Daylight and Sunlight Report

Malden Road

Goldcrest Land

March 2016



9 Heneage Street, Spitalfields, London E1 5LJ

CONTENTS

1	Introduction and Scope of Report	2
2	Sources of Information and Limitations	3
3	Daylight and Sunlight Standards	4
4	Scheme Assessment	8
5	Summary and Conclusion	12

APPENDICES

- 1 Feasibility Study
- 2 Drawing Nos. MA133-09-CAD044 and CAD046
- 3 Drawing Nos. MA133-09-BRE048 and BRE052
- 4. Daylight Analysis Table
- 5 Sunlight Analysis Table
- 6. Drawing Nos MA133-10-BRE054 and BRE055
- 7. Daylight Analysis Table for Shipton House omitting canopy-effect of balconies

1 INTRODUCTION AND SCOPE OF REPORT

- 1.1 GVA Schatunowski Brooks was retained by Goldcrest Land to assess the performance and impact of the proposed development at the site of the former play area between Leysdown, Shipton House and the Fiddler's Elbow Public House in Malden Road in respect of daylight and sunlight and prepared a Daylight and Sunlight Report dated December 2015. Since then, the scheme has been amended and revised in terms of internal layout and unit sizes and mixes, but those changes remain entirely within the same massing and building envelope tested in December 2015. Any impact on the daylight and sunlight amenity enjoyed by existing neighbouring properties will therefore be the same as that measured and reported on in the GVA report dated December 2015. Lumina London Limited have now been retained by Goldcrest Land to verify that there will be no material difference in the impact of the revised scheme and to prepare this revised report.
- 1.2 The purpose of this report is to assess the impact of the proposed development on the daylight and sunlight enjoyed by existing neighbouring dwellings in according with the Building Research Establishment (BRE) Guidelines "Site Layout Planning for Daylight and Sunlight A Guide to Good Practice", 2011, to ensure that the proposed development will not result in any material impact on the amenity enjoyed by existing neighbouring residents.
- 1.3 Mr Wong of Lumina London Limited, and previously of GVA Schatunowski Brooks, has been retained from the outset of the Feasibility Study to provide advice and input into the design and location of the proposed habitable rooms in order to assist the architect in ensuring that the design meets the target standards for impact on amenity.

2 SOURCES OF INFORMATION AND LIMITATIONS

- 2.1 The existing and surrounding buildings have been modelled from an accurate survey comprising Twickenham survey drawing numbers 1529 LS, 15501, 15502, 1529E1, 1529E2, 1529E3 and 1529E4.
- 2.2 For the proposed scheme we have relied upon the John Pardey Architects 3D model, reference 1502_Building Model_151209. SKP, which represents the same 'massing' as the Application Scheme.
- 2.3 The site has been inspected and the survey information has been supplemented by photographs and measurements taken on Site.

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 standards within the Guidelines have been derived on the basis of a low density suburban housing model, it would be entirely appropriate to apply a more flexible approach when dealing with higher rise developments in a denser inner city urban environment. 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 The maximum VSC value that can be achieved for a totally unobstructed vertical window is 40% VSC. The target VSC value for good daylighting conditions is 27% VSC. In simple terms, 27% VSC equates to being able to see 27% of the Sky Dome i.e. the hemisphere of sky above a given reference point. A VSC value of 27% will be achieved where the obstruction in front of a vertical

window is continuous and parallel to the plane of that window and subtends a vertical angle of 25 degrees when measured from the mid-point of that window. It therefore follows that if a proposed new development is below a vertical angle of 25 degrees, the resultant VSC value will remain above 27%. This is the scientific basis for the initial 'screening' in the BRE Guidelines where it is unnecessary for any further detailed daylight (or sunlight) tests to be undertaken where a proposed development will remain below a vertical angle of 25 degrees. It is clear that in an inner city urban environment the relationship of the vast majority of existing buildings already exceed a vertical angle of 25% and that the VSC values that prevail will therefore be below 27% VSC. In such circumstances VSC values in the mid-teens are the norm, and value in excess of 20% VSC will be considered to be good.

- 3.5 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.
- 3.6 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.
- 3.7 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, there is often 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.
- 3.8 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 and around 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 recommend that internal Daylight Distribution is measured in addition to VSC.

3.9 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. 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.

3.10 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."

To put this in context, the maximum VSC value that can be received for a totally unobstructed vertical window is 40%. It is therefore permissible for an obstruction to reduce the VSC value by 13 percentage points before the level of daylight received by the window could be below standard. 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 through the research undertaken at the Building Research Establishment, they have found 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. Where existing windows enjoy very high levels of daylight under existing conditions, the percentage reduction of daylight can be higher provided that the residual VSC value remains adequate.

Sunlighting

- 3.11 The requirements for protecting sunlight to existing residential buildings are set out in section 3.2 of the BRE Guidelines. As with daylight, it is unnecessary for detailed sunlight tests to be undertaken if a proposed development is below a vertical angle of 25 degrees as the BRE targets will automatically be met.
- 3.12 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.
- 3.13 The sunlight standards are normally applied to the principal Living Room within each dwelling rather than to kitchens and bedrooms.
- 3.14 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."
- 3.15 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

- 4.1 The site is presently a surface level playground and recreational area with no buildings or structures. Before the site was cleared for use as a playground, it was previously occupied by a three storey domestic scale terrace of properties similar in nature to those on the opposite side of Malden Road.
- 4.2 As the site has been a cleared site for a number of years, the buildings adjacent to the site have had the benefit of relatively unobstructed outlook over the site and have therefore enjoyed exceptionally good levels of natural daylight. In addition, as those baseline conditions are much higher than would normally be expected, those existing daylight levels can be reduced by a higher amount before the residual levels of natural light become inadequate and below-standard. It would therefore be inappropriate to apply the 20% permissible margin of reduction in the BRE Guidelines, but instead, to follow he BRE advice on setting alternative numerical targets in Appendix F of the Guidelines and focus on the actual absolute residual values of VSC in order to determine whether the habitable rooms in the existing neighbouring dwellings will continue to receive a sufficient amount of daylight, and therefore continue to enjoy a reasonable level of amenity.
- 4.3 The site was previously in the ownership of Camden Council, and was sold as a Development Site.
- 4.4 We have seen the Feasibility Study prepared by Barton Wilmore for the London Borough of Camden dated September 2012 which was produced to determine the reasonable development potential of the site. A copy of that Feasibility Study is annexed at Appendix I.
- 4.5 That Feasibility Study showed a six storey development occupying the front portion of the site. The indicative massing shown in that Feasibility Study has been followed in developing the current Planning Application scheme.

- 4.6 The extent of existing neighbouring residential premises in close proximity of the site that could be affected by the proposed development comprise:
 - The flats above the shop units at 2-20 Malden Road
 - The flats within Leysdown
 - The flats at the eastern end of Shipton House
- 4.7 For the purpose of Planning, the tests within the BRE Guidelines are usually limited to habitable rooms within an existing neighbouring residential building. Non-domestic and commercial buildings are usually excluded as it is generally accepted that these uses normally rely primarily on supplementary artificial lighting throughout the day and therefore are not dependent on natural light for their sole source of amenity. Bathrooms, Hallways and circulation space within dwellings are also excluded as they are not 'habitable' rooms. Small kitchens are also generally excluded where the use of the kitchen is exclusively for food preparation and where the size is insufficient to accommodate an alternative habitable use such as dining.
- 4.8 Annexed at Appendix II are the GVA drawing numbers MA133-09-CAD044 and CAD046 which are images of the Site Plans showing the existing cleared sites, and the Site Plan of the proposed new building. Those Site Plans also show the context with the various neighbouring properties. They are followed in Appendix III by the GVA drawing numbers MA133-09-BRE048 to BRE052 which are the Daylight Distribution plans for the neighbouring residential properties. They are then followed in Appendix IV by the Daylight Analysis Table setting out the results of the Vertical Sky Components (VSC), Daylight Distribution and Average Daylight Factor (ADF) analyses, and then by the results of the Sunlight Analysis at Appendix V. The room and window location references shown on the drawings should be cross-referenced with the equivalent room and window references in the tables.
- 4.9 The results show that all of the residential properties within 2-20 Malden Road will experience no material loss of daylight or sunlight at all. Not only will any reduction in existing VSC values be well within the 20% permissible margin of reduction, the actual residual VSC values for all of the windows will also continue to be higher than 27% VSC. The results of the sunlight analysis follows a similar pattern in that not only will all of the windows comfortably satisfy the BRE Guidelines, the availability of sunlight will continue to be more than twice the BRE recommended

targets for APSH, and in the vast majority of cases, more than three times the amount for winter sunlight.

