Daylight & Sunlight Assessments of Social Housing Bundle 5 Development at Balcurris Road, Ballymun, Dublin 11

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Contents:

1. Introduction

The construction of 288 apartment/duplex and housing units at a site of c. 2.6 ha (c. 2.2 ha net) bound by Balbutcher Lane to the north, Balcurris Park to the west, the Ballymun Road to the east, and Balcurris Gardens to the south-west,, Ballymun, Dublin 11, which will consist of the following:

- Construction of 288 no. apartment/duplex and housing units across 5 sites (Sites 5, 15, 16, 17 and 18) ranging from 2 to 6 storeys containing 138 no one-bed, 87 no. 2-bed units, 61 no. 3-bed and 2 no. 4-bed dwellings.
    - Site 5 consists of 132 no. apartment units (66 no. 1 bed, 44 no. 2 bed units and 22 no. 3 bed units) and ranges from 4 to 5 storeys including a new urban edge along Ballymun Road;
    - Site 15 consists of 8 no. dwellings comprising 6 no. 1 bed own-door apartments and 2 no. 3 bed houses adjoining Balcurris Gardens
    - Site 16 consists of 5 no. dwellings comprising 2 no. 1 bed own-door apartments, 1 no. 3 bed house and 2 no. 4 bed houses adjoining Balcurris Gardens
    - Site 17 consists of 34 no. apartment units (17 no. 1 bed units, 9 no. 2 bed units and 8 no. 3 bed units) and ranges from 3 to 6 storeys forming an urban block with incomplete urban cell at the Linnbhla and Charter apartments;
    - Site 18 consists of 109 no. apartments (47 no. 1 bed units, 34 no. 2 bed units and 28 no. 3 bed units) and ranges from 4 to 5 storeys with edges to Balcurris Road, Balcurris Park and a new edge to Balbutcher Lane;
- 70 no. car parking spaces, 4 no. loading bays and 4 no. motorbike parking spaces
- 551 no. long stay and 180 no. short stay bicycle parking spaces to serve the housing units.
- Provision of 1611 m² Retail/Commercial floor space at ground level facing Ballymun Road/St. Pappins Square (sites 5 and 17)
- Provision of a 324 m² childcare facility at ground floor in Site 5.
- Provision of 1,058 m² of community, cultural and arts space located at ground floor level in sites 5 and 17.
- Provision of 91 no bicycle spaces to serve the non-residential uses distributed across the site.
- The provision of a public open space in a new plaza at St Pappin's Square (1,953 m²) and additional areas of 979m², 496m² and 839 m² with 2,969 m² of communal open space
- Realignment of Balcurris Road, provision of two new vehicular accesses (one off the Balbutcher Lane and one off the Ballymun Road) and a dedicated pedestrian and cycle lane off the Balbutcher Lane
- Boundary treatments, public lighting, site drainage works, internal road surfacing and footpaths, ESB meter rooms, ESB substations, stores, bin and cycle storage, plant rooms, landscaping; and
- All ancillary site services and development works above and below ground.

1.1 Executive Summary

This preliminary 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 MCORM Architecture & Urban Design.

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

1.2.1 Daylight to Adjacent Properties

The majority of the window the neighbouring residential properties retain a VSC level greater that 27% or if less that 27% VSC then they are not reduced below 80% of their existing value. There are a number of windows that have a reduction below 27% VSC. The majority of these window have no facing obstruction currently and have high existing VSC levels. Additionally the majority of the window that experience a reduction have a self obstruction balcony or side projection blocking light from the sky. Any reduction in available daylight is in-line with emerging trends in the area and any impact will be negligible. The detailed assessment of the apartment buildings indicated that the apartments will retain high levels of daylight due to the large existing windows.

It should be noted that the existing dwelling units where built with the expectation that the current development site would be developed at a future stage and there would be a reduction of available daylight.

It is important to recognise that the guideline targets published by the BRE are intended to be employed with a degree of discretion and flexibility. The flexibility available in the BRE guide is outlined in the introductory section as follows:

> *"The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical targets these should be interpreted flexibly because natural lighting is only one of many factors in site layout design."*

The impact on the VSC levels is in-line with developments in urban locations and the Sustainable and Compact Settlements: Guidelines for Planning Authorities (2024) recommends flexibility when interpreting results.

1.2.2 Sunlight to Adjacent Properties

There will be minimal reduction to the available sunlight to the neighbouring properties and any impact will be minor to imperceptible.

There will be minimal reduction to sunlight to adjacent communal and private amenity spaces and any perceived reduction will be negligible.

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

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

The BRE Guidelines BR209:2022 recommends 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%).

The target results set out in BS EN17037:2018+A1:2021 are used in this assessment as the primary results to be achieved because these are referenced in BR209 (as recommended by the local authority) and set out additional room specific targets to be achieved in residential buildings. BR209 deals with daylight and sunlight to adjacent properties and defers to BS EN17037:2018+A1:2021 for daylight and sunlight within the proposed development and allows for a complete assessment of the proposed development and its surroundings. BR209 presents a discussion on aspects of daylight and sunlight and interpreting the results of these assessments.

IS EN17037:2018 does not set out any guidance for assessing the impact to daylight and sunlight from a proposed development on neighbouring buildings nor is there any Irish governmental guidance on interpreting results and percentages of units to achieve the target results in multi unit developments. IS EN17037:2018 does not set out room use specific targets but instead designates a Minimum and Target lux level to be achieved in all rooms regardless of use. The function of a room historically has been the key factor in informing the design of a building and the window sizes to allow adequate daylight levels for the task typical to that room to be achieved. The lack of variance in target levels for the tasks typical to a room can lead to substantially oversized windows in rooms with a lower requirement for daylight levels, for example bedrooms. The aim to achieve the minimum target lux level to all rooms in a multi unit residential building is not practical and could lead to overheating of units that have greater access to the sky and sunlight. This could also lead to higher energy usage due to oversized windows and a balance needs to be met.

The results for the Minimum and Target levels set out in Table A1 in IS EN17037:2018 are presented in the assessment as supplementary for completeness, however, conclusions can not be made due to lack of clear guidance on interpenetration of results.

There are no existing mature trees within the vicinity of any of the proposed units that would influence the daylight levels and the assessment is carried out without any trees.

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. These are the minimum values, per specified use, 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 93.1% of units meeting the minimum recommended 1.5 direct sunlight hours. This is in line with the BRE guideline example for an apartment layout where 4 in 5 achieves the target sunlight hours.

All proposed public and communal amenity spaces achieve sunlight levels that exceed 2 hours sunlight over 50% of the required amenity space on the 21st March. In the houses and duplex units with ground level private amenity, 8 out of 9 no. units (88.9%) achieve the target sunlight levels set out in BR209:2022 (third edition). The private amenity space is well considered and designed.

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 96.2% of rooms achieving Minimum Illuminance and 77.7% achieving Target Illuminance. Appendix B identifies any rooms which do not achieve minimum illuminance or target illuminance levels.

To date there is no guidance from governmental bodies on the use or interpretation of IS EN 17038:2018. Apartment guidelines and local authorities guidelines refer to BR209 2022: "Site layout planning for daylight and sunlight" (Third edition) 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. Therefore the assessment against IS EN 17037:2018 is included as supplementary information only noting there are no room specific recommendations for daylight, and because of this limitation, it is considered the recommendations made in the BRE guidelines are more appropriate.

Appendix 16- Sunlight and Daylight of the Dublin City Development Plan 2022-2028 gives guidance on the two daylight provision metrics as follows:
Section 3.3 BS EN 17037:2018 – Daylight in Buildings states that:*"The minimum daylight provision targets given within the national annex have relevance."*
Section 3.4 IS EN 17037:2018 – Daylight in Buildings states that due to the lack of localisation and provision for specific guidance on individual room use that: *"These limitations make it unsuitable for use in planning policy or during planning applications. BR 209 must still be used for this purpose."*

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 vast majority of habitable rooms achieve daylight provision as set out in IS EN 17038:2018.

With regard to internal daylighting, Section 6.7 of the Sustainable Urban Housing: Design Standards for New Apartments (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:

> *"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 habitable 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.

As Appendix 16- Sunlight and Daylight of the Dublin City Development Plan 2022-2028 references BRE 'Site Layout Planning for Daylight and Sunlight' 2011 (Second edition), it is considered that the guidance in the Development Plan has been superseded by the BRE Guidelines 2022 and therefore it is not necessary to assess the scheme against the recommendations in Appendix 16 also.

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." The recommendations of the BRE guidelines (2022) are not suitable for rigid application to all developments in all contexts and this 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 to adjacent buildings in the areas of Daylight is the Vertical Sky Component (VSC) and Sunlight is the Annual Probable Sunlight Hours (APSH). Sunlight to adjacent amenity space is assessed through the measurement of sunlight availability on the 21st March and the plotting of shadow diagrams.

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 its 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 through 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 it should receive at least 25% of the APSH and it should receive 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.

Model trees representing the breath and height of the existing trees are included with dynamic leaf condition for the annual daylight illuminance calculation. It should be noted that assessment of the results which include the simulation of trees should be viewed with caution due the difficulty in simulation on site tree conditions.

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.
The BRE guidelines does not set out a specific value range for the different classification of impact level of Minor, Moderate and Major to each window. For the purpose of this report one of five classification levels will be applied:

1. Imperceptible: There is no reduction in the VSC levels or where the levels are 99% of the existing value.
2. No substantial change: A reduction in the VSC level but it retains a VSC >27% or <27% but >80% of the existing value
3. Minor reduction: A reduction below <27%VSC and <80% of the existing value but greater than 20% VSC.
4. Moderate reduction: A reduction below <20%VSC and <80% of the existing value but greater than 10% VSC.
5. Major reduction: A reduction below <10%VSC and <80% of the existing value.

The evaluation of the impact should be considered in conjunction with other factors when determining the overall impact level to a property.

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 with 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 (Ev,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 for both

target levels but it 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%

* EN17037 uses the latitude of the capital city of each European country to set individual values for daylight and sunlight metrics for use in setting the target levels to be achieved in a particular country.

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

2.9 Sunlight within 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 guidelines acknowledge that it may not be possible to have every living room facing within 90° of south in large developments, however, it recommends maximising the number of units with a southerly aspect.

The BRE guidelines (2022) state that BS EN 17037 should be used to assess for interior access to direct sunlight and that the assessment of APSH should no longer be used. BS EN 17037 sets recommendations for access to sunlight and notes three levels of achievement; Minimum, Medium and 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 recommend 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 in Neighbouring Buildings

3.1 Site Overview

The site of the proposed development is predominantly greenfield accessed by Ballymun Road, Balcurris Road and Balbutcher Lane. There are houses of 2-3 storeys in Balcurris Gardens, Balcurris Close and Balcurris Road.

Figure 1: Satellite view taken from Bing 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 locations A - H extend and if they intersect the proposed development, they are plotted in Figure 3 below.

The guidelines 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.

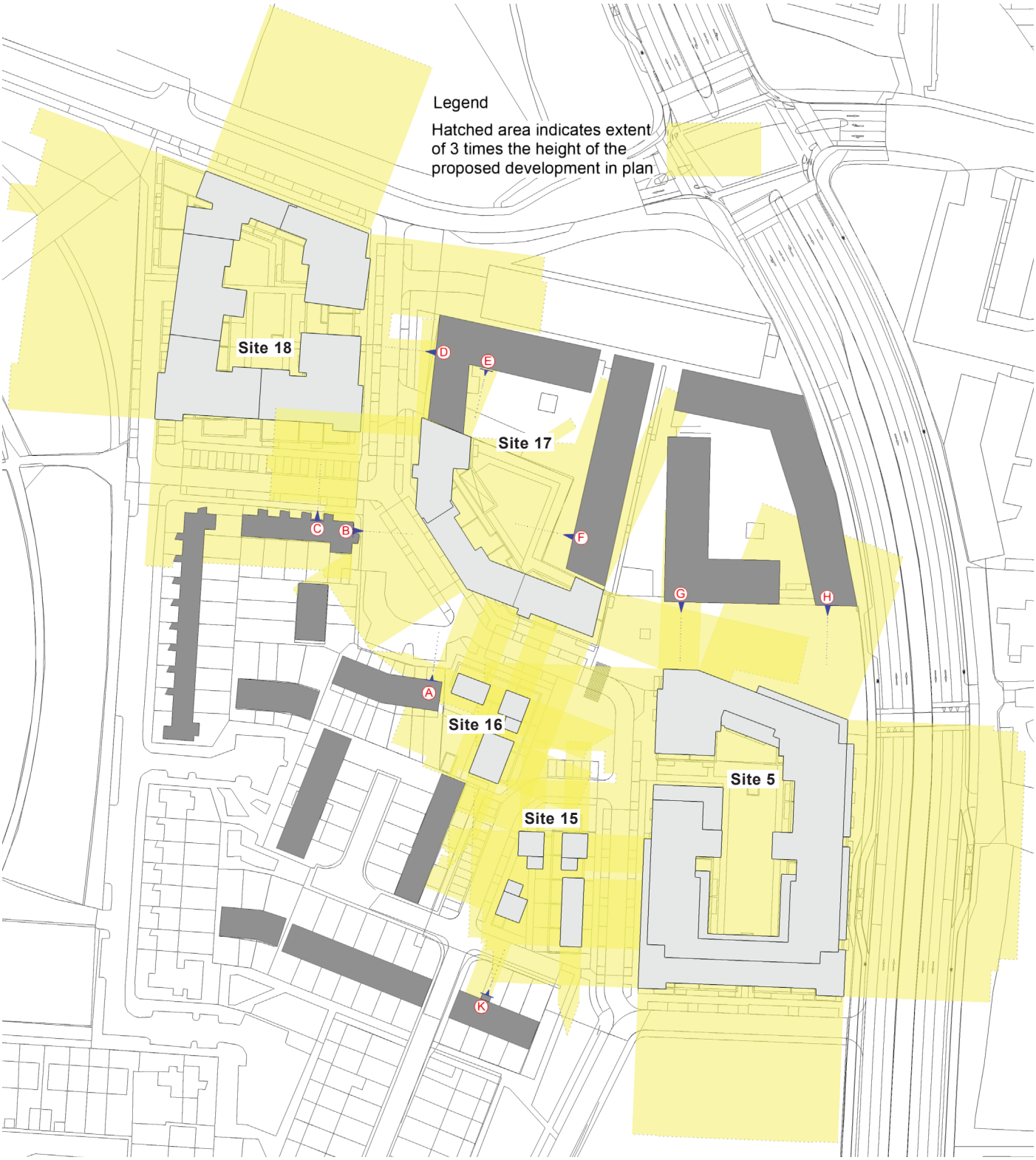
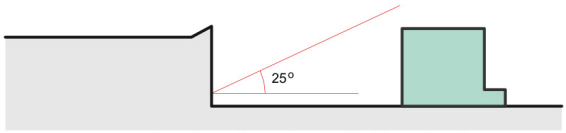
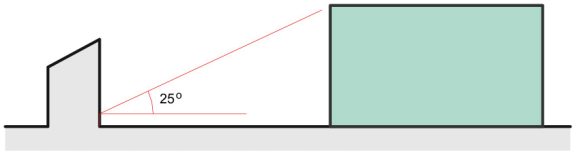


Figure 2: Proposed site plan showing the zone of influence (3 times the height of the proposed building) and direction of the window wall of adjacent residential properties.

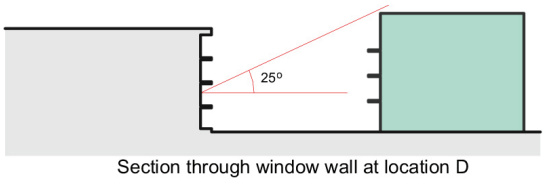
Section through window wall at location A



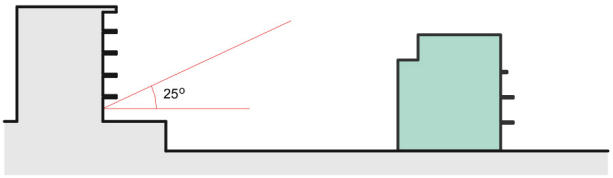
Section through window wall at location B



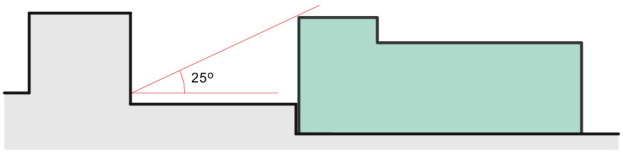
Section through window wall at location C



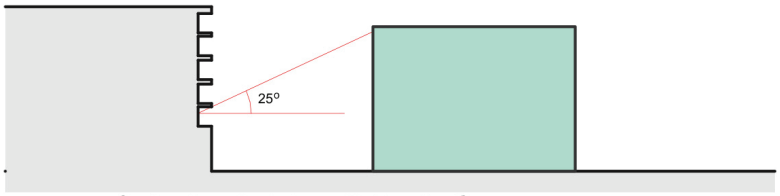
Section through window wall at location D



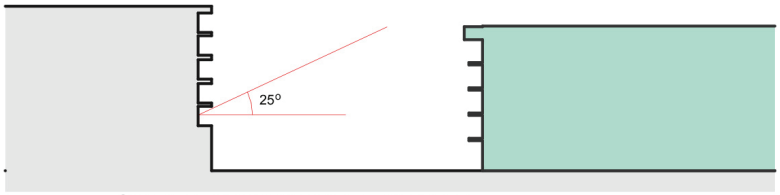
Section through window wall at location E



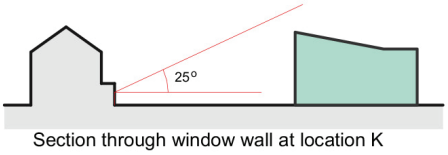
Section through window wall at location F



Section through window wall at location G



Section through window wall at location H



Section through window wall at location K

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

3.3 Comment on Preliminary Assessment

Location A: The 25º line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible.

Location B through No.6 Balcurris Close: The 25º line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible.

Location C through No.4 Balcurris Close: The 25º line would be subtended by the proposed development, these houses were selected for further assessment.

Location D through the lowest residential floor in Linnbhla: The 25º line would not be subtended by the proposed development, however it is marginal. The rooms in this elevation have been selected for assessment.

Location E through the lowest residential floor in Linnbhla: The 25º line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible.

Location F through the lowest residential floor in The Charter: The 25º line would not be subtended by the proposed development, however it is marginal. The rooms in this elevation have been selected for assessment.

Location G through the lowest residential floor in Turnpike Apartments: The 25º line would be subtended by the proposed development, these rooms were selected for further assessment.

Location H through the lowest residential floor in Turnpike Apartments: The 25º line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible.

Location K through No.3 Balcurris Gardens: The 25º line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible.

The relevant elevations in No.s 1 - 6 Balcurris Close, Linnbhla, The Charter and Turnpike Apartments have been selected for detailed assessment. Annual probable sunlight hours will also be assessed where relevant.

3.4 Detailed Assessment to Adjoining Dwellings

The BRE guidelines BR209:2022 (third edition) recommend assessing the Vertical Sky Component (VSC) to adjacent properties, where the layouts are not known. Annual Probable Sunlight Hours (APSH) will also be assessed, where that is relevant.

The guideline recommends that if a window retains a VSC in excess of 27% with the proposed development in place then it will still receive enough daylight. If the existing VSC is below 27% or is reduced below 27% and below 0.8 times its former value then the diffuse light maybe adversely affected.

Test points representing windows in the adjacent dwellings at locations identified in preliminary analysis are indicated in Figures 4 - 9. The results are shown in Tables 6-9.

3.5 Balcurris Close

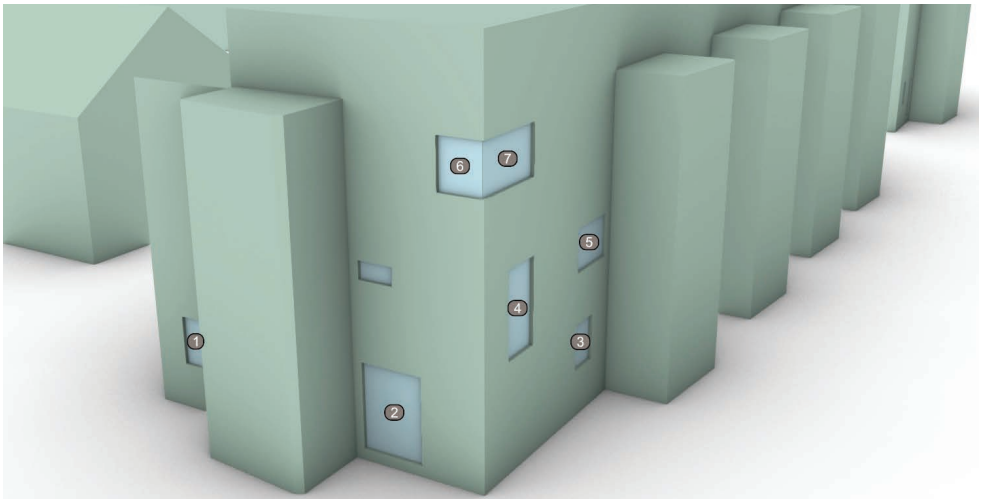


Figure 4: No.6 Balcurris Close - View of model locating VSC test points.

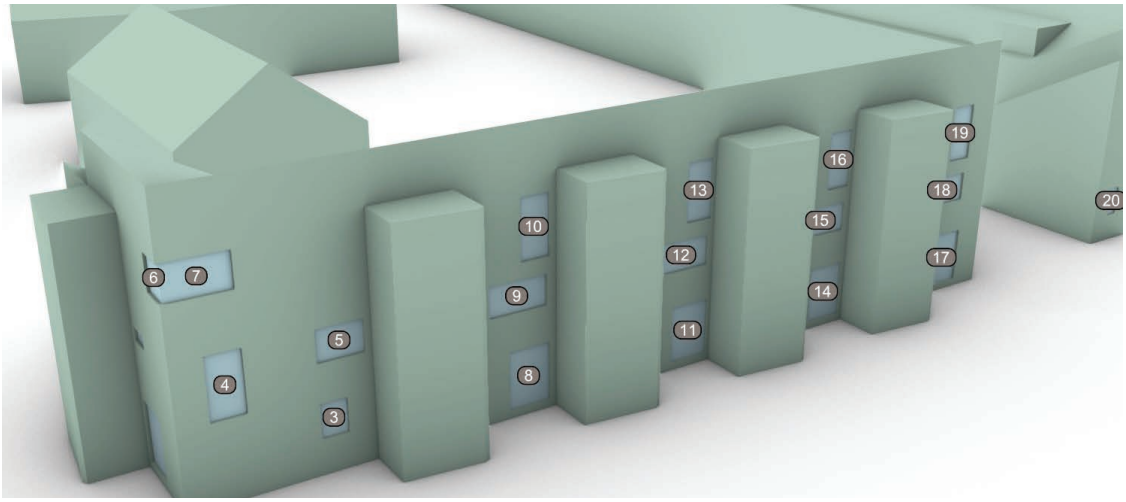


Figure 5: No.s 2 - 6 Balcurris Close - View of model locating VSC test points.

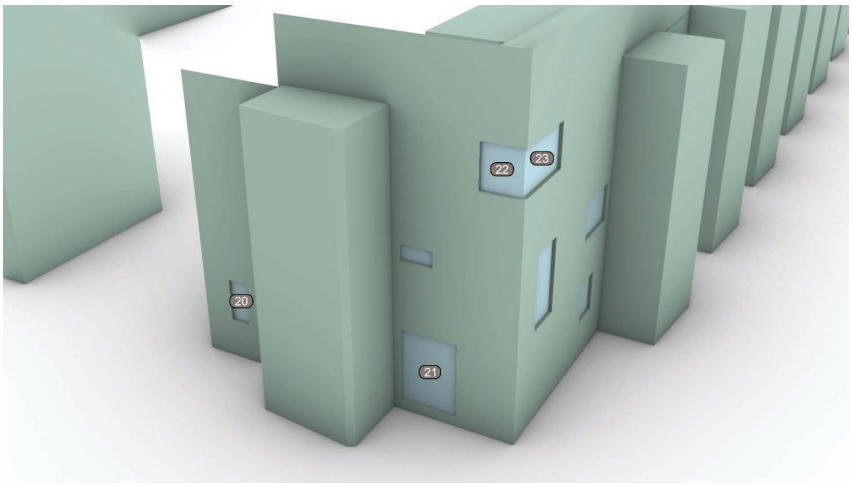


Figure 6: No.1 Balcurris Close - View of model locating VSC test points.

Vertical Sky Component					
Location	Vertical Sky Component Recommended Value > 27%		Ratio: Proposal to Existing Recommended > 80%	Meets criteria if >27% VSC or <27% but >80% Existing Value	Comments
	Existing %	Proposed %			
1	30.4	26.0	85.4%	Y	No substantial change
2	24.6	19.0	77.2%	N	Minor reduction
3	28.7	22.0	76.5%	N	Minor reduction
4	35.9	29.5	82.3%	Y	No substantial change
5	27.3	22.6	82.7%	Y	No substantial change
6	35.3	32.7	92.5%	Y	No substantial change
7	37.1	33.2	89.6%	Y	No substantial change
8	24.4	17.5	71.9%	N	Minor reduction
9	26.7	21.0	78.7%	N	Minor reduction
10	26.4	22.9	86.6%	Y	No substantial change
11	23.9	16.6	69.4%	N	Minor reduction
12	26.3	20.1	76.5%	N	Minor reduction
13	25.4	21.7	85.4%	Y	No substantial change
14	24.4	16.6	68.0%	N	Minor reduction
15	26.7	20.2	75.7%	N	Minor reduction
16	25.8	21.8	84.2%	Y	No substantial change
17	34.7	24.7	71.1%	N	Minor reduction
18	33.9	26.4	78.0%	N	Minor reduction
19	36.7	31.0	84.5%	Y	No substantial change
20	32.6	23.2	71.2%	N	Minor reduction
21	28.3	21.2	74.7%	N	Minor reduction
22	37.3	32.8	87.9%	Y	No substantial change
23	38.3	37.9	99.0%	Y	No substantial change

Table 6: Vertical sky component.

3.5 Conclusion of Potential Impact to Existing Houses

There will be a reduction to the VSC levels of the windows to the houses at Balcurris Close. These house currently face fields with no obstruction. Any new buildings will have a noticeable effect on the VSC levels. The design of the houses with the repeating projection block either side of the windows is restrictive to additional obstructions and the majority of the windows would retain a VSC level in excess of 27% without the projection.

3.6 Linnbhla Apartments

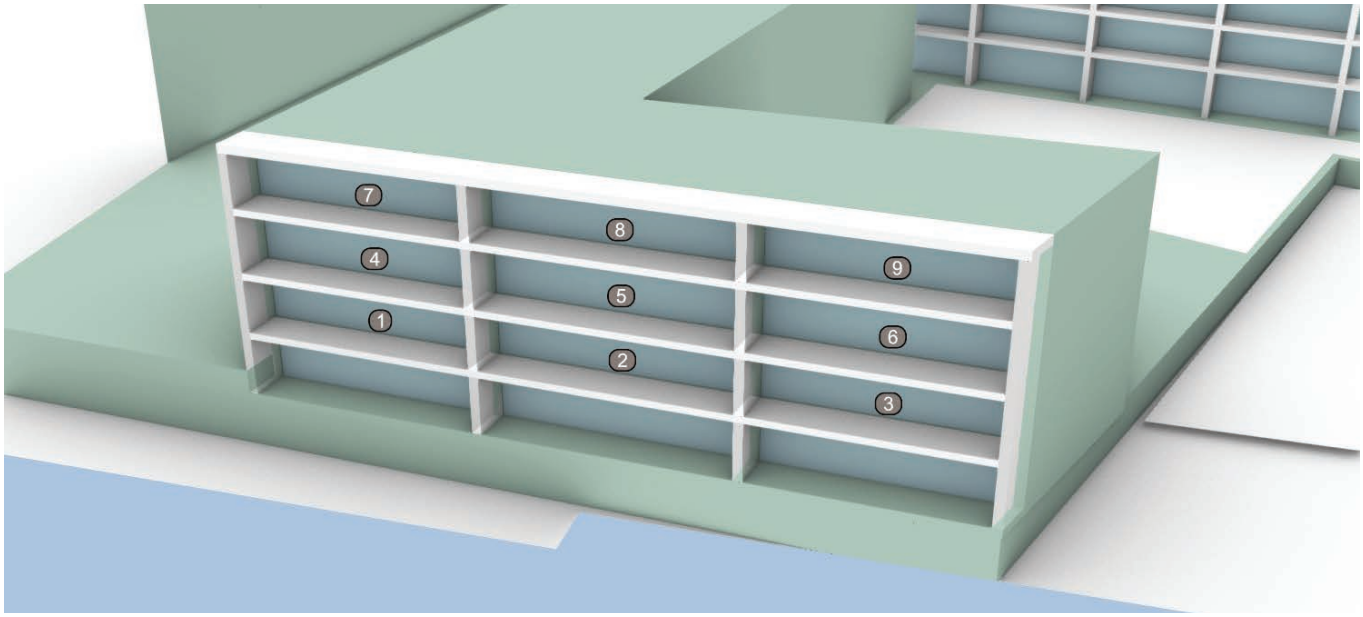


Figure 7: Linnbhla Apts. - View of model locating VSC test points.

Vertical Sky Component - Linnbhla Apartments									
Test No.	Vertical Sky Component Recommended > 27%				Ratio: Recommended > 80%		Meets Criteria		Comment
	Existing	Existing with no balcony	Proposed	Proposed with no balcony	Prop : Exist	Prop : Exist No balcony	With balcony	Without balcony	
1	16.8	38.8	8.9	30.8	52.6%	79.3%	N	Y	Minor Reduction*
2	16.8	38.7	8.9	30.6	53.0%	79.1%	N	Y	Minor Reduction*
3	16.6	38.6	8.6	27.8	52.0%	72.0%	N	Y	Minor Reduction*
4	17.8	39.0	12.2	33.4	68.9%	85.7%	N	Y	Minor Reduction*
5	17.8	38.9	12.6	33.6	70.6%	86.4%	N	Y	Minor Reduction*
6	17.7	38.9	12.1	31.7	68.2%	81.5%	N	Y	Minor Reduction*
7	16.4	39.0	13.2	35.8	80.4%	91.8%	Y	Y	No substantial change
8	16.4	39.0	13.7	36.2	83.5%	92.8%	Y	Y	No substantial change
9	16.3	39.0	13.7	36.1	83.7%	92.6%	Y	Y	No substantial change

* Determination based on the assessment without the balcony obstruction

Table 7: Vertical sky component for windows

3.7 The Turnpike Apartments

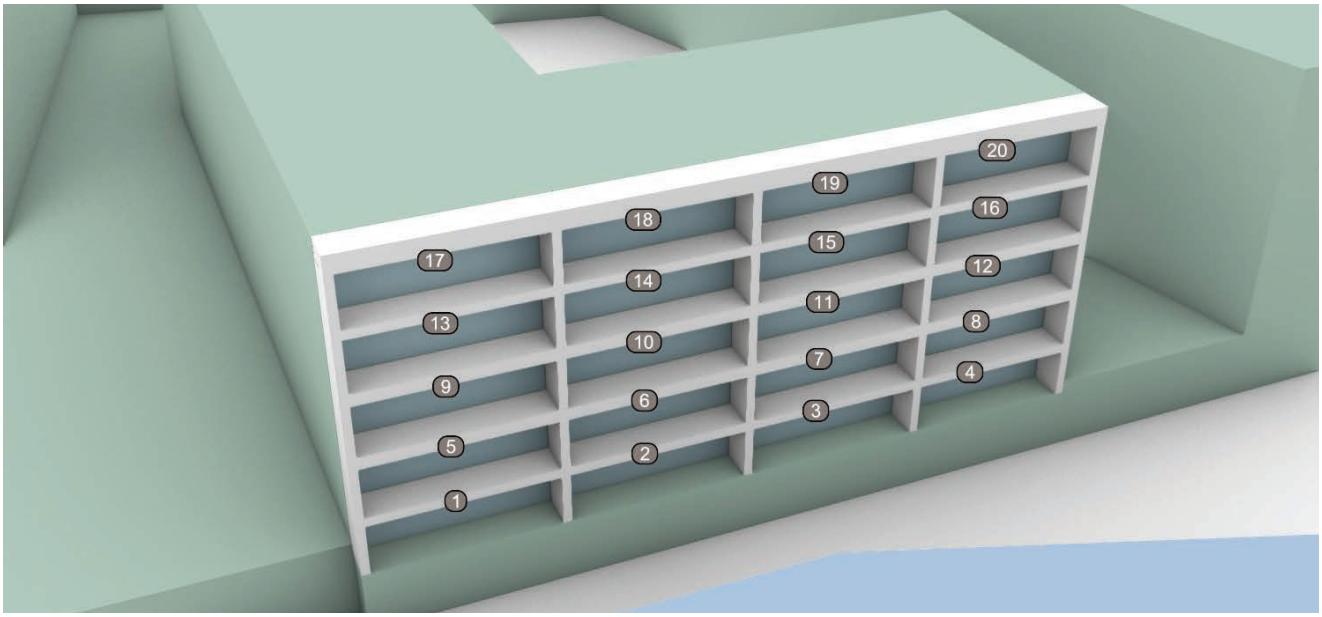


Figure 8: The Turnpike Apts. - View of model locating VSC & APSH test points.

Vertical Sky Component - Turnpike Apartments									
Test No.	Vertical Sky Component Recommended > 27%				Ratio: Recommended > 80%		Meets Criteria		Comment
	Existing	Existing with no balcony	Proposed	Proposed with no balcony	Prop : Exist	Prop : Exist No balcony	With balcony	Without balcony	
1	17.0	38.7	8.5	29.3	50.3%	75.7%	N	Y	Minor Reduction*
2	17.0	38.8	7.3	28.6	43.2%	73.8%	N	Y	Minor Reduction*
3	16.9	38.8	7.4	28.9	43.6%	74.5%	N	Y	Minor Reduction*
4	16.9	38.7	8.1	29.8	48.2%	76.9%	N	Y	Minor Reduction*
5	17.2	38.9	11.0	32.0	63.8%	82.2%	N	Y	Minor Reduction*
6	17.1	38.9	10.0	31.4	58.7%	80.7%	N	Y	Minor Reduction*
7	17.1	38.9	10.1	31.7	59.0%	81.4%	N	Y	Minor Reduction*
8	17.0	38.9	10.6	32.4	62.5%	83.3%	N	Y	Minor Reduction*
9	17.3	39.0	13.5	34.7	78.3%	88.9%	N	Y	Minor Reduction*
10	17.2	39.0	12.9	34.4	75.1%	88.2%	N	Y	Minor Reduction*
11	17.2	39.0	12.9	34.6	75.4%	88.7%	N	Y	Minor Reduction*
12	17.1	39.0	13.2	35.0	77.5%	89.8%	N	Y	Minor Reduction*
13	17.3	39.1	15.7	37.1	90.9%	94.9%	Y	Y	No substantial change
14	17.2	39.1	15.5	37.1	90.1%	95.0%	Y	Y	No substantial change
15	17.2	39.1	15.5	37.2	90.0%	95.3%	Y	Y	No substantial change
16	17.1	39.0	15.5	37.4	90.8%	95.8%	Y	Y	No substantial change
17	17.3	39.1	17.2	38.8	99.5%	99.3%	Y	Y	No substantial change
18	17.2	39.1	17.2	38.9	100.1%	99.6%	Y	Y	No substantial change
19	17.2	39.0	17.2	39.0	100.1%	99.8%	Y	Y	No substantial change
20	17.1	39.1	17.1	39.0	100.0%	99.9%	Y	Y	No substantial change

* Determination based on the assessment without the balcony obstruction

Table 8: Vertical sky component for windows

3.8 The Charter Apartments

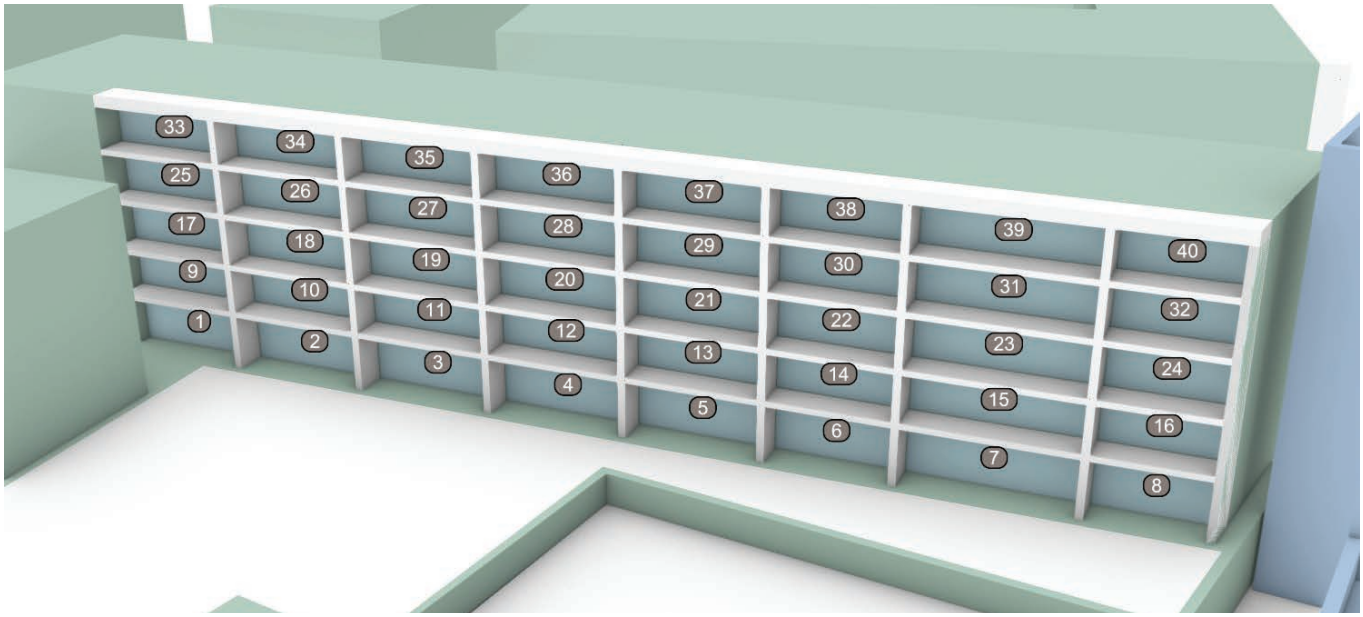


Figure 9: The Charter Apts. - View of model locating VSC test points.

Vertical Sky Component - The Charter Apartments									
Test No.	Vertical Sky Component Recommended > 27%				Ratio: Recommended > 80%		Meets Criteria		Comment
	Existing	Existing with no balcony	Proposed	Proposed with no balcony	Prop : Exist	Prop : Exist No balcony	With balcony	Without balcony	
1	6.3	17.8	5.3	16.6	85.0%	93.6%	Y	Y	No substantial change
2	11.4	27.6	9.9	26.0	87.0%	94.1%	Y	Y	No substantial change
3	14.3	32.0	12.1	29.5	84.9%	92.3%	Y	Y	No substantial change
4	16.1	34.3	13.1	30.8	81.3%	90.0%	Y	Y	No substantial change
5	17.2	35.6	13.4	31.0	77.8%	87.1%	N	Y	Minor Reduction*
6	17.6	36.3	13.1	30.4	74.1%	83.7%	N	Y	Minor Reduction*
7	18.5	36.8	12.2	28.4	66.0%	77.1%	N	Y	Minor Reduction*
8	18.0	37.1	9.9	23.9	55.0%	64.3%	N	N	Moderate Reduction*
9	5.5	20.9	4.8	20.2	87.7%	96.4%	Y	Y	No substantial change
10	10.4	30.7	9.4	29.6	90.3%	96.4%	Y	Y	No substantial change
11	12.8	34.3	11.4	32.7	88.9%	95.2%	Y	Y	No substantial change
12	14.1	36.0	12.2	33.6	86.4%	93.5%	Y	Y	No substantial change
13	14.9	36.8	12.4	33.7	83.7%	91.6%	Y	Y	No substantial change
14	15.2	37.3	12.3	33.2	81.0%	89.2%	Y	Y	No substantial change
15	15.9	37.6	11.7	31.6	73.8%	83.8%	N	Y	Minor Reduction*
16	15.4	37.9	9.7	27.0	63.3%	71.3%	N	Y	Minor Reduction*
17	6.4	26.2	6.1	25.7	94.2%	98.1%	Y	Y	No substantial change
18	13.1	34.1	12.5	33.4	95.6%	98.1%	Y	Y	No substantial change
19	15.3	36.4	14.5	35.4	95.0%	97.4%	Y	Y	No substantial change
20	16.1	37.2	15.0	35.9	93.4%	96.5%	Y	Y	No substantial change
21	16.5	37.7	15.3	36.0	92.3%	95.4%	Y	Y	No substantial change
22	16.6	38.1	15.2	35.7	91.2%	93.7%	Y	Y	No substantial change
23	17.3	38.3	14.7	34.4	84.7%	89.7%	Y	Y	No substantial change
24	16.6	38.4	12.3	30.1	73.9%	78.2%	N	Y	Minor Reduction*
25	12.7	33.4	12.6	33.3	99.5%	99.6%	Y	Y	No substantial change
26	15.2	37.0	15.0	36.8	98.6%	99.4%	Y	Y	No substantial change
27	15.9	37.8	15.6	37.5	98.1%	99.0%	Y	Y	No substantial change
28	16.3	38.2	15.9	37.7	97.5%	98.6%	Y	Y	No substantial change
29	16.5	38.4	16.0	37.7	97.4%	98.0%	Y	Y	No substantial change
30	16.4	38.6	15.9	37.5	97.1%	97.1%	Y	Y	No substantial change
31	17.0	38.7	15.5	36.5	91.2%	94.3%	Y	Y	No substantial change

Vertical Sky Component - The Charter Apartments									
Test No.	Vertical Sky Component Recommended > 27%				Ratio: Recommended > 80%		Meets Criteria		Comment
	Existing	Existing with no balcony	Proposed	Proposed with no balcony	Prop : Exist	Prop : Exist No balcony	With balcony	Without balcony	
32	16.2	38.8	13.0	32.8	80.3%	84.5%	Y	Y	No substantial change
33	15.1	37.5	15.0	37.2	98.7%	99.4%	Y	Y	No substantial change
34	15.5	38.3	15.3	38.1	98.8%	99.4%	Y	Y	No substantial change
35	15.7	38.6	15.6	38.3	98.9%	99.4%	Y	Y	No substantial change
36	15.9	38.7	15.7	38.5	98.8%	99.4%	Y	Y	No substantial change
37	15.9	38.8	15.8	38.5	98.9%	99.1%	Y	Y	No substantial change
38	15.8	38.9	15.6	38.3	98.9%	98.6%	Y	Y	No substantial change
39	16.3	38.9	15.4	37.7	94.7%	96.8%	Y	Y	No substantial change
40	15.5	38.9	13.3	35.1	85.8%	90.2%	Y	Y	No substantial change

* Determination based on the assessment without the balcony obstruction

Table 9: Vertical sky component for windows

3.9 Comment on daylight in adjacent habitable rooms

The BRE guidelines states that; *"Balconies and overhangs cut light from the top part of the sky and even a modest obstruction opposite may result in a large relative impact on the VSC."* The guidelines recommend carrying out additional calculations of the VSC with and without the balcony in place for the existing and proposed conditions to identify if the balcony rather than the obstruction are the main factor in the relative loss of light.

It can be see from the results without the balconies that they are a significant factor in reducing the VSC levels. The apartments have very large full width and full height window and the VSC assessment only indicates the amount of sky visible at the centre point of the window and does not take into account the window size or room dimensions. The drawings to the apartment block were available on the DCC Planning portal. Detailed assessment of daylight provision was carried out on these habitable rooms. A full schedule of results are indicated in Appendix D. With the proposed development in place, all habitable rooms achieve high levels of daylight and 100% of the rooms achieve the minimum target daylight levels set out in BS EN 17037:2018+A1:2021.

3.10 Conclusion

There is a reduction in available daylight to a number of windows below the recommended VSC level, however, a large portion if this can be attributed to the substantial overhanging and side projections associated with the balconies. The detailed daylight assessment indicates that the apartments at Linnbhla, The Charter and Turnpike will still retain an ample quality of daylight to all habitable rooms.

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.

The windows identified in the preliminary assessment, in the Turnpike Apartments that face within 90° of due south are assessed regardless of use. No other windows to the surrounding dwellings have a window that is less than 90° to due south. The windows are identified in Figure 9, the results are set out in the table below.

Annual Probable Sunlight Hours - Turnpike Apartments

	APSH >25% Target			Sept 21 - Mar 21 WPSH >5% Target			Meets criteria of >25% APSH and >5% PSH Or <25% or <5% PSH but >80% Existing Value	
Location ID	Existing	Proposed	Ratio	Existing	Proposed	Ratio		
	% of APSH	% of APSH	If less than 25% APSH Target >80%	% WPSH	% WPSH	If less than 5% WPSH Target >80%		
1	82.8%	60.3%	72.8%	31.6%	15.8%	50.1%	Y	Y
2	82.6%	61.8%	74.8%	31.7%	16.3%	51.4%	Y	Y
3	80.6%	61.7%	76.6%	31.6%	17.0%	53.8%	Y	Y
4	83.7%	65.2%	78.0%	32.2%	20.6%	64.0%	Y	Y
5	83.6%	66.0%	78.9%	32.2%	19.8%	61.5%	Y	Y
6	83.5%	67.8%	81.3%	32.3%	20.6%	63.8%	Y	Y
7	81.2%	66.6%	82.1%	32.1%	21.0%	65.6%	Y	Y
8	84.7%	73.3%	86.5%	32.8%	25.8%	78.6%	Y	Y
9	84.5%	74.9%	88.6%	32.9%	26.5%	80.4%	Y	Y
10	84.3%	77.0%	91.4%	33.0%	28.0%	85.1%	Y	Y
11	83.7%	76.4%	91.3%	32.7%	27.7%	84.6%	Y	Y
12	85.3%	80.2%	94.1%	33.1%	30.4%	92.0%	Y	Y

Table 10: Annual Probable Sunlight hours to adjoining properties

4.2 Conclusion

All windows assessed exceed the target values set out for APSH and WPSH. The proposed development meets the recommendations of the BRE guidelines (2022) and any potential loss of sunlight will be negligible.

5. Sunlight to Amenity Spaces in Neighbouring Properties

The BRE document 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. It also states that front gardens need not be assessed for sunlight. Amenity spaces which are South of the proposed development would not be impacted by it.

5.1 Sunlight to Adjacent Private Amenity Spaces

The private amenity spaces of were assessed for a potential impact on their sun of the ground. The existing & proposed scenarios in generated analysis are shown in Figure 10, the results are shown in Table 11 below.

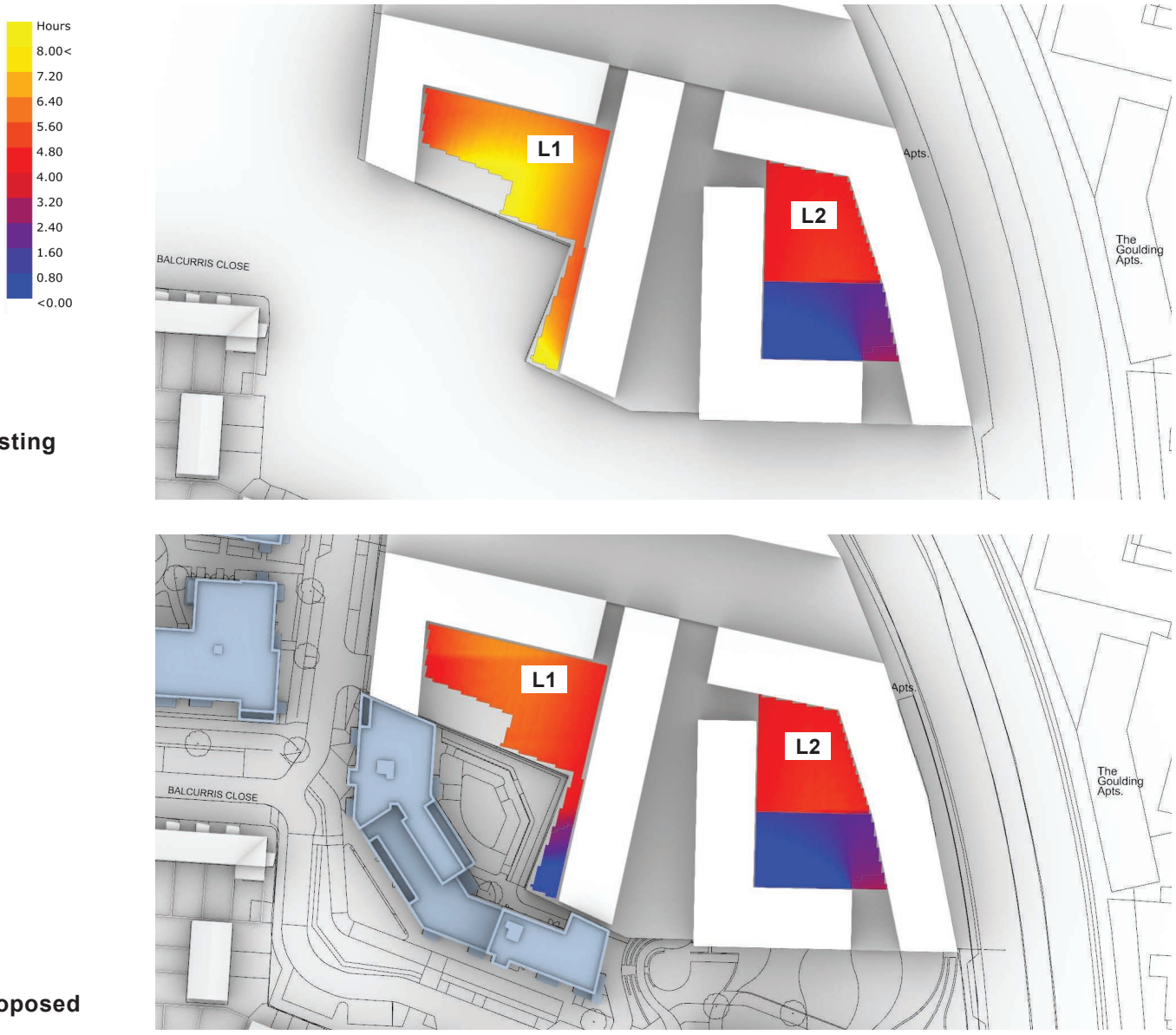


Figure 10: Existing & Proposed Radiation map of amenity areas, showing available sunlight on 21st March. The scale represents the percentage of daylight received from 0 - 8 hrs.

Sunlight on the ground - Adjacent properties				
No.	% Area receiving 2 hours sunlight on 21st March		Ratio of Proposed: Existing	Meets criteria of >50% area Or if <50% then target >80% Existing Value
	Existing	Proposed		
L1	100.0%	90.9%	90.9%	Y
L2	54.8%	54.8%	100.0%	Y

Table 11: Calculation of Sun on the Ground to adjacent amenity areas

5.2 Conclusion

All the private amenity space to the surrounding properties were assessed for sunlight in accordance with the recommendations set out in BR209:2022. On the 21st March, all the amenity spaces will retain 2 hours sunlight over 50% of the area or will not be reduced below 80% of the existing levels. The proposed development meets the recommendations of the BRE guidelines.

