

Ref: ROL01535

05 February 2025

Sian Thomas

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London
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By Email: sthomas@hghconsulting.com

Dear Sian

RE: PROPOSED DAYLIGHT AND SUNLIGHT AMENITY ASSOCIATED WITH THE CHANGE OF USE FROM OFFICE TO RESIDENTIAL AT ABBEY GARDENS, READING, POSTCODE - PERMITTED DEVELOPMENT RIGHTS APPLICATION

Anstey Horne are instructed by McGrath Group ("the Applicant") to review the proposed redevelopment at Abbey Gardens, Abbey Street, Reading, RG1 3BA ("the Site"), in respect of daylight and sunlight availability to the proposed residential units associated with the proposed change of use from existing office use to residential accommodation ("the Proposed Development").

Approach to technical assessment

To calculate the various measures of daylight and sunlight, a three-dimensional computer model has been created to reproduce the massing of the buildings both on and surrounding the Site at a level of detail appropriate to the calculations performed.

For the purpose of this assessment, the results and drawings relating to the Proposed Development are by reference to the scheme information supplied to Anstey Horne by SADA Architecture', received 03 February 2025. The wider context has been created using a 3D photogrammetry model, whilst the Proposed Development has been modelled directly from the architects 2D drawings.

Reading Borough Council ("RBC") will be concerned with the daylight and sunlight amenity to habitable rooms within the proposed residential accommodation. To this end, a review of adequate daylighting

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has been conducted in line with requirements specified in Class MA and supporting Paragraph MA.2 of The Town and Country Planning (General Permitted Development etc.) (England) (Amendment) Order 2021. This document states the following conditions Class MA, Permitted development:

“Development under Class MA is permitted subject to following conditions ... that before beginning the development, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to ... the provision of adequate natural light in all habitable rooms of the dwellinghouses, and the provisions of paragraph W (prior approval) apply in relation to that application”.

In the absence of more detailed guidance in respect of permitted development, we have carried out an assessment in accordance with the *BRE Report 209, Site Layout Planning for Daylight and Sunlight: A guide to good practice (third edition, 2022)* (“the BRE Guidelines”). The BRE Guidelines provides recommendations for maximising natural light amenity within new developments and methodologies in relation to the same.

The BRE Guidelines suggest that assessing daylight to new dwellings can be done using either the ‘Daylight Factor’ method or the ‘Illuminance’ method. For this assessment, we have used the illuminance method which involves *“using climatic data for the location of the Site ... to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year.”*¹ A brief summary of the relevant guidance is summarised below:

The UK National Annex provides illuminance recommendations for daylight provision within UK dwellings as follows:

- **Bedrooms:** 100 lux
- **Living rooms:** 150 lux
- **Kitchens:** 200 lux

The parameters used for the daylight assessments are as follows:

- **Internal ceilings:** 0.8 (Equivalent to white/pale cream ceilings)
- **Internal walls:** 0.8 (Equivalent to white/pale cream walls)

¹ Paragraph C4, BRE Guidelines

- **Internal flooring:** 0.4 (Equivalent to light wood flooring)
- **Frame correction factor:** 0.84 (averaged across different window types)
- **Glazing transmission factor:** 0.68 (double glazing with low emissivity coating)
- **Maintenance factor:** 0.92 (assuming vertical window, no overhang)

In terms of sunlight, the BRE Guidelines makes recommendations for new developments advising that:

*“In housing, **the main requirement for sunlight is in living rooms**, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as **less important in bedrooms and in kitchens**, where people prefer it in the mornings rather than the afternoon [emphasis added].”²*

The Sunlight Exposure (“SE”) assessment recommended by the BRE Guidelines sets out that internal spaces should be able to receive a minimum of 1.5 hours of direct sunlight on a selected date between 01 February and 21 March. The recommended test date should be 21 March with cloudless conditions and, at least one habitable room, should achieve at least the minimum criterion. It further notes that the criterion applies to rooms of all orientations, although if a room faces significantly north of due east or west, the criteria is unlikely to be met.

Daylight performance within the Proposed Development

The full and detailed technical analysis can be found appended to this report. These show both the locations and configuration of the rooms which have been analysed. The associated table shows the percentage of room area that achieves the target daylight illuminance (lux levels) based on the proposed room use.

Across the ground to second floors, a total of 76 habitable rooms have been assessed. This represents all habitable accommodation (36 living / kitchen / dining rooms [“LKDs”], 1 studio and 39 bedrooms) at the lowest three floors of the Proposed Development where daylight and sunlight amenity is naturally more constrained. It can be noted that as part of this application, residential accommodation is also proposed on the corresponding upper levels of the existing building. As such, the daylight and sunlight position presented within this report would be materially improved in terms of BRE adherence if every habitable room had been assessed.

² Paragraph 3.1.2, BRE Guidelines

The results show that 69 out of 76 rooms (91%) will comfortably achieve and exceed the BRE recommended minimum target illuminance value for the room usage over at least 50% of the room area for at least 50% of the daylight hours available.

The rooms which fall marginally short of the guideline values consist of 6 LKDs and 1 studio. These rooms achieve the BRE's 200 target lux to between 37% and 47% of the assessed area which is only slightly below BRE's recommendation of 50%. These rooms tend to be rather large and deep spaces, which are naturally harder to achieve light penetration through to the rear of the spaces. These rooms all achieve adequate daylight levels to the front portions of the room where the main habitable living space is located, and with the kitchen areas located to the rear where some degree of artificial lighting will inevitably be used to provide an optimum lighting balance..

Additionally, it is material consideration in this case that where there are an isolated number of rooms that record daylight levels marginally below the BRE's recommendations, these relate to rooms that are located in the naturally more constrained locations of the Proposed Development e.g., internal corners, underneath overhangs and / or where the building looks onto its own massing where it will inevitably be more challenging in terms of natural light potential. Within the confines of permitted development, these rooms are considered isolated incidences below default BRE guidance, that will only improve as you move up the building. Nevertheless, in such instances the BRE Guidelines state that:

*"Where a room has a shared use, the highest target should apply ... **Local authorities can use discretion here. For example, the target for a living room could be used for a combined living/dining/kitchen area** [emphasis added]"³*

With the above in mind, a secondary assessment has been undertaken whereby the living room target of 150 lux has been applied to all 37 combined LKDs as the principal use of the space. The results of this assessment show that all LKDs and studio (100%) achieve and exceed the BRE recommended minimum target illuminance value for the room usage over at least 50% of the room area for at least 50% of the daylight hours available. This is considered an excellent result in design terms, given the inherent challenges associated with converting an existing office building to provide residential accommodation.

³ Paragraph C17, BRE Guidelines

Sunlight performance within the Proposed Development

When we consider sunlight to the main LKD spaces, 27 out of 37 LKDs will meet or exceed the minimum BRE guideline value for sunlight exposure. Where LKDs fall below this, the BRE Guidelines acknowledge that if a room faces significantly north of due east or west, the sunlight criterion is unlikely to be met. With primarily eastern and western facing units, the Proposed Development has been designed well to accommodate the majority of units within the confines of permitted development.