- 4.10 The flats within Leysdown do not have any windows serving habitable rooms with a direct outlook onto the site. The windows serving habitable rooms are located on the principal front east facing elevation and rear west facing elevation. The single column of small windows in the south facing elevation overlooking the site serve bathrooms and are therefore are not 'habitable' rooms.
- 4.11 One window in Leysdown (the window labelled R2/41 at first floor level) will experience a loss of VSC in excess of 20%. The location of that window is illustrated on drawing number BRE049 annexed at Appendix III. It should however be noted that the residual VSC value for that particular window will be 26.14%, and that the loss of internal Daylight Distribution measured using the No Skyline Contour, is just 0.25% and would therefore be imperceptible. This room will therefore continue to be extremely well-lit.
- 4.12 Shipton House lies to the south west of the site and although the windows in Shipton House face directly onto the open play area, they also face directly on to the flank elevation of the Leysdown block of flats which is six storeys in height. Many of the windows in Shipton House therefore derive much of their natural daylight from the gap in front of Leysdown, rather than over the top. Any meaningful development on the site in the form illustrated by the Council's own Feasibility Study will infill that gap and therefore result in an inevitable reduction in daylight received by the windows in Shipton House. It should also be noted that Shipton House is a block of balcony access flats and the majority of the windows in the north facing elevation are therefore located below projecting walkways and therefore suffer from the 'canopy-effect' of those projecting walkways. For the purpose of the BRE Guidelines, it is therefore necessary to test the availability of daylight and sunlight 'with' and 'without' the canopy-effect of the balconies taken into account. The results of that separate analysis specifically for Shipton House are annexed at Appendices VI and VII which comprise the revised distribution plans and daylight analysis table. It should also be noted that the principal Living Rooms in the Shipton House flats are located on the south elevation with a direct outlook over Prince of Wales Road, and that the rooms facing onto the Application Site are the entrance hallways, small kitchens and possibly a number of bedrooms.

- 4.13 When those results are compared side by side, it is clear that the low VSC values and losses of VSC are a direct result of the canopy-effect of the projecting balconies rather than the height and 'massing' of the proposed development. In addition, given that the site is a cleared site, the change in lighting conditions when expressed as a percentage reduction will be disproportionately higher than would be expected in the event of the redevelopment of an existing building. The most appropriate measure for daylight adequacy is therefore to ensure that the residual VSC values remain sufficient for the rooms in question to continue to be used for their current design purpose and provide the occupants with a reasonable level of daylight amenity.
- 4.14 27% VSC is the target value for a habitable room in a low density suburban housing environment. In inner and central London, and where the height and scale of development is greater than the two storey domestic model upon which the BRE Guidelines have been drafted, residual VSC values in the mid-teens is considered to be typical and that any values above 20% are relatively good. It is only where the residual VSC values fall into single figures that would then make it difficult to achieve adequate internal natural lighting for most of the day without the need for supplementary artificial lighting.
- 4.15 The only room/window that may be left with a relatively low level of natural daylight is the ground floor window labelled R1/70 in Shipton House which is the window at the extreme eastern end of Shipton House that faces directly on to the flank wall of Leysdown and derives most of its natural daylight through the gap over the existing cleared site. That said, the residual VSC value of 13.52% VSC is still fair, especially as this room appears to serve a bedroom.
- 4.16 The BRE sunlight criteria does not apply to Shipton House as none of the windows face within 90 degrees of due south.

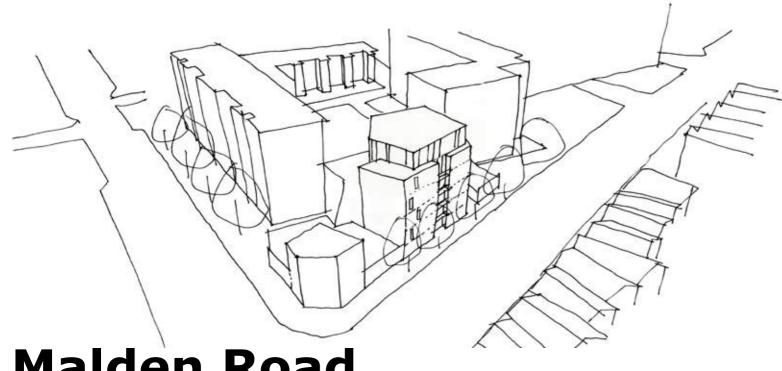
5 SUMMARY AND CONCLUSION

- 5.1 As the Site is an open cleared site, it is inappropriate to strictly apply the numerical targets in the BRE Guidelines and that instead, alternative numerical targets should be followed as advised in Appendix F of the BRE Guidelines. The approach adopted for setting those alternative targets has been the height and 'massing' of the Feasibility Study prepared for the London Borough of Camden by Barton Wilmore in September 2014 as this represented a form of development that was consistent with the general height and townscape of the existing neighbouring buildings matching the general roof and parapet profiles of those neighbouring buildings.
- 5.2 On that basis, the residential properties on the opposite (east) side of Malden Road (2 Malden Road to 20 Malden Road) will not only comfortably satisfy the BRE Guidelines in terms of impact on existing lighting conditions, the absolute residual VSC values will all be in excess of 27% VSC.
- 5.3 One window in Leysdown will experience a loss of VSC marginally above the BRE Guidelines but still achieve a residual VSC value of 26.14%, just 0.94% below the target for low density suburban housing, which in a built-up urban environment is extremely good. In addition, the change in internal Daylight Distribution within that room will be barely perceptible.
- 5.4 The only material change in lighting conditions will be within Shipton House where the windows currently receive the majority of their natural daylight from the gap over the Application Site and in front of the present six storey block of flats. Shipton House also suffers from the canopy-effect of the projecting access walkways which significantly reduce direct sky visibility resulting in low VSC values.
- 5.5 One ground floor bedroom window within Shipton House will record a relatively low VSC value at 13.52% and although that absolute residual VSC value is low, the room affected is a bedroom, and the amount of light remaining will still be adequate for that room to be continue to be used as a bedroom. This is the only room affected.

5.6 In overall conclusion, whilst there are a handful of cases where the BRE targets have been exceeded, the impact of the proposed development will not result in any significant or unreasonable impact on existing neighbouring amenity.

APPENDIX I

Feasibility Study



Malden Road

London Borough of Camden Feasibility Study September 2012



Barton Willmore Design

Established as an Architectural practice almost 75 years ago, Barton Willmore is now the UK's leading independent Planning and Design consultancy. We currently operate from nine offices within the UK, guiding projects of all types and scales within Britain and Internationally across Europe, the Middle East and Asia.

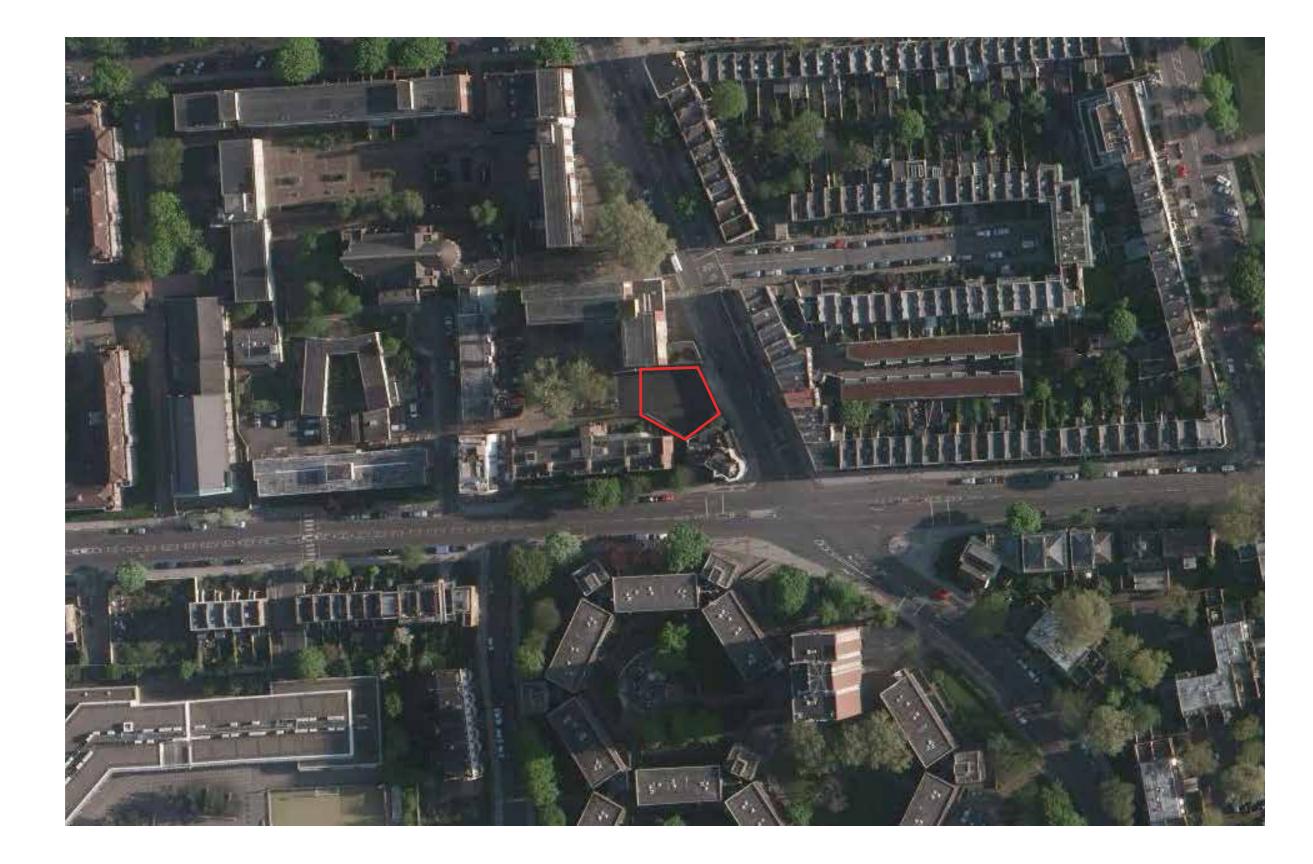
As a Practice we believe the integration of planning and design expertise, from the macro to the micro scale, is central to the delivery of successful new development. Our team combines their diverse range of skills to develop sustainable design solutions that are exciting and innovative yet also commercially viable.

