WARREN COURT
EUSTON ROAD
LONDON. NW1 3AA

APPENDIX 02: DAYLIGHT SUNLIGHT ANALYSIS

By

GVA Schatunowski Brooks

to be read

in conjunction with

DESIGN & ACCESS STATEMENT

for submission to the London Borough of Camden to accompany an application for the demolition of one residential unit (Class C3) at 6th floor level and the construction of two new residential units (Class C3) at 6th and 7th floor levels.

Prepared by Moxley Architects
for
Warren Court Investments LLP.

September 2016

MBP Michael Barclay Partnership
consulting engineers

ferguson brown
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Cole Jarman

Air Quality CONSULTANTS

MOXLEY
ARCHITECTS

47 Clapham High St
T+44 (0)20 7720 8968
www.moxley.co.uk

London SW4 7TL
F+44 (0)20 7627 2533
info@moxley.co.uk

8.0 APPENDICES:

APPENDIX 02: DAYLIGHT SUNLIGHT ANALYSIS **GVA Schatunowski Brooks:**

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GVA Schatunowski Brooks

BRE Report

GVA
65 Gresham Street
London
EC2V 7NQ

Warren Court, Euston Road, London

Warren Court Investments LLP

January 2016

gva.co.uk

CONTENTS

Appendices

1. Introduction

1.1 GVA Schatunowski Brooks has been retained by Warren Court Investments LLP to assess the impact of the proposed redevelopment at Warren Court, 293 Euston Road, NW1. The buildings with the potential to be impacted are:

- The accommodation in Warren Court below the level of the redevelopment.
- 295 Euston Road

2. Sources of Information

2.1 A detailed 3D computer model of the existing neighbouring buildings, the existing building and the and proposed building was built using the following information:-

- 3-D Z map model,
- Scheme info3D Skp file 706-warren court.dwg.

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.

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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.

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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.

295 Euston Road – WA118/07/BRE47A

4.2 The drawing referenced as above found in appendix 1 shows the results on plan of the properties' windows on all floors. Areas thought to be circulation space have not been tested.

4.3 The building is residential in use above a ground floor retail outlet.

4.4 The area that sees change from the proposal is only the internal lightwell which as can be seen serves hallways, bedrooms and food preparation kitchen areas. The main habitable rooms are located on the main front and rear elevations and remain unaffected.

4.5 It can be seen that the existing level of light is extremely low and thus any change of the actual percentage of light received will be a high percentage reduction. In physical reality there is little or no change in light received within the rooms.

Warren Court – WA118/08/BRE48-49

4.6 There are limited habitable rooms facing into the existing internal lightwell of the building.

4.7 These are restricted to small food preparation kitchens and bedrooms.

4.8 The Kitchens are of a size whereby it would not be possible to utilise them as anything other than a food preparation area as opposed to being utilised to sit in and consume food.

4.9 In that case we do not believe that these need to be considered.

4.10 There are two bedrooms per floor from third to fifth floor and these see a range of reductions. However those at the lower levels already achieve low levels of light which

is below that considered to provide real amenity in terms of light in the existing condition. These are reduced but in very low amounts in real terms.

4.11 At fifth floor level the bedrooms enjoy a higher level of existing light but in the proposed condition these will still enjoy well in excess of the British Standard requirements and will therefore be satisfactorily well lit.

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5. Conclusion

5.1 We have undertaken a detailed study of the impact of the proposed development on the relevant rooms within the neighbouring dwelling and those to be retained within the development building.

5.2 The tests were undertaken in accordance with the BRE Report 209 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (second edition, 2011) and the British Standard - BS 8206: Part 2.

5.3 The proposed development causes very few impacts to the one neighbouring building in question leaving the vast majority of the building with exceedingly high levels of daylight, impacts being restricted to bedrooms and food preparation areas.

5.4 The same applies to the retained buildings within Warren Court itself where the retained habitable rooms will retain sufficient daylight in areas where currently the levels of light are low.

Yours faithfully

GVA Schatunowski Brooks.

