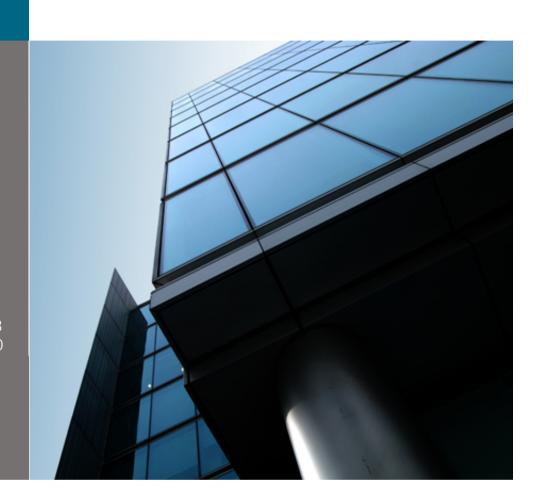




Daylight and Sunlight Report

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30 Cleveland Street, London

Barr Gazetas Ltd

December 2016

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1. Introduction and Scope of Report

- 1.1 GVA Schatunowski Brooks has been retained by Barr Gazetas Ltd to assess the impact of the proposed development of 30 Cleveland Street London, in respect of daylight and sunlight.
- 1.2 The nature of the works is fairly modest in terms of increase in height and massing to the property.
- 1.3 The purpose of this report is to assess the impact of the proposed development to the current Daylight and Sunlight amenity enjoyed by occupants of neighbouring dwellings in accordance with the Building Research Establishment (BRE) Guidelines "Site Layout Planning for Daylight and Sunlight A Guide to Good Practice", 2011.
- 1.4 Results will be reviewed in the context of the Camden Council's town planning policies policy to ensure that existing neighbouring residents will continue to enjoy a reasonable level of amenity in context with the general character of this part of the Borough.
- 1.5 The dwellings with the potential to be affected are as follows:
 - 41 Tottenham Street Technical Assessment Drawing BRE/92
 - ➤ 43 Tottenham Street Technical Assessment Drawing BRE/93
 - > 45 Tottenham Street Technical Assessment Drawing BRE/94
 - ▶ 47 Tottenham Street Technical Assessment Drawing BRE/95
 - > 49 Tottenham Street Technical Assessment Drawing BRE/96
 - 22 Cleveland Street Technical Assessment Drawing BRE/97
 - > 52 Tottenham Street Technical Assessment Drawing BRE/98
 - Fitzroy Place Technical Assessment Drawing BRE/99, 100, 101

2. Sources of Information and Limitations

2.1 VSC, APSH &; No-Skyline Contour Drawings and 3D models have been created using the following information:

Survey Data:

➤ MBS15-448 30 Cleveland Street 11.03.2015 Survey Photos

Existing Scheme: 30 Cleveland Street

Info Received: 26 Oct 2016

- 10.201 Existing Lower Ground Floor Plan
- > 10.202 Existing Ground Floor Plan
- 10.203 Existing First Floor Plan
- 10.204 Existing Second Floor Plan
- > 10.205 Existing Third Floor Plan
- ➤ 10.206 Existing Fourth Floor Plan
- > 10.207 Existing Fifth Floor Plan
- > 10.208 Existing Sixth Floor Plan
- > 10.251 Existing
- Section AA

Proposed Scheme Information:

Info Received: 13 Dec 2016

> 30 Cleveland Street Building - Proposed

3. Daylight and Sunlight Standards

- 3.1 The BRE Guidelines Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice are well established and are adopted by most Local Authorities as the appropriate scientific and empirical methods of measuring daylight and sunlight in order to provide objective data upon which to apply their planning policies. The Guidelines are not fixed standards but should be applied flexibly to take account of the specific circumstances of each case.
- 3.2 The Introduction of the Guidelines states:
 - "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."
- 3.3 The 'flexibility' recommended in the Guidelines should reflect the specific characteristics of each case being considered. For example, as the numerical targets within the Guidelines have been derived on the basis of a low density suburban housing model, it is entirely appropriate to apply a more flexible approach when dealing with higher rise developments in a denser urban environment where the general scale of development is greater. In addition, where existing and proposed buildings have specific design features such as projecting balconies, deep recesses, bay windows etc., it is also equally valid to apply a degree of flexibility to take account of the effect of these particular design features. This does not mean that the recommendations and targets within the Guidelines can be disregarded but, instead, the 'flexibility' that should be applied should be founded on sound scientific principles that can be supported and justified. This requires a certain level of professional value judgement and experience.

Daylighting

- 3.4 In respect of daylighting, the BRE Guidelines adopt different methods of measurement depending on whether the assessment is for the impact on existing neighbouring premises or for measuring the adequacy of proposed new dwellings. For safeguarding the daylight received by existing neighbouring residential buildings around a proposed development, the relevant recommendations are set out in Section 2.2 of the Guidelines.
- 3.5 The adequacy of daylight received by existing neighbouring dwellings is measured using two methods of measurement. First, it is necessary to measure the Vertical Sky Component (VSC)

followed by the measurement of internal Daylight Distribution by plotting the position of the 'existing' and 'proposed' no sky line contour.

- 3.6 VSC is measured at the mid-point on the external face of the window serving a habitable room. For the purpose of the Guidelines, a "habitable" room is defined as a Kitchen, Living Room or Bedroom. Bathrooms, hallways and circulation space are excluded from this definition. In addition, many Local Authorities make a further distinction in respect of small kitchens. Where the internal area of a small kitchen limits the use to food preparation and is not of sufficient size to accommodate some other form of "habitable" use such as dining, the kitchen need not be classed as a "habitable" room in its own right.
- 3.7 VSC is a 'spot' measurement taken on the face of the window and is a measure of the availability of light from the sky from over the "existing" and "proposed" obstruction caused by buildings or structures in front of the window. As it is measured on the outside face of the window, one of the inevitable shortcomings is that it does not take account of the size of the window or the size or use of the room served by the window. For this reason, the BRE Guidelines require internal Daylight Distribution to be measured in addition to VSC.
- 3.8 The 'No Sky Line' contour plotted for the purpose of measuring internal Daylight Distribution identifies those areas within the room usually measured on a horizontal working plane set at table top level, where there is direct sky visibility. This therefore represents those parts within the room where the sky can be seen through the window. This second measure therefore takes account of the size of the window and the size of the room but is only more reliable than VSC when the actual room uses, layouts and dimensions are known. When interpreted in conjunction with the VSC value, the likely internal lighting conditions, and hence the quality of lighting within the room, can be assessed.
- 3.9 For VSC, the Guidelines states that:
 - "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 the occupants of the existing building will notice the reduction in the amount of skylight."
- 3.10 To put this in context, the maximum VSC value that can be received for a totally unobstructed vertical window is 40%. There are however circumstances where the VSC value is already below 27%. In such circumstances, it is permissible to reduce the existing VSC value by a factor of 0.2 (i.e. 20%) so that the value on the 'proposed' conditions remains more than 0.8 times its former value. The scientific reasoning for this permissible margin of reduction is that existing daylight (and sunlight) levels can be reduced by a factor of 20% before the loss

- becomes materially noticeable. This factor of reduction applies to VSC, daylight distribution, sunlight and overshadowing.
- 3.11 By contrast, the adequacy of daylight for proposed 'New-Build' dwellings is measured using the standards in the British Standard Code of Practice for Daylighting, BS8206 Part 2.
- 3.12 The British Standard relies upon the use of Average Daylight Factors (ADF) rather than VSC and Daylight Distribution. The use of ADF is referred to in the BRE Guidelines (Appendix C) but its use is usually limited as a supplementary 'check' of internal lighting conditions once the VSC and Daylight Distribution tests have been completed.
- 3.13 ADF is sometimes seen as a more accurate and representative measure of internal lighting conditions as it comprises a greater number of design factors and input variables/coefficients. That is, the value of ADF is derived from:
 - The actual amount of daylight received by the window(s) serving the room expressed as the "angle of visible sky" which is derived from the VSC value and therefore represents the amount of light striking the face of the window.
 - The loss of transmittance through the glazing.
 - The size of the window (net area of glazing).
 - The size of the room served by the window(s) (net internal surface area of the room).
 - The internal reflectance values of the internal finishes within the room.
 - The specific use of the room.
- 3.14 One of the main reasons why ADF is more appropriate for New-Build dwellings is that any of the above input variables can be changed during the course of the design process in order to achieve the required internal lighting values. The ability to make such changes is not usually available when dealing with existing neighbouring buildings.
- 3.15 Unlike the application of VSC and daylight distribution, the British Standard differentiates between different room uses. It places the highest ADF standard on Family Kitchens where the minimum target value is 2% df. Living Rooms should achieve 1.5% df, and Bedrooms 1.0% df.

Sunlighting

3.16 The requirements for protecting sunlight to existing residential buildings are set out in section 3.2 of the BRE Guidelines.

- 3.17 The availability of sunlight varies throughout the year with the maximum amount of sunlight being available on the summer solstice and the minimum on the winter solstice. In view of this, the internationally accepted test date for measuring sunlight is the spring equinox (21 March), on which day the United Kingdom has equal periods of daylight and darkness and sunlight is available from approximately 0830hrs to 1730hrs. In addition, on that date, sunlight received perpendicular to the face of a window would only be received where that window faces within 90° of due south. The BRE Guidelines therefore limit the extent of testing for sunlight where a window faces within 90° of due south.
- 3.18 The sunlight standards are normally applied to the principal Living Room within each dwelling rather than to kitchens and bedrooms.
- 3.19 The recommendation for sunlight is:

"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 21 September and 21 March, then the room should still receive enough sunlight ...

Any reduction in sunlight access below this level should be kept to a minimum. If the availability of sunlight hours are both less than the amounts 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."

