Daylight & Sunlight Assessments of a Residential Development at Coolaghknock Glebe, Co. Kildare.

Date: 5th March 2024

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1. Introduction

Permission is sought for a residential development of 89 no. houses, 42 no. duplex units, and all associated works as described in statutory notices.

1.1 Executive Summary

This report assesses the impact of the proposed development for Daylight and Sunlight on the neighbouring buildings and the quality of daylight and sunlight within the proposed development. This analysis is carried out based on the drawings of McCrossan O'Rourke Manning Architects.

1.2 Assessment of Potential Impact to Daylight and Sunlight Availability on Adjacent Properties

There will be minimal reduction to the available daylight and sunlight levels to the adjacent dwellings. There will be no reduction in sunlight to private or communal amenity spaces.

The results find that any impact on the adjacent residential structures would be imperceivable. All areas assessed continue to meet or exceed the recommendations of the BRE guidelines (2022).

1.3 Assessment of the Quality of Daylight and Sunlight within the Proposed Development

The houses and duplex units were designed in line with the recommendations of the BRE guidelines. A number of design iterations were conducted to improve the daylight and sunlight within in the proposed development. The guidelines clearly state that the they are recommendations only and flexibility is required when setting and interpreting the targets.

The BRE Guidelines BR209:2022 recommend assessment methods set out in BS EN 17037 for daylight provision. BS EN 17037 contains a National Annex (NA1) which sets out minimum daylight levels to be achieved in the UK and channel Islands. Ireland has a similar latitude and climate to the UK. The National Annex in BS EN 17037 states that the target values set out in Table A1 may be hard to achieve in the UK and as a result sets alternative minimum values for rooms to dwellings. The minimum illuminance levels set out in BS EN17037:2018+A1:2021 are: Kitchens and living spaces containing a kitchen 200lux (1.3%DF). Living rooms 150lux (1%DF) and bedrooms 100lux (DF0.7%).

1.3.1 Assessment of Daylight in Accordance with BR209:2022 and BS EN 17037:2018+A1:2021.

100% of the Living, Dining, Kitchen and Bedroom spaces within the proposed development achieve the target values set out in BS EN 17037:2018+A1:2021 section NA1. This is the minimum rooms specific values to be achieved in habitable rooms and meets the recommendations of the BRE guidelines.

1.3.2 Sunlight within the Proposed Development

This scheme is well designed for sunlight, with 88.1% of the duplex units meeting the minimum recommended 1.5 direct sunlight hours. This meets the recommendations of the BRE guidelines (2022).

The proposed development has been well designed for sunlight. All public open spaces and the creche amenity exceed 2 hours sunlight over 50% of the amenity space on the 21st March. 110 no. houses and duplex units that have ground level amenity space, all meet the BRE criteria in excess of the minimum standard required. The proposed development meets the recommendations of the BRE guidelines for gardens and open spaces.

1.4 Supplementary Information - Assessment of Daylight in Accordance with IS EN 17037:2018

EN 17037:2018 sets out values for target illuminance, minimum target illuminance and fractions of reference plane to be achieved. The target and minimum target levels set out in EN17037:2018 are for any type of building; they do not take into account room use or make allowance for rooms that have a lesser requirement for daylight. The results of this assessment indicate a high level of daylight provision, with 100% of rooms achieving Minimum Illuminance and 97.4% achieving Target Illuminance. Appendix B identifies any rooms which do not achieve target illuminance levels.

To date there is no guidance from Irish local authorities or governmental bodies on the use or interpretation of IS EN 17038:2018. The local authorities guidelines and apartment guidelines refer to BR209 Site layout planning for daylight and sunlight which in turn references BS EN 17037. BS EN17037:2018+A1:2021 is the same as IS EN 17037:2018 with the addition of a National Annex (NA1) and the annex specifically refers to and sets room specific values for dwellings in the UK and Channel Islands.

1.5 Conclusions

Overall the design team worked in response to the context to ensure the proposed development performed with regards to achieving the best possible daylight and sunlight quality. All apartments meet the minimum standard for daylight provision as per

BS EN 17037:2018+A1:2021 as referred to in the BRE guidelines BR209:2022 (third edition). The majority of the apartment units achieve daylight provision as set out in IS EN 17038:2018.

Also of note with regards to internal daylighting section 6.7 of the Sustainable Urban Housing: Design Standards for New Apartments July 2023 states the following:

> *"Where an applicant cannot fully meet all of the requirements of the daylight provisions above, this must be clearly identified and a rationale for any alternative, compensatory design solutions must be set out, which planning authorities should apply their discretion in accepting taking account of its assessment of specific (sic). This may arise due to design constraints associated with the site or location and the balancing of that assessment against the desirability of achieving wider planning objectives. Such objectives might include securing comprehensive urban regeneration and or an effective urban design and streetscape solution."*

Furthermore Section 3.2 of the Urban Development and Building Heights: Guidelines for Planning Authorities (2018) states the following:

> *"Where a proposal may not be able to fully meet all the requirements of the daylight provisions above, this must be clearly identified and a rationale for any alternative, compensatory design solutions must be set out, in respect of which the planning authority or An Bord Pleanála should apply their discretion, having regard to local factors including specific site constraints and the balancing of that assessment against the desirability of achieving wider planning objectives. Such objectives might include securing comprehensive urban regeneration and or an effective urban design and streetscape solution."*

It is our opinion that all the rooms within the proposed development achieve the minimum target daylight levels set out in BS EN 17037:2018+A1:2021 as referred to in The BRE guidelines BR209:2022 (third edition) and no compensatory measures are required.

2. Methodology

2.1 Standards and Guidelines

Ministerial guidance is provided in Sustainable and Compact Settlements: Guidelines for Planning Authorities (2024) Section 5.3.7(b).

> *In cases where a technical assessment of daylight performance is considered by the planning authority to be necessary regard should be had to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in Buildings IS EN17037:2018, UK National Annex BS EN17037:2019 and the associated BRE Guide 209 2022 Edition (June 2022), or any relevant future standards or guidance specific to the Irish context.*

This is accordance with Section 6.6 of the Sustainable Urban Housing: Design Standards for New Apartments (2023), and Section 3.2 of the Urban Development and Building Heights Guidelines for Planning Authorities (2018).

The Daylight and Sunlight assessments included in this report demonstrates the level of compliance with these three documents:

- BR209:2022 Site Layout Planning for Daylight and Sunlight (Third edition), also referred to as the BRE guidelines.
- BS EN 17037:2018+A1:2021 Daylight in Buildings, also referred to as the UK Annex.
- IS EN 17037:2018 Daylight in Buildings.

2.2 BRE guidance document BR209:2022 - Site Layout Planning for Daylight and Sunlight (3rd edition).

The BRE guidelines (2022) state at the outset that “It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location.” That the recommendations of the BRE guidelines (2022) are not suitable for rigid application to all developments in all contexts is of particular importance in the context of national and local policies for the consolidation and densification of urban areas.

BR209 2022 sets out the assessment metrics to be applied when assessing the potential impact of a development on the daylight and sunlight of neighbouring properties. The metrics for assessing impact in the areas of Daylight (VSC) and Sunlight (APSH) to adjacent buildings. Sunlight to adjacent amenity space is assessed through the measurement of sunlight availability on the 21st March and the plotting of shadow studies.

The BRE guidelines (2022) recommend the use of BS EN 17037:2018 for assessing the quality of interior spaces in proposed developments. BS EN 17037 sets out assessment methods for daylight provision and access to sunlight. It states that “The guidance here is intended for use in the United Kingdom and in the Republic of Ireland, though recommendations in the Irish Standard IS EN 17037 may vary from those in BS EN17037.”

EN 17037 is a unified daylighting standard published by the European Committee for Standardization (CEN) in 2018. It is applicable across all countries within the EU including Ireland with the Irish edition IS EN17037:2018. The standard is enacted in Britain under BS EN 17037:2018+A1:2021 with a UK National Annex for regional assessments. The daylight and sunlight assessment methods for internal daylight and sunlight provision are common to both the Irish Standard Version and the UK version.

The UK National Annex (NA) provides further recommendations for daylight provision in the UK and Channel Islands. NA.1 states that the UK committee supports the recommendations for daylight in buildings given in BS EN17037:2018. The annex states that the daylight target levels in Clause A.2 may be hard to achieve in buildings in the UK and in particular dwellings in urban areas with significant obstructions or tall trees outside. NA.2 sets out minimum daylight provision to be achieved in UK dwellings.

The UK National Annex A1 sets out room specific minimum values to be achieved in the UK and Channel Islands. All the rooms achieve the minimum DF factor levels set out in A1 for Bedrooms (DF0.7%), Living Rooms (1%DF) and Kitchens and living spaces containing a Kitchen(1.3%). The Daylight Factor percentage values are derived from minimum room specific illiminance levels set out in NA+1 and the Median External Diffuse Illuminance ($E_{v,d,med}$) for Dublin from Table A.3 EN17037:2018. The illuminance levels and corresponding DF% are given in Table 5 below.

2.3 Daylight to existing dwellings

BRE guidance document (2022) “Site layout planning for daylight and sunlight” relates to daylight and sunlight to potential impact in neighbouring buildings. As set out above, this is broadly in line with the previous version of the BRE guidelines (2011). The metrics are the same for assessing impact in the areas of Daylight (VSC) and Sunlight (APSH) to adjacent buildings. Sunlight to adjacent amenity space is assessed through the measurement of sunlight availability on the 21st March.

A proposed development could potentially have a negative effect on the level of daylight that a neighbouring property receives, if the obstructing building is large in relation to their distance from the existing dwelling. To ensure a neighbouring property is not adversely affected, the Vertical Sky Component (also referred to as VSC) is calculated and assessed. VSC can be defined as the amount of skylight that falls on a vertical wall or window.

BRE guidelines (2022) recommend that: *"Loss of light to existing windows need not be assessed if the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window."*
The diffuse light of the existing building may be adversely affected if part of a new building measured in a vertical section perpendicular to the main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25º to the horizontal. If a window falls within a 45° angle both in plan and elevation with a new development in place then the window may be affected and should be assessed.

The guidelines sets out which rooms need to be assessed for daylight in Section 2.2:

> *"The guidelines here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines may also be applied to any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels and hostels, small workshops and some offices";*

For loss of daylight the BRE guidelines (2022) recommends calculation of the Vertical Sky Component. This is the ratio of direct sky illuminance falling on the outside window, to the simultaneous horizontal illuminance under an unobstructed sky. The standard CIE Overcast Sky is used and the ratio is usually expressed as a percentage. The maximum value is just under 40% for a completely unobstructed vertical wall. The Vertical Sky Component on a window is a good measure of the amount of daylight entering it.

The BRE guidelines (2022) recommend one of two criteria is met when assessing for the Vertical Sky Component:

a) Where the Vertical Sky Component at the centre of the existing window exceeds 27% with the new development in place then enough sky light should still be reached by the existing window.

b) Where the Vertical Sky Component with the new development in place is both less than 27% and less than 0.8 times its former value, then the area lit by the window is likely to appear more gloomy, and electric light will be needed more of the time.

The BRE guidelines (2022) state that if the VSC is:

- At least 27%, then conventional window design will usually give reasonable results;
- Between 15% and 27%, then special measures (larger windows, changes to room layout) are usually needed to provide adequate daylight;
- Between 5% and 15%, then it is very difficult to prove adequate daylight unless very large windows are used;
- Less than 5%, then it is often impossible to achieve reasonable daylight, even if the whole window wall is glazed

This report assesses the percentage of direct sky illuminance that falls on the centre point of neighbouring windows that could be affected by the proposed development, The Vertical Sky Component (VSC) as per the methodologies contained in the BRE guidelines (2022).

2.4 Sunlight to existing buildings

The BRE guidelines (2022) recommend assessing the main living rooms and conservatories if they have a window wall facing within 90° of due south. Kitchens and bedrooms are less important but care should be taken not to block too much sun. If the proposed development is fully north of the existing window then sunlight need not be assessed.

The Annual Probable Sunlight Hours (APSH) is used to assess the quantity of sunlight for a given location. This is the total amount of sunshine for a given location on an unobstructed horizontal surface taking cloud cover into account. Statistical data from the Irish Meteorological Service is used to assess the APSH and the Winter Probable Sunlight Hours (taken to fall between the 21st of September and the 21st of March).
Table 1 below shows the average sunlight hours for each month and the maximum possible without any cloud cover. This gives the factor of possible sunlight hours for each month.

Met Éireann Sunlight Hours Data Set 1991-2020													
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Average Sunlight Hours/ Day	1:54	2:54	3:42	5:24	6:24	6:00	5:17	5:00	4:24	3:24	2:24	1:42	
Average Sunlight Hours/ Month	58:54	81:12	114:42	162:00	198:24	180:00	163:47	155:00	132:00	105:24	72:00	52:42	1449.1
Total Available Sunlight Hours	252	265	358	412	483	485	496	451	375	320	250	236	4383
Probable Sunlight Hours Ratio	23.4%	30.6%	32.9%	39.3%	41.1%	37.1%	33.0%	34.4%	35.2%	32.9%	16.8%	22.3%	33.1%

Table 1: Average monthly sunlight hours recorded at Dublin Airport - Data set 1991-2020

The BRE guidelines (2022) recommend that the centre of a window or 1.6m above ground for a door be assessed and receive at least 25% of the APSH and at least 5% during the period of 21st September to 21st March. If the available APSH is less than this then it should not be reduced below 0.8 times its former value or noticeable loss of sunlight may occur.

2.5 Sunlight to gardens and open spaces

For calculations of sunlight analysis it is general practice to use March 21st. The BRE guidelines (2022) states:

> *"It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21 March is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March."*

2.6 Calculations of Trees & Hedges

Trees are not usually included in the assessments of impact on neighbouring properties, unless specified otherwise. In relation to the effects of trees and hedges the BRE guidelines (2022) states:

> *"It is generally more difficult to calculate the effects of trees on daylight because of their irregular shape and because some light will generally penetrate through the crown. Where the effects of a new building on existing buildings nearby is being analysed, it is usual to ignore the effects of existing trees. This is because daylight is at its scarcest and most valuable in winter when most trees will not be in leaf."*

BR209:2022 recommends that sometimes trees should be taken into account for the proposed development where the new development is proposed near large existing trees. This needs to be done by modelling a representative of the existing trees. Reflectance and transparency should be taken into account. Table G1 in BR209:2022 gives values for transparencies of tree crowns in summer and winter for deciduous trees, dense evergreen can be assessed as opaque. Table G2 gives general reflectance values for shades of trees.

2.7 BRE Guidelines (2022) Appendix H: Environmental Impact Assessment

The BRE guidelines sets out criteria for classification for assessment of impact where a new development affects a number of existing buildings or open spaces in relation to an Environmental Impact Assessment. The guide does not give a specific range or percentages but sets out parameters set out below.

> *"Where the loss of skylight or sunlight fully meets the guidelines in this book, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.*
>
> *Where the loss of skylight or sunlight does not meet the guidelines in this book, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:*
>
> - *only a small number of windows or limited area of open space are affected*
> - *the loss of light is only marginally outside the guidelines*
> - *an affected room has other sources of skylight or sunlight*
> - *the affected building or open space only has a low level requirement for skylight or sunlight*
> - *there are particular reasons why an alternative, less stringent, guideline should be applied.*
>
> *Factors tending towards a major adverse impact include:*
>
> - *a large number of windows or large area of open space are affected*
> - *the loss of light is substantially outside the guidelines*
> - *all the windows in a particular property are affected*
> - *the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, eg a living room in a dwelling or a children's playground.*
>
> *Beneficial impacts occur when there is a significant increase in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space.*
>
> *Beneficial impacts should be worked out using the same principles as adverse impacts. Thus a tiny increase in light would be classified as a negligible impact, not a minor beneficial impact."*

A flexible approach should be taken when assessing the impact with daylight and sunlight being one of many factors that influence the environment when planning a new development.

2.8 Daylight in the Proposed Development.

BR209 (2022) Appendix C sets out interior daylight recommendations. The guideline sets out the that: “BS EN 17037 supersedes BS8206 Part 2 ‘Code of practice for daylighting’ which contained a method of assessment based on Average Daylight Factor, which is now no longer recommended.

BS EN 17037:2018+A1 sets out two methods for assessing daylight provision in proposed buildings. One method is called the **Illuminance method**. This is based on Target illuminances for daylight to be achieved across specified fractions of a reference plane at working plane height (0.85m) for half the daylight hours in a year. The Illuminance Method requires the use of a suitable weather file local climate conditions and takes into account the orientation of the space.

The alternative method is called the **Daylight Factor Method.** This method is based on calculating the daylight factors achieved over specific fractions of a reference plane. The Daylight factor is the illuminance at a point on a reference plane in a space, divided by the illuminance on an unobstructed horizontal surface outdoors. This method uses an overcast sky for calculation and the assessment of the space is orientation independent. BS EN 17037 gives the Median External Diffuse Illuminance ($E_{v,d,med}$) for the capital cities throughout Europe to account for external local illuminance levels.

The UK National Annex (NA) sets out additional minimum room specific Target Daylight Factor values for the UK where the target values in A2 are hard to achieve. NA.2 sets out illuminance values to be exceeded over at least 50% of the points on a reference plane 0.85m above the floor for at least half the daylight hours. The UK committee formed the opinion that the Target Illuminance recommendations in Clause A.2 of BS EN 17037 may not be achievable for some buildings, particularly dwellings. The UK committee believes this could be the case for dwellings with basement rooms or those with significant external obstructions.

BR209 (2022) recommends surface reflectances should represent real conditions and where reflectance values have not been measured or specified default values are set out in Table C4 of the guidance document. The surface reflectances have been specified and are set out in Table 2 below. This table also shows the input values for material used and additional assessment model input parameters.

Input Values for Assessment Model			
Surface Reflectance			
Element	Reflectance	Transmittance	Material Description
Internal walls	80%	0%	White Painted Walls
Internal ceiling	80%	0%	White Painted Ceiling
Floor - light wood	40%	0%	Light wood Flooring
External walls - proposed development	50%	0%	Brick
External walls - outside site	50%	0%	CIBSE
External ground	20%	0%	CIBSE
Glass		68%	Triple glazed clear glass
Maintenance Factor for Glass		Assessment Plane	
Suburban Vertical no overhang	0.96	Sensor Grid spacing	0.3m
Suburban Vertical sheltered by balcony or overhang	0.88	Sensor grid inset	0.35m
Framing Factor: Patio Doors	0.77	Minimum inset	0.3m
		Work plane offset	0.85m

Table 2: Surface reflectance parameters and input values for model calculations

The EN17037:2018 Standard deals exclusively with new developments and does not give guidance or metrics on loss of light or sunlight to existing properties. EN 17037:2018 sets out values for Minimum and Target levels to be achieved with a minimum, medium and high compliance level for each. The guideline recommends that the minimum level should be achieved but does not give guidance on the number of units or fraction within a multiple residential unit development that should achieve these values. Additionally it does not differentiate between room use and weighted targets for rooms which would have a lesser requirement. The UK National annex sets out factors for UK specific settings where it is difficult to achieve natural daylighting.

The compliance calculation is based on an annual, climate-based simulation of interior illuminance distributions, BR209 refers to this method as the Illuminance Method. For each hour of the year, the percentage of the floor area achieving minimum and target illuminance thresholds are measured on a room-by-room basis. Two target types are set with the following criteria:

- Target Illuminance: 300 lux over 50% of floor area for at least 50% of daylight hours.
- Minimum Illuminance: 100 lux over 95% of floor area for at least 50% of daylight hours.

BS EN 17037 gives three levels of recommendation for daylight provision in an interior space: minimum, medium and high. BR209:2022 Section C3 recommends for compliance with the standard a space should achieve the minimum level.

Daylight hours are defined as the 4380 hours with the most diffuse horizontal illuminance in the weather file. In addition to this baseline (Minimum) requirement, rooms can achieve Medium and High levels of compliance by meeting higher illuminance thresholds, as outlined in the table below:

Target Illuminance from Daylight over at least half the daylight hours		
Level of recommendation	Target illuminance E_T(lx) for half of the assessment grid	Minimum illuminance E_{TM}(lx) for 95% of the assessment grid
Minimum	300 lux	100 lux
Medium	500 lux	300 lux
High	750 lux	500 lux

Table 3: IS / BS EN 17037:2018 Target Illuminance from Daylight over at least half the daylight hours.

Target Daylight Factor (D) for Dublin		
Level of recommendation	Target daylight factor D for half of the assessment grid	Minimum daylight factor D for 95% of the assessment grid
Minimum	2%	0.7%
Medium	3.5%	2%
High	5%	3.5%

Table 4: IS / BS EN 17037:2018 Target Daylight Factor (D) for Dublin.

Target Minimum Daylight Factor (D) for Dublin based UK National Annex		
Room Type	Target illuminance E_T(lx) for half of the assessment grid	Target daylight factor D from Table A.3 EN17037 $E_{v,d,med}$ for Dublin -14,900
Bedroom	100 lux	0.7%
Living Room	150 lux	1%
Kitchen	200 lux	1.3%

Table 5: BS EN 17037:2018+A1:2021 Target Illuminance levels and Daylight Factor (D) for Dublin.

2.9 Sunlight to proposed developments

The BRE guidelines (2022) recommend that for large residential developments the overall sunlight potential can be initially assessed by counting the number of windows facing south, east and west and the aim should be to minimise the number of living rooms facing solely north, north-east or north-west unless there is some compensating factor such as an appealing view to the north. The guideline acknowledges in large developments it may not be possible to have every living room facing within 90° of south, it recommends maximising the number of units with a southerly aspect.

The BRE guidelines (2022) states that BS EN 17037 should be used to assess for interior access to direct sunlight. BS EN 17037 sets recommendations for access to sunlight in a range achieving compliance from Minimum to High. In dwellings at least one habitable room, preferably a living room, should achieve the minimum of 1.5 direct hours on a specified date between 1st February and 21st March, with a cloudless sky. This assessment uses the 21st March. The guidelines recommends a time step of 5 minutes or less for the assessment interval. The minimum level to achieve is 1.5, the medium level is 3 hours and the high level is 4 hours direct sunlight.

3. Daylight to adjacent buildings.

3.1 Site Overview

The site is a greenfield in Collaghknock Glebe, Co. Kildare. It is bounded by fields to the north, east and south east. There is a housing estate on the Connagh Road to the north west. To the south west are housing in the Curragh Plains, Coolaghknock Avenue and Coolaghknock Park. The site rises in elevation from the south-west to the north east.

Figure 1: Indicative view of the site, taken from Google Maps.

3.2 Preliminary Assessment of Adjoining Dwellings

The BRE guidelines BR209:2022 (third edition) recommend that loss of light to existing windows need not be assessed if the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window. The zone of influence 3 times the height of the proposal is plotted in Figure 2 in yellow.

Section planes perpendicular to the window wall of the adjacent properties facing the proposed development are indicated in blue in Figure 2. The planes at location A extend and if they intersect the proposed development, they are plotted in figure 3 below.

The document also states that if part of a new building measured in a vertical section perpendicular to the main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25º to the horizontal, then the diffuse light of the existing building may be adversely affected. If a window falls within a 45° angle both in plan and elevation with a new development in place then the window may be affected and should be assessed.

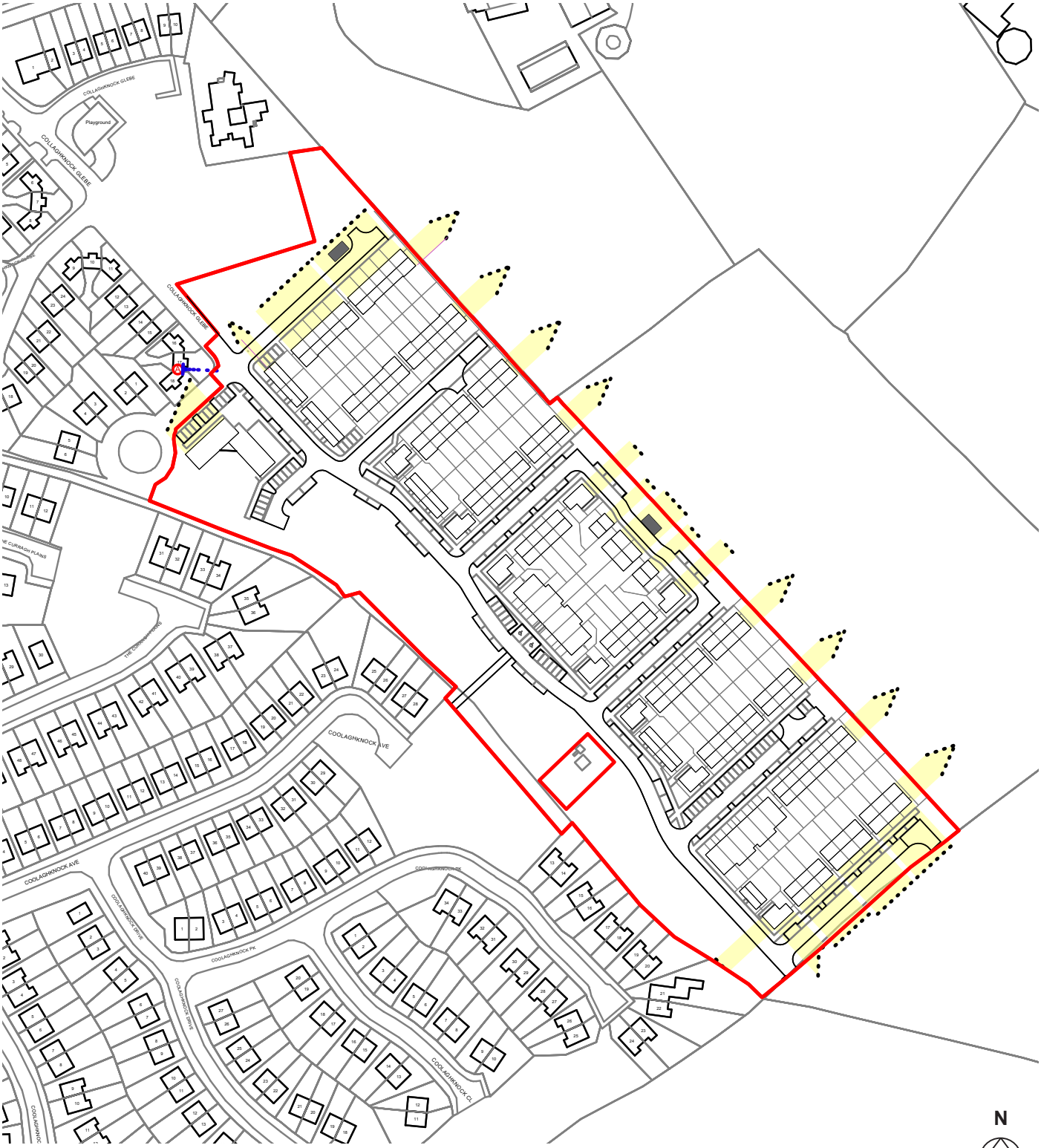


Figure 2: Proposed site plan showing the zone of influence (3 times the height of the proposed building) and direction of the window wall of adjacent residential properties.

