

21044 Greystar Dalguise House
Monkstown Daylight Sunlight and
Shadowing Assessment Planning
Issue 02



La Vallee House
Upper Dargle Road
Bray, Co. Wicklow
A98 W2H9
Ireland

p: +353 (0) 1 204 0005
e: info@metec.ie
w: www.metec.ie

DAYLIGHT SUNLIGHT AND SHADOWING ASSESSMENT

for the

DALGUISE HOUSE DEVELOPMENT

at

**MONKSTOWN
CO. DUBLIN**

for

GEDV MONKSTOWN OWNER LIMITED



Reshaping the way you think
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issue no.	issue date	pages	issued for	by	approvals	
					checked	approved
02	06/06/2023	246	Planning	ST	EL/SC	MR
01	09/11/2022	245	Planning	ST	EL/SC	MR

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EXECUTIVE SUMMARY

METEC Consulting Engineers have been instructed by our client, GEDV Monkstown Owner Limited, to carry out an assessment of the Daylight, Sunlight and Shadowing for the proposed Dalguise House development. The scope of the assessment was to determine:

- The impact, if any, that the proposed development would have on the existing surrounding properties in terms of Daylight, Sunlight and Shadowing;
- The Daylight and Sunlight levels that would be achieved by the proposed development.

Overall Methodology

The assessment of the proposed development was prepared using the methodologies set out in the British Standard: Lighting for Buildings – Part 2: Code for Practice for Daylighting, BRE BR209, 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice', Third Edition 2022, by P. J. Littlefair and the Design Standards for New Apartments - Guidelines for Planning Authorities (March 2020).

BRE Guidelines and Advisory Note

The numerical guidelines given in these documents are purely advisory. BRE BR209 states that:

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

Overall Conclusion

It is our opinion that, after carrying out a comprehensive daylight, sunlight, and shadowing assessment of the proposed development using simulation modelling and comparing results achieved against the BRE Guidelines, this development achieves excellent results.

Executive Summary Results Table

Design Parameters which have been reviewed as part of this study	Methodology	Recommended Guidelines (note these are not mandatory values)	Compliance achieved in line with BRE Guide BS EN 17037
Daylight Assessment on Neighbouring Buildings – Vertical Sky Component (VSC) (Referring to nearby Residential Properties)	<p>IES VE Radiance Daylight Simulation</p>	BRE Guide [2.2] <ul style="list-style-type: none"> VSC \geq 27% (Or where that is not achieved) \leq 20% reduction in VSC compared to its previous value before the proposed development (as simulated) 	<p>The VSC results demonstrate that the proposed development will not result in any loss of light received by neighbouring properties beyond Minor adverse impacts as identified in Appendix I of the BRE Guidelines.</p> <p>Refer to Section 8.0 of this Report for a more in-depth commentary.</p> <p>Refer to Appendix E of this report for simulation result images.</p>
Daylighting (Referring to the Proposed Development)	<p>IES VE Radiance Daylight Simulation</p>	BRE Guide [2.1.10] <ul style="list-style-type: none"> 100 lux for Bedrooms 150 lux for Living Rooms 200 lux for Kitchens 	<p>Of the 1191 rooms that were assessed for daylight, 1159 achieved the BRE daylight guidelines resulting in a 97% passing rate for the entire development.</p> <p>Summaries and for each block are available in Appendix A.</p> <p>Daylighting images for each room are available in Appendix B.</p> <p>Model inputs for this assessment are available in Appendix C.</p> <p>Compensatory measures for each space not meeting the BRE Guidelines are available in Appendix D.</p> <p>Refer to Section 9.0 of this Report for a more in-depth commentary.</p>
Sunlight Assessment Neighbouring Buildings – Annual Probable Sunlight Hours (APSH)	<p>IES VE SunCast Simulation</p>	BRE Guide [3.2] <ul style="list-style-type: none"> Receives more than 25% of annual probable sunlight hours, and more than 5% of annual probable sunlight hours between 21st September and 21st March; (Or where that is not achieved) 	<p>156 of the 197 windows assessed for APSH achieved the BRE Guideline recommended values for safeguarding access to sunlight in existing dwellings resulting in a 79% passing rate. 178 of the 197 windows assessed for APSH in the winter months achieved the BRE Guideline recommended values for</p>

Design Parameters which have been reviewed as part of this study	Methodology	Recommended Guidelines (note these are not mandatory values)	Compliance achieved in line with BRE Guide BS EN 17037
(Referring to nearby Residential Properties)		<ul style="list-style-type: none"> • $\leq 20\%$ reduction in APSH compared to its previous value before the proposed development (as simulated) • Has a reduction in sunlight received over the whole year less than 4% of annual probable sunlight hours. 	<p>safeguarding access to sunlight in existing dwellings resulting in a 90% passing rate.</p> <p>This demonstrates that the proposed development will not result in any loss of light received by the nearby residential developments beyond Minor adverse impacts as identified in Appendix I of the BRE Guidelines.</p> <p>Refer to Section 10.0 of this Report for a more in-depth commentary and Appendix F for detailed simulation results.</p>
<p>Sunlight Assessment on <u>Amenity Space</u> – Sunlight Hours</p> <p>(Referring to nearby Residential Properties)</p>	IES VE SunCast Simulation	<p>BRE Guide [3.3.17]</p> <p>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 21st March.</p> <p>If as a result of a new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on March 21st is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.</p>	<p>64 of the 75 assessed neighbouring amenity areas achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of 85%.</p> <p>Appendix I of the BRE Guidelines suggests that daylight/sunlight impacts can be assessed as minor, moderate or major adverse, with minor adverse impact defined as the loss of light to only a limited area of open space.</p> <p>While some individual amenity areas experience moderate to major adverse impact, the overall loss of sunlight to all assessed open spaces with the proposed development in place is that of a limited area, and as such, an overall classification of minor adverse impact is appropriate.</p> <p>Refer to Section 11.0 of this Report for a more in-depth commentary.</p>
Sunlight Assessment on <u>Proposed Buildings</u>	IES VE SunCast Simulation	<p>BRE Guide [3.1.15]</p> <p>The centre of at least one window to a main living room</p>	761 of the 901 assessed proposed main windows achieve the BRE

Design Parameters which have been reviewed as part of this study	Methodology	Recommended Guidelines (note these are not mandatory values)	Compliance achieved in line with BRE Guide BS EN 17037
<p>– Annual Probable Sunlight Hours (APSH)</p> <p>(Referring to Proposed Development)</p>		<p>facing within 90° due south receives at least 1.5 hours of on 21st March.</p>	<p>Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of 84%.</p> <p>696 of the 749 assessed <u>Non-North facing</u> proposed main windows achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of 93%.</p> <p>Compensatory measures for each space not meeting the BRE Guidelines are available in Appendix D.</p> <p>Refer to Section 12.0 of this Report for a more in-depth commentary.</p>
<p>Sunlight Assessment on <u>Amenity Space</u> – Sunlight Hours</p> <p>(Referring to Proposed Development)</p>	<p>IES VE SunCast Simulation</p>	<p>BRE Guide [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 21st March.</p>	<p>26 of the 26 assessed areas are in line with the BRE guidelines and achieve excellent levels of sunlight.</p> <p>Refer to Section 13.0 of this Report for a more in-depth commentary.</p>
<p>Solar Shading</p> <p>(Referring to Entire Assessment Area)</p>	<p>IES VE SunCast Simulation</p>	<p>BRE Guide [3.3.17] Where a large building is proposed which may affect a number of gardens or open spaces it is often illustrative to plot a shadow plan showing the location of shadows at different times of the day and year.</p>	<p>Existing and proposed solar shading images have been presented for information purposes only to illustrate the shadows that will occur on March 21st, June 21st and December 21st.</p> <p>Refer to Section 14.0 of this Report for a more in-depth commentary and Appendix G for images.</p>

1.0 INTRODUCTION

METEC Consulting Engineers have been instructed by our client, GEDV Monkstown Owner Limited, to carry out an assessment of the Daylight, Sunlight and Shadowing for the proposed Dalguise House development.

The authors of this report, Shelby Thomas, Evan Leung and Scott Caldwell, have a combined experience of over 20 years in sustainable building design and construction, with degrees in Building Services and Mechanical Engineering. They possess an extensive knowledge of the BR 209 and EN 17037, a high proficiency in utilizing daylight modelling software, and have undertaken the Daylight, Sunlight, and Shadowing assessments of several commercial and domestic developments that have been granted planning permission.

The scope of the assessment was to determine:

- The impact, if any, that the proposed development would have on the existing surrounding properties in terms of Daylight, Sunlight and Shadowing;
- The Daylight and Sunlight levels that would be achieved by the proposed development.

Daylight and Sunlight calculations have been carried out in accordance with BRE's 'Site Layout Planning for Sunlight and Daylight: A Guide to Good Practice' (2022) (herein referred to as the "BRE Guide") by P J Littlefair, which is accepted as good practice by Planning Authorities. The Design Standards for New Apartments - Guidelines for Planning Authorities (December 2020) were also considered as part of this study.

The BRE Guide gives advice on site layout to achieve provision of daylight and sunlight both within buildings, and in the open spaces between them. In general, it aims to aid designers in considering the relationship between new and existing buildings to ensure that each retains the potential to achieve good daylighting and sunlight levels.

The BRE Guide states in the introduction that: "*The guide is intended for building designers and their clients, consultants and planning officials. **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. In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.*"

It is therefore important that the guidelines that exist in relation to daylight and sunlight are read in the correct context and are not viewed as mandatory requirements for all dwellings.

2.0 SITE PLAN



Figure 2.0.1 – Proposed Development Site Layout Plan

3.0 DEFINITIONS

The technical definitions that are referred to in this report are explained below.

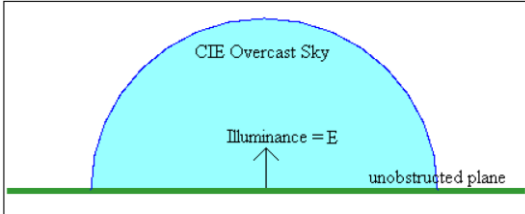
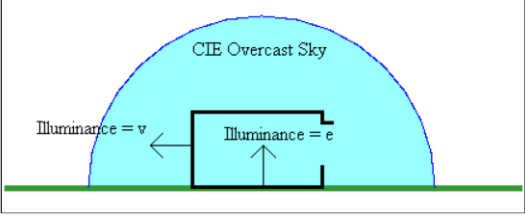
BRE	Building Research Establishment.
Illuminance	A measure of the amount of light falling on a surface, usually measured in lux.
Climate Based Daylight Modelling (CBDM)	The prediction of various radiant or luminous quantities using daylight conditions derived from standard meteorological datasets.
Vertical Sky Component (VSC)	<p>The Vertical Sky Component (VSC) is the "Ratio of that part of illuminance, at a point on a given vertical plane that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. Usually the "given vertical plane" is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings.</p>  <p>E= illuminance on an unobstructed plane.</p>  <p>e= illuminance at point in interior</p> <p>Sky Component = e/E (often expressed as a percentage) Vertical Sky Component = v/E</p>
CIE Standard Overcast Sky	<p>A completely overcast sky for which the ratio of its luminance L_y at an angle of elevation y above the horizontal to the luminance L_z at the zenith is given by;</p> $L_y = L_z \frac{(1 + 2 \sin y)}{3}$ <p>The CIE standard overcast sky is darkest at the horizon and brightest at the zenith (vertically overhead).</p>
Annual Probable Sunlight Hours	The long-term average of the total number of hours during a year in which direct sunlight reaches the unobstructed ground (when clouds are taken into account).

Table 3.0.1 – Definitions of key terms referenced in this study

4.0 GUIDANCE DOCUMENTS REFERENCED DURING THIS STUDY

This Daylight, Sunlight and Shadowing Assessment, has been carried out in accordance with the methodology outlined in the BRE Guide.


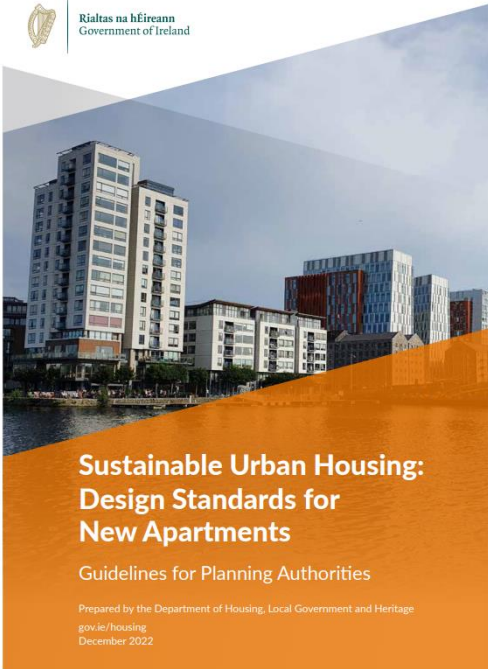
	<p>This document gives advice on site layout planning to achieve good sun lighting and daylighting, both within buildings and in the open spaces between them. This authoritative document is widely used to provide advice during the planning and design stages of building development in the UK and Ireland.</p> <p>Guidance is given on site layout for good sun lighting and daylighting; safeguarding of daylight and sunlight within existing buildings nearby; and the protection of daylighting of adjoining land for future development.</p>
	<p>Design Standards for New Apartments - Guidelines for Planning Authorities (December 2022).</p>

Table 4.0.1 – Guidance Documents Referenced for this Study

5.0 ASSESSMENT METHODOLOGY

This Daylight, Sunlight and Shadowing Assessment was carried out using the simulation software IES VE. The simulation results were then compared against metrics referenced in the BRE Guide. It is important to note that these guidelines do not contain mandatory requirements and they should not be seen as an instrument of planning policy.

Per the BRE Guide "Trees should be taken into account 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". Thus, for the assessment of the *proposed development*, existing trees *which are to be retained* have been modelled as shading with varying transmittance levels depending on tree type per landscaping and arboricultural proposals so that their impacts in relation to daylight and sunlight to the proposed development are accurately captured. [Conversely, per BRE Guidelines, trees are typically *not to be included* in the assessment of nearby *adjacent buildings*.]

The design process for the proposed development was that of an iterative nature with improvements to the scheme originating from feedback provided to the design team from a variety of studies. This collaborative approach formed an important aspect of the design rational and the outcome of the proposed development is that of a multi-disciplinary approach.

Daylighting

BRE guidelines provide two different methods of assessing daylighting provision to interior spaces of commercial and residential buildings.

Method 1: This method outlines the calculations for determining daylight factors on a reference plane, including criteria for both target and minimum daylight factors depending on the location and orientation of glazing. This assessment is carried out under CIE overcast sky conditions.

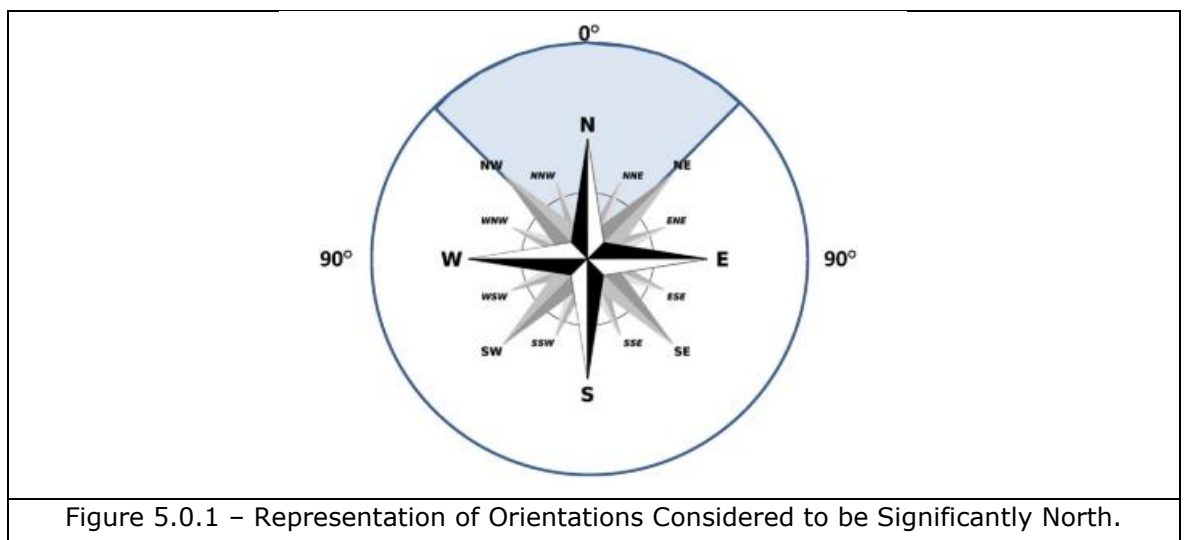
Method 2: This method outlines the calculations for determining the illuminance levels on a reference plane, including criteria for both target and minimum daylight factors. This method also utilizes location specific climatic data via a weather file and hourly time steps spanning the length of an entire year.

Assessment method 2 was selected for this analysis as it offers significantly more accurate results due to its utilization of Climate Based Daylight Modelling (CBDM), as described above. These results are presented below.

Annual Probable Sunlight Hours (APSH)

The BRE Guide recognises that good sun light availability is unlikely to be met for rooms that face significantly north of due east or west. Paragraph 3.1.11 of the BRE Guide states that if a room faces significantly north of due east or west it is unlikely to meet the recommended sunlight levels. These orientations were analysed and included for information purposes, however when interpreting the results, it should be recognised that generally good sun light availability is unlikely to be met for these orientations.

It is also worth noting that a key consideration of the design of this development in regards to block orientation and unit layout was to minimize the number of dwellings with main living room windows facing significantly north.



6.0 SIMULATION SOFTWARE DESCRIPTION

IES VIRTUAL ENVIRONMENT

IES Virtual Environment is the world's leading building performance analysis tool. The software provides an in-depth suite of integrated analysis tools which allow an integrated design approach and highly detailed results.

IES VIRTUAL ENVIRONMENT - RADIANCE

Radiance is a software package developed by the Lighting Systems Research group at the Lawrence Berkeley Laboratory in California, USA. Radiance was developed as a research tool for predicting the distribution of visible radiation in illuminated spaces.

IES VIRTUAL ENVIRONMENT - SUNCAST

SunCast enables engineers to perform shading and solar insolation analysis studies and can generate images and animations. SunCast generates shadows and internal solar insolation from any sun position defined by date, time, orientation, site latitude and longitude. SunCast can be used at any stage of the design process from a model created by the IES Model Builder.

7.0 SIMULATION MODEL IMAGES

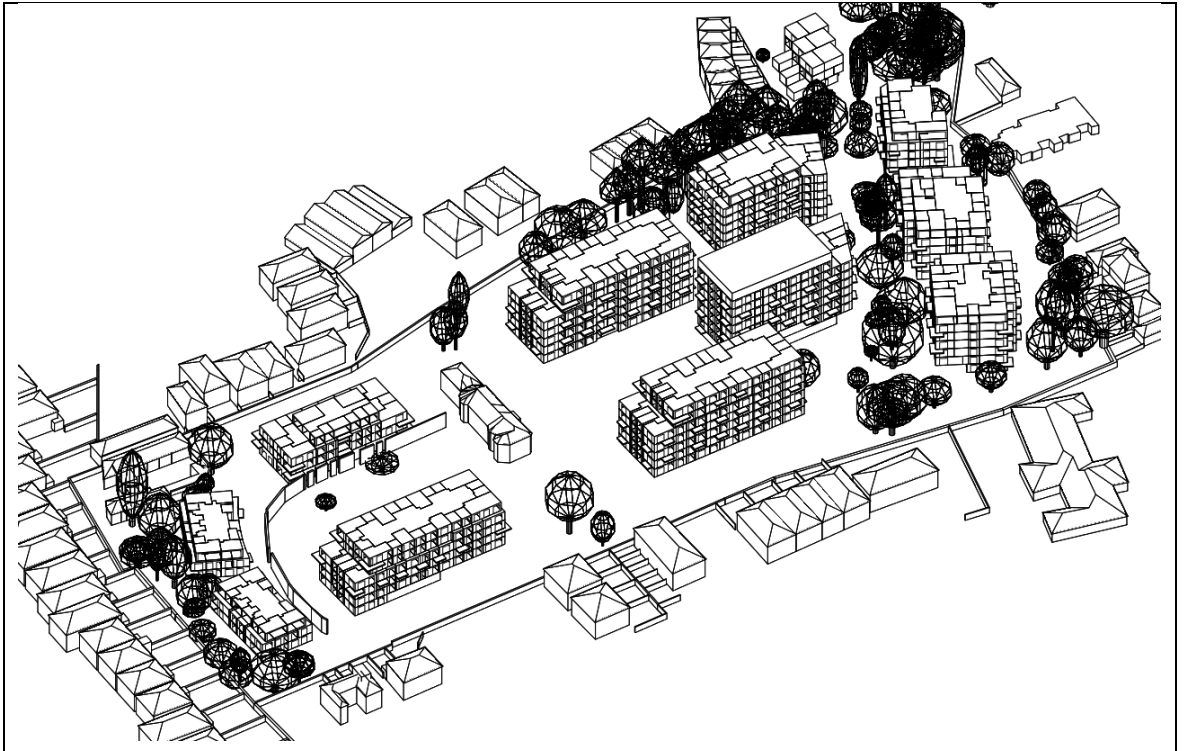


Figure 7.0.1 View from the South East.

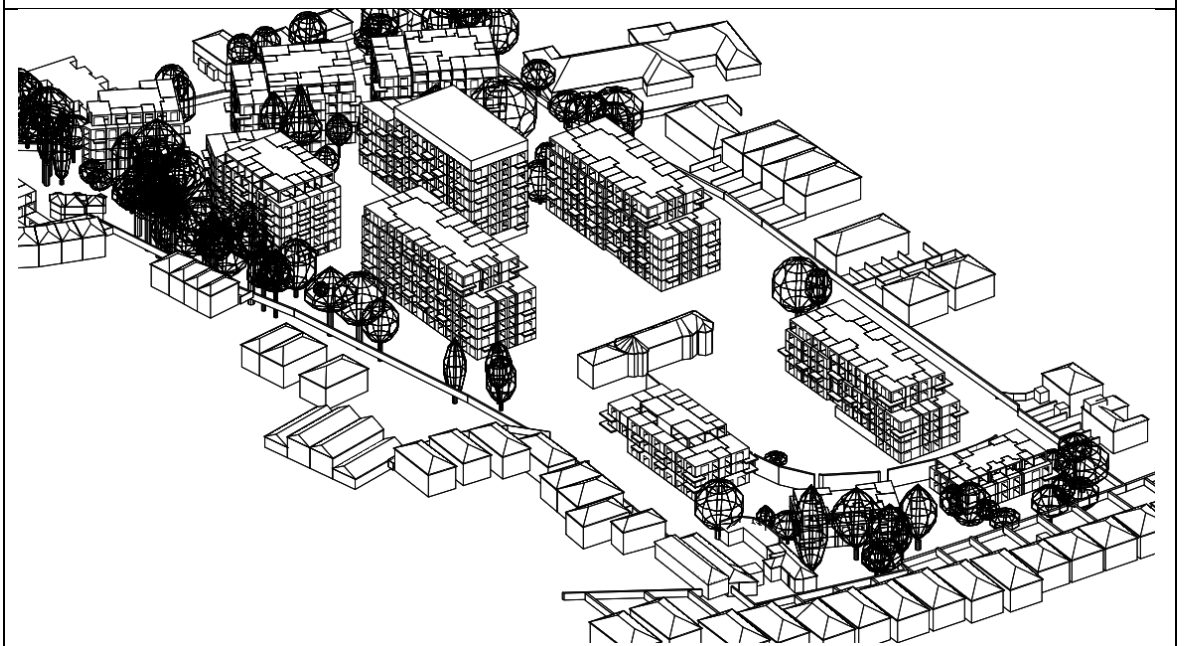


Figure 7.0.2 View from the North West.

8.0 DAYLIGHT ASSESSMENT – NEIGHBOURING PROPERTIES

The guidelines given within the BRE Guide are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

To analyse the effects of the proposed development on the adjacent dwellings in the immediate surrounding area of the Dalguise House development, a Vertical Sky Component (VSC) simulation was carried out using the IES Radiance software package. For the VSC definition refer to Section 3.0 of this report. The VSC was calculated with the proposed development in place using a simulation model. In accordance with Section 2.2 of the BRE Guide, where a VSC of 27% or greater is achieved, “enough skylight should still be reaching the existing building” and therefore daylighting will not be significantly affected. The BRE Methodology is summarised below.

Result images for this analysis are available in **Appendix E**.

Methodology (as referenced in Section 2.2 of the BRE Guide)

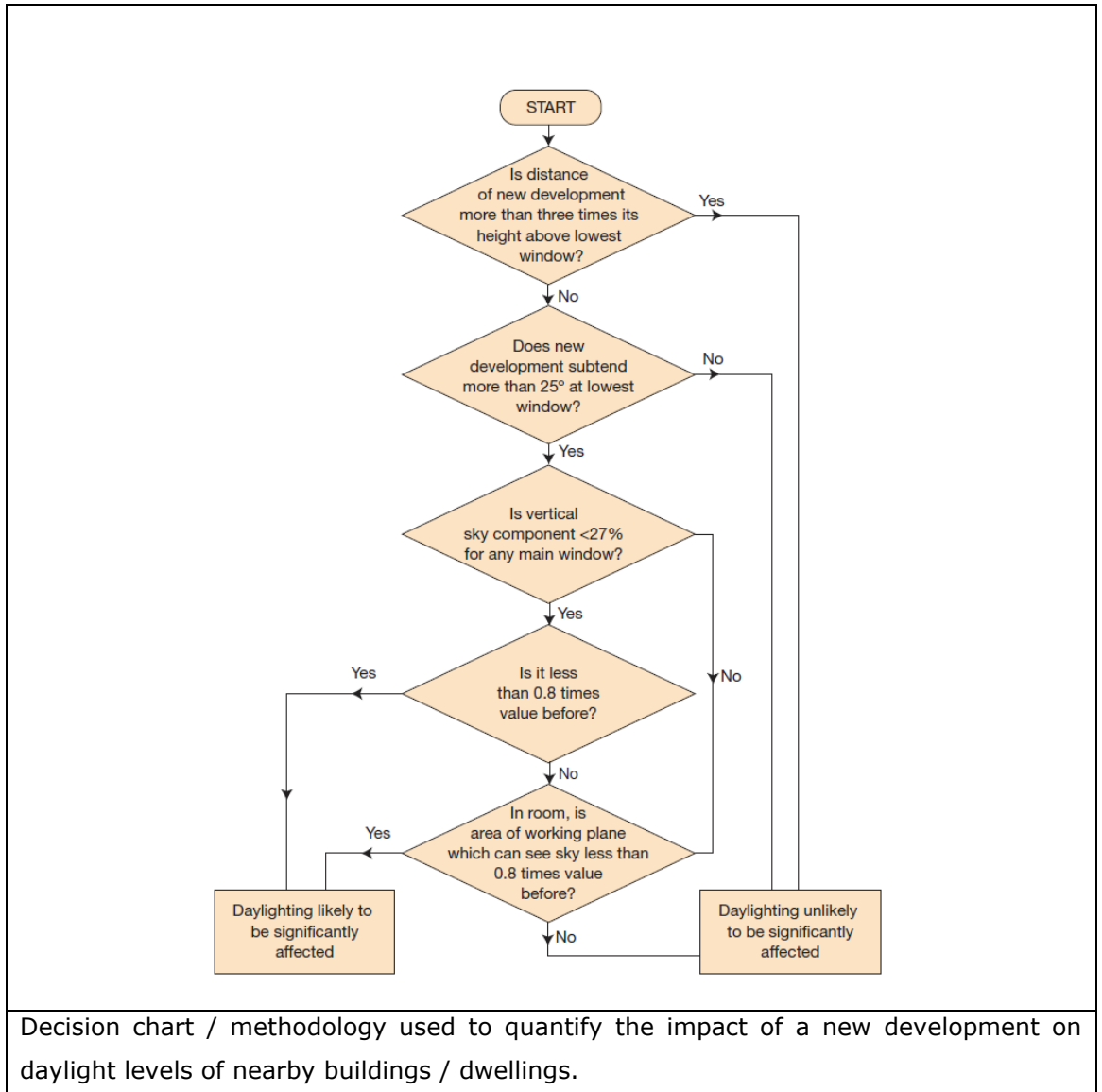


Figure 8.0.1 – BRE Guide VSC Decision Chart

The VSC has been calculated for all main windows of surrounding dwellings which face the proposed development. Figure 8.0.2 below identifies the dwellings that were analysed as part of this assessment. The results of this VSC analysis are presented overleaf.



Figure 8.0.2 – Assessed Surrounding Dwellings

Dwelling Reference	Dwelling Address
1	9 Drayton Cl, Mountashton, Monkstown, Co. Dublin
2	77 Monkstown Rd, Mountashton, Monkstown, Co. Dublin
3	Glenville Lodge, Monkstown Rd, Mountashton, Monkstown, Co. Dublin
4	13 Heathfield, Mountashton, Monkstown, Co. Dublin
5	12Heathfield, Mountashton, Monkstown, Co. Dublin
6	11 Heathfield, Mountashton, Monkstown, Co. Dublin
7	10 Heathfield, Mountashton, Monkstown, Co. Dublin
8	8 Heathfield, Mountashton, Monkstown, Co. Dublin
9	7 Heathfield, Mountashton, Monkstown, Co. Dublin
10	6 Heathfield, Mountashton, Monkstown, Co. Dublin
11	111 Richmond Park, Mountashton, Monkstown, Co. Dublin
12	18A Richmond Park, Mountashton, Monkstown, Co. Dublin
13	19 Richmond Park, Mountashton, Monkstown, Co. Dublin
14	20 Richmond Park, Mountashton, Monkstown, Co. Dublin
15	21 Richmond Park, Mountashton, Monkstown, Co. Dublin
16	22 Richmond Park, Mountashton, Monkstown, Co. Dublin
17	28 Richmond Park, Mountashton, Monkstown, Co. Dublin
18	29 Richmond Park, Mountashton, Monkstown, Co. Dublin
19	33 Richmond Park, Mountashton, Monkstown, Co. Dublin
20	34 Richmond Park, Mountashton, Monkstown, Co. Dublin
21	35 Richmond Park, Mountashton, Monkstown, Co. Dublin
22	36 Richmond Park, Mountashton, Monkstown, Co. Dublin
23	37 Richmond Park, Mountashton, Monkstown, Co. Dublin
24	38 Richmond Park, Mountashton, Monkstown, Co. Dublin
25	46 Brook Ct, Mountashton, Monkstown, Co. Dublin
26	45 Brook Ct, Mountashton, Monkstown, Co. Dublin
27	44 Brook Ct, Mountashton, Monkstown, Co. Dublin
28	43 Brook Ct, Mountashton, Monkstown, Co. Dublin
29	42 Brook Ct, Mountashton, Monkstown, Co. Dublin
30	41 Brook Ct, Mountashton, Monkstown, Co. Dublin
31	40 Brook Ct, Mountashton, Monkstown, Co. Dublin
32	39 Brook Ct, Mountashton, Monkstown, Co. Dublin
33	38 Brook Ct, Mountashton, Monkstown, Co. Dublin
34	37 Brook Ct, Mountashton, Monkstown, Co. Dublin
35	36 Brook Ct, Mountashton, Monkstown, Co. Dublin
36	35 Brook Ct, Mountashton, Monkstown, Co. Dublin
37	34 Brook Ct, Mountashton, Monkstown, Co. Dublin

38	33 Brook Ct, Mountashton, Monkstown, Co. Dublin
39	32 Brook Ct, Mountashton, Monkstown, Co. Dublin
40	31 Brook Ct, Mountashton, Monkstown, Co. Dublin
41	30 Brook Ct, Mountashton, Monkstown, Co. Dublin
42	The Coach House, Monkstown Rd, Mountashton, Monkstown, Co. Dublin
43	10 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
44	9 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
45	8 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
46	7 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
47	6 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
48	5 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
49	4 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
50	3 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
51	7 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
52	6 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
53	5 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
54	4 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
55	3 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
56	2 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
57	1 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
58	34 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
59	33 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
60	32 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
61	31 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
62	30 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
63	29 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
64	28 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
65	27 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
66	26 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
67	25 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
68	24 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
69	23 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
70	22 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin

Table 8.0.1 Assessment Dwelling Reference Addresses

Simulation Results

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
1	1	37.22	29.01	Yes	
2	N/A	N/A	N/A	N/A	See Note
3	N/A	N/A	N/A	N/A	See Note
4	1	37.45	24.50	No	Marginally below guideline
5	1	38.20	28.18	Yes	
	2	37.82	28.47	Yes	
6	1	37.73	28.45	Yes	
	2	33.87	22.44	No	Marginally below guideline
7	1	37.91	26.26	No	Marginally below guideline
	2	37.64	26.77	No	Marginally below guideline
8	1	37.78	30.80	Yes	
	2	38.00	32.19	Yes	
9	1	37.83	28.86	Yes	
10	1	37.16	30.30	Yes	
11	1	37.90	27.41	Yes	
	2	36.48	22.56	No	Marginally below guideline
	3	35.63	29.96	Yes	
12	1	38.88	29.62	Yes	
	2	37.80	26.72	No	Marginally below guideline
	3	38.54	27.70	Yes	
	4	32.81	24.07	No	Marginally below guideline
13	1	39.22	29.26	Yes	
	2	39.17	24.40	No	Marginally below guideline
14	1	38.91	29.37	Yes	
	2	38.86	27.46	Yes	
15	1	38.53	29.71	Yes	
	2	38.44	27.92	Yes	
16	1	38.41	30.87	Yes	
	2	38.22	29.24	Yes	
17	1	39.40	33.46	Yes	
	2	29.11	27.19	Yes	

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
18	1	39.14	32.93	Yes	
	2	30.08	26.67	Yes	
19	1	38.15	32.30	Yes	
	2	38.18	33.10	Yes	
	3	38.07	33.45	Yes	
	4	38.10	33.70	Yes	
20	1	33.47	28.96	Yes	
	2	26.56	24.10	Yes	
	3	23.31	23.34	Yes	
	4	32.06	30.40	Yes	
21	1	39.26	37.18	Yes	
	2	37.89	34.26	Yes	
	3	38.07	34.23	Yes	
	4	38.41	34.06	Yes	
	5	38.24	34.47	Yes	
22	1	32.16	29.53	Yes	
	2	26.59	24.48	Yes	
	3	33.05	29.81	Yes	
	4	28.91	26.17	Yes	
23	1	32.97	29.80	Yes	
24	1	35.95	31.99	Yes	
25	1	38.70	38.21	Yes	
	2	38.84	38.03	Yes	
	3	38.76	38.27	Yes	
	4	38.68	38.21	Yes	
	5	31.12	30.60	Yes	
	6	34.79	34.88	Yes	
26	1	38.70	37.46	Yes	
	2	38.89	37.91	Yes	
	3	37.66	36.28	Yes	
	4	32.75	31.38	Yes	
	5	34.48	34.09	Yes	
27	1	38.39	37.48	Yes	
	2	38.14	37.43	Yes	
	3	36.40	35.00	Yes	
28	1	38.47	37.29	Yes	
	2	38.48	37.23	Yes	
	3	36.09	34.07	Yes	
	4	33.66	32.19	Yes	

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
29	1	38.38	36.80	Yes	
	2	38.39	36.25	Yes	
	3	34.43	32.06	Yes	
	4	35.31	31.93	Yes	
30	1	37.45	35.25	Yes	
	2	38.84	36.07	Yes	
	3	36.86	33.14	Yes	
	4	37.88	33.67	Yes	
31	1	35.31	33.28	Yes	
	2	37.30	35.37	Yes	
	3	34.41	31.43	Yes	
	4	30.11	27.83	Yes	
32	1	38.44	36.58	Yes	
	2	37.47	34.14	Yes	
	3	36.12	33.64	Yes	
	4	37.72	34.49	Yes	
	5	29.81	28.64	Yes	
	6	31.17	28.49	Yes	
33	1	38.05	36.02	Yes	
	2	36.71	34.57	Yes	
	3	29.45	28.21	Yes	
	4	34.55	32.77	Yes	
	5	29.90	28.84	Yes	
	6	29.73	27.68	Yes	
34	1	38.20	36.34	Yes	
	2	38.34	36.53	Yes	
	3	32.38	31.29	Yes	
	4	36.84	34.24	Yes	
	5	31.03	29.80	Yes	
	6	33.11	31.11	Yes	
35	1	38.21	36.60	Yes	
	2	36.19	35.02	Yes	
	3	37.29	35.40	Yes	
	4	23.16	22.38	Yes	
36	1	38.02	36.71	Yes	
	2	38.04	36.84	Yes	
	3	35.00	34.45	Yes	
	4	34.62	33.76	Yes	

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
37	1	37.88	36.52	Yes	
	2	34.54	33.69	Yes	
	3	36.07	34.89	Yes	
	4	19.95	19.94	Yes	
38	1	37.78	36.79	Yes	
	2	35.55	34.66	Yes	
	3	34.24	34.75	Yes	
	4	35.24	35.32	Yes	
	5	28.59	29.05	Yes	
	6	28.30	28.24	Yes	
39	1	36.48	36.00	Yes	
	2	34.09	33.28	Yes	
	3	32.90	33.04	Yes	
	4	32.96	33.15	Yes	
	5	25.42	25.43	Yes	
	6	24.95	25.39	Yes	
40	1	36.50	36.48	Yes	
	2	33.87	33.85	Yes	
	3	37.03	36.97	Yes	
41	1	37.70	37.72	Yes	
	2	37.97	37.83	Yes	
42	N/A	N/A	N/A	N/A	See Note
43	1	38.76	35.73	Yes	
	2	35.81	33.40	Yes	
44	1	36.28	33.24	Yes	
	2	32.20	28.18	Yes	
45	1	38.41	32.98	Yes	
	2	37.21	29.62	Yes	
46	1	38.31	31.91	Yes	
	2	36.73	27.75	Yes	
47	1	38.02	32.48	Yes	
	2	38.16	33.74	Yes	
	3	34.34	26.26	No	Marginally below guideline
	4	34.89	29.42	Yes	
48	1	37.98	35.92	Yes	
	2	38.56	36.26	Yes	
49	1	16.06	15.30	Yes	
	2	26.40	25.18	Yes	

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
50	1	16.25	16.40	Yes	
51	1	33.55	30.79	Yes	
	2	36.57	33.58	Yes	
52	1	38.39	35.48	Yes	
	2	38.33	35.29	Yes	
53	1	38.16	35.13	Yes	
	2	37.42	34.79	Yes	
54	1	33.28	30.85	Yes	
	2	29.14	27.71	Yes	
55	1	39.21	31.51	Yes	
	2	39.07	31.21	Yes	
	3	38.55	29.60	Yes	
56	1	39.21	29.76	Yes	
	2	39.31	29.85	Yes	
	3	39.37	29.57	Yes	
57	1	39.56	29.89	Yes	
	2	39.33	27.88	Yes	
	3	38.76	27.47	Yes	
	4	38.66	29.48	Yes	
	5	38.70	27.63	Yes	
58	1	39.43	28.11	Yes	Marginally below guideline
	2	37.63	25.63	No	
59	1	39.36	27.88	Yes	Marginally below guideline
	2	39.40	25.68	No	
60	1	39.36	27.88	Yes	Marginally below guideline
	2	39.46	25.38	No	
61	1	38.09	28.13	Yes	Marginally below guideline
	2	38.08	25.50	No	
62	1	38.38	27.70	Yes	Marginally below guideline
	2	38.54	25.48	No	
63	1	39.72	37.34	Yes	
	2	39.47	37.60	Yes	
64	1	39.49	37.93	Yes	
	2	39.32	37.79	Yes	
65	1	36.48	34.60	Yes	
	2	30.30	29.71	Yes	
66	1	30.10	29.13	Yes	

Dwelling Reference	Window Reference	VSC with Current Development (%)	VSC with Proposed Development (%)	Compliant with BRE Guideline for Safeguarding Daylight	Comments
67	1	39.32	37.67	Yes	
	2	39.50	38.06	Yes	
68	1	39.58	38.30	Yes	
	2	39.31	38.53	Yes	
69	1	29.62	29.28	Yes	
	2	31.74	31.58	Yes	
70	1	31.12	30.40	Yes	

Table 8.0.2 – VSC Results for Surrounding Assessment Dwellings

172 of the **187** windows assessed meet the BRE Guideline metrics for access to daylight for existing surrounding dwellings with a resulting VSC of $\geq 27\%$ or ≥ 0.8 times its existing value prior to the proposed development.

Note: There are 3 properties located at 77 Monkstown Rd (dwelling reference 02), Glenville Lodge Monkstown Rd (dwelling reference 03), and The Coach House Monkstown Rd (dwelling reference 35) which are adjacent to the proposed development but are not addressed in this analysis. The reasons for this are that they do not have any vertical windows facing the proposed development. Roof lights that could be potentially impacted are present on each of these dwellings, however, at this time, sloping and horizontal sky component analysis is not yet available through IES and as such we are unable to present results for these windows in regards to this analysis. Due to the nature of the windows having a direct view of the sky, it is a reasonable assumption that they will not experience a noticeable decrease in access to daylight. Additionally, APSH analysis was completed for these windows and these results are presented in Section 10.0 of this report.

It is worth noting that those spaces which do not meet the BRE criteria fall marginally below the guideline. Additionally, foliage present within the proposed developments boundary which provides significant shading in some instances has been *excluded from the simulation as it is not typically included in assessments of adjacent properties* per the BRE Guidelines. However, the Arboricultural Assessment enclosed with this Application has identified boundary trees and/or groups of trees which are of poor quality and should be removed irrespective of any further development on the basis of good estate management. Therefore, this may result in a smaller reduction of or even increase in daylight to some adjacent properties which is not able to be captured accurately using this specific BRE analysis method.

Appendix I of the BRE Guidelines suggests that daylight/sunlight impacts can be assessed as minor, moderate or major adverse. Where the loss of sunlight affects only a small number of windows and the loss of light is only marginally outside the guidelines, as is the case here with the proposed development in place, **a classification of minor adverse impact is appropriate.**

9.0 DAYLIGHT ASSESSMENT – PROPOSED DEVELOPMENT

Daylight Assessment

Per the BRE Guide “Trees should be taken into account 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”. Thus, for the assessment of the *proposed development*, existing trees *which are to be retained* have been modelled as shading with varying transmittance levels depending on tree type per landscaping and arboricultural proposals so that their impacts in relation to daylight and sunlight to the proposed development are accurately captured. [Conversely, per BRE Guidelines, trees are typically *not to be included* in the assessment of nearby *adjacent buildings*.]

It is worth noting that there are 3 existing buildings within the development undergoing major renovation but as the BRE Guide only sets criteria for New Buildings, these structures were not assessed for daylight. Their impact on the daylighting, sunlighting, and shadowing of other aspects of the development are however included for the sake of comprehensive analysis.

Of the **1191** rooms that were assessed, **1159** achieved the BRE daylighting guidelines. This provides excellent results with a passing rate of **97%** for the entire development.

Overall, the proposed development achieves excellent daylight levels per the criteria set out in the BRE Guide. For any units containing at least one receptor room that does not achieve these guidelines, a variety of compensatory measures have been provided to ensure occupant satisfaction. These measures include:

- Unit size exceeding the minimum standard by more than 10%
- Dual aspect glazing – glazing that is present on two or more walls of the same room allowing for views in multiple directions
- Direct quality views to retained existing trees - from unit bedroom and/or LDK room window
- Unit location is adjacent to communal residential facilities at Block E and Dalguise house
- A direct view over large area of public or communal open space - from unit bedroom and/or LDK room window

Appendix D provides a table listing each proposed unit which does not meet the BRE Guidelines, clarification on which criteria the unit is not achieving, and what compensatory measures are available to that unit.

Appendix A presents the daylight results for the dwellings within the proposed development, including a summary table containing individual block and site wide result totals.

Appendix B presents daylight distribution images.

Appendix C presents the software inputs that were specified within the daylight modelling software for the calculation of illuminance levels.

Appendix D presents the compensatory measures provided for each space which does not meet the BRE Guidelines.

10.0 SUNLIGHT ASSESSMENT – NEIGHBOURING PROPERTIES

In designing a new development or extension to a building, it is important to safeguard the access to sunlight where there is a particular requirement for sunlight. To assess the sunlight impact to existing buildings the BRE Guide has been followed. A summary of the BRE Guide for safeguarding sunlight is provided in the table below.

Methodology (as referenced in Section 3.2 of the BRE Guide)

Design Issue	BRE Recommended Criteria – Section 3.2
Safeguarding Sunlight to Neighbouring Properties	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 at 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 sun lighting of the window may be adversely affected. This will be the case if the centre of the window:
	Receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 st September and 21 st March; and
	Receives less than 0.8 times its former sunlight hours during either period; and
	Has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

Table 10.0.1 – BRE Guide methodology for safeguarding sunlight

The previously identified surrounding assessment dwellings have been assessed for sunlight impact. The BRE Guideline requires all *main living room* windows which face the proposed development to be assessed and identifies that windows which face significantly north of due east or west are not expected to achieve good APSH values because good sun light availability is unachievable for these orientations. However, given the high number of windows and lack of information regarding areas served, all identified adjacent windows have been included in this assessment for information.

156 of the 197 assessed neighbouring windows achieve the BRE Guideline recommended values for safeguarding annual access to sunlight, and 178 of the 197 assessed windows achieve the BRE Guideline recommended values for safeguarding winter access to sunlight.

It is worth noting that, as mentioned above, the use type for each assessed could not be ascertained, and as such not all rooms which fail to meet the BRE Guidelines for safeguarding access to sunlight are applicable to this assessment.

This demonstrates that the nearby residential developments will not result in any loss of light received by the proposed development beyond Minor adverse impacts as identified in Appendix I of the BRE Guidelines.

Please see Figure 8.0.2 for dwelling assessment references. Results are presented in full in **Appendix F.**

11.0 SUNLIGHT ASSESSMENT – NEIGHBOURING AMENITY SPACE

BRE Guidelines recommend that in order for an amenity space to appear adequately sunlit throughout the year, at least half of the amenity space should receive at least two hours of sunlight on the design day, March 21st. If as a result of a new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on March 21st is less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

Presented overleaf are the current and proposed scenario sunlight exposure images for the rear gardens of the assessment dwellings.

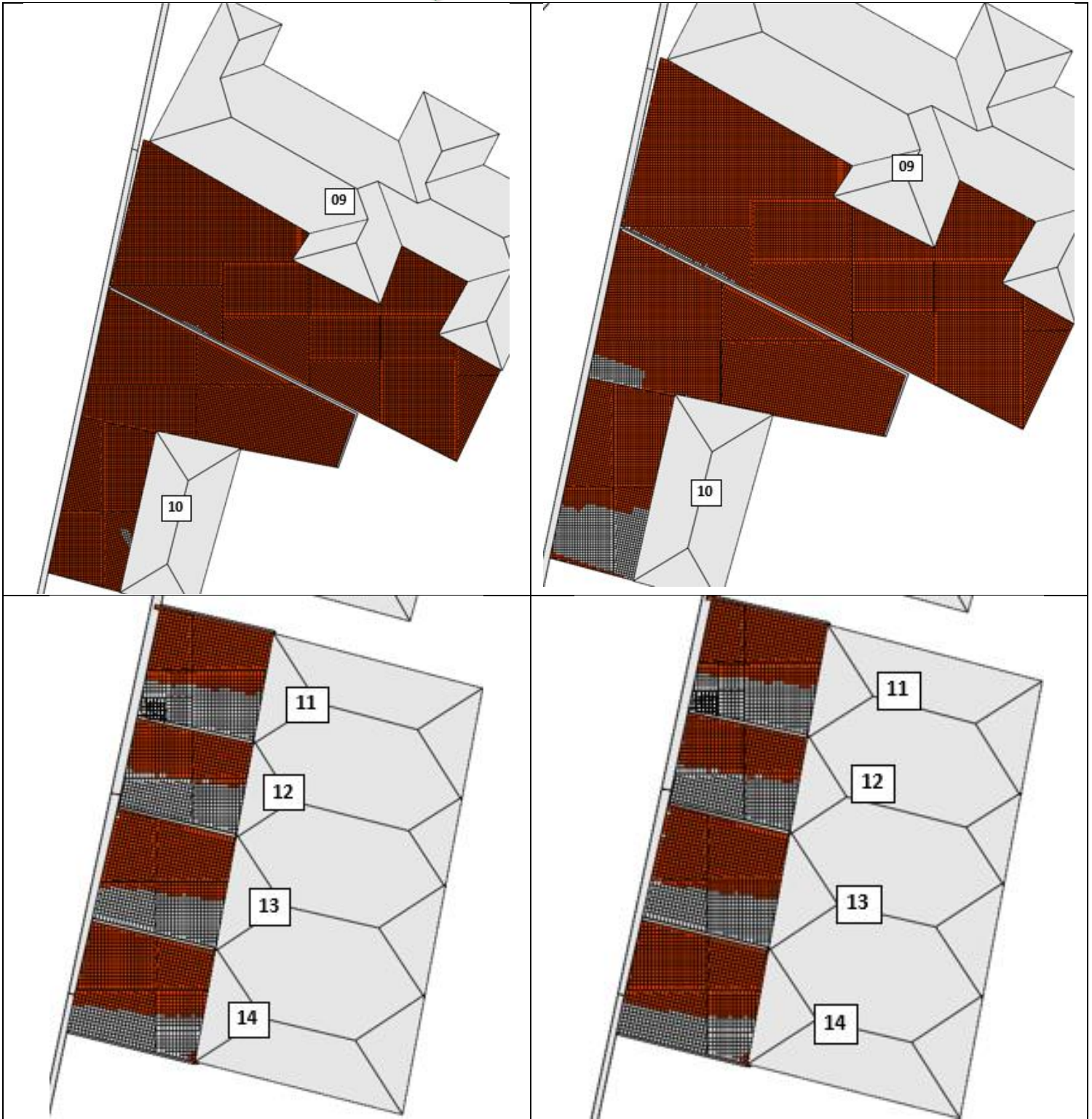
Amenity Reference	Amenity Address
1	Glenville Lodge, Monkstown Rd, Mountashton, Monkstown, Co. Dublin
2	13 Heathfield, Mountashton, Monkstown, Co. Dublin
3	12 Heathfield, Mountashton, Monkstown, Co. Dublin
4	11 Heathfield, Mountashton, Monkstown, Co. Dublin
5	10 Heathfield, Mountashton, Monkstown, Co. Dublin
6	8 Heathfield, Mountashton, Monkstown, Co. Dublin
7	7 Heathfield, Mountashton, Monkstown, Co. Dublin
8	6 Heathfield, Mountashton, Monkstown, Co. Dublin
9	111 Richmond Park, Mountashton, Monkstown, Co. Dublin
10	18A Richmond Park, Mountashton, Monkstown, Co. Dublin
11	19 Richmond Park, Mountashton, Monkstown, Co. Dublin
12	20 Richmond Park, Mountashton, Monkstown, Co. Dublin
13	21 Richmond Park, Mountashton, Monkstown, Co. Dublin
14	22 Richmond Park, Mountashton, Monkstown, Co. Dublin
15	28 Richmond Park, Mountashton, Monkstown, Co. Dublin
16	27 Richmond Park, Mountashton, Monkstown, Co. Dublin
17	26 Richmond Park, Mountashton, Monkstown, Co. Dublin
18	25 Richmond Park, Mountashton, Monkstown, Co. Dublin
19	24 Richmond Park, Mountashton, Monkstown, Co. Dublin
20	29 Richmond Park, Mountashton, Monkstown, Co. Dublin
21	30 Richmond Park, Mountashton, Monkstown, Co. Dublin
22	31 Richmond Park, Mountashton, Monkstown, Co. Dublin
23	32 Richmond Park, Mountashton, Monkstown, Co. Dublin
24	33 Richmond Park, Mountashton, Monkstown, Co. Dublin
25	34 Richmond Park, Mountashton, Monkstown, Co. Dublin
26	35 Richmond Park, Mountashton, Monkstown, Co. Dublin
27	36 Richmond Park, Mountashton, Monkstown, Co. Dublin
28	37 Richmond Park, Mountashton, Monkstown, Co. Dublin
29	38 Richmond Park, Mountashton, Monkstown, Co. Dublin
30	46 Brook Ct, Mountashton, Monkstown, Co. Dublin
31	45 Brook Ct, Mountashton, Monkstown, Co. Dublin
32	44 Brook Ct, Mountashton, Monkstown, Co. Dublin
33	43 Brook Ct, Mountashton, Monkstown, Co. Dublin
34	42 Brook Ct, Mountashton, Monkstown, Co. Dublin
35	41 Brook Ct, Mountashton, Monkstown, Co. Dublin
36	40 Brook Ct, Mountashton, Monkstown, Co. Dublin
37	39 Brook Ct, Mountashton, Monkstown, Co. Dublin
38	38 Brook Ct, Mountashton, Monkstown, Co. Dublin

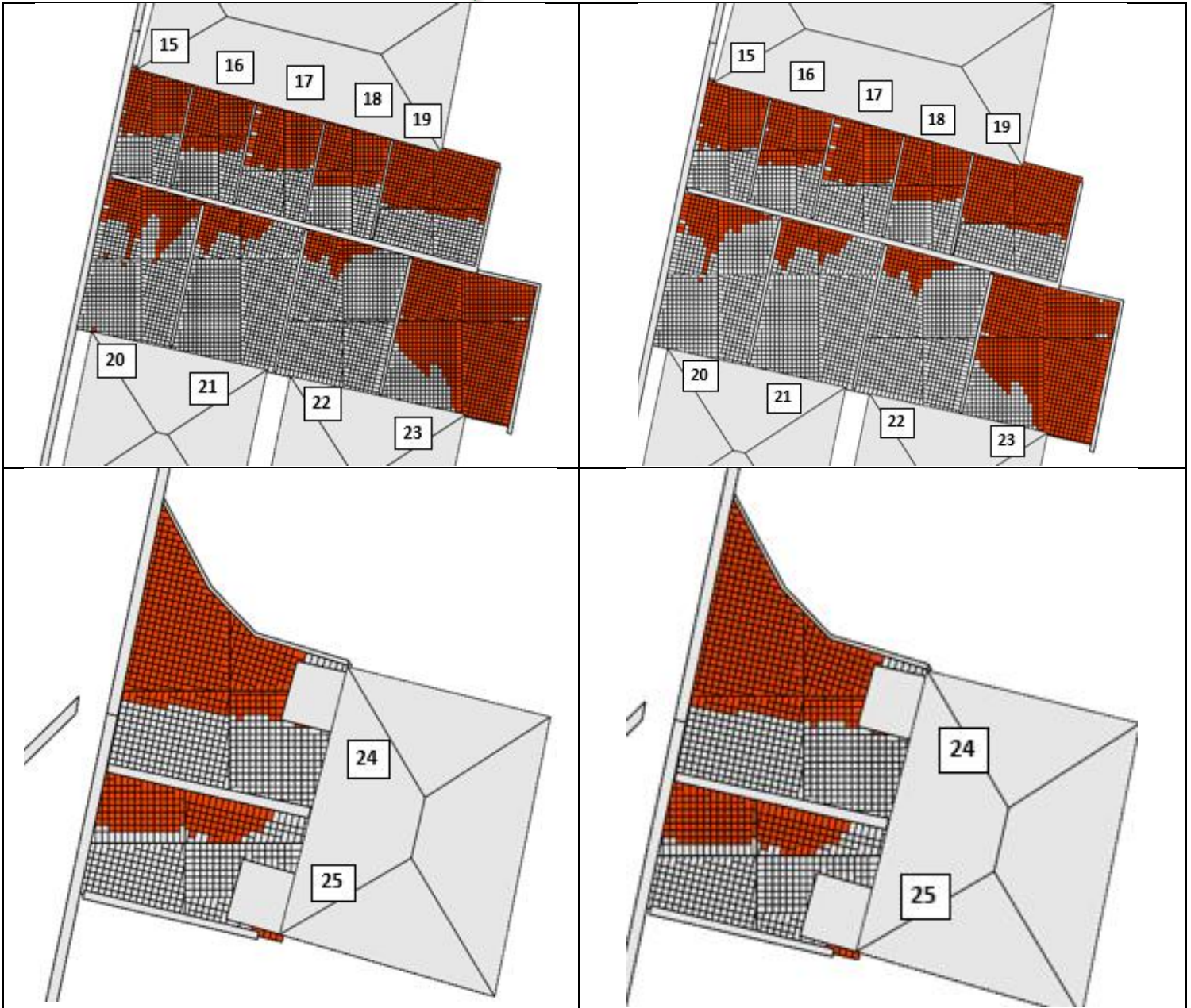
39	37 Brook Ct, Mountashton, Monkstown, Co. Dublin
40	36 Brook Ct, Mountashton, Monkstown, Co. Dublin
41	35 Brook Ct, Mountashton, Monkstown, Co. Dublin
42	34 Brook Ct, Mountashton, Monkstown, Co. Dublin
43	33 Brook Ct, Mountashton, Monkstown, Co. Dublin
44	32 Brook Ct, Mountashton, Monkstown, Co. Dublin
45	31 Brook Ct, Mountashton, Monkstown, Co. Dublin
46	The Coach House, Monkstown Rd, Mountashton, Monkstown, Co. Dublin
47	10 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
48	9 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
49	8 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
50	7 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
51	6 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
52	5 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
53	4 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
54	3 The Orchard, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
55	7 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
56	6 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
57	5 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
58	4 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
59	3 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
60	2 Arundel, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
61	34 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
62	33 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
63	32 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
64	31 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
65	30 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
66	29 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
67	28 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
68	27 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
69	26 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
70	25 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
71	24/25 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
72	23 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
73	22 Southdene, Monkstown Valley, Mountashton, Monkstown, Co. Dublin
74	9 Drayton Cl, Mountashton, Monkstown, Co. Dublin
75	77 Monkstown Rd, Mountashton, Monkstown, Co. Dublin

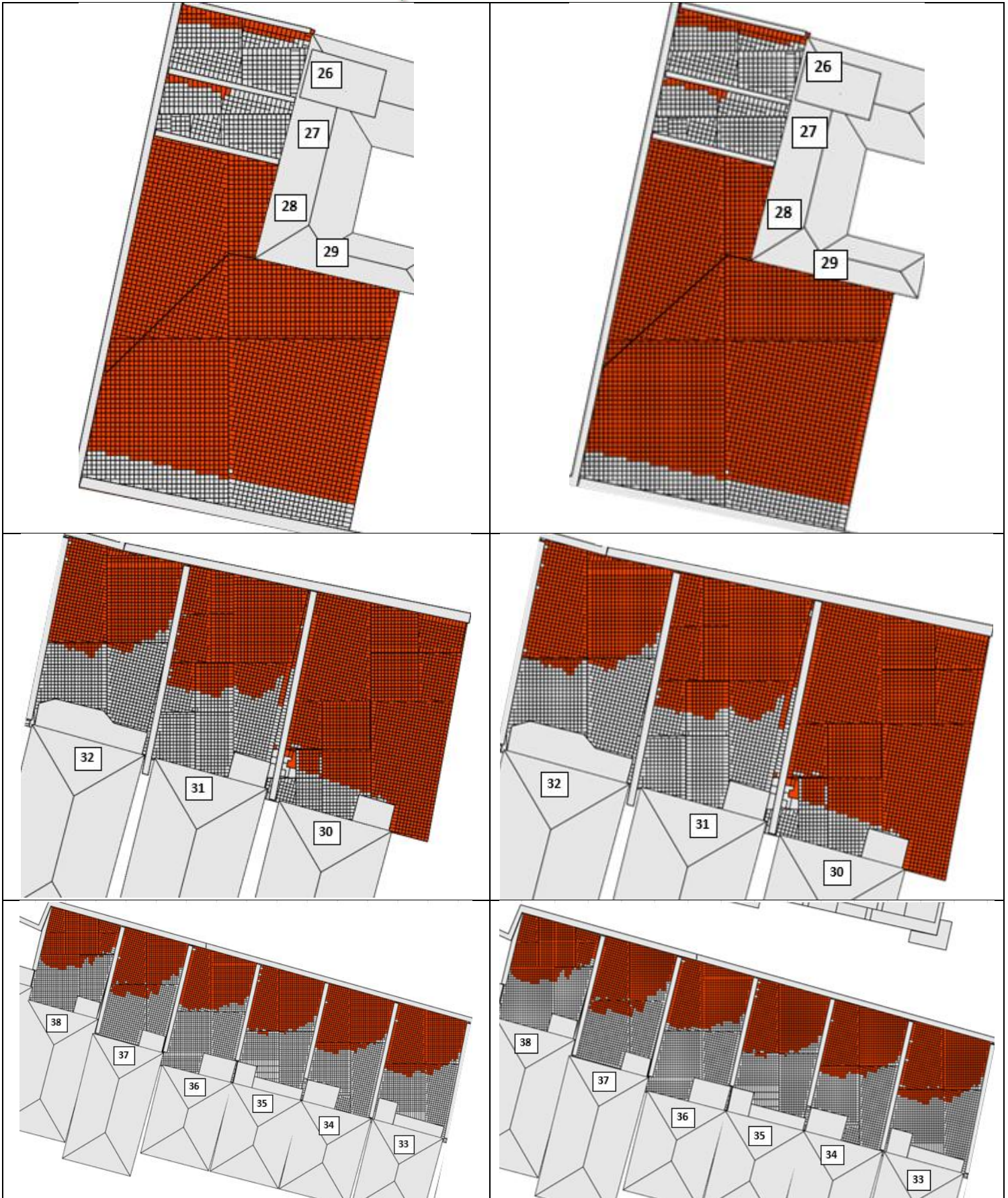
Table 11.0.1 Assessed Amenity Reference Addresses

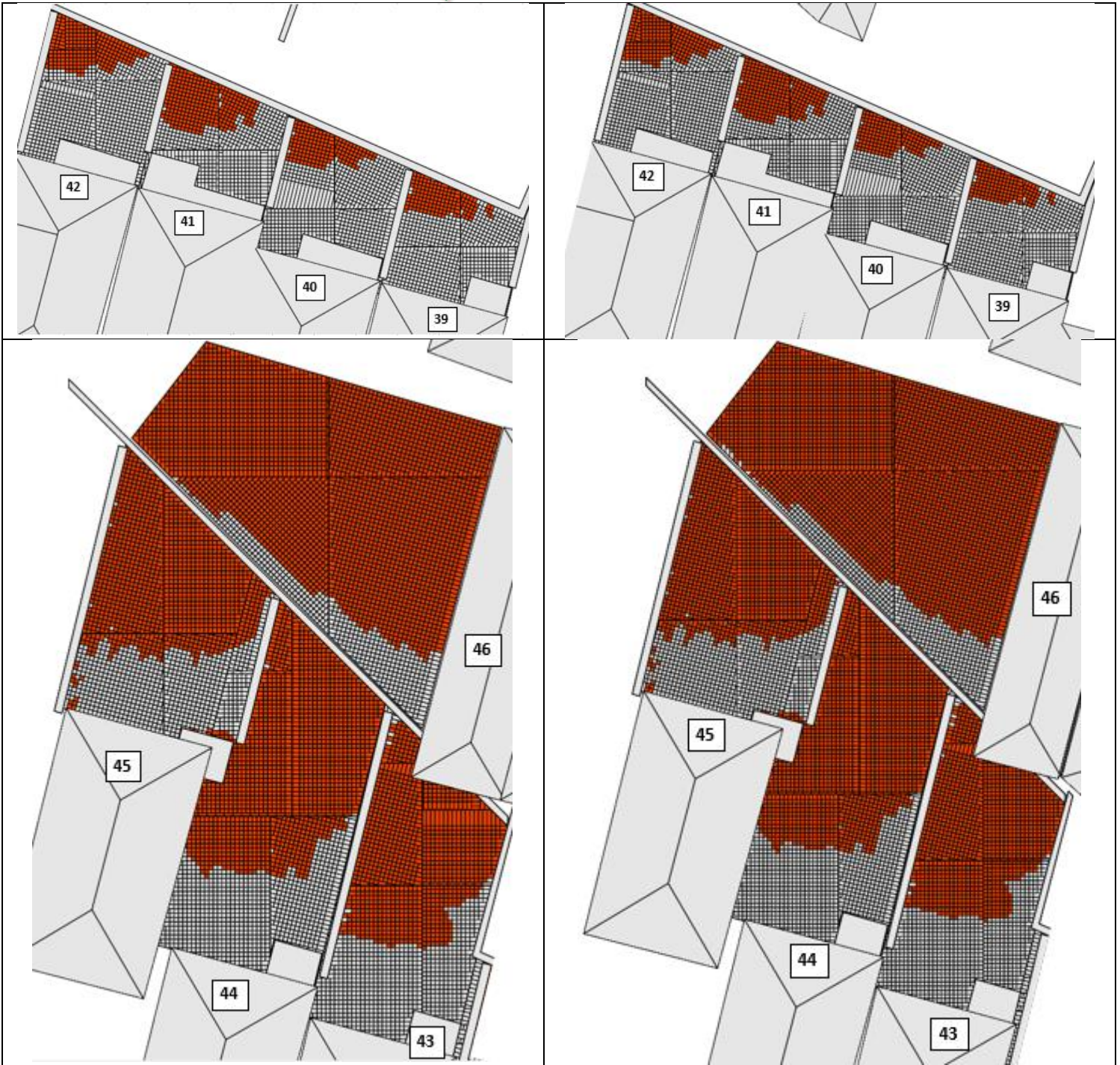
Simulation Results



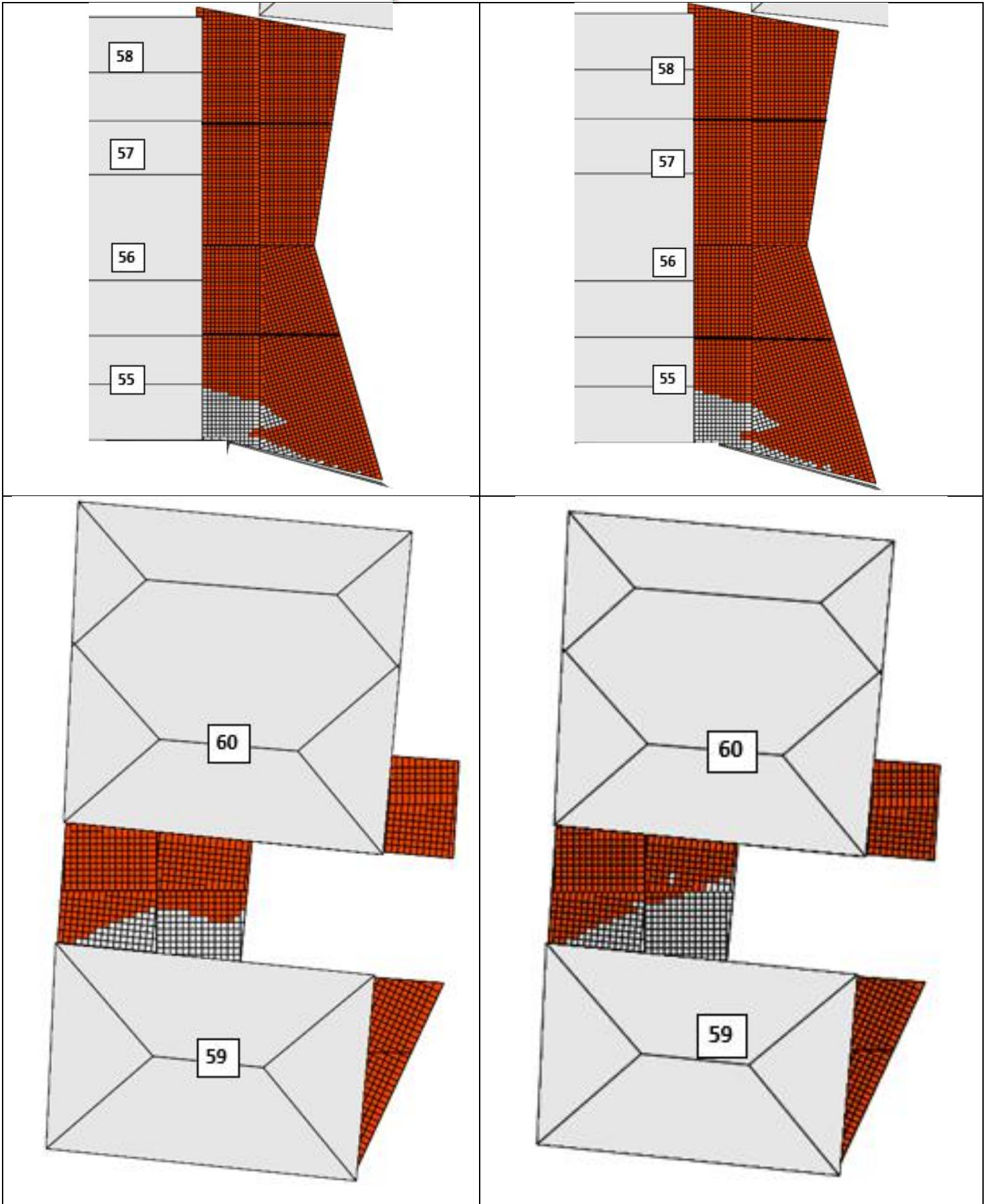


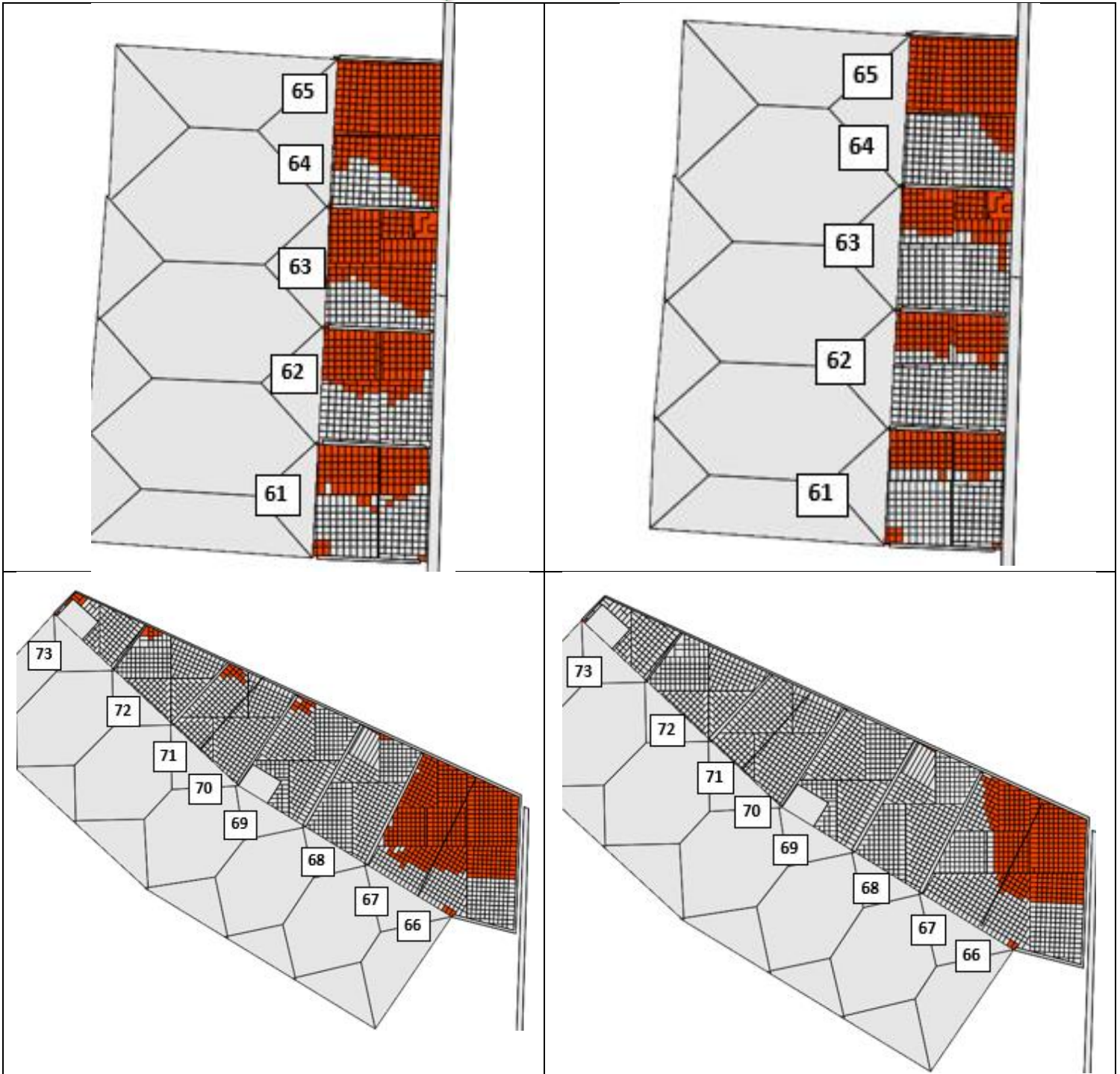












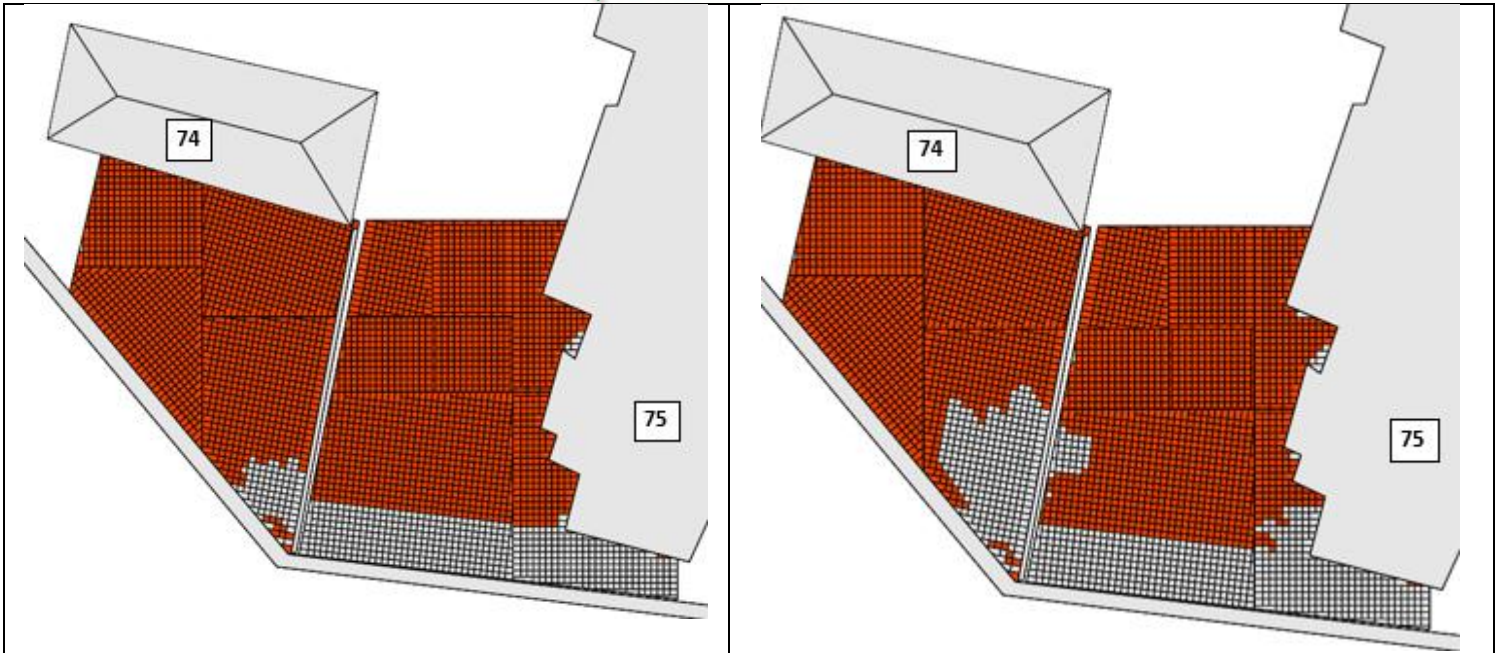


Figure 11.0.2 Sunlight Exposure on Neighboring Amenity Spaces Results

Simulation Results Table

Garden Ref No.	Current Scenario % of Garden receiving ≥ 2 hours of sunlight on March 21	Proposed Scenario % of Garden receiving ≥ 2 hours of sunlight on March 21	% of Former Value (target value ≥80%)	Compliant with BRE Guideline for safeguarding access to sunlight
1	88.90	76.75	86.33	Yes
2	63.82	50.20	78.66	Yes
3	88.20	83.40	94.56	Yes
4	76.77	77.54	101.00	Yes
5	63.75	48.49	76.06	No
6	78.09	78.13	100.05	Yes
7	67.20	51.86	77.17	Yes
8	74.83	74.83	100.00	Yes
9	99.89	99.49	99.61	Yes
10	99.67	87.08	87.37	Yes
11	62.94	62.94	100.00	Yes
12	52.66	52.66	100.00	Yes
13	63.41	63.41	100.00	Yes
14	70.40	70.40	100.00	Yes
15	57.16	57.16	100.00	Yes
16	55.06	55.06	100.00	Yes
17	52.84	52.84	100.00	Yes
18	54.33	54.33	100.00	Yes
19	61.22	61.22	100.00	Yes
20	26.45	18.37	69.45	No
21	12.70	12.70	100.00	Yes
22	10.44	10.44	100.00	Yes
23	84.38	84.38	100.00	Yes
24	55.86	55.86	100.00	Yes
25	35.17	35.17	100.00	Yes
26	20.56	20.56	100.00	Yes
27	6.42	6.42	100.00	Yes
28	100.00	100.00	100.00	Yes
29	88.08	88.08	100.00	Yes
30	91.29	91.29	100.00	Yes
31	59.56	59.56	100.00	Yes
32	57.09	57.09	100.00	Yes
33	55.00	55.00	100.00	Yes
34	51.86	51.86	100.00	Yes
35	53.06	53.06	100.00	Yes
36	47.10	47.10	100.00	Yes
37	48.32	48.32	100.00	Yes
38	52.67	52.67	100.00	Yes
39	18.99	18.99	100.00	Yes

Garden Ref No.	Current Scenario % of Garden receiving ≥ 2 hours of sunlight on March 21	Proposed Scenario % of Garden receiving ≥ 2 hours of sunlight on March 21	% of Former Value (target value ≥80%)	Compliant with BRE Guideline for safeguarding access to sunlight
40	18.36	18.36	100.00	Yes
41	35.39	35.39	100.00	Yes
42	25.60	25.60	100.00	Yes
43	59.06	59.06	100.00	Yes
44	66.14	66.14	100.00	Yes
45	63.18	63.18	100.00	Yes
46	87.68	87.68	100.00	Yes
47	0.00	0.00	100.00	Yes
48	57.69	57.69	100.00	Yes
49	50.86	50.86	100.00	Yes
50	28.71	28.71	100.00	Yes
51	86.39	82.63	95.64	Yes
52	21.30	21.30	100.00	Yes
53	2.65	2.65	100.00	Yes
54	6.83	6.83	100.00	Yes
55	81.65	81.65	100.00	Yes
56	100.00	100.00	100.00	Yes
57	100.00	100.00	100.00	Yes
58	100.00	100.00	100.00	Yes
59	100.00	100.00	100.00	Yes
60	80.54	72.49	90.01	Yes
61	44.13	35.62	80.71	Yes
62	50.69	34.44	67.93	No
63	69.56	40.58	58.35	No
64	58.76	13.73	23.37	No
65	100.00	100.00	100.00	Yes
66	61.55	54.95	89.28	Yes
67	78.90	37.80	47.91	No
68	3.12	0.00	0.00	No
69	3.23	0.00	0.00	No
70	0.00	0.00	100.00	Yes
71	8.26	0.00	0.00	No
72	3.82	0.00	0.00	No
73	6.15	0.00	0.00	No
74	93.59	82.72	88.39	Yes
75	75.61	72.50	95.89	Yes

Table 11.0.1 Sunlight Exposure on Neighboring Amenity Spaces Results

Results Summary

64 of the **75** assessed neighbouring amenity areas achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of **85%**.

