

Daylight & Sunlight Assessments of a Residential Development Cherry Orchard Point Phase 2, Dublin 10.

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1. Introduction

The proposed development will consist of the construction of a residential scheme containing 137no. residential dwellings (comprising 31no. 2-bedroom units, and 106no. 3-bedroom units) through a mixture of houses, duplex units and own-door apartments. The proposed development will include a new access road connecting to the entrance point at Park West Avenue as permitted under the Phase 1 scheme, new internal streets, landscaped public and communal open space, a new pedestrian connection to Cloverhill Road all associated site and development works. The proposed development represents Phase 2 of the overall planned development for Development Sites 4 and 5 of the LAP lands.

1.1 Executive Summary

This report assesses the impact of the proposed development for Daylight and Sunlight on the neighbouring buildings and the quality of daylight and sunlight within the proposed development. This analysis is carried out based on the drawings of Conroy Crowe Kelly Architects.

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

1.2.1 Daylight to Adjacent Properties

Analysis demonstrated in Section 3 shows that no existing dwelling would be experience a reduction in daylight from the proposed development. It also indicates that any reduction in available daylight to the permitted buildings in Phase 1 will be negligible.

1.2.2 Sunlight to Adjacent Properties

All existing properties are beyond the zone of influence from the proposed development. In the permitted development of Phase 1, the windows which face towards the proposed development are oriented to the north-west. There are no windows to be assessed for an impact on sunlight, as recommended in the BRE guidelines (2022).

1.2.3 Sunlight to Adjacent Amenity Spaces

The shadow study in Section 8 demonstrates on the 21st of March, the shadows caused by the proposed development, do not extend to any existing private garden or amenity space. There will be no reduction in sunlight to any neighbouring amenity spaces with a requirement for sunlight. The proposed development meets the requirements of the BRE guidelines (2022).

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

The residential units were designed in line with the recommendations of the BRE guidelines (2022). A number of 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 (2022) recommends assessment methods set out in BS EN 17037 for daylight provision. BS EN 17037 contains a National Annex 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 UK annex to BS EN 17037 states that the target values set out in EN 17037 Table A1 may be hard to achieve in the UK, it 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 levels set out in the UK annex are used in this assessment, as the primary results to be achieved, because these are referenced in the BRE guidelines (2022), as recommended by the local authority. The BRE guidelines (2022) 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. The BRE guidelines (2022) 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.

The assessment of daylight levels are undertaken with the inclusion of the existing woodland planting along the M50 and Cloverhill Road in the model. The assessment model also includes a simple massing representing a potential future development in Phase 4.

1.3.1 Assessment of Daylight as per the BRE guidelines (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 Table NA.1. These are the minimum values, per specified use, to be achieved in habitable rooms and meets the recommendations of the BRE guidelines (2022).

1.3.2 Sunlight within the Proposed Development

In Phase 2, there are house and duplex units. All of the houses have a main window wall within 90° due south and will achieve the minimum target sunlight hours. The duplex units are well designed for sunlight, with 86.1% 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 public open spaces and communal amenity spaces exceed 2 hours sunlight over 50% of the amenity space on the 21st March. In 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 recommend values for sunlight. In the 101 houses, a high percentage of the private amenity spaces at 70.3% (71 no.) achieve the target sunlight levels set out in the BRE guidelines (2022).

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

EN 17037:2018 sets out values for target illuminance, minimum target illuminance and fractions of reference plane to be achieved. The target and minimum target levels set out in EN17037:2018 are for any type of building; they do not take into account room use or make allowance for rooms that have a lesser requirement for daylight. The results of this assessment indicate a high level of daylight provision, with 100% of rooms achieving Minimum Illuminance and 99.1% achieving Target Illuminance. Appendix B identifies any rooms which do not achieve 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 (2022) 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 performs with regards to achieving the best possible daylight and sunlight quality. All habitable rooms 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).

In the assessment of daylight in accordance with IS EN 17037:2018, shown for supplementary information, the vast majority of habitable rooms achieve daylight provision as set out in IS EN 17038:2018 (100% of rooms achieving Minimum Illuminance and 99.1% achieving Target Illuminance).

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 in 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:

- BR 209:2022 Site Layout Planning for Daylight and Sunlight (third edition), also referred to as the BRE guidelines (2022).
- BS EN 17037:2018+A1:2021 Daylight in Buildings, also referred to as the UK Annex.
- IS EN 17037:2018 Daylight in Buildings.

In Appendix 16- Sunlight and Daylight, the Dublin City Development Plan 2022-28 references BR 209:2011 Site Layout Planning for Daylight and Sunlight (2nd edition). It also states that ‘If, over the coming years, a revised version of BR 209 is to be issued, the guidance within this new version will take precedence.’ It is considered that the guidance in the Development Plan has been superseded by BR 209:2022 and therefore it is not necessary to assess the scheme against the recommendations in Appendix 16 also. All relevant assessments in this report have regard to the guidance in BR 209:2022, referred to as the BRE guidelines (2022).

2.2 BRE Guidance Document BR 209:2022 Site Layout Planning for Daylight and Sunlight (third edition)

In its opening summary, the BRE guidelines (2022) states that the report “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. This is of particular importance in the context of national and local policies for the consolidation and densification of urban areas.

The BRE guidelines (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. This is broadly in line with the previous version of the BRE guidelines (2011). The metrics for assessing impact to adjacent buildings for 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.

When assessing the quality of interior spaces in proposed developments, the BRE guidelines (2022) Appendix C states; “The guidance contained in this publication is intended to be used with BS EN 17037 and its UK National Annex.” The BRE guidelines (2022) also states in Section 1.7 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.”

2.3 Daylight in Buildings EN 17037:2018

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 EN17037:2018 Standard deals exclusively with new developments and does not give guidance or metrics on loss of light or sunlight to existing properties.

The UK National Annex (NA) provides further recommendations for daylight provision in the UK and Channel Islands. The UK annex states that the daylight target levels in BS EN 17037:2018 Clause A.2 may be hard to achieve in buildings in the UK, in particular dwellings in urban areas with significant obstructions or tall trees outside. The UK annex sets out minimum daylight provision to be achieved in UK dwellings. Table NA.1 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 illuminance 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.

2.4 Daylight to Existing Buildings

BRE guidelines (2022) Section 2.2.2 sets out which rooms need to be assessed for daylight.

“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.”

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. BRE guidelines (2022) Section 2.2.4 states 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.” In this report, we refer to this as the ‘zone of influence’.

BRE guidelines (2022) Section 2.2.23 states; “If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting 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, the window may be affected and should be assessed.

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 VSC 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 VSC 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 provide 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 as per the methodologies contained in the BRE guidelines (2022).

2.5 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.

2.6 Sunlight to Gardens and Open Spaces

For calculations of sunlight analysis it is general practice to use March 21st. The BRE guidelines (2022) Section 3.3.17 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.”

2.7 BRE Guidelines (2022) Appendix G: 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) Section G1.2 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.”

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

2.8 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 as 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, e.g. 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.”

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 95% of the existing value.
2. Negligible: A reduction in the VSC level but it retains a VSC >27% or <27% but >80% of the existing value.
3. Minor reduction: VSC below 27% but greater than 20%, or ratio greater than 65% of the existing value.
4. Moderate reduction: VSC below 20% but greater than 10%, or ratio greater that 50% of the existing value.
5. Major reduction: VSC below 10% or ratio less than 50% of the existing value.

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

2.9 Assessment Model Parameters

The BRE guidelines (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

2.10 Daylight in the Proposed Development.

The BRE guidelines (2022) Appendix C sets out interior daylight recommendations, it states; “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 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 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. In BS EN 17037:2018+A1:2021, the UK National Annex (NA) sets out additional minimum room specific Target Daylight Factor values for the UK. Clause 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.

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 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. The BRE guidelines (2022) 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. The BRE guidelines (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 on 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.

2.11 Sunlight within Proposed Developments

The BRE guidelines (2022) Section 3.1.7 states “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.” In Section 3.1.8 the guideline acknowledges 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) Section 3.1.10 recommends that BS EN 17037 should be used to assess for interior access to direct sunlight. BS EN 17037 Table A.6 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

This project is located on lands at Cherry Orchard, Dublin 10 (known as Development Site 4 in the Park West Cherry Orchard Local Area Plan 2019). The proposed development represents Phase 2 of the overall planned development for Development Sites 4 and 5 of the LAP lands. The site is bound by Cloverhill Road to the north, Cedar Brook Avenue and Park West Avenue to the east, the consented Phase 1 development (Bord. Ref: ABP-318607-23) to the south, and the M50 motorway to the west.

A simple massing has been included in assessment model, to include a potential future development of Phase 4. This is indicated as commercial/ enterprise units, which form a buffer along the M50. There is no residential use indicated in Phase 4.



**Figure 1: Indicative view of the site, taken from Google Maps.
Please refer to architectural drawings for statutory boundaries.**

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 - B extend and if they intersect the proposed development, they are plotted in Figure 3 below.

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



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

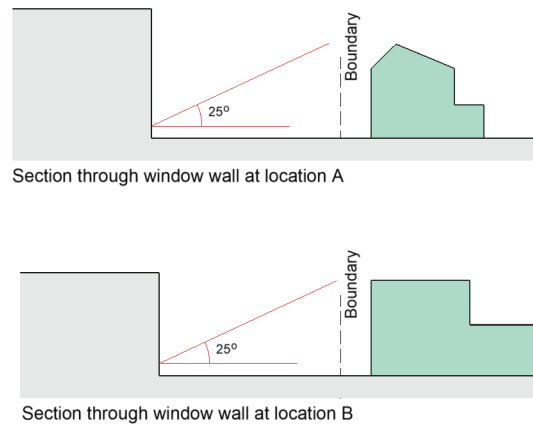


Figure 3: Section perpendicular to window wall at locations indicated in Figure 2

3.3 Conclusion to Preliminary Assessment for Daylight

The zone of influence from the buildings in the proposed development do not extend to the window wall of any existing dwelling. No existing dwelling would be experience a reduction in daylight from the proposed development.

The zone of influence does reach some of the buildings in Phase I of the development, noted at locations A & B. These buildings were examined in section, as shown in Figure 3. At locations A & B, the 25° line would not be subtended by the proposed development, indicating any reduction in available daylight is likely to be negligible. No further assessment is required.

4. Sunlight in Neighbouring Buildings

4.1 Sunlight in neighbouring dwellings (Annual Probable Sunlight Hours)

The BRE guidelines BR209:2022 (3rd edition) recommends assessing window walls for the APSH that face within 90° 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 BRE guidelines states that obstruction to sunlight may become an issues if

- Some part of a new development is situated within 90° of due south of a main window wall of an existing building
- In the section drawn perpendicular to this existing window wall, the new development subtends an angle greater than 25° to the horizontal measured from the centre of the lowest window to a main living room.

4.2 Conclusion on Assessment of APSH

All existing properties are beyond the zone of influence from the proposed development. In the permitted development of Phase 1, the windows which face towards the proposed development are oriented to the north-west. There are no windows to be assessed for an impact on sunlight, as recommended in the BRE guidelines.

4.3 Sunlight to Adjoining Amenity Spaces

The shadow study in Section 8 demonstrates on the 21st of March, the shadows caused by the proposed development, do not extend to any existing private garden or amenity space. No further detailed assessment is required.

There is an area of public open space with a playground in Phase 1, which has been selected for detailed assessment in Section 7 below.

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

5. Daylight within the Proposed Development

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

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

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

5.1 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 $E_v(x)$ for half of the assessment grid	Number of rooms to achieve target Lux over 50% of the assessment grid	Percentage of rooms achieving Target
All Units	LKD	18	200	18	100.0%
	KD	119	200	119	100.0%
	Liv	119	150	119	100.0%
	Bedrooms	380	100	380	100.0%
Total		636		636	100.0%

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

5.2 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. These are the minimum values, per specified use, to be achieved in habitable rooms.

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

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

Daylight provision Illuminance Method IS EN 17037:2018						
		Below Target	Minimum	Medium	High	Percentage of rooms achieving Target
Overall total	Target Illuminance	0.9%	18.2%	53.0%	27.8%	99.1%
	Minimum Illuminance	0.0%	14.8%	65.7%	19.5%	100.0%

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

The results indicate a high level of daylight provision, with 100% of rooms achieving Minimum Illuminance and 99.1% achieving Target Illuminance. The rooms will be bright and pleasant spaces.

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

6. Sunlight within the Proposed Development

6.1 Sunlight Hours

BR209:2022 (third edition) and BS EN 17037 set out recommendations for sunlight hours to be achieved preferably in a main living space. The guidelines recommends the sunlight hours should be assessed preferably on the 21st March over the course of the day. The guidelines sets 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 does give an example of a well designed floor layout in figure below where 4 out of 5 units in an apartment building would achieve the target sunlight.

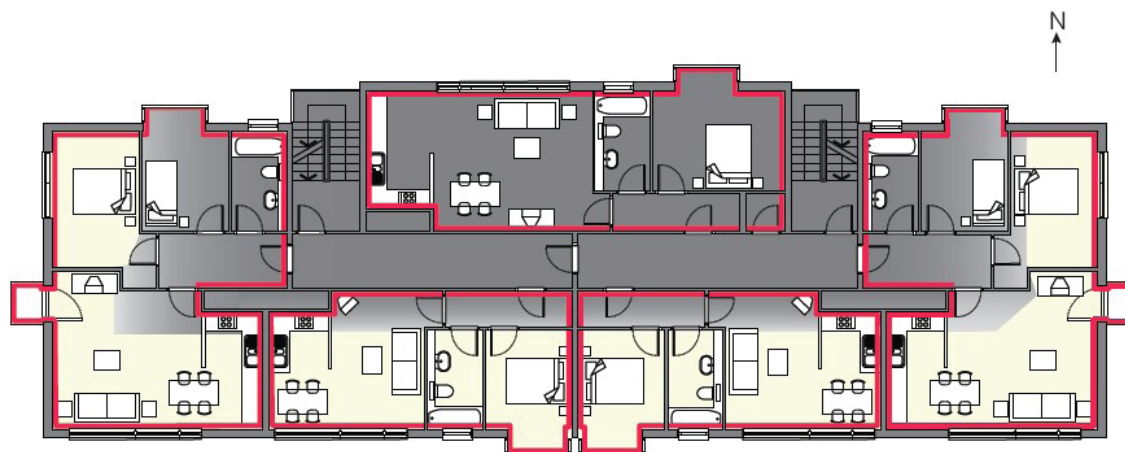


Figure 26: Careful layout design means that four out of the five flats shown have a south-facing living room

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

All the houses have a main window wall within 90° due south and will achieve the minimum target sunlight hours. The occupants can gravitate to the sunlit room as desired. Appendix C details the results in the apartments, indicating if the LKD 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						
Apartments	36	30	83.3%	5	2	0	29	31	86.1%

Table 8: Summary of results of assessment of Sunlight Hours

6.2 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 the 36no. duplex units 83.3% (30 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 36no. duplex units 86.1% (31 no.) have a living spaces achieve the minimum recommended 1.5 direct sunlight hours.

6.3 Conclusion

In Phase 2, there are house and duplex units. All of the houses have a main window wall within 90° due south and will achieve the minimum target sunlight hours. The duplex units are well designed for sunlight, with 86.1% 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.

7. Sunlight to Amenity Spaces within the Proposed Development

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

7.1 Sunlight to Amenity Spaces

The public open space, communal and private amenity to the houses have been assessed with a calculation of Sun on the Ground on the 21st March. The public open space with a playground which is permitted under Phase 1 has also been assessed.

A simple massing has been included in assessment model, to include a potential future development of Phase 4. Generated analysis is shown in Figure 5. The results for public and communal amenity are set out in Table 9. A summary of results of the private amenity to the houses are shown in Table 10. A full schedule of results are shown in Appendix D.



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

Sunlight on the Ground - Public & Communal Amenity			
ID No.	Details	% Area receiving 2 hours sunlight on 21st March	Meets criteria if >50% area receiving 2 hours sunlight on 21st March
S1	Public Open Space - Phase 2	99.9%	Y
S2	Communal Open Space Duplex Blocks 6 & 7	74.6%	Y
S3	Communal Open Space Duplex Blocks 4 & 5	81.3%	Y
S4	Communal Open Space Duplex Blocks 1 - 3	91.8%	Y
S5	Public Open Space - Phase I	100.0%	Y

Table 9: Calculation of Sun on the Ground to Amenity Areas within the Proposed Development

7.2 Comment on Public and Communal Amenity Areas

All the public and communal amenity spaces are well oriented for sunlight. They all receive 2 hours of available sunlight on the 21st March, on more than 50% of the ground.

Sunlight on the Ground - Private Amenity to Houses		
Total number private amenity spaces in the houses	Number of private amenity areas in houses receiving in excess of 2 hours sunlight on 21st March over >50% of the ground	Percentage that meets the criteria
101	71	70.3%

Table 10: Calculation of Sun on the Ground to Private Amenity Spaces in the Houses

7.3 Comment on Private Amenity Spaces

The BRE guidelines do not give a value for the percentage of amenity spaces that should 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. The proposed development has been well designed for sunlight. In the proposed 101 houses, a high percentage 70.3% (71 no.) achieve the target sunlight hours to their private amenity spaces.

A simple massing has been included in assessment model, to include a potential future development of Phase 4. A detailed design of these commercial buildings would have the potential to improve the sunlight to the amenity of a greater number of houses in Phase 2.

7.4 Conclusion

All public open spaces and communal amenity spaces exceed 2 hours sunlight over 50% of the amenity space on the 21st March. In 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 101 houses, a high percentage of the private amenity spaces at 70.3% (71 no.) achieve the target sunlight levels set out in the BRE guidelines (2022).

8. Shadow Study

8.1 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 8.2 shows the existing and proposed shadow diagrams for the Equinox on the 21st March at 2 hourly intervals during the day between 09:00 and 17:00.

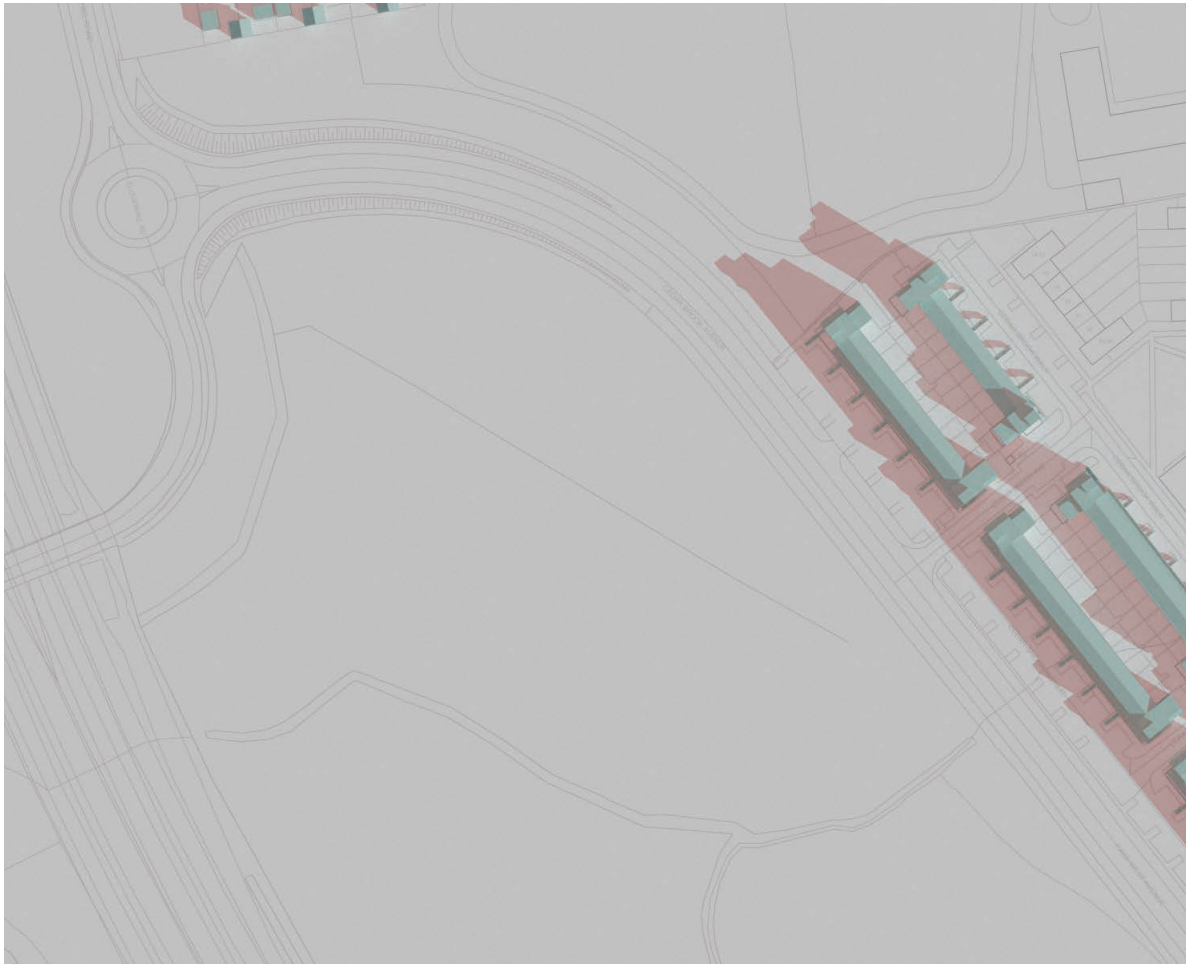
Section 8.3 shows the existing and proposed shadow diagrams for the Summer Solstice on the 21st June at 2 hourly intervals during the day between 09:00 and 19:00.

Section 8.4 shows the existing and proposed shadow diagrams for the Winter Solstice on the 21st December at 2 hourly intervals during the day between 09:00 and 15:00.

The site is a greenfield site, there is no shadow cast from any structures 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.

8.2 Shadow Casting diagrams March Equinox

Existing



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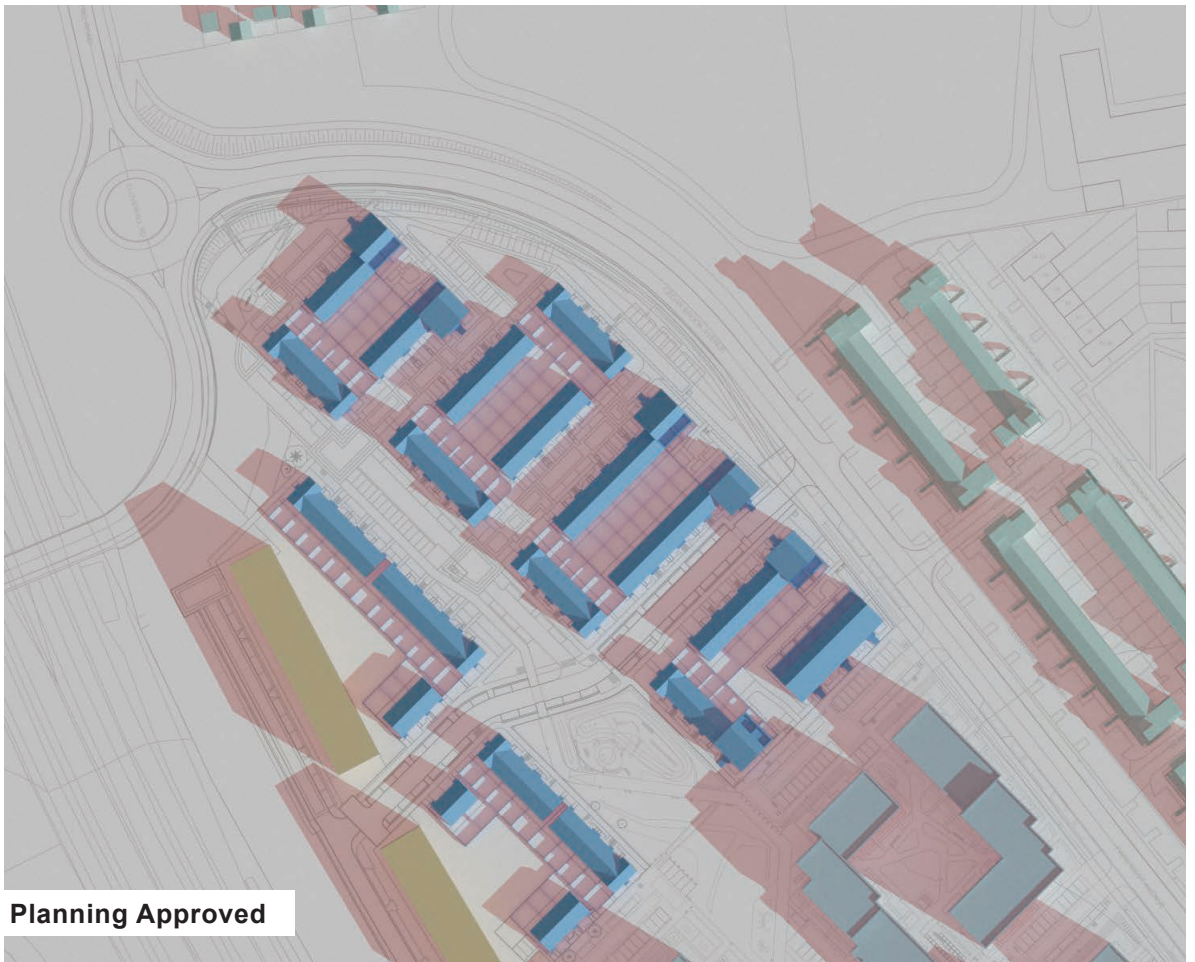
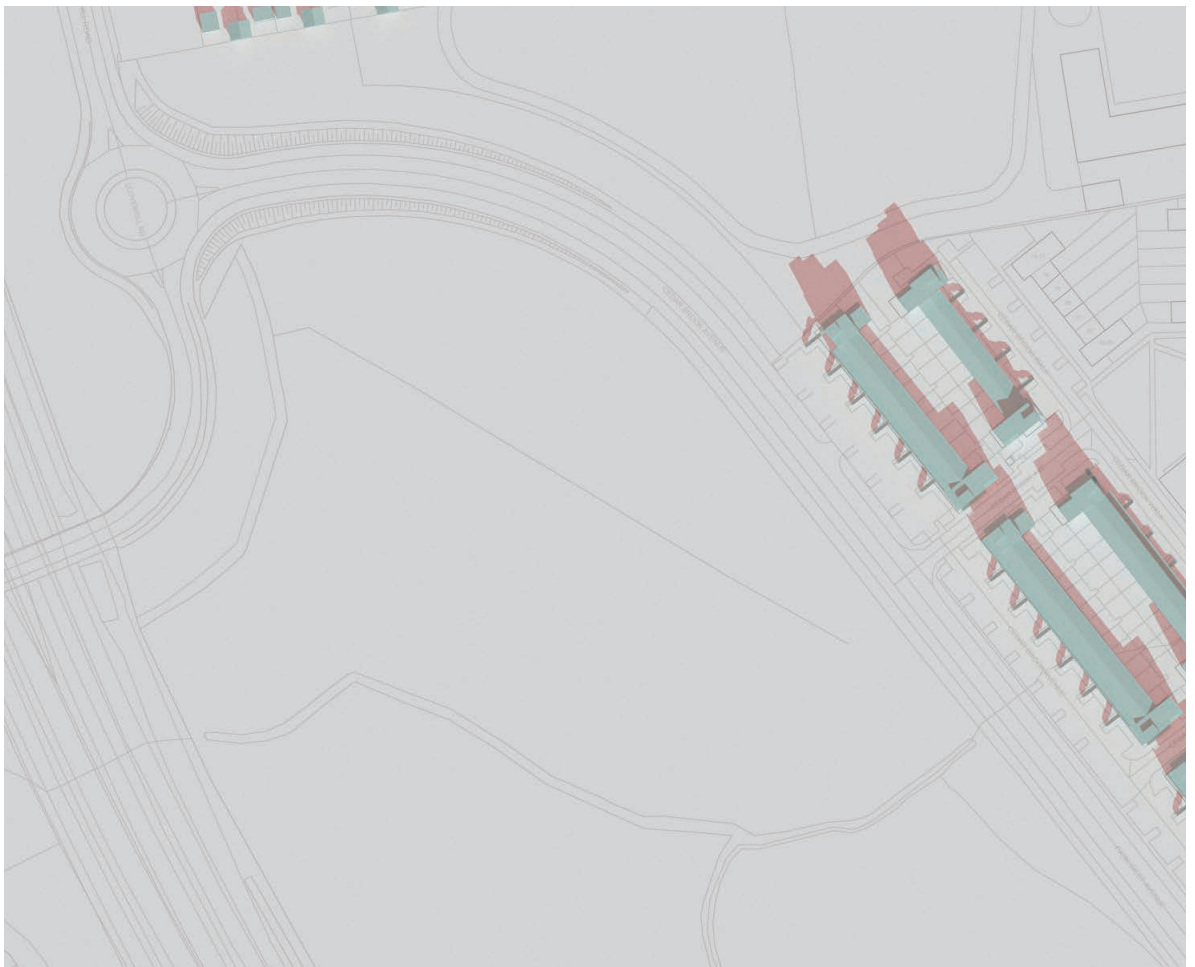


Figure 6: Shadow diagrams 21 March 09:00 UTC

Existing



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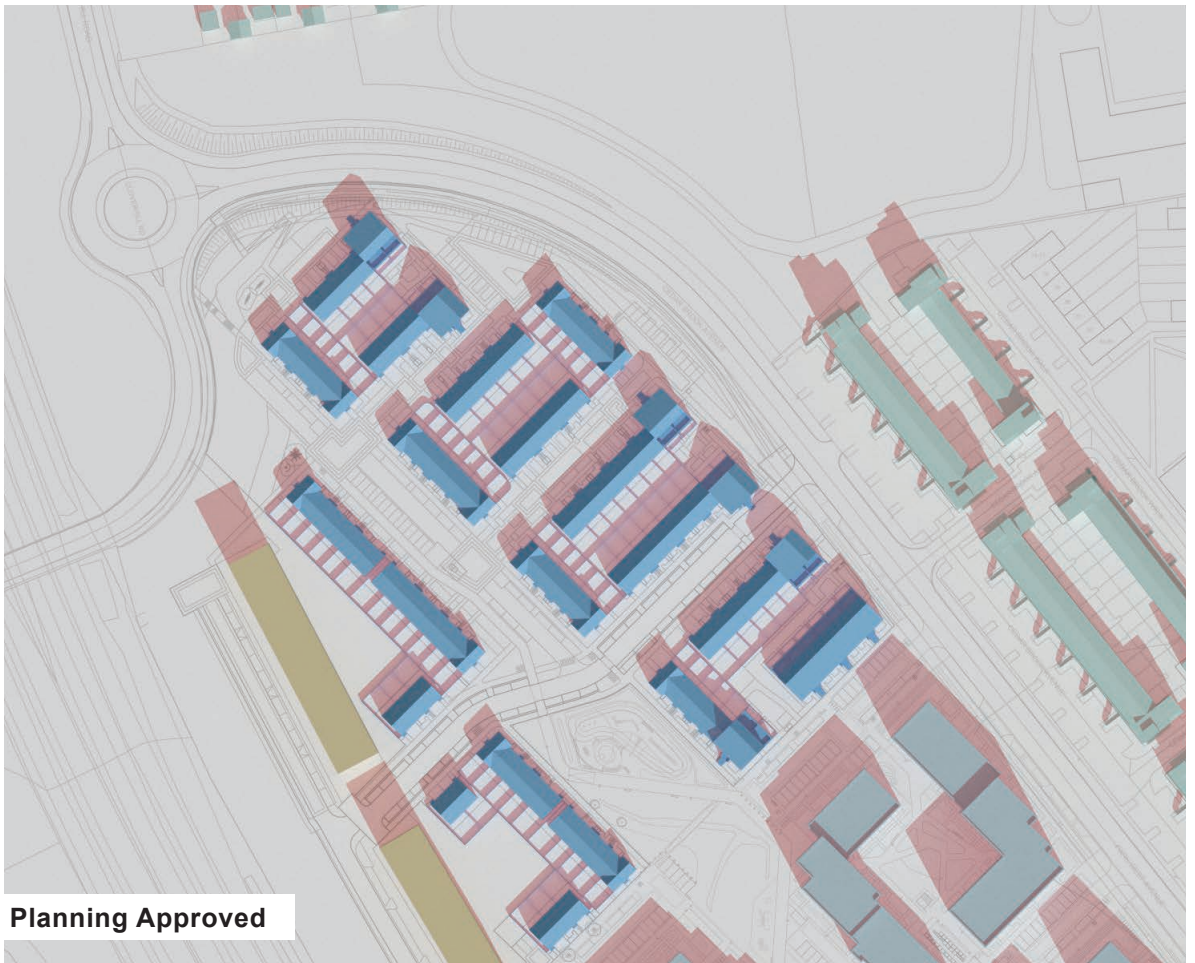
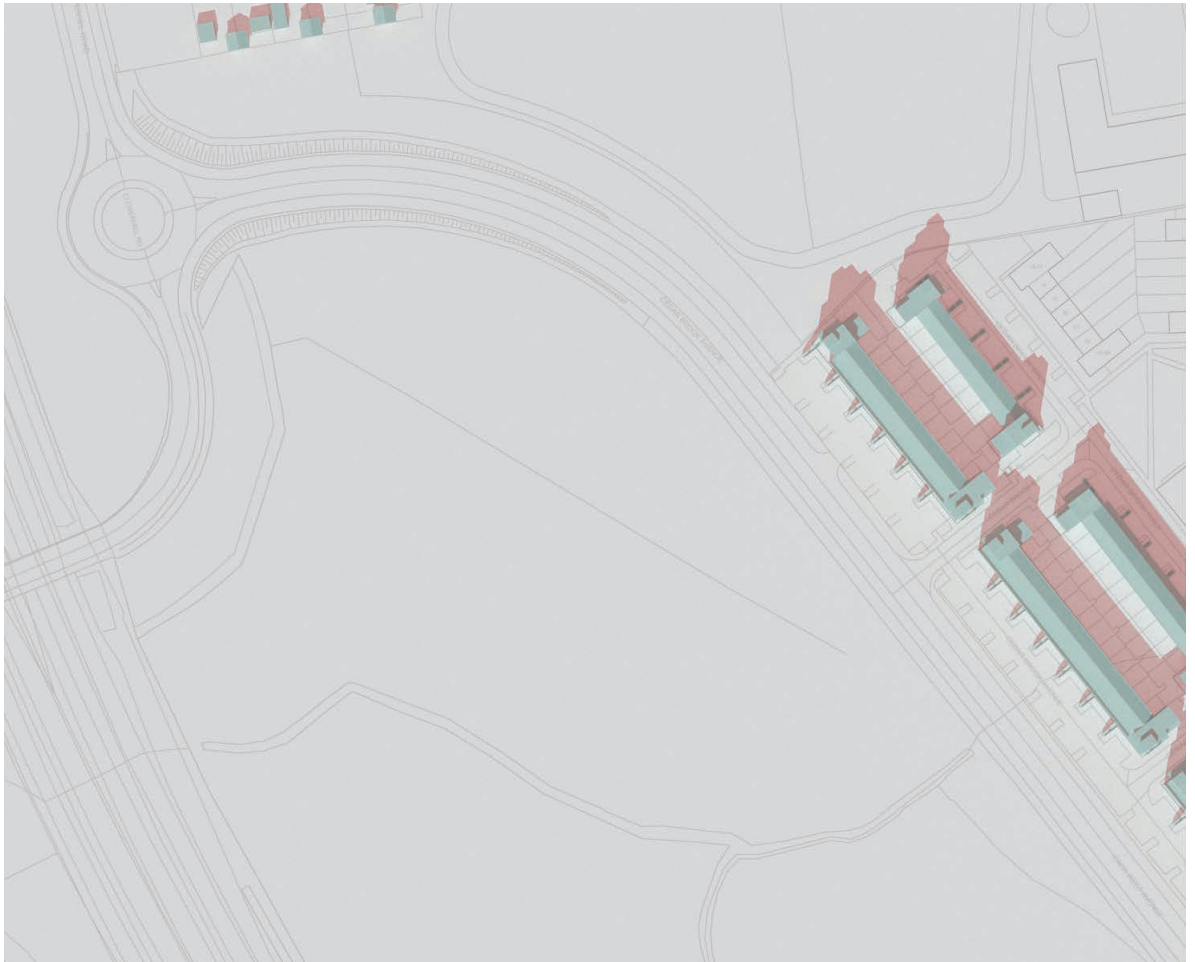


