# AnsteyHorne

**REPORT** 

on

DAYLIGHT & SUNLIGHT WITHIN
THE
PROPOSED DWELLINGS
& SUNLIGHT TO PROPOSED
AMENITY SPACES

Αt

THE BARN HOTEL

**WEST END ROAD** 

**RUISLIP** 

REF: GI/EK/ROL01027 3 September 2024

expertise applied

#### **TABLE OF CONTENTS**

SEC	TION	PAGE NO.
1.	INTRODUCTION	1
2.	PLANNING POLICY AND GUIDANCE	3
3.	METHOD OF ASSESSMENT AND NUMERICAL GUIDELINES	8
4.	APPLICATION OF THE BRE GUIDELINES	12
5.	INFORMATION USED IN THE TECHNICAL STUDY	13
6.	RESULTS OF TECHNICAL STUDY	14
7.	SUMMARY AND CONCLUSION	19

#### **APPENDICES**

APPENDIX A - PLAN AND 3D VIEWS OF THE COMPUTER MODEL

APPENDIX B - DAYLIGHT ILLUMINANCE TABLE

APPENDIX C - SUNLIGHT EXPOSURE TABLE

APPENDIX D - LAYOUT PLANS WITH DAYLIGHT ILLUMINANCE RESULTS

APPENDIX E - TWO-HOURS SUN CONTOUR PLAN



Figure 1: Oblique aerial photograph of the site looking south



Figure 2: 3D view of computer model

#### 1. INTRODUCTION

- 1.1 Chase New Homes Limited is proposing a development at The Barn Hotel, West End Road, Ruislip, HA4 6JB. The development comprises the partial demolition of 1no. Grade II Listed Building and conversion of both (2no.) listed buildings to provide 3no. dwellings. Demolition and redevelopment of the remainder of the site for residential use with associated infrastructure, public open space and landscaping.
- 1.1 Anstey Horne has been commissioned to undertake a formal technical assessment of the daylight and sunlight levels within the proposed accommodation and sunlight to proposed amenity spaces. 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. Our 3D model of the proposed scheme is illustrated in Figure 2 at page ii and in our drawings at Appendix A.
- 1.2 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)
- 1.3 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.
- 1.4 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.

1.5	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 (December 2023) 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 129 (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."

#### **Regional Planning Policy and Guidance**

#### Mayor's London Plan

- 2.4 The Mayor of London's London Plan March 2021 sets out the spatial development strategy for London. It forms part of the development plan for Greater London, along with local plans of the London boroughs.
- 2.5 Policy D6 'Housing quality and standards' states the following:
  - "... C. Housing development should maximise the provision of dual aspect dwellings and normally avoid the provision of single aspect dwellings. A single aspect dwelling should only be provided where it is considered a more appropriate design solution to meet the requirements of Part B in Policy D3 Optimising site capacity through the design-led

approach than a dual aspect dwelling, and it can be demonstrated that it will have adequate passive ventilation, daylight and privacy, and avoid overheating.

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

#### Mayor's Housing Supplementary Planning Guidance

- 2.6 The Mayor of London's 'Housing Supplementary Planning Guidance' (March 2016) provides guidance on how to implement the housing policies in the London Plan. It replaces the 2012 Housing Supplementary Planning Guidance.
- 2.7 Part 1 of the SPG covers housing supply and sets out the Plan's approach to optimising housing output. In relation to daylight and sunlight within new housing developments it advises:

"An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight ... within new developments. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time."

"The daylight targets within a proposed scheme should be assessed drawing on broadly comparable residential typologies within the area and of a similar nature across London. Decision makers should recognise that fully optimising housing potential on large sites may necessitate standards which depart from those presently experienced but which still achieve satisfactory levels of residential amenity."

2.8 Part 2 of the SPG covers quality and design of housing developments. It contains standards that set out the minimum level of quality and design that new homes should meet. The standards and corresponding guidance that relate to daylight and sunlight in new housing are as follows:

#### Communal and public open space

"Standard 4 - Where communal open space is provided, development proposals should demonstrate that the space ... is designed to take advantage of direct sunlight."

#### Home as a place of retreat

"... Natural light is also vital to a sense of wellbeing in the home, and this may be restricted in densely developed parts of the city. The Mayor seeks to encourage the kind of housing that provides comfortable and enjoyable places of retreat and privacy. Factors to be considered include privacy, the importance of dual aspect development, noise mitigation, floor to ceiling heights, daylight and sunlight."

#### **Dual aspect**

"Standard 29 - Developments should minimise the number of single aspect dwellings. Single aspect dwellings that are north facing, or exposed to noise levels above which significant adverse effects on health and quality of life occur, or which contain three or more bedrooms should be avoided."

"Dual aspect dwellings with opening windows on at least two sides have many inherent benefits. These include better daylight, a greater chance of direct sunlight for longer periods, natural cross ventilation and a greater capacity to address overheating, mitigating pollution, offering a choice of views, access to a quiet side of the building, greater flexibility in the use of rooms, and more potential for future adaptability by altering the use of rooms. Where possible the provision of dual aspect dwellings should be maximised in a development proposal."

"The design of single aspect flats will need to demonstrate that all habitable rooms and the kitchen are provided with adequate ventilation, privacy and daylight and the orientation enhances amenity, including views. North facing single aspect dwellings should be avoided wherever possible. However, in applying this standard consideration should also be given to other planning and design objectives for a site, for example the aim to maximise active frontages and minimise inactive frontages."

"Good single aspect one and two bedroom homes are possible where limited numbers of rooms are required, the frontage is generous, the plan is shallow, the orientation and or outlook is favourable, and care is taken to mitigate the potential for overheating without the need for mechanical cooling. Single aspect dwellings may also be appropriate when being used to wrap podium level car parks or large retail units with active frontages."

"In single aspect dwellings with more than two bedrooms it is difficult to achieve adequate natural ventilation and daylight to all rooms in an efficient plan layout which avoids long internal corridors. Single aspect dwellings containing three or more bedrooms should therefore be avoided. The design of single aspect ground floor dwellings will require particular consideration to maintain privacy and adequate levels of daylight."

#### Daylight and sunlight

"Standard 32 - All homes should provide for direct sunlight to enter at least one habitable room for part of the day. Living areas and kitchen dining spaces should preferably receive direct sunlight."

"Daylight enhances residents' enjoyment of an interior and reduces the energy needed to provide light for everyday activities, while controlled sunlight can help to meet part of the winter heating requirement. Sunlight is particularly desirable in living areas and kitchen dining spaces. The risk of overheating should be taken into account when designing for sunlight alongside the need to ensure appropriate levels of privacy. In addition to the above standards, BRE good practice guidelines and methodology can be used to assess the levels of daylight and sunlight achieved within new developments, taking into account guidance below and in Section 1.3."

"Where direct sunlight cannot be achieved in line with Standard 32, developers should demonstrate how the daylight standards proposed within a scheme and individual units will achieve good amenity for residents. They should also demonstrate how the design has sought to optimise the amount of daylight and amenity available to residents, for example, through the design, colour and landscaping of surrounding buildings and spaces within a development."

"BRE guidelines on assessing daylight and sunlight should be applied sensitively to higher density development in London, particularly in central and urban settings, recognising the London Plan's strategic approach to optimise housing output (Policy 3.4) and the need to accommodate additional housing supply in locations with good accessibility suitable for higher density development (Policy 3.3). Quantitative standards on daylight and sunlight should not be applied rigidly, without carefully considering the location and context and standards experienced in broadly comparable housing typologies in London."

#### **Local Planning Policy and Guidance**

2.9 The development site is located within the London Borough of Hillingdon.

Hillingdon Local Plan Part 2 - Development Management Policies

2.10 Hillingdon's Local Plan was adopted in January 2020. Paragraph 5.4.1 under 'Design of New Development' states the following:

"The Council will aim to minimise the impact of the loss of daylight and sunlight and unacceptable overshadowing caused by new development on habitable rooms, amenity space and public open space. The Council will also seek to ensure that the design of new development optimises the levels of London Borough of Hillingdon Local Plan Part 2 - Development Management Policies 49 daylight and sunlight. The Council will expect the impact of the development to be assessed following the methodology set out in the most recent version of the Building Research Establishments (BRE) "Site layout planning for daylight and sunlight: A guide to good practice".

- 2.11 Policy DMHB 11: Design of New Development states that:
  - "... B) Development proposals should not adversely impact on the amenity, daylight and sunlight of adjacent properties and open space..."
- 2.12 We confirm that we have undertaken our daylight and sunlight study in accordance with BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022).

#### 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".

#### **Daylight Factor Method**

- 3.7 As an alternative to the illuminance method, the BRE Guidelines 2022 recommend calculating daylight factors at each calculation point on the assessment grid. The daylight factor assessment uses an overcast sky model rather than climate-based data and does not take account of the potential for sunlight or the orientation of a particular room.
- 3.8 The BRE Guidelines provide equivalent daylight factor values to the lux values set out above for different locations. As the site is located in London, the equivalent target daylight factors for the nearest specified location (London Gatwick Airport) as follows:

Bedrooms: 0.7%

• Living rooms: 1.1%

• Kitchens: 1.4%

3.9 The above recommendations are based upon the median daylight factors that should be achieved over at least 50% of the assessment grid.

#### Sunlight within new development

- 3.10 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."
- 3.11 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."
- 3.12 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".

- 3.13 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.
- 3.14 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.
- 3.15 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."
- 3.16 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".

#### Sunlight to proposed amenity spaces within new development

- 3.17 Section 3.3 of the BRE guide makes recommendations concerning sunlight to open spaces between buildings. It notes that sunlight into these open spaces "is valuable for a number of reasons, to:
  - provide attractive sunlit views (all year)
  - make outdoor activities like sitting out and children's play more pleasant (mainly warmer months)
  - encourage plant growth (mainly spring and summer)
  - dry out the ground, reducing moss and slime (mainly in colder months).
  - melt frost, ice and snow (in winter)
  - dry clothes (all year)."

3.18 The BRE guide recognises that different types of amenity space can have different sunlighting requirements and that it is difficult to suggest a hard and fast rule. The equinox (21 March) can be chosen as a date for assessment. The guide recommends that "at least half of the amenity areas ... should receive at least two hours of sunlight on 21 March. It is instructive to draw the 'two hours sun contour', which marks this area on plan, because the use of specific parts of a site can be planned with sunlight in mind".

#### 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 Furthermore, as noted at paragraph 2.7 above, the Mayor of London's *Housing Supplementary Planning Guidance* emphasises that fully optimising housing potential on large sites may necessitate departure from conventional guidelines and the adoption of alternative target values.
- 4.6 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:
    - o CMYK's 2D drawings of the proposed scheme received 21 August 2024
  - Surrounding buildings:
    - Anstey Horne's drone survey data collected 17 January 2023
    - Site visit, photographs and measurements
- 5.2 The computer model is illustrated on the drawings at Appendix A.
- 5.3 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 0.7 for the frame correction factor (variable depending on the window type);
  - Surface reflectance's of each room based on the following surface finishes and reflectances:

o Ceilings: white 0.80

o Walls: pale cream 0.80

o Floors: light wood flooring 0.4

#### 6. RESULTS OF TECHNICAL STUDY

- 6.1 We have tested all habitable rooms in the proposed development.
- 6.2 In all we tested 193 rooms, of which 74 are a combination of living rooms, dining rooms and kitchens (LKDs) and 119 are bedrooms. Where windows are set back beneath balconies serving the floor above, we have included the obstructing effect of the balcony within our model.
- 6.3 It is important to note that Anstey Horne have worked closely with the developer and the architect to maximise daylight potential to all of the rooms within the scheme and have undergone various design iterations to assist in this exercise.
- 6.4 The rooms tested are shown outlined on our drawing nos. ROL01027\_R06\_V01\_601-01 to 604-01at Appendix D. 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

- 6.5 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 B (along with the relevant target for the room use concerned) and on the room layout drawings at Appendix D.
- 6.6 The results demonstrate that 190 (98%) of the 193 rooms assessed across the scheme will achieve illuminance levels that either meet or exceed the recommended guideline values based on the target for their specific room use.
- 6.7 Of the 74 LKDs assessed, 73 (99%) will achieve illuminance levels that either meet or exceed the recommended guideline values for a kitchen which is the highest target proposed by the BRE Guidelines, with many of these LKDs receiving the recommended 200 lux to 100% of the assessed area. This is an excellent level of daylight amenity to achieve overall.
- 6.8 Of the 119 bedrooms assessed, 117 (99%) will achieve illuminance levels that either meet or exceed the recommended guideline values, with many of these bedrooms receiving the recommended 100 lux to 100% of the assessed area.

- 6.9 It is worth noting that in the very limited number of instances where three rooms sit below the guideline criteria, they are all located within the Listed buildings. Naturally, there is a trade-off between maximising daylight availability when designing within the constraints of an existing, listed building. When looking at these rooms on their associated lux contour drawing (refs. ROL01027\_R06\_V01\_611-01 to 612-01), it is evident that all areas of the assessed room will receive at least some daylight availability, which in our view, will lead to adequately daylit spaces overall. It is also worth noting that these dwellings all contain at least one room which exceeds the guideline values.
- 6.10 In summary, the proposed development shows excellent adherence to the BRE Guidelines for daylight availability.

#### Sunlight within new development

- 6.11 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."
- 6.12 In order to limit the number of single-aspect units, the proposed development has been designed as so that all dwellings are dual aspect, which allows a higher percentage of rooms to have access to sunlight at different times of the day.
- 6.13 The guidelines acknowledge that "if a room faces significantly north of due east or west [the sunlight criterion] is unlikely to be met". Despite this, we have tested all the rooms in our model regardless of orientation.
- 6.14 We tested a total of 74 LKDs, which include the main living area. 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.
- 6.15 The sunlight results for the rooms tested are given in the table at Appendix C. As advised by the BRE Guidelines, these are room-based aggregate figures taking account of sunlight available to all windows, where they are served by more than one.

- 6.16 The results of the sunlight exposure assessment demonstrate that of the 193 rooms assessed, regardless of orientation, 144 (75%) would meet or exceed the minimum guideline values. Of these rooms, 98 would achieve the highest criteria, 35 would achieve the medium criteria and 11 would achieve the minimum criteria, demonstrating that the majority of these rooms achieve very good levels of sunlight above the BRE's suggested minimum levels. When considering these results, it is worth bearing in mind that within a multi-block development, it is usually only possible to orientate approximately half the rooms to face majorly within 90 degrees of due south.
- 6.17 Of the 74 LKDs assessed, 57 (77%) would meet or exceed the minimum guideline values for sunlight exposure therefore demonstrating that the majority of the main living rooms will receive a good level of sunlight. It is worth bearing in mind that all bar one of these LKDs is shown to meet or exceed the guidelines for daylight and therefore the vast majority of the rooms will have good access to natural light.
- 6.18 In summary, considering the majority of the main living areas meet the guideline criteria regardless of orientation, and in many instances, exceed it, the proposed development shows good adherence to the BRE Guidelines for sunlight availability.