Summary

Whilst there is no specific guidance on the light levels recommended for habitable rooms within permitted developments, the Class MA requirements suggest that ‘adequate natural light’ is provided in all habitable rooms. A comprehensive technical assessment has been undertaken to establish the daylight and sunlight potential of the proposed accommodation, in accordance with the Building Research Establishment (BRE) Report 209, ‘Site Layout Planning for Daylight and Sunlight: A guide to good practice’ – commonly referred to as “the BRE Guidelines”.

The results show that the Proposed Development demonstrates a very good level of compliance with the BRE Guidelines, with all habitable rooms achieving and exceeding their respective target illuminance value appropriate for their principal usage over at least 50% of the room area, alongside at most LKDs achieving BRE compliance with sunlight exposure, due to their orientation.

In conclusion, the daylight and sunlight quality in the Proposed Development has been carefully considered by the architectural team, who have had to balance this with the constraints of converting an existing building where in the majority of cases the orientation, size and position of the windows are already fixed with limited scope for adjustment. Room sizes and position being limited by the envelope of the existing building, Anstey Horne have worked closely with the architectural team to maximise the daylight and sunlight to the proposed flats through proposed internal rearrangement.

I trust this provides a useful summary in respect of the daylight and sunlight levels associated with the Proposed Development at Abbey Gardens, Reading.

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Yours sincerely,



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Director

Encls: Target Illuminance Plans – LKD 200 Lux Target
Target Illuminance Plans – LKD 150 Lux Target
Target Illuminance Table
Sunlight Exposure Table

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Target Illuminance Table – LKD 200 Lux Target

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Floor Ref	Room Ref	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux
PROPOSED								
Gnd Floor	R1	Residential	Bedroom	10.70	6.86	242	6.86	100%
	R2	Residential	LKD	23.50	17.56	302	12.60	72%
	R3	Residential	Bedroom	8.11	5.03	422	5.03	100%
	R4	Residential	LKD	19.54	14.14	691	11.95	84%
	R5	Residential	LKD	22.01	16.44	512	16.44	100%
	R6	Residential	Bedroom	7.12	4.28	200	4.28	100%
	R7	Residential	LKD	21.45	15.41	184	6.73	44%
	R8	Residential	Bedroom	7.41	4.39	102	2.43	55%
	R9	Residential	Bedroom	6.87	4.09	100	2.09	51%
	R10	Residential	LKD	48.48	38.15	290	22.93	60%
	R11	Residential	Bedroom	10.61	7.00	143	6.02	86%
	R12	Residential	Bedroom	10.71	7.13	178	7.05	99%
1st Floor	R1	Residential	Bedroom	13.88	9.00	173	8.88	99%
	R2	Residential	LKD	26.55	19.86	398	17.70	89%
	R3	Residential	Bedroom	10.14	6.33	332	6.33	100%
	R4	Residential	LKD	28.88	22.23	1585	22.23	100%
	R5	Residential	LKD	24.31	18.07	1398	18.07	100%
	R6	Residential	Bedroom	10.81	6.84	348	6.84	100%
	R7	Residential	LKD	20.70	15.46	184	7.16	46%
	R8	Residential	Bedroom	9.71	6.27	277	6.27	100%
	R9	Residential	Studio	23.20	16.82	144	6.17	37%
	R11	Residential	LKD	31.30	24.74	338	19.55	79%
	R12	Residential	Bedroom	10.98	7.33	336	7.33	100%
	R13	Residential	Bedroom	10.67	7.09	326	7.09	100%
	R14	Residential	LKD	30.55	24.05	214	12.62	52%
	R15	Residential	LKD	23.83	17.08	832	17.08	100%
	R16	Residential	Bedroom	9.51	5.85	153	5.85	100%
	R17	Residential	Bedroom	8.82	5.27	145	4.68	89%
	R18	Residential	LKD	23.93	17.25	695	17.25	100%
2nd Floor	R1	Residential	LKD	19.07	13.69	1623	13.69	100%
	R2	Residential	Bedroom	11.29	7.23	266	7.23	100%
	R3	Residential	LKD	25.33	17.45	254	10.84	62%
	R4	Residential	Bedroom	11.97	7.83	295	7.83	100%
	R5	Residential	Bedroom	7.52	4.59	1309	4.59	100%
	R6	Residential	LKD	26.13	19.34	1752	19.34	100%
	R7	Residential	Bedroom	11.50	7.40	414	7.40	100%
	R8	Residential	LKD	23.43	17.24	540	17.24	100%
	R9	Residential	LKD	23.45	17.26	536	17.25	100%
	R10	Residential	Bedroom	13.22	8.68	333	8.68	100%
	R11	Residential	Bedroom	13.35	8.81	646	8.81	100%
	R12	Residential	LKD	23.11	16.67	363	16.67	100%
	R13	Residential	Bedroom	13.77	9.20	656	9.20	100%
	R14	Residential	LKD	23.35	17.39	778	17.39	100%
	R15	Residential	LKD	23.31	16.58	375	15.02	91%
	R16	Residential	Bedroom	7.81	4.80	1346	4.80	100%
	R17	Residential	Bedroom	13.75	8.63	183	8.03	93%
	R18	Residential	Bedroom	13.89	9.33	557	9.33	100%
	R19	Residential	LKD	34.72	26.55	249	17.13	65%
	R20	Residential	LKD	41.63	33.31	158	12.29	37%
	R21	Residential	Bedroom	13.48	8.99	444	8.99	100%
	R22	Residential	Bedroom	10.16	6.34	387	6.34	100%
	R23	Residential	LKD	28.88	22.23	1718	22.23	100%
	R24	Residential	LKD	24.31	18.07	1559	18.07	100%
	R25	Residential	Bedroom	10.34	6.63	414	6.63	100%
	R26	Residential	LKD	20.70	15.46	231	8.54	55%
	R27	Residential	Bedroom	9.71	6.27	358	6.27	100%
	R28	Residential	LKD	23.18	16.80	175	7.83	47%
	R30	Residential	LKD	31.29	24.73	361	19.89	80%
	R31	Residential	Bedroom	10.98	7.33	323	7.33	100%

Floor Ref	Room Ref	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux
	R32	Residential	Bedroom	10.67	7.09	377	7.09	100%
	R33	Residential	LKD	30.54	24.04	280	16.90	70%
	R34	Residential	LKD	23.83	17.08	1045	17.08	100%
	R35	Residential	Bedroom	9.51	5.85	226	5.85	100%
	R36	Residential	Bedroom	8.82	5.27	229	5.27	100%
	R37	Residential	LKD	23.93	17.25	864	17.25	100%
	R38	Residential	LKD	20.52	14.95	149	5.96	40%
	R39	Residential	Bedroom	10.05	6.55	680	6.55	100%
	R40	Residential	LKD	26.68	19.68	331	15.74	80%
	R41	Residential	Bedroom	11.35	7.48	525	7.48	100%
	R42	Residential	Bedroom	11.35	7.48	470	7.48	100%
	R43	Residential	LKD	26.68	19.68	385	17.34	88%
	R44	Residential	Bedroom	11.23	7.36	519	7.36	100%
	R45	Residential	LKD	24.12	17.96	191	8.24	46%
	R46	Residential	LKD	23.61	17.03	1517	17.03	100%
	R47	Residential	Bedroom	9.45	5.80	286	5.80	100%
	R48	Residential	Bedroom	8.31	4.91	297	4.91	100%

