GVA Schatunowski Brooks



## Report



# 42 Falkland Road Daylight/Sunlight Report

20<sup>th</sup> August 2014

Ian Absolon For and on behalf of GVA Schatunowski Brooks

### CONTENTS

1.	INTRODUCTION	3
2.	EXECUTIVE SUMMARY	4
3.	DAYLIGHT/SUNLIGHT PLANNING PRINCIPLES	5
4.	ASSESSMENT RESULTS	11
5.	CONCLUSIONS	13

## 1. Introduction

- 1.1 GVA Schatunowski Brooks has been instructed by Carltone Ltd to assess the daylight/sunlight effects with regard to the redevelopment of the garages at 42 Falkland Road. We have been provided with the proposed scheme drawings numbered 1133-prop1F, 2F, 3F, base, elevations, GF and Roof. Surrounding buildings drawn from OS plans, satellite imagery and photographs.
- 1.2 We have also visited the site and vicinity.

## 2. Executive Summary

- 2.1 The proposed development will potentially affect the following neighbouring residential properties and these are the subject of the analysis:-
  - 11-13 Lady Margaret Road;
  - 15 Lady Margaret Road;
  - 41 Falkland Road;
  - 39 Falkland Road.
- 2.2 The site currently consists of single retail garages.
- 2.3 The proposals are for flats in two blocks over the site as an extension to the existing housing terrace.
- 2.4 The analysis will show that there is no significant impact on the neighbouring windows.
- 2.5 The analysis will also show that daylighting amenity to the scheme will pass all the British standard guidance.
- 2.5 3-D views of existing and proposed conditions are shown on drawings FA24-03/BRE14 and 15.

## 3. Daylight/Sunlight Planning Principles

- 3.1 The Building Research Establishment (BRE) guidelines Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011) is the document referred to by most local authorities. The BRE guidelines cover amenity requirements for sunlight and daylight to buildings around any development site as well as the quality of daylight within a proposed habitable development. The BRE guidelines should also be read in conjunction with the British Standard, BS 8206-2:2008 Lighting for Buildings Part 2: Code of Practice for Daylighting as they both refer to each other.
- 3.2 The introduction to the guidelines state: -

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."

#### Daylighting

- 3.3 The requirements governing daylighting to existing residential buildings around a development site are set out in Part 2.2 of the guidelines. The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the vertical sky component at the centre of the window. The guidelines advise that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines also suggest that distribution of daylight within rooms is reviewed although bedrooms are considered to be less important.
- 3.4 The vertical sky component can be calculated by using the skylight indicator provided as part of the guidelines, by mathematical methods using what is known as a waldram diagram or by 3D CAD modelling.

3.5 The guidelines states the following:-

"If this vertical sky component is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component with the new development in place, is both less than 27% and less than 0.8 times its former value, then occupants of the existing building will notice the reduction in the amount of skylight."

- 3.6 It must be interpreted from this criterion that a 27% vertical sky component (VSC) constitutes adequacy, but where this value cannot be achieved a reduction of up to 0.8 times its the former value (this is the same as saying a 20% reduction when compared against the existing condition) would not be noticeable and would not therefore be considered material.
- 3.7 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the room window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.
- 3.8 Appendix C of the BRE guidelines sets out various more detailed tests that assess the interior daylight conditions of rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines. The ADF value determines the level of interior illumination that can be compared with the British Standard, BS 8206: Part 2. This recommends a minimum of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.
- 3.9 The no sky-line or daylight distribution contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. If a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

#### Sunlighting

3.10 Requirements for protection of sunlighting to existing residential buildings around a development site are set out in Part 3.2 of the BRE guidelines. There is a requirement to assess windows of surrounding properties where the main windows face within 90 degrees of due south. The calculations are taken at the window reference point at the centre of each window on the plane of the inside surface of the wall. The guidelines further state that kitchens and bedrooms are less important in the context of considering sunlight, although care should be taken not to block too much sun. The guidelines sets the following standard:-

"If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months of 21st September and 21st March, then the room should still receive enough sunlight. The sunlight availability indicator in Appendix A can be used to check this.

Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months then the occupants of the existing building will notice the loss of sunlight."

3.11 To summarize the above, a good level of sunlight to a window is 25% annual probable sunlight hours, of which 5% should be in winter months. Where sunlight levels fall below the suggested level, a comparison with the existing condition is reviewed and if the ratio reduction is within 0.8 (the same as saying a 20% reduction) its former value then the sunlight loss will not be noticeable. Sunlight reductions that fall below 0.8, i.e. 0.7 (the same as saying greater than 20%) then the sunlight losses will be noticed by the occupants.