Figure 7: Shadow diagrams 21 March 11:00 UTC

Existing

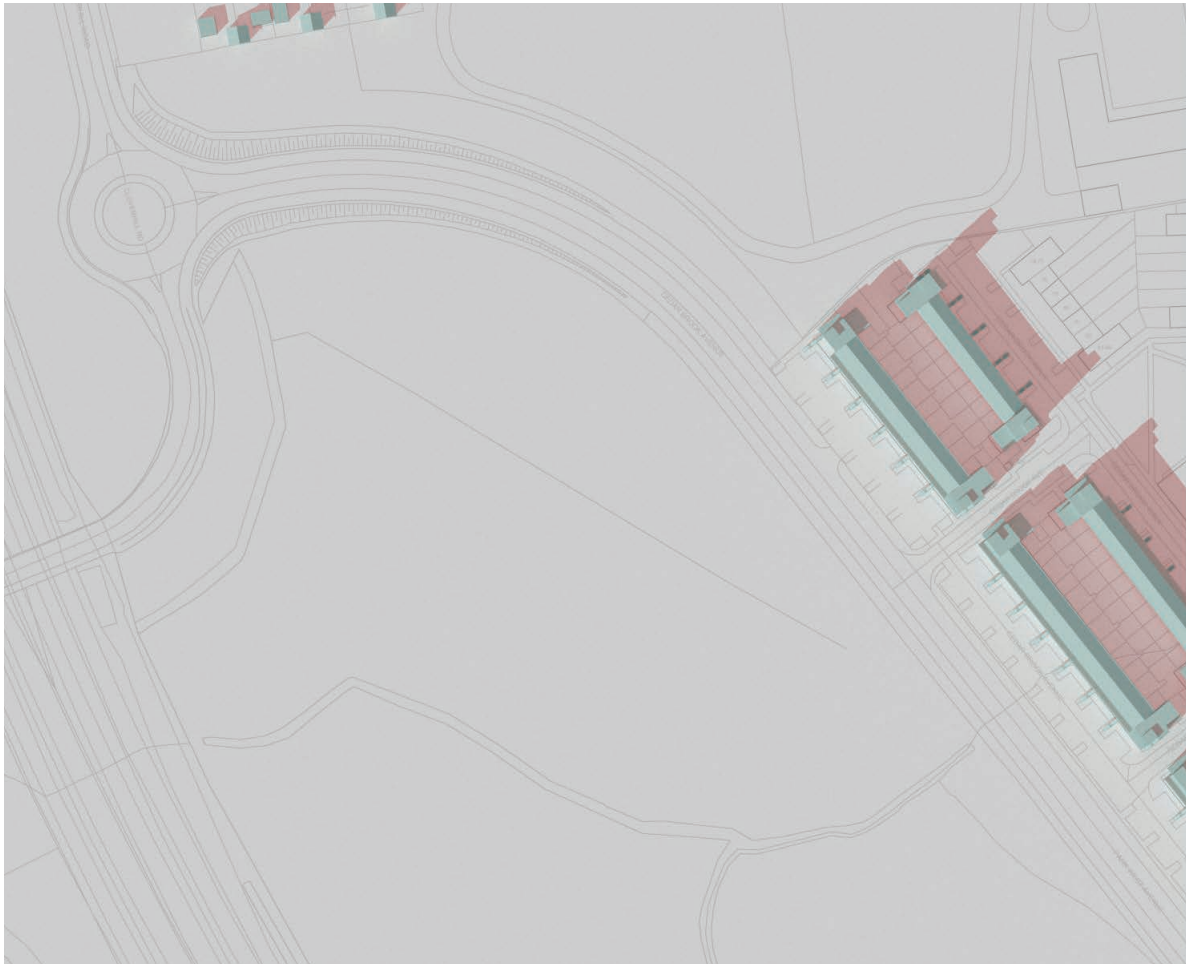


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Figure 8: Shadow diagrams 21 March 13:00 UTC

Existing

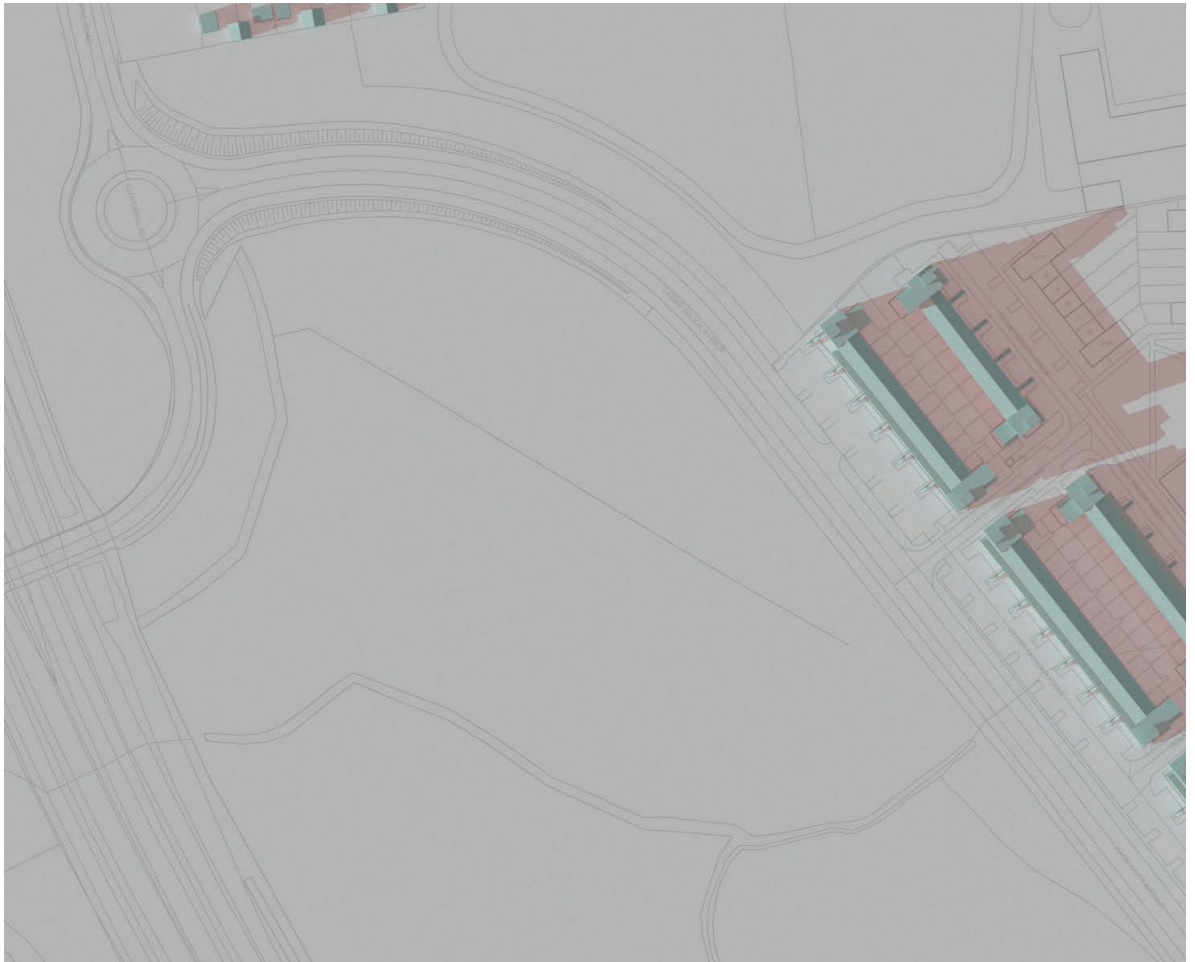


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Figure 9: Shadow diagrams 21 March 15:00 UTC

Existing



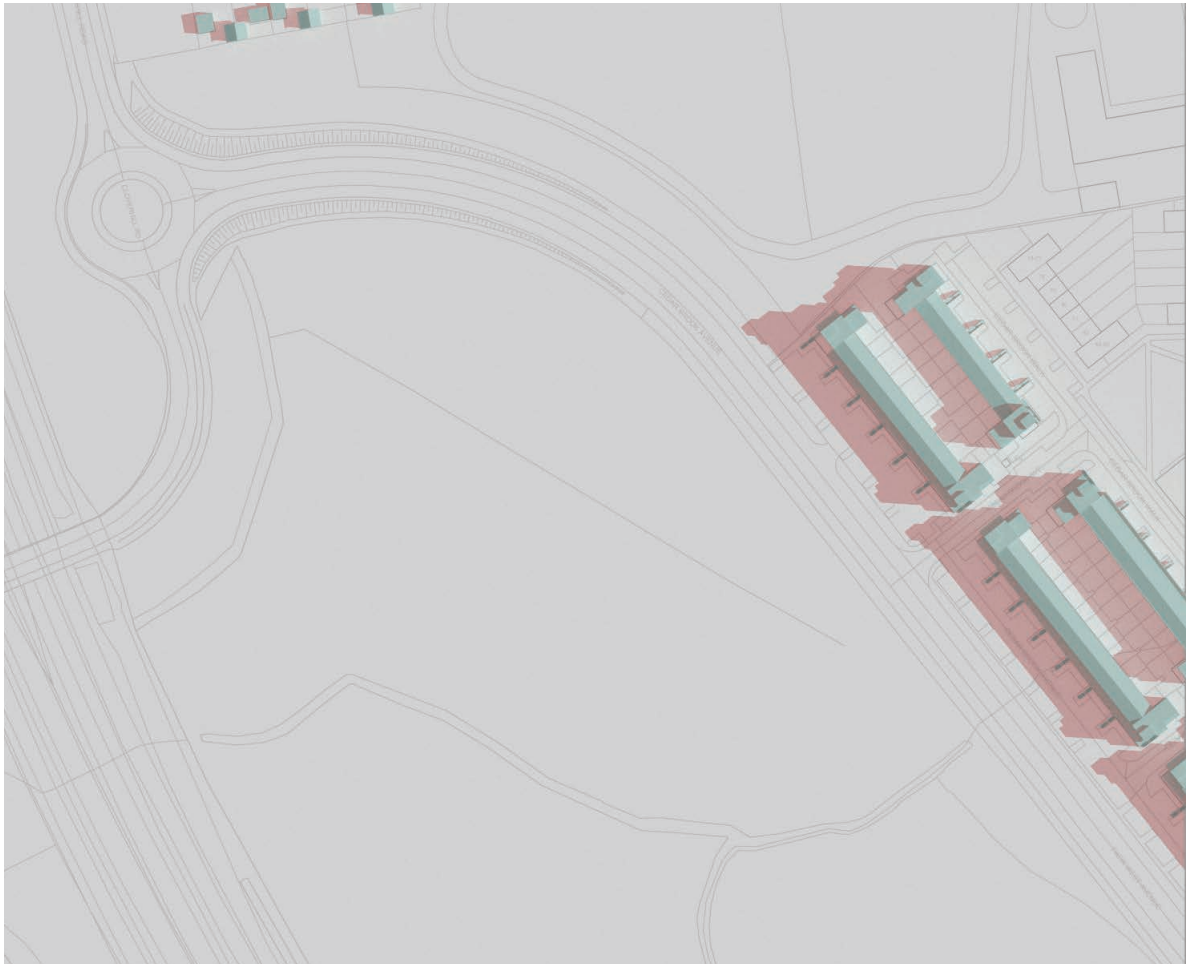
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Figure 10: Shadow diagrams 21 March 17:00 UTC

8.3 Shadow Casting diagrams June Solstice

Existing



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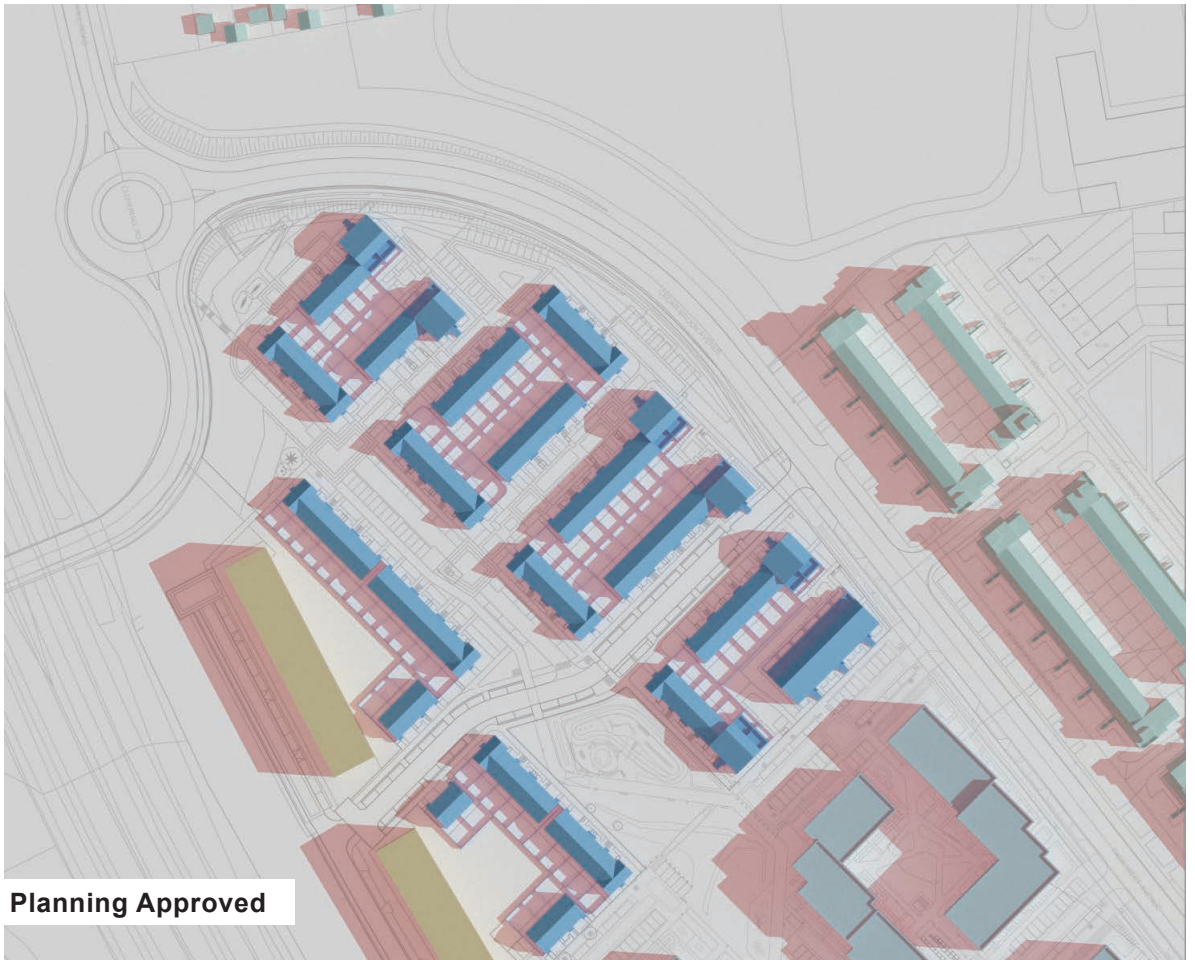
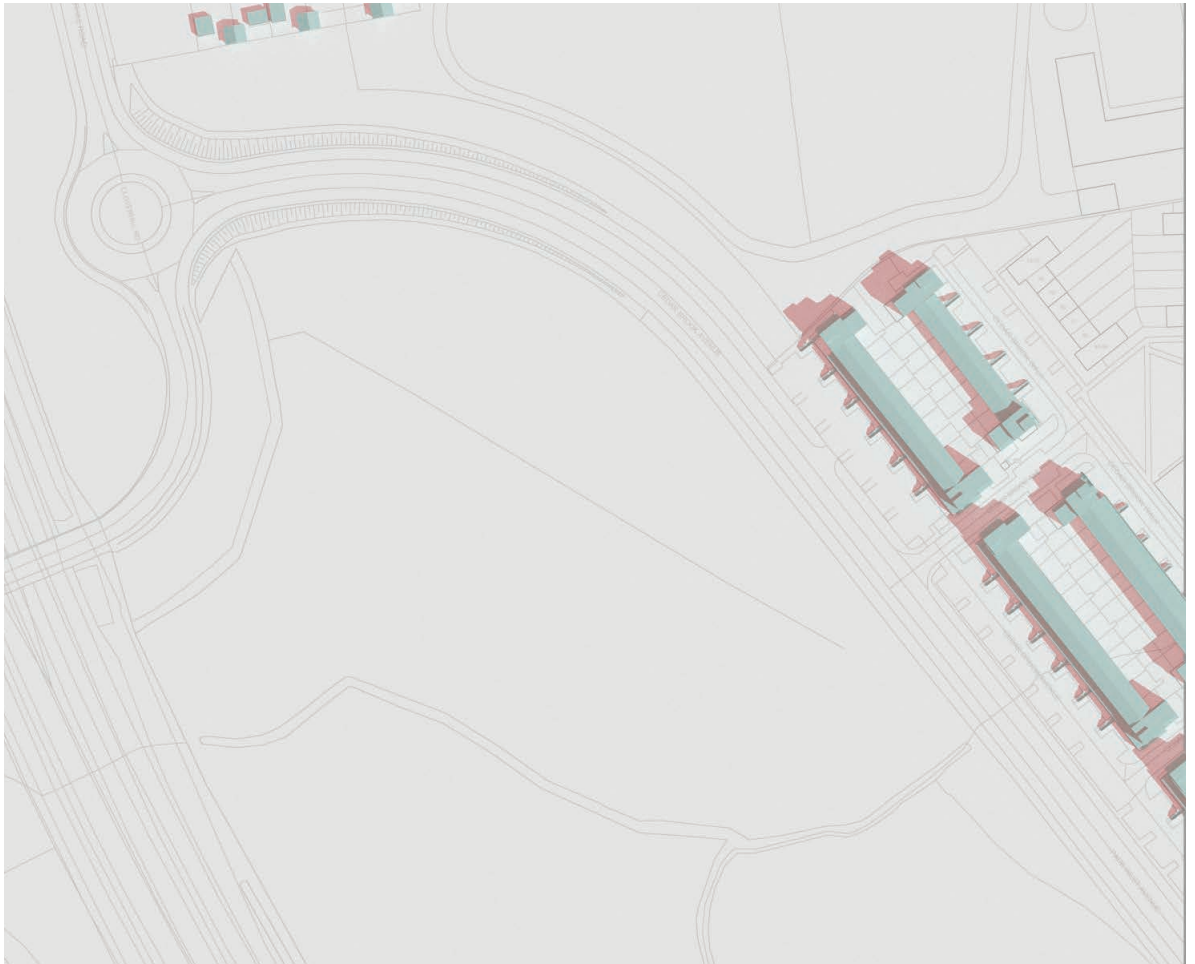


Figure 11: Shadow diagrams 21 June 09.00 UTC +1

Existing



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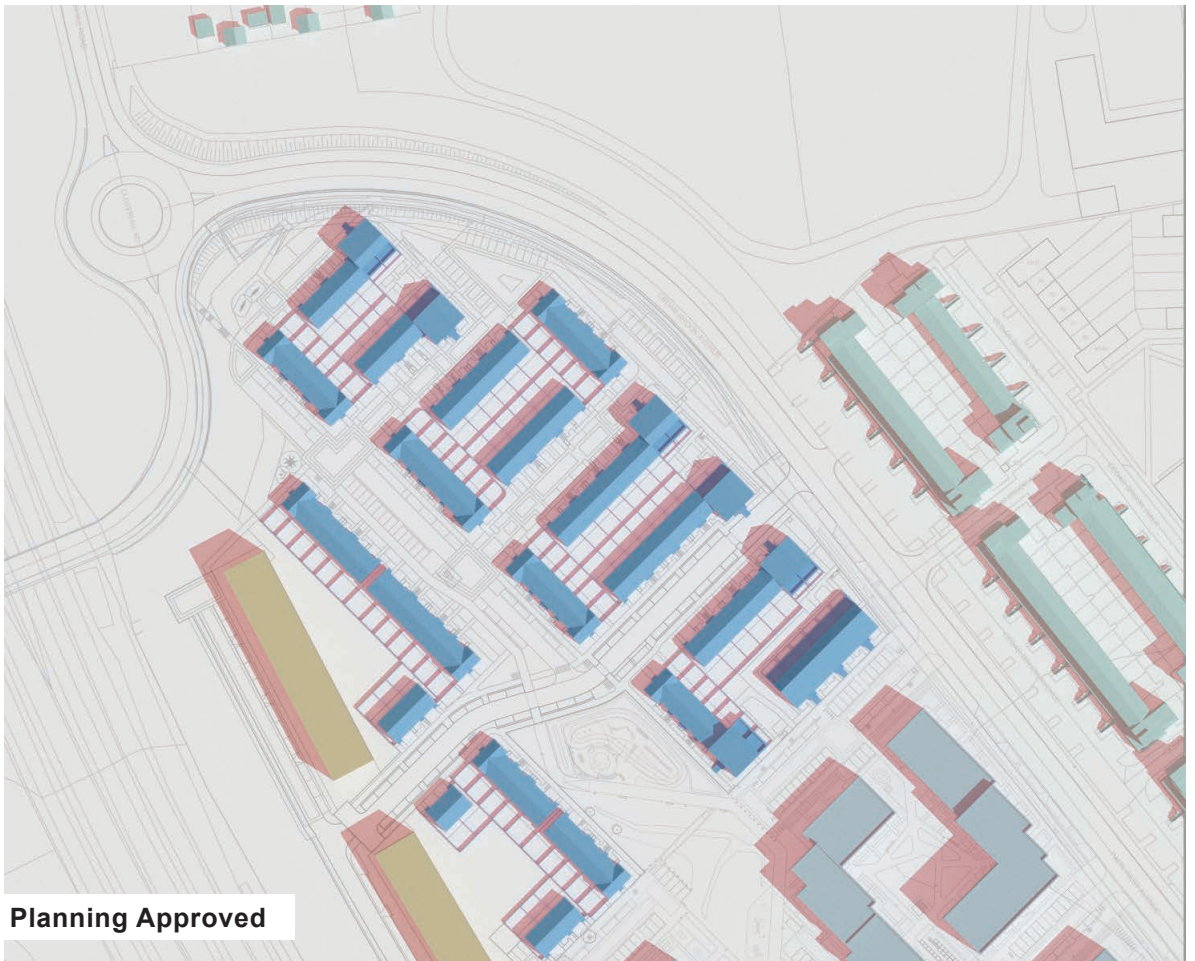
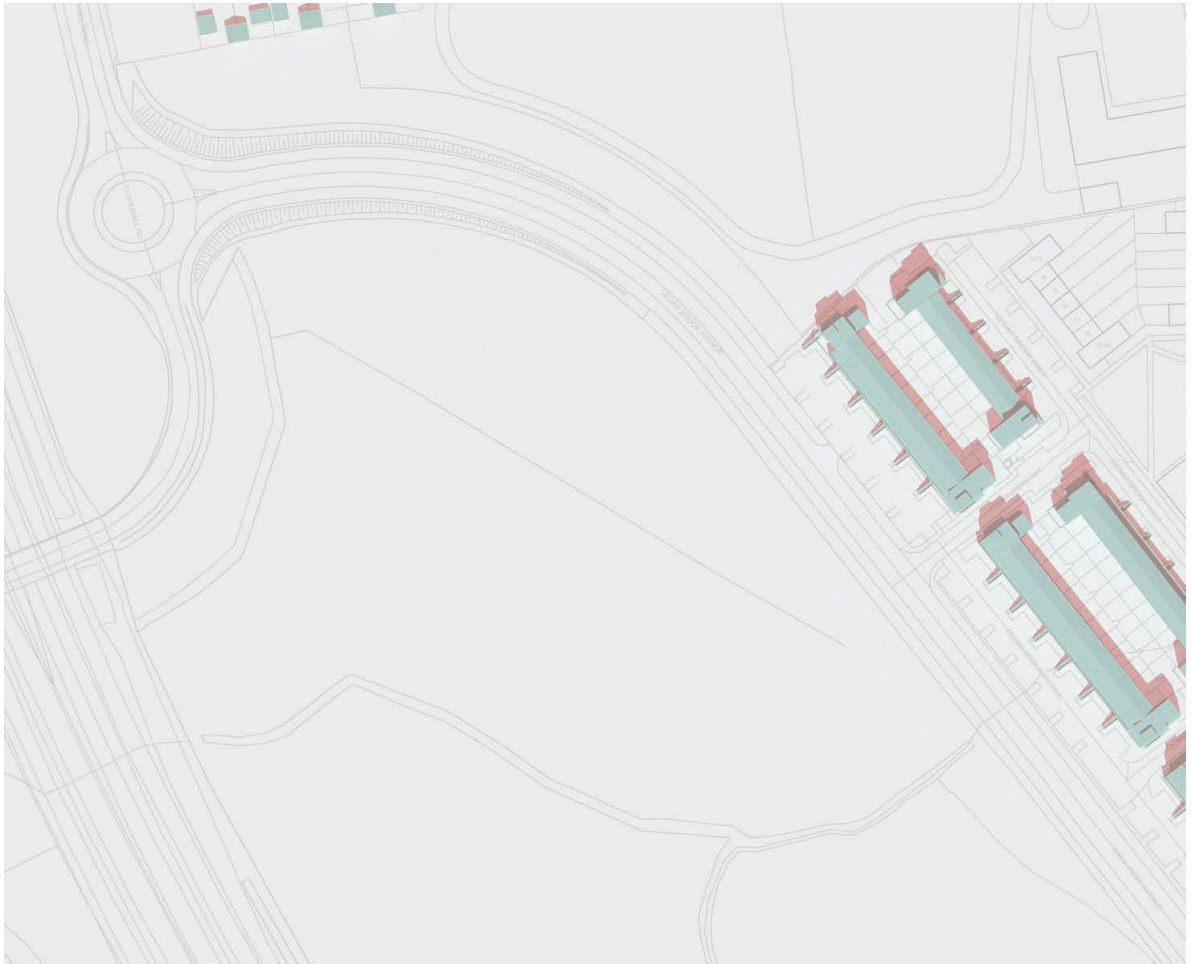


Figure 12: Shadow diagrams 21 June 11:00 UTC +1

Existing

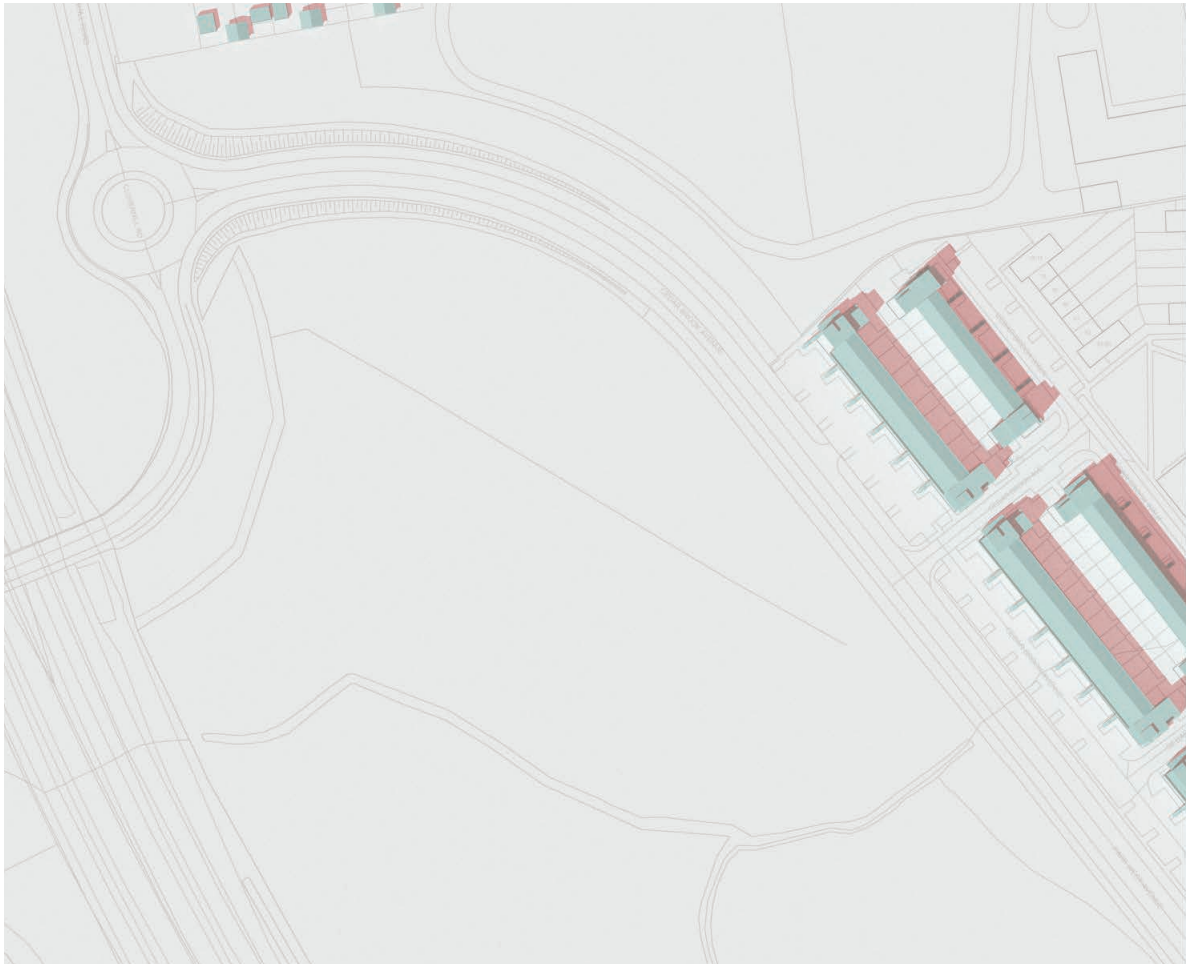


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Figure 13: Shadow diagrams 21 June 13:00 UTC +1

Existing



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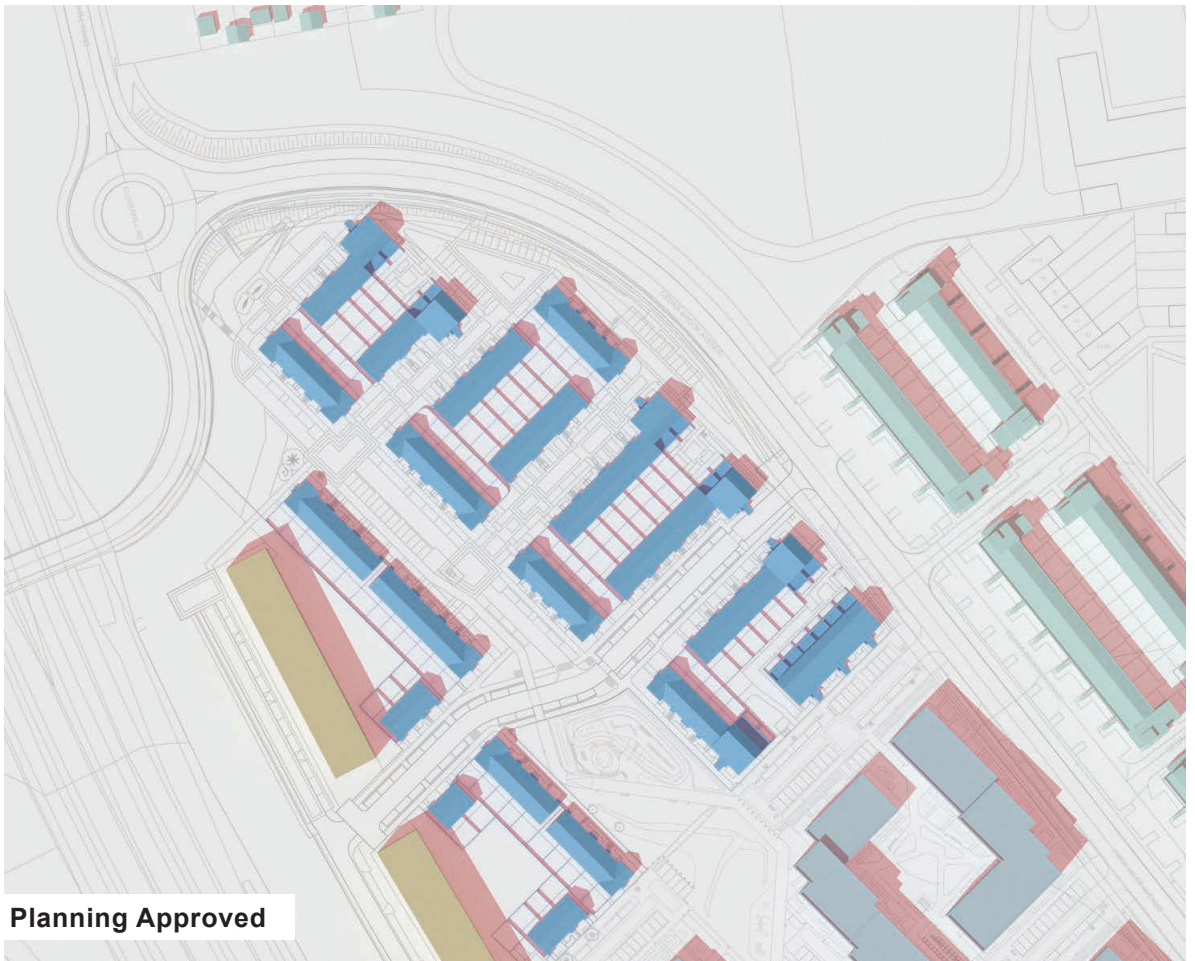
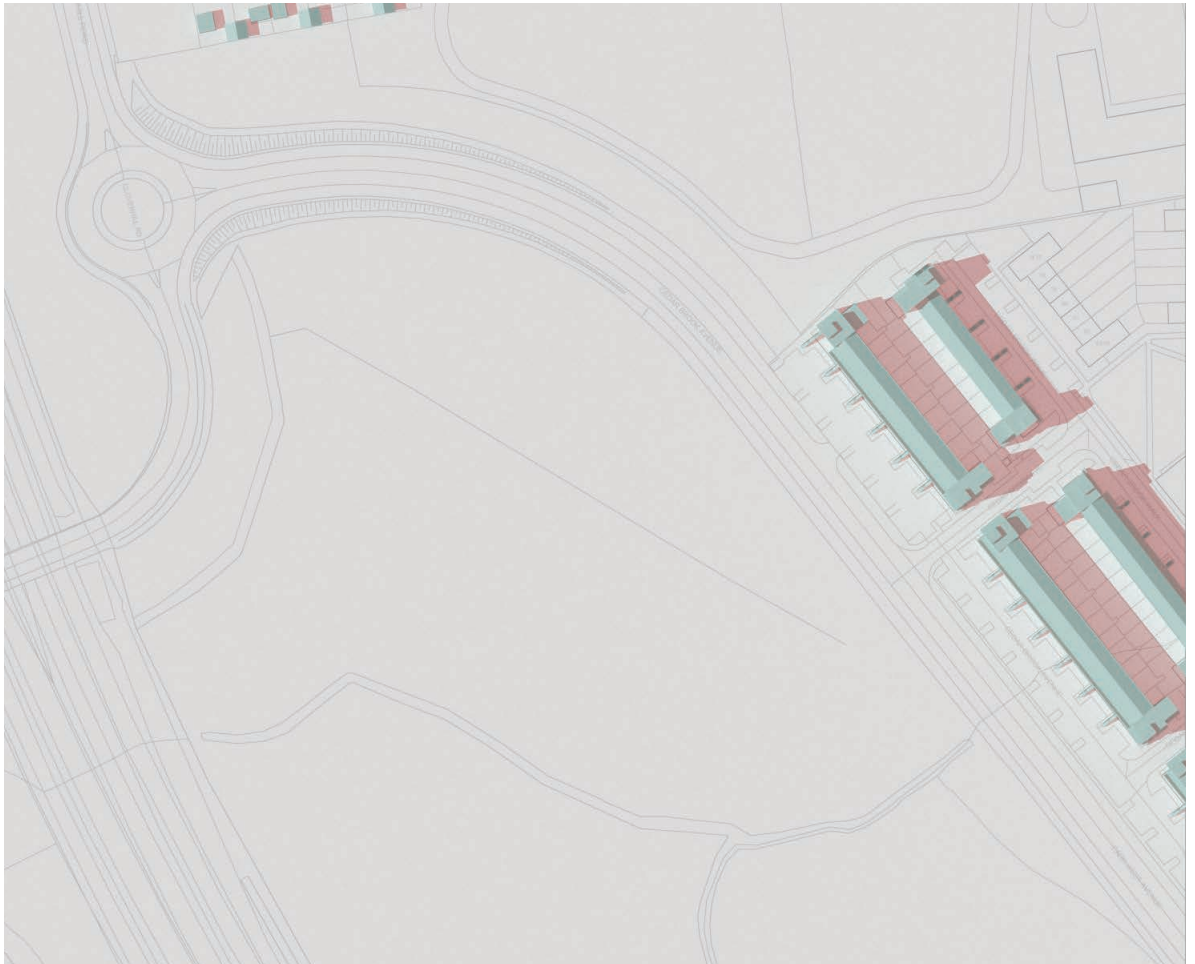