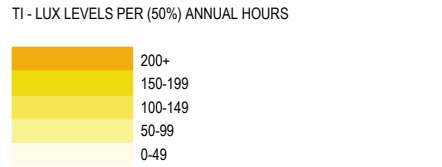
Target Illuminance Plans – LKD 200 Lux Target

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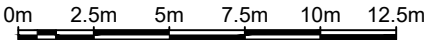


LEGEND:



SOURCES OF INFORMATION:

EXISTING, SURROUNDING & ANALYSED BUILDINGS
ZMAPPING
Received on 22/01/25
Site and aerial photos.
PROPOSED BUILDINGS
SADA ARCHITECTURE
Received on 14/01/25



PROJECT INFORMATION

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CLIENT: McGrath Group

PROJECT TITLE: ABBEY GARDENS
ABBAY STREET
READING RG1 3BA

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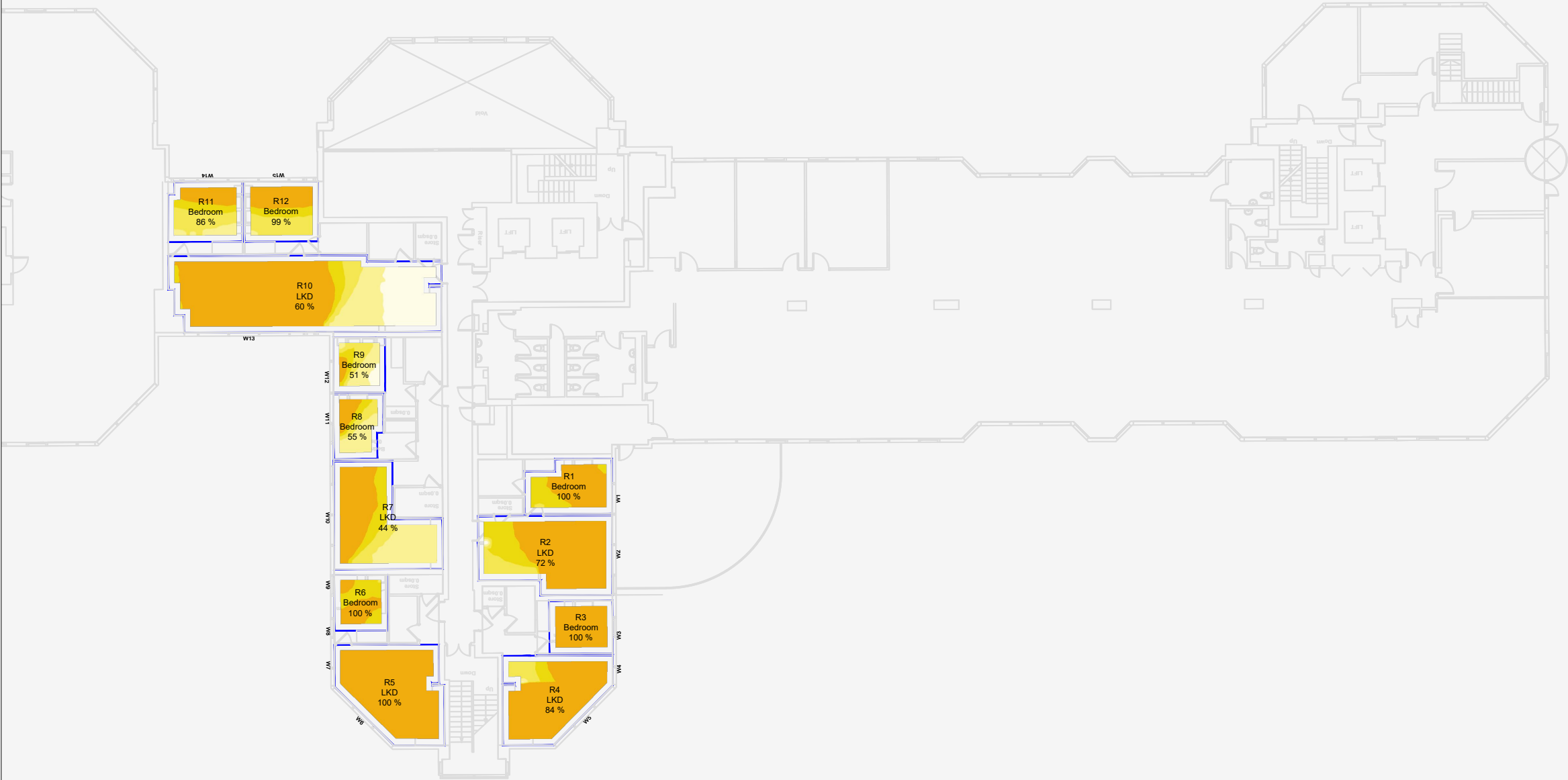
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INTERNAL FLOOR LAYOUTS
PROPOSED

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PROJECT No: ROL01535 RELEASE No: R03 VERSION No: V01 DRAWING No: 601-01

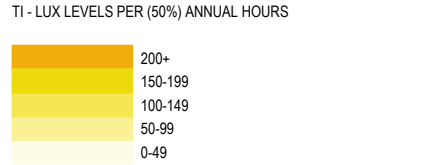
Daylight & Sunlight

PROPOSED GROUND FLOOR PLAN
SCALE 1:200



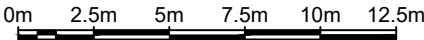
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PROJECT TITLE: ABBEY GARDENS
ABBEE STREET
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SCHEME REF: SCHEME RECEIVED: 14/01/25