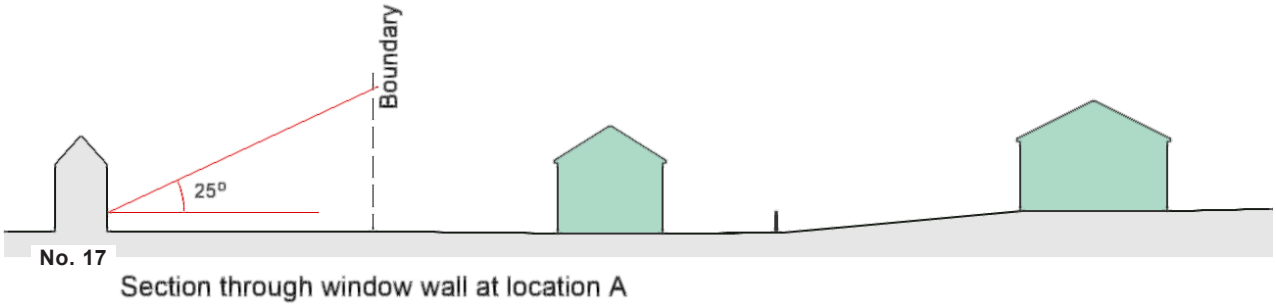


Figure 3: Section perpendicular to window wall at locations indicated in Figure 2.

3.3 Comment on preliminary assessment

Location A at No.17 Connagh Road: The proposed development does not subtend the 25º line. Any reduction in available daylight is likely to be negligible.

3.4 Conclusion of potential impact to existing houses

There are no dwellings or buildings which have a requirement for daylight, within the zone of influence of the proposed development. Any reduction in available daylight from the proposed development will be negligible and meets the recommendations of the BRE guidelines BR209:2022 (third edition).

4. Sunlight in Neighbouring Buildings

4.1 Sunlight the Neighbouring Dwellings APSH (Annual Probable Sunlight Hours)

The BRE guidelines BR209:2022 (third edition) recommends assessing window walls for the APSH that face within 90º of due south. The guidelines state that;

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

For a proposed development to have a noticeable impact on the annual Probable Sunlight Hours the value need to be reduced below the recommended 25% annual or 5% in the winter period from September to March. If the value is either below this to begin with or is reduced below this then it should not be reduced below 0.8 times its former value.

All adjacent properties are beyond the zone of influence and there are no windows with a requirement for sunlight adjacent to the proposed development.

5. Sunlight to adjoining amenity spaces

The shadow diagrams in Section 8 indicate that the shadows caused by the proposed development do not extend to any private garden or amenity space with a requirement for sunlight on the 21st march and no detailed assessment is required.

There will be no reduction in sunlight to any of the neighbouring amenity spaces with a requirement for sunlight and the proposed development meets the requirements of the BRE guidelines BR209:2022 (third edition).

6. Daylight within the Proposed Development.

All habitable rooms within the units were assessed for daylight provision by illuminance method. The Illuminance method assesses the daylight levels over at least 50% daylight hours in the year and uses a weather file data set. These methods take into account the orientation of the space. They provide an accurate representation of the daylight provision to a specific room in the context of the proposed environment.

Compliance is demonstrated by a calculation of Daylight Provision with the illuminance method under BS EN 17037:2018+A1:2021. A summary of the results are presented in Table 6 below and a complete set of room results are shown in Appendix A.

For supplementary information, an assessment of Daylight Provision with the illuminance method under IS /BS EN 17037:2018 is undertaken. A summary of the results are presented in Table 7 below and a complete set of room results are shown in Appendix B.

6.1 Assessment for Daylight Provision BS EN 17037:2018+A1:2021

The UK National Annex (A1) contains minimum room specific target values for dwellings in the UK. The UK committee fully supports the recommendations of EN17037:2018 but considers the target daylight levels may be hard to achieve in UK dwellings, in particular in urban areas and areas with mature trees. The Target and Minimum levels set out in IS / BS EN17037:2018 do not take into account room use or make allowance for room that have a lesser requirement for daylight. The UK National Annex A1 in BS EN17037:2018+A1:2021 sets out room specific minimum values to be achieved in the UK and Channel Islands. These target values are set to achieve similar minimum daylight levels as the superseded Average Daylight Factor method (ADF) in BS8206-2 2008.

Minimum daylight provision UK NA.1 - BS EN 17037:2018+A1:2021					
	Room Use	Number of rooms	Target illuminance E_T(lx) for half of the assessment grid	Number of rooms to achieve target Lux over 50% of the assessment grid	Percentage of rooms achieving Target
All rooms	LKD/ KD	131	200	131	100.0%
	Liv	89	150	89	100.0%
	Bedrooms	281	100	281	100.0%
Total		501		501	100.0%

Table 6: Summary of room for Target Illuminance compliance with BS EN 17037:2018+A1:2021. Individual room results can be viewed in Appendix A.

6.2 Conclusion

BR209:2022 recommends assessment methods set out in BS EN 17037 for daylight provision. 100% of the Living, Dining, Kitchen and Bedroom spaces achieve the target values set out in BS EN 17037:2018+A1:2021 section NA1. The is the minimum rooms specific values to be achieved in habitable rooms.

6.3 Supplementary Information - Assessment for Daylight Provision IS / BS EN 17037:2018

A summary of Minimum and Target Illuminance level compliance under IS EN 17037:2018 Annex A Table A1 are set out in the table below.

Daylight provision Illuminance Method IS EN 17037:2018						
		Below Target	Minimum	Medium	High	Percentage of rooms achieving Target
Overall total	Target Illuminance	2.6%	22.6%	54.3%	20.6%	97.4%
	Minimum Illuminance	0.0%	20.8%	65.3%	14.0%	100.0%

Table 7: Percentage of rooms at each level to IS/BS EN 17037:2018. Individual room results can be viewed in Appendix B.

The results indicate a high level of compliance for Minimum level of 100% and Target level with 97.4% of the spaces achieving the minimum target for each metric. The results indicate that the rooms will achieve high levels of daylight and they will be bright and pleasant spaces.

The recommendations for Daylight provision in Table A1 are not specific for dwellings and do not make allowance for room use. BS EN 17037:2018+A1:2021 address this with the National Annex NA.1 which sets out room specific targets for dwellings and compliance for this is presented in Section 5.1.

7. Sunlight within the proposed development.

7.1 Sunlight Hours

The BRE guidelines BR209:2022 (third edition) and BS EN 17037:2018+A1:2021 set out recommendations for sunlight hours to be achieved. It states that; *"For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion."* The guidelines recommend the sunlight hours should be assessed preferably on the 21st March over the course of the day. The guidelines set three levels of achievement. Minimum 1.5h, Medium 3h and High 4h. The guideline does not set the percentage of units that need the achieve the recommendations but they do give an example of a well designed floor layout in Figure 4 below where 4 out of 5 (80%) units in an apartment building would achieve the target sunlight.

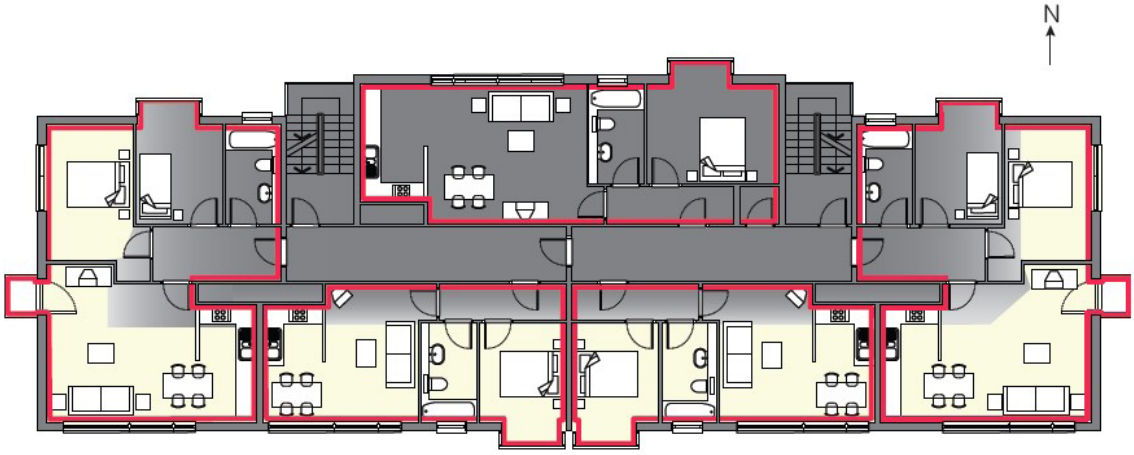


Figure 26: Careful layout design means that four out of the five flats shown have a south-facing living room

Figure 4: Extract from BR209:2022 Section 3 Sun-lighting: Diagram indicating sample floor plan to maximise units with a main living space facing south.

All the houses have a main window wall within 90° due South and will achieve the minimum target sunlight hours. The occupants can gravitate to the sunlit room as desired. The LKD in the duplex units have been assessed for sunlight. Detailed results are shown in Appendix C. It indicates if the room has a relevant south facing window and the number of hours it receives sunlight on the 21st March. A summary of these results are displayed in the table below.

Sunlight Hours Summary Table									
	Total Units	LKD with a window within 90° South		Below recommendation <1.5 hours	Minimum >1.5 hours	Medium >3 Hours	High >4 Hours	Number meets criteria	Ratio meets criteria
		No.	Ratio						
Duplex	42	32	76.2%	5	7	2	28	37	88.1%

Table 8: Summary of results of assessment of Sunlight Hours

7.2 Comment on EN 17037 Sunlight Hours

The BRE Guidelines recommend maximising the amount of units that have a window within 90° due South but does not have set targets. The guidelines acknowledges that for large developments with site constraints its not possible to achieve south facing windows to all main living spaces. 32no. of the 42no. (76.2%) apartment units have a window to a living room or kitchen/ dining room which face within 90° of due south.

Often windows with an aspect of greater than 90° due South, to the North West or North East, will still receive sunlight, but it is likely to be lesser amounts especially in the winter period. 37no. of the 42no. units (88.1%)have a living spaces that achieves the minimum recommended 1.5 direct sunlight hours. Additionally units with dual aspect will receive sunlight to a bedroom space.

7.3 Conclusion

This scheme is well designed for sunlight, with 88.1% of units meeting the minimum recommended 1.5 direct sunlight hours. This meets the recommendations of the The BRE guidelines BR209:2022 (third edition).

8. Sunlight to Amenity within the Proposed Development

The BRE guidelines BR209:2022 (third edition) indicates that for an amenity area to have good quality sunlight throughout the year, 50% should receive in excess of 2 hours sunlight on the 21st March.

8.1 Sunlight to amenity within the proposed development

Public and private amenity areas within this proposed development have been assessed with a calculation of sunlight on the ground on the 21st March. Generated analysis is shown in Figure 5 and the results are set out in Tables 9 and 10 below.

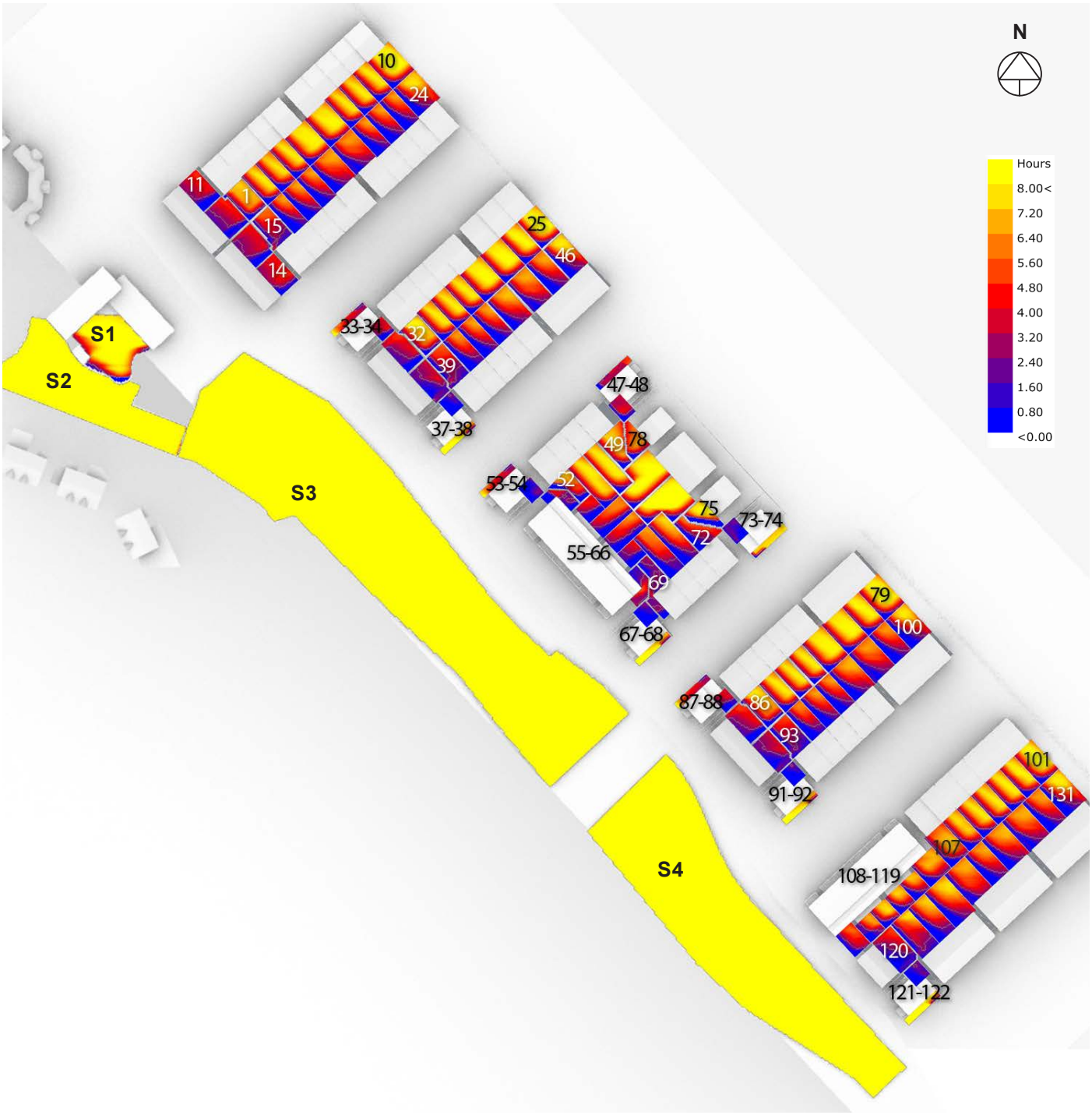


Figure 5: Radiation map of amenity within the Proposed Development, showing available sunlight on 21st March. The scale represents the percentage of daylight received from 0 - 8 hrs.

Sunlight on the ground - within development			
No.	Use	Proposed	Meets criteria of >50% area
S1	Creche	94.4%	Y
S2	POS	100.0%	Y
S3	POS	100.0%	Y
S4	POS	100.0%	Y

Table 9: Calculation of Sun on the Ground to amenity area within the proposed development.

8.2 Conclusion

The public amenity areas are well oriented for sunlight and will all the amenity spaces will achieve 2 hours sunlight in excess of 50% of the amenity area on the 21st March. The proposed development meets the recommendations of the BRE guidelines BR209:2022 (third edition).

8.3 Assessment of Private Amenity Spaces

All private amenity spaces at ground level were assessed. The full schedule of spaces are shown in Appendix D, a summary of the results are shown in Table 10 below.

Duplex Type A units, at ground level, have amenity spaces to the front and rear, both of which are in excess of 5m2. In all cases these units achieve the target values for sunlight on the ground in at least one of these spaces, as noted in Appendix D.

All of the amenity spaces are greater than the minimum area required. All private amenity spaces meet the BRE criteria in excess of the minimum standard required.

Sunlight on the Ground - Private amenity within the development		
Total number of ground level private amenity spaces	Number of ground level amenity receiving in excess 2 hours sunlight on 21st March >50% of Area	Percentage that achieve target
110	110	100%

Table 10: Calculation of Sun on the Ground to ground level private amenity spaces of the houses and duplex units

8.4 Conclusion

The proposed development has been well designed for sunlight. All public open spaces and the creche amenity exceed 2 hours sunlight over 50% of the amenity space on the 21st March. 110 no. houses and duplex units that have ground level amenity space, all meet the BRE criteria in excess of the minimum standard required. The proposed development meets the recommendations of the BRE guidelines BR209:2022 (third edition) for gardens and open spaces.

9. Shadow Diagrams

8.1 BRE Guidance on Shadow Studies

Shadow diagrams are a visual aid to understand where possible shading may occur. The BRE guidelines recommend using the March Equinox due the equal length of the day and night time. It states:

> *"If a space is used all year round, the equinox (21 March) is the best date for which to prepare shadow plots as it gives an average level of shadowing. Lengths of shadows at the autumn equinox (21 September) will be the same as those for 21 March, so a separate set of plots for September is not required."*

June 21st and December 21st are provided below for information but it should be noted that the summer solstice is the best case scenario with shadows at their shortest. The Summer Solstice diagrams are included here with the Daylight Saving Time (UTC+1) applied. In Winter even low buildings will cast long shadows and it is common for large areas of the ground to be in shadow throughout the day especially in a built up area and sun barely rises above an altitude of 10° during the course of the day. The guidelines recommends that Sunlight at an altitude of 10° or less does not count. Below are the times for the Equinox and Solstice that the sun is above 10° altitude rounded to the nearest half hour.

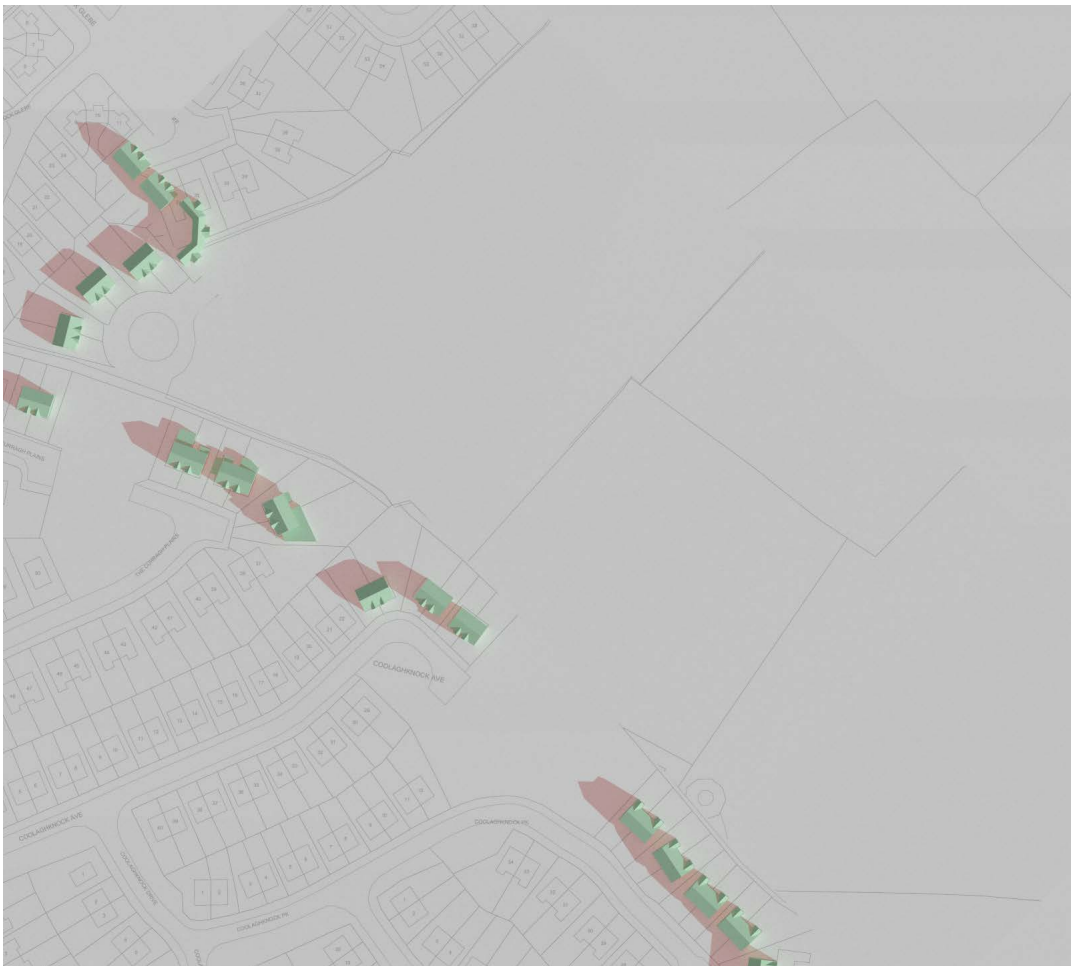
Equinox: between 8:30 and 17:30
Summer Solstice: Between 6:30 and 20:00
Winter Solstice: Between 10:30 and 14:00

Section 8.2 shows the existing and proposed shadow diagrams for the Equinox on the 21st March at 2 hourly intervals during the day between 09:00 and 17:00.
Section 8.3 shows the existing and proposed shadow diagrams for the Summer Solstice on the 21st June at 2 hourly intervals during the day between 09:00 and 19:00.
Section 8.4 shows the existing and proposed shadow diagrams for the Winter Solstice on the 21st December at 2 hourly intervals during the day between 09:00 and 15:00.

The site is a greenfield site, there is no shadow cast from any structures at present. Shadow diagrams are a visual aid to understand where possible shading may occur. The use of shadow diagrams as an assessment method should be taken over the course of the day and not a specific time due to the transient nature of the sun and the shade caused by obstructions.

8.2 Shadow Casting diagrams March Equinox

Existing



N

Proposed

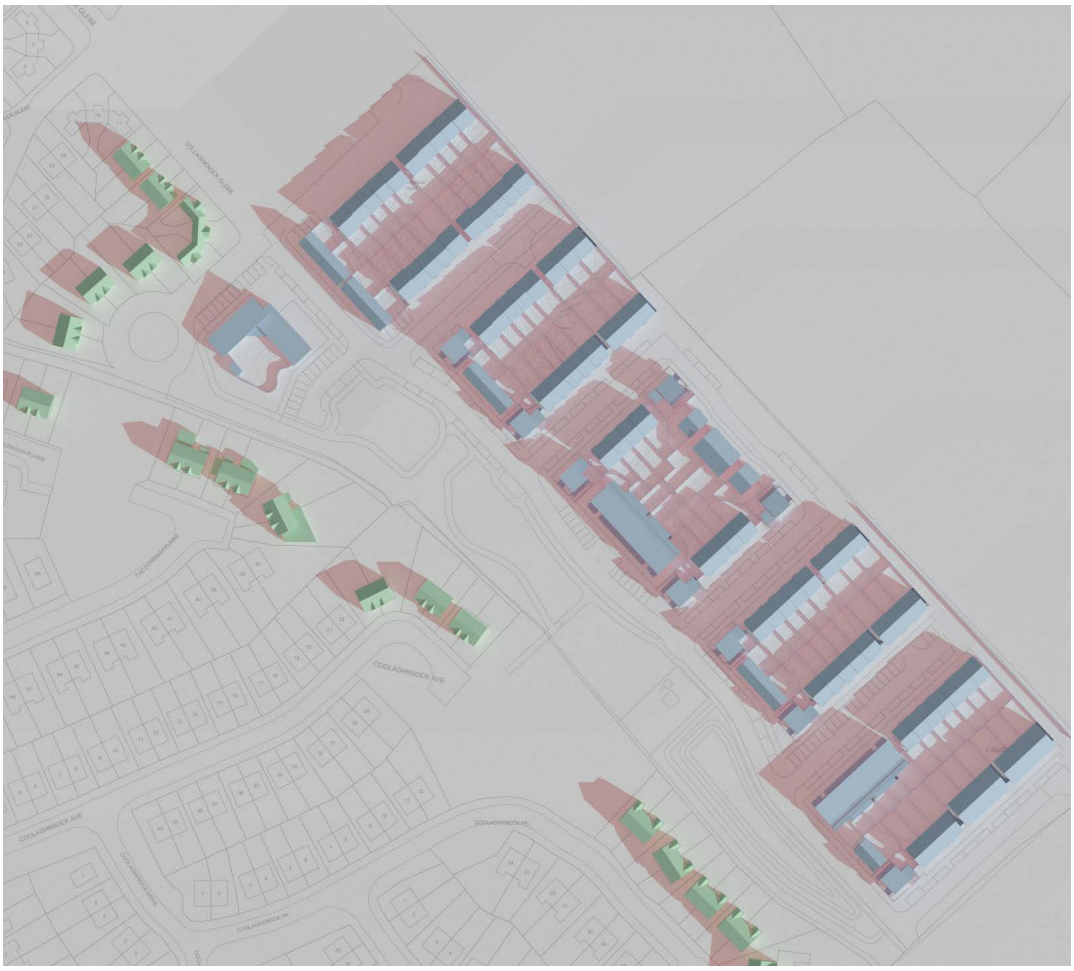
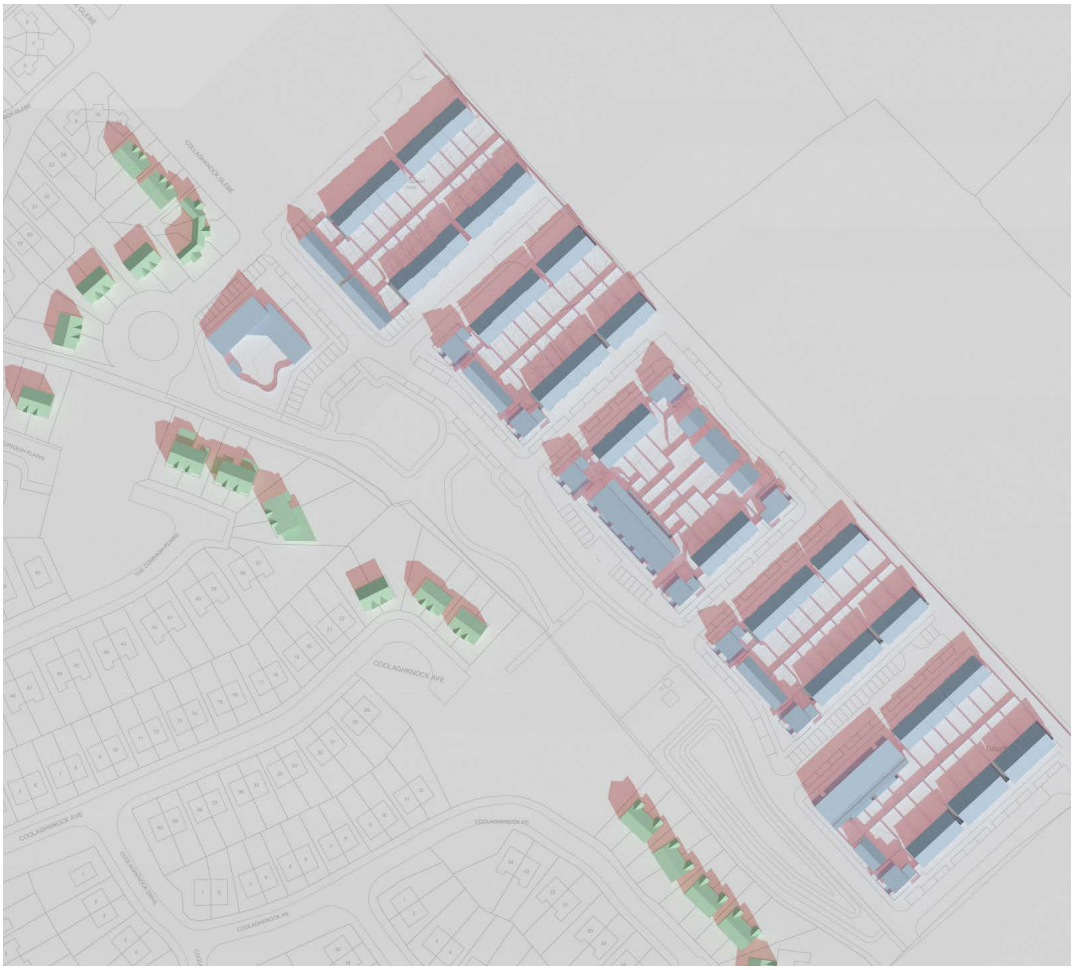


