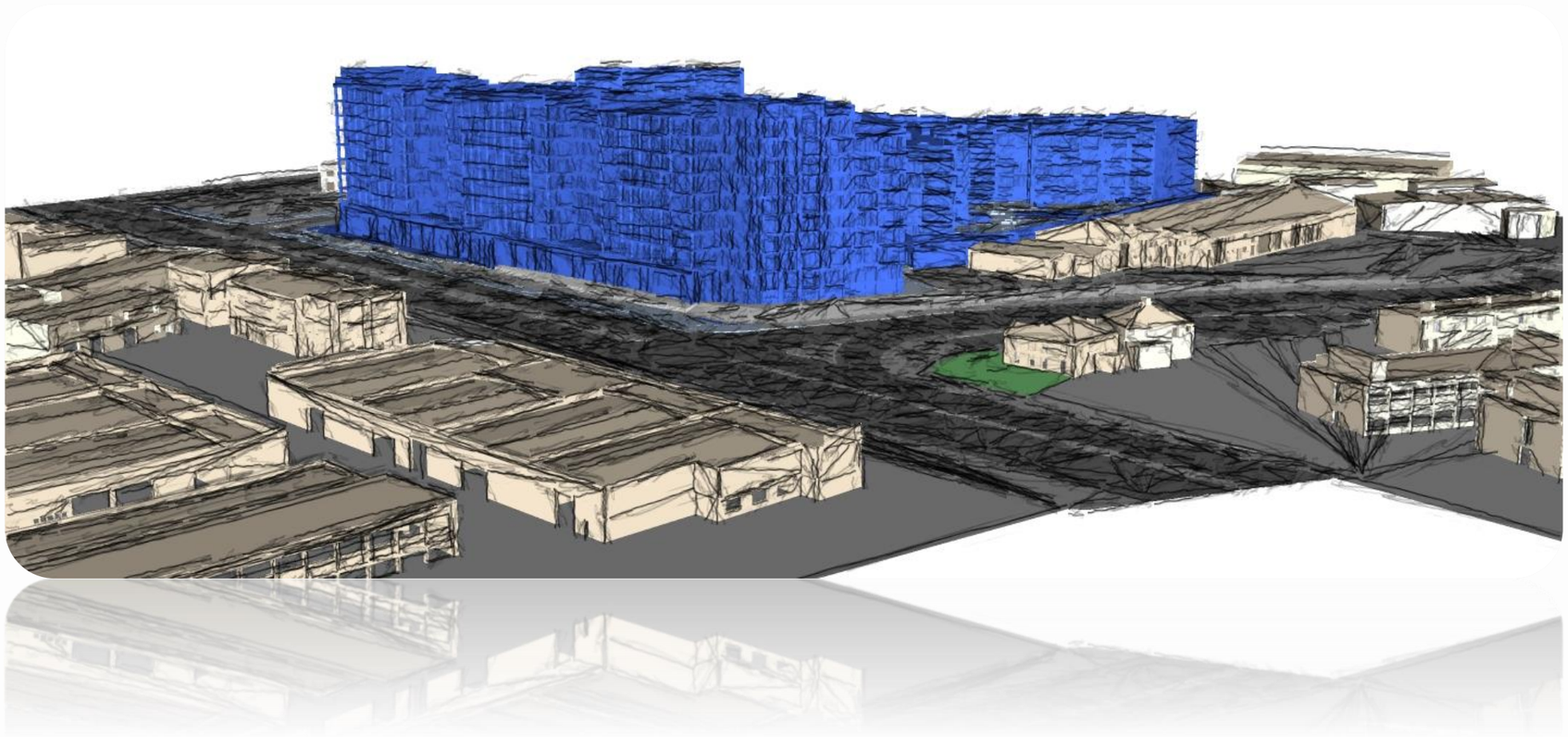
PARKMORE – LRD STAGE 3

Sunlight, Daylight & Shadow Assessment (Impact Neighbours and Development Performance)

V1



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Executive Summary

This report examines the impact the proposed Development will have on neighbours in terms of daylight, sunlight & shadow. We will also examine how the proposed development performs in terms of light. The report is, in accordance with Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice - Third Edition - 2022.
It should be noted at the outset that the BRE document sets out in its introduction that:

> *"Summary Page . . . It is purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location."*
>
> *" 1.6 . . . 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. . . . "*

Change/Impact to neighbouring buildings in the adjoining residential areas.

- **Skylight- VSC**
  - **95%** of the tested windows comply with the 27%, 0.8 ratio requirements for habitable rooms.
  - *100% if we include marginal windows.*
  - The average change ratio for VSC is **0.90**
- **Sunlight APSH & WPSH**
  - **100%** of tested windows comply with the annual APSH and
  - **100%** with the winter WPSH requirements for sunlight or overall requirement.
  - The average change ratio for sunlight is APSH:**0.88** and WPSH: **0.90**
- **Sunlight on the Ground SOG (Shadow)**
  - **100%** of tested neighbouring amenity spaces pass the 2-hour test requirements for the 21st March.
  - The average change ratio for shadow/sunlight is **0.97**

Performance of the proposed design

- **Target Illuminance E_T**
  - **97%** of rooms comply with the BS/EN 17037 Annex NA room targets for 50% of the floor area tested.
  - *99% if we include marginal results.*
  - The average compliant areas achieving the relevant target Lx for
    - all bedrooms is **98%** and
    - all Living/Kitchen spaces **78%**
    - both are well in excess of the required 50%
- **Sunlight to rooms:**
  - **82%** of Living rooms receive 1.5hrs of sunlight on the test day of the 21st March
  - *84% if we include marginal results.*
  - This is consistent/compliant with the BRE defined "careful layout design" 80% target.
- **Sunlight on the Ground SOG (Shadow)**
  - The zone allocated to new communal and public amenity spaces passes the BRE requirement.
  - Each of the areas individually and combined well comply with the BRE requirements.

The application shows a very high level of compliance with the recommendations and Guidelines of Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (BR209 - 2022).

In summary, this report can conclude that the design team has followed best practice to ensure that the proposal received good quality daylight and sunlight, with limited impact on the neighbouring environment.

Architects' & Planners' Commentary / Compensatory Measures.

The design is constrained by its location, site shape and orientation. As an urban infill scheme with competing design constraints and objectives it is specifically covered by clauses 6.6/6.7 of the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities – amended July 2023:

6.7 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 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.

Similarly, department document "Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities" suggests in relation to drawing conclusions 5.3.7:

In drawing conclusions in relation to daylight performance, planning authorities must weigh up the overall quality of the design and layout of the scheme and the measures proposed to maximise daylight provision, against the location of the site and the general presumption in favour of increased scales of urban residential development. Poor performance may arise due to design constraints associated with the site or location and there is a need to balance 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.

The architect has endeavoured to design apartment units with good access to light given that this is an urban infill site. Project Specific Comments / Compensatory Design Solutions are provided under the following headings:

- Site and Objectives
- Specific Compensatory measures on a room-by-room basis.

See main body of this report and the Architect's Design Statement.

Introduction

Chris Shackleton Consulting (CSC) have been asked to examine the impact that the proposed development will have on the existing neighbouring properties in terms of sunlight, daylight & shadow. We have also been asked to examine how the proposed development performs in terms of light.

Development Description

The development will comprise a Large-Scale Residential Development (LRD) on a site at Parkmore Industrial Estate, Long Mile Rd, Robinhood, Dublin, 12. The proposed development will comprise the demolition of existing industrial units, and construction of a mixed use, residential-led development within 4 no. blocks ranging in height from 06 to 10 storeys over semi-basement. The development will comprise the following: 436 no. apartments (studios; 1 beds; 2 beds and 3 beds) with commercial/employment units, creche, café and library. Provision of car, cycle and motorbike parking. Vehicular accesses from Parkmore estate road and additional pedestrian/cyclist accesses from the Long Mile Road and Robinhood Road. Upgrade works to the estate road and surrounding road network. All associated site development works and services provision, open spaces, ESB substations, plant areas, waste management areas, landscaping and boundary treatments.

Guidelines used in this analysis

This analysis has been carried out in accordance with the recommendations of Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice - Third Edition (BRE 2022).

All references quoted in this report are from BRE document "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice – Third Edition – 2022 (BR 209) by Paul Littlefair et al." unless specifically noted otherwise.

The BRE Guidelines referenced above are the best practice guidelines for assessment of both impact on Neighbours and the Development Performance. This the 3rd edition of this reference document and this version is compatible with EN 17037:2018 both the Irish IS and British BS versions.

These Best Practice Guidelines (and the UK National Annex to BS EN 17037) are referenced directly in Irish Government Publications such as:

Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities – amended July 2023:

6.6 Planning authorities should ensure appropriate expert advice and input where necessary, and have regard to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in BuildingsEN17037 or UK National Annex BS EN17037 and the associated BRE Guide 209 2022 Edition (June 2022),or any relevant future guidance specific to the Irish context, when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision.

And Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities - 2024

5.3.7 Daylight …

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

South Dublin County Development Plan 2022-2028

The drafting of the SDCC development plan supersedes the current publications but the application of the new editions of the BRE Guidance Document and other standards is covered under the phrase "any updated guidance."

Section 12.6.7 Residential Standard
Sunlight / Daylight

Residential Developments shall be guided by the quantitative performance approaches and recommendations under the 'Site Layout Planning for Daylight and Sunlight' (2nd edition): A Guideline to Good Practice (BRE 2011) and BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting' or any updated guidance.

- *A daylight analysis will be required for all proposed developments of 30+ units or in any other case where the layout or design could unduly impact on residential amenity.*
- *The impact of any development on existing habitable rooms should also be considered.*

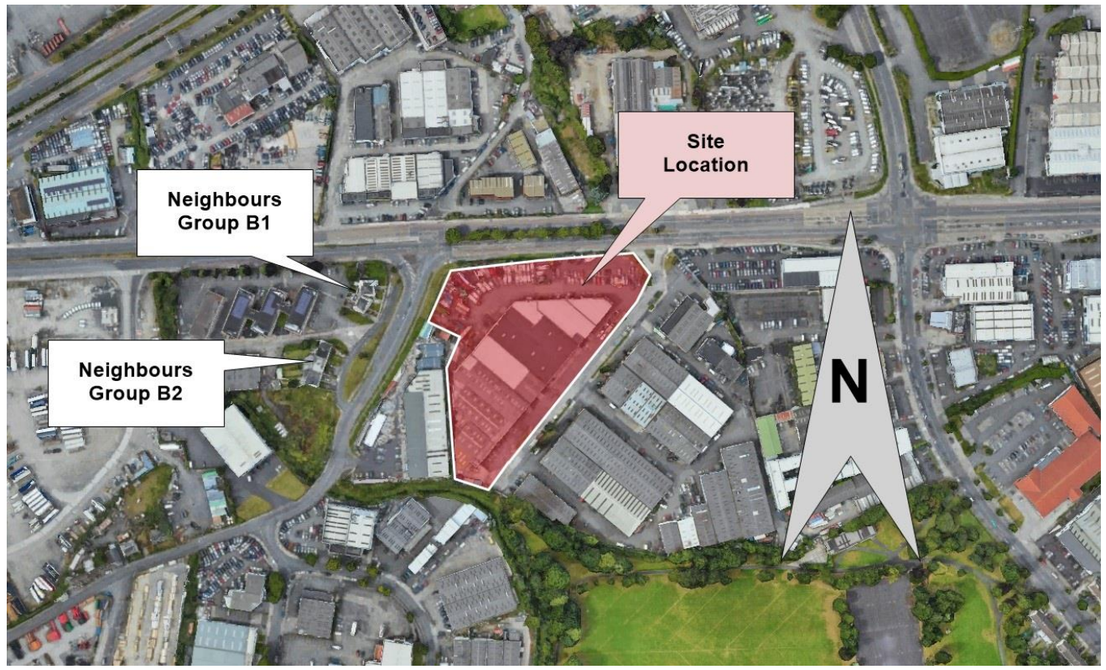
It is for the proposer of residential applications to demonstrate that the development can satisfy the standards set out above in relation to potential impacts on the quality and usability of spaces including public open spaces and communal spaces. This can potentially be achieved through appropriate heights and orientation of adjoining blocks to allow for adequate levels of sunlight to reach communal amenity space throughout the year."

Section 12.6.8 Residential Consolidation
Infill sites:

All residential consolidation proposals shall be guided by the quantitative performance approaches and recommendations under the 'Site Layout Planning for Daylight and Sunlight' (2nd edition): A Guidelines to Good Practice (BRE 2011) and BS 8206-2: 2008 – 'Lighting for Buildings – Part 2: Code of Practice for Daylighting' and / or any updated guidance.

Preliminary Overview

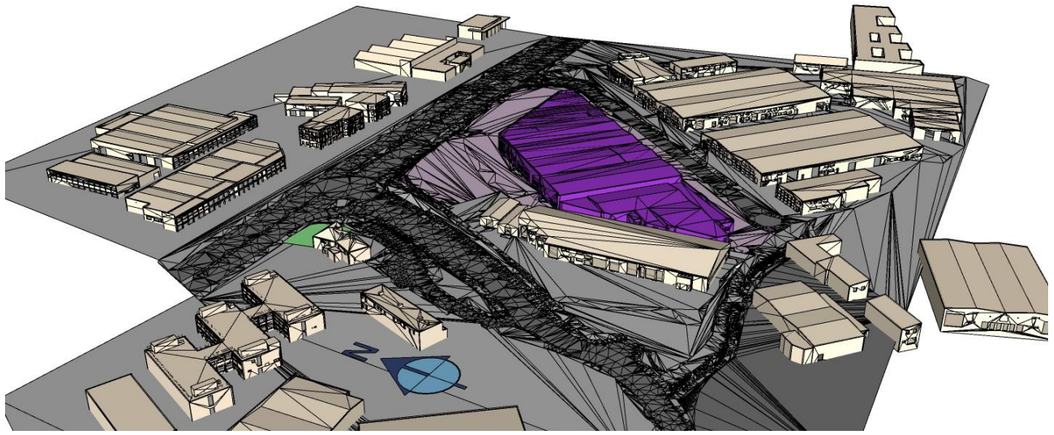
The aerial view shows the context for the site and the closest neighbour groups.



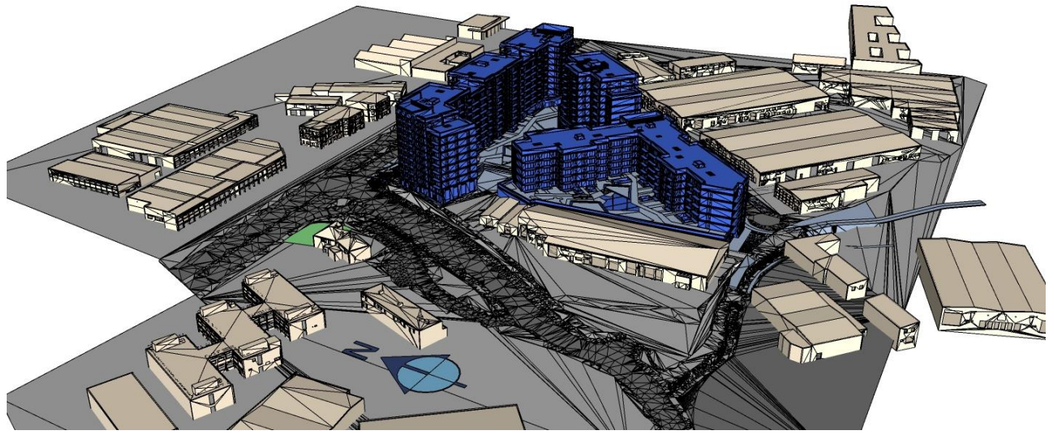
Google Earth extract © Google 2025

Design Model

A 3D model of the proposed development and the surrounding neighbouring properties was provided by the Architect. These had been modelled from survey information and drawings provided in plan, elevation and section formats. The model was geo-referenced to its correct location and an accurate solar daylight system was introduced. The analysis is based on the information provided.



Existing Model



Proposed Model

Scope of this Report

We have been asked to address the following specific items in this report and our scope is limited to the same:

Impact on Existing Neighbours

In this document we will assess the potential impact of the proposed development on the neighbouring residential houses. We will test for the following in relation to impact:

- Existing facing windows for:
  - Impact/Change for Skylight – **V**ertical **S**ky **C**omponent - VSC
  - Impact/Change for **P**robable **S**unlight **H**ours – Annual APSH and Winter WPSH
- Existing amenity spaces for impact/change on Sunlight/Shadow

Development Performance

For the proposed development we have initially examine the performance of the development under the following headings:

- Target Illuminance – E_T – All habitable rooms
- Sunlight to rooms – A room preferably a living space.
- Sunlight on the Ground SOG (Shadow) - Proposed Public & Shared amenity spaces

All residential rooms on all floors to all blocks are tested.

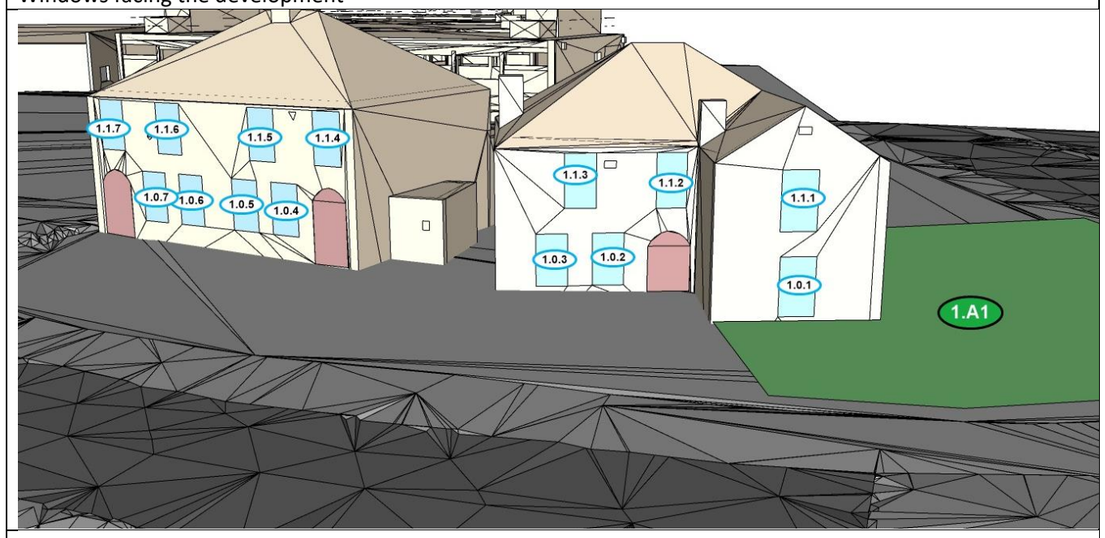
Adjacent Properties Details

The referencing used later in this report is detailed below.

Neighbour Group B1

Oblique imagery © Google 2024

Windows facing the development



Key to colours

Existing Buildings

Existing Buildings Replaced/Demolished

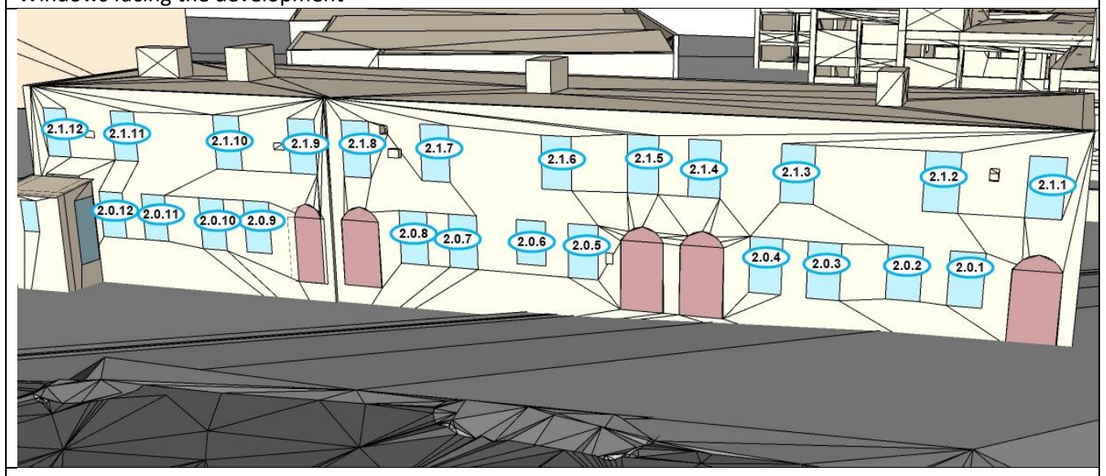
Residental Window/Cluster

Amenity space

Neighbour Group B2

Oblique imagery © Google 2023

Windows facing the development



Key to colours

Existing Buildings

Existing Buildings Replaced/Demolished

Residental Window/Cluster

Amenity space

Impact on neighbours

Adjacent Properties - Light from the Sky impact on neighbouring properties

Tests were carried out to establish the quantity and quality of skylight (daylight) available to a room's windows. Locations tested are based on guideline recommendations for the closest facades which have windows with potential for impact.

We have investigated this impact under clause 2.2.7

> ***2.2.7 If this VSC is greater than 27% then enough skylight should still be reaching the window of the existing building. This value of VSC typically supplies enough daylight to a standard room when combined with a window of normal dimensions, with glass area around 10% or more of the floor area. Any reduction below this level should be kept to a minimum. If the VSC, with the new development in place, is both less than 27% and less than 0.80 times its former value, occupants of the existing building will notice the reduction in the amount of skylight. The area lit by the window is likely to appear gloomier, and electric lighting will be needed more of the time. . . .***
>
> ***2.2.6 Any reduction in the total amount of skylight can be calculated by finding the VSC at the centre of each main window. In the case of a floor-to-ceiling window such as a patio door, a point 1.6 m above ground (or balcony level for an upper storey) on the centre line of the window may be used. For a bay window, the centre window facing directly outwards can be taken as the main window. If a room has two or more windows of equal size, the mean of their VSCs may be taken. The reference point is in the external plane of the window wall. Windows to bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed. . . .***

Tabulated results

	Skylight to habitable rooms						
	VSC						
Design	*Check > 27% or ratio > 0.8*						
v3							
Group	**Floor**	**Win**	**Ref**	**Existing**	**Proposed**	**Ratio**	**Result**
B1	F0	W1	1.0.1	37.7%	30.3%	0.80	Pass
B1	F0	W2	1.0.2	32.2%	25.2%	0.78	Marginal
B1	F0	W3	1.0.3	35.3%	28.3%	0.80	Pass
B1	F0	W4	1.0.4	37.6%	31.6%	0.84	Pass
B1	F0	W5	1.0.5	37.6%	31.7%	0.84	Pass
B1	F0	W6	1.0.6	37.6%	31.9%	0.85	Pass
B1	F0	W7	1.0.7	37.6%	32.0%	0.85	Pass
B1	F1	W1	1.1.1	38.4%	31.1%	0.81	Pass
B1	F1	W2	1.1.2	28.9%	22.2%	0.77	Marginal
B1	F1	W3	1.1.3	36.8%	30.0%	0.81	Pass
B1	F1	W4	1.1.4	38.3%	32.2%	0.84	Pass
B1	F1	W5	1.1.5	38.3%	32.5%	0.85	Pass
B1	F1	W6	1.1.6	38.2%	32.8%	0.86	Pass
B1	F1	W7	1.1.7	38.2%	33.0%	0.86	Pass
B2	F0	W1	2.0.1	37.8%	34.9%	0.93	Pass
B2	F0	W2	2.0.2	37.8%	35.0%	0.93	Pass
B2	F0	W3	2.0.3	37.7%	35.1%	0.93	Pass
B2	F0	W4	2.0.4	37.8%	35.2%	0.93	Pass
B2	F0	W5	2.0.5	37.8%	35.3%	0.94	Pass
B2	F0	W6	2.0.6	37.8%	35.4%	0.94	Pass
B2	F0	W7	2.0.7	37.7%	35.4%	0.94	Pass
B2	F0	W8	2.0.8	37.7%	35.4%	0.94	Pass
B2	F0	W9	2.0.9	37.7%	35.6%	0.94	Pass
B2	F0	W10	2.0.10	37.6%	35.5%	0.94	Pass
B2	F0	W11	2.0.11	36.4%	34.4%	0.94	Pass
B2	F0	W12	2.0.12	27.9%	25.9%	0.93	Pass
B2	F1	W1	2.1.1	38.4%	35.6%	0.93	Pass
B2	F1	W2	2.1.2	38.4%	35.7%	0.93	Pass
B2	F1	W3	2.1.3	38.5%	35.8%	0.93	Pass
B2	F1	W4	2.1.4	38.5%	35.9%	0.93	Pass
B2	F1	W5	2.1.5	38.5%	36.0%	0.94	Pass
B2	F1	W6	2.1.6	38.4%	36.0%	0.94	Pass
B2	F1	W7	2.1.7	38.4%	36.2%	0.94	Pass
B2	F1	W8	2.1.8	38.3%	36.1%	0.94	Pass
B2	F1	W9	2.1.9	38.5%	36.3%	0.94	Pass
B2	F1	W10	2.1.10	38.5%	36.3%	0.94	Pass
B2	F1	W11	2.1.11	38.5%	36.4%	0.95	Pass
B2	F1	W12	2.1.12	38.5%	36.5%	0.95	Pass

Note: When the proposed value exceeds the minimum requirement the ratio check is not required, and the result is coloured grey.

Windows 1.0.2 & 1.1.2 are just marginal on the target 0.80 change ratio at 0.78 and 0.77 respectively. Both windows still receive good skylight >22% VSC. The reduction in this case is mainly due to the fact that they sit close to the house's own façade articulation.

Conclusion

When tested with the new development in place
95% of the tested windows comply with the 27%, 0.8 ratio requirements for habitable rooms.
100% if we include marginal windows.

The average change ratio for VSC is **0.90**

The proposed development generally complies with the BRE guidelines in relation to neighbours skylight availability any impacts are marginal.

Adjacent Properties - Sunlight into living spaces

Tests for the amount of sunlight that windows to living room and/or conservatory can receive over both annual and winter periods.

> ***3.2.3 To assess loss of sunlight to an existing building, it is suggested that all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun. Normally loss of sunlight need not be analysed to kitchens and bedrooms, except for bedrooms that also comprise a living space, for example a bed sitting room in an old people's home. . . .***
>
> ***3.2.4 To calculate the loss of sunlight over the year, a different metric, the annual probable sunlight hours (APSH), is used. Here 'probable sunlight hours' means the total number of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question (based on sunshine probability data). The sunlight reaching a window is quantified as a percentage of this unobstructed annual total. … The APSH is a better way of quantifying loss of sunlight because it takes into account sunlight received over the whole year, not just on one particular date.***
>
> ***3.2.13 If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if the centre of the window:***
> ***• receives less than 25% of annual probable sunlight hours and less than 0.80 times its former annual value; or less than 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.80 times its former value during that period;***
> ***• and also has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.***

While not all windows relate to living rooms, we have for completeness tested all of them. Note only windows which face within 90˚of due South require testing and those that do not, are notionally labelled as "North" in the table below.

The results are tabulated below:

Sunlight on windows to living room spaces check

Annual - 25% and Winter - 5%

Design				*Check > 25% or ratio > 0.8*					*Check > 5% or ratio > 0.8*				
v3													
Group	Floor	Win	Ref	Existing	Proposed	Ratio	Result		Existing	Proposed	Ratio	Result	
B1	F0	W1	1.0.1	50.1%	36.4%	0.73	Pass	North	16.6%	12.4%	0.75	Pass	North
B1	F0	W2	1.0.2	48.8%	35.5%	0.73	Pass	North	15.4%	12.3%	0.80	Pass	North
B1	F0	W3	1.0.3	48.7%	35.5%	0.73	Pass	North	15.3%	12.2%	0.80	Pass	North
B1	F0	W4	1.0.4	63.5%	52.2%	0.82	Pass		23.7%	20.6%	0.87	Pass	
B1	F0	W5	1.0.5	63.8%	52.5%	0.82	Pass		24.0%	20.7%	0.86	Pass	
B1	F0	W6	1.0.6	63.9%	52.5%	0.82	Pass		24.1%	21.0%	0.87	Pass	
B1	F0	W7	1.0.7	63.8%	52.6%	0.82	Pass		24.0%	21.1%	0.88	Pass	
B1	F1	W1	1.1.1	50.5%	37.1%	0.74	Pass	North	17.0%	13.1%	0.77	Pass	North
B1	F1	W2	1.1.2	47.6%	34.3%	0.72	Pass	North	16.9%	12.7%	0.76	Pass	North
B1	F1	W3	1.1.3	50.2%	36.6%	0.73	Pass	North	16.7%	12.7%	0.76	Pass	North
B1	F1	W4	1.1.4	64.5%	53.1%	0.82	Pass		24.7%	21.1%	0.86	Pass	
B1	F1	W5	1.1.5	64.4%	53.3%	0.83	Pass		24.6%	21.1%	0.86	Pass	
B1	F1	W6	1.1.6	64.3%	53.2%	0.83	Pass		24.5%	21.3%	0.87	Pass	
B1	F1	W7	1.1.7	64.3%	53.4%	0.83	Pass		24.5%	21.4%	0.88	Pass	
B2	F0	W1	2.0.1	61.8%	55.9%	0.90	Pass		22.1%	21.0%	0.95	Pass	
B2	F0	W2	2.0.2	61.8%	56.3%	0.91	Pass		22.0%	21.0%	0.95	Pass	
B2	F0	W3	2.0.3	61.8%	56.7%	0.92	Pass		22.0%	21.0%	0.95	Pass	
B2	F0	W4	2.0.4	61.7%	56.9%	0.92	Pass		22.0%	21.0%	0.95	Pass	
B2	F0	W5	2.0.5	61.4%	57.7%	0.94	Pass		22.1%	21.1%	0.95	Pass	
B2	F0	W6	2.0.6	61.5%	58.8%	0.96	Pass		22.1%	21.1%	0.96	Pass	
B2	F0	W7	2.0.7	61.0%	58.7%	0.96	Pass		22.1%	21.5%	0.98	Pass	
B2	F0	W8	2.0.8	60.8%	58.4%	0.96	Pass		22.1%	21.5%	0.98	Pass	
B2	F0	W9	2.0.9	61.8%	58.6%	0.95	Pass		22.2%	21.5%	0.97	Pass	
B2	F0	W10	2.0.10	61.0%	57.7%	0.95	Pass		21.4%	20.7%	0.97	Pass	
B2	F0	W11	2.0.11	55.4%	51.9%	0.94	Pass		15.9%	15.1%	0.95	Pass	
B2	F0	W12	2.0.12	27.6%	24.1%	0.87	Pass		2.8%	2.0%	0.72	PASS	*1
B2	F1	W1	2.1.1	62.1%	56.4%	0.91	Pass		22.3%	21.3%	0.95	Pass	
B2	F1	W2	2.1.2	62.3%	56.9%	0.91	Pass		22.5%	21.4%	0.95	Pass	
B2	F1	W3	2.1.3	62.3%	57.4%	0.92	Pass		22.5%	21.4%	0.95	Pass	
B2	F1	W4	2.1.4	62.3%	57.7%	0.93	Pass		22.5%	21.4%	0.95	Pass	
B2	F1	W5	2.1.5	62.2%	58.5%	0.94	Pass		22.5%	21.4%	0.95	Pass	
B2	F1	W6	2.1.6	62.2%	58.9%	0.95	Pass		22.5%	21.6%	0.96	Pass	
B2	F1	W7	2.1.7	62.3%	59.7%	0.96	Pass		22.5%	21.8%	0.97	Pass	
B2	F1	W8	2.1.8	56.8%	53.7%	0.95	Pass		20.7%	19.9%	0.96	Pass	
B2	F1	W9	2.1.9	62.5%	59.4%	0.95	Pass		22.8%	21.9%	0.96	Pass	
B2	F1	W10	2.1.10	62.6%	59.2%	0.95	Pass		22.8%	21.8%	0.96	Pass	
B2	F1	W11	2.1.11	62.6%	59.2%	0.95	Pass		22.8%	22.0%	0.96	Pass	
B2	F1	W12	2.1.12	63.0%	59.8%	0.95	Pass		23.2%	22.6%	0.97	Pass	

Note: When the proposed value exceeds the minimum requirement the ratio check is not required, and the result is coloured grey.

*1 Windows noted thus comply with the APSH change being less than 4% requirement.

Conclusion

When tested with the proposed development in place:
100% of tested windows comply with the annual APSH and
100% with the winter WPSH requirements for sunlight or overall requirement.

The average change ratio for sunlight is APSH:**0.88** and WPSH: **0.90**

The proposed development complies with the BRE guidelines in relation to both annual and winter sunlight availability to neighbours as it applies to living rooms and conservatories.

Adjacent Properties – Sunlight on the Ground (Shadow)
Gardens and Open spaces

Tests for the availability of sunlight in amenity areas.

3.3.17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March

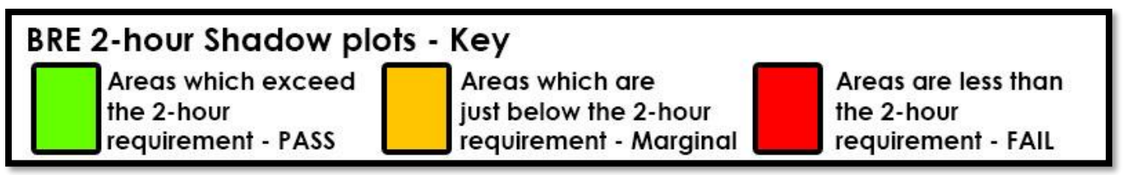
3.3.3 The availability of sunlight should be checked for all open spaces where it will be required. This would normally include:
• gardens, such as the main back garden of a house or communal gardens including courtyards and roof terraces
• parks and playing fields
• children's playgrounds
• outdoor swimming pools and paddling pools, and other areas of recreational water such as marinas and boating lakes
• sitting out areas such as those between non-domestic buildings and in public squares
• nature reserves (which may have special requirements for sunlight if rare plants are growing there).

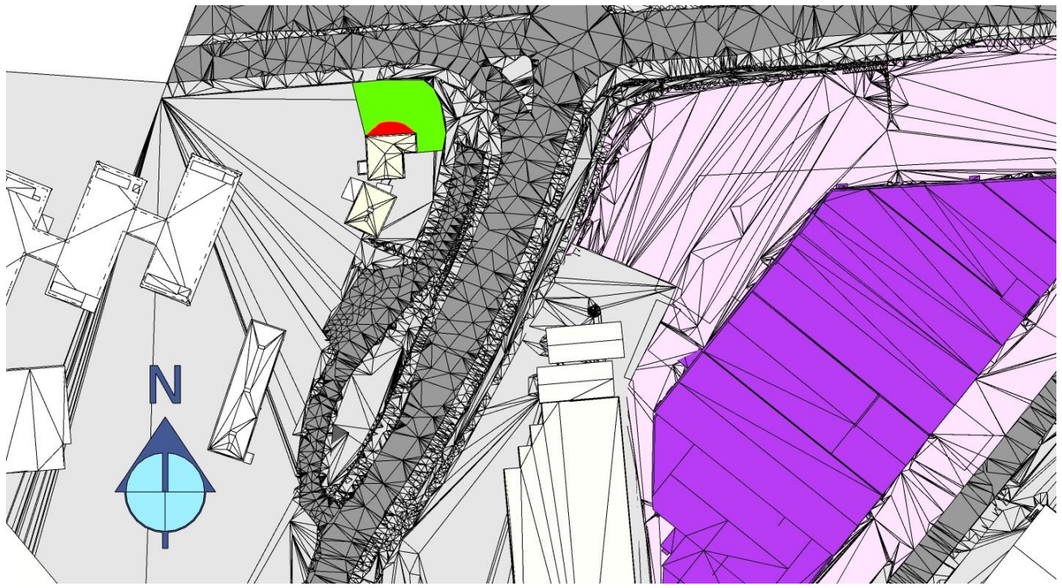
The amenities of the following properties were tested.

- Rear Gardens to neighbours group B1

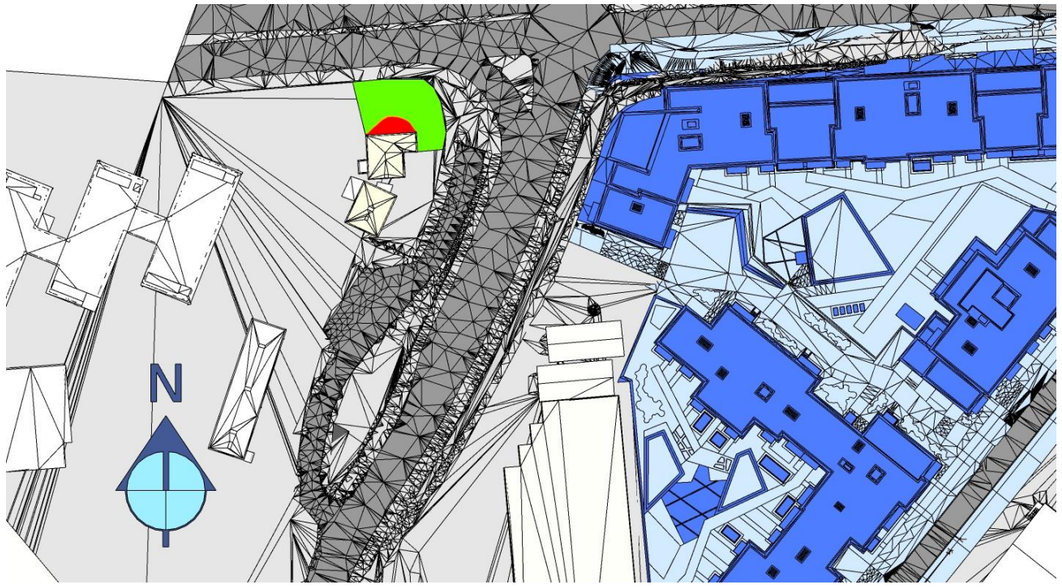
BRE 2-hour Shadow Plots

The graphic below indicates the areas which receive 2 hours of sunlight on the 21st March in accordance with the BRE Guidelines.





Existing



Proposed

The results are tabulated below:

				Shadow to amenity spaces			
				2-hour Sunlight - 21st March			
Design				*Check > 50% or ratio > 0.8*			
v3							
Group	**Area**	**Ref**	**Description**	**Existing**	**Proposed**	**Ratio**	**Result**
B1	A1	1.A1	Amenity	90%	87%	0.97	Pass

Note: When the proposed value exceeds the minimum requirement the ratio check is not required, and the result is coloured grey.

Please note that passing the BRE requirements does not imply that shadows will not be cast over an amenity space at all. Shadows which are transient by nature may not impact on the percentage of the space which receives 2 hours of sunlight on the 21st of March.

Conclusion

100% of tested neighbouring amenity spaces pass the BRE 2-hours of sunlight on the 21st of March or 0.8 ratio requirement.

The average change ratio for the tested amenity spaces **0.97**

The proposed development complies with the requirements of the BRE guidelines for impact on amenity Sunlight/Shadow.

Summary - Adjacent Properties

Neighbouring properties will generally not be affected by the proposed development and the impacts on Skylight, Sunlight and Shadow have been tested in accordance with the best practice guidelines.

Change/Impact to neighbouring buildings in the adjoining residential areas.

- **Skylight- VSC**
  - **95%** of the tested windows comply with the 27%, 0.8 ratio requirements for habitable rooms.
  - *100% if we include marginal windows.*
  - The average change ratio for VSC is **0.90**
- **Sunlight APSH & WPSH**
  - **100%** of tested windows comply with the annual APSH and
  - **100%** with the winter WPSH requirements for sunlight or overall requirement.
  - The average change ratio for sunlight is APSH:**0.88** and WPSH: **0.90**
- **Sunlight on the Ground SOG (Shadow)**
  - **100%** of tested neighbouring amenity spaces pass the 2-hour test requirements for the 21st March.
  - The average change ratio for shadow/sunlight is **0.97**

The impact of the proposed development on neighbours is almost fully compliant with the requirements of "Site layout planning for daylight and sunlight a guide to good practice " (BR209 – 2022), any impacts are marginal.

Development Performance

Development Performance - Target Illuminance E_T Metric

National Standards Authority of Ireland have adopted EN 17037 to directly become IS/EN 17037. There are no amendments made to this document and no national Annex localising the same was developed as can be found in BS/EN 17037. The standard document provides only a single target for rooms of new buildings and does not include specific usage targets for spaces for commercial, office and residential (living, bedroom, Kitchen).

The UK variant referenced is more suitable to use in temperate climates where the median external diffuse illuminance is low. We would concur with the UK committee that the recommendations for daylight provision in a space may not be achievable for some buildings, particularly dwellings, which are the subject of this report.

We note the reasoning put forward by the UK committee and concur with their conclusions that different room usage should be assigned different light requirements/targets. Design in Ireland quite often follows the practice and precedent set in the UK. With similar climates, light and receiving environments it is reasonable to adopt BS/EN 17037 / Annex NA which itself was derived from the now withdrawn BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting, Subclause 5.6. This provides alignment between the new and old standards and with the levels of light we are used to and deemed acceptable in new developments.

> ***Target illuminance (ET) :***
> ***Illuminance from daylight that should be achieved for at least half of annual daylight hours across a specified fraction of the reference plane in a daylit space***

Reference in Irish Government Publications:

Clause 6.6 of the Department Apartment Guidelines "Sustainable Urban Housing: Design Standards for New Apartments" directly reference this annex and the BRE guide (Emphasis Added):

Planning authorities should ensure appropriate expert advice and input where necessary, and have regard to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in Buildings EN17037 or ***UK National Annex BS EN17037 and the associated BRE Guide 209 2022*** *Edition (June 2022), or any relevant future guidance specific to the Irish context, when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision.*

Clause 5.3.7 (b) of "Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities" also directly reference this annex the BRE guide (Emphasis Added):

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

NA.2 - Minimum daylight provision in UK dwellings

Even if a predominantly daylit appearance is not achievable for a room in a UK dwelling, the UK committee recommends that the target illuminance values given in Table NA.1 are exceeded over at least 50 % of the points on a reference plane 0.85 m above the floor, for at least half of the daylight hours.

Table NA.1 — Values of target illuminance for room types in UK dwellings

Room type	Target illuminance E_T (lx)
Bedroom	100
Living room	150
Kitchen	200

Derived from BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting

Where one room in a UK dwelling serves more than a single purpose, the UK committee recommends that the target illuminance is that for the room type with the highest value – for example, in a space that combines a living room and a kitchen the target illuminance is recommended to be 200 lx.

It is the opinion of the UK committee that the recommendation in Clause A.2 – that a target illuminance level should be achieved across the entire (i.e. 95 %) fraction of the reference plane within a space – need not be applied to rooms in dwellings.

This is echoed in The BRE Guidelines

> ***C16 The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK.***
>
> ***C17 Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design. The kitchen space would still need to be included in the assessment area … in rooms with a particular requirement for daylight, such as bed sitting rooms in homes for the elderly, higher values … may be taken.***

Analysis Parameters

Analysis parameters are as per Annex B (and/or as revised by Annex NA), analysis method 1 was used. The following Parameters were used which are within the recommended ranges and reflect the materials/finishes specified in this application. The Median External Diffuse Illuminance used is noted in the relevant results tables.

Surface	Description	Reflectance
External Plane	Earth	0.2
External Walls	Grey Render / Concrete	0.4
Floor	Light wood/ cream Carpet	0.4
Internal Wall	Cream	0.7
Ceiling	White	0.8
Frames	Medium Grey	0.5
	Transmittance	
Glazing clear	0.63 (incls. Maintenance Factor)	
Glazing Translucent	0.4 (incls. Maintenance Factor)	

Light distribution was computed by modelling the internal configuration of rooms and windows placed within the existing topography and the adjacent buildings and then running an analysis on the same. This analysis was based on a standard working plane for in this case residential of 0.850m.

Reference plane or working plane

> *Horizontal, vertical, or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in houses and factories, 0.7 m above the floor in offices.*

Legend for Radiance Plots

In the radiances plots provided below we shall use the following demarcation of Lx results which is compatible with the target values from Annex NA

Assessment Areas

Where rooms have small annexed entrances or corridors they need not be included in the assessment grid area, (unless it is wide enough to be part of the usable space in a room, typically over 1.5m wide).

Fig C2 – Fixed floor to ceiling units

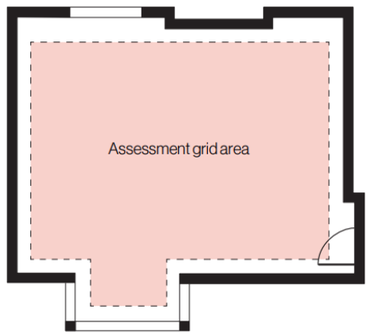


Figure C2: Where room layouts have small variations or alcoves along a wall's length, the inner or dominant section should be taken as a basis for the 0.3m gap to the assessment grid area. Fixed floor to ceiling cupboards can be excluded from the room area, but not kitchen units incorporating a worktop. Areas in bay windows may be included unless they are winter gardens separated from the room by a fixed partition.

Fig C3 - Corridors/entrances

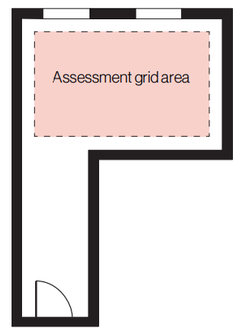


Figure C3: In a room with a corridor, or annexed entrance, the corridor need not be included in the assessment grid area (unless it is wide enough to be part of the usable space in a room, typically over 1.5m wide). The room layout and surfaces, including the corridor would still need to be included in the calculation model.

Fig C2 also notes that: Fixed floor to ceiling cupboards can be excluded from the room area, but not kitchen units incorporating a worktop. And also the BRE Guidelines note the following in relation to the assessment grid.

> *The standard states that the assessment grid should exclude a band of 0.5m from the walls, unless otherwise specified. In dwellings it is recommended that a band of 0.3m should be excluded, to avoid excluding parts of the room that are used by the occupants. Professional judgement should be used in cases with irregular shaped spaces or rooms with corridor or annex areas.*

Room referencing

- Rooms tested are referenced specifically for this report.
- This referencing is used to identify rooms rather than apartments.
- Numbering is generally sequential but may vary to keep similar room types on different floors consistent.
- Graphics are provided on a floor-by-floor basis to show the referencing for this project.
- Room numbers are coloured orange = Living/Kitchen/Dining room and Blue = Bedroom.
- Where Living and Kitchens are separated Green = Living room and yellow = Kitchens.

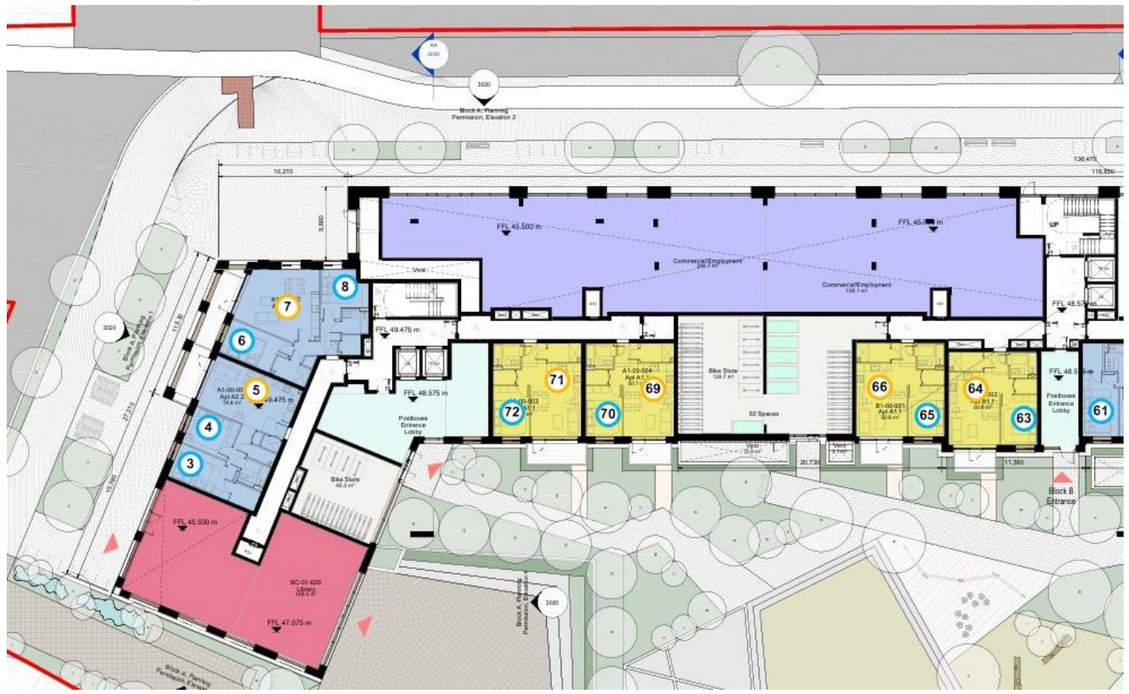
In the result tables the following referencing is used.

