GVA

GVA Schatunowski Brooks

Planning BRE Daylight/Sunlight Report

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SEPTEMBER 2018

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Contents

Appendices

Prepared By: Richard Nosworthy
Status: Final
Draft Date: September 2018

For and on behalf of GVA Grimley Limited

1. Introduction

1.1 The current proposals consist of a three-storey extension to provide new residential accommodation.

1.2 GVA Schatunowski Brooks have been instructed to assess the daylight and sunlight to the neighbouring properties in the current and proposed condition in order to determine the comparative change in the daylight and sunlight levels received, if any. Only properties in the immediate vicinity have been tested as is reasonable to assume that any affect resulting from the proposed works will lessen over distance.

1.3 We have also assessed the daylight and sunlight amenity within the proposed new dwellings.

1.4 The assessment model was based upon the following information:

- Land Survey drawing ref: *Smarts Place Existing Model.dwg*, produced by MBS Survey Software Limited, received December 2012.
- Scheme drawings produced by David Kohn Architect's drawings ref:
    - 221-XX-L12-06
    - 221-XX-L12-07
    - 221-XX-L12-08
    - 221-XX-L14-01
    - 221-XX-L14-02
    - 221-XX-L14-03
    - 221-XX-L15-01
    - 221-XX-L15-02
    - 221-XX-L15-03
- Research utilising the London Borough of Camden's planning archives on 1 March 2018.
- Google Street view and Bing Map Aerial photography.

1.5 The above drawings have allowed us to model the proposed development for the purposes of this assessment.

2. Daylight Planning Principles

2.1 The Building Research Establishment (BRE) Guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice is the document referred to by most local authorities. The BRE Guide gives advice on site layout planning to achieve good daylighting and sunlighting, within buildings and in the open spaces between them.

2.2 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

2.3 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 (VSC) 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.

2.4 The VSC 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.

2.5 The guidelines state 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."

2.6 It must be interpreted from this criterion that a 27% 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.

2.7 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is considered more a measure of the potential for good daylight within a given room. Depending upon the room and window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

2.8 The no sky-line or daylight distribution (DD) 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.

2.9 Appendix C of the BRE Guidelines sets out various more detailed tests that assess the interior daylight conditions of proposed habitable rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines.

2.10 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.

Sunlighting

2.11 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.

2.12 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."

2.13 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 or the reduction in sunlight received over the whole year is 4% or less, then the sunlight loss will not be noticeable.

2.14 Where sunlight reductions fall below a ratio of 0.8 (the same as saying greater than 20%) then the sunlight losses may be noticeable to occupants.

3. Report

3.1 Attached drawing BRE/31 shows the proposals in context and BRE/32 to BRE/35 illustrate graphically the room layouts and No Skyline Contours (NSL) for the neighbouring properties. These can be found with the daylight and sunlight tables by reference to Appendix 1.

3.2 The BRE Guidelines suggest that residential properties or those properties with a specific requirement for daylight need to be considered. We have identified four residential properties that could be consider sensitive to changing daylight and sunlight conditions resulting from the proposed extension works. These are as follows:

- 17A Macklin Street
- 19 Macklin Street
- 21 Macklin Street

3.3 The commentary below deals with each of these properties in-turn.

17A Macklin Street – BRE/34

3.4 This is a two-storey residential property, located immediately to the south-east of the proposed development.

3.5 For daylight, the results indicate that all tests are satisfied by virtue of retaining their guideline value or 0.8 of their former value.

3.6 For sunlight, no windows with a view of the proposed development are orientated within 90° and therefore do not have reasonable expectation of direct sunlight. On this basis, sunlight to this property has not been considered.

19 Macklin Street – BRE/33

3.7 This is a five-storey residential property, located immediately to the south-east of the proposed development.

3.8 For daylight, the results indicate that all tests are satisfied by virtue of retaining their guideline value or 0.8 of their former value.

3.9 For sunlight, the results indicate that the four windows considered retain the 25% annual and 5% winter sunlight, satisfying the guidelines.

21 Macklin Street – BRE/32

3.10 This is a four-storey residential property, located immediately to the south-east of the proposed development.

3.11 For daylight, whilst there will be some noticeable reductions of the No Skyline, all windows will satisfy the BRE guidelines by virtue of retaining 0.8 of the former value i.e. no greater than 20% reduction.

3.12 For sunlight, no windows with a view of the proposed development are orientated within 90° and therefore do not have reasonable expectation of direct sunlight. On this basis, sunlight to this property has not been considered.