6. Daylight to proposed units.

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 12 below and a complete set of room results are shown in Appendix A.

Compliance is also demonstrated with a calculation of Daylight Provision with the illuminance method under IS /BS EN 17037:2018. A summary of the results are presented in Table 13 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
Site 5	LKD	132	200	132	100.0%
	Bedrooms	220	100	220	100.0%
Site 15 & 16	LKD /KD	13	200	13	100.0%
	Liv	5	150	5	100.0%
	Bedrooms	23	100	23	100.0%
Site 17	LKD	34	200	34	100.0%
	Bedrooms	59	100	59	100.0%
Site 18	LKD	109	200	109	100.0%
	Bedrooms	199	100	199	100.0%
Total		794		794	100.0%

Table 12: 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. This the minimum rooms specific values to be achieved in habitable rooms.

6.3 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
Site 5	Target Illuminance	28.1%	42.0%	24.4%	5.4%	71.9%
	Minimum Illuminance	4.0%	65.1%	25.0%	6.0%	96.0%
Sites 15 & 16	Target Illuminance	22.0%	34.1%	36.6%	7.3%	78.0%
	Minimum Illuminance	4.9%	43.9%	41.5%	9.8%	95.1%
Site 17	Target Illuminance	7.5%	35.5%	34.4%	22.6%	92.5%
	Minimum Illuminance	2.2%	33.3%	45.2%	19.4%	97.8%
Site 18	Target Illuminance	20.1%	39.9%	35.7%	4.2%	79.9%
	Minimum Illuminance	3.9%	50.6%	41.9%	3.6%	96.1%
Overall total	Target Illuminance	22.3%	40.1%	30.6%	7.1%	77.7%
	Minimum Illuminance	3.8%	54.7%	34.8%	6.8%	96.2%

Table 13: Summary of room for Target Illuminance compliance with IS/BS EN 17037:2018. Percentage of rooms at each compliance level. Individual room results can be viewed in Appendix B.

The results indicate a high level of compliance for Minimum level with 96.2% and Target level with 77.7% 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 to live.

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 6.1.

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 6 below where 4 out of 5 units in an apartment building would achieve the target sunlight.

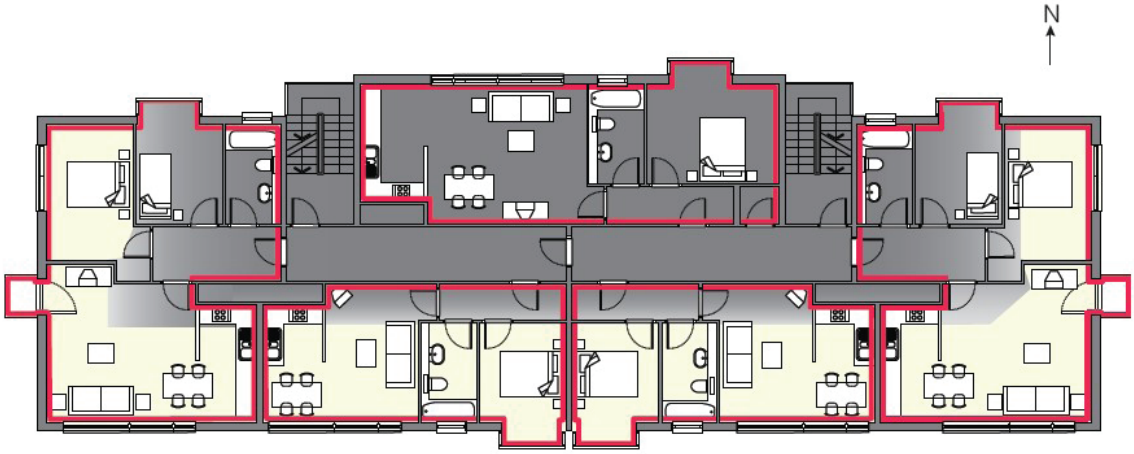


Figure 26: Careful layout design means that four out of the five flats shown have a south-facing living room

Figure 11: Extract from BR209:2022 Section 3 Sun-lighting: Diagram indicating sample floor plan to maximise units with a main living space facing south.

Appendix C details the results per habitable room, indicating if this room has a relevant South facing window. A summary of these results are displayed in the table below.

Sunlight Hours Summary Table									
	Total Units	Rooms 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						
Site 5	132	84	63.6%	12	61	18	41	120	90.9%
Sites 15 & 16	13	11	84.6%	2	3	2	6	11	84.6%
Site 17	34	28	82.4%	0	5	7	22	34	100.0%
Site 18	109	67	61.5%	6	31	14	58	103	94.5%
Overall total	288	190	66.0%	20	100	41	127	268	93.1%

Table 14: 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. In this development of 288 units, 66.0% (190 no.) have window to a Living room or Kitchen/ Dining room which face within 90° 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. In this development of 288 units, 93.1% (268 no.) have a living spaces achieve the minimum recommended 1.5 direct sunlight hours.

7.3 Conclusion

This scheme is well designed for sunlight, with 93.1% of units achieving the minimum recommended 1.5 direct sunlight hours. This is in line with the BRE guideline example for an apartment layout where 4 in 5 achieves the target sunlight hours.

8. Sunlight to Amenity Spaces 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

The public and communal amenity areas within this proposal have been assessed with a calculation of Sun on the Ground on the 21st March. Generated analysis is shown in Figure 12 and the results are set out in Table 15 below.

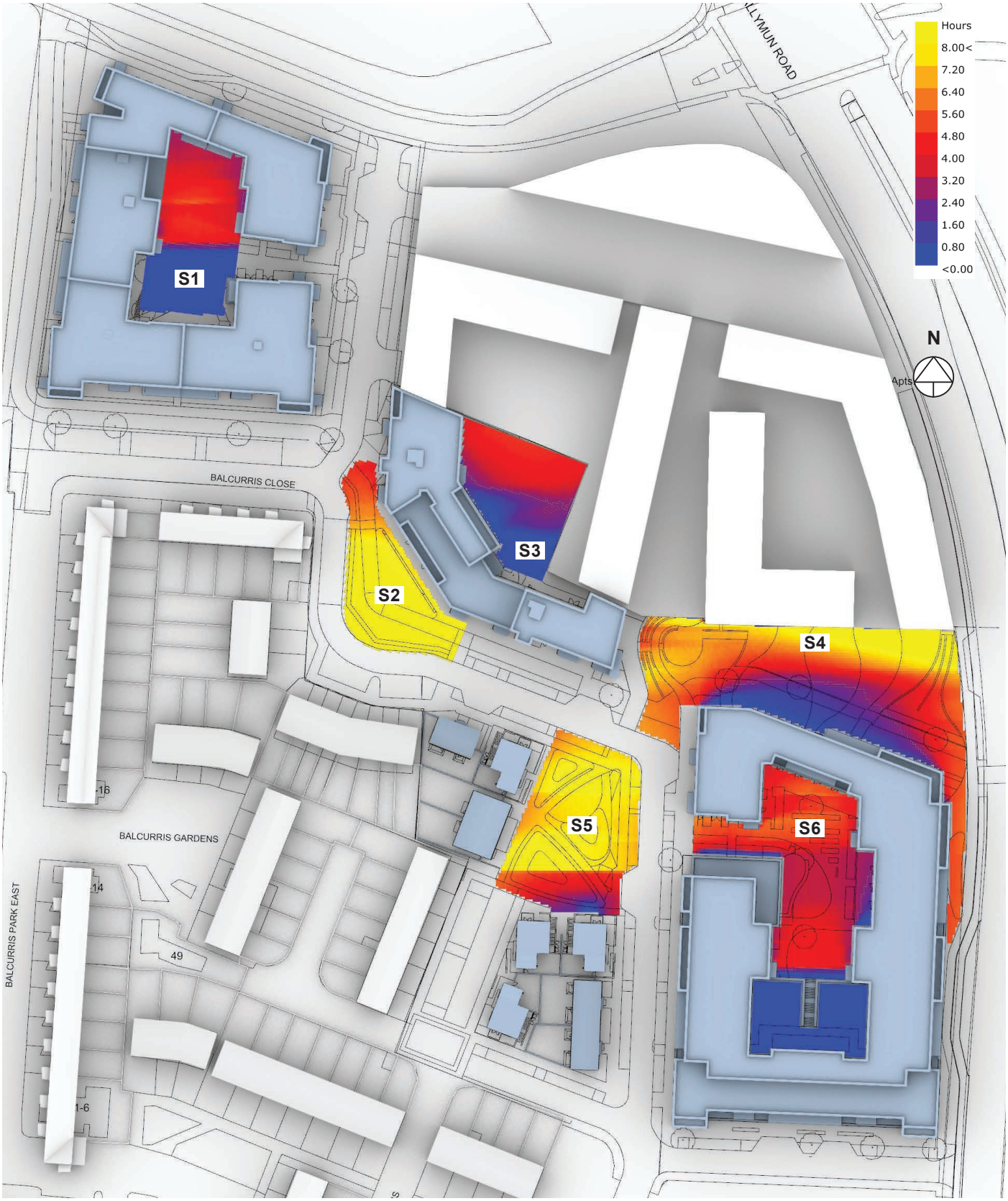


Figure 12: Amenity Space - Radiation map of amenity area, showing available sunlight on 21st March. The scale represents the percentage of daylight received from 0 - 8 hrs.

Sunlight on the Ground - Public & Communal Amenity					
		Proposed: % Area receiving 2 hours sunlight on 21st March	Area Meeting criteria m2	Area Min required m2	Meets criteria of >50% of area required
S1	Communal Open Space	55.7%	771	725	Y
S2	Public Open Space	100.0%			Y
S3	Communal Open Space	52.7%	676	212	Y
S4	Public Open Space	78.9%			Y
S5	Public Open Space	96.3%			Y
S6	Communal Open Space	67.9%	1303	836	Y

Table 15: Calculation of Sun on the Ground to public amenity spaces within the development

8.2 Comment on Public and Communal Amenity Spaces

The public and communal amenity spaces are well oriented for sunlight. The communal open spaces provided are much larger than the minimum area required. All meet the BRE criteria for sunlight over a greater area than the minimum area required, exceeding two hours sunlight on the 21st March over in excess of 50% of the area.

8.3 Assessment of Private Amenity Spaces

All private amenity spaces at ground level were assessed. Generated analysis is shown in Figure 13 and the results are set out in Table 16 below.

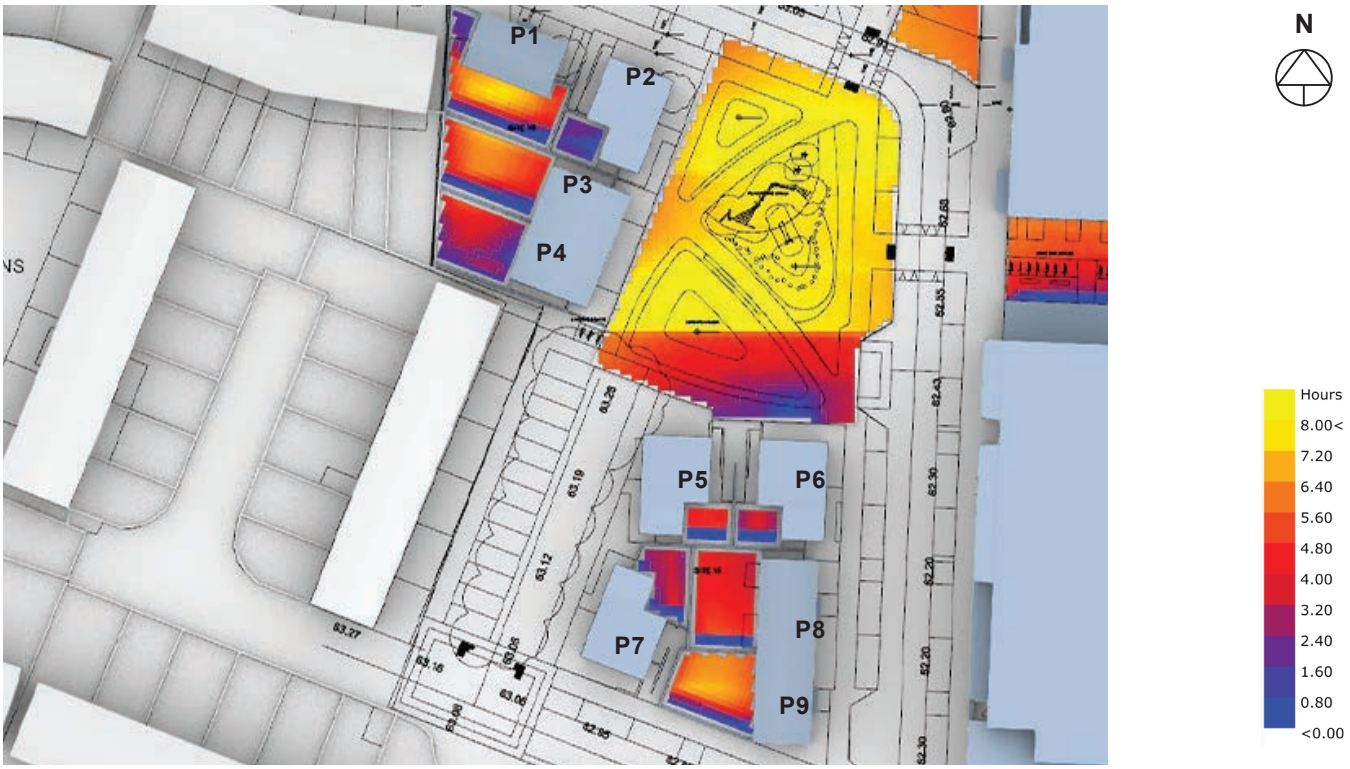


Figure 13: Radiation map of private gardens to houses showing available sunlight on 21st March. The scale represents the percentage of daylight received from 0 - 8 hrs.

Sunlight on the Ground - Private Amenity to Houses and Ground Floor Duplex		
	Proposed: % Area receiving 2 hours sunlight on 21st March	Meets criteria of >50% area
P1	68.4%	Y
P2	0.0%	N
P3	79.8%	Y
P4	64.9%	Y
P5	60.0%	Y
P6	60.0%	Y
P7	72.2%	Y
P8	88.2%	Y
P9	83.9%	Y

Table 16: Calculation of Sun on the Ground to public amenity spaces within the development

8.4 Conclusion on the Assessment of Sunlight on the Ground

The BRE guidelines does not give target numbers or ratios in a multi unit development for amenity spaces to meet the recommended targets for sunlight. In large developments there are many factors and design constraints that influence the layout of the buildings and often it is not possible for all private amenity spaces to achieve the recommended values for sunlight. In the houses and duplex units with ground level private amenity, 8 out of 9 no. units (88.9%) achieve the target sunlight levels set out in BR209:2022 (third edition).

All proposed public and communal amenity spaces achieve sunlight levels that exceed 2 hours sunlight over 50% of the required amenity space on the 21st March. The proposed development meets the recommendations of the BRE guidelines (2022) for gardens and open spaces.

9. Shadow Study

9.1 BRE Guidance on Shadow Studies

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.

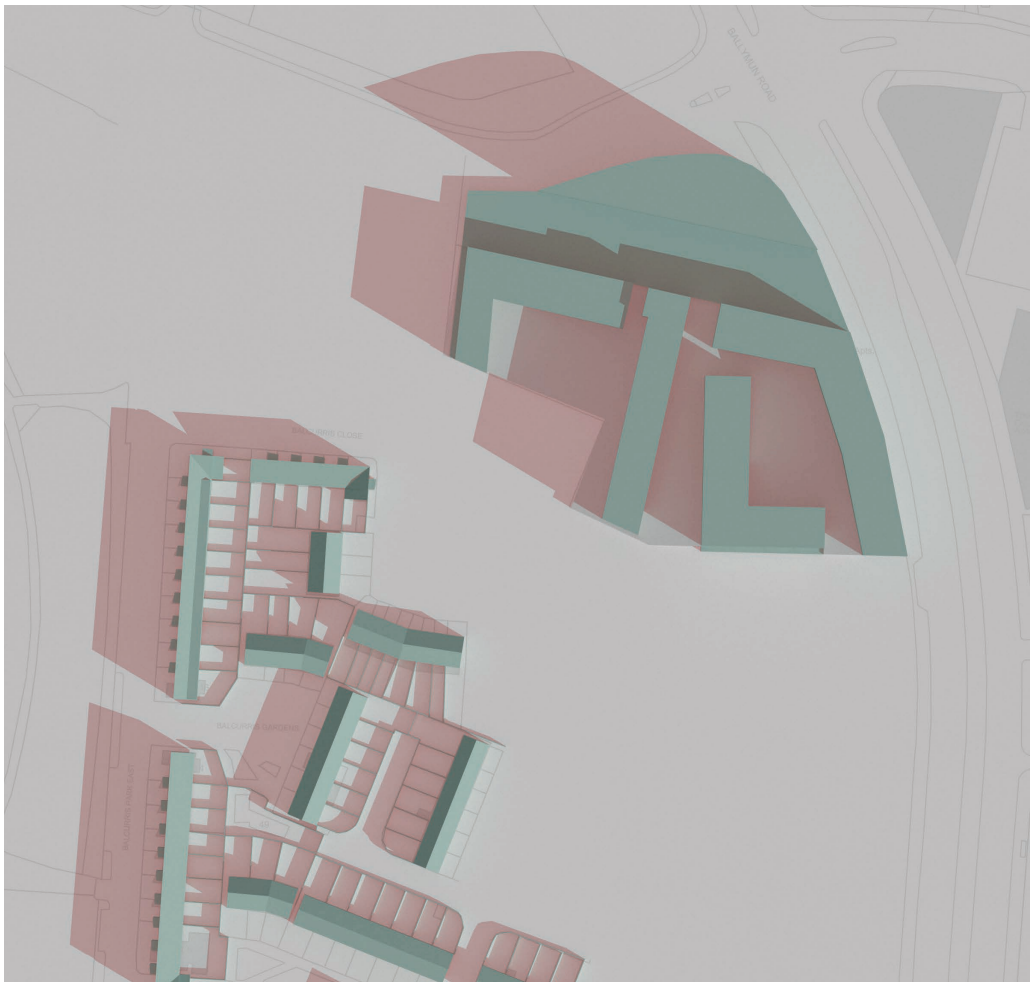
Equinox: between 8:30 and 17:30
Summer Solstice: Between 6:30 and 20:00
Winter Solstice: Between 10:30 and 14:00

Section 9.2 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 9.3 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 9.4 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 sites are greenfields, there are no shadow cast from any structures in the existing condition. 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.

9.2 Shadow Casting diagrams March Equinox

Existing



Proposed

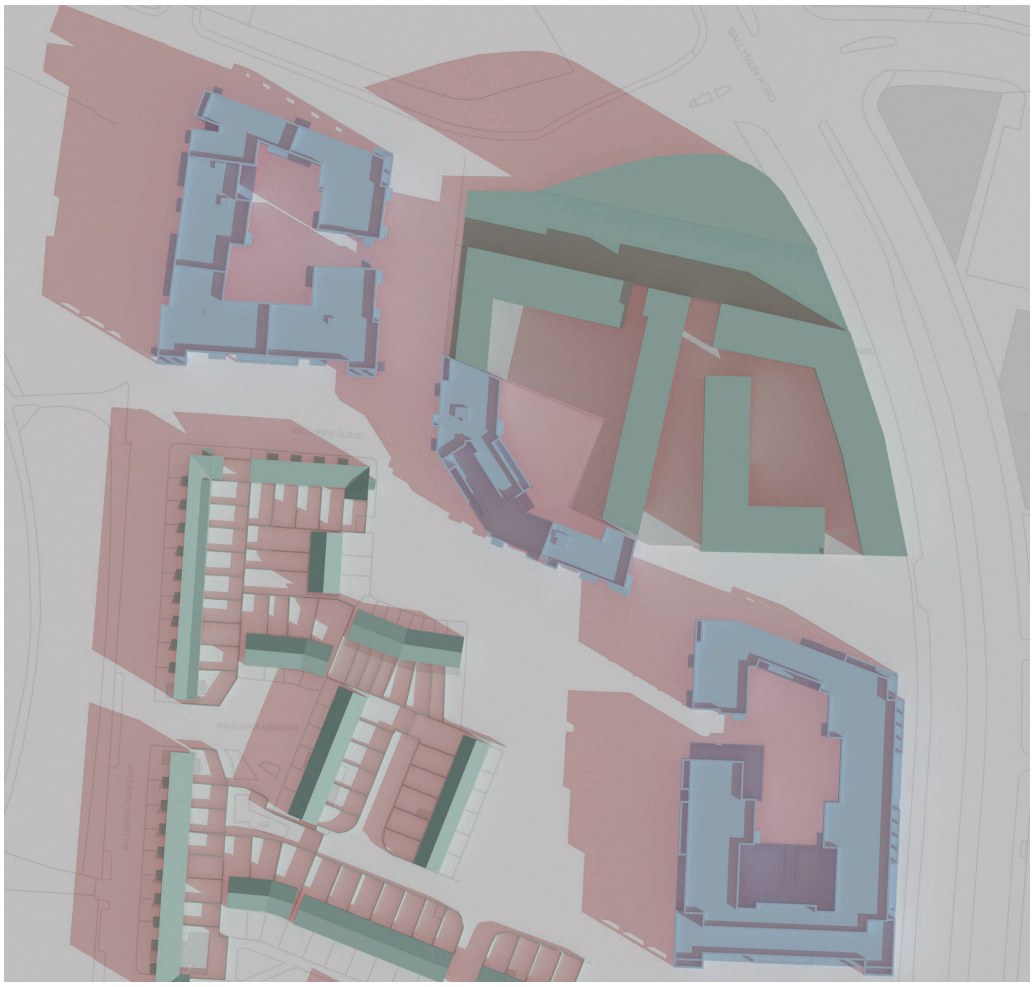
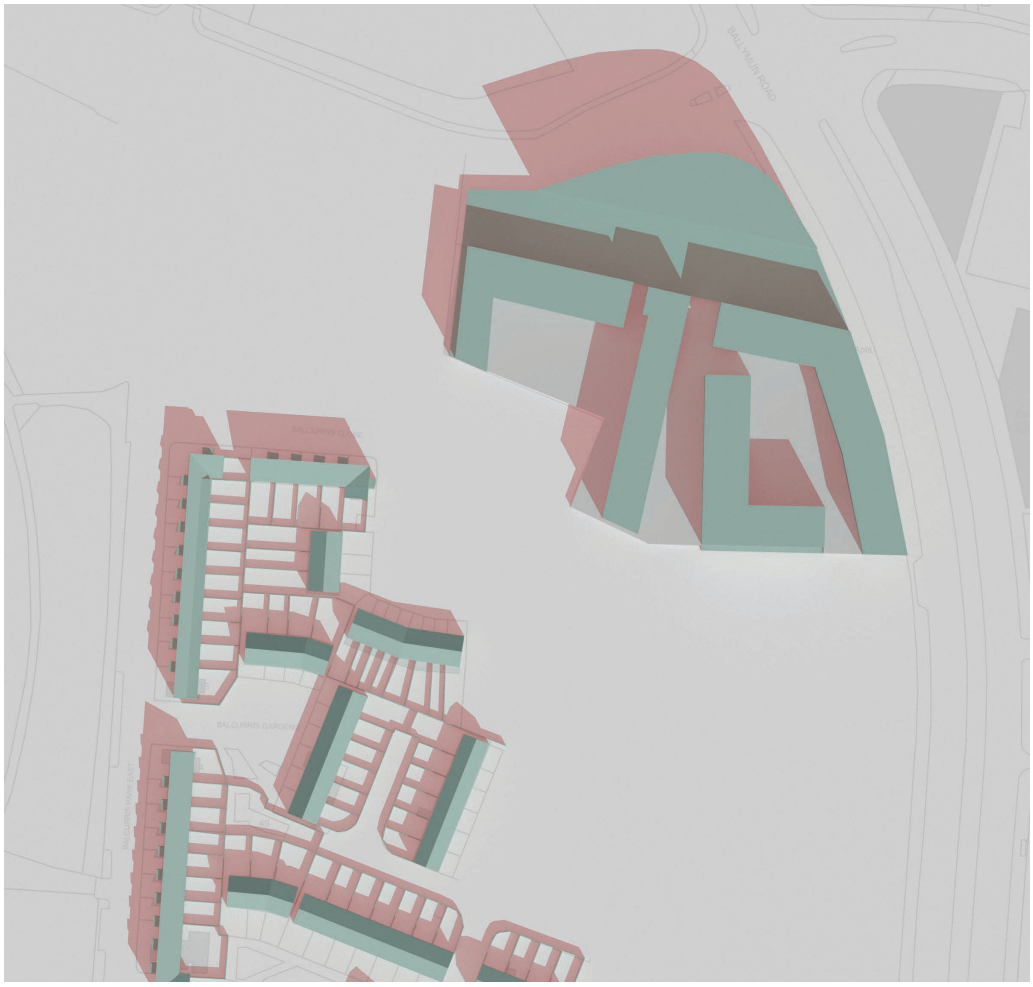


Figure 14: Shadow diagrams 21 March 09:00 UTC

N

Existing



Proposed

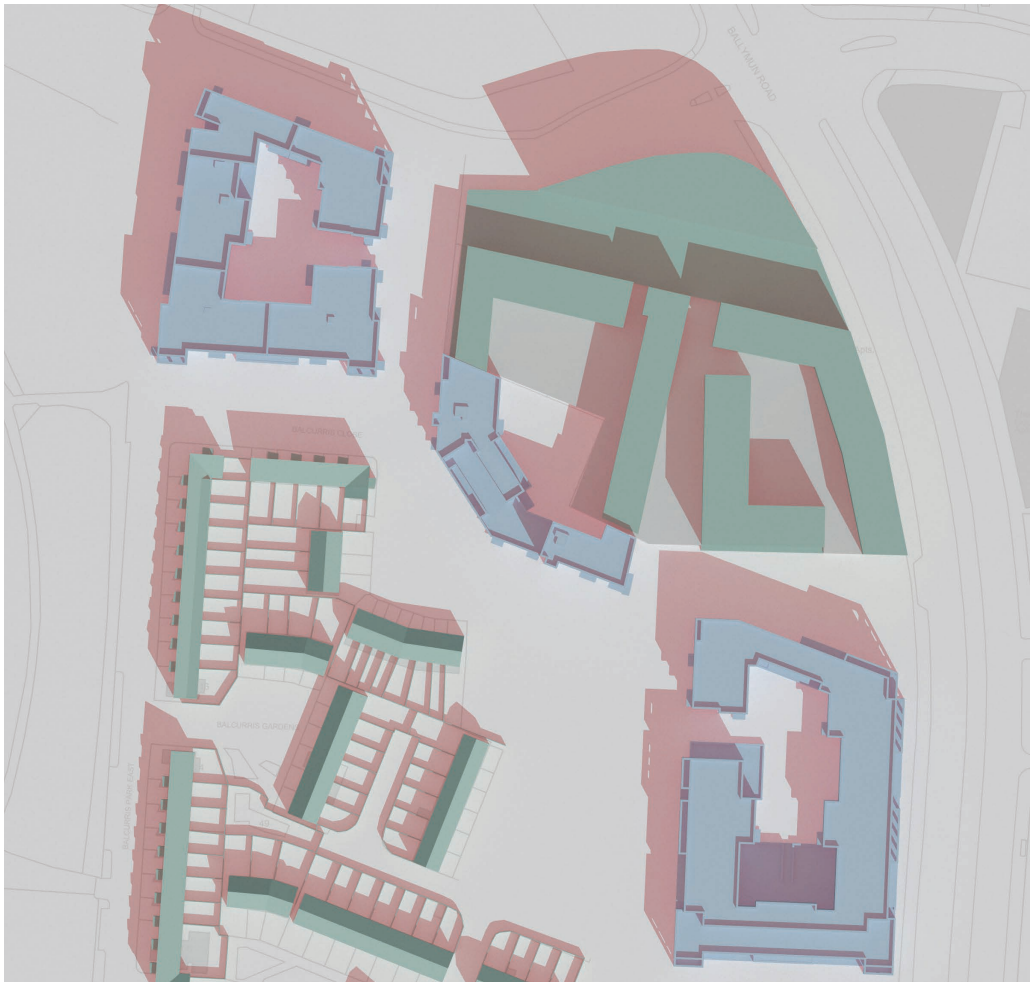
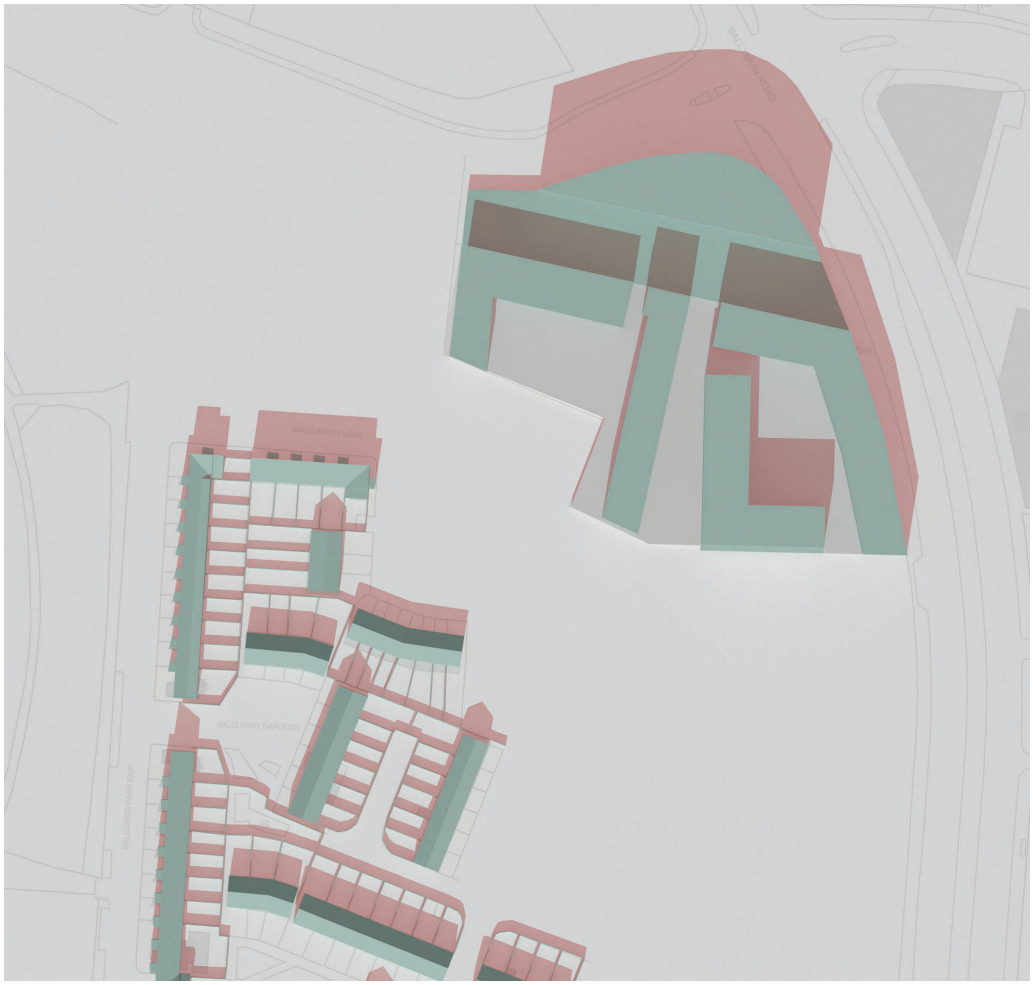


Figure 15: Shadow diagrams 21 March 11:00 UTC

N

Existing



Proposed

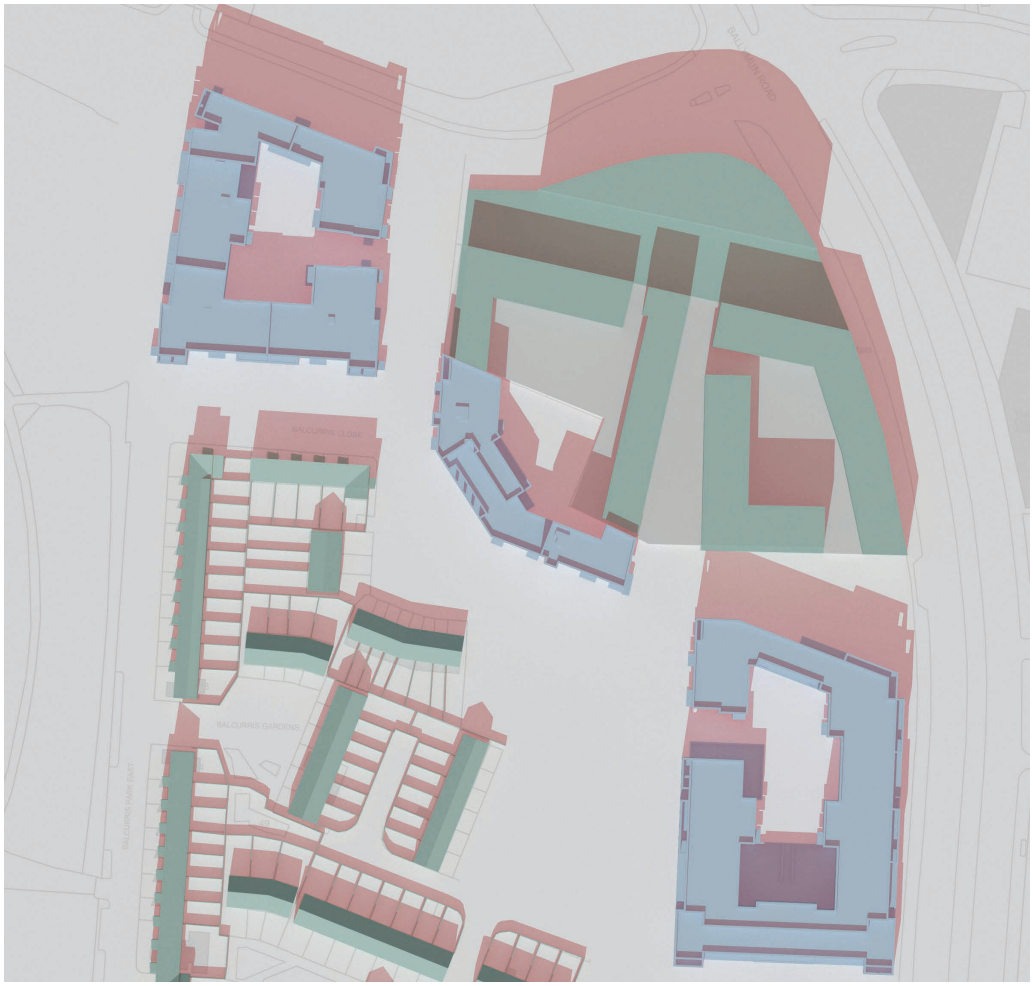


Figure 16: Shadow diagrams 21 March 13:00 UTC

N

Existing

Proposed

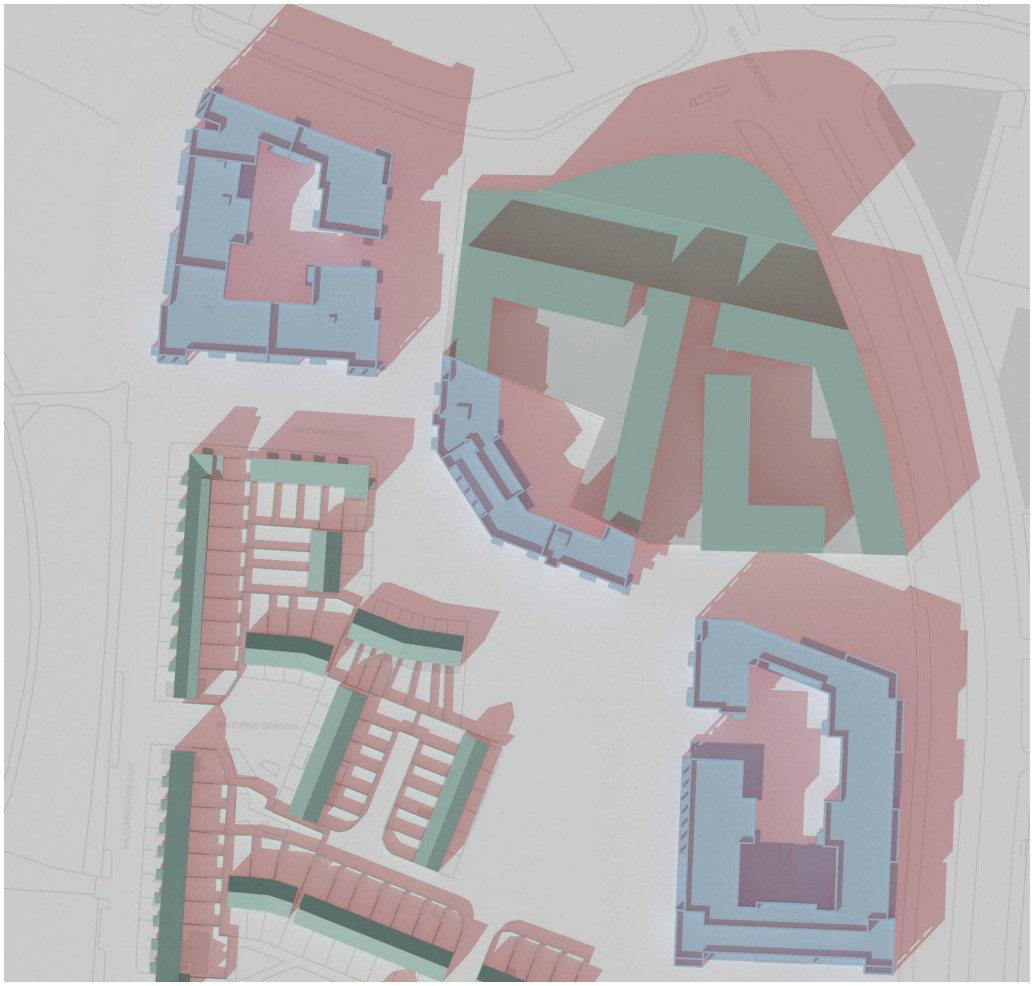
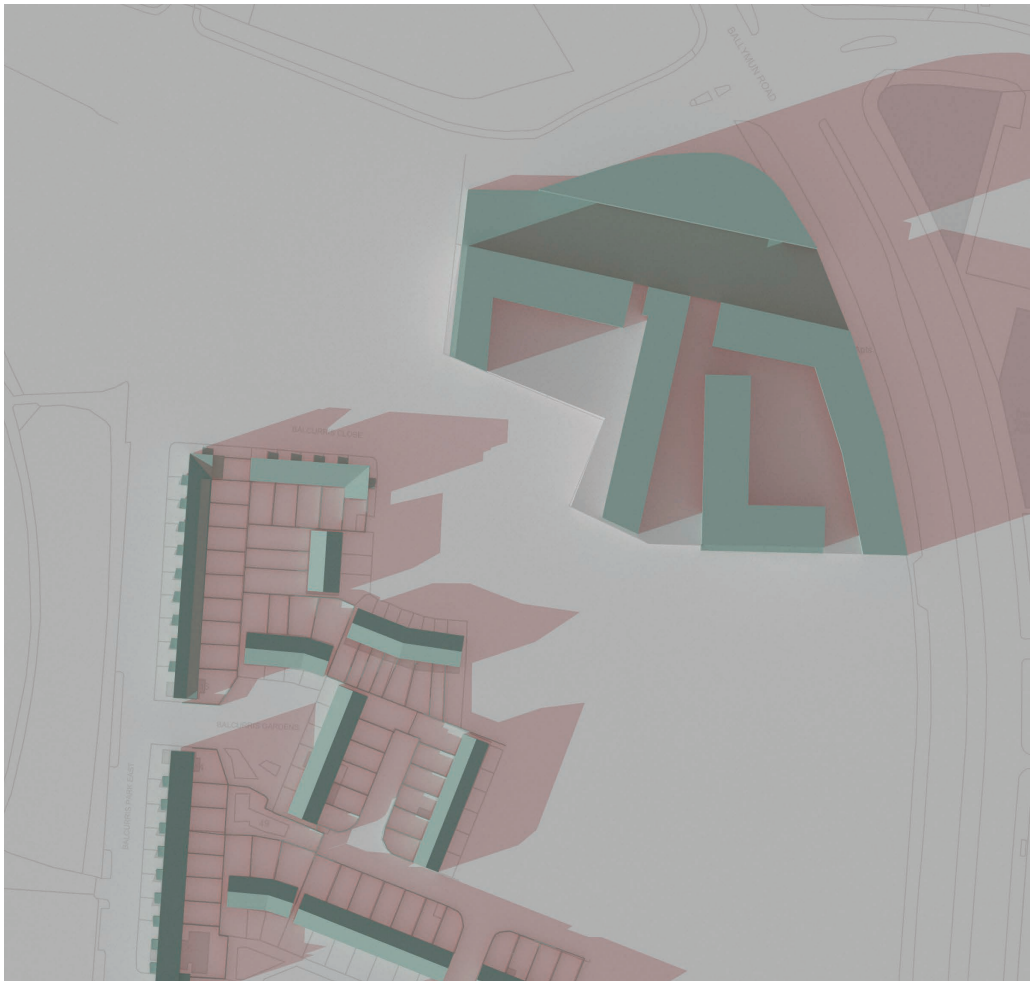


Figure 17: Shadow diagrams 21 March 15:00 UTC

N

Existing



Proposed

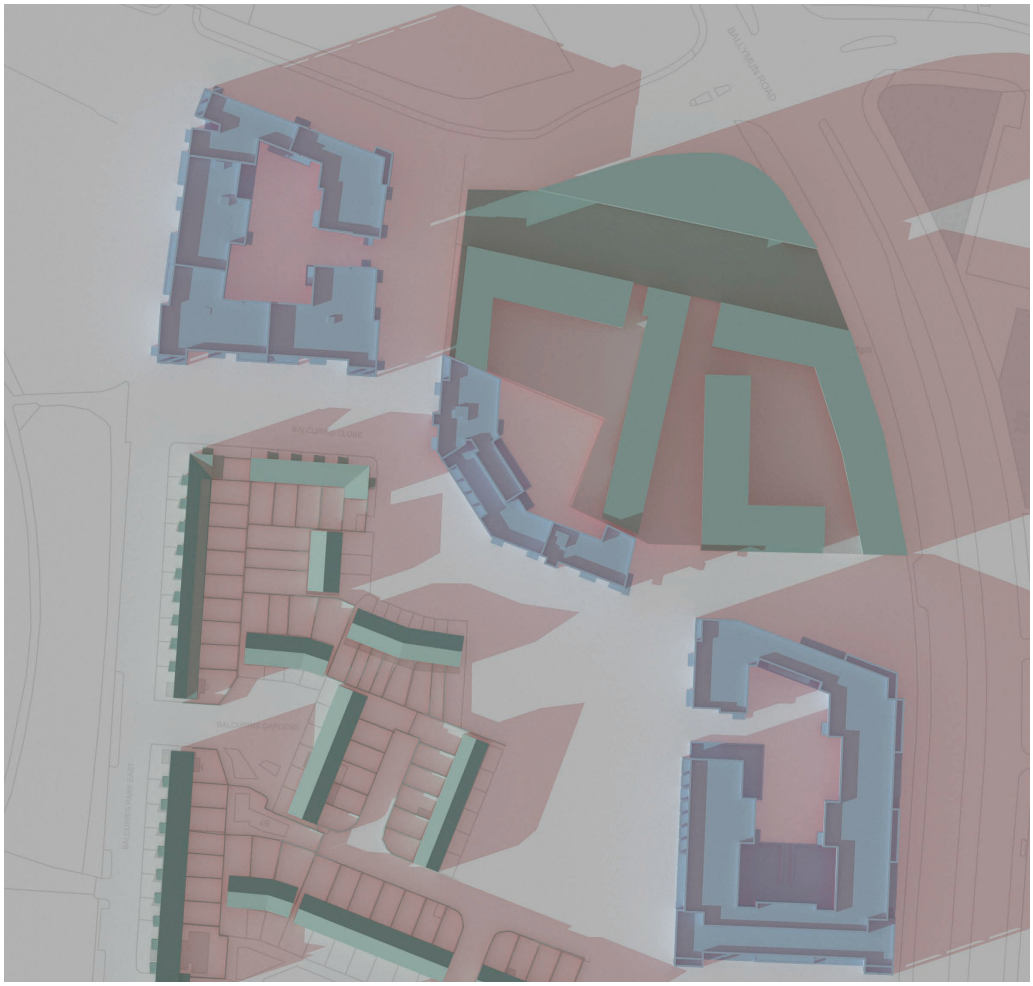
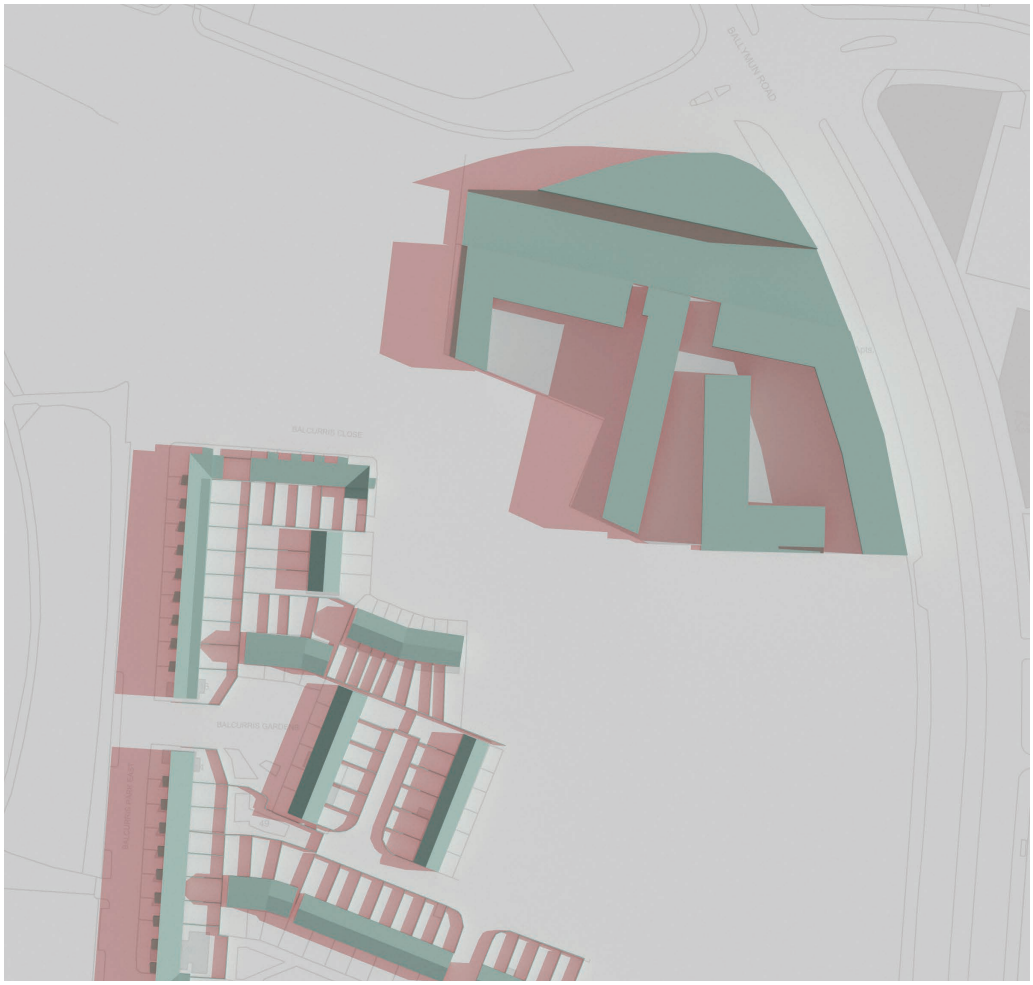


Figure 18: Shadow diagrams 21 March 17:00 UTC

N

9.3 Shadow Casting diagrams June Solstice

Existing



Proposed

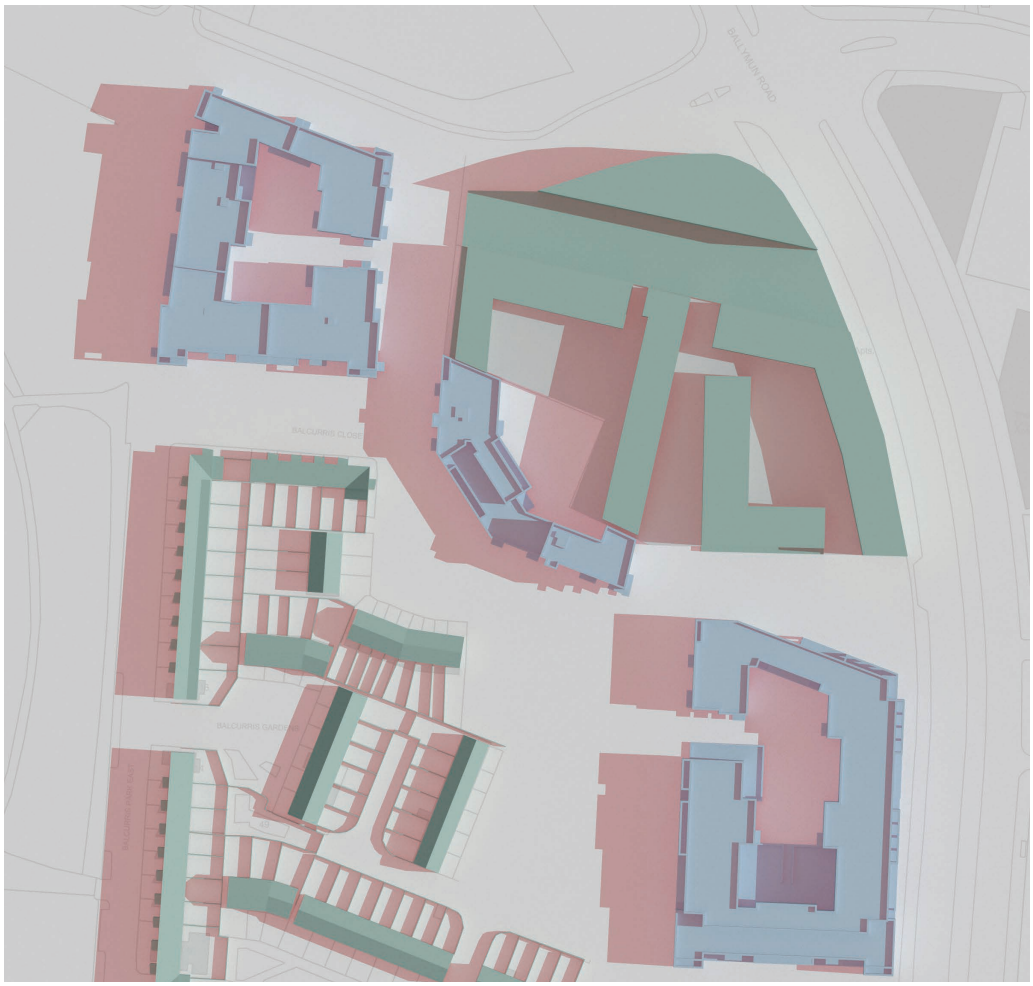
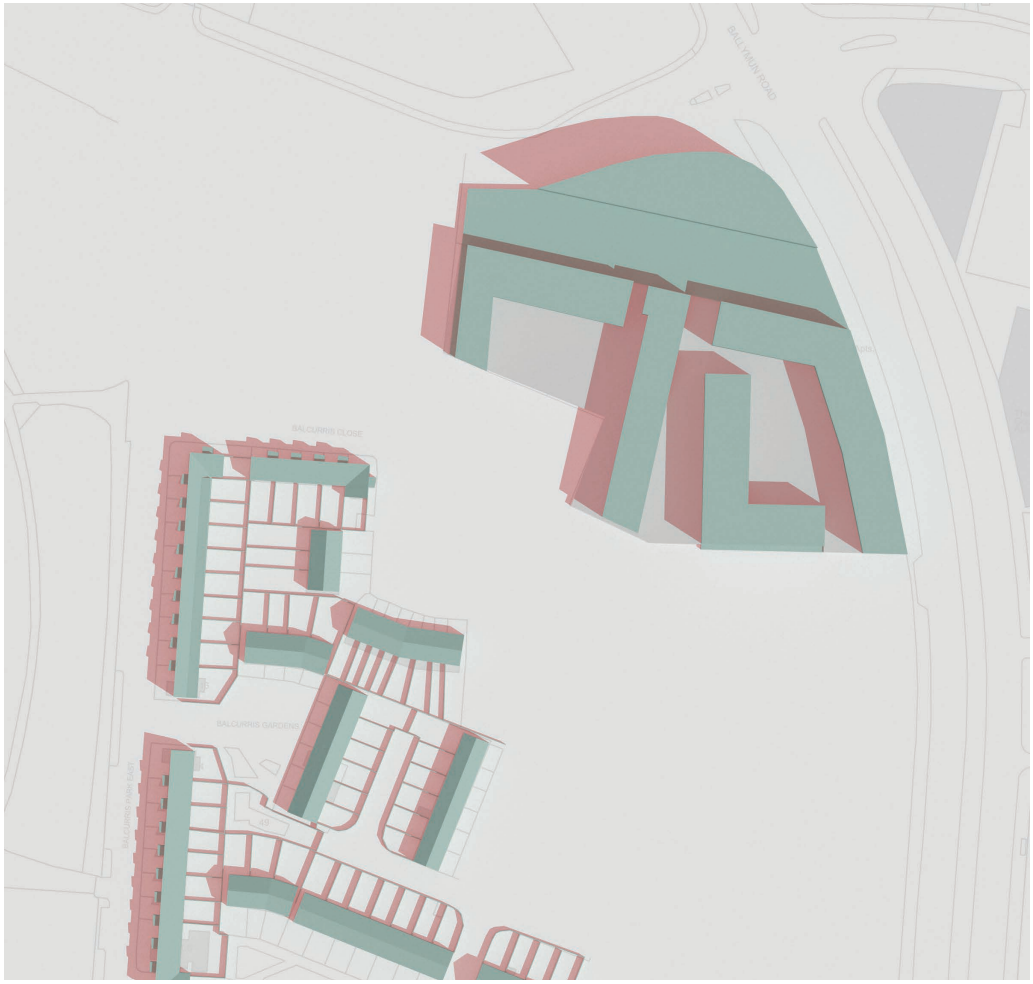