3.20 A good level of sunlight will therefore be achieved where a window achieves more than 25% APSH, of which 5% should be in the winter months. Where sunlight levels fall below this suggested recommendation, a comparison with the existing condition should be undertaken and if the reduction ratio is less than 0.2, i.e. the window continues to receive more than 0.8 times its existing sunlight levels, the impact on sunlight will be acceptable.

4. Scheme Assessment

Impact on Neighbouring Dwellings

- 4.1 Although the BRE Guidelines contain recommendations for commercial and non-domestic buildings as well as buildings in residential use, for the purpose of Planning, the assessment within the Guidelines are usually limited to existing neighbouring residential buildings.
- 4.2 Non-domestic and commercial buildings are usually excluded as it is generally accepted that these uses ordinarily rely primarily on supplementary artificial lighting throughout the day and are therefore not fully dependent on natural daylight as the sole source of amenity.
- 4.3 For the purpose of the Guidelines, a 'habitable' room is defined as a Kitchen, Living Room, or Bedroom. Bathrooms, hallways and circulation space are excluded and therefore do not require testing.
- 4.4 We set out below our commentary on the assessments for the daylight/sunlight assessments, all results are shown graphically on the attached plans and in tabular format.

41, 43, 45, 47, 49 Tottenham Street - BRE/92-96

- 4.5 The drawings referenced as above found in Appendix I, shows the results on plan of the properties' windows.
- 4.6 The buildings are residential in use, but room uses are unknown.

Daylight & Sunlight Analysis

- 4.7 The Daylight Analysis & Plans for the above five buildings, show that there are minor reductions occurring to windows for 41 & 43, however, the majority of VSC results show a beneficial increase of existing VSC levels.
- 4.8 As they satisfy the BRE recommendations, these buildings do not require any further consideration.
- 4.9 The Sunlight Analysis shows that the development will have a nil effect on 47 Tottenham Street and the other buildings have not been tested as there are no windows facing 90 degrees of due south

22 Cleveland Street - BRE/97

- 4.10 The drawings referenced as above found in Appendix I, shows the results on plan of the properties' windows.
- 4.11 The buildings are residential in use, and the potentially affected room uses are unknown.

Daylight & Sunlight Analysis

- 4.12 The Daylight Analysis & Plans show that of all windows tested, two windows have an increase in VSC levels, and a single window has a further reduction. This however, is only minor and will still satisfy the BRE recommendations.
- 4.13 As they satisfy the BRE recommendations, these buildings do not require any further consideration.
- 4.14 Sunlight Analysis has not been tested for this property, as there are no windows facing 90 degrees of due south and so no expectations of sunlight.

52 Tottenham Street - BRE/98

- 4.15 The drawings referenced as above found in Appendix I, shows the results on plan of the properties' windows.
- 4.16 The buildings are residential in use, and the potentially affected room uses are unknown.

Daylight & Sunlight Analysis

- 4.17 The Daylight Analysis & Plans show that only one window within R1/80 will suffer a noticeable loss, where the VSC levels exceed that of a 20% loss. However, the remaining windows serving that room and other windows on the remaining floors pass and so will satisfy BRE recommendations.
- 4.18 As they satisfy the BRE recommendations, these buildings do not require any further consideration.
- 4.19 Sunlight Analysis has been tested for this property and will have no change on 52 Tottenham Street.

Fitzroy Place - BRE/99-101

- 4.20 The drawings referenced as above found in Appendix I, shows the results on plan of the properties' windows.
- 4.21 The buildings are residential in use, and the potentially affected room uses are known.

Daylight & Sunlight Analysis

- 4.22 The Daylight Analysis & Plans show that majority of windows pass with either an increase of VSC levels or are in excess of 27% and so will be classed as adequately lit.
- 4.23 Room R3/112 & R4/112, have a loss greater than that of 20%. These rooms however, are bedrooms and their primary use is at night. It is also worthy to note, that they benefit from an increase in the average Daylight Factor of 11.64% & 25.76%.
- 4.24 Living/Dining Room R5/112 has a VSC loss greater than 20%, which is below the recommendations under BRE and so other aspects should be considered such as the No skyline figure, which is greater than 0.8 of the former value and therefore there will be no noticeable reduction and so should be acceptable.
- 4.25 Living/Dining Room R5/113 has a loss which is greater than that of 20%, but only exceeds this percentage by 0.97% and would likely be classed as a technical transgression and no noticeable difference in the room by reference to the no skyline figure which is greater than 0.8 of the former value and therefore will be no noticeable reduction.
- 4.26 All rooms will satisfy at least one of the BRE assessments and therefore no noticeable difference will occur within in the room.
- 4.27 The Sunlight Analysis shows that the development will have a minimal to nil effect on this building and therefore will remain adequately sunlit during the winter and summer months.

40-50 Tottenham Street

4.28 Arthur Stanley House has been considered, but has not been assessed. This is due to the fact that the proposed scheme should not have an impact on the residential section of the new mixed development, due to the commercial section facing the proposed scheme with residential on the far side.

5. Summary and Conclusion

- 5.1 We have undertaken a detailed study considering the impact of the proposed development to the potentially affected neighbouring dwellings.
- 5.2 The assessments 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 Whilst there are a small number of minor reductions in Daylight to the windows, the No Sky-line results confirm that there will be no noticeable reduction to the room. In respect of sunlight, all relevant windows will satisfy the APSH assessment. Therefore one should consider that the BRE Guidelines are satisfied.
- 5.4 Given the above, the effect of the proposed development is concluded as acceptable on daylight and sunlight grounds.