#### **BRE Criteria for New Buildings**

3.12 The BRE Guide covers amenity requirements for sunlight, daylight and overshadowing for residential developments.

3.13 Before dealing specifically with the requirements of the Guide under the various headings, we would note certain relevant aspects set out in the Introduction to the Guide which are as follows:-

"While this guide supercedes the 1971 Department of the Environment document 'Sunlight and Daylight' which is now withdrawn, the main aim is the same - to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions".

3.14 The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."

#### Daylighting

- 3.15 The guidelines regarding the quality and quantity of daylight to residential habitable rooms are set out in Part 2.1 of the Guide. The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the vertical sky component at the centre of the window. The Guide advises that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.
- 3.16 The vertical sky component can be calculated by using the skylight indicator provided as part of the Guide or by mathematical methods using what is known as a waldram diagram. The use of the skylight indicator is, in our view, the less accurate and can only be relied upon for indicative results. The mathematical method which actually measures the amount of visible sky gives far more accurate and truly representative results, and this is the method we have used.
- 3.17 The Guide states the following:-

"...a vertical sky component of 27% or more indicates the potential for good daylight."

- 3.18 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the room and window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.
- 3.19 Appendix C of the BRE Guide sets out various more detailed tests that assess the interior daylit conditions of rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines. The ADF value determines the level of interior illumination that can be compared with the British Standard, BS 8206: Part 2. This recommends a minimum of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.
- 3.20 The no sky-line or daylight distribution contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. The guide advises that if a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

#### Sunlighting

- 3.21 Requirements for provision of sunlight to new residential buildings are set out in Part 3.1 of the BRE Guide.
- 3.22 Sunlight is considered important for living rooms and conservatories but is viewed as less important in bedrooms and in kitchens. Access to sunlight can be quantified for the interior of rooms. The guidelines state:-

"The British Standard recommends that interiors where the occupants expect sunlight should receive at least one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months, between 21 September and 21 March."

3.23 The guide further recommends that where window positions are known, the centre of each main living window can be used for the calculation.

#### **Overshadowing**

3.24 Overshadowing to gardens and open spaces can be a material planning consideration. Part 3.3 of the BRE guidelines deals with overshadowing considerations,

identifying areas such as gardens, allotments, parks, playing fields, playgrounds, swimming pools, paddling pools, sitting out areas and public open spaces.

3.25 Assessments are normally undertaken on 21<sup>st</sup> March, 21<sup>st</sup> June and 21<sup>st</sup> December as these months represent the average and extremes within a year. The transient sunlight tracking is reviewed throughout the day, when the altitude of the sun is higher than 10 degrees. The amount of sunlight being available to an amenity space is measured on 21<sup>st</sup> March, with the BRE guidelines suggesting that an area should ideally achieve 50% of its area receiving 2 hours of sunlight on that day. If reductions do occur then the guide suggests a 20% reduction will not be noticeable.

## 4. Assessment Results

4.1 We set out below our commentary on the assessments for the daylight/sunlight tests, all results are shown graphically on the attached plans and in tabular format.

#### 11-13 Lady Margaret Road- FA24-03/BRE11

- 4.2 All rooms will see a high level of daylight and in most cases far in excess of 27%, The rooms immediately adjacent to the proposal and noted as R2/10 and R3/10 on the ground floor are, following site inspection, noted to be bathrooms and as such these are discounted for daylighting purposes.
- 4.3 Otherwise rooms either retain in excess of 27% VSC, the ideal BRE level or retain light marginally below this level such that they too will be exceedingly well lit.

#### 15 Lady Margaret Road- FA24-03/BRE12

- 4.4 All rooms see either no change to their daylight or retain well in excess of the BRE guide level of 27% VSC.
- 4.5 The orientation of this building means there is no requirement to analyse for sunlight.
- 4.6 This building is fully BRE compliant.

#### 41 Falkland Road - FA24-03/BRE13

- 4.7 All rooms see either no change to their daylight or retain well in excess of the BRE guide level of 27% VSC.
- 4.8 The orientation of this building means there is no requirement to analyse for sunlight.
- 4.9 This building is fully BRE compliant.

#### 41 Falkland Road -FA24-03/BRE14

4.10 All rooms see either no change to their daylight or retain well in excess of the BRE guide level of 27% VSC.

- 4.11 The orientation of this building means there is no requirement to analyse for sunlight.
- 4.12 This building is fully BRE compliant.