Contents

- 1.0 Existing Site
- 2.0 Site Analysis
- 3.0 Proposed Development



1.1Aerial View of Existing Site



1.2. Existing Site



Existing street frontage of Site



South East view from back of the site



View East from back of the Site



Birds Eye View

2.1 Site Analysis

Key

Site Boundary

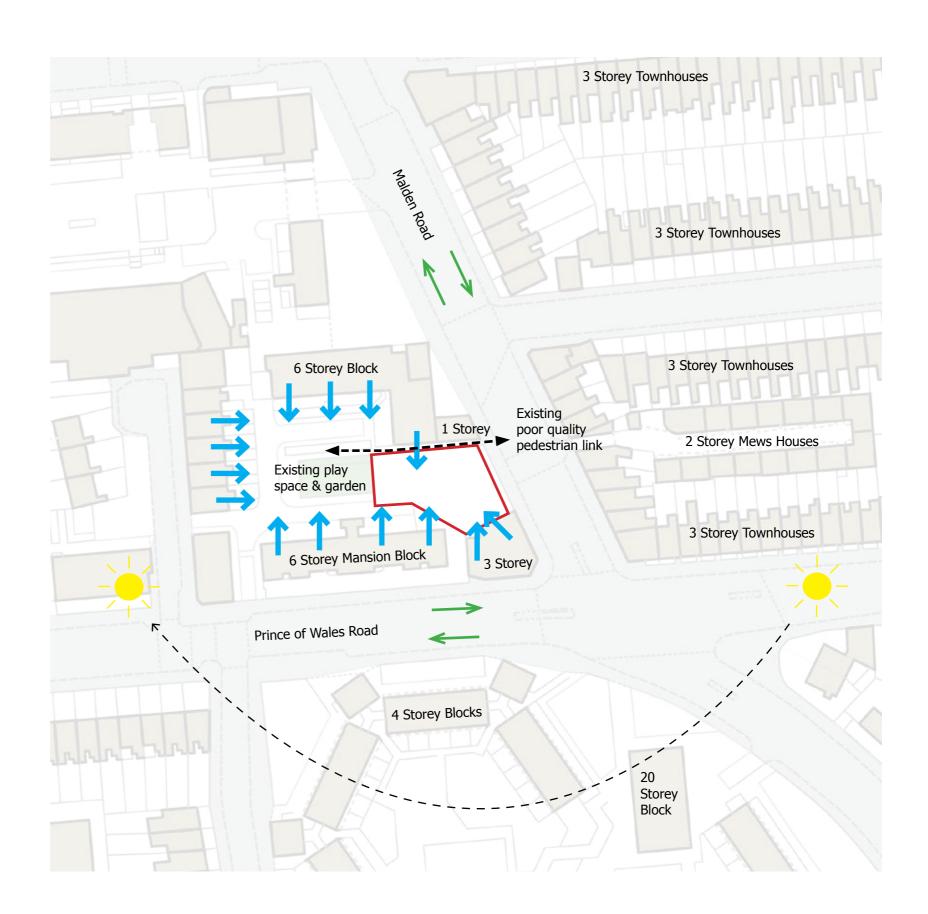
Existing windows that overlook the site

Two way street

Sun Path

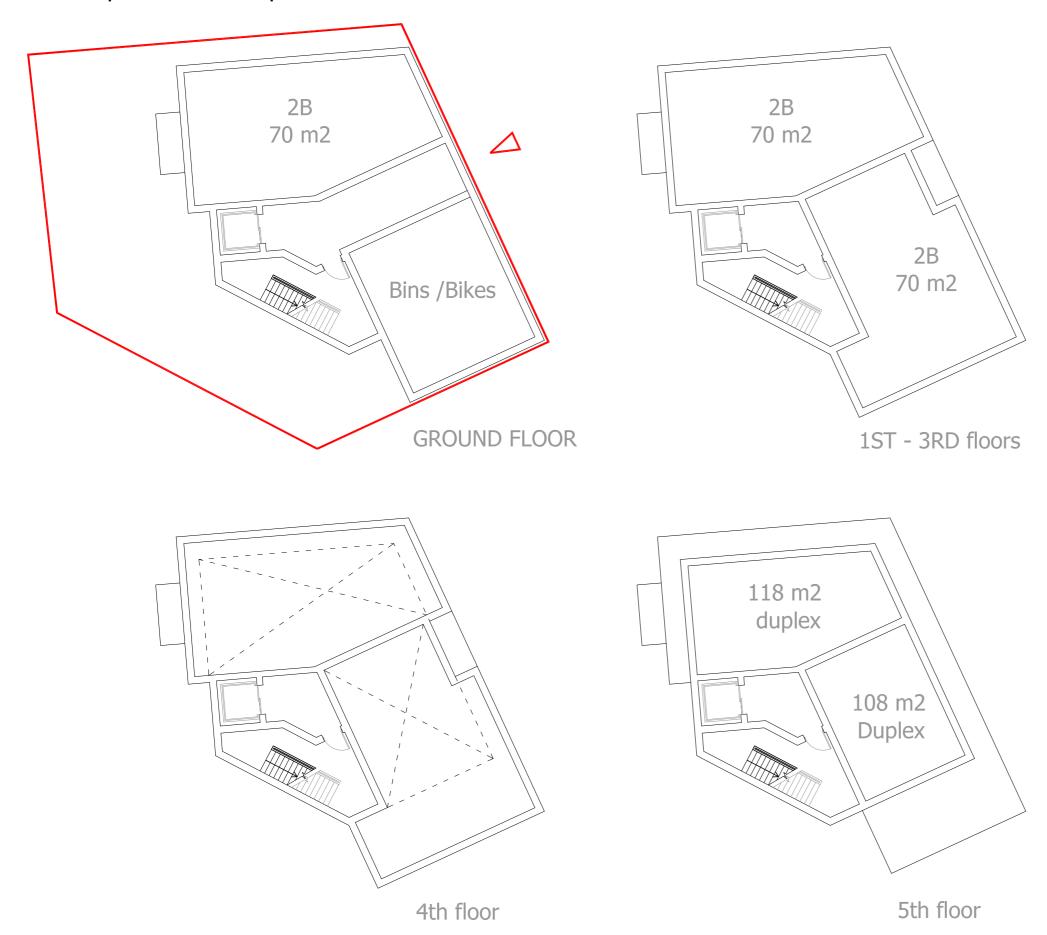
Key Constraints

- Existing windows and potential for overlooking
- Retaining access to rear of 1-24 Prince of Wales Road
- Busy Urban Roads (Malden Road & Prince of Wales Road)



3.1 Proposed Development - Site Plan MALDEN ROAD MALDEN ROAD

3.2 Proposed Development

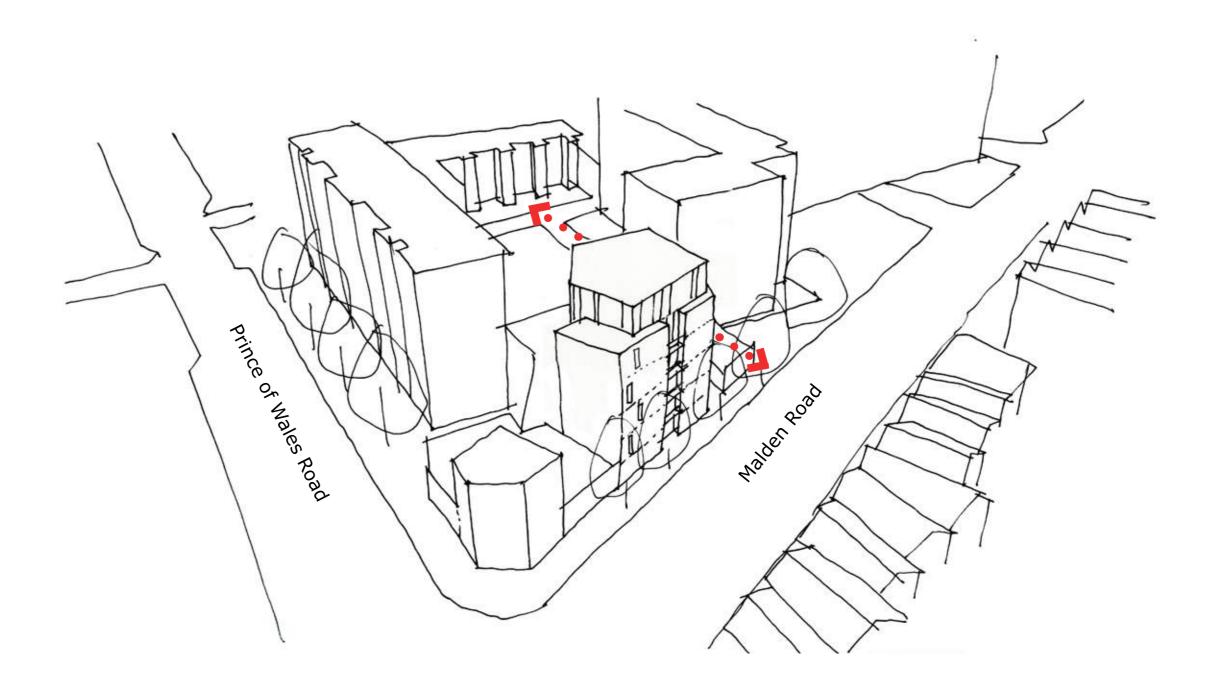


Schedule of Accommodation

	Units			HR
GF	1	2B	70m2	3
1st	2	2B	70m2	6
2nd	2	2B	70m2	6
3rd	2	2B	70m2	6
4th	2	3B duplex	118/108m2	8
5th				
total units	9		total HR	29
Density	238.1	units/Ha	767.2	HR/Ha
Site	0.0378	На		