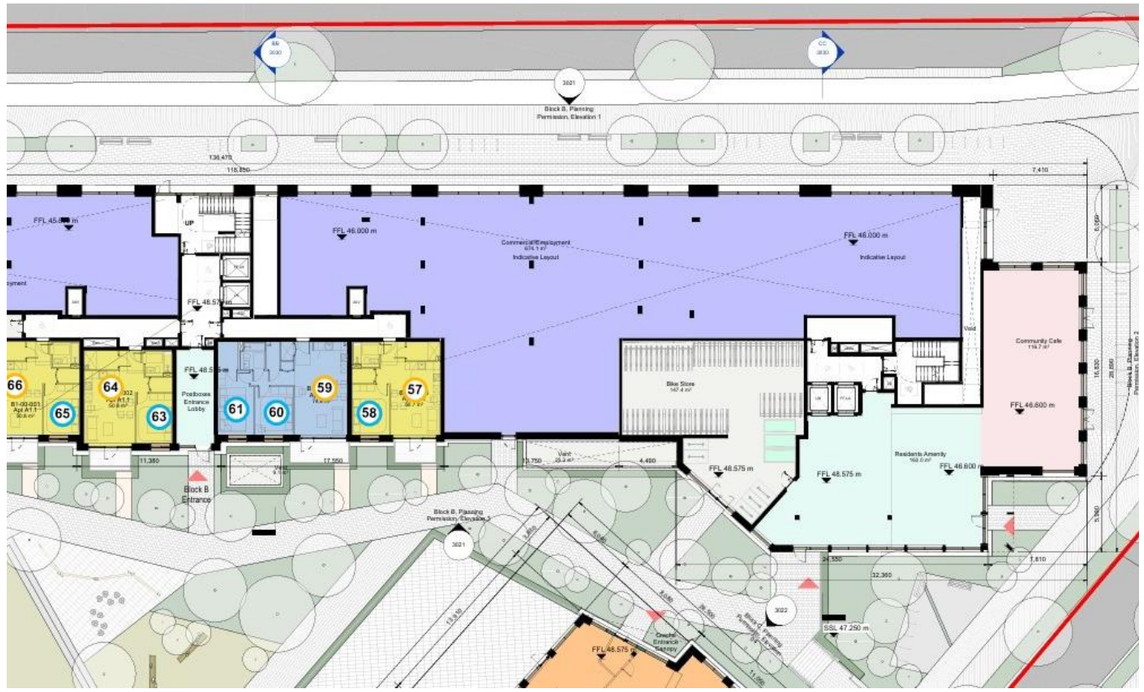
- Two-digit Floor reference 00=GFL, 01=1st Floor
- A two letter block reference
- Two-digit room reference (as per layout naming in the plans below
  Combined Living/Kitchen/Dining rooms have the suffix “c” added to the name
  This would also be the reference for a Studio apartment.

Typical Example of the naming, not specifically project related:

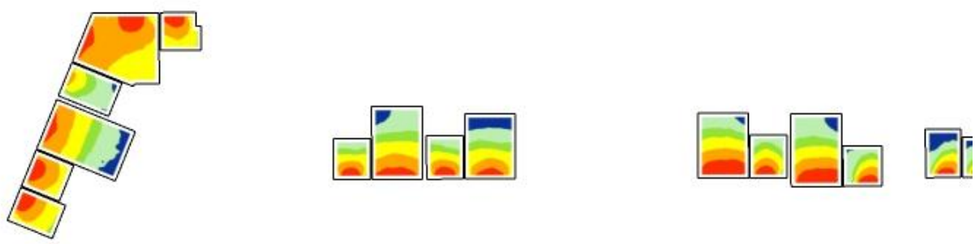
01-AB-02c = 1st Floor, Block AB, room 2 which is an LKD (Living/Kitchen/Dining room).
00-Cx-04 = Ground Floor, Block C, room 4 which is a bedroom.

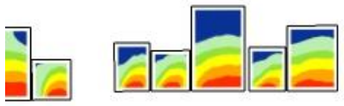
Block AB - Target Illuminance E_T - GFL Floor





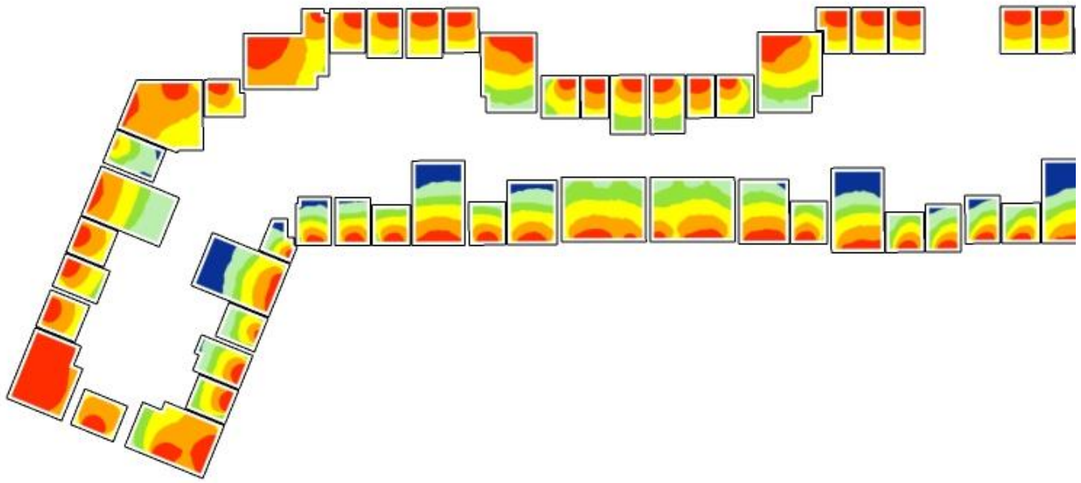
Radiance Plot

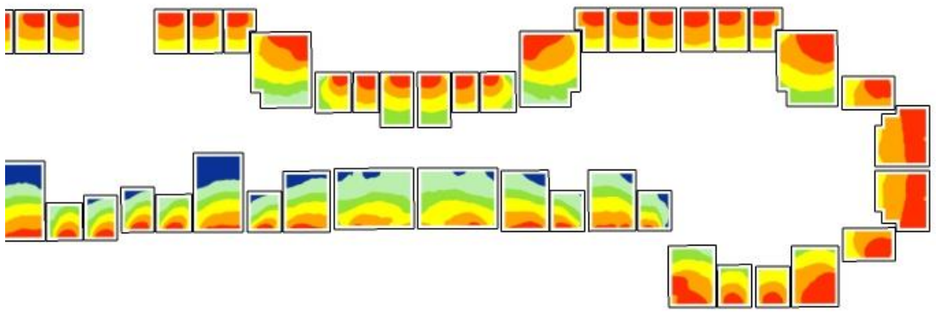




Block AB - 1st Floor

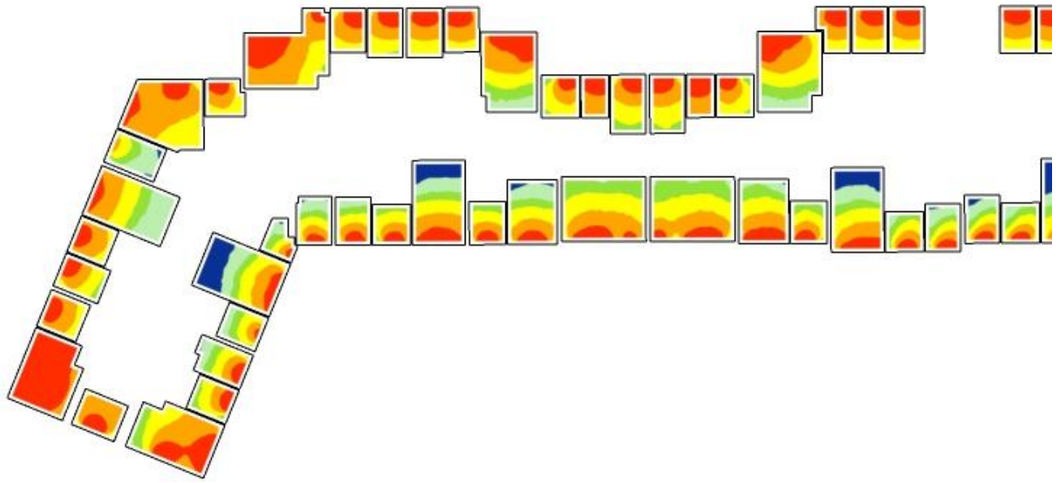
Radiance Plot

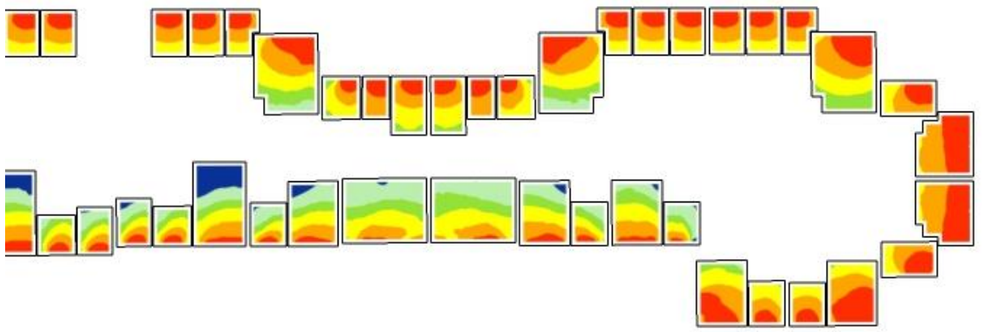




Block AB – 2nd Floor

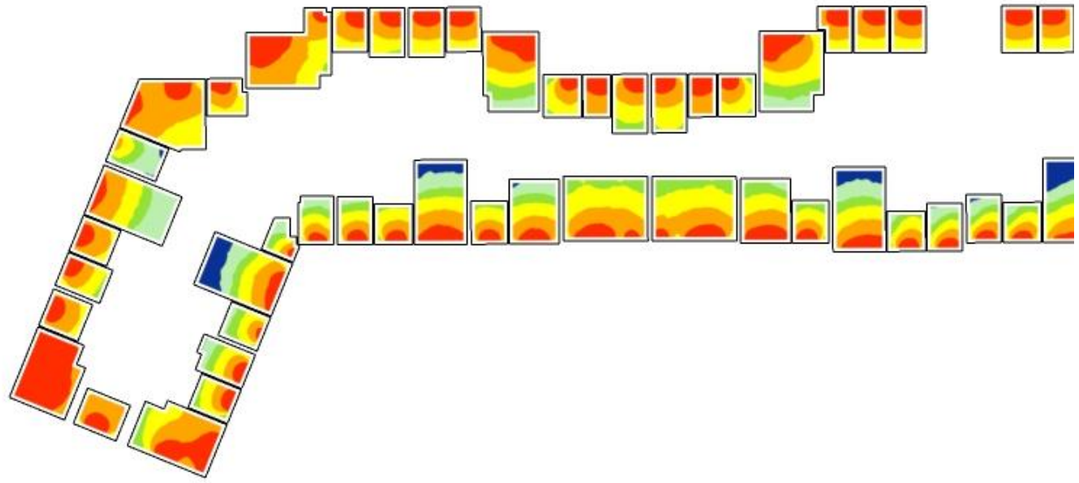
Radiance Plot

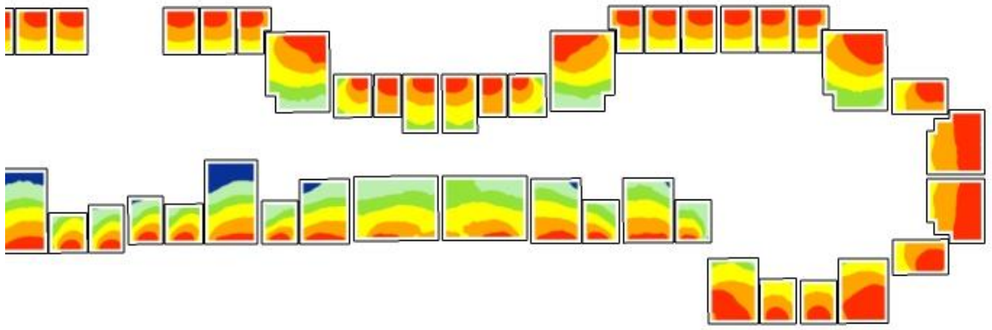




Block AB – 3rd Floor

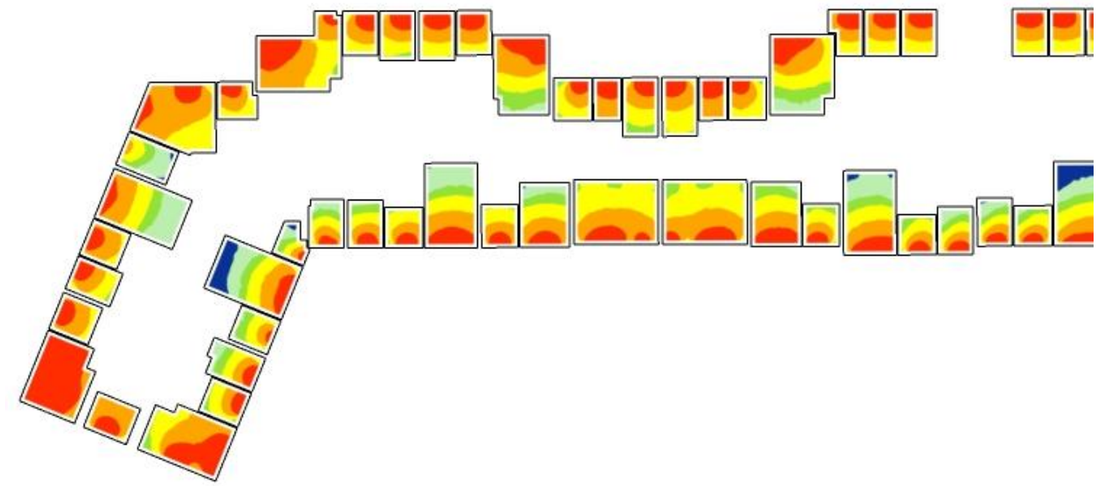
Radiance Plot

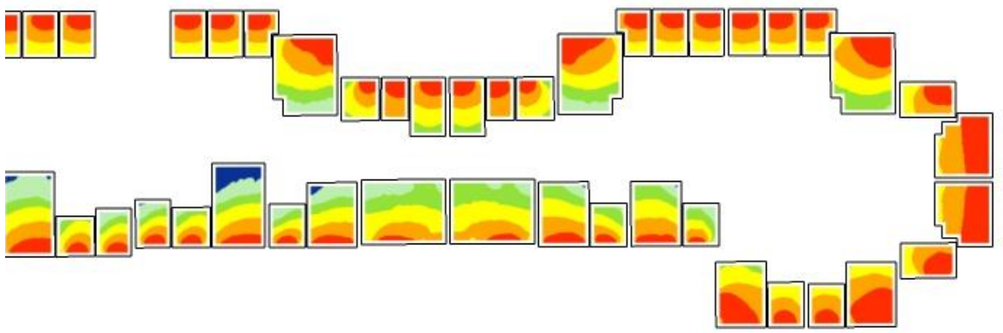




Block AB – 4th Floor

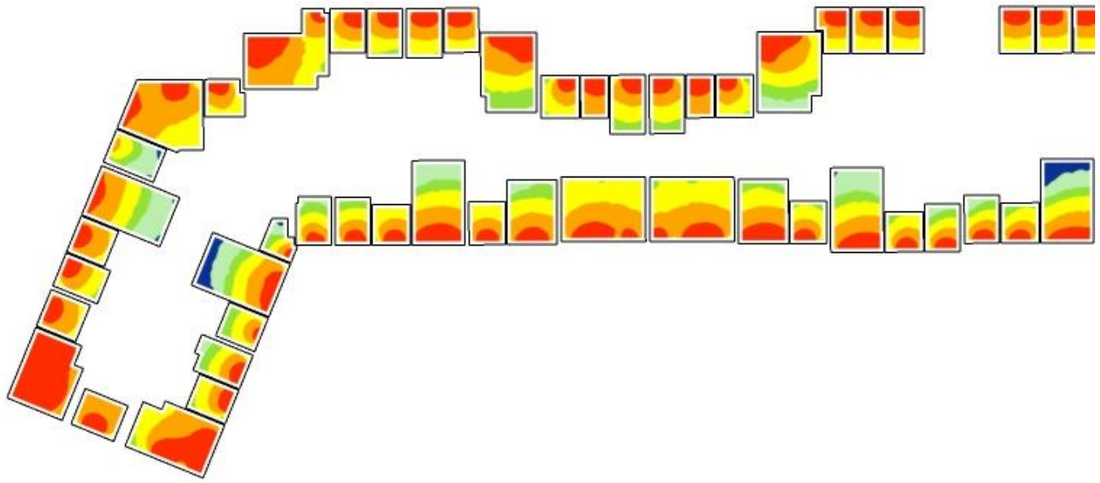
Radiance Plot

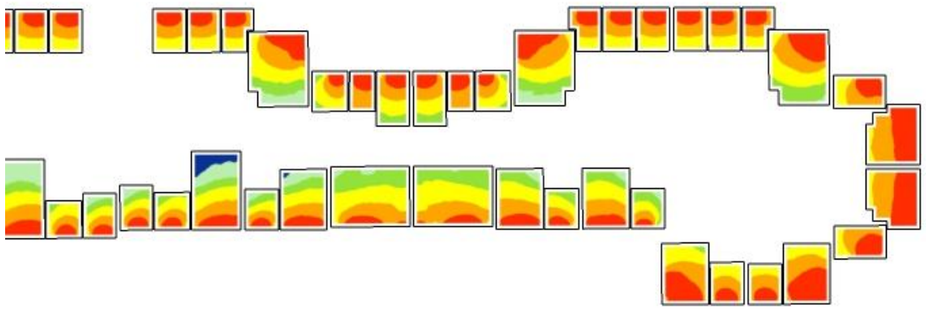




Block AB – 5th Floor

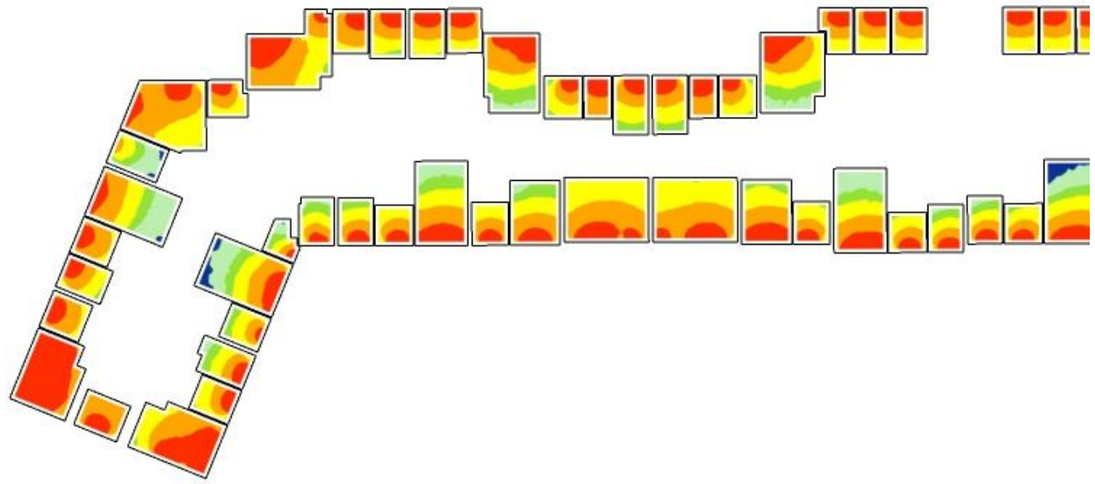
Radiance Plot

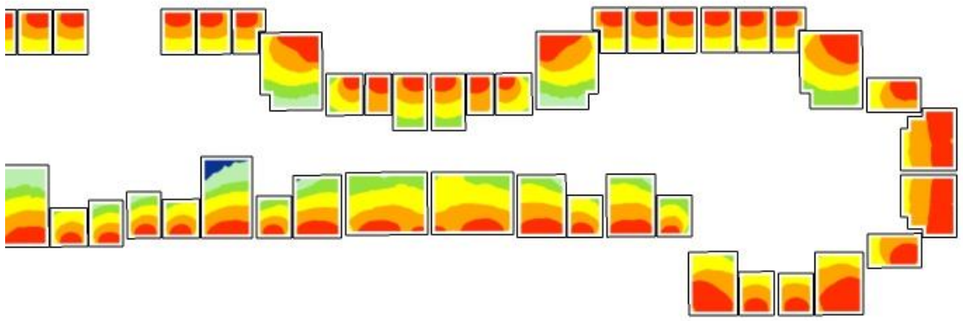




Block AB – 6th Floor

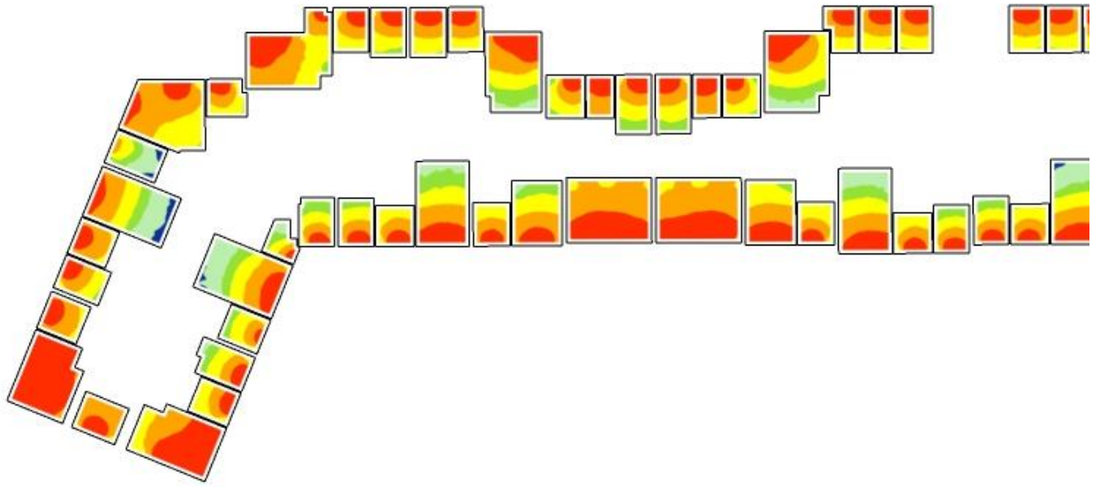
Radiance Plot

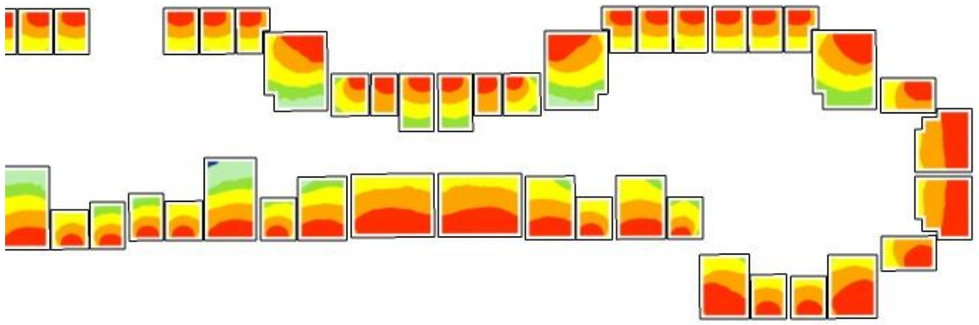




Block AB – 7th Floor

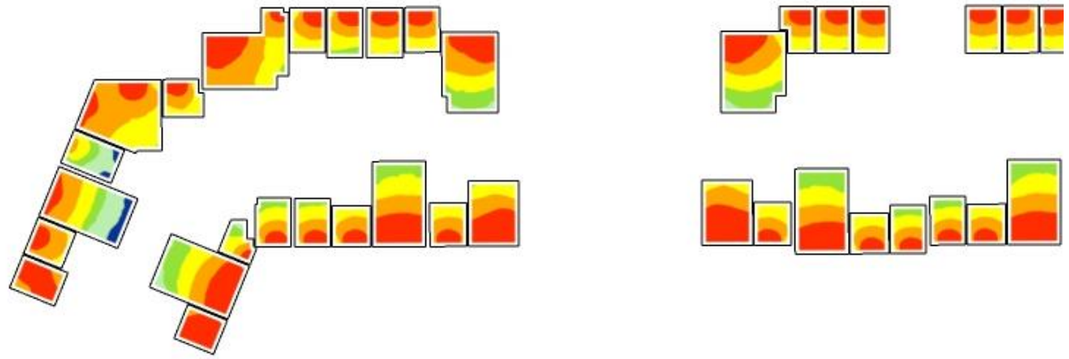
Radiance Plot

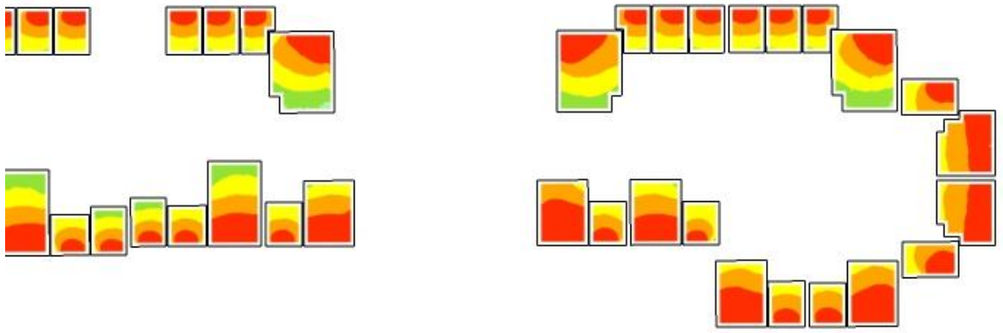




Block AB – 8th Floor

Radiance Plot





NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
00-AB-03	Bedroom	100	100	Pass
00-AB-04	Bedroom	100	100	Pass
00-AB-05c	Living/Kitchen	48	200	Marginal
00-AB-06	Bedroom	91	100	Pass
00-AB-07c	Living/Kitchen	100	200	Pass
00-AB-08	Bedroom	100	100	Pass
00-AB-57c	Living/Kitchen	46	200	Marginal
00-AB-58	Bedroom	75	100	Pass
00-AB-59c	Living/Kitchen	39	200	Fail
00-AB-60	Bedroom	92	100	Pass
00-AB-61	Bedroom	68	100	Pass
00-AB-63	Bedroom	97	100	Pass
00-AB-64c	Living/Kitchen	54	200	Pass
00-AB-65	Bedroom	100	100	Pass
00-AB-66c	Living/Kitchen	60	200	Pass
00-AB-69c	Living/Kitchen	42	200	Marginal
00-AB-70	Bedroom	100	100	Pass
00-AB-71c	Living/Kitchen	50	200	Pass
00-AB-72	Bedroom	100	100	Pass
01-AB-01c	Living/Kitchen	100	200	Pass
01-AB-02	Bedroom	100	100	Pass
01-AB-03	Bedroom	100	100	Pass
01-AB-04	Bedroom	100	100	Pass
01-AB-05c	Living/Kitchen	52	200	Pass
01-AB-06	Bedroom	89	100	Pass
01-AB-07c	Living/Kitchen	100	200	Pass
01-AB-08	Bedroom	100	100	Pass
01-AB-09c	Living/Kitchen	98	200	Pass
01-AB-10	Bedroom	100	100	Pass
01-AB-11	Bedroom	100	100	Pass
01-AB-12	Bedroom	100	100	Pass
01-AB-13	Bedroom	100	100	Pass
01-AB-14c	Living/Kitchen	68	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
01-AB-15	Bedroom	100	100	Pass
01-AB-16	Bedroom	100	100	Pass
01-AB-17	Bedroom	100	100	Pass
01-AB-18	Bedroom	100	100	Pass
01-AB-19	Bedroom	100	100	Pass
01-AB-20	Bedroom	100	100	Pass
01-AB-21c	Living/Kitchen	67	200	Pass
01-AB-22	Bedroom	100	100	Pass
01-AB-23	Bedroom	100	100	Pass
01-AB-24	Bedroom	100	100	Pass
01-AB-25	Bedroom	100	100	Pass
01-AB-26	Bedroom	100	100	Pass
01-AB-27	Bedroom	100	100	Pass
01-AB-28c	Living/Kitchen	67	200	Pass
01-AB-29	Bedroom	100	100	Pass
01-AB-30	Bedroom	100	100	Pass
01-AB-31	Bedroom	100	100	Pass
01-AB-32	Bedroom	100	100	Pass
01-AB-33	Bedroom	100	100	Pass
01-AB-34	Bedroom	100	100	Pass
01-AB-35c	Living/Kitchen	69	200	Pass
01-AB-36	Bedroom	100	100	Pass
01-AB-37	Bedroom	100	100	Pass
01-AB-38	Bedroom	100	100	Pass
01-AB-39	Bedroom	100	100	Pass
01-AB-40	Bedroom	100	100	Pass
01-AB-41	Bedroom	100	100	Pass
01-AB-42c	Living/Kitchen	78	200	Pass
01-AB-43	Bedroom	100	100	Pass
01-AB-44c	Living/Kitchen	100	200	Pass
01-AB-45c	Living/Kitchen	100	200	Pass
01-AB-46	Bedroom	100	100	Pass
01-AB-47c	Living/Kitchen	91	200	Pass
01-AB-48	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
01-AB-49	Bedroom	100	100	Pass
01-AB-50c	Living/Kitchen	75	200	Pass
01-AB-51	Bedroom	84	100	Pass
01-AB-52c	Living/Kitchen	52	200	Pass
01-AB-53	Bedroom	100	100	Pass
01-AB-54c	Living/Kitchen	50	200	Pass
01-AB-55c	Living/Kitchen	38	200	Fail
01-AB-56c	Living/Kitchen	35	200	Fail
01-AB-57c	Living/Kitchen	46	200	Marginal
01-AB-58	Bedroom	90	100	Pass
01-AB-59c	Living/Kitchen	37	200	Fail
01-AB-60	Bedroom	100	100	Pass
01-AB-61	Bedroom	86	100	Pass
01-AB-62	Bedroom	92	100	Pass
01-AB-63	Bedroom	100	100	Pass
01-AB-64c	Living/Kitchen	45	200	Marginal
01-AB-65	Bedroom	100	100	Pass
01-AB-66c	Living/Kitchen	62	200	Pass
01-AB-67c	Living/Kitchen	58	200	Pass
01-AB-68c	Living/Kitchen	60	200	Pass
01-AB-69c	Living/Kitchen	51	200	Pass
01-AB-70	Bedroom	100	100	Pass
01-AB-71c	Living/Kitchen	48	200	Marginal
01-AB-72	Bedroom	100	100	Pass
01-AB-73	Bedroom	93	100	Pass
01-AB-74	Bedroom	81	100	Pass
01-AB-75	Bedroom	80	100	Pass
01-AB-76c	Living/Kitchen	40	200	Marginal
01-AB-77	Bedroom	100	100	Pass
01-AB-78	Bedroom	97	100	Pass
01-AB-79	Bedroom	100	100	Pass
01-AB-80c	Living/Kitchen	84	200	Pass
01-AB-81	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-AB-01c	Living/Kitchen	100	200	Pass
02-AB-02	Bedroom	100	100	Pass
02-AB-03	Bedroom	100	100	Pass
02-AB-04	Bedroom	100	100	Pass
02-AB-05c	Living/Kitchen	54	200	Pass
02-AB-06	Bedroom	91	100	Pass
02-AB-07c	Living/Kitchen	100	200	Pass
02-AB-08	Bedroom	100	100	Pass
02-AB-09c	Living/Kitchen	98	200	Pass
02-AB-10	Bedroom	100	100	Pass
02-AB-11	Bedroom	100	100	Pass
02-AB-12	Bedroom	100	100	Pass
02-AB-13	Bedroom	100	100	Pass
02-AB-14c	Living/Kitchen	68	200	Pass
02-AB-15	Bedroom	100	100	Pass
02-AB-16	Bedroom	100	100	Pass
02-AB-17	Bedroom	100	100	Pass
02-AB-18	Bedroom	100	100	Pass
02-AB-19	Bedroom	100	100	Pass
02-AB-20	Bedroom	100	100	Pass
02-AB-21c	Living/Kitchen	67	200	Pass
02-AB-22	Bedroom	100	100	Pass
02-AB-23	Bedroom	100	100	Pass
02-AB-24	Bedroom	100	100	Pass
02-AB-25	Bedroom	100	100	Pass
02-AB-26	Bedroom	100	100	Pass
02-AB-27	Bedroom	100	100	Pass
02-AB-28c	Living/Kitchen	69	200	Pass
02-AB-29	Bedroom	100	100	Pass
02-AB-30	Bedroom	100	100	Pass
02-AB-31	Bedroom	100	100	Pass
02-AB-32	Bedroom	100	100	Pass
02-AB-33	Bedroom	100	100	Pass
02-AB-34	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-AB-35c	Living/Kitchen	68	200	Pass
02-AB-36	Bedroom	100	100	Pass
02-AB-37	Bedroom	100	100	Pass
02-AB-38	Bedroom	100	100	Pass
02-AB-39	Bedroom	100	100	Pass
02-AB-40	Bedroom	100	100	Pass
02-AB-41	Bedroom	100	100	Pass
02-AB-42c	Living/Kitchen	78	200	Pass
02-AB-43	Bedroom	100	100	Pass
02-AB-44c	Living/Kitchen	100	200	Pass
02-AB-45c	Living/Kitchen	100	200	Pass
02-AB-46	Bedroom	100	100	Pass
02-AB-47c	Living/Kitchen	98	200	Pass
02-AB-48	Bedroom	100	100	Pass
02-AB-49	Bedroom	100	100	Pass
02-AB-50c	Living/Kitchen	83	200	Pass
02-AB-51	Bedroom	93	100	Pass
02-AB-52c	Living/Kitchen	60	200	Pass
02-AB-53	Bedroom	100	100	Pass
02-AB-54c	Living/Kitchen	56	200	Pass
02-AB-55c	Living/Kitchen	45	200	Marginal
02-AB-56c	Living/Kitchen	42	200	Marginal
02-AB-57c	Living/Kitchen	51	200	Pass
02-AB-58	Bedroom	97	100	Pass
02-AB-59c	Living/Kitchen	40	200	Marginal
02-AB-60	Bedroom	100	100	Pass
02-AB-61	Bedroom	92	100	Pass
02-AB-62	Bedroom	96	100	Pass
02-AB-63	Bedroom	100	100	Pass
02-AB-64c	Living/Kitchen	50	200	Pass
02-AB-65	Bedroom	100	100	Pass
02-AB-66c	Living/Kitchen	68	200	Pass
02-AB-67c	Living/Kitchen	67	200	Pass
02-AB-68c	Living/Kitchen	71	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-AB-69c	Living/Kitchen	56	200	Pass
02-AB-70	Bedroom	100	100	Pass
02-AB-71c	Living/Kitchen	52	200	Pass
02-AB-72	Bedroom	100	100	Pass
02-AB-73	Bedroom	100	100	Pass
02-AB-74	Bedroom	100	100	Pass
02-AB-75	Bedroom	100	100	Pass
02-AB-76c	Living/Kitchen	43	200	Marginal
02-AB-77	Bedroom	100	100	Pass
02-AB-78	Bedroom	100	100	Pass
02-AB-79	Bedroom	100	100	Pass
02-AB-80c	Living/Kitchen	87	200	Pass
02-AB-81	Bedroom	100	100	Pass
03-AB-01c	Living/Kitchen	100	200	Pass
03-AB-02	Bedroom	100	100	Pass
03-AB-03	Bedroom	100	100	Pass
03-AB-04	Bedroom	100	100	Pass
03-AB-05c	Living/Kitchen	54	200	Pass
03-AB-06	Bedroom	92	100	Pass
03-AB-07c	Living/Kitchen	100	200	Pass
03-AB-08	Bedroom	100	100	Pass
03-AB-09c	Living/Kitchen	98	200	Pass
03-AB-10	Bedroom	100	100	Pass
03-AB-11	Bedroom	100	100	Pass
03-AB-12	Bedroom	100	100	Pass
03-AB-13	Bedroom	100	100	Pass
03-AB-14c	Living/Kitchen	67	200	Pass
03-AB-15	Bedroom	100	100	Pass
03-AB-16	Bedroom	100	100	Pass
03-AB-17	Bedroom	100	100	Pass
03-AB-18	Bedroom	100	100	Pass
03-AB-19	Bedroom	100	100	Pass
03-AB-20	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
03-AB-21c	Living/Kitchen	67	200	Pass
03-AB-22	Bedroom	100	100	Pass
03-AB-23	Bedroom	100	100	Pass
03-AB-24	Bedroom	100	100	Pass
03-AB-25	Bedroom	100	100	Pass
03-AB-26	Bedroom	100	100	Pass
03-AB-27	Bedroom	100	100	Pass
03-AB-28c	Living/Kitchen	67	200	Pass
03-AB-29	Bedroom	100	100	Pass
03-AB-30	Bedroom	100	100	Pass
03-AB-31	Bedroom	100	100	Pass
03-AB-32	Bedroom	100	100	Pass
03-AB-33	Bedroom	100	100	Pass
03-AB-34	Bedroom	100	100	Pass
03-AB-35c	Living/Kitchen	67	200	Pass
03-AB-36	Bedroom	100	100	Pass
03-AB-37	Bedroom	100	100	Pass
03-AB-38	Bedroom	100	100	Pass
03-AB-39	Bedroom	100	100	Pass
03-AB-40	Bedroom	100	100	Pass
03-AB-41	Bedroom	100	100	Pass
03-AB-42c	Living/Kitchen	74	200	Pass
03-AB-43	Bedroom	100	100	Pass
03-AB-44c	Living/Kitchen	100	200	Pass
03-AB-45c	Living/Kitchen	100	200	Pass
03-AB-46	Bedroom	100	100	Pass
03-AB-47c	Living/Kitchen	98	200	Pass
03-AB-48	Bedroom	100	100	Pass
03-AB-49	Bedroom	100	100	Pass
03-AB-50c	Living/Kitchen	87	200	Pass
03-AB-51	Bedroom	97	100	Pass
03-AB-52c	Living/Kitchen	63	200	Pass
03-AB-53	Bedroom	100	100	Pass
03-AB-54c	Living/Kitchen	62	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
03-AB-55c	Living/Kitchen	53	200	Pass
03-AB-56c	Living/Kitchen	48	200	Marginal
03-AB-57c	Living/Kitchen	53	200	Pass
03-AB-58	Bedroom	100	100	Pass
03-AB-59c	Living/Kitchen	43	200	Marginal
03-AB-60	Bedroom	100	100	Pass
03-AB-61	Bedroom	96	100	Pass
03-AB-62	Bedroom	100	100	Pass
03-AB-63	Bedroom	100	100	Pass
03-AB-64c	Living/Kitchen	51	200	Pass
03-AB-65	Bedroom	100	100	Pass
03-AB-66c	Living/Kitchen	72	200	Pass
03-AB-67c	Living/Kitchen	77	200	Pass
03-AB-68c	Living/Kitchen	82	200	Pass
03-AB-69c	Living/Kitchen	61	200	Pass
03-AB-70	Bedroom	100	100	Pass
03-AB-71c	Living/Kitchen	55	200	Pass
03-AB-72	Bedroom	100	100	Pass
03-AB-73	Bedroom	100	100	Pass
03-AB-74	Bedroom	100	100	Pass
03-AB-75	Bedroom	100	100	Pass
03-AB-76c	Living/Kitchen	47	200	Marginal
03-AB-77	Bedroom	100	100	Pass
03-AB-78	Bedroom	100	100	Pass
03-AB-79	Bedroom	100	100	Pass
03-AB-80c	Living/Kitchen	89	200	Pass
03-AB-81	Bedroom	100	100	Pass
04-AB-01c	Living/Kitchen	100	200	Pass
04-AB-02	Bedroom	100	100	Pass
04-AB-03	Bedroom	100	100	Pass
04-AB-04	Bedroom	100	100	Pass
04-AB-05c	Living/Kitchen	54	200	Pass
04-AB-06	Bedroom	94	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
04-AB-07c	Living/Kitchen	100	200	Pass
04-AB-08	Bedroom	100	100	Pass
04-AB-09c	Living/Kitchen	98	200	Pass
04-AB-10	Bedroom	100	100	Pass
04-AB-11	Bedroom	100	100	Pass
04-AB-12	Bedroom	100	100	Pass
04-AB-13	Bedroom	100	100	Pass
04-AB-14c	Living/Kitchen	70	200	Pass
04-AB-15	Bedroom	100	100	Pass
04-AB-16	Bedroom	100	100	Pass
04-AB-17	Bedroom	100	100	Pass
04-AB-18	Bedroom	100	100	Pass
04-AB-19	Bedroom	100	100	Pass
04-AB-20	Bedroom	100	100	Pass
04-AB-21c	Living/Kitchen	67	200	Pass
04-AB-22	Bedroom	100	100	Pass
04-AB-23	Bedroom	100	100	Pass
04-AB-24	Bedroom	100	100	Pass
04-AB-25	Bedroom	100	100	Pass
04-AB-26	Bedroom	100	100	Pass
04-AB-27	Bedroom	100	100	Pass
04-AB-28c	Living/Kitchen	67	200	Pass
04-AB-29	Bedroom	100	100	Pass
04-AB-30	Bedroom	100	100	Pass
04-AB-31	Bedroom	100	100	Pass
04-AB-32	Bedroom	100	100	Pass
04-AB-33	Bedroom	100	100	Pass
04-AB-34	Bedroom	100	100	Pass
04-AB-35c	Living/Kitchen	67	200	Pass
04-AB-36	Bedroom	100	100	Pass
04-AB-37	Bedroom	100	100	Pass
04-AB-38	Bedroom	100	100	Pass
04-AB-39	Bedroom	100	100	Pass
04-AB-40	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
04-AB-41	Bedroom	100	100	Pass
04-AB-42c	Living/Kitchen	75	200	Pass
04-AB-43	Bedroom	100	100	Pass
04-AB-44c	Living/Kitchen	100	200	Pass
04-AB-45c	Living/Kitchen	100	200	Pass
04-AB-46	Bedroom	100	100	Pass
04-AB-47c	Living/Kitchen	99	200	Pass
04-AB-48	Bedroom	100	100	Pass
04-AB-49	Bedroom	100	100	Pass
04-AB-50c	Living/Kitchen	90	200	Pass
04-AB-51	Bedroom	100	100	Pass
04-AB-52c	Living/Kitchen	68	200	Pass
04-AB-53	Bedroom	100	100	Pass
04-AB-54c	Living/Kitchen	68	200	Pass
04-AB-55c	Living/Kitchen	60	200	Pass
04-AB-56c	Living/Kitchen	54	200	Pass
04-AB-57c	Living/Kitchen	57	200	Pass
04-AB-58	Bedroom	100	100	Pass
04-AB-59c	Living/Kitchen	48	200	Marginal
04-AB-60	Bedroom	100	100	Pass
04-AB-61	Bedroom	97	100	Pass
04-AB-62	Bedroom	100	100	Pass
04-AB-63	Bedroom	100	100	Pass
04-AB-64c	Living/Kitchen	55	200	Pass
04-AB-65	Bedroom	100	100	Pass
04-AB-66c	Living/Kitchen	76	200	Pass
04-AB-67c	Living/Kitchen	90	200	Pass
04-AB-68c	Living/Kitchen	95	200	Pass
04-AB-69c	Living/Kitchen	65	200	Pass
04-AB-70	Bedroom	100	100	Pass
04-AB-71c	Living/Kitchen	60	200	Pass
04-AB-72	Bedroom	100	100	Pass
04-AB-73	Bedroom	100	100	Pass
04-AB-74	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
04-AB-75	Bedroom	88	100	Pass
04-AB-76c	Living/Kitchen	49	200	Marginal
04-AB-77	Bedroom	100	100	Pass
04-AB-78	Bedroom	100	100	Pass
04-AB-79	Bedroom	100	100	Pass
04-AB-80c	Living/Kitchen	93	200	Pass
04-AB-81	Bedroom	100	100	Pass
05-AB-01c	Living/Kitchen	100	200	Pass
05-AB-02	Bedroom	100	100	Pass
05-AB-03	Bedroom	100	100	Pass
05-AB-04	Bedroom	100	100	Pass
05-AB-05c	Living/Kitchen	54	200	Pass
05-AB-06	Bedroom	91	100	Pass
05-AB-07c	Living/Kitchen	100	200	Pass
05-AB-08	Bedroom	100	100	Pass
05-AB-09c	Living/Kitchen	98	200	Pass
05-AB-10	Bedroom	100	100	Pass
05-AB-11	Bedroom	100	100	Pass
05-AB-12	Bedroom	100	100	Pass
05-AB-13	Bedroom	100	100	Pass
05-AB-14c	Living/Kitchen	73	200	Pass
05-AB-15	Bedroom	100	100	Pass
05-AB-16	Bedroom	100	100	Pass
05-AB-17	Bedroom	100	100	Pass
05-AB-18	Bedroom	100	100	Pass
05-AB-19	Bedroom	100	100	Pass
05-AB-20	Bedroom	100	100	Pass
05-AB-21c	Living/Kitchen	67	200	Pass
05-AB-22	Bedroom	100	100	Pass
05-AB-23	Bedroom	100	100	Pass
05-AB-24	Bedroom	100	100	Pass
05-AB-25	Bedroom	100	100	Pass
05-AB-26	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
05-AB-27	Bedroom	100	100	Pass
05-AB-28c	Living/Kitchen	67	200	Pass
05-AB-29	Bedroom	100	100	Pass
05-AB-30	Bedroom	100	100	Pass
05-AB-31	Bedroom	100	100	Pass
05-AB-32	Bedroom	100	100	Pass
05-AB-33	Bedroom	100	100	Pass
05-AB-34	Bedroom	100	100	Pass
05-AB-35c	Living/Kitchen	67	200	Pass
05-AB-36	Bedroom	100	100	Pass
05-AB-37	Bedroom	100	100	Pass
05-AB-38	Bedroom	100	100	Pass
05-AB-39	Bedroom	100	100	Pass
05-AB-40	Bedroom	100	100	Pass
05-AB-41	Bedroom	100	100	Pass
05-AB-42c	Living/Kitchen	74	200	Pass
05-AB-43	Bedroom	100	100	Pass
05-AB-44c	Living/Kitchen	100	200	Pass
05-AB-45c	Living/Kitchen	100	200	Pass
05-AB-46	Bedroom	100	100	Pass
05-AB-47c	Living/Kitchen	99	200	Pass
05-AB-48	Bedroom	100	100	Pass
05-AB-49	Bedroom	100	100	Pass
05-AB-50c	Living/Kitchen	96	200	Pass
05-AB-51	Bedroom	100	100	Pass
05-AB-52c	Living/Kitchen	75	200	Pass
05-AB-53	Bedroom	100	100	Pass
05-AB-54c	Living/Kitchen	73	200	Pass
05-AB-55c	Living/Kitchen	70	200	Pass
05-AB-56c	Living/Kitchen	64	200	Pass
05-AB-57c	Living/Kitchen	64	200	Pass
05-AB-58	Bedroom	100	100	Pass
05-AB-59c	Living/Kitchen	51	200	Pass
05-AB-60	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
05-AB-61	Bedroom	100	100	Pass
05-AB-62	Bedroom	100	100	Pass
05-AB-63	Bedroom	100	100	Pass
05-AB-64c	Living/Kitchen	57	200	Pass
05-AB-65	Bedroom	100	100	Pass
05-AB-66c	Living/Kitchen	81	200	Pass
05-AB-67c	Living/Kitchen	97	200	Pass
05-AB-68c	Living/Kitchen	99	200	Pass
05-AB-69c	Living/Kitchen	70	200	Pass
05-AB-70	Bedroom	100	100	Pass
05-AB-71c	Living/Kitchen	63	200	Pass
05-AB-72	Bedroom	100	100	Pass
05-AB-73	Bedroom	100	100	Pass
05-AB-74	Bedroom	100	100	Pass
05-AB-75	Bedroom	92	100	Pass
05-AB-76c	Living/Kitchen	52	200	Pass
05-AB-77	Bedroom	100	100	Pass
05-AB-78	Bedroom	100	100	Pass
05-AB-79	Bedroom	100	100	Pass
05-AB-80c	Living/Kitchen	97	200	Pass
05-AB-81	Bedroom	100	100	Pass
06-AB-01c	Living/Kitchen	100	200	Pass
06-AB-02	Bedroom	100	100	Pass
06-AB-03	Bedroom	100	100	Pass
06-AB-04	Bedroom	100	100	Pass
06-AB-05c	Living/Kitchen	55	200	Pass
06-AB-06	Bedroom	91	100	Pass
06-AB-07c	Living/Kitchen	100	200	Pass
06-AB-08	Bedroom	100	100	Pass
06-AB-09c	Living/Kitchen	97	200	Pass
06-AB-10	Bedroom	100	100	Pass
06-AB-11	Bedroom	100	100	Pass
06-AB-12	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
06-AB-13	Bedroom	100	100	Pass
06-AB-14c	Living/Kitchen	68	200	Pass
06-AB-15	Bedroom	100	100	Pass
06-AB-16	Bedroom	100	100	Pass
06-AB-17	Bedroom	100	100	Pass
06-AB-18	Bedroom	100	100	Pass
06-AB-19	Bedroom	100	100	Pass
06-AB-20	Bedroom	100	100	Pass
06-AB-21c	Living/Kitchen	67	200	Pass
06-AB-22	Bedroom	100	100	Pass
06-AB-23	Bedroom	100	100	Pass
06-AB-24	Bedroom	100	100	Pass
06-AB-25	Bedroom	100	100	Pass
06-AB-26	Bedroom	100	100	Pass
06-AB-27	Bedroom	100	100	Pass
06-AB-28c	Living/Kitchen	67	200	Pass
06-AB-29	Bedroom	100	100	Pass
06-AB-30	Bedroom	100	100	Pass
06-AB-31	Bedroom	100	100	Pass
06-AB-32	Bedroom	100	100	Pass
06-AB-33	Bedroom	100	100	Pass
06-AB-34	Bedroom	100	100	Pass
06-AB-35c	Living/Kitchen	68	200	Pass
06-AB-36	Bedroom	100	100	Pass
06-AB-37	Bedroom	100	100	Pass
06-AB-38	Bedroom	100	100	Pass
06-AB-39	Bedroom	100	100	Pass
06-AB-40	Bedroom	100	100	Pass
06-AB-41	Bedroom	100	100	Pass
06-AB-42c	Living/Kitchen	74	200	Pass
06-AB-43	Bedroom	100	100	Pass
06-AB-44c	Living/Kitchen	100	200	Pass
06-AB-45c	Living/Kitchen	100	200	Pass
06-AB-46	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
06-AB-47c	Living/Kitchen	99	200	Pass
06-AB-48	Bedroom	100	100	Pass
06-AB-49	Bedroom	100	100	Pass
06-AB-50c	Living/Kitchen	96	200	Pass
06-AB-51	Bedroom	100	100	Pass
06-AB-52c	Living/Kitchen	80	200	Pass
06-AB-53	Bedroom	100	100	Pass
06-AB-54c	Living/Kitchen	79	200	Pass
06-AB-55c	Living/Kitchen	85	200	Pass
06-AB-56c	Living/Kitchen	72	200	Pass
06-AB-57c	Living/Kitchen	69	200	Pass
06-AB-58	Bedroom	100	100	Pass
06-AB-59c	Living/Kitchen	53	200	Pass
06-AB-60	Bedroom	100	100	Pass
06-AB-61	Bedroom	100	100	Pass
06-AB-62	Bedroom	100	100	Pass
06-AB-63	Bedroom	100	100	Pass
06-AB-64c	Living/Kitchen	60	200	Pass
06-AB-65	Bedroom	100	100	Pass
06-AB-66c	Living/Kitchen	85	200	Pass
06-AB-67c	Living/Kitchen	99	200	Pass
06-AB-68c	Living/Kitchen	100	200	Pass
06-AB-69c	Living/Kitchen	71	200	Pass
06-AB-70	Bedroom	100	100	Pass
06-AB-71c	Living/Kitchen	64	200	Pass
06-AB-72	Bedroom	100	100	Pass
06-AB-73	Bedroom	100	100	Pass
06-AB-74	Bedroom	100	100	Pass
06-AB-75	Bedroom	100	100	Pass
06-AB-76c	Living/Kitchen	54	200	Pass
06-AB-77	Bedroom	100	100	Pass
06-AB-78	Bedroom	100	100	Pass
06-AB-79	Bedroom	100	100	Pass
06-AB-80c	Living/Kitchen	98	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
06-AB-81	Bedroom	100	100	Pass
07-AB-01c	Living/Kitchen	100	200	Pass
07-AB-02	Bedroom	100	100	Pass
07-AB-03	Bedroom	100	100	Pass
07-AB-04	Bedroom	100	100	Pass
07-AB-05c	Living/Kitchen	52	200	Pass
07-AB-06	Bedroom	87	100	Pass
07-AB-07c	Living/Kitchen	100	200	Pass
07-AB-08	Bedroom	100	100	Pass
07-AB-09c	Living/Kitchen	97	200	Pass
07-AB-10	Bedroom	100	100	Pass
07-AB-11	Bedroom	100	100	Pass
07-AB-12	Bedroom	100	100	Pass
07-AB-13	Bedroom	100	100	Pass
07-AB-14c	Living/Kitchen	70	200	Pass
07-AB-15	Bedroom	100	100	Pass
07-AB-16	Bedroom	100	100	Pass
07-AB-17	Bedroom	100	100	Pass
07-AB-18	Bedroom	100	100	Pass
07-AB-19	Bedroom	100	100	Pass
07-AB-20	Bedroom	100	100	Pass
07-AB-21c	Living/Kitchen	68	200	Pass
07-AB-22	Bedroom	100	100	Pass
07-AB-23	Bedroom	100	100	Pass
07-AB-24	Bedroom	100	100	Pass
07-AB-25	Bedroom	100	100	Pass
07-AB-26	Bedroom	100	100	Pass
07-AB-27	Bedroom	100	100	Pass
07-AB-28c	Living/Kitchen	68	200	Pass
07-AB-29	Bedroom	100	100	Pass
07-AB-30	Bedroom	100	100	Pass
07-AB-31	Bedroom	100	100	Pass
07-AB-32	Bedroom	100	100	Pass
07-AB-33	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3 **Type**

Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
07-AB-34	Bedroom	100	100	Pass
07-AB-35c	Living/Kitchen	69	200	Pass
07-AB-36	Bedroom	100	100	Pass
07-AB-37	Bedroom	100	100	Pass
07-AB-38	Bedroom	100	100	Pass
07-AB-39	Bedroom	100	100	Pass
07-AB-40	Bedroom	100	100	Pass
07-AB-41	Bedroom	100	100	Pass
07-AB-42c	Living/Kitchen	75	200	Pass
07-AB-43	Bedroom	100	100	Pass
07-AB-44c	Living/Kitchen	100	200	Pass
07-AB-45c	Living/Kitchen	100	200	Pass
07-AB-46	Bedroom	100	100	Pass
07-AB-47c	Living/Kitchen	99	200	Pass
07-AB-48	Bedroom	100	100	Pass
07-AB-49	Bedroom	100	100	Pass
07-AB-50c	Living/Kitchen	97	200	Pass
07-AB-51	Bedroom	100	100	Pass
07-AB-52c	Living/Kitchen	92	200	Pass
07-AB-53	Bedroom	100	100	Pass
07-AB-54c	Living/Kitchen	93	200	Pass
07-AB-55c	Living/Kitchen	100	200	Pass
07-AB-56c	Living/Kitchen	100	200	Pass
07-AB-57c	Living/Kitchen	80	200	Pass
07-AB-58	Bedroom	100	100	Pass
07-AB-59c	Living/Kitchen	59	200	Pass
07-AB-60	Bedroom	100	100	Pass
07-AB-61	Bedroom	100	100	Pass
07-AB-62	Bedroom	100	100	Pass
07-AB-63	Bedroom	100	100	Pass
07-AB-64c	Living/Kitchen	64	200	Pass
07-AB-65	Bedroom	100	100	Pass
07-AB-66c	Living/Kitchen	92	200	Pass
07-AB-67c	Living/Kitchen	100	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3 **Type**

Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
07-AB-68c	Living/Kitchen	100	200	Pass
07-AB-69c	Living/Kitchen	78	200	Pass
07-AB-70	Bedroom	100	100	Pass
07-AB-71c	Living/Kitchen	67	200	Pass
07-AB-72	Bedroom	100	100	Pass
07-AB-73	Bedroom	100	100	Pass
07-AB-74	Bedroom	100	100	Pass
07-AB-75	Bedroom	100	100	Pass
07-AB-76c	Living/Kitchen	57	200	Pass
07-AB-77	Bedroom	100	100	Pass
07-AB-78	Bedroom	100	100	Pass
07-AB-79	Bedroom	100	100	Pass
07-AB-80c	Living/Kitchen	100	200	Pass
07-AB-81	Bedroom	100	100	Pass
08-AB-03	Bedroom	100	100	Pass
08-AB-04	Bedroom	100	100	Pass
08-AB-05c	Living/Kitchen	52	200	Pass
08-AB-06	Bedroom	87	100	Pass
08-AB-07c	Living/Kitchen	100	200	Pass
08-AB-08	Bedroom	100	100	Pass
08-AB-09c	Living/Kitchen	98	200	Pass
08-AB-10	Bedroom	100	100	Pass
08-AB-11	Bedroom	100	100	Pass
08-AB-12	Bedroom	100	100	Pass
08-AB-13	Bedroom	100	100	Pass
08-AB-14c	Living/Kitchen	72	200	Pass
08-AB-21c	Living/Kitchen	71	200	Pass
08-AB-22	Bedroom	100	100	Pass
08-AB-23	Bedroom	100	100	Pass
08-AB-24	Bedroom	100	100	Pass
08-AB-25	Bedroom	100	100	Pass
08-AB-26	Bedroom	100	100	Pass
08-AB-27	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance	14,900	lx

>50 % of the points on a reference plane to exceed

AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
08-AB-28c	Living/Kitchen	72	200	Pass
08-AB-35c	Living/Kitchen	78	200	Pass
08-AB-36	Bedroom	100	100	Pass
08-AB-37	Bedroom	100	100	Pass
08-AB-38	Bedroom	100	100	Pass
08-AB-39	Bedroom	100	100	Pass
08-AB-40	Bedroom	100	100	Pass
08-AB-41	Bedroom	100	100	Pass
08-AB-42c	Living/Kitchen	73	200	Pass
08-AB-43	Bedroom	100	100	Pass
08-AB-44c	Living/Kitchen	100	200	Pass
08-AB-45c	Living/Kitchen	100	200	Pass
08-AB-46	Bedroom	100	100	Pass
08-AB-47c	Living/Kitchen	100	200	Pass
08-AB-48	Bedroom	100	100	Pass
08-AB-49	Bedroom	100	100	Pass
08-AB-50	Bedroom	100	100	Pass
08-AB-51	Bedroom	100	100	Pass
08-AB-52c	Living/Kitchen	98	200	Pass
08-AB-53	Bedroom	100	100	Pass
08-AB-54c	Living/Kitchen	100	200	Pass
08-AB-57c	Living/Kitchen	98	200	Pass
08-AB-58	Bedroom	100	100	Pass
08-AB-59c	Living/Kitchen	80	200	Pass
08-AB-60	Bedroom	100	100	Pass
08-AB-61	Bedroom	100	100	Pass
08-AB-62	Bedroom	100	100	Pass
08-AB-63	Bedroom	100	100	Pass
08-AB-64c	Living/Kitchen	76	200	Pass
08-AB-65	Bedroom	100	100	Pass
08-AB-66c	Living/Kitchen	100	200	Pass
08-AB-69c	Living/Kitchen	98	200	Pass
08-AB-70	Bedroom	100	100	Pass
08-AB-71c	Living/Kitchen	80	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance	14,900	lx

>50 % of the points on a reference plane to exceed

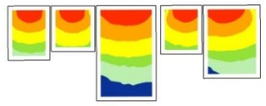
AB-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
08-AB-72	Bedroom	100	100	Pass
08-AB-73	Bedroom	100	100	Pass
08-AB-74	Bedroom	100	100	Pass
08-AB-75	Bedroom	100	100	Pass
08-AB-76c	Living/Kitchen	72	200	Pass
08-AB-77	Bedroom	100	100	Pass

Block AB

- ***Compliant 97%, including marginals 99%***
- ***Average all bedrooms 99% and for all LKD 75%***

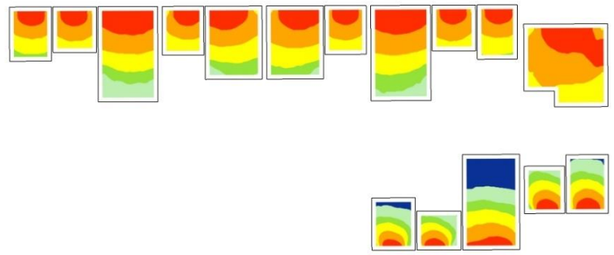
Block C - Target Illuminance E_T - Lower GFL

Radiance Plot



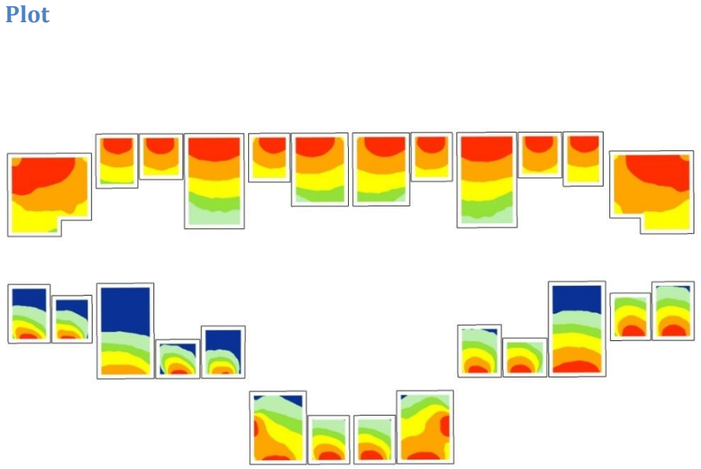
Block C - Upper GFL

Radiance Plot



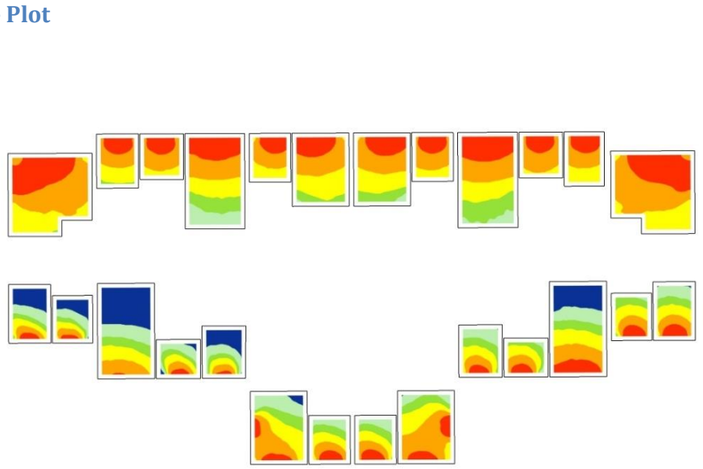
Block C – 1st Floor

Radiance Plot



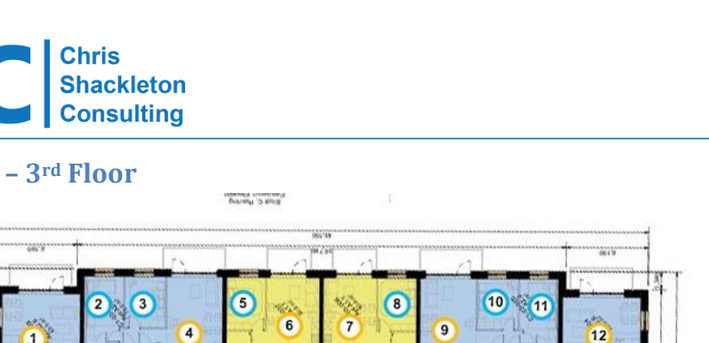
Block C – 2nd Floor

Radiance Plot



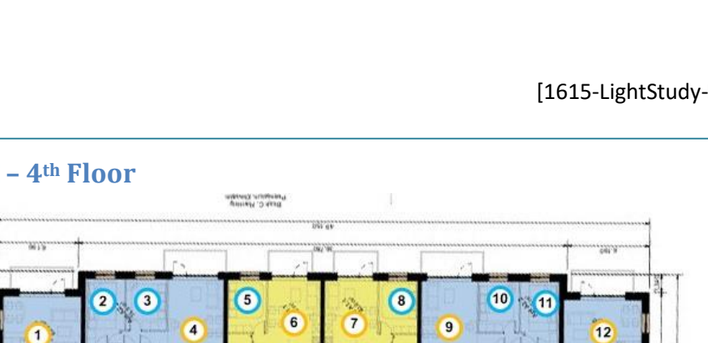
Block C – 3rd Floor

Radiance Plot



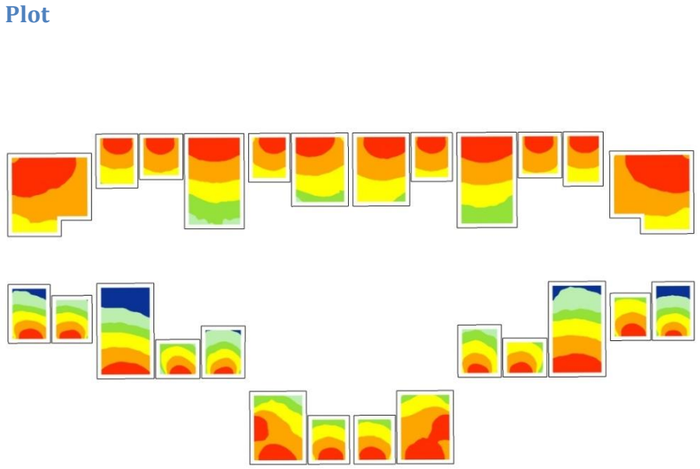
Block C – 4th Floor

Radiance Plot



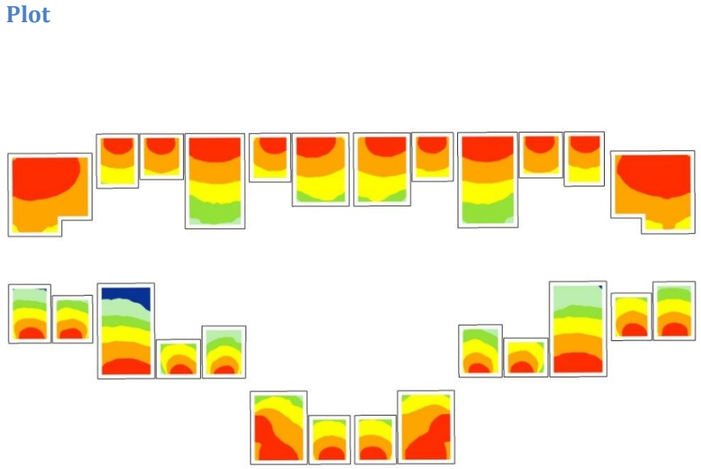
Block C – 5th Floor

Radiance Plot



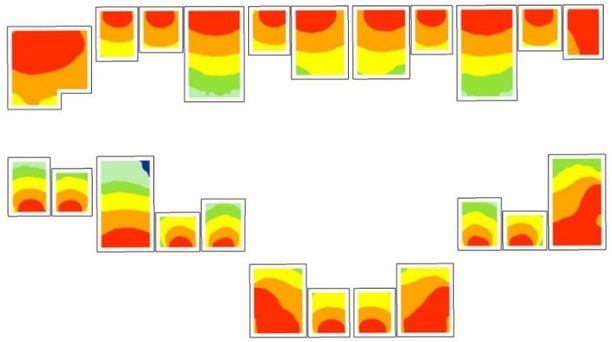
Block C – 6th Floor

Radiance Plot



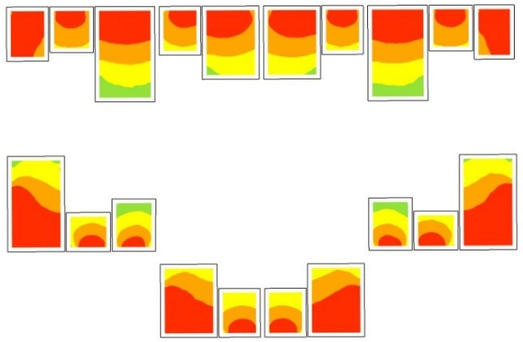
Block C – 7th Floor

Radiance Plot



Block C – 8th Floor

Radiance Plot



NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance	14,900	lx

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
0L-Cx-02	Bedroom	100	100	Pass
0L-Cx-03	Bedroom	100	100	Pass
0L-Cx-04c	Living/Kitchen	53	200	Pass
0L-Cx-05	Bedroom	100	100	Pass
0L-Cx-06c	Living/Kitchen	59	200	Pass
0U-Cx-02	Bedroom	100	100	Pass
0U-Cx-03	Bedroom	100	100	Pass
0U-Cx-04c	Living/Kitchen	66	200	Pass
0U-Cx-05	Bedroom	100	100	Pass
0U-Cx-06c	Living/Kitchen	76	200	Pass
0U-Cx-07c	Living/Kitchen	80	200	Pass
0U-Cx-08	Bedroom	100	100	Pass
0U-Cx-09c	Living/Kitchen	69	200	Pass
0U-Cx-10	Bedroom	100	100	Pass
0U-Cx-11	Bedroom	100	100	Pass
0U-Cx-12c	Living/Kitchen	100	200	Pass
0U-Cx-13	Bedroom	97	100	Pass
0U-Cx-14	Bedroom	100	100	Pass
0U-Cx-15c	Living/Kitchen	40	200	Marginal
0U-Cx-16	Bedroom	100	100	Pass
0U-Cx-17	Bedroom	82	100	Pass
01-Cx-01c	Living/Kitchen	99	200	Pass
01-Cx-02	Bedroom	100	100	Pass
01-Cx-03	Bedroom	100	100	Pass
01-Cx-04c	Living/Kitchen	65	200	Pass
01-Cx-05	Bedroom	100	100	Pass
01-Cx-06c	Living/Kitchen	76	200	Pass
01-Cx-07c	Living/Kitchen	79	200	Pass
01-Cx-08	Bedroom	100	100	Pass
01-Cx-09c	Living/Kitchen	68	200	Pass
01-Cx-10	Bedroom	100	100	Pass
01-Cx-11	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance	14,900	lx

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
01-Cx-12c	Living/Kitchen	100	200	Pass
01-Cx-13	Bedroom	97	100	Pass
01-Cx-14	Bedroom	100	100	Pass
01-Cx-15c	Living/Kitchen	44	200	Marginal
01-Cx-16	Bedroom	100	100	Pass
01-Cx-17	Bedroom	91	100	Pass
01-Cx-18c	Living/Kitchen	72	200	Pass
01-Cx-19	Bedroom	100	100	Pass
01-Cx-20	Bedroom	100	100	Pass
01-Cx-21c	Living/Kitchen	55	200	Pass
01-Cx-22	Bedroom	43	100	Marginal
01-Cx-23	Bedroom	70	100	Pass
01-Cx-24c	Living/Kitchen	26	200	Fail
01-Cx-25	Bedroom	60	100	Pass
01-Cx-26	Bedroom	62	100	Pass
02-Cx-01c	Living/Kitchen	99	200	Pass
02-Cx-02	Bedroom	100	100	Pass
02-Cx-03	Bedroom	100	100	Pass
02-Cx-04c	Living/Kitchen	65	200	Pass
02-Cx-05	Bedroom	100	100	Pass
02-Cx-06c	Living/Kitchen	86	200	Pass
02-Cx-07c	Living/Kitchen	80	200	Pass
02-Cx-08	Bedroom	100	100	Pass
02-Cx-09c	Living/Kitchen	69	200	Pass
02-Cx-10	Bedroom	100	100	Pass
02-Cx-11	Bedroom	100	100	Pass
02-Cx-12c	Living/Kitchen	100	200	Pass
02-Cx-13	Bedroom	100	100	Pass
02-Cx-14	Bedroom	100	100	Pass
02-Cx-15c	Living/Kitchen	48	200	Marginal
02-Cx-16	Bedroom	100	100	Pass
02-Cx-17	Bedroom	100	100	Pass
02-Cx-18c	Living/Kitchen	76	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-Cx-19	Bedroom	100	100	Pass
02-Cx-20	Bedroom	100	100	Pass
02-Cx-21c	Living/Kitchen	60	200	Pass
02-Cx-22	Bedroom	55	100	Pass
02-Cx-23	Bedroom	88	100	Pass
02-Cx-24c	Living/Kitchen	31	200	Fail
02-Cx-25	Bedroom	60	100	Pass
02-Cx-26	Bedroom	62	100	Pass
03-Cx-01c	Living/Kitchen	100	200	Pass
03-Cx-02	Bedroom	100	100	Pass
03-Cx-03	Bedroom	100	100	Pass
03-Cx-04c	Living/Kitchen	67	200	Pass
03-Cx-05	Bedroom	100	100	Pass
03-Cx-06c	Living/Kitchen	80	200	Pass
03-Cx-07c	Living/Kitchen	81	200	Pass
03-Cx-08	Bedroom	100	100	Pass
03-Cx-09c	Living/Kitchen	74	200	Pass
03-Cx-10	Bedroom	100	100	Pass
03-Cx-11	Bedroom	100	100	Pass
03-Cx-12c	Living/Kitchen	100	200	Pass
03-Cx-13	Bedroom	100	100	Pass
03-Cx-14	Bedroom	100	100	Pass
03-Cx-15c	Living/Kitchen	52	200	Pass
03-Cx-16	Bedroom	100	100	Pass
03-Cx-17	Bedroom	100	100	Pass
03-Cx-18c	Living/Kitchen	81	200	Pass
03-Cx-19	Bedroom	100	100	Pass
03-Cx-20	Bedroom	100	100	Pass
03-Cx-21c	Living/Kitchen	64	200	Pass
03-Cx-22	Bedroom	66	100	Pass
03-Cx-23	Bedroom	95	100	Pass
03-Cx-24c	Living/Kitchen	35	200	Fail
03-Cx-25	Bedroom	71	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
03-Cx-26	Bedroom	63	100	Pass
04-Cx-01c	Living/Kitchen	100	200	Pass
04-Cx-02	Bedroom	100	100	Pass
04-Cx-03	Bedroom	100	100	Pass
04-Cx-04c	Living/Kitchen	69	200	Pass
04-Cx-05	Bedroom	100	100	Pass
04-Cx-06c	Living/Kitchen	92	200	Pass
04-Cx-07c	Living/Kitchen	82	200	Pass
04-Cx-08	Bedroom	100	100	Pass
04-Cx-09c	Living/Kitchen	74	200	Pass
04-Cx-10	Bedroom	100	100	Pass
04-Cx-11	Bedroom	100	100	Pass
04-Cx-12c	Living/Kitchen	100	200	Pass
04-Cx-13	Bedroom	100	100	Pass
04-Cx-14	Bedroom	100	100	Pass
04-Cx-15c	Living/Kitchen	56	200	Pass
04-Cx-16	Bedroom	100	100	Pass
04-Cx-17	Bedroom	100	100	Pass
04-Cx-18c	Living/Kitchen	86	200	Pass
04-Cx-19	Bedroom	100	100	Pass
04-Cx-20	Bedroom	100	100	Pass
04-Cx-21c	Living/Kitchen	71	200	Pass
04-Cx-22	Bedroom	76	100	Pass
04-Cx-23	Bedroom	97	100	Pass
04-Cx-24c	Living/Kitchen	41	200	Marginal
04-Cx-25	Bedroom	82	100	Pass
04-Cx-26	Bedroom	70	100	Pass
05-Cx-01c	Living/Kitchen	100	200	Pass
05-Cx-02	Bedroom	100	100	Pass
05-Cx-03	Bedroom	100	100	Pass
05-Cx-04c	Living/Kitchen	69	200	Pass
05-Cx-05	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
05-Cx-06c	Living/Kitchen	82	200	Pass
05-Cx-07c	Living/Kitchen	96	200	Pass
05-Cx-08	Bedroom	100	100	Pass
05-Cx-09c	Living/Kitchen	75	200	Pass
05-Cx-10	Bedroom	100	100	Pass
05-Cx-11	Bedroom	100	100	Pass
05-Cx-12c	Living/Kitchen	100	200	Pass
05-Cx-13	Bedroom	73	100	Pass
05-Cx-14	Bedroom	100	100	Pass
05-Cx-15c	Living/Kitchen	59	200	Pass
05-Cx-16	Bedroom	100	100	Pass
05-Cx-17	Bedroom	100	100	Pass
05-Cx-18c	Living/Kitchen	90	200	Pass
05-Cx-19	Bedroom	100	100	Pass
05-Cx-20	Bedroom	100	100	Pass
05-Cx-21c	Living/Kitchen	79	200	Pass
05-Cx-22	Bedroom	95	100	Pass
05-Cx-23	Bedroom	100	100	Pass
05-Cx-24c	Living/Kitchen	46	200	Marginal
05-Cx-25	Bedroom	100	100	Pass
05-Cx-26	Bedroom	81	100	Pass
06-Cx-01c	Living/Kitchen	100	200	Pass
06-Cx-02	Bedroom	100	100	Pass
06-Cx-03	Bedroom	100	100	Pass
06-Cx-04c	Living/Kitchen	71	200	Pass
06-Cx-05	Bedroom	100	100	Pass
06-Cx-06c	Living/Kitchen	86	200	Pass
06-Cx-07c	Living/Kitchen	86	200	Pass
06-Cx-08	Bedroom	100	100	Pass
06-Cx-09c	Living/Kitchen	72	200	Pass
06-Cx-10	Bedroom	100	100	Pass
06-Cx-11	Bedroom	100	100	Pass
06-Cx-12c	Living/Kitchen	100	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
06-Cx-13	Bedroom	100	100	Pass
06-Cx-14	Bedroom	100	100	Pass
06-Cx-15c	Living/Kitchen	61	200	Pass
06-Cx-16	Bedroom	100	100	Pass
06-Cx-17	Bedroom	100	100	Pass
06-Cx-18c	Living/Kitchen	95	200	Pass
06-Cx-19	Bedroom	100	100	Pass
06-Cx-20	Bedroom	100	100	Pass
06-Cx-21c	Living/Kitchen	86	200	Pass
06-Cx-22	Bedroom	100	100	Pass
06-Cx-23	Bedroom	100	100	Pass
06-Cx-24c	Living/Kitchen	54	200	Pass
06-Cx-25	Bedroom	100	100	Pass
06-Cx-26	Bedroom	100	100	Pass
07-Cx-01c	Living/Kitchen	100	200	Pass
07-Cx-02	Bedroom	100	100	Pass
07-Cx-03	Bedroom	100	100	Pass
07-Cx-04c	Living/Kitchen	70	200	Pass
07-Cx-05	Bedroom	100	100	Pass
07-Cx-06c	Living/Kitchen	93	200	Pass
07-Cx-07c	Living/Kitchen	91	200	Pass
07-Cx-08	Bedroom	100	100	Pass
07-Cx-09c	Living/Kitchen	71	200	Pass
07-Cx-10	Bedroom	100	100	Pass
07-Cx-11	Bedroom	100	100	Pass
07-Cx-15c	Living/Kitchen	85	200	Pass
07-Cx-16	Bedroom	100	100	Pass
07-Cx-17	Bedroom	100	100	Pass
07-Cx-18c	Living/Kitchen	98	200	Pass
07-Cx-19	Bedroom	100	100	Pass
07-Cx-20	Bedroom	100	100	Pass
07-Cx-21c	Living/Kitchen	97	200	Pass
07-Cx-22	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

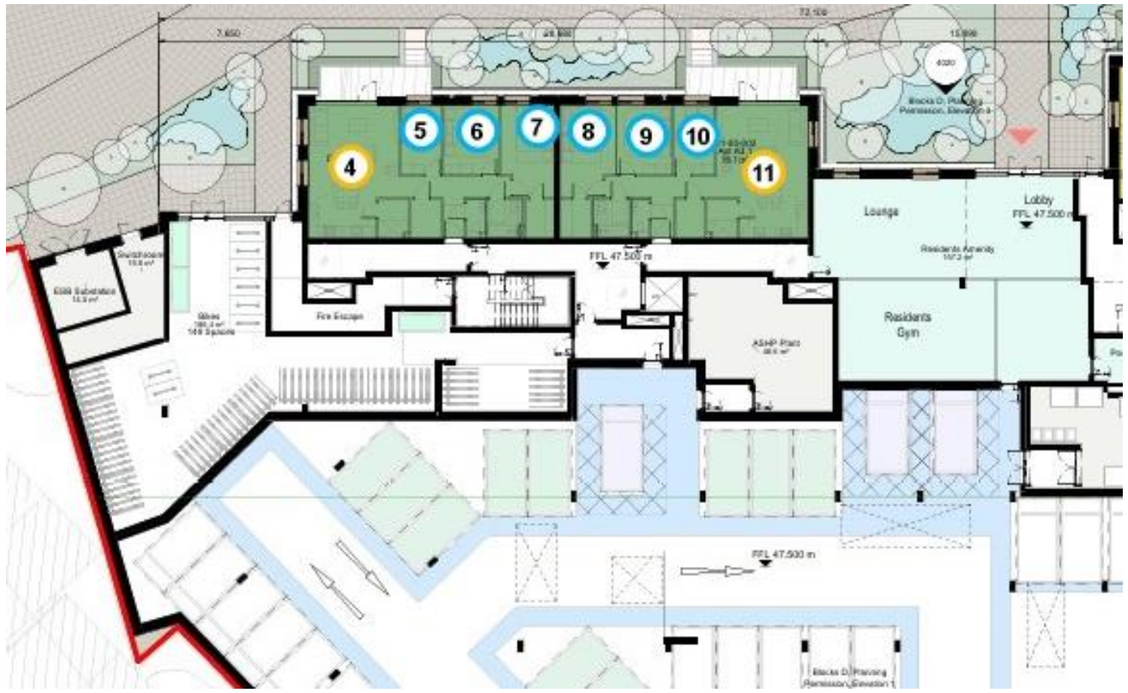
For all habitable rooms

Median External Diffuse Illuminance	14,900	lx

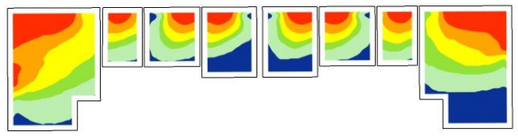
>50 % of the points on a reference plane to exceed

C-v3	Type			
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
07-Cx-23	Bedroom	100	100	Pass
07-Cx-24c	Living/Kitchen	60	200	Pass
07-Cx-25	Bedroom	100	100	Pass
07-Cx-26	Bedroom	100	100	Pass
08-Cx-02	Bedroom	100	100	Pass
08-Cx-03	Bedroom	100	100	Pass
08-Cx-04c	Living/Kitchen	81	200	Pass
08-Cx-05	Bedroom	100	100	Pass
08-Cx-06c	Living/Kitchen	95	200	Pass
08-Cx-07c	Living/Kitchen	97	200	Pass
08-Cx-08	Bedroom	100	100	Pass
08-Cx-09c	Living/Kitchen	81	200	Pass
08-Cx-10	Bedroom	100	100	Pass
08-Cx-11	Bedroom	100	100	Pass
08-Cx-15c	Living/Kitchen	97	200	Pass
08-Cx-16	Bedroom	100	100	Pass
08-Cx-17	Bedroom	100	100	Pass
08-Cx-18c	Living/Kitchen	100	200	Pass
08-Cx-19	Bedroom	100	100	Pass
08-Cx-20	Bedroom	100	100	Pass
08-Cx-21c	Living/Kitchen	99	200	Pass
08-Cx-22	Bedroom	100	100	Pass
08-Cx-23	Bedroom	100	100	Pass
08-Cx-24c	Living/Kitchen	95	200	Pass

Block D1 - Target Illuminance E_T - GFL



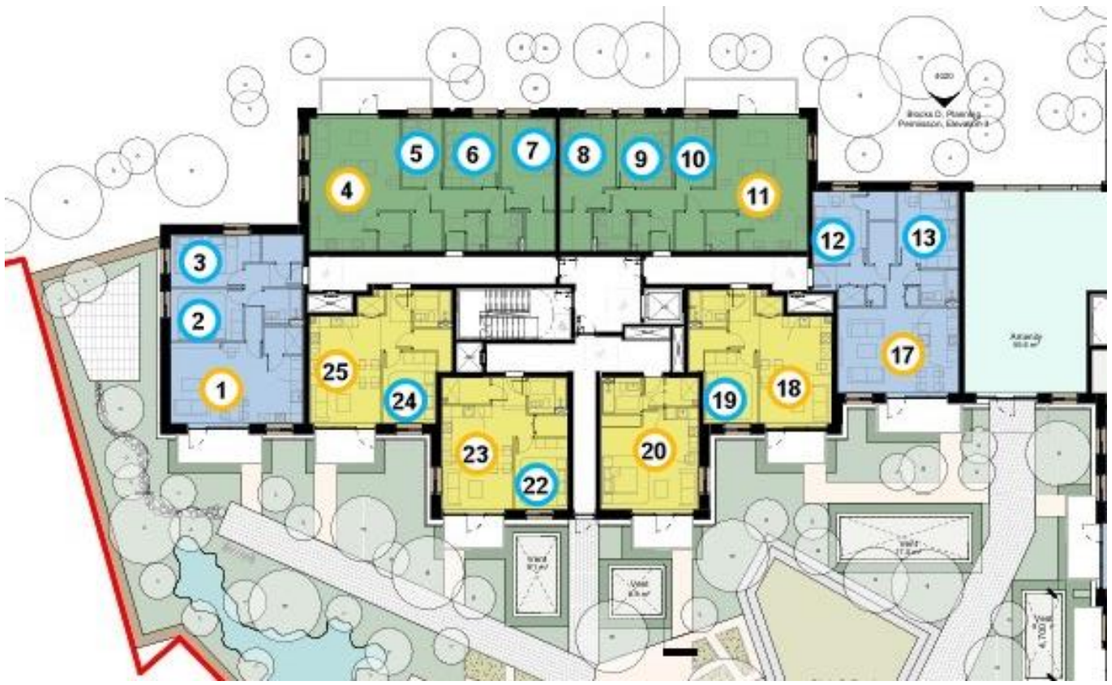
Radiance Plot



Block C

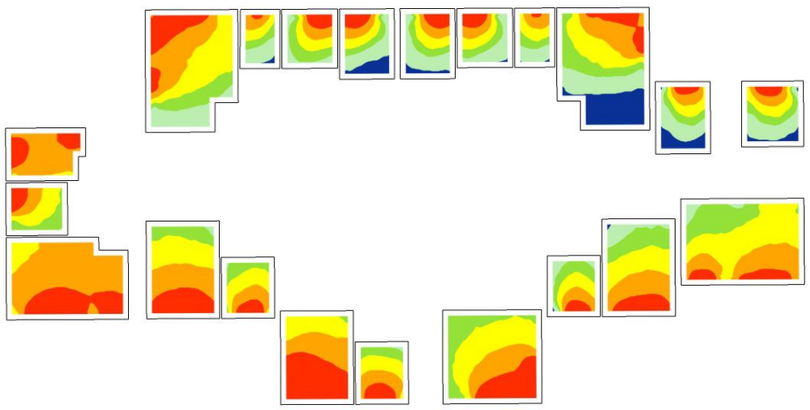
- ***Compliant 96%, including marginals 99%***
- ***Average all bedrooms 96% and for all LKD 77%***

Block D1 - 1st Floor

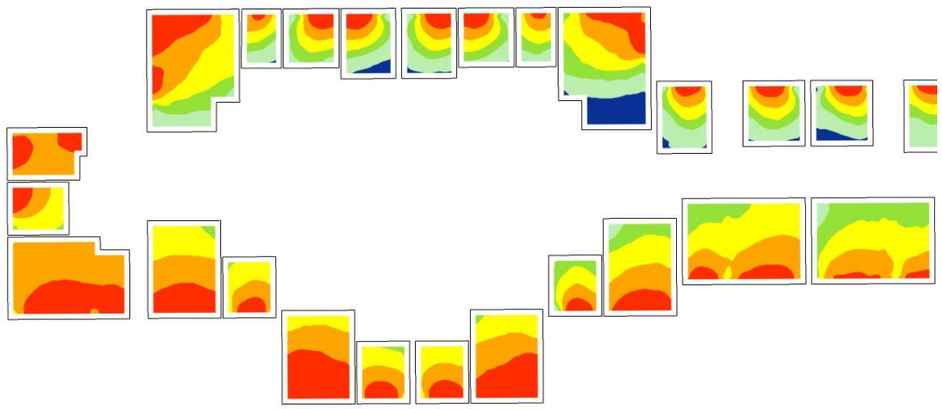


Block D1 – 2nd Floor

Radiance Plot

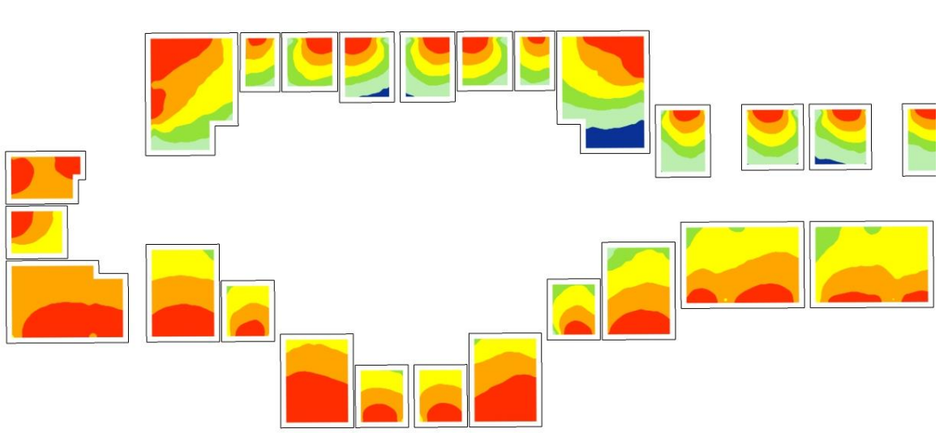


Radiance Plot



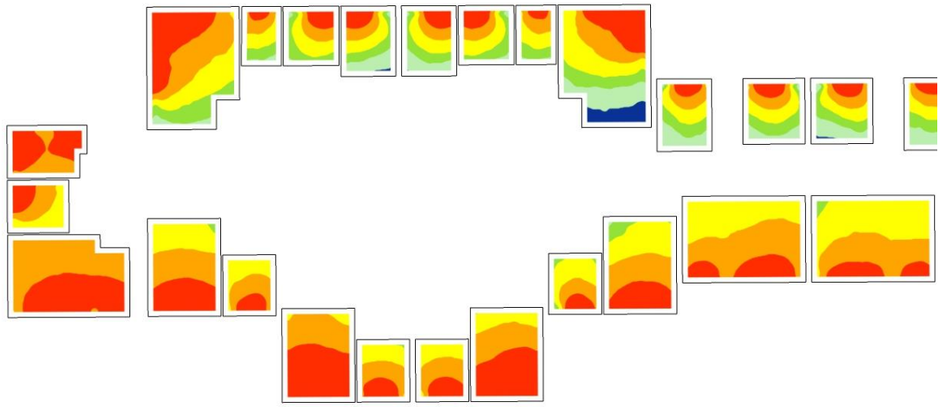
Block D1 – 3rd Floor

Radiance Plot



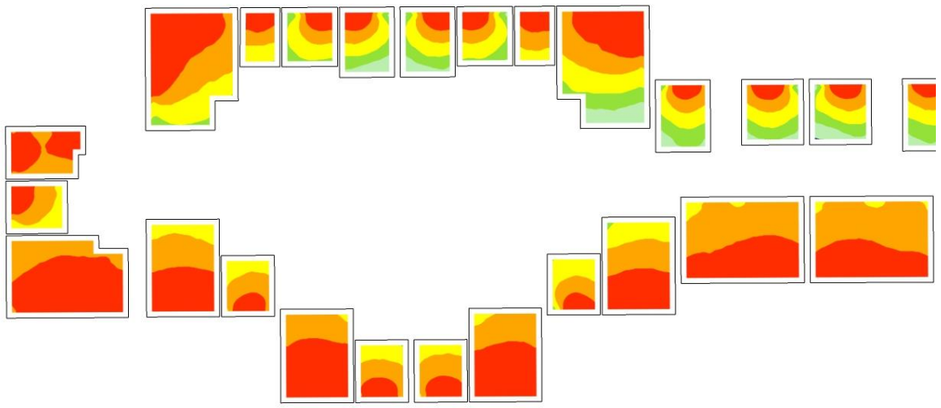
Block D1 – 4th Floor

Radiance Plot



Block D1 -5th Floor

Radiance Plot



NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance ***14,900*** ***lx***

>50 % of the points on a reference plane to exceed

D1-v3 Type

Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
00-D1-04c	Living/Kitchen	62	200	Pass
00-D1-05	Bedroom	100	100	Pass
00-D1-06	Bedroom	84	100	Pass
00-D1-07	Bedroom	58	100	Pass
00-D1-08	Bedroom	67	100	Pass
00-D1-09	Bedroom	86	100	Pass
00-D1-10	Bedroom	100	100	Pass
00-D1-11c	Living/Kitchen	43	200	Marginal
01-D1-01c	Living/Kitchen	100	200	Pass
01-D1-02	Bedroom	100	100	Pass
01-D1-03	Bedroom	100	100	Pass
01-D1-04c	Living/Kitchen	69	200	Pass
01-D1-05	Bedroom	94	100	Pass
01-D1-06	Bedroom	100	100	Pass
01-D1-07	Bedroom	77	100	Pass
01-D1-08	Bedroom	88	100	Pass
01-D1-09	Bedroom	97	100	Pass
01-D1-10	Bedroom	96	100	Pass
01-D1-11c	Living/Kitchen	40	200	Marginal
01-D1-12	Bedroom	71	100	Pass
01-D1-13	Bedroom	85	100	Pass
01-D1-17c	Living/Kitchen	76	200	Pass
01-D1-18c	Living/Kitchen	65	200	Pass
01-D1-19	Bedroom	97	100	Pass
01-D1-20c	Living/Kitchen	72	200	Pass
01-D1-22	Bedroom	100	100	Pass
01-D1-23c	Living/Kitchen	98	200	Pass
01-D1-24	Bedroom	100	100	Pass
01-D1-25c	Living/Kitchen	80	200	Pass
02-D1-01c	Living/Kitchen	100	200	Pass
02-D1-02	Bedroom	100	100	Pass
02-D1-03	Bedroom	100	100	Pass
02-D1-04c	Living/Kitchen	73	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D1-v3 Type

Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
02-D1-05	Bedroom	100	100	Pass
02-D1-06	Bedroom	100	100	Pass
02-D1-07	Bedroom	84	100	Pass
02-D1-08	Bedroom	96	100	Pass
02-D1-09	Bedroom	100	100	Pass
02-D1-10	Bedroom	100	100	Pass
02-D1-11c	Living/Kitchen	47	200	Marginal
02-D1-12	Bedroom	91	100	Pass
02-D1-13	Bedroom	98	100	Pass
02-D1-14	Bedroom	83	100	Pass
02-D1-15	Bedroom	97	100	Pass
02-D1-16c	Living/Kitchen	62	200	Pass
02-D1-17c	Living/Kitchen	84	200	Pass
02-D1-18c	Living/Kitchen	77	200	Pass
02-D1-19	Bedroom	100	100	Pass
02-D1-20c	Living/Kitchen	98	200	Pass
02-D1-21	Bedroom	100	100	Pass
02-D1-22	Bedroom	100	100	Pass
02-D1-23c	Living/Kitchen	100	200	Pass
02-D1-24	Bedroom	100	100	Pass
02-D1-25c	Living/Kitchen	95	200	Pass
03-D1-01c	Living/Kitchen	100	200	Pass
03-D1-02	Bedroom	100	100	Pass
03-D1-03	Bedroom	100	100	Pass
03-D1-04c	Living/Kitchen	75	200	Pass
03-D1-05	Bedroom	100	100	Pass
03-D1-06	Bedroom	100	100	Pass
03-D1-07	Bedroom	91	100	Pass
03-D1-08	Bedroom	98	100	Pass
03-D1-09	Bedroom	100	100	Pass
03-D1-10	Bedroom	100	100	Pass
03-D1-11c	Living/Kitchen	53	200	Pass
03-D1-12	Bedroom	100	100	Pass
03-D1-13	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D1-v3 Type

Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
03-D1-14	Bedroom	93	100	Pass
03-D1-15	Bedroom	100	100	Pass
03-D1-16c	Living/Kitchen	90	200	Pass
03-D1-17c	Living/Kitchen	95	200	Pass
03-D1-18c	Living/Kitchen	84	200	Pass
03-D1-19	Bedroom	100	100	Pass
03-D1-20c	Living/Kitchen	98	200	Pass
03-D1-21	Bedroom	100	100	Pass
03-D1-22	Bedroom	100	100	Pass
03-D1-23c	Living/Kitchen	100	200	Pass
03-D1-24	Bedroom	100	100	Pass
03-D1-25c	Living/Kitchen	97	200	Pass
04-D1-01c	Living/Kitchen	100	200	Pass
04-D1-02	Bedroom	100	100	Pass
04-D1-03	Bedroom	100	100	Pass
04-D1-04c	Living/Kitchen	80	200	Pass
04-D1-05	Bedroom	100	100	Pass
04-D1-06	Bedroom	100	100	Pass
04-D1-07	Bedroom	98	100	Pass
04-D1-08	Bedroom	100	100	Pass
04-D1-09	Bedroom	100	100	Pass
04-D1-10	Bedroom	100	100	Pass
04-D1-11c	Living/Kitchen	58	200	Pass
04-D1-12	Bedroom	100	100	Pass
04-D1-13	Bedroom	100	100	Pass
04-D1-14	Bedroom	100	100	Pass
04-D1-15	Bedroom	100	100	Pass
04-D1-16c	Living/Kitchen	97	200	Pass
04-D1-17c	Living/Kitchen	100	200	Pass
04-D1-18c	Living/Kitchen	91	200	Pass
04-D1-19	Bedroom	100	100	Pass
04-D1-20c	Living/Kitchen	99	200	Pass
04-D1-21	Bedroom	100	100	Pass
04-D1-22	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance ***14,900*** ***lx***

>50 % of the points on a reference plane to exceed

D1-v3 Type

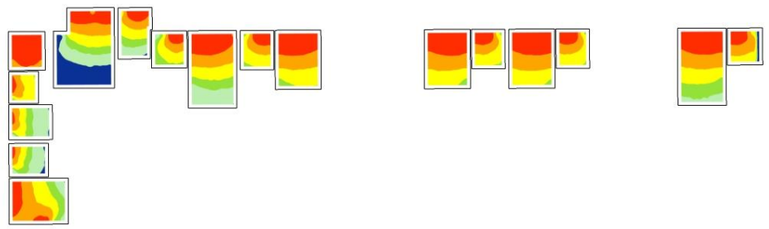
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
04-D1-23c	Living/Kitchen	100	200	Pass
04-D1-24	Bedroom	100	100	Pass
04-D1-25c	Living/Kitchen	98	200	Pass
05-D1-01c	Living/Kitchen	100	200	Pass
05-D1-02	Bedroom	100	100	Pass
05-D1-03	Bedroom	100	100	Pass
05-D1-04c	Living/Kitchen	94	200	Pass
05-D1-05	Bedroom	100	100	Pass
05-D1-06	Bedroom	100	100	Pass
05-D1-07	Bedroom	100	100	Pass
05-D1-08	Bedroom	100	100	Pass
05-D1-09	Bedroom	100	100	Pass
05-D1-10	Bedroom	100	100	Pass
05-D1-11c	Living/Kitchen	73	200	Pass
05-D1-12	Bedroom	100	100	Pass
05-D1-13	Bedroom	100	100	Pass
05-D1-14	Bedroom	100	100	Pass
05-D1-15	Bedroom	100	100	Pass
05-D1-16c	Living/Kitchen	100	200	Pass
05-D1-17c	Living/Kitchen	100	200	Pass
05-D1-18c	Living/Kitchen	99	200	Pass
05-D1-19	Bedroom	100	100	Pass
05-D1-20c	Living/Kitchen	100	200	Pass
05-D1-21	Bedroom	100	100	Pass
05-D1-22	Bedroom	100	100	Pass
05-D1-23c	Living/Kitchen	100	200	Pass
05-D1-24	Bedroom	100	100	Pass
05-D1-25c	Living/Kitchen	100	200	Pass

Block D1

- ***Compliant 98%, including marginals 100%***
- ***Average all bedrooms 97% and for all LKD 86%***

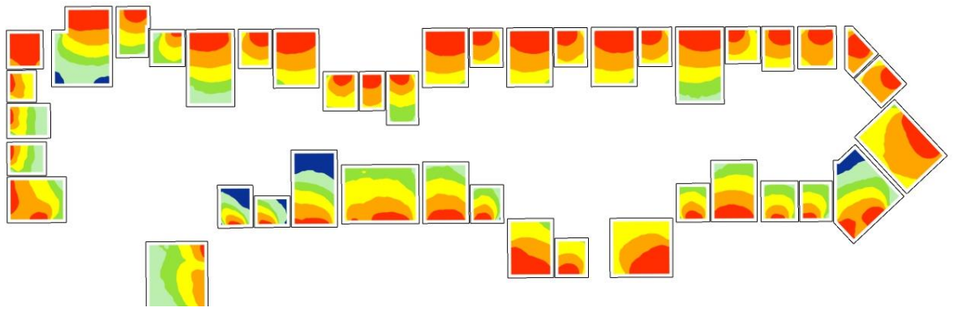
Block D2 - Target Illuminance E_T – GFL

Radiance Plot



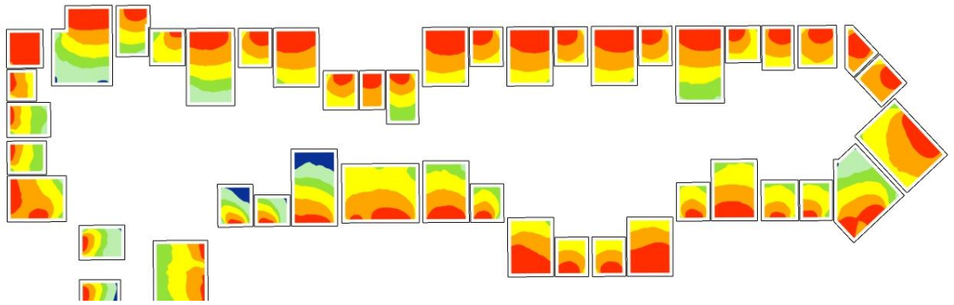
Block D2 - 1st Floor

Radiance Plot



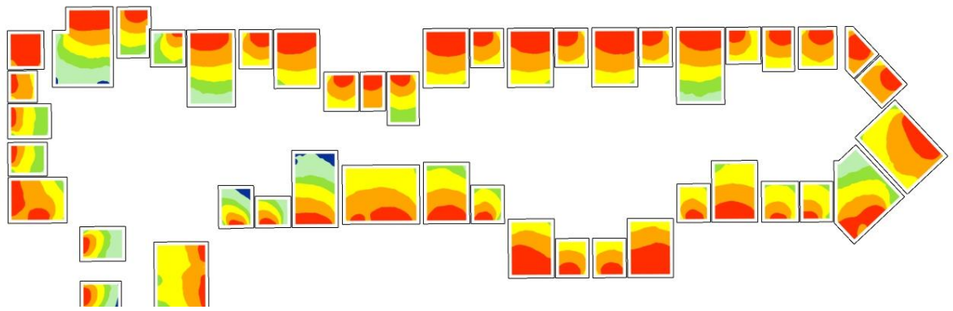
Block D2 - 2nd Floor

Radiance Plot



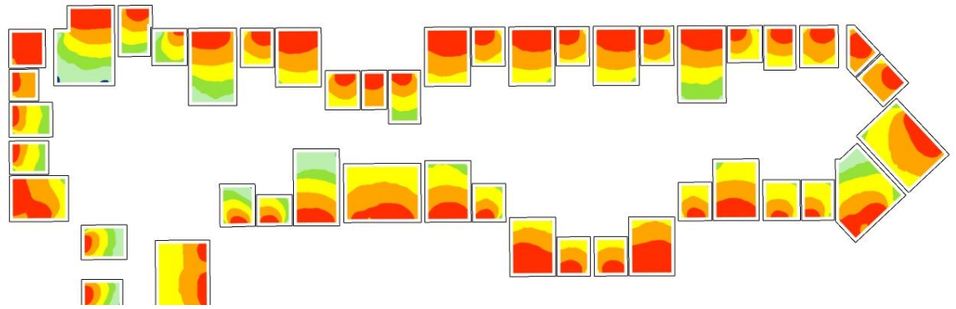
Block D2 – 3rd Floor

Radiance Plot



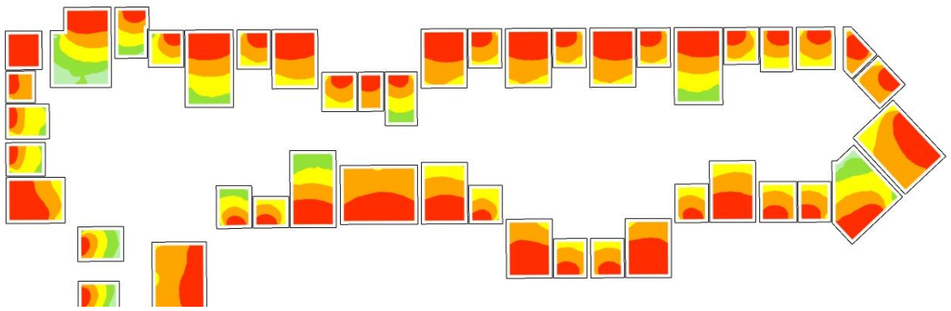
Block D2 – 4th Floor

Radiance Plot



Block D2 – 5th Floor

Radiance Plot



NA.2 Minimum daylight provision				
				For all habitable rooms
Median External Diffuse Illuminance			14,900	lx
>50 % of the points on a reference plane to exceed				
D2-v3	Type			
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
01-D2-01c	Living/Kitchen	74	200	Pass
01-D2-02	Bedroom	88	100	Pass
01-D2-03	Bedroom	99	100	Pass
01-D2-04	Bedroom	100	100	Pass
01-D2-05	Bedroom	100	100	Pass
01-D2-06c	Living/Kitchen	38	200	Fail
01-D2-07	Bedroom	100	100	Pass
01-D2-08	Bedroom	100	100	Pass
01-D2-09c	Living/Kitchen	62	200	Pass
01-D2-10	Bedroom	100	100	Pass
01-D2-11c	Living/Kitchen	92	200	Pass
01-D2-15c	Living/Kitchen	96	200	Pass
01-D2-16	Bedroom	100	100	Pass
01-D2-17c	Living/Kitchen	97	200	Pass
01-D2-18	Bedroom	100	100	Pass
01-D2-21c	Living/Kitchen	69	200	Pass
01-D2-22	Bedroom	84	100	Pass
01-D2-01c	Living/Kitchen	79	200	Pass
01-D2-02	Bedroom	100	100	Pass
01-D2-03	Bedroom	100	100	Pass
01-D2-04	Bedroom	100	100	Pass
01-D2-05	Bedroom	100	100	Pass
01-D2-06c	Living/Kitchen	51	200	Pass
01-D2-07	Bedroom	100	100	Pass
01-D2-08	Bedroom	100	100	Pass
01-D2-09c	Living/Kitchen	66	200	Pass
01-D2-10	Bedroom	100	100	Pass
01-D2-11c	Living/Kitchen	96	200	Pass
01-D2-12	Bedroom	100	100	Pass
01-D2-13	Bedroom	100	100	Pass
01-D2-14	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
01-D2-15c	Living/Kitchen	98	200	Pass
01-D2-16	Bedroom	100	100	Pass
01-D2-17c	Living/Kitchen	98	200	Pass
01-D2-18	Bedroom	100	100	Pass
01-D2-19c	Living/Kitchen	98	200	Pass
01-D2-20	Bedroom	100	100	Pass
01-D2-21c	Living/Kitchen	70	200	Pass
01-D2-22	Bedroom	100	100	Pass
01-D2-23	Bedroom	100	100	Pass
01-D2-24	Bedroom	100	100	Pass
01-D2-25	Bedroom	100	100	Pass
01-D2-26	Bedroom	100	100	Pass
01-D2-27c	Living/Kitchen	98	200	Pass
01-D2-28c	Living/Kitchen	49	200	Marginal
01-D2-29	Bedroom	100	100	Pass
01-D2-30	Bedroom	100	100	Pass
01-D2-31c	Living/Kitchen	74	200	Pass
01-D2-32	Bedroom	100	100	Pass
01-D2-33c	Living/Kitchen	99	200	Pass
01-D2-35	Bedroom	100	100	Pass
01-D2-36c	Living/Kitchen	95	200	Pass
01-D2-37	Bedroom	100	100	Pass
01-D2-38c	Living/Kitchen	68	200	Pass
01-D2-39c	Living/Kitchen	71	200	Pass
01-D2-40c	Living/Kitchen	41	200	Marginal
01-D2-41	Bedroom	84	100	Pass
01-D2-42	Bedroom	63	100	Pass
02-D2-01c	Living/Kitchen	90	200	Pass
02-D2-02	Bedroom	100	100	Pass
02-D2-03	Bedroom	100	100	Pass
02-D2-04	Bedroom	100	100	Pass
02-D2-05	Bedroom	100	100	Pass
02-D2-06c	Living/Kitchen	53	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-D2-07	Bedroom	100	100	Pass
02-D2-08	Bedroom	100	100	Pass
02-D2-09c	Living/Kitchen	65	200	Pass
02-D2-10	Bedroom	100	100	Pass
02-D2-11c	Living/Kitchen	96	200	Pass
02-D2-12	Bedroom	100	100	Pass
02-D2-13	Bedroom	100	100	Pass
02-D2-14	Bedroom	100	100	Pass
02-D2-15c	Living/Kitchen	98	200	Pass
02-D2-16	Bedroom	100	100	Pass
02-D2-17c	Living/Kitchen	98	200	Pass
02-D2-18	Bedroom	100	100	Pass
02-D2-19c	Living/Kitchen	98	200	Pass
02-D2-20	Bedroom	100	100	Pass
02-D2-21c	Living/Kitchen	72	200	Pass
02-D2-22	Bedroom	100	100	Pass
02-D2-23	Bedroom	100	100	Pass
02-D2-24	Bedroom	100	100	Pass
02-D2-25	Bedroom	100	100	Pass
02-D2-26	Bedroom	100	100	Pass
02-D2-27c	Living/Kitchen	96	200	Pass
02-D2-28c	Living/Kitchen	57	200	Pass
02-D2-29	Bedroom	100	100	Pass
02-D2-30	Bedroom	100	100	Pass
02-D2-31c	Living/Kitchen	88	200	Pass
02-D2-32	Bedroom	100	100	Pass
02-D2-33c	Living/Kitchen	100	200	Pass
02-D2-34	Bedroom	100	100	Pass
02-D2-35	Bedroom	100	100	Pass
02-D2-36c	Living/Kitchen	98	200	Pass
02-D2-37	Bedroom	100	100	Pass
02-D2-38c	Living/Kitchen	77	200	Pass
02-D2-39c	Living/Kitchen	95	200	Pass
02-D2-40c	Living/Kitchen	48	200	Marginal

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
02-D2-41	Bedroom	96	100	Pass
02-D2-42	Bedroom	75	100	Pass
03-D2-01c	Living/Kitchen	93	200	Pass
03-D2-02	Bedroom	100	100	Pass
03-D2-03	Bedroom	100	100	Pass
03-D2-04	Bedroom	100	100	Pass
03-D2-05	Bedroom	100	100	Pass
03-D2-06c	Living/Kitchen	52	200	Pass
03-D2-07	Bedroom	100	100	Pass
03-D2-08	Bedroom	100	100	Pass
03-D2-09c	Living/Kitchen	65	200	Pass
03-D2-10	Bedroom	100	100	Pass
03-D2-11c	Living/Kitchen	97	200	Pass
03-D2-12	Bedroom	100	100	Pass
03-D2-13	Bedroom	100	100	Pass
03-D2-14	Bedroom	100	100	Pass
03-D2-15c	Living/Kitchen	98	200	Pass
03-D2-16	Bedroom	100	100	Pass
03-D2-17c	Living/Kitchen	98	200	Pass
03-D2-18	Bedroom	100	100	Pass
03-D2-19c	Living/Kitchen	98	200	Pass
03-D2-20	Bedroom	100	100	Pass
03-D2-21c	Living/Kitchen	68	200	Pass
03-D2-22	Bedroom	100	100	Pass
03-D2-23	Bedroom	100	100	Pass
03-D2-24	Bedroom	100	100	Pass
03-D2-25	Bedroom	100	100	Pass
03-D2-26	Bedroom	100	100	Pass
03-D2-27c	Living/Kitchen	97	200	Pass
03-D2-28c	Living/Kitchen	61	200	Pass
03-D2-29	Bedroom	100	100	Pass
03-D2-30	Bedroom	100	100	Pass
03-D2-31c	Living/Kitchen	94	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
03-D2-32	Bedroom	100	100	Pass
03-D2-33c	Living/Kitchen	100	200	Pass
03-D2-34	Bedroom	100	100	Pass
03-D2-35	Bedroom	100	100	Pass
03-D2-36c	Living/Kitchen	99	200	Pass
03-D2-37	Bedroom	100	100	Pass
03-D2-38c	Living/Kitchen	83	200	Pass
03-D2-39c	Living/Kitchen	98	200	Pass
03-D2-40c	Living/Kitchen	53	200	Pass
03-D2-41	Bedroom	100	100	Pass
03-D2-42	Bedroom	89	100	Pass
04-D2-01c	Living/Kitchen	98	200	Pass
04-D2-02	Bedroom	100	100	Pass
04-D2-03	Bedroom	100	100	Pass
04-D2-04	Bedroom	100	100	Pass
04-D2-05	Bedroom	100	100	Pass
04-D2-06c	Living/Kitchen	53	200	Pass
04-D2-07	Bedroom	100	100	Pass
04-D2-08	Bedroom	100	100	Pass
04-D2-09c	Living/Kitchen	66	200	Pass
04-D2-10	Bedroom	100	100	Pass
04-D2-11c	Living/Kitchen	98	200	Pass
04-D2-12	Bedroom	100	100	Pass
04-D2-13	Bedroom	100	100	Pass
04-D2-14	Bedroom	100	100	Pass
04-D2-15c	Living/Kitchen	99	200	Pass
04-D2-16	Bedroom	100	100	Pass
04-D2-17c	Living/Kitchen	98	200	Pass
04-D2-18	Bedroom	100	100	Pass
04-D2-19c	Living/Kitchen	98	200	Pass
04-D2-20	Bedroom	100	100	Pass
04-D2-21c	Living/Kitchen	73	200	Pass
04-D2-22	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
04-D2-23	Bedroom	100	100	Pass
04-D2-24	Bedroom	100	100	Pass
04-D2-25	Bedroom	100	100	Pass
04-D2-26	Bedroom	100	100	Pass
04-D2-27c	Living/Kitchen	96	200	Pass
04-D2-28c	Living/Kitchen	70	200	Pass
04-D2-29	Bedroom	100	100	Pass
04-D2-30	Bedroom	100	100	Pass
04-D2-31c	Living/Kitchen	97	200	Pass
04-D2-32	Bedroom	100	100	Pass
04-D2-33c	Living/Kitchen	100	200	Pass
04-D2-34	Bedroom	100	100	Pass
04-D2-35	Bedroom	100	100	Pass
04-D2-36c	Living/Kitchen	99	200	Pass
04-D2-37	Bedroom	100	100	Pass
04-D2-38c	Living/Kitchen	89	200	Pass
04-D2-39c	Living/Kitchen	100	200	Pass
04-D2-40c	Living/Kitchen	59	200	Pass
04-D2-41	Bedroom	100	100	Pass
04-D2-42	Bedroom	100	100	Pass
05-D2-01c	Living/Kitchen	99	200	Pass
05-D2-02	Bedroom	100	100	Pass
05-D2-03	Bedroom	100	100	Pass
05-D2-04	Bedroom	100	100	Pass
05-D2-05	Bedroom	100	100	Pass
05-D2-06c	Living/Kitchen	56	200	Pass
05-D2-07	Bedroom	100	100	Pass
05-D2-08	Bedroom	100	100	Pass
05-D2-09c	Living/Kitchen	83	200	Pass
05-D2-10	Bedroom	100	100	Pass
05-D2-11c	Living/Kitchen	99	200	Pass
05-D2-12	Bedroom	100	100	Pass
05-D2-13	Bedroom	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3	Type			
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
05-D2-14	Bedroom	100	100	Pass
05-D2-15c	Living/Kitchen	100	200	Pass
05-D2-16	Bedroom	100	100	Pass
05-D2-17c	Living/Kitchen	100	200	Pass
05-D2-18	Bedroom	100	100	Pass
05-D2-19c	Living/Kitchen	100	200	Pass
05-D2-20	Bedroom	100	100	Pass
05-D2-21c	Living/Kitchen	80	200	Pass
05-D2-22	Bedroom	100	100	Pass
05-D2-23	Bedroom	100	100	Pass
05-D2-24	Bedroom	100	100	Pass
05-D2-25	Bedroom	100	100	Pass
05-D2-26	Bedroom	100	100	Pass
05-D2-27c	Living/Kitchen	100	200	Pass
05-D2-28c	Living/Kitchen	76	200	Pass
05-D2-29	Bedroom	100	100	Pass
05-D2-30	Bedroom	100	100	Pass
05-D2-31c	Living/Kitchen	100	200	Pass
05-D2-32	Bedroom	100	100	Pass
05-D2-33c	Living/Kitchen	100	200	Pass
05-D2-34	Bedroom	100	100	Pass
05-D2-35	Bedroom	100	100	Pass
05-D2-36c	Living/Kitchen	100	200	Pass
05-D2-37	Bedroom	100	100	Pass
05-D2-38c	Living/Kitchen	99	200	Pass
05-D2-39c	Living/Kitchen	100	200	Pass
05-D2-40c	Living/Kitchen	75	200	Pass
05-D2-41	Bedroom	100	100	Pass
05-D2-42	Bedroom	100	100	Pass

Block D1

- ***Compliant 98%, including marginals 100%***
- ***Average all bedrooms 99% and for all LKD 84%***

Summary

The majority of rooms comply with requirements.
Many of those that don't are very marginal on the 50% requirement.
Were targets have not been achieved compensatory factors are detailed in the Architects Commentary.

	Annex NA E_T % Pass	
	BRE v3	Incl Marginal
v3	Pass %	Pass %
AB	97%	99%
C	96%	99%
D1	98%	100%
D2	98%	100%
Total	**97%**	99%

97% of rooms comply with the BS/EN 17037 Annex NA room targets for 50% of the floor area tested.
(99% if we include marginal results).

The average compliant areas achieving the relevant target Lx for all bedrooms is 98% and all Living/Kitchen spaces 78% both are well in excess of the required 50%.

Development Performance - Sunlight to rooms (living spaces)

Clause 3.1.2 of the guidance document BRE indicates that special checks should be applied to living rooms to ensure that these core rooms receive the necessary sunlight.

> *In Housing, the main requirement for sunlight is in living rooms. where it is valued at any time of day but especially in the afternoon.*

Check Clauses

> *3.1.15 In general a dwelling, or non-domestic building that has a particular requirement for sunlight, will appear reasonably sunlit provided:*
> *- at least one main window wall faces within 90° of due south and*
> *- a habitable room, preferably a main living room, can receive a total of at least 1.5 hours of sunlight on 21 March. This is assessed at the inside centre of the window(s); sunlight received by different windows can be added provided they occur at different times and sunlight hours are not double counted.*

> *3.1.16 Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings with a main living room that meets the above recommendations*

The guidelines accept the difficulty imposed by this requirement and that it will not always be possible to achieve this requirement for ALL living spaces. While it is preferred to have sunlight the guidelines are pragmatic in this regard. The guidelines note that:

> *3.1.8……. For larger developments of flats, especially those with site constraints, it may not be possible to have every living room facing within 90° of south…….*

A view or similar may be considered a compensating factor to North facing windows

> *3.1.7 …. compensating factor such as an appealing view to the north.*

It then follows with an example of a careful layout for a relatively small block where 4/5 flats have south facing living rooms, and one North which would receive no sunlight at all. From this layout and results we can conclude that an 80% pass rate is considered careful layout design.

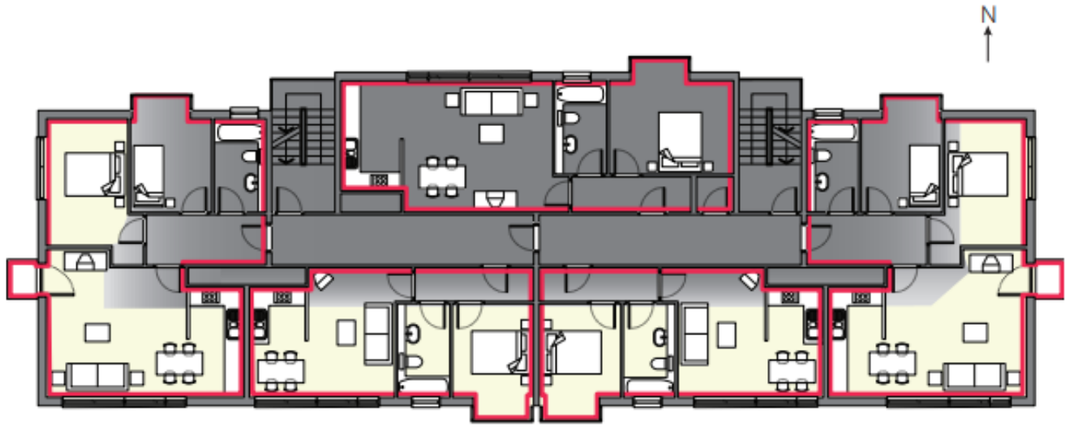


Figure 26: Careful layout design means that four out of the five flats shown have a south-facing living room

Quality of light minimum/medium/high is defined in clause 3.1.10

> *3.1.10 … For interiors, access to sunlight can be quantified. BS EN 17037 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. …..*

Block AB

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F0	R05	00.AB.05	2.3	Pass	*Min*
AB	F0	R07	00.AB.07	1.0	Fail	
AB	F0	R57	00.AB.57	6.0	Pass	*High*
AB	F0	R59	00.AB.59	6.0	Pass	*High*
AB	F0	R60	00.AB.60	6.2	Pass	*High*
AB	F0	R66	00.AB.66	6.0	Pass	*High*
AB	F0	R69	00.AB.69	5.7	Pass	*High*
AB	F0	R71	00.AB.71	5.5	Pass	*High*
AB	F1	R01	01.AB.01	8.7	Pass	*High*
AB	F1	R05	01.AB.05	2.0	Pass	*Min*
AB	F1	R07	01.AB.07	1.2	Marginal	
AB	F1	R09	01.AB.09	1.0	Fail	
AB	F1	R14	01.AB.14	0.0	Fail	
AB	F1	R21	01.AB.21	0.0	Fail	
AB	F1	R28	01.AB.28	0.0	Fail	
AB	F1	R35	01.AB.35	0.0	Fail	
AB	F1	R42	01.AB.42	0.7	Fail	
AB	F1	R44	01.AB.44	4.5	Pass	*High*
AB	F1	R45	01.AB.45	4.8	Pass	*High*
AB	F1	R47	01.AB.47	7.5	Pass	*High*
AB	F1	R50	01.AB.50	6.5	Pass	*High*
AB	F1	R52	01.AB.52	3.7	Pass	*Medium*
AB	F1	R54	01.AB.54	5.0	Pass	*High*
AB	F1	R55	01.AB.55	5.5	Pass	*High*
AB	F1	R56	01.AB.56	5.0	Pass	*High*
AB	F1	R57	01.AB.57	6.2	Pass	*High*
AB	F1	R59	01.AB.59	6.2	Pass	*High*
AB	F1	R64	01.AB.64	6.5	Pass	*High*
AB	F1	R66	01.AB.66	6.3	Pass	*High*
AB	F1	R67	01.AB.67	6.5	Pass	*High*
AB	F1	R68	01.AB.68	6.5	Pass	*High*
AB	F1	R69	01.AB.69	6.0	Pass	*High*
AB	F1	R71	01.AB.71	5.8	Pass	*High*
AB	F1	R76	01.AB.76	2.3	Pass	*Min*
AB	F1	R80	01.AB.80	6.8	Pass	*High*

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F2	R01	02.AB.01	9.3	Pass	*High*
AB	F2	R05	02.AB.05	2.0	Pass	*Min*
AB	F2	R07	02.AB.07	1.2	Marginal	
AB	F2	R09	02.AB.09	1.0	Fail	
AB	F2	R14	02.AB.14	0.0	Fail	
AB	F2	R21	02.AB.21	0.0	Fail	
AB	F2	R28	02.AB.28	0.0	Fail	
AB	F2	R35	02.AB.35	0.0	Fail	
AB	F2	R42	02.AB.42	0.7	Fail	
AB	F2	R44	02.AB.44	4.5	Pass	*High*
AB	F2	R45	02.AB.45	4.8	Pass	*High*
AB	F2	R47	02.AB.47	7.5	Pass	*High*
AB	F2	R50	02.AB.50	6.5	Pass	*High*
AB	F2	R52	02.AB.52	3.7	Pass	*Medium*
AB	F2	R54	02.AB.54	5.0	Pass	*High*
AB	F2	R55	02.AB.55	5.5	Pass	*High*
AB	F2	R56	02.AB.56	5.3	Pass	*High*
AB	F2	R57	02.AB.57	6.2	Pass	*High*
AB	F2	R59	02.AB.59	6.3	Pass	*High*
AB	F2	R64	02.AB.64	6.7	Pass	*High*
AB	F2	R66	02.AB.66	6.3	Pass	*High*
AB	F2	R67	02.AB.67	6.5	Pass	*High*
AB	F2	R68	02.AB.68	6.5	Pass	*High*
AB	F2	R69	02.AB.69	6.0	Pass	*High*
AB	F2	R71	02.AB.71	5.8	Pass	*High*
AB	F2	R76	02.AB.76	2.7	Pass	*Min*
AB	F2	R80	02.AB.80	8.2	Pass	*High*
AB	F3	R01	03.AB.01	9.3	Pass	*High*
AB	F3	R05	03.AB.05	2.0	Pass	*Min*
AB	F3	R07	03.AB.07	1.2	Marginal	
AB	F3	R09	03.AB.09	1.0	Fail	
AB	F3	R14	03.AB.14	0.0	Fail	
AB	F3	R21	03.AB.21	0.0	Fail	
AB	F3	R28	03.AB.28	0.0	Fail	
AB	F3	R35	03.AB.35	0.0	Fail	

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F3	R42	03.AB.42	0.7	Fail	
AB	F3	R44	03.AB.44	4.5	Pass	*High*
AB	F3	R45	03.AB.45	4.8	Pass	*High*
AB	F3	R47	03.AB.47	7.5	Pass	*High*
AB	F3	R50	03.AB.50	6.5	Pass	*High*
AB	F3	R52	03.AB.52	4.2	Pass	*High*
AB	F3	R54	03.AB.54	5.3	Pass	*High*
AB	F3	R55	03.AB.55	6.0	Pass	*High*
AB	F3	R56	03.AB.56	5.5	Pass	*High*
AB	F3	R57	03.AB.57	6.5	Pass	*High*
AB	F3	R59	03.AB.59	6.8	Pass	*High*
AB	F3	R64	03.AB.64	7.2	Pass	*High*
AB	F3	R66	03.AB.66	6.8	Pass	*High*
AB	F3	R67	03.AB.67	7.0	Pass	*High*
AB	F3	R68	03.AB.68	7.0	Pass	*High*
AB	F3	R69	03.AB.69	6.7	Pass	*High*
AB	F3	R71	03.AB.71	6.3	Pass	*High*
AB	F3	R76	03.AB.76	2.8	Pass	*Min*
AB	F3	R80	03.AB.80	9.3	Pass	*High*
AB	F4	R01	04.AB.01	9.3	Pass	*High*
AB	F4	R05	04.AB.05	2.0	Pass	*Min*
AB	F4	R07	04.AB.07	1.2	Marginal	
AB	F4	R09	04.AB.09	1.0	Fail	
AB	F4	R14	04.AB.14	0.0	Fail	
AB	F4	R21	04.AB.21	0.0	Fail	
AB	F4	R28	04.AB.28	0.0	Fail	
AB	F4	R35	04.AB.35	0.0	Fail	
AB	F4	R42	04.AB.42	0.7	Fail	
AB	F4	R44	04.AB.44	4.5	Pass	*High*
AB	F4	R45	04.AB.45	4.8	Pass	*High*
AB	F4	R47	04.AB.47	7.8	Pass	*High*
AB	F4	R50	04.AB.50	6.5	Pass	*High*
AB	F4	R52	04.AB.52	5.7	Pass	*High*
AB	F4	R54	04.AB.54	6.8	Pass	*High*
AB	F4	R55	04.AB.55	7.3	Pass	*High*
AB	F4	R56	04.AB.56	7.2	Pass	*High*

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F4	R57	04.AB.57	8.0	Pass	*High*
AB	F4	R59	04.AB.59	8.2	Pass	*High*
AB	F4	R64	04.AB.64	7.8	Pass	*High*
AB	F4	R66	04.AB.66	7.8	Pass	*High*
AB	F4	R67	04.AB.67	7.7	Pass	*High*
AB	F4	R68	04.AB.68	7.7	Pass	*High*
AB	F4	R69	04.AB.69	7.2	Pass	*High*
AB	F4	R71	04.AB.71	6.8	Pass	*High*
AB	F4	R76	04.AB.76	3.2	Pass	*Medium*
AB	F4	R80	04.AB.80	9.3	Pass	*High*
AB	F5	R01	05.AB.01	9.3	Pass	*High*
AB	F5	R05	05.AB.05	2.0	Pass	*Min*
AB	F5	R07	05.AB.07	1.2	Marginal	
AB	F5	R09	05.AB.09	1.0	Fail	
AB	F5	R14	05.AB.14	0.0	Fail	
AB	F5	R21	05.AB.21	0.0	Fail	
AB	F5	R28	05.AB.28	0.0	Fail	
AB	F5	R35	05.AB.35	0.0	Fail	
AB	F5	R42	05.AB.42	0.7	Fail	
AB	F5	R44	05.AB.44	4.5	Pass	*High*
AB	F5	R45	05.AB.45	4.8	Pass	*High*
AB	F5	R47	05.AB.47	8.8	Pass	*High*
AB	F5	R50	05.AB.50	7.8	Pass	*High*
AB	F5	R52	05.AB.52	7.0	Pass	*High*
AB	F5	R54	05.AB.54	8.7	Pass	*High*
AB	F5	R55	05.AB.55	9.2	Pass	*High*
AB	F5	R56	05.AB.56	9.2	Pass	*High*
AB	F5	R57	05.AB.57	10.0	Pass	*High*
AB	F5	R59	05.AB.59	10.0	Pass	*High*
AB	F5	R64	05.AB.64	9.7	Pass	*High*
AB	F5	R66	05.AB.66	9.3	Pass	*High*
AB	F5	R67	05.AB.67	9.2	Pass	*High*
AB	F5	R68	05.AB.68	8.8	Pass	*High*
AB	F5	R69	05.AB.69	8.3	Pass	*High*
AB	F5	R71	05.AB.71	7.7	Pass	*High*
AB	F5	R76	05.AB.76	3.5	Pass	*Medium*

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F5	R80	05.AB.80	9.3	Pass	*High*
AB	F6	R01	06.AB.01	9.3	Pass	*High*
AB	F6	R05	06.AB.05	2.0	Pass	*Min*
AB	F6	R07	06.AB.07	1.2	Marginal	
AB	F6	R09	06.AB.09	1.0	Fail	
AB	F6	R14	06.AB.14	0.0	Fail	
AB	F6	R21	06.AB.21	0.0	Fail	
AB	F6	R28	06.AB.28	0.0	Fail	
AB	F6	R35	06.AB.35	0.0	Fail	
AB	F6	R42	06.AB.42	0.7	Fail	
AB	F6	R44	06.AB.44	4.5	Pass	*High*
AB	F6	R45	06.AB.45	4.8	Pass	*High*
AB	F6	R47	06.AB.47	9.7	Pass	*High*
AB	F6	R50	06.AB.50	9.3	Pass	*High*
AB	F6	R52	06.AB.52	7.0	Pass	*High*
AB	F6	R54	06.AB.54	8.7	Pass	*High*
AB	F6	R55	06.AB.55	9.2	Pass	*High*
AB	F6	R56	06.AB.56	9.2	Pass	*High*
AB	F6	R57	06.AB.57	10.3	Pass	*High*
AB	F6	R59	06.AB.59	10.5	Pass	*High*
AB	F6	R64	06.AB.64	10.5	Pass	*High*
AB	F6	R66	06.AB.66	10.0	Pass	*High*
AB	F6	R67	06.AB.67	9.8	Pass	*High*
AB	F6	R68	06.AB.68	9.5	Pass	*High*
AB	F6	R69	06.AB.69	9.3	Pass	*High*
AB	F6	R71	06.AB.71	8.8	Pass	*High*
AB	F6	R76	06.AB.76	4.0	Pass	*High*
AB	F6	R80	06.AB.80	9.3	Pass	*High*
AB	F7	R01	07.AB.01	9.3	Pass	*High*
AB	F7	R05	07.AB.05	2.0	Pass	*Min*
AB	F7	R07	07.AB.07	1.2	Marginal	
AB	F7	R09	07.AB.09	1.0	Fail	
AB	F7	R14	07.AB.14	0.0	Fail	
AB	F7	R21	07.AB.21	0.0	Fail	
AB	F7	R28	07.AB.28	0.0	Fail	

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F7	R35	07.AB.35	0.0	Fail	
AB	F7	R42	07.AB.42	0.7	Fail	
AB	F7	R44	07.AB.44	4.5	Pass	*High*
AB	F7	R45	07.AB.45	4.8	Pass	*High*
AB	F7	R47	07.AB.47	9.7	Pass	*High*
AB	F7	R50	07.AB.50	9.7	Pass	*High*
AB	F7	R52	07.AB.52	7.0	Pass	*High*
AB	F7	R54	07.AB.54	8.8	Pass	*High*
AB	F7	R55	07.AB.55	9.3	Pass	*High*
AB	F7	R56	07.AB.56	9.3	Pass	*High*
AB	F7	R57	07.AB.57	10.3	Pass	*High*
AB	F7	R59	07.AB.59	10.5	Pass	*High*
AB	F7	R64	07.AB.64	10.7	Pass	*High*
AB	F7	R66	07.AB.66	10.2	Pass	*High*
AB	F7	R67	07.AB.67	10.0	Pass	*High*
AB	F7	R68	07.AB.68	9.5	Pass	*High*
AB	F7	R69	07.AB.69	9.3	Pass	*High*
AB	F7	R71	07.AB.71	9.0	Pass	*High*
AB	F7	R76	07.AB.76	4.3	Pass	*High*
AB	F7	R80	07.AB.80	9.3	Pass	*High*
AB	F8	R05	08.AB.05	2.0	Pass	*Min*
AB	F8	R07	08.AB.07	1.2	Marginal	
AB	F8	R09	08.AB.09	1.0	Fail	
AB	F8	R14	08.AB.14	3.8	Pass	*Medium*
AB	F8	R21	08.AB.21	4.0	Pass	*High*
AB	F8	R28	08.AB.28	3.8	Pass	*Medium*
AB	F8	R35	08.AB.35	4.0	Pass	*High*
AB	F8	R42	08.AB.42	3.8	Pass	*Medium*
AB	F8	R44	08.AB.44	0.7	Fail	
AB	F8	R44	08.AB.44	4.5	Pass	*High*
AB	F8	R45	08.AB.45	4.8	Pass	*High*
AB	F8	R47	08.AB.47	9.7	Pass	*High*
AB	F8	R50	08.AB.50	9.7	Pass	*High*
AB	F8	R42	08.AB.42	7.3	Pass	*High*
AB	F8	R54	08.AB.54	9.2	Pass	*High*
AB	F8	R57	08.AB.57	10.3	Pass	*High*

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
AB	F8	R59	08.AB.59	10.5	Pass	*High*
AB	F8	R64	08.AB.64	10.7	Pass	*High*
AB	F8	R66	08.AB.66	10.3	Pass	*High*
AB	F8	R69	08.AB.69	10.2	Pass	*High*
AB	F8	R71	08.AB.71	9.8	Pass	*High*
AB	F8	R76	08.AB.76	6.5	Pass	*High*

Block C

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
Cx	F0L	R04	0L.Cx.04	4.3	Pass	*High*
Cx	F0L	R06	0L.Cx.06	5.5	Pass	*High*
Cx	F0U	R04	0U.Cx.04	4.8	Pass	*High*
Cx	F0U	R06	0U.Cx.06	6.2	Pass	*High*
Cx	F0U	R07	0U.Cx.07	6.2	Pass	*High*
Cx	F0U	R09	0U.Cx.09	4.8	Pass	*High*
Cx	F0U	R12	0U.Cx.12	5.3	Pass	*High*
Cx	F0U	R15	0U.Cx.15	0.0	Fail	
Cx	F1	R01	01.Cx.01	5.3	Pass	*High*
Cx	F1	R04	01.Cx.04	5.7	Pass	*High*
Cx	F1	R06	01.Cx.06	6.8	Pass	*High*
Cx	F1	R07	01.Cx.07	6.7	Pass	*High*
Cx	F1	R09	01.Cx.09	5.5	Pass	*High*
Cx	F1	R12	01.Cx.12	6.0	Pass	*High*
Cx	F1	R15	01.Cx.15	0.0	Fail	
Cx	F1	R18	01.Cx.18	2.0	Pass	*Min*
Cx	F1	R21	01.Cx.21	2.2	Pass	*Min*
Cx	F1	R24	01.Cx.24	0.8	Fail	

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality
Cx	F2	R01	02.Cx.01	5.3	Pass	*High*
Cx	F2	R04	02.Cx.04	5.7	Pass	*High*
Cx	F2	R06	02.Cx.06	6.8	Pass	*High*
Cx	F2	R07	02.Cx.07	6.7	Pass	*High*
Cx	F2	R09	02.Cx.09	5.5	Pass	*High*
Cx	F2	R12	02.Cx.12	6.0	Pass	*High*
Cx	F2	R15	02.Cx.15	0.8	Fail	
Cx	F2	R18	02.Cx.18	2.3	Pass	*Min*
Cx	F2	R21	02.Cx.21	2.5	Pass	*Min*
Cx	F2	R24	02.Cx.24	0.8	Fail	
Cx	F3	R01	03.Cx.01	5.3	Pass	*High*
Cx	F3	R04	03.Cx.04	5.7	Pass	*High*
Cx	F3	R06	03.Cx.06	6.8	Pass	*High*
Cx	F3	R07	03.Cx.07	6.7	Pass	*High*
Cx	F3	R09	03.Cx.09	5.5	Pass	*High*
Cx	F3	R12	03.Cx.12	6.0	Pass	*High*
Cx	F3	R15	03.Cx.15	1.7	Pass	*Min*
Cx	F3	R18	03.Cx.18	3.0	Pass	*Medium*
Cx	F3	R21	03.Cx.21	3.0	Pass	*Medium*
Cx	F3	R24	03.Cx.24	0.8	Fail	
Cx	F4	R01	04.Cx.01	5.3	Pass	*High*
Cx	F4	R04	04.Cx.04	5.7	Pass	*High*
Cx	F4	R06	04.Cx.06	6.8	Pass	*High*
Cx	F4	R07	04.Cx.07	6.7	Pass	*High*
Cx	F4	R09	04.Cx.09	5.5	Pass	*High*
Cx	F4	R12	04.Cx.12	6.0	Pass	*High*
Cx	F4	R15	04.Cx.15	2.2	Pass	*Min*
Cx	F4	R18	04.Cx.18	3.7	Pass	*Medium*
Cx	F4	R21	04.Cx.21	3.2	Pass	*Medium*
Cx	F4	R24	04.Cx.24	0.8	Fail	
Cx	F5	R01	05.Cx.01	5.3	Pass	*High*
Cx	F5	R04	05.Cx.04	5.7	Pass	*High*
Cx	F5	R06	05.Cx.06	6.8	Pass	*High*
Cx	F5	R07	05.Cx.07	6.7	Pass	*High*

