October 2023

Proposed Apartment Dev. Mayeston, Dublin

Daylight and Sunlight Assessment Report

Applicant: Fingal County Council

"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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3D DESIGN BUREAU

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 apartment development Mayeston, 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.

It is the opinion of 3D Design Bureau, the results in this report demonstrate a favourable outcome, both in terms of daylight and sunlight access within the proposed development and regarding the level of impact on existing surrounding properties. Full details of methodologies used can be found throughout this report. Furthermore full set of assessment results, for both impact and scheme performance, can be found in the appendix of results.

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 12. A visual representation of the model states can be seen in the renderings of the shadow study in the appendix section on Page 39.

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:
  - 53 Mayeston Green
  - 59 Mayeston Green
  - 2-12 Mayeston Downs
  - Mayeston Rise
  - Mayeston Boulevard

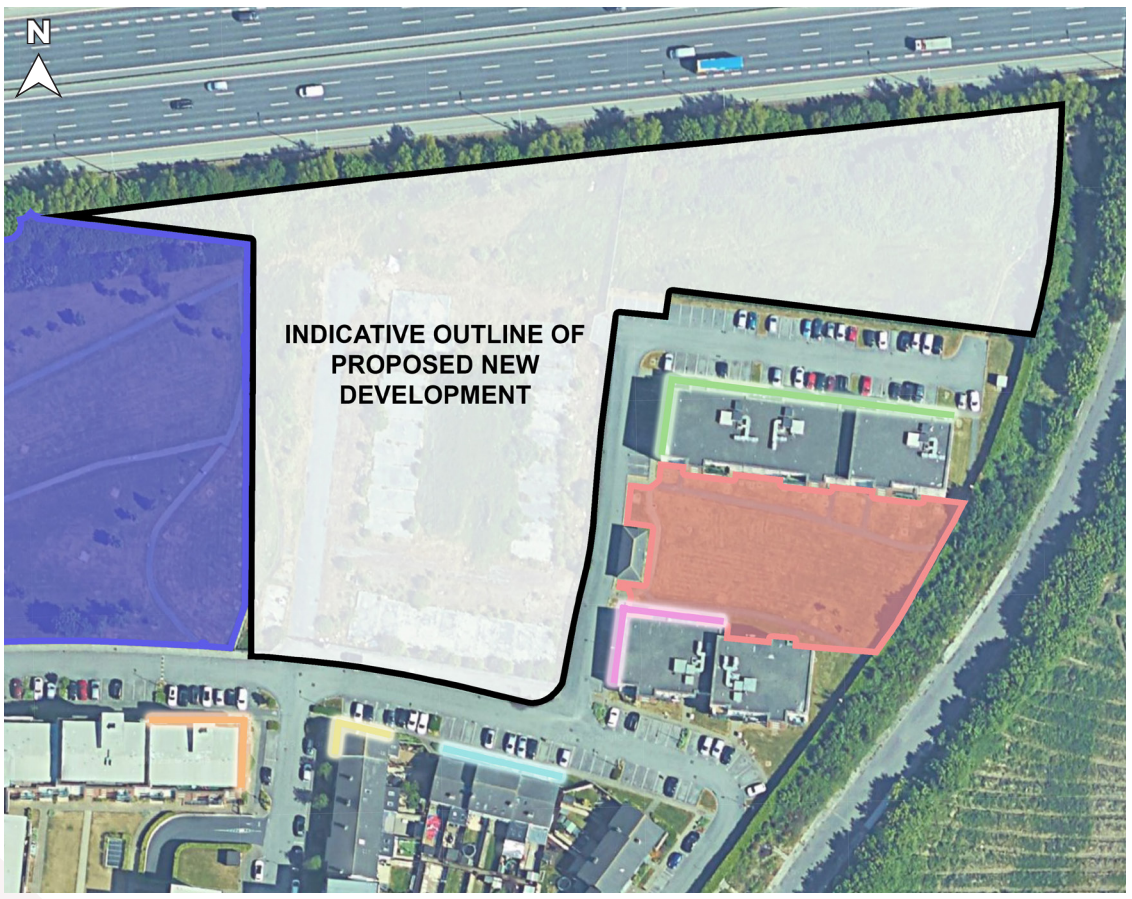

Figure 1.1: Scope of surrounding properties and environment assessed.

- Effect on sunlight to surrounding properties. The effect to the annual and winter probable sunlight hours (APSH/WPSH) assessment only includes windows with an orientation within 90 degrees of due south. As no windows on properties in the surrounding context fall under this criteria, no APSH/WPSH assessment was required.
- Effect on sun on ground (SOG) to surrounding external amenity spaces:
  - Mayeston Green Courtyard
  - Mayeston Estate Open Space

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 Impact Assessment, Window Selection Criteria" on page 11.

The results of the impact assessments can be found in section A.0 on page 25. These results are summarised in section 1.2 and explained in section "5.1 Analysis of Impact Assessment Results" on page 18.

Scheme Performance

Daylight access for all of 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 48. These results are summarised in section 1.3 and explained in section "5.2 Analysis of Scheme Performance Results" on page 19.

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 D.0 on page 86.

1.2 Impact Assessment Results Overview - Neighbouring Properties:

Effect to Daylight - Vertical Sky Component (VSC) :

Effect to Vertical Sky Component (VSC)	
Windows Assessed	130
Negligible	113
Minor Adverse	15
Moderate Adverse	2
Major Adverse	0
Beneficial Impact*	0
n.a.**	0
Compliance Rate	c. 87%

This analysis demonstrates that the proposed development would have a negligible level effect on the daylight in the majority of the assessed neighbouring properties. Please see section 5.1.1.

Effect to Sun On Ground (SOG):

Effect to Sun On Ground (SOG)	
Areas Assessed	2
Negligible	2
Minor Adverse	0
Moderate Adverse	0
Major Adverse	0
Beneficial Impact*	0
n.a.**	0
Compliance Rate	100%

This analysis demonstrates that the proposed development would have a negligible level of impact on the sunlight access to the neighbouring areas. Please see section 5.1.2.

*'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.

**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.

Note: As explained in section 1.1, no impact to sunlight on neighbouring properties (APSH/WPSH) was warranted on this project.

1.3 Scheme Performance Results Overview:

Spatial Daylight Autonomy (SDA):

Spatial Daylight Autonomy (SDA) BRE 209 Criteria*	
Unit Count	119
Rooms Assessed	336
Without Trees	
Compliant	336
Non-compliant	0
Compliance Rate	100%
Trees in Winter State (Proposed and Existing Trees)	
Compliant	336
Non-compliant	0
Compliance Rate	100%
Trees in Summer State (Proposed and Existing Trees)	
Compliant	336
Non-compliant	0
Compliance Rate	100%
*It is the expert opinion of 3DDB that the appropriate criteria for SDA assessments are that of the BRE Guidelines (BRE 209)	

Under the criteria as set out in the BRE 209, the SDA value in all 336 no. habitable rooms meet or exceed their target values in all 3 assessments: not including trees, with trees in summer state and with trees in winter states. This gives a compliance rate of 100% with in all 3 studies. For a scheme of this size, achieving full compliance is an excellent outcome. Please see section 5.2.1.

Sunlight Exposure (SE):

Sunlight Exposure (SE)	
Units Assessed	119
SE with trees as opaque objects	
Non-Compliant	12
Minimum	22
Medium	13
High	72
Compliance Rate	c. 90%
SE without deciduous trees	
Non-Compliant	11
Minimum	22
Medium	13
High	73
Compliance Rate	c. 91%

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 very favourably in this regard, demonstrating that the design has taken into account the position and orientation of the blocks in relation to sunlight. Please see section 5.2.2.

Sun On Ground (SOG) in proposed gardens / amenity areas:

Sun On Ground (SOG) in proposed gardens / amenity areas	
Areas Assessed	5
Areas meeting the guidelines	5
Areas not meeting the guidelines	0
Compliance Rate	100%

This assessment shows that all proposed outdoor amenity areas in the proposed development are fully compliant under BRE Guideline (BRE 209) which is an excellent result. Please see section 5.2.3.

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 an update to the 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 where applicable. For this report, as the development achieves full compliance under the BRE 209 standards, compensatory design solutions are required for the supplementary I.S. EN 17037 standards only.

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 "4.3 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 those 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 71. 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 Impact Assessment, Window Selection Criteria

To determine the properties to be included in the impact assessment, the decision chart taken from the BRE Guidelines has been followed, as shown in Figure 4.2.

Accordingly, all properties within a distance of three times the height of the proposed development, as illustrated in Figure 4.1, have been considered for impact assessment.

Figure 4.1: Properties within three times the height of the proposed development

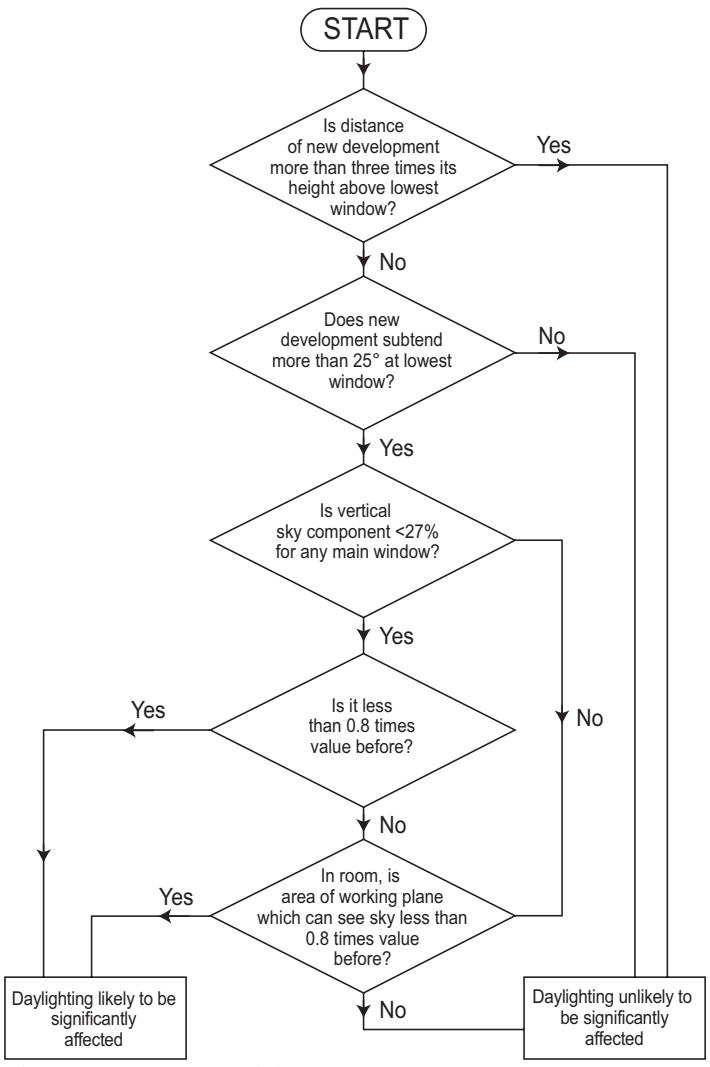

Figure 4.2: VSC decision chart, taken from BRE 209.

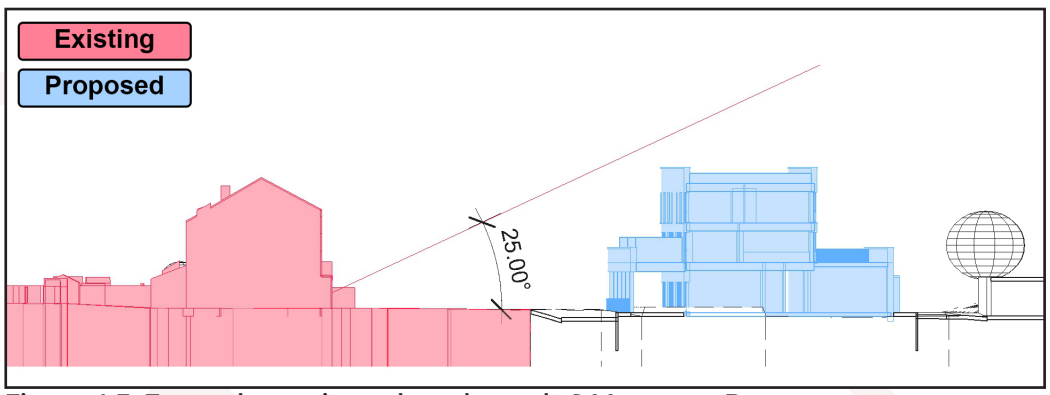

Figure 4.3: Example section taken through 6 Mayeston Downs.

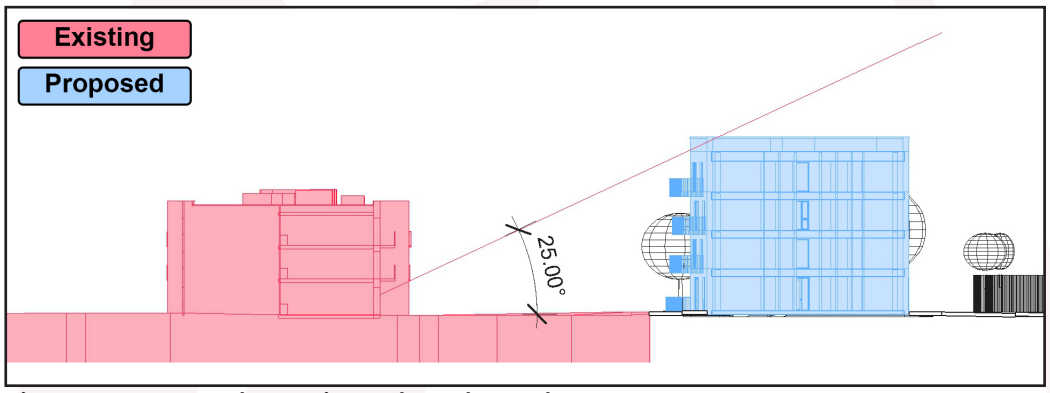

Figure 4.4: Example section taken through 53 Mayeston Green.

As per the BRE Guidelines, a perpendicular section has been drawn from the main window wall of the potentially affected properties to determine if the proposed development subtends an angle of more than 25˚ at the lowest window.

If the proposed development does not subtend 25˚ in this section, no further assessment has been carried out.

If the proposed development does subtend 25˚ in a perpendicular section, then a VSC assessment should be conducted. Figure 4.4 shows a perpendicular section taken through 53 Mayeston Green which provides an example of where this is applicable in the context of the proposed scheme. A detailed description regarding the methodology of the VSC assessment can be found in 4.3.1 on page 13.

The BRE Guidelines also apply the 25˚ rule to determine the need for an impact assessment for loss of sunlight (APSH/WPSH). They also advise that only windows with an orientation within 90˚ of due south should be assessed. It is recommended to assess the main living rooms of dwellings and conservatories, while APSH/WPSH assessments are typically not required for kitchens and bedrooms.

In practice, 3DDB includes all windows meeting the proximity criteria in an APSH/WPSH assessment, avoiding the need for assumptions about room functionality in existing dwellings. For this specific project, no APSH/WPSH assessment was required.

While the BRE Guidelines recommend conducting an impact assessment on the lowest window where daylight/sunlight is needed, if a property is found to have a window potentially affected by the proposed development, based on the previously explained criteria, all windows facing the proposed development on that property will be assessed. This approach provides a more comprehensive understanding of the overall impact on the property.

4.2 Preparing the analytical model

4.2.1 Building the Model States

The project architect, O'Briain Beary Architects supplied 3DDB with AutoCAD drawings of the proposed development from which a 3D analytical model was created. Landscape drawings were issued by REDscape Landscape & Urbanism. 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 which is not applicable due to the subject site being a green field.. 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 where applicable.

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. Proposed buildings have been positioned in their location on the subject site with surrounding context included.

Proposed trees have been included in this state and used all relevant studies. Proposed trees have been included in this state, as per the landscape plan, and included appropriately in all relevant studies. See section "4.2.2 Trees" below for detailed information on the inclusion of trees in assessments.

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

4.2.2 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 supplementary 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 of proposed development. 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.

4.3 Quantitative Impact Assessment Overview

4.3.1 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.

Section 4.1 outlines the decision process which was used to determine the appropriate properties to be included in the VSC impact assessment.

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 4.2 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).

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 25, with analysis of the results in section 5.1.1 on page 18.

4.3.2 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 4.2 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

The SOG impact assessment has been carried out on the neighbouring gardens/amenity areas that could be affected by the proposed development as outlined above.

The results of the impact to sun on ground assessment the in neighbouring gardens/amenity areas (including a visual representation in the form of 2-hour false colour plans) can be found in the appendix results section A.2 on page 37, with analysis of the results in section 5.1.2 on page 19.

4.4 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 4.2 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 39.

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 4.2.1. 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.

4.5 Quantitative Scheme Performance Assessment Overview

4.5.1 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 are non-residential spaces that lack predefined target SDA (Spatial Daylight Autonomy) values under BRE 209. These spaces include a daycare facility with five classrooms located on the ground floor of Block C. A target value of 150 Lux has been applied for the assessment of these classrooms. However, only residential units have been considered in the calculation of 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 Floor Plans" on page 48.

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. 4.5.1 - 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	0.68
Ground cover	Paving	0.4		Maintenance Factor	0.91
	Tarmac	0.2		Glass adjusted for maintenance	0.62
	Grass	0.2		Frosted glass	0.5

Trees

Where new trees are proposed in a development, the BRE 209 SDA results have been generated with trees represented in both summer and winter states of foliage as per the BRE Guidelines. The study is also 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 58.

Analysis of the results can be found in section 5.2.1 on page 19.

The results of the supplementary SDA study under the I.S. EN 17037 criterion can be found in section D.0 on page 86.

4.5.2 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.

In some instances a sunlight exposure assessment will be carried out on non-residential rooms within a proposed development. The classrooms located at the ground floor of Block C have not been included in the calculated compliance rates.

Project Assessment

The results for the study on sunlight exposure can be found in the appendix results section C.3 on page 71, with analysis of the results in section 5.2.2 on page 21.

4.5.3 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 84, with analysis of the results in section 5.2.3 on page 21.

4.5.4 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 the environs of 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 86.

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 130 no. windows/rooms across the surrounding properties along Mayeston Green, Mayeston Downs, Mayeston Rise, and Mayeston Boulevard.

Using the rationale explained in section 3.2 on page 9, the effect to VSC on 113 no. of these windows/rooms would be considered *'negligible'*, 15 no. '*minor adverse*', 2 no. '*moderate adverse*' .

This shows that c.87% of the assessed windows would experience a *'negligible'* level of effect

All of the adversely affected windows are located on the neighbouring apartment building of Mayeston Green. There are 15 no. windows that have shown a '*minor adverse*' level of effect along with 2 no. windows displaying a '*moderate adverse*' level of effect.

Figure 5.1: 53 Mayeston Green affected windows under balconies orange = '*moderate adverse*', yellow = '*minor adverse*' and green = '*negligible*'.

13 no. of 15 no. affected windows are located on the north facade of 53 Mayeston Green, running parallel to the proposed new Block E, as illustrated in Figure 5.1. These 13 no. windows include the 2 no. *'moderate adverse'* affected windows 530c and 531c. It's worth noting that, except for windows 530q#2 and 531q#2, all windows that exhibit a noticeable level of effect on 53 Mayeston Green are situated below balconies.

The remaining 2 no. affected windows are located on the gable elevation. Windows 530q#2 and 531q#2 presented a '*minor adverse*' level of effect, while windows 530q#1 and 531q#1 exhibited a '*negligeble*' level of effect. Each pair of windows (ie 530q#1 and 530q#2) are servicing the same room, and as per the BRE Guidelines, after averaging the results, rooms 530q# and 531q# still indicate a '*minor adverse*' level of effect. This is primarily due to the presence of existing balconies above windows 530q#1 and 531q#1, resulting in a low baseline level. See Figure 5.2.

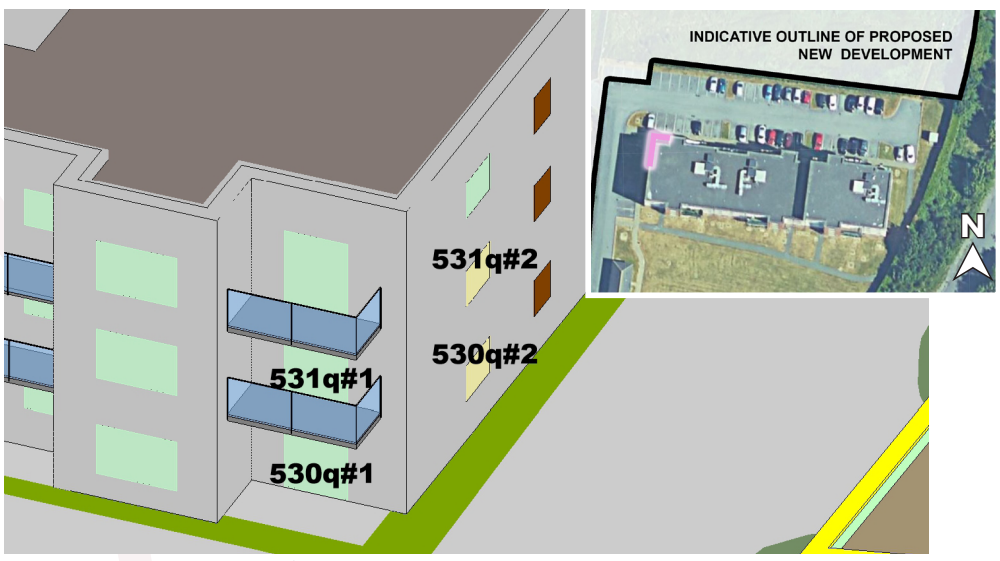

Figure 5.2: 53 Mayeston Green.

To determine whether the presence of balconies on the existing Mayeston Green apartment building are exaggerating the levels of impact, in particular from the proposed Block E, 3DDB carried out two hypothetical 'no balcony' studies. The first of these studies was carried out in accordance with the BRE Guidelines which states:

Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large relative impact on the VSC, and on the area receiving direct skylight. One way to demonstrate this would be to carry out an additional calculation of the VSC and area receiving direct skylight, for both the existing and proposed situations, without the balcony in place. For example, if the proposed VSC with the balcony was under 0.80 times the existing value with the balcony, but the same ratio for the values without the balcony was well over 0.8, this would show that the presence of the balcony, rather than the size of the new obstruction, was the main factor in the relative loss of light.

In this first hypothetical study, which removes the balcony geometry from the analytical model and leaves the window assessment point in its existing location, it was determined that only two windows, namely 530c and 530e, both located on the ground floor, continue to exhibit a 'minor adverse' level of effect. Notably, window 530c, previously classified as *'moderate adverse'* in the regular study that included the balconies, now has a reduced '*minor adverse*' level of effect in this hypothetical scenario.

Whilst room 530q#, is the average of the windows servicing the same room, see Figure 5.2, as it still presents a '*minor adverse*' level of effect in this 'no balcony' study it can be concluded that the presence of balconies has an exaggerated effect on windows which are located beneath them, rather than the size or proximity of the proposed development.

This argument can be further justified by comparing the adjacent windows 530d, 531d, 532d, 533d, and 530g, 531g, 532g, located on the portion of the existing building that protrudes in the direction of the proposed new development. All these referenced windows exhibit a '*negligeble*' level of effect in the regular study and are located closer to the proposed Block E. See Figure 5.1.

The second hypothetical study, with the assessment point taken from the balcony edge has resulted in none of the windows experiencing an adverse level of affect. All newly located assessment points are therefore compliant under the BRE Guidelines.

The full set of results for both hypothetical studies and for the regular study on VSC can be found in section A.1 on page 25.

5.1.2 Effect on Sun On Ground in Existing Amenity Spaces

This study has assessed the effect the proposed development would have on the level of sunlight on March 21st in exisitng amenity spaces of the neighbouring properties that are located along Mayeston Green and Mayeston Boulevard.

In total 2 no. spaces have been assessed. Using the rationale explained in section 3.2 on page 9, both spaces would experience a *'negligible'* level of effect.

100% of these outdoor spaces have met the criteria for effect on sunlighting as set out in the BRE Guidelines.

The results of the Sun On Ground study (SOG) on the neighbouring gardens can be found In section A.2 on page 37.

A visual representation of these readings can be seen in the 2 hour false colour plans in section A.2 and in the hourly shadow diagrams for March 21st in section B.1 on page 39.

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 119 no. units, which makes up approximately 336 no. habitable rooms.

Under the criteria as set out in the BRE 209, the SDA value in all 336 no. habitable rooms meet or exceed their target values in all 3 assessments: not including trees, with trees in summer state and with trees in winter states. This gives a compliance rate of 100% with in all 3 studies. For a scheme of this size, achieving full compliance is an excellent outcome.

It should be noted that to achieve full compliance, 3DDB collaborated closely with the project design team to mitigate against initial under performing rooms/units in regard to the scheme performance.

I.S. EN 17037 sets out more onerous recommendations for SDA. As such, the number of habitable rooms achieving compliance under this standard is 254 with summer trees and 262 with the trees represented in the winter state. This gives a reduced circa compliance rate of c. 76% & c. 78% in the summer and winter time calculations respectively. The additional SDA assessment, under this standard, that does not include trees has shown a compliance rate of c. 81%.

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."

Despite the fact the scheme is fully compliant with the BRE 209 standards, 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 under the supplementary assessment which applies the I.S. EN 17037 criteria.

