



Eaton Court,

Oxford Road, Reading,

Daylight Assessment

(Within the Proposal)

Job No: 6309

Issued: May, 2025

Issue No: 3



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09.05.25

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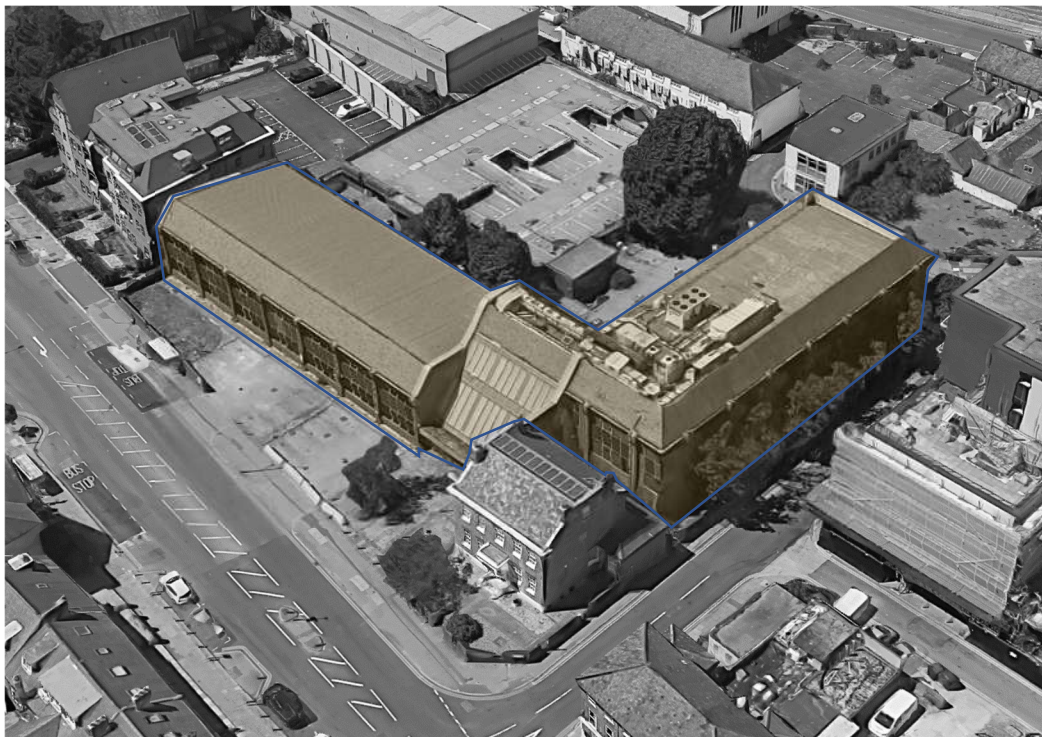
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1.0 Introduction

- 1.1 This internal daylight assessment has been prepared in relation to a planning application for the proposed conversion of the site known as Eaton Court, Oxford Road, Reading.
- 1.2 The report assesses the proposals in respect of daylight matters within habitable rooms in the proposed scheme, having regard to industry standard guidance.
- 1.3 The report concludes that the proposal is acceptable and in accordance with planning policy requirements in relation to daylight and sunlight for those rooms and gardens assessed.
- 1.4 There is no existing specific National Planning Policy relating to the prospective impacts of developments on daylight and sunlight on their surrounding environment.
- 1.5 However, the NPPF (Para 130(c)) does refer to daylight and sunlight in relation to density, encouraging Local Planning Authorities to take a flexible approach to applying policies and guidance relating to the impacts of proposals where they would otherwise inhibit making effective use of the site.
- 1.6 The BRE Report 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' (3rd Edition, 2022) is the established National guidance to aid the developer in the assessment of light within proposed new dwellings.
- 1.7 It refers in turn to the daylight and sunlight recommendations in BS EN 17037: 2018+A1:2021 (with UK Annexe): 'Daylight in Buildings'
- 1.8 These reference documents are accepted as the authoritative works in the field on daylight, sunlight and overshadowing and the BRE guidance specifically referred to in many Local Authorities' planning policy guidance for daylighting.
- 1.9 The methodology therein has been used in numerous lighting analyses and the standards of permissible reduction in light are accepted as the industry standards.