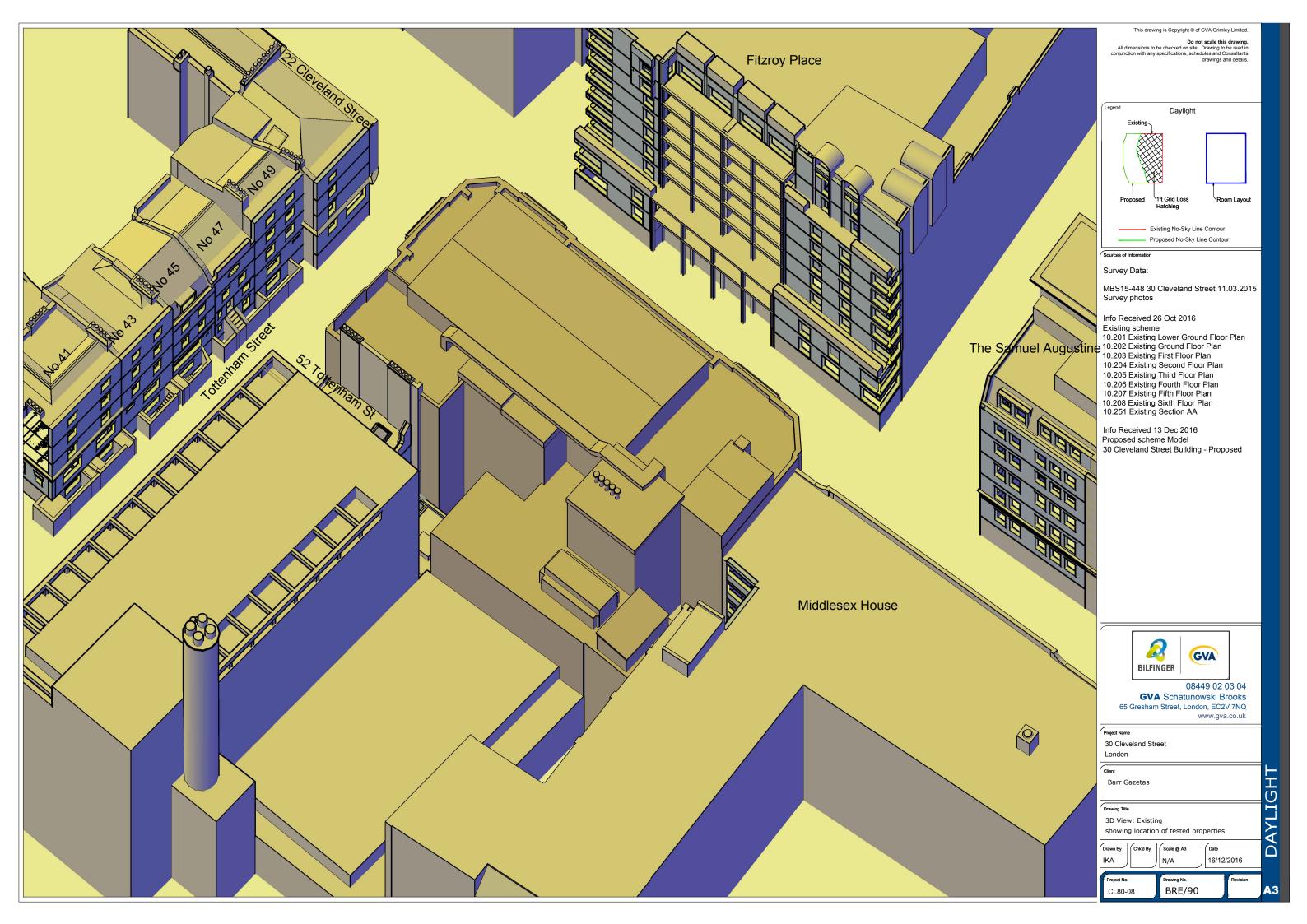
GVA Schatunowski Brooks

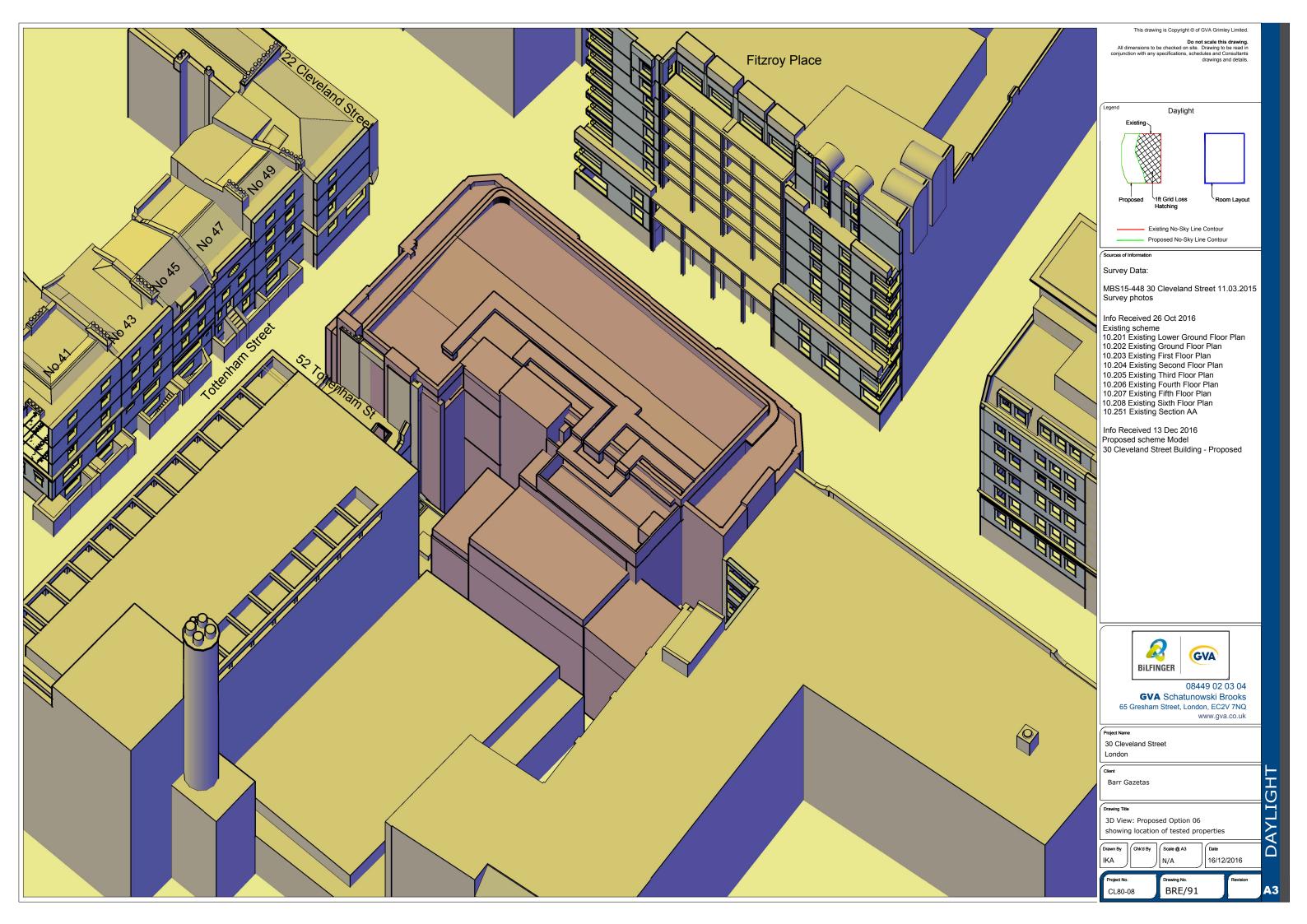


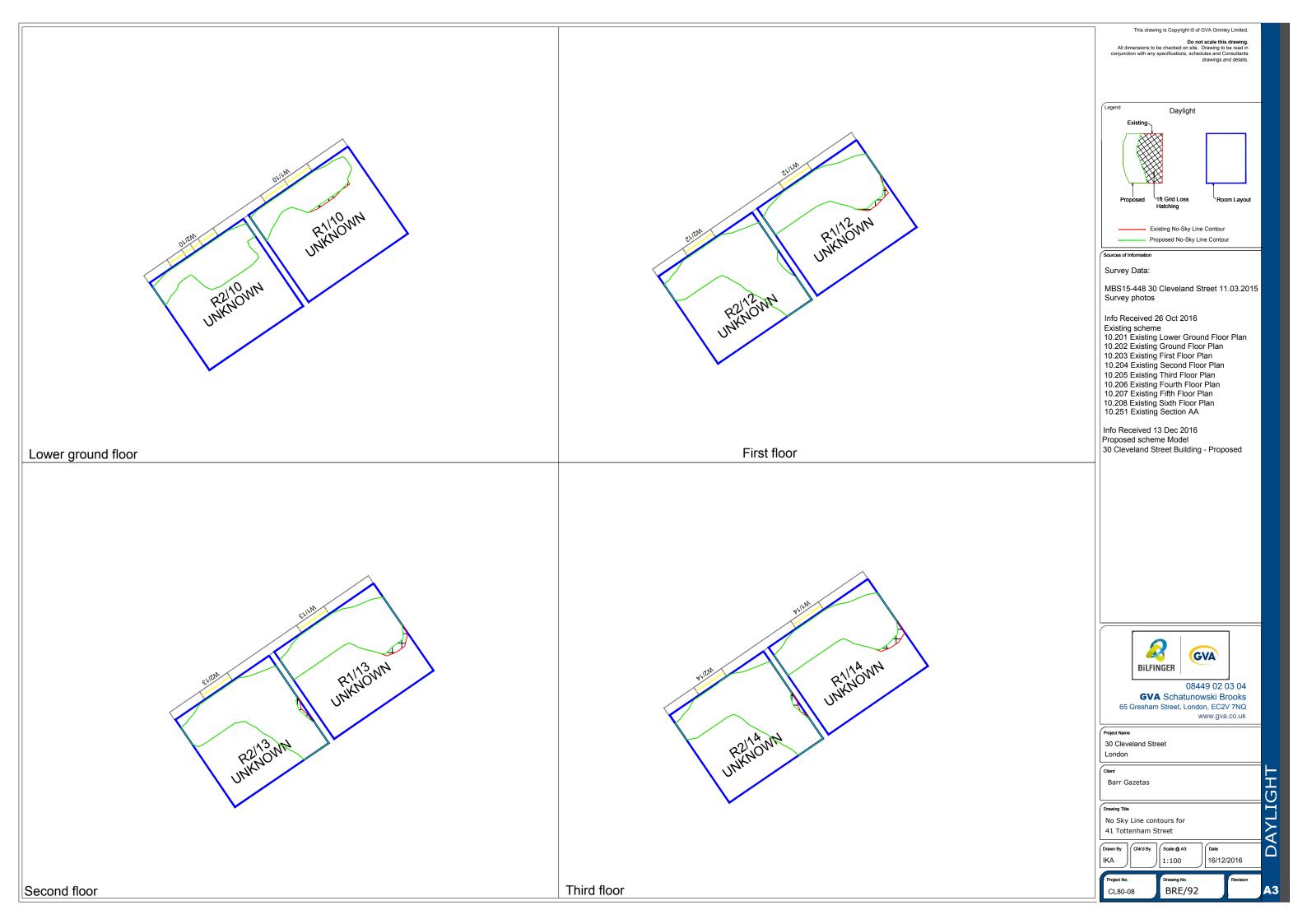