Figure 14: Shadow diagrams 21 June 15:00 UTC +1

Existing

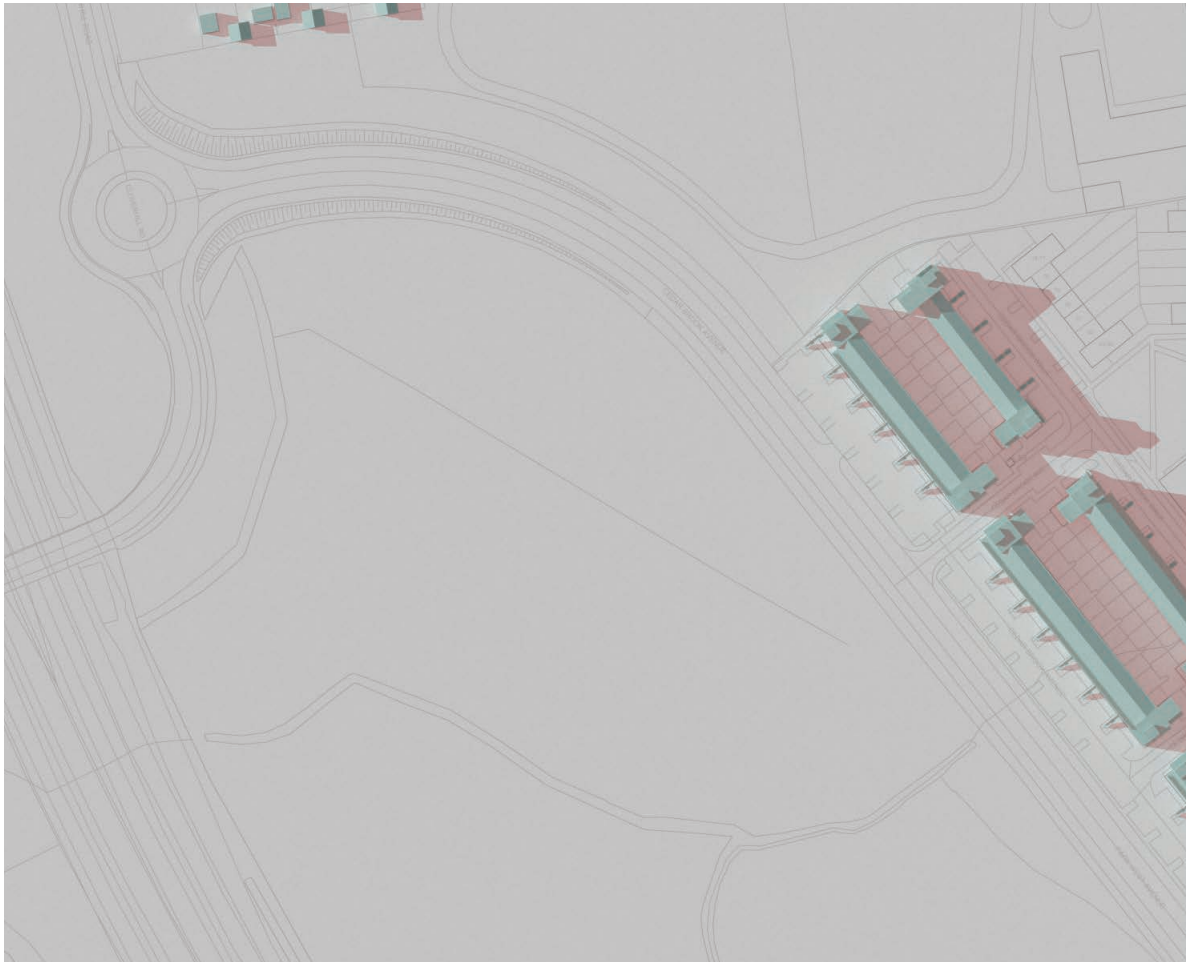


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Figure 15: Shadow diagrams 21 June 17:00 UTC +1

Existing



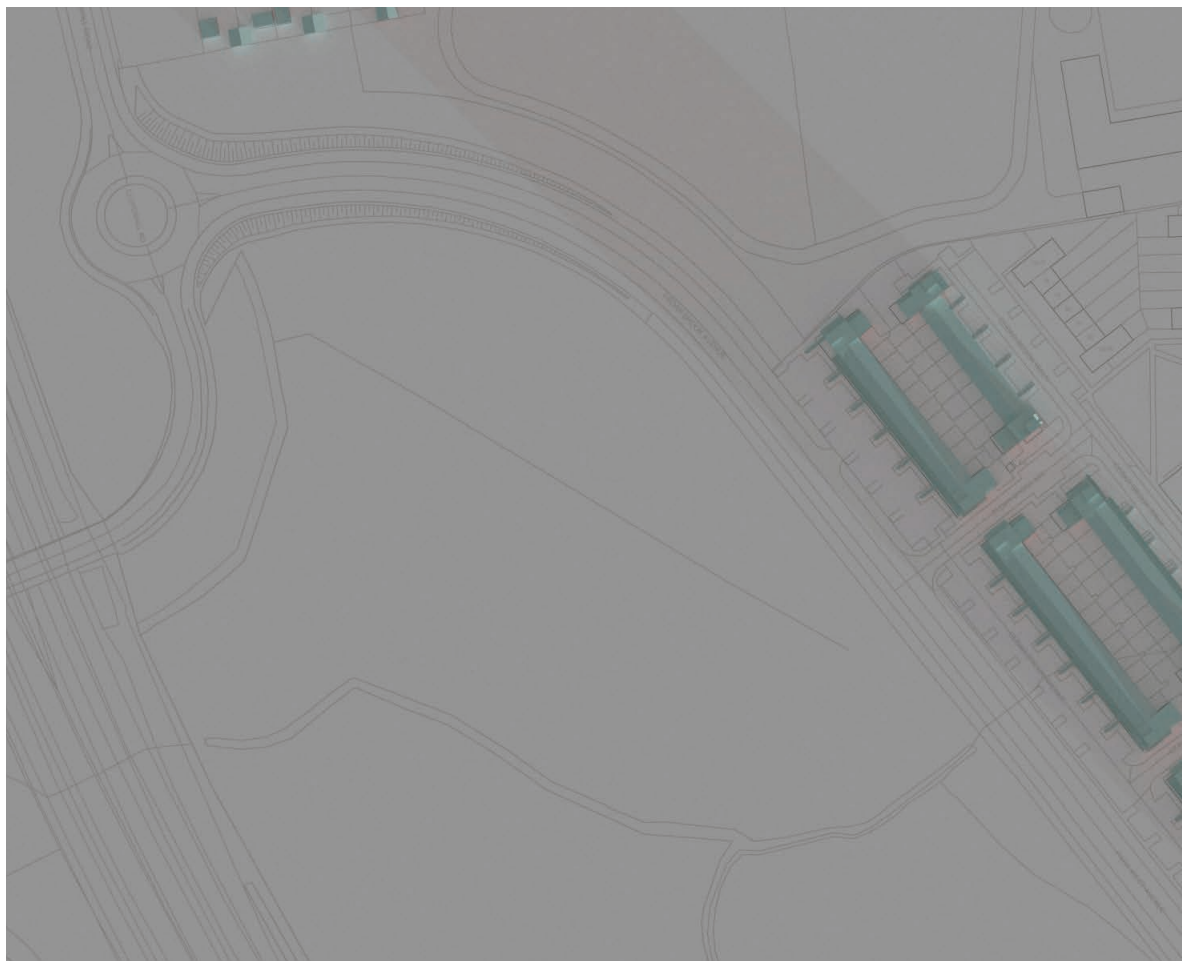
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Figure 16: Shadow diagrams 21 June 19:00 UTC +1

8.4 Shadow Casting diagrams December Solstice

Existing

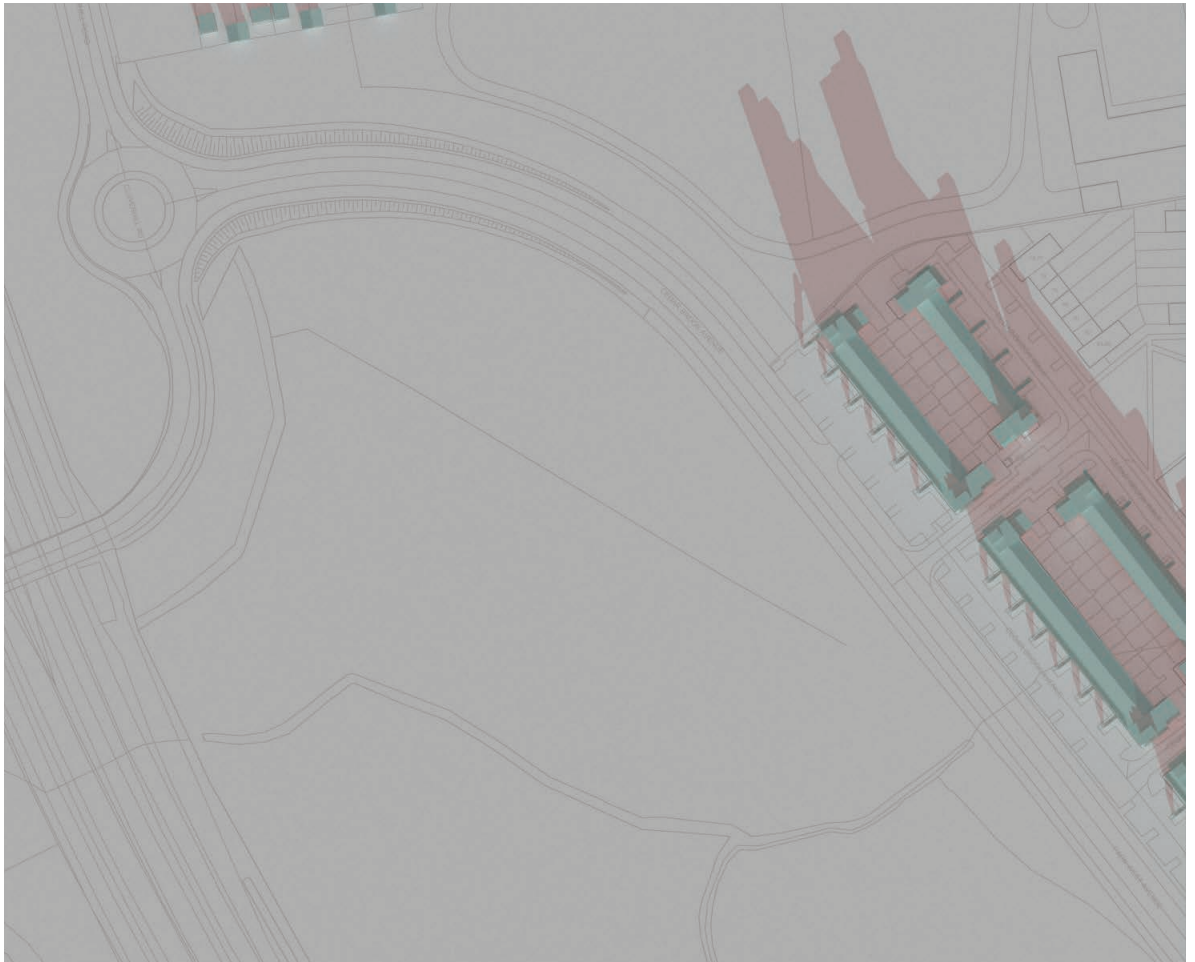


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Figure 17: Shadow diagrams 21 December 09:00 UTC

Existing

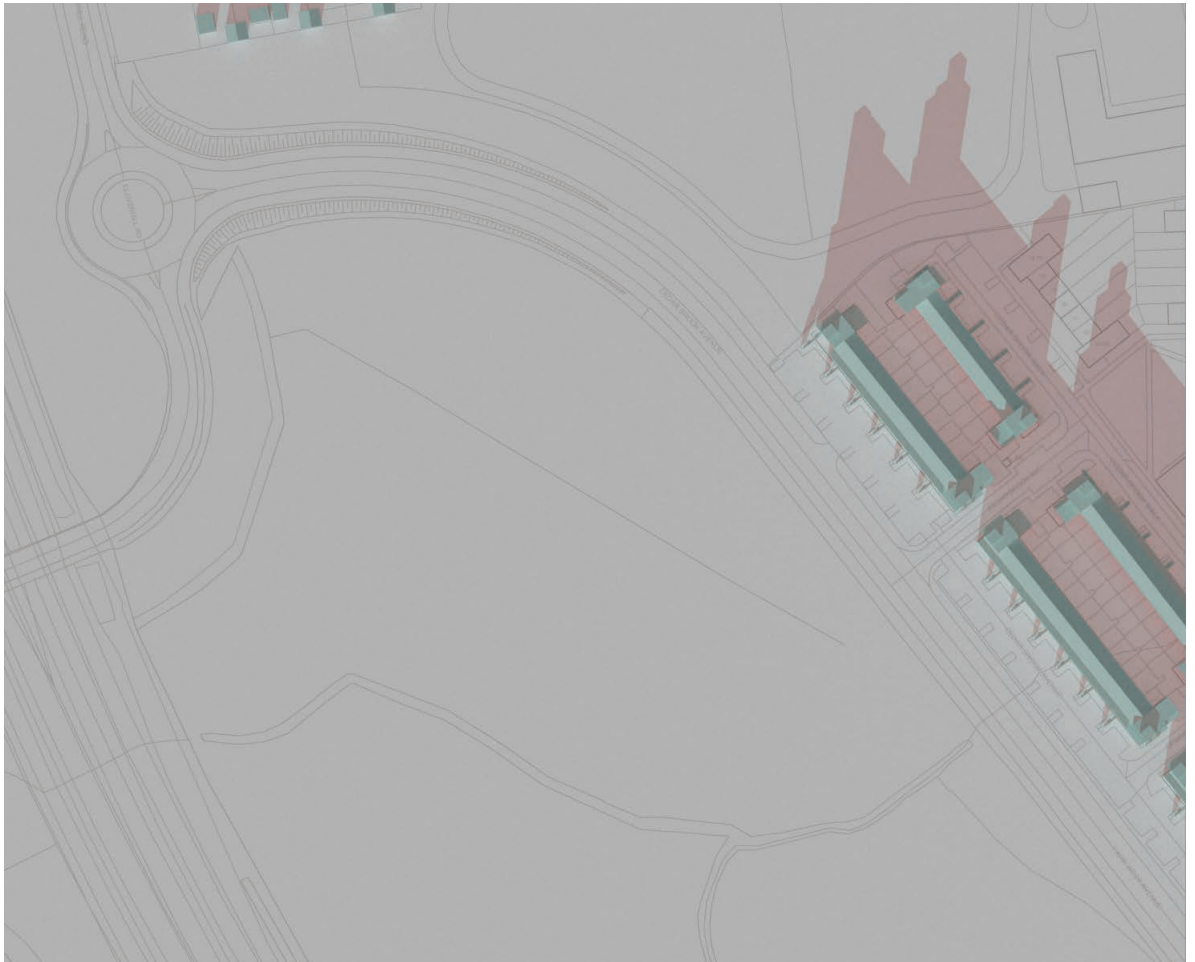


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Figure 18: Shadow diagrams 21 December 11:00 UTC

Existing



Proposed and Planning Approved

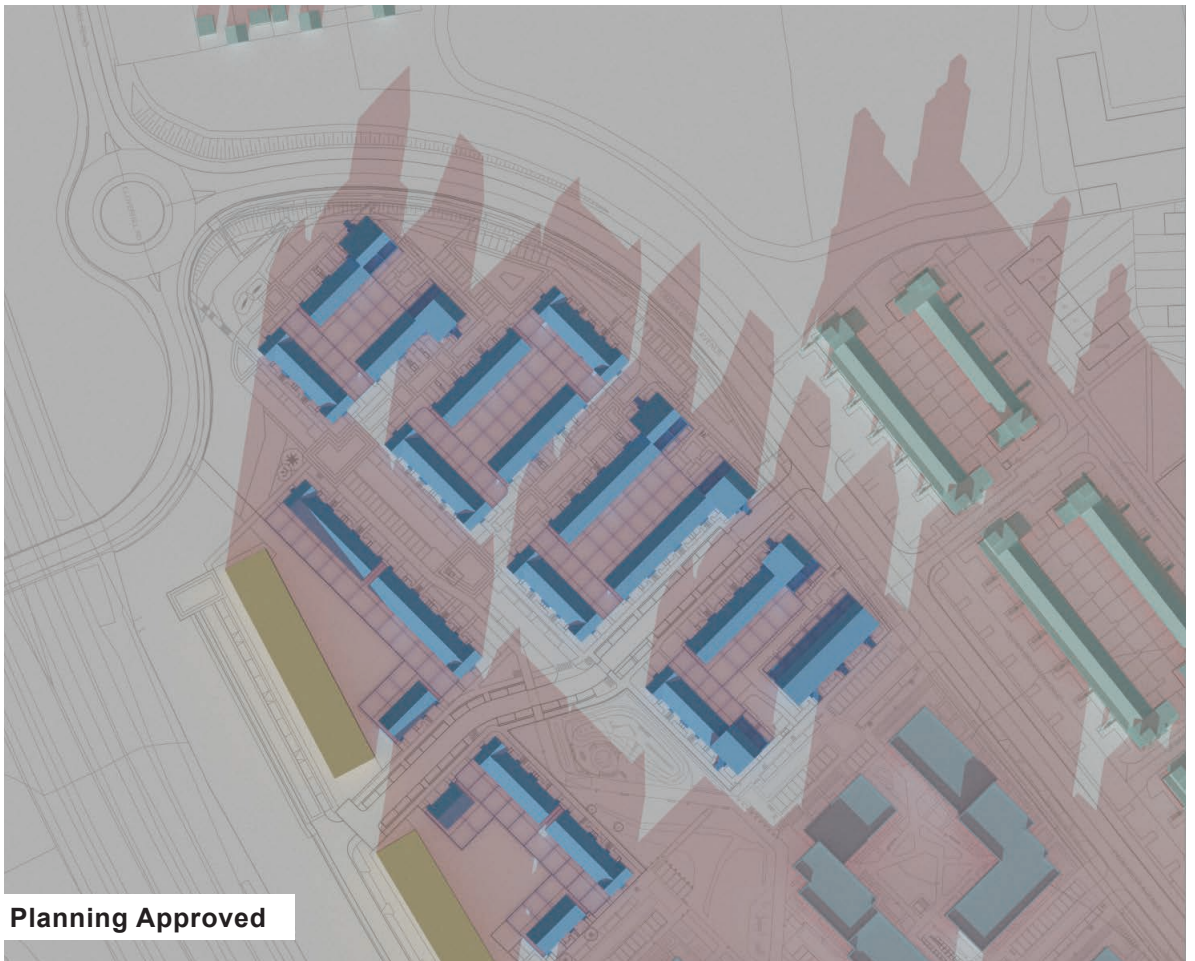
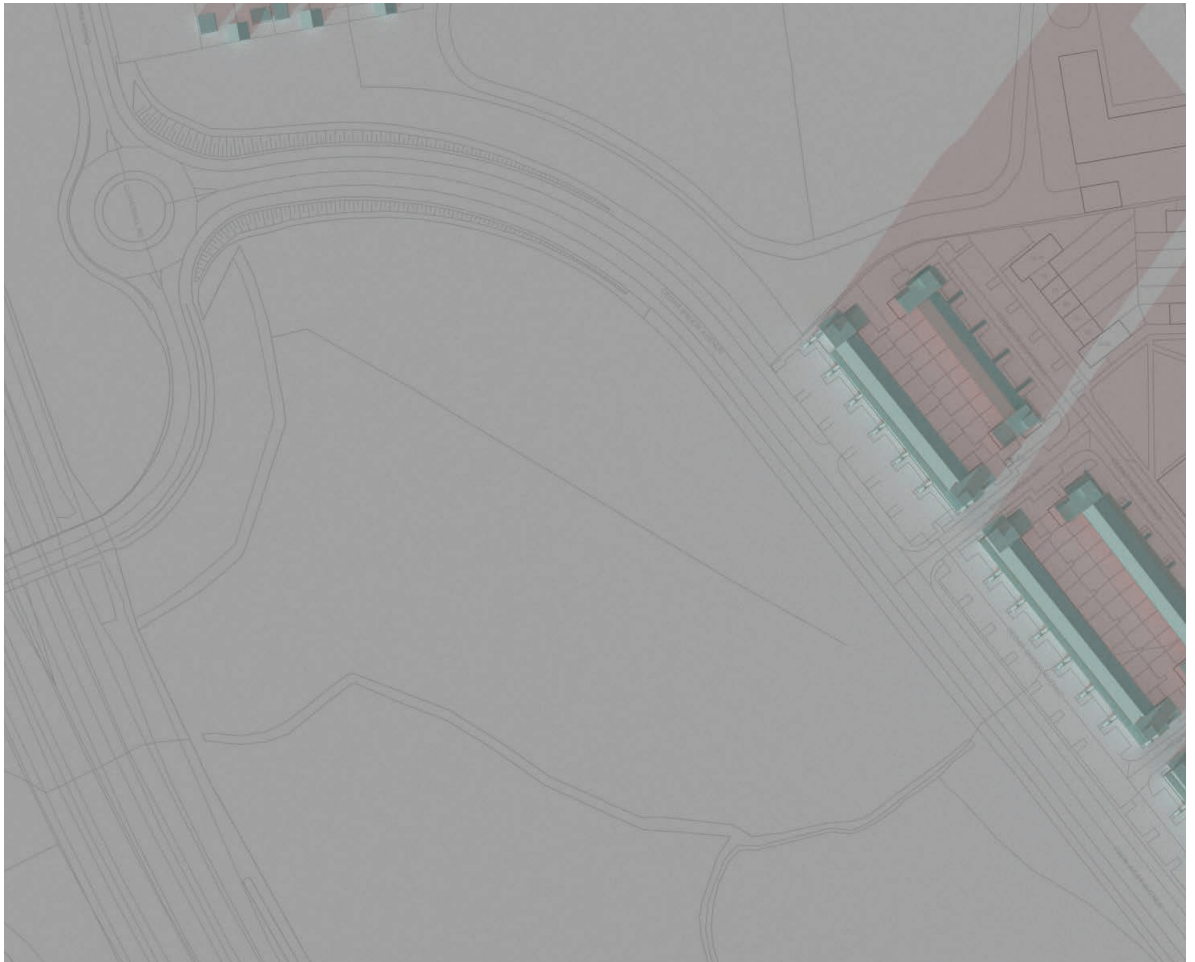


Figure 19: Shadow diagrams 21 December 13:00 UTC

Existing



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Figure 20: Shadow diagrams 21 December 15:00 UTC

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



Figure 22: No.s 1-31 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 21: No.s 1-31 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 23: No.s 1-31 Second floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
A001.1	LKD	30.5	271	200	1182	100.0%	Y	Y
A001.2	Bed	9.0	72	100	823	100.0%	Y	Y
A001.3	Bed	11.6	96	100	1468	100.0%	Y	Y
A002.1	L	16.8	143	200	2236	100.0%	Y	Y
A002.2	KD	17.8	148	150	1170	100.0%	Y	Y
A002.3	Bed	6.5	48	100	1463	100.0%	Y	Y
A002.4	Bed	10.6	88	100	1423	100.0%	Y	Y
A002.5	Bed	12.3	108	100	826	100.0%	Y	Y
A003.1	LKD	30.4	276	200	893	100.0%	Y	Y
A003.2	Bed	11.7	96	100	675	100.0%	Y	Y
A003.3	Bed	10.0	80	100	811	100.0%	Y	Y
A004.1	L	16.8	143	200	1634	100.0%	Y	Y
A004.2	KD	17.8	148	150	817	100.0%	Y	Y
A004.3	Bed	12.3	108	100	1056	100.0%	Y	Y
A004.4	Bed	10.6	88	100	2353	100.0%	Y	Y
A004.5	Bed	6.5	48	100	1511	100.0%	Y	Y
A005.1	LKD	30.4	276	200	863	100.0%	Y	Y
A005.2	Bed	11.7	96	100	712	100.0%	Y	Y
A005.3	Bed	10.0	80	100	796	100.0%	Y	Y
A006.1	L	16.8	143	200	1608	100.0%	Y	Y
A006.2	KD	17.8	148	150	828	100.0%	Y	Y
A006.3	Bed	12.3	108	100	1066	100.0%	Y	Y
A006.4	Bed	10.6	88	100	2343	100.0%	Y	Y
A006.5	Bed	6.5	48	100	1472	100.0%	Y	Y
A007.1	LKD	30.5	271	200	869	97.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
A007.2	Bed	9.0	72	100	911	100.0%	Y	Y
A007.3	Bed	11.6	96	100	721	100.0%	Y	Y
A008.1	L	16.8	143	200	1640	100.0%	Y	Y
A008.2	KD	17.8	148	150	746	100.0%	Y	Y
A008.3	Bed	6.5	48	100	1499	100.0%	Y	Y
A008.4	Bed	10.6	88	100	1037	100.0%	Y	Y
A008.5	Bed	12.3	108	100	226	79.6%	Y	Y
A009.1	LKD	30.4	276	200	873	100.0%	Y	Y
A009.2	Bed	11.7	96	100	735	100.0%	Y	Y
A009.3	Bed	10.0	80	100	828	100.0%	Y	Y
A010.1	L	16.8	143	200	1605	100.0%	Y	Y
A010.2	KD	17.8	148	150	845	100.0%	Y	Y
A010.3	Bed	12.3	108	100	1094	100.0%	Y	Y
A010.4	Bed	10.6	88	100	2335	100.0%	Y	Y
A010.5	Bed	6.5	48	100	1478	100.0%	Y	Y
A011.1	LKD	30.5	271	200	1573	100.0%	Y	Y
A011.2	Bed	9.0	72	100	936	100.0%	Y	Y
A011.3	Bed	11.6	96	100	2261	100.0%	Y	Y
A012.1	L	16.8	143	200	2973	100.0%	Y	Y
A012.2	KD	17.8	148	150	1701	100.0%	Y	Y
A012.3	Bed	6.5	48	100	1525	100.0%	Y	Y
A012.4	Bed	10.6	88	100	1881	100.0%	Y	Y
A012.5	Bed	12.3	108	100	1542	100.0%	Y	Y
A013.1	LKD	30.5	271	200	1684	100.0%	Y	Y
A013.2	Bed	9.0	72	100	955	100.0%	Y	Y
A013.3	Bed	11.6	96	100	2643	100.0%	Y	Y
A014.1	KD	17.8	148	200	1811	100.0%	Y	Y
A014.2	L	16.8	143	150	3083	100.0%	Y	Y
A014.3	Bed	12.3	108	100	1603	100.0%	Y	Y
A014.4	Bed	10.6	88	100	1925	100.0%	Y	Y
A014.5	Bed	6.5	48	100	1448	100.0%	Y	Y
A015.1	LKD	30.4	276	200	797	97.8%	Y	Y
A015.2	Bed	11.7	96	100	744	100.0%	Y	Y
A015.3	Bed	10.0	80	100	808	100.0%	Y	Y
A016.1	KD	17.8	148	200	853	100.0%	Y	Y
A016.2	L	16.8	143	150	1524	100.0%	Y	Y
A016.3	Bed	6.5	48	100	1430	100.0%	Y	Y
A016.4	Bed	10.6	88	100	2254	100.0%	Y	Y
A016.5	Bed	12.3	108	100	1090	100.0%	Y	Y
H017.1	KD	15.9	136	200	549	100.0%	Y	Y
H017.2	L	18.0	156	150	1197	100.0%	Y	Y
H017.3	Bed	5.8	42	100	1641	100.0%	Y	Y
H017.4	Bed	11.0	90	100	1723	100.0%	Y	Y
H017.5	Bed	9.7	80	100	799	100.0%	Y	Y
H018.1	KD	14.1	117	200	785	100.0%	Y	Y
H018.2	L	16.6	138	150	1618	100.0%	Y	Y
H018.3	Bed	12.5	99	100	768	100.0%	Y	Y
H018.4	Bed	11.4	92	100	1719	100.0%	Y	Y
H019.1	KD	14.1	117	200	808	100.0%	Y	Y
H019.2	L	16.6	138	150	1631	100.0%	Y	Y
H019.3	Bed	12.5	99	100	782	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H019.4	Bed	11.4	92	100	1745	100.0%	Y	Y
H020.1	KD	15.9	136	200	706	100.0%	Y	Y
H020.2	L	18.0	156	150	1168	100.0%	Y	Y
H020.3	Bed	5.8	42	100	1592	100.0%	Y	Y
H020.4	Bed	11.0	90	100	1722	100.0%	Y	Y
H020.5	Bed	9.7	80	100	902	100.0%	Y	Y
H021.1	KD	17.2	144	200	1397	100.0%	Y	Y
H021.2	L	21.0	187	150	1013	100.0%	Y	Y
H021.3	Bed	10.1	85	100	1814	100.0%	Y	Y
H021.4	Bed	5.8	42	100	690	100.0%	Y	Y
H021.5	Bed	10.4	88	100	776	100.0%	Y	Y
H022.1	KD	15.9	136	200	1562	100.0%	Y	Y
H022.2	L	18.0	156	150	521	100.0%	Y	Y
H022.3	Bed	5.8	42	100	699	100.0%	Y	Y
H022.4	Bed	11.0	90	100	789	100.0%	Y	Y
H022.5	Bed	9.7	80	100	1913	100.0%	Y	Y
H023.1	KD	15.9	136	200	1561	100.0%	Y	Y
H023.2	L	18.0	156	150	526	100.0%	Y	Y
H023.3	Bed	5.8	42	100	726	100.0%	Y	Y
H023.4	Bed	11.0	90	100	783	100.0%	Y	Y
H023.5	Bed	9.7	80	100	1898	100.0%	Y	Y
H024.1	KD	15.9	136	200	1448	100.0%	Y	Y
H024.2	L	18.0	156	150	518	100.0%	Y	Y
H024.3	Bed	5.8	42	100	692	100.0%	Y	Y
H024.4	Bed	11.0	90	100	783	100.0%	Y	Y
H024.5	Bed	9.7	80	100	1832	100.0%	Y	Y
H025.1	KD	15.9	136	200	1363	100.0%	Y	Y
H025.2	L	18.0	156	150	527	100.0%	Y	Y
H025.3	Bed	5.8	42	100	719	100.0%	Y	Y
H025.4	Bed	11.0	90	100	781	100.0%	Y	Y
H025.5	Bed	9.7	80	100	1777	100.0%	Y	Y
H026.1	KD	15.9	136	200	1313	100.0%	Y	Y
H026.2	L	18.0	156	150	514	100.0%	Y	Y
H026.3	Bed	5.8	42	100	699	100.0%	Y	Y
H026.4	Bed	11.0	90	100	775	100.0%	Y	Y
H026.5	Bed	9.7	80	100	1736	100.0%	Y	Y
H027.1	KD	15.9	136	200	1271	100.0%	Y	Y
H027.2	L	18.0	156	150	508	100.0%	Y	Y
H027.3	Bed	5.8	42	100	706	100.0%	Y	Y
H027.4	Bed	11.0	90	100	763	100.0%	Y	Y
H027.5	Bed	9.7	80	100	1730	100.0%	Y	Y
A028.1	LKD	30.4	276	200	366	54.3%	Y	Y
A028.2	Bed	11.7	96	100	1154	100.0%	Y	Y
A028.3	Bed	10.0	80	100	1415	100.0%	Y	Y
A029.1	KD	17.8	148	150	1634	100.0%	Y	Y
A029.2	L	16.8	143	200	727	100.0%	Y	Y
A029.3	Bed	6.5	48	100	665	100.0%	Y	Y
A029.4	Bed	10.6	88	100	1088	100.0%	Y	Y
A029.5	Bed	12.3	108	100	2066	100.0%	Y	Y
A030.1	LKD	30.5	271	200	699	100.0%	Y	Y
A030.2	Bed	9.0	72	100	1573	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
A030.3	Bed	11.6	96	100	2064	100.0%		Y
A031.1	KD	17.8	148	150	1912	100.0%		Y
A031.2	L	16.8	143	200	1385	100.0%		Y
A031.3	Bed	12.3	108	100	1041	100.0%		Y
A031.4	Bed	10.6	88	100	892	100.0%		Y
A031.5	Bed	6.5	48	100	639	100.0%		Y