4. Conclusions

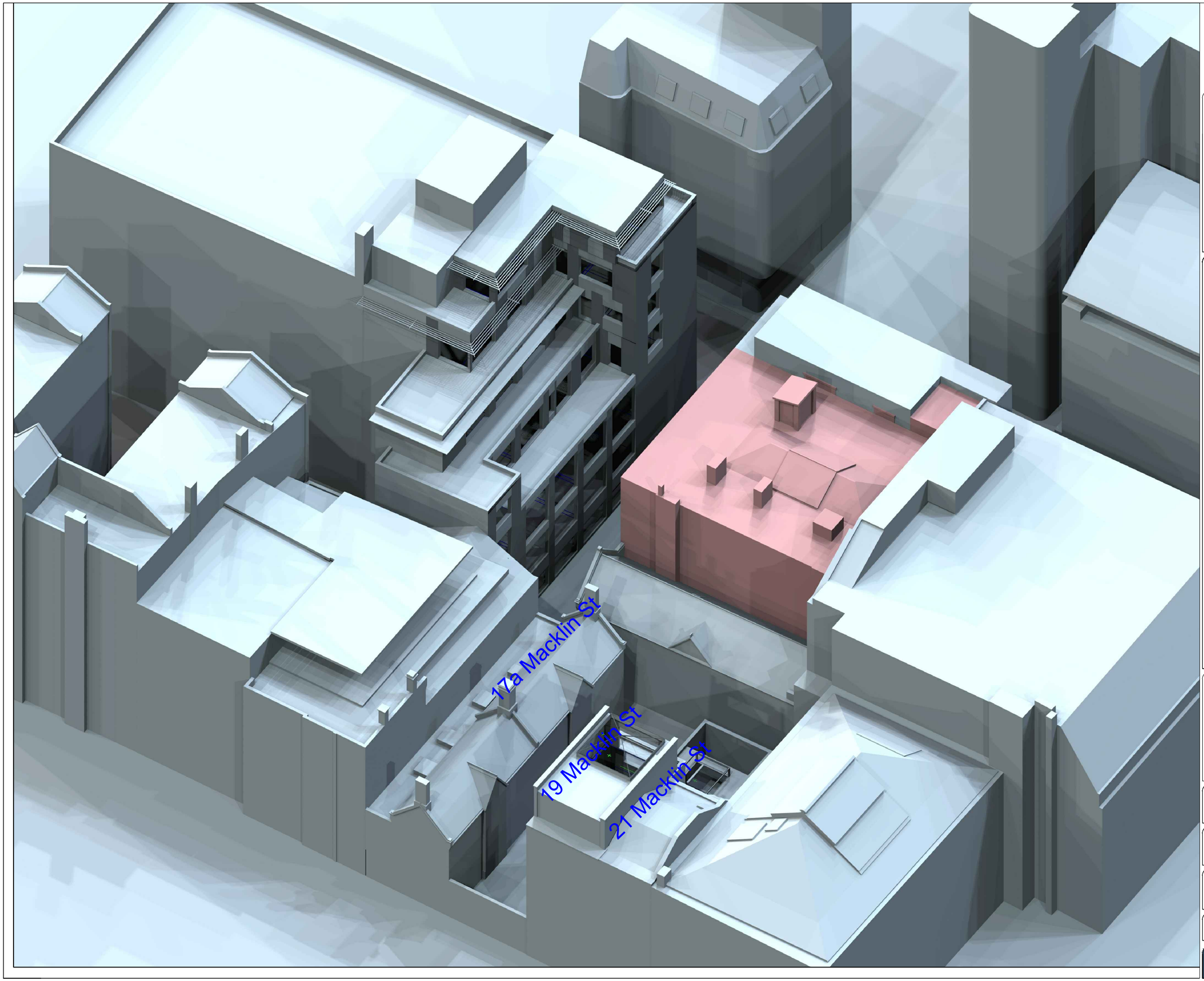
4.1 The London Borough of Camden's planning policy seeks to safeguard daylight and sunlight to existing buildings and points to the guidance published in BRE Report 209 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'.

4.2 We have undertaken a comprehensive study of the impact of the proposed development on the relevant rooms in all of the relevant surrounding dwellings. 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).

4.3 The results of our detailed study indicate that all windows and the majority of rooms tested will not see a noticeable reduction in daylight with the proposed development in place and retain daylight levels commensurate with the location.

4.4 For sunlight, the majority of the windows considered are located within 90° of due south and therefore the proposals, located to the north-west, will not impact an access to sunlight. Where they are considered, the results demonstrate that the guidelines are satisfied.

4.5 In conclusion, generally the proposal adheres to the BRE guidelines and therefore conclude that the London Borough of Camden's planning policy on daylight and sunlight will be satisfied.

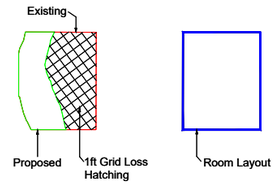


This drawing is Copyright © of GVA Grimley Limited.