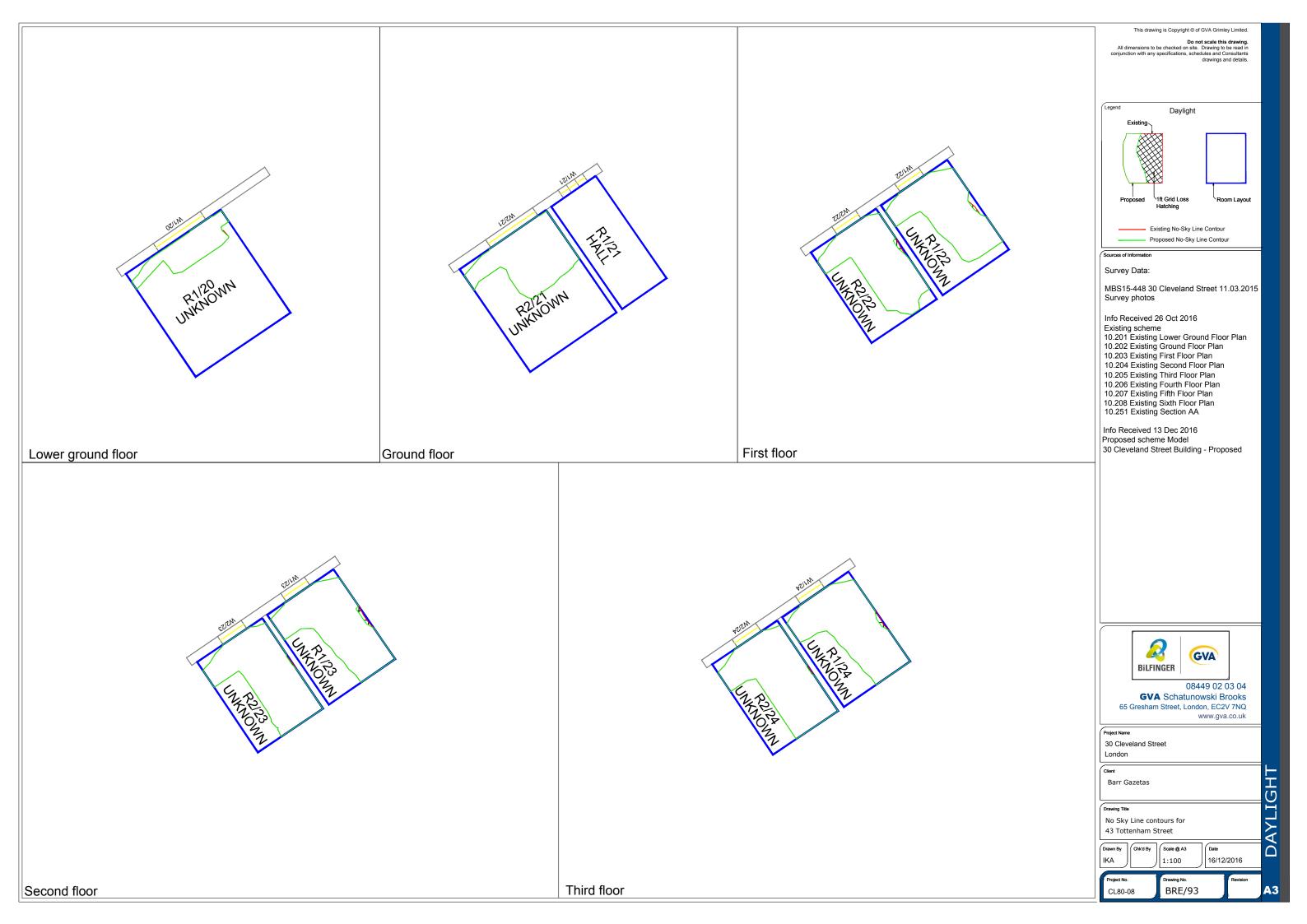
Appendix I

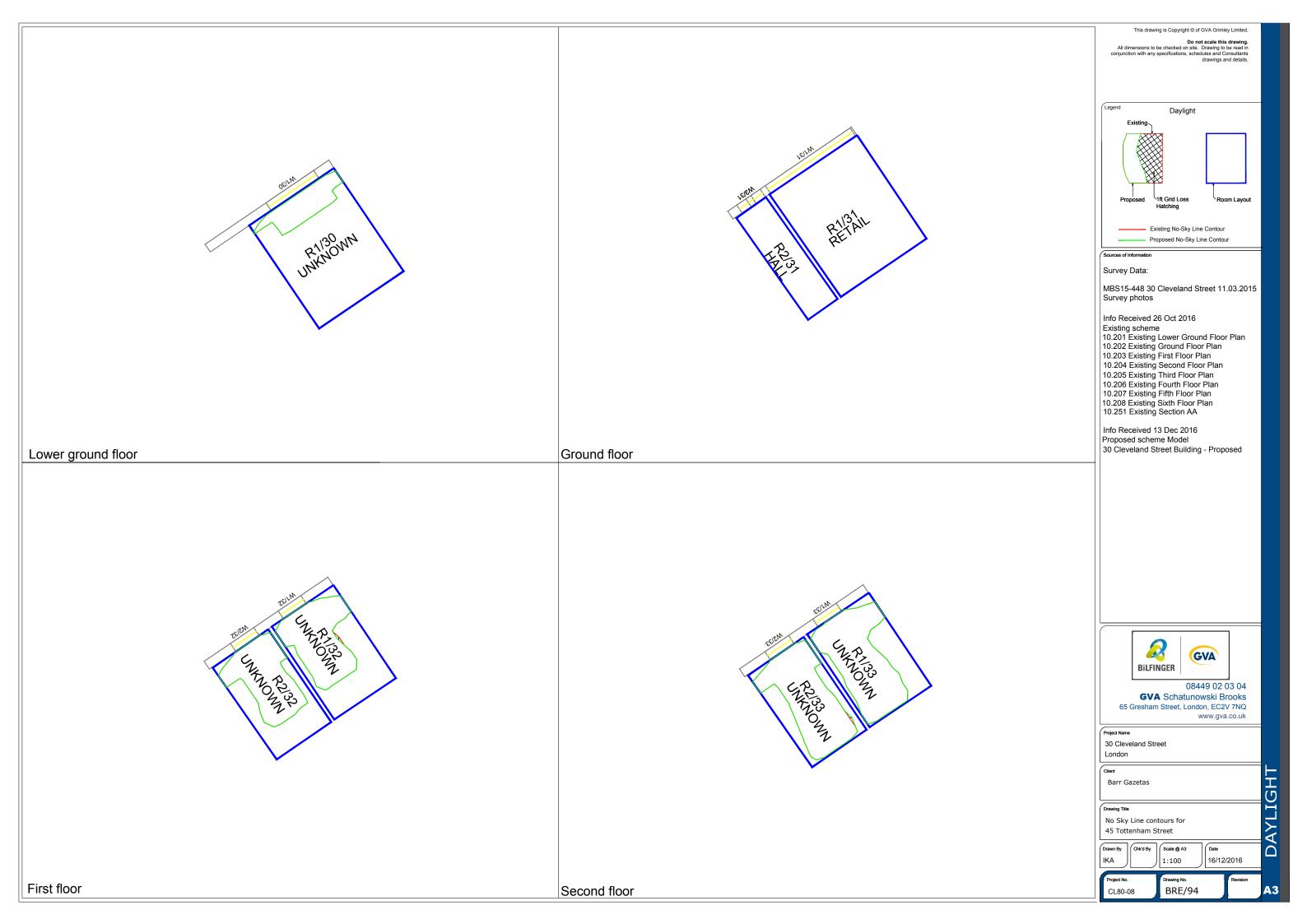
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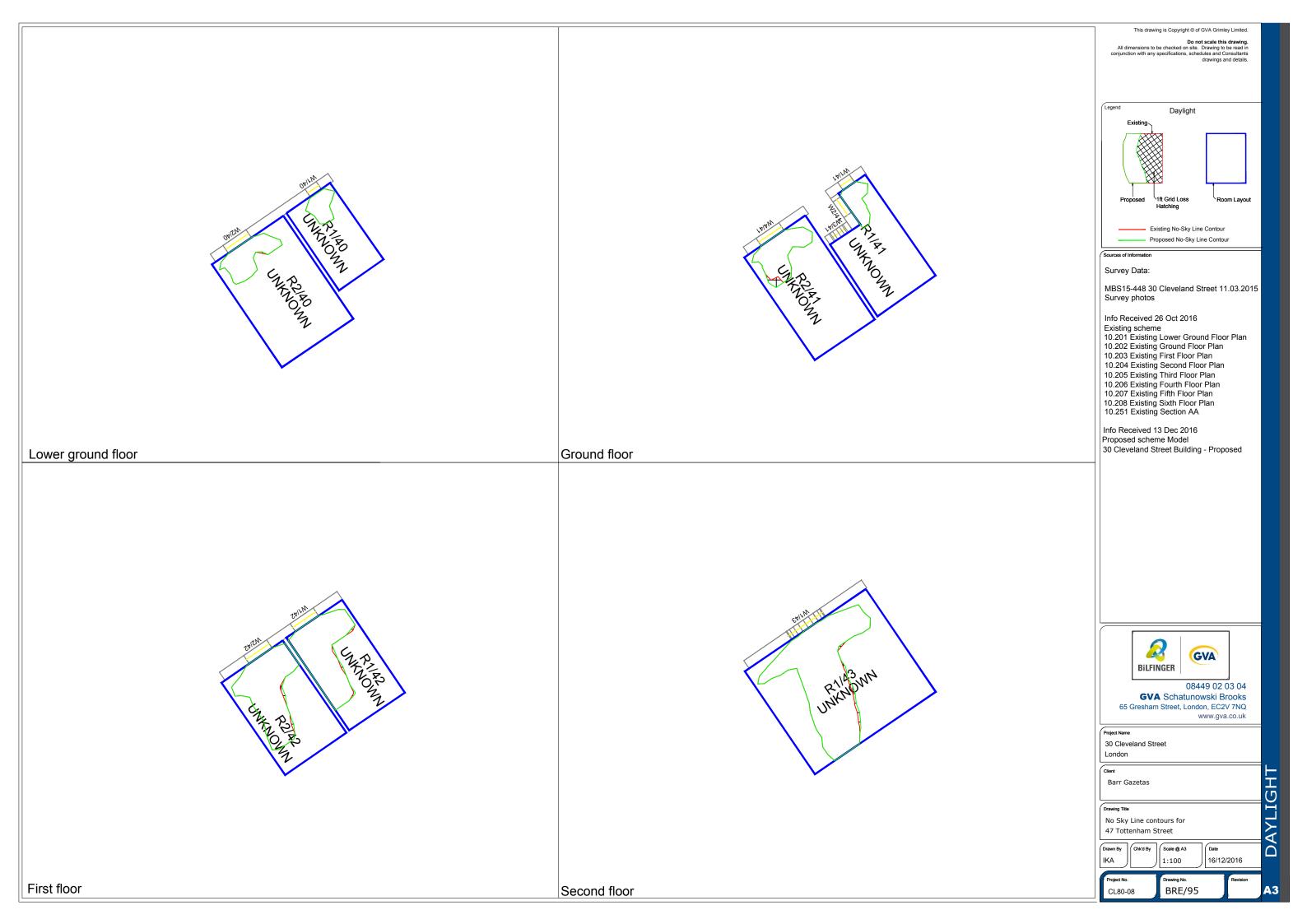