3.3 Proposed Birds Eye View

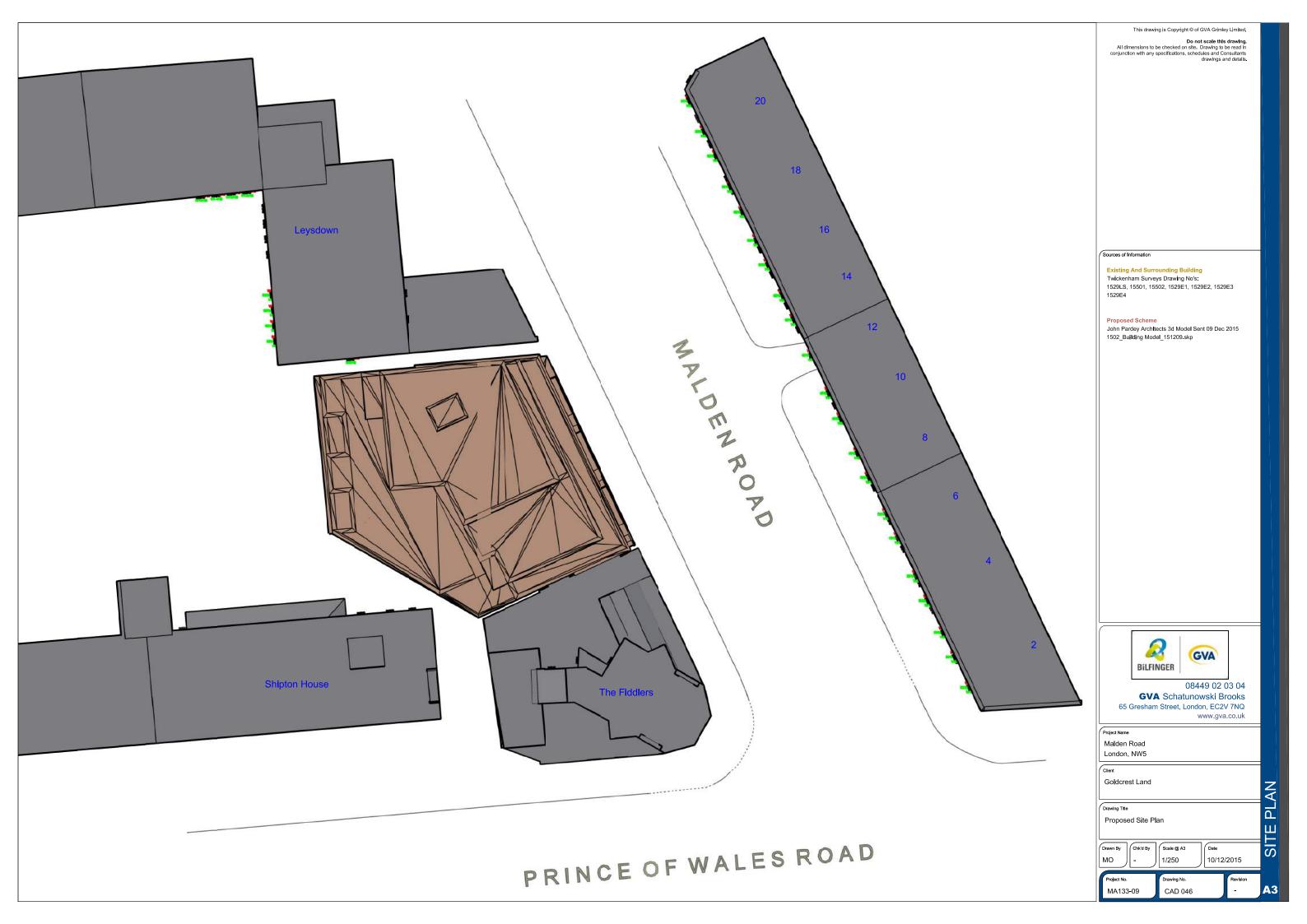
- 6 Storey development continues massing of other neighbouring developments
- Development allows for enhanced pedestrian link from Malden Road to the courtyard of neighbouring blocks
- Development re-establishes building line to Malden Road, and provides containment to the rear of courtyard space