Appendix I of the BRE Guidelines suggests that daylight/sunlight impacts can be assessed as minor, moderate or major adverse, with minor adverse impact defined as the loss of light to only a limited area of open space.

While some individual amenity areas experience moderate to major adverse impact, the overall loss of sunlight to *all* assessed open spaces with the proposed development in place is that of a limited area, and as such, **an overall classification of minor adverse impact is appropriate.**

It is worth noting that foliage present within the proposed developments boundary which provides significant shading in some instances has been *excluded from the simulation as it is not typically included in assessments of adjacent properties* per the BRE Guidelines. However, the Arboricultural Assessment enclosed with this Application has identified boundary trees and/or groups of trees which are of poor quality and should be removed irrespective of any further development on the basis of good estate management. Therefore, this may result in a smaller reduction of or even increase in daylight to some adjacent amenity areas which is not able to be captured accurately using this specific BRE analysis method.

12.0 SUNLIGHT ASSESSMENT – PROPOSED DEVELOPMENT

In general, a dwelling, or non-domestic building which has a particular requirement for sunlight, will appear reasonably sunlit provided the following recommended BRE Guide metrics are achieved.

Methodology (as referenced in Section 3.1 of the BRE Guide)

Design Issue	BRE Recommended Criteria – Section 3.1
Sunlight	In general, a dwelling, of non-domestic building which has a particular requirement for sunlight will appear reasonably sunlit provided;
	(1) At least one main window wall faces within 90° of due south; and
	(2) 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.

BRE Guidelines and Advisory Notes

It is important that the guidelines that exist in relation to sunlight are read in the correct context and are not viewed as mandatory requirements for all dwellings.

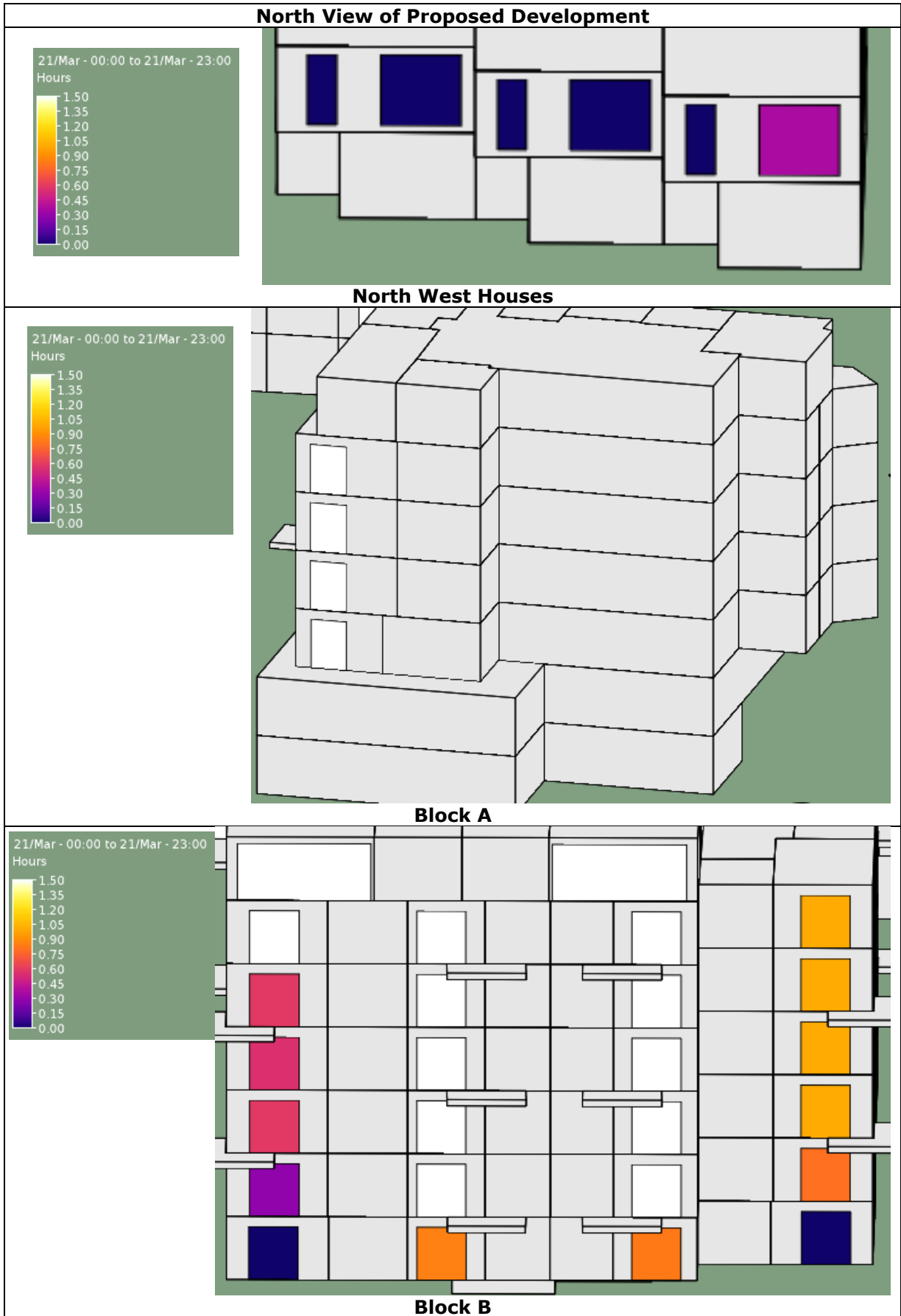
The BRE Guide states “Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings with a main living room that meets the above recommendations” (Section 3.1.16). In our opinion this outlines that there is not an expectation that all dwellings will achieve the guidelines for Sunlight, particularly in urban infill locations with mature retained landscaping.

Paragraph 3.1.11 of the BRE Guide states that if a room faces significantly north of due east or west it is unlikely to meet the recommended levels. With this in mind, we have presented results for both the entire development, as well as results for only the windows which do not face significantly north.

The Sunlight target is at least 1.5 hours of sunlight on March 21st (refer to legend). Windows shown in white achieve the BRE targets as the APSH is greater than 1.5 hours. Using the legend, the specific APSH can be determined for windows that do not exceed the target value.

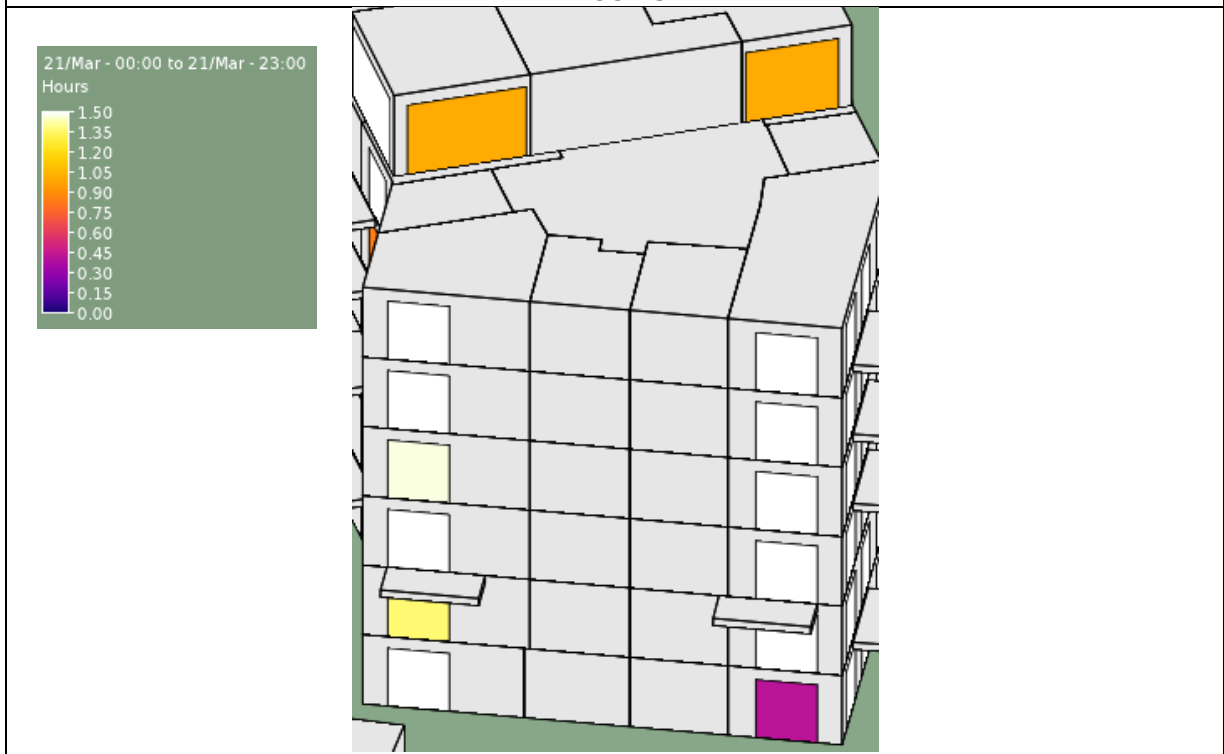
Presented below are the APSH results for the proposed development.

Simulation Results Images – Full Year

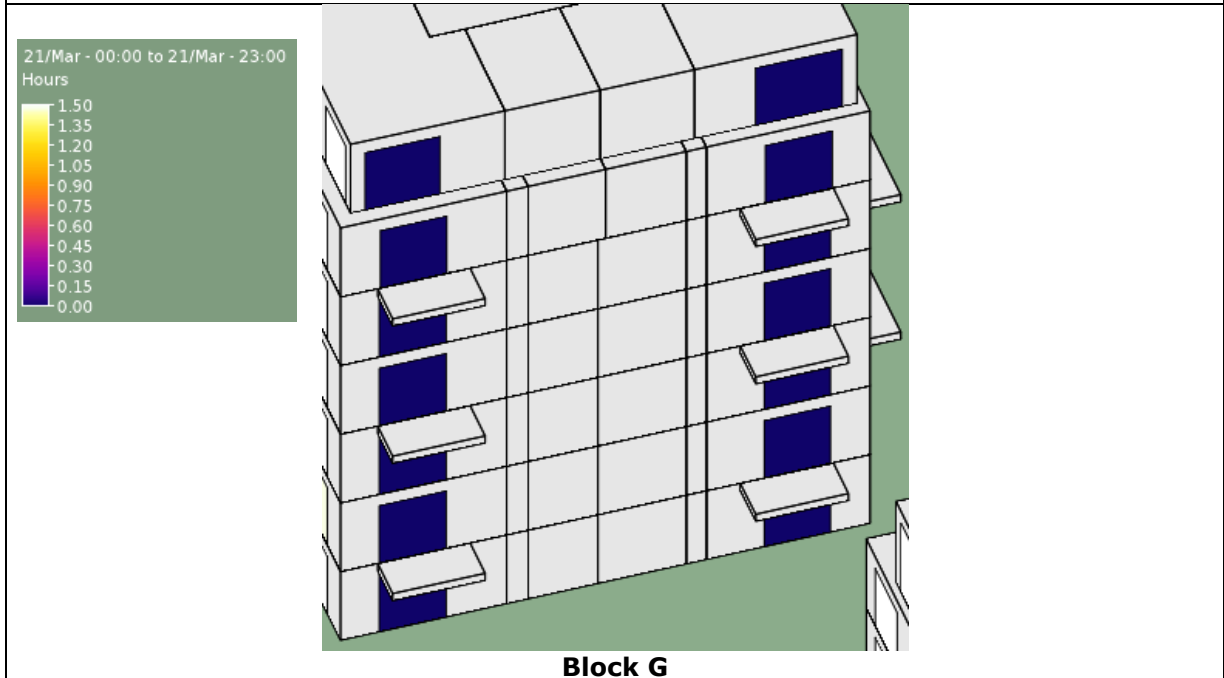
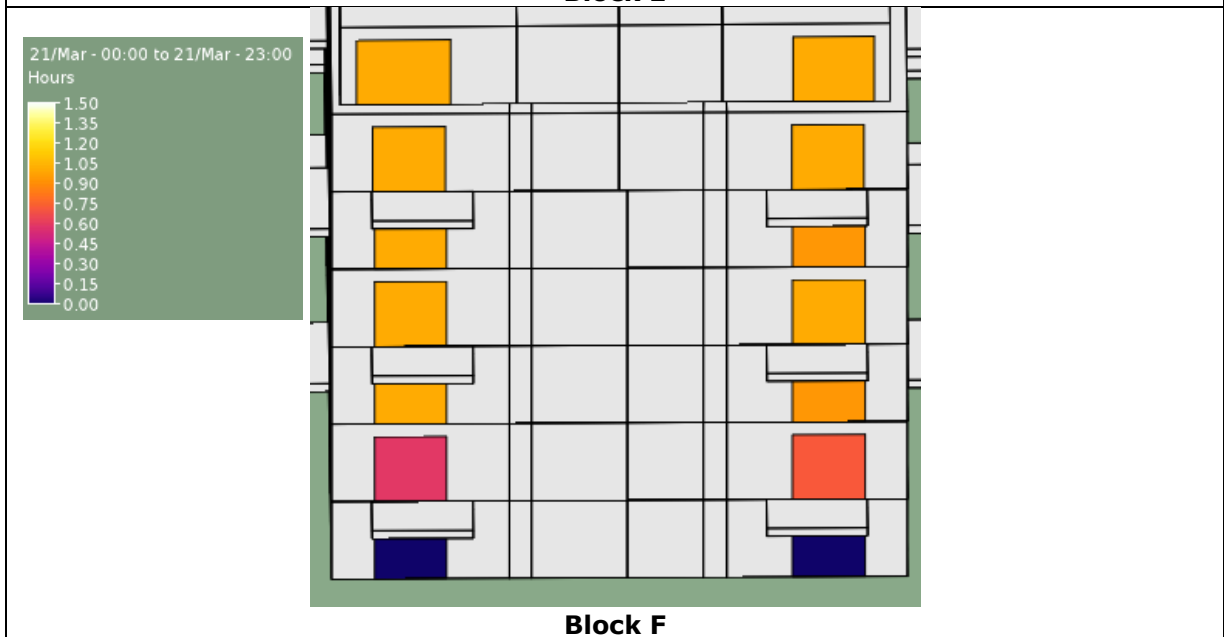
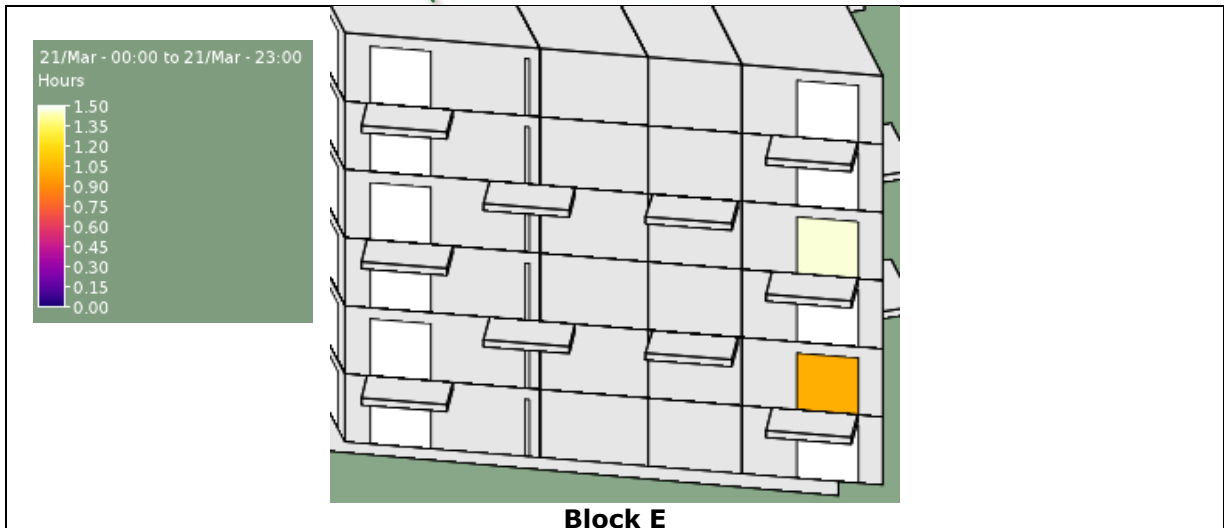


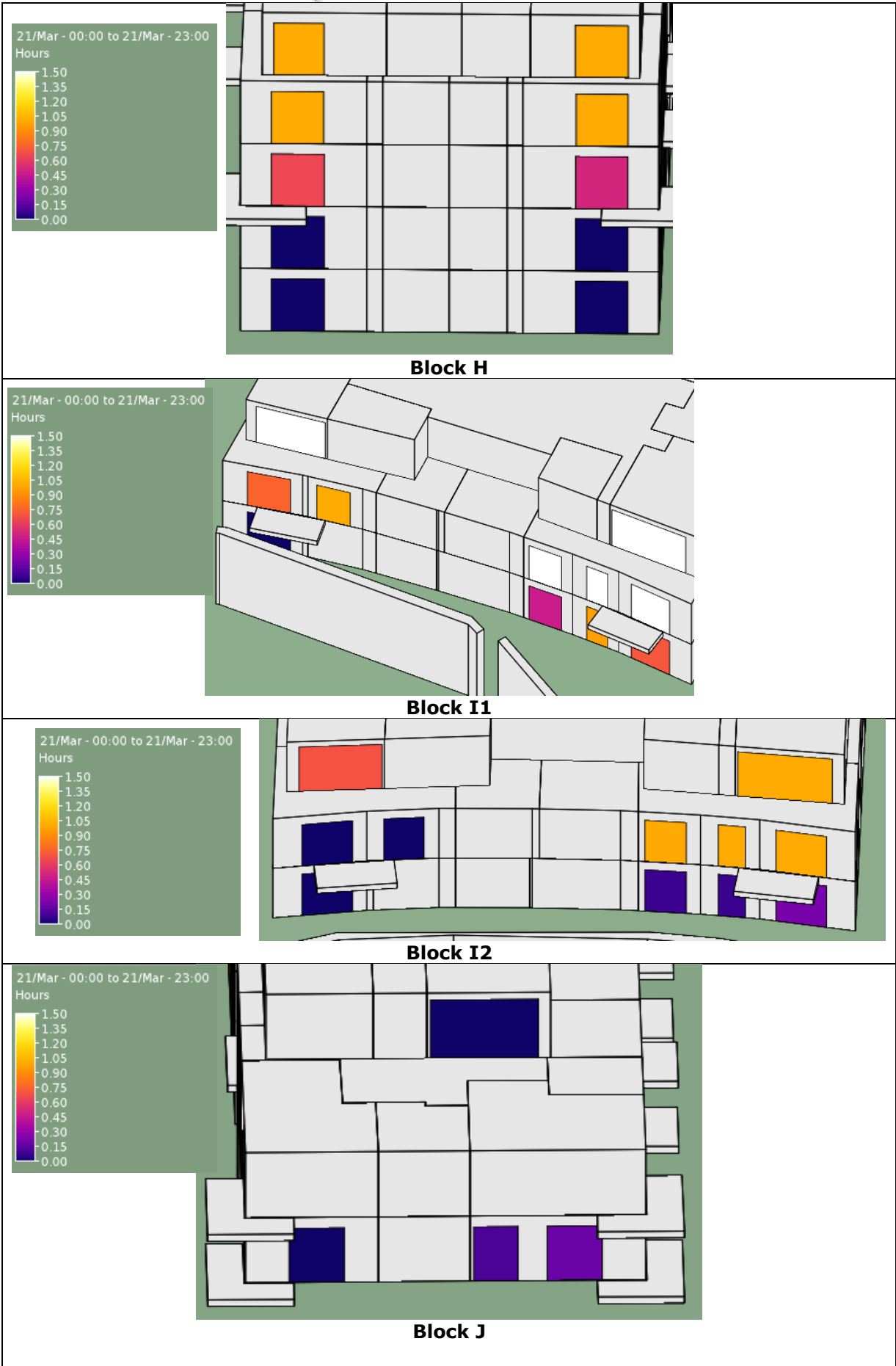


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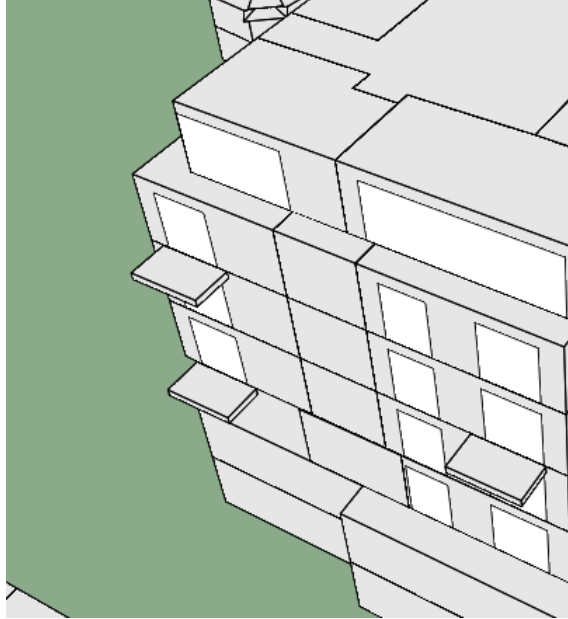
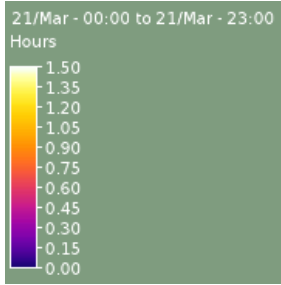


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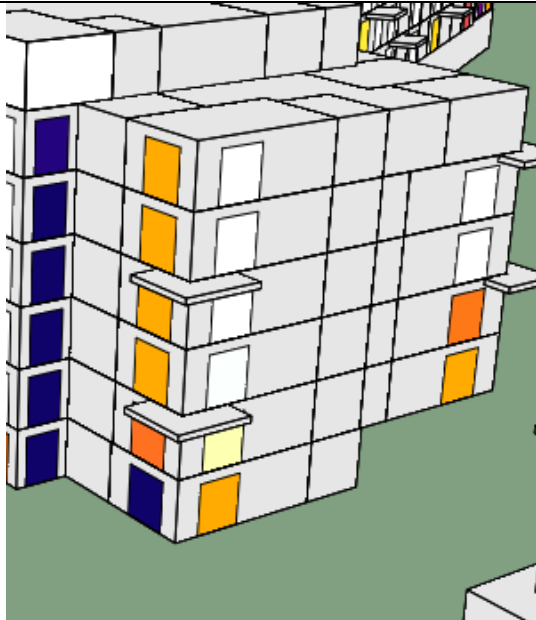
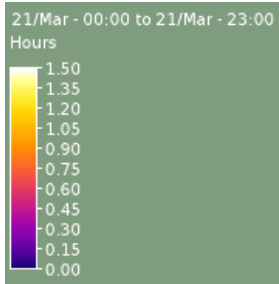




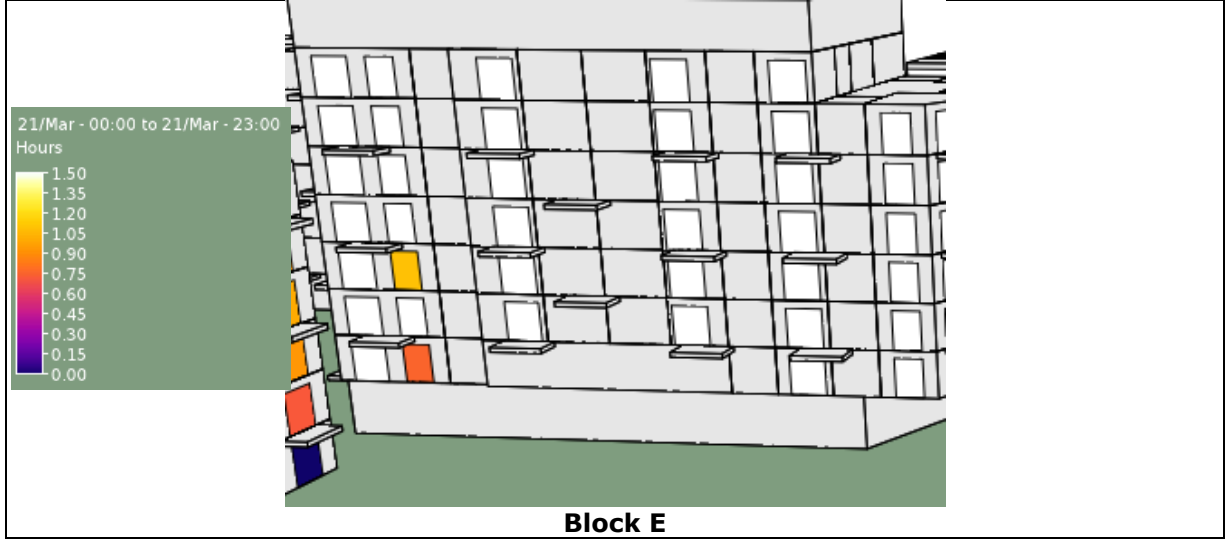
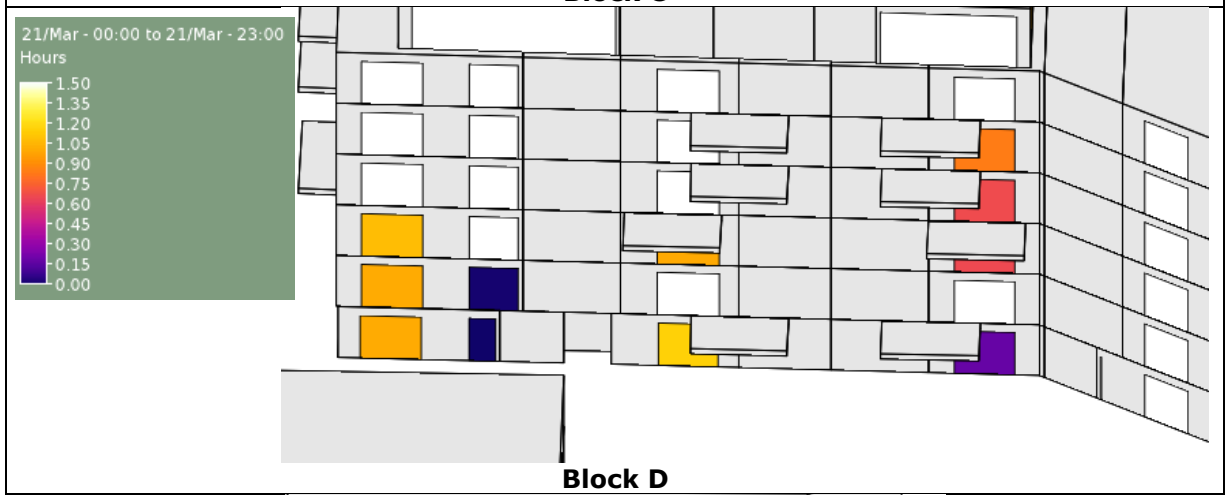
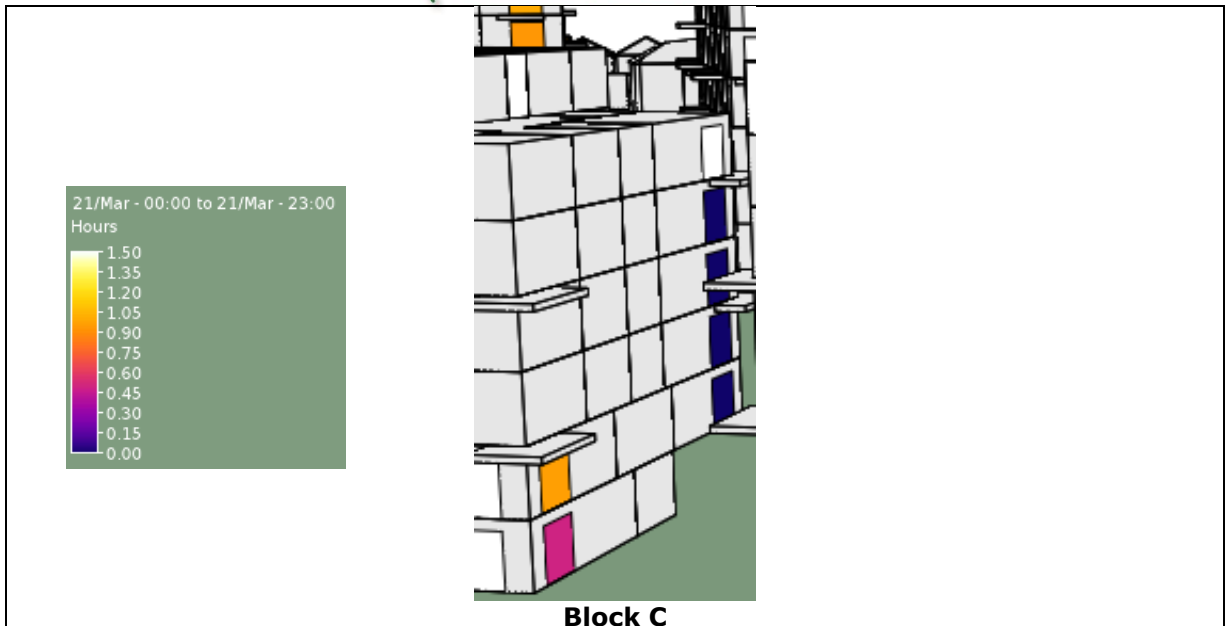
East View of Proposed Development

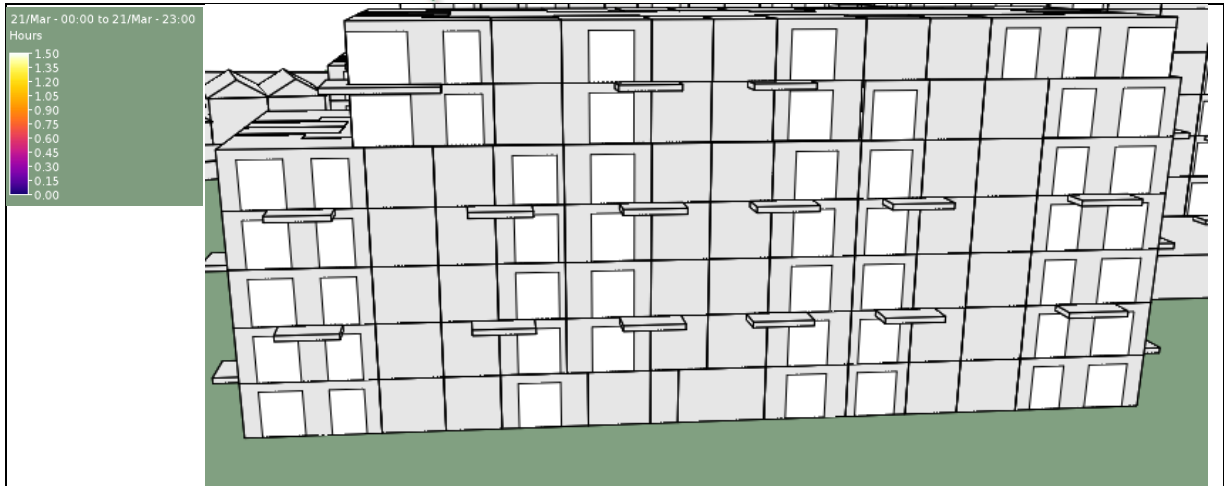


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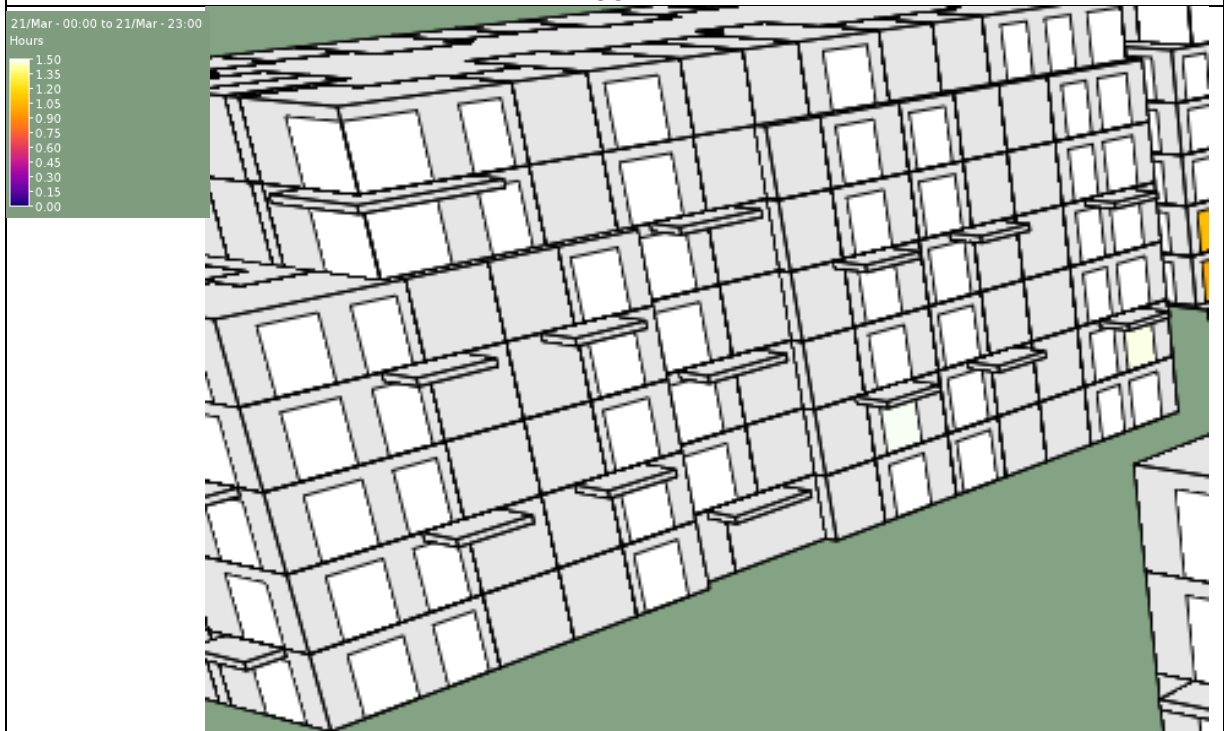


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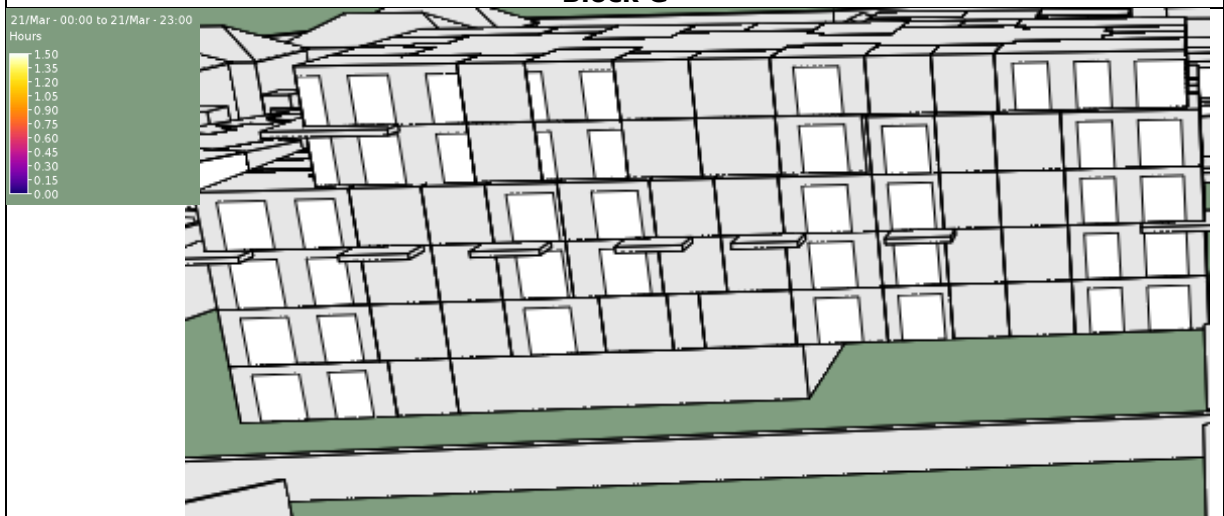




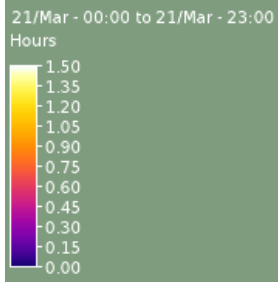
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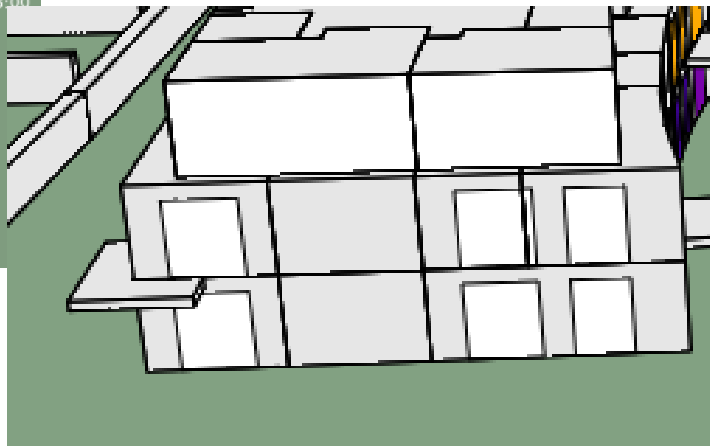
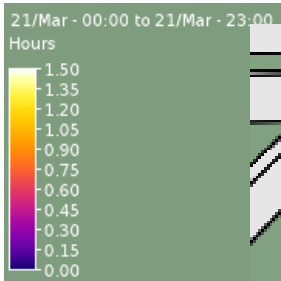
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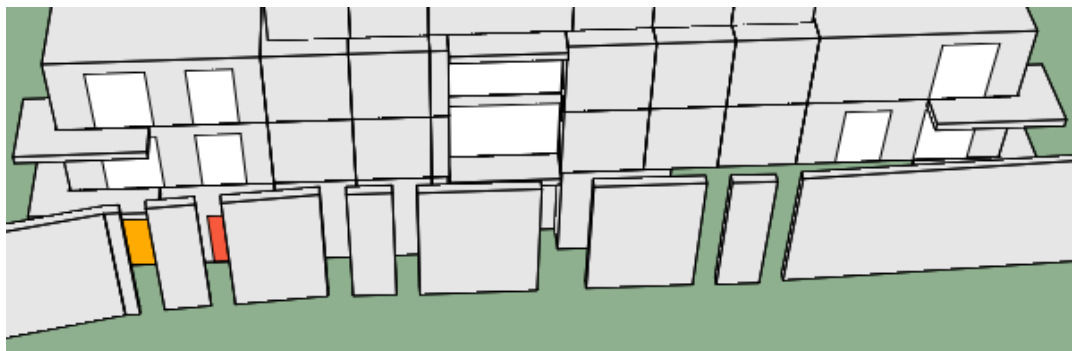
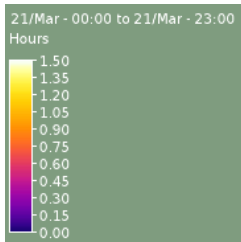
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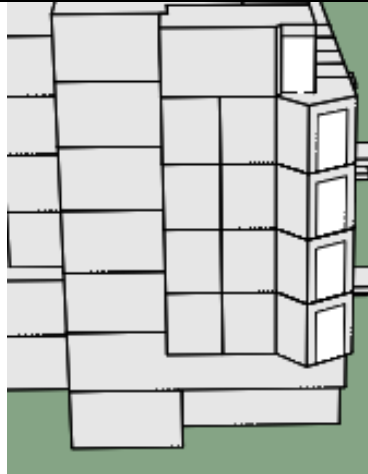
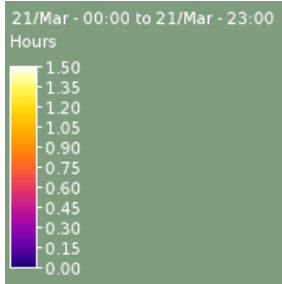


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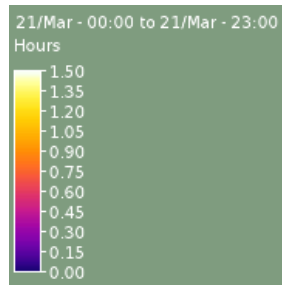


Block J

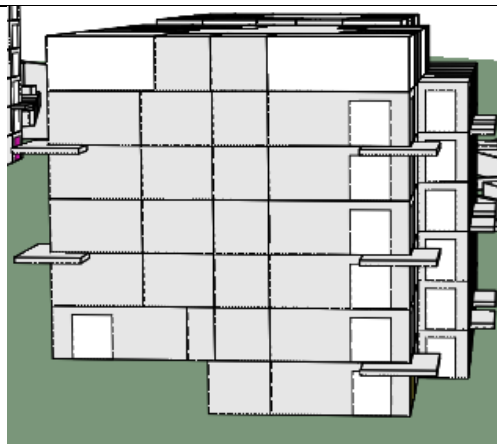
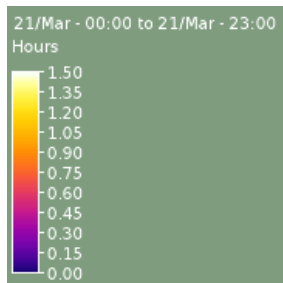
West View of Proposed Development



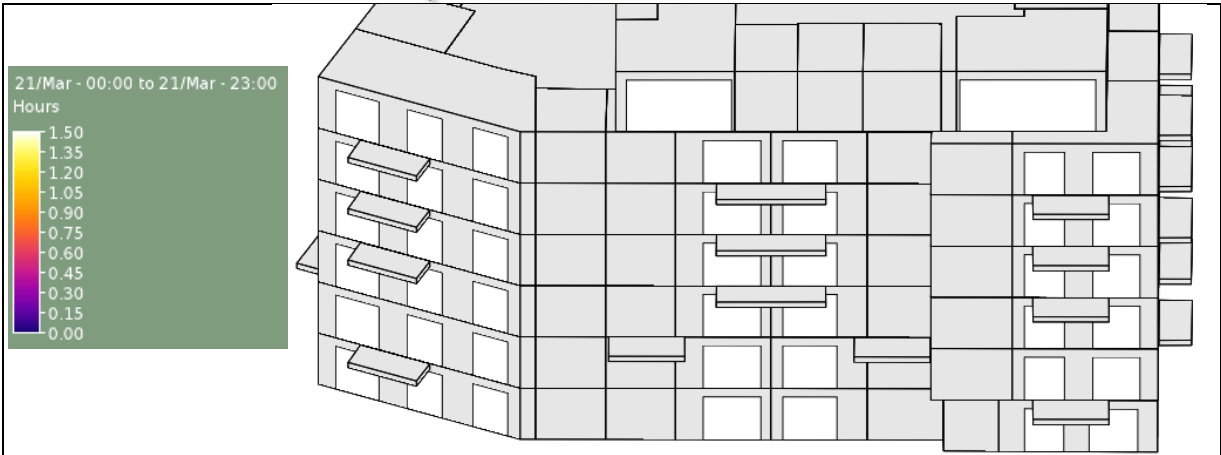
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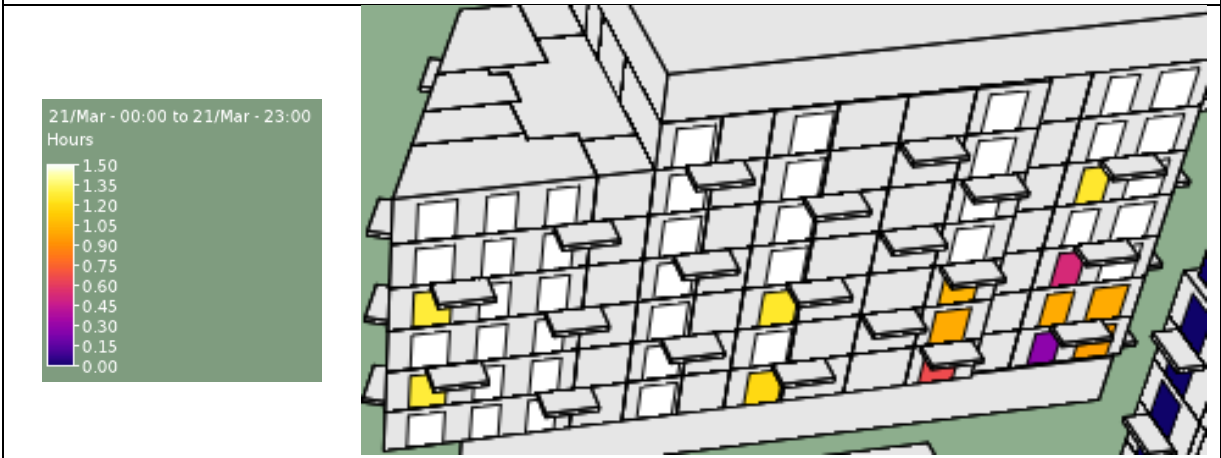
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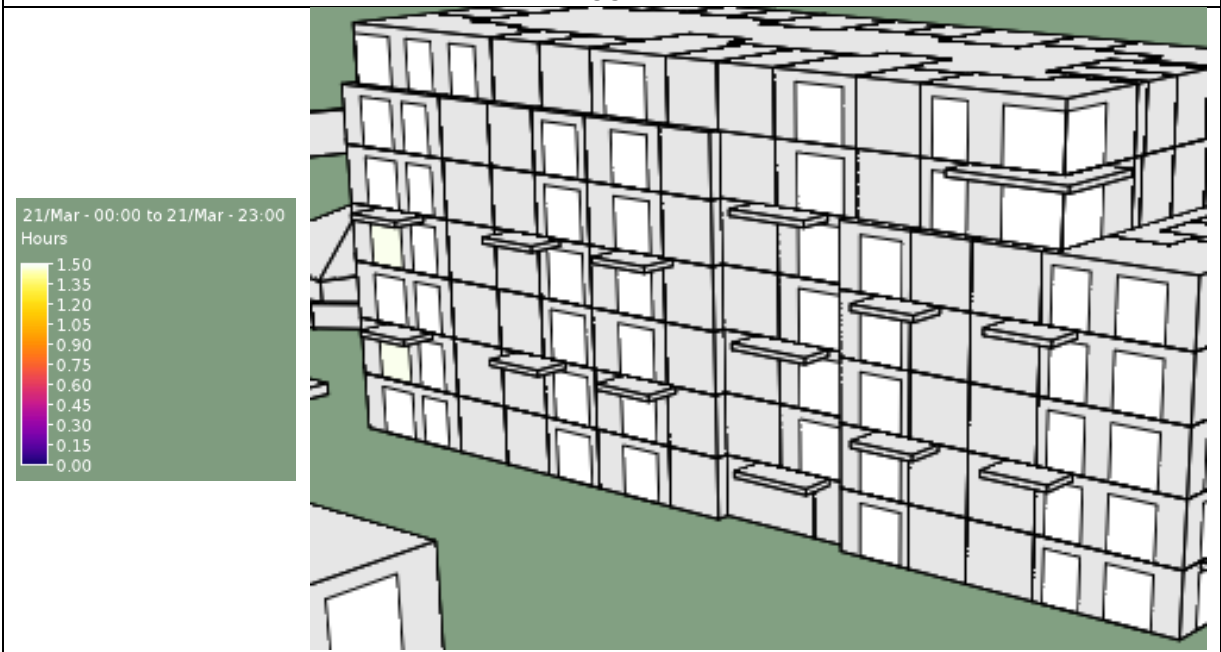
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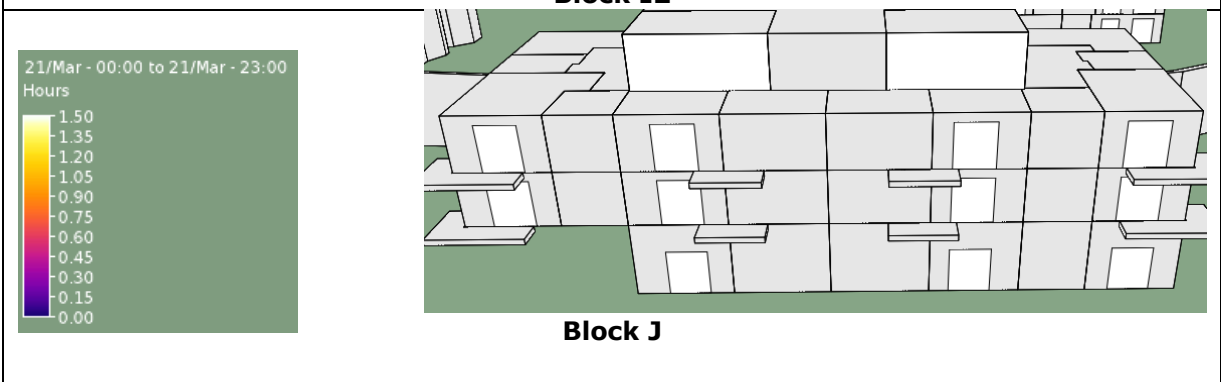
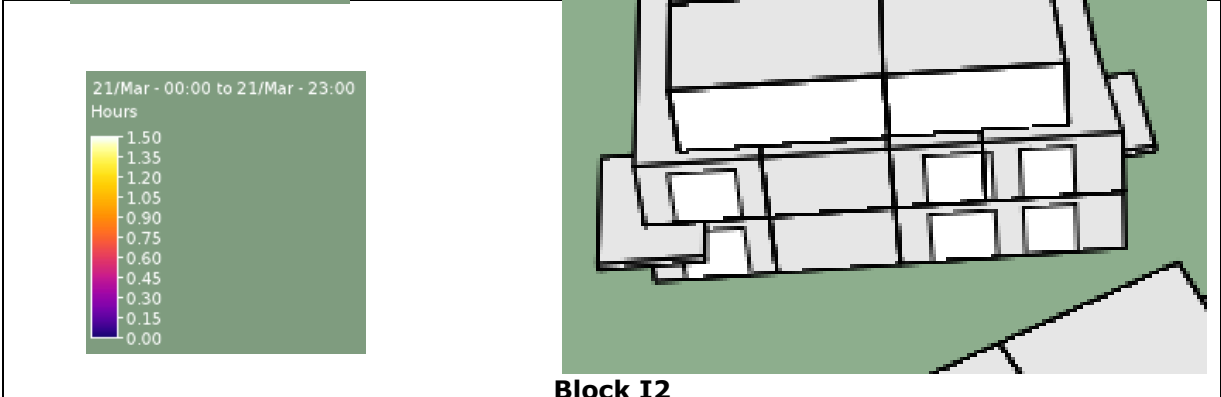
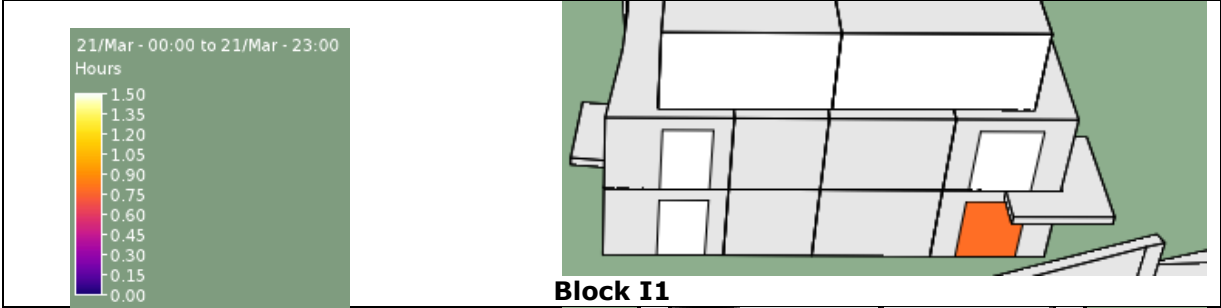
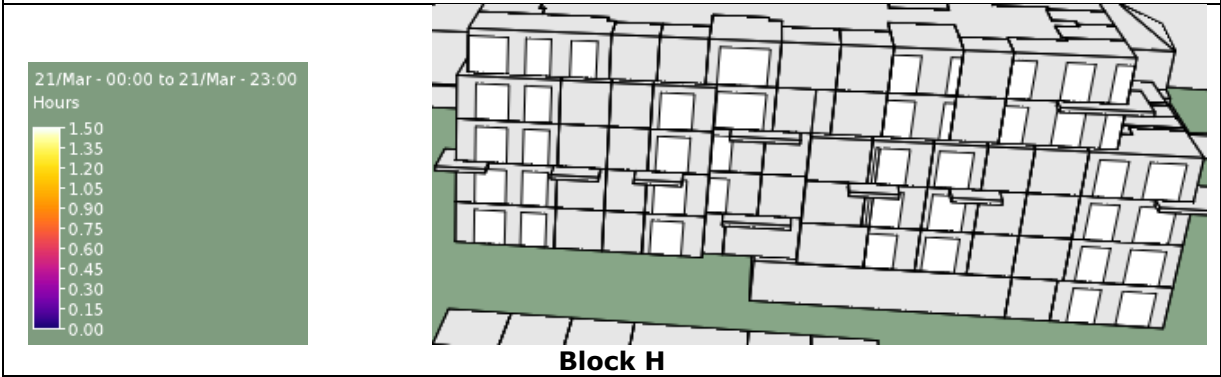
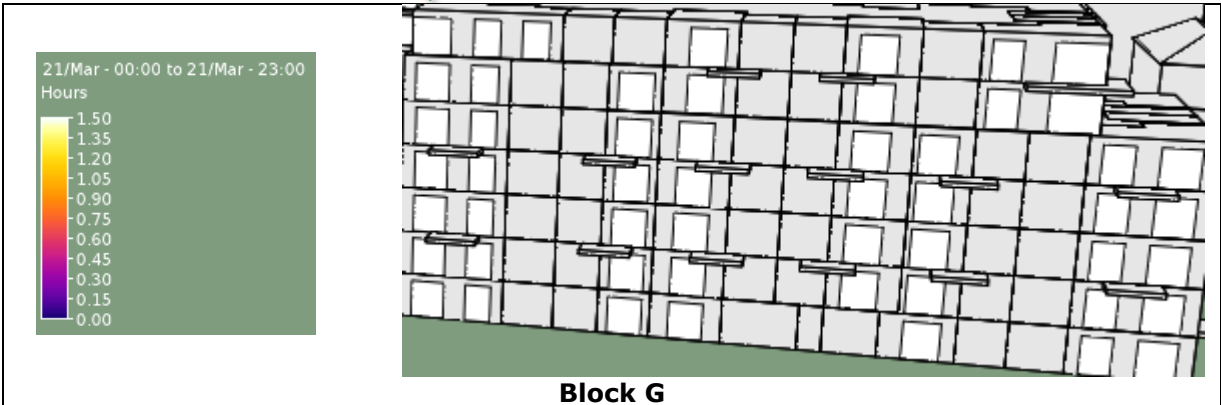
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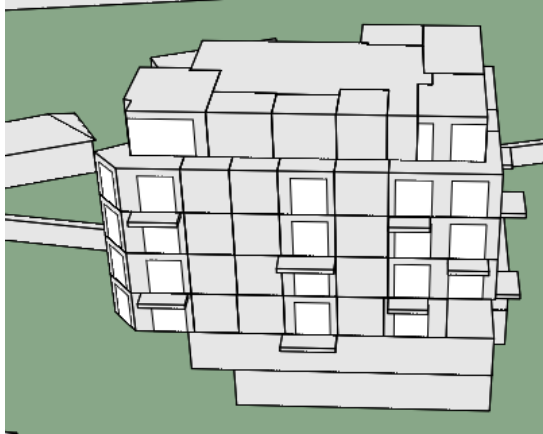
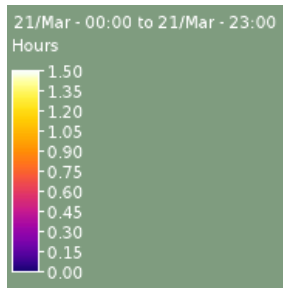
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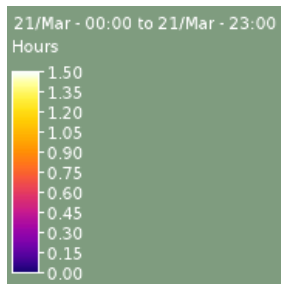
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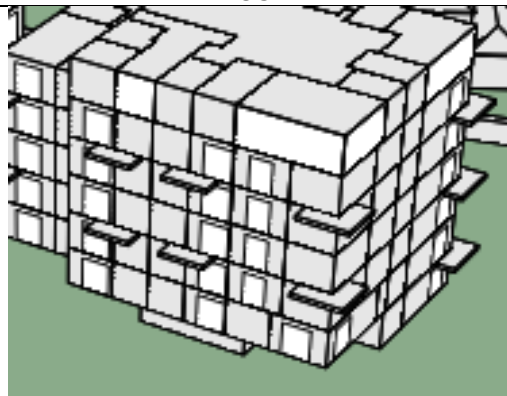
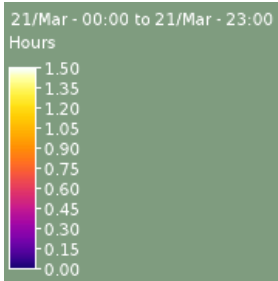
South View of Proposed Development



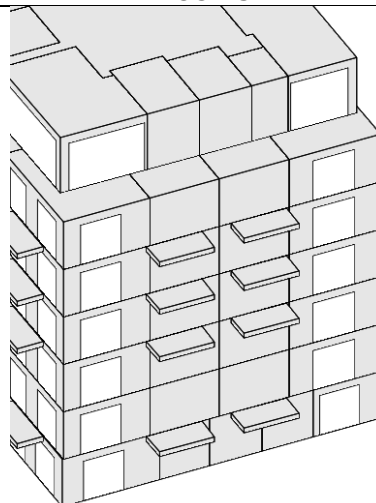
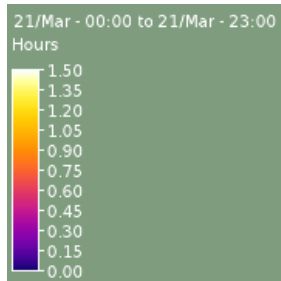
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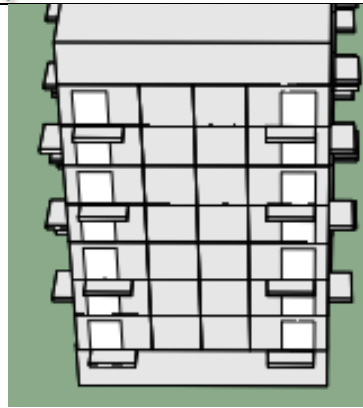
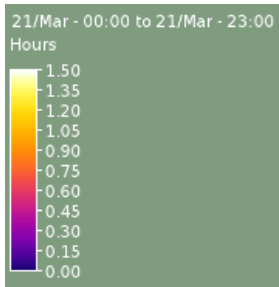
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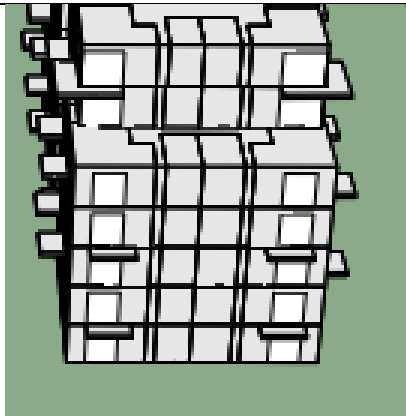
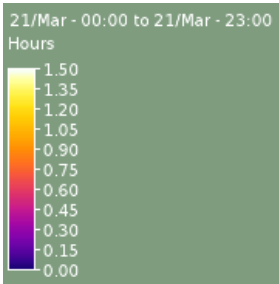
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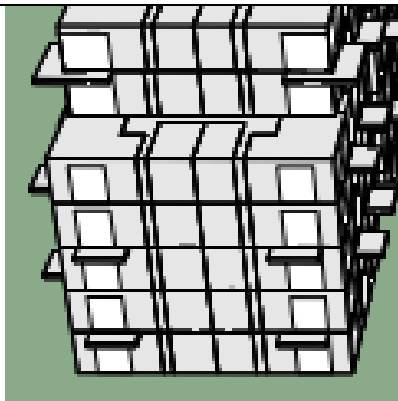
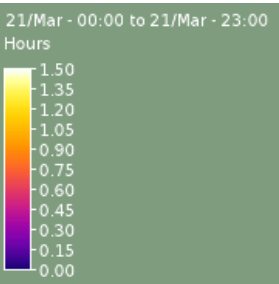
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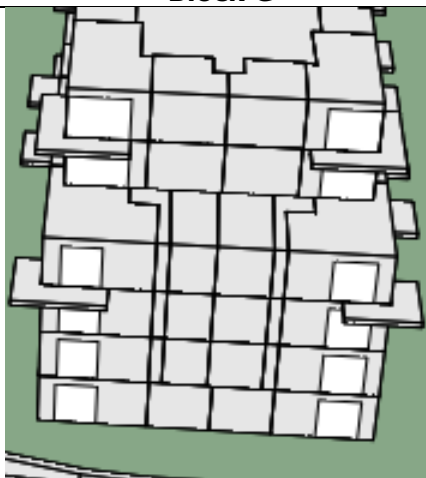
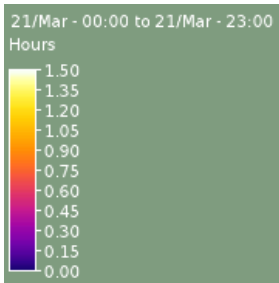
Block E



Block F



Block G



Block H

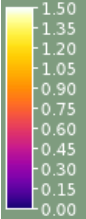
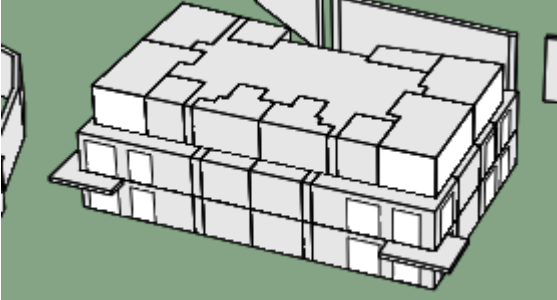
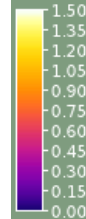
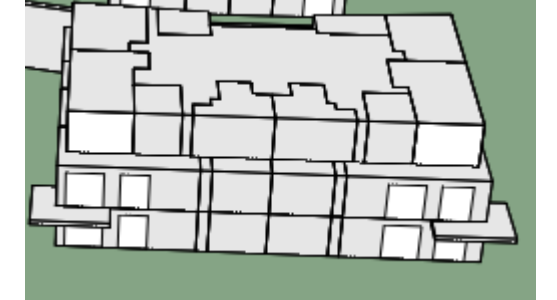
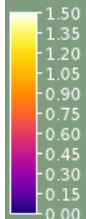
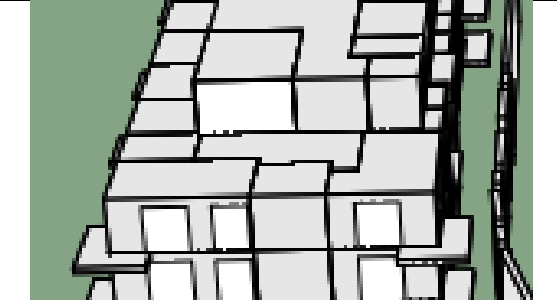
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<p>21/Mar - 00:00 to 21/Mar - 23:00 Hours</p> 	
<p>Block I2</p>	
<p>21/Mar - 00:00 to 21/Mar - 23:00 Hours</p> 	
<p>Block J</p>	

Table 12.0.1 APSH on Proposed Living Room Windows Result Images

Simulation Results Table

Block Name	Total Number of Windows	Number of Windows Achieving Guideline (≥ 1.5 Hours Sunlight on March 21st)	% Windows Achieving BRE Guideline for Access to Sunlight	Comments
Block A	40	40	100	
Block B	80	54	68	See Appendix D for Compensatory Measures
Block C	73	60	82	See Appendix D for Compensatory Measures
Block D	104	88	85	See Appendix D for Compensatory Measures
Block E	118	101	86	See Appendix D for Compensatory Measures
Block F	134	120	90	See Appendix D for Compensatory Measures
Block G	134	120	90	See Appendix D for Compensatory Measures
Block H	104	94	90	See Appendix D for Compensatory Measures
Block I1	35	28	80	See Appendix D for Compensatory Measures
Block I2	35	24	69	See Appendix D for Compensatory Measures
Block J	38	32	84	See Appendix D for Compensatory Measures
NW Houses	6	0	0	See Appendix D for Compensatory Measures

Table 12.0.2 APSH of Proposed Living Room Windows Result Table

Block Name	Total Number of Assessed Windows	Number of Assessed Windows Achieving Guideline (≥ 1.5 Hours Sunlight on March 21st)	% Assessed Windows Achieving BRE Guideline for Access to Sunlight	Comments
Block A	36	36	100	
Block B	54	41	76	See Appendix D for Compensatory Measures
Block C	47	36	77	See Appendix D for Compensatory Measures
Block D	90	79	88	See Appendix D for Compensatory Measures
Block E	106	91	86	See Appendix D for Compensatory Measures
Block F	120	120	100	
Block G	120	120	100	
Block H	94	94	100	
Block I1	24	23	96	See Appendix D for Compensatory Measures
Block I2	24	24	100	
Block J	34	32	94	See Appendix D for Compensatory Measures
NW Houses	0	0	N/A	

Table 12.0.3 APSH of Non-North Facing Proposed Living Room Windows Result Table

Results Summary

761 of the **901** assessed proposed main windows achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of **84%**.

696 of the **749** assessed Non-North facing proposed main windows achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of **93%**.

Overall, the proposed development achieves excellent sunlight levels per the criteria set out in the BRE Guide. For any units containing at least one receptor room that does not achieve these guidelines, a variety of compensatory measures have been provided to ensure occupant satisfaction. These measures include:

- Unit size exceeding the minimum standard by more than 10%
- Dual aspect glazing – glazing that is present on two or more walls of the same room allowing for views in multiple directions
- Direct quality views to retained existing trees - from unit bedroom and/or LDK room window
- Unit location is adjacent to communal residential facilities at Block E and Dalguise house
- A direct view over large area of public or communal open space - from unit bedroom and/or LDK room window

Appendix D provides a table listing each proposed unit which does not meet the BRE Guidelines, clarification on which criteria the unit is not achieving, and what compensatory measures are available to that unit.

13.0 SUNLIGHT ASSESSMENT – PROPOSED DEVELOPMENT AMENITY SPACE

The BRE Guide recommends that for an amenity space to appear adequately sunlit throughout the year, at least half of the amenity space should receive at least two hours of sunlight on the design day, March 21st.

Methodology (as referenced in Section 3.3 of the BRE Guide)

Design Issue	BRE Recommended Criteria – Section 3.3.7
Sunlight in Gardens, Communal Open Spaces, Play Areas etc.	It is recommended that at least half ($\geq 50\%$) of the amenity areas should receive at least two hours of sunlight on 21 st March.

Table 12.0.1 – BRE methodology for safeguarding sunlight in amenity spaces

The massing of the proposed development has been designed so that the amenity areas meet the BRE Guides recommended criteria for sunlight while retaining well-established site foliage. This will ensure that a positive appearance and ambiance will be achieved by the development. This is demonstrated by the images overleaf where the amenity areas exceed the BRE Guides recommended criteria.

Additionally, the total outdoor area of the proposed development has been divided into several subspaces to assist with simulation capability and provide clarity. Figure 12.0.2 below shows the designated spaces and their assessment references.

Overall, the proposed development is in line with the BRE guidelines and achieves excellent levels of sunlight for all assessed spaces.



