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Straightforward Building Compliance

159 Broadhurst Gardens
London
NW6 3AU

Right To Light (BS EN 17037/BS8206) Data Report

For:

Elliot Higginson

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Project no. 18995

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REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
V1	24/07/2024	Mantas Adomaitis	C80 Solutions	Initial report for comment
V2	10/09/2024	Mantas Adomaitis	C80 Solutions	Adjusted testing
V3	12/09/2024	Mantas Adomaitis	C80 Solutions	SDA visuals and table adjusted

The results generated and analysed in this report are based upon complex arithmetical calculation that takes into consideration several design criteria and evaluations in a dynamic simulation. It gives an indication of the predicted environmental conditions based on climatic data and anticipated operating strategies of the building.

The predicted simulated internal temperatures may also not meet the actual internal air temperatures due to several reasons, namely change in space function, use of equipment, natural wear and tear of building elements, global climate change and meteorological changes, change in operational management of apertures etc.

C80 Solutions cannot be held liable for temperatures that vary from the simulated results as these have been calculated in a controlled virtual environment.

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1. Introduction

1.1. About C80 Solutions Ltd

C80 Solutions are independent Sustainability and Energy Consultants providing carbon reduction solutions to help the UK achieve its carbon emission reduction target of 80% by 2050 - as set out in the Government's Climate Change Act 2008.

Our range of affordable but comprehensive solutions for the construction industry are broken down into two sectors: i) Building Compliance and ii) Consultancy.

1.2. Building Compliance

Our Building Compliance services include, SAP Calculations, On Construction Energy Performance Certificates, Water Efficiency Calculations, SBEM Calculations, Commercial EPCs, BREEAM assessments, Thermal comfort analysis, Air Tightness Testing and Sound Testing.

1.3. Consultancy

Our experience and exposure to building compliance combined with previous experience and IEMA accredited training means we have built up a vast amount of knowledge which enables us to provide our clients with invaluable advice. Our Consultancy services include Renewable Energy Feasibility Reports, Energy Statements for planning, Sustainability Statements and Building Compliance Advisory Reports.

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2. Overview

The aim of this data report is to provide evidence of adequate lighting for the proposed 2-storey existing development in Camden, NW6 3AU.

The following sections show the results produced and highlight the criteria that they have been reviewed against.