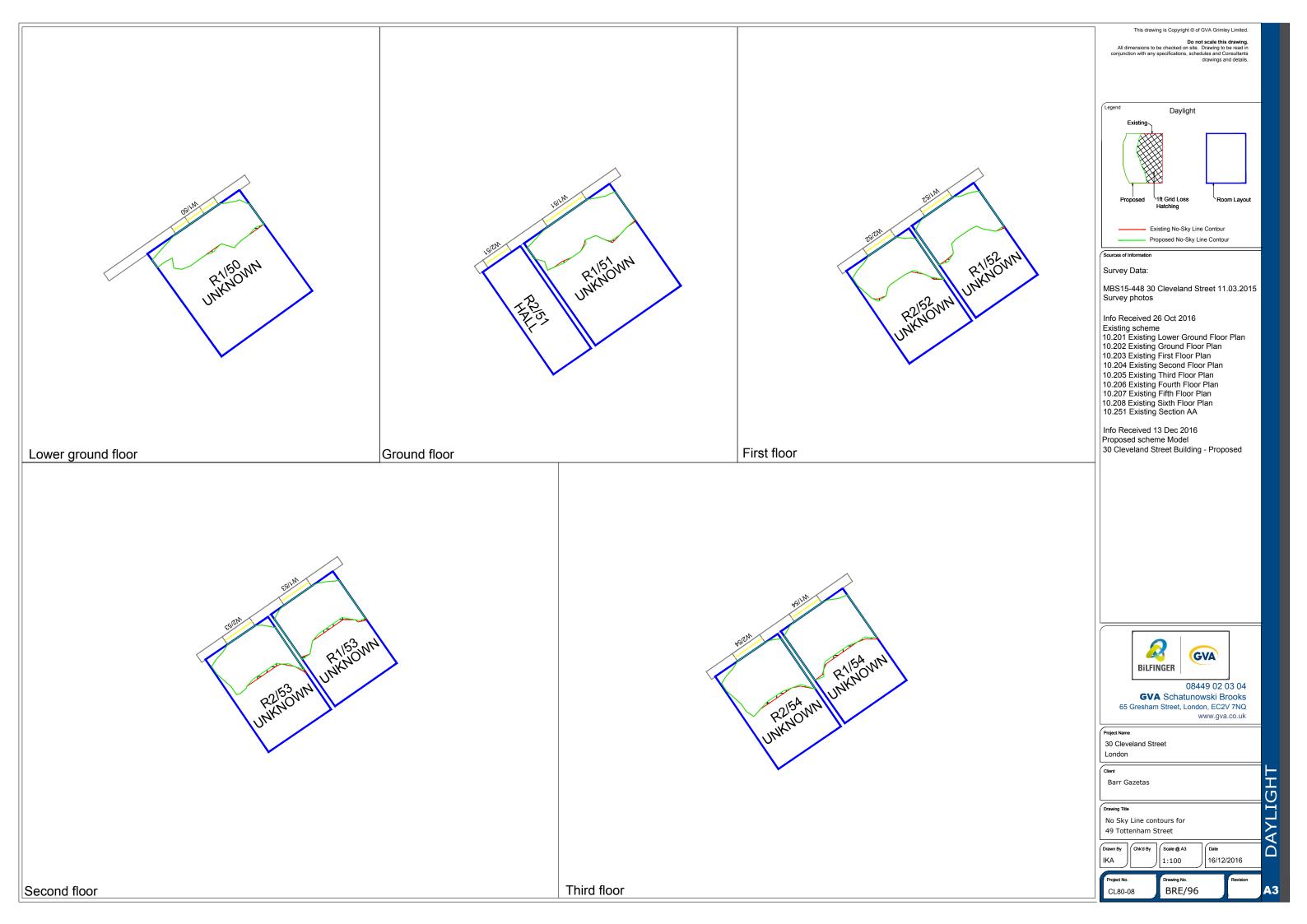


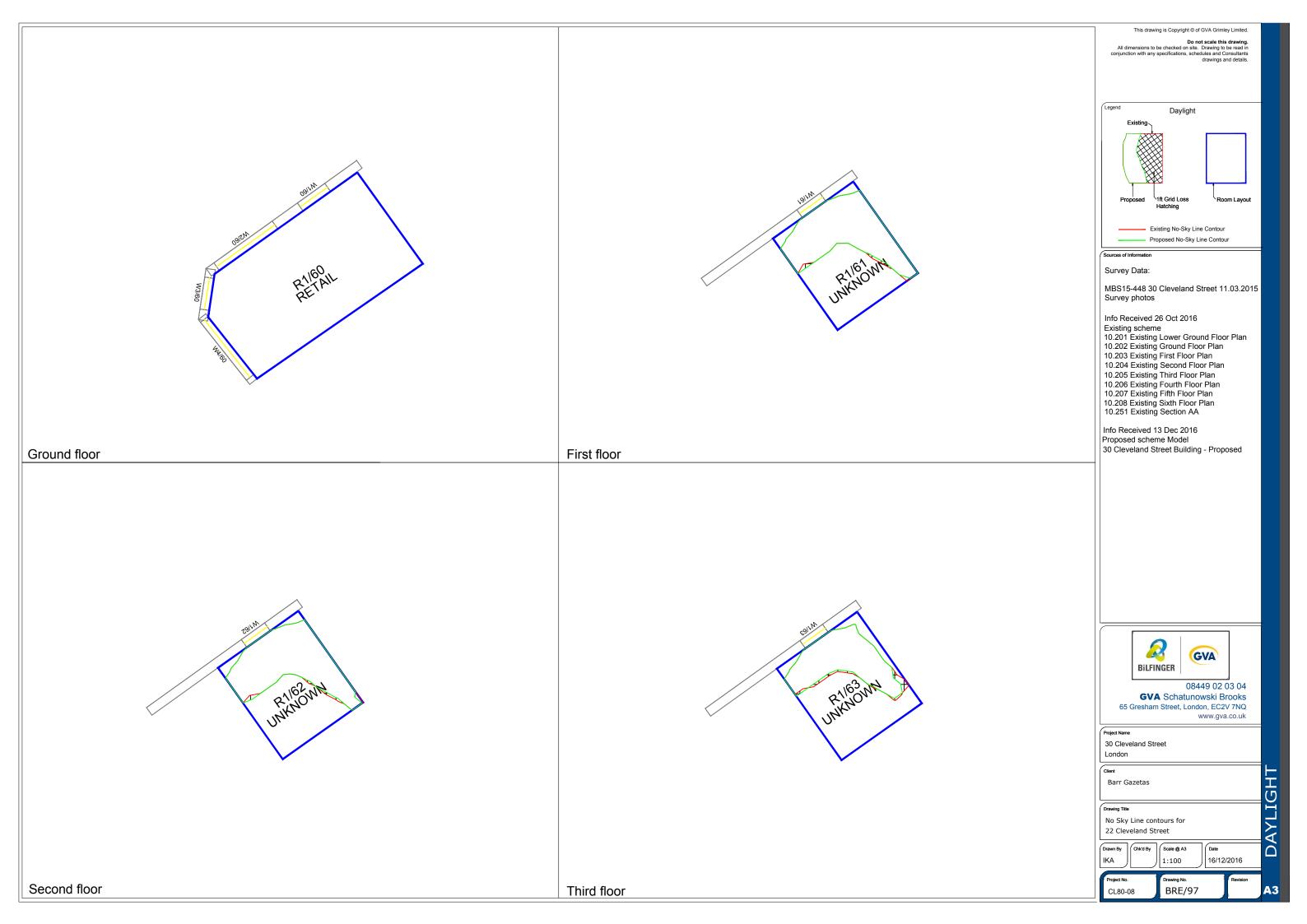


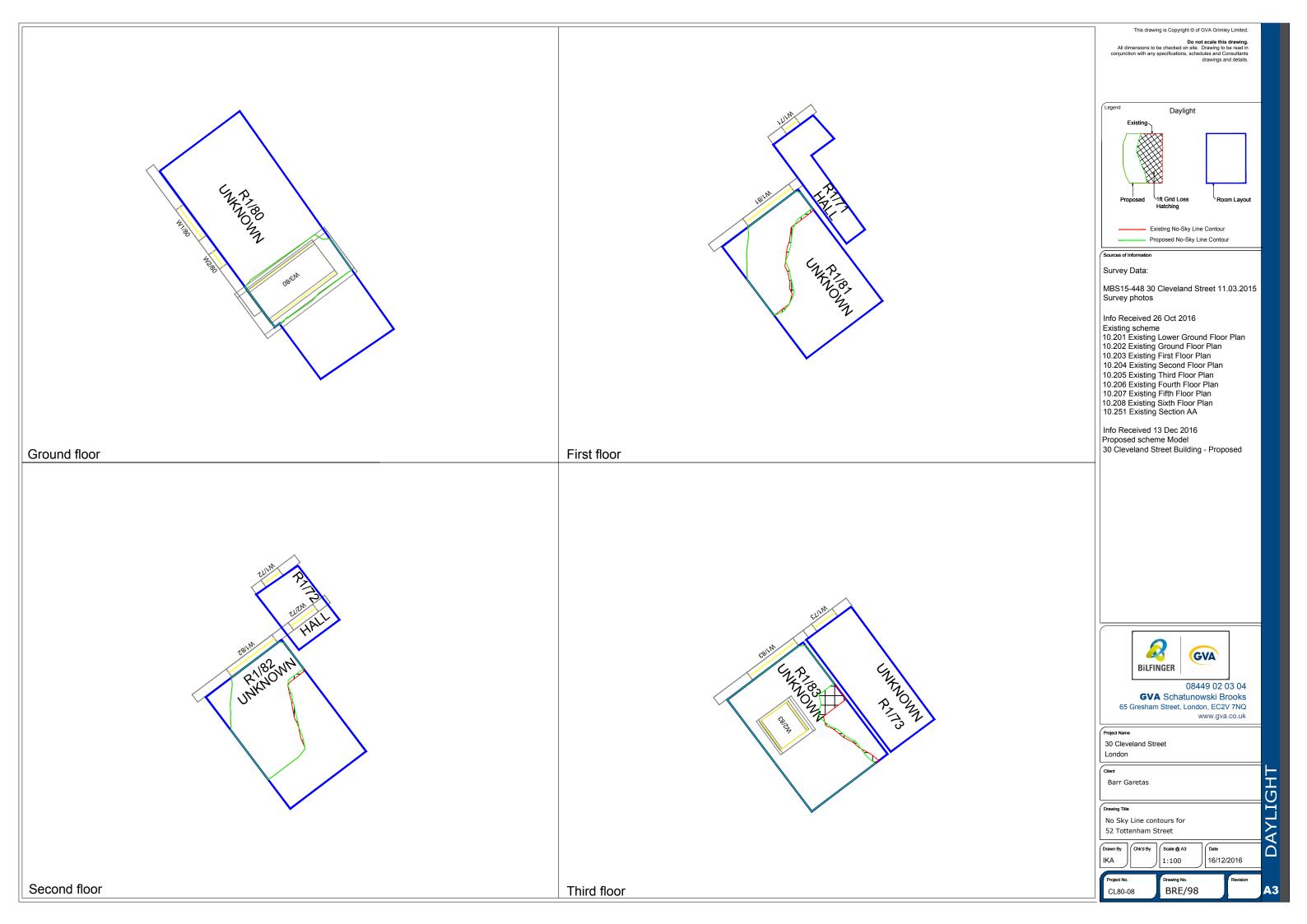


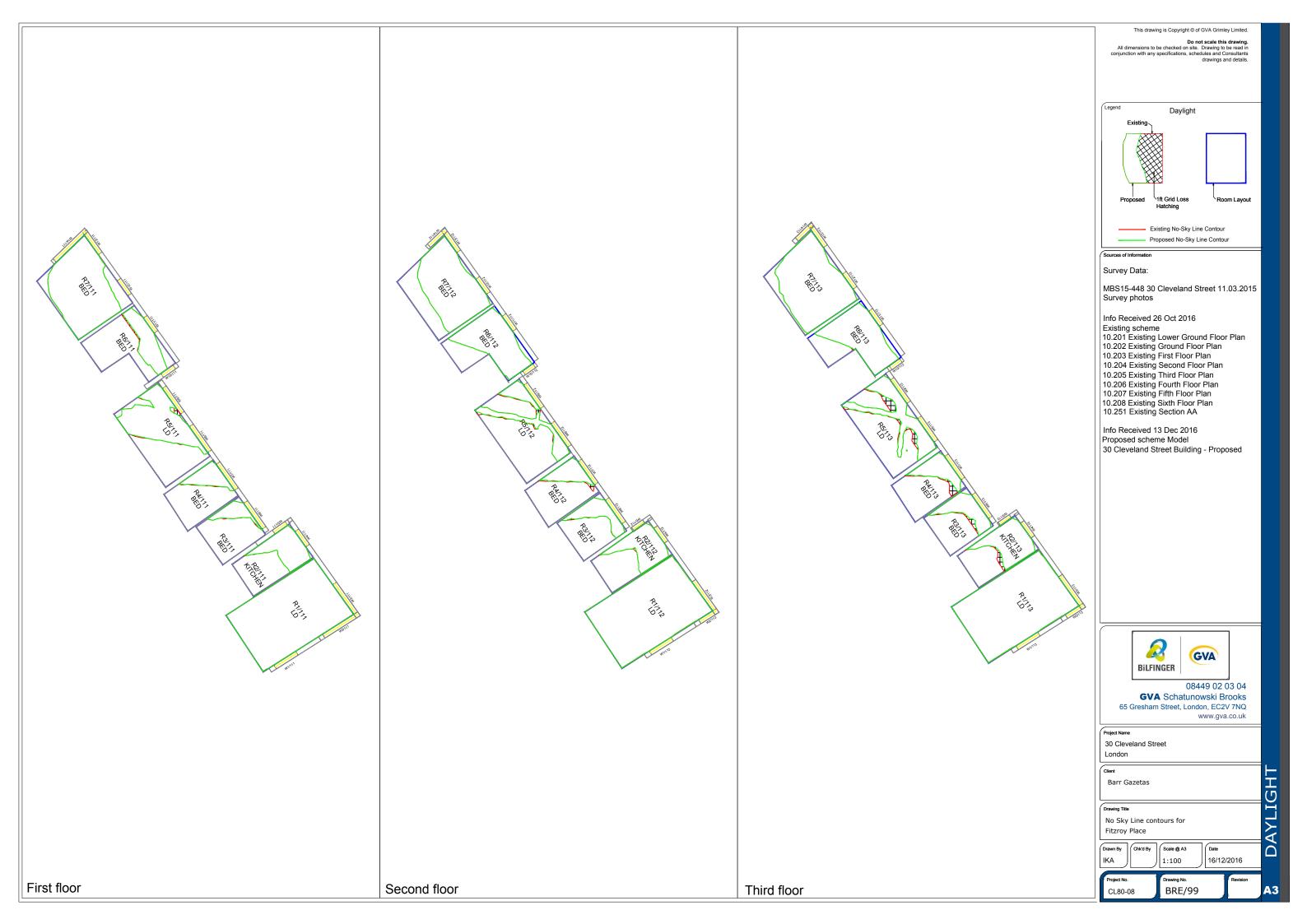


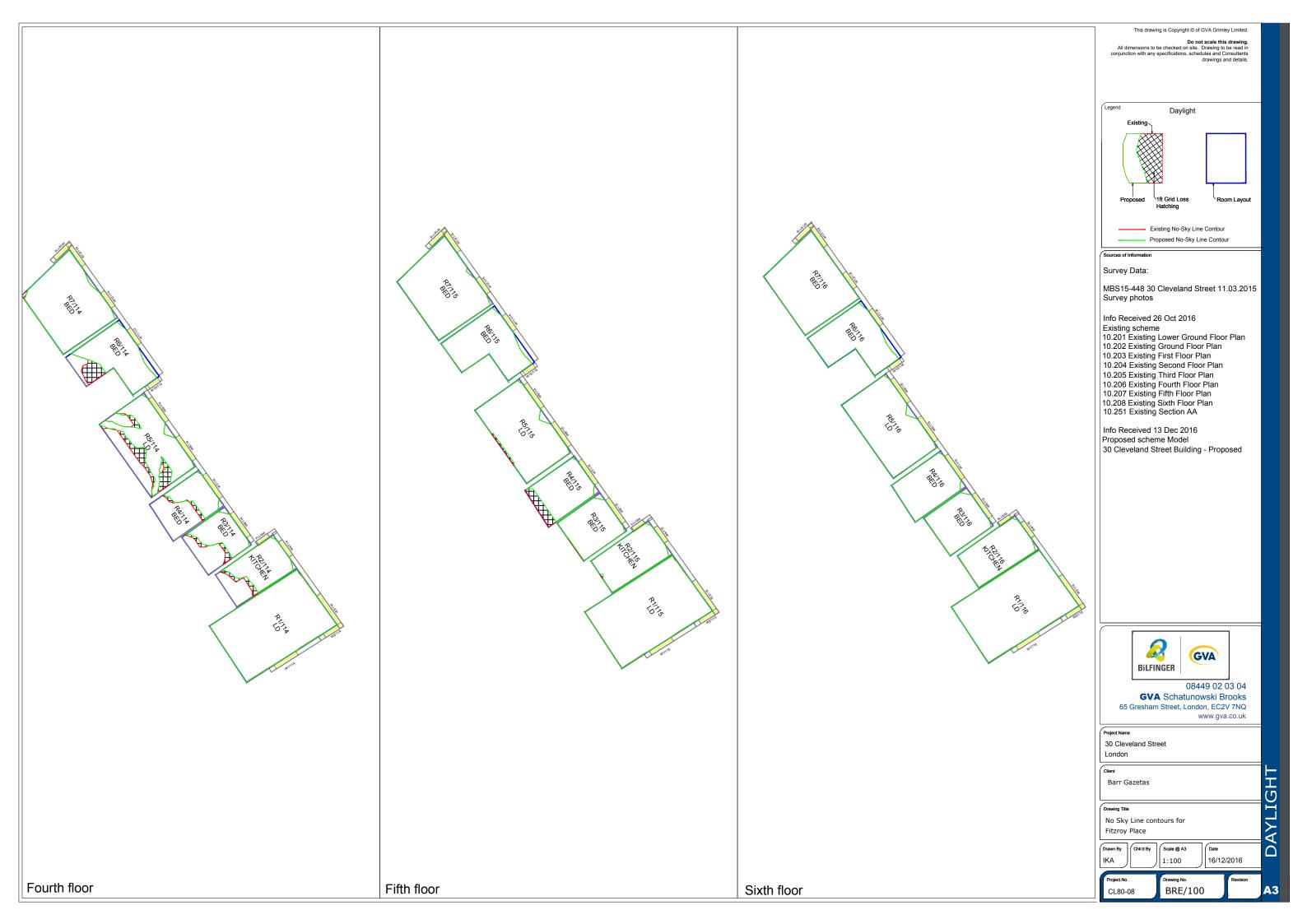














GVA Schatunowski Brooks





Appendix II

Daylight Analysis Table



30 CLEVELAND STREET BRE DAYLIGHT ANALYSIS

16/12/2016

			%VSC			% D	ayligh	t Factor	Propose	Proposed No Sky	
									Room	% Loss of	
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Fxist	Prop	% Loss	Area	Existing	
41 Tottenha			Extist	. iop	70 2000	Littlet	1100	70 2000		J	
Base Floor											
R1/10	UNKNOWN	W1/10	5.54	5.52	0.36%	0.53	0.53	0.38%	21.85%	2.82%	
R2/10	UNKNOWN	W2/10	5.61	5.58		0.61	0.61	0.33%			
1st Floor	oranico viit	VV2/10	0.01	0.00	0.0070	0.01	0.01	0.0070	20.0170	0.0070	
R1/12	UNKNOWN	W1/12	9.44	9.40	0.42%	0.54	0.54	0.37%	35.73%	2.31%	
R2/12	UNKNOWN	W2/12	9.87	9.84	0.30%		0.62	0.32%		0.00%	
2nd Floor		ı									
R1/13	UNKNOWN	W1/13	11.58	11.53	0.43%	0.53	0.53	0.19%	37.14%	3.66%	
R2/13	UNKNOWN	W2/13	12.21	12.17	0.33%	0.61	0.61	0.49%		1.09%	
3rd Floor		•						•		•	
R1/14	UNKNOWN	W1/14	14.17	14.07	0.71%	0.53	0.52	0.57%	37.35%	3.64%	
R2/14	UNKNOWN	W2/14	14.94	14.84	0.67%	0.60	0.59	0.83%	53.71%	1.24%	
43 Tottenhai	m Street - Bl	RE/93									
Base Floor											
R1/20	UNKNOWN	W1/20	6.23	6.23	0.00%	0.32	0.32	0.00%	16.98%	0.37%	
Gnd Floor											
R2/21	UNKNOWN	W2/21	8.74	8.75	-0.11%	0.83	0.84	-1.45%	38.30%	0.00%	
1st Floor											
R1/22	UNKNOWN	W1/22	10.74	10.76		0.61	0.61	-0.99%		0.52%	
R2/22	UNKNOWN	W2/22	11.35	11.39	-0.35%	0.64	0.66	-2.18%	62.36%	0.84%	
2nd Floor					_				_		
R1/23	UNKNOWN	W1/23	13.46	13.49			0.69			1.07%	
R2/23	UNKNOWN	W2/23	14.51	14.59	-0.55%	0.73	0.74	-2.21%	69.61%	0.15%	
3rd Floor	1	I	T	T			T -		T . =	_	
R1/24	UNKNOWN	W1/24	16.41	16.34			0.63			0.91%	
R2/24	UNKNOWN	W2/24	17.75	17.69	0.34%	0.67	0.68	-2.09%	72.34%	0.29%	
45 Tottenhai	m Street - Bl	RE/94									
Base Floor	LINIUAN CAR	144 100	(0 :	(0=	0.500	0.00	0.00	0 (00)	47.700	0.000	
R1/30	UNKNOWN	W1/30	6.04	6.07	-0.50%	0.30	0.30	-0.68%	16.63%	0.00%	
1st Floor	lunua i o i a a i	14/4/00	140.40	40.7/	0 / 50/	0 (0	0.40	0 (50)	F0.070/	0.440/	
R1/32	UNKNOWN	W1/32	10.69	10.76			0.62			0.41%	
