

# Daylight and Sunlight Report Warren Court, Euston Road, London

April 2020

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### **Appendices**

Appendix I Drawings WA118/10/BRE/48 to BRE/51 – Plan and 3D View in 'Existing' and 'Proposed' Condition

Appendix II Drawing WA118/10/BRE/47 including associated tables – Daylight and Sunlight in relation to 295 Euston Road

Appendix III Drawings WA118/11/BRE/48 & 49 including associated tables – Daylight and Sunlight in relation to Warren Court

Draft Date: April 2020

Prepared by Richard Nosworthy For and on behalf of Avison Young

## 1. Introduction

1.1 Avison Young has been retained by Warren Court Investments LLP to assess the daylight and sunlight impact of the proposed development at Warren Court, 293 Euston Road, London NW1, in accordance with the Building Research Establishment (BRE) Guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice. The buildings with the potential to be impacted are:

- The accommodation in Warren Court below the level of the redevelopment.
- 295 Euston Road
- 1.2 The proposed development comprise of Demolition of existing sixth floor and the erection of a replacement single storey extension to provide four residential units

## 2. Sources of Information

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

- 3D Z-map model
- 3D Model of the proposal, received 31 March 2020, drawing reference: Warren Court proposal.dwg

## 3. Daylight/Sunlight Planning Principles

3.1 The Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011) is the document referred to by most local authorities. The BRE guidelines cover amenity requirements for sunlight and daylight to buildings around any development site as well as the quality of daylight within a proposed habitable development. The BRE guidelines should also be read in conjunction with the British Standard, BS 8206-2:2008 Lighting for Buildings Part 2: Code of Practice for Daylighting as they both refer to each other.

3.2 The introduction to the guidelines state:-

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."

### **Daylighting**

- 3.3 The requirements governing daylighting to existing residential buildings around a development site are set out in Part 2.2 of the guidelines. The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the vertical sky component at the centre of the window. The guidelines advise that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines also suggest that distribution of daylight within rooms is reviewed although bedrooms are considered to be less important.
- 3.4 The vertical sky component can be calculated by using the skylight indicator provided as part of the guidelines, by mathematical methods using what is known as a Waldram diagram or by 3D CAD modelling.
- 3.5 The guidelines states the following:-
  - "If this vertical sky component is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component with the new development in place, is both less than 27% and less than 0.8 times its former value, then occupants of the existing building will notice the reduction in the amount of skylight."
- 3.6 It must be interpreted from this criterion that a 27% vertical sky component (VSC) constitutes adequacy, but where this value cannot be achieved a reduction of up to 0.8 times its the former value (this is the same as saying a 20% reduction when compared against the existing condition) would not be noticeable and would not therefore be considered material.
- 3.7 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the room window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

3.8 Appendix C of the BRE guidelines sets out various more detailed tests that assess the interior daylight conditions of rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines. The ADF value determines the level of interior illumination that can be compared with the British Standard, BS 8206: Part 2. This recommends a minimum of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.

3.9 The no sky-line or daylight distribution contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. If a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

## **Sunlighting**

3.10 Requirements for protection of sunlighting to existing residential buildings around a development site are set out in Part 3.2 of the BRE guidelines. There is a requirement to assess windows of surrounding properties where the main windows face within 90 degrees of due south. The calculations are taken at the window reference point at the centre of each window on the plane of the inside surface of the wall. The guidelines further state that kitchens and bedrooms are less important in the context of considering sunlight, although care should be taken not to block too much sun. The guidelines sets the following standard:-

"If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months of 21st September and 21st March, then the room should still receive enough sunlight. The sunlight availability indicator in Appendix A can be used to check this.

Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months then the occupants of the existing building will notice the loss of sunlight."

3.11 To summarize the above, a good level of sunlight to a window is 25% annual probable sunlight hours, of which 5% should be in winter months. Where sunlight levels fall below the suggested level, a comparison with the existing condition is reviewed and if the ratio reduction is within 0.8 (the same as saying a 20% reduction) its former value then the sunlight loss will not be noticeable. Sunlight reductions that fall below 0.8, i.e. 0.7 (the same as saying greater than 20%) then the sunlight losses will be noticed by the occupants.

## 4. Assessment Results

4.1 We set out below our commentary on the assessments for the daylight/sunlight tests, all results are shown graphically on the attached plans and in tabular format.