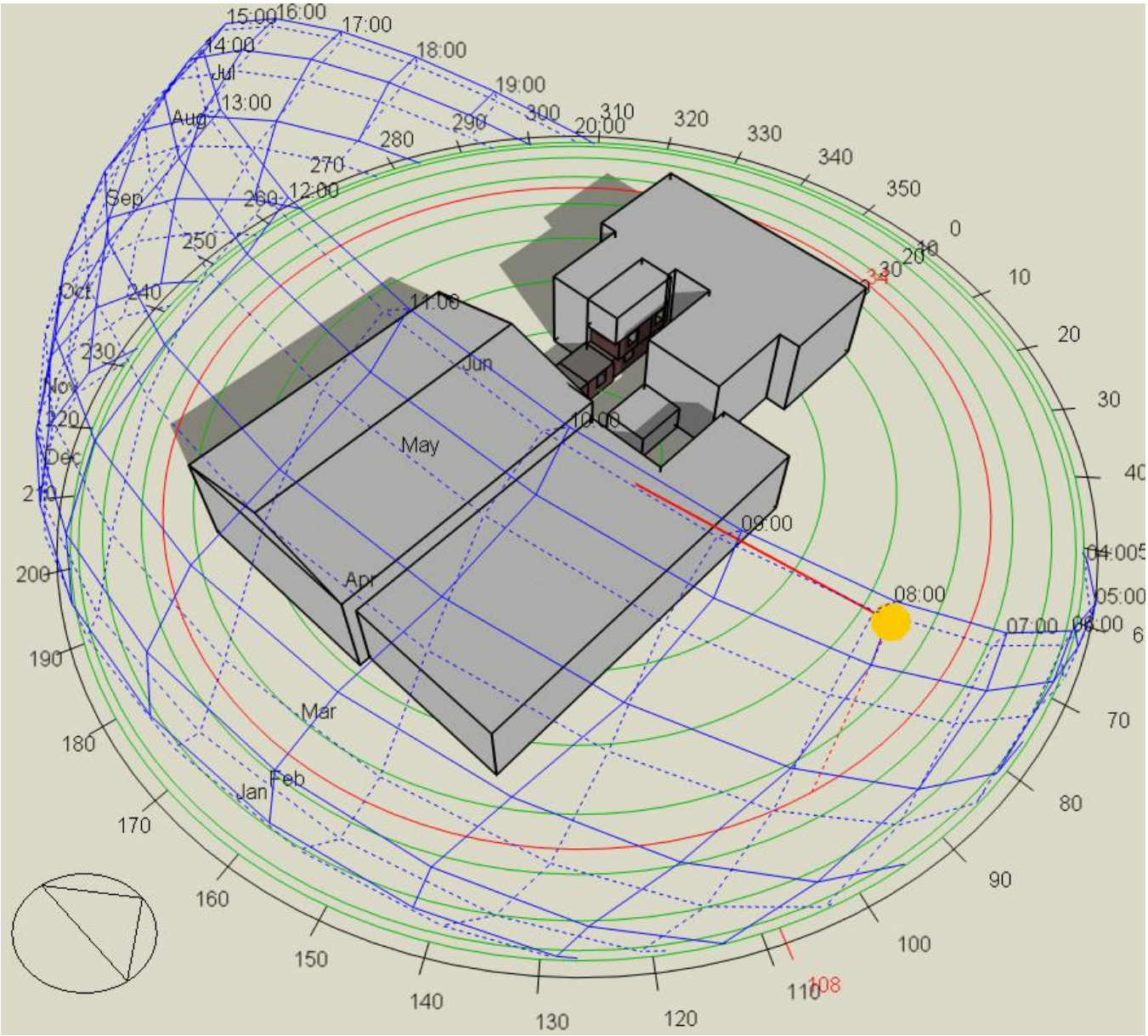

Figure 1 – Site Model With Adjacent Buildings and Sun Pathing

3. Right To Light (BS EN 17037/BS8206)

The concept of "Right to Light" refers to a legal principle protecting property owners from unreasonable obstruction of natural light by new developments. While not directly assessed in the current daylighting standard BS EN 17037:2018 (replacing the outdated BS 8206:2008), demonstrating compliance with BS EN 17037 can be helpful in proving adequate lighting for a new building design. This standard utilizes various performance indicators like daylight illuminance levels, daylight autonomy, and usable daylight hours to quantify natural light provision within a space. By following BS EN 17037's recommendations for these metrics based on space types, your design can achieve good daylighting practices, minimizing potential concerns regarding "Right to Light" infringement.

The 2 areas that will be explored in this report to prove adequate lighting are as follows:

1) Daylight Factor (DF)

Daylight factor (DF) is a measure of the amount of daylight entering a space. A typical threshold for passing building regulations is 2%, but this can vary. Factors like window size, orientation, and obstructions affect DF.

2) Spatial Daylight Autonomy (SDA Illuminance)

Spatial Daylight Autonomy (sDA) assesses whether a space receives sufficient daylight on a work plane during standard operating hours on an annual basis. The target is 300 lux for 50% of the occupied period.