2.0 Project Summary

- 2.1 The proposal site lies at the corner of Oxford Road and Eaton Place, Reading and is currently occupied by a part-2, part-3 storey detached building known as Eaton Court.
- 2.2 The proposal is for the conversion of the building to residential use, creating 52 new units.
- 2.3 The developer wishes to ensure that the habitable rooms in the new dwellings will receive sufficient daylight, for their intended uses, in excess of the minimum values prescribed by the BRE guidance and BS EN 17037: 2018+A1:2021
- 2.4 2D CAD drawings have been provided to us by the design team. These have been used to construct a 3D analysis model in order to assess the internal daylight levels within each room.
- 2.5 Computer simulation modelling has been used to produce the results, presented below.



Site Location

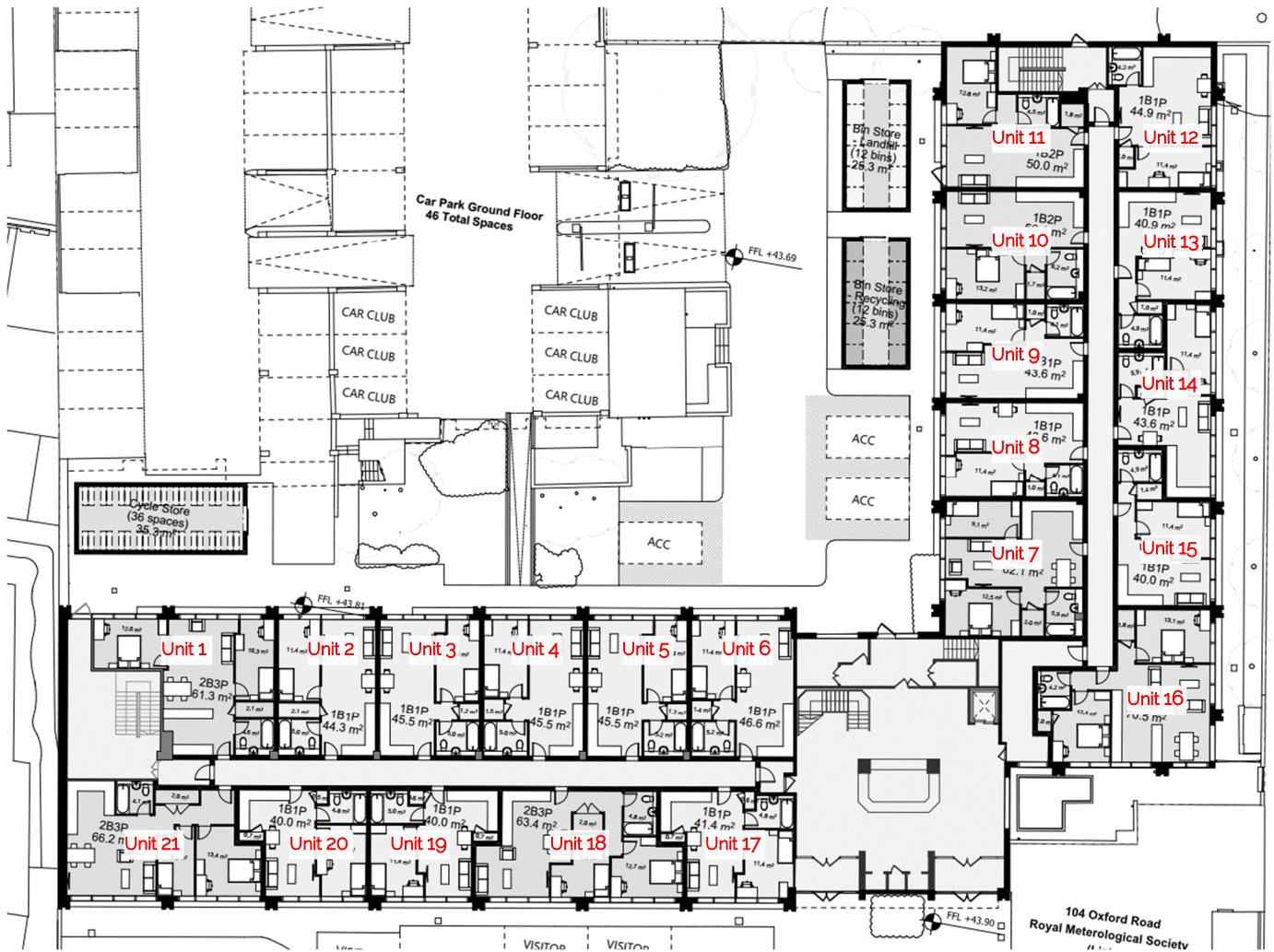
3.0 Methodology

- 3.1 The BRE and BS EN 17037 guidance allows for two alternative methods to assess daylight within new dwellings and residential spaces. This report uses the Target Daylight Factor (DF_T) method.
- 3.2 The DF_T method is a complex and representative calculation to determine natural internal luminance.
- 3.3 It takes into account such factors as window size, number of windows available to the room, room size and layout, room surface reflectance, and the angle of visible sky reaching the window.