Figure 19: Shadow diagrams 21 June 09.00 UTC +1

N

Existing



Proposed

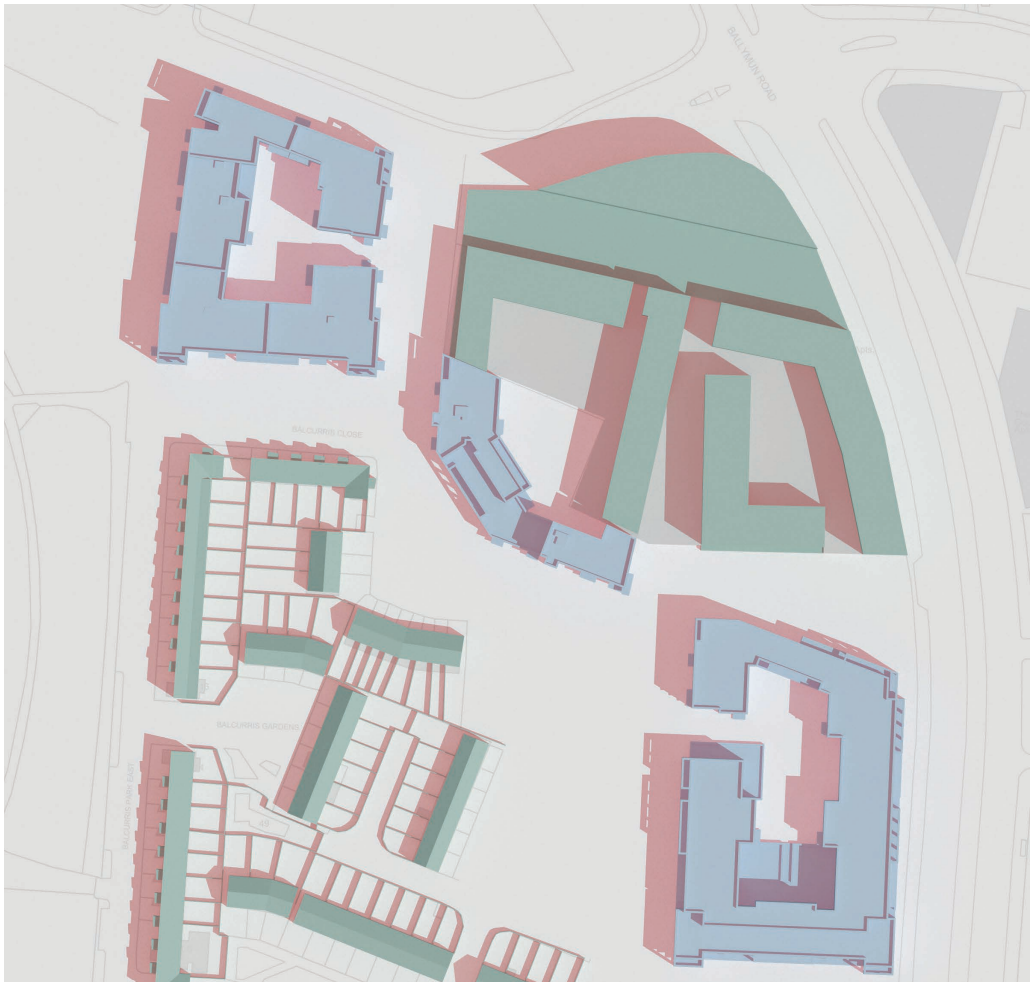
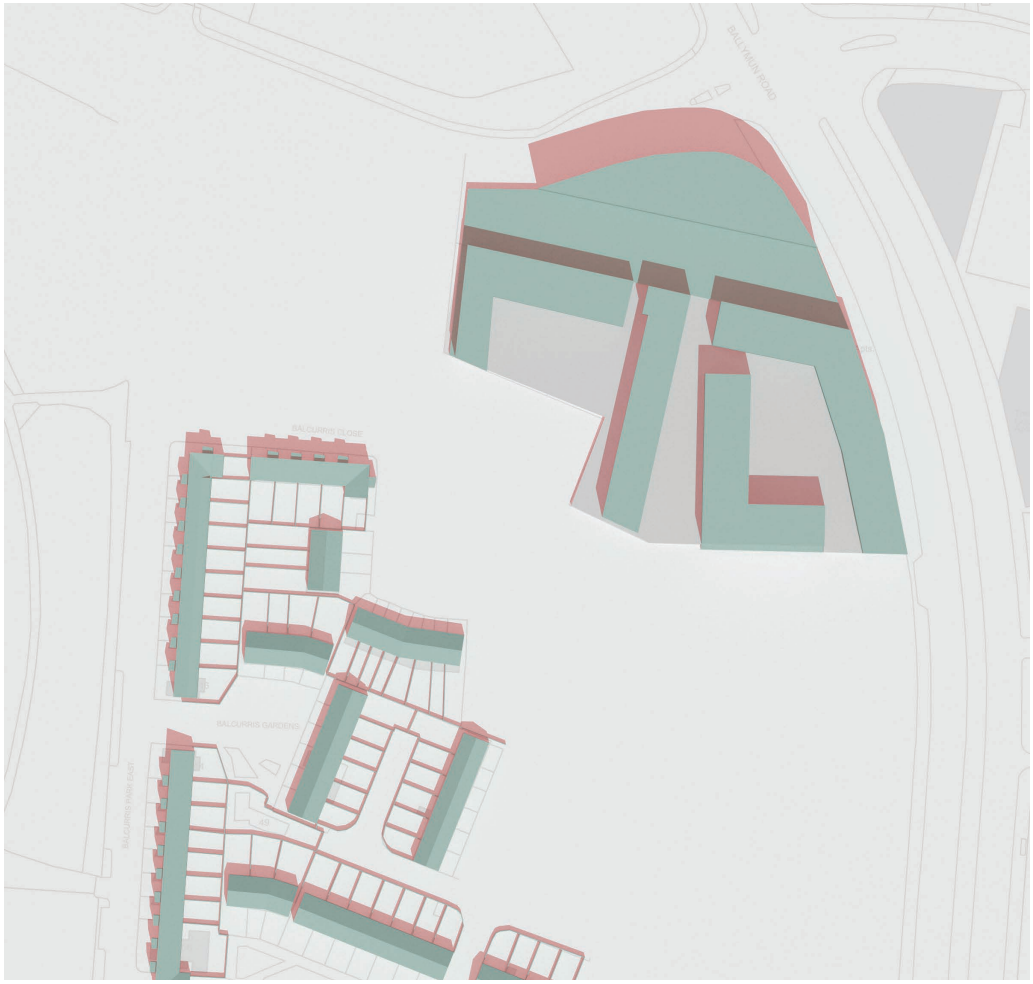


Figure 20: Shadow diagrams 21 June 11:00 UTC +1

N

Existing



Proposed

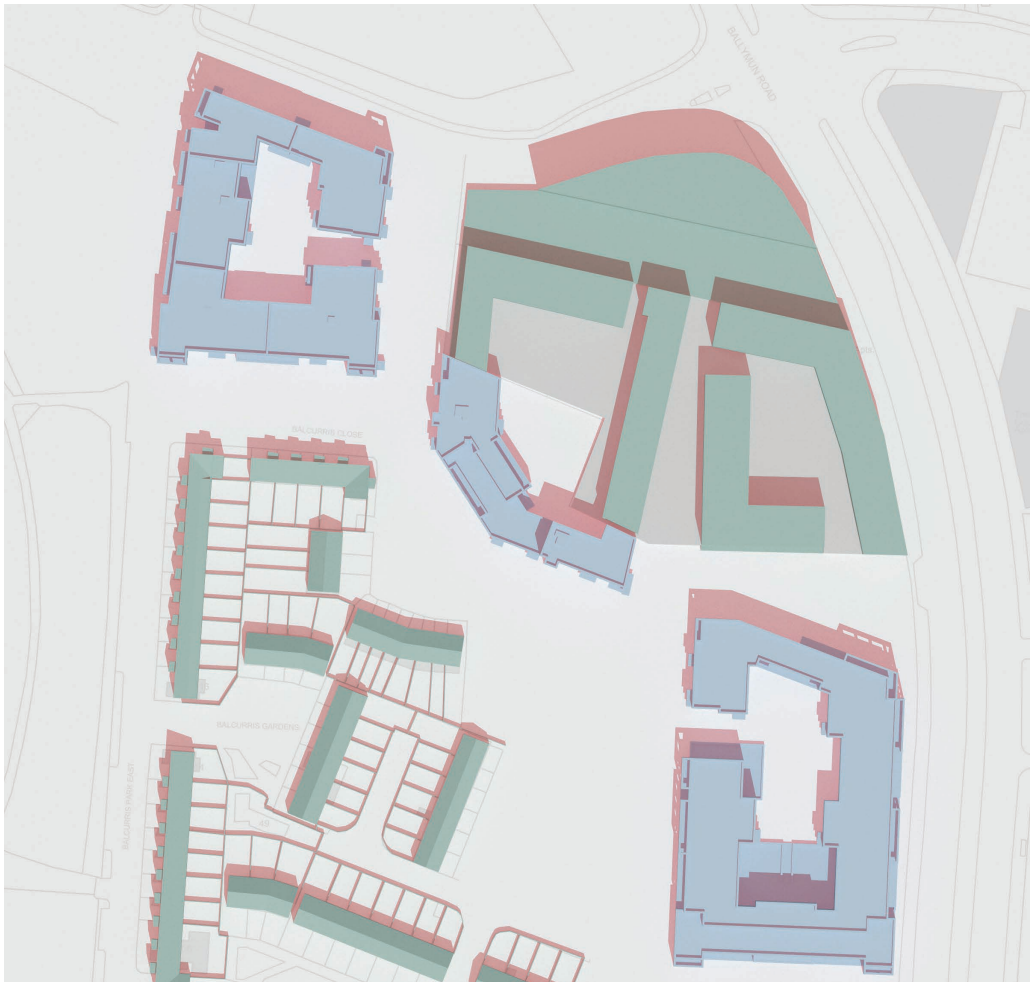
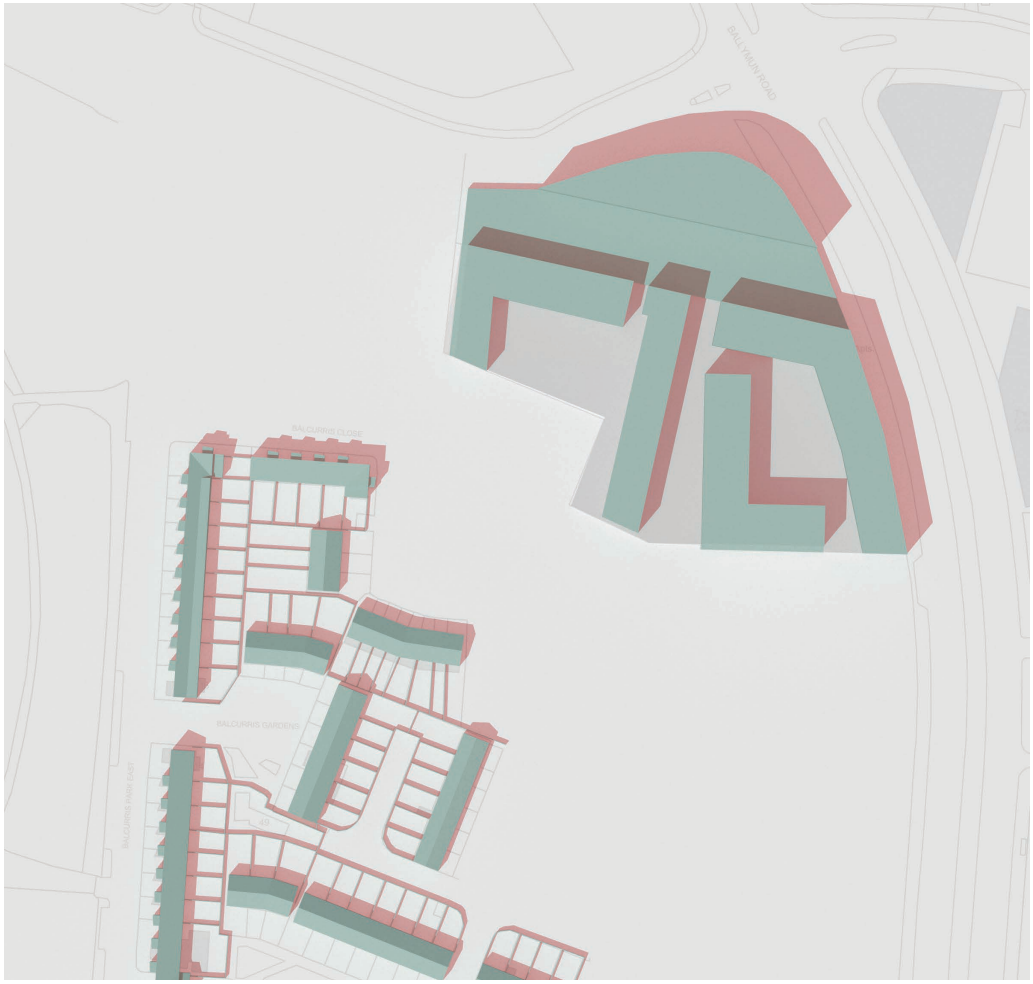


Figure 21: Shadow diagrams 21 June 13:00 UTC +1

N

Existing



Proposed

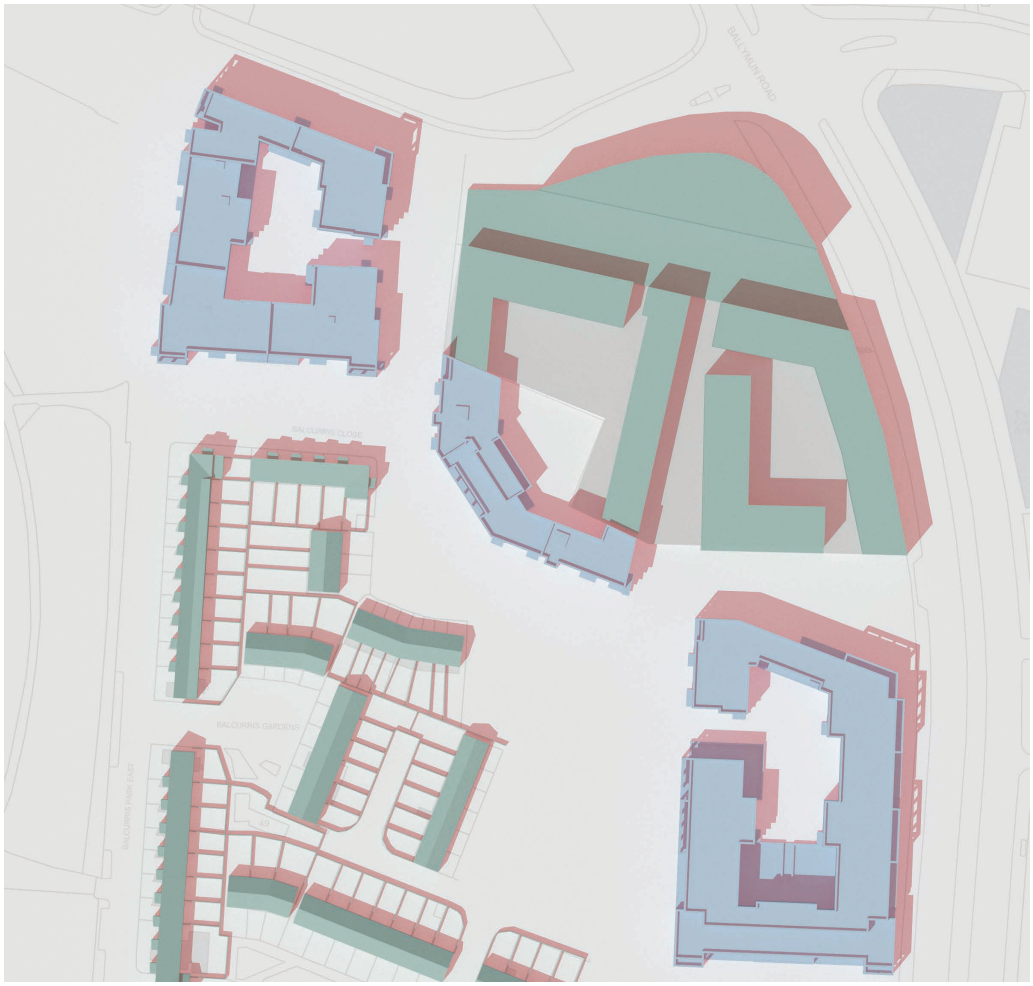


Figure 22: Shadow diagrams 21 June 15:00 UTC +1

N

Existing

Proposed

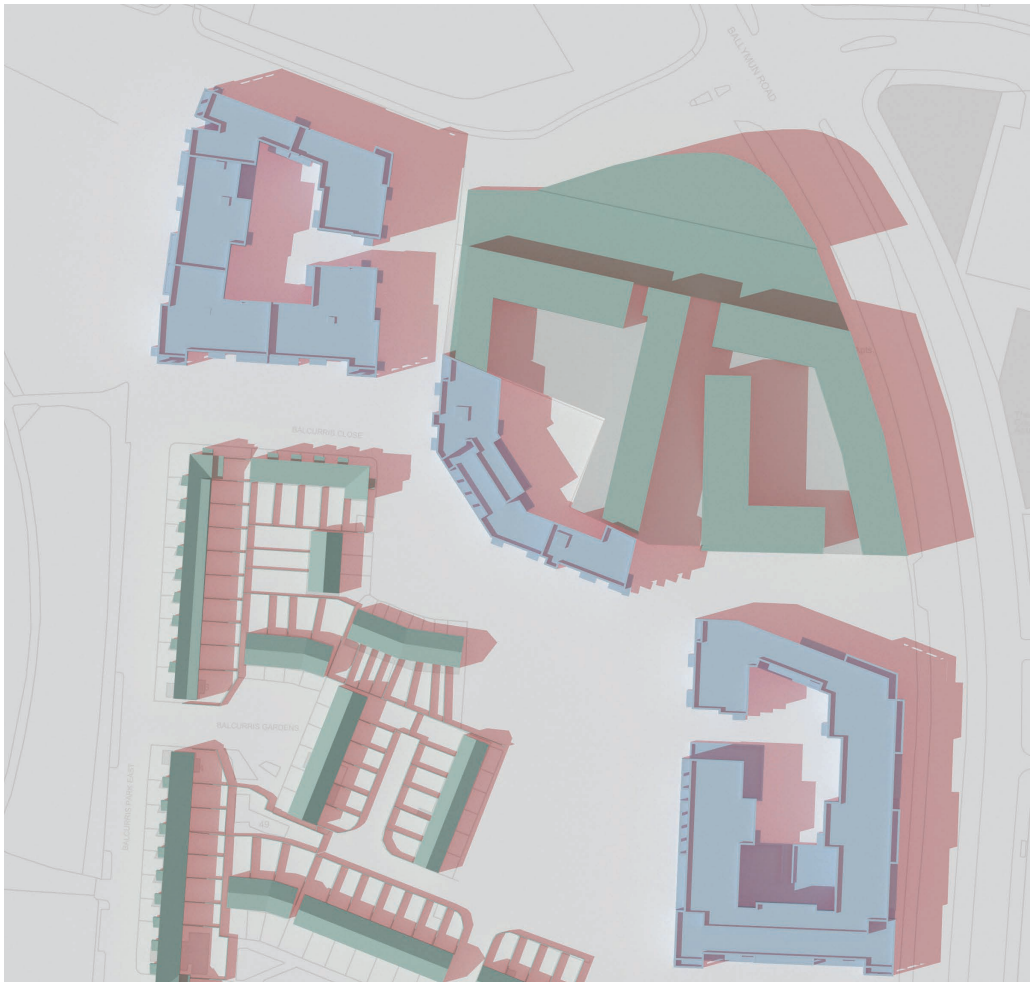
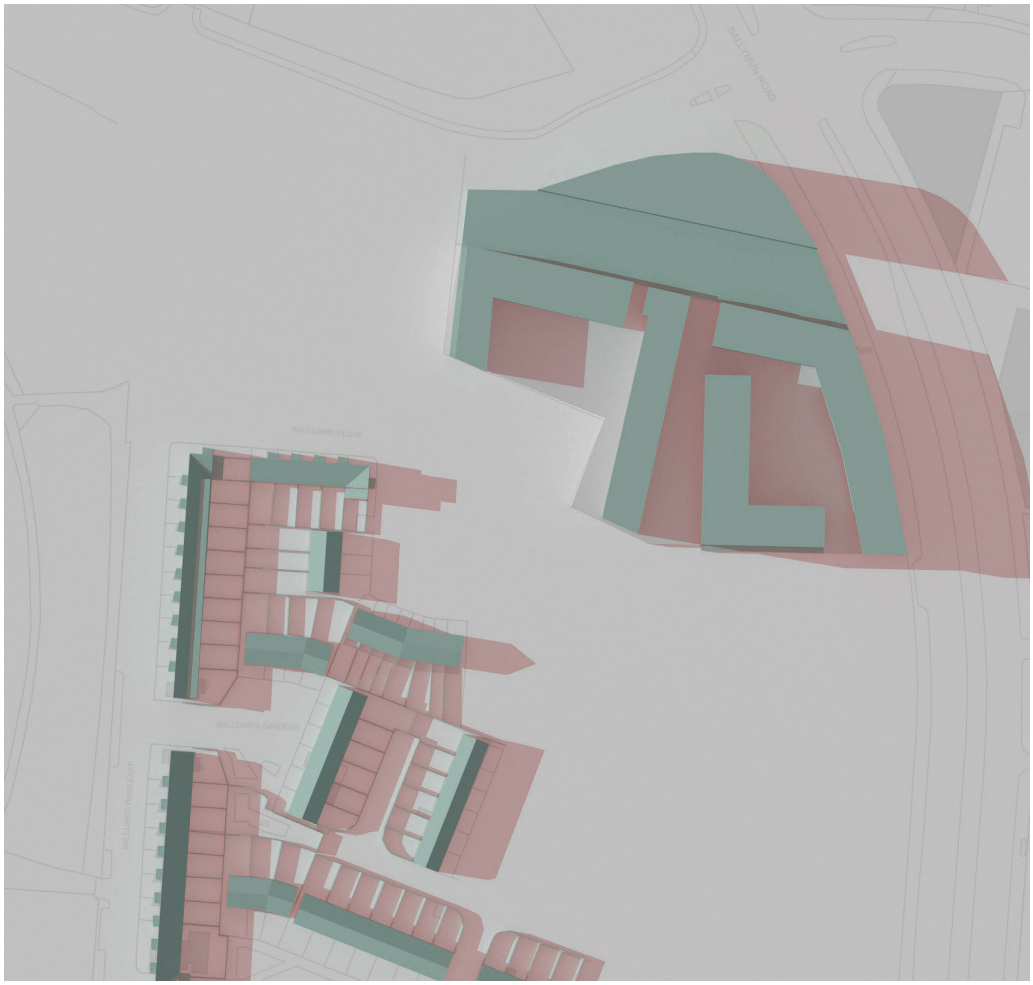


Figure 23: Shadow diagrams 21 June 17:00 UTC +1

N

Existing



Proposed

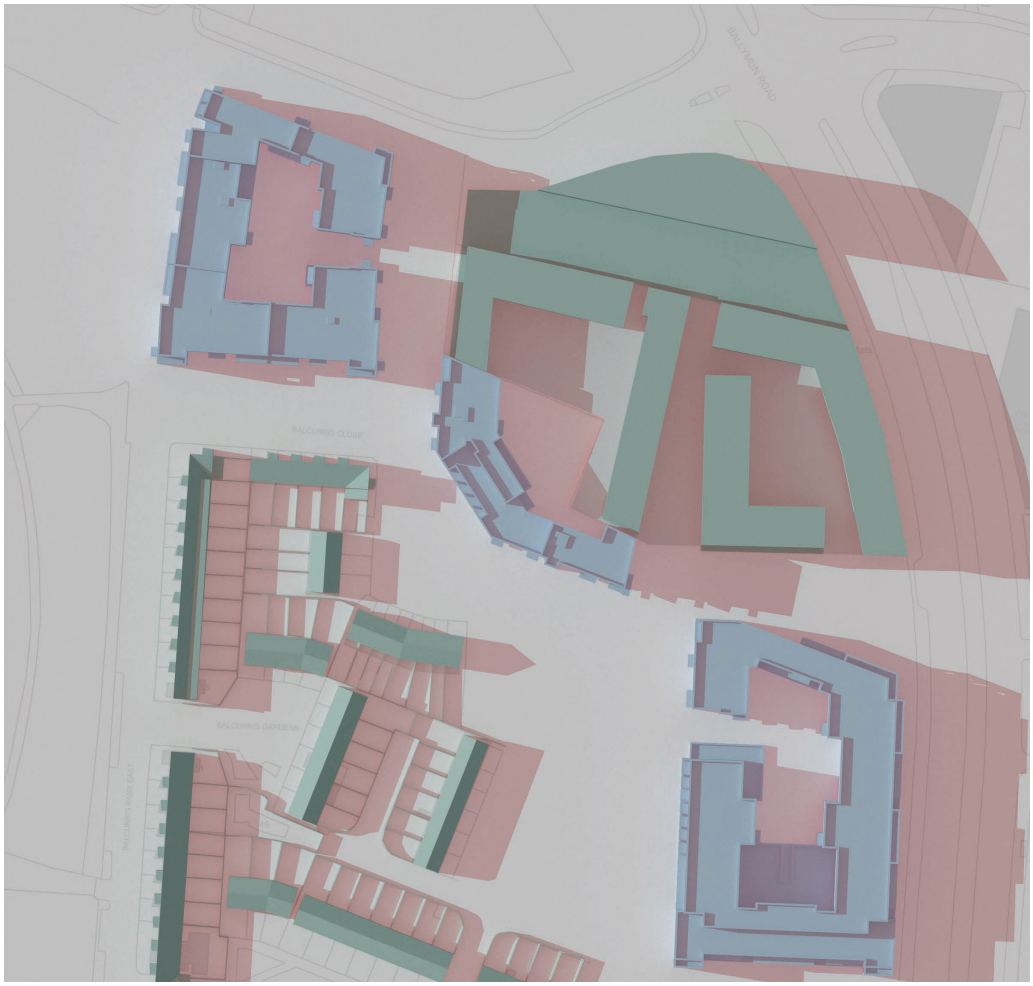
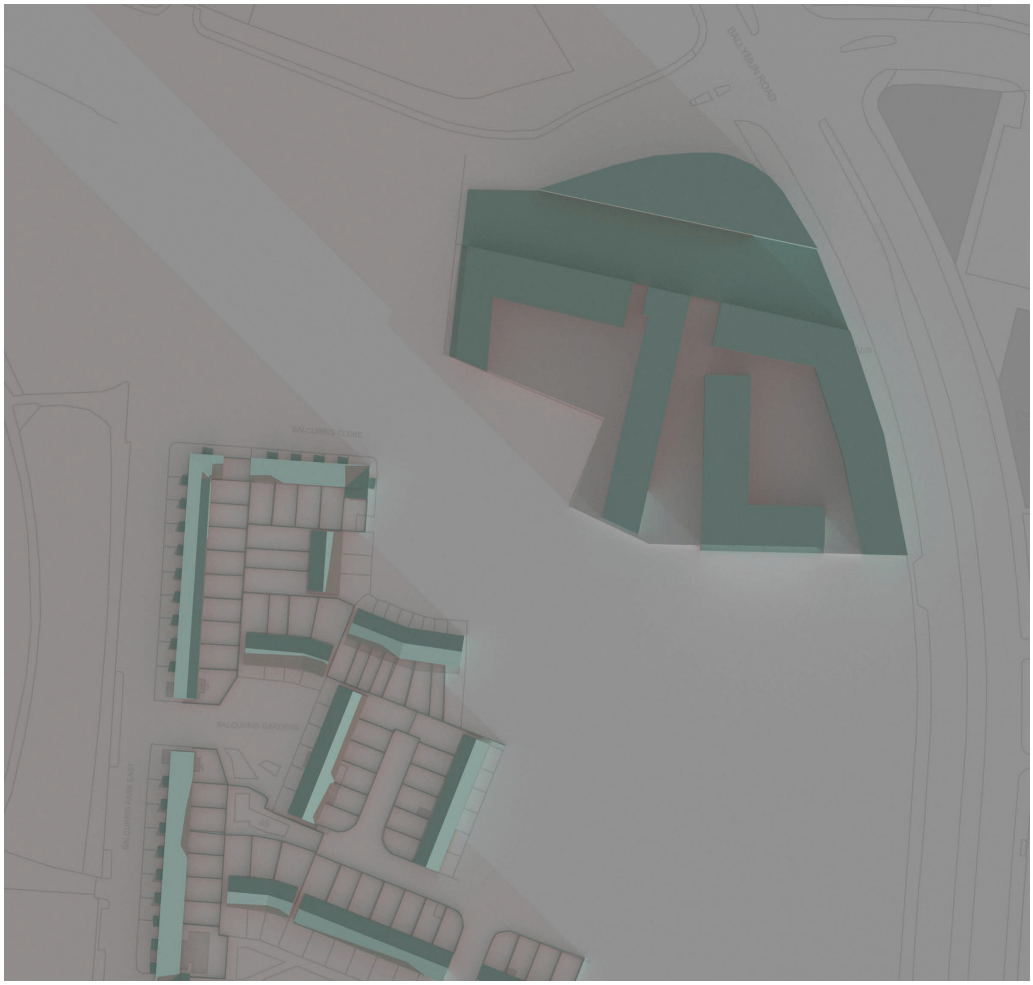


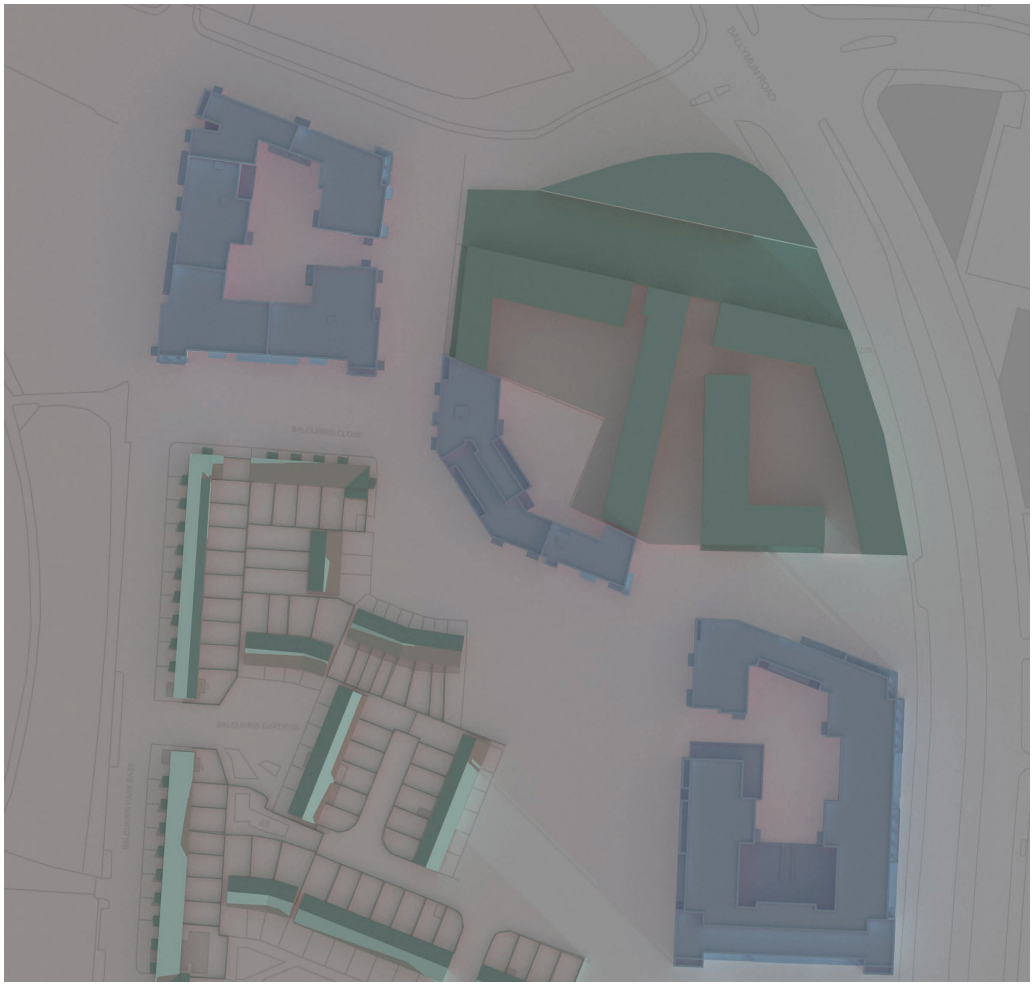
Figure 24: Shadow diagrams 21 June 19:00 UTC +1

N

9.4 Shadow Casting diagrams December Solstice



Existing

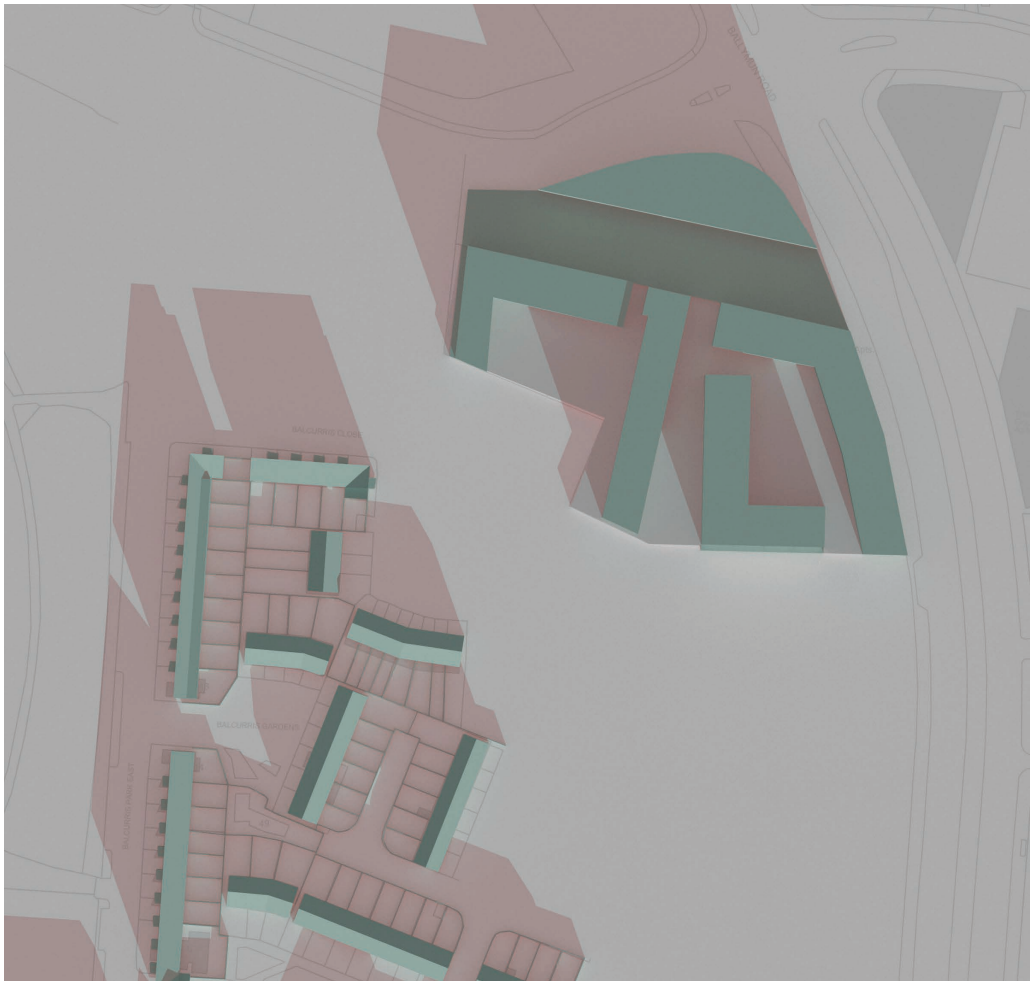


Proposed

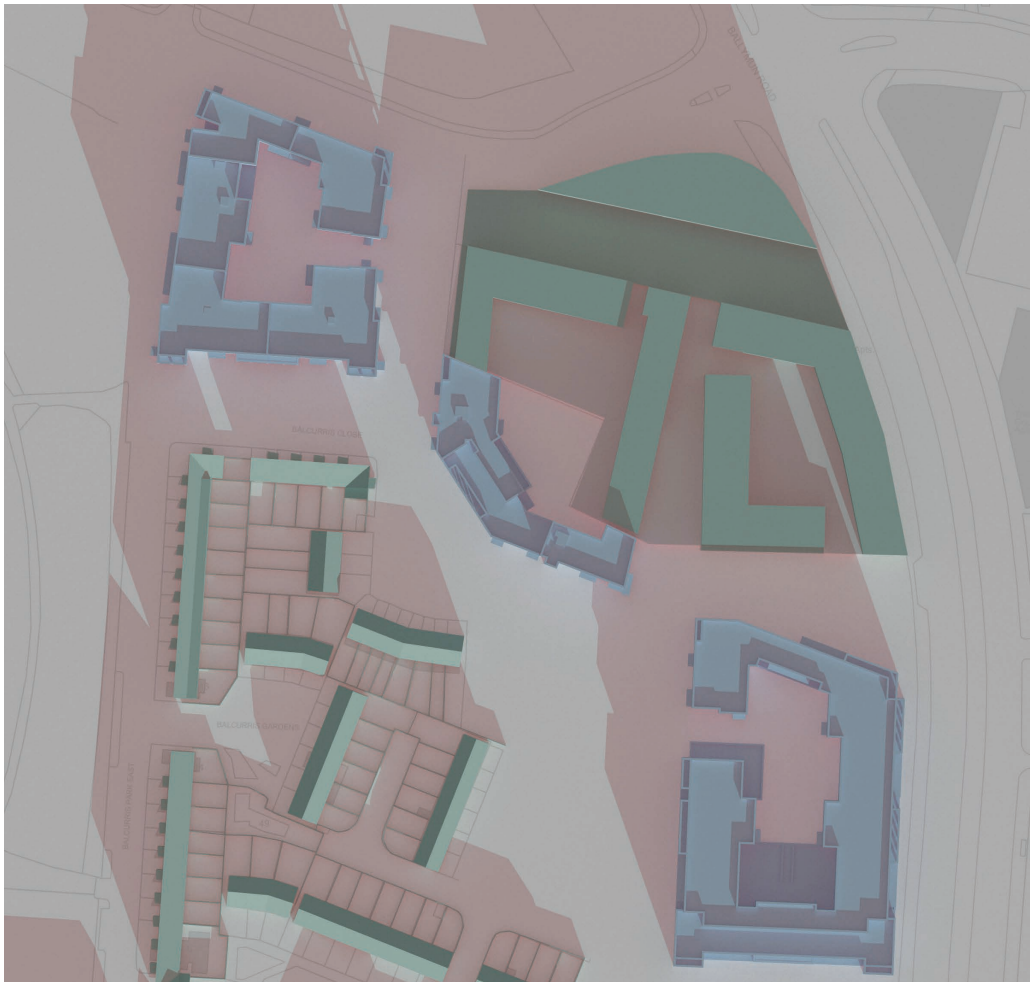
Figure 25: Shadow diagrams 21 December 09:00 UTC