### 295 Euston Road – WA118/10/BRE47

- 4.2 The building is to the west of the proposed development and comprises of a ground floor retail space, with residential flats from first to fourth floors. The drawing referenced as above and the associated tables, located in Appendix I, provide the results of the residential properties' windows and rooms on all floors. Areas thought to be circulation space have not been tested.
- 4.3 The areas that see a change in daylight and sunlight as a result of the proposed development are located within the internal lightwell only. These lightwell windows can be seen to serve hallways, bedrooms and kitchens. The main habitable rooms are located on the main front and rear elevations and remain unaffected.
- 4.4 Our assessment confirms that the existing levels of light are extremely low to all of the first, second and third floor windows and rooms, arguably providing little to no amenity. The fourth floor window/room is also currently significantly below BRE guideline values. Therefore any reduction in daylight and sunlight values will manifest as a disproportionately high percentage reductions. In physical reality there is little or no change in light received within the rooms.
- 4.5 Specifically in relation to sunlight, the BRE guidance only requires windows that face within 90 degrees of due south to be assessed, as only these windows have reasonable expectation of receiving the guideline annual probable sunlight hours. The main rooms that require sunlight are living areas with bedrooms being a secondary consideration, deemed as "less important" by the BRE guidelines. The configuration of the lightwell means that only three windows face within 90 degrees of due south and these are all bedrooms.
- 4.6 Despite the low existing values, all of the BRE guideline assessments are satisfied in respect of daylight and sunlight by virtue of all windows and rooms assessed retaining 0.8 of their former value. Therefore the scheme is fully BRE compliant from a daylight and sunlight perspective in relation to this property.

### Warren Court - WA118/11/BRE48-49

- 4.7 There are limited habitable rooms facing into the existing internal lightwell of the building and are restricted to small food preparation kitchens and bedrooms.
- 4.8 The kitchens are of a size whereby it would not be possible to utilise them as anything other than a food preparation area, as opposed to being utilised to sit in and consume food. Therefore as these rooms do not provide a dining function, in accordance with the BRE guidelines, they are not 'habitable' rooms and in that case we do not believe that these need to be considered.
- 4.9 Again, our assessment confirms that the existing levels of light are low to all of the first, second, third and fourth floor windows and rooms, arguably providing little amenity. The fifth floor window/room is also

currently below BRE guideline values. Therefore, again, any reduction in daylight and sunlight values will manifest as a disproportionately high percentage reductions.

- 4.10 This is confirmed by reference to the two bedrooms per floor from third to fifth floor and these see a range of reductions. However, by reference to the VSC test (at the window) and No Skyline test (within the room) those to the lower floors already achieve low levels of light which is below that considered to provide real amenity in terms of light in the existing condition. These are reduced but in very low amounts in real terms. One bedroom window at fifth floor, W1/55, will see a VSC reduction in excess of guidance at 30.56%, however excellent daylight access is still maintained to the room by reference to the ADF value of 2.21%, compared to a target of 1%.
- 4.11 It should be noted that by reference to the Average Daylight Factor (ADF) test (within the room), this indicates that all but one bedroom will retain in excess of the British Standard requirements value of 1% ADF. The remaining bedroom will only be marginally below this value at 0.9% ADF and retain 0.8 of it former value. With the exception of this bedroom, all rooms that achieve their British Standard value in the 'existing' condition will retain their required value with the proposed development in place. We therefore suggest that by reference to this test, all rooms assessed will remain satisfactorily well-lit or will not see a noticeable change in daylight conditions, by virtue of retaining 0.8 of their former value or no material reduction in the ADF value.
- 4.12 With regard to sunlight, eight windows arranged over first to fifth floors have been assessed in accordance the BRE's APSH test. The results confirm that six of the eight windows assessed will satisfy the guidelines by either retaining 25% annual and 5% winter sunlight or 0.8 of their former value, with the exception of one retained winter sunlight value of 4%. The remaining two windows are located at fourth floor. The bedroom window (W1/54) will only see an annual reduction marginally above the 20% guidance, at 21.05%. The kitchen window (W2/54), with see a reduction of 31.82% of it former value. However, in both instances the windows retain 15% APSH, whilst below guideline is commensurate with an inner-city location due the height and proximity of neighbouring buildings. Both windows also see no change in winter sunlight values. We therefore suggest that either no noticeable change in sunlight conditions will occur or values commensurate with an inner-city location are retained and these should be considered acceptable.