Unit number that requires CDS under I.S.EN 17037	Unit Floor Area Above Minimum Requirement	Private External Amenity Area Above Minimum Requirement	Dual Aspect Unit	Favourable Outlook	Floor to Ceiling Height
0-A-2	12.40%	154%	✓	View east to courtyard planted area	2.8 m
0-A-3	12.90%	152%	✓	View east to courtyard planted area and south to centre of courtyard	2.8 m
0-A-4	2.40%	9%	✓	View west to large park and south to centre of courtyard	2.8 m
1-A-1	22.50%	166.70%	✓	View west to large park	2.5 m
1-A-2	22.50%	181.70%	✓	View east to courtyard planted area	2.5 m
1-A-3	12.90%	46%		View south to centre of courtyard	2.5 m
1-A-4	12.40%	42%		View south to centre of courtyard	2.5 m

Unit number that requires CDS under I.S.EN 17037	Unit Floor Area Above Minimum Requirement	Private External Amenity Area Above Minimum Requirement	Dual Aspect Unit	Favourable Outlook	Floor to Ceiling Height
1-A-5	12.40%	46%		View south to centre of courtyard	2.5 m
1-A-6	2.40%	9%	✓	View west to large park and south to centre of courtyard	2.5 m
2-A-2	22.50%	181.70%	✓	View east to courtyard planted area	2.5 m
2-A-4	12.40%	42%		View south to centre of courtyard	2.5 m
2-A-5	12.40%	46%		View south to centre of courtyard	2.5 m
0-B-1	8%	67%	✓	View west to courtyard	3.65 m
0-B-2	12%	58%	✓	View east to Public Open Space	3.65 m
0-B-3	6%	31%			3.65 m
0-B-5	6%	76%	✓	View west to courtyard	3.65 m
0-B-6	12%	88%		View west to courtyard	3.65 m
1-B-1	8%	30%	✓	View west to courtyard	2.5 m
1-B-2	12%	58%	✓	View east to Public Open Space	2.5 m
1-B-3	6%	4%			2.5 m
1-B-4	6%	4%			2.5 m
1-B-7	12%	38%		View west to courtyard	2.5 m
1-B-8	12%	46%		View west to courtyard	2.5 m
2-B-1	8%	30%	✓	View west to courtyard	2.5 m
2-B-2	12%	58%	✓	View east to Public Open Space	2.5 m
2-B-7	12%	38%		View west to courtyard	2.5 m
2-B-8	12%	46%		View west to courtyard	2.5 m
3-B-1	8%	30%	✓	View west to courtyard	2.5 m
3-B-2	12%	58%	✓	View east to Public Open Space	2.5 m
3-B-8	12%	46%		View west to courtyard	2.5 m
C-1	18%	302%	✓	View south and view north to centre of courtyard	2.5 m
C-2	18%	350%	✓	View south and view north to centre of courtyard	2.5 m
C-3	18%	350%	✓	View south and view north to centre of courtyard	2.5 m
C-4	18%	350%	✓	View south and view north to centre of courtyard	2.5 m
C-5	18%	350%	✓	View south and view north to centre of courtyard	2.5 m
C-6	18%	350%	✓	View south and view north to centre of courtyard	2.5 m
0-D-1	23%	92%	✓	View west to large park and north to courtyard planted area	3.15 m
0-D-2	13%	110%	✓	View east and north to courtyard	3.15 m
0-D-4	8%	53%	✓	View west to large park	3.15 m
1-D-1	23%	295%	✓	View west to large park and north to courtyard planted area	2.5 m
1-D-2	13%	46%	✓	View east and north to courtyard	2.5 m
1-D-3	12%	42%		View east to courtyard	2.5 m
1-D-5	8%	247%	✓	View west to large park	2.5 m
1-D-6	23%	282%		View west to large park	2.5 m
2-D-1	23%	295%	✓	View west to large park and north to courtyard planted area	2.5 m
2-D-3	12%	42%		View east to courtyard	2.5 m
2-D-5	8%	247%	✓	View west to large park	2.5 m
2-D-6	23%	282%		View west to large park	2.5 m
3-D-1	23%	295%	✓	View west to large park and north to courtyard planted area	2.5 m
3-D-5	8%	247%	✓	View west to large park	2.5 m
3-D-6	23%	282%		View west to large park	2.5 m
0-E-1	6%	58%	✓	View north and west to Public Open space	2.8 m
0-E-2	6%	58%	✓	View north and east to Public Open space	2.8 m
1-E-1	6%	55%	✓	View north and west to Public Open space	2.5 m
1-E-2	6%	55%	✓	View north and east to Public Open space	2.5 m
2-E-1	6%	55%	✓	View north and west to Public Open space	2.5 m
2-E-2	6%	55%	✓	View north and east to Public Open space	2.5 m
3-E-2	6%	55%	✓	View north and east to Public Open space	2.5 m

The results for the study on SDA can be seen in section C.2 on page 58.

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. Where a range of values is expressed in the following summary, this refers to the results generated with the deciduous trees as opaque objects and with deciduous trees not included. Evergreen trees where no light can penetrate all year round, are included as opaque objects in both studies.

In total 119 no. units have been assessed, Using the rationale explained in section 3.3 on page 10, the level of sunlight exposure for 72-73 no. units is considered *high*, 13 no. *medium*, 22 no. have reached the *minimum* recommendation with 11-12 units below the *minimum* recommendation. It should be noted that all of the 11-12 units that do not meet the guidelines are predominantly north-oriented. The corner units are also serviced by windows facing due east and due west and are located under recessed balconies. Under performance in predominantly north-facing units is a common occurrence in developments. 3DDB and the design worked together to isolate this issue to a small number of units and the compliance rates achieved for SE should be considered very favourable.

The SE assessment has shown that circa c. 90% - 91% 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, especially in developments that contain single aspect units.

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 very favourably in this regard, demonstrating that the design has taken into account the position and orientation of the blocks in relation to sunlight.

The results for the study on SE in the habitable rooms of the proposed units can be seen in section C.3 on page 71.

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 5 no. spaces have been assessed, 5 no. of which would meet the criteria as set out in the BRE Guidelines.

Again, as per the other scheme performance assessments, this full compliance can be considered excellent. The layout of the blocks have been design to allow for high levels of sunlight access to the identified amenity areas. For example c. 92% of the Communal Amenity Space 2 area is capable of receiving at least 2 hrs of direct sunlight on march 21 demonstrating that future occupants will enjoy good levels of sunlight within the outdoor designated amenity areas.

The results for the study on sunlight in the proposed outdoor amenity spaces can be found in section C.4 on page 84.

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 39 of the appendix section of this report.

6.0 Conclusion

3D Design Bureau (3DDB) were commissioned to carry out a daylight assessment, sunlight assessment and shadow study for apartment development Mayeston, 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/environment that are in close proximity to the proposed development.

The impact assessment has shown that the proposed development would have a negligible level effect on the daylight in the majority of the assessed neighbouring properties. However, as detailed in section 5.1.1, there is a perceptible level of impact on some of the existing windows at 53 Mayeston Green. However, the hypothetical assessments without balconies have demonstrated that the balconies have an exaggerated effect on the level of impact on those windows.

The sun on ground (SOG) impact assessment for the 2 no. surrounding existing spaces have both achieved compliance well in excess of the recommended 50% threshold under BRE Guideline levels (c. 91% and 100%).

The scheme performance assessment for this report quantified the level of daylight and sunlight within the proposed development.

The results of the SDA assessment, under BRE guidelines, have presented full compliance in all three scenarios: without trees factored into the calculation, with trees in their winter state, and with trees in their full leaf state for summer. For the size of the scheme proposed, this shows care and consideration for daylight access has been taken into account with regard to internal layouts.

The sunlight exposure (SE) assessment yielded a very favourable outcome, with compliance rates exceeding 90%. This demonstrates that the majority of the proposed new apartment development units will have adequate sunlight levels under BRE guidelines.

The Sun on ground (SOG) assessment to the proposed amenity areas has resulted in 100% compliance across all 5 spaces assessed. Furthermore results have ranged from c. 92% to 100%, which can be deemed excellent results with future occupants of the scheme having access to well sunlight outdoor amenity space.

It is the opinion of 3D Design Bureau, the results in this report demonstrate a favourable outcome, both in terms of daylight and sunlight access within the proposed development and regarding the level of impact on existing surrounding properties.

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 9.

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 53 Mayeston Green: Ground Floor

Table No. A.1.1 - VSC Results: 53 Mayeston Green						
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**
530a#1	35.84%	35.82%	1.00	27.00%	BRE Compliant	-
530a#2	18.14%	12.83%	0.71	14.51%	88%	-
530a#	23.59%	19.90%	0.84	18.87%	BRE Compliant	Negligible
530b	20.13%	13.76%	0.68	16.10%	85%	Minor Adverse
530c	14.73%	8.77%	0.60	11.78%	74%	Moderate Adverse
530d	37.19%	29.67%	0.80	27.00%	BRE Compliant	Negligible
530e	17.83%	11.79%	0.66	14.26%	83%	Minor Adverse
530f	17.63%	12.18%	0.69	14.10%	86%	Minor Adverse
530g	37.35%	31.28%	0.84	27.00%	BRE Compliant	Negligible
530h	11.43%	10.10%	0.88	9.14%	BRE Compliant	Negligible
530i	15.90%	11.55%	0.73	12.72%	91%	Minor Adverse
530j	20.99%	16.23%	0.77	16.79%	97%	Minor Adverse
530l	18.77%	15.12%	0.81	15.02%	BRE Compliant	Negligible
530m	18.27%	15.63%	0.86	14.62%	BRE Compliant	Negligible
530n	19.02%	16.51%	0.87	15.22%	BRE Compliant	Negligible
530o	13.45%	11.82%	0.88	10.76%	BRE Compliant	Negligible
530p	37.30%	34.13%	0.92	27.00%	BRE Compliant	Negligible
530q#1	14.55%	12.05%	0.83	11.64%	BRE Compliant	-
530q#2	37.66%	21.84%	0.58	27.00%	81%	-
530q#	21.66%	15.06%	0.70	17.33%	87%	Minor Adverse

* 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 9.

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 53 Mayeston Green: First Floor

Table No. A.1.2 - VSC Results: 53 Mayeston Green						
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**
531a#1	37.67%	37.65%	1.00	27.00%	BRE Compliant	-
531a#2	15.95%	11.67%	0.73	12.76%	91%	-
531a#	22.63%	19.66%	0.87	18.11%	BRE Compliant	Negligible
531b	17.75%	12.61%	0.71	14.20%	89%	Minor Adverse
531c	12.84%	8.04%	0.63	10.27%	78%	Moderate Adverse
531d	38.25%	32.14%	0.84	27.00%	BRE Compliant	Negligible
531e	15.82%	10.96%	0.69	12.66%	87%	Minor Adverse
531f	15.31%	10.92%	0.71	12.25%	89%	Minor Adverse
531g	38.40%	33.46%	0.87	27.00%	BRE Compliant	Negligible
531h	10.54%	9.41%	0.89	8.43%	BRE Compliant	Negligible
531i	13.88%	10.34%	0.74	11.10%	93%	Minor Adverse
531j	18.53%	14.68%	0.79	14.82%	99%	Minor Adverse
531l	16.43%	13.52%	0.82	13.14%	BRE Compliant	Negligible
531m	16.03%	13.93%	0.87	12.82%	BRE Compliant	Negligible
531n	16.69%	14.65%	0.88	13.35%	BRE Compliant	Negligible
531o	11.65%	10.37%	0.89	9.32%	BRE Compliant	Negligible
531p	38.44%	35.77%	0.93	27.00%	BRE Compliant	Negligible
531q#1	12.71%	10.56%	0.83	10.17%	BRE Compliant	-
531q#2	38.48%	24.74%	0.64	27.00%	92%	-
531q#	20.64%	14.92%	0.72	16.51%	90%	Minor Adverse

* 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 9.

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.1.3 53 Mayeston Green: Second Floor

Table No. A.1.3 - VSC Results: 53 Mayeston Green						
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**
532a#1	38.85%	38.83%	1.00	27.00%	BRE Compliant	-
532a#2	16.81%	13.65%	0.81	13.45%	BRE Compliant	-
532a#	23.59%	21.40%	0.91	18.87%	BRE Compliant	Negligible
532b	18.55%	14.76%	0.80	14.84%	99%	Minor Adverse
532c	13.44%	9.92%	0.74	10.75%	92%	Minor Adverse
532d	39.06%	34.50%	0.88	27.00%	BRE Compliant	Negligible
532e	16.65%	13.06%	0.78	13.32%	98%	Minor Adverse
532f	32.52%	29.27%	0.90	26.02%	BRE Compliant	Negligible
532g	39.16%	35.44%	0.91	27.00%	BRE Compliant	Negligible
532h	24.94%	23.70%	0.95	19.95%	BRE Compliant	Negligible
532i	31.71%	29.04%	0.92	25.37%	BRE Compliant	Negligible
532j	38.71%	35.82%	0.93	27.00%	BRE Compliant	Negligible
532l	37.65%	35.37%	0.94	27.00%	BRE Compliant	Negligible
532m	36.70%	35.13%	0.96	27.00%	BRE Compliant	Negligible
532n	38.65%	37.00%	0.96	27.00%	BRE Compliant	Negligible
532o	29.60%	28.64%	0.97	23.68%	BRE Compliant	Negligible
532p	39.25%	37.10%	0.95	27.00%	BRE Compliant	Negligible
532q#1	34.23%	32.17%	0.94	27.00%	BRE Compliant	-
532q#2	39.01%	27.68%	0.71	27.00%	BRE Compliant	-
532q#	35.70%	30.79%	0.86	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 9.

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

A.1.4 53 Mayeston Green: Third Floor

Table No. A.1.4 - VSC Results: 53 Mayeston Green						
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**
533a#1	39.30%	39.29%	1.00	27.00%	BRE Compliant	-
533a#2	37.45%	35.51%	0.95	27.00%	BRE Compliant	-
533a#	38.02%	36.67%	0.96	27.00%	BRE Compliant	Negligible
533b	38.83%	36.52%	0.94	27.00%	BRE Compliant	Negligible
533c	30.57%	28.44%	0.93	24.46%	BRE Compliant	Negligible
533d	39.48%	36.63%	0.93	27.00%	BRE Compliant	Negligible
533e	34.65%	32.33%	0.93	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 9.

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

A.1.5 59 Mayeston Green: Ground Floor and First Floor

Table No. A.1.5 - VSC Results: 59 Mayeston Green						
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**
590a	34.57%	32.67%	0.95	27.00%	BRE Compliant	Negligible
590b	33.23%	31.25%	0.94	26.58%	BRE Compliant	Negligible
590c	15.96%	13.91%	0.87	12.77%	BRE Compliant	Negligible
590d	12.76%	11.58%	0.91	10.21%	BRE Compliant	Negligible
590e	34.55%	32.30%	0.93	27.00%	BRE Compliant	Negligible
590f	28.88%	26.04%	0.90	23.10%	BRE Compliant	Negligible
590g#1	33.93%	30.39%	0.90	27.00%	BRE Compliant	-
590g#2	37.16%	28.56%	0.77	27.00%	BRE Compliant	-
590g#	35.28%	29.63%	0.84	27.00%	BRE Compliant	Negligible
591a	36.76%	34.94%	0.95	27.00%	BRE Compliant	Negligible
591b	36.82%	34.84%	0.95	27.00%	BRE Compliant	Negligible
591c	36.61%	34.48%	0.94	27.00%	BRE Compliant	Negligible
591d	33.05%	31.73%	0.96	26.44%	BRE Compliant	Negligible
591e	37.23%	34.35%	0.92	27.00%	BRE Compliant	Negligible
591f	32.33%	29.15%	0.90	25.86%	BRE Compliant	Negligible
591g#1	37.09%	33.63%	0.91	27.00%	BRE Compliant	-
591g#2	37.94%	31.67%	0.83	27.00%	BRE Compliant	-
591g#	37.44%	32.81%	0.88	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 9.

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.

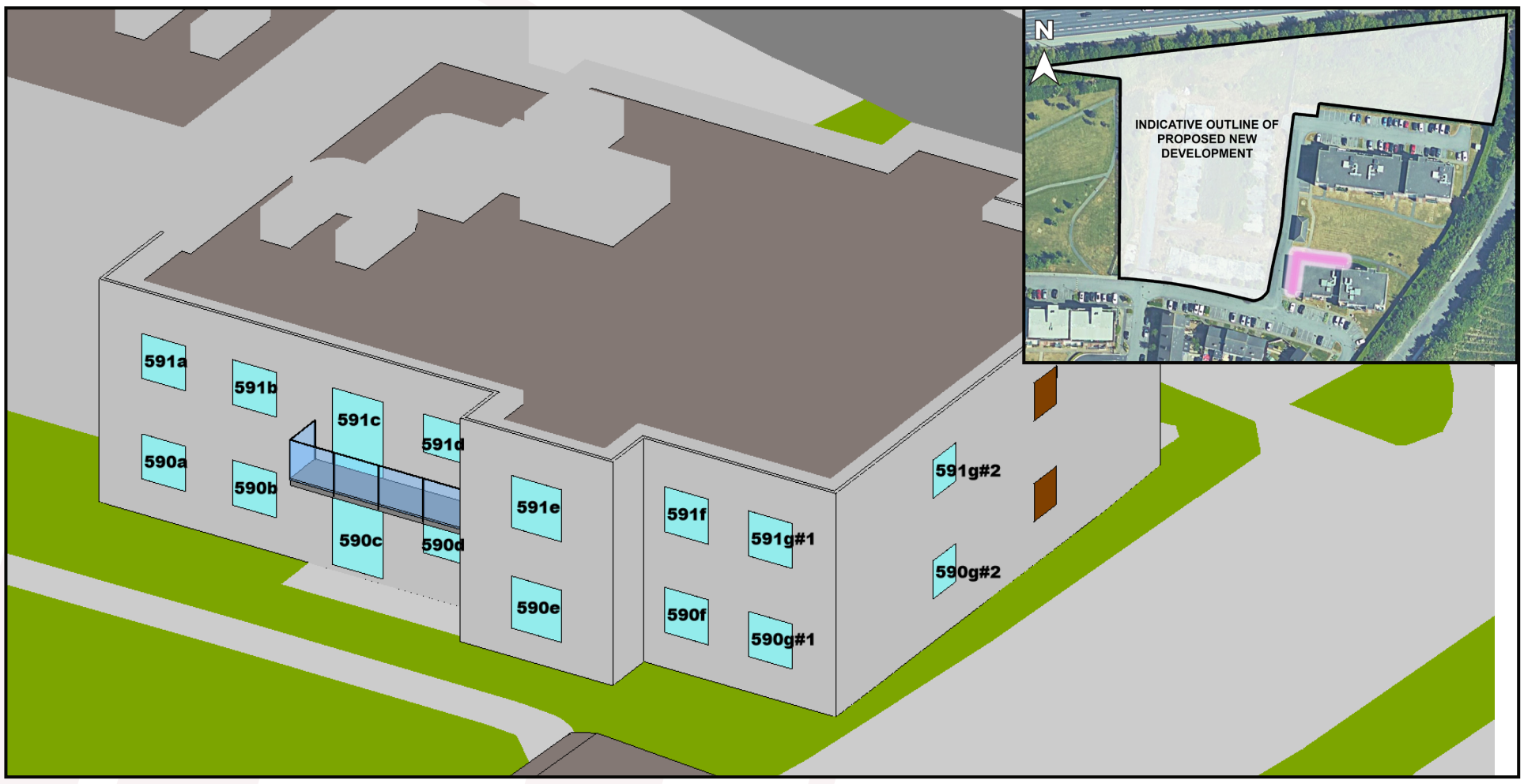


Figure A.5: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.1.6 2-12 Mayeston Downs

Table No. A.1.6 - VSC Results: 2-12 Mayeston Downs						
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**
2a	37.06%	30.04%	0.81	27.00%	BRE Compliant	Negligible
2b	38.61%	33.64%	0.87	27.00%	BRE Compliant	Negligible
2c	38.58%	33.32%	0.86	27.00%	BRE Compliant	Negligible
4a	36.64%	30.43%	0.83	27.00%	BRE Compliant	Negligible
4b	38.54%	33.94%	0.88	27.00%	BRE Compliant	Negligible
4c	38.60%	33.87%	0.88	27.00%	BRE Compliant	Negligible
6a	37.58%	32.03%	0.85	27.00%	BRE Compliant	Negligible
6b	38.59%	34.82%	0.90	27.00%	BRE Compliant	Negligible
6c	38.55%	34.35%	0.89	27.00%	BRE Compliant	Negligible
6d	39.11%	36.42%	0.93	27.00%	BRE Compliant	Negligible
6e	39.14%	36.29%	0.93	27.00%	BRE Compliant	Negligible
8a	37.49%	32.52%	0.87	27.00%	BRE Compliant	Negligible
8b	38.46%	35.29%	0.92	27.00%	BRE Compliant	Negligible
8c	38.56%	35.16%	0.91	27.00%	BRE Compliant	Negligible
8d	39.10%	36.89%	0.94	27.00%	BRE Compliant	Negligible
8e	39.09%	36.65%	0.94	27.00%	BRE Compliant	Negligible
10a	36.09%	32.33%	0.90	27.00%	BRE Compliant	Negligible
10b	38.39%	35.77%	0.93	27.00%	BRE Compliant	Negligible
10c	38.38%	35.52%	0.93	27.00%	BRE Compliant	Negligible
12a	36.28%	33.14%	0.91	27.00%	BRE Compliant	Negligible
12b	38.26%	35.88%	0.94	27.00%	BRE Compliant	Negligible
12c	38.35%	35.88%	0.94	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 9.

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.

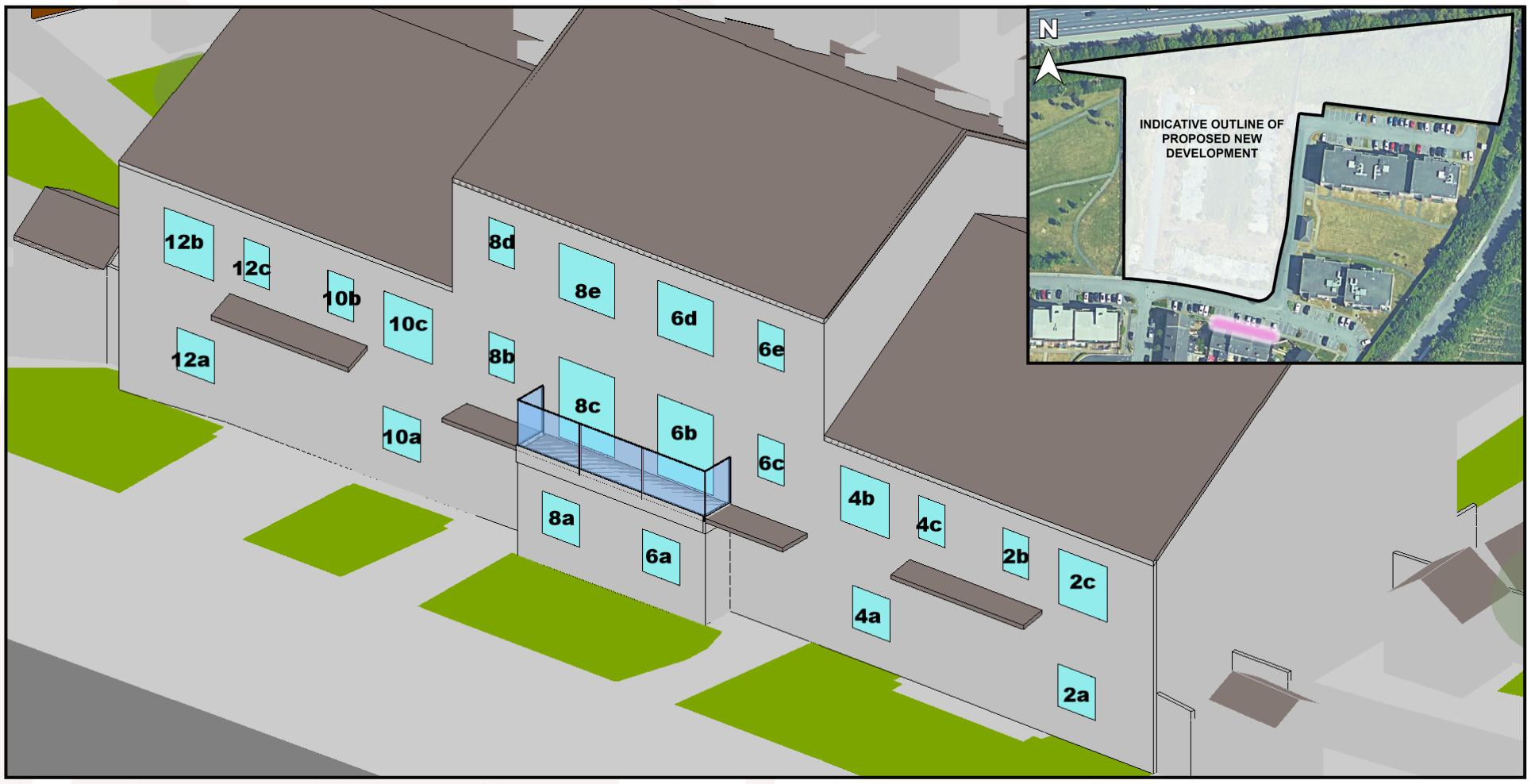


Figure A.6: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.1.7 1 Mayeston Rise

Table No. A.1.7 - VSC Results: 1 Mayeston Rise						
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**
1a	38.44%	30.01%	0.78	27.00%	BRE Compliant	Negligible
1b	37.92%	29.64%	0.78	27.00%	BRE Compliant	Negligible
1c#1	38.53%	29.94%	0.78	27.00%	BRE Compliant	-
1c#2	33.46%	31.82%	0.95	26.77%	BRE Compliant	-
1c#	36.00%	30.88%	0.86	27.00%	BRE Compliant	Negligible
1d	38.99%	32.67%	0.84	27.00%	BRE Compliant	Negligible
1e	38.61%	32.21%	0.83	27.00%	BRE Compliant	Negligible
1f#1	39.03%	32.45%	0.83	27.00%	BRE Compliant	-
1f#2	35.14%	33.83%	0.96	27.00%	BRE Compliant	-
1f#	37.09%	33.14%	0.89	27.00%	BRE Compliant	Negligible
1g	33.16%	32.76%	0.99	26.53%	BRE Compliant	Negligible
1h	39.39%	34.84%	0.88	27.00%	BRE Compliant	Negligible
1i	39.39%	34.72%	0.88	27.00%	BRE Compliant	Negligible
1j	36.71%	35.77%	0.97	27.00%	BRE Compliant	Negligible
1k	36.51%	35.82%	0.98	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 9.

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.