R2/32	UNKNOWN	W2/32	10.62	10.69	-0.66%	0.67	0.69	-2.67%	55.53%	0.00%	
2nd Floor	I IN IIZNI OVAZNI	W/1 /00	10 57	10 /0	0.000/	0.74	0 / 1	0.000/	(0.050)	0.000/	
R1/33	UNKNOWN	W1/33	13.57	13.69			0.61	-0.82%			
R2/33	UNKNOWN	W2/33	13.51	13.66	-1.11%	0.66	0.67	-1.06%	73.80%	-0.49%	
3rd Floor	I IN IIZNI OVAZNI	VA/1 /O 4	1/ //	1/ / 4	0.100/	0.70	0 / /	4 400/	FF 470/	0.000/	
R1/34	UNKNOWN	W1/34	16.66	16.64	0.12%	0.63	0.66	-4.42%	55.47%	0.00%	





			%VSC			% D	ayligh	t Factor	Propose	ed No Sky
									% oi Room	% Loss of
Room/Floor		Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing
47 Tottenhai	m Street - Bl	RE/95								
Base Floor		•			•					
R1/40	UNKNOWN	W1/40	6.14	6.25			0.13		13.29%	0.00%
R2/40	UNKNOWN	W2/40	6.13	6.23	-1.63%	0.32	0.51	-58.64%	13.29%	0.62%
Gnd Floor		•			•					
		W1/41	8.79	8.93						
R1/41	UNKNOWN	W2/41	0.00	0.00	0.00%	0.17		-11.56%	10.97%	0.00%
		W3/41	0.00	0.00	0.00%					
R2/41	UNKNOWN	W4/41	8.40	8.55	-1.79%	0.34	0.39	-15.13%	19.39%	-5.91%
1st Floor					_					
R1/42	UNKNOWN	W1/42	10.92	11.16		0.59	0.62	-4.22%	46.42%	-1.04%
R2/42	UNKNOWN	W2/42	10.35	10.57	-2.13%	0.55	0.57	-3.85%	43.91%	-1.75%
2nd Floor										
R1/43		W1/43	13.56	13.88	-2.36%	0.37	0.37	-1.92%	40.76%	-1.48%
49 Tottenha	m Street - Bl	RE/96								
Base Floor										
R1/50	UNKNOWN	W1/50	5.61	5.68	-1.25%	0.64	0.71	-10.28%	25.75%	0.00%
Gnd Floor										
R1/51	UNKNOWN	W1/51	7.32	7.40	-1.09%	0.67	0.72	-7.01%	30.01%	-0.23%
1st Floor										
R1/52	UNKNOWN	W1/52	9.49	9.59	-1.05%	0.73	0.75	-2.46%	36.67%	-0.29%
R2/52	UNKNOWN	W2/52	8.56	8.59	-0.35%	0.69	0.71	-3.79%	33.40%	0.32%
2nd Floor										
R1/53	UNKNOWN	W1/53	12.43	12.57	-1.13%	0.83	0.84	-1.33%	40.83%	2.79%
R2/53	UNKNOWN	W2/53	11.30	11.35	-0.44%	0.79	0.80	-1.14%	37.43%	3.02%
3rd Floor										
R1/54	UNKNOWN	W1/54	16.39	16.37	0.12%	0.76	0.77	-0.79%	45.95%	2.49%
R2/54	UNKNOWN	W2/54	15.43	15.34	0.58%	0.76	0.77	-0.52%	43.27%	2.16%
22 Clevelan	d Street - Bl	RE/97								
1st Floor										
R1/61	UNKNOWN	W1/61	9.86	9.89	-0.30%	0.62	0.62	0.32%	50.73%	0.64%
2nd Floor										
R1/62	UNKNOWN	W1/62	12.90	12.94	-0.31%	0.65	0.65	0.46%	52.37%	0.77%
3rd Floor										
R1/63	UNKNOWN	W1/63	16.33	16.25	0.49%	0.44	0.44	1.14%	38.66%	5.20%





			%VSC			% D	avligh	t Factor	Proposed No Sky	
