September 2023

Glenageary Gate LRD

Daylight and Sunlight Assessment Report

Applicant: Red Rock Glenageary Ltd

"The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design." - BRE 209

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Report Contents

The full set of results for each assessment and shadow study can be found in the appendix section of this report.

1.0 Executive Summary

1.1 Summary of Assessment

3D Design Bureau (3DDB) were commissioned to carry out a comprehensive daylight and sunlight assessment, along with an accompanying shadow study for the proposed Large-scale Residential Development at Glenageary, Co. Dublin.

The following report has been prepared by 3D Design Bureau (3DDB). 3DDB have over 7 years experience in producing daylight and sunlight assessments for large scale planning applications and are recognised as experts in the field. This report has been reviewed and overseen by Nicholas Polley and Richard Dalton. Nicholas is CEO of 3D Design Bureau and is a qualified Building Services Engineer (B.Sc.(Eng) Dip Eng) with over 25 years experience in the industry. Richard is Associate Director of 3DDB and has a bachelors degree in Building Information Modelling (BIM) with over 20 years experience in the industry.

Assessments have been broken down into the following two main categories, 'Impact Assessment' and 'Scheme Performance', of which there are subcategories as summarised below:

Impact Assessment

The impact assessment that was carried out for the purpose of this report, in accordance with the BRE Guidelines, has studied the potential levels of effect the surrounding existing environment and/or properties would sustain should the proposed development be built as proposed. The effects were assessed in the baseline state versus the proposed state; For definition of model states please refer to the 'Methodology' section on Page 3. A visual representation of the model states can be seen in the renderings of the shadow study in the appendix section on Page 3.

This impact assessment covers the following metrics:

- Effect on daylight to surrounding properties. The effect to the Vertical Sky Component (VSC) of the windows of the following neighbouring properties was assessed:
  - 1A Parnell Street
  - 20 Sallynoggin Villas
  - 3-21 Sallynoggin Road Lower
- Effect on sunlight to surrounding properties. The effect to the annual and winter probable sunlight hours (APSH/ WPSH) of the windows of the following neighbouring properties was assessed:
  - 1A Parnell Street
  - 20 Sallynoggin Villas
  - 3-21 Sallynoggin Road Lower

Following advice within the BRE Guidelines, the surrounding context was carefully considered to ensure all properties and amenity spaces that may potentially experience a level of effect have been included in the study. A more detailed explanation of the criterion applied can be found in section "4.1 Preparing the analytical model" on page 3.

The results of the impact assessments can be found in section A.0 on page 3. These results are summarised in section 1.2 and explained in section "5.1 Analysis of Impact Assessment Results" on page 3.

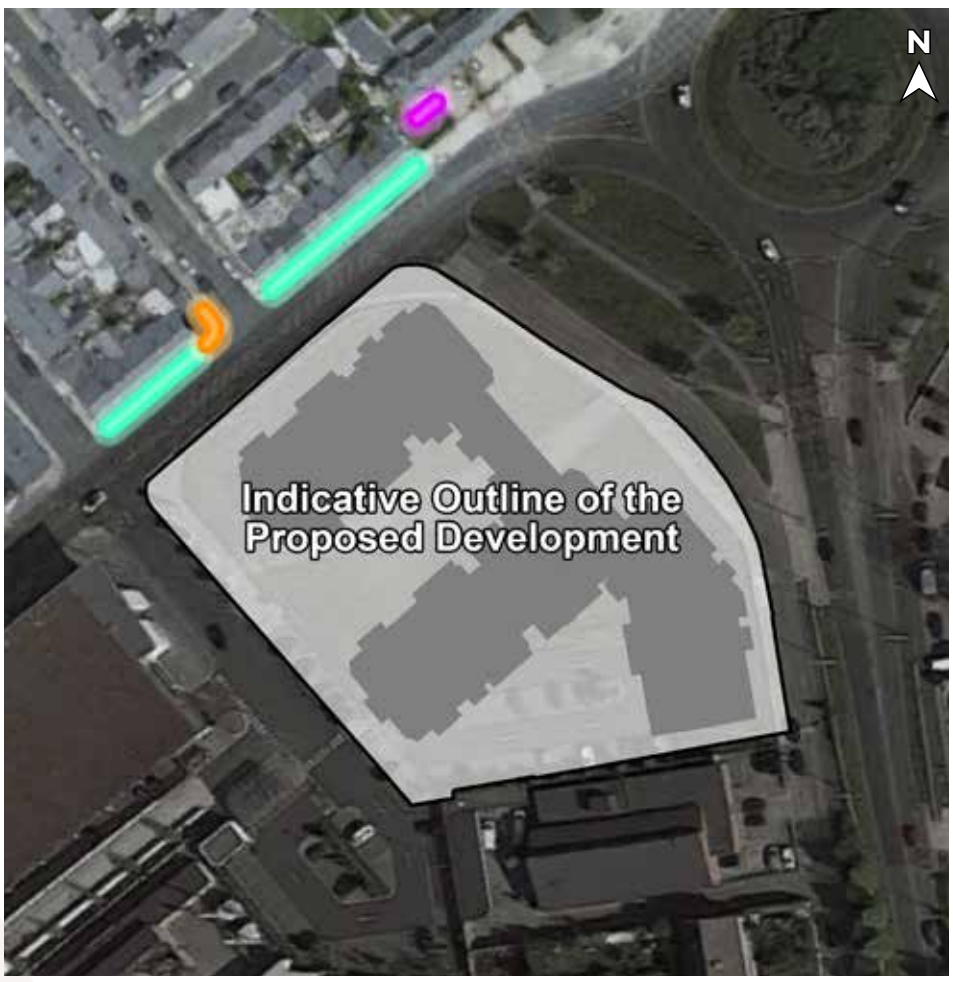

Figure 1.1: Scope of surrounding properties and environment assessed.

Scheme Performance

Daylight access for the habitable rooms of the proposed development have been assessed through a Spatial Daylight Autonomy (SDA) study. Sunlight access for the same rooms has been quantified through a Sunlight Exposure (SE) assessment. A Sun On Ground (SOG) study has also been carried out to indicate the level of sunlight on March 21st in the proposed external amenity spaces. The results of these scheme performance assessments, which are in accordance with the BRE Guidelines, can be found in section C.0 on page 3. These results are summarised in section 1.3 and explained in section "5.2 Analysis of Scheme Performance Results" on page 3.

Supplementary scheme performance studies have also been carried out. These include an SDA assessment under the I.S. EN 17037 criterion, and a No Sky Line (NSL) study within proposed habitable rooms. The results of the supplementary scheme performance assessments can be found in section E.0 on page 3.

It should be noted that the assessments within this report have taken into account design changes from that of the previous application on the same site. These design changes took place following feedback from DLRCC on that application. The changes have led to an improvement in the Sunlight Exposure (SE) results.

1.2 Impact Assessment Results Overview - Neighbouring Properties:

Effect to Daylight - Vertical Sky Component (VSC) :

Effect to Vertical Sky Component (VSC)	
Windows Assessed	19
Negligible	12
Minor Adverse	7
Moderate Adverse	0
Major Adverse	0
Beneficial Impact*	0
n.a.**	0
Compliance Rate	c. 63%

Effect to Sunlight - Annual Probable Sunlight Hours (APSH):

Effect to Annual Probable Sunlight Hours (APSH)	
Windows Assessed	19
Negligible	19
Minor Adverse	0
Moderate Adverse	0
Major Adverse	0
Beneficial Impact*	0
n.a.**	0
Compliance Rate	100%

Effect to Sunlight - Winter Probable Sunlight Hours (WPSH):

Effect to Winter Probable Sunlight Hours (WPSH)	
Windows Assessed	19
Negligible	19
Minor Adverse	0
Moderate Adverse	0
Major Adverse	0
Beneficial Impact*	0
n.a.**	0
Compliance Rate	100%

*'Beneficial Impact' will only be stated if the ratio of change is greater than 1.20 (an improvement of 20%). Should less perceptible improvements occur an 'Negligible' level of effect will be stated.

**In instances where a baseline value is particularly low, levels of effects can appear exaggerated. To mitigate such occurrences, If the baseline value in the VSC, APSH/WPSH or SOG studies is below 1%, 3DDB have categorised the level of effect as n.a. (not applicable). Where windows/ gardens/amenity areas are considered non-applicable, these instances are not included in the compliance rates calculation.

1.3 Scheme Performance Results Overview:

Spatial Daylight Autonomy (SDA):

Spatial Daylight Autonomy (SDA)	
Unit Count	138
Rooms Assessed	402
Without Trees	
Compliant	382
Non-compliant	20
Compliance Rate	c. 95%
Trees in Winter State (Proposed and Existing Trees)	
Compliant	381
Non-compliant	21
Compliance Rate	c. 95%
Trees in Summer State (Proposed and Existing Trees)	
Compliant	380
Non-compliant	22
Compliance Rate	c. 95%

Sunlight Exposure (SE):

Sunlight Exposure (SE)	
Units Assessed	138
SE with trees as opaque objects	
Non-Compliant	32
Minimum	29
Medium	11
High	66
Compliance Rate	c. 77%
SE without deciduous trees	
Non-Compliant	32
Minimum	29
Medium	11
High	66
Compliance Rate	c. 77%

Sun On Ground (SOG) in proposed amenity areas:

Sun On Ground (SOG) in proposed amenity areas	
Areas Assessed	3
Areas meeting the guidelines	3
Areas not meeting the guidelines	0
Compliance Rate	100%

1.4 Supplementary Assessment Results Overview

Spatial Daylight Autonomy (SDA) under I.S. EN 17037 Criterion:

Spatial Daylight Autonomy (SDA) under I.S. EN 17037 Criterion*	
Unit Count	138
Rooms Assessed	402
Without Trees	
Compliant	334
Non-compliant	68
Compliance Rate	c. 83%
Trees in Winter State (Proposed and Existing Trees)	
Compliant	332
Non-compliant	70
Compliance Rate	c. 83%
Trees in Summer State (Proposed and Existing Trees)	
Compliant	332
Non-compliant	70
Compliance Rate	c. 83%
*The study under the I.S. EN 17037 criterion should be considered a supplementary assessment. It is the expert opinion of 3DDB that the appropriate criteria are that of the BRE Guidelines (BRE 209)	

No Sky Line (NSL):

No Sky Line (NSL):	
Unit Count	138
Rooms Assessed	402
Yes	338
No	64
Compliance Rate*	c. 84%
* As the BRE Guidelines do not provide a recommended minimum for NSL in proposed developments, compliance rates for NSL are calculated using a criteria applied by 3DDB.	

2.0 Guidelines / Standards

Summary

Neither the British Standard, European Standard, British Annex to the European Standard nor the BRE Guide set out rigid standards or limits. They are all considered advisory documents. The BRE Guide is preceded by the following very clear statement as to how the design advice contained therein should be used:

"*The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design.*"

That the recommendations of the BRE Guide are not suitable for rigid application to all developments in all contexts, is of particular importance in the context of national and local policies for the consolidation and densification of urban areas or when assessing applications for highly constrained sites (e.g. lands in close proximity or immediately to the south of residential lands). A compromise may have to be made concerning daylight and sunlight compliance to achieve national or local planning objectives.

It is the expert opinion of 3D Design Bureau, that the BRE Guidelines (*BRE 209*) are the most appropriate guiding document for daylight and sunlight assessment. For daylight within proposed developments, a supplementary study has also been carried out under the criteria of *I.S. EN 17037*. The rationale for this opinion is outlined below.

Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities. (2023)

In July 2023, the Department of Housing, Planning and Local Government published a guidance document for new apartments, *Sustainable Urban Housing: Design Standards for New Apartments*. This document makes reference to, *EN 17037:2018: Daylight in Buildings* (the European Standard), *BS EN 17037:2018: Daylight in Buildings* (the UK National Annex to the European Standard) and to the 3rd edition of Building Research Establishment's *Site Layout Planning for Daylight and Sunlight: a Guide to Good Practice* (BRE 209 2022).

Paragraph 6.7 of the 2023 apartment guidelines states:

"*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. This may arise due to a design constraints [sic] 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.*"

As such, this report identifies where daylight and sunlight recommendations have and have not been achieved. Rationale and compensatory design solutions are the remits of the planning consultant and/or the project architect, these will also be included in this report when possible.

Note: Section 3.2 of the Urban Development and Building Height Guidelines 2018, provides similar guidance as above. However, it should be noted that at the time of publication of the *Urban Development and Building Height Guidelines (2018),* BRE 209 was in the 2nd edition, first published in 2011. Since then, a 3rd edition of BRE 209 has been published (June 2022) and the 2nd edition has been withdrawn. BRE 209 no longer references *BS 8206-2:2008*, which has also been withdrawn. The standard used as reference in BRE 209 edition 3 is *BS EN 17037*.

BRE - Site Layout Planning for Daylight and Sunlight: a Guide to Good Practice (2022)

This document will be referred to as *the BRE Guidelines* in this report.

At the time of writing this report, the BRE Guidelines are in the third edition (BRE 209). The BRE Guidelines sets out recommendations for appropriate levels of daylight and sunlight within a proposed development, as well as providing guidance on impacts arising from a proposed development to surrounding properties and amenity areas.

It is the expert opinion of 3D Design Bureau that the BRE Guidelines are the most appropriate guiding document for assessing daylight potential within a proposed development. The rationale for this opinion is outlined in the Dublin City Development Plan (2022-2028), which states:

"*Prior to 2018, Ireland had no standard for daylight. In 2018, the National Standards Authority of Ireland adopted EN 17037 to directly become IS EN 17037. It is important to note that no amendments were made to this document and unlike BS EN 317037, it does not contain a national annex. It offers only a single target for new buildings (there are no space by space targets – e.g. a kitchen would have the same target as a warehouse or office). It does not offer guidance on how new developments will impact on surrounding existing environments. These limitations make it unsuitable for use in planning policy or during planning applications. BR 209 must still be used for this purpose.*"

Whilst BRE Guidelines draws reference from BS EN 17037, there are some subtle differences between BRE 209 and BS EN 17037. For the purposes of this report, the BRE Guidelines (BRE 209) is considered the appropriate reference document.

A detailed description of the various recommendations for impact assessment and scheme performance is contained in section "4.2 Quantitative Impact Assessment Overview" on page 13 of this report.

EN 17037:2018: Daylight in Buildings (2018)

*EN 17037 i*s a European Standard that provides recommendations for daylight within spaces. (Emphasis added)

EN 17037:2018 recommends that 300 lux should be received across 50% of a hypothetical reference plane of any room for half of the daylight hours of the year, with no less than 100 lux received across 95% of the reference plane. No distinction is made for the function of the room for target lux levels within this standard.

It is the opinion of 3D Design Bureau that these target values are less appropriate for proposed residential developments than the recommendations made in the BRE Guidelines, which apply room-specific target values for appropriate LUX levels.

Recommendations made in EN 17037 regarding Sunlight Exposure for proposed developments have been incorporated into the BRE Guidelines. As such, Sunlight Exposure is deemed the appropriate assessment for sunlight within habitable rooms of the proposed development.

EN 17037 also makes recommendations related to glare and quality of view out. These aspects are not addressed in this report as these assessments have less relevance in a residential context where occupants have the freedom to move about in order to improve level of glare or alter the view out.

I.S. EN 17037:2018 Daylight in Buildings (2018)

*I.S. EN 17037 i*s a direct adoption of the European Standard *EN 17037:2018* that provides recommendations for daylight within spaces.

The target values given within *I.S. EN 17037* are directly adopted from *EN 17037*. As such, there are no room-specific recommendations for daylight. Because of these limitations, it is the expert opinion of 3D Design Bureau, that the recommendations made in the *BRE Guidelines* are more appropriate to use than that within *I.S. EN 17037*.

Regardless, a supplementary SDA study has been carried out on the proposed development using the criterion of *I.S. EN 17037*, with compliance rates stated. However, this should be considered a supplementary study.

BS EN 17037:2018: Daylight in Buildings (2018)

BS EN 17037 is the British Annex to the European Standard (see above). The British Annex acknowledges that a rigid application of the European Standard "may not be achievable". It states *"... it is the opinion of the UK committee that the recommendations for daylight provision in a space [...] may not be achievable for some buildings, particularly dwellings."*

In BS EN 17037, daylight recommendations differ depending on the function of a room. Target lux levels are applied across 50% of the reference plane of a room for half of the daylight hours. The target lux levels are:

- 200 Lux for kitchens
- 150 Lux for living rooms
- 100 Lux for bedrooms

No minimum is stated to be achieved across 95% of the working plane. If a space has dual purposes it is advised that the higher target value should be applied.

3.0 Glossary

3.1 Terms and Definitions

Skylight
Non directional ambient light cast from the sky and environment.

Sunlight
Direct parallel rays of light emitted from the sun.

Daylight
Combined skylight and sunlight.

Overcast sky model
A completely overcast sky model, used for daylight calculation.

Cloudless sky model
A completely cloudless sky model, used for sunlight exposure calculation.

Model State
The model state is a term used to describe the configuration of the digital model used to run analysis. Model states will typically reflect a baseline state and a proposed or cumulative state. For a definition of the model states used in the analysis carried out in this report, please refer to “Preparing the analytical model” on page 12.

Vertical Sky Component (VSC)
Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from an overcast sky model, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. Usually the ‘given vertical plane’ is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings.

Annual Probable Sunlight Hours (APSH) / Winter Probable Sunlight Hours (WPSH)
Annual Probable Sunlight Hours (APSH) and Winter Probable Sunlight Hours (WPSH) are a measure of sunlight that a given window may expect over a year period (1 Jan - 31 Dec), or the winter period (21 Sep - 21 Mar) respectively.

North facing windows may receive sunlight on only a handful of occasions in a year, and windows facing eastwards or westwards will receive sunlight only at certain times of the day. Taking this into account, the BRE Guidelines suggest that windows with an orientation within 90 degrees of due south should be assessed.

Sun On Ground (SOG)
Assessment of what portion of a garden or amenity space is capable of receiving 2 hours or more of direct sunlight on March 21st.

Sunlight Exposure (SE)
The number of hours of direct sunlight a room can expect to receive on a given date between February 1st and March 21st at a determined point on the windows.

Spatial Daylight Autonomy (SDA)
Spatial Daylight Autonomy assesses whether a space receives sufficient daylight on a working plane during standard operating hours on an annual basis. For compliance, the target value is achieved across 50% of the working plane for half of the occupied period.

No Sky Line (NSL)
The no sky line divides points on the working plane which can and cannot see the sky.

Working plane
Horizontal, vertical or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 850 mm above the floor in houses and factories, 700 mm above the floor in offices. The plane is offset 300mm from the room boundaries under BRE 209 criteria, and 500mm from the room boundaries under I.S. EN 17037 criteria.

LKD
Living / Kitchen / Dining room.

BRE Target Value
When assessing the effect a proposed development would have on a neighbouring property, a target value will be applied. This applied target value is generated as per the criteria set out for each study in the BRE Guidelines.

Alternative Target Value
It could be appropriate to use alternative target values when conducting assessment of effect on existing properties. If such instances occur the rationale will be clearly explained and the instances where the alternative target values have been applied will be clearly identified.

Level of BRE Compliance
Each table in the study that has a column identified as “Level of BRE Compliance”, identifies how an assessed instance performs in relation to the appropriate target value. If the instance is in compliance with the recommendations as made in the BRE Guidelines the value will be expressed as “BRE Compliant”. If the instance does not meet the criteria as set out in the BRE Guidelines a percentage will be expressed to determine the level of compliance with the recommendation. This value determines the definition of effect.

LUX
Lux is a standardised unit of measurement of light level intensity. A measurement of 1 lux is equal to the illumination of a one metre square surface that is one metre away from a single candle.

3.2 Definition of Effects

The BRE Guidelines state that:

"Adverse impacts occur when there is a significant decrease 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. The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied."

As such, planning authorities should consider a range of localised factors when making decisions. The terminology suggested in the BRE Guidelines is as listed below, whilst the assessment of impact should depend on a combination of factors. The BRE Guidelines also state:

"Where a new development affects a number of existing buildings or open spaces, the clearest approach is usually to assess the impact on each one separately. It is also clearer to assess skylight and sunlight impacts separately."

Taking this advice, 3DDB have categorised the level of effect on each window/room/open space on an individual basis. In quantifying the levels of effect, 3DDB have assigned numerical values to the levels of compliance with the BRE recommendations. By applying a numerical logic to the terminology used in defining the levels of effect there is no ambiguity regarding how the levels of effect have been categorised within this report.

The list of definitions given below is taken from 'Appendix H: Environmental impact assessment' of the BRE 209 with a clear indication of how they have been applied in the context of this report.

Negligible
For the purposes of this Sunlight and Daylight Assessment Report a '*Negligible*' level of effect will be stated if the level of effect is within the criteria as recommended in the BRE Guidelines and the applied target value has been achieved.

Minor Adverse
For the purposes of this Sunlight and Daylight Assessment Report, a '*Minor Adverse*' level of effect will be stated if the level of effect is marginally outside of the criteria as stated in the BRE Guidelines. Typically a '*Minor Adverse*' level of effect will be applied if the level of daylight or sunlight is reduced to equal or greater than 80% and less than 100% of the applied target value.

Moderate Adverse
For the purposes of this Sunlight and Daylight Assessment Report, a 'Moderate Adverse' level of effect will be stated if the level of daylight or sunlight is reduced to equal or greater than 50% and less than 80% of the applied target value. '*Moderate Adverse*' levels of effect are quite typical in instances where a proposed development is planned on an under-developed plot of land.

Major Adverse
An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment. For the purposes of this Sunlight and Daylight Assessment Report a '*Major Adverse*' level of effect will be stated if the proposed development reduces the availability of daylight or sunlight of a neighbouring property to significantly below a baseline level. A '*Major Adverse*' level of effect will be stated if the level of daylight or sunlight is reduced to less than 50% of the applied target value.

Beneficial Impact
In relation to sunlight or daylight access, it is conceivable that a proposed development could yield positive effects on the neighbouring properties. In such circumstances the development would typically involve a reduction to the size or scale of built form (e.g. such as the demolition of a building or the removal of a large belt of evergreen trees, which might result in an increase in light access). Where such improvements occur, a '*Beneficial Impact*' will only be stated if the ratio of change is greater than 1.20 (an improvement of 20%). Should less perceptible improvements occur a '*Negligible*' level of effect will be stated.

Not Applicable (n.a.)
In instances where a baseline value is particularly low, levels of effects can appear exaggerated. To mitigate such occurrences, If the baseline value in the VSC, APSH/WPSH or SOG studies is below 1%, 3DDB have categorised the level of effect as n.a. (not applicable).

Averaged Windows (-)
If it can be determined or reasonably assumed that multiple windows are servicing the same room, each window will be assessed and a weighted average will be calculated. In such instances the level of effect for the room will be stated, but the level of effect for the individual windows contributing towards the average will be left blank in the table. This will be indicated in the tables with the dash symbol. (-)

3.3 Definition of Levels of Sunlight Exposure

For interiors, access to sunlight can be quantified. BRE 209 recommends that a space should receive a minimum of 1.5 hours of direct sunlight on a selected date between 1 February and 21 March with cloudless conditions. It is suggested that 21 March (equinox) be used. The medium level of recommendation is three hours and the high level of recommendation four hours. For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion.

Level of Sunlight Exposure:

The level of sunlight exposure will be stated for each assessed room in the tables under section "C.3 Sunlight Exposure (SE) in Proposed Units" on page 60. Below is a list of the terms used to categorise the levels of sunlight exposure:

Below Minimum
Sunlight exposure will be categorised as 'below minimum' if the potential sunlight for the assessed room is less than 1.5 hours on March 21st. Note: the recommendation is that a room within a proposed unit is capable of receiving 1.5 hours of direct sunlight on March 21st. If an individual room does not achieve this recommendation, it does not mean that the unit is non compliant.

Minimum
A 'minimum' level of sunlight exposure will be stated if the potential sunlight for the assessed room is between 1.5 hours and 3 hours on March 21st.

Medium
A 'medium' level of sunlight exposure will be stated if the potential sunlight for the assessed room is between 3 hours and 4 hours on March 21st.

High
A 'high' level of sunlight exposure will be stated if the potential sunlight for the assessed room is greater than 4 hours on March 21st.

Unit Compliance:

In addition to the level of sunlight exposure expressed for each room, compliance will be stated on a unit-by-unit basis. A proposed unit is considered to be compliant if any habitable room within the unit is capable of receiving at least 1.5 hours of sunlight on the assessment date.

Non-Compliant
If no habitable rooms within a proposed unit can receive 1.5 hours of sunlight on the assessment date, the unit will be categorised as 'Non-Compliant'.

Compliant
If at least one habitable rooms within a proposed unit can receive 1.5 hours or more of sunlight on the assessment date, the unit will be categorised as 'Compliant'.

Typically unit compliance will be stated for the best performing room per unit only, with lesser performing rooms indicated with a dash (-). However, if more than one room in a given unit is considered to be the best performing room (i.e. they have the same number of SE hours on March 21st), then the unit compliance column will be populated in the row related to each room.

4.0 Methodology

4.1 Preparing the analytical model

4.1.1 Building the Model States

The project architect, John Fleming Architects, supplied 3DDB with AutoCAD drawings of the proposed development from which the 3D analytical model was created. Landscape drawings were also issued by Park Hood Landscape Architects. A combination of survey information, aerial photography, available online photography and/or ordnance survey information were used to model the surrounding context and assessed buildings. **Note:** as the information gathered from online sources is not as accurate as surveyed information, a reasonable tolerance should be allowed to the placement of windows, boundary treatments and the results generated.

Baseline model state

The baseline model state reflects the existing environment. It includes the surrounding context and the subject site in their current standing. This includes any structures that are to be demolished as part of this application. Existing trees were placed using photogrammetry information, with assumptions made regarding exact size, position and species.

The BRE Guidelines recommend that impact assessments should be carried out 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. This criteria has been used to ensure all windows that could possibly sustain an adverse level of effect have been included in the model when running VSC and APSH/WPSH assessments. **Note:** The properties assessed have remained the same as those assessed under the previous application.

Proposed model state

The proposed model state reflects the subject site if the development is built as proposed. This includes proposed landscaping on the subject site and the demolition of existing structures, etc. The proposed trees were placed in the model using the information provided by the landscape architect regarding size, position and species.

All of the above information was subsequently used to prepare digital analytical model in software specifically designed for daylight and sunlight analysis.

4.1.2 Trees

It is generally not possible to accurately represent trees in a digital 3D model as the size and shape will differ greatly from tree to tree. When modelling trees for this assessment assumptions have been made and tree geometry has been simplified.

For the purpose of the analysis carried out in this report, the position and size of existing trees have been estimated using photogrammetry information. The shape of the trees have been simplified and the species of each tree has been assumed. Simplified models of proposed trees within the development have also been included according to the information provided by the landscape architect.

BRE 209 provides guidance on how trees should be treated depending on the study being carried out, as summarised below:

Impact to Vertical Sky Component (VSC) and Annual / Winter Probable Sunlight Hours (APSH / WPSH)

The BRE Guidelines state that when assessing the effect a new development would have on existing buildings, it is usual to ignore the effect of deciduous trees. This is because daylight is at its scarcest and most valuable in winter when most trees will not be in leaf. Evergreen trees should be included, particularly where a dense belt or group of evergreens is specifically planned as a windbreak or for privacy purposes.

Sun On Ground (SOG)

The BRE Guidelines states that when assessing the impact of buildings on sunlight in gardens:

"...trees and shrubs are not normally included in the calculation unless a dense belt or group of evergreens is specifically planned as a windbreak or for privacy purposes. This is partly because the dappled shade of a tree is more pleasant than the deep shadow of a building (this applies especially to deciduous trees)."

As such, deciduous trees have not been included in the calculation of SOG in either the impact or scheme performance assessments. Evergreen trees should be included, particularly where a dense belt or group of evergreens is specifically planned as a windbreak or for privacy purposes.