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

EXISTING BUILDING
Os Map survey requirements.DWG
Smarts Place Existing model R2007.DWG

SURROUNDING BUILDINGS
Os Map survey requirements.DWG
Smarts Place Existing model R2007.DWG

PROPOSED BUILDING
INFO RECEIVED 19 SEPT 2018 - David Kohn Architects Ltd
221-XX-L15-01
221-XX-L15-02
221-XX-L15-03
221-XX-L12-06
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221-XX-L12-09

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Project Name
SMARTS PLACE
LONDON

Client
Mr. C. Kelly

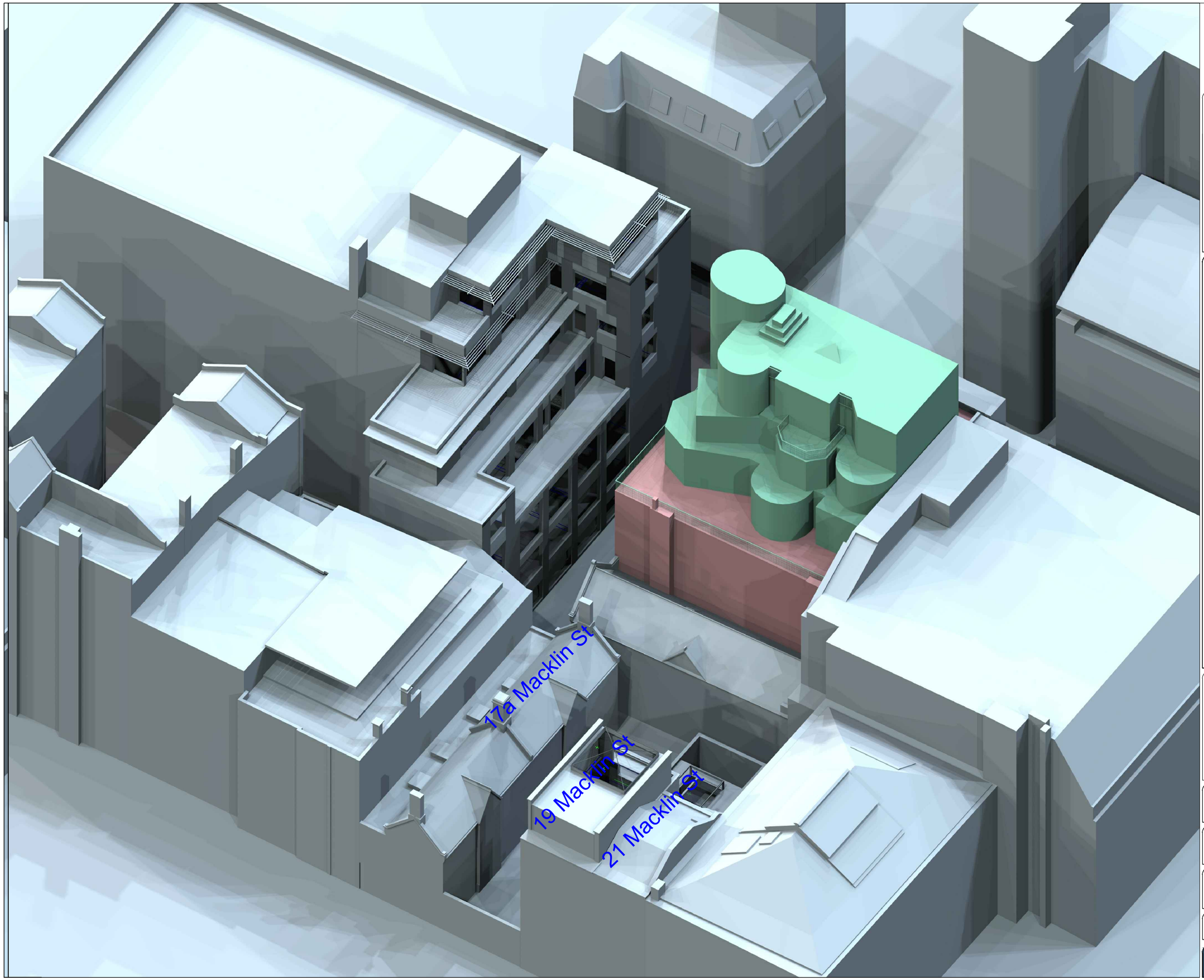
Drawing Title
Existing 3D View

Drawn By	Chk'd By	Scale @ A3	Date
AH			25 SEPT 2018

Project No.	Drawing No.	Revision
SM08/10	BRE/30	-

DAYLIGHT

A3



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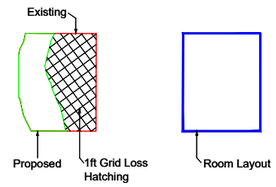
Legend

Daylight



Existing No-Sky Line Contour

Proposed No-Sky Line Contour

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Project Name
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Client
Mr. C. Kelly