GVA Schatunowski Brooks

Appendices

Appendix I

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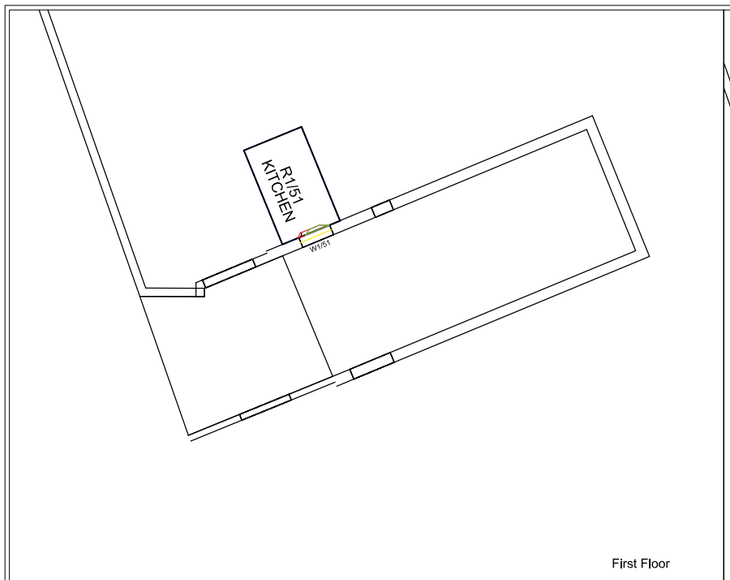
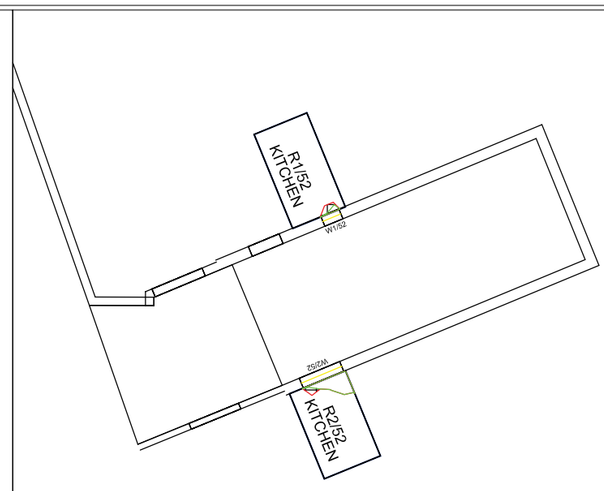
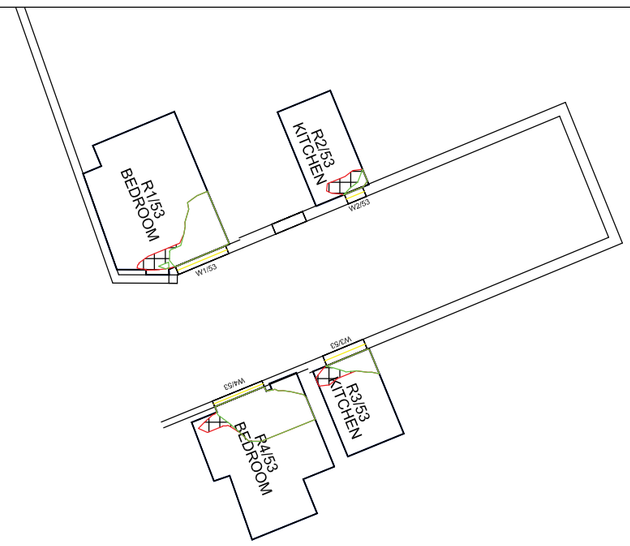


First Floor



Second Floor



Third Floor

Fourth Floor

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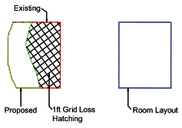
Do not scale this drawing.
All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Legend

Daylight



Existing No-Sky Line Contour
Proposed No-Sky Line Contour

Sources of Information

Z-Map 3D Model

Proposed Scheme 3D SKP file 706-warren court.dwg received 27 July 2015

Estimated windows, jpeg layouts

GVA
08449 02 03 04
GVA Schatunowski Brooks
10 Stratton Street, London, W1J 8JR
www.gva.co.uk

Project Name: Warren Court, London

Client:

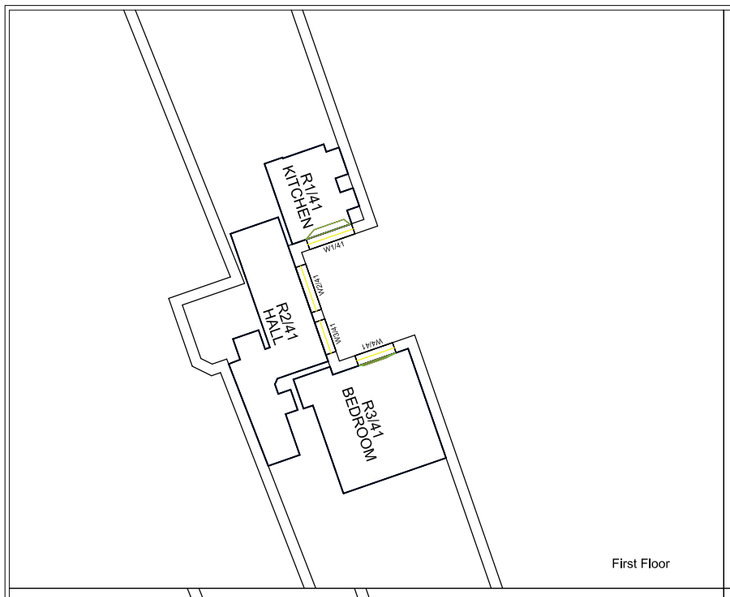
Drawing Title: No-Sky Line Contours for Warren Court lightwell