## 5. Conclusion

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

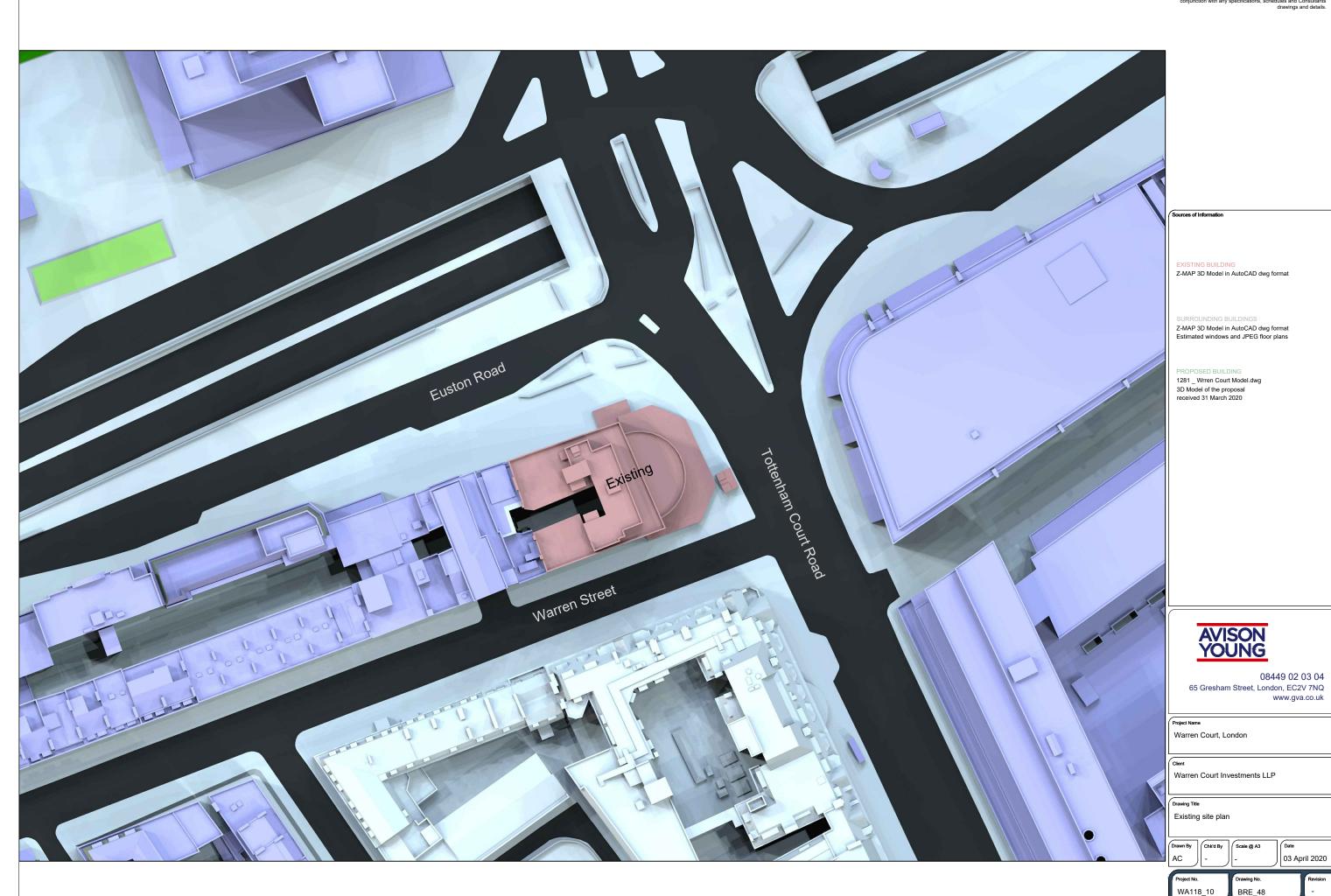
- 5.2 The London Borough of Camden seeks to safeguard daylight and sunlight to existing buildings and promote adequate standards for new developments by reference to Policy CS5 and DP26. The tests were undertaken in accordance with the BRE Report 209 'Site Layout Planning for Daylight and Sunlight A Guide to Good Practice' (second edition, 2011) and the British Standard BS 8206: Part 2.
- 5.3 The proposed development causes no impacts to the assessed windows/rooms that are likely to be considered noticeable by the BRE guidelines, to the one neighbouring building in Euston Road. The vast majority of the remainder of building will retain exceedingly high levels of daylight and sunlight.
- 5.4 The same applies to the retained buildings within Warren Court itself, where either no noticeable change in light conditions will occur or the retained habitable rooms will retain sufficient light in areas where currently the levels of light are low or values are commensurate with the location.
- 5.5 In Camden's Planning Guidance Amenity, Camden state in paragraph 3.22 that "While we strongly support the aims of the BRE methodology for assessing sunlight and daylight we will consider the outcomes of the assessments flexibility where appropriate, taking into account site specific circumstances and context." We suggest that taking into account these considerations, applying the guidelines flexibly as intended, the London Borough of Camden's planning policy and related London Plan on daylight and sunlight will be satisfied.

## Appendix I



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.



