

Internal Average Daylight Study

Client: Mr Bakhda

Site Details: 5 Brecknock Road
London
N7 0BL

Contents

1. Introduction & Methodology	3
2. Proposed Development	4
3. Modelling the site	5
4. Internal Daylight	6
5. Illuminance Captures.....	7
6. Conclusion	8

Appendices

Appendix A: Proposed Plans

Report Details:

Prepared by	Checked by	Date	Job Number	Revision
Nicholas Gardner	Peter Kinsella	19.11.2021	9210	0.0

This document has been prepared solely as an Internal Daylight Factor Report for Mr Bakhda. Base Energy Services Ltd accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

1. Introduction & Methodology

Base Energy were instructed by Mr Bakhda to prepare an internal daylight study to investigate the internal daylight levels within the living room and bedroom of Unit 3 within the proposed development at 5 Brecknock Road, London, N7 0BL.

The daylight study is to ensure the comfort, health and safety of building occupants as well as visitors and others within the vicinity is acceptable. It is also to enhance the quality of life in dwellings by recognising those that encourage a healthy and safe internal environment for occupants.

Using industry standard methodology as prescribed by BRE and British Standard guidance: we have made numerical analyses to ensure compliance with the recommended levels of change in daylight for the habitable rooms of the assess dwelling.

The main criteria used in this analysis to show compliance is the:

- Average Daylight Factor (ADF)

The ADF is derived from British Standard BS 8206 and is a complex and representative calculation to determine natural internal luminance (daylight). The ADF 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.

This report has been prepared for planning purposes, and not a Right to Light dispute.

2. Proposed Development

There are proposals for the conversion of the existing ground floor store - room space to create a 1 - bedroom dwelling at 5 Brecknock Road, London, N7 0BL.

Location Plan



3. Modelling the site

An analysis model is created of the living room and bedroom within Unit 3. All relevant surrounding buildings and obstructions are also factored into the analysis, calculations are then run to determine the average daylight factor within those rooms.

The outputs of those calculations can be exported numerically. Using the BRE guidance which gives absolute figures for the acceptable percentage of daylight, we can then establish if the proposal will have the required daylighting levels stipulated by BRE guidelines.

It is important to note that not all nearby features have been modelled, only those that will affect the daylighting. In accordance with BRE recommendations, trees have been omitted from the calculations.

The reference document for this analysis, BRE Digest 209, provides the methodology for undertaking the calculations as well as benchmark figures for the acceptable reduction in the daylight on existing properties which might be affected by development.

This study has been calculated in accordance with BRE methodology, using:

- An CIE overcast sky
- Glass transmission is 0.6 (double glazing with low-emissivity coating)
- Angle of visible sky between 72° and 74°
- Horizontal glazing for rooflights
- Area weighted reflectance of room surfaces at 0.5

It is also worth noting that these figures assume that internal lighting is available to supplement the available daylight. It is considered that if a room has a Daylight Factor of 5%, then it will be sufficiently well lit, even in the absence of electric lighting. It is deemed by the guidance that if the ADF criteria are met, then the occupiers of the dwelling will have sufficient daylight, although it should be noted that these figures are guidelines only, and assumptions have been made on window types.

4. Internal Daylight

Internal daylight levels for the rooms detailed below have been calculated in accordance with BRE methodology, using a CIE overcast sky at an illuminance value of 8500 lux. The calculations assume a white ceiling, cream walls and mid-grey carpet or wooden floor.

BS 8206 recommends the following values for particular room types:

- Kitchen: **2%**
- Living/Dining Rooms: **1.5%**
- Bedrooms: **1%**

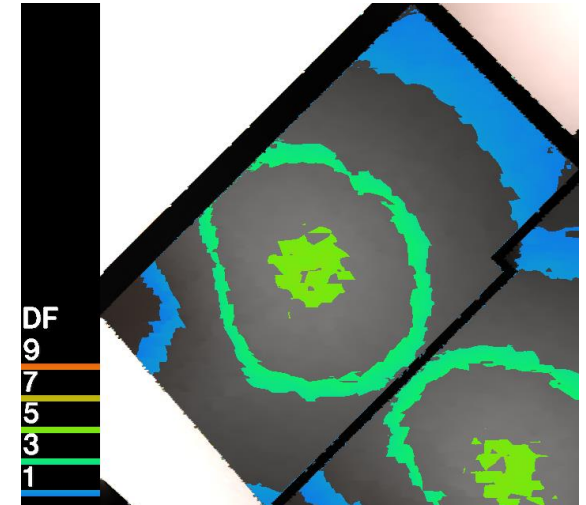
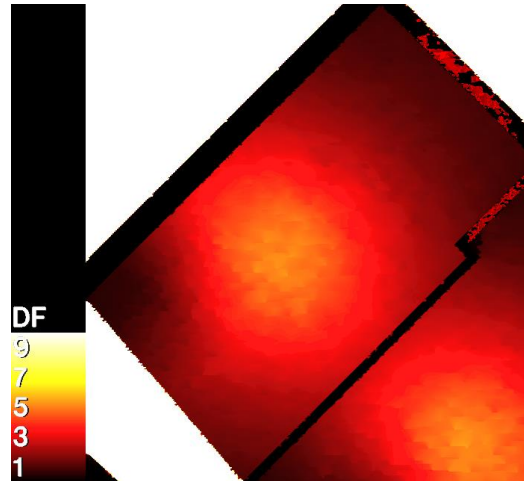
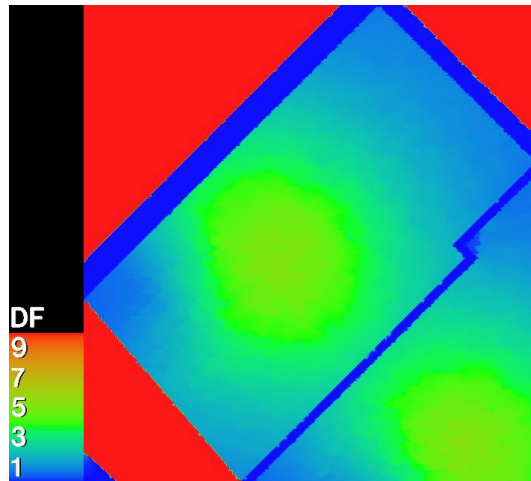
It is deemed by the guidance that if the ADF criteria are met, then the occupiers of the dwellings will have sufficient daylight.

Proposed Room	Recommended ADF (%)	Proposed ADF (%)	BRE Compliance
Living Room	1.5%	2.6 %	Yes
Bedroom	1%	2.55%	Yes

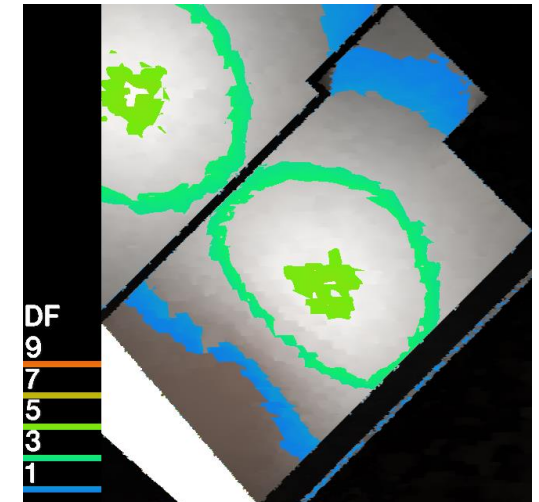
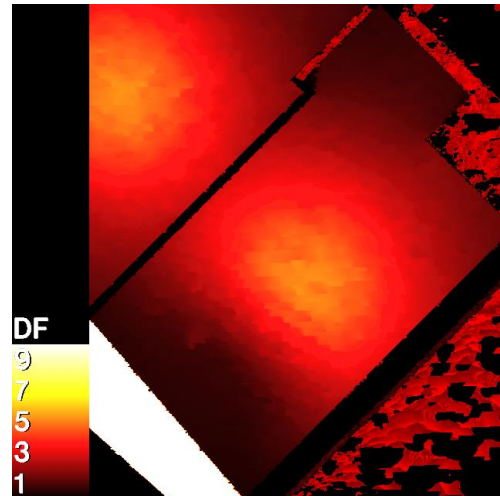
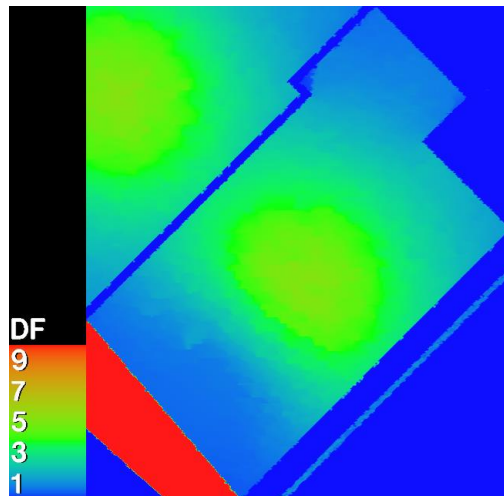
It can be seen from the results above that both assessed rooms meet and are in excess of the target daylight factor and therefore comply with BRE guidelines.