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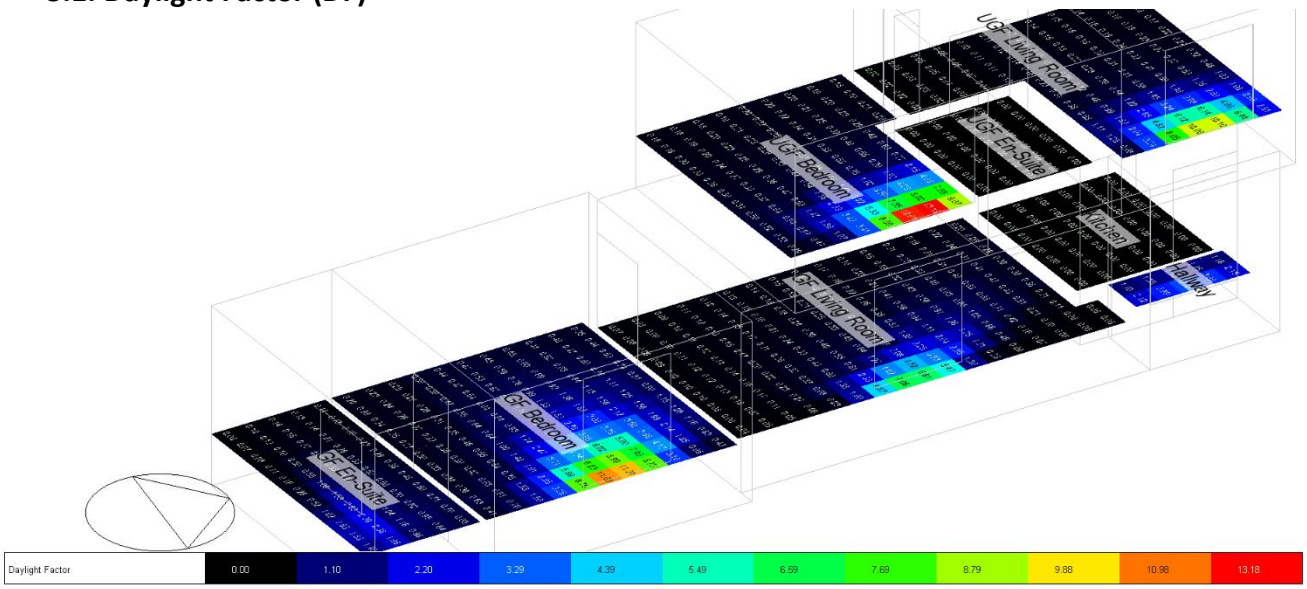
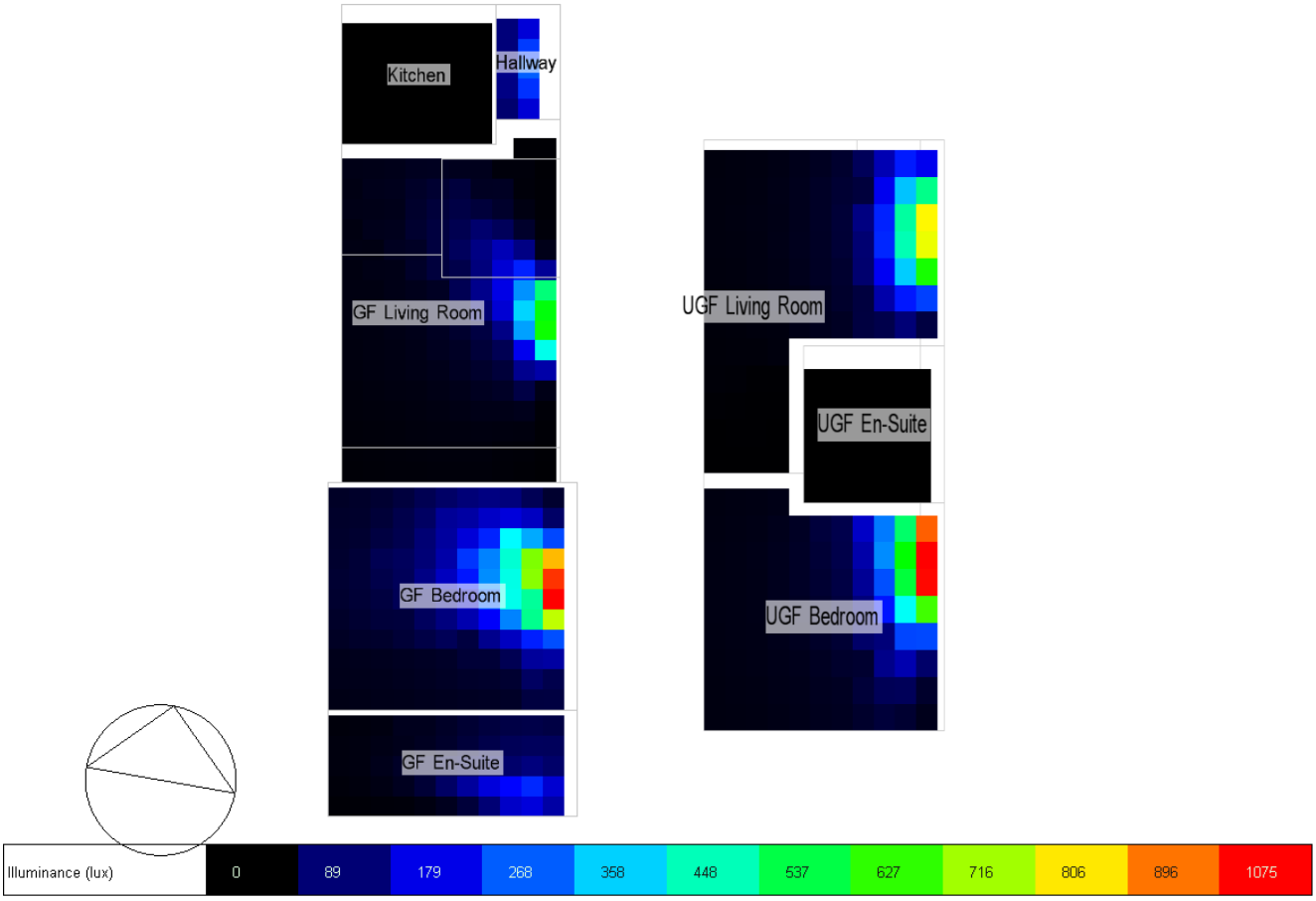
3.1. Daylight Factor (DF)



Block	Zone	Floor Area (m2)	Floor Area above Threshold (m2)	Floor Area above Threshold (%)	Daylight Factor (%)
GF	Kitchen	4.49	0	0	0
GF	GF Living Room	15.669	1.161	7.407	0.611
GF	Hallway	1.531	0.766	50	1.996
GF	GF Bedroom	11.782	2.532	21.488	1.712
GF	GF En-Suite	5.501	0.3	5.455	0.665
Upper GF	UGF Bedroom	9.073	1.578	17.391	1.457
Upper GF	UGF En-Suite	3.491	0	0	0
Upper GF	UGF Living Room	9.793	1.615	16.495	1.117
Total		**61.329**	**7.951**	**12.965**	**0.988**

3.2. Spatial Daylight Autonomy (SDA Illuminance)



Block	Zone	Floor Area (m2)	sDA Area in Range (m2)	sDA Area in Range (%)	ASE Area in Range (m2)	ASE Area in Range (%)
GF	Kitchen	4.49	0	0	4.49	100
GF	GF Living Room	15.669	1.168	7.453	15.669	100
GF	Hallway	1.531	0.68	44.444	1.531	100
GF	GF Bedroom	11.782	2.749	23.333	11.586	98.333
GF	GF En-Suite	5.501	0.102	1.852	5.501	100
Upper GF	UGF Bedroom	9.073	1.595	17.582	8.874	97.802
Upper GF	UGF En-Suite	3.491	0	0	3.491	100
Upper GF	UGF Living Room	9.793	1.632	16.667	9.589	97.917
Total		**61.329**	**7.927**	**12.925**	**60.729**	**99.022**

4. Conclusion

The design stage analysis completed using 'Designbuilder and Energy Plus' an approved thermal dynamic simulation software Has enabled full analysis of Right to Light using the provided design information.

1) Daylight Factor (DF)

   Depending on the criteria required, the daylight factor seems to be on the lower end in majority of the rooms.

2) Spatial Daylight Autonomy (SDA Illuminance)

   Similar to Daylight Factor, SDA test also shows that the rooms will have quite low amounts of illumination.