#### Daylighting Amenity -FA24-08/BRE24

- 4.13 An assessment has been made of the levels of light that will be received in the proposed development
- 4.14 In these circumstances we assess schemes from the lowest floor up and cease assessments when it becomes clear that all rooms will achieve the required British Standard levels of daylight.
- 4.15 In this case the above drawing and the attached tables show that save for one bedroom having marginally below the Standard all rooms in the basement will achieve the B Standard criteria, in addition the lounge areas, deemed the most important under BRE guidance, also achieve high levels of coverage of the daylight distribution contour.
- 4.16 At all floors above this the levels of daylight will only increase and as such they will all be compliant.
- 4.17 These rooms are in our view more than adequately lit for their location and design.

## 5. Conclusions

- 5.1 The proposed development will leave all neighbouring buildings with a good standard of Daylight and Sunlight to habitable rooms. The only noticeable impacts would be to non-habitable areas which can be disregarded for the application.
- 5.2 Internal amenity daylighting for the scheme is good with all save one bedroom which is marginally under guide levels being compliant.
- 5.3 If you require any further information please do not hesitate to contact us.

Yours faithfully

GUA Schatunouski Brooks.

GVA Schatunowski Brooks















#### Falkland Road, London Daylight results for current scheme 28 May 2014

			%VSC		% Daylight Factor			Proposed No Sky		
									% of	
			'		1 '	'	'	1 '	Room	% Loss of
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing
11 and 13 LA	DY MARGAF	RET ROAD	FA24	1 03_F	RE11					
Ground Floor										
		W1/10	30.01	28.96	>27					
R1/10	UNKNOWN	W2/10	32.20	21.04	34.66%	2.60	2.03	21.89%	92.11%	7.80%
		W3/10	31.17	18.41	40.94%	_'	_'	1'		
R2/10	UNKNOWN	W4/10	33.17	15.29	53.90%	0.52	0.18	65.65%	16.61%	80.16%
R3/10	UNKNOWN	W5/10	33.55	16.44	51.00%	0.46	0.19	58.66%	27.26%	67.75%
R4/10	UNKNOWN	W6/10	33.94	25.42	25.10%	1.08	0.84	21.99%	71.28%	23.19%
First Floor										
R1/11	UNKNOWN	W1/11	34.94	25.07	28.25%	1.12	0.84	24.69%	73.34%	24.19%
R2/11	UNKNOWN	W2/11	35.93	27.50	>27	1.01	0.80	20.65%	73.31%	23.46%
Second Floor	r									
R1/12	UNKNOWN	W1/12	37.32	32.20	>27	0.38	0.33	14.40%	81.99%	13.36%
R2/12	UNKNOWN	W2/12	37.75	33.64	>27	0.42	0.38	10.66%	91.44%	0.00%
Third Floor										
R1/13	UNKNOWN	W1/13	39.03	36.70	>27	0.17	0.15	6.67%	88.79%	0.00%
R2/13	UNKNOWN	W2/13	39.16	37.33	>27	0.16	0.15	5.03%	84.14%	0.00%
First Floor										
R1/14	UNKNOWN	W1/14	35.37	26.82	24.17%	1.13	0.90	20.18%	72.68%	24.22%
R2/14	UNKNOWN	W2/14	34.51	26.67	22.72%	1.06	0.86	19.08%	77.71%	18.80%
Second Floor	r									
R1/15	UNKNOWN	W1/15	38.10	32.56	>27	1.17	1.02	12.77%	93.27%	2.75%
R2/15	UNKNOWN	W2/15	38.27	33.22	>27	1.12	0.99	11.83%	93.55%	2.25%
15 LADY MA	RGARET RO/	AD FA24	_03_BF	₹E_12						
Ground Floo	r									
D1 /20		W1/20	29.81	28.97	>27	2 79	2 72	2 10%	100 00%	0.00%
K1/20		W2/20	33.13	31.97	>27	2.15	2.12	2.4070	100.0070	0.0075
R2/20	UNKNOWN	W3/20	25.43	25.43	0.00%	2.14	2.14	0.00%	99.71%	0.00%
First Floor										
R1/21	UNKNOWN	W1/21	34.49	33.30	>27	2.00	1.96	1.85%	98.60%	0.00%
Second Floor	ſ									
R1/22	UNKNOWN	W1/22	36.99	36.23	>27	1.78	1.76	1.23%	98.65%	0.00%