Sunlight Exposure (SE)

The BRE Guidelines state that as deciduous trees would not be in full leaf on the recommended assessment date (March 21st), sunlight would be expected to penetrate deciduous trees. However, as trees have so many variables, it is impossible to accurately represent how they would affect sunlight at a given time. The suggested methodology (BRE 209) to allow for this is to run the sunlight exposure study in two states. Once with trees as opaque objects and secondly without deciduous trees in the assessment model. This gives a range of potential sunlight hours.

Spatial Daylight Autonomy (SDA)

BRE 209 recommends when assessing daylight in a proposed building, it is appropriate to run the assessment with trees represented in both winter and summer conditions. Light transmittance values of 60% and 20% have been applied to deciduous tree canopies for winter and summer assessments respectively. A light transmittance value of 20% has been applied to evergreen trees throughout the year. Units have also been assessed without trees to give an understanding of how the architecture performs should trees not be factored into the calculation.

I.S. EN 17037 does not give any guidance on how trees should be represented. For the purpose of this report, the SDA calculation under the I.S. EN 17037 criteria has been carried out with trees represented in both winter and summer conditions. Light transmittance values of 60% and 20% have been applied to deciduous tree canopies for winter and summer assessments respectively. A light transmittance value of 20% has been applied to evergreen trees throughout the year. Units have also been assessed without trees to give an understanding of how the architecture performs should trees not be factored into the calculation.

No Sky Line (NSL)

Because some sky can usually be seen through a tree canopy, deciduous trees have not been included in the No Sky Line assessment model. Evergreen trees may be included in this assessment, particularly if there is a dense belt or group planned for windbreak or for privacy purposes.

Shadow Study

The hourly renderings of the shadow study have been generated with evergreen trees represented as opaque objects, where applicable, and without deciduous trees. This method best represents the methodology used for the impact assessment and allows for a better understanding of potential shadows cast by the proposed development through the tree canopy.

4.2 Quantitative Impact Assessment Overview

4.2.1 Effect on Vertical Sky Component (VSC)

A proposed development could potentially have a negative effect on the level of daylight that a neighbouring property receives, if the obstructing building is large in relation to their distance from the existing dwelling.

Figure 4.1 shows a decision chart taken from the BRE Guidelines which is used to determine the appropriate assessment to be carried out when assessing impact to daylight.

For the proposed development, all properties within a radius of three times the height of the proposed development have been considered for impact assessment. Should the angle from the windows to the proposed development subtend 25° in a perpendicular section, then VSC is calculated in both the baseline and proposed model states, and a comparison made.

A no skyline assessment requires accurate dimensions and layouts of both rooms and windows. However, the required information is rarely available for existing dwellings. As such, it is not common practice to carry out a no sky line (NSL) impact assessment.

VSC can be defined as the amount of skylight that falls on a vertical wall or window.

This report assesses the percentage of direct sky illuminance that falls on the assessment point of neighbouring windows that could be affected by the proposed development.

The BRE Guidelines 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.

The VSC for each window/room will be calculated in the relevant model states, as outlined in section 4.1 on page 12. A comparison between the results generated with these model states will determine the level of effect.

A proposed development could possibly have a noticeable effect on the daylight received by an existing window, if the following occurs:

- The VSC value drops below the guideline value of 27%; **and**
- The VSC value is less than 0.8 times the existing value.

In instances where a baseline value is less than 1%, the impact will be considered '*non-applicable*' (n.a.)

Under BRE Guidelines, only habitable rooms need to be assessed for effect to VSC. In the absence of design layouts or floor plans, or information pertaining to the internal 'as-built' layouts, assumptions have been made regarding the function of the windows of the existing surrounding properties (i.e. what room type is served by the window being assessed).

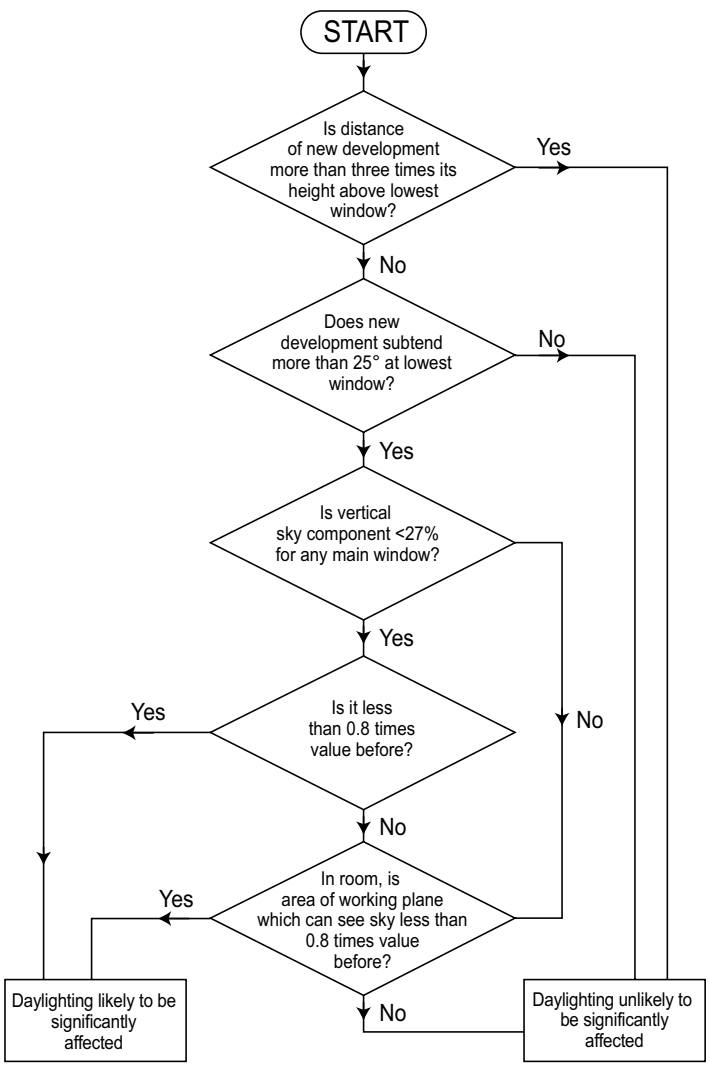

Figure 4.1: VSC decision chart, taken from BRE 209.

Typically, the effect on ground floor windows is greater than the effect on windows of subsequent floors. However, floors above ground floor level have been included in this study to give a more comprehensive assessment.

Assessment Points

The VSC impact assessment has been carried out on the windows/rooms of the neighbouring properties that could be affected by the proposed development as highlighted in Figure 1.1 on page 3.

The assessment points for measuring VSC are taken from the centre point of a standard window. If the window being assessed is a full height window, the assessment point is taken at 1600 mm above the finished floor level.

Weighted Averages

If it can be determined or reasonably assumed that multiple windows are servicing the same room, each window has been assessed and a room VSC has been calculated by applying a weighted average calculation to the results.

When calculating weighted averages the proportion of the total glazing area represented for each window is taken into account. It should be noted that assumptions typically need to be made regarding window sizes, so a tolerance should be applied regarding calculated weighted averages.

In instances where weighted averages have been calculated, the VSC figures will be stated for each window on an individual basis as well as the calculated figure to be applied to the room, but the level of effect will only be stated for the room.

Project Assessment

The VSC impact assessment has been carried out on the windows/rooms of the neighbouring properties that could be affected by the proposed development as indicated in Figure 1.1 on page 3. .

The results for the VSC assessment can be found in the appendix results section A.1 on page 26, with analysis of the results in section 5.1.1 on page 19.

4.2.2 Effect on Annual/Winter Probable Sunlight Hours (APSH/WPSH)

Annual/Winter Probable Sunlight Hours (APSH/WPSH) is a measure of sunlight that a given window may expect to receive over the period of a year. The percentage of APSH/WPSH that windows in existing properties receive might be affected by a proposed development.

A proposed development could potentially have a negative effect on the level of sunlight that a neighbouring property receives, if the obstructing building is located to the south and is large in relation to their distance from the existing dwelling. This can be determined if the distance of a proposed development is less than three times its height from an existing dwelling, or if the angle from an existing window to the proposed development subtends 25° to the horizontal when measured in a perpendicular section.

Whether a window is considered for APSH/WPSH impact assessment is based on its orientation. A south-facing window will, in general, receive the most sunlight. North facing windows may receive sunlight on only a handful of occasions in a year, and windows facing eastwards or westwards will receive sunlight only at certain times of the day. Taking this into account, the BRE Guidelines suggest that windows with an orientation within 90 degrees of due south should be assessed.

The above criteria has been used to ensure all windows that could possibly sustain an adverse level of effect have been included in the APSH/WPSH assessment.

The APSH/WPSH for each of the assessed windows will be calculated in the relevant model states, as outlined in section 4.1 on page 12. A comparison between the results generated with these model states will determine the level of effect.

If it can be determined or reasonably assumed that multiple windows are servicing the same room, APSH/WPSH has been calculated for the room rather than the individual windows.

If the room can receive more than 25% of APSH, including at least 5% of the WPSH, then the room should receive enough sunlight.

A proposed development could possibly have a noticeable effect on the sunlight received by an existing window, if the following occurs:

- The APSH value drops below the annual (25%) or winter (5%) guidelines; **and**
- The APSH value is less than 0.8 times the baseline value; **and**
- There is a reduction of more than 4% to the annual APSH.

In some circumstances, the available sunlight during the winter period (WPSH) may both drop below the recommended minimum of 5% with a proposed value of less than 0.8 times the baseline value, but the reduction to annual probable sunlight (APSH) is less than 4%. Such occurrences are considered compliant with the BRE Guidelines, and the impact to WPSH will be stated as '*negligible*' on that basis.

Additionally, where a baseline value is less than 1%, the impact will be considered '*non-applicable*' (n.a.)

Under BRE Guidelines, only main living-rooms need to be assessed for effect on sunlight. In the absence of design layouts or floor plans, or information pertaining to the internal 'as-built' layouts, all windows assumed to be servicing habitable rooms have been included in the APSH/WPSH assessment provided they are orientated within 90° of due south and are in relative close proximity to the proposed development.

Typically, the effect on ground floor windows is greater than the effect on windows of subsequent floors. However, floors above ground floor level have been included in this study to give a more comprehensive assessment.

If it can be determined or reasonably assumed that multiple windows are servicing the same room, the APSH/WPSH has been assessed for the room as opposed to each individual window. When APSH/WPSH is assessed for a room it considers sunlight coming from all windows, but does not double count if sunlight is reaching multiple windows at the same time.

Assessment Points

The assessment points for measuring APSH/WPSH are taken from the centre point of a standard window. If the window being assessed is a full height window, the assessment point is taken at 1600 mm above the finished floor level.

Project Assessment

The APSH/WPSH impact assessment has been carried out on the windows/rooms of the neighbouring properties that could be affected by the proposed development as indicated in Figure 1.1 on page 3.

The results for the APSH/WPSH assessment can be found in the appendix results section A.2 on page 29, with analysis of the results in section 5.1.2 on page 19.

4.2.3 Effect on Sun On Ground in Existing Gardens/Amenity Areas (SOG)

The BRE Guidelines recommend that for a garden or amenity area to appear adequately sunlit throughout the year, at least half the area should receive at least two hours of sunlight on March 21st. As the BRE Guidelines does not provide a clear criteria on which neighbouring properties should be included in an impact on SOG study, 3DDB have carefully considered the neighbouring properties that may be affected when running the impact assessment. Gardens or amenity areas included in this study are typically located within close proximity, to the north of the proposed development.

Where a quantitative assessment has not been carried out it is on the basis that the omitted areas are unlikely to be adversely affected. Such instances may be because the areas are not deemed to be in close proximity to the proposed development or because they are located to the south. Should there be any concerns over the potential impact on any areas that have not been included in the quantitative assessment, a qualitative assessment may be carried out using the shadow study and false colour plans included in the report.

March 21st, also known as the spring equinox, is chosen as the assessment date as daytime and night-time are of approximately equal duration on this date.

The analytical model for SOG impact assessment includes evergreen trees, where applicable, in accordance with the BRE Guidelines. Typically deciduous trees will not be included unless there is a particularly dense belt.

The percentage of assessed areas which can receive two hours or more of direct sunlight on March 21st will be calculated in the relevant model states, as outlined in section 4.1 on page 12. A comparison between the results generated with these model states will determine the level of effect.

A proposed development could possibly have a noticeable effect on the sunlight received by an existing garden and/or amenity area, if the following occurs:

- Half the area of the space does not receive at least two hours of sunlight during the spring equinox; **and**
- The area that receives more than two hours of sun on the spring equinox is less than 0.8 times its former value.

In instances where a baseline value is less than 1%, the impact will be considered '*non-applicable*' (n.a.)

Effect on sunlight to existing neighbouring gardens and/or amenity areas has been assessed to the north of the proposed development, as areas located to the south are unlikely to be affected due to sun direction. Overshadowing is highly unlikely to occur in areas that are due south of any proposed development.

Project Assessment

None of the existing surrounding gardens were deemed to be applicable for SOG impact assessment based on the criteria as per the BRE Gudeilines and as explained in section 4.1.1. Therefore no such study appears in this report.

4.3 Qualitative Assessment - Shadow Study

A shadow study has been carried out to allow a qualitative comparison between the relevant model states, as outlined in section 4.1 on page 12. This visual representation of the shadows cast by the proposed development can be found in the hourly shadow diagrams in the appendix results section B.0 on page 32.

Hourly renderings have been shown from sunrise to sunset on the following dates:

- Spring equinox: March 21st Sunrise 6:25 | Sunset 18:40. (GMT)
- Summer solstice: June 21st. Sunrise 4:57 | Sunset 21:57. (BST)
- Winter solstice: December 21st Sunrise 8:38 | Sunset 16:08. (GMT)

The shadow study has been generated using the same model states as described in section 4.1.1. In certain cases, assumptions or estimations may have been made when modelling elements of the surrounding context and/or proposed site details when creating the various model states. Therefore, it is advisable for a reasonable tolerance to be applied when interpreting shadows in the qualitative assessment.

The hourly renderings of the shadow study will be generated without deciduous trees and with evergreen trees, where applicable, represented as opaque objects when present in the model states.

Note: The spring equinox (March 21st) and autumn equinox (21st September) yield similar shadows, albeit with a one hour difference as daylight saving time (BST) would be in affect. Only the spring equinox was included in the shadow study images in accordance with the BRE Guidelines.

4.4 Quantitative Scheme Performance Assessment Overview

4.4.1 Spatial Daylight Autonomy in Proposed Habitable Rooms (SDA)

Since the publication of the 3rd edition of the BRE Guidelines (BRE 209 - 2022), Spatial Daylight Autonomy (SDA) is the recommended metric for assessing daylight access within a proposed development. Spatial Daylight Autonomy replaces Average Daylight Factor (ADF) in this regard, which was the recommended metric under the 2nd edition of the BRE Guidelines (BRE 209 - 2011).

Spatial Daylight Autonomy assesses whether a room receives sufficient daylight on a working plane during standard operating hours on an annual basis. A given target value should be achieved across 50% of the working plane for half of the daylight hours.

There are two methods for calculating SDA:

- **Calculation method using illuminance level:** This requires the use of a detailed daylight calculation method where hourly (or sub-hourly) internal daylight illuminance values for a typical year are computed using hourly (or sub-hourly) sky and sun conditions derived from climate data appropriate to the site. This calculation method determines daylight provision directly from simulated illuminance values on the reference plane. The illuminance value of at least half the required area of the space should equal or exceed the target values.
- **Calculation method using daylight factor:** The daylight factor method assumes a constant ratio between internal and external illuminance. The daylight factors in the space shall be calculated by any reliable method that is based on the ISO 15469:2004 standard overcast sky (TYPE 1 or TYPE 16). Daylight factors are to be predicted across grid of points on a plane 0.85m above the floor of the space. The daylight factor of at least half the required area of the space should equal or exceed the target values.

It is the opinion of 3DDB that the calculation method using illuminance level better represents a real-world scenario as it accounts for the quality of daylight based on orientation. As such, the illuminance methodology has been adopted for all SDA assessments in this report using a localised EnergyPlus Weather File (IRL_Dublin.039690_IWEC.epw) to apply the relevant climate information.

In terms of housing, *BRE 209* provides target SDA values to be received across at least 50% of the working plane for at least half the daylight hours. The target values differ based on the function of the room assessed:

• 200 Lux for kitchens • 150 Lux for living rooms • 100 Lux for bedrooms

Where rooms serve more than one function, the higher SDA target value should been taken. In new developments, some internal spaces (e.g. studio apartments, shared communal areas etc.) can possibly be of a nature that do not have a predefined target value in BRE 209. In such instances, 3DDB have applied a target value they deem to be appropriate. In the case of the proposed development there is the creche and a number of residential amenity areas on the ground floor level.

3DDB recommend that a SDA target value of 150 Lux be applied to these spaces. The rationale for this target value is that these spaces would mainly be used during the day, hence the target value used for a living room could be deemed appropriate. These rooms have not been included in the calculated compliance rates.

Under I.S. EN 17037 at least 50% of the working plane should receive above 300 lux for at least half the daylight hours, with 95% of the working plane receiving above 100 Lux for all rooms. The target SDA values do not vary depending on the room function under this criteria.

This study has assessed the Spatial Daylight Autonomy (SDA) received in the habitable rooms of the proposed development under the BRE 209 criterion. The SDA of the proposed development has been calculated under the I.S. EN 17037 criterion as part of a supplementary assessment.

Defining Rooms

Definition of rooms has been taken directly from the architectural drawings supplied by the project architect.

In accordance with the BRE Guidelines circulation spaces, corridors, bathrooms etc. have not been assessed.

Indication of the assessed space in each room is provided in the floor plans that correspond to the SDA results in the appendix section “Proposed Apartment Block Floor Plans” on page 41.

Working Plane

The calculation of SDA is carried out on a hypothetical working plane which lies 850 mm from the finished floor level in residential units and 700 mm in academic and office spaces.

In the BRE 209 study the working plane is offset 300 mm from the room boundaries. Under the I.S. En 17037 criteria the working plane is offset 500 mm from the room boundaries. The working plane has a grid density of c. 300 mm.

Material Palette

Following consultation with the design team, material values used for SDA calculations are as per the table below.

Table No. 4.4.1 - Material Palette for SDA Calculations

Object	Material	Reflectance	Object	Material	Reflectance / Transmittance
Exterior walls	Standard Brick	0.3	Interior Walls	Pastel paint	0.70
	Light Brick	0.4	Interior Ceiling	White paint	0.8
	Dark Brick	0.15	Interior Floor	Light timber	0.4
	Render	0.6	Miscellaneous	Miscellaneous	0.5
	Concrete	0.4	Glass	Double glazing	0.8
Ground cover	Paving	0.4		Maintenance Factor	0.91
	Tarmac	0.2		Glass adjusted for maintenance	0.73
	Grass	0.2		Frosted glass	0.5

Trees

The SDA results have been generated with trees represented in both summer and winter states of foliage as per the BRE Guidelines. The study has also been carried out without trees included in the analytical model. The assessment without trees should be considered an additional assessment. Its purpose is to demonstrate that in some instances the inclusion of trees will cause a reduction to daylight levels. However, this is a necessary consequence of a balanced built environment that includes trees and the benefits they bring.

I.S. EN 17037 does not give any advice on how to include trees in the assessment. The supplementary SDA study, under the I.S. EN 17037 criterion, has been carried out with trees both in winter and summer foliage and without trees as per the assessment under the BRE Guidelines.

Project Assessment

The results for the study on SDA can be found in the appendix results section C.2 on page 48.

Analysis of the results can be found in section 5.2.1 on page 20.

The results of the supplementary SDA study under the I.S. EN 17037 criterion can be found in section D.0 on page 74.

4.4.2 Sunlight Exposure in Proposed Habitable Rooms (SE)

Since the publication of the 3rd edition of the BRE Guidelines (BRE 209 - 2022), Sunlight Exposure (SE) is the recommended metric for assessing sunlight access within a proposed development. Sunlight Exposure replaces APSH/WPSH in this regard, which was the recommended metric under the 2nd edition of the BRE Guidelines (BRE 209 - 2011).

Sunlight exposure (SE) is a measure of sunlight that a given window may expect to receive on a given date between the 1st of February and the 21st of March. The BRE guidelines suggest that March 21st (equinox) is used as the assessment date.

In the presence of trees, SE results have been generated, both with deciduous trees as opaque objects and without the inclusion of deciduous trees, in accordance with the BRE Guidelines. Evergreen trees have been included as opaque objects, where applicable, in both states.

The level of sunlight exposure is categorised as follows:

- 1.5 Hours - Minimum
- 3 Hours - Medium
- 4 Hours - High

The recommendation for dwellings is that at least one habitable room, preferably a main living room, should receive at least the minimum criterion. Should no room within a given unit meet the recommended minimum level of sunlight exposure, it will be stated as non-compliant.

Sunlight exposure is carried out on habitable rooms within a proposed development. The assessment point for windows is 1.2m above the finished floor level, or 0.3m above the sill level (which ever is higher). If a room has multiple windows, the amount of sunlight received by each can be added together provided they occur at different times and sunlight hours are not double counted.

The criterion applies to rooms of all orientations, although if a room faces significantly north of due east or west it is unlikely to be met. As such, it is not always possible to achieve full compliance, especially in developments that contain single aspect units.

Project Assessment

The results for the study on sunlight exposure can be found in the appendix results section C.3 on page 60, with analysis of the results in section 5.2.2 on page 22.

4.4.3 Sun On Ground in Proposed Outdoor Amenity Areas (SOG)

The BRE Guidelines recommend that for a garden or amenity area to appear adequately sunlit throughout the year, at least half of it should receive at least two hours of sunlight on March 21st.

March 21st, also known as the spring equinox, is chosen as the assessment date as daytime and night-time are of approximately equal duration on this date.

The analytical model for SOG assessment in proposed amenity areas includes evergreen trees, where applicable, as per the BRE Guidelines. Typically deciduous trees will not be included unless there is a particularly dense belt.

A quantitative SOG assessment has been carried out on the areas as indicated by the project architect. The shadow study and false colour plans allow for a qualitative assessment for all other areas.

The portion of each assessed space capable of receiving 2 hours of direct sunlight on March 21st has been calculated individually. These areas can be combined to give the development average where appropriate.

Project Assessment

The levels of sunlighting to proposed amenity areas, as indicated by the architect, have been assessed. However, it should be noted that the numbering of these spaces in the Daylight and Sunlight Assessment Report has been assigned by 3DDB specifically for the purposes of this report. If other consultants are referencing these spaces in their own reports, it is unlikely they will be numbered the same.

The results for the study on sun on ground in the proposed outdoor amenity areas (including a visual representation in the form of 2-hour false colour plans) can be found in the appendix results section C.4 on page 72, with analysis of the results in section 5.2.3 on page 22.

4.4.4 No Sky Line in Proposed Habitable Rooms (NSL)

The no sky line divides the areas of the working plane which can receive direct skylight, from those which cannot. It indicates the distribution of direct daylight within a room.

The BRE Guidelines recommend the No Sky Line study as an appropriate metric for an impact assessment to daylight, but only where room layouts are known.

“The calculation can only be carried out where room layouts are known. Using estimated room layouts is likely to give inaccurate results and is not recommended.“

All advice given for NSL in the BRE Guidelines are in relation to impact assessments. NSL is not mentioned in the BRE section regarding daylight in new developments. Regardless, a NSL assessment was carried out on the proposed development as a supplementary study as it is requested in the DCC development plan 2022-2028. Although the proposed development is not located within Dublin City, the NSL study has been included to provide consistency across 3DDB daylight and sunlight assessments.

As the BRE Guidelines does not give advice on target NSL values for proposed rooms, no compliance rate has been stated. However a no skyline of 80% could be considered an appropriate figure given that the BRE Guidelines state that supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.

The results of the supplementary NSL study can be found in section D.0 on page 74.

5.0 Analysis of Results

5.1 Analysis of Impact Assessment Results

5.1.1 Effect on Vertical Sky Component (VSC)

The effect on VSC has been assessed for 19 no. windows/rooms across the surrounding properties along Sallynoggin Lower Road, Parnell Street and Sallynoggin Villas.

Using the rationale explained in section 3.2 on page 9, the effect to VSC on 12 no. of these windows (or rooms if an average of multiple windows has been taken) would be considered '*negligible*' and 7 no. '*minor adverse*'.

This shows that c. 63% of the assessed windows would experience a '*negligible*' level of effect.

While it is recognized that the proposed development will cause some level of impact on nearby windows along 9-17 Sallynoggin Lower Road, none of the affected windows have been categorised as experiencing anything higher than '*minor adverse*' levels of effect. The number of windows that qualify for assessment is also relatively low, which may lead to the compliance rate appearing worse than it is due to the small quantity of windows that fall under the study based on the BRE guidelines criteria. It is opinion of 3DDB that considering the desire for the redevelopment of this vacant, zoned residential, subject site, the levels of effect could be deemed acceptable. Furthermore the results generated on the affected windows are not too far from the guideline value of 27% set out in the BRE Guidelines.

The results of the study on VSC can be found in section A.1 on page 26.

5.1.2 Effect on Annual/Winter Probable Sunlight Hours (APSH/WPSH)

The effect on APSH/WPSH has been assessed for 19 no. of windows/rooms of the surrounding existing properties across Sallynoggin Lower Road, Parnell Street and Sallynoggin Villas. Only windows that have an orientation within 90 degrees of due south have been included in this assessment.

Using the rationale explained in section 3.2 on page 9, the effect on the APSH of all of these windows or rooms would be considered '*negligible*'.

100% of these windows have met the criteria for effect on APSH as set out in the BRE Guidelines.

The effect on the WPSH of all of these windows or rooms would be considered '*negligible*'.

100% of these windows have met the criteria for effect on WPSH as set out in the BRE Guidelines.

These results are very positive as they indicate that the proposed development would not adversely impact on the neighbouring properties' access to natural sunlight throughout the year, including the winter months.

The results of the study on APSH/WPSH can be found in Section A.2 on page 29.

5.2 Analysis of Scheme Performance Results

5.2.1 Spatial Daylight Autonomy (SDA)

This study has assessed the Spatial Daylight Autonomy (SDA) received in all habitable rooms within the residential portion of the proposed development. This has ensured that a clear understanding has been obtained regarding the daylight performance of the proposed development.

This proposed development consists of 138 no. units, which makes up approximately 402 no. habitable rooms.

Under the criteria as set out in the BRE 209, the SDA value in 380 & 381 no. habitable rooms meet or exceed their target values in the summer and winter time calculations respectively. This gives a circa compliance rate of c.95% with trees represented in both summer state and winter state.

The supplementary SDA assessment that does not include trees has presented the same compliance rate of c.95%. In this state, 20 no. rooms did not meet the recommended Lux levels for SDA. For the majority of rooms, this is mainly due to their constrained location which is either at the inner corners of the scheme or in close proximity to the bridge structure connecting Block A and Block B. However, it is worth noting that 9 no. of these rooms have SDA values above 40%, which is not too far from the compliant guideline value of 50%.

The inclusion of the proposed trees in the calculations affects the compliance of 2 no. additional rooms on top of the 20 no rooms explained above. These are the secondary bedroom of unit A1-1.03 and the LKD of unit B1-2.11. However, the SDA value of these rooms have presented just below the minimum recommended Lux levels set by the BRE Guidelines, 48% and 47% in winter and summer states respectively.

Considering the importance of trees with regard to environmental and planning reasons, these SDA values and corresponding compliance rates, presented for this scheme, should be considered acceptable.

I.S. EN 17037 sets out more onerous recommendations for SDA. As such, the number of habitable rooms achieving compliance under this standard is 332 with trees in both summer and winter state. This gives a reduced circa compliance rate of c.83% in both summer and winter calculations. The additional SDA assessment, under this standard, that does not include trees has shown the same compliance rate of c. 83%.