Figure 6: Shadow diagrams 21 March 09:00 UTC

Existing

N

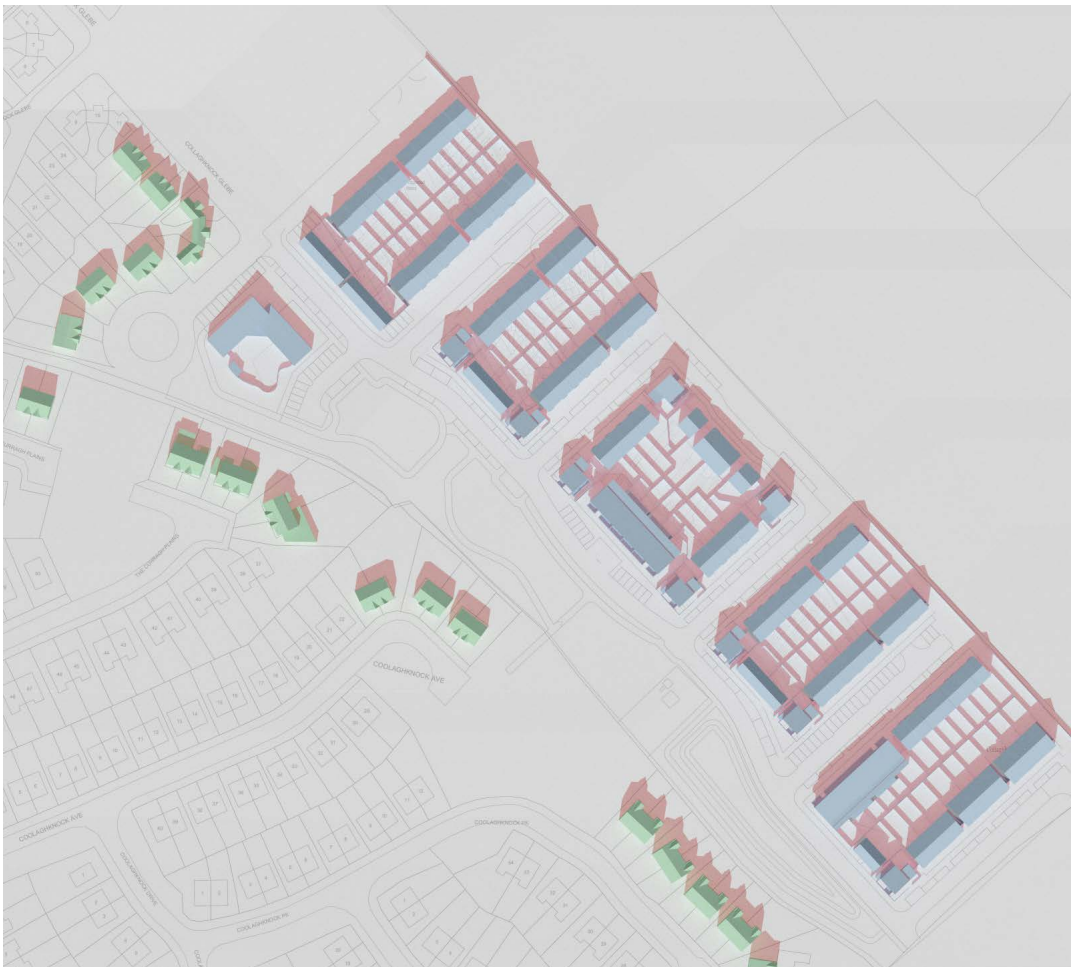


Proposed

Figure 7: Shadow diagrams 21 March 11:00 UTC

Existing

N

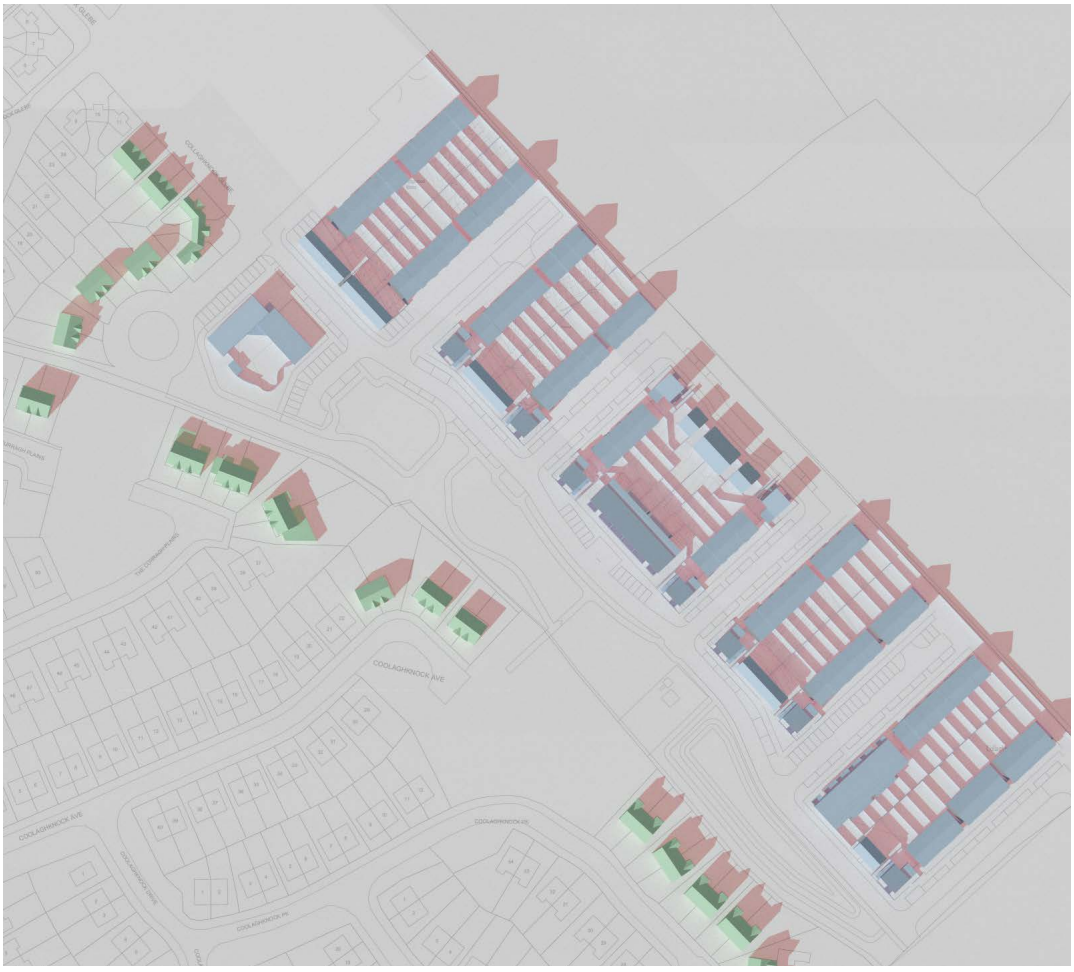


Proposed

Figure 8: Shadow diagrams 21 March 13:00 UTC

Existing

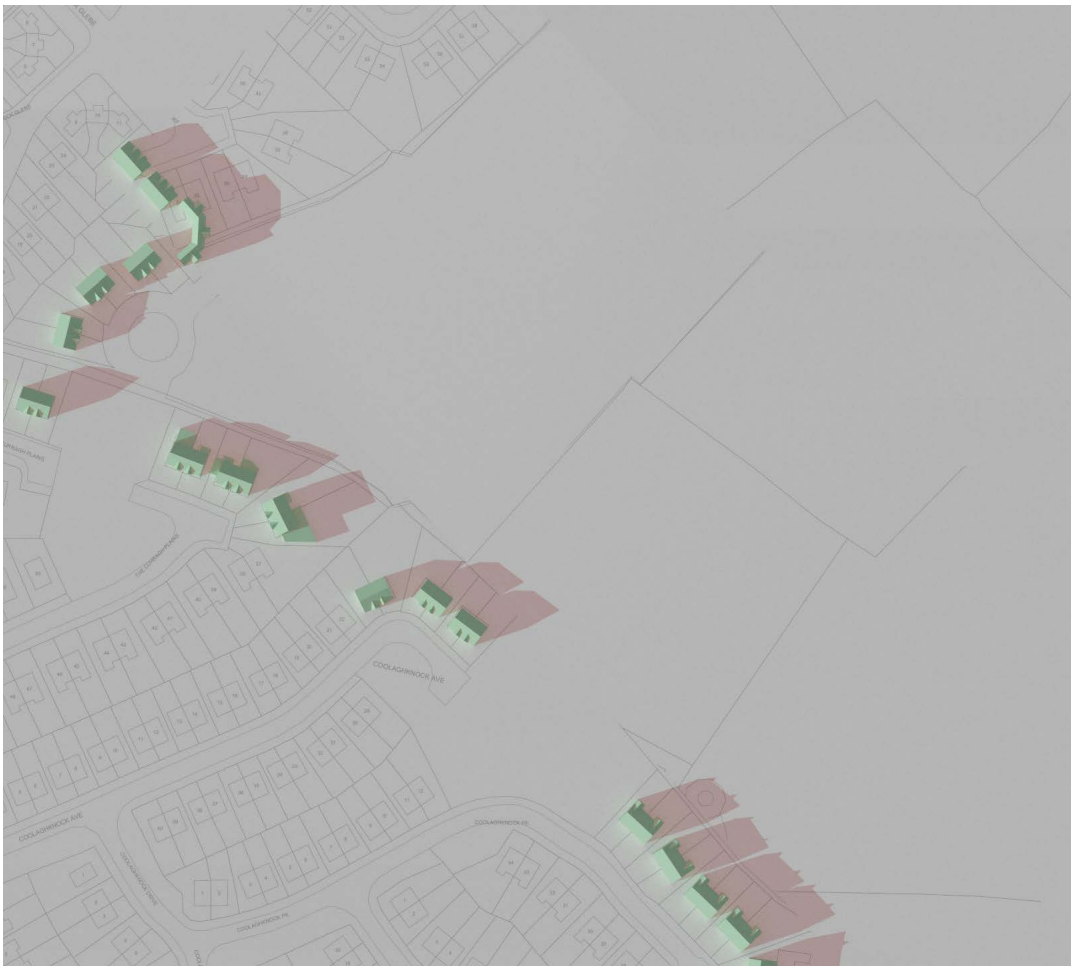
N



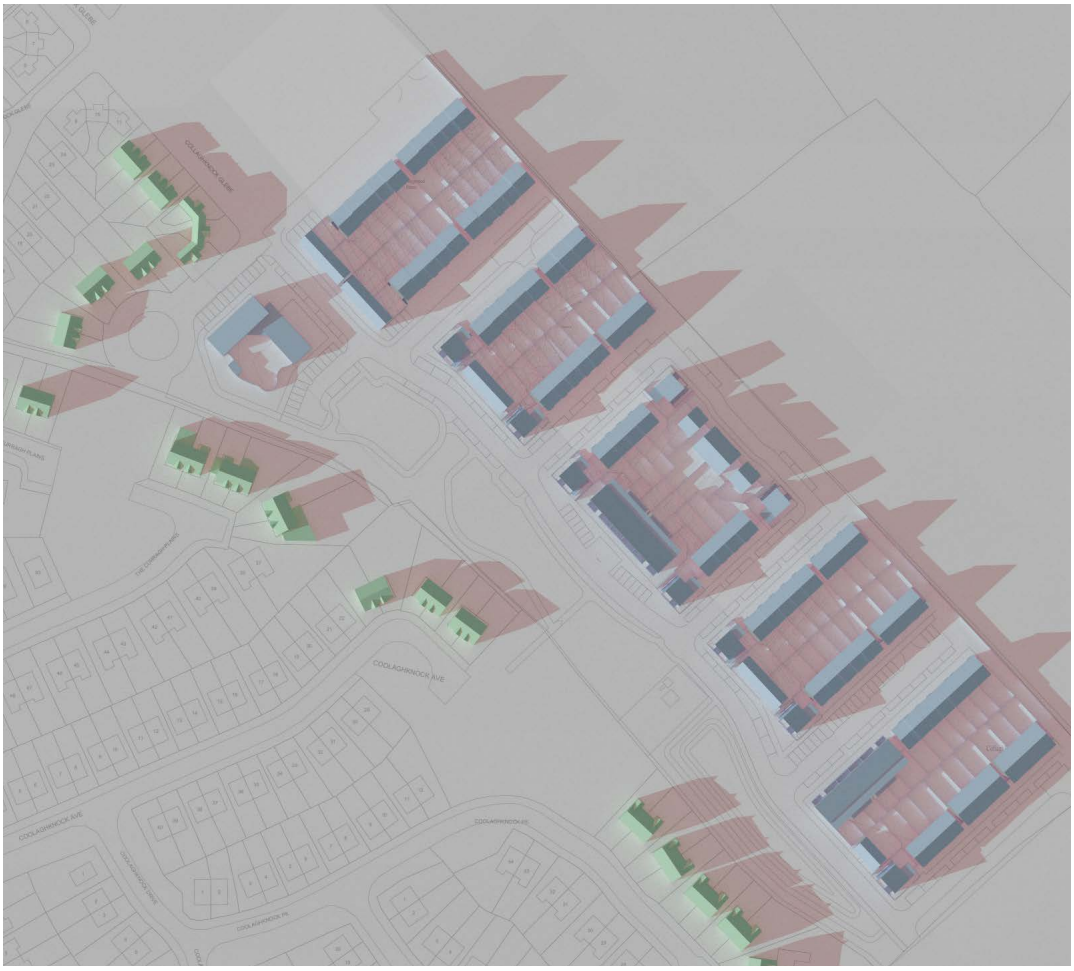
Proposed

Figure 9: Shadow diagrams 21 March 15:00 UTC

Existing



N



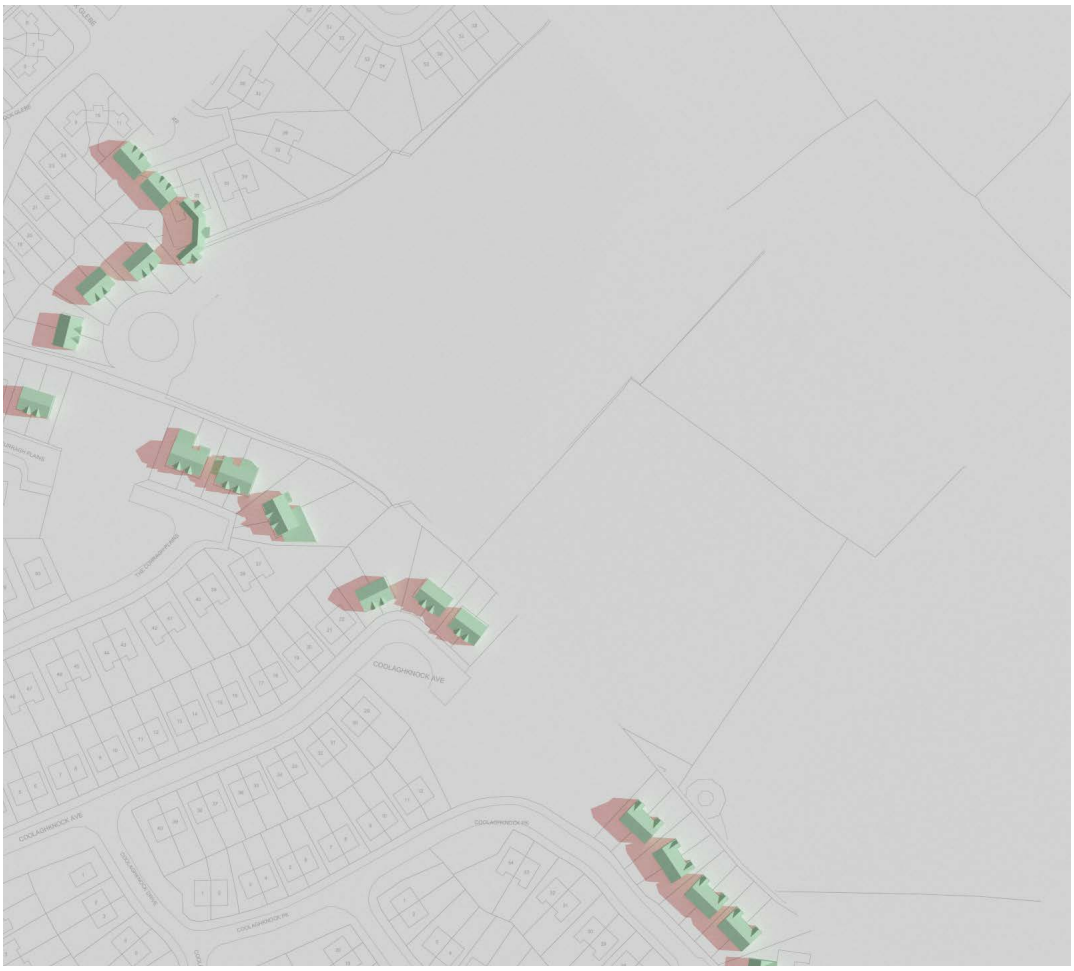
Proposed

Figure 10: Shadow diagrams 21 March 17:00 UTC

8.3 Shadow Casting diagrams June Solstice

Existing

N



Proposed

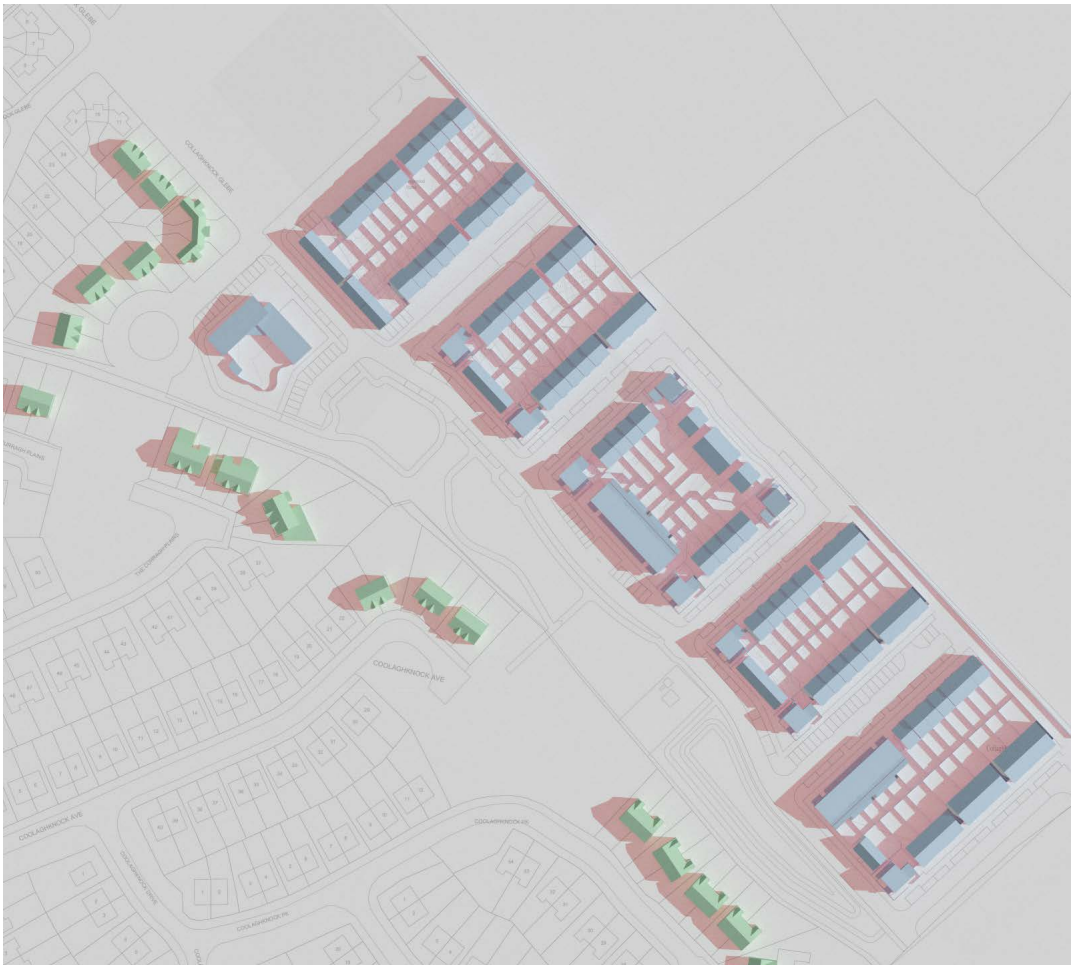


Figure 11: Shadow diagrams 21 June 09.00 UTC +1

Existing

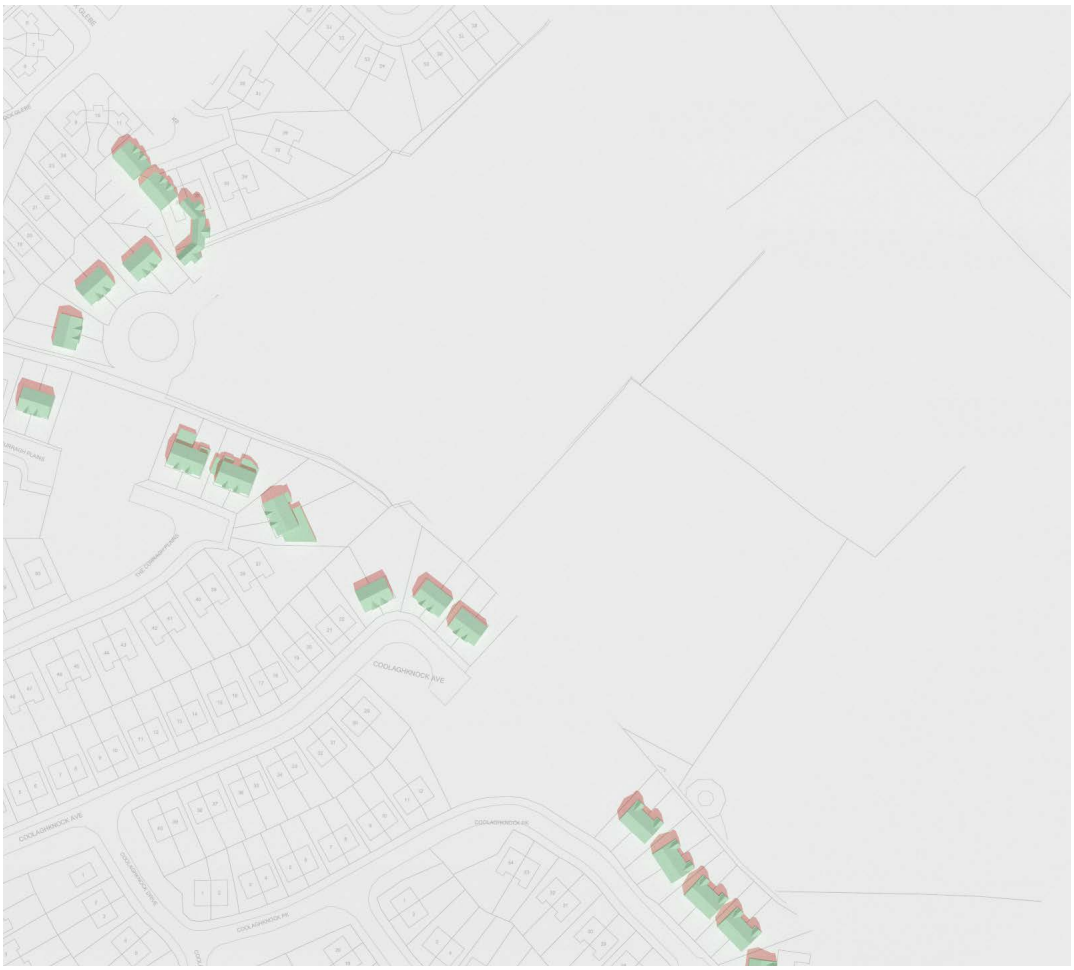
N

Proposed

Figure 12: Shadow diagrams 21 June 11:00 UTC +1

Existing

N

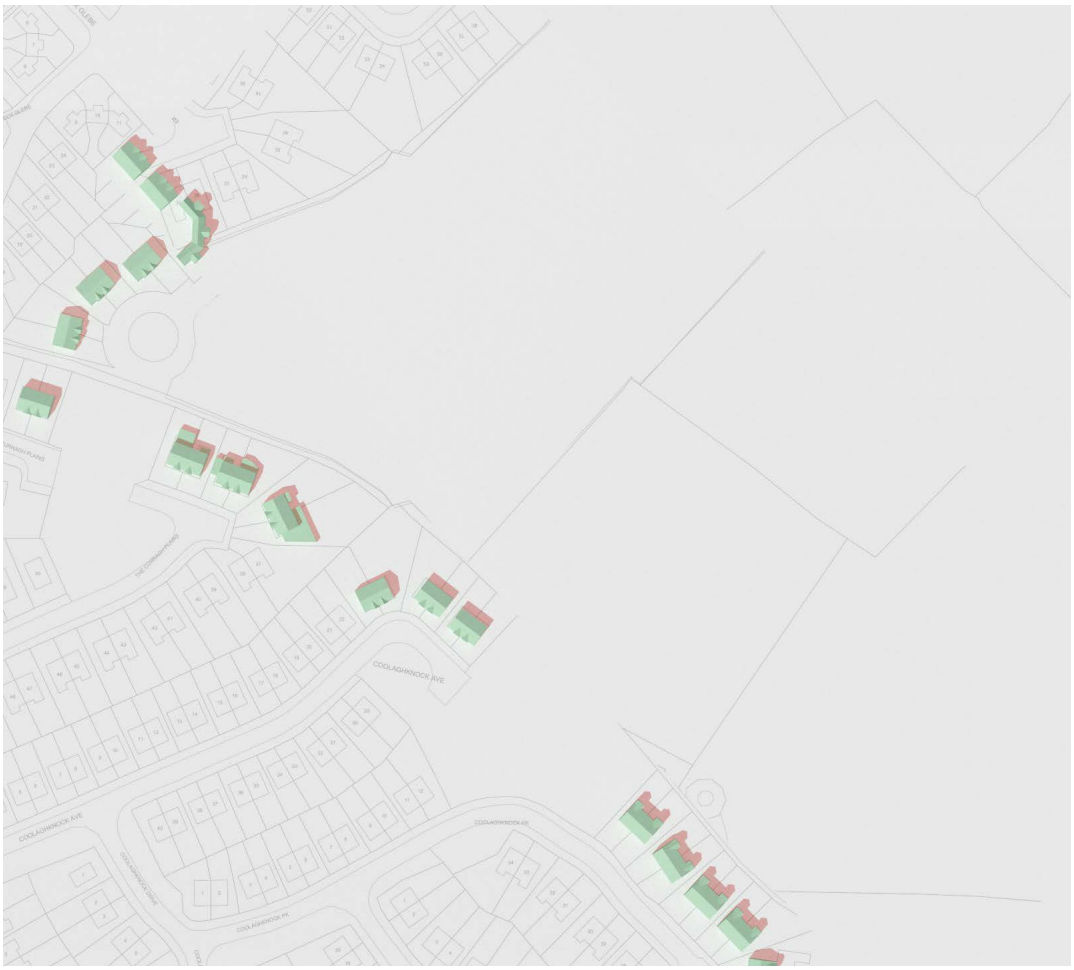


Proposed

Figure 13: Shadow diagrams 21 June 13:00 UTC +1

Existing

N



Proposed

Figure 14: Shadow diagrams 21 June 15:00 UTC +1