N

Existing



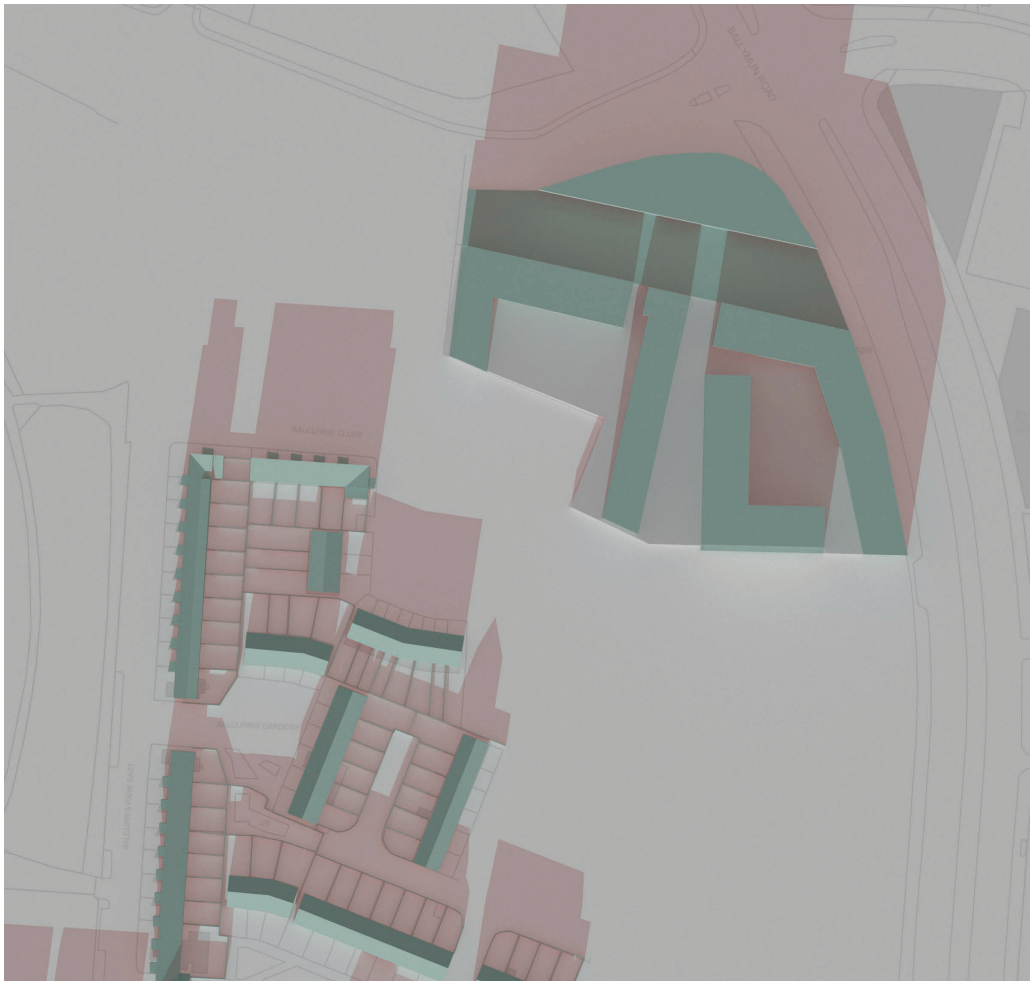
Proposed



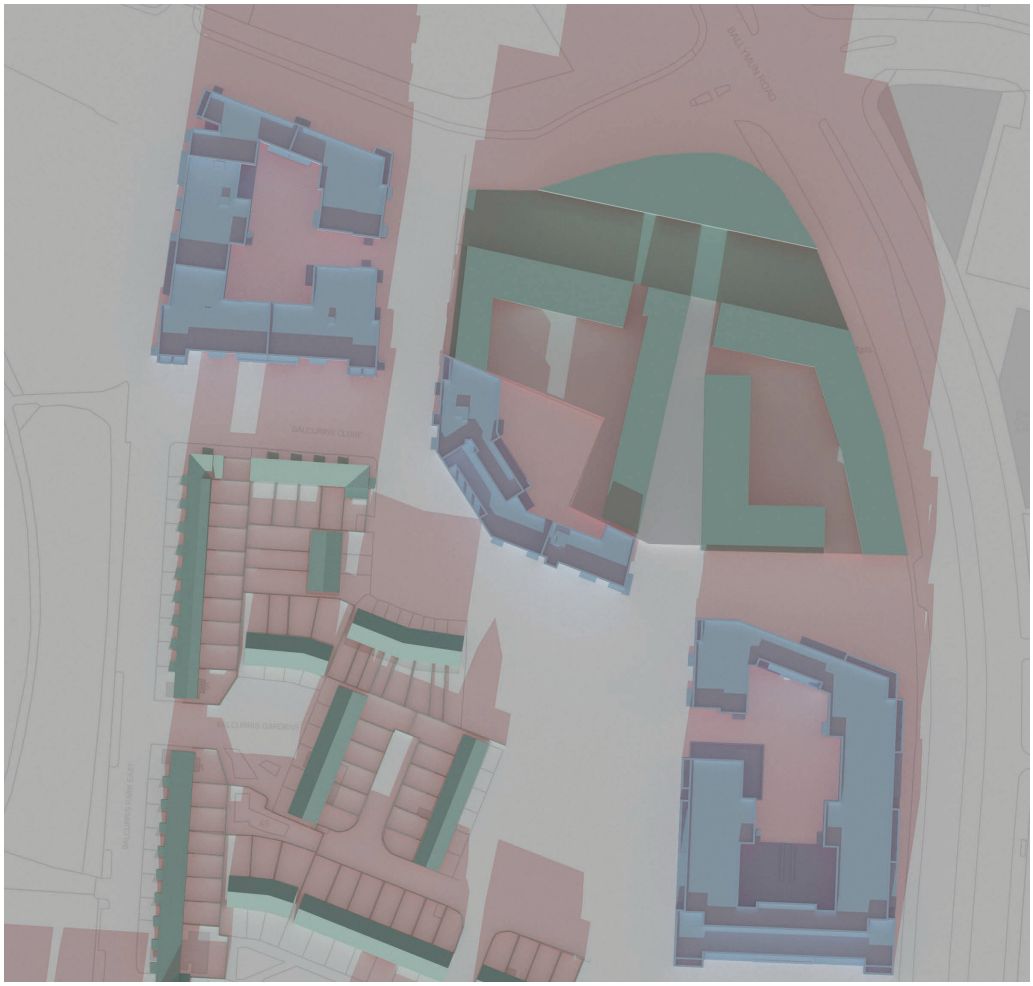
N

Figure 26: Shadow diagrams 21 December 11:00 UTC

Existing



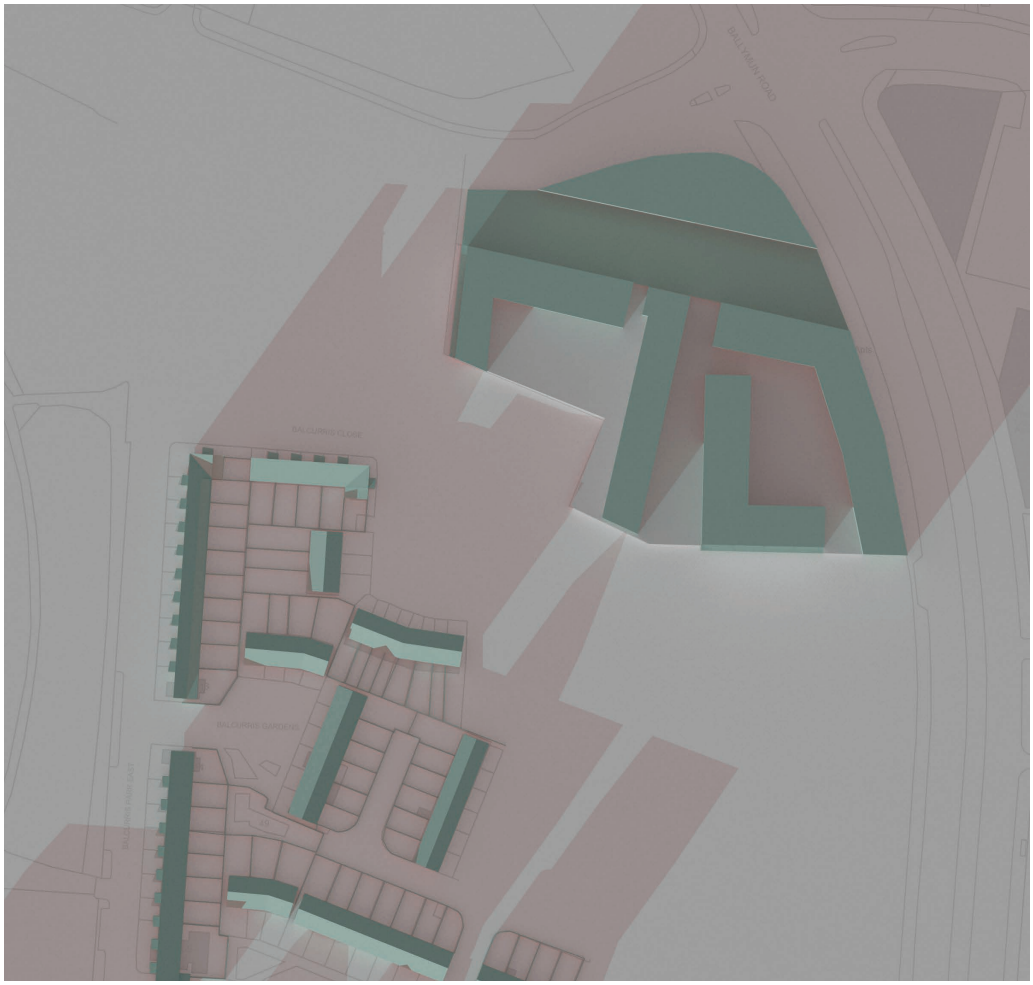
Proposed



N

Figure 27: Shadow diagrams 21 December 13:00 UTC

Existing



Proposed

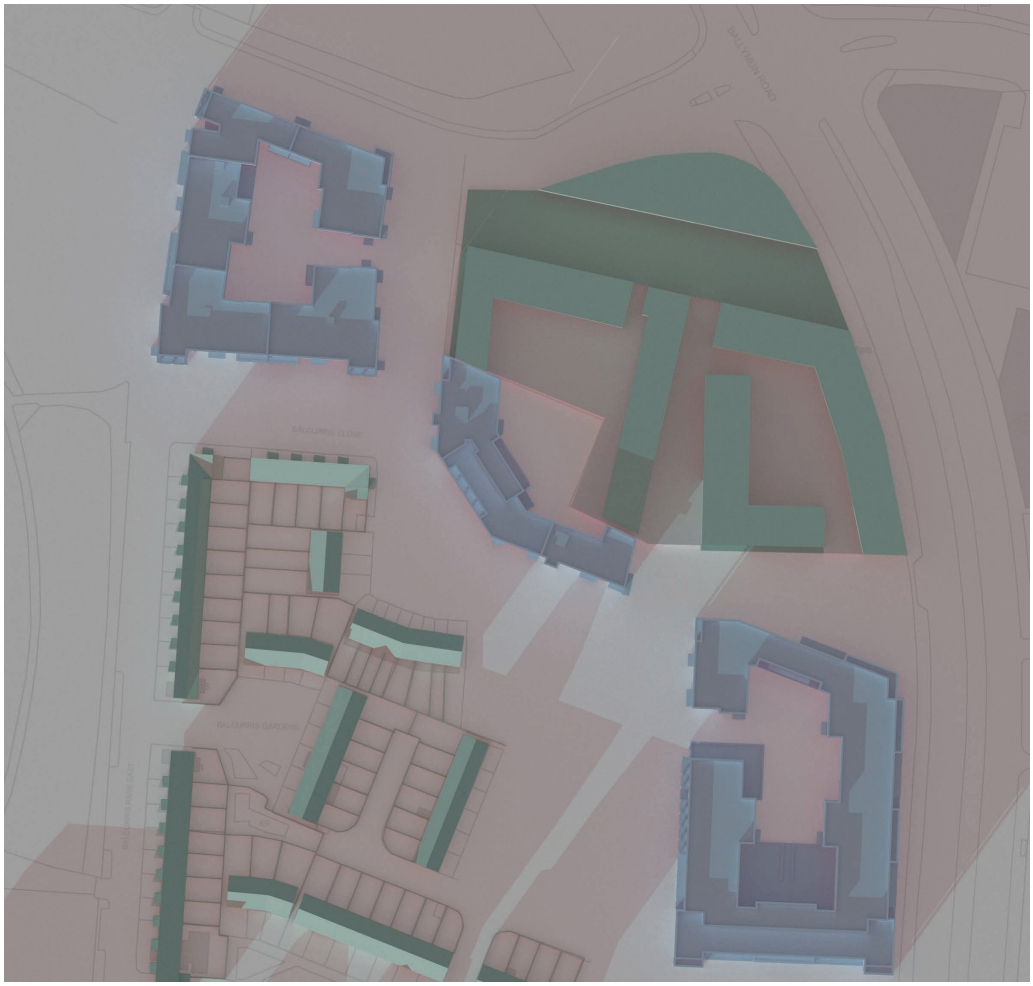


Figure 28: Shadow diagrams 21 December 15:00 UTC

N

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

Site 5

First Floor

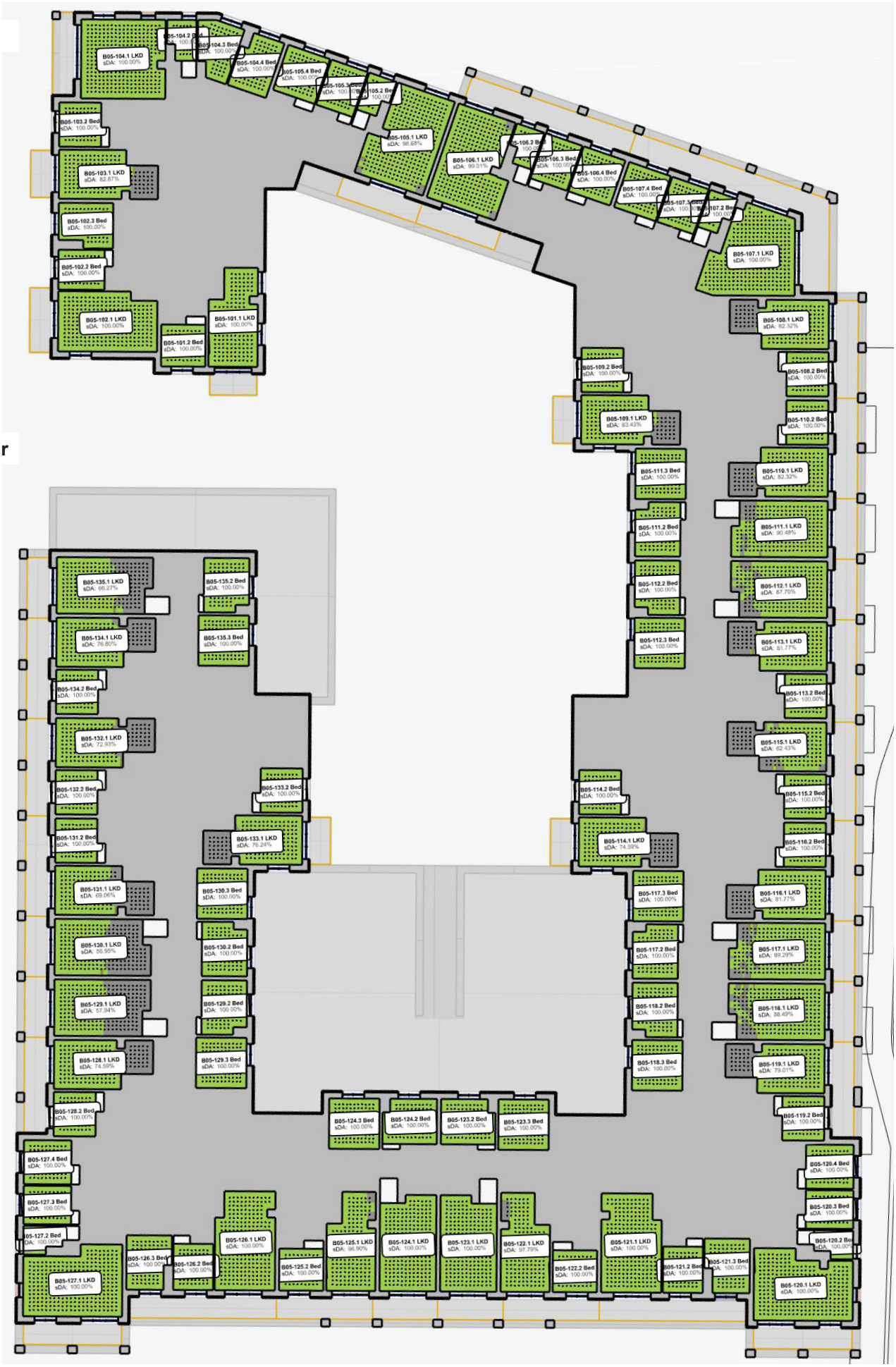


Figure 29: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5

Second Floor

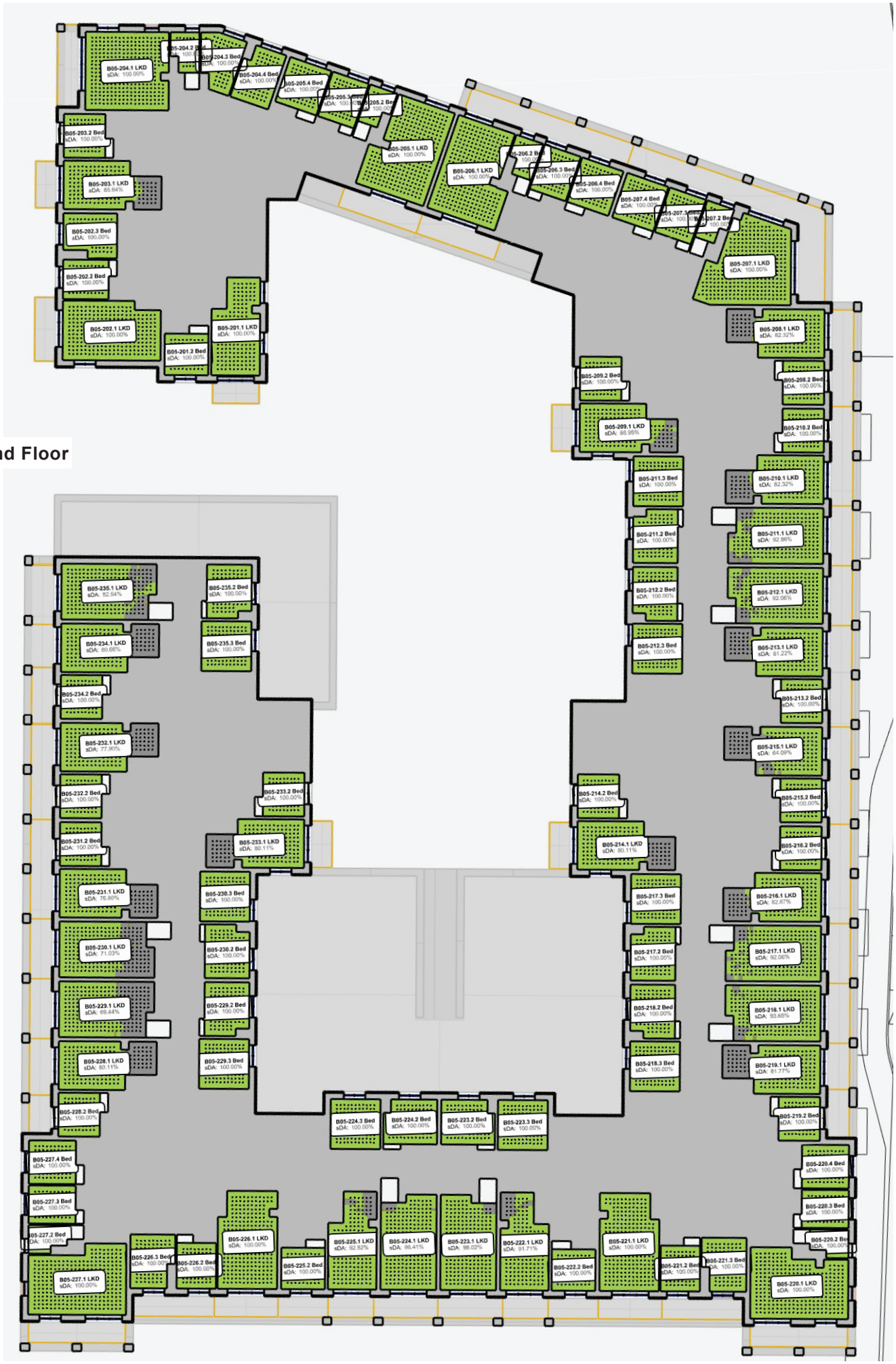


Figure 30: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5

Third Floor

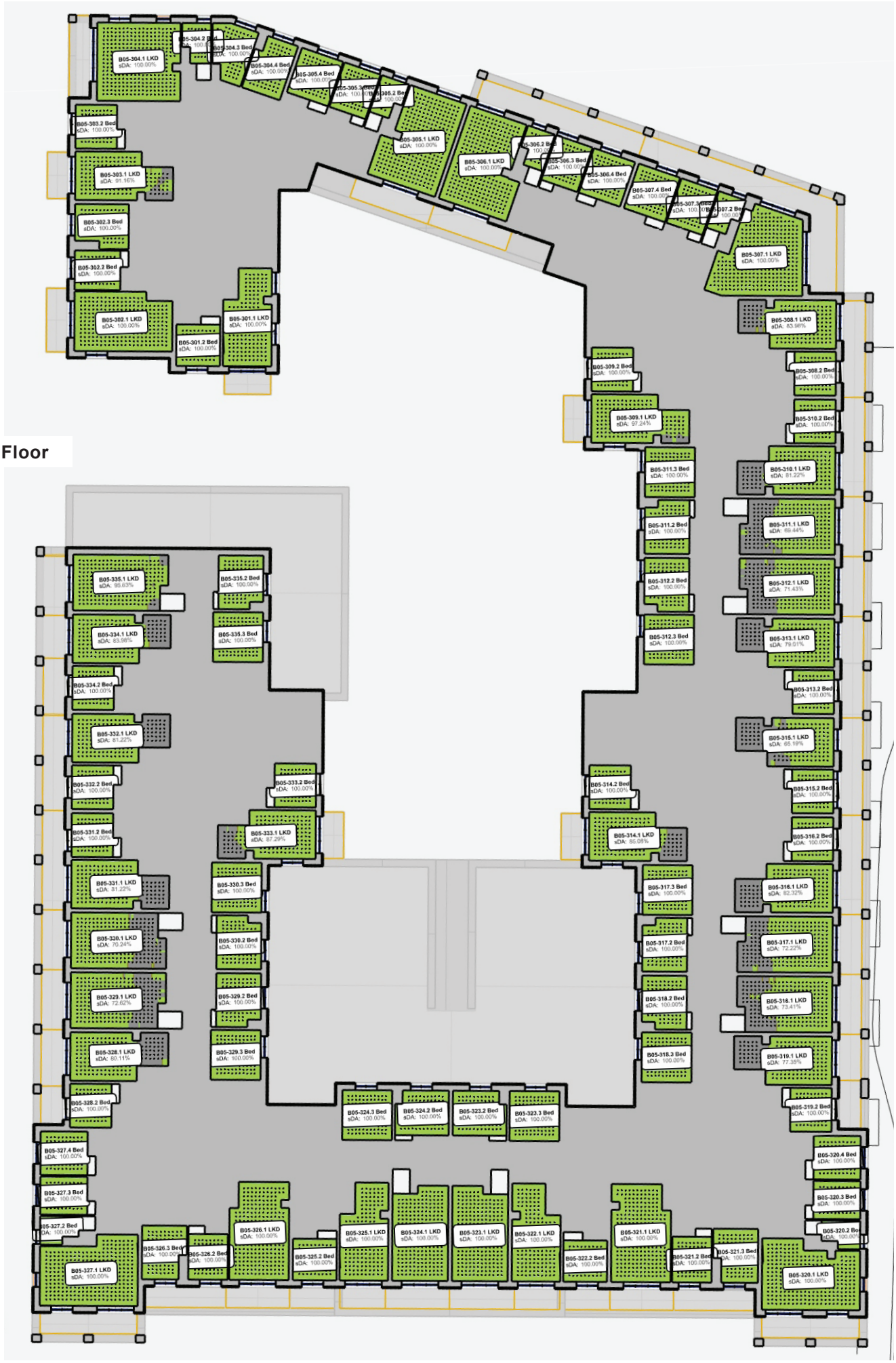


Figure 31: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5

Fourth Floor

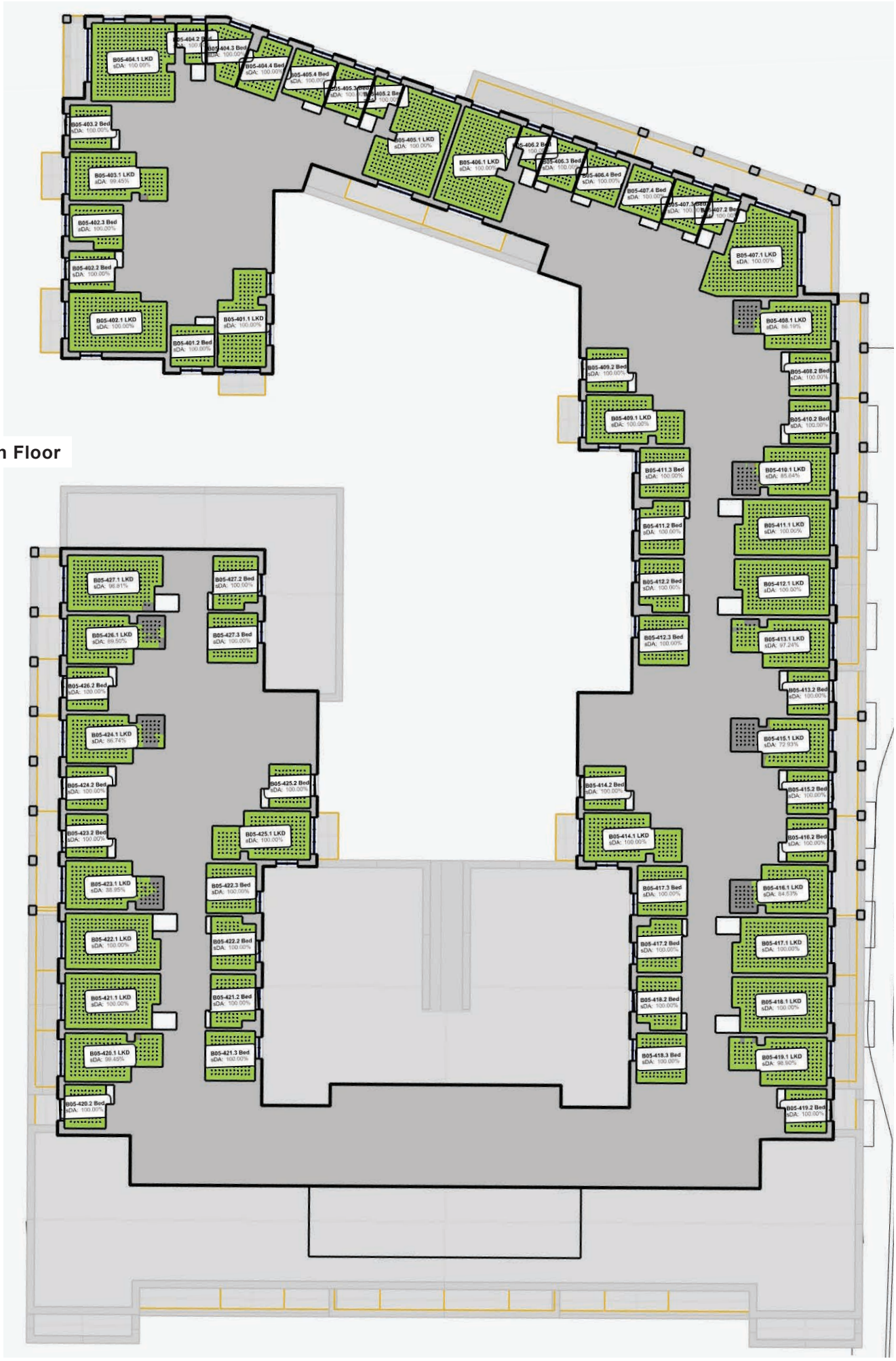


Figure 32: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5 - 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
B05-101.1	LKD	22.8	181	200	1014	100.0%	Y
B05-101.2	Bed	9.8	81	100	747	100.0%	Y
B05-102.1	LKD	30.2	274	200	812	100.0%	Y
B05-102.2	Bed	9.7	80	100	929	100.0%	Y
B05-102.3	Bed	12.0	96	100	848	100.0%	Y
B05-103.1	LKD	22.7	181	200	660	82.9%	Y
B05-103.2	Bed	9.8	81	100	966	100.0%	Y
B05-104.1	LKD	34.9	334	200	828	100.0%	Y
B05-104.2	Bed	5.6	40	100	331	100.0%	Y
B05-104.3	Bed	11.1	85	100	400	100.0%	Y
B05-104.4	Bed	11.6	88	100	369	100.0%	Y
B05-105.1	LKD	33.8	302	200	383	98.7%	Y
B05-105.2	Bed	5.2	32	100	464	100.0%	Y
B05-105.3	Bed	9.7	80	100	456	100.0%	Y
B05-105.4	Bed	11.1	90	100	414	100.0%	Y
B05-106.1	LKD	33.8	302	200	385	99.0%	Y
B05-106.2	Bed	5.2	32	100	272	100.0%	Y
B05-106.3	Bed	9.7	80	100	279	100.0%	Y
B05-106.4	Bed	11.1	90	100	307	100.0%	Y
B05-107.1	LKD	36.1	342	200	752	100.0%	Y
B05-107.2	Bed	5.2	32	100	284	100.0%	Y
B05-107.3	Bed	9.7	80	100	341	100.0%	Y
B05-107.4	Bed	11.1	90	100	319	100.0%	Y
B05-108.1	LKD	22.7	181	200	589	82.3%	Y
B05-108.2	Bed	9.8	81	100	670	100.0%	Y
B05-109.1	LKD	22.7	181	200	785	83.4%	Y
B05-109.2	Bed	9.8	81	100	724	100.0%	Y
B05-110.1	LKD	22.7	181	200	579	82.3%	Y
B05-110.2	Bed	9.8	81	100	670	100.0%	Y
B05-111.1	LKD	27.6	252	200	522	90.5%	Y
B05-111.2	Bed	12.5	102	100	551	100.0%	Y
B05-111.3	Bed	13.4	121	100	488	100.0%	Y
B05-112.1	LKD	27.6	252	200	518	87.7%	Y
B05-112.2	Bed	12.5	102	100	533	100.0%	Y
B05-112.3	Bed	13.4	121	100	452	100.0%	Y
B05-113.1	LKD	22.7	181	200	602	81.8%	Y
B05-113.2	Bed	9.8	81	100	939	100.0%	Y
B05-114.1	LKD	22.7	181	200	545	74.6%	Y
B05-114.2	Bed	9.8	81	100	576	100.0%	Y
B05-115.1	LKD	22.7	181	200	351	62.4%	Y
B05-115.2	Bed	9.8	81	100	1062	100.0%	Y
B05-116.1	LKD	22.7	181	200	579	81.8%	Y
B05-116.2	Bed	9.8	81	100	668	100.0%	Y
B05-117.1	LKD	27.6	252	200	523	89.3%	Y
B05-117.2	Bed	12.5	102	100	498	100.0%	Y
B05-117.3	Bed	13.4	121	100	460	100.0%	Y
B05-118.1	LKD	27.6	252	200	522	88.5%	Y
B05-118.2	Bed	12.5	102	100	412	100.0%	Y
B05-118.3	Bed	13.4	121	100	285	100.0%	Y
B05-119.1	LKD	22.7	181	200	549	79.0%	Y
B05-119.2	Bed	9.8	81	100	796	100.0%	Y

Site 5 - 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
B05-120.1	LKD	33.8	302	200	1252	100.0%	Y
B05-120.2	Bed	5.2	32	100	1200	100.0%	Y
B05-120.3	Bed	9.7	80	100	1176	100.0%	Y
B05-120.4	Bed	11.1	90	100	1068	100.0%	Y
B05-121.1	LKD	29.9	266	200	929	100.0%	Y
B05-121.2	Bed	9.7	80	100	1689	100.0%	Y
B05-121.3	Bed	12.0	96	100	1221	100.0%	Y
B05-122.1	LKD	22.7	181	200	931	97.8%	Y
B05-122.2	Bed	9.8	81	100	1647	100.0%	Y
B05-123.1	LKD	27.6	252	200	811	100.0%	Y
B05-123.2	Bed	12.5	102	100	375	100.0%	Y
B05-123.3	Bed	13.4	121	100	343	100.0%	Y
B05-124.1	LKD	27.6	252	200	803	100.0%	Y
B05-124.2	Bed	12.5	102	100	376	100.0%	Y
B05-124.3	Bed	13.4	121	100	343	100.0%	Y
B05-125.1	LKD	22.7	181	200	930	98.9%	Y
B05-125.2	Bed	9.8	81	100	1640	100.0%	Y
B05-126.1	LKD	29.9	266	200	923	100.0%	Y
B05-126.2	Bed	9.7	80	100	1687	100.0%	Y
B05-126.3	Bed	12.0	96	100	1249	100.0%	Y
B05-127.1	LKD	34.1	310	200	1171	100.0%	Y
B05-127.2	Bed	5.2	32	100	1015	100.0%	Y
B05-127.3	Bed	9.7	80	100	1012	100.0%	Y
B05-127.4	Bed	11.1	90	100	904	100.0%	Y
B05-128.1	LKD	22.7	181	200	450	74.6%	Y
B05-128.2	Bed	9.8	81	100	557	100.0%	Y
B05-129.1	LKD	27.6	252	200	359	57.9%	Y
B05-129.2	Bed	12.5	102	100	458	100.0%	Y
B05-129.3	Bed	13.4	121	100	324	100.0%	Y
B05-130.1	LKD	27.6	252	200	358	56.0%	Y
B05-130.2	Bed	12.5	102	100	528	100.0%	Y
B05-130.3	Bed	13.4	121	100	484	100.0%	Y
B05-131.1	LKD	22.7	181	200	396	69.1%	Y
B05-131.2	Bed	9.8	81	100	439	100.0%	Y
B05-132.1	LKD	22.7	181	200	411	72.9%	Y
B05-132.2	Bed	9.8	81	100	457	100.0%	Y
B05-133.1	LKD	22.7	181	200	539	76.2%	Y
B05-133.2	Bed	9.8	81	100	575	100.0%	Y
B05-134.1	LKD	22.7	181	200	445	76.8%	Y
B05-134.2	Bed	9.8	81	100	738	100.0%	Y
B05-135.1	LKD	27.6	252	200	402	66.3%	Y
B05-135.2	Bed	12.5	102	100	650	100.0%	Y
B05-135.3	Bed	13.4	121	100	552	100.0%	Y
B05-201.1	LKD	22.8	181	200	1237	100.0%	Y
B05-201.2	Bed	9.8	81	100	953	100.0%	Y
B05-202.1	LKD	30.2	274	200	898	100.0%	Y
B05-202.2	Bed	9.7	80	100	970	100.0%	Y
B05-202.3	Bed	12.0	96	100	890	100.0%	Y
B05-203.1	LKD	22.7	181	200	686	85.6%	Y
B05-203.2	Bed	9.8	81	100	1009	100.0%	Y
B05-204.1	LKD	34.9	334	200	907	100.0%	Y

Site 5 - 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
B05-204.2	Bed	5.6	40	100	399	100.0%	Y
B05-204.3	Bed	11.1	85	100	459	100.0%	Y
B05-204.4	Bed	11.6	88	100	423	100.0%	Y
B05-205.1	LKD	33.8	302	200	649	100.0%	Y
B05-205.2	Bed	5.2	32	100	511	100.0%	Y
B05-205.3	Bed	9.7	80	100	514	100.0%	Y
B05-205.4	Bed	11.1	90	100	473	100.0%	Y
B05-206.1	LKD	33.8	302	200	682	100.0%	Y
B05-206.2	Bed	5.2	32	100	295	100.0%	Y
B05-206.3	Bed	9.7	80	100	308	100.0%	Y
B05-206.4	Bed	11.1	90	100	328	100.0%	Y
B05-207.1	LKD	36.1	342	200	765	100.0%	Y
B05-207.2	Bed	5.2	32	100	300	100.0%	Y
B05-207.3	Bed	9.7	80	100	357	100.0%	Y
B05-207.4	Bed	11.1	90	100	335	100.0%	Y
B05-208.1	LKD	22.7	181	200	598	82.3%	Y
B05-208.2	Bed	9.8	81	100	673	100.0%	Y
B05-209.1	LKD	22.7	181	200	916	89.0%	Y
B05-209.2	Bed	9.8	81	100	814	100.0%	Y
B05-210.1	LKD	22.7	181	200	590	82.3%	Y
B05-210.2	Bed	9.8	81	100	672	100.0%	Y
B05-211.1	LKD	27.6	252	200	524	92.9%	Y
B05-211.2	Bed	12.5	102	100	617	100.0%	Y
B05-211.3	Bed	13.4	121	100	546	100.0%	Y
B05-212.1	LKD	27.6	252	200	519	92.1%	Y
B05-212.2	Bed	12.5	102	100	612	100.0%	Y
B05-212.3	Bed	13.4	121	100	521	100.0%	Y
B05-213.1	LKD	22.7	181	200	616	81.2%	Y
B05-213.2	Bed	9.8	81	100	968	100.0%	Y
B05-214.1	LKD	22.7	181	200	719	80.1%	Y
B05-214.2	Bed	9.8	81	100	712	100.0%	Y
B05-215.1	LKD	22.7	181	200	353	64.1%	Y
B05-215.2	Bed	9.8	81	100	1091	100.0%	Y
B05-216.1	LKD	22.7	181	200	588	82.9%	Y
B05-216.2	Bed	9.8	81	100	672	100.0%	Y
B05-217.1	LKD	27.6	252	200	525	92.1%	Y
B05-217.2	Bed	12.5	102	100	599	100.0%	Y
B05-217.3	Bed	13.4	121	100	551	100.0%	Y
B05-218.1	LKD	27.6	252	200	526	93.7%	Y
B05-218.2	Bed	12.5	102	100	504	100.0%	Y
B05-218.3	Bed	13.4	121	100	348	100.0%	Y
B05-219.1	LKD	22.7	181	200	563	81.8%	Y
B05-219.2	Bed	9.8	81	100	820	100.0%	Y
B05-220.1	LKD	33.8	302	200	1248	100.0%	Y
B05-220.2	Bed	5.2	32	100	1184	100.0%	Y
B05-220.3	Bed	9.7	80	100	1189	100.0%	Y
B05-220.4	Bed	11.1	90	100	1078	100.0%	Y
B05-221.1	LKD	29.9	266	200	921	100.0%	Y
B05-221.2	Bed	9.7	80	100	1674	100.0%	Y
B05-221.3	Bed	12.0	96	100	1230	100.0%	Y
B05-222.1	LKD	22.7	181	200	631	91.7%	Y

Site 5 - 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
B05-222.2	Bed	9.8	81	100	1674	100.0%	Y
B05-223.1	LKD	27.6	252	200	530	98.0%	Y
B05-223.2	Bed	12.5	102	100	443	100.0%	Y
B05-223.3	Bed	13.4	121	100	394	100.0%	Y
B05-224.1	LKD	27.6	252	200	532	98.4%	Y
B05-224.2	Bed	12.5	102	100	439	100.0%	Y
B05-224.3	Bed	13.4	121	100	404	100.0%	Y
B05-225.1	LKD	22.7	181	200	629	92.8%	Y
B05-225.2	Bed	9.8	81	100	1680	100.0%	Y
B05-226.1	LKD	29.9	266	200	920	100.0%	Y
B05-226.2	Bed	9.7	80	100	1688	100.0%	Y
B05-226.3	Bed	12.0	96	100	1243	100.0%	Y
B05-227.1	LKD	34.1	310	200	1176	100.0%	Y
B05-227.2	Bed	5.2	32	100	1062	100.0%	Y
B05-227.3	Bed	9.7	80	100	1083	100.0%	Y
B05-227.4	Bed	11.1	90	100	969	100.0%	Y
B05-228.1	LKD	22.7	181	200	506	80.1%	Y
B05-228.2	Bed	9.8	81	100	618	100.0%	Y
B05-229.1	LKD	27.6	252	200	410	69.4%	Y
B05-229.2	Bed	12.5	102	100	573	100.0%	Y
B05-229.3	Bed	13.4	121	100	411	100.0%	Y
B05-230.1	LKD	27.6	252	200	412	71.0%	Y
B05-230.2	Bed	12.5	102	100	658	100.0%	Y
B05-230.3	Bed	13.4	121	100	587	100.0%	Y
B05-231.1	LKD	22.7	181	200	452	76.8%	Y
B05-231.2	Bed	9.8	81	100	489	100.0%	Y
B05-232.1	LKD	22.7	181	200	458	77.9%	Y
B05-232.2	Bed	9.8	81	100	513	100.0%	Y
B05-233.1	LKD	22.7	181	200	755	80.1%	Y
B05-233.2	Bed	9.8	81	100	765	100.0%	Y
B05-234.1	LKD	22.7	181	200	500	80.7%	Y
B05-234.2	Bed	9.8	81	100	787	100.0%	Y
B05-235.1	LKD	27.6	252	200	444	82.5%	Y
B05-235.2	Bed	12.5	102	100	747	100.0%	Y
B05-235.3	Bed	13.4	121	100	637	100.0%	Y
B05-301.1	LKD	22.8	181	200	1519	100.0%	Y
B05-301.2	Bed	9.8	81	100	1252	100.0%	Y
B05-302.1	LKD	30.2	274	200	1004	100.0%	Y
B05-302.2	Bed	9.7	80	100	1019	100.0%	Y
B05-302.3	Bed	12.0	96	100	922	100.0%	Y
B05-303.1	LKD	22.7	181	200	717	91.2%	Y
B05-303.2	Bed	9.8	81	100	1055	100.0%	Y
B05-304.1	LKD	34.9	334	200	973	100.0%	Y
B05-304.2	Bed	5.6	40	100	458	100.0%	Y
B05-304.3	Bed	11.1	85	100	521	100.0%	Y
B05-304.4	Bed	11.6	88	100	484	100.0%	Y
B05-305.1	LKD	33.8	302	200	759	100.0%	Y
B05-305.2	Bed	5.2	32	100	563	100.0%	Y
B05-305.3	Bed	9.7	80	100	574	100.0%	Y
B05-305.4	Bed	11.1	90	100	536	100.0%	Y
B05-306.1	LKD	33.8	302	200	733	100.0%	Y

Site 5 - 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
B05-306.2	Bed	5.2	32	100	226	100.0%	Y
B05-306.3	Bed	9.7	80	100	246	100.0%	Y
B05-306.4	Bed	11.1	90	100	260	100.0%	Y
B05-307.1	LKD	36.1	342	200	776	100.0%	Y
B05-307.2	Bed	5.2	32	100	315	100.0%	Y
B05-307.3	Bed	9.7	80	100	368	100.0%	Y
B05-307.4	Bed	11.1	90	100	349	100.0%	Y
B05-308.1	LKD	22.7	181	200	603	84.0%	Y
B05-308.2	Bed	9.8	81	100	684	100.0%	Y
B05-309.1	LKD	22.7	181	200	1066	97.2%	Y
B05-309.2	Bed	9.8	81	100	909	100.0%	Y
B05-310.1	LKD	22.7	181	200	570	81.2%	Y
B05-310.2	Bed	9.8	81	100	683	100.0%	Y
B05-311.1	LKD	27.6	252	200	365	69.4%	Y
B05-311.2	Bed	12.5	102	100	680	100.0%	Y
B05-311.3	Bed	13.4	121	100	599	100.0%	Y
B05-312.1	LKD	27.6	252	200	358	71.4%	Y
B05-312.2	Bed	12.5	102	100	672	100.0%	Y
B05-312.3	Bed	13.4	121	100	583	100.0%	Y
B05-313.1	LKD	22.7	181	200	430	79.0%	Y
B05-313.2	Bed	9.8	81	100	990	100.0%	Y
B05-314.1	LKD	22.7	181	200	924	85.1%	Y
B05-314.2	Bed	9.8	81	100	833	100.0%	Y
B05-315.1	LKD	22.7	181	200	356	65.2%	Y
B05-315.2	Bed	9.8	81	100	1083	100.0%	Y
B05-316.1	LKD	22.7	181	200	567	82.3%	Y
B05-316.2	Bed	9.8	81	100	685	100.0%	Y
B05-317.1	LKD	27.6	252	200	364	72.2%	Y
B05-317.2	Bed	12.5	102	100	698	100.0%	Y
B05-317.3	Bed	13.4	121	100	637	100.0%	Y
B05-318.1	LKD	27.6	252	200	363	73.4%	Y
B05-318.2	Bed	12.5	102	100	636	100.0%	Y
B05-318.3	Bed	13.4	121	100	437	100.0%	Y
B05-319.1	LKD	22.7	181	200	401	77.3%	Y
B05-319.2	Bed	9.8	81	100	889	100.0%	Y
B05-320.1	LKD	33.8	302	200	1077	100.0%	Y
B05-320.2	Bed	5.2	32	100	1194	100.0%	Y
B05-320.3	Bed	9.7	80	100	1206	100.0%	Y
B05-320.4	Bed	11.1	90	100	1082	100.0%	Y
B05-321.1	LKD	29.9	266	200	1245	100.0%	Y
B05-321.2	Bed	9.7	80	100	1787	100.0%	Y
B05-321.3	Bed	12.0	96	100	1256	100.0%	Y
B05-322.1	LKD	22.7	181	200	1555	100.0%	Y
B05-322.2	Bed	9.8	81	100	1851	100.0%	Y
B05-323.1	LKD	27.6	252	200	1309	100.0%	Y
B05-323.2	Bed	12.5	102	100	487	100.0%	Y
B05-323.3	Bed	13.4	121	100	446	100.0%	Y
B05-324.1	LKD	27.6	252	200	1308	100.0%	Y
B05-324.2	Bed	12.5	102	100	493	100.0%	Y
B05-324.3	Bed	13.4	121	100	457	100.0%	Y
B05-325.1	LKD	22.7	181	200	1558	100.0%	Y

Site 5 - 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
B05-325.2	Bed	9.8	81	100	1840	100.0%	Y
B05-326.1	LKD	29.9	266	200	1240	100.0%	Y
B05-326.2	Bed	9.7	80	100	1801	100.0%	Y
B05-326.3	Bed	12.0	96	100	1279	100.0%	Y
B05-327.1	LKD	34.1	310	200	1046	100.0%	Y
B05-327.2	Bed	5.2	32	100	1102	100.0%	Y
B05-327.3	Bed	9.7	80	100	1130	100.0%	Y
B05-327.4	Bed	11.1	90	100	1024	100.0%	Y
B05-328.1	LKD	22.7	181	200	388	80.1%	Y
B05-328.2	Bed	9.8	81	100	673	100.0%	Y
B05-329.1	LKD	27.6	252	200	315	72.6%	Y
B05-329.2	Bed	12.5	102	100	713	100.0%	Y
B05-329.3	Bed	13.4	121	100	512	100.0%	Y
B05-330.1	LKD	27.6	252	200	322	70.2%	Y
B05-330.2	Bed	12.5	102	100	769	100.0%	Y
B05-330.3	Bed	13.4	121	100	692	100.0%	Y
B05-331.1	LKD	22.7	181	200	490	81.2%	Y
B05-331.2	Bed	9.8	81	100	538	100.0%	Y
B05-332.1	LKD	22.7	181	200	505	81.2%	Y
B05-332.2	Bed	9.8	81	100	557	100.0%	Y
B05-333.1	LKD	22.7	181	200	1005	87.3%	Y
B05-333.2	Bed	9.8	81	100	933	100.0%	Y
B05-334.1	LKD	22.7	181	200	541	84.0%	Y
B05-334.2	Bed	9.8	81	100	828	100.0%	Y
B05-335.1	LKD	27.6	252	200	478	95.6%	Y
B05-335.2	Bed	12.5	102	100	833	100.0%	Y
B05-335.3	Bed	13.4	121	100	726	100.0%	Y
B05-401.1	LKD	22.8	181	200	2194	100.0%	Y
B05-401.2	Bed	9.8	81	100	1599	100.0%	Y
B05-402.1	LKD	30.2	274	200	1297	100.0%	Y
B05-402.2	Bed	9.7	80	100	1092	100.0%	Y
B05-402.3	Bed	12.0	96	100	946	100.0%	Y
B05-403.1	LKD	22.7	181	200	941	99.4%	Y
B05-403.2	Bed	9.8	81	100	1111	100.0%	Y
B05-404.1	LKD	34.9	334	200	1000	100.0%	Y
B05-404.2	Bed	5.6	40	100	521	100.0%	Y
B05-404.3	Bed	11.1	85	100	588	100.0%	Y
B05-404.4	Bed	11.6	88	100	545	100.0%	Y
B05-405.1	LKD	33.8	302	200	1230	100.0%	Y
B05-405.2	Bed	5.2	32	100	621	100.0%	Y
B05-405.3	Bed	9.7	80	100	632	100.0%	Y
B05-405.4	Bed	11.1	90	100	588	100.0%	Y
B05-406.1	LKD	33.8	302	200	1292	100.0%	Y
B05-406.2	Bed	5.2	32	100	612	100.0%	Y
B05-406.3	Bed	9.7	80	100	621	100.0%	Y
B05-406.4	Bed	11.1	90	100	555	100.0%	Y
B05-407.1	LKD	36.1	342	200	841	100.0%	Y
B05-407.2	Bed	5.2	32	100	384	100.0%	Y
B05-407.3	Bed	9.7	80	100	430	100.0%	Y
B05-407.4	Bed	11.1	90	100	418	100.0%	Y
B05-408.1	LKD	22.7	181	200	601	86.2%	Y

Site 5 - 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
B05-408.2	Bed	9.8	81	100	663	100.0%	Y
B05-409.1	LKD	22.7	181	200	1432	100.0%	Y
B05-409.2	Bed	9.8	81	100	1009	100.0%	Y
B05-410.1	LKD	22.7	181	200	614	85.6%	Y
B05-410.2	Bed	9.8	81	100	673	100.0%	Y
B05-411.1	LKD	27.6	252	200	877	100.0%	Y
B05-411.2	Bed	12.5	102	100	742	100.0%	Y
B05-411.3	Bed	13.4	121	100	659	100.0%	Y
B05-412.1	LKD	27.6	252	200	912	100.0%	Y
B05-412.2	Bed	12.5	102	100	721	100.0%	Y
B05-412.3	Bed	13.4	121	100	645	100.0%	Y
B05-413.1	LKD	22.7	181	200	1065	97.2%	Y
B05-413.2	Bed	9.8	81	100	1030	100.0%	Y
B05-414.1	LKD	22.7	181	200	1370	100.0%	Y
B05-414.2	Bed	9.8	81	100	964	100.0%	Y
B05-415.1	LKD	22.7	181	200	355	72.9%	Y
B05-415.2	Bed	9.8	81	100	1096	100.0%	Y
B05-416.1	LKD	22.7	181	200	614	84.5%	Y
B05-416.2	Bed	9.8	81	100	680	100.0%	Y
B05-417.1	LKD	27.6	252	200	873	100.0%	Y
B05-417.2	Bed	12.5	102	100	795	100.0%	Y
B05-417.3	Bed	13.4	121	100	725	100.0%	Y
B05-418.1	LKD	27.6	252	200	916	100.0%	Y
B05-418.2	Bed	12.5	102	100	761	100.0%	Y
B05-418.3	Bed	13.4	121	100	599	100.0%	Y
B05-419.1	LKD	22.7	181	200	1076	98.9%	Y
B05-419.2	Bed	9.8	81	100	1228	100.0%	Y
B05-420.1	LKD	22.7	181	200	1016	99.4%	Y
B05-420.2	Bed	9.8	81	100	1078	100.0%	Y
B05-421.1	LKD	27.6	252	200	855	100.0%	Y
B05-421.2	Bed	12.5	102	100	848	100.0%	Y
B05-421.3	Bed	13.4	121	100	684	100.0%	Y
B05-422.1	LKD	27.6	252	200	810	100.0%	Y
B05-422.2	Bed	12.5	102	100	884	100.0%	Y
B05-422.3	Bed	13.4	121	100	780	100.0%	Y
B05-423.1	LKD	22.7	181	200	558	89.0%	Y
B05-423.2	Bed	9.8	81	100	585	100.0%	Y
B05-424.1	LKD	22.7	181	200	540	86.7%	Y
B05-424.2	Bed	9.8	81	100	602	100.0%	Y
B05-425.1	LKD	22.7	181	200	1474	100.0%	Y
B05-425.2	Bed	9.8	81	100	1055	100.0%	Y
B05-426.1	LKD	22.7	181	200	542	89.5%	Y
B05-426.2	Bed	9.8	81	100	863	100.0%	Y
B05-427.1	LKD	27.6	252	200	495	98.8%	Y
B05-427.2	Bed	12.5	102	100	909	100.0%	Y
B05-427.3	Bed	13.4	121	100	805	100.0%	Y

Table 17: Site 5 - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

Site 15

First Floor

Ground Floor

Site 16

First Floor

Ground Floor

Figure 33: Sites 15 & 16 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Sites 15 & 16 - 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
S15-D01.1	LKD	24.6	216	200	1150	100.0%	Y
S15-D01.2	Bed	12.2	100	100	319	100.0%	Y
S15-D02.1	LKD	23.2	194	200	1719	100.0%	Y
S15-D02.2	Bed	10.9	90	100	738	100.0%	Y
S15-D03.1	LKD	24.6	216	200	774	100.0%	Y
S15-D03.2	Bed	12.2	100	100	352	100.0%	Y
S15-D04.1	LKD	23.2	194	200	791	100.0%	Y
S15-D04.2	Bed	10.9	90	100	821	100.0%	Y
S15-D05.1	LKD	24.6	216	200	550	100.0%	Y
S15-D05.2	Bed	12.2	100	100	254	95.0%	Y
S15-D06.1	LKD	23.2	194	200	722	100.0%	Y
S15-D06.2	Bed	10.9	90	100	572	100.0%	Y
S15-H01.1	L	20.6	187	150	1201	100.0%	Y
S15-H01.2	LK	14.1	122	200	917	100.0%	Y
S15-H01.3	Bed	13.1	112	100	662	100.0%	Y
S15-H01.4	Bed	7.4	49	100	416	100.0%	Y
S15-H01.5	Bed	11.2	90	100	831	100.0%	Y
S15-H02.1	L	20.6	187	150	1280	100.0%	Y
S15-H02.2	LK	14.1	122	200	1180	100.0%	Y
S15-H02.3	Bed	13.1	112	100	758	100.0%	Y
S15-H02.4	Bed	7.4	49	100	435	100.0%	Y
S15-H02.5	Bed	11.2	90	100	897	100.0%	Y
S16-D01.1	LKD	24.6	216	200	860	100.0%	Y
S16-D01.2	Bed	12.2	100	100	373	100.0%	Y
S16-D02.1	LKD	23.2	194	200	838	100.0%	Y
S16-D02.2	Bed	10.9	90	100	1020	100.0%	Y
S16-H01.1	L	20.6	187	150	1697	100.0%	Y
S16-H01.2	KD	14.1	122	200	1296	100.0%	Y
S16-H01.3	Bed	11.2	90	100	643	100.0%	Y
S16-H01.3	Bed	7.4	49	100	319	100.0%	Y
S16-H01.5	Bed	13.1	112	100	533	100.0%	Y
S16-H02.1	L	14.8	121	150	1204	100.0%	Y
S16-H02.2	LK	18.8	151	200	865	100.0%	Y
S16-H02.3	Bed	13.4	112	100	1047	100.0%	Y
S16-H02.4	Bed	12.3	99	100	823	100.0%	Y
S16-H02.5	Bed	6.3	48	100	852	100.0%	Y
S16-H03.1	L	14.8	121	150	1179	100.0%	Y
S16-H03.2	LK	18.8	151	200	789	100.0%	Y
S16-H03.3	Bed	13.4	112	100	1081	100.0%	Y
S16-H03.4	Bed	12.3	99	100	797	100.0%	Y
S16-H03.5	Bed	6.3	48	100	830	100.0%	Y