With regards to internal daylighting, Section 6.7 of the Sustainable Urban Housing: Design Standards for New Apartments July 2023, states the following:

"Where an applicant cannot fully meet all of the requirements of the daylight provisions above, this must be clearly identified and a rationale for any alternative, compensatory design solutions must be set out, which planning authorities should apply their discretion in accepting taking account of its assessment of specific. This may arise due to a design constraints [sic] 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."

Where rooms are compliant with the criteria of BRE 209 and non-compliant with the I.S. EN 17037 criteria, it is the recommendation of 3D Design Bureau that these rooms will appear adequately daylit. The rationale for this opinion is that the criteria given in BRE 209 is room-specific, unlike I.S. EN 17037. BRE 209 takes into account the different daylight requirements of given room types, I.S. EN 17037 does not.

Based on the above statements, compensatory design solutions have been provided by the project architect where rooms do not achieve the daylight provision targets as set out in the BRE Guidelines. Compensatory design solutions have also been provided for rooms that do not achieve the recommended level of daylight under the supplementary assessment which applies the I.S. EN 17037 criteria.

The following list indicates all units that do not achieve the recommended level of daylight with regards to BRE 209 and the compensatory design solution for each:

- B1-0.02 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to communal open space on floor.
- B2-0.01 exceeds unit floor area requirement (5.8% over minimum standard). Overlooks communal open space. Access to communal open space on floor.B2-0.01- Bedroom: Unit overlooks communal open space.
- A1-1.03 exceeds unit floor area requirement (11.8% over minimum standard). Dual aspect unit. Access to shared roof terrace.
- A1-1.04 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- A1-1.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-1.01 exceeds unit floor area requirement (22.9% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-1.02 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-1.04 exceeds unit floor area requirement (4.1% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-1.10 exceeds unit floor area requirement (2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.

- A1-2.04 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- A1-2.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-2.02 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-2.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- B1-2.11 exceeds unit floor area requirement (2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- A1-3.04 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- A1-3.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-3.02 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.
- B1-3.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- B1-4.02 exceeds unit floor area requirement (10.2% over minimum standard). Overlooking public plaza. Access to shared roof terrace.

Given the site constraints on the proposed site and the fact that an appropriate level of density is being targeted, the results of the SDA study could be considered to be very favourable.

In cases where rooms comply with the criteria of BRE 209 but do not meet the criteria of I.S. EN 17037, 3D Design Bureau recommends that these rooms will still receive adequate daylighting. This recommendation is based on the fact that BRE 209 provides room-specific criteria, unlike I.S. EN 17037. BRE 209 considers the varying daylight requirements for different room types, which I.S. EN 17037 does not account for. However, compensatory design solutions have also been incorporated for units that do not meet the recommended daylight levels according to I.S. EN 17037.

- B1-0.01 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks communal open space. Access to communal open space on floor.
- B2-0.02 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to communal open space on floor.
- A1-1.06 exceeds unit floor area requirement (2.2% over minimum standard). Dual aspect unit (South-East and South-West outlooks). Access to shared roof terrace.
- B1-1.03 exceeds unit floor area requirement (11.8% over minimum standard). Favourable outlook towards sea. Access to shared roof terrace.
- B1-1.05 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- B1-1.09 exceeds unit floor area requirement (2.2% over minimum standard). Favourable outlook overlooking public plaza. Access to shared roof terrace.
- B2-1.01 exceeds unit floor area requirement (14.4% over minimum standard). Dual aspect unit (overlooks communal open space and favourable outlook towards sea). Access to shared roof terrace.
- B2-1.03 exceeds unit floor area requirement (5.6% over minimum standard). Favourable outlook towards sea. Access to shared roof terrace.
- B2-1.08 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- A1-2.06 exceeds unit floor area requirement (2.6% over minimum standard). Favourable South-East outlook. Access to shared roof terrace.
- B1-2.01 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks public plaza. Access to shared roof terrace.
- B1-2.06 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- B2-2.01 exceeds unit floor area requirement (14.4% over minimum standard). Favourable outlook overlooking communal open space. Access to shared roof terrace.
- B2-2.03 exceeds unit floor area requirement (5.6% over minimum standard). Favourable outlook towards sea. Access to shared roof terrace.
- B2-2.08 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- A1-3.06 exceeds unit floor area requirement (2.6% over minimum standard). Favourable South-East outlook. Access to shared roof terrace.

- B1-3.01 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks public plaza. Access to shared roof terrace.
- B1-3.11 exceeds unit floor area requirement (2% over minimum standard). Overlooks public plaza. Access to shared roof terrace.
- B2-3.01 exceeds unit floor area requirement (14.4% over minimum standard). Dual aspect unit (overlooks communal open space and favourable outlook towards sea). Access to shared roof terrace.
- A1-4.05 exceeds unit floor area requirement (10.2% over minimum standard). Favourable South-East outlook. Access to shared roof terrace.
- B1-4.01 exceeds unit floor area requirement (22.9% over minimum standard). Overlooks public plaza. Access to shared roof terrace.
- B1-4.05 exceeds unit floor area requirement (4.1% over minimum standard). Overlooks communal open space. Access to shared roof terrace.
- B2-4.01 exceeds unit floor area requirement (14.4% over minimum standard). Dual aspect unit (overlooks communal open space and favourable outlook towards sea). Access to shared roof terrace.
- B2-5.01 exceeds unit floor area requirement (14.4% over minimum standard). Dual aspect unit (overlooks communal open space and favourable outlook towards sea). Access to shared roof terrace.

The results for the study on SDA can be seen in section C.2 on page 48.

5.2.2 Sunlight Exposure (SE)

A sunlight exposure assessment has been carried out on all habitable rooms within the residential portion of the proposed development. The assessment has been carried out with deciduous trees represented both as opaque objects and removed from the model in accordance with the BRE Guidelines.

In total 138 no. units have been assessed, Using the rationale explained in section 3.3 on page 11, the level of sunlight exposure for 66 no. units is considered *high*, 11 no. *medium*, 29 no. have reached the *minimum* recommendation with 32 units below the *minimum* recommendation.

The SE assessment has shown that circa c. 77% of the proposed units meet the criteria for sunlight exposure as set out in the BRE Guidelines. **Note:** For a unit to be compliant under BRE 209, only one habitable room within the unit needs to meet the guideline values.

Whilst the criterion applies to rooms of all orientations, it should be noted that if a room faces significantly north of due east or west it is unlikely to be met. As such, it is not always possible to achieve full compliance. However, design amendments from the previous application have been sympathetic to this, and the compliance rate for SE has increased from c. 71 % to c. 77%.

Note: For a unit to be compliant under BRE 209, only one habitable room within the unit needs to meet the guideline values.

No recommendation is made regarding the performance of a development as a whole for SE performance within the BRE Guidelines. However, it is the opinion of 3DDB that the proposed development performs adequately in this regard.

The results for the study on SE in the habitable rooms of the proposed units can be seen in section C.3 on page 60.

5.2.3 Sun On Ground in Proposed Outdoor Amenity Areas

This study has assessed the level of sunlight on March 21st within the proposed amenity areas.

In total 3 no. spaces have been assessed. They include the public open space and the communal open space, as marked by the landscape architect. Also, the open space of the creche has been assessed.

All of them have met the criteria as set out in the BRE Guidelines.

These results show that the amenity areas designed within the development site would be all able to receive good levels of sunlight.

The results for the study on sunlighting in the proposed outdoor amenity spaces can be found in section C.4 on page 72.

A visual representation of these readings can be seen in the false colour plan in section C.4 and in the hourly shadow diagrams for March 21st in section B.1 on page 32 of the appendix section of this report.

6.0 Conclusion

3D Design Bureau were commissioned to carry out a comprehensive daylight and sunlight assessment, along with an accompanying shadow study for the proposed Large-scale Residential Development at Glenageary, Co. Dublin.

The impact assessment for this report has quantified the effect the proposed development would have on the level of daylight and sunlight received by neighbouring properties that are in close proximity to the proposed development. The findings for VSC have shown that the properties located along 9-17 Sallynoggin Lower Road would experience a level of impact which was categorised as '*minor adverse*'. Regarding the levels of sunlight, the APSH/WPSH results have shown that all the windows assessed would be compliant with the BRE Guidelines.

The scheme performance assessment for this report has quantified the level of daylight and sunlight within the proposed development. The SDA of the proposed apartment building has yielded very positive results, with compliance rates of circa c. 95% with and without the inclusion of trees in the calculations. Also, the supplementary study carried out under the more onerous recommendations of the I.S. EN 17037 has shown a relatively high compliance rate.

The Sunlight Exposure (SE) assessment has shown a level of compliance of c. 77%, which should be considered acceptable, and an increase to the compliance rates presented in the previous application.

The results for Sun on Ground (SOG), the false colour plans and shadow study diagrams are showing that future occupants will enjoy open amenity spaces that are capable of receiving good levels of sunlight.

In conclusion, 3DDB are of the opinion that the scheme is performing very well from a daylight and sunlight point of view. It is acknowledged that the proposed development will cause some minor impact to some of the nearby windows. However, the drop in the levels of daylight of the affected windows could be deemed to be within an acceptable range.

Appendix - Results

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3D DESIGN BUREAU

Appendix Contents

Assessment criteria and detailed analysis of results can be found in the accompanying report.

A.0 Impact Assessment Results

A.1 Effect on Vertical Sky Component (VSC)

Below is an example of the table used to describe the effect on VSC.

Table Example. A.1 - VSC Impact Assessment						
Window Number	Baseline VSC Value	Proposed VSC Value	Ratio of Proposed VSC to Baseline VSC	Recommended Minimum VSC	Level of Compliance with BRE Guidelines	Effect of Proposed Development
A	**B**	**C**	**D**	**E**	**F**	**G**

A: Window Number

The number in this column will identify the assessed window. All windows are represented visually in the corresponding figure.

B: Baseline VSC Value

The *Baseline VSC Value* represents the VSC value of the assessed window which is calculated in the existing baseline model state (as explained in the "Building the Model States" on page 12).

C: Proposed VSC Value

The *Proposed VSC Value* represents the VSC value of the assessed window which is calculated in the proposed model state (as explained in the "Building the Model States" on page 12).

D: Ratio of Proposed VSC to Baseline VSC

This column expressed the ratio of change between the baseline VSC value and the proposed VSC value. The BRE Guidelines recommend that if the proposed value is less than 0.8 times the baseline value, then the reduction in daylight is more likely to be perceptible.

E: Recommended minimum VSC

The *BRE Target Value* for each window has been set according to the BRE Guidelines. The Guidelines state that a proposed development could possibly have a noticeable effect on the daylight received by an existing window, if the VSC value **both** drops below the guideline value of 27% **and** the VSC value is less than 0.8 times the baseline value.

Therefore, to determine the *recommended minimum Value*, 80% of the *Baseline VSC value* has been calculated. If this value is above the 27% threshold, a target value of 27% will be applied. If 80% of the baseline value is below 27%, then 80% of the baseline value is the appropriate target value.

F: Level of Compliance with the BRE Guidelines

This column states the compliance of the *Proposed VSC Value* with the *recommended minimum VSC* as per the BRE Guidelines. In essence, it shows whether or not the assessed window would experience a perceptible level of impact. If the window complies with the BRE Guidelines this cell will state "*BRE Compliant"*. If the window does not meet the criteria as set out in the BRE Guidelines, a percentage of compliance with the *recommended minimum* will be stated.

G: Effect of Proposed Development

The levels of effect in this column describe the effect an assessed window will experience, based on its compliance with the *BRE Target Value*. A full list of definitions and a numerical rationale for each can be found in the section *"Definition of Effects"* on page 10.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

A.1.1 Sallynoggin Road Lower and Parnell Street

Table No. A.1.1 - VSC Results: Sallynoggin Road Lower and Parnell Street						
Window Number	Baseline VSC Value	Proposed VSC Value	Ratio of Proposed VSC to Baseline VSC	Recommended minimum VSC*	Level of Compliance with BRE Guidelines	Effect of Proposed Development**
21a	36.36%	29.92%	0.82	27.00%	BRE Compliant	Negligible
21b	36.78%	29.32%	0.80	27.00%	BRE Compliant	Negligible
19a	37.13%	28.52%	0.77	27.00%	BRE Compliant	Negligible
17a	37.41%	27.60%	0.74	27.00%	BRE Compliant	Negligible
17b	37.65%	26.41%	0.70	27.00%	98%	Minor Adverse
15a	37.82%	25.27%	0.67	27.00%	94%	Minor Adverse
1A#1	37.75%	24.24%	0.64	27.00%	90%	-
1A#2	38.09%	25.34%	0.67	27.00%	94%	-
1A#3	36.20%	32.54%	0.90	27.00%	BRE Compliant	-
1A#	37.23%	27.96%	0.75	27.00%	BRE Compliant	Negligible

* The BRE Guidelines state that in order for a proposed development to have a noticeable effect on the VSC of an existing window, the value needs to both drop below the stated target value of 27% **and** be less than 0.8 times the baseline value.

** For the interpretation of level of effects please refer to"3.2 Definition of Effects" on page 10.

If it can be determined or reasonably assumed that multiple windows are servicing the same room, each window has been assessed and a weighted average has been calculated to determine the level of effect on the room. In such instances, the 'effect of proposed development' column will have the symbol "-" for the individual windows, with the level effect stated in the row associated with the corresponding room.

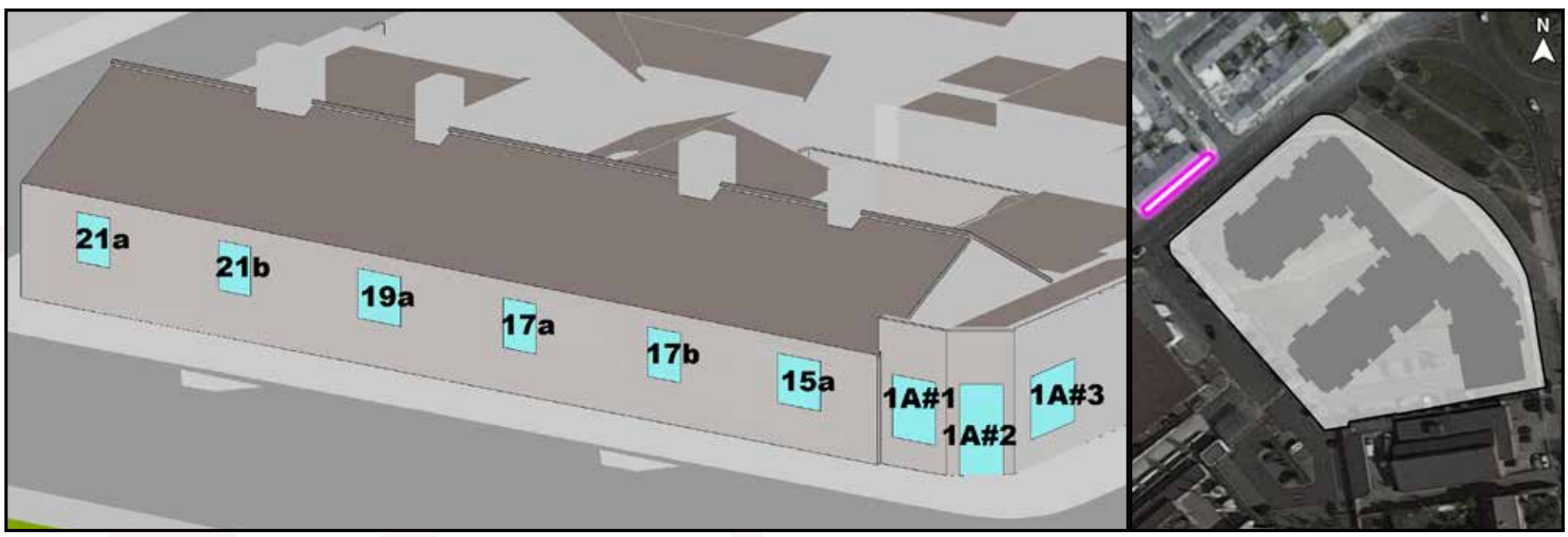


Figure A.1: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.1.2 Sallynoggin Road Lower and Sallynoggin Villas

Table No. A.1.2 - VSC Results: Sallynoggin Road Lower and Sallynoggin Villas						
Window Number	Baseline VSC Value	Proposed VSC Value	Ratio of Proposed VSC to Baseline VSC	Recommended minimum VSC*	Level of Compliance with BRE Guidelines	Effect of Proposed Development**
13a	38.29%	22.70%	0.59	27.00%	84%	Minor Adverse
13b	38.34%	23.14%	0.60	27.00%	86%	Minor Adverse
11a	38.37%	23.85%	0.62	27.00%	88%	Minor Adverse
9a	38.40%	24.97%	0.65	27.00%	92%	Minor Adverse
9b	38.43%	26.36%	0.69	27.00%	98%	Minor Adverse
7a	38.45%	27.82%	0.72	27.00%	BRE Compliant	Negligible
5a	38.47%	29.14%	0.76	27.00%	BRE Compliant	Negligible
5b	38.48%	30.24%	0.79	27.00%	BRE Compliant	Negligible
3a	38.50%	31.31%	0.81	27.00%	BRE Compliant	Negligible
20a	37.92%	33.94%	0.90	27.00%	BRE Compliant	Negligible
20b	38.99%	35.04%	0.90	27.00%	BRE Compliant	Negligible
20c	39.00%	35.28%	0.90	27.00%	BRE Compliant	Negligible

* The BRE Guidelines state that in order for a proposed development to have a noticeable effect on the VSC of an existing window, the value needs to both drop below the stated target value of 27% **and** be less than 0.8 times the baseline value.

** For the interpretation of level of effects please refer to"3.2 Definition of Effects" on page 10.

If it can be determined or reasonably assumed that multiple windows are servicing the same room, each window has been assessed and a weighted average has been calculated to determine the level of effect on the room. In such instances, the 'effect of proposed development' column will have the symbol "-" for the individual windows, with the level effect stated in the row associated with the corresponding room.

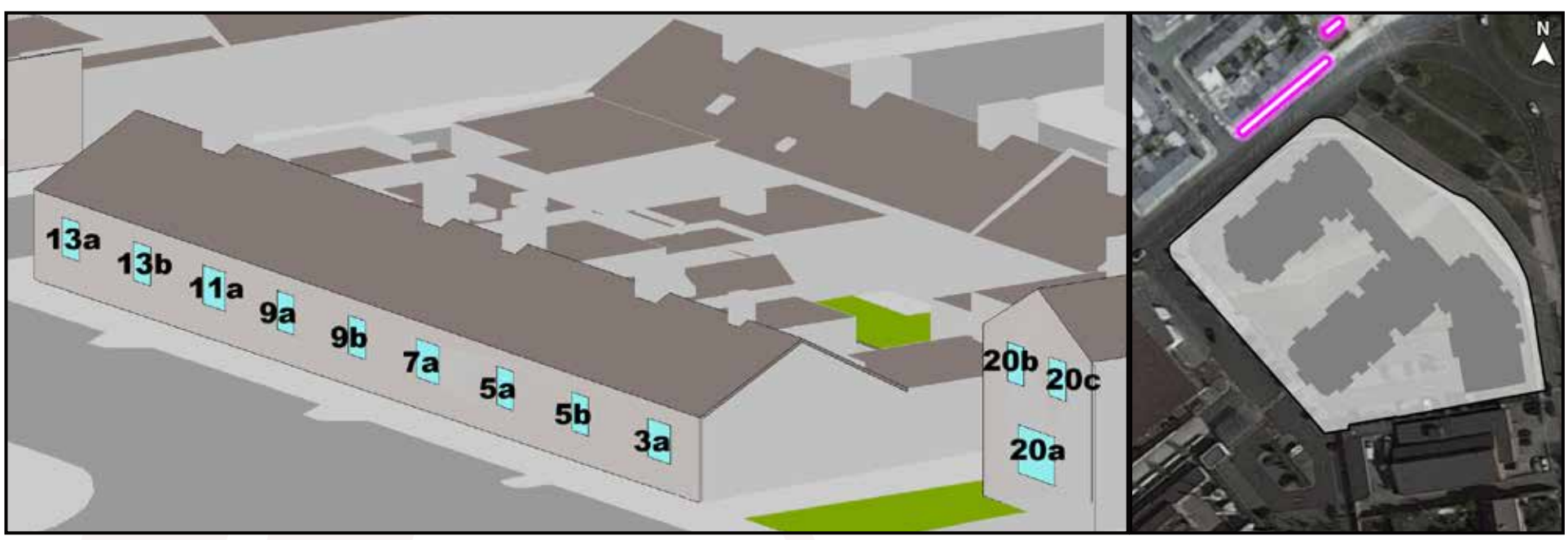


Figure A.2: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.2 Effect on Annual/Winter Probable Sunlight Hours (APSH/WPSH)

Below is an example of the table used to describe the effect to the APSH/WPSH of existing windows.

Table Example. A.2 - APSH/WPSH Impact Assessment						
Window Number	Baseline APSH/WPSH	Proposed APSH/WPSH	Ratio of Proposed to Baseline APSH/ WPSH	Recommended Minimum APSH/WPSH	Level of Compliance with BRE Guidelines	Effect of Proposed Development
A	**B**	**C**	**D**	**E**	**F**	**G**

A: Window Number

The number in this column will identify the assessed window. All windows are represented visually in the corresponding figure.

B: Baseline APSH/WPSH

The *Baseline APSH/WPSH Value* represents percentage of the probable sunlight hours that the assessed window can receive, calculated in the existing baseline model state (as explained in the "Building the Model States" on page 12). The annual and winter assessments will be represented in separate tables.

C: Proposed APSH/WPSH

The *Proposed APSH/WPSH Value* represents the percentage of probable sunlight hours that the assessed window can receive, calculated in the proposed model state (as explained in the "Building the Model States" on page 12).

D: Ratio of Proposed to Baseline APSH/WPSH

This column expressed the ratio of change between the baseline APSH/WPSH value and the proposed APSH/WPSH value. The BRE Guidelines recommend that if the proposed value is less than 0.8 times the baseline value, then the reduction to sunlight is more likely to be perceptible.

E: Recommended Minimum APSH/WPSH

The *BRE Target Value* for each window has been set according to the BRE Guidelines. The Guidelines state that a proposed development could possibly have a noticeable effect on the sunlight received by an existing window, if the APSH value drops below the annual (25%) or WPSH value below the winter (5%) guidelines; **and** the APSH/WPSH value is less than 0.8 times the baseline value; **and** there is a reduction of more than 4% to the APSH.

Therefore, to determine the *recommended minimum APSH Value* for the annual study, 80% of the *Baseline APSH value* has been calculated. If this value is above the 25% threshold, a target value of 25% will be applied. If 80% of the baseline value is below 25%, then 80% of the baseline value is the appropriate target value.

To determine the *recommended minimum WPSH Value* for the winter study, 80% of the *Baseline winter APSH value* has been calculated. If this value is above the 5% threshold, a target value of 5% will be applied. If 80% of the baseline value is below 5%, then 80% of the baseline value is the appropriate target value.

F: Level of Compliance with BRE Guidelines

This column states the compliance of the *Proposed APSH/WPSH Value* with the *recommended minimum APSH/WPSH* as per the BRE Guidelines. In essence, it shows whether or not the assessed window would experience a perceptible level of impact. If the window complies with the BRE Guidelines this cell will state "*BRE Compliant*". If the window does not meet the criteria as set out in the BRE Guidelines, a percentage of compliance with the *recommended minimum* will be stated.

G: Effect of Proposed Development

The levels of effect in this column describe the effect an assessed window will experience, based on its compliance with the *BRE Target Value*. A full list of definitions and a numerical rationale for each can be found in the section *"Definition of Effects"* on page 10.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

A.2.1 Sallynoggin Road Lower and Parnell Street - Annual Probable Sunlight Hours

Table No. A.2.1 - APSH Results: Sallynoggin Road Lower and Parnell Street						
Window Number	Baseline APSH	Proposed APSH	Ratio of Proposed APSH to Baseline APSH	Recommended minimum APSH*	Level of Compliance with BRE Guidelines	Effect of Proposed Development
21a	74.05%	59.91%	0.81	25.00%	BRE Compliant	Negligible
21b	74.98%	59.05%	0.79	25.00%	BRE Compliant	Negligible
19a	75.99%	59.52%	0.78	25.00%	BRE Compliant	Negligible
17a	76.53%	57.91%	0.76	25.00%	BRE Compliant	Negligible
17b	77.31%	57.31%	0.74	25.00%	BRE Compliant	Negligible
15a	77.47%	54.31%	0.70	25.00%	BRE Compliant	Negligible
1A#	74.67%	52.22%	0.70	25.00%	BRE Compliant	Negligible

A.2.2 Sallynoggin Road Lower and Parnell Street - Winter Probable Sunlight Hours

Table No. A.2.2 - WPSH Results: Sallynoggin Road Lower and Parnell Street						
Window Number	Baseline WPSH	Proposed WPSH	Ratio of Proposed WPSH to Baseline WPSH	Recommended minimum WPSH*	Level of Compliance with BRE Guidelines	Effect of Proposed Development
21a	26.96%	22.84%	0.85	5.00%	BRE Compliant	Negligible
21b	27.89%	23.43%	0.84	5.00%	BRE Compliant	Negligible
19a	28.90%	23.39%	0.81	5.00%	BRE Compliant	Negligible
17a	29.45%	22.31%	0.76	5.00%	BRE Compliant	Negligible
17b	30.23%	21.02%	0.70	5.00%	BRE Compliant	Negligible
15a	30.38%	18.80%	0.62	5.00%	BRE Compliant	Negligible
0	0.00%	0.00%	0.00	0.00%	0%	0

* The BRE Guidelines state that in order for a proposed development to have a noticeable effect on the APSH/WPSH of an existing window, the value needs to drop below the stated target value of 25% (annual) / 5% (winter) **and** be less than 0.8 times the baseline value **and** it has to have a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

** For the interpretation of level of effects please refer to “3.2 Definition of Effects” on page 10.

If it can be determined or reasonably assumed that multiple windows are servicing the same room, APSH/WPSH has been calculated for the room rather than the individual windows.