Existing

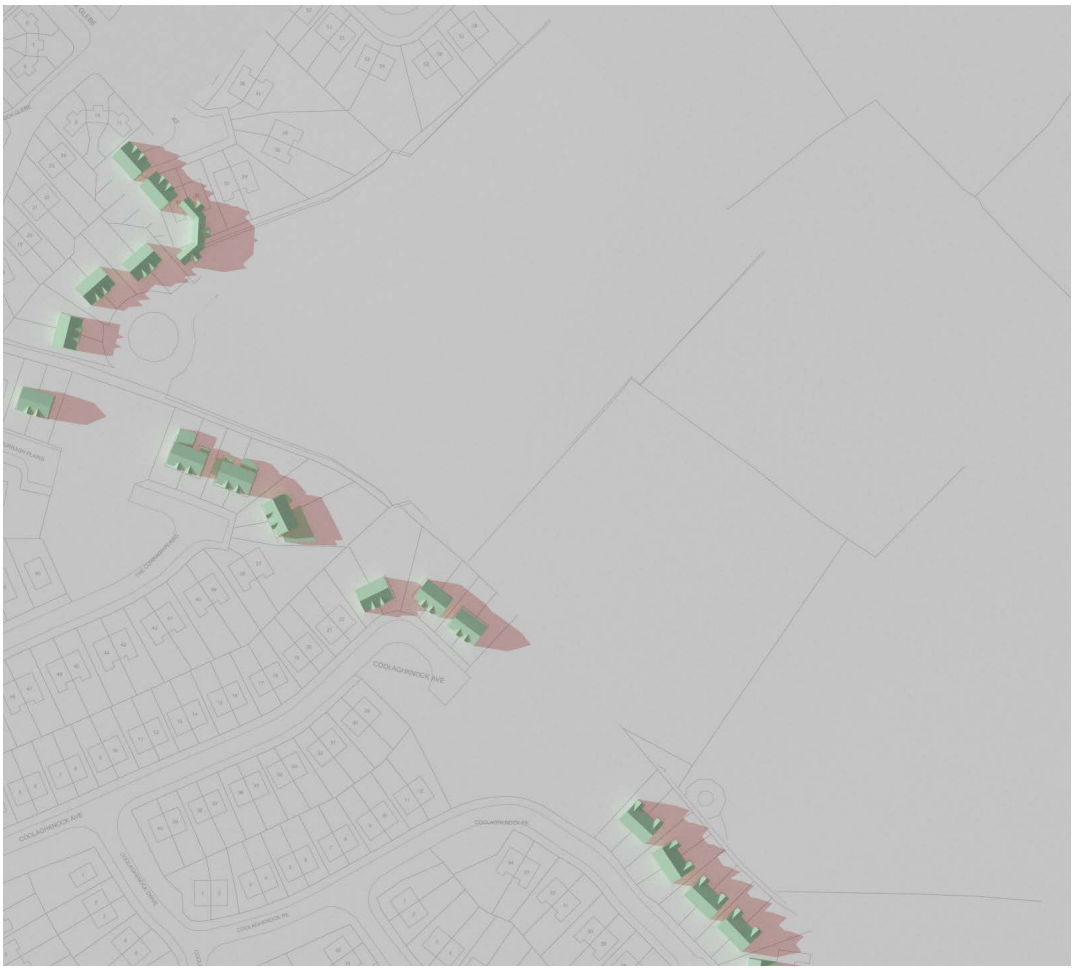
N

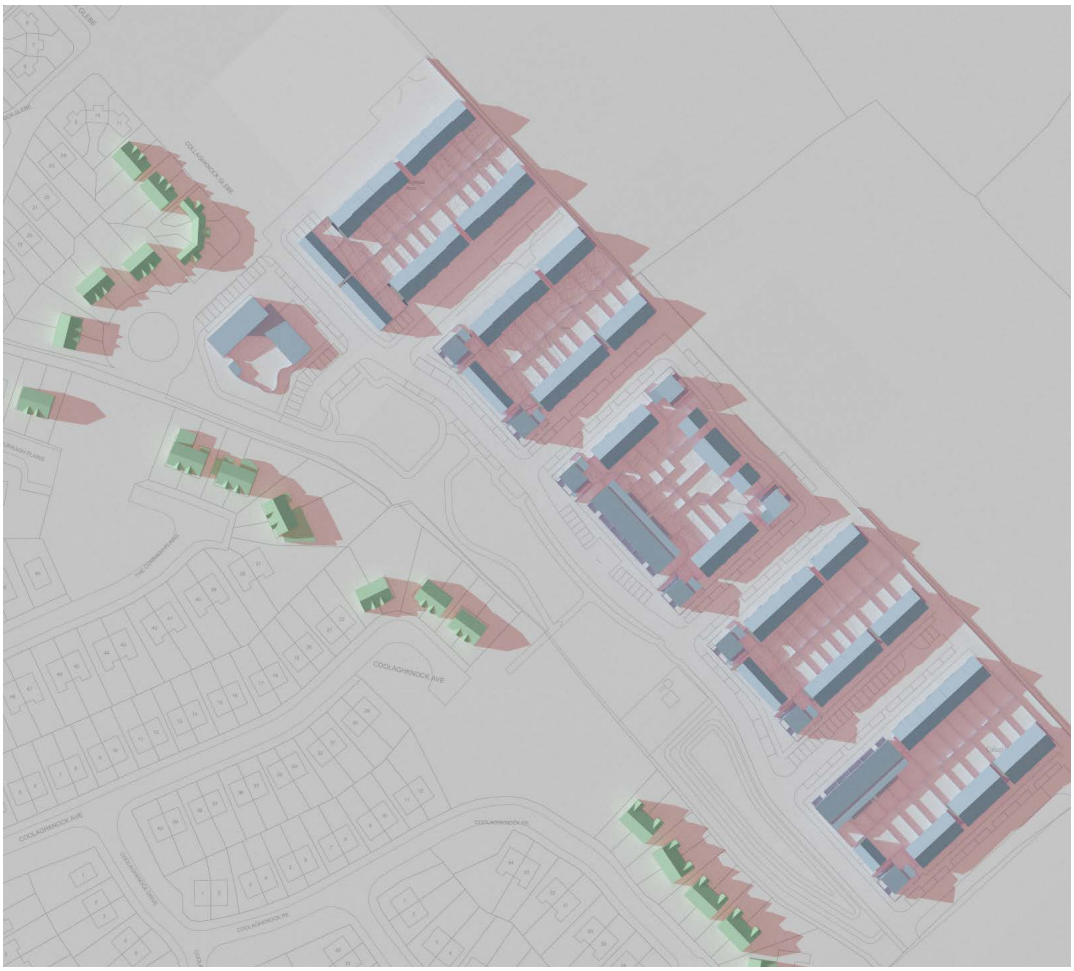
Proposed

Figure 15: Shadow diagrams 21 June 17:00 UTC +1

Existing

N





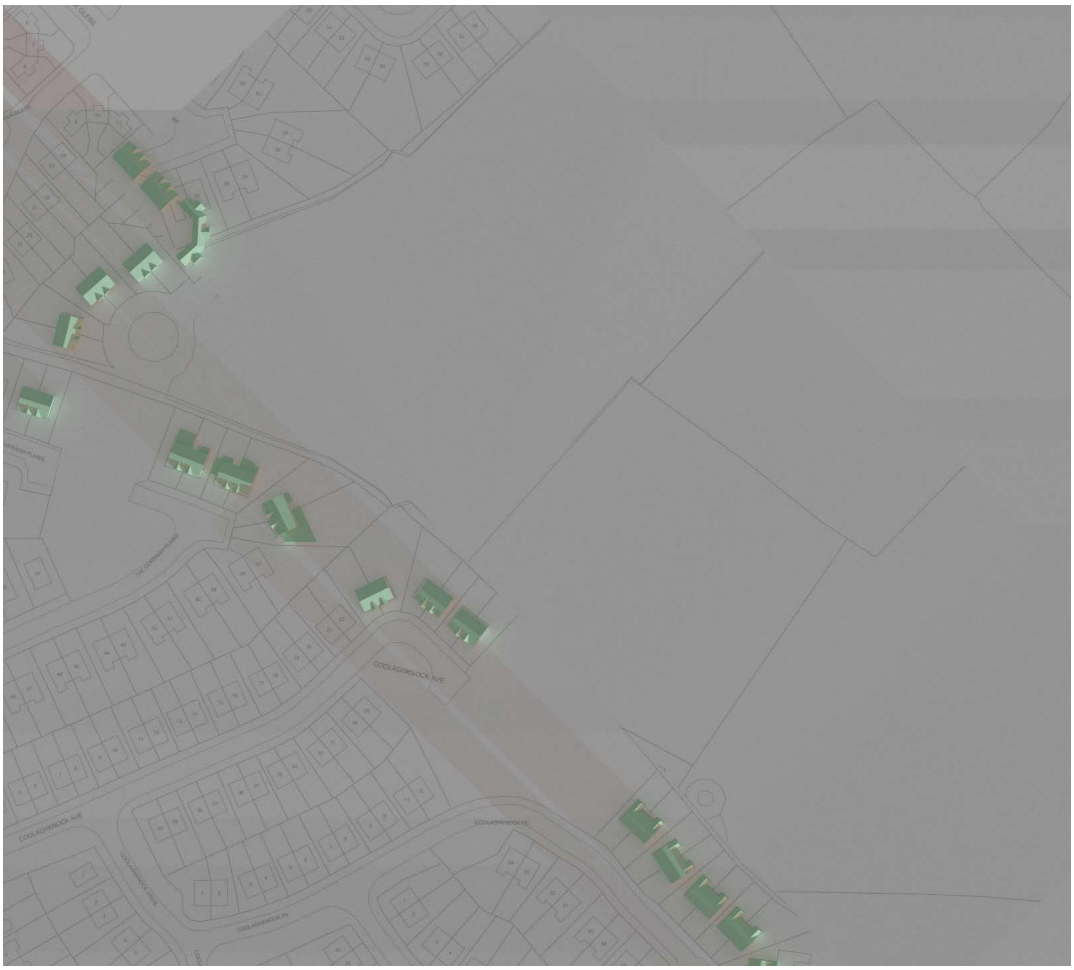
Proposed

Figure 16: Shadow diagrams 21 June 19:00 UTC +1

8.4 Shadow Casting diagrams December Solstice

Existing

N

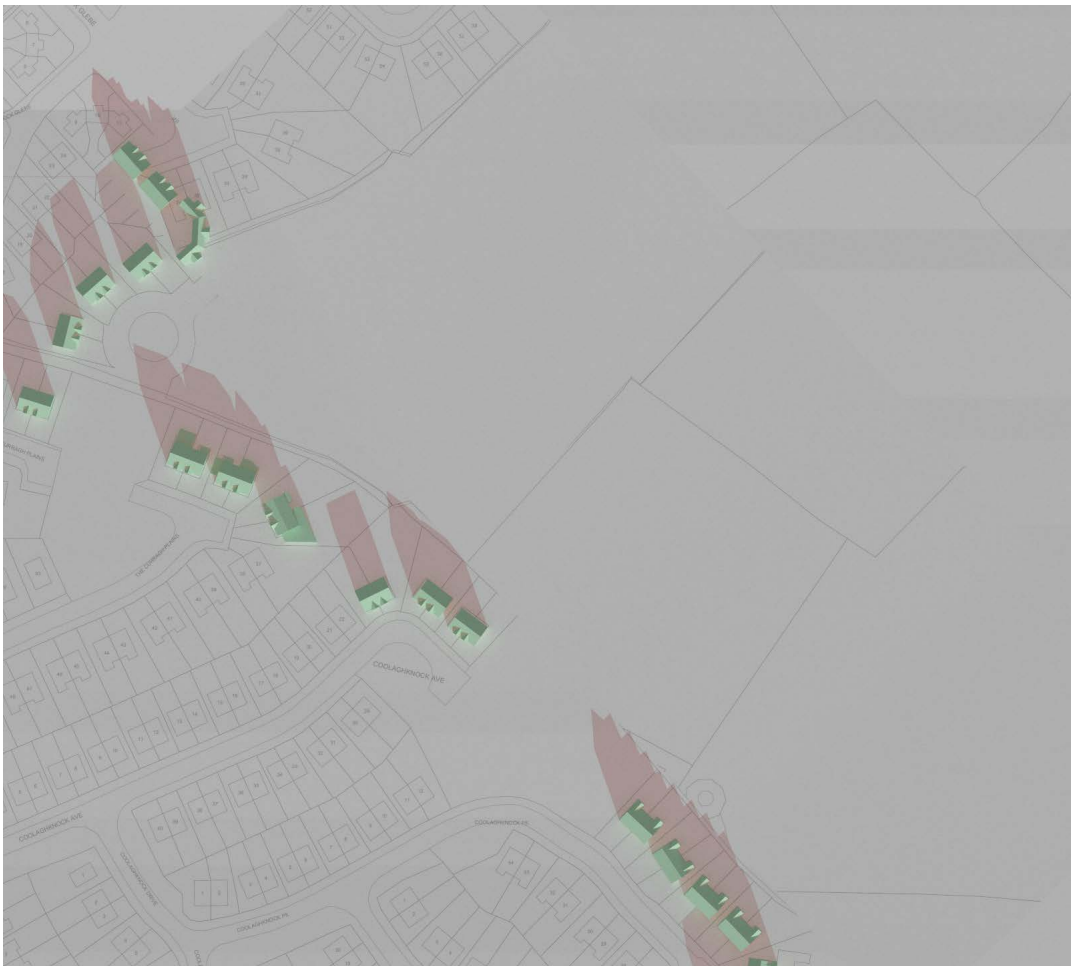


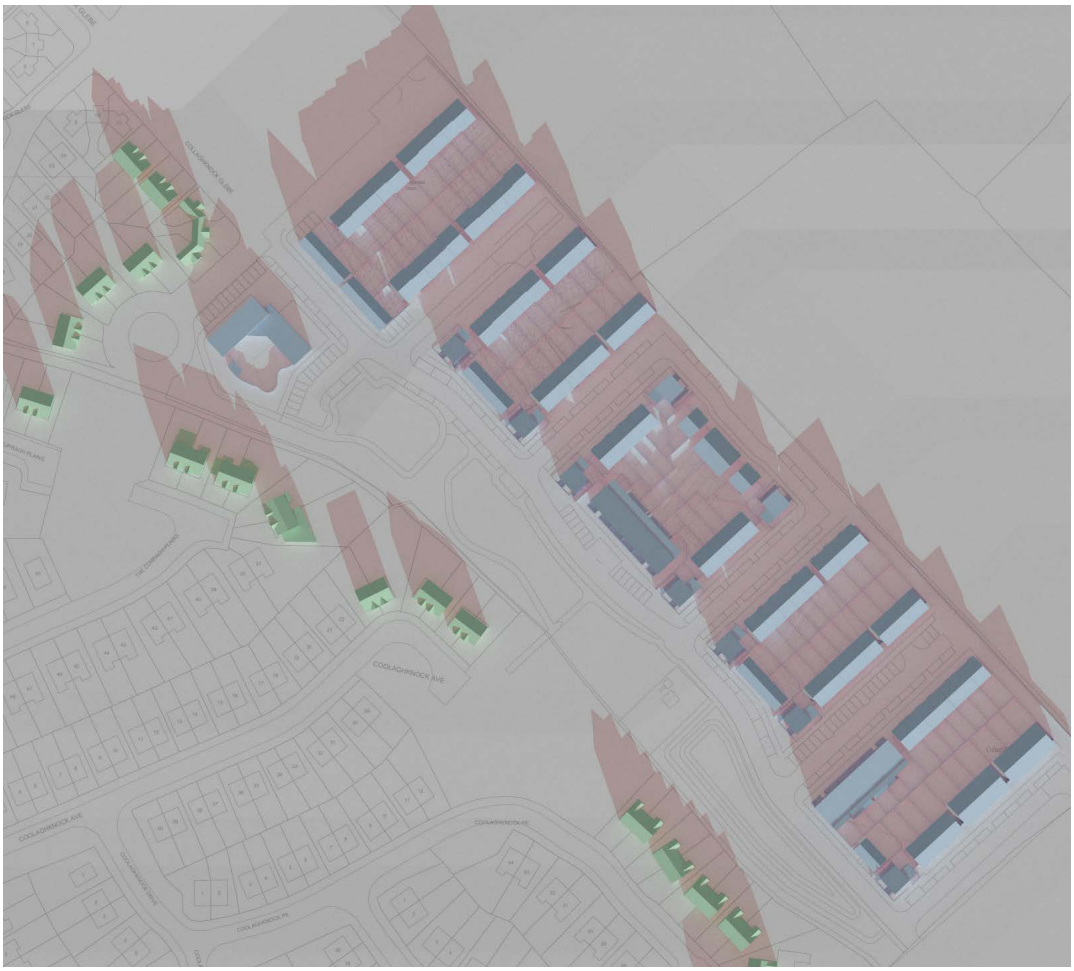
Proposed

Figure 17: Shadow diagrams 21 December 09:00 UTC

Existing

N



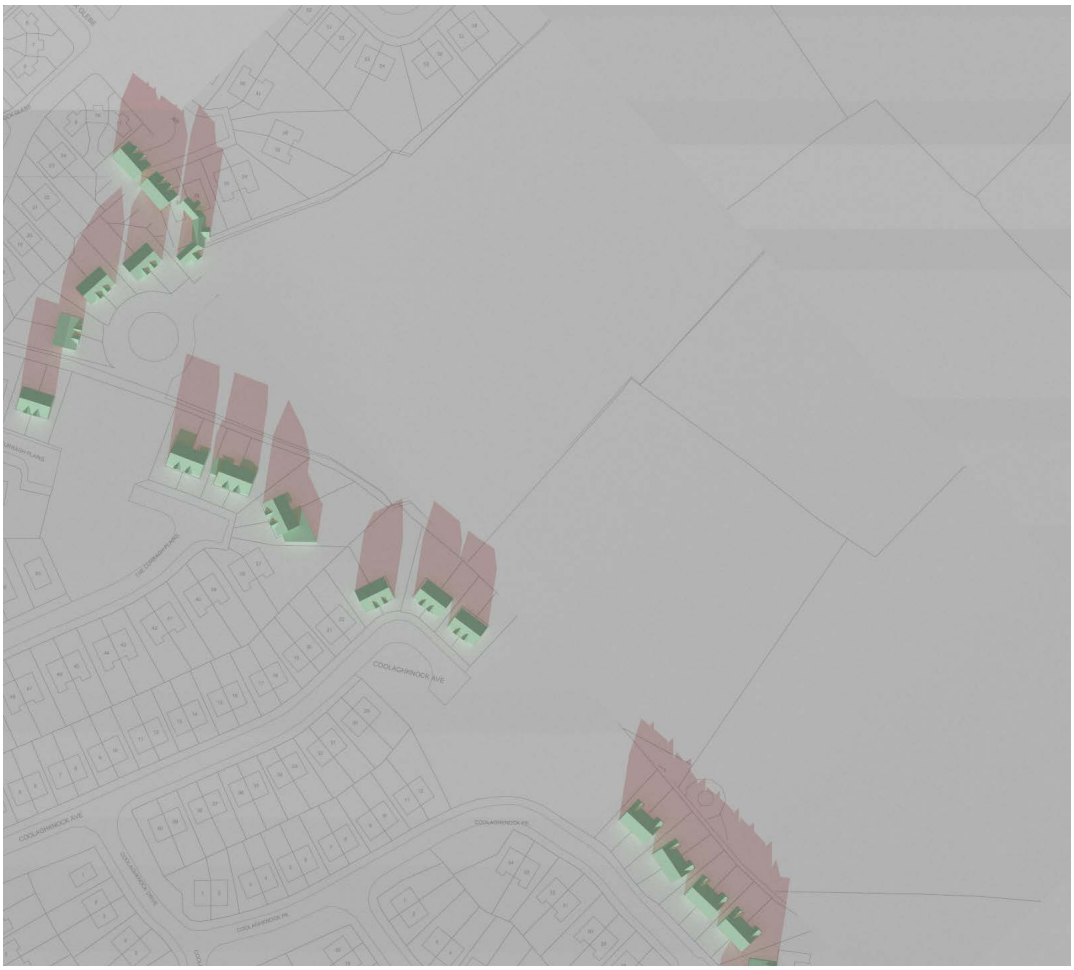


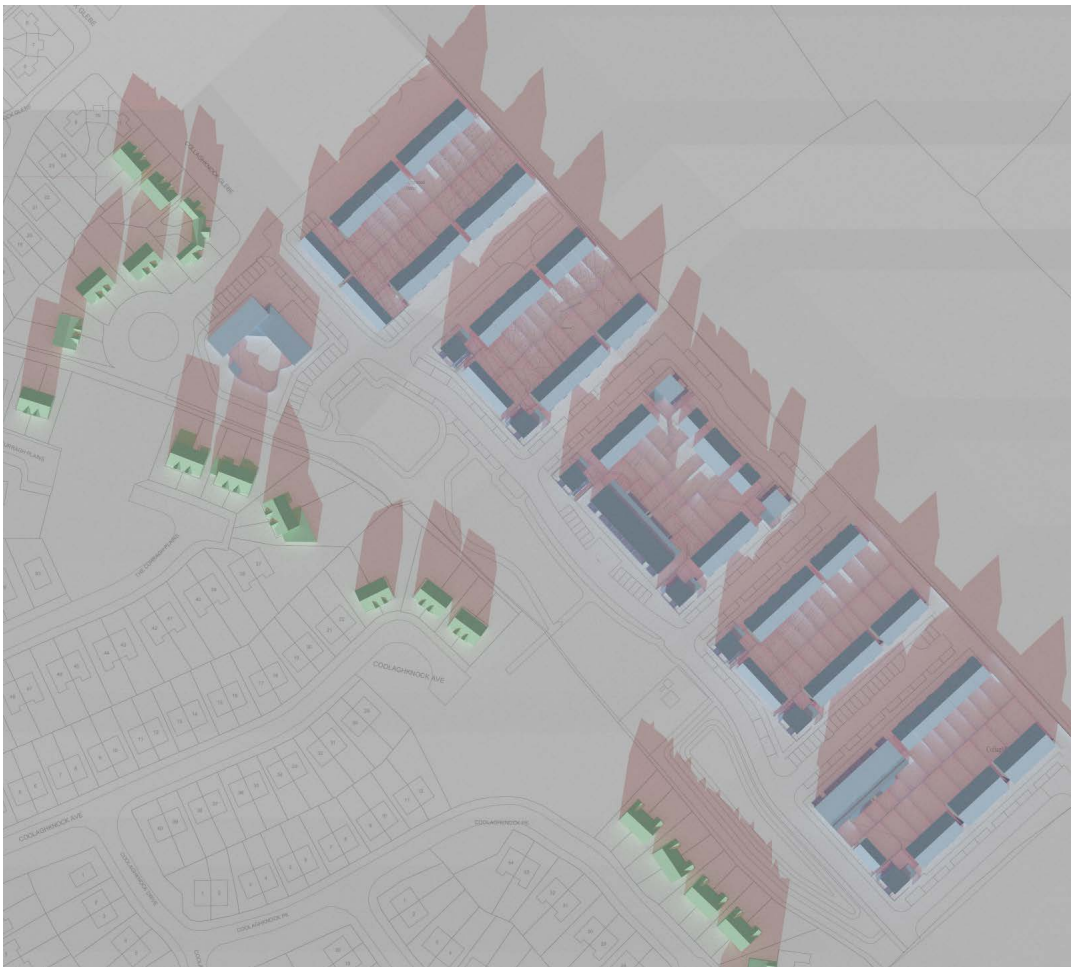
Proposed

Figure 18: Shadow diagrams 21 December 11:00 UTC

Existing

N



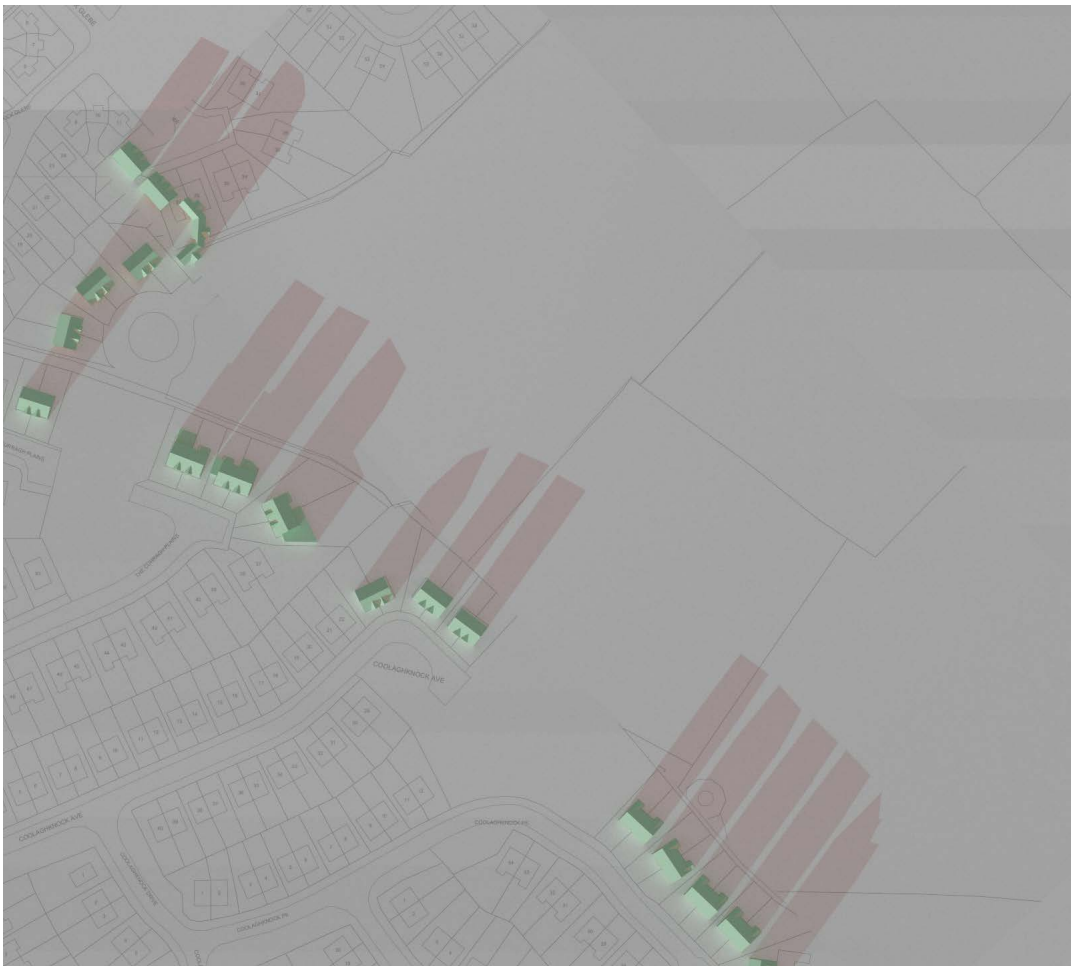


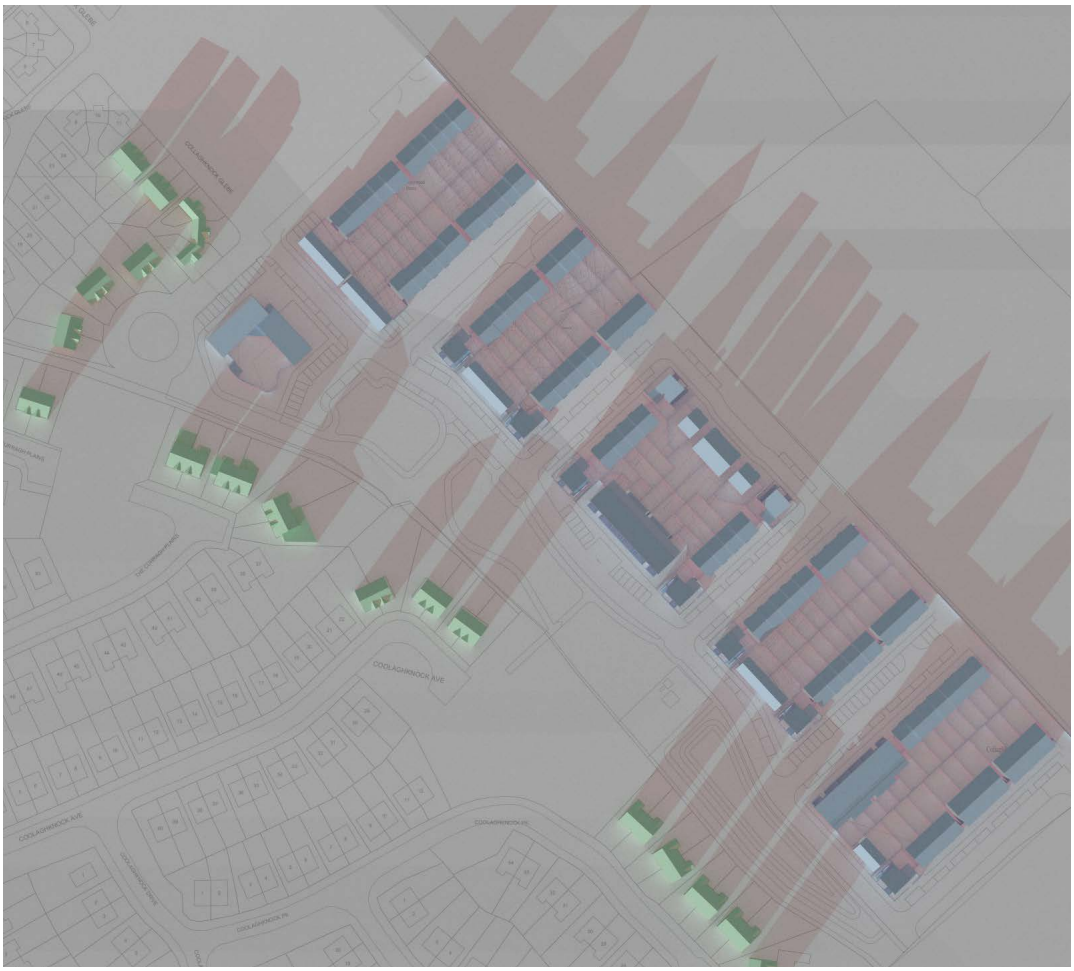
Proposed

Figure 19: Shadow diagrams 21 December 13:00 UTC

Existing

N





Proposed

Figure 20: Shadow diagrams 21 December 15:00 UTC

Appendix A -BS EN17037:2021+A1 Minimum room specific Daylight Provision in accordance with UK National Annex Table NA.1.