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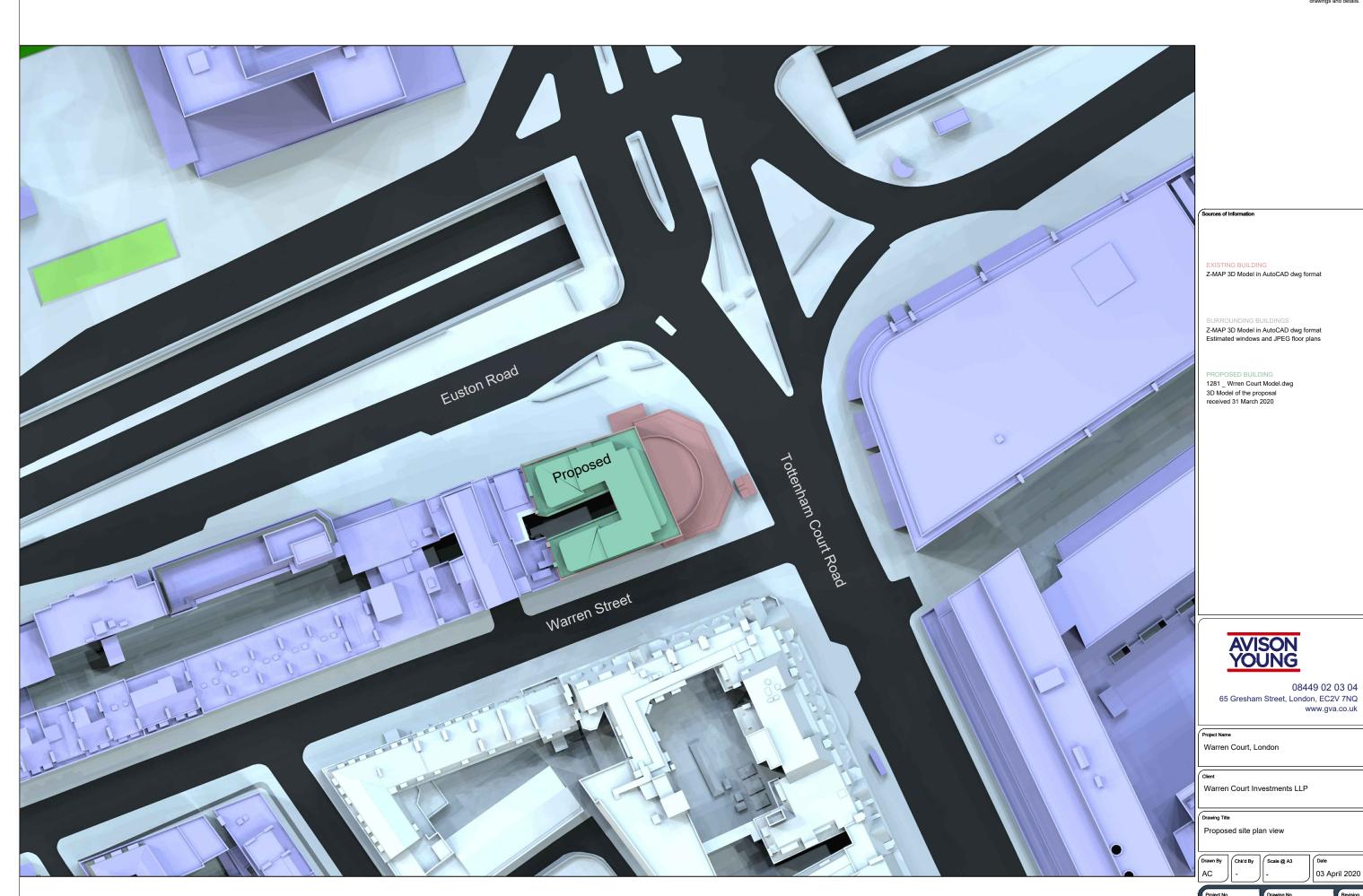
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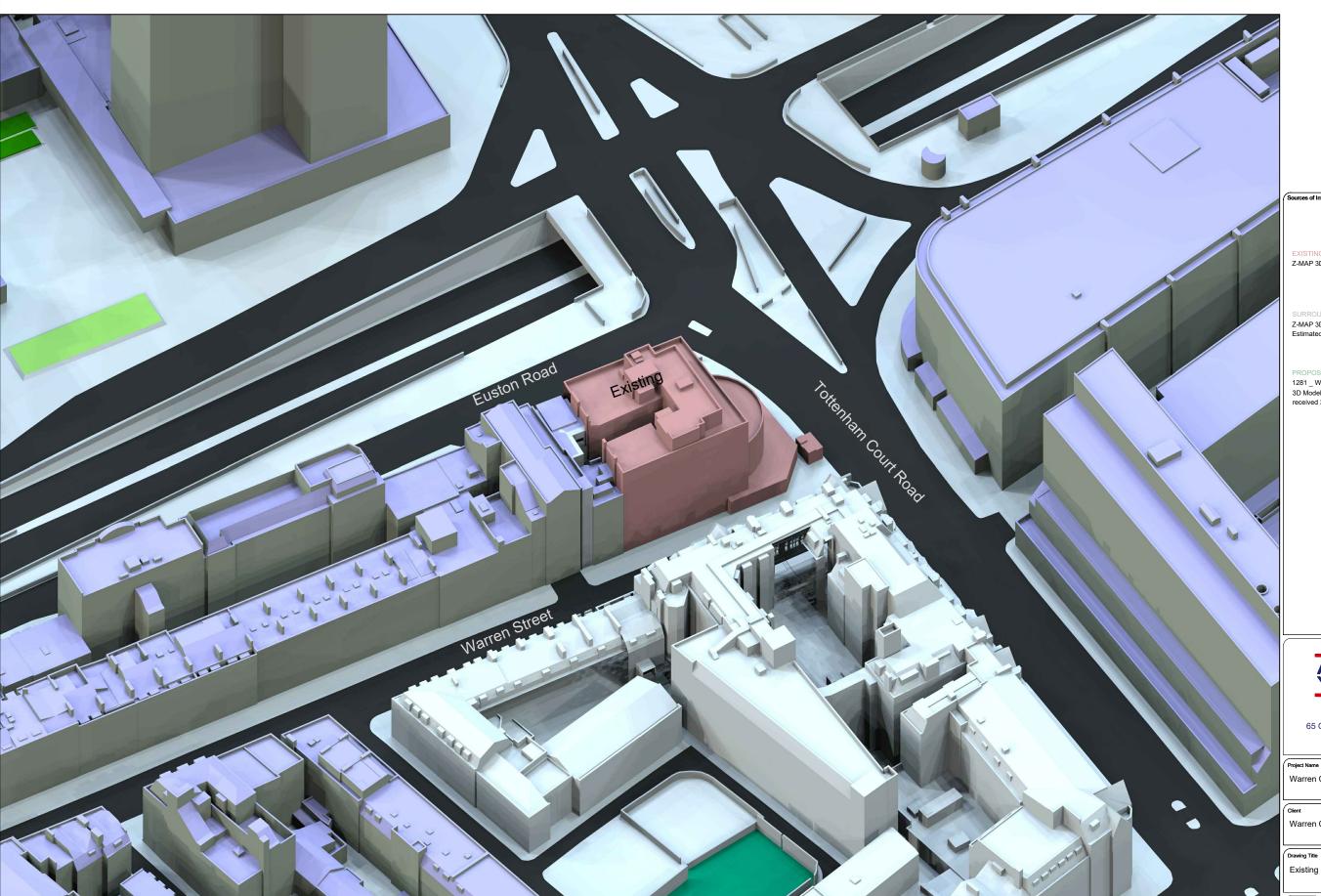
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Do not scale this drawing.