Table 18: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

Site 17

First Floor

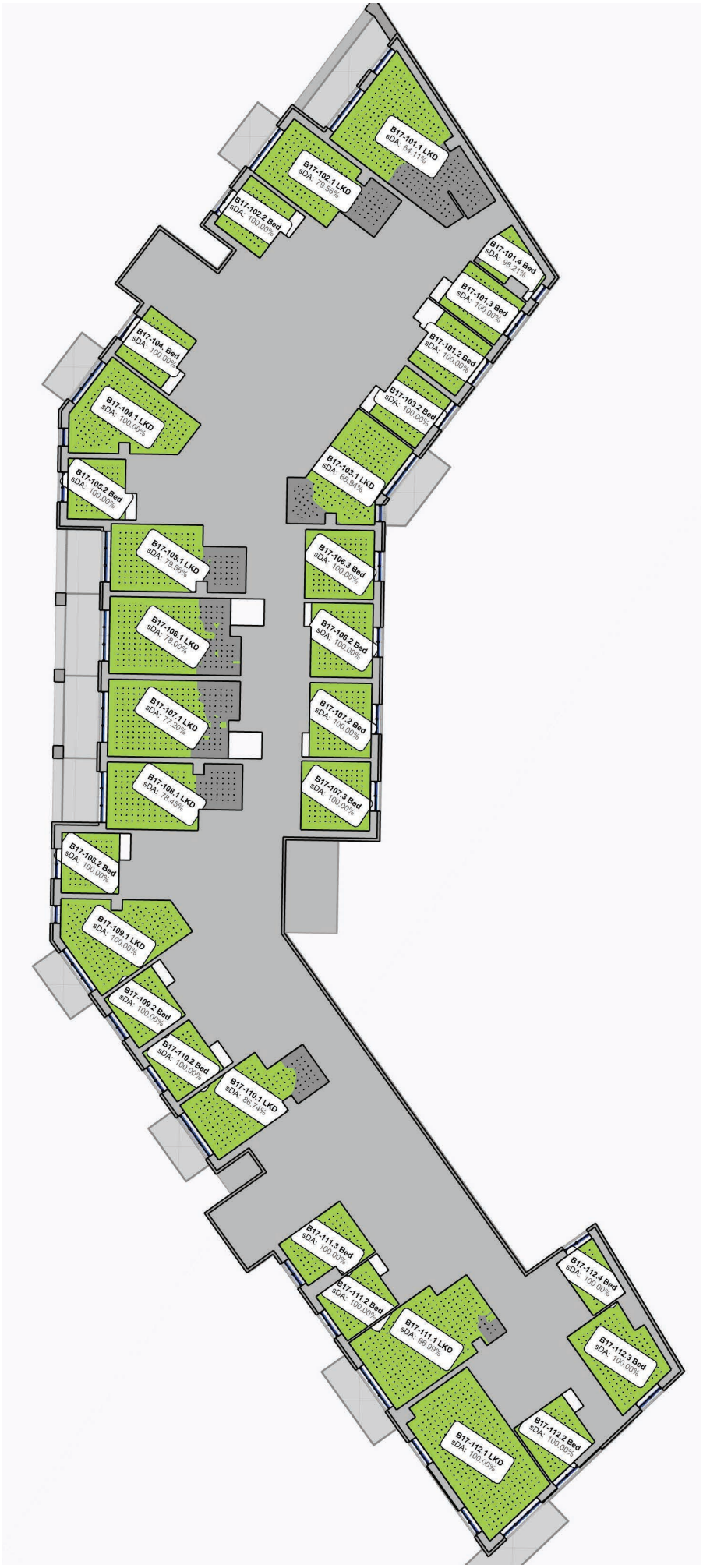


Figure 34: Site 17 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 17

Second Floor

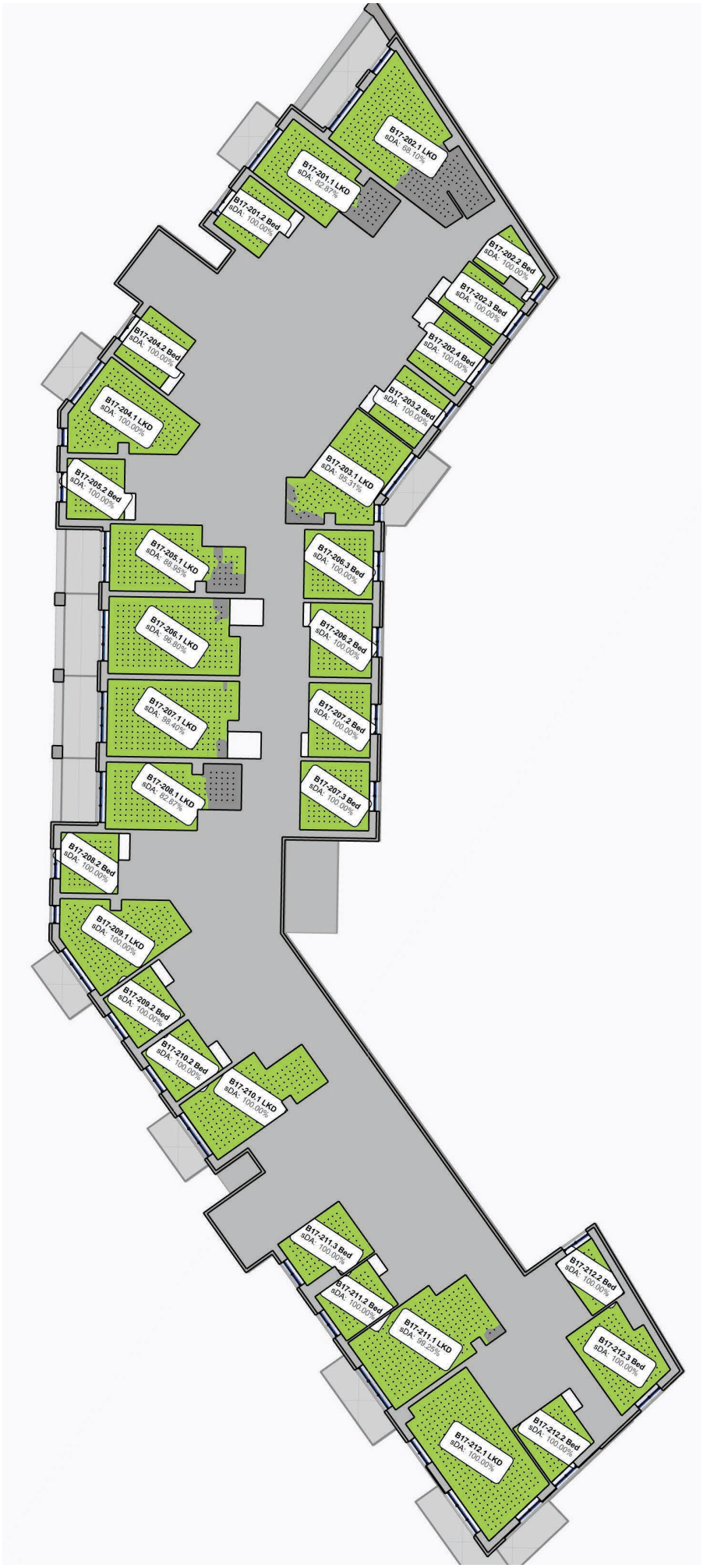


Figure 35: Site 17 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Figure 36: Site 17 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 17 - 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
B17-101.1	LKD	36.9	326	200	370	64.1%	Y
B17-101.2	Bed	10.4	81	100	867	100.0%	Y
B17-101.3	Bed	10.4	88	100	864	100.0%	Y
B17-101.4	Bed	7.1	56	100	450	98.2%	Y
B17-102.1	LKD	22.7	181	200	574	79.6%	Y
B17-102.2	Bed	9.8	81	100	934	100.0%	Y
B17-103.1	LKD	23.9	192	200	527	85.9%	Y
B17-103.2	Bed	9.9	81	100	744	100.0%	Y
B17-104.1	LKD	22.9	202	200	941	100.0%	Y
B17-104.2	Bed	9.7	81	100	910	100.0%	Y
B17-105.1	LKD	22.7	181	200	612	79.6%	Y
B17-105.2	Bed	9.8	81	100	1444	100.0%	Y
B17-106.1	LKD	27.5	250	200	521	78.0%	Y
B17-106.2	Bed	13.0	108	100	499	100.0%	Y
B17-106.3	Bed	13.4	121	100	508	100.0%	Y
B17-107.1	LKD	27.5	250	200	529	77.2%	Y
B17-107.2	Bed	13.0	108	100	465	100.0%	Y
B17-107.3	Bed	13.4	121	100	417	100.0%	Y
B17-108.1	LKD	22.7	181	200	566	78.5%	Y
B17-108.2	Bed	9.8	81	100	1478	100.0%	Y
B17-109.1	LKD	22.9	202	200	1370	100.0%	Y
B17-109.2	Bed	9.8	81	100	1627	100.0%	Y
B17-110.1	LKD	22.7	181	200	987	86.7%	Y
B17-110.2	Bed	9.8	81	100	1598	100.0%	Y
B17-111.1	LKD	29.9	266	200	781	97.0%	Y
B17-111.2	Bed	9.8	80	100	1582	100.0%	Y
B17-111.3	Bed	12.0	96	100	1235	100.0%	Y
B17-112.1	LKD	34.5	321	200	1421	100.0%	Y
B17-112.2	Bed	10.3	84	100	940	100.0%	Y
B17-112.3	Bed	16.9	153	100	704	100.0%	Y
B17-112.4	Bed	7.6	56	100	399	100.0%	Y
B17-201.1	LKD	22.7	181	200	624	82.9%	Y
B17-201.2	Bed	9.8	81	100	988	100.0%	Y
B17-202.1	LKD	36.9	326	200	415	68.1%	Y
B17-202.2	Bed	7.1	56	100	525	100.0%	Y
B17-202.3	Bed	10.4	88	100	999	100.0%	Y
B17-202.4	Bed	10.4	81	100	985	100.0%	Y
B17-203.1	LKD	23.9	192	200	635	95.3%	Y
B17-203.2	Bed	9.9	81	100	846	100.0%	Y
B17-204.1	LKD	22.9	202	200	1013	100.0%	Y
B17-204.2	Bed	9.7	81	100	960	100.0%	Y
B17-205.1	LKD	22.7	181	200	688	89.0%	Y
B17-205.2	Bed	9.8	81	100	1510	100.0%	Y
B17-206.1	LKD	27.5	250	200	589	96.8%	Y
B17-206.2	Bed	13.0	108	100	579	100.0%	Y
B17-206.3	Bed	13.4	121	100	583	100.0%	Y
B17-207.1	LKD	27.5	250	200	584	98.4%	Y
B17-207.2	Bed	13.0	108	100	549	100.0%	Y
B17-207.3	Bed	13.4	121	100	505	100.0%	Y
B17-208.1	LKD	22.7	181	200	596	82.9%	Y
B17-208.2	Bed	9.8	81	100	1540	100.0%	Y

Site 17 - 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
B17-209.1	LKD	22.9	202	200	1757	100.0%	Y
B17-209.2	Bed	9.8	81	100	1730	100.0%	Y
B17-210.1	LKD	22.7	181	200	1354	100.0%	Y
B17-210.2	Bed	9.8	81	100	1719	100.0%	Y
B17-211.1	LKD	29.9	266	200	838	99.2%	Y
B17-211.2	Bed	9.8	80	100	1651	100.0%	Y
B17-211.3	Bed	12.0	96	100	1305	100.0%	Y
B17-212.1	LKD	34.5	321	200	1719	100.0%	Y
B17-212.2	Bed	10.3	84	100	977	100.0%	Y
B17-212.2	Bed	7.6	56	100	479	100.0%	Y
B17-212.3	Bed	16.9	153	100	768	100.0%	Y
B17-301.1	LKD	22.7	181	200	854	87.8%	Y
B17-301.2	Bed	9.8	81	100	1042	100.0%	Y
B17-302.1	LKD	36.9	326	200	471	76.4%	Y
B17-302.2	Bed	7.1	56	100	577	100.0%	Y
B17-302.3	Bed	10.4	88	100	1092	100.0%	Y
B17-302.4	Bed	10.4	81	100	1086	100.0%	Y
B17-303.1	LKD	23.9	192	200	953	100.0%	Y
B17-303.2	Bed	9.9	81	100	959	100.0%	Y
B17-304.1	LKD	22.9	202	200	1244	100.0%	Y
B17-304.2	Bed	9.7	81	100	1068	100.0%	Y
B17-305.1	LKD	29.9	266	200	869	100.0%	Y
B17-305.2	Bed	9.8	80	100	1710	100.0%	Y
B17-305.3	Bed	12.0	96	100	1351	100.0%	Y
B17-306.1	LKD	34.5	321	200	1592	100.0%	Y
B17-306.2	Bed	10.3	84	100	1100	100.0%	Y
B17-306.3	Bed	16.9	153	100	820	100.0%	Y
B17-306.4	Bed	7.6	56	100	540	100.0%	Y
B17-401.1	LKD	29.9	266	200	882	99.6%	Y
B17-401.2	Bed	9.8	80	100	1733	100.0%	Y
B17-401.3	Bed	12.0	96	100	1366	100.0%	Y
B17-402.1	LKD	34.5	321	200	1443	100.0%	Y
B17-402.2	Bed	10.3	84	100	1119	100.0%	Y
B17-402.3	Bed	16.9	153	100	866	100.0%	Y
B17-402.4	Bed	7.6	56	100	626	100.0%	Y
B17-501.1	LKD	29.9	266	200	1155	100.0%	Y
B17-501.2	Bed	9.8	80	100	1775	100.0%	Y
B17-501.3	Bed	12.0	96	100	1387	100.0%	Y
B17-502.1	LKD	34.5	321	200	1916	100.0%	Y
B17-502.2	Bed	10.3	84	100	1259	100.0%	Y
B17-502.3	Bed	16.9	153	100	890	100.0%	Y
B17-502.4	Bed	7.6	56	100	805	100.0%	Y

Table 19: Site 17 - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

Site 18

Ground Floor

Figure 37: Site 18 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 18

First Floor

Figure 38: Site 18 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 18

Second Floor

Figure 39: Site 18 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 18

Third Floor

Figure 40: Site 18 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 18

Fourth Floor

Figure 41: Site 18 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 18- 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
B18-001.1	LKD	22.7	181	100	500	95.6%	Y
B18-001.2	Bed	9.8	81	100	780	100.0%	Y
B18-002.1	LKD	33.8	303	200	663	100.0%	Y
B18-002.2	Bed	5.2	32	100	643	100.0%	Y
B18-002.3	Bed	9.7	80	100	588	100.0%	Y
B18-002.4	Bed	11.1	90	100	547	100.0%	Y
B18-003.1	LKD	29.9	266	200	773	87.2%	Y
B18-003.2	Bed	9.7	80	100	1253	100.0%	Y
B18-003.3	Bed	12.0	96	100	849	100.0%	Y
B18-004.1	LKD	22.7	181	200	526	76.2%	Y
B18-004.2	Bed	9.8	81	100	1202	100.0%	Y
B18-005.1	LKD	27.6	252	200	508	71.4%	Y
B18-005.2	Bed	13.0	108	100	271	100.0%	Y
B18-005.3	Bed	13.4	121	100	244	99.2%	Y
B18-006.1	LKD	27.6	252	200	555	84.5%	Y
B18-006.2	Bed	13.0	108	100	279	100.0%	Y
B18-006.3	Bed	13.4	121	100	256	100.0%	Y
B18-007.1	LKD	22.7	181	200	657	82.9%	Y
B18-007.2	Bed	9.8	81	100	1336	100.0%	Y
B18-008.1	LKD	29.9	266	200	903	99.6%	Y
B18-008.2	Bed	9.7	80	100	1408	100.0%	Y

Site 18- 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
B18-008.3	Bed	12.0	96	100	1008	100.0%	Y
B18-009.1	LKD	33.8	303	200	842	100.0%	Y
B18-009.2	Bed	5.2	32	100	1025	100.0%	Y
B18-009.3	Bed	9.7	80	100	983	100.0%	Y
B18-009.4	Bed	14.4	126	100	758	100.0%	Y
B18-010.1	LKD	28.4	256	200	357	66.0%	Y
B18-010.2	Bed	12.4	102	100	374	100.0%	Y
B18-010.3	Bed	13.4	121	100	237	89.3%	Y
B18-011.1	LKD	27.6	252	200	362	69.4%	Y
B18-011.2	Bed	12.4	102	100	488	100.0%	Y
B18-011.3	Bed	13.4	121	100	507	100.0%	Y
B18-012.1	LKD	22.7	181	200	426	79.6%	Y
B18-012.2	Bed	9.8	81	100	714	100.0%	Y
B18-013.1	LKD	22.7	181	200	660	77.9%	Y
B18-013.2	Bed	5.2	32	100	587	100.0%	Y
B18-013.2	Bed	9.8	81	100	673	100.0%	Y
B18-014.1	LKD	22.7	181	200	426	79.6%	Y
B18-014.2	Bed	9.8	81	100	895	100.0%	Y
B18-015.1	LKD	22.7	181	200	638	96.1%	Y
B18-015.2	Bed	9.8	81	100	640	100.0%	Y
B18-016.1	LKD	33.8	302	200	434	100.0%	Y
B18-016.1	LKD	33.8	302	200	498	82.5%	Y
B18-016.3	Bed	9.7	80	100	625	100.0%	Y
B18-016.4	Bed	11.1	90	100	563	100.0%	Y
B18-017.2	Bed	5.2	32	100	547	100.0%	Y
B18-017.3	Bed	9.7	80	100	584	100.0%	Y
B18-017.4	Bed	11.1	90	100	540	100.0%	Y
B18-018.1	LKD	33.8	302	200	523	85.4%	Y
B18-018.2	Bed	5.2	32	100	583	100.0%	Y
B18-018.3	Bed	9.7	80	100	605	100.0%	Y
B18-018.4	Bed	11.1	90	100	552	100.0%	Y
B18-019.1	LKD	34.5	307	200	435	99.3%	Y
B18-019.2	Bed	5.2	32	100	377	100.0%	Y
B18-019.3	Bed	9.7	80	100	597	100.0%	Y
B18-019.4	Bed	11.1	90	100	552	100.0%	Y
B18-020.1	LKD	22.7	181	200	696	80.7%	Y
B18-020.2	Bed	9.8	81	100	1094	100.0%	Y
B18-101.1	LKD	29.9	266	200	339	60.5%	Y
B18-101.2	Bed	9.7	80	100	466	100.0%	Y
B18-101.3	Bed	12.0	96	100	282	100.0%	Y
B18-102.1	LKD	22.7	181	200	697	85.1%	Y
B18-102.2	Bed	9.8	81	100	1051	100.0%	Y
B18-103.1	LKD	22.7	181	200	410	61.9%	Y
B18-103.2	Bed	9.8	81	100	871	100.0%	Y
B18-104.1	LKD	33.8	302	200	1088	100.0%	Y
B18-104.2	Bed	5.2	32	100	905	100.0%	Y
B18-104.3	Bed	9.7	80	100	852	100.0%	Y
B18-104.3	Bed	11.1	90	100	772	100.0%	Y
B18-105.1	LKD	29.9	266	200	775	95.9%	Y
B18-105.2	Bed	9.7	80	100	1486	100.0%	Y
B18-105.3	Bed	12.0	96	100	1037	100.0%	Y

Site 18- 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
B18-106.1	LKD	22.7	181	200	791	83.4%	Y
B18-106.2	Bed	9.8	81	100	1424	100.0%	Y
B18-107.1	LKD	27.6	252	200	715	95.6%	Y
B18-107.2	Bed	12.4	102	100	352	100.0%	Y
B18-107.3	Bed	13.4	121	100	318	100.0%	Y
B18-108.1	LKD	27.6	252	200	730	98.4%	Y
B18-108.2	Bed	13.0	108	100	364	100.0%	Y
B18-108.3	Bed	13.4	121	100	340	100.0%	Y
B18-109.1	LKD	22.7	181	200	827	93.4%	Y
B18-109.2	Bed	9.8	81	100	1455	100.0%	Y
B18-110.1	LKD	29.9	266	200	835	99.2%	Y
B18-110.2	Bed	9.7	80	100	1545	100.0%	Y
B18-110.3	Bed	12.0	96	100	1136	100.0%	Y
B18-111.1	LKD	33.8	303	200	1248	100.0%	Y
B18-111.2	Bed	5.2	32	100	1105	100.0%	Y
B18-111.3	Bed	9.7	80	100	1051	100.0%	Y
B18-111.4	Bed	14.4	126	100	819	100.0%	Y
B18-112.1	LKD	22.7	181	200	518	80.7%	Y
B18-112.2	Bed	9.8	81	100	611	100.0%	Y
B18-113.1	LKD	27.6	252	200	448	81.3%	Y
B18-113.2	Bed	12.4	102	100	554	100.0%	Y
B18-113.3	Bed	13.4	121	100	350	100.0%	Y
B18-114.1	LKD	27.6	252	200	438	83.7%	Y
B18-114.2	Bed	12.4	102	100	681	100.0%	Y
B18-114.3	Bed	13.4	121	100	669	100.0%	Y
B18-115.1	LKD	22.7	181	200	517	82.3%	Y
B18-115.2	Bed	9.8	81	100	796	100.0%	Y
B18-116.1	LKD	22.7	181	200	783	81.8%	Y
B18-116.2	Bed	9.8	81	100	827	100.0%	Y
B18-117.1	LKD	22.7	181	200	677	88.4%	Y
B18-117.2	Bed	9.8	81	100	1021	100.0%	Y
B18-118.1	LKD	22.7	181	200	528	80.7%	Y
B18-118.2	Bed	9.8	81	100	942	100.0%	Y
B18-119.1	LKD	27.6	252	200	463	88.5%	Y
B18-119.2	Bed	12.4	102	100	555	100.0%	Y
B18-119.3	Bed	13.4	121	100	502	100.0%	Y
B18-120.1	LKD	22.7	181	200	588	87.3%	Y
B18-120.2	Bed	9.8	81	100	718	100.0%	Y
B18-121.1	LKD	33.8	302	200	622	100.0%	Y
B18-121.2	Bed	5.2	32	100	653	100.0%	Y
B18-121.3	Bed	9.7	80	100	679	100.0%	Y
B18-121.4	Bed	11.1	90	100	612	100.0%	Y
B18-122.1	LKD	33.8	302	200	648	100.0%	Y
B18-122.2	Bed	5.2	32	100	590	100.0%	Y
B18-122.3	Bed	9.7	80	100	631	100.0%	Y
B18-122.4	Bed	11.1	90	100	586	100.0%	Y
B18-123.1	LKD	33.8	302	200	676	100.0%	Y
B18-123.2	Bed	5.2	32	100	637	100.0%	Y
B18-123.3	Bed	9.7	80	100	654	100.0%	Y
B18-123.4	Bed	11.1	90	100	605	100.0%	Y
B18-124.1	LKD	34.4	307	200	837	100.0%	Y

Site 18- 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
B18-124.2	Bed	5.2	32	100	436	100.0%	Y
B18-124.3	Bed	9.7	80	100	654	100.0%	Y
B18-124.4	Bed	11.1	90	100	604	100.0%	Y
B18-125.1	LKD	22.7	181	200	740	89.5%	Y
B18-125.2	Bed	9.8	81	100	1158	100.0%	Y
B18-126.1	LKD	22.7	181	200	950	97.2%	Y
B18-126.2	Bed	9.8	81	100	1279	100.0%	Y
B18-127.1	LKD	29.9	266	200	510	74.4%	Y
B18-127.2	Bed	9.7	80	100	500	100.0%	Y
B18-127.3	Bed	12.0	96	100	550	100.0%	Y
B18-201.1	LKD	29.9	266	200	437	73.7%	Y
B18-201.2	Bed	9.7	80	100	610	100.0%	Y
B18-201.3	Bed	12.0	96	100	353	100.0%	Y
B18-202.1	LKD	22.7	181	200	825	86.7%	Y
B18-202.2	Bed	9.8	81	100	1208	100.0%	Y
B18-203.1	LKD	22.7	181	200	517	76.2%	Y
B18-203.2	Bed	9.8	81	100	1011	100.0%	Y
B18-204.1	LKD	33.8	302	200	1183	100.0%	Y
B18-204.2	Bed	5.2	32	100	1094	100.0%	Y
B18-204.3	Bed	11.1	90	100	921	100.0%	Y
B18-204.3	Bed	9.7	80	100	1015	100.0%	Y
B18-205.1	LKD	29.9	266	200	845	99.2%	Y
B18-205.2	Bed	9.7	80	100	1565	100.0%	Y
B18-205.3	Bed	12.0	96	100	1112	100.0%	Y
B18-206.1	LKD	22.7	181	200	539	81.2%	Y
B18-206.2	Bed	9.8	81	100	1523	100.0%	Y
B18-207.1	LKD	27.6	252	200	488	88.1%	Y
B18-207.2	Bed	12.4	102	100	401	100.0%	Y
B18-207.3	Bed	13.4	121	100	380	100.0%	Y
B18-208.1	LKD	27.6	252	200	495	93.7%	Y
B18-208.2	Bed	13.0	108	100	419	100.0%	Y
B18-208.3	Bed	13.4	121	100	399	100.0%	Y
B18-209.1	LKD	22.7	181	200	562	85.6%	Y
B18-209.2	Bed	9.8	81	100	1542	100.0%	Y
B18-210.1	LKD	29.9	266	200	885	100.0%	Y
B18-210.2	Bed	9.7	80	100	1587	100.0%	Y
B18-210.3	Bed	12.0	96	100	1180	100.0%	Y
B18-211.1	LKD	33.8	303	200	1261	100.0%	Y
B18-211.2	Bed	5.2	32	100	1111	100.0%	Y
B18-211.3	Bed	9.7	80	100	1064	100.0%	Y
B18-211.4	Bed	14.4	126	100	823	100.0%	Y
B18-212.1	LKD	22.7	181	200	365	78.5%	Y
B18-212.2	Bed	9.8	81	100	626	100.0%	Y
B18-213.1	LKD	27.6	252	200	313	64.7%	Y
B18-213.2	Bed	12.4	102	100	710	100.0%	Y
B18-213.3	Bed	13.4	121	100	438	100.0%	Y
B18-214.1	LKD	27.6	252	200	314	66.3%	Y
B18-214.2	Bed	12.4	102	100	831	100.0%	Y
B18-214.3	Bed	13.4	121	100	793	100.0%	Y
B18-215.1	LKD	22.7	181	200	364	77.3%	Y
B18-215.2	Bed	9.8	81	100	838	100.0%	Y

Site 18- 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
B18-216.1	LKD	22.7	181	200	1037	88.4%	Y
B18-216.2	Bed	9.8	81	100	984	100.0%	Y
B18-217.1	LKD	22.7	181	200	693	90.6%	Y
B18-217.2	Bed	9.8	81	100	1043	100.0%	Y
B18-218.1	LKD	22.7	181	200	384	77.3%	Y
B18-218.2	Bed	9.8	81	100	983	100.0%	Y
B18-219.1	LKD	27.6	252	200	337	72.6%	Y
B18-219.2	Bed	12.4	102	100	641	100.0%	Y
B18-219.3	Bed	13.4	121	100	592	100.0%	Y
B18-220.1	LKD	22.7	181	200	603	87.8%	Y
B18-220.2	Bed	9.8	81	100	789	100.0%	Y
B18-221.1	LKD	33.8	302	200	621	100.0%	Y
B18-221.2	Bed	5.2	32	100	657	100.0%	Y
B18-221.3	Bed	9.7	80	100	681	100.0%	Y
B18-221.4	Bed	11.1	90	100	622	100.0%	Y
B18-222.1	LKD	33.8	302	200	730	100.0%	Y
B18-222.2	Bed	5.2	32	100	604	100.0%	Y
B18-222.3	Bed	9.7	80	100	651	100.0%	Y
B18-222.4	Bed	11.1	90	100	595	100.0%	Y
B18-223.1	LKD	33.8	302	200	760	100.0%	Y
B18-223.2	Bed	5.2	32	100	646	100.0%	Y
B18-223.3	Bed	9.7	80	100	668	100.0%	Y
B18-223.4	Bed	11.1	90	100	613	100.0%	Y
B18-224.1	LKD	34.4	307	200	863	100.0%	Y
B18-224.2	Bed	5.2	32	100	442	100.0%	Y
B18-224.3	Bed	9.7	80	100	668	100.0%	Y
B18-224.4	Bed	11.1	90	100	621	100.0%	Y
B18-225.1	LKD	22.7	181	200	794	93.4%	Y
B18-225.2	Bed	9.8	81	100	1225	100.0%	Y
B18-226.1	LKD	22.7	181	200	1089	100.0%	Y
B18-226.2	Bed	9.8	81	100	1369	100.0%	Y
B18-227.1	LKD	29.9	266	200	627	92.5%	Y
B18-227.2	Bed	9.7	80	100	677	100.0%	Y
B18-227.3	Bed	12.0	96	100	656	100.0%	Y
B18-301.1	LKD	29.9	266	200	765	97.4%	Y
B18-301.2	Bed	9.7	80	100	825	100.0%	Y
B18-301.3	Bed	12.0	96	100	476	100.0%	Y
B18-302.1	LKD	22.7	181	200	1153	98.9%	Y
B18-302.2	Bed	9.8	81	100	1318	100.0%	Y
B18-303.1	LKD	22.7	181	200	797	85.6%	Y
B18-303.2	Bed	9.8	81	100	1143	100.0%	Y
B18-304.1	LKD	33.8	302	200	1230	100.0%	Y
B18-304.2	Bed	5.2	32	100	1194	100.0%	Y
B18-304.3	Bed	9.7	80	100	1125	100.0%	Y
B18-304.3	Bed	11.1	90	100	1022	100.0%	Y
B18-305.1	LKD	29.9	266	200	1216	100.0%	Y
B18-305.2	Bed	9.7	80	100	1662	100.0%	Y
B18-305.3	Bed	12.0	96	100	1178	100.0%	Y
B18-306.1	LKD	22.7	181	200	1512	100.0%	Y
B18-306.2	Bed	9.8	81	100	1768	100.0%	Y
B18-307.1	LKD	27.6	252	200	1260	100.0%	Y

Site 18- 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
B18-307.2	Bed	12.4	102	100	464	100.0%	Y
B18-307.3	Bed	13.4	121	100	444	100.0%	Y
B18-308.1	LKD	27.6	252	200	1266	100.0%	Y
B18-308.2	Bed	13.0	108	100	478	100.0%	Y
B18-308.3	Bed	13.4	121	100	470	100.0%	Y
B18-309.1	LKD	22.7	181	200	1515	100.0%	Y
B18-309.2	Bed	9.8	81	100	1766	100.0%	Y
B18-310.1	LKD	29.9	266	200	1213	100.0%	Y
B18-310.2	Bed	9.7	80	100	1654	100.0%	Y
B18-310.3	Bed	12.0	96	100	1223	100.0%	Y
B18-311.1	LKD	33.8	303	200	1250	100.0%	Y
B18-311.2	Bed	5.2	32	100	1125	100.0%	Y
B18-311.3	Bed	9.7	80	100	1078	100.0%	Y
B18-311.4	Bed	14.4	126	200	828	100.0%	Y
B18-312.1	LKD	22.7	181	200	867	93.9%	Y
B18-312.2	Bed	9.8	81	100	692	100.0%	Y
B18-313.1	LKD	27.6	252	200	744	99.6%	Y
B18-313.2	Bed	12.4	102	100	866	100.0%	Y
B18-313.3	Bed	13.4	121	100	605	100.0%	Y
B18-314.1	LKD	27.6	252	200	757	100.0%	Y
B18-314.2	Bed	12.4	102	100	950	100.0%	Y
B18-314.3	Bed	13.4	121	100	913	100.0%	Y
B18-315.1	LKD	22.7	181	200	905	97.8%	Y
B18-315.2	Bed	9.8	81	100	917	100.0%	Y
B18-316.1	LKD	22.7	181	200	1547	99.4%	Y
B18-316.2	Bed	9.8	81	100	1122	100.0%	Y
B18-317.1	LKD	22.7	181	200	898	96.1%	Y
B18-317.2	Bed	9.8	81	100	1064	100.0%	Y
B18-318.1	LKD	22.7	181	200	904	97.2%	Y
B18-318.2	Bed	9.8	81	100	1059	100.0%	Y
B18-319.1	LKD	27.6	252	200	751	100.0%	Y
B18-319.2	Bed	12.4	102	100	745	100.0%	Y
B18-319.3	Bed	13.4	121	100	696	100.0%	Y
B18-320.1	LKD	22.7	181	200	627	91.2%	Y
B18-320.2	Bed	9.8	81	100	934	100.0%	Y
B18-321.1	LKD	33.8	302	200	628	100.0%	Y
B18-321.2	Bed	5.2	32	100	659	100.0%	Y
B18-321.3	Bed	9.7	80	100	693	100.0%	Y
B18-321.4	Bed	11.1	90	100	630	100.0%	Y
B18-322.1	LKD	33.8	302	200	844	100.0%	Y
B18-322.2	Bed	5.2	32	100	604	100.0%	Y
B18-322.3	Bed	9.7	80	100	649	100.0%	Y
B18-322.4	Bed	11.1	90	100	602	100.0%	Y
B18-323.1	LKD	33.8	302	200	859	100.0%	Y
B18-323.2	Bed	5.2	32	100	644	100.0%	Y
B18-323.3	Bed	9.7	80	100	687	100.0%	Y
B18-323.4	Bed	11.1	90	100	628	100.0%	Y
B18-324.1	LKD	34.4	307	200	887	100.0%	Y
B18-324.2	Bed	5.2	32	100	447	100.0%	Y
B18-324.3	Bed	9.7	80	100	680	100.0%	Y
B18-324.4	Bed	11.1	90	100	631	100.0%	Y

Site 18- 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
B18-325.1	LKD	22.7	181	200	831	97.2%	Y
B18-325.2	Bed	9.8	81	100	1275	100.0%	Y
B18-326.1	LKD	22.7	181	200	1294	100.0%	Y
B18-326.2	Bed	9.8	81	100	1434	100.0%	Y
B18-327.1	LKD	29.9	266	200	808	99.6%	Y
B18-327.2	Bed	9.7	80	100	775	100.0%	Y
B18-327.3	Bed	12.0	96	100	745	100.0%	Y
B18-401.1	LKD	22.7	181	200	979	98.9%	Y
B18-401.2	Bed	9.8	81	100	953	100.0%	Y
B18-402.1	LKD	33.8	302	200	656	100.0%	Y
B18-402.2	Bed	5.2	32	100	662	100.0%	Y
B18-402.3	Bed	9.7	80	100	696	100.0%	Y
B18-402.4	Bed	11.1	90	100	639	100.0%	Y
B18-403.1	LKD	33.8	302	200	1231	100.0%	Y
B18-403.2	Bed	5.2	32	100	620	100.0%	Y
B18-403.3	Bed	9.7	80	100	657	100.0%	Y
B18-403.4	Bed	11.1	90	100	603	100.0%	Y
B18-404.1	LKD	33.8	302	200	1239	100.0%	Y
B18-404.2	Bed	5.2	32	100	652	100.0%	Y
B18-404.3	Bed	9.7	80	100	690	100.0%	Y
B18-404.4	Bed	11.1	90	100	627	100.0%	Y
B18-405.1	LKD	34.4	307	200	925	100.0%	Y
B18-405.2	Bed	5.2	32	100	455	100.0%	Y
B18-405.3	Bed	9.7	80	100	674	100.0%	Y
B18-405.4	Bed	11.1	90	100	632	100.0%	Y
B18-406.1	LKD	22.7	181	200	1105	98.9%	Y
B18-406.2	Bed	9.8	81	100	1305	100.0%	Y
B18-407.1	LKD	22.7	181	200	1637	100.0%	Y
B18-407.2	Bed	9.8	81	100	1523	100.0%	Y
B18-408.1	LKD	29.9	266	200	1096	100.0%	Y
B18-408.2	Bed	9.7	80	100	892	100.0%	Y
B18-408.3	Bed	12.0	96	100	818	100.0%	Y

Table 20: Site 18 - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

Appendix B - Supplementary Information - IS/ BS EN17037:2018 Table A.1 Daylight Provision Room Results

Site 5

First Floor

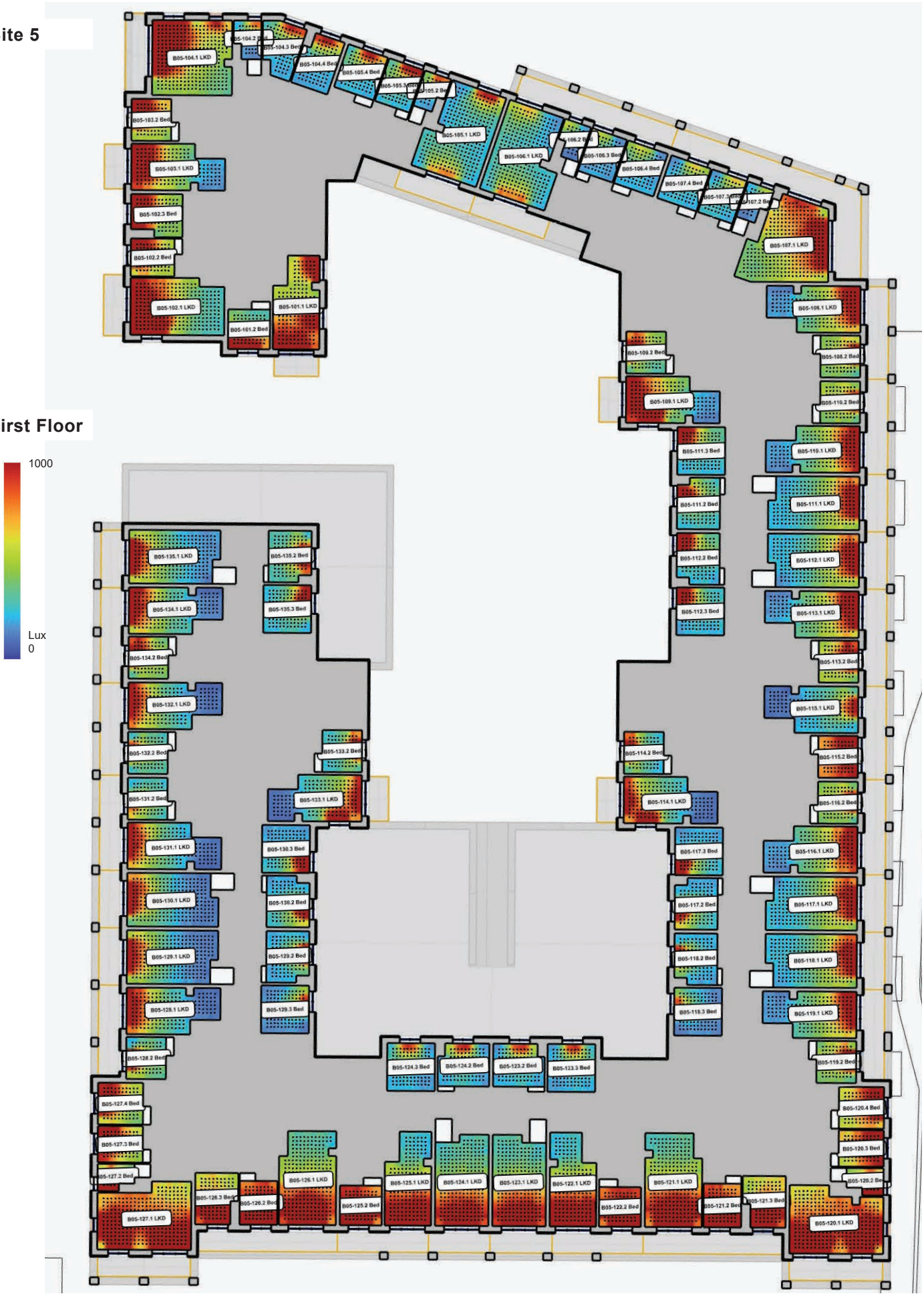


Figure 42: Site 5 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 5

Second Floor

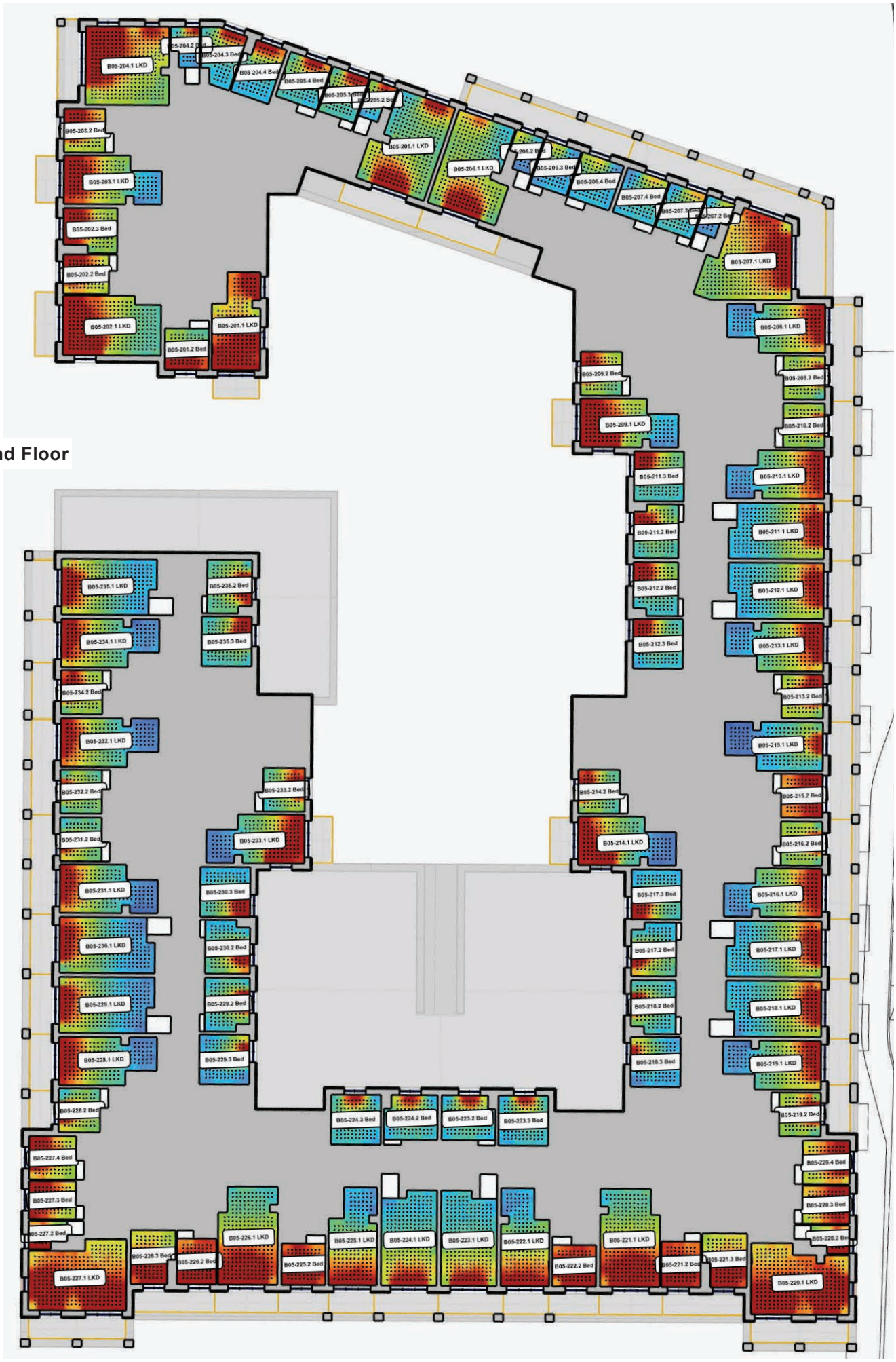


Figure 43: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5

Third Floor

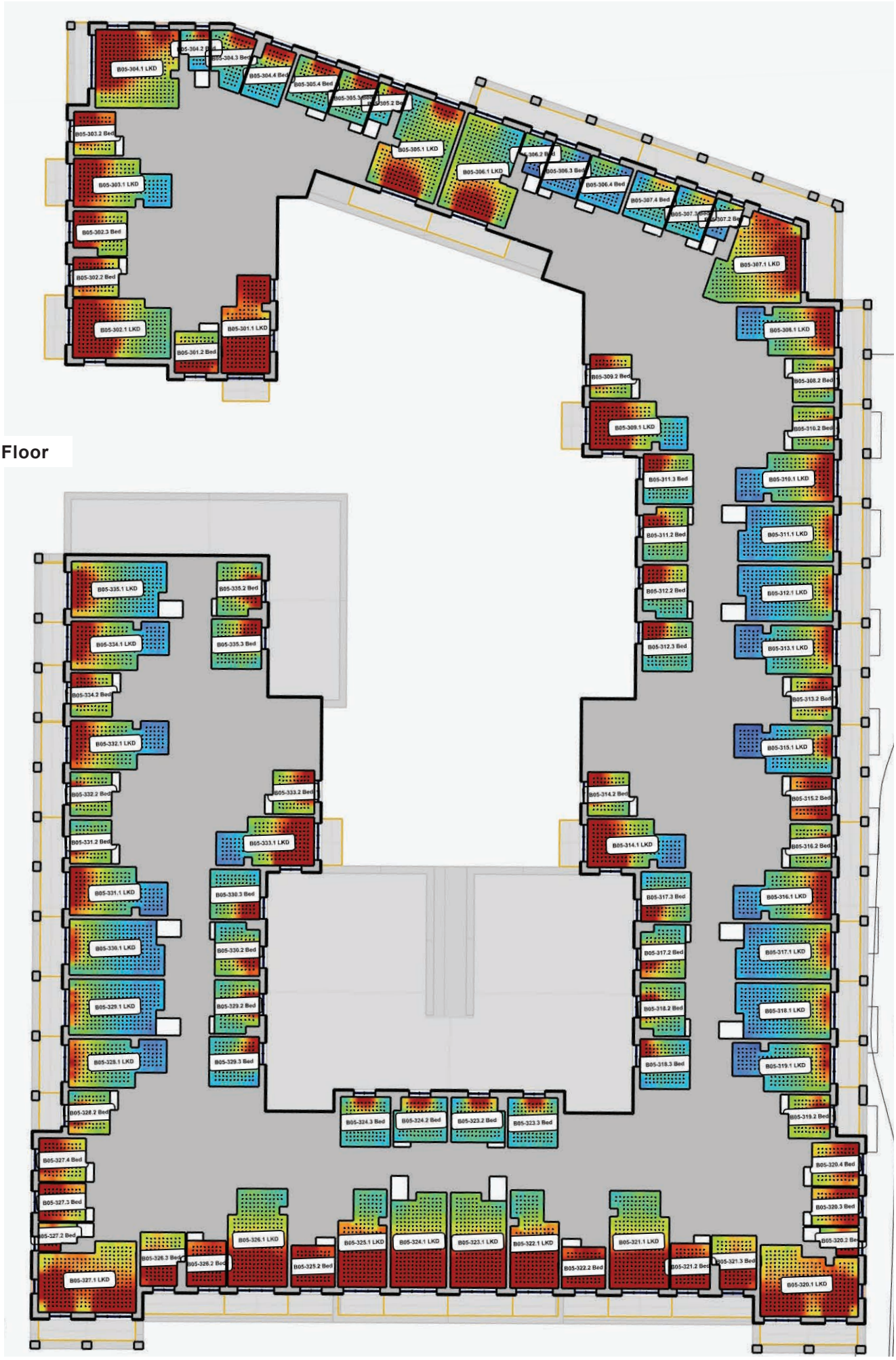


Figure 44: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 5

Fourth Floor

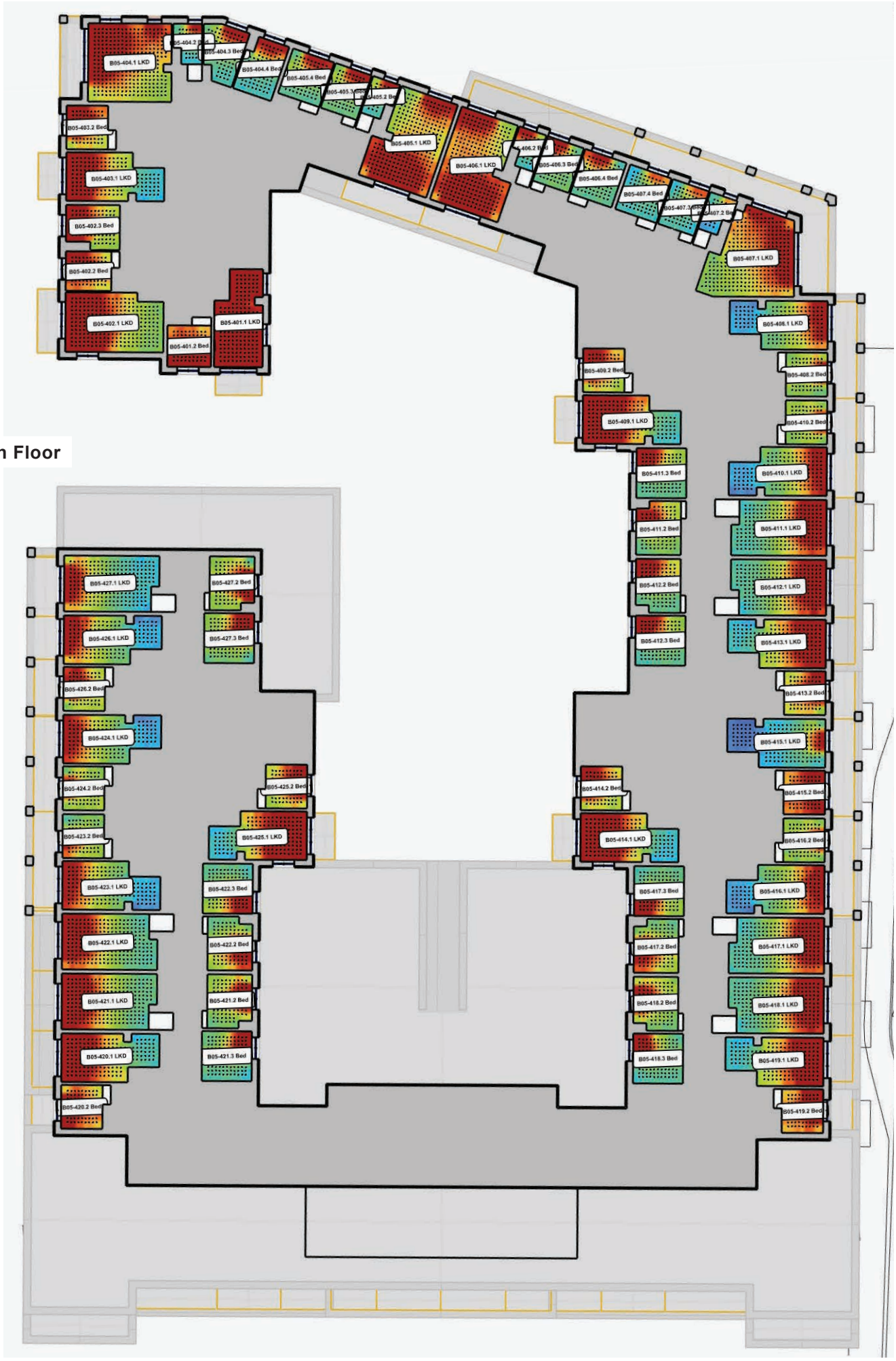


Figure 45: Site 5 - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Site 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
B05-101.1	LKD	22.8	181	Medium	68.3%	55.7%	43.2%	Medium	80.6%	55.8%	40.4%
B05-101.2	Bed	9.8	81	Minimum	54.4%	36.6%	20.1%	Minimum	73.9%	41.1%	20.8%
B05-102.1	LKD	30.2	274	Minimum	64.1%	49.2%	32.4%	Minimum	71.0%	37.0%	11.1%
B05-102.2	Bed	9.7	80	Medium	70.5%	54.6%	37.0%	Medium	82.2%	57.2%	36.0%
B05-102.3	Bed	12.0	96	Minimum	63.5%	45.9%	26.7%	Minimum	78.5%	48.0%	25.5%
B05-103.1	LKD	22.7	181	Minimum	60.3%	41.0%	21.5%	Minimum	60.2%	11.8%	4.9%
B05-103.2	Bed	9.8	81	Medium	68.5%	52.8%	35.1%	Medium	82.1%	57.8%	35.7%
B05-104.1	LKD	34.9	334	Medium	67.5%	52.0%	35.4%	Medium	78.7%	50.5%	28.9%
B05-104.2	Bed	5.6	40	Fail	40.8%	11.6%	0.0%	Minimum	56.8%	3.7%	0.0%
B05-104.3	Bed	11.1	85	Fail	45.9%	19.5%	1.4%	Minimum	63.8%	22.0%	0.3%
B05-104.4	Bed	11.6	88	Fail	37.2%	9.7%	0.0%	Minimum	63.3%	16.1%	0.0%
B05-105.1	LKD	33.8	302	Fail	40.4%	15.5%	5.7%	Minimum	64.7%	24.3%	2.5%
B05-105.2	Bed	5.2	32	Minimum	59.2%	38.4%	7.8%	Minimum	67.7%	19.2%	0.0%
B05-105.3	Bed	9.7	80	Minimum	53.6%	29.5%	4.7%	Minimum	71.4%	31.7%	1.7%
B05-105.4	Bed	11.1	90	Fail	48.4%	22.3%	2.0%	Minimum	68.9%	27.0%	0.9%
B05-106.1	LKD	33.8	302	Fail	43.2%	17.6%	6.8%	Minimum	65.0%	23.7%	3.0%
B05-106.2	Bed	5.2	32	Fail	32.9%	1.1%	0.0%	Minimum	53.1%	0.5%	0.0%
B05-106.3	Bed	9.7	80	Fail	34.2%	4.9%	0.0%	Minimum	63.1%	7.3%	0.0%
B05-106.4	Bed	11.1	90	Fail	39.8%	8.5%	0.0%	Minimum	66.2%	14.6%	0.0%
B05-107.1	LKD	36.1	342	Medium	70.6%	54.4%	35.7%	Medium	81.6%	53.5%	27.9%
B05-107.2	Bed	5.2	32	Fail	37.4%	2.4%	0.4%	Minimum	60.3%	1.7%	0.0%
B05-107.3	Bed	9.7	80	Fail	47.8%	14.8%	0.6%	Minimum	72.0%	26.8%	0.4%
B05-107.4	Bed	11.1	90	Fail	42.9%	8.9%	0.0%	Minimum	68.2%	16.6%	0.0%
B05-108.1	LKD	22.7	181	Minimum	54.6%	31.1%	14.2%	Minimum	57.8%	10.2%	4.0%
B05-108.2	Bed	9.8	81	Minimum	60.1%	38.3%	20.1%	Minimum	79.6%	48.8%	23.6%
B05-109.1	LKD	22.7	181	Minimum	63.2%	47.9%	30.3%	Minimum	56.1%	11.7%	5.3%
B05-109.2	Bed	9.8	81	Minimum	57.2%	39.2%	20.0%	Minimum	74.3%	41.3%	18.7%
B05-110.1	LKD	22.7	181	Minimum	53.3%	30.0%	12.9%	Minimum	58.6%	11.0%	4.6%
B05-110.2	Bed	9.8	81	Minimum	59.8%	38.3%	19.7%	Minimum	79.7%	49.5%	25.7%
B05-111.1	LKD	27.6	252	Fail	48.1%	23.7%	10.0%	Minimum	65.8%	18.8%	5.7%
B05-111.2	Bed	12.5	102	Fail	49.4%	27.9%	10.6%	Minimum	68.8%	29.3%	9.5%
B05-111.3	Bed	13.4	121	Fail	39.5%	20.0%	8.3%	Minimum	59.8%	21.0%	7.2%
B05-112.1	LKD	27.6	252	Fail	47.3%	23.3%	9.5%	Minimum	65.9%	19.0%	5.7%
B05-112.2	Bed	12.5	102	Fail	49.0%	26.6%	8.5%	Minimum	66.8%	24.6%	6.4%
B05-112.3	Bed	13.4	121	Fail	41.1%	15.6%	4.9%	Minimum	64.2%	20.8%	4.6%
B05-113.1	LKD	22.7	181	Minimum	53.9%	31.2%	14.8%	Minimum	58.9%	11.8%	4.5%
B05-113.2	Bed	9.8	81	Minimum	66.6%	47.9%	30.3%	Medium	82.7%	57.2%	33.8%
B05-114.1	LKD	22.7	181	Fail	45.8%	27.6%	10.5%	Fail	37.9%	5.0%	0.1%
B05-114.2	Bed	9.8	81	Fail	49.0%	29.0%	8.4%	Minimum	68.2%	31.4%	6.4%
B05-115.1	LKD	22.7	181	Fail	30.3%	10.9%	4.7%	Fail	37.8%	3.9%	1.2%
B05-115.2	Bed	9.8	81	Medium	74.3%	59.8%	43.3%	High	85.8%	68.3%	51.6%
B05-116.1	LKD	22.7	181	Minimum	53.0%	29.7%	12.7%	Minimum	59.4%	10.7%	4.1%
B05-116.2	Bed	9.8	81	Minimum	59.7%	37.9%	19.7%	Minimum	79.8%	49.4%	24.7%
B05-117.1	LKD	27.6	252	Fail	47.2%	23.4%	10.0%	Minimum	66.3%	20.0%	6.0%
B05-117.2	Bed	12.5	102	Fail	41.0%	18.1%	5.8%	Minimum	61.7%	18.3%	4.1%
B05-117.3	Bed	13.4	121	Fail	30.5%	12.1%	5.3%	Minimum	55.6%	17.1%	5.2%
B05-118.1	LKD	27.6	252	Fail	47.9%	23.7%	10.1%	Minimum	66.4%	19.7%	5.9%
B05-118.2	Bed	12.5	102	Fail	37.3%	12.0%	2.9%	Minimum	64.6%	18.3%	2.5%
B05-118.3	Bed	13.4	121	Fail	24.3%	1.6%	1.0%	Minimum	55.9%	6.3%	0.8%
B05-119.1	LKD	22.7	181	Minimum	51.5%	27.8%	11.9%	Minimum	58.8%	10.8%	3.9%
B05-119.2	Bed	9.8	81	Minimum	59.5%	37.2%	21.9%	Minimum	79.3%	46.5%	22.7%