APPENDIX II

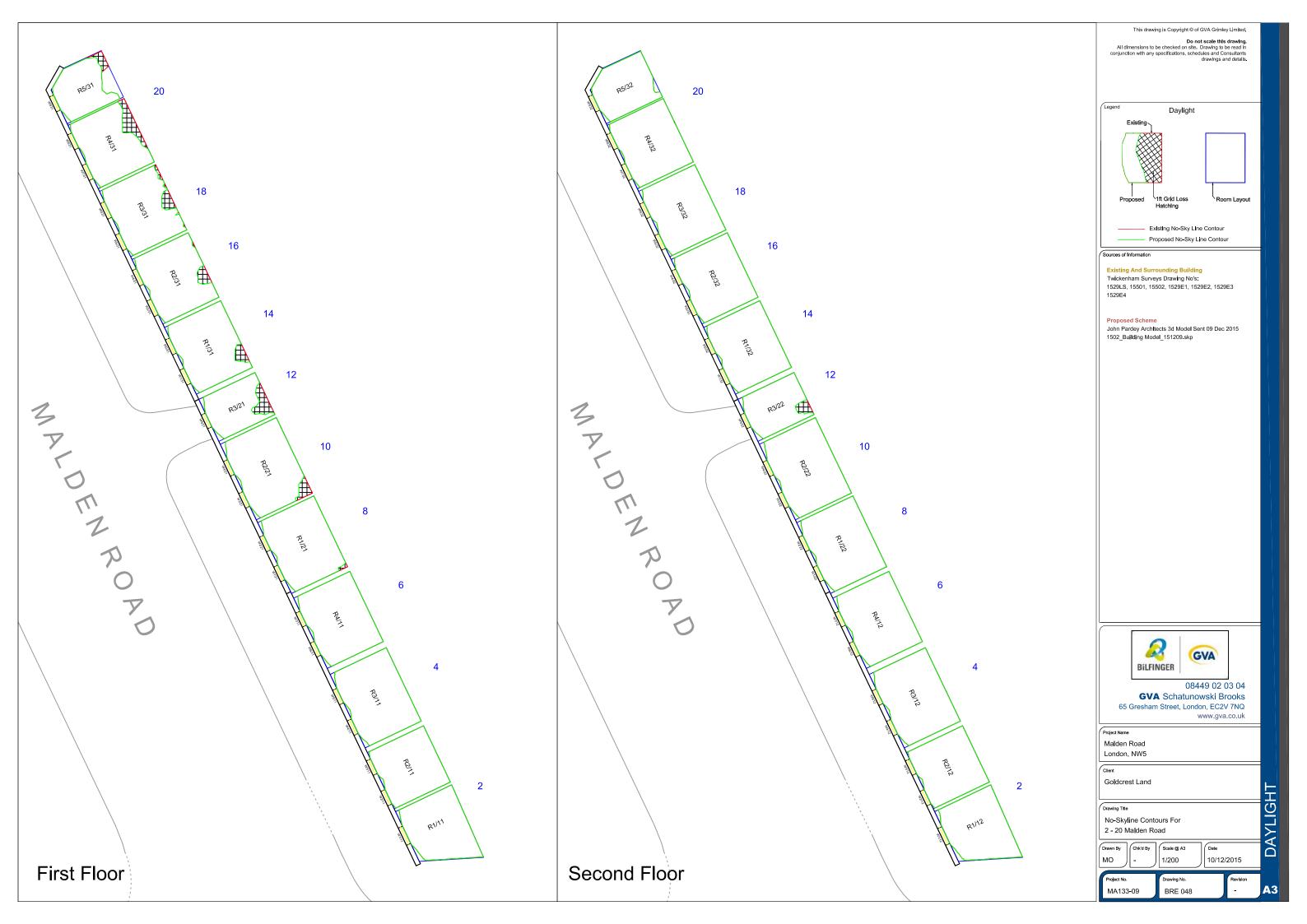
Drawing Nos: MA133-09-CAD044 and CAD046

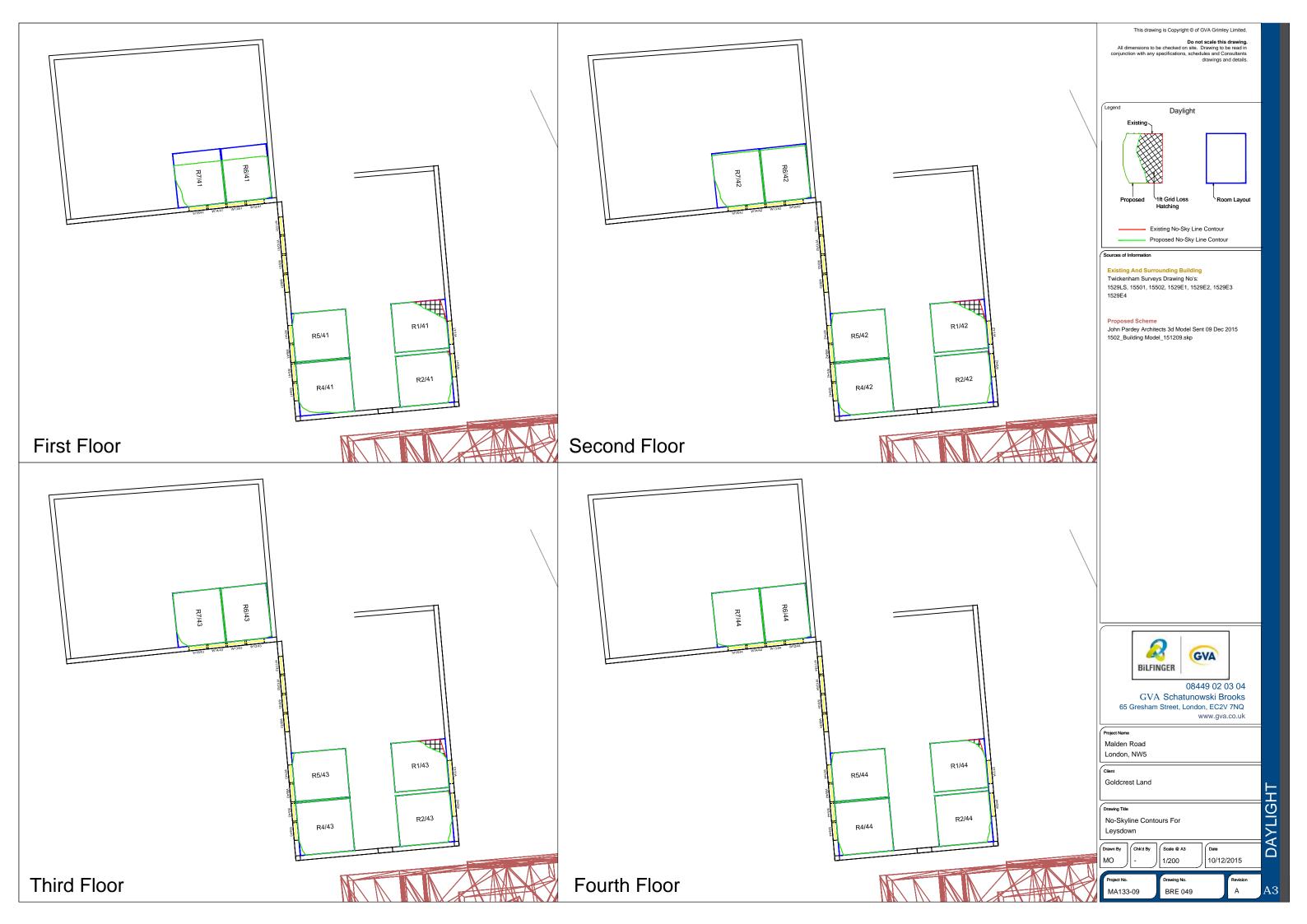




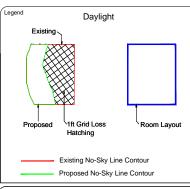
APPENDIX III

Drawing Nos: MA133-09-BRE048 to BRE052

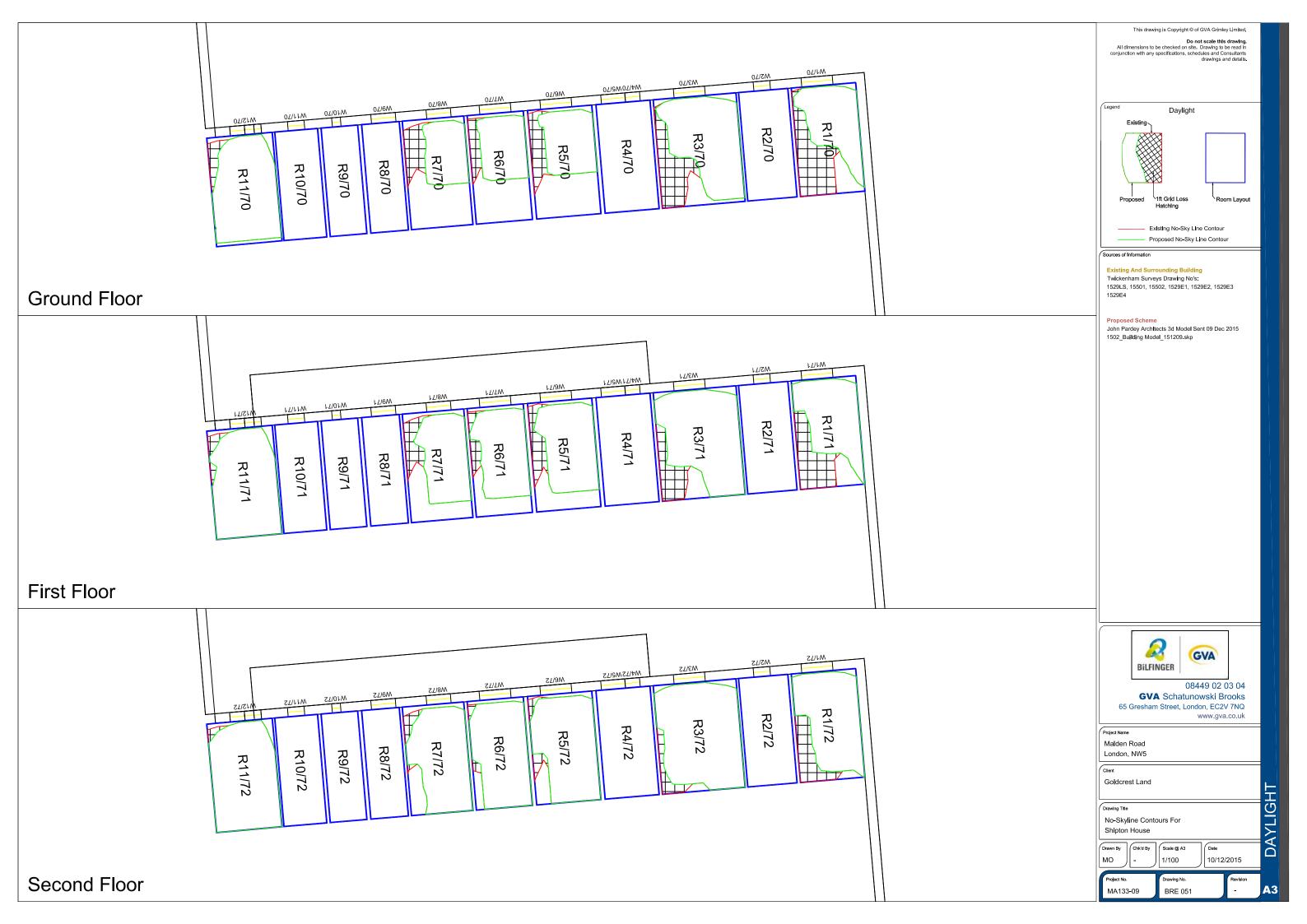








DAYLIGH.





