Second Addendum Daylight and Sunlight Report

GVA 10 Stratton Street London W1J 8JR



Bacton Low Rise, Gospel Oak

London Borough of Camden

February 2013

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1. Introduction

- 1.1 This second Addendum Report is a supplement to our main Daylight and Sunlight Reports and first Addendum Daylight and Sunlight Report both dated November 2012 and is in further response to queries and consultation with neighbouring owners. As a result of the consultation process, meetings and further inspections were held with the owners/occupiers of 20 Vicar's Road, 24 Vicar's Road and representatives of St Martin's Church. The issues raised were:-
 - 20 Vicar's Road Mr & Mrs Campbell of 20 Vicar's Road queried the accuracy of the Daylight and Sunlight Analysis undertaken for their property as the room uses and sizes had been incorrectly identified. The analysis undertaken in our original report was based on accurate external survey information but no contact was made with any of the neighbouring owners for the purpose of measuring the internal dimensions of each room. The original analysis was therefore based on assumed and estimated room layouts. The assumption made was that the windows in the flank wall of 20 Vicar's Road serve staircase landings. Whilst this is correct for the first floor window, the ground floor windows do in fact serve a Kitchen/Diner. That Kitchen/Diner is a larger room than the assumed stair landing in our analysis, but when correctly modelled, the room is a dual aspect room served by four windows, two in the east flank wall and two in the principal north rear facing wall.

24 Vicar's Road

- The estimated and assumed room uses and layouts for 24 Vicar's Road were also incorrect and a meeting was held with the owner/occupier of the western most ground and first floor maisonette, Angela Morgan, in order to inspect and correct those errors.
- St Martin's Church Reverend Brice expressed his concern over the impact on the sunlight that will be received at the altar of the church. Although internal sunlight penetration is not one of the measures within the BRE Guidelines for Daylight and Sunlight, it was agreed that we would measure the availability of sunlight received by the West Window in isolation.

• The quality of sunlight within the courtyards in the proposed new development was raised by the Council and results of the overshadowing analysis for those courtyards is attached.

2. Response to Queries

20 Vicar's Road

- 2.1 Following our meeting with Mr & Mrs Campbell, we returned to the property to measure up the Kitchen so that the analysis could be updated using the actual measurements. Two key issues were identified. First, the floor to sill heights that we adopted for setting the height of the Working Plane for measuring the no skyline contours was significantly different and second, the window sizes were larger than identified on the external survey. As the results are heavily influenced by the size of the windows and floor to sill and sill to head height of the windows, these discrepancies were corrected.
- 2.2 In addition to those corrections, the design, height and "massing" of Block B2 was amended and the building moved further away from 20 Vicar's Road.
- 2.3 The updated results of the Daylight and Sunlight analysis for 20 Vicar's Road are annexed at Appendix 1 and comprise our drawing no. BRE 050 and revised Daylight analysis table.
- 2.4 Whilst the windows in the flank elevation of the Kitchen (windows W1/80 and W2/80) will still experience a reduction in VSC (i.e the amount of light striking the face of the window) beyond the BRE Guidelines, we now know that the Kitchen is dual aspect and served by four windows, two of which are on the principal rear elevation. As it is a dual aspect room served by four windows, it is inappropriate to rely on any single VSC value, but instead, the VSC values for all four windows need to be taken into account. There will be virtually no impact at all on the two rear facing windows with the only measurable loss being recorded at a value of 0.67%.
- 2.5 As the room is dual aspect, it is then necessary to consider the no skyline Daylight Distribution results together with the overall Average Daylight Factor value. The Daylight distribution test shows that the percentage loss of internal Daylight distribution will be just 5.66% - well within the 20% permissible margin of reduction in the BRE Guidelines. Those Daylight distribution results also show that the vast majority of the kitchen area (87.32%) will in fact receive direct sky visibility. In addition, the ADF value recorded for the Kitchen under "proposed" conditions will be 2.11% *df* and therefore

still comfortably achieve the target design standard for a family kitchen in accordance with the British Standard Code of Practice for Daylighting.

2.6 As the design of Block B2 has changed and been reduced in terms of height and massing, the overshadowing analysis of the garden at 20 Vicar's Road has been re-run and those results are annexed at Appendix 2. The overshadowing analysis shows that the area that will continue to receive more than 2 hours of sun-on-the-ground on the Spring Equinox will be 40.21%. It should however be noted that the vast majority of the present overshadowing of the garden is a result of the northerly orientation of the garden itself and the shadow cast by the existing house and garden wall. The increase in overshadowing that will occur will arise in the early morning, and the overshadowing will remain unchanged from mid morning onwards.

24 Vicar's Road

- 2.7 At our meeting with Angela Morgan, we identified that the ground floor of the north facing windows of her maisonette consist of the entrance hallway and a separate Kitchen, whereas we had previously assessed this area as one single room. The first floor is laid out as a bedroom, separate WC and separate bathroom. On our drawing no. BRE 056 annexed at Appendix 3 and accompanying daylight analysis table, we have re-run the daylight analysis using the measurements taken at our inspection.
- 2.8 The VSC values do of course remain unchanged as they are measurements of daylight taken on the outside face of the window. We do however now only need to consider windows W14/10 and W20/11 as these are the only windows that serve the habitable rooms.
- 2.9 The ground floor Kitchen will satisfy the BRE Guidelines in that the percentage loss of VSC will be 19.20% and the loss of internal Daylight Distribution will be 16.44% both within the 20% permissible margin of reduction.
- 2.10 The first floor bedroom, the reduction in VSC will remain at 25.04% and therefore above the BRE recommendations. The loss of internal Daylight distribution will however be 18.21% which is within the BRE recommendations. As the VSC value for the window is below target, we ran an ADF value for that room, which produced a value of 1.08% *d*f. This satisfies the design target.