Drawn By	Chk'd By	Scale @ A3	Date
AC	-	1:150	24 Aug 2015

Project No.	Drawing No.	Revision
WA118/08	BRE/48	-

Daylight

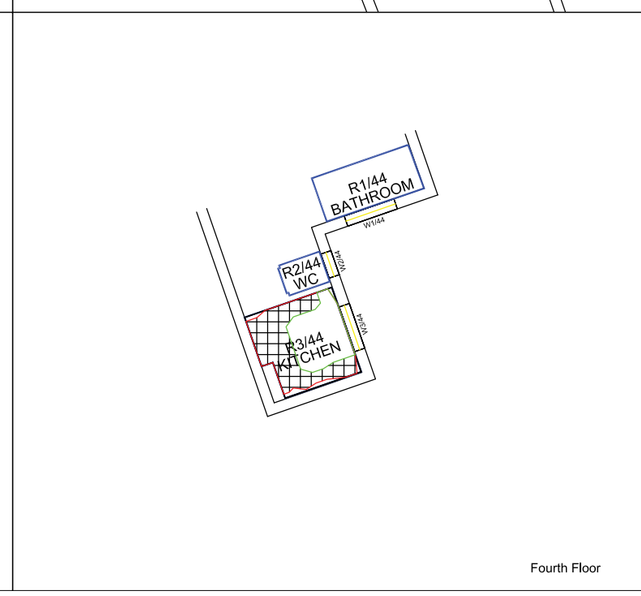
A3



First Floor

Second Floor

Third Floor



Fourth Floor

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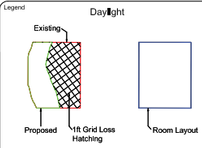
All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Legend

Daylight



Existing No-Sky Line Contour
Proposed No-Sky Line Contour

Sources of Information

Z-Map 3D Model

Proposed Scheme 3D SKP file 706-warren court.dwg received 27 July 2015

Estimated windows, jpeg layouts

GVA
08449 02 03 04
GVA Schatunowski Brooks
10 Stratton Street, London, W1J 8JR
www.gva.co.uk

Project Name: Warren Court, London

Client:

Drawing Title: No-Sky Line Contours for 295 Euston Road lightwell

Drawn By	Chk'd By	Scale @ A3	Date
AH	-	1:150	22 JAN 2016

Project No.	Drawing No.	Revision
WA118/09	ROL/47	A

Daylight

A3

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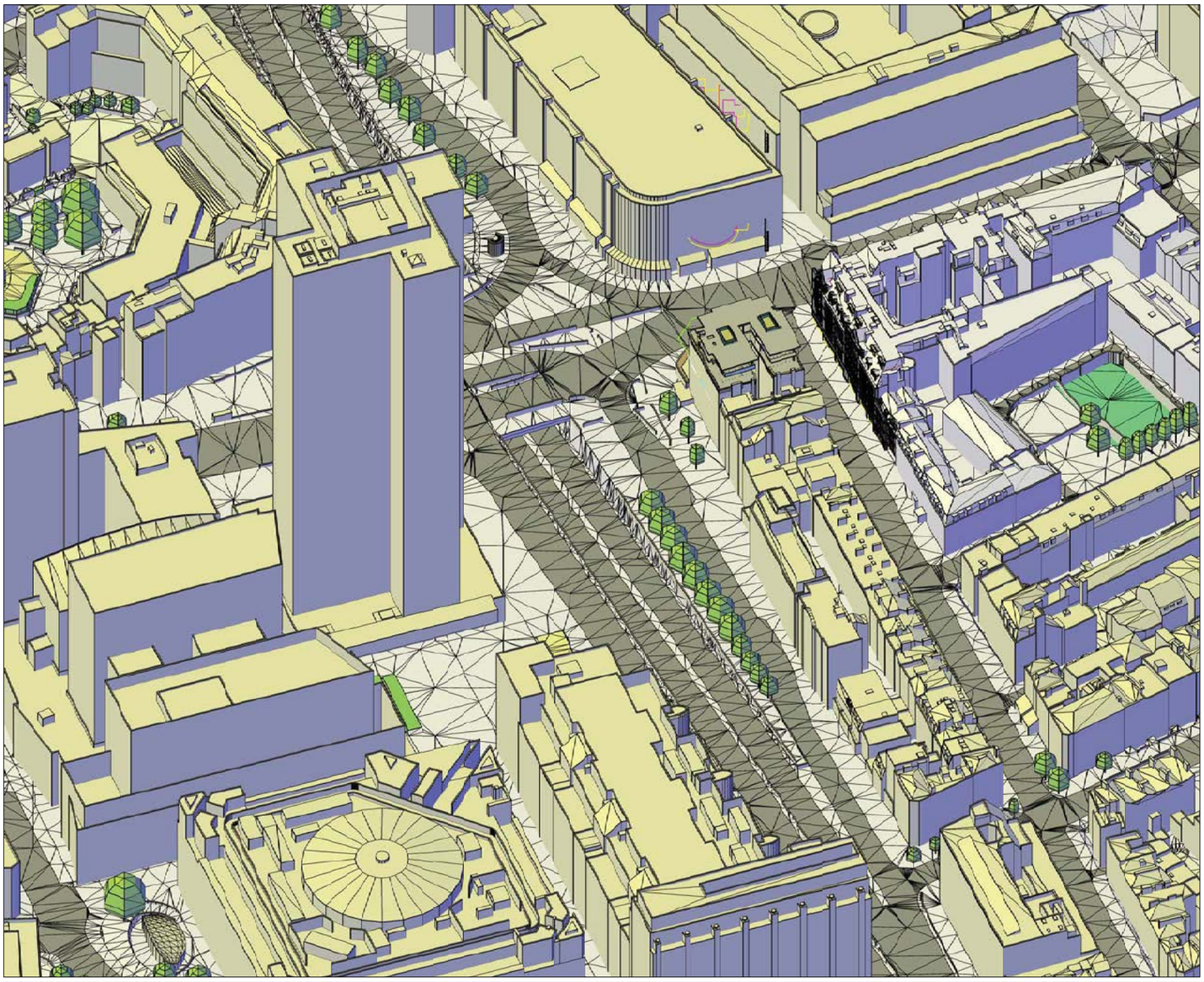

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Legend

Rights of Light

Existing

Proposed

1ft Grid Loss Hatching

Room Layout

Existing 0.2% Daylight Contour

Proposed 0.2% Daylight Contour

Sources of Information

Z-Map 3D Model

Proposed Scheme 3D SKP file 706-warren court.dwg received 27 July 2015

Estimated windows/rooms

GVA
08449 02 03 04
GVA Schatunowski Brooks
10 Stratton Street, London, W1J 8JR
www.gva.co.uk

Project Name: Warren Court, London

Client:

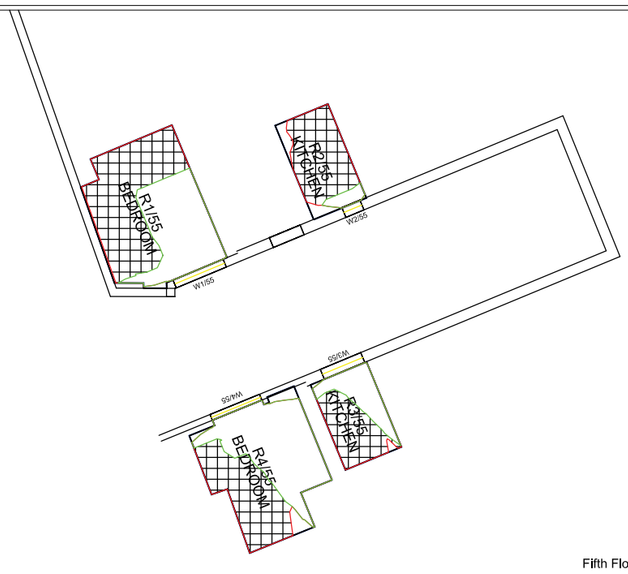
Drawing Title: 3D View of Proposal

Drawn By	Ch'd By	Scale @ A3	Date
AC	-	N/A	15 May 2014

Project No.	Drawing No.	Revision
WA118/05	ROL/45	-

Rights of Light

A3



Fifth Floor

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All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Legend