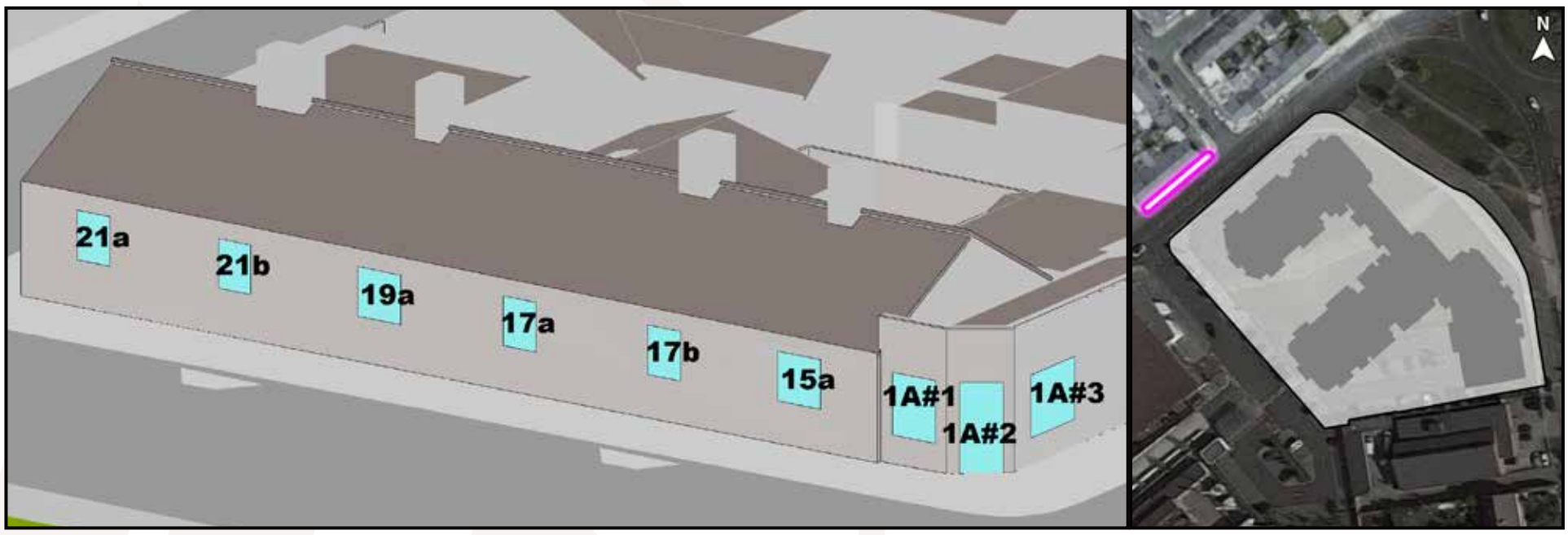


Figure A.3: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.2.3 Sallynoggin Road Lower and Sallynoggin Villas - Annual Probable Sunlight Hours

Table No. A.2.4 - APSH Results: Sallynoggin Road Lower and Sallynoggin Villas						
Window Number	Baseline APSH	Proposed APSH	Ratio of Proposed APSH to Baseline APSH	Recommended minimum APSH*	Level of Compliance with BRE Guidelines	Effect of Proposed Development
13a	77.62%	50.07%	0.65	25.00%	BRE Compliant	Negligible
13b	77.62%	51.39%	0.66	25.00%	BRE Compliant	Negligible
11a	77.62%	52.26%	0.67	25.00%	BRE Compliant	Negligible
9a	77.62%	53.85%	0.69	25.00%	BRE Compliant	Negligible
9b	77.70%	56.31%	0.72	25.00%	BRE Compliant	Negligible
7a	77.70%	57.09%	0.73	25.00%	BRE Compliant	Negligible
5a	77.54%	59.21%	0.76	25.00%	BRE Compliant	Negligible
5b	77.47%	60.53%	0.78	25.00%	BRE Compliant	Negligible
3a	77.39%	61.93%	0.80	25.00%	BRE Compliant	Negligible
20a	75.52%	66.53%	0.88	25.00%	BRE Compliant	Negligible

A.2.4 Sallynoggin Road Lower and Sallynoggin Villas - Winter Probable Sunlight Hours

Table No. A.2.4 - WPSH Results: Sallynoggin Road Lower and Sallynoggin Villas						
Window Number	Baseline WPSH	Proposed WPSH	Ratio of Proposed WPSH to Baseline WPSH	Recommended minimum WPSH*	Level of Compliance with BRE Guidelines	Effect of Proposed Development
0	0.00%	0.00%	0.00	0.00%	0%	0
0	0.00%	0.00%	0.00	0.00%	0%	0
1A#	28.59%	14.14%	0.49	5.00%	BRE Compliant	Negligible
13a	30.77%	10.72%	0.35	5.00%	BRE Compliant	Negligible
13b	30.77%	10.14%	0.33	5.00%	BRE Compliant	Negligible
11a	30.77%	10.07%	0.33	5.00%	BRE Compliant	Negligible
9a	30.77%	10.88%	0.35	5.00%	BRE Compliant	Negligible
9b	30.85%	11.78%	0.38	5.00%	BRE Compliant	Negligible
7a	30.85%	11.87%	0.38	5.00%	BRE Compliant	Negligible
5a	30.69%	13.36%	0.44	5.00%	BRE Compliant	Negligible
5b	30.61%	13.91%	0.45	5.00%	BRE Compliant	Negligible

* The BRE Guidelines state that in order for a proposed development to have a noticeable effect on the APSH/WPSH of an existing window, the value needs to drop below the stated target value of 25% (annual) / 5% (winter) **and** be less than 0.8 times the baseline value **and** it has to have a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

** For the interpretation of level of effects please refer to “3.2 Definition of Effects” on page 10.

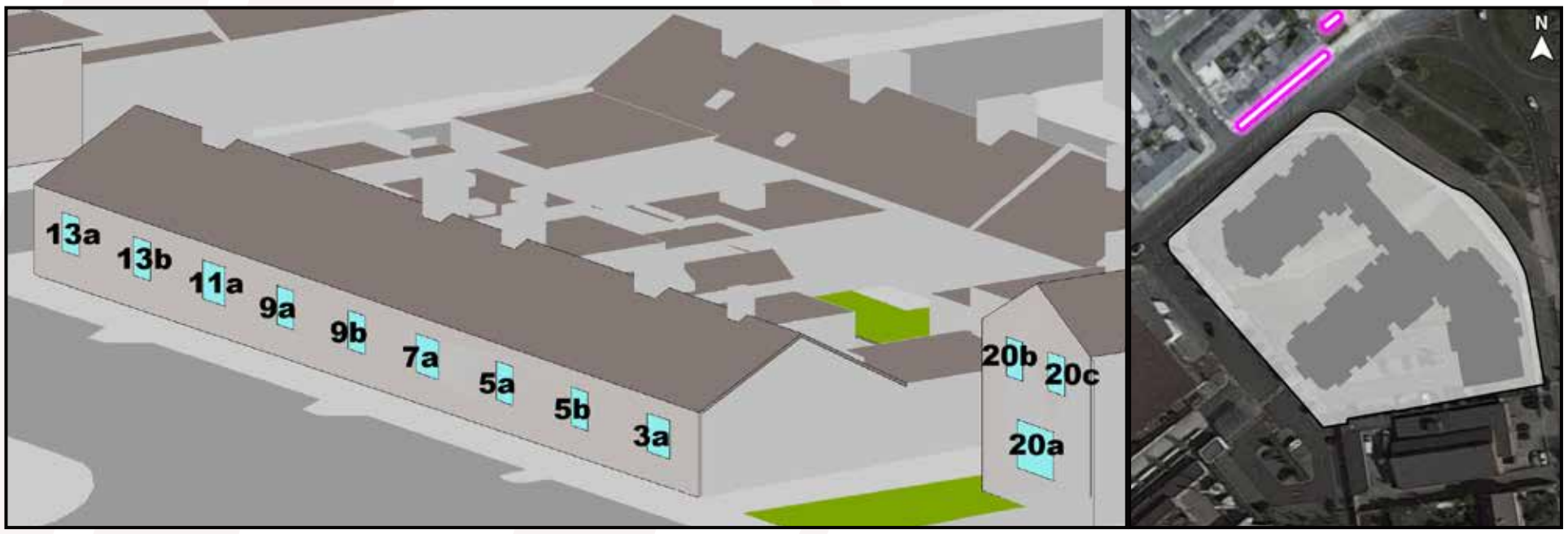


Figure A.4: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

N

Baseline	Proposed
March 21st 7:00	
March 21st 8:00	
March 21st 9:00	
March 21st 10:00	

B.0 B.1	Shadow Studies Shadow Study 21 March	Project: Glenageary Gate LRD	3D DESIGN BUREAU
	March 21st Sunrise 6:25 | Sunset 18:40	Applicant: Red Rock Glenageary Ltd.	

N

Baseline	Proposed
March 21st 11:00	
March 21st 12:00	
March 21st 13:00	
March 21st 14:00	

March 21st
Sunrise 6:25 | Sunset 18:40

Project: Glenageary Gate LRD

Applicant: Red Rock Glenageary Ltd.

3D DESIGN BUREAU

N

Baseline	Proposed
March 21st 15:00	
March 21st 16:00	
March 21st 17:00	
March 21st 18:00	

March 21st
Sunrise 6:25 | Sunset 18:40

Project: Glenageary Gate LRD

Applicant: Red Rock Glenageary Ltd.

3D DESIGN BUREAU

N

Baseline	Proposed
	
	
	
	

June 21st 6:00

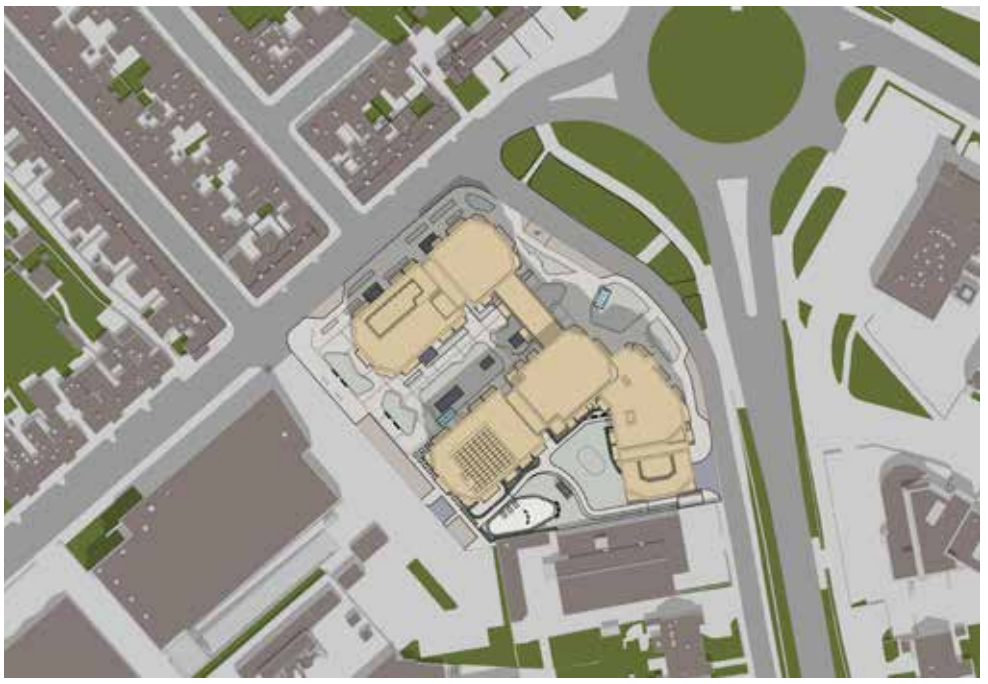
June 21st 7:00

June 21st 8:00

June 21st 9:00

B.2 Shadow Study 21 June	**Project: Glenageary Gate LRD**	3D DESIGN BUREAU
June 21st Sunrise 4:57 | Sunset 21:57	**Applicant: Red Rock Glenageary Ltd.**	

N

Baseline	Proposed
	
	
	
	

June 21st 10:00

June 21st 11:00

June 21st 12:00

June 21st 13:00

	Project: Glenageary Gate LRD	3D DESIGN BUREAU
June 21st **Sunrise 4:57 | Sunset 21:57**	**Applicant: Red Rock Glenageary Ltd.**	

N

Baseline	Proposed
June 21st 14:00	
June 21st 15:00	
June 21st 16:00	
June 21st 17:00	

	Project: Glenageary Gate LRD	3D DESIGN BUREAU
June 21st **Sunrise 4:57 | Sunset 21:57**	**Applicant: Red Rock Glenageary Ltd.**	

N

Baseline	Proposed
June 21st 18:00	
June 21st 19:00	
June 21st 20:00	
June 21st 21:00	

	Project: Glenageary Gate LRD	3D DESIGN BUREAU
June 21st **Sunrise 4:57 | Sunset 21:57**	**Applicant: Red Rock Glenageary Ltd.**	

N

Baseline	Proposed
December 21st 9:00	
December 21st 10:00	
December 21st 11:00	
December 21st 12:00	

B.3 Shadow Study 21 December	**Project: Glenageary Gate LRD**	3D DESIGN BUREAU
December 21st Sunrise 8:38 | Sunset 16:08	**Applicant: Red Rock Glenageary Ltd.**	

N

Baseline	Proposed
December 21st 13:00	
	
December 21st 14:00	
	
December 21st 15:00	
	
December 21st 16:00	
	

	Project: Glenageary Gate LRD	3D DESIGN BUREAU
December 21st **Sunrise 8:38 | Sunset 16:08**	**Applicant: Red Rock Glenageary Ltd.**	