Drawing Title
Proposed 3D View

Drawn By	Chk'd By	Scale @ A3	Date
AH			25 SEPT 2018

Project No.	Drawing No.	Revision
SM08/10	BRE/31	-

DAYLIGHT

A3

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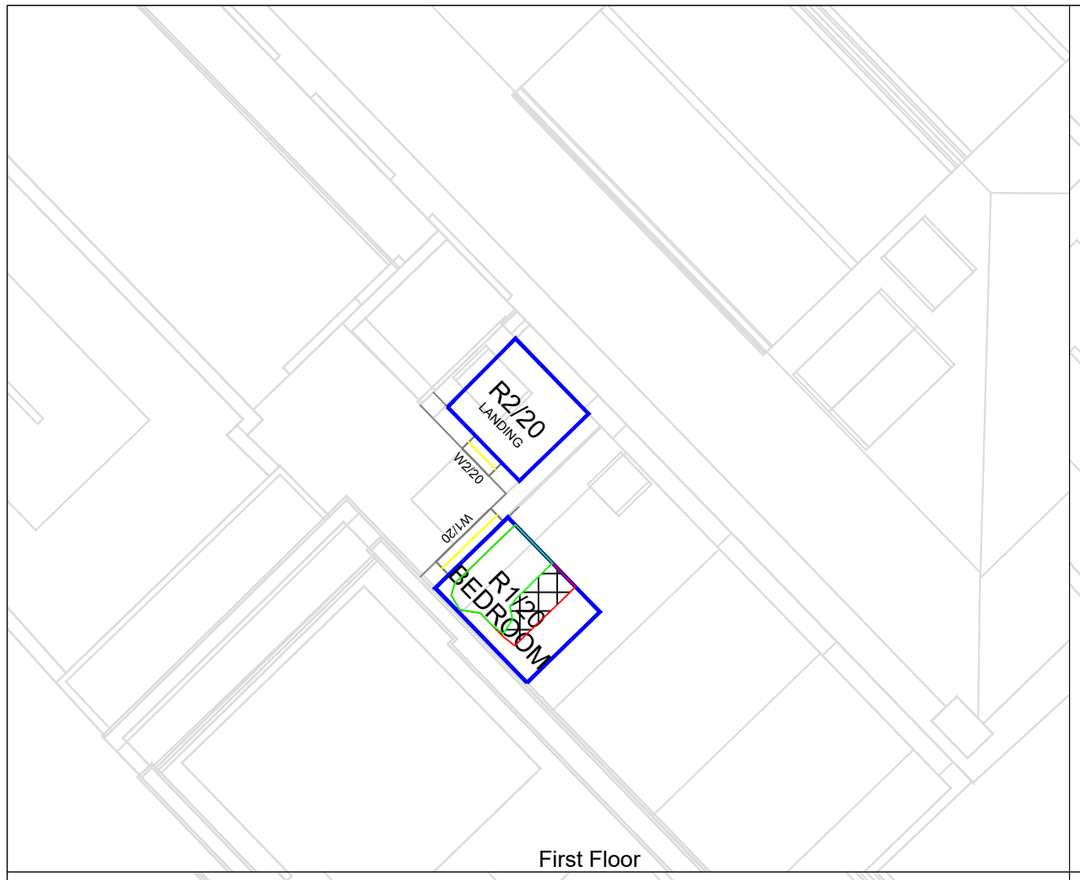
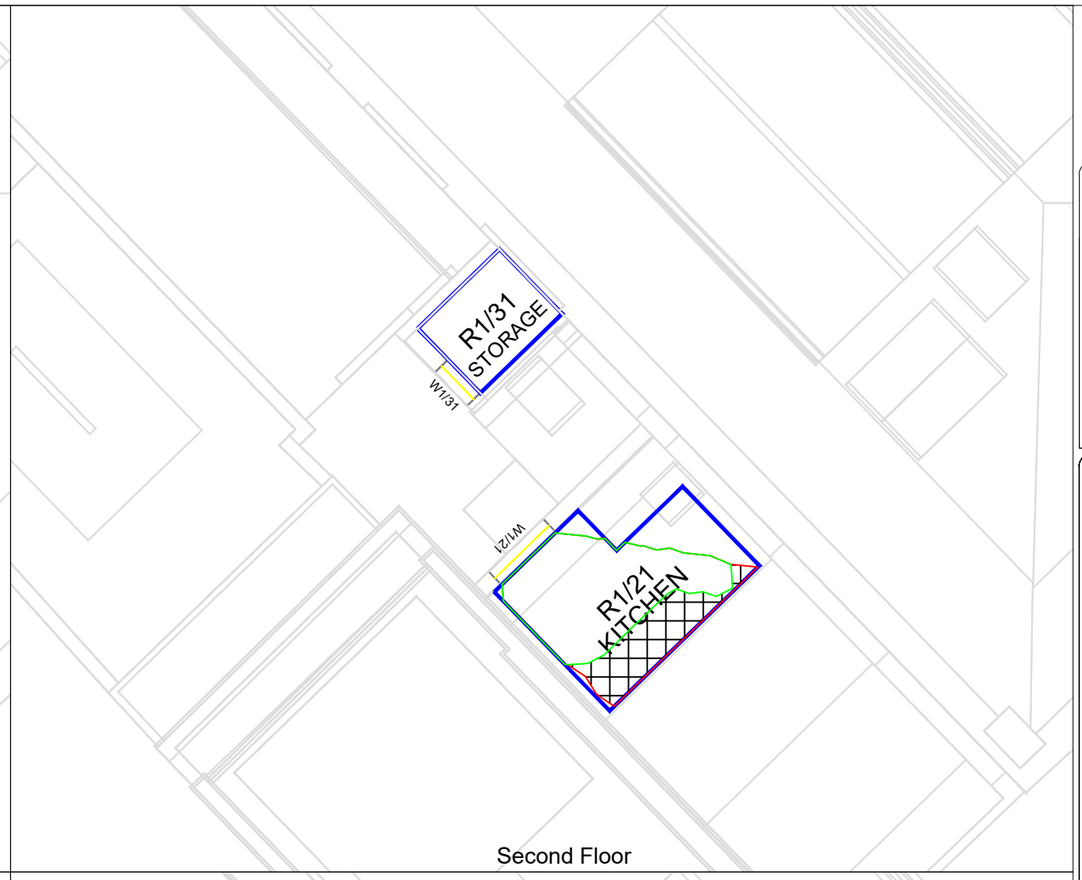