Figure 13.0.1 Landscaping Site Plan

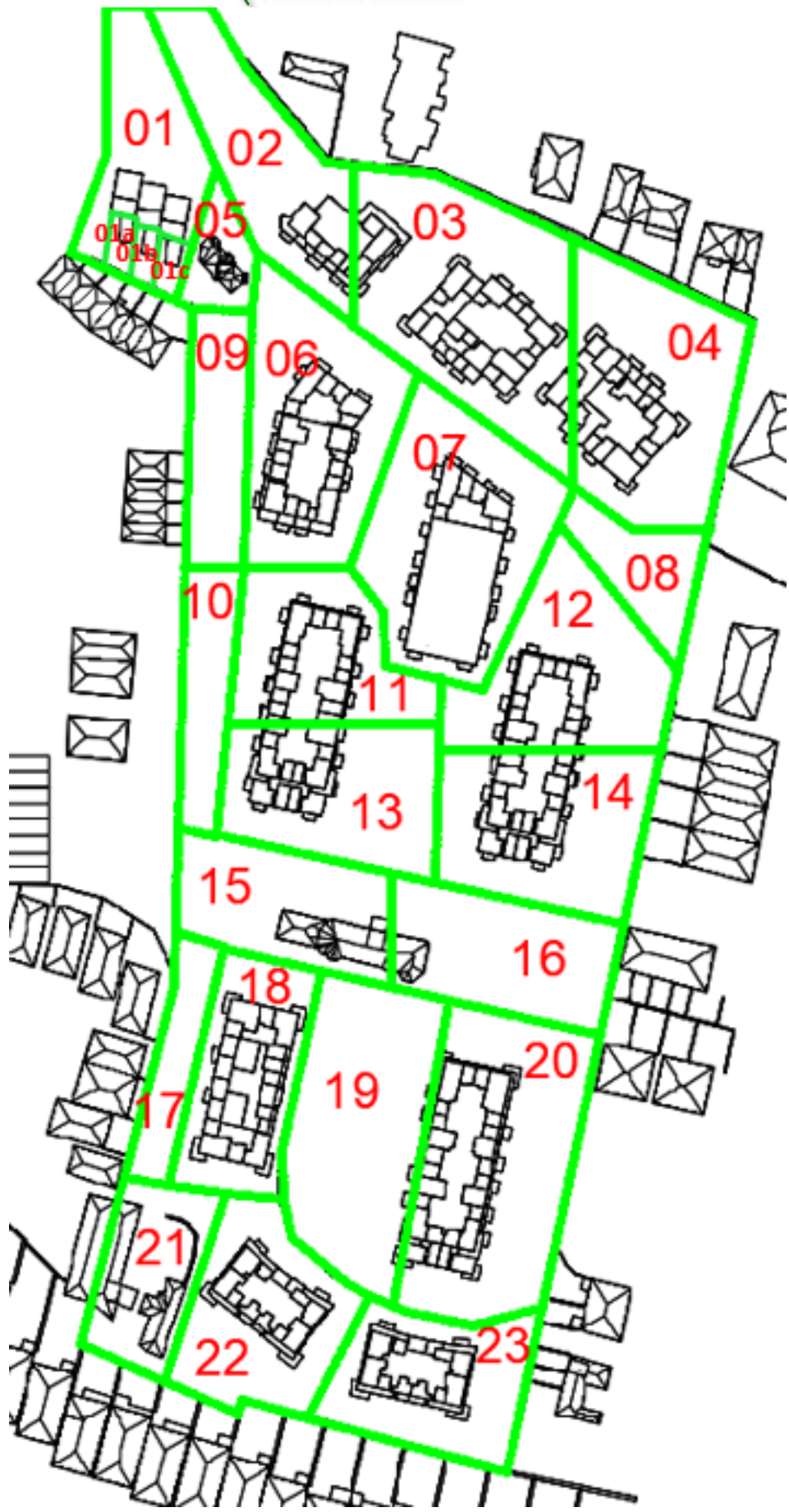
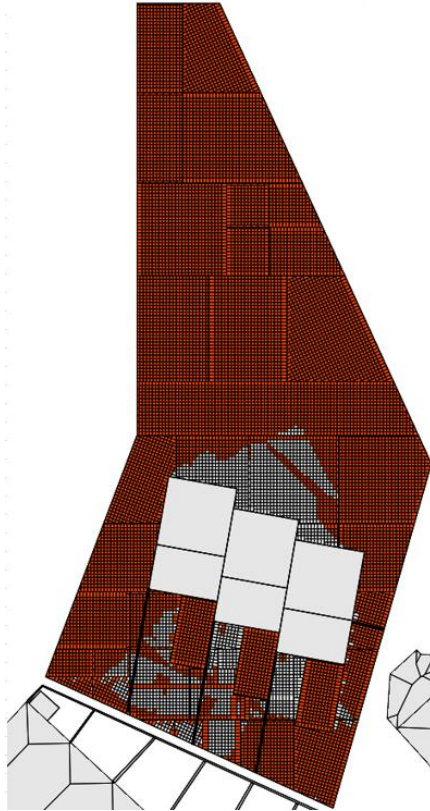


Figure 13.0.2 Sunlight Exposure Assessment References

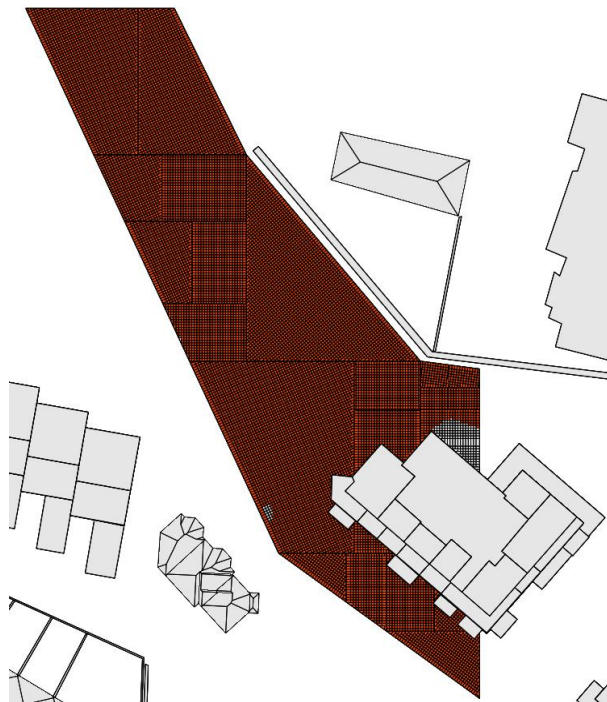
Simulation Results

Proposed Development Open Areas – March 21st
Cells coloured red if they receive ≥ 2 hours of sunlight

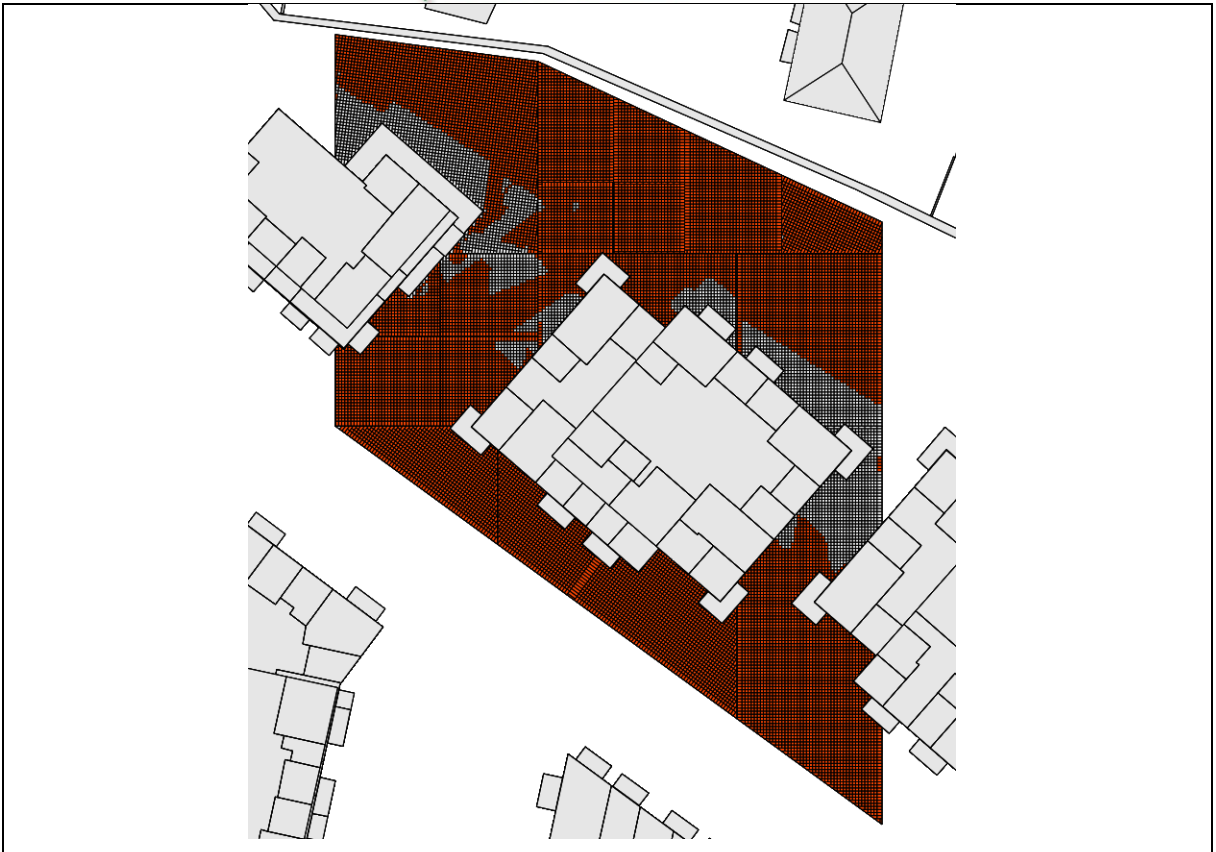
Assessment Reference 01, 01a, 01b, 01c



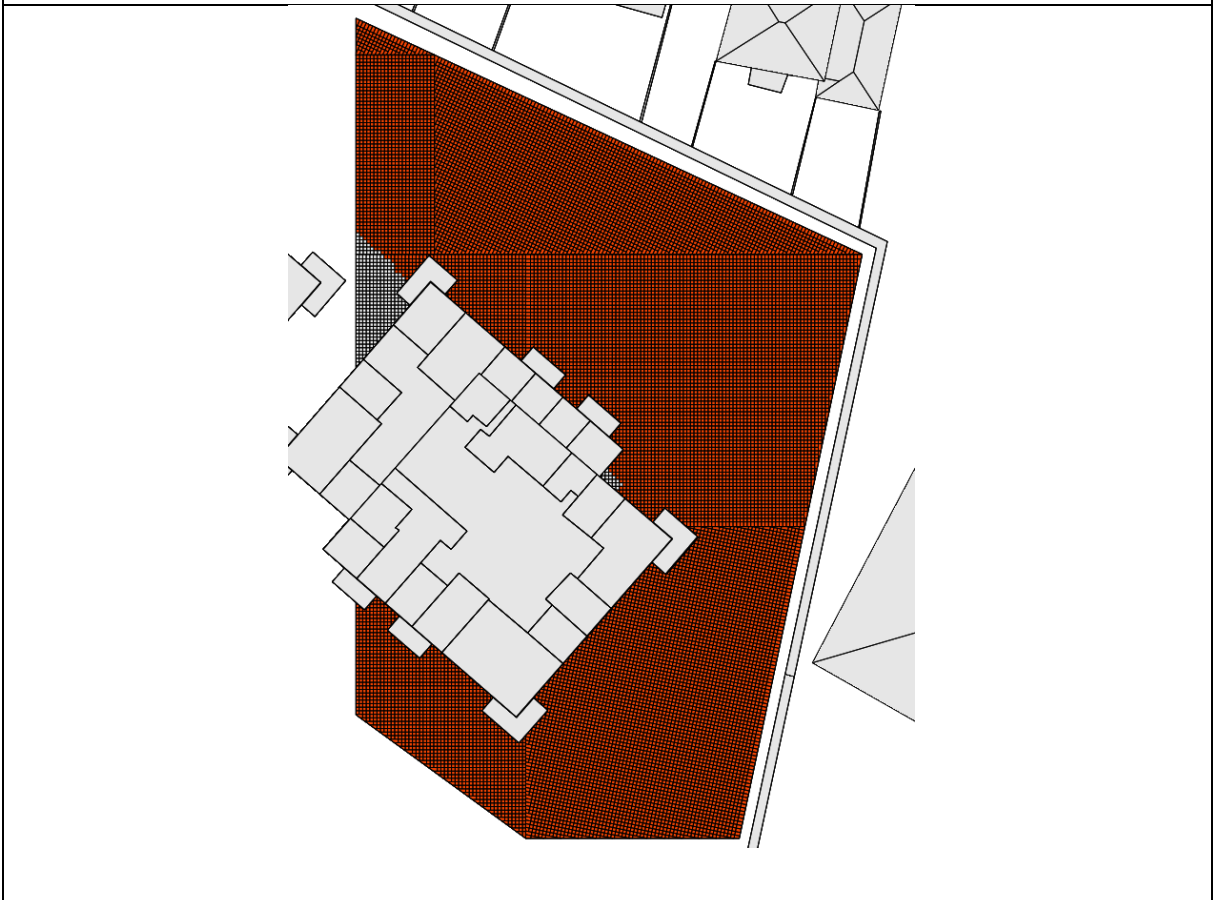
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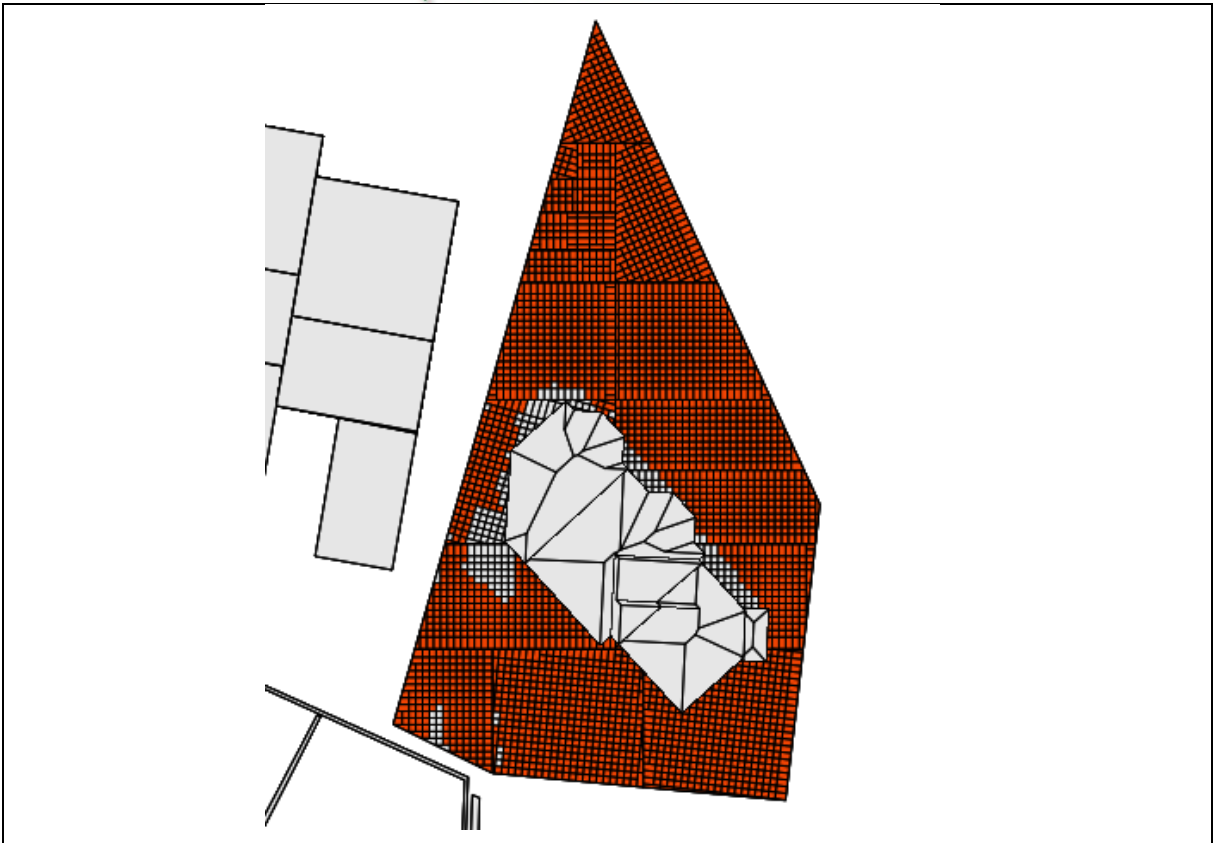
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Assessment Reference 04



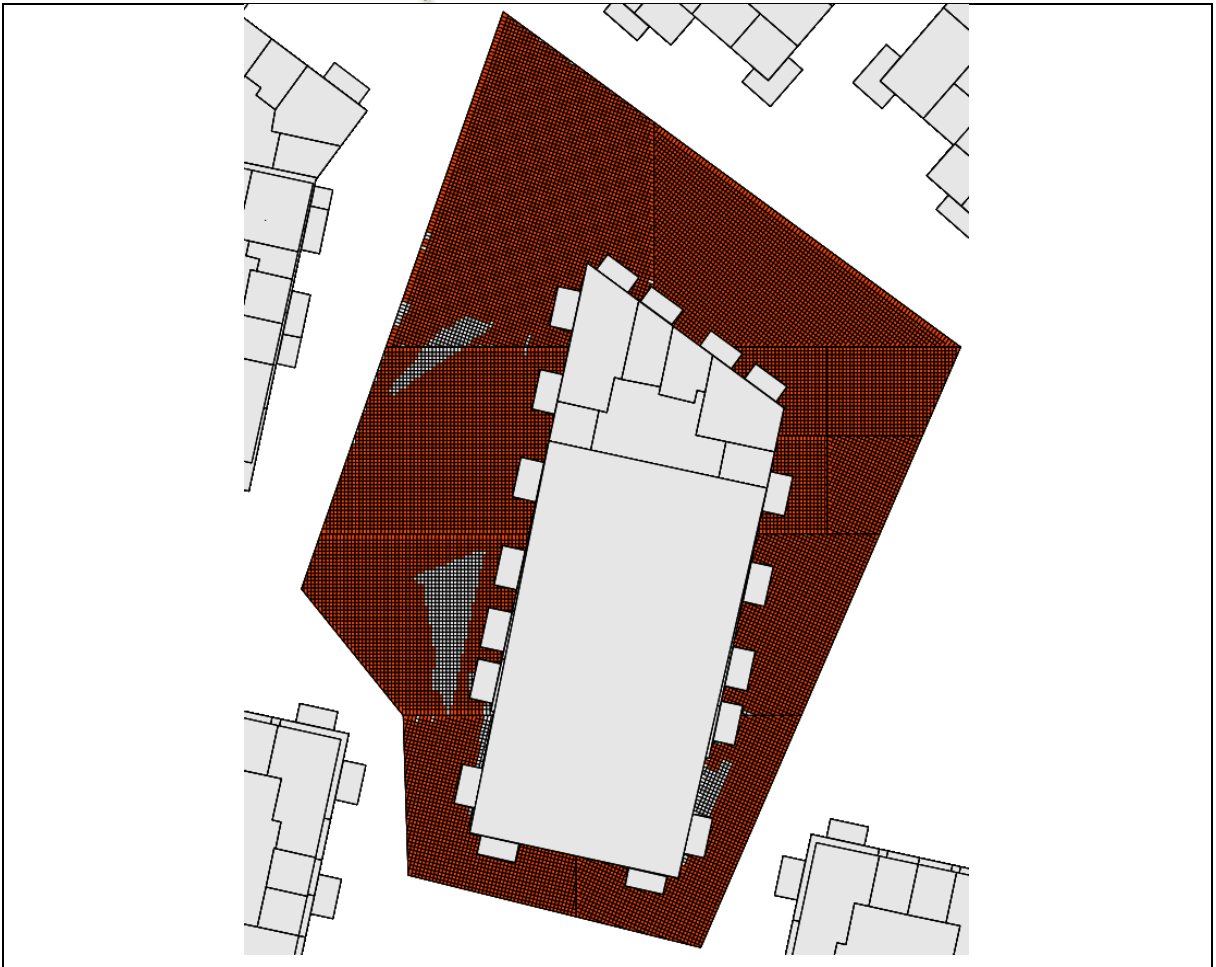
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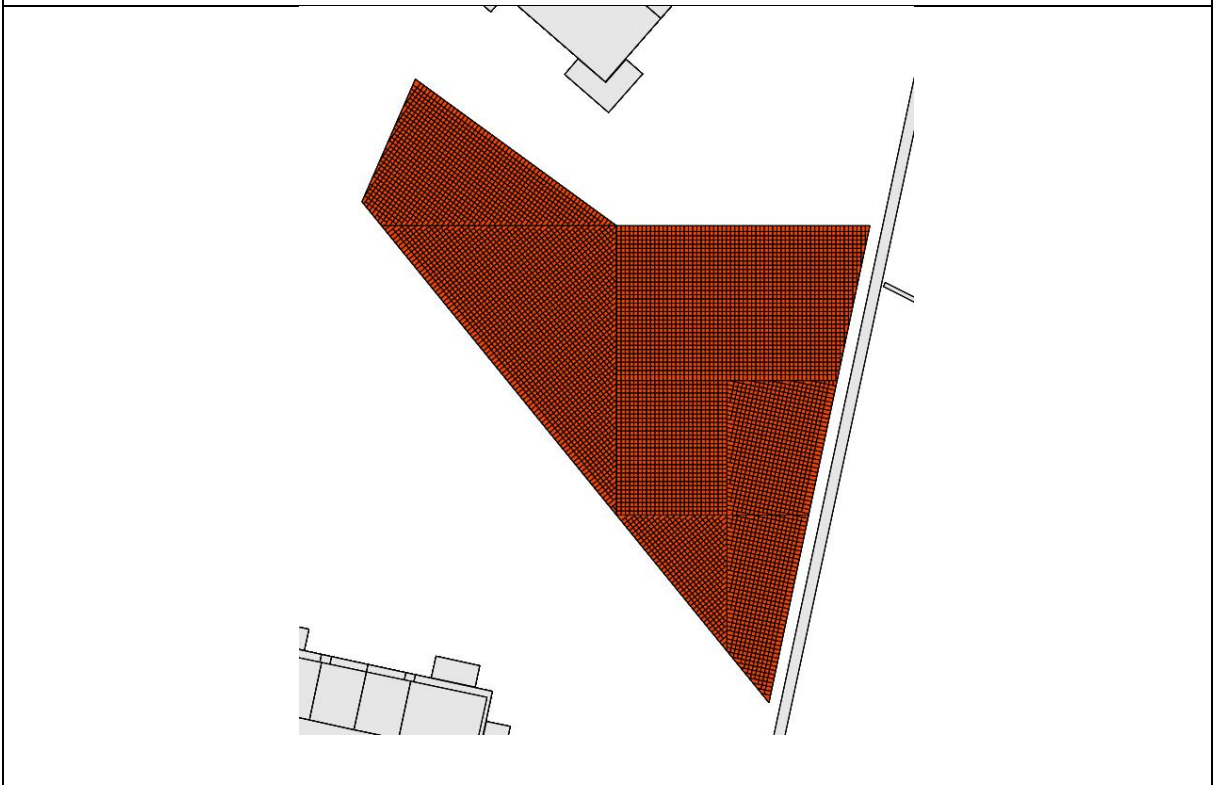
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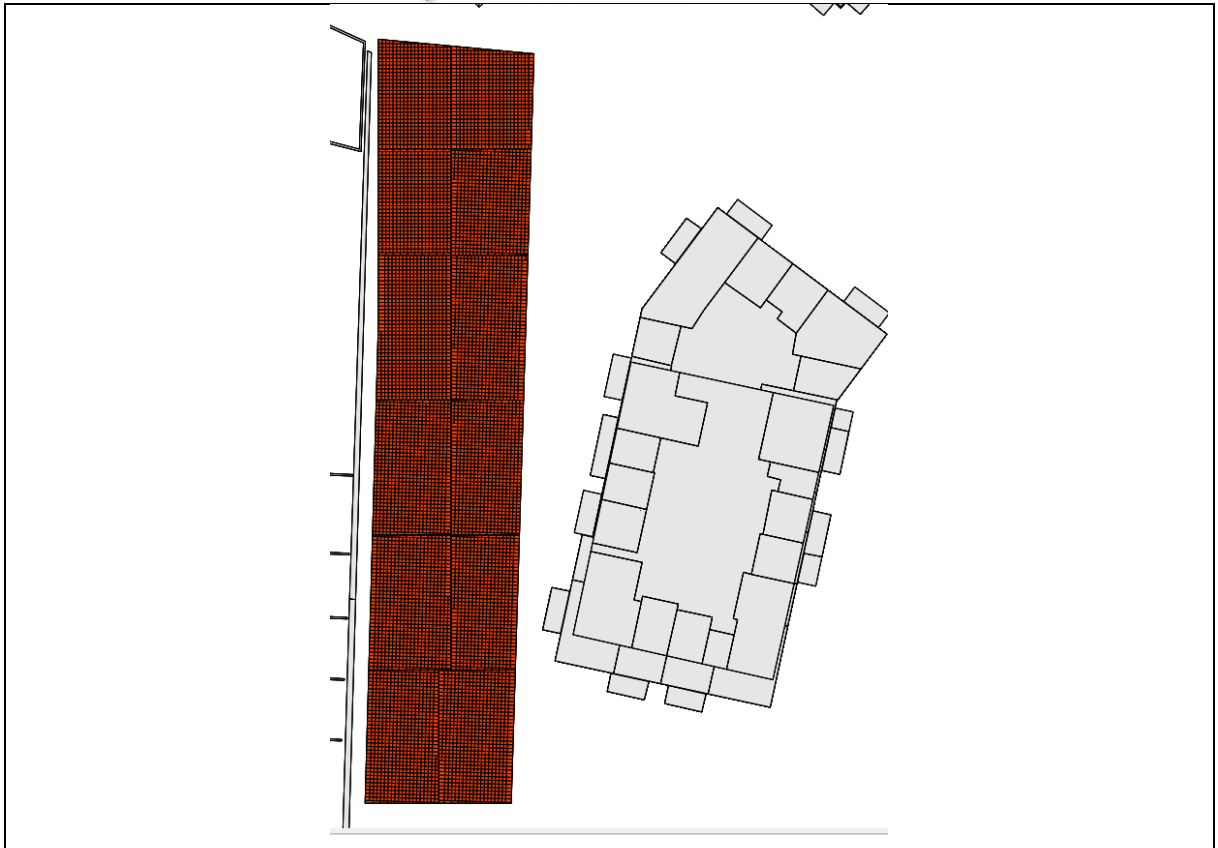
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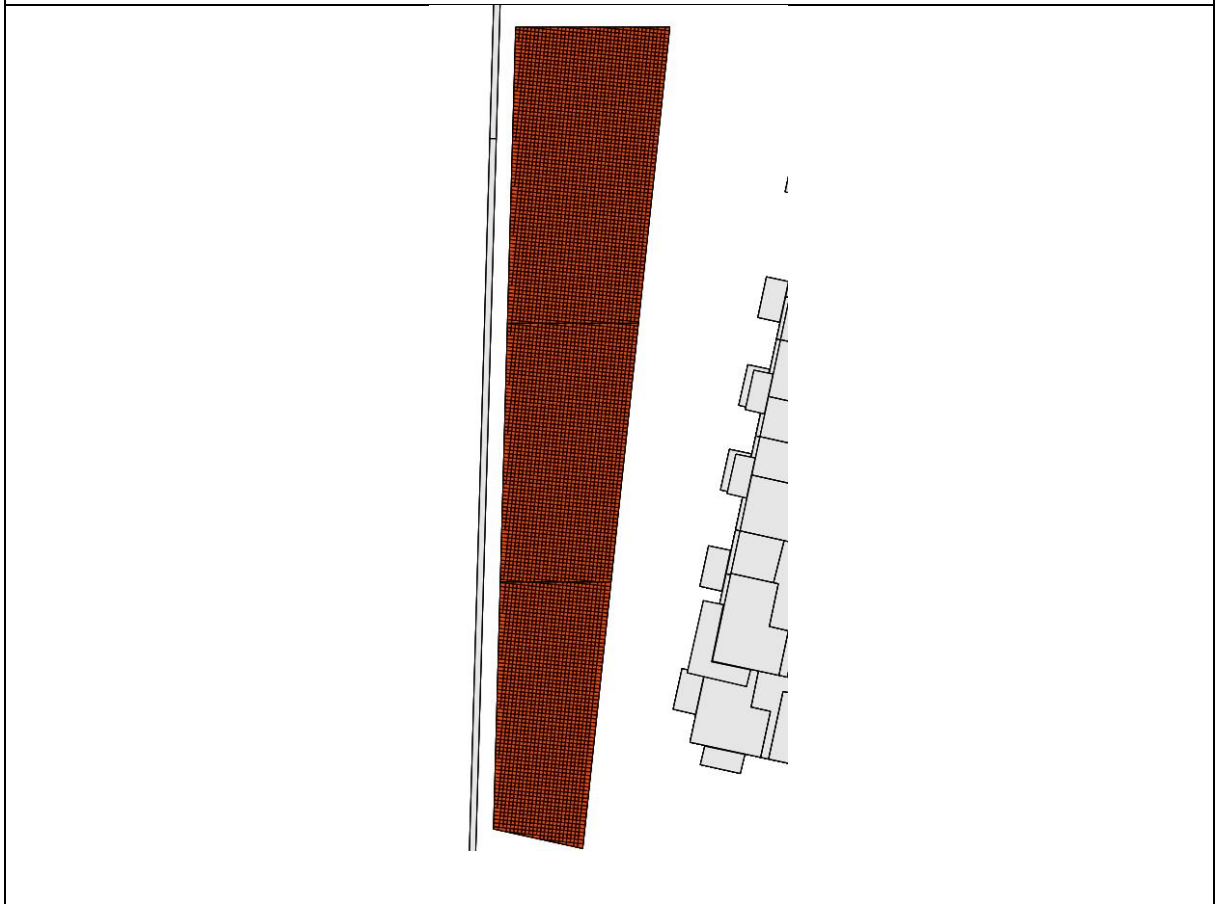
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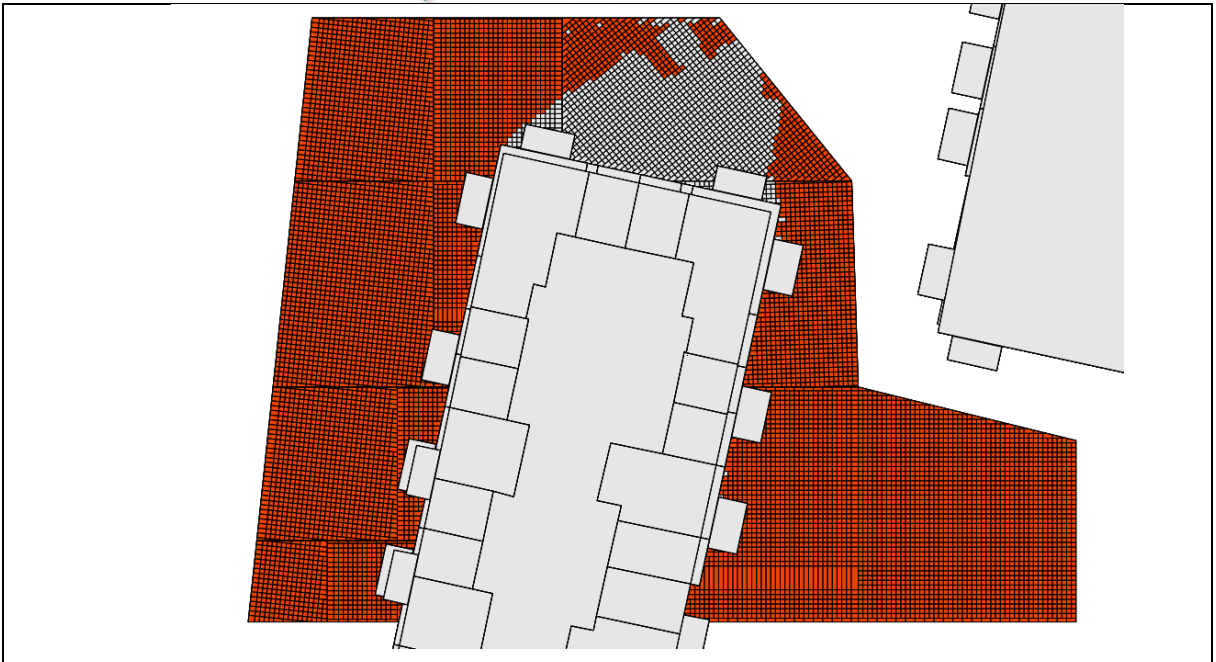
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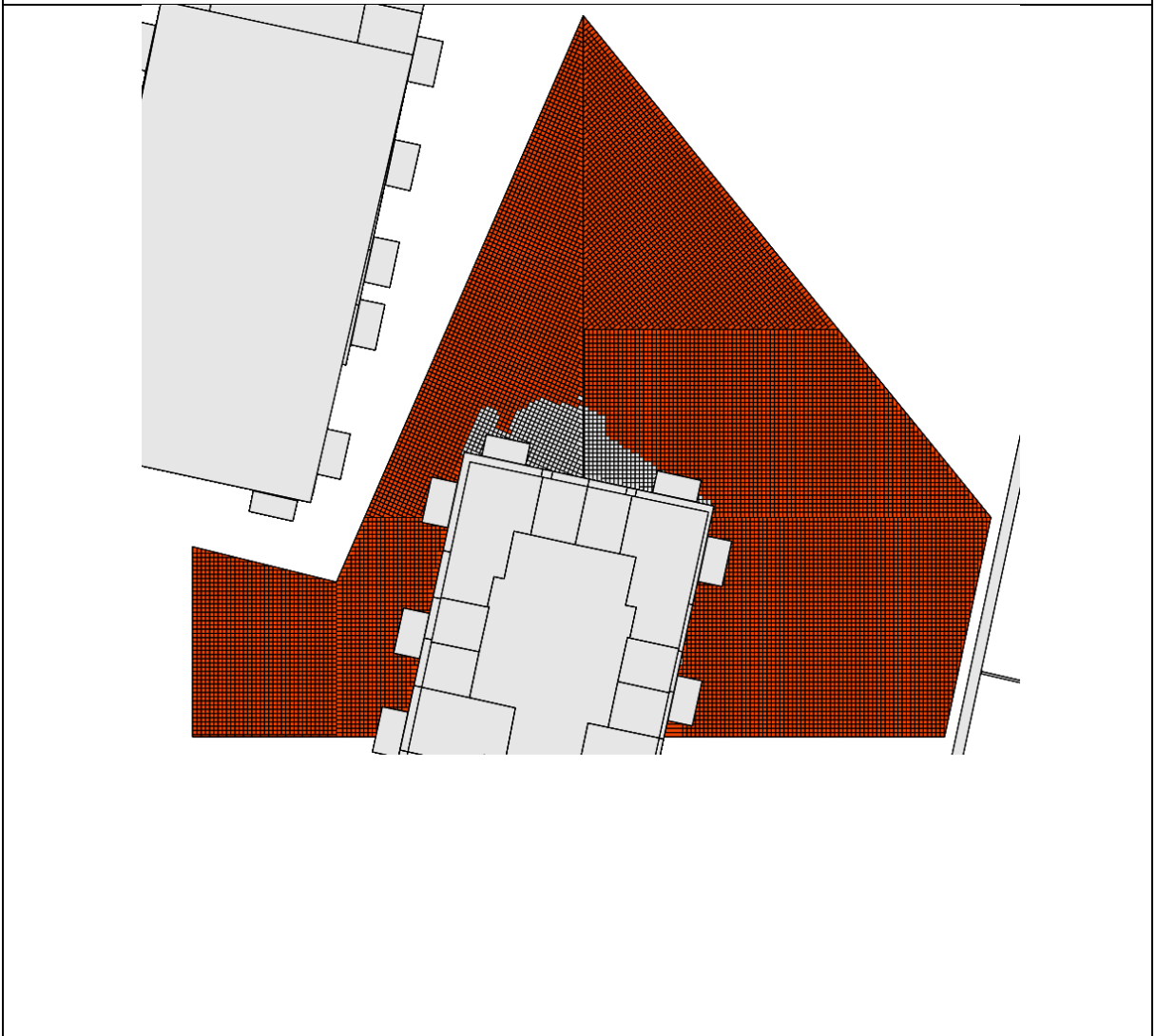
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Assessment Reference 11



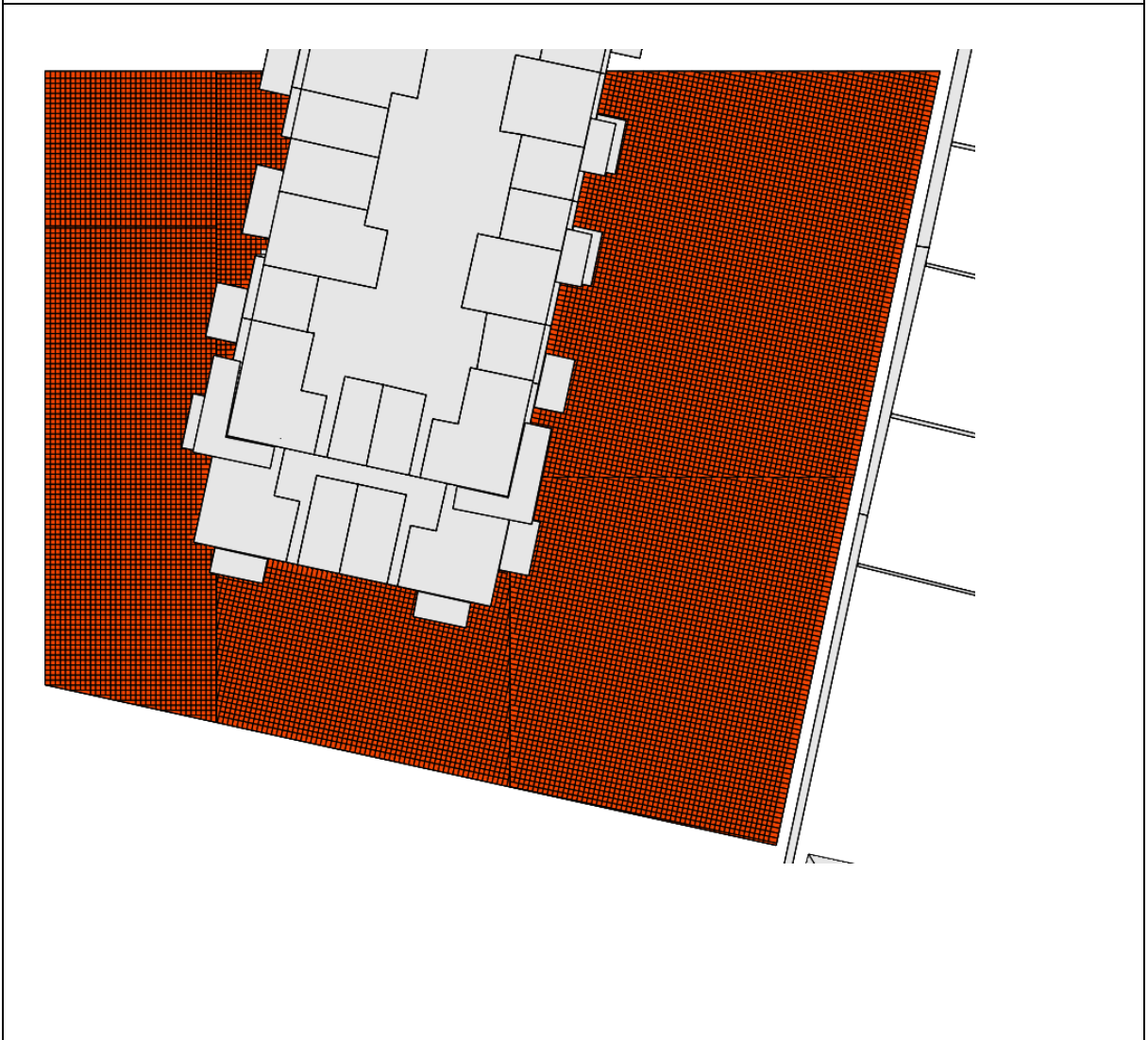
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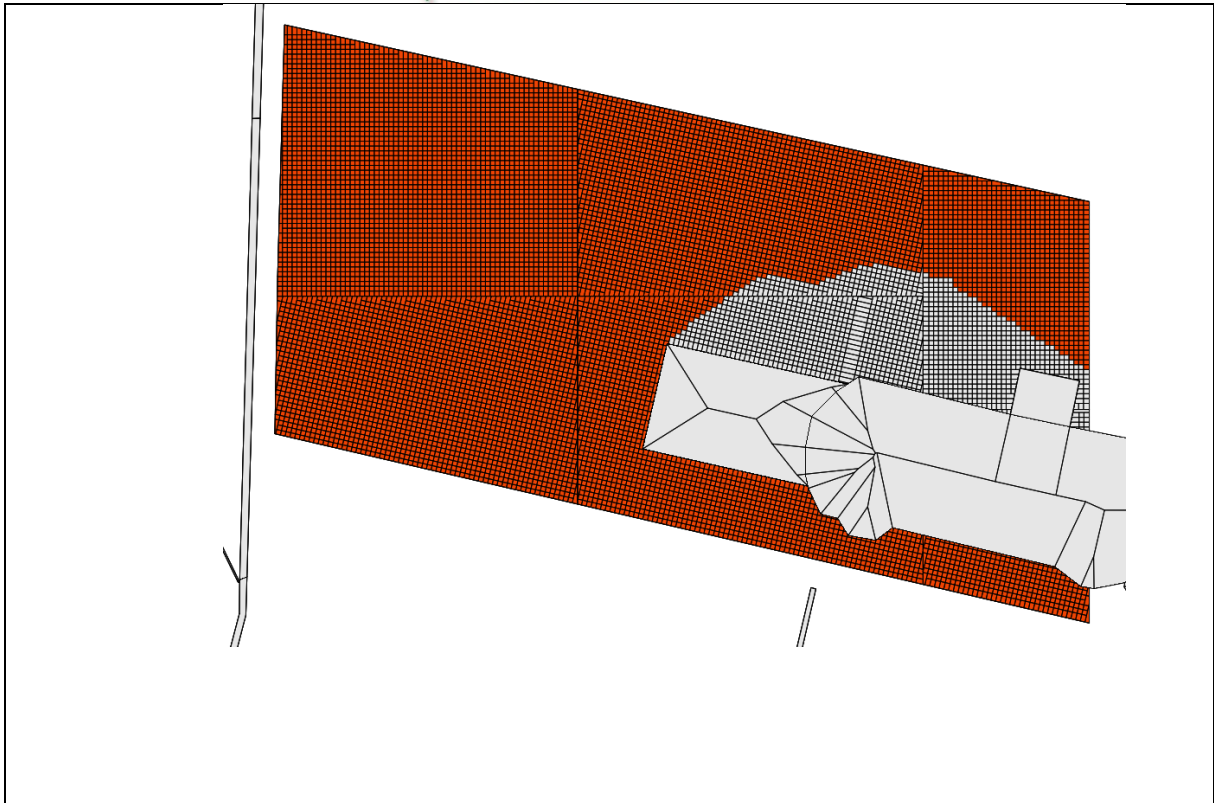
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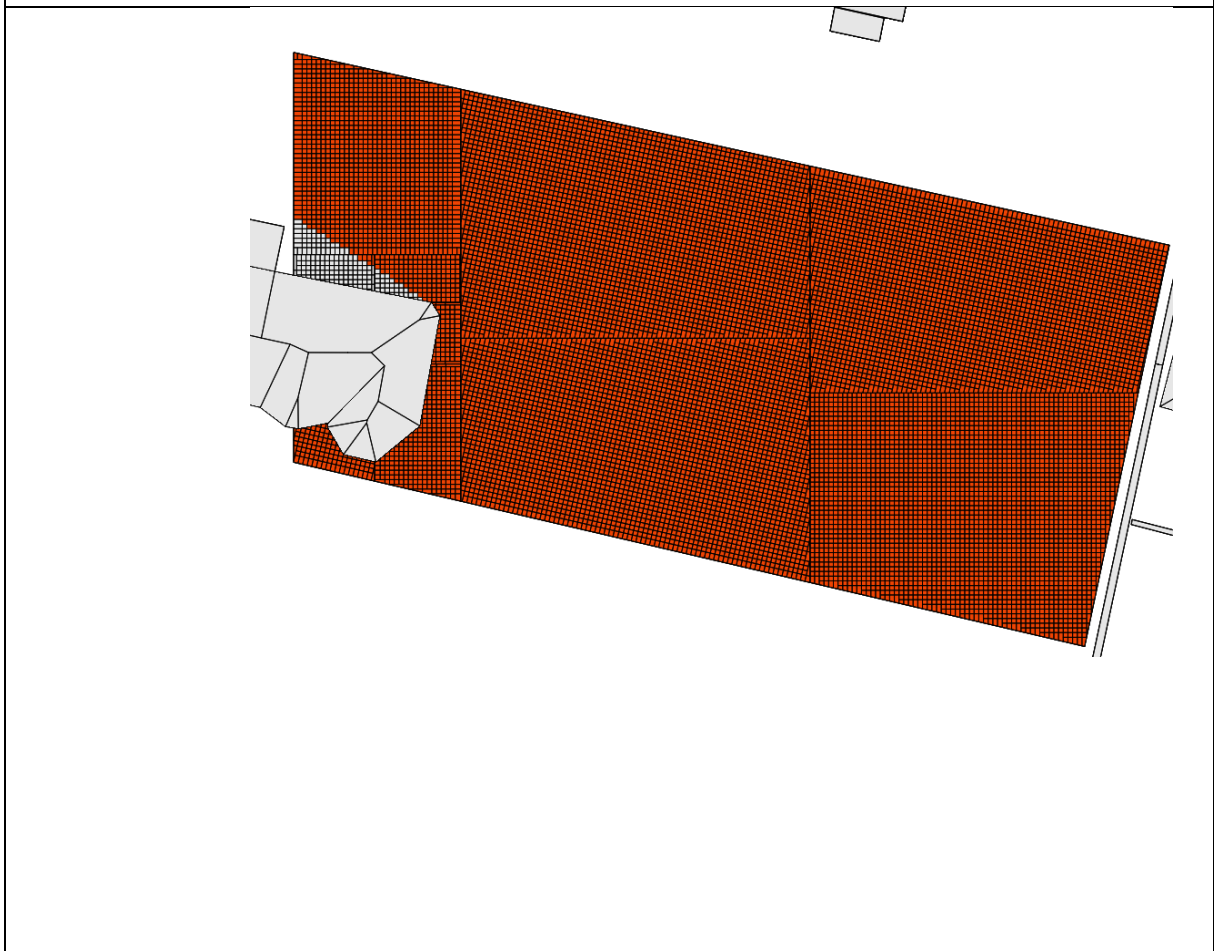
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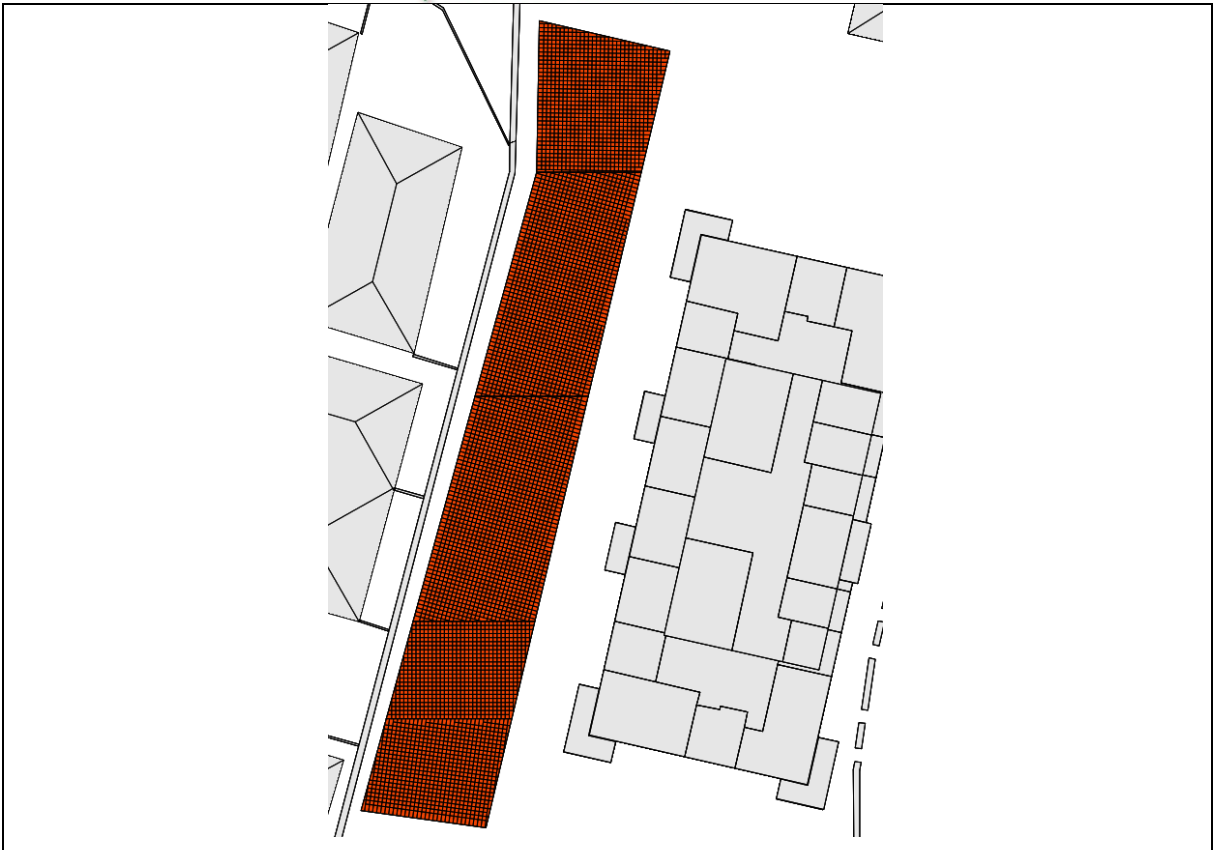
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Assessment Reference 16



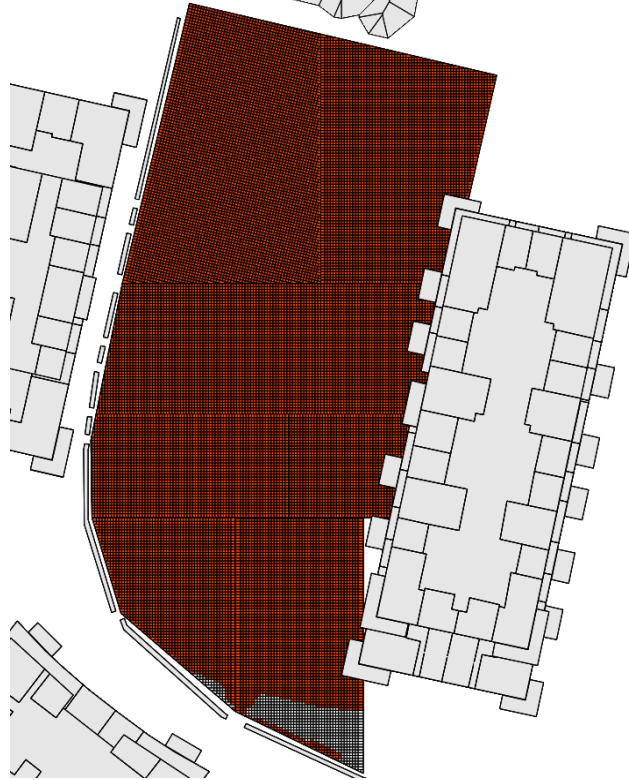
Assessment Reference 17



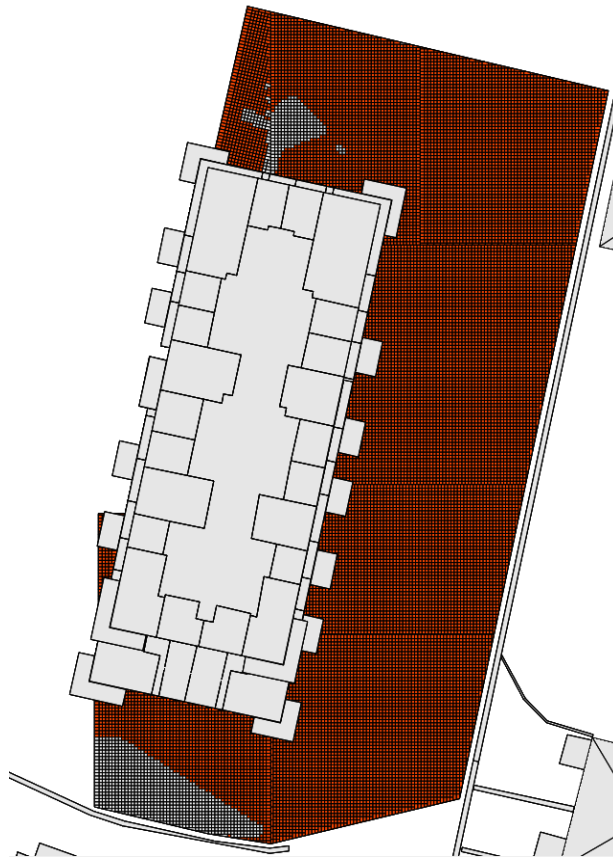
Assessment Reference 18



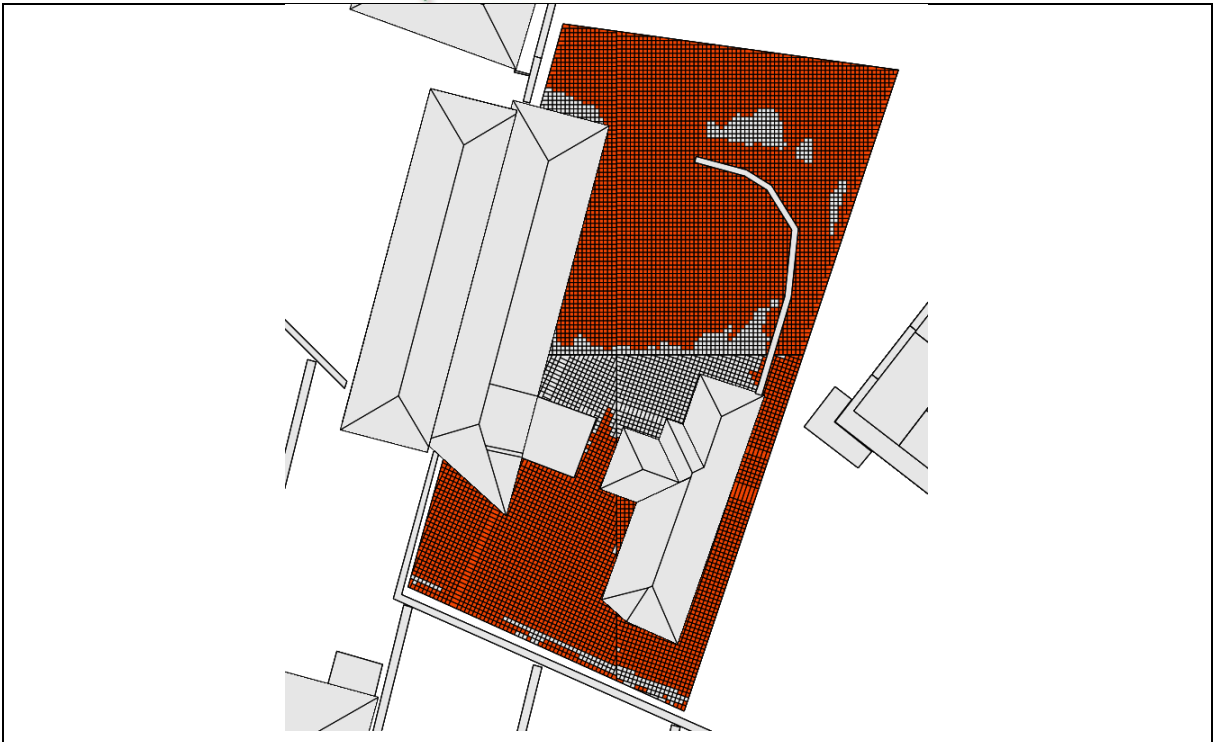
Assessment Reference 19



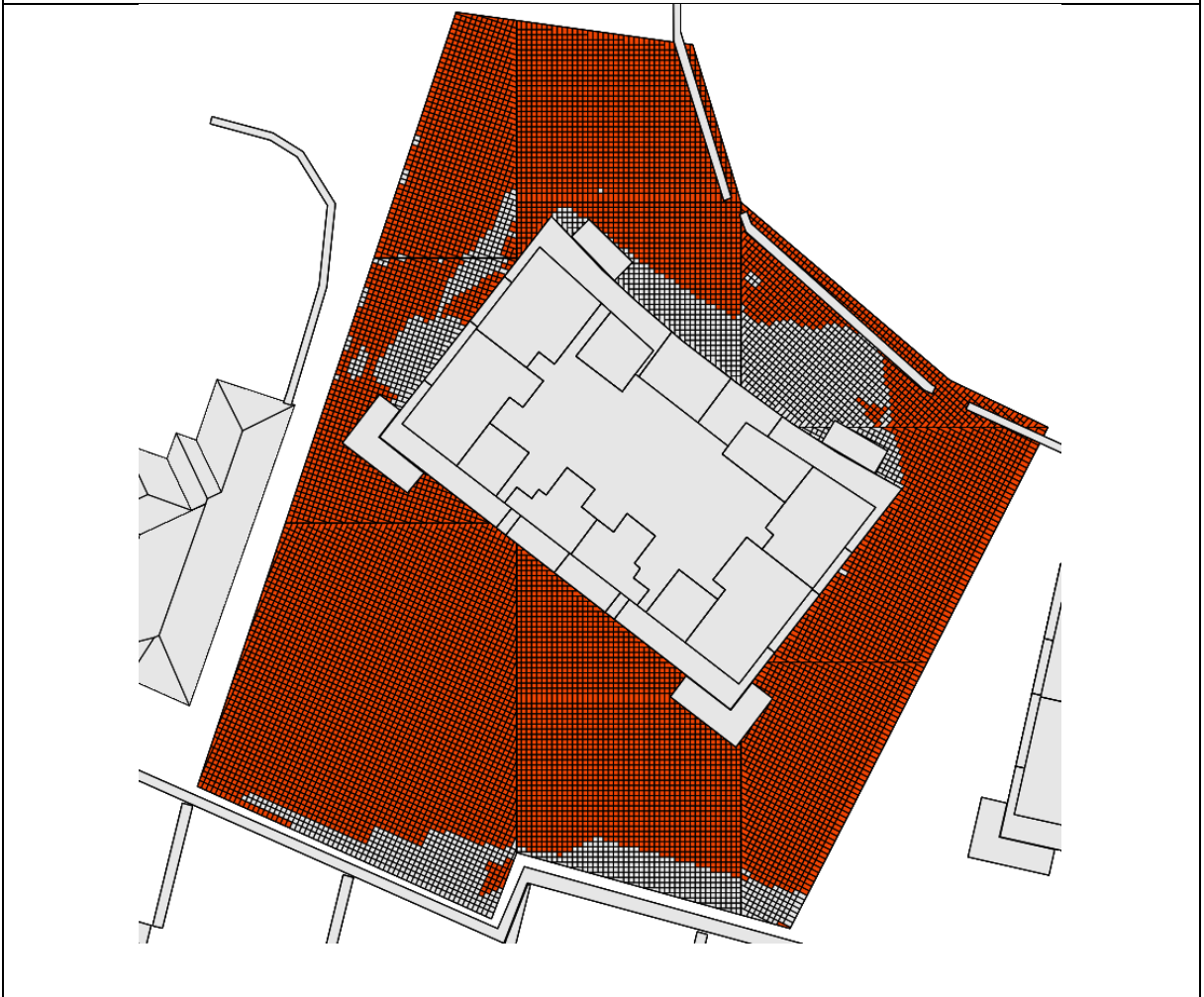
Assessment Reference 20



Assessment Reference 21



Assessment Reference 22



Assessment Reference 23

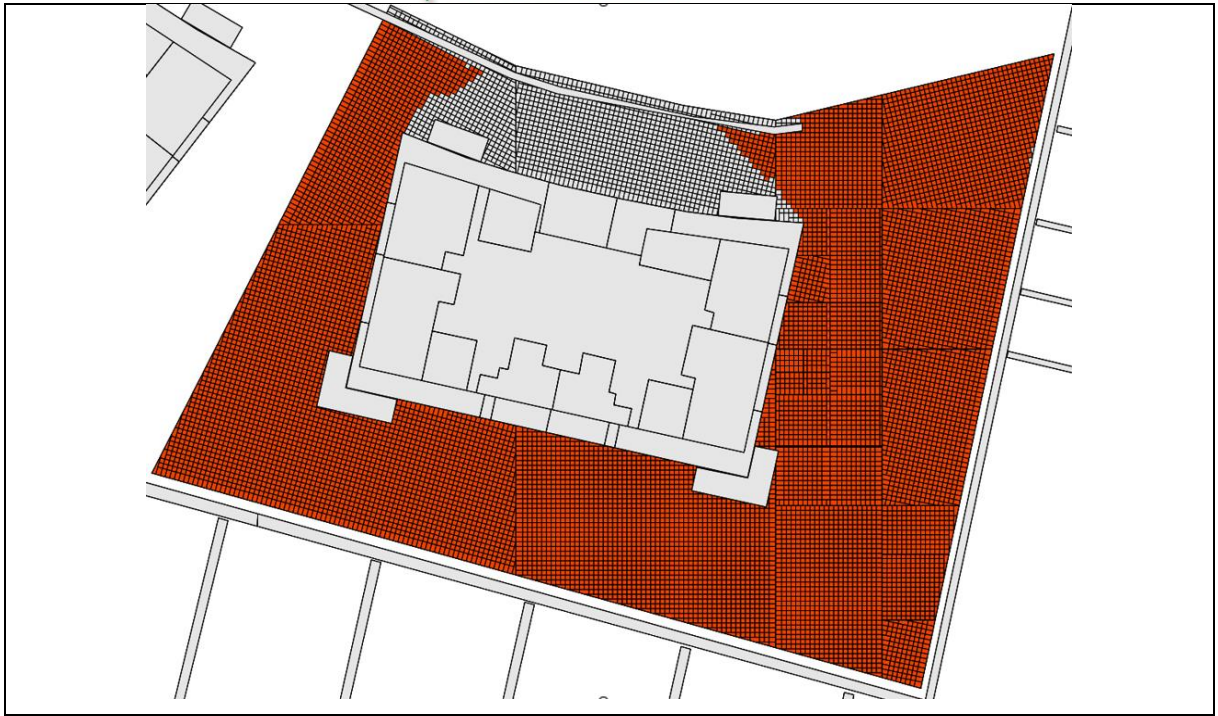


Table 13.0.1 Sunlight Exposure on Proposed Amenity Areas Results

Simulation Results Table

Garden Ref No.	% of Garden receiving ≥ 2 hours of sunlight on March 21	Compliant with BRE Guideline for safeguarding access to sunlight
1	85.00	Yes
1a	58.00	Yes
1b	60.00	Yes
1c	83.00	Yes
2	95.00	Yes
3	80.00	Yes
4	95.00	Yes
5	95.00	Yes
6	85.00	Yes
7	95.00	Yes
8	100.00	Yes
9	100.00	Yes
10	100.00	Yes
11	90.00	Yes
12	95.00	Yes
13	100.00	Yes
14	100.00	Yes
15	80.00	Yes
16	95.00	Yes
17	100.00	Yes
18	70.00	Yes
19	95.00	Yes
20	90.00	Yes
21	85.00	Yes
22	85.00	Yes
23	90.00	Yes

Results Summary

26 of the **26** assessed areas are in line with the BRE guidelines and achieve excellent levels of sunlight.

SHADOW ASSESSMENT

Per BRE Guidelines, Shadow Images from the IES SunCast simulation package are presented in Appendix G for informational purposes only for both the current scenario and with the proposed development in place. Images are presented for the design days of March 21st and June 21st as recommended by the BRE Guide. These design days generally provide the best dates for shadow images, March 21st gives an average shadowing day while June 21st represents the best-case minimum shadow scenario. It is worth noting that shadows on the Autumn Equinox (September 21st) will be the same as those on the Spring Equinox (March 21st), and that for the 6 months between March and September, shadows will be equal to or less significant than those presented in the March 21st images. Also presented are images for December 21st, however it should be noted that in December, even low buildings will cast long shadows. It should be borne in mind when interpreting the shadowing images that nearly all structures will create areas of new shadows, and some degree of Shadowing of a space is to be expected. Time adjustments for daylighting savings have been accounted for in the results presented for June 21st.

Foliage present within the proposed developments boundary which provides significant shading in some instances has been *excluded from the simulation as it is not typical in shadowing assessments* per the BRE Guidelines. However, the Arboricultural Assessment enclosed with this Application has identified boundary trees and/or groups of trees which are of poor quality and should be removed irrespective of any further development on the basis of good estate management. As such, shadowing impact on the ground may differ slightly from the results presented as it is not able to be captured accurately using this analysis method.

14.0 CONCLUSION

The Daylight, Sunlight and Shadowing assessment of the proposed development was prepared using the methodology's set out in the British Standard: Lighting for Buildings – Part 2: Code for Practice for Daylighting, BRE 209, 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice', Third Edition 2022, by P. J. Littlefair, and the Design Standards for New Apartments - Guidelines for Planning Authorities (December 2020).

It is important to note that these guidelines do not contain mandatory requirements and they should not be seen as an instrument of planning policy.

Our conclusions with respect to daylight & sunlight are summarised as follows;

Existing Neighbouring Properties

Vertical Sky Component

172 of the **187** windows assessed meet the BRE Guideline metrics for access to daylight for existing surrounding dwellings, resulting in a **92% passing rate**. This demonstrates that the proposed development will not result in any loss of light received by neighbouring properties beyond Minor adverse impacts as identified in Appendix I of the BRE Guidelines.

Annual Probable Sunlight Hours

156 of the **197** windows assessed for APSH achieved the BRE Guideline recommended values for safeguarding access to sunlight in existing dwellings resulting in a **79% passing rate**.

178 of the **197** windows assessed for APSH in the winter months achieved the BRE Guideline recommended values for safeguarding access to sunlight in existing dwellings resulting in a **90% passing rate**.

This demonstrates that the proposed development will not result in any loss of light received by the nearby residential developments beyond Minor adverse impacts as identified in Appendix I of the BRE Guidelines

Shadow Images

Per BRE Guidelines, Shadow Images are presented, for informational purposes only, for both the current scenario and with the proposed development in place. While additional shadows are identified, it is important to note that the results of the daylight and sunlight impact assessment demonstrated that the proposed development would not result in any significant loss of light received by neighbouring properties.

Proposed Development

Overall, the proposed development achieves excellent daylight/sunlight levels per the criteria set out in the BRE Guide. For any units containing at least one receptor room that does not achieve these guidelines, a variety of compensatory measures have been provided to ensure occupant satisfaction. These measures include:

- Unit size exceeding the minimum standard by more than 10%
- Dual aspect glazing – glazing that is present on two or more walls of the same room allowing for views in multiple directions
- Direct quality views to retained existing trees - from unit bedroom and/or LDK room window
- Unit location is adjacent to communal residential facilities at Block E and Dalguise house
- A direct view over large area of public or communal open space - from unit bedroom and/or LDK room window

Appendix D provides a table listing each proposed unit which does not meet the BRE Guidelines, clarification on which criteria the unit is not achieving, and what compensatory measures are available to that unit.

Daylight

Of the **1191** rooms that were assessed, **1159** achieved the BRE daylighting guidelines. This provides excellent results with a passing rate of **97%** for the entire development.

Summaries for each block are available in **Appendix A**.

APSH

761 of the **901** assessed proposed main windows achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of **84%**.

696 of the **749** assessed Non-North facing proposed main windows achieve the BRE Guideline recommended values for safeguarding access to sunlight. This provides excellent results with a passing rate of **93%**.

Sunlight to Amenity Areas

26 of the **26** assessed areas are in line with the BRE guidelines and achieve excellent levels of sunlight.

Shadow Images

Per BRE Guidelines, Shadow Images from the IES SunCast simulation package are presented in Appendix G for informational purposes only for both the current scenario and with the proposed development in place. Images are presented for the design days of March 21st and June 21st as recommended by the BRE Guide. Also presented are images for December 21st, however it should be noted that in December, even low buildings will cast long shadows. It should be borne in mind when interpreting the shadowing images that nearly all structures will create areas of new shadows, and some degree of Shadowing of a space is to be expected.

While additional shadows are identified, it is important to note that the results of the daylight and sunlight impact assessment demonstrated that the proposed development would not result in any significant loss of light received by neighbouring properties.

APPENDIX A – DAYLIGHT RESULTS – PROPOSED DEVELOPMENT

NW HOUSES

NW Houses				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
North West House 01 PB:01 Bedroom	100	100.00	Yes	
North West House 01 PB:02 Bedroom	100	100.00	Yes	
North West House 02 PB:01 Bedroom	100	100.00	Yes	
North West House 02 PB:02 Bedroom	100	100.00	Yes	
North West House 03 PB:01 Bedroom	100	100.00	Yes	
North West House 03 PB:02 Bedroom	100	100.00	Yes	
North West House 01 LL:03 Living	150	100.00	Yes	
North West House 01 LL:04 Kitchen	200	100.00	Yes	
North West House 02 LL:03 Living	150	100.00	Yes	
North West House 02 LL:04 Kitchen	200	100.00	Yes	
North West House 03 LL:03 Living	150	100.00	Yes	
North West House 03 LL:04 Kitchen	200	100.00	Yes	
North West House 01 L00:05 Bedroom	100	100.00	Yes	
North West House 02 L00:05 Bedroom	100	100.00	Yes	
North West House 03 L00:05 Bedroom	100	100.00	Yes	

BLOCK A

Block A				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block A L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block A L00:02 Unit 01 LDK	200	100.00	Yes	
Block A L00:03 Unit 02 LDK	200	22.92	No	See Appendix D for Compensatory Measures
Block A L00:04 Unit 02 Bedroom	100	100.00	Yes	
Block A L00:05 Unit 03 LDK	200	36.84	No	See Appendix D for Compensatory Measures
Block A L00:06 Unit 03 Bedroom	100	100.00	Yes	
Block A L00:07 Unit 04 Bedroom	100	100.00	Yes	
Block A L00:08 Unit 04 LDK	200	82.22	Yes	
Block A L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block A L01:02 Unit 01 LDK	200	100.00	Yes	
Block A L01:03 Unit 02 Bedroom	100	100.00	Yes	
Block A L01:04 Unit 02 LDK	200	100.00	Yes	
Block A L01:05 Unit 02 Bedroom	100	100.00	Yes	
Block A L01:06 Unit 03 LDK	200	36.84	No	See Appendix D for Compensatory Measures
Block A L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block A L01:08 Unit 04 Bedroom	100	100.00	Yes	
Block A L01:09 Unit 04 LDK	200	95.45	Yes	
Block A L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block A L02:02 Unit 01 LDK	200	100.00	Yes	
Block A L02:03 Unit 02 Bedroom	100	100.00	Yes	
Block A L02:04 Unit 02 LDK	200	100.00	Yes	
Block A L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block A L02:06 Unit 03 LDK	200	55.26	Yes	
Block A L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block A L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block A L02:09 Unit 04 LDK	200	100.00	Yes	

Block A L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block A L03:02 Unit 01 LDK	200	100.00	Yes	
Block A L03:03 Unit 02 Bedroom	100	100.00	Yes	
Block A L03:04 Unit 02 LDK	200	100.00	Yes	
Block A L03:05 Unit 02 Bedroom	100	100.00	Yes	
Block A L03:06 Unit 03 LDK	200	65.79	Yes	
Block A L03:07 Unit 03 Bedroom	100	100.00	Yes	
Block A L03:08 Unit 04 Bedroom	100	100.00	Yes	
Block A L03:09 Unit 04 LDK	200	100.00	Yes	
Block A L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block A L04:02 Unit 01 LDK	200	100.00	Yes	
Block A L04:03 Unit 02 LDK	200	100.00	Yes	
Block A L04:04 Unit 02 Bedroom	100	100.00	Yes	
Block A L04:05 Unit 03 Bedroom	100	100.00	Yes	
Block A L04:06 Unit 03 Bedroom	100	100.00	Yes	
Block A L04:07 Unit 03 LDK	200	100.00	Yes	

BLOCK B

Block B				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block B LL:01 Unit 01 Bedroom	100	100.00	Yes	
Block B LL:02 Unit 01 LDK	200	89.04	Yes	
Block B LL:03 Unit 01 Bedroom	100	100.00	Yes	
Block B LL:04 Unit 02 LDK	200	100.00	Yes	
Block B LL:05 Unit 02 Bedroom	100	100.00	Yes	
Block B LL:06 Unit 03 Bedroom	100	100.00	Yes	
Block B LL:07 Unit 03 LDK	200	70.00	Yes	
Block B LL:08 Unit 04 Bedroom	100	100.00	Yes	
Block B LL:09 Unit 04 LDK	200	94.37	Yes	
Block B LL:10 Unit 04 Bedroom	100	100.00	Yes	
Block B L00:01 Unit 01 LDK	200	80.49	Yes	
Block B L00:02 Unit 01 Bedroom	100	100.00	Yes	
Block B L00:03 Unit 02 Bedroom	100	100.00	Yes	
Block B L00:04 Unit 02 LDK	200	55.00	Yes	
Block B L00:05 Unit 03 Bedroom	100	100.00	Yes	
Block B L00:06 Unit 03 LDK	200	64.52	Yes	
Block B L00:07 Unit 04 Bedroom	100	100.00	Yes	
Block B L00:08 Unit 04 LDK	200	37.31	No	See Appendix D for Compensatory Measures
Block B L00:09 Unit 05 LDK	200	75.00	Yes	
Block B L00:10 Unit 05 Bedroom	100	100.00	Yes	
Block B L00:11 Unit 06 Bedroom	100	95.65	Yes	
Block B L00:12 Unit 06 LDK	200	43.75	No	See Appendix D for Compensatory Measures
Block B L00:13 Unit 07 Bedroom	100	100.00	Yes	
Block B L00:14 Unit 07 LDK	200	79.41	Yes	
Block B L00:15 Unit 08 Bedroom	100	100.00	Yes	
Block B L00:16 Unit 08 LDK	200	63.38	Yes	

Block B L00:17 Unit 08 Bedroom	100	100.00	Yes	
Block B L01:01 Unit 01 LDK	200	82.93	Yes	
Block B L01:02 Unit 01 Bedroom	100	100.00	Yes	
Block B L01:03 Unit 02 Bedroom	100	100.00	Yes	
Block B L01:04 Unit 02 LDK	200	52.50	Yes	
Block B L01:05 Unit 03 Bedroom	100	100.00	Yes	
Block B L01:06 Unit 03 LDK	200	67.74	Yes	
Block B L01:07 Unit 04 Bedroom	100	100.00	Yes	
Block B L01:08 Unit 04 LDK	200	56.58	Yes	
Block B L01:09 Unit 04 Bedroom	100	100.00	Yes	
Block B L01:10 Unit 05 LDK	200	66.67	Yes	
Block B L01:11 Unit 05 Bedroom	100	100.00	Yes	
Block B L01:12 Unit 06 Bedroom	100	82.61	Yes	
Block B L01:13 Unit 06 LDK	200	39.58	No	See Appendix D for Compensatory Measures
Block B L01:14 Unit 07 Bedroom	100	100.00	Yes	
Block B L01:15 Unit 07 LDK	200	67.65	Yes	
Block B L01:16 Unit 08 Bedroom	100	100.00	Yes	
Block B L01:17 Unit 08 LDK	200	69.01	Yes	
Block B L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block B L02:01 Unit 01 LDK	200	92.68	Yes	
Block B L02:02 Unit 01 Bedroom	100	100.00	Yes	
Block B L02:03 Unit 02 Bedroom	100	100.00	Yes	
Block B L02:04 Unit 02 LDK	200	62.50	Yes	
Block B L02:05 Unit 03 Bedroom	100	100.00	Yes	
Block B L02:06 Unit 03 LDK	200	75.81	Yes	
Block B L02:07 Unit 04 Bedroom	100	100.00	Yes	
Block B L02:08 Unit 04 LDK	200	73.68	Yes	
Block B L02:09 Unit 04 Bedroom	100	100.00	Yes	
Block B L02:10 Unit 05 LDK	200	77.08	Yes	
Block B L02:11 Unit 05 Bedroom	100	83.33	Yes	

Block B L02:12 Unit 06 Bedroom	100	60.87	Yes	
Block B L02:13 Unit 06 LDK	200	22.92	No	See Appendix D for Compensatory Measures
Block B L02:14 Unit 07 Bedroom	100	100.00	Yes	
Block B L02:15 Unit 07 LDK	200	86.76	Yes	
Block B L02:16 Unit 08 Bedroom	100	100.00	Yes	
Block B L02:17 Unit 08 LDK	200	74.65	Yes	
Block B L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block B L03:01 Unit 01 LDK	200	95.12	Yes	
Block B L03:02 Unit 01 Bedroom	100	100.00	Yes	
Block B L03:03 Unit 02 Bedroom	100	100.00	Yes	
Block B L03:04 Unit 02 LDK	200	65.00	Yes	
Block B L03:05 Unit 03 Bedroom	100	100.00	Yes	
Block B L03:06 Unit 03 LDK	200	93.55	Yes	
Block B L03:07 Unit 04 Bedroom	100	100.00	Yes	
Block B L03:08 Unit 04 LDK	200	82.89	Yes	
Block B L03:09 Unit 04 Bedroom	100	100.00	Yes	
Block B L03:10 Unit 05 LDK	200	81.25	Yes	
Block B L03:11 Unit 05 Bedroom	100	62.50	Yes	
Block B L03:12 Unit 06 Bedroom	100	60.87	Yes	
Block B L03:13 Unit 06 LDK	200	22.92	No	See Appendix D for Compensatory Measures
Block B L03:14 Unit 07 Bedroom	100	100.00	Yes	
Block B L03:15 Unit 07 LDK	200	91.18	Yes	
Block B L03:16 Unit 08 Bedroom	100	100.00	Yes	
Block B L03:17 Unit 08 LDK	200	84.51	Yes	
Block B L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block B L04:01 Unit 01 LDK	200	100.00	Yes	
Block B L04:02 Unit 01 Bedroom	100	100.00	Yes	
Block B L04:03 Unit 02 Bedroom	100	100.00	Yes	
Block B L04:04 Unit 02 LDK	200	72.50	Yes	
Block B L04:05 Unit 03 Bedroom	100	100.00	Yes	

Block B L04:06 Unit 03 LDK	200	100.00	Yes	
Block B L04:07 Unit 04 Bedroom	100	100.00	Yes	
Block B L04:08 Unit 04 LDK	200	94.74	Yes	
Block B L04:09 Unit 04 Bedroom	100	100.00	Yes	
Block B L04:10 Unit 05 LDK	200	97.92	Yes	
Block B L04:11 Unit 05 Bedroom	100	100.00	Yes	
Block B L04:12 Unit 06 Bedroom	100	95.65	Yes	
Block B L04:13 Unit 06 LDK	200	50.00	Yes	
Block B L04:14 Unit 07 LDK	200	53.73	Yes	
Block B L04:15 Unit 07 Bedroom	100	100.00	Yes	
Block B L04:16 Unit 08 Bedroom	100	100.00	Yes	
Block B L04:17 Unit 08 LDK	200	95.77	Yes	
Block B L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block B L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block B L05:02 Unit 01 LDK	200	100.00	Yes	
Block B L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block B L05:04 Unit 02 Bedroom	100	100.00	Yes	
Block B L05:05 Unit 02 LDK	200	100.00	Yes	
Block B L05:06 Unit 02 Bedroom	100	100.00	Yes	
Block B L05:07 Unit 03 LDK	200	100.00	Yes	
Block B L05:08 Unit 03 Bedroom	100	100.00	Yes	
Block B L05:09 Unit 03 Bedroom	100	100.00	Yes	
Block B L05:10 Unit 04 Bedroom	100	100.00	Yes	
Block B L05:11 Unit 04 LDK	200	100.00	Yes	
Block B L05:12 Unit 04 Bedroom	100	100.00	Yes	