C.0 Scheme Performance

C.1 Proposed Apartment Block Floor Plans

Figure C.1: Ground Floor

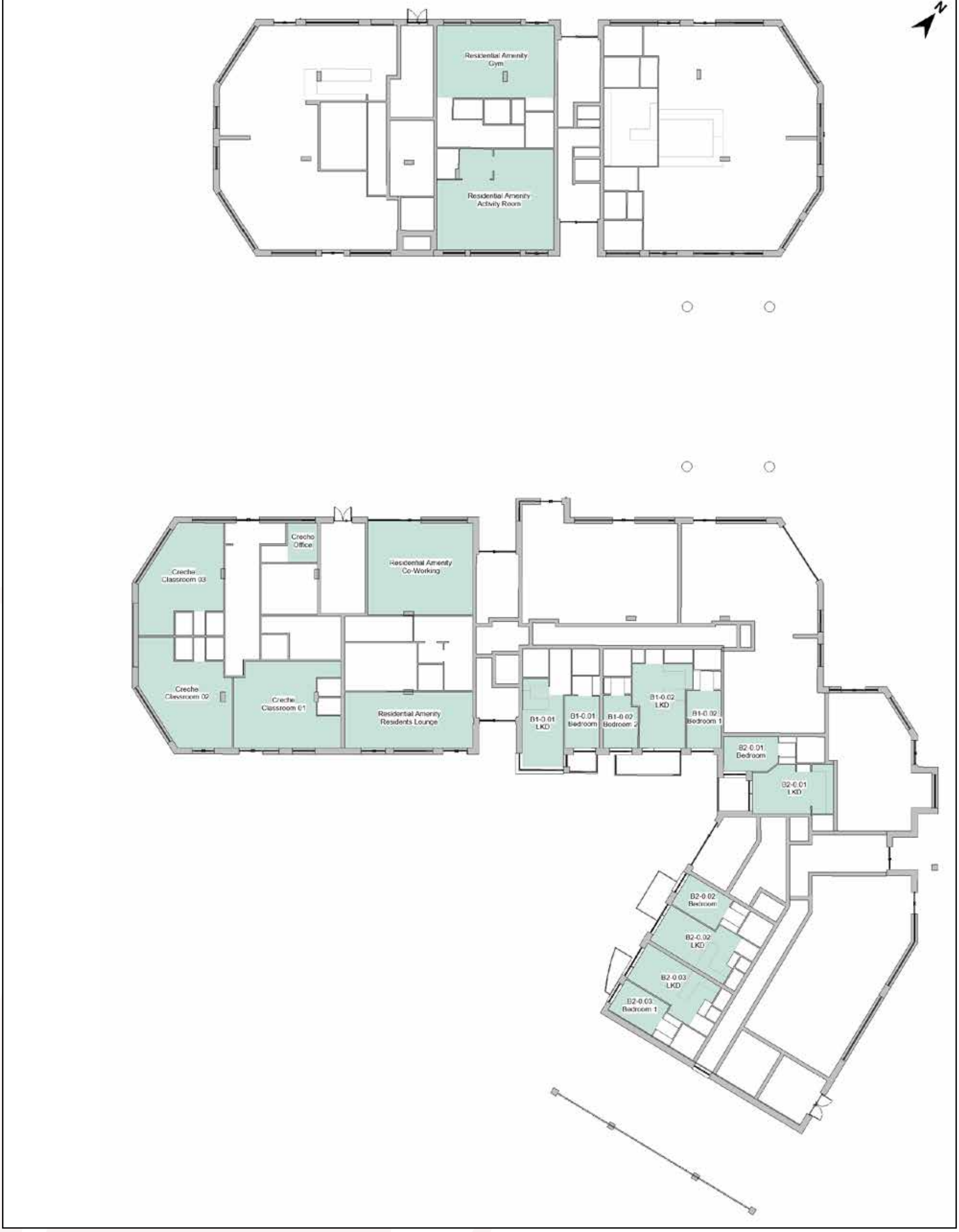


Figure C.2: First Floor

Figure C.3: Second Floor

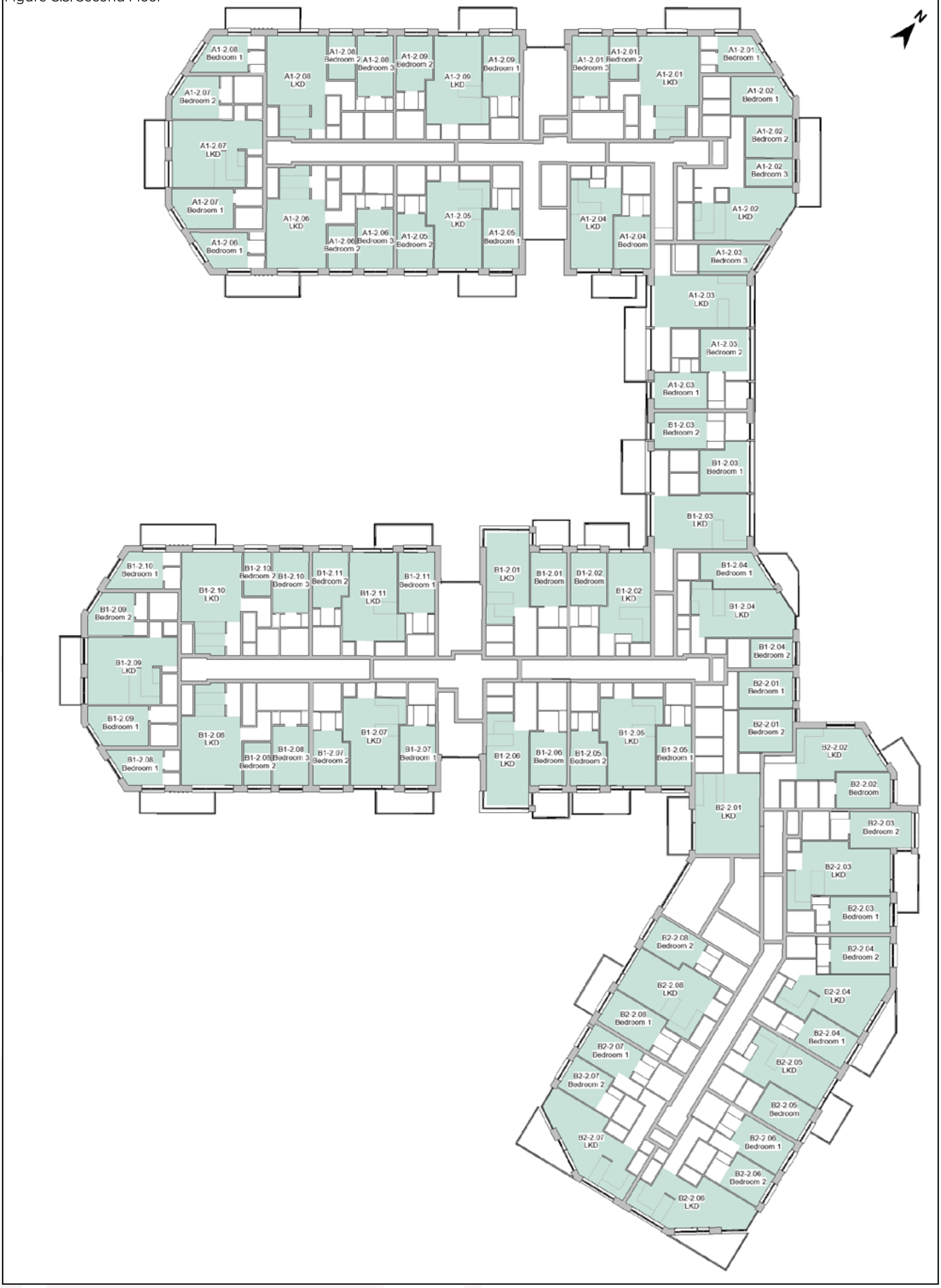


Figure C.4: Third Floor

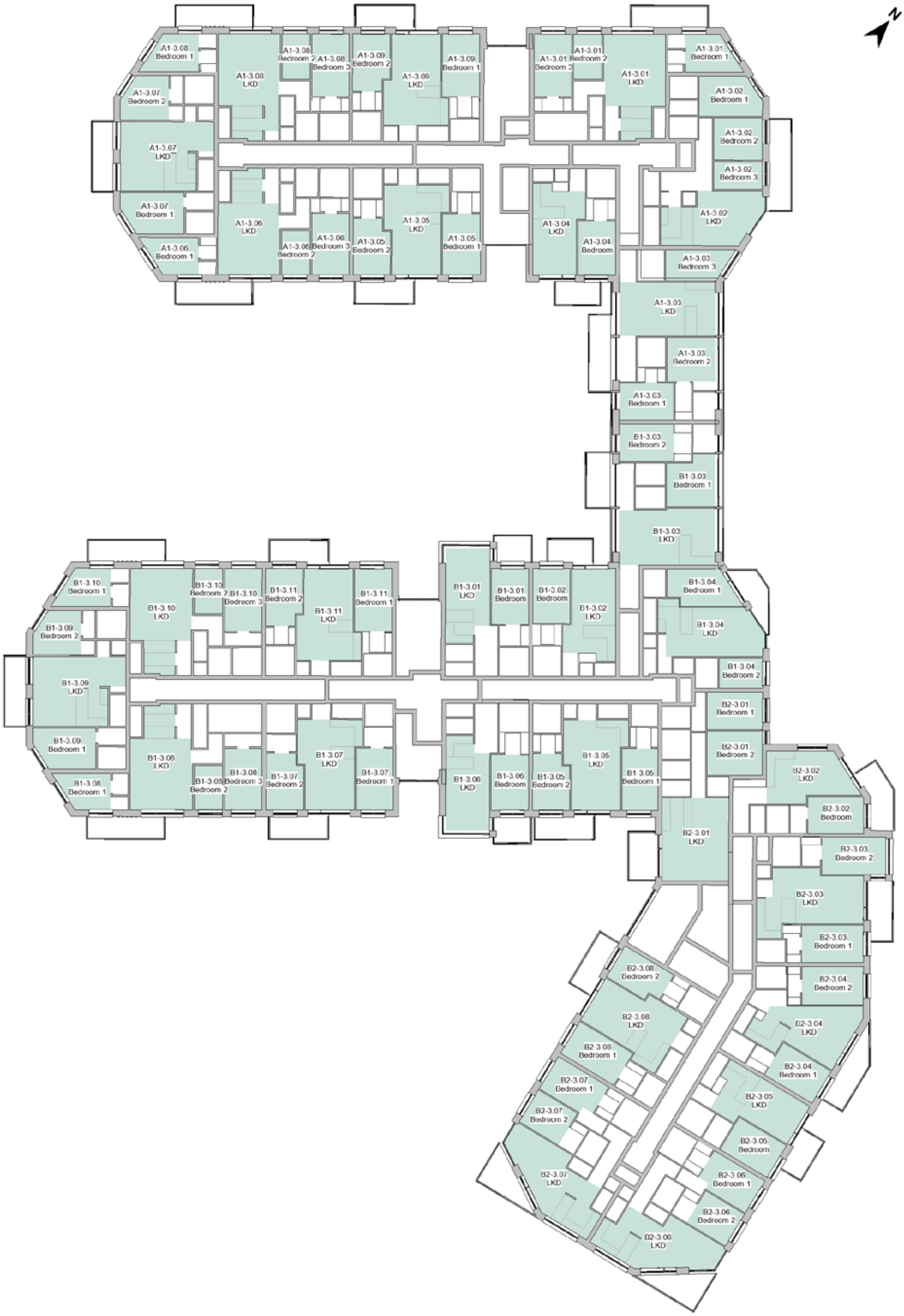


Figure C.5: Fourth Floor

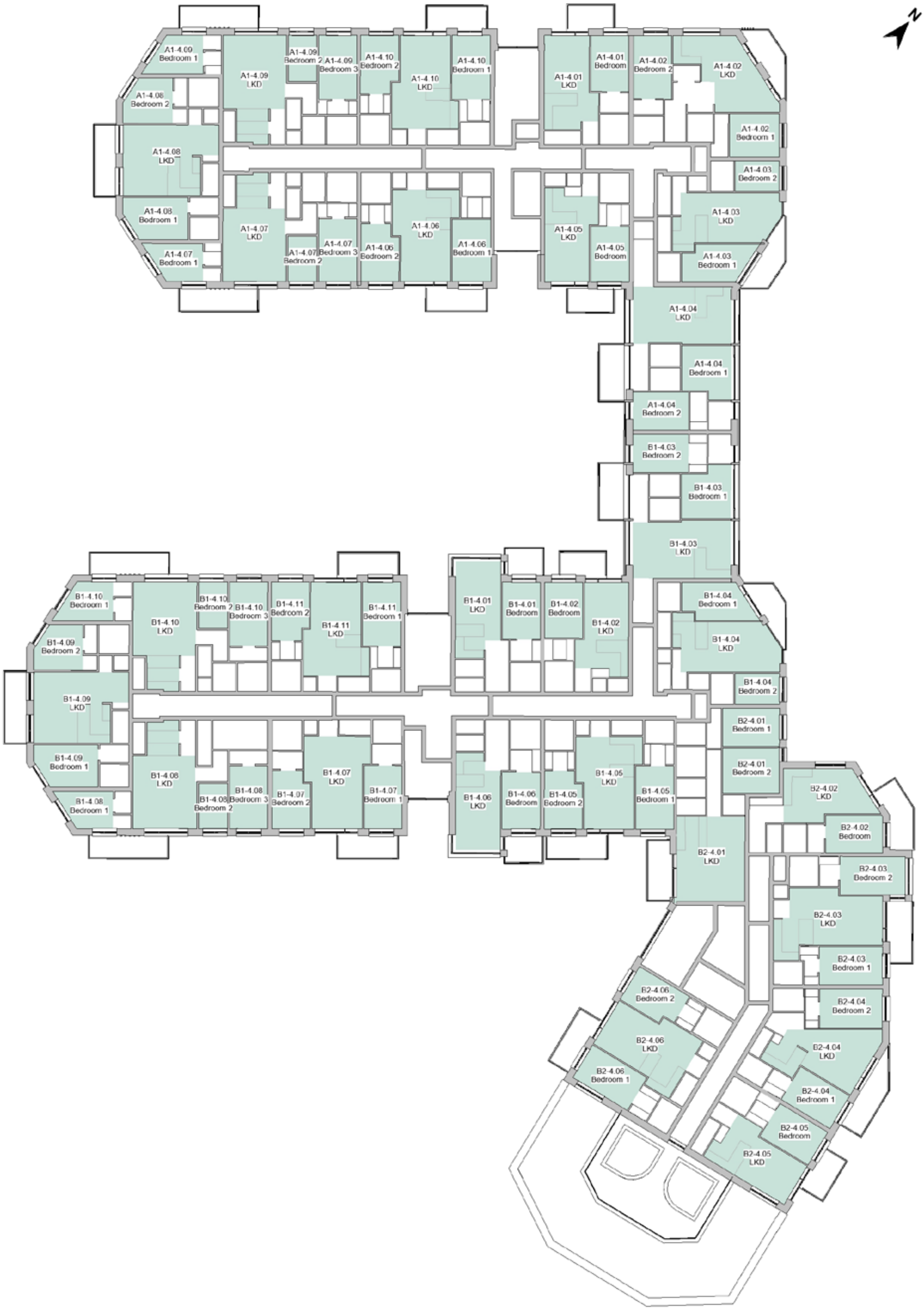


Figure C.6: Fifth Floor

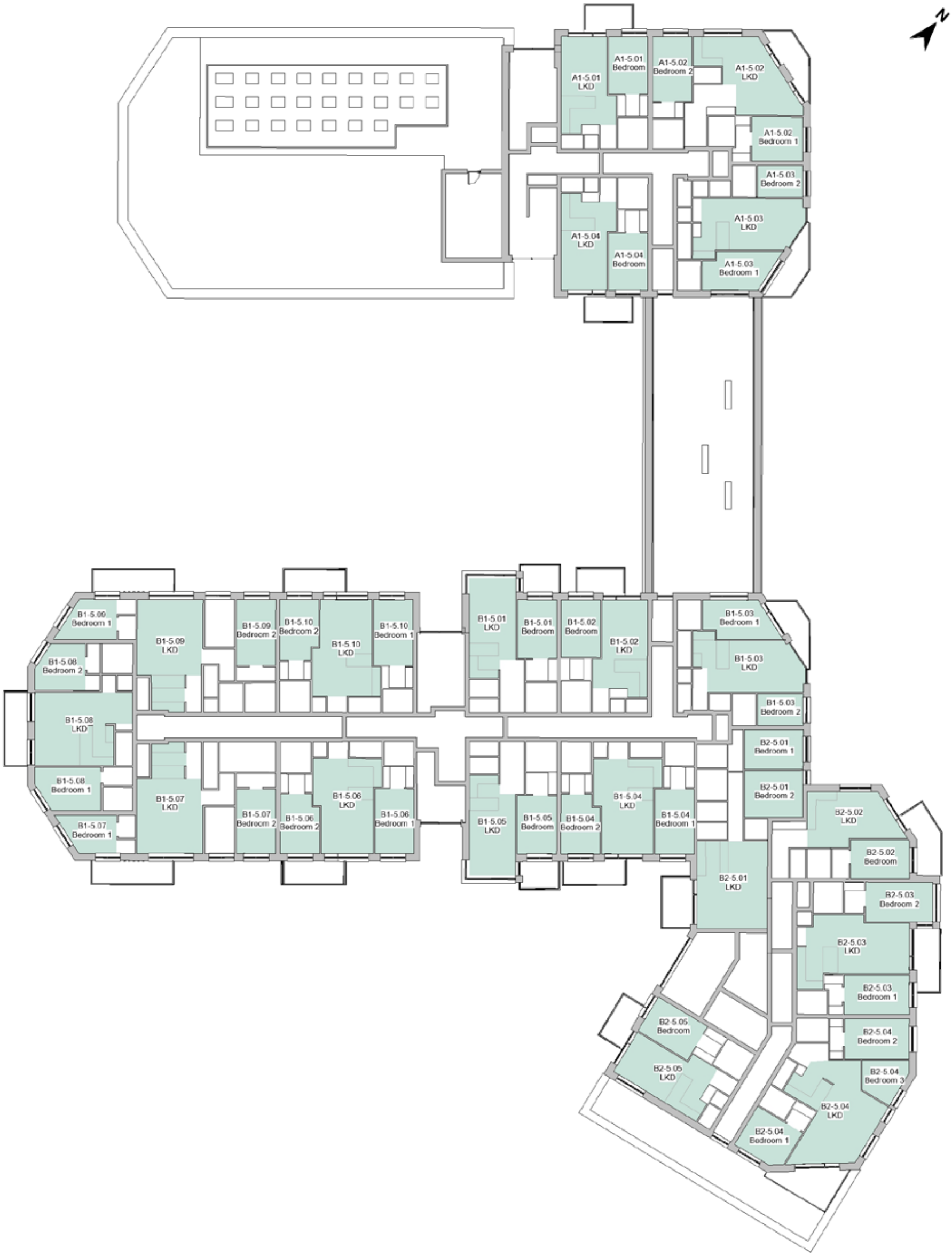
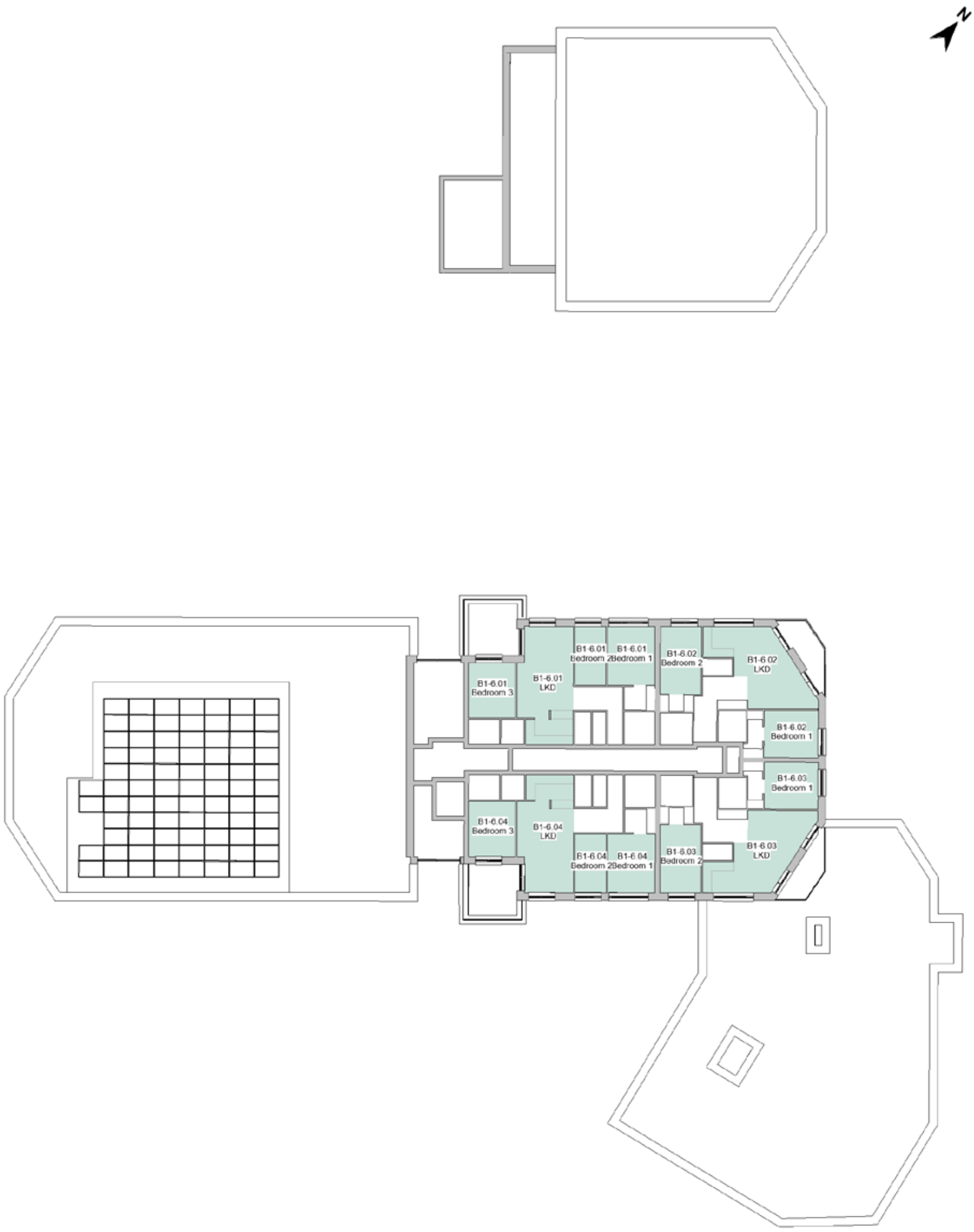


Figure C.7: Sixth Floor



C.2 Spatial Daylight Autonomy (SDA) in Proposed Units

Below is an example of the table used to describe the spatial daylight autonomy results in proposed units.

Table Example. C.2 - Scheme Performance SDA						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria
			Without Trees	Winter	Summer	
A	**B**	**C**	**D**	**E**	**F**	**G**

A: Unit Number

This column identifies the assessed unit. All unit numbers are determined by the architect's drawings, unless otherwise stated.

B: Room Description

Room Description details which room in the unit has been assessed, e.g. bedroom, LKD, etc.

C: Target Lux

Under BRE 209 the appropriate target lux levels to be achieved across 50% of the working plane of a room differ depending on the room type. Kitchens have a target lux of 200, living rooms have a target lux of 150 and bedrooms have a target lux of 100. In a room providing more than one function, such as an LKD, the higher target value should be taken i.e. 200 Lux.

D: % of area above target Lux (Without Trees)

BRE 209 recommends target lux levels to be achieved across at least 50% of the working plane for at least half the daylight hours. The target values differ depending on the room function, 200 lux for Kitchens, 150 lux for Living Rooms or 100 lux for Bedrooms.

This column states percentage of the working plane of the assessed room that is capable of receiving more than the appropriate target lux for at least half the daylight hours with trees excluded from the analytical model. The figures shown in this column should be considered part of a supplementary study that helps identify if trees are having an effect on daylight within the proposed units.

E: % of area above target Lux (Winter)

BRE 209 recommends target lux levels to be achieved across at least 50% of the working plane for at least half the daylight hours. The target values differ depending on the room function, 200 lux for Kitchens, 150 lux for Living Rooms or 100 lux for Bedrooms.

This column states percentage of the working plane of the assessed room that is capable of receiving more than the appropriate target lux for at least half the daylight hours with deciduous trees in the winter state, i.e. bare branch.

F: % of area above target Lux (Summer)

BRE 209 recommends target lux levels to be achieved across at least 50% of the working plane for at least half the daylight hours. The target values differ depending on the room function, 200 lux for Kitchens, 150 lux for Living Rooms or 100 lux for Bedrooms.

This column states percentage of the working plane of the assessed room that is capable of receiving more than the appropriate target lux for at least half the daylight hours with deciduous trees in full foliage.

G: Compliance with BRE 209 Criteria

This column states if the assessed room achieves the recommended level of daylight as per BRE 209 with consideration to the various tree states.

If the target lux level is achieved across more than 50% of the working plane, for half the daylight hours, both with and without trees, this column will state: *'Compliant'*.

If the target lux level is not achieved across more than 50% of the working plane, for half the daylight hours, both with and without trees, this column will state: *'Non-compliant'*.

If the target lux level is achieved across more than 50% of the working plane, for half the daylight hours, without trees but is not achieved with trees, this column will state: *'Trees affecting compliance'*.

If the target lux level is achieved across more than 50% of the working plane, for half the daylight hours, with the trees in the winter state but is not achieved with trees in the summer state, this column will state: *'Trees affecting compliance (summer only)'*.

Compliance rates will be stated for SDA compliance with trees in all of the above states.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

C.2.1 SDA Results: Ground Floor

Table No. C.2.1 - SDA Results: Ground Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-0.01	LKD	200	99%	97%	93%	Compliant
B1-0.01	Bedroom	100	100%	100%	100%	Compliant
B1-0.02	LKD	200	42%	40%	38%	Non-compliant
B1-0.02	Bedroom 1	100	67%	66%	62%	Compliant
B1-0.02	Bedroom 2	100	100%	100%	100%	Compliant
B2-0.01	LKD	200	22%	21%	18%	Non-compliant
B2-0.01	Bedroom	100	42%	39%	38%	Non-compliant
B2-0.02	LKD	200	59%	59%	58%	Compliant
B2-0.02	Bedroom	100	100%	100%	100%	Compliant
B2-0.03	LKD	200	73%	73%	72%	Compliant
B2-0.03	Bedroom 1	100	100%	100%	100%	Compliant
Creche	Classroom 01	150	100%	99%	99%	Compliant
Creche	Classroom 02	150	100%	100%	100%	Compliant
Creche	Classroom 03	150	100%	100%	100%	Compliant
Creche	Office	150	100%	100%	100%	Compliant
Residential Amenity	Activity Room	150	92%	86%	79%	Compliant
Residential Amenity	Co-Working	150	100%	100%	100%	Compliant
Residential Amenity	Gym	150	100%	100%	100%	Compliant
Residential Amenity	Residents Lounge	150	100%	100%	100%	Compliant

C.2.2 SDA Results: First Floor

Table No. C.2.2 - SDA Results: First Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-1.01	LKD	200	97%	97%	97%	Compliant
A1-1.01	Bedroom	100	100%	100%	100%	Compliant
A1-1.02	LKD	200	100%	100%	100%	Compliant
A1-1.02	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.02	Bedroom 2	100	100%	100%	100%	Compliant
A1-1.03	LKD	200	100%	100%	100%	Compliant
A1-1.03	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.03	Bedroom 2	100	57%	54%	48%	Trees affecting compliance (summer only)
A1-1.04	LKD	200	25%	24%	23%	Non-compliant
A1-1.04	Bedroom	100	46%	42%	38%	Non-compliant
A1-1.05	LKD	200	33%	33%	33%	Non-compliant
A1-1.05	Bedroom 1	100	76%	74%	70%	Compliant
A1-1.05	Bedroom 2	100	100%	100%	100%	Compliant
A1-1.06	LKD	200	50%	50%	50%	Compliant
A1-1.06	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.06	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.

** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.

*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.

The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.2 - SDA Results: First Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-1.06	Bedroom 3	100	100%	100%	100%	Compliant
A1-1.07	LKD	200	100%	100%	100%	Compliant
A1-1.07	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.07	Bedroom 2	100	100%	100%	100%	Compliant
A1-1.08	LKD	200	95%	95%	94%	Compliant
A1-1.08	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.08	Bedroom 2	100	100%	100%	100%	Compliant
A1-1.08	Bedroom 3	100	100%	100%	100%	Compliant
A1-1.09	LKD	200	100%	100%	99%	Compliant
A1-1.09	Bedroom 1	100	100%	100%	100%	Compliant
A1-1.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.01	LKD	200	65%	64%	63%	Compliant
B1-1.01	Bedroom	100	38%	33%	31%	Non-compliant
B1-1.02	LKD	200	14%	14%	13%	Non-compliant
B1-1.02	Bedroom	100	70%	68%	63%	Compliant
B1-1.03	LKD	200	100%	100%	100%	Compliant
B1-1.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-1.03	Bedroom 2	100	60%	54%	52%	Compliant
B1-1.04	LKD	200	36%	35%	34%	Non-compliant
B1-1.04	Bedroom 1	100	73%	73%	71%	Compliant
B1-1.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.05	LKD	200	100%	100%	100%	Compliant
B1-1.05	Bedroom	100	100%	100%	100%	Compliant
B1-1.06	LKD	200	100%	100%	100%	Compliant
B1-1.06	Bedroom 1	100	100%	100%	100%	Compliant
B1-1.06	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.07	LKD	200	100%	100%	100%	Compliant
B1-1.07	Bedroom 1	100	100%	100%	100%	Compliant
B1-1.07	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.07	Bedroom 3	100	100%	100%	100%	Compliant
B1-1.08	LKD	200	100%	100%	100%	Compliant
B1-1.08	Bedroom 1	100	100%	100%	100%	Compliant
B1-1.08	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.09	LKD	200	64%	64%	62%	Compliant
B1-1.09	Bedroom 1	100	100%	100%	100%	Compliant
B1-1.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-1.09	Bedroom 3	100	100%	100%	100%	Compliant
B1-1.10	LKD	200	42%	41%	40%	Non-compliant
B1-1.10	Bedroom 1	100	91%	86%	79%	Compliant
B1-1.10	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.

** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.

*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.

The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.2 - SDA Results: First Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B2-1.01	LKD	200	82%	81%	80%	Compliant
B2-1.01	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.01	Bedroom 2	100	91%	91%	90%	Compliant
B2-1.02	LKD	200	100%	100%	100%	Compliant
B2-1.02	Bedroom	100	100%	100%	100%	Compliant
B2-1.03	LKD	200	71%	68%	65%	Compliant
B2-1.03	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.03	Bedroom 2	100	100%	100%	100%	Compliant
B2-1.04	LKD	200	80%	80%	80%	Compliant
B2-1.04	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.04	Bedroom 2	100	100%	100%	100%	Compliant
B2-1.05	LKD	200	98%	97%	97%	Compliant
B2-1.05	Bedroom	100	100%	100%	100%	Compliant
B2-1.06	LKD	200	100%	100%	100%	Compliant
B2-1.06	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.06	Bedroom 2	100	100%	100%	100%	Compliant
B2-1.07	LKD	200	100%	100%	100%	Compliant
B2-1.07	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.07	Bedroom 2	100	100%	100%	100%	Compliant
B2-1.08	LKD	200	59%	58%	57%	Compliant
B2-1.08	Bedroom 1	100	100%	100%	100%	Compliant
B2-1.08	Bedroom 2	100	100%	100%	100%	Compliant

C.2.3 SDA Results: Second Floor

Table No. C.2.3 - SDA Results: Second Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-2.01	LKD	200	100%	100%	100%	Compliant
A1-2.01	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.01	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.01	Bedroom 3	100	100%	100%	100%	Compliant
A1-2.02	LKD	200	100%	100%	100%	Compliant
A1-2.02	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.02	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.02	Bedroom 3	100	100%	100%	100%	Compliant
A1-2.03	LKD	200	100%	100%	100%	Compliant
A1-2.03	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.03	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.03	Bedroom 3	100	100%	100%	100%	Compliant
A1-2.04	LKD	200	32%	32%	30%	Non-compliant
A1-2.04	Bedroom	100	32%	32%	30%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.3 - SDA Results: Second Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-2.05	LKD	200	38%	37%	37%	Non-compliant
A1-2.05	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.05	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.06	LKD	200	56%	56%	55%	Compliant
A1-2.06	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.06	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.06	Bedroom 3	100	100%	100%	100%	Compliant
A1-2.07	LKD	200	100%	100%	100%	Compliant
A1-2.07	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.07	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.08	LKD	200	98%	98%	97%	Compliant
A1-2.08	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.08	Bedroom 2	100	100%	100%	100%	Compliant
A1-2.08	Bedroom 3	100	100%	100%	100%	Compliant
A1-2.09	LKD	200	100%	100%	100%	Compliant
A1-2.09	Bedroom 1	100	100%	100%	100%	Compliant
A1-2.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.01	LKD	200	71%	71%	69%	Compliant
B1-2.01	Bedroom	100	55%	52%	50%	Compliant
B1-2.02	LKD	200	18%	18%	17%	Non-compliant
B1-2.02	Bedroom	100	81%	80%	79%	Compliant
B1-2.03	LKD	200	100%	100%	100%	Compliant
B1-2.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.03	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.04	LKD	200	97%	97%	96%	Compliant
B1-2.04	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.05	LKD	200	42%	42%	41%	Non-compliant
B1-2.05	Bedroom 1	100	87%	87%	87%	Compliant
B1-2.05	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.06	LKD	200	100%	100%	100%	Compliant
B1-2.06	Bedroom	100	100%	100%	100%	Compliant
B1-2.07	LKD	200	100%	100%	100%	Compliant
B1-2.07	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.07	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.08	LKD	200	100%	100%	100%	Compliant
B1-2.08	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.08	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.08	Bedroom 3	100	100%	100%	100%	Compliant
B1-2.09	LKD	200	100%	100%	100%	Compliant
B1-2.09	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.09	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.3 - SDA Results: Second Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-2.10	LKD	200	71%	71%	69%	Compliant
B1-2.10	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.10	Bedroom 2	100	100%	100%	100%	Compliant
B1-2.10	Bedroom 3	100	100%	100%	100%	Compliant
B1-2.11	LKD	200	50%	48%	47%	Trees affecting compliance
B1-2.11	Bedroom 1	100	100%	100%	100%	Compliant
B1-2.11	Bedroom 2	100	100%	100%	100%	Compliant
B2-2.01	LKD	200	83%	82%	82%	Compliant
B2-2.01	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.01	Bedroom 2	100	98%	95%	95%	Compliant
B2-2.02	LKD	200	100%	100%	100%	Compliant
B2-2.02	Bedroom	100	100%	100%	100%	Compliant
B2-2.03	LKD	200	76%	73%	71%	Compliant
B2-2.03	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.03	Bedroom 2	100	100%	100%	100%	Compliant
B2-2.04	LKD	200	81%	81%	80%	Compliant
B2-2.04	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.04	Bedroom 2	100	100%	100%	100%	Compliant
B2-2.05	LKD	200	97%	97%	97%	Compliant
B2-2.05	Bedroom	100	100%	100%	100%	Compliant
B2-2.06	LKD	200	100%	100%	100%	Compliant
B2-2.06	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.06	Bedroom 2	100	100%	100%	100%	Compliant
B2-2.07	LKD	200	100%	100%	100%	Compliant
B2-2.07	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.07	Bedroom 2	100	100%	100%	100%	Compliant
B2-2.08	LKD	200	68%	68%	67%	Compliant
B2-2.08	Bedroom 1	100	100%	100%	100%	Compliant
B2-2.08	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

C.2.4 SDA Results: Third Floor

Table No. C.2.4 - SDA Results: Third Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-3.01	LKD	200	100%	100%	100%	Compliant
A1-3.01	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.01	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.01	Bedroom 3	100	100%	100%	100%	Compliant
A1-3.02	LKD	200	100%	100%	100%	Compliant
A1-3.02	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.02	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.02	Bedroom 3	100	100%	100%	100%	Compliant
A1-3.03	LKD	200	100%	100%	100%	Compliant
A1-3.03	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.03	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.03	Bedroom 3	100	100%	100%	100%	Compliant
A1-3.04	LKD	200	42%	42%	41%	Non-compliant
A1-3.04	Bedroom	100	62%	62%	62%	Compliant
A1-3.05	LKD	200	47%	47%	46%	Non-compliant
A1-3.05	Bedroom 1	100	96%	96%	96%	Compliant
A1-3.05	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.06	LKD	200	66%	65%	64%	Compliant
A1-3.06	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.06	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.06	Bedroom 3	100	100%	100%	100%	Compliant
A1-3.07	LKD	200	100%	100%	100%	Compliant
A1-3.07	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.07	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.08	LKD	200	97%	97%	97%	Compliant
A1-3.08	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.08	Bedroom 2	100	100%	100%	100%	Compliant
A1-3.08	Bedroom 3	100	100%	100%	100%	Compliant
A1-3.09	LKD	200	100%	100%	100%	Compliant
A1-3.09	Bedroom 1	100	100%	100%	100%	Compliant
A1-3.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.01	LKD	200	79%	79%	79%	Compliant
B1-3.01	Bedroom	100	79%	79%	77%	Compliant
B1-3.02	LKD	200	29%	29%	29%	Non-compliant
B1-3.02	Bedroom	100	100%	100%	100%	Compliant
B1-3.03	LKD	200	100%	100%	100%	Compliant
B1-3.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.03	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.4 - SDA Results: Third Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-3.04	LKD	200	99%	97%	97%	Compliant
B1-3.04	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.05	LKD	200	49%	48%	48%	Non-compliant
B1-3.05	Bedroom 1	100	100%	100%	99%	Compliant
B1-3.05	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.06	LKD	200	100%	100%	100%	Compliant
B1-3.06	Bedroom	100	100%	100%	100%	Compliant
B1-3.07	LKD	200	100%	100%	100%	Compliant
B1-3.07	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.07	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.08	LKD	200	100%	100%	100%	Compliant
B1-3.08	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.08	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.08	Bedroom 3	100	100%	100%	100%	Compliant
B1-3.09	LKD	200	100%	100%	100%	Compliant
B1-3.09	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.10	LKD	200	80%	80%	79%	Compliant
B1-3.10	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.10	Bedroom 2	100	100%	100%	100%	Compliant
B1-3.10	Bedroom 3	100	100%	100%	100%	Compliant
B1-3.11	LKD	200	57%	56%	55%	Compliant
B1-3.11	Bedroom 1	100	100%	100%	100%	Compliant
B1-3.11	Bedroom 2	100	100%	100%	100%	Compliant
B2-3.01	LKD	200	90%	89%	89%	Compliant
B2-3.01	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.01	Bedroom 2	100	100%	99%	98%	Compliant
B2-3.02	LKD	200	100%	100%	100%	Compliant
B2-3.02	Bedroom	100	100%	100%	100%	Compliant
B2-3.03	LKD	200	77%	75%	73%	Compliant
B2-3.03	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.03	Bedroom 2	100	100%	100%	100%	Compliant
B2-3.04	LKD	200	81%	81%	81%	Compliant
B2-3.04	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.04	Bedroom 2	100	100%	100%	100%	Compliant
B2-3.05	LKD	200	97%	97%	97%	Compliant
B2-3.05	Bedroom	100	100%	100%	100%	Compliant
B2-3.06	LKD	200	100%	100%	100%	Compliant
B2-3.06	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.06	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.4 - SDA Results: Third Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B2-3.07	LKD	200	100%	100%	100%	Compliant
B2-3.07	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.07	Bedroom 2	100	100%	100%	100%	Compliant
B2-3.08	LKD	200	79%	79%	78%	Compliant
B2-3.08	Bedroom 1	100	100%	100%	100%	Compliant
B2-3.08	Bedroom 2	100	100%	100%	100%	Compliant

C.2.5 SDA Results: Fourth Floor

Table No. C.2.5 - SDA Results: Fourth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-4.01	LKD	200	97%	97%	97%	Compliant
A1-4.01	Bedroom	100	100%	100%	100%	Compliant
A1-4.02	LKD	200	100%	100%	100%	Compliant
A1-4.02	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.02	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.03	LKD	200	98%	97%	97%	Compliant
A1-4.03	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.03	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.04	LKD	200	100%	100%	100%	Compliant
A1-4.04	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.04	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.05	LKD	200	56%	56%	55%	Compliant
A1-4.05	Bedroom	100	100%	100%	100%	Compliant
A1-4.06	LKD	200	83%	82%	82%	Compliant
A1-4.06	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.06	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.07	LKD	200	90%	90%	90%	Compliant
A1-4.07	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.07	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.07	Bedroom 3	100	100%	100%	100%	Compliant
A1-4.08	LKD	200	100%	100%	100%	Compliant
A1-4.08	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.08	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.09	LKD	200	100%	100%	100%	Compliant
A1-4.09	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.09	Bedroom 2	100	100%	100%	100%	Compliant
A1-4.09	Bedroom 3	100	100%	100%	100%	Compliant
A1-4.10	LKD	200	100%	100%	100%	Compliant
A1-4.10	Bedroom 1	100	100%	100%	100%	Compliant
A1-4.10	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.5 - SDA Results: Fourth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-4.01	LKD	200	89%	89%	89%	Compliant
B1-4.01	Bedroom	100	100%	100%	100%	Compliant
B1-4.02	LKD	200	49%	49%	49%	Non-compliant
B1-4.02	Bedroom	100	100%	100%	100%	Compliant
B1-4.03	LKD	200	100%	100%	100%	Compliant
B1-4.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.03	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.04	LKD	200	98%	97%	97%	Compliant
B1-4.04	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.05	LKD	200	55%	55%	54%	Compliant
B1-4.05	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.05	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.06	LKD	200	100%	100%	100%	Compliant
B1-4.06	Bedroom	100	100%	100%	100%	Compliant
B1-4.07	LKD	200	100%	100%	100%	Compliant
B1-4.07	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.07	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.08	LKD	200	100%	100%	100%	Compliant
B1-4.08	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.08	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.08	Bedroom 3	100	100%	100%	100%	Compliant
B1-4.09	LKD	200	100%	100%	100%	Compliant
B1-4.09	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.10	LKD	200	84%	84%	84%	Compliant
B1-4.10	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.10	Bedroom 2	100	100%	100%	100%	Compliant
B1-4.10	Bedroom 3	100	100%	100%	100%	Compliant
B1-4.11	LKD	200	71%	71%	70%	Compliant
B1-4.11	Bedroom 1	100	100%	100%	100%	Compliant
B1-4.11	Bedroom 2	100	100%	100%	100%	Compliant
B2-4.01	LKD	200	89%	89%	89%	Compliant
B2-4.01	Bedroom 1	100	100%	100%	100%	Compliant
B2-4.01	Bedroom 2	100	100%	100%	99%	Compliant
B2-4.02	LKD	200	100%	100%	100%	Compliant
B2-4.02	Bedroom	100	100%	100%	100%	Compliant
B2-4.03	LKD	200	77%	74%	73%	Compliant
B2-4.03	Bedroom 1	100	100%	100%	100%	Compliant
B2-4.03	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.5 - SDA Results: Fourth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B2-4.04	LKD	200	84%	83%	83%	Compliant
B2-4.04	Bedroom 1	100	100%	100%	100%	Compliant
B2-4.04	Bedroom 2	100	100%	100%	100%	Compliant
B2-4.05	LKD	200	100%	100%	100%	Compliant
B2-4.05	Bedroom	100	100%	100%	100%	Compliant
B2-4.06	LKD	200	86%	86%	86%	Compliant
B2-4.06	Bedroom 1	100	100%	100%	100%	Compliant
B2-4.06	Bedroom 2	100	100%	100%	100%	Compliant