First Floor



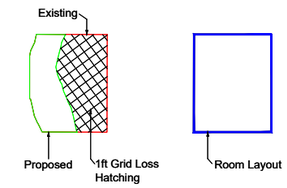
Second Floor

Third Floor

Fourth Floor

Legend

Daylight



Existing No-Sky Line Contour

Proposed No-Sky Line Contour

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Project Name
SMARTS PLACE
LONDON

Client
Mr. C. Kelly

Drawing Title
NO SKYLINE CONTOUR FOR
21 Macklin St

Drawn By	Chk'd By	Scale @ A3	Date
AH		1:100	25 SEPT 2018

Project No.	Drawing No.	Revision
SM08/10	BRE/32	-

DAYLIGHT

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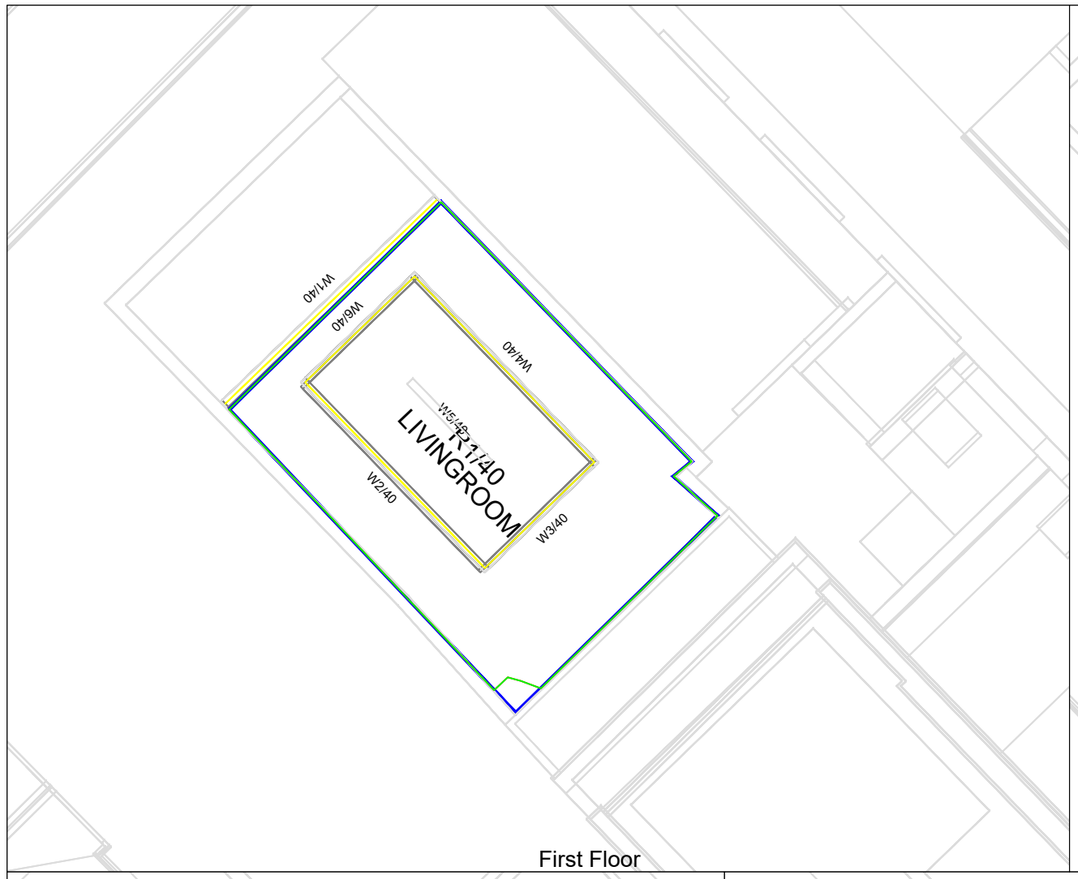
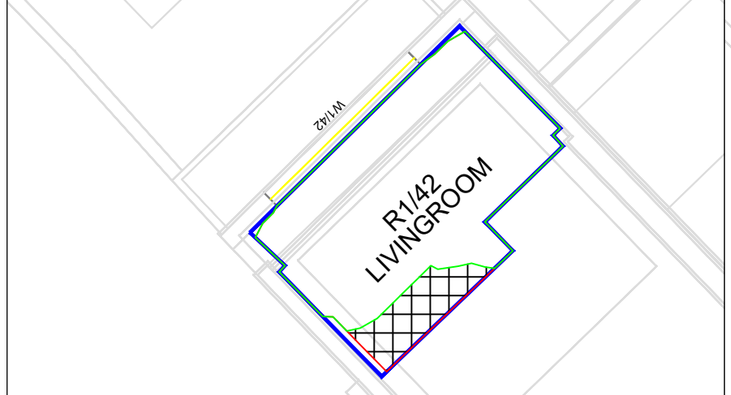
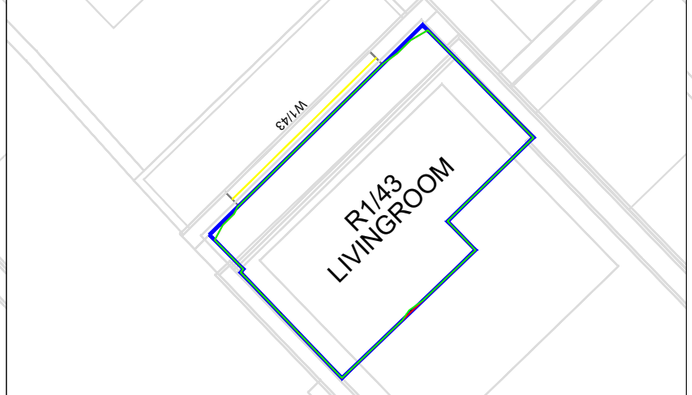