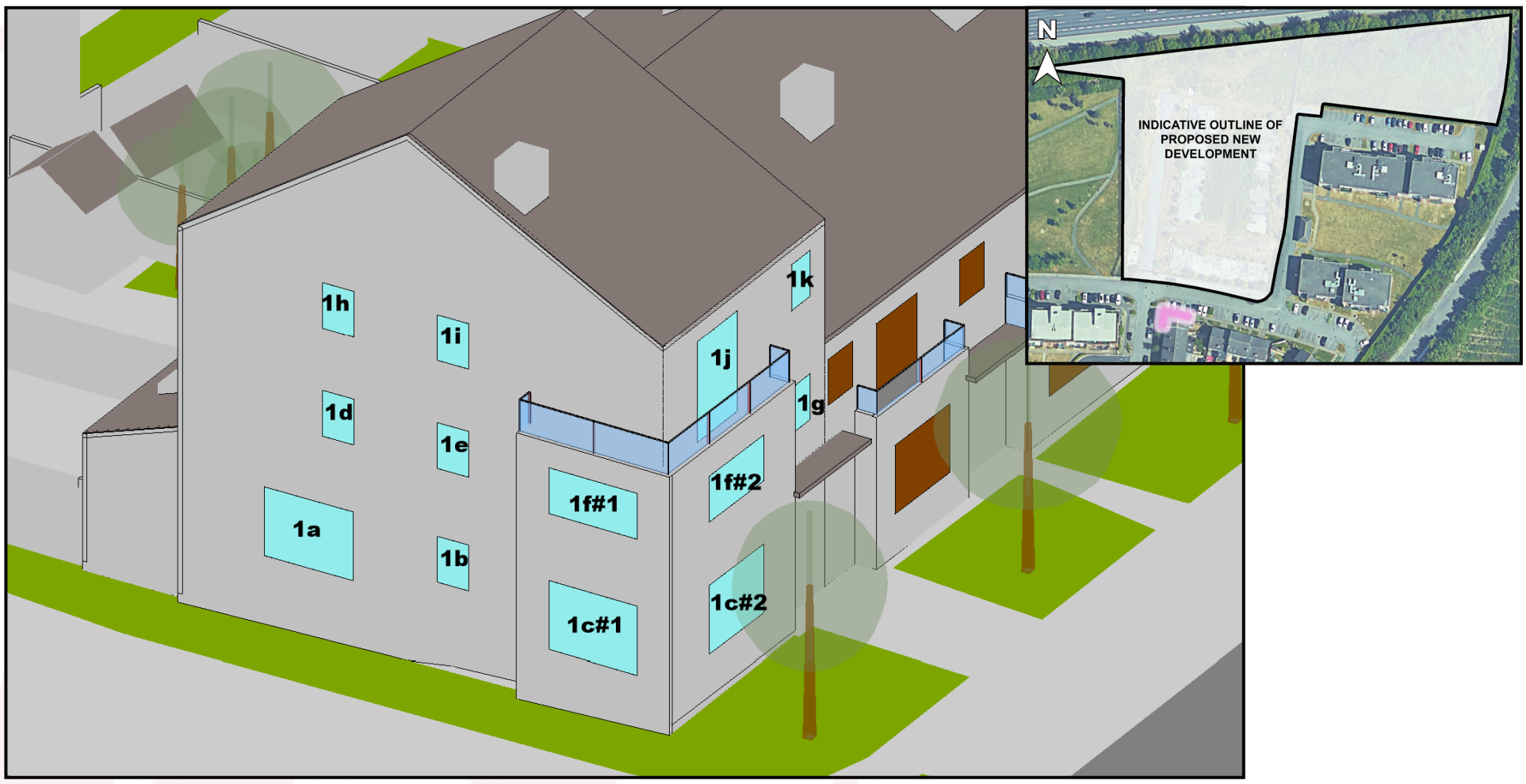


Figure A.7: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.1.8 Mayeston Boulevard: Ground Floor and First Floor

Table No. A.1.8 - VSC Results: Mayeston Boulevard						
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**
M0a	32.16%	30.85%	0.96	25.73%	BRE Compliant	Negligible
M0b	32.62%	31.11%	0.95	26.10%	BRE Compliant	Negligible
M0c	32.21%	30.64%	0.95	25.77%	BRE Compliant	Negligible
M0d	32.02%	29.74%	0.93	25.62%	BRE Compliant	Negligible
M0e#1	22.60%	19.90%	0.88	18.08%	BRE Compliant	-
M0e#2	24.41%	19.05%	0.78	19.53%	98%	-
M0e#	23.68%	19.39%	0.82	18.94%	BRE Compliant	Negligible
M0f	36.31%	31.36%	0.86	27.00%	BRE Compliant	Negligible
M0g	36.80%	33.02%	0.90	27.00%	BRE Compliant	Negligible
M0h	28.01%	24.57%	0.88	22.41%	BRE Compliant	Negligible
M1a	34.92%	33.92%	0.97	27.00%	BRE Compliant	Negligible
M1b	35.26%	34.13%	0.97	27.00%	BRE Compliant	Negligible
M1c	34.63%	33.49%	0.97	27.00%	BRE Compliant	Negligible
M1d	34.42%	32.71%	0.95	27.00%	BRE Compliant	Negligible
M1e#1	23.02%	20.97%	0.91	18.42%	BRE Compliant	-
M1e#2	23.19%	19.10%	0.82	18.55%	BRE Compliant	-
M1e#	23.12%	19.86%	0.86	18.50%	BRE Compliant	Negligible
M1f	37.42%	33.63%	0.90	27.00%	BRE Compliant	Negligible
M1g	37.67%	34.76%	0.92	27.00%	BRE Compliant	Negligible
M1h	26.93%	24.27%	0.90	21.54%	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 9.

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

A.1.9 Mayeston Boulevard: Second Floor and Third Floor

Table No. A.1.9 - VSC Results: Mayeston Boulevard						
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**
M2a	37.31%	36.61%	0.98	27.00%	BRE Compliant	Negligible
M2b	37.58%	36.80%	0.98	27.00%	BRE Compliant	Negligible
M2c	36.83%	36.09%	0.98	27.00%	BRE Compliant	Negligible
M2d	37.91%	36.74%	0.97	27.00%	BRE Compliant	Negligible
M2e#1	38.17%	36.82%	0.96	27.00%	BRE Compliant	-
M2e#2	39.43%	36.66%	0.93	27.00%	BRE Compliant	-
M2e#	38.92%	36.72%	0.94	27.00%	BRE Compliant	Negligible
M2f	39.42%	36.83%	0.93	27.00%	BRE Compliant	Negligible
M2g	39.34%	37.30%	0.95	27.00%	BRE Compliant	Negligible
M2h	39.39%	37.53%	0.95	27.00%	BRE Compliant	Negligible
M3a	38.69%	38.27%	0.99	27.00%	BRE Compliant	Negligible
M3b	38.78%	38.34%	0.99	27.00%	BRE Compliant	Negligible
M3c#1	38.94%	38.34%	0.98	27.00%	BRE Compliant	-
M3c#2	38.29%	36.91%	0.96	27.00%	BRE Compliant	-
M3c#	38.55%	37.49%	0.97	27.00%	BRE Compliant	Negligible
M3d	31.36%	30.02%	0.96	25.09%	BRE Compliant	Negligible
M3e	33.54%	32.66%	0.97	26.83%	BRE Compliant	Negligible
M3f	38.36%	37.29%	0.97	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 9.

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.

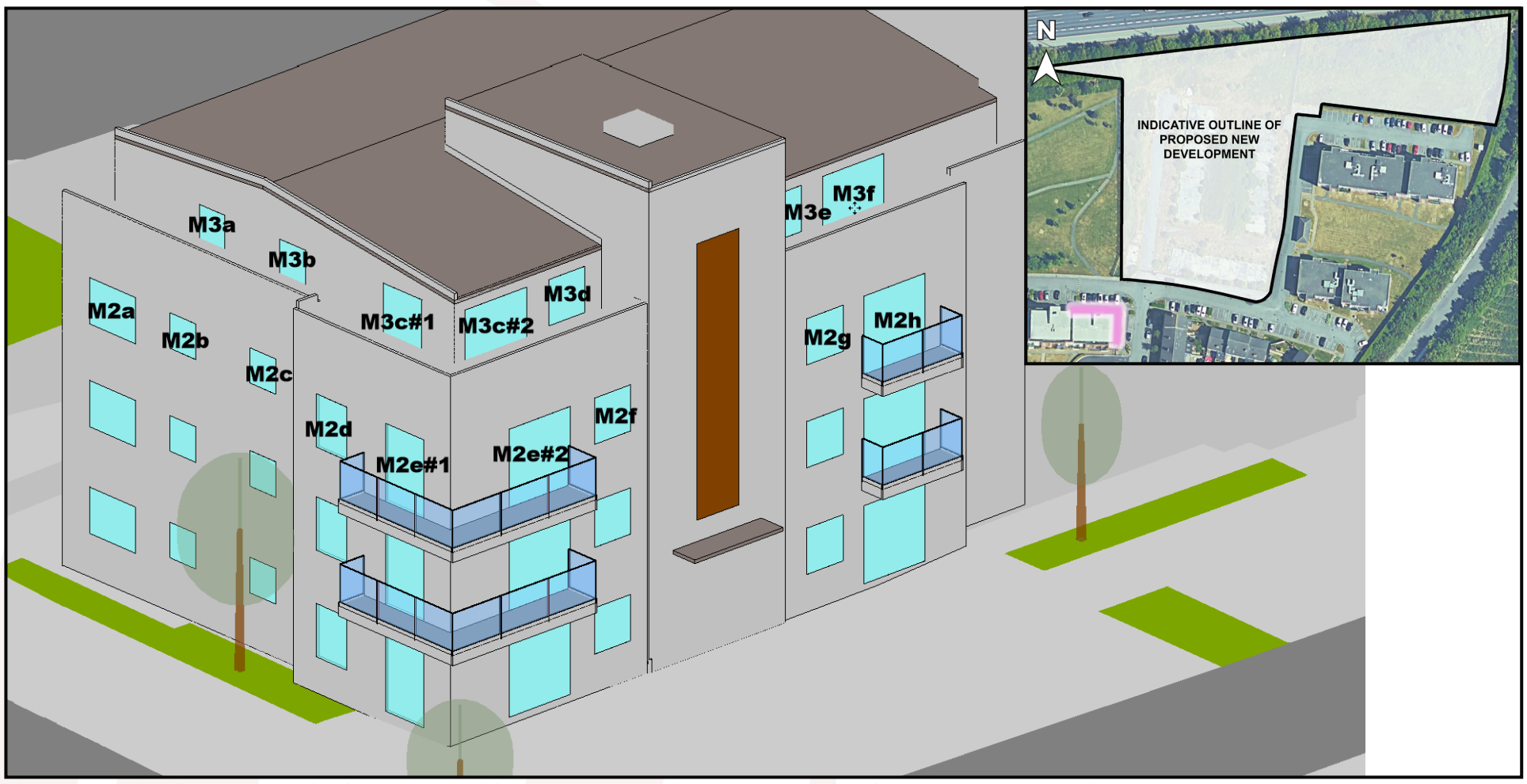


Figure A.9: Highlighted areas indicate the position of assessed windows (L), Aerial view of assessed location (R)

A.1.10 53 Mayeston Green - Hypothetical First Study - Balcony Geometry Removed from Analytical Model

The table below refers to windows situated below balconies, which exhibit a noticeable level of effect on VSC for 53 Mayeston Green. The results below are an hypothetical alternative study of the non-compliant windows removing the balcony geometry from the analytical model.

Table No. A.1.11 - VSC Results: 53 Mayeston Green

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**
530b	35.74%	29.37%	0.82	27.00%	BRE Compliant	Negligible
530c	27.62%	21.66%	0.78	22.10%	98%	Minor Adverse
530e	29.65%	23.62%	0.80	23.72%	100%	Minor Adverse
530f	29.45%	24.00%	0.81	23.56%	BRE Compliant	Negligible
530i	29.31%	24.90%	0.85	23.45%	BRE Compliant	Negligible
530j	36.38%	31.61%	0.87	27.00%	BRE Compliant	Negligible
530q#1	30.36%	27.56%	0.91	24.29%	BRE Compliant	-
530q#2	37.66%	21.84%	0.58	27.00%	81%	-
530q#	32.61%	25.80%	0.79	26.08%	99%	Minor Adverse
531b	36.87%	31.72%	0.86	27.00%	BRE Compliant	Negligible
531c	28.47%	23.66%	0.83	22.78%	BRE Compliant	Negligible
531e	30.79%	25.93%	0.84	24.63%	BRE Compliant	Negligible
531f	30.06%	25.67%	0.85	24.05%	BRE Compliant	Negligible
531i	30.21%	26.63%	0.88	24.17%	BRE Compliant	Negligible
531j	37.54%	33.68%	0.90	27.00%	BRE Compliant	Negligible
531q#1	31.63%	29.18%	0.92	25.30%	BRE Compliant	-
531q#2	38.48%	24.74%	0.64	27.00%	92%	-
531q#	33.74%	27.81%	0.82	26.99%	BRE Compliant	Negligible
532b	37.85%	34.06%	0.90	27.00%	BRE Compliant	Negligible
532c	29.17%	25.64%	0.88	23.34%	BRE Compliant	Negligible
532e	32.09%	28.50%	0.89	25.67%	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 9.

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

A.1.12 53 Mayeston Green - Hypothetical Second Study - Offset Assessment Point

The table below refers to windows situated below balconies, which exhibit a noticeable level of effect on VSC for 53 Mayeston Green. These results represent an alternative study of the non-compliant windows, with the assessment point taken from the balcony edge.

Table No. A.1.12 - VSC Results: 53 Mayeston Green

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**
530b	37.10%	30.05%	0.81	27.00%	BRE Compliant	Negligible
530c	36.66%	29.51%	0.80	27.00%	BRE Compliant	Negligible
530e	35.22%	28.48%	0.81	27.00%	BRE Compliant	Negligible
530f	35.15%	29.23%	0.83	27.00%	BRE Compliant	Negligible
530i	37.27%	31.78%	0.85	27.00%	BRE Compliant	Negligible
530j	37.40%	32.35%	0.86	27.00%	BRE Compliant	Negligible
530q#1	34.27%	30.68%	0.90	27.00%	BRE Compliant	-
530q#2	37.66%	21.84%	0.58	27.00%	81%	-
530q#	35.31%	27.96%	0.79	27.00%	BRE Compliant	Negligible
531b	38.19%	32.49%	0.85	27.00%	BRE Compliant	Negligible
531c	37.73%	31.95%	0.85	27.00%	BRE Compliant	Negligible
531e	36.22%	30.78%	0.85	27.00%	BRE Compliant	Negligible
531f	35.87%	31.10%	0.87	27.00%	BRE Compliant	Negligible
531i	38.31%	33.87%	0.88	27.00%	BRE Compliant	Negligible
531j	38.45%	34.37%	0.89	27.00%	BRE Compliant	Negligible
531q#1	34.84%	31.78%	0.91	27.00%	BRE Compliant	-
531q#2	38.48%	24.74%	0.64	27.00%	92%	-
531q#	35.96%	29.61%	0.82	27.00%	BRE Compliant	Negligible
532b	39.02%	34.79%	0.89	27.00%	BRE Compliant	Negligible
532c	38.51%	34.25%	0.89	27.00%	BRE Compliant	Negligible
532e	37.04%	33.00%	0.89	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 9.

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

A.2 Effect on Sun On Ground (SOG) in Existing Gardens

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

Table Example. A.2 - SOG Impact Assessment						
Address	% of Area to Receive Above 2 Hours Sunlight on March 21st (Target >50%)				Level of Compliance with BRE Guidelines	Effect of Proposed Development
	Baseline	Proposed	Ratio of Proposed to Baseline	Recommended Minimum as per BRE Guidelines		
A	**B**	**C**	**D**	**E**	**F**	**G**

A: Address

This column contains the address of the assessed garden/amenity space. The locations of the gardens and amenity spaces assessed are visually represented in a corresponding figure.

B: Baseline

Baseline represents percentage of the assessed space's area that can receive more than 2 hours of sunlight on March 21st, calculated in the existing baseline model state (as explained in the "Building the Model States" on page 12).

C: Proposed

Proposed represents percentage of the assessed space's area that can receive more than 2 hours of sunlight on March 21st, calculated in the proposed model state (as explained in the "Building the Model States" on page 12).

D: Ratio of Proposed to Baseline

This column expressed the ratio of change between the baseline and the proposed values. 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 as per the BRE Guidelines

The BRE Guidelines indicate that a proposed development could possibly have a noticeable effect on the sunlight received by an existing garden and/or amenity area, if 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.

To determine the *recommended minimum*, 80% of the *Baseline* value has been calculated. If this value is above the 50% threshold, a target value of 50% will be applied. If 80% of the baseline value is below 50%, then 80% of the baseline value is the appropriate target value.

F: Level of BRE Compliance

This column states the compliance of the *Proposed* sunlight value with the *recommended minimum as per the BRE Guidelines*. In essence, it shows whether or not the assessed garden or amenity area would experience a perceptible level of impact. If the 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.

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 9.

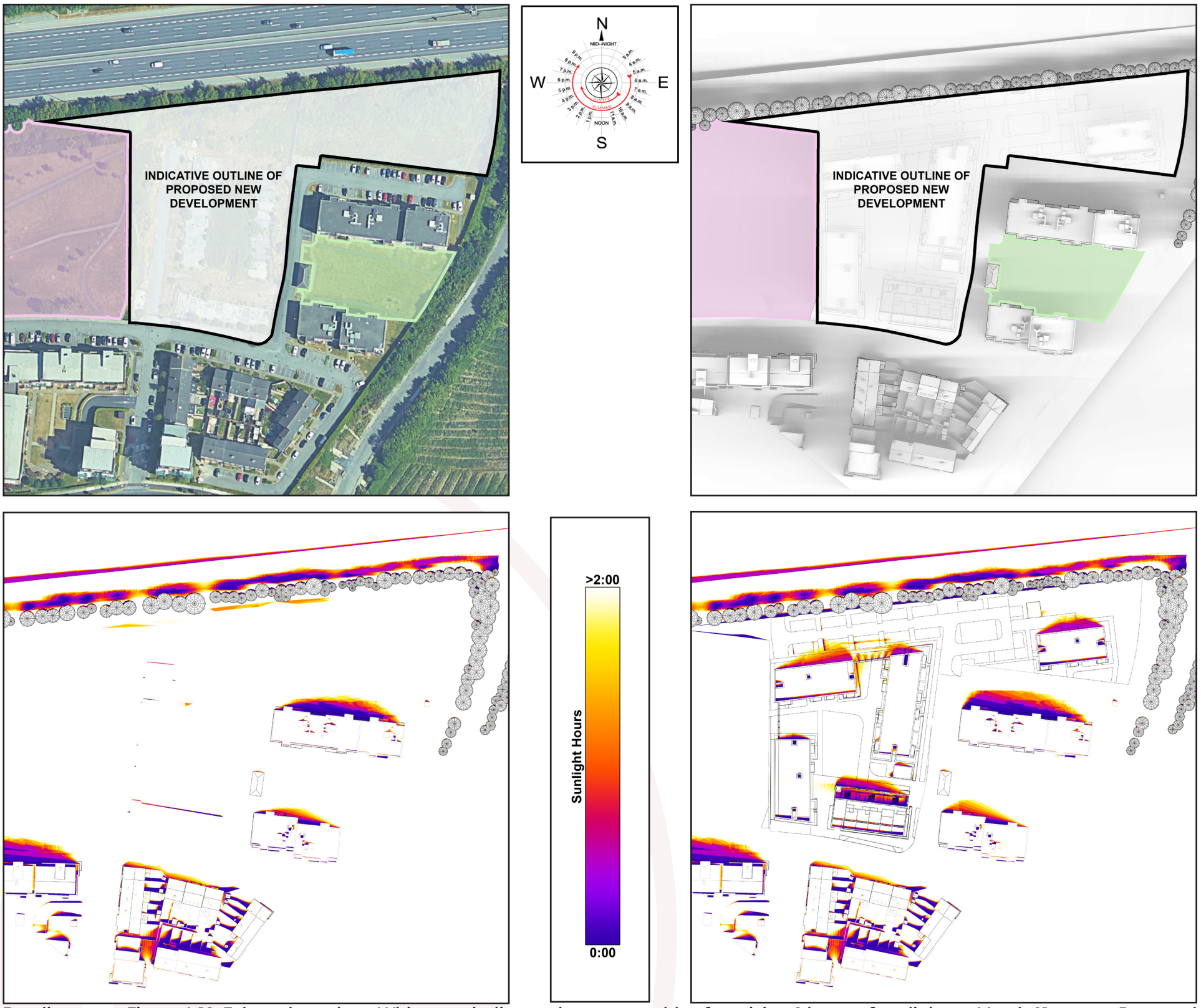
It should be noted that the figures displayed in the table of results have been rounded off. A manual calculation on these figures may yield a negligible difference and should not be considered an error.

A.2.1 Mayeston Green and Mayeston Boulevard

Table No. A.2.1 - SOG Results: Mayeston Green and Mayeston Boulevard						
Address	% of Area to Receive Above 2 Hours Sunlight on March 21st (Target >50%)				Level of Compliance with BRE Guidelines	Effect of Proposed Development**
	Baseline	Proposed	Ratio of Proposed to Baseline	Recommended minimum		
Mayeston Green Courtyard	100.00%	100.00%	1.00	50.00%	BRE Compliant	Negligible
Mayeston Estate Open Space	94.31%	91.79%	0.97	50.00%	BRE Compliant	Negligible

* The BRE guidelines state that in order for a proposed development to have a noticeable effect on the amount of sunlight received in an existing garden or amenity area, the value needs to both drop below the stated target value of 50% **and** be reduced by more than 20% of the existing value.

** For the interpretation of level of effects please refer to "3.2 Definition of Effects" on page 9.



Baseline Figure A.12: False colour plans. White area indicates the area capable of receiving 2 hours of sunlight on March 21st. Proposed

N

Baseline

Proposed

March 21st 7:00

March 21st 8:00

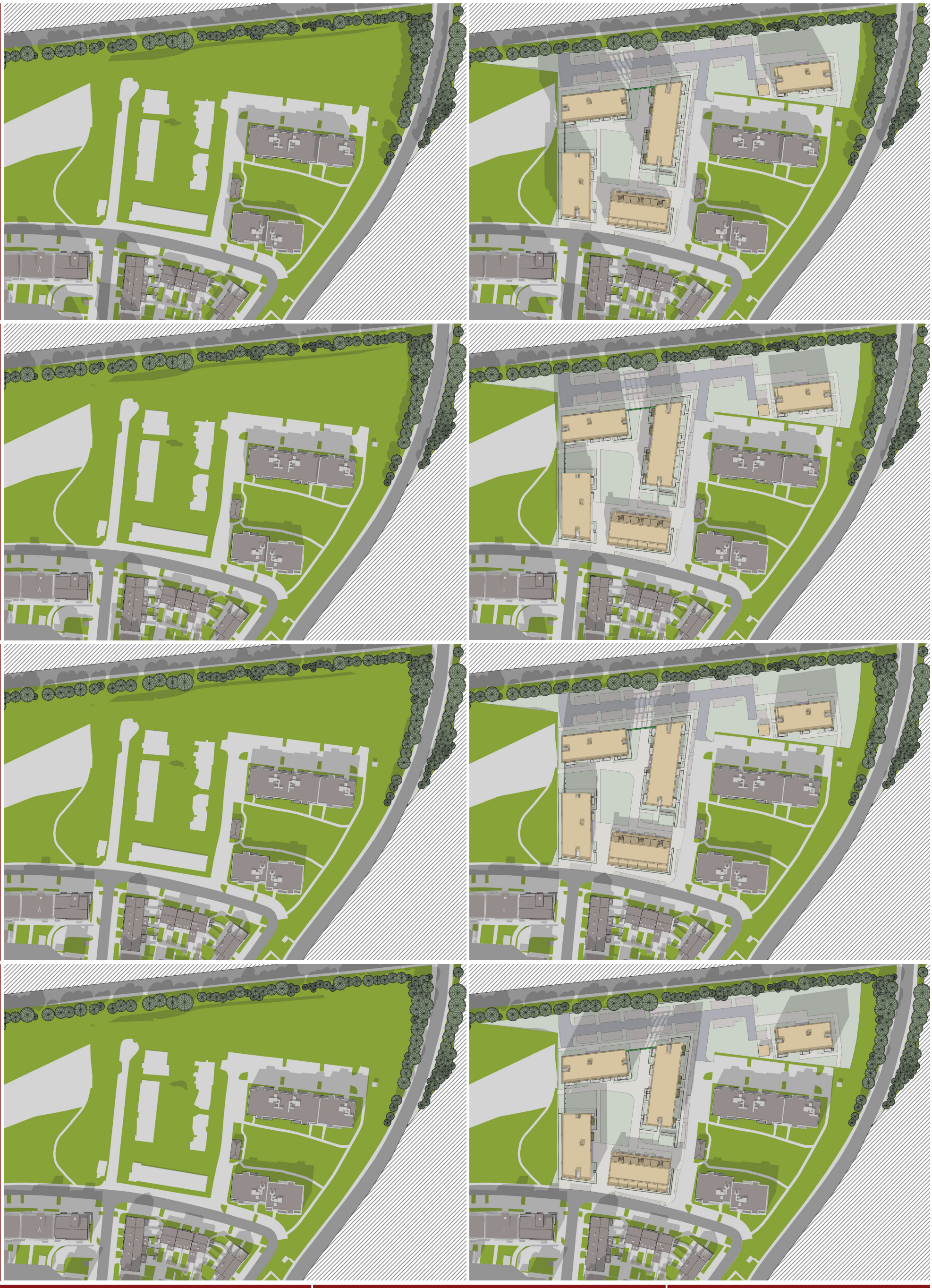
March 21st 9:00

March 21st 10:00

B.0 B.1	Shadow Studies Shadow Study 21 March	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
	March 21st Sunrise 6:25 | Sunset 18:40	Applicant: Fingal County Council	