5. Sample Illuminance Captures

Living Room



Bedroom



6. Conclusion

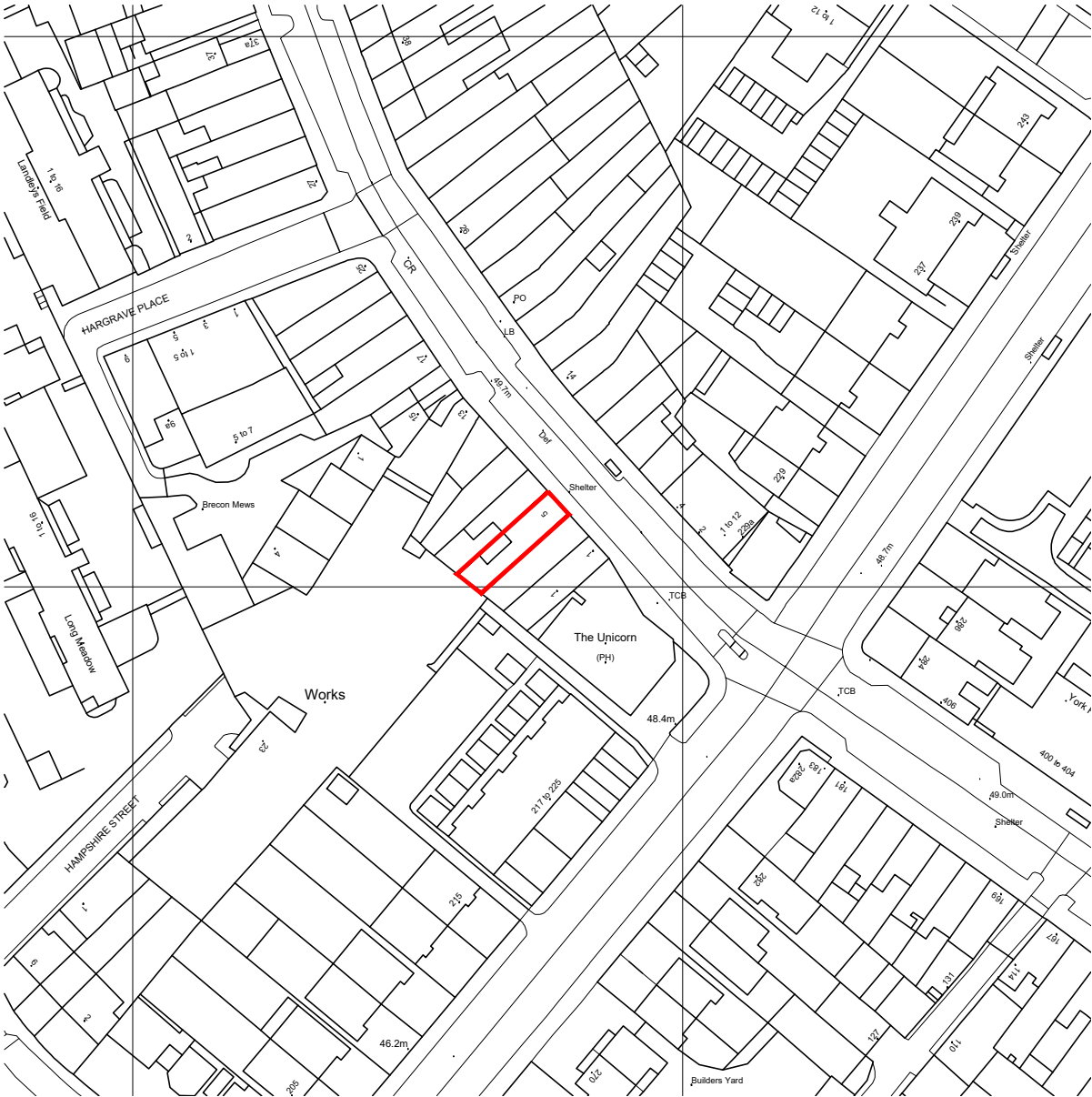
Using industry standard methodology, we have made numerical analyses to calculate the recommended levels of daylight for the rooms detailed above. The main criteria used in this analysis to show compliance is the Average Daylight Factor (ADF) reflected as a percentage.

The results show that all rooms detailed in section 4 of this report meet and exceed the minimum requirements in accordance with BRE guidelines and are therefore, from a planning perspective, considered acceptable.