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



EXISTING BUILDING

Z-MAP 3D Model in AutoCAD dwg format

Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans

PROPOSED BUILDING 1281 \_ Wrren Court Model.dwg 3D Model of the proposal received 31 March 2020



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Warren Court, London

Warren Court Investments LLP

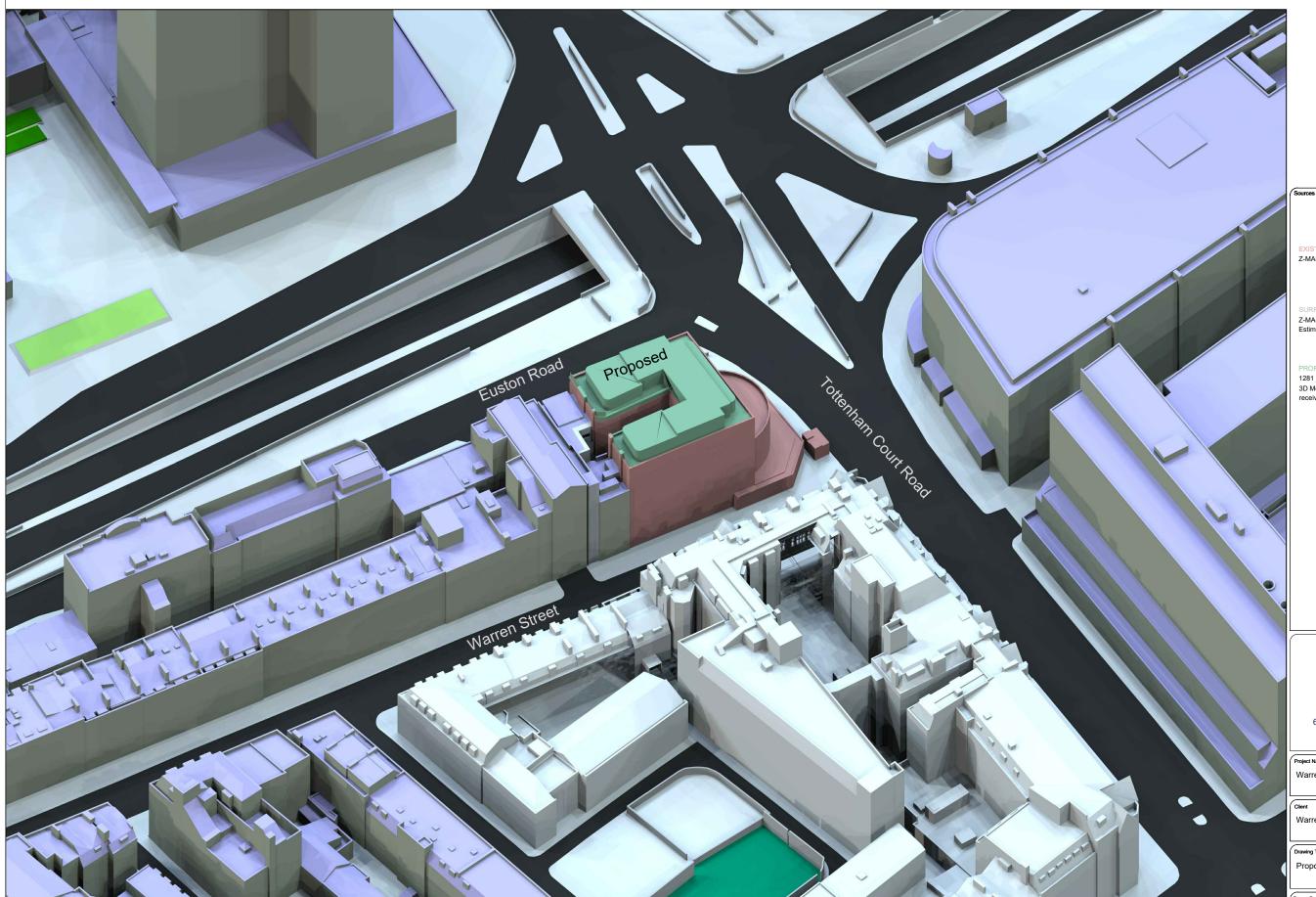
Existing site 3D view

03 April 2020

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Do not scale this drawing.