#### Sunlight to proposed amenity spaces

- 6.19 The results for sunlight to the amenity spaces within the proposed development are shown on our drawings at Appendix E. All communal amenity spaces have been tested as well as private amenity spaces for the proposed accommodation. This does not include balconies as these are not typically tested as per the BRE guidelines. The private balconies will provide yet further access to good daylight and sunlight levels.
- 6.20 The areas that will be able to receive at least two hours of sunlight are shown cross-hatched yellow and areas that will receive sunlight for a shorter duration are cross-hatched grey. The proportion of each space achieving the two-hour guideline on 21 March and 21 June is expressed as a percentage on the drawing and in the second column of Table 1 below. The BRE target is for 50% of a space to achieve two hours of sunlight on 21 March.

Table 1 - Percentage of each amenity area receiving at least two hours of sunlight on 21 March and 21 June

Amenity Area	Percentage of area in sunlight on 21 March for ≥ 2 hrs	Percentage of area in sunlight on 21 June for ≥ 2 hrs
A1	67.71%	93.85%
A2	57.46%	89.76%
A3	100.00%	99.06%
A4	47.06%	83.34%
A5	75.67%	98.04%
A6	54.59%	92.40%
A7	71.06%	80.28%
A8	55.82%	93.76%
A9	98.06%	99.97%
A10	89.47%	98.87%
A11	79.31%	98.93%
A12	100.00%	100.00%
A13	75.00%	99.96%
A14	91.71%	97.61%
A15	100.00%	99.40%
A16	100.00%	100.00%
A17	100.00%	97.22%
A18	100.00%	98.68%
A19	100.00%	98.22%
A20	95.45%	97.67%
A21	70.13%	96.65%
A22	8.62%	70.51%
A23	0.00%	77.97%
A24	35.46%	89.62%

- 6.21 The two-hour sun contour results show that the majority of the proposed amenity spaces achieve or exceed the BRE's recommended two-hours of sunlight to over 50% of their assessed area. Notably, the main communal space (labelled as A9) achieves the two-hours of sun-on-ground to 98.06% of its space on the 21 March assessment date, greatly exceeding the BRE's 50% target.
- 6.22 When developing a multi-block scheme within the Greater London area, there are naturally going to be some areas that are more challenging on the 21 March assessment date and will fall short of the suggested target guidance due to orientation, however that does not mean that they will not still have access to meaningful levels of sunlight.

- 6.23 In addition to the 21 March assessment date, a further study has been undertaken to consider the sunlight potential for the proposed amenity spaces on 21 June. The rationale for this supplementary assessment is that this test provides an understanding of the sunlight availability during the summer months, when the spaces are more likely to be used and enjoyed. The results show that of the 24 areas assessed, all 24 will receive at least two-hours of sunlight to a minimum of 77.97% of their assessed area.
- 6.24 Overall, it is considered that the proposed development will afford future occupiers with very good levels of sunlight amenity within the various spaces that they will have access to.

#### 7. SUMMARY AND CONCLUSION

- 7.1 There are no mandatory standards for daylight or sunlight provision within dwellings. Hillingdon'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. BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022) provides useful guidance on the subject.
- 7.2 We assessed daylight and sunlight to 193 habitable rooms across the proposed development. The tests were undertaken in accordance with the BRE methodology. We also assessed sunlight to the main amenity spaces within the scheme.
- 7.3 For daylight, the proposed development shows excellent adherence to the BRE Guidelines, with 98% of the rooms assessed achieving illuminance levels that either meet or exceed the recommended guideline values. Whilst all but three rooms meet or exceed the guideline criteria, these remaining rooms sit within the listed buildings which have been designed with the existing structure in mind whilst maximising daylight availability.
- 7.4 For sunlight, the proposed development shows good adherence to the BRE Guidelines for sunlight exposure, with the majority (77%) of the main living areas meeting or exceeding the BRE's criteria for sunlight availability. Therefore, considering both daylight and sunlight availability, the vast majority of the units are shown to receive good levels of natural light.
- 7.5 In terms of sunlight availability to amenity spaces, the results show that the majority of the proposed amenity spaces will meet or exceed the BRE's guideline values on the 21 March assessment date. It is worth noting that all future occupants will have access to the shared amenity space at A9 which achieves the two-hours of sunlight to 98.06% of its area, greatly exceeding the BRE's recommended levels of sunlight availability. Additionally, all of the assessed amenity spaces achieve very good levels of sunlight amenity in the summer months, when the spaces are more likely to be used and enjoyed.
- 7.6 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. Furthermore, the Mayor of London's *Draft Interim Housing Supplementary Planning Guidance* emphasises that fully optimising housing potential may necessitate departure from conventional guidelines whilst still achieving satisfactory levels of residential amenity.

7.7 In conclusion, the layout of the proposed development follows reasonable application of the BRE Guidelines and will provide very good daylight and sunlight conditions within the proposed accommodation.

**ANSTEY HORNE** 

3 September 2024

#### **APPENDIX A**

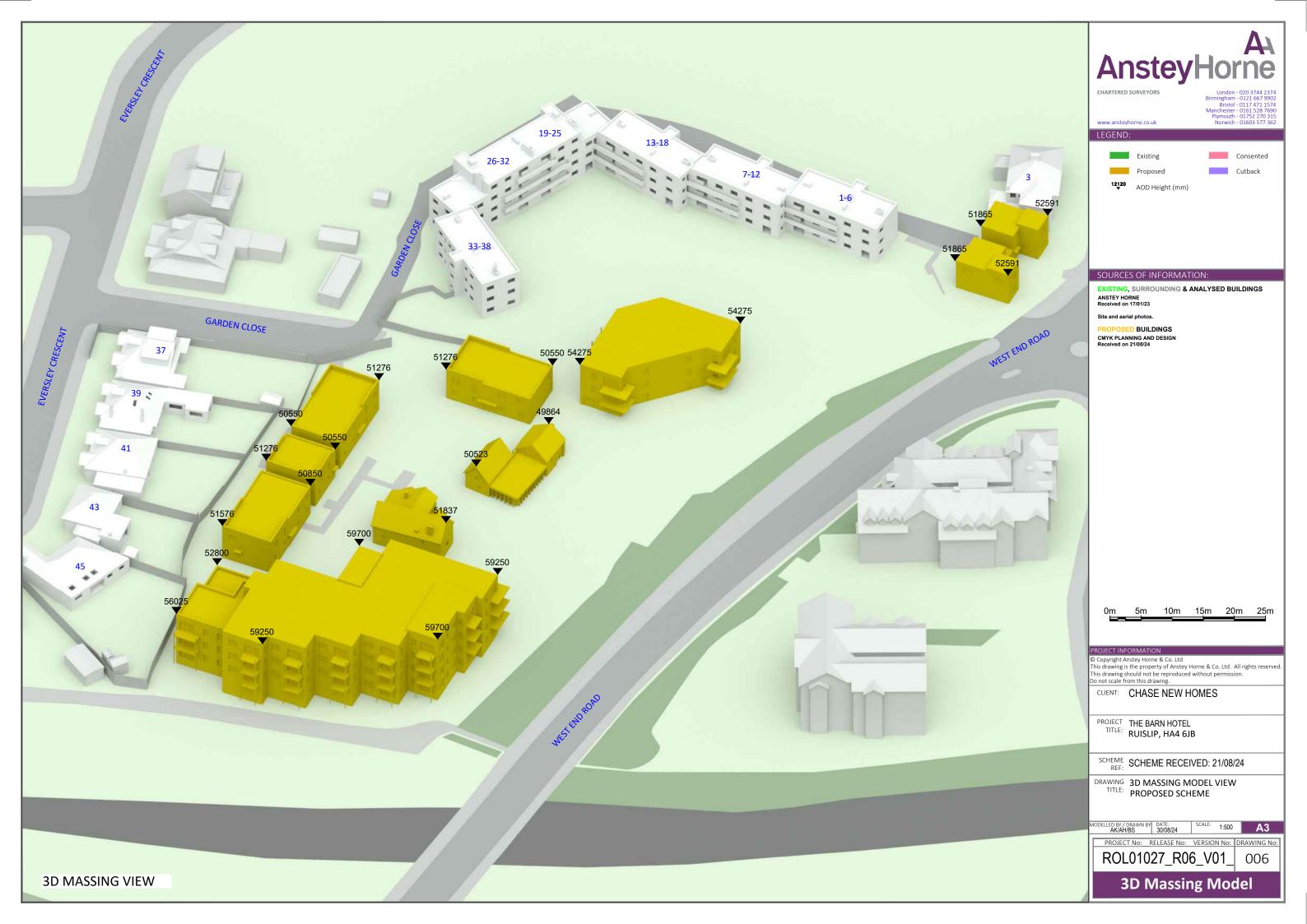
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### PLAN AND 3D VIEWS OF THE COMPUTER MODEL

DRAWING NOS. ROL01027\_R06\_V01\_004 TO 006







## APPENDIX B DAYLIGHT ILLUMINANCE TABLE

Project Name: THE BARN HOTEL Project No.: ROL01027 - R06 - V01 Report Title: SDA BS En17037 Analysis - Proposed Scheme Date of Analysis: 29/08/2024

1	1		T -						Crite	Req % of	% of		
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Daylight Hours	Daylig! Hours		
			•		PLO	T 01							
and Floor	R1	LKD	35.94	25.39	588	25.39	100%	200	50%	50%	4380		
1st Floor	R1	Bedroom	6.96	4.10	214	4.10	100%	100	50%	50%	4380		
130 1 1001	R2	Bedroom	8.80	5.59	373	5.59	100%	100	50%	50%	4380		
	R3	Bedroom	11.77	7.82	732	7.82	100%	100	50%	50%	4380		
					PLO	T 02							
God Floor	R1	LKD	35.94	25 20	592	25.39	100%	200	50%	E09/	4380		
Gnd Floor 1st Floor	R1	Bedroom	35.94 11.77	25.39 7.82	1126	7.82	100%	100	50%	50% 50%	4380		
250 1 1001	R2	Bedroom	8.80	5.59	875	5.59	100%	100	50%	50%	4380		
	R3	Bedroom	6.96	4.10	201	4.10	100%	100	50%	50%	4380		
					PLOT	03-14							
Gnd Floor	R1	LKD	27.42	21.13	704	21.13	100%	200	50%	50%	4380		
	R2	Bedroom	12.90	8.69	132	7.68	88%	100	50%	50%	4380		
	R3	Bedroom	12.66	8.45	157	7.65	91%	100	50%	50%	4380		
	R4	LKD	26.11	19.82	525	19.82	100%	200	50%	50%	4380		
	R5	LKD	26.95	19.94	478	19.94	100%	200	50%	50%	4380		
	R6	Bedroom	14.70	10.07	193	9.63	96%	100	50%	50%	4380		
	R7	Bedroom	14.70	10.07	203	9.89	98%	100	50%	50%	4380		
1st Floor	R8 R1	LKD LKD	26.95 27.42	19.93 21.13	646 587	19.93 21.13	100% 100%	200 200	50% 50%	50% 50%	438 438		
13t FIUUI	R2	Bedroom	12.90	8.69	587 154	8.60	99%	100	50%	50%	438		
	R3	Bedroom	12.90	8.69	160	8.60	99%	100	50%	50%	438		
	R4	LKD	27.42	21.12	508	21.12	100%	200	50%	50%	438		
	R5	LKD	26.95	19.94	577	19.94	100%	200	50%	50%	438		
	R6	Bedroom	14.70	10.07	229	10.07	100%	100	50%	50%	438		
	R7	Bedroom	14.70	10.07	231	10.07	100%	100	50%	50%	438		
	R8	LKD	26.95	19.93	693	19.93	100%	200	50%	50%	438		
2nd Floor	R1	LKD	28.24	21.90	671	21.90	100%	200	50%	50%	438		
	R2	Bedroom	15.48	11.19	184	11.10	99%	100	50%	50%	438		
	R3	Bedroom	13.41	9.40	199	9.40	100%	100	50%	50%	438		
	R4	LKD	30.78	24.12	502 697	24.12	100%	200	50%	50%	438		
	R5 R6	LKD Bedroom	24.61 11.54	18.23 7.81	687 287	18.23 7.81	100% 100%	200 100	50% 50%	50% 50%	438 438		
	R7	Bedroom	11.54	7.81 7.81	287 290	7.81 7.81	100%	100	50%	50%	438		
	R8	LKD	24.65	18.26	786	18.26	100%	200	50%	50%	438		
					PLOT	15-16							
Gnd Floor	R1	Bedroom	11.50	7.77	151	6.12	79%	100	50%	50%	4380		
	R2	Bedroom	8.48	5.20	186	5.11	98%	100	50%	50%	4380		
	R3	LKD	21.73	16.30	422	16.30	100%	200	50%	50%	438		
1st Floor	R1	LKD	25.34	18.27	294	13.61	74%	200	50%	50%	438		
	R2 R3	Bedroom Bedroom	8.11 11.50	4.99 7.79	1186 251	4.99 7.79	100% 100%	100 100	50% 50%	50% 50%	438 438		
						17-18			20/1	55,1			
			0.40	F 20			050/	400	500/	500/	420		
Gnd Floor	R1	Bedroom	8.48 11.50	5.20 7.77	187 173	5.01	96%	100	50% 50%	50% 50%	438 438		
	R2 R3	Bedroom LKD	11.50 21.73	7.77 16.30	173 434	7.28 16.30	94% 100%	100 200	50% 50%	50% 50%	438 438		
1st Floor	R1	LKD	25.34	18.27	360	14.26	78%	200	50%	50%	438		
	R2	Bedroom	11.50	7.79	365	7.79	100%	100	50%	50%	438		
	R3	Bedroom	8.11	4.99	1164	4.99	100%	100	50%	50%	438		
					PLOT	19-20							
and Floor	R1	LKD	22.29	16.71	452	16.71	100%	200	50%	50%	438		
	R2	Bedroom	11.44	7.71	209	7.62	99%	100	50%	50%	438		
	R3	Bedroom	8.48	5.20	253	5.20	100%	100	50%	50%	438		
1st Floor	R1	Bedroom	8.08	4.97	1134	4.97	100%	100	50%	50%	438		
	R2 R3	Bedroom LKD	11.50 25.34	7.79 18.63	448 462	7.79 16.39	100% 88%	100 200	50% 50%	50% 50%	438 438		
	11.5	LKU	23.34	10.03			00/0	200	30/6	3070	+30		
						21-22							
Gnd Floor	R1	LKD	22.29	16.71	439	16.71	100%	200	50%	50%	438		
	R2 R3	Bedroom Bedroom	8.48 11.44	5.20 7.71	254 209	5.20 7.44	100% 97%	100 100	50% 50%	50% 50%	4380 4380		
1st Floor	R1	Bedroom	11.44	7.71 7.79	209 1017	7.44 7.79	100%	100	50%	50%	4380		
236 1 1001	R2	Bedroom	8.08	4.97	1162	4.97	100%	100	50%	50%	4380		
	R3	LKD	25.34	18.63	357	15.16	81%	200	50%	50%	438		
					PLOT	23-24							
Gnd Floor	R1	LKD	22.29	16.71	438	16.71	100%	200	50%	50%	4380		
	R2	Bedroom	8.48	5.20	235	5.20	100%	100	50%	50%	4380		
3114 1 1001	KZ												
	R3	Bedroom	11.44	7.71	184	7.02	91%	100	50%	50%	4380		
1st Floor						7.02 7.79 4.99	91% 100% 100%	100 100	50% 50%	50% 50%	4380 4380 4380		