APPENDIX IV

Daylight Analysis Table



Daylight Analysis Malden Road 10-Dec-15

				%VS0)	% Da	ayligh	t Factor	Proposed No Sky	
									Room	% Loss of
Room/Floor	Poom Uso	Window	Fvict	Prop	% Loss	Evict	Dron	% Loss	Area	Existing
2 Malden Ro		WIIIGOW	LAISU	ПОР	70 LU33	LAISU	ПОР	70 LU33	71100	Existing
1st Floor	oau									
R1/11		W1/11	36.94	35.95	\27	1.59	1.55	2.57%	97.16%	0.00%
K17 1 1		W1/11 W2/11	36.37	35.10	>27	1.07	1.55	2.5770	97.1070	0.0070
R2/11		W2/11 W3/11	35.76	34.23	>27	2.69	2.59	3.54%	99.13%	0.00%
2nd Floor			00110	0 1120	<u> </u>			<u>l</u>	1	<u>I</u>
R1/12		W1/12	37.68	36.88	>27	1.39	1.36	2.02%	96.88%	0.00%
D2/12		W2/12	37.29	36.27	>27		2.22	2.040/	00 100/	0.000/
R2/12		W3/12	36.87	35.65	>27	2.40	2.33	2.84%	99.13%	0.00%
4 Malden Ro	ad									
1st Floor										
R3/11		W4/11	34.95	33.17	>27	2.23	2.12	4.84%	98.00%	0.00%
N3/ 11		W5/11	34.51	32.50	>27	2.23	2.12	4.0470	90.0070	0.0070
2nd Floor										•
R3/12		W4/12	36.42	35.01	>27	1.95	1.88	3.79%	98.00%	0.00%
		W5/12	36.04	34.45	>27	1.70	1.00	0.7770	70.0070	0.0070
6 Malden Ro	oad									
1st Floor						1		1	T	
R4/11		W6/11	33.92	31.47	>27	2.10	1.96	6.62%	98.00%	0.00%
On al Elece		W7/11	33.54	30.81	>27					
2nd Floor		M// /10	2E / 1	22//	. 27	1		1	1	
R4/12		W6/12 W7/12	35.61 35.30	33.66 33.13	>2 <i>1</i> >2 <i>7</i>	1.91	1.81	5.19%	98.00%	0.00%
8 Malden Ro) a d	VV // 12	33.30	33.13	>21					
1st Floor	au									
13(1100)		W1/21	33.82	30.82	>27					
R1/21		W1/21 W2/21	33.69	30.41	>27	2.28	2.10	7.98%	97.56%	0.66%
2nd Floor		VV2/21	00.07	00.11	, ,					
		W1/22	35.73	33.44	>27					
R1/22		W2/22	35.61	33.11	>27	2.02	1.90	6.04%	98.16%	0.00%
10 Malden R	load									
1st Floor										
R2/21		W3/21	33.42	29.77	>27	2.15	1.94	9.58%	94.21%	3.79%
Γ∖∠ / ∠ I		W4/21	33.33	29.44	>27	2.10	1.94	9.58%	94.21%	3.19%
2nd Floor										
R2/22		W3/22	35.33	32.58	>27	1.90	1.77	7.10%	97.93%	0.00%
114/44		W4/22	35.21	32.26	>27	1.70	1.77	7.10/0	71.73/0	0.00%



				%VS0	2	% Da	ayligh	t Factor	Propos	ed No Sky
									% ∪i Room	% Loss of
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss		Existing
12 Malden F	Road									-
1st Floor										
R3/21		W5/21	33.18	28.89	>27	1.47	1.31	11.07%	85.48%	12.13%
2nd Floor										
R3/22		W5/22	34.94	31.64	>27	1.32	1.21	8.42%	91.69%	5.75%
14 Malden F	Road									
1st Floor										
R1/31		W1/31	32.81	28.27		2.33	2.06	11.50%	94.92%	3.81%
		W2/31	32.45	28.00	>27	2.00	2.00	11.0070	7117270	0.0170
2nd Floor	1		1	1	1			1		
R1/32		W1/32	34.63	31.16		2.07	1.89	8.59%	98.68%	0.00%
		W2/32	34.30	30.88	>27					
16 Malden F	Road									
1st Floor	1	14/0/01	00.04	07.46	0.7	1		I		
R2/31		W3/31	32.06			2.50	2.22	11.02%	94.69%	4.19%
On al Flagr		W4/31	31.83	27.59	>27					
2nd Floor	1	14/2/22	22.04	20.54	0.7	ı		ı		
R2/32		W3/32	33.94	30.54		2.04	1.87	8.47%	98.64%	0.00%
18 Malden F	Dood	W4/32	33.72	30.42	>27					
1st Floor	Road									
IST FIOOI	ı	W5/31	31.41	27.64	× 27	I		I		1
R3/31		W6/31	31.05	27.70	>27	2.42	2.20	9.25%	93.51%	5.45%
2nd Floor		VVO/ 3 I	31.03	27.70	>21					
2110 11001		W5/32	33.35	30.40	\27					
R3/32		W6/32	33.05			1.99	1.85	7.14%	98.60%	0.00%
20 Malden F	l Road	VVO/ 32	33.03	30.43	/ 2 /					1
1st Floor	touu									
		W7/31	30.68	27.85	>27					
R4/31		W8/31		28.14		2.27	2.10	7.32%	88.99%	10.04%
R5/31		W9/31		28.49		1.48	1.39	5.87%	81.41%	5.78%
2nd Floor	1									
		W7/32	32.71	30.49	>27	214	2.02	E E / 0/	00.070/	0.050/
R4/32		W8/32		30.69		2.14	2.02	5.56%	98.97%	0.05%
R5/32		W9/32	32.66	30.93	>27	1.40	1.33	4.44%	96.33%	0.00%
Leysdown										
1st Floor										
R1/41		W1/41	36.91	29.33		1.37	1.17	14.49%	86.68%	
R2/41		W2/41			29.06%	1.33	1.06	20.47%	96.59%	0.25%
R4/41		W4/41	27.66	27.66	>27	2.42	2.42	0 00%	95.85%	0.00%
117/ 7 1		W5/41	27.07	27.07			2.42	0.0076	75.05/0	0.0076
R5/41		W6/41	26.51	26.51	0.00%		2.48	0.00%	99.41%	0.00%
		W7/41		25.78	0.00%		2.70	0.0070	77.7170	5.0070
R6/41		W12/41	16.75		0.00%	1 45	1.95	0.00%	77.75%	0.00%
		W13/41	18.37	18.37	0.00%		1.75	3.0070		0.0070
R7/41		W14/41		19.93	0.00%	7110	2.09	0.00%	73.13%	0.00%
		W15/41	21.26	21.26	0.00%	,	,	3.0070	7 3 . 1 3 70	3.0070



				%VS0	2	% Da	ayligh	t Factor	Propos	ed No Sky
									76 Ui Room	% Loss of
Room/Floor	Room Use	Window	Fyist	Prop	% Loss	Fyist	Prop	% Loss		Existing
2nd Floor	KOOIII 03C	VVIIIGOVV	LXISt	ПОР	70 LO33	LXISt	ПОР	70 LO33	7 0 C.	_,9
R1/42		W1/42	38.68	31.64	>27	1.43	1.23	13 53%	87.86%	9.71%
R2/42		W2/42		28.21	>27	1.39	1.11	19.86%		
		W4/42		30.36						
R4/42		W5/42		29.80		2.57	2.57	0.00%	97.96%	0.00%
		W6/42		29.23						
R5/42		W7/42		28.46		2.64	2.64	0.00%	99.41%	0.00%
		W12/42		18.26	0.00%					
R6/42		W13/42		20.25	0.00%	2.07	2.07	0.00%	96.55%	0.00%
		W14/42	22.11	22.11	0.00%					
R7/42		W15/42		23.69	0.00%	2.24	2.24	0.00%	92.43%	0.00%
3rd Floor		1110/12	20.07	20.07	0.0070	<u> </u>		<u> </u>		
R1/43		W1/43	39.61	33.78	>27	1.46	1.29	11.51%	90.22%	7.28%
R2/43		W2/43	39.61	30.29		1.42	1.17	18.13%		0.17%
		W4/43		33.09		0.70	0.70			
R4/43		W5/43	32.64	32.64	>27	2.73	2.73	0.00%	98.82%	0.00%
DE /40		W6/43	32.13	32.13	>27	0.00	0.00	0.000/	00.440/	0.000/
R5/43		W7/43	31.41	31.41	>27	2.82	2.82	0.00%	99.41%	0.00%
D/ /42		W12/43	20.08	20.08	0.00%	0.01	2.21	0.000/	00.700/	0.000/
R6/43		W13/43	22.68	22.68	0.00%	2.21	2.21	0.00%	99.73%	0.00%
D7/40		W14/43	24.95	24.95	0.00%	2.42	2.42	0.000/	00.000/	0.000/
R7/43		W15/43	26.78	26.78	0.00%	2.43	2.43	0.00%	98.00%	0.00%
4th Floor		-	-		-					
R1/44		W1/44	39.62	35.86	>27	1.46	1.35	7.67%	95.19%	2.17%
R2/44		W2/44	39.62	32.82	>27	1.42	1.23	13.91%	96.83%	0.00%
D4/44		W4/44	35.62	35.62	>27	2.07	2.07	0.000/	00 000/	0.000/
R4/44		W5/44	35.34	35.34	>27	2.87	2.87	0.00%	98.90%	0.00%
R5/44		W6/44	35.01	35.01	>27	2.99	2.99	0.000/	99.41%	0.00%
R3/44		W7/44	34.51	34.51	>27	2.99	2.99	0.00%	99.41%	0.00%
R6/44		W12/44	22.77	22.77	0.00%	2.43	2.43	0.00%	99.73%	0.00%
K0/44		W13/44	26.39	26.39	0.00%	2.43	2.43	0.00%	99.7370	0.00%
R7/44		W14/44	29.05	29.05	>27	2.70	2.70	0.00%	99.30%	0.00%
K7744		W15/44	30.91	30.91	>27	2.70	2.70	0.00%	77.3070	0.0076
5th Floor										
R1/45		W1/45		38.29		1.46			97.30%	0.00%
R2/45		W2/45	39.62			1.42	1.35	5.41%	96.83%	0.00%
R4/45		W4/45	38.02			3.01	3.01	0.00%	98.90%	0.00%
11775		W5/45		37.96		5.01	5.01	0.0070	70.7070	0.0070
R5/45		W6/45	37.87	37.87		3.17	3.17	0.00%	99.41%	0.00%
1.07 70		W7/45	37.71	37.71		5.17	5.17	0.0070	77.7170	0.0070
R6/45		W12/45	29.46			2.89	2 20	0.00%	99 73%	0.00%
NO/40		W13/45	33.52	33.52	>27	2.09	2.89	0.00%	% 99.73%	6 0.00%
R7/45		W14/45		35.28		3.08	3.08	0.00%	99.39%	0.00%
11/7-13		W15/45	36.20	36.20	>27	5.00	5.00	0.0076	77.3770	0.00%