- 3.4 The calculations have assumed a white ceiling, cream walls and mid-grey carpet or wooden floor using reflectance values taken from the BS EN 170437 Guidance.
- 3.5 As this is a conversion scheme, it falls under the category of "hard to light" dwellings and therefore an alternative target can be used. The minimum DF_T values for various UK locations and room types are provided below.
- 3.6 The targets for London have been used for this assessment.

Table C3 – Target daylight factors (D_T) to achieve over at least 50% of the assessment grid in UK domestic habitable rooms with vertical and/or inclined daylight apertures			
Location	D_T for 100 lx (Bedroom)	D_T for 150 lx (Living room)	D_T for 200 lx (Kitchen)
St Peter (Jersey)	0.6%	0.9%	1.2%
London (Gatwick Airport)	0.7%	1.1%	1.4%
Birmingham	0.6%	0.9%	1.2%
Hemsby (Norfolk)	0.6%	0.9%	1.3%
Finningley (Yorkshire)	0.7%	1.0%	1.3%
Aughton (Lancashire)	0.7%	1.1%	1.4%
Belfast	0.7%	1.0%	1.4%
Leuchars (Fife)	0.7%	1.1%	1.4%
Oban	0.8%	1.1%	1.5%
Aberdeen	0.7%	1.1%	1.4%

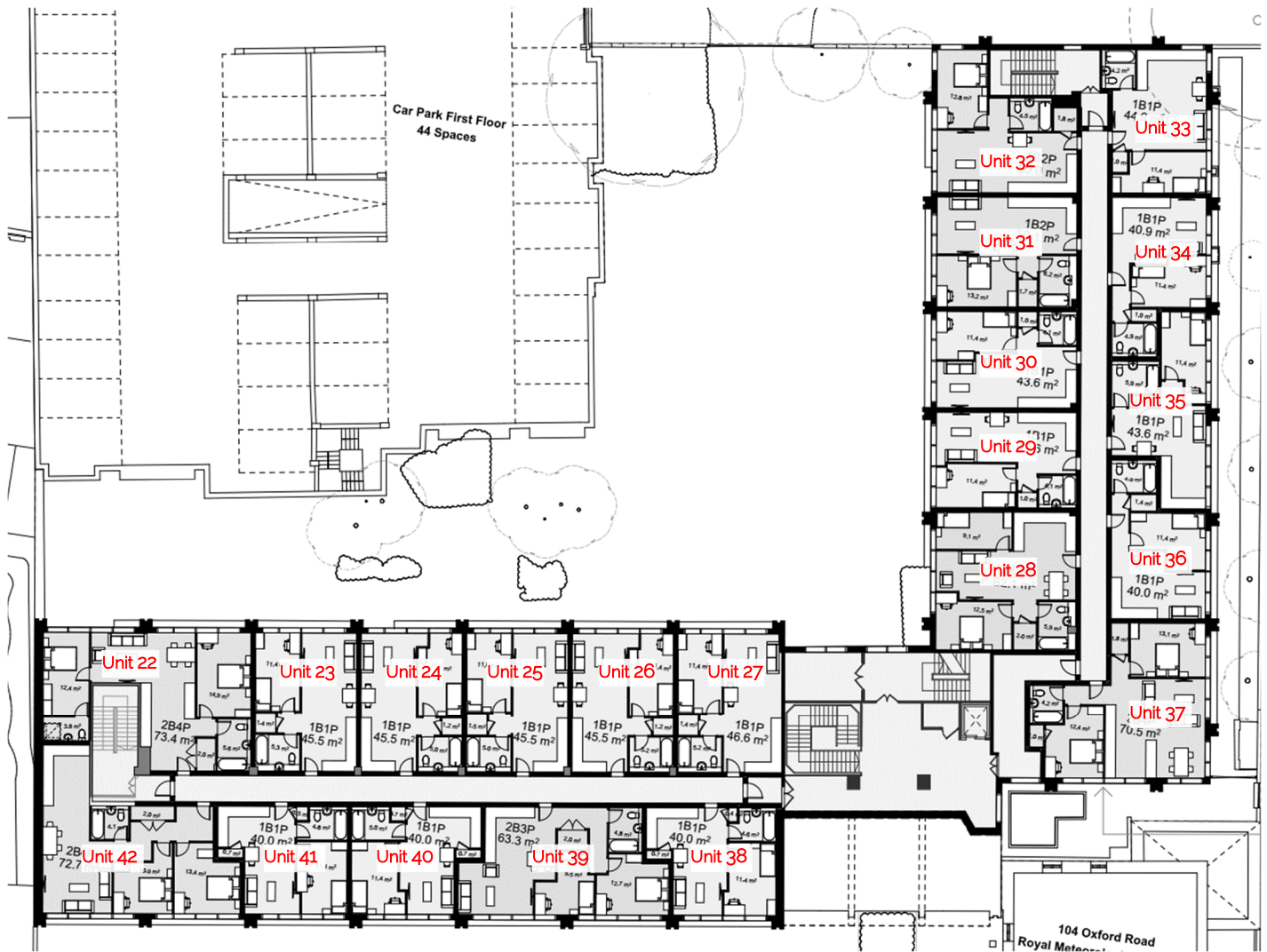
- 3.7 If the minimum DF criteria are met, then the occupiers of the dwelling/habitable space will have sufficient daylight. As can be seen from the results below that all assessed habitable rooms meet and exceed the minimum levels of internal daylight.