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



Figure 24: No.s 32-59 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 25: No.s 32-59 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

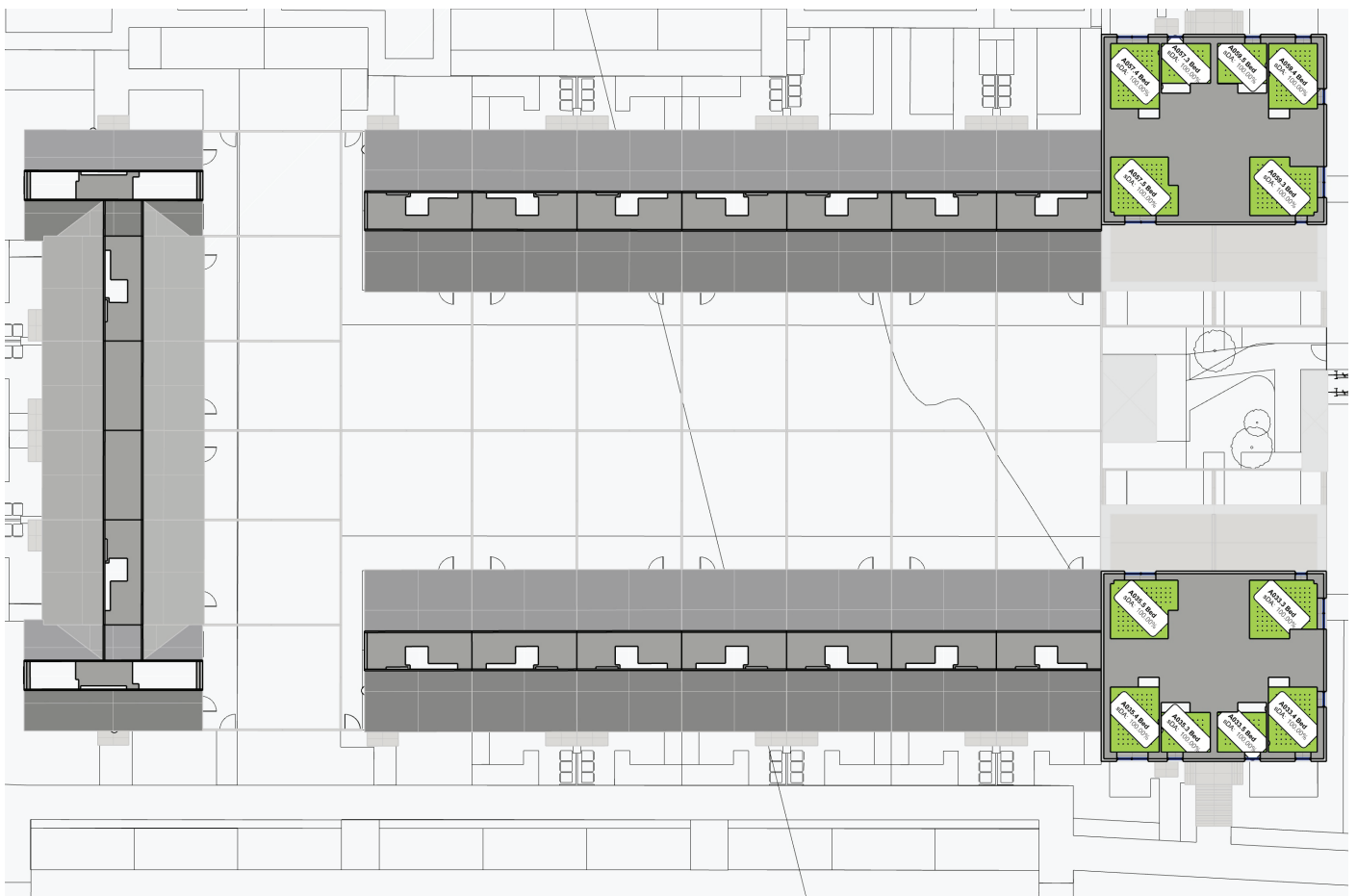


Figure 26: No.s 32-59 Second floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
A032.1	LKD	30.5	271	200	1035	100.0%	Y	Y
A032.2	Bed	9.0	72	100	884	100.0%	Y	Y
A032.3	Bed	11.6	96	100	1522	100.0%	Y	Y
A033.1	KD	17.8	148	100	1184	100.0%	Y	Y
A033.2	L	16.8	143	100	2067	100.0%	Y	Y
A033.3	Bed	12.3	108	100	823	100.0%	Y	Y
A033.4	Bed	10.6	88	100	1366	100.0%	Y	Y
A033.5	Bed	6.5	48	100	1385	100.0%	Y	Y
A034.1	LKD	30.4	276	200	649	69.2%	Y	Y
A034.2	Bed	11.7	96	100	698	100.0%	Y	Y
A034.3	Bed	10.0	80	100	853	100.0%	Y	Y
A035.1	KD	17.8	148	100	761	100.0%	Y	Y
A035.2	L	16.8	143	100	1415	100.0%	Y	Y
A035.3	Bed	6.5	48	100	1414	100.0%	Y	Y
A035.4	Bed	10.6	88	100	2211	100.0%	Y	Y
A035.5	Bed	12.3	108	100	1047	100.0%	Y	Y
H036.1	KD	15.9	136	200	728	100.0%	Y	Y
H036.2	L	18.0	156	150	923	100.0%	Y	Y
H036.3	Bed	5.8	42	100	1501	100.0%	Y	Y
H036.4	Bed	11.0	90	100	1515	100.0%	Y	Y
H036.5	Bed	9.7	80	100	898	100.0%	Y	Y
H037.1	KD	15.9	136	200	724	100.0%	Y	Y
H037.2	L	18.0	156	150	1113	100.0%	Y	Y
H037.3	Bed	5.8	42	100	1621	100.0%	Y	Y
H037.4	Bed	11.0	90	100	1712	100.0%	Y	Y
H037.5	Bed	9.7	80	100	902	100.0%	Y	Y
H038.1	KD	15.9	136	200	732	100.0%	Y	Y
H038.2	L	18.0	156	150	1110	100.0%	Y	Y
H038.3	Bed	5.8	42	100	1580	100.0%	Y	Y
H038.4	Bed	11.0	90	100	1719	100.0%	Y	Y
H038.5	Bed	9.7	80	100	916	100.0%	Y	Y
H039.1	KD	15.9	136	200	727	100.0%	Y	Y
H039.2	L	18.0	156	150	1138	100.0%	Y	Y
H039.3	Bed	5.8	42	100	1646	100.0%	Y	Y
H039.4	Bed	11.0	90	100	1742	100.0%	Y	Y
H039.5	Bed	9.7	80	100	906	100.0%	Y	Y
H040.1	KD	15.9	136	200	733	100.0%	Y	Y
H040.2	L	18.0	156	150	1134	100.0%	Y	Y
H040.3	Bed	5.8	42	100	1587	100.0%	Y	Y
H040.4	Bed	11.0	90	100	1730	100.0%	Y	Y
H040.5	Bed	9.7	80	100	922	100.0%	Y	Y
H041.1	KD	15.9	136	200	724	100.0%	Y	Y
H041.2	L	18.0	156	150	1157	100.0%	Y	Y
H041.3	Bed	5.8	42	100	1658	100.0%	Y	Y
H041.4	Bed	11.0	90	100	1741	100.0%	Y	Y
H041.5	Bed	9.7	80	100	899	100.0%	Y	Y
H042.1	KD	15.9	136	200	731	100.0%	Y	Y
H042.2	L	18.0	156	150	1158	100.0%	Y	Y
H042.3	Bed	5.8	42	100	1617	100.0%	Y	Y
H042.4	Bed	11.0	90	100	1744	100.0%	Y	Y
H042.5	Bed	9.7	80	100	904	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H043.1	KD	17.2	144	200	2062	100.0%	Y	Y
H043.2	L	21.0	187	150	1591	100.0%	Y	Y
H043.3	Bed	10.1	85	100	2813	100.0%	Y	Y
H043.4	Bed	5.8	42	100	1629	100.0%	Y	Y
H043.5	Bed	10.4	88	100	1760	100.0%	Y	Y
H044.1	KD	15.9	136	200	698	100.0%	Y	Y
H044.2	L	18.0	156	150	1137	100.0%	Y	Y
H044.3	Bed	5.8	42	100	1637	100.0%	Y	Y
H044.4	Bed	11.0	90	100	1672	100.0%	Y	Y
H044.5	Bed	9.7	80	100	906	100.0%	Y	Y
H045.1	KD	14.1	117	200	779	100.0%	Y	Y
H045.2	L	16.6	138	150	1602	100.0%	Y	Y
H045.3	Bed	12.5	99	100	774	100.0%	Y	Y
H045.4	Bed	11.4	92	100	1702	100.0%	Y	Y
H046.1	KD	14.1	117	200	810	100.0%	Y	Y
H046.2	L	16.6	138	150	1589	100.0%	Y	Y
H046.3	Bed	12.5	99	100	788	100.0%	Y	Y
H046.4	Bed	11.4	92	100	1726	100.0%	Y	Y
H047.1	KD	15.9	136	200	713	100.0%	Y	Y
H047.2	L	18.0	156	150	1126	100.0%	Y	Y
H047.3	Bed	5.8	42	100	1571	100.0%	Y	Y
H047.4	Bed	11.0	90	100	1709	100.0%	Y	Y
H047.5	Bed	9.7	80	100	913	100.0%	Y	Y
H048.1	KD	17.2	144	200	1395	100.0%	Y	Y
H048.2	L	21.0	187	150	977	100.0%	Y	Y
H048.3	Bed	10.1	85	100	1795	100.0%	Y	Y
H048.4	Bed	5.8	42	100	687	100.0%	Y	Y
H048.5	Bed	10.4	88	100	770	100.0%	Y	Y
H049.1	KD	15.9	136	200	1541	100.0%	Y	Y
H049.2	L	18.0	156	150	509	100.0%	Y	Y
H049.3	Bed	5.8	42	100	699	100.0%	Y	Y
H049.4	Bed	11.0	90	100	787	100.0%	Y	Y
H049.5	Bed	9.7	80	100	1946	100.0%	Y	Y
H050.1	KD	15.9	136	200	1500	100.0%	Y	Y
H050.2	L	18.0	156	150	517	100.0%	Y	Y
H050.3	Bed	5.8	42	100	723	100.0%	Y	Y
H050.4	Bed	11.0	90	100	783	100.0%	Y	Y
H050.5	Bed	9.7	80	100	1934	100.0%	Y	Y
H051.1	KD	15.9	136	200	1503	100.0%	Y	Y
H051.2	L	18.0	156	150	511	100.0%	Y	Y
H051.3	Bed	5.8	42	100	692	100.0%	Y	Y
H051.4	Bed	11.0	90	100	793	100.0%	Y	Y
H051.5	Bed	9.7	80	100	1932	100.0%	Y	Y
H052.1	KD	15.9	136	200	1496	100.0%	Y	Y
H052.2	L	18.0	156	150	514	100.0%	Y	Y
H052.3	Bed	5.8	42	100	738	100.0%	Y	Y
H052.4	Bed	11.0	90	100	789	100.0%	Y	Y
H052.5	Bed	9.7	80	100	1913	100.0%	Y	Y
H053.1	KD	15.9	136	200	1481	100.0%	Y	Y
H053.2	L	18.0	156	150	510	100.0%	Y	Y
H053.3	Bed	5.8	42	100	704	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H053.4	Bed	11.0	90	100	793	100.0%	Y	Y
H053.5	Bed	9.7	80	100	1909	100.0%	Y	Y
H054.1	KD	15.9	136	200	1462	100.0%	Y	Y
H054.2	L	18.0	156	150	513	100.0%	Y	Y
H054.3	Bed	5.8	42	100	726	100.0%	Y	Y
H054.4	Bed	11.0	90	100	773	100.0%	Y	Y
H054.5	Bed	9.7	80	100	1896	100.0%	Y	Y
H055.1	KD	15.9	136	200	1447	100.0%	Y	Y
H055.2	L	18.0	156	150	470	100.0%	Y	Y
H055.3	Bed	5.8	42	100	688	100.0%	Y	Y
H055.4	Bed	11.0	90	100	751	100.0%	Y	Y
H055.5	Bed	9.7	80	100	1870	100.0%	Y	Y
A056.1	LKD	30.4	276	200	375	56.9%	Y	Y
A056.2	Bed	11.7	96	100	1393	100.0%	Y	Y
A056.3	Bed	10.0	80	100	1692	100.0%	Y	Y
A057.1	KD	17.8	148	200	1667	100.0%	Y	Y
A057.2	L	16.8	143	150	755	100.0%	Y	Y
A057.3	Bed	6.5	48	100	689	100.0%	Y	Y
A057.4	Bed	10.6	88	100	1127	100.0%	Y	Y
A057.5	Bed	12.3	108	100	2183	100.0%	Y	Y
A058.1	LKD	30.5	271	200	727	100.0%	Y	Y
A058.2	Bed	9.0	72	100	1806	100.0%	Y	Y
A058.3	Bed	11.6	96	100	2240	100.0%	Y	Y
A059.1	KD	17.8	148	200	2000	100.0%	Y	Y
A059.2	L	16.8	143	150	1426	100.0%	Y	Y
A059.3	Bed	12.3	108	100	1054	100.0%	Y	Y
A059.4	Bed	10.6	88	100	908	100.0%	Y	Y
A059.5	Bed	6.5	48	100	671	100.0%	Y	Y

Table 12: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms

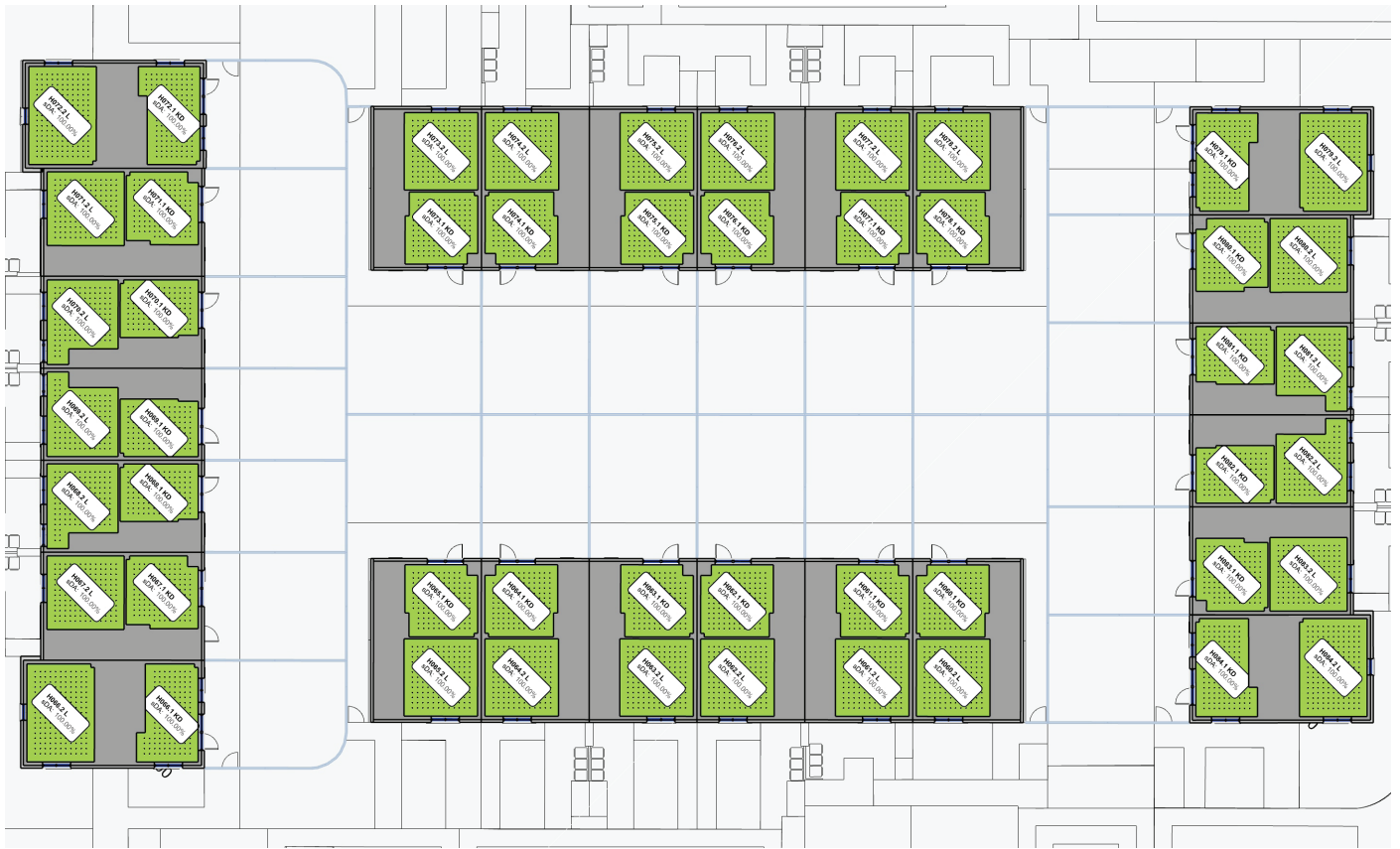


Figure 28: No.s 60-84 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

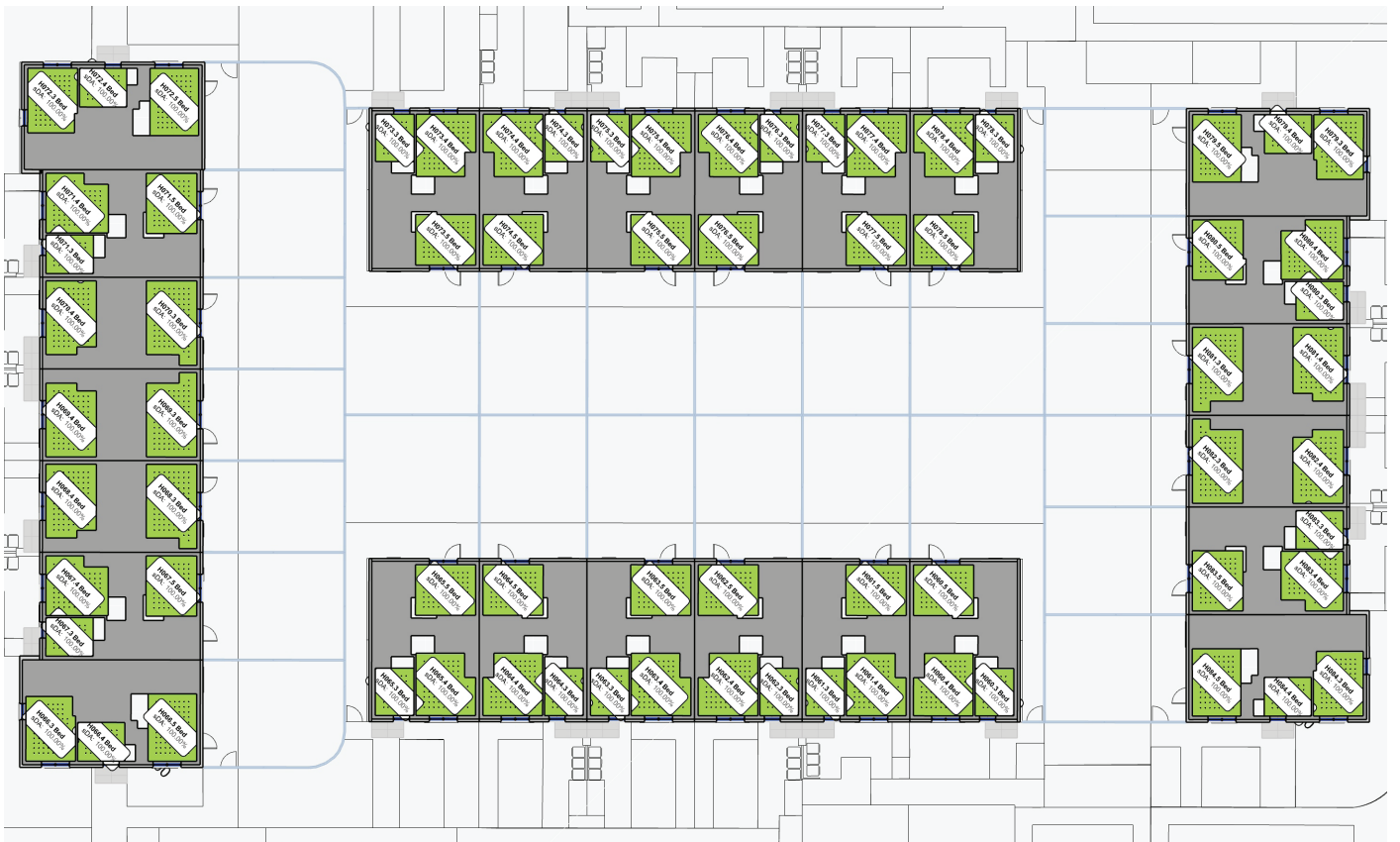


Figure 27: No.s 60-84 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
H060.1	KD	15.9	136	200	722	100.0%	Y	Y
H060.2	L	18.0	156	150	1047	100.0%	Y	Y
H060.3	Bed	5.8	42	100	1593	100.0%	Y	Y
H060.4	Bed	11.0	90	100	1678	100.0%	Y	Y
H060.5	Bed	9.7	80	100	909	100.0%	Y	Y
H061.1	KD	15.9	136	200	732	100.0%	Y	Y
H061.2	L	18.0	156	150	1054	100.0%	Y	Y
H061.3	Bed	5.8	42	100	1550	100.0%	Y	Y
H061.4	Bed	11.0	90	100	1689	100.0%	Y	Y
H061.5	Bed	9.7	80	100	915	100.0%	Y	Y
H062.1	KD	15.9	136	200	721	100.0%	Y	Y
H062.2	L	18.0	156	150	1078	100.0%	Y	Y
H062.3	Bed	5.8	42	100	1615	100.0%	Y	Y
H062.4	Bed	11.0	90	100	1697	100.0%	Y	Y
H062.5	Bed	9.7	80	100	907	100.0%	Y	Y
H063.1	KD	15.9	136	200	729	100.0%	Y	Y
H063.2	L	18.0	156	150	1070	100.0%	Y	Y
H063.3	Bed	5.8	42	100	1562	100.0%	Y	Y
H063.4	Bed	11.0	90	100	1711	100.0%	Y	Y
H063.5	Bed	9.7	80	100	916	100.0%	Y	Y
H064.1	KD	15.9	136	200	721	100.0%	Y	Y
H064.2	L	18.0	156	150	1102	100.0%	Y	Y
H064.3	Bed	5.8	42	100	1632	100.0%	Y	Y
H064.4	Bed	11.0	90	100	1715	100.0%	Y	Y
H064.5	Bed	9.7	80	100	900	100.0%	Y	Y
H065.1	KD	15.9	136	200	731	100.0%	Y	Y
H065.2	L	18.0	156	150	1106	100.0%	Y	Y
H065.3	Bed	5.8	42	100	1588	100.0%	Y	Y
H065.4	Bed	11.0	90	100	1717	100.0%	Y	Y
H065.5	Bed	9.7	80	100	907	100.0%	Y	Y
H066.1	KD	17.2	144	200	1981	100.0%	Y	Y
H066.2	L	21.0	187	150	1497	100.0%	Y	Y
H066.3	Bed	10.1	85	100	2712	100.0%	Y	Y
H066.4	Bed	5.8	42	100	1565	100.0%	Y	Y
H066.5	Bed	10.4	88	100	1699	100.0%	Y	Y
H067.1	KD	15.9	136	200	700	100.0%	Y	Y
H067.2	L	18.0	156	150	1121	100.0%	Y	Y
H067.3	Bed	5.8	42	100	1506	100.0%	Y	Y
H067.4	Bed	11.0	90	100	1686	100.0%	Y	Y
H067.5	Bed	9.7	80	100	918	100.0%	Y	Y
H068.1	KD	14.1	117	200	787	100.0%	Y	Y
H068.2	L	16.6	138	150	1561	100.0%	Y	Y
H068.3	Bed	12.5	99	100	788	100.0%	Y	Y
H068.4	Bed	11.4	92	100	1707	100.0%	Y	Y
H069.1	KD	14.1	117	200	780	100.0%	Y	Y
H069.2	L	16.6	138	150	1543	100.0%	Y	Y
H069.3	Bed	12.5	99	100	777	100.0%	Y	Y
H069.4	Bed	11.4	92	100	1672	100.0%	Y	Y
H070.1	KD	14.1	117	200	810	100.0%	Y	Y
H070.2	L	16.6	138	150	1542	100.0%	Y	Y
H070.3	Bed	12.5	99	100	790	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H070.4	Bed	11.4	92	100	1692	100.0%	Y	Y
H071.1	KD	15.9	136	200	694	100.0%	Y	Y
H071.2	L	18.0	156	150	1109	100.0%	Y	Y
H071.3	Bed	5.8	42	100	1521	100.0%	Y	Y
H071.4	Bed	11.0	90	100	1674	100.0%	Y	Y
H071.5	Bed	9.7	80	100	904	100.0%	Y	Y
H072.1	KD	17.2	144	200	1408	100.0%	Y	Y
H072.2	L	21.0	187	150	980	100.0%	Y	Y
H072.3	Bed	10.1	85	100	1806	100.0%	Y	Y
H072.4	Bed	5.8	42	100	694	100.0%	Y	Y
H072.5	Bed	10.4	88	100	782	100.0%	Y	Y
H073.1	KD	15.9	136	200	1535	100.0%	Y	Y
H073.2	L	18.0	156	150	505	100.0%	Y	Y
H073.3	Bed	5.8	42	100	688	100.0%	Y	Y
H073.4	Bed	11.0	90	100	781	100.0%	Y	Y
H073.5	Bed	9.7	80	100	1946	100.0%	Y	Y
H074.1	KD	15.9	136	200	1502	100.0%	Y	Y
H074.2	L	18.0	156	150	507	100.0%	Y	Y
H074.3	Bed	5.8	42	100	719	100.0%	Y	Y
H074.4	Bed	11.0	90	100	771	100.0%	Y	Y
H074.5	Bed	9.7	80	100	1913	100.0%	Y	Y
H075.1	KD	15.9	136	200	1497	100.0%	Y	Y
H075.2	L	18.0	156	150	478	100.0%	Y	Y
H075.3	Bed	5.8	42	100	661	100.0%	Y	Y
H075.4	Bed	11.0	90	100	752	100.0%	Y	Y
H075.5	Bed	9.7	80	100	1922	100.0%	Y	Y
H076.1	KD	15.9	136	200	1498	100.0%	Y	Y
H076.2	L	18.0	156	150	474	100.0%	Y	Y
H076.3	Bed	5.8	42	100	670	100.0%	Y	Y
H076.4	Bed	11.0	90	100	731	100.0%	Y	Y
H076.5	Bed	9.7	80	100	1909	100.0%	Y	Y
H077.1	KD	15.9	136	200	1511	100.0%	Y	Y
H077.2	L	18.0	156	150	482	100.0%	Y	Y
H077.3	Bed	5.8	42	100	657	100.0%	Y	Y
H077.4	Bed	11.0	90	100	741	100.0%	Y	Y
H077.5	Bed	9.7	80	100	1935	100.0%	Y	Y
H078.1	KD	15.9	136	200	1502	100.0%	Y	Y
H078.2	L	18.0	156	150	490	100.0%	Y	Y
H078.3	Bed	5.8	42	100	680	100.0%	Y	Y
H078.4	Bed	11.0	90	100	738	100.0%	Y	Y
H078.5	Bed	9.7	80	100	1930	100.0%	Y	Y
H079.1	KD	17.2	144	200	2215	100.0%	Y	Y
H079.2	L	21.0	187	150	715	100.0%	Y	Y
H079.3	Bed	10.1	85	100	1288	100.0%	Y	Y
H079.4	Bed	5.8	42	100	709	100.0%	Y	Y
H079.5	Bed	10.4	88	100	743	100.0%	Y	Y
H080.1	KD	15.9	136	200	1341	100.0%	Y	Y
H080.2	L	18.0	156	150	554	100.0%	Y	Y
H080.3	Bed	5.8	42	100	712	100.0%	Y	Y
H080.4	Bed	11.0	90	100	813	100.0%	Y	Y
H080.5	Bed	9.7	80	100	1830	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H081.1	KD	14.1	117	200	1719	100.0%	Y	Y
H081.2	L	16.6	138	150	794	100.0%	Y	Y
H081.3	Bed	12.5	99	100	1602	100.0%	Y	Y
H081.4	Bed	11.4	92	100	825	100.0%	Y	Y
H082.1	KD	14.1	117	200	1641	100.0%	Y	Y
H082.2	L	16.6	138	150	794	100.0%	Y	Y
H082.3	Bed	12.5	99	100	1559	100.0%	Y	Y
H082.4	Bed	11.4	92	100	808	100.0%	Y	Y
H083.1	KD	15.9	136	200	1303	100.0%	Y	Y
H083.2	L	18.0	156	150	527	100.0%	Y	Y
H083.3	Bed	5.8	42	100	745	100.0%	Y	Y
H083.4	Bed	11.0	90	100	771	100.0%	Y	Y
H083.5	Bed	9.7	80	100	1806	100.0%	Y	Y
H084.1	KD	17.2	144	200	2608	100.0%	Y	Y
H084.2	L	21.0	187	150	1059	100.0%	Y	Y
H084.3	Bed	10.1	85	100	2087	100.0%	Y	Y
H084.4	Bed	5.8	42	100	1448	100.0%	Y	Y
H084.5	Bed	10.4	88	100	1459	100.0%	Y	Y

Table 13: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms



Figure 29: No.s 85-106 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 30: No.s 85-106 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