BLOCK C

Block C				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block C LL:01 Unit 01 Bedroom	100	100.00	Yes	
Block C LL:02 Unit 01 LDK	200	70.37	Yes	
Block C LL:03 Unit 01 Bedroom	100	100.00	Yes	
Block C LL:04 Unit 02 LDK	200	76.32	Yes	
Block C LL:05 Unit 02 Bedroom	100	100.00	Yes	
Block C LL:06 Unit 03 Bedroom	100	100.00	Yes	
Block C LL:07 Unit 03 LDK	200	100.00	Yes	
Block C LL:08 Unit 04 Bedroom	100	100.00	Yes	
Block C LL:09 Unit 04 LDK	200	86.49	Yes	
Block C LL:10 Unit 04 Bedroom	100	100.00	Yes	
Block C L00:01 Unit 01 LDK	200	77.27	Yes	
Block C L00:02 Unit 01 Bedroom	100	100.00	Yes	
Block C L00:03 Unit 02 LDK	200	59.46	Yes	
Block C L00:04 Unit 02 Bedroom	100	100.00	Yes	
Block C L00:05 Unit 03 Bedroom	100	100.00	Yes	
Block C L00:06 Unit 03 LDK	200	89.74	Yes	
Block C L00:07 Unit 04 Bedroom	100	100.00	Yes	
Block C L00:08 Unit 04 LDK	200	75.00	Yes	
Block C L00:09 Unit 04 Bedroom	100	100.00	Yes	
Block C L00:10 Unit 05 LDK	200	98.59	Yes	
Block C L00:11 Unit 05 Bedroom	100	100.00	Yes	
Block C L00:12 Unit 06 LDK	200	46.67	No	See Appendix D for Compensatory Measures
Block C L00:13 Unit 06 Bedroom	100	100.00	Yes	
Block C L00:14 Unit 07 Bedroom	100	100.00	Yes	
Block C L00:15 Unit 07 LDK	200	31.82	No	See Appendix D for Compensatory Measures
Block C L00:16 Unit 08 Bedroom	100	100.00	Yes	

Block C L00:17 Unit 08 LDK	200	80.88	Yes	
Block C L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block C L01:02 Unit 01 LDK	200	37.50	No	See Appendix D for Compensatory Measures
Block C L01:03 Unit 02 LDK	200	54.05	Yes	
Block C L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block C L01:05 Unit 03 Bedroom	100	100.00	Yes	
Block C L01:06 Unit 03 LDK	200	74.36	Yes	
Block C L01:07 Unit 04 Bedroom	100	100.00	Yes	
Block C L01:08 Unit 04 LDK	200	73.61	Yes	
Block C L01:09 Unit 04 Bedroom	100	100.00	Yes	
Block C L01:10 Unit 05 Bedroom	100	100.00	Yes	
Block C L01:11 Unit 05 LDK	200	27.87	No	See Appendix D for Compensatory Measures
Block C L01:12 Unit 06 LDK	200	33.33	No	See Appendix D for Compensatory Measures
Block C L01:13 Unit 06 Bedroom	100	96.15	Yes	
Block C L01:14 Unit 07 Bedroom	100	91.67	Yes	
Block C L01:15 Unit 07 LDK	200	100.00	Yes	
Block C L01:16 Unit 08 Bedroom	100	52.27	Yes	
Block C L01:17 Unit 08 LDK	200	55.56	Yes	
Block C L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block C L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block C L02:02 Unit 01 LDK	200	46.43	No	See Appendix D for Compensatory Measures
Block C L02:03 Unit 02 LDK	200	62.16	Yes	
Block C L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block C L02:05 Unit 03 Bedroom	100	100.00	Yes	
Block C L02:06 Unit 03 LDK	200	71.79	Yes	
Block C L02:07 Unit 04 Bedroom	100	100.00	Yes	
Block C L02:08 Unit 04 LDK	200	76.39	Yes	
Block C L02:09 Unit 04 Bedroom	100	100.00	Yes	
Block C L02:10 Unit 05 Bedroom	100	100.00	Yes	

Block C L02:11 Unit 05 LDK	200	39.34	No	See Appendix D for Compensatory Measures
Block C L02:12 Unit 06 LDK	200	40.00	No	See Appendix D for Compensatory Measures
Block C L02:13 Unit 06 Bedroom	100	92.31	Yes	
Block C L02:14 Unit 07 Bedroom	100	95.83	Yes	
Block C L02:15 Unit 07 LDK	200	100.00	Yes	
Block C L02:16 Unit 08 Bedroom	100	56.82	Yes	
Block C L02:17 Unit 08 LDK	200	61.73	Yes	
Block C L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block C L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block C L03:02 Unit 01 LDK	200	53.57	Yes	
Block C L03:03 Unit 02 LDK	200	62.16	Yes	
Block C L03:04 Unit 02 Bedroom	100	100.00	Yes	
Block C L03:05 Unit 03 Bedroom	100	100.00	Yes	
Block C L03:06 Unit 03 LDK	200	76.92	Yes	
Block C L03:07 Unit 04 Bedroom	100	100.00	Yes	
Block C L03:08 Unit 04 LDK	200	79.17	Yes	
Block C L03:09 Unit 04 Bedroom	100	100.00	Yes	
Block C L03:10 Unit 05 Bedroom	100	100.00	Yes	
Block C L03:11 Unit 05 LDK	200	42.62	No	See Appendix D for Compensatory Measures
Block C L03:12 Unit 06 LDK	200	46.67	No	See Appendix D for Compensatory Measures
Block C L03:13 Unit 06 Bedroom	100	92.31	Yes	
Block C L03:14 Unit 07 Bedroom	100	95.83	Yes	
Block C L03:15 Unit 07 LDK	200	52.27	Yes	
Block C L03:16 Unit 08 Bedroom	100	100.00	Yes	
Block C L03:17 Unit 08 LDK	200	67.90	Yes	
Block C L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block C L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block C L04:02 Unit 01 LDK	200	60.71	Yes	
Block C L04:03 Unit 02 LDK	200	75.68	Yes	
Block C L04:04 Unit 02 Bedroom	100	100.00	Yes	

Block C L04:05 Unit 03 Bedroom	100	100.00	Yes	
Block C L04:06 Unit 03 LDK	200	94.87	Yes	
Block C L04:07 Unit 04 Bedroom	100	100.00	Yes	
Block C L04:08 Unit 04 LDK	200	83.33	Yes	
Block C L04:09 Unit 04 Bedroom	100	100.00	Yes	
Block C L04:10 Unit 05 Bedroom	100	100.00	Yes	
Block C L04:11 Unit 05 LDK	200	47.54	No	See Appendix D for Compensatory Measures
Block C L04:12 Unit 06 LDK	200	60.00	Yes	
Block C L04:13 Unit 06 Bedroom	100	100.00	Yes	
Block C L04:14 Unit 07 Bedroom	100	100.00	Yes	
Block C L04:15 Unit 07 LDK	200	100.00	Yes	
Block C L04:16 Unit 08 Bedroom	100	70.45	Yes	
Block C L04:17 Unit 08 LDK	200	77.78	Yes	
Block C L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block C L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block C L05:02 Unit 01 LDK	200	100.00	Yes	
Block C L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block C L05:04 Unit 02 Bedroom	100	100.00	Yes	
Block C L05:05 Unit 02 LDK	200	100.00	Yes	
Block C L05:06 Unit 02 Bedroom	100	100.00	Yes	
Block C L05:07 Unit 03 Bedroom	100	100.00	Yes	
Block C L05:08 Unit 03 LDK	200	100.00	Yes	
Block C L05:09 Unit 03 Bedroom	100	100.00	Yes	
Block C L05:10 Unit 04 Bedroom	100	100.00	Yes	
Block C L05:11 Unit 04 LDK	200	73.13	Yes	
Block C L05:12 Unit 04 Bedroom	100	100.00	Yes	

BLOCK D

Block D				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block D L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L00:02 Unit 01 LDK	200	92.16	Yes	
Block D L00:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L00:04 Unit 02 LDK	200	49.09	No	See Appendix D for Compensatory Measures
Block D L00:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L00:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L00:07 Unit 03 LDK	200	44.83	No	See Appendix D for Compensatory Measures
Block D L00:08 Unit 04 LDK	200	100.00	Yes	
Block D L00:09 Unit 04 Bedroom	100	93.33	Yes	
Block D L00:10 Unit 05 Bedroom	100	90.00	Yes	
Block D L00:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L00:12 Unit 05 LDK	200	89.33	Yes	
Block D L00:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L00:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L00:15 Unit 06 LDK	200	11.11	No	See Appendix D for Compensatory Measures
Block D L00:16 Unit 07 LDK	200	16.98	No	See Appendix D for Compensatory Measures
Block D L00:17 Unit 07 Bedroom	100	100.00	Yes	
Block D L00:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L00:19 Unit 08 LDK	200	90.70	Yes	
Block D L00:20 Unit 08 Bedroom	100	100.00	Yes	

Block D L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L01:02 Unit 01 LDK	200	77.59	Yes	
Block D L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L01:04 Unit 02 LDK	200	63.64	Yes	
Block D L01:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L01:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L01:07 Unit 03 LDK	200	59.65	Yes	
Block D L01:08 Unit 04 Bedroom	100	100.00	Yes	
Block D L01:09 Unit 04 LDK	200	100.00	Yes	
Block D L01:10 Unit 04 Bedroom	100	100.00	Yes	
Block D L01:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L01:12 Unit 05 LDK	200	100.00	Yes	
Block D L01:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L01:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L01:15 Unit 06 LDK	200	29.63	No	See Appendix D for Compensatory Measures
Block D L01:16 Unit 07 LDK	200	41.51	No	See Appendix D for Compensatory Measures
Block D L01:17 Unit 07 Bedroom	100	100.00	Yes	
Block D L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L01:19 Unit 08 LDK	200	100.00	Yes	
Block D L01:20 Unit 08 Bedroom	100	100.00	Yes	
Block D L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L02:02 Unit 01 LDK	200	94.83	Yes	
Block D L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L02:04 Unit 02 LDK	200	63.64	Yes	

Block D L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L02:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L02:07 Unit 03 LDK	200	52.63	Yes	
Block D L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block D L02:09 Unit 04 LDK	200	100.00	Yes	
Block D L02:10 Unit 04 Bedroom	100	100.00	Yes	
Block D L02:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L02:12 Unit 05 LDK	200	100.00	Yes	
Block D L02:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L02:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L02:15 Unit 06 LDK	200	31.48	No	See Appendix D for Compensatory Measures
Block D L02:16 Unit 07 LDK	200	37.74	No	See Appendix D for Compensatory Measures
Block D L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block D L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L02:19 Unit 08 LDK	200	100.00	Yes	
Block D L02:20 Unit 08 Bedroom	100	100.00	Yes	
Block D L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L03:02 Unit 01 LDK	200	100.00	Yes	
Block D L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L03:04 Unit 02 LDK	200	63.64	Yes	
Block D L03:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L03:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L03:07 Unit 03 LDK	200	57.89	Yes	
Block D L03:08 Unit 04 Bedroom	100	100.00	Yes	

Block D L03:09 Unit 04 LDK	200	100.00	Yes	
Block D L03:10 Unit 04 Bedroom	100	100.00	Yes	
Block D L03:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L03:12 Unit 05 LDK	200	100.00	Yes	
Block D L03:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L03:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L03:15 Unit 06 LDK	200	37.04	No	See Appendix D for Compensatory Measures
Block D L03:16 Unit 07 LDK	200	41.51	No	See Appendix D for Compensatory Measures
Block D L03:17 Unit 07 Bedroom	100	100.00	Yes	
Block D L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L03:19 Unit 08 LDK	200	100.00	Yes	
Block D L03:20 Unit 08 Bedroom	100	100.00	Yes	
Block D L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L04:02 Unit 01 LDK	200	100.00	Yes	
Block D L04:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L04:04 Unit 02 LDK	200	72.73	Yes	
Block D L04:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L04:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L04:07 Unit 03 LDK	200	66.67	Yes	
Block D L04:08 Unit 04 Bedroom	100	100.00	Yes	
Block D L04:09 Unit 04 LDK	200	100.00	Yes	
Block D L04:10 Unit 04 Bedroom	100	100.00	Yes	
Block D L04:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L04:12 Unit 05 LDK	200	100.00	Yes	

Block D L04:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L04:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L04:15 Unit 06 LDK	200	74.07	Yes	
Block D L04:16 Unit 07 LDK	200	81.13	Yes	
Block D L04:17 Unit 07 Bedroom	100	100.00	Yes	
Block D L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L04:19 Unit 08 LDK	200	100.00	Yes	
Block D L04:20 Unit 08 Bedroom	100	100.00	Yes	
Block D L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block D L05:02 Unit 01 LDK	200	100.00	Yes	
Block D L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L05:04 Unit 02 LDK	200	85.45	Yes	
Block D L05:05 Unit 02 Bedroom	100	100.00	Yes	
Block D L05:06 Unit 03 Bedroom	100	100.00	Yes	
Block D L05:07 Unit 03 LDK	200	73.68	Yes	
Block D L05:08 Unit 04 Bedroom	100	100.00	Yes	
Block D L05:09 Unit 04 LDK	200	100.00	Yes	
Block D L05:10 Unit 04 Bedroom	100	100.00	Yes	
Block D L05:11 Unit 05 Bedroom	100	100.00	Yes	
Block D L05:12 Unit 05 LDK	200	100.00	Yes	
Block D L05:13 Unit 05 Bedroom	100	100.00	Yes	
Block D L05:14 Unit 06 Bedroom	100	100.00	Yes	
Block D L05:15 Unit 06 LDK	200	100.00	Yes	
Block D L05:16 Unit 07 LDK	200	100.00	Yes	
Block D L05:17 Unit 07 Bedroom	100	100.00	Yes	

Block D L05:18 Unit 08 Bedroom	100	100.00	Yes	
Block D L05:19 Unit 08 LDK	200	100.00	Yes	
Block D L05:20 Unit 08 Bedroom	100	100.00	Yes	
Block D L06:01 Unit 01 LDK	200	100.00	Yes	
Block D L06:02 Unit 01 Bedroom	100	100.00	Yes	
Block D L06:03 Unit 01 Bedroom	100	100.00	Yes	
Block D L06:04 Unit 02 Bedroom	100	100.00	Yes	
Block D L06:05 Unit 02 LDK	200	100.00	Yes	
Block D L06:06 Unit 02 Bedroom	100	100.00	Yes	
Block D L06:07 Unit 02 Bedroom	100	100.00	Yes	
Block D L06:08 Unit 03 Bedroom	100	100.00	Yes	
Block D L06:09 Unit 03 LDK	200	100.00	Yes	
Block D L06:10 Unit 03 Bedroom	100	100.00	Yes	
Block D L06:11 Unit 04 Bedroom	100	100.00	Yes	
Block D L06:12 Unit 04 Bedroom	100	100.00	Yes	
Block D L06:13 Unit 04 LDK	200	100.00	Yes	

BLOCK E

Block E				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block E L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block E L01:02 Unit 01 LDK	200	91.30	Yes	
Block E L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L01:04 Unit 02 LDK	200	60.00	Yes	
Block E L01:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L01:06 Unit 03 Bedroom	100	100.00	Yes	
Block E L01:07 Unit 03 LDK	200	100.00	Yes	
Block E L01:08 Unit 03 Bedroom	100	100.00	Yes	
Block E L01:09 Unit 04 Bedroom	100	100.00	Yes	
Block E L01:10 Unit 04 LDK	200	100.00	Yes	
Block E L01:11 Unit 04 Bedroom	100	58.00	Yes	
Block E L01:12 Unit 05 LDK	200	100.00	Yes	
Block E L01:13 Unit 05 Bedroom	100	100.00	Yes	
Block E L01:14 Unit 06 Bedroom	100	100.00	Yes	
Block E L01:15 Unit 06 LDK	200	56.86	Yes	
Block E L01:16 Unit 07 Bedroom	100	100.00	Yes	
Block E L01:17 Unit 07 LDK	200	65.96	Yes	
Block E L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L01:19 Unit 08 LDK	200	100.00	Yes	
Block E L01:20 Unit 08 Bedroom	100	100.00	Yes	
Block E L02:01 Unit 01 Bedroom	100	86.21	Yes	
Block E L02:02 Unit 01 LDK	200	88.41	Yes	
Block E L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L02:04 Unit 02 LDK	200	62.22	Yes	
Block E L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L02:06 Unit 03 LDK	200	66.00	Yes	
Block E L02:07 Unit 03 Bedroom	100	100.00	Yes	

Block E L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block E L02:09 Unit 04 LDK	200	54.90	Yes	
Block E L02:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L02:11 Unit 05 LDK	200	100.00	Yes	
Block E L02:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L02:13 Unit 06 Bedroom	100	100.00	Yes	
Block E L02:14 Unit 06 LDK	200	100.00	Yes	
Block E L02:15 Unit 06 Bedroom	100	100.00	Yes	
Block E L02:16 Unit 07 LDK	200	60.00	Yes	
Block E L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block E L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L02:19 Unit 08 LDK	200	72.55	Yes	
Block E L02:20 Unit 09 Bedroom	100	100.00	Yes	
Block E L02:21 Unit 09 LDK	200	59.57	Yes	
Block E L02:22 Unit 10 Bedroom	100	100.00	Yes	
Block E L02:23 Unit 10 LDK	200	100.00	Yes	
Block E L02:24 Unit 10 Bedroom	100	96.77	Yes	
Block E L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block E L03:02 Unit 01 LDK	200	94.20	Yes	
Block E L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L03:04 Unit 02 LDK	200	64.44	Yes	
Block E L03:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L03:06 Unit 03 LDK	200	62.00	Yes	
Block E L03:07 Unit 03 Bedroom	100	100.00	Yes	
Block E L03:08 Unit 04 Bedroom	100	100.00	Yes	
Block E L03:09 Unit 04 LDK	200	43.14	No	See Appendix D for Compensatory Measures
Block E L03:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L03:11 Unit 05 LDK	200	100.00	Yes	
Block E L03:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L03:13 Unit 06 Bedroom	100	100.00	Yes	

Block E L03:14 Unit 06 LDK	200	100.00	Yes	
Block E L03:15 Unit 06 Bedroom	100	100.00	Yes	
Block E L03:16 Unit 07 LDK	200	60.24	Yes	
Block E L03:17 Unit 07 Bedroom	100	100.00	Yes	
Block E L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L03:19 Unit 08 LDK	200	68.63	Yes	
Block E L03:20 Unit 09 Bedroom	100	100.00	Yes	
Block E L03:21 Unit 09 LDK	200	68.09	Yes	
Block E L03:22 Unit 10 Bedroom	100	100.00	Yes	
Block E L03:23 Unit 10 LDK	200	100.00	Yes	
Block E L03:24 Unit 10 Bedroom	100	100.00	Yes	
Block E L04:01 Unit 01 Bedroom	100	96.55	Yes	
Block E L04:02 Unit 01 LDK	200	98.55	Yes	
Block E L04:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L04:04 Unit 02 LDK	200	73.33	Yes	
Block E L04:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L04:06 Unit 03 LDK	200	70.00	Yes	
Block E L04:07 Unit 03 Bedroom	100	100.00	Yes	
Block E L04:08 Unit 04 Bedroom	100	100.00	Yes	
Block E L04:09 Unit 04 LDK	200	52.94	Yes	
Block E L04:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L04:11 Unit 05 LDK	200	100.00	Yes	
Block E L04:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L04:13 Unit 06 Bedroom	100	100.00	Yes	
Block E L04:14 Unit 06 LDK	200	100.00	Yes	
Block E L04:15 Unit 06 Bedroom	100	100.00	Yes	
Block E L04:16 Unit 07 LDK	200	70.00	Yes	
Block E L04:17 Unit 07 Bedroom	100	100.00	Yes	
Block E L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L04:19 Unit 08 LDK	200	72.55	Yes	
Block E L04:20 Unit 09 Bedroom	100	100.00	Yes	

Block E L04:21 Unit 09 LDK	200	72.34	Yes	
Block E L04:22 Unit 10 Bedroom	100	100.00	Yes	
Block E L04:23 Unit 10 LDK	200	100.00	Yes	
Block E L04:24 Unit 10 Bedroom	100	100.00	Yes	
Block E L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block E L05:02 Unit 01 LDK	200	98.55	Yes	
Block E L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L05:04 Unit 02 LDK	200	71.11	Yes	
Block E L05:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L05:06 Unit 03 LDK	200	74.00	Yes	
Block E L05:07 Unit 03 Bedroom	100	100.00	Yes	
Block E L05:08 Unit 04 Bedroom	100	100.00	Yes	
Block E L05:09 Unit 04 LDK	200	45.10	No	See Appendix D for Compensatory Measures
Block E L05:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L05:11 Unit 05 LDK	200	100.00	Yes	
Block E L05:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L05:13 Unit 06 Bedroom	100	100.00	Yes	
Block E L05:14 Unit 06 LDK	200	100.00	Yes	
Block E L05:15 Unit 06 Bedroom	100	100.00	Yes	
Block E L05:16 Unit 07 LDK	200	74.00	Yes	
Block E L05:17 Unit 07 Bedroom	100	100.00	Yes	
Block E L05:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L05:19 Unit 08 LDK	200	76.47	Yes	
Block E L05:20 Unit 09 Bedroom	100	100.00	Yes	
Block E L05:21 Unit 09 LDK	200	85.11	Yes	
Block E L05:22 Unit 10 Bedroom	100	100.00	Yes	
Block E L05:23 Unit 10 LDK	200	100.00	Yes	
Block E L05:24 Unit 10 Bedroom	100	100.00	Yes	
Block E L06:01 Unit 01 Bedroom	100	100.00	Yes	
Block E L06:02 Unit 01 LDK	200	100.00	Yes	

Block E L06:03 Unit 01 Bedroom	100	100.00	Yes	
Block E L06:04 Unit 02 LDK	200	77.78	Yes	
Block E L06:05 Unit 02 Bedroom	100	100.00	Yes	
Block E L06:06 Unit 03 LDK	200	78.00	Yes	
Block E L06:07 Unit 03 Bedroom	100	100.00	Yes	
Block E L06:08 Unit 04 Bedroom	100	100.00	Yes	
Block E L06:09 Unit 04 LDK	200	66.67	Yes	
Block E L06:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L06:11 Unit 05 LDK	200	100.00	Yes	
Block E L06:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L06:13 Unit 06 Bedroom	100	100.00	Yes	
Block E L06:14 Unit 06 LDK	200	100.00	Yes	
Block E L06:15 Unit 06 Bedroom	100	100.00	Yes	
Block E L06:16 Unit 07 LDK	200	80.00	Yes	
Block E L06:17 Unit 07 Bedroom	100	100.00	Yes	
Block E L06:18 Unit 08 Bedroom	100	100.00	Yes	
Block E L06:19 Unit 08 LDK	200	90.20	Yes	
Block E L06:20 Unit 09 Bedroom	100	100.00	Yes	
Block E L06:21 Unit 09 LDK	200	87.23	Yes	
Block E L06:22 Unit 10 Bedroom	100	100.00	Yes	
Block E L06:23 Unit 10 LDK	200	100.00	Yes	
Block E L06:24 Unit 10 Bedroom	100	100.00	Yes	
Block E L07:01 Unit 01 LDK	200	78.95	Yes	
Block E L07:02 Unit 01 Bedroom	100	100.00	Yes	
Block E L07:03 Unit 02 LDK	200	82.00	Yes	
Block E L07:04 Unit 02 Bedroom	100	100.00	Yes	
Block E L07:05 Unit 03 Bedroom	100	100.00	Yes	
Block E L07:06 Unit 03 LDK	200	64.71	Yes	
Block E L07:07 Unit 04 Bedroom	100	100.00	Yes	
Block E L07:08 Unit 04 LDK	200	100.00	Yes	
Block E L07:09 Unit 04 Bedroom	100	100.00	Yes	

Block E L07:10 Unit 05 Bedroom	100	100.00	Yes	
Block E L07:11 Unit 05 LDK	200	100.00	Yes	
Block E L07:12 Unit 05 Bedroom	100	100.00	Yes	
Block E L07:13 Unit 06 LDK	200	90.00	Yes	
Block E L07:14 Unit 06 Bedroom	100	100.00	Yes	
Block E L07:15 Unit 07 Bedroom	100	100.00	Yes	
Block E L07:16 Unit 07 LDK	200	94.12	Yes	
Block E L07:17 Unit 08 Bedroom	100	100.00	Yes	
Block E L07:18 Unit 08 LDK	200	87.18	Yes	

BLOCK F

Block F				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block F L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L00:02 Unit 01 LDK	200	100.00	Yes	
Block F L00:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L00:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L00:05 Unit 02 LDK	200	72.09	Yes	
Block F L00:06 Unit 03 LDK	200	100.00	Yes	
Block F L00:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L00:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L00:09 Unit 04 LDK	200	69.33	Yes	
Block F L00:10 Unit 04 Bedroom	100	100.00	Yes	
Block F L00:11 Unit 05 Bedroom	100	100.00	Yes	
Block F L00:12 Unit 05 LDK	200	100.00	Yes	
Block F L00:13 Unit 05 Bedroom	100	100.00	Yes	
Block F L00:14 Unit 06 Bedroom	100	100.00	Yes	
Block F L00:15 Unit 06 LDK	200	100.00	Yes	
Block F L00:16 Unit 06 Bedroom	100	100.00	Yes	
Block F L00:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L00:18 Unit 07 LDK	200	57.14	Yes	
Block F L00:19 Unit 07 Bedroom	100	100.00	Yes	
Block F L00:20 Unit 08 Bedroom	100	100.00	Yes	
Block F L00:21 Unit 08 LDK	200	65.75	Yes	
Block F L00:22 Unit 09 LDK	200	72.73	Yes	
Block F L00:23 Unit 09 Bedroom	100	100.00	Yes	
Block F L00:24 Unit 10 Bedroom	100	100.00	Yes	
Block F L00:25 Unit 10 LDK	200	100.00	Yes	
Block F L00:26 Unit 10 Bedroom	100	82.35	Yes	
Block F L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L01:02 Unit 01 LDK	200	100.00	Yes	
Block F L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L01:05 Unit 02 LDK	200	70.45	Yes	
Block F L01:06 Unit 03 LDK	200	56.16	Yes	
Block F L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L01:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L01:09 Unit 04 LDK	200	86.44	Yes	
Block F L01:10 Unit 05 LDK	200	69.77	Yes	
Block F L01:11 Unit 05 Bedroom	100	100.00	Yes	
Block F L01:12 Unit 06 Bedroom	100	100.00	Yes	
Block F L01:13 Unit 06 LDK	200	100.00	Yes	

Block F L01:14 Unit 06 Bedroom	100	100.00	Yes	
Block F L01:15 Unit 07 Bedroom	100	100.00	Yes	
Block F L01:16 Unit 07 LDK	200	100.00	Yes	
Block F L01:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block F L01:19 Unit 08 LDK	200	75.56	Yes	
Block F L01:20 Unit 09 LDK	200	100.00	Yes	
Block F L01:21 Unit 09 Bedroom	100	100.00	Yes	
Block F L01:22 Unit 10 Bedroom	100	100.00	Yes	
Block F L01:23 Unit 10 LDK	200	100.00	Yes	
Block F L01:24 Unit 11 LDK	200	74.42	Yes	
Block F L01:25 Unit 11 Bedroom	100	100.00	Yes	
Block F L01:26 Unit 12 Bedroom	100	100.00	Yes	
Block F L01:27 Unit 12 LDK	200	100.00	Yes	
Block F L01:28 Unit 12 Bedroom	100	100.00	Yes	
Block F L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L02:02 Unit 01 LDK	200	100.00	Yes	
Block F L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L02:05 Unit 02 LDK	200	79.55	Yes	
Block F L02:06 Unit 03 LDK	200	67.12	Yes	
Block F L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L02:09 Unit 04 LDK	200	91.53	Yes	
Block F L02:10 Unit 05 LDK	200	83.72	Yes	
Block F L02:11 Unit 05 Bedroom	100	100.00	Yes	
Block F L02:12 Unit 06 Bedroom	100	100.00	Yes	
Block F L02:13 Unit 06 LDK	200	100.00	Yes	
Block F L02:14 Unit 06 Bedroom	100	100.00	Yes	
Block F L02:15 Unit 07 Bedroom	100	100.00	Yes	
Block F L02:16 Unit 07 LDK	200	100.00	Yes	
Block F L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block F L02:19 Unit 08 LDK	200	82.22	Yes	
Block F L02:20 Unit 09 LDK	200	100.00	Yes	
Block F L02:21 Unit 09 Bedroom	100	100.00	Yes	
Block F L02:22 Unit 10 Bedroom	100	100.00	Yes	
Block F L02:23 Unit 10 LDK	200	100.00	Yes	
Block F L02:24 Unit 11 LDK	200	83.72	Yes	
Block F L02:25 Unit 11 Bedroom	100	100.00	Yes	
Block F L02:26 Unit 12 Bedroom	100	100.00	Yes	
Block F L02:27 Unit 12 LDK	200	100.00	Yes	
Block F L02:28 Unit 12 Bedroom	100	100.00	Yes	
Block F L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L03:02 Unit 01 LDK	200	100.00	Yes	

Block F L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L03:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L03:05 Unit 02 LDK	200	86.36	Yes	
Block F L03:06 Unit 03 LDK	200	67.12	Yes	
Block F L03:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L03:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L03:09 Unit 04 LDK	200	94.92	Yes	
Block F L03:10 Unit 05 LDK	200	79.07	Yes	
Block F L03:11 Unit 05 Bedroom	100	100.00	Yes	
Block F L03:12 Unit 06 Bedroom	100	100.00	Yes	
Block F L03:13 Unit 06 LDK	200	100.00	Yes	
Block F L03:14 Unit 06 Bedroom	100	100.00	Yes	
Block F L03:15 Unit 07 Bedroom	100	100.00	Yes	
Block F L03:16 Unit 07 LDK	200	100.00	Yes	
Block F L03:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block F L03:19 Unit 08 LDK	200	84.44	Yes	
Block F L03:20 Unit 09 LDK	200	100.00	Yes	
Block F L03:21 Unit 09 Bedroom	100	100.00	Yes	
Block F L03:22 Unit 10 Bedroom	100	100.00	Yes	
Block F L03:23 Unit 10 LDK	200	100.00	Yes	
Block F L03:24 Unit 11 LDK	200	83.72	Yes	
Block F L03:25 Unit 11 Bedroom	100	100.00	Yes	
Block F L03:26 Unit 12 Bedroom	100	100.00	Yes	
Block F L03:27 Unit 12 LDK	200	100.00	Yes	
Block F L03:28 Unit 12 Bedroom	100	100.00	Yes	
Block F L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L04:02 Unit 01 LDK	200	100.00	Yes	
Block F L04:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L04:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L04:05 Unit 02 LDK	200	90.91	Yes	
Block F L04:06 Unit 03 LDK	200	75.34	Yes	
Block F L04:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L04:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L04:09 Unit 04 LDK	200	100.00	Yes	
Block F L04:10 Unit 05 LDK	200	88.37	Yes	
Block F L04:11 Unit 05 Bedroom	100	100.00	Yes	
Block F L04:12 Unit 06 Bedroom	100	100.00	Yes	
Block F L04:13 Unit 06 LDK	200	100.00	Yes	
Block F L04:14 Unit 06 Bedroom	100	100.00	Yes	
Block F L04:15 Unit 07 Bedroom	100	100.00	Yes	
Block F L04:16 Unit 07 LDK	200	100.00	Yes	
Block F L04:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block F L04:19 Unit 08 LDK	200	86.67	Yes	

Block F L04:20 Unit 09 LDK	200	100.00	Yes	
Block F L04:21 Unit 09 Bedroom	100	100.00	Yes	
Block F L04:22 Unit 10 Bedroom	100	100.00	Yes	
Block F L04:23 Unit 10 LDK	200	100.00	Yes	
Block F L04:24 Unit 11 LDK	200	81.40	Yes	
Block F L04:25 Unit 11 Bedroom	100	100.00	Yes	
Block F L04:26 Unit 12 Bedroom	100	100.00	Yes	
Block F L04:27 Unit 12 LDK	200	100.00	Yes	
Block F L04:28 Unit 12 Bedroom	100	100.00	Yes	
Block F L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L05:02 Unit 01 LDK	200	100.00	Yes	
Block F L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L05:04 Unit 02 Bedroom	100	100.00	Yes	
Block F L05:05 Unit 02 LDK	200	97.73	Yes	
Block F L05:06 Unit 03 LDK	200	80.82	Yes	
Block F L05:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L05:08 Unit 04 Bedroom	100	100.00	Yes	
Block F L05:09 Unit 04 LDK	200	100.00	Yes	
Block F L05:10 Unit 05 Bedroom	100	100.00	Yes	
Block F L05:11 Unit 05 LDK	200	100.00	Yes	
Block F L05:12 Unit 05 Bedroom	100	100.00	Yes	
Block F L05:13 Unit 06 Bedroom	100	100.00	Yes	
Block F L05:14 Unit 06 LDK	200	100.00	Yes	
Block F L05:15 Unit 06 Bedroom	100	100.00	Yes	
Block F L05:16 Unit 07 LDK	200	100.00	Yes	
Block F L05:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L05:18 Unit 08 Bedroom	100	100.00	Yes	
Block F L05:19 Unit 08 LDK	200	100.00	Yes	
Block F L05:20 Unit 09 LDK	200	90.70	Yes	
Block F L05:21 Unit 09 Bedroom	100	100.00	Yes	
Block F L05:22 Unit 10 Bedroom	100	100.00	Yes	
Block F L05:23 Unit 10 LDK	200	100.00	Yes	
Block F L05:24 Unit 10 Bedroom	100	100.00	Yes	
Block F L06:01 Unit 01 Bedroom	100	100.00	Yes	
Block F L06:02 Unit 01 LDK	200	100.00	Yes	
Block F L06:03 Unit 01 Bedroom	100	100.00	Yes	
Block F L06:04 Unit 01 Bedroom	100	100.00	Yes	
Block F L06:05 Unit 02 LDK	200	100.00	Yes	
Block F L06:06 Unit 02 Bedroom	100	100.00	Yes	
Block F L06:07 Unit 03 Bedroom	100	100.00	Yes	
Block F L06:08 Unit 03 LDK	200	100.00	Yes	
Block F L06:09 Unit 04 Bedroom	100	100.00	Yes	
Block F L06:10 Unit 04 LDK	200	100.00	Yes	
Block F L06:11 Unit 04 Bedroom	100	100.00	Yes	
Block F L06:12 Unit 05 Bedroom	100	100.00	Yes	

Block F L06:13 Unit 05 LDK	200	100.00	Yes	
Block F L06:14 Unit 05 Bedroom	100	100.00	Yes	
Block F L06:15 Unit 06 LDK	200	100.00	Yes	
Block F L06:16 Unit 06 Bedroom	100	100.00	Yes	
Block F L06:17 Unit 07 Bedroom	100	100.00	Yes	
Block F L06:18 Unit 07 LDK	200	100.00	Yes	
Block F L06:19 Unit 08 Bedroom	100	100.00	Yes	
Block F L06:20 Unit 08 Bedroom	100	100.00	Yes	
Block F L06:21 Unit 08 LDK	200	100.00	Yes	
Block F L06:22 Unit 08 Bedroom	100	100.00	Yes	

BLOCK G

Block G				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block G L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L00:02 Unit 01 LDK	200	100.00	Yes	
Block G L00:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L00:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L00:05 Unit 02 LDK	200	58.14	Yes	
Block G L00:06 Unit 03 LDK	200	91.49	Yes	
Block G L00:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L00:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L00:09 Unit 04 LDK	200	61.84	Yes	
Block G L00:10 Unit 04 Bedroom	100	100.00	Yes	
Block G L00:11 Unit 05 Bedroom	100	100.00	Yes	
Block G L00:12 Unit 05 LDK	200	100.00	Yes	
Block G L00:13 Unit 05 Bedroom	100	100.00	Yes	
Block G L00:14 Unit 06 Bedroom	100	100.00	Yes	
Block G L00:15 Unit 06 LDK	200	100.00	Yes	
Block G L00:16 Unit 06 Bedroom	100	100.00	Yes	
Block G L00:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L00:18 Unit 07 LDK	200	58.18	Yes	
Block G L00:19 Unit 07 Bedroom	100	100.00	Yes	
Block G L00:20 Unit 08 Bedroom	100	100.00	Yes	
Block G L00:21 Unit 08 LDK	200	66.67	Yes	
Block G L00:22 Unit 09 LDK	200	72.73	Yes	
Block G L00:23 Unit 09 Bedroom	100	100.00	Yes	
Block G L00:24 Unit 10 Bedroom	100	100.00	Yes	
Block G L00:25 Unit 10 LDK	200	100.00	Yes	
Block G L00:26 Unit 10 Bedroom	100	100.00	Yes	
Block G L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L01:02 Unit 01 LDK	200	100.00	Yes	
Block G L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L01:05 Unit 02 LDK	200	68.18	Yes	
Block G L01:06 Unit 03 LDK	200	58.33	Yes	
Block G L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L01:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L01:09 Unit 04 LDK	200	84.48	Yes	
Block G L01:10 Unit 05 LDK	200	67.44	Yes	
Block G L01:11 Unit 05 Bedroom	100	100.00	Yes	
Block G L01:12 Unit 06 Bedroom	100	100.00	Yes	
Block G L01:13 Unit 06 LDK	200	100.00	Yes	

Block G L01:14 Unit 06 Bedroom	100	100.00	Yes	
Block G L01:15 Unit 07 Bedroom	100	100.00	Yes	
Block G L01:16 Unit 07 LDK	200	100.00	Yes	
Block G L01:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block G L01:19 Unit 08 LDK	200	69.57	Yes	
Block G L01:20 Unit 09 LDK	200	100.00	Yes	
Block G L01:21 Unit 09 Bedroom	100	100.00	Yes	
Block G L01:22 Unit 10 Bedroom	100	100.00	Yes	
Block G L01:23 Unit 10 LDK	200	91.49	Yes	
Block G L01:24 Unit 11 LDK	200	60.47	Yes	
Block G L01:25 Unit 11 Bedroom	100	100.00	Yes	
Block G L01:26 Unit 12 Bedroom	100	100.00	Yes	
Block G L01:27 Unit 12 LDK	200	100.00	Yes	
Block G L01:28 Unit 12 Bedroom	100	100.00	Yes	
Block G L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L02:02 Unit 01 LDK	200	100.00	Yes	
Block G L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L02:05 Unit 02 LDK	200	72.73	Yes	
Block G L02:06 Unit 03 LDK	200	68.06	Yes	
Block G L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L02:09 Unit 04 LDK	200	87.93	Yes	
Block G L02:10 Unit 05 LDK	200	74.42	Yes	
Block G L02:11 Unit 05 Bedroom	100	100.00	Yes	
Block G L02:12 Unit 06 Bedroom	100	100.00	Yes	
Block G L02:13 Unit 06 LDK	200	100.00	Yes	
Block G L02:14 Unit 06 Bedroom	100	100.00	Yes	
Block G L02:15 Unit 07 Bedroom	100	100.00	Yes	
Block G L02:16 Unit 07 LDK	200	100.00	Yes	
Block G L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block G L02:19 Unit 08 LDK	200	76.09	Yes	
Block G L02:20 Unit 09 LDK	200	100.00	Yes	
Block G L02:21 Unit 09 Bedroom	100	100.00	Yes	
Block G L02:22 Unit 10 Bedroom	100	100.00	Yes	
Block G L02:23 Unit 10 LDK	200	100.00	Yes	
Block G L02:24 Unit 11 LDK	200	69.77	Yes	
Block G L02:25 Unit 11 Bedroom	100	100.00	Yes	
Block G L02:26 Unit 12 Bedroom	100	100.00	Yes	
Block G L02:27 Unit 12 LDK	200	100.00	Yes	
Block G L02:28 Unit 12 Bedroom	100	100.00	Yes	
Block G L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L03:02 Unit 01 LDK	200	100.00	Yes	

Block G L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L03:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L03:05 Unit 02 LDK	200	81.82	Yes	
Block G L03:06 Unit 03 LDK	200	66.67	Yes	
Block G L03:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L03:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L03:09 Unit 04 LDK	200	91.38	Yes	
Block G L03:10 Unit 05 LDK	200	79.07	Yes	
Block G L03:11 Unit 05 Bedroom	100	100.00	Yes	
Block G L03:12 Unit 06 Bedroom	100	100.00	Yes	
Block G L03:13 Unit 06 LDK	200	100.00	Yes	
Block G L03:14 Unit 06 Bedroom	100	100.00	Yes	
Block G L03:15 Unit 07 Bedroom	100	100.00	Yes	
Block G L03:16 Unit 07 LDK	200	100.00	Yes	
Block G L03:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block G L03:19 Unit 08 LDK	200	80.43	Yes	
Block G L03:20 Unit 09 LDK	200	100.00	Yes	
Block G L03:21 Unit 09 Bedroom	100	100.00	Yes	
Block G L03:22 Unit 10 Bedroom	100	100.00	Yes	
Block G L03:23 Unit 10 LDK	200	100.00	Yes	
Block G L03:24 Unit 11 LDK	200	72.09	Yes	
Block G L03:25 Unit 11 Bedroom	100	100.00	Yes	
Block G L03:26 Unit 12 Bedroom	100	100.00	Yes	
Block G L03:27 Unit 12 LDK	200	100.00	Yes	
Block G L03:28 Unit 12 Bedroom	100	100.00	Yes	
Block G L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L04:02 Unit 01 LDK	200	100.00	Yes	
Block G L04:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L04:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L04:05 Unit 02 LDK	200	90.91	Yes	
Block G L04:06 Unit 03 LDK	200	79.17	Yes	
Block G L04:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L04:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L04:09 Unit 04 LDK	200	98.28	Yes	
Block G L04:10 Unit 05 LDK	200	86.05	Yes	
Block G L04:11 Unit 05 Bedroom	100	100.00	Yes	
Block G L04:12 Unit 06 Bedroom	100	100.00	Yes	
Block G L04:13 Unit 06 LDK	200	100.00	Yes	
Block G L04:14 Unit 06 Bedroom	100	100.00	Yes	
Block G L04:15 Unit 07 Bedroom	100	100.00	Yes	
Block G L04:16 Unit 07 LDK	200	100.00	Yes	
Block G L04:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L04:18 Unit 08 Bedroom	100	100.00	Yes	
Block G L04:19 Unit 08 LDK	200	89.13	Yes	

Block G L04:20 Unit 09 LDK	200	100.00	Yes	
Block G L04:21 Unit 09 Bedroom	100	100.00	Yes	
Block G L04:22 Unit 10 Bedroom	100	100.00	Yes	
Block G L04:23 Unit 10 LDK	200	100.00	Yes	
Block G L04:24 Unit 11 LDK	200	86.05	Yes	
Block G L04:25 Unit 11 Bedroom	100	100.00	Yes	
Block G L04:26 Unit 12 Bedroom	100	100.00	Yes	
Block G L04:27 Unit 12 LDK	200	100.00	Yes	
Block G L04:28 Unit 12 Bedroom	100	100.00	Yes	
Block G L05:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L05:02 Unit 01 LDK	200	100.00	Yes	
Block G L05:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L05:04 Unit 02 Bedroom	100	100.00	Yes	
Block G L05:05 Unit 02 LDK	200	88.64	Yes	
Block G L05:06 Unit 03 LDK	200	81.94	Yes	
Block G L05:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L05:08 Unit 04 Bedroom	100	100.00	Yes	
Block G L05:09 Unit 04 LDK	200	100.00	Yes	
Block G L05:10 Unit 05 Bedroom	100	100.00	Yes	
Block G L05:11 Unit 05 LDK	200	100.00	Yes	
Block G L05:12 Unit 05 Bedroom	100	100.00	Yes	
Block G L05:13 Unit 06 Bedroom	100	100.00	Yes	
Block G L05:14 Unit 06 LDK	200	100.00	Yes	
Block G L05:15 Unit 06 Bedroom	100	100.00	Yes	
Block G L05:16 Unit 07 LDK	200	100.00	Yes	
Block G L05:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L05:18 Unit 08 Bedroom	100	100.00	Yes	
Block G L05:19 Unit 08 LDK	200	100.00	Yes	
Block G L05:20 Unit 09 LDK	200	93.02	Yes	
Block G L05:21 Unit 09 Bedroom	100	100.00	Yes	
Block G L05:22 Unit 10 Bedroom	100	100.00	Yes	
Block G L05:23 Unit 10 LDK	200	100.00	Yes	
Block G L05:24 Unit 10 Bedroom	100	100.00	Yes	
Block G L06:01 Unit 01 Bedroom	100	100.00	Yes	
Block G L06:02 Unit 01 LDK	200	100.00	Yes	
Block G L06:03 Unit 01 Bedroom	100	100.00	Yes	
Block G L06:04 Unit 01 Bedroom	100	100.00	Yes	
Block G L06:05 Unit 02 LDK	200	100.00	Yes	
Block G L06:06 Unit 02 Bedroom	100	100.00	Yes	
Block G L06:07 Unit 03 Bedroom	100	100.00	Yes	
Block G L06:08 Unit 03 LDK	200	100.00	Yes	
Block G L06:09 Unit 04 Bedroom	100	100.00	Yes	
Block G L06:10 Unit 04 LDK	200	100.00	Yes	
Block G L06:11 Unit 04 Bedroom	100	100.00	Yes	
Block G L06:12 Unit 05 Bedroom	100	100.00	Yes	

Block G L06:13 Unit 05 LDK	200	100.00	Yes	
Block G L06:14 Unit 05 Bedroom	100	100.00	Yes	
Block G L06:15 Unit 06 LDK	200	100.00	Yes	
Block G L06:16 Unit 06 Bedroom	100	100.00	Yes	
Block G L06:17 Unit 07 Bedroom	100	100.00	Yes	
Block G L06:18 Unit 07 LDK	200	100.00	Yes	
Block G L06:19 Unit 08 Bedroom	100	100.00	Yes	
Block G L06:20 Unit 08 Bedroom	100	100.00	Yes	
Block G L06:21 Unit 08 LDK	200	100.00	Yes	
Block G L06:22 Unit 08 Bedroom	100	100.00	Yes	

BLOCK H

Block H				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block H LL:01 Unit 01 Bedroom	100	100.00	Yes	
Block H LL:02 Unit 01 LDK	200	100.00	Yes	
Block H LL:03 Unit 01 Bedroom	100	100.00	Yes	
Block H LL:04 Unit 02 Bedroom	100	100.00	Yes	
Block H LL:05 Unit 02 LDK	200	100.00	Yes	
Block H LL:06 Unit 02 Bedroom	100	100.00	Yes	
Block H L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block H L00:02 Unit 01 LDK	200	100.00	Yes	
Block H L00:03 Unit 01 Bedroom	100	100.00	Yes	
Block H L00:04 Unit 02 Bedroom	100	100.00	Yes	
Block H L00:05 Unit 02 LDK	200	97.67	Yes	
Block H L00:06 Unit 03 LDK	200	100.00	Yes	
Block H L00:07 Unit 03 Bedroom	100	100.00	Yes	
Block H L00:08 Unit 04 Bedroom	100	100.00	Yes	
Block H L00:09 Unit 04 LDK	200	72.60	Yes	
Block H L00:10 Unit 04 Bedroom	100	100.00	Yes	
Block H L00:11 Unit 05 Bedroom	100	100.00	Yes	
Block H L00:12 Unit 05 LDK	200	100.00	Yes	
Block H L00:13 Unit 05 Bedroom	100	100.00	Yes	
Block H L00:14 Unit 06 Bedroom	100	100.00	Yes	
Block H L00:15 Unit 06 LDK	200	100.00	Yes	
Block H L00:16 Unit 06 Bedroom	100	100.00	Yes	
Block H L00:17 Unit 07 Bedroom	100	100.00	Yes	
Block H L00:18 Unit 07 LDK	200	72.92	Yes	
Block H L00:19 Unit 08 LDK	200	58.70	Yes	
Block H L00:20 Unit 08 Bedroom	100	100.00	Yes	
Block H L00:21 Unit 09 Bedroom	100	100.00	Yes	
Block H L00:22 Unit 09 LDK	200	56.90	Yes	
Block H L00:23 Unit 09 Bedroom	100	100.00	Yes	
Block H L00:24 Unit 10 Bedroom	100	100.00	Yes	
Block H L00:25 Unit 10 LDK	200	100.00	Yes	
Block H L00:26 Unit 10 Bedroom	100	100.00	Yes	
Block H L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block H L01:02 Unit 01 LDK	200	100.00	Yes	
Block H L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block H L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block H L01:05 Unit 02 LDK	200	90.70	Yes	
Block H L01:06 Unit 03 LDK	200	100.00	Yes	
Block H L01:07 Unit 03 Bedroom	100	100.00	Yes	

Block H L01:08 Unit 04 Bedroom	100	100.00	Yes	
Block H L01:09 Unit 04 LDK	200	100.00	Yes	
Block H L01:10 Unit 05 LDK	200	83.72	Yes	
Block H L01:11 Unit 05 Bedroom	100	100.00	Yes	
Block H L01:12 Unit 06 Bedroom	100	100.00	Yes	
Block H L01:13 Unit 06 LDK	200	100.00	Yes	
Block H L01:14 Unit 06 Bedroom	100	100.00	Yes	
Block H L01:15 Unit 07 Bedroom	100	100.00	Yes	
Block H L01:16 Unit 07 LDK	200	100.00	Yes	
Block H L01:17 Unit 07 Bedroom	100	100.00	Yes	
Block H L01:18 Unit 08 Bedroom	100	100.00	Yes	
Block H L01:19 Unit 08 LDK	200	77.08	Yes	
Block H L01:20 Unit 09 LDK	200	60.66	Yes	
Block H L01:21 Unit 09 Bedroom	100	100.00	Yes	
Block H L01:22 Unit 09 Bedroom	100	100.00	Yes	
Block H L01:23 Unit 10 LDK	200	98.31	Yes	
Block H L01:24 Unit 11 LDK	200	55.17	Yes	
Block H L01:25 Unit 11 Bedroom	100	100.00	Yes	
Block H L01:26 Unit 12 Bedroom	100	100.00	Yes	
Block H L01:27 Unit 12 LDK	200	100.00	Yes	
Block H L01:28 Unit 12 Bedroom	100	100.00	Yes	
Block H L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block H L02:02 Unit 01 LDK	200	100.00	Yes	
Block H L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block H L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block H L02:05 Unit 02 LDK	200	93.02	Yes	
Block H L02:06 Unit 03 LDK	200	100.00	Yes	
Block H L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block H L02:08 Unit 04 Bedroom	100	100.00	Yes	
Block H L02:09 Unit 04 LDK	200	100.00	Yes	
Block H L02:10 Unit 05 LDK	200	88.37	Yes	
Block H L02:11 Unit 05 Bedroom	100	100.00	Yes	
Block H L02:12 Unit 06 Bedroom	100	100.00	Yes	
Block H L02:13 Unit 06 LDK	200	100.00	Yes	
Block H L02:14 Unit 06 Bedroom	100	100.00	Yes	
Block H L02:15 Unit 07 Bedroom	100	100.00	Yes	
Block H L02:16 Unit 07 LDK	200	100.00	Yes	
Block H L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block H L02:18 Unit 08 Bedroom	100	100.00	Yes	
Block H L02:19 Unit 08 LDK	200	81.25	Yes	
Block H L02:20 Unit 09 LDK	200	67.21	Yes	
Block H L02:21 Unit 09 Bedroom	100	100.00	Yes	
Block H L02:22 Unit 09 Bedroom	100	100.00	Yes	
Block H L02:23 Unit 10 LDK	200	98.31	Yes	
Block H L02:24 Unit 11 LDK	200	62.07	Yes	

Block H L02:25 Unit 11 Bedroom	100	100.00	Yes	
Block H L02:26 Unit 12 Bedroom	100	100.00	Yes	
Block H L02:27 Unit 12 LDK	200	100.00	Yes	
Block H L02:28 Unit 12 Bedroom	100	100.00	Yes	
Block H L03:01 Unit 01 Bedroom	100	100.00	Yes	
Block H L03:02 Unit 01 LDK	200	100.00	Yes	
Block H L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block H L03:04 Unit 02 Bedroom	100	100.00	Yes	
Block H L03:05 Unit 02 LDK	200	100.00	Yes	
Block H L03:06 Unit 03 LDK	200	100.00	Yes	
Block H L03:07 Unit 03 Bedroom	100	100.00	Yes	
Block H L03:08 Unit 04 Bedroom	100	100.00	Yes	
Block H L03:09 Unit 04 LDK	200	97.62	Yes	
Block H L03:10 Unit 05 Bedroom	100	100.00	Yes	
Block H L03:11 Unit 05 LDK	200	100.00	Yes	
Block H L03:12 Unit 05 Bedroom	100	100.00	Yes	
Block H L03:13 Unit 06 Bedroom	100	100.00	Yes	
Block H L03:14 Unit 06 LDK	200	100.00	Yes	
Block H L03:15 Unit 06 Bedroom	100	100.00	Yes	
Block H L03:16 Unit 07 LDK	200	66.67	Yes	
Block H L03:17 Unit 07 Bedroom	100	100.00	Yes	
Block H L03:18 Unit 08 Bedroom	100	100.00	Yes	
Block H L03:19 Unit 08 LDK	200	100.00	Yes	
Block H L03:20 Unit 09 LDK	200	65.52	Yes	
Block H L03:21 Unit 09 Bedroom	100	100.00	Yes	
Block H L03:22 Unit 10 Bedroom	100	100.00	Yes	
Block H L03:23 Unit 10 LDK	200	100.00	Yes	
Block H L03:24 Unit 10 Bedroom	100	100.00	Yes	
Block H L04:01 Unit 01 Bedroom	100	100.00	Yes	
Block H L04:02 Unit 01 LDK	200	100.00	Yes	
Block H L04:03 Unit 01 Bedroom	100	100.00	Yes	
Block H L04:04 Unit 01 Bedroom	100	100.00	Yes	
Block H L04:05 Unit 02 LDK	200	100.00	Yes	
Block H L04:06 Unit 02 Bedroom	100	100.00	Yes	
Block H L04:07 Unit 03 Bedroom	100	100.00	Yes	
Block H L04:08 Unit 03 LDK	200	97.67	Yes	
Block H L04:09 Unit 04 Bedroom	100	100.00	Yes	
Block H L04:10 Unit 04 LDK	200	100.00	Yes	
Block H L04:11 Unit 04 Bedroom	100	100.00	Yes	
Block H L04:12 Unit 05 Bedroom	100	100.00	Yes	
Block H L04:13 Unit 05 LDK	200	100.00	Yes	
Block H L04:14 Unit 05 Bedroom	100	100.00	Yes	
Block H L04:15 Unit 06 LDK	200	75.38	Yes	
Block H L04:16 Unit 06 Bedroom	100	100.00	Yes	
Block H L04:17 Unit 07 Bedroom	100	100.00	Yes	

Block H L04:18 Unit 07 LDK	200	100.00	Yes	
Block H L04:19 Unit 08 Bedroom	100	100.00	Yes	
Block H L04:20 Unit 08 Bedroom	100	100.00	Yes	
Block H L04:21 Unit 08 LDK	200	100.00	Yes	
Block H L04:22 Unit 08 Bedroom	100	100.00	Yes	

BLOCK I1

Block I1				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block I1 L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block I1 L00:02 Unit 01 LDK	200	100.00	Yes	
Block I1 L00:03 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L00:04 Unit 02 LDK	200	94.74	Yes	
Block I1 L00:05 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L00:06 Unit 03 Bedroom	100	100.00	Yes	
Block I1 L00:07 Unit 03 LDK	200	94.74	Yes	
Block I1 L00:08 Unit 03 Bedroom	100	56.52	Yes	
Block I1 L00:09 Unit 04 Bedroom	100	100.00	Yes	
Block I1 L00:10 Unit 04 LDK	200	100.00	Yes	
Block I1 L00:11 Unit 04 Bedroom	100	100.00	Yes	
Block I1 L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block I1 L01:02 Unit 01 LDK	200	100.00	Yes	
Block I1 L01:03 Unit 01 LDK	200	100.00	Yes	
Block I1 L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L01:05 Unit 02 LDK	200	96.49	Yes	
Block I1 L01:06 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block I1 L01:08 Unit 03 LDK	200	100.00	Yes	
Block I1 L01:09 Unit 03 Bedroom	100	0.00	No	See Appendix D for Compensatory Measures
Block I1 L01:10 Unit 04 Bedroom	100	100.00	Yes	
Block I1 L01:11 Unit 04 LDK	200	100.00	Yes	

Block I1 L01:12 Unit 04 Bedroom	100	100.00	Yes	
Block I1 L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block I1 L02:02 Unit 01 LDK	200	100.00	Yes	
Block I1 L02:03 Unit 02 LDK	200	100.00	Yes	
Block I1 L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block I1 L02:06 Unit 03 Bedroom	100	100.00	Yes	
Block I1 L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block I1 L02:08 Unit 03 LDK	200	100.00	Yes	
Block I1 L02:09 Unit 04 LDK	200	100.00	Yes	
Block I1 L02:10 Unit 04 Bedroom	100	100.00	Yes	

BLOCK I2

Block I2				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block I2 L00:01 Unit 01 Bedroom	100	100.00	Yes	
Block I2 L00:02 Unit 01 LDK	200	100.00	Yes	
Block I2 L00:03 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L00:04 Unit 02 LDK	200	98.25	Yes	
Block I2 L00:05 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L00:06 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L00:07 Unit 03 LDK	200	98.25	Yes	
Block I2 L00:08 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L00:09 Unit 04 Bedroom	100	100.00	Yes	
Block I2 L00:10 Unit 04 LDK	200	100.00	Yes	
Block I2 L00:11 Unit 04 Bedroom	100	100.00	Yes	
Block I2 L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block I2 L01:02 Unit 01 LDK	200	100.00	Yes	
Block I2 L01:03 Unit 01 LDK	200	100.00	Yes	
Block I2 L01:04 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L01:05 Unit 02 LDK	200	100.00	Yes	
Block I2 L01:06 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L01:08 Unit 03 LDK	200	98.25	Yes	
Block I2 L01:09 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L01:10 Unit 04 Bedroom	100	100.00	Yes	
Block I2 L01:11 Unit 04 LDK	200	100.00	Yes	
Block I2 L01:12 Unit 04 Bedroom	100	100.00	Yes	
Block I2 L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block I2 L02:02 Unit 01 LDK	200	100.00	Yes	
Block I2 L02:03 Unit 02 LDK	200	100.00	Yes	
Block I2 L02:04 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block I2 L02:06 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block I2 L02:08 Unit 03 LDK	200	100.00	Yes	
Block I2 L02:09 Unit 04 LDK	200	100.00	Yes	
Block I2 L02:10 Unit 04 Bedroom	100	100.00	Yes	

BLOCK J

Block J				
Room	Target Lux	% Area Target Lux Achieved (Recommended Value > 50%)	Target Lux Achieved	Comments
Block J L00:01 Unit 01 Bedroom	100	86.96	Yes	
Block J L00:02 Unit 01 Bedroom	100	100.00	Yes	
Block J L00:03 Unit 01 LDK	200	100.00	Yes	
Block J L00:04 Unit 02 LDK	200	100.00	Yes	
Block J L00:05 Unit 02 Bedroom	100	100.00	Yes	
Block J L00:06 Unit 03 LDK	200	72.58	Yes	
Block J L00:07 Unit 03 Bedroom	100	100.00	Yes	
Block J L00:08 Unit 04 Bedroom	100	100.00	Yes	
Block J L00:09 Unit 04 LDK	200	65.63	Yes	
Block J L01:01 Unit 01 Bedroom	100	100.00	Yes	
Block J L01:02 Unit 01 LDK	200	100.00	Yes	
Block J L01:03 Unit 01 Bedroom	100	100.00	Yes	
Block J L01:04 Unit 01 Bedroom	100	100.00	Yes	
Block J L01:05 Unit 02 Bedroom	100	100.00	Yes	
Block J L01:06 Unit 02 LDK	200	100.00	Yes	
Block J L01:07 Unit 03 Bedroom	100	100.00	Yes	
Block J L01:08 Unit 03 Bedroom	100	100.00	Yes	
Block J L01:09 Unit 03 LDK	200	100.00	Yes	
Block J L01:10 Unit 03 Bedroom	100	100.00	Yes	
Block J L01:11 Unit 04 LDK	200	100.00	Yes	
Block J L01:12 Unit 04 Bedroom	100	100.00	Yes	
Block J L01:13 Unit 05 LDK	200	92.06	Yes	
Block J L01:14 Unit 05 Bedroom	100	100.00	Yes	
Block J L01:15 Unit 06 Bedroom	100	100.00	Yes	
Block J L01:16 Unit 06 LDK	200	97.14	Yes	
Block J L01:17 Unit 07 Bedroom	100	100.00	Yes	
Block J L01:18 Unit 07 LDK	200	100.00	Yes	
Block J L02:01 Unit 01 Bedroom	100	100.00	Yes	
Block J L02:02 Unit 01 LDK	200	100.00	Yes	
Block J L02:03 Unit 01 Bedroom	100	100.00	Yes	
Block J L02:04 Unit 01 Bedroom	100	100.00	Yes	
Block J L02:05 Unit 02 Bedroom	100	100.00	Yes	
Block J L02:06 Unit 02 LDK	200	100.00	Yes	
Block J L02:07 Unit 03 Bedroom	100	100.00	Yes	
Block J L02:08 Unit 03 Bedroom	100	100.00	Yes	
Block J L02:09 Unit 03 LDK	200	100.00	Yes	
Block J L02:10 Unit 03 Bedroom	100	100.00	Yes	
Block J L02:11 Unit 04 LDK	200	100.00	Yes	
Block J L02:12 Unit 04 Bedroom	100	100.00	Yes	

Block J L02:13 Unit 05 LDK	200	96.83	Yes	
Block J L02:14 Unit 05 Bedroom	100	100.00	Yes	
Block J L02:15 Unit 06 Bedroom	100	100.00	Yes	
Block J L02:16 Unit 06 LDK	200	100.00	Yes	
Block J L02:17 Unit 07 Bedroom	100	100.00	Yes	
Block J L02:18 Unit 07 LDK	200	100.00	Yes	
Block J L03:01 Unit 01 LDK	200	100.00	Yes	
Block J L03:02 Unit 01 Bedroom	100	100.00	Yes	
Block J L03:03 Unit 01 Bedroom	100	100.00	Yes	
Block J L03:04 Unit 01 Bedroom	100	100.00	Yes	
Block J L03:05 Unit 02 Bedroom	100	100.00	Yes	
Block J L03:06 Unit 02 Bedroom	100	100.00	Yes	
Block J L03:07 Unit 02 Bedroom	100	100.00	Yes	
Block J L03:08 Unit 02 LDK	200	100.00	Yes	

SUMMARY

Building Totals	
NW Houses	
# Rooms Total	15
# Rooms Passing	15
% Passing	100.00
Block A	
# Rooms Total	42
# Rooms Passing	39
% Passing	92.86
Block B	
# Rooms Total	111
# Rooms Passing	106
% Passing	95.50
Block C	
# Rooms Total	111
# Rooms Passing	100
% Passing	90.09
Block D	
# Rooms Total	133
# Rooms Passing	123
% Passing	92.48
Block E	
# Rooms Total	158
# Rooms Passing	156
% Passing	98.73
Block F	
# Rooms Total	184
# Rooms Passing	184
% Passing	100.00
Block G	
# Rooms Total	184
# Rooms Passing	184
% Passing	100.00
Block H	
# Rooms Total	134
# Rooms Passing	134
% Passing	100.00
Block I1	
# Rooms Total	33
# Rooms Passing	32
% Passing	96.97
Block I2	
# Rooms Total	33

# Rooms Passing	33
% Passing	100.00
Block J	
# Rooms Total	53
# Rooms Passing	53
% Passing	100.00
Site Total	
# Rooms Total	1191
# Rooms Passing	1159
% Passing	97.31

APPENDIX B – DAYLIGHT DISTRIBUTION IMAGES – PROPOSED DEVELOPMENT

Per the BR 209 2022 illuminance method for daylighting analysis, a target lux level must be achieved over at least half of the reference plane, for at least half of the daylighting hours over the period of a typical year.

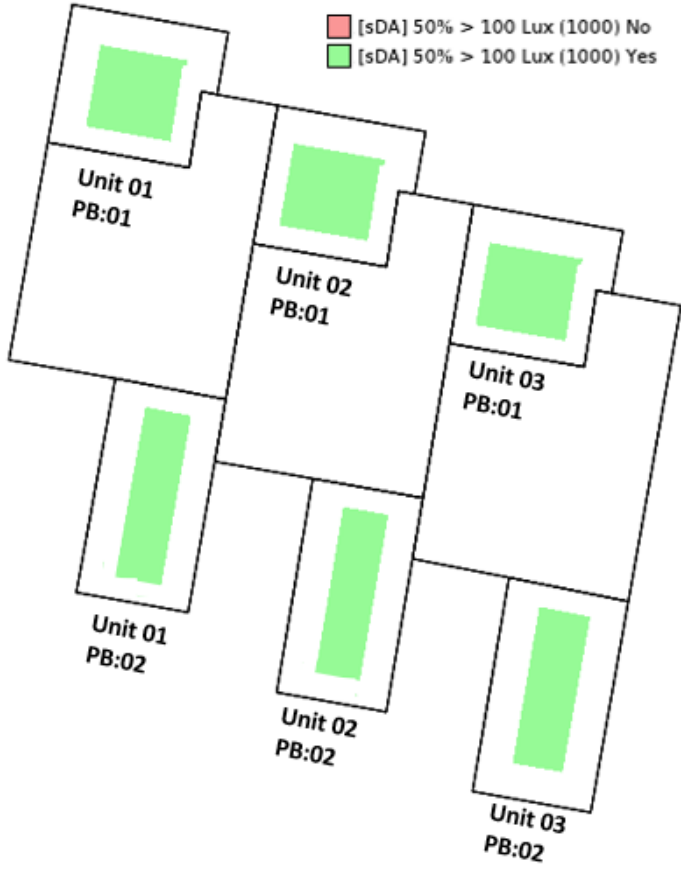
The images below are a visual representation of the daylighting results, with spaces achieving the target lux for at least half of the daylight hours coloured green and areas which do not meet the target lux for at least half of the daylight hours coloured red.

A room is considered to meet the BRE Guidelines for daylighting if at least half of the reference area meets the above criteria, or, as show below, if at least half of the image is coloured green.