Project Name: THE BARN HOTEL Project No.: ROL01027 - R06 - V01 Report Title: SDA BS En17037 Analysis - Proposed Scheme Date of Analysis: 29/08/2024

	Criteria									ı	
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Daylight Hours
	R3	LKD	25.28	18.21	412	15.13	83%	200	50%	50%	4380
					PLOT	25-26					
Gnd Floor	R1	Bedroom	11.44	7.71	195	7.51	98%	100	50%	50%	4380
	R2	Bedroom	8.48	5.20	209	5.20	100%	100	50%	50%	4380
	R3	LKD	22.35	16.93	447	16.93	100%	200	50%	50%	4380
1st Floor	R1	Bedroom	11.50	7.79	1014	7.79	100%	100	50%	50%	4380
	R2 R3	LKD Bedroom	25.34 8.11	18.63 4.99	316 1150	15.09 4.99	81% 100%	200 100	50% 50%	50% 50%	4380 4380
					PLOT	27-28					
Gnd Floor	R1	Bedroom	8.48	5.20	210	5.20	100%	100	50%	50%	4380
	R2 R3	Bedroom LKD	11.44 22.35	7.71 16.93	139 436	5.27 16.93	68% 100%	100 200	50% 50%	50% 50%	4380 4380
1st Floor	R1	Bedroom	8.11	4.99	1105	4.99	100%	100	50%	50%	4380
	R2	LKD	25.34	18.63	328	14.42	77%	200	50%	50%	4380
	R3	Bedroom	11.50	7.79	274	7.79	100%	100	50%	50%	4380
					LISTED	BARN					
Gnd Floor	R1	LKD	22.60	16.90	222	9.35	55%	200	50%	50%	4380
	R2	Bedroom	12.34	7.57	342	6.70	88%	100	50%	50%	4380
	R3	Bedroom	11.57	7.56	525	7.56	100%	100	50%	50%	4380
1st Floor	R4 R1	LKD Bedroom	34.26 24.07	26.85 18.46	599 71	26.85 6.01	100% 33%	200 100	50% 50%	50% 50%	4380 4380
130 1 1001	KI	Deuroom	24.07	10.40			3370	100	3070	3070	4380
					LISTED FA	RMHOUSE					
Gnd Floor	R1	LKD	18.54	12.94	238	7.21	56%	200	50%	50%	4380
	R2	LKD	18.26	13.02	92	2.41	18%	200	50%	50%	4380
	R3 R4	Bedroom LKD	17.60 18.71	12.32 13.46	106 234	7.01 8.31	57% 62%	100 200	50% 50%	50% 50%	4380 4380
1st Floor	R1	Bedroom	19.62	14.59	107	7.87	54%	100	50%	50%	4380
	R2	Bedroom	16.06	11.62	150	9.06	78%	100	50%	50%	4380
	R3	Bedroom	16.09	10.80	86	4.16	39%	100	50%	50%	4380
					PLOT	32-72					
Gnd Floor	R1	Bedroom	7.52	4.49	352	4.49	100%	100	50%	50%	4380
	R2	LKD	22.76	17.14	1003	17.14	100%	200	50%	50%	4380
	R3 R4	Bedroom Bedroom	9.56 16.68	6.12 11.81	375 303	6.12 11.81	100% 100%	100 100	50% 50%	50% 50%	4380 4380
	R5	Bedroom	14.40	10.00	370	10.00	100%	100	50%	50%	4380
	R6	Bedroom	8.16	4.95	1121	4.95	100%	100	50%	50%	4380
	R7	Bedroom	11.43	7.60	125	4.80	63%	100	50%	50%	4380
	R8	LKD	29.30	22.02	526	18.58	84%	200	50%	50%	4380
	R9 R10	Bedroom Bedroom	11.42 12.09	7.64 8.16	149 353	7.45 8.16	98% 100%	100 100	50% 50%	50% 50%	4380 4380
	R11	Bedroom	8.31	5.06	277	5.06	100%	100	50%	50%	4380
	R12	LKD	18.21	13.35	506	13.35	100%	200	50%	50%	4380
	R13	LKD	20.25	15.19	414	15.19	100%	200	50%	50%	4380
	R14 R15	Bedroom Bedroom	7.52 14.03	4.57 9.76	290 371	4.57 9.76	100% 100%	100 100	50% 50%	50% 50%	4380 4380
	R16	Bedroom	9.91	6.23	243	6.23	100%	100	50%	50%	4380
	R17	LKD	24.58	18.93	628	18.93	100%	200	50%	50%	4380
	R18	Bedroom	8.37	5.26	241	5.26	100%	100	50%	50%	4380
	R19 R20	Bedroom Bedroom	16.09 15.00	11.13 10.57	109 230	6.26 10.57	56% 100%	100 100	50% 50%	50% 50%	4380 4380
	R21	LKD	20.98	15.66	397	15.66	100%	200	50%	50%	4380
	R22	LKD	23.79	17.95	748	17.95	100%	200	50%	50%	4380
	R23	Bedroom	11.52	7.62	432	7.62	100%	100	50%	50%	4380
1st Floor	R24 R1	LKD Bedroom	26.98 7.52	20.23 4.49	414 372	18.37 4.49	91%	200 100	50% 50%	50% 50%	4380 4380
1st Floor	R1 R2	LKD LKD	7.52 24.97	4.49 18.82	372 1004	4.49 18.82	100% 100%	200	50% 50%	50% 50%	4380 4380
	R3	Bedroom	9.56	6.12	406	6.12	100%	100	50%	50%	4380
	R4	Bedroom	10.46	6.91	668	6.91	100%	100	50%	50%	4380
	R5	Bedroom	16.46	11.75	362	11.75	100%	100	50%	50%	4380
	R6 R7	LKD LKD	19.27 28.63	14.24 20.99	661 668	14.24 16.07	100% 77%	200 200	50% 50%	50% 50%	4380 4380
	R8	Bedroom	28.63 11.52	7.66	155	6.55	86%	100	50%	50%	4380
	R9	Bedroom	11.42	7.64	342	7.64	100%	100	50%	50%	4380
	R10	Bedroom	16.02	11.21	276	11.21	100%	100	50%	50%	4380
	R11	Bedroom	8.03	4.86	339	4.86	100%	100	50%	50%	4380
	R12 R13	LKD Bedroom	27.13 8.87	20.23 5.53	330 196	14.79 5.53	73% 100%	200 100	50% 50%	50% 50%	4380 4380
	R14	LKD	8.87 19.43	5.53 14.37	605	5.53 14.37	100%	200	50%	50%	4380
	R15	Bedroom	7.52	4.57	387	4.57	100%	100	50%	50%	4380
	R16	Bedroom	11.75	7.94	153	7.94	100%	100	50%	50%	4380
	R17	Bedroom	9.91	6.23	156	5.12	82%	100	50%	50%	4380
	R18	LKD Bedroom	23.91	18.26	338	18.26	100%	200	50% 50%	50% 50%	4380
	R19	Bedroom	7.52	4.49	283	4.49	100%	100	50%	50%	4380
	R20	Bedroom	12.81	8.83	178	8.74	99%	100	50%	50%	4380

Project Name: THE BARN HOTEL Project No.: ROL01027 - R06 - V01 Report Title: SDA BS En17037 Analysis - Proposed Scheme Date of Analysis: 29/08/2024

Criteria

									Criteria			
Floor Ref	Room Ref	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux	Req Lux	Req % of Effective Area	Req % of Daylight Hours	Dayligh Hours	
	R22	LKD	20.52	15.29	443	15.29	100%	200	50%	50%	4380	
	R23	Bedroom	15.19	10.73	261	10.73	100%	100	50%	50%	4380	
	R24	LKD	21.23	15.86	429	15.86	100%	200	50%	50%	4380	
	R25	Bedroom	13.75	9.46	245	9.46	100%	100	50%	50%	4380	
	R26	LKD	20.74	15.60	446	15.60	100%	200	50%	50%	4380	
	R27	Bedroom	15.00	10.57	246	10.57	100%	100	50%	50%	4380	
	R28	LKD	20.98	15.66	425	15.66	100%	200	50%	50%	4380	
	R29	LKD	23.79	17.95	802	17.95	100%	200	50%	50%	4380	
	R30	Bedroom	11.52	7.62	465	7.62	100%	100	50%	50%	4380	
	R31	LKD	26.98	20.23	439	18.83	93%	200	50%	50%	4380	
2nd Floor	R1	Bedroom	7.52	4.49	384	4.49	100%	100	50%	50%	4380	
	R2	LKD	24.97	18.82	1052	18.82	100%	200	50%	50%	4380	
	R3	Bedroom	9.56	6.12	423	6.12	100%	100	50%	50%	4380	
	R4	Bedroom	10.46	6.91	695	6.91	100%	100	50%	50%	4380	
	R5	Bedroom	16.46	11.75	378	11.75	100%	100	50%	50%	4380	
	R6	LKD	19.27	14.24	720	14.24	100%	200	50%	50%	4380	
	R7	LKD	28.63	20.99	744	16.45	78%	200	50%	50%	4380	
	R8	Bedroom	11.52	7.66	198	7.57	99%	100	50%	50%	4380	
	R9	Bedroom	11.42	7.64	384	7.64	100%	100	50%	50%	4380	
	R10	Bedroom	16.02	11.21	307	11.21	100%	100	50%	50%	4380	
	R11	Bedroom	8.03	4.86	379	4.86	100%	100	50%	50%	4380	
	R12	LKD	27.13	20.23	385	15.81	78%	200	50%	50%	4380	
	R13	Bedroom	17.21	12.54	293	12.54	100%	100	50%	50%	4380	
	R14	Bedroom	9.91	6.23	400	6.23	100%	100	50%	50%	4380	
	R15	LKD	23.91	18.26	406	18.26	100%	200	50%	50%	4380	
	R16	Bedroom	7.52	4.49	314	4.49	100%	100	50%	50%	4380	
	R17	Bedroom	12.81	8.83	183	8.74	99%	100	50%	50%	4380	
	R18	Bedroom	13.15	9.09	396	9.09	100%	100	50%	50%	4380	
	R19	LKD	20.52	15.29	458		100%	200	50%	50%	4380	
	R20		15.19	10.73	456 270	15.29 10.73	100%	100	50%	50%	4380	
	R21	Bedroom LKD	21.23		453		100%	200	50%	50%	4380	
				15.86		15.86						
	R22	Bedroom	13.75	9.46	260	9.46	100%	100	50%	50%	4380	
	R23	LKD	20.74	15.60	472	15.60	100%	200	50%	50%	4380	
	R24	Bedroom	15.00	10.57	259	10.57	100%	100	50%	50%	4380	
	R25	LKD	20.98	15.66	444	15.66	100%	200	50%	50%	4380	
	R26	LKD	23.79	17.95	835	17.95	100%	200	50%	50%	4380	
	R27	Bedroom	11.52	7.62	487	7.62	100%	100	50%	50%	4380	
	R28	LKD	26.98	20.23	456	19.21	95%	200	50%	50%	4380	
4th Floor	R1	Bedroom	7.52	4.49	406	4.49	100%	100	50%	50%	4380	
	R2	LKD	24.97	18.82	1167	18.82	100%	200	50%	50%	4380	
	R3	Bedroom	9.56	6.12	429	6.12	100%	100	50%	50%	4380	
	R4	Bedroom	10.46	6.91	704	6.91	100%	100	50%	50%	4380	
	R5	Bedroom	16.46	11.75	386	11.75	100%	100	50%	50%	4380	
	R6	LKD	19.27	14.24	782	14.24	100%	200	50%	50%	4380	
	R7	LKD	28.63	20.99	862	17.02	81%	200	50%	50%	4380	
	R8	Bedroom	11.52	7.66	236	7.66	100%	100	50%	50%	4380	
	R9	Bedroom	11.42	7.64	419	7.64	100%	100	50%	50%	4380	
	R10	Bedroom	16.02	11.21	338	11.21	100%	100	50%	50%	4380	
	R11	Bedroom	8.03	4.86	419	4.86	100%	100	50%	50%	4380	
	R12	LKD	27.13	20.23	460	18.19	90%	200	50%	50%	4380	
	R13	Bedroom	8.87	5.53	273	5.53	100%	100	50%	50%	4380	
	R14	Bedroom	13.15	9.09	413	9.09	100%	100	50%	50%	4380	
	R15	LKD	20.52	15.29	530	15.29	100%	200	50%	50%	4380	
	R16	Bedroom	15.19	10.73	296	10.73	100%	100	50%	50%	4380	
	R17	LKD	21.23	15.86	530	15.86	100%	200	50%	50%	4380	
	R18	Bedroom	13.75	9.46	279	9.46	100%	100	50%	50%	4380	
	R19	LKD	20.74	15.60	555	15.60	100%	200	50%	50%	4380	
	R20	Bedroom	15.00				100%	100	50%	50%		
				10.57	286	10.57					4380	
	R21	LKD	20.98	15.66	527	15.66	100%	200	50%	50%	4380	
	R22	LKD	23.79	17.95	941	17.95	100%	200	50%	50%	4380	
	R23	Bedroom	11.52	7.62	504	7.62	100%	100	50%	50%	4380	
	R24	LKD	26.98	20.23	510	20.23	100%	200	50%	50%	4380	

### APPENDIX C SUNLIGHT EXPOSURE TABLE

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligi Exposure (Hours
		PLOT	01		
Gnd Floor	R1	LKD	W1	90°N	3.6
			W2	90°N	3
			W3	90°N	4.2
			W4	90°N	2.7
			W5	90°N	4.2
			W6	90°N	1.9
			W7	90°N	1.9
			W8	270°N	4.1
			W9	270°N	3.9
			W10	0°N	0
					8.3
1st Floor	R1	Bedroom	W1	90°N	3.4
					3.4
1st Floor	R2	Bedroom	W2	90°N	4.1
			W3	180°	0
					4.1
1st Floor	R3	Bedroom	W4	180°	0
			W5	270°N	4
			W6	270°N	3.9
			W7	270°N	4.1
			W8	270°N	3.9
					4.1
		PLOT	02		
Gnd Floor	R1	LKD	W1	90°N	3.5
			W2	90°N	3.5
			W3	90°N	3.8
			W4	90°N	3.8
			W5	90°N	3.6
			W6	90°N	3.7
			W7	90°N	3.5
			W8	180°	4.3
			W9	270°N	3.7
			W10	270°N	4.4
					8.9
1st Floor	R1	Bedroom	W1	0°N	0
			W5	270°N	3.7
			W6	270°N	4
			W7	270°N	3.7