N

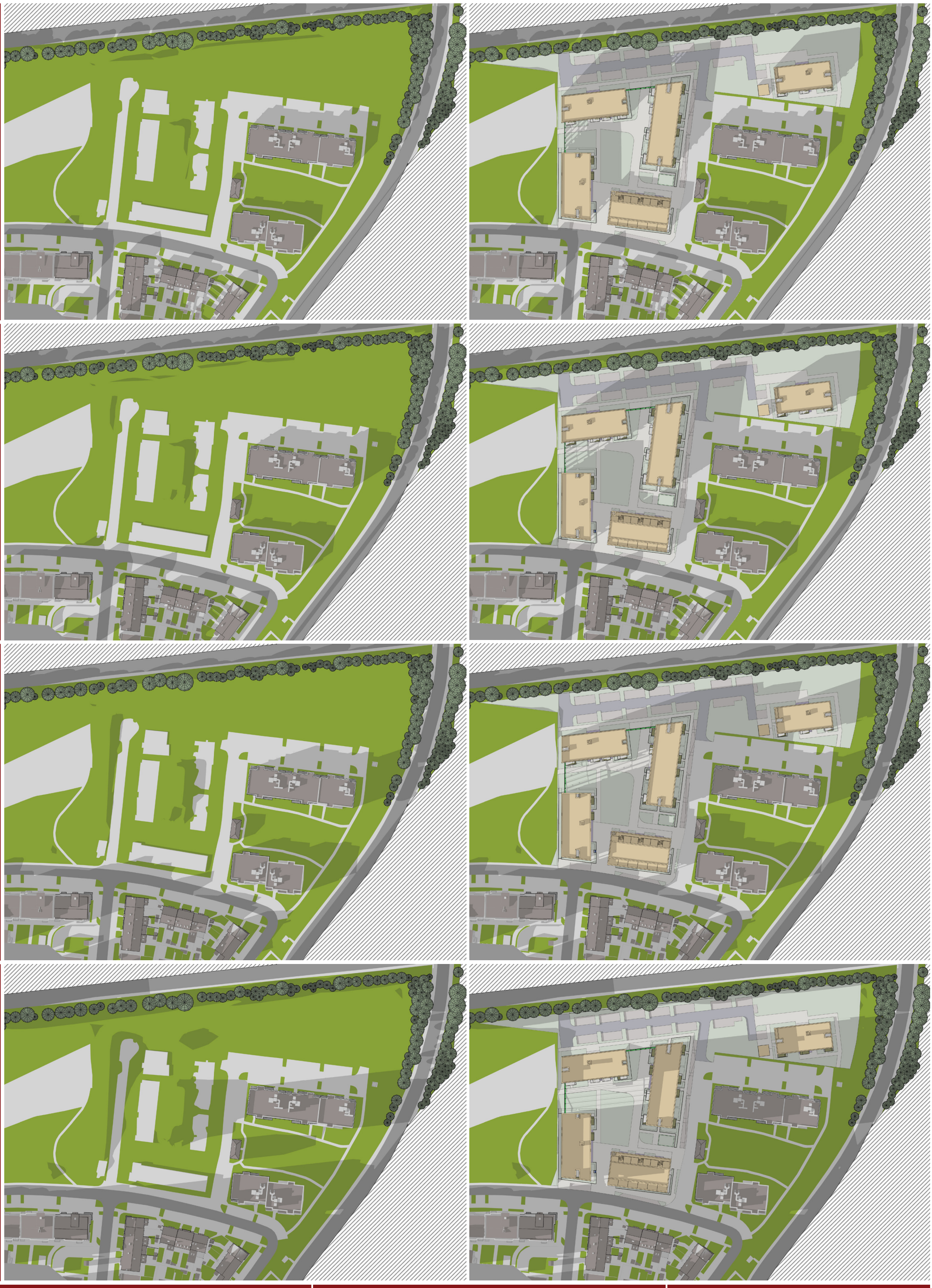
Baseline	Proposed
March 21st 11:00	
March 21st 12:00	
March 21st 13:00	
March 21st 14:00	



	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
March 21st **Sunrise 6:25 | Sunset 18:40**	**Applicant: Fingal County Council**	

N

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



	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
March 21st **Sunrise 6:25 | Sunset 18:40**	**Applicant: Fingal County Council**	

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: Mayeston S179A, North Dublin

3D DESIGN BUREAU

June 21st
Sunrise 4:57 | Sunset 21:57

Applicant: Fingal County Council

N

Baseline

Proposed

June 21st 10:00

June 21st 11:00

June 21st 12:00

June 21st 13:00

	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
June 21st **Sunrise 4:57 | Sunset 21:57**	**Applicant: Fingal County Council**	

N

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

Project: Mayeston S179A, North Dublin

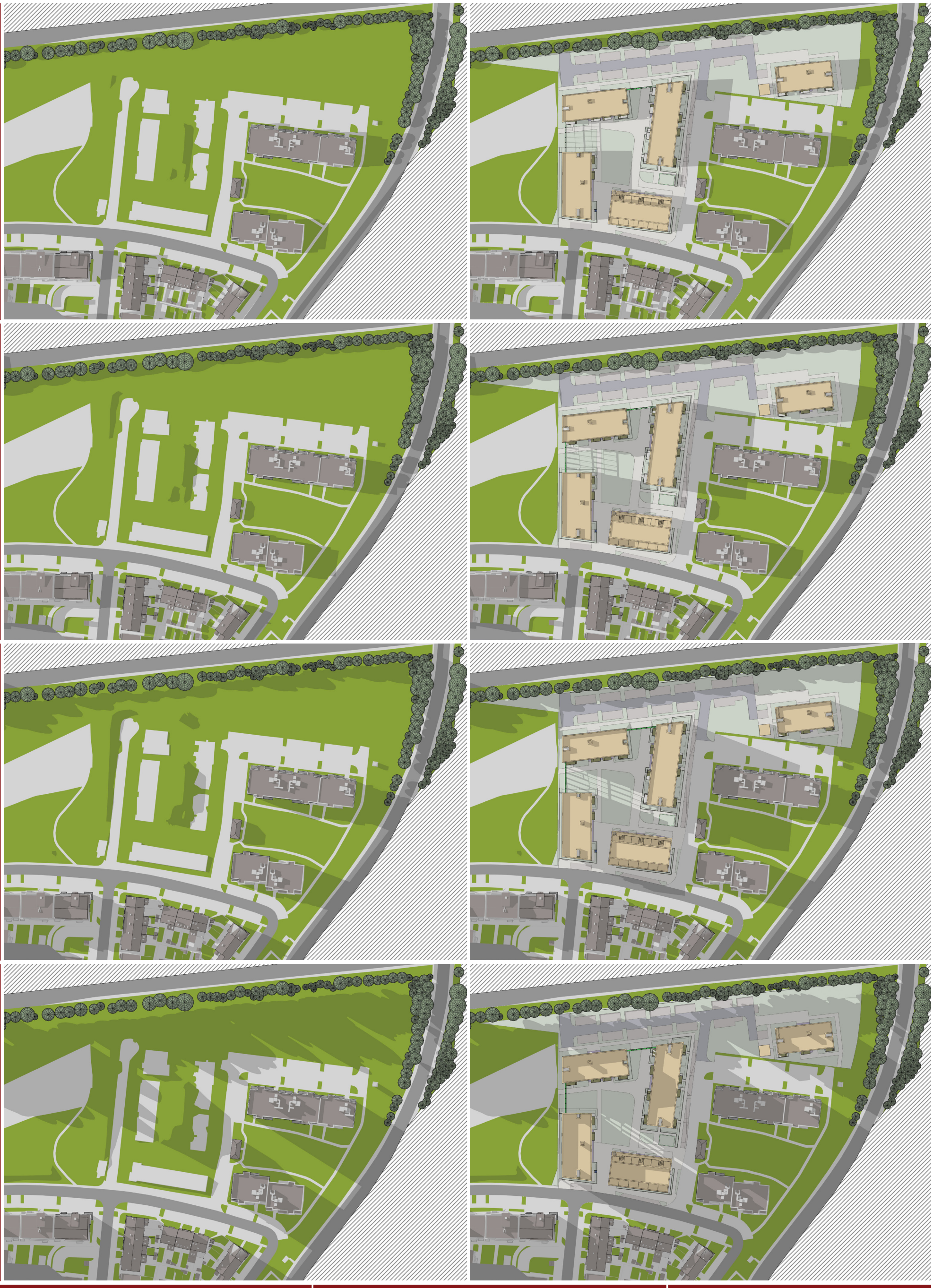
3D DESIGN BUREAU

June 21st
Sunrise 4:57 | Sunset 21:57

Applicant: Fingal County Council

N

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



	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
June 21st **Sunrise 4:57 | Sunset 21:57**	**Applicant: Fingal County Council**	

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: Mayeston S179A, North Dublin	3D DESIGN BUREAU
December 21st Sunrise 8:38 | Sunset 16:08	Applicant: Fingal County Council	

N

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

	Project: Mayeston S179A, North Dublin	3D DESIGN BUREAU
December 21st **Sunrise 8:38 | Sunset 16:08**	**Applicant: Fingal County Council**	