PURBECK

NW HOUSES

Bedrooms

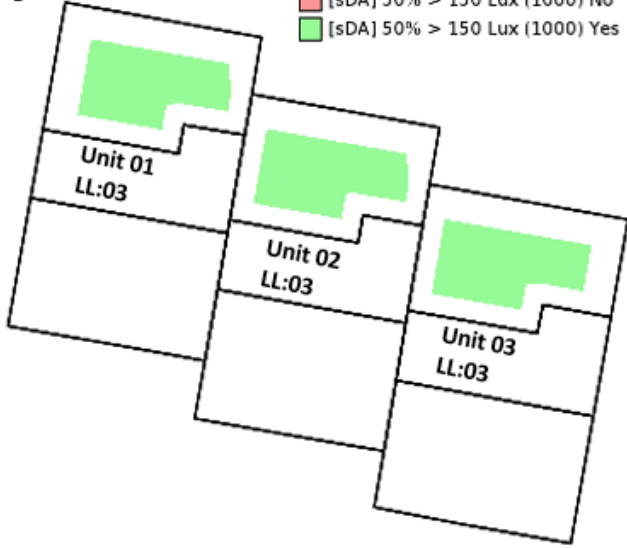


LOWER LEVEL

NW HOUSES

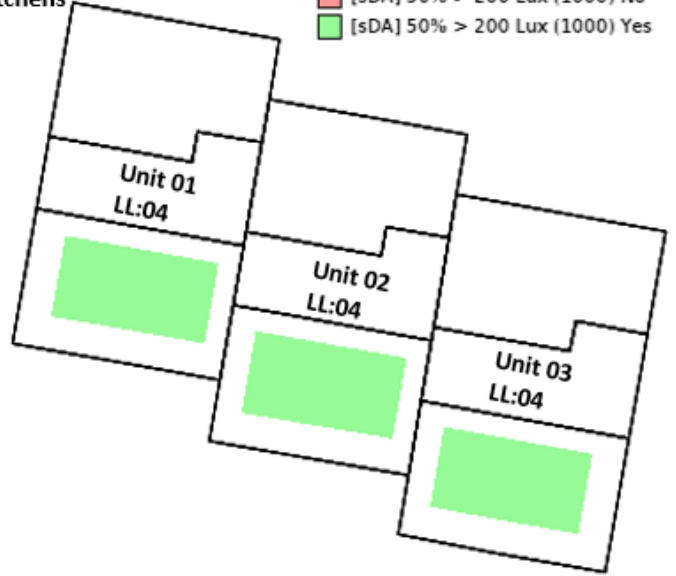
Living Rooms

■ [sDA] 50% > 150 Lux (1000) No
■ [sDA] 50% > 150 Lux (1000) Yes



Kitchens

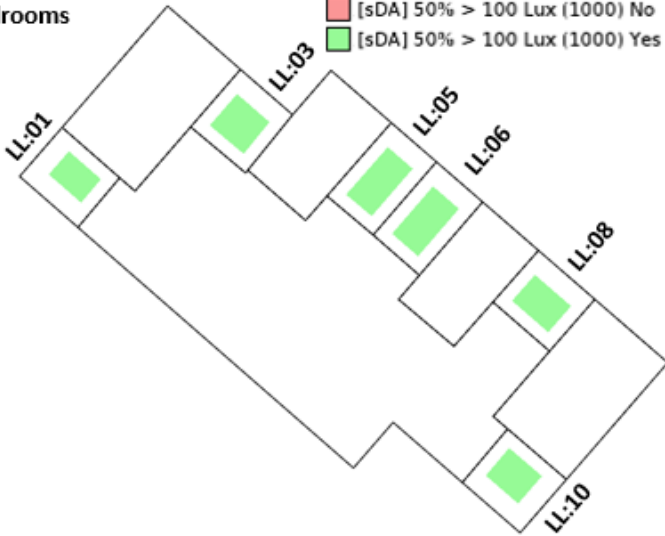
■ [sDA] 50% > 200 Lux (1000) No
■ [sDA] 50% > 200 Lux (1000) Yes



BLOCK B

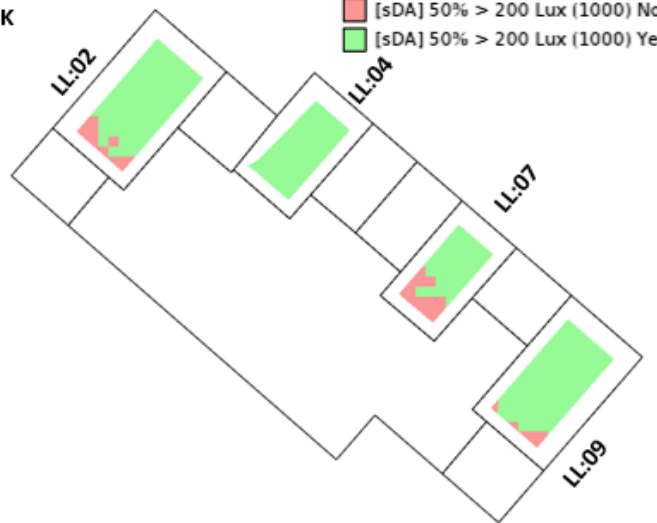
Bedrooms

■ [sDA] 50% > 100 Lux (1000) No
■ [sDA] 50% > 100 Lux (1000) Yes



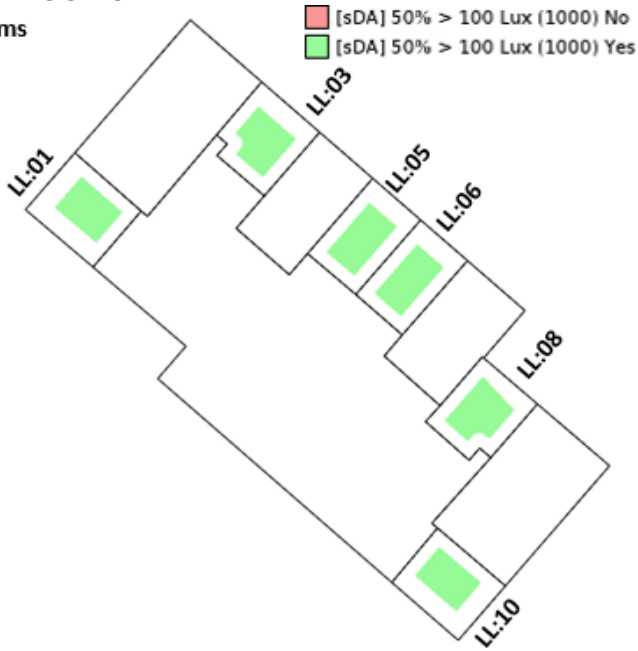
LDK

■ [sDA] 50% > 200 Lux (1000) No
■ [sDA] 50% > 200 Lux (1000) Yes

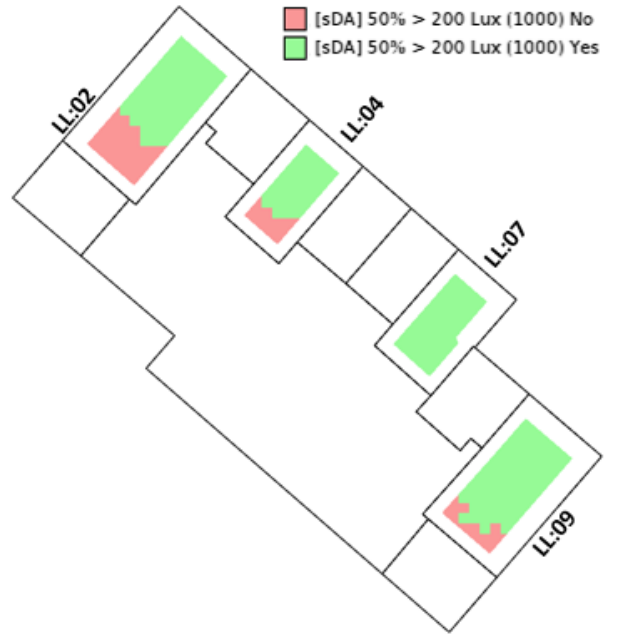


BLOCK C

Bedrooms

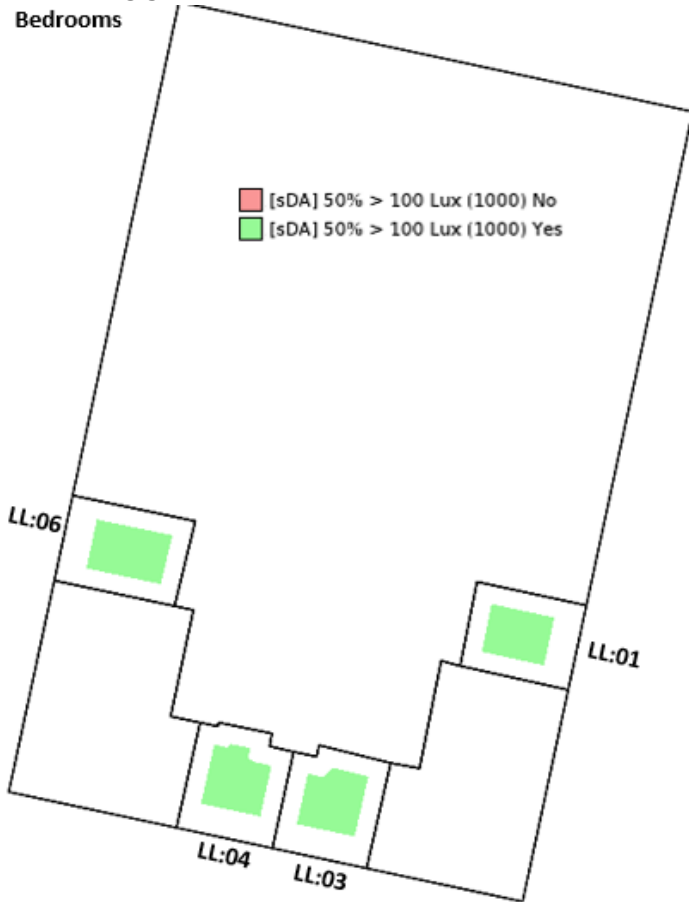


LDK

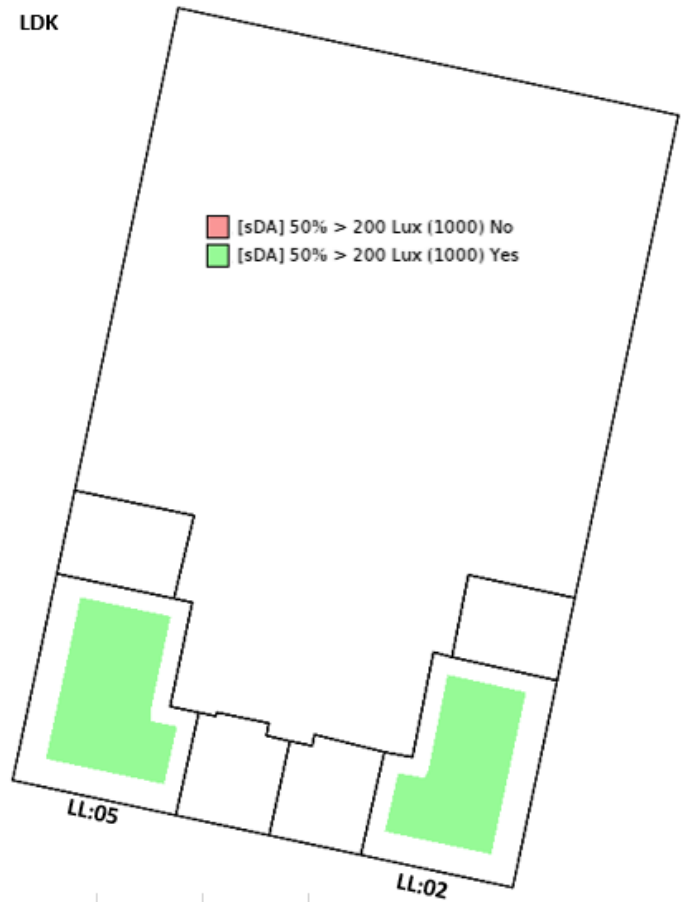


BLOCK H

Bedrooms



LDK

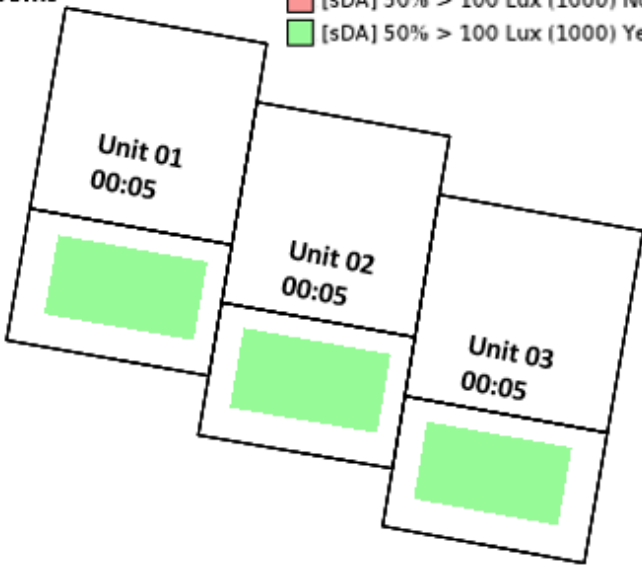


GROUND FLOOR

NW HOUSES

Bedrooms

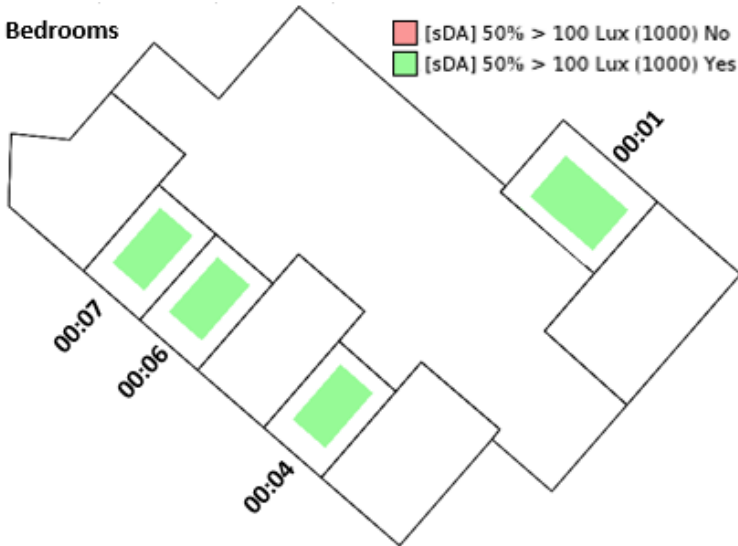
■ [sDA] 50% > 100 Lux (1000) No
■ [sDA] 50% > 100 Lux (1000) Yes



BLOCK A

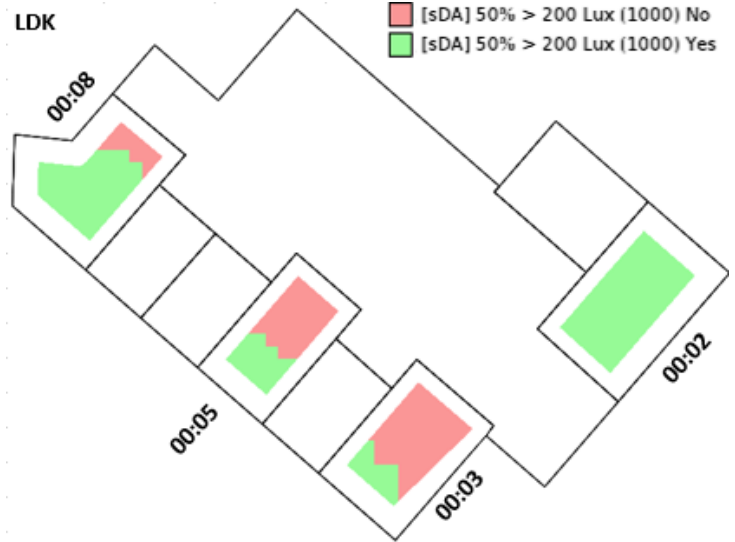
Bedrooms

■ [sDA] 50% > 100 Lux (1000) No
■ [sDA] 50% > 100 Lux (1000) Yes



LDK

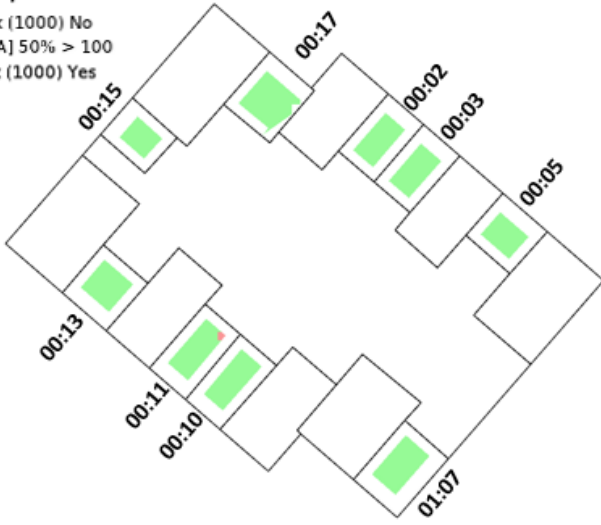
■ [sDA] 50% > 200 Lux (1000) No
■ [sDA] 50% > 200 Lux (1000) Yes



BLOCK B

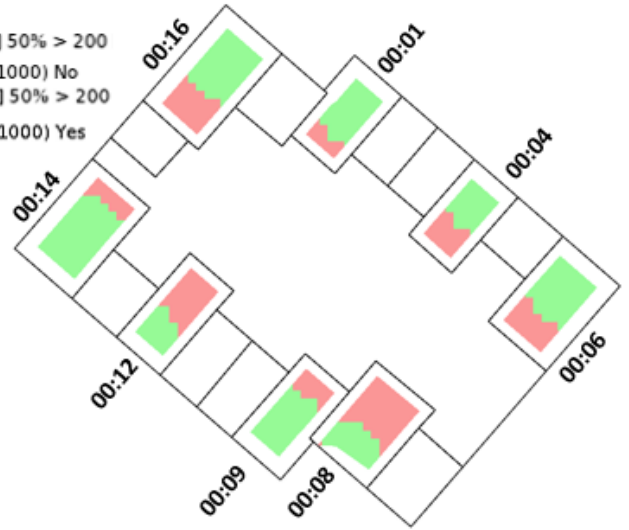
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

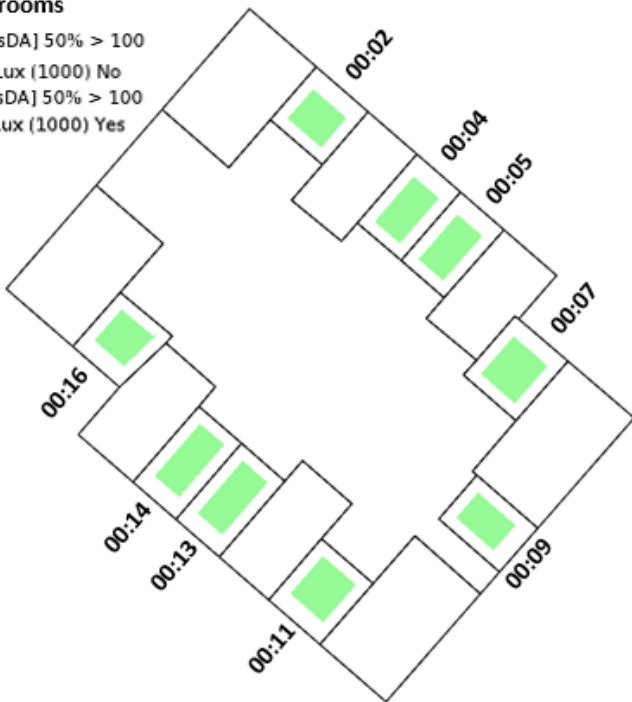
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK C

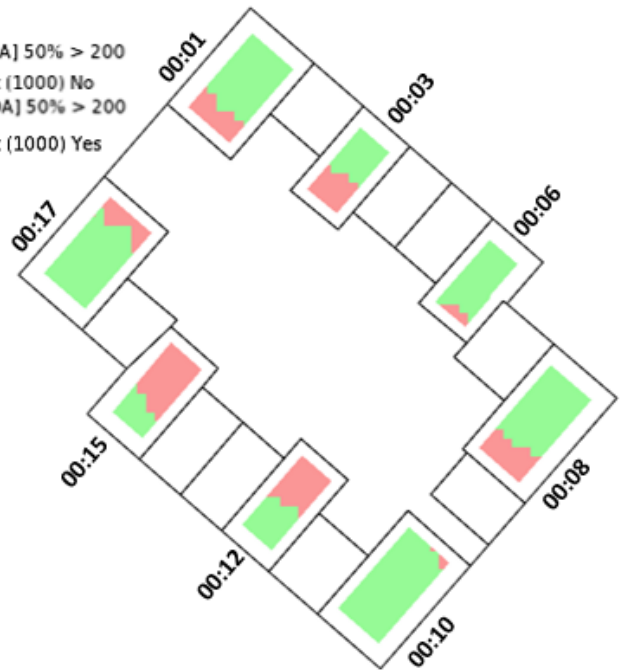
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

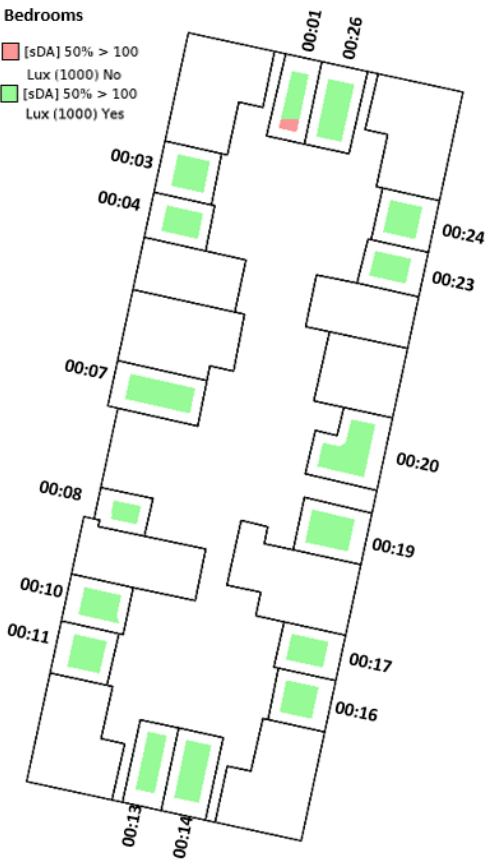
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK F

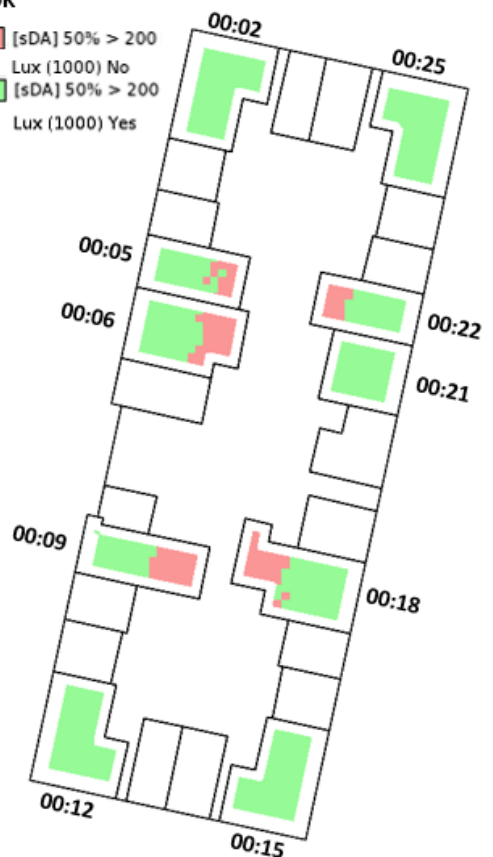
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

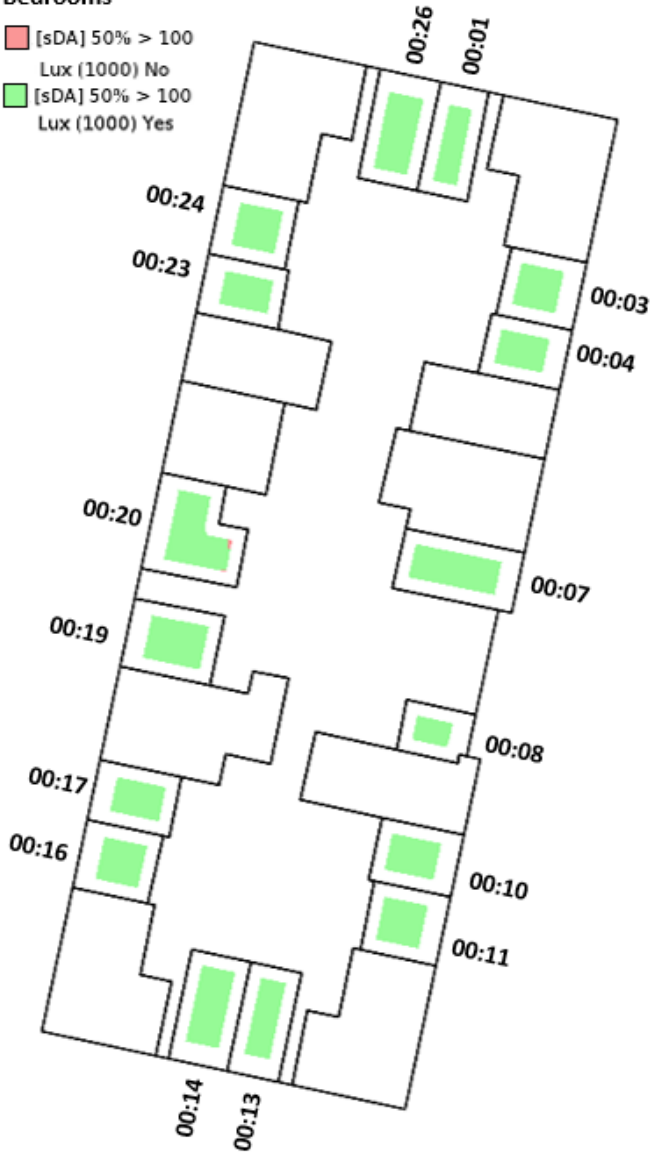
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

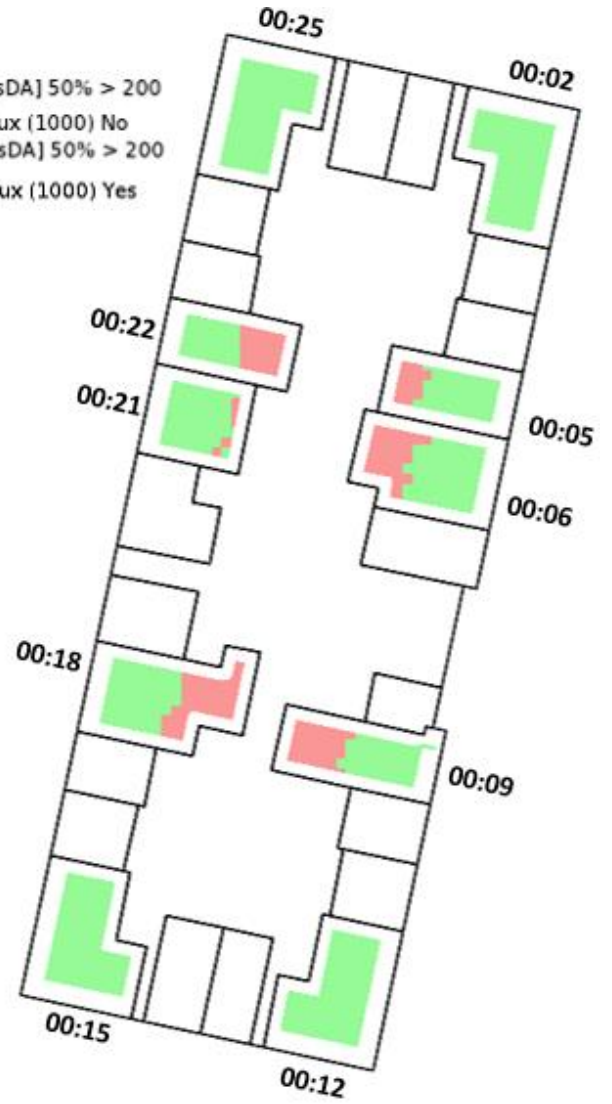
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

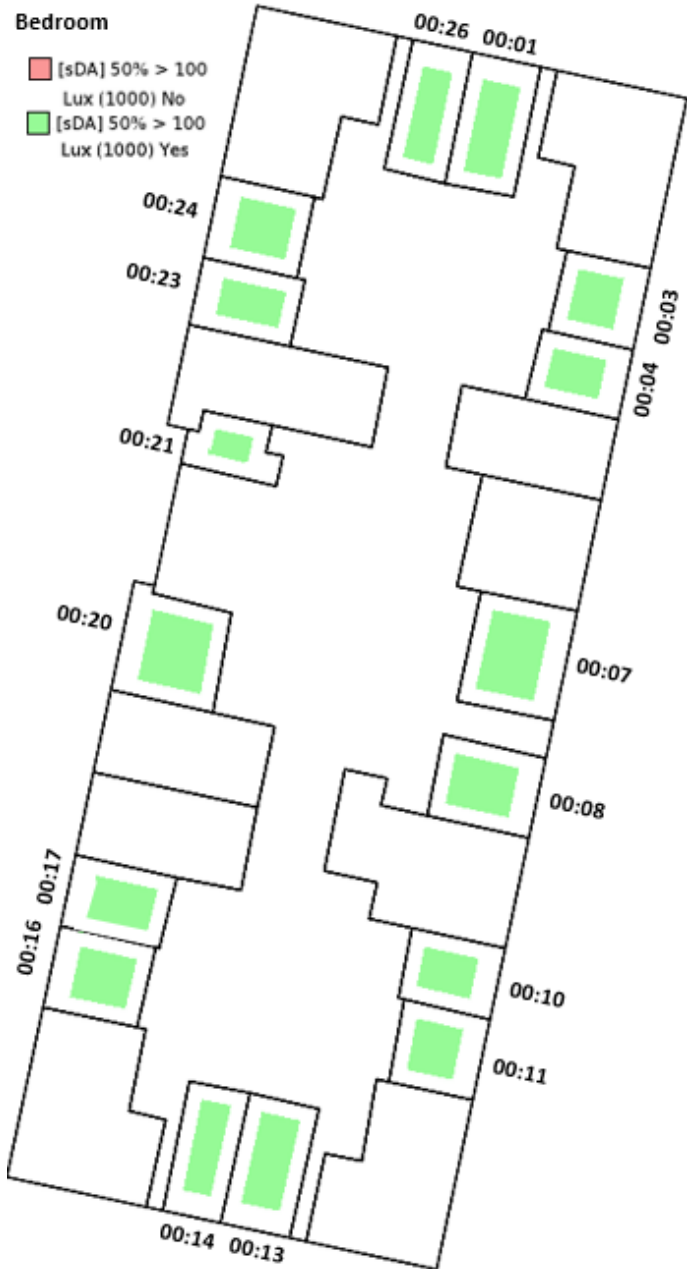
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK H

Bedroom

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



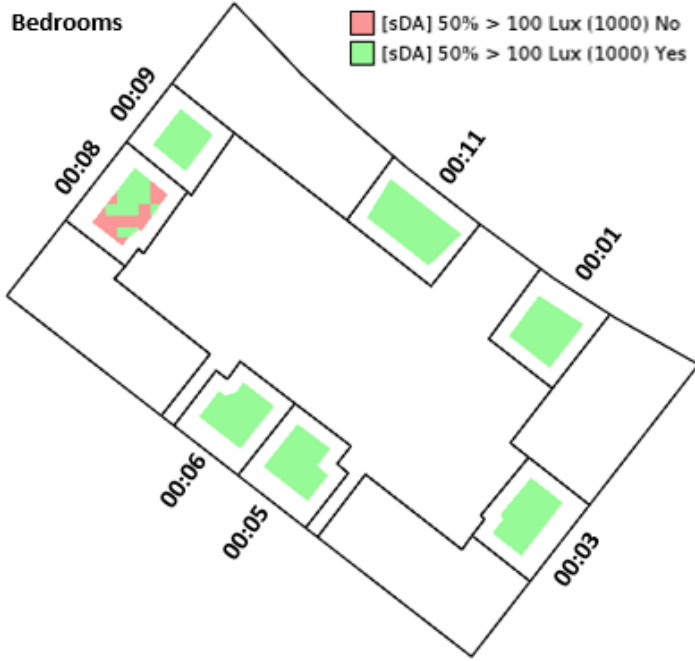
LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

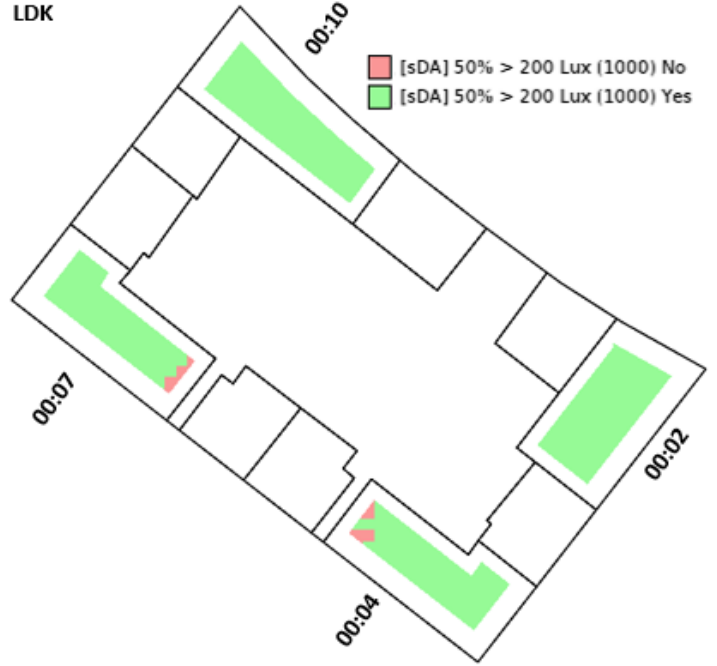


BLOCK I1

Bedrooms

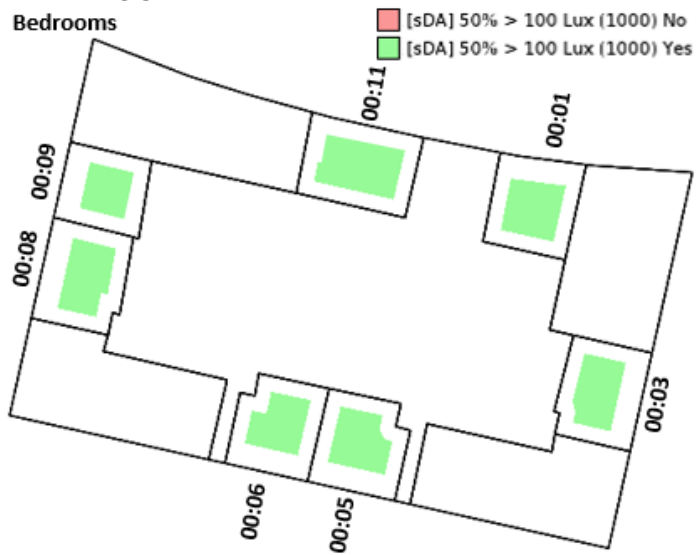


LDK

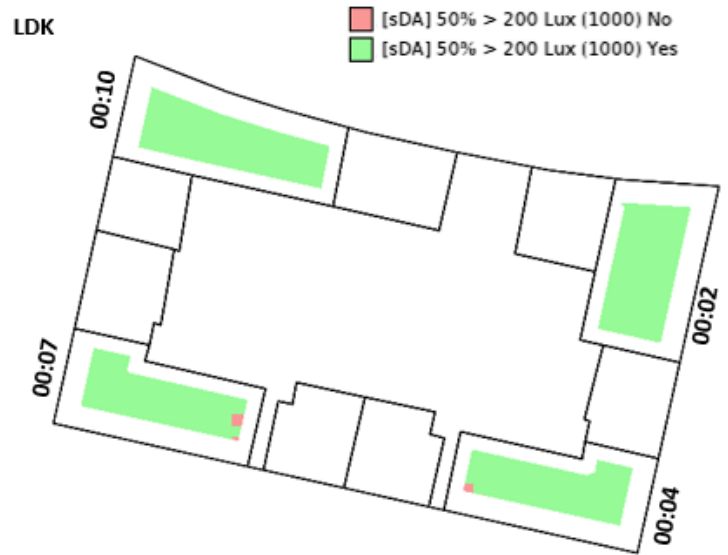


BLOCK I2

Bedrooms



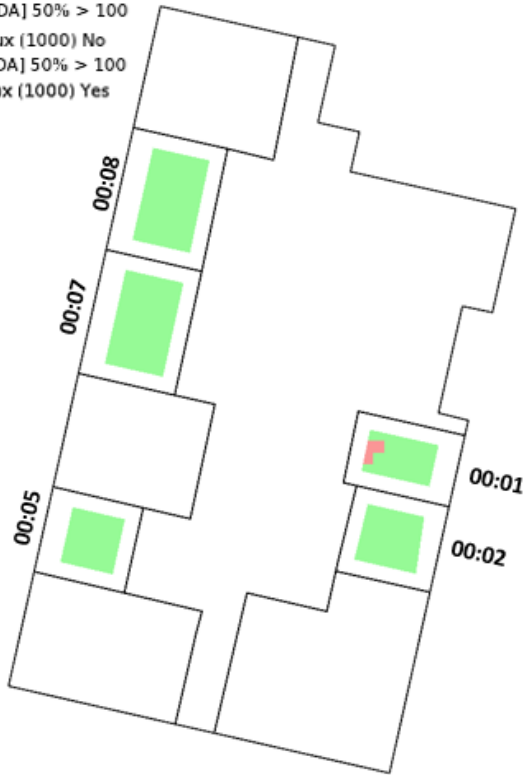
LDK



BLOCK J

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



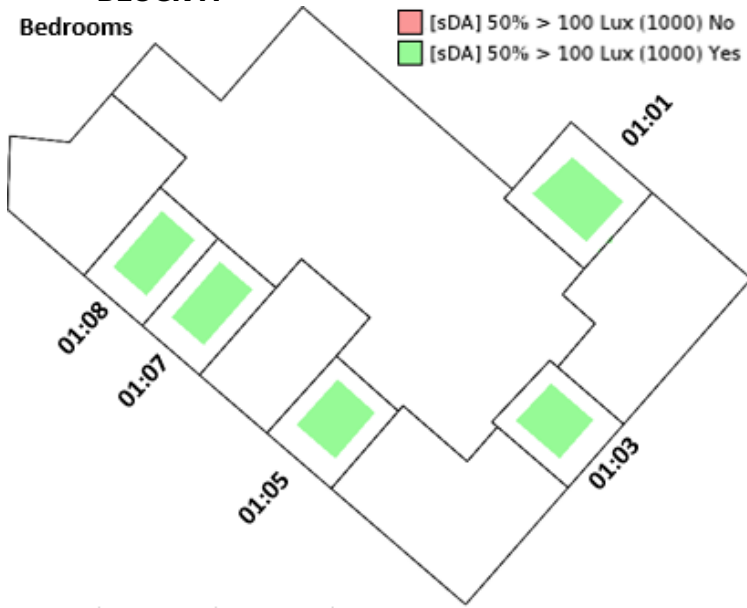
LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

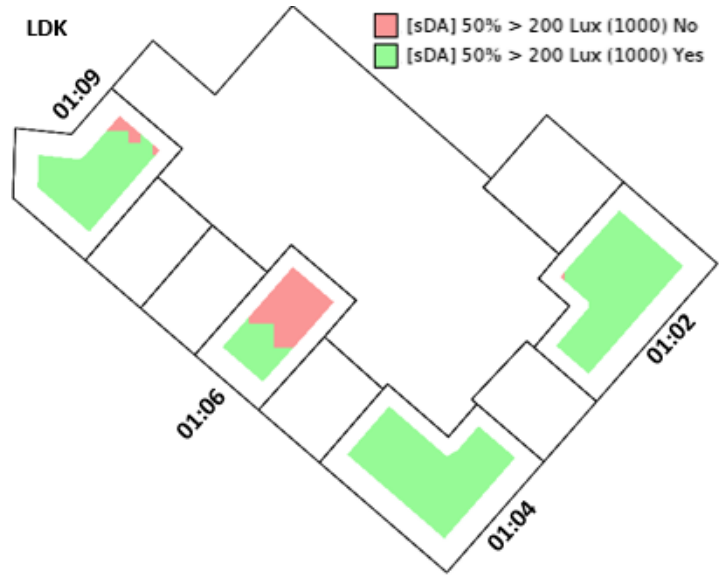


**1st FLOOR
 BLOCK A**

Bedrooms

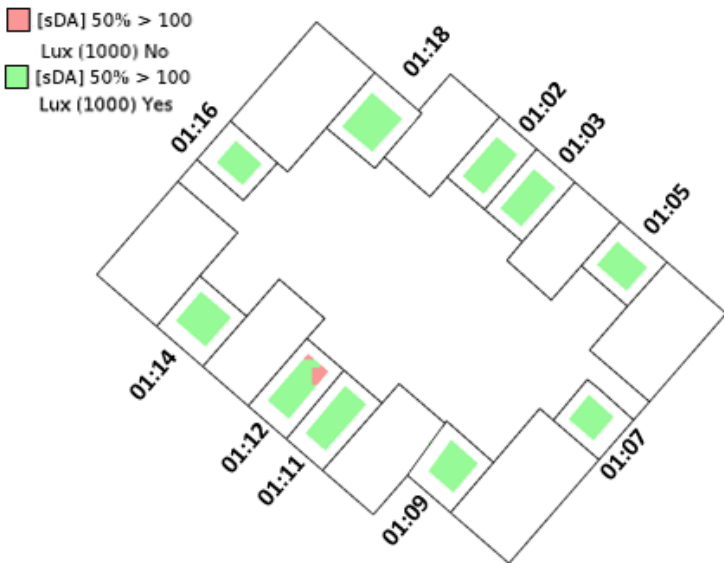


LDK

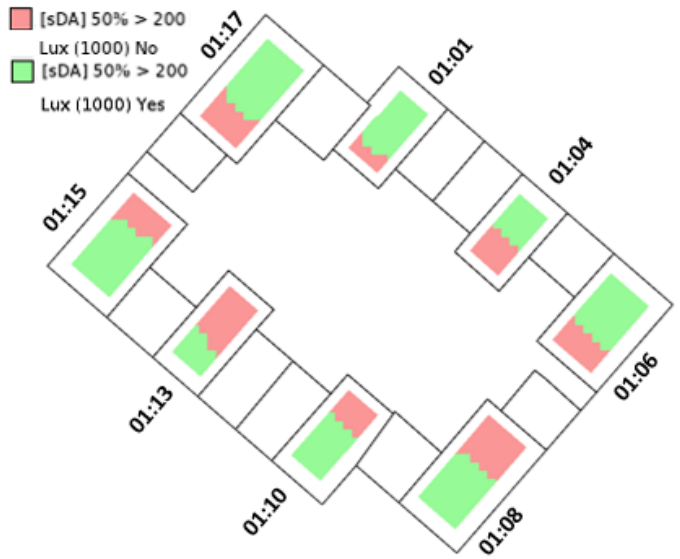


BLOCK B

Bedrooms



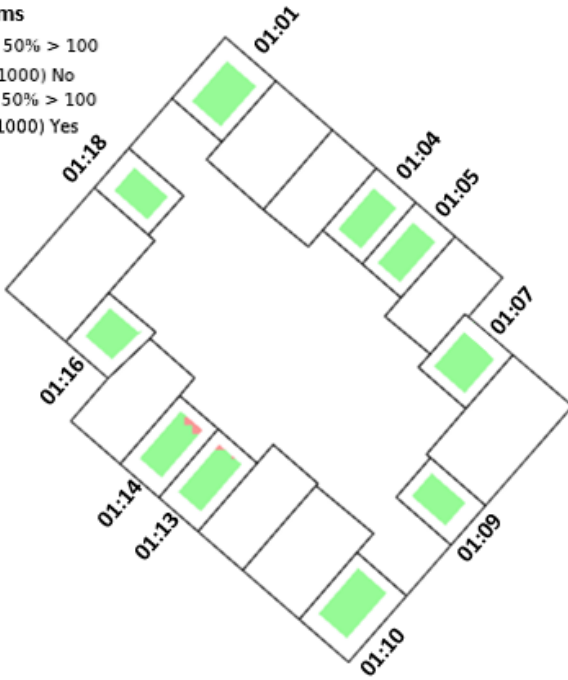
LDK



BLOCK C

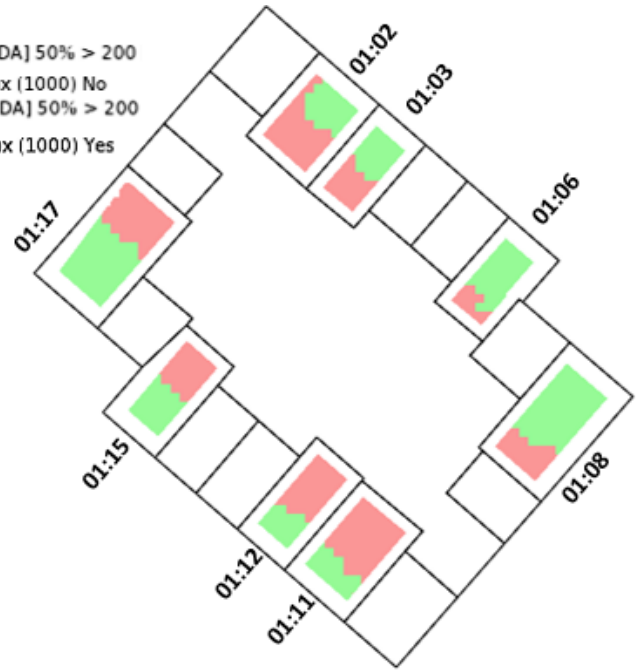
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

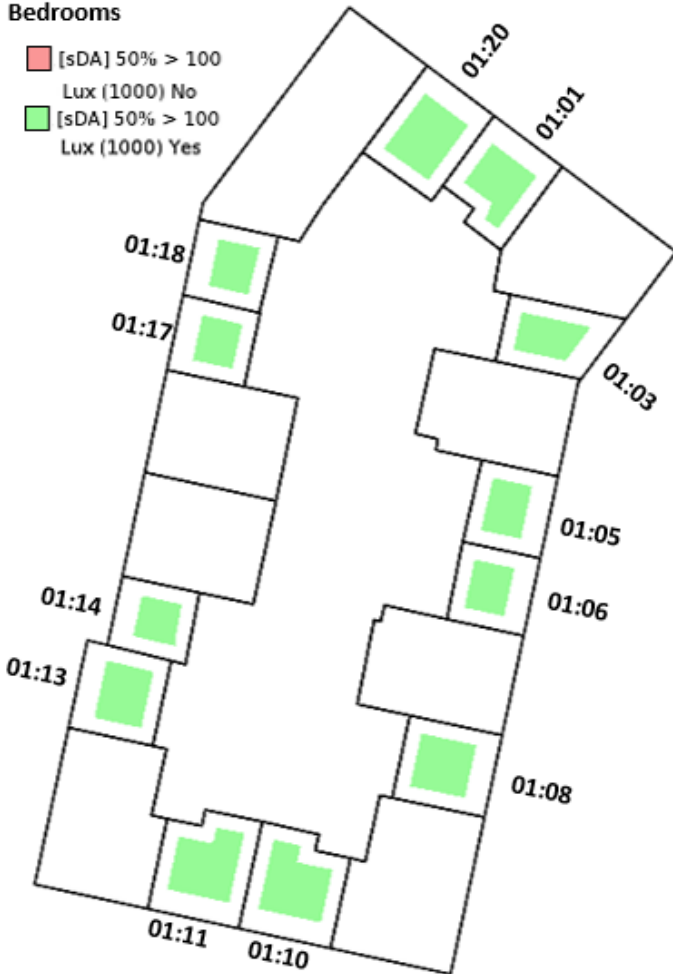
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

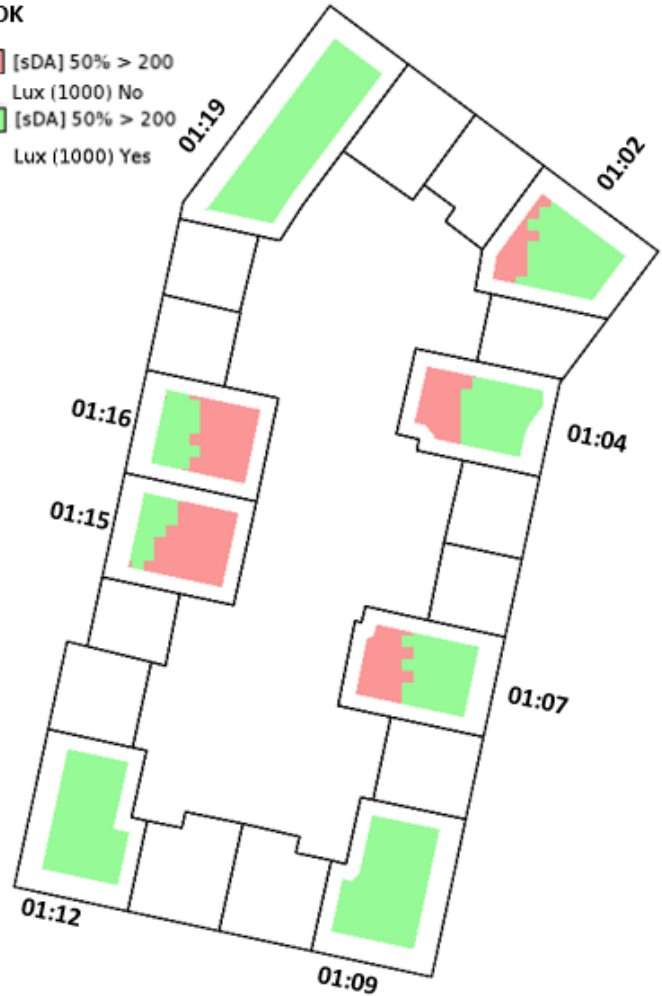
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

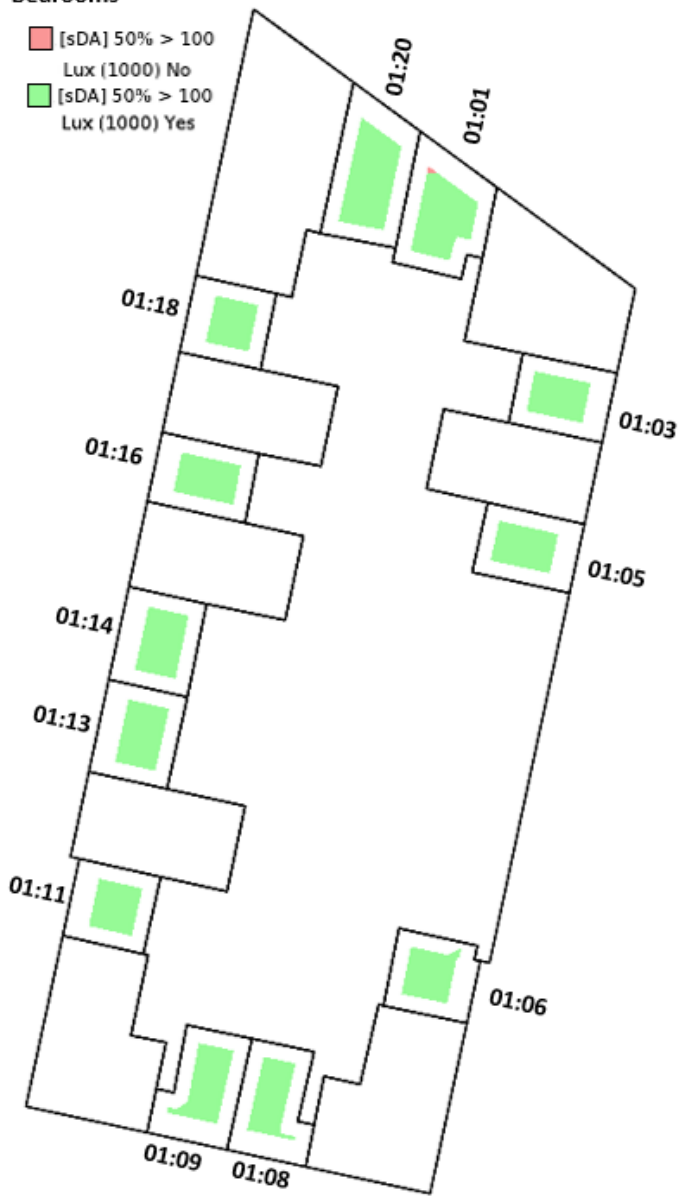
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK E

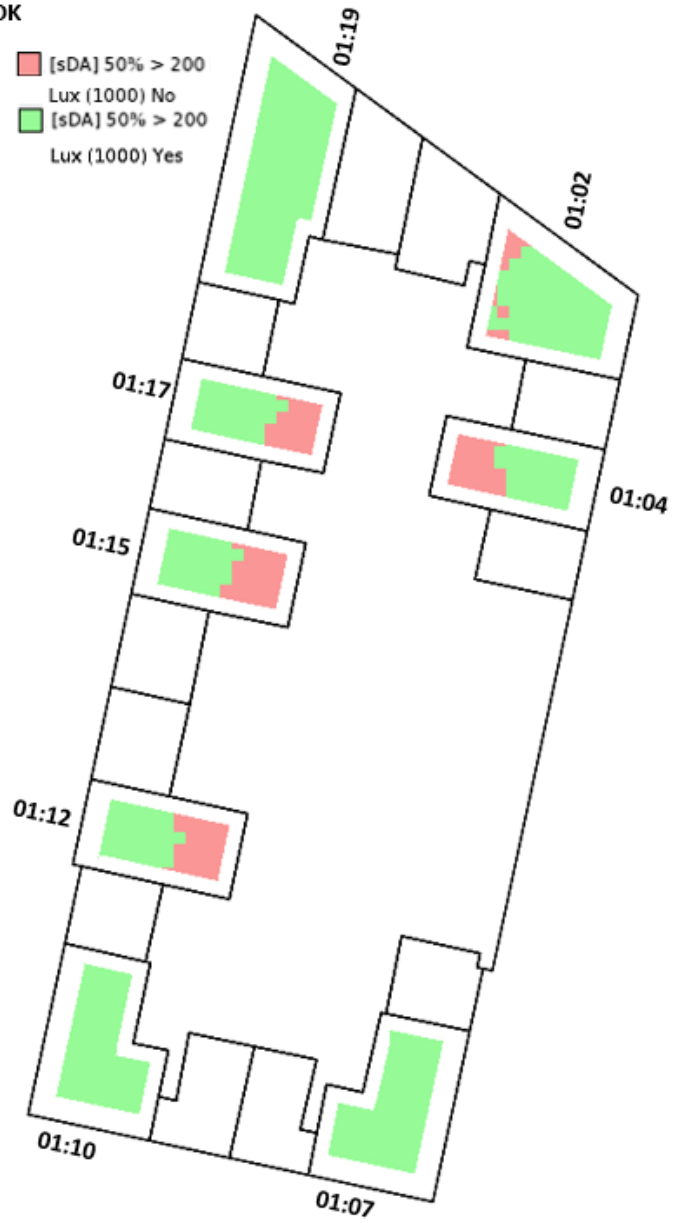
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



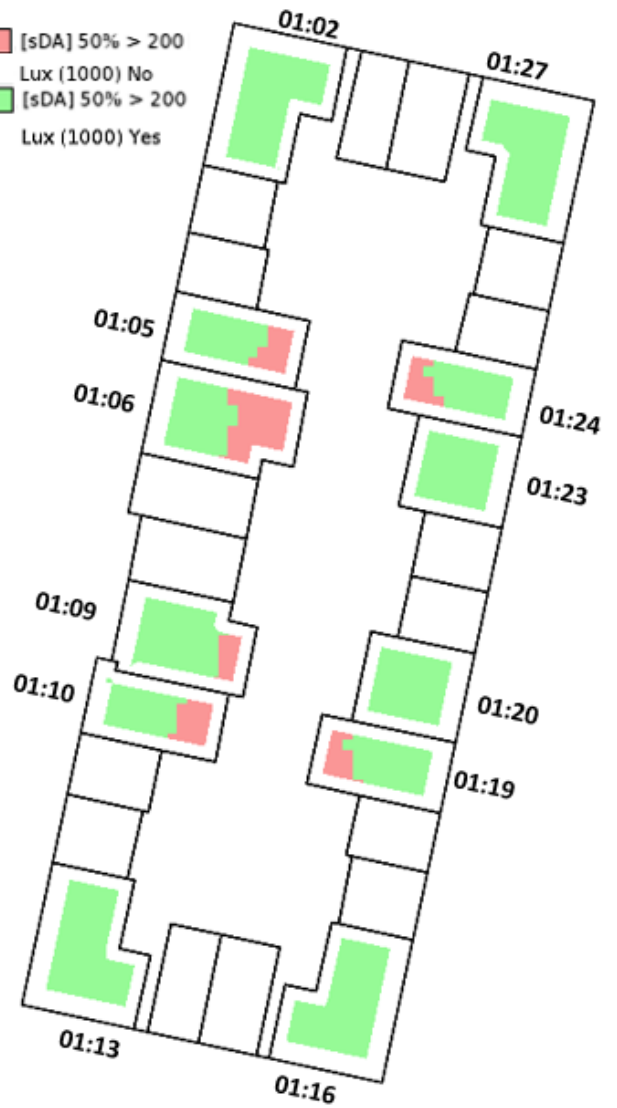
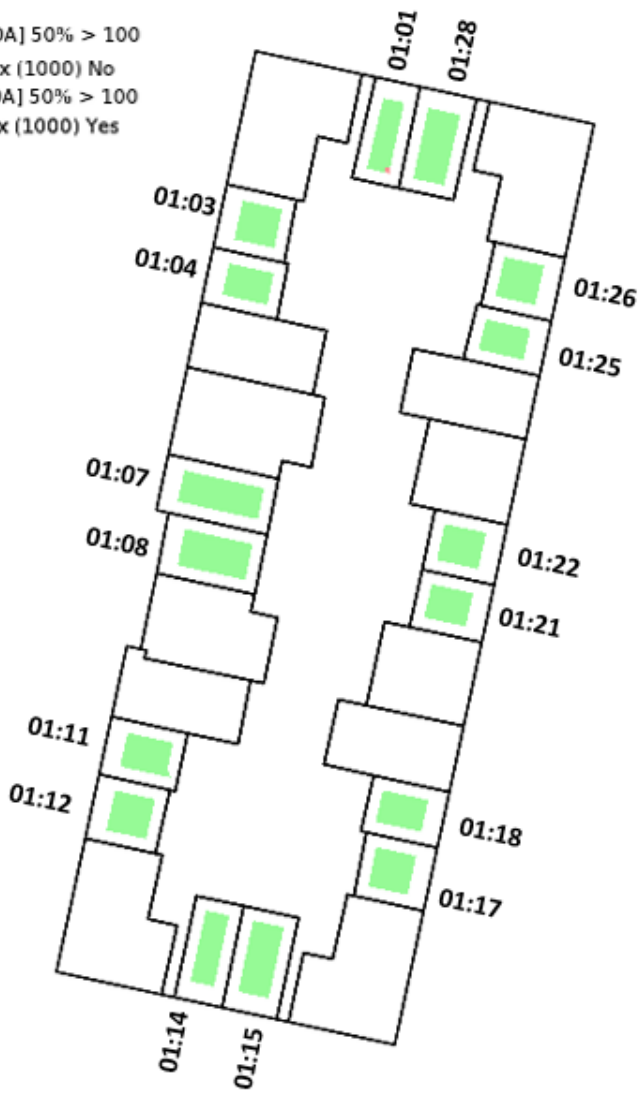
BLOCK F

LDK

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes

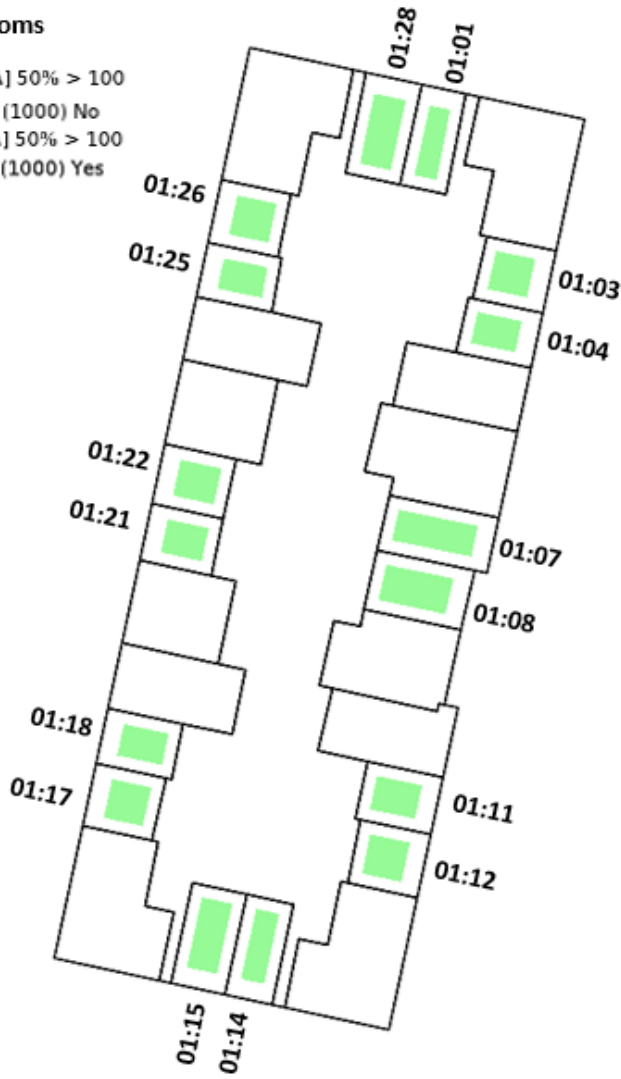
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

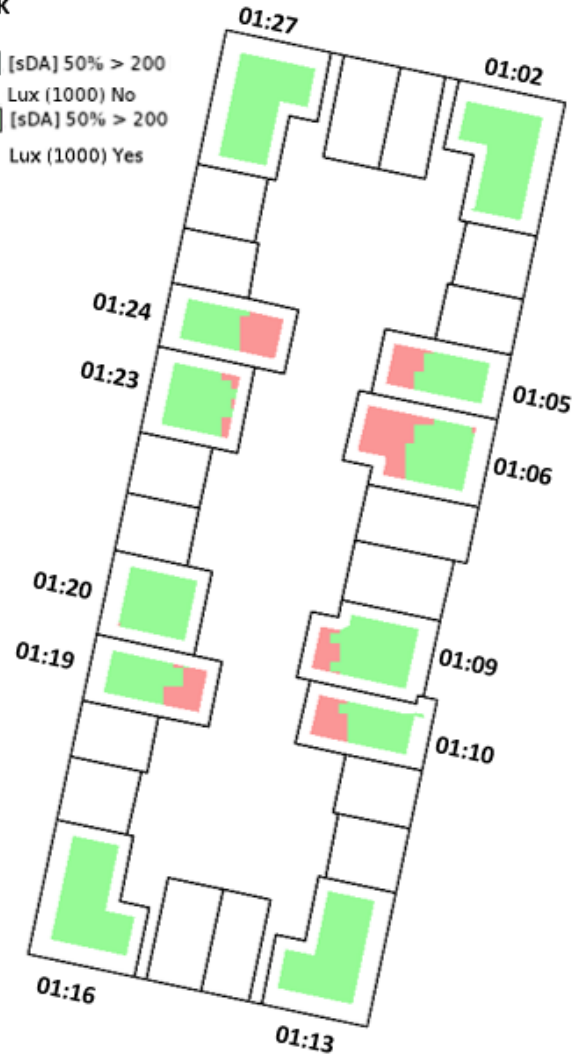
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes

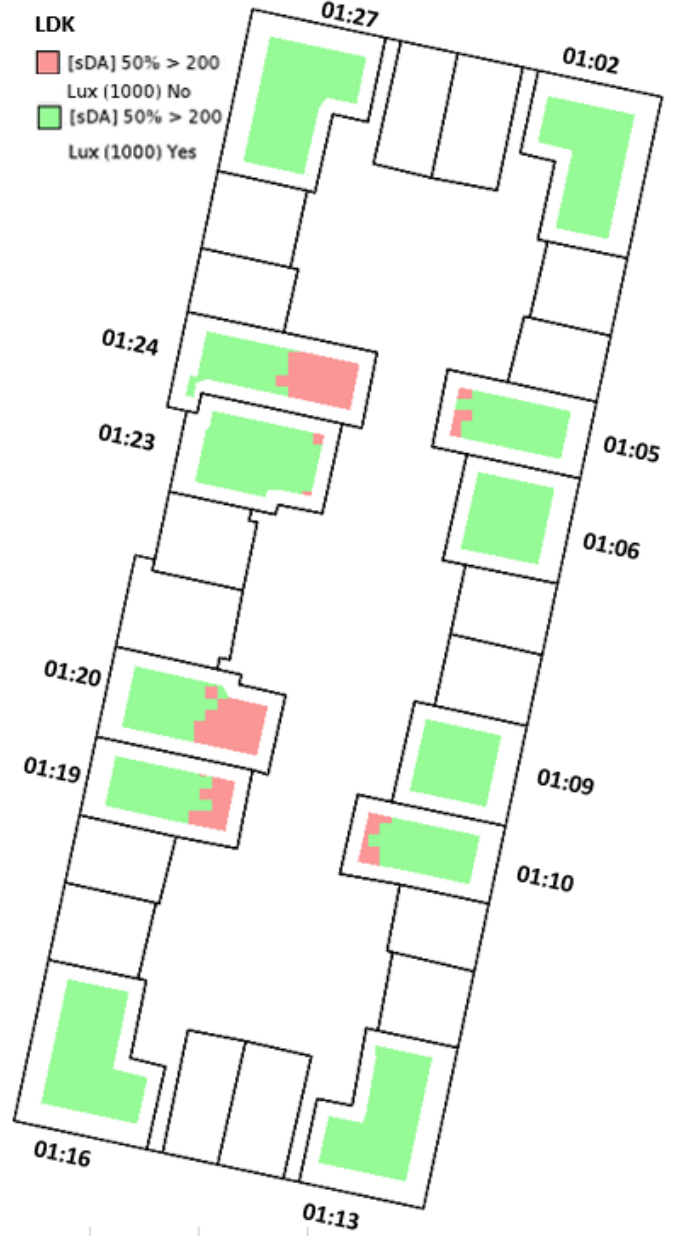
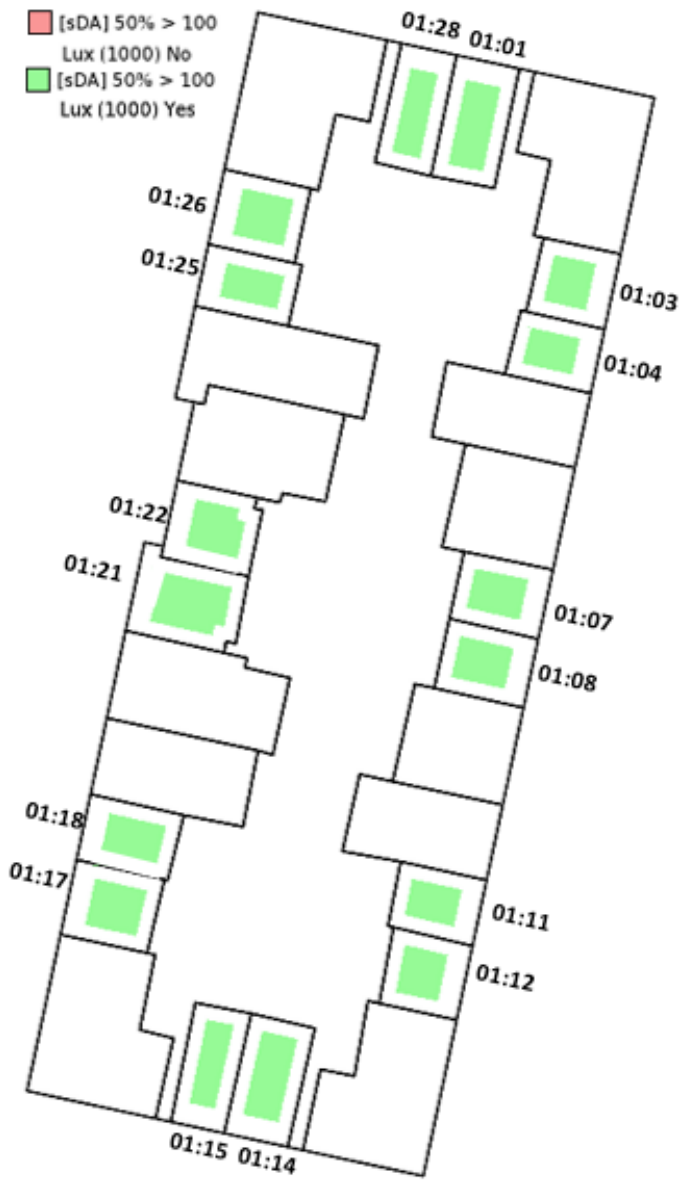


LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

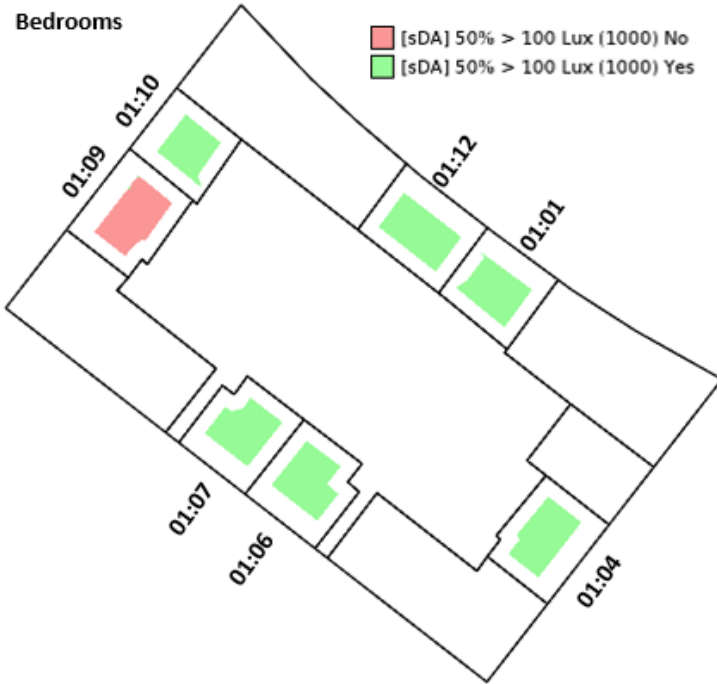


BLOCK H
Bedrooms



BLOCK I1

Bedrooms

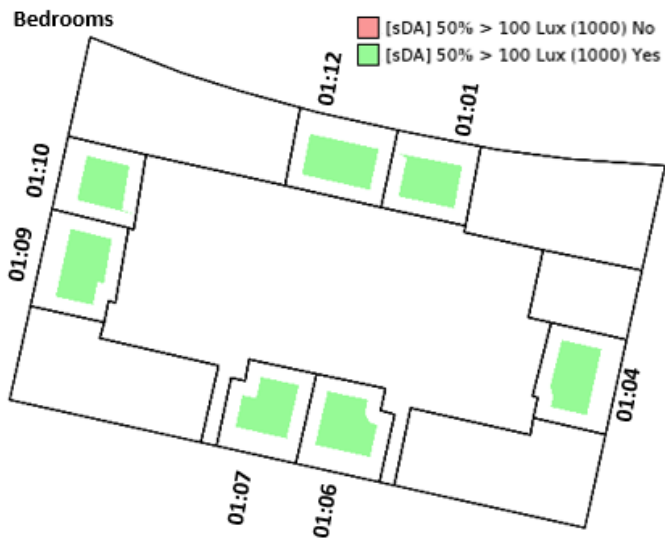


LDK

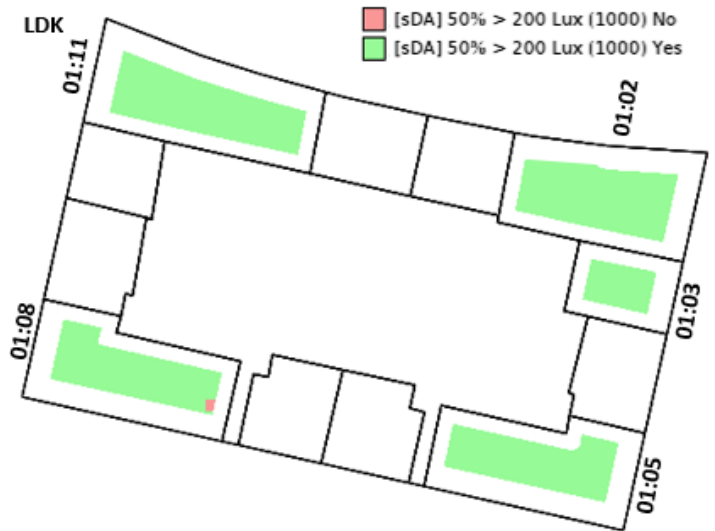


BLOCK I2

Bedrooms



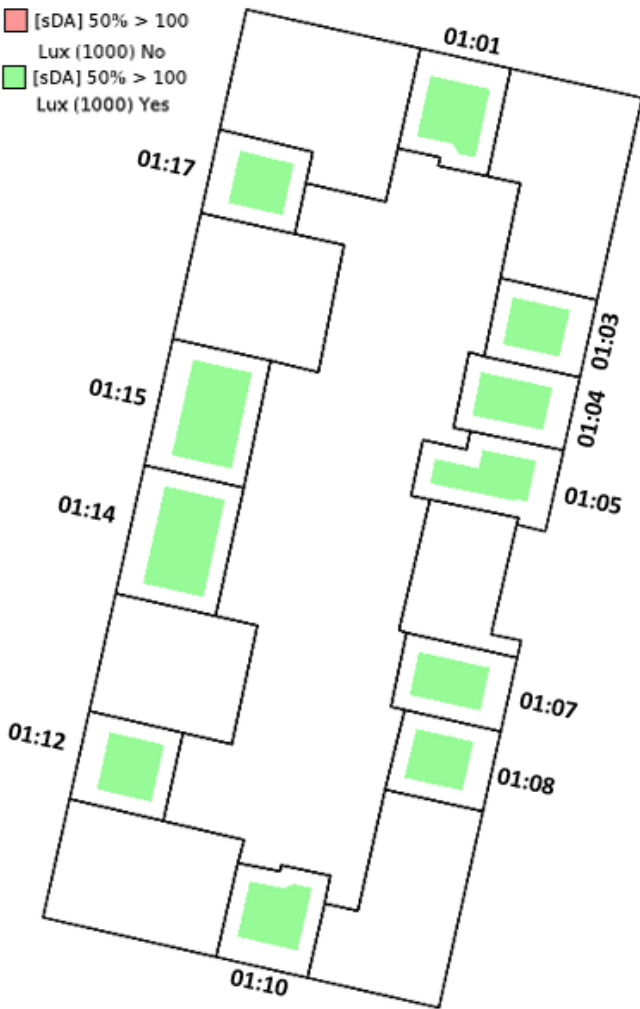
LDK



BLOCK J

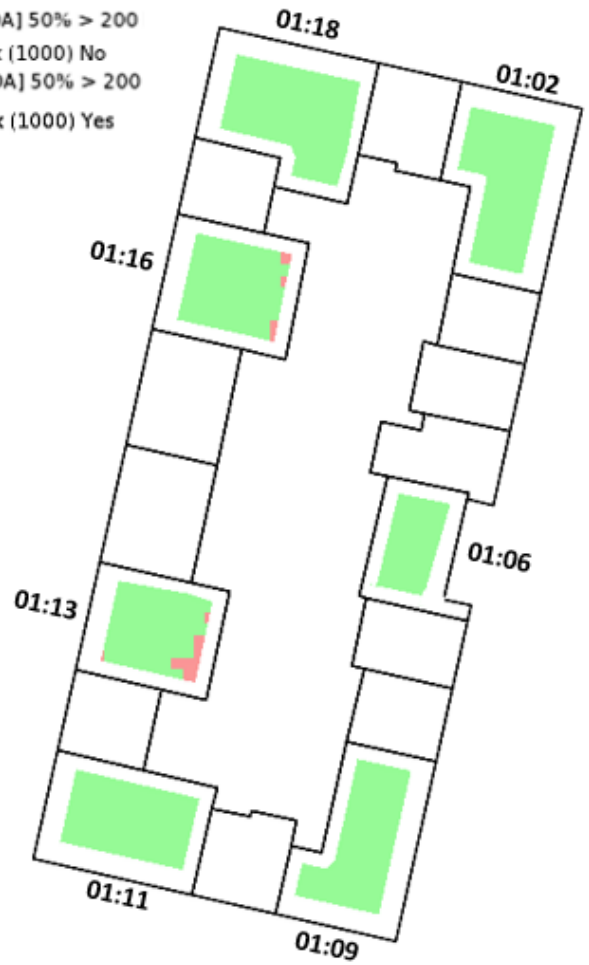
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

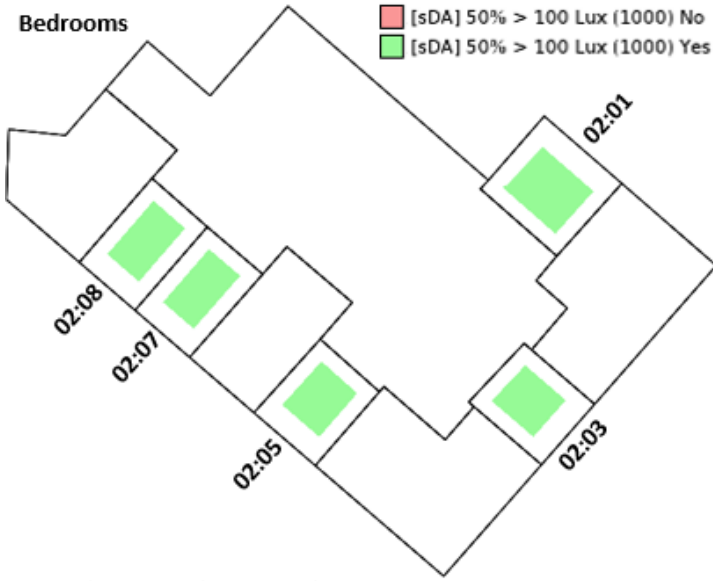


2nd FLOOR

BLOCK A

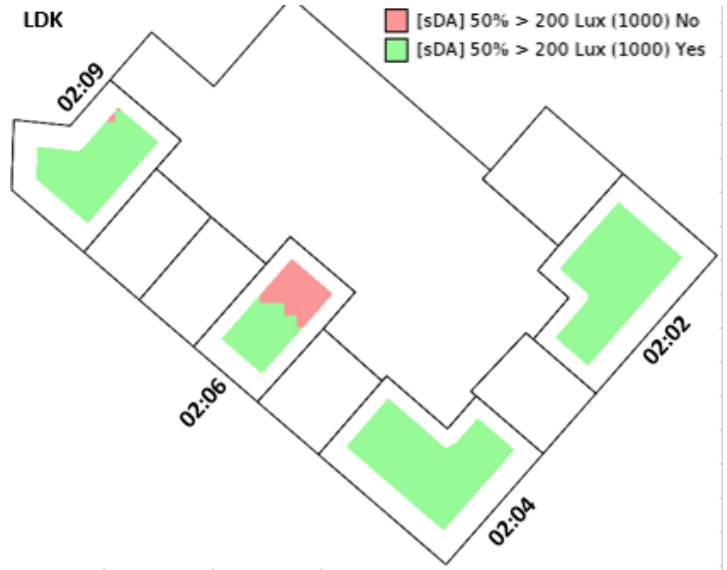
Bedrooms

■ [sDA] 50% > 100 Lux (1000) No
■ [sDA] 50% > 100 Lux (1000) Yes



LDK

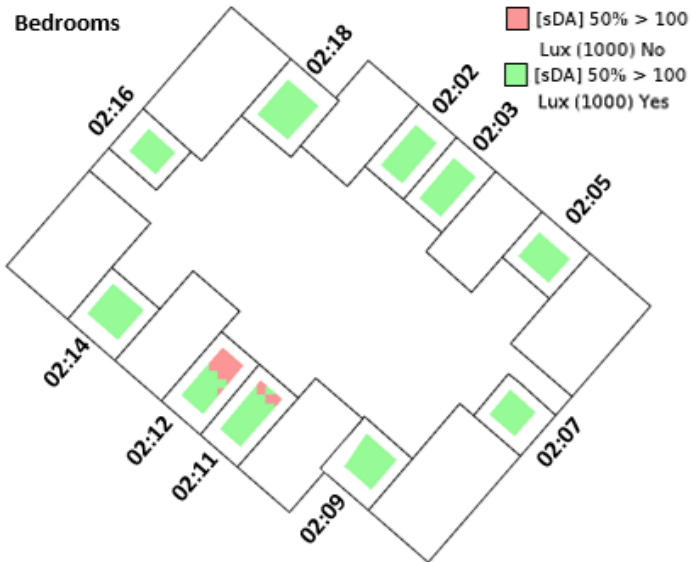
■ [sDA] 50% > 200 Lux (1000) No
■ [sDA] 50% > 200 Lux (1000) Yes



BLOCK B

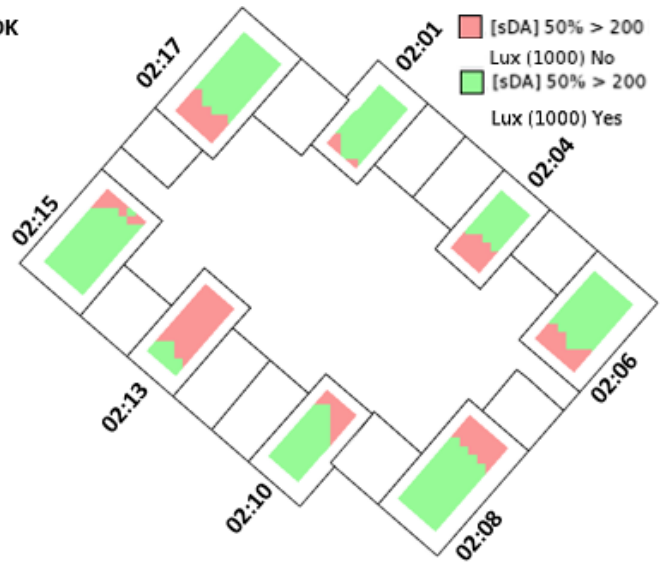
Bedrooms

■ [sDA] 50% > 100 Lux (1000) No
■ [sDA] 50% > 100 Lux (1000) Yes



LDK

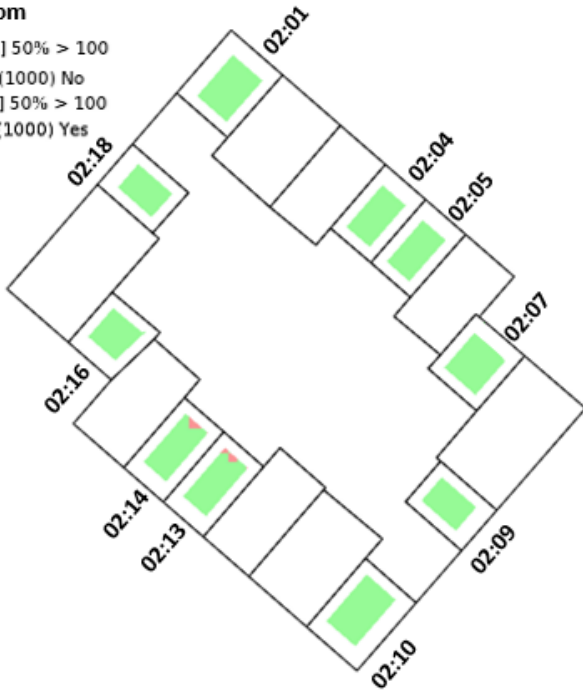
■ [sDA] 50% > 200 Lux (1000) No
■ [sDA] 50% > 200 Lux (1000) Yes



BLOCK C

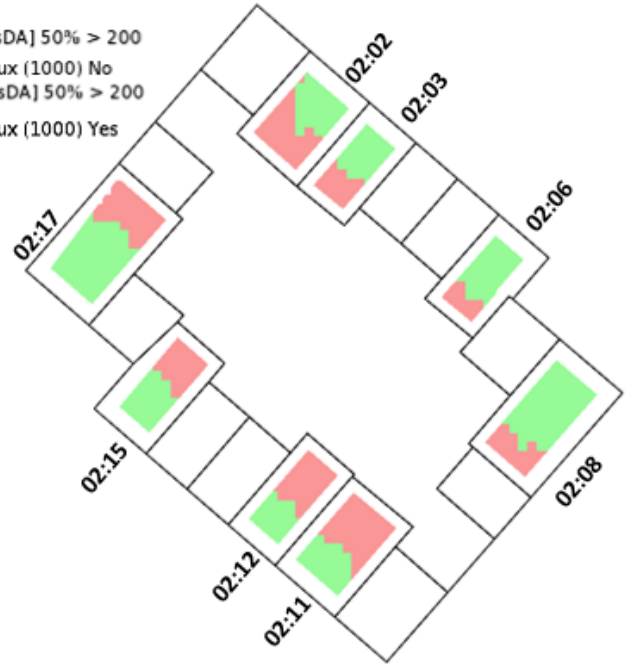
Bedroom

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

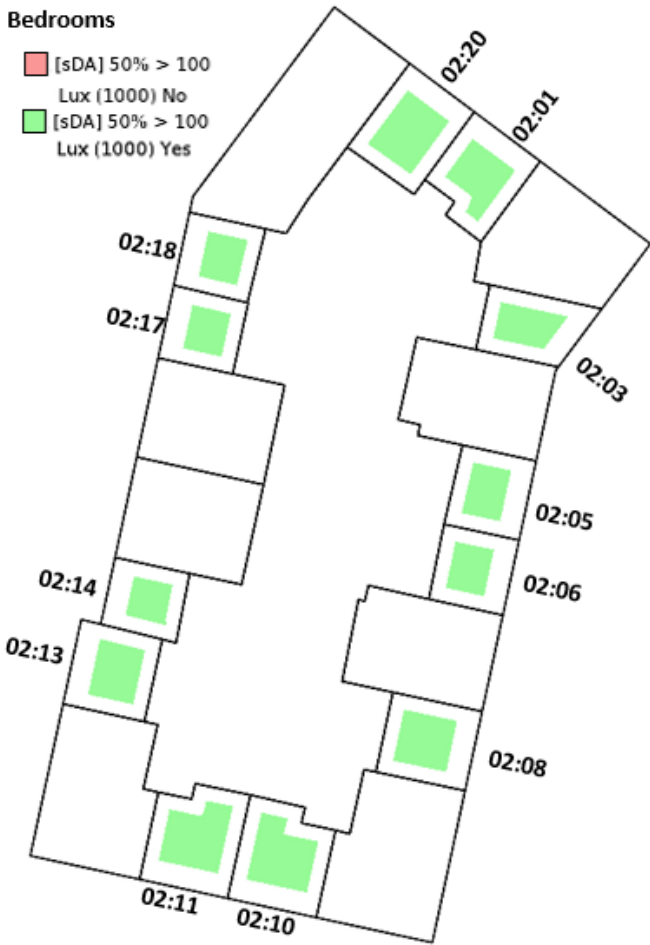
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