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hou
			W8	270°N	4.3
					4.3
1st Floor	R2	Bedroom	W2	0°N	0
			W3	90°N	3.9
=					3.9
1st Floor	R3	Bedroom	W4	90°N	3.9
					3.9
		PLOT (	<b>)3-14</b>		
Gnd Floor	R1	LKD	W1	360°N	0
			W2	360°N	0
			W30	180°	9.4
			W31	180°	9.4
			W32	269°	3.8
			W33	269°	4.2
			W34	269°	4.2
					9.5
Gnd Floor	R2	Bedroom	W3	315°N	0.5
			W4	315°N	0
					0.5
Gnd Floor	R3	Bedroom	W5	315°N	1
			W6	315°N	1.2
0 151				2.500	1.2
Gnd Floor	R4	LKD	W7	269°	2.4
			W8	269°	2.5
			W9	360°N	0
			W10	360°N	0
			W11	360°N	0
			W12	90°N	4.1
			W13	90°N	3.9 6.5
Gnd Floor	R5	LKD	W14	90°N	3.2
GHU FIOOI	СЛ	LND	W15	90 N 90°N	2.1
			W16	90°N	2.1
			W17	90°N	3
			W18	90°N	3.5
			W19	90°N	3.6
			25	30	3.6
Gnd Floor	R6	Bedroom	W20	135°	6.3
			W21	135°	6.4
					6.4
Gnd Floor	R7	Bedroom	W22	135°	6.4

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours
			W23	135°	6.4
					6.4
Gnd Floor	R8	LKD	W24	180°	9.3
			W25	180°	5.8
			W26	180°	9.4
			W27	180°	9.5
			W28	180°	9.5
			W29	180°	7.7
					9.5
1st Floor	R1	LKD	W1	360°N	0
			W2	360°N	0
			W30	270°	4
			W31	270°	4
			W32	269°	4
			W33	269°	4.2
			W34	269°	2.8
					4.2
1st Floor	R2	Bedroom	W3	315°N	0.5
			W4	315°N	0
					0.5
1st Floor	R3	Bedroom	W5	315°N	1.2
			W6	315°N	1.2
					1.2
1st Floor	R4	LKD	W7	269°	2.7
			W8	269°	2.8
			W9	360°N	0
			W10	360°N	0
			W11	360°N	0
			W12	360°N	0
			W13	360°N	0
4-1-51-	55	145	1414.4	00011	2.8
1st Floor	R5	LKD	W14	90°N	3.7
			W15	90°N	2.6
			W16	90°N	2.7
			W17	90°N	3.6
			W18	90°N	3.9
			W19	90°N	3.9
4 - 1 5	5.0	D 1	14/26	4250	4
1st Floor	R6	Bedroom	W20	135°	6.4
			W21	135°	6.4
4 . = .					6.4
1st Floor	R7	Bedroom	W22	135°	6.4
			W23	135°	6.4

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours)
					6.4
1st Floor	R8	LKD	W24	180°	8.8
			W25	180°	5.9
			W26	180°	8.8
			W27	180°	8.9
			W28	180°	8.9
			W29	180°	7.7
					9.5
2nd Floor	R1	LKD	W1	360°N	0
			W2	360°N	0
			W28	270°	4
			W29	270°	4
			W30	269°	4
			W31	269°	4.2
			W32	269°	4.2
					4.2
2nd Floor	R2	Bedroom	W3	315°N	0.7
			W4	315°N	1.2
					1.2
2nd Floor	R3	Bedroom	W5	315°N	1.2
			W6	315°N	1.2
					1.2
2nd Floor	R4	LKD	W7	269°	3.4
			W8	269°	4
			W9	360°N	0
			W10	360°N	0
			W11	360°N	0
			W12	360°N	0
			W13	360°N	0
					4
2nd Floor	R5	LKD	W14	90°N	4.2
			W15	90°N	4.2
			W16	90°N	4
			W17	90°N	3.9
			W18	90°N	3.9
					4.2
2nd Floor	R6	Bedroom	W19	135°	6.4
			W20	135°	6.4
					6.4
2nd Floor	R7	Bedroom	W21	135°	6.4
			W22	135°	6.4
					6.4
2nd Floor	R8	LKD	W23	180°	9.3

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
			W24	180°	9.3
			W25	180°	9.5
			W26	180°	9.5
			W27	180°	9.5
					9.5
		PLOT 1	15-16		
Gnd Floor	R1	Bedroom	W1	0°N	0
					0
Gnd Floor	R2	Bedroom	W2	0°N	0
					0
Gnd Floor	R3	LKD	W3	180°	7.5
			W4	180°	7.2
			W5	180° 180° 180°	7.4
			W6		7
			W7		7.2
					7.5
1st Floor	R1	LKD	W1	0°N 0°N	0
			W2		0
					0
1st Floor	R2	Bedroom	W3		9.5
			W4	90° Hz 180°	8.5
4 . =1			=	27001	9.5
1st Floor	R3	Bedroom	W5	270°N	1.9
		PLOT 1	17-18		1.9
Gnd Floor	R1	Bedroom	W1	0°N	0
					0
Gnd Floor	R2	Bedroom	W2	0°N	0
					0
Gnd Floor	R3	LKD	W3	180°	8
			W4	180°	8.2
			W5	180°	8
			W6	180°	8.2
			W7	180°	8
					8.3
1st Floor	R1	LKD	W1	0°N	0
			W2	0°N	0
			W3	0°N	0
			W4	0°N	0

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours
			W5	0°N	0
			W6	0°N	0
					0
1st Floor	R2	Bedroom	W7	90°N	4.2
					4.2
1st Floor	R3	Bedroom	W8	180°	8.8
			W9	90° Hz	9.5
					9.5
		PLOT 1	19-20		
Gnd Floor	R1	LKD	W1	90°N	4.2
			W2	90°N	4.2
			W3	90°N	3.8
			W4	90°N	3.1
			W5	90°N	3.1
				90°N	4.2
Gnd Floor	R2	Bedroom	W6 270°N	4	
					4
Gnd Floor	R3	Bedroom	W7	270°N	4
					4
1st Floor	R1	Bedroom	W1		9.4
			W2	90°N	3.9
					9.5
1st Floor	R2	Bedroom	W3	180°	9.5
					9.5
1st Floor	R3	LKD	W4	270°N	3.7
			W5	270°N	4
			W6	270°N	3.7
			W7 W8	270°N 270°N	4.3
			W9	270 N 270°N	4 4
			VV9	270 N	4.3
					4.5
		PLOT 2	21-22		
Gnd Floor	R1	LKD	W1	90°N	4.2
			W2	90°N	3.8
			W3	90°N	4.2
			W4	90°N	3.8
			W5	90°N	3.3
					4.2
Gnd Floor	R2	Bedroom	W6	270°N	4

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
					4
Gnd Floor	R3	Bedroom	W7	270°N	4
					4
1st Floor	R1	Bedroom	W1	90° Hz	9.5
			W2	90°N	4.2
=1					9.5
1st Floor		W3	90°N	4.1	
			W4	90° Hz	9.5
1 at 5 a a a	D2	LKD	\A/F	270°N	9.5
1st Floor	R3	LKD	W5	270°N	4.3
			W6	270°N	4
					4.3
		PLOT 2	23-24		
Gnd Floor	R1	LKD	W1	90°N	4.2
C.14 1 100.		LIND	W2	90°N	4.2
			W3	90°N	4.2
			W4	90°N	4.2
			W5	90°N	4
					4.2
Gnd Floor	R2	Bedroom	W6	270°	4
					4
Gnd Floor	R3	Bedroom	W7	270°	4
					4
1st Floor	R1	Bedroom	W1	90° Hz	9.4
			W2	90°N	4.2
					9.5
1st Floor	R2	Bedroom	W3	90°N	3.9
			W4	90° Hz	9.4
					9.5
1st Floor	R3	LKD	W5	270°	4
			W6	270°	4
			W7	270°	3.7
			W8	270°	3.7
			W9	270°	4
			W10	270°	4.3
					4.3
		PLOT 2	25-26		
Gnd Floor	R1	Bedroom	W1	270°	3.6
3.14 1 1001	11.	200100111	** -	2,0	3.6

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hou
Gnd Floor	R2	Bedroom	W2	270°	3
					3
Gnd Floor	R3	LKD	W3	90°N	4.2
			W4	90°N	4.2
			W5	90°N	3.8
			W6	90°N	3.1
			W7	90°N	3.1
					4.2
1st Floor	R1	Bedroom	W1	90° Hz	9.5
			W6	90°N	3.7
		9.5			
1st Floor	R2	LKD	W2	270°	4.3
V	W3	270°	4.3		
					4.3
1st Floor R3 Bedroom	W4	90° Hz	9.5		
	W5 90°N	90°N	3.5		
					9.5
3114 1 1001	NI.	Beardonn	***	270	4
Gnd Floor	R1	Bedroom	W1	270°	4
Gnd Floor	R2	Bedroom	W2	270°	4
0.14 1.1001		Beardonn	***2	2.0	4
Gnd Floor	R3	LKD	W3	90°N	4.2
			W4	90°N	3.8
			W5	90°N	4.2
			W6	90°N	3.8
			W7	90°N	3.3
					4.2
1st Floor	R1	Bedroom	W1	90° Hz	4.2 9.4
1st Floor	R1	Bedroom	W1 W9	90° Hz 90°N	
1st Floor	R1	Bedroom			9.4
1st Floor 1st Floor	R1 R2	Bedroom LKD			9.4 3.1
			W9	90°N	9.4 3.1 9.5
			W9	90°N 270°	9.4 3.1 9.5 4
			W9 W2 W3	90°N 270° 270°	9.4 3.1 9.5 4 4
			W9 W2 W3 W4	90°N 270° 270° 270°	9.4 3.1 9.5 4 4 3.7
			W2 W3 W4 W5	90°N 270° 270° 270° 270°	9.4 3.1 9.5 4 4 3.7 3.7
1st Floor			W9 W2 W3 W4 W5 W6	90°N  270° 270° 270° 270° 270° 270°	9.4 3.1 9.5 4 4 3.7 3.7
			W9 W2 W3 W4 W5 W6	90°N 270° 270° 270° 270° 270°	9.4 3.1 9.5 4 4 3.7 3.7 4 4.3

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours)
		LISTED	BARN		
Gnd Floor	R1	LKD	W1	96°	3.8
			W2	96°	4.1
			W3	7°N	0
			W4	7°N	0
					4.1
Gnd Floor	R2	Bedroom	W5	7°N	0
			W6	7°N	0
			W7	7°N	0
					0
Gnd Floor	R3	Bedroom	W8	277°N	0.7
			W9	277°N	0.7
			W10	277°N	0.7
					0.7
Gnd Floor	R4	LKD	W11	269°	3.8
			W12	184°	7.5
			W13	96°	0.5
			W14	96°	0.9
			W15	275°N	2.8
			W16	184°	7.5
			W17	188°	5
					7.7
1st Floor	R1	Bedroom	W1	92°	3.1
			W2	92°	3
			W3	9°N	0
			W4	9°N	0
					3.1
		LISTED FAR	MHOUSE		
Gnd Floor	R1	LKD	W1	269°	3.1
			W2	177°	6.2
					7.7
Gnd Floor	R2	LKD	W3	178°	5.2
			W4	88°N	2.1
			W5	88°N	1.3
					5.3
Gnd Floor	R3	Bedroom	W6	87°N	3.3
			W7	359°N	0
					3.3
Gnd Floor	R4	LKD	W8	269°	3
			W9	179°	6.4

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours
					7.8
1st Floor	R1	Bedroom	W1	269°	1
			W2	177°	6.1
					7
1st Floor	R2	Bedroom	W3	177°	0
			W4	90°N	3.8
					3.8
1st Floor	R3	Bedroom	W5	359°N	0
			W6	179°	8.6
					8.6
		PLOT 3	32-72		
Gnd Floor	R1	Bedroom	W1	270°	2.8
G.1.4 1.100.			W2	270°	2.1
					2.9
Gnd Floor	R2	LKD	W3	270°	2.6
			W4	270°	2.6
			W5	180°	8.6
			W6	180°	9.5
			W7	180°	8.8
			W8	180°	7.7
			W9	180°	6.2
					9.5
Gnd Floor	R3	Bedroom	W10	180°	7.7
			W11	180°	7.7
					7.7
Gnd Floor	R4	Bedroom	W12	180°	8.5
			W13	180°	9.4
			W14	180°	7.7
					9.4
Gnd Floor	R5	Bedroom	W15	180°	6.5
			W16	180°	9.4
			W17	180°	7.6
					9.5
Gnd Floor	R6	Bedroom	W18	180°	8.6
			W19	180°	9.5
			W20	180°	8.8
					9.5
Gnd Floor	R7	Bedroom	W21	90°N	3.4
			W22	90°N	3.4
					3.4
Gnd Floor	R8	LKD	W23	180°	5.6

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours)
			W24	180°	6.1
			W25	180°	5.7
			W26	90°N	2.4
			W27	90°N	2.4
			W28	90°N	2.6
					6.6
Gnd Floor	R9	Bedroom	W29	180°	3.9
			W30	180°	3.9
					3.9
Gnd Floor	R10	Bedroom	W31	180°	4.5
			W32	180°	5.4
			W33	180°	4.3
					5.6
Gnd Floor	R11	Bedroom	W34	180°	5.2
			W35	180°	2.7
					5.3
Gnd Floor	R12	LKD	W36	180°	6.7
			W37	180°	6.9
			W38	180°	6.4
			W39	90°N	2.8
					7.1
Gnd Floor	R13	LKD	W40	180°	8.1
			W41	180°	8.2
			W42	180°	7.6
					8.3
Gnd Floor	R14	Bedroom	W43	180°	6.1
					6.1
Gnd Floor	R15	Bedroom	W44	90°N	4
			W45	90°N	3.5
			W46	90°N	3.8
					4
Gnd Floor	R16	Bedroom	W47	90°N	3.4
			W48	90°N	3.4
					3.4
Gnd Floor	R17	LKD	W49	90°N	3.4
			W50	90°N	3.5
			W51	360°N	0
			W52	360°N	0
			W53	360°N	0
					3.5
Gnd Floor	R18	Bedroom	W54	360°N	0
			W55	360°N	0
					0