C.2.6 SDA Results: Fifth Floor

Table No. C.2.6 - SDA Results: Fifth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
A1-5.01	LKD	200	100%	100%	99%	Compliant
A1-5.01	Bedroom	100	100%	100%	100%	Compliant
A1-5.02	LKD	200	100%	100%	100%	Compliant
A1-5.02	Bedroom 1	100	100%	100%	100%	Compliant
A1-5.02	Bedroom 2	100	100%	100%	100%	Compliant
A1-5.03	LKD	200	99%	99%	98%	Compliant
A1-5.03	Bedroom 1	100	100%	100%	100%	Compliant
A1-5.03	Bedroom 2	100	100%	100%	100%	Compliant
A1-5.04	LKD	200	91%	91%	91%	Compliant
A1-5.04	Bedroom	100	100%	100%	100%	Compliant
B1-5.01	LKD	200	100%	100%	100%	Compliant
B1-5.01	Bedroom	100	100%	100%	100%	Compliant
B1-5.02	LKD	200	78%	78%	78%	Compliant
B1-5.02	Bedroom	100	100%	100%	100%	Compliant
B1-5.03	LKD	200	98%	97%	96%	Compliant
B1-5.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.03	Bedroom 2	100	100%	100%	100%	Compliant
B1-5.04	LKD	200	89%	89%	88%	Compliant
B1-5.04	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-5.05	LKD	200	100%	100%	100%	Compliant
B1-5.05	Bedroom	100	100%	100%	100%	Compliant
B1-5.06	LKD	200	100%	100%	100%	Compliant
B1-5.06	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.06	Bedroom 2	100	100%	100%	100%	Compliant
B1-5.07	LKD	200	100%	100%	100%	Compliant
B1-5.07	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.07	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.2.6 - SDA Results: Fifth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-5.08	LKD	200	100%	100%	100%	Compliant
B1-5.08	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.08	Bedroom 2	100	100%	100%	100%	Compliant
B1-5.09	LKD	200	100%	100%	100%	Compliant
B1-5.09	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.09	Bedroom 2	100	100%	100%	100%	Compliant
B1-5.10	LKD	200	100%	100%	100%	Compliant
B1-5.10	Bedroom 1	100	100%	100%	100%	Compliant
B1-5.10	Bedroom 2	100	100%	100%	100%	Compliant
B2-5.01	LKD	200	100%	99%	99%	Compliant
B2-5.01	Bedroom 1	100	100%	100%	100%	Compliant
B2-5.01	Bedroom 2	100	100%	100%	100%	Compliant
B2-5.02	LKD	200	100%	100%	100%	Compliant
B2-5.02	Bedroom	100	100%	100%	100%	Compliant
B2-5.03	LKD	200	81%	80%	79%	Compliant
B2-5.03	Bedroom 1	100	100%	100%	100%	Compliant
B2-5.03	Bedroom 2	100	100%	100%	100%	Compliant
B2-5.04	LKD	200	100%	100%	100%	Compliant
B2-5.04	Bedroom 1	100	100%	100%	100%	Compliant
B2-5.04	Bedroom 2	100	100%	100%	100%	Compliant
B2-5.04	Bedroom 3	100	100%	100%	100%	Compliant
B2-5.05	LKD	200	100%	100%	100%	Compliant
B2-5.05	Bedroom	100	100%	100%	100%	Compliant

C.2.7 SDA Results: Sixth Floor

Table No. C.2.7 - SDA Results: Sixth Floor						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
B1-6.01	LKD	200	80%	80%	80%	Compliant
B1-6.01	Bedroom 1	100	100%	100%	100%	Compliant
B1-6.01	Bedroom 2	100	100%	100%	100%	Compliant
B1-6.01	Bedroom 3	100	100%	100%	100%	Compliant
B1-6.02	LKD	200	100%	100%	100%	Compliant
B1-6.02	Bedroom 1	100	100%	100%	100%	Compliant
B1-6.02	Bedroom 2	100	100%	100%	100%	Compliant
B1-6.03	LKD	200	100%	100%	100%	Compliant
B1-6.03	Bedroom 1	100	100%	100%	100%	Compliant
B1-6.03	Bedroom 2	100	100%	100%	100%	Compliant
B1-6.04	LKD	200	97%	97%	97%	Compliant
B1-6.04	Bedroom 1	100	100%	100%	100%	Compliant
B1-6.04	Bedroom 2	100	100%	100%	100%	Compliant
B1-6.04	Bedroom 3	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
** Under the BRE 209 study the SDA has been calculated with trees represented with both winter and summer foliage.
*** The SDA assessment without trees is a supplementary study which indicates the level of daylight within the proposed development when trees are not included in the analytical model. This study provides an understanding of how trees affect daylight.
The SDA circa compliance rates across the entire scheme can be found in section 5.2.1 on page 20.
For floor plans of the assessed units please refer to section C.1 on page 41.

C.3 Sunlight Exposure (SE) in Proposed Units

Below is an example of the table used to describe the SE performance of proposed habitable rooms.

Table Example. C.3 - Scheme Performance Sunlight Exposure							
Unit Number	Room Description	Deciduous Trees as Opaque Objects			Without Deciduous Trees		
		SE Hours on March 21st	Level of SE on March 21st	Unit compliance based on highest performing room	SE Hours on March 21st	Level of SE on March 21st	Unit compliance based on highest performing room
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**

A: Unit Number

This column identifies the assessed unit. All unit numbers are determined by the architect's drawings, unless otherwise stated.

B: Room Description

Room Description details which room of the unit has been assessed, e.g. bedroom, living room, etc.

C: SE Hours on March 21st (Deciduous Trees as Opaque Objects)

This column will state the number of hours the assessed room can expect to receive on March 21st with the assessment carried out with deciduous trees as opaque objects.

D: Level of SE on March 21st (Deciduous Trees as Opaque Objects)

BRE 209 recommends a minimum sunlight exposure of 1.5 hours for a proposed unit with preference given to main living rooms. BRE 209 categorise sunlight exposure as minimum, medium and high, this column will categorise the level of sunlight exposure with deciduous trees as opaque objects based on the following:

- Less than 1.5 hours: *Below minimum,*
- Between 1.5 hours and 3 hours: *Minimum*
- Between 3 hours and 4 hours: *Medium*
- More than 4 hours: *High*

E: Unit compliance based on highest performing room (Deciduous Trees as Opaque Objects)

A proposed unit is considered to be compliant provided any habitable room within the unit is capable of receiving at least 1.5 hours of sunlight on the assessment date. This column will identify the highest performing room within a unit and state compliance for the associated unit based on that room with the assessment carried out with deciduous trees as opaque objects.

Typically unit compliance will be stated for the best performing room per unit only, with lesser performing rooms indicated with a dash (-). However, if more than one room in a given unit is considered to be the best performing room (i.e. they have the same number of SE hours on March 21st), then the unit compliance column will be populated in the row related to each room.

F: SE Hours on March 21st (Without Deciduous Trees)

This column will state the number of hours the assessed room can expect to receive on March 21st with the assessment carried out without deciduous trees.

G: Level of SE on March 21st (Without Deciduous Trees)

BRE 209 recommends a minimum sunlight exposure of 1.5 hours for a proposed unit with preference given to main living rooms. BRE 209 categorise sunlight exposure as minimum, medium and high, this column will categorise the level of sunlight exposure without deciduous trees using the same criteria as the study with deciduous trees as opaque objects.

H: Unit compliance based on highest performing room (Without Deciduous Trees)

A proposed unit is considered to be compliant provided any habitable room within the unit is capable of receiving at least 1.5 hours of sunlight on March 21st. This column will identify the highest performing room within a unit and state compliance for the associated unit based on that room with the assessment carried out without deciduous trees. Typically only one room per unit will be populated in this column, with lesser performing rooms indicated with a dash (-). However, if more than one room in a given unit is considered to be the best performing room, i.e. they have the same number of SE hours on March 21st, then the unit compliance column will be populated for each.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

C.3.1 SE Results: Ground Floor

Table No. C.3.1 - Sunlight Exposure Results: Ground Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B1-0.01	LKD	5.40	High	Compliant	5.40	High	Compliant
B1-0.01	Bedroom	2.00	Minimum	-	2.00	Minimum	-
B1-0.02	LKD	2.80	Minimum	Compliant	2.80	Minimum	Compliant
B1-0.02	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
B1-0.02	Bedroom 2	2.70	Minimum	-	2.70	Minimum	-
B2-0.01	LKD	1.50	Minimum	Compliant	1.50	Minimum	Compliant
B2-0.01	Bedroom	0.70	Below Minimum	-	0.70	Below Minimum	-
B2-0.02	LKD	4.30	High	Compliant	4.30	High	Compliant
B2-0.02	Bedroom	2.80	Minimum	-	2.80	Minimum	-
B2-0.03	LKD	4.70	High	Compliant	4.70	High	Compliant
B2-0.03	Bedroom 1	4.60	High	-	4.60	High	-

C.3.2 SE Results: First Floor

Table No. C.3.2 - Sunlight Exposure Results: First Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-1.01	LKD	1.00	Below Minimum	Non-Compliant	1.00	Below Minimum	Non-Compliant
A1-1.01	Bedroom	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-1.02	LKD	1.00	Below Minimum	Non-Compliant	1.00	Below Minimum	Non-Compliant
A1-1.02	Bedroom 1	0.70	Below Minimum	-	0.70	Below Minimum	-
A1-1.02	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-1.03	LKD	2.30	Minimum	Compliant	2.30	Minimum	Compliant
A1-1.03	Bedroom 1	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-1.03	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
A1-1.04	LKD	3.40	Medium	Compliant	3.40	Medium	Compliant
A1-1.04	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
A1-1.05	LKD	3.70	Medium	Compliant	3.70	Medium	Compliant
A1-1.05	Bedroom 1	0.50	Below Minimum	-	0.50	Below Minimum	-
A1-1.05	Bedroom 2	3.10	Medium	-	3.10	Medium	-
A1-1.06	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-1.06	Bedroom 1	6.50	High	Compliant	6.50	High	Compliant
A1-1.06	Bedroom 2	2.70	Minimum	-	2.70	Minimum	-
A1-1.06	Bedroom 3	3.10	Medium	-	3.10	Medium	-
A1-1.07	LKD	5.90	High	-	5.90	High	-
A1-1.07	Bedroom 1	6.90	High	Compliant	6.90	High	Compliant
A1-1.07	Bedroom 2	4.20	High	-	4.20	High	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.

** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.

*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.2 - Sunlight Exposure Results: First Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-1.08	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-1.08	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
A1-1.08	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-1.08	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-1.09	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
A1-1.09	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-1.09	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-1.01	LKD	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B1-1.01	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-1.02	LKD	0.30	Below Minimum	Non-Compliant	0.30	Below Minimum	Non-Compliant
B1-1.02	Bedroom	0.20	Below Minimum	-	0.20	Below Minimum	-
B1-1.03	LKD	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-1.03	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-1.03	Bedroom 2	0.40	Below Minimum	Non-Compliant	0.40	Below Minimum	Non-Compliant
B1-1.04	LKD	0.90	Below Minimum	-	0.90	Below Minimum	-
B1-1.04	Bedroom 1	2.60	Minimum	Compliant	2.60	Minimum	Compliant
B1-1.04	Bedroom 2	1.30	Below Minimum	-	1.30	Below Minimum	-
B1-1.05	LKD	5.90	High	Compliant	5.90	High	Compliant
B1-1.05	Bedroom	1.20	Below Minimum	-	1.20	Below Minimum	-
B1-1.06	LKD	6.60	High	Compliant	6.60	High	Compliant
B1-1.06	Bedroom 1	3.00	Medium	-	3.00	Medium	-
B1-1.06	Bedroom 2	6.30	High	-	6.30	High	-
B1-1.07	LKD	3.70	Medium	-	3.70	Medium	-
B1-1.07	Bedroom 1	9.40	High	Compliant	9.40	High	Compliant
B1-1.07	Bedroom 2	6.00	High	-	6.00	High	-
B1-1.07	Bedroom 3	6.40	High	-	6.40	High	-
B1-1.08	LKD	5.80	High	-	5.80	High	-
B1-1.08	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
B1-1.08	Bedroom 2	4.20	High	-	4.20	High	-
B1-1.09	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-1.09	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B1-1.09	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-1.09	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-1.10	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
B1-1.10	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-1.10	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B2-1.01	LKD	2.40	Minimum	Compliant	2.40	Minimum	Compliant
B2-1.01	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-1.01	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-1.02	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B2-1.02	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.

** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.

*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.2 - Sunlight Exposure Results: First Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B2-1.03	LKD	1.40	Below Minimum	-	1.40	Below Minimum	-
B2-1.03	Bedroom 1	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-1.03	Bedroom 2	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B2-1.04	LKD	1.80	Minimum	-	1.80	Minimum	-
B2-1.04	Bedroom 1	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B2-1.04	Bedroom 2	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-1.05	LKD	3.60	Medium	Compliant	3.60	Medium	Compliant
B2-1.05	Bedroom	1.80	Minimum	-	1.80	Minimum	-
B2-1.06	LKD	8.90	High	Compliant	8.90	High	Compliant
B2-1.06	Bedroom 1	3.10	Medium	-	3.10	Medium	-
B2-1.06	Bedroom 2	3.10	Medium	-	3.10	Medium	-
B2-1.07	LKD	9.40	High	Compliant	9.40	High	Compliant
B2-1.07	Bedroom 1	4.30	High	-	4.30	High	-
B2-1.07	Bedroom 2	4.30	High	-	4.30	High	-
B2-1.08	LKD	1.90	Minimum	-	1.90	Minimum	-
B2-1.08	Bedroom 1	4.10	High	Compliant	4.10	High	Compliant
B2-1.08	Bedroom 2	3.10	Medium	-	3.10	Medium	-

C.3.3 SE Results: Second Floor

Table No. C.3.3 - Sunlight Exposure Results: Second Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-2.01	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
A1-2.01	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-2.01	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-2.01	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-2.02	LKD	3.20	Medium	Compliant	3.20	Medium	Compliant
A1-2.02	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
A1-2.02	Bedroom 2	0.70	Below Minimum	-	0.70	Below Minimum	-
A1-2.02	Bedroom 3	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-2.03	LKD	3.00	Medium	-	3.00	Medium	-
A1-2.03	Bedroom 1	3.70	Medium	Compliant	3.70	Medium	Compliant
A1-2.03	Bedroom 2	1.40	Below Minimum	-	1.40	Below Minimum	-
A1-2.03	Bedroom 3	2.00	Minimum	-	2.00	Minimum	-
A1-2.04	LKD	3.50	Medium	Compliant	3.50	Medium	Compliant
A1-2.04	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
A1-2.05	LKD	1.50	Minimum	-	1.50	Minimum	-
A1-2.05	Bedroom 1	3.40	Medium	Compliant	3.40	Medium	Compliant
A1-2.05	Bedroom 2	3.10	Medium	-	3.10	Medium	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.3 - Sunlight Exposure Results: Second Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-2.06	LKD	1.40	Below Minimum	-	1.40	Below Minimum	-
A1-2.06	Bedroom 1	7.40	High	Compliant	7.40	High	Compliant
A1-2.06	Bedroom 2	3.70	Medium	-	3.70	Medium	-
A1-2.06	Bedroom 3	4.10	High	-	4.10	High	-
A1-2.07	LKD	5.90	High	-	5.90	High	-
A1-2.07	Bedroom 1	7.80	High	Compliant	7.80	High	Compliant
A1-2.07	Bedroom 2	4.20	High	-	4.20	High	-
A1-2.08	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-2.08	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
A1-2.08	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-2.08	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-2.09	LKD	0.80	Below Minimum	Non-Compliant	0.80	Below Minimum	Non-Compliant
A1-2.09	Bedroom 1	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-2.09	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-2.01	LKD	2.00	Minimum	Compliant	2.00	Minimum	Compliant
B1-2.01	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-2.02	LKD	0.30	Below Minimum	Non-Compliant	0.30	Below Minimum	Non-Compliant
B1-2.02	Bedroom	0.20	Below Minimum	-	0.20	Below Minimum	-
B1-2.03	LKD	2.00	Minimum	-	2.00	Minimum	-
B1-2.03	Bedroom 1	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-2.03	Bedroom 2	2.60	Minimum	Compliant	2.60	Minimum	Compliant
B1-2.04	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B1-2.04	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-2.04	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-2.05	LKD	1.10	Below Minimum	-	1.10	Below Minimum	-
B1-2.05	Bedroom 1	2.30	Minimum	Compliant	2.30	Minimum	Compliant
B1-2.05	Bedroom 2	1.70	Minimum	-	1.70	Minimum	-
B1-2.06	LKD	6.60	High	Compliant	6.70	High	Compliant
B1-2.06	Bedroom	1.40	Below Minimum	-	1.40	Below Minimum	-
B1-2.07	LKD	4.00	High	-	4.00	High	-
B1-2.07	Bedroom 1	5.90	High	Compliant	5.90	High	Compliant
B1-2.07	Bedroom 2	5.60	High	-	5.60	High	-
B1-2.08	LKD	3.70	Medium	-	3.70	Medium	-
B1-2.08	Bedroom 1	9.40	High	Compliant	9.40	High	Compliant
B1-2.08	Bedroom 2	6.00	High	-	6.00	High	-
B1-2.08	Bedroom 3	6.40	High	-	6.40	High	-
B1-2.09	LKD	5.80	High	-	5.80	High	-
B1-2.09	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
B1-2.09	Bedroom 2	4.20	High	-	4.20	High	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.3 - Sunlight Exposure Results: Second Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B1-2.10	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-2.10	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B1-2.10	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-2.10	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-2.11	LKD	0.80	Below Minimum	Non-Compliant	0.80	Below Minimum	Non-Compliant
B1-2.11	Bedroom 1	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-2.11	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B2-2.01	LKD	2.00	Minimum	Compliant	2.00	Minimum	Compliant
B2-2.01	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-2.01	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-2.02	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B2-2.02	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-2.03	LKD	1.40	Below Minimum	-	1.40	Below Minimum	-
B2-2.03	Bedroom 1	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-2.03	Bedroom 2	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B2-2.04	LKD	1.80	Minimum	-	1.80	Minimum	-
B2-2.04	Bedroom 1	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B2-2.04	Bedroom 2	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-2.05	LKD	2.10	Minimum	-	2.10	Minimum	-
B2-2.05	Bedroom	3.10	Medium	Compliant	3.10	Medium	Compliant
B2-2.06	LKD	8.90	High	Compliant	8.90	High	Compliant
B2-2.06	Bedroom 1	3.10	Medium	-	3.10	Medium	-
B2-2.06	Bedroom 2	3.10	Medium	-	3.10	Medium	-
B2-2.07	LKD	9.40	High	Compliant	9.40	High	Compliant
B2-2.07	Bedroom 1	4.30	High	-	4.30	High	-
B2-2.07	Bedroom 2	4.30	High	-	4.30	High	-
B2-2.08	LKD	4.30	High	Compliant	4.30	High	Compliant
B2-2.08	Bedroom 1	4.10	High	-	4.10	High	-
B2-2.08	Bedroom 2	1.80	Minimum	-	1.80	Minimum	-

C.3.4 SE Results: Third Floor

Table No. C.3.4 - Sunlight Exposure Results: Second Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-3.01	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-3.01	Bedroom 1	0.60	Below Minimum	Non-Compliant	0.60	Below Minimum	Non-Compliant
A1-3.01	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-3.01	Bedroom 3	0.50	Below Minimum	-	0.50	Below Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.4 - Sunlight Exposure Results: Third Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-3.02	LKD	1.80	Minimum	Compliant	1.80	Minimum	Compliant
A1-3.02	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
A1-3.02	Bedroom 2	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-3.02	Bedroom 3	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-3.03	LKD	4.10	High	-	4.10	High	-
A1-3.03	Bedroom 1	4.60	High	Compliant	4.60	High	Compliant
A1-3.03	Bedroom 2	1.40	Below Minimum	-	1.40	Below Minimum	-
A1-3.03	Bedroom 3	2.50	Minimum	-	2.50	Minimum	-
A1-3.04	LKD	4.60	High	Compliant	4.60	High	Compliant
A1-3.04	Bedroom	0.80	Below Minimum	-	0.80	Below Minimum	-
A1-3.05	LKD	5.30	High	Compliant	5.30	High	Compliant
A1-3.05	Bedroom 1	1.50	Minimum	-	1.50	Minimum	-
A1-3.05	Bedroom 2	4.70	High	-	4.70	High	-
A1-3.06	LKD	2.50	Minimum	-	2.50	Minimum	-
A1-3.06	Bedroom 1	8.20	High	Compliant	8.20	High	Compliant
A1-3.06	Bedroom 2	4.60	High	-	4.60	High	-
A1-3.06	Bedroom 3	4.70	High	-	4.70	High	-
A1-3.07	LKD	5.90	High	-	5.90	High	-
A1-3.07	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
A1-3.07	Bedroom 2	4.20	High	-	4.20	High	-
A1-3.08	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-3.08	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
A1-3.08	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-3.08	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-3.09	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
A1-3.09	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-3.09	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-3.01	LKD	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B1-3.01	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-3.02	LKD	0.30	Below Minimum	Non-Compliant	0.30	Below Minimum	Non-Compliant
B1-3.02	Bedroom	0.20	Below Minimum	-	0.20	Below Minimum	-
B1-3.03	LKD	2.00	Minimum	-	2.00	Minimum	-
B1-3.03	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-3.03	Bedroom 2	2.90	Minimum	Compliant	2.90	Minimum	Compliant
B1-3.04	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B1-3.04	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-3.04	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-3.05	LKD	1.30	Below Minimum	-	1.30	Below Minimum	-
B1-3.05	Bedroom 1	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B1-3.05	Bedroom 2	1.80	Minimum	-	1.80	Minimum	-
B1-3.06	LKD	6.60	High	Compliant	6.60	High	Compliant
B1-3.06	Bedroom	1.90	Minimum	-	1.90	Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.4 - Sunlight Exposure Results: Third Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B1-3.07	LKD	7.00	High	Compliant	7.00	High	Compliant
B1-3.07	Bedroom 1	3.70	Medium	-	3.70	Medium	-
B1-3.07	Bedroom 2	6.40	High	-	6.40	High	-
B1-3.08	LKD	3.70	Medium	-	3.70	Medium	-
B1-3.08	Bedroom 1	9.40	High	Compliant	9.40	High	Compliant
B1-3.08	Bedroom 2	6.00	High	-	6.00	High	-
B1-3.08	Bedroom 3	6.40	High	-	6.40	High	-
B1-3.09	LKD	5.80	High	-	5.80	High	-
B1-3.09	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
B1-3.09	Bedroom 2	4.20	High	-	4.20	High	-
B1-3.10	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-3.10	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B1-3.10	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-3.10	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-3.11	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
B1-3.11	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-3.11	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B2-3.01	LKD	2.80	Minimum	Compliant	2.80	Minimum	Compliant
B2-3.01	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-3.01	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-3.02	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B2-3.02	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-3.03	LKD	1.40	Below Minimum	-	1.40	Below Minimum	-
B2-3.03	Bedroom 1	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-3.03	Bedroom 2	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B2-3.04	LKD	1.80	Minimum	-	1.80	Minimum	-
B2-3.04	Bedroom 1	2.50	Minimum	Compliant	2.50	Minimum	Compliant
B2-3.04	Bedroom 2	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-3.05	LKD	2.30	Minimum	-	2.30	Minimum	-
B2-3.05	Bedroom	3.10	Medium	Compliant	3.10	Medium	Compliant
B2-3.06	LKD	8.90	High	Compliant	8.90	High	Compliant
B2-3.06	Bedroom 1	3.10	Medium	-	3.10	Medium	-
B2-3.06	Bedroom 2	3.10	Medium	-	3.10	Medium	-
B2-3.07	LKD	9.40	High	Compliant	9.40	High	Compliant
B2-3.07	Bedroom 1	4.30	High	-	4.30	High	-
B2-3.07	Bedroom 2	4.30	High	-	4.30	High	-
B2-3.08	LKD	2.30	Minimum	-	2.30	Minimum	-
B2-3.08	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B2-3.08	Bedroom 2	3.50	Medium	-	3.50	Medium	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

C.3.5 SE Results: Fourth Floor

Table No. C.3.5 - Sunlight Exposure Results: Fourth Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-4.01	LKD	1.40	Below Minimum	Non-Compliant	1.40	Below Minimum	Non-Compliant
A1-4.01	Bedroom	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-4.02	LKD	0.80	Below Minimum	-	0.80	Below Minimum	-
A1-4.02	Bedroom 1	1.10	Below Minimum	Non-Compliant	1.10	Below Minimum	Non-Compliant
A1-4.02	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
A1-4.03	LKD	1.80	Minimum	-	1.80	Minimum	-
A1-4.03	Bedroom 1	3.00	Medium	Compliant	3.00	Medium	Compliant
A1-4.03	Bedroom 2	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-4.04	LKD	6.30	High	Compliant	6.30	High	Compliant
A1-4.04	Bedroom 1	1.40	Below Minimum	-	1.40	Below Minimum	-
A1-4.04	Bedroom 2	5.40	High	-	5.40	High	-
A1-4.05	LKD	5.70	High	Compliant	5.70	High	Compliant
A1-4.05	Bedroom	1.90	Minimum	-	1.90	Minimum	-
A1-4.06	LKD	6.00	High	Compliant	6.00	High	Compliant
A1-4.06	Bedroom 1	5.00	High	-	5.00	High	-
A1-4.06	Bedroom 2	5.20	High	-	5.20	High	-
A1-4.07	LKD	6.10	High	-	6.10	High	-
A1-4.07	Bedroom 1	9.00	High	Compliant	9.00	High	Compliant
A1-4.07	Bedroom 2	5.50	High	-	5.50	High	-
A1-4.07	Bedroom 3	5.40	High	-	5.40	High	-
A1-4.08	LKD	6.10	High	-	6.10	High	-
A1-4.08	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
A1-4.08	Bedroom 2	4.20	High	-	4.20	High	-
A1-4.09	LKD	1.20	Below Minimum	-	1.20	Below Minimum	-
A1-4.09	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
A1-4.09	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-4.09	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-4.10	LKD	1.50	Minimum	Compliant	1.50	Minimum	Compliant
A1-4.10	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-4.10	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-4.01	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
B1-4.01	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-4.02	LKD	0.30	Below Minimum	Non-Compliant	0.30	Below Minimum	Non-Compliant
B1-4.02	Bedroom	0.20	Below Minimum	-	0.20	Below Minimum	-
B1-4.03	LKD	2.30	Minimum	-	2.30	Minimum	-
B1-4.03	Bedroom 1	0.90	Below Minimum	-	0.90	Below Minimum	-
B1-4.03	Bedroom 2	4.50	High	Compliant	4.50	High	Compliant
B1-4.04	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B1-4.04	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-4.04	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.

** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.

*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.5 - Sunlight Exposure Results: Fourth Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B1-4.05	LKD	1.80	Minimum	-	1.80	Minimum	-
B1-4.05	Bedroom 1	2.30	Minimum	Compliant	2.30	Minimum	Compliant
B1-4.05	Bedroom 2	2.10	Minimum	-	2.10	Minimum	-
B1-4.06	LKD	7.50	High	Compliant	7.50	High	Compliant
B1-4.06	Bedroom	1.90	Minimum	-	1.90	Minimum	-
B1-4.07	LKD	4.00	High	-	4.00	High	-
B1-4.07	Bedroom 1	5.90	High	Compliant	5.90	High	Compliant
B1-4.07	Bedroom 2	5.40	High	-	5.40	High	-
B1-4.08	LKD	3.70	Medium	-	3.70	Medium	-
B1-4.08	Bedroom 1	9.40	High	Compliant	9.40	High	Compliant
B1-4.08	Bedroom 2	6.00	High	-	6.00	High	-
B1-4.08	Bedroom 3	6.40	High	-	6.40	High	-
B1-4.09	LKD	5.80	High	-	5.80	High	-
B1-4.09	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
B1-4.09	Bedroom 2	4.20	High	-	4.20	High	-
B1-4.10	LKD	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-4.10	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B1-4.10	Bedroom 2	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-4.10	Bedroom 3	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-4.11	LKD	0.80	Below Minimum	Non-Compliant	0.80	Below Minimum	Non-Compliant
B1-4.11	Bedroom 1	0.40	Below Minimum	-	0.40	Below Minimum	-
B1-4.11	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B2-4.01	LKD	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B2-4.01	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-4.01	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-4.02	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B2-4.02	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-4.03	LKD	1.40	Below Minimum	-	1.40	Below Minimum	-
B2-4.03	Bedroom 1	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-4.03	Bedroom 2	1.60	Minimum	Compliant	1.60	Minimum	Compliant
B2-4.04	LKD	3.60	Medium	Compliant	3.60	Medium	Compliant
B2-4.04	Bedroom 1	3.10	Medium	-	3.10	Medium	-
B2-4.04	Bedroom 2	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-4.05	LKD	7.80	High	Compliant	8.70	High	Compliant
B2-4.05	Bedroom	3.10	Medium	-	3.10	Medium	-
B2-4.06	LKD	4.70	High	-	4.70	High	-
B2-4.06	Bedroom 1	8.40	High	Compliant	9.40	High	Compliant
B2-4.06	Bedroom 2	2.40	Minimum	-	2.40	Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.

** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.

*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.

For floor plans of the assessed units please refer to section C.1 on page 41.

C.3.6 SE Results: Fifth Floor

Table No. C.3.6 - Sunlight Exposure Results: Fifth Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
A1-5.01	LKD	1.40	Below Minimum	Non-Compliant	1.40	Below Minimum	Non-Compliant
A1-5.01	Bedroom	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-5.02	LKD	1.00	Below Minimum	-	1.00	Below Minimum	-
A1-5.02	Bedroom 1	1.10	Below Minimum	Non-Compliant	1.10	Below Minimum	Non-Compliant
A1-5.02	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
A1-5.03	LKD	3.70	Medium	-	3.70	Medium	-
A1-5.03	Bedroom 1	4.60	High	Compliant	6.70	High	Compliant
A1-5.03	Bedroom 2	1.10	Below Minimum	-	1.10	Below Minimum	-
A1-5.04	LKD	6.80	High	Compliant	6.80	High	Compliant
A1-5.04	Bedroom	6.40	High	-	6.40	High	-
B1-5.01	LKD	2.50	Minimum	Compliant	2.50	Minimum	Compliant
B1-5.01	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-5.02	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
B1-5.02	Bedroom	0.20	Below Minimum	-	0.20	Below Minimum	-
B1-5.03	LKD	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-5.03	Bedroom 1	1.00	Below Minimum	Non-Compliant	1.00	Below Minimum	Non-Compliant
B1-5.03	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B1-5.04	LKD	6.00	High	Compliant	6.00	High	Compliant
B1-5.04	Bedroom 1	4.30	High	-	4.30	High	-
B1-5.04	Bedroom 2	5.70	High	-	5.70	High	-
B1-5.05	LKD	7.80	High	Compliant	7.80	High	Compliant
B1-5.05	Bedroom	4.10	High	-	4.10	High	-
B1-5.06	LKD	7.00	High	Compliant	7.00	High	Compliant
B1-5.06	Bedroom 1	6.40	High	-	6.40	High	-
B1-5.06	Bedroom 2	6.40	High	-	6.40	High	-
B1-5.07	LKD	6.80	High	-	6.80	High	-
B1-5.07	Bedroom 1	9.40	High	Compliant	9.40	High	Compliant
B1-5.07	Bedroom 2	6.40	High	-	6.40	High	-
B1-5.08	LKD	6.10	High	-	6.10	High	-
B1-5.08	Bedroom 1	8.00	High	Compliant	8.00	High	Compliant
B1-5.08	Bedroom 2	4.20	High	-	4.20	High	-
B1-5.09	LKD	1.20	Below Minimum	-	1.20	Below Minimum	-
B1-5.09	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
B1-5.09	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-5.10	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
B1-5.10	Bedroom 1	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-5.10	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.

** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.

*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.

For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. C.3.6 - Sunlight Exposure Results: Fifth Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B2-5.01	LKD	5.30	High	Compliant	5.30	High	Compliant
B2-5.01	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-5.01	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-5.02	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
B2-5.02	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
B2-5.03	LKD	1.80	Minimum	-	1.80	Minimum	-
B2-5.03	Bedroom 1	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-5.03	Bedroom 2	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B2-5.04	LKD	6.90	High	-	6.90	High	-
B2-5.04	Bedroom 1	8.40	High	Compliant	8.40	High	Compliant
B2-5.04	Bedroom 2	1.20	Below Minimum	-	1.20	Below Minimum	-
B2-5.04	Bedroom 3	2.80	Minimum	-	2.80	Minimum	-
B2-5.05	LKD	9.40	High	Compliant	9.40	High	Compliant
B2-5.05	Bedroom	4.30	High	-	4.30	High	-

C.3.7 SE Results: Sixth Floor

Table No. C.3.7 - Sunlight Exposure Results: Sixth Floor							
Unit Number	Room Description	Deciduous Trees as Opaque Objects*			Without Deciduous Trees*		
		SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**	SE Hours on March 21st	Level of SE on March 21st***	Unit compliance based on highest performing room**
B1-6.01	LKD	2.70	Minimum	Compliant	2.70	Minimum	Compliant
B1-6.01	Bedroom 1	1.00	Below Minimum	-	1.00	Below Minimum	-
B1-6.01	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-6.01	Bedroom 3	0.30	Below Minimum	-	0.30	Below Minimum	-
B1-6.02	LKD	1.00	Below Minimum	-	1.00	Below Minimum	-
B1-6.02	Bedroom 1	1.10	Below Minimum	Non-Compliant	1.10	Below Minimum	Non-Compliant
B1-6.02	Bedroom 2	0.60	Below Minimum	-	0.60	Below Minimum	-
B1-6.03	LKD	6.70	High	Compliant	6.70	High	Compliant
B1-6.03	Bedroom 1	1.10	Below Minimum	-	1.10	Below Minimum	-
B1-6.03	Bedroom 2	6.40	High	-	6.40	High	-
B1-6.04	LKD	8.10	High	Compliant	8.10	High	Compliant
B1-6.04	Bedroom 1	6.70	High	-	6.70	High	-
B1-6.04	Bedroom 2	6.40	High	-	6.40	High	-
B1-6.04	Bedroom 3	6.40	High	-	6.40	High	-

* Rooms are tested with deciduous trees as opaque objects and without deciduous trees to account for the range of possible sunlight hours.
** The BRE Guidelines recommend that for a unit to be compliant any room within the unit should receive a minimum of 1.5 hours of direct sunlight on March 21st, preferably a main living room. The SE circa compliance rates can be found in section 5.2.2 on page 22.
*** For the interpretation of levels of Sunlight Exposure please refer to “3.3 Definition of Levels of Sunlight Exposure” on page 11.
For floor plans of the assessed units please refer to section C.1 on page 41.

C.4 Sun On Ground (SOG) in Proposed Outdoor Amenity Areas

Below is an example of the table used to describe SOG in proposed gardens and amenity spaces.

Table Example. C.4 - Scheme Performance SOG				
Assessed Area	Area Capable of Receiving 2 Hours of Sunlight on March 21st	Recommended Minimum	Level of Compliance with BRE Guidelines	Meets BRE 209 Criteria
A	**B**	**C**	**D**	**E**

A: Assessed Area

This column identifies the assessed garden/amenity area.

B: Area Capable of Receiving 2 Hours of Sunlight on March 21st

The percentage of the proposed area that can receive more than 2 hours of sunlight on March 21st.

C: Recommended Minimum

The BRE Guidelines state that the percentage of a garden/amenity area that can receive more than 2 hours of sunlight on March 21st should be 50%. The target value for all spaces is set to 50%.

D: Level of Compliance with BRE Guidelines

This column states the compliance of the assessed space with the *BRE Target Value*. If the assessed garden or amenity area complies with the BRE Guidelines this cell will state "*BRE Compliant*". If the garden or amenity area does not meet the criteria as set out in the BRE Guidelines, a percentage of compliance with the *recommended minimum* will be stated.

E: Meets BRE 209 Criteria

This column states if the assessed room achieves the recommended level of sunlight on March 21st as per BRE 209.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

C.4.1 Sun On Ground in Proposed Outdoor Amenity Areas

Table No. C.4.1 - SOG in Proposed Outdoor Amenity Areas Results:				
Assessed Area	Area Capable of Receiving 2 Hours of Sunlight on March 21st	Recommended minimum	Level of Compliance with BRE Guidelines*	Meets BRE 209 Criteria*
Public Open Space	87.73%	50.00%	BRE Compliant	Yes
Communal Open Space	86.98%	50.00%	BRE Compliant	Yes
Creche Open Space	94.41%	50.00%	BRE Compliant	Yes
* The BRE Guidelines recommend that for a garden or amenity 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 March 21st.				

Figure C.8: Indication of the amenity areas that have been analysed (L), Area capable of receiving 2 hours of sunlight on March 21st shown in white (R)

D.0 Supplementary Study Results

D.1 SDA study, under the I.S. EN 17037 criteria

Below is an example of the table used to describe the supplementary study results for proposed units in the assessment of SDA under the I.S. EN 17037 criteria.

Table Example. D.1 - Supplementary SDA Results (I.S. EN 17037 criteria)								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria
		Area above 300 Lux	Area above 100 Lux	Area above 300 Lux	Area above 100 Lux	Area above 300 Lux	Area above 100 Lux	
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**

A: Unit Number

This column identifies the assessed unit. All unit numbers are determined by the architect's drawings, unless otherwise stated.

B: Room Description

Room Description details which room in the unit has been assessed, e.g. bedroom, LKD, etc.

C: % of area above 300 Lux (No Trees)

I.S. EN 17037 recommends at least 50% of the working plane receives above 300 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 300 lux for at least half the daylight hours when the assessment is carried out without trees in the analytical model.

D: % of area above 100 Lux (No Trees)

I.S. EN 17037 recommends at least 95% of the working plane receives above 100 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 100 lux for at least half the daylight hours when the assessment is carried out without trees in the analytical model.

E: % of area above 300 Lux (Winter Trees)

I.S. EN 17037 recommends at least 50% of the working plane receives above 300 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 300 lux for at least half the daylight hours when the trees in the analytical model are configured in the winter state i.e. bare branch.

F: % of area above 100 Lux (Winter Trees)

I.S. EN 17037 recommends at least 95% of the working plane receives above 100 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 100 lux for at least half the daylight hours when the trees in the analytical model are configured in the winter state i.e. bare branch.

G: % of area above 300 Lux (Summer Trees)

I.S. EN 17037 recommends at least 50% of the working plane receives above 300 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 300 lux for at least half the daylight hours when the trees in the analytical model are configured in the summer state i.e. full leaf.

H: % of area above 100 Lux (Summer Trees)

I.S. EN 17037 recommends at least 95% of the working plane receives above 100 lux for at least half the daylight hours.

This column states percentage of the working plane of the assessed room that is capable of receiving more than 100 lux for at least half the daylight hours when the trees in the analytical model are configured in the summer state i.e. full leaf.

I: Compliance with I.S. EN 17037 Criteria I.S. EN 17037 Criteria

This column states if the assessed room achieves the recommended level of daylight as per I.S. EN 17037 with consideration to the various tree states.

If the recommended lux levels are achieved on the working plane, for half the daylight hours, both with and without trees, this column will state: *'Compliant'*.

If the recommended lux levels are not achieved on the working plane, for half the daylight hours, both with and without trees, this column will state: *'Non-compliant'*.

If the recommended lux levels are achieved on the working plane, for half the daylight hours, without trees but are not achieved with trees, this column will state: *'Trees affecting compliance'*.

If the recommended lux levels are achieved on the working plane, for half the daylight hours, with the trees in the winter state but are not achieved with trees in the summer state, this column will state: *'Trees affecting compliance (summer only)'*.

Compliance rates will be stated for SDA compliance with trees in all of the above states.

It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

D.1.1 Supplementary SDA Results (I.S. EN 17037 criteria): Ground Floor

Table No. D.1.1 - Supplementary SDA Results (I.S. EN 17037 criteria): Ground Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-0.01	LKD	78%	100%	75%	100%	71%	100%	Compliant
B1-0.01	Bedroom	47%	100%	47%	100%	45%	100%	Non-compliant
B1-0.02	LKD	31%	85%	31%	79%	28%	71%	Non-compliant
B1-0.02	Bedroom 1	21%	63%	19%	61%	18%	56%	Non-compliant
B1-0.02	Bedroom 2	58%	100%	52%	100%	52%	100%	Compliant
B2-0.01	LKD	4%	90%	4%	82%	3%	76%	Non-compliant
B2-0.01	Bedroom	0%	48%	0%	46%	0%	45%	Non-compliant
B2-0.02	LKD	41%	99%	41%	99%	41%	99%	Non-compliant
B2-0.02	Bedroom	30%	100%	30%	100%	30%	100%	Non-compliant
B2-0.03	LKD	52%	100%	51%	100%	51%	100%	Compliant
B2-0.03	Bedroom 1	95%	100%	95%	100%	92%	100%	Compliant
Creche	Classroom 01	99%	100%	99%	100%	99%	100%	Compliant
Creche	Classroom 02	100%	100%	100%	100%	100%	100%	Compliant
Creche	Classroom 03	100%	100%	100%	100%	100%	100%	Compliant
Creche	Office	100%	100%	100%	100%	100%	100%	Compliant
Residential Amenity	Activity Room	44%	100%	38%	100%	31%	100%	Non-compliant
Residential Amenity	Co-Working	71%	100%	61%	100%	51%	100%	Compliant
Residential Amenity	Gym	100%	100%	100%	100%	100%	100%	Compliant
Residential Amenity	Residents Lounge	100%	100%	100%	100%	100%	100%	Compliant

D.1.2 Supplementary SDA Results (I.S. EN 17037 criteria): First Floor

Table No. D.1.2 - Supplementary SDA Results (I.S. EN 17037 criteria): First Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-1.01	LKD	72%	100%	72%	100%	72%	100%	Compliant
A1-1.01	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
A1-1.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-1.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-1.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-1.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.03	Bedroom 2	0%	60%	0%	51%	0%	47%	Non-compliant
A1-1.04	LKD	14%	53%	14%	52%	14%	50%	Non-compliant
A1-1.04	Bedroom	0%	45%	0%	40%	0%	38%	Non-compliant
A1-1.05	LKD	20%	62%	19%	60%	19%	59%	Non-compliant
A1-1.05	Bedroom 1	4%	75%	3%	72%	0%	68%	Non-compliant
A1-1.05	Bedroom 2	45%	100%	45%	100%	43%	100%	Non-compliant
A1-1.06	LKD	31%	85%	31%	85%	31%	84%	Non-compliant
A1-1.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.06	Bedroom 2	91%	100%	91%	100%	91%	100%	Compliant
A1-1.06	Bedroom 3	38%	100%	36%	100%	35%	100%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.2 - Supplementary SDA Results (I.S. EN 17037 criteria): First Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-1.07	LKD	89%	100%	88%	100%	88%	100%	Compliant
A1-1.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-1.08	LKD	82%	100%	80%	100%	80%	100%	Compliant
A1-1.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-1.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-1.09	LKD	78%	100%	72%	100%	67%	100%	Compliant
A1-1.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-1.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-1.01	LKD	49%	97%	47%	96%	44%	94%	Non-compliant
B1-1.01	Bedroom	0%	38%	0%	35%	0%	32%	Non-compliant
B1-1.02	LKD	3%	43%	2%	41%	1%	38%	Non-compliant
B1-1.02	Bedroom	13%	73%	12%	68%	10%	67%	Non-compliant
B1-1.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-1.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-1.03	Bedroom 2	0%	61%	0%	54%	0%	49%	Non-compliant
B1-1.04	LKD	23%	63%	23%	62%	22%	62%	Non-compliant
B1-1.04	Bedroom 1	19%	72%	19%	72%	19%	71%	Non-compliant
B1-1.04	Bedroom 2	37%	100%	33%	100%	33%	100%	Non-compliant
B1-1.05	LKD	91%	100%	91%	100%	90%	100%	Compliant
B1-1.05	Bedroom	29%	100%	29%	100%	27%	100%	Non-compliant
B1-1.06	LKD	75%	100%	74%	100%	73%	100%	Compliant
B1-1.06	Bedroom 1	100%	100%	100%	100%	99%	100%	Compliant
B1-1.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-1.07	LKD	86%	100%	85%	100%	85%	100%	Compliant
B1-1.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-1.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-1.07	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
B1-1.08	LKD	92%	100%	92%	100%	92%	100%	Compliant
B1-1.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-1.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-1.09	LKD	45%	95%	44%	94%	42%	93%	Non-compliant
B1-1.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-1.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-1.09	Bedroom 3	54%	100%	53%	100%	53%	100%	Compliant
B1-1.10	LKD	30%	75%	29%	72%	28%	69%	Non-compliant
B1-1.10	Bedroom 1	18%	93%	15%	89%	14%	82%	Non-compliant
B1-1.10	Bedroom 2	55%	100%	53%	100%	53%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.2 - Supplementary SDA Results (I.S. EN 17037 criteria): First Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B2-1.01	LKD	46%	100%	45%	100%	43%	100%	Non-compliant
B2-1.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-1.01	Bedroom 2	15%	95%	15%	93%	13%	93%	Non-compliant
B2-1.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-1.02	Bedroom	91%	100%	83%	100%	73%	100%	Compliant
B2-1.03	LKD	48%	97%	46%	97%	46%	97%	Non-compliant
B2-1.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-1.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-1.04	LKD	78%	99%	77%	99%	77%	99%	Compliant
B2-1.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-1.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-1.05	LKD	74%	100%	74%	100%	73%	100%	Compliant
B2-1.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B2-1.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-1.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-1.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-1.07	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-1.07	Bedroom 1	97%	100%	97%	100%	97%	100%	Compliant
B2-1.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-1.08	LKD	41%	100%	41%	100%	41%	100%	Non-compliant
B2-1.08	Bedroom 1	54%	100%	54%	100%	53%	100%	Compliant
B2-1.08	Bedroom 2	60%	100%	60%	100%	60%	100%	Compliant

D.1.3 Supplementary SDA Results (I.S. EN 17037 criteria): Second Floor

Table No. D.1.3 - Supplementary SDA Results (I.S. EN 17037 criteria): Second Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-2.01	LKD	84%	100%	84%	100%	84%	100%	Compliant
A1-2.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.01	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.01	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-2.02	LKD	84%	100%	81%	100%	79%	100%	Compliant
A1-2.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.02	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-2.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-2.03	Bedroom 1	63%	100%	63%	100%	62%	100%	Compliant
A1-2.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.03	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-2.04	LKD	20%	58%	19%	58%	19%	57%	Non-compliant
A1-2.04	Bedroom	0%	33%	0%	33%	0%	32%	Non-compliant
A1-2.05	LKD	26%	68%	25%	68%	24%	68%	Non-compliant
A1-2.05	Bedroom 1	40%	100%	40%	100%	40%	100%	Non-compliant
A1-2.05	Bedroom 2	25%	100%	23%	100%	23%	100%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.3 - Supplementary SDA Results (I.S. EN 17037 criteria): Second Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-2.06	LKD	38%	87%	37%	87%	37%	86%	Non-compliant
A1-2.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.06	Bedroom 3	49%	100%	49%	100%	49%	100%	Non-compliant
A1-2.07	LKD	89%	100%	89%	100%	88%	100%	Compliant
A1-2.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.08	LKD	81%	100%	81%	100%	81%	100%	Compliant
A1-2.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-2.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-2.09	LKD	81%	100%	77%	100%	76%	100%	Compliant
A1-2.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-2.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.01	LKD	58%	100%	56%	100%	54%	100%	Compliant
B1-2.01	Bedroom	2%	52%	2%	52%	0%	52%	Non-compliant
B1-2.02	LKD	6%	39%	6%	38%	6%	38%	Non-compliant
B1-2.02	Bedroom	22%	93%	22%	93%	22%	90%	Non-compliant
B1-2.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-2.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.03	Bedroom 2	57%	100%	55%	100%	55%	100%	Compliant
B1-2.04	LKD	76%	100%	75%	100%	71%	100%	Compliant
B1-2.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.05	LKD	28%	77%	28%	77%	27%	77%	Non-compliant
B1-2.05	Bedroom 1	25%	90%	25%	90%	24%	90%	Non-compliant
B1-2.05	Bedroom 2	57%	100%	55%	100%	53%	100%	Compliant
B1-2.06	LKD	99%	100%	99%	100%	99%	100%	Compliant
B1-2.06	Bedroom	42%	100%	42%	100%	42%	100%	Non-compliant
B1-2.07	LKD	88%	100%	87%	100%	86%	100%	Compliant
B1-2.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.08	LKD	88%	100%	88%	100%	88%	100%	Compliant
B1-2.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
B1-2.09	LKD	94%	100%	94%	100%	94%	100%	Compliant
B1-2.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.10	LKD	52%	98%	51%	98%	50%	97%	Compliant
B1-2.10	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-2.10	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-2.10	Bedroom 3	69%	100%	69%	100%	68%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.3 - Supplementary SDA Results (I.S. EN 17037 criteria): Second Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-2.11	LKD	38%	89%	37%	87%	36%	86%	Non-compliant
B1-2.11	Bedroom 1	57%	100%	56%	100%	53%	100%	Compliant
B1-2.11	Bedroom 2	55%	100%	55%	100%	52%	100%	Compliant
B2-2.01	LKD	45%	100%	44%	100%	43%	100%	Non-compliant
B2-2.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-2.01	Bedroom 2	19%	100%	18%	99%	16%	98%	Non-compliant
B2-2.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-2.02	Bedroom	94%	100%	94%	100%	91%	100%	Compliant
B2-2.03	LKD	50%	98%	49%	97%	49%	97%	Trees affecting compliance
B2-2.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-2.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-2.04	LKD	79%	99%	79%	99%	78%	99%	Compliant
B2-2.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-2.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-2.05	LKD	78%	100%	76%	100%	76%	100%	Compliant
B2-2.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B2-2.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-2.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-2.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-2.07	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-2.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-2.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-2.08	LKD	48%	100%	48%	100%	48%	100%	Non-compliant
B2-2.08	Bedroom 1	82%	100%	82%	100%	82%	100%	Compliant
B2-2.08	Bedroom 2	53%	100%	53%	100%	53%	100%	Compliant

D.1.4 Supplementary SDA Results (I.S. EN 17037 criteria): Third Floor

Table No. D.1.4 - Supplementary SDA Results (I.S. EN 17037 criteria): Third Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-3.01	LKD	86%	100%	86%	100%	86%	100%	Compliant
A1-3.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.01	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.01	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-3.02	LKD	85%	100%	84%	100%	83%	100%	Compliant
A1-3.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.02	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-3.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-3.03	Bedroom 1	73%	100%	72%	100%	72%	100%	Compliant
A1-3.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.03	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-3.04	LKD	29%	69%	29%	69%	29%	69%	Non-compliant
A1-3.04	Bedroom	10%	67%	10%	67%	10%	67%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.4 - Supplementary SDA Results (I.S. EN 17037 criteria): Third Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-3.05	LKD	37%	90%	37%	89%	36%	88%	Non-compliant
A1-3.05	Bedroom 1	29%	99%	29%	99%	29%	97%	Non-compliant
A1-3.05	Bedroom 2	82%	100%	80%	100%	80%	100%	Compliant
A1-3.06	LKD	48%	91%	48%	91%	48%	91%	Non-compliant
A1-3.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.06	Bedroom 3	67%	100%	65%	100%	65%	100%	Compliant
A1-3.07	LKD	90%	100%	90%	100%	89%	100%	Compliant
A1-3.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.08	LKD	82%	100%	82%	100%	81%	100%	Compliant
A1-3.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-3.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-3.09	LKD	86%	100%	85%	100%	83%	100%	Compliant
A1-3.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-3.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-3.01	LKD	66%	100%	65%	100%	65%	100%	Compliant
B1-3.01	Bedroom	15%	80%	15%	80%	15%	80%	Non-compliant
B1-3.02	LKD	17%	52%	17%	52%	17%	52%	Non-compliant
B1-3.02	Bedroom	38%	100%	38%	100%	37%	100%	Non-compliant
B1-3.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-3.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.03	Bedroom 2	63%	100%	63%	100%	63%	100%	Compliant
B1-3.04	LKD	78%	100%	76%	100%	76%	100%	Compliant
B1-3.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-3.05	LKD	36%	94%	35%	93%	35%	93%	Non-compliant
B1-3.05	Bedroom 1	33%	100%	32%	100%	32%	100%	Non-compliant
B1-3.05	Bedroom 2	70%	100%	70%	100%	70%	100%	Compliant
B1-3.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-3.06	Bedroom	61%	100%	61%	100%	59%	100%	Compliant
B1-3.07	LKD	97%	100%	95%	100%	93%	100%	Compliant
B1-3.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-3.08	LKD	90%	100%	90%	100%	89%	100%	Compliant
B1-3.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-3.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
B1-3.09	LKD	93%	100%	93%	100%	93%	100%	Compliant
B1-3.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.4 - Supplementary SDA Results (I.S. EN 17037 criteria): Third Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-3.10	LKD	59%	100%	58%	100%	58%	100%	Compliant
B1-3.10	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-3.10	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-3.10	Bedroom 3	79%	100%	79%	100%	78%	100%	Compliant
B1-3.11	LKD	46%	99%	46%	99%	46%	99%	Non-compliant
B1-3.11	Bedroom 1	50%	100%	49%	100%	46%	100%	Trees affecting compliance
B1-3.11	Bedroom 2	85%	100%	83%	100%	83%	100%	Compliant
B2-3.01	LKD	65%	100%	64%	100%	64%	100%	Compliant
B2-3.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-3.01	Bedroom 2	21%	100%	19%	100%	19%	100%	Non-compliant
B2-3.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-3.02	Bedroom	95%	100%	94%	100%	94%	100%	Compliant
B2-3.03	LKD	50%	98%	50%	97%	50%	97%	Compliant
B2-3.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-3.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-3.04	LKD	79%	99%	79%	99%	79%	99%	Compliant
B2-3.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-3.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-3.05	LKD	79%	100%	77%	100%	76%	100%	Compliant
B2-3.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B2-3.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-3.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-3.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-3.07	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-3.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-3.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-3.08	LKD	55%	100%	55%	100%	55%	100%	Compliant
B2-3.08	Bedroom 1	82%	100%	82%	100%	82%	100%	Compliant
B2-3.08	Bedroom 2	90%	100%	90%	100%	90%	100%	Compliant