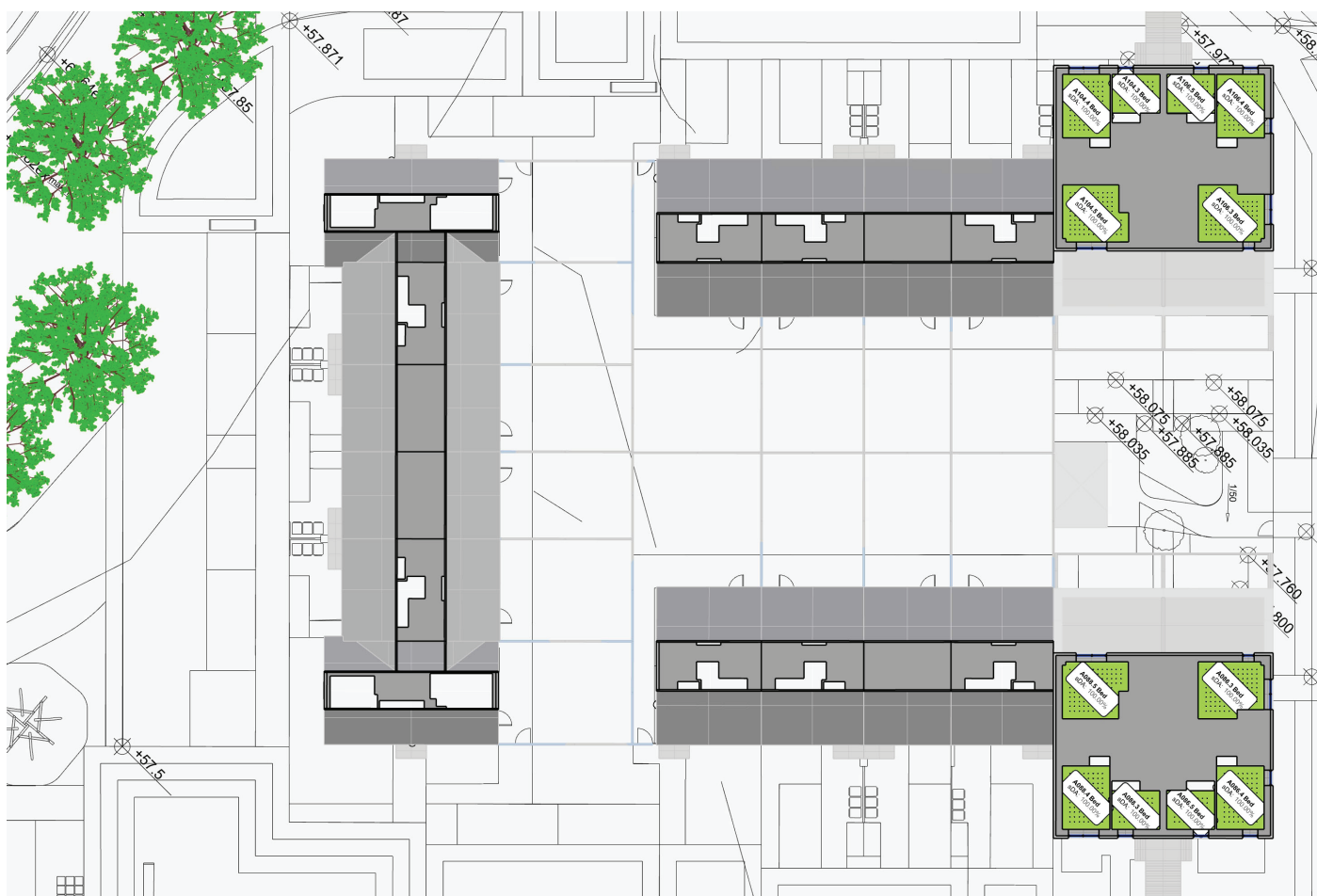


Figure 31: No.s 85-106 Second floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
A085.1	LKD	30.5	271	200	1008	100.0%	Y	Y
A085.2	Bed	9.0	72	100	893	100.0%	Y	Y
A085.3	Bed	11.6	96	100	1567	100.0%	Y	Y
A086.1	KD	17.8	148	200	1191	100.0%	Y	Y
A086.2	L	16.8	143	150	2117	100.0%	Y	Y
A086.3	Bed	12.3	108	100	832	100.0%	Y	Y
A086.4	Bed	10.6	88	100	1415	100.0%	Y	Y
A086.5	Bed	6.5	48	100	1453	100.0%	Y	Y
A087.1	LKD	30.4	276	200	646	63.0%	Y	Y
A087.2	Bed	11.7	96	100	696	100.0%	Y	Y
A087.3	Bed	10.0	80	100	849	100.0%	Y	Y
A088.1	KD	17.8	148	200	758	100.0%	Y	Y
A088.2	L	16.8	143	150	1473	100.0%	Y	Y
A088.3	Bed	6.5	48	100	1486	100.0%	Y	Y
A088.4	Bed	10.6	88	100	2304	100.0%	Y	Y
A088.5	Bed	12.3	108	100	1055	100.0%	Y	Y
H089.1	KD	15.9	136	200	718	100.0%	Y	Y
H089.2	L	18.0	156	150	1037	100.0%	Y	Y
H089.3	Bed	5.8	42	100	1513	100.0%	Y	Y
H089.4	Bed	11.0	90	100	1667	100.0%	Y	Y
H089.5	Bed	9.7	80	100	888	100.0%	Y	Y
H090.1	KD	14.1	117	200	795	100.0%	Y	Y
H090.2	L	16.6	138	150	1468	100.0%	Y	Y
H090.3	Bed	12.5	99	100	765	100.0%	Y	Y
H090.4	Bed	11.4	92	100	1725	100.0%	Y	Y
H090.5	Bed	5.8	42	100	1628	100.0%	Y	Y
H091.1	KD	15.9	136	200	715	100.0%	Y	Y
H091.2	L	18.0	156	150	1119	100.0%	Y	Y
H091.3	Bed	11.0	90	100	1718	100.0%	Y	Y
H091.4	Bed	9.7	80	100	909	100.0%	Y	Y
H092.1	KD	15.9	136	200	732	100.0%	Y	Y
H092.2	L	18.0	156	150	1108	100.0%	Y	Y
H092.3	Bed	5.8	42	100	1564	100.0%	Y	Y
H092.4	Bed	11.0	90	100	1725	100.0%	Y	Y
H092.5	Bed	9.7	80	100	906	100.0%	Y	Y
H093.1	KD	17.2	144	200	2006	100.0%	Y	Y
H093.2	L	21.0	187	150	1538	100.0%	Y	Y
H093.3	Bed	10.1	85	100	2792	100.0%	Y	Y
H093.4	Bed	5.8	42	100	1614	100.0%	Y	Y
H093.5	Bed	10.4	88	100	1727	100.0%	Y	Y
H094.1	KD	15.9	136	200	693	100.0%	Y	Y
H094.2	L	18.0	156	150	1136	100.0%	Y	Y
H094.3	Bed	5.8	42	100	1646	100.0%	Y	Y
H094.4	Bed	11.0	90	100	1674	100.0%	Y	Y
H094.5	Bed	9.7	80	100	901	100.0%	Y	Y
H095.1	KD	14.1	117	200	791	100.0%	Y	Y
H095.2	L	16.6	138	150	1653	100.0%	Y	Y
H095.3	Bed	12.5	99	100	778	100.0%	Y	Y
H095.4	Bed	11.4	92	100	1745	100.0%	Y	Y
H096.1	KD	14.1	117	200	791	100.0%	Y	Y
H096.2	L	16.6	138	150	1678	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H096.3	Bed	12.5	99	100	786	100.0%	Y	Y
H096.4	Bed	11.4	92	100	1743	100.0%	Y	Y
H097.1	KD	15.9	136	200	717	100.0%	Y	Y
H097.2	L	18.0	156	150	1214	100.0%	Y	Y
H097.3	Bed	5.8	42	100	1626	100.0%	Y	Y
H097.4	Bed	11.0	90	100	1745	100.0%	Y	Y
H097.5	Bed	9.7	80	100	919	100.0%	Y	Y
H098.1	KD	17.2	144	200	1432	100.0%	Y	Y
H098.2	L	21.0	187	150	1053	100.0%	Y	Y
H098.3	Bed	10.1	85	100	1842	100.0%	Y	Y
H098.4	Bed	5.8	42	100	685	100.0%	Y	Y
H098.5	Bed	10.4	88	100	779	100.0%	Y	Y
H099.1	KD	15.9	136	200	1529	100.0%	Y	Y
H099.2	L	18.0	156	150	553	100.0%	Y	Y
H099.3	Bed	5.8	42	100	711	100.0%	Y	Y
H099.4	Bed	11.0	90	100	794	100.0%	Y	Y
H099.5	Bed	9.7	80	100	1947	100.0%	Y	Y
H100.1	KD	15.9	136	200	1506	100.0%	Y	Y
H100.2	L	18.0	156	150	554	100.0%	Y	Y
H100.3	Bed	5.8	42	100	727	100.0%	Y	Y
H100.4	Bed	11.0	90	100	785	100.0%	Y	Y
H100.5	Bed	9.7	80	100	1911	100.0%	Y	Y
H101.1	KD	14.1	117	200	1616	100.0%	Y	Y
H101.2	L	16.6	138	150	768	100.0%	Y	Y
H101.3	Bed	12.5	99	100	1580	100.0%	Y	Y
H101.4	Bed	11.4	92	100	796	100.0%	Y	Y
H102.1	KD	15.9	136	200	1464	100.0%	Y	Y
H102.2	L	18.0	156	150	533	100.0%	Y	Y
H102.3	Bed	5.8	42	100	709	100.0%	Y	Y
H102.4	Bed	11.0	90	100	770	100.0%	Y	Y
H102.5	Bed	9.7	80	100	1883	100.0%	Y	Y
A103.1	LKD	30.4	276	200	419	73.6%	Y	Y
A103.2	Bed	11.7	96	100	1392	100.0%	Y	Y
A103.3	Bed	10.0	80	100	1699	100.0%	Y	Y
A104.1	KD	17.8	148	200	1671	100.0%	Y	Y
A104.2	L	16.8	143	150	759	100.0%	Y	Y
A104.3	Bed	6.5	48	100	663	100.0%	Y	Y
A104.4	Bed	10.6	88	100	1077	100.0%	Y	Y
A104.5	Bed	12.3	108	100	2189	100.0%	Y	Y
A105.1	LKD	30.5	271	200	768	100.0%	Y	Y
A105.2	Bed	9.0	72	100	1817	100.0%	Y	Y
A105.3	Bed	11.6	96	100	2274	100.0%	Y	Y
A106.1	KD	17.8	148	200	2025	100.0%	Y	Y
A106.2	L	16.8	143	150	1455	100.0%	Y	Y
A106.3	Bed	12.3	108	100	1074	100.0%	Y	Y
A106.4	Bed	10.6	88	100	905	100.0%	Y	Y
A106.5	Bed	6.5	48	100	645	100.0%	Y	Y

Table 14: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms



Figure 33: No.s 107-122 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 32: No.s 107-122 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
H107.1	KD	17.2	144	200	2205	100.0%	Y	Y
H107.2	L	21.0	187	150	716	100.0%	Y	Y
H107.3	Bed	10.1	85	100	1303	100.0%	Y	Y
H107.4	Bed	5.8	42	100	719	100.0%	Y	Y
H107.5	Bed	10.4	88	100	753	100.0%	Y	Y
H108.1	KD	15.9	136	200	1114	100.0%	Y	Y
H108.2	L	18.0	156	150	535	100.0%	Y	Y
H108.3	Bed	5.8	42	100	717	100.0%	Y	Y
H108.4	Bed	11.0	90	100	812	100.0%	Y	Y
H108.5	Bed	9.7	80	100	1423	100.0%	Y	Y
H109.1	KD	15.9	136	200	946	100.0%	Y	Y
H109.2	L	18.0	156	150	551	100.0%	Y	Y
H109.3	Bed	5.8	42	100	748	100.0%	Y	Y
H109.4	Bed	11.0	90	100	813	100.0%	Y	Y
H109.5	Bed	9.7	80	100	1291	100.0%	Y	Y
H110.1	KD	15.9	136	200	961	100.0%	Y	Y
H110.2	L	18.0	156	150	547	100.0%	Y	Y
H110.3	Bed	5.8	42	100	718	100.0%	Y	Y
H110.4	Bed	11.0	90	100	818	100.0%	Y	Y
H110.5	Bed	9.7	80	100	1331	100.0%	Y	Y
H111.1	KD	15.9	136	200	1036	100.0%	Y	Y
H111.2	L	18.0	156	150	553	100.0%	Y	Y
H111.3	Bed	5.8	42	100	757	100.0%	Y	Y
H111.4	Bed	11.0	90	100	813	100.0%	Y	Y
H111.5	Bed	9.7	80	100	1405	100.0%	Y	Y
H112.1	KD	15.9	136	200	1088	100.0%	Y	Y
H112.2	L	18.0	156	150	548	100.0%	Y	Y
H112.3	Bed	5.8	42	100	718	100.0%	Y	Y
H112.4	Bed	11.0	90	100	822	100.0%	Y	Y
H112.5	Bed	9.7	80	100	1478	100.0%	Y	Y
H113.1	KD	15.9	136	200	1189	100.0%	Y	Y
H113.2	L	18.0	156	150	549	100.0%	Y	Y
H113.3	Bed	5.8	42	100	765	100.0%	Y	Y
H113.4	Bed	11.0	90	100	806	100.0%	Y	Y
H113.5	Bed	9.7	80	100	1554	100.0%	Y	Y
H114.1	KD	15.9	136	200	1238	100.0%	Y	Y
H114.2	L	18.0	156	150	546	100.0%	Y	Y
H114.3	Bed	5.8	42	100	712	100.0%	Y	Y
H114.4	Bed	11.0	90	100	818	100.0%	Y	Y
H114.5	Bed	9.7	80	100	1596	100.0%	Y	Y
H115.1	KD	15.9	136	200	1276	100.0%	Y	Y
H115.2	L	18.0	156	150	558	100.0%	Y	Y
H115.3	Bed	5.8	42	100	739	100.0%	Y	Y
H115.4	Bed	11.0	90	100	809	100.0%	Y	Y
H115.5	Bed	9.7	80	100	1624	100.0%	Y	Y
H116.1	KD	15.9	136	200	1304	100.0%	Y	Y
H116.2	L	18.0	156	150	548	100.0%	Y	Y
H116.3	Bed	5.8	42	100	712	100.0%	Y	Y
H116.4	Bed	11.0	90	100	809	100.0%	Y	Y
H116.5	Bed	9.7	80	100	1682	100.0%	Y	Y
H117.1	KD	15.9	136	200	1278	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H117.2	L	18.0	156	150	550	100.0%	Y	Y
H117.3	Bed	5.8	42	100	760	100.0%	Y	Y
H117.4	Bed	11.0	90	100	817	100.0%	Y	Y
H117.5	Bed	9.7	80	100	1676	100.0%	Y	Y
H118.1	KD	15.9	136	200	1210	100.0%	Y	Y
H118.2	L	18.0	156	150	526	100.0%	Y	Y
H118.3	Bed	5.8	42	100	757	100.0%	Y	Y
H118.4	Bed	11.0	90	100	786	100.0%	Y	Y
H118.5	Bed	9.7	80	100	1668	100.0%	Y	Y
H119.1	KD	17.2	144	200	2901	100.0%	Y	Y
H119.2	L	21.0	187	150	1280	100.0%	Y	Y
H119.3	Bed	10.1	85	100	2328	100.0%	Y	Y
H119.4	Bed	5.8	42	100	1694	100.0%	Y	Y
H119.5	Bed	10.4	88	100	1719	100.0%	Y	Y
H120.1	KD	15.9	136	200	634	100.0%	Y	Y
H120.2	L	18.0	156	150	1143	100.0%	Y	Y
H120.3	Bed	5.8	42	100	1648	100.0%	Y	Y
H120.4	Bed	11.0	90	100	1715	100.0%	Y	Y
H120.5	Bed	9.7	80	100	796	100.0%	Y	Y
H121.1	KD	15.9	136	200	574	100.0%	Y	Y
H121.2	L	18.0	156	150	1127	100.0%	Y	Y
H121.3	Bed	5.8	42	100	1618	100.0%	Y	Y
H121.4	Bed	11.0	90	100	1719	100.0%	Y	Y
H121.5	Bed	9.7	80	100	728	100.0%	Y	Y
H122.1	KD	15.9	136	200	525	100.0%	Y	Y
H122.2	L	18.0	156	150	1099	100.0%	Y	Y
H122.3	Bed	5.8	42	100	1549	100.0%	Y	Y
H122.4	Bed	11.0	90	100	1687	100.0%	Y	Y
H122.5	Bed	9.7	80	100	667	100.0%	Y	Y

Table 15: Minimum Daylight Provision BS EN17037:2018+A1:2021 Table NA.1 compliance for habitable rooms



Figure 35: No.s 123-137 Ground floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021



Figure 34: No.s 123-137 First floor plans indicating Daylight Provision to BS EN17037:2018+A1:2021

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
H123.1	KD	15.9	136	200	1553	100.0%	Y	Y
H123.2	L	18.0	156	150	492	100.0%	Y	Y
H123.3	Bed	5.8	42	100	662	100.0%	Y	Y
H123.4	Bed	11.0	90	100	744	100.0%	Y	Y
H123.5	Bed	9.7	80	100	1872	100.0%	Y	Y
H124.1	KD	15.9	136	200	1609	100.0%	Y	Y
H124.2	L	18.0	156	150	501	100.0%	Y	Y
H124.3	Bed	5.8	42	100	686	100.0%	Y	Y
H124.4	Bed	11.0	90	100	737	100.0%	Y	Y
H124.5	Bed	9.7	80	100	1930	100.0%	Y	Y
H125.1	KD	17.2	144	200	2298	100.0%	Y	Y
H125.2	L	21.0	187	150	700	100.0%	Y	Y
H125.3	Bed	10.1	85	100	1291	100.0%	Y	Y
H125.4	Bed	5.8	42	100	719	100.0%	Y	Y
H125.5	Bed	10.4	88	100	749	100.0%	Y	Y
H126.1	KD	15.9	136	200	1228	100.0%	Y	Y
H126.2	L	18.0	156	150	551	100.0%	Y	Y
H126.3	Bed	5.8	42	100	720	100.0%	Y	Y
H126.4	Bed	11.0	90	100	816	100.0%	Y	Y
H126.5	Bed	9.7	80	100	1700	100.0%	Y	Y
H127.1	KD	15.9	136	200	1333	100.0%	Y	Y
H127.2	L	18.0	156	150	561	100.0%	Y	Y
H127.3	Bed	5.8	42	100	721	100.0%	Y	Y
H127.4	Bed	11.0	90	100	819	100.0%	Y	Y
H127.5	Bed	9.7	80	100	1722	100.0%	Y	Y
H128.1	KD	15.9	136	200	1376	100.0%	Y	Y
H128.2	L	18.0	156	150	566	100.0%	Y	Y
H128.3	Bed	5.8	42	100	759	100.0%	Y	Y
H128.4	Bed	11.0	90	100	811	100.0%	Y	Y
H128.5	Bed	9.7	80	100	1725	100.0%	Y	Y
H129.1	KD	15.9	136	200	1405	100.0%	Y	Y
H129.2	L	18.0	156	150	558	100.0%	Y	Y
H129.3	Bed	5.8	42	100	720	100.0%	Y	Y
H129.4	Bed	11.0	90	100	818	100.0%	Y	Y
H129.5	Bed	9.7	80	100	1747	100.0%	Y	Y
H130.1	KD	15.9	136	200	1415	100.0%	Y	Y
H130.2	L	18.0	156	150	569	100.0%	Y	Y
H130.3	Bed	5.8	42	100	755	100.0%	Y	Y
H130.4	Bed	11.0	90	100	806	100.0%	Y	Y
H130.5	Bed	9.7	80	100	1745	100.0%	Y	Y
H131.1	KD	15.9	136	200	1417	100.0%	Y	Y
H131.2	L	18.0	156	150	561	100.0%	Y	Y
H131.3	Bed	5.8	42	100	709	100.0%	Y	Y
H131.4	Bed	11.0	90	100	819	100.0%	Y	Y
H131.5	Bed	9.7	80	100	1768	100.0%	Y	Y
H132.1	KD	15.9	136	200	1335	100.0%	Y	Y
H132.2	L	18.0	156	150	560	100.0%	Y	Y
H132.3	Bed	5.8	42	100	745	100.0%	Y	Y
H132.4	Bed	11.0	90	100	809	100.0%	Y	Y
H132.5	Bed	9.7	80	100	1743	100.0%	Y	Y
H133.1	KD	15.9	136	200	1233	100.0%	Y	Y

Minimum illuminance levels from BS EN17037:2018+A1:2021 - Table NA.1

Space ID	Use	Area m2	Sensor Count	Target Lux	Mean Lux	% of grid target exceeded	Minimum 50% of Grid	Meets Criteria
H133.2	L	18.0	156	150	537	100.0%	Y	Y
H133.3	Bed	5.8	42	100	748	100.0%	Y	Y
H133.4	Bed	11.0	90	100	781	100.0%	Y	Y
H133.5	Bed	9.7	80	100	1739	100.0%	Y	Y
H134.1	KD	17.2	144	200	3071	100.0%	Y	Y
H134.2	L	21.0	187	150	1321	100.0%	Y	Y
H134.3	Bed	10.1	85	100	2345	100.0%	Y	Y
H134.4	Bed	5.8	42	100	1734	100.0%	Y	Y
H134.5	Bed	10.4	88	100	1745	100.0%	Y	Y
H135.1	KD	15.9	136	200	693	100.0%	Y	Y
H135.2	L	18.0	156	150	1246	100.0%	Y	Y
H135.3	Bed	5.8	42	100	1701	100.0%	Y	Y
H135.4	Bed	11.0	90	100	1790	100.0%	Y	Y
H135.5	Bed	9.7	80	100	851	100.0%	Y	Y
H136.1	KD	15.9	136	200	653	100.0%	Y	Y
H136.2	L	18.0	156	150	1240	100.0%	Y	Y
H136.3	Bed	5.8	42	100	1685	100.0%	Y	Y
H136.4	Bed	11.0	90	100	1777	100.0%	Y	Y
H136.5	Bed	9.7	80	100	812	100.0%	Y	Y
H137.1	KD	15.9	136	200	622	100.0%	Y	Y
H137.2	L	18.0	156	150	1227	100.0%	Y	Y
H137.3	Bed	5.8	42	100	1604	100.0%	Y	Y
H137.4	Bed	11.0	90	100	1775	100.0%	Y	Y
H137.5	Bed	9.7	80	100	779	100.0%	Y	Y

Table 16: 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



Figure 37: No.s 1-31 Second floor plans indicating Daylight Provision to EN17037:2018 Table A.1

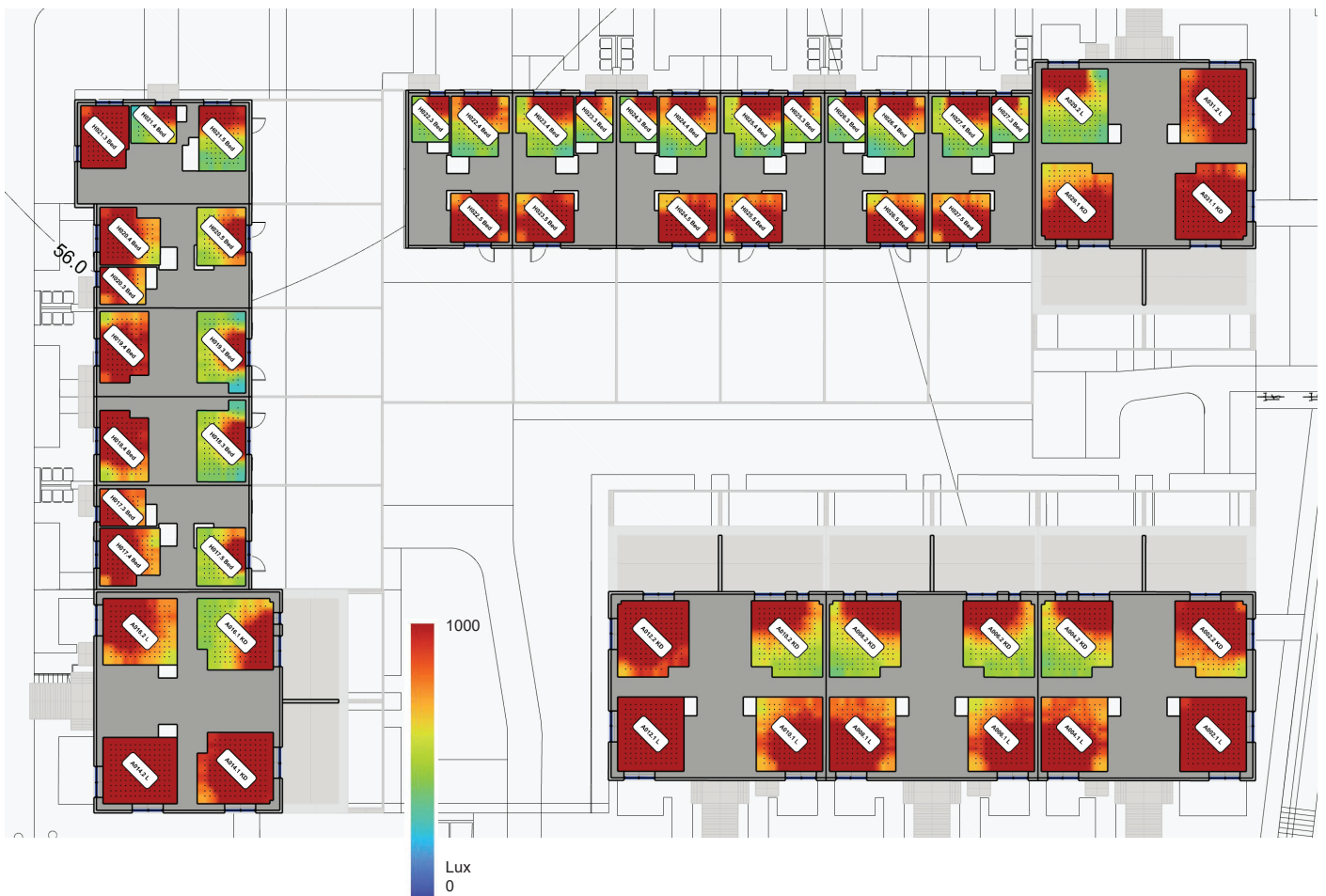


Figure 36: No.s 1-31 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1

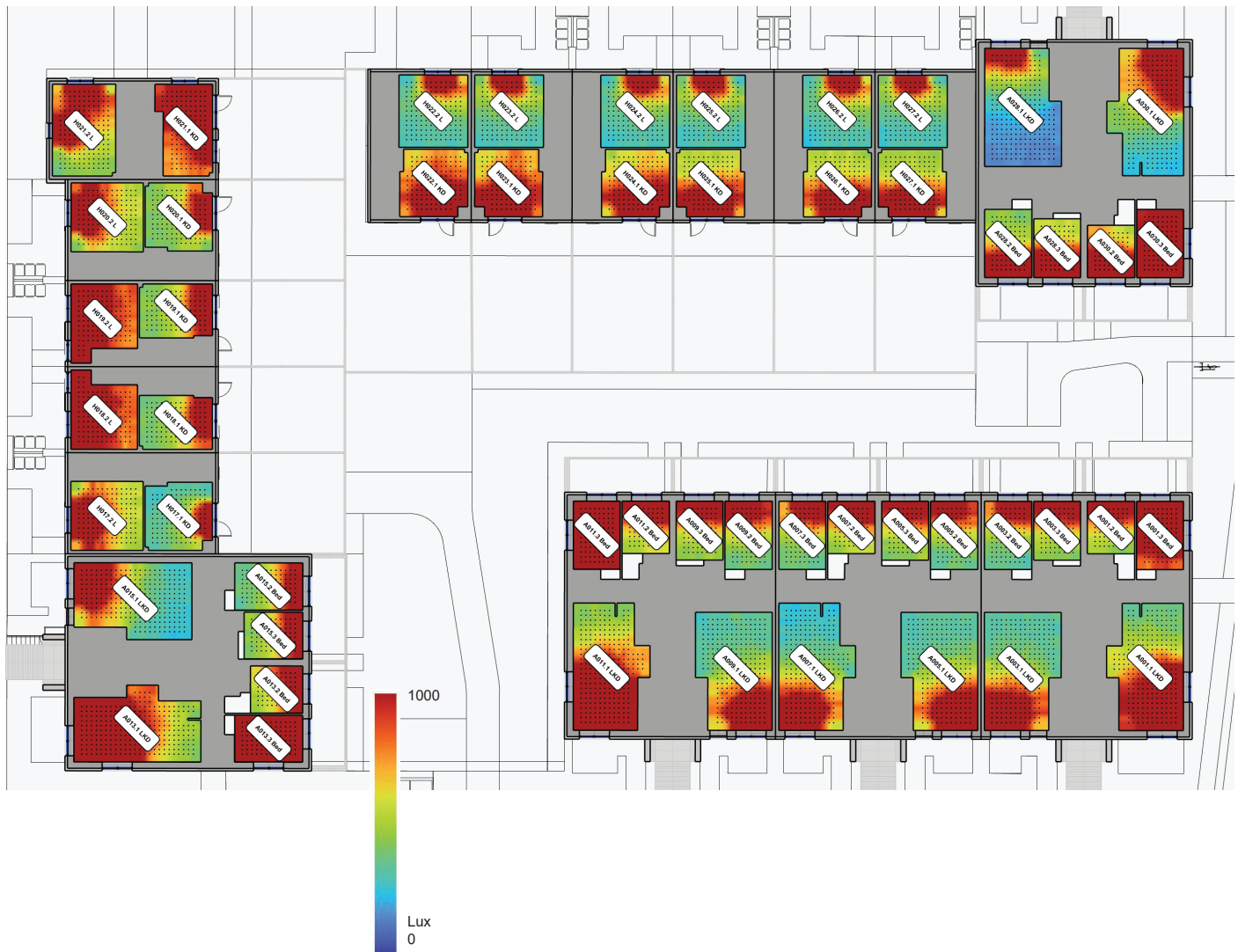


Figure 38: No.s 1-31 Ground Floor plans indicating Daylight Provision to EN17037:2018 Table A.1

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
A001.1	LKD	30.5	271	Medium	71.7%	57.9%	43.7%	Minimum	77.2%	46.5%	23.0%
A001.2	Bed	9.0	72	Medium	72.8%	57.1%	42.8%	Medium	82.5%	57.0%	38.1%
A001.3	Bed	11.6	96	High	84.5%	77.3%	67.4%	High	89.1%	76.9%	63.0%
A002.1	L	16.8	143	High	84.1%	77.4%	68.2%	High	89.2%	78.2%	67.1%
A002.2	KD	17.8	148	High	81.0%	71.8%	58.1%	High	87.8%	72.7%	56.4%
A002.3	Bed	6.5	48	Medium	73.2%	59.7%	47.6%	Medium	81.8%	59.8%	44.2%
A002.4	Bed	10.6	88	High	78.4%	67.5%	55.6%	High	86.6%	70.8%	56.5%
A002.5	Bed	12.3	108	Medium	72.4%	57.0%	40.9%	Medium	82.8%	58.1%	36.7%
A003.1	LKD	30.4	276	Minimum	52.1%	34.6%	20.1%	Minimum	70.6%	35.6%	16.6%
A003.2	Bed	11.7	96	Minimum	61.4%	44.2%	24.8%	Minimum	77.5%	43.1%	18.2%
A003.3	Bed	10.0	80	Medium	68.3%	53.1%	37.5%	Medium	80.7%	53.7%	33.7%
A004.1	L	16.8	143	Medium	73.6%	61.1%	48.3%	Medium	83.9%	63.8%	48.8%
A004.2	KD	17.8	148	Medium	71.8%	55.9%	39.1%	Medium	83.5%	57.6%	36.6%
A004.3	Bed	12.3	108	High	78.7%	67.7%	54.7%	High	88.1%	74.0%	58.1%
A004.4	Bed	10.6	88	High	80.5%	71.9%	61.7%	High	87.6%	75.7%	62.5%
A004.5	Bed	6.5	48	Medium	73.4%	60.7%	47.9%	Medium	81.6%	59.6%	44.3%
A005.1	LKD	30.4	276	Minimum	51.3%	33.3%	18.5%	Minimum	69.2%	33.0%	14.2%
A005.2	Bed	11.7	96	Minimum	65.5%	48.3%	31.6%	Minimum	78.3%	47.1%	25.5%
A005.3	Bed	10.0	80	Medium	69.9%	55.0%	39.0%	Medium	81.8%	54.8%	35.6%

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
A006.1	L	16.8	143	Medium	72.6%	59.4%	47.7%	High	84.0%	64.2%	50.0%
A006.2	KD	17.8	148	Medium	72.1%	56.2%	39.4%	Medium	84.4%	59.4%	38.7%
A006.3	Bed	12.3	108	High	78.8%	67.8%	54.7%	High	88.2%	74.1%	58.5%
A006.4	Bed	10.6	88	High	81.0%	72.6%	62.3%	High	87.6%	75.1%	62.1%
A006.5	Bed	6.5	48	Medium	74.0%	60.8%	48.8%	Medium	81.7%	59.5%	43.4%
A007.1	LKD	30.5	271	Minimum	50.3%	33.1%	19.0%	Minimum	64.8%	29.2%	9.1%
A007.2	Bed	9.0	72	Medium	74.8%	60.4%	45.2%	Medium	83.4%	59.1%	41.6%
A007.3	Bed	11.6	96	Medium	68.1%	51.6%	34.9%	Minimum	79.0%	49.2%	27.1%
A008.1	L	16.8	143	Medium	72.8%	59.9%	47.5%	High	84.4%	65.3%	50.7%
A008.2	KD	17.8	148	Medium	72.6%	56.3%	39.7%	Medium	84.2%	59.1%	38.7%
A008.3	Bed	6.5	48	Medium	73.4%	60.8%	48.2%	Medium	81.6%	59.3%	43.9%
A008.4	Bed	10.6	88	Minimum	62.4%	46.9%	32.4%	Medium	78.6%	50.6%	31.8%
A008.5	Bed	12.3	108	High	79.1%	68.6%	55.9%	High	87.6%	72.2%	56.8%
A009.1	LKD	30.4	276	Minimum	51.8%	34.0%	18.3%	Minimum	69.1%	32.6%	13.5%
A009.2	Bed	11.7	96	Medium	67.9%	51.3%	34.3%	Medium	79.4%	50.4%	29.1%
A009.3	Bed	10.0	80	Medium	72.0%	57.0%	41.1%	Medium	82.8%	56.5%	37.1%
A010.1	L	16.8	143	Medium	72.9%	59.4%	47.3%	Medium	83.9%	64.1%	49.8%
A010.2	KD	17.8	148	Medium	73.5%	57.2%	41.2%	Medium	84.7%	61.1%	40.6%
A010.3	Bed	12.3	108	High	79.2%	68.6%	56.1%	High	88.4%	75.0%	59.5%
A010.4	Bed	10.6	88	High	80.3%	71.8%	61.2%	High	87.4%	74.6%	61.7%
A010.5	Bed	6.5	48	Medium	74.0%	60.2%	47.9%	Medium	82.1%	60.6%	45.2%
A011.1	LKD	30.5	271	High	73.2%	61.7%	50.4%	Medium	78.2%	52.5%	38.4%
A011.2	Bed	9.0	72	Medium	75.5%	61.3%	46.8%	Medium	84.4%	61.0%	43.5%
A011.3	Bed	11.6	96	High	84.6%	77.5%	69.0%	High	88.9%	77.2%	65.6%
A012.1	L	16.8	143	High	84.6%	78.7%	71.2%	High	89.3%	79.3%	68.9%
A012.2	KD	17.8	148	High	81.7%	73.7%	63.0%	High	88.5%	75.8%	62.7%
A012.3	Bed	6.5	48	Medium	73.5%	60.3%	48.4%	Medium	82.9%	61.4%	46.1%
A012.4	Bed	10.6	88	High	80.0%	69.9%	61.7%	High	87.2%	74.3%	62.4%
A012.5	Bed	12.3	108	High	75.2%	63.2%	52.5%	Medium	83.9%	64.3%	49.2%
A013.1	LKD	30.5	271	High	75.9%	64.5%	54.0%	Medium	79.0%	54.4%	41.1%
A013.2	Bed	9.0	72	Medium	73.9%	60.7%	46.4%	Medium	83.4%	61.3%	43.1%
A013.3	Bed	11.6	96	High	85.4%	79.5%	72.9%	High	90.2%	79.8%	69.9%
A014.1	KD	17.8	148	High	82.5%	75.0%	64.5%	High	88.1%	74.9%	61.7%
A014.2	L	16.8	143	High	84.8%	79.4%	71.7%	High	90.1%	80.8%	71.8%
A014.3	Bed	12.3	108	High	75.8%	63.6%	51.4%	High	84.5%	66.1%	50.1%
A014.4	Bed	10.6	88	High	80.3%	70.3%	62.0%	High	87.1%	74.5%	62.7%
A014.5	Bed	6.5	48	Medium	73.8%	60.5%	48.3%	Medium	81.0%	58.0%	41.5%
A015.1	LKD	30.4	276	Minimum	51.1%	31.9%	17.1%	Minimum	65.7%	29.5%	8.4%
A015.2	Bed	11.7	96	Minimum	65.7%	49.9%	31.0%	Minimum	78.8%	49.6%	26.1%
A015.3	Bed	10.0	80	Medium	70.6%	56.4%	40.3%	Medium	82.1%	57.4%	37.4%
A016.1	KD	17.8	148	Medium	71.9%	56.8%	39.7%	Medium	83.5%	59.5%	38.3%
A016.2	L	16.8	143	Medium	73.0%	59.7%	47.3%	Medium	83.2%	63.1%	47.9%
A016.3	Bed	6.5	48	Medium	74.2%	60.8%	49.0%	Medium	82.3%	60.4%	45.3%
A016.4	Bed	10.6	88	High	80.8%	72.4%	62.2%	High	87.5%	74.3%	61.5%
A016.5	Bed	12.3	108	High	78.3%	66.5%	54.3%	High	87.9%	73.2%	58.5%
H017.1	KD	15.9	136	Minimum	59.6%	38.2%	10.0%	Minimum	78.3%	42.9%	10.0%
H017.2	L	18.0	156	Medium	65.1%	50.2%	36.4%	Medium	80.2%	53.9%	36.5%
H017.3	Bed	5.8	42	Medium	73.8%	61.2%	49.2%	Medium	83.9%	64.7%	49.0%
H017.4	Bed	11.0	90	High	75.5%	63.4%	51.9%	Medium	83.3%	63.6%	48.2%
H017.5	Bed	9.7	80	Medium	73.6%	58.4%	41.9%	Medium	85.1%	62.5%	43.2%

