



Abbey
Corner,
Reading
RG1 3AA

Internal Daylight Assessment

November
2021



Ref: 21-8528

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Revision	-
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1. Executive Summary

Syntegra Consulting Ltd has been appointed by The Harris Partnership to prepare an Internal Daylight Assessment in order to examine the levels of daylight received by the new 4th floor on Abbey Corner in Reading. The study covers the addition of a newly build 4th floor addition to the existing development on Abbey Corner, Reading.

The following can be concluded based on the studies undertaken:

- **Internal daylight (ADF):** All rooms are compliant with the minimum standards

Please note that only highly occupied rooms are included within the assessment.

Therefore, all rooms are compliant with the minimum internal daylight standards outlined in the (BRE) Guide 'Site Layout Planning for Sunlight and Daylight: A Guide to Good Practice' by P J Littlefair (2011).

2. Introduction

2.1. Background

Syntegra Consulting Ltd has been appointed by The Harris Partnership to prepare an Internal Daylight assessment in order to examine the levels of daylight received by the new 4th floor on Abbey Corner in Reading. The following methodology has been proposed in order to examine all required parameters:

- Carry out an internal daylight assessment using the methodologies set out in by BRE and British Standard guidelines to determine the Average Daylight Factor (ADF).

2.2. Methodology – Assessment Criteria

The Internal daylight assessment, analysed in this report, has been carried out in compliance with the methodology outlined in the Building Research Establishment (BRE) Guide ‘Site Layout Planning for Sunlight and Daylight: A Guide to Good Practice’ by P J Littlefair (2011).

Please see below brief description of each criterion assessed.

2.3. Average Daylight Factor (ADF)

The quality and quantity of daylight provision to a space in a new dwelling are both important. The BRE guidance suggests the use of the widely understood average daylight factor (ADF) metric to assess both the quantity and distribution of daylight in new rooms, using a CIE standard overcast sky condition. Referencing BS8206-2 Code of Practice for Daylighting, the guidance recommends values of 5% for a well day lit space and 2% for a partly day lit space.

Table 1 below summarizes all criteria examined.

Parameter	Acceptability Criteria
Average daylight factor (ADF)	Kitchen > or = 2% Living areas > or = 1.5% Bedrooms > or = 1%

Table 1 - Overall Guidance/Methodology Assessment

Error! Reference source not found. below demonstrates the room description for easier interpretation of the results, while figure 2 the examined areas are marked with green. Figure 3 displays the IES model used to calculate the Internal daylight levels. The IES model is based on information received by the client. All surrounding buildings are build based on approximation and on google maps.

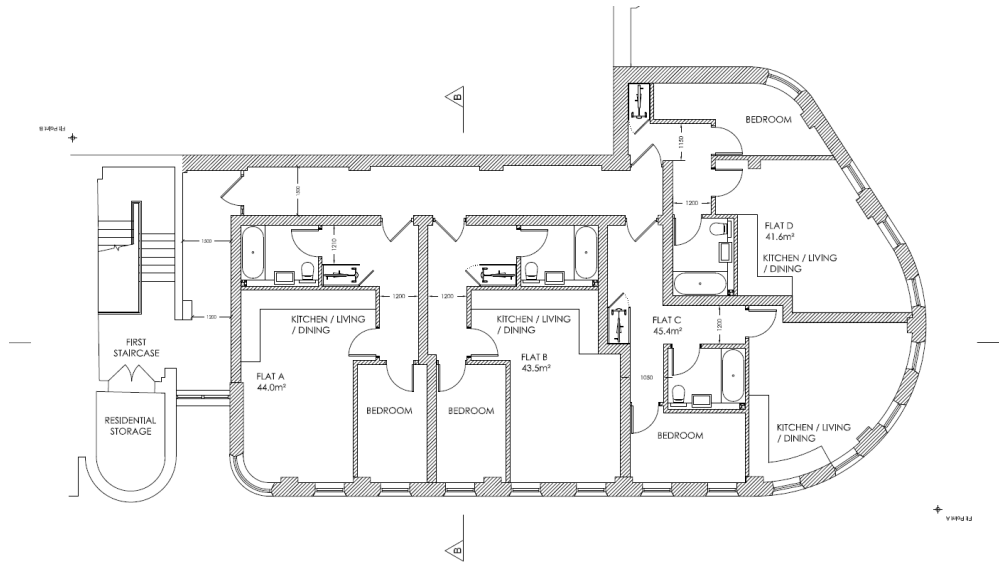


Figure 1 - Room reference

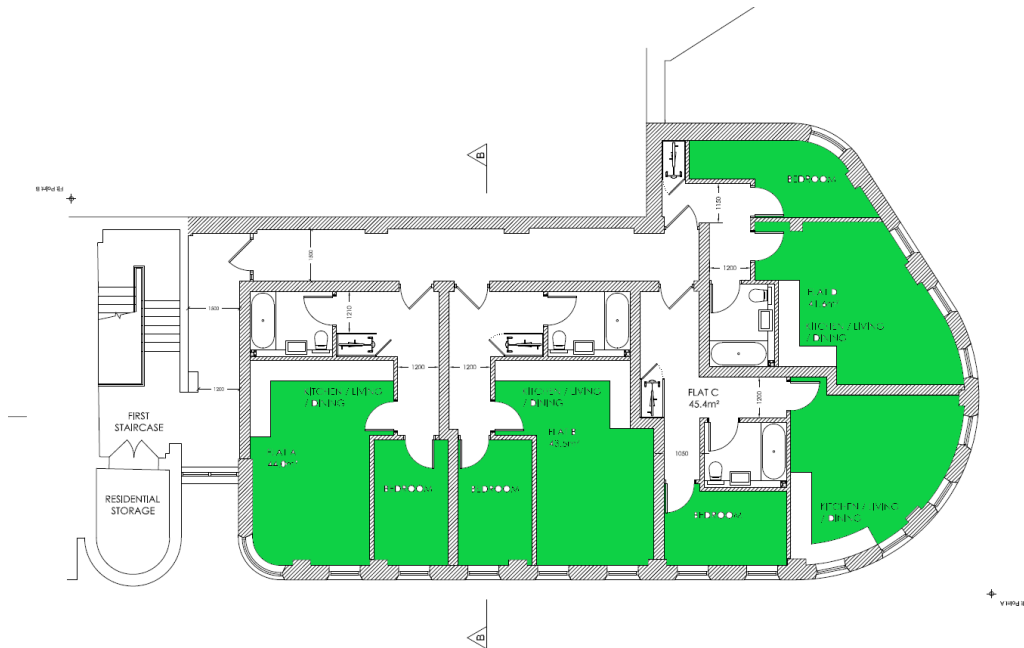


Figure 2 - Examined Rooms for IDA Compliance

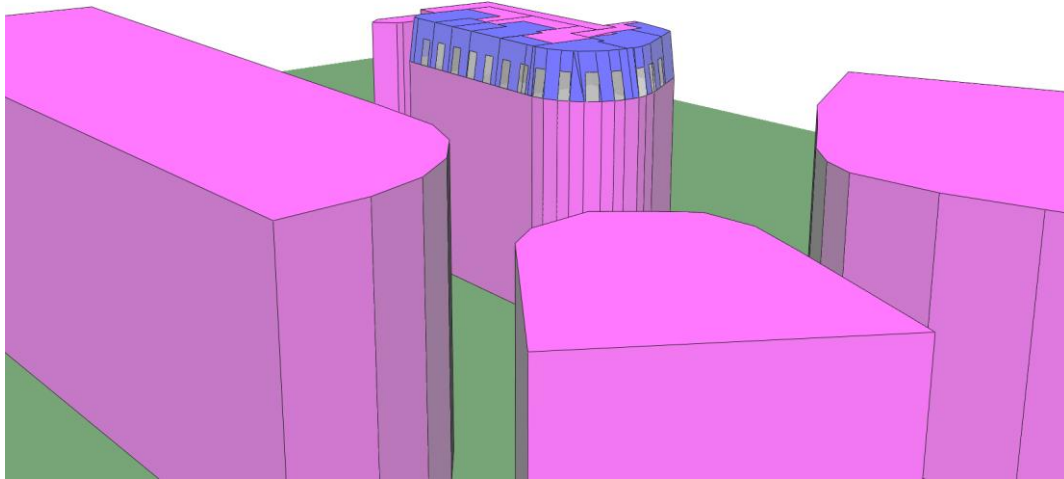


Figure 3 - IES VE 2021 3D Model Representation

3. Results

Average Daylight Factor

The results of the analysis for the levels of daylight available within the occupied spaces of the proposed development are presented on the table below.

Zone	ADF	Status
Flat A KLD	2.0%	Pass
Flat A Bed	2.5%	Pass
Flat B KLD	1.7%	Pass
Flat B Bed	3.3%	Pass
Flat C KLD	4.2%	Pass
Flat C Bed	5.4%	Pass
Flat D KLD	2.9%	Pass
Flat D Bed	1.7%	Pass

Table 2 - IDA Results/ Compliance

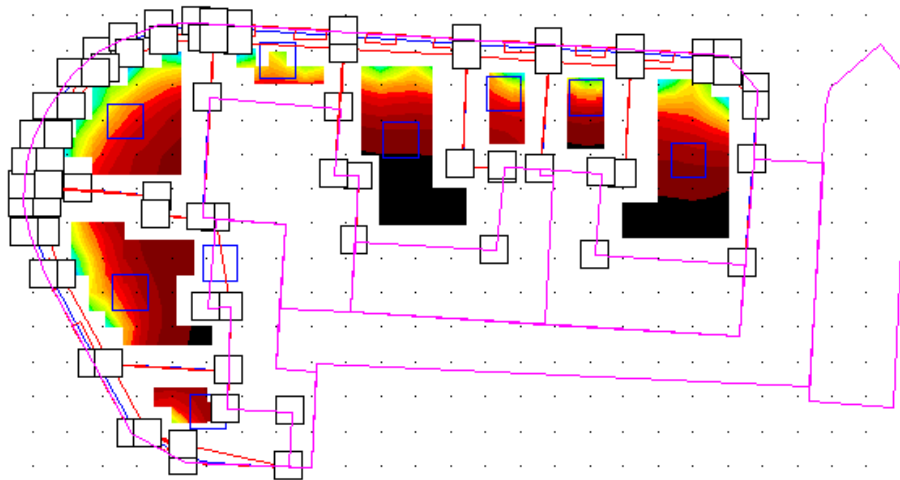


Figure 4 - Abbey Corner 4th Floor / IDA Graphical Representation

4. Conclusion

The results of this assessment with respect to the new 4th floor on Abbey Corner in Reading indicate the following:

- **Internal daylight (ADF):** All rooms are compliant with the minimum standards

Please note that only highly occupied rooms are included within the assessment.

Therefore, all rooms are compliant with the minimum internal daylight standards outlined in the (BRE) Guide 'Site Layout Planning for Sunlight and Daylight: A Guide to Good Practice' by P J Littlefair (2011).