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
Gnd Floor	R19	Bedroom	W56	360°N	0
			W57	360°N	0
					0
Gnd Floor	R20	Bedroom	W58	360°N 360°N 360°N 360°N 360°N 360°N 270°  360°N 360°N 360°N 270° 270° 270° 270° 270° 270° 270°	0
			W59	360°N	0
			W60	360°N	0
					0
Gnd Floor	R21	LKD	W61	360°N	0
			W62	360°N	0
			W63	360°N	0
			W64	270°	0.6
					0.6
Gnd Floor	R22	LKD	W65	360°N 360°N 360°N 360°N 270°	0
			W66		0
			W67		0
			W68		0
			W69	360°N	0
			W70	270°	3.8
			W71	270°	3.4
			W72	270°	3.3
			W73	270°	3.1
					3.8
Gnd Floor	R23	Bedroom	W74	270°	2.3
			W75	270°	1.8
			W76	270°	1.2
				360°N 360°N 360°N 270° 360°N 360°N 360°N 270° 270° 270° 270° 270° 270° 270°	2.3
Gnd Floor	R24	LKD	W77	360°N 270° 270° 270° 270° 270° 270° 270° 270°	0
			W78	360°N	0
			W79	270°	2.7
			W80	270°	3.3
			W81	270°	2.5
					3.3
1st Floor	R1	Bedroom	W1	270°	2.9
			W2	270°	2.1
					2.9
1st Floor	R2	LKD	W3	270°	2.7
			W4	270°	2.7
			W5	180°	8.6
			W6	180°	9.5
			W7	180°	8.8
			W8	180°	7.7
			W9	180°	6.2
					9.5

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours
1st Floor	R3	Bedroom	W10	180°	7.7
			W11	180°	7.7
					7.7
1st Floor	R4	Bedroom	W12	180°	9.4
			W13	180°	8.5
			W14	180°	7.7
					9.4
1st Floor	R5	Bedroom	W15	180°	6.5
			W16	180°	9.4
			W17	180°	7.6
					9.5
1st Floor	R6	LKD	W18	180°	8.6
			W19	180°	9.5
			W20	180°	8.8
			W21	90°N	3.4
			W22	90°N 90°N	3.4
					9.5
1st Floor	R7	LKD	W23	90°N 180° 180° 180°	5.6
			W24	180°	6.2
			W25	180°	5.7
			W26	90°N	2.7
			W27	90°N	2.7
			W28	90°N	2.9
			W29	90°N	2
					6.6
1st Floor	R8	Bedroom	W30	90°N	3.4
			W31	90°N	3.4
					3.4
1st Floor	R9	Bedroom	W32	180°	4.6
		-	W33	180°	5
			W34	180°	3.7
					5.3
1st Floor	R10	Bedroom	W35	180°	5.8
		-	W36	180°	5
			W37	180°	4.9
			-		6.1
1st Floor	R11	Bedroom	W38	180°	5.9
<del></del>			W39	180°	3.3
					5.9
1st Floor	R12	LKD	W40	180°	7.3
	<del></del>		W41	180°	7.4
			W42	180°	6.9
			W43	90°N	3

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours)
					7.6
1st Floor	R13	Bedroom	W44	180°	3
			W45	180°	3.6
					3.6
1st Floor	R14	LKD	W46	180°	8.5
			W47	180°	8.6
			W48	180°	8
					8.7
1st Floor	R15	Bedroom	W49	180°	7.7
					7.7
1st Floor	R16	Bedroom	W50	45°N	1.5
					1.5
1st Floor	R17	Bedroom	W51	45°N	1.5
					1.5
1st Floor	R18	LKD	W52	360°N	0
			W53	360°N	0
			W54	360°N	0
					0
1st Floor	R19	Bedroom	W55	360°N	0
			W56	360°N	0
					0
1st Floor	R20	Bedroom	W57	360°N	0
			W58	360°N	0
					0
1st Floor	R21	Bedroom	W59	360°N	0
			W60	360°N	0
			W61	360°N	0
					0
1st Floor	R22	LKD	W62	360°N	0
			W63	360°N	0
			W64	360°N	0
			W65	270°	0
4 : 5!				2.5221	0
1st Floor	R23	Bedroom	W66	360°N	0
			W67	360°N	0
			W68	360°N	0
1 at El	D2.4	145	W.CC	26001	0
1st Floor	R24	LKD	W69	360°N	0
			W70	360°N	0
			W71	360°N	0
			W72	270°	0.1
1st Floor	R25	Bedroom	W73	360°N	0.1

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
			W74	360°N	0
			W75	360°N	0
					0
1st Floor	R26	LKD	W76	360°N 360°N 360°N 360°N 270°  360°N 360°N 360°N 360°N 360°N 360°N 360°N 360°N 360°N 370°  270° 270° 270° 270° 270°	0
			W77	360°N	0
			W78	360°N	0
			W79	270°	0.1
					0.1
1st Floor	R27	Bedroom	W80	360°N	0
			W81	360°N	0
			W82	360°N	0
					0
1st Floor	R28	LKD	W83	360°N	0
			W84	360°N	0
			W85	360°N	0
			W86	360°N 270° 360°N 360°N	0.6
					0.6
1st Floor	R29	LKD	W87	270° 360°N 360°N	0
			W88	360°N	0
			W89	360°N	0
			W90	360°N	0
			W91	360°N	0
			W92	270°	4
			W93	270°	3.4
			W94	270°	3.3
			W95	270°	3.1
					4
1st Floor	R30	Bedroom	W96	270°	1.8
			W97	270°	2.3
			W98	270°	1.2
					2.3
1st Floor	R31	LKD	W99	360°N	0
			W100	360°N	0
			W101	270°	2.7
			W102	270°	3.3
			W103	270°	2.5
					3.3
2nd Floor	R1	Bedroom	W1	270°	2.9
			W2	270°	2.1
					2.9
2nd Floor	R2	LKD	W3	270°	2.7
			W4	270°	2.7
			W5	180°	8.6

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
			W6	180°	9.5
			W7	180°	8.8
			W8	180°	7.7
			W9	180°	6.2
					9.5
2nd Floor	R3	Bedroom	W10	180°	7.7
			W11	180°	7.7
					7.7
2nd Floor	R4	Bedroom	W12	180°	9.4
			W13	180°	8.5
			W14	180°	7.7
					9.4
2nd Floor	R5	Bedroom	W15	180° 180° 180° 180°	6.5
			W16		9.4
			W17		7.6
					9.5
2nd Floor	R6	LKD	W18	180°	8.6
			W19		9.5
			W20		8.8
			W21		3.4
			W22		3.4
					9.5
2nd Floor	R7	LKD	W23	180°	5.6
			W24		6.2
			W25		5.7
			W26		2.7
			W27		2.7
			W28		2.9
			W29		2
					6.6
2nd Floor	R8	Bedroom	W30	90°N	3.4
			W31	90°N	3.4
					3.4
2nd Floor	R9	Bedroom	W32	180°	5.2
			W34	180°	5.1
			W35	180°	3.9
				_55	5.5
2nd Floor	R10	Bedroom	W33	180°	6.2
		230.00111	W36	180°	5.3
			W37	180°	5.2
			****	100	6.4
2nd Floor	R11	Bedroom	W38	180°	6
2110 1 1001	IVTT	Beardonn	W39	180°	3.7

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligh Exposure (Hours)
					6.3
2nd Floor	R12	LKD	W40	180°	7.6
			W41	180°	7.7
			W42	180°	7.2
			W43	90°N	3.4
					7.9
2nd Floor	R13	Bedroom	W44	180°	4.5
			W45	180°	4.5
			W46	180°	6
					6
2nd Floor	R14	Bedroom	W47	180°	6.9
			W48	180°	7.2
					7.2
2nd Floor	R15	LKD	W49	360°N	0
			W50	360°N	0
			W51	360°N	0
					0
2nd Floor	R16	Bedroom	W52	360°N	0
			W53	360°N	0
				333	0
2nd Floor	R17	Bedroom	W54	360°N	0
2.10 1.001	1127	Beardonn	W55	360°N	0
				333	0
2nd Floor	R18	Bedroom	W56	360°N	0
21.01.00.	1120	Beardonn	W57	360°N	0
			W58	360°N	0
				300	0
2nd Floor	R19	LKD	W59	360°N	0
2114 1 1001	KIS	LIND	W60	360°N	0
			W61	360°N	0
			W62	270°	0
			VV 02	270	0
2nd Floor	R20	Bedroom	W63	360°N	0
2110 1 1001	NZO	bearoom	W64	360°N	0
			W65	360°N	0
			VVOJ	300 N	0
2nd Floor	R21	LKD	W66	360°N	0
	NΔ1	LND	W67	360°N	
			W68	360°N	0 0
			W69	360 N 270°	
			VVOS	2/0	0.1
2nd Floor	Daa	Dodresses	\A/70	20001	0.1
2nd Floor	R22	Bedroom	W70	360°N	0
			W71	360°N	0

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
			W72	360°N	0
					0
2nd Floor	R23	LKD	W73	360°N	0
			W74	360°N	0
			W75	360°N	0
			W76	270°	0.1
					0.1
2nd Floor	R24	Bedroom	W77	360°N	0
			W78	360°N	0
			W79	360°N	0
					0
2nd Floor	R25	LKD	W80	360°N	0
			W81	360°N	0
			W82	360°N	0
			W83	270°	0.6
					0.6
2nd Floor	R26	LKD	W84	360°N	0
			W85	360°N	0
			W86	360°N	0
			W87	360°N	0
			W88	360°N	0
			W89	270°	4
			W90	270°	3.4
			W91	270°	3.4
			W92	270°	3.4
					4
2nd Floor	R27	Bedroom	W93	270°	1.8
			W94	270°	2.3
			W95	270°	1.2
					2.3
2nd Floor	R28	LKD	W96	360°N	0
			W97	360°N	0
			W98	270°	2.7
			W99	270°	3.3
			W100	270°	2.5
					3.3
4th Floor	R1	Bedroom	W1	270°	3.4
			W2	270°	3.4
					3.4
4th Floor	R2	LKD	W3	270°	4.2
			W4	270°	3.4
			W5	180°	8.6
			W6	180°	9.5

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlig Exposure (Hour
			W7	180°	8.8
			W8	180°	7.7
			W9	180°	7.7
					9.5
4th Floor	R3	Bedroom	W10	180°	7.7
			W11	180°	7.7
					7.7
4th Floor	R4	Bedroom	W12	180°	9.4
			W13	180°	8.8
			W14	180°	7.7
					9.4
4th Floor	R5	Bedroom	W15	180°	9.4
			W16	180°	7.7
			W17	180°	8.8
					9.5
4th Floor	R6	LKD	W18	180°	8.6
			W19	180°	9.5
			W20	180°	8.8
			W21	90°N	3.4
			W22	90°N	3.4
					9.5
4th Floor	R7	LKD	W23	180°	5.9
			W24	180°	6.6
			W25	180°	6.2
			W26	90°N	3.4
			W27	90°N	4.2
			W28	90°N	3.4
			W29	90°N	3.4
					7.1
4th Floor	R8	Bedroom	W30	90°N	3.4
			W31	90°N	3.4
					3.4
4th Floor	R9	Bedroom	W32	180°	5.7
			W34	180°	5.8
			W35	180°	4.8
					6.4
4th Floor	R10	Bedroom	W33	180°	7.3
			W36	180°	7.5
			W37	180°	7.3
					7.9
4th Floor	R11	Bedroom	W38	180°	7.3
			W39	180°	7.7
					7.7

Report Title: Sunlight Exposure Analysis - Proposed Scheme

Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunligi Exposure (Hours
4th Floor	R12	LKD	W40	180°	8.6
			W41	180°	9
			W42	180°	8.5
			W43	90°N	3.4
					9.2
4th Floor	R13	Bedroom	W44	180°	4.6
			W45	180°	4.9
					4.9
4th Floor	R14	Bedroom	W46	360°N	0
			W47	360°N	0
			W48	360°N	0
					0
4th Floor	R15	LKD	W49	360°N	0
			W50	360°N	0
			W51	360°N	0
			W52	270°	0
					0
4th Floor	R16	Bedroom	W53	360°N	0
			W54	360°N	0
			W55	360°N	0
					0
4th Floor	R17	LKD	W56	360°N	0
			W57	360°N	0
			W58	360°N	0
			W59	270°	0.4
					0.4
4th Floor	R18	Bedroom	W60	360°N	0
11111001			W61	360°N	0
			W62	360°N	0
					0
4th Floor	R19	LKD	W63	360°N	0
			W64	360°N	0
			W65	360°N	0
			W66	270°	0.4
					0.4
4th Floor	R20	Bedroom	W67	360°N	0
	-		W68	360°N	0
			W69	360°N	0
					0
4th Floor	R21	LKD	W70	360°N	0
		_,. <u>_</u>	W71	360°N	0
			W72	360°N	0
			W73	270°	0.9

Report Title: Sunlight Exposure Analysis - Proposed Scheme

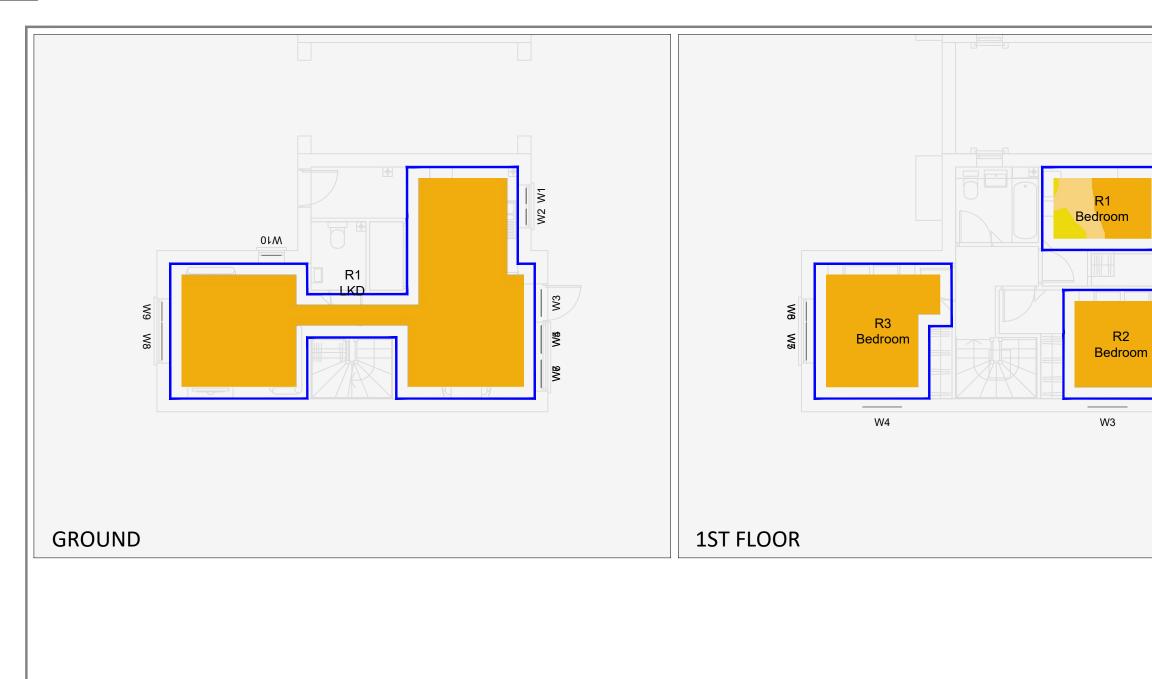
Floor Ref	Room Ref	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
					0.9
4th Floor	R22	LKD	W74	360°N	0
			W75	360°N	0
			W76	360°N	0
			W77	360°N	0
			W78	360°N	0
			W79	270°	4.2
			W80	270°	3.4
			W81	270°	3.4
			W82	270°	3.4
					4.2
4th Floor	R23	Bedroom	W83	270°	2
			W84	270°	2.3
			W85	270°	1.2
					2.3
4th Floor	R24	LKD	W86	360°N	0
			W87	360°N	0
			W88	270°	4.2
			W89	270°	3.3
			W90	270°	2.5
					4.2