C.0 Scheme Performance

C.1 Proposed Apartment Floor Plans

C.1.1 Proposed Apartment Floor Plans - Block A

Figure C.1: Block A - Site Location

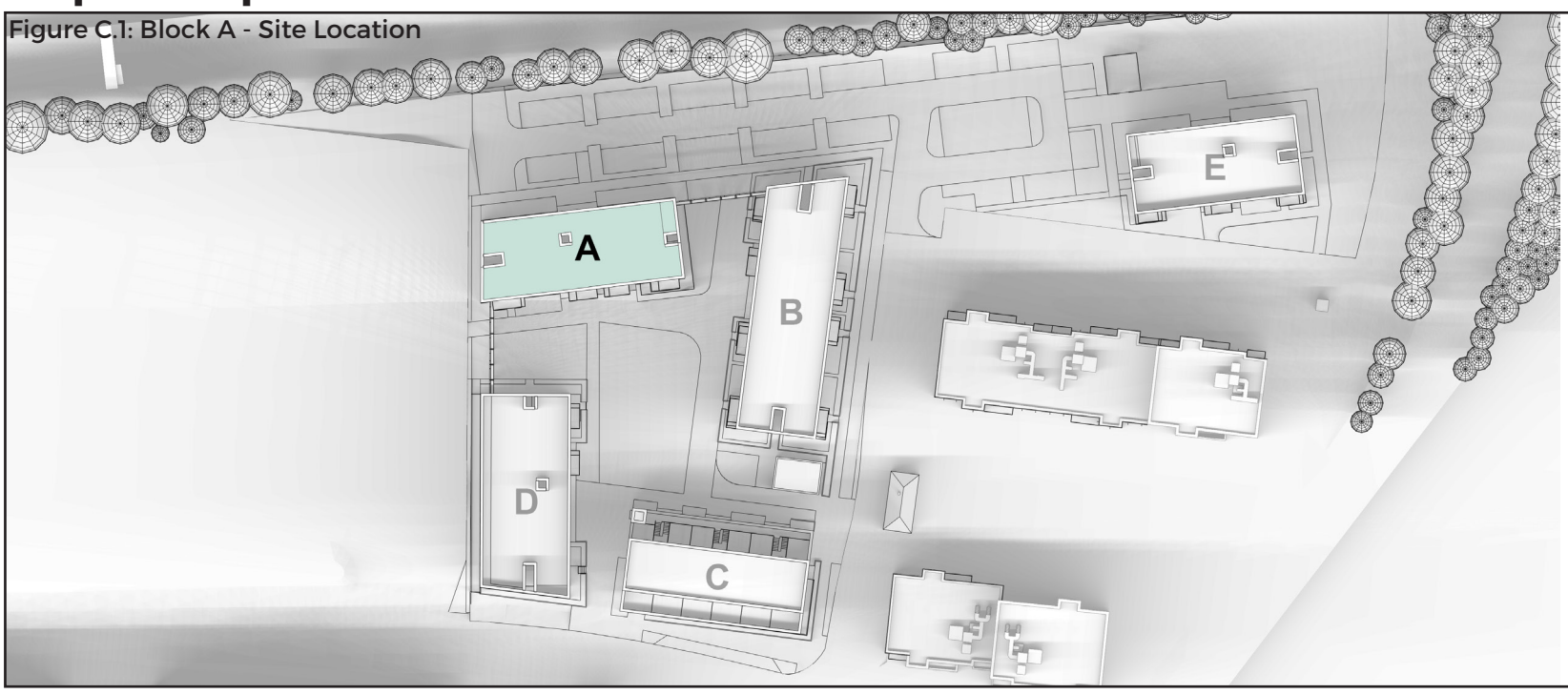


Figure C.2: Block A - Level Ground Floor

Figure C.3: Block A - Level First Floor

Figure C.4: Block A - Level Second Floor

Figure C.5: Block A - Third Floor

Figure C.6: Block A - Fourth Floor

Figure C.7: Block A - Fifth Floor

C.1.2 Proposed Apartment Floor Plans - Block B

Figure C.8: Block B - Site Location

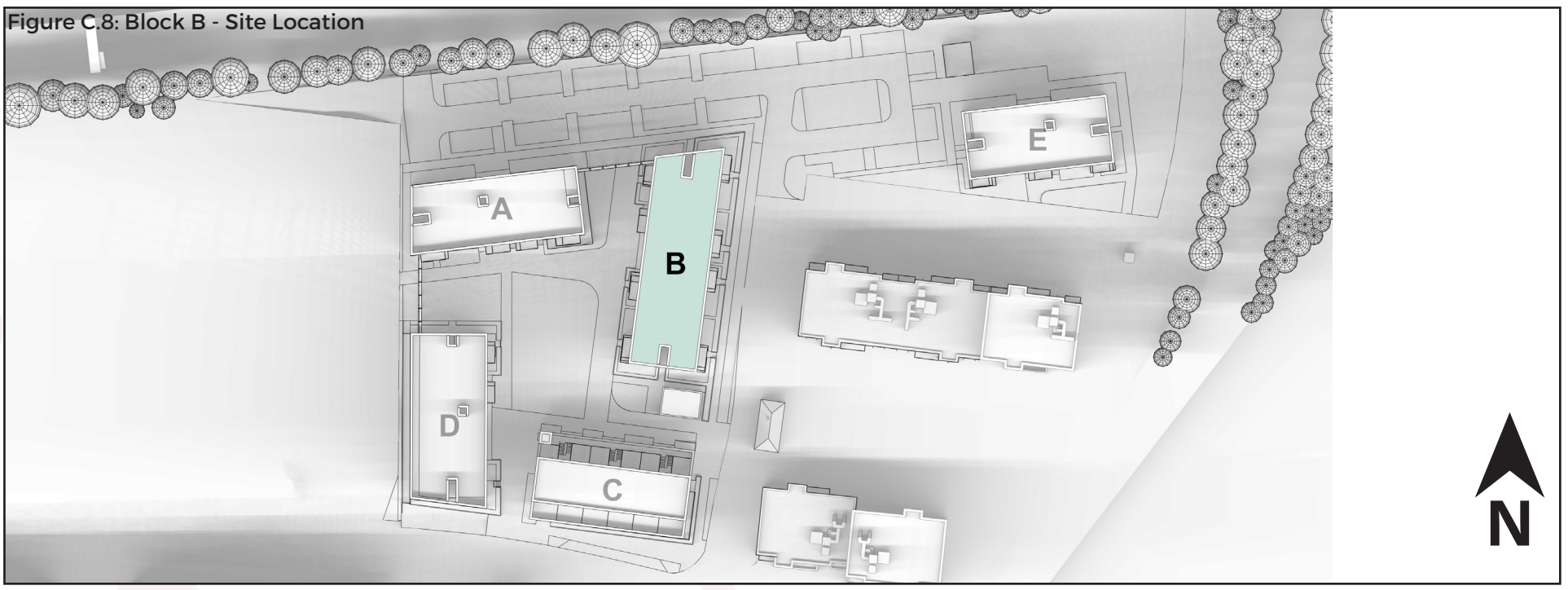


Figure C.9: Block B - Ground Floor

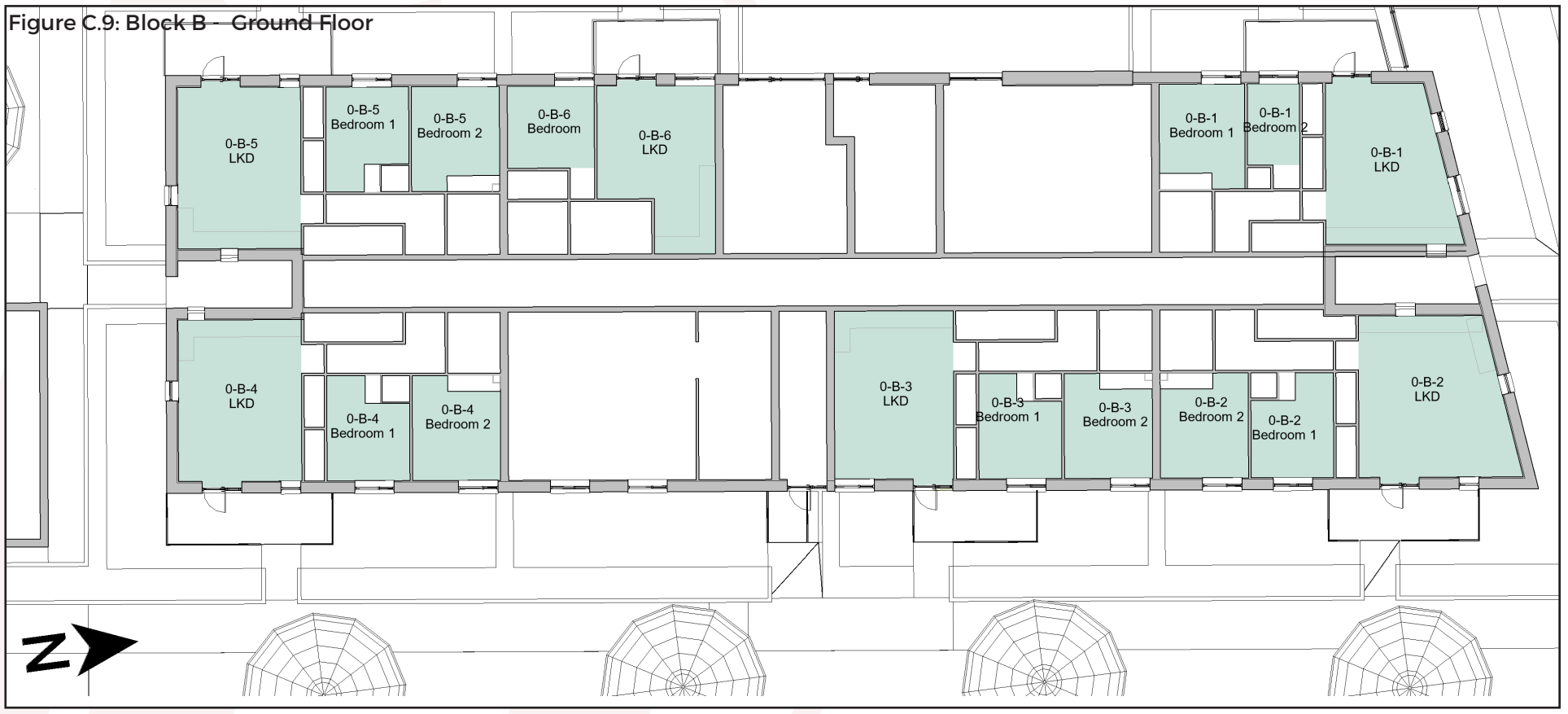


Figure C.10: Block B - First Floor

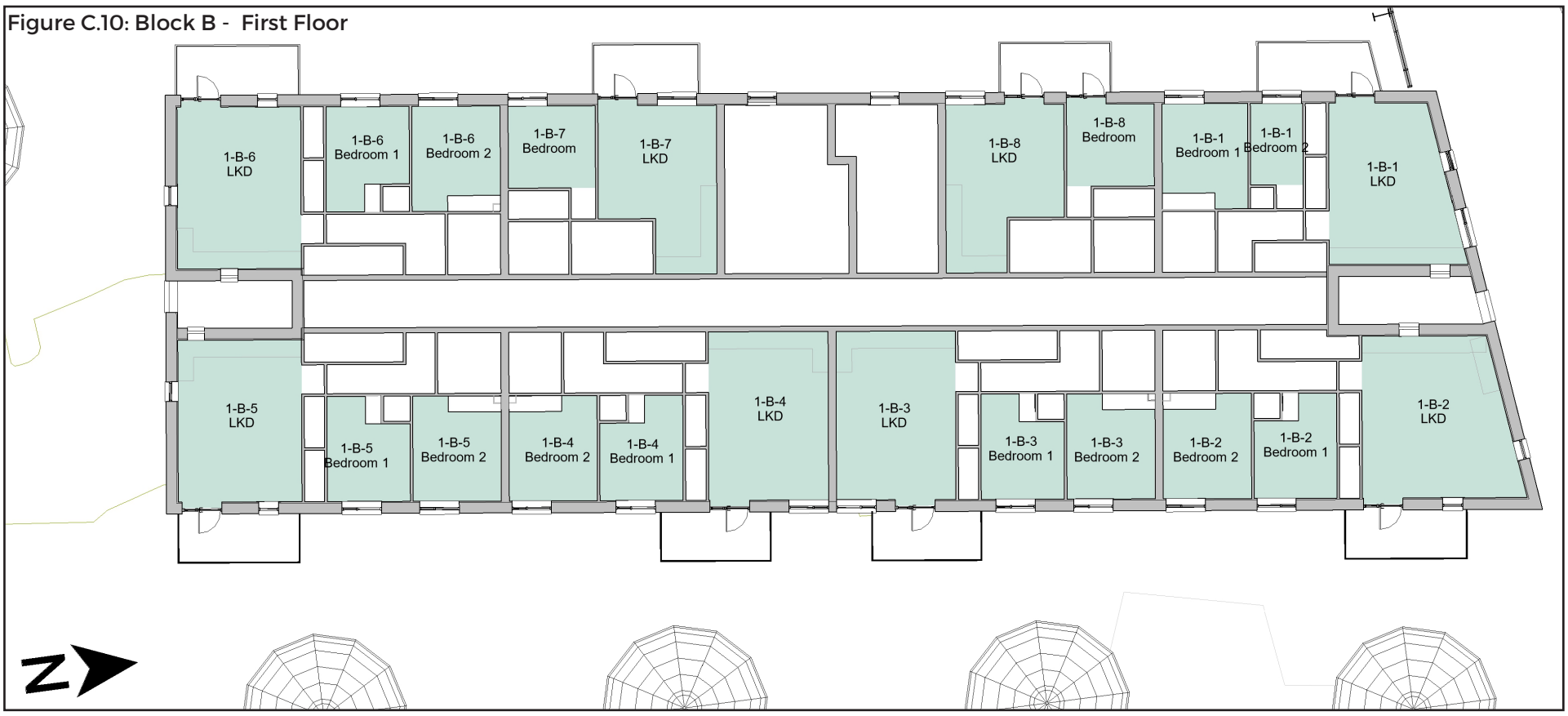


Figure C.11: Block B - Second Floor

Figure C.12: Block B - Third Floor

Figure C.13: Block B - Fourth Floor

C.1.3 Proposed Apartment Floor Plans - Block C

Figure C.14: Block C - Site Location

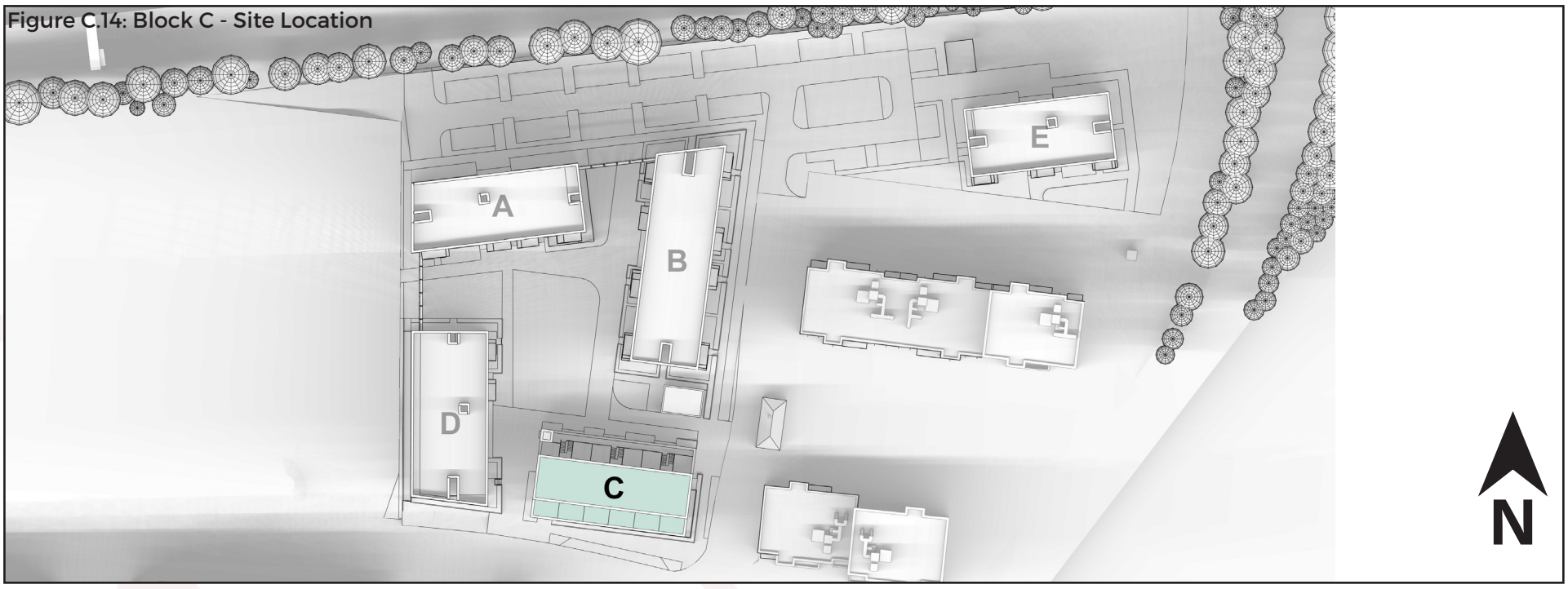


Figure C.15: Block C - Ground Floor

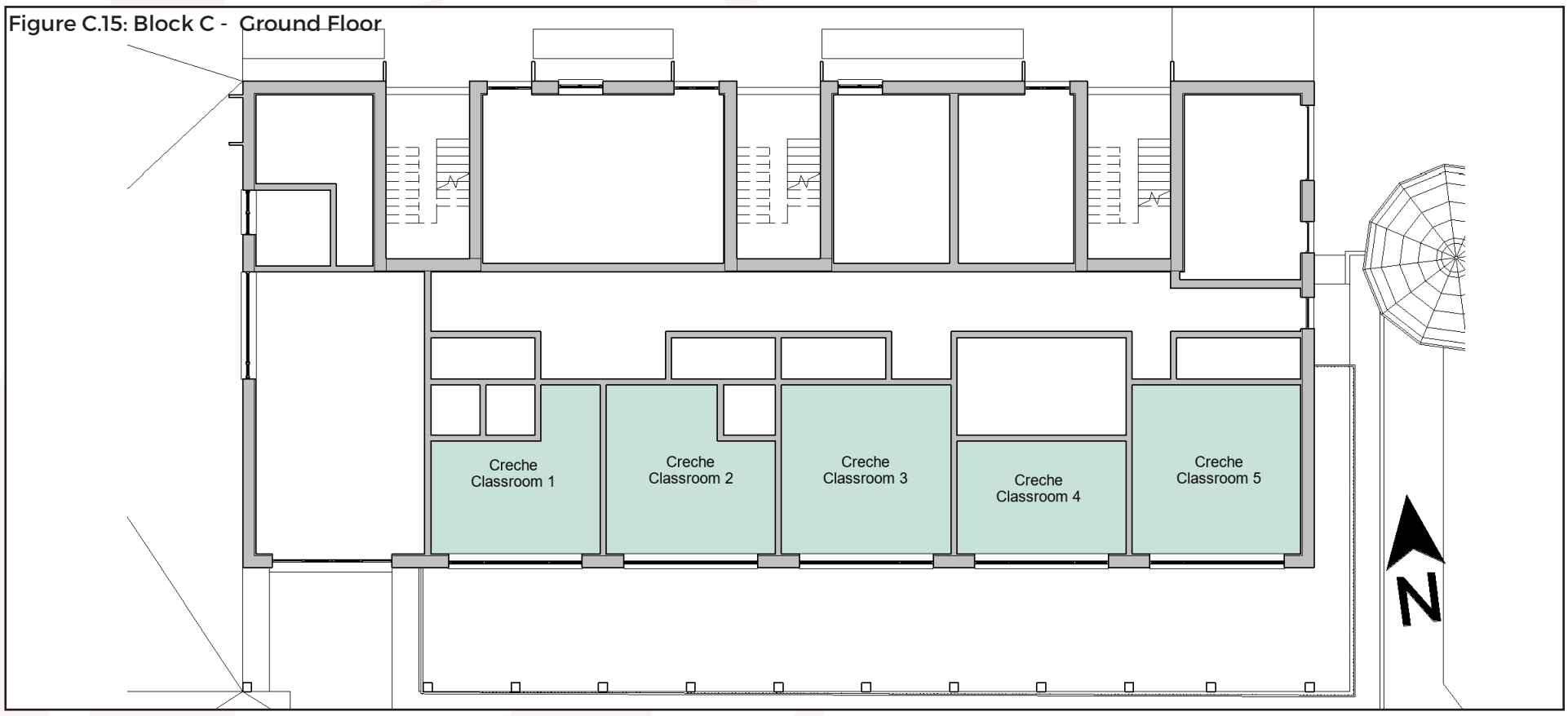


Figure C.16: Block C - First Floor

Figure C.17: Block C - Second Floor

C.1.4 Proposed Apartment Floor Plans - Block D

Figure C.18: Block D - Site Location

Figure C.19: Block D - Ground Floor

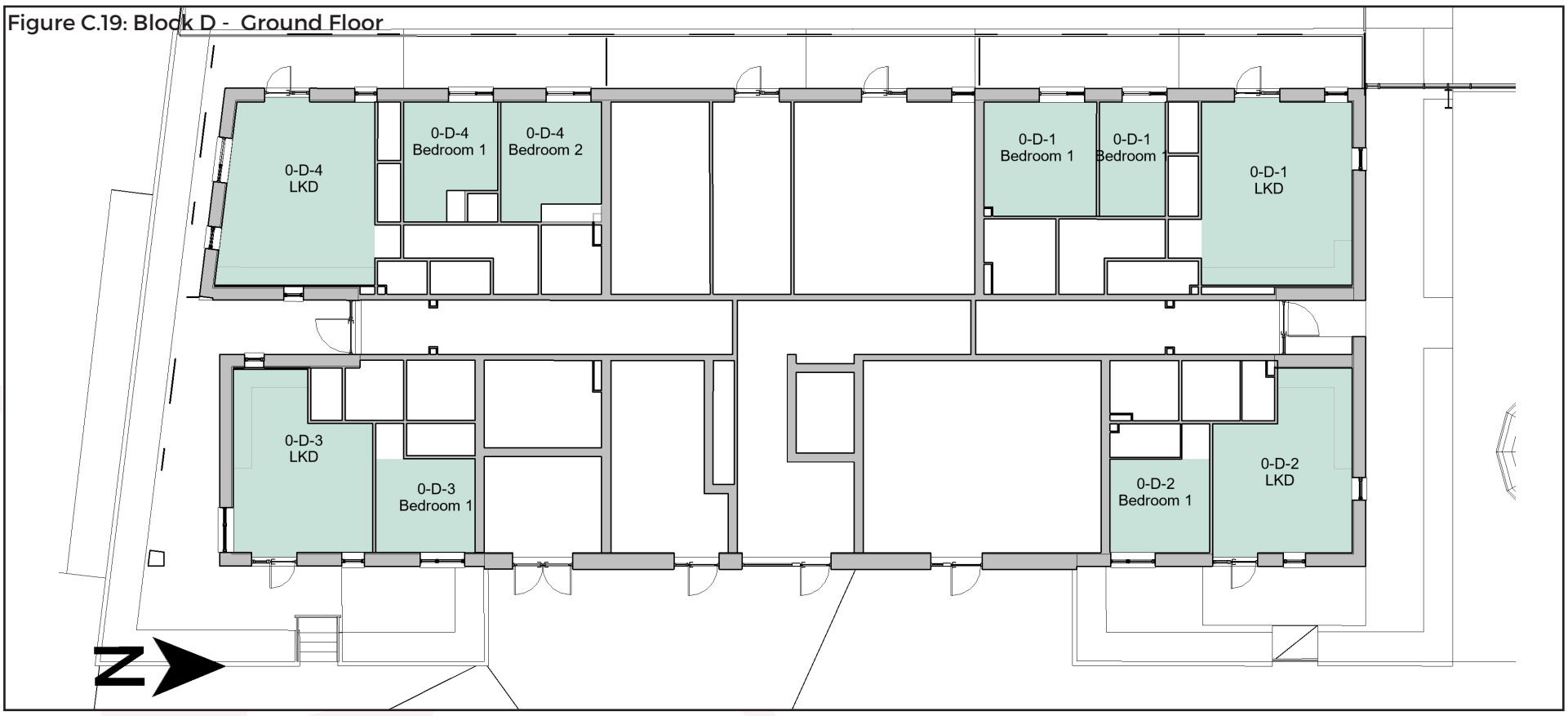


Figure C.20: Block D - First Floor

Figure C.21: Block D - Second Floor

Figure C.22: Block D - Third Floor

C.1.5 Proposed Apartment Floor Plans - Block E

Figure C.23: Block E - Site Location

Figure C.24: Block E - Ground Floor

Figure C.25: Block E- First Floor

Figure C.26: Block D - Second Floor

Figure C.27: Block D - Third 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: Block A / Ground Floor, First Floor and Second Floor

Table No. C.2.1 - SDA Results: Block A						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
0-A-1	LKD	200	100%	100%	99%	Compliant
0-A-1	Bedroom	100	100%	100%	100%	Compliant
0-A-2	LKD	200	94%	77%	69%	Compliant
0-A-2	Bedroom	100	100%	100%	100%	Compliant
0-A-3	LKD	200	77%	75%	69%	Compliant
0-A-3	Bedroom	100	100%	100%	100%	Compliant
0-A-4	LKD	200	72%	66%	62%	Compliant
0-A-4	Bedroom 1	100	100%	100%	100%	Compliant
0-A-4	Bedroom 2	100	100%	100%	100%	Compliant
0-A-4	Bedroom 3	100	100%	97%	97%	Compliant
1-A-1	LKD	200	100%	100%	98%	Compliant
1-A-1	Bedroom 1	100	100%	100%	100%	Compliant
1-A-1	Bedroom 2	100	100%	100%	100%	Compliant
1-A-2	LKD	200	77%	62%	50%	Compliant
1-A-2	Bedroom 1	100	100%	100%	100%	Compliant
1-A-2	Bedroom 2	100	100%	100%	100%	Compliant
1-A-3	LKD	200	73%	73%	72%	Compliant
1-A-3	Bedroom	100	100%	100%	100%	Compliant
1-A-4	LKD	200	73%	71%	70%	Compliant
1-A-4	Bedroom	100	100%	100%	100%	Compliant
1-A-5	LKD	200	56%	55%	53%	Compliant
1-A-5	Bedroom	100	100%	100%	100%	Compliant
1-A-6	LKD	200	63%	61%	59%	Compliant
1-A-6	Bedroom 1	100	100%	100%	100%	Compliant
1-A-6	Bedroom 2	100	100%	100%	100%	Compliant
1-A-6	Bedroom 3	100	90%	86%	86%	Compliant
2-A-1	LKD	200	100%	100%	100%	Compliant
2-A-1	Bedroom 1	100	100%	100%	100%	Compliant
2-A-1	Bedroom 2	100	100%	100%	100%	Compliant
2-A-2	LKD	200	94%	76%	70%	Compliant
2-A-2	Bedroom 1	100	100%	100%	100%	Compliant
2-A-2	Bedroom 2	100	100%	100%	100%	Compliant
2-A-3	LKD	200	80%	79%	79%	Compliant
2-A-3	Bedroom	100	100%	100%	100%	Compliant
2-A-4	LKD	200	70%	70%	70%	Compliant
2-A-4	Bedroom	100	100%	100%	100%	Compliant
2-A-5	LKD	200	74%	74%	73%	Compliant
2-A-5	Bedroom	100	100%	100%	100%	Compliant
2-A-6	LKD	200	77%	76%	75%	Compliant
2-A-6	Bedroom 1	100	100%	100%	100%	Compliant
2-A-6	Bedroom 2	100	100%	100%	100%	Compliant
2-A-6	Bedroom 3	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.2 SDA Results: Block A / Third Floor and Fourth Floor

Table No. C.2.2 - SDA Results: Block A						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
3-A-1	LKD	200	100%	100%	100%	Compliant
3-A-1	Bedroom 1	100	100%	100%	100%	Compliant
3-A-1	Bedroom 2	100	100%	100%	100%	Compliant
3-A-2	LKD	200	98%	94%	92%	Compliant
3-A-2	Bedroom 1	100	100%	100%	100%	Compliant
3-A-2	Bedroom 2	100	100%	100%	100%	Compliant
3-A-3	LKD	200	82%	82%	82%	Compliant
3-A-3	Bedroom	100	100%	100%	100%	Compliant
3-A-4	LKD	200	81%	80%	80%	Compliant
3-A-4	Bedroom	100	100%	100%	100%	Compliant
3-A-5	LKD	200	75%	75%	75%	Compliant
3-A-5	Bedroom	100	100%	100%	100%	Compliant
3-A-6	LKD	200	97%	95%	95%	Compliant
3-A-6	Bedroom 1	100	100%	100%	100%	Compliant
3-A-6	Bedroom 2	100	100%	100%	100%	Compliant
3-A-6	Bedroom 3	100	100%	100%	100%	Compliant
4-A-1	LKD	200	100%	100%	100%	Compliant
4-A-1	Bedroom 1	100	100%	100%	100%	Compliant
4-A-1	Bedroom 2	100	100%	100%	100%	Compliant
4-A-2	LKD	200	100%	100%	100%	Compliant
4-A-2	Bedroom 1	100	100%	100%	100%	Compliant
4-A-2	Bedroom 2	100	100%	100%	100%	Compliant
4-A-3	LKD	200	95%	94%	93%	Compliant
4-A-3	Bedroom	100	100%	100%	100%	Compliant
4-A-4	LKD	200	81%	81%	81%	Compliant
4-A-4	Bedroom	100	100%	100%	100%	Compliant
4-A-5	LKD	200	83%	83%	83%	Compliant
4-A-5	Bedroom	100	100%	100%	100%	Compliant
4-A-6	LKD	200	98%	98%	98%	Compliant
4-A-6	Bedroom 1	100	100%	100%	100%	Compliant
4-A-6	Bedroom 2	100	100%	100%	100%	Compliant
4-A-6	Bedroom 3	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.3 SDA Results: Block A / Fifth Floor

Table No. C.2.3 - SDA Results: Block A						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
5-A-1	LKD	200	100%	100%	100%	Compliant
5-A-1	Bedroom 1	100	100%	100%	100%	Compliant
5-A-1	Bedroom 2	100	100%	100%	100%	Compliant
5-A-2	LKD	200	100%	100%	100%	Compliant
5-A-2	Bedroom 1	100	100%	100%	100%	Compliant
5-A-2	Bedroom 2	100	100%	100%	100%	Compliant
5-A-3	LKD	200	100%	100%	100%	Compliant
5-A-3	Bedroom	100	100%	100%	100%	Compliant
5-A-4	LKD	200	92%	92%	92%	Compliant
5-A-4	Bedroom	100	100%	100%	100%	Compliant
5-A-5	LKD	200	88%	88%	88%	Compliant
5-A-5	Bedroom	100	100%	100%	100%	Compliant
5-A-6	LKD	200	100%	100%	100%	Compliant
5-A-6	Bedroom 1	100	100%	100%	100%	Compliant
5-A-6	Bedroom 2	100	100%	100%	100%	Compliant
5-A-6	Bedroom 3	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.4 SDA Results: Block B / Ground Floor, First Floor and Second Floor

Table No. C.2.4 - SDA Results: Block B						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
0-B-1	LKD	200	100%	96%	81%	Compliant
0-B-1	Bedroom 1	100	87%	81%	68%	Compliant
0-B-1	Bedroom 2	100	100%	100%	100%	Compliant
0-B-2	LKD	200	92%	75%	61%	Compliant
0-B-2	Bedroom 1	100	100%	100%	100%	Compliant
0-B-2	Bedroom 2	100	100%	100%	100%	Compliant
0-B-3	LKD	200	91%	75%	65%	Compliant
0-B-3	Bedroom 1	100	100%	100%	100%	Compliant
0-B-3	Bedroom 2	100	100%	100%	100%	Compliant
0-B-4	LKD	200	100%	100%	97%	Compliant
0-B-4	Bedroom 1	100	100%	100%	100%	Compliant
0-B-4	Bedroom 2	100	100%	100%	100%	Compliant
0-B-5	LKD	200	87%	85%	80%	Compliant
0-B-5	Bedroom 1	100	100%	100%	100%	Compliant
0-B-5	Bedroom 2	100	100%	100%	100%	Compliant
0-B-6	LKD	200	64%	56%	50%	Compliant
0-B-6	Bedroom	100	100%	100%	100%	Compliant
1-B-1	LKD	200	97%	94%	87%	Compliant
1-B-1	Bedroom 1	100	99%	98%	96%	Compliant
1-B-1	Bedroom 2	100	100%	100%	100%	Compliant
1-B-2	LKD	200	65%	60%	58%	Compliant
1-B-2	Bedroom 1	100	100%	100%	100%	Compliant
1-B-2	Bedroom 2	100	100%	100%	100%	Compliant
1-B-3	LKD	200	82%	77%	75%	Compliant
1-B-3	Bedroom 1	100	100%	100%	100%	Compliant
1-B-3	Bedroom 2	100	100%	100%	100%	Compliant
1-B-4	LKD	200	79%	75%	72%	Compliant
1-B-4	Bedroom 1	100	100%	100%	100%	Compliant
1-B-4	Bedroom 2	100	100%	100%	100%	Compliant
1-B-5	LKD	200	100%	100%	100%	Compliant
1-B-5	Bedroom 1	100	100%	100%	100%	Compliant
1-B-5	Bedroom 2	100	100%	100%	100%	Compliant
1-B-6	LKD	200	83%	82%	80%	Compliant
1-B-6	Bedroom 1	100	100%	100%	100%	Compliant
1-B-6	Bedroom 2	100	100%	100%	100%	Compliant
1-B-7	LKD	200	76%	75%	74%	Compliant
1-B-7	Bedroom	100	100%	100%	100%	Compliant
1-B-8	LKD	200	61%	58%	54%	Compliant
1-B-8	Bedroom	100	100%	99%	99%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.5 SDA Results: Block B / Second Floor

Table No. C.2.5 - SDA Results: Block B						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
2-B-1	LKD	200	100%	100%	100%	Compliant
2-B-1	Bedroom 1	100	100%	100%	98%	Compliant
2-B-1	Bedroom 2	100	100%	100%	100%	Compliant
2-B-2	LKD	200	76%	73%	71%	Compliant
2-B-2	Bedroom 1	100	100%	100%	100%	Compliant
2-B-2	Bedroom 2	100	100%	100%	100%	Compliant
2-B-3	LKD	200	94%	90%	87%	Compliant
2-B-3	Bedroom 1	100	100%	100%	100%	Compliant
2-B-3	Bedroom 2	100	100%	100%	100%	Compliant
2-B-4	LKD	200	95%	91%	91%	Compliant
2-B-4	Bedroom 1	100	100%	100%	100%	Compliant
2-B-4	Bedroom 2	100	100%	100%	100%	Compliant
2-B-5	LKD	200	100%	100%	100%	Compliant
2-B-5	Bedroom 1	100	100%	100%	100%	Compliant
2-B-5	Bedroom 2	100	100%	100%	100%	Compliant
2-B-6	LKD	200	100%	99%	99%	Compliant
2-B-6	Bedroom 1	100	100%	100%	100%	Compliant
2-B-6	Bedroom 2	100	95%	95%	95%	Compliant
2-B-7	LKD	200	79%	79%	78%	Compliant
2-B-7	Bedroom	100	100%	100%	100%	Compliant
2-B-8	LKD	200	67%	66%	66%	Compliant
2-B-8	Bedroom	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.6 SDA Results: Block B / Third Floor

Table No. C.2.6 - SDA Results: Block B						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
3-B-1	LKD	200	99%	98%	98%	Compliant
3-B-1	Bedroom 1	100	100%	100%	100%	Compliant
3-B-1	Bedroom 2	100	100%	100%	100%	Compliant
3-B-2	LKD	200	72%	68%	67%	Compliant
3-B-2	Bedroom 1	100	100%	100%	100%	Compliant
3-B-2	Bedroom 2	100	100%	100%	100%	Compliant
3-B-3	LKD	200	100%	100%	100%	Compliant
3-B-3	Bedroom 1	100	100%	100%	100%	Compliant
3-B-3	Bedroom 2	100	100%	100%	100%	Compliant
3-B-4	LKD	200	97%	96%	96%	Compliant
3-B-4	Bedroom 1	100	100%	100%	100%	Compliant
3-B-4	Bedroom 2	100	100%	100%	100%	Compliant
3-B-5	LKD	200	100%	100%	100%	Compliant
3-B-5	Bedroom 1	100	100%	100%	100%	Compliant
3-B-5	Bedroom 2	100	100%	100%	100%	Compliant
3-B-6	LKD	200	100%	100%	100%	Compliant
3-B-6	Bedroom 1	100	100%	100%	100%	Compliant
3-B-6	Bedroom 2	100	100%	100%	100%	Compliant
3-B-7	LKD	200	85%	84%	84%	Compliant
3-B-7	Bedroom	100	100%	100%	100%	Compliant
3-B-8	LKD	200	75%	75%	75%	Compliant
3-B-8	Bedroom	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.7 SDA Results: Block B / Fourth Floor

Table No. C.2.7 - SDA Results: Block B						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
4-B-1	LKD	200	100%	100%	100%	Compliant
4-B-1	Bedroom 1	100	94%	94%	94%	Compliant
4-B-1	Bedroom 2	100	100%	100%	100%	Compliant
4-B-2	LKD	200	98%	96%	95%	Compliant
4-B-2	Bedroom 1	100	100%	100%	100%	Compliant
4-B-2	Bedroom 2	100	100%	100%	100%	Compliant
4-B-3	LKD	200	100%	100%	100%	Compliant
4-B-3	Bedroom 1	100	100%	100%	100%	Compliant
4-B-3	Bedroom 2	100	100%	100%	100%	Compliant
4-B-4	LKD	200	100%	100%	100%	Compliant
4-B-4	Bedroom 1	100	100%	100%	100%	Compliant
4-B-4	Bedroom 2	100	100%	100%	100%	Compliant
4-B-5	LKD	200	100%	100%	100%	Compliant
4-B-5	Bedroom 1	100	100%	100%	100%	Compliant
4-B-5	Bedroom 2	100	100%	100%	100%	Compliant
4-B-6	LKD	200	100%	100%	100%	Compliant
4-B-6	Bedroom 1	100	100%	100%	100%	Compliant
4-B-6	Bedroom 2	100	100%	100%	100%	Compliant
4-B-7	LKD	200	97%	97%	96%	Compliant
4-B-7	Bedroom 1	100	100%	100%	100%	Compliant
4-B-8	LKD	200	83%	83%	83%	Compliant
4-B-8	Bedroom 1	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.8 SDA Results: Block C / Ground Floor, First Floor and Second Floor

Table No. C.2.8 - SDA Results: Block C						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
Creche	Classroom 1	150	100%	100%	97%	Compliant
Creche	Classroom 2	150	100%	100%	100%	Compliant
Creche	Classroom 3	150	100%	100%	100%	Compliant
Creche	Classroom 4	150	100%	100%	100%	Compliant
Creche	Classroom 5	150	100%	100%	100%	Compliant
C-1	Living Room	150	100%	100%	100%	Compliant
C-1	Bedroom 1	100	100%	100%	100%	Compliant
C-1	Bedroom 2	100	100%	100%	100%	Compliant
C-1	Bedroom 3	100	100%	100%	100%	Compliant
C-1	Kitchen Dining	200	54%	54%	54%	Compliant
C-2	Living Room	150	100%	100%	100%	Compliant
C-2	Bedroom 1	100	100%	100%	100%	Compliant
C-2	Bedroom 2	100	100%	100%	100%	Compliant
C-2	Bedroom 3	100	100%	100%	100%	Compliant
C-2	Kitchen Dining	200	64%	64%	63%	Compliant
C-3	Living Room	150	100%	100%	100%	Compliant
C-3	Bedroom 1	100	100%	100%	100%	Compliant
C-3	Bedroom 2	100	100%	100%	100%	Compliant
C-3	Bedroom 3	100	100%	100%	100%	Compliant
C-3	Kitchen Dining	200	68%	68%	66%	Compliant
C-4	Living Room	150	100%	100%	100%	Compliant
C-4	Bedroom 1	100	100%	100%	100%	Compliant
C-4	Bedroom 2	100	100%	100%	100%	Compliant
C-4	Bedroom 3	100	100%	100%	100%	Compliant
C-4	Kitchen Dining	200	67%	67%	67%	Compliant
C-5	Living Room	150	100%	100%	100%	Compliant
C-5	Bedroom 1	100	100%	100%	100%	Compliant
C-5	Bedroom 2	100	100%	100%	100%	Compliant
C-5	Bedroom 3	100	100%	100%	100%	Compliant
C-5	Kitchen Dining	200	72%	72%	72%	Compliant
C-6	Living Room	150	100%	100%	100%	Compliant
C-6	Bedroom 1	100	100%	100%	100%	Compliant
C-6	Bedroom 2	100	100%	100%	100%	Compliant
C-6	Bedroom 3	100	100%	100%	100%	Compliant
C-6	Kitchen Dining	200	72%	72%	72%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.9 SDA Results: Block D / Ground Floor, First Floor and Second Floor

Table No. C.2.9 - SDA Results: Block D						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
0-D-1	LKD	200	66%	63%	61%	Compliant
0-D-1	Bedroom 1	100	100%	100%	100%	Compliant
0-D-1	Bedroom 1	100	100%	100%	100%	Compliant
0-D-2	LKD	200	81%	78%	74%	Compliant
0-D-2	Bedroom 1	100	100%	100%	100%	Compliant
0-D-3	LKD	200	89%	88%	88%	Compliant
0-D-3	Bedroom 1	100	100%	100%	100%	Compliant
0-D-4	LKD	200	100%	100%	100%	Compliant
0-D-4	Bedroom 1	100	100%	100%	100%	Compliant
0-D-4	Bedroom 2	100	100%	100%	100%	Compliant
1-D-1	LKD	200	60%	59%	59%	Compliant
1-D-1	Bedroom 1	100	100%	100%	100%	Compliant
1-D-1	Bedroom 2	100	100%	100%	100%	Compliant
1-D-2	LKD	200	73%	71%	67%	Compliant
1-D-2	Bedroom	100	100%	100%	100%	Compliant
1-D-3	LKD	200	53%	52%	50%	Compliant
1-D-3	Bedroom	100	100%	100%	100%	Compliant
1-D-4	LKD	200	84%	83%	83%	Compliant
1-D-4	Bedroom 1	100	100%	100%	100%	Compliant
1-D-4	Bedroom 2	100	100%	100%	100%	Compliant
1-D-5	LKD	200	100%	100%	100%	Compliant
1-D-5	Bedroom 1	100	100%	100%	100%	Compliant
1-D-5	Bedroom 2	100	100%	100%	100%	Compliant
1-D-6	LKD	200	73%	71%	70%	Compliant
1-D-6	Bedroom 1	100	100%	100%	100%	Compliant
1-D-6	Bedroom 2	100	100%	100%	100%	Compliant
2-D-1	LKD	200	62%	61%	60%	Compliant
2-D-1	Bedroom 1	100	100%	100%	100%	Compliant
2-D-1	Bedroom 2	100	100%	100%	100%	Compliant
2-D-2	LKD	200	80%	80%	79%	Compliant
2-D-2	Bedroom	100	100%	100%	100%	Compliant
2-D-3	LKD	200	72%	72%	71%	Compliant
2-D-3	Bedroom	100	100%	100%	100%	Compliant
2-D-4	LKD	200	85%	85%	84%	Compliant
2-D-4	Bedroom 1	100	100%	100%	100%	Compliant
2-D-4	Bedroom 2	100	100%	100%	100%	Compliant
2-D-5	LKD	200	100%	100%	100%	Compliant
2-D-5	Bedroom 1	100	100%	100%	100%	Compliant
2-D-5	Bedroom 2	100	100%	100%	100%	Compliant
2-D-6	LKD	200	89%	86%	82%	Compliant
2-D-6	Bedroom 1	100	100%	100%	100%	Compliant
2-D-6	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.10 SDA Results: Block D / Third Floor