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
1.1	KD	18.8	165	200	1453	100.0%	Y
1.2	L	15.2	121	150	754	100.0%	Y
1.3	Bed	11.7	87	100	639	100.0%	Y
1.4	Bed	11.7	87	100	1485	100.0%	Y
1.5	Bed	6.6	48	100	372	100.0%	Y
2.1	KD	12.2	96	200	770	100.0%	Y
2.2	L	16.9	156	150	1661	100.0%	Y
2.3	Bed	12.5	112	100	657	100.0%	Y
2.4	Bed	10.4	84	100	1696	100.0%	Y
3.1	KD	12.2	96	200	766	100.0%	Y
3.2	L	16.9	156	150	1663	100.0%	Y
3.3	Bed	12.5	112	100	660	100.0%	Y
3.4	Bed	10.4	84	100	1700	100.0%	Y
4.1	KD	12.2	96	200	747	100.0%	Y
4.2	L	16.9	156	150	1612	100.0%	Y
4.3	Bed	12.5	112	100	633	100.0%	Y
4.4	Bed	10.4	84	100	1645	100.0%	Y
5.1	KD	18.8	165	200	1490	100.0%	Y
5.2	L	15.2	121	150	762	100.0%	Y
5.3	Bed	11.7	87	100	651	100.0%	Y
5.4	Bed	11.7	87	100	1501	100.0%	Y
5.5	Bed	6.6	48	100	371	100.0%	Y
6.1	KD	18.8	165	200	1494	100.0%	Y
6.2	L	15.2	121	150	758	100.0%	Y
6.3	Bed	11.7	87	100	637	100.0%	Y
6.4	Bed	11.7	87	100	1522	100.0%	Y
6.5	Bed	6.6	48	100	380	100.0%	Y
7.1	KD	12.2	96	200	771	100.0%	Y
7.2	L	16.9	156	150	1660	100.0%	Y
7.3	Bed	12.5	112	100	656	100.0%	Y
7.4	Bed	10.4	84	100	1715	100.0%	Y
8.1	KD	12.2	96	200	777	100.0%	Y
8.2	L	16.9	156	150	1670	100.0%	Y
8.3	Bed	12.5	112	100	656	100.0%	Y
8.4	Bed	10.4	84	100	1725	100.0%	Y
9.1	KD	12.2	96	200	770	100.0%	Y
9.2	L	16.9	156	150	1689	100.0%	Y
9.3	Bed	12.5	112	100	655	100.0%	Y
9.4	Bed	10.4	84	100	1746	100.0%	Y
10.1	KD	18.8	165	200	1562	100.0%	Y
10.2	L	15.2	121	150	756	100.0%	Y
10.3	Bed	11.7	87	100	645	100.0%	Y
10.4	Bed	11.7	87	100	1543	100.0%	Y
10.5	Bed	6.6	48	100	376	100.0%	Y
11.1	KD	14.5	126	200	1792	100.0%	Y
11.2	L	20.6	187	150	1485	100.0%	Y
11.3	Bed	13.1	112	100	1427	100.0%	Y
11.4	Bed	7.4	49	100	838	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
11.5	Bed	11.8	93	100	1608	100.0%	Y
12.1	KD	14.5	126	200	1811	100.0%	Y
12.2	L	20.6	187	150	1507	100.0%	Y
12.3	Bed	13.1	112	100	1422	100.0%	Y
12.4	Bed	7.4	49	100	819	100.0%	Y
12.5	Bed	11.8	93	100	1605	100.0%	Y
13.1	KD	14.5	126	200	1804	100.0%	Y
13.2	L	20.6	187	150	1482	100.0%	Y
13.3	Bed	13.1	112	100	1422	100.0%	Y
13.4	Bed	7.4	49	100	826	100.0%	Y
13.5	Bed	11.8	93	100	1606	100.0%	Y
14.1	KD	14.5	126	200	1772	100.0%	Y
14.2	L	20.6	187	150	1510	100.0%	Y
14.3	Bed	13.1	112	100	1424	100.0%	Y
14.4	Bed	7.4	49	100	844	100.0%	Y
14.5	Bed	11.8	93	100	1601	100.0%	Y
15.1	KD	18.8	165	200	658	100.0%	Y
15.2	L	15.2	121	150	1580	100.0%	Y
15.3	Bed	11.7	87	100	1501	100.0%	Y
15.4	Bed	11.7	87	100	662	100.0%	Y
15.5	Bed	6.6	48	100	919	100.0%	Y
16.1	KD	12.2	96	200	1661	100.0%	Y
16.2	L	16.9	156	150	712	100.0%	Y
16.3	Bed	12.5	112	100	1474	100.0%	Y
16.4	Bed	10.4	84	100	766	100.0%	Y
17.1	KD	12.2	96	200	1658	100.0%	Y
17.2	L	16.9	156	150	729	100.0%	Y
17.3	Bed	12.5	112	100	1478	100.0%	Y
17.4	Bed	10.4	84	100	768	100.0%	Y
18.1	KD	12.2	96	200	1647	100.0%	Y
18.2	L	16.9	156	150	729	100.0%	Y
18.3	Bed	12.5	112	100	1473	100.0%	Y
18.4	Bed	10.4	84	100	765	100.0%	Y
19.1	KD	18.8	165	200	682	100.0%	Y
19.2	L	15.2	121	150	1538	100.0%	Y
19.3	Bed	11.7	87	100	1477	100.0%	Y
19.4	Bed	11.7	87	100	677	100.0%	Y
19.5	Bed	6.6	48	100	902	100.0%	Y
20.1	KD	18.8	165	200	683	100.0%	Y
20.2	L	15.2	121	150	1555	100.0%	Y
20.3	Bed	11.7	87	100	1486	100.0%	Y
20.4	Bed	11.7	87	100	686	100.0%	Y
20.5	Bed	6.6	48	100	901	100.0%	Y
21.1	KD	12.2	96	200	1660	100.0%	Y
21.2	L	16.9	156	150	707	100.0%	Y
21.3	Bed	12.5	112	100	1477	100.0%	Y
21.4	Bed	10.4	84	100	777	100.0%	Y
22.1	KD	12.2	96	200	1653	100.0%	Y
22.2	L	16.9	156	150	716	100.0%	Y
22.3	Bed	12.5	112	100	1488	100.0%	Y
23.1	KD	12.2	96	200	1675	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
23.2	L	16.9	156	150	728	100.0%	Y
23.3	Bed	12.5	112	100	1506	100.0%	Y
23.4	Bed	10.4	84	100	774	100.0%	Y
23.4	Bed	10.4	84	100	779	100.0%	Y
24.1	KD	18.8	165	200	685	100.0%	Y
24.2	L	15.2	121	150	1622	100.0%	Y
24.3	Bed	11.7	87	100	1510	100.0%	Y
24.4	Bed	11.7	87	100	673	100.0%	Y
24.5	Bed	6.6	48	100	935	100.0%	Y
25.1	KD	18.8	165	200	1565	100.0%	Y
25.2	L	15.2	121	150	740	100.0%	Y
25.3	Bed	11.7	87	100	660	100.0%	Y
25.4	Bed	11.7	87	100	1532	100.0%	Y
25.5	Bed	6.6	48	100	367	100.0%	Y
26.1	KD	18.8	165	200	1514	100.0%	Y
26.2	L	15.2	121	150	734	100.0%	Y
26.3	Bed	11.7	87	100	660	100.0%	Y
26.4	Bed	11.7	87	100	1514	100.0%	Y
26.5	Bed	6.6	48	100	382	100.0%	Y
27.1	KD	18.8	165	200	1433	100.0%	Y
27.2	L	15.2	121	150	716	100.0%	Y
27.3	Bed	11.7	87	100	654	100.0%	Y
27.4	Bed	11.7	87	100	1522	100.0%	Y
27.5	Bed	6.6	48	100	382	100.0%	Y
28.1	KD	18.8	165	200	1436	100.0%	Y
28.2	L	15.2	121	150	724	100.0%	Y
28.3	Bed	11.7	87	100	658	100.0%	Y
28.4	Bed	11.7	87	100	1532	100.0%	Y
28.5	Bed	6.6	48	100	384	100.0%	Y
29.1	KD	12.2	96	200	755	100.0%	Y
29.2	L	16.9	156	150	1686	100.0%	Y
29.3	Bed	10.4	84	100	1721	100.0%	Y
29.4	Bed	12.5	112	100	682	100.0%	Y
30.1	KD	12.2	96	200	748	100.0%	Y
30.2	L	16.9	156	150	1694	100.0%	Y
30.3	Bed	10.4	84	100	1726	100.0%	Y
30.4	Bed	12.5	112	100	683	100.0%	Y
31.1	KD	12.2	96	200	736	100.0%	Y
31.2	L	16.9	156	150	1683	100.0%	Y
31.3	Bed	10.4	84	100	1703	100.0%	Y
31.4	Bed	12.5	112	100	683	100.0%	Y
32.1	KD	18.8	165	200	1474	100.0%	Y
32.2	L	15.2	121	150	730	100.0%	Y
32.3	Bed	11.7	87	100	1509	100.0%	Y
32.4	Bed	11.7	87	100	659	100.0%	Y
32.5	Bed	6.6	48	100	370	100.0%	Y
33.1	LKD	25.0	220	200	1313	100.0%	Y
33.2	Bed	11.5	88	100	556	100.0%	Y
34.1	LKD	23.6	202	200	1500	100.0%	Y
34.2	Bed	11.5	88	100	622	100.0%	Y
35.1	KD	14.5	126	200	1601	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
35.2	L	20.6	187	150	1350	100.0%	Y
35.3	Bed	13.1	112	100	1427	100.0%	Y
35.4	Bed	7.4	49	100	844	100.0%	Y
35.5	Bed	11.8	93	100	1603	100.0%	Y
36.1	KD	14.5	126	200	1683	100.0%	Y
36.2	L	20.6	187	150	1390	100.0%	Y
36.3	Bed	11.8	93	100	1612	100.0%	Y
36.4	Bed	7.4	49	100	855	100.0%	Y
36.5	Bed	13.1	112	100	1408	100.0%	Y
37.1	LKD	25.0	220	200	1722	100.0%	Y
37.2	Bed	11.5	88	100	661	100.0%	Y
38.1	LKD	23.6	202	200	1702	100.0%	Y
38.2	Bed	11.5	88	100	1302	100.0%	Y
39.1	KD	19.3	159	200	706	100.0%	Y
39.2	L	14.8	121	150	1582	100.0%	Y
39.3	Bed	11.5	91	100	670	100.0%	Y
39.4	Bed	6.6	48	100	902	100.0%	Y
39.4	Bed	12.7	108	100	1381	100.0%	Y
40.1	KD	12.2	96	200	1603	100.0%	Y
40.2	L	16.9	156	150	713	100.0%	Y
40.3	Bed	10.4	84	100	754	100.0%	Y
40.4	Bed	12.5	112	100	1460	100.0%	Y
41.1	KD	12.2	96	200	1545	100.0%	Y
41.2	L	16.9	156	150	722	100.0%	Y
41.3	Bed	10.4	84	100	770	100.0%	Y
41.4	Bed	12.5	112	100	1446	100.0%	Y
42.1	KD	12.2	96	200	1508	100.0%	Y
42.2	L	16.9	156	150	716	100.0%	Y
42.3	Bed	10.4	84	100	775	100.0%	Y
42.4	Bed	12.5	112	100	1485	100.0%	Y
43.1	KD	19.3	159	200	749	100.0%	Y
43.2	L	14.8	121	150	1470	100.0%	Y
43.3	Bed	11.5	91	100	684	100.0%	Y
43.4	Bed	12.7	108	100	1386	100.0%	Y
43.5	Bed	6.6	48	100	890	100.0%	Y
44.1	KD	19.3	159	200	760	100.0%	Y
44.2	L	14.8	121	150	1615	100.0%	Y
44.3	Bed	11.5	91	100	684	100.0%	Y
44.4	Bed	12.7	108	100	1384	100.0%	Y
44.5	Bed	6.6	48	100	895	100.0%	Y
45.1	KD	19.3	159	200	748	100.0%	Y
45.2	L	14.8	121	150	1652	100.0%	Y
45.3	Bed	11.5	91	100	673	100.0%	Y
45.4	Bed	6.6	48	100	899	100.0%	Y
45.4	Bed	12.7	108	100	1396	100.0%	Y
46.1	KD	19.3	159	200	757	100.0%	Y
46.2	L	14.8	121	150	1699	100.0%	Y
46.3	Bed	11.5	91	100	671	100.0%	Y
46.4	Bed	12.7	108	100	1410	100.0%	Y
46.5	Bed	6.6	48	100	911	100.0%	Y
47.1	LKD	25.0	220	200	893	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
47.2	Bed	11.5	88	100	595	100.0%	Y
48.1	LKD	23.6	202	200	787	100.0%	Y
48.2	Bed	11.5	88	100	622	100.0%	Y
49.1	KD	19.3	159	200	1683	100.0%	Y
49.2	L	14.8	121	150	728	100.0%	Y
49.3	Bed	12.7	108	100	628	100.0%	Y
49.4	Bed	11.5	91	100	1561	100.0%	Y
49.5	Bed	6.6	48	100	375	100.0%	Y
50.1	KD	12.2	96	200	731	100.0%	Y
50.2	L	16.9	156	150	1760	100.0%	Y
50.3	Bed	12.5	112	100	680	100.0%	Y
50.4	Bed	10.4	84	100	1738	100.0%	Y
51.1	KD	12.2	96	200	747	100.0%	Y
51.2	L	16.9	156	150	1746	100.0%	Y
51.3	Bed	12.5	112	100	685	100.0%	Y
51.4	Bed	10.4	84	100	1748	100.0%	Y
52.1	KD	19.3	159	200	1541	100.0%	Y
52.2	L	14.8	121	150	751	100.0%	Y
52.3	Bed	12.7	108	100	639	100.0%	Y
52.4	Bed	11.5	91	100	1556	100.0%	Y
52.5	Bed	6.6	48	100	374	100.0%	Y
53.1	LKD	25.0	220	200	1326	100.0%	Y
53.2	Bed	11.5	88	100	478	100.0%	Y
54.1	LKD	23.6	202	200	1493	100.0%	Y
54.2	Bed	11.5	88	100	618	100.0%	Y
55.1	LKD	23.7	208	200	607	100.0%	Y
55.2	Bed	13.1	108	100	556	100.0%	Y
56.1	LKD	23.5	213	200	1776	100.0%	Y
56.2	Bed	10.0	80	100	619	100.0%	Y
57.1	LKD	24.1	209	200	568	96.7%	Y
57.2	Bed	11.8	99	100	716	100.0%	Y
58.1	LKD	23.5	213	200	1717	100.0%	Y
58.2	Bed	10.0	80	100	680	100.0%	Y
59.1	LKD	24.1	209	200	622	97.6%	Y
59.2	Bed	11.8	99	100	785	100.0%	Y
60.1	LKD	23.5	213	200	1686	100.0%	Y
60.2	Bed	10.0	80	100	674	100.0%	Y
61.1	LKD	24.1	209	200	604	97.1%	Y
61.2	Bed	11.8	99	100	800	100.0%	Y
62.1	LKD	23.5	213	200	1707	100.0%	Y
62.2	Bed	10.0	80	100	664	100.0%	Y
63.1	LKD	24.1	209	200	603	98.6%	Y
63.2	Bed	11.8	99	100	797	100.0%	Y
64.1	LKD	23.5	213	200	1683	100.0%	Y
64.2	Bed	10.0	80	100	681	100.0%	Y
65.1	LKD	23.7	208	200	776	100.0%	Y
65.2	Bed	13.1	108	100	799	100.0%	Y
66.1	LKD	23.5	213	200	1941	100.0%	Y
66.2	Bed	10.0	80	100	1329	100.0%	Y
67.1	LKD	25.0	220	200	1731	100.0%	Y
67.2	Bed	11.5	88	100	670	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
68.1	LKD	23.6	202	200	1697	100.0%	Y
68.2	Bed	11.5	88	100	1294	100.0%	Y
69.1	KD	19.3	159	200	626	100.0%	Y
69.2	L	14.8	121	150	1540	100.0%	Y
69.3	Bed	12.7	108	100	1371	100.0%	Y
69.4	Bed	11.5	91	100	648	100.0%	Y
69.5	Bed	6.6	48	100	895	100.0%	Y
70.1	KD	12.2	96	200	1435	100.0%	Y
70.2	L	16.9	156	150	639	100.0%	Y
70.3	Bed	10.4	84	100	757	100.0%	Y
70.4	Bed	12.5	112	100	1458	100.0%	Y
71.1	KD	12.2	96	200	1518	100.0%	Y
71.2	L	16.9	156	150	681	100.0%	Y
71.3	Bed	10.4	84	100	760	100.0%	Y
71.4	Bed	12.5	112	100	1455	100.0%	Y
72.1	KD	19.3	159	200	732	100.0%	Y
72.2	L	14.8	121	150	1569	100.0%	Y
72.3	Bed	11.5	91	100	686	100.0%	Y
72.4	Bed	12.7	108	100	1363	100.0%	Y
72.5	Bed	6.6	48	100	882	100.0%	Y
73.1	LKD	25.0	220	200	1256	100.0%	Y
73.2	Bed	11.5	88	100	696	100.0%	Y
74.1	LKD	23.6	202	200	971	100.0%	Y
74.2	Bed	11.5	88	100	1283	100.0%	Y
75.1	KD	19.3	159	200	1584	100.0%	Y
75.2	L	14.8	121	150	831	100.0%	Y
75.3	Bed	12.7	108	100	657	100.0%	Y
75.4	Bed	11.5	91	100	1482	100.0%	Y
75.5	Bed	6.6	48	100	388	100.0%	Y
76.1	KD	22.4	204	200	1333	100.0%	Y
76.2	L	17.6	156	150	719	100.0%	Y
76.3	Bed	11.7	99	100	687	100.0%	Y
76.4	Bed	7.6	56	100	339	100.0%	Y
76.5	Bed	10.4	80	100	1568	100.0%	Y
76.6	Bed	8.7	72	100	1828	100.0%	Y
77.1	KD	22.4	204	200	1281	100.0%	Y
77.2	L	17.6	156	150	725	100.0%	Y
77.3	Bed	11.7	99	100	663	100.0%	Y
77.4	Bed	7.6	56	100	352	100.0%	Y
77.5	Bed	10.4	80	100	1589	100.0%	Y
77.6	Bed	8.7	72	100	1837	100.0%	Y
78.1	KD	12.2	96	200	818	100.0%	Y
78.2	L	16.9	156	150	1568	100.0%	Y
78.3	Bed	12.5	112	100	713	100.0%	Y
78.4	Bed	10.4	84	100	1673	100.0%	Y
79.1	KD	19.3	159	200	1726	100.0%	Y
79.2	L	14.8	121	150	743	100.0%	Y
79.3	Bed	12.7	108	100	606	100.0%	Y
79.4	Bed	6.6	48	100	359	100.0%	Y
79.4	Bed	11.5	91	100	1549	100.0%	Y
80.1	KD	19.3	159	200	1679	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
80.2	L	14.8	121	150	741	100.0%	Y
80.3	Bed	12.7	108	100	616	100.0%	Y
80.4	Bed	11.5	91	100	1553	100.0%	Y
80.5	Bed	6.6	48	100	366	100.0%	Y
81.1	KD	19.3	159	200	1708	100.0%	Y
81.2	L	14.8	121	150	742	100.0%	Y
81.3	Bed	12.7	108	100	611	100.0%	Y
81.4	Bed	11.5	91	100	1546	100.0%	Y
81.5	Bed	6.6	48	100	369	100.0%	Y
82.1	KD	19.3	159	200	1690	100.0%	Y
82.2	L	14.8	121	150	745	100.0%	Y
82.3	Bed	12.7	108	100	624	100.0%	Y
82.4	Bed	11.5	91	100	1545	100.0%	Y
82.5	Bed	6.6	48	100	377	100.0%	Y
83.1	KD	12.2	96	200	711	100.0%	Y
83.2	L	16.9	156	150	1659	100.0%	Y
83.3	Bed	12.5	112	100	682	100.0%	Y
83.4	Bed	10.4	84	100	1712	100.0%	Y
84.1	KD	12.2	96	200	671	100.0%	Y
84.2	L	16.9	156	150	1651	100.0%	Y
84.3	Bed	12.5	112	100	682	100.0%	Y
84.4	Bed	10.4	84	100	1725	100.0%	Y
85.1	KD	12.2	96	200	660	100.0%	Y
85.2	L	16.9	156	150	1661	100.0%	Y
85.3	Bed	12.5	112	100	662	100.0%	Y
85.4	Bed	10.4	84	100	1734	100.0%	Y
86.1	KD	19.3	159	200	1615	100.0%	Y
86.2	L	14.8	121	150	677	100.0%	Y
86.3	Bed	12.7	108	100	614	100.0%	Y
86.4	Bed	11.5	91	100	1526	100.0%	Y
86.5	Bed	6.6	48	100	374	100.0%	Y
87.1	LKD	25.0	220	200	1330	100.0%	Y
87.2	Bed	11.5	88	100	580	100.0%	Y
88.1	LKD	23.6	202	200	1496	100.0%	Y
88.2	Bed	11.5	88	100	614	100.0%	Y
89.1	KD	14.5	126	200	1661	100.0%	Y
89.2	L	20.6	187	150	1511	100.0%	Y
89.3	Bed	13.1	112	100	1443	100.0%	Y
89.4	Bed	7.4	49	100	850	100.0%	Y
89.5	Bed	11.8	93	100	1618	100.0%	Y
90.1	KD	14.5	126	200	1789	100.0%	Y
90.2	L	20.6	187	150	1546	100.0%	Y
90.3	Bed	11.8	93	100	1635	100.0%	Y
90.4	Bed	7.4	49	100	846	100.0%	Y
90.5	Bed	13.1	112	100	1422	100.0%	Y
91.1	LKD	25.0	220	200	1656	100.0%	Y
91.2	Bed	11.5	88	100	647	100.0%	Y
92.1	LKD	23.6	202	200	1674	100.0%	Y
92.2	Bed	11.5	88	100	1265	100.0%	Y
93.1	KD	19.3	159	200	697	100.0%	Y
93.2	L	14.8	121	150	1532	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
93.3	Bed	12.7	108	100	1338	100.0%	Y
93.4	Bed	11.5	91	100	664	100.0%	Y
93.5	Bed	6.6	48	100	878	100.0%	Y
94.1	KD	12.2	96	200	1620	100.0%	Y
94.2	L	16.9	156	150	709	100.0%	Y
94.3	Bed	12.5	112	300	1465	100.0%	Y
94.4	Bed	10.4	84	100	763	100.0%	Y
95.1	KD	12.2	96	200	1627	100.0%	Y
95.2	L	16.9	156	150	725	100.0%	Y
95.3	Bed	12.5	112	100	1471	100.0%	Y
95.4	Bed	10.4	84	100	769	100.0%	Y
96.1	KD	12.2	96	200	1651	100.0%	Y
96.2	L	16.9	156	150	714	100.0%	Y
96.3	Bed	12.5	112	100	1469	100.0%	Y
96.4	Bed	10.4	84	100	786	100.0%	Y
97.1	KD	19.3	159	200	755	100.0%	Y
97.2	L	14.8	121	150	1609	100.0%	Y
97.3	Bed	12.7	108	100	1372	100.0%	Y
97.4	Bed	11.5	91	100	682	100.0%	Y
97.5	Bed	6.6	48	100	889	100.0%	Y
98.1	KD	19.3	159	200	768	100.0%	Y
98.2	L	14.8	121	150	1609	100.0%	Y
98.3	Bed	12.7	108	100	1391	100.0%	Y
98.4	Bed	11.5	91	100	690	100.0%	Y
98.5	Bed	6.6	48	100	896	100.0%	Y
99.1	KD	19.3	159	200	763	100.0%	Y
99.2	L	14.8	121	150	1638	100.0%	Y
99.3	Bed	12.7	108	100	1395	100.0%	Y
99.4	Bed	11.5	91	100	685	100.0%	Y
99.5	Bed	6.6	48	100	891	100.0%	Y
100.1	KD	19.3	159	200	772	100.0%	Y
100.2	L	14.8	121	150	1676	100.0%	Y
100.3	Bed	12.7	108	100	1405	100.0%	Y
100.4	Bed	11.5	91	100	677	100.0%	Y
100.5	Bed	6.6	48	100	893	100.0%	Y
101.1	KD	12.2	96	200	760	100.0%	Y
101.2	L	16.9	156	150	1720	100.0%	Y
101.3	Bed	12.5	112	100	675	100.0%	Y
101.4	Bed	10.4	84	100	1706	100.0%	Y
102.1	KD	12.2	96	200	761	100.0%	Y
102.2	L	16.9	156	150	1687	100.0%	Y
102.3	Bed	12.5	112	100	679	100.0%	Y
102.4	Bed	10.4	84	100	1714	100.0%	Y
103.1	KD	12.2	96	200	760	100.0%	Y
103.2	L	16.9	156	150	1669	100.0%	Y
103.3	Bed	12.5	112	100	675	100.0%	Y
103.4	Bed	10.4	84	100	1711	100.0%	Y
104.1	KD	12.2	96	200	755	100.0%	Y
104.2	L	16.9	156	150	1667	100.0%	Y
104.3	Bed	12.5	112	100	674	100.0%	Y
104.4	Bed	10.4	84	100	1706	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
105.1	KD	12.2	96	200	748	100.0%	Y
105.2	L	16.9	156	150	1628	100.0%	Y
105.3	Bed	12.5	112	100	674	100.0%	Y
105.4	Bed	10.4	84	100	1680	100.0%	Y
106.1	KD	12.2	96	200	751	100.0%	Y
106.2	L	16.9	156	150	1687	100.0%	Y
106.3	Bed	12.5	112	100	674	100.0%	Y
106.4	Bed	10.4	84	100	1689	100.0%	Y
107.1	KD	12.2	96	200	743	100.0%	Y
107.2	L	16.9	156	150	1606	100.0%	Y
107.3	Bed	12.5	112	100	677	100.0%	Y
107.4	Bed	10.4	84	100	1667	100.0%	Y
108.1	LKD	23.7	208	200	1297	100.0%	Y
108.2	Bed	13.1	108	100	274	100.0%	Y
109.1	LKD	23.5	213	200	839	100.0%	Y
109.2	Bed	10.0	80	100	646	100.0%	Y
110.1	LKD	24.1	209	200	1167	100.0%	Y
110.2	Bed	11.8	99	100	364	100.0%	Y
111.1	LKD	23.5	213	200	765	100.0%	Y
111.2	Bed	10.0	80	100	1431	100.0%	Y
112.1	LKD	24.1	209	200	1195	100.0%	Y
112.2	Bed	11.8	99	100	365	100.0%	Y
113.1	LKD	23.5	213	200	766	100.0%	Y
113.2	Bed	10.0	80	100	1461	100.0%	Y
114.1	LKD	24.1	209	200	1165	100.0%	Y
114.2	Bed	11.8	99	100	373	100.0%	Y
115.1	LKD	23.5	213	200	762	100.0%	Y
115.2	Bed	10.0	80	100	1437	100.0%	Y
116.1	LKD	24.1	209	200	1117	100.0%	Y
116.2	Bed	11.8	99	100	380	100.0%	Y
117.1	LKD	23.5	213	200	759	100.0%	Y
117.2	Bed	10.0	80	100	1446	100.0%	Y
118.1	LKD	23.7	208	200	1530	100.0%	Y
118.2	Bed	13.1	108	100	1118	100.0%	Y
119.1	LKD	23.5	213	200	1050	100.0%	Y
119.2	Bed	10.0	80	100	1461	100.0%	Y
120.1	KD	14.5	126	200	1769	100.0%	Y
120.2	L	20.6	187	150	1367	100.0%	Y
120.3	Bed	13.1	112	100	1446	100.0%	Y
120.4	Bed	7.4	49	100	851	100.0%	Y
120.5	Bed	11.8	93	100	1606	100.0%	Y
121.1	LKD	25.0	220	200	1837	100.0%	Y
121.2	Bed	11.5	88	100	749	100.0%	Y
122.1	LKD	23.6	202	200	1708	100.0%	Y
122.2	Bed	11.5	88	100	1406	100.0%	Y
123.1	KD	19.3	159	200	730	100.0%	Y
123.2	L	14.8	121	150	1817	100.0%	Y
123.3	Bed	12.7	108	100	1449	100.0%	Y
123.4	Bed	11.5	91	100	680	100.0%	Y
123.5	Bed	6.6	48	100	938	100.0%	Y
124.1	KD	19.3	159	200	729	100.0%	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded: Minimum 50% of grid	Meets Criteria
124.2	L	14.8	121	150	1805	100.0%	Y
124.3	Bed	12.7	108	100	1423	100.0%	Y
124.4	Bed	11.5	91	100	679	100.0%	Y
124.5	Bed	6.6	48	100	953	100.0%	Y
125.1	KD	19.3	159	200	749	100.0%	Y
125.2	L	14.8	121	150	1817	100.0%	Y
125.3	Bed	12.7	108	100	1452	100.0%	Y
125.4	Bed	11.5	91	100	676	100.0%	Y
125.5	Bed	6.6	48	100	929	100.0%	Y
126.1	KD	22.4	204	200	605	100.0%	Y
126.2	L	17.6	156	150	1562	100.0%	Y
126.3	Bed	10.4	80	100	708	100.0%	Y
126.4	Bed	8.7	72	100	800	100.0%	Y
126.5	Bed	11.7	99	100	1499	100.0%	Y
126.6	Bed	7.6	56	100	823	100.0%	Y
127.1	KD	22.4	204	200	591	100.0%	Y
127.2	L	17.6	156	150	1570	100.0%	Y
127.3	Bed	10.4	80	100	705	100.0%	Y
127.4	Bed	8.7	72	100	790	100.0%	Y
127.5	Bed	11.7	99	100	1513	100.0%	Y
127.6	Bed	7.6	56	100	828	100.0%	Y
128.1	KD	22.4	204	200	570	100.0%	Y
128.2	L	17.6	156	150	1572	100.0%	Y
128.3	Bed	10.4	80	100	710	100.0%	Y
128.4	Bed	8.7	72	100	793	100.0%	Y
128.5	Bed	11.7	99	100	1462	100.0%	Y
128.6	Bed	7.6	56	100	839	100.0%	Y
129.1	KD	22.4	204	200	599	100.0%	Y
129.2	L	17.6	156	150	1573	100.0%	Y
129.3	Bed	10.4	80	100	696	100.0%	Y
129.4	Bed	8.7	72	100	803	100.0%	Y
129.5	Bed	11.7	99	100	1523	100.0%	Y
129.6	Bed	7.6	56	100	828	100.0%	Y
130.1	KD	22.4	204	200	594	100.0%	Y
130.2	L	17.6	156	150	1563	100.0%	Y
130.3	Bed	10.4	80	100	705	100.0%	Y
130.4	Bed	8.7	72	100	794	100.0%	Y
130.5	Bed	11.7	99	100	1519	100.0%	Y
130.6	Bed	7.6	56	100	829	100.0%	Y
131.1	KD	22.4	204	200	586	100.0%	Y
131.2	L	17.6	156	150	1584	100.0%	Y
131.3	Bed	10.4	80	100	703	100.0%	Y
131.4	Bed	8.7	72	100	791	100.0%	Y
131.5	Bed	11.7	99	100	1481	100.0%	Y
131.6	Bed	7.6	56	100	836	100.0%	Y