### APPENDIX D

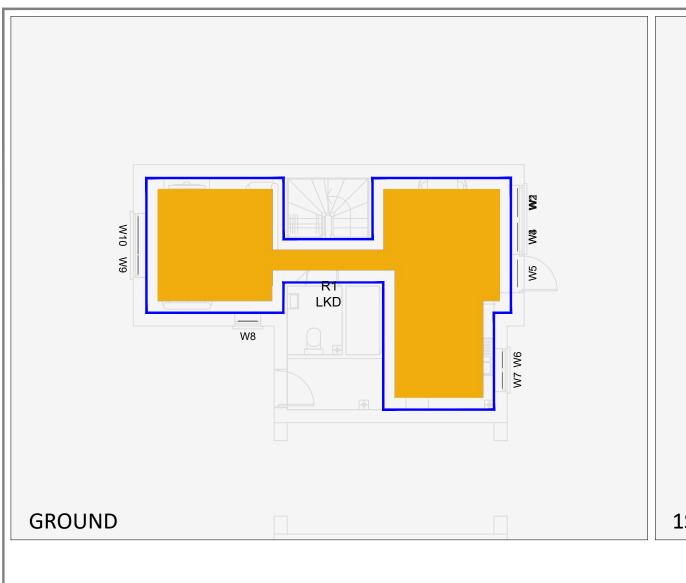
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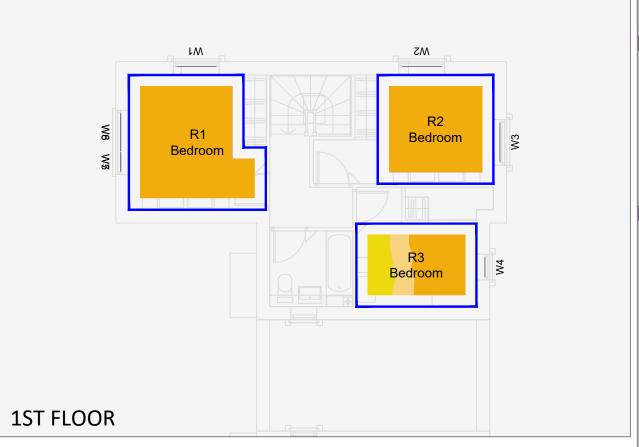
# LAYOUT PLANS WITH DAYLIGHT ILLUMINANCE RESULTS