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality		
Cx	F5	R09	05.Cx.09	5.5	Pass			*High*
Cx	F5	R12	05.Cx.12	6.0	Pass			*High*
Cx	F5	R15	05.Cx.15	2.8	Pass	*Min*		
Cx	F5	R18	05.Cx.18	4.2	Pass			*High*
Cx	F5	R21	05.Cx.21	3.2	Pass		*Medium*	
Cx	F5	R24	05.Cx.24	0.8	Fail			
Cx	F6	R01	06.Cx.01	5.3	Pass			*High*
Cx	F6	R04	06.Cx.04	5.7	Pass			*High*
Cx	F6	R06	06.Cx.06	6.8	Pass			*High*
Cx	F6	R07	06.Cx.07	6.7	Pass			*High*
Cx	F6	R09	06.Cx.09	5.5	Pass			*High*
Cx	F6	R12	06.Cx.12	7.7	Pass			*High*
Cx	F6	R15	06.Cx.15	3.3	Pass		*Medium*	
Cx	F6	R18	06.Cx.18	4.5	Pass			*High*
Cx	F6	R21	06.Cx.21	3.2	Pass		*Medium*	
Cx	F6	R24	06.Cx.24	0.8	Fail			
Cx	F7	R01	07.Cx.01	6.8	Pass			*High*
Cx	F7	R04	07.Cx.04	6.0	Pass			*High*
Cx	F7	R06	07.Cx.06	6.8	Pass			*High*
Cx	F7	R07	07.Cx.07	7.0	Pass			*High*
Cx	F7	R09	07.Cx.09	5.5	Pass			*High*
Cx	F7	R15	07.Cx.15	8.0	Pass			*High*
Cx	F7	R18	07.Cx.18	4.8	Pass			*High*
Cx	F7	R21	07.Cx.21	3.2	Pass		*Medium*	
Cx	F7	R24	07.Cx.24	0.8	Fail			
Cx	F8	R04	08.Cx.04	7.7	Pass			*High*
Cx	F8	R06	08.Cx.06	7.7	Pass			*High*
Cx	F8	R07	08.Cx.07	7.7	Pass			*High*
Cx	F8	R09	08.Cx.09	7.7	Pass			*High*
Cx	F8	R15	08.Cx.15	8.0	Pass			*High*
Cx	F8	R18	08.Cx.18	5.8	Pass			*High*
Cx	F8	R21	08.Cx.21	3.2	Pass		*Medium*	
Cx	F8	R24	08.Cx.24	1.7	Pass	*Min*		

Block D1

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3

Block	Floor	Window/Room	Ref	Hrs of Sun	Pass	Quality		
D1	F0	R04	00.D1.04	0.7	Fail			
D1	F0	R11	00.D1.11	1.0	Fail			
D1	F1	R01	01.D1.01	6.0	Pass			*High*
D1	F1	R04	01.D1.04	0.5	Fail			
D1	F1	R11	01.D1.11	0.8	Fail			
D1	F1	R17	01.D1.17	4.8	Pass			*High*
D1	F1	R18	01.D1.18	5.7	Pass			*High*
D1	F1	R20	01.D1.20	7.0	Pass			*High*
D1	F1	R23	01.D1.23	7.3	Pass			*High*
D1	F1	R25	01.D1.25	6.0	Pass			*High*
D1	F2	R01	02.D1.01	6.0	Pass			*High*
D1	F2	R04	02.D1.04	0.5	Fail			
D1	F2	R11	02.D1.11	0.8	Fail			
D1	F2	R16	02.D1.16	4.7	Pass			*High*
D1	F2	R17	02.D1.17	5.7	Pass			*High*
D1	F2	R18	02.D1.18	6.2	Pass			*High*
D1	F2	R20	02.D1.20	8.2	Pass			*High*
D1	F2	R23	02.D1.23	8.0	Pass			*High*
D1	F2	R25	02.D1.25	6.0	Pass			*High*
D1	F3	R01	03.D1.01	6.0	Pass			*High*
D1	F3	R04	03.D1.04	0.7	Fail			
D1	F3	R11	03.D1.11	0.8	Fail			
D1	F3	R16	03.D1.16	5.2	Pass			*High*
D1	F3	R17	03.D1.17	6.0	Pass			*High*
D1	F3	R18	03.D1.18	7.2	Pass			*High*
D1	F3	R20	03.D1.20	8.3	Pass			*High*
D1	F3	R23	03.D1.23	8.2	Pass			*High*
D1	F3	R25	03.D1.25	6.0	Pass			*High*
D1	F4	R01	04.D1.01	6.7	Pass			*High*
D1	F4	R04	04.D1.04	0.8	Fail			
D1	F4	R11	04.D1.11	1.5	Pass	*Min*		
D1	F4	R16	04.D1.16	5.7	Pass			*High*
D1	F4	R17	04.D1.17	6.0	Pass			*High*

Sunlight to living rooms									
Receives 1.5 hours of sunlight on 21st March									
v3									
Block	**Floor**	**Window/Room**	**Ref**	**Hrs of Sun**	**Pass**		**Quality**		
D1	F4	R18	04.D1.18	7.5	Pass				*High*
D1	F4	R20	04.D1.20	8.3	Pass				*High*
D1	F4	R23	04.D1.23	8.3	Pass				*High*
D1	F4	R25	04.D1.25	6.0	Pass				*High*
D1	F5	R01	05.D1.01	8.5	Pass				*High*
D1	F5	R04	05.D1.04	1.0	Fail				
D1	F5	R11	05.D1.11	3.3	Pass			*Medium*	
D1	F5	R16	05.D1.16	7.5	Pass				*High*
D1	F5	R17	05.D1.17	8.5	Pass				*High*
D1	F5	R18	05.D1.18	7.8	Pass				*High*
D1	F5	R20	05.D1.20	8.5	Pass				*High*
D1	F5	R23	05.D1.23	8.5	Pass				*High*
D1	F5	R25	05.D1.25	7.3	Pass				*High*

Block D1

Sunlight to living rooms									
Receives 1.5 hours of sunlight on 21st March									
v3									
Block	**Floor**	**Window/Room**	**Ref**	**Hrs of Sun**	**Pass**		**Quality**		
D2	F0	R01	00.D2.01	1.7	Pass		*Min*		
D2	F0	R06	00.D2.06	6.2	Pass				*High*
D2	F0	R09	00.D2.09	6.5	Pass				*High*
D2	F0	R11	00.D2.11	6.3	Pass				*High*
D2	F0	R15	00.D2.15	6.0	Pass				*High*
D2	F0	R17	00.D2.17	6.0	Pass				*High*
D2	F0	R21	00.D2.21	7.2	Pass				*High*
D2	F1	R01	01.D2.01	2.2	Pass		*Min*		
D2	F1	R06	01.D2.06	7.0	Pass				*High*
D2	F1	R09	01.D2.09	5.2	Pass				*High*
D2	F1	R11	01.D2.11	7.2	Pass				*High*
D2	F1	R15	01.D2.15	6.2	Pass				*High*
D2	F1	R17	01.D2.17	6.2	Pass				*High*
D2	F1	R19	01.D2.19	6.2	Pass				*High*
D2	F1	R21	01.D2.21	5.0	Pass				*High*
D2	F1	R27	01.D2.27	8.8	Pass				*High*
D2	F1	R28	01.D2.28	4.2	Pass				*High*
D2	F1	R31	01.D2.31	1.5	Pass		*Min*		
D2	F1	R33	01.D2.33	3.2	Pass			*Medium*	
D2	F1	R36	01.D2.36	2.5	Pass		*Min*		
D2	F1	R38	01.D2.38	0.0	Fail				
D2	F1	R39	01.D2.39	1.3	Marginal				
D2	F1	R40	01.D2.40	2.0	Pass		*Min*		
D2	F2	R01	02.D2.01	2.3	Pass		*Min*		
D2	F2	R06	02.D2.06	7.2	Pass				*High*
D2	F2	R09	02.D2.09	5.3	Pass				*High*
D2	F2	R11	02.D2.11	7.3	Pass				*High*
D2	F2	R15	02.D2.15	6.2	Pass				*High*
D2	F2	R17	02.D2.17	6.2	Pass				*High*
D2	F2	R19	02.D2.19	6.2	Pass				*High*
D2	F2	R21	02.D2.21	5.0	Pass				*High*
D2	F2	R27	02.D2.27	8.8	Pass				*High*
D2	F2	R28	02.D2.28	5.2	Pass				*High*
D2	F2	R31	02.D2.31	2.2	Pass		*Min*		

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3									
Block	**Floor**	**Window/Room**	**Ref**	**Hrs of Sun**	**Pass**	**Quality**			
D2	F2	R33	02.D2.33	3.8	Pass		*Medium*		
D2	F2	R36	02.D2.36	3.0	Pass		*Medium*		
D2	F2	R38	02.D2.38	0.3	Fail				
D2	F2	R39	02.D2.39	1.7	Pass	*Min*			
D2	F2	R40	02.D2.40	2.3	Pass	*Min*			
D2	F3	R01	03.D2.01	2.3	Pass	*Min*			
D2	F3	R06	03.D2.06	7.2	Pass				*High*
D2	F3	R09	03.D2.09	5.3	Pass				*High*
D2	F3	R11	03.D2.11	7.3	Pass				*High*
D2	F3	R15	03.D2.15	6.2	Pass				*High*
D2	F3	R17	03.D2.17	6.2	Pass				*High*
D2	F3	R19	03.D2.19	6.2	Pass				*High*
D2	F3	R21	03.D2.21	5.0	Pass				*High*
D2	F3	R27	03.D2.27	8.8	Pass				*High*
D2	F3	R28	03.D2.28	5.3	Pass				*High*
D2	F3	R31	03.D2.31	2.3	Pass	*Min*			
D2	F3	R33	03.D2.33	4.0	Pass				*High*
D2	F3	R36	03.D2.36	3.2	Pass		*Medium*		
D2	F3	R38	03.D2.38	0.5	Fail				
D2	F3	R39	03.D2.39	1.8	Pass	*Min*			
D2	F3	R40	03.D2.40	2.5	Pass	*Min*			
D2	F4	R01	04.D2.01	2.3	Pass	*Min*			
D2	F4	R06	04.D2.06	7.2	Pass				*High*
D2	F4	R09	04.D2.09	5.7	Pass				*High*
D2	F4	R11	04.D2.11	7.3	Pass				*High*
D2	F4	R15	04.D2.15	6.7	Pass				*High*
D2	F4	R17	04.D2.17	6.7	Pass				*High*
D2	F4	R19	04.D2.19	6.7	Pass				*High*
D2	F4	R21	04.D2.21	5.0	Pass				*High*
D2	F4	R27	04.D2.27	8.8	Pass				*High*
D2	F4	R28	04.D2.28	5.3	Pass				*High*
D2	F4	R31	04.D2.31	2.3	Pass	*Min*			
D2	F4	R33	04.D2.33	4.7	Pass				*High*
D2	F4	R36	04.D2.36	3.3	Pass		*Medium*		
D2	F4	R38	04.D2.38	0.5	Fail				

Sunlight to living rooms

Receives 1.5 hours of sunlight on 21st March

v3									
Block	**Floor**	**Window/Room**	**Ref**	**Hrs of Sun**	**Pass**	**Quality**			
D2	F4	R39	04.D2.39	1.8	Pass	*Min*			
D2	F4	R40	04.D2.40	2.5	Pass	*Min*			
D2	F5	R01	05.D2.01	2.3	Pass	*Min*			
D2	F5	R06	05.D2.06	7.2	Pass				*High*
D2	F5	R09	05.D2.09	7.7	Pass				*High*
D2	F5	R11	05.D2.11	7.3	Pass				*High*
D2	F5	R15	05.D2.15	7.3	Pass				*High*
D2	F5	R17	05.D2.17	7.3	Pass				*High*
D2	F5	R19	05.D2.19	7.3	Pass				*High*
D2	F5	R21	05.D2.21	7.2	Pass				*High*
D2	F5	R27	05.D2.27	8.8	Pass				*High*
D2	F5	R28	05.D2.28	5.3	Pass				*High*
D2	F5	R31	05.D2.31	3.3	Pass			*Medium*	
D2	F5	R33	05.D2.33	5.7	Pass				*High*
D2	F5	R36	05.D2.36	3.3	Pass			*Medium*	
D2	F5	R38	05.D2.38	0.5	Fail				
D2	F5	R39	05.D2.39	2.8	Pass	*Min*			
D2	F5	R40	05.D2.40	3.3	Pass			*Medium*	

This is consistent with the guidelines example of “careful layout” design 80%, especially given that this is an urban infill development.

	Sunlight LKDs	
	BRE v3	Incl Marginal
v3	**Pass %**	Pass %
AB	76%	79%
C	88%	88%
D1	78%	78%
D2	93%	94%
Total	**82%**	84%

Summary

Sunlight to living rooms:

82% of all Living rooms *(84% if we include marginals)* receive 1.5hrs of sunlight on the test day of the 21st March
This is consistent/compliant with the BRE defined “careful layout design” 80% target.

Development Performance - Sunlight on the Ground SOG (Shadow)
Gardens and Open spaces

Tests for the availability of sunlight in amenity areas.

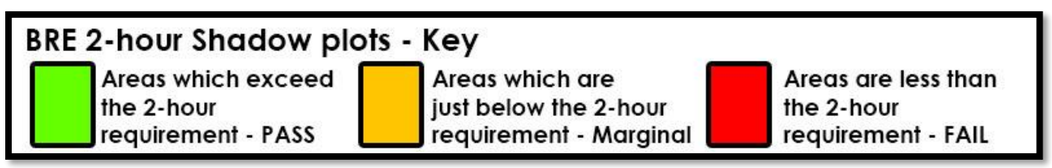
> *3.3.17 It is recommended that for it to appear adequately sunlit throughout the year, at least half of a garden or amenity area should receive at least two hours of sunlight on 21 March. If as a result of new development an existing garden or amenity area does not meet the above, and the area that can receive two hours of sun on 21 March is less than 0.80 times its former value, then the loss of sunlight is likely to be noticeable. If a detailed calculation cannot be carried out, it is recommended that the centre of the area should receive at least two hours of sunlight on 21 March*
>
> *3.3.3 The availability of sunlight should be checked for all open spaces where it will be required. This would normally include:*
> *• gardens, such as the main back garden of a house or communal gardens including courtyards and roof terraces*
> *• parks and playing fields*
> *• children's playgrounds*
> *• outdoor swimming pools and paddling pools, and other areas of recreational water such as marinas and boating lakes*
> *• sitting out areas such as those between non-domestic buildings and in public squares*
> *• nature reserves (which may have special requirements for sunlight if rare plants are growing there).*
>
> *3.3.9 … Normally trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than the deep shadow of a building (this applies especially to deciduous trees). …*

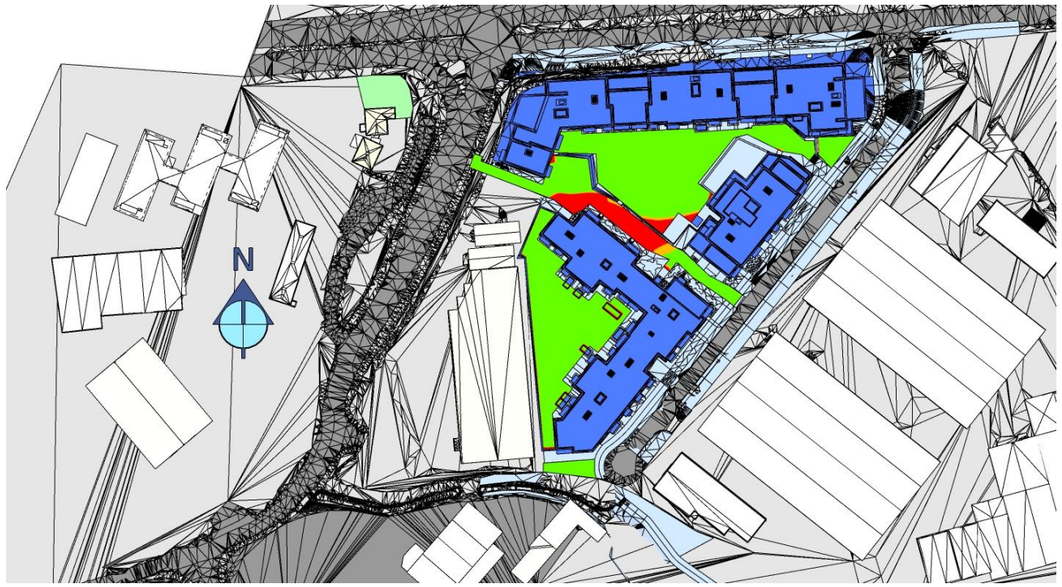
The amenities of the following Building Groups were tested.

- Shared / communal & Public Spaces.

BRE 2-hour Shadow Plots

The graphic below indicates the areas which receive 2 hours of sunlight on the 21st March in accordance with the BRE Guidelines.





Proposed

The results are tabulated below:

		Shadow / Sunlight Amenity >50% receives 2 hours of sunlight on 21st March)			
v3					
Group	Floor	Ref	Ref	% 2hr Sunlight	Check
Pocket Park 1	F0	A1	Pocket Park 1.A1	99%	Pass
Public Space	F0	A2	Public Space.A2	60%	Pass
Pocket Park 2	F0	A3	Pocket Park 2.A3	100%	Pass
Courtyard A	F0	A4	Courtyard A.A4	96%	Pass
Courtyard B	F0	A5	Courtyard B.A5	97%	Pass

Please note that passing the BRE requirements does not imply that shadows will not be cast over an amenity space at all. Shadows which are transient by nature may not impact on the percentage of the space which receives 2 hours of sunlight on the 21st of March.

Conclusion

The zone allocated to new communal and public amenity spaces passes the BRE requirement.
Each of the areas individually and combined well comply with the BRE requirements.

The tested spaces comply with the requirements of the BRE guidelines

Architects Commentary Compensatory Measures.

General

The design is constrained by its location, site shape and orientation. As an urban infill scheme with competing design constraints and objectives it is specifically covered by clauses 6.6/6.7 of the Sustainable Urban Housing: Design Standards for New Apartments Guidelines for Planning Authorities – amended July 2023:

6.6 Planning authorities should ensure appropriate expert advice and input where necessary, and have regard to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in BuildingsEN17037 or UK National Annex BS EN17037 and the associated BRE Guide 209 2022 Edition (June 2022),or any relevant future guidance specific to the Irish context, when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision.

6.7 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 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.

Similarly, department document "Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities" which references the same guideline notes:

5.3.7 Daylight The provision of acceptable levels of daylight in new residential developments is an important planning consideration, in the interests of ensuring a high-quality living environment for future residents. It is also important to safeguard against a detrimental impact on the amenity of other sensitive occupiers of adjacent properties.

(a) The potential for poor daylight performance in a proposed development or for a material impact on neighbouring properties will generally arise in cases where the buildings are close together, where higher buildings are involved, or where there are other obstructions to daylight. Planning authorities do not need to undertake a detailed technical assessment in relation to daylight performance in all cases. It should be clear from the assessment of architectural drawings (including sections) in the case of low-rise housing with good separation from existing and proposed buildings that undue impact would not arise, and planning authorities may apply a level of discretion in this regard.

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

In drawing conclusions in relation to daylight performance, planning authorities must weigh up the overall quality of the design and layout of the scheme and the measures proposed to maximise daylight provision, against the location of the site and the general presumption in favour of increased scales of urban residential development. Poor performance may arise due to design constraints associated with the site or location and there is a need to balance 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.

Site and Objectives

The site has specific constraints pertaining to its orientation and location which directly effects the daylight/sunlight opportunities within the proposed development. The architect has endeavoured to design apartment units with good access to light given that this is an urban infill site. Where site constraints have made attaining the relevant standards unachievable, compensatory measures have been made.

There is a desirability of achieving the wider planning objectives as set out in the City Edge Framework Plan and these objectives include securing comprehensive urban regeneration with an effective urban design and streetscape solution that increases connectivity in the neighbourhood whilst also facilitating a future Greenway. Even when complying with the wider planning objectives the daylight and sunlight levels for the proposed scheme are very high for an urban design solution. The provision of appropriate scale of urban residential development close to good public transport links has to be balanced against the levels of daylight provision. At Parkmore the high levels of daylighting have not been to the detriment of achieving good urban design that also meets the urban design criteria set out in City Edge and the qualitive requirements of Appendix 10 (Building Height and Density Guide) in the South Dublin County Development Plan 2022 – 2028.

Specific compensatory measures

Ground floor of Blocks A & B

00-AB-05c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number A1-00-001)
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.
- Whilst the room is marginally below compliance for daylight, this room and other rooms in the apartment achieve above the requisite sunlight requirements.

00-AB-57c – Marginal

- Apartment oversized by 10% (HQA apartment number B1-00-004)
- The living room is larger than the minimum standard required
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.
- Direct access out onto the residents communal amenity space is provided

00-AB-59c – Fail

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number B1-00-003)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.
- Direct access out onto the residents communal amenity space is provided

00-AB-69c – Marginal

- Apartment oversized by 10% (HQA apartment number A1-00-004)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.
- Direct access out onto the residents communal amenity space is provided

First floor of Blocks A & B

01-AB-55c – Fail

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number B2-01-003)
- Dual aspect apartment with views on opposing sides of the building
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

01-AB-56c – Fail

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number B1-01-006)
- Dual aspect apartment with views on opposing sides of the building
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

01-AB-57c – Marginal

- Apartment oversized by 10% (HQA apartment number B1-01-007)
- The living room is larger than the minimum standard required
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

01-AB-59c – Fail

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number B1-01-008)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

01-AB-64c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number B1-01-001)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

01-AB-71c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number A1-01-010)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

01-AB-76c – Marginal

- The apartment is larger than the minimum size required (HQA apartment number A1-01-001)
- Apartment benefits from south easterly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

Second floor of Blocks A & B

02-AB-55c – Marginal

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number B2-02-003)
- Dual aspect apartment with views on opposing sides of the building
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

02-AB-56c – Marginal

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number B1-02-006)
- Dual aspect apartment with views on opposing sides of the building
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

02-AB-59c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number B1-02-008)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

02-AB-76c – Marginal

- The apartment is larger than the minimum size required (HQA apartment number A1-02-001)
- Apartment benefits from south easterly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

Third floor of Blocks A & B

03-AB-56c – Marginal

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number BC-01-825)
- Dual aspect apartment with views on opposing sides of the building
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

03-AB-59c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number BC-01-834)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

03-AB-76c – Marginal

- The apartment is larger than the minimum size required
- Apartment benefits from south easterly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

Fourth floor of Blocks A & B

04-AB-59c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number B1-04-008)
- Apartment benefits from southerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

04-AB-76c – Marginal

- The apartment is larger than the minimum size required (HQA apartment number A1-04-001)
- Apartment benefits from south easterly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are marginally below the standard required.

Lower Ground floor and Upper ground floor of Block C

0U-Cx-15c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-00-015)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

First floor of Block C

01-Cx-15c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-01-003)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

01-Cx-22 – Marginal

- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard (HQA apartment number C1-01-010)

01-Cx-24c – Fail

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-01-010)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard

Second floor of Block C

02-Cx-15c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-02-003)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

02-Cx-24c – Fail

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-02-010)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard

Third floor of Block C

03-Cx-24c – Fail

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-03-010)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard

Fourth floor of Block C

02-Cx-24c – Marginal

- The living room is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining. (HQA apartment number C1-04-010)
- Apartment benefits from north westerly aspect over the residents enclosed communal courtyard

Ground floor Block D1

00-D1-11c - Marginal

- Apartment oversized by 10% (HQA apartment number D1-00-002)
- This room is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

First floor Block D1

01-D1-11c - Marginal

- Apartment oversized by 10% (HQA apartment number D1-01-006)
- This room is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

Second floor Block D1

02-D1-11c - Marginal

- Apartment oversized by 10% (HQA apartment number D1-02-006)
- This room and apartment are dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

Ground floor Block D2

01-D2-06c - Fail

- The apartment is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining (HQA apartment number D2-00-002)
- This apartment is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

First floor Block D2

01-D2-28c – Marginal

- The apartment is larger than the minimum standard required which has led to a slightly deeper Living/Kitchen/Dining (HQA apartment number D3-01-004)
- This apartment is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.
- Direct access out onto the residents communal amenity space is provided

01-D2-40c - Marginal

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number D2-01-005)
- This apartment is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.
- Direct access out onto the residents communal amenity space is provided

Second floor Block D2

02-D2-40c - Marginal

- The apartment is larger than the minimum size required and marginally less than 10% oversized (HQA apartment number D2-02-007)
- This apartment is dual aspect
- Apartment benefits from north westerly aspect towards the residents enclosed communal courtyard
- Adjacent rooms within the same apartment are comfortably compliant despite the room being assessed showing results that are below the standard required.

Summary – Development Performance

This report is in compliance with: "Site layout planning for daylight and sunlight a guide to good practice" - BR209". It also references EN 17037 and Annex NA (BS/EN 17037) as and where called for in the above BRE guidance document.

Performance of the proposed design

- **Target Illuminance E_T**
  - **97%** of rooms comply with the BS/EN 17037 Annex NA room targets for 50% of the floor area tested.
  - *99% if we include marginal results.*
  - The average compliant areas achieving the relevant target Lx for
    - all bedrooms is **98%** and
    - all Living/Kitchen spaces **78%**
    - both are well in excess of the required 50%
- **Sunlight to rooms:**
  - **82%** of Living rooms receive 1.5hrs of sunlight on the test day of the 21st March
  - *84% if we include marginal results.*
  - This is consistent/compliant with the BRE defined "careful layout design" 80% target.
- **Sunlight on the Ground SOG (Shadow)**
  - The zone allocated to new communal and public amenity spaces passes the BRE requirement.
  - Each of the areas individually and combined well comply with the BRE requirements.

The application is highly compliant with the recommendations and guidelines of Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice – BR209.

Summary – Overall

This report is in compliance with "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" BRE version 3, 2022 and EN 17037:2018 Daylight in buildings.

Change/Impact to neighbouring buildings in the adjoining residential areas.

- **Skylight- VSC**
  - **95%** of the tested windows comply with the 27%, 0.8 ratio requirements for habitable rooms.
  - *100% if we include marginal windows.*
  - The average change ratio for VSC is **0.90**
- **Sunlight APSH & WPSH**
  - **100%** of tested windows comply with the annual APSH and
  - **100%** with the winter WPSH requirements for sunlight or overall requirement.
  - The average change ratio for sunlight is APSH:**0.88** and WPSH: **0.90**
- **Sunlight on the Ground SOG (Shadow)**
  - **100%** of tested neighbouring amenity spaces pass the 2-hour test requirements for the 21st March.
  - The average change ratio for shadow/sunlight is **0.97**

Performance of the proposed design

- **Target Illuminance E_T**
  - **97%** of rooms comply with the BS/EN 17037 Annex NA room targets for 50% of the floor area tested.
  - *99% if we include marginal results.*
  - The average compliant areas achieving the relevant target Lx for
    - all bedrooms is **98%** and
    - all Living/Kitchen spaces **78%**
    - both are well in excess of the required 50%
- **Sunlight to rooms:**
  - **82%** of Living rooms receive 1.5hrs of sunlight on the test day of the 21st March
  - *84% if we include marginal results.*
  - This is consistent/compliant with the BRE defined "careful layout design" 80% target.
- **Sunlight on the Ground SOG (Shadow)**
  - The zone allocated to new communal and public amenity spaces passes the BRE requirement.
  - Each of the areas individually and combined well comply with the BRE requirements.

The application shows a very high level of compliance with the recommendations and Guidelines of Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice (BR209 - 2022).

In summary, this report can conclude that the design team has followed best practice to ensure that the proposal received good quality daylight and sunlight, with limited impact on the neighbouring environment.

Appendix 1
Light Distribution
Target Illuminance ET Metric
Analysis including Proposed Trees

In the main body of the report these trees have been excluded since their management is part of the Development landscape plan and their impact is likely to be minimal.

Development Performance

Development Performance - Target Illuminance E_T Metric

National Standards Authority of Ireland have adopted EN 17037 to directly become IS/EN 17037. There are no amendments made to this document and no national Annex localising the same was developed as can be found in BS/EN 17037. The standard document provides only a single target for rooms of new buildings and does not include specific usage targets for spaces for commercial, office and residential (living, bedroom, Kitchen).

The UK variant referenced is more suitable to use in temperate climates where the median external diffuse illuminance is low. We would concur with the UK committee that the recommendations for daylight provision in a space may not be achievable for some buildings, particularly dwellings, which are the subject of this report.

We note the reasoning put forward by the UK committee and concur with their conclusions that different room usage should be assigned different light requirements/targets. Design in Ireland quite often follows the practice and precedent set in the UK. With similar climates, light and receiving environments it is reasonable to adopt BS/EN 17037 / Annex NA which itself was derived from the now withdrawn BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting, Subclause 5.6. This provides alignment between the new and old standards and with the levels of light we are used to and deemed acceptable in new developments.

> ***Target illuminance (ET) :***
> ***Illuminance from daylight that should be achieved for at least half of annual daylight hours across a specified fraction of the reference plane in a daylit space***

Reference in Irish Government Publications:

Clause 6.6 of the Department Apartment Guidelines "Sustainable Urban Housing: Design Standards for New Apartments" directly reference this annex and the BRE guide (Emphasis Added):

Planning authorities should ensure appropriate expert advice and input where necessary, and have regard to quantitative performance approaches to daylight provision outlined in guides like A New European Standard for Daylighting in Buildings EN17037 or ***UK National Annex BS EN17037 and the associated BRE Guide 209 2022*** *Edition (June 2022), or any relevant future guidance specific to the Irish context, when undertaken by development proposers which offer the capability to satisfy minimum standards of daylight provision.*

Clause 5.3.7 (b) of "Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities" also directly reference this annex the BRE guide (Emphasis Added):

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

NA.2 - Minimum daylight provision in UK dwellings

Even if a predominantly daylit appearance is not achievable for a room in a UK dwelling, the UK committee recommends that the target illuminance values given in Table NA.1 are exceeded over at least 50 % of the points on a reference plane 0.85 m above the floor, for at least half of the daylight hours.

Table NA.1 — Values of target illuminance for room types in UK dwellings

Room type	Target illuminance E_T (lx)
Bedroom	100
Living room	150
Kitchen	200

Derived from BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting

Where one room in a UK dwelling serves more than a single purpose, the UK committee recommends that the target illuminance is that for the room type with the highest value – for example, in a space that combines a living room and a kitchen the target illuminance is recommended to be 200 lx.

It is the opinion of the UK committee that the recommendation in Clause A.2 – that a target illuminance level should be achieved across the entire (i.e. 95 %) fraction of the reference plane within a space – need not be applied to rooms in dwellings.

This is echoed in The BRE Guidelines

> ***C16 The UK National Annex gives illuminance recommendations of 100 lux in bedrooms, 150 lux in living rooms and 200 lux in kitchens. These are the median illuminances, to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours. The recommended levels over 95% of a reference plane need not apply to dwellings in the UK.***
>
> ***C17 Where a room has a shared use, the highest target should apply. For example in a bed sitting room in student accommodation, the value for a living room should be used if students would often spend time in their rooms during the day. Local authorities could use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area if the kitchens are not treated as habitable spaces, as it may avoid small separate kitchens in a design. The kitchen space would still need to be included in the assessment area … in rooms with a particular requirement for daylight, such as bed sitting rooms in homes for the elderly, higher values … may be taken.***

Analysis Parameters

Analysis parameters are as per Annex B (and/or as revised by Annex NA), analysis method 1 was used. The following Parameters were used which are within the recommended ranges and reflect the materials/finishes specified in this application. The Median External Diffuse Illuminance used is noted in the relevant results tables.

Surface	Description	Reflectance
External Plane	Earth	0.2
External Walls	Grey Render / Concrete	0.4
Floor	Light wood/ cream Carpet	0.4
Internal Wall	Cream	0.7
Ceiling	White	0.8
Frames	Medium Grey	0.5
	Transmittance	
Glazing clear	0.63 (incls. Maintenance Factor)	
Glazing Translucent	0.4 (incls. Maintenance Factor)	

Light distribution was computed by modelling the internal configuration of rooms and windows placed within the existing topography and the adjacent buildings and then running an analysis on the same. This analysis was based on a standard working plane for in this case residential of 0.850m.

Reference plane or working plane

> *Horizontal, vertical, or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in houses and factories, 0.7 m above the floor in offices.*

Legend for Radiance Plots

In the radiances plots provided below we shall use the following demarcation of Lx results which is compatible with the target values from Annex NA

Assessment Areas

Where rooms have small annexed entrances or corridors they need not be included in the assessment grid area, (unless it is wide enough to be part of the usable space in a room, typically over 1.5m wide).

Fig C2 – Fixed floor to ceiling units

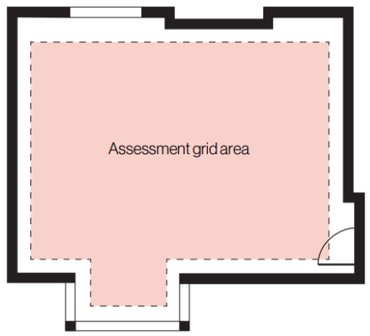


Figure C2: Where room layouts have small variations or alcoves along a wall's length, the inner or dominant section should be taken as a basis for the 0.3m gap to the assessment grid area. Fixed floor to ceiling cupboards can be excluded from the room area, but not kitchen units incorporating a worktop. Areas in bay windows may be included unless they are winter gardens separated from the room by a fixed partition.

Fig C3 - Corridors/entrances

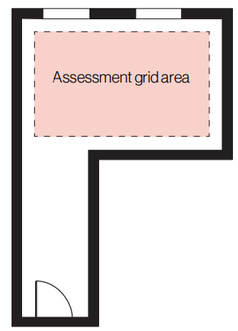


Figure C3: In a room with a corridor, or annexed entrance, the corridor need not be included in the assessment grid area (unless it is wide enough to be part of the usable space in a room, typically over 1.5m wide). The room layout and surfaces, including the corridor would still need to be included in the calculation model.

Fig C2 also notes that: Fixed floor to ceiling cupboards can be excluded from the room area, but not kitchen units incorporating a worktop. And also The BRE guidelines note the following in relation to the assessment grid.

> *The standard states that the assessment grid should exclude a band of 0.5m from the walls, unless otherwise specified. In dwellings it is recommended that a band of 0.3m should be excluded, to avoid excluding parts of the room that are used by the occupants. Professional judgement should be used in cases with irregular shaped spaces or rooms with corridor or annex areas.*

Including adjacent Trees in the assessment of daylight / Target Illuminance.

To include adjacent Trees in the analysis we will refer to Appendix G of the BRE guidelines refers.

The analysis below looks at daylight within rooms or Target Illuminance.

G2 Skylight in new dwellings obstructed by trees

G2.1 Sometimes, however, trees should be taken into account, for example where a new dwelling is proposed near to large existing trees. There may be concern that future occupants of the dwelling may want the trees to be cut down if they block too much skylight or sunlight.

G2.2 A way to assess this is to calculate the illuminances or daylight factors in the proposed rooms (Appendix C) with the trees in place. This will depend on the transparency of the trees; the proportion of light that passes through the tree crown.

G2.3 The calculation model should account for the obstruction to daylight caused by the trees. This needs to be done by modelling a representative shape of the trees. Often trees are irregularly shaped and simple modelling, using height and spread data and assuming a circular tree, will give inaccurate results. A special survey on site is generally required to produce the required data on the tree profile, using a clinometer or other device to measure tree height (Figure G1). Buildings and other solid objects should also be taken into account.

G2.4 The assessment should account for the transparency and reflectance of the trees, which can vary across the seasons.

G2.5 Table G1 below details the optical transparency of tree crowns for winter and summer.

Table G1 – Transparencies of tree crowns to solar radiation

		Transparency (% radiation passing)	
Botanical name	**Common name**	**Full leaf**	**Bare branch**
Acer pseudoplatanus	Sycamore	20	60
Acer saccharinum	Silver maple	15	55
Aesculus hippocastanum	Horse chestnut	20	55
Betula pendula	European birch	20	55
Fagus sylvatica	European beech	20	45*
Fraxinus excelsior	European ash	25	65
Gleditsia	Locust	30	80
Quercus robur	English oak	20	55*
Tilia cordata	Lime	10	55
Ulmus	Elm	15	65

* The beech, and some oaks, tend to retain dead leaves for much of the winter, reaching bare branch condition only briefly before new leaf growth in the spring. The transparency value for beech is an average winter value.

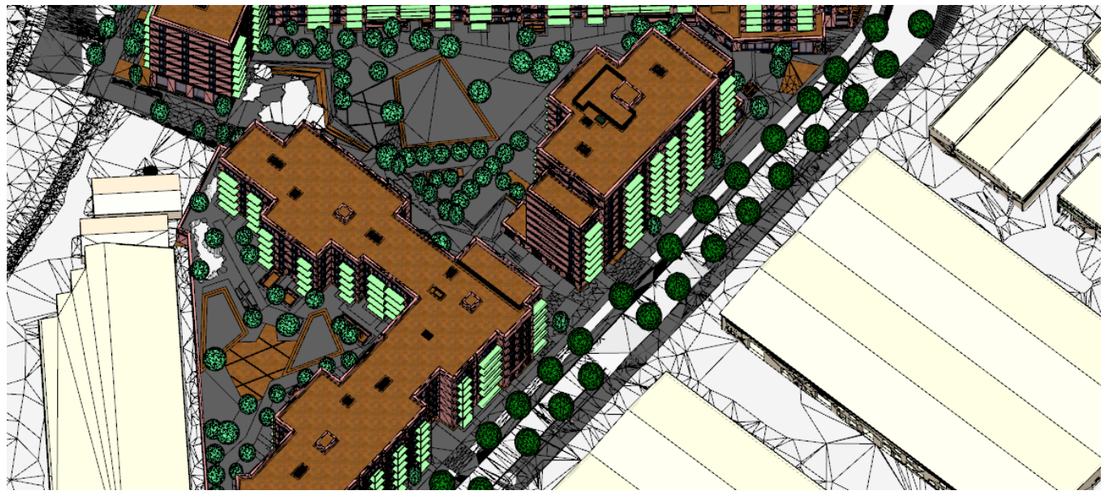
G2.6 Table G2 contains data on the reflectance of trees in summer and winter.

Table G2 – Reflectances of trees

	Reflectance (%)	
	Summer	Winter
Trees with dense light-coloured foliage in summer	40	10
Trees with open foliage	20	10
Evergreen conifers	10	10

Design Model

The 3D model of the proposed development and the surrounding neighbouring properties was reused in this analysis. The individual shapes and types of the trees was provided as 3D information consistent with the planting and projected growth heights by the landscape consultant.



The analysis was undertaken from using the same orientation for both the “Full Leaf/Leaf on” and “Bare Branch/leaf off” conditions as per Appendix G recommendations.

The trees (not shrubs) are modelled according to the landscape plan.

- Trees on the podium are set at 5m height.
- Trees on natural ground are at 7.5m height.
- Larger trees next to the road are at 8m height.

The modelled elements are estimates as planting is dynamic and difficult to predict precisely.

However, the models provided are suitable to be used as a reference in the design.

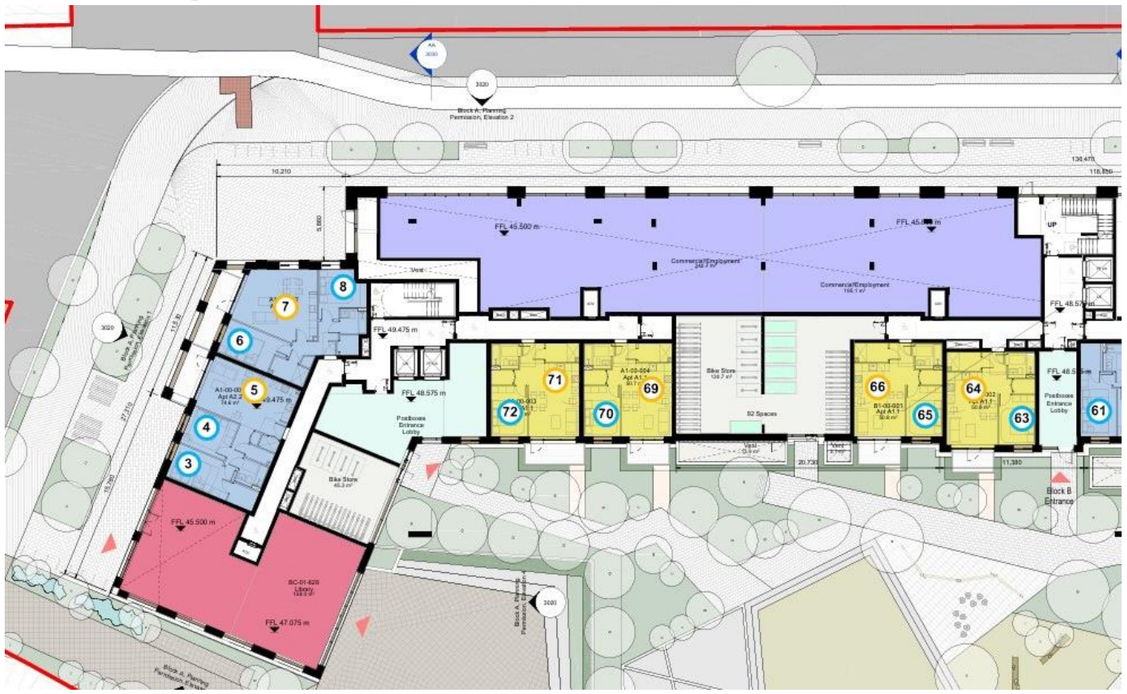
Particularly on the podium, due to limited soil depth, tree growth is somewhat stunted.

Compliance is mainly focused on the Bare Branch analysis with the Full leaf results provided as information.

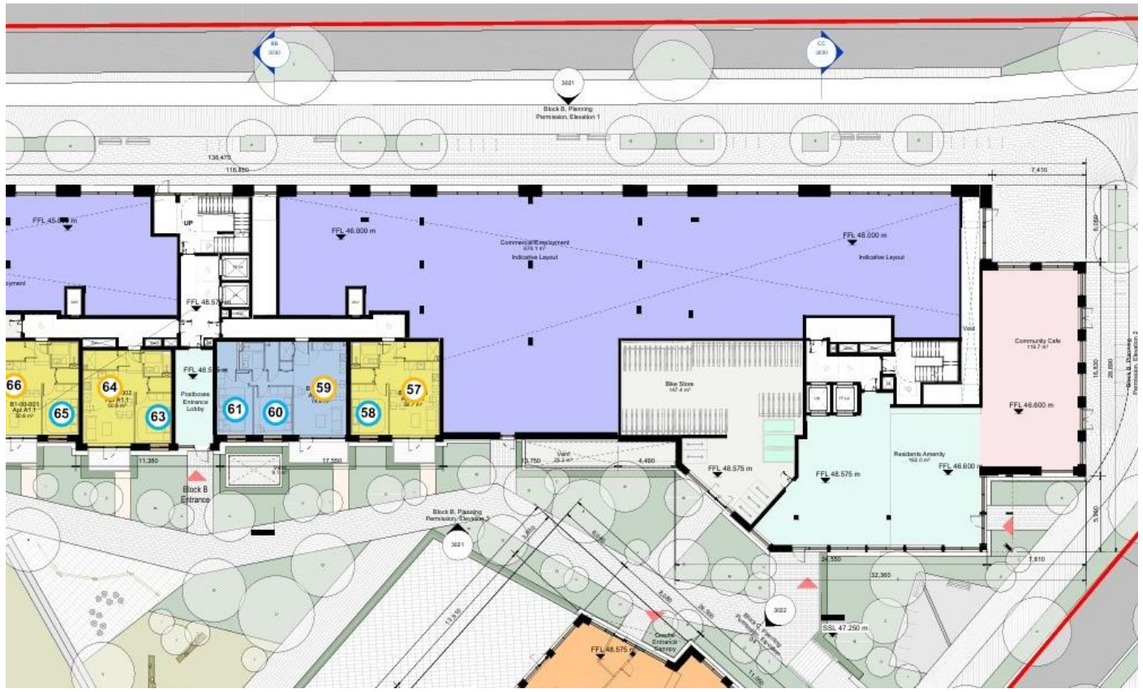
Note:

- The proposed trees in question are subject to the landscape plan detailed in the proposed design.
- There are no significant existing trees to be examined.
- Heights and form will be defined and maintained as part of the management of the development.
- Only certain floors on specific blocks can be impacted by the proposed planting and only these are assessed as follows:
    - AB: Floors GFL and 1st
    - C: Floors Lower Ground, Upper Ground and 1st
    - D1: Floors Ground, 1st and 2nd
    - D2: Floors Ground, 1st and 2nd
- In providing a quantum for compliance for a Block and the full development including other floors are considered.
- Room naming and referencing convention remains as per the main body of the report.

Block AB - Target Illuminance E_T - GFL Floor



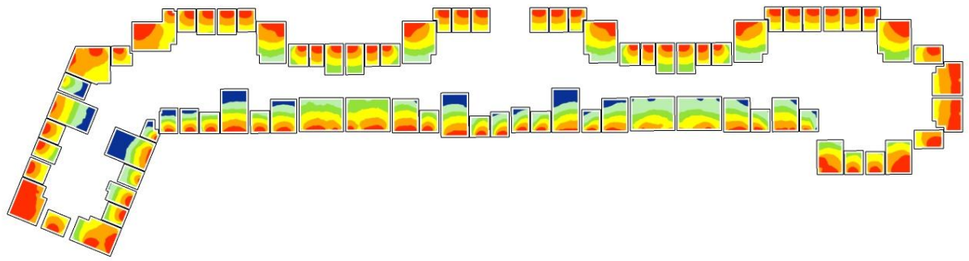
Block AB - 1st Floor



Radiance Plots Bare Branch / Leaf off

GFL

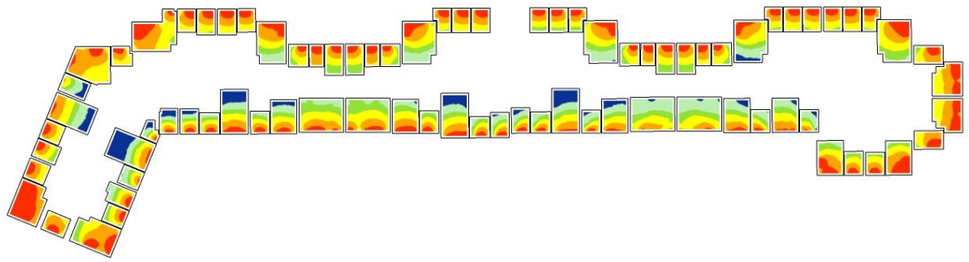
1st



Radiance Plots Full Leaf / Leaf On

GFL

1st



Tabulated Results for both phases.

Tabulated Results for both phases.