First Floor

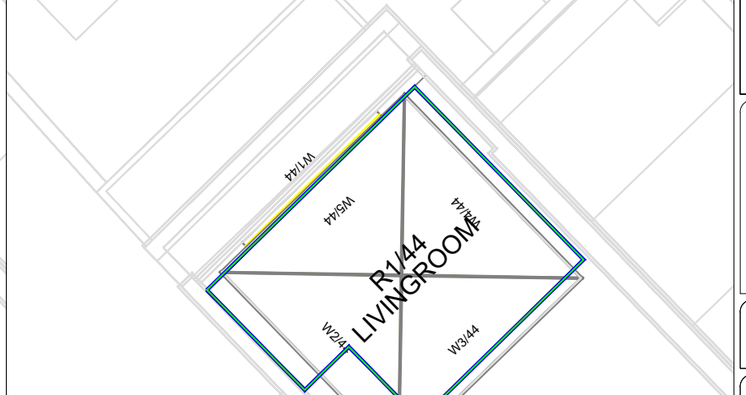
Second Floor



Third Floor



Fourth Floor



Fifth Floor

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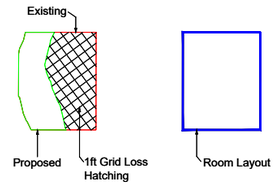
Legend

Daylight



Existing No-Sky Line Contour

Proposed No-Sky Line Contour

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Project Name
SMARTS PLACE
LONDON