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
H018.1	KD	14.1	117	Medium	68.1%	50.1%	30.5%	Medium	81.6%	52.1%	28.3%
H018.2	L	16.6	138	High	75.5%	63.5%	51.7%	High	84.8%	66.0%	52.0%
H018.3	Bed	12.5	99	Medium	69.4%	53.2%	35.0%	Medium	81.3%	52.8%	30.0%
H018.4	Bed	11.4	92	High	76.2%	64.3%	52.8%	Medium	83.3%	62.9%	48.3%
H019.1	KD	14.1	117	Medium	68.7%	51.1%	32.7%	Medium	81.8%	53.7%	30.5%
H019.2	L	16.6	138	High	74.9%	62.9%	51.1%	High	85.2%	66.5%	52.4%
H019.3	Bed	12.5	99	Medium	69.3%	53.2%	36.5%	Medium	81.0%	52.9%	29.1%
H019.4	Bed	11.4	92	High	75.9%	64.1%	52.9%	Medium	83.9%	64.6%	49.4%
H020.1	KD	15.9	136	Minimum	63.5%	46.5%	27.6%	Medium	79.5%	50.0%	28.4%
H020.2	L	18.0	156	Minimum	63.9%	48.9%	33.8%	Medium	78.9%	51.8%	34.0%
H020.3	Bed	5.8	42	Medium	74.1%	60.8%	48.7%	High	84.2%	65.0%	50.0%
H020.4	Bed	11.0	90	High	75.7%	63.9%	52.3%	Medium	83.0%	62.4%	46.1%
H020.5	Bed	9.7	80	Medium	74.6%	60.1%	45.8%	Medium	84.6%	62.7%	45.1%
H021.1	KD	17.2	144	High	82.3%	74.6%	62.6%	High	88.4%	75.0%	59.9%
H021.2	L	21.0	187	Medium	71.9%	58.4%	43.3%	Medium	80.3%	55.2%	33.9%
H021.3	Bed	10.1	85	High	82.6%	75.5%	65.4%	High	89.7%	78.8%	68.2%
H021.4	Bed	5.8	42	Medium	70.4%	54.6%	35.4%	Medium	81.3%	54.8%	30.9%
H021.5	Bed	10.4	88	Medium	70.3%	54.5%	37.2%	Medium	81.7%	56.2%	33.6%
H022.1	KD	15.9	136	Medium	70.0%	56.4%	44.5%	Medium	83.1%	60.6%	45.6%
H022.2	L	18.0	156	Minimum	56.2%	33.4%	8.4%	Minimum	76.1%	39.2%	8.4%
H022.3	Bed	5.8	42	Medium	69.6%	52.8%	34.4%	Medium	82.4%	56.7%	35.1%
H022.4	Bed	11.0	90	Medium	71.8%	56.7%	40.3%	Medium	82.5%	57.4%	37.3%
H022.5	Bed	9.7	80	High	77.7%	65.9%	55.3%	High	85.6%	68.6%	54.4%
H023.1	KD	15.9	136	Medium	70.6%	57.4%	44.7%	Medium	83.1%	61.0%	45.6%
H023.2	L	18.0	156	Minimum	56.5%	34.6%	10.6%	Minimum	76.5%	40.2%	10.3%
H023.3	Bed	5.8	42	Medium	69.6%	53.1%	35.0%	Medium	82.9%	56.8%	36.0%
H023.4	Bed	11.0	90	Medium	72.4%	56.8%	41.3%	Medium	82.3%	56.8%	35.2%
H023.5	Bed	9.7	80	High	77.4%	65.4%	54.5%	High	85.8%	68.0%	53.9%
H024.1	KD	15.9	136	Medium	68.9%	55.6%	43.5%	Medium	81.3%	58.1%	42.9%
H024.2	L	18.0	156	Minimum	56.1%	33.5%	8.3%	Minimum	76.3%	39.7%	9.0%
H024.3	Bed	5.8	42	Medium	69.0%	52.7%	32.9%	Medium	82.1%	57.1%	34.5%
H024.4	Bed	11.0	90	Medium	72.1%	56.8%	40.6%	Medium	82.0%	56.9%	35.0%
H024.5	Bed	9.7	80	High	76.5%	64.3%	54.0%	High	85.0%	65.9%	52.3%
H025.1	KD	15.9	136	Medium	67.3%	53.7%	41.0%	Medium	80.6%	55.5%	38.9%
H025.2	L	18.0	156	Minimum	56.2%	33.7%	10.1%	Minimum	75.9%	38.7%	8.4%
H025.3	Bed	5.8	42	Medium	68.9%	52.3%	34.0%	Medium	82.9%	57.2%	36.1%
H025.4	Bed	11.0	90	Medium	71.4%	56.0%	39.0%	Medium	81.5%	55.6%	33.3%
H025.5	Bed	9.7	80	High	76.1%	63.1%	52.6%	High	84.4%	64.7%	51.0%
H026.1	KD	15.9	136	Medium	65.9%	52.3%	38.8%	Medium	80.0%	54.2%	37.8%
H026.2	L	18.0	156	Minimum	54.9%	31.7%	7.6%	Minimum	75.4%	38.1%	7.7%
H026.3	Bed	5.8	42	Medium	69.3%	52.6%	32.9%	Medium	82.1%	56.4%	34.9%
H026.4	Bed	11.0	90	Medium	71.2%	56.0%	39.4%	Medium	81.2%	55.1%	31.8%
H026.5	Bed	9.7	80	High	75.3%	62.9%	52.1%	High	84.4%	64.5%	50.6%
H027.1	KD	15.9	136	Medium	64.7%	50.9%	36.4%	Medium	79.1%	52.4%	35.2%
H027.2	L	18.0	156	Minimum	55.4%	32.5%	8.8%	Minimum	75.3%	37.1%	7.8%
H027.3	Bed	5.8	42	Medium	67.1%	50.2%	31.5%	Medium	81.8%	55.7%	33.3%
H027.4	Bed	11.0	90	Medium	71.0%	55.7%	38.9%	Medium	81.4%	55.5%	33.8%
H027.5	Bed	9.7	80	High	74.7%	62.1%	51.8%	High	84.5%	65.0%	50.9%
A028.1	LKD	30.4	276	Fail	33.1%	6.5%	1.0%	Minimum	54.0%	2.3%	0.0%
A028.2	Bed	11.7	96	Minimum	62.5%	48.1%	33.5%	Minimum	76.6%	46.7%	26.7%

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
A028.3	Bed	10.0	80	Medium	69.5%	56.1%	43.4%	Medium	80.3%	54.7%	38.0%
A029.1	KD	17.8	148	High	74.4%	61.3%	50.9%	Medium	83.7%	62.6%	48.6%
A029.2	L	16.8	143	Medium	67.1%	51.0%	32.1%	Medium	81.6%	56.1%	35.0%
A029.3	Bed	6.5	48	Medium	69.5%	53.4%	35.8%	Medium	80.9%	53.3%	30.1%
A029.4	Bed	10.6	88	High	79.0%	68.2%	55.8%	High	87.2%	70.5%	55.5%
A029.5	Bed	12.3	108	High	79.5%	69.8%	59.9%	High	87.7%	74.5%	61.3%
A030.1	LKD	30.5	271	Medium	66.7%	50.2%	29.9%	Minimum	73.0%	33.2%	1.8%
A030.2	Bed	9.0	72	Medium	74.8%	61.2%	49.0%	Medium	83.4%	60.2%	45.2%
A030.3	Bed	11.6	96	High	84.5%	77.7%	68.5%	High	89.2%	77.5%	65.5%
A031.1	KD	17.8	148	High	82.2%	74.3%	63.9%	High	87.7%	73.8%	60.3%
A031.2	L	16.8	143	High	82.6%	75.4%	64.2%	High	88.9%	77.1%	63.2%
A031.3	Bed	12.3	108	Medium	73.3%	59.9%	45.8%	Medium	83.1%	60.4%	41.6%
A031.4	Bed	10.6	88	High	77.4%	64.8%	51.0%	High	86.6%	69.1%	52.1%
A031.5	Bed	6.5	48	Medium	68.2%	51.8%	31.3%	Medium	80.2%	52.3%	26.3%

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

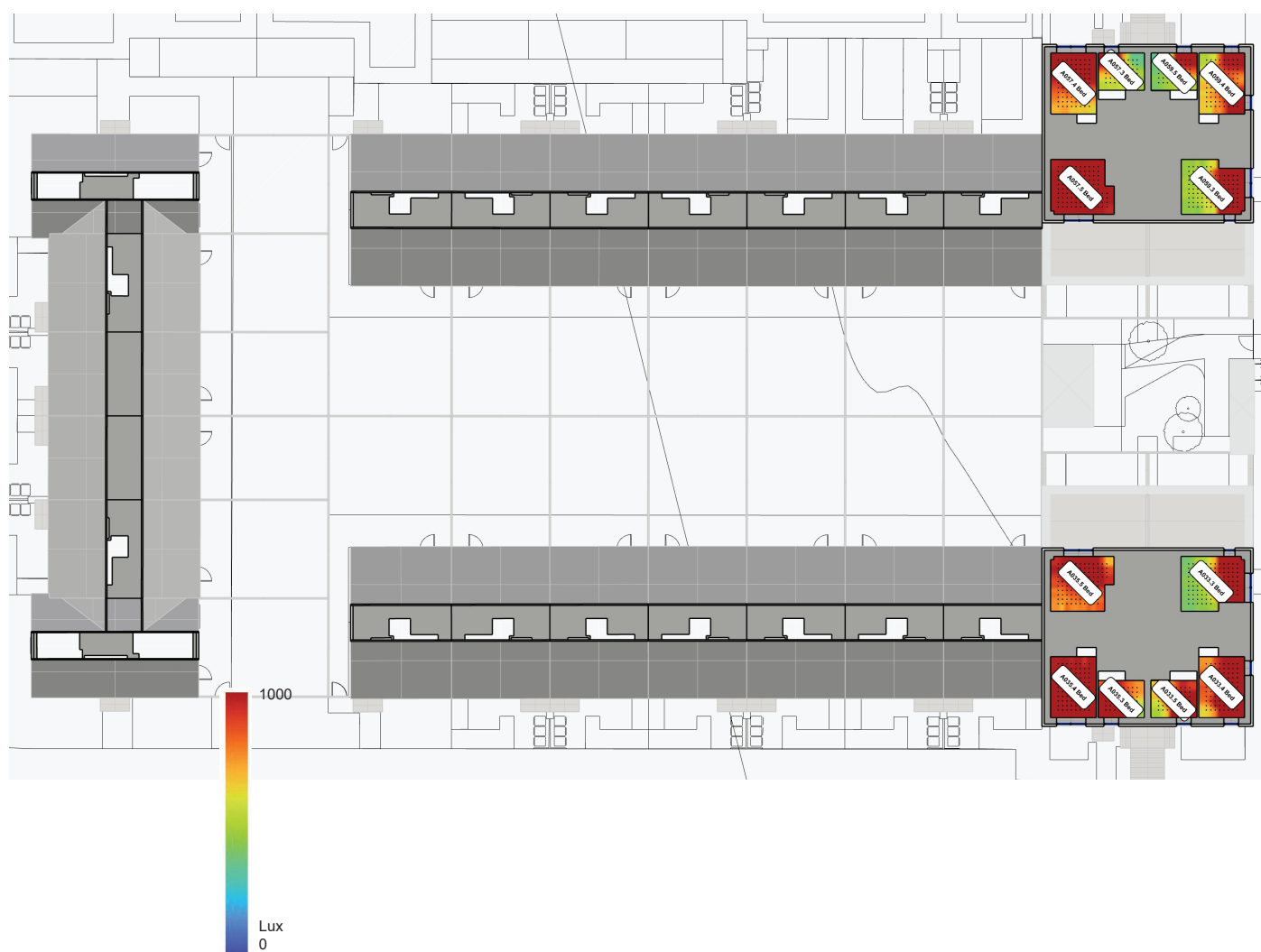


Figure 39: Units 32-59 Second floor plans indicating Daylight Provision to EN17037:2018 Table A.1 NA.1



Figure 40: No.s 32-59 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1

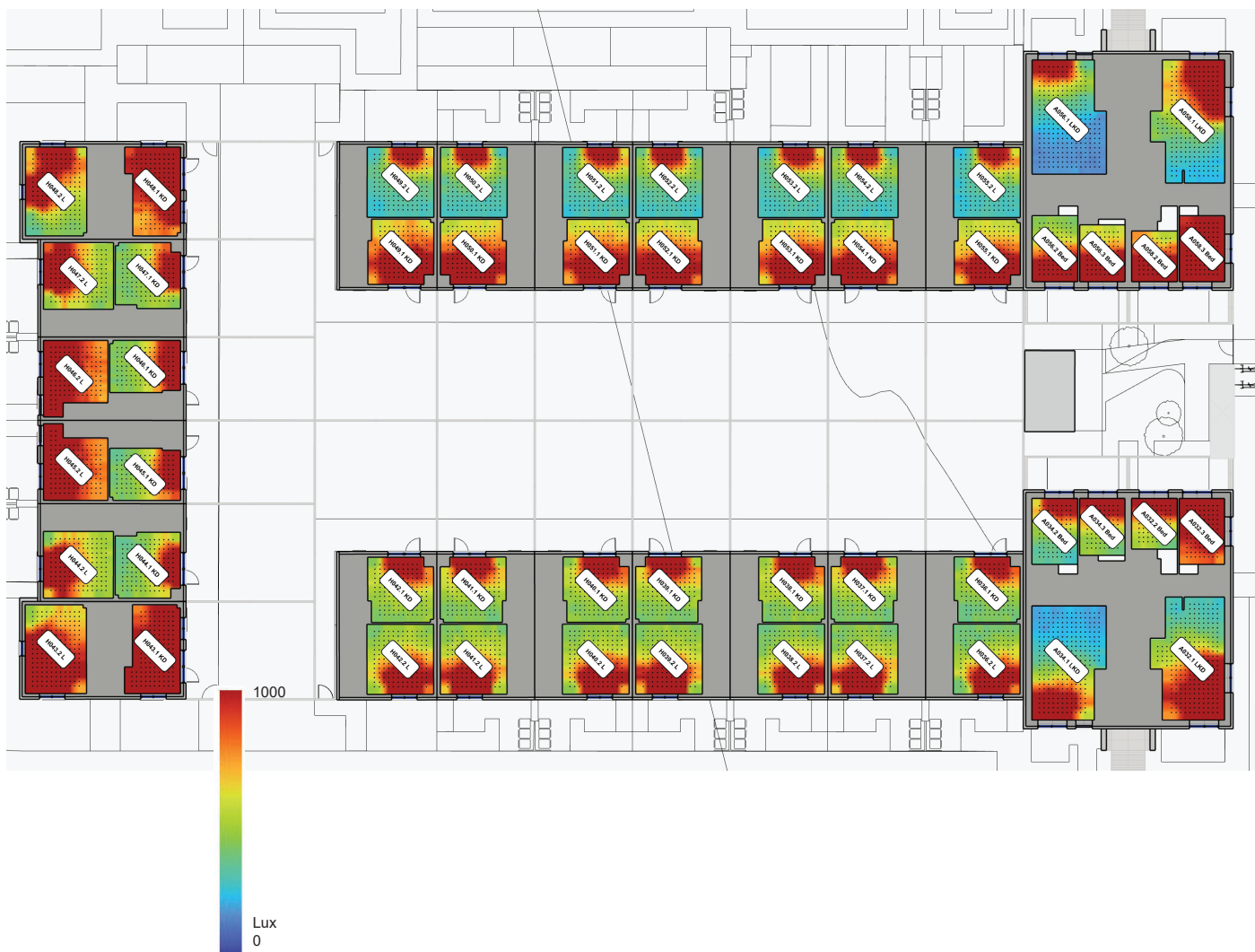


Figure 41: No.s 32-59 Ground floor plans indicating Daylight Provision to EN17037:2018 Table A.1

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
A032.1	LKD	30.5	271	Medium	69.4%	54.8%	38.8%	Minimum	74.8%	38.8%	14.9%
A032.2	Bed	9.0	72	Medium	73.3%	58.5%	43.8%	Medium	82.4%	57.8%	38.6%
A032.3	Bed	11.6	96	High	84.6%	77.2%	67.4%	High	89.5%	77.7%	64.7%
A033.1	KD	17.8	148	High	81.4%	72.4%	58.9%	High	87.8%	72.7%	56.6%
A033.2	L	16.8	143	High	83.7%	76.9%	67.1%	High	89.1%	77.9%	66.5%
A033.3	Bed	12.3	108	Medium	72.8%	57.7%	41.4%	Medium	82.9%	58.5%	36.9%
A033.4	Bed	10.6	88	High	78.2%	67.2%	54.9%	High	86.8%	71.6%	56.8%
A033.5	Bed	6.5	48	Medium	72.1%	58.6%	46.7%	Medium	81.5%	58.7%	42.7%
A034.1	LKD	30.4	276	Fail	44.2%	22.6%	8.8%	Minimum	58.5%	15.0%	4.2%
A034.2	Bed	11.7	96	Minimum	61.8%	45.0%	25.7%	Minimum	77.1%	44.0%	17.4%
A034.3	Bed	10.0	80	Medium	70.1%	55.9%	39.8%	Medium	80.6%	54.1%	33.5%
A035.1	KD	17.8	148	Medium	73.1%	57.3%	40.8%	Medium	83.7%	59.5%	40.1%
A035.2	L	16.8	143	Medium	69.6%	56.8%	44.9%	Medium	82.1%	60.4%	44.7%
A035.3	Bed	6.5	48	Medium	73.4%	60.3%	48.0%	Medium	81.5%	59.1%	43.6%
A035.4	Bed	10.6	88	High	80.7%	72.1%	61.6%	High	87.1%	73.9%	61.0%
A035.5	Bed	12.3	108	High	78.9%	68.1%	56.0%	High	88.2%	74.8%	59.6%
H036.1	KD	15.9	136	Minimum	60.8%	43.7%	25.0%	Minimum	78.4%	47.9%	26.1%
H036.2	L	18.0	156	Minimum	59.4%	43.0%	28.7%	Minimum	74.7%	44.7%	25.4%
H036.3	Bed	5.8	42	Medium	71.8%	57.9%	46.1%	Medium	83.2%	61.6%	46.4%
H036.4	Bed	11.0	90	Medium	73.6%	61.2%	48.7%	Medium	82.1%	60.4%	44.0%
H036.5	Bed	9.7	80	Medium	75.2%	61.0%	46.6%	Medium	85.7%	64.7%	47.1%
H037.1	KD	15.9	136	Minimum	66.7%	49.4%	31.4%	Medium	80.8%	52.8%	32.4%
H037.2	L	18.0	156	Minimum	61.5%	45.8%	30.6%	Minimum	76.7%	47.4%	27.9%
H037.3	Bed	5.8	42	Medium	72.7%	59.9%	47.6%	Medium	83.6%	62.8%	47.1%
H037.4	Bed	11.0	90	High	74.8%	61.6%	50.2%	Medium	83.1%	61.8%	46.2%
H037.5	Bed	9.7	80	Medium	75.4%	61.1%	46.3%	Medium	85.1%	63.6%	46.3%
H038.1	KD	15.9	136	Minimum	66.9%	49.7%	32.3%	Medium	80.7%	52.8%	32.6%
H038.2	L	18.0	156	Minimum	60.6%	44.9%	28.7%	Minimum	76.3%	47.4%	27.2%
H038.3	Bed	5.8	42	Medium	73.2%	59.8%	47.2%	Medium	83.3%	61.8%	45.4%
H038.4	Bed	11.0	90	High	75.6%	62.6%	51.2%	Medium	82.9%	61.6%	45.9%
H038.5	Bed	9.7	80	Medium	75.7%	61.5%	47.0%	Medium	86.0%	65.8%	48.2%
H039.1	KD	15.9	136	Minimum	66.8%	49.5%	31.0%	Medium	81.0%	53.4%	33.3%
H039.2	L	18.0	156	Minimum	62.4%	47.4%	31.3%	Minimum	77.4%	49.3%	29.7%
H039.3	Bed	5.8	42	Medium	73.2%	60.7%	48.3%	Medium	83.7%	62.7%	47.5%
H039.4	Bed	11.0	90	High	75.6%	62.4%	51.3%	Medium	83.6%	62.6%	47.1%
H039.5	Bed	9.7	80	Medium	75.5%	61.2%	47.0%	Medium	85.8%	65.6%	48.1%
H040.1	KD	15.9	136	Medium	67.1%	50.1%	32.0%	Medium	81.0%	53.7%	34.2%
H040.2	L	18.0	156	Minimum	61.4%	46.2%	30.1%	Minimum	77.7%	49.7%	29.0%
H040.3	Bed	5.8	42	Medium	73.4%	59.9%	48.2%	Medium	83.6%	62.5%	47.0%
H040.4	Bed	11.0	90	High	76.0%	63.0%	51.9%	Medium	83.0%	62.0%	45.3%
H040.5	Bed	9.7	80	Medium	75.3%	61.1%	46.8%	Medium	85.9%	65.8%	48.4%
H041.1	KD	15.9	136	Minimum	66.6%	49.2%	31.1%	Medium	81.2%	53.3%	32.6%
H041.2	L	18.0	156	Minimum	62.6%	47.8%	32.4%	Medium	78.0%	50.5%	30.2%
H041.3	Bed	5.8	42	Medium	73.2%	60.5%	48.0%	Medium	83.9%	63.3%	47.8%
H041.4	Bed	11.0	90	High	75.0%	62.0%	50.8%	Medium	83.4%	62.6%	47.5%
H041.5	Bed	9.7	80	Medium	75.5%	61.0%	46.2%	Medium	85.9%	65.4%	47.8%
H042.1	KD	15.9	136	Medium	67.3%	50.2%	32.5%	Medium	81.3%	54.4%	34.3%
H042.2	L	18.0	156	Minimum	62.8%	48.8%	32.1%	Medium	78.4%	50.7%	31.0%
H042.3	Bed	5.8	42	Medium	74.1%	60.9%	49.5%	Medium	83.6%	62.4%	47.2%
H042.4	Bed	11.0	90	High	76.1%	63.1%	51.9%	Medium	83.3%	61.9%	46.2%

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
H042.5	Bed	9.7	80	Medium	75.5%	60.8%	46.9%	Medium	86.1%	65.6%	48.3%
H043.1	KD	17.2	144	High	83.7%	76.6%	66.7%	High	88.4%	75.9%	63.6%
H043.2	L	21.0	187	High	75.6%	64.1%	53.2%	Medium	82.1%	61.6%	47.3%
H043.3	Bed	10.1	85	High	83.8%	77.6%	68.4%	High	90.1%	80.7%	71.5%
H043.4	Bed	5.8	42	High	75.2%	62.2%	50.2%	Medium	82.1%	60.0%	43.6%
H043.5	Bed	10.4	88	High	74.7%	61.6%	50.1%	Medium	83.4%	62.4%	46.0%
H044.1	KD	15.9	136	Minimum	63.6%	45.8%	26.3%	Medium	79.7%	50.5%	27.2%
H044.2	L	18.0	156	Minimum	63.3%	48.1%	32.1%	Medium	78.8%	51.6%	32.1%
H044.3	Bed	5.8	42	Medium	74.0%	61.4%	49.5%	Medium	83.8%	64.3%	49.0%
H044.4	Bed	11.0	90	High	75.1%	62.3%	50.3%	Medium	83.2%	62.8%	46.4%
H044.5	Bed	9.7	80	Medium	74.9%	61.1%	46.1%	Medium	85.3%	64.7%	46.6%
H045.1	KD	14.1	117	Medium	68.0%	50.0%	30.4%	Medium	82.0%	53.4%	29.3%
H045.2	L	16.6	138	High	75.3%	63.1%	51.5%	High	84.5%	65.4%	50.8%
H045.3	Bed	12.5	99	Medium	69.9%	54.5%	37.1%	Medium	81.7%	54.2%	32.1%
H045.4	Bed	11.4	92	High	75.8%	64.2%	53.0%	Medium	83.3%	63.4%	48.1%
H046.1	KD	14.1	117	Medium	68.7%	51.8%	33.2%	Medium	82.0%	54.5%	30.5%
H046.2	L	16.6	138	High	74.6%	62.2%	50.6%	High	84.6%	65.4%	50.8%
H046.3	Bed	12.5	99	Medium	69.7%	53.8%	37.3%	Medium	81.6%	53.8%	31.3%
H046.4	Bed	11.4	92	High	75.6%	63.7%	52.5%	Medium	83.5%	64.5%	49.1%
H047.1	KD	15.9	136	Minimum	63.4%	46.1%	27.2%	Medium	80.0%	51.9%	30.5%
H047.2	L	18.0	156	Minimum	63.0%	47.8%	32.7%	Medium	77.9%	50.6%	32.1%
H047.3	Bed	5.8	42	Medium	72.4%	59.1%	46.9%	Medium	83.6%	63.7%	48.6%
H047.4	Bed	11.0	90	High	74.5%	63.1%	50.8%	Medium	82.8%	62.0%	45.6%
H047.5	Bed	9.7	80	Medium	74.2%	60.4%	46.3%	Medium	84.9%	63.1%	45.5%
H048.1	KD	17.2	144	High	82.4%	74.8%	62.9%	High	88.0%	73.7%	58.7%
H048.2	L	21.0	187	Medium	71.2%	56.9%	41.2%	Medium	79.6%	53.7%	31.7%
H048.3	Bed	10.1	85	High	82.4%	75.2%	65.0%	High	89.8%	78.9%	68.6%
H048.4	Bed	5.8	42	Medium	70.2%	54.1%	35.8%	Medium	81.1%	53.6%	28.7%
H048.5	Bed	10.4	88	Medium	70.1%	54.2%	37.5%	Medium	81.2%	55.0%	31.7%
H049.1	KD	15.9	136	Medium	69.6%	56.3%	44.8%	Medium	82.1%	59.5%	45.3%
H049.2	L	18.0	156	Minimum	54.9%	32.3%	7.7%	Minimum	75.3%	37.6%	6.9%
H049.3	Bed	5.8	42	Medium	68.0%	51.1%	31.2%	Medium	83.5%	58.1%	38.0%
H049.4	Bed	11.0	90	Medium	71.5%	56.3%	40.5%	Medium	81.1%	54.6%	32.1%
H049.5	Bed	9.7	80	High	77.3%	65.5%	54.8%	High	85.9%	68.8%	54.9%
H050.1	KD	15.9	136	Medium	70.5%	57.0%	44.0%	Medium	82.3%	58.7%	42.7%
H050.2	L	18.0	156	Minimum	55.8%	33.4%	8.8%	Minimum	75.3%	38.2%	7.6%
H050.3	Bed	5.8	42	Medium	67.7%	50.9%	32.2%	Medium	83.4%	57.6%	36.8%
H050.4	Bed	11.0	90	Medium	71.7%	56.6%	40.1%	Medium	82.1%	57.5%	37.5%
H050.5	Bed	9.7	80	High	77.7%	65.8%	54.8%	High	85.9%	68.5%	54.7%
H051.1	KD	15.9	136	Medium	68.8%	56.3%	44.0%	Medium	81.6%	59.1%	43.6%
H051.2	L	18.0	156	Minimum	55.0%	33.0%	7.8%	Minimum	75.2%	37.6%	6.8%
H051.3	Bed	5.8	42	Medium	69.0%	52.7%	33.8%	Medium	81.4%	55.5%	33.4%
H051.4	Bed	11.0	90	Medium	71.4%	56.5%	40.5%	Medium	81.7%	57.0%	36.7%
H051.5	Bed	9.7	80	High	77.1%	65.3%	54.8%	High	86.1%	69.2%	55.4%
H052.1	KD	15.9	136	Medium	69.5%	56.5%	43.8%	Medium	81.4%	58.1%	41.7%
H052.2	L	18.0	156	Minimum	55.5%	33.2%	8.9%	Minimum	75.0%	37.5%	7.1%
H052.3	Bed	5.8	42	Medium	69.5%	53.4%	35.8%	Medium	82.3%	56.8%	35.9%
H052.4	Bed	11.0	90	Medium	71.2%	55.8%	39.1%	Medium	81.7%	56.2%	35.6%
H052.5	Bed	9.7	80	High	77.8%	65.9%	55.2%	High	85.6%	67.8%	54.2%
H053.1	KD	15.9	136	Medium	68.5%	55.8%	43.4%	Medium	81.5%	58.1%	42.8%

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
H053.2	L	18.0	156	Minimum	54.7%	32.6%	8.2%	Minimum	75.3%	37.6%	7.4%
H053.3	Bed	5.8	42	Medium	69.1%	53.0%	34.5%	Medium	81.5%	55.6%	32.4%
H053.4	Bed	11.0	90	Medium	72.0%	56.5%	40.4%	Medium	81.6%	55.4%	33.6%
H053.5	Bed	9.7	80	High	77.2%	65.6%	55.1%	High	85.8%	68.6%	54.9%
H054.1	KD	15.9	136	Medium	68.4%	55.5%	42.0%	Medium	81.2%	57.3%	40.6%
H054.2	L	18.0	156	Minimum	54.3%	32.1%	9.1%	Minimum	75.0%	37.0%	7.8%
H054.3	Bed	5.8	42	Medium	69.7%	53.4%	36.3%	Medium	82.1%	56.3%	35.0%
H054.4	Bed	11.0	90	Medium	71.0%	56.1%	38.8%	Medium	81.8%	56.1%	35.1%
H054.5	Bed	9.7	80	High	77.1%	64.9%	54.2%	High	85.8%	67.8%	54.2%
H055.1	KD	15.9	136	Medium	67.1%	54.0%	41.6%	Medium	80.9%	57.0%	41.3%
H055.2	L	18.0	156	Fail	48.1%	23.7%	7.1%	Minimum	70.8%	28.7%	6.5%
H055.3	Bed	5.8	42	Medium	67.2%	50.1%	30.8%	Medium	81.7%	55.1%	33.4%
H055.4	Bed	11.0	90	Medium	68.8%	52.5%	34.5%	Medium	79.7%	51.8%	28.9%
H055.5	Bed	9.7	80	High	76.7%	64.5%	53.9%	High	85.4%	67.0%	53.3%
A056.1	LKD	30.4	276	Fail	34.4%	6.2%	1.1%	Minimum	56.0%	2.4%	0.0%
A056.2	Bed	11.7	96	Medium	65.5%	52.1%	38.2%	Minimum	77.4%	49.4%	29.3%
A056.3	Bed	10.0	80	Medium	72.6%	59.4%	47.7%	Medium	81.3%	57.7%	42.0%
A057.1	KD	17.8	148	Medium	74.4%	60.2%	48.4%	Medium	83.4%	61.5%	46.1%
A057.2	L	16.8	143	Medium	67.0%	51.9%	33.1%	Medium	81.8%	56.9%	36.3%
A057.3	Bed	6.5	48	Medium	70.2%	55.0%	38.1%	Medium	81.1%	54.7%	31.1%
A057.4	Bed	10.6	88	High	79.4%	69.2%	57.1%	High	87.7%	72.4%	57.7%
A057.5	Bed	12.3	108	High	80.5%	72.1%	61.3%	High	88.0%	76.2%	62.9%
A058.1	LKD	30.5	271	Medium	68.7%	52.1%	31.9%	Minimum	73.6%	32.7%	2.2%
A058.2	Bed	9.0	72	High	74.9%	61.8%	51.0%	Medium	82.5%	59.6%	43.9%
A058.3	Bed	11.6	96	High	85.3%	78.2%	70.0%	High	89.5%	78.0%	66.3%
A059.1	KD	17.8	148	High	82.1%	74.2%	63.7%	High	87.9%	74.6%	61.4%
A059.2	L	16.8	143	High	83.5%	76.5%	65.4%	High	89.7%	78.1%	66.2%
A059.3	Bed	12.3	108	Medium	72.3%	58.6%	43.4%	Medium	83.6%	60.8%	41.4%
A059.4	Bed	10.6	88	High	78.0%	66.1%	52.2%	High	87.0%	70.4%	54.1%
A059.5	Bed	6.5	48	Medium	69.4%	53.6%	35.6%	Medium	81.2%	54.6%	32.2%

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

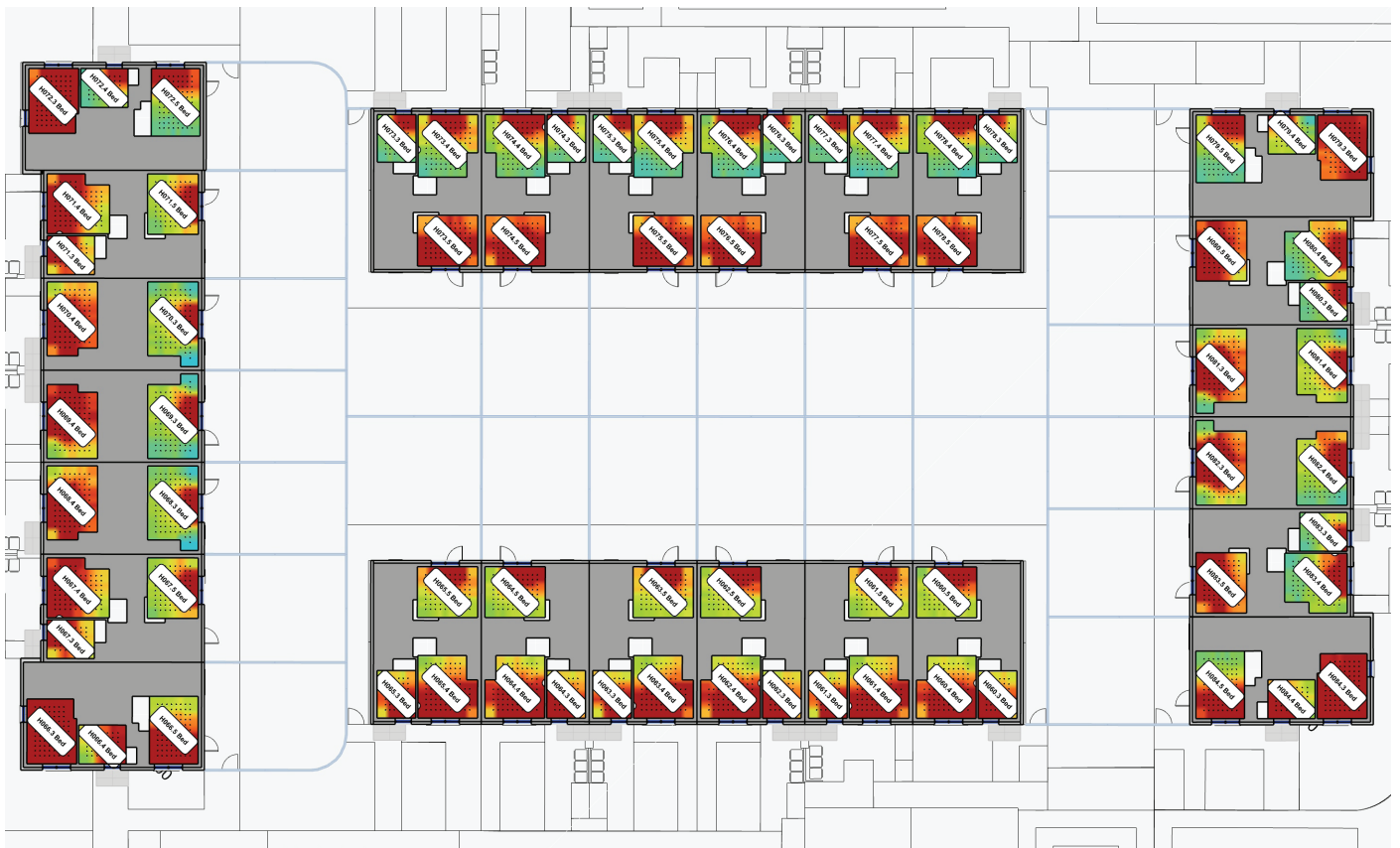


Figure 42: No.s 60-84 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1

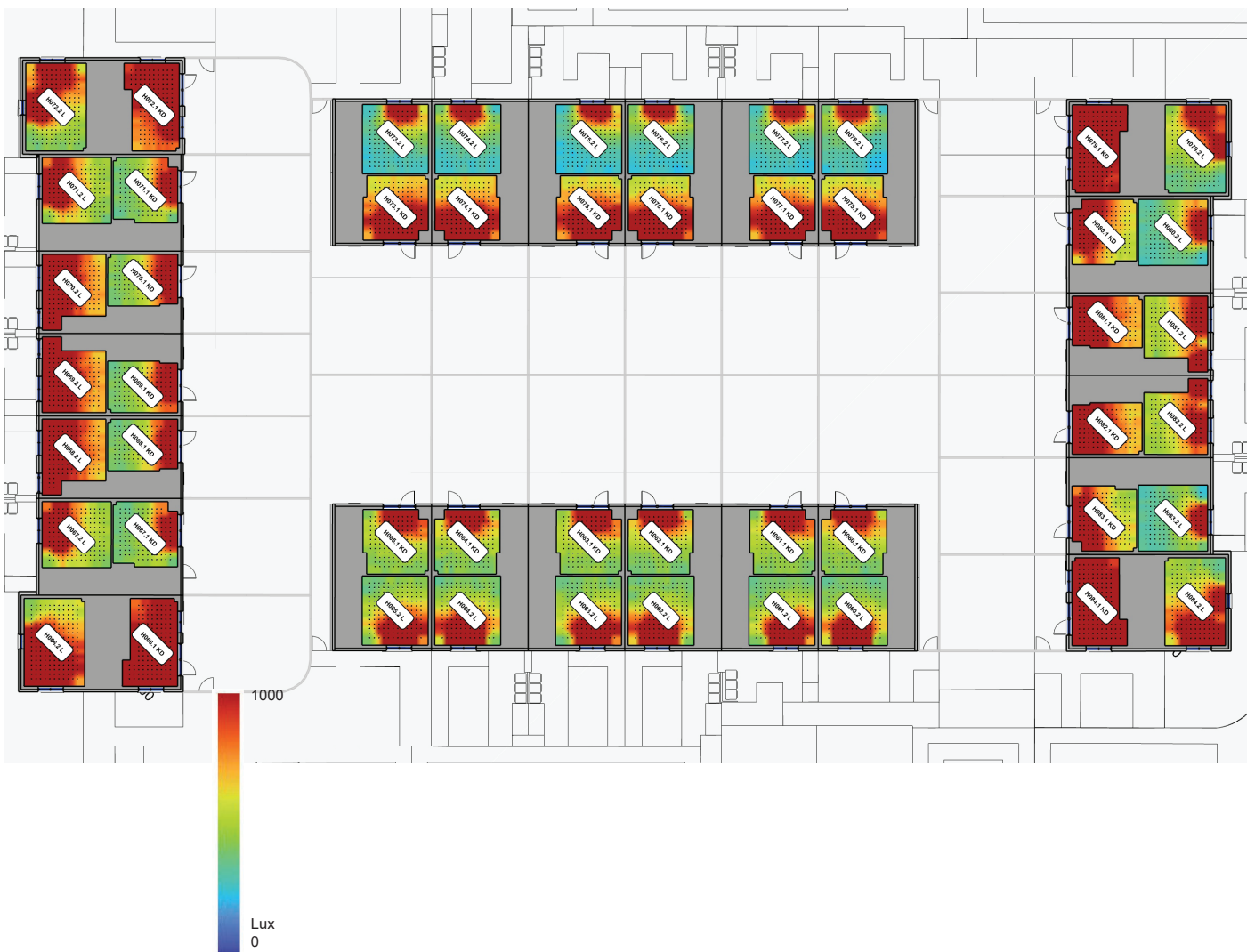


Figure 43: No.s 60-84 Ground floor plans indicating Daylight Provision to EN17037:2018 Table A.1