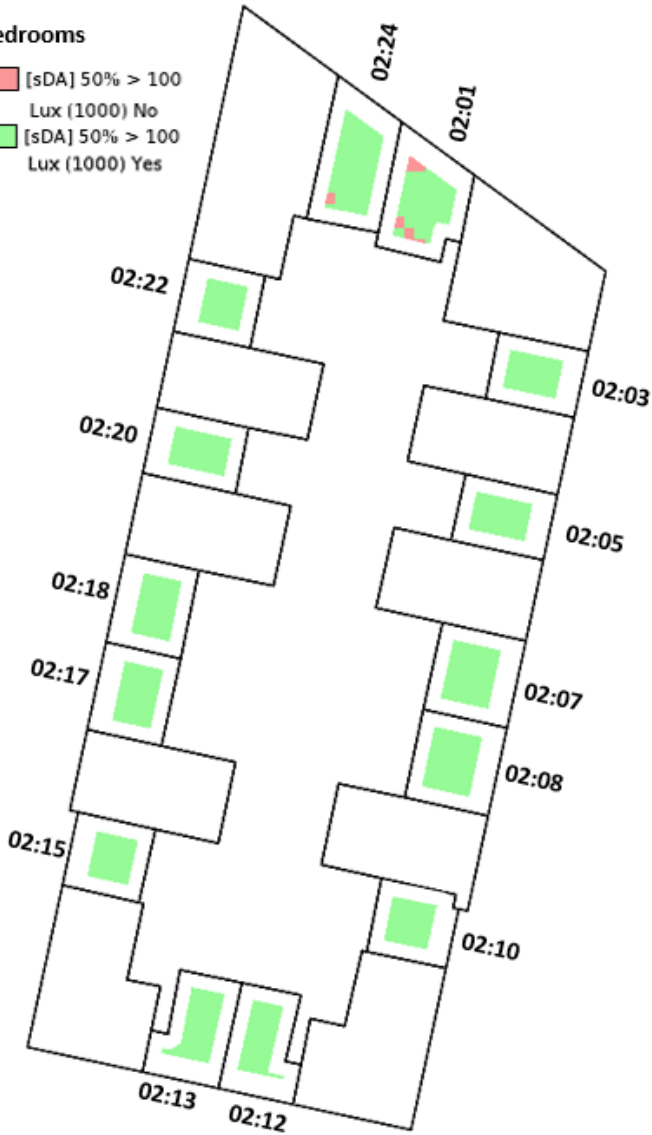
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK E

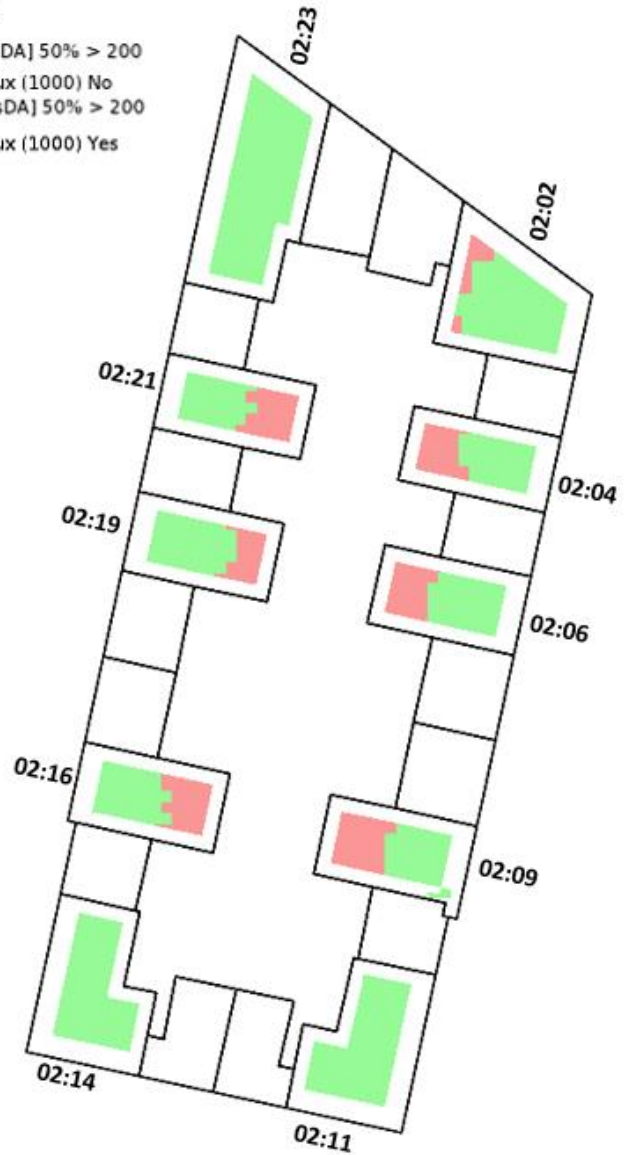
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



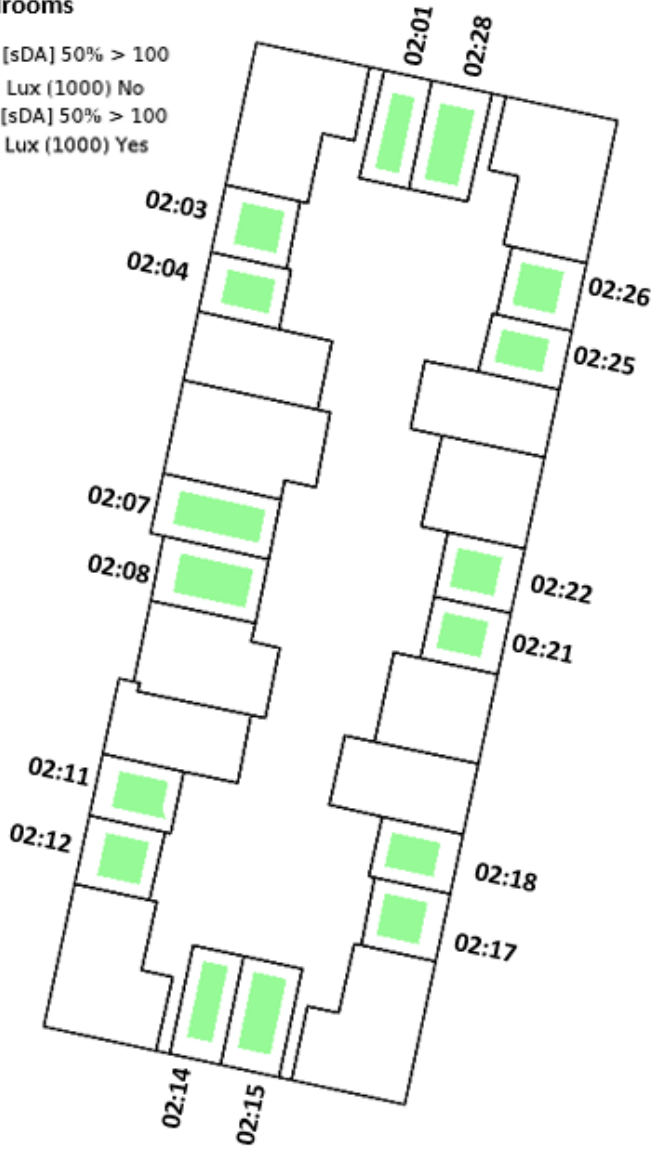
LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



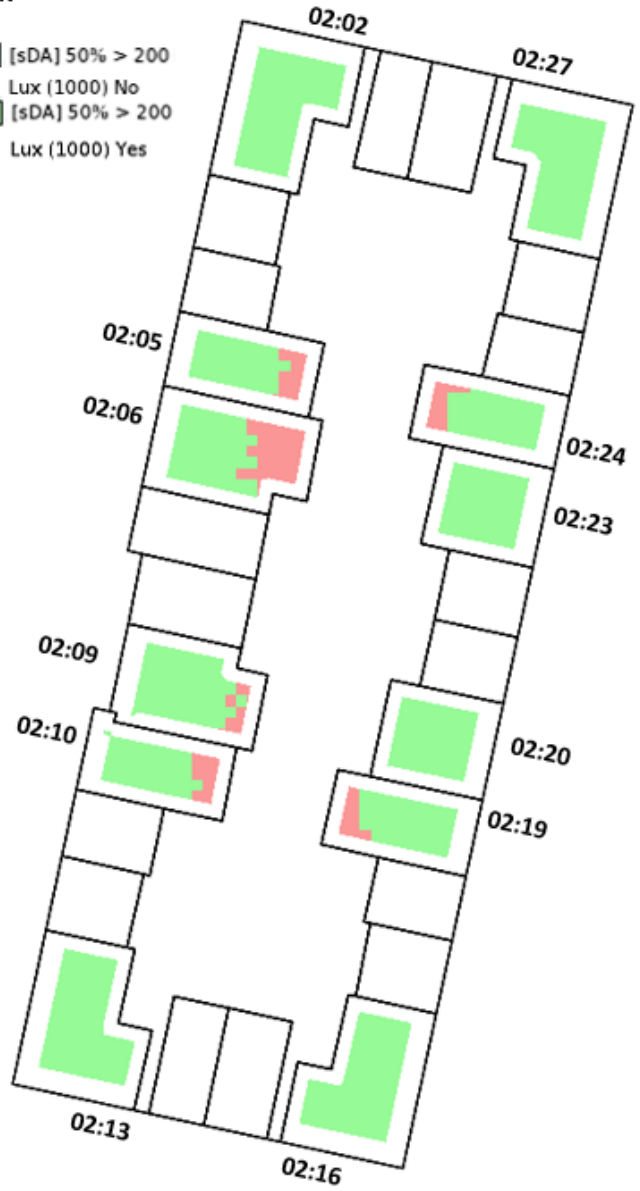
BLOCK F
 Bedrooms

- [sDA] 50% > 100
 Lux (1000) No
- [sDA] 50% > 100
 Lux (1000) Yes



LDK

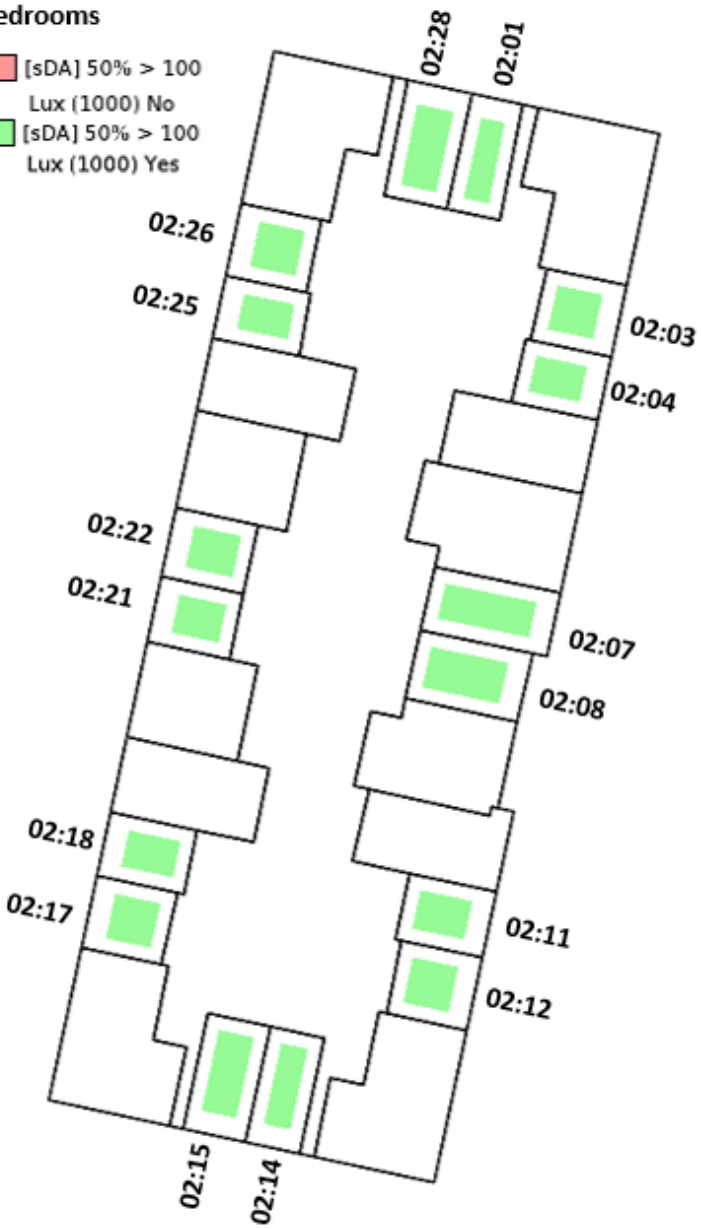
- [sDA] 50% > 200
 Lux (1000) No
- [sDA] 50% > 200
 Lux (1000) Yes



BLOCK G

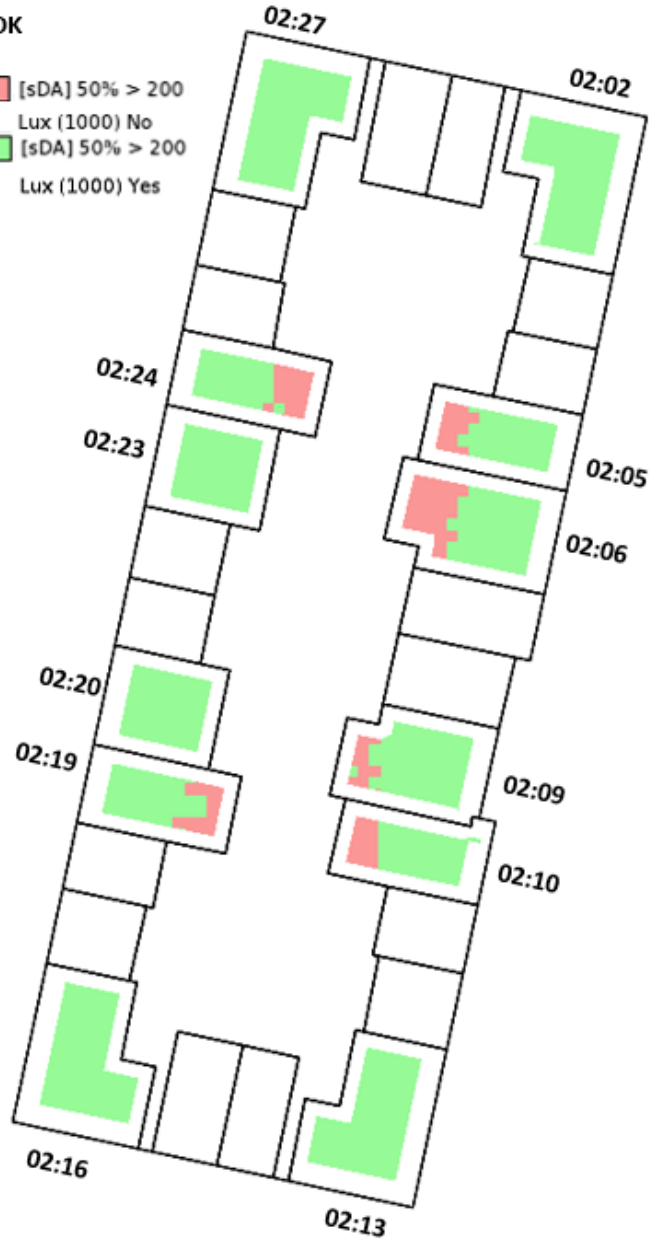
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

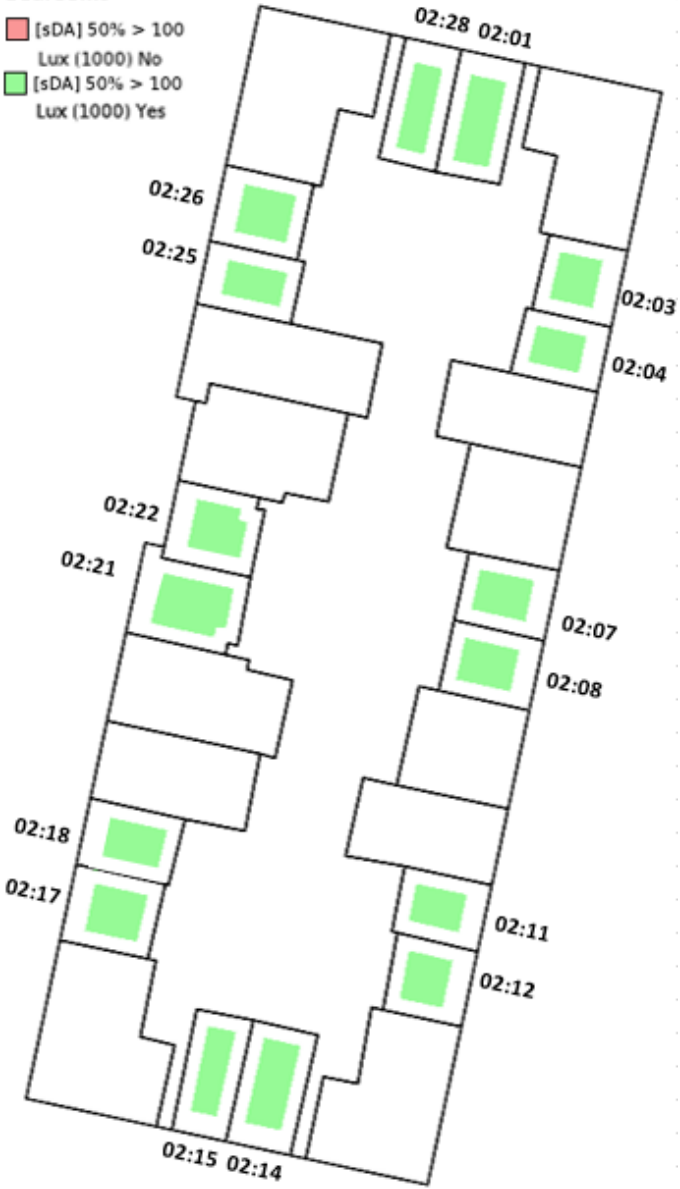
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK H

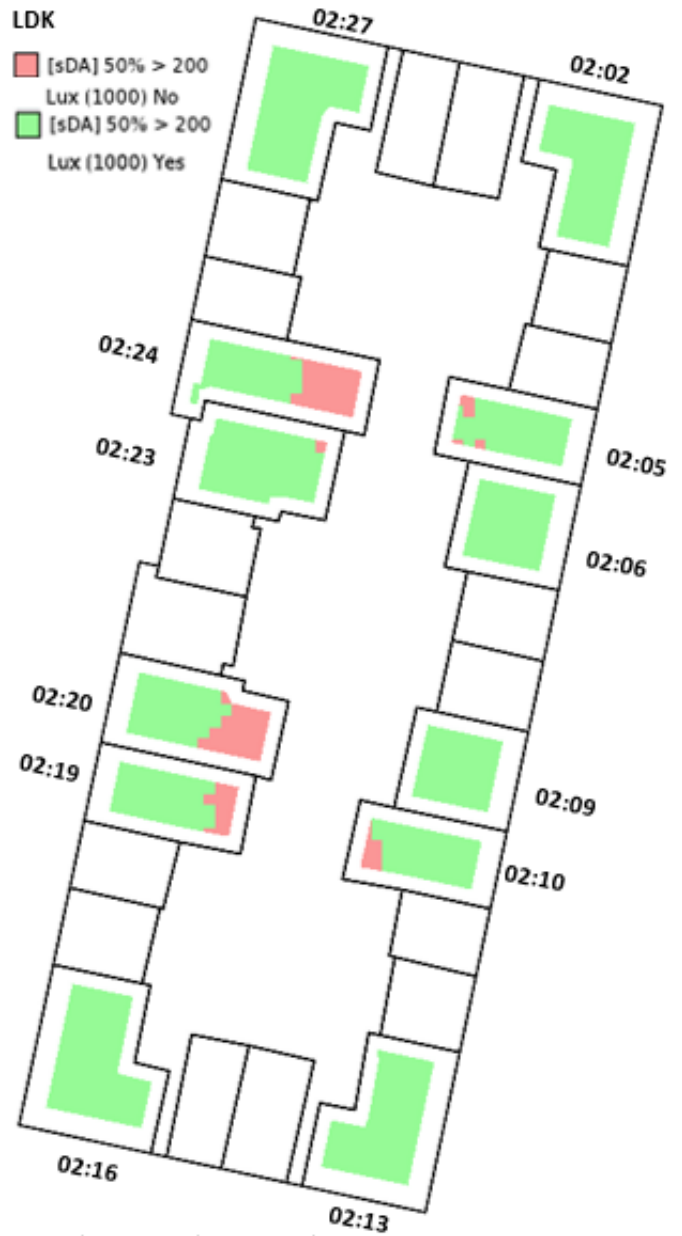
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK I1

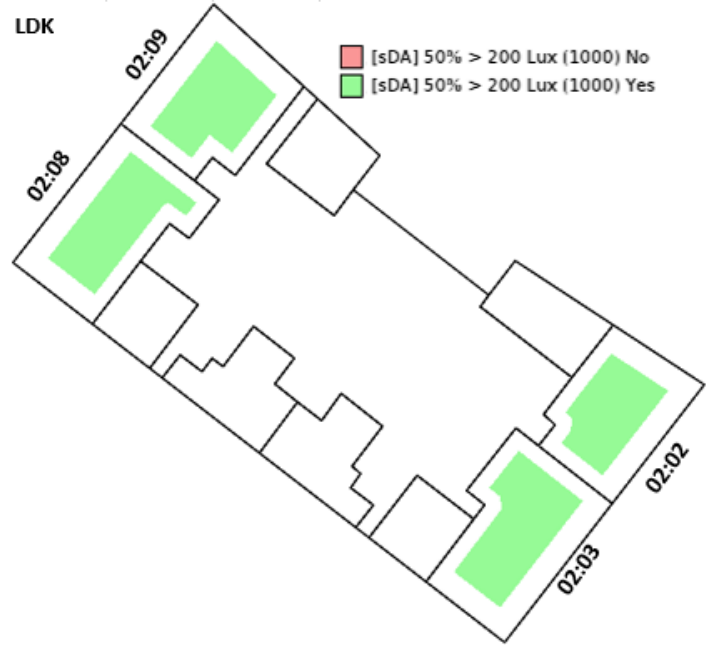
Bedrooms

- [sDA] 50% > 100 Lux (1000) No
- [sDA] 50% > 100 Lux (1000) Yes



LDK

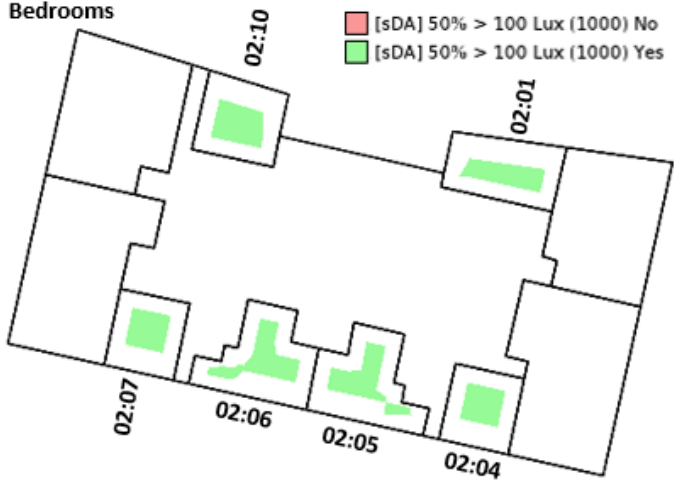
- [sDA] 50% > 200 Lux (1000) No
- [sDA] 50% > 200 Lux (1000) Yes



BLOCK I2

Bedrooms

- [sDA] 50% > 100 Lux (1000) No
- [sDA] 50% > 100 Lux (1000) Yes



LDK

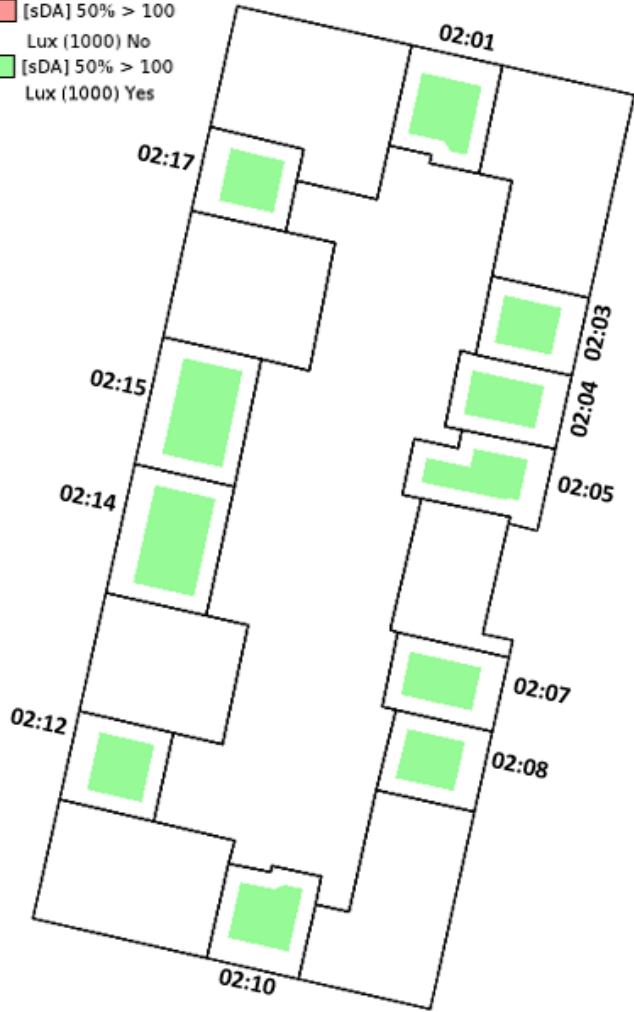
- [sDA] 50% > 200 Lux (1000) No
- [sDA] 50% > 200 Lux (1000) Yes



BLOCK J

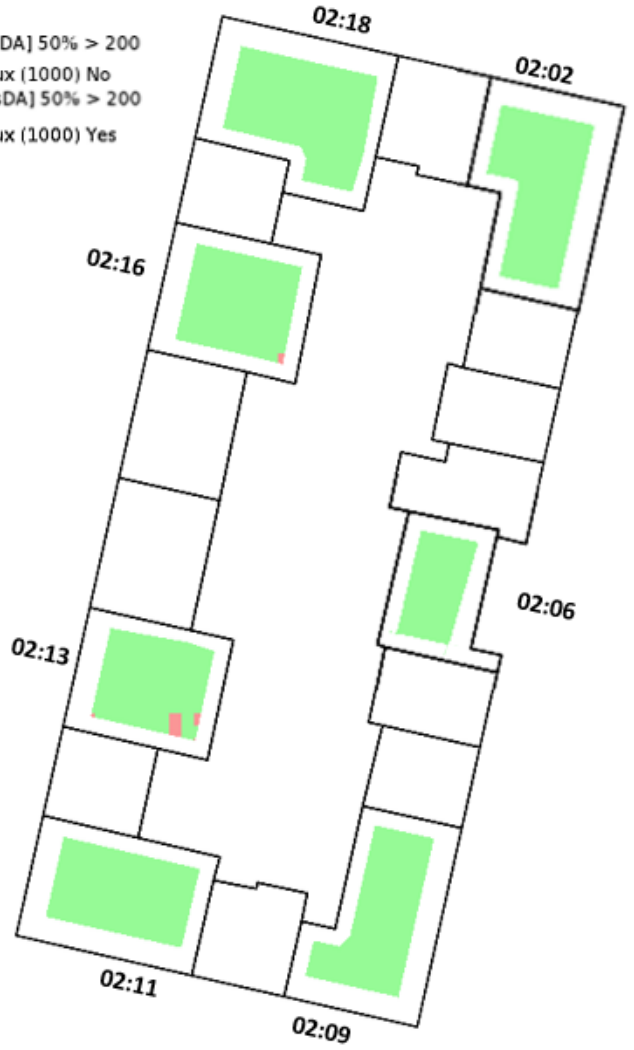
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

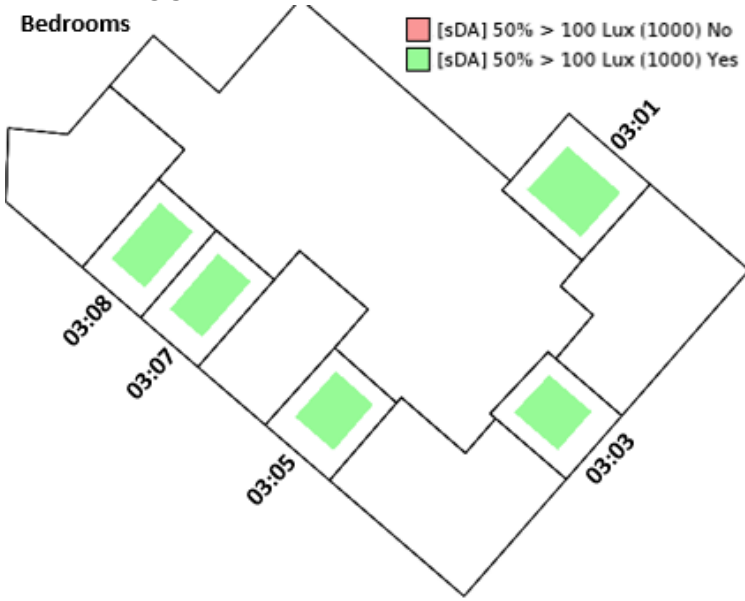
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



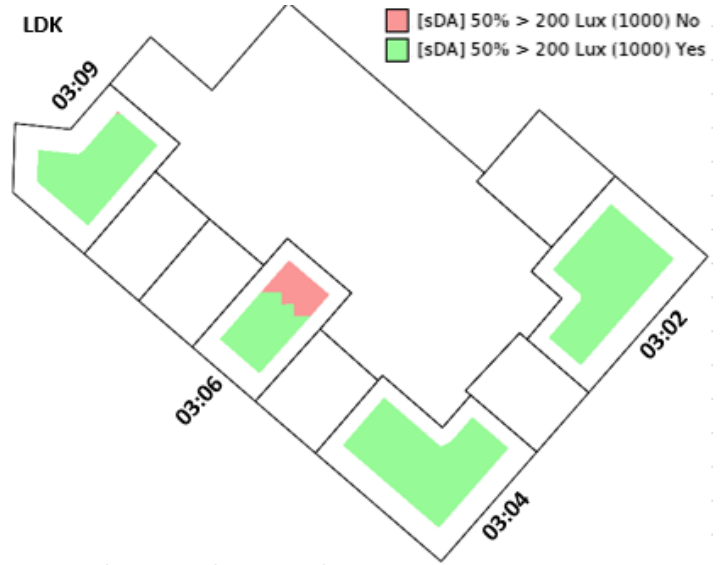
3rd FLOOR

BLOCK A

Bedrooms



LDK

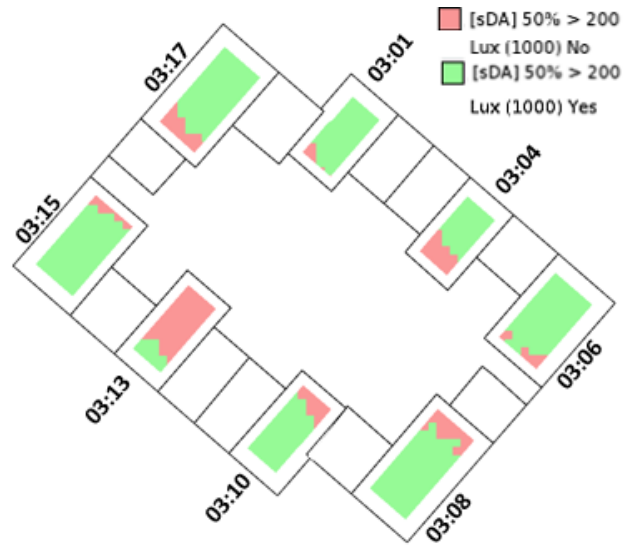


BLOCK B

Bedrooms



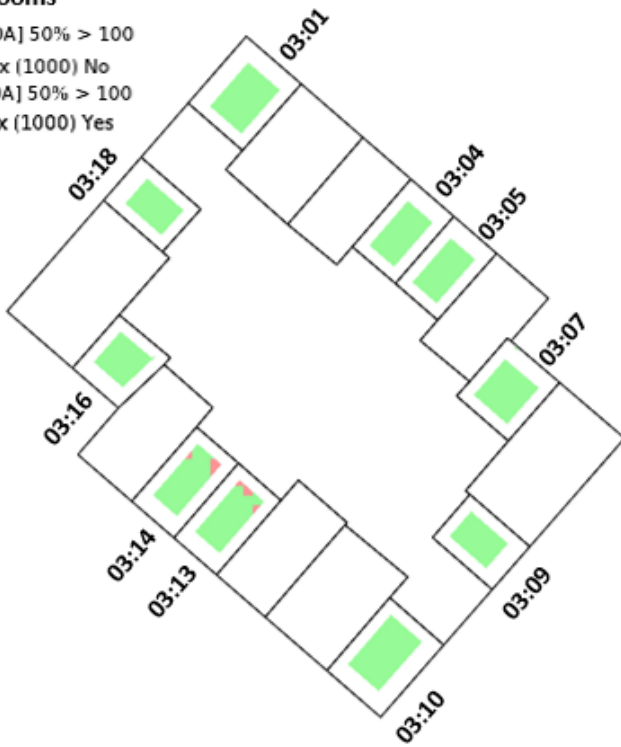
LDK



BLOCK C

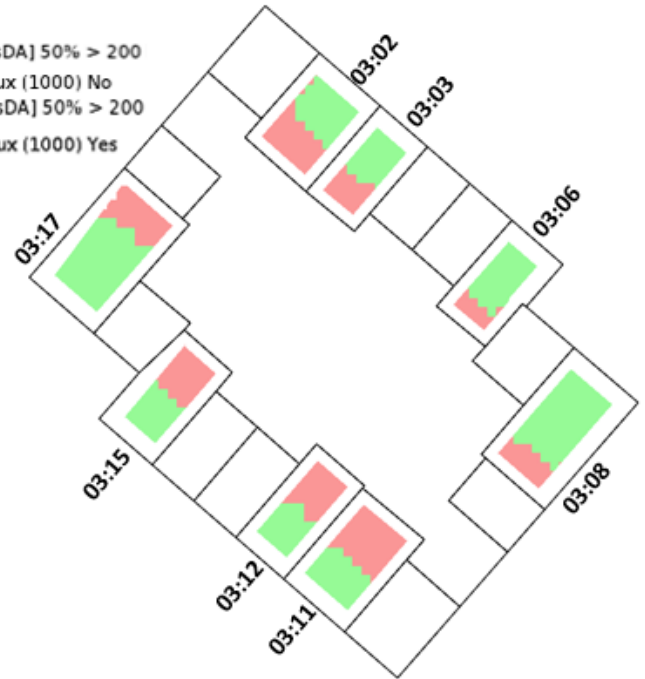
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

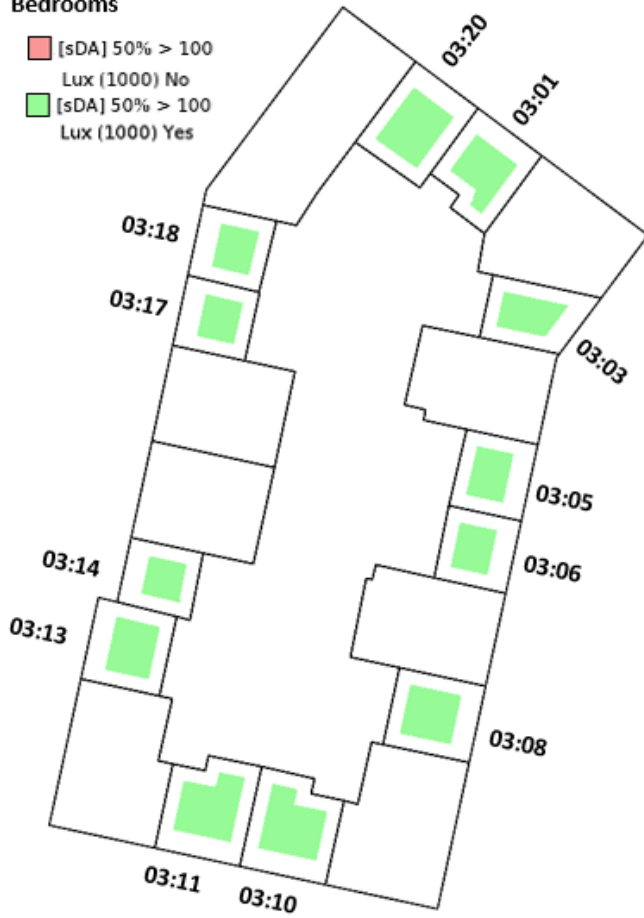
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

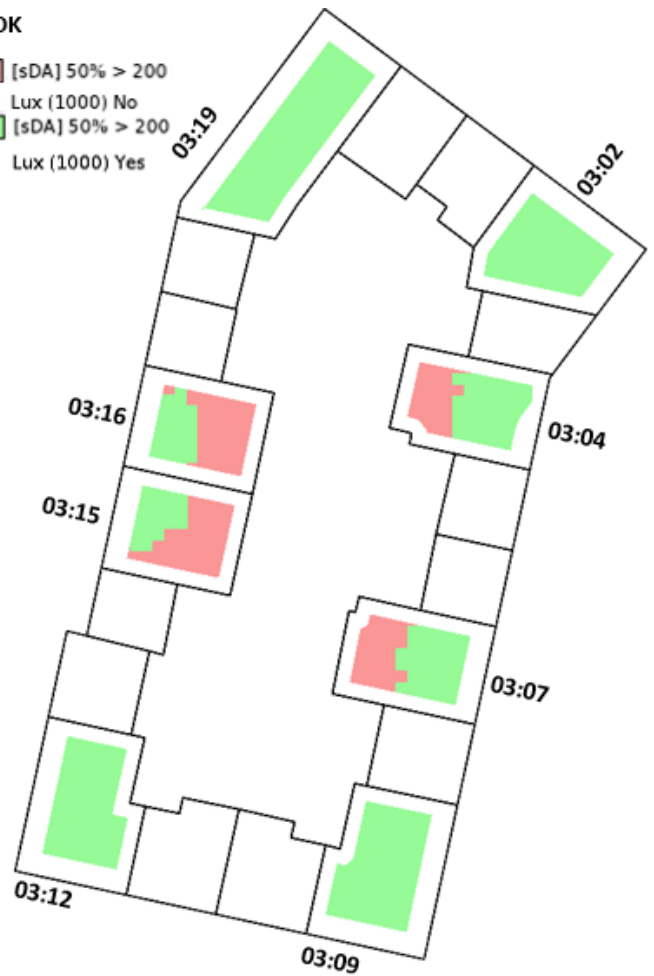
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

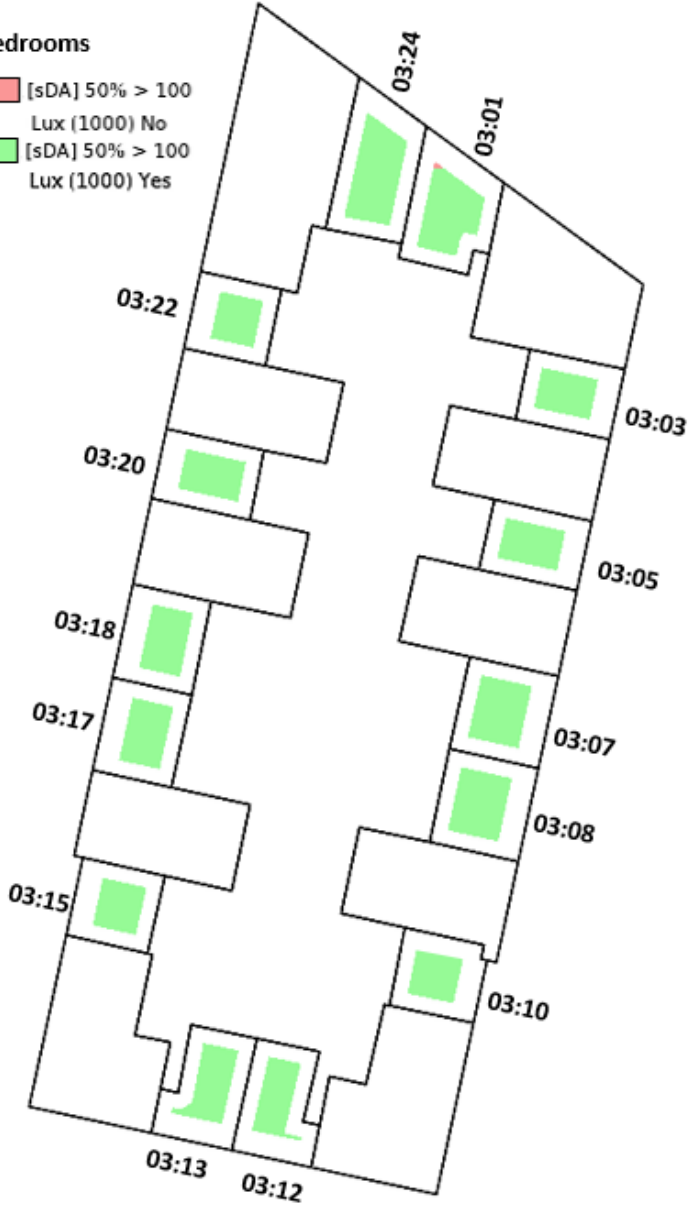
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK E

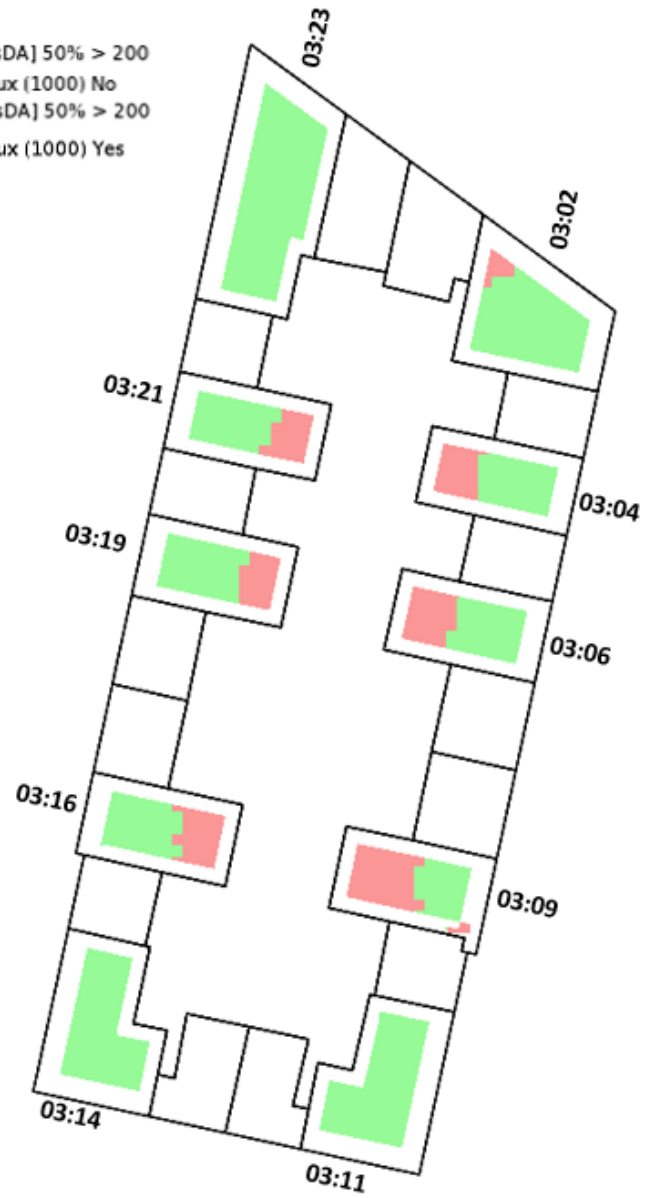
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

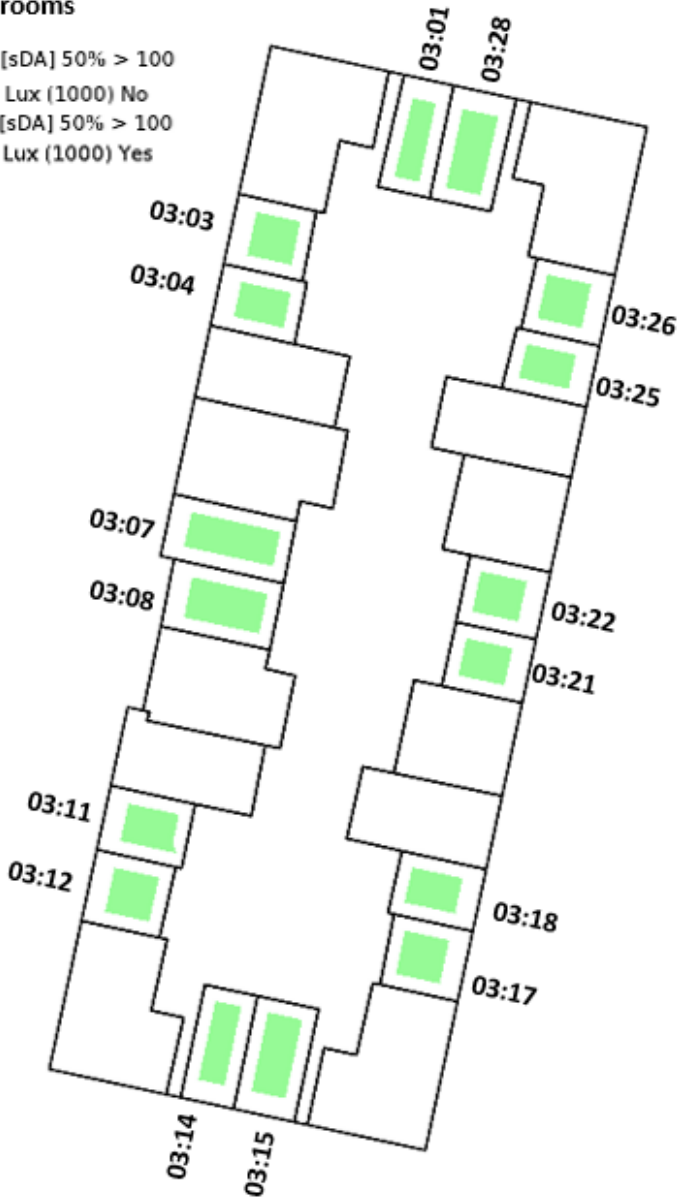
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK F

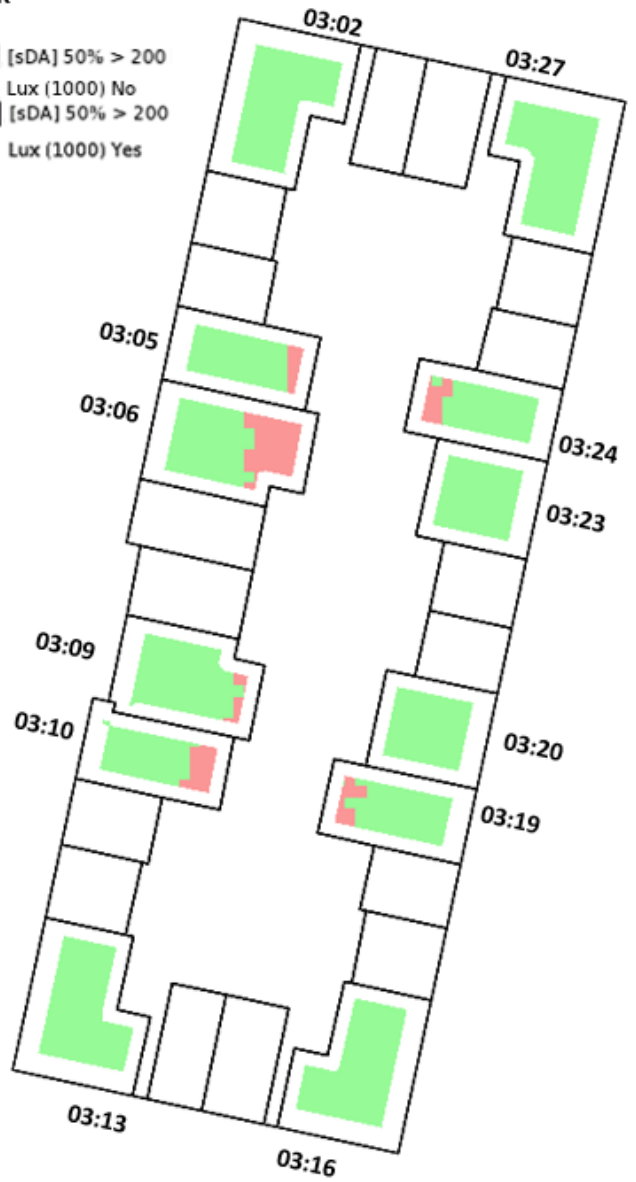
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

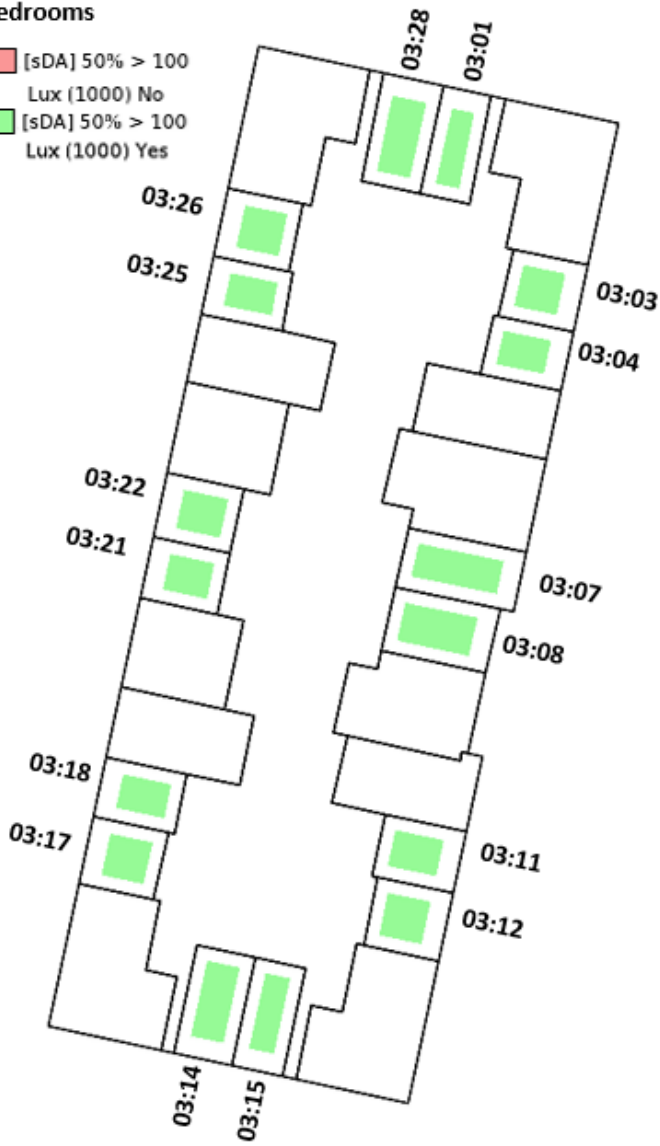
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

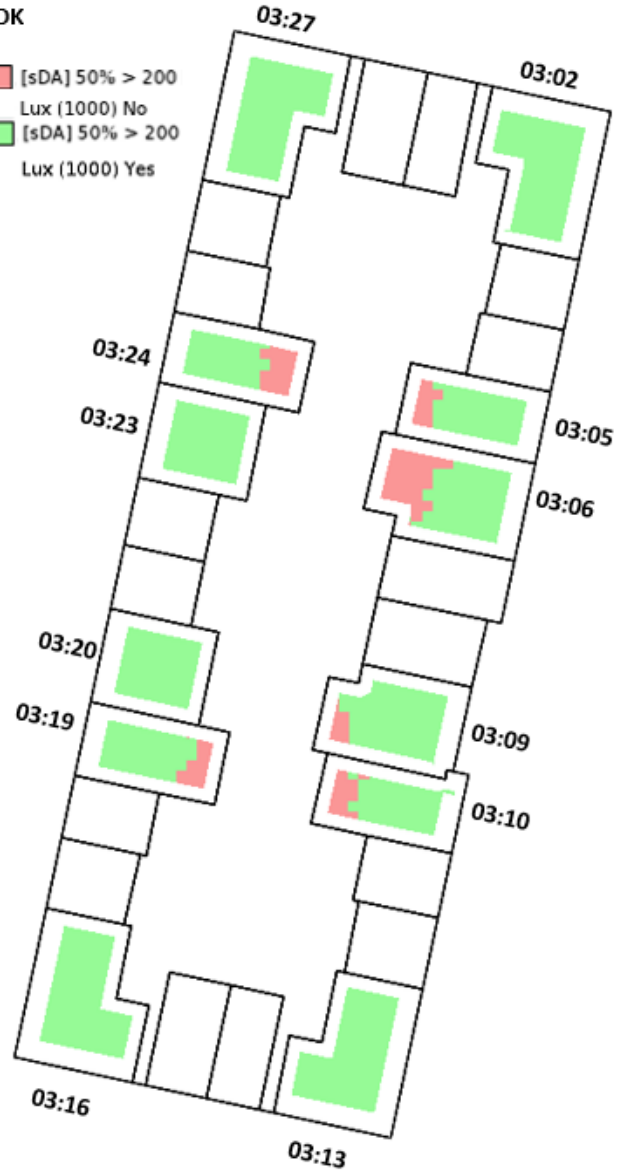
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

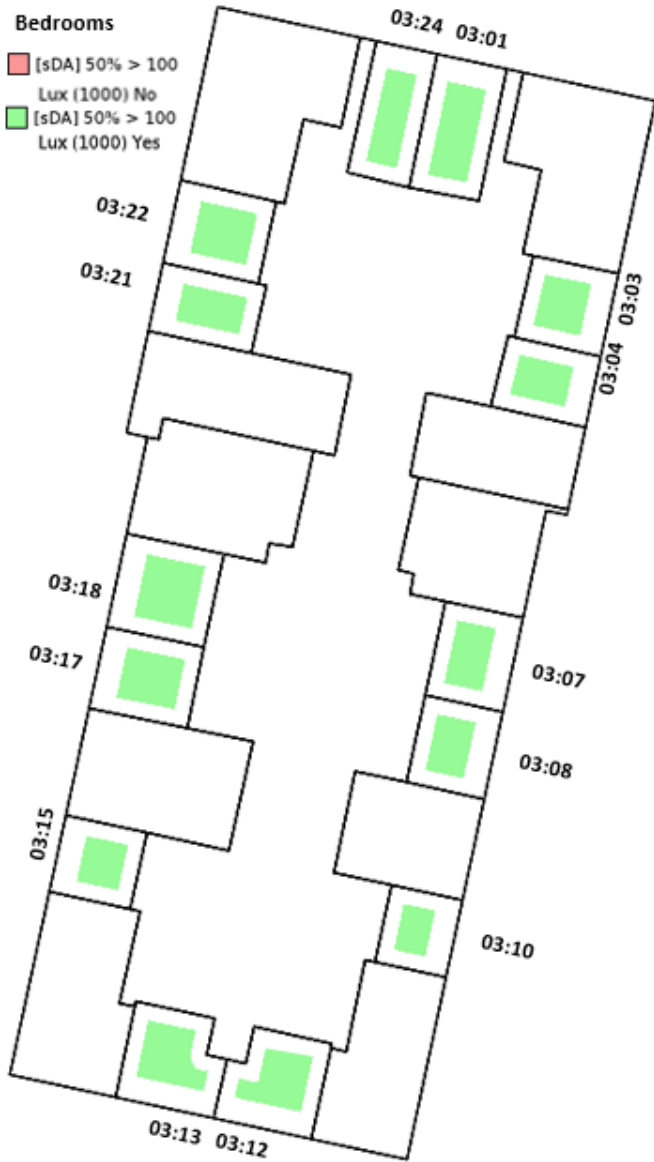
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK H

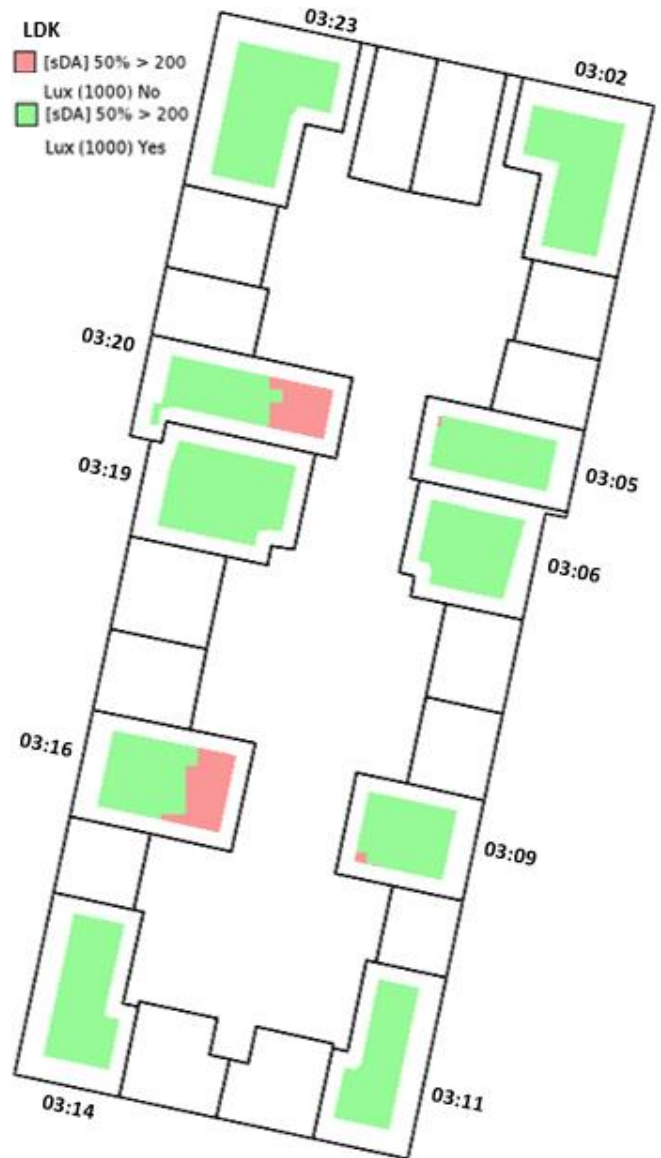
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK J

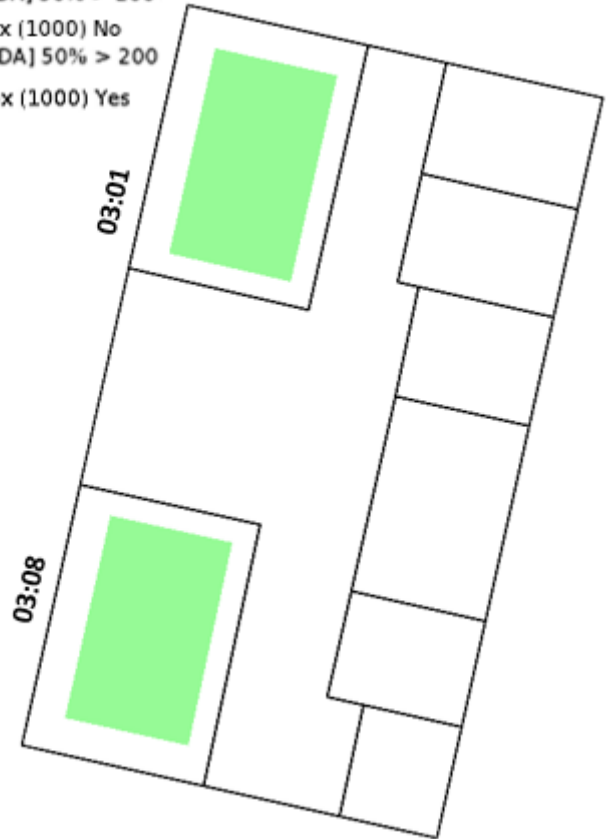
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

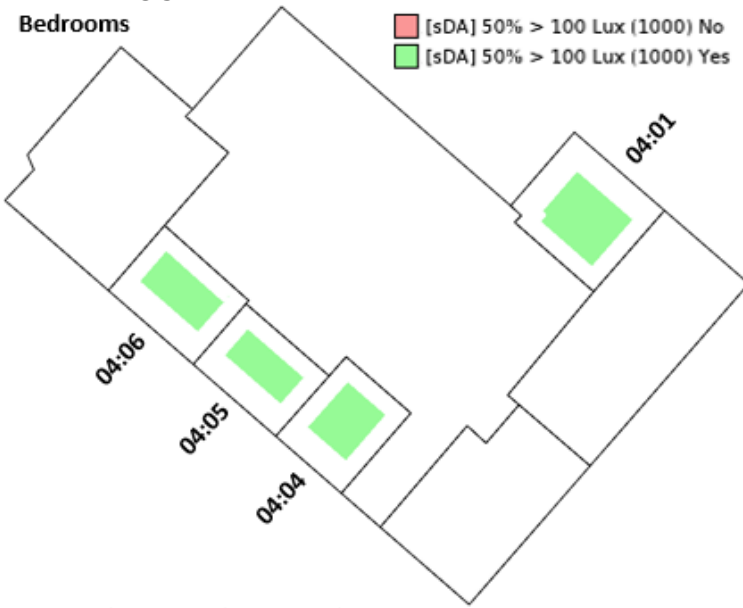
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



4th FLOOR

BLOCK A

Bedrooms

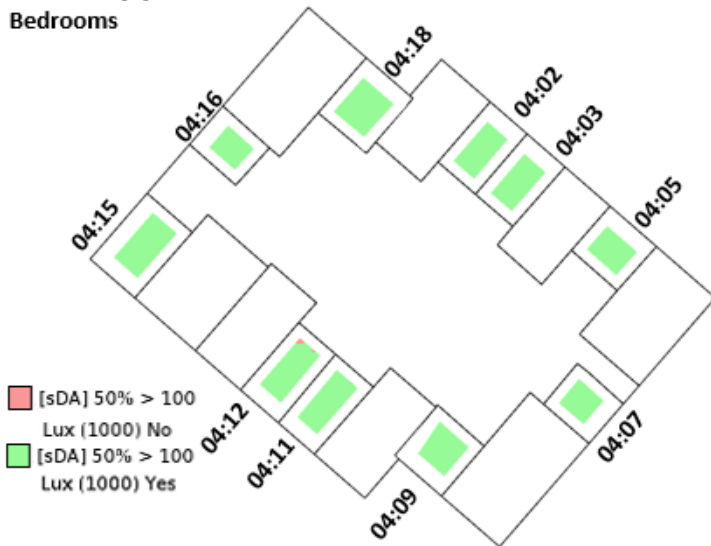


LDK

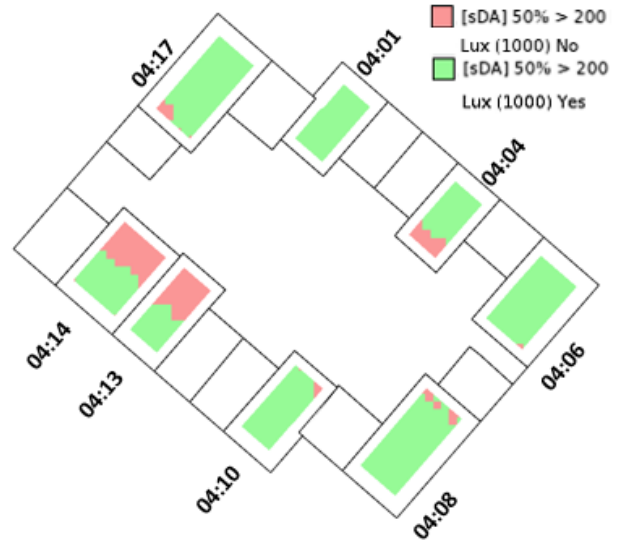


BLOCK B

Bedrooms



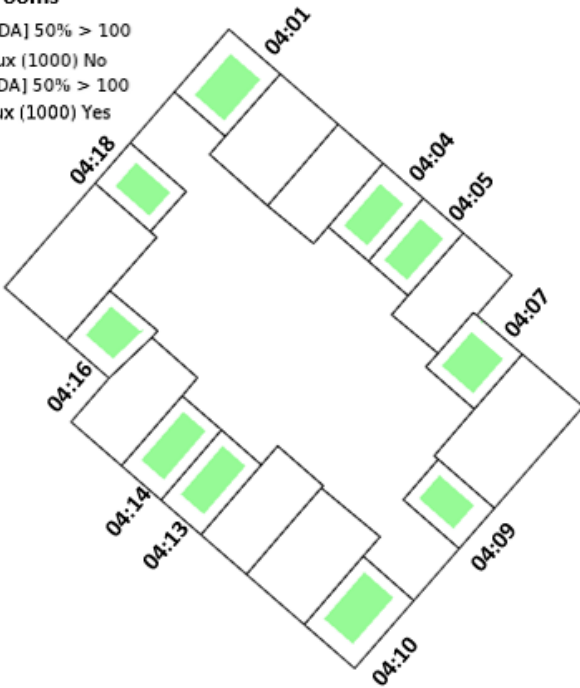
LDK



BLOCK C

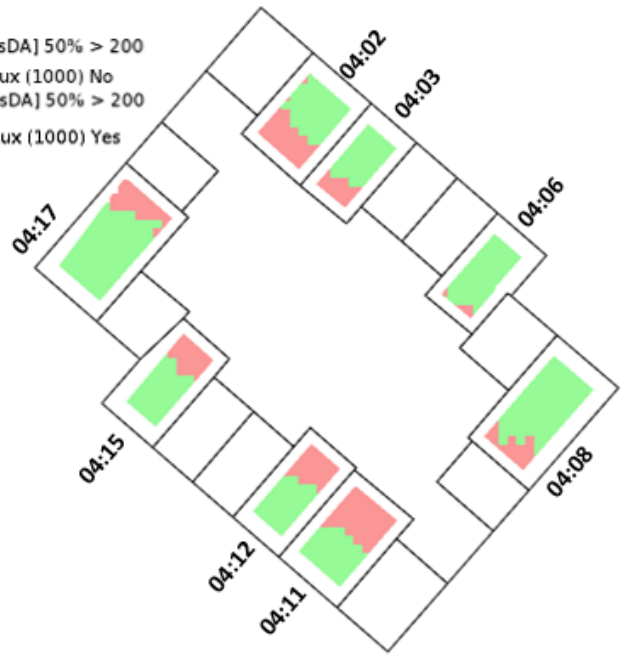
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

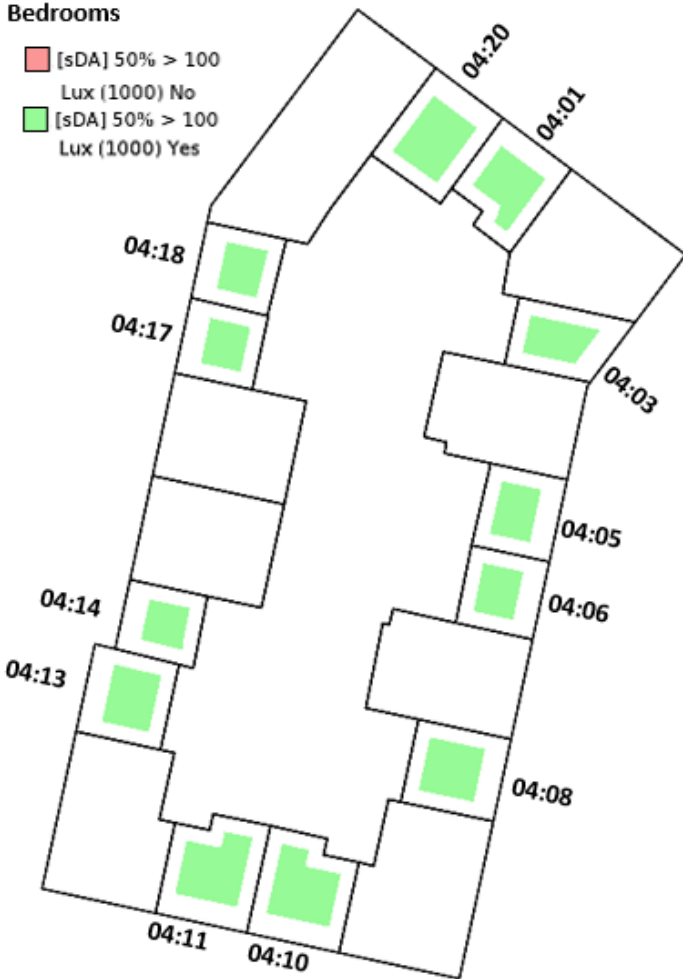
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

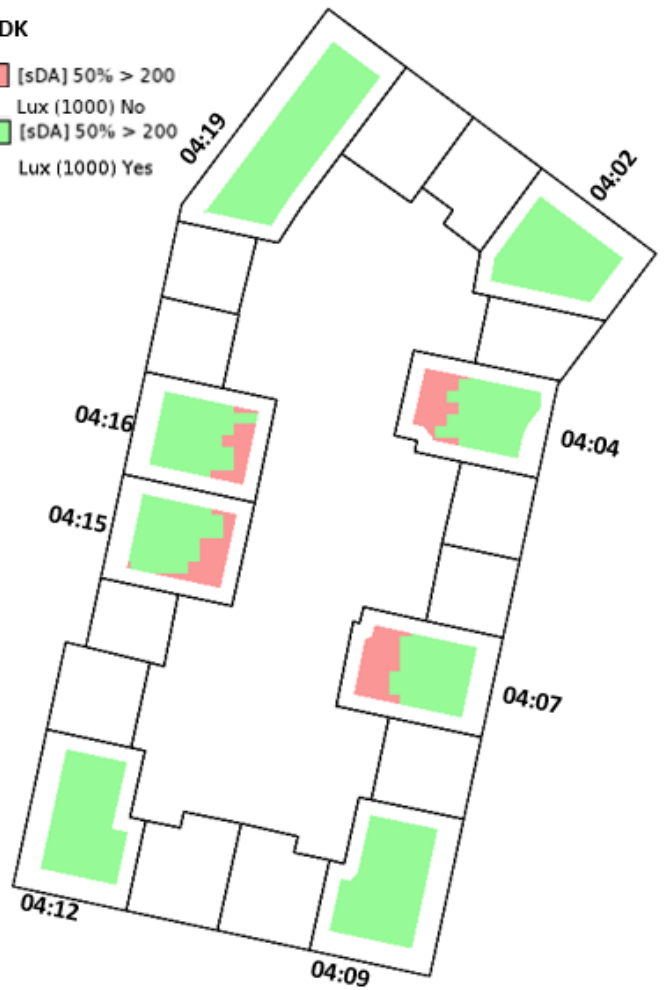
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



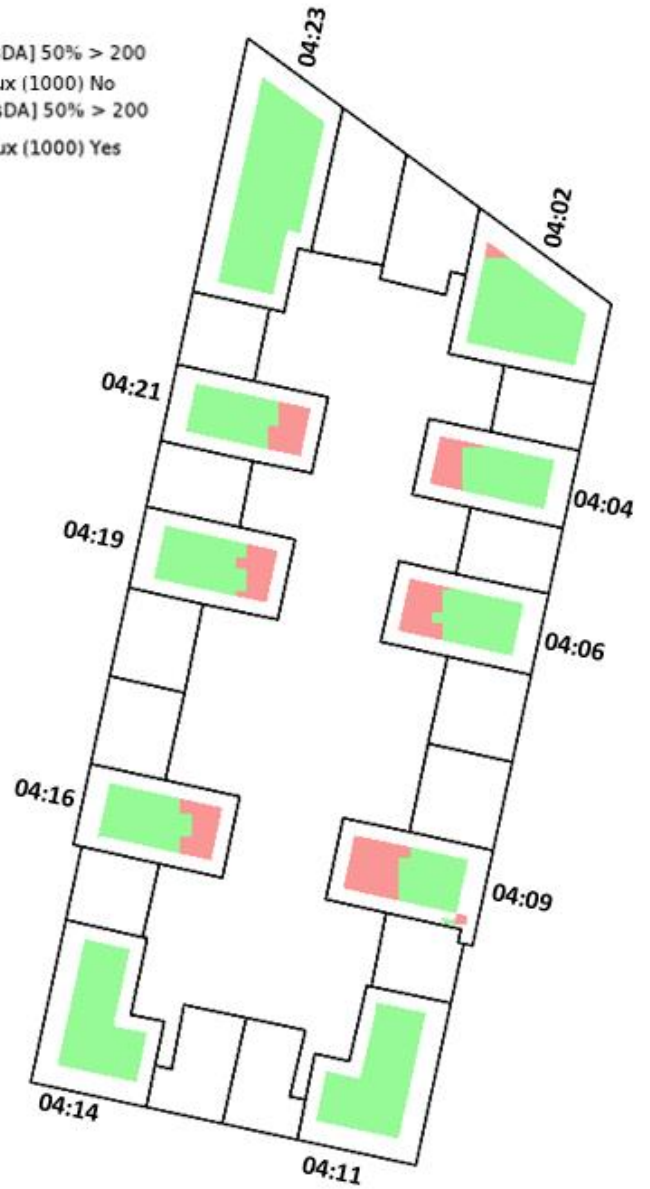
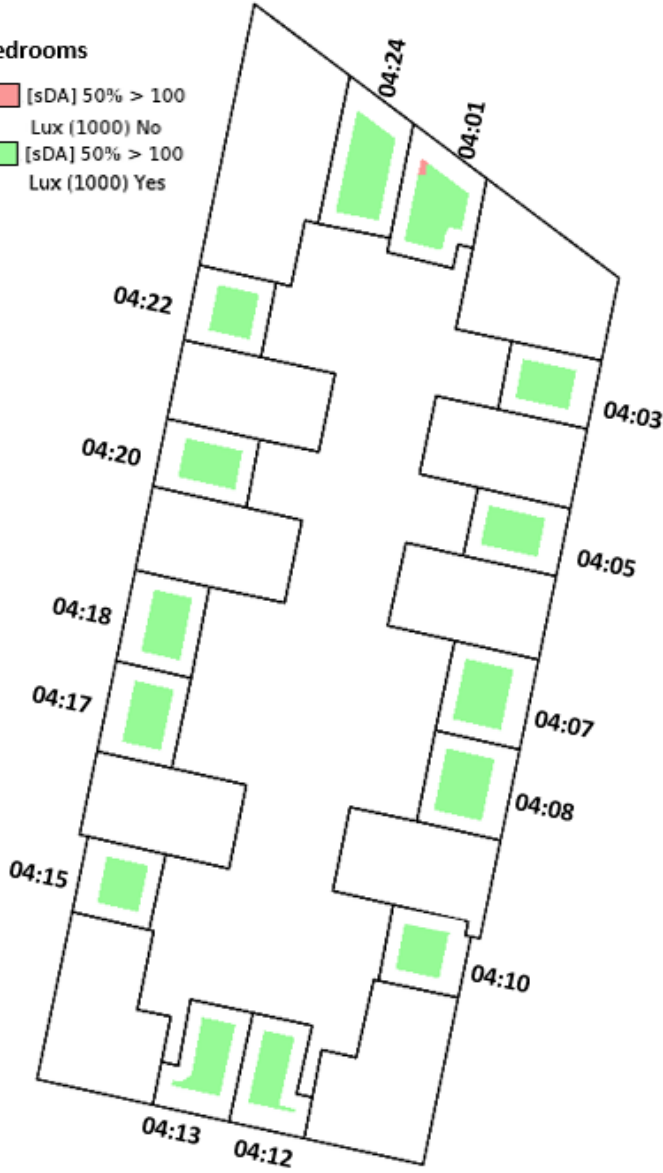
BLOCK E