Client
GOLDWAY PROPERTIES C/o BAYLIHGT

Drawing Title
NO SKYLINE CONTOUR FOR
19 Macklin St

Drawn By	Chk'd By	Scale @ A3	Date
AH		1:100	25 SEPT 2018

Project No.	Drawing No.	Revision
SM08/10	BRE/33	-

DAYLIGHT

A3

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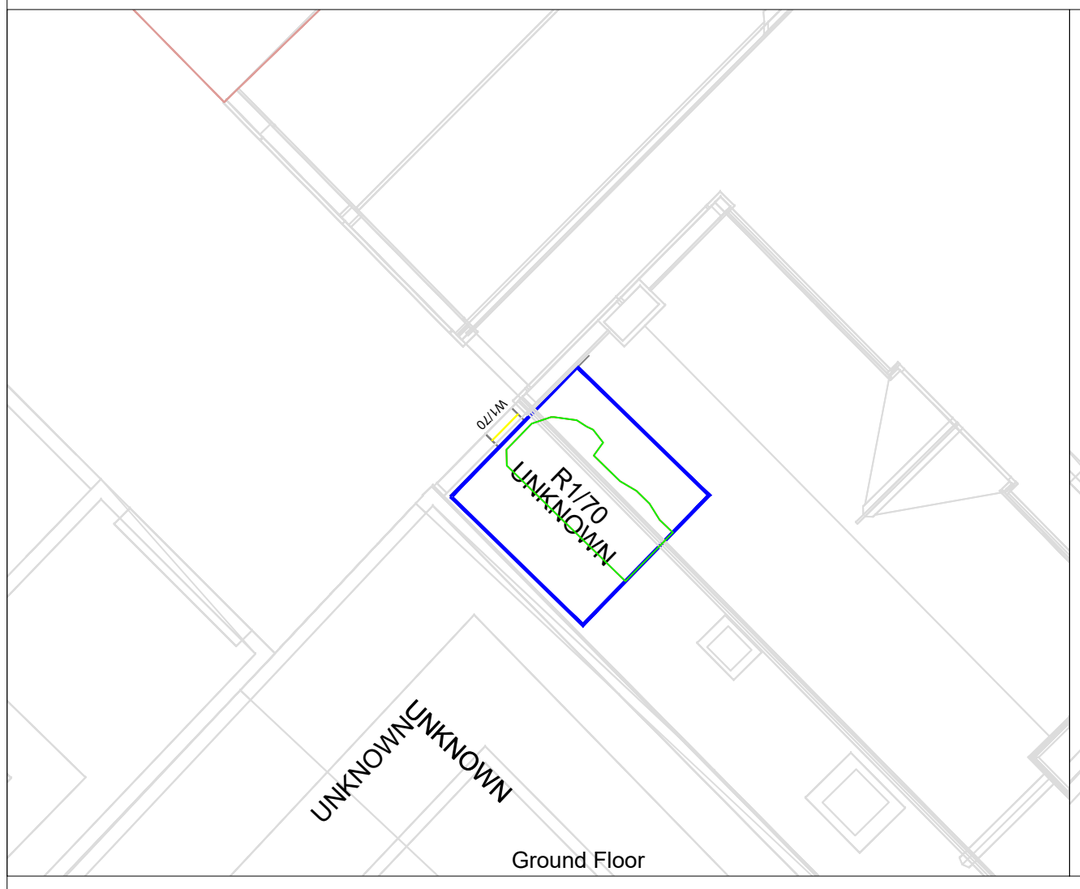
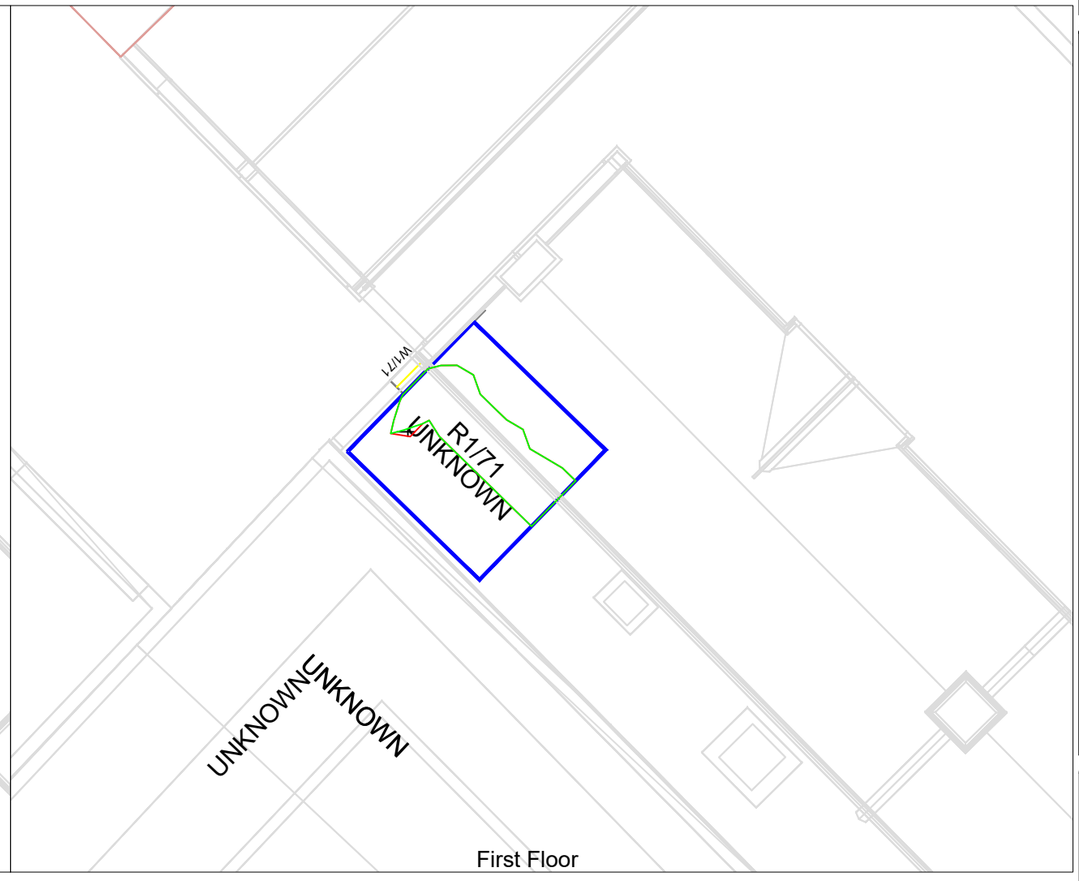