4.0 Room Schedules



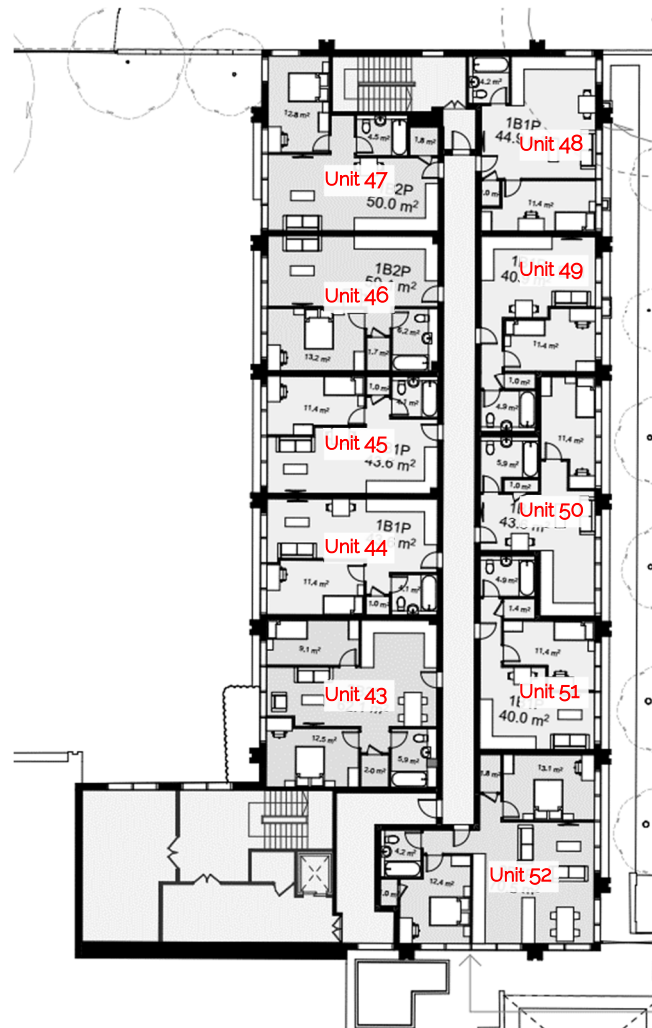
Ground Floor as Proposed

4.0 Room Schedules



1st Floor as Proposed

4.0 Room Schedules



2nd Floor as Proposed

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room Use	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
1	Kitchen/Living/Dining	14%	67.7%	Yes
1	Bedroom 1	0.7%	100.0%	Yes
1	Bedroom 2	0.7%	92.1%	Yes
2	Kitchen/Living/Dining	14%	59.8%	Yes
2	Bedroom 1	0.7%	100.0%	Yes
3	Kitchen/Living/Dining	14%	68.9%	Yes
3	Bedroom 1	0.7%	91.4%	Yes
4	Kitchen/Living/Dining	14%	59.6%	Yes
4	Bedroom 1	0.7%	100.0%	Yes
5	Kitchen/Living/Dining	14%	68.8%	Yes
5	Bedroom 1	0.7%	91.4%	Yes
6	Kitchen/Living/Dining	14%	59.5%	Yes
6	Bedroom 1	0.7%	100.0%	Yes
7	Kitchen/Living/Dining	14%	51.2%	Yes
7	Bedroom 1	0.7%	71.7%	Yes
7	Bedroom 2	0.7%	76.2%	Yes
8	Kitchen/Living/Dining	14%	58.4%	Yes
8	Bedroom 1	0.7%	100.0%	Yes
9	Kitchen/Living/Dining	14%	58.5%	Yes
9	Bedroom 1	0.7%	100.0%	Yes
10	Kitchen/Living/Dining	14%	56.9%	Yes
10	Bedroom 1	0.7%	100.0%	Yes
11	Kitchen/Living/Dining	14%	63.8%	Yes
11	Bedroom 1	0.7%	72.6%	Yes
12	Kitchen/Living/Dining	14%	60.5%	Yes
12	Bedroom 1	0.7%	100.0%	Yes
13	Kitchen/Living/Dining	14%	65.8%	Yes
13	Bedroom 1	0.7%	100.0%	Yes