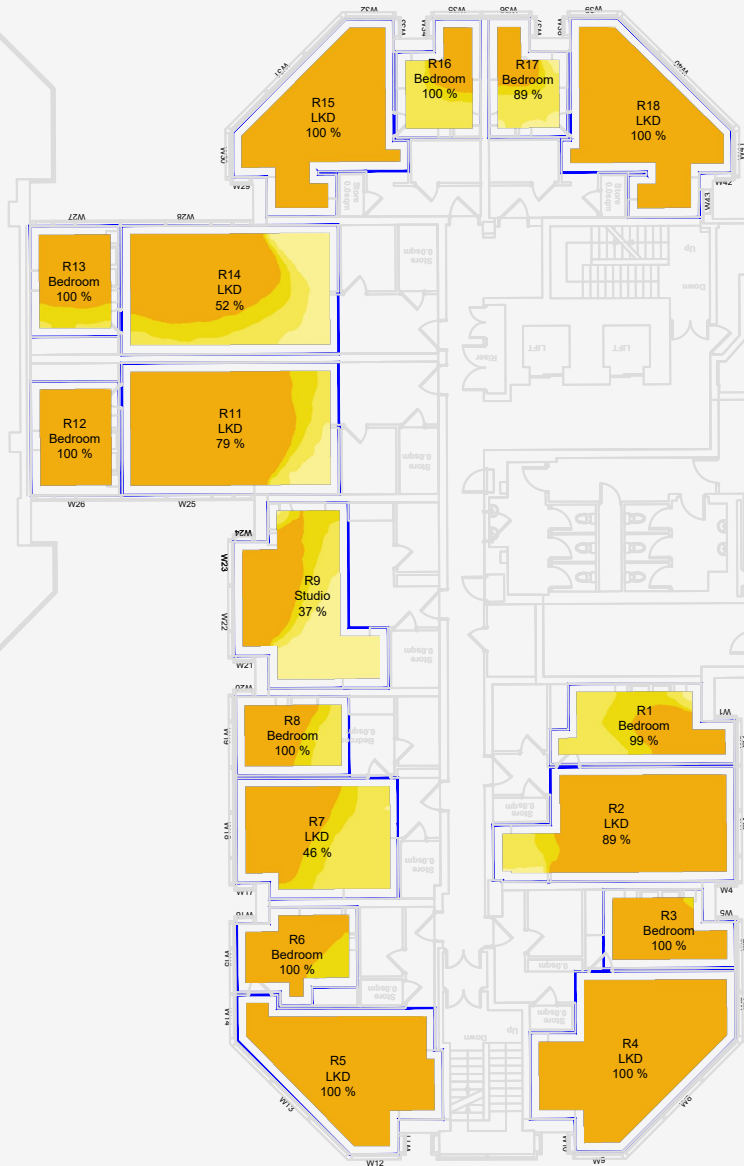
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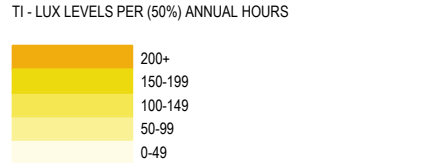
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Daylight & Sunlight

SCALE 1:200
PROPOSED 1ST FLOOR PLAN

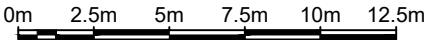


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SOURCES OF INFORMATION:

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SCHEME REF: SCHEME RECEIVED: 14/01/25

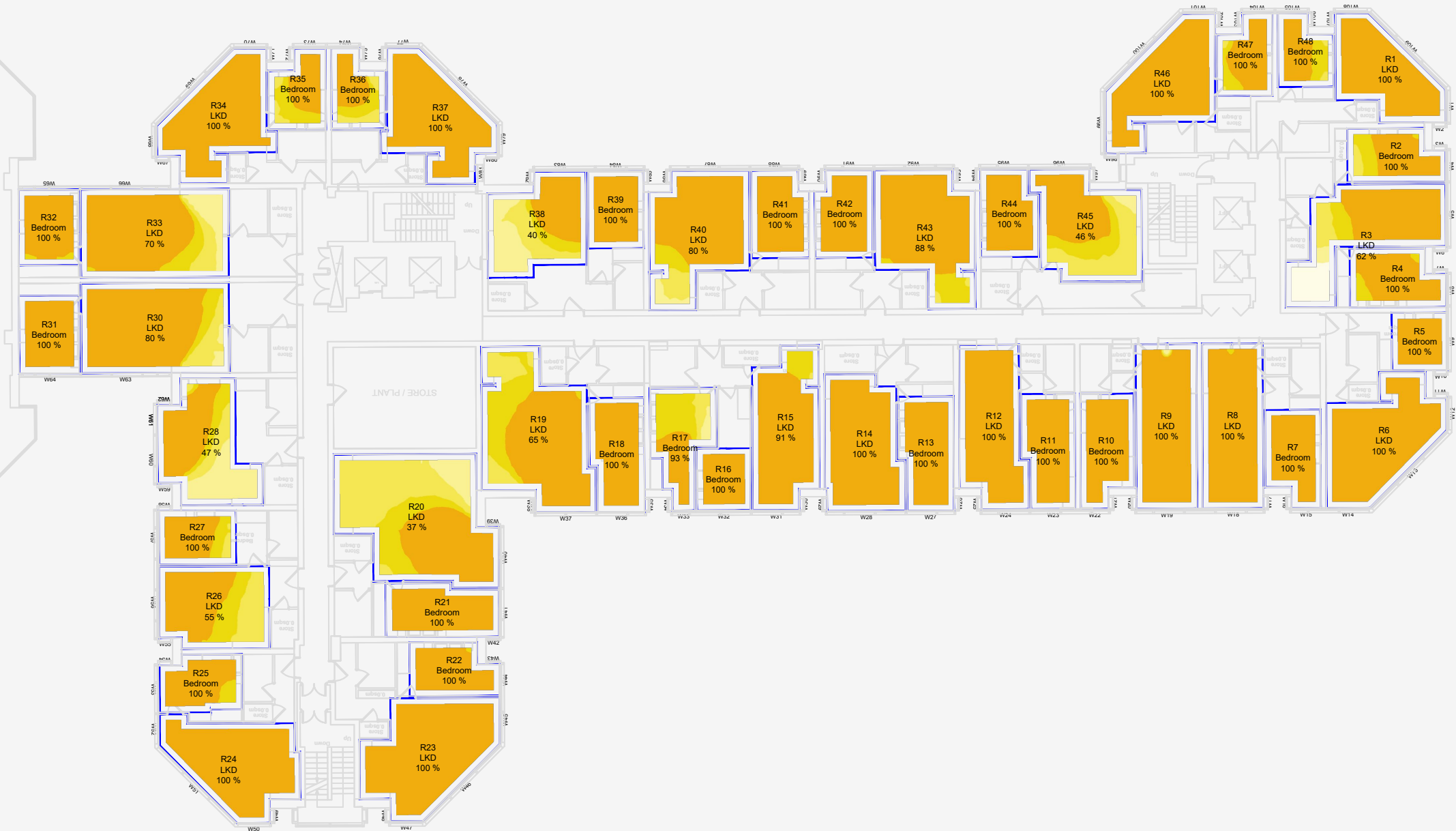
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INTERNAL FLOOR LAYOUTS
PROPOSED

MODELLED BY: EY/AH
DRAWN BY: EY/AH
DATE: 04/02/25
SCALE: 1:250
A3

PROJECT No: ROL01535_R03_V01_601-03
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Daylight & Sunlight

