



67-77 High Street, Northfleet, DA11

Internal Daylight Assessment

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Contents

1.0	Introduction	3
2.0	Project Summary	4
3.0	Methodology	5
4.0	Room Schedules	6
5.0	Daylight Results	10
6.0	Conclusions	12

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1.0 Introduction

- 1.1 This internal daylight assessment has been prepared in relation to an application for the proposed redevelopment of the site at 67-77 High Street, Northfleet.
- 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 for those rooms 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 develop 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 are accepted as the industry standards.

2.0 Project Summary

- 2.1 The proposal site is at 67-77 High Street, Northfleet and is currently occupied by a car washing facility.
- 2.2 The proposal is for the demolition of the existing buildings on the site and the construction of a new residential development, rising to a maximum of 4 storeys in height.
- 2.3 The developer wishes to ensure that the newly created dwellings will receive sufficient daylight for their intended use, in excess of the minimum values prescribed by 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

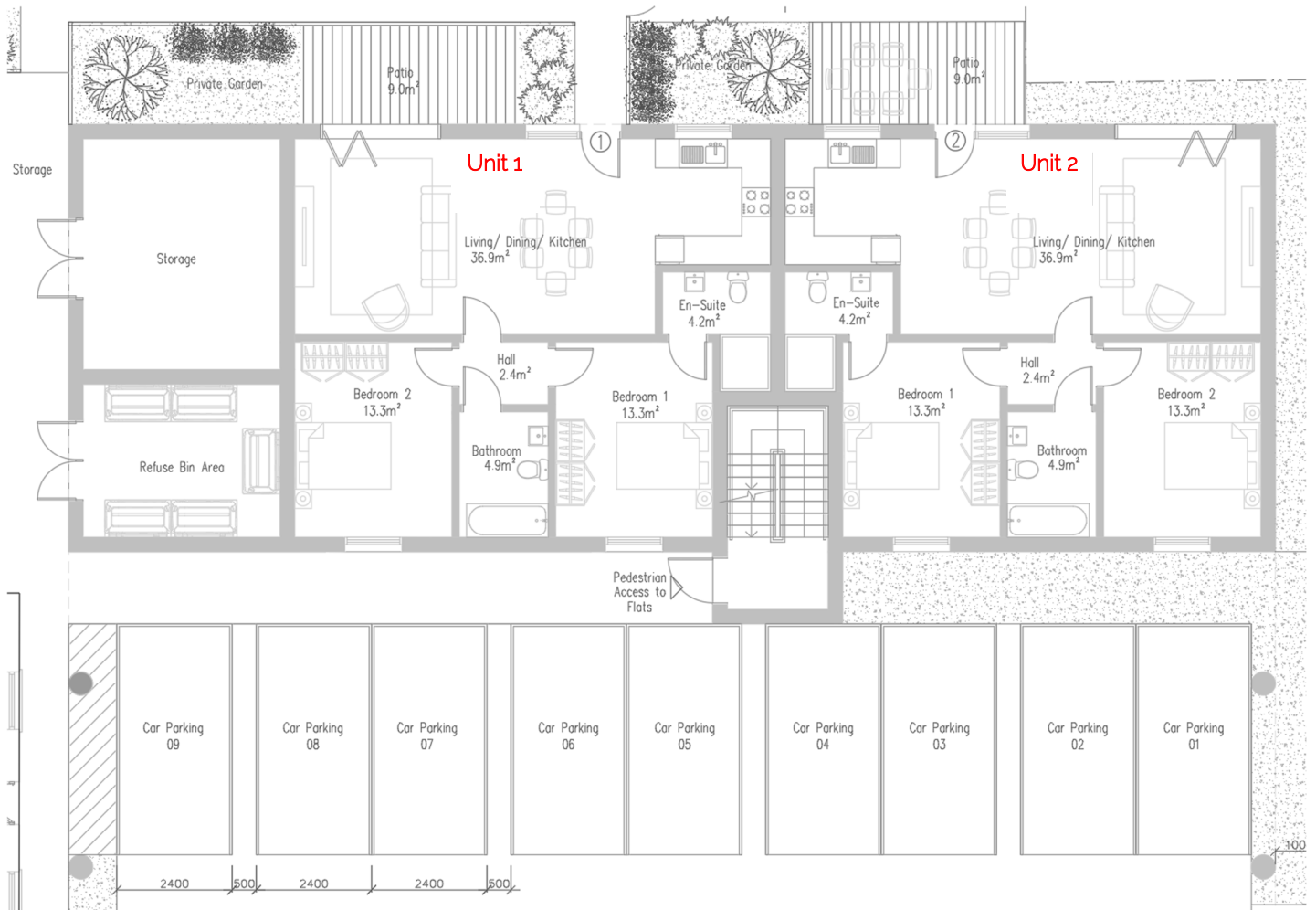
3.0 Methodology

- 3.1 The BRE and BS EN 17037 guidance allows for two alternative methods to assess daylight within new dwellings. This report uses the following method:
- Target Daylight Factor (DF_T)
- 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 The minimum DF_T values for various UK locations and room types are provided below. The targets for London have been used for this site.

Table C3 – Target daylight factors (D_r) to achieve over at least 50% of the assessment grid in UK domestic habitable rooms with vertical and/or inclined daylight apertures			
Location	D_r for 100 lx (Bedroom)	D_r for 150 lx (Living room)	D_r 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%

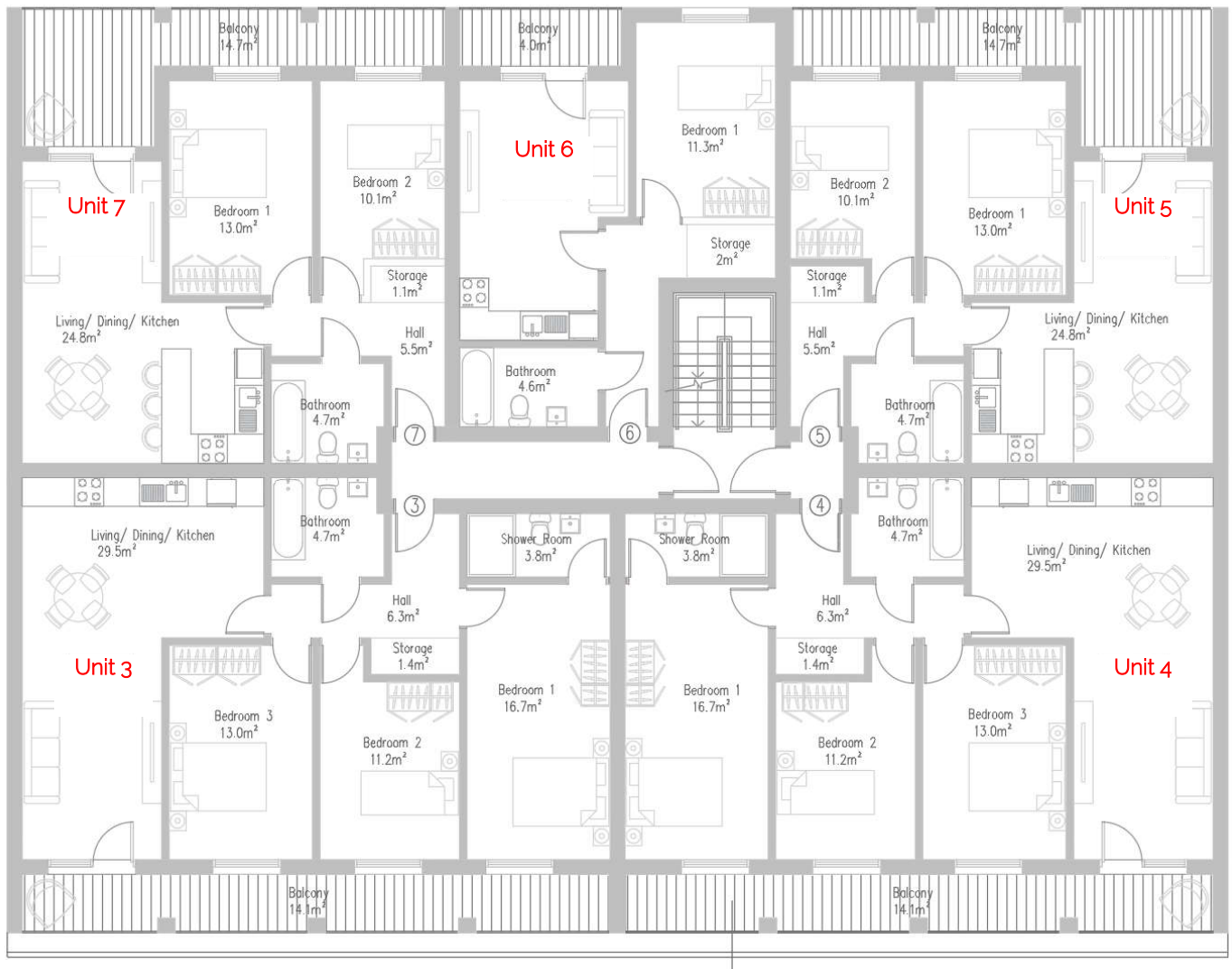
- 3.6 It is deemed by the guidance that if the minimum DF_T criteria are met, then the occupiers of the dwelling will have sufficient daylight. As can be seen from the results below that all assessed habitable rooms meet and exceed the minimum levels of internal daylight.

4.0 Room Schedules



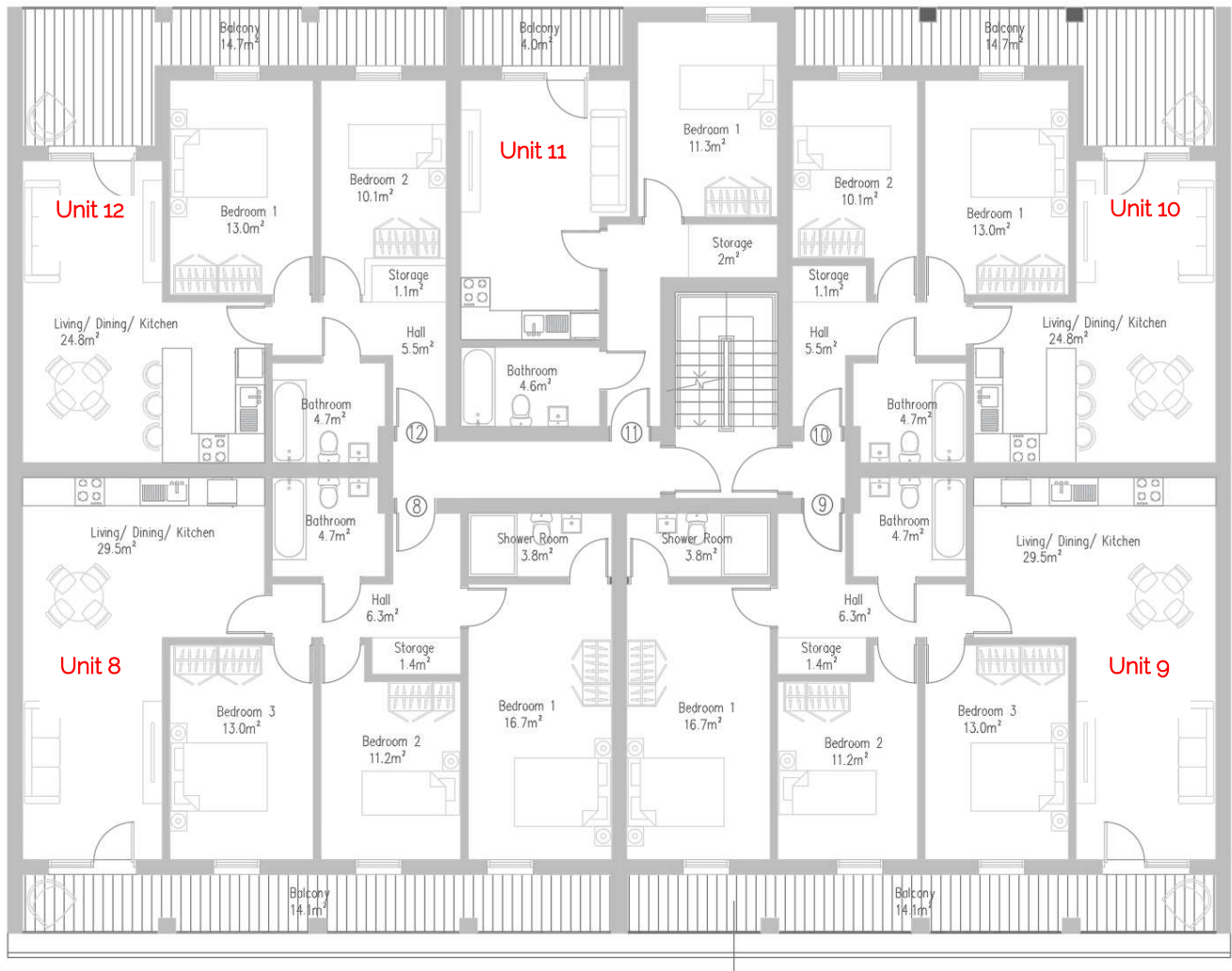
Ground Floor as Proposed

4.0 Room Schedules



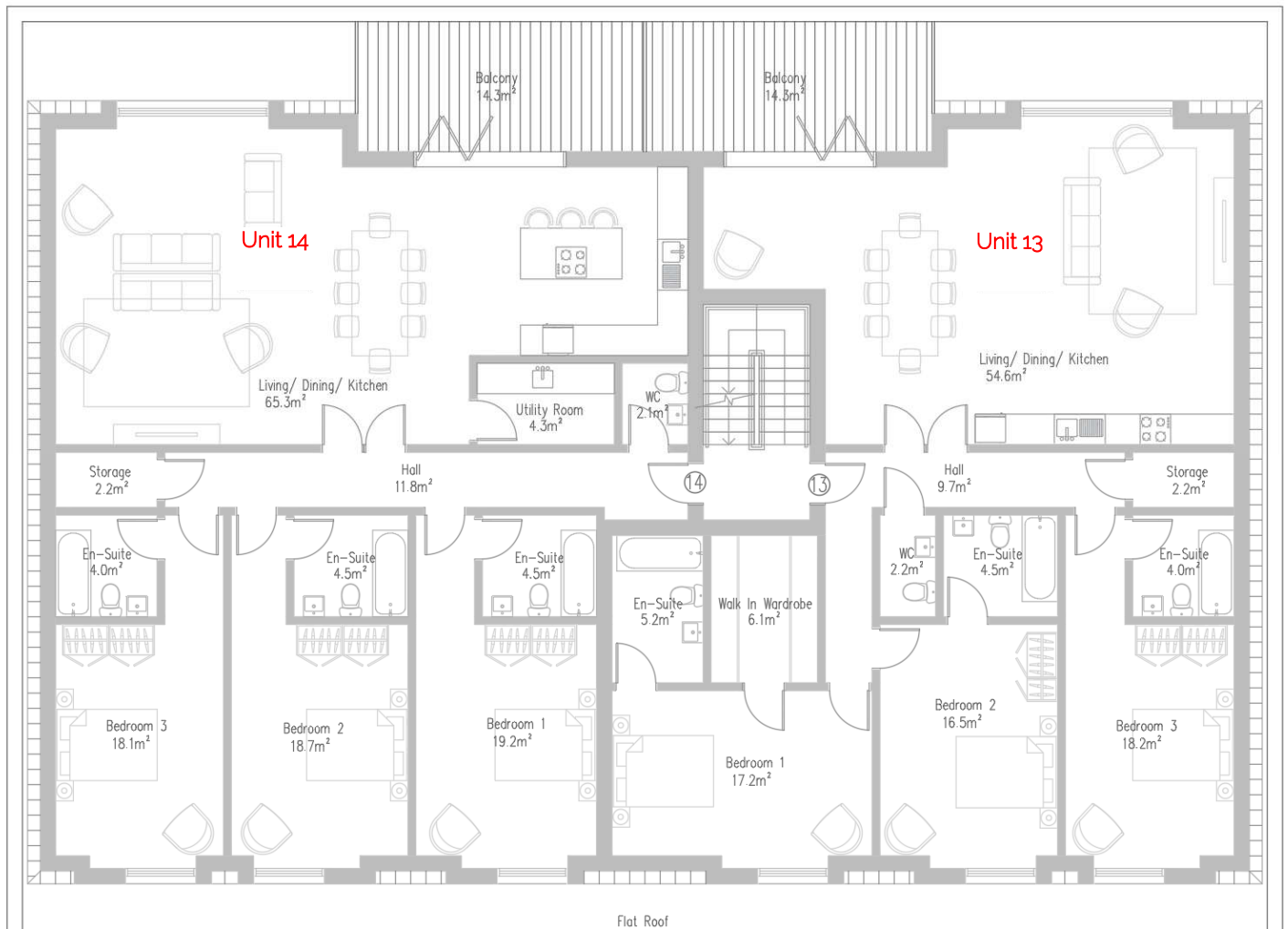
First Floor as Proposed

4.0 Room Schedules



Second Floor as Proposed

4.0 Room Schedules



Third Floor as Proposed

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
1	Kitchen/Living/Dining	1.4%	93.5%	Yes
1	Bedroom 1	0.7%	67.4%	Yes
1	Bedroom 2	0.7%	64.6%	Yes
2	Kitchen/Living/Dining	1.4%	93.6%	Yes
2	Bedroom 1	0.7%	67.4%	Yes
2	Bedroom 2	0.7%	67.9%	Yes
3	Kitchen/Living/Dining	1.4%	59.9%	Yes
3	Bedroom 1	0.7%	88.2%	Yes
3	Bedroom 2	0.7%	94.9%	Yes
3	Bedroom 3	0.7%	91.7%	Yes
4	Kitchen/Living/Dining	1.4%	59.9%	Yes
4	Bedroom 1	0.7%	88.3%	Yes
4	Bedroom 2	0.7%	94.9%	Yes
4	Bedroom 3	0.7%	91.8%	Yes
5	Kitchen/Living/Dining	1.4%	63.0%	Yes
5	Bedroom 1	0.7%	90.4%	Yes
5	Bedroom 2	0.7%	93.8%	Yes
6	Kitchen/Living/Dining	1.4%	86.2%	Yes
6	Bedroom 1	0.7%	92.5%	Yes
7	Kitchen/Living/Dining	1.4%	62.9%	Yes
7	Bedroom 1	0.7%	90.3%	Yes
7	Bedroom 2	0.7%	93.8%	Yes

5.0 Daylight Results

Minimum Target Daylight Factor				
Unit	Room	Required DF _T Over 50% of Room Area	Area Of Room Receiving Required DF _T	Meets Standards?
8	Kitchen/Living/Dining	1.4%	61.9%	Yes
8	Bedroom 1	0.7%	91.2%	Yes
8	Bedroom 2	0.7%	98.2%	Yes
8	Bedroom 3	0.7%	94.8%	Yes
9	Kitchen/Living/Dining	1.4%	61.9%	Yes
9	Bedroom 1	0.7%	91.3%	Yes
9	Bedroom 2	0.7%	98.2%	Yes
9	Bedroom 3	0.7%	94.9%	Yes
10	Kitchen/Living/Dining	1.4%	65.1%	Yes
10	Bedroom 1	0.7%	93.5%	Yes
10	Bedroom 2	0.7%	97.0%	Yes
11	Kitchen/Living/Dining	1.4%	89.2%	Yes
11	Bedroom 1	0.7%	95.7%	Yes
12	Kitchen/Living/Dining	1.4%	65.0%	Yes
12	Bedroom 1	0.7%	93.4%	Yes
12	Bedroom 2	0.7%	97.0%	Yes
13	Kitchen/Living/Dining	1.4%	100.0%	Yes
13	Bedroom 1	0.7%	92.4%	Yes
13	Bedroom 2	0.7%	97.1%	Yes
13	Bedroom 3	0.7%	95.9%	Yes
14	Kitchen/Living/Dining	1.4%	100.0%	Yes
14	Bedroom 1	0.7%	92.3%	Yes
14	Bedroom 2	0.7%	97.2%	Yes
14	Bedroom 3	0.7%	95.9%	Yes

6.0 Conclusions

- 6.1 The proposed development at 67-77 High Street, Northfleet 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 relevant guidance.
- 6.3 This has been successfully achieved, as demonstrated by the positive results presented within this report.
- 6.4 The assessed rooms 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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