14	Kitchen/Living/Dining	14%	82.9%	Yes
14	Bedroom 1	0.7%	100.0%	Yes

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room Use	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
15	Kitchen/Living/Dining	1.4%	62.1%	Yes
15	Bedroom 1	0.7%	100.0%	Yes
16	Kitchen/Living/Dining	1.4%	96.7%	Yes
16	Bedroom 1	0.7%	100.0%	Yes
16	Bedroom 2	0.7%	100.0%	Yes
17	Kitchen/Living/Dining	1.4%	58.2%	Yes
17	Bedroom 1	0.7%	100.0%	Yes
18	Kitchen/Living/Dining	1.4%	66.3%	Yes
18	Bedroom 1	0.7%	100.0%	Yes
18	Bedroom 2	0.7%	100.0%	Yes
19	Kitchen/Living/Dining	1.4%	58.8%	Yes
19	Bedroom 1	0.7%	100.0%	Yes
20	Kitchen/Living/Dining	1.4%	58.9%	Yes
20	Bedroom 1	0.7%	100.0%	Yes
21	Kitchen/Living/Dining	1.4%	93.1%	Yes
21	Bedroom 1	0.7%	100.0%	Yes
21	Bedroom 2	0.7%	96.9%	Yes
22	Kitchen/Living/Dining	1.4%	88.1%	Yes
22	Bedroom 1	0.7%	100.0%	Yes
22	Bedroom 2	0.7%	100.0%	Yes
23	Kitchen/Living/Dining	1.4%	61.9%	Yes
23	Bedroom 1	0.7%	100.0%	Yes
24	Kitchen/Living/Dining	1.4%	71.3%	Yes
24	Bedroom 1	0.7%	94.6%	Yes
25	Kitchen/Living/Dining	1.4%	61.7%	Yes
25	Bedroom 1	0.7%	100.0%	Yes
26	Kitchen/Living/Dining	1.4%	71.2%	Yes
26	Bedroom 1	0.7%	94.6%	Yes
27	Kitchen/Living/Dining	1.4%	61.6%	Yes
27	Bedroom 1	0.7%	100.0%	Yes

