Daylight Report
(Code for Sustainable Homes Credits)

Client: Sarah Fournier, 5 Kemplay Road, London, NW3 1TA

Project: 5 Kemplay Road, London, NW3 1TA

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Author: James Hargreaves

MES Energy Services
Newark Beacon,
Beacon Hill Office Park,
Cafferata Way,
Newark
Nottinghamshire NG24 2TN.

Tel: 01636 653 055 Fax: 01636 653 010
Email: info@mesenergyservices.co.uk
www.mesenergyservices.co.uk

SUSTAINABLE BUILDING SOLUTIONS

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We offer a full range of services for both residential and commercial buildings from small individual properties through to highly complex mixed used developments.

We are an industry leader in delivering a professional, accredited and certified service to a wide range of clients including architects, developers, builders, housing associations, the public sector and private householders.

Employing highly qualified staff, our team comes from a variety of backgrounds within the construction industry with combined knowledge of building design, engineering, assessment, construction, development, research and surveying.

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MES Energy Services maintains its position at the forefront of changes in building regulations as well as technological advances. Our clients, large or small are therefore assured of a cost effective, cohesive and fully integrated professional service.

About the Author

James Hargreaves is a Daylighting and Right to Light Consultant within *MES Energy Services.* With a background in measured surveys he is also studying part time for a Masters degree in Building Surveying. James undertakes daylighting, sunlight and shadow cast analysis for planning applications. Experienced in Code and BREEAM requirements James also works with clients so their buildings can achieve daylighting credits.

List of contents

Section 1: Executive Summary

We have assessed the amount of light in the subject building and compared the results to guidance figures as set out in the *Code for Sustainable Homes Technical Guide Category 7: Health & Well-being*.

Our conclusions are that all rooms assessed meet the assessment criteria set out in the technical guide as displayed below and therefore achieve 3 credits:

Criteria	Credits
Kitchens must achieve a minimum *Average Daylight Factor* of at least 2%	1
All living rooms, dining rooms and studies (including any room designated as a home office under Ene 9 – Home Office) must achieve a minimum Average Daylight Factor of at least 1.5%	1
80% of the *working plane* in each kitchen, living room, dining room and study (including any room designated as a home office under Ene 9 – Home Office) must receive direct light from the sky	1
Default Cases None	

Section 2: Introduction

The purpose of this report is to assess the average daylight factor and no-sky line in the kitchen/living room and study of 5 Kemplay Road, NW3 1TA .

This report considers the daylight issues against the criteria set out for guidance in the following publications:

- *Code for Sustainable Homes Technical Guide (CSHTG)*.

- Site Layout Planning for Daylight & Sunlight (SLPDS), PJ Littlefair 2011 published by the BRE (Building Research Establishment).

There are no minimum mandatory requirements for daylighting in Building Regulations for England & Wales but to attain credits under the Code for Sustainable Homes scheme the building must meet the values laid out in the table above.

Section 3: Assessment Process

The guidance states that rooms to be assessed should be living rooms, kitchens and studies in residential properties, including any room designated as a home office, under the *Ene 9 – Home Office* section of the *Code for Sustainable Homes Technical Guide*

The two parameters we have assessed are:

- Average Daylight Factor (ADF)
- No Sky Line Test

Section 4: The amount of daylight in the proposed development:

Average Daylight Factors

The Code for Sustainable Homes Technical Guidance states daylight provision may be checked by using the Average Daylight Factor (ADF). The ADF is a measure of the overall amount of daylight in a space.

The following values are required to gain Code credits:

Kitchens	2%
Living Rooms	1.5%
Home Office	1.5%

We have therefore assessed the kitchen, living room and bedroom 2 (proposed home office) in this building.

The calculation of the average daylight factor takes into account the following variables:

- The diffuse visible transmittance of the glazing (we have assumed a figure of 0.7 for double glazing)
- A maintenance factor, allowing for the effects of dirt
- The net glazed area of the window
- The total area of the room surfaces
- The average reflectance of the rooms (we have assumed a light coloured room with a value of 0.5)
- The angle of the visible sky (taking into account external obstructions).