Site 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
B05-120.1	LKD	33.8	302	Medium	72.5%	60.5%	48.4%	Medium	82.9%	62.8%	47.5%
B05-120.2	Bed	5.2	32	Medium	69.7%	54.1%	37.2%	Medium	80.9%	54.1%	29.6%
B05-120.3	Bed	9.7	80	Medium	73.4%	58.7%	41.5%	Medium	84.5%	63.7%	44.7%
B05-120.4	Bed	11.1	90	Medium	70.8%	55.0%	37.9%	Medium	83.9%	61.6%	41.0%
B05-121.1	LKD	29.9	266	Minimum	62.0%	45.8%	33.6%	Minimum	72.0%	41.5%	19.3%
B05-121.2	Bed	9.7	80	High	74.5%	61.9%	51.3%	High	83.4%	64.6%	50.1%
B05-121.3	Bed	12.0	96	Medium	65.9%	51.2%	37.1%	Medium	78.6%	52.6%	36.1%
B05-122.1	LKD	22.7	181	Minimum	62.5%	46.6%	34.2%	Minimum	65.9%	31.6%	7.7%
B05-122.2	Bed	9.8	81	High	74.0%	61.6%	50.1%	High	84.8%	67.1%	52.3%
B05-123.1	LKD	27.6	252	Minimum	56.2%	42.3%	24.7%	Minimum	69.2%	37.0%	15.1%
B05-123.2	Bed	12.5	102	Fail	43.9%	12.5%	0.0%	Minimum	69.0%	20.8%	0.4%
B05-123.3	Bed	13.4	121	Fail	39.4%	10.2%	0.0%	Minimum	66.4%	18.3%	0.1%
B05-124.1	LKD	27.6	252	Minimum	55.9%	41.8%	24.5%	Minimum	69.5%	37.7%	15.5%
B05-124.2	Bed	12.5	102	Fail	45.0%	13.7%	0.0%	Minimum	68.0%	18.8%	0.0%
B05-124.3	Bed	13.4	121	Fail	39.9%	9.4%	0.0%	Minimum	65.7%	15.4%	0.0%
B05-125.1	LKD	22.7	181	Minimum	62.6%	47.3%	35.5%	Minimum	65.9%	30.7%	7.0%
B05-125.2	Bed	9.8	81	High	74.2%	61.6%	50.2%	High	84.3%	66.0%	51.1%
B05-126.1	LKD	29.9	266	Minimum	61.5%	45.4%	33.2%	Minimum	71.9%	41.8%	19.5%
B05-126.2	Bed	9.7	80	High	74.9%	62.7%	51.2%	High	84.3%	66.4%	51.3%
B05-126.3	Bed	12.0	96	Medium	65.2%	50.8%	36.9%	Medium	79.1%	53.0%	36.6%
B05-127.1	LKD	34.1	310	Medium	70.9%	59.2%	46.5%	Medium	82.6%	61.8%	46.1%
B05-127.2	Bed	5.2	32	Medium	68.1%	51.8%	34.0%	Minimum	78.3%	47.6%	24.2%
B05-127.3	Bed	9.7	80	Medium	70.3%	55.5%	38.3%	Medium	81.5%	56.7%	35.4%
B05-127.4	Bed	11.1	90	Medium	67.4%	51.3%	33.9%	Medium	80.3%	53.6%	31.4%
B05-128.1	LKD	22.7	181	Fail	46.6%	21.9%	7.5%	Fail	43.0%	3.3%	0.3%
B05-128.2	Bed	9.8	81	Minimum	51.9%	30.2%	12.0%	Minimum	73.2%	32.7%	11.4%
B05-129.1	LKD	27.6	252	Fail	35.0%	10.0%	4.5%	Fail	48.4%	4.3%	1.1%
B05-129.2	Bed	12.5	102	Fail	38.6%	14.2%	2.6%	Minimum	63.4%	19.0%	2.5%
B05-129.3	Bed	13.4	121	Fail	24.3%	1.7%	1.1%	Minimum	57.1%	7.4%	1.0%
B05-130.1	LKD	27.6	252	Fail	34.5%	9.8%	4.6%	Fail	46.9%	4.5%	0.9%
B05-130.2	Bed	12.5	102	Fail	40.4%	17.4%	5.3%	Minimum	60.9%	18.9%	4.3%
B05-130.3	Bed	13.4	121	Fail	30.0%	11.9%	5.2%	Minimum	53.5%	15.8%	4.5%
B05-131.1	LKD	22.7	181	Fail	43.6%	17.8%	6.7%	Fail	36.8%	3.6%	0.6%
B05-131.2	Bed	9.8	81	Fail	48.4%	23.3%	8.7%	Minimum	70.0%	29.4%	8.7%
B05-132.1	LKD	22.7	181	Fail	42.7%	16.7%	7.0%	Fail	38.9%	2.9%	0.0%
B05-132.2	Bed	9.8	81	Fail	49.2%	25.0%	8.8%	Minimum	72.3%	32.1%	10.0%
B05-133.1	LKD	22.7	181	Fail	45.2%	27.1%	10.0%	Fail	37.9%	5.0%	0.1%
B05-133.2	Bed	9.8	81	Fail	48.9%	29.7%	8.9%	Minimum	68.3%	32.6%	7.4%
B05-134.1	LKD	22.7	181	Fail	48.2%	23.0%	9.6%	Minimum	50.5%	6.2%	1.6%
B05-134.2	Bed	9.8	81	Minimum	62.5%	42.9%	23.4%	Minimum	79.1%	47.9%	23.9%
B05-135.1	LKD	27.6	252	Fail	41.6%	15.4%	6.7%	Minimum	57.2%	8.4%	3.3%
B05-135.2	Bed	12.5	102	Minimum	51.1%	30.3%	12.6%	Minimum	72.7%	33.9%	12.8%
B05-135.3	Bed	13.4	121	Fail	44.8%	20.1%	5.4%	Minimum	67.4%	24.1%	6.0%
B05-201.1	LKD	22.8	181	High	74.2%	61.3%	50.3%	Medium	83.4%	62.0%	47.6%
B05-201.2	Bed	9.8	81	Minimum	60.3%	44.6%	28.3%	Minimum	77.1%	46.6%	27.0%
B05-202.1	LKD	30.2	274	Medium	66.4%	51.8%	36.3%	Minimum	74.5%	43.2%	18.1%
B05-202.2	Bed	9.7	80	Medium	71.5%	56.6%	39.4%	Medium	83.4%	61.3%	41.6%
B05-202.3	Bed	12.0	96	Minimum	65.4%	48.9%	30.1%	Medium	79.9%	51.8%	28.4%
B05-203.1	LKD	22.7	181	Minimum	62.0%	44.3%	23.9%	Minimum	63.2%	14.3%	5.4%
B05-203.2	Bed	9.8	81	Medium	70.6%	56.1%	39.5%	Medium	82.7%	60.5%	39.8%
B05-204.1	LKD	34.9	334	Medium	71.3%	57.6%	42.0%	Medium	80.2%	55.8%	35.1%

Site 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
B05-204.2	Bed	5.6	40	Fail	48.9%	22.2%	0.8%	Minimum	61.4%	15.2%	0.0%
B05-204.3	Bed	11.1	85	Minimum	51.9%	29.6%	5.9%	Minimum	68.2%	30.0%	2.6%
B05-204.4	Bed	11.6	88	Fail	45.2%	18.0%	1.1%	Minimum	67.2%	25.9%	0.5%
B05-205.1	LKD	33.8	302	Minimum	55.8%	38.6%	18.6%	Minimum	74.9%	42.9%	14.4%
B05-205.2	Bed	5.2	32	Minimum	62.6%	43.0%	17.0%	Minimum	69.9%	28.9%	1.1%
B05-205.3	Bed	9.7	80	Minimum	58.1%	37.4%	13.4%	Minimum	74.9%	39.7%	9.9%
B05-205.4	Bed	11.1	90	Minimum	55.3%	32.3%	7.9%	Minimum	72.3%	34.5%	3.7%
B05-206.1	LKD	33.8	302	Minimum	57.7%	40.4%	22.1%	Minimum	73.7%	41.3%	10.9%
B05-206.2	Bed	5.2	32	Fail	37.2%	4.3%	0.0%	Minimum	58.3%	1.1%	0.0%
B05-206.3	Bed	9.7	80	Fail	39.5%	7.7%	0.0%	Minimum	66.7%	16.8%	0.0%
B05-206.4	Bed	11.1	90	Fail	44.6%	13.2%	0.0%	Minimum	69.5%	21.8%	0.0%
B05-207.1	LKD	36.1	342	Medium	70.9%	55.6%	37.7%	Medium	81.8%	54.2%	30.7%
B05-207.2	Bed	5.2	32	Fail	41.6%	6.5%	0.4%	Minimum	63.6%	5.5%	0.0%
B05-207.3	Bed	9.7	80	Fail	49.7%	19.1%	0.5%	Minimum	74.4%	32.2%	0.3%
B05-207.4	Bed	11.1	90	Fail	47.3%	15.6%	0.0%	Minimum	70.6%	22.5%	0.0%
B05-208.1	LKD	22.7	181	Minimum	55.8%	32.9%	14.6%	Minimum	61.2%	11.3%	4.7%
B05-208.2	Bed	9.8	81	Minimum	60.5%	39.8%	20.6%	Medium	80.2%	51.1%	26.2%
B05-209.1	LKD	22.7	181	Medium	66.8%	53.6%	37.8%	Minimum	62.0%	19.9%	7.1%
B05-209.2	Bed	9.8	81	Minimum	63.8%	47.2%	29.3%	Minimum	77.9%	49.3%	27.8%
B05-210.1	LKD	22.7	181	Minimum	55.3%	32.3%	13.5%	Minimum	57.8%	10.5%	4.1%
B05-210.2	Bed	9.8	81	Minimum	60.2%	39.6%	20.0%	Medium	80.0%	51.6%	26.4%
B05-211.1	LKD	27.6	252	Fail	48.4%	24.0%	9.5%	Minimum	66.2%	19.8%	5.7%
B05-211.2	Bed	12.5	102	Minimum	54.9%	34.7%	16.1%	Minimum	73.2%	36.7%	14.7%
B05-211.3	Bed	13.4	121	Fail	44.5%	24.0%	11.8%	Minimum	65.9%	28.1%	11.1%
B05-212.1	LKD	27.6	252	Fail	48.4%	23.2%	9.3%	Minimum	66.1%	19.5%	5.7%
B05-212.2	Bed	12.5	102	Minimum	55.0%	34.8%	14.4%	Minimum	70.3%	32.0%	9.5%
B05-212.3	Bed	13.4	121	Fail	47.7%	24.7%	7.0%	Minimum	69.2%	28.5%	6.3%
B05-213.1	LKD	22.7	181	Minimum	55.8%	34.2%	16.7%	Minimum	59.8%	12.0%	4.4%
B05-213.2	Bed	9.8	81	Medium	68.1%	50.8%	33.4%	Medium	82.8%	58.3%	36.2%
B05-214.1	LKD	22.7	181	Minimum	55.7%	39.0%	22.2%	Fail	47.0%	6.5%	0.2%
B05-214.2	Bed	9.8	81	Minimum	58.1%	41.6%	21.9%	Minimum	76.3%	42.0%	18.9%
B05-215.1	LKD	22.7	181	Fail	32.1%	10.4%	4.7%	Fail	39.8%	4.7%	1.1%
B05-215.2	Bed	9.8	81	Medium	74.7%	60.5%	45.0%	High	85.8%	68.5%	52.6%
B05-216.1	LKD	22.7	181	Minimum	53.6%	30.2%	12.7%	Minimum	57.9%	10.2%	4.1%
B05-216.2	Bed	9.8	81	Minimum	60.2%	39.2%	19.9%	Medium	80.2%	50.8%	25.8%
B05-217.1	LKD	27.6	252	Fail	49.2%	24.1%	9.7%	Minimum	66.8%	20.3%	5.8%
B05-217.2	Bed	12.5	102	Fail	50.0%	28.7%	11.8%	Minimum	67.4%	25.3%	6.7%
B05-217.3	Bed	13.4	121	Fail	41.9%	20.1%	7.5%	Minimum	61.1%	21.1%	6.1%
B05-218.1	LKD	27.6	252	Fail	49.1%	24.2%	10.0%	Minimum	66.5%	20.3%	5.5%
B05-218.2	Bed	12.5	102	Fail	48.2%	24.4%	7.7%	Minimum	70.7%	30.2%	6.6%
B05-218.3	Bed	13.4	121	Fail	38.4%	10.0%	1.9%	Minimum	65.0%	15.5%	1.4%
B05-219.1	LKD	22.7	181	Minimum	52.9%	29.3%	11.8%	Minimum	57.3%	9.6%	3.7%
B05-219.2	Bed	9.8	81	Minimum	62.8%	42.5%	25.0%	Minimum	80.0%	49.5%	25.9%
B05-220.1	LKD	33.8	302	Medium	72.7%	60.8%	48.8%	Medium	83.1%	63.7%	49.0%
B05-220.2	Bed	5.2	32	Medium	71.5%	56.5%	40.6%	Medium	80.5%	53.8%	29.4%
B05-220.3	Bed	9.7	80	Medium	73.8%	59.7%	43.9%	Medium	84.8%	65.3%	47.9%
B05-220.4	Bed	11.1	90	Medium	71.7%	56.7%	40.0%	Medium	83.8%	61.7%	42.3%
B05-221.1	LKD	29.9	266	Minimum	61.7%	45.4%	33.2%	Minimum	72.2%	42.4%	19.8%
B05-221.2	Bed	9.7	80	High	74.7%	62.4%	51.7%	High	84.5%	66.5%	51.9%
B05-221.3	Bed	12.0	96	Medium	66.2%	52.2%	38.0%	Medium	80.6%	55.6%	39.2%
B05-222.1	LKD	22.7	181	Minimum	54.8%	40.5%	21.5%	Minimum	60.1%	18.0%	3.9%

Site 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
B05-222.2	Bed	9.8	81	High	74.4%	62.1%	50.5%	High	85.0%	67.6%	53.3%
B05-223.1	LKD	27.6	252	Fail	46.1%	30.3%	10.0%	Minimum	65.6%	30.3%	6.2%
B05-223.2	Bed	12.5	102	Minimum	52.1%	27.6%	5.1%	Minimum	74.9%	32.4%	4.8%
B05-223.3	Bed	13.4	121	Fail	47.0%	19.9%	2.0%	Minimum	70.7%	26.5%	2.5%
B05-224.1	LKD	27.6	252	Fail	47.5%	31.1%	10.7%	Minimum	65.4%	29.7%	6.0%
B05-224.2	Bed	12.5	102	Minimum	51.2%	27.0%	4.5%	Minimum	74.9%	32.4%	5.3%
B05-224.3	Bed	13.4	121	Fail	47.5%	20.9%	1.9%	Minimum	71.6%	27.7%	3.8%
B05-225.1	LKD	22.7	181	Minimum	54.4%	40.4%	20.7%	Minimum	61.2%	19.9%	3.9%
B05-225.2	Bed	9.8	81	High	74.6%	62.0%	50.9%	High	84.5%	66.7%	52.2%
B05-226.1	LKD	29.9	266	Minimum	62.7%	46.6%	33.4%	Minimum	72.4%	42.1%	19.5%
B05-226.2	Bed	9.7	80	High	74.6%	62.7%	51.4%	High	84.6%	66.6%	52.4%
B05-226.3	Bed	12.0	96	Medium	66.3%	52.2%	38.1%	Medium	79.8%	54.2%	37.8%
B05-227.1	LKD	34.1	310	Medium	71.8%	59.8%	47.4%	Medium	82.7%	62.6%	47.3%
B05-227.2	Bed	5.2	32	Medium	69.0%	54.6%	37.4%	Medium	79.8%	50.8%	26.9%
B05-227.3	Bed	9.7	80	Medium	73.0%	58.8%	43.7%	Medium	83.4%	61.8%	43.4%
B05-227.4	Bed	11.1	90	Medium	70.5%	55.4%	38.6%	Medium	82.0%	57.8%	38.0%
B05-228.1	LKD	22.7	181	Minimum	53.3%	30.9%	11.1%	Minimum	53.4%	5.7%	2.2%
B05-228.2	Bed	9.8	81	Minimum	58.5%	39.0%	18.2%	Minimum	77.4%	42.9%	19.4%
B05-229.1	LKD	27.6	252	Fail	43.2%	16.4%	6.3%	Minimum	57.7%	7.7%	3.0%
B05-229.2	Bed	12.5	102	Fail	48.5%	25.5%	8.3%	Minimum	71.2%	29.5%	7.2%
B05-229.3	Bed	13.4	121	Fail	38.5%	11.1%	2.1%	Minimum	64.1%	15.4%	1.4%
B05-230.1	LKD	27.6	252	Fail	43.6%	15.8%	6.5%	Minimum	58.4%	8.4%	3.3%
B05-230.2	Bed	12.5	102	Fail	49.8%	28.8%	12.1%	Minimum	66.9%	24.5%	6.1%
B05-230.3	Bed	13.4	121	Fail	41.3%	19.7%	6.8%	Minimum	61.7%	21.7%	5.7%
B05-231.1	LKD	22.7	181	Fail	49.5%	24.8%	8.9%	Minimum	50.1%	5.5%	1.7%
B05-231.2	Bed	9.8	81	Minimum	54.9%	32.2%	12.0%	Minimum	74.1%	38.5%	12.5%
B05-232.1	LKD	22.7	181	Minimum	51.5%	26.5%	9.4%	Minimum	50.8%	5.5%	2.6%
B05-232.2	Bed	9.8	81	Minimum	55.3%	33.2%	12.5%	Minimum	77.4%	43.9%	17.8%
B05-233.1	LKD	22.7	181	Minimum	56.1%	40.3%	22.9%	Fail	47.3%	6.6%	0.4%
B05-233.2	Bed	9.8	81	Minimum	59.0%	42.4%	22.6%	Minimum	76.4%	42.6%	18.4%
B05-234.1	LKD	22.7	181	Minimum	53.8%	30.0%	11.9%	Minimum	57.0%	8.2%	2.9%
B05-234.2	Bed	9.8	81	Minimum	65.8%	47.5%	28.3%	Medium	80.6%	53.1%	30.0%
B05-235.1	LKD	27.6	252	Fail	48.3%	21.9%	8.6%	Minimum	65.0%	15.1%	4.0%
B05-235.2	Bed	12.5	102	Minimum	55.0%	36.6%	15.9%	Minimum	76.8%	43.4%	16.6%
B05-235.3	Bed	13.4	121	Minimum	50.6%	30.4%	8.3%	Minimum	72.7%	35.0%	8.1%
B05-301.1	LKD	22.8	181	High	78.1%	66.6%	56.0%	High	85.5%	67.5%	54.2%
B05-301.2	Bed	9.8	81	Medium	68.4%	54.6%	40.9%	Medium	80.1%	54.2%	36.4%
B05-302.1	LKD	30.2	274	Medium	68.7%	55.2%	40.9%	Minimum	77.7%	49.5%	25.7%
B05-302.2	Bed	9.7	80	Medium	73.1%	58.6%	43.6%	Medium	84.5%	63.9%	45.6%
B05-302.3	Bed	12.0	96	Medium	66.5%	50.8%	32.2%	Medium	81.3%	56.3%	33.9%
B05-303.1	LKD	22.7	181	Minimum	64.5%	47.9%	26.9%	Minimum	67.0%	20.1%	6.0%
B05-303.2	Bed	9.8	81	Medium	73.3%	59.1%	44.0%	Medium	84.6%	64.2%	46.0%
B05-304.1	LKD	34.9	334	Medium	74.3%	60.6%	46.6%	Medium	81.7%	59.0%	39.8%
B05-304.2	Bed	5.6	40	Minimum	55.6%	32.8%	5.0%	Minimum	67.7%	24.3%	0.8%
B05-304.3	Bed	11.1	85	Minimum	58.7%	38.7%	13.6%	Minimum	71.9%	36.3%	4.9%
B05-304.4	Bed	11.6	88	Minimum	52.2%	28.4%	6.1%	Minimum	71.3%	33.4%	2.8%
B05-305.1	LKD	33.8	302	Minimum	61.4%	45.5%	29.2%	Minimum	77.0%	48.1%	25.6%
B05-305.2	Bed	5.2	32	Minimum	66.2%	47.9%	26.6%	Minimum	75.5%	39.5%	6.1%
B05-305.3	Bed	9.7	80	Minimum	62.4%	43.2%	18.8%	Minimum	77.9%	46.8%	18.9%
B05-305.4	Bed	11.1	90	Minimum	59.5%	39.3%	14.3%	Minimum	76.5%	42.8%	14.4%

Site 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
B05-306.1	LKD	33.8	302	Minimum	58.6%	41.7%	24.9%	Minimum	74.6%	42.9%	11.7%
B05-306.2	Bed	5.2	32	Fail	24.0%	1.2%	0.0%	Fail	48.7%	0.0%	0.0%
B05-306.3	Bed	9.7	80	Fail	27.6%	2.2%	0.0%	Minimum	59.9%	2.6%	0.0%
B05-306.4	Bed	11.1	90	Fail	34.1%	5.2%	0.0%	Minimum	63.8%	8.2%	0.0%
B05-307.1	LKD	36.1	342	Medium	71.2%	56.2%	39.0%	Medium	81.8%	54.6%	31.3%
B05-307.2	Bed	5.2	32	Fail	44.2%	8.9%	0.4%	Minimum	64.8%	6.2%	0.0%
B05-307.3	Bed	9.7	80	Minimum	50.4%	20.6%	0.5%	Minimum	74.8%	34.3%	0.6%
B05-307.4	Bed	11.1	90	Fail	49.4%	18.5%	0.0%	Minimum	72.3%	28.6%	0.1%
B05-308.1	LKD	22.7	181	Minimum	56.0%	34.3%	14.5%	Minimum	60.5%	11.1%	4.3%
B05-308.2	Bed	9.8	81	Minimum	61.1%	40.8%	20.7%	Medium	80.6%	52.0%	26.2%
B05-309.1	LKD	22.7	181	Medium	72.5%	58.6%	45.3%	Minimum	66.1%	28.0%	9.1%
B05-309.2	Bed	9.8	81	Medium	67.6%	51.8%	35.8%	Medium	81.5%	56.1%	37.2%
B05-310.1	LKD	22.7	181	Minimum	54.0%	30.8%	12.0%	Minimum	59.0%	9.7%	3.9%
B05-310.2	Bed	9.8	81	Minimum	61.5%	41.4%	21.5%	Medium	79.5%	50.2%	25.5%
B05-311.1	LKD	27.6	252	Fail	36.3%	11.7%	5.5%	Minimum	61.4%	11.1%	3.7%
B05-311.2	Bed	12.5	102	Minimum	60.4%	41.5%	21.6%	Minimum	76.6%	44.3%	22.0%
B05-311.3	Bed	13.4	121	Minimum	50.1%	29.7%	13.6%	Minimum	67.8%	31.2%	13.1%
B05-312.1	LKD	27.6	252	Fail	34.3%	11.2%	5.4%	Minimum	60.8%	10.7%	3.5%
B05-312.2	Bed	12.5	102	Minimum	58.8%	40.7%	19.5%	Minimum	73.8%	38.3%	14.4%
B05-312.3	Bed	13.4	121	Minimum	53.3%	31.5%	10.3%	Minimum	73.7%	35.5%	11.6%
B05-313.1	LKD	22.7	181	Fail	46.5%	22.3%	8.1%	Minimum	55.0%	7.9%	2.8%
B05-313.2	Bed	9.8	81	Medium	68.9%	52.5%	35.6%	Medium	83.3%	60.2%	39.1%
B05-314.1	LKD	22.7	181	Medium	67.0%	52.1%	37.1%	Minimum	56.8%	9.7%	2.7%
B05-314.2	Bed	9.8	81	Minimum	64.7%	47.6%	30.6%	Medium	80.6%	52.6%	31.1%
B05-315.1	LKD	22.7	181	Fail	30.9%	10.4%	4.7%	Fail	41.3%	4.5%	1.2%
B05-315.2	Bed	9.8	81	Medium	75.1%	61.4%	46.3%	High	85.9%	68.7%	52.6%
B05-316.1	LKD	22.7	181	Minimum	54.3%	30.6%	11.8%	Minimum	57.7%	9.6%	3.9%
B05-316.2	Bed	9.8	81	Minimum	60.7%	40.5%	20.5%	Medium	79.8%	51.2%	25.4%
B05-317.1	LKD	27.6	252	Fail	37.3%	12.4%	5.5%	Minimum	62.5%	11.7%	3.7%
B05-317.2	Bed	12.5	102	Minimum	57.7%	39.9%	20.0%	Minimum	75.4%	37.7%	14.8%
B05-317.3	Bed	13.4	121	Fail	49.9%	28.7%	11.5%	Minimum	69.1%	29.0%	9.5%
B05-318.1	LKD	27.6	252	Fail	36.6%	11.9%	5.4%	Minimum	61.6%	11.2%	3.8%
B05-318.2	Bed	12.5	102	Minimum	55.8%	35.8%	15.6%	Minimum	77.4%	41.0%	16.3%
B05-318.3	Bed	13.4	121	Fail	45.5%	19.5%	4.4%	Minimum	70.8%	27.0%	3.5%
B05-319.1	LKD	22.7	181	Fail	44.6%	19.1%	7.3%	Minimum	53.4%	6.5%	2.7%
B05-319.2	Bed	9.8	81	Minimum	65.0%	46.5%	28.1%	Medium	82.1%	54.2%	32.6%
B05-320.1	LKD	33.8	302	Medium	70.3%	57.7%	45.5%	Medium	82.6%	62.2%	47.0%
B05-320.2	Bed	5.2	32	Medium	72.4%	57.5%	41.2%	Medium	80.5%	53.7%	30.0%
B05-320.3	Bed	9.7	80	Medium	74.3%	60.3%	45.9%	Medium	84.8%	65.4%	48.1%
B05-320.4	Bed	11.1	90	Medium	71.5%	56.3%	40.6%	Medium	83.8%	62.3%	43.0%
B05-321.1	LKD	29.9	266	Medium	65.9%	51.6%	41.6%	Minimum	75.1%	45.2%	29.8%
B05-321.2	Bed	9.7	80	High	75.5%	63.9%	52.9%	High	84.7%	66.9%	52.9%
B05-321.3	Bed	12.0	96	Medium	67.0%	53.6%	39.7%	Medium	81.2%	56.5%	40.2%
B05-322.1	LKD	22.7	181	Medium	72.2%	59.5%	47.7%	Minimum	74.2%	43.8%	23.8%
B05-322.2	Bed	9.8	81	High	76.2%	65.6%	54.5%	High	85.8%	69.2%	55.4%
B05-323.1	LKD	27.6	252	Medium	67.5%	53.8%	42.9%	Minimum	76.7%	48.9%	32.5%
B05-323.2	Bed	12.5	102	Minimum	55.5%	33.3%	7.7%	Minimum	77.7%	40.5%	9.3%
B05-323.3	Bed	13.4	121	Minimum	52.7%	28.3%	5.5%	Minimum	75.0%	34.2%	6.6%
B05-324.1	LKD	27.6	252	Medium	66.8%	52.9%	42.4%	Minimum	76.5%	48.6%	32.1%
B05-324.2	Bed	12.5	102	Minimum	55.6%	32.9%	7.2%	Minimum	77.7%	41.2%	8.6%

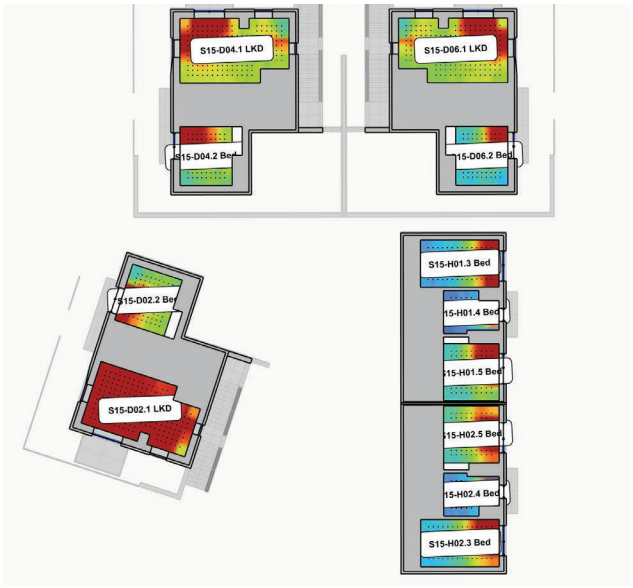
Site 5 - EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
B05-324.3	Bed	13.4	121	Minimum	53.6%	30.1%	6.2%	Minimum	75.8%	35.8%	7.3%
B05-325.1	LKD	22.7	181	Medium	72.7%	59.8%	48.4%	Minimum	73.3%	43.0%	22.7%
B05-325.2	Bed	9.8	81	High	76.2%	65.6%	54.6%	High	85.8%	69.1%	55.6%
B05-326.1	LKD	29.9	266	Medium	66.0%	51.9%	41.7%	Minimum	75.2%	45.4%	30.1%
B05-326.2	Bed	9.7	80	High	75.7%	64.1%	52.5%	High	84.8%	67.1%	52.8%
B05-326.3	Bed	12.0	96	Medium	67.1%	53.1%	39.4%	Medium	80.3%	55.0%	38.5%
B05-327.1	LKD	34.1	310	Medium	69.3%	56.8%	45.0%	Medium	82.6%	62.4%	46.6%
B05-327.2	Bed	5.2	32	Medium	71.5%	56.8%	40.5%	Medium	80.9%	54.9%	31.9%
B05-327.3	Bed	9.7	80	Medium	75.5%	62.4%	48.1%	Medium	85.5%	65.3%	47.9%
B05-327.4	Bed	11.1	90	Medium	73.2%	58.6%	43.7%	Medium	84.1%	62.7%	44.7%
B05-328.1	LKD	22.7	181	Fail	49.5%	23.6%	7.5%	Minimum	59.3%	7.2%	2.1%
B05-328.2	Bed	9.8	81	Minimum	63.6%	45.6%	25.3%	Minimum	79.1%	48.6%	24.1%
B05-329.1	LKD	27.6	252	Fail	38.6%	10.3%	5.4%	Minimum	62.0%	8.7%	3.3%
B05-329.2	Bed	12.5	102	Minimum	57.1%	37.2%	17.2%	Minimum	76.6%	40.5%	15.9%
B05-329.3	Bed	13.4	121	Fail	46.2%	20.2%	4.3%	Minimum	71.5%	27.4%	4.0%
B05-330.1	LKD	27.6	252	Fail	37.6%	9.8%	5.6%	Minimum	61.2%	8.7%	3.6%
B05-330.2	Bed	12.5	102	Minimum	57.7%	39.9%	19.7%	Minimum	73.2%	34.9%	12.9%
B05-330.3	Bed	13.4	121	Fail	49.5%	28.5%	11.9%	Minimum	69.3%	30.0%	10.3%
B05-331.1	LKD	22.7	181	Minimum	54.4%	30.7%	10.7%	Minimum	59.2%	8.2%	3.7%
B05-331.2	Bed	9.8	81	Minimum	57.7%	37.2%	14.5%	Minimum	77.5%	44.5%	18.7%
B05-332.1	LKD	22.7	181	Minimum	55.4%	32.9%	11.6%	Minimum	59.3%	9.1%	3.8%
B05-332.2	Bed	9.8	81	Minimum	60.6%	40.7%	17.8%	Medium	79.3%	50.5%	23.4%
B05-333.1	LKD	22.7	181	Medium	66.6%	52.3%	37.1%	Minimum	56.5%	10.2%	3.0%
B05-333.2	Bed	9.8	81	Minimum	65.9%	49.4%	33.1%	Medium	80.4%	53.0%	33.4%
B05-334.1	LKD	22.7	181	Minimum	57.4%	35.7%	13.8%	Minimum	61.3%	10.9%	4.1%
B05-334.2	Bed	9.8	81	Medium	67.8%	51.6%	33.2%	Medium	82.2%	57.8%	37.2%
B05-335.1	LKD	27.6	252	Minimum	51.3%	25.8%	9.5%	Minimum	68.0%	21.2%	5.7%
B05-335.2	Bed	12.5	102	Minimum	61.0%	44.3%	23.0%	Minimum	78.4%	48.1%	23.7%
B05-335.3	Bed	13.4	121	Minimum	56.6%	37.0%	15.2%	Minimum	76.9%	42.9%	15.7%
B05-401.1	LKD	22.8	181	High	81.9%	74.7%	65.2%	High	87.8%	76.0%	63.4%
B05-401.2	Bed	9.8	81	High	74.2%	62.4%	50.6%	High	84.5%	65.7%	51.1%
B05-402.1	LKD	30.2	274	Medium	72.8%	59.6%	47.5%	Medium	79.8%	55.4%	35.0%
B05-402.2	Bed	9.7	80	Medium	74.2%	61.1%	46.4%	Medium	85.0%	64.8%	48.1%
B05-402.3	Bed	12.0	96	Medium	68.8%	53.9%	36.7%	Medium	82.2%	58.0%	37.4%
B05-403.1	LKD	22.7	181	Medium	68.0%	53.2%	34.5%	Minimum	71.0%	29.5%	8.7%
B05-403.2	Bed	9.8	81	Medium	73.7%	60.5%	46.2%	Medium	84.9%	64.9%	48.1%
B05-404.1	LKD	34.9	334	Medium	75.9%	62.4%	49.1%	Medium	82.6%	61.2%	43.8%
B05-404.2	Bed	5.6	40	Minimum	61.5%	41.1%	13.8%	Minimum	74.4%	36.6%	4.6%
B05-404.3	Bed	11.1	85	Minimum	63.3%	45.1%	21.4%	Minimum	77.0%	44.9%	14.3%
B05-404.4	Bed	11.6	88	Minimum	58.1%	36.9%	11.6%	Minimum	76.2%	41.6%	7.4%
B05-405.1	LKD	33.8	302	Medium	72.1%	58.7%	47.5%	Medium	83.4%	61.9%	46.8%
B05-405.2	Bed	5.2	32	Medium	69.6%	52.2%	30.7%	Minimum	77.5%	43.8%	10.5%
B05-405.3	Bed	9.7	80	Minimum	65.1%	47.7%	26.0%	Medium	80.6%	53.7%	29.4%
B05-405.4	Bed	11.1	90	Minimum	63.5%	45.2%	20.7%	Minimum	79.0%	49.4%	22.7%
B05-406.1	LKD	33.8	302	Medium	74.3%	61.6%	49.5%	High	85.3%	65.3%	51.0%
B05-406.2	Bed	5.2	32	Medium	70.2%	52.4%	30.6%	Minimum	78.7%	45.5%	10.2%
B05-406.3	Bed	9.7	80	Minimum	66.6%	48.2%	23.7%	Medium	82.3%	55.8%	29.7%
B05-406.4	Bed	11.1	90	Minimum	63.6%	43.7%	13.3%	Medium	80.9%	52.1%	21.3%
B05-407.1	LKD	36.1	342	Medium	73.4%	59.1%	44.1%	Medium	82.8%	58.3%	37.8%
B05-407.2	Bed	5.2	32	Fail	48.2%	21.1%	3.0%	Minimum	67.7%	17.5%	0.0%

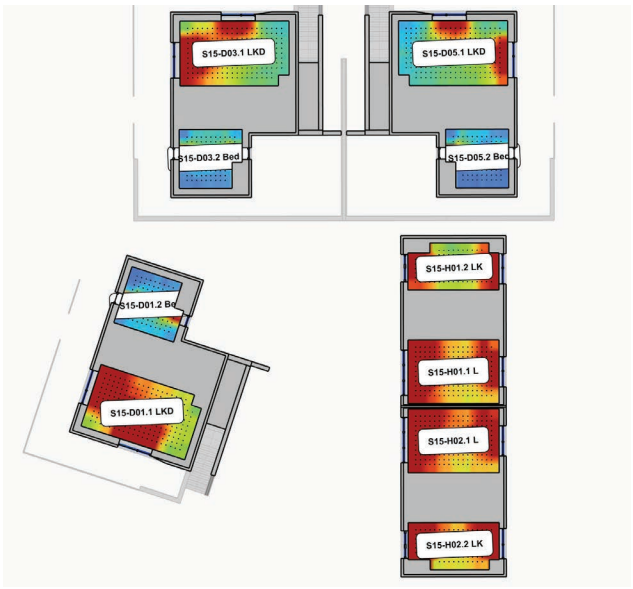
Site 5 - EN17037:2018 Table A.1 Daylight Provision Room Schedule											
Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
B05-407.3	Bed	9.7	80	Minimum	53.7%	29.3%	4.2%	Minimum	77.0%	40.9%	6.9%
B05-407.4	Bed	11.1	90	Minimum	53.0%	27.9%	3.3%	Minimum	75.7%	37.2%	3.9%
B05-408.1	LKD	22.7	181	Minimum	57.0%	37.2%	17.8%	Minimum	62.1%	13.7%	3.9%
B05-408.2	Bed	9.8	81	Minimum	62.1%	44.2%	25.2%	Medium	80.2%	52.9%	29.5%
B05-409.1	LKD	22.7	181	High	76.8%	64.9%	53.7%	Minimum	73.3%	40.3%	14.7%
B05-409.2	Bed	9.8	81	Medium	70.7%	56.6%	41.1%	Medium	83.2%	61.7%	43.3%
B05-410.1	LKD	22.7	181	Minimum	57.3%	37.7%	18.2%	Minimum	62.6%	14.4%	4.2%
B05-410.2	Bed	9.8	81	Minimum	62.6%	44.8%	25.1%	Medium	80.8%	53.8%	30.7%
B05-411.1	LKD	27.6	252	Minimum	60.4%	40.8%	24.4%	Minimum	74.5%	37.3%	15.0%
B05-411.2	Bed	12.5	102	Minimum	64.1%	47.1%	27.0%	Medium	79.1%	51.2%	27.8%
B05-411.3	Bed	13.4	121	Minimum	54.1%	34.7%	16.8%	Minimum	73.3%	39.2%	18.0%
B05-412.1	LKD	27.6	252	Minimum	63.0%	44.5%	26.4%	Minimum	75.9%	39.4%	16.6%
B05-412.2	Bed	12.5	102	Minimum	63.0%	46.1%	24.2%	Minimum	77.5%	45.8%	19.9%
B05-412.3	Bed	13.4	121	Minimum	57.6%	38.7%	16.7%	Minimum	76.9%	43.2%	17.4%
B05-413.1	LKD	22.7	181	Medium	69.3%	53.2%	36.1%	Minimum	69.7%	27.5%	10.0%
B05-413.2	Bed	9.8	81	Medium	71.5%	56.5%	39.5%	Medium	84.5%	63.7%	45.5%
B05-414.1	LKD	22.7	181	High	75.6%	63.0%	51.5%	Minimum	68.8%	32.1%	9.2%
B05-414.2	Bed	9.8	81	Medium	70.6%	56.0%	40.5%	Medium	83.7%	60.9%	43.7%
B05-415.1	LKD	22.7	181	Fail	35.7%	11.9%	4.4%	Fail	43.2%	3.7%	1.1%
B05-415.2	Bed	9.8	81	Medium	75.7%	62.2%	49.0%	High	86.5%	70.0%	55.0%
B05-416.1	LKD	22.7	181	Minimum	56.8%	37.2%	17.8%	Minimum	60.9%	12.1%	3.9%
B05-416.2	Bed	9.8	81	Minimum	61.7%	43.8%	24.0%	Medium	80.7%	53.8%	31.2%
B05-417.1	LKD	27.6	252	Minimum	61.1%	41.9%	25.0%	Minimum	74.7%	37.2%	15.3%
B05-417.2	Bed	12.5	102	Minimum	64.7%	47.5%	27.5%	Minimum	78.8%	47.4%	23.5%
B05-417.3	Bed	13.4	121	Minimum	57.2%	36.7%	17.1%	Minimum	75.8%	41.0%	18.2%
B05-418.1	LKD	27.6	252	Minimum	63.4%	45.5%	27.4%	Minimum	76.2%	40.3%	17.6%
B05-418.2	Bed	12.5	102	Minimum	63.4%	45.8%	25.3%	Medium	80.6%	52.1%	27.7%
B05-418.3	Bed	13.4	121	Minimum	54.8%	33.5%	12.8%	Minimum	77.2%	40.9%	14.9%
B05-419.1	LKD	22.7	181	Medium	69.5%	54.1%	36.9%	Minimum	70.5%	29.2%	10.6%
B05-419.2	Bed	9.8	81	Medium	75.5%	61.6%	46.6%	High	85.6%	67.1%	50.1%
B05-420.1	LKD	22.7	181	Medium	71.9%	57.6%	41.9%	Minimum	73.6%	36.7%	11.6%
B05-420.2	Bed	9.8	81	Medium	73.4%	59.8%	45.7%	Medium	85.2%	65.9%	49.2%
B05-421.1	LKD	27.6	252	Minimum	65.5%	49.0%	29.7%	Minimum	77.5%	45.4%	18.8%
B05-421.2	Bed	12.5	102	Minimum	63.6%	46.6%	25.0%	Medium	80.7%	51.8%	26.9%
B05-421.3	Bed	13.4	121	Minimum	55.6%	33.3%	13.7%	Minimum	76.9%	40.9%	14.7%
B05-422.1	LKD	27.6	252	Minimum	62.2%	44.6%	25.5%	Minimum	76.2%	42.4%	16.2%
B05-422.2	Bed	12.5	102	Minimum	65.2%	48.9%	28.5%	Minimum	78.9%	47.8%	22.8%
B05-422.3	Bed	13.4	121	Minimum	57.8%	37.7%	18.6%	Minimum	75.2%	40.1%	17.4%
B05-423.1	LKD	22.7	181	Minimum	59.6%	40.4%	19.5%	Minimum	65.0%	16.4%	4.2%
B05-423.2	Bed	9.8	81	Minimum	62.1%	44.7%	23.4%	Medium	79.6%	51.4%	28.8%
B05-424.1	LKD	22.7	181	Minimum	59.0%	38.8%	17.9%	Minimum	64.2%	15.4%	3.9%
B05-424.2	Bed	9.8	81	Minimum	63.2%	46.4%	26.6%	Medium	81.1%	55.5%	34.5%
B05-425.1	LKD	22.7	181	High	75.7%	63.6%	51.8%	Minimum	67.9%	32.2%	9.7%
B05-425.2	Bed	9.8	81	Medium	70.8%	56.2%	41.5%	Medium	82.9%	60.4%	42.1%
B05-426.1	LKD	22.7	181	Minimum	59.4%	39.1%	17.3%	Minimum	65.8%	16.8%	4.3%
B05-426.2	Bed	9.8	81	Medium	69.3%	53.5%	36.8%	Medium	83.3%	60.8%	41.3%
B05-427.1	LKD	27.6	252	Minimum	53.9%	31.6%	11.7%	Minimum	70.5%	30.1%	6.2%
B05-427.2	Bed	12.5	102	Minimum	65.3%	49.7%	29.7%	Medium	80.8%	53.3%	31.5%
B05-427.3	Bed	13.4	121	Minimum	61.6%	44.5%	22.8%	Medium	79.4%	50.4%	25.4%

Table 21: Site 5 Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

Site 15



First Floor



Ground Floor

Site 16

First Floor

Ground Floor

Figure 46: Site 15 - 16 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Sites 15 & 16 - 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
S15-D01.1	LKD	24.6	216	Medium	73.6%	61.2%	49.3%	Medium	81.5%	58.8%	43.2%
S15-D01.2	Bed	12.2	100	Fail	36.3%	6.8%	0.7%	Minimum	50.9%	3.9%	0.0%
S15-D02.1	LKD	23.2	194	High	77.3%	66.1%	56.4%	High	86.6%	71.5%	58.9%
S15-D02.2	Bed	10.9	90	Minimum	64.7%	48.4%	27.8%	Medium	80.0%	50.9%	26.8%
S15-D03.1	LKD	24.6	216	Medium	70.1%	54.5%	38.1%	Minimum	78.4%	49.0%	22.7%
S15-D03.2	Bed	12.2	100	Fail	38.8%	11.9%	1.2%	Minimum	51.8%	7.0%	0.0%
S15-D04.1	LKD	23.2	194	Medium	72.2%	56.2%	39.7%	Medium	85.2%	62.9%	43.6%
S15-D04.2	Bed	10.9	90	Minimum	65.9%	49.8%	30.5%	Medium	79.4%	51.6%	27.1%
S15-D05.1	LKD	24.6	216	Minimum	59.7%	40.3%	18.9%	Minimum	74.5%	35.6%	5.8%
S15-D05.2	Bed	12.2	100	Fail	16.5%	4.7%	0.6%	Fail	40.7%	2.9%	0.0%
S15-D06.1	LKD	23.2	194	Medium	70.1%	52.9%	34.3%	Medium	84.2%	58.7%	37.8%
S15-D06.2	Bed	10.9	90	Fail	49.8%	28.2%	6.5%	Minimum	68.4%	31.5%	3.8%
S15-H01.1	L	20.6	187	Medium	73.4%	60.3%	46.5%	Medium	85.1%	64.3%	49.5%
S15-H01.2	LK	14.1	122	Medium	64.6%	51.0%	35.5%	Medium	80.7%	55.1%	37.9%
S15-H01.3	Bed	13.1	112	Fail	46.0%	23.0%	5.5%	Minimum	59.4%	10.2%	1.6%
S15-H01.4	Bed	7.4	49	Fail	24.6%	4.9%	1.8%	Fail	45.5%	2.4%	0.0%
S15-H01.5	Bed	11.2	90	Minimum	59.9%	43.5%	21.3%	Minimum	73.1%	40.1%	11.8%
S15-H02.1	L	20.6	187	Medium	74.7%	61.9%	49.6%	High	85.4%	65.7%	51.3%
S15-H02.2	LK	14.1	122	Medium	73.4%	60.1%	47.8%	Medium	84.5%	64.2%	49.6%
S15-H02.3	Bed	13.1	112	Minimum	54.9%	34.4%	11.7%	Minimum	66.9%	28.7%	4.6%
S15-H02.4	Bed	7.4	49	Fail	30.3%	5.9%	2.5%	Minimum	52.0%	3.2%	0.1%
S15-H02.5	Bed	11.2	90	Minimum	63.0%	48.2%	28.4%	Minimum	75.5%	44.3%	17.7%
S16-D01.1	LKD	24.6	216	Medium	68.7%	54.3%	37.1%	Minimum	78.1%	48.1%	22.0%
S16-D01.2	Bed	12.2	100	Fail	44.0%	11.9%	2.0%	Minimum	55.3%	7.0%	0.0%
S16-D02.1	LKD	23.2	194	Medium	71.4%	56.5%	39.8%	Medium	84.8%	62.8%	43.6%
S16-D02.2	Bed	10.9	90	Minimum	64.2%	49.0%	28.9%	Medium	78.3%	50.3%	27.6%
S16-H01.1	L	20.6	187	High	78.5%	67.9%	57.4%	High	87.8%	74.2%	60.4%
S16-H01.2	KD	14.1	122	High	76.4%	63.3%	52.1%	High	86.7%	70.1%	55.7%
S16-H01.3	Bed	11.2	90	Minimum	66.6%	48.8%	27.0%	Medium	80.5%	52.2%	25.7%
S16-H01.3	Bed	7.4	49	Fail	31.1%	0.7%	0.0%	Minimum	60.9%	2.7%	0.0%
S16-H01.5	Bed	13.1	112	Minimum	57.1%	34.9%	6.5%	Minimum	72.7%	30.3%	0.3%
S16-H02.1	L	14.8	121	Medium	67.0%	52.7%	36.3%	Medium	80.5%	53.6%	34.6%
S16-H02.2	LK	18.8	151	Medium	67.4%	50.7%	33.1%	Medium	80.7%	53.3%	32.4%
S16-H02.3	Bed	13.4	112	Minimum	63.0%	46.0%	25.8%	Minimum	76.2%	44.3%	18.8%
S16-H02.4	Bed	12.3	99	Medium	68.6%	52.4%	35.7%	Medium	82.2%	56.9%	36.6%
S16-H02.5	Bed	6.3	48	Minimum	59.0%	40.6%	23.2%	Minimum	76.9%	43.2%	20.4%
S16-H03.1	L	14.8	121	Medium	66.8%	52.3%	35.9%	Medium	80.4%	53.1%	33.8%
S16-H03.2	LK	18.8	151	Minimum	65.8%	48.8%	29.7%	Medium	81.3%	53.4%	31.5%
S16-H03.3	Bed	13.4	112	Minimum	63.5%	47.1%	28.8%	Minimum	76.5%	43.9%	18.5%
S16-H03.4	Bed	12.3	99	Medium	67.7%	51.4%	33.6%	Medium	81.6%	55.5%	33.2%
S16-H03.5	Bed	6.3	48	Minimum	59.1%	38.9%	21.4%	Minimum	75.4%	40.6%	15.9%