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room Use	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
28	Kitchen/Living/Dining	1.4%	53.0%	Yes
28	Bedroom 1	0.7%	74.2%	Yes
28	Bedroom 2	0.7%	78.8%	Yes
29	Kitchen/Living/Dining	1.4%	60.4%	Yes
29	Bedroom 1	0.7%	100.0%	Yes
30	Kitchen/Living/Dining	1.4%	60.5%	Yes
30	Bedroom 1	0.7%	100.0%	Yes
31	Kitchen/Living/Dining	1.4%	58.9%	Yes
31	Bedroom 1	0.7%	100.0%	Yes
32	Kitchen/Living/Dining	1.4%	66.0%	Yes
32	Bedroom 1	0.7%	100.0%	Yes
33	Kitchen/Living/Dining	1.4%	62.6%	Yes
33	Bedroom 1	0.7%	100.0%	Yes
34	Kitchen/Living/Dining	1.4%	68.1%	Yes
34	Bedroom 1	0.7%	100.0%	Yes
35	Kitchen/Living/Dining	1.4%	85.8%	Yes
35	Bedroom 1	0.7%	100.0%	Yes
36	Kitchen/Living/Dining	1.4%	64.2%	Yes
36	Bedroom 1	0.7%	100.0%	Yes
37	Kitchen/Living/Dining	1.4%	100.0%	Yes
37	Bedroom 1	0.7%	100.0%	Yes
37	Bedroom 2	0.7%	100.0%	Yes
38	Kitchen/Living/Dining	1.4%	60.2%	Yes
38	Bedroom 1	0.7%	100.0%	Yes
39	Kitchen/Living/Dining	1.4%	68.6%	Yes
39	Bedroom 1	0.7%	100.0%	Yes
39	Bedroom 2	0.7%	100.0%	Yes
40	Kitchen/Living/Dining	1.4%	60.8%	Yes
40	Bedroom 1	0.7%	100.0%	Yes

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room Use	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
41	Kitchen/Living/Dining	1.4%	60.9%	Yes
41	Bedroom 1	0.7%	100.0%	Yes
42	Kitchen/Living/Dining	1.4%	74.3%	Yes
42	Bedroom 1	0.7%	100.0%	Yes
42	Bedroom 2	0.7%	100.0%	Yes
43	Kitchen/Living/Dining	1.4%	54.9%	Yes
43	Bedroom 1	0.7%	76.9%	Yes
43	Bedroom 2	0.7%	81.6%	Yes
44	Kitchen/Living/Dining	1.4%	62.6%	Yes
44	Bedroom 1	0.7%	100.0%	Yes
45	Kitchen/Living/Dining	1.4%	62.7%	Yes
45	Bedroom 1	0.7%	100.0%	Yes
46	Kitchen/Living/Dining	1.4%	61.0%	Yes
46	Bedroom 1	0.7%	100.0%	Yes
47	Kitchen/Living/Dining	1.4%	68.4%	Yes
47	Bedroom 1	0.7%	100.0%	Yes
48	Kitchen/Living/Dining	1.4%	64.8%	Yes
48	Bedroom 1	0.7%	100.0%	Yes
49	Kitchen/Living/Dining	1.4%	70.5%	Yes
49	Bedroom 1	0.7%	100.0%	Yes
50	Kitchen/Living/Dining	1.4%	88.9%	Yes
50	Bedroom 1	0.7%	100.0%	Yes
51	Kitchen/Living/Dining	1.4%	66.5%	Yes
51	Bedroom 1	0.7%	100.0%	Yes
52	Kitchen/Living/Dining	1.4%	100.0%	Yes
52	Bedroom 1	0.7%	100.0%	Yes
52	Bedroom 2	0.7%	100.0%	Yes

6.0 Conclusions

- 6.1 The proposed conversion of Eaton Court, Oxford Road, Reading has been assessed for internal daylight levels using the Target Daylight Factor (DF_T) test as prescribed by the BRE guidance and BS EN 17037:2018.
- 6.2 The design team has endeavoured to ensure that the proposed habitable rooms have levels of natural light in excess of the minimum standards prescribed by the standards.
- 6.3 This has been successfully achieved, as demonstrated by the positive results presented within this report.
- 6.4 The assessed rooms, which are selected to cover all variations within the development, meet the recommendations using the DF_T test.
- 6.5 This means the future occupants will enjoy a well-lit environment, with reduced reliance on artificial lighting.
- 6.6 It is therefore the conclusion of this report that the proposals meet the guidance levels for daylight and are therefore acceptable in planning terms.



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