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



EXISTING BUILDING

Z-MAP 3D Model in AutoCAD dwg format

Z-MAP 3D Model in AutoCAD dwg format Estimated windows and JPEG floor plans

PROPOSED BUILDING 1281 \_ Wrren Court Model.dwg 3D Model of the proposal received 31 March 2020



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Warren Court, London

Warren Court Investments LLP

Drawing Title

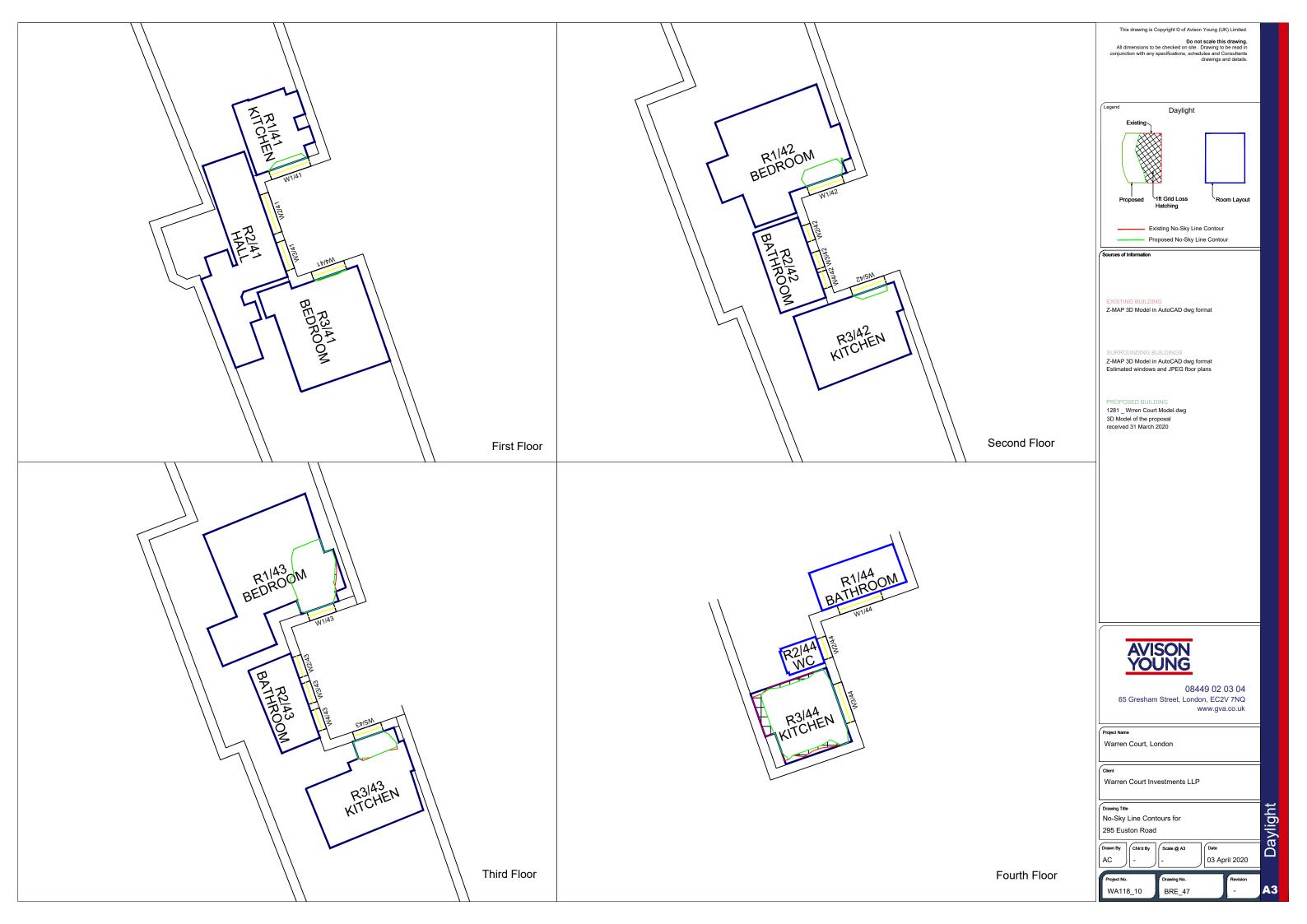
Proposed site 3D view

03 April 2020

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## Appendix II







## Warren Court, Euston Road, London Daylight results for proposal job 10 03 April 2020

				%VSC	%VSC		aylight	Factor Prop		osed No Sky	
									% of		
									Room	% Loss of	