Table No. C.2.10 - SDA Results: Block D						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
3-D-1	LKD	200	70%	69%	69%	Compliant
3-D-1	Bedroom 1	100	100%	100%	100%	Compliant
3-D-1	Bedroom 2	100	100%	100%	100%	Compliant
3-D-2	LKD	200	88%	88%	88%	Compliant
3-D-2	Bedroom	100	100%	100%	100%	Compliant
3-D-3	LKD	200	77%	77%	77%	Compliant
3-D-3	Bedroom	100	100%	100%	100%	Compliant
3-D-4	LKD	200	99%	99%	99%	Compliant
3-D-4	Bedroom 1	100	100%	100%	100%	Compliant
3-D-4	Bedroom 2	100	100%	100%	100%	Compliant
3-D-5	LKD	200	100%	100%	100%	Compliant
3-D-5	Bedroom 1	100	100%	100%	100%	Compliant
3-D-5	Bedroom 2	100	100%	100%	100%	Compliant
3-D-6	LKD	200	97%	95%	93%	Compliant
3-D-6	Bedroom 1	100	100%	100%	100%	Compliant
3-D-6	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.11 SDA Results: Block E / Ground Floor, First Floor and Second Floor

Table No. C.2.11 - SDA Results: Block E						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
0-E-1	LKD	200	97%	90%	84%	Compliant
0-E-1	Bedroom 1	100	100%	100%	100%	Compliant
0-E-1	Bedroom 2	100	100%	100%	100%	Compliant
0-E-2	LKD	200	98%	81%	78%	Compliant
0-E-2	Bedroom 1	100	100%	100%	100%	Compliant
0-E-2	Bedroom 2	100	100%	100%	100%	Compliant
0-E-3	LKD	200	100%	98%	96%	Compliant
0-E-3	Bedroom 1	100	100%	100%	100%	Compliant
0-E-4	LKD	200	95%	92%	85%	Compliant
0-E-4	Bedroom 1	100	100%	100%	100%	Compliant
0-E-4	Bedroom 2	100	100%	100%	100%	Compliant
1-E-1	LKD	200	97%	90%	85%	Compliant
1-E-1	Bedroom 1	100	100%	100%	100%	Compliant
1-E-1	Bedroom 2	100	100%	100%	100%	Compliant
1-E-2	LKD	200	99%	85%	83%	Compliant
1-E-2	Bedroom 1	100	100%	100%	100%	Compliant
1-E-2	Bedroom 2	100	100%	100%	100%	Compliant
1-E-3	LKD	200	100%	100%	100%	Compliant
1-E-3	Bedroom 1	100	100%	100%	100%	Compliant
1-E-3	Bedroom 2	100	100%	100%	100%	Compliant
1-E-4	LKD	200	84%	82%	82%	Compliant
1-E-4	Bedroom 1	100	100%	100%	100%	Compliant
1-E-5	LKD	200	98%	97%	96%	Compliant
1-E-5	Bedroom 1	100	100%	100%	100%	Compliant
1-E-5	Bedroom 2	100	100%	100%	100%	Compliant
2-E-1	LKD	200	98%	97%	95%	Compliant
2-E-1	Bedroom 1	100	100%	100%	100%	Compliant
2-E-1	Bedroom 2	100	100%	100%	100%	Compliant
2-E-2	LKD	200	99%	95%	94%	Compliant
2-E-2	Bedroom 1	100	100%	100%	100%	Compliant
2-E-2	Bedroom 2	100	100%	100%	100%	Compliant
2-E-3	LKD	200	100%	100%	100%	Compliant
2-E-3	Bedroom 1	100	100%	100%	100%	Compliant
2-E-3	Bedroom 2	100	100%	100%	100%	Compliant
2-E-4	LKD	200	84%	83%	83%	Compliant
2-E-4	Bedroom 1	100	100%	100%	100%	Compliant
2-E-5	LKD	200	100%	100%	100%	Compliant
2-E-5	Bedroom 1	100	100%	100%	100%	Compliant
2-E-5	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.2.12 SDA Results: Block E / Third Floor

Table No. C.2.12 - SDA Results: Block E						
Unit Number	Room Description	Target Lux*	% of area above target Lux* (recommendation >50%)			Compliance with BRE 209 Criteria*
			Without Trees***	Winter**	Summer**	
3-E-1	LKD	200	99%	97%	97%	Compliant
3-E-1	Bedroom 1	100	100%	100%	100%	Compliant
3-E-1	Bedroom 2	100	100%	100%	100%	Compliant
3-E-2	LKD	200	100%	99%	99%	Compliant
3-E-2	Bedroom 1	100	100%	100%	100%	Compliant
3-E-2	Bedroom 2	100	100%	100%	100%	Compliant
3-E-3	LKD	200	100%	100%	100%	Compliant
3-E-3	Bedroom 1	100	100%	100%	100%	Compliant
3-E-3	Bedroom 2	100	100%	100%	100%	Compliant
3-E-4	LKD	200	95%	93%	93%	Compliant
3-E-4	Bedroom 1	100	100%	100%	100%	Compliant
3-E-5	LKD	200	100%	100%	100%	Compliant
3-E-5	Bedroom 1	100	100%	100%	100%	Compliant
3-E-5	Bedroom 2	100	100%	100%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.

** 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 19.

For floor plans of the assessed units please refer to section C.1 on page 48.

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: Block A / Ground Floor, First Floor and Second Floor

Table No. C.3.1 - Sunlight Exposure Results: Block A

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**
0-A-1	LKD	1.00	Below Minimum	Non-Compliant	1.70	Minimum	Compliant
0-A-1	Bedroom	0.00	Below Minimum	-	0.00	Below Minimum	-
0-A-2	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
0-A-2	Bedroom	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	-
0-A-3	LKD	5.10	High	Compliant	6.10	High	Compliant
0-A-3	Bedroom	4.60	High	-	5.80	High	-
0-A-4	LKD	7.10	High	Compliant	8.40	High	Compliant
0-A-4	Bedroom 1	3.20	Medium	-	5.70	High	-
0-A-4	Bedroom 2	3.60	Medium	-	6.50	High	-
0-A-4	Bedroom 3	3.50	Medium	-	5.50	High	-
1-A-1	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
1-A-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
1-A-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
1-A-2	LKD	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	Non-Compliant
1-A-2	Bedroom 1	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	-
1-A-2	Bedroom 2	0.00	Below Minimum	Non-Compliant	0.00	Below Minimum	-
1-A-3	LKD	4.20	High	-	4.20	High	-
1-A-3	Bedroom	6.30	High	Compliant	6.30	High	Compliant
1-A-4	LKD	5.10	High	Compliant	7.00	High	Compliant
1-A-4	Bedroom	5.00	High	-	5.00	High	-
1-A-5	LKD	4.90	High	Compliant	5.10	High	-
1-A-5	Bedroom	4.80	High	-	7.60	High	Compliant
1-A-6	LKD	7.20	High	Compliant	8.20	High	Compliant
1-A-6	Bedroom 1	2.70	Minimum	-	5.00	High	-
1-A-6	Bedroom 2	4.40	High	-	7.10	High	-
1-A-6	Bedroom 3	2.40	Minimum	-	4.00	High	-
2-A-1	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
2-A-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
2-A-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
2-A-2	LKD	0.20	Below Minimum	Non-Compliant	0.20	Below Minimum	Non-Compliant
2-A-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
2-A-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
2-A-3	LKD	5.30	High	-	5.30	High	-
2-A-3	Bedroom	7.00	High	Compliant	7.00	High	Compliant
2-A-4	LKD	7.50	High	Compliant	7.50	High	Compliant
2-A-4	Bedroom	5.40	High	-	5.40	High	-
2-A-5	LKD	6.70	High	-	6.70	High	-
2-A-5	Bedroom	8.60	High	Compliant	8.60	High	Compliant
2-A-6	LKD	7.60	High	-	7.60	High	-
2-A-6	Bedroom 1	7.50	High	-	7.50	High	-
2-A-6	Bedroom 2	8.30	High	Compliant	8.30	High	Compliant
2-A-6	Bedroom 3	4.10	High	-	4.10	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.2 SE Results: Block A /Third Floor and Fourth Floor

Table No. C.3.2 - Sunlight Exposure Results: Block A							
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**
3-A-1	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
3-A-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
3-A-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
3-A-2	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
3-A-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
3-A-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
3-A-3	LKD	5.60	High	-	5.60	High	-
3-A-3	Bedroom	7.60	High	Compliant	7.60	High	Compliant
3-A-4	LKD	8.00	High	Compliant	8.00	High	Compliant
3-A-4	Bedroom	6.30	High	-	6.30	High	-
3-A-5	LKD	6.30	High	-	6.30	High	-
3-A-5	Bedroom	8.80	High	Compliant	8.80	High	Compliant
3-A-6	LKD	7.60	High	-	7.60	High	-
3-A-6	Bedroom 1	5.40	High	-	5.40	High	-
3-A-6	Bedroom 2	8.10	High	Compliant	8.10	High	Compliant
3-A-6	Bedroom 3	4.00	High	-	4.00	High	-
4-A-1	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
4-A-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
4-A-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
4-A-2	LKD	1.30	Below Minimum	Non-Compliant	1.30	Below Minimum	Non-Compliant
4-A-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
4-A-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
4-A-3	LKD	7.00	High	-	7.00	High	-
4-A-3	Bedroom	8.40	High	Compliant	8.40	High	Compliant
4-A-4	LKD	8.20	High	Compliant	8.20	High	Compliant
4-A-4	Bedroom	6.40	High	-	6.40	High	-
4-A-5	LKD	7.10	High	-	7.10	High	-
4-A-5	Bedroom	9.00	High	Compliant	9.00	High	Compliant
4-A-6	LKD	7.60	High	-	7.60	High	-
4-A-6	Bedroom 1	7.50	High	-	7.50	High	-
4-A-6	Bedroom 2	8.70	High	Compliant	8.70	High	Compliant
4-A-6	Bedroom 3	4.10	High	-	4.10	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.3 SE Results: Block A / Fifth Floor

Table No. C.3.3 - Sunlight Exposure Results: Block A							
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**
5-A-1	LKD	1.20	Below Minimum	Non-Compliant	1.20	Below Minimum	Non-Compliant
5-A-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
5-A-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
5-A-2	LKD	1.40	Below Minimum	Non-Compliant	1.40	Below Minimum	Non-Compliant
5-A-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
5-A-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
5-A-3	LKD	8.90	High	Compliant	8.90	High	Compliant
5-A-3	Bedroom	8.80	High	-	8.80	High	-
5-A-4	LKD	8.90	High	Compliant	8.90	High	Compliant
5-A-4	Bedroom	8.80	High	-	8.80	High	-
5-A-5	LKD	8.90	High	Compliant	8.90	High	Compliant
5-A-5	Bedroom	8.80	High	-	8.80	High	-
5-A-6	LKD	9.40	High	Compliant	9.40	High	Compliant
5-A-6	Bedroom 1	8.80	High	-	8.80	High	-
5-A-6	Bedroom 2	8.80	High	-	8.80	High	-
5-A-6	Bedroom 3	7.20	High	-	7.20	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.4 SE Results: Block B / Ground Floor and First Floor

Table No. C.3.4 - Sunlight Exposure Results: Block B							
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**
0-B-1	LKD	1.20	Below Minimum	-	1.20	Below Minimum	-
0-B-1	Bedroom 1	1.50	Minimum	-	1.50	Minimum	-
0-B-1	Bedroom 2	1.70	Minimum	Compliant	1.80	Minimum	Compliant
0-B-2	LKD	3.40	Medium	-	4.40	High	Compliant
0-B-2	Bedroom 1	4.20	High	Compliant	4.20	High	-
0-B-2	Bedroom 2	4.20	High	Compliant	4.20	High	-
0-B-3	LKD	3.60	Medium	Compliant	3.60	Medium	-
0-B-3	Bedroom 1	2.50	Minimum	-	2.60	Minimum	-
0-B-3	Bedroom 2	2.00	Minimum	-	4.10	High	Compliant
0-B-4	LKD	8.20	High	Compliant	8.80	High	Compliant
0-B-4	Bedroom 1	1.60	Minimum	-	3.30	Medium	-
0-B-4	Bedroom 2	4.00	High	-	4.20	High	-
0-B-5	LKD	7.00	High	Compliant	7.00	High	Compliant
0-B-5	Bedroom 1	1.80	Minimum	-	1.80	Minimum	-
0-B-5	Bedroom 2	2.60	Minimum	-	2.60	Minimum	-
0-B-6	LKD	2.50	Minimum	-	2.80	Minimum	Compliant
0-B-6	Bedroom	2.60	Minimum	Compliant	2.60	Minimum	-
1-B-1	LKD	0.00	Below Minimum	-	0.00	Below Minimum	-
1-B-1	Bedroom 1	2.10	Minimum	Compliant	2.10	Minimum	Compliant
1-B-1	Bedroom 2	1.50	Minimum	-	1.50	Minimum	-
1-B-2	LKD	4.30	High	Compliant	4.30	High	Compliant
1-B-2	Bedroom 1	4.20	High	-	4.20	High	-
1-B-2	Bedroom 2	4.20	High	-	4.20	High	-
1-B-3	LKD	4.10	High	Compliant	4.10	High	Compliant
1-B-3	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
1-B-3	Bedroom 2	3.60	Medium	-	3.60	Medium	-
1-B-4	LKD	4.00	High	-	4.00	High	-
1-B-4	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
1-B-4	Bedroom 2	4.20	High	Compliant	4.20	High	-
1-B-5	LKD	8.80	High	Compliant	8.80	High	Compliant
1-B-5	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
1-B-5	Bedroom 2	4.00	High	-	4.00	High	-
1-B-6	LKD	7.50	High	Compliant	7.50	High	Compliant
1-B-6	Bedroom 1	1.60	Minimum	-	1.60	Minimum	-
1-B-6	Bedroom 2	3.00	Medium	-	3.00	Medium	-
1-B-7	LKD	0.90	Below Minimum	-	1.90	Minimum	-
1-B-7	Bedroom	3.20	Medium	Compliant	3.20	Medium	Compliant
1-B-8	LKD	3.40	Medium	Compliant	3.40	Medium	Compliant
1-B-8	Bedroom	1.20	Below Minimum	-	1.20	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.5 SE Results: Block B / Second Floor

Table No. C.3.5 - Sunlight Exposure Results: Block B							
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**
2-B-1	LKD	0.00	Below Minimum	-	0.00	Below Minimum	-
2-B-1	Bedroom 1	1.90	Minimum	Compliant	1.90	Minimum	Compliant
2-B-1	Bedroom 2	1.80	Minimum	-	1.80	Minimum	-
2-B-2	LKD	2.30	Minimum	-	2.30	Minimum	-
2-B-2	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
2-B-2	Bedroom 2	4.20	High	Compliant	4.20	High	-
2-B-3	LKD	3.60	Medium	-	3.60	Medium	-
2-B-3	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
2-B-3	Bedroom 2	4.00	High	Compliant	4.00	High	Compliant
2-B-4	LKD	2.30	Minimum	-	2.30	Minimum	-
2-B-4	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
2-B-4	Bedroom 2	4.20	High	Compliant	4.20	High	-
2-B-5	LKD	8.80	High	Compliant	8.80	High	Compliant
2-B-5	Bedroom 1	3.50	Medium	-	3.50	Medium	-
2-B-5	Bedroom 2	4.10	High	-	4.10	High	-
2-B-6	LKD	7.80	High	Compliant	7.80	High	Compliant
2-B-6	Bedroom 1	2.70	Minimum	-	2.70	Minimum	-
2-B-6	Bedroom 2	3.30	Medium	-	3.30	Medium	-
2-B-7	LKD	3.30	Medium	-	3.60	Medium	Compliant
2-B-7	Bedroom	3.60	Medium	Compliant	3.60	Medium	-
2-B-8	LKD	3.60	Medium	Compliant	3.60	Medium	Compliant
2-B-8	Bedroom	1.20	Below Minimum	-	1.20	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.6 SE Results: Block B / Third Floor

Table No. C.3.6 - Sunlight Exposure Results: Block B							
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**
3-B-1	LKD	0.30	Below Minimum	-	0.30	Below Minimum	-
3-B-1	Bedroom 1	2.40	Minimum	Compliant	2.40	Minimum	Compliant
3-B-1	Bedroom 2	1.80	Minimum	-	1.80	Minimum	-
3-B-2	LKD	4.30	High	Compliant	4.30	High	Compliant
3-B-2	Bedroom 1	4.20	High	-	4.20	High	-
3-B-2	Bedroom 2	4.20	High	-	4.20	High	-
3-B-3	LKD	4.30	High	Compliant	4.30	High	Compliant
3-B-3	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
3-B-3	Bedroom 2	3.70	Medium	-	3.70	Medium	-
3-B-4	LKD	4.00	High	-	4.00	High	-
3-B-4	Bedroom 1	4.20	High	Compliant	4.20	High	Compliant
3-B-4	Bedroom 2	4.20	High	Compliant	4.20	High	-
3-B-5	LKD	8.80	High	Compliant	8.80	High	Compliant
3-B-5	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
3-B-5	Bedroom 2	4.20	High	-	4.20	High	-
3-B-6	LKD	7.80	High	Compliant	7.80	High	Compliant
3-B-6	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
3-B-6	Bedroom 2	3.40	Medium	-	3.40	Medium	-
3-B-7	LKD	1.90	Minimum	-	1.90	Minimum	-
3-B-7	Bedroom	3.40	Medium	Compliant	3.40	Medium	Compliant
3-B-8	LKD	3.40	Medium	Compliant	3.40	Medium	Compliant
3-B-8	Bedroom	1.20	Below Minimum	-	1.20	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.7 SE Results: Block B / Fourth Floor

Table No. C.3.7 - Sunlight Exposure Results: Block B							
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**
4-B-1	LKD	2.80	Minimum	Compliant	2.80	Minimum	Compliant
4-B-1	Bedroom 1	2.50	Minimum	-	2.50	Minimum	-
4-B-1	Bedroom 2	2.60	Minimum	-	2.60	Minimum	-
4-B-2	LKD	4.40	High	Compliant	4.40	High	Compliant
4-B-2	Bedroom 1	4.20	High	-	4.20	High	-
4-B-2	Bedroom 2	4.20	High	-	4.20	High	-
4-B-3	LKD	4.40	High	Compliant	4.40	High	Compliant
4-B-3	Bedroom 1	4.20	High	-	4.20	High	-
4-B-3	Bedroom 2	4.20	High	-	4.20	High	-
4-B-4	LKD	4.40	High	Compliant	4.40	High	Compliant
4-B-4	Bedroom 1	4.20	High	-	4.20	High	-
4-B-4	Bedroom 2	4.20	High	-	4.20	High	-
4-B-5	LKD	8.80	High	Compliant	8.80	High	Compliant
4-B-5	Bedroom 1	4.20	High	-	4.20	High	-
4-B-5	Bedroom 2	4.20	High	-	4.20	High	-
4-B-6	LKD	7.80	High	Compliant	7.80	High	Compliant
4-B-6	Bedroom 1	3.50	Medium	-	3.50	Medium	-
4-B-6	Bedroom 2	3.50	Medium	-	3.50	Medium	-
4-B-7	LKD	3.60	Medium	Compliant	3.60	Medium	Compliant
4-B-7	Bedroom 1	3.60	Medium	Compliant	3.60	Medium	-
4-B-8	LKD	3.60	Medium	Compliant	3.60	Medium	Compliant
4-B-8	Bedroom 1	2.80	Minimum	-	2.80	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.8 SE Results: Block C / Ground Floor, First Floor and Second Floor

Table No. C.3.8 - Sunlight Exposure Results: Block C							
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**
Creche	Classroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
Creche	Classroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
Creche	Classroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
Creche	Classroom 4	0.00	Below Minimum	-	0.00	Below Minimum	-
Creche	Classroom 5	0.90	Below Minimum	Non-Compliant	1.80	Minimum	Compliant
C-1	Living Room	9.20	High	Compliant	9.20	High	Compliant
C-1	Bedroom 1	8.80	High	-	8.80	High	-
C-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-1	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-1	Kitchen Dining	0.00	Below Minimum	-	0.00	Below Minimum	-
C-2	Living Room	9.00	High	Compliant	9.00	High	Compliant
C-2	Bedroom 1	8.80	High	-	8.80	High	-
C-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-2	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-2	Kitchen Dining	0.00	Below Minimum	-	0.00	Below Minimum	-
C-3	Living Room	9.00	High	Compliant	9.00	High	Compliant
C-3	Bedroom 1	8.80	High	-	8.80	High	-
C-3	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-3	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-3	Kitchen Dining	0.00	Below Minimum	-	0.00	Below Minimum	-
C-4	Living Room	9.00	High	Compliant	9.00	High	Compliant
C-4	Bedroom 1	8.80	High	-	8.80	High	-
C-4	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-4	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-4	Kitchen Dining	0.00	Below Minimum	-	0.00	Below Minimum	-
C-5	Living Room	9.00	High	Compliant	9.00	High	Compliant
C-5	Bedroom 1	8.80	High	-	8.80	High	-
C-5	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-5	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-5	Kitchen Dining	0.00	Below Minimum	-	0.00	Below Minimum	-
C-6	Living Room	9.30	High	Compliant	9.30	High	Compliant
C-6	Bedroom 1	8.80	High	-	8.80	High	-
C-6	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
C-6	Bedroom 3	0.00	Below Minimum	-	0.00	Below Minimum	-
C-6	Kitchen Dining	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.9 SE Results: Block D / Ground Floor, First Floor and Second Floor

Table No. C.3.9 - Sunlight Exposure Results: Block D							
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**
0-D-1	LKD	2.50	Minimum	-	2.50	Minimum	-
0-D-1	Bedroom 1	2.60	Minimum	Compliant	2.60	Minimum	Compliant
0-D-1	Bedroom 1	2.30	Minimum	-	2.30	Minimum	-
0-D-2	LKD	2.10	Minimum	-	3.90	Medium	Compliant
0-D-2	Bedroom 1	2.70	Minimum	Compliant	2.70	Minimum	-
0-D-3	LKD	8.40	High	Compliant	8.40	High	Compliant
0-D-3	Bedroom 1	2.20	Minimum	-	2.20	Minimum	-
0-D-4	LKD	8.40	High	Compliant	8.40	High	Compliant
0-D-4	Bedroom 1	2.60	Minimum	-	2.60	Minimum	-
0-D-4	Bedroom 2	2.50	Minimum	-	2.50	Minimum	-
1-D-1	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
1-D-1	Bedroom 1	1.70	Minimum	-	1.70	Minimum	-
1-D-1	Bedroom 2	2.10	Minimum	Compliant	2.10	Minimum	Compliant
1-D-2	LKD	1.90	Minimum	-	2.20	Minimum	-
1-D-2	Bedroom	3.30	Medium	Compliant	3.70	Medium	Compliant
1-D-3	LKD	3.10	Medium	Compliant	3.10	Medium	Compliant
1-D-3	Bedroom	2.10	Minimum	-	2.10	Minimum	-
1-D-4	LKD	7.10	High	Compliant	7.10	High	Compliant
1-D-4	Bedroom 1	2.40	Minimum	-	2.40	Minimum	-
1-D-4	Bedroom 2	2.30	Minimum	-	2.30	Minimum	-
1-D-5	LKD	8.20	High	Compliant	8.20	High	Compliant
1-D-5	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
1-D-5	Bedroom 2	2.00	Minimum	-	2.00	Minimum	-
1-D-6	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
1-D-6	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
1-D-6	Bedroom 2	2.10	Minimum	Compliant	2.10	Minimum	Compliant
2-D-1	LKD	2.00	Minimum	-	2.00	Minimum	-
2-D-1	Bedroom 1	2.10	Minimum	Compliant	2.10	Minimum	Compliant
2-D-1	Bedroom 2	1.90	Minimum	-	1.90	Minimum	-
2-D-2	LKD	2.20	Minimum	-	2.20	Minimum	-
2-D-2	Bedroom	3.80	Medium	Compliant	3.80	Medium	Compliant
2-D-3	LKD	3.10	Medium	Compliant	3.10	Medium	Compliant
2-D-3	Bedroom	2.20	Minimum	-	2.20	Minimum	-
2-D-4	LKD	6.20	High	Compliant	6.20	High	Compliant
2-D-4	Bedroom 1	3.70	Medium	-	3.70	Medium	-
2-D-4	Bedroom 2	3.60	Medium	-	3.60	Medium	-
2-D-5	LKD	8.30	High	Compliant	8.30	High	Compliant
2-D-5	Bedroom 1	2.10	Minimum	-	2.10	Minimum	-
2-D-5	Bedroom 2	2.00	Minimum	-	2.00	Minimum	-
2-D-6	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
2-D-6	Bedroom 1	2.10	Minimum	Compliant	2.10	Minimum	-
2-D-6	Bedroom 2	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.10 SE Results: Block D / Third Floor

Table No. C.3.10 - Sunlight Exposure Results: Block							
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**
3-D-1	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
3-D-1	Bedroom 1	1.70	Minimum	-	1.70	Minimum	-
3-D-1	Bedroom 2	2.10	Minimum	Compliant	2.10	Minimum	-
3-D-2	LKD	4.00	High	Compliant	4.00	High	Compliant
3-D-2	Bedroom	4.00	High	Compliant	4.00	High	-
3-D-3	LKD	4.00	High	Compliant	4.00	High	Compliant
3-D-3	Bedroom	3.90	Medium	-	3.90	Medium	-
3-D-4	LKD	7.10	High	Compliant	7.10	High	Compliant
3-D-4	Bedroom 1	3.90	Medium	-	3.90	Medium	-
3-D-4	Bedroom 2	3.90	Medium	-	3.90	Medium	-
3-D-5	LKD	8.10	High	Compliant	8.10	High	Compliant
3-D-5	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
3-D-5	Bedroom 2	2.00	Minimum	-	2.00	Minimum	-
3-D-6	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
3-D-6	Bedroom 1	1.90	Minimum	-	1.90	Minimum	-
3-D-6	Bedroom 2	2.10	Minimum	Compliant	2.10	Minimum	Compliant

* 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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.11 SE Results: Block E / Ground Floor, First Floor and Second Floor

Table No. C.3.11 - Sunlight Exposure Results: Block							
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**
0-E-1	LKD	2.30	Minimum	Compliant	2.30	Minimum	Compliant
0-E-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
0-E-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
0-E-2	LKD	2.10	Minimum	Compliant	2.10	Minimum	Compliant
0-E-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
0-E-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
0-E-3	LKD	8.60	High	Compliant	8.70	High	Compliant
0-E-3	Bedroom 1	8.60	High	Compliant	8.70	High	-
0-E-4	LKD	9.00	High	Compliant	9.00	High	Compliant
0-E-4	Bedroom 1	8.00	High	-	8.00	High	-
0-E-4	Bedroom 2	8.90	High	-	8.90	High	-
1-E-1	LKD	2.20	Minimum	Compliant	2.20	Minimum	Compliant
1-E-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
1-E-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
1-E-2	LKD	1.90	Minimum	Compliant	1.90	Minimum	Compliant
1-E-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
1-E-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
1-E-3	LKD	8.90	High	Compliant	8.90	High	Compliant
1-E-3	Bedroom 1	8.80	High	-	8.80	High	-
1-E-3	Bedroom 2	8.20	High	-	8.20	High	-
1-E-4	LKD	8.90	High	Compliant	8.90	High	Compliant
1-E-4	Bedroom 1	5.60	High	-	5.60	High	-
1-E-5	LKD	8.80	High	Compliant	9.30	High	Compliant
1-E-5	Bedroom 1	6.40	High	-	6.40	High	-
1-E-5	Bedroom 2	8.40	High	-	8.40	High	-
2-E-1	LKD	2.30	Minimum	Compliant	2.30	Minimum	Compliant
2-E-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
2-E-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
2-E-2	LKD	1.90	Minimum	Compliant	1.90	Minimum	Compliant
2-E-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
2-E-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
2-E-3	LKD	7.50	High	-	7.50	High	-
2-E-3	Bedroom 1	8.90	High	Compliant	8.90	High	Compliant
2-E-3	Bedroom 2	8.20	High	-	8.20	High	-
2-E-4	LKD	9.00	High	Compliant	9.00	High	Compliant
2-E-4	Bedroom 1	5.80	High	-	5.80	High	-
2-E-5	LKD	9.20	High	Compliant	9.20	High	Compliant
2-E-5	Bedroom 1	8.00	High	-	8.00	High	-
2-E-5	Bedroom 2	8.90	High	-	8.90	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 21.
*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.
For floor plans of the assessed units please refer to section C.1 on page 48.