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H060.1	KD	15.9	136	Medium	68.0%	50.4%	32.6%	Medium	81.6%	54.3%	33.6%
H060.2	L	18.0	156	Minimum	60.3%	44.5%	28.5%	Minimum	75.1%	45.2%	24.3%
H060.3	Bed	5.8	42	Medium	72.7%	60.1%	48.2%	Medium	83.3%	62.1%	46.1%
H060.4	Bed	11.0	90	High	74.5%	61.5%	50.6%	Medium	82.5%	60.9%	45.3%
H060.5	Bed	9.7	80	Medium	75.5%	61.3%	46.7%	Medium	86.3%	66.7%	49.7%
H061.1	KD	15.9	136	Medium	67.4%	50.2%	32.5%	Medium	81.2%	54.5%	34.9%
H061.2	L	18.0	156	Minimum	59.4%	43.0%	26.4%	Minimum	75.6%	45.9%	25.7%
H061.3	Bed	5.8	42	Medium	73.3%	59.8%	47.1%	Medium	83.5%	62.4%	47.2%
H061.4	Bed	11.0	90	High	74.5%	62.1%	50.4%	Medium	82.1%	60.6%	44.9%
H061.5	Bed	9.7	80	Medium	76.0%	61.7%	47.1%	Medium	86.0%	65.5%	47.6%
H062.1	KD	15.9	136	Minimum	67.3%	49.8%	32.1%	Medium	81.2%	53.6%	33.0%
H062.2	L	18.0	156	Minimum	60.5%	44.6%	29.5%	Minimum	76.1%	46.9%	27.0%
H062.3	Bed	5.8	42	Medium	74.0%	60.6%	48.8%	Medium	83.4%	62.0%	46.3%
H062.4	Bed	11.0	90	High	74.7%	61.7%	50.8%	Medium	83.0%	61.7%	45.9%
H062.5	Bed	9.7	80	Medium	74.6%	60.4%	46.3%	Medium	85.9%	65.3%	48.1%
H063.1	KD	15.9	136	Minimum	66.8%	49.8%	31.5%	Medium	81.1%	54.3%	34.0%
H063.2	L	18.0	156	Minimum	60.7%	44.4%	28.3%	Minimum	75.8%	46.1%	25.7%
H063.3	Bed	5.8	42	Medium	73.6%	59.8%	47.4%	Medium	83.9%	63.3%	48.2%
H063.4	Bed	11.0	90	High	74.9%	62.2%	50.6%	Medium	82.3%	60.9%	44.5%
H063.5	Bed	9.7	80	Medium	75.1%	60.8%	46.3%	Medium	85.9%	65.8%	48.4%
H064.1	KD	15.9	136	Medium	67.3%	50.1%	31.8%	Medium	81.1%	53.5%	33.1%
H064.2	L	18.0	156	Minimum	60.9%	45.7%	29.9%	Minimum	76.8%	47.9%	27.8%
H064.3	Bed	5.8	42	Medium	73.3%	60.7%	48.4%	Medium	83.5%	62.4%	47.1%
H064.4	Bed	11.0	90	High	74.5%	61.6%	50.5%	Medium	83.3%	62.5%	46.4%
H064.5	Bed	9.7	80	Medium	75.4%	61.0%	46.2%	Medium	85.7%	65.1%	47.7%
H065.1	KD	15.9	136	Minimum	67.2%	49.9%	31.3%	Medium	81.6%	54.9%	34.6%
H065.2	L	18.0	156	Minimum	61.0%	44.9%	29.3%	Minimum	76.3%	47.5%	25.9%
H065.3	Bed	5.8	42	Medium	72.9%	59.3%	46.9%	Medium	84.2%	63.9%	48.8%
H065.4	Bed	11.0	90	High	75.5%	62.6%	51.1%	Medium	82.8%	61.2%	44.7%
H065.5	Bed	9.7	80	Medium	75.7%	61.0%	46.9%	Medium	85.9%	65.3%	47.7%
H066.1	KD	17.2	144	High	83.6%	76.3%	66.2%	High	88.8%	76.8%	64.1%
H066.2	L	21.0	187	High	73.6%	61.8%	51.3%	Medium	81.1%	58.5%	44.4%
H066.3	Bed	10.1	85	High	83.5%	77.2%	67.6%	High	89.7%	79.6%	69.2%
H066.4	Bed	5.8	42	Medium	74.3%	60.2%	48.4%	Medium	82.5%	59.9%	44.0%
H066.5	Bed	10.4	88	Medium	74.1%	61.2%	48.5%	Medium	82.1%	60.6%	43.9%
H067.1	KD	15.9	136	Minimum	63.1%	46.1%	26.9%	Medium	79.4%	50.3%	27.7%
H067.2	L	18.0	156	Minimum	62.6%	46.8%	30.9%	Minimum	77.4%	49.3%	28.9%
H067.3	Bed	5.8	42	Medium	71.5%	57.9%	43.1%	Medium	83.2%	62.3%	45.6%
H067.4	Bed	11.0	90	High	74.9%	63.4%	51.3%	Medium	82.8%	61.7%	45.3%
H067.5	Bed	9.7	80	Medium	74.3%	60.2%	45.6%	Medium	85.0%	63.9%	46.2%
H068.1	KD	14.1	117	Medium	68.6%	51.2%	33.1%	Medium	81.6%	53.1%	30.1%
H068.2	L	16.6	138	High	74.3%	62.2%	50.5%	Medium	83.6%	63.3%	48.0%
H068.3	Bed	12.5	99	Medium	69.9%	54.2%	37.6%	Medium	81.4%	53.2%	30.3%
H068.4	Bed	11.4	92	High	75.3%	63.2%	52.4%	Medium	82.9%	63.1%	48.0%
H069.1	KD	14.1	117	Medium	69.0%	51.6%	33.2%	Medium	82.2%	54.5%	31.5%
H069.2	L	16.6	138	High	74.5%	62.2%	50.4%	Medium	83.6%	63.4%	48.2%
H069.3	Bed	12.5	99	Medium	70.5%	54.7%	37.8%	Medium	80.7%	52.7%	30.3%
H069.4	Bed	11.4	92	High	75.8%	63.8%	52.9%	Medium	83.4%	62.8%	47.6%
H070.1	KD	14.1	117	Medium	68.1%	51.2%	33.5%	Medium	81.4%	53.4%	30.2%
H070.2	L	16.6	138	Medium	74.2%	61.5%	49.5%	Medium	83.6%	63.5%	48.4%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H070.3	Bed	12.5	99	Medium	69.8%	54.1%	37.6%	Medium	81.9%	54.7%	32.3%
H070.4	Bed	11.4	92	High	75.3%	63.7%	52.6%	High	84.0%	64.8%	50.3%
H071.1	KD	15.9	136	Minimum	62.9%	45.7%	26.8%	Minimum	78.8%	48.8%	27.7%
H071.2	L	18.0	156	Minimum	62.7%	47.1%	31.7%	Minimum	77.4%	49.4%	30.2%
H071.3	Bed	5.8	42	Medium	73.2%	59.9%	47.7%	Medium	83.2%	62.6%	47.3%
H071.4	Bed	11.0	90	High	75.0%	63.5%	51.9%	Medium	83.1%	62.8%	47.3%
H071.5	Bed	9.7	80	Medium	73.7%	60.0%	45.5%	Medium	84.6%	62.4%	44.6%
H072.1	KD	17.2	144	High	83.1%	75.8%	64.2%	High	88.7%	76.4%	61.3%
H072.2	L	21.0	187	Medium	70.9%	56.6%	40.7%	Medium	80.1%	54.5%	34.1%
H072.3	Bed	10.1	85	High	82.4%	75.5%	65.5%	High	89.6%	78.7%	68.2%
H072.4	Bed	5.8	42	Medium	70.6%	54.8%	36.1%	Medium	80.7%	53.0%	29.4%
H072.5	Bed	10.4	88	Medium	69.7%	53.9%	35.9%	Medium	81.4%	55.7%	32.5%
H073.1	KD	15.9	136	Medium	70.6%	57.3%	45.1%	Medium	82.6%	60.1%	45.3%
H073.2	L	18.0	156	Minimum	54.3%	31.7%	7.1%	Minimum	74.5%	36.6%	6.4%
H073.3	Bed	5.8	42	Medium	68.4%	51.7%	33.3%	Medium	82.1%	56.3%	36.0%
H073.4	Bed	11.0	90	Medium	71.8%	56.5%	40.3%	Medium	82.0%	57.1%	35.6%
H073.5	Bed	9.7	80	High	77.7%	66.2%	55.6%	High	85.8%	68.4%	54.2%
H074.1	KD	15.9	136	Medium	69.9%	56.5%	43.7%	Medium	82.3%	59.2%	43.5%
H074.2	L	18.0	156	Minimum	53.9%	31.8%	7.7%	Minimum	73.1%	35.3%	6.0%
H074.3	Bed	5.8	42	Medium	68.5%	51.9%	33.8%	Medium	82.2%	56.9%	35.7%
H074.4	Bed	11.0	90	Medium	70.3%	55.0%	38.0%	Medium	81.5%	55.8%	34.8%
H074.5	Bed	9.7	80	High	77.7%	66.0%	55.0%	High	85.7%	68.0%	54.1%
H075.1	KD	15.9	136	Medium	69.7%	57.0%	44.9%	Medium	81.7%	59.1%	44.5%
H075.2	L	18.0	156	Minimum	51.3%	28.4%	4.6%	Minimum	70.7%	32.1%	3.1%
H075.3	Bed	5.8	42	Minimum	66.1%	49.0%	29.6%	Medium	80.0%	52.7%	29.2%
H075.4	Bed	11.0	90	Medium	70.3%	54.9%	38.8%	Medium	79.5%	52.6%	29.9%
H075.5	Bed	9.7	80	High	77.6%	65.9%	55.1%	High	85.9%	69.0%	55.1%
H076.1	KD	15.9	136	Medium	69.4%	56.7%	44.2%	Medium	81.8%	58.7%	43.2%
H076.2	L	18.0	156	Minimum	50.1%	26.8%	4.6%	Minimum	71.0%	33.4%	2.9%
H076.3	Bed	5.8	42	Minimum	65.7%	48.9%	28.2%	Medium	80.1%	52.6%	29.3%
H076.4	Bed	11.0	90	Medium	69.0%	53.6%	36.7%	Medium	78.9%	50.9%	27.9%
H076.5	Bed	9.7	80	High	77.5%	65.9%	55.4%	High	85.7%	68.7%	54.7%
H077.1	KD	15.9	136	Medium	69.3%	56.8%	44.8%	Medium	81.7%	59.4%	44.6%
H077.2	L	18.0	156	Minimum	52.5%	26.8%	3.6%	Minimum	73.3%	34.1%	2.9%
H077.3	Bed	5.8	42	Minimum	67.2%	49.7%	30.0%	Medium	79.3%	51.4%	24.8%
H077.4	Bed	11.0	90	Medium	70.3%	54.5%	38.1%	Medium	79.8%	52.0%	26.5%
H077.5	Bed	9.7	80	High	77.4%	65.9%	55.5%	High	85.6%	67.9%	54.3%
H078.1	KD	15.9	136	Medium	69.2%	56.5%	43.8%	Medium	81.8%	59.0%	42.5%
H078.2	L	18.0	156	Minimum	54.2%	29.7%	4.8%	Minimum	74.3%	34.6%	3.7%
H078.3	Bed	5.8	42	Medium	68.9%	51.8%	32.7%	Medium	82.6%	56.1%	31.9%
H078.4	Bed	11.0	90	Medium	70.9%	54.6%	36.7%	Medium	80.6%	53.3%	27.4%
H078.5	Bed	9.7	80	High	77.6%	66.1%	55.5%	High	85.5%	67.6%	54.0%
H079.1	KD	17.2	144	High	83.0%	76.0%	66.2%	High	88.4%	76.0%	62.6%
H079.2	L	21.0	187	Medium	72.1%	55.2%	36.7%	Medium	81.4%	53.9%	28.6%
H079.3	Bed	10.1	85	High	82.5%	74.9%	63.0%	High	90.2%	79.2%	68.4%
H079.4	Bed	5.8	42	Medium	71.7%	55.2%	37.4%	Medium	81.7%	54.4%	29.3%
H079.5	Bed	10.4	88	Medium	70.9%	54.2%	35.3%	Medium	82.7%	56.0%	31.1%
H080.1	KD	15.9	136	Medium	66.5%	53.9%	41.0%	Medium	80.8%	56.8%	40.9%
H080.2	L	18.0	156	Minimum	57.0%	31.7%	10.6%	Minimum	78.3%	42.3%	13.3%
H080.3	Bed	5.8	42	Medium	69.8%	52.4%	30.5%	Medium	83.7%	58.0%	34.9%

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H080.4	Bed	11.0	90	Medium	72.0%	55.7%	37.5%	Medium	82.4%	55.5%	31.0%
H080.5	Bed	9.7	80	High	76.6%	64.9%	54.6%	High	85.5%	66.9%	53.7%
H081.1	KD	14.1	117	Medium	73.4%	60.2%	48.4%	Medium	82.7%	61.1%	45.8%
H081.2	L	16.6	138	Medium	73.1%	56.8%	38.3%	Medium	85.3%	63.0%	42.1%
H081.3	Bed	12.5	99	High	73.7%	61.6%	50.5%	Medium	82.4%	59.8%	44.7%
H081.4	Bed	11.4	92	Medium	72.8%	56.9%	39.6%	Medium	83.5%	58.3%	36.3%
H082.1	KD	14.1	117	Medium	73.2%	59.5%	47.2%	Medium	82.8%	60.9%	44.5%
H082.2	L	16.6	138	Medium	72.9%	56.6%	38.1%	Medium	85.1%	62.1%	40.8%
H082.3	Bed	12.5	99	Medium	73.6%	60.8%	49.7%	Medium	82.2%	59.8%	44.1%
H082.4	Bed	11.4	92	Medium	73.1%	57.3%	39.5%	Medium	83.3%	57.4%	34.6%
H083.1	KD	15.9	136	Medium	67.2%	53.4%	39.3%	Medium	80.3%	55.3%	36.5%
H083.2	L	18.0	156	Minimum	57.2%	31.6%	8.9%	Minimum	78.6%	42.7%	11.7%
H083.3	Bed	5.8	42	Medium	71.2%	54.2%	34.1%	Medium	84.2%	59.3%	37.1%
H083.4	Bed	11.0	90	Medium	72.1%	55.5%	36.6%	Medium	83.7%	58.1%	35.6%
H083.5	Bed	9.7	80	High	76.2%	64.2%	53.7%	High	85.1%	66.2%	52.8%
H084.1	KD	17.2	144	High	82.4%	75.2%	65.5%	High	87.8%	74.8%	62.5%
H084.2	L	21.0	187	Medium	70.4%	55.6%	39.5%	Medium	79.0%	50.8%	28.5%
H084.3	Bed	10.1	85	High	82.3%	74.5%	64.1%	High	89.5%	78.5%	67.2%
H084.4	Bed	5.8	42	Medium	71.6%	58.8%	45.3%	Medium	81.6%	58.8%	42.4%
H084.5	Bed	10.4	88	Medium	68.5%	55.6%	42.8%	Medium	78.9%	53.0%	31.4%

Table 19: Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.

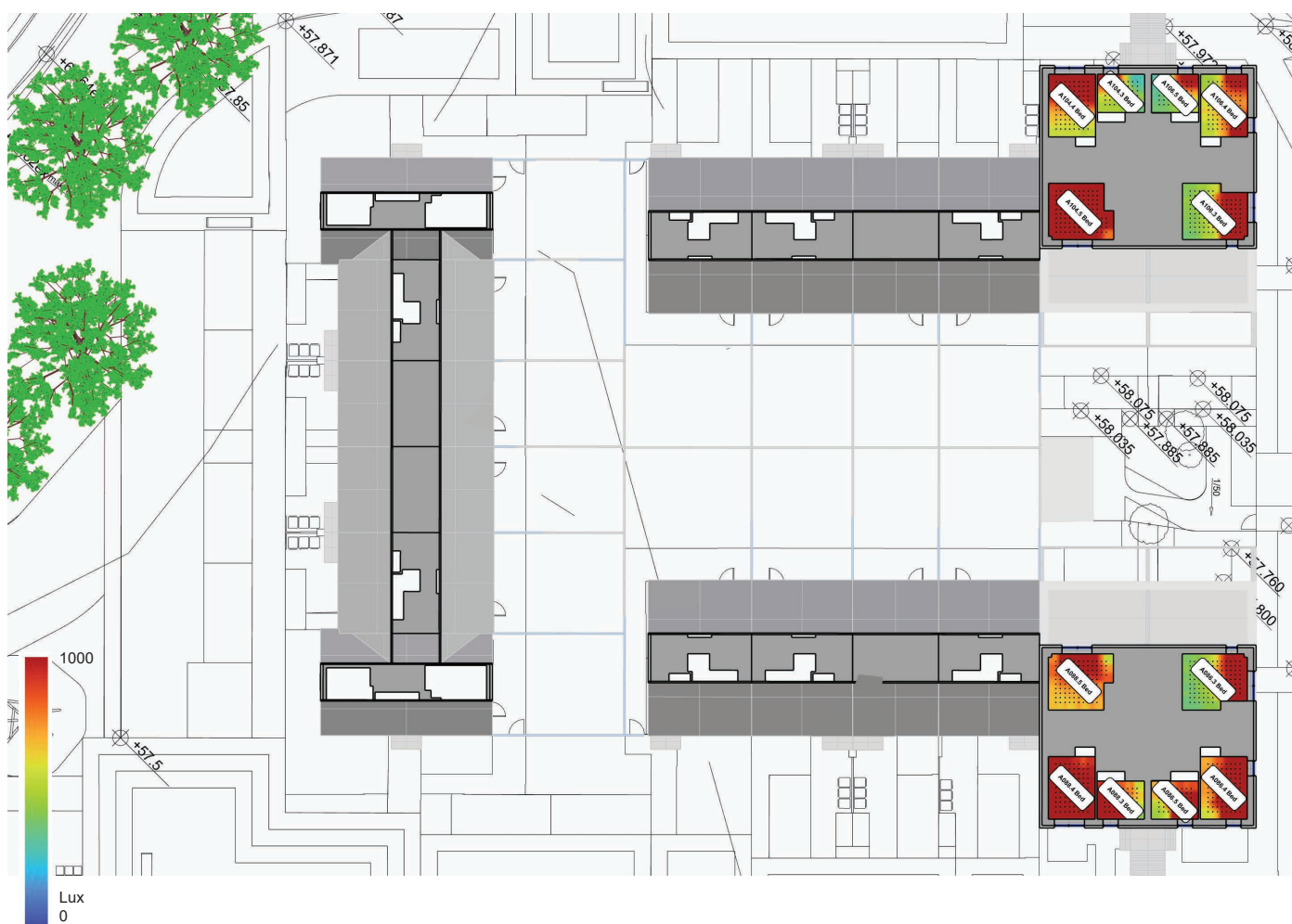


Figure 44: No.s 85-106 Second floor plans indicating Daylight Provision to EN17037:2018 Table A.1

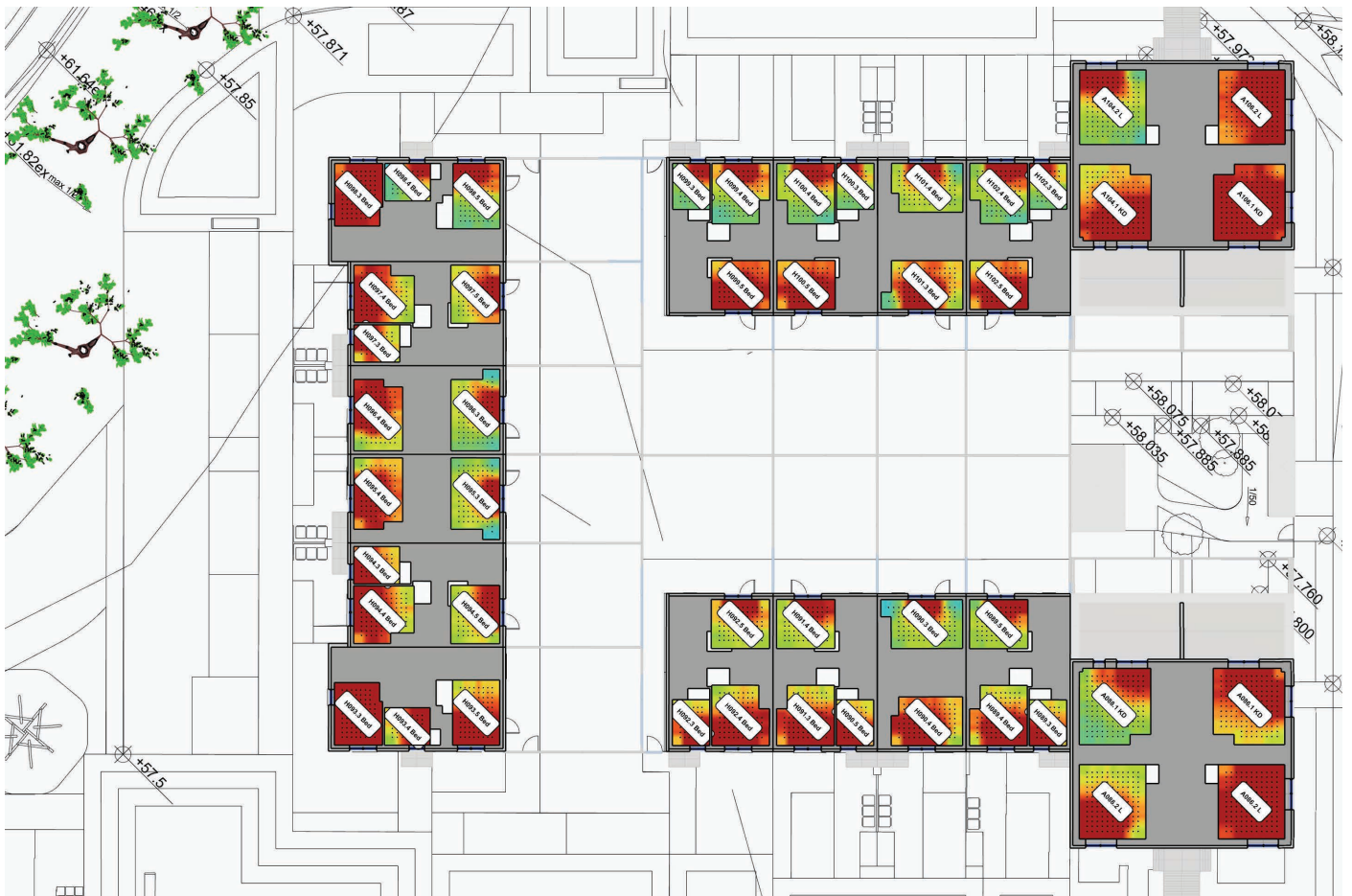


Figure 46: Units 85-106 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1

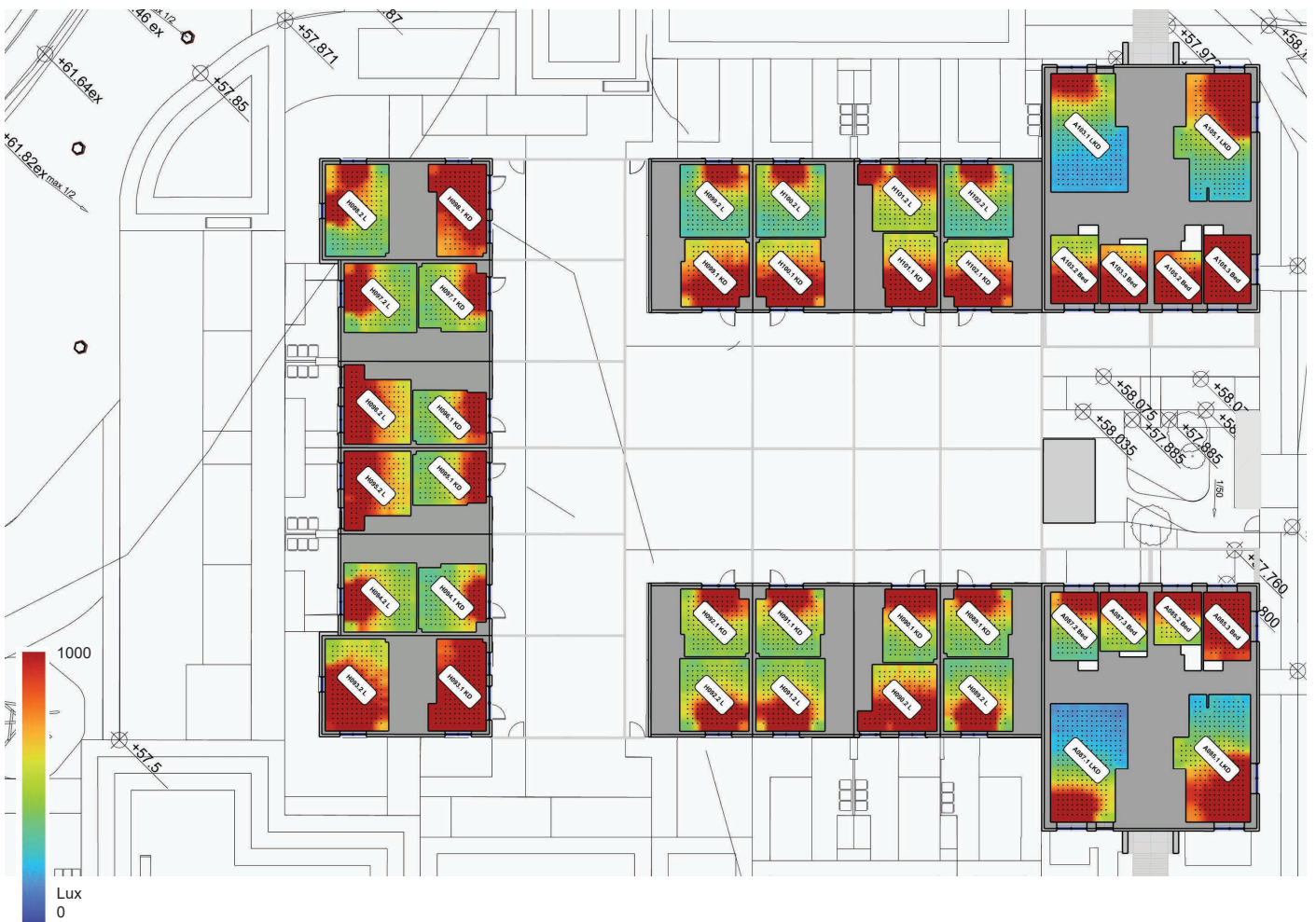


Figure 45: No.s 85-106 Ground floor plans indicating Daylight Provision to EN17037:2018 Table A.1

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Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
A085.1	LKD	30.5	271	Medium	67.8%	52.5%	35.0%	Minimum	71.8%	32.6%	7.6%
A085.2	Bed	9.0	72	Medium	75.4%	60.3%	45.6%	Medium	84.6%	61.2%	43.0%
A085.3	Bed	11.6	96	High	85.7%	78.7%	70.3%	High	90.1%	78.6%	67.1%
A086.1	KD	17.8	148	High	81.8%	73.0%	59.9%	High	88.2%	74.2%	57.7%
A086.2	L	16.8	143	High	84.0%	77.0%	67.1%	High	89.6%	78.1%	66.8%
A086.3	Bed	12.3	108	Medium	73.2%	57.9%	41.8%	Medium	83.9%	60.0%	38.9%
A086.4	Bed	10.6	88	High	78.7%	67.6%	56.4%	High	87.1%	72.6%	58.2%
A086.5	Bed	6.5	48	Medium	74.2%	61.1%	49.7%	Medium	82.4%	61.5%	46.8%
A087.1	LKD	30.4	276	Fail	39.5%	15.3%	7.2%	Minimum	54.2%	10.1%	3.4%
A087.2	Bed	11.7	96	Minimum	66.0%	48.2%	28.4%	Minimum	78.2%	45.9%	17.1%
A087.3	Bed	10.0	80	Medium	72.5%	57.1%	42.0%	Medium	81.7%	56.3%	35.9%
A088.1	KD	17.8	148	Medium	70.9%	54.5%	35.9%	Medium	83.4%	57.3%	34.7%
A088.2	L	16.8	143	Medium	70.3%	57.8%	46.5%	Medium	82.1%	60.5%	45.3%
A088.3	Bed	6.5	48	High	74.2%	61.5%	50.3%	Medium	82.7%	61.4%	46.3%
A088.4	Bed	10.6	88	High	81.0%	73.1%	62.7%	High	87.9%	76.1%	63.3%
A088.5	Bed	12.3	108	High	79.3%	68.8%	56.1%	High	88.2%	74.3%	58.4%
H089.1	KD	15.9	136	Minimum	65.9%	48.8%	30.5%	Medium	80.5%	52.3%	30.6%
H089.2	L	18.0	156	Minimum	58.9%	43.7%	28.4%	Minimum	74.5%	44.8%	24.6%
H089.3	Bed	5.8	42	Medium	70.2%	56.8%	44.9%	Medium	82.1%	60.0%	44.2%
H089.4	Bed	11.0	90	Medium	73.5%	60.7%	48.9%	Medium	81.9%	60.2%	44.1%
H089.5	Bed	9.7	80	Medium	75.6%	60.9%	46.6%	Medium	85.6%	64.3%	46.6%
H090.1	KD	14.1	117	Medium	67.9%	51.6%	33.8%	Medium	80.5%	52.8%	32.7%
H090.2	L	16.6	138	Medium	71.1%	58.1%	45.8%	Medium	81.7%	59.5%	43.4%
H090.3	Bed	12.5	99	Medium	69.8%	54.7%	38.9%	Medium	81.1%	53.7%	31.9%
H090.4	Bed	11.4	92	High	74.6%	62.2%	51.2%	Medium	83.0%	62.4%	47.1%
H090.5	Bed	5.8	42	Medium	73.8%	60.9%	48.7%	Medium	83.8%	63.1%	48.0%
H091.1	KD	15.9	136	Minimum	67.1%	49.6%	30.8%	Medium	81.1%	53.5%	32.4%
H091.2	L	18.0	156	Minimum	62.1%	46.8%	31.5%	Minimum	77.4%	49.3%	28.9%
H091.3	Bed	11.0	90	High	75.3%	62.2%	50.9%	Medium	83.4%	62.4%	46.4%
H091.4	Bed	9.7	80	Medium	75.4%	60.7%	46.3%	Medium	85.9%	65.6%	48.8%
H092.1	KD	15.9	136	Medium	67.2%	50.2%	32.0%	Medium	81.7%	55.0%	35.2%
H092.2	L	18.0	156	Minimum	60.9%	45.0%	28.6%	Minimum	77.4%	48.6%	27.5%
H092.3	Bed	5.8	42	Medium	73.5%	60.0%	47.7%	Medium	83.7%	62.6%	47.1%
H092.4	Bed	11.0	90	High	75.8%	63.0%	51.8%	Medium	83.0%	61.8%	45.4%
H092.5	Bed	9.7	80	Medium	75.8%	61.5%	47.1%	Medium	85.6%	64.5%	46.7%
H093.1	KD	17.2	144	High	83.3%	76.3%	66.1%	High	88.1%	75.0%	62.6%
H093.2	L	21.0	187	High	75.2%	63.9%	52.7%	Medium	81.8%	60.6%	46.1%
H093.3	Bed	10.1	85	High	83.8%	77.8%	68.6%	High	90.2%	80.7%	71.6%
H093.4	Bed	5.8	42	Medium	75.0%	61.4%	49.7%	Medium	82.0%	58.7%	42.1%
H093.5	Bed	10.4	88	Medium	74.5%	61.3%	49.5%	Medium	82.5%	60.9%	44.3%
H094.1	KD	15.9	136	Minimum	63.6%	46.2%	26.1%	Medium	80.0%	50.4%	27.2%
H094.2	L	18.0	156	Minimum	63.3%	48.0%	33.1%	Medium	79.3%	52.1%	33.2%
H094.3	Bed	5.8	42	Medium	74.0%	60.9%	48.9%	High	84.5%	65.3%	50.2%
H094.4	Bed	11.0	90	High	75.4%	62.4%	50.3%	Medium	83.2%	62.9%	46.3%
H094.5	Bed	9.7	80	Medium	75.0%	60.7%	45.8%	Medium	85.2%	64.2%	46.2%
H095.1	KD	14.1	117	Medium	68.7%	51.1%	32.2%	Medium	82.2%	54.6%	31.9%
H095.2	L	16.6	138	High	75.5%	63.0%	51.5%	High	85.7%	68.1%	53.1%
H095.3	Bed	12.5	99	Medium	70.5%	54.6%	37.9%	Medium	81.5%	53.9%	31.4%
H095.4	Bed	11.4	92	High	76.2%	64.3%	52.9%	Medium	83.3%	63.7%	49.3%
H096.1	KD	14.1	117	Medium	69.2%	52.0%	33.6%	Medium	82.5%	55.1%	32.1%