NA.2 Minimum daylight provision							
			For all habitable rooms				
Median External Diffuse Illuminance			***14,900***	***lx***			
>50 % of the points on a reference plane to exceed							
AB-v3-T1	**Type**	**Leaf OFF**			**Leaf ON**		
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
00-AB-03	Bedroom	100	100	Pass	100	100	Pass
00-AB-04	Bedroom	100	100	Pass	100	100	Pass
00-AB-05c	Living/Kitchen	26	200	Fail	26	200	Fail
00-AB-06	Bedroom	31	100	Fail	31	100	Fail
00-AB-07c	Living/Kitchen	87	200	Pass	83	200	Pass
00-AB-08	Bedroom	100	100	Pass	100	100	Pass
00-AB-57c	Living/Kitchen	41	200	Marginal	41	200	Marginal
00-AB-58	Bedroom	62	100	Pass	62	100	Pass
00-AB-59c	Living/Kitchen	35	200	Fail	35	200	Fail
00-AB-60	Bedroom	66	100	Pass	65	100	Pass
00-AB-61	Bedroom	53	100	Pass	53	100	Pass
00-AB-63	Bedroom	89	100	Pass	90	100	Pass
00-AB-64c	Living/Kitchen	51	200	Pass	50	200	Pass
00-AB-65	Bedroom	75	100	Pass	72	100	Pass
00-AB-66c	Living/Kitchen	43	200	Marginal	43	200	Marginal
00-AB-69c	Living/Kitchen	17	200	Fail	16	200	Fail
00-AB-70	Bedroom	64	100	Pass	63	100	Pass
00-AB-71c	Living/Kitchen	23	200	Fail	23	200	Fail
00-AB-72	Bedroom	57	100	Pass	55	100	Pass
01-AB-01c	Living/Kitchen	100	200	Pass	100	200	Pass
01-AB-02	Bedroom	100	100	Pass	100	100	Pass
01-AB-03	Bedroom	100	100	Pass	100	100	Pass
01-AB-04	Bedroom	100	100	Pass	100	100	Pass
01-AB-05c	Living/Kitchen	46	200	Marginal	45	200	Marginal
01-AB-06	Bedroom	67	100	Pass	65	100	Pass
01-AB-07c	Living/Kitchen	100	200	Pass	100	200	Pass
01-AB-08	Bedroom	100	100	Pass	100	100	Pass
01-AB-09c	Living/Kitchen	98	200	Pass	96	200	Pass
01-AB-10	Bedroom	100	100	Pass	100	100	Pass
01-AB-11	Bedroom	100	100	Pass	100	100	Pass
01-AB-12	Bedroom	100	100	Pass	100	100	Pass
01-AB-13	Bedroom	100	100	Pass	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

AB-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
01-AB-14c	Living/Kitchen	66	200	Pass	61	200	Pass
01-AB-15	Bedroom	100	100	Pass	100	100	Pass
01-AB-16	Bedroom	100	100	Pass	100	100	Pass
01-AB-17	Bedroom	100	100	Pass	100	100	Pass
01-AB-18	Bedroom	100	100	Pass	100	100	Pass
01-AB-19	Bedroom	100	100	Pass	100	100	Pass
01-AB-20	Bedroom	100	100	Pass	100	100	Pass
01-AB-21c	Living/Kitchen	64	200	Pass	58	200	Pass
01-AB-22	Bedroom	100	100	Pass	100	100	Pass
01-AB-23	Bedroom	100	100	Pass	100	100	Pass
01-AB-24	Bedroom	100	100	Pass	100	100	Pass
01-AB-25	Bedroom	100	100	Pass	100	100	Pass
01-AB-26	Bedroom	100	100	Pass	100	100	Pass
01-AB-27	Bedroom	100	100	Pass	100	100	Pass
01-AB-28c	Living/Kitchen	63	200	Pass	56	200	Pass
01-AB-29	Bedroom	100	100	Pass	100	100	Pass
01-AB-30	Bedroom	100	100	Pass	100	100	Pass
01-AB-31	Bedroom	100	100	Pass	100	100	Pass
01-AB-32	Bedroom	100	100	Pass	100	100	Pass
01-AB-33	Bedroom	100	100	Pass	100	100	Pass
01-AB-34	Bedroom	100	100	Pass	100	100	Pass
01-AB-35c	Living/Kitchen	63	200	Pass	53	200	Pass
01-AB-36	Bedroom	100	100	Pass	100	100	Pass
01-AB-37	Bedroom	100	100	Pass	100	100	Pass
01-AB-38	Bedroom	100	100	Pass	100	100	Pass
01-AB-39	Bedroom	100	100	Pass	100	100	Pass
01-AB-40	Bedroom	100	100	Pass	100	100	Pass
01-AB-41	Bedroom	100	100	Pass	100	100	Pass
01-AB-42c	Living/Kitchen	72	200	Pass	71	200	Pass
01-AB-43	Bedroom	100	100	Pass	100	100	Pass
01-AB-44c	Living/Kitchen	100	200	Pass	99	200	Pass
01-AB-45c	Living/Kitchen	100	200	Pass	100	200	Pass
01-AB-46	Bedroom	100	100	Pass	100	100	Pass
01-AB-47c	Living/Kitchen	88	200	Pass	83	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

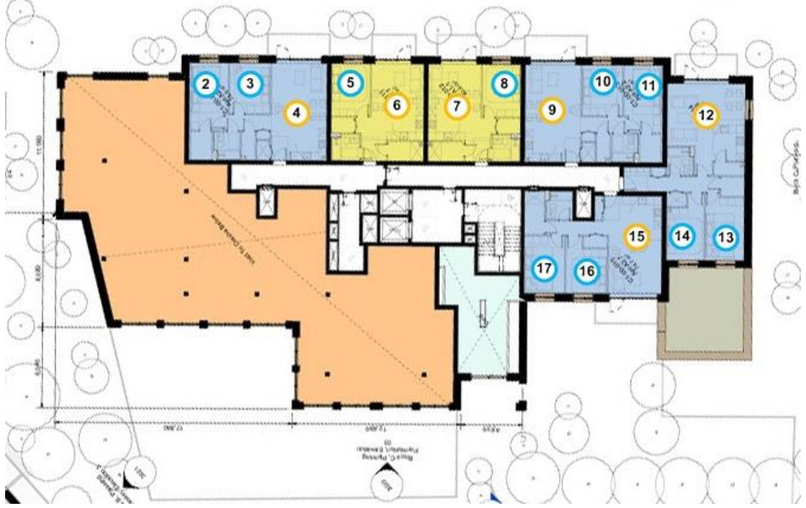
>50 % of the points on a reference plane to exceed

AB-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
01-AB-48	Bedroom	100	100	Pass	100	100	Pass
01-AB-49	Bedroom	100	100	Pass	100	100	Pass
01-AB-50c	Living/Kitchen	74	200	Pass	72	200	Pass
01-AB-51	Bedroom	87	100	Pass	87	100	Pass
01-AB-52c	Living/Kitchen	54	200	Pass	53	200	Pass
01-AB-53	Bedroom	100	100	Pass	97	100	Pass
01-AB-54c	Living/Kitchen	50	200	Pass	50	200	Pass
01-AB-55c	Living/Kitchen	36	200	Fail	35	200	Fail
01-AB-56c	Living/Kitchen	34	200	Fail	33	200	Fail
01-AB-57c	Living/Kitchen	45	200	Marginal	44	200	Marginal
01-AB-58	Bedroom	90	100	Pass	90	100	Pass
01-AB-59c	Living/Kitchen	37	200	Fail	37	200	Fail
01-AB-60	Bedroom	100	100	Pass	100	100	Pass
01-AB-61	Bedroom	84	100	Pass	84	100	Pass
01-AB-62	Bedroom	93	100	Pass	92	100	Pass
01-AB-63	Bedroom	100	100	Pass	100	100	Pass
01-AB-64c	Living/Kitchen	46	200	Marginal	46	200	Marginal
01-AB-65	Bedroom	100	100	Pass	100	100	Pass
01-AB-66c	Living/Kitchen	63	200	Pass	62	200	Pass
01-AB-67c	Living/Kitchen	62	200	Pass	58	200	Pass
01-AB-68c	Living/Kitchen	54	200	Pass	52	200	Pass
01-AB-69c	Living/Kitchen	47	200	Marginal	44	200	Marginal
01-AB-70	Bedroom	100	100	Pass	100	100	Pass
01-AB-71c	Living/Kitchen	45	200	Marginal	45	200	Marginal
01-AB-72	Bedroom	100	100	Pass	100	100	Pass
01-AB-73	Bedroom	81	100	Pass	80	100	Pass
01-AB-74	Bedroom	70	100	Pass	70	100	Pass
01-AB-75	Bedroom	72	100	Pass	71	100	Pass
01-AB-76c	Living/Kitchen	30	200	Fail	30	200	Fail
01-AB-77	Bedroom	100	100	Pass	99	100	Pass
01-AB-78	Bedroom	100	100	Pass	100	100	Pass
01-AB-79	Bedroom	100	100	Pass	100	100	Pass
01-AB-80c	Living/Kitchen	84	200	Pass	84	200	Pass
01-AB-81	Bedroom	100	100	Pass	100	100	Pass

NA.2 Minimum daylight provision							
			For all habitable rooms				
Median External Diffuse Illuminance			***14,900***	***lx***			
>50 % of the points on a reference plane to exceed							
AB-v3-T1	**Type**	**Leaf OFF**			**Leaf ON**		
Ref	**Type**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**	**Percentage within Target Lux**	**BS/EN17037 Annex AN Target Lux**	**Check**
Remaining Floors as per the Main Report							

Block C - Target Illuminance E_T - Lower GFL

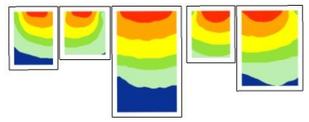
Block C - Upper GFL



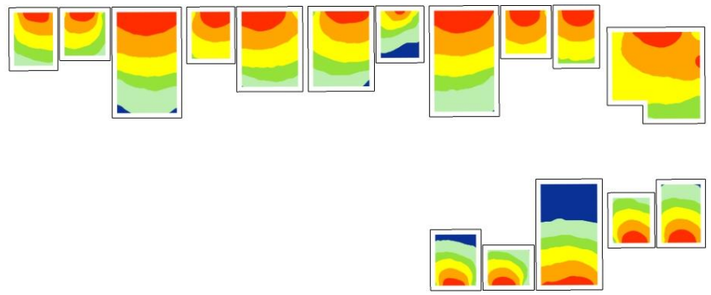
Block C – 1st Floor

Radiance Plots Bare Branch / Leaf off

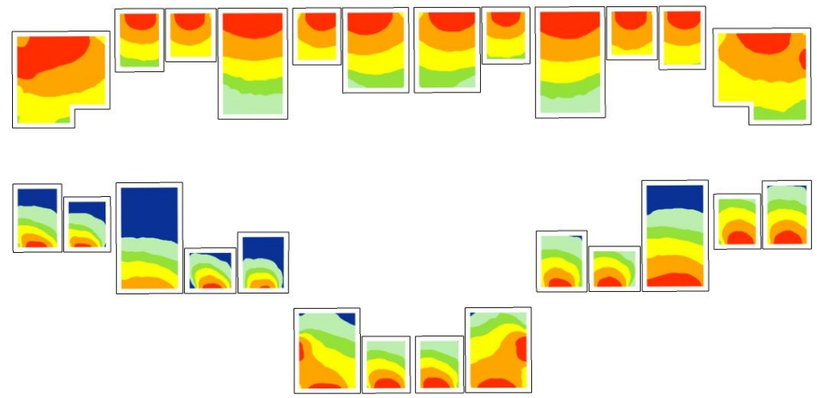
Lower GF



Upper GF

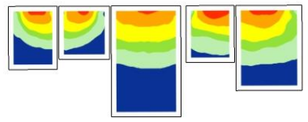


1st Floor

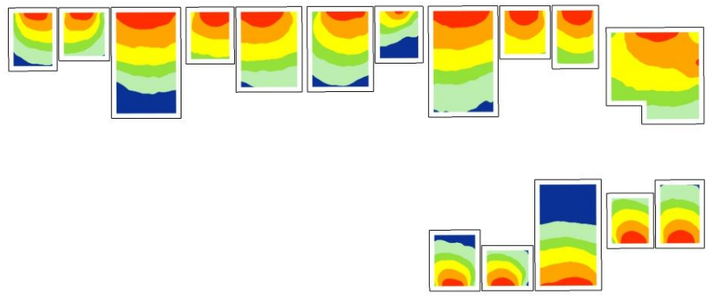


Radiance Plots Full Leaf / Leaf On

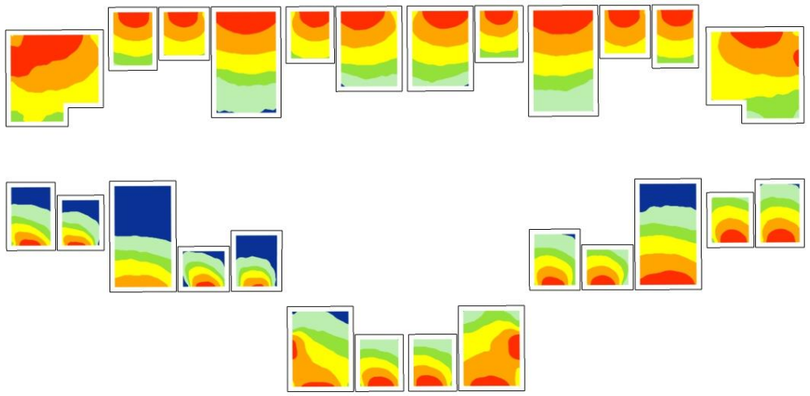
Lower GF



Upper GF



1st Floor



Tabulated Results for both phases.

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

C-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
0L-Cx-02	Bedroom	78	100	Pass	60	100	Pass
0L-Cx-03	Bedroom	100	100	Pass	66	100	Pass
0L-Cx-04c	Living/Kitchen	46	200	Marginal	32	200	Fail
0L-Cx-05	Bedroom	100	100	Pass	84	100	Pass
0L-Cx-06c	Living/Kitchen	50	200	Pass	31	200	Fail
0U-Cx-02	Bedroom	100	100	Pass	87	100	Pass
0U-Cx-03	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-04c	Living/Kitchen	61	200	Pass	50	200	Pass
0U-Cx-05	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-06c	Living/Kitchen	70	200	Pass	60	200	Pass
0U-Cx-07c	Living/Kitchen	61	200	Pass	45	200	Marginal
0U-Cx-08	Bedroom	75	100	Pass	61	100	Pass
0U-Cx-09c	Living/Kitchen	61	200	Pass	55	200	Pass
0U-Cx-10	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-11	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-12c	Living/Kitchen	85	200	Pass	66	200	Pass
0U-Cx-13	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-14	Bedroom	100	100	Pass	100	100	Pass
0U-Cx-15c	Living/Kitchen	37	200	Fail	36	200	Fail
0U-Cx-16	Bedroom	100	100	Pass	95	100	Pass
0U-Cx-17	Bedroom	77	100	Pass	77	100	Pass
01-Cx-01c	Living/Kitchen	97	200	Pass	93	200	Pass
01-Cx-02	Bedroom	100	100	Pass	100	100	Pass
01-Cx-03	Bedroom	100	100	Pass	100	100	Pass
01-Cx-04c	Living/Kitchen	63	200	Pass	59	200	Pass
01-Cx-05	Bedroom	100	100	Pass	100	100	Pass
01-Cx-06c	Living/Kitchen	76	200	Pass	66	200	Pass
01-Cx-07c	Living/Kitchen	71	200	Pass	67	200	Pass
01-Cx-08	Bedroom	100	100	Pass	100	100	Pass
01-Cx-09c	Living/Kitchen	66	200	Pass	61	200	Pass
01-Cx-10	Bedroom	100	100	Pass	100	100	Pass

NA.2 Minimum daylight provision

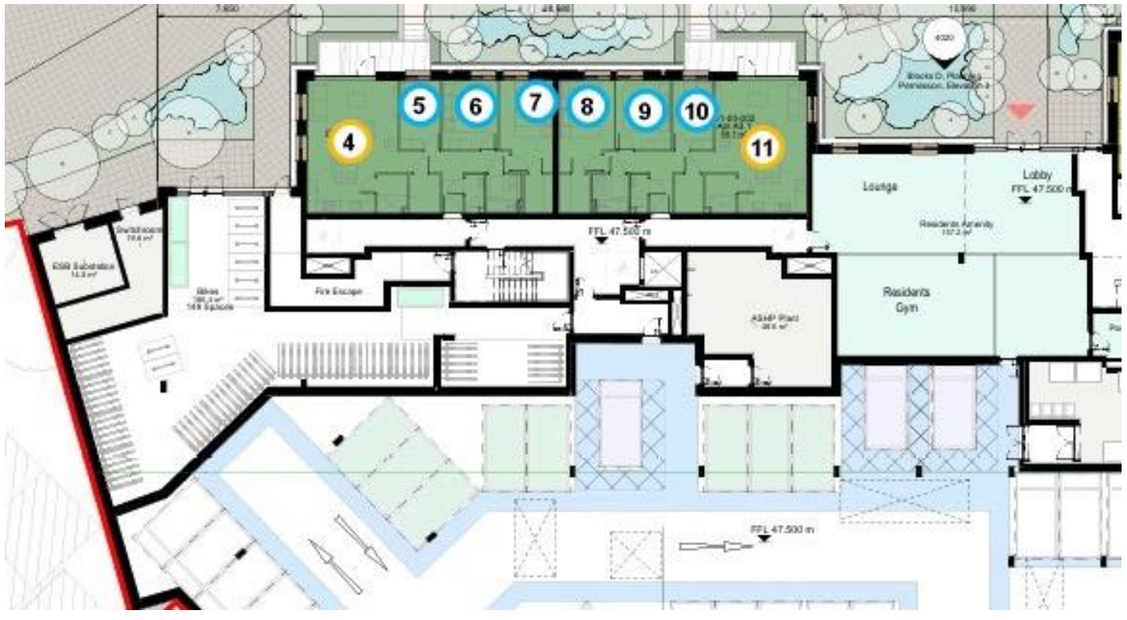
For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

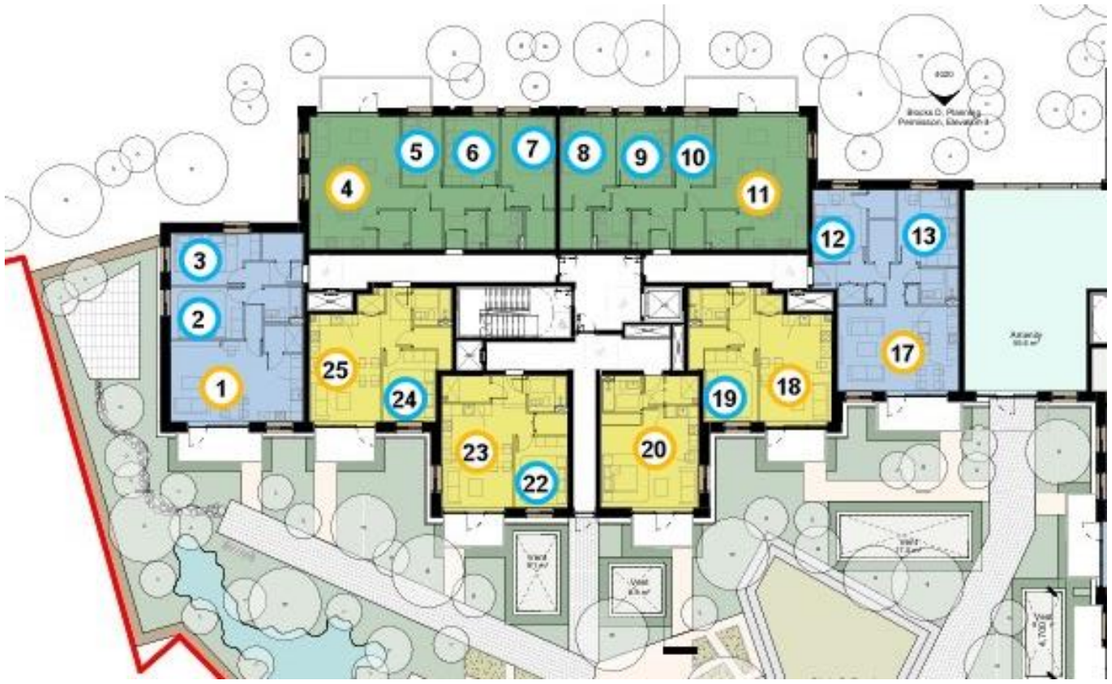
C-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
01-Cx-11	Bedroom	100	100	Pass	100	100	Pass
01-Cx-12c	Living/Kitchen	87	200	Pass	80	200	Pass
01-Cx-13	Bedroom	100	100	Pass	100	100	Pass
01-Cx-14	Bedroom	100	100	Pass	100	100	Pass
01-Cx-15c	Living/Kitchen	46	200	Marginal	46	200	Marginal
01-Cx-16	Bedroom	100	100	Pass	100	100	Pass
01-Cx-17	Bedroom	95	100	Pass	97	100	Pass
01-Cx-18c	Living/Kitchen	73	200	Pass	75	200	Pass
01-Cx-19	Bedroom	100	100	Pass	100	100	Pass
01-Cx-20	Bedroom	100	100	Pass	100	100	Pass
01-Cx-21c	Living/Kitchen	55	200	Pass	55	200	Pass
01-Cx-22	Bedroom	44	100	Marginal	44	100	Marginal
01-Cx-23	Bedroom	73	100	Pass	73	100	Pass
01-Cx-24c	Living/Kitchen	26	200	Fail	26	200	Fail
01-Cx-25	Bedroom	60	100	Pass	60	100	Pass
01-Cx-26	Bedroom	65	100	Pass	65	100	Pass
Remaining Floors as per the Main Report							

Block D1 - Target Illuminance E_T - GFL



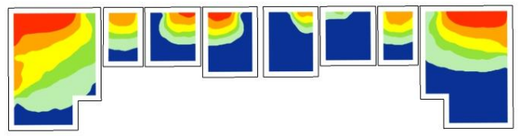
Block D1 – 2nd Floor

Block D1 - 1st Floor

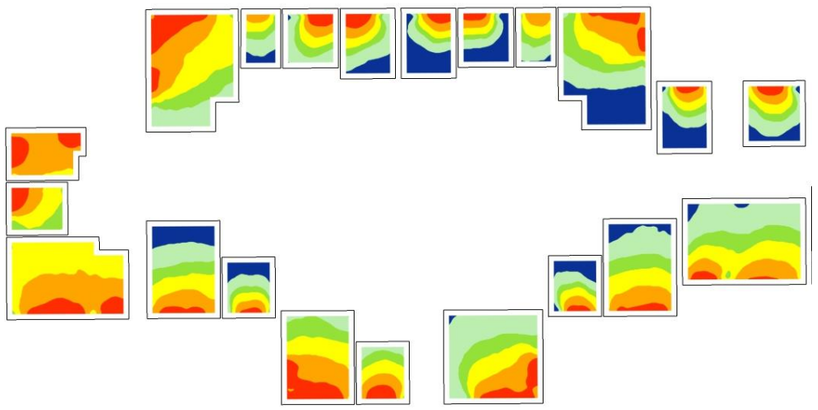


Radiance Plots Bare Branch / Leaf off

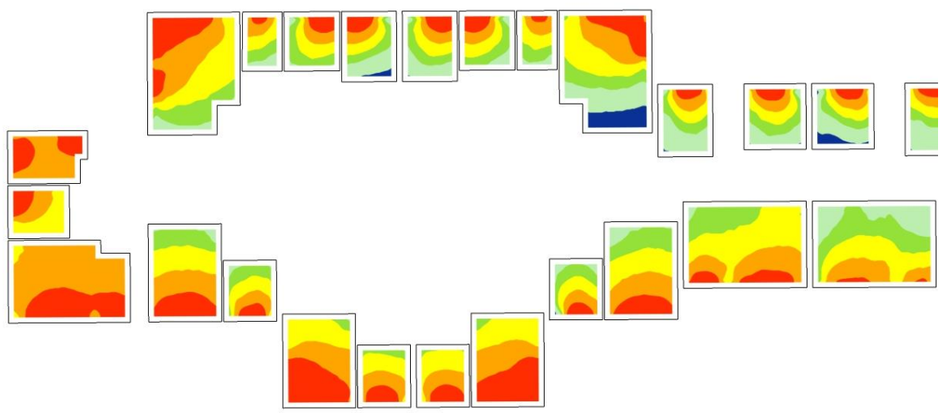
GFL



1st Floor

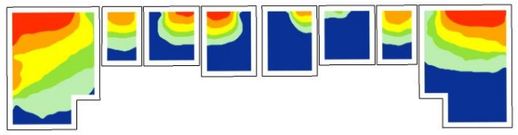


2nd Floor

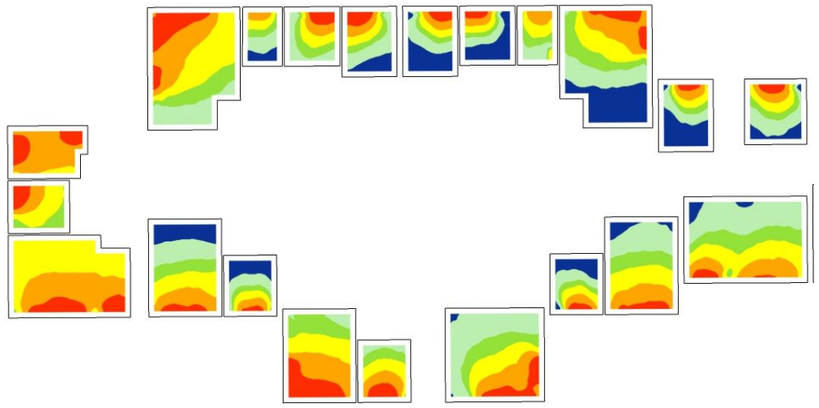


Radiance Plots Full Leaf / Leaf On

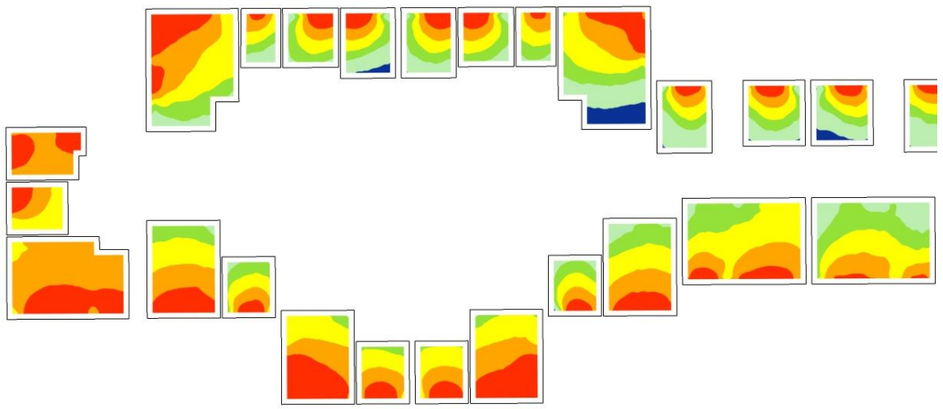
GFL



1st Floor



2nd Floor



Tabulated Results for both phases.

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D1-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
00-D1-04c	Living/Kitchen	48	200	Marginal	47	200	Marginal
00-D1-05	Bedroom	71	100	Pass	71	100	Pass
00-D1-06	Bedroom	43	100	Marginal	43	100	Marginal
00-D1-07	Bedroom	37	100	Fail	37	100	Fail
00-D1-08	Bedroom	18	100	Fail	18	100	Fail
00-D1-09	Bedroom	11	100	Fail	10	100	Fail
00-D1-10	Bedroom	64	100	Pass	64	100	Pass
00-D1-11c	Living/Kitchen	30	200	Fail	30	200	Fail
01-D1-01c	Living/Kitchen	99	200	Pass	99	200	Pass
01-D1-02	Bedroom	100	100	Pass	100	100	Pass
01-D1-03	Bedroom	100	100	Pass	100	100	Pass
01-D1-04c	Living/Kitchen	66	200	Pass	65	200	Pass
01-D1-05	Bedroom	77	100	Pass	72	100	Pass
01-D1-06	Bedroom	97	100	Pass	98	100	Pass
01-D1-07	Bedroom	78	100	Pass	75	100	Pass
01-D1-08	Bedroom	48	100	Marginal	45	100	Marginal
01-D1-09	Bedroom	52	100	Pass	50	100	Pass
01-D1-10	Bedroom	96	100	Pass	96	100	Pass
01-D1-11c	Living/Kitchen	36	200	Fail	36	200	Fail
01-D1-12	Bedroom	55	100	Pass	52	100	Pass
01-D1-13	Bedroom	73	100	Pass	72	100	Pass
01-D1-17c	Living/Kitchen	43	200	Marginal	42	200	Marginal
01-D1-18c	Living/Kitchen	46	200	Marginal	46	200	Marginal
01-D1-19	Bedroom	66	100	Pass	66	100	Pass
01-D1-20c	Living/Kitchen	41	200	Marginal	41	200	Marginal
01-D1-22	Bedroom	100	100	Pass	100	100	Pass
01-D1-23c	Living/Kitchen	70	200	Pass	70	200	Pass
01-D1-24	Bedroom	65	100	Pass	65	100	Pass
01-D1-25c	Living/Kitchen	43	200	Marginal	42	200	Marginal
02-D1-01c	Living/Kitchen	100	200	Pass	100	200	Pass
02-D1-02	Bedroom	100	100	Pass	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D1-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
02-D1-03	Bedroom	100	100	Pass	100	100	Pass
02-D1-04c	Living/Kitchen	75	200	Pass	75	200	Pass
02-D1-05	Bedroom	100	100	Pass	100	100	Pass
02-D1-06	Bedroom	100	100	Pass	100	100	Pass
02-D1-07	Bedroom	92	100	Pass	91	100	Pass
02-D1-08	Bedroom	100	100	Pass	100	100	Pass
02-D1-09	Bedroom	100	100	Pass	100	100	Pass
02-D1-10	Bedroom	100	100	Pass	100	100	Pass
02-D1-11c	Living/Kitchen	51	200	Pass	51	200	Pass
02-D1-12	Bedroom	96	100	Pass	95	100	Pass
02-D1-13	Bedroom	100	100	Pass	100	100	Pass
02-D1-14	Bedroom	86	100	Pass	86	100	Pass
02-D1-15	Bedroom	95	100	Pass	95	100	Pass
02-D1-16c	Living/Kitchen	45	200	Marginal	45	200	Marginal
02-D1-17c	Living/Kitchen	79	200	Pass	78	200	Pass
02-D1-18c	Living/Kitchen	68	200	Pass	68	200	Pass
02-D1-19	Bedroom	100	100	Pass	100	100	Pass
02-D1-20c	Living/Kitchen	96	200	Pass	93	200	Pass
02-D1-21	Bedroom	100	100	Pass	100	100	Pass
02-D1-22	Bedroom	100	100	Pass	100	100	Pass
02-D1-23c	Living/Kitchen	95	200	Pass	95	200	Pass
02-D1-24	Bedroom	100	100	Pass	100	100	Pass
02-D1-25c	Living/Kitchen	75	200	Pass	74	200	Pass
Remaining Floors as per the Main Report							

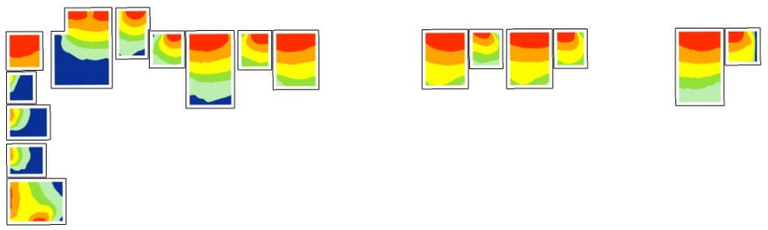
Block D2 - Target Illuminance E_T – GFL

Block D2 - 2nd Floor

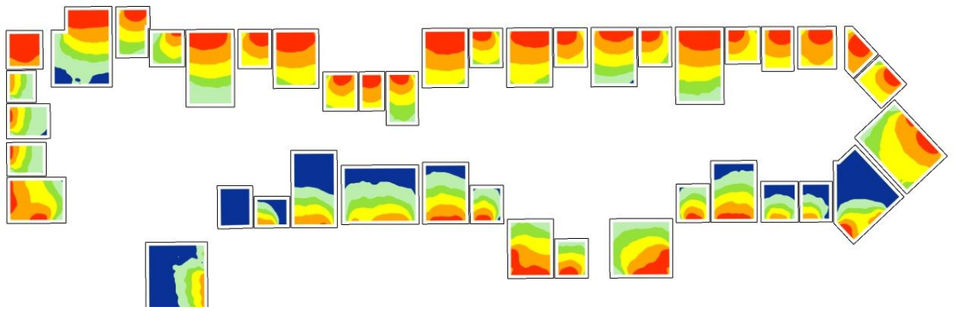
Block D2 - 1st Floor

Radiance Plots Bare Branch / Leaf off

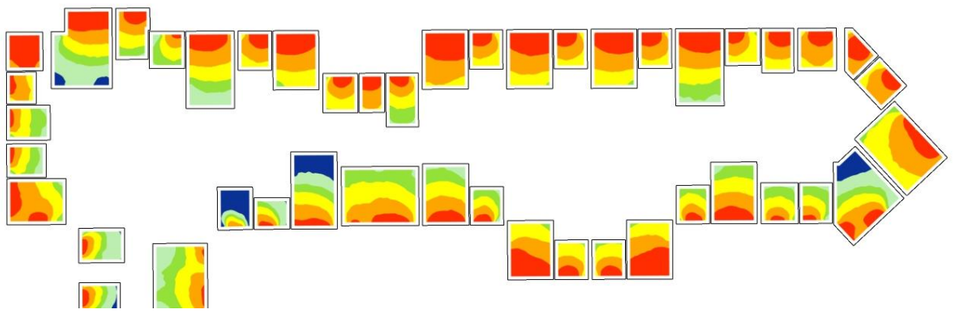
GFL



1st Floor

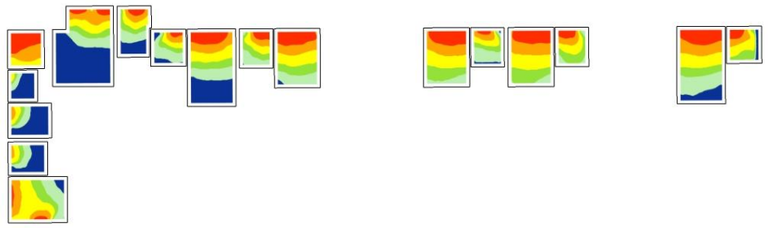


2nd Floor

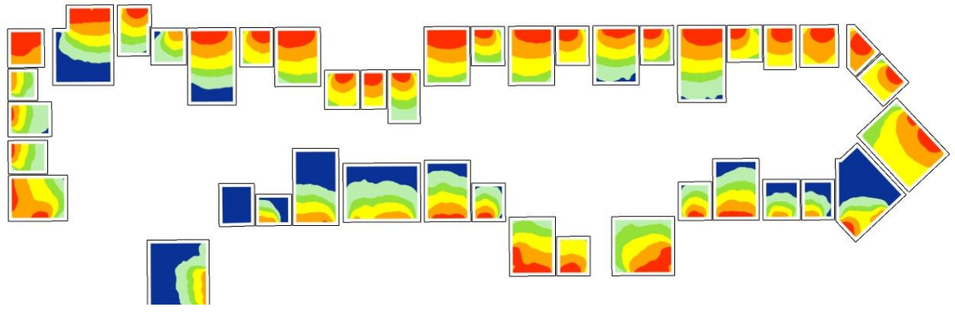


Radiance Plots Full Leaf / Leaf On

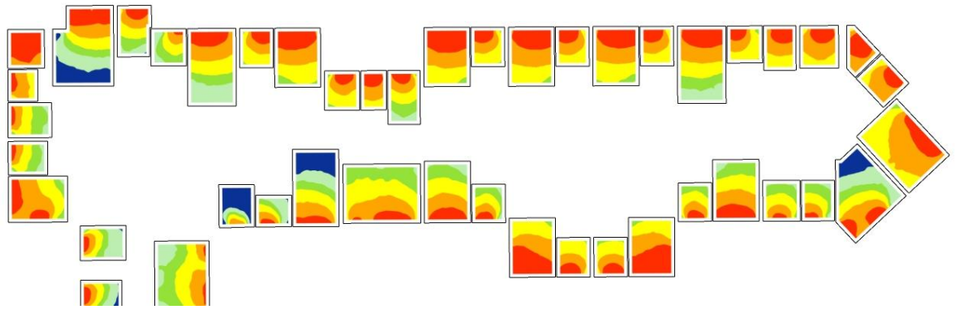
GFL



1st Floor



2nd Floor



Tabulated Results for both phases.

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

D2-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
00-D2-01c	Living/Kitchen	57	200	Pass	56	200	Pass
00-D2-02	Bedroom	43	100	Marginal	42	100	Marginal
00-D2-03	Bedroom	36	100	Fail	36	100	Fail
00-D2-04	Bedroom	22	100	Fail	22	100	Fail
00-D2-05	Bedroom	100	100	Pass	100	100	Pass
00-D2-06c	Living/Kitchen	33	200	Fail	24	200	Fail
00-D2-07	Bedroom	92	100	Pass	72	100	Pass
00-D2-08	Bedroom	97	100	Pass	82	100	Pass
00-D2-09c	Living/Kitchen	55	200	Pass	42	200	Marginal
00-D2-10	Bedroom	100	100	Pass	100	100	Pass
00-D2-11c	Living/Kitchen	79	200	Pass	60	200	Pass
00-D2-15c	Living/Kitchen	88	200	Pass	66	200	Pass
00-D2-16	Bedroom	100	100	Pass	82	100	Pass
00-D2-17c	Living/Kitchen	85	200	Pass	69	200	Pass
00-D2-18	Bedroom	100	100	Pass	100	100	Pass
00-D2-21c	Living/Kitchen	62	200	Pass	51	200	Pass
00-D2-22	Bedroom	84	100	Pass	84	100	Pass
01-D2-01c	Living/Kitchen	75	200	Pass	75	200	Pass
01-D2-02	Bedroom	97	100	Pass	97	100	Pass
01-D2-03	Bedroom	93	100	Pass	93	100	Pass
01-D2-04	Bedroom	96	100	Pass	96	100	Pass
01-D2-05	Bedroom	100	100	Pass	100	100	Pass
01-D2-06c	Living/Kitchen	47	200	Marginal	40	200	Marginal
01-D2-07	Bedroom	100	100	Pass	100	100	Pass
01-D2-08	Bedroom	100	100	Pass	94	100	Pass
01-D2-09c	Living/Kitchen	60	200	Pass	52	200	Pass
01-D2-10	Bedroom	100	100	Pass	100	100	Pass
01-D2-11c	Living/Kitchen	91	200	Pass	78	200	Pass
01-D2-12	Bedroom	100	100	Pass	100	100	Pass
01-D2-13	Bedroom	100	100	Pass	100	100	Pass
01-D2-14	Bedroom	100	100	Pass	100	100	Pass
01-D2-15c	Living/Kitchen	97	200	Pass	82	200	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

D2-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
01-D2-16	Bedroom	100	100	Pass	100	100	Pass
01-D2-17c	Living/Kitchen	90	200	Pass	81	200	Pass
01-D2-18	Bedroom	100	100	Pass	100	100	Pass
01-D2-19c	Living/Kitchen	64	200	Pass	52	200	Pass
01-D2-20	Bedroom	100	100	Pass	100	100	Pass
01-D2-21c	Living/Kitchen	68	200	Pass	60	200	Pass
01-D2-22	Bedroom	100	100	Pass	100	100	Pass
01-D2-23	Bedroom	100	100	Pass	100	100	Pass
01-D2-24	Bedroom	100	100	Pass	100	100	Pass
01-D2-25	Bedroom	100	100	Pass	100	100	Pass
01-D2-26	Bedroom	100	100	Pass	100	100	Pass
01-D2-27c	Living/Kitchen	75	200	Pass	72	200	Pass
01-D2-28c	Living/Kitchen	21	200	Fail	21	200	Fail
01-D2-29	Bedroom	51	100	Pass	49	100	Marginal
01-D2-30	Bedroom	62	100	Pass	62	100	Pass
01-D2-31c	Living/Kitchen	45	200	Marginal	45	200	Marginal
01-D2-32	Bedroom	97	100	Pass	97	100	Pass
01-D2-33c	Living/Kitchen	50	200	Pass	49	200	Marginal
01-D2-35	Bedroom	100	100	Pass	100	100	Pass
01-D2-36c	Living/Kitchen	69	200	Pass	69	200	Pass
01-D2-37	Bedroom	89	100	Pass	86	100	Pass
01-D2-38c	Living/Kitchen	45	200	Marginal	45	200	Marginal
01-D2-39c	Living/Kitchen	23	200	Fail	22	200	Fail
01-D2-40c	Living/Kitchen	24	200	Fail	24	200	Fail
01-D2-41	Bedroom	48	100	Marginal	47	100	Marginal
01-D2-42	Bedroom	0	100	Fail	0	100	Fail
02-D2-01c	Living/Kitchen	88	200	Pass	87	200	Pass
02-D2-02	Bedroom	100	100	Pass	100	100	Pass
02-D2-03	Bedroom	100	100	Pass	100	100	Pass
02-D2-04	Bedroom	100	100	Pass	100	100	Pass
02-D2-05	Bedroom	100	100	Pass	100	100	Pass
02-D2-06c	Living/Kitchen	48	200	Marginal	43	200	Marginal
02-D2-07	Bedroom	100	100	Pass	100	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
02-D2-08	Bedroom	100	100	Pass	100	100	Pass
02-D2-09c	Living/Kitchen	63	200	Pass	59	200	Pass
02-D2-10	Bedroom	100	100	Pass	100	100	Pass
02-D2-11c	Living/Kitchen	96	200	Pass	89	200	Pass
2-D2-12	Bedroom	100	100	Pass	100	100	Pass
-D2-13	Bedroom	100	100	Pass	100	100	Pass
02-D2-14	Bedroom	100	100	Pass	100	100	Pass
02-D2-15c	Living/Kitchen	100	200	Pass	96	200	Pass
02-D2-16	Bedroom	100	100	Pass	100	100	Pass
02-D2-17c	Living/Kitchen	99	200	Pass	96	200	Pass
02-D2-18	Bedroom	100	100	Pass	100	100	Pass
02-D2-19c	Living/Kitchen	98	200	Pass	92	200	Pass
02-D2-20	Bedroom	100	100	Pass	100	100	Pass
02-D2-21c	Living/Kitchen	70	200	Pass	64	200	Pass
02-D2-22	Bedroom	100	100	Pass	100	100	Pass
02-D2-23	Bedroom	100	100	Pass	100	100	Pass
02-D2-24	Bedroom	100	100	Pass	100	100	Pass
02-D2-25	Bedroom	100	100	Pass	100	100	Pass
02-D2-26	Bedroom	100	100	Pass	100	100	Pass
02-D2-27c	Living/Kitchen	91	200	Pass	90	200	Pass
02-D2-28c	Living/Kitchen	44	200	Marginal	44	200	Marginal
02-D2-29	Bedroom	100	100	Pass	100	100	Pass
02-D2-30	Bedroom	100	100	Pass	100	100	Pass
02-D2-31c	Living/Kitchen	73	200	Pass	72	200	Pass
02-D2-32	Bedroom	100	100	Pass	100	100	Pass
02-D2-33c	Living/Kitchen	97	200	Pass	96	200	Pass
02-D2-34	Bedroom	100	100	Pass	100	100	Pass
02-D2-35	Bedroom	100	100	Pass	100	100	Pass
02-D2-36c	Living/Kitchen	96	200	Pass	96	200	Pass
02-D2-37	Bedroom	100	100	Pass	100	100	Pass
02-D2-38c	Living/Kitchen	68	200	Pass	69	200	Pass
02-D2-39c	Living/Kitchen	68	200	Pass	68	200	Pass
02-D2-40c	Living/Kitchen	44	200	Marginal	43	200	Marginal
02-D2-41	Bedroom	97	100	Pass	95	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** *lx*

>50 % of the points on a reference plane to exceed

D2-v3-T1	Type	Leaf OFF			Leaf ON		
Ref	Type	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check	Percentage within Target Lux	BS/EN17037 Annex AN Target Lux	Check
02-D2-42	Bedroom	28	100	Fail	27	100	Fail
Remaining Floors as per the Main Report							

In the assessment of results, we have followed the guidance of clause G2.8

> ***G2.8 If using the daylight factor method, the calculations should be repeated for summer and winter conditions and two sets of results shown. If BS EN 17037 recommended values of daylight factor over at least half of an assessment grid are exceeded in both summer and winter, then daylight would be considered adequate; and if the recommendations are not reached in both summer or winter then daylight would be considered inadequate. For a room where the recommendation is exceeded in winter, but not in summer, daylight provision year round is likely to be adequate, but it is clear that the trees are having some effect on daylight.***

Summary

Summary of the results for the 3x analyses

Analysis excluding the adjacent boundary trees (see the main body of report) **:**
97% *(99% including marginal results)* comply with the BS/EN 17037 Annex NA room targets

Analysis including adjacent boundary trees Bare Branch/Leaf Off:
95% *(98% including marginal results)* comply with the BS/EN 17037 Annex NA room targets and likely adequate.

Analysis including adjacent boundary trees Full Leaf/Leaf On:
95% *(98% including marginal results)* comply with the BS/EN 17037 Annex NA room targets and adequate.

The change in compliance for including the proposed planting is negligible.
While fewer rooms comply in the Leaf on variant the numbers over the project scale is negligible.

	Annex NA E_T % Pass		Annex NA E_T % Pass		Annex NA E_T % Pass	
	BRE v3	Incl Marginal	BRE v3	Incl Marginal	BRE v3	Incl Marginal
v3	Pass %	Pass %	Pass %	Pass %	Pass %	Pass %
			Leaf OFF		Leaf ON	
AB	97%	99%	96%	99%	96%	99%
C	96%	99%	95%	98%	95%	97%
D1	98%	100%	91%	96%	91%	96%
D2	98%	100%	93%	96%	92%	96%
Total	**97%**	**99%**	**95%**	**98%**	**95%**	**98%**

Appendix 2
Light Distribution
Alternative Target Illuminance ET Metric
Non-Annex Analysis

Comparison between the Annex and non-Annex results

And reasoning behind adoption and applicability of the BS/EN Annex

This is a supplementary analysis which does not reflect the performance of the proposed design in temperate climates such as Ireland / UK. There should be no expectation that the design would comply with these requirements.

The NA-annex results in the main body of this report reflect design in such conditions. This is as defined by the UK committee and directly referenced in Irish Department publications such "Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities" July 2023, the "Sustainable and Compact Settlements: Guidelines for Planning Authorities 2024" and many Development Plans.

Design Standards / Guidelines
Light Distribution.

BRE v2 – 2011 / BS 8206-2

The original BRE Guidelines "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice – Second Edition - 2011" was cross-referenced to and from the now withdrawn BS 8206-2 : 2008.

It looked at light distribution within a room based on Average Daylight Factor ADF (an average over the entire room surface) and was based off the CIE overcast sky and results of rooms were based on obstructions, room geometry, ope sizes, radiance and transmittance but was constant from location to location on the globe.

The Guidelines and BS standard took into account room usage placing higher degrees of importance on living spaces than to bedrooms, which is a reasonable consideration, given that bedrooms are typically used more at night.

Given that these Standard and Guidelines are withdrawn tests such as ADF are no longer relevant.

BRE v3 – 2022 / EN 17037

The new BRE Guidelines "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice – Third Edition - 2022" provides best guidelines for analysing development while referencing relevant elements of EN 17037 similar to how the withdrawn BRE v2 – 2011 provided best guidelines for analysing development referencing relevant elements of withdrawn BS 8206- 2.

This best practice guideline has been considered the de-facto standard since 1991 and details how to apply EN 17037.

Impact on neighbours and shadow elements are handled only within the BRE Guidelines but the EN standard covers some elements of development performance.

EN 17037 also looks at internal light distribution/daylight but in terms of target illuminance over a specific percentage of a room. Target illuminance is driven by the available external light which varies by location on the globe. However, the internal room lux targets Lx we strive to achieve remain unchanged.

There are various tables of requirements (minimum, medium and high), and these are defined for all rooms and do not consider the rooms usage. The minimum targets are:

Rooms	300lx over 50% of room area
AND	100lx over 95% of room area

Localisation

The EN 17037 is designed to be localised and a blank National Annex is provided in for that purpose.

This is an acknowledgement that design will vary in different countries and that adjustment will be needed to take into account available external light which itself drives the internal lux results and other design constraints / objectives. The Irish version of this standard IS EN17037 currently has no specific National Annex

The UK committee, in their examination of this provided recommendations which are pulled through to the National Annex in the UK variant of this document BS EN 17037

Given the similarity of weather, light and design patterns between Ireland and the UK in many areas and the absence of specific localisation Annex information in the IS version it is not unreasonable to apply the BS recommendations at this time. There is considerable precedence in the adoption of such technical recommendations in the engineering and indeed legal professions.

The UK committee acknowledged the difficulty of achieving the primary lux targets outlined in the main body of the report particularly in dwellings in our climates. The Annex recommendations are focused on dwellings which is the subject of the vast majority of our reports. The committee again re-affirmed their commitment that room usage should be considered and set lower target illuminance values accordingly for dwellings based on the same.