Table 22: Sites 15 & 15 - Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

Site 17

First Floor

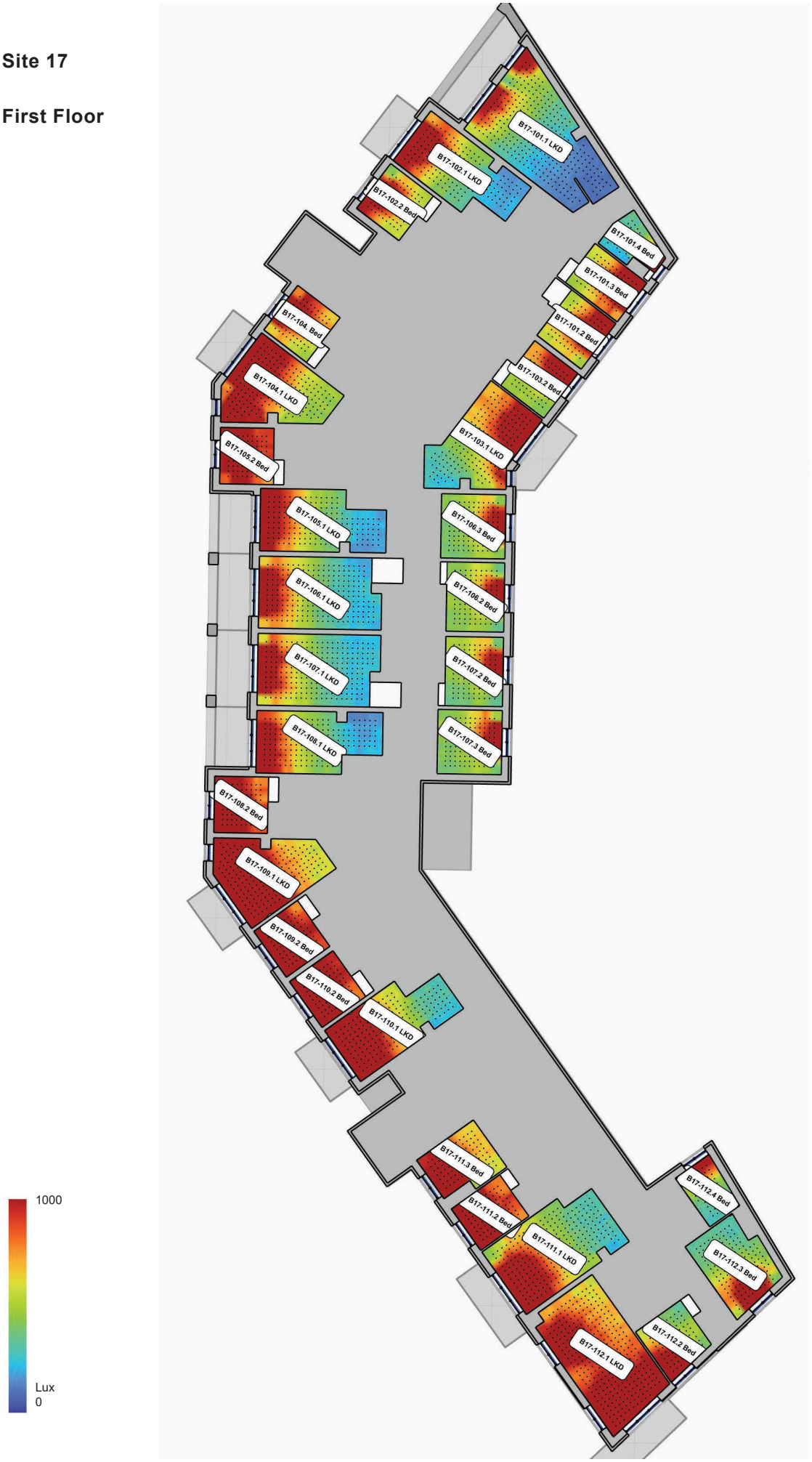


Figure 47: Site 17 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 17

Second Floor

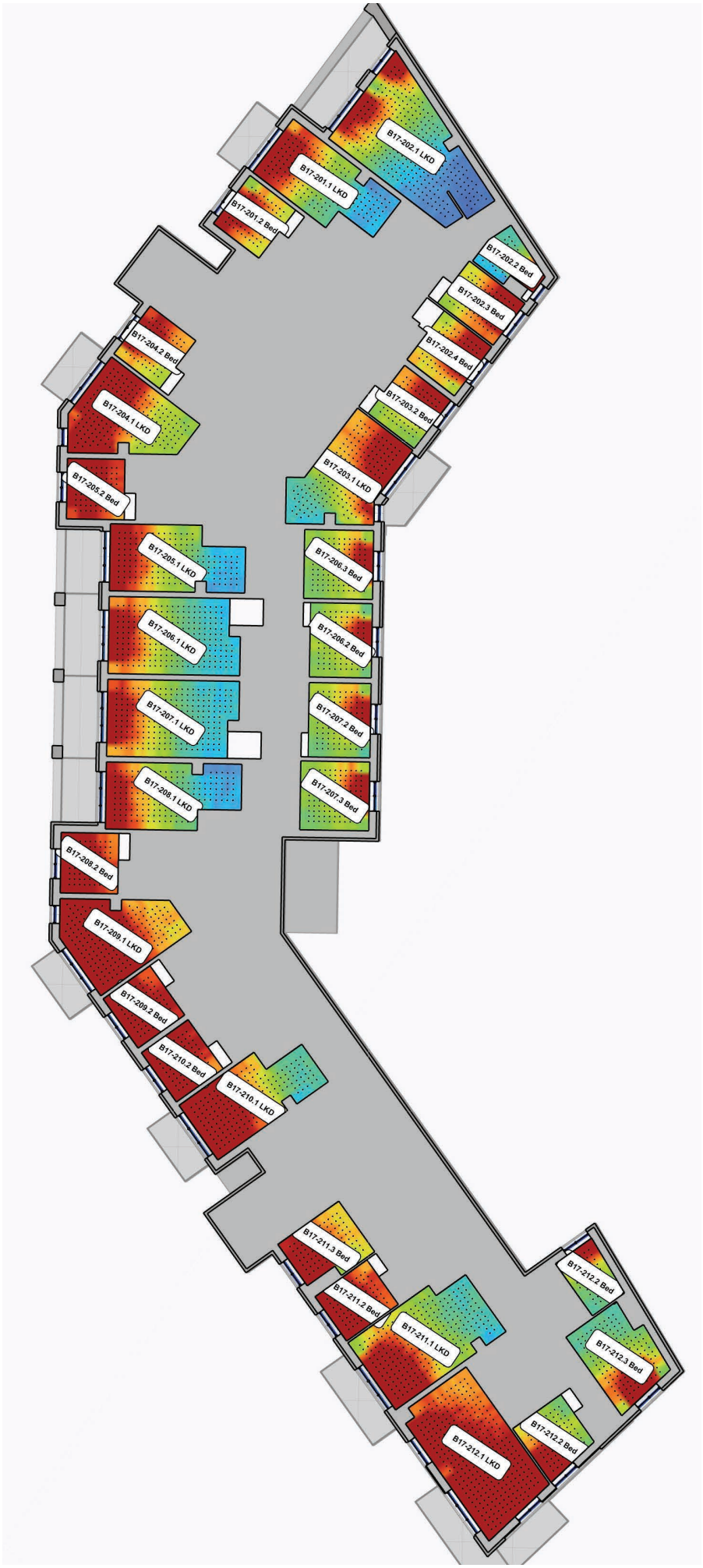


Figure 48: Site 17 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Figure 49: Site 17 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 17 - 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
B17-101.1	LKD	36.9	326	Fail	44.8%	16.4%	5.6%	Fail	44.7%	3.7%	0.0%
B17-101.2	Bed	10.4	81	Medium	70.7%	53.7%	36.8%	Medium	83.9%	60.5%	39.7%
B17-101.3	Bed	10.4	88	Medium	71.8%	55.7%	37.9%	Medium	83.3%	58.8%	38.0%
B17-101.4	Bed	7.1	56	Fail	43.1%	21.3%	9.8%	Minimum	64.8%	21.6%	7.8%
B17-102.1	LKD	22.7	181	Minimum	58.2%	37.0%	15.6%	Minimum	60.5%	11.9%	4.8%
B17-102.2	Bed	9.8	81	Medium	69.3%	53.2%	36.8%	Medium	82.6%	59.5%	38.6%
B17-103.1	LKD	23.9	192	Minimum	67.2%	49.1%	28.9%	Minimum	75.5%	35.4%	10.8%
B17-103.2	Bed	9.9	81	Minimum	68.2%	49.8%	32.8%	Medium	82.2%	54.3%	32.7%
B17-104.1	Bed	9.7	81	Medium	70.3%	55.0%	38.7%	Medium	83.3%	61.6%	42.8%
B17-104.1	LKD	22.9	202	Medium	73.6%	59.9%	46.7%	Medium	80.8%	55.5%	34.1%
B17-105.1	LKD	22.7	181	Minimum	55.5%	35.5%	19.2%	Minimum	58.7%	17.2%	5.3%
B17-105.2	Bed	9.8	81	High	75.6%	62.3%	51.1%	High	86.1%	68.1%	53.0%
B17-106.1	LKD	27.5	250	Fail	48.9%	28.5%	13.8%	Minimum	63.6%	21.0%	7.3%
B17-106.2	Bed	13.0	108	Minimum	64.8%	45.5%	24.0%	Medium	82.6%	54.8%	30.0%
B17-106.3	Bed	13.4	121	Minimum	63.9%	44.1%	22.6%	Medium	82.5%	54.6%	29.7%
B17-107.1	LKD	27.5	250	Fail	48.1%	27.8%	13.7%	Minimum	64.0%	22.6%	7.4%
B17-107.2	Bed	13.0	108	Minimum	64.7%	45.5%	23.1%	Medium	82.1%	53.5%	28.2%
B17-107.3	Bed	13.4	121	Minimum	64.6%	45.2%	22.8%	Medium	82.7%	55.4%	30.5%
B17-108.1	LKD	22.7	181	Minimum	53.9%	33.0%	16.1%	Minimum	57.8%	14.0%	5.5%
B17-108.2	Bed	9.8	81	High	75.5%	62.4%	51.1%	High	85.6%	67.8%	53.5%
B17-109.1	LKD	22.9	202	High	76.5%	65.2%	55.0%	Medium	82.6%	61.4%	45.8%
B17-109.2	Bed	9.8	81	High	75.6%	64.2%	53.3%	High	85.7%	68.4%	54.8%
B17-110.1	LKD	22.7	181	Medium	66.0%	52.0%	39.2%	Minimum	68.4%	34.6%	11.9%
B17-110.2	Bed	9.8	81	High	75.4%	63.8%	52.8%	High	85.5%	67.9%	54.5%
B17-111.1	LKD	29.9	266	Minimum	58.3%	42.9%	28.6%	Minimum	69.8%	37.6%	14.8%
B17-111.2	Bed	9.8	80	High	74.9%	63.1%	51.9%	High	84.2%	66.1%	51.7%
B17-111.3	Bed	12.0	96	Medium	67.3%	53.5%	41.6%	Medium	81.7%	57.7%	42.0%
B17-112.1	LKD	34.5	321	High	75.1%	63.3%	52.1%	High	83.9%	64.8%	51.6%
B17-112.2	Bed	10.3	84	Minimum	64.2%	47.6%	27.0%	Medium	78.9%	50.2%	25.8%
B17-112.3	Bed	16.9	153	Minimum	56.6%	35.3%	18.6%	Minimum	75.6%	37.9%	16.2%
B17-112.4	Bed	7.6	56	Minimum	65.8%	45.4%	18.8%	Minimum	78.9%	44.2%	11.2%
B17-201.1	LKD	22.7	181	Minimum	59.9%	40.5%	17.9%	Minimum	63.4%	14.0%	4.9%
B17-201.2	Bed	9.8	81	Medium	71.0%	55.5%	39.9%	Medium	83.4%	61.7%	42.8%
B17-202.1	LKD	36.9	326	Fail	49.2%	22.8%	6.7%	Fail	49.3%	3.8%	0.2%
B17-202.2	Bed	7.1	56	Fail	43.4%	21.3%	9.4%	Minimum	65.4%	21.8%	7.4%
B17-202.3	Bed	10.4	88	Medium	72.2%	56.4%	39.7%	Medium	83.4%	59.6%	39.5%
B17-202.4	Bed	10.4	81	Medium	72.6%	56.7%	40.2%	Medium	84.4%	62.4%	42.9%
B17-203.1	LKD	23.9	192	Medium	68.3%	50.2%	30.7%	Minimum	76.1%	38.3%	12.8%
B17-203.2	Bed	9.9	81	Medium	69.3%	52.1%	35.2%	Medium	81.8%	54.1%	33.4%
B17-204.1	LKD	22.9	202	Medium	74.8%	61.3%	48.9%	Medium	81.3%	56.7%	35.7%
B17-204.2	Bed	9.7	81	Medium	71.6%	56.5%	39.9%	Medium	83.2%	61.6%	42.8%
B17-205.1	LKD	22.7	181	Minimum	58.1%	41.2%	26.3%	Minimum	61.4%	19.9%	4.8%
B17-205.2	Bed	9.8	81	High	75.4%	62.3%	51.0%	High	86.4%	68.8%	54.6%
B17-206.1	LKD	27.5	250	Minimum	53.5%	34.3%	17.0%	Minimum	67.1%	28.3%	7.8%
B17-206.2	Bed	13.0	108	Minimum	65.5%	46.8%	25.9%	Medium	83.2%	56.8%	33.6%
B17-206.3	Bed	13.4	121	Minimum	64.5%	45.4%	24.4%	Medium	82.7%	55.7%	31.8%
B17-207.1	LKD	27.5	250	Minimum	53.0%	34.1%	16.3%	Minimum	67.3%	27.8%	7.3%
B17-207.2	Bed	13.0	108	Minimum	65.7%	47.1%	26.1%	Medium	83.1%	56.3%	32.3%
B17-207.3	Bed	13.4	121	Minimum	64.5%	45.5%	23.4%	Medium	83.1%	56.6%	33.2%
B17-208.1	LKD	22.7	181	Minimum	56.4%	35.6%	18.5%	Minimum	61.2%	15.3%	4.2%

Site 17 - 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
B17-208.2	Bed	9.8	81	High	75.8%	63.0%	52.0%	High	86.4%	69.1%	54.9%
B17-209.1	LKD	22.9	202	High	78.6%	67.9%	57.7%	Medium	83.2%	63.4%	47.8%
B17-209.2	Bed	9.8	81	High	76.3%	65.0%	53.9%	High	85.8%	68.9%	55.7%
B17-210.1	LKD	22.7	181	Medium	69.0%	56.1%	43.7%	Minimum	72.0%	38.5%	19.6%
B17-210.2	Bed	9.8	81	High	75.9%	64.5%	53.6%	High	86.1%	69.5%	55.6%
B17-211.1	LKD	29.9	266	Minimum	58.5%	43.2%	29.1%	Minimum	69.2%	37.0%	14.1%
B17-211.2	Bed	9.8	80	High	74.8%	63.0%	51.8%	High	84.9%	66.7%	52.6%
B17-211.3	Bed	12.0	96	Medium	67.2%	53.7%	41.3%	Medium	81.9%	58.5%	42.3%
B17-212.1	LKD	34.5	321	High	78.1%	67.2%	57.6%	High	84.6%	67.0%	54.0%
B17-212.2	Bed	10.3	84	Minimum	65.5%	49.7%	29.1%	Medium	79.7%	52.2%	28.3%
B17-212.2	Bed	7.6	56	Medium	69.0%	50.2%	27.5%	Medium	81.8%	53.2%	25.3%
B17-212.3	Bed	16.9	153	Minimum	58.6%	37.8%	19.9%	Minimum	76.6%	41.5%	17.6%
B17-301.1	LKD	22.7	181	Minimum	65.3%	47.9%	27.9%	Minimum	66.6%	20.8%	6.9%
B17-301.2	Bed	9.8	81	Medium	72.0%	57.4%	41.3%	Medium	84.1%	63.1%	44.5%
B17-302.1	LKD	36.9	326	Minimum	55.4%	33.4%	10.3%	Minimum	54.8%	5.0%	1.4%
B17-302.2	Bed	7.1	56	Fail	45.5%	21.9%	9.9%	Minimum	64.2%	22.1%	8.2%
B17-302.3	Bed	10.4	88	Medium	72.1%	57.2%	40.9%	Medium	83.5%	60.8%	41.2%
B17-302.4	Bed	10.4	81	Medium	72.5%	57.3%	40.9%	Medium	84.5%	63.2%	45.0%
B17-303.1	LKD	23.9	192	Medium	73.7%	58.2%	41.4%	Minimum	79.2%	47.4%	23.3%
B17-303.2	Bed	9.9	81	Medium	69.7%	53.9%	37.5%	Medium	82.4%	56.7%	35.6%
B17-304.1	LKD	22.9	202	High	77.6%	65.9%	53.2%	Medium	82.7%	60.4%	42.0%
B17-304.2	Bed	9.7	81	Medium	72.7%	58.4%	42.5%	Medium	84.7%	64.5%	47.6%
B17-305.1	LKD	29.9	266	Minimum	59.5%	43.7%	29.6%	Minimum	70.6%	38.6%	16.3%
B17-305.2	Bed	9.8	80	High	75.1%	63.6%	52.8%	High	85.0%	67.0%	52.9%
B17-305.3	Bed	12.0	96	Medium	68.2%	54.8%	42.6%	Medium	82.1%	59.1%	43.1%
B17-306.1	LKD	34.5	321	High	77.0%	65.9%	55.4%	High	84.5%	66.7%	53.7%
B17-306.2	Bed	10.3	84	Medium	67.8%	52.8%	33.5%	Medium	80.9%	55.9%	33.2%
B17-306.3	Bed	16.9	153	Minimum	61.0%	41.3%	23.2%	Minimum	77.9%	44.8%	20.5%
B17-306.4	Bed	7.6	56	Medium	70.4%	53.2%	32.4%	Medium	84.7%	59.8%	38.5%
B17-401.1	LKD	29.9	266	Minimum	60.3%	44.5%	30.0%	Minimum	70.7%	39.2%	16.0%
B17-401.2	Bed	9.8	80	High	75.5%	64.1%	52.9%	High	84.7%	67.1%	53.1%
B17-401.3	Bed	12.0	96	Medium	68.7%	55.5%	43.1%	Medium	82.1%	59.2%	43.6%
B17-402.1	LKD	34.5	321	High	76.0%	64.3%	53.2%	High	84.5%	66.7%	53.4%
B17-402.2	Bed	10.3	84	Medium	68.7%	54.3%	35.6%	Medium	82.1%	58.7%	38.8%
B17-402.3	Bed	16.9	153	Minimum	62.4%	43.9%	25.0%	Minimum	78.2%	46.7%	21.7%
B17-402.4	Bed	7.6	56	Medium	72.6%	55.7%	37.6%	Medium	85.4%	62.6%	43.0%
B17-501.1	LKD	29.9	266	Minimum	63.7%	49.3%	37.5%	Minimum	74.6%	44.4%	25.3%
B17-501.2	Bed	9.8	80	High	75.7%	64.6%	53.5%	High	85.5%	68.3%	54.2%
B17-501.3	Bed	12.0	96	Medium	68.7%	55.2%	43.5%	Medium	82.2%	59.5%	44.6%
B17-502.1	LKD	34.5	321	High	78.7%	68.4%	58.6%	High	86.1%	71.1%	58.1%
B17-502.2	Bed	10.3	84	Medium	70.2%	56.1%	39.9%	Medium	83.0%	61.1%	42.9%
B17-502.3	Bed	16.9	153	Minimum	63.0%	44.9%	25.6%	Minimum	78.6%	48.2%	23.1%
B17-502.4	Bed	7.6	56	Medium	74.4%	58.5%	42.4%	Medium	86.2%	66.0%	47.2%

Table 23: Site 17 Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

Site 18

Ground Floor

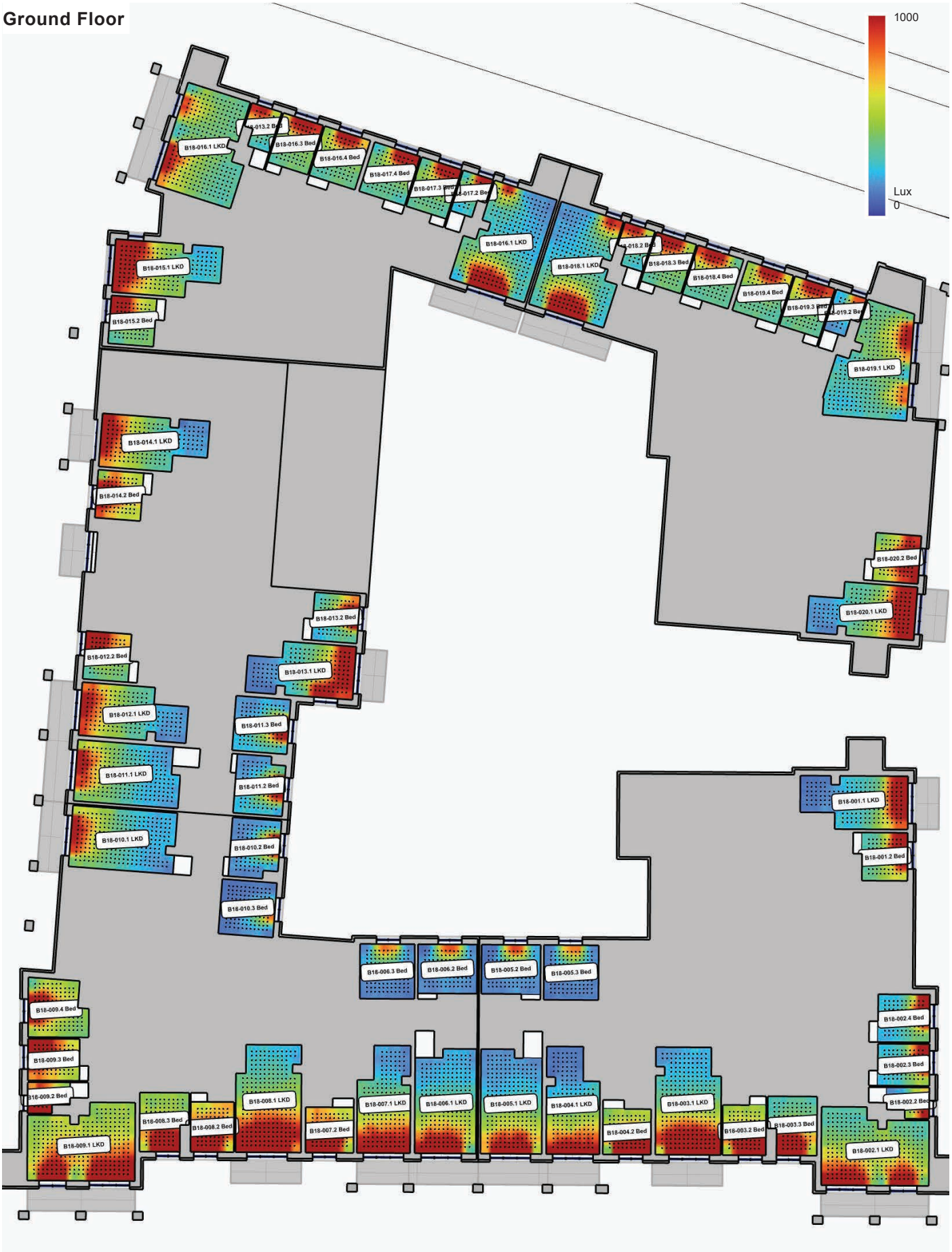


Figure 50: Site 18 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 18

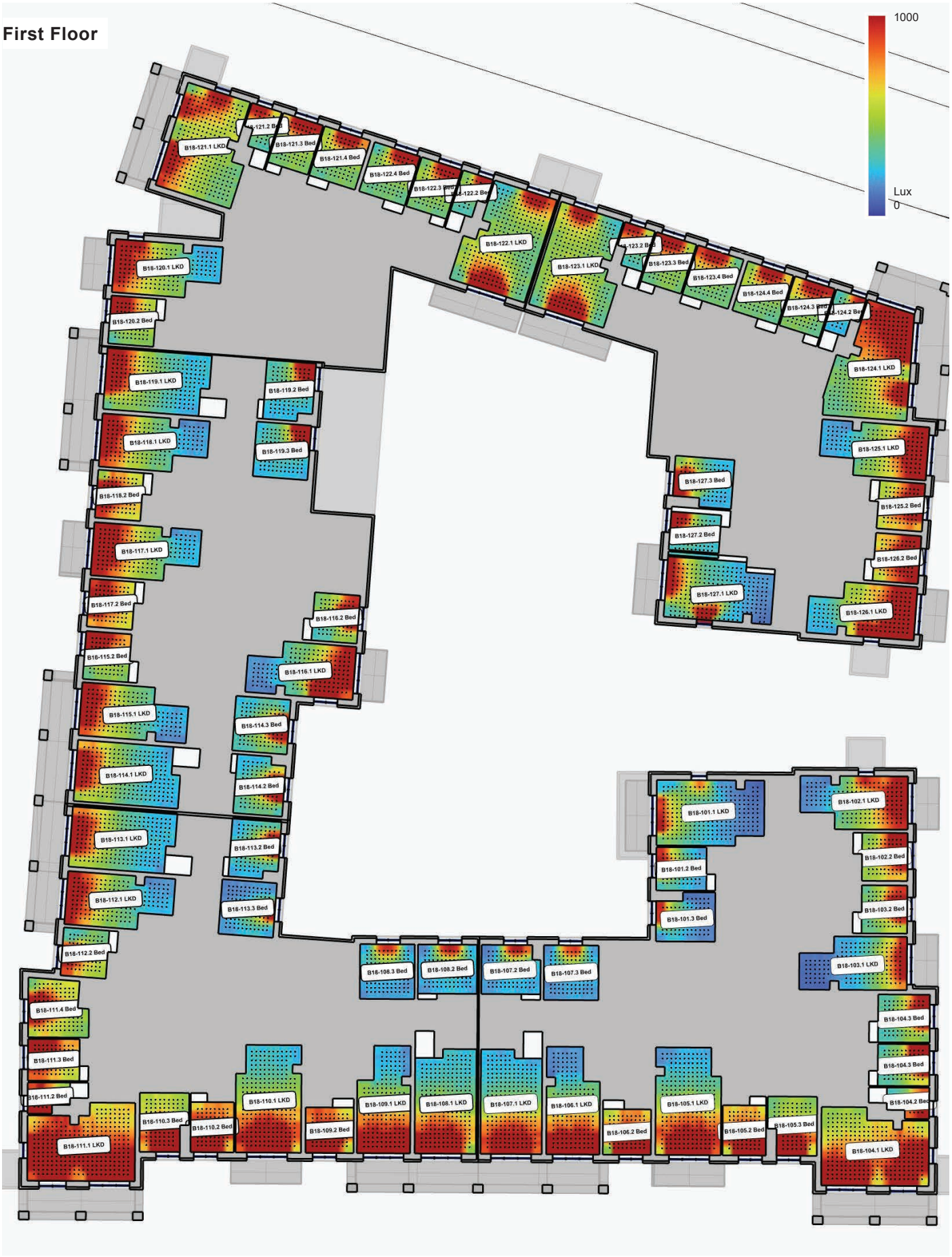


Figure 51: Site 18 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 18

Second Floor

Figure 52: Site 18 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 18

Third Floor

Figure 53: Site 18 - Daylight Provision and Annual Average Illuminance to all habitable rooms

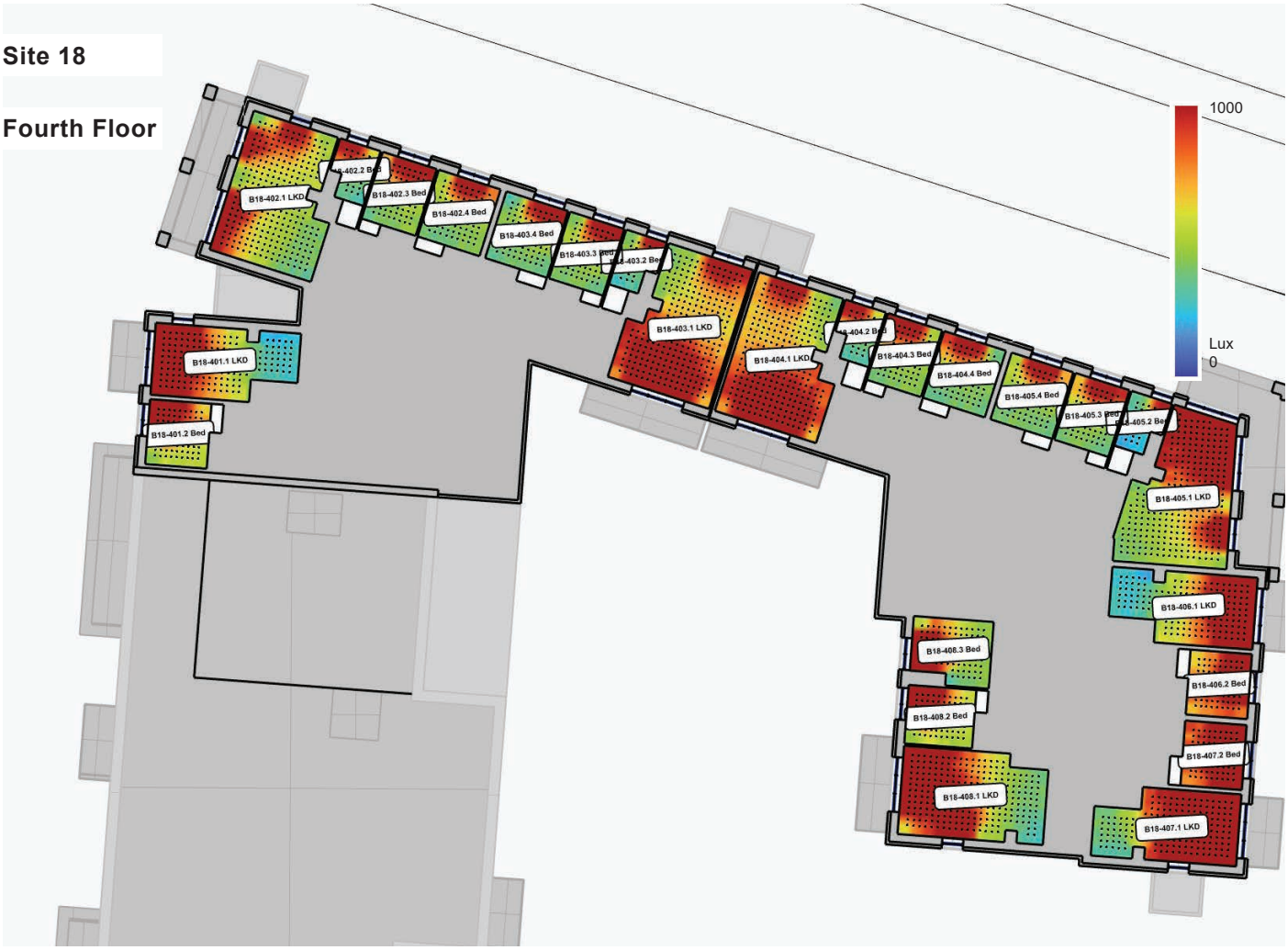


Figure 54: Site 18 - Daylight Provision and Annual Average Illuminance to all habitable rooms

Site 18 - 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
B18-001.1	LKD	22.7	181	Fail	38.5%	13.5%	5.5%	Fail	42.1%	3.2%	0.1%
B18-001.2	Bed	9.8	81	Minimum	58.4%	39.4%	20.0%	Minimum	74.4%	38.8%	15.9%
B18-002.1	LKD	33.8	303	Minimum	54.1%	39.6%	20.2%	Minimum	69.7%	39.7%	15.4%
B18-002.2	Bed	5.2	32	Minimum	51.7%	32.4%	12.9%	Minimum	55.1%	11.5%	2.0%
B18-002.3	Bed	9.7	80	Fail	46.9%	25.5%	6.9%	Minimum	66.6%	27.1%	4.6%
B18-002.4	Bed	11.1	90	Fail	43.8%	20.2%	4.9%	Minimum	64.0%	23.3%	4.0%
B18-003.1	LKD	29.9	266	Fail	49.3%	34.4%	14.9%	Minimum	57.7%	19.0%	6.0%
B18-003.2	Bed	9.7	80	Medium	63.9%	50.7%	39.7%	Medium	77.6%	50.9%	35.6%
B18-003.3	Bed	12.0	96	Minimum	51.9%	35.2%	18.6%	Minimum	66.2%	34.5%	13.3%
B18-004.1	LKD	22.7	181	Fail	44.5%	26.3%	8.2%	Fail	42.8%	2.9%	0.1%
B18-004.2	Bed	9.8	81	Medium	63.9%	50.1%	37.2%	Minimum	76.8%	49.7%	33.7%
B18-005.1	LKD	27.6	252	Fail	41.5%	19.9%	6.8%	Minimum	53.3%	9.5%	2.5%
B18-005.2	Bed	13.0	108	Fail	20.2%	0.1%	0.0%	Fail	48.0%	0.0%	0.0%
B18-005.3	Bed	13.4	121	Fail	13.0%	0.0%	0.0%	Fail	46.3%	0.0%	0.0%
B18-006.1	LKD	27.6	252	Fail	44.2%	27.8%	8.5%	Minimum	58.8%	17.6%	4.0%
B18-006.2	Bed	13.0	108	Fail	23.9%	0.7%	0.0%	Minimum	50.7%	0.2%	0.0%
B18-006.3	Bed	13.4	121	Fail	17.5%	0.4%	0.0%	Fail	48.6%	0.4%	0.0%
B18-007.1	LKD	22.7	181	Minimum	52.4%	36.3%	16.8%	Minimum	54.4%	10.6%	2.3%
B18-007.2	Bed	9.8	81	Medium	66.7%	53.5%	41.2%	Medium	81.2%	57.1%	41.1%
B18-008.1	LKD	29.9	266	Minimum	55.1%	41.3%	24.9%	Minimum	66.1%	34.3%	10.9%
B18-008.2	Bed	9.7	80	Medium	67.8%	54.5%	42.6%	Medium	81.8%	58.7%	42.9%

Site 18 - 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
B18-008.3	Bed	12.0	96	Minimum	58.5%	43.1%	27.8%	Minimum	74.3%	43.8%	26.1%
B18-009.1	LKD	33.8	303	Minimum	61.0%	45.6%	32.4%	Medium	77.8%	51.0%	35.5%
B18-009.2	Bed	5.2	32	Medium	70.0%	51.9%	35.3%	Minimum	80.1%	49.0%	25.8%
B18-009.3	Bed	9.7	80	Medium	71.0%	54.9%	36.6%	Medium	83.0%	59.1%	36.5%
B18-009.4	Bed	14.4	126	Minimum	62.9%	42.3%	24.6%	Medium	80.1%	50.0%	26.1%
B18-010.1	LKD	28.4	256	Fail	38.8%	13.8%	6.2%	Minimum	63.3%	12.4%	4.5%
B18-010.2	Bed	12.4	102	Fail	22.8%	3.7%	1.8%	Minimum	51.2%	4.7%	1.1%
B18-010.3	Bed	13.4	121	Fail	5.7%	1.1%	0.3%	Fail	40.7%	1.0%	0.0%
B18-011.1	LKD	27.6	252	Fail	38.7%	13.8%	6.3%	Minimum	64.1%	14.0%	4.5%
B18-011.2	Bed	12.4	102	Fail	36.4%	12.4%	3.9%	Minimum	51.8%	9.2%	2.7%
B18-011.3	Bed	13.4	121	Fail	30.7%	12.0%	5.2%	Minimum	51.7%	12.3%	4.3%
B18-012.1	LKD	22.7	181	Fail	48.8%	23.4%	9.2%	Minimum	60.2%	9.7%	3.9%
B18-012.2	Bed	9.8	81	Minimum	65.0%	45.4%	24.7%	Minimum	79.7%	47.8%	23.0%
B18-013.1	LKD	22.7	181	Fail	46.5%	25.3%	11.6%	Fail	42.7%	7.0%	2.1%
B18-013.2	Bed	5.2	32	Medium	71.3%	52.5%	27.3%	Minimum	79.1%	42.9%	7.1%
B18-013.2	Bed	9.8	81	Fail	49.0%	28.0%	10.4%	Minimum	65.7%	27.7%	7.5%
B18-014.1	LKD	22.7	181	Minimum	50.6%	26.5%	10.5%	Minimum	59.7%	11.3%	4.4%
B18-014.2	Bed	9.8	81	Minimum	67.9%	49.9%	31.8%	Medium	82.6%	57.9%	35.0%
B18-015.1	LKD	22.7	181	Minimum	62.8%	41.4%	21.0%	Minimum	70.0%	25.3%	8.3%
B18-015.2	Bed	9.8	81	Minimum	62.1%	39.7%	20.3%	Minimum	79.5%	47.2%	22.1%
B18-016.1	LKD	33.8	302	Minimum	53.2%	27.4%	10.0%	Minimum	77.8%	42.0%	14.1%
B18-016.3	Bed	9.7	80	Medium	69.6%	50.5%	24.8%	Medium	83.0%	56.3%	27.2%
B18-016.4	Bed	11.1	90	Minimum	64.4%	43.2%	15.1%	Medium	81.9%	52.3%	19.5%
B18-017.1	LKD	33.8	302	Fail	39.3%	17.8%	6.6%	Minimum	57.9%	15.1%	3.7%
B18-017.2	Bed	5.2	32	Minimum	64.5%	42.5%	15.2%	Minimum	77.7%	37.7%	4.4%
B18-017.3	Bed	9.7	80	Minimum	64.4%	43.3%	15.5%	Medium	82.1%	53.4%	21.4%
B18-017.4	Bed	11.1	90	Minimum	61.1%	38.2%	9.1%	Minimum	80.9%	49.3%	16.3%
B18-018.1	LKD	33.8	302	Fail	41.7%	19.5%	6.9%	Minimum	58.6%	14.9%	4.4%
B18-018.2	Bed	5.2	32	Medium	71.1%	51.8%	26.1%	Minimum	79.7%	46.2%	9.1%
B18-018.3	Bed	9.7	80	Minimum	67.2%	47.1%	18.5%	Medium	82.9%	55.3%	25.9%
B18-018.4	Bed	11.1	90	Minimum	63.3%	41.0%	11.3%	Medium	81.6%	51.8%	18.0%
B18-019.1	LKD	34.5	307	Fail	46.1%	21.2%	8.1%	Minimum	70.6%	26.7%	6.6%
B18-019.2	Bed	5.2	32	Fail	45.0%	6.5%	0.0%	Minimum	67.8%	5.8%	0.0%
B18-019.3	Bed	9.7	80	Minimum	67.4%	47.5%	18.4%	Medium	82.2%	53.8%	22.5%
B18-019.4	Bed	11.1	90	Minimum	65.1%	43.5%	15.0%	Medium	82.0%	53.2%	19.7%
B18-020.1	LKD	22.7	181	Minimum	52.2%	30.0%	12.0%	Minimum	55.2%	8.4%	3.1%
B18-020.2	Bed	9.8	81	Medium	68.7%	53.6%	37.4%	Medium	81.4%	55.4%	34.6%
B18-101.1	LKD	29.9	266	Fail	37.5%	11.1%	2.9%	Fail	44.4%	1.5%	0.0%
B18-101.2	Bed	9.7	80	Fail	46.5%	21.6%	4.1%	Minimum	64.8%	17.5%	2.6%
B18-101.3	Bed	12.0	96	Fail	23.7%	1.4%	0.8%	Fail	47.8%	1.1%	0.1%
B18-102.1	LKD	22.7	181	Minimum	63.4%	47.1%	29.2%	Minimum	56.5%	6.7%	0.8%
B18-102.2	Bed	9.8	81	Medium	68.6%	52.6%	37.1%	Medium	79.8%	52.3%	31.8%
B18-103.1	LKD	22.7	181	Fail	35.2%	7.7%	2.9%	Fail	34.9%	1.3%	0.0%
B18-103.2	Bed	9.8	81	Minimum	64.5%	47.1%	27.1%	Minimum	78.2%	48.3%	24.2%
B18-104.1	LKD	33.8	302	Medium	67.8%	54.9%	43.5%	Medium	79.6%	54.1%	40.4%
B18-104.2	Bed	5.2	32	Minimum	63.9%	48.0%	29.3%	Minimum	72.0%	36.3%	8.8%
B18-104.3	Bed	9.7	80	Minimum	61.6%	45.8%	25.8%	Minimum	75.0%	42.3%	15.3%
B18-104.3	Bed	11.1	90	Minimum	58.3%	41.3%	18.9%	Minimum	73.2%	38.0%	11.5%
B18-105.1	LKD	29.9	266	Minimum	55.4%	41.1%	24.7%	Minimum	62.3%	23.7%	5.3%
B18-105.2	Bed	9.7	80	Medium	69.4%	56.3%	43.5%	Medium	82.0%	59.4%	43.3%

Site 18 - 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
B18-105.3	Bed	12.0	96	Minimum	60.5%	45.0%	31.4%	Minimum	74.7%	44.9%	27.6%
B18-106.1	LKD	22.7	181	Minimum	56.3%	42.9%	26.4%	Minimum	52.4%	8.9%	2.5%
B18-106.2	Bed	9.8	81	Medium	69.7%	56.3%	44.7%	Medium	81.7%	58.9%	43.6%
B18-107.1	LKD	27.6	252	Minimum	51.6%	34.5%	17.8%	Minimum	61.8%	23.6%	6.1%
B18-107.2	Bed	12.4	102	Fail	36.5%	7.8%	0.0%	Minimum	61.9%	9.4%	0.0%
B18-107.3	Bed	13.4	121	Fail	34.2%	4.5%	0.0%	Minimum	60.1%	6.9%	0.0%
B18-108.1	LKD	27.6	252	Minimum	52.4%	35.9%	18.9%	Minimum	64.0%	29.1%	7.4%
B18-108.2	Bed	13.0	108	Fail	41.8%	12.4%	0.2%	Minimum	65.3%	15.1%	0.0%
B18-108.3	Bed	13.4	121	Fail	37.1%	8.9%	0.0%	Minimum	62.5%	13.7%	0.0%
B18-109.1	LKD	22.7	181	Minimum	59.2%	43.6%	29.0%	Minimum	60.8%	20.7%	4.5%
B18-109.2	Bed	9.8	81	Medium	71.1%	58.1%	45.9%	Medium	82.8%	61.5%	46.1%
B18-110.1	LKD	29.9	266	Minimum	57.6%	42.9%	28.1%	Minimum	67.5%	34.4%	9.3%
B18-110.2	Bed	9.7	80	Medium	71.1%	58.1%	46.6%	Medium	83.1%	62.3%	47.1%
B18-110.3	Bed	12.0	96	Minimum	62.7%	47.9%	34.7%	Medium	78.4%	51.7%	34.9%
B18-111.1	LKD	33.8	303	High	74.3%	61.9%	50.5%	Medium	82.7%	62.2%	47.3%
B18-111.2	Bed	5.2	32	Medium	74.2%	59.0%	42.4%	Medium	81.5%	55.7%	32.6%
B18-111.3	Bed	9.7	80	Medium	74.2%	60.3%	44.1%	Medium	85.2%	64.3%	45.4%
B18-111.4	Bed	14.4	126	Minimum	65.3%	47.6%	28.3%	Medium	80.6%	53.4%	30.8%
B18-112.1	LKD	22.7	181	Minimum	54.5%	31.2%	13.0%	Minimum	61.1%	11.1%	4.6%
B18-112.2	Bed	9.8	81	Minimum	62.7%	41.8%	22.6%	Minimum	77.4%	42.0%	17.6%
B18-113.1	LKD	27.6	252	Fail	46.9%	21.6%	8.9%	Minimum	66.4%	18.4%	5.8%
B18-113.2	Bed	12.4	102	Fail	43.0%	17.7%	5.6%	Minimum	65.4%	19.3%	3.3%
B18-113.3	Bed	13.4	121	Fail	27.7%	3.3%	1.8%	Minimum	57.5%	6.8%	1.1%
B18-114.1	LKD	27.6	252	Fail	46.8%	21.3%	8.5%	Minimum	66.4%	17.8%	5.7%
B18-114.2	Bed	12.4	102	Fail	49.4%	26.3%	10.6%	Minimum	66.6%	24.3%	7.3%
B18-114.3	Bed	13.4	121	Fail	46.3%	25.1%	11.0%	Minimum	65.4%	25.1%	9.4%
B18-115.1	LKD	22.7	181	Minimum	55.7%	32.6%	13.0%	Minimum	62.4%	11.2%	4.1%
B18-115.2	Bed	9.8	81	Medium	68.6%	50.6%	32.2%	Medium	81.5%	54.0%	30.1%
B18-116.1	LKD	22.7	181	Minimum	57.1%	39.1%	22.8%	Fail	49.2%	8.3%	2.3%
B18-116.2	Bed	9.8	81	Minimum	57.4%	39.3%	19.6%	Minimum	72.2%	37.0%	13.3%
B18-117.1	LKD	22.7	181	Minimum	63.6%	44.6%	24.4%	Minimum	65.6%	18.0%	6.0%
B18-117.2	Bed	9.8	81	Medium	73.6%	58.2%	41.3%	Medium	85.8%	65.5%	46.7%
B18-118.1	LKD	22.7	181	Minimum	54.9%	31.6%	13.9%	Minimum	60.7%	11.3%	4.0%
B18-118.2	Bed	9.8	81	Medium	70.5%	54.0%	36.9%	Medium	83.2%	60.7%	39.3%
B18-119.1	LKD	27.6	252	Fail	48.9%	24.0%	9.2%	Minimum	68.2%	22.1%	6.4%
B18-119.2	Bed	12.4	102	Fail	38.6%	18.4%	7.2%	Minimum	56.9%	20.0%	6.6%
B18-119.3	Bed	13.4	121	Fail	38.7%	14.8%	5.3%	Minimum	61.9%	20.8%	6.2%
B18-120.1	LKD	22.7	181	Minimum	63.4%	44.4%	23.3%	Minimum	66.3%	18.9%	5.7%
B18-120.2	Bed	9.8	81	Minimum	66.1%	47.2%	27.8%	Medium	82.0%	55.4%	32.4%
B18-121.1	LKD	33.8	302	Medium	68.2%	50.5%	27.6%	Medium	81.1%	54.2%	27.6%
B18-121.2	Bed	5.2	32	Medium	73.8%	56.0%	35.0%	Minimum	80.4%	49.9%	17.7%
B18-121.3	Bed	9.7	80	Medium	71.0%	53.5%	32.4%	Medium	84.4%	59.0%	36.6%
B18-121.4	Bed	11.1	90	Minimum	68.1%	49.5%	24.4%	Medium	82.8%	56.1%	30.5%
B18-122.1	LKD	33.8	302	Minimum	58.9%	41.4%	20.8%	Minimum	76.9%	46.1%	20.3%
B18-122.2	Bed	5.2	32	Minimum	63.3%	43.1%	16.9%	Minimum	78.8%	44.3%	10.0%
B18-122.3	Bed	9.7	80	Minimum	67.8%	48.8%	24.7%	Medium	83.3%	57.1%	32.9%
B18-122.4	Bed	11.1	90	Minimum	63.3%	43.2%	16.4%	Medium	82.2%	54.1%	25.5%
B18-123.1	LKD	33.8	302	Minimum	60.8%	43.7%	23.0%	Minimum	76.7%	46.6%	22.5%
B18-123.2	Bed	5.2	32	Medium	71.7%	53.5%	30.3%	Medium	81.0%	50.3%	17.6%
B18-123.3	Bed	9.7	80	Medium	70.1%	52.0%	29.1%	Medium	84.0%	57.9%	34.1%