DRAWING NOS. ROL01027\_R06\_V01\_601-01 TO 613-04



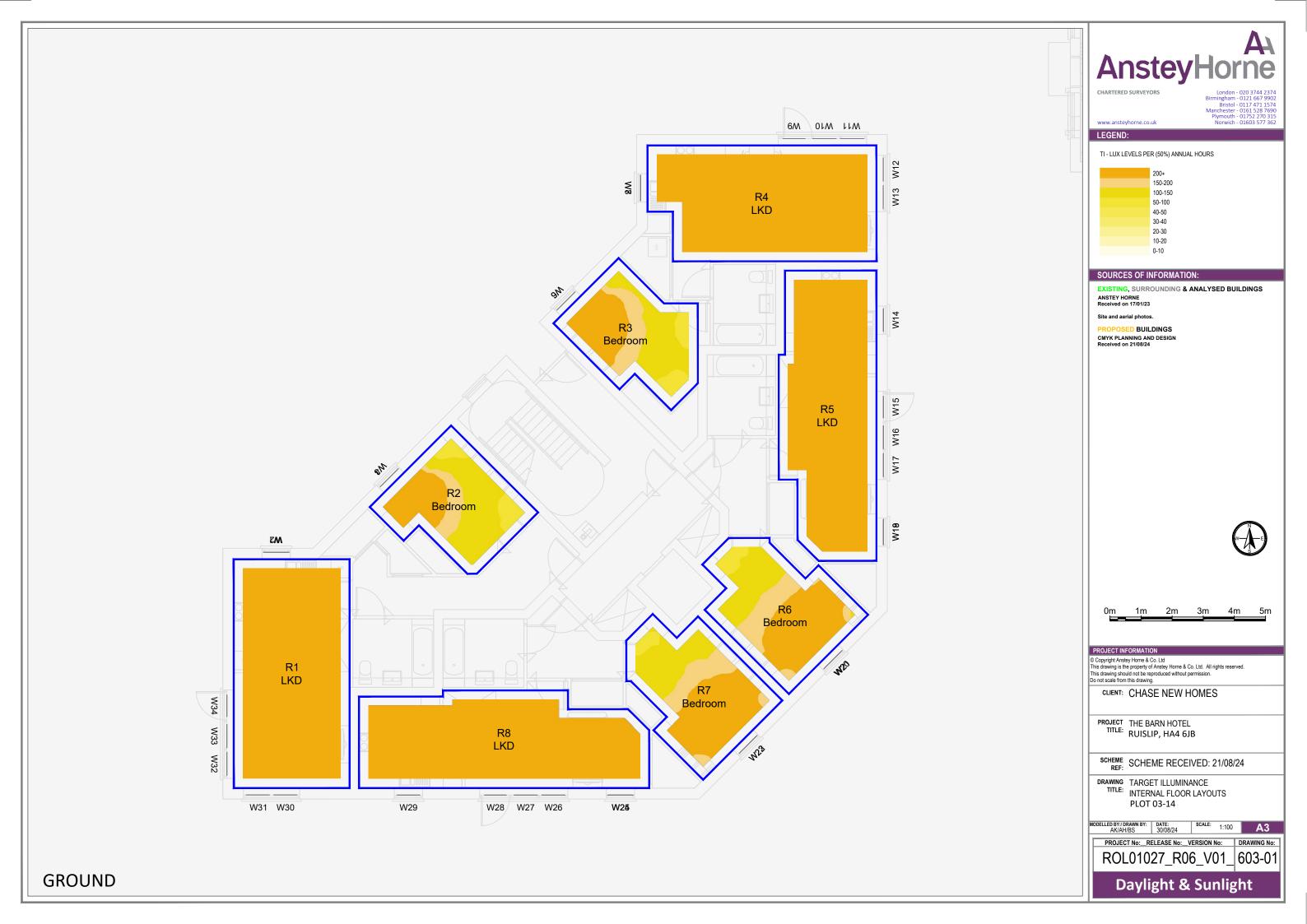




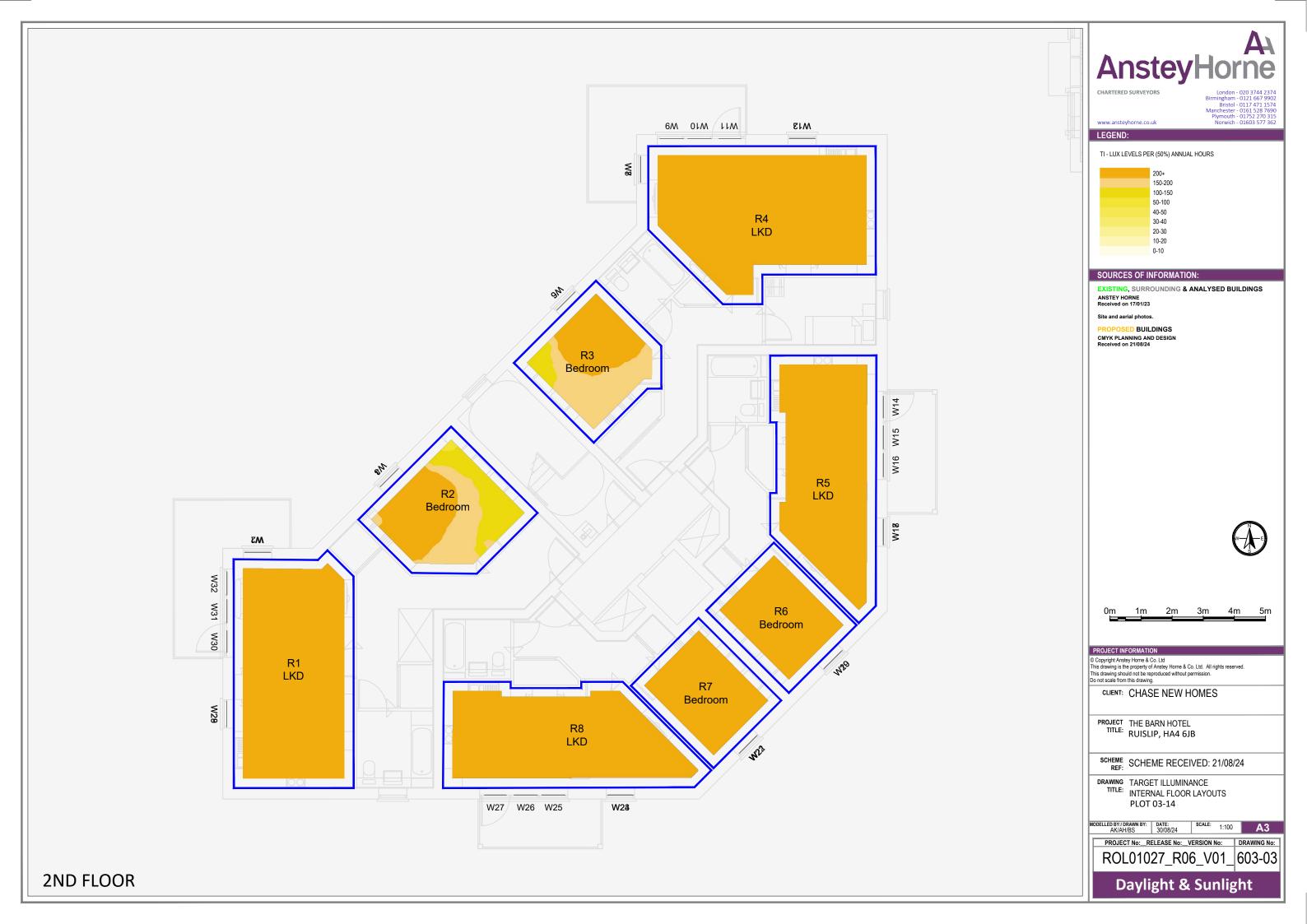




**Daylight & Sunlight** 

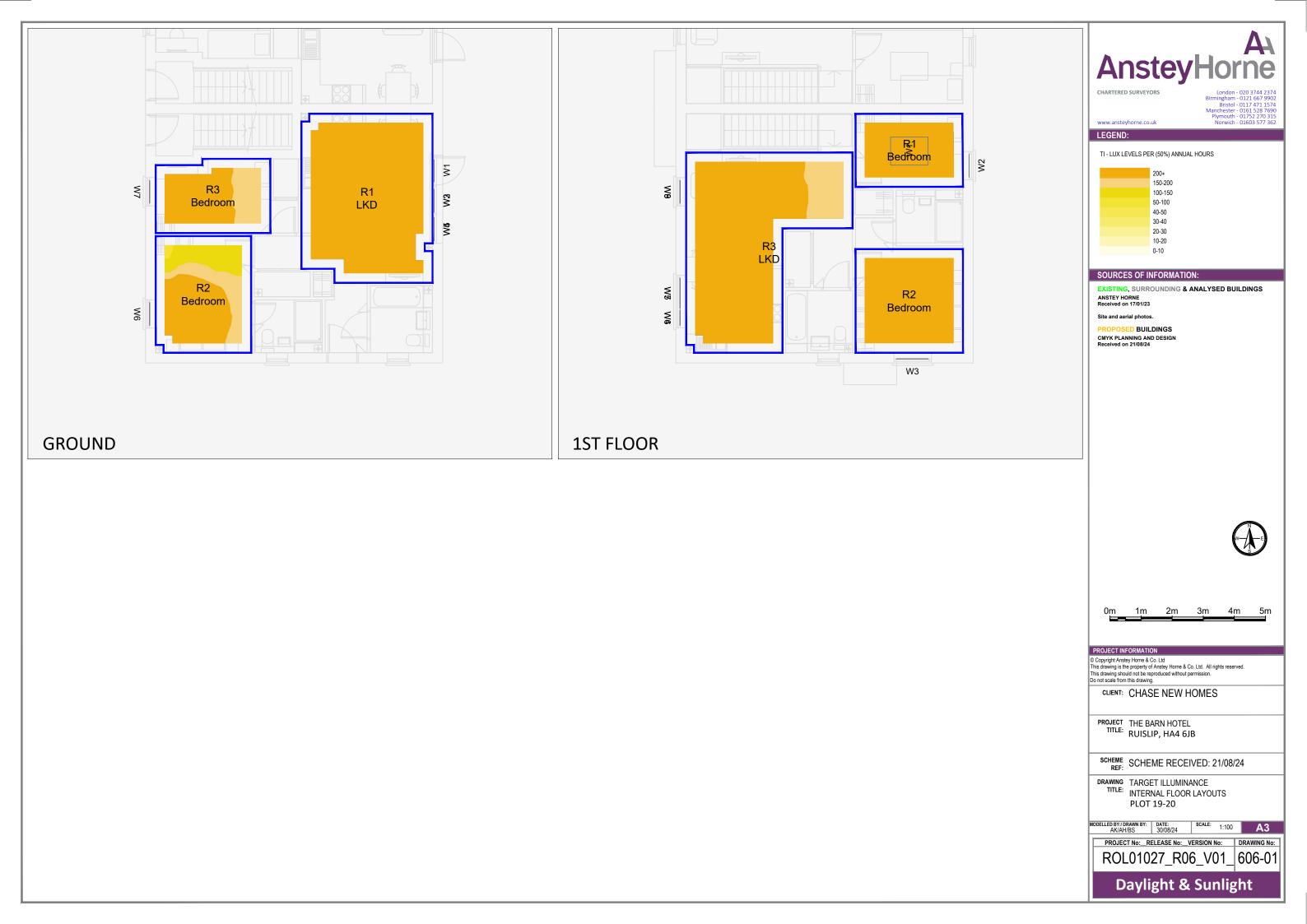


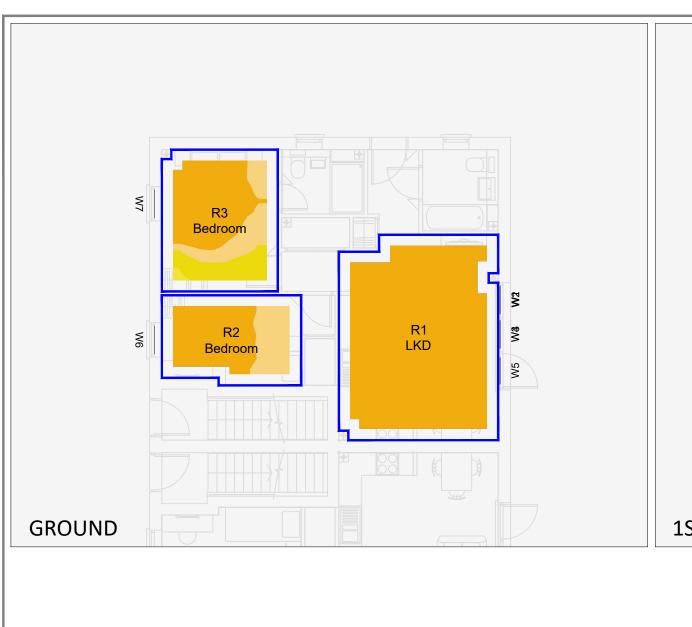


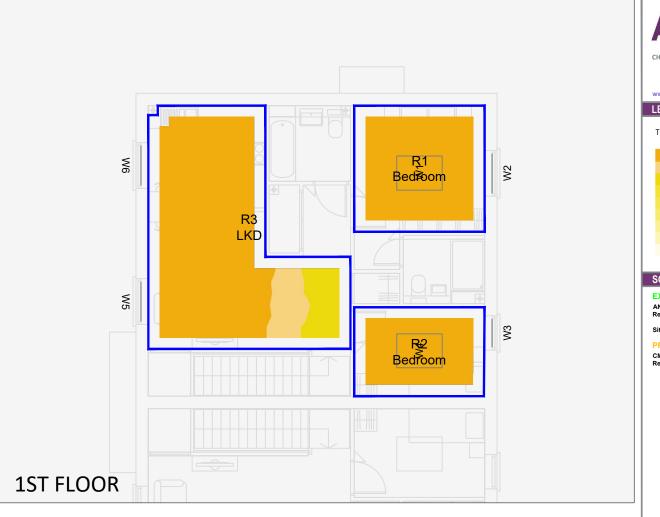


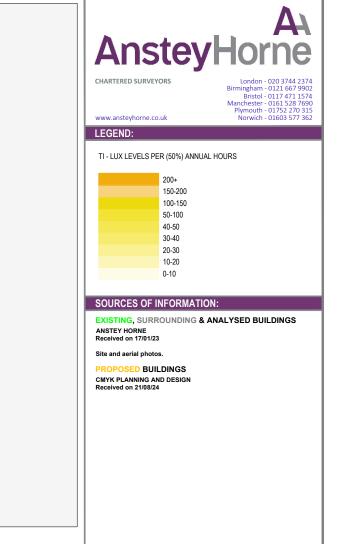
















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CLIENT: CHASE NEW HOMES

PROJECT THE BARN HOTEL
TITLE: RUISLIP, HA4 6JB

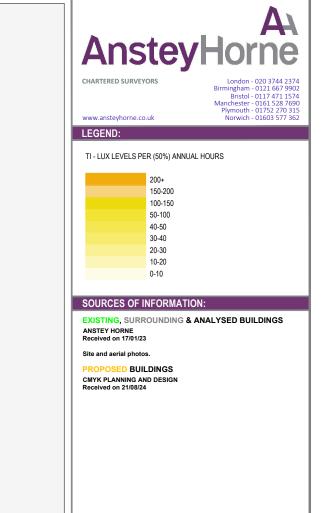
SCHEME RECEIVED: 21/08/24

DRAWING TARGET ILLUMINANCE INTERNAL FLOOR LAYOUTS PLOT 21-22

MODELLED BY:/ DRAWN BY: DATE: SCALE: 1:100 A3 PROJECT No:\_\_RELEASE No:\_\_VERSION No: DRAWING No: ROL01027\_R06\_V01\_ 607-01 Daylight & Sunlight











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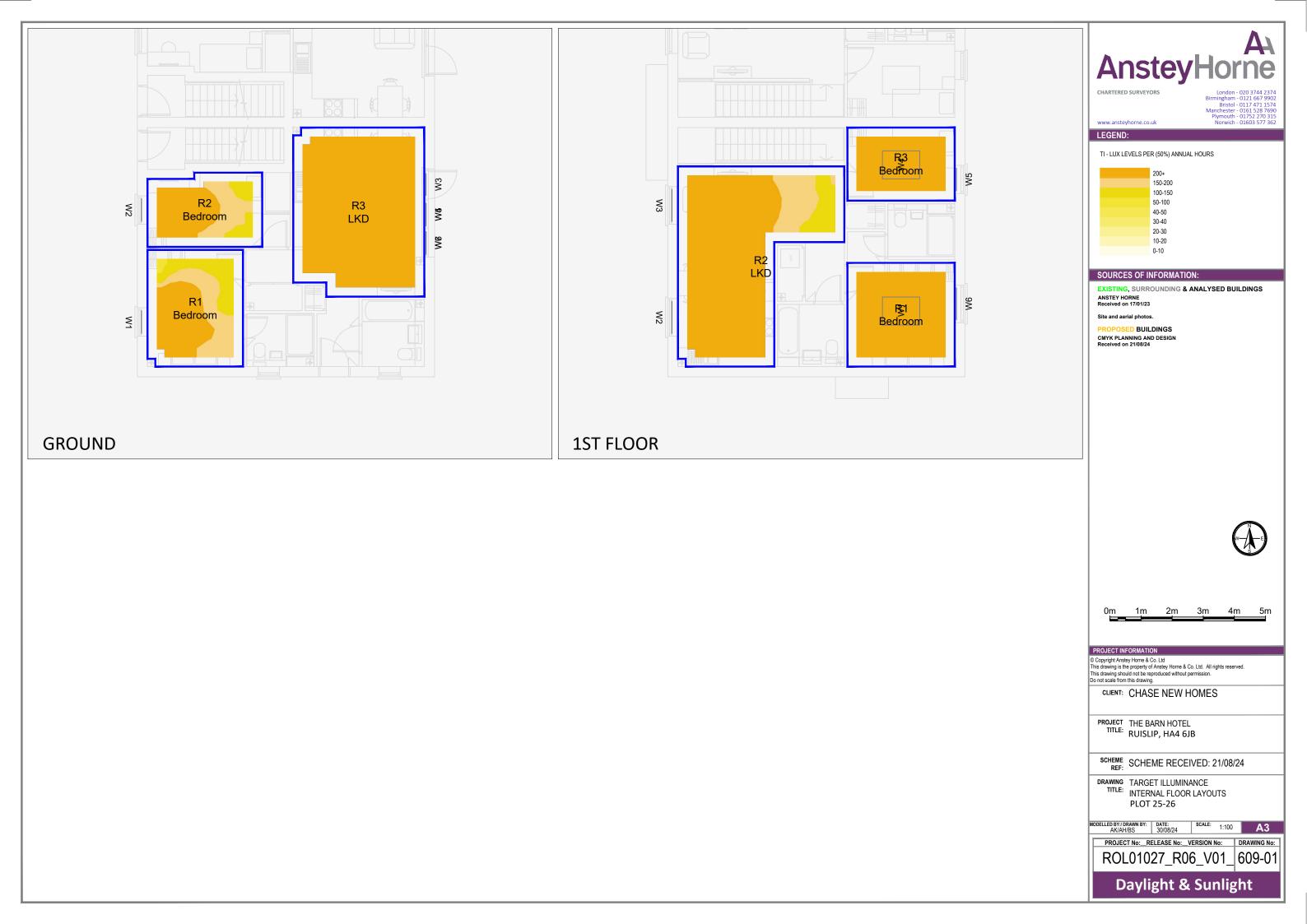
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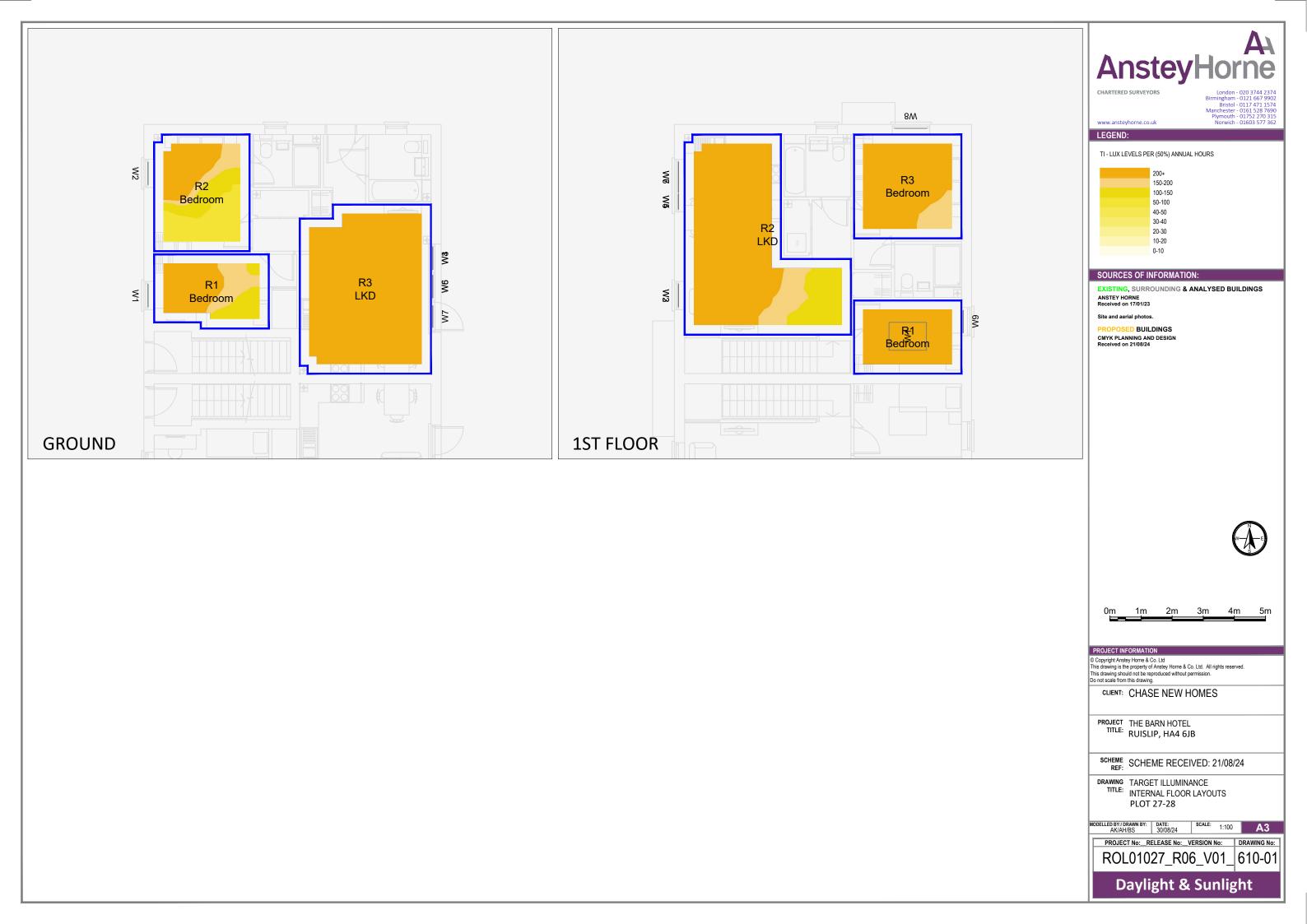
PROJECT THE BARN HOTEL
TITLE: RUISLIP, HA4 6JB

SCHEME RECEIVED: 21/08/24

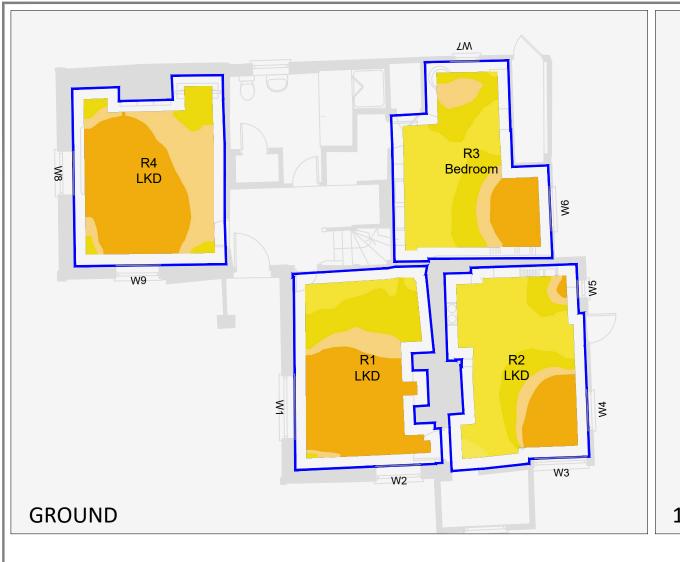
DRAWING
TITLE: TARGET ILLUMINANCE
INTERNAL FLOOR LAYOUTS
PLOT 23-24

Daylight & Sunlight

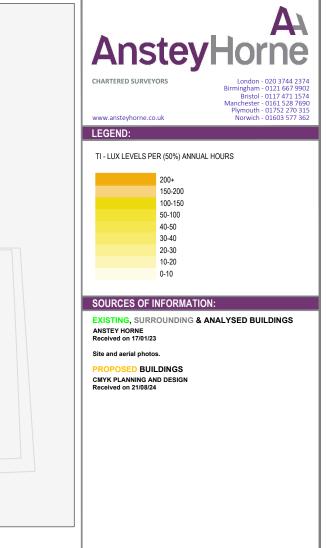
















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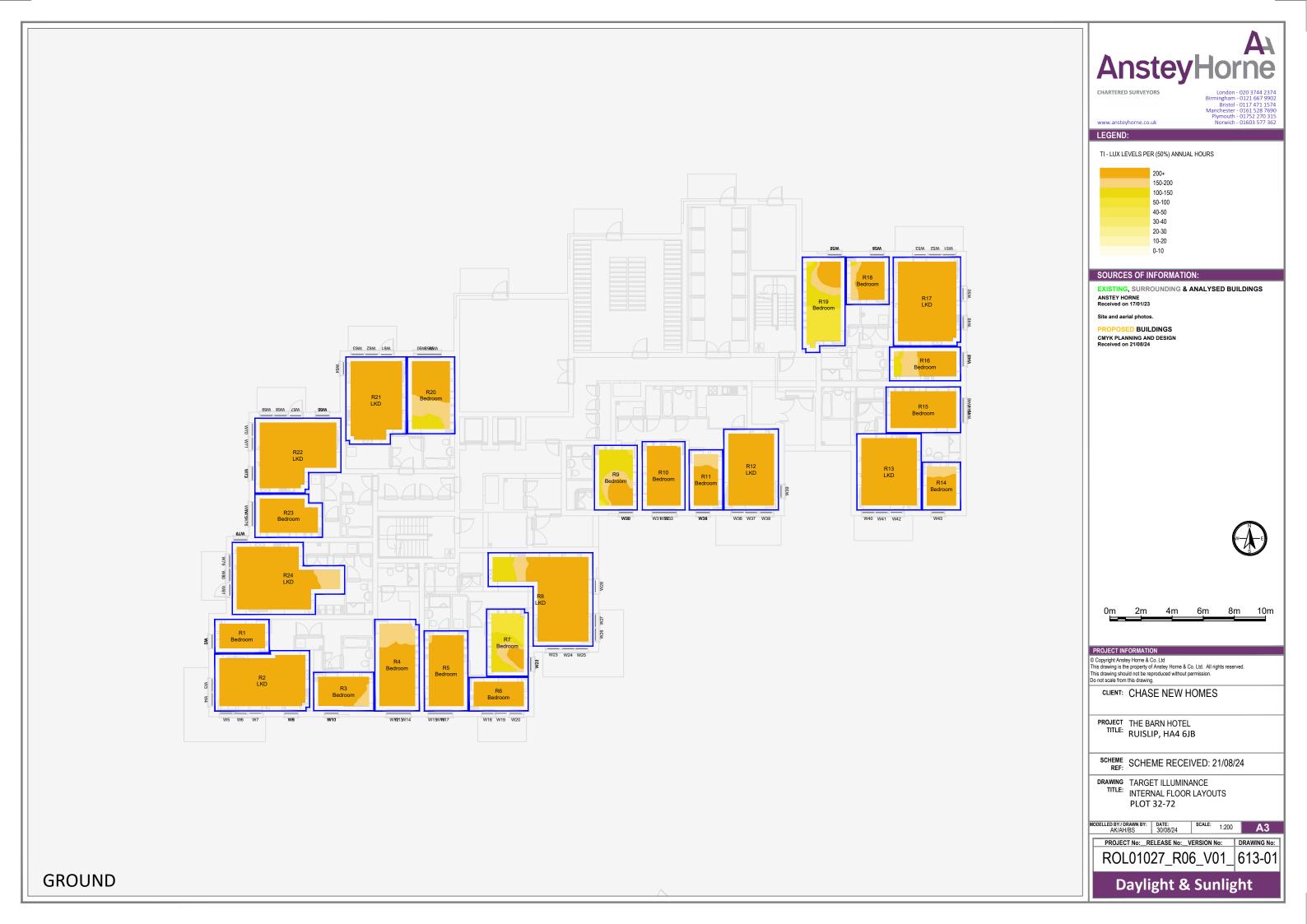
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TITLE: RUISLIP, HA4 6JB

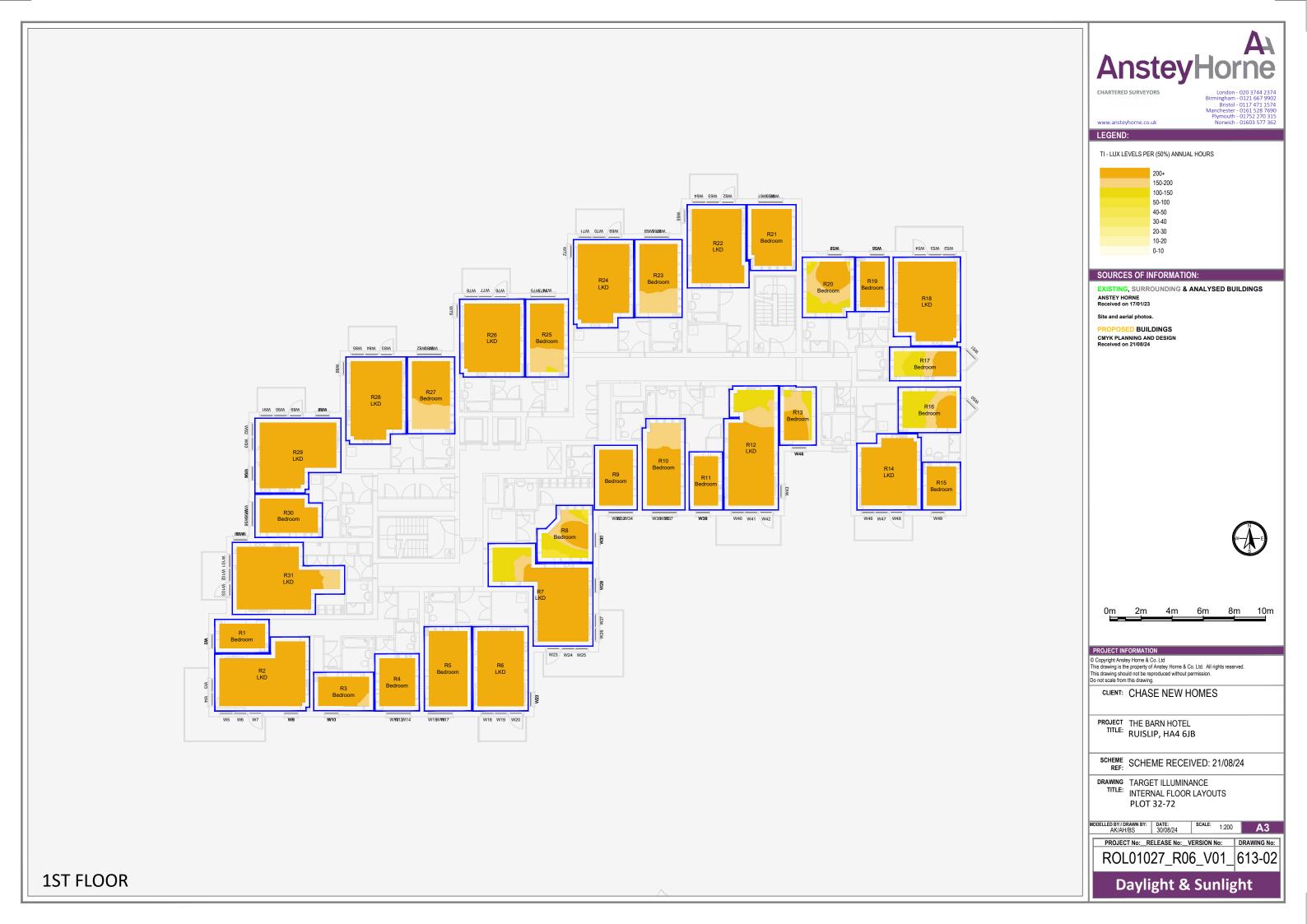
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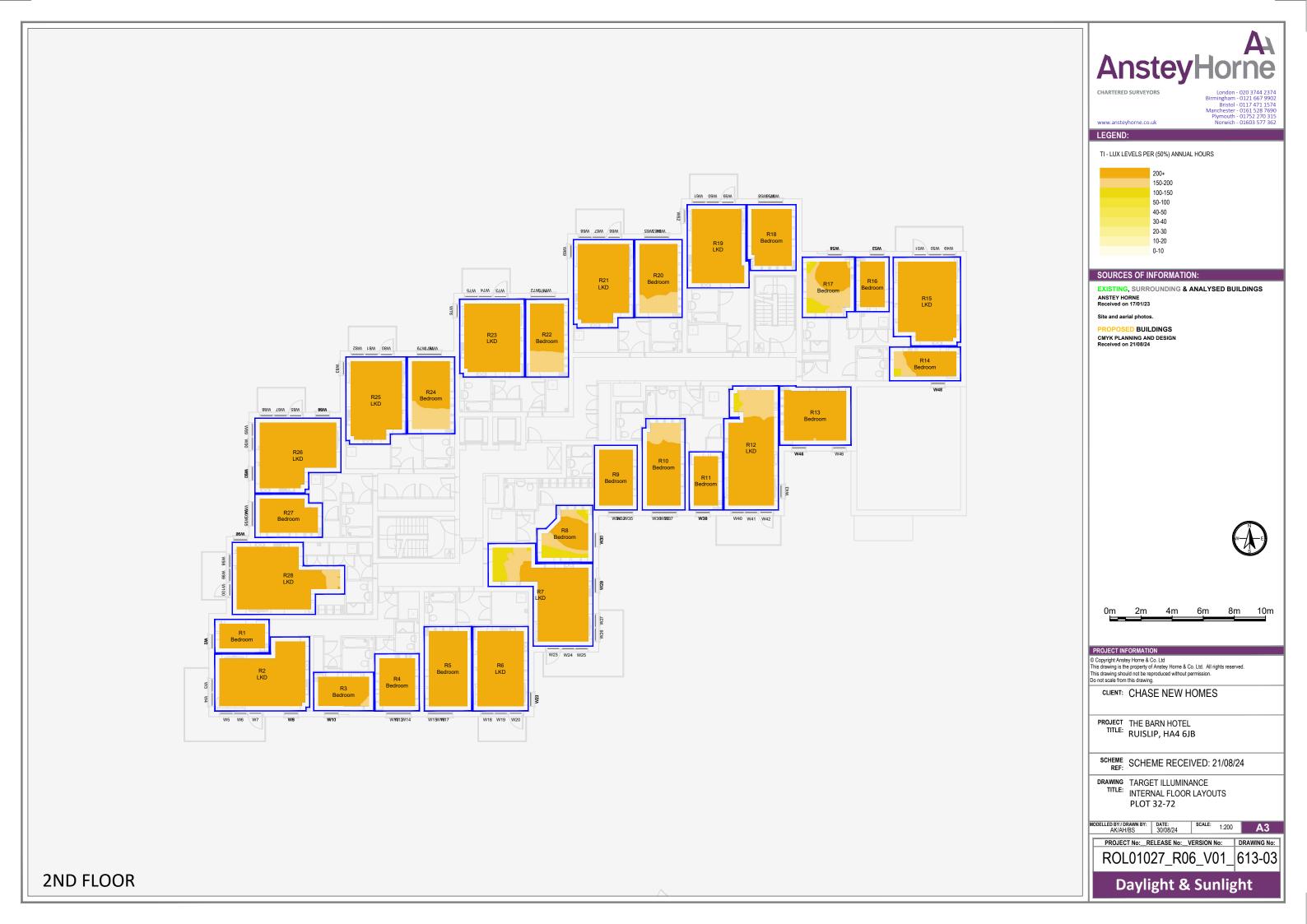
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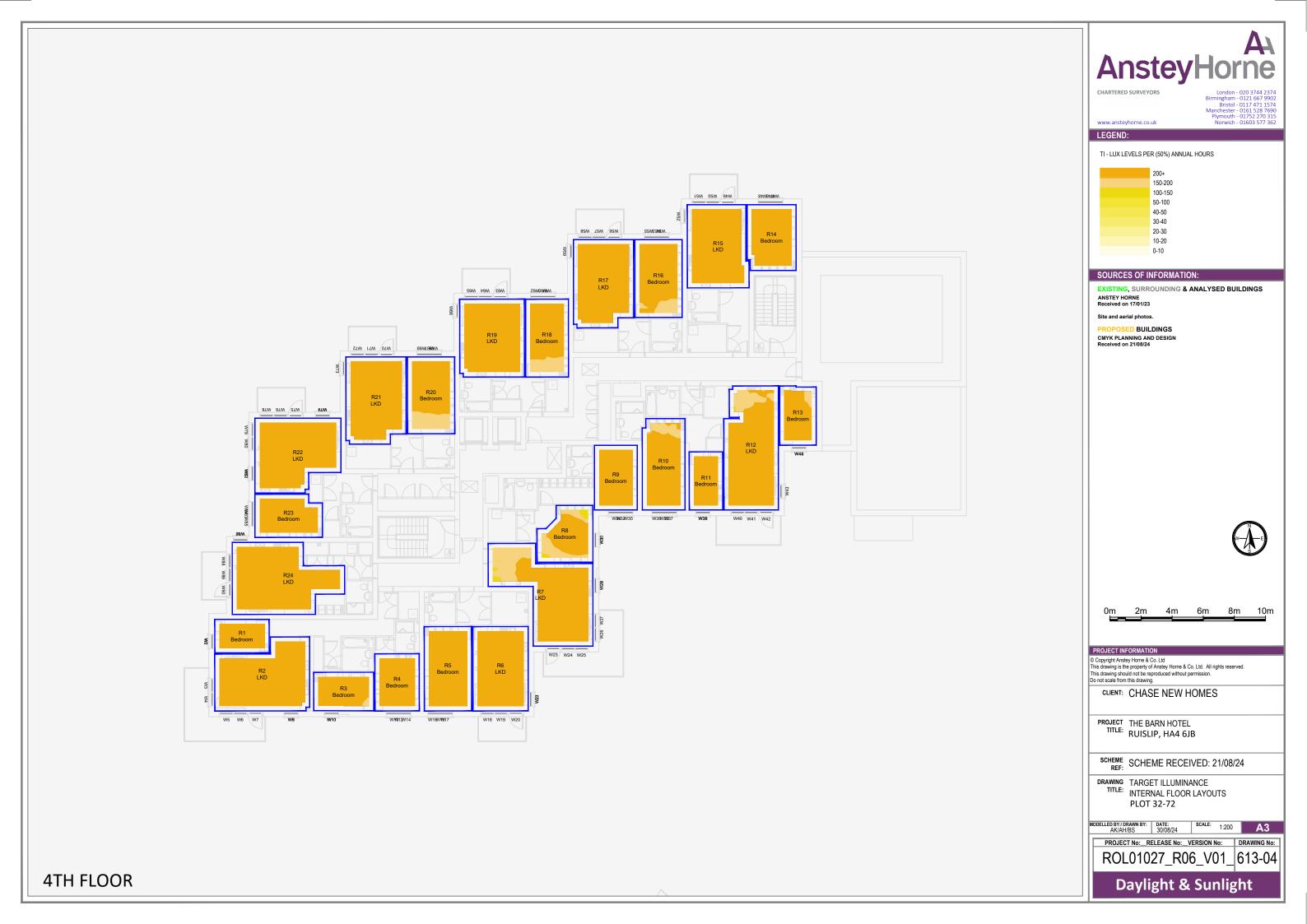
MODELLED BY:/ DRAWN BY: DATE: SCALE: 1:100 A3 PROJECT No:\_\_RELEASE No:\_\_VERSION No: DRAWING No: ROL01027\_R06\_V01\_ 612-01

Daylight & Sunlight









### **APPENDIX E**

## TWO-HOURS SUN CONTOUR PLAN

DRAWING NOS. ROL01027\_R06\_V01\_302-01 TO 302-01







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