PROPOSED 2ND - 4TH FLOOR PLAN
SCALE 1:200



2ND FLOOR

Target Illuminance Table – LKD 150 Lux Target

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Floor Ref	Room Ref	Property Type	Room Use	Room Area m2	Effective Area	Median Lux	Area Meeting Req Lux	% of Area Meeting Req Lux
PROPOSED								
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	R2	Residential	LKD	23.50	17.56	302	15.75	90%
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	R4	Residential	LKD	19.54	14.14	691	12.69	90%
	R5	Residential	LKD	22.01	16.44	512	16.44	100%
	R6	Residential	Bedroom	7.12	4.28	200	4.28	100%
	R7	Residential	LKD	21.45	15.41	184	9.11	59%
	R8	Residential	Bedroom	7.41	4.39	102	2.43	55%
	R9	Residential	Bedroom	6.87	4.09	100	2.09	51%
	R10	Residential	LKD	48.48	38.15	290	24.71	65%
	R11	Residential	Bedroom	10.61	7.00	143	6.02	86%
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	R14	Residential	LKD	30.55	24.05	214	16.23	67%
	R15	Residential	LKD	23.83	17.08	832	17.08	100%
	R16	Residential	Bedroom	9.51	5.85	153	5.85	100%
	R17	Residential	Bedroom	8.82	5.27	145	4.68	89%
	R18	Residential	LKD	23.93	17.25	695	17.25	100%
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	R3	Residential	LKD	25.33	17.45	254	12.25	70%
	R4	Residential	Bedroom	11.97	7.83	295	7.83	100%
	R5	Residential	Bedroom	7.52	4.59	1309	4.59	100%
	R6	Residential	LKD	26.13	19.34	1752	19.34	100%
	R7	Residential	Bedroom	11.50	7.40	414	7.40	100%
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	R9	Residential	LKD	23.45	17.26	536	17.25	100%
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	R11	Residential	Bedroom	13.35	8.81	646	8.81	100%
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	R13	Residential	Bedroom	13.77	9.20	656	9.20	100%
	R14	Residential	LKD	23.35	17.39	778	17.39	100%
	R15	Residential	LKD	23.31	16.58	375	16.52	100%
	R16	Residential	Bedroom	7.81	4.80	1346	4.80	100%
	R17	Residential	Bedroom	13.75	8.63	183	8.03	93%
	R18	Residential	Bedroom	13.89	9.33	557	9.33	100%
	R19	Residential	LKD	34.72	26.55	249	23.50	89%
	R20	Residential	LKD	41.63	33.31	158	17.79	53%
	R21	Residential	Bedroom	13.48	8.99	444	8.99	100%
	R22	Residential	Bedroom	10.16	6.34	387	6.34	100%
	R23	Residential	LKD	28.88	22.23	1718	22.23	100%
	R24	Residential	LKD	24.31	18.07	1559	18.07	100%
	R25	Residential	Bedroom	10.34	6.63	414	6.63	100%
	R26	Residential	LKD	20.70	15.46	231	11.88	77%
	R27	Residential	Bedroom	9.71	6.27	358	6.27	100%
	R28	Residential	LKD	23.18	16.80	175	9.67	58%
	R30	Residential	LKD	31.29	24.73	361	21.62	87%
	R31	Residential	Bedroom	10.98	7.33	323	7.33	100%
	R32	Residential	Bedroom	10.67	7.09	377	7.09	100%
	R33	Residential	LKD	30.54	24.04	280	19.34	80%
	R34	Residential	LKD	23.83	17.08	1045	17.08	100%
	R35	Residential	Bedroom	9.51	5.85	226	5.85	100%
	R36	Residential	Bedroom	8.82	5.27	229	5.27	100%
	R37	Residential	LKD	23.93	17.25	864	17.25	100%
	R38	Residential	LKD	20.52	14.95	149	7.69	51%
	R39	Residential	Bedroom	10.05	6.55	680	6.55	100%
	R40	Residential	LKD	26.68	19.68	331	17.31	88%
	R41	Residential	Bedroom	11.35	7.48	525	7.48	100%
	R42	Residential	Bedroom	11.35	7.48	470	7.48	100%
	R43	Residential	LKD	26.68	19.68	385	19.46	99%
	R44	Residential	Bedroom	11.23	7.36	519	7.36	100%
	R45	Residential	LKD	24.12	17.96	191	11.43	64%
	R46	Residential	LKD	23.61	17.03	1517	17.03	100%
	R47	Residential	Bedroom	9.45	5.80	286	5.80	100%
	R48	Residential	Bedroom	8.31	4.91	297	4.91	100%

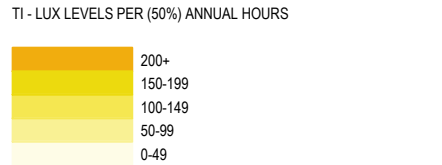
Target Illuminance Plans – LKD 150 Lux Target

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4 Chiswell St, London
EC1Y 4UP

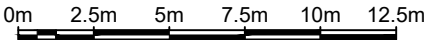


LEGEND:



SOURCES OF INFORMATION:

EXISTING, SURROUNDING & ANALYSED BUILDINGS
ZMAPPING
Received on 22/01/25
Site and aerial photos.
PROPOSED BUILDINGS
SADA ARCHITECTURE
Received on 03/02/25