Room/Floor	Room Use	Window	Exist	Prop	% Loss	Exist	Prop	% Loss	Area	Existing	
295 Euston F	Road NW1	BRE_47									
1st Floor											
R1/41	KITCHEN	W1/41	1.16	1.05	9.48%	0.00	0.00	0.00%	4.43%	0.00%	
R3/41	BEDROOM	W4/41	0.66	0.62	6.06%	0.00	0.00	0.00%	0.36%	0.00%	
2nd Floor	-				-				-		
R1/42	BEDROOM	W1/42	2.59	2.34	9.65%	0.10	0.10	0.00%	5.39%	0.00%	
R3/42	KITCHEN	W5/42	1.38	1.28	7.25%	0.00	0.00	0.00%	2.47%	0.00%	
3rd Floor	3rd Floor										
R1/43	BEDROOM	W1/43	7.50	6.71	10.53%	0.22	0.20	9.82%	19.12%	1.39%	
R3/43	KITCHEN	W5/43	3.94	3.60	8.63%	0.19	0.18	2.67%	9.56%	2.33%	
4th Floor											
R3/44	KITCHEN	W3/44	14.56	12.48	14.29%	0.96	0.84	12.72%	83.23%	12.64%	



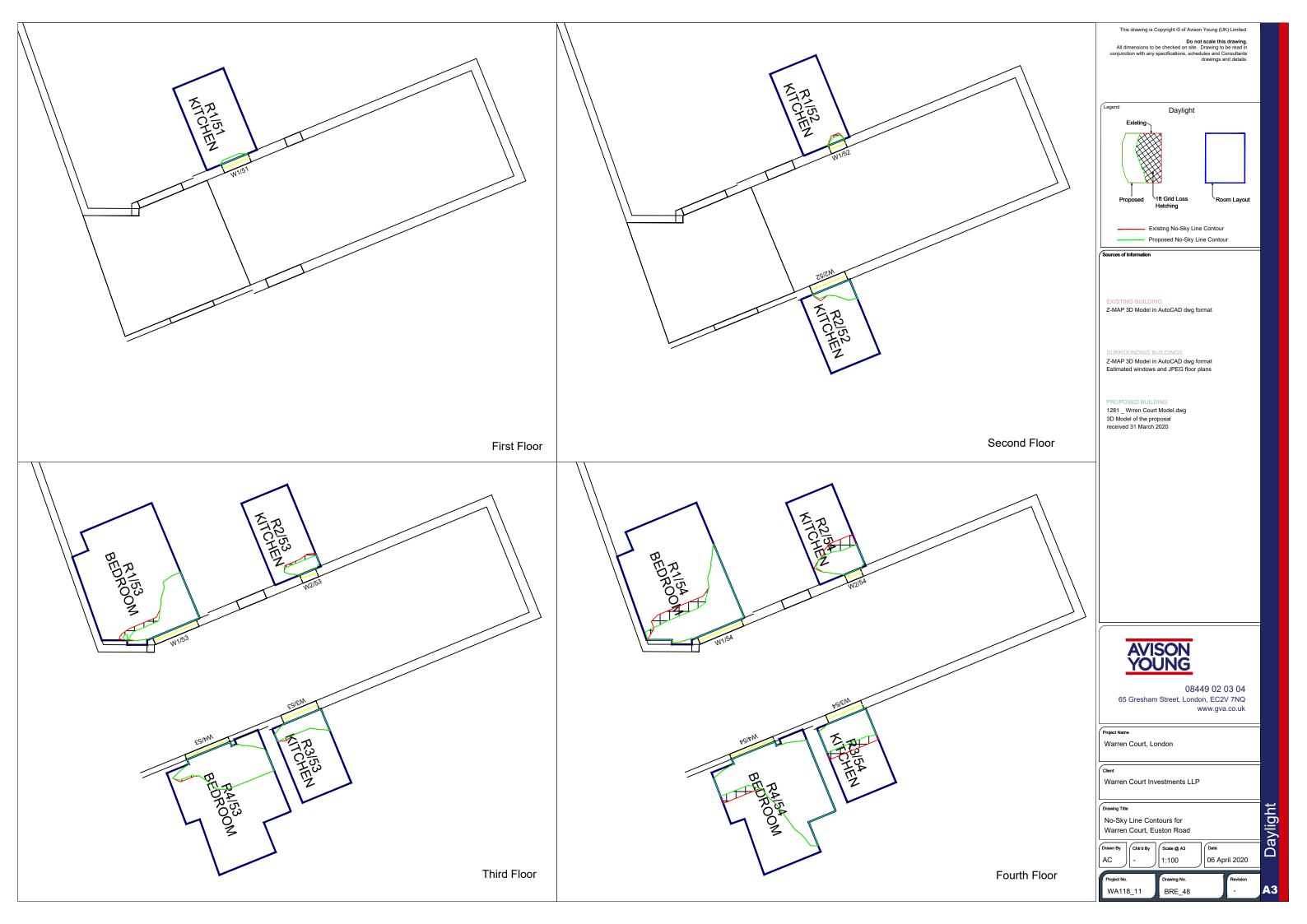
## Warren Court, Euston Road, London Sunlight results for proposal job 10 03 April 2020