Daylight

Existing

Proposed

1ft Grid Loss Hatching

Room Layout

Existing No-Sky Line Contour

Proposed No-Sky Line Contour

Sources of Information

Z-Map 3D Model

Proposed Scheme 3D SKP file 706-warren court.dwg received 27 July 2015

Estimated windows, jpeg layouts

GVA
08449 02 03 04
GVA Schatunowski Brooks
10 Stratton Street, London, W1J 8JR
www.gva.co.uk

Project Name: Warren Court, London

Client:

Drawing Title: No-Sky Line Contours for Warren Court lightwell

Drawn By	Ch'd By	Scale @ A3	Date
AC	-	1:150	24 Aug 2015

Project No.	Drawing No.	Revision
WA118/08	BRE/49	-

Daylight

A3

Warren Court, London
Daylight Results for current scheme 24 August 2015

Room/Floor	Room Use	Window	%VSC			% Daylight Factor			Proposed No Sky	
			Exist	Prop	% Loss	Exist	Prop	% Loss	% of Room Area	% Loss of Existing
Euston Road NW1 BRE/48,49										
First Floor										
R1/51	KITCHEN	W1/51	0.73	0.30	58.90%	0.00	0.00	0.00%	1.13%	33.33%
Second Floor										
R1/52	KITCHEN	W1/52	2.00	1.15	42.50%	0.00	0.00	0.00%	0.82%	66.67%
R2/52	KITCHEN	W2/52	2.05	1.18	42.44%	0.40	0.40	0.00%	9.83%	11.54%
Third Floor										
R1/53	BEDROOM	W1/53	4.89	3.23	33.95%	1.02	0.78	23.28%	15.51%	17.23%
R2/53	KITCHEN	W2/53	3.82	1.88	50.79%	0.36	0.00	100.00%	2.87%	73.08%
R3/53	KITCHEN	W3/53	4.64	2.68	42.24%	1.35	0.95	29.88%	12.18%	35.23%
R4/53	BEDROOM	W4/53	5.37	3.71	30.91%	1.22	0.96	21.05%	25.48%	8.49%
Fourth Floor										
R1/54	BEDROOM	W1/54	10.88	6.45	40.72%	1.72	1.20	30.09%	21.02%	33.42%
R2/54	KITCHEN	W2/54	8.51	3.14	63.10%	0.80	0.00	100.00%	3.08%	89.36%
R3/54	KITCHEN	W3/54	9.85	4.51	54.21%	2.50	1.36	45.58%	18.38%	55.90%
R4/54	BEDROOM	W4/54	12.53	8.29	33.84%	2.01	1.56	22.18%	53.15%	12.91%
Fifth Floor										
R1/55	BEDROOM	W1/55	24.87	11.99	51.79%	2.88	1.78	38.15%	42.44%	56.95%
R2/55	KITCHEN	W2/55	21.90	5.59	74.47%	1.57	0.28	82.17%	8.83%	90.16%
R3/55	KITCHEN	W3/55	19.85	7.73	61.06%	3.93	1.99	49.44%	40.38%	58.82%
R4/55	BEDROOM	W4/55	22.30	12.88	42.24%	2.83	2.01	29.11%	56.13%	40.92%

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A Bilfinger Real Estate Company

295 Euston Road, London
Daylight Results for current scheme 21 August 2015
Job 9

Room/Floor	Room Use	Window	%VSC			% Daylight Factor			Proposed No Sky	
			Exist	Prop	% Loss	Exist	Prop	% Loss	% of Room Area	% Loss of Existing
295 Euston Road NW1 BRE/47										
First Floor										
R1/41	KITCHEN	W1/41	1.16	0.77	33.62%	0.00	0.00	0.00%	4.43%	0.00%
R3/41	BEDROOM	W4/41	0.66	0.46	30.30%	0.00	0.00	0.00%	0.36%	0.00%
Second Floor										
R1/42	BEDROOM	W1/42	2.59	1.83	29.34%	0.10	0.10	-2.02%	5.39%	0.00%
R3/42	KITCHEN	W5/42	1.38	1.00	27.54%	0.00	0.00	0.00%	2.47%	0.00%
Third Floor										
R1/43	BEDROOM	W1/43	7.50	5.89	21.47%	0.22	0.21	7.59%	19.19%	1.04%
R3/43	KITCHEN	W5/43	3.94	2.99	24.11%	0.19	0.19	0.00%	9.78%	0.00%
Fourth Floor (Updated 22 Jan 2016)										
R3/44	KITCHEN	W3/44	14.56	6.85	52.95%	0.96	0.47	51.30%	43.14%	54.72%

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