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes

LDK

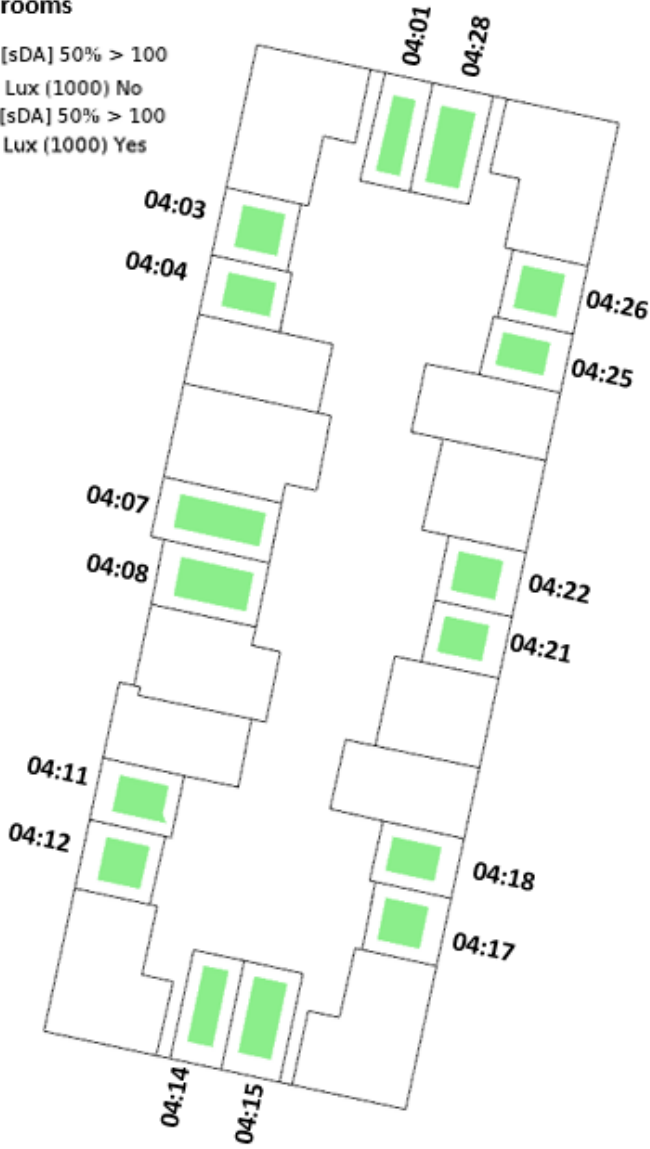
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK F

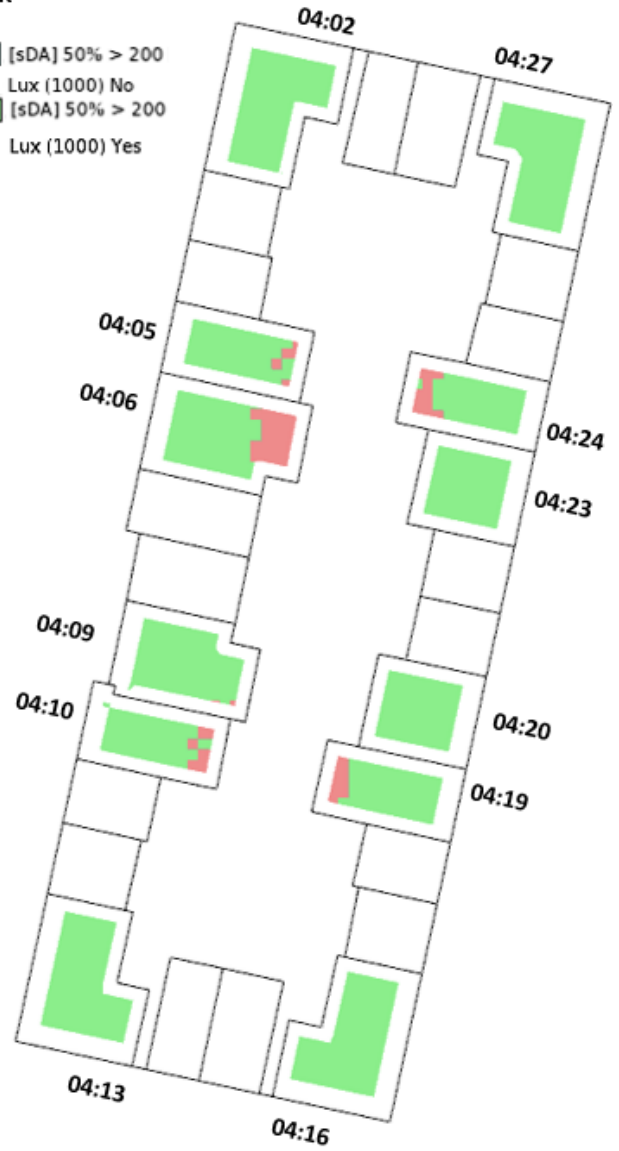
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

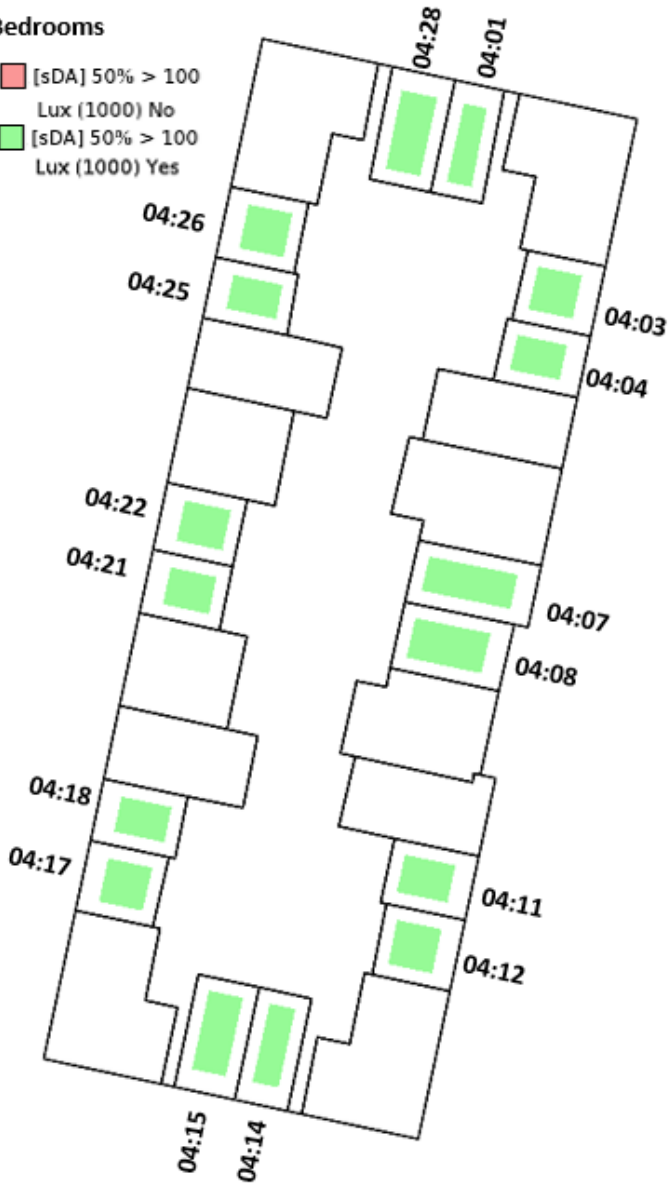
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

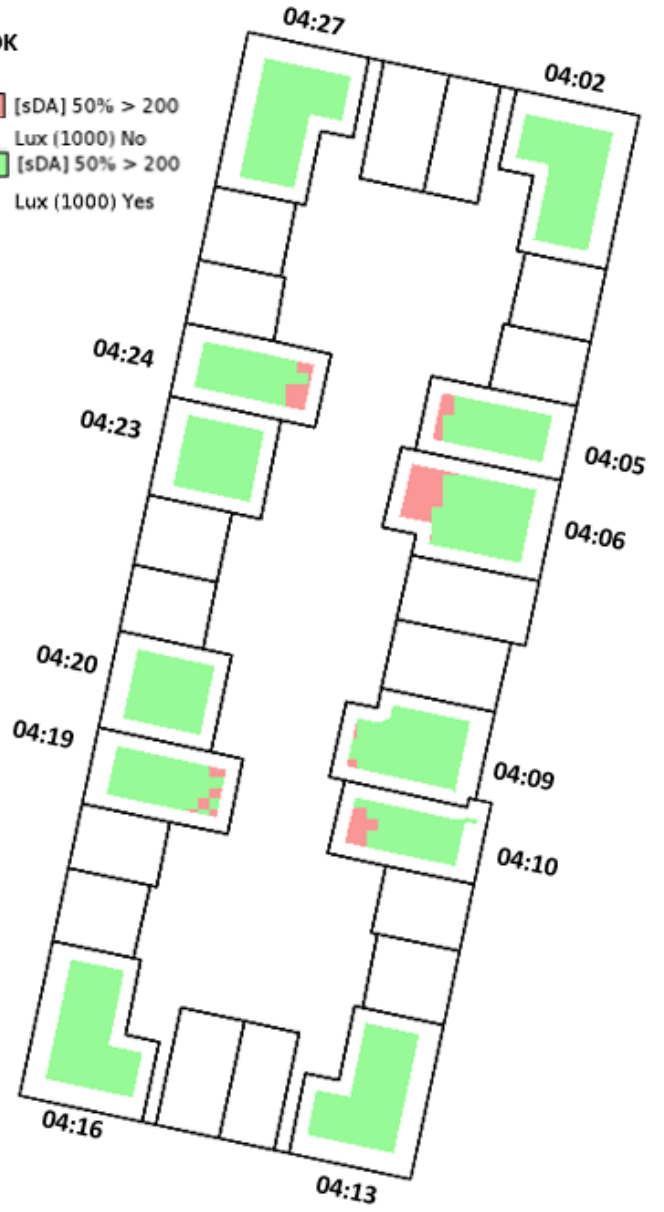
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

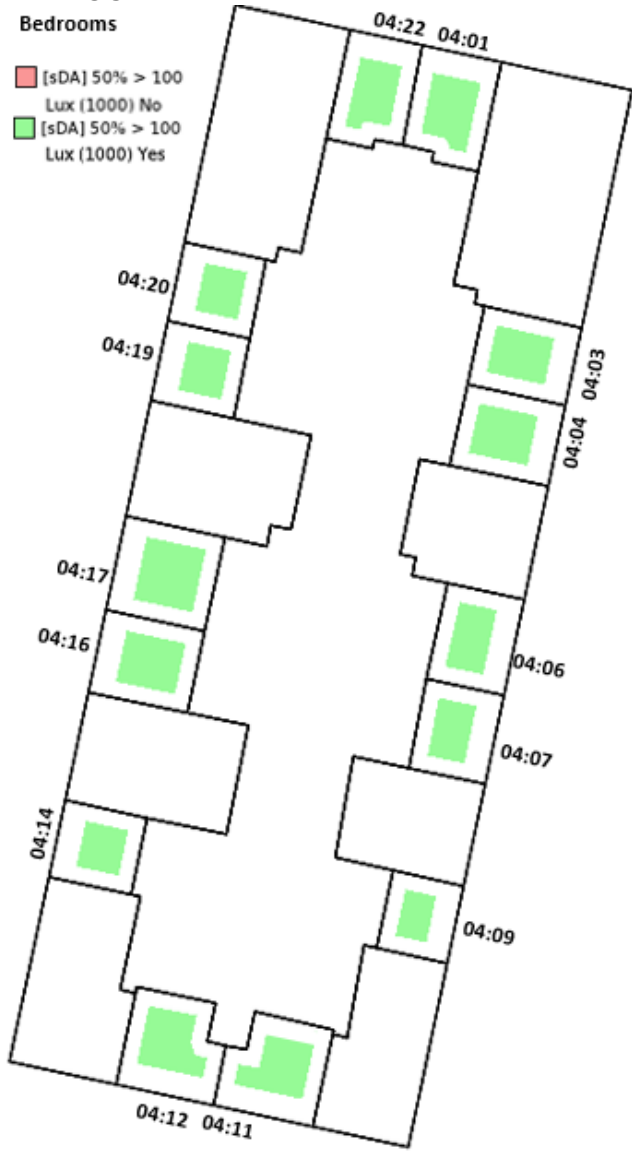
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK H

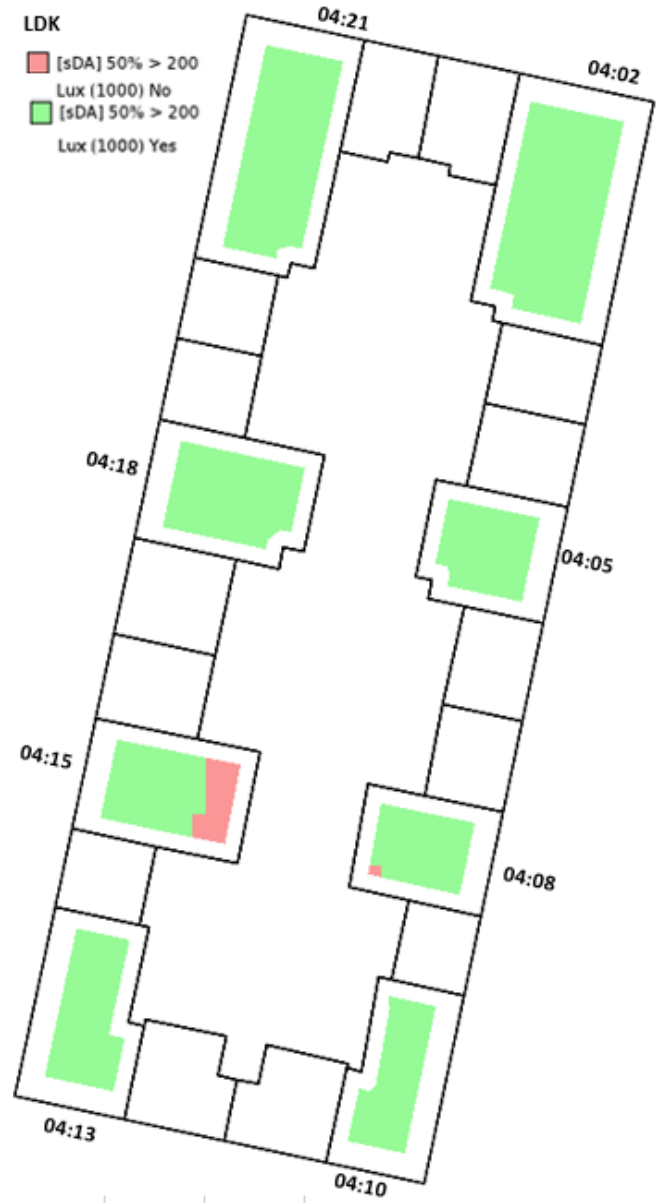
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

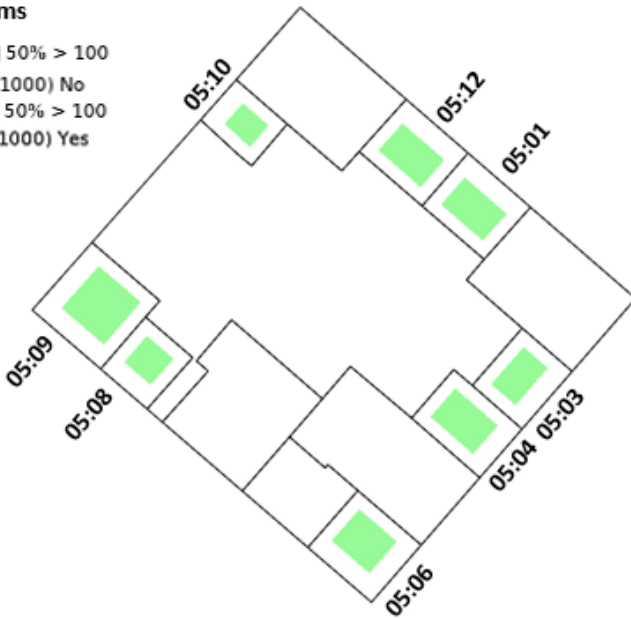


5th FLOOR

BLOCK B

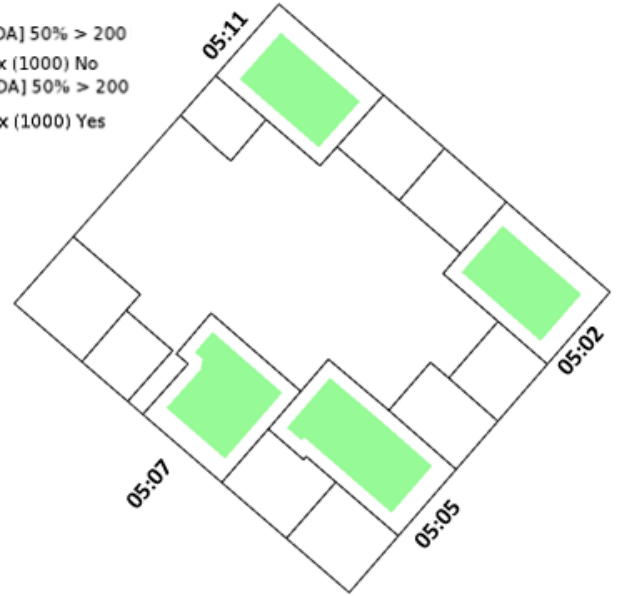
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK C

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

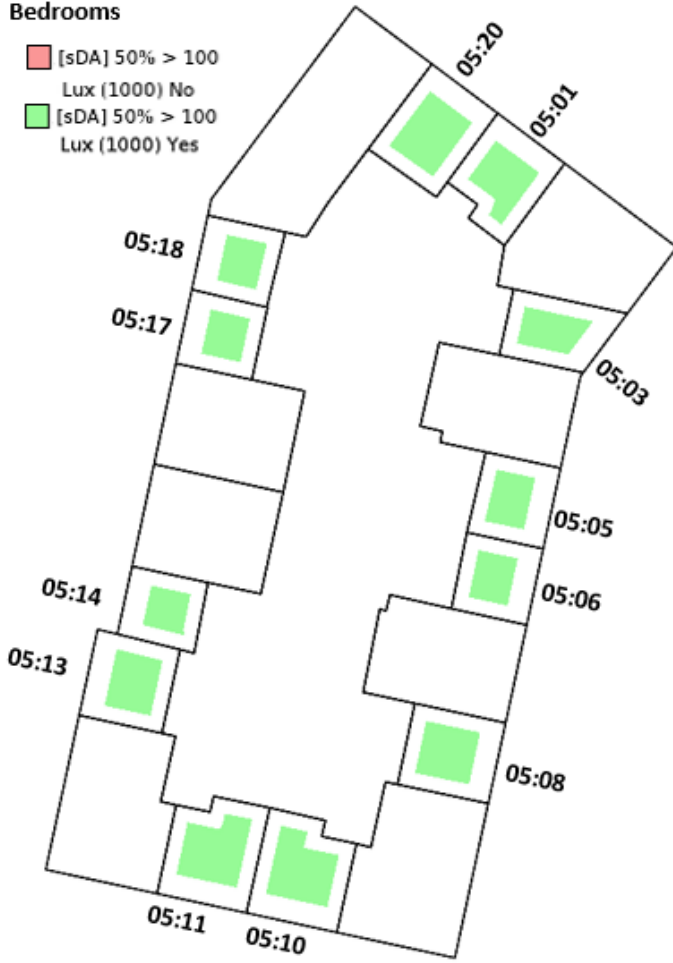
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK D

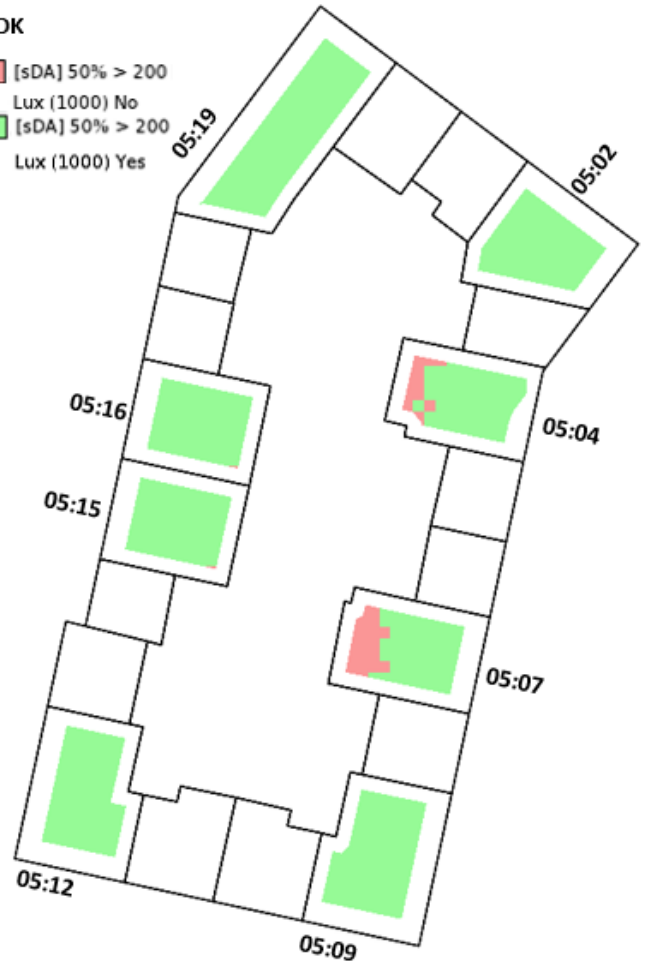
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

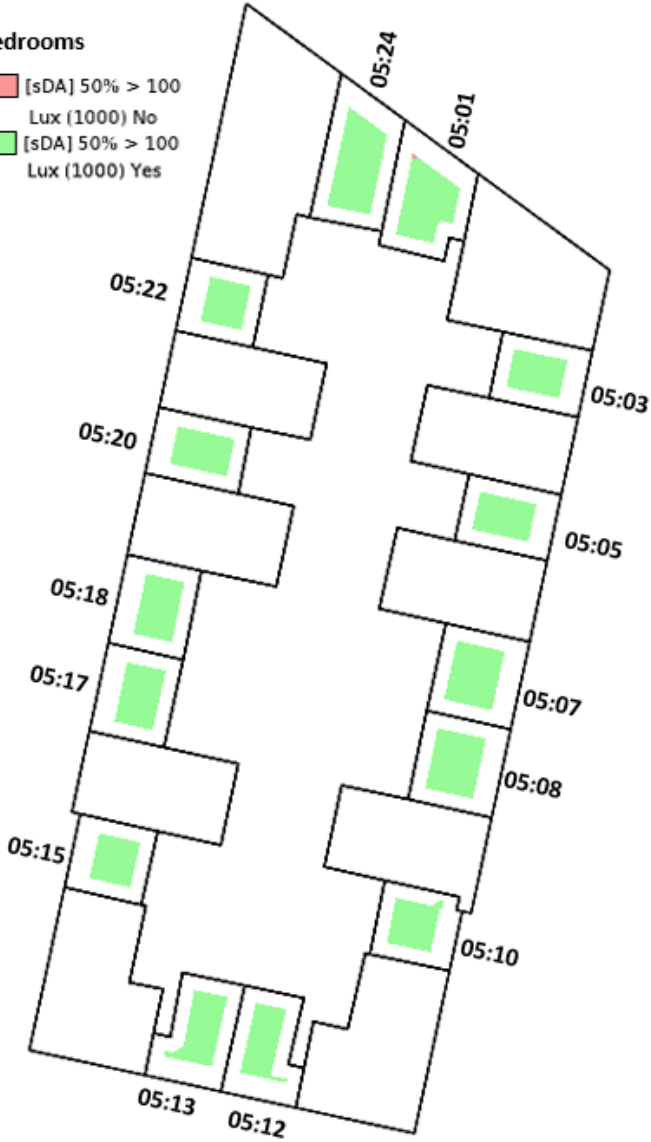
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK E

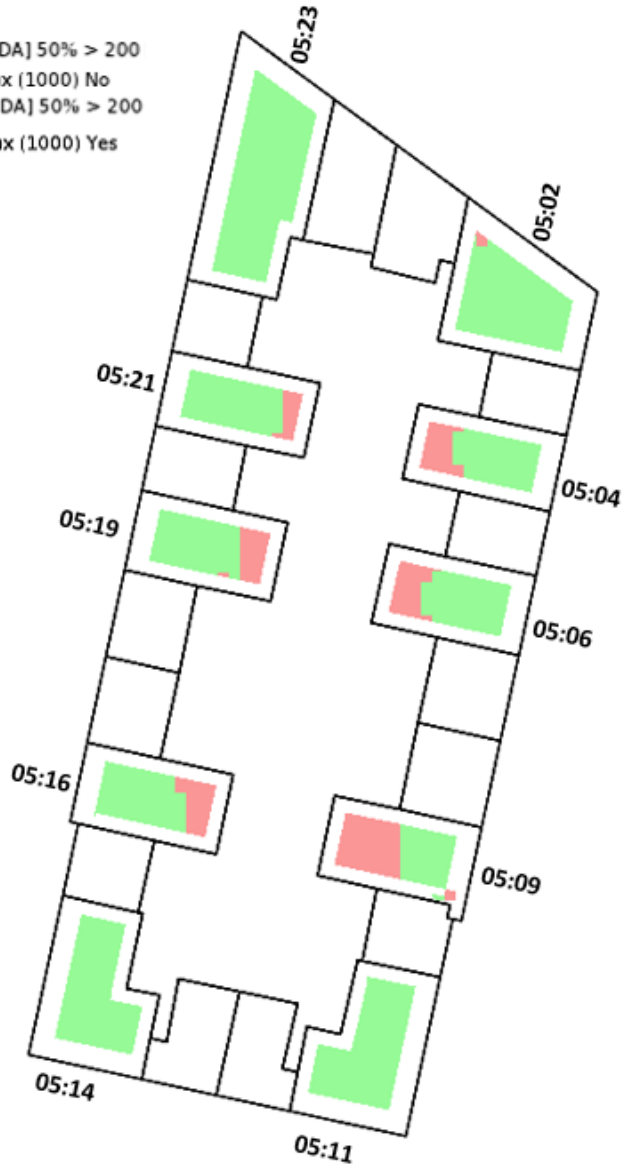
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

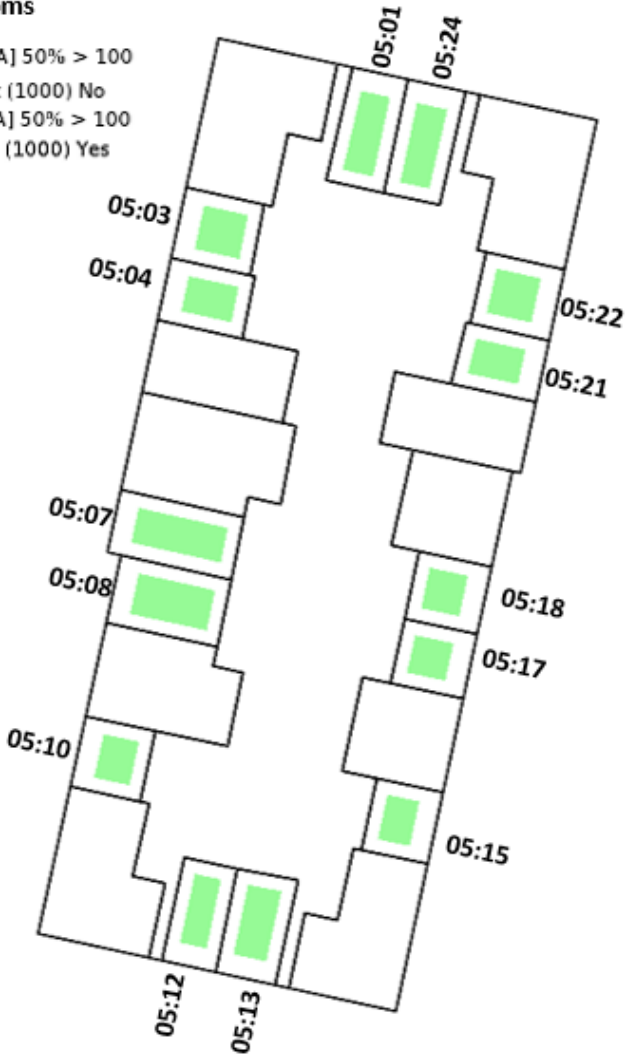
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK F

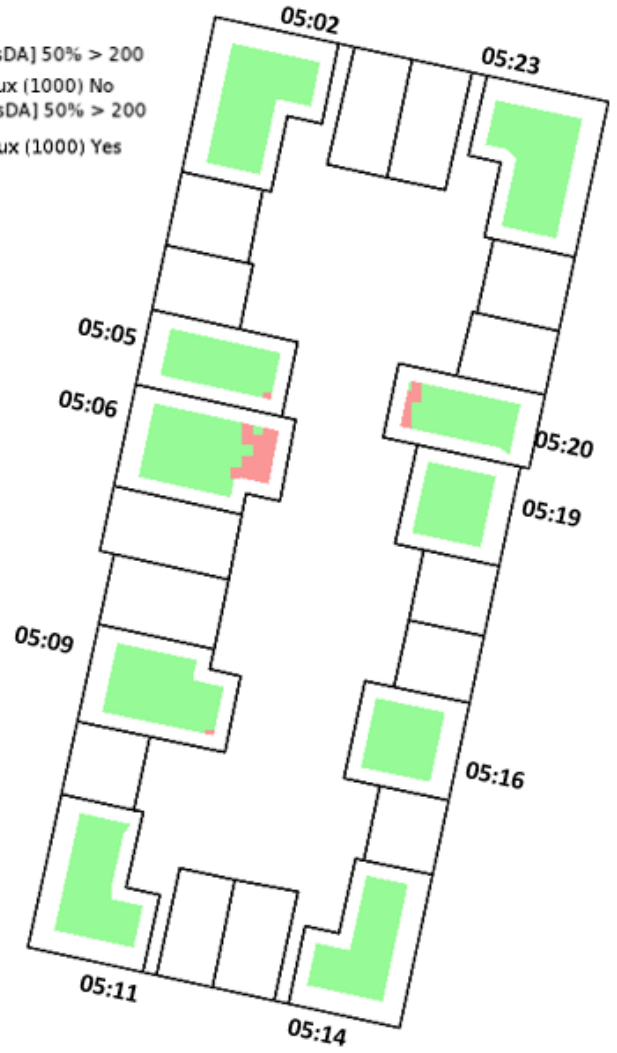
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

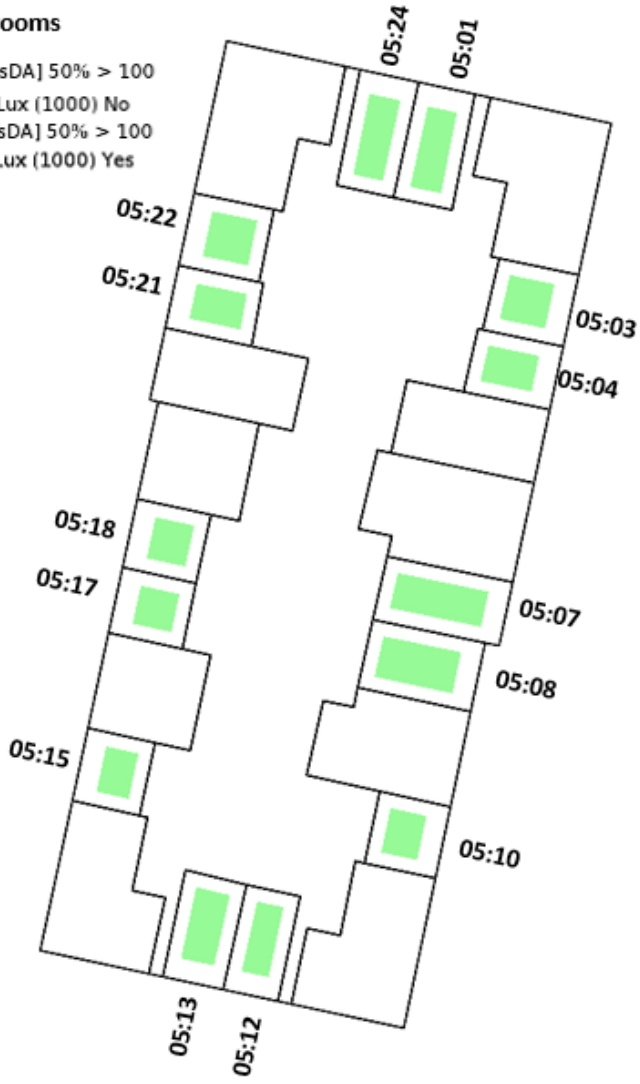
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

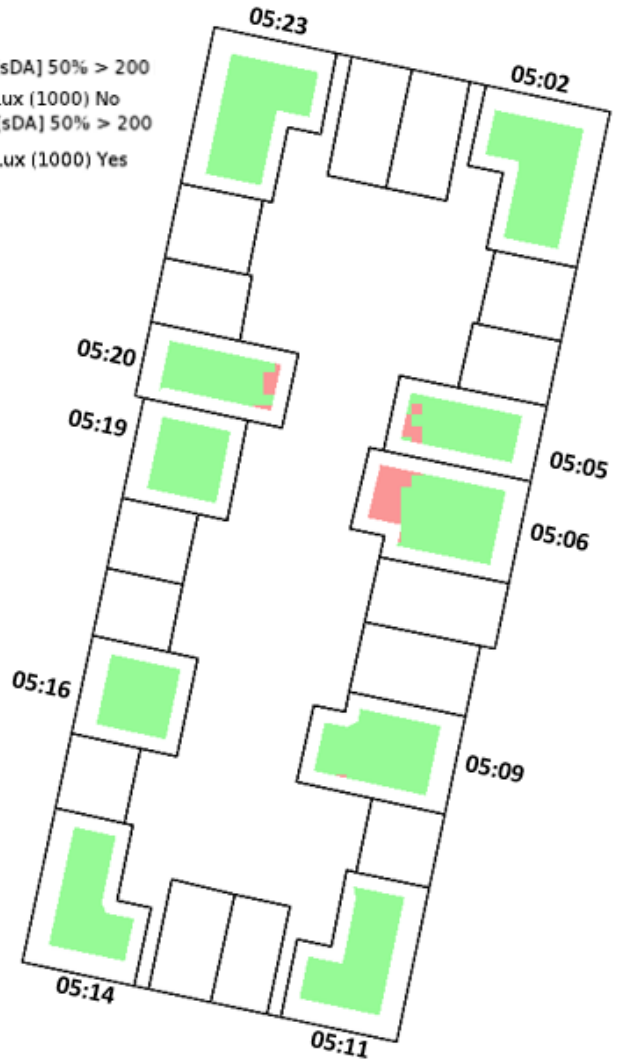
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



6th FLOOR

BLOCK D

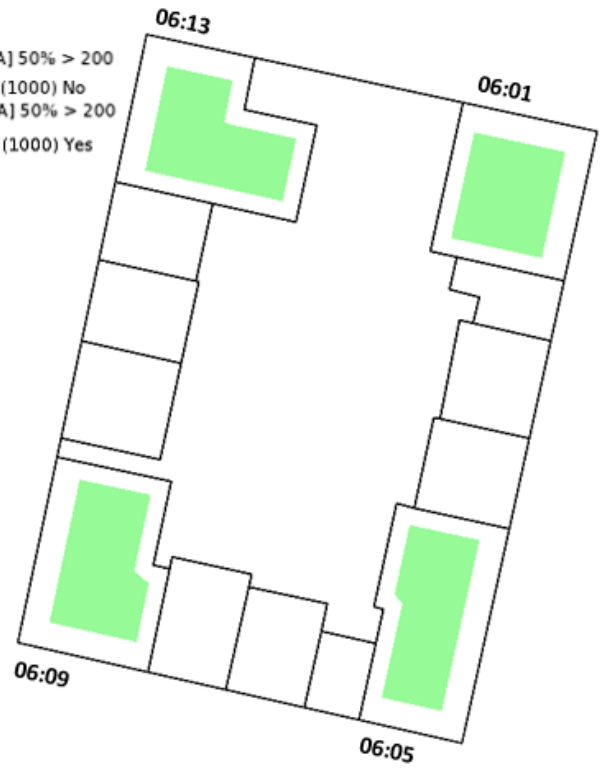
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



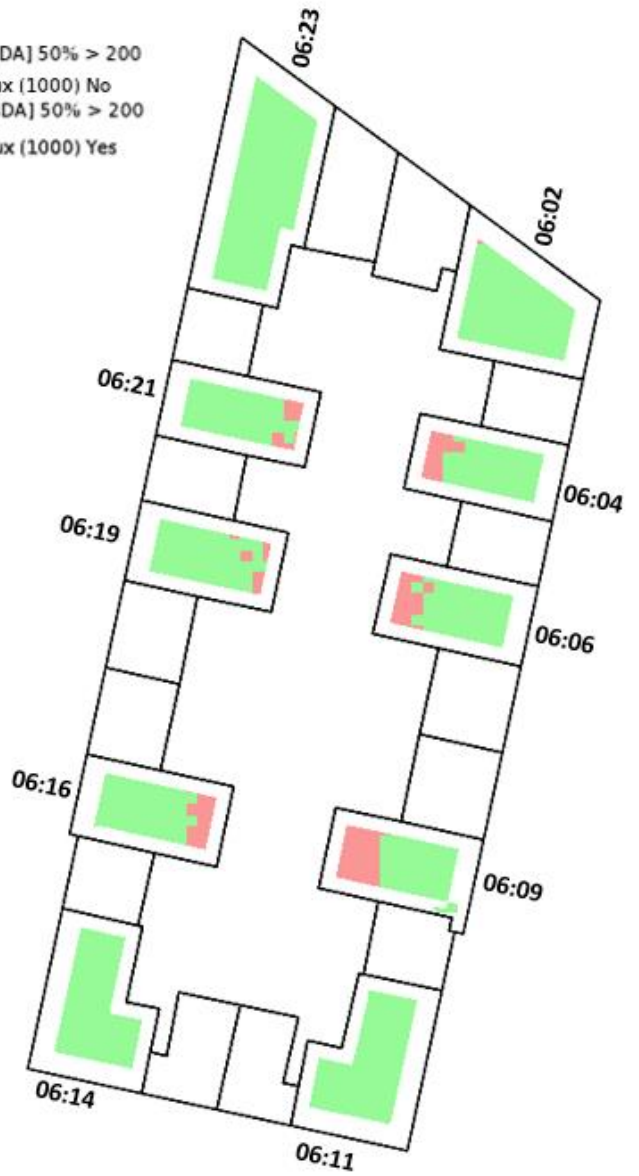
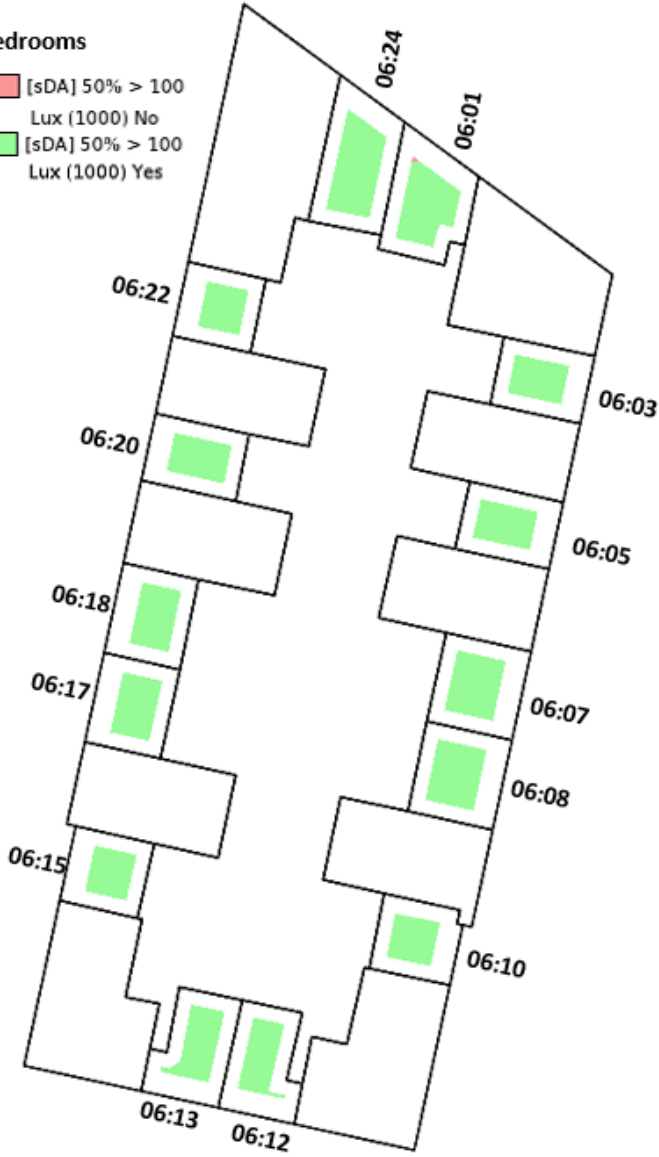
BLOCK E

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes

LDK

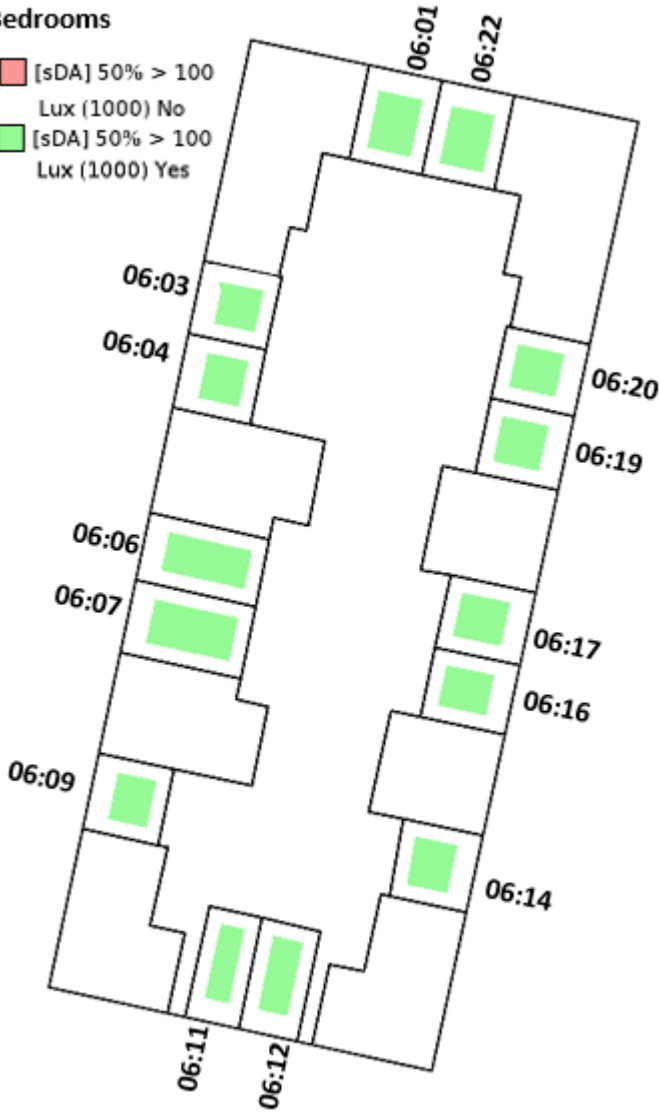
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK F

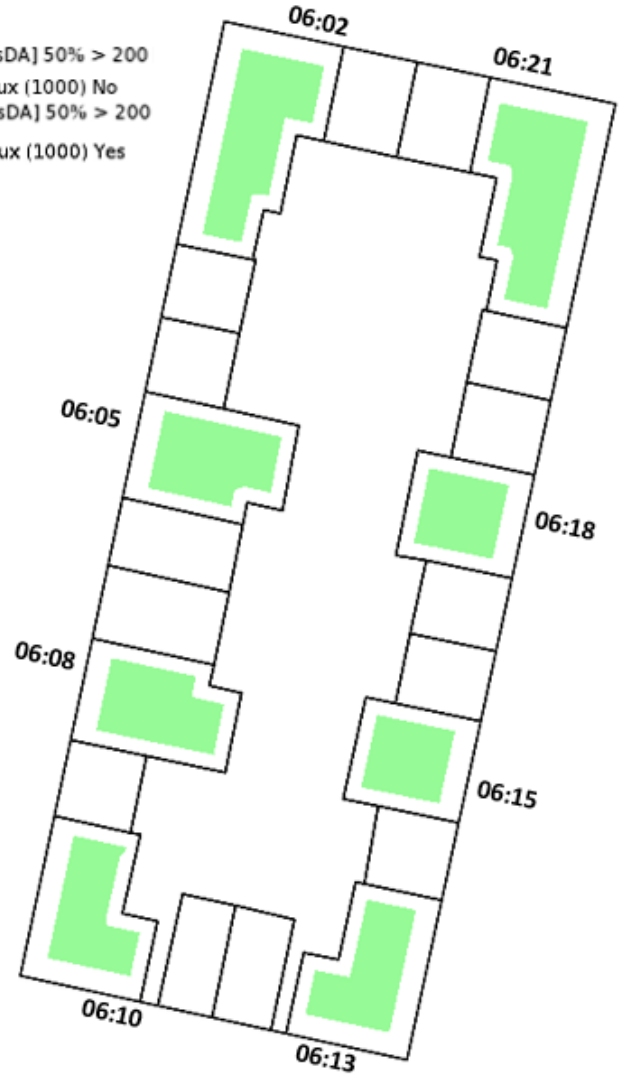
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

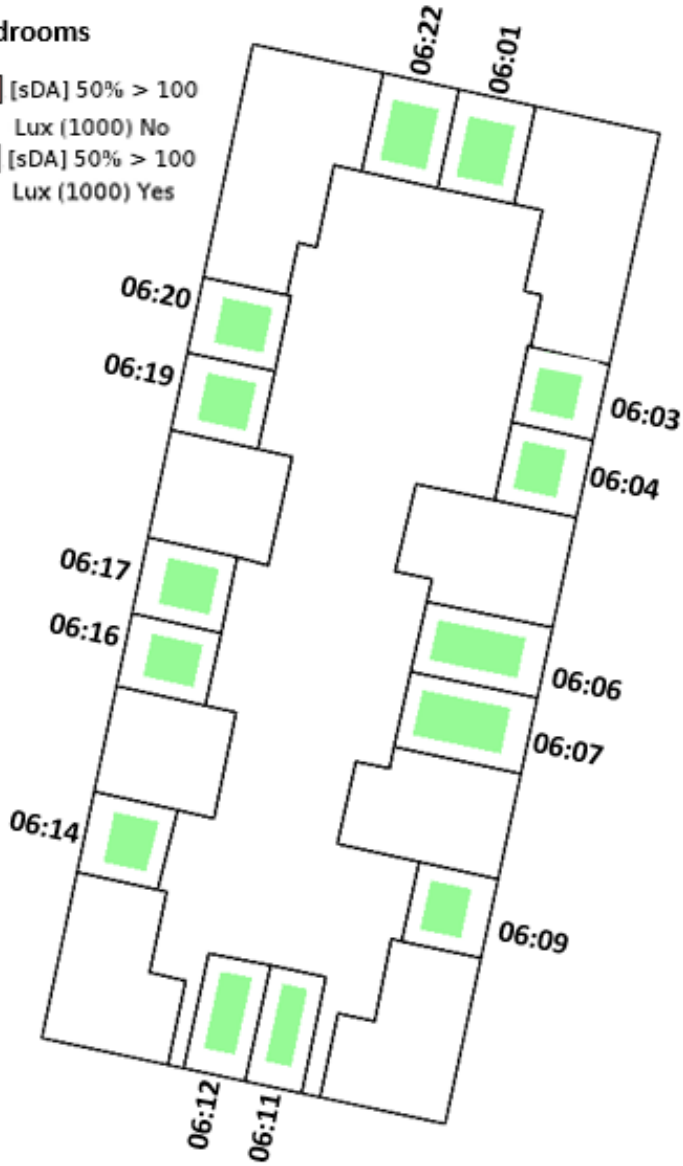
- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



BLOCK G

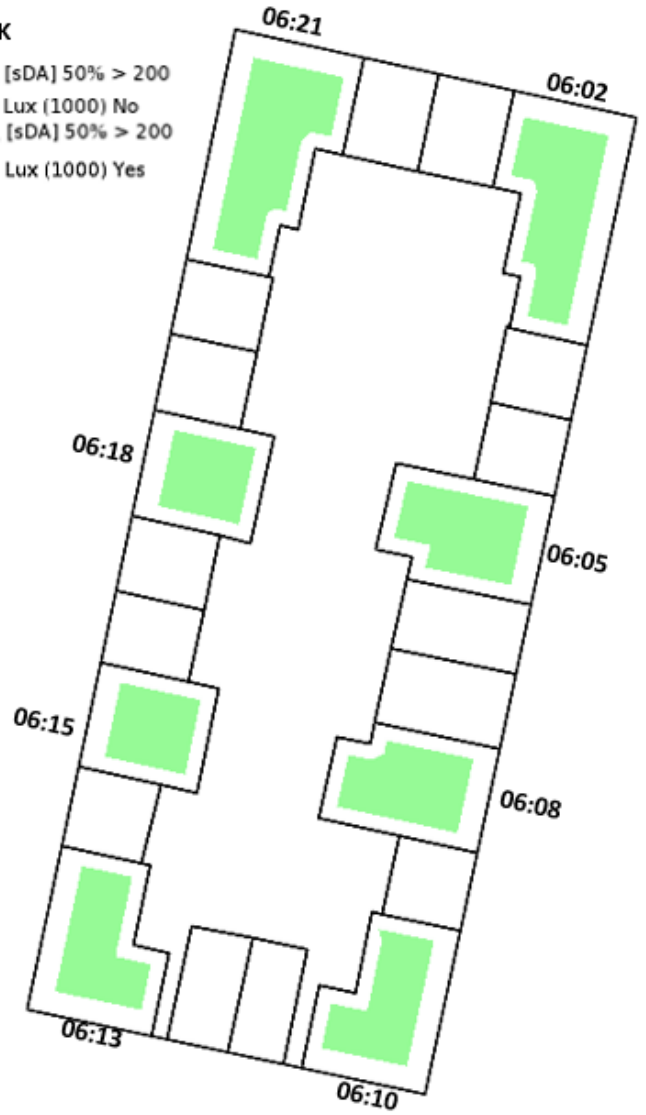
Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes

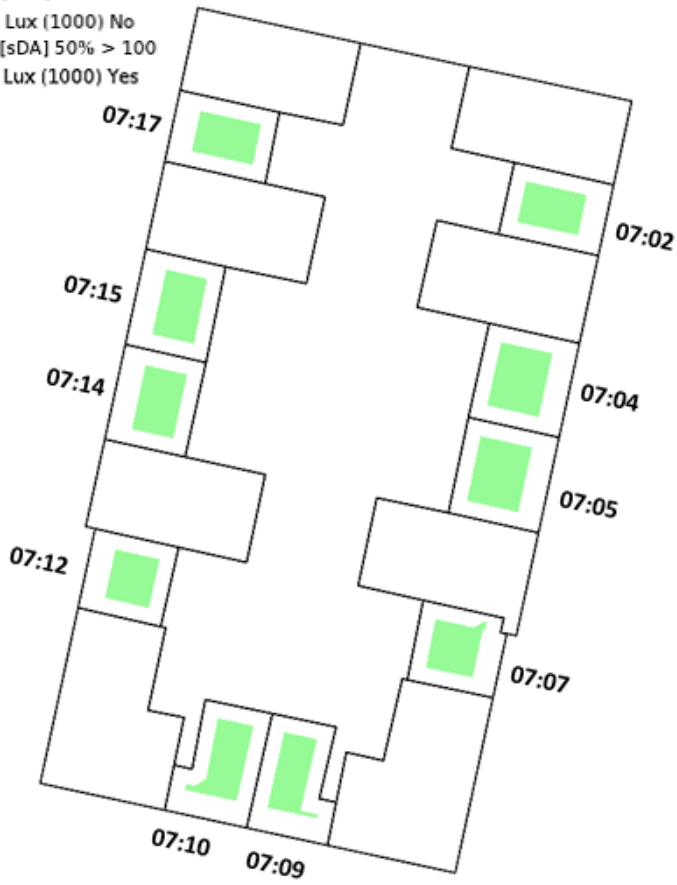


7th FLOOR

BLOCK E

Bedrooms

- [sDA] 50% > 100
Lux (1000) No
- [sDA] 50% > 100
Lux (1000) Yes



LDK

- [sDA] 50% > 200
Lux (1000) No
- [sDA] 50% > 200
Lux (1000) Yes



APPENDIX C – DAYLIGHT MODEL INPUTS – PROPOSED DEVELOPMENT

Parameter	Value
Surface Reflectance's	
• Internal ceilings	80% e.g., white coloured ceiling
• Internal walls	60% e.g., light coloured walls
• Internal floors	40% e.g., light coloured timber floor
Surface Maintenance Factor	90%
Glazing Transmittance	70%
Frame	0.10m frame width
Working Plane	0.85m
Area of Interest (AOI)	0.5m inset from perimeter
Simulation Settings	Radiance dynamic settings: Ambient bounces – 5 Ambient accuracy – 0 Ambient resolution – 1024 Ambient divisions – 32768 Ambient super samples – 0 Limit reflection – 0

APPENDIX D - COMPENSATORY MEASURES – PROPOSED DEVELOPMENT

Overall, the proposed development achieves excellent daylight levels per the criteria set out in the BRE Guide. For any units containing at least one receptor room that does not achieve these guidelines, a variety of compensatory measures have been provided to ensure occupant satisfaction

The table below provides a list of all proposed units which do not meet the BRE Guidelines for daylight and/or sunlight, clarification on which criteria these units do not achieve, and the compensatory measures that are available to that unit.

The compensatory measures included in the table below are as follows:

- Unit size exceeding the minimum standard by more than 10%
- Dual aspect glazing – glazing that is present on two or more walls of the same room allowing for views in multiple directions
- Direct quality views to retained existing trees - from unit bedroom and/or LDK room window
- Unit location is adjacent to communal residential facilities at Block E and Dalguise house
- A direct view over large area of public or communal open space - from unit bedroom and/or LDK room window

Lastly, it is worth noting that any compensatory measure achieved, is achieved in regularly occupied spaces such as the bedrooms or living/dining/kitchen areas.

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
North West Houses	-	X	Y	-	Y	-	Y
Block A Ground Floor Unit 02	X	-	-	-	Y	-	Y
Block A Ground Floor Unit 03	X	-	-	-	Y	-	Y
Block A First Floor Unit 03	X	-	Y	-	Y	-	Y
Block B Lower-Level Unit 01	-	X	-	Y	Y	Y	Y
Block B Lower-Level Unit 02	-	X	Y	-	Y	Y	Y
Block B Lower-Level Unit 03	-	X	Y	-	Y	Y	Y
Block B Lower-Level Unit 04	-	X	-	Y	Y	Y	Y
Block B Ground Floor Unit 03	-	X	-	Y	Y	Y	Y
Block B Ground Floor Unit 04	X	-	-	-	Y	Y	Y
Block B Ground Floor Unit 06	X	-	Y	-	Y	Y	Y
Block B Ground Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block B Ground Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block B First Floor Unit 03	-	X	-	Y	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block B First Floor Unit 06	X	-	Y	-	Y	Y	Y
Block B First Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block B First Floor Unit 08	-	X	-	Y	Y	Y	Y
Block B Second Floor Unit 03	-	X	Y	Y	Y	Y	Y
Block B Second Floor Unit 06	X	-	Y	-	Y	Y	Y
Block B Second Floor Unit 08	-	X	-	Y	Y	Y	Y
Block B Third Floor Unit 03	-	X	Y	Y	Y	Y	Y
Block B Third Floor Unit 06	X	-	Y	Y	Y	Y	Y
Block B Third Floor Unit 08	-	X	-	Y	Y	Y	Y
Block B Fourth Floor Unit 08	-	X	-	Y	Y	Y	Y
Block C Lower-Level Unit 01	-	X	Y	Y	Y	Y	Y
Block C Lower-Level Unit 04	-	X	-	-	Y	Y	Y
Block C Lower-Level Unit 09	-	X	Y	Y	Y	Y	Y
Block C Ground Floor Unit 01	-	X	Y	Y	Y	Y	Y
Block C Ground Floor Unit 06	X	-	Y	-	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block C Ground Floor Unit 07	X	X	Y	Y	Y	Y	Y
Block C Ground Floor Unit 08	-	-	Y	Y	Y	Y	Y
Block C First Floor Unit 01	X	-	Y	-	Y	Y	Y
Block C First Floor Unit 05	X	-	-	-	Y	Y	Y
Block C First Floor Unit 06	X	-	Y	-	Y	Y	Y
Block C First Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block C First Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block C Second Floor Unit 01	X	-	Y	-	Y	Y	Y
Block C Second Floor Unit 05	X	-	-	-	Y	Y	Y
Block C Second Floor Unit 06	X	-	Y	-	Y	Y	Y
Block C Second Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block C Second Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block C Third Floor Unit 05	X	-	-	-	Y	Y	Y
Block C Third Floor Unit 06	X	-	Y	-	Y	Y	Y
Block C Third Floor Unit 07	-	X	Y	Y	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block C Third Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block C Fourth Floor Unit 05	X	-	-	-	Y	Y	Y
Block C Fourth Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block D Ground Floor Unit 02	X	X	-	-	Y	Y	Y
Block D Ground Floor Unit 03	X	X	-	-	Y	Y	Y
Block D Ground Floor Unit 04	-	X	-	Y	Y	Y	Y
Block D Ground Floor Unit 06	X	-	-	Y	Y	Y	Y
Block D Ground Floor Unit 07	X	X	-	Y	Y	Y	Y
Block D First Floor Unit 01	-	X	-	Y	Y	Y	Y
Block D First Floor Unit 03	-	X	-	-	Y	Y	Y
Block D First Floor Unit 04	-	X	-	Y	Y	Y	Y
Block D First Floor Unit 06	X	-	-	-	Y	Y	Y
Block D First Floor Unit 07	X	-	-	-	Y	Y	Y
Block D Second Floor Unit 02	-	X	-	-	Y	Y	Y
Block D Second Floor Unit 03	-	X	-	-	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block D Second Floor Unit 04	-	X	-	Y	Y	Y	Y
Block D Second Floor Unit 06	X	-	-	-	Y	Y	Y
Block D Second Floor Unit 07	X	-	-	-	Y	Y	Y
Block D Third Floor Unit 01	-	X	-	Y	Y	Y	Y
Block D Third Floor Unit 02	-	X	-	-	Y	Y	Y
Block D Third Floor Unit 06	X	-	-	-	Y	Y	Y
Block D Third Floor Unit 07	X	-	-	-	Y	Y	Y
Block D Fourth Floor Unit 02	-	X	-	-	Y	Y	Y
Block E First Floor Unit 03	-	X	-	Y	Y	Y	Y
Block E First Floor Unit 04	-	X	Y	Y	Y	Y	Y
Block E First Floor Unit 05	-	X	-	-	Y	Y	Y
Block E First Floor Unit 06	-	X	Y	-	Y	Y	Y
Block E Second Floor Unit 06	-	X	Y	Y	Y	Y	Y
Block E Second Floor Unit 07	-	X	-	-	Y	Y	Y
Block E Second Floor Unit 10	-	X	-	Y	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block E Third Floor Unit 04	X	-	-	-	Y	Y	Y
Block E Third Floor Unit 06	-	X	Y	Y	Y	Y	Y
Block E Third Floor Unit 07	-	X	-	-	Y	Y	Y
Block E Third Floor Unit 08	-	X	-	-	Y	Y	Y
Block E Fourth Floor Unit 10	-	X	-	Y	Y	Y	Y
Block E Fifth Floor Unit 04	X	-	-	-	Y	Y	Y
Block E Fifth Floor Unit 06	-	X	Y	Y	Y	Y	Y
Block F Ground Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F Ground Floor Unit 10	-	X	-	Y	Y	Y	Y
Block F First Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F First Floor Unit 12	-	X	-	Y	Y	Y	Y
Block F Second Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F Second Floor Unit 12	-	X	-	Y	Y	Y	Y
Block F Third Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F Third Floor Unit 12	-	X	-	Y	Y	Y	Y
Block F Fourth Floor Unit 01	-	X	-	Y	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block F Fourth Floor Unit 12	-	X	-	Y	Y	Y	Y
Block F Fifth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F Fifth Floor Unit 10	-	X	-	Y	Y	Y	Y
Block F Sixth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block F Sixth Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block G Ground Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Ground Floor Unit 10	-	X	-	Y	Y	Y	Y
Block G First Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G First Floor Unit 12	-	X	-	Y	Y	Y	Y
Block G Second Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Second Floor Unit 12	-	X	-	Y	Y	Y	Y
Block G Third Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Third Floor Unit 12	-	X	-	Y	Y	Y	Y
Block G Fourth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Fourth Floor Unit 12	-	X	-	Y	Y	Y	Y

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block G Fifth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Fifth Floor Unit 10	-	X	-	Y	Y	Y	Y
Block G Sixth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block G Sixth Floor Unit 08	-	X	Y	Y	Y	Y	Y
Block H Ground Floor Unit 01	-	X	-	Y	Y	Y	Y
Block H Ground Floor Unit 10	-	X	-	Y	Y	Y	Y
Block H First Floor Unit 01	-	X	-	Y	Y	Y	Y
Block H First Floor Unit 12	-	X	-	Y	Y	Y	Y
Block H Second Floor Unit 01	-	X	-	Y	Y	Y	Y
Block H Second Floor Unit 12	-	X	-	Y	Y	Y	Y
Block H Third Floor Unit 01	-	X	-	Y	Y	Y	Y
Block H Third Floor Unit 10	-	X	-	Y	Y	Y	Y
Block H Fourth Floor Unit 01	-	X	-	Y	Y	Y	Y
Block H Fourth Floor Unit 08	-	X	-	Y	Y	Y	Y
Block I1 Ground Floor Unit 01	-	X	-	Y	Y	-	-

Unit	BRE Guideline not Achieved		Compensatory Measures				
	Daylighting - below target value in at least one receptor room	Sunlight - below target value in at least one receptor room	Unit size exceeds minimum standard by more than 10%	Dual Aspect Unit	Direct view to retained existing tree	Unit located in close proximity to communal residential facilities at Block E and Dalguise house	Direct view over large area of public or communal open space
Block I1 Ground Floor Unit 03	-	X	Y	Y	Y	-	Y
Block I1 Ground Floor Unit 04	-	X	Y	Y	Y	-	-
Block I1 First Floor Unit 01	-	X	Y	Y	Y	-	-
Block I1 First Floor Unit 03	X	-	Y	-	Y	-	Y
Block I2 Ground Floor Unit 01	-	X	Y	Y	Y	-	-
Block I2 Ground Floor Unit 04	-	X	-	Y	Y	-	-
Block I2 First Floor Unit 01	-	X	Y	Y	Y	-	-
Block I2 First Floor Unit 04	-	X	-	Y	Y	-	-
Block I2 Second Floor Unit 01	-	X	Y	Y	Y	-	Y
Block I2 Second Floor Unit 04	-	X	-	Y	Y	-	Y
Block J Ground Floor Unit 01	-	X	Y	Y	Y	Y	Y
Block J First Floor Unit 01	-	X	Y	Y	Y	Y	Y
Block J First Floor Unit 07	-	X	Y	Y	Y	Y	Y
Block J Third Floor Unit 01	-	X	-	Y	Y	Y	Y

APPENDIX E – DAYLIGHT ASSESSMENT – NEIGHBOURING PROPERTIES - VSC RESULTS IMAGES

Per the BRE Guidelines, a reduction in daylight to a window will be noticeable if “the VSC measured at the centre of an existing window is less than 27% *and* less than 0.80 times its former value.”

The Vertical Sky Component results presented in this report are generated from individual simulations completed for the current and proposed scenario.

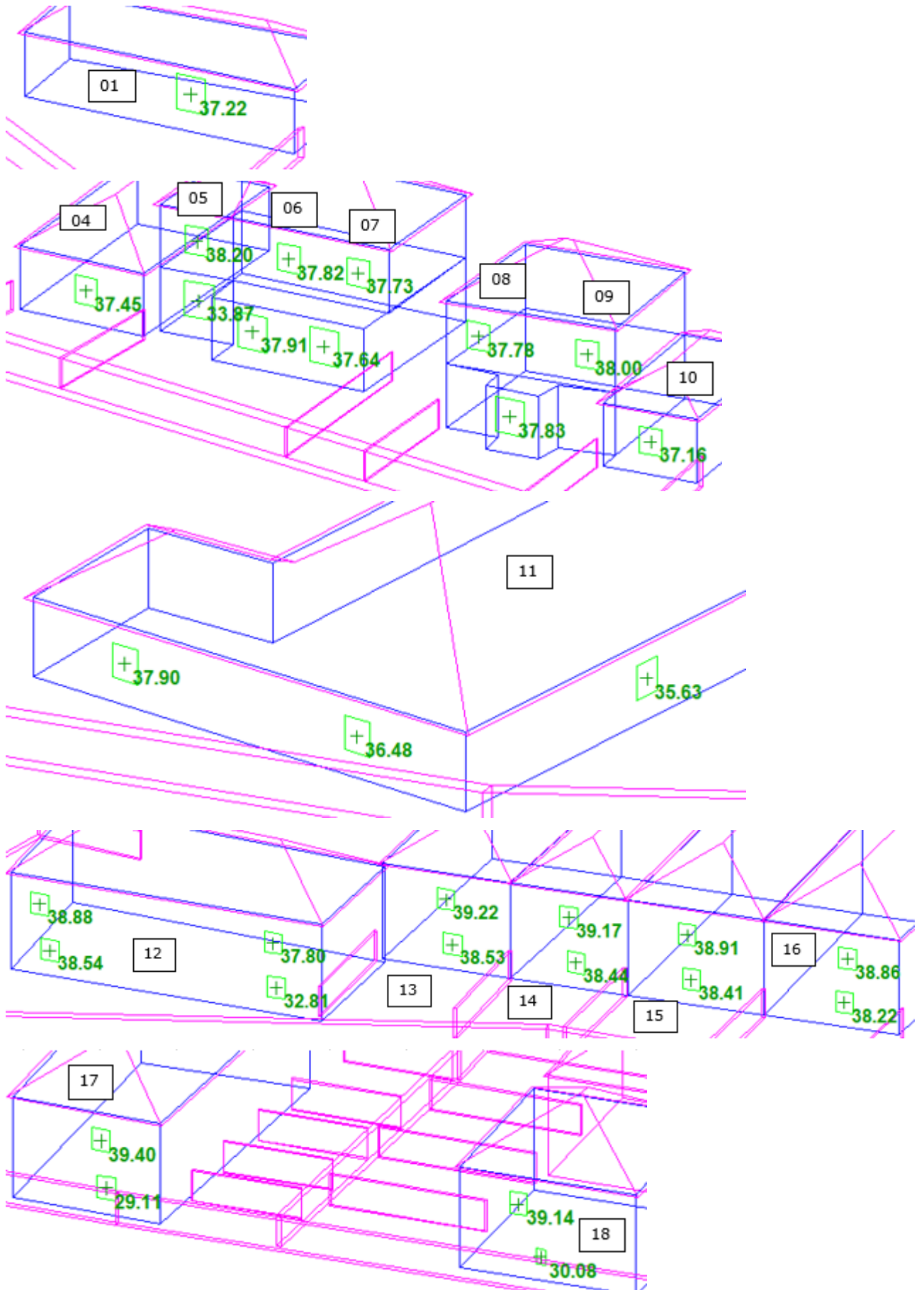
The software is unable to compare the results of both scenarios, and as such, only reports on the Vertical Sky Component % of that specific scenario. This results in any windows receiving less than 27% to be presented in red text, as seen below.

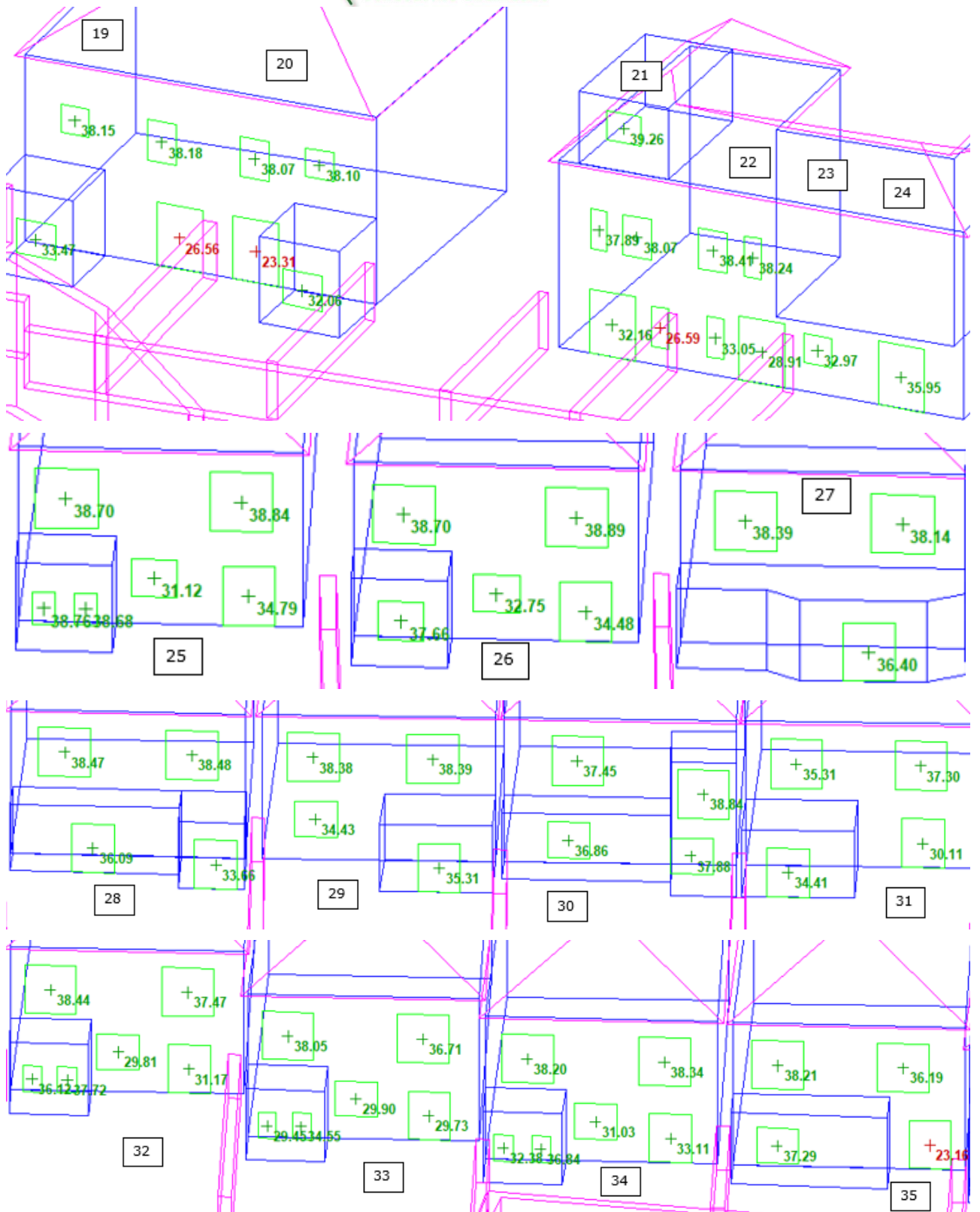
This should not, however, be taken as a direct indicator of the windows ability to meet BRE Guidelines. As stated in the BRE Guide, so long as the reduction in daylight is less than 80% of its former value, even if the VSC is lower than 27%, the window still meets the criteria for safeguarding access to daylight.

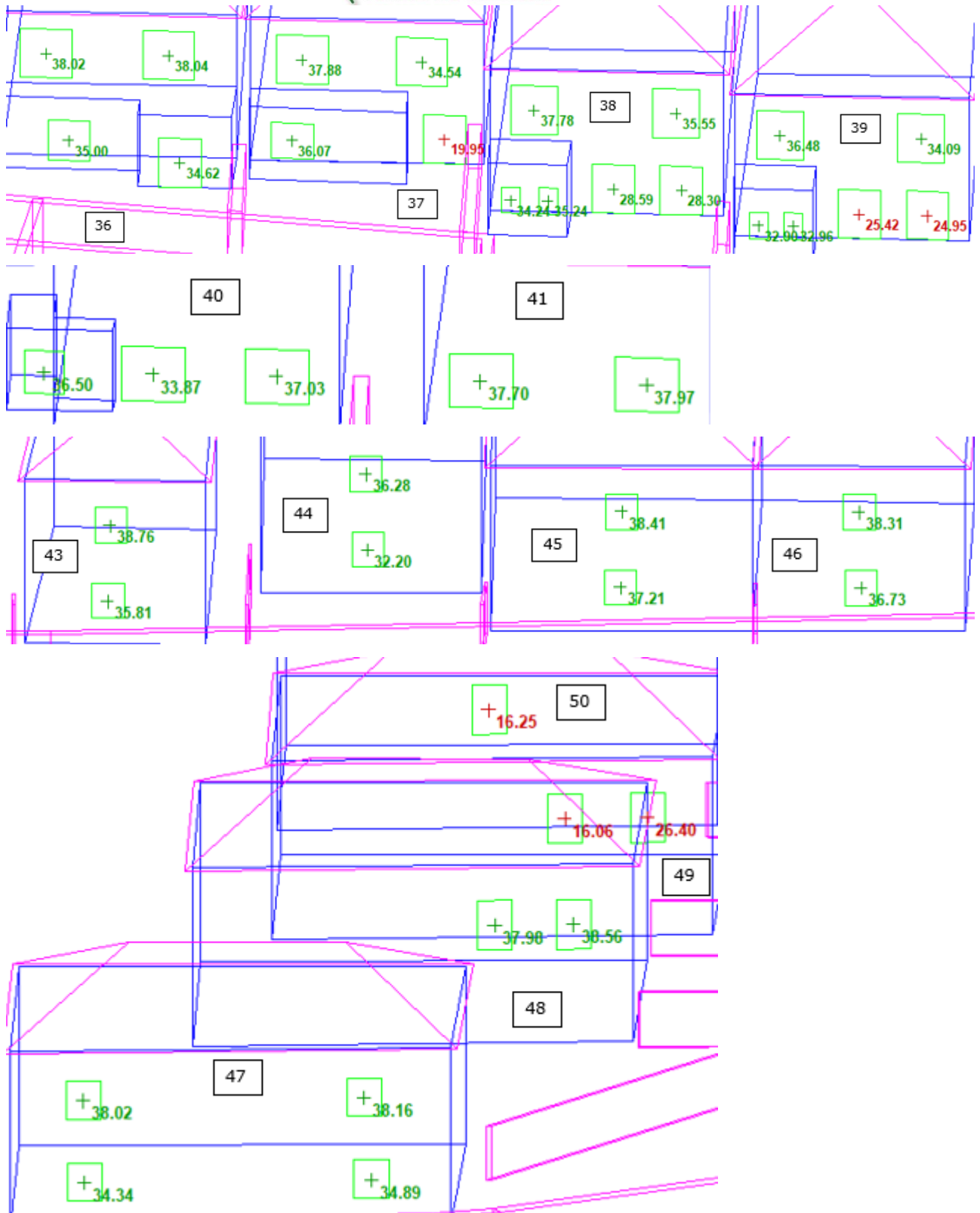
Please refer to Table 8.0.2 for the full analysis of each assessment window.