					_	.,,,,				
									Room	% Loss of
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing
	m Street - B	RE/98								
1st Floor										
		W1/80	0.12		16.67%					
R1/80	UNKNOWN	W2/80	0.14		21.43%	0.77	0.77	-0.26%	19.18%	0.00%
		W3/80	9.68	9.57	1.14%					
2nd Floor	1									0.700
R1/81	UNKNOWN	W1/81	4.53	4.41	2.65%	0.59	0.59	0.34%	33.02%	-2.73%
3rd Floor		VA/1 /00	7.04	/ 71	7.000/	0.01	0.00	0.0707	F1 700/	0.500/
R1/82 4th Floor	UNKNOWN	W1/82	7.24	6.71	7.32%	0.81	0.82	-0.86%	51.72%	-0.52%
4th Floor		VV/1 /02	10 E7	0.20	11 1/0/	1		l		
R1/83	UNKNOWN	W1/83 W2/83	10.57	9.39	11.16%	1.52	1.53	-0.53%	84.74%	4.27%
Fitzrov Place	<u>I</u> e - BRE/99, 1		33.67	33.30	>21					
1st Floor	C - DKL/ 99,	100, 101								
13(1100)		W1/111	9.75	9.75	0.00%					
R1/111	LD	W2/111	17.27	17.27	0.00%		4.91	-23.63%	99.97%	0.00%
,		W3/111	19.03		1.21%		1.71	20.0070	77.7770	0.0070
D0 /4.44	LUT OLUTAL	W4/111	14.73	-	2.31%		4.07	07.0404	45.050/	0.100/
R2/111	KITCHEN	W5/111	2.16		8.33%	1.54	1.96	-27.36%	45.35%	0.18%
R3/111	BED	W6/111	0.91	0.78	14.29%	0.27	0.36	-31.02%	20.35%	2.22%
R4/111	BED	W7/111	0.71	0.71	0.00%	0.42	0.65	-53.66%	26.50%	1.88%
R5/111	LD	W8/111	0.91	0.91	0.00%	0.42	0.66	EO 210/	53.92%	1.60%
R3/TTI	LD	W9/111	0.63	0.58	7.94%	0.42	0.00	-58.31%	33.7270	1.00%
R6/111	BED	W10/111	3.28		4.27%	1.10	1.37	24 30%	32.02%	3.50%
107111	DLD	W11/111	11.19		3.40%	1.10	1.37	-24.39%		3.50%
		W12/111	11.40		3.42%		2.63	-22.78%	87.12%	0.00%
R7/111	BED	W13/111	11.70	11.35	2.99%	2.14				
		W14/111	15.99	15.99	0.00%					
2nd Floor	1	14/4 /4 4 0	44.00	44.00	0.000	1	1	ı	ı	1
D1 /110		W1/112	11.30		0.00%	1	2.00	25 700	00.050/	0.000/
R1/112	LD	W2/112	17.79	17.79	0.00%	3.10	3.90	-25.78%	99.25%	0.00%
		W3/112		23.04	1.45%					
R2/112	KITCHEN	W4/112 W5/112	19.42 2.78		2.73% 9.71%		2.08	-24.31%	50.72%	0.47%
R3/112	BED						0.62	-11.64%	34.14%	1.07%
R4/112	BED	W6/112 W7/112	2.20 1.90		25.00% 20.53%		0.63			
	DLD	W8/112	0.92	0.41	55.43%					
R5/112	LD	W9/112	1.55		34.19%	11/18	0.55	-15.51%	24.10%	5.78%
		W10/112	4.37	4.11	5.95%				 	
R6/112	BED	W11/112	16.05		4.42%	1 3/1	1.62	-20.78%	74.64%	0.00%
		W11/112 W12/112		15.61	4.17%				 	
R7/112	BED	W13/112		16.00	3.61%	4	3.74	-19.79%	74.51%	0.00%
K//IIZ	DED	W14/112		17.59		1	., 1		74.31%	0.00%