				%VS0	2	% Da	ayligh	t Factor	Propose	ed No Sky
									% OI Room	% Loss of
Room/Floor	Doom Hee	Window	Evict	Dron	% Loss	Evict	Drop	% Loss		Existing
Shipton Hou		WINGOW	LAISU	riup	70 LU33	LXISt	riop	70 LUSS	Aica	LXISTING
Gnd Floor	se									
R1/70		W1/70	29.07	13.31	54.21%	1.46	0.86	40.92%	54.28%	38.67%
R3/70		W3/70	24.13	12.92		1.11	0.75	32.94%		24.72%
R5/70		W6/70	6.01	3.01			0.34	34.79%		23.76%
R6/70		W7/70	5.68		42.61%		0.39			16.80%
R7/70		W8/70	5.38	3.41	36.62%	0.38	0.29	22.87%	38.69%	27.57%
R11/70		W12/70	6.47	5.39	16.69%	0.61	0.57	7.03%	86.56%	6.51%
1st Floor										
R1/71		W1/71	31.45		50.40%			38.23%		29.83%
R3/71		W3/71	26.51		41.23%		0.84		77.14%	15.19%
R5/71		W6/71	7.29	3.86			0.42		64.92%	15.78%
R6/71		W7/71	6.97	4.18						9.23%
R7/71		W8/71	6.66	4.37	34.38%			19.09%		16.92%
R11/71 2nd Floor		W12/71	7.49	6.22	16.96%	0.66	0.61	7.12%	91.58%	4.33%
2 na Floor R1/72	I	\\/1 /7 O	33.52	10.01	42.000/	1 ()	1.00	22.200/	77.52%	10.070/
R1/72 R3/72		W1/72 W3/72	28.76	18.81 19.01	43.88% 33.90%	1.62 1.26		33.29% 24.07%		19.07% 6.56%
R5/72		W6/72	9.89		40.04%			25.00%		5.73%
R6/72		W7/72	9.57	6.34				20.56%		2.88%
R7/72		W8/72	9.24		29.00%		0.45	15.21%		5.51%
R11/72		W12/72	9.27	7.77	16.18%	0.73	0.68	7.02%		1.71%
3rd Floor										
R1/73		W1/73	35.51	23.50	33.82%	1.70	1.25	26.15%	86.97%	11.21%
R3/73		W3/73	30.86	23.18	24.89%	1.33	1.09	18.16%	97.02%	0.00%
R5/73		W6/73	11.54	7.63	33.88%	0.79	0.63	20.43%		0.00%
R6/73		W7/73	11.24	8.08		0.85	0.71	16.55%		0.15%
R7/73		W8/73	10.91	8.32	23.74%	0.60	0.53	11.83%		1.83%
R11/73		W12/73	10.75	9.33	13.21%	0.80	0.75	5.76%	95.10%	0.66%
4th Floor	T	DA74 /7 4	07.44	00.40	0.7	4 7 /	4 47	4 / 570/	07.04.04	0.000/
R1/74		W1/74	37.14			1.76	1.47		97.96%	0.00%
R3/74 R5/74		W3/74 W6/74		28.09		1.39		11.31%		0.00%
R6/74		W7/74			20.71% 16.84%				96.63%	0.00%
R6/74 R7/74		W8/74		11.16	13.97%				95.72%	0.00%
R11/74		W12/74		11.52					96.11%	0.00%
5th Floor		/ / /	12.17	11.02	7.7770	0.00	0.00	0.1270	73.1170	5.5570
R1/75		W1/75	38.60	35.91	>27	1.82	1.70	6.38%	97.96%	0.00%
R3/75		W3/75		35.51		1.53	1.46		97.02%	0.00%
R5/75		W6/75		11.08	8.88%	0.85	0.80		97.95%	0.00%
R6/75		W7/75	11.96	11.09	7.27%	0.92	0.87	4.59%	98.39%	0.00%
R7/75		W8/75	11.73		6.05%	0.66	0.64		97.05%	0.00%
R11/75		W12/75	14.52	14.14	2.62%	0.96	0.95	1.25%	96.86%	0.00%

APPENDIX V

Sunlight Analysis Table



Sunlight Analysis Malden Road 10-Dec-15

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

		Exi	sting %		Pro	posed %	6			
	Window							% Loss of	% Loss of	% Loss of
Room use	Ref	Summer	Winter	Total	Summer	Winter	Total	Summer	Winter	Total
2 Malden I	Road									
1st Floor	1	ı	ı		ı			T	T	T
W1/11		37.00		59.00	36.00		58.00	2.70%		1.69%
W2/11		38.00		60.00	37.00		59.00	2.63%	0.00%	1.67%
W3/11		39.00	20.00	59.00	36.00	20.00	56.00	7.69%	0.00%	5.08%
2nd Floor	1	ı	ı		ı			T	T	T
W1/12		38.00		60.00	38.00		60.00	0.00%		0.00%
W2/12		39.00		61.00	38.00		60.00	2.56%	0.00%	1.64%
W3/12		39.00	20.00	59.00	38.00	20.00	58.00	2.56%	0.00%	1.69%
4 Malden I	Road									
1st Floor										
W4/11		39.00		59.00	34.00		54.00			8.47%
W5/11		40.00	20.00	60.00	35.00	20.00	55.00	12.50%	0.00%	8.33%
2nd Floor	,									
W4/12		40.00		61.00	37.00		58.00			4.92%
W5/12		40.00	21.00	61.00	36.00	21.00	57.00	10.00%	0.00%	6.56%
6 Malden I	Road									
1st Floor										
W6/11		38.00		57.00	34.00		53.00	10.53%	0.00%	7.02%
W7/11		38.00	18.00	56.00	34.00	18.00	52.00	10.53%	0.00%	7.14%
2nd Floor										
W6/12		40.00	19.00	59.00	35.00	19.00	54.00	12.50%	0.00%	8.47%
W7/12		38.00	19.00	57.00	34.00	19.00	53.00	10.53%	0.00%	7.02%
8 Malden I	Road									
1st Floor	_									
W1/21		38.00	17.00	55.00	33.00	17.00	50.00		0.00%	9.09%
W2/21		38.00	18.00	56.00	33.00	18.00	51.00	13.16%	0.00%	8.93%
2nd Floor	,									
W1/22		39.00		58.00	36.00		55.00	7.69%	0.00%	5.17%
W2/22		39.00	19.00	58.00	36.00	19.00	55.00	7.69%	0.00%	5.17%
10 Malden	Road									
1st Floor	1	ı	ı		ı			T	T	T
W3/21		37.00		55.00			49.00			10.91%
W4/21		35.00	18.00	53.00	30.00	18.00	48.00	14.29%	0.00%	9.43%
2nd Floor	_									
W3/22		39.00		59.00			55.00			
W4/22		37.00	20.00	57.00	36.00	19.00	55.00	2.70%	5.00%	3.51%
12 Malden	Road									
1st Floor	_									
W5/21		35.00	18.00	53.00	31.00	16.00	47.00	11.43%	11.11%	11.32%
2nd Floor	_									
W5/22		37.00	19.00	56.00	36.00	19.00	55.00	2.70%	0.00%	1.79%