Site 18 - 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
B18-123.4	Bed	11.1	90	Minimum	66.5%	47.0%	20.0%	Medium	82.6%	54.7%	27.4%
B18-124.1	LKD	34.4	307	Medium	69.5%	52.6%	34.6%	Medium	80.5%	51.4%	26.0%
B18-124.2	Bed	5.2	32	Minimum	52.3%	21.3%	0.5%	Minimum	73.9%	25.1%	0.4%
B18-124.3	Bed	9.7	80	Medium	70.5%	52.4%	29.7%	Medium	84.2%	58.2%	34.6%
B18-124.4	Bed	11.1	90	Minimum	67.7%	48.4%	23.0%	Medium	83.0%	56.3%	30.2%
B18-125.1	LKD	22.7	181	Minimum	60.0%	41.5%	20.8%	Minimum	61.5%	13.6%	4.1%
B18-125.2	Bed	9.8	81	Medium	69.9%	54.9%	39.2%	Medium	83.0%	60.2%	41.4%
B18-126.1	LKD	22.7	181	Medium	68.4%	54.5%	40.3%	Minimum	66.5%	29.5%	9.3%
B18-126.2	Bed	9.8	81	Medium	74.0%	60.3%	45.9%	Medium	84.5%	64.3%	47.7%
B18-127.1	LKD	29.9	266	Fail	43.1%	23.0%	9.3%	Minimum	51.6%	9.4%	0.2%
B18-127.2	Bed	9.7	80	Fail	45.6%	23.7%	7.6%	Minimum	67.0%	30.4%	5.5%
B18-127.3	Bed	12.0	96	Fail	43.1%	20.2%	5.6%	Minimum	59.8%	21.3%	4.2%
B18-201.1	LKD	29.9	266	Fail	49.4%	26.8%	6.6%	Minimum	54.0%	5.6%	0.7%
B18-201.2	Bed	9.7	80	Minimum	54.9%	33.9%	12.8%	Minimum	73.9%	35.2%	8.5%
B18-201.3	Bed	12.0	96	Fail	39.0%	8.6%	2.2%	Minimum	59.9%	7.6%	1.3%
B18-202.1	LKD	22.7	181	Medium	67.3%	53.4%	36.8%	Minimum	60.5%	10.2%	2.6%
B18-202.2	Bed	9.8	81	Medium	72.3%	58.7%	44.1%	Medium	83.7%	62.4%	45.4%
B18-203.1	LKD	22.7	181	Fail	49.5%	22.5%	7.9%	Fail	42.6%	3.7%	1.1%
B18-203.2	Bed	9.8	81	Medium	68.4%	52.4%	35.4%	Medium	82.3%	57.6%	37.5%
B18-204.1	LKD	33.8	302	Medium	71.1%	59.3%	47.2%	Medium	82.0%	60.5%	45.0%
B18-204.2	Bed	5.2	32	Medium	68.8%	53.6%	37.0%	Medium	79.0%	50.1%	24.5%
B18-204.3	Bed	11.1	90	Minimum	65.3%	49.5%	29.7%	Minimum	78.6%	49.5%	24.1%
B18-204.3	Bed	9.7	80	Medium	67.4%	52.1%	35.2%	Medium	79.6%	51.9%	29.6%
B18-205.1	LKD	29.9	266	Minimum	58.8%	43.4%	29.8%	Minimum	67.4%	33.7%	8.5%
B18-205.2	Bed	9.7	80	Medium	71.9%	58.8%	46.8%	Medium	83.2%	62.6%	47.2%
B18-205.3	Bed	12.0	96	Minimum	63.2%	48.2%	34.1%	Medium	77.5%	50.2%	33.8%
B18-206.1	LKD	22.7	181	Fail	49.3%	32.6%	10.9%	Minimum	54.5%	7.3%	2.5%
B18-206.2	Bed	9.8	81	Medium	71.7%	58.7%	46.8%	Medium	83.2%	63.1%	47.9%
B18-207.1	LKD	27.6	252	Fail	43.7%	22.0%	7.0%	Minimum	61.4%	17.0%	4.2%
B18-207.2	Bed	12.4	102	Fail	47.1%	17.7%	0.2%	Minimum	68.4%	21.6%	0.1%
B18-207.3	Bed	13.4	121	Fail	44.6%	13.7%	0.0%	Minimum	68.5%	20.8%	0.2%
B18-208.1	LKD	27.6	252	Fail	44.1%	22.7%	7.3%	Minimum	63.0%	20.6%	4.5%
B18-208.2	Bed	13.0	108	Minimum	50.2%	22.2%	0.7%	Minimum	72.7%	28.9%	1.0%
B18-208.3	Bed	13.4	121	Fail	47.6%	18.3%	1.3%	Minimum	70.5%	26.0%	0.6%
B18-209.1	LKD	22.7	181	Minimum	50.2%	33.6%	12.7%	Minimum	58.9%	13.1%	3.3%
B18-209.2	Bed	9.8	81	Medium	73.0%	59.9%	47.6%	Medium	83.4%	64.0%	48.6%
B18-210.1	LKD	29.9	266	Minimum	60.3%	44.4%	31.7%	Minimum	71.6%	40.1%	16.0%
B18-210.2	Bed	9.7	80	Medium	72.7%	59.5%	47.9%	Medium	83.9%	64.9%	49.9%
B18-210.3	Bed	12.0	96	Minimum	64.4%	49.9%	36.3%	Medium	79.1%	52.6%	35.8%
B18-211.1	LKD	33.8	303	High	74.3%	62.1%	50.9%	Medium	83.1%	64.0%	49.5%
B18-211.2	Bed	5.2	32	Medium	73.0%	58.2%	41.6%	Medium	82.9%	59.5%	37.6%
B18-211.3	Bed	9.7	80	Medium	73.3%	58.5%	43.3%	Medium	84.7%	63.9%	45.8%
B18-211.4	Bed	14.4	126	Minimum	65.5%	47.9%	28.7%	Medium	81.2%	54.6%	31.3%
B18-212.1	LKD	22.7	181	Fail	46.7%	20.5%	8.1%	Minimum	55.8%	7.8%	3.3%
B18-212.2	Bed	9.8	81	Minimum	63.8%	43.9%	23.9%	Minimum	78.1%	43.7%	19.0%
B18-213.1	LKD	27.6	252	Fail	36.8%	11.0%	5.7%	Minimum	62.2%	10.9%	3.9%
B18-213.2	Bed	12.4	102	Minimum	51.9%	29.6%	12.8%	Minimum	73.4%	31.1%	11.3%
B18-213.3	Bed	13.4	121	Fail	40.2%	12.3%	3.1%	Minimum	63.6%	14.1%	2.6%
B18-214.1	LKD	27.6	252	Fail	36.1%	11.2%	5.6%	Minimum	62.6%	11.2%	3.7%
B18-214.2	Bed	12.4	102	Minimum	57.6%	37.7%	19.6%	Minimum	76.3%	40.5%	19.4%

Site 18 - 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
B18-214.3	Bed	13.4	121	Minimum	53.9%	33.7%	18.4%	Minimum	74.6%	38.6%	17.9%
B18-215.1	LKD	22.7	181	Fail	47.1%	21.1%	6.9%	Minimum	59.1%	7.9%	3.4%
B18-215.2	Bed	9.8	81	Medium	69.5%	52.1%	34.1%	Medium	82.0%	55.6%	33.3%
B18-216.1	LKD	22.7	181	Medium	66.8%	53.0%	37.1%	Minimum	59.2%	17.1%	7.1%
B18-216.2	Bed	9.8	81	Minimum	64.9%	48.9%	31.1%	Minimum	78.1%	48.9%	25.8%
B18-217.1	LKD	22.7	181	Minimum	64.6%	46.2%	25.8%	Minimum	68.1%	22.9%	7.4%
B18-217.2	Bed	9.8	81	Medium	74.5%	59.8%	43.8%	Medium	86.0%	66.3%	47.4%
B18-218.1	LKD	22.7	181	Fail	48.5%	23.6%	8.7%	Minimum	57.4%	8.4%	2.7%
B18-218.2	Bed	9.8	81	Medium	71.2%	55.6%	38.2%	Medium	84.6%	63.1%	43.7%
B18-219.1	LKD	27.6	252	Fail	40.9%	13.0%	5.9%	Minimum	63.8%	12.9%	4.1%
B18-219.2	Bed	12.4	102	Fail	43.7%	23.8%	8.6%	Minimum	61.1%	24.7%	9.1%
B18-219.3	Bed	13.4	121	Fail	44.4%	21.8%	6.0%	Minimum	64.2%	25.2%	5.9%
B18-220.1	LKD	22.7	181	Minimum	63.3%	44.7%	24.2%	Minimum	66.9%	20.3%	5.5%
B18-220.2	Bed	9.8	81	Minimum	66.8%	48.3%	29.9%	Medium	81.3%	54.1%	31.3%
B18-221.1	LKD	33.8	302	Medium	68.0%	50.4%	28.3%	Medium	81.0%	54.4%	28.9%
B18-221.2	Bed	5.2	32	Medium	72.6%	55.2%	35.1%	Medium	81.3%	52.3%	21.4%
B18-221.3	Bed	9.7	80	Medium	71.5%	54.4%	34.4%	Medium	84.3%	58.8%	37.1%
B18-221.4	Bed	11.1	90	Minimum	67.6%	49.0%	25.9%	Medium	82.6%	55.5%	30.8%
B18-222.1	LKD	33.8	302	Minimum	61.6%	45.2%	27.5%	Minimum	78.0%	49.5%	26.7%
B18-222.2	Bed	5.2	32	Minimum	66.9%	47.8%	21.3%	Minimum	80.4%	49.0%	15.6%
B18-222.3	Bed	9.7	80	Minimum	67.3%	48.8%	25.4%	Medium	83.8%	58.3%	35.2%
B18-222.4	Bed	11.1	90	Minimum	64.3%	44.8%	19.2%	Medium	82.5%	55.1%	28.6%
B18-223.1	LKD	33.8	302	Minimum	63.3%	48.0%	30.1%	Medium	78.5%	51.2%	28.6%
B18-223.2	Bed	5.2	32	Medium	72.4%	54.5%	33.0%	Medium	80.9%	50.5%	18.2%
B18-223.3	Bed	9.7	80	Medium	70.9%	53.0%	31.3%	Medium	83.4%	57.9%	34.3%
B18-223.4	Bed	11.1	90	Minimum	66.7%	47.5%	21.7%	Medium	83.1%	57.1%	32.4%
B18-224.1	LKD	34.4	307	Medium	70.2%	54.0%	36.4%	Medium	80.5%	52.0%	27.4%
B18-224.2	Bed	5.2	32	Minimum	53.4%	25.7%	1.2%	Minimum	71.3%	18.9%	0.0%
B18-224.3	Bed	9.7	80	Medium	70.5%	52.8%	30.8%	Medium	83.6%	57.6%	33.6%
B18-224.4	Bed	11.1	90	Minimum	67.4%	48.9%	24.7%	Medium	83.3%	57.3%	32.8%
B18-225.1	LKD	22.7	181	Minimum	62.6%	45.4%	24.6%	Minimum	65.8%	21.4%	5.9%
B18-225.2	Bed	9.8	81	Medium	73.4%	59.1%	44.3%	Medium	84.5%	64.5%	47.4%
B18-226.1	LKD	22.7	181	Medium	71.6%	58.3%	45.3%	Minimum	68.8%	34.4%	10.7%
B18-226.2	Bed	9.8	81	Medium	76.0%	63.0%	49.3%	High	85.8%	67.6%	51.9%
B18-227.1	LKD	29.9	266	Minimum	55.4%	38.6%	18.2%	Minimum	60.2%	17.4%	2.5%
B18-227.2	Bed	9.7	80	Minimum	57.7%	40.3%	20.0%	Minimum	75.6%	43.9%	19.7%
B18-227.3	Bed	12.0	96	Minimum	52.1%	32.8%	12.6%	Minimum	69.0%	34.1%	7.4%
B18-301.1	LKD	29.9	266	Minimum	64.1%	47.0%	27.9%	Minimum	69.0%	30.3%	6.2%
B18-301.2	Bed	9.7	80	Minimum	65.0%	47.1%	26.8%	Medium	80.2%	51.3%	26.0%
B18-301.3	Bed	12.0	96	Minimum	51.7%	25.0%	6.1%	Minimum	69.6%	22.0%	3.9%
B18-302.1	LKD	22.7	181	Medium	74.7%	62.2%	49.8%	Minimum	69.6%	30.6%	6.8%
B18-302.2	Bed	9.8	81	Medium	75.7%	62.9%	49.5%	High	85.2%	66.8%	51.2%
B18-303.1	LKD	22.7	181	Minimum	61.1%	42.0%	18.7%	Minimum	60.0%	9.0%	3.7%
B18-303.2	Bed	9.8	81	Medium	72.3%	58.4%	42.4%	Medium	84.1%	63.1%	46.1%
B18-304.1	LKD	33.8	302	High	74.1%	62.2%	50.9%	Medium	83.3%	64.5%	49.9%
B18-304.2	Bed	5.2	32	Medium	71.7%	57.6%	43.7%	Medium	81.1%	54.9%	32.0%
B18-304.3	Bed	9.7	80	Medium	72.1%	58.8%	43.6%	Medium	82.8%	60.4%	42.1%
B18-304.3	Bed	11.1	90	Medium	68.9%	54.5%	37.8%	Medium	82.1%	57.9%	37.2%
B18-305.1	LKD	29.9	266	Medium	65.4%	50.8%	40.4%	Minimum	75.1%	44.1%	25.6%
B18-305.2	Bed	9.7	80	High	74.0%	61.5%	50.1%	High	84.6%	66.1%	51.0%

Site 18 - 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
B18-305.3	Bed	12.0	96	Medium	65.5%	50.5%	36.2%	Medium	79.9%	53.9%	36.4%
B18-306.1	LKD	22.7	181	Medium	71.6%	58.9%	46.4%	Minimum	72.9%	42.5%	20.3%
B18-306.2	Bed	9.8	81	High	75.4%	63.9%	52.9%	High	85.6%	68.8%	54.5%
B18-307.1	LKD	27.6	252	Medium	65.9%	52.0%	41.5%	Minimum	77.0%	48.8%	32.4%
B18-307.2	Bed	12.4	102	Minimum	54.4%	29.0%	1.9%	Minimum	76.1%	37.2%	3.3%
B18-307.3	Bed	13.4	121	Minimum	53.3%	27.7%	1.8%	Minimum	76.2%	37.1%	4.2%
B18-308.1	LKD	27.6	252	Medium	66.1%	52.1%	41.6%	Minimum	77.0%	49.4%	32.5%
B18-308.2	Bed	13.0	108	Minimum	56.5%	32.9%	5.2%	Minimum	77.4%	41.5%	6.6%
B18-308.3	Bed	13.4	121	Minimum	55.2%	31.1%	4.9%	Minimum	77.0%	39.9%	6.3%
B18-309.1	LKD	22.7	181	Medium	71.6%	59.1%	47.2%	Minimum	74.0%	43.6%	23.4%
B18-309.2	Bed	9.8	81	High	75.2%	63.6%	52.4%	High	85.2%	67.3%	53.5%
B18-310.1	LKD	29.9	266	Medium	65.7%	51.2%	41.1%	Minimum	75.3%	45.4%	29.2%
B18-310.2	Bed	9.7	80	High	73.9%	61.3%	50.2%	High	84.5%	66.3%	52.1%
B18-310.3	Bed	12.0	96	Medium	66.3%	51.5%	37.6%	Medium	79.2%	53.5%	36.7%
B18-311.1	LKD	33.8	303	High	75.0%	63.1%	51.8%	High	83.6%	65.3%	51.1%
B18-311.2	Bed	5.2	32	Medium	73.2%	58.7%	42.5%	Medium	81.4%	55.5%	34.1%
B18-311.3	Bed	9.7	80	Medium	74.7%	60.9%	45.5%	Medium	85.0%	64.2%	45.9%
B18-311.4	Bed	14.4	126	Minimum	66.3%	49.1%	30.1%	Medium	81.4%	55.6%	33.2%
B18-312.1	LKD	22.7	181	Minimum	67.0%	48.8%	29.1%	Minimum	70.4%	26.6%	9.0%
B18-312.2	Bed	9.8	81	Minimum	66.4%	48.1%	28.5%	Medium	80.4%	50.9%	25.4%
B18-313.1	LKD	27.6	252	Minimum	59.9%	38.5%	21.4%	Minimum	74.3%	35.3%	13.0%
B18-313.2	Bed	12.4	102	Minimum	61.6%	42.1%	22.2%	Minimum	78.2%	46.3%	21.1%
B18-313.3	Bed	13.4	121	Minimum	52.5%	25.9%	9.4%	Minimum	74.3%	31.6%	9.4%
B18-314.1	LKD	27.6	252	Minimum	62.3%	42.0%	23.6%	Minimum	75.3%	37.2%	13.2%
B18-314.2	Bed	12.4	102	Minimum	65.3%	48.5%	28.3%	Medium	80.3%	51.3%	27.4%
B18-314.3	Bed	13.4	121	Minimum	60.9%	43.4%	25.4%	Medium	79.1%	50.3%	26.7%
B18-315.1	LKD	22.7	181	Medium	68.0%	51.3%	32.2%	Minimum	70.0%	26.8%	9.0%
B18-315.2	Bed	9.8	81	Medium	70.9%	55.3%	38.3%	Medium	82.6%	58.4%	37.7%
B18-316.1	LKD	22.7	181	High	75.7%	62.8%	51.0%	Minimum	70.7%	36.9%	11.8%
B18-316.2	Bed	9.8	81	Medium	69.3%	53.9%	38.5%	Medium	81.8%	58.0%	38.8%
B18-317.1	LKD	22.7	181	Medium	67.7%	51.1%	32.0%	Minimum	71.2%	28.0%	9.2%
B18-317.2	Bed	9.8	81	Medium	74.9%	60.8%	44.9%	Medium	86.1%	66.5%	49.0%
B18-318.1	LKD	22.7	181	Medium	69.2%	52.0%	33.9%	Minimum	71.1%	28.2%	9.3%
B18-318.2	Bed	9.8	81	Medium	73.6%	59.0%	43.4%	Medium	85.4%	65.5%	47.2%
B18-319.1	LKD	27.6	252	Minimum	61.6%	41.3%	23.1%	Minimum	75.0%	37.3%	13.5%
B18-319.2	Bed	12.4	102	Minimum	53.1%	34.1%	16.0%	Minimum	67.5%	32.9%	14.4%
B18-319.3	Bed	13.4	121	Minimum	52.5%	31.9%	12.0%	Minimum	69.8%	34.9%	10.9%
B18-320.1	LKD	22.7	181	Minimum	64.4%	46.8%	26.6%	Minimum	67.1%	21.7%	5.7%
B18-320.2	Bed	9.8	81	Medium	69.6%	53.4%	36.2%	Medium	83.7%	60.3%	41.0%
B18-321.1	LKD	33.8	302	Medium	67.8%	50.0%	28.7%	Medium	81.0%	54.1%	28.6%
B18-321.2	Bed	5.2	32	Medium	72.7%	55.1%	35.3%	Medium	81.9%	53.6%	25.4%
B18-321.3	Bed	9.7	80	Medium	71.2%	54.1%	34.7%	Medium	84.3%	59.3%	37.7%
B18-321.4	Bed	11.1	90	Medium	68.6%	50.1%	27.6%	Medium	82.9%	56.7%	32.5%
B18-322.1	LKD	33.8	302	Medium	65.8%	51.1%	36.3%	Medium	80.5%	54.8%	35.5%
B18-322.2	Bed	5.2	32	Minimum	67.1%	48.1%	24.8%	Minimum	79.6%	47.5%	14.9%
B18-322.3	Bed	9.7	80	Minimum	68.2%	49.8%	27.4%	Medium	83.6%	57.9%	35.0%
B18-322.4	Bed	11.1	90	Minimum	63.5%	44.2%	19.1%	Medium	82.6%	55.3%	29.9%
B18-323.1	LKD	33.8	302	Medium	66.1%	51.3%	36.2%	Medium	81.1%	56.7%	37.4%
B18-323.2	Bed	5.2	32	Medium	73.8%	56.2%	37.0%	Medium	81.3%	52.1%	22.7%
B18-323.3	Bed	9.7	80	Medium	70.7%	52.9%	31.4%	Medium	84.5%	58.9%	37.2%

Site 18 - 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
B18-323.4	Bed	11.1	90	Minimum	67.2%	48.4%	24.4%	Medium	82.9%	56.3%	31.6%
B18-324.1	LKD	34.4	307	Medium	70.5%	54.6%	37.7%	Medium	81.6%	53.9%	29.2%
B18-324.2	Bed	5.2	32	Minimum	54.1%	26.5%	1.3%	Minimum	72.8%	23.1%	0.0%
B18-324.3	Bed	9.7	80	Medium	70.7%	53.3%	32.5%	Medium	84.5%	59.5%	36.9%
B18-324.4	Bed	11.1	90	Minimum	67.9%	49.0%	25.5%	Medium	82.9%	56.9%	32.7%
B18-325.1	LKD	22.7	181	Minimum	65.1%	48.9%	28.8%	Minimum	67.4%	24.3%	6.6%
B18-325.2	Bed	9.8	81	Medium	74.0%	60.3%	46.7%	High	85.3%	67.0%	50.8%
B18-326.1	LKD	22.7	181	High	77.3%	66.1%	55.0%	Minimum	74.5%	44.7%	16.6%
B18-326.2	Bed	9.8	81	High	77.3%	65.1%	52.5%	High	86.3%	69.5%	54.3%
B18-327.1	LKD	29.9	266	Medium	64.6%	51.6%	34.8%	Minimum	70.0%	37.8%	10.9%
B18-327.2	Bed	9.7	80	Minimum	64.5%	47.8%	28.6%	Medium	79.5%	51.8%	30.3%
B18-327.3	Bed	12.0	96	Minimum	58.7%	40.9%	20.3%	Minimum	75.7%	44.0%	16.5%
B18-401.1	LKD	22.7	181	Medium	71.4%	56.3%	40.0%	Minimum	73.2%	33.6%	10.1%
B18-401.2	Bed	9.8	81	Medium	71.7%	56.2%	39.1%	Medium	85.2%	64.1%	45.1%
B18-402.1	LKD	33.8	302	Medium	68.8%	52.1%	32.2%	Medium	81.9%	56.1%	34.0%
B18-402.2	Bed	5.2	32	Medium	74.9%	58.1%	39.9%	Medium	81.6%	52.3%	23.6%
B18-402.3	Bed	9.7	80	Medium	72.6%	56.0%	37.3%	Medium	84.8%	60.7%	39.9%
B18-402.4	Bed	11.1	90	Minimum	68.0%	49.7%	27.4%	Medium	83.2%	57.5%	34.5%
B18-403.1	LKD	33.8	302	Medium	72.9%	59.2%	46.9%	Medium	83.5%	61.7%	46.2%
B18-403.2	Bed	5.2	32	Minimum	67.6%	49.0%	25.0%	Medium	80.9%	50.5%	17.9%
B18-403.3	Bed	9.7	80	Medium	68.2%	50.3%	28.1%	Medium	83.8%	58.3%	36.0%
B18-403.4	Bed	11.1	90	Minimum	65.1%	45.9%	22.2%	Medium	82.3%	54.6%	29.4%
B18-404.1	LKD	33.8	302	Medium	72.8%	59.6%	46.9%	Medium	83.9%	62.9%	48.2%
B18-404.2	Bed	5.2	32	Medium	73.1%	55.5%	35.7%	Minimum	79.2%	45.6%	11.5%
B18-404.3	Bed	9.7	80	Medium	71.4%	54.3%	33.7%	Medium	84.3%	59.3%	37.7%
B18-404.4	Bed	11.1	90	Minimum	66.9%	48.4%	23.7%	Medium	82.8%	56.6%	32.4%
B18-405.1	LKD	34.4	307	Medium	71.8%	56.8%	41.3%	Medium	82.4%	57.4%	35.8%
B18-405.2	Bed	5.2	32	Minimum	55.3%	30.8%	3.2%	Minimum	72.8%	26.4%	0.1%
B18-405.3	Bed	9.7	80	Medium	71.2%	53.9%	33.8%	Medium	84.5%	59.8%	37.8%
B18-405.4	Bed	11.1	90	Medium	69.1%	50.9%	28.7%	Medium	83.1%	57.0%	33.3%
B18-406.1	LKD	22.7	181	Medium	68.5%	53.9%	35.7%	Minimum	70.5%	32.1%	11.3%
B18-406.2	Bed	9.8	81	Medium	75.4%	62.2%	48.8%	High	86.0%	68.4%	53.0%
B18-407.1	LKD	22.7	181	High	79.9%	70.9%	61.2%	Medium	77.6%	51.2%	27.7%
B18-407.2	Bed	9.8	81	High	77.9%	66.4%	54.0%	High	87.1%	71.8%	57.3%
B18-408.1	LKD	29.9	266	Medium	73.1%	60.5%	48.5%	Medium	78.1%	52.5%	28.4%
B18-408.2	Bed	9.7	80	Medium	69.2%	54.3%	38.2%	Medium	82.7%	59.9%	41.2%
B18-408.3	Bed	12.0	96	Minimum	63.3%	47.3%	27.4%	Medium	79.7%	52.5%	29.6%

Table 24: Site 18 Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

Appendix C - Sunlight Hours to Living Spaces within the Proposed Development

Site 5 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B05-101.1	Yes	1.92	Minimum
B05-102.1	No	2.67	Minimum
B05-103.1	No	4.00	High
B05-104.1	No	2.67	Minimum
B05-105.1	Yes	0.00	Below criteria
B05-106.1	Yes	0.00	Below criteria
B05-107.1	Yes	2.58	Minimum
B05-108.1	Yes	2.50	Minimum
B05-109.1	No	2.75	Minimum
B05-110.1	Yes	2.58	Minimum
B05-111.1	Yes	2.92	Minimum
B05-112.1	Yes	2.92	Minimum
B05-113.1	Yes	3.58	Medium
B05-114.1	No	2.17	Minimum
B05-115.1	Yes	2.50	Minimum
B05-116.1	Yes	2.50	Minimum
B05-117.1	Yes	2.92	Minimum
B05-118.1	Yes	2.92	Minimum
B05-119.1	Yes	3.00	Medium
B05-120.1	Yes	6.42	High
B05-121.1	Yes	8.00	High
B05-122.1	Yes	6.58	High
B05-123.1	Yes	6.25	High
B05-124.1	Yes	6.25	High
B05-125.1	Yes	6.58	High
B05-126.1	Yes	8.00	High
B05-127.1	Yes	6.25	High
B05-128.1	No	1.75	Minimum
B05-129.1	No	0.75	Below criteria
B05-130.1	No	0.92	Below criteria
B05-131.1	No	0.67	Below criteria
B05-132.1	No	0.83	Below criteria
B05-133.1	Yes	2.25	Minimum
B05-134.1	No	1.42	Below criteria
B05-135.1	No	0.83	Below criteria
B05-201.1	Yes	2.42	Minimum
B05-202.1	No	3.00	Medium
B05-203.1	No	4.42	High
B05-204.1	No	3.08	Medium
B05-205.1	Yes	2.50	Minimum
B05-206.1	Yes	3.50	Medium
B05-207.1	Yes	2.58	Minimum
B05-208.1	Yes	2.50	Minimum
B05-209.1	No	3.33	Medium
B05-210.1	Yes	2.58	Minimum
B05-211.1	Yes	2.92	Minimum
B05-212.1	Yes	2.92	Minimum
B05-213.1	Yes	3.58	Medium
B05-214.1	No	2.67	Minimum
B05-215.1	Yes	2.50	Minimum
B05-216.1	Yes	2.50	Minimum

Site 5 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B05-217.1	Yes	2.92	Minimum
B05-218.1	Yes	2.92	Minimum
B05-219.1	Yes	3.00	Medium
B05-220.1	Yes	6.42	High
B05-221.1	Yes	8.00	High
B05-222.1	Yes	1.50	Minimum
B05-223.1	Yes	0.00	Below criteria
B05-224.1	Yes	0.00	Below criteria
B05-225.1	Yes	1.75	Minimum
B05-226.1	Yes	8.00	High
B05-227.1	Yes	6.25	High
B05-228.1	No	2.33	Minimum
B05-229.1	No	1.50	Minimum
B05-230.1	No	1.67	Minimum
B05-231.1	No	1.42	Below criteria
B05-232.1	No	1.42	Below criteria
B05-233.1	Yes	2.83	Minimum
B05-234.1	No	2.33	Minimum
B05-235.1	No	2.25	Minimum
B05-301.1	Yes	2.75	Minimum
B05-302.1	No	3.42	Medium
B05-303.1	No	4.83	High
B05-304.1	No	3.67	Medium
B05-305.1	Yes	3.17	Medium
B05-306.1	Yes	4.00	High
B05-307.1	Yes	2.58	Minimum
B05-308.1	Yes	2.50	Minimum
B05-309.1	No	4.42	High
B05-310.1	Yes	2.58	Minimum
B05-311.1	Yes	2.75	Minimum
B05-312.1	Yes	2.75	Minimum
B05-313.1	Yes	2.50	Minimum
B05-314.1	No	3.25	Medium
B05-315.1	Yes	2.50	Minimum
B05-316.1	Yes	2.50	Minimum
B05-317.1	Yes	2.75	Minimum
B05-318.1	Yes	2.75	Minimum
B05-319.1	Yes	2.50	Minimum
B05-320.1	Yes	1.83	Minimum
B05-321.1	Yes	8.33	High
B05-322.1	Yes	9.00	High
B05-323.1	Yes	9.00	High
B05-324.1	Yes	9.00	High
B05-325.1	Yes	9.00	High
B05-326.1	Yes	8.17	High
B05-327.1	Yes	1.75	Minimum
B05-328.1	No	2.42	Minimum
B05-329.1	No	2.25	Minimum
B05-330.1	No	2.42	Minimum
B05-331.1	No	2.08	Minimum
B05-332.1	No	2.17	Minimum

Site 5 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B05-333.1	Yes	3.50	Medium
B05-334.1	No	3.17	Medium
B05-335.1	No	2.42	Minimum
B05-401.1	Yes	3.58	Medium
B05-402.1	No	4.92	High
B05-403.1	No	4.92	High
B05-404.1	No	3.58	Medium
B05-405.1	Yes	6.75	High
B05-406.1	Yes	7.42	High
B05-407.1	Yes	2.25	Minimum
B05-408.1	Yes	2.92	Minimum
B05-409.1	No	4.92	High
B05-410.1	Yes	4.08	High
B05-411.1	Yes	5.17	High
B05-412.1	Yes	5.17	High
B05-413.1	Yes	5.17	High
B05-414.1	No	4.00	High
B05-415.1	Yes	2.50	Minimum
B05-416.1	Yes	4.00	High
B05-417.1	Yes	5.17	High
B05-418.1	Yes	5.17	High
B05-419.1	Yes	5.17	High
B05-420.1	No	4.92	High
B05-421.1	No	4.92	High
B05-422.1	No	4.92	High
B05-423.1	No	3.83	Medium
B05-424.1	No	2.33	Minimum
B05-425.1	Yes	4.25	High
B05-426.1	No	3.75	Medium
B05-427.1	No	2.83	Minimum

Table 25: Site 5 -Sunlight hours to living spaces

Sites 15 & 16 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
S15-D01.1	Yes	8.3	High
S15-D02.1	Yes	7.9	High
S15-D03.1	No	2.8	Minimum
S15-D04.1	No	3.4	Medium
S15-D05.1	Yes	1.1	Below criteria
S15-D06.1	Yes	1.4	Below criteria
S15-H01.1	Yes	2.2	Minimum
S15-H02.1	Yes	2.2	Minimum
S16-D01.1	Yes	4.3	High
S16-D02.1	Yes	3.5	Medium
S16-H01.2	Yes	7.1	High
S16-H02.1	Yes	4.4	High
S16-H03.1	Yes	4.4	High

Table 26: Site 15 & 16 - Sunlight hours to living spaces

Site 17 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B17-101.1	No	2.75	Minimum
B17-102.1	No	4.83	High
B17-103.1	Yes	2.00	Minimum
B17-104.1	Yes	3.42	Medium
B17-105.1	Yes	3.42	Medium
B17-106.1	Yes	3.75	Medium
B17-107.1	Yes	4.00	High
B17-108.1	Yes	3.75	Medium
B17-109.1	Yes	7.83	High
B17-110.1	Yes	7.50	High
B17-111.1	Yes	7.50	High
B17-112.1	Yes	6.92	High
B17-202.1	No	2.75	Minimum
B17-201.1	No	4.83	High
B17-203.1	Yes	2.50	Minimum
B17-204.1	Yes	4.25	High
B17-205.1	Yes	3.83	Medium
B17-206.1	Yes	4.33	High
B17-207.1	Yes	4.50	High
B17-208.1	Yes	3.92	Medium
B17-209.1	Yes	8.67	High
B17-210.1	Yes	7.92	High
B17-211.1	Yes	7.67	High
B17-212.1	Yes	7.42	High
B17-302.1	No	2.50	Minimum
B17-301.1	No	4.83	High
B17-303.1	Yes	3.58	Medium
B17-304.1	Yes	5.42	High
B17-305.1	Yes	7.83	High
B17-306.1	Yes	7.00	High
B17-401.1	Yes	7.83	High
B17-402.1	Yes	4.58	High
B17-501.1	Yes	8.92	High
B17-502.1	Yes	8.00	High

Table 27: Site 17- Sunlight hours to living spaces

Site 18 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B18-001.1	Yes	2.33	Minimum
B18-002.1	Yes	4.83	High
B18-003.1	Yes	7.83	High
B18-004.1	Yes	6.33	High
B18-005.1	Yes	5.17	High
B18-006.1	Yes	4.83	High
B18-007.1	Yes	5.00	High
B18-008.1	Yes	7.75	High
B18-009.1	Yes	6.33	High
B18-010.1	No	2.33	Minimum
B18-011.1	No	2.33	Minimum
B18-012.1	No	1.92	Minimum
B18-013.1	Yes	2.25	Minimum

Site 18 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B18-014.1	No	3.33	Medium
B18-015.1	No	4.08	High
B18-016.1	No	2.33	Minimum
B18-017.1	Yes	2.83	Minimum
B18-018.1	Yes	2.75	Minimum
B18-019.1	Yes	1.92	Minimum
B18-020.1	Yes	3.17	Medium
B18-101.1	No	0.00	Below criteria
B18-102.1	Yes	3.08	Medium
B18-103.1	Yes	0.92	Below criteria
B18-104.1	Yes	5.67	High
B18-105.1	Yes	8.00	High
B18-106.1	Yes	6.42	High
B18-107.1	Yes	6.42	High
B18-108.1	Yes	5.33	High
B18-109.1	Yes	6.50	High
B18-110.1	Yes	8.00	High
B18-111.1	Yes	6.33	High
B18-112.1	No	2.83	Minimum
B18-113.1	No	2.33	Minimum
B18-114.1	No	2.92	Minimum
B18-115.1	No	2.33	Minimum
B18-116.1	Yes	3.33	Medium
B18-117.1	No	4.58	High
B18-118.1	No	3.42	Medium
B18-119.1	No	2.67	Minimum
B18-120.1	No	3.92	Medium
B18-121.1	No	2.17	Minimum
B18-122.1	Yes	3.00	Medium
B18-123.1	Yes	3.08	Medium
B18-124.1	Yes	2.00	Minimum
B18-125.1	Yes	4.83	High
B18-126.1	Yes	4.17	High
B18-127.1	No	2.42	Minimum
B18-201.1	No	0.00	Below criteria
B18-202.1	Yes	3.75	Medium
B18-203.1	Yes	1.67	Minimum
B18-204.1	Yes	5.67	High
B18-205.1	Yes	8.00	High
B18-206.1	Yes	1.08	Below criteria
B18-207.1	Yes	1.25	Below criteria
B18-208.1	Yes	0.00	Below criteria
B18-209.1	Yes	1.50	Minimum
B18-210.1	Yes	8.00	High
B18-211.1	Yes	6.33	High
B18-212.1	No	2.08	Minimum
B18-213.1	No	2.33	Minimum
B18-214.1	No	3.17	Medium
B18-215.1	No	2.00	Minimum
B18-216.1	Yes	5.08	High
B18-217.1	No	4.58	High
B18-218.1	No	1.92	Minimum

Site 18 - Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
B18-219.1	No	2.67	Minimum
B18-220.1	No	4.08	High
B18-221.1	No	2.17	Minimum
B18-222.1	Yes	3.75	Medium
B18-223.1	Yes	4.25	High
B18-224.1	Yes	2.00	Minimum
B18-225.1	Yes	4.83	High
B18-226.1	Yes	4.92	High
B18-227.1	No	3.00	Medium
B18-301.1	No	3.92	Medium
B18-302.1	Yes	4.58	High
B18-303.1	Yes	2.42	Minimum
B18-304.1	Yes	4.00	High
B18-305.1	Yes	8.42	High
B18-306.1	Yes	8.92	High
B18-307.1	Yes	8.92	High
B18-308.1	Yes	8.92	High
B18-309.1	Yes	8.92	High
B18-310.1	Yes	8.17	High
B18-311.1	Yes	4.58	High
B18-312.1	No	4.25	High
B18-313.1	No	4.58	High
B18-314.1	No	4.58	High
B18-315.1	No	4.58	High
B18-316.1	Yes	5.33	High
B18-317.1	No	4.58	High
B18-318.1	No	4.58	High
B18-319.1	No	4.58	High
B18-320.1	No	4.08	High
B18-321.1	No	2.33	Minimum
B18-322.1	Yes	4.33	High
B18-323.1	Yes	5.17	High
B18-324.1	Yes	2.08	Minimum
B18-325.1	Yes	4.83	High
B18-326.1	Yes	5.25	High
B18-327.1	No	3.50	Medium
B18-401.1	No	4.58	High
B18-402.1	No	2.33	Minimum
B18-403.1	Yes	6.33	High
B18-404.1	Yes	7.75	High
B18-405.1	Yes	2.33	Minimum
B18-406.1	Yes	4.92	High
B18-407.1	Yes	5.25	High
B18-408.1	No	4.42	High

Table 28: Site 18 - Sunlight hours to living spaces

Appendix D - Daylight Provision in Adjacent Apartments to BS EN17037:2021+A1 in accordance with UK National Annex Table NA.1.

First Floor

Second Floor

Third Floor

Figure 55: Linnbhla - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Linnbhla - Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	% of grid target exceeded: Minimum 50% of grid		Meets Criteria
					Existing	Proposed	
B1-01-01.1	LKD	42.1	384	200	94.8%	78.4%	Y
B1-01-01.2	Bed	10.4	84	100	100.0%	100.0%	Y
B1-01-02.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-01-02.2	Bed	10.5	84	100	100.0%	100.0%	Y
B1-01-03.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-01-03.2	Bed	10.4	84	100	100.0%	100.0%	Y
B1-02-01.1	LKD	42.1	384	200	94.8%	83.1%	Y
B1-02-01.2	Bed	10.4	84	100	100.0%	100.0%	Y
B1-02-02.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-02-02.2	Bed	10.5	84	100	100.0%	100.0%	Y
B1-02-03.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-02-03.2	Bed	10.4	84	100	100.0%	100.0%	Y
B1-03-01.1	LKD	42.1	384	200	97.1%	95.1%	Y
B1-03-01.2	Bed	10.4	84	100	100.0%	100.0%	Y
B1-03-02.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-03-02.2	Bed	10.5	84	100	100.0%	100.0%	Y
B1-03-03.1	LKD	26.1	240	200	100.0%	100.0%	Y
B1-03-03.2	Bed	10.4	84	100	100.0%	100.0%	Y

Table 29: Linnbhla - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

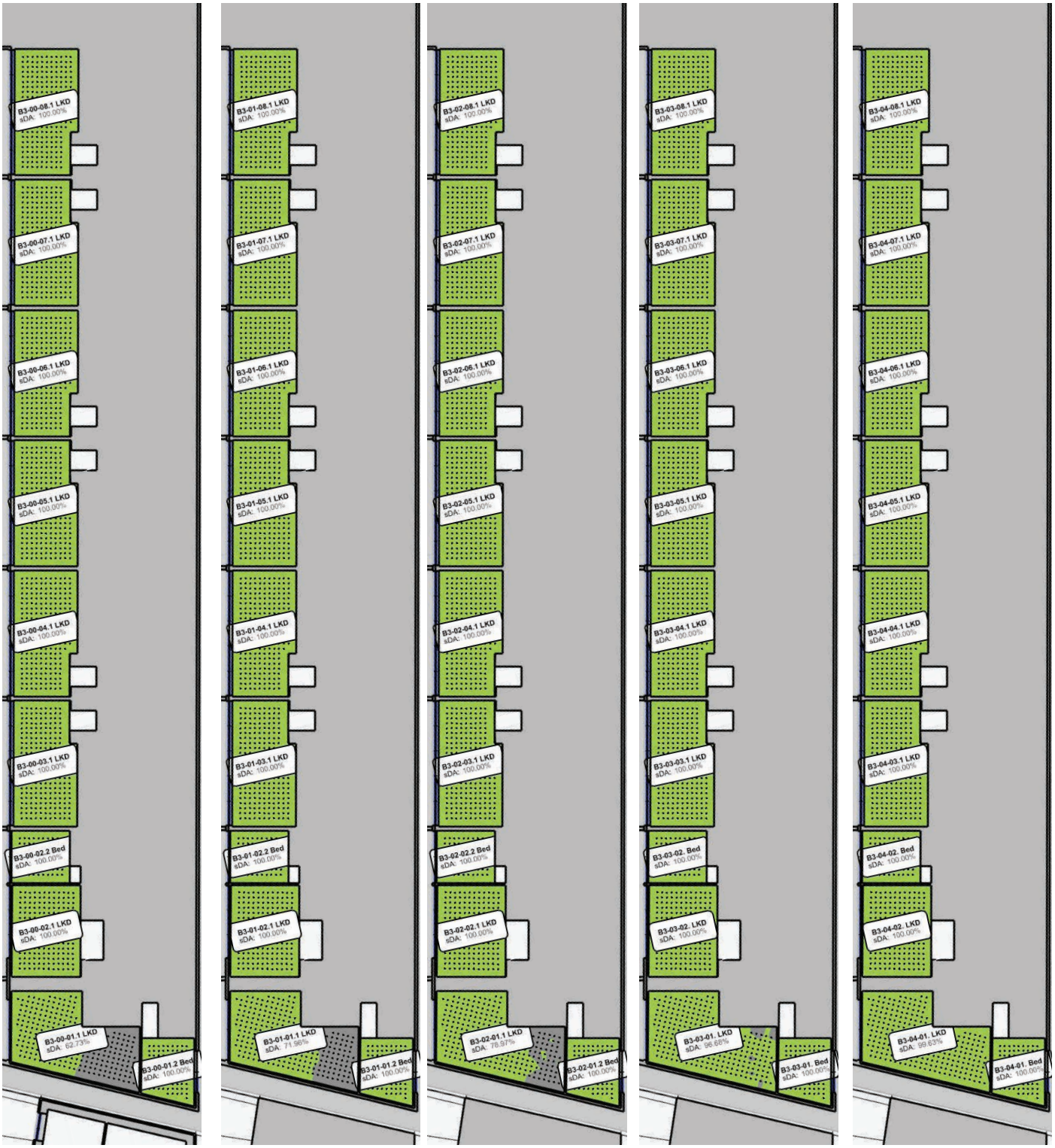
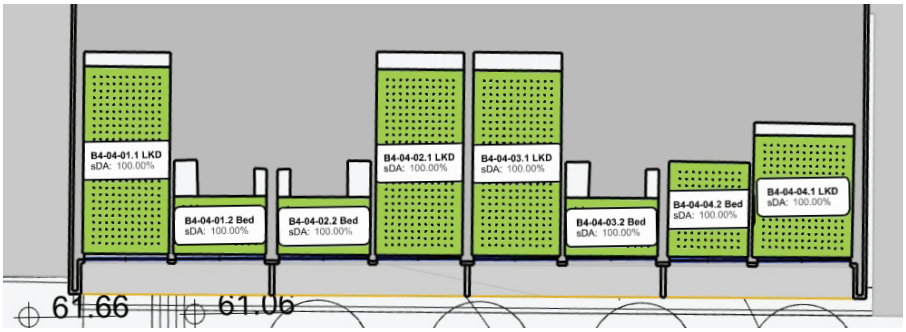


Figure 56: The Charter - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

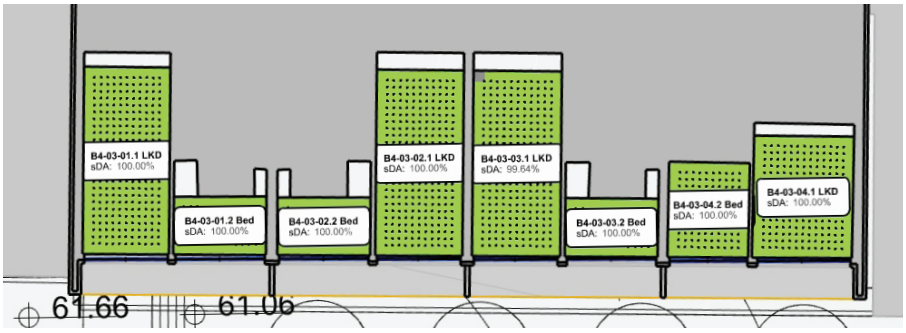
The Charter - Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	% of grid target exceeded: Minimum 50% of grid		Meets Criteria
					Existing	Proposed	
B3-00-01.1	LKD	29.9	271	200	98.9%	62.4%	Y
B3-00-01.2	Bed	10.8	96	100	100.0%	100.0%	Y
B3-00-02.1	LKD	20.8	192	200	100.0%	100.0%	Y
B3-00-02.2	Bed	10.1	80	100	100.0%	100.0%	Y
B3-00-03.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-00-04.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-00-05.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-00-06.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-00-07.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-00-08.1	LKD	25.5	236	200	100.0%	100.0%	Y
B3-01-01.1	LKD	29.9	271	200	99.6%	70.8%	Y
B3-01-01.2	Bed	10.8	96	100	100.0%	100.0%	Y
B3-01-02.1	LKD	20.8	192	200	100.0%	100.0%	Y
B3-01-02.2	Bed	10.1	80	100	100.0%	100.0%	Y
B3-01-03.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-01-04.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-01-05.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-01-06.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-01-07.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-01-08.1	LKD	25.5	236	200	100.0%	100.0%	Y
B3-02-01.1	LKD	29.9	271	200	100.0%	81.5%	Y
B3-02-01.2	Bed	10.8	96	100	100.0%	100.0%	Y
B3-02-02.1	LKD	20.8	192	200	100.0%	100.0%	Y
B3-02-02.2	Bed	10.1	80	100	100.0%	100.0%	Y
B3-02-03.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-02-04.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-02-05.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-02-06.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-02-07.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-02-08.1	LKD	25.5	236	200	100.0%	100.0%	Y
B3-03-01.	Bed	10.8	96	100	99.3%	100.0%	Y
B3-03-01.	LKD	29.9	271	200	100.0%	99.6%	Y
B3-03-02.	LKD	20.8	192	200	100.0%	100.0%	Y
B3-03-02.	Bed	10.1	80	100	100.0%	100.0%	Y
B3-03-03.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-03-04.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-03-05.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-03-06.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-03-07.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-03-08.1	LKD	25.5	236	200	100.0%	100.0%	Y
B3-04-01.	Bed	10.8	96	100	99.6%	100.0%	Y
B3-04-01.	LKD	29.9	271	200	100.0%	100.0%	Y
B3-04-02.	LKD	20.8	192	200	100.0%	100.0%	Y
B3-04-02.	Bed	10.1	80	100	100.0%	100.0%	Y
B3-04-03.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-04-04.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-04-05.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-04-06.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-04-07.1	LKD	25.4	236	200	100.0%	100.0%	Y
B3-04-08.1	LKD	25.5	236	200	100.0%	100.0%	Y

Table 30: The Charter - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

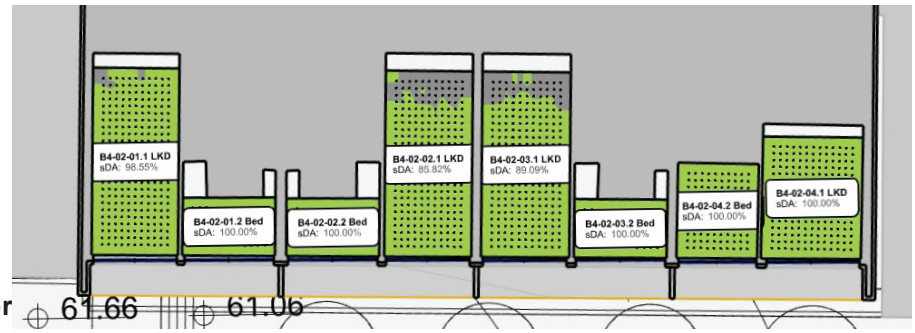
Fourth Floor



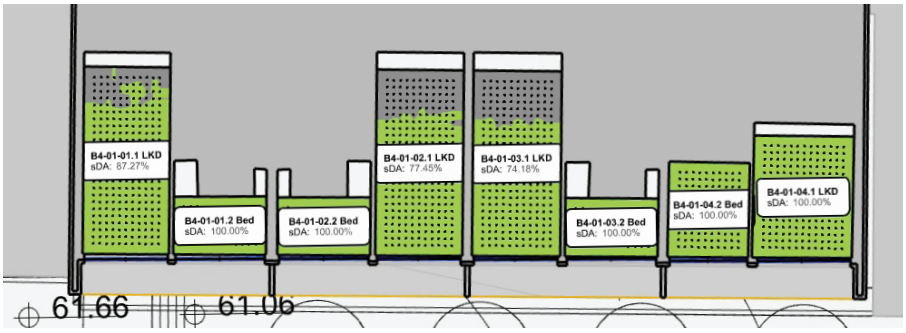
Third Floor



Second Floor



First Floor



Ground Floor

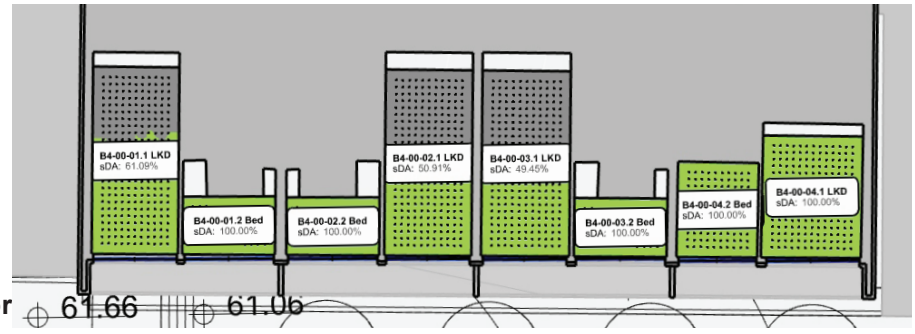


Figure 57: Turnpike - Floor plans indicating Daylight Provision to BS EN17037:2021+A1 Table NA.1

Turnpike - Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1							
Space ID	Use	Area m2	Sensor Count	Target Lux	% of grid target exceeded: Minimum 50% of grid		Meets Criteria
					Existing	Proposed	
B4-00-01.1	LKD	30.2	275	200	97.5%	69.5%	Y
B4-00-01.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-00-02.1	LKD	30.3	275	200	98.2%	61.5%	Y
B4-00-02.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-00-03.1	LKD	30.6	275	200	98.9%	59.6%	Y
B4-00-03.2	Bed	10.2	84	100	100.0%	100.0%	Y
B4-00-04.1	LKD	22.7	208	200	100.0%	100.0%	Y
B4-00-04.2	Bed	14.3	120	100	100.0%	100.0%	Y
B4-01-01.1	LKD	30.2	275	200	100.0%	98.5%	Y
B4-01-01.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-01-02.1	LKD	30.3	275	200	100.0%	93.5%	Y
B4-01-02.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-01-03.1	LKD	30.6	275	200	100.0%	93.5%	Y
B4-01-03.2	Bed	10.2	84	100	100.0%	100.0%	Y
B4-01-04.1	LKD	22.7	208	200	100.0%	100.0%	Y
B4-01-04.2	Bed	14.3	120	100	100.0%	100.0%	Y
B4-02-01.1	LKD	30.2	275	200	100.0%	100.0%	Y
B4-02-01.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-02-02.1	LKD	30.3	275	200	100.0%	100.0%	Y
B4-02-02.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-02-03.1	LKD	30.6	275	200	100.0%	100.0%	Y
B4-02-03.2	Bed	10.2	84	100	100.0%	100.0%	Y
B4-02-04.1	LKD	22.7	208	200	100.0%	100.0%	Y
B4-02-04.2	Bed	14.3	120	100	100.0%	100.0%	Y
B4-03-01.1	LKD	30.2	275	200	100.0%	100.0%	Y
B4-03-01.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-03-02.1	LKD	30.3	275	200	100.0%	100.0%	Y
B4-03-02.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-03-03.1	LKD	30.6	275	200	100.0%	100.0%	Y
B4-03-03.2	Bed	10.2	84	100	100.0%	100.0%	Y
B4-03-04.1	LKD	22.7	208	200	100.0%	100.0%	Y
B4-03-04.2	Bed	14.3	120	100	100.0%	100.0%	Y
B4-04-01.1	LKD	30.2	275	200	100.0%	100.0%	Y
B4-04-01.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-04-02.1	LKD	30.3	275	200	100.0%	100.0%	Y
B4-04-02.2	Bed	10.1	84	100	100.0%	100.0%	Y
B4-04-03.1	LKD	30.6	275	200	100.0%	100.0%	Y
B4-04-03.2	Bed	10.2	84	100	100.0%	100.0%	Y
B4-04-04.1	LKD	22.7	208	200	100.0%	100.0%	Y
B4-04-04.2	Bed	14.3	120	100	100.0%	100.0%	Y

Table 31: Turnpike Apartments - Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms