Daylight Calculations Report

10 Little Turnstile, Holburn.

25th April 2022

ENVIRONMENTAL AND
SUSTAINABILITY CONSULTANTS

encon associates

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1 Executive Summary

Encon Associates Ltd have been appointed by Migdal Investments Ltd to complete an assessment of the internal daylight conditions for the proposed refurbishment under the Building Research Establishment (BRE), PJ Littlefair and relevant BS 8206-2 Lighting for Buildings - Part 2 requirements. This report gives an indication of the probable internal average daylight factors for the development, based on the information provided at early design stage.

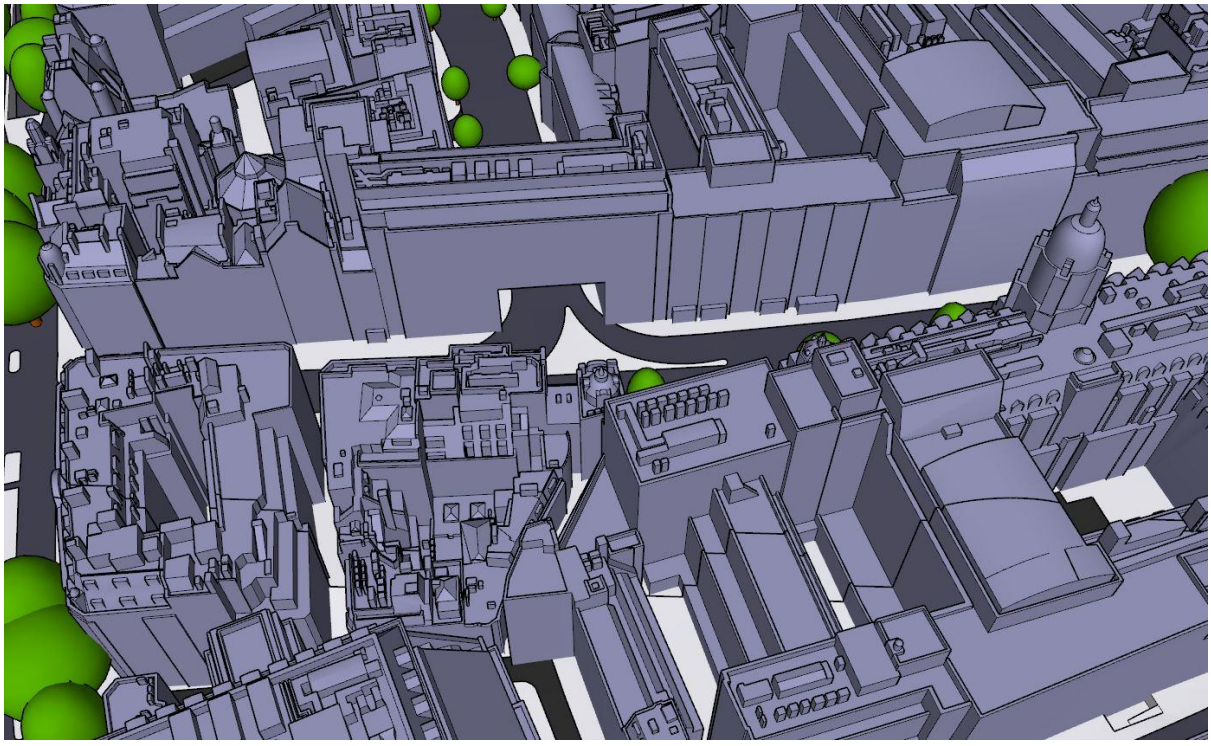
The proposed development consists of 1 No. Apartment and a small commercial element to the ground and basement floors at 10 Little Turnstile, Holburn, London. The scheme has been assessed against the BRE methodology and associated P J Littlefair guidelines.

The requirements state the following is required in order to achieve compliance with internal levels for the residential aspects:

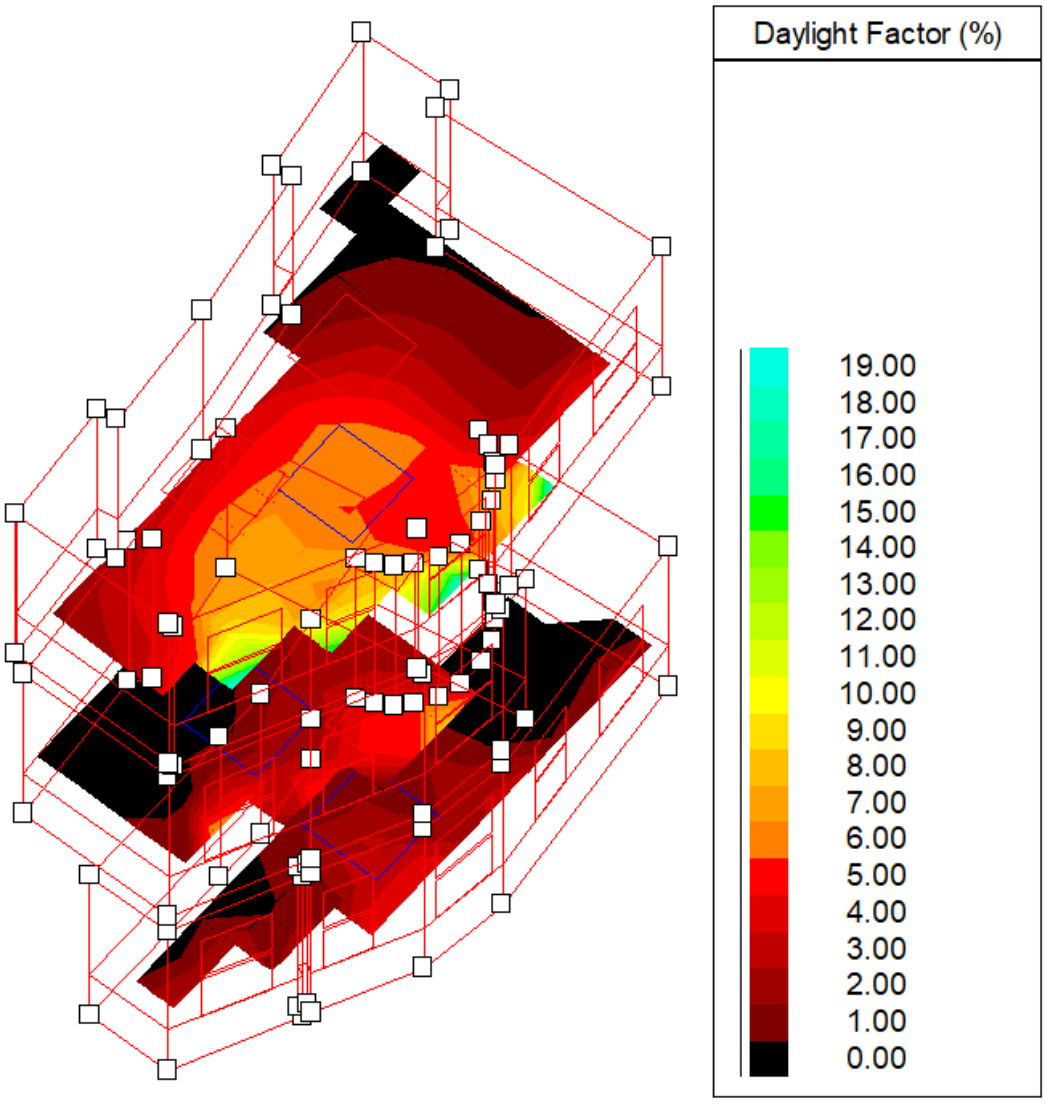
Minimum Internal Daylight factors	
Room	**Minimum requirement**
Kitchens	2.0%
Living Rooms, Dining Rooms and Studies	1.5%

The analysis undertaken confirms that the assessed bedrooms and Living/Kitchen/Dining rooms achieve compliance with the BRE minimum requirements for adequate internal daylight factors and view of the sky.

2 Modelling Imagery

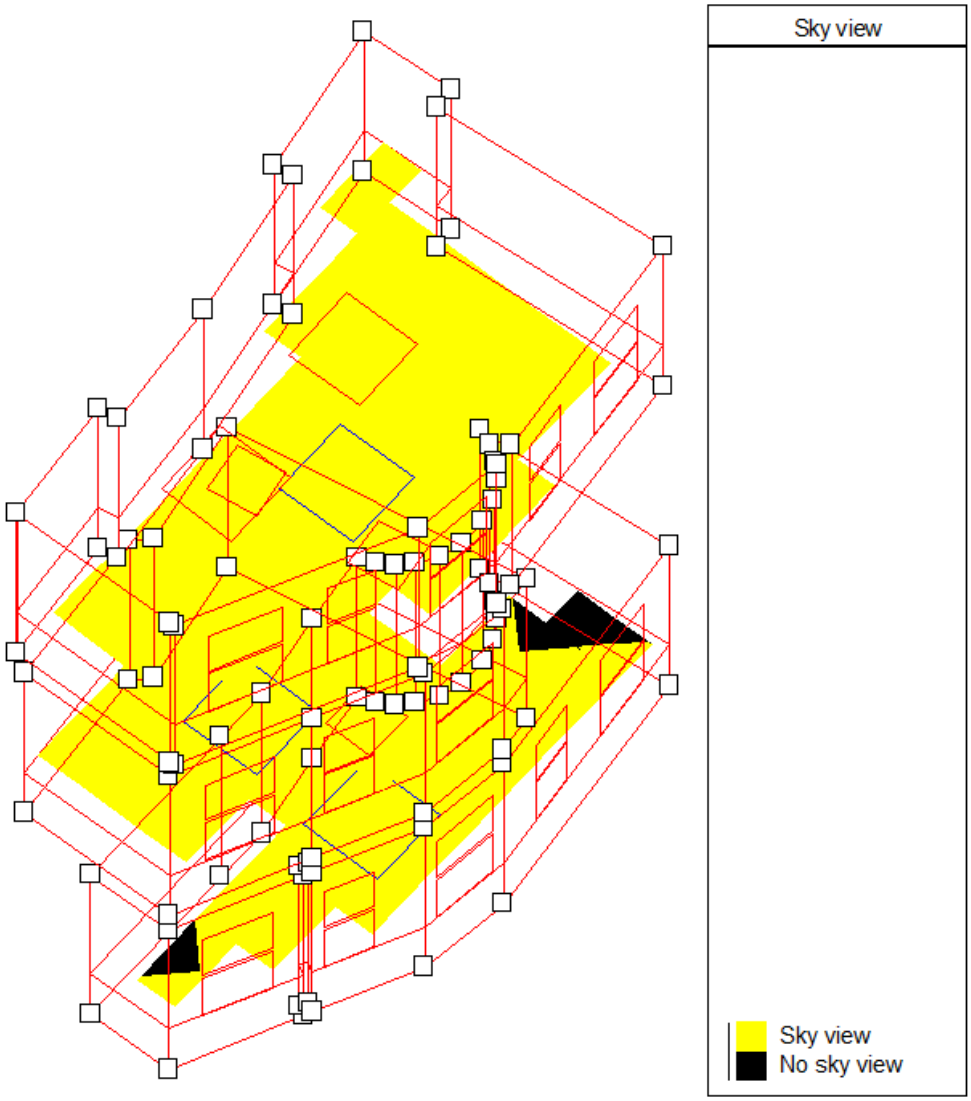


3 Daylighting Map Image



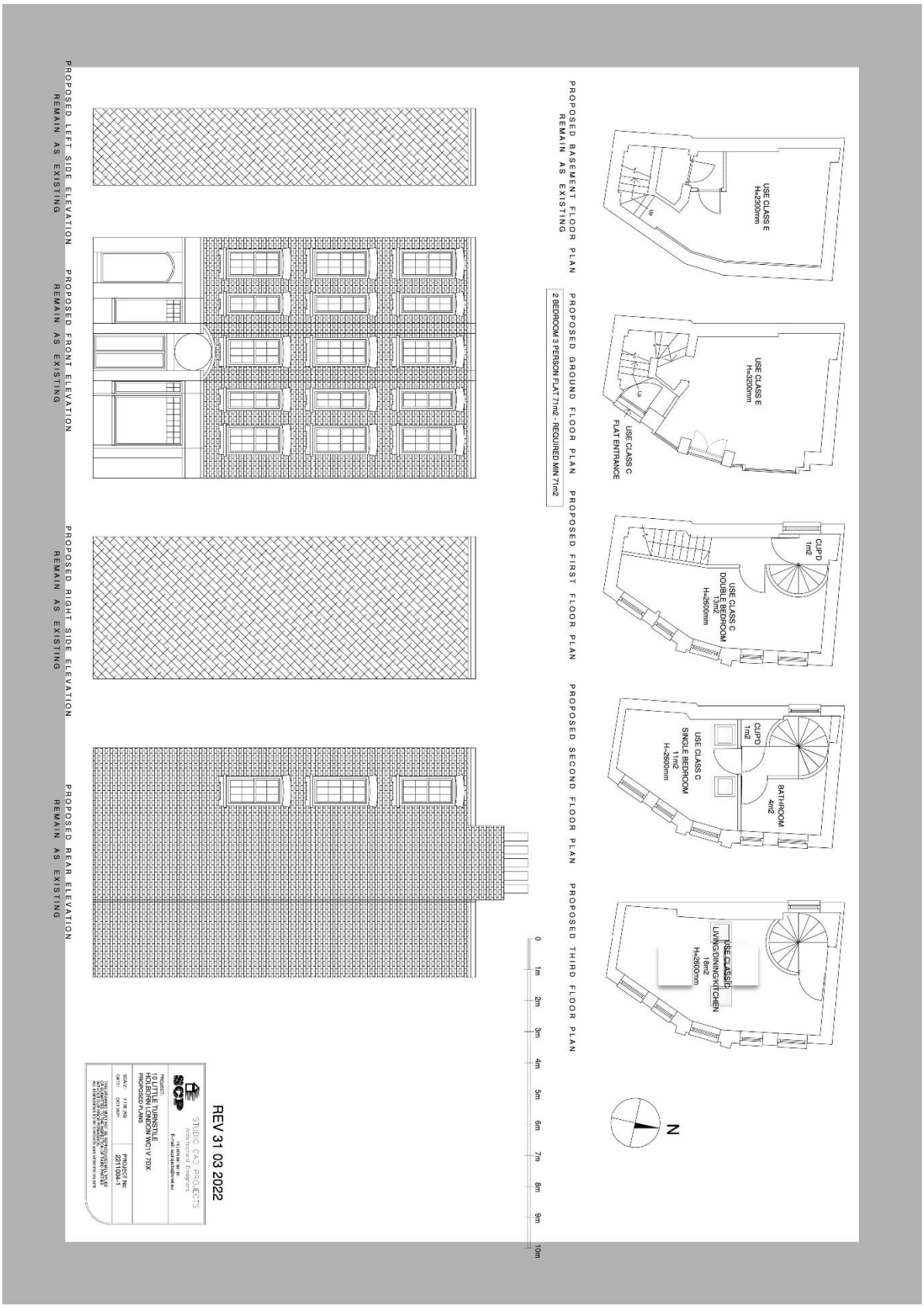
Achieved Internal Daylight factors		
Room	**Minimum requirement**	**Achieved level**
FF Double Bedroom	1.5%	1.8%
SF Single Bedroom	1.5%	2.3%
TF Living/Kitchen/Dining	2.0%	5.0%

4 View of the Sky Map Image



Achieved Skyview Percentages		
Room	**Minimum requirement**	**Achieved level**
FF Double Bedroom	80%	93%
SF Single Bedroom	80%	100%
TF Living/Kitchen/Dining	80%	100%

5 Planning Drawings



6 Daylight Calculations

Calculation summary:

Room ID	Room name	Analysis calculation	
		Performed	Succeeded
10000000	FF Double Bedroom	√	√
20000000	SF Single Bedroom	√	√
30000000	TF Living/Kitchen/Dining	√	√

Construction/Material ID	External area (m²)	External reflectance (%)	Internal area (m²)	Internal reflectance (%)
ASHWL-1	27997.67	10	138.85	80
RF7A	2006.88	10	44.72	80
SGFLR	4286.39	0	47.65	45

Room 10000000 (FF Double Bedroom)

Analysis calculation for room -

Summary results for working planes and floor

Surface	Quantity	Values			Uniformity (Min./Ave.)	Diversity (Min./Max.)
		Min.	Ave.	Max.		
Working plane 1 Reflectance=0% Transmittance=100% Grid size=0.50 m Area=13.819m² Margin=0.00 m	Daylight factor	0.0 %	1.8 %	17.1 %	0.00	0.00
	Daylight illuminance	0.00 lux	222.97 lux	2094.87 lux	0.00	0.00
	Sky view	0.00	0.93	1.00	0.00	0.00

Room 20000000 (SF Single Bedroom)

Analysis calculation for room -

Summary results for working planes and floor

Surface	Quantity	Values			Uniformity (Min./Ave.)	Diversity (Min./Max.)
		Min.	Ave.	Max.		
Working plane 1 Reflectance=0% Transmittance=100% Grid size=0.50 m Area=11.374m² Margin=0.00 m	Daylight factor	0.1 %	2.3 %	8.9 %	0.04	0.01
	Daylight illuminance	10.24 lux	276.79 lux	1086.38 lux	0.04	0.01
	Sky view	1.00	1.00	1.00	1.00	1.00

Room 30000000 (TF Living/Kitchen/Dining)

Analysis calculation for room -

Summary results for working planes and floor

Surface	Quantity	Values			Uniformity (Min./Ave.)	Diversity (Min./Max.)
		Min.	Ave.	Max.		
Working plane 1 Reflectance=0% Transmittance=100% Grid size=0.50 m Area=22.458m² Margin=0.00 m	Daylight factor	0.2 %	5.0 %	19.6 %	0.04	0.01
	Daylight illuminance	24.92 lux	614.34 lux	2395.21 lux	0.04	0.01
	Sky view	1.00	1.00	1.00	1.00	1.00