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CLIENT: McGrath Group

PROJECT TITLE: ABBEY GARDENS
ABBEE STREET
READING RG1 3BA

SCHEME REF: SCHEME RECEIVED: 03/02/25

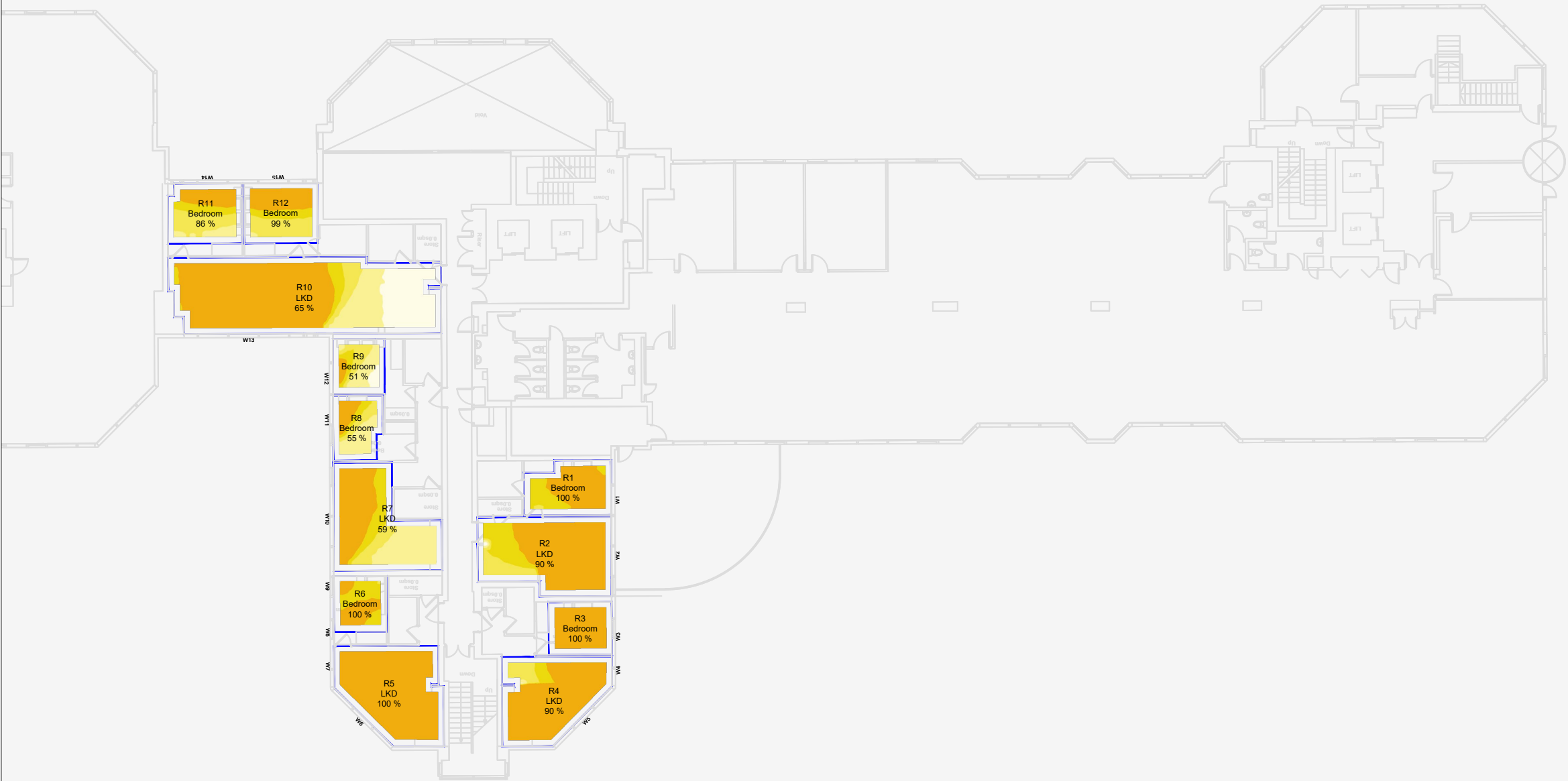
DRAWING TITLE: TARGET ILLUMINANCE
INTERNAL FLOOR LAYOUTS
PROPOSED

MODELLED BY: EY/AH DRAWN BY: EY/AH DATE: 04/02/25 SCALE: 1:250 A3

PROJECT No: ROL01535 RELEASE No: R03 VERSION No: V01A DRAWING No: 601-01

Daylight & Sunlight

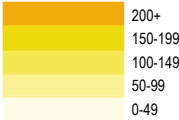
PROPOSED GROUND FLOOR PLAN
SCALE 1:200



GROUND

LEGEND:

TI - LUX LEVELS PER (50%) ANNUAL HOURS



SOURCES OF INFORMATION:

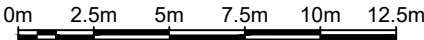
EXISTING, SURROUNDING & ANALYSED BUILDINGS

ZMAPPING
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PROPOSED BUILDINGS

SADA ARCHITECTURE
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CLIENT: McGrath Group

PROJECT TITLE: ABBEY GARDENS
ABBEE STREET
READING RG1 3BA

SCHEME REF: SCHEME RECEIVED: 03/02/25

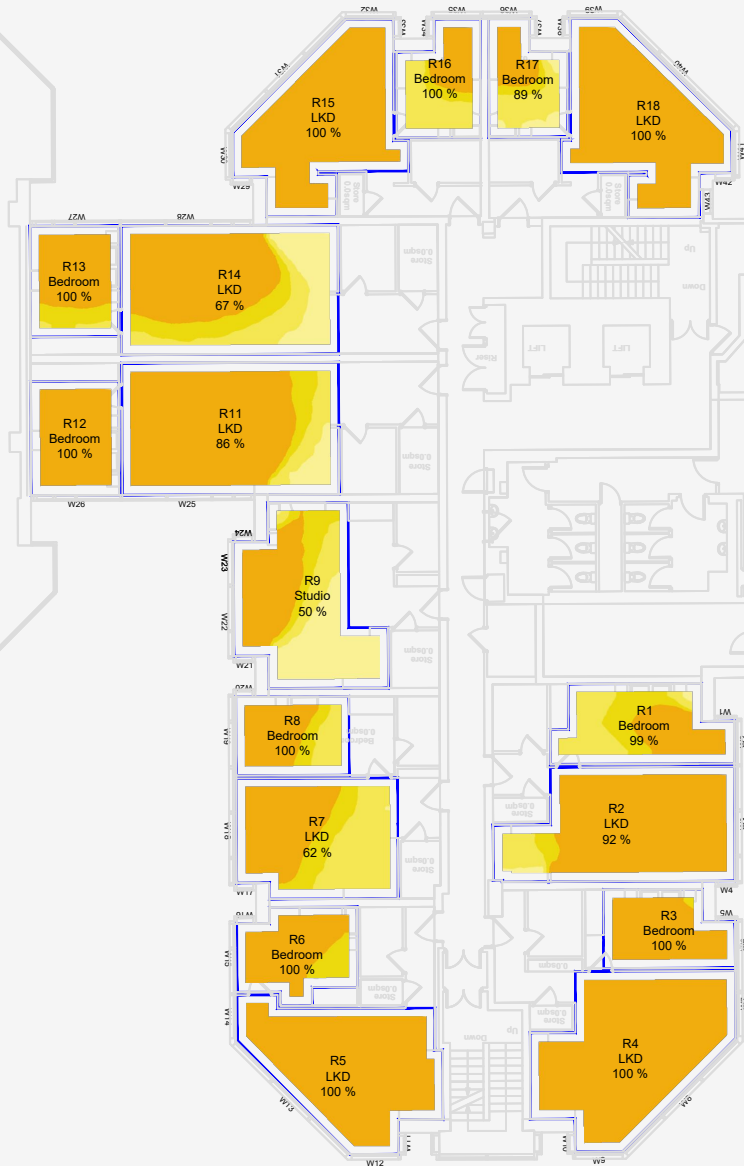
DRAWING TITLE: TARGET ILLUMINANCE
INTERNAL FLOOR LAYOUTS
PROPOSED

MODELLED BY: EY/AH | DRAWN BY: EY/AH | DATE: 04/02/25 | SCALE: 1:250 | A3

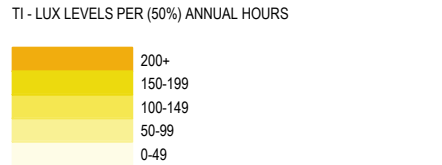
PROJECT No: ROL01535_ R03_ V01A_ | RELEASE No: | VERSION No: | DRAWING No: 601-02

Daylight & Sunlight

SCALE 1:200
PROPOSED 1ST FLOOR PLAN

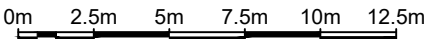


LEGEND:



SOURCES OF INFORMATION:

EXISTING, SURROUNDING & ANALYSED BUILDINGS
ZMAPPING
Received on 22/01/25
Site and aerial photos.
PROPOSED BUILDINGS
SADA ARCHITECTURE
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CLIENT: McGrath Group

PROJECT TITLE: ABBEY GARDENS
ABBEE STREET
READING RG1 3BA

SCHEME REF: SCHEME RECEIVED: 03/02/25

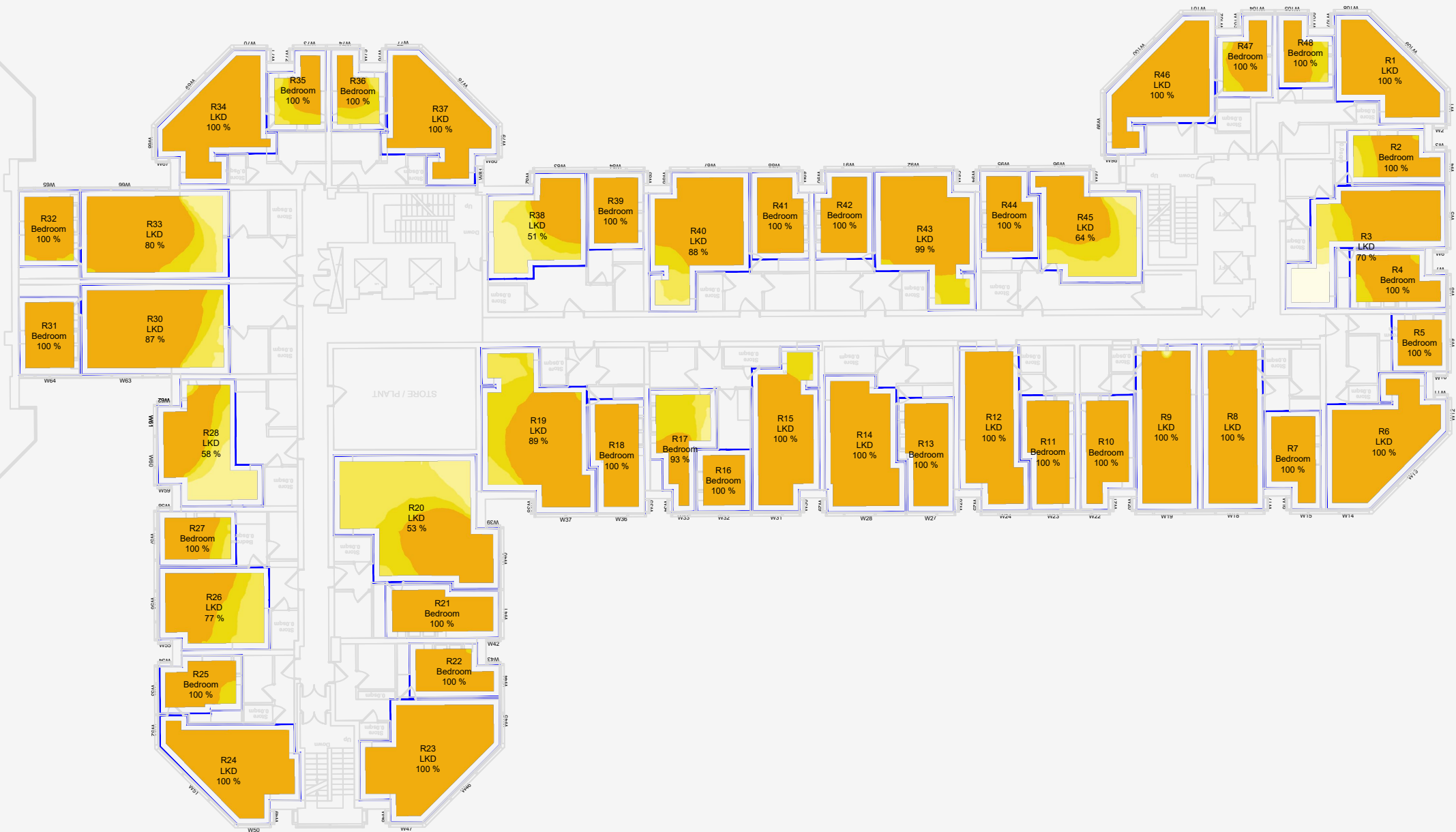
DRAWING TITLE: TARGET ILLUMINANCE
INTERNAL FLOOR LAYOUTS
PROPOSED

MODELLED BY: EY/AH DRAWN BY: EY/AH DATE: 04/02/25 SCALE: 1:250 A3

PROJECT No: ROL01535 RELEASE No: R03 VERSION No: V01A DRAWING No: 601-03

Daylight & Sunlight

PROPOSED 2ND - 4TH FLOOR PLAN
SCALE 1:200



2ND FLOOR

Sunlight Exposure Table

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4 Chiswell St, London
EC1Y 4UP



Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
PROPOSED						
Gnd Floor	R1	Residential	Bedroom	W1	355°N	0
						0
Gnd Floor	R2	Residential	LKD	W2	355°N	0
						0
Gnd Floor	R3	Residential	Bedroom	W3	354°N	0
						0
Gnd Floor	R4	Residential	LKD	W4	355°N	0
				W5	40°N	1.4
						1.4
Gnd Floor	R5	Residential	LKD	W6	130°	2.7
				W7	175°	2.6
						2.9
Gnd Floor	R6	Residential	Bedroom	W8	175°	2.5
				W9	175°	2.3
						2.5
Gnd Floor	R7	Residential	LKD	W10	175°	2
						2
Gnd Floor	R8	Residential	Bedroom	W11	175°	1.8
						1.8
Gnd Floor	R9	Residential	Bedroom	W12	175°	1.7
						1.7
Gnd Floor	R10	Residential	LKD	W13	85°N	1.3
						1.3
Gnd Floor	R11	Residential	Bedroom	W14	265°	0
						0
Gnd Floor	R12	Residential	Bedroom	W15	265°	0.5
						0.5
1st Floor	R1	Residential	Bedroom	W1	265°	0
				W2	355°N	0
						0
1st Floor	R2	Residential	LKD	W3	355°N	0
				W4	85°N	0
						0
1st Floor	R3	Residential	Bedroom	W5	265°	0
				W6	355°N	0
						0
1st Floor	R4	Residential	LKD	W7	355°N	0
				W8	40°N	1.5
				W9	85°N	3.6
				W10	175°	1.6
						3.6
1st Floor	R5	Residential	LKD	W11	355°N	0
				W12	85°N	3.7
				W13	130°	3.8
				W14	175°	3
						4
1st Floor	R6	Residential	Bedroom	W15	175°	2.9
				W16	265°	0
						2.9
1st Floor	R7	Residential	LKD	W17	85°N	1.8
				W18	175°	2.7
						2.7
1st Floor	R8	Residential	Bedroom	W19	175°	2.5
				W20	265°	0
						2.5
1st Floor	R9	Residential	Studio	W21	85°N	2.2
				W22	175°	2.3
				W23	175°	2.2
				W24	265°	0
						2.4
1st Floor	R11	Residential	LKD	W25	85°N	1.9
						1.9