Table 11: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

Appendix B - Supplementary Information

EN17037:2018 Table A.1 Daylight Provision Room Results

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
1.1	KD	18.8	165	Medium	68.4%	55.1%	42.8%	Medium	80.9%	56.4%	41.0%
1.2	L	15.2	121	Medium	72.1%	55.0%	36.1%	Medium	85.8%	63.1%	42.5%
1.3	Bed	11.7	87	Minimum	66.6%	47.4%	24.5%	Medium	80.6%	51.8%	22.8%
1.4	Bed	11.7	87	Medium	71.2%	57.9%	45.8%	Medium	82.9%	61.4%	45.2%
1.5	Bed	6.6	48	Fail	49.6%	19.8%	2.5%	Minimum	75.4%	33.1%	2.6%
2.1	KD	12.2	96	Medium	72.5%	55.8%	36.9%	Medium	85.3%	61.8%	40.5%
2.2	L	16.9	156	Medium	74.1%	60.8%	49.7%	Medium	83.3%	61.6%	47.2%
2.3	Bed	12.5	112	Medium	68.5%	50.1%	27.6%	Medium	80.5%	51.0%	22.8%
2.4	Bed	10.4	84	High	75.4%	62.6%	51.5%	Medium	83.5%	62.8%	48.3%
3.1	KD	12.2	96	Medium	72.5%	55.8%	36.4%	Medium	85.2%	61.2%	39.5%
3.2	L	16.9	156	Medium	73.8%	60.9%	49.6%	Medium	83.2%	61.7%	46.9%
3.3	Bed	12.5	112	Medium	68.8%	50.6%	28.2%	Medium	80.6%	51.5%	23.4%
3.4	Bed	10.4	84	High	75.5%	62.7%	51.7%	Medium	83.1%	62.6%	48.4%
4.1	KD	12.2	96	Medium	71.8%	54.6%	34.7%	Medium	84.3%	59.4%	36.9%
4.2	L	16.9	156	Medium	72.9%	60.2%	48.7%	Medium	82.3%	60.9%	45.5%
4.3	Bed	12.5	112	Minimum	66.6%	47.4%	24.8%	Minimum	79.6%	47.8%	19.0%
4.4	Bed	10.4	84	High	74.5%	61.7%	50.5%	Medium	82.2%	61.2%	45.7%
5.1	KD	18.8	165	Medium	69.7%	56.7%	44.8%	Medium	81.2%	57.8%	41.9%
5.2	L	15.2	121	Medium	73.2%	55.8%	37.3%	Medium	86.1%	64.4%	43.9%
5.3	Bed	11.7	87	Minimum	66.5%	47.1%	24.7%	Medium	80.5%	51.2%	22.2%
5.4	Bed	11.7	87	Medium	71.6%	58.9%	46.8%	Medium	82.8%	62.1%	46.5%
5.5	Bed	6.6	48	Fail	50.0%	19.8%	2.6%	Minimum	75.4%	32.1%	2.9%
6.1	KD	18.8	165	Medium	69.0%	56.4%	43.8%	Medium	81.1%	57.7%	42.1%
6.2	L	15.2	121	Medium	73.1%	56.0%	36.9%	Medium	86.1%	64.3%	43.9%
6.3	Bed	11.7	87	Minimum	67.6%	48.4%	26.1%	Medium	81.1%	52.4%	24.9%
6.4	Bed	11.7	87	Medium	71.3%	58.4%	46.3%	Medium	83.1%	61.9%	47.3%
6.5	Bed	6.6	48	Fail	49.2%	19.7%	2.6%	Minimum	74.8%	31.5%	2.2%
7.1	KD	12.2	96	Medium	72.7%	55.9%	36.8%	Medium	85.0%	61.0%	39.2%
7.2	L	16.9	156	Medium	74.3%	61.3%	49.9%	Medium	83.2%	61.8%	47.5%
7.3	Bed	12.5	112	Minimum	68.1%	49.8%	27.4%	Medium	80.6%	51.8%	23.8%
7.4	Bed	10.4	84	High	75.7%	63.0%	52.0%	Medium	83.4%	63.2%	48.7%
8.1	KD	12.2	96	Medium	73.4%	56.2%	37.0%	Medium	85.1%	61.2%	39.7%
8.2	L	16.9	156	High	74.2%	61.4%	50.3%	Medium	83.4%	62.3%	48.1%
8.3	Bed	12.5	112	Minimum	67.8%	49.3%	27.4%	Medium	80.6%	51.7%	23.1%
8.4	Bed	10.4	84	High	76.0%	63.4%	52.2%	Medium	83.7%	63.6%	49.4%
9.1	KD	12.2	96	Medium	73.9%	56.8%	38.1%	Medium	85.2%	61.5%	40.1%
9.2	L	16.9	156	High	75.0%	62.0%	50.6%	Medium	83.6%	63.0%	48.6%
9.3	Bed	12.5	112	Medium	69.0%	51.3%	29.2%	Medium	81.1%	52.8%	25.3%
9.4	Bed	10.4	84	High	76.3%	63.6%	52.3%	Medium	83.7%	63.4%	48.8%
10.1	KD	18.8	165	Medium	73.0%	59.6%	46.8%	Medium	82.7%	60.6%	45.2%
10.2	L	15.2	121	Medium	72.0%	55.1%	36.2%	Medium	85.8%	63.2%	42.9%
10.3	Bed	11.7	87	Minimum	66.3%	47.1%	24.7%	Medium	80.6%	51.6%	23.7%
10.4	Bed	11.7	87	Medium	72.2%	59.0%	46.9%	Medium	83.8%	63.6%	48.3%
10.5	Bed	6.6	48	Fail	49.0%	19.9%	2.7%	Minimum	74.9%	31.6%	2.2%
11.1	KD	14.5	126	High	79.4%	68.8%	58.5%	High	87.6%	74.4%	61.5%
11.2	L	20.6	187	High	77.1%	64.7%	55.3%	High	87.1%	72.3%	59.1%
11.3	Bed	13.1	112	Medium	70.0%	56.2%	42.7%	Medium	80.9%	56.6%	38.4%
11.4	Bed	7.4	49	Minimum	53.7%	35.3%	19.4%	Minimum	74.2%	40.1%	20.9%
11.5	Bed	11.8	93	High	74.9%	61.6%	50.3%	High	84.5%	66.1%	51.0%

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
12.1	KD	14.5	126	High	79.6%	69.9%	59.9%	High	88.0%	76.0%	62.9%
12.2	L	20.6	187	High	78.0%	66.8%	57.0%	High	87.7%	74.2%	60.8%
12.3	Bed	13.1	112	Medium	70.6%	56.7%	42.9%	Medium	81.0%	56.4%	38.1%
12.4	Bed	7.4	49	Minimum	52.2%	33.4%	18.8%	Minimum	74.2%	40.1%	19.2%
12.5	Bed	11.8	93	Medium	74.6%	61.5%	49.7%	High	84.7%	66.1%	51.5%
13.1	KD	14.5	126	High	80.2%	71.0%	60.5%	High	88.4%	76.6%	63.7%
13.2	L	20.6	187	High	77.6%	65.3%	55.4%	High	87.1%	72.4%	58.8%
13.3	Bed	13.1	112	Medium	70.5%	56.7%	43.1%	Medium	80.9%	56.7%	38.6%
13.4	Bed	7.4	49	Minimum	53.4%	34.3%	19.7%	Minimum	74.0%	39.8%	18.6%
13.5	Bed	11.8	93	High	75.0%	61.8%	50.3%	High	84.7%	65.9%	51.2%
14.1	KD	14.5	126	High	78.9%	68.1%	58.3%	High	87.5%	74.0%	61.1%
14.2	L	20.6	187	High	77.4%	65.7%	56.5%	High	87.1%	72.7%	59.5%
14.3	Bed	13.1	112	Medium	69.9%	56.3%	42.8%	Medium	80.8%	56.4%	38.0%
14.4	Bed	7.4	49	Minimum	54.0%	34.3%	19.4%	Minimum	74.8%	40.6%	19.5%
14.5	Bed	11.8	93	High	74.9%	61.8%	50.4%	High	84.2%	65.5%	50.3%
15.1	KD	18.8	165	Minimum	64.9%	46.3%	25.8%	Minimum	79.5%	49.9%	25.6%
15.2	L	15.2	121	Medium	73.4%	60.4%	48.9%	Medium	83.8%	63.5%	49.5%
15.3	Bed	11.7	87	Medium	71.0%	57.7%	45.3%	Medium	81.3%	57.9%	41.2%
15.4	Bed	11.7	87	Minimum	66.5%	49.4%	29.8%	Medium	81.6%	56.2%	35.3%
15.5	Bed	6.6	48	Minimum	59.6%	42.5%	26.1%	Minimum	76.8%	45.0%	23.9%
16.1	KD	12.2	96	Medium	74.1%	61.3%	49.5%	Medium	83.1%	62.1%	47.6%
16.2	L	16.9	156	Medium	69.9%	53.3%	35.4%	Medium	81.5%	54.9%	32.8%
16.3	Bed	12.5	112	Medium	71.3%	58.0%	45.5%	Medium	81.4%	58.0%	41.1%
16.4	Bed	10.4	84	Medium	71.0%	56.0%	39.7%	Medium	81.8%	57.3%	37.3%
17.1	KD	12.2	96	Medium	73.0%	60.6%	48.4%	Medium	82.1%	60.4%	45.5%
17.2	L	16.9	156	Medium	69.8%	53.5%	36.3%	Medium	81.7%	55.4%	34.4%
17.3	Bed	12.5	112	Medium	71.6%	58.3%	45.7%	Medium	81.3%	58.1%	39.9%
17.4	Bed	10.4	84	Medium	71.5%	56.8%	40.5%	Medium	81.8%	57.7%	37.1%
18.1	KD	12.2	96	Medium	73.4%	60.8%	49.1%	Medium	82.1%	60.8%	45.1%
18.2	L	16.9	156	Medium	70.3%	53.9%	35.9%	Medium	81.7%	55.0%	34.0%
18.3	Bed	12.5	112	Medium	71.4%	58.3%	45.8%	Medium	81.0%	57.7%	39.9%
18.4	Bed	10.4	84	Medium	70.9%	56.5%	40.3%	Medium	82.0%	58.2%	38.9%
19.1	KD	18.8	165	Minimum	65.4%	47.5%	27.8%	Medium	79.6%	50.5%	27.4%
19.2	L	15.2	121	Medium	73.0%	60.2%	48.1%	Medium	83.4%	62.8%	48.4%
19.3	Bed	11.7	87	Medium	70.4%	57.2%	45.2%	Medium	80.7%	56.4%	38.5%
19.4	Bed	11.7	87	Medium	67.4%	51.4%	31.6%	Medium	81.2%	56.0%	34.0%
19.5	Bed	6.6	48	Minimum	59.1%	42.2%	25.5%	Minimum	77.0%	46.3%	23.2%
20.1	KD	18.8	165	Minimum	65.6%	47.7%	28.7%	Medium	79.3%	50.5%	28.2%
20.2	L	15.2	121	Medium	72.8%	59.9%	47.9%	Medium	83.5%	63.0%	49.0%
20.3	Bed	11.7	87	Medium	71.1%	57.8%	45.2%	Medium	81.1%	57.4%	40.6%
20.4	Bed	11.7	87	Medium	68.4%	52.6%	33.3%	Medium	81.7%	57.0%	36.8%
20.5	Bed	6.6	48	Minimum	59.4%	42.3%	25.0%	Minimum	75.9%	44.4%	21.2%
21.1	KD	12.2	96	High	74.7%	61.5%	50.3%	Medium	82.2%	61.2%	46.1%
21.2	L	16.9	156	Medium	69.8%	53.2%	35.4%	Medium	81.8%	55.4%	34.3%
21.3	Bed	12.5	112	Medium	72.0%	58.9%	46.3%	Medium	81.4%	58.7%	41.3%
21.4	Bed	10.4	84	Medium	71.6%	57.0%	41.1%	Medium	81.6%	57.2%	36.6%
22.1	KD	12.2	96	Medium	73.9%	61.0%	49.6%	Medium	82.4%	61.0%	46.1%
22.2	L	16.9	156	Medium	70.1%	53.4%	35.5%	Medium	81.8%	55.5%	34.6%
22.3	Bed	12.5	112	Medium	71.6%	58.1%	46.1%	Medium	81.2%	58.3%	40.8%
23.1	KD	12.2	96	High	74.2%	61.4%	50.3%	Medium	83.4%	62.6%	48.1%