Bedroom	100lx over 50% of room area
Living Rooms	150lx over 50% of room area
Kitchens	200lx over 50% of room area

Dual usage rooms use the higher value.

These targets were derived from BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting, targets have served us well in the past and which have been the staple for design for years. We have dual run multiple projects BRE v2 (ADF) vs BRE v3 Annex (Et) and as expected they show very similar compliance rates.

Furthermore, the UK committee decided that the target illuminance across the entire (i.e. 95 %) **need not** be applied to rooms in dwellings.

Analysis

We concur with the UK committees' recommendations for daylight provision in a space may not be achievable for some buildings, particularly dwellings and that a target illuminance level should be achieved across the entire (i.e. 95 %) fraction of the reference plane within a space – need **not** be applied to rooms in dwellings.

The targets defined in the National Annex are linked to the targets have served us well in the past and have been the staple for design for years. The primary results have thus been compiled based on the UK Annex NA targets, tabulated in the report main body.

We have for the avoidance of doubt also provided results based on the non-annex Standard, in Appendix 2. The results for which show that the conclusions of the UK committee were justified and that the standard (non-Annex) targets are unlikely to be achieved in a more densely developed residential sites.

This is in accordance with the Departments "Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities" July 2023 and clause 6.6 which directly references the UK National Annex BS EN17037:2019.

Block AB – E_T results - Tabulated

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
00-AB-03	Bedroom	46	Marginal	100	Pass
00-AB-04	Bedroom	63	Pass	100	Pass
00-AB-05c	Living/Kitchen	29	Fail	84	Marginal
00-AB-06	Bedroom	8	Fail	91	Marginal
00-AB-07c	Living/Kitchen	66	Pass	100	Pass
00-AB-08	Bedroom	50	Pass	100	Pass
00-AB-57c	Living/Kitchen	29	Fail	80	Marginal
00-AB-58	Bedroom	16	Fail	75	Fail
00-AB-59c	Living/Kitchen	25	Fail	63	Fail
00-AB-60	Bedroom	20	Fail	92	Marginal
00-AB-61	Bedroom	22	Fail	68	Fail
00-AB-63	Bedroom	27	Fail	97	Pass
00-AB-64c	Living/Kitchen	37	Fail	93	Marginal
00-AB-65	Bedroom	32	Fail	100	Pass
00-AB-66c	Living/Kitchen	43	Marginal	96	Pass
00-AB-69c	Living/Kitchen	21	Fail	77	Marginal
00-AB-70	Bedroom	32	Fail	100	Pass
00-AB-71c	Living/Kitchen	32	Fail	92	Marginal
00-AB-72	Bedroom	31	Fail	100	Pass
01-AB-01c	Living/Kitchen	100	Pass	100	Pass
01-AB-02	Bedroom	70	Pass	100	Pass
01-AB-03	Bedroom	46	Marginal	100	Pass
01-AB-04	Bedroom	67	Pass	100	Pass
01-AB-05c	Living/Kitchen	33	Fail	100	Pass
01-AB-06	Bedroom	6	Fail	89	Marginal
01-AB-07c	Living/Kitchen	72	Pass	100	Pass
01-AB-08	Bedroom	53	Pass	100	Pass
01-AB-09c	Living/Kitchen	77	Pass	100	Pass
01-AB-10	Bedroom	67	Pass	100	Pass
01-AB-11	Bedroom	57	Pass	100	Pass
01-AB-12	Bedroom	63	Pass	100	Pass
01-AB-13	Bedroom	72	Pass	100	Pass
01-AB-14c	Living/Kitchen	50	Pass	100	Pass
01-AB-15	Bedroom	36	Fail	100	Pass
01-AB-16	Bedroom	76	Pass	100	Pass
01-AB-17	Bedroom	37	Fail	100	Pass
01-AB-18	Bedroom	38	Fail	100	Pass
01-AB-19	Bedroom	78	Pass	100	Pass
01-AB-20	Bedroom	34	Fail	100	Pass
01-AB-21c	Living/Kitchen	39	Fail	100	Pass
01-AB-22	Bedroom	71	Pass	100	Pass
01-AB-23	Bedroom	66	Pass	100	Pass
01-AB-24	Bedroom	65	Pass	100	Pass
01-AB-25	Bedroom	67	Pass	100	Pass
01-AB-26	Bedroom	64	Pass	100	Pass
01-AB-27	Bedroom	70	Pass	100	Pass
01-AB-28c	Living/Kitchen	40	Marginal	100	Pass
01-AB-29	Bedroom	33	Fail	100	Pass
01-AB-30	Bedroom	76	Pass	100	Pass
01-AB-31	Bedroom	39	Fail	100	Pass
01-AB-32	Bedroom	42	Marginal	100	Pass
01-AB-33	Bedroom	74	Pass	100	Pass
01-AB-34	Bedroom	34	Fail	100	Pass
01-AB-35c	Living/Kitchen	42	Marginal	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
01-AB-36	Bedroom	71	Pass	100	Pass
01-AB-37	Bedroom	64	Pass	100	Pass
01-AB-38	Bedroom	69	Pass	100	Pass
01-AB-39	Bedroom	82	Pass	100	Pass
01-AB-40	Bedroom	64	Pass	100	Pass
01-AB-41	Bedroom	71	Pass	100	Pass
01-AB-42c	Living/Kitchen	52	Pass	100	Pass
01-AB-43	Bedroom	73	Pass	100	Pass
01-AB-44c	Living/Kitchen	94	Pass	100	Pass
01-AB-45c	Living/Kitchen	87	Pass	100	Pass
01-AB-46	Bedroom	75	Pass	100	Pass
01-AB-47c	Living/Kitchen	66	Pass	100	Pass
01-AB-48	Bedroom	54	Pass	100	Pass
01-AB-49	Bedroom	42	Marginal	100	Pass
01-AB-50c	Living/Kitchen	52	Pass	100	Pass
01-AB-51	Bedroom	15	Fail	84	Marginal
01-AB-52c	Living/Kitchen	31	Fail	94	Marginal
01-AB-53	Bedroom	25	Fail	100	Pass
01-AB-54c	Living/Kitchen	30	Fail	89	Marginal
01-AB-55c	Living/Kitchen	12	Fail	96	Pass
01-AB-56c	Living/Kitchen	14	Fail	92	Marginal
01-AB-57c	Living/Kitchen	27	Fail	82	Marginal
01-AB-58	Bedroom	17	Fail	90	Marginal
01-AB-59c	Living/Kitchen	20	Fail	63	Fail
01-AB-60	Bedroom	25	Fail	100	Pass
01-AB-61	Bedroom	27	Fail	86	Marginal
01-AB-62	Bedroom	26	Fail	92	Marginal
01-AB-63	Bedroom	31	Fail	100	Pass
01-AB-64c	Living/Kitchen	26	Fail	70	Fail
01-AB-65	Bedroom	35	Fail	100	Pass
01-AB-66c	Living/Kitchen	41	Marginal	97	Pass
01-AB-67c	Living/Kitchen	30	Fail	100	Pass
01-AB-68c	Living/Kitchen	31	Fail	100	Pass
01-AB-69c	Living/Kitchen	26	Fail	83	Marginal
01-AB-70	Bedroom	43	Marginal	100	Pass
01-AB-71c	Living/Kitchen	31	Fail	73	Fail
01-AB-72	Bedroom	36	Fail	100	Pass
01-AB-73	Bedroom	30	Fail	93	Marginal
01-AB-74	Bedroom	25	Fail	81	Marginal
01-AB-75	Bedroom	20	Fail	80	Marginal
01-AB-76c	Living/Kitchen	23	Fail	66	Fail
01-AB-77	Bedroom	19	Fail	100	Pass
01-AB-78	Bedroom	30	Fail	97	Pass
01-AB-79	Bedroom	37	Fail	100	Pass
01-AB-80c	Living/Kitchen	65	Pass	100	Pass
01-AB-81	Bedroom	79	Pass	100	Pass
02-AB-01c	Living/Kitchen	100	Pass	100	Pass
02-AB-02	Bedroom	72	Pass	100	Pass
02-AB-03	Bedroom	50	Pass	100	Pass
02-AB-04	Bedroom	70	Pass	100	Pass
02-AB-05c	Living/Kitchen	33	Fail	100	Pass
02-AB-06	Bedroom	6	Fail	91	Marginal
02-AB-07c	Living/Kitchen	73	Pass	100	Pass
02-AB-08	Bedroom	57	Pass	100	Pass
02-AB-09c	Living/Kitchen	78	Pass	100	Pass
02-AB-10	Bedroom	67	Pass	100	Pass
02-AB-11	Bedroom	57	Pass	100	Pass
02-AB-12	Bedroom	64	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
02-AB-13	Bedroom	74	Pass	100	Pass
02-AB-14c	Living/Kitchen	49	Marginal	100	Pass
02-AB-15	Bedroom	43	Marginal	100	Pass
02-AB-16	Bedroom	100	Pass	100	Pass
02-AB-17	Bedroom	46	Marginal	100	Pass
02-AB-18	Bedroom	48	Marginal	100	Pass
02-AB-19	Bedroom	100	Pass	100	Pass
02-AB-20	Bedroom	42	Marginal	100	Pass
02-AB-21c	Living/Kitchen	40	Marginal	100	Pass
02-AB-22	Bedroom	71	Pass	100	Pass
02-AB-23	Bedroom	66	Pass	100	Pass
02-AB-24	Bedroom	68	Pass	100	Pass
02-AB-25	Bedroom	69	Pass	100	Pass
02-AB-26	Bedroom	70	Pass	100	Pass
02-AB-27	Bedroom	71	Pass	100	Pass
02-AB-28c	Living/Kitchen	42	Marginal	100	Pass
02-AB-29	Bedroom	38	Fail	100	Pass
02-AB-30	Bedroom	100	Pass	100	Pass
02-AB-31	Bedroom	49	Marginal	100	Pass
02-AB-32	Bedroom	49	Marginal	100	Pass
02-AB-33	Bedroom	100	Pass	100	Pass
02-AB-34	Bedroom	48	Marginal	100	Pass
02-AB-35c	Living/Kitchen	42	Marginal	100	Pass
02-AB-36	Bedroom	71	Pass	100	Pass
02-AB-37	Bedroom	66	Pass	100	Pass
02-AB-38	Bedroom	69	Pass	100	Pass
02-AB-39	Bedroom	71	Pass	100	Pass
02-AB-40	Bedroom	66	Pass	100	Pass
02-AB-41	Bedroom	71	Pass	100	Pass
02-AB-42c	Living/Kitchen	51	Pass	100	Pass
02-AB-43	Bedroom	72	Pass	100	Pass
02-AB-44c	Living/Kitchen	96	Pass	100	Pass
02-AB-45c	Living/Kitchen	91	Pass	100	Pass
02-AB-46	Bedroom	75	Pass	100	Pass
02-AB-47c	Living/Kitchen	76	Pass	100	Pass
02-AB-48	Bedroom	66	Pass	100	Pass
02-AB-49	Bedroom	52	Pass	100	Pass
02-AB-50c	Living/Kitchen	59	Pass	100	Pass
02-AB-51	Bedroom	20	Fail	93	Marginal
02-AB-52c	Living/Kitchen	36	Fail	98	Pass
02-AB-53	Bedroom	28	Fail	100	Pass
02-AB-54c	Living/Kitchen	34	Fail	95	Pass
02-AB-55c	Living/Kitchen	16	Fail	100	Pass
02-AB-56c	Living/Kitchen	16	Fail	99	Pass
02-AB-57c	Living/Kitchen	30	Fail	88	Marginal
02-AB-58	Bedroom	20	Fail	97	Pass
02-AB-59c	Living/Kitchen	23	Fail	66	Fail
02-AB-60	Bedroom	28	Fail	100	Pass
02-AB-61	Bedroom	30	Fail	92	Marginal
02-AB-62	Bedroom	29	Fail	96	Pass
02-AB-63	Bedroom	36	Fail	100	Pass
02-AB-64c	Living/Kitchen	30	Fail	77	Marginal
02-AB-65	Bedroom	38	Fail	100	Pass
02-AB-66c	Living/Kitchen	46	Marginal	99	Pass
02-AB-67c	Living/Kitchen	36	Fail	100	Pass
02-AB-68c	Living/Kitchen	38	Fail	100	Pass
02-AB-69c	Living/Kitchen	30	Fail	91	Marginal
02-AB-70	Bedroom	46	Marginal	100	Pass
02-AB-71c	Living/Kitchen	37	Fail	78	Marginal

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
02-AB-72	Bedroom	38	Fail	100	Pass
02-AB-73	Bedroom	36	Fail	100	Pass
02-AB-74	Bedroom	29	Fail	100	Pass
02-AB-75	Bedroom	29	Fail	100	Pass
02-AB-76c	Living/Kitchen	25	Fail	69	Fail
02-AB-77	Bedroom	20	Fail	100	Pass
02-AB-78	Bedroom	33	Fail	100	Pass
02-AB-79	Bedroom	42	Marginal	100	Pass
02-AB-80c	Living/Kitchen	67	Pass	100	Pass
02-AB-81	Bedroom	87	Pass	100	Pass
03-AB-01c	Living/Kitchen	100	Pass	100	Pass
03-AB-02	Bedroom	74	Pass	100	Pass
03-AB-03	Bedroom	49	Marginal	100	Pass
03-AB-04	Bedroom	78	Pass	100	Pass
03-AB-05c	Living/Kitchen	34	Fail	100	Pass
03-AB-06	Bedroom	6	Fail	92	Marginal
03-AB-07c	Living/Kitchen	74	Pass	100	Pass
03-AB-08	Bedroom	57	Pass	100	Pass
03-AB-09c	Living/Kitchen	76	Pass	100	Pass
03-AB-10	Bedroom	65	Pass	100	Pass
03-AB-11	Bedroom	57	Pass	100	Pass
03-AB-12	Bedroom	65	Pass	100	Pass
03-AB-13	Bedroom	73	Pass	100	Pass
03-AB-14c	Living/Kitchen	49	Marginal	100	Pass
03-AB-15	Bedroom	43	Marginal	100	Pass
03-AB-16	Bedroom	100	Pass	100	Pass
03-AB-17	Bedroom	43	Marginal	100	Pass
03-AB-18	Bedroom	50	Pass	100	Pass
03-AB-19	Bedroom	100	Pass	100	Pass
03-AB-20	Bedroom	43	Marginal	100	Pass
03-AB-21c	Living/Kitchen	39	Fail	100	Pass
03-AB-22	Bedroom	74	Pass	100	Pass
03-AB-23	Bedroom	66	Pass	100	Pass
03-AB-24	Bedroom	66	Pass	100	Pass
03-AB-25	Bedroom	70	Pass	100	Pass
03-AB-26	Bedroom	66	Pass	100	Pass
03-AB-27	Bedroom	71	Pass	100	Pass
03-AB-28c	Living/Kitchen	41	Marginal	100	Pass
03-AB-29	Bedroom	40	Marginal	100	Pass
03-AB-30	Bedroom	100	Pass	100	Pass
03-AB-31	Bedroom	47	Marginal	100	Pass
03-AB-32	Bedroom	49	Marginal	100	Pass
03-AB-33	Bedroom	100	Pass	100	Pass
03-AB-34	Bedroom	38	Fail	100	Pass
03-AB-35c	Living/Kitchen	41	Marginal	100	Pass
03-AB-36	Bedroom	71	Pass	100	Pass
03-AB-37	Bedroom	66	Pass	100	Pass
03-AB-38	Bedroom	68	Pass	100	Pass
03-AB-39	Bedroom	69	Pass	100	Pass
03-AB-40	Bedroom	66	Pass	100	Pass
03-AB-41	Bedroom	71	Pass	100	Pass
03-AB-42c	Living/Kitchen	49	Marginal	100	Pass
03-AB-43	Bedroom	71	Pass	100	Pass
03-AB-44c	Living/Kitchen	92	Pass	100	Pass
03-AB-45c	Living/Kitchen	90	Pass	100	Pass
03-AB-46	Bedroom	76	Pass	100	Pass
03-AB-47c	Living/Kitchen	77	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
03-AB-48	Bedroom	69	Pass	100	Pass
03-AB-49	Bedroom	59	Pass	100	Pass
03-AB-50c	Living/Kitchen	61	Pass	100	Pass
03-AB-51	Bedroom	23	Fail	97	Pass
03-AB-52c	Living/Kitchen	36	Fail	98	Pass
03-AB-53	Bedroom	32	Fail	100	Pass
03-AB-54c	Living/Kitchen	36	Fail	96	Pass
03-AB-55c	Living/Kitchen	21	Fail	100	Pass
03-AB-56c	Living/Kitchen	20	Fail	100	Pass
03-AB-57c	Living/Kitchen	33	Fail	93	Marginal
03-AB-58	Bedroom	30	Fail	100	Pass
03-AB-59c	Living/Kitchen	26	Fail	70	Fail
03-AB-60	Bedroom	30	Fail	100	Pass
03-AB-61	Bedroom	31	Fail	96	Pass
03-AB-62	Bedroom	33	Fail	100	Pass
03-AB-63	Bedroom	37	Fail	100	Pass
03-AB-64c	Living/Kitchen	34	Fail	83	Marginal
03-AB-65	Bedroom	40	Marginal	100	Pass
03-AB-66c	Living/Kitchen	48	Marginal	100	Pass
03-AB-67c	Living/Kitchen	41	Marginal	100	Pass
03-AB-68c	Living/Kitchen	43	Marginal	100	Pass
03-AB-69c	Living/Kitchen	38	Fail	98	Pass
03-AB-70	Bedroom	51	Pass	100	Pass
03-AB-71c	Living/Kitchen	38	Fail	83	Marginal
03-AB-72	Bedroom	44	Marginal	100	Pass
03-AB-73	Bedroom	39	Fail	100	Pass
03-AB-74	Bedroom	33	Fail	100	Pass
03-AB-75	Bedroom	29	Fail	100	Pass
03-AB-76c	Living/Kitchen	28	Fail	73	Fail
03-AB-77	Bedroom	24	Fail	100	Pass
03-AB-78	Bedroom	33	Fail	100	Pass
03-AB-79	Bedroom	44	Marginal	100	Pass
03-AB-80c	Living/Kitchen	69	Pass	100	Pass
03-AB-81	Bedroom	90	Pass	100	Pass
04-AB-01c	Living/Kitchen	100	Pass	100	Pass
04-AB-02	Bedroom	75	Pass	100	Pass
04-AB-03	Bedroom	54	Pass	100	Pass
04-AB-04	Bedroom	78	Pass	100	Pass
04-AB-05c	Living/Kitchen	34	Fail	99	Pass
04-AB-06	Bedroom	6	Fail	94	Marginal
04-AB-07c	Living/Kitchen	70	Pass	100	Pass
04-AB-08	Bedroom	57	Pass	100	Pass
04-AB-09c	Living/Kitchen	72	Pass	100	Pass
04-AB-10	Bedroom	63	Pass	100	Pass
04-AB-11	Bedroom	55	Pass	100	Pass
04-AB-12	Bedroom	63	Pass	100	Pass
04-AB-13	Bedroom	73	Pass	100	Pass
04-AB-14c	Living/Kitchen	50	Pass	100	Pass
04-AB-15	Bedroom	45	Marginal	100	Pass
04-AB-16	Bedroom	100	Pass	100	Pass
04-AB-17	Bedroom	47	Marginal	100	Pass
04-AB-18	Bedroom	50	Pass	100	Pass
04-AB-19	Bedroom	100	Pass	100	Pass
04-AB-20	Bedroom	47	Marginal	100	Pass
04-AB-21c	Living/Kitchen	39	Fail	100	Pass
04-AB-22	Bedroom	70	Pass	100	Pass
04-AB-23	Bedroom	63	Pass	100	Pass
04-AB-24	Bedroom	67	Pass	100	Pass
04-AB-25	Bedroom	67	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
04-AB-26	Bedroom	63	Pass	100	Pass
04-AB-27	Bedroom	70	Pass	100	Pass
04-AB-28c	Living/Kitchen	39	Fail	100	Pass
04-AB-29	Bedroom	42	Marginal	100	Pass
04-AB-30	Bedroom	97	Pass	100	Pass
04-AB-31	Bedroom	48	Marginal	100	Pass
04-AB-32	Bedroom	48	Marginal	100	Pass
04-AB-33	Bedroom	100	Pass	100	Pass
04-AB-34	Bedroom	40	Marginal	100	Pass
04-AB-35c	Living/Kitchen	41	Marginal	100	Pass
04-AB-36	Bedroom	74	Pass	100	Pass
04-AB-37	Bedroom	64	Pass	100	Pass
04-AB-38	Bedroom	68	Pass	100	Pass
04-AB-39	Bedroom	70	Pass	100	Pass
04-AB-40	Bedroom	72	Pass	100	Pass
04-AB-41	Bedroom	71	Pass	100	Pass
04-AB-42c	Living/Kitchen	47	Marginal	100	Pass
04-AB-43	Bedroom	71	Pass	100	Pass
04-AB-44c	Living/Kitchen	91	Pass	100	Pass
04-AB-45c	Living/Kitchen	91	Pass	100	Pass
04-AB-46	Bedroom	75	Pass	100	Pass
04-AB-47c	Living/Kitchen	78	Pass	100	Pass
04-AB-48	Bedroom	72	Pass	100	Pass
04-AB-49	Bedroom	61	Pass	100	Pass
04-AB-50c	Living/Kitchen	65	Pass	100	Pass
04-AB-51	Bedroom	26	Fail	100	Pass
04-AB-52c	Living/Kitchen	41	Marginal	99	Pass
04-AB-53	Bedroom	35	Fail	100	Pass
04-AB-54c	Living/Kitchen	43	Marginal	99	Pass
04-AB-55c	Living/Kitchen	28	Fail	100	Pass
04-AB-56c	Living/Kitchen	23	Fail	100	Pass
04-AB-57c	Living/Kitchen	36	Fail	95	Pass
04-AB-58	Bedroom	32	Fail	100	Pass
04-AB-59c	Living/Kitchen	29	Fail	76	Marginal
04-AB-60	Bedroom	33	Fail	100	Pass
04-AB-61	Bedroom	35	Fail	97	Pass
04-AB-62	Bedroom	35	Fail	100	Pass
04-AB-63	Bedroom	39	Fail	100	Pass
04-AB-64c	Living/Kitchen	37	Fail	96	Pass
04-AB-65	Bedroom	43	Marginal	100	Pass
04-AB-66c	Living/Kitchen	51	Pass	100	Pass
04-AB-67c	Living/Kitchen	46	Marginal	100	Pass
04-AB-68c	Living/Kitchen	48	Marginal	100	Pass
04-AB-69c	Living/Kitchen	39	Fail	99	Pass
04-AB-70	Bedroom	53	Pass	100	Pass
04-AB-71c	Living/Kitchen	42	Marginal	99	Pass
04-AB-72	Bedroom	47	Marginal	100	Pass
04-AB-73	Bedroom	44	Marginal	100	Pass
04-AB-74	Bedroom	33	Fail	100	Pass
04-AB-75	Bedroom	29	Fail	88	Marginal
04-AB-76c	Living/Kitchen	32	Fail	78	Marginal
04-AB-77	Bedroom	24	Fail	100	Pass
04-AB-78	Bedroom	37	Fail	100	Pass
04-AB-79	Bedroom	44	Marginal	100	Pass
04-AB-80c	Living/Kitchen	73	Pass	100	Pass
04-AB-81	Bedroom	92	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
05-AB-01c	Living/Kitchen	100	Pass	100	Pass
05-AB-02	Bedroom	79	Pass	100	Pass
05-AB-03	Bedroom	56	Pass	100	Pass
05-AB-04	Bedroom	78	Pass	100	Pass
05-AB-05c	Living/Kitchen	36	Fail	97	Pass
05-AB-06	Bedroom	6	Fail	91	Marginal
05-AB-07c	Living/Kitchen	72	Pass	100	Pass
05-AB-08	Bedroom	57	Pass	100	Pass
05-AB-09c	Living/Kitchen	74	Pass	100	Pass
05-AB-10	Bedroom	62	Pass	100	Pass
05-AB-11	Bedroom	55	Pass	100	Pass
05-AB-12	Bedroom	63	Pass	100	Pass
05-AB-13	Bedroom	70	Pass	100	Pass
05-AB-14c	Living/Kitchen	51	Pass	100	Pass
05-AB-15	Bedroom	47	Marginal	100	Pass
05-AB-16	Bedroom	100	Pass	100	Pass
05-AB-17	Bedroom	45	Marginal	100	Pass
05-AB-18	Bedroom	44	Marginal	100	Pass
05-AB-19	Bedroom	100	Pass	100	Pass
05-AB-20	Bedroom	43	Marginal	100	Pass
05-AB-21c	Living/Kitchen	39	Fail	100	Pass
05-AB-22	Bedroom	68	Pass	100	Pass
05-AB-23	Bedroom	62	Pass	100	Pass
05-AB-24	Bedroom	67	Pass	100	Pass
05-AB-25	Bedroom	66	Pass	100	Pass
05-AB-26	Bedroom	60	Pass	100	Pass
05-AB-27	Bedroom	68	Pass	100	Pass
05-AB-28c	Living/Kitchen	39	Fail	100	Pass
05-AB-29	Bedroom	38	Fail	100	Pass
05-AB-30	Bedroom	100	Pass	100	Pass
05-AB-31	Bedroom	48	Marginal	100	Pass
05-AB-32	Bedroom	48	Marginal	100	Pass
05-AB-33	Bedroom	100	Pass	100	Pass
05-AB-34	Bedroom	38	Fail	100	Pass
05-AB-35c	Living/Kitchen	41	Marginal	100	Pass
05-AB-36	Bedroom	71	Pass	100	Pass
05-AB-37	Bedroom	62	Pass	100	Pass
05-AB-38	Bedroom	66	Pass	100	Pass
05-AB-39	Bedroom	66	Pass	100	Pass
05-AB-40	Bedroom	63	Pass	100	Pass
05-AB-41	Bedroom	68	Pass	100	Pass
05-AB-42c	Living/Kitchen	46	Marginal	100	Pass
05-AB-43	Bedroom	71	Pass	100	Pass
05-AB-44c	Living/Kitchen	90	Pass	100	Pass
05-AB-45c	Living/Kitchen	90	Pass	100	Pass
05-AB-46	Bedroom	77	Pass	100	Pass
05-AB-47c	Living/Kitchen	77	Pass	100	Pass
05-AB-48	Bedroom	71	Pass	100	Pass
05-AB-49	Bedroom	61	Pass	100	Pass
05-AB-50c	Living/Kitchen	66	Pass	100	Pass
05-AB-51	Bedroom	28	Fail	100	Pass
05-AB-52c	Living/Kitchen	47	Marginal	100	Pass
05-AB-53	Bedroom	40	Marginal	100	Pass
05-AB-54c	Living/Kitchen	48	Marginal	100	Pass
05-AB-55c	Living/Kitchen	35	Fail	100	Pass
05-AB-56c	Living/Kitchen	30	Fail	100	Pass
05-AB-57c	Living/Kitchen	41	Marginal	98	Pass
05-AB-58	Bedroom	40	Marginal	100	Pass
05-AB-59c	Living/Kitchen	34	Fail	80	Marginal
05-AB-60	Bedroom	40	Marginal	100	Pass
05-AB-61	Bedroom	38	Fail	100	Pass
05-AB-62	Bedroom	37	Fail	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance 14,900 lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
05-AB-63	Bedroom	44	Marginal	100	Pass
05-AB-64c	Living/Kitchen	39	Fail	99	Pass
05-AB-65	Bedroom	44	Marginal	100	Pass
05-AB-66c	Living/Kitchen	55	Pass	100	Pass
05-AB-67c	Living/Kitchen	51	Pass	100	Pass
05-AB-68c	Living/Kitchen	53	Pass	100	Pass
05-AB-69c	Living/Kitchen	43	Marginal	99	Pass
05-AB-70	Bedroom	53	Pass	100	Pass
05-AB-71c	Living/Kitchen	44	Marginal	100	Pass
05-AB-72	Bedroom	50	Pass	100	Pass
05-AB-73	Bedroom	46	Marginal	100	Pass
05-AB-74	Bedroom	34	Fail	100	Pass
05-AB-75	Bedroom	29	Fail	92	Marginal
05-AB-76c	Living/Kitchen	34	Fail	83	Marginal
05-AB-77	Bedroom	25	Fail	100	Pass
05-AB-78	Bedroom	41	Marginal	100	Pass
05-AB-79	Bedroom	45	Marginal	100	Pass
05-AB-80c	Living/Kitchen	76	Pass	100	Pass
05-AB-81	Bedroom	94	Pass	100	Pass
06-AB-01c	Living/Kitchen	100	Pass	100	Pass
06-AB-02	Bedroom	78	Pass	100	Pass
06-AB-03	Bedroom	54	Pass	100	Pass
06-AB-04	Bedroom	79	Pass	100	Pass
06-AB-05c	Living/Kitchen	36	Fail	98	Pass
06-AB-06	Bedroom	9	Fail	91	Marginal
06-AB-07c	Living/Kitchen	67	Pass	100	Pass
06-AB-08	Bedroom	54	Pass	100	Pass
06-AB-09c	Living/Kitchen	71	Pass	100	Pass
06-AB-10	Bedroom	78	Pass	100	Pass
06-AB-11	Bedroom	57	Pass	100	Pass
06-AB-12	Bedroom	61	Pass	100	Pass
06-AB-13	Bedroom	70	Pass	100	Pass
06-AB-14c	Living/Kitchen	49	Marginal	100	Pass
06-AB-15	Bedroom	44	Marginal	100	Pass
06-AB-16	Bedroom	100	Pass	100	Pass
06-AB-17	Bedroom	46	Marginal	100	Pass
06-AB-18	Bedroom	47	Marginal	100	Pass
06-AB-19	Bedroom	100	Pass	100	Pass
06-AB-20	Bedroom	43	Marginal	100	Pass
06-AB-21c	Living/Kitchen	39	Fail	100	Pass
06-AB-22	Bedroom	68	Pass	100	Pass
06-AB-23	Bedroom	59	Pass	100	Pass
06-AB-24	Bedroom	62	Pass	100	Pass
06-AB-25	Bedroom	62	Pass	100	Pass
06-AB-26	Bedroom	59	Pass	100	Pass
06-AB-27	Bedroom	68	Pass	100	Pass
06-AB-28c	Living/Kitchen	39	Fail	100	Pass
06-AB-29	Bedroom	41	Marginal	100	Pass
06-AB-30	Bedroom	97	Pass	100	Pass
06-AB-31	Bedroom	48	Marginal	100	Pass
06-AB-32	Bedroom	48	Marginal	100	Pass
06-AB-33	Bedroom	97	Pass	100	Pass
06-AB-34	Bedroom	44	Marginal	100	Pass
06-AB-35c	Living/Kitchen	40	Marginal	100	Pass
06-AB-36	Bedroom	70	Pass	100	Pass
06-AB-37	Bedroom	64	Pass	100	Pass
06-AB-38	Bedroom	65	Pass	100	Pass
06-AB-39	Bedroom	66	Pass	100	Pass
06-AB-40	Bedroom	69	Pass	100	Pass
06-AB-41	Bedroom	68	Pass	100	Pass
06-AB-42c	Living/Kitchen	46	Marginal	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
06-AB-43	Bedroom	69	Pass	100	Pass
06-AB-44c	Living/Kitchen	87	Pass	100	Pass
06-AB-45c	Living/Kitchen	87	Pass	100	Pass
06-AB-46	Bedroom	74	Pass	100	Pass
06-AB-47c	Living/Kitchen	77	Pass	100	Pass
06-AB-48	Bedroom	73	Pass	100	Pass
06-AB-49	Bedroom	65	Pass	100	Pass
06-AB-50c	Living/Kitchen	69	Pass	100	Pass
06-AB-51	Bedroom	33	Fail	100	Pass
06-AB-52c	Living/Kitchen	52	Pass	100	Pass
06-AB-53	Bedroom	51	Pass	100	Pass
06-AB-54c	Living/Kitchen	53	Pass	100	Pass
06-AB-55c	Living/Kitchen	43	Marginal	100	Pass
06-AB-56c	Living/Kitchen	38	Fail	100	Pass
06-AB-57c	Living/Kitchen	48	Marginal	99	Pass
06-AB-58	Bedroom	44	Marginal	100	Pass
06-AB-59c	Living/Kitchen	36	Fail	85	Marginal
06-AB-60	Bedroom	46	Marginal	100	Pass
06-AB-61	Bedroom	42	Marginal	100	Pass
06-AB-62	Bedroom	40	Marginal	100	Pass
06-AB-63	Bedroom	49	Marginal	100	Pass
06-AB-64c	Living/Kitchen	41	Marginal	100	Pass
06-AB-65	Bedroom	50	Pass	100	Pass
06-AB-66c	Living/Kitchen	57	Pass	100	Pass
06-AB-67c	Living/Kitchen	54	Pass	100	Pass
06-AB-68c	Living/Kitchen	57	Pass	100	Pass
06-AB-69c	Living/Kitchen	45	Marginal	100	Pass
06-AB-70	Bedroom	61	Pass	100	Pass
06-AB-71c	Living/Kitchen	46	Marginal	100	Pass
06-AB-72	Bedroom	51	Pass	100	Pass
06-AB-73	Bedroom	48	Marginal	100	Pass
06-AB-74	Bedroom	34	Fail	100	Pass
06-AB-75	Bedroom	30	Fail	100	Pass
06-AB-76c	Living/Kitchen	36	Fail	89	Marginal
06-AB-77	Bedroom	28	Fail	100	Pass
06-AB-78	Bedroom	42	Marginal	100	Pass
06-AB-79	Bedroom	46	Marginal	100	Pass
06-AB-80c	Living/Kitchen	77	Pass	100	Pass
06-AB-81	Bedroom	92	Pass	100	Pass
07-AB-01c	Living/Kitchen	100	Pass	100	Pass
07-AB-02	Bedroom	81	Pass	100	Pass
07-AB-03	Bedroom	56	Pass	100	Pass
07-AB-04	Bedroom	84	Pass	100	Pass
07-AB-05c	Living/Kitchen	34	Fail	89	Marginal
07-AB-06	Bedroom	9	Fail	87	Marginal
07-AB-07c	Living/Kitchen	66	Pass	100	Pass
07-AB-08	Bedroom	54	Pass	100	Pass
07-AB-09c	Living/Kitchen	70	Pass	100	Pass
07-AB-10	Bedroom	54	Pass	100	Pass
07-AB-11	Bedroom	54	Pass	100	Pass
07-AB-12	Bedroom	60	Pass	100	Pass
07-AB-13	Bedroom	67	Pass	100	Pass
07-AB-14c	Living/Kitchen	50	Pass	100	Pass
07-AB-15	Bedroom	45	Marginal	100	Pass
07-AB-16	Bedroom	100	Pass	100	Pass
07-AB-17	Bedroom	45	Marginal	100	Pass
07-AB-18	Bedroom	45	Marginal	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
07-AB-19	Bedroom	100	Pass	100	Pass
07-AB-20	Bedroom	45	Marginal	100	Pass
07-AB-21c	Living/Kitchen	40	Marginal	100	Pass
07-AB-22	Bedroom	66	Pass	100	Pass
07-AB-23	Bedroom	57	Pass	100	Pass
07-AB-24	Bedroom	58	Pass	100	Pass
07-AB-25	Bedroom	63	Pass	100	Pass
07-AB-26	Bedroom	58	Pass	100	Pass
07-AB-27	Bedroom	65	Pass	100	Pass
07-AB-28c	Living/Kitchen	40	Marginal	100	Pass
07-AB-29	Bedroom	38	Fail	100	Pass
07-AB-30	Bedroom	97	Pass	100	Pass
07-AB-31	Bedroom	47	Marginal	100	Pass
07-AB-32	Bedroom	46	Marginal	100	Pass
07-AB-33	Bedroom	97	Pass	100	Pass
07-AB-34	Bedroom	40	Marginal	100	Pass
07-AB-35c	Living/Kitchen	42	Marginal	100	Pass
07-AB-36	Bedroom	64	Pass	100	Pass
07-AB-37	Bedroom	59	Pass	100	Pass
07-AB-38	Bedroom	58	Pass	100	Pass
07-AB-39	Bedroom	63	Pass	100	Pass
07-AB-40	Bedroom	64	Pass	100	Pass
07-AB-41	Bedroom	67	Pass	100	Pass
07-AB-42c	Living/Kitchen	45	Marginal	100	Pass
07-AB-43	Bedroom	71	Pass	100	Pass
07-AB-44c	Living/Kitchen	91	Pass	100	Pass
07-AB-45c	Living/Kitchen	88	Pass	100	Pass
07-AB-46	Bedroom	75	Pass	100	Pass
07-AB-47c	Living/Kitchen	79	Pass	100	Pass
07-AB-48	Bedroom	73	Pass	100	Pass
07-AB-49	Bedroom	65	Pass	100	Pass
07-AB-50c	Living/Kitchen	71	Pass	100	Pass
07-AB-51	Bedroom	38	Fail	100	Pass
07-AB-52c	Living/Kitchen	59	Pass	100	Pass
07-AB-53	Bedroom	60	Pass	100	Pass
07-AB-54c	Living/Kitchen	61	Pass	100	Pass
07-AB-55c	Living/Kitchen	77	Pass	100	Pass
07-AB-56c	Living/Kitchen	74	Pass	100	Pass
07-AB-57c	Living/Kitchen	55	Pass	100	Pass
07-AB-58	Bedroom	51	Pass	100	Pass
07-AB-59c	Living/Kitchen	42	Marginal	97	Pass
07-AB-60	Bedroom	53	Pass	100	Pass
07-AB-61	Bedroom	46	Marginal	100	Pass
07-AB-62	Bedroom	48	Marginal	100	Pass
07-AB-63	Bedroom	51	Pass	100	Pass
07-AB-64c	Living/Kitchen	46	Marginal	100	Pass
07-AB-65	Bedroom	50	Pass	100	Pass
07-AB-66c	Living/Kitchen	61	Pass	100	Pass
07-AB-67c	Living/Kitchen	92	Pass	100	Pass
07-AB-68c	Living/Kitchen	92	Pass	100	Pass
07-AB-69c	Living/Kitchen	49	Marginal	100	Pass
07-AB-70	Bedroom	62	Pass	100	Pass
07-AB-71c	Living/Kitchen	47	Marginal	100	Pass
07-AB-72	Bedroom	54	Pass	100	Pass
07-AB-73	Bedroom	48	Marginal	100	Pass
07-AB-74	Bedroom	37	Fail	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
07-AB-75	Bedroom	33	Fail	100	Pass
07-AB-76c	Living/Kitchen	39	Fail	96	Pass
07-AB-77	Bedroom	29	Fail	100	Pass
07-AB-78	Bedroom	41	Marginal	100	Pass
07-AB-79	Bedroom	50	Pass	100	Pass
07-AB-80c	Living/Kitchen	85	Pass	100	Pass
07-AB-81	Bedroom	90	Pass	100	Pass
08-AB-03	Bedroom	100	Pass	100	Pass
08-AB-04	Bedroom	87	Pass	100	Pass
08-AB-05c	Living/Kitchen	34	Fail	85	Marginal
08-AB-06	Bedroom	9	Fail	87	Marginal
08-AB-07c	Living/Kitchen	68	Pass	100	Pass
08-AB-08	Bedroom	57	Pass	100	Pass
08-AB-09c	Living/Kitchen	74	Pass	100	Pass
08-AB-10	Bedroom	59	Pass	100	Pass
08-AB-11	Bedroom	52	Pass	100	Pass
08-AB-12	Bedroom	60	Pass	100	Pass
08-AB-13	Bedroom	66	Pass	100	Pass
08-AB-14c	Living/Kitchen	52	Pass	100	Pass
08-AB-21c	Living/Kitchen	44	Marginal	100	Pass
08-AB-22	Bedroom	64	Pass	100	Pass
08-AB-23	Bedroom	58	Pass	100	Pass
08-AB-24	Bedroom	59	Pass	100	Pass
08-AB-25	Bedroom	62	Pass	100	Pass
08-AB-26	Bedroom	58	Pass	100	Pass
08-AB-27	Bedroom	64	Pass	100	Pass
08-AB-28c	Living/Kitchen	46	Marginal	100	Pass
08-AB-35c	Living/Kitchen	52	Pass	100	Pass
08-AB-36	Bedroom	64	Pass	100	Pass
08-AB-37	Bedroom	57	Pass	100	Pass
08-AB-38	Bedroom	58	Pass	100	Pass
08-AB-39	Bedroom	61	Pass	100	Pass
08-AB-40	Bedroom	58	Pass	100	Pass
08-AB-41	Bedroom	64	Pass	100	Pass
08-AB-42c	Living/Kitchen	45	Marginal	100	Pass
08-AB-43	Bedroom	71	Pass	100	Pass
08-AB-44c	Living/Kitchen	87	Pass	100	Pass
08-AB-45c	Living/Kitchen	91	Pass	100	Pass
08-AB-46	Bedroom	76	Pass	100	Pass
08-AB-47c	Living/Kitchen	87	Pass	100	Pass
08-AB-48	Bedroom	78	Pass	100	Pass
08-AB-49	Bedroom	69	Pass	100	Pass
08-AB-50	Bedroom	83	Pass	100	Pass
08-AB-51	Bedroom	43	Marginal	100	Pass
08-AB-52c	Living/Kitchen	75	Pass	100	Pass
08-AB-53	Bedroom	62	Pass	100	Pass
08-AB-54c	Living/Kitchen	95	Pass	100	Pass
08-AB-57c	Living/Kitchen	76	Pass	100	Pass
08-AB-58	Bedroom	58	Pass	100	Pass
08-AB-59c	Living/Kitchen	60	Pass	100	Pass
08-AB-60	Bedroom	61	Pass	100	Pass
08-AB-61	Bedroom	48	Marginal	100	Pass
08-AB-62	Bedroom	48	Marginal	100	Pass
08-AB-63	Bedroom	58	Pass	100	Pass
08-AB-64c	Living/Kitchen	56	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
08-AB-65	Bedroom	56	Pass	100	Pass
08-AB-66c	Living/Kitchen	86	Pass	100	Pass
08-AB-69c	Living/Kitchen	76	Pass	100	Pass
08-AB-70	Bedroom	64	Pass	100	Pass
08-AB-71c	Living/Kitchen	60	Pass	100	Pass
08-AB-72	Bedroom	65	Pass	100	Pass
08-AB-73	Bedroom	51	Pass	100	Pass
08-AB-74	Bedroom	47	Marginal	100	Pass
08-AB-75	Bedroom	37	Fail	100	Pass
08-AB-76c	Living/Kitchen	52	Pass	100	Pass
08-AB-77	Bedroom	100	Pass	100	Pass
		Count	**645**	**Count**	**645**
		Pass	**349**	**Pass**	**588**
		Pass Rate 300lx/50%	**54%**	**Pass Rate 100lx/95%**	**91%**
		Marginal	129	Marginal	46
		Pass Margina	74%	Pass Margina	98%