			%VSC		% Daylight Factor			Proposed No Sky		
									% of	
						'	1		Room	% Loss of
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing
Fourth Floor	·									
		W1/25	39.44	39.19	>27					
R1/25	UNKNOWN	W2/25	39.44	39.21	>27	1.49	1.48	0.47%	95.43%	0.00%
		W3/25	39.44	39.23	>27	'		'	l	
Second Floo	r									
R1/26	UNKNOWN	W1/26	23.31	23.31	0.00%	1.18	1.18	0.00%	97.98%	0.00%
R2/26	UNKNOWN	W2/26	23.21	23.21	0.00%	1.08	1.08	0.00%	97.24%	0.00%
Third Floor										
R1/27	UNKNOWN	W1/27	38.47	38.08	>27	1.37	1.36	0.59%	98.24%	0.00%
R2/27	UNKNOWN	W2/27	38.47	37.99	>27	1.26	1.25	0.87%	97.57%	0.00%
41 FALKLAN	D ROAD FA	24_03_BF	E_13							
Ground Floo	r									
R1/30	UNKNOWN	W1/30	32.13	28.94	>27	1.04	0.95	8.59%	95.42%	0.00%
First Floor			·							
R1/31	UNKNOWN	W1/31	34.90	32.66	>27	1.40	1.32	5.79%	97.81%	0.00%
R2/31	UNKNOWN	W2/31	35.05	32.62	>27	1.46	1.37	6.23%	97.91%	0.00%
Second Floo	r									
R1/32	UNKNOWN	W1/32	37.58	36.39	>27	1.27	1.23	2.99%	97.34%	0.00%
R2/32	UNKNOWN	W2/32	37.64	36.34	>27	1.32	1.28	3.33%	97.29%	0.00%
Third Floor	·									
R1/33	UNKNOWN	W1/33	31.33	30.95	>27	3.21	3.18	0.96%	98.56%	0.00%
39 FALKLAN	D ROAD FA	24_03_BF	E14							
Ground Floo	r									
R1/40	UNKNOWN	W1/40	31.42	28.98	>27	0.97	0.91	6.68%	95.23%	0.00%
First Floor										
R1/41	UNKNOWN	W2/41	34.53	32.72	>27	1.34	1.28	4.71%	97.38%	0.00%
R2/41	UNKNOWN	W1/41	34.28	32.75	>27	1.32	1.27	4.01%	97.29%	0.00%
Second Floo	r									
R1/42	UNKNOWN	W2/42	37.37	36.38	>27	1.37	1.34	2.55%	97.05%	0.00%
R2/42	UNKNOWN	W1/42	37.26	36.41	>27	1.36	1.33	2.13%	96.86%	0.00%
Third Floor										
R1/43	UNKNOWN	W1/43	38.14	37.76	>27	1.68	1.67	0.95%	98.41%	0.00%



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Legend Daylight	-							
Existing Proposed 1ft Grid Loss Hatching								
Existing No-Sky Line Contour Envelope No-Sky Line Contour								
Sources of Information OSmap in DWG format								
NOTE: All adjoining owners properties window, cill, roof, room layouts, room uses have been estimated from photgraphs If survey information were to be provided these results could change significantly								
Proposed scheme drawings INFO 12 AUGUST 2014 1099-AB-107 1099-AB-108 1099-AB-113 1099-AB-116 1099-AB-115								
1099-AB-114								
	-							
GVA								
08449 02 03 04 GVA Schatunowski Brooks 10 Stratton Street, London, W1J 8JR www.gva.co.uk								
Project Name FALKLAND ROAD, KENTISH TOWN LONDON								
Client London Borough of Camden -								
Drawing Title NO SKY-LINE CONTOURS FOR Proposed building								
Drawn By Chk'd By Scale @ A3 Date   RT 1:100 12 AUG 2014	Ō							
Project No. Drawing No. Revision	A3							



## FALKLAND ROAD, LONDON 20-Aug-14 JOB 08 - AMENITY - LOWER GROUND FLOOR

					No Sky	%Sun			
Room/Floor	Room Use	Window	%VSC	%ADF	% of Room	Summer	Winter	Total	
FALKLAND ROAD									
LOWER GROUND FLOOR									
R1/50	BEDROOM	W2/50	7.91	1.23	80.08%	N/A	N/A	N/A	
R2/50	BEDROOM	W3/50	10.62	1.36	58.47%	5.00	0.00	5.00	
R3/50	BEDROOM	W4/50	10.90	0.90	54.88%	N/A	N/A	N/A	
	LKD	W7/50	4.30	1.68		N/A	N/A	N/A	
		W8/50	7.91		72 520/	13.00	2.00	15.00	
K4/30		W9/50	5.19		/5.55%	N/A	N/A	N/A	
		W10/50	16.89			23.00	0.00	23.00	
R5/50	BEDROOM	W1/50	11.03	1.09	56.03%	N/A	N/A	N/A	
	LKD	W5/50	17.01	1.51	08 22%	25.00	7.00	32.00	
K0/50		W6/50	15.37		98.32%	N/A	N/A	N/A	