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
23.2	L	16.9	156	Medium	70.5%	53.9%	36.3%	Medium	81.6%	55.0%	32.4%
23.3	Bed	12.5	112	Medium	72.6%	59.2%	46.6%	Medium	81.2%	58.2%	41.0%
23.4	Bed	10.4	84	Medium	71.9%	57.0%	41.1%	Medium	82.0%	58.2%	38.9%
23.4	Bed	10.4	84	Medium	71.9%	56.6%	40.5%	Medium	82.1%	58.0%	38.4%
24.1	KD	18.8	165	Minimum	66.9%	49.1%	28.7%	Medium	80.3%	51.8%	28.0%
24.2	L	15.2	121	Medium	74.1%	61.2%	49.5%	High	84.2%	65.0%	51.1%
24.3	Bed	11.7	87	Medium	71.8%	58.7%	46.5%	Medium	81.7%	59.2%	42.2%
24.4	Bed	11.7	87	Medium	67.9%	51.8%	31.1%	Medium	82.6%	57.3%	35.9%
24.5	Bed	6.6	48	Minimum	60.2%	43.2%	26.9%	Minimum	76.9%	47.5%	24.0%
25.1	KD	18.8	165	Medium	72.8%	59.3%	46.6%	Medium	82.6%	60.8%	45.2%
25.2	L	15.2	121	Medium	70.2%	53.8%	35.2%	Medium	83.9%	59.5%	40.0%
25.3	Bed	11.7	87	Minimum	66.4%	48.9%	28.3%	Medium	79.7%	52.0%	25.3%
25.4	Bed	11.7	87	Medium	72.5%	59.3%	46.6%	Medium	83.9%	63.5%	48.2%
25.5	Bed	6.6	48	Minimum	50.1%	20.2%	2.1%	Minimum	73.4%	29.4%	1.6%
26.1	KD	18.8	165	Medium	70.5%	57.2%	44.9%	Medium	81.5%	58.6%	42.6%
26.2	L	15.2	121	Medium	69.5%	53.4%	35.1%	Medium	83.0%	58.5%	39.5%
26.3	Bed	11.7	87	Medium	67.5%	50.4%	30.6%	Medium	79.7%	52.2%	26.2%
26.4	Bed	11.7	87	Medium	72.2%	58.9%	46.9%	Medium	83.7%	63.2%	48.1%
26.5	Bed	6.6	48	Minimum	52.3%	25.2%	2.8%	Minimum	75.2%	33.7%	2.0%
27.1	KD	18.8	165	Medium	68.1%	55.0%	41.7%	Medium	80.2%	55.5%	39.6%
27.2	L	15.2	121	Medium	68.7%	52.3%	33.8%	Medium	82.0%	57.3%	37.7%
27.3	Bed	11.7	87	Minimum	66.8%	49.8%	29.3%	Medium	79.5%	51.5%	26.5%
27.4	Bed	11.7	87	Medium	71.8%	58.8%	46.6%	Medium	83.5%	62.6%	47.4%
27.5	Bed	6.6	48	Minimum	51.9%	23.9%	1.8%	Minimum	73.7%	33.0%	1.7%
28.1	KD	18.8	165	Medium	68.4%	55.2%	41.8%	Medium	80.4%	55.4%	39.5%
28.2	L	15.2	121	Medium	68.7%	52.6%	34.7%	Medium	81.7%	57.3%	38.6%
28.3	Bed	11.7	87	Minimum	66.0%	49.1%	29.3%	Medium	79.1%	50.2%	23.2%
28.4	Bed	11.7	87	Medium	71.5%	58.4%	46.5%	Medium	83.3%	62.0%	46.6%
28.5	Bed	6.6	48	Minimum	51.2%	24.2%	2.4%	Minimum	73.0%	32.6%	1.8%
29.1	KD	12.2	96	Medium	69.8%	54.3%	37.0%	Medium	81.5%	56.3%	36.6%
29.2	L	16.9	156	High	74.1%	61.5%	50.0%	Medium	83.7%	62.9%	48.8%
29.3	Bed	10.4	84	High	76.1%	63.3%	52.3%	Medium	83.6%	63.2%	48.5%
29.4	Bed	12.5	112	Medium	68.6%	52.6%	33.8%	Medium	79.6%	52.2%	27.3%
30.1	KD	12.2	96	Medium	70.2%	55.0%	37.6%	Medium	81.1%	55.7%	34.8%
30.2	L	16.9	156	High	74.7%	61.6%	50.3%	Medium	83.7%	62.8%	48.5%
30.3	Bed	10.4	84	High	76.4%	63.6%	52.8%	Medium	83.6%	63.3%	48.5%
30.4	Bed	12.5	112	Medium	67.6%	51.7%	32.0%	Medium	79.3%	51.6%	27.3%
31.1	KD	12.2	96	Medium	69.4%	53.6%	36.1%	Medium	81.1%	55.5%	35.0%
31.2	L	16.9	156	Medium	74.2%	61.0%	49.6%	Medium	83.6%	62.3%	48.4%
31.3	Bed	10.4	84	High	75.9%	63.0%	51.6%	Medium	83.7%	63.6%	49.0%
31.4	Bed	12.5	112	Medium	68.6%	52.8%	33.1%	Medium	79.5%	52.6%	27.4%
32.1	KD	18.8	165	Medium	68.5%	55.4%	42.7%	Medium	80.9%	56.4%	40.3%
32.2	L	15.2	121	Medium	69.2%	52.9%	35.3%	Medium	82.3%	57.9%	38.8%
32.3	Bed	11.7	87	Medium	71.3%	57.8%	45.7%	Medium	82.9%	61.4%	45.5%
32.4	Bed	11.7	87	Minimum	66.3%	49.5%	29.6%	Medium	79.5%	51.8%	26.2%
32.5	Bed	6.6	48	Minimum	51.2%	22.8%	2.1%	Minimum	73.6%	32.4%	1.6%
33.1	LKD	25.0	220	High	77.9%	66.8%	55.5%	High	84.7%	65.4%	51.8%
33.2	Bed	11.5	88	Minimum	57.7%	39.8%	16.1%	Minimum	70.8%	34.8%	6.1%
34.1	LKD	23.6	202	High	75.8%	63.7%	52.3%	High	85.2%	67.1%	52.7%
34.2	Bed	11.5	88	Minimum	63.9%	46.8%	24.9%	Medium	80.5%	53.0%	28.4%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
35.1	KD	14.5	126	High	77.9%	66.0%	56.8%	High	86.7%	71.7%	58.6%
35.2	L	20.6	187	High	76.3%	63.6%	52.7%	High	86.5%	70.0%	56.7%
35.3	Bed	13.1	112	Medium	70.3%	56.6%	43.1%	Medium	81.2%	57.1%	39.3%
35.4	Bed	7.4	49	Minimum	53.9%	35.2%	19.7%	Minimum	73.7%	39.6%	18.6%
35.5	Bed	11.8	93	Medium	74.7%	61.6%	49.9%	High	84.6%	65.9%	51.2%
36.1	KD	14.5	126	High	79.5%	68.9%	58.3%	High	88.0%	75.5%	61.4%
36.2	L	20.6	187	High	77.1%	64.4%	54.9%	High	86.8%	71.2%	57.8%
36.3	Bed	11.8	93	High	74.8%	62.0%	50.2%	High	84.6%	65.7%	51.2%
36.4	Bed	7.4	49	Minimum	52.4%	32.7%	18.1%	Minimum	74.4%	39.8%	19.5%
36.5	Bed	13.1	112	Medium	70.7%	56.8%	43.2%	Medium	81.1%	56.9%	38.7%
37.1	LKD	25.0	220	High	79.4%	68.2%	60.1%	High	85.0%	67.2%	54.7%
37.2	Bed	11.5	88	Minimum	59.2%	41.3%	21.2%	Minimum	71.1%	37.4%	12.1%
38.1	LKD	23.6	202	High	76.9%	65.8%	55.7%	High	85.5%	68.2%	55.8%
38.2	Bed	11.5	88	Medium	68.3%	55.6%	42.2%	Medium	81.8%	60.3%	44.5%
39.1	KD	19.3	159	Medium	69.4%	52.3%	34.4%	Medium	80.5%	52.0%	30.2%
39.2	L	14.8	121	Medium	73.6%	60.8%	48.7%	Medium	83.9%	63.9%	49.9%
39.3	Bed	11.5	91	Medium	67.5%	51.1%	31.0%	Medium	81.6%	55.9%	35.3%
39.4	Bed	6.6	48	Minimum	58.5%	40.7%	23.6%	Minimum	74.6%	41.2%	17.4%
39.4	Bed	12.7	108	Medium	68.9%	55.8%	42.5%	Medium	80.5%	56.1%	37.1%
40.1	KD	12.2	96	Medium	72.4%	59.5%	47.3%	Medium	81.6%	59.9%	43.8%
40.2	L	16.9	156	Medium	69.6%	52.9%	34.7%	Medium	81.2%	54.4%	33.3%
40.3	Bed	10.4	84	Medium	70.8%	55.9%	40.1%	Medium	81.6%	57.3%	37.4%
40.4	Bed	12.5	112	Medium	71.6%	58.2%	45.9%	Medium	80.4%	55.8%	38.0%
41.1	KD	12.2	96	Medium	71.9%	59.0%	46.2%	Medium	81.3%	58.6%	42.2%
41.2	L	16.9	156	Medium	70.0%	53.7%	36.1%	Medium	82.2%	55.7%	35.0%
41.3	Bed	10.4	84	Medium	70.9%	56.3%	39.7%	Medium	81.3%	56.8%	36.5%
41.4	Bed	12.5	112	Medium	71.3%	58.3%	45.7%	Medium	80.8%	56.5%	39.3%
42.1	KD	12.2	96	Medium	70.7%	57.8%	45.4%	Medium	81.0%	57.8%	41.2%
42.2	L	16.9	156	Medium	69.5%	52.5%	34.8%	Medium	81.5%	54.8%	34.0%
42.3	Bed	10.4	84	Medium	71.3%	56.9%	40.8%	Medium	81.9%	57.8%	38.6%
42.4	Bed	12.5	112	Medium	72.1%	58.9%	46.2%	Medium	80.9%	57.4%	39.5%
43.1	KD	19.3	159	Medium	70.5%	54.6%	37.3%	Medium	81.4%	54.8%	34.7%
43.2	L	14.8	121	Medium	71.3%	58.4%	45.6%	Medium	82.8%	61.6%	46.5%
43.3	Bed	11.5	91	Medium	69.1%	53.3%	34.4%	Medium	81.8%	56.7%	35.9%
43.4	Bed	12.7	108	Medium	69.4%	56.2%	42.6%	Medium	80.5%	55.8%	37.0%
43.5	Bed	6.6	48	Minimum	57.6%	40.4%	22.6%	Minimum	75.0%	41.4%	20.4%
44.1	KD	19.3	159	Medium	70.9%	55.2%	38.7%	Medium	81.7%	56.1%	35.7%
44.2	L	14.8	121	High	75.0%	62.0%	50.2%	High	84.4%	65.5%	51.5%
44.3	Bed	11.5	91	Medium	68.5%	52.8%	32.8%	Medium	82.4%	57.6%	37.3%
44.4	Bed	12.7	108	Medium	70.3%	56.4%	42.7%	Medium	81.1%	57.0%	38.8%
44.5	Bed	6.6	48	Minimum	58.3%	40.6%	23.9%	Minimum	75.7%	42.0%	19.6%
45.1	KD	19.3	159	Medium	70.4%	54.6%	37.2%	Medium	81.5%	55.5%	35.0%
45.2	L	14.8	121	High	75.7%	62.5%	50.6%	High	84.7%	66.5%	52.2%
45.3	Bed	11.5	91	Medium	69.1%	53.6%	34.8%	Medium	82.6%	57.2%	36.3%
45.4	Bed	6.6	48	Minimum	58.6%	40.4%	24.1%	Minimum	76.3%	43.3%	21.8%
45.4	Bed	12.7	108	Medium	70.2%	56.5%	42.1%	Medium	80.4%	56.0%	37.1%
46.1	KD	19.3	159	Medium	72.1%	56.1%	39.5%	Medium	82.7%	56.8%	37.1%
46.2	L	14.8	121	High	75.9%	63.0%	51.2%	High	85.3%	68.2%	53.1%
46.3	Bed	11.5	91	Medium	68.8%	52.8%	31.9%	Medium	82.8%	57.1%	36.0%
46.4	Bed	12.7	108	Medium	70.2%	56.2%	42.4%	Medium	80.9%	57.1%	38.8%
46.5	Bed	6.6	48	Minimum	57.9%	40.5%	25.2%	Minimum	76.5%	43.4%	22.1%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
47.1	LKD	25.0	220	High	77.4%	63.7%	50.7%	Medium	84.3%	61.6%	43.2%
47.2	Bed	11.5	88	Minimum	59.2%	42.6%	20.7%	Minimum	72.8%	39.3%	10.9%
48.1	LKD	23.6	202	Medium	73.7%	58.0%	41.0%	Medium	85.0%	62.1%	41.8%
48.2	Bed	11.5	88	Minimum	64.8%	47.5%	26.6%	Medium	80.4%	52.5%	27.2%
49.1	KD	19.3	159	High	75.3%	62.3%	50.5%	Medium	83.7%	63.0%	48.0%
49.2	L	14.8	121	Medium	69.4%	53.3%	35.8%	Medium	82.0%	57.9%	38.9%
49.3	Bed	12.7	108	Minimum	65.2%	48.2%	27.3%	Minimum	79.2%	49.9%	21.8%
49.4	Bed	11.5	91	Medium	73.0%	60.4%	48.1%	Medium	83.7%	63.0%	48.7%
49.5	Bed	6.6	48	Minimum	50.4%	22.3%	1.8%	Minimum	72.5%	30.1%	1.5%
50.1	KD	12.2	96	Medium	68.9%	53.4%	35.5%	Medium	80.6%	54.5%	32.9%
50.2	L	16.9	156	High	75.5%	62.4%	51.0%	High	84.2%	64.7%	50.6%
50.3	Bed	12.5	112	Medium	67.6%	51.6%	31.4%	Medium	79.6%	52.3%	27.6%
50.4	Bed	10.4	84	High	76.0%	63.4%	52.5%	High	83.8%	64.5%	50.2%
51.1	KD	12.2	96	Medium	70.1%	54.5%	37.4%	Medium	81.1%	55.3%	34.5%
51.2	L	16.9	156	High	75.4%	61.9%	50.5%	Medium	84.3%	64.2%	49.5%
51.3	Bed	12.5	112	Medium	67.5%	51.7%	32.3%	Medium	79.8%	52.7%	29.1%
51.4	Bed	10.4	84	High	75.9%	63.4%	52.1%	Medium	83.9%	64.0%	49.4%
52.1	KD	19.3	159	Medium	71.6%	57.6%	44.2%	Medium	82.2%	59.1%	42.6%
52.2	L	14.8	121	Medium	69.9%	54.3%	36.5%	Medium	83.1%	59.4%	40.5%
52.3	Bed	12.7	108	Minimum	64.8%	47.4%	25.5%	Minimum	79.0%	49.9%	22.7%
52.4	Bed	11.5	91	Medium	73.2%	60.1%	47.4%	Medium	84.1%	63.4%	48.3%
52.5	Bed	6.6	48	Minimum	50.5%	21.1%	2.0%	Minimum	71.1%	27.1%	1.3%
53.1	LKD	25.0	220	High	78.3%	67.3%	55.8%	High	84.8%	65.9%	51.8%
53.2	Bed	11.5	88	Minimum	53.4%	31.9%	6.7%	Minimum	70.2%	31.2%	4.6%
54.1	LKD	23.6	202	High	76.0%	63.7%	52.3%	High	85.3%	67.3%	53.0%
54.2	Bed	11.5	88	Minimum	64.5%	47.1%	25.4%	Medium	80.4%	52.8%	27.3%
55.1	LKD	23.7	208	Minimum	63.6%	45.5%	25.7%	Minimum	77.1%	44.0%	19.6%
55.2	Bed	13.1	108	Minimum	56.2%	38.7%	17.1%	Minimum	66.4%	29.8%	8.8%
56.1	LKD	23.5	213	High	78.5%	67.8%	56.5%	High	85.7%	67.6%	53.2%
56.2	Bed	10.0	80	Minimum	64.1%	47.1%	28.2%	Medium	80.1%	53.4%	31.7%
57.1	LKD	24.1	209	Minimum	53.8%	32.9%	11.3%	Minimum	71.6%	30.3%	3.4%
57.2	Bed	11.8	99	Minimum	58.5%	40.9%	24.8%	Minimum	75.5%	44.0%	21.9%
58.1	LKD	23.5	213	High	75.5%	63.3%	51.5%	Medium	83.9%	64.3%	49.6%
58.2	Bed	10.0	80	Medium	70.7%	54.1%	36.2%	Medium	82.8%	57.4%	36.4%
59.1	LKD	24.1	209	Minimum	57.6%	38.8%	16.8%	Minimum	74.2%	36.9%	11.0%
59.2	Bed	11.8	99	Minimum	61.5%	44.6%	28.6%	Minimum	78.0%	49.2%	28.3%
60.1	LKD	23.5	213	High	75.5%	62.8%	51.4%	High	84.7%	64.8%	50.2%
60.2	Bed	10.0	80	Medium	71.3%	54.9%	37.6%	Medium	82.3%	56.2%	34.9%
61.1	LKD	24.1	209	Minimum	58.2%	38.0%	13.9%	Minimum	74.3%	35.0%	5.3%
61.2	Bed	11.8	99	Minimum	61.6%	45.1%	30.0%	Minimum	78.0%	49.5%	30.9%
62.1	LKD	23.5	213	High	75.4%	63.3%	51.5%	High	84.6%	65.2%	51.1%
62.2	Bed	10.0	80	Medium	70.8%	54.7%	36.8%	Medium	82.2%	56.0%	33.9%
63.1	LKD	24.1	209	Minimum	56.9%	36.8%	15.6%	Minimum	73.7%	34.8%	9.0%
63.2	Bed	11.8	99	Minimum	61.6%	45.1%	29.1%	Minimum	77.5%	48.2%	27.6%
64.1	LKD	23.5	213	High	75.6%	62.8%	51.5%	High	84.5%	64.4%	50.1%
64.2	Bed	10.0	80	Medium	70.8%	54.5%	36.7%	Medium	82.7%	57.2%	35.4%
65.1	LKD	23.7	208	Medium	69.8%	52.8%	35.0%	Medium	81.6%	54.4%	34.1%
65.2	Bed	13.1	108	Minimum	62.5%	49.3%	34.7%	Minimum	75.2%	48.0%	28.1%
66.1	LKD	23.5	213	High	79.1%	68.6%	59.2%	High	86.0%	68.9%	56.3%
66.2	Bed	10.0	80	Medium	68.7%	56.3%	43.2%	Medium	81.5%	59.1%	42.9%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
67.1	LKD	25.0	220	High	79.2%	68.1%	60.0%	High	84.9%	67.1%	54.4%
67.2	Bed	11.5	88	Minimum	57.3%	38.5%	21.3%	Minimum	71.7%	37.1%	11.7%
68.1	LKD	23.6	202	High	76.9%	65.8%	55.8%	High	85.5%	68.3%	55.9%
68.2	Bed	11.5	88	Medium	68.7%	55.6%	42.0%	Medium	81.7%	59.5%	43.3%
69.1	KD	19.3	159	Minimum	65.7%	46.9%	24.2%	Minimum	79.6%	47.8%	20.9%
69.2	L	14.8	121	Medium	72.7%	59.9%	47.7%	Medium	83.4%	62.8%	48.3%
69.3	Bed	12.7	108	Medium	68.9%	55.5%	42.1%	Medium	80.3%	55.5%	36.7%
69.4	Bed	11.5	91	Medium	67.8%	50.6%	29.7%	Medium	81.6%	54.9%	31.6%
69.5	Bed	6.6	48	Minimum	58.9%	41.3%	25.0%	Minimum	75.8%	43.2%	20.4%
70.1	KD	12.2	96	Medium	68.0%	55.3%	42.0%	Medium	79.1%	53.2%	34.2%
70.2	L	16.9	156	Minimum	66.4%	47.7%	24.4%	Minimum	79.7%	48.8%	21.5%
70.3	Bed	10.4	84	Medium	71.5%	55.9%	39.3%	Medium	81.9%	57.2%	35.4%
70.4	Bed	12.5	112	Medium	71.7%	58.5%	46.0%	Medium	81.0%	57.4%	39.3%
71.1	KD	12.2	96	Medium	71.0%	58.2%	44.9%	Medium	80.7%	57.1%	40.7%
71.2	L	16.9	156	Medium	69.0%	51.1%	30.4%	Medium	81.3%	53.0%	27.8%
71.3	Bed	10.4	84	Medium	71.1%	55.7%	38.3%	Medium	82.7%	58.3%	37.7%
71.4	Bed	12.5	112	Medium	71.6%	58.6%	45.9%	Medium	81.1%	57.6%	40.4%
72.1	KD	19.3	159	Medium	70.2%	53.5%	36.2%	Medium	81.6%	54.7%	32.8%
72.2	L	14.8	121	Medium	73.5%	60.8%	48.8%	Medium	83.7%	63.3%	49.5%
72.3	Bed	11.5	91	Medium	68.0%	51.6%	32.3%	Medium	81.6%	56.3%	34.7%
72.4	Bed	12.7	108	Medium	69.3%	56.0%	42.8%	Medium	80.4%	55.3%	36.7%
72.5	Bed	6.6	48	Minimum	58.3%	40.1%	23.8%	Minimum	75.3%	41.6%	19.9%
73.1	LKD	25.0	220	High	77.3%	65.8%	52.9%	Medium	84.4%	63.7%	46.0%
73.2	Bed	11.5	88	Minimum	60.2%	44.1%	25.5%	Minimum	72.6%	41.6%	15.6%
74.1	LKD	23.6	202	Medium	74.3%	59.9%	43.7%	Medium	85.2%	64.4%	45.4%
74.2	Bed	11.5	88	Medium	68.3%	54.8%	40.9%	Medium	81.8%	59.0%	43.0%
75.1	KD	19.3	159	Medium	74.5%	61.3%	49.7%	Medium	83.0%	62.0%	46.9%
75.2	L	14.8	121	Medium	73.1%	56.6%	38.1%	Medium	86.0%	65.7%	46.5%
75.3	Bed	12.7	108	Minimum	64.3%	45.2%	21.8%	Minimum	80.7%	50.0%	20.7%
75.4	Bed	11.5	91	Medium	73.6%	60.0%	47.2%	Medium	83.5%	62.9%	47.5%
75.5	Bed	6.6	48	Fail	49.2%	19.8%	2.5%	Minimum	73.2%	24.8%	2.0%
76.1	KD	22.4	204	Medium	67.3%	54.4%	40.6%	Medium	79.6%	54.6%	37.6%
76.2	L	17.6	156	Minimum	68.0%	49.1%	26.6%	Medium	84.0%	58.9%	35.5%
76.3	Bed	11.7	99	Minimum	64.8%	46.1%	22.6%	Minimum	79.6%	48.2%	18.2%
76.4	Bed	7.6	56	Fail	40.5%	9.6%	2.1%	Minimum	70.9%	21.0%	1.7%
76.5	Bed	10.4	80	High	74.7%	62.1%	50.7%	Medium	82.6%	61.0%	44.0%
76.6	Bed	8.7	72	High	77.8%	66.3%	55.5%	High	85.8%	68.7%	54.8%
77.1	KD	22.4	204	Medium	67.0%	53.1%	38.7%	Medium	79.6%	53.5%	34.5%
77.2	L	17.6	156	Medium	68.9%	50.2%	27.8%	Medium	83.6%	58.0%	33.3%
77.3	Bed	11.7	99	Minimum	64.2%	44.9%	21.0%	Minimum	80.2%	49.3%	18.7%
77.4	Bed	7.6	56	Fail	43.5%	14.1%	2.2%	Minimum	71.3%	21.9%	1.8%
77.5	Bed	10.4	80	High	74.5%	62.0%	50.4%	Medium	82.7%	61.8%	44.8%
77.6	Bed	8.7	72	High	77.6%	66.1%	55.5%	High	85.6%	68.1%	54.4%
78.1	KD	12.2	96	Medium	73.2%	56.7%	37.7%	Medium	84.7%	61.1%	39.6%
78.2	L	16.9	156	Medium	73.6%	60.6%	48.5%	Medium	82.9%	62.1%	46.1%
78.3	Bed	12.5	112	Minimum	68.1%	49.6%	28.6%	Medium	80.8%	50.5%	22.4%
78.4	Bed	10.4	84	High	75.5%	63.7%	53.1%	High	83.9%	64.9%	50.3%
79.1	KD	19.3	159	High	76.3%	63.5%	52.4%	Medium	84.1%	63.9%	49.6%
79.2	L	14.8	121	Medium	71.6%	55.4%	37.2%	Medium	85.3%	62.1%	42.1%
79.3	Bed	12.7	108	Minimum	65.0%	46.1%	21.8%	Minimum	79.4%	48.6%	16.7%
79.4	Bed	6.6	48	Fail	49.6%	18.9%	1.9%	Minimum	73.4%	28.1%	1.6%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
79.4	Bed	11.5	91	Medium	73.6%	60.8%	48.6%	Medium	84.1%	63.8%	48.8%
80.1	KD	19.3	159	High	75.4%	62.6%	51.4%	Medium	83.2%	62.0%	47.3%
80.2	L	14.8	121	Medium	71.6%	55.5%	37.4%	Medium	84.6%	61.3%	42.5%
80.3	Bed	12.7	108	Minimum	64.8%	46.6%	23.2%	Medium	79.6%	50.0%	20.2%
80.4	Bed	11.5	91	Medium	73.4%	60.3%	47.9%	Medium	83.8%	63.4%	48.3%
80.5	Bed	6.6	48	Fail	48.7%	18.2%	1.8%	Minimum	72.5%	25.5%	1.2%
81.1	KD	19.3	159	High	75.1%	62.1%	51.1%	Medium	83.2%	61.9%	47.6%
81.2	L	14.8	121	Medium	70.1%	54.3%	35.8%	Medium	84.2%	60.8%	41.5%
81.3	Bed	12.7	108	Minimum	64.3%	46.5%	23.3%	Minimum	79.3%	49.5%	20.1%
81.4	Bed	11.5	91	Medium	73.4%	60.3%	48.2%	Medium	83.7%	62.9%	48.1%
81.5	Bed	6.6	48	Fail	49.4%	18.5%	1.7%	Minimum	73.5%	28.7%	1.0%
82.1	KD	19.3	159	High	75.1%	62.1%	51.2%	Medium	83.2%	62.0%	47.4%
82.2	L	14.8	121	Medium	69.8%	54.1%	36.6%	Medium	83.5%	59.3%	40.9%
82.3	Bed	12.7	108	Minimum	64.2%	46.6%	24.1%	Minimum	79.3%	49.8%	21.6%
82.4	Bed	11.5	91	Medium	73.2%	60.0%	47.9%	Medium	83.7%	62.6%	47.5%
82.5	Bed	6.6	48	Fail	49.7%	21.1%	1.9%	Minimum	72.8%	28.4%	1.6%
83.1	KD	12.2	96	Medium	68.7%	52.3%	34.5%	Medium	79.8%	52.4%	29.3%
83.2	L	16.9	156	Medium	73.9%	61.0%	49.6%	Medium	83.2%	61.8%	47.3%
83.3	Bed	12.5	112	Medium	67.8%	51.9%	31.6%	Medium	79.3%	51.4%	26.3%
83.4	Bed	10.4	84	High	75.8%	63.0%	52.0%	Medium	83.6%	63.7%	49.5%
84.1	KD	12.2	96	Minimum	65.7%	48.1%	28.5%	Minimum	77.8%	46.9%	20.2%
84.2	L	16.9	156	Medium	73.9%	60.8%	49.8%	Medium	83.1%	61.1%	46.2%
84.3	Bed	12.5	112	Medium	66.8%	50.4%	30.5%	Medium	79.5%	52.0%	27.1%
84.4	Bed	10.4	84	High	75.9%	63.0%	52.1%	Medium	82.7%	62.2%	47.2%
85.1	KD	12.2	96	Minimum	64.3%	47.3%	26.9%	Minimum	77.5%	46.5%	18.5%
85.2	L	16.9	156	Medium	74.0%	60.7%	49.4%	Medium	83.4%	62.4%	47.5%
85.3	Bed	12.5	112	Medium	67.4%	51.0%	31.0%	Medium	79.6%	52.6%	28.4%
85.4	Bed	10.4	84	High	75.2%	62.5%	51.3%	Medium	83.1%	62.5%	47.6%
86.1	KD	19.3	159	Medium	73.4%	60.0%	48.6%	Medium	82.1%	59.0%	44.0%
86.2	L	14.8	121	Medium	66.9%	50.0%	29.9%	Medium	80.8%	54.5%	32.0%
86.3	Bed	12.7	108	Minimum	65.5%	48.1%	26.9%	Minimum	78.7%	49.1%	20.4%
86.4	Bed	11.5	91	Medium	72.6%	58.7%	46.2%	Medium	83.4%	61.1%	46.0%
86.5	Bed	6.6	48	Minimum	50.7%	20.9%	2.0%	Minimum	71.3%	28.0%	1.5%
87.1	LKD	25.0	220	High	78.4%	67.7%	56.2%	High	85.1%	66.3%	52.4%
87.2	Bed	11.5	88	Minimum	58.0%	40.3%	15.6%	Minimum	71.4%	34.7%	6.3%
88.1	LKD	23.6	202	High	76.1%	63.8%	52.3%	High	85.5%	67.7%	53.3%
88.2	Bed	11.5	88	Minimum	64.5%	47.5%	25.9%	Medium	80.5%	52.2%	27.1%
89.1	KD	14.5	126	High	78.8%	68.2%	58.4%	High	87.3%	74.0%	60.9%
89.2	L	20.6	187	High	78.4%	67.3%	57.4%	High	87.6%	74.2%	60.9%
89.3	Bed	13.1	112	Medium	70.9%	57.1%	43.5%	Medium	81.3%	57.4%	39.6%
89.4	Bed	7.4	49	Minimum	52.4%	34.0%	19.1%	Minimum	75.6%	42.7%	23.1%
89.5	Bed	11.8	93	High	75.0%	62.0%	50.5%	High	84.9%	66.2%	51.8%
90.1	KD	14.5	126	High	80.4%	71.0%	60.1%	High	88.4%	76.8%	63.5%
90.2	L	20.6	187	High	78.9%	68.2%	57.9%	High	87.9%	75.7%	61.8%
90.3	Bed	11.8	93	Medium	74.8%	61.6%	49.6%	High	84.9%	66.1%	51.7%
90.4	Bed	7.4	49	Minimum	53.3%	34.6%	18.3%	Minimum	75.1%	41.6%	21.5%
90.5	Bed	13.1	112	Medium	69.9%	56.1%	42.6%	Medium	80.8%	56.5%	38.1%
91.1	LKD	25.0	220	High	78.7%	67.3%	58.8%	High	84.3%	66.1%	53.2%
91.2	Bed	11.5	88	Minimum	58.1%	38.6%	18.1%	Minimum	70.5%	35.6%	9.4%
92.1	LKD	23.6	202	High	76.5%	65.4%	55.2%	High	85.6%	67.8%	55.1%
92.2	Bed	11.5	88	Medium	67.9%	54.7%	40.8%	Medium	80.9%	56.6%	40.4%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
93.1	KD	19.3	159	Medium	68.8%	51.3%	33.3%	Medium	80.5%	51.7%	29.6%
93.2	L	14.8	121	Medium	72.6%	60.0%	47.4%	Medium	83.4%	62.5%	47.6%
93.3	Bed	12.7	108	Medium	68.1%	54.7%	40.9%	Medium	80.0%	54.5%	34.5%
93.4	Bed	11.5	91	Medium	67.2%	50.7%	30.6%	Medium	81.5%	55.2%	34.1%
93.5	Bed	6.6	48	Minimum	57.3%	39.8%	23.0%	Minimum	74.1%	39.5%	16.8%
94.1	KD	12.2	96	Medium	74.0%	61.1%	49.1%	Medium	82.0%	60.6%	44.7%
94.2	L	16.9	156	Medium	69.3%	52.2%	34.2%	Medium	81.7%	55.0%	34.1%
94.3	Bed	12.5	112	Medium	71.3%	58.1%	45.4%	Medium	80.5%	55.9%	38.2%
94.4	Bed	10.4	84	Medium	71.7%	56.6%	40.5%	Medium	81.6%	56.7%	36.8%
95.1	KD	12.2	96	Medium	73.1%	60.2%	48.0%	Medium	82.5%	61.5%	46.3%
95.2	L	16.9	156	Medium	70.1%	53.7%	35.9%	Medium	81.5%	54.7%	33.4%
95.3	Bed	12.5	112	Medium	71.0%	57.9%	45.5%	Medium	80.8%	56.7%	39.0%
95.4	Bed	10.4	84	Medium	71.0%	56.4%	40.1%	Medium	81.8%	57.3%	37.6%
96.1	KD	12.2	96	Medium	73.0%	60.4%	47.8%	Medium	82.6%	61.2%	46.1%
96.2	L	16.9	156	Medium	69.7%	53.0%	35.5%	Medium	81.7%	55.3%	34.5%
96.3	Bed	12.5	112	Medium	71.0%	57.7%	44.6%	Medium	81.1%	57.9%	39.8%
96.4	Bed	10.4	84	Medium	71.9%	57.1%	40.8%	Medium	81.5%	57.4%	37.5%
97.1	KD	19.3	159	Medium	71.4%	55.9%	39.3%	Medium	81.3%	55.3%	35.5%
97.2	L	14.8	121	Medium	74.2%	61.3%	49.3%	High	84.0%	64.0%	50.4%
97.3	Bed	12.7	108	Medium	69.1%	55.6%	42.0%	Medium	80.8%	56.1%	37.8%
97.4	Bed	11.5	91	Medium	68.9%	53.3%	34.0%	Medium	82.3%	57.2%	37.1%
97.5	Bed	6.6	48	Minimum	57.7%	40.5%	24.3%	Minimum	75.4%	43.1%	19.8%
98.1	KD	19.3	159	Medium	71.6%	56.1%	40.2%	Medium	81.6%	56.1%	36.6%
98.2	L	14.8	121	High	74.6%	61.7%	50.3%	High	84.2%	64.7%	51.1%
98.3	Bed	12.7	108	Medium	69.7%	56.3%	43.1%	Medium	81.0%	56.9%	39.5%
98.4	Bed	11.5	91	Medium	69.4%	53.6%	34.8%	Medium	82.1%	57.1%	36.7%
98.5	Bed	6.6	48	Minimum	57.5%	40.3%	23.5%	Minimum	75.7%	43.0%	20.3%
99.1	KD	19.3	159	Medium	71.4%	55.7%	38.9%	Medium	81.8%	56.0%	35.8%
99.2	L	14.8	121	High	75.1%	62.0%	50.4%	High	84.7%	66.0%	52.3%
99.3	Bed	12.7	108	Medium	70.0%	56.4%	43.2%	Medium	80.6%	56.0%	37.9%
99.4	Bed	11.5	91	Medium	68.6%	52.8%	32.8%	Medium	83.0%	57.3%	37.0%
99.5	Bed	6.6	48	Minimum	57.6%	40.0%	23.1%	Minimum	74.8%	41.9%	20.0%
100.1	KD	19.3	159	Medium	72.3%	56.4%	39.9%	Medium	82.8%	57.3%	38.3%
100.2	L	14.8	121	High	75.4%	62.6%	51.0%	High	84.7%	66.4%	52.6%
100.3	Bed	12.7	108	Medium	70.3%	56.7%	43.0%	Medium	81.3%	57.7%	40.8%
100.4	Bed	11.5	91	Medium	68.9%	52.7%	32.4%	Medium	83.2%	57.2%	35.8%
100.5	Bed	6.6	48	Minimum	57.5%	40.6%	23.3%	Minimum	76.4%	44.2%	22.6%
101.1	KD	12.2	96	Medium	71.0%	55.5%	38.1%	Medium	83.4%	58.5%	38.4%
101.2	L	16.9	156	High	76.3%	62.9%	51.7%	High	84.5%	65.3%	50.0%
101.3	Bed	12.5	112	Medium	68.4%	51.8%	31.2%	Medium	80.2%	52.4%	26.3%
101.4	Bed	10.4	84	High	76.0%	63.2%	52.1%	Medium	83.7%	63.4%	48.3%
102.1	KD	12.2	96	Medium	70.7%	55.3%	37.5%	Medium	82.2%	57.3%	37.2%
102.2	L	16.9	156	High	75.5%	62.3%	51.3%	Medium	84.1%	64.1%	49.9%
102.3	Bed	12.5	112	Medium	67.8%	51.0%	31.0%	Medium	80.0%	53.1%	28.2%
102.4	Bed	10.4	84	High	76.2%	63.3%	52.2%	Medium	83.7%	63.5%	49.1%
103.1	KD	12.2	96	Medium	70.2%	54.6%	37.8%	Medium	81.9%	57.4%	38.0%
103.2	L	16.9	156	High	75.0%	61.8%	50.8%	Medium	83.8%	63.0%	48.7%
103.3	Bed	12.5	112	Medium	67.8%	51.5%	30.8%	Medium	79.8%	52.9%	27.8%
103.4	Bed	10.4	84	High	75.9%	63.0%	52.1%	Medium	83.6%	63.1%	48.9%
104.1	KD	12.2	96	Medium	70.8%	55.5%	38.3%	Medium	81.4%	55.9%	35.0%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
104.2	L	16.9	156	High	74.1%	61.2%	50.0%	Medium	83.4%	62.7%	48.2%
104.3	Bed	12.5	112	Medium	67.8%	51.8%	31.6%	Medium	79.8%	52.6%	27.9%
104.4	Bed	10.4	84	High	75.5%	62.6%	51.7%	Medium	83.3%	63.1%	48.2%
105.1	KD	12.2	96	Medium	69.9%	54.2%	36.5%	Medium	81.6%	56.4%	36.0%
105.2	L	16.9	156	High	74.3%	61.3%	50.0%	Medium	83.4%	62.1%	47.6%
105.3	Bed	12.5	112	Medium	67.5%	51.3%	31.8%	Medium	80.0%	53.2%	28.7%
105.4	Bed	10.4	84	High	75.8%	63.0%	52.1%	Medium	82.4%	62.3%	47.4%
106.1	KD	12.2	96	Medium	69.6%	53.9%	36.2%	Medium	81.5%	56.1%	35.4%
106.2	L	16.9	156	High	74.5%	61.6%	50.5%	Medium	83.6%	62.8%	48.5%
106.3	Bed	12.5	112	Medium	68.1%	52.1%	32.1%	Medium	79.8%	52.9%	29.0%
106.4	Bed	10.4	84	High	75.7%	63.0%	52.0%	Medium	82.6%	61.8%	47.0%
107.1	KD	12.2	96	Medium	69.1%	53.2%	34.3%	Medium	81.5%	55.6%	34.9%
107.2	L	16.9	156	Medium	73.7%	60.1%	48.8%	Medium	83.1%	61.3%	46.1%
107.3	Bed	12.5	112	Medium	66.8%	50.3%	29.8%	Medium	79.3%	51.6%	25.6%
107.4	Bed	10.4	84	High	75.0%	61.8%	50.4%	Medium	82.7%	61.5%	46.9%
108.1	LKD	23.7	208	Medium	72.8%	58.8%	47.4%	Medium	81.6%	58.2%	42.4%
108.2	Bed	13.1	108	Fail	35.5%	7.6%	0.0%	Minimum	51.9%	0.8%	0.0%
109.1	LKD	23.5	213	Medium	75.0%	60.0%	44.9%	Medium	84.4%	59.8%	39.9%
109.2	Bed	10.0	80	Minimum	64.2%	47.6%	27.0%	Minimum	77.9%	49.7%	26.9%
110.1	LKD	24.1	209	Minimum	61.5%	47.1%	31.6%	Minimum	75.4%	44.5%	25.0%
110.2	Bed	11.8	99	Minimum	50.5%	23.5%	2.6%	Minimum	70.1%	27.0%	1.6%
111.1	LKD	23.5	213	Medium	71.0%	55.4%	37.8%	Medium	83.2%	57.2%	34.5%
111.2	Bed	10.0	80	Medium	74.7%	61.2%	49.5%	Medium	83.4%	62.1%	46.2%
112.1	LKD	24.1	209	Minimum	61.7%	47.6%	33.4%	Minimum	75.7%	46.6%	29.6%
112.2	Bed	11.8	99	Fail	50.0%	22.1%	2.5%	Minimum	69.8%	26.8%	1.6%
113.1	LKD	23.5	213	Medium	70.6%	54.7%	36.3%	Medium	83.8%	57.6%	34.4%
113.2	Bed	10.0	80	Medium	74.5%	61.3%	49.7%	Medium	83.4%	62.2%	46.6%
114.1	LKD	24.1	209	Minimum	62.3%	47.2%	30.5%	Minimum	75.1%	42.8%	23.7%
114.2	Bed	11.8	99	Minimum	51.1%	24.2%	3.2%	Minimum	71.6%	28.3%	2.5%
115.1	LKD	23.5	213	Medium	71.3%	55.2%	36.5%	Medium	83.8%	58.4%	34.3%
115.2	Bed	10.0	80	Medium	74.9%	61.4%	49.7%	Medium	83.2%	62.1%	44.9%
116.1	LKD	24.1	209	Minimum	62.2%	47.0%	31.2%	Minimum	75.8%	45.5%	26.5%
116.2	Bed	11.8	99	Minimum	51.6%	23.5%	3.2%	Minimum	71.8%	30.3%	2.6%
117.1	LKD	23.5	213	Medium	71.3%	55.0%	35.7%	Medium	83.4%	56.9%	31.6%
117.2	Bed	10.0	80	High	75.1%	61.8%	50.0%	Medium	83.4%	62.3%	45.8%
118.1	LKD	23.7	208	High	76.6%	65.5%	55.8%	High	85.0%	66.4%	54.5%
118.2	Bed	13.1	108	Medium	71.4%	56.8%	42.2%	Medium	82.2%	58.6%	40.5%
119.1	LKD	23.5	213	High	77.8%	66.0%	52.0%	Medium	85.7%	65.8%	47.5%
119.2	Bed	10.0	80	Medium	73.9%	60.2%	48.2%	High	84.6%	65.5%	50.6%
120.1	KD	14.5	126	High	80.5%	71.3%	60.6%	High	88.4%	76.9%	64.1%
120.2	L	20.6	187	High	77.2%	64.2%	53.7%	High	87.0%	72.1%	58.2%
120.3	Bed	13.1	112	Medium	70.1%	56.2%	42.8%	Medium	81.3%	57.1%	38.9%
120.4	Bed	7.4	49	Minimum	52.4%	33.9%	18.6%	Minimum	74.9%	41.5%	21.9%
120.5	Bed	11.8	93	High	75.1%	61.8%	50.4%	High	84.7%	66.3%	51.8%
121.1	LKD	25.0	220	High	80.6%	71.3%	62.8%	High	86.0%	70.5%	58.9%
121.2	Bed	11.5	88	Minimum	62.9%	46.1%	28.1%	Minimum	74.9%	42.1%	19.5%
122.1	LKD	23.6	202	High	77.4%	66.3%	56.3%	High	85.9%	69.2%	56.6%
122.2	Bed	11.5	88	Medium	70.7%	57.1%	44.2%	Medium	82.6%	61.7%	46.1%
123.1	KD	19.3	159	Medium	71.0%	54.9%	37.2%	Medium	81.9%	55.5%	34.2%
123.2	L	14.8	121	High	76.8%	64.3%	53.0%	High	86.3%	71.1%	56.5%