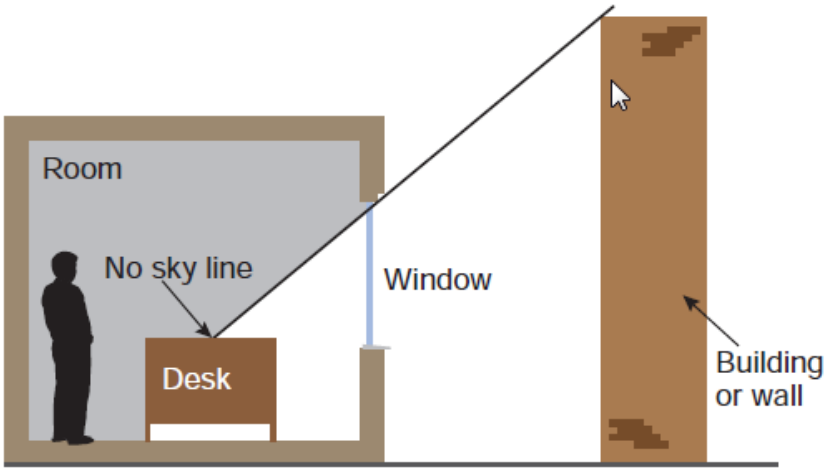
Results

Calculations were undertaken in accordance with the procedures shown in CSHTG. Our results (see appendix) show that all rooms meet their respective assessment criteria as shown on page 4, therefore achieving the maximum amount of 2 credits in this category.

Daylight Distribution (No-sky line)

If a significant area of the working plane lies beyond the no sky line (ie it receives no direct skylight) then the distribution of daylight in the room will look poor and supplementary electric lighting will be required.

The no-sky line effectively separates the points on the working plane (0.85m for residential properties) that cannot see the sky. Therefore areas beyond the no sky line will receive no direct daylight but will instead be lit from reflected light.



BRE 209

Results

Calculations were undertaken in accordance with the procedures shown in CSHTG. Our results show all rooms meet the assessment criteria as set out in the table on page 4, therefore attaining the maximum total of 1 credit in this category.

Section 5: Notes:

This report has been prepared for the sole use of Sarah Fournier. No representation or warranty (expressed or implied) is given to any other parties. Therefore this report should not be relied upon by any third party and we accept no liability from the use of this report by any other party.

We have not visited site and therefore where necessary we have made reasonable estimations of internal layouts, floor area's, window sizes and external obstructions etc.

We are not aware of any conflicts of interest between ourselves and any other party concerning this project.

Appendix

Average Daylight Factor Results:

MES Calculations (Average Daylight Factor)

Floor Ref.	Room Ref.	Room Use	Window Ref.	ADF Existing	ADF Proposed	Req'd Value	Pass/Fail
5 Kemplay Road							
Ground	R1	Kitchen	W1-L	0.00	0.06		
			W1-U	0.00	1.25		
			W2-L	0.00	0.05		
			W2-U	0.00	1.16		
			W3-L	0.00	0.06		
			W3-U	0.00	1.38		
			W4-L	0.00	0.05		
			W4-U	0.00	1.17		
			W5-L	0.00	0.06		
			W5-U	0.00	1.25		
			W6-L	0.00	0.01		
			W6-U	0.00	0.14		
				0.00	6.64	2.0	PASS
Ground	R2	Study	W7-L	0.00	0.11		
			W7-U	0.00	1.44		
			W8-L	0.00	0.07		
			W8-U	0.00	0.98		
				0.00	2.59	1.5	PASS

No Sky Line Test:

MES Calculations (Daylight Distribution)

Floor Ref.	Room Ref.	Room Use.		Room Area	Lit Area Proposed
5 Kemplay Road					
Ground	R1	Kitchen	Area m^2	67.60	67.03
			% of room		99%
Ground	R2	Study	Area m^2	11.12	10.80
			% of room		97%