Appendices

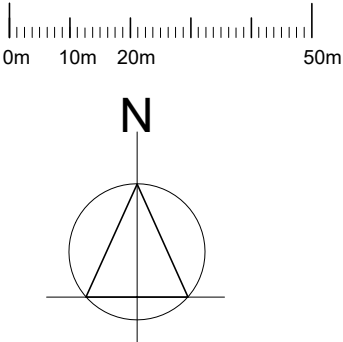
Appendix A: Proposed Plans

LOCATION PLAN



Copyright notice:

This and all other documents authored by VMA and all information and concepts both depicted and implied therein are the sole property of VMA. Reproduction or transmission in any form is strictly forbidden unless prior permission is obtained in writing from VMA. Construction based on the depicted information at any time or location not related to this project is strictly forbidden unless prior permission is obtained in writing from VMA.



00	10.05.21	PLANNING
----	----------	----------

VMArchitects

21 Sunningfields Road DDI: 020 7936 4222
London NW4 4QR office@vm-arch.com

Job title

5 BRECKNOCK ROAD
LONDON - N7 0BL

Drawing title

LOCATION PLAN

Scale	Date	Drawn	Checked
1:1250@ A3	May 21	MJ	VM
Drawing No.		Rev. No.	
380/B - 0001		00	



SOUTH ELEVATION

WEST ELEVATION

NORTH ELEVATION

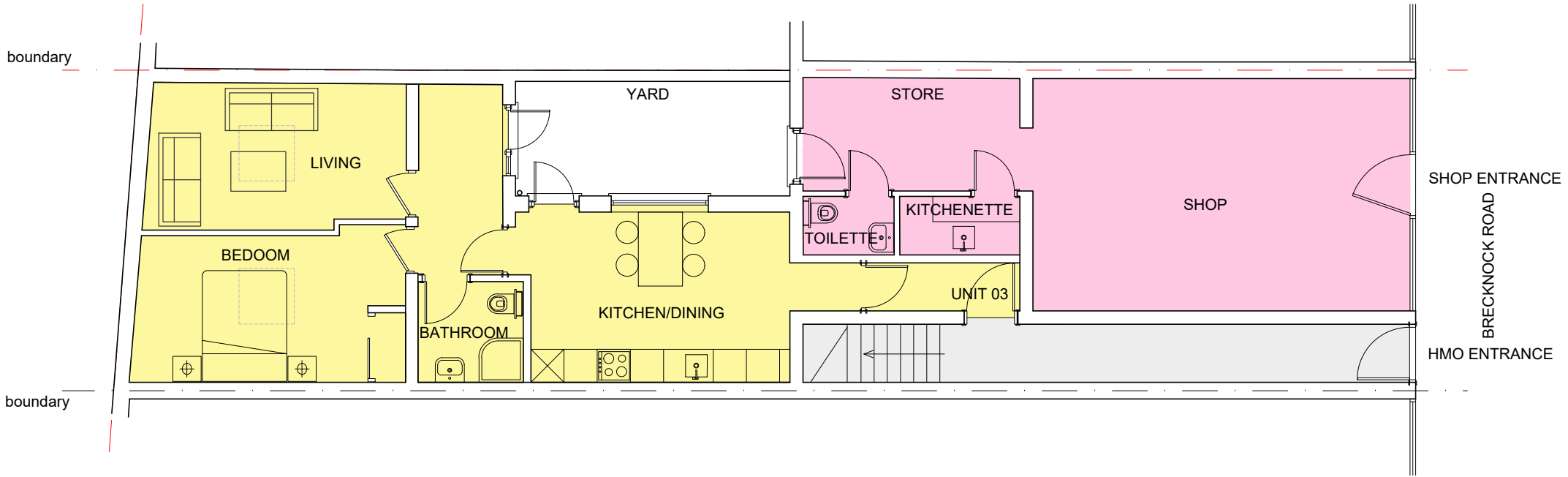
Copyright notice:

This and all other documents authored by VMA and all information and concepts both depicted and implied therein are the sole property of VMA. Reproduction or transmission in any form is strictly forbidden unless prior permission is obtained in writing from VMA. Construction based on the depicted information at any time or location not related to this project is strictly forbidden unless prior permission is obtained in writing from VMA.

0m1m2m5m

HMO UNIT 03
Gross internal area 55.0 m²

SHOP AREA
Gross internal area 42.0 m²



GROUND FLOOR PLAN
AS BUILT

00

10.05.21

PLANNING

VMA

architects

21 Sunningfields Road
London NW4 4QR

DDI: 020 7936 4222
office@vm-arch.com

Job title

5 BRECKNOCK ROAD
LONDON - N7 0BL

Drawing title

PLAN, SECTIONS AND ELEVATIONS
AS BUILT

Scale	Date	Drawn	Checked
1:100@ A3	May 21	SB	VM

Drawing No.	Rev. No.
380 - 110	00