EN17037:2018 Table A.1 Daylight Provision Room Schedule											
Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
123.3	Bed	12.7	108	Medium	71.2%	57.1%	44.2%	Medium	81.7%	58.5%	41.5%
123.4	Bed	11.5	91	Medium	68.5%	52.2%	32.0%	Medium	82.5%	57.2%	36.7%
123.5	Bed	6.6	48	Minimum	59.5%	42.2%	26.9%	Minimum	76.9%	45.4%	24.4%
124.1	KD	19.3	159	Medium	70.4%	54.5%	36.3%	Medium	81.7%	55.3%	34.0%
124.2	L	14.8	121	High	76.7%	64.6%	52.5%	High	86.4%	71.3%	56.6%
124.3	Bed	12.7	108	Medium	70.4%	55.9%	42.7%	Medium	81.6%	58.3%	41.3%
124.4	Bed	11.5	91	Medium	68.7%	52.8%	33.0%	Medium	82.4%	57.7%	35.8%
124.5	Bed	6.6	48	Minimum	58.6%	42.4%	28.1%	Minimum	76.9%	46.0%	28.0%
125.1	KD	19.3	159	Medium	71.0%	55.3%	37.7%	Medium	82.1%	56.1%	35.8%
125.2	L	14.8	121	High	76.6%	64.1%	52.8%	High	86.2%	71.0%	56.3%
125.3	Bed	12.7	108	Medium	70.8%	56.9%	43.9%	Medium	81.9%	59.1%	42.5%
125.4	Bed	11.5	91	Medium	69.0%	53.5%	33.8%	Medium	82.6%	57.7%	37.3%
125.5	Bed	6.6	48	Minimum	58.4%	41.7%	26.5%	Minimum	76.0%	44.6%	23.5%
126.1	KD	22.4	204	Minimum	61.4%	42.3%	18.9%	Minimum	76.8%	43.1%	14.9%
126.2	L	17.6	156	Medium	74.2%	61.1%	47.7%	High	84.4%	65.3%	50.0%
126.3	Bed	10.4	80	Medium	69.7%	54.5%	36.6%	Medium	80.6%	53.8%	29.6%
126.4	Bed	8.7	72	Medium	75.1%	59.7%	44.6%	Medium	84.9%	62.6%	44.7%
126.5	Bed	11.7	99	Medium	71.3%	57.6%	44.9%	Medium	81.6%	58.5%	41.3%
126.6	Bed	7.6	56	Minimum	55.3%	36.8%	22.4%	Minimum	75.3%	41.9%	21.9%
127.1	KD	22.4	204	Minimum	59.7%	40.5%	16.8%	Minimum	76.4%	41.2%	12.5%
127.2	L	17.6	156	Medium	74.0%	61.0%	47.9%	High	84.4%	65.5%	50.5%
127.3	Bed	10.4	80	Medium	69.8%	54.1%	35.8%	Medium	80.8%	54.4%	31.3%
127.4	Bed	8.7	72	Medium	75.2%	60.2%	44.9%	Medium	84.6%	61.8%	43.2%
127.5	Bed	11.7	99	Medium	71.4%	58.2%	45.2%	Medium	81.6%	58.5%	41.6%
127.6	Bed	7.6	56	Minimum	54.3%	36.1%	20.5%	Minimum	76.1%	43.5%	22.8%
128.1	KD	22.4	204	Minimum	58.9%	38.8%	13.0%	Minimum	76.2%	39.5%	8.4%
128.2	L	17.6	156	Medium	73.7%	60.3%	47.6%	High	84.3%	65.4%	50.1%
128.3	Bed	10.4	80	Medium	69.9%	54.2%	36.1%	Medium	80.5%	53.8%	30.1%
128.4	Bed	8.7	72	Medium	75.0%	59.9%	44.2%	Medium	84.9%	62.6%	44.6%
128.5	Bed	11.7	99	Medium	71.1%	56.8%	43.5%	Medium	82.1%	59.0%	42.3%
128.6	Bed	7.6	56	Minimum	55.0%	36.9%	23.2%	Minimum	75.0%	41.5%	22.1%
129.1	KD	22.4	204	Minimum	60.4%	41.5%	18.3%	Minimum	76.6%	42.6%	13.7%
129.2	L	17.6	156	Medium	73.1%	59.6%	46.8%	High	84.4%	65.3%	50.2%
129.3	Bed	10.4	80	Medium	70.3%	55.0%	36.8%	Medium	80.5%	54.1%	29.3%
129.4	Bed	8.7	72	Medium	75.4%	60.0%	44.5%	Medium	84.8%	62.4%	44.1%
129.5	Bed	11.7	99	Medium	71.3%	57.4%	45.0%	Medium	81.6%	58.4%	41.4%
129.6	Bed	7.6	56	Minimum	54.4%	36.0%	20.6%	Minimum	76.5%	44.3%	22.7%
130.1	KD	22.4	204	Minimum	59.7%	40.1%	16.1%	Minimum	76.2%	41.7%	12.6%
130.2	L	17.6	156	Medium	73.6%	60.3%	47.7%	Medium	84.3%	65.1%	49.9%
130.3	Bed	10.4	80	Medium	69.8%	53.9%	35.8%	Medium	80.1%	53.0%	28.4%
130.4	Bed	8.7	72	Medium	74.8%	59.2%	43.7%	Medium	85.1%	62.9%	44.3%
130.5	Bed	11.7	99	Medium	71.0%	57.1%	44.4%	Medium	81.6%	58.6%	42.0%
130.6	Bed	7.6	56	Minimum	55.1%	36.1%	21.4%	Minimum	75.7%	43.1%	22.1%
131.1	KD	22.4	204	Minimum	60.8%	41.2%	14.8%	Minimum	77.2%	41.7%	9.4%
131.2	L	17.6	156	Medium	73.9%	60.7%	47.6%	High	84.4%	65.4%	50.1%
131.3	Bed	10.4	80	Medium	69.6%	53.6%	34.9%	Medium	80.8%	53.8%	28.9%
131.4	Bed	8.7	72	Medium	75.3%	59.7%	44.0%	Medium	85.0%	62.8%	44.2%
131.5	Bed	11.7	99	Medium	71.1%	56.9%	43.5%	Medium	81.6%	58.1%	41.3%
131.6	Bed	7.6	56	Minimum	55.2%	37.3%	23.0%	Minimum	76.0%	43.3%	22.8%

Table 12: Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

Appendix C - Sunlight Hours for Living Spaces in Duplex Units

Sunlight Hours			
Room/ Unit ID	LKD window within 90° South	No. sunlight hours on 21st March	Compliance
33.1	Yes	7.3	High
34.1	Yes	6.9	High
37.1	Yes	5.4	High
38.1	Yes	6.9	High
47.1	Yes	2.8	Minimum
48.1	Yes	1.7	Minimum
53.1	Yes	6.8	High
54.1	Yes	6.8	High
55.1	No	1.2	Below criteria
56.1	Yes	7.0	High
57.1	No	0.0	Below criteria
58.1	Yes	7.1	High
59.1	No	0.8	Below criteria
60.1	Yes	7.2	High
61.1	No	0.0	Below criteria
62.1	Yes	7.3	High
63.1	No	0.0	Below criteria
64.1	Yes	7.3	High
65.1	Yes	3.8	Medium
66.1	Yes	7.3	High
67.1	Yes	5.4	High
68.1	Yes	6.9	High
73.1	Yes	6.5	High
74.1	Yes	6.4	High
87.1	Yes	7.3	High
88.1	Yes	6.9	High
91.1	Yes	5.3	High
92.1	Yes	6.9	High
108.1	Yes	5.4	High
109.1	Yes	2.0	Minimum
110.1	Yes	5.5	High
111.1	No	2.0	Minimum
112.1	Yes	5.6	High
113.1	No	2.0	Minimum
114.1	Yes	5.6	High
115.1	No	2.0	Minimum
116.1	Yes	5.6	High
117.1	No	2.0	Minimum
118.1	Yes	3.8	Medium
119.1	No	6.1	High
121.1	Yes	7.3	High
122.1	Yes	6.9	High

Table 13: Sunlight hours to living spaces in duplex

Appendix D - Sun on the Ground for Amenity of Houses and Duplex units

This table shows all units with private amenity space at ground level. In the case of ground floor duplex units this schedule shows if the amenity meeting the BRE recommendation is to the front or rear of the building.

All of the amenity spaces are greater than the minimum area required. All private amenity spaces meet the BRE criteria in excess of the minimum standard required.

Sunlight on the Ground - Private Amenity

Plot No.	Unit Type	Qualifying amenity in duplex units	Minimum standard required	Sun on Grd to 50% of minimum area	Assessment Plane	BRE criteria >50% area receiving 2 hours sunlight on 21st March		Meets criteria
			Area	Area	Area	Area	% Area	
1	Type D - 3 bed		40.0	20.0	62.6	51.7	81.9%	Y
2	Type A - 2 bed		30.0	15.0	61.0	49.8	81.3%	Y
3	Type A - 2 bed		30.0	15.0	63.5	50.5	79.3%	Y
4	Type A - 2 bed		30.0	15.0	62.2	50.5	81.5%	Y
5	Type D - 3 bed		40.0	20.0	86.9	75.0	87.3%	Y
6	Type D - 3 bed		40.0	20.0	86.9	75.8	87.5%	Y
7	Type A - 2 bed		30.0	15.0	61.0	50.6	81.8%	Y
8	Type A - 2 bed		30.0	15.0	63.5	53.1	82.4%	Y
9	Type A - 2 bed		30.0	15.0	62.2	50.9	82.4%	Y
10	Type D - 3 bed		40.0	20.0	93.2	85.1	91.0%	Y
11	Type C - 3 bed		40.0	20.0	73.9	50.6	68.1%	Y
12	Type C - 3 bed		40.0	20.0	70.1	41.7	56.5%	Y
13	Type C - 3 bed		40.0	20.0	70.1	50.8	68.0%	Y
14	Type C - 3 bed		40.0	20.0	74.2	59.1	79.8%	Y
15	Type D - 3 bed		40.0	20.0	62.6	41.6	67.7%	Y
16	Type A - 2 bed		30.0	15.0	61.0	29.4	48.3%	Y*
17	Type A - 2 bed		30.0	15.0	63.5	33.8	53.8%	Y
18	Type A - 2 bed		30.0	15.0	62.2	32.7	53.0%	Y
19	Type D - 3 bed		40.0	20.0	86.9	59.8	68.8%	Y
20	Type D - 3 bed		40.0	20.0	86.9	59.1	67.8%	Y
21	Type A - 2 bed		30.0	15.0	61.0	29.3	48.6%	Y*
22	Type A - 2 bed		30.0	15.0	63.5	33.8	53.8%	Y
23	Type A - 2 bed		30.0	15.0	62.2	32.7	53.0%	Y
24	Type D - 3 bed		40.0	20.0	93.2	67.3	72.8%	Y
25	Type D - 3 bed		40.0	20.0	67.4	63.2	92.5%	Y
26	Type D - 3 bed		40.0	20.0	69.9	60.6	86.4%	Y
27	Type D - 3 bed		40.0	20.0	84.9	75.5	88.6%	Y
28	Type D - 3 bed		40.0	20.0	86.2	75.5	88.4%	Y
29	Type A - 2 bed		30.0	15.0	62.5	52.3	84.0%	Y
30	Type A - 2 bed		30.0	15.0	62.6	52.4	83.5%	Y
31	Type A - 2 bed		30.0	15.0	61.5	51.4	83.5%	Y
32	Type D - 3 bed		40.0	20.0	62.1	52.8	88.7%	Y
33	Duplex A	Rear	5.0	2.5	26.7	18.2	68.5%	Y
35	Type C - 3 bed		40.0	20.0	62.2	36.0	57.3%	Y
36	Type C - 3 bed		40.0	20.0	79.4	33.0	40.6%	Y*
37	Duplex A	Front	5.0	2.5	26.7	24.0	99.1%	Y
39	Type B - 3 bed		40.0	20.0	62.8	42.4	62.2%	Y
40	Type A - 2 bed		30.0	15.0	66.3	35.3	52.7%	Y
41	Type A - 2 bed		30.0	15.0	66.3	36.8	54.9%	Y
42	Type A - 2 bed		30.0	15.0	66.3	36.8	54.9%	Y
43	Type B - 3 bed		40.0	20.0	73.6	53.1	70.3%	Y

Sunlight on the Ground - Private Amenity

Plot No.	Unit Type	Qualifying amenity in duplex units	Minimum standard required	Sun on Grd to 50% of minimum area	Assessment Plane	BRE criteria >50% area receiving 2 hours sunlight on 21st March		Meets criteria
			Area	Area	Area	Area	% Area	
44	Type B - 3 bed		40.0	20.0	73.6	54.6	72.0%	Y
45	Type B - 3 bed		40.0	20.0	76.4	45.0	59.7%	Y
46	Type B - 3 bed		40.0	20.0	72.6	51.0	68.6%	Y
47	Duplex A	Rear	5.0	2.5	31.8	21.1	64.2%	Y
49	Type B - 3 bed		40.0	20.0	55.1	50.6	90.6%	Y
50	Type A - 2 bed		30.0	15.0	66.6	62.1	90.7%	Y
51	Type A - 2 bed		30.0	15.0	88.9	81.0	90.0%	Y
52	Type B - 3 bed		40.0	20.0	35.0	25.9	67.1%	Y
53	Duplex A	Front	5.0	2.5	28.3	24.0	92.7%	Y
55	Duplex B		5.0	2.5	38.3	10.3	29.8%	Y*
57	Duplex B		5.0	2.5	35.6	18.3	51.9%	Y
59	Duplex B		5.0	2.5	68.7	43.9	63.7%	Y
61	Duplex B		5.0	2.5	69.0	41.0	59.3%	Y
63	Duplex B		5.0	2.5	35.9	13.7	38.5%	Y*
65	Duplex B		5.0	2.5	41.8	22.4	56.7%	Y
67	Duplex A	Front	5.0	2.5	28.3	24.0	0.0%	Y
69	Type B - 3 bed		40.0	20.0	71.4	21.5	31.1%	Y*
70	Type A - 2 bed		30.0	15.0	88.9	50.5	56.9%	Y
71	Type A - 2 bed		30.0	15.0	88.9	55.5	62.5%	Y
72	Type B - 3 bed		40.0	20.0	68.7	39.5	59.2%	Y
73	Duplex A	Front	5.0	2.5	29.7	24.0	0.0%	Y
75	Type B - 3 bed		40.0	20.0	54.2	33.7	63.6%	Y
76	Type E - 4 bed		50.0	25.0	130.2	115.0	90.5%	Y
77	Type E - 4 bed		50.0	25.0	122.3	116.1	95.4%	Y
78	Type A - 2 bed		30.0	15.0	46.4	40.5	89.0%	Y
79	Type B - 3 bed		40.0	20.0	89.0	80.5	90.6%	Y
80	Type B - 3 bed		40.0	20.0	73.3	62.8	85.9%	Y
81	Type B - 3 bed		40.0	20.0	89.0	78.3	88.5%	Y
82	Type B - 3 bed		40.0	20.0	89.0	78.6	88.3%	Y
83	Type A - 2 bed		30.0	15.0	55.7	48.7	89.1%	Y
84	Type A - 2 bed		30.0	15.0	55.7	48.7	89.1%	Y
85	Type A - 2 bed		30.0	15.0	63.5	52.2	82.4%	Y
86	Type B - 3 bed		40.0	20.0	71.6	58.2	82.6%	Y
87	Duplex A	Rear	5.0	2.5	25.7	14.3	54.5%	Y
89	Type C - 3 bed		40.0	20.0	70.6	41.4	58.6%	Y
90	Type C - 3 bed		40.0	20.0	77.0	33.0	42.9%	Y*
91	Duplex A	Front	5.0	2.5	26.7	24.0	99.1%	Y
93	Type B - 3 bed		40.0	20.0	70.4	37.1	52.9%	Y
94	Type A - 2 bed		30.0	15.0	63.5	31.9	50.5%	Y
95	Type A - 2 bed		30.0	15.0	63.5	34.2	53.5%	Y
96	Type A - 2 bed		30.0	15.0	63.5	34.3	53.8%	Y
97	Type B - 3 bed		40.0	20.0	89.0	59.2	66.7%	Y
98	Type B - 3 bed		40.0	20.0	89.0	59.3	66.9%	Y
99	Type B - 3 bed		40.0	20.0	73.3	42.4	57.1%	Y
100	Type B - 3 bed		40.0	20.0	89.0	57.9	65.0%	Y
101	Type A - 2 bed		30.0	15.0	81.0	73.0	90.0%	Y
102	Type A - 2 bed		30.0	15.0	65.0	54.8	84.6%	Y

Sunlight on the Ground - Private Amenity								
Plot No.	Unit Type	Qualifying amenity in duplex units	Minimum standard required	Sun on Grd to 50% of minimum area	Assessment Plane	BRE criteria >50% area receiving 2 hours sunlight on 21st March		Meets criteria
			Area	Area	Area	Area	% Area	
103	Type A - 2 bed		30.0	15.0	65.0	53.8	83.2%	Y
104	Type A - 2 bed		30.0	15.0	65.0	53.6	82.2%	Y
105	Type A - 2 bed		30.0	15.0	65.0	52.3	81.1%	Y
106	Type A - 2 bed		30.0	15.0	65.0	51.1	79.0%	Y
107	Type A - 2 bed		30.0	15.0	81.1	64.6	80.3%	Y
108	Duplex B		5.0	2.5	68.1	51.7	76.5%	Y
110	Duplex B		5.0	2.5	38.9	25.2	66.0%	Y
112	Duplex B		5.0	2.5	38.8	27.1	70.5%	Y
114	Duplex B		5.0	2.5	38.9	28.2	72.3%	Y
116	Duplex B		5.0	2.5	38.9	21.6	54.9%	Y
118	Duplex B		5.0	2.5	50.6	34.1	69.0%	Y
120	Type C - 3 bed		40.0	20.0	95.2	43.8	46.3%	Y*
121	Duplex A	Front	5.0	2.5	30.0	24.0	99.1%	Y
123	Type B - 3 bed		40.0	20.0	90.5	56.5	62.8%	Y
124	Type B - 3 bed		40.0	20.0	87.5	51.7	58.8%	Y
125	Type B - 3 bed		40.0	20.0	106.0	73.2	69.1%	Y
126	Type E - 4 bed		50.0	25.0	94.8	71.2	74.7%	Y
127	Type E - 4 bed		50.0	25.0	78.4	46.7	60.1%	Y
128	Type E - 4 bed		50.0	25.0	94.8	63.2	66.7%	Y
129	Type E - 4 bed		50.0	25.0	94.8	65.0	68.7%	Y
130	Type E - 4 bed		50.0	25.0	78.4	46.8	60.1%	Y
131	Type E - 4 bed		50.0	25.0	94.5	63.1	66.9%	Y

* The area meeting the BRE criteria is greater than the minimum standard required to meet the amenity. (i.e. >50% of mini standard amenity)

Table 14: Sun on the ground to private amenity spaces at ground level