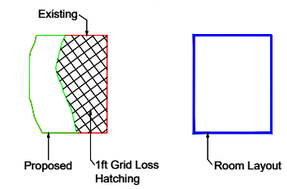
Ground Floor



First Floor

Legend

Daylight



Existing No-Sky Line Contour

Proposed No-Sky Line Contour

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Drawing Title
NO SKYLINE CONTOUR FOR
17 Macklin St

Drawn By	Chk'd By	Scale @ A3	Date
AH		1:100	25 SEPT 2018

Project No.	Drawing No.	Revision
SM08/10	BRE/34	-

DAYLIGHT

A3

SM08 - SMARTS PLACE
25-Sep-18
JOB 10 - DAYLIGHT RESULTS

Room/Floor	Room Use	Window	%VSC			% Daylight Factor			Proposed No Sky	
			Exist	Prop	% Loss	Exist	Prop	% Loss	% of Room Area	% Loss of Existing
21 Macklin St										
1st Floor										
R1/20	BEDROOM	W1/20	6.83	5.52	19.18%	0.53	0.40	25.84%	39.27%	32.43%
2nd Floor										
R1/21	KITCHEN	W1/21	8.47	6.96	17.83%	0.84	0.74	11.22%	58.13%	28.57%
3rd Floor										
R1/22	BEDROOM	W1/22	11.38	9.52	16.34%	1.10	0.99	9.83%	72.84%	23.30%
4th Floor										
R1/23	STUDY	W1/23	18.98	17.30	8.85%	1.18	1.11	5.67%	62.34%	0.00%
2nd Floor										
R1/32	UNKNOWN	W1/32	14.57	12.78	12.29%	1.47	1.32	10.22%	86.00%	0.00%
19 Macklin St										
Gnd Floor										
R1/40	LIVINGROOM	W1/40	6.47	6.02	6.96%	7.90	7.74	1.99%	99.32%	0.00%
		W2/40	19.79	19.47	1.62%					
		W4/40	6.09	6.07	0.33%					
		W5/40	51.11	49.90	>27					
		W6/40	9.98	8.69	12.93%					
1st Floor										
R1/41	LIVINGROOM	W1/41	17.93	15.73	12.27%	2.46	2.24	8.87%	83.15%	12.60%
2nd Floor										
R1/42	LIVINGROOM	W1/42	23.30	20.87	10.43%	2.34	2.15	7.91%	87.37%	11.25%
3rd Floor										
R1/43	LIVINGROOM	W1/43	27.30	25.01	8.39%	2.45	2.29	6.48%	99.43%	0.06%
4th Floor										
R1/44	LIVINGROOM	W1/44	30.99	29.22	>27	28.43	28.10	1.15%	100.00%	0.00%
		W2/44	91.74	91.40	>27					
		W3/44	93.24	93.24	>27					
		W4/44	92.26	92.15	>27					
		W5/44	90.44	89.59	>27					
17a Macklin St										
Gnd Floor										
R1/70	UNKNOWN	W1/70	7.84	7.81	0.38%	0.23	0.23	0.00%	38.20%	0.00%
1st Floor										
R1/71	UNKNOWN	W1/71	12.29	11.97	2.60%	0.65	0.63	2.16%	34.73%	1.19%

SM08 - SMARTS PLACE
10-Sep-18
JOB 10 - SUNLIGHT RESULTS

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

		Existing %			Proposed %					
Room use	Window Ref	Summer	Winter	Total	Summer	Winter	Total	% Loss of Summer	% Loss of Winter	% Loss of Total
19 Macklin St										
Gnd Floor										
LIVINGROOM	W2/40	24.00	8.00	32.00	24.00	8.00	32.00	0.00%	0.00%	0.00%
LIVINGROOM	W5/40	28.00	7.00	35.00	28.00	7.00	35.00	0.00%	0.00%	0.00%
4th Floor										
LIVINGROOM	W2/44	63.00	27.00	90.00	63.00	27.00	90.00	0.00%	0.00%	0.00%
LIVINGROOM	W3/44	64.00	28.00	92.00	64.00	28.00	92.00	0.00%	0.00%	0.00%