		Exi		Pro	posed %	6				
	Window							% Loss of	% Loss of	% Loss of
Room use	Ref	Summer	Winter	Total	Summer	Winter	Total	Summer	Winter	Total
14 Malden	Road									
1st Floor										
W1/31		36.00		55.00			48.00	11.11%	15.79%	
W2/31		36.00	20.00	56.00	32.00	15.00	47.00	11.11%	25.00%	16.07%
2nd Floor						1				
W1/32		37.00		57.00	36.00		55.00	2.70%	5.00%	
W2/32		37.00	20.00	57.00	36.00	17.00	53.00	2.70%	15.00%	7.02%
16 Malden	Road									
1st Floor	ı	ı			ı	ı		1		,
W3/31		36.00		56.00	33.00		48.00	8.33%	25.00%	
W4/31		36.00	19.00	55.00	33.00	15.00	48.00	8.33%	21.05%	12.73%
2nd Floor	1	Т			1	1		I		1
W3/32		36.00	21.00		35.00		51.00	2.78%	23.81%	
W4/32	<u> </u>	37.00	20.00	57.00	36.00	16.00	52.00	2.70%	20.00%	8.77%
18 Malden	Koad									
1st Floor	T									
W5/31		35.00		52.00	34.00		48.00	2.86%	17.65%	
W6/31		36.00	17.00	53.00	35.00	14.00	49.00	2.78%	17.65%	7.55%
2nd Floor	T							· · · · · · · · · · · · · · · · · · ·		1
W5/32		36.00		54.00	36.00		52.00	0.00%	11.11%	
W6/32		37.00	18.00	55.00	37.00	16.00	53.00	0.00%	11.11%	3.64%
20 Malden	Road									
1st Floor	I	0.4.00	10.00	F0.00	0400	10.00	17.00	0.000/	07.700/	0.4004
W7/31		34.00		52.00			47.00	0.00%	27.78%	
W8/31		34.00		52.00	34.00		47.00	0.00%	27.78%	
W9/31		36.00	18.00	54.00	36.00	14.00	50.00	0.00%	22.22%	7.41%
2nd Floor	1	00.00	40.00	F/ 00	00.00	44.00	F 4 00	0.000/	44 440/	0.570/
W7/32		38.00		56.00	38.00		54.00	0.00%	11.11%	3.57%
W8/32		38.00		56.00	38.00		54.00	0.00%	11.11%	
W9/32		39.00	18.00	57.00	39.00	16.00	55.00	0.00%	11.11%	3.51%
Leysdown 1st Floor										
W4/41	1	34.00	3.00	37.00	34.00	2.00	37.00	0.00%	0.00%	0.000/
W5/41		33.00	5.00		34.00		37.00	0.00%	0.00%	
W6/41		33.00		39.00	33.00		39.00	0.00%	0.00%	
W7/41		33.00		40.00			40.00		0.00%	
W12/41		28.00		40.00	28.00		40.00	0.00%	0.00%	
W13/41		31.00		44.00	31.00		44.00	0.00%	0.00%	
W14/41		32.00		46.00			46.00	0.00%	0.00%	
W15/41		34.00		48.00	34.00		48.00	0.00%	0.00%	
2nd Floor	<u> </u>	34.00	14.00	40.00	34.00	14.00	40.00	0.00%	0.00%	0.00%
W4/42		34.00	8 00	42.00	34.00	8 NO	42.00	0.00%	0.00%	0.00%
W5/42		33.00		41.00	33.00		41.00	0.00%	0.00%	
W6/42		33.00		43.00	33.00		43.00	0.00%	0.00%	
W7/42		33.00		44.00	33.00		44.00	0.00%	0.00%	
W12/42		29.00		45.00	29.00		45.00	0.00%	0.00%	
W13/42		32.00		49.00	32.00		49.00	0.00%	0.00%	
W14/42		34.00		50.00			50.00	0.00%	0.00%	
W15/42				51.00			51.00	0.00%	0.00%	
VV 13/4Z		34.00	17.00	J 1.UU	34.00	17.00	J 1.UU	0.00%	0.00%	0.00%



		Ex	isting %		Pro	posed %	6			
	Window							% LOSS Of	% Loss of	% Loss of
Room use	Ref	Summer	Winter	Iotal	Summer	Winter	Iotal	Summer	Winter	Total
3rd Floor										
W4/43		34.00	11.00	45.00	34.00	11.00	45.00	0.00%	0.00%	0.00%
W5/43		34.00	11.00	45.00	34.00	11.00	45.00	0.00%	0.00%	0.00%
W6/43		33.00	12.00	45.00	33.00	12.00	45.00	0.00%	0.00%	0.00%
W7/43		33.00	13.00	46.00	33.00	13.00	46.00	0.00%	0.00%	0.00%
W12/43		31.00	17.00	48.00	31.00	17.00	48.00	0.00%	0.00%	0.00%
W13/43		34.00	19.00	53.00	34.00	19.00	53.00	0.00%	0.00%	0.00%
W14/43		37.00	19.00	56.00	37.00	19.00	56.00	0.00%	0.00%	0.00%
W15/43		38.00	22.00	60.00	38.00	22.00	60.00	0.00%	0.00%	0.00%
4th Floor										
W4/44		34.00	15.00	49.00	34.00	15.00	49.00	0.00%	0.00%	0.00%
W5/44		34.00	15.00	49.00	34.00	15.00	49.00	0.00%	0.00%	0.00%
W6/44		34.00	16.00	50.00	34.00	16.00	50.00	0.00%	0.00%	0.00%
W7/44		34.00	16.00	50.00	34.00	16.00	50.00	0.00%	0.00%	0.00%
W12/44		33.00	18.00	51.00	33.00	18.00	51.00	0.00%	0.00%	0.00%
W13/44		38.00	20.00	58.00	38.00	20.00	58.00	0.00%	0.00%	0.00%
W14/44		41.00	23.00	64.00	41.00	23.00	64.00	0.00%	0.00%	0.00%
W15/44		45.00	23.00	68.00	45.00	23.00	68.00	0.00%	0.00%	0.00%
5th Floor	•									
W4/45		35.00	16.00	51.00	35.00	16.00	51.00	0.00%	0.00%	0.00%
W5/45		35.00	16.00	51.00	35.00	16.00	51.00	0.00%	0.00%	0.00%
W6/45		35.00	16.00	51.00	35.00	16.00	51.00	0.00%	0.00%	0.00%
W7/45		35.00	16.00	51.00	35.00	16.00	51.00	0.00%	0.00%	0.00%
W12/45		41.00	22.00	63.00	41.00	22.00	63.00	0.00%	0.00%	0.00%
W13/45		51.00	25.00	76.00	51.00	25.00	76.00	0.00%	0.00%	0.00%
W14/45		55.00	27.00	82.00	55.00	27.00	82.00	0.00%	0.00%	0.00%
W15/45		56.00	27.00	83.00	56.00	27.00	83.00	0.00%	0.00%	0.00%

APPENDIX VI

Drawing Nos: MA133-10-BRE054 and BRE055





APPENDIX VII

Daylight Analysis Table for Shipton House omitting canopy-effect of balconies



Daylight Analysis Malden Road No-Balconies 10-Dec-15

				%VSC	2	% Do	yligh	Factor		ed No Sky
									% of Room	% Loss of
Room/Floor	Room lise	Window	Fxist	Prop	% Loss	Fxist	Prop	% Loss	Area	Existing
Shipton Hou		WilliaoW	-/		70 2000	-/(101		70 2000		- 3
Gnd Floor										
R1/70		W1/70	29.28	13.52	53.83%	1.46	0.86	40.92%	54.28%	38.67%
R3/70		W3/70			39.96%			28.90%		
R5/70		W6/70			28.30%			18.41%		
R6/70		W7/70	26.41	20.03	24.16%	1.50	1.28	14.78%	88.71%	
R7/70		W8/70	25.42	20.11	20.89%	1.04	0.93	10.19%	83.67%	0.32%
R11/70		W12/70	15.53	12.62	18.74%	0.97	0.89	8.47%	92.96%	0.00%
1st Floor				•			•			
R1/71		W1/71	31.68	15.82	50.06%	1.55		38.23%		
R3/71		W3/71			35.84%			26.20%		
R5/71		W6/71		22.24			1.24		91.17%	
R6/71		W7/71	28.81	22.87	20.62%			13.00%		
R7/71		W8/71	27.77	22.88			1.01		91.30%	
R11/71		W12/71	17.16	14.56	15.15%	1.04	0.96	6.86%	96.11%	0.00%
2nd Floor	I	W/1 /70	20.77	10.07	10 5 / 07	1 (0	1.00	22.000	77 5007	10.0707
R1/72		W1/72	33.77		43.56%			33.29%		
R3/72 R5/72		W3/72 W6/72	32.77		29.75% 19.60%			22.12% 13.34%		
R6/72		W7/72			16.26%			10.55%		
R7/72		W7/72 W8/72		26.01			1.09	6.97%		
R11/72		W12/72	18.83	16.66	11.52%	1.10	1.04	5.18%		
3rd Floor		** 12/72	10.00	10.00	11.02/0	1.10	1.04	0.10/0	70.1170	0.0070
R1/73		W1/73	35.74	23.73	33.60%	1.70	1.25	26.15%	86.97%	11.21%
R3/73		W3/73		27.29		1.44		17.06%		
R5/73		W6/73	34.17	29.39		1.66		10.04%		
R6/73		W7/73	33.56	29.72		1.79	1.65		98.53%	
R7/73		W8/73		29.41		1.25	1.18		97.32%	
R11/73		W12/73	20.51	18.88	7.95%	1.17	1.13	3.52%	96.11%	0.00%
4th Floor										
R1/74		W1/74	37.27	29.81	>27	1.76	1.47	16.57%	97.96%	0.00%
R3/74		W3/74	36.78	32.08		1.50	1.34		97.02%	
R5/74		W6/74		33.32		1.74	1.64		98.08%	
R6/74		W7/74		33.38		1.88	1.79		98.53%	
R7/74		W8/74		32.89		1.31	1.27		97.32%	
R11/74		W12/74	22.08	21.11	4.39%	1.23	1.20	2.04%	96.11%	0.00%
5th Floor	ı	VA/1 /75	20.70	25.00	. 07	1.00	1 70	4.000	07.048	0.007
R1/75		W1/75		35.92		1.82	1.70		97.96%	
R3/75		W3/75		36.66		1.55	1.49		97.02%	
R5/75		W6/75 W7/75		36.94 36.80		1.81	1.77		98.08%	
R6/75 R7/75						1.96	1.92		98.53% 97.32%	
R7/75 R11/75		W8/75 W12/75		36.29 23.57		1.36	1.35		97.32% 97.24%	
K11//J		VV 12//3	23.76	23.3/	1.00%	1.30	1.27	0.//%	7/.24%	0.00%