St Martin's Church

2.11 Reverend Brice expressed his concern over the impact on the sunlight that will be received at the altar. There are no scientific tests for measuring sunlight penetration within a building and we have therefore adapted the overshadowing analysis in our software by measuring the sunlight availability along the aisle all the way up to the altar on the Spring Equinox and Summer Solstice and limiting the source of sunlight through the west window taken in isolation. Those results are illustrated on our drawing nos. BRE 053 and BRE 054 for the Spring Equinox and BRE 055 and BRE 056 for the Summer Solstice. They show that whilst there will be a minor loss of sunlight at the western end of the aisle on the Spring Equinox, the amount of sunlight received at the eastern end of the aisle, including the altar, will remain unchanged. The corresponding results for the Summer Solstice show that there will be no loss of direct sunlight at all along the full length of the aisle.

Overshadowing of the Proposed New Courtyards

- 2.12 Annexed at Appendix 5 are our drawing nos. BRE 48 and BRE 49 which illustrate the tests for the overshadowing of the three proposed new courtyards. Those drawings identify those parts of the courtyard which will receive over 2 hours of sun-on-theground on the Spring Equinox.
- 2.13 An inherent characteristic of enclosed courtyards is the overshadowing that arises due to the very nature of a four sided structure and results show that large parts of each of the courtyards will receive relatively low levels of direct sun-on-the-ground.



Appendices



Appendix I





GROUND FLOOR





DAYLIGHT ANALYSIS BACTON LOW RISE 06-Feb-13

			%VSC % Dayligi		aylight	Factor	Proposed No Sky			
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	% of Room Area	% Loss of Existing
20 VICAR'S	ROAD									
GROUND FLO	OR									
P1/90		W5/80	15.33	15.07	1.70%	2.01	2 00	0.21%	08 38%	0 00%
n 1/00	LIVINGROOM	W6/80	31.34	31.24	>27	2.91	2.90	0.21%	90.30%	0.00 %
	KITCHEN	W1/80	16.67	10.95	34.31%	2.56	2.11	17.55%	87.32%	5.66%
B2/80		W2/80	24.85	16.24	34.65%					
112/00		W3/80	5.47	5.47	0.00%					
		W4/80	8.91	8.85	0.67%					
FIRST FLOOR										
R1/81	BEDBOOM	W3/81	17.08	16.76	1.87%	2 53	2 52	0 32%	00 1/10/-	0.00%
n1/01		W4/81	33.84	33.75	>27	2.00	2.52	0.0270	55.1470	0.0078
R2/81	BEDROOM	W1/81	23.69	19.22	18.87%	1.54	1.33	13.64%	66.49%	0.00%



Appendix II





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BRE 052

BA81 - 15



Appendix III









DAYLIGHT ANALYSIS BACTON LOW RISE 06-Feb-12

			%VSC			% Daylight Factor			Proposed No Sky	
									% of	% Loss
Boom/Eloor	Boom Lise	Window	Fxist	Prop	%1.055	Frist	Prop	%1.055	Room Area	or Existina
24 VICAR'S	24 VICAB'S BOAD									
GROUND FLOOR										
R9/10		W14/10	20.78	16.79	19.20%	1.15	0.99	14.40%	77.09%	16.44%
FIRST FLOOR										
R12/11		W20/11	22.80	17.09	25.04%	1.34	1.08	19.45%	80.35%	18.21%



Appendix IV











A3

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Appendix V







N	This drawin	ig is Copyright © of G Do not ie checked on site. D pecifications, schedu (VA Grimley Limited, scale this drawing rawing to be read in les and Consultants drawings and details	
	Legend	Daylight	Over 2hr of Sun Under 2hr of Sur	
	Sources of Information Existing And Surround MBS Survey Software L Proposed Scheme: Karakusevic Carson Arc Sent on 23 Oct 2012 An 202 A.D. BLR 100,00 202 A.D. DHO_100,00 202 A.D. DHO_100,00 202 A.D. DHO_300_00 202 A.D. DHO_300_00	Ing Buildings: td 3d Survey sent 15 hiltects LLP 3d Mode d Drawing No's: Rev 5 to 202 A. D. Rev 6 to 202 A. D. Rev 6 to 202 A. D. Rev 3 202 A. D. E Rev 3, 202 A. D. E	5 Sept 2012 BLR_100_07 Rev 5 LR_100_B1 Rev 03 DHO_100_08 Rev BLR_300_04 Rev 1 HDC_300_01 Rev 4 JLR_300_03 Rev 3	6
	GV			
	Project Name Bacton Low Rise Gospel Oak Client EC Harris	0844 Schatunov on Street, Lonc w	49 02 03 04 vski Brooks don, W1J 8JR www.gva.co.uk	
	Shadow Analysis Proposed Schem Drawn By MO - Project No. BA81 - 11	S For Scale @ A3 NTS Drawing No. BRE 049	Date 26/01/2013 Revisio -	