C.3.12 SE Results: Block E / Third Floor

Table No. C.3.12 - Sunlight Exposure Results: Block							
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**
3-E-1	LKD	2.30	Minimum	Compliant	2.30	Minimum	Compliant
3-E-1	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
3-E-1	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
3-E-2	LKD	1.90	Minimum	Compliant	1.90	Minimum	Compliant
3-E-2	Bedroom 1	0.00	Below Minimum	-	0.00	Below Minimum	-
3-E-2	Bedroom 2	0.00	Below Minimum	-	0.00	Below Minimum	-
3-E-3	LKD	8.90	High	Compliant	8.90	High	Compliant
3-E-3	Bedroom 1	8.80	High	-	8.80	High	-
3-E-3	Bedroom 2	8.80	High	-	8.80	High	-
3-E-4	LKD	8.90	High	Compliant	8.90	High	Compliant
3-E-4	Bedroom 1	8.90	High	Compliant	8.90	High	-
3-E-5	LKD	9.40	High	Compliant	9.40	High	Compliant
3-E-5	Bedroom 1	8.80	High	-	8.80	High	-
3-E-5	Bedroom 2	8.80	High	-	8.80	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 21.

*** For the interpretation of levels of Sunlight Exposure please refer to "3.3 Definition of Levels of Sunlight Exposure" on page 10.

For floor plans of the assessed units please refer to section C.1 on page 48.

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 1	99.23%	50.00%	BRE Compliant	Yes
PUBLIC OPEN SPACE 2	100.00%	50.00%	BRE Compliant	Yes
COMMUNAL AMENITY SPACE 1	100.00%	50.00%	BRE Compliant	Yes
COMMUNAL AMENITY SPACE 2	92.22%	50.00%	BRE Compliant	Yes
CRECHE OUTDOOR PLAY SPACE	99.62%	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.				

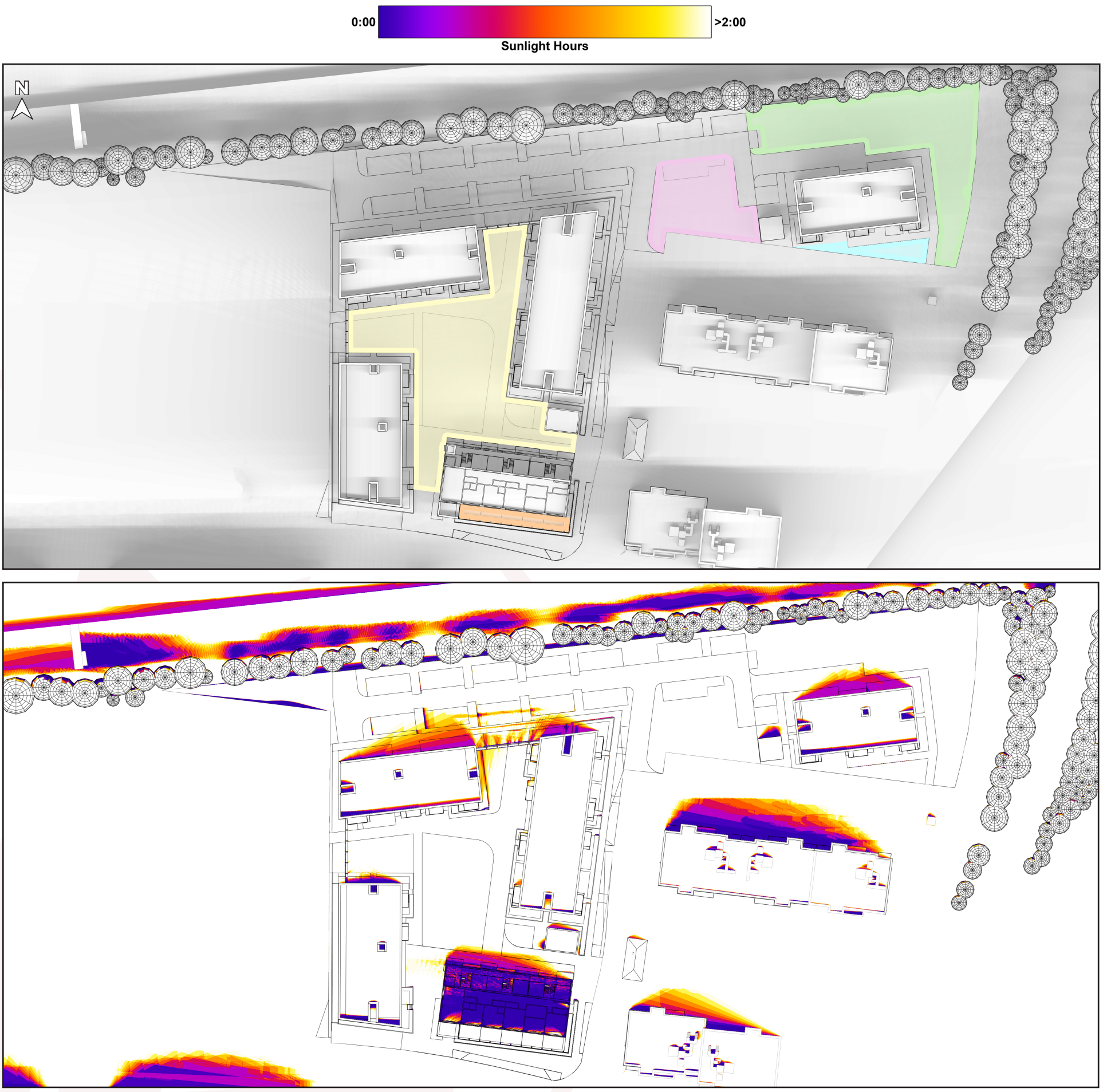


Figure C.28: Indication of the amenity areas that have been analysed (U), Area capable of receiving 2 hours of sunlight on March 21st shown in white (D)

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): Block A / Ground Floor, First Floor and Second Floor

Table No. D.1.1 - Supplementary SDA Results (I.S. EN 17037 criteria): Block A								
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*	
0-A-1	LKD	92%	100%	78%	100%	72%	100%	Compliant
0-A-1	Bedroom	100%	100%	93%	100%	66%	100%	Compliant
0-A-2	LKD	76%	100%	52%	100%	37%	100%	Trees affecting compliance (summer only)
0-A-2	Bedroom	98%	100%	75%	100%	54%	100%	Compliant
0-A-3	LKD	56%	100%	49%	100%	41%	100%	Trees affecting compliance
0-A-3	Bedroom	86%	100%	86%	100%	84%	100%	Compliant
0-A-4	LKD	40%	100%	27%	100%	20%	100%	Non-compliant
0-A-4	Bedroom 1	98%	100%	94%	100%	77%	100%	Compliant
0-A-4	Bedroom 2	82%	100%	67%	100%	52%	100%	Compliant
0-A-4	Bedroom 3	44%	100%	39%	100%	33%	100%	Non-compliant
1-A-1	LKD	92%	100%	76%	100%	65%	100%	Compliant
1-A-1	Bedroom 1	63%	100%	48%	100%	39%	100%	Trees affecting compliance
1-A-1	Bedroom 2	100%	100%	86%	100%	67%	100%	Compliant
1-A-2	LKD	41%	100%	32%	100%	26%	100%	Non-compliant
1-A-2	Bedroom 1	85%	100%	60%	100%	45%	100%	Trees affecting compliance (summer only)
1-A-2	Bedroom 2	100%	100%	92%	100%	78%	100%	Compliant
1-A-3	LKD	52%	100%	51%	100%	47%	100%	Trees affecting compliance (summer only)
1-A-3	Bedroom	93%	100%	91%	100%	88%	100%	Compliant
1-A-4	LKD	41%	100%	39%	100%	39%	100%	Non-compliant
1-A-4	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
1-A-5	LKD	32%	87%	31%	86%	29%	85%	Non-compliant
1-A-5	Bedroom	88%	100%	80%	100%	73%	100%	Compliant
1-A-6	LKD	37%	100%	35%	100%	33%	100%	Non-compliant
1-A-6	Bedroom 1	65%	100%	56%	100%	52%	100%	Compliant
1-A-6	Bedroom 2	62%	100%	58%	100%	52%	100%	Compliant
1-A-6	Bedroom 3	11%	89%	11%	89%	0%	89%	Non-compliant
2-A-1	LKD	97%	100%	84%	100%	79%	100%	Compliant
2-A-1	Bedroom 1	93%	100%	76%	100%	64%	100%	Compliant
2-A-1	Bedroom 2	100%	100%	100%	100%	86%	100%	Compliant
2-A-2	LKD	49%	100%	39%	100%	35%	100%	Non-compliant
2-A-2	Bedroom 1	66%	100%	54%	100%	48%	100%	Trees affecting compliance (summer only)
2-A-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-A-3	LKD	64%	100%	62%	100%	60%	100%	Compliant
2-A-3	Bedroom	73%	100%	73%	100%	73%	100%	Compliant
2-A-4	LKD	43%	100%	43%	100%	41%	100%	Non-compliant
2-A-4	Bedroom	100%	100%	100%	100%	98%	100%	Compliant
2-A-5	LKD	48%	100%	48%	100%	47%	100%	Non-compliant
2-A-5	Bedroom	88%	100%	88%	100%	86%	100%	Compliant
2-A-6	LKD	55%	100%	53%	100%	52%	100%	Compliant
2-A-6	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-A-6	Bedroom 2	98%	100%	98%	100%	97%	100%	Compliant
2-A-6	Bedroom 3	50%	100%	50%	100%	50%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.2 Supplementary SDA Results (I.S. EN 17037 criteria): Block A / Third Floor and Fourth Floor

Table No. D.1.2 - Supplementary SDA Results (I.S. EN 17037 criteria): Block A

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*	
3-A-1	LKD	100%	100%	91%	100%	89%	100%	Compliant
3-A-1	Bedroom 1	67%	100%	60%	100%	57%	100%	Compliant
3-A-1	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-A-2	LKD	65%	100%	60%	100%	59%	100%	Compliant
3-A-2	Bedroom 1	96%	100%	84%	100%	82%	100%	Compliant
3-A-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-A-3	LKD	78%	100%	78%	100%	78%	100%	Compliant
3-A-3	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
3-A-4	LKD	61%	100%	61%	100%	59%	100%	Compliant
3-A-4	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
3-A-5	LKD	53%	100%	53%	100%	53%	100%	Compliant
3-A-5	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
3-A-6	LKD	69%	100%	68%	100%	68%	100%	Compliant
3-A-6	Bedroom 1	98%	100%	98%	100%	98%	100%	Compliant
3-A-6	Bedroom 2	100%	100%	100%	100%	98%	100%	Compliant
3-A-6	Bedroom 3	61%	100%	61%	100%	56%	100%	Compliant
4-A-1	LKD	100%	100%	95%	100%	94%	100%	Compliant
4-A-1	Bedroom 1	99%	100%	97%	100%	94%	100%	Compliant
4-A-1	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-A-2	LKD	80%	100%	76%	100%	75%	100%	Compliant
4-A-2	Bedroom 1	69%	100%	66%	100%	64%	100%	Compliant
4-A-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-A-3	LKD	81%	100%	81%	100%	81%	100%	Compliant
4-A-3	Bedroom	98%	100%	98%	100%	98%	100%	Compliant
4-A-4	LKD	66%	100%	65%	100%	65%	100%	Compliant
4-A-4	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
4-A-5	LKD	70%	100%	70%	100%	69%	100%	Compliant
4-A-5	Bedroom	98%	100%	98%	100%	98%	100%	Compliant
4-A-6	LKD	87%	100%	86%	100%	86%	100%	Compliant
4-A-6	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
4-A-6	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-A-6	Bedroom 3	83%	100%	83%	100%	83%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.3 Supplementary SDA Results (I.S. EN 17037 criteria): Block A / Fifth Floor

Table No. D.1.3 - Supplementary SDA Results (I.S. EN 17037 criteria): Block A

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*	
5-A-1	LKD	100%	100%	100%	100%	99%	100%	Compliant
5-A-1	Bedroom 1	78%	100%	67%	100%	67%	100%	Compliant
5-A-1	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
5-A-2	LKD	96%	100%	94%	100%	94%	100%	Compliant
5-A-2	Bedroom 1	97%	100%	96%	100%	94%	100%	Compliant
5-A-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
5-A-3	LKD	88%	100%	88%	100%	88%	100%	Compliant
5-A-3	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
5-A-4	LKD	84%	100%	84%	100%	84%	100%	Compliant
5-A-4	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
5-A-5	LKD	76%	100%	76%	100%	76%	100%	Compliant
5-A-5	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
5-A-6	LKD	100%	100%	100%	100%	100%	100%	Compliant
5-A-6	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
5-A-6	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
5-A-6	Bedroom 3	94%	100%	94%	100%	94%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.4 Supplementary SDA Results (I.S. EN 17037 criteria): Block B / Ground Floor and First Floor

Table No. D.1.4 - Supplementary SDA Results (I.S. EN 17037 criteria): Block B

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*	
0-B-1	LKD	81%	100%	47%	100%	32%	100%	Trees affecting compliance
0-B-1	Bedroom 1	16%	93%	10%	88%	9%	71%	Non-compliant
0-B-1	Bedroom 2	29%	100%	14%	100%	14%	100%	Non-compliant
0-B-2	LKD	65%	100%	51%	100%	38%	100%	Trees affecting compliance (summer only)
0-B-2	Bedroom 1	98%	100%	96%	100%	94%	100%	Compliant
0-B-2	Bedroom 2	94%	100%	77%	100%	73%	100%	Compliant
0-B-3	LKD	54%	100%	48%	100%	40%	100%	Trees affecting compliance
0-B-3	Bedroom 1	92%	100%	85%	100%	73%	100%	Compliant
0-B-3	Bedroom 2	80%	100%	73%	100%	59%	100%	Compliant
0-B-4	LKD	82%	100%	78%	100%	72%	100%	Compliant
0-B-4	Bedroom 1	94%	100%	92%	100%	88%	100%	Compliant
0-B-4	Bedroom 2	83%	100%	74%	100%	62%	100%	Compliant
0-B-5	LKD	64%	100%	59%	100%	55%	100%	Compliant
0-B-5	Bedroom 1	85%	100%	85%	100%	81%	100%	Compliant
0-B-5	Bedroom 2	44%	100%	38%	100%	35%	100%	Non-compliant
0-B-6	LKD	34%	100%	31%	99%	26%	90%	Non-compliant
0-B-6	Bedroom	43%	100%	38%	100%	30%	100%	Non-compliant
1-B-1	LKD	56%	100%	41%	100%	36%	100%	Trees affecting compliance
1-B-1	Bedroom 1	21%	100%	19%	98%	17%	98%	Non-compliant
1-B-1	Bedroom 2	19%	100%	14%	100%	10%	100%	Non-compliant
1-B-2	LKD	44%	100%	42%	100%	39%	100%	Non-compliant
1-B-2	Bedroom 1	98%	100%	96%	100%	96%	100%	Compliant
1-B-2	Bedroom 2	95%	100%	94%	100%	91%	100%	Compliant
1-B-3	LKD	53%	100%	51%	100%	48%	100%	Trees affecting compliance (summer only)
1-B-3	Bedroom 1	100%	100%	96%	100%	92%	100%	Compliant
1-B-3	Bedroom 2	100%	100%	98%	100%	95%	100%	Compliant
1-B-4	LKD	50%	100%	48%	100%	46%	100%	Trees affecting compliance
1-B-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
1-B-4	Bedroom 2	100%	100%	98%	100%	95%	100%	Compliant
1-B-5	LKD	85%	100%	84%	100%	82%	100%	Compliant
1-B-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
1-B-5	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
1-B-6	LKD	62%	100%	61%	100%	57%	100%	Compliant
1-B-6	Bedroom 1	93%	100%	93%	100%	93%	100%	Compliant
1-B-6	Bedroom 2	77%	100%	73%	100%	68%	100%	Compliant
1-B-7	LKD	49%	100%	47%	100%	46%	100%	Non-compliant
1-B-7	Bedroom	88%	100%	80%	100%	80%	100%	Compliant
1-B-8	LKD	31%	88%	28%	86%	26%	85%	Non-compliant
1-B-8	Bedroom	16%	100%	14%	100%	14%	100%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.5 Supplementary SDA Results (I.S. EN 17037 criteria): Block B / Second Floor and Third Floor

Table No. D.1.5 - Supplementary SDA Results (I.S. EN 17037 criteria): Block B

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*	
2-B-1	LKD	92%	100%	73%	100%	68%	100%	Compliant
2-B-1	Bedroom 1	26%	100%	24%	100%	24%	98%	Non-compliant
2-B-1	Bedroom 2	33%	100%	29%	100%	29%	100%	Non-compliant
2-B-2	LKD	53%	100%	50%	100%	49%	100%	Trees affecting compliance (summer only)
2-B-2	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-B-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-B-3	LKD	55%	100%	54%	100%	52%	100%	Compliant
2-B-3	Bedroom 1	100%	100%	98%	100%	96%	100%	Compliant
2-B-3	Bedroom 2	98%	100%	98%	100%	95%	100%	Compliant
2-B-4	LKD	56%	100%	55%	100%	55%	100%	Compliant
2-B-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-B-4	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-B-5	LKD	86%	100%	85%	100%	84%	100%	Compliant
2-B-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-B-5	Bedroom 2	100%	100%	98%	100%	98%	100%	Compliant
2-B-6	LKD	80%	100%	79%	100%	78%	100%	Compliant
2-B-6	Bedroom 1	93%	100%	93%	100%	93%	100%	Compliant
2-B-6	Bedroom 2	56%	100%	54%	100%	52%	100%	Compliant
2-B-7	LKD	49%	100%	48%	100%	45%	100%	Non-compliant
2-B-7	Bedroom	46%	100%	46%	100%	46%	100%	Non-compliant
2-B-8	LKD	37%	92%	37%	91%	36%	89%	Non-compliant
2-B-8	Bedroom	30%	100%	29%	100%	27%	100%	Non-compliant
3-B-1	LKD	90%	100%	74%	100%	68%	100%	Compliant
3-B-1	Bedroom 1	45%	100%	45%	100%	45%	100%	Non-compliant
3-B-1	Bedroom 2	57%	100%	43%	100%	43%	100%	Trees affecting compliance
3-B-2	LKD	50%	100%	45%	100%	45%	100%	Trees affecting compliance
3-B-2	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-B-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-B-3	LKD	60%	100%	59%	100%	59%	100%	Compliant
3-B-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-B-3	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-B-4	LKD	57%	100%	56%	100%	55%	100%	Compliant
3-B-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-B-4	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-B-5	LKD	95%	100%	95%	100%	94%	100%	Compliant
3-B-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-B-5	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-B-6	LKD	81%	100%	81%	100%	79%	100%	Compliant
3-B-6	Bedroom 1	96%	100%	96%	100%	96%	100%	Compliant
3-B-6	Bedroom 2	94%	100%	94%	100%	94%	100%	Compliant
3-B-7	LKD	72%	100%	69%	100%	68%	100%	Compliant
3-B-7	Bedroom	98%	100%	98%	100%	98%	100%	Compliant
3-B-8	LKD	49%	100%	47%	100%	46%	99%	Non-compliant
3-B-8	Bedroom	36%	100%	36%	100%	36%	100%	Non-compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.6 Supplementary SDA Results (I.S. EN 17037 criteria): Block B / Fourth Floor

Table No. D.1.6 - Supplementary SDA Results (I.S. EN 17037 criteria): Block B

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*	
4-B-1	LKD	100%	100%	100%	100%	100%	100%	Compliant
4-B-1	Bedroom 1	61%	100%	59%	100%	59%	100%	Compliant
4-B-1	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-B-2	LKD	69%	100%	66%	100%	66%	100%	Compliant
4-B-2	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
4-B-2	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-B-3	LKD	67%	100%	67%	100%	67%	100%	Compliant
4-B-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
4-B-3	Bedroom 2	100%	100%	98%	100%	98%	100%	Compliant
4-B-4	LKD	68%	100%	67%	100%	67%	100%	Compliant
4-B-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
4-B-4	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-B-5	LKD	98%	100%	97%	100%	97%	100%	Compliant
4-B-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
4-B-5	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
4-B-6	LKD	99%	100%	99%	100%	99%	100%	Compliant
4-B-6	Bedroom 1	98%	100%	98%	100%	98%	100%	Compliant
4-B-6	Bedroom 2	88%	100%	88%	100%	86%	100%	Compliant
4-B-7	LKD	84%	100%	84%	100%	84%	100%	Compliant
4-B-7	Bedroom 1	86%	100%	86%	100%	86%	100%	Compliant
4-B-8	LKD	73%	100%	73%	100%	73%	100%	Compliant
4-B-8	Bedroom 1	86%	100%	82%	100%	82%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.7 Supplementary SDA Results (I.S. EN 17037 criteria): Block C / Ground Floor, First Floor and Second Floor

Table No. D.1.7 - Supplementary SDA Results (I.S. EN 17037 criteria): Block C								
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*	
Creche	Classroom 1	77%	100%	72%	100%	45%	100%	Trees affecting compliance (summer only)
Creche	Classroom 2	61%	100%	51%	100%	44%	100%	Trees affecting compliance (summer only)
Creche	Classroom 3	44%	100%	40%	100%	35%	100%	Non-compliant
Creche	Classroom 4	100%	100%	100%	100%	99%	100%	Compliant
Creche	Classroom 5	81%	100%	59%	100%	37%	100%	Trees affecting compliance (summer only)
C-1	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-1	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-1	Bedroom 2	54%	100%	51%	100%	51%	100%	Compliant
C-1	Bedroom 3	36%	100%	36%	100%	36%	100%	Non-compliant
C-1	Kitchen Dining	45%	85%	44%	85%	44%	85%	Non-compliant
C-2	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-2	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-2	Bedroom 2	57%	100%	57%	100%	56%	100%	Compliant
C-2	Bedroom 3	41%	100%	41%	100%	41%	100%	Non-compliant
C-2	Kitchen Dining	62%	100%	62%	100%	62%	99%	Compliant
C-3	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-3	Bedroom 2	60%	100%	59%	100%	59%	100%	Compliant
C-3	Bedroom 3	41%	100%	41%	100%	41%	100%	Non-compliant
C-3	Kitchen Dining	52%	93%	52%	93%	49%	93%	Non-compliant
C-4	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-4	Bedroom 2	60%	100%	59%	100%	57%	100%	Compliant
C-4	Bedroom 3	45%	100%	45%	100%	41%	100%	Non-compliant
C-4	Kitchen Dining	63%	100%	62%	100%	62%	99%	Compliant
C-5	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-5	Bedroom 2	60%	100%	60%	100%	59%	100%	Compliant
C-5	Bedroom 3	41%	100%	41%	100%	41%	100%	Non-compliant
C-5	Kitchen Dining	63%	100%	63%	100%	63%	99%	Compliant
C-6	Living Room	100%	100%	100%	100%	100%	100%	Compliant
C-6	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
C-6	Bedroom 2	66%	100%	63%	100%	62%	100%	Compliant
C-6	Bedroom 3	41%	100%	41%	100%	41%	100%	Non-compliant
C-6	Kitchen Dining	67%	100%	67%	100%	66%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.8 Supplementary SDA Results (I.S. EN 17037 criteria): Block D / Ground Floor, First Floor and Second Floor