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

		Existing %			Pro	posed %						
	Window							% Loss of	% Loss of	% Loss of		
Room use	Ref	Summer	Winter	Total	Summer	Winter	Total	Summer	Winter	Total		
295 Euston Road NW1 BRE_47												
1st Floor												
KITCHEN	W1/41	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%		
2nd Floor	2nd Floor											
BEDROOM	W1/42	1.00	0.00	1.00	1.00	0.00	1.00	0.00%	0.00%	0.00%		
3rd Floor												
BEDROOM	W1/43	6.00	1.00	7.00	6.00	1.00	7.00	0.00%	0.00%	0.00%		

## Appendix III









## Warren Court, Euston Road, London Daylight results for proposals Job 11 29 April 2020

			%VSC			% D	aylight	Factor	Proposed No Sky	
Room/Floor	Room Use	Window	Exist					% Loss	% of Room Area	% Loss of Existing
Warren Cou	rt Euston Ro	BRE_4	48-49							
1st Floor										
R1/51	KITCHEN	W1/51	0.73	0.62	15.07%	0.00	0.00	0.00%	1.69%	0.00%
2nd Floor	-	-		-	-	-	-		-	
R1/52	KITCHEN	W1/52	2.00	1.76	12.00%	0.00	0.00	0.00%	1.64%	33.33%
R2/52	KITCHEN	W2/52	2.05	1.93	5.85%	0.40	0.39	2.25%	10.68%	3.85%
3rd Floor	•	-		=				=		
R1/53	BEDROOM	W1/53	4.89	4.35	11.04%	1.02	0.90	11.39%	16.85%	10.08%
R2/53	KITCHEN	W2/53	3.82	3.27	14.40%	0.36	0.24	33.43%	8.62%	19.23%
R3/53	KITCHEN	W3/53	4.64	4.32	6.90%	1.35	1.18	12.43%	18.38%	2.27%
R4/53	BEDROOM	W4/53	5.37	5.08	5.40%	1.22	1.15	5.57%	27.50%	1.26%
4th Floor	-	-		-	-	-	-		-	-
R1/54	BEDROOM	W1/54	10.88	9.00	17.28%	1.72	1.47	14.26%	27.24%	13.72%
R2/54	KITCHEN	W2/54	8.51	6.75	20.68%	0.80	0.61	24.25%	21.15%	26.95%
R3/54	KITCHEN	W3/54	9.85	8.41	14.62%	2.50	2.14	14.25%	32.48%	22.05%
R4/54	BEDROOM	W4/54	12.53	11.23	10.38%	2.01	1.84	8.42%	58.49%	4.16%
5th Floor										
R1/55	BEDROOM	W1/55	24.87	17.27	30.56%	2.88	2.21	23.19%	51.18%	48.08%
R2/55	KITCHEN	W2/55	21.90	14.18	35.25%	1.57	1.07	31.57%	47.43%	47.14%
R3/55	KITCHEN	W3/55	19.85	15.99	19.45%	3.93	3.33	15.13%	64.74%	33.99%
R4/55	LKD	W4/55	21.79	17.76	18.49%	4.04	3.84	4.90%	97.83%	0.40%
N <del>4</del> /33		W5/55	36.25	36.25	>27	4.04			37.03%	0.40%



## Warren Court, Euston Road, London Sunlight results for proposal job 11 29 April 2020

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

		Fx	isting %		Pro	posed %							
Room use	Window Ref			Total	Summer	İ	Total	% Loss of Summer	% Loss of Winter	% Loss of Total			
Warren Court Euston Road NW1 BRE_48-49													
1st Floor													
KITCHEN	W1/51	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00%	0.00%			
2nd Floor													
KITCHEN	W1/52	4.00	0.00	4.00	4.00	0.00	4.00	0.00%	0.00%	0.00%			
3rd Floor													
BEDROOM	W1/53	8.00	0.00	8.00	8.00	0.00	8.00	0.00%	0.00%	0.00%			
KITCHEN	W2/53	9.00	0.00	9.00	8.00	0.00	8.00	11.11%	0.00%	11.11%			
4th Floor													
BEDROOM	W1/54	17.00	2.00	19.00	13.00	2.00	15.00	23.53%	0.00%	21.05%			
KITCHEN	W2/54	21.00	1.00	22.00	14.00	1.00	15.00	33.33%	0.00%	31.82%			
5th Floor													
BEDROOM	W1/55	43.00	11.00	54.00	32.00	5.00	37.00	25.58%	54.55%	31.48%			
KITCHEN	W2/55	40.00	12.00	52.00	34.00	4.00	38.00	15.00%	66.67%	26.92%			
LKD	W4/55	10.00	0.00	10.00	10.00	0.00	10.00	0.00%	0.00%	0.00%			
LKD	W5/55	56.00	27.00	83.00	56.00	27.00	83.00	0.00%	0.00%	0.00%			

## Contact Details

### **Enquiries**

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