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
06-AB-43	Bedroom	69	Pass	100	Pass
06-AB-44c	Living/Kitchen	87	Pass	100	Pass
06-AB-45c	Living/Kitchen	87	Pass	100	Pass
06-AB-46	Bedroom	74	Pass	100	Pass
06-AB-47c	Living/Kitchen	77	Pass	100	Pass
06-AB-48	Bedroom	73	Pass	100	Pass
06-AB-49	Bedroom	65	Pass	100	Pass
06-AB-50c	Living/Kitchen	69	Pass	100	Pass
06-AB-51	Bedroom	33	Fail	100	Pass
06-AB-52c	Living/Kitchen	52	Pass	100	Pass
06-AB-53	Bedroom	51	Pass	100	Pass
06-AB-54c	Living/Kitchen	53	Pass	100	Pass
06-AB-55c	Living/Kitchen	43	Marginal	100	Pass
06-AB-56c	Living/Kitchen	38	Fail	100	Pass
06-AB-57c	Living/Kitchen	48	Marginal	99	Pass
06-AB-58	Bedroom	44	Marginal	100	Pass
06-AB-59c	Living/Kitchen	36	Fail	85	Marginal
06-AB-60	Bedroom	46	Marginal	100	Pass
06-AB-61	Bedroom	42	Marginal	100	Pass
06-AB-62	Bedroom	40	Marginal	100	Pass
06-AB-63	Bedroom	49	Marginal	100	Pass
06-AB-64c	Living/Kitchen	41	Marginal	100	Pass
06-AB-65	Bedroom	50	Pass	100	Pass
06-AB-66c	Living/Kitchen	57	Pass	100	Pass
06-AB-67c	Living/Kitchen	54	Pass	100	Pass
06-AB-68c	Living/Kitchen	57	Pass	100	Pass
06-AB-69c	Living/Kitchen	45	Marginal	100	Pass
06-AB-70	Bedroom	61	Pass	100	Pass
06-AB-71c	Living/Kitchen	46	Marginal	100	Pass
06-AB-72	Bedroom	51	Pass	100	Pass
06-AB-73	Bedroom	48	Marginal	100	Pass
06-AB-74	Bedroom	34	Fail	100	Pass
06-AB-75	Bedroom	30	Fail	100	Pass
06-AB-76c	Living/Kitchen	36	Fail	89	Marginal
06-AB-77	Bedroom	28	Fail	100	Pass
06-AB-78	Bedroom	42	Marginal	100	Pass
06-AB-79	Bedroom	46	Marginal	100	Pass
06-AB-80c	Living/Kitchen	77	Pass	100	Pass
06-AB-81	Bedroom	92	Pass	100	Pass
07-AB-01c	Living/Kitchen	100	Pass	100	Pass
07-AB-02	Bedroom	81	Pass	100	Pass
07-AB-03	Bedroom	56	Pass	100	Pass
07-AB-04	Bedroom	84	Pass	100	Pass
07-AB-05c	Living/Kitchen	34	Fail	89	Marginal
07-AB-06	Bedroom	9	Fail	87	Marginal
07-AB-07c	Living/Kitchen	66	Pass	100	Pass
07-AB-08	Bedroom	54	Pass	100	Pass
07-AB-09c	Living/Kitchen	70	Pass	100	Pass
07-AB-10	Bedroom	54	Pass	100	Pass
07-AB-11	Bedroom	54	Pass	100	Pass
07-AB-12	Bedroom	60	Pass	100	Pass
07-AB-13	Bedroom	67	Pass	100	Pass
07-AB-14c	Living/Kitchen	50	Pass	100	Pass
07-AB-15	Bedroom	45	Marginal	100	Pass
07-AB-16	Bedroom	100	Pass	100	Pass
07-AB-17	Bedroom	45	Marginal	100	Pass
07-AB-18	Bedroom	45	Marginal	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
07-AB-19	Bedroom	100	Pass	100	Pass
07-AB-20	Bedroom	45	Marginal	100	Pass
07-AB-21c	Living/Kitchen	40	Marginal	100	Pass
07-AB-22	Bedroom	66	Pass	100	Pass
07-AB-23	Bedroom	57	Pass	100	Pass
07-AB-24	Bedroom	58	Pass	100	Pass
07-AB-25	Bedroom	63	Pass	100	Pass
07-AB-26	Bedroom	58	Pass	100	Pass
07-AB-27	Bedroom	65	Pass	100	Pass
07-AB-28c	Living/Kitchen	40	Marginal	100	Pass
07-AB-29	Bedroom	38	Fail	100	Pass
07-AB-30	Bedroom	97	Pass	100	Pass
07-AB-31	Bedroom	47	Marginal	100	Pass
07-AB-32	Bedroom	46	Marginal	100	Pass
07-AB-33	Bedroom	97	Pass	100	Pass
07-AB-34	Bedroom	40	Marginal	100	Pass
07-AB-35c	Living/Kitchen	42	Marginal	100	Pass
07-AB-36	Bedroom	64	Pass	100	Pass
07-AB-37	Bedroom	59	Pass	100	Pass
07-AB-38	Bedroom	58	Pass	100	Pass
07-AB-39	Bedroom	63	Pass	100	Pass
07-AB-40	Bedroom	64	Pass	100	Pass
07-AB-41	Bedroom	67	Pass	100	Pass
07-AB-42c	Living/Kitchen	45	Marginal	100	Pass
07-AB-43	Bedroom	71	Pass	100	Pass
07-AB-44c	Living/Kitchen	91	Pass	100	Pass
07-AB-45c	Living/Kitchen	88	Pass	100	Pass
07-AB-46	Bedroom	75	Pass	100	Pass
07-AB-47c	Living/Kitchen	79	Pass	100	Pass
07-AB-48	Bedroom	73	Pass	100	Pass
07-AB-49	Bedroom	65	Pass	100	Pass
07-AB-50c	Living/Kitchen	71	Pass	100	Pass
07-AB-51	Bedroom	38	Fail	100	Pass
07-AB-52c	Living/Kitchen	59	Pass	100	Pass
07-AB-53	Bedroom	60	Pass	100	Pass
07-AB-54c	Living/Kitchen	61	Pass	100	Pass
07-AB-55c	Living/Kitchen	77	Pass	100	Pass
07-AB-56c	Living/Kitchen	74	Pass	100	Pass
07-AB-57c	Living/Kitchen	55	Pass	100	Pass
07-AB-58	Bedroom	51	Pass	100	Pass
07-AB-59c	Living/Kitchen	42	Marginal	97	Pass
07-AB-60	Bedroom	53	Pass	100	Pass
07-AB-61	Bedroom	46	Marginal	100	Pass
07-AB-62	Bedroom	48	Marginal	100	Pass
07-AB-63	Bedroom	51	Pass	100	Pass
07-AB-64c	Living/Kitchen	46	Marginal	100	Pass
07-AB-65	Bedroom	50	Pass	100	Pass
07-AB-66c	Living/Kitchen	61	Pass	100	Pass
07-AB-67c	Living/Kitchen	92	Pass	100	Pass
07-AB-68c	Living/Kitchen	92	Pass	100	Pass
07-AB-69c	Living/Kitchen	49	Marginal	100	Pass
07-AB-70	Bedroom	62	Pass	100	Pass
07-AB-71c	Living/Kitchen	47	Marginal	100	Pass
07-AB-72	Bedroom	54	Pass	100	Pass
07-AB-73	Bedroom	48	Marginal	100	Pass
07-AB-74	Bedroom	37	Fail	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
07-AB-75	Bedroom	33	Fail	100	Pass
07-AB-76c	Living/Kitchen	39	Fail	96	Pass
07-AB-77	Bedroom	29	Fail	100	Pass
07-AB-78	Bedroom	41	Marginal	100	Pass
07-AB-79	Bedroom	50	Pass	100	Pass
07-AB-80c	Living/Kitchen	85	Pass	100	Pass
07-AB-81	Bedroom	90	Pass	100	Pass
08-AB-03	Bedroom	100	Pass	100	Pass
08-AB-04	Bedroom	87	Pass	100	Pass
08-AB-05c	Living/Kitchen	34	Fail	85	Marginal
08-AB-06	Bedroom	9	Fail	87	Marginal
08-AB-07c	Living/Kitchen	68	Pass	100	Pass
08-AB-08	Bedroom	57	Pass	100	Pass
08-AB-09c	Living/Kitchen	74	Pass	100	Pass
08-AB-10	Bedroom	59	Pass	100	Pass
08-AB-11	Bedroom	52	Pass	100	Pass
08-AB-12	Bedroom	60	Pass	100	Pass
08-AB-13	Bedroom	66	Pass	100	Pass
08-AB-14c	Living/Kitchen	52	Pass	100	Pass
08-AB-21c	Living/Kitchen	44	Marginal	100	Pass
08-AB-22	Bedroom	64	Pass	100	Pass
08-AB-23	Bedroom	58	Pass	100	Pass
08-AB-24	Bedroom	59	Pass	100	Pass
08-AB-25	Bedroom	62	Pass	100	Pass
08-AB-26	Bedroom	58	Pass	100	Pass
08-AB-27	Bedroom	64	Pass	100	Pass
08-AB-28c	Living/Kitchen	46	Marginal	100	Pass
08-AB-35c	Living/Kitchen	52	Pass	100	Pass
08-AB-36	Bedroom	64	Pass	100	Pass
08-AB-37	Bedroom	57	Pass	100	Pass
08-AB-38	Bedroom	58	Pass	100	Pass
08-AB-39	Bedroom	61	Pass	100	Pass
08-AB-40	Bedroom	58	Pass	100	Pass
08-AB-41	Bedroom	64	Pass	100	Pass
08-AB-42c	Living/Kitchen	45	Marginal	100	Pass
08-AB-43	Bedroom	71	Pass	100	Pass
08-AB-44c	Living/Kitchen	87	Pass	100	Pass
08-AB-45c	Living/Kitchen	91	Pass	100	Pass
08-AB-46	Bedroom	76	Pass	100	Pass
08-AB-47c	Living/Kitchen	87	Pass	100	Pass
08-AB-48	Bedroom	78	Pass	100	Pass
08-AB-49	Bedroom	69	Pass	100	Pass
08-AB-50	Bedroom	83	Pass	100	Pass
08-AB-51	Bedroom	43	Marginal	100	Pass
08-AB-52c	Living/Kitchen	75	Pass	100	Pass
08-AB-53	Bedroom	62	Pass	100	Pass
08-AB-54c	Living/Kitchen	95	Pass	100	Pass
08-AB-57c	Living/Kitchen	76	Pass	100	Pass
08-AB-58	Bedroom	58	Pass	100	Pass
08-AB-59c	Living/Kitchen	60	Pass	100	Pass
08-AB-60	Bedroom	61	Pass	100	Pass
08-AB-61	Bedroom	48	Marginal	100	Pass
08-AB-62	Bedroom	48	Marginal	100	Pass
08-AB-63	Bedroom	58	Pass	100	Pass
08-AB-64c	Living/Kitchen	56	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
08-AB-65	Bedroom	56	Pass	100	Pass
08-AB-66c	Living/Kitchen	86	Pass	100	Pass
08-AB-69c	Living/Kitchen	76	Pass	100	Pass
08-AB-70	Bedroom	64	Pass	100	Pass
08-AB-71c	Living/Kitchen	60	Pass	100	Pass
08-AB-72	Bedroom	65	Pass	100	Pass
08-AB-73	Bedroom	51	Pass	100	Pass
08-AB-74	Bedroom	47	Marginal	100	Pass
08-AB-75	Bedroom	37	Fail	100	Pass
08-AB-76c	Living/Kitchen	52	Pass	100	Pass
08-AB-77	Bedroom	100	Pass	100	Pass
		Count	**645**	**Count**	**645**
		Pass	**349**	**Pass**	**588**
		Pass Rate 300lx/50%	**54%**	**Pass Rate 100lx/95%**	**91%**
		Marginal	129	Marginal	46
		Pass Margina	74%	Pass Margina	98%

Block Cx – E_T results - Tabulated

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
0L-Cx-02	Bedroom	45	Marginal	100	Pass
0L-Cx-03	Bedroom	48	Marginal	100	Pass
0L-Cx-04c	Living/Kitchen	36	Fail	80	Marginal
0L-Cx-05	Bedroom	43	Marginal	100	Pass
0L-Cx-06c	Living/Kitchen	35	Fail	97	Pass
0U-Cx-02	Bedroom	56	Pass	100	Pass
0U-Cx-03	Bedroom	66	Pass	100	Pass
0U-Cx-04c	Living/Kitchen	48	Marginal	100	Pass
0U-Cx-05	Bedroom	61	Pass	100	Pass
0U-Cx-06c	Living/Kitchen	50	Pass	100	Pass
0U-Cx-07c	Living/Kitchen	53	Pass	100	Pass
0U-Cx-08	Bedroom	66	Pass	100	Pass
0U-Cx-09c	Living/Kitchen	51	Pass	100	Pass
0U-Cx-10	Bedroom	69	Pass	100	Pass
0U-Cx-11	Bedroom	58	Pass	100	Pass
0U-Cx-12c	Living/Kitchen	73	Pass	100	Pass
0U-Cx-13	Bedroom	30	Fail	97	Pass
0U-Cx-14	Bedroom	36	Fail	100	Pass
0U-Cx-15c	Living/Kitchen	24	Fail	65	Fail
0U-Cx-16	Bedroom	29	Fail	100	Pass
0U-Cx-17	Bedroom	20	Fail	82	Marginal
01-Cx-01c	Living/Kitchen	71	Pass	100	Pass
01-Cx-02	Bedroom	60	Pass	100	Pass
01-Cx-03	Bedroom	72	Pass	100	Pass
01-Cx-04c	Living/Kitchen	48	Marginal	100	Pass
01-Cx-05	Bedroom	64	Pass	100	Pass
01-Cx-06c	Living/Kitchen	51	Pass	100	Pass
01-Cx-07c	Living/Kitchen	53	Pass	100	Pass
01-Cx-08	Bedroom	72	Pass	100	Pass
01-Cx-09c	Living/Kitchen	50	Pass	100	Pass
01-Cx-10	Bedroom	75	Pass	100	Pass
01-Cx-11	Bedroom	62	Pass	100	Pass
01-Cx-12c	Living/Kitchen	75	Pass	100	Pass
01-Cx-13	Bedroom	30	Fail	97	Pass
01-Cx-14	Bedroom	37	Fail	100	Pass
01-Cx-15c	Living/Kitchen	29	Fail	68	Fail
01-Cx-16	Bedroom	30	Fail	100	Pass
01-Cx-17	Bedroom	20	Fail	91	Marginal
01-Cx-18c	Living/Kitchen	47	Marginal	98	Pass
01-Cx-19	Bedroom	31	Fail	100	Pass
01-Cx-20	Bedroom	31	Fail	100	Pass
01-Cx-21c	Living/Kitchen	33	Fail	90	Marginal
01-Cx-22	Bedroom	10	Fail	43	Fail
01-Cx-23	Bedroom	18	Fail	70	Fail
01-Cx-24c	Living/Kitchen	12	Fail	47	Fail
01-Cx-25	Bedroom	12	Fail	60	Fail
01-Cx-26	Bedroom	14	Fail	62	Fail

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
02-Cx-01c	Living/Kitchen	73	Pass	100	Pass
02-Cx-02	Bedroom	60	Pass	100	Pass
02-Cx-03	Bedroom	75	Pass	100	Pass
02-Cx-04c	Living/Kitchen	48	Marginal	100	Pass
02-Cx-05	Bedroom	66	Pass	100	Pass
02-Cx-06c	Living/Kitchen	53	Pass	100	Pass
02-Cx-07c	Living/Kitchen	51	Pass	100	Pass
02-Cx-08	Bedroom	74	Pass	100	Pass
02-Cx-09c	Living/Kitchen	51	Pass	100	Pass
02-Cx-10	Bedroom	81	Pass	100	Pass
02-Cx-11	Bedroom	65	Pass	100	Pass
02-Cx-12c	Living/Kitchen	75	Pass	100	Pass
02-Cx-13	Bedroom	34	Fail	100	Pass
02-Cx-14	Bedroom	37	Fail	100	Pass
02-Cx-15c	Living/Kitchen	32	Fail	72	Fail
02-Cx-16	Bedroom	39	Fail	100	Pass
02-Cx-17	Bedroom	22	Fail	100	Pass
02-Cx-18c	Living/Kitchen	50	Pass	99	Pass
02-Cx-19	Bedroom	37	Fail	100	Pass
02-Cx-20	Bedroom	37	Fail	100	Pass
02-Cx-21c	Living/Kitchen	37	Fail	95	Pass
02-Cx-22	Bedroom	13	Fail	55	Fail
02-Cx-23	Bedroom	23	Fail	88	Marginal
02-Cx-24c	Living/Kitchen	16	Fail	56	Fail
02-Cx-25	Bedroom	18	Fail	60	Fail
02-Cx-26	Bedroom	16	Fail	62	Fail
03-Cx-01c	Living/Kitchen	73	Pass	100	Pass
03-Cx-02	Bedroom	59	Pass	100	Pass
03-Cx-03	Bedroom	71	Pass	100	Pass
03-Cx-04c	Living/Kitchen	48	Marginal	100	Pass
03-Cx-05	Bedroom	66	Pass	100	Pass
03-Cx-06c	Living/Kitchen	50	Pass	100	Pass
03-Cx-07c	Living/Kitchen	52	Pass	100	Pass
03-Cx-08	Bedroom	75	Pass	100	Pass
03-Cx-09c	Living/Kitchen	54	Pass	100	Pass
03-Cx-10	Bedroom	84	Pass	100	Pass
03-Cx-11	Bedroom	64	Pass	100	Pass
03-Cx-12c	Living/Kitchen	79	Pass	100	Pass
03-Cx-13	Bedroom	37	Fail	100	Pass
03-Cx-14	Bedroom	41	Marginal	100	Pass
03-Cx-15c	Living/Kitchen	36	Fail	76	Marginal
03-Cx-16	Bedroom	39	Fail	100	Pass
03-Cx-17	Bedroom	24	Fail	100	Pass
03-Cx-18c	Living/Kitchen	65	Pass	100	Pass
03-Cx-19	Bedroom	38	Fail	100	Pass
03-Cx-20	Bedroom	40	Marginal	100	Pass
03-Cx-21c	Living/Kitchen	41	Marginal	96	Pass
03-Cx-22	Bedroom	14	Fail	66	Fail
03-Cx-23	Bedroom	25	Fail	95	Pass
03-Cx-24c	Living/Kitchen	20	Fail	60	Fail
03-Cx-25	Bedroom	22	Fail	71	Fail
03-Cx-26	Bedroom	19	Fail	63	Fail

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
04-Cx-01c	Living/Kitchen	83	Pass	100	Pass
04-Cx-02	Bedroom	59	Pass	100	Pass
04-Cx-03	Bedroom	85	Pass	100	Pass
04-Cx-04c	Living/Kitchen	49	Marginal	100	Pass
04-Cx-05	Bedroom	67	Pass	100	Pass
04-Cx-06c	Living/Kitchen	57	Pass	100	Pass
04-Cx-07c	Living/Kitchen	54	Pass	100	Pass
04-Cx-08	Bedroom	73	Pass	100	Pass
04-Cx-09c	Living/Kitchen	54	Pass	100	Pass
04-Cx-10	Bedroom	85	Pass	100	Pass
04-Cx-11	Bedroom	64	Pass	100	Pass
04-Cx-12c	Living/Kitchen	80	Pass	100	Pass
04-Cx-13	Bedroom	38	Fail	100	Pass
04-Cx-14	Bedroom	45	Marginal	100	Pass
04-Cx-15c	Living/Kitchen	40	Marginal	82	Marginal
04-Cx-16	Bedroom	44	Marginal	100	Pass
04-Cx-17	Bedroom	25	Fail	100	Pass
04-Cx-18c	Living/Kitchen	67	Pass	100	Pass
04-Cx-19	Bedroom	41	Marginal	100	Pass
04-Cx-20	Bedroom	43	Marginal	100	Pass
04-Cx-21c	Living/Kitchen	48	Marginal	98	Pass
04-Cx-22	Bedroom	16	Fail	76	Marginal
04-Cx-23	Bedroom	26	Fail	97	Pass
04-Cx-24c	Living/Kitchen	26	Fail	67	Fail
04-Cx-25	Bedroom	27	Fail	82	Marginal
04-Cx-26	Bedroom	24	Fail	70	Fail
05-Cx-01c	Living/Kitchen	86	Pass	100	Pass
05-Cx-02	Bedroom	62	Pass	100	Pass
05-Cx-03	Bedroom	76	Pass	100	Pass
05-Cx-04c	Living/Kitchen	50	Pass	100	Pass
05-Cx-05	Bedroom	67	Pass	100	Pass
05-Cx-06c	Living/Kitchen	52	Pass	100	Pass
05-Cx-07c	Living/Kitchen	62	Pass	100	Pass
05-Cx-08	Bedroom	76	Pass	100	Pass
05-Cx-09c	Living/Kitchen	54	Pass	100	Pass
05-Cx-10	Bedroom	85	Pass	100	Pass
05-Cx-11	Bedroom	66	Pass	100	Pass
05-Cx-12c	Living/Kitchen	82	Pass	100	Pass
05-Cx-13	Bedroom	16	Fail	73	Fail
05-Cx-14	Bedroom	49	Marginal	100	Pass
05-Cx-15c	Living/Kitchen	42	Marginal	89	Marginal
05-Cx-16	Bedroom	44	Marginal	100	Pass
05-Cx-17	Bedroom	27	Fail	100	Pass
05-Cx-18c	Living/Kitchen	72	Pass	100	Pass
05-Cx-19	Bedroom	51	Pass	100	Pass
05-Cx-20	Bedroom	47	Marginal	100	Pass
05-Cx-21c	Living/Kitchen	59	Pass	100	Pass
05-Cx-22	Bedroom	21	Fail	95	Pass
05-Cx-23	Bedroom	33	Fail	100	Pass
05-Cx-24c	Living/Kitchen	31	Fail	72	Fail
05-Cx-25	Bedroom	31	Fail	100	Pass
05-Cx-26	Bedroom	29	Fail	81	Marginal

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
06-Cx-01c	Living/Kitchen	95	Pass	100	Pass
06-Cx-02	Bedroom	60	Pass	100	Pass
06-Cx-03	Bedroom	76	Pass	100	Pass
06-Cx-04c	Living/Kitchen	51	Pass	100	Pass
06-Cx-05	Bedroom	71	Pass	100	Pass
06-Cx-06c	Living/Kitchen	55	Pass	100	Pass
06-Cx-07c	Living/Kitchen	56	Pass	100	Pass
06-Cx-08	Bedroom	75	Pass	100	Pass
06-Cx-09c	Living/Kitchen	52	Pass	100	Pass
06-Cx-10	Bedroom	87	Pass	100	Pass
06-Cx-11	Bedroom	65	Pass	100	Pass
06-Cx-12c	Living/Kitchen	92	Pass	100	Pass
06-Cx-13	Bedroom	43	Marginal	100	Pass
06-Cx-14	Bedroom	50	Pass	100	Pass
06-Cx-15c	Living/Kitchen	43	Marginal	99	Pass
06-Cx-16	Bedroom	46	Marginal	100	Pass
06-Cx-17	Bedroom	27	Fail	100	Pass
06-Cx-18c	Living/Kitchen	74	Pass	100	Pass
06-Cx-19	Bedroom	52	Pass	100	Pass
06-Cx-20	Bedroom	52	Pass	100	Pass
06-Cx-21c	Living/Kitchen	68	Pass	100	Pass
06-Cx-22	Bedroom	25	Fail	100	Pass
06-Cx-23	Bedroom	40	Marginal	100	Pass
06-Cx-24c	Living/Kitchen	38	Fail	80	Marginal
06-Cx-25	Bedroom	36	Fail	100	Pass
06-Cx-26	Bedroom	36	Fail	100	Pass
07-Cx-01c	Living/Kitchen	92	Pass	100	Pass
07-Cx-02	Bedroom	62	Pass	100	Pass
07-Cx-03	Bedroom	83	Pass	100	Pass
07-Cx-04c	Living/Kitchen	51	Pass	100	Pass
07-Cx-05	Bedroom	72	Pass	100	Pass
07-Cx-06c	Living/Kitchen	60	Pass	100	Pass
07-Cx-07c	Living/Kitchen	59	Pass	100	Pass
07-Cx-08	Bedroom	80	Pass	100	Pass
07-Cx-09c	Living/Kitchen	52	Pass	100	Pass
07-Cx-10	Bedroom	82	Pass	100	Pass
07-Cx-11	Bedroom	100	Pass	100	Pass
07-Cx-15c	Living/Kitchen	69	Pass	100	Pass
07-Cx-16	Bedroom	50	Pass	100	Pass
07-Cx-17	Bedroom	28	Fail	100	Pass
07-Cx-18c	Living/Kitchen	77	Pass	100	Pass
07-Cx-19	Bedroom	54	Pass	100	Pass
07-Cx-20	Bedroom	54	Pass	100	Pass
07-Cx-21c	Living/Kitchen	75	Pass	100	Pass
07-Cx-22	Bedroom	28	Fail	100	Pass
07-Cx-23	Bedroom	45	Marginal	100	Pass
07-Cx-24c	Living/Kitchen	43	Marginal	96	Pass
07-Cx-25	Bedroom	49	Marginal	100	Pass
07-Cx-26	Bedroom	39	Fail	100	Pass

Block D1 – E_T results - Tabulated

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
08-Cx-02	Bedroom	100	Pass	100	Pass
08-Cx-03	Bedroom	90	Pass	100	Pass
08-Cx-04c	Living/Kitchen	59	Pass	100	Pass
08-Cx-05	Bedroom	76	Pass	100	Pass
08-Cx-06c	Living/Kitchen	66	Pass	100	Pass
08-Cx-07c	Living/Kitchen	67	Pass	100	Pass
08-Cx-08	Bedroom	80	Pass	100	Pass
08-Cx-09c	Living/Kitchen	59	Pass	100	Pass
08-Cx-10	Bedroom	93	Pass	100	Pass
08-Cx-11	Bedroom	100	Pass	100	Pass
08-Cx-15c	Living/Kitchen	74	Pass	100	Pass
08-Cx-16	Bedroom	58	Pass	100	Pass
08-Cx-17	Bedroom	36	Fail	100	Pass
08-Cx-18c	Living/Kitchen	85	Pass	100	Pass
08-Cx-19	Bedroom	57	Pass	100	Pass
08-Cx-20	Bedroom	57	Pass	100	Pass
08-Cx-21c	Living/Kitchen	82	Pass	100	Pass
08-Cx-22	Bedroom	32	Fail	100	Pass
08-Cx-23	Bedroom	53	Pass	100	Pass
08-Cx-24c	Living/Kitchen	74	Pass	100	Pass
		Count	**220**	**Count**	**220**
		Pass	**124**	**Pass**	**188**
		Pass Rate 300lx/50%	**56%**	**Pass Rate 100lx/95%**	**85%**
		Marginal	**29**	**Marginal**	**12**
		Pass Margina	**70%**	**Pass Margina**	**91%**

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
00-D1-04c	Living/Kitchen	38	Fail	93	Marginal
00-D1-05	Bedroom	38	Fail	100	Pass
00-D1-06	Bedroom	23	Fail	84	Marginal
00-D1-07	Bedroom	23	Fail	58	Fail
00-D1-08	Bedroom	21	Fail	67	Fail
00-D1-09	Bedroom	24	Fail	86	Marginal
00-D1-10	Bedroom	35	Fail	100	Pass
00-D1-11c	Living/Kitchen	28	Fail	74	Fail
01-D1-01c	Living/Kitchen	90	Pass	100	Pass
01-D1-02	Bedroom	33	Fail	100	Pass
01-D1-03	Bedroom	92	Pass	100	Pass
01-D1-04c	Living/Kitchen	40	Marginal	100	Pass
01-D1-05	Bedroom	24	Fail	94	Marginal
01-D1-06	Bedroom	30	Fail	100	Pass
01-D1-07	Bedroom	24	Fail	77	Marginal
01-D1-08	Bedroom	25	Fail	88	Marginal
01-D1-09	Bedroom	29	Fail	97	Pass
01-D1-10	Bedroom	25	Fail	96	Pass
01-D1-11c	Living/Kitchen	25	Fail	74	Fail
01-D1-12	Bedroom	18	Fail	71	Fail
01-D1-13	Bedroom	21	Fail	85	Marginal
01-D1-17c	Living/Kitchen	34	Fail	100	Pass
01-D1-18c	Living/Kitchen	41	Marginal	99	Pass
01-D1-19	Bedroom	30	Fail	97	Pass
01-D1-20c	Living/Kitchen	40	Marginal	100	Pass
01-D1-22	Bedroom	47	Marginal	100	Pass
01-D1-23c	Living/Kitchen	74	Pass	100	Pass
01-D1-24	Bedroom	35	Fail	100	Pass
01-D1-25c	Living/Kitchen	53	Pass	100	Pass
02-D1-01c	Living/Kitchen	98	Pass	100	Pass
02-D1-02	Bedroom	41	Marginal	100	Pass
02-D1-03	Bedroom	100	Pass	100	Pass
02-D1-04c	Living/Kitchen	46	Marginal	100	Pass
02-D1-05	Bedroom	26	Fail	100	Pass
02-D1-06	Bedroom	34	Fail	100	Pass
02-D1-07	Bedroom	28	Fail	84	Marginal
02-D1-08	Bedroom	26	Fail	96	Pass
02-D1-09	Bedroom	32	Fail	100	Pass
02-D1-10	Bedroom	27	Fail	100	Pass
02-D1-11c	Living/Kitchen	29	Fail	78	Marginal
02-D1-12	Bedroom	18	Fail	91	Marginal
02-D1-13	Bedroom	23	Fail	98	Pass
02-D1-14	Bedroom	20	Fail	83	Marginal
02-D1-15	Bedroom	19	Fail	97	Pass
02-D1-16c	Living/Kitchen	28	Fail	100	Pass
02-D1-17c	Living/Kitchen	42	Marginal	100	Pass
02-D1-18c	Living/Kitchen	47	Marginal	100	Pass
02-D1-19	Bedroom	32	Fail	100	Pass
02-D1-20c	Living/Kitchen	70	Pass	100	Pass
02-D1-21	Bedroom	57	Pass	100	Pass
02-D1-22	Bedroom	54	Pass	100	Pass
02-D1-23c	Living/Kitchen	82	Pass	100	Pass
02-D1-24	Bedroom	43	Marginal	100	Pass
02-D1-25c	Living/Kitchen	63	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
03-D1-01c	Living/Kitchen	99	Pass	100	Pass
03-D1-02	Bedroom	50	Pass	100	Pass
03-D1-03	Bedroom	100	Pass	100	Pass
03-D1-04c	Living/Kitchen	49	Marginal	100	Pass
03-D1-05	Bedroom	32	Fail	100	Pass
03-D1-06	Bedroom	34	Fail	100	Pass
03-D1-07	Bedroom	28	Fail	91	Marginal
03-D1-08	Bedroom	28	Fail	98	Pass
03-D1-09	Bedroom	34	Fail	100	Pass
03-D1-10	Bedroom	30	Fail	100	Pass
03-D1-11c	Living/Kitchen	31	Fail	82	Marginal
03-D1-12	Bedroom	23	Fail	100	Pass
03-D1-13	Bedroom	24	Fail	100	Pass
03-D1-14	Bedroom	23	Fail	93	Marginal
03-D1-15	Bedroom	19	Fail	100	Pass
03-D1-16c	Living/Kitchen	38	Fail	100	Pass
03-D1-17c	Living/Kitchen	51	Pass	100	Pass
03-D1-18c	Living/Kitchen	52	Pass	100	Pass
03-D1-19	Bedroom	37	Fail	100	Pass
03-D1-20c	Living/Kitchen	75	Pass	100	Pass
03-D1-21	Bedroom	59	Pass	100	Pass
03-D1-22	Bedroom	56	Pass	100	Pass
03-D1-23c	Living/Kitchen	85	Pass	100	Pass
03-D1-24	Bedroom	43	Marginal	100	Pass
03-D1-25c	Living/Kitchen	66	Pass	100	Pass
04-D1-01c	Living/Kitchen	99	Pass	100	Pass
04-D1-02	Bedroom	53	Pass	100	Pass
04-D1-03	Bedroom	100	Pass	100	Pass
04-D1-04c	Living/Kitchen	59	Pass	100	Pass
04-D1-05	Bedroom	37	Fail	100	Pass
04-D1-06	Bedroom	35	Fail	100	Pass
04-D1-07	Bedroom	30	Fail	98	Pass
04-D1-08	Bedroom	30	Fail	100	Pass
04-D1-09	Bedroom	35	Fail	100	Pass
04-D1-10	Bedroom	34	Fail	100	Pass
04-D1-11c	Living/Kitchen	36	Fail	86	Marginal
04-D1-12	Bedroom	26	Fail	100	Pass
04-D1-13	Bedroom	29	Fail	100	Pass
04-D1-14	Bedroom	27	Fail	100	Pass
04-D1-15	Bedroom	23	Fail	100	Pass
04-D1-16c	Living/Kitchen	47	Marginal	100	Pass
04-D1-17c	Living/Kitchen	61	Pass	100	Pass
04-D1-18c	Living/Kitchen	58	Pass	100	Pass
04-D1-19	Bedroom	41	Marginal	100	Pass
04-D1-20c	Living/Kitchen	80	Pass	100	Pass
04-D1-21	Bedroom	63	Pass	100	Pass
04-D1-22	Bedroom	61	Pass	100	Pass
04-D1-23c	Living/Kitchen	93	Pass	100	Pass
04-D1-24	Bedroom	57	Pass	100	Pass
04-D1-25c	Living/Kitchen	67	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
05-D1-01c	Living/Kitchen	100	Pass	100	Pass
05-D1-02	Bedroom	59	Pass	100	Pass
05-D1-03	Bedroom	100	Pass	100	Pass
05-D1-04c	Living/Kitchen	73	Pass	100	Pass
05-D1-05	Bedroom	64	Pass	100	Pass
05-D1-06	Bedroom	40	Marginal	100	Pass
05-D1-07	Bedroom	33	Fail	100	Pass
05-D1-08	Bedroom	34	Fail	100	Pass
05-D1-09	Bedroom	39	Fail	100	Pass
05-D1-10	Bedroom	73	Pass	100	Pass
05-D1-11c	Living/Kitchen	54	Pass	100	Pass
05-D1-12	Bedroom	31	Fail	100	Pass
05-D1-13	Bedroom	34	Fail	100	Pass
05-D1-14	Bedroom	33	Fail	100	Pass
05-D1-15	Bedroom	30	Fail	100	Pass
05-D1-16c	Living/Kitchen	94	Pass	100	Pass
05-D1-17c	Living/Kitchen	95	Pass	100	Pass
05-D1-18c	Living/Kitchen	74	Pass	100	Pass
05-D1-19	Bedroom	46	Marginal	100	Pass
05-D1-20c	Living/Kitchen	95	Pass	100	Pass
05-D1-21	Bedroom	71	Pass	100	Pass
05-D1-22	Bedroom	66	Pass	100	Pass
05-D1-23c	Living/Kitchen	98	Pass	100	Pass
05-D1-24	Bedroom	62	Pass	100	Pass
05-D1-25c	Living/Kitchen	80	Pass	100	Pass
		Count	**128**	**Count**	**128**
		Pass	**49**	**Pass**	**109**
		Pass Rate 300lx/50%	**38%**	**Pass Rate 100lx/95%**	**85%**
		Marginal	**15**	**Marginal**	**14**
		Pass Margina	**50%**	**Pass Margina**	**96%**

Block D2 – E_T results - Tabulated

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
00-D2-01c	Living/Kitchen	55	Pass	99	Pass
00-D2-02	Bedroom	18	Fail	88	Marginal
00-D2-03	Bedroom	17	Fail	99	Pass
00-D2-04	Bedroom	37	Fail	100	Pass
00-D2-05	Bedroom	100	Pass	100	Pass
00-D2-06c	Living/Kitchen	27	Fail	62	Fail
00-D2-07	Bedroom	38	Fail	100	Pass
00-D2-08	Bedroom	34	Fail	100	Pass
00-D2-09c	Living/Kitchen	46	Marginal	100	Pass
00-D2-10	Bedroom	45	Marginal	100	Pass
00-D2-11c	Living/Kitchen	65	Pass	100	Pass
00-D2-15c	Living/Kitchen	68	Pass	100	Pass
00-D2-16	Bedroom	45	Marginal	100	Pass
00-D2-17c	Living/Kitchen	69	Pass	100	Pass
00-D2-18	Bedroom	48	Marginal	100	Pass
00-D2-21c	Living/Kitchen	52	Pass	100	Pass
00-D2-22	Bedroom	54	Pass	84	Marginal
01-D2-01c	Living/Kitchen	58	Pass	100	Pass
01-D2-02	Bedroom	19	Fail	100	Pass
01-D2-03	Bedroom	21	Fail	100	Pass
01-D2-04	Bedroom	44	Marginal	100	Pass
01-D2-05	Bedroom	100	Pass	100	Pass
01-D2-06c	Living/Kitchen	38	Fail	92	Marginal
01-D2-07	Bedroom	50	Pass	100	Pass
01-D2-08	Bedroom	24	Fail	100	Pass
01-D2-09c	Living/Kitchen	48	Marginal	100	Pass
01-D2-10	Bedroom	66	Pass	100	Pass
01-D2-11c	Living/Kitchen	70	Pass	100	Pass
01-D2-12	Bedroom	47	Marginal	100	Pass
01-D2-13	Bedroom	83	Pass	100	Pass
01-D2-14	Bedroom	33	Fail	100	Pass
01-D2-15c	Living/Kitchen	75	Pass	100	Pass
01-D2-16	Bedroom	69	Pass	100	Pass
01-D2-17c	Living/Kitchen	72	Pass	100	Pass
01-D2-18	Bedroom	73	Pass	100	Pass
01-D2-19c	Living/Kitchen	71	Pass	100	Pass
01-D2-20	Bedroom	71	Pass	100	Pass
01-D2-21c	Living/Kitchen	52	Pass	100	Pass
01-D2-22	Bedroom	49	Marginal	100	Pass
01-D2-23	Bedroom	68	Pass	100	Pass
01-D2-24	Bedroom	82	Pass	100	Pass
01-D2-25	Bedroom	96	Pass	100	Pass
01-D2-26	Bedroom	90	Pass	100	Pass
01-D2-27c	Living/Kitchen	66	Pass	100	Pass
01-D2-28c	Living/Kitchen	32	Fail	88	Marginal
01-D2-29	Bedroom	26	Fail	100	Pass
01-D2-30	Bedroom	23	Fail	100	Pass
01-D2-31c	Living/Kitchen	48	Marginal	100	Pass
01-D2-32	Bedroom	32	Fail	100	Pass
01-D2-33c	Living/Kitchen	55	Pass	100	Pass
01-D2-35	Bedroom	47	Marginal	100	Pass
01-D2-36c	Living/Kitchen	63	Pass	100	Pass
01-D2-37	Bedroom	30	Fail	100	Pass
01-D2-38c	Living/Kitchen	43	Marginal	100	Pass
01-D2-39c	Living/Kitchen	31	Fail	100	Pass
01-D2-40c	Living/Kitchen	24	Fail	69	Fail
01-D2-41	Bedroom	25	Fail	84	Marginal
01-D2-42	Bedroom	13	Fail	63	Fail

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
02-D2-01c	Living/Kitchen	67	Pass	100	Pass
02-D2-02	Bedroom	26	Fail	100	Pass
02-D2-03	Bedroom	23	Fail	100	Pass
02-D2-04	Bedroom	62	Pass	100	Pass
02-D2-05	Bedroom	100	Pass	100	Pass
02-D2-06c	Living/Kitchen	38	Fail	97	Pass
02-D2-07	Bedroom	52	Pass	100	Pass
02-D2-08	Bedroom	31	Fail	100	Pass
02-D2-09c	Living/Kitchen	47	Marginal	100	Pass
02-D2-10	Bedroom	65	Pass	100	Pass
02-D2-11c	Living/Kitchen	69	Pass	100	Pass
02-D2-12	Bedroom	52	Pass	100	Pass
02-D2-13	Bedroom	97	Pass	100	Pass
02-D2-14	Bedroom	38	Fail	100	Pass
02-D2-15c	Living/Kitchen	75	Pass	100	Pass
02-D2-16	Bedroom	70	Pass	100	Pass
02-D2-17c	Living/Kitchen	73	Pass	100	Pass
02-D2-18	Bedroom	78	Pass	100	Pass
02-D2-19c	Living/Kitchen	72	Pass	100	Pass
02-D2-20	Bedroom	74	Pass	100	Pass
02-D2-21c	Living/Kitchen	52	Pass	100	Pass
02-D2-22	Bedroom	49	Marginal	100	Pass
02-D2-23	Bedroom	68	Pass	100	Pass
02-D2-24	Bedroom	73	Pass	100	Pass
02-D2-25	Bedroom	96	Pass	100	Pass
02-D2-26	Bedroom	91	Pass	100	Pass
02-D2-27c	Living/Kitchen	60	Pass	100	Pass
02-D2-28c	Living/Kitchen	36	Fail	99	Pass
02-D2-29	Bedroom	33	Fail	100	Pass
02-D2-30	Bedroom	34	Fail	100	Pass
02-D2-31c	Living/Kitchen	57	Pass	100	Pass
02-D2-32	Bedroom	39	Fail	100	Pass
02-D2-33c	Living/Kitchen	78	Pass	100	Pass
02-D2-34	Bedroom	61	Pass	100	Pass
02-D2-35	Bedroom	60	Pass	100	Pass
02-D2-36c	Living/Kitchen	72	Pass	100	Pass
02-D2-37	Bedroom	34	Fail	100	Pass
02-D2-38c	Living/Kitchen	49	Marginal	100	Pass
02-D2-39c	Living/Kitchen	45	Marginal	100	Pass
02-D2-40c	Living/Kitchen	28	Fail	77	Marginal
02-D2-41	Bedroom	28	Fail	96	Pass
02-D2-42	Bedroom	15	Fail	75	Fail
03-D2-01c	Living/Kitchen	70	Pass	100	Pass
03-D2-02	Bedroom	27	Fail	100	Pass
03-D2-03	Bedroom	28	Fail	100	Pass
03-D2-04	Bedroom	78	Pass	100	Pass
03-D2-05	Bedroom	100	Pass	100	Pass
03-D2-06c	Living/Kitchen	37	Fail	97	Pass
03-D2-07	Bedroom	52	Pass	100	Pass
03-D2-08	Bedroom	24	Fail	100	Pass
03-D2-09c	Living/Kitchen	46	Marginal	100	Pass
03-D2-10	Bedroom	64	Pass	100	Pass
03-D2-11c	Living/Kitchen	68	Pass	100	Pass
03-D2-12	Bedroom	57	Pass	100	Pass
03-D2-13	Bedroom	97	Pass	100	Pass
03-D2-14	Bedroom	37	Fail	100	Pass
03-D2-15c	Living/Kitchen	75	Pass	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
03-D2-16	Bedroom	69	Pass	100	Pass
03-D2-17c	Living/Kitchen	71	Pass	100	Pass
03-D2-18	Bedroom	76	Pass	100	Pass
03-D2-19c	Living/Kitchen	72	Pass	100	Pass
03-D2-20	Bedroom	74	Pass	100	Pass
03-D2-21c	Living/Kitchen	50	Pass	100	Pass
03-D2-22	Bedroom	49	Marginal	100	Pass
03-D2-23	Bedroom	68	Pass	100	Pass
03-D2-24	Bedroom	68	Pass	100	Pass
03-D2-25	Bedroom	96	Pass	100	Pass
03-D2-26	Bedroom	91	Pass	100	Pass
03-D2-27c	Living/Kitchen	60	Pass	100	Pass
03-D2-28c	Living/Kitchen	38	Fail	100	Pass
03-D2-29	Bedroom	35	Fail	100	Pass
03-D2-30	Bedroom	36	Fail	100	Pass
03-D2-31c	Living/Kitchen	59	Pass	100	Pass
03-D2-32	Bedroom	47	Marginal	100	Pass
03-D2-33c	Living/Kitchen	82	Pass	100	Pass
03-D2-34	Bedroom	63	Pass	100	Pass
03-D2-35	Bedroom	61	Pass	100	Pass
03-D2-36c	Living/Kitchen	75	Pass	100	Pass
03-D2-37	Bedroom	36	Fail	100	Pass
03-D2-38c	Living/Kitchen	53	Pass	100	Pass
03-D2-39c	Living/Kitchen	52	Pass	100	Pass
03-D2-40c	Living/Kitchen	34	Fail	90	Marginal
03-D2-41	Bedroom	32	Fail	100	Pass
03-D2-42	Bedroom	18	Fail	89	Marginal
04-D2-01c	Living/Kitchen	77	Pass	100	Pass
04-D2-02	Bedroom	32	Fail	100	Pass
04-D2-03	Bedroom	30	Fail	100	Pass
04-D2-04	Bedroom	96	Pass	100	Pass
04-D2-05	Bedroom	100	Pass	100	Pass
04-D2-06c	Living/Kitchen	38	Fail	98	Pass
04-D2-07	Bedroom	48	Marginal	100	Pass
04-D2-08	Bedroom	24	Fail	100	Pass
04-D2-09c	Living/Kitchen	47	Marginal	100	Pass
04-D2-10	Bedroom	66	Pass	100	Pass
04-D2-11c	Living/Kitchen	72	Pass	100	Pass
04-D2-12	Bedroom	60	Pass	100	Pass
04-D2-13	Bedroom	100	Pass	100	Pass
04-D2-14	Bedroom	42	Marginal	100	Pass
04-D2-15c	Living/Kitchen	80	Pass	100	Pass
04-D2-16	Bedroom	73	Pass	100	Pass
04-D2-17c	Living/Kitchen	71	Pass	100	Pass
04-D2-18	Bedroom	76	Pass	100	Pass
04-D2-19c	Living/Kitchen	71	Pass	100	Pass
04-D2-20	Bedroom	76	Pass	100	Pass
04-D2-21c	Living/Kitchen	53	Pass	100	Pass
04-D2-22	Bedroom	47	Marginal	100	Pass
04-D2-23	Bedroom	67	Pass	100	Pass
04-D2-24	Bedroom	73	Pass	100	Pass
04-D2-25	Bedroom	96	Pass	100	Pass
04-D2-26	Bedroom	92	Pass	100	Pass
04-D2-27c	Living/Kitchen	59	Pass	100	Pass
04-D2-28c	Living/Kitchen	42	Marginal	100	Pass
04-D2-29	Bedroom	38	Fail	100	Pass
04-D2-30	Bedroom	39	Fail	100	Pass

NA.2 Minimum daylight provision

For all habitable rooms

Median External Diffuse Illuminance **14,900** lx

>50 % of the points on a reference plane to exceed

Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
04-D2-31c	Living/Kitchen	64	Pass	100	Pass
04-D2-32	Bedroom	51	Pass	100	Pass
04-D2-33c	Living/Kitchen	87	Pass	100	Pass
04-D2-34	Bedroom	66	Pass	100	Pass
04-D2-35	Bedroom	65	Pass	100	Pass
04-D2-36c	Living/Kitchen	78	Pass	100	Pass
04-D2-37	Bedroom	42	Marginal	100	Pass
04-D2-38c	Living/Kitchen	58	Pass	100	Pass
04-D2-39c	Living/Kitchen	59	Pass	100	Pass
04-D2-40c	Living/Kitchen	40	Marginal	99	Pass
04-D2-41	Bedroom	41	Marginal	100	Pass
04-D2-42	Bedroom	24	Fail	100	Pass
05-D2-01c	Living/Kitchen	84	Pass	100	Pass
05-D2-02	Bedroom	35	Fail	100	Pass
05-D2-03	Bedroom	36	Fail	100	Pass
05-D2-04	Bedroom	96	Pass	100	Pass
05-D2-05	Bedroom	100	Pass	100	Pass
05-D2-06c	Living/Kitchen	40	Marginal	100	Pass
05-D2-07	Bedroom	48	Marginal	100	Pass
05-D2-08	Bedroom	49	Marginal	100	Pass
05-D2-09c	Living/Kitchen	59	Pass	100	Pass
05-D2-10	Bedroom	72	Pass	100	Pass
05-D2-11c	Living/Kitchen	80	Pass	100	Pass
05-D2-12	Bedroom	63	Pass	100	Pass
05-D2-13	Bedroom	100	Pass	100	Pass
05-D2-14	Bedroom	43	Marginal	100	Pass
05-D2-15c	Living/Kitchen	89	Pass	100	Pass
05-D2-16	Bedroom	75	Pass	100	Pass
05-D2-17c	Living/Kitchen	86	Pass	100	Pass
05-D2-18	Bedroom	77	Pass	100	Pass
05-D2-19c	Living/Kitchen	86	Pass	100	Pass
05-D2-20	Bedroom	80	Pass	100	Pass
05-D2-21c	Living/Kitchen	59	Pass	100	Pass
05-D2-22	Bedroom	62	Pass	100	Pass
05-D2-23	Bedroom	67	Pass	100	Pass
05-D2-24	Bedroom	64	Pass	100	Pass
05-D2-25	Bedroom	96	Pass	100	Pass
05-D2-26	Bedroom	92	Pass	100	Pass
05-D2-27c	Living/Kitchen	83	Pass	100	Pass
05-D2-28c	Living/Kitchen	45	Marginal	100	Pass
05-D2-29	Bedroom	69	Pass	100	Pass
05-D2-30	Bedroom	72	Pass	100	Pass
05-D2-31c	Living/Kitchen	78	Pass	100	Pass
05-D2-32	Bedroom	61	Pass	100	Pass
05-D2-33c	Living/Kitchen	97	Pass	100	Pass
05-D2-34	Bedroom	69	Pass	100	Pass
05-D2-35	Bedroom	71	Pass	100	Pass
05-D2-36c	Living/Kitchen	95	Pass	100	Pass
05-D2-37	Bedroom	48	Marginal	100	Pass

NA.2 Minimum daylight provision					
				For all habitable rooms	
Median External Diffuse Illuminance		14,900	lx		
>50 % of the points on a reference plane to exceed					
Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%
05-D2-38c	Living/Kitchen	75	Pass	100	Pass
05-D2-39c	Living/Kitchen	99	Pass	100	Pass
05-D2-40c	Living/Kitchen	56	Pass	100	Pass
05-D2-41	Bedroom	55	Pass	100	Pass
05-D2-42	Bedroom	36	Fail	100	Pass
		Count	226	Count	226
		Pass	139	Pass	214
		Pass Rate 300lx/50%	62%	Pass Rate 100lx/95%	95%
		Marginal	32	Marginal	8
		Pass Margina	76%	Pass Margina	98%

NA.2 Minimum daylight provision					
				For all habitable rooms	
Median External Diffuse Illuminance		14,900	lx		
>50 % of the points on a reference plane to exceed					
Ref	Type	Percentage within 300lx	EN17037 Check @ 50%	Percentage within 100lx	EN17037 Check @ 95%

Summary – Light Distribution all habitable rooms for all blocks.

A summary for pass results for all blocks is detailed below.
And compared with the analysis from Light Distribution – Target Illuminance (Annex NA)

	Annex NA E_T % Pass			Non-Annex 300lx @ 50%			Non-Annex 100lx @ 95%	
	BRE v3	Incl Marginal			Incl Marginal			Incl Marginal
v3	Pass %	Pass %		Pass %	Pass %		Pass %	Pass %
AB	97%	99%	**AB**	54%	74%	**AB**	91%	98%
C	96%	99%	**C**	56%	70%	**C**	85%	91%
D1	98%	100%	**D1**	38%	77%	**D1**	85%	96%
D2	98%	100%	**D2**	62%	123%	**D2**	95%	98%
Total	**97%**	99%	**Total**	**54%**	83%	**Total**	**90%**	97%

It is our opinion that this concurs with the UK committees' position that the non-annex targets are too stringent for use for residential buildings and that (in the absence of an Irish National Annex) that the targets provided in the UK Annex NA are reasonable to apply to residential housing in this case.

The above is further endorsed in the Departments "Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities" July 2023 and clause 6.6 which directly references the UK National Annex BS EN17037:2019 as does the "Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities" 2024.

This is a supplementary analysis which does not reflect the performance of the proposed design in temperate climates such as Ireland / UK. There should be no expectation that the design would comply with these requirements.

The NA-annex results in the main body of this report reflect design in such conditions. This is as defined by the UK committee and directly referenced in Irish Department publications such "Sustainable Urban Housing: Design Standards for New Apartments, Guidelines for Planning Authorities" July 2023, "Sustainable and Compact Settlements: Guidelines for Planning Authorities 2024" and many Development Plans.