Table No. D.1.8 - Supplementary SDA Results (I.S. EN 17037 criteria): Block D								
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*	
0-D-1	LKD	38%	100%	35%	100%	34%	100%	Non-compliant
0-D-1	Bedroom 1	59%	100%	54%	100%	53%	100%	Compliant
0-D-1	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
0-D-2	LKD	57%	100%	52%	100%	46%	98%	Trees affecting compliance (summer only)
0-D-2	Bedroom 1	82%	100%	80%	100%	73%	100%	Compliant
0-D-3	LKD	77%	100%	77%	100%	77%	100%	Compliant
0-D-3	Bedroom 1	70%	100%	70%	100%	68%	100%	Compliant
0-D-4	LKD	100%	100%	100%	100%	100%	100%	Compliant
0-D-4	Bedroom 1	71%	100%	71%	100%	69%	100%	Compliant
0-D-4	Bedroom 2	45%	100%	44%	100%	42%	100%	Non-compliant
1-D-1	LKD	35%	100%	33%	100%	33%	100%	Non-compliant
1-D-1	Bedroom 1	31%	100%	29%	100%	28%	100%	Non-compliant
1-D-1	Bedroom 2	92%	100%	78%	100%	78%	100%	Compliant
1-D-2	LKD	46%	100%	43%	100%	42%	100%	Non-compliant
1-D-2	Bedroom	41%	100%	41%	100%	36%	100%	Non-compliant
1-D-3	LKD	26%	89%	26%	88%	24%	86%	Non-compliant
1-D-3	Bedroom	79%	100%	73%	100%	71%	100%	Compliant
1-D-4	LKD	52%	100%	52%	100%	52%	100%	Compliant
1-D-4	Bedroom 1	59%	100%	59%	100%	58%	100%	Compliant
1-D-4	Bedroom 2	92%	100%	92%	100%	92%	100%	Compliant
1-D-5	LKD	98%	100%	98%	100%	96%	100%	Compliant
1-D-5	Bedroom 1	42%	100%	42%	100%	42%	100%	Non-compliant
1-D-5	Bedroom 2	32%	100%	30%	100%	29%	100%	Non-compliant
1-D-6	LKD	41%	100%	40%	100%	39%	100%	Non-compliant
1-D-6	Bedroom 1	29%	100%	29%	100%	28%	100%	Non-compliant
1-D-6	Bedroom 2	78%	100%	75%	100%	75%	100%	Compliant
2-D-1	LKD	37%	100%	36%	100%	36%	100%	Non-compliant
2-D-1	Bedroom 1	40%	100%	40%	100%	36%	100%	Non-compliant
2-D-1	Bedroom 2	97%	100%	94%	100%	86%	100%	Compliant
2-D-2	LKD	59%	100%	59%	100%	58%	100%	Compliant
2-D-2	Bedroom	95%	100%	95%	100%	91%	100%	Compliant
2-D-3	LKD	43%	100%	41%	100%	41%	100%	Non-compliant
2-D-3	Bedroom	100%	100%	100%	100%	100%	100%	Compliant
2-D-4	LKD	54%	100%	53%	100%	53%	100%	Compliant
2-D-4	Bedroom 1	94%	100%	93%	100%	93%	100%	Compliant
2-D-4	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-D-5	LKD	100%	100%	100%	100%	100%	100%	Compliant
2-D-5	Bedroom 1	60%	100%	56%	100%	56%	100%	Compliant
2-D-5	Bedroom 2	33%	100%	33%	100%	33%	100%	Non-compliant
2-D-6	LKD	47%	100%	46%	100%	46%	100%	Non-compliant
2-D-6	Bedroom 1	38%	100%	36%	100%	35%	100%	Non-compliant
2-D-6	Bedroom 2	94%	100%	89%	100%	83%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.9 Supplementary SDA Results (I.S. EN 17037 criteria): Block D / Third Floor

Table No. D.1.9 - Supplementary SDA Results (I.S. EN 17037 criteria): Block D								
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*	
3-D-1	LKD	49%	100%	47%	100%	46%	100%	Non-compliant
3-D-1	Bedroom 1	38%	100%	38%	100%	35%	100%	Non-compliant
3-D-1	Bedroom 2	100%	100%	94%	100%	92%	100%	Compliant
3-D-2	LKD	76%	100%	76%	100%	76%	100%	Compliant
3-D-2	Bedroom	93%	100%	93%	100%	93%	100%	Compliant
3-D-3	LKD	64%	100%	63%	100%	63%	100%	Compliant
3-D-3	Bedroom	98%	100%	98%	100%	96%	100%	Compliant
3-D-4	LKD	75%	100%	75%	100%	75%	100%	Compliant
3-D-4	Bedroom 1	91%	100%	91%	100%	90%	100%	Compliant
3-D-4	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-D-5	LKD	100%	100%	100%	100%	100%	100%	Compliant
3-D-5	Bedroom 1	54%	100%	54%	100%	52%	100%	Compliant
3-D-5	Bedroom 2	38%	100%	35%	100%	35%	100%	Non-compliant
3-D-6	LKD	53%	100%	53%	100%	50%	100%	Compliant
3-D-6	Bedroom 1	38%	100%	35%	100%	34%	100%	Non-compliant
3-D-6	Bedroom 2	97%	100%	92%	100%	89%	100%	Compliant

* For information regarding the criteria under the various guidelines including target Lux please refer to section 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.10 Supplementary SDA Results (I.S. EN 17037 criteria): Block E / Ground Floor, First Floor and Second Floor

Table No. D.1.10 - Supplementary SDA Results (I.S. EN 17037 criteria): Block E								
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*	
0-E-1	LKD	72%	100%	60%	100%	57%	100%	Compliant
0-E-1	Bedroom 1	95%	100%	82%	100%	82%	100%	Compliant
0-E-1	Bedroom 2	43%	100%	29%	100%	29%	100%	Non-compliant
0-E-2	LKD	77%	100%	57%	100%	56%	100%	Compliant
0-E-2	Bedroom 1	91%	100%	70%	100%	68%	100%	Compliant
0-E-2	Bedroom 2	57%	100%	43%	100%	43%	100%	Trees affecting compliance
0-E-3	LKD	86%	100%	85%	100%	84%	100%	Compliant
0-E-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
0-E-4	LKD	79%	100%	74%	100%	69%	100%	Compliant
0-E-4	Bedroom 1	100%	100%	98%	100%	98%	100%	Compliant
0-E-4	Bedroom 2	98%	100%	98%	100%	98%	100%	Compliant
1-E-1	LKD	72%	100%	67%	100%	63%	100%	Compliant
1-E-1	Bedroom 1	86%	100%	74%	100%	72%	100%	Compliant
1-E-1	Bedroom 2	52%	100%	43%	100%	43%	100%	Trees affecting compliance
1-E-2	LKD	76%	100%	54%	100%	52%	100%	Compliant
1-E-2	Bedroom 1	80%	100%	64%	100%	64%	100%	Compliant
1-E-2	Bedroom 2	33%	100%	24%	100%	24%	100%	Non-compliant
1-E-3	LKD	96%	100%	89%	100%	87%	100%	Compliant
1-E-3	Bedroom 1	98%	100%	98%	100%	98%	100%	Compliant
1-E-3	Bedroom 2	98%	100%	98%	100%	98%	100%	Compliant
1-E-4	LKD	67%	100%	64%	100%	64%	100%	Compliant
1-E-4	Bedroom 1	98%	100%	98%	100%	98%	100%	Compliant
1-E-5	LKD	83%	100%	81%	100%	77%	100%	Compliant
1-E-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
1-E-5	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-E-1	LKD	73%	100%	69%	100%	68%	100%	Compliant
2-E-1	Bedroom 1	97%	100%	84%	100%	83%	100%	Compliant
2-E-1	Bedroom 2	38%	100%	29%	100%	29%	100%	Non-compliant
2-E-2	LKD	81%	100%	71%	100%	70%	100%	Compliant
2-E-2	Bedroom 1	91%	100%	79%	100%	79%	100%	Compliant
2-E-2	Bedroom 2	52%	100%	43%	100%	43%	100%	Trees affecting compliance
2-E-3	LKD	82%	100%	77%	100%	76%	100%	Compliant
2-E-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-E-3	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
2-E-4	LKD	73%	100%	71%	100%	70%	100%	Compliant
2-E-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-E-5	LKD	90%	100%	89%	100%	87%	100%	Compliant
2-E-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
2-E-5	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 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

D.1.11 Supplementary SDA Results (I.S. EN 17037 criteria): Block E / Third Floor

Table No. D.1.11 - Supplementary SDA Results (I.S. EN 17037 criteria): Block E								
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*	
3-E-1	LKD	80%	100%	77%	100%	75%	100%	Compliant
3-E-1	Bedroom 1	95%	100%	84%	100%	84%	100%	Compliant
3-E-1	Bedroom 2	57%	100%	52%	100%	52%	100%	Compliant
3-E-2	LKD	86%	100%	75%	100%	74%	100%	Compliant
3-E-2	Bedroom 1	97%	100%	80%	100%	80%	100%	Compliant
3-E-2	Bedroom 2	43%	100%	33%	100%	33%	100%	Non-compliant
3-E-3	LKD	95%	100%	90%	100%	88%	100%	Compliant
3-E-3	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-E-3	Bedroom 2	100%	100%	100%	100%	100%	100%	Compliant
3-E-4	LKD	84%	100%	84%	100%	84%	100%	Compliant
3-E-4	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-E-5	LKD	99%	100%	99%	100%	99%	100%	Compliant
3-E-5	Bedroom 1	100%	100%	100%	100%	100%	100%	Compliant
3-E-5	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 4.5.1 on page 15.
For floor plans of the assessed units please refer to section C.1 on page 48.

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: Block A / Ground Floor, First Floor and Second Floor

Table No. D.2.1 - Supplementary NSL Results: Block A			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
0-A-1	LKD	100%	Yes
0-A-1	Bedroom	98%	Yes
0-A-2	LKD	98%	Yes
0-A-2	Bedroom	94%	Yes
0-A-3	LKD	96%	Yes
0-A-3	Bedroom	92%	Yes
0-A-4	LKD	94%	Yes
0-A-4	Bedroom 1	93%	Yes
0-A-4	Bedroom 2	94%	Yes
0-A-4	Bedroom 3	87%	Yes
1-A-1	LKD	100%	Yes
1-A-1	Bedroom 1	93%	Yes
1-A-1	Bedroom 2	100%	Yes
1-A-2	LKD	99%	Yes
1-A-2	Bedroom 1	96%	Yes
1-A-2	Bedroom 2	99%	Yes
1-A-3	LKD	96%	Yes
1-A-3	Bedroom	94%	Yes
1-A-4	LKD	99%	Yes
1-A-4	Bedroom	97%	Yes
1-A-5	LKD	85%	Yes
1-A-5	Bedroom	93%	Yes
1-A-6	LKD	96%	Yes
1-A-6	Bedroom 1	75%	No
1-A-6	Bedroom 2	86%	Yes
1-A-6	Bedroom 3	60%	No
2-A-1	LKD	100%	Yes
2-A-1	Bedroom 1	96%	Yes
2-A-1	Bedroom 2	99%	Yes
2-A-2	LKD	99%	Yes
2-A-2	Bedroom 1	93%	Yes
2-A-2	Bedroom 2	100%	Yes
2-A-3	LKD	98%	Yes
2-A-3	Bedroom	80%	Yes
2-A-4	LKD	97%	Yes
2-A-4	Bedroom	94%	Yes
2-A-5	LKD	99%	Yes
2-A-5	Bedroom	92%	Yes
2-A-6	LKD	91%	Yes
2-A-6	Bedroom 1	95%	Yes
2-A-6	Bedroom 2	96%	Yes
2-A-6	Bedroom 3	90%	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.2.2 Supplementary NSL Results: Block A / Third Floor and Fourth Floor

Table No. D.2.2 - Supplementary NSL Results: Block A			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
3-A-1	LKD	100%	Yes
3-A-1	Bedroom 1	93%	Yes
3-A-1	Bedroom 2	100%	Yes
3-A-2	LKD	100%	Yes
3-A-2	Bedroom 1	96%	Yes
3-A-2	Bedroom 2	99%	Yes
3-A-3	LKD	97%	Yes
3-A-3	Bedroom	94%	Yes
3-A-4	LKD	99%	Yes
3-A-4	Bedroom	98%	Yes
3-A-5	LKD	97%	Yes
3-A-5	Bedroom	94%	Yes
3-A-6	LKD	95%	Yes
3-A-6	Bedroom 1	91%	Yes
3-A-6	Bedroom 2	95%	Yes
3-A-6	Bedroom 3	95%	Yes
4-A-1	LKD	100%	Yes
4-A-1	Bedroom 1	96%	Yes
4-A-1	Bedroom 2	99%	Yes
4-A-2	LKD	100%	Yes
4-A-2	Bedroom 1	93%	Yes
4-A-2	Bedroom 2	100%	Yes
4-A-3	LKD	99%	Yes
4-A-3	Bedroom	93%	Yes
4-A-4	LKD	97%	Yes
4-A-4	Bedroom	94%	Yes
4-A-5	LKD	99%	Yes
4-A-5	Bedroom	94%	Yes
4-A-6	LKD	91%	Yes
4-A-6	Bedroom 1	95%	Yes
4-A-6	Bedroom 2	96%	Yes
4-A-6	Bedroom 3	90%	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.2.3 Supplementary NSL Results: Block A / Fifth Floor

Table No. D.2.3 - Supplementary NSL Results: Block A			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
5-A-1	LKD	100%	Yes
5-A-1	Bedroom 1	93%	Yes
5-A-1	Bedroom 2	100%	Yes
5-A-2	LKD	100%	Yes
5-A-2	Bedroom 1	96%	Yes
5-A-2	Bedroom 2	99%	Yes
5-A-3	LKD	97%	Yes
5-A-3	Bedroom	94%	Yes
5-A-4	LKD	99%	Yes
5-A-4	Bedroom	98%	Yes
5-A-5	LKD	97%	Yes
5-A-5	Bedroom	94%	Yes
5-A-6	LKD	99%	Yes
5-A-6	Bedroom 1	93%	Yes
5-A-6	Bedroom 2	95%	Yes
5-A-6	Bedroom 3	95%	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.2.4 Supplementary NSL Results: Block B / Ground Floor and First Floor

Table No. D.2.4 - Supplementary NSL Results: Block B			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
0-B-1	LKD	98%	Yes
0-B-1	Bedroom 1	22%	No
0-B-1	Bedroom 2	25%	No
0-B-2	LKD	98%	Yes
0-B-2	Bedroom 1	98%	Yes
0-B-2	Bedroom 2	96%	Yes
0-B-3	LKD	99%	Yes
0-B-3	Bedroom 1	98%	Yes
0-B-3	Bedroom 2	95%	Yes
0-B-4	LKD	100%	Yes
0-B-4	Bedroom 1	98%	Yes
0-B-4	Bedroom 2	95%	Yes
0-B-5	LKD	100%	Yes
0-B-5	Bedroom 1	98%	Yes
0-B-5	Bedroom 2	75%	No
0-B-6	LKD	92%	Yes
0-B-6	Bedroom	66%	No
1-B-1	LKD	96%	Yes
1-B-1	Bedroom 1	56%	No
1-B-1	Bedroom 2	21%	No
1-B-2	LKD	98%	Yes
1-B-2	Bedroom 1	97%	Yes
1-B-2	Bedroom 2	95%	Yes
1-B-3	LKD	100%	Yes
1-B-3	Bedroom 1	97%	Yes
1-B-3	Bedroom 2	96%	Yes
1-B-4	LKD	99%	Yes
1-B-4	Bedroom 1	97%	Yes
1-B-4	Bedroom 2	95%	Yes
1-B-5	LKD	99%	Yes
1-B-5	Bedroom 1	98%	Yes
1-B-5	Bedroom 2	96%	Yes
1-B-6	LKD	100%	Yes
1-B-6	Bedroom 1	98%	Yes
1-B-6	Bedroom 2	96%	Yes
1-B-7	LKD	98%	Yes
1-B-7	Bedroom	94%	Yes
1-B-8	LKD	76%	No
1-B-8	Bedroom	74%	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.

D.2.5 Supplementary NSL Results: Block B / Second Floor and Third Floor

Table No. D.2.5 - Supplementary NSL Results: Block B			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
2-B-1	LKD	98%	Yes
2-B-1	Bedroom 1	43%	No
2-B-1	Bedroom 2	32%	No
2-B-2	LKD	98%	Yes
2-B-2	Bedroom 1	98%	Yes
2-B-2	Bedroom 2	96%	Yes
2-B-3	LKD	99%	Yes
2-B-3	Bedroom 1	98%	Yes
2-B-3	Bedroom 2	95%	Yes
2-B-4	LKD	100%	Yes
2-B-4	Bedroom 1	97%	Yes
2-B-4	Bedroom 2	96%	Yes
2-B-5	LKD	100%	Yes
2-B-5	Bedroom 1	98%	Yes
2-B-5	Bedroom 2	95%	Yes
2-B-6	LKD	99%	Yes
2-B-6	Bedroom 1	98%	Yes
2-B-6	Bedroom 2	81%	Yes
2-B-7	LKD	96%	Yes
2-B-7	Bedroom	76%	No
2-B-8	LKD	63%	No
2-B-8	Bedroom	58%	No
3-B-1	LKD	96%	Yes
3-B-1	Bedroom 1	76%	No
3-B-1	Bedroom 2	80%	No
3-B-2	LKD	98%	Yes
3-B-2	Bedroom 1	97%	Yes
3-B-2	Bedroom 2	95%	Yes
3-B-3	LKD	100%	Yes
3-B-3	Bedroom 1	97%	Yes
3-B-3	Bedroom 2	96%	Yes
3-B-4	LKD	99%	Yes
3-B-4	Bedroom 1	97%	Yes
3-B-4	Bedroom 2	95%	Yes
3-B-5	LKD	100%	Yes
3-B-5	Bedroom 1	98%	Yes
3-B-5	Bedroom 2	96%	Yes
3-B-6	LKD	100%	Yes
3-B-6	Bedroom 1	98%	Yes
3-B-6	Bedroom 2	96%	Yes
3-B-7	LKD	99%	Yes
3-B-7	Bedroom	94%	Yes
3-B-8	LKD	87%	Yes
3-B-8	Bedroom	83%	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: Block B / Fourth Floor

Table No. D.2.6 - Supplementary NSL Results: Block B			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
4-B-1	LKD	98%	Yes
4-B-1	Bedroom 1	88%	Yes
4-B-1	Bedroom 2	100%	Yes
4-B-2	LKD	98%	Yes
4-B-2	Bedroom 1	98%	Yes
4-B-2	Bedroom 2	96%	Yes
4-B-3	LKD	99%	Yes
4-B-3	Bedroom 1	98%	Yes
4-B-3	Bedroom 2	95%	Yes
4-B-4	LKD	100%	Yes
4-B-4	Bedroom 1	98%	Yes
4-B-4	Bedroom 2	96%	Yes
4-B-5	LKD	99%	Yes
4-B-5	Bedroom 1	98%	Yes
4-B-5	Bedroom 2	95%	Yes
4-B-6	LKD	99%	Yes
4-B-6	Bedroom 1	98%	Yes
4-B-6	Bedroom 2	95%	Yes
4-B-7	LKD	100%	Yes
4-B-7	Bedroom 1	94%	Yes
4-B-8	LKD	92%	Yes
4-B-8	Bedroom 1	94%	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.2.7 Supplementary NSL Results: Block C / Ground Floor, First Floor and Second Floor

Table No. D.2.7 - Supplementary NSL Results: Block C			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
Creche	Classroom 1	100%	Yes
Creche	Classroom 2	100%	Yes
Creche	Classroom 3	100%	Yes
Creche	Classroom 4	99%	Yes
Creche	Classroom 5	100%	Yes
C-1	Living Room	100%	Yes
C-1	Bedroom 1	97%	Yes
C-1	Bedroom 2	96%	Yes
C-1	Bedroom 3	93%	Yes
C-1	Kitchen Dining	85%	Yes
C-2	Living Room	100%	Yes
C-2	Bedroom 1	97%	Yes
C-2	Bedroom 2	96%	Yes
C-2	Bedroom 3	92%	Yes
C-2	Kitchen Dining	93%	Yes
C-3	Living Room	100%	Yes
C-3	Bedroom 1	97%	Yes
C-3	Bedroom 2	94%	Yes
C-3	Bedroom 3	93%	Yes
C-3	Kitchen Dining	96%	Yes
C-4	Living Room	100%	Yes
C-4	Bedroom 1	97%	Yes
C-4	Bedroom 2	89%	Yes
C-4	Bedroom 3	92%	Yes
C-4	Kitchen Dining	71%	No
C-5	Living Room	100%	Yes
C-5	Bedroom 1	97%	Yes
C-5	Bedroom 2	91%	Yes
C-5	Bedroom 3	93%	Yes
C-5	Kitchen Dining	75%	No
C-6	Living Room	100%	Yes
C-6	Bedroom 1	97%	Yes
C-6	Bedroom 2	90%	Yes
C-6	Bedroom 3	92%	Yes
C-6	Kitchen Dining	94%	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.2.8 Supplementary NSL Results: Block D / Ground Floor, First Floor and Second Floor

Table No. D.2.8 - Supplementary NSL Results: Block D			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
0-D-1	LKD	99%	Yes
0-D-1	Bedroom 1	93%	Yes
0-D-1	Bedroom 1	99%	Yes
0-D-2	LKD	95%	Yes
0-D-2	Bedroom 1	94%	Yes
0-D-3	LKD	90%	Yes
0-D-3	Bedroom 1	88%	Yes
0-D-4	LKD	100%	Yes
0-D-4	Bedroom 1	94%	Yes
0-D-4	Bedroom 2	70%	No
1-D-1	LKD	98%	Yes
1-D-1	Bedroom 1	86%	Yes
1-D-1	Bedroom 2	99%	Yes
1-D-2	LKD	96%	Yes
1-D-2	Bedroom	88%	Yes
1-D-3	LKD	88%	Yes
1-D-3	Bedroom	94%	Yes
1-D-4	LKD	97%	Yes
1-D-4	Bedroom 1	95%	Yes
1-D-4	Bedroom 2	96%	Yes
1-D-5	LKD	100%	Yes
1-D-5	Bedroom 1	93%	Yes
1-D-5	Bedroom 2	93%	Yes
1-D-6	LKD	99%	Yes
1-D-6	Bedroom 1	86%	Yes
1-D-6	Bedroom 2	99%	Yes
2-D-1	LKD	99%	Yes
2-D-1	Bedroom 1	93%	Yes
2-D-1	Bedroom 2	99%	Yes
2-D-2	LKD	97%	Yes
2-D-2	Bedroom	94%	Yes
2-D-3	LKD	99%	Yes
2-D-3	Bedroom	98%	Yes
2-D-4	LKD	100%	Yes
2-D-4	Bedroom 1	96%	Yes
2-D-4	Bedroom 2	99%	Yes
2-D-5	LKD	99%	Yes
2-D-5	Bedroom 1	94%	Yes
2-D-5	Bedroom 2	68%	No
2-D-6	LKD	99%	Yes
2-D-6	Bedroom 1	93%	Yes
2-D-6	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.

D.2.9 Supplementary NSL Results: Block D / Third Floor

Table No. D.2.9 - Supplementary NSL Results: Block D			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
3-D-1	LKD	99%	Yes
3-D-1	Bedroom 1	86%	Yes
3-D-1	Bedroom 2	99%	Yes
3-D-2	LKD	99%	Yes
3-D-2	Bedroom	94%	Yes
3-D-3	LKD	97%	Yes
3-D-3	Bedroom	94%	Yes
3-D-4	LKD	100%	Yes
3-D-4	Bedroom 1	95%	Yes
3-D-4	Bedroom 2	100%	Yes
3-D-5	LKD	100%	Yes
3-D-5	Bedroom 1	94%	Yes
3-D-5	Bedroom 2	94%	Yes
3-D-6	LKD	99%	Yes
3-D-6	Bedroom 1	86%	Yes
3-D-6	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.

D.2.10 Supplementary NSL Results: Block E / Ground Floor, First Floor and Second Floor

Table No. D.2.10 - Supplementary NSL Results: Block E			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
0-E-1	LKD	100%	Yes
0-E-1	Bedroom 1	96%	Yes
0-E-1	Bedroom 2	94%	Yes
0-E-2	LKD	100%	Yes
0-E-2	Bedroom 1	96%	Yes
0-E-2	Bedroom 2	97%	Yes
0-E-3	LKD	100%	Yes
0-E-3	Bedroom 1	98%	Yes
0-E-4	LKD	99%	Yes
0-E-4	Bedroom 1	96%	Yes
0-E-4	Bedroom 2	95%	Yes
1-E-1	LKD	100%	Yes
1-E-1	Bedroom 1	95%	Yes
1-E-1	Bedroom 2	96%	Yes
1-E-2	LKD	100%	Yes
1-E-2	Bedroom 1	96%	Yes
1-E-2	Bedroom 2	93%	Yes
1-E-3	LKD	99%	Yes
1-E-3	Bedroom 1	96%	Yes
1-E-3	Bedroom 2	96%	Yes
1-E-4	LKD	99%	Yes
1-E-4	Bedroom 1	94%	Yes
1-E-5	LKD	100%	Yes
1-E-5	Bedroom 1	95%	Yes
1-E-5	Bedroom 2	96%	Yes
2-E-1	LKD	100%	Yes
2-E-1	Bedroom 1	96%	Yes
2-E-1	Bedroom 2	93%	Yes
2-E-2	LKD	100%	Yes
2-E-2	Bedroom 1	96%	Yes
2-E-2	Bedroom 2	97%	Yes
2-E-3	LKD	100%	Yes
2-E-3	Bedroom 1	95%	Yes
2-E-3	Bedroom 2	96%	Yes
2-E-4	LKD	97%	Yes
2-E-4	Bedroom 1	94%	Yes
2-E-5	LKD	99%	Yes
2-E-5	Bedroom 1	96%	Yes
2-E-5	Bedroom 2	95%	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.2.11 Supplementary NSL Results: Block D / Third Floor

Table No. D.2.11 - Supplementary NSL Results: Block D			
Unit Number	Room Description	No Sky Line (NSL)	
		% of room where the sky is visible from the working plane	Above 80%*
3-E-1	LKD	100%	Yes
3-E-1	Bedroom 1	95%	Yes
3-E-1	Bedroom 2	96%	Yes
3-E-2	LKD	100%	Yes
3-E-2	Bedroom 1	96%	Yes
3-E-2	Bedroom 2	93%	Yes
3-E-3	LKD	99%	Yes
3-E-3	Bedroom 1	96%	Yes
3-E-3	Bedroom 2	95%	Yes
3-E-4	LKD	99%	Yes
3-E-4	Bedroom 1	94%	Yes
3-E-5	LKD	100%	Yes
3-E-5	Bedroom 1	96%	Yes
3-E-5	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.