				%VS	C	% D	ayligh	t Factor	Proposed No Sky	
									% OI	
									Room	% Loss of
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing
3rd Floor					_			_	_	
		W1/113	13.04	13.04		-	4.00	-21.62%	99.28%	
R1/113	LD	W2/113	19.69	19.69			4.28			0.00%
		W3/113	26.98		1.74%	-				
R2/113	KITCHEN	W4/113	23.20	22.48		2.06	2.49	-20.46%	54.81%	5.00%
504440		W5/113	4.31	3.95	8.35%					
R3/113	BED	W6/113	5.31	4.50	15.25%		0.87	-25.39%	39.13%	
R4/113	BED	W7/113	5.02	4.34	13.55%	0.76	0.93	-21.89%	30.31%	11.17%
R5/113	LD	W8/113	4.15		20.96%	0.71	0.87	-21.71%	34.72%	13.46%
		W9/113	4.76		19.96%	-				
R6/113	BED	W10/113 W11/113	5.75 20.31	5.47 19.21	4.87% 5.42%	1 22	1.95	-18.53%	75.10%	0.17%
		W11/113 W12/113	20.70	19.21	5.42%					
R7/113	BED	W12/113 W13/113	21.14	20.16	4.64%	-	6 4.07	-17.60%	90.93%	0.00%
K//113	BLD	W13/113 W14/113	19.74	19.74		-	4.07	-17.00%	90.93%	0.00%
4th Floor		VV 14/ 113	17.74	19.74	0.0076					
41111001	LD	W1/114	15.38	15.38	0.00%			-20.94%	99.28%	0.00%
R1/114		W2/114	21.86	21.86		-	4.73			
1(17) 1 1 1		W3/114	30.95	30.35		0.71	1.70	20.7170	77.2070	0.0070
		W4/114	27.77	26.87	3.24%					
R2/114	KITCHEN	W5/114	5.75	5.33	7.30%	2.37	2.83	-19.63%	70.83%	7.34%
R3/114	BED	W6/114	9.11	8.20	9.99%	1.05	1.70	-61.44%	59.39%	10.08%
R4/114	BED	W7/114	8.86	8.05	9.14%	1.01	1.62	-61.39%	46.66%	7.55%
DE /114	I D	W8/114	8.17	7.10	13.10%	1 10	1.05			
R5/114	LD	W9/114	8.73	7.50	14.09%	1.19	1.95	-63.86%	62.14%	18.47%
R6/114	BED	W10/114	7.07	6.79	3.96%	1.92	2.26	-17.26%	77.60%	11 000/
K0/114	BED	W11/114	25.75	24.18	6.10%	1.92	2.20	-17.20/0	77.00%	11.80%
		W12/114	26.29	24.69	6.09%					
R7/114	BED	W13/114	26.90	25.46	5.35%	-	4.69	-16.33%	98.32%	0.13%
		W14/114	22.57	22.57	0.00%					
5th Floor			T							
		W1/115	18.32			-				
R1/115	LD	W2/115		24.12		4.29	5.18	-20.85%	99.31%	0.00%
		W3/115		33.89						
R2/115	KITCHEN	W4/115		31.52		2.69	3.21	-19.66%	98.40%	0.32%
D2 /11F	DED	W5/115	7.45					25 110/	07.500/	0 ((0 (
R3/115	BED	W6/115	13.34			•	2.36		97.59%	
R4/115	BED	W7/115	13.08			_	2.18	-36.02%	84.93%	13.91%
R5/115	LD	W8/115 W9/115	12.71 12.99	11.65 11.77	8.34% 9.39%		2.75	-34.02%	96.95%	1.32%
		W10/115	8.31	8.06						
R6/115	BED	W10/115 W11/115		29.93		2.20	2.59	-17.42%	96.32%	0.00%
		W11/115	32.15	30.51						
R7/115	BED	W13/115	32.67	31.37		4.64	5.42	-16.95%	99.25%	0.00%
1.77113						-	0.42	-10.95%	99.25%	0.0070
,,	טבט	W14/115		26.20		-	0.12	-10.90%	77.2070	0.007





				%VS	С	% Daylight Factor			Proposed No Sky	
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Room Area	% Loss of Existing
6th Floor										
R1/116	LD	W1/116 W2/116 W3/116	21.16 26.92 37.41	21.16 26.92 36.97	0.00%	4	5.59	-21.52%	99.50%	0.00%
R2/116	KITCHEN	W4/116 W5/116	36.18 8.84			2.89	3.50	-21.14%	98.72%	0.00%
R3/116	BED	W6/116	17.36	16.73	3.63%	2.20	2.90	-31.53%	98.24%	0.00%
R4/116	BED	W7/116	17.12	16.47	3.80%	2.01	2.65	-31.63%	98.65%	0.00%
R5/116	LD	W8/116 W9/116	16.99 17.00	16.20 16.14	4.65% 5.06%	1 / 6	3.42	-30.76%	98.25%	0.00%
R6/116	BED	W10/116 W11/116	9.60 36.51	9.43 35.48	1.77% >27	2.45	2.92	-19.59%	96.32%	0.00%
R7/116	BED	W12/116 W13/116 W14/116	36.80 37.02 30.18	35.86 36.33 30.18	>27	5.16	6.13	-18.73%	100.00%	0.00%
7th Floor			1						1	1
R1/117	LD	W1/117 W2/117 W3/117	26.11 29.89 38.98	26.11 29.89 38.95	>27	5.03	6.11	-21.52%	99.56%	0.00%
R2/117	KITCHEN	W4/117 W5/117	39.03 9.78	38.99 9.76	>27 0.20%	3.13	3.85	-23.19%	99.44%	0.00%
R3/117	BED	W6/117	19.20		0.16%		3.18	-33.84%	98.24%	0.00%
R4/117	BED	W7/117	19.18	19.15	0.16%	2.19	2.93	-33.96%	98.65%	0.00%
R5/117	LD	W8/117 W9/117	19.38 21.79	19.36 21.78	0.10% 0.05%	2.98	4.01	-34.83%	99.22%	0.00%
R6/117	BED	W10/117 W11/117	37.84 38.30	37.85 38.32		1.64	1.97	-19.96%	90.85%	0.00%
8th Floor										
R1/118	LD	W1/118 W2/118 W3/118	30.71 33.37 39.40	30.71 33.37 39.40	>27	5.33	6.47	-21.48%	99.56%	0.00%
R2/118	KITCHEN	W4/118 W5/118	39.45 21.63	39.45 21.63		3.70	4.52	-22.22%	99.44%	0.00%
R3/118	BED	W6/118	34.37	34.37		5.16	6.37	-23.46%	99.91%	0.00%
R4/118	BED	W7/118	38.81	38.81	>27	5.34	6.64	-24.42%	99.92%	0.00%
R5/118	LD	W8/118 W9/118		39.28 39.10		7.08	8.81	-24.45%	99.86%	0.00%
R6/118	BED	W10/118 W11/118 W12/118 W13/118		38.77 39.05 38.78 38.95	>27 >27	3.15	3.48	-10.58%	93.87%	0.00%

GVA Schatunowski Brooks





Appendix III

Sunlight Analysis Table



30 CLEVELAND STREET BRE SUNLIGHT ANALYSIS

16/12/2016

Available sunlight as a percentage of annual unobstructed total (1486.0 Hrs)

		Exi	sting %		Prop	osed %	ò					
								% LOSS Of	% Loss of	% LOSS Of		
Room use	Window Ref		Winter	Total	Summer	Winter	Total	Summer	Winter	Total		
	ım Street - B	RE/95										
Gnd Floor												
UNKNOWN		0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%		
	am Street - B	RE/98										
1st Floor												
UNKNOWN	W1/80	0.00	0.00	0.00	0.00	0.00		0.00%	0.00%			
UNKNOWN		0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%		
Fitzroy House- BRE/99, 100, 101												
1st Floor												
LD	W1/111	21.00		27.00	21.00		27.00	0.00%	0.00%			
LD	W2/111	31.00		39.00	31.00		39.00	0.00%	0.00%			
BED	W10/111	4.00	1.00	5.00	4.00	1.00	5.00	0.00%	0.00%	0.00%		
2nd Floor												
LD	W1/112	25.00	7.00	32.00	25.00		32.00	0.00%	0.00%	0.00%		
LD	W2/112	32.00		40.00	32.00		40.00	0.00%	0.00%			
BED	W10/112	5.00	2.00	7.00	5.00	2.00	7.00	0.00%	0.00%	0.00%		
3rd Floor												
LD	W1/113	26.00			26.00		33.00	0.00%	0.00%	0.00%		
LD	W2/113	34.00	9.00	43.00	34.00	9.00	43.00	0.00%	0.00%	0.00%		
BED	W10/113	7.00	2.00	9.00	6.00	2.00	8.00	14.29%	0.00%	11.11%		
4th Floor												
LD	W1/114	33.00		40.00	33.00		40.00	0.00%	0.00%			
LD	W2/114	39.00		48.00	39.00	9.00	48.00	0.00%	0.00%	0.00%		
BED	W10/114	11.00	2.00	13.00	10.00	2.00	12.00	9.09%	0.00%	7.69%		
5th Floor												
LD	W1/115	41.00	7.00	48.00	41.00		48.00	0.00%	0.00%	0.00%		
LD	W2/115	45.00		54.00	45.00		54.00	0.00%	0.00%			
BED	W10/115	13.00	2.00	15.00	12.00	2.00	14.00	7.69%	0.00%	6.67%		
6th Floor												
LD	W1/116	42.00		51.00	42.00		51.00	0.00%	0.00%	0.00%		
LD	W2/116	47.00		59.00	47.00		59.00	0.00%	0.00%	0.00%		
BED	W10/116	17.00	2.00	19.00	17.00	2.00	19.00	0.00%	0.00%	0.00%		
7th Floor												
LD	W1/117	51.00	11.00	62.00	51.00		62.00	0.00%	0.00%	0.00%		
LD	W2/117	50.00	11.00	61.00	50.00	11.00	61.00	0.00%	0.00%	0.00%		
8th Floor												
LD	W1/118	54.00	17.00	71.00	54.00	17.00	71.00	0.00%	0.00%	0.00%		



		Exi	sting %		Pro	oosed %	0			
Room use	Window Ref	Summer	Winter	Total	Summer	Summer Winter Total S			% Loss of Winter	% Loss of Total
LD	W2/118	50.00	19.00	69.00	50.00	19.00	69.00	0.00%	0.00%	0.00%