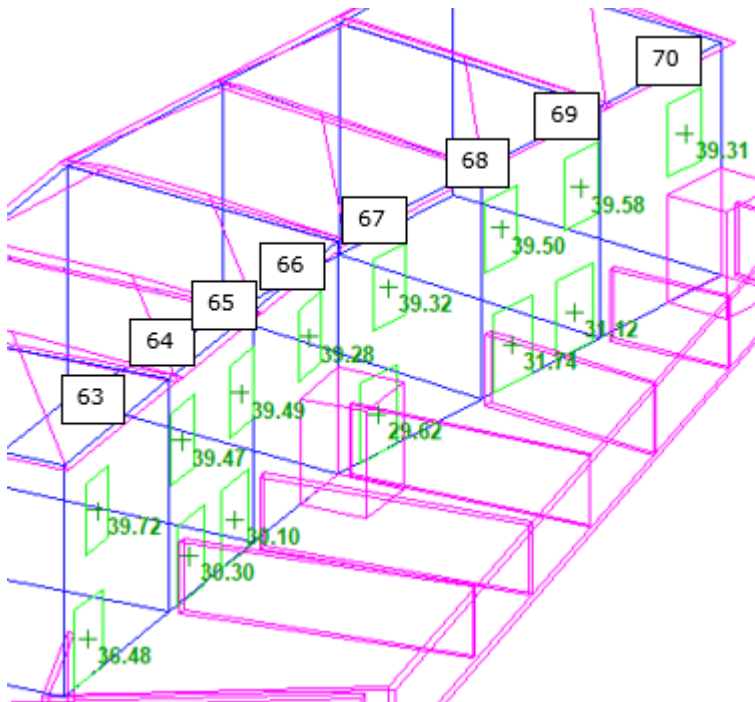
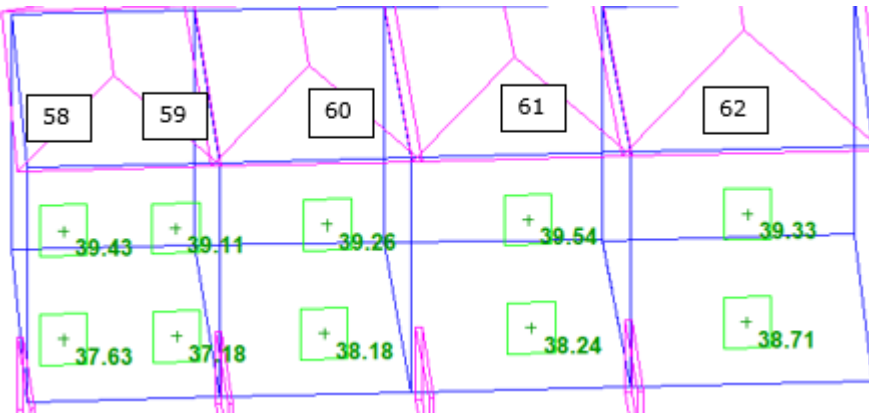
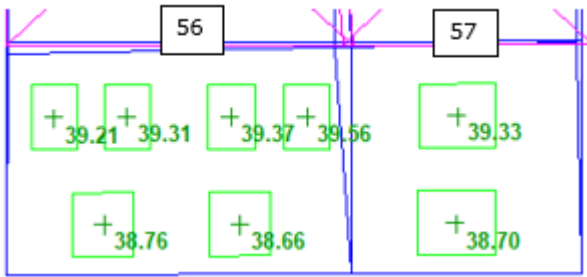
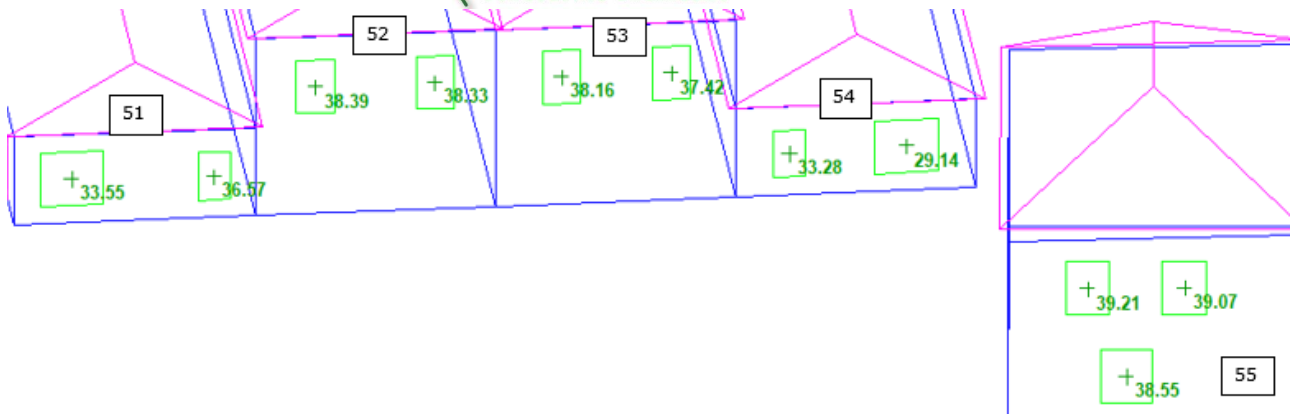
The images below are visual representations of the Vertical Sky Component results and are provided for clarity and informative purposes.

CURRENT SCENARIO

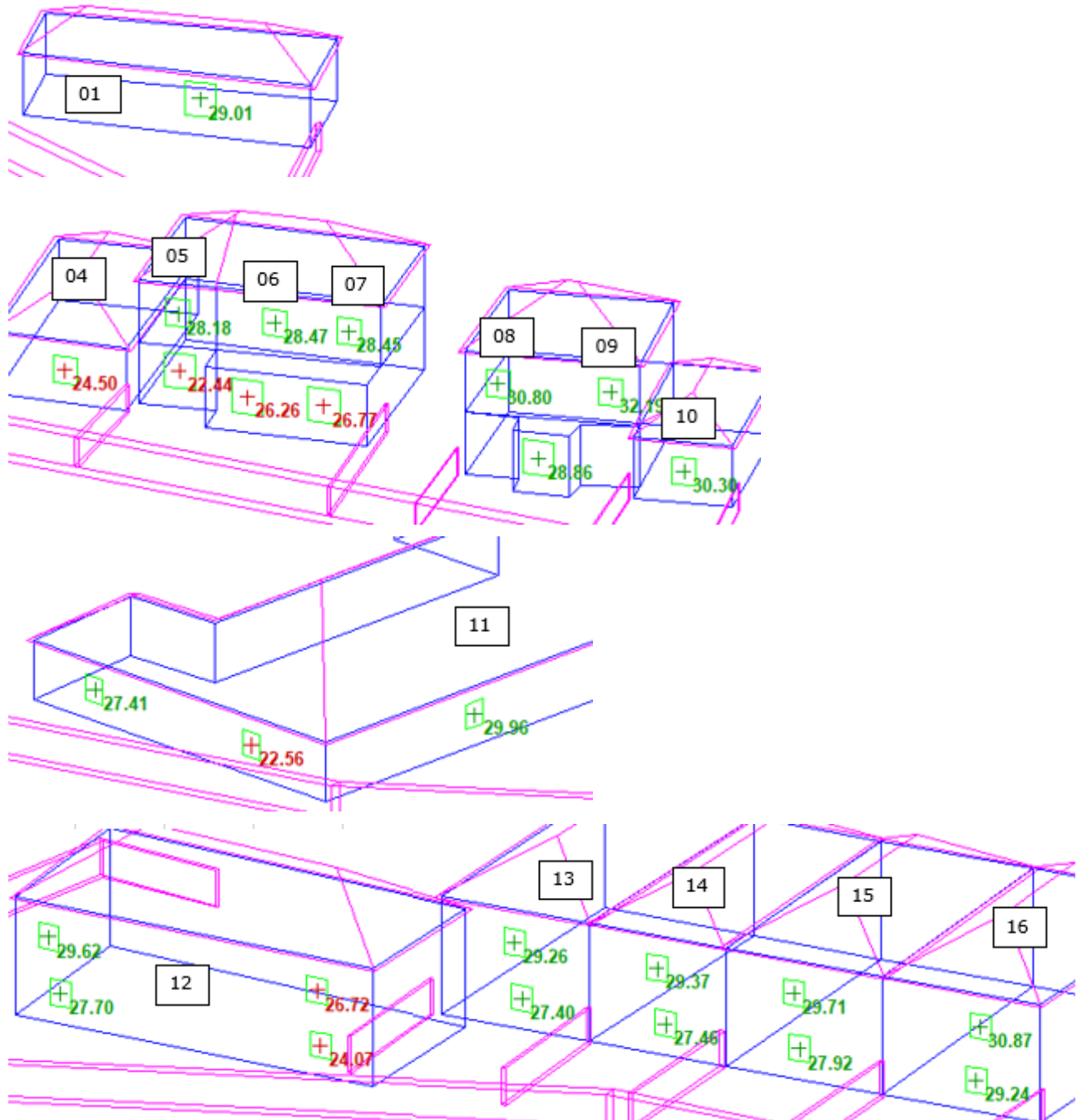


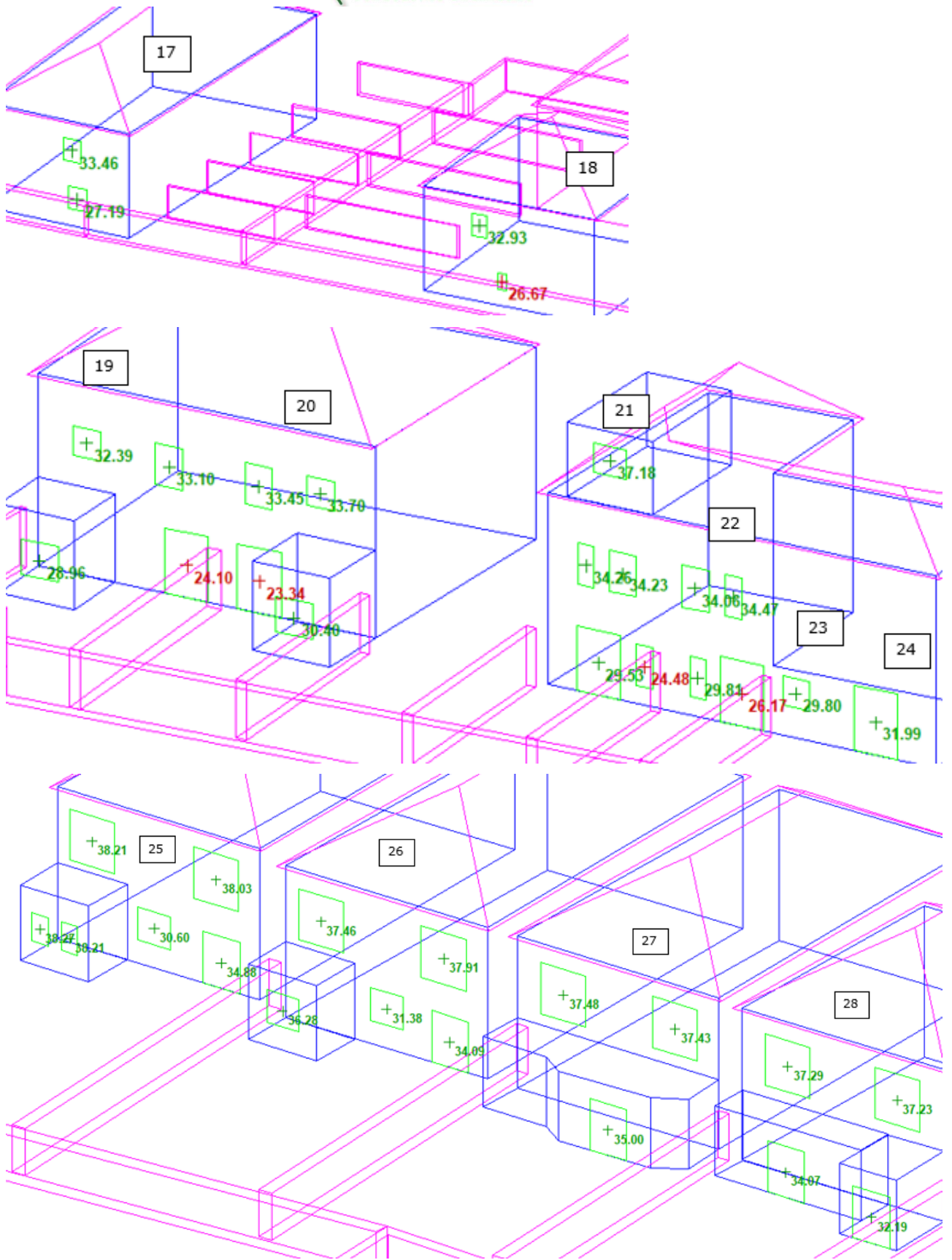


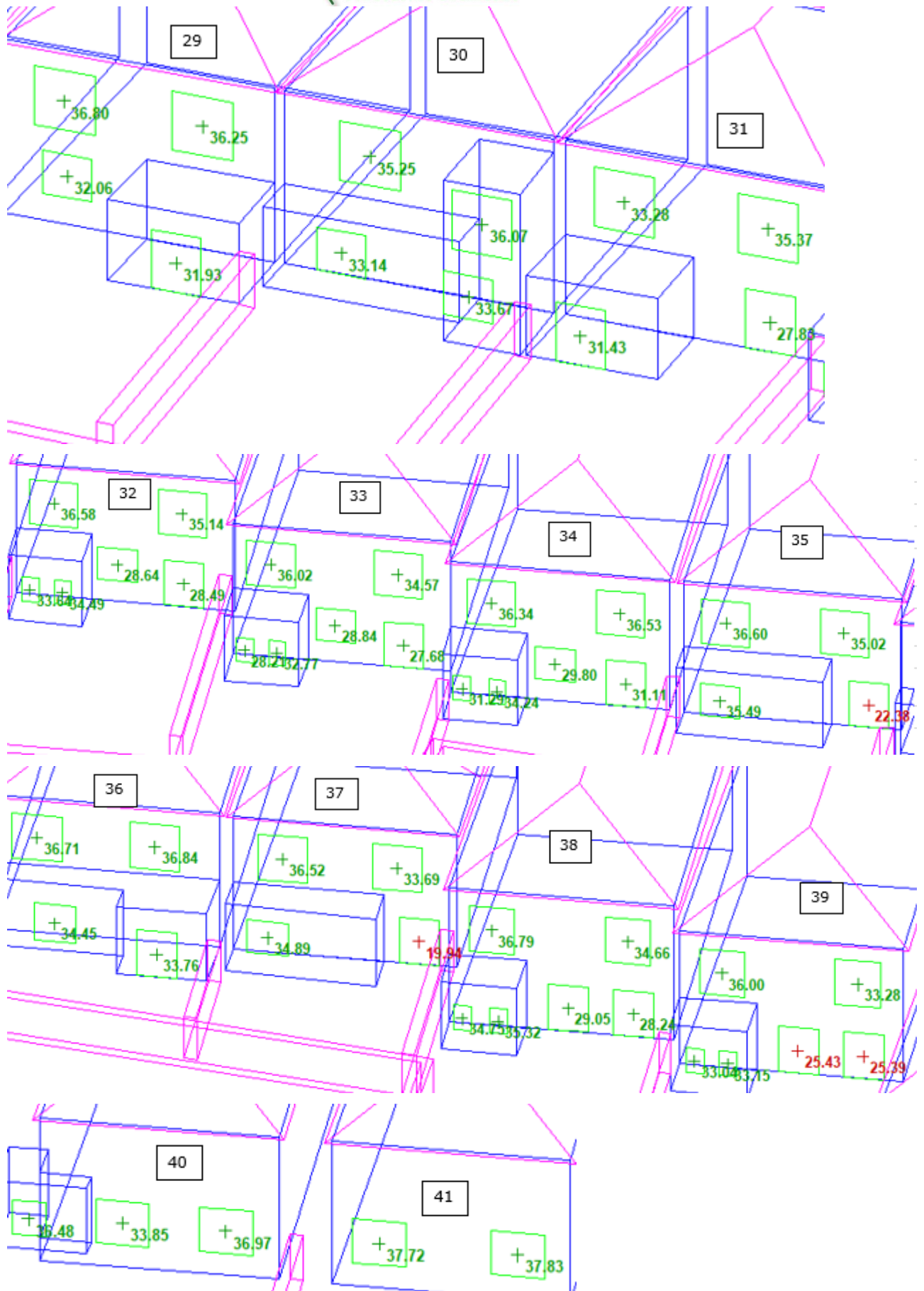


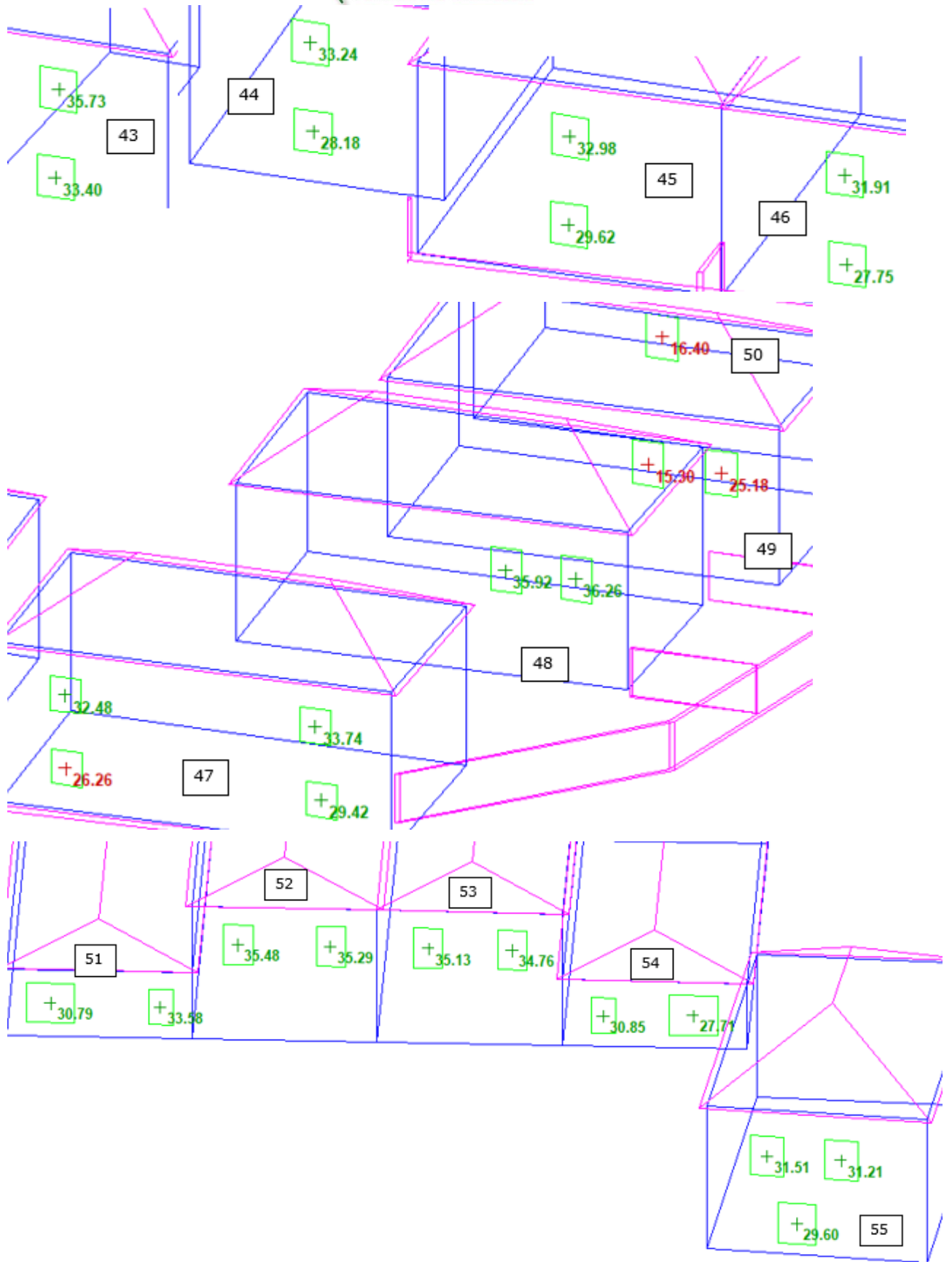


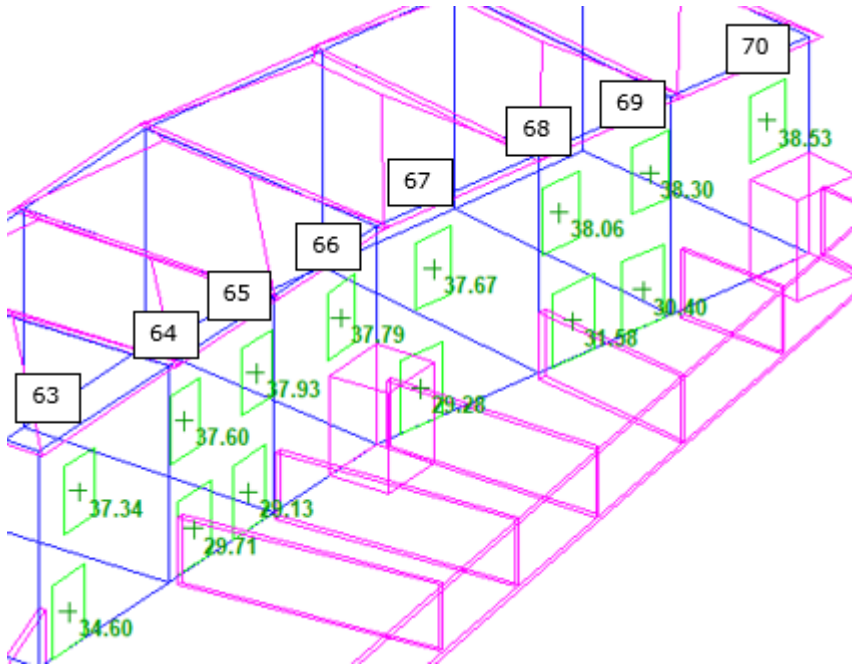
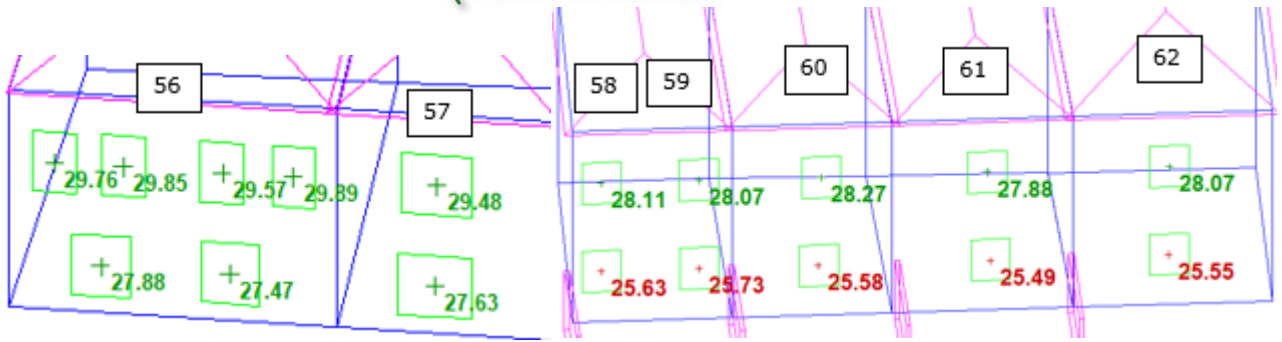
PROPOSED SCENARIO











APPENDIX F – SUNLIGHT ASSESSMENT – NEIGHBOURING PROPERTIES – APSH SIMULATION RESULTS

Annual Probable Sunlight Hours Simulation Results

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value ≥25%)	% of Former Value (Recommended Value ≥ 80% if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
1	1	72.57	55.8	76.89	Yes	
2	1	96.99	77.02	79.41	Yes	
	2	97.48	68.72	70.50	Yes	
	3	97.02	75.48	77.80	Yes	
3	1	76.92	65.53	85.19	Yes	
	2	70.7	56.19	79.48	Yes	
	3	73.88	57.44	77.75	Yes	
4	1	73.61	47.99	65.19	Yes	
5	1	57.14	36.71	64.25	Yes	
	2	75.38	53.25	70.64	Yes	
	3	73.86	53.96	73.06	Yes	
	4	74.77	56	74.90	Yes	
	5	70.85	54.62	77.09	Yes	
	6	73.19	55.21	75.43	Yes	
6	1	76.71	61.1	79.65	Yes	
	2	76.21	63.02	82.69	Yes	
	3	76.52	59.6	77.89	Yes	
7	1	74.61	60.4	80.95	Yes	
8	1	28.06	7.13	25.41	No	Window serves unknown use
	2	25.93	9.53	36.75	No	Window serves unknown use
	3	62.85	49.08	78.09	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
9	1	34.13	17.66	51.74	No	Window serves unknown use
	2	22.25	12.46	56.00	No	Window serves unknown use
	3	31.49	15.54	49.35	No	Window serves unknown use
	4	37.83	20.91	55.27	No	Window serves unknown use
10	1	40.85	24.7	60.47	No	Window serves unknown use
	2	40.72	24.63	60.49	No	Window serves unknown use
11	1	39.11	25.71	65.74	Yes	
	2	40.53	25.51	62.94	Yes	
12	1	39.77	25.76	64.77	Yes	
	2	40.03	26.1	65.20	Yes	
13	1	38.7	28.58	73.85	Yes	
	2	41.32	29.76	72.02	Yes	
14	1	25.98	22.45	86.41	Yes	
	2	39.33	32.79	83.37	Yes	
15	1	39.1	27.18	69.51	Yes	
	2	26.83	20.79	77.49	No	Window serves unknown use

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
16	1	29.58	25.07	84.75	Yes	
	2	38.59	27.45	71.13	Yes	
	3	39.28	34.78	88.54	Yes	
	4	38.3	32.84	85.74	Yes	
	5	38.16	33.07	86.66	Yes	
	6	10.46	10.46	100.00	Yes	
	7	15.19	11.19	73.67	No	Window serves unknown use
	8	23.71	15.36	64.78	No	Window serves unknown use
17	1	25.96	23.65	91.10	Yes	
	2	20.31	15.85	78.04	No	Window serves unknown use
	3	33.64	27.78	82.58	Yes	
	4	33.88	28.28	83.47	Yes	
	5	38.03	34.75	91.38	Yes	
	6	38	34.14	89.84	Yes	
	7	38.29	33.65	87.88	Yes	
	8	37.96	34.24	90.20	Yes	
	9	29.58	24.26	82.01	Yes	
	10	17.76	16.55	93.19	Yes	
	11	42.66	40.59	95.15	Yes	
18	1	17.13	17.13	100.00	Yes	
	2	16.76	16.76	100.00	Yes	
	3	15.12	15.12	100.00	Yes	
	4	17.2	17.2	100.00	Yes	
	5	0.28	0.28	100.00	Yes	
	6	7.42	7.42	100.00	Yes	
19	1	13.28	13.28	100.00	Yes	
	2	17.19	17.19	100.00	Yes	
	3	17.97	17.97	100.00	Yes	
	4	1.48	1.48	100.00	Yes	
	5	6.47	6.47	100.00	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
20	1	11.36	11.36	100.00	Yes	
	2	16.04	16.04	100.00	Yes	
	3	17.32	17.32	100.00	Yes	
21	1	11.63	11.63	100.00	Yes	
	2	17.19	17.19	100.00	Yes	
	3	17.87	11.63	65.08	No	Window serves unknown use
	4	7.83	7.83	100.00	Yes	
22	1	15.08	15.08	100.00	Yes	
	2	17.08	17.08	100.00	Yes	
	3	4.56	4.56	100.00	Yes	
	4	10.33	10.33	100.00	Yes	
23	1	13.09	13.09	100.00	Yes	
	2	7.39	7.39	100.00	Yes	
	3	18.15	7.39	40.72	No	Window serves unknown use
	4	13.89	13.09	94.24	Yes	
24	1	4.68	4.68	100.00	Yes	
	2	10.79	10.63	98.52	Yes	
	3	1.06	0.95	89.62	Yes	
	4	6.12	6.12	100.00	Yes	
25	1	11.67	10.99	94.17	Yes	
	2	8.48	8.48	100.00	Yes	
	3	13.01	0.29	2.23	No	Window serves unknown use
	4	15.79	3.98	25.21	No	Window serves unknown use
	5	0.29	0.29	100.00	Yes	
	6	4.8	4.8	100.00	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
26	1	2.7	2.7	100.00	Yes	
	2	4.41	4.41	100.00	Yes	
	3	13	10.39	79.92	No	Window serves unknown use
	4	15.51	13.42	86.52	Yes	
	5	0.34	0.34	100.00	Yes	
	6	4.1	3.77	91.95	Yes	
27	1	15.2	11.85	77.96	No	Window serves unknown use
	2	17.03	13.6	79.86	No	Window serves unknown use
	3	0.39	0.39	100.00	Yes	
	4	5.37	3.69	68.72	No	Window serves unknown use
	5	7.17	6.28	87.59	Yes	
	6	11.3	9.46	83.72	Yes	
28	1	10.66	9.11	85.46	Yes	
	2	13.05	9.61	73.64	No	Window serves unknown use
	3	14.53	11.72	80.66	Yes	
	4	0.28	0.13	46.43	No	Window serves unknown use

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
29	1	15.77	7.03	44.58	No	Window serves unknown use
	2	13.62	9.43	69.24	No	Window serves unknown use
	3	7.64	7.64	100.00	Yes	
	4	10.3	10.3	100.00	Yes	
30	1	5.76	5.76	100.00	Yes	
	2	13.05	10.63	81.46	Yes	
	3	13.43	0.08	0.60	No	Window serves unknown use
	4	0.12	0.12	100.00	Yes	
31	1	6.96	6.13	88.07	Yes	
	2	10.13	8.89	87.76	Yes	
	3	13.01	10.85	83.40	Yes	
	4	14.16	11.7	82.63	Yes	
	5	6.36	5.23	82.23	Yes	
	6	0.24	0.17	70.83	No	Window serves unknown use
32	1	6.05	6.05	100.00	Yes	
	2	9.22	9.22	100.00	Yes	
	3	11.8	5.23	44.32	No	Window serves unknown use
	4	13.5	0.17	1.26	No	Window serves unknown use
	5	5.49	5.49	100.00	Yes	
	6	0.17	0.17	100.00	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value ≥25%)	% of Former Value (Recommended Value ≥ 80% if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
33	1	11.64	11.5	98.80	Yes	
	2	4.46	4.46	100.00	Yes	
	3	11.48	11.48	100.00	Yes	
34	1	14.13	13.57	96.04	Yes	
	2	13.59	12.9	94.92	Yes	
35	1	72.92	70.32	96.43	Yes	
	2	72.56	70.05	96.54	Yes	
	3	72.41	70.63	97.54	Yes	
	4	72.54	71.11	98.03	Yes	
	5	62.56	62.56	100.00	Yes	
	6	56.56	56.56	100.00	Yes	
36	1	52.93	46.15	87.19	Yes	
	2	45.91	45.06	98.15	Yes	
37	1	45.81	39.4	86.01	Yes	
	2	39.19	31.22	79.66	Yes	
38	1	51.32	40.82	79.54	Yes	
	2	49.44	37.16	75.16	Yes	
39	1	50.86	38.89	76.46	Yes	
	2	47.51	32.16	67.69	Yes	
40	1	46.48	36.28	78.06	Yes	
	2	49.93	40.37	80.85	Yes	
	3	38.25	24.97	65.28	No	Window serves unknown use
	4	44.15	34.48	78.10	Yes	
41	1	51.36	45.93	89.43	Yes	
	2	49.16	45.4	92.35	Yes	
42	1	28.23	24.73	87.60	Yes	
	2	15.37	15.28	99.41	Yes	
43	1	17.83	17.83	100.00	Yes	
44	1	48.79	41.8	85.67	Yes	
	2	47	40.01	85.13	Yes	
	3	38.52	32.88	85.36	Yes	
	4	29.25	23.85	81.54	Yes	
45	1	49.65	38.77	78.09	Yes	
	2	47.65	39.3	82.48	Yes	
	3	43.81	42.67	97.40	Yes	
	4	42.33	41.97	99.15	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
46	1	48.12	36.22	75.27	Yes	
	2	47.62	34.64	72.74	Yes	
	3	46.36	33.43	72.11	Yes	
47	1	49.84	31.99	64.19	Yes	
	2	47.46	30.06	63.34	Yes	
	3	48.25	32.71	67.79	Yes	
	4	49.21	32.03	65.09	Yes	
	5	48.84	32.23	65.99	Yes	
	6	48.45	32.7	67.49	Yes	
	7	47.42	30.58	64.49	Yes	
	8	47	31.23	66.45	Yes	
48	1	45.89	27.39	59.69	Yes	
	2	48.59	28.68	59.02	Yes	
49	1	45.73	27.85	60.90	Yes	
	2	48.7	28.02	57.54	Yes	
50	1	46.03	24.69	53.64	No	Window serves unknown use
	2	48.3	25.56	52.92	Yes	
51	1	47.54	24.48	51.49	No	Window serves unknown use
	2	49.4	26.46	53.56	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value ≥25%)	% of Former Value (Recommended Value ≥ 80% if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
52	1	8.54	8.54	100.00	Yes	
	2	13.61	9.51	69.88	No	Window serves unknown use
	3	19.79	12.95	65.44	No	Window serves unknown use
	4	19.79	5.96	30.12	No	Window serves unknown use
	5	13.77	10.06	73.06	No	Window serves unknown use
	6	20.05	12.37	61.70	No	Window serves unknown use
	7	19.79	12.73	64.33	No	Window serves unknown use
53	1	11.45	11.45	100.00	Yes	
	2	18.18	3.04	16.72	No	Window serves unknown use
	3	22.93	17.77	77.50	No	Window serves unknown use
	4	23.54	10.47	44.48	No	Window serves unknown use

	5	23.59	16.49	69.90	No	Window serves unknown use
	6	3.35	3.35	100.00	Yes	
	7	22.26	19.2	86.25	Yes	

Annual Probable Sunlight Hours During the Winter Months Simulation Results

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value ≥25%)	% of Former Value (Recommended Value ≥ 80% if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
1	1	32.53	15.76	48.45	Yes	
2	1	36.31	16.21	44.64	Yes	
	2	36.77	10.16	27.63	Yes	
	3	36.18	15.34	42.40	Yes	
3	1	28.67	17.28	60.27	Yes	
	2	22.45	8.64	38.49	Yes	
	3	25.62	9.89	38.60	Yes	
4	1	32.50	12.75	39.23	Yes	
5	1	24.64	6.89	27.96	Yes	
	2	32.81	15.58	47.49	Yes	
	3	31.83	15.90	49.95	Yes	
	4	33.12	17.67	53.35	Yes	
	5	29.42	15.98	54.32	Yes	
	6	32.03	16.85	52.61	Yes	
6	1	34.82	22.57	64.82	Yes	
	2	34.97	23.78	68.00	Yes	
	3	33.98	21.17	62.30	Yes	
7	1	33.92	23.20	68.40	Yes	
8	1	7.03	1.08	15.36	No	Window serves unknown use
	2	6.79	2.16	31.81	No	Window serves unknown use
	3	25.01	20.32	81.25	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
9	1	8.64	4.37	50.58	No	Window serves unknown use
	2	3.10	2.14	69.03	No	Window serves unknown use
	3	5.61	3.65	65.06	No	Window serves unknown use
	4	11.96	6.88	57.53	Yes	
10	1	12.60	9.95	78.97	Yes	
	2	14.14	10.05	71.07	Yes	
11	1	12.20	10.12	82.95	Yes	
	2	13.96	10.75	77.01	Yes	
12	1	13.03	10.01	76.82	Yes	
	2	13.55	11.29	83.32	Yes	
13	1	10.17	8.81	86.63	Yes	
	2	14.96	12.98	86.76	Yes	
14	1	8.84	5.77	65.27	Yes	
	2	14.15	9.02	63.75	Yes	
15	1	14.69	6.60	44.93	Yes	
	2	9.25	6.56	70.92	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value ≥25%)	% of Former Value (Recommended Value ≥ 80% if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
16	1	9.67	3.96	40.95	No	Window serves unknown use
	2	13.26	8.40	63.35	Yes	
	3	13.59	10.74	79.03	Yes	
	4	13.41	11.86	88.44	Yes	
	5	13.36	11.52	86.23	Yes	
	6	0.23	0.23	100.00	Yes	
	7	2.20	0.09	4.09	No	Window serves unknown use
	8	4.56	1.89	41.45	No	Window serves unknown use
17	1	4.61	4.35	94.36	Yes	
	2	4.99	4.99	100.00	Yes	
	3	9.01	9.01	100.00	Yes	
	4	10.24	10.24	100.00	Yes	
	5	12.15	11.38	93.66	Yes	
	6	12.12	11.42	94.22	Yes	
	7	12.42	10.96	88.24	Yes	
	8	11.87	11.17	94.10	Yes	
	9	6.25	6.25	100.00	Yes	
	10	4.79	4.76	99.37	Yes	
	11	14.69	13.32	90.67	Yes	
18	1	0.70	0.70	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.70	0.70	100.00	Yes	
	4	0.70	0.70	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	
19	1	0.23	0.23	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.70	0.70	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
	5	0.00	0.00	100.00	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
20	1	0.12	0.12	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.70	0.70	100.00	Yes	
21	1	0.14	0.14	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.70	0.14	20.00	No	Window serves unknown use
	4	0.06	0.06	100.00	Yes	
22	1	0.70	0.70	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.12	0.12	100.00	Yes	
23	1	0.70	0.70	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.70	0.00	0.00	No	Window serves unknown use
	4	0.35	0.35	100.00	Yes	
24	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.08	0.08	100.00	Yes	
25	1	0.16	0.16	100.00	Yes	
	2	0.13	0.13	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	
26	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.70	0.70	100.00	Yes	
	4	0.70	0.70	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
27	1	0.70	0.70	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	
28	1	0.09	0.09	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.70	0.70	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
29	1	0.70	0.03	4.29	No	Window serves unknown use
	2	0.70	0.70	100.00	Yes	
	3	0.03	0.03	100.00	Yes	
	4	0.07	0.07	100.00	Yes	
30	1	0.00	0.00	100.00	Yes	
	2	0.70	0.70	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
31	1	0.14	0.00	100.00	No	Window serves unknown use
	2	0.16	0.00	100.00	No	Window serves unknown use
	3	0.70	0.70	100.00	Yes	
	4	0.70	0.70	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	
32	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	

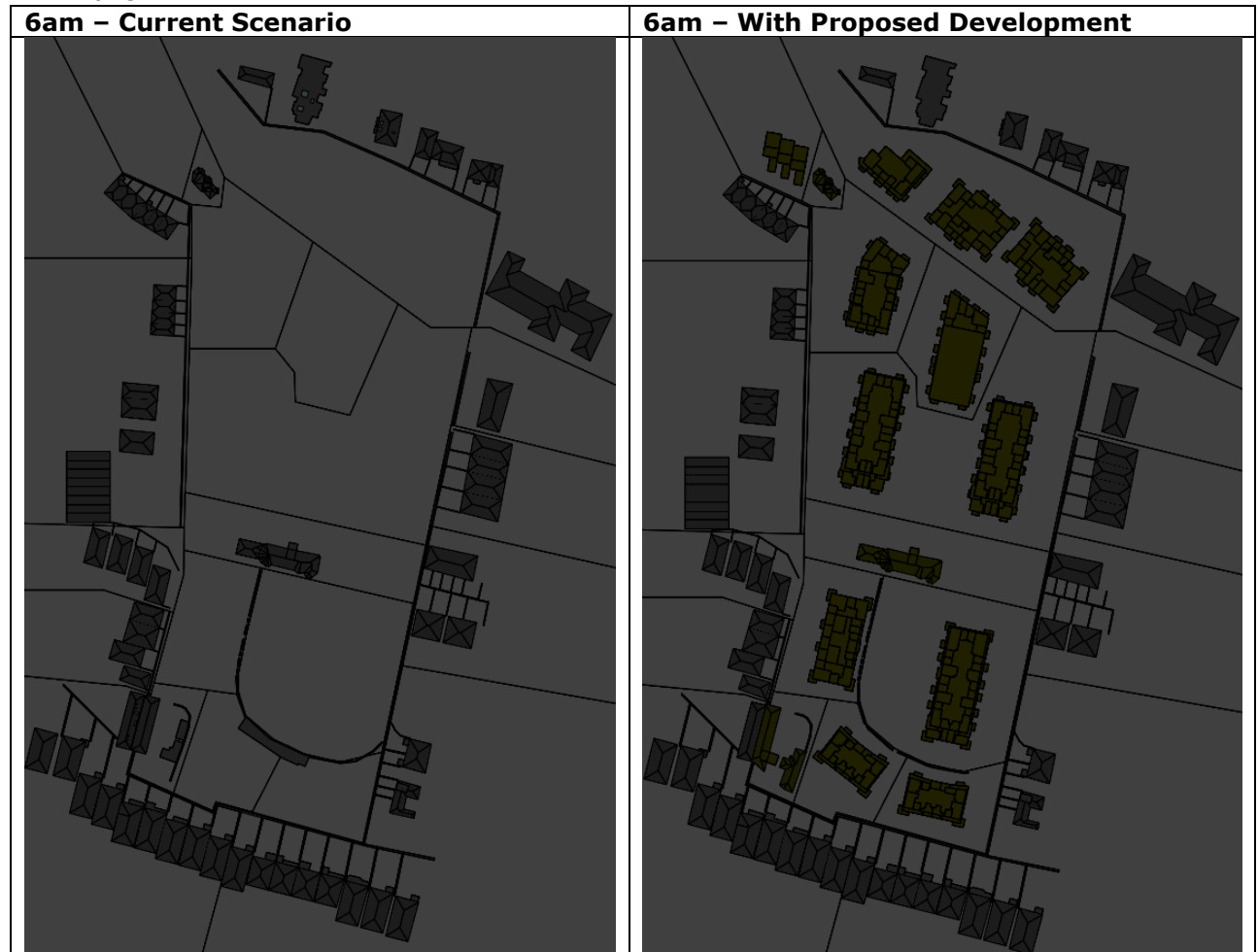
Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
33	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.07	0.07	100.00	Yes	
34	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
35	1	26.77	26.77	100.00	Yes	
	2	26.77	26.77	100.00	Yes	
	3	26.87	26.87	100.00	Yes	
	4	27.04	27.04	100.00	Yes	
	5	22.19	22.19	100.00	Yes	
	6	19.35	19.35	100.00	Yes	
36	1	22.16	20.68	93.32	Yes	
	2	14.26	14.26	100.00	Yes	
37	1	16.44	14.58	88.69	Yes	
	2	10.14	8.16	80.47	Yes	
38	1	21.95	17.78	81.00	Yes	
	2	20.47	17.21	84.07	Yes	
39	1	22.19	15.43	69.54	Yes	
	2	19.68	13.61	69.16	Yes	
40	1	18.73	11.40	60.86	Yes	
	2	21.25	13.19	62.07	Yes	
	3	11.88	4.75	39.98	No	Window serves unknown use
	4	17.86	10.32	57.78	Yes	
41	1	20.86	18.38	88.11	Yes	
	2	19.07	17.43	91.40	Yes	
42	1	5.42	5.42	100.00	Yes	
	2	5.11	5.11	100.00	Yes	
43	1	6.42	6.42	100.00	Yes	
44	1	18.02	16.62	92.23	Yes	
	2	16.23	14.84	91.44	Yes	
	3	7.75	7.71	99.48	Yes	
	4	1.50	1.50	100.00	Yes	
45	1	18.88	16.00	84.75	Yes	
	2	18.88	17.02	90.15	Yes	
	3	16.94	16.94	100.00	Yes	
	4	17.96	16.78	93.43	Yes	

Dwelling Reference	Window Reference	APSH for Current Scenario (%)	APSH Proposed Development (%) (Recommended Value $\geq 25\%$)	% of Former Value (Recommended Value $\geq 80\%$ if APSH lower than 25%)	Compliant with BRE Guide for Safeguarding Access to Sunlight	Comments
46	1	17.58	16.77	95.39	Yes	
	2	17.08	15.83	92.68	Yes	
	3	16.15	15.40	95.36	Yes	
47	1	19.30	12.59	65.23	Yes	
	2	17.39	11.89	68.37	Yes	
	3	17.68	13.79	78.00	Yes	
	4	18.67	12.82	68.67	Yes	
	5	18.30	13.14	71.80	Yes	
	6	17.91	13.78	76.94	Yes	
	7	17.31	12.54	72.44	Yes	
	8	16.86	13.29	78.83	Yes	
48	1	16.09	7.85	48.79	Yes	
	2	18.80	8.93	47.50	Yes	
49	1	15.88	8.10	51.01	Yes	
	2	18.85	8.66	45.94	Yes	
50	1	16.12	7.90	49.01	Yes	
	2	18.72	8.93	47.70	Yes	
51	1	16.90	8.05	47.63	Yes	
	2	19.52	9.04	46.31	Yes	
52	1	0.00	0.00	100.00	Yes	
	2	0.00	0.00	100.00	Yes	
	3	0.00	0.00	100.00	Yes	
	4	0.00	0.00	100.00	Yes	
	5	0.00	0.00	100.00	Yes	
	6	0.00	0.00	100.00	Yes	
	7	0.00	0.00	100.00	Yes	
53	1	0.77	0.77	100.00	Yes	
	2	1.24	0.00	100.00	No	Window serves unknown use
	3	3.84	0.63	16.41	No	Window serves unknown use
	4	4.42	0.52	11.76	No	Window serves unknown use

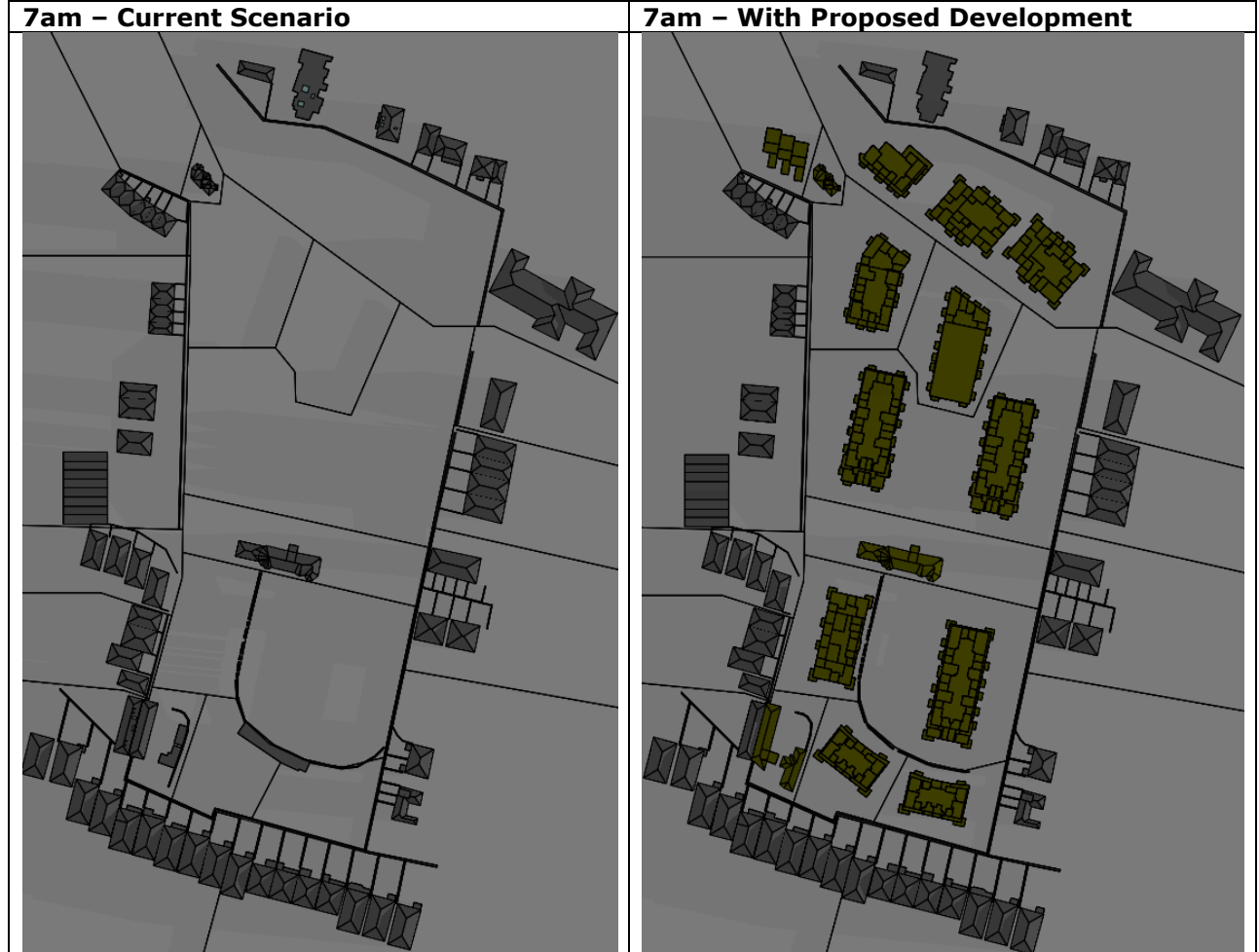
	5	4.45	0.81	18.20	No	Window serves unknown use
	6	0.00	0.00	100.00	Yes	
	7	3.43	1.51	44.02	No	Window serves unknown use

APPENDIX G – SHADOW IMAGES

21st March



21st March



21st March



21st March



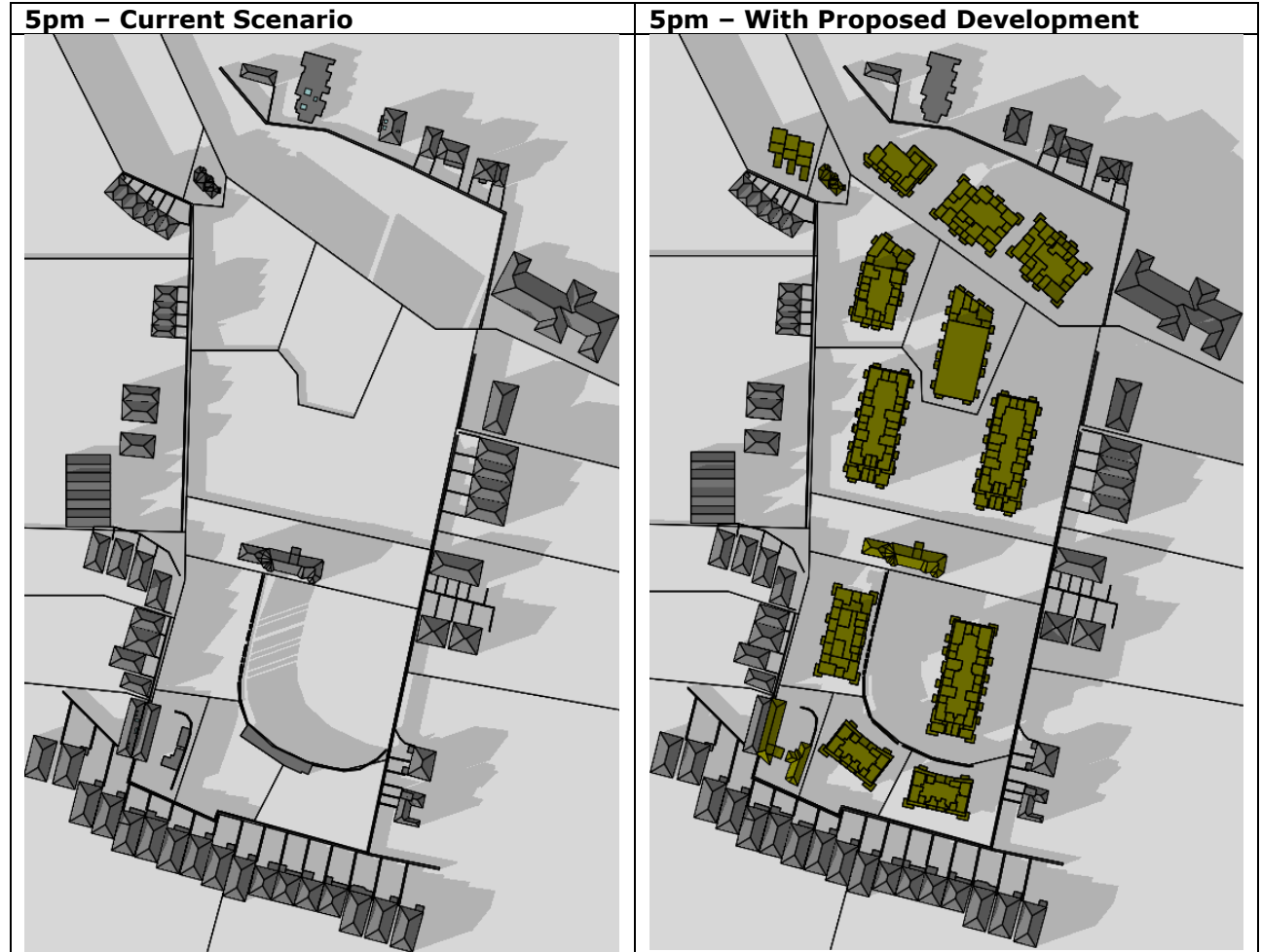
21st March



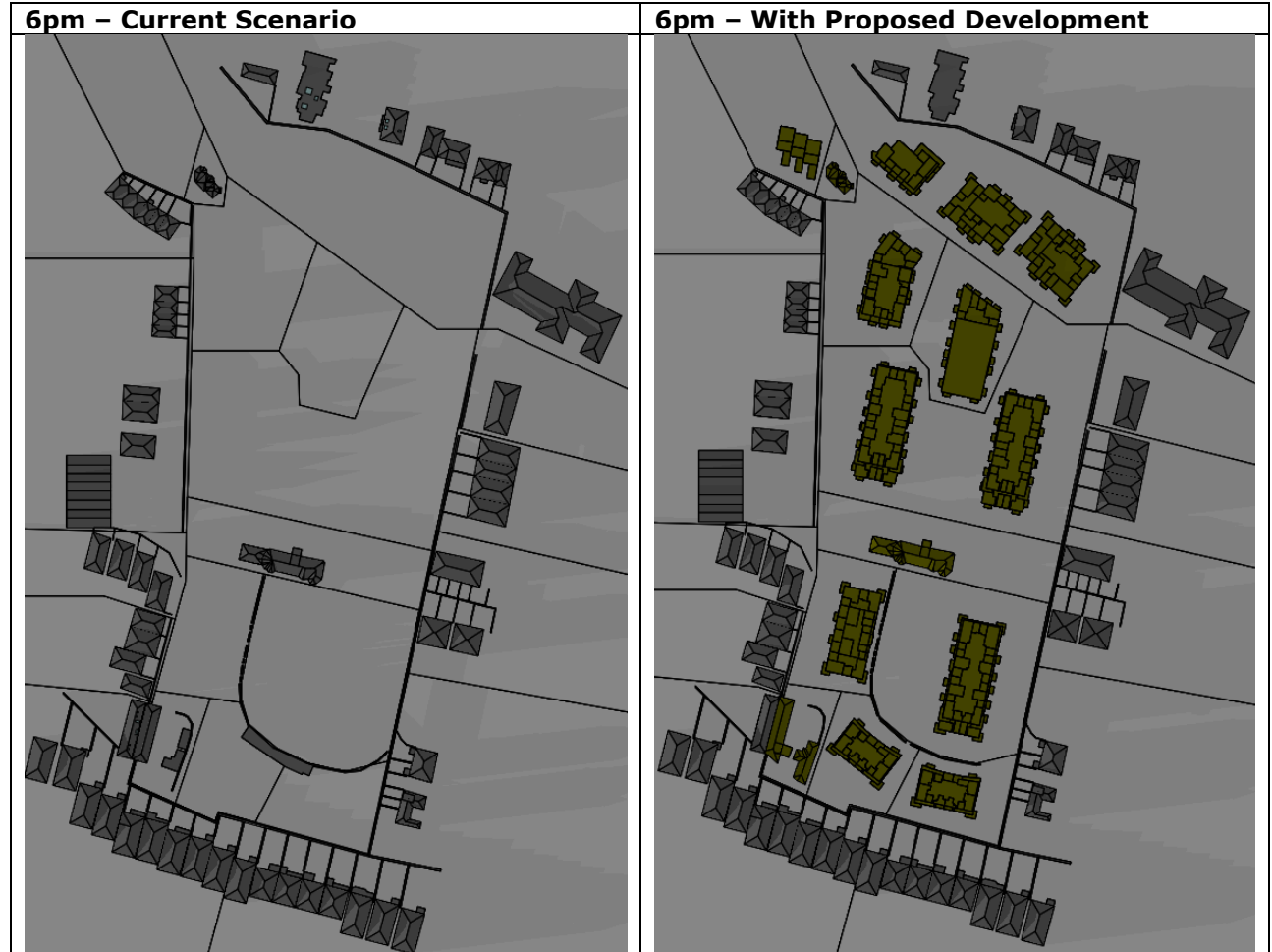
21st March



21st March



21st March



21st March

7pm – Current Scenario



7pm – With Proposed Development

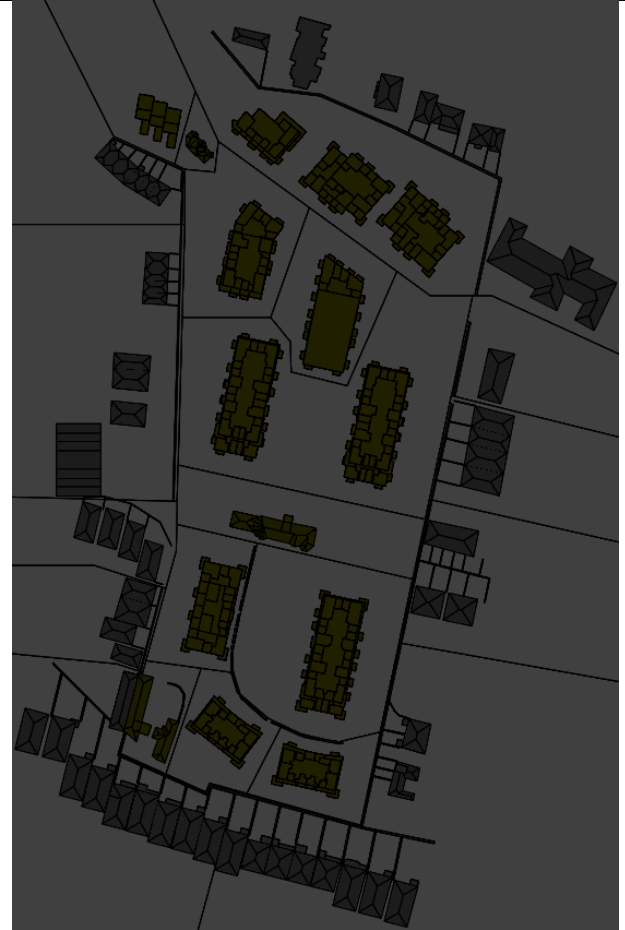


21st June

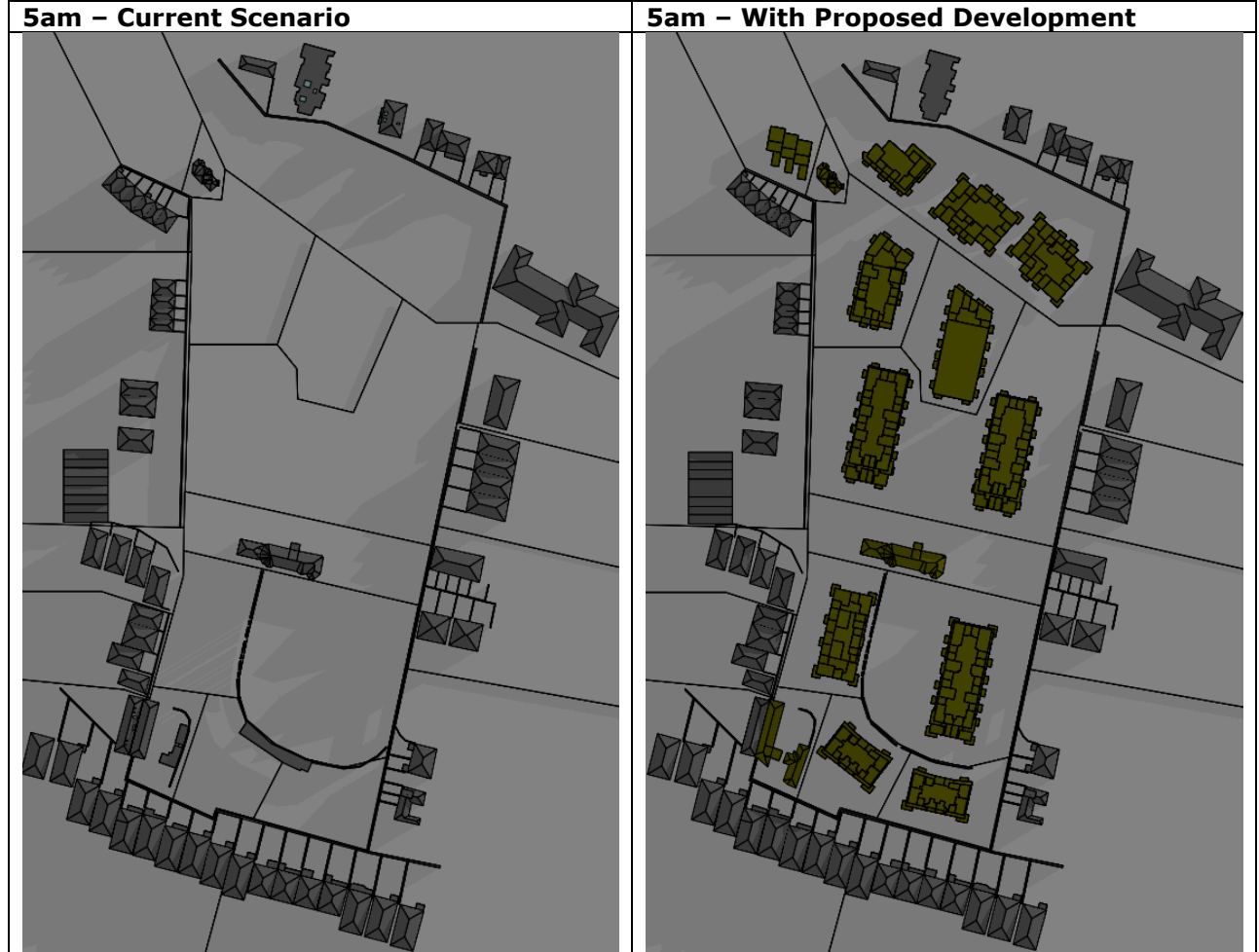
4am – Current Scenario



4am – With Proposed Development



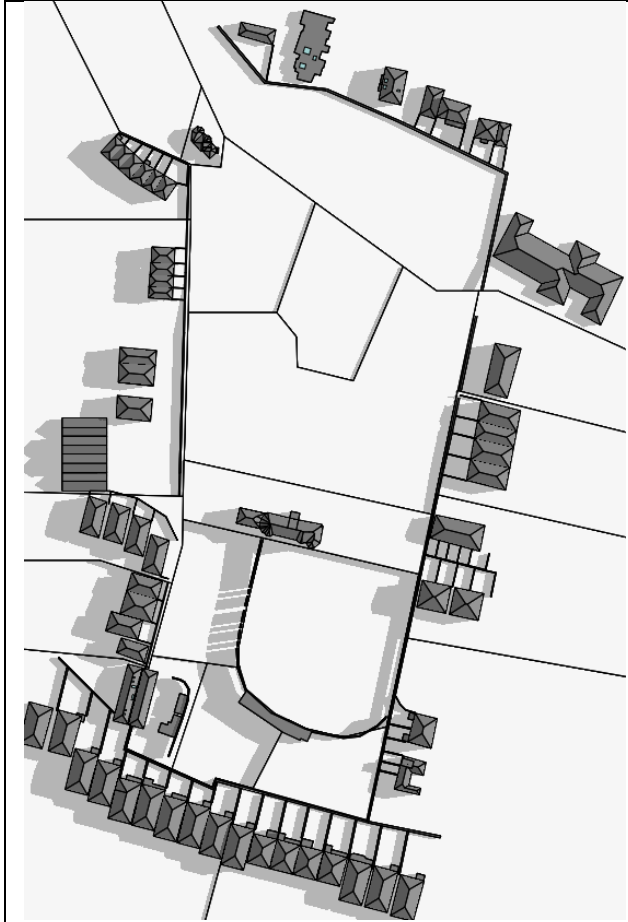
21st June



21st June

7am – Current Scenario

7am – Current Scenario



7am – With Proposed Development



21st June



21st June



21st June



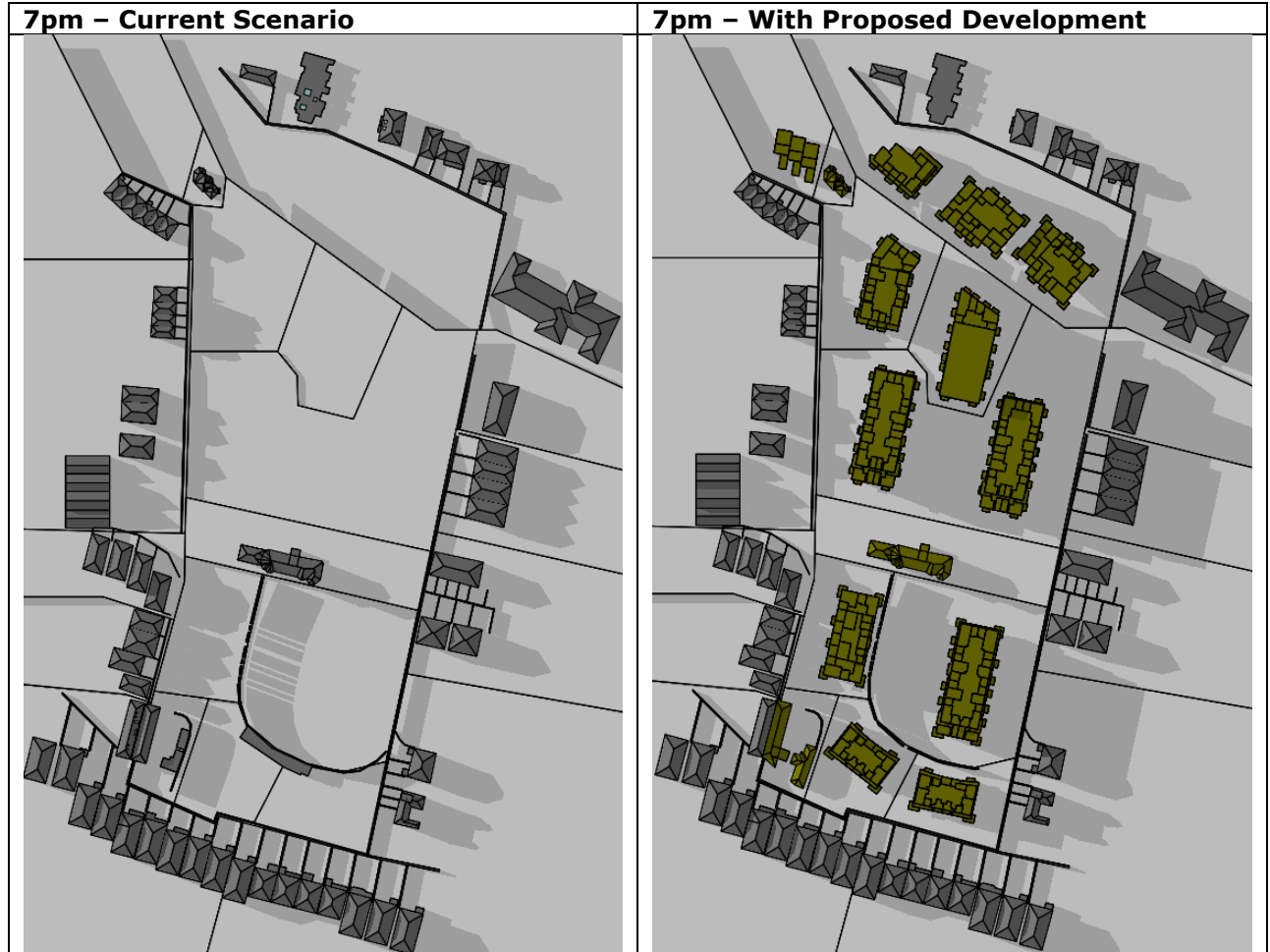
21st June



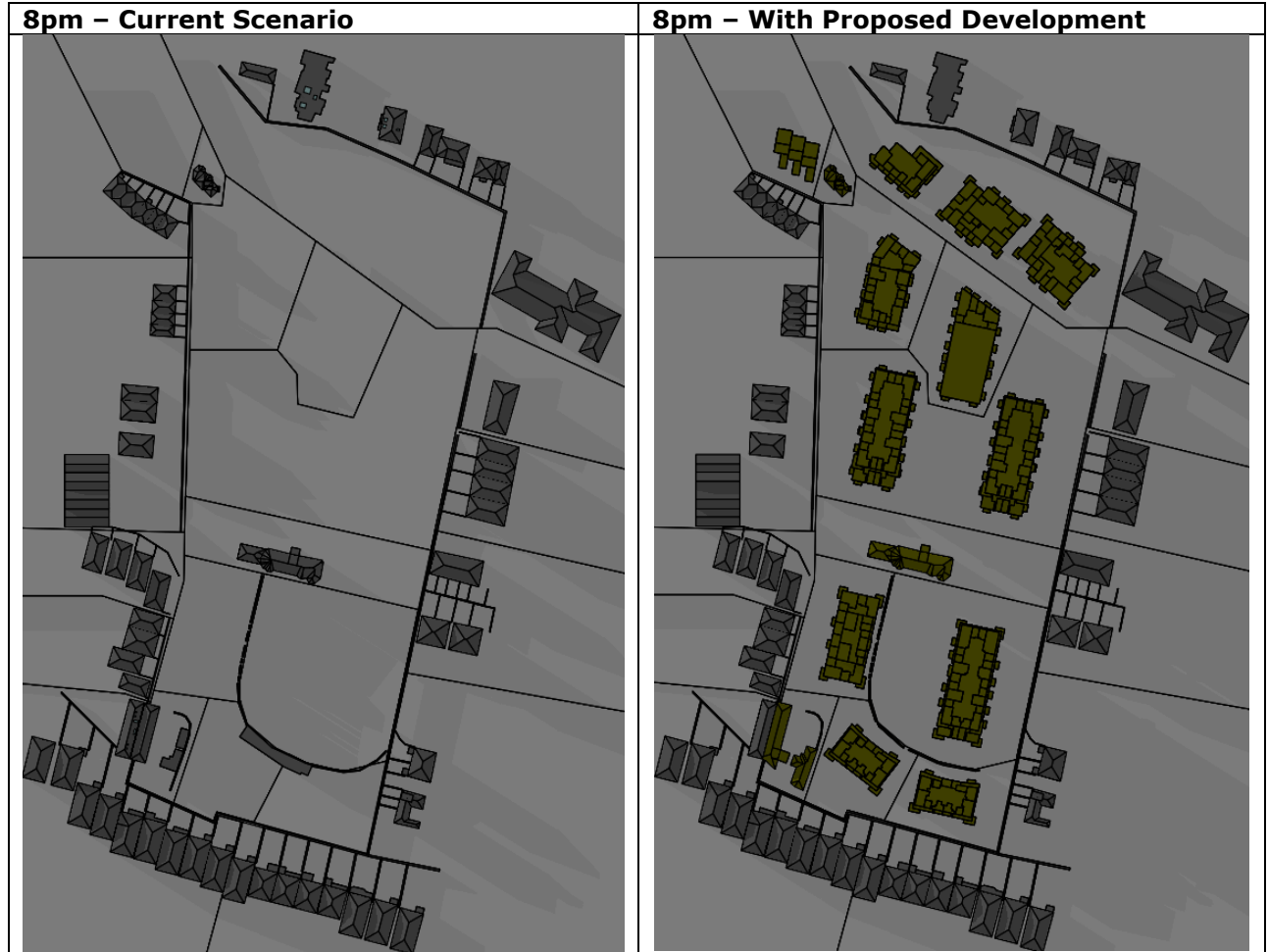
21st June



21st June



21st June



21st June

9pm – Current Scenario



9pm – With Proposed Development



21st December

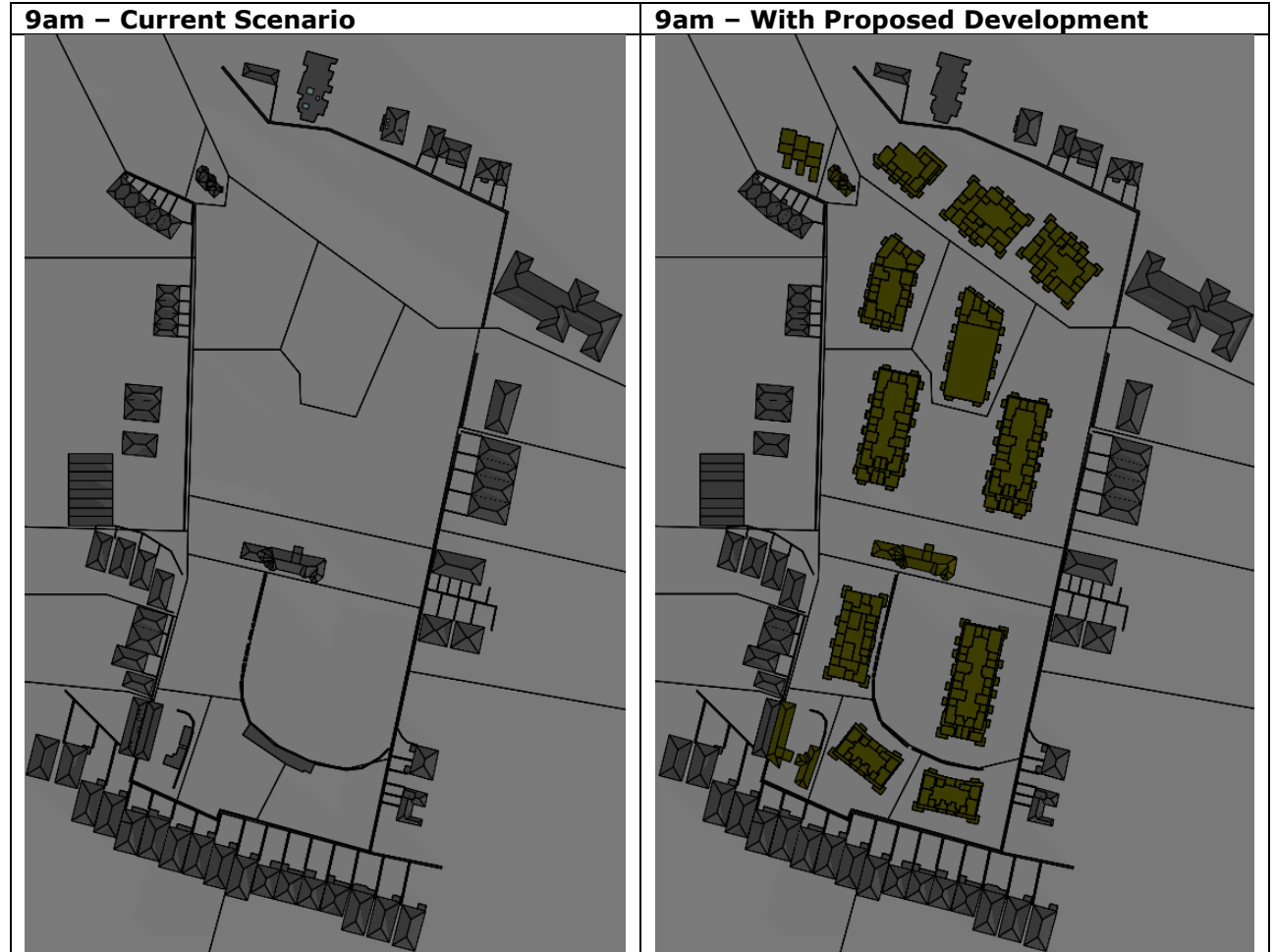
8am – Current Scenario



8am – With Proposed Development



21st December



21st December



21st December



21st December



21st December

4pm – Current Scenario



4pm – With Proposed Development



21st December

5pm – Current Scenario



5pm – With Proposed Development