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
1st Floor	R12	Residential	Bedroom	W26	85°N	0
						0
1st Floor	R13	Residential	Bedroom	W27	265°	0
						0
1st Floor	R14	Residential	LKD	W28	265°	1.1
						1.1
1st Floor	R15	Residential	LKD	W29	85°N	0
				W30	175°	1.7
				W31	220°	2.3
				W32	265°	2.1
				W33	355°N	0
						2.6
1st Floor	R16	Residential	Bedroom	W34	175°	1.5
				W35	265°	2.1
						2.1
1st Floor	R17	Residential	Bedroom	W36	265°	2.6
				W37	355°N	0
						2.6
1st Floor	R18	Residential	LKD	W38	175°	1.5
				W39	265°	2
				W40	309°N	0.2
				W41	355°N	0
				W42	85°N	0
				W43	355°N	0
						2.1
2nd Floor	R1	Residential	LKD	W1	355°N	0
				W2	85°N	0
				W107	175°	0.7
				W108	265°	1.2
				W109	310°N	0.6
		1.5				
2nd Floor	R2	Residential	Bedroom	W3	265°	0
				W4	355°N	0
						0
2nd Floor	R3	Residential	LKD	W5	355°N	0
				W6	85°N	0
						0
2nd Floor	R4	Residential	Bedroom	W7	265°	0
				W8	355°N	0
						0
2nd Floor	R5	Residential	Bedroom	W9	355°N	0
				W10	85°N	0
						0
2nd Floor	R6	Residential	LKD	W11	265°	0
				W12	355°N	0
				W13	40°N	1.5
				W14	85°N	4.2
						4.2
2nd Floor	R7	Residential	Bedroom	W15	85°N	3.5
				W16	175°	1.6
						3.5
2nd Floor	R8	Residential	LKD	W17	355°N	0
				W18	85°N	4.2
						4.2
2nd Floor	R9	Residential	LKD	W19	85°N	4
				W20	175°	1.6
						4
2nd Floor	R10	Residential	Bedroom	W21	355°N	0
				W22	85°N	4.2
						4.2
2nd Floor	R11	Residential	Bedroom	W23	85°N	4.2
						4.2
2nd Floor	R12	Residential	LKD	W24	85°N	3.9
				W25	175°	1.6
						3.9

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
2nd Floor	R13	Residential	Bedroom	W26	355°N	0
				W27	85°N	4.3
						4.3
2nd Floor	R14	Residential	LKD	W28	85°N	2.6
				W29	175°	0.7
						2.6
2nd Floor	R15	Residential	LKD	W30	355°N	0
				W31	85°N	2.1
						2.1
2nd Floor	R16	Residential	Bedroom	W32	85°N	1.8
						1.8
2nd Floor	R17	Residential	Bedroom	W33	85°N	1.4
				W34	175°	0
						1.4
2nd Floor	R18	Residential	Bedroom	W35	355°N	0
				W36	85°N	0.6
						0.6
2nd Floor	R19	Residential	LKD	W37	85°N	0
				W38	175°	0
						0
2nd Floor	R20	Residential	LKD	W39	265°	0
				W40	355°N	0
						0
2nd Floor	R21	Residential	Bedroom	W41	355°N	0
				W42	85°N	0
						0
2nd Floor	R22	Residential	Bedroom	W43	265°	0
				W44	355°N	0
						0
2nd Floor	R23	Residential	LKD	W45	355°N	0
				W46	40°N	1.5
				W47	85°N	3.6
				W48	175°	1.6
						3.6
2nd Floor	R24	Residential	LKD	W49	355°N	0
				W50	85°N	3.8
				W51	130°	5.8
				W52	175°	5.6
						5.8
2nd Floor	R25	Residential	Bedroom	W53	175°	5.4
				W54	265°	0
						5.4
2nd Floor	R26	Residential	LKD	W55	85°N	1.9
				W56	175°	4.6
						4.6
2nd Floor	R27	Residential	Bedroom	W57	175°	3.9
				W58	265°	0
						3.9
2nd Floor	R28	Residential	LKD	W59	85°N	2.2
				W60	175°	2.8
				W61	175°	2.7
				W62	265°	0
						2.8
2nd Floor	R30	Residential	LKD	W63	85°N	2.1
						2.1
2nd Floor	R31	Residential	Bedroom	W64	85°N	0
2nd Floor	R32	Residential	Bedroom	W65	265°	0
2nd Floor	R33	Residential	LKD	W66	265°	1.3
2nd Floor	R34	Residential	LKD	W67	85°N	0
				W68	175°	2.1
				W69	220°	2.7
				W70	265°	2.5

Floor Ref	Room Ref	Property Type	Room Use	Window Ref	Window Orientation	Proposed Sunlight Exposure (Hours)
2nd Floor	R35	Residential	Bedroom	W71	355°N	0
						2.9
				W72	175°	1.5
2nd Floor	R36	Residential	Bedroom	W73	265°	2.4
						2.4
				W74	265°	3
2nd Floor	R37	Residential	LKD	W75	355°N	0
						3
				W76	175°	1.5
2nd Floor	R38	Residential	LKD	W77	265°	2.4
				W78	309°N	0.6
				W79	355°N	0
2nd Floor	R39	Residential	Bedroom	W80	85°N	0
				W81	355°N	0
						2.5
2nd Floor	R40	Residential	LKD	W82	176°	0
				W83	265° Inc	1.3
						1.3
2nd Floor	R41	Residential	Bedroom	W84	264°	1.9
				W85	355°N	0
						1.9
2nd Floor	R42	Residential	LKD	W86	175°	1.2
				W87	265°	2.9
						2.9
2nd Floor	R43	Residential	Bedroom	W88	265°	4.1
				W89	355°N	0
						4.1
2nd Floor	R44	Residential	Bedroom	W90	175°	1.5
				W91	265°	4.1
						4.1
2nd Floor	R45	Residential	LKD	W92	265°	4.3
				W93	355°N	0
						4.3
2nd Floor	R46	Residential	Bedroom	W94	175°	1.5
				W95	265°	3.8
						3.8
2nd Floor	R47	Residential	LKD	W96	265°	3.7
				W97	355°N	0
						3.7
2nd Floor	R48	Residential	LKD	W98	85°N	0
				W99	175°	3.9
				W100	220°	4.1
2nd Floor	R49	Residential	Bedroom	W101	265°	1.5
				W102	355°N	0
						4.7
2nd Floor	R50	Residential	Bedroom	W103	175°	1
				W104	265°	1.1
						1.2
2nd Floor	R51	Residential	Bedroom	W105	265°	1.8
				W106	355°N	0
						1.8