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H096.2	L	16.6	138	High	76.1%	64.1%	52.6%	High	86.0%	68.7%	54.2%
H096.3	Bed	12.5	99	Medium	70.2%	54.3%	37.6%	Medium	80.5%	52.0%	27.9%
H096.4	Bed	11.4	92	High	76.2%	64.3%	53.1%	Medium	83.8%	63.9%	49.7%
H097.1	KD	15.9	136	Minimum	64.1%	46.9%	27.4%	Medium	80.5%	52.4%	30.3%
H097.2	L	18.0	156	Medium	65.0%	51.2%	36.5%	Medium	80.6%	55.2%	38.0%
H097.3	Bed	5.8	42	Medium	74.4%	60.4%	47.9%	Medium	84.7%	64.9%	50.0%
H097.4	Bed	11.0	90	High	75.9%	64.2%	52.5%	High	83.9%	64.9%	50.0%
H097.5	Bed	9.7	80	Medium	74.9%	60.5%	45.8%	Medium	85.0%	63.8%	45.9%
H098.1	KD	17.2	144	High	83.9%	76.7%	65.5%	High	89.0%	77.0%	62.5%
H098.2	L	21.0	187	Medium	74.3%	60.4%	46.0%	Medium	82.7%	59.1%	37.8%
H098.3	Bed	10.1	85	High	83.1%	76.1%	66.3%	High	90.2%	79.8%	70.1%
H098.4	Bed	5.8	42	Medium	70.9%	53.9%	34.6%	Medium	82.2%	54.2%	27.9%
H098.5	Bed	10.4	88	Medium	71.5%	55.0%	37.0%	Medium	83.4%	56.9%	33.9%
H099.1	KD	15.9	136	Medium	70.2%	57.0%	45.1%	Medium	82.6%	59.8%	45.2%
H099.2	L	18.0	156	Minimum	59.4%	37.1%	13.0%	Minimum	79.4%	45.8%	16.8%
H099.3	Bed	5.8	42	Medium	70.1%	53.0%	33.3%	Medium	83.4%	57.1%	34.6%
H099.4	Bed	11.0	90	Medium	73.7%	57.0%	39.9%	Medium	84.4%	59.8%	38.0%
H099.5	Bed	9.7	80	High	77.2%	65.3%	54.8%	High	86.2%	69.2%	55.1%
H100.1	KD	15.9	136	Medium	69.6%	56.2%	43.1%	Medium	81.8%	58.7%	42.1%
H100.2	L	18.0	156	Minimum	59.0%	36.3%	13.9%	Minimum	79.3%	45.2%	16.7%
H100.3	Bed	5.8	42	Medium	69.9%	52.3%	33.0%	Medium	84.3%	59.6%	37.7%
H100.4	Bed	11.0	90	Medium	72.8%	56.0%	38.4%	Medium	83.6%	57.7%	34.9%
H100.5	Bed	9.7	80	High	77.8%	66.1%	55.3%	High	85.6%	67.7%	54.0%
H101.1	KD	14.1	117	Medium	70.3%	57.7%	44.9%	Medium	80.9%	57.3%	41.7%
H101.2	L	16.6	138	Medium	73.0%	56.6%	37.8%	Medium	86.0%	63.8%	43.5%
H101.3	Bed	12.5	99	Medium	73.0%	60.4%	48.7%	Medium	81.5%	59.1%	44.1%
H101.4	Bed	11.4	92	Medium	72.9%	56.3%	39.2%	Medium	84.4%	60.3%	38.9%
H102.1	KD	15.9	136	Medium	69.4%	56.0%	43.5%	Medium	81.6%	58.0%	42.0%
H102.2	L	18.0	156	Minimum	56.7%	33.2%	13.6%	Minimum	78.8%	44.0%	17.2%
H102.3	Bed	5.8	42	Minimum	67.4%	48.7%	30.3%	Medium	82.2%	54.8%	31.9%
H102.4	Bed	11.0	90	Medium	71.1%	54.5%	36.9%	Medium	82.4%	56.1%	33.8%
H102.5	Bed	9.7	80	High	77.4%	65.6%	54.6%	High	85.2%	67.1%	53.4%
A103.1	LKD	30.4	276	Fail	40.4%	11.9%	3.2%	Minimum	66.8%	13.7%	2.0%
A103.2	Bed	11.7	96	Medium	69.4%	55.5%	42.3%	Medium	79.8%	53.4%	35.0%
A103.3	Bed	10.0	80	High	74.7%	61.9%	51.1%	Medium	83.3%	61.7%	46.5%
A104.1	KD	17.8	148	Medium	75.0%	60.9%	48.7%	Medium	84.0%	63.2%	47.6%
A104.2	L	16.8	143	Medium	69.7%	52.7%	33.9%	Medium	84.2%	59.2%	38.4%
A104.3	Bed	6.5	48	Medium	70.0%	52.7%	34.0%	Medium	80.5%	51.3%	26.0%
A104.4	Bed	10.6	88	High	79.4%	68.6%	54.7%	High	87.8%	71.9%	55.5%
A104.5	Bed	12.3	108	High	80.6%	72.3%	61.4%	High	88.4%	76.7%	64.1%
A105.1	LKD	30.5	271	Medium	71.5%	54.8%	35.7%	Minimum	77.8%	41.9%	6.9%
A105.2	Bed	9.0	72	High	77.1%	65.4%	53.6%	Medium	84.0%	64.0%	49.3%
A105.3	Bed	11.6	96	High	85.7%	79.2%	71.7%	High	90.3%	79.4%	68.3%
A106.1	KD	17.8	148	High	82.4%	74.6%	64.5%	High	88.1%	75.2%	62.4%
A106.2	L	16.8	143	High	84.5%	77.3%	67.0%	High	89.8%	78.7%	67.7%
A106.3	Bed	12.3	108	Medium	73.7%	60.1%	45.0%	Medium	83.9%	61.8%	41.7%
A106.4	Bed	10.6	88	High	77.9%	65.8%	51.8%	High	87.1%	70.9%	54.5%
A106.5	Bed	6.5	48	Medium	69.5%	52.2%	31.8%	Medium	80.6%	51.7%	25.0%

Table 20: Daylight Provision individual values for all habitable rooms to EN 17037 Table A.1.



Figure 47: No.s 107-122 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1

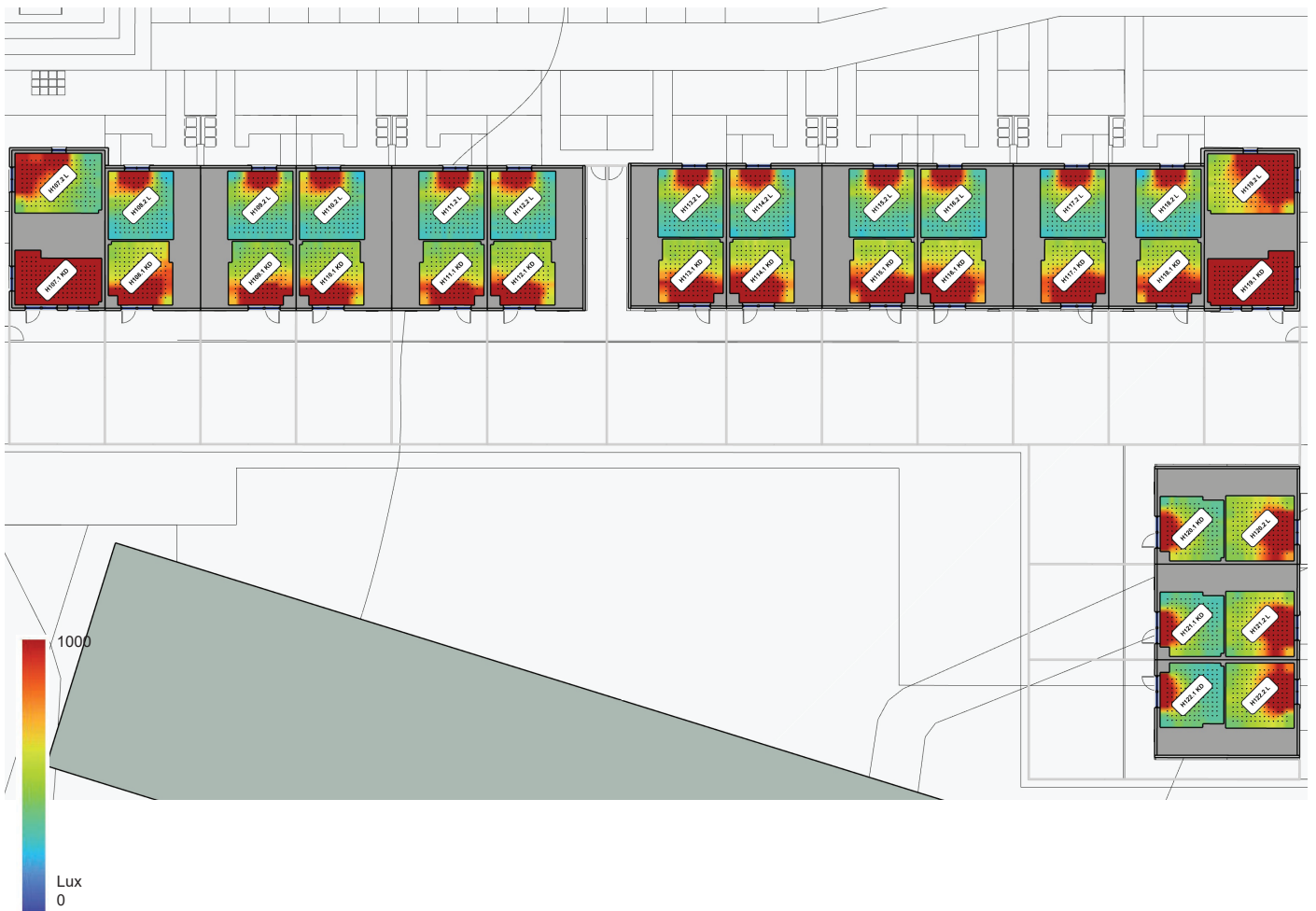


Figure 48: No.s 107-122 Ground floor plans indicating Daylight Provision to EN17037:2018 Table A.1

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H107.1	KD	17.2	144	High	84.5%	77.6%	68.7%	High	89.6%	79.1%	68.7%
H107.2	L	21.0	187	Medium	71.3%	54.6%	36.4%	Medium	80.7%	52.9%	25.9%
H107.3	Bed	10.1	85	High	82.6%	75.4%	63.7%	High	90.1%	79.1%	68.4%
H107.4	Bed	5.8	42	Medium	72.3%	55.3%	36.9%	Medium	81.5%	53.1%	28.5%
H107.5	Bed	10.4	88	Medium	70.4%	53.3%	34.2%	Medium	83.4%	56.8%	33.9%
H108.1	KD	15.9	136	Medium	66.1%	52.0%	36.9%	Medium	80.2%	54.0%	36.4%
H108.2	L	18.0	156	Minimum	56.1%	31.2%	8.2%	Minimum	76.4%	38.9%	9.4%
H108.3	Bed	5.8	42	Medium	68.9%	51.9%	31.9%	Medium	83.8%	59.0%	36.6%
H108.4	Bed	11.0	90	Medium	72.5%	56.7%	39.6%	Medium	82.2%	55.8%	32.3%
H108.5	Bed	9.7	80	Medium	73.5%	60.2%	47.9%	Medium	82.4%	60.0%	43.8%
H109.1	KD	15.9	136	Minimum	60.1%	45.2%	28.5%	Medium	79.2%	52.1%	32.8%
H109.2	L	18.0	156	Minimum	57.0%	33.7%	10.5%	Minimum	76.7%	39.6%	9.7%
H109.3	Bed	5.8	42	Medium	69.7%	52.9%	34.4%	Medium	83.1%	57.8%	35.7%
H109.4	Bed	11.0	90	Medium	71.3%	56.0%	38.3%	Medium	82.9%	58.2%	36.6%
H109.5	Bed	9.7	80	Medium	70.9%	57.7%	45.5%	Medium	81.4%	57.9%	41.8%
H110.1	KD	15.9	136	Minimum	60.3%	45.6%	29.8%	Medium	78.3%	50.5%	32.5%
H110.2	L	18.0	156	Minimum	56.6%	33.2%	8.5%	Minimum	77.2%	40.5%	10.9%
H110.3	Bed	5.8	42	Medium	68.9%	51.8%	30.8%	Medium	82.9%	57.2%	34.7%
H110.4	Bed	11.0	90	Medium	71.9%	57.1%	40.3%	Medium	81.8%	55.1%	32.2%
H110.5	Bed	9.7	80	Medium	70.5%	57.1%	45.4%	Medium	81.2%	57.1%	40.7%
H111.1	KD	15.9	136	Minimum	59.0%	44.7%	28.4%	Medium	78.3%	50.8%	31.7%
H111.2	L	18.0	156	Minimum	57.0%	33.7%	9.9%	Minimum	76.7%	39.8%	10.4%
H111.3	Bed	5.8	42	Medium	69.0%	52.6%	34.1%	Medium	83.2%	58.3%	36.4%
H111.4	Bed	11.0	90	Medium	72.1%	56.4%	39.7%	Medium	83.1%	57.8%	37.6%
H111.5	Bed	9.7	80	Medium	71.0%	57.3%	45.7%	Medium	80.7%	56.2%	40.1%
H112.1	KD	15.9	136	Minimum	60.3%	46.5%	32.4%	Medium	78.7%	52.0%	34.7%
H112.2	L	18.0	156	Minimum	56.3%	32.5%	7.9%	Minimum	76.8%	39.9%	9.2%
H112.3	Bed	5.8	42	Medium	70.0%	53.2%	34.4%	Medium	82.8%	57.1%	34.7%
H112.4	Bed	11.0	90	Medium	71.4%	56.0%	39.2%	Medium	82.9%	57.5%	35.8%
H112.5	Bed	9.7	80	Medium	71.9%	58.7%	46.8%	Medium	81.8%	58.9%	44.5%
H113.1	KD	15.9	136	Minimum	62.3%	48.5%	34.2%	Medium	79.0%	52.4%	34.0%
H113.2	L	18.0	156	Minimum	57.0%	34.6%	10.1%	Minimum	77.1%	40.7%	10.5%
H113.3	Bed	5.8	42	Medium	68.9%	52.0%	33.7%	Medium	83.5%	58.6%	37.6%
H113.4	Bed	11.0	90	Medium	71.6%	56.3%	39.1%	Medium	83.0%	57.6%	36.1%
H113.5	Bed	9.7	80	Medium	73.1%	60.2%	48.5%	Medium	82.9%	60.5%	45.2%
H114.1	KD	15.9	136	Minimum	63.2%	49.4%	36.7%	Medium	79.6%	53.9%	38.1%
H114.2	L	18.0	156	Minimum	56.8%	33.5%	8.2%	Minimum	76.9%	39.8%	8.8%
H114.3	Bed	5.8	42	Medium	69.0%	51.8%	31.8%	Medium	82.9%	56.9%	34.7%
H114.4	Bed	11.0	90	Medium	72.9%	57.2%	40.3%	Medium	82.6%	57.3%	35.1%
H114.5	Bed	9.7	80	Medium	73.8%	61.0%	49.7%	Medium	83.1%	61.6%	46.9%
H115.1	KD	15.9	136	Medium	65.0%	52.1%	37.9%	Medium	79.5%	53.9%	36.3%
H115.2	L	18.0	156	Minimum	57.6%	34.5%	10.3%	Minimum	77.4%	41.2%	10.9%
H115.3	Bed	5.8	42	Medium	69.7%	53.2%	34.0%	Medium	83.4%	57.9%	35.4%
H115.4	Bed	11.0	90	Medium	71.7%	56.2%	38.3%	Medium	83.2%	58.2%	36.4%
H115.5	Bed	9.7	80	High	74.4%	61.6%	50.9%	Medium	83.4%	62.5%	48.1%
H116.1	KD	15.9	136	Medium	66.0%	52.6%	40.1%	Medium	80.4%	55.3%	39.2%
H116.2	L	18.0	156	Minimum	57.2%	34.4%	9.3%	Minimum	77.3%	40.9%	10.4%
H116.3	Bed	5.8	42	Medium	69.1%	51.9%	30.2%	Medium	82.7%	57.0%	33.6%
H116.4	Bed	11.0	90	Medium	73.0%	57.5%	40.2%	Medium	82.3%	56.2%	32.3%
H116.5	Bed	9.7	80	High	74.7%	62.4%	51.5%	Medium	83.6%	62.9%	47.9%

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
H117.1	KD	15.9	136	Medium	64.9%	51.6%	36.3%	Medium	79.4%	52.7%	35.0%
H117.2	L	18.0	156	Minimum	57.6%	33.4%	10.7%	Minimum	77.1%	40.7%	10.8%
H117.3	Bed	5.8	42	Medium	70.3%	54.2%	36.0%	Medium	83.3%	58.2%	36.3%
H117.4	Bed	11.0	90	Medium	72.0%	56.3%	39.1%	Medium	82.9%	57.9%	35.4%
H117.5	Bed	9.7	80	High	75.1%	62.6%	51.9%	Medium	83.8%	63.9%	49.4%
H118.1	KD	15.9	136	Medium	63.6%	50.1%	34.6%	Medium	79.0%	52.5%	33.0%
H118.2	L	18.0	156	Minimum	55.7%	31.1%	6.3%	Minimum	76.5%	38.4%	7.3%
H118.3	Bed	5.8	42	Medium	70.2%	54.0%	35.0%	Medium	83.0%	57.0%	35.1%
H118.4	Bed	11.0	90	Medium	72.1%	56.4%	38.7%	Medium	82.2%	56.1%	32.9%
H118.5	Bed	9.7	80	High	75.5%	63.1%	52.2%	Medium	83.6%	62.7%	48.6%
H119.1	KD	17.2	144	High	83.8%	77.2%	68.1%	High	88.3%	76.7%	65.1%
H119.2	L	21.0	187	Medium	73.9%	59.6%	46.6%	Medium	81.5%	57.3%	39.1%
H119.3	Bed	10.1	85	High	83.1%	76.2%	66.3%	High	90.2%	79.5%	69.2%
H119.4	Bed	5.8	42	Medium	75.0%	61.9%	49.4%	Medium	81.9%	60.0%	44.5%
H119.5	Bed	10.4	88	Medium	74.3%	60.7%	48.8%	Medium	83.3%	61.9%	45.4%
H120.1	KD	15.9	136	Minimum	62.8%	43.5%	21.3%	Minimum	80.5%	49.5%	22.6%
H120.2	L	18.0	156	Minimum	63.0%	48.0%	32.1%	Medium	78.2%	50.1%	30.5%
H120.3	Bed	5.8	42	Medium	73.9%	60.7%	47.8%	Medium	83.7%	63.0%	47.6%
H120.4	Bed	11.0	90	High	75.3%	62.0%	50.5%	Medium	83.3%	62.4%	46.2%
H120.5	Bed	9.7	80	Medium	72.2%	55.8%	39.4%	Medium	84.4%	59.3%	40.0%
H121.1	KD	15.9	136	Minimum	59.6%	39.0%	14.4%	Minimum	79.7%	45.7%	17.7%
H121.2	L	18.0	156	Minimum	62.2%	46.6%	30.4%	Minimum	77.9%	49.6%	29.0%
H121.3	Bed	5.8	42	Medium	73.0%	60.2%	47.7%	Medium	84.2%	64.0%	48.7%
H121.4	Bed	11.0	90	High	75.4%	62.1%	50.6%	Medium	83.0%	61.5%	45.0%
H121.5	Bed	9.7	80	Medium	71.6%	54.0%	35.8%	Medium	82.8%	55.1%	33.1%
H122.1	KD	15.9	136	Minimum	56.2%	33.8%	9.0%	Minimum	78.4%	41.5%	13.2%
H122.2	L	18.0	156	Minimum	61.2%	44.7%	28.4%	Minimum	77.7%	48.4%	28.2%
H122.3	Bed	5.8	42	Medium	73.8%	60.0%	47.0%	Medium	83.6%	62.3%	46.1%
H122.4	Bed	11.0	90	Medium	74.8%	61.6%	49.6%	Medium	83.4%	61.9%	44.7%
H122.5	Bed	9.7	80	Minimum	67.8%	49.6%	29.4%	Minimum	80.3%	49.6%	24.1%

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



Figure 49: No.s 123-137 First floor plans indicating Daylight Provision to EN17037:2018 Table A.1



Figure 50: No.s 123-137 Ground floor plans indicating Daylight Provision to EN17037:2018 Table A.1

EN17037:2018 Table A.1 Daylight Provision Room Schedule

Space ID	Description	Area m2	Sensor Count	Target Illuminance	300lux_50	500lux_50	750lux_50	Minimum Target Illuminance	100lux_95	300lux_95	500lux_95
H123.1	KD	15.9	136	Medium	70.6%	55.3%	41.4%	Medium	83.5%	60.3%	43.3%
H123.2	L	18.0	156	Minimum	54.4%	30.4%	5.4%	Minimum	75.1%	36.7%	5.7%
H123.3	Bed	5.8	42	Medium	67.6%	50.6%	29.5%	Medium	80.6%	53.2%	29.6%
H123.4	Bed	11.0	90	Medium	70.0%	53.8%	36.8%	Medium	79.8%	52.2%	27.8%
H123.5	Bed	9.7	80	High	76.8%	63.7%	51.9%	High	84.9%	66.9%	51.1%
H124.1	KD	15.9	136	Medium	71.3%	56.6%	43.2%	Medium	83.9%	62.1%	46.2%
H124.2	L	18.0	156	Minimum	54.2%	30.3%	5.6%	Minimum	73.8%	34.3%	4.5%
H124.3	Bed	5.8	42	Medium	68.6%	51.4%	32.7%	Medium	80.9%	53.9%	28.8%
H124.4	Bed	11.0	90	Medium	70.2%	54.1%	36.6%	Medium	79.7%	51.8%	26.2%
H124.5	Bed	9.7	80	High	77.2%	64.8%	53.4%	High	85.9%	69.0%	53.9%
H125.1	KD	17.2	144	High	83.2%	76.3%	66.5%	High	88.4%	76.5%	63.5%
H125.2	L	21.0	187	Medium	69.4%	52.7%	33.9%	Medium	79.8%	50.6%	24.0%
H125.3	Bed	10.1	85	High	82.3%	74.5%	62.9%	High	89.7%	78.4%	66.9%
H125.4	Bed	5.8	42	Medium	70.5%	54.4%	37.3%	Medium	81.1%	53.7%	30.0%
H125.5	Bed	10.4	88	Medium	69.8%	53.4%	35.0%	Medium	81.2%	53.9%	30.1%
H126.1	KD	15.9	136	Medium	64.2%	51.5%	37.5%	Medium	79.9%	54.9%	38.4%
H126.2	L	18.0	156	Minimum	56.9%	32.3%	8.7%	Minimum	77.6%	41.5%	11.6%
H126.3	Bed	5.8	42	Medium	69.1%	51.6%	29.8%	Medium	83.2%	58.0%	35.4%
H126.4	Bed	11.0	90	Medium	72.1%	56.4%	39.2%	Medium	82.3%	55.9%	32.0%
H126.5	Bed	9.7	80	High	75.0%	62.9%	51.8%	High	84.2%	64.7%	50.6%
H127.1	KD	15.9	136	Medium	65.8%	53.1%	40.7%	Medium	80.2%	55.4%	40.0%
H127.2	L	18.0	156	Minimum	57.7%	34.0%	9.6%	Minimum	77.9%	42.6%	11.8%
H127.3	Bed	5.8	42	Medium	70.8%	54.0%	34.1%	Medium	83.3%	57.3%	34.5%
H127.4	Bed	11.0	90	Medium	73.0%	57.5%	40.2%	Medium	83.3%	58.1%	35.9%
H127.5	Bed	9.7	80	High	75.1%	63.5%	52.8%	High	84.2%	64.3%	50.3%
H128.1	KD	15.9	136	Medium	67.8%	55.0%	41.8%	Medium	80.4%	56.1%	38.7%
H128.2	L	18.0	156	Minimum	58.8%	36.0%	12.1%	Minimum	77.8%	43.1%	12.9%
H128.3	Bed	5.8	42	Medium	70.0%	53.2%	33.7%	Medium	83.1%	57.8%	34.7%
H128.4	Bed	11.0	90	Medium	72.4%	56.8%	39.3%	Medium	83.1%	57.9%	36.0%
H128.5	Bed	9.7	80	High	75.5%	63.4%	53.1%	High	84.6%	64.8%	51.7%
H129.1	KD	15.9	136	Medium	69.2%	56.6%	44.7%	Medium	81.1%	58.5%	43.6%
H129.2	L	18.0	156	Minimum	58.2%	35.3%	10.5%	Minimum	78.1%	42.6%	12.2%
H129.3	Bed	5.8	42	Medium	69.2%	51.5%	30.2%	Medium	83.2%	57.3%	34.4%
H129.4	Bed	11.0	90	Medium	72.0%	56.3%	39.2%	Medium	82.5%	57.0%	33.2%
H129.5	Bed	9.7	80	High	76.0%	64.4%	53.7%	High	84.3%	64.8%	51.2%
H130.1	KD	15.9	136	Medium	69.2%	56.4%	43.2%	Medium	81.3%	58.4%	41.3%
H130.2	L	18.0	156	Minimum	58.6%	35.7%	11.6%	Minimum	77.8%	43.3%	13.2%
H130.3	Bed	5.8	42	Medium	69.0%	52.5%	32.4%	Medium	83.8%	59.2%	37.5%
H130.4	Bed	11.0	90	Medium	72.2%	56.7%	39.3%	Medium	83.3%	58.2%	36.7%
H130.5	Bed	9.7	80	High	75.7%	63.5%	52.9%	High	84.8%	65.2%	51.3%
H131.1	KD	15.9	136	Medium	69.0%	56.1%	43.2%	Medium	81.3%	58.2%	42.5%
H131.2	L	18.0	156	Minimum	57.3%	33.7%	9.2%	Minimum	77.5%	41.8%	12.2%
H131.3	Bed	5.8	42	Medium	68.7%	51.0%	29.5%	Medium	83.6%	58.7%	36.7%
H131.4	Bed	11.0	90	Medium	73.4%	57.9%	40.6%	Medium	83.0%	57.6%	34.3%
H131.5	Bed	9.7	80	High	75.5%	63.6%	53.3%	High	84.5%	64.8%	51.1%
H132.1	KD	15.9	136	Medium	67.8%	54.3%	39.6%	Medium	81.0%	56.1%	37.9%
H132.2	L	18.0	156	Minimum	58.6%	35.7%	11.8%	Minimum	78.2%	43.8%	14.3%
H132.3	Bed	5.8	42	Medium	70.2%	53.1%	33.1%	Medium	83.5%	58.7%	36.8%
H132.4	Bed	11.0	90	Medium	71.8%	56.1%	38.3%	Medium	83.2%	57.9%	36.0%
H132.5	Bed	9.7	80	High	76.3%	63.9%	53.6%	High	84.7%	65.5%	51.7%

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
H133.1	KD	15.9	136	Medium	64.7%	51.4%	36.2%	Medium	79.4%	53.6%	34.5%
H133.2	L	18.0	156	Minimum	57.7%	33.3%	8.6%	Minimum	77.8%	41.8%	11.0%
H133.3	Bed	5.8	42	Medium	69.4%	52.1%	33.4%	Medium	83.1%	57.7%	34.9%
H133.4	Bed	11.0	90	Medium	71.5%	55.9%	37.5%	Medium	82.8%	56.8%	34.2%
H133.5	Bed	9.7	80	High	75.6%	63.3%	52.6%	High	85.0%	65.2%	51.6%
H134.1	KD	17.2	144	High	84.5%	78.4%	71.0%	High	89.1%	78.6%	67.7%
H134.2	L	21.0	187	Medium	74.2%	60.7%	47.0%	Medium	82.9%	60.3%	42.2%
H134.3	Bed	10.1	85	High	83.6%	76.9%	67.3%	High	90.4%	80.2%	70.3%
H134.4	Bed	5.8	42	High	75.6%	62.6%	50.4%	Medium	83.2%	62.1%	46.6%
H134.5	Bed	10.4	88	High	75.2%	61.6%	50.1%	Medium	83.8%	63.0%	46.7%
H135.1	KD	15.9	136	Minimum	66.8%	48.7%	28.4%	Medium	82.5%	54.8%	31.9%
H135.2	L	18.0	156	Medium	65.3%	50.4%	36.4%	Medium	80.3%	54.7%	37.2%
H135.3	Bed	5.8	42	Medium	74.1%	61.3%	48.9%	Medium	84.1%	63.6%	48.7%
H135.4	Bed	11.0	90	High	76.4%	63.6%	51.8%	Medium	83.9%	63.6%	47.8%
H135.5	Bed	9.7	80	Medium	74.3%	58.6%	43.0%	Medium	85.6%	63.9%	45.1%
H136.1	KD	15.9	136	Minimum	64.8%	45.7%	23.6%	Medium	81.6%	51.6%	26.9%
H136.2	L	18.0	156	Medium	65.4%	50.6%	36.6%	Medium	80.1%	54.2%	37.3%
H136.3	Bed	5.8	42	Medium	74.5%	61.3%	49.2%	Medium	84.4%	64.9%	49.4%
H136.4	Bed	11.0	90	High	75.9%	63.2%	51.2%	Medium	84.0%	64.1%	48.5%
H136.5	Bed	9.7	80	Medium	73.4%	56.6%	40.9%	Medium	85.6%	62.9%	43.0%
H137.1	KD	15.9	136	Minimum	63.6%	44.2%	21.8%	Medium	80.5%	50.4%	24.8%
H137.2	L	18.0	156	Medium	65.5%	50.3%	35.3%	Medium	80.2%	54.1%	36.2%
H137.3	Bed	5.8	42	Medium	74.5%	60.7%	48.1%	Medium	84.4%	64.7%	48.7%
H137.4	Bed	11.0	90	High	76.3%	63.4%	51.7%	Medium	84.1%	64.0%	48.6%
H137.5	Bed	9.7	80	Medium	71.8%	55.0%	38.2%	Medium	83.9%	57.7%	37.8%

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

Appendix C - Sunlight Hours to Living Spaces to Duplex Units

Sunlight Hours			
Unit ID	LKD window within 90° south	No. sunlight hours on 21st March	BRE Recommendation
A001.1	Yes	6.0	High
A002.1	Yes	6.3	High
A003.1	Yes	5.9	High
A004.1	Yes	6.3	High
A005.1	Yes	4.3	High
A006.1	Yes	6.3	High
A007.1	Yes	4.3	High
A008.1	Yes	5.3	High
A009.1	Yes	2.8	Minimum
A010.1	Yes	5.0	High
A011.1	Yes	4.7	High
A012.1	Yes	4.8	High
A013.1	Yes	4.4	High
A014.2	Yes	5.2	High
A015.1	Yes	5.3	High
A016.2	Yes	6.7	High
A028.1	No	0.7	Below criteria
A029.1	Yes	6.1	High
A030.1	No	0.3	Below criteria
A031.1	Yes	6.3	High
A032.1	Yes	6.0	High
A033.2	Yes	6.2	High
A034.1	Yes	4.3	High
A035.2	Yes	5.3	High
A056.1	No	0.3	Below criteria
A057.1	Yes	6.3	High
A058.1	No	0.0	Below criteria
A059.1	Yes	6.3	High
A085.1	Yes	4.7	High
A086.2	Yes	6.4	High
A087.1	Yes	4.7	High
A088.2	Yes	5.8	High
A103.1	No	1.6	Minimum
A104.1	Yes	6.3	High
A105.1	No	1.3	Below criteria
A106.1	Yes	6.9	High

Table 23: Sunlight hours to living spaces in duplex units

Appendix D - Sunlight to Private Amenity Spaces within the Proposed Development

Sunlight on the Ground - Private Amenity		
Plot No.	% Area receiving 2 hours sunlight on 21st March	Meets Criteria
H017	0.0%	N
H018	17.7%	N
H019	28.1%	N
H020	49.0%	N
H021	49.0%	N
H022	83.9%	Y
H023	78.5%	Y
H024	72.2%	Y
H025	72.2%	Y
H026	72.2%	Y
H027	72.2%	Y
H036	51.2%	Y
H037	51.2%	Y
H038	51.2%	Y
H039	51.2%	Y
H040	50.4%	Y
H041	49.5%	N
H042	67.9%	Y
H043	63.2%	Y
H044	46.1%	N
H045	41.3%	N
H046	41.3%	N
H047	45.2%	N
H048	49.5%	N
H049	76.9%	Y
H050	75.2%	Y
H051	76.9%	Y
H052	76.9%	Y
H053	76.9%	Y
H054	76.9%	Y
H055	76.9%	Y
H060	60.8%	Y
H061	51.2%	Y
H062	51.2%	Y
H063	50.4%	Y
H064	48.7%	N
H065	67.3%	Y
H066	72.4%	Y
H067	46.1%	N
H068	41.3%	N
H069	41.3%	N
H070	39.4%	N
H071	47.0%	N
H072	52.8%	Y
H073	76.9%	Y
H074	75.2%	Y
H075	76.9%	Y
H076	76.9%	Y

Sunlight on the Ground - Private Amenity		
Plot No.	% Area receiving 2 hours sunlight on 21st March	Meets Criteria
H077	76.9%	Y
H078	81.4%	Y
H079	58.9%	Y
H080	76.9%	Y
H081	78.8%	Y
H082	76.9%	Y
H083	55.5%	Y
H084	65.8%	Y
H089	51.2%	Y
H090	42.3%	N
H091	47.8%	N
H092	67.9%	Y
H093	64.1%	Y
H094	45.2%	N
H095	41.3%	N
H096	41.3%	N
H097	45.2%	N
H098	48.7%	N
H099	76.9%	Y
H100	75.2%	Y
H101	73.0%	Y
H102	76.9%	Y
H107	68.2%	Y
H108	65.0%	Y
H109	62.6%	Y
H110	64.2%	Y
H111	67.4%	Y
H112	75.6%	Y
H113	77.9%	Y
H114	71.4%	Y
H115	70.6%	Y
H116	71.4%	Y
H117	722.2%	Y
H118	54.7%	Y
H119	70.6%	Y
H120	33.3%	N
H121	5.9%	N
H122	2.5%	N
H123	71.1%	Y
H124	76.9%	Y
H125	60.3%	Y
H126	73.0%	Y
H127	74.6%	Y
H128	76.9%	Y
H129	82.7%	Y
H130	82.7%	Y
H131	77.7%	Y
H132	69.0%	Y

Sunlight on the Ground - Private Amenity		
Plot No.	% Area receiving 2 hours sunlight on 21st March	Meets Criteria
H133	57.9%	Y
H134	71.4%	Y
H135	43.5%	N
H136	23.0%	N
H137	23.7%	N

Table 24: Sun on the ground to private amenity spaces to houses