D.1.5 Supplementary SDA Results (I.S. EN 17037 criteria): Fourth Floor

Table No. D.1.5 - Supplementary SDA Results (I.S. EN 17037 criteria): Fourth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-4.01	LKD	74%	100%	74%	100%	73%	100%	Compliant
A1-4.01	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
A1-4.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-4.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.03	LKD	86%	100%	84%	100%	82%	100%	Compliant
A1-4.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.5 - Supplementary SDA Results (I.S. EN 17037 criteria): Fourth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-4.04	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-4.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.05	LKD	42%	88%	42%	88%	42%	88%	Non-compliant
A1-4.05	Bedroom	42%	100%	42%	100%	42%	100%	Non-compliant
A1-4.06	LKD	65%	100%	65%	100%	65%	100%	Compliant
A1-4.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.07	LKD	83%	100%	83%	100%	83%	100%	Compliant
A1-4.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.07	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-4.08	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-4.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.09	LKD	92%	100%	92%	100%	92%	100%	Compliant
A1-4.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-4.09	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
A1-4.10	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-4.10	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-4.10	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.01	LKD	78%	100%	78%	100%	78%	100%	Compliant
B1-4.01	Bedroom	35%	100%	35%	100%	35%	100%	Non-compliant
B1-4.02	LKD	34%	76%	34%	76%	34%	76%	Non-compliant
B1-4.02	Bedroom	58%	100%	58%	100%	58%	100%	Compliant
B1-4.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-4.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.03	Bedroom 2	78%	100%	78%	100%	78%	100%	Compliant
B1-4.04	LKD	81%	100%	79%	100%	78%	100%	Compliant
B1-4.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.05	LKD	43%	99%	42%	99%	42%	99%	Non-compliant
B1-4.05	Bedroom 1	35%	100%	35%	100%	33%	100%	Non-compliant
B1-4.05	Bedroom 2	82%	100%	82%	100%	82%	100%	Compliant
B1-4.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-4.06	Bedroom	77%	100%	77%	100%	77%	100%	Compliant
B1-4.07	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-4.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.08	LKD	93%	100%	93%	100%	92%	100%	Compliant
B1-4.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.08	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.5 - Supplementary SDA Results (I.S. EN 17037 criteria): Fourth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-4.09	LKD	94%	100%	94%	100%	94%	100%	Compliant
B1-4.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.10	LKD	68%	100%	68%	100%	67%	100%	Compliant
B1-4.10	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-4.10	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-4.10	Bedroom 3	100%	100%	97%	100%	96%	100%	Compliant
B1-4.11	LKD	56%	100%	55%	100%	55%	100%	Compliant
B1-4.11	Bedroom 1	83%	100%	83%	100%	83%	100%	Compliant
B1-4.11	Bedroom 2	87%	100%	87%	100%	85%	100%	Compliant
B2-4.01	LKD	64%	100%	63%	100%	62%	100%	Compliant
B2-4.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-4.01	Bedroom 2	21%	100%	21%	100%	20%	100%	Non-compliant
B2-4.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-4.02	Bedroom	97%	100%	95%	100%	94%	100%	Compliant
B2-4.03	LKD	51%	97%	51%	97%	50%	97%	Compliant
B2-4.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-4.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-4.04	LKD	80%	100%	80%	100%	80%	100%	Compliant
B2-4.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-4.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-4.05	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-4.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B2-4.06	LKD	63%	100%	63%	100%	63%	100%	Compliant
B2-4.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-4.06	Bedroom 2	95%	100%	95%	100%	95%	100%	Compliant

D.1.6 Supplementary SDA Results (I.S. EN 17037 criteria): Fifth Floor

Table No. D.1.6 - Supplementary SDA Results (I.S. EN 17037 criteria): Fifth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
A1-5.01	LKD	94%	100%	93%	100%	92%	100%	Compliant
A1-5.01	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
A1-5.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
A1-5.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-5.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-5.03	LKD	97%	100%	97%	100%	97%	100%	Compliant
A1-5.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
A1-5.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
A1-5.04	LKD	76%	100%	76%	100%	75%	100%	Compliant
A1-5.04	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B1-5.01	LKD	92%	100%	91%	100%	90%	100%	Compliant
B1-5.01	Bedroom	89%	100%	88%	100%	86%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

Table No. D.1.6 - Supplementary SDA Results (I.S. EN 17037 criteria): Fifth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-5.02	LKD	62%	100%	62%	100%	62%	100%	Compliant
B1-5.02	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B1-5.03	LKD	87%	100%	86%	100%	82%	100%	Compliant
B1-5.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.04	LKD	64%	100%	64%	100%	63%	100%	Compliant
B1-5.04	Bedroom 1	74%	100%	74%	100%	74%	100%	Compliant
B1-5.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.05	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-5.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B1-5.06	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-5.06	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.06	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.07	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-5.07	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.07	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.08	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-5.08	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.08	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.09	LKD	86%	100%	86%	100%	86%	100%	Compliant
B1-5.09	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.09	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-5.10	LKD	77%	100%	77%	100%	77%	100%	Compliant
B1-5.10	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-5.10	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-5.01	LKD	94%	100%	94%	100%	93%	100%	Compliant
B2-5.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-5.01	Bedroom 2	21%	100%	20%	100%	18%	100%	Non-compliant
B2-5.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-5.02	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
B2-5.03	LKD	59%	99%	58%	99%	58%	98%	Compliant
B2-5.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-5.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-5.04	LKD	100%	100%	100%	100%	100%	100%	Compliant
B2-5.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B2-5.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B2-5.04	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
B2-5.05	LKD	97%	100%	97%	100%	97%	100%	Compliant
B2-5.05	Bedroom	100%	100%	100%	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

D.1.7 Supplementary SDA Results (I.S. EN 17037 criteria): Sixth Floor

Table No. D.1.7 - Supplementary SDA Results (I.S. EN 17037 criteria): Sixth Floor								
Unit Number	Room Description	No Trees		Winter Trees		Summer Trees		Compliance with I.S. EN 17037 Criteria*
		Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	Area above 300 Lux*	Area above 100 Lux*	
B1-6.01	LKD	77%	100%	77%	100%	77%	100%	Compliant
B1-6.01	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-6.01	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-6.01	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant
B1-6.02	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-6.02	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-6.02	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-6.03	LKD	100%	100%	100%	100%	100%	100%	Compliant
B1-6.03	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-6.03	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-6.04	LKD	84%	100%	83%	100%	83%	100%	Compliant
B1-6.04	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
B1-6.04	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
B1-6.04	Bedroom 3	100%	100%	100%	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.4.1 on page 16.
For floor plans of the assessed units please refer to section C.1 on page 41.

D.2 Supplementary No Sky Line (NSL) assessment in proposed units.

Below is an example of the table used to describe the supplementary assessment results for 'No Sky Line' in proposed units.

Table Example. D.2 - Supplementary NSL Results:			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%
A	**B**	**C**	**D**

A: Unit Number

This column identifies the assessed unit. All unit numbers are determined by the architect's drawings, unless otherwise stated.

B: Room Description

Room Description details which room in the unit has been assessed, e.g. bedroom, LKD, etc.

C: % of room where the sky is visible from the working plane

This column states the percentage of the room from which there is a direct line of sight to the sky when assessed at the working plane height, which is 850mm above the finished floor level in residential rooms or 700mm above the finished floor level in offices or classrooms.

D: Above 80%

Whilst the BRE Guidelines only provide recommendations for NSL in the context of an impact analysis, it states that "Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line."

If this column states: *'Yes'*, it signifies that the sky will be visible from more than 80% of the working plane.

If this column states: *'No'*, it signifies that the sky will be visible from less than 80% of the working plane and supplementary electric lighting may be required.

D.2.1 Supplementary NSL Results: Ground Floor

Table No. D.2.1 - Supplementary NSL Results: Ground Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B1-0.01	LKD	100%	Yes
B1-0.01	Bedroom	80%	No
B1-0.02	LKD	66%	No
B1-0.02	Bedroom 1	48%	No
B1-0.02	Bedroom 2	74%	No
B2-0.01	LKD	92%	Yes
B2-0.01	Bedroom	68%	No
B2-0.02	LKD	67%	No
B2-0.02	Bedroom	50%	No
B2-0.03	LKD	84%	Yes
B2-0.03	Bedroom 1	93%	Yes
Creche	Classroom 01	96%	Yes
Creche	Classroom 02	100%	Yes
Creche	Classroom 03	100%	Yes
Creche	Office	90%	Yes
Residential Amenity	Activity Room	69%	No
Residential Amenity	Co-Working	86%	Yes
Residential Amenity	Gym	100%	Yes
Residential Amenity	Residents Lounge	99%	Yes

D.2.2 Supplementary NSL Results: First Floor

Table No. D.2.2 - Supplementary NSL Results: First Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-1.01	LKD	98%	Yes
A1-1.01	Bedroom	99%	Yes
A1-1.02	LKD	100%	Yes
A1-1.02	Bedroom 1	99%	Yes
A1-1.02	Bedroom 2	99%	Yes
A1-1.03	LKD	99%	Yes
A1-1.03	Bedroom 1	99%	Yes
A1-1.03	Bedroom 2	34%	No
A1-1.04	LKD	25%	No
A1-1.04	Bedroom	25%	No
A1-1.05	LKD	25%	No
A1-1.05	Bedroom 1	19%	No
A1-1.05	Bedroom 2	49%	No
A1-1.06	LKD	42%	No
A1-1.06	Bedroom 1	99%	Yes
A1-1.06	Bedroom 2	57%	No
A1-1.06	Bedroom 3	40%	No

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.2 - Supplementary NSL Results: First Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-1.07	LKD	100%	Yes
A1-1.07	Bedroom 1	100%	Yes
A1-1.07	Bedroom 2	99%	Yes
A1-1.08	LKD	100%	Yes
A1-1.08	Bedroom 1	99%	Yes
A1-1.08	Bedroom 2	100%	Yes
A1-1.08	Bedroom 3	99%	Yes
A1-1.09	LKD	98%	Yes
A1-1.09	Bedroom 1	100%	Yes
A1-1.09	Bedroom 2	99%	Yes
B1-1.01	LKD	48%	No
B1-1.01	Bedroom	16%	No
B1-1.02	LKD	27%	No
B1-1.02	Bedroom	51%	No
B1-1.03	LKD	99%	Yes
B1-1.03	Bedroom 1	98%	Yes
B1-1.03	Bedroom 2	42%	No
B1-1.04	LKD	65%	No
B1-1.04	Bedroom 1	49%	No
B1-1.04	Bedroom 2	67%	No
B1-1.05	LKD	100%	Yes
B1-1.05	Bedroom	78%	No
B1-1.06	LKD	98%	Yes
B1-1.06	Bedroom 1	99%	Yes
B1-1.06	Bedroom 2	100%	Yes
B1-1.07	LKD	100%	Yes
B1-1.07	Bedroom 1	99%	Yes
B1-1.07	Bedroom 2	100%	Yes
B1-1.07	Bedroom 3	100%	Yes
B1-1.08	LKD	100%	Yes
B1-1.08	Bedroom 1	100%	Yes
B1-1.08	Bedroom 2	100%	Yes
B1-1.09	LKD	79%	No
B1-1.09	Bedroom 1	99%	Yes
B1-1.09	Bedroom 2	91%	Yes
B1-1.09	Bedroom 3	68%	No
B1-1.10	LKD	44%	No
B1-1.10	Bedroom 1	37%	No
B1-1.10	Bedroom 2	67%	No
B2-1.01	LKD	92%	Yes
B2-1.01	Bedroom 1	98%	Yes
B2-1.01	Bedroom 2	88%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.3 - Supplementary NSL Results: First Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B2-1.02	LKD	100%	Yes
B2-1.02	Bedroom	99%	Yes
B2-1.03	LKD	95%	Yes
B2-1.03	Bedroom 1	100%	Yes
B2-1.03	Bedroom 2	100%	Yes
B2-1.04	LKD	95%	Yes
B2-1.04	Bedroom 1	99%	Yes
B2-1.04	Bedroom 2	99%	Yes
B2-1.05	LKD	98%	Yes
B2-1.05	Bedroom	99%	Yes
B2-1.06	LKD	100%	Yes
B2-1.06	Bedroom 1	99%	Yes
B2-1.06	Bedroom 2	99%	Yes
B2-1.07	LKD	100%	Yes
B2-1.07	Bedroom 1	95%	Yes
B2-1.07	Bedroom 2	99%	Yes
B2-1.08	LKD	71%	No
B2-1.08	Bedroom 1	71%	No
B2-1.08	Bedroom 2	72%	No

D.2.3 Supplementary NSL Results: Second Floor

Table No. D.2.3 - Supplementary NSL Results: Second Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-2.01	LKD	100%	Yes
A1-2.01	Bedroom 1	99%	Yes
A1-2.01	Bedroom 2	100%	Yes
A1-2.01	Bedroom 3	100%	Yes
A1-2.02	LKD	100%	Yes
A1-2.02	Bedroom 1	100%	Yes
A1-2.02	Bedroom 2	98%	Yes
A1-2.02	Bedroom 3	100%	Yes
A1-2.03	LKD	100%	Yes
A1-2.03	Bedroom 1	95%	Yes
A1-2.03	Bedroom 2	100%	Yes
A1-2.03	Bedroom 3	100%	Yes
A1-2.04	LKD	31%	No
A1-2.04	Bedroom	20%	No
A1-2.05	LKD	29%	No
A1-2.05	Bedroom 1	53%	No
A1-2.05	Bedroom 2	40%	No

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.3 - Supplementary NSL Results: Second Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-2.06	LKD	46%	No
A1-2.06	Bedroom 1	99%	Yes
A1-2.06	Bedroom 2	76%	No
A1-2.06	Bedroom 3	54%	No
A1-2.07	LKD	100%	Yes
A1-2.07	Bedroom 1	100%	Yes
A1-2.07	Bedroom 2	100%	Yes
A1-2.08	LKD	100%	Yes
A1-2.08	Bedroom 1	99%	Yes
A1-2.08	Bedroom 2	100%	Yes
A1-2.08	Bedroom 3	99%	Yes
A1-2.09	LKD	98%	Yes
A1-2.09	Bedroom 1	100%	Yes
A1-2.09	Bedroom 2	99%	Yes
B1-2.01	LKD	56%	No
B1-2.01	Bedroom	38%	No
B1-2.02	LKD	31%	No
B1-2.02	Bedroom	67%	No
B1-2.03	LKD	100%	Yes
B1-2.03	Bedroom 1	100%	Yes
B1-2.03	Bedroom 2	95%	Yes
B1-2.04	LKD	98%	Yes
B1-2.04	Bedroom 1	100%	Yes
B1-2.04	Bedroom 2	100%	Yes
B1-2.05	LKD	69%	No
B1-2.05	Bedroom 1	51%	No
B1-2.05	Bedroom 2	82%	Yes
B1-2.06	LKD	100%	Yes
B1-2.06	Bedroom	89%	Yes
B1-2.07	LKD	98%	Yes
B1-2.07	Bedroom 1	99%	Yes
B1-2.07	Bedroom 2	99%	Yes
B1-2.08	LKD	100%	Yes
B1-2.08	Bedroom 1	99%	Yes
B1-2.08	Bedroom 2	100%	Yes
B1-2.08	Bedroom 3	100%	Yes
B1-2.09	LKD	100%	Yes
B1-2.09	Bedroom 1	100%	Yes
B1-2.09	Bedroom 2	100%	Yes
B1-2.10	LKD	86%	Yes
B1-2.10	Bedroom 1	98%	Yes
B1-2.10	Bedroom 2	100%	Yes
B1-2.10	Bedroom 3	85%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.3 - Supplementary NSL Results: Second Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B1-2.11	LKD	51%	No
B1-2.11	Bedroom 1	80%	No
B1-2.11	Bedroom 2	74%	No
B2-2.01	LKD	92%	Yes
B2-2.01	Bedroom 1	98%	Yes
B2-2.01	Bedroom 2	88%	Yes
B2-2.02	LKD	100%	Yes
B2-2.02	Bedroom	99%	Yes
B2-2.03	LKD	95%	Yes
B2-2.03	Bedroom 1	100%	Yes
B2-2.03	Bedroom 2	100%	Yes
B2-2.04	LKD	95%	Yes
B2-2.04	Bedroom 1	99%	Yes
B2-2.04	Bedroom 2	99%	Yes
B2-2.05	LKD	98%	Yes
B2-2.05	Bedroom	99%	Yes
B2-2.06	LKD	100%	Yes
B2-2.06	Bedroom 1	99%	Yes
B2-2.06	Bedroom 2	99%	Yes
B2-2.07	LKD	100%	Yes
B2-2.07	Bedroom 1	99%	Yes
B2-2.07	Bedroom 2	99%	Yes
B2-2.08	LKD	79%	No
B2-2.08	Bedroom 1	90%	Yes
B2-2.08	Bedroom 2	69%	No

D.2.4 Supplementary NSL Results: Third Floor

Table No. D.2.4 - Supplementary NSL Results: Third Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-3.01	LKD	100%	Yes
A1-3.01	Bedroom 1	99%	Yes
A1-3.01	Bedroom 2	100%	Yes
A1-3.01	Bedroom 3	100%	Yes
A1-3.02	LKD	100%	Yes
A1-3.02	Bedroom 1	100%	Yes
A1-3.02	Bedroom 2	98%	Yes
A1-3.02	Bedroom 3	100%	Yes
A1-3.03	LKD	100%	Yes
A1-3.03	Bedroom 1	96%	Yes
A1-3.03	Bedroom 2	100%	Yes
A1-3.03	Bedroom 3	100%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.4 - Supplementary NSL Results: Third Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-3.04	LKD	42%	No
A1-3.04	Bedroom	43%	No
A1-3.05	LKD	47%	No
A1-3.05	Bedroom 1	57%	No
A1-3.05	Bedroom 2	88%	Yes
A1-3.06	LKD	57%	No
A1-3.06	Bedroom 1	99%	Yes
A1-3.06	Bedroom 2	100%	Yes
A1-3.06	Bedroom 3	79%	No
A1-3.07	LKD	100%	Yes
A1-3.07	Bedroom 1	100%	Yes
A1-3.07	Bedroom 2	100%	Yes
A1-3.08	LKD	100%	Yes
A1-3.08	Bedroom 1	99%	Yes
A1-3.08	Bedroom 2	100%	Yes
A1-3.08	Bedroom 3	99%	Yes
A1-3.09	LKD	98%	Yes
A1-3.09	Bedroom 1	100%	Yes
A1-3.09	Bedroom 2	99%	Yes
B1-3.01	LKD	82%	Yes
B1-3.01	Bedroom	79%	No
B1-3.02	LKD	51%	No
B1-3.02	Bedroom	92%	Yes
B1-3.03	LKD	100%	Yes
B1-3.03	Bedroom 1	100%	Yes
B1-3.03	Bedroom 2	95%	Yes
B1-3.04	LKD	98%	Yes
B1-3.04	Bedroom 1	100%	Yes
B1-3.04	Bedroom 2	100%	Yes
B1-3.05	LKD	77%	No
B1-3.05	Bedroom 1	56%	No
B1-3.05	Bedroom 2	92%	Yes
B1-3.06	LKD	100%	Yes
B1-3.06	Bedroom	94%	Yes
B1-3.07	LKD	98%	Yes
B1-3.07	Bedroom 1	99%	Yes
B1-3.07	Bedroom 2	99%	Yes
B1-3.08	LKD	100%	Yes
B1-3.08	Bedroom 1	99%	Yes
B1-3.08	Bedroom 2	100%	Yes
B1-3.08	Bedroom 3	100%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.4 - Supplementary NSL Results: Third Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B1-3.09	LKD	100%	Yes
B1-3.09	Bedroom 1	100%	Yes
B1-3.09	Bedroom 2	100%	Yes
B1-3.10	LKD	97%	Yes
B1-3.10	Bedroom 1	99%	Yes
B1-3.10	Bedroom 2	100%	Yes
B1-3.10	Bedroom 3	99%	Yes
B1-3.11	LKD	88%	Yes
B1-3.11	Bedroom 1	100%	Yes
B1-3.11	Bedroom 2	99%	Yes
B2-3.01	LKD	93%	Yes
B2-3.01	Bedroom 1	99%	Yes
B2-3.01	Bedroom 2	88%	Yes
B2-3.02	LKD	100%	Yes
B2-3.02	Bedroom	98%	Yes
B2-3.03	LKD	95%	Yes
B2-3.03	Bedroom 1	100%	Yes
B2-3.03	Bedroom 2	100%	Yes
B2-3.04	LKD	95%	Yes
B2-3.04	Bedroom 1	99%	Yes
B2-3.04	Bedroom 2	99%	Yes
B2-3.05	LKD	98%	Yes
B2-3.05	Bedroom	99%	Yes
B2-3.06	LKD	100%	Yes
B2-3.06	Bedroom 1	99%	Yes
B2-3.06	Bedroom 2	99%	Yes
B2-3.07	LKD	100%	Yes
B2-3.07	Bedroom 1	99%	Yes
B2-3.07	Bedroom 2	99%	Yes
B2-3.08	LKD	83%	Yes
B2-3.08	Bedroom 1	95%	Yes
B2-3.08	Bedroom 2	96%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

D.2.5 Supplementary NSL Results: Fourth Floor

Table No. D.2.5 - Supplementary NSL Results: Fourth Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-4.01	LKD	98%	Yes
A1-4.01	Bedroom	99%	Yes
A1-4.02	LKD	100%	Yes
A1-4.02	Bedroom 1	99%	Yes
A1-4.02	Bedroom 2	99%	Yes
A1-4.03	LKD	98%	Yes
A1-4.03	Bedroom 1	100%	Yes
A1-4.03	Bedroom 2	100%	Yes
A1-4.04	LKD	100%	Yes
A1-4.04	Bedroom 1	100%	Yes
A1-4.04	Bedroom 2	98%	Yes
A1-4.05	LKD	60%	No
A1-4.05	Bedroom	87%	Yes
A1-4.06	LKD	92%	Yes
A1-4.06	Bedroom 1	99%	Yes
A1-4.06	Bedroom 2	100%	Yes
A1-4.07	LKD	100%	Yes
A1-4.07	Bedroom 1	99%	Yes
A1-4.07	Bedroom 2	100%	Yes
A1-4.07	Bedroom 3	99%	Yes
A1-4.08	LKD	100%	Yes
A1-4.08	Bedroom 1	100%	Yes
A1-4.08	Bedroom 2	100%	Yes
A1-4.09	LKD	100%	Yes
A1-4.09	Bedroom 1	99%	Yes
A1-4.09	Bedroom 2	100%	Yes
A1-4.09	Bedroom 3	99%	Yes
A1-4.10	LKD	98%	Yes
A1-4.10	Bedroom 1	100%	Yes
A1-4.10	Bedroom 2	99%	Yes
B1-4.01	LKD	100%	Yes
B1-4.01	Bedroom	99%	Yes
B1-4.02	LKD	89%	Yes
B1-4.02	Bedroom	99%	Yes
B1-4.03	LKD	100%	Yes
B1-4.03	Bedroom 1	100%	Yes
B1-4.03	Bedroom 2	98%	Yes
B1-4.04	LKD	98%	Yes
B1-4.04	Bedroom 1	100%	Yes
B1-4.04	Bedroom 2	100%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.5 - Supplementary NSL Results: Fourth Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B1-4.05	LKD	85%	Yes
B1-4.05	Bedroom 1	67%	No
B1-4.05	Bedroom 2	98%	Yes
B1-4.06	LKD	100%	Yes
B1-4.06	Bedroom	97%	Yes
B1-4.07	LKD	98%	Yes
B1-4.07	Bedroom 1	99%	Yes
B1-4.07	Bedroom 2	99%	Yes
B1-4.08	LKD	99%	Yes
B1-4.08	Bedroom 1	99%	Yes
B1-4.08	Bedroom 2	100%	Yes
B1-4.08	Bedroom 3	100%	Yes
B1-4.09	LKD	100%	Yes
B1-4.09	Bedroom 1	100%	Yes
B1-4.09	Bedroom 2	100%	Yes
B1-4.10	LKD	100%	Yes
B1-4.10	Bedroom 1	99%	Yes
B1-4.10	Bedroom 2	100%	Yes
B1-4.10	Bedroom 3	99%	Yes
B1-4.11	LKD	98%	Yes
B1-4.11	Bedroom 1	100%	Yes
B1-4.11	Bedroom 2	99%	Yes
B2-4.01	LKD	93%	Yes
B2-4.01	Bedroom 1	99%	Yes
B2-4.01	Bedroom 2	88%	Yes
B2-4.02	LKD	100%	Yes
B2-4.02	Bedroom	98%	Yes
B2-4.03	LKD	95%	Yes
B2-4.03	Bedroom 1	100%	Yes
B2-4.03	Bedroom 2	100%	Yes
B2-4.04	LKD	96%	Yes
B2-4.04	Bedroom 1	99%	Yes
B2-4.04	Bedroom 2	99%	Yes
B2-4.05	LKD	100%	Yes
B2-4.05	Bedroom	99%	Yes
B2-4.06	LKD	95%	Yes
B2-4.06	Bedroom 1	100%	Yes
B2-4.06	Bedroom 2	98%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

D.2.6 Supplementary NSL Results: Fifth Floor

Table No. D.2.6 - Supplementary NSL Results: Fifth Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
A1-5.01	LKD	98%	Yes
A1-5.01	Bedroom	99%	Yes
A1-5.02	LKD	100%	Yes
A1-5.02	Bedroom 1	99%	Yes
A1-5.02	Bedroom 2	100%	Yes
A1-5.03	LKD	98%	Yes
A1-5.03	Bedroom 1	100%	Yes
A1-5.03	Bedroom 2	100%	Yes
A1-5.04	LKD	98%	Yes
A1-5.04	Bedroom	99%	Yes
B1-5.01	LKD	99%	Yes
B1-5.01	Bedroom	99%	Yes
B1-5.02	LKD	98%	Yes
B1-5.02	Bedroom	99%	Yes
B1-5.03	LKD	98%	Yes
B1-5.03	Bedroom 1	100%	Yes
B1-5.03	Bedroom 2	100%	Yes
B1-5.04	LKD	96%	Yes
B1-5.04	Bedroom 1	97%	Yes
B1-5.04	Bedroom 2	100%	Yes
B1-5.05	LKD	100%	Yes
B1-5.05	Bedroom	99%	Yes
B1-5.06	LKD	98%	Yes
B1-5.06	Bedroom 1	99%	Yes
B1-5.06	Bedroom 2	99%	Yes
B1-5.07	LKD	100%	Yes
B1-5.07	Bedroom 1	99%	Yes
B1-5.07	Bedroom 2	100%	Yes
B1-5.08	LKD	100%	Yes
B1-5.08	Bedroom 1	100%	Yes
B1-5.08	Bedroom 2	100%	Yes
B1-5.09	LKD	100%	Yes
B1-5.09	Bedroom 1	99%	Yes
B1-5.09	Bedroom 2	99%	Yes
B1-5.10	LKD	98%	Yes
B1-5.10	Bedroom 1	100%	Yes
B1-5.10	Bedroom 2	99%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.

Table No. D.2.6 - Supplementary NSL Results: Fifth Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B2-5.01	LKD	95%	Yes
B2-5.01	Bedroom 1	99%	Yes
B2-5.01	Bedroom 2	88%	Yes
B2-5.02	LKD	100%	Yes
B2-5.02	Bedroom	99%	Yes
B2-5.03	LKD	95%	Yes
B2-5.03	Bedroom 1	100%	Yes
B2-5.03	Bedroom 2	100%	Yes
B2-5.04	LKD	100%	Yes
B2-5.04	Bedroom 1	99%	Yes
B2-5.04	Bedroom 2	99%	Yes
B2-5.04	Bedroom 3	93%	Yes
B2-5.05	LKD	100%	Yes
B2-5.05	Bedroom	99%	Yes

D.2.7 Supplementary NSL Results: Sixth Floor

Table No. D.2.7 - Supplementary NSL Results: Sixth Floor			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
B1-6.01	LKD	97%	Yes
B1-6.01	Bedroom 1	100%	Yes
B1-6.01	Bedroom 2	100%	Yes
B1-6.01	Bedroom 3	99%	Yes
B1-6.02	LKD	100%	Yes
B1-6.02	Bedroom 1	98%	Yes
B1-6.02	Bedroom 2	100%	Yes
B1-6.03	LKD	100%	Yes
B1-6.03	Bedroom 1	99%	Yes
B1-6.03	Bedroom 2	100%	Yes
B1-6.04	LKD	97%	Yes
B1-6.04	Bedroom 1	100%	Yes
B1-6.04	Bedroom 2	100%	Yes
B1-6.04	Bedroom 3	99%	Yes

* Whilst the BRE Guidelines do not provide target values for NSL in a proposed development, it states that “Supplementary electric lighting will be needed if a significant part of the working plane (20% of the room or more) lies beyond the no sky line.”

For floor plans of the assessed units please refer to section C.1 on page 62.