

<u>Daylight and sunlight report for the proposed</u> <u>development at</u>

# 140-142 Camden High Street, London NW10NG



Prepared for: Tasou Associates

Prepared by: Ian McKenna BSc (Hons) MRICS

Stephanie Mosa LLB (Hons) LL.M

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### 1. Executive summary

### **1.1.** <u>Scope</u>

1.1.1. We have been instructed by Tasou Associates to determine the impact upon the daylight and sunlight amenity of the existing surrounding buildings which may arise from the proposed development at 140-142 Camden High Street, London NW10NG. The development under consideration entails a rear two storey extension over the existing first floor roof, to provide additional residential accommodation.

### 1.2. <u>Assessment criteria</u>

- 1.2.1. To ensure that this assessment can be appropriately evaluated against London Borough of Camden's planning policy, daylight and sunlight calculations have been undertaken in accordance with the Building Research Establishment Report 'Site Layout Planning for Daylight and Sunlight A Guide to Good Practice' 2nd Edition, 2011(the "BRE guide") and also British Standard 8206 2: 2008 'Lighting for Buildings Part 2: Code of Practice for Daylighting', to which the BRE guide refers. The standards and tests applied within this assessment are briefly described in Appendix A.
- 1.3. Summary of effect of proposed development on existing surrounding buildings
- 1.3.1. Only one property surrounding the two story rear extension development at 140-142 Camden High Street is thought to be residential and marginally affected in terms of daylight and sunlight, namely the rear windows and rooms pertaining 144 Camden High Street.

### Daylight

- 1.3.2. Of the 11 windows assessed for Vertical Sky Component (VSC), all but two will continue to meet the target values as set out in the BRE guidelines, achieving either a VSC of 27% or above, in the proposed condition, or they will experience a ratio reduction of no more than 0.8 times their former value. In most cases the windows assessed will experience no reduction whatsoever.
- 1.3.3. Both the windows that fall short of the BRE's numerical criteria are located on the first floor on the southern elevation, siting opposite the proposed development and within close proximity. The windows in question will experience moderate reductions of 0.65% and 0.62% when considering their already low existing VSC. It should be noted that, any kind of standard construction on the site beyond the baseline scenario, would alter the levels of daylight reaching these windows, which is due to the dense urban environment.







### 2. Introduction

### **2.1.** Scope

- 2.1.1. We have been instructed by Tasou Associates to determine the impact upon the daylight and sunlight amenity of the existing surrounding buildings which may arise from the proposed development at 140-142 Camden High Street, London NW10NG (the "Application Site"). In accordance with the BRE Guide we have limited our assessment to those surrounding/adjoining buildings containing in part, or in whole, residential habitable rooms.
- 2.1.2. The development under consideration entails a rear two storey extension over the existing first floor roof, to provide additional residential accommodation.
- 2.2. Planning policy
- 2.2.1. Camden Council's Local Development Framework, Development Policy, refers to the following documents as those being used to review adequacy of daylight and sunlight.
- 2.2.2. Building Research Establishment (BRE) Report "Site Layout Planning for Daylight and Sunlight a guide to good practice, 2nd Edition, 2011" ("the BRE Guide").
- 2.2.3. This Report is therefore based on the BRE guide which contains the accepted methodologies for assessing daylight and sunlight and the recommended targets.
- 2.2.4. Camden Council's Local Plan (2017) contains the following policy guidance under Section 6 Protecting Amenity, Policy A1Managing the Impact of Development:

### Sunlight, daylight and overshadowing

6.5. Loss of daylight and sunlight can be caused if spaces are overshadowed by development. To assess whether acceptable levels of daylight and sunlight are available to habitable, outdoor amenity and open spaces, the Council will take into account the most recent guidance published by the Building Research Establishment (currently the Building Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice 2011). Further detail can be found within our supplementary planning document Camden Planning Guidance

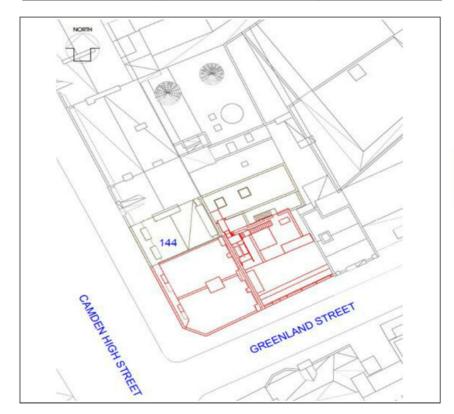
### 2.3. <u>Assessment criteria</u>

2.3.1. To ensure that this assessment can be appropriately evaluated against Camden Council's planning policy, daylight and sunlight calculations have been undertaken in accordance with the 'BRE guide' and also on BS8206–2: 2008 to which the BRE guide refers. The standards and tests applied are briefly described in Appendix A.



2.3.2. The existing buildings adjacent to the proposed development site are shown on the site plan (see below) and comprise:

Name/address of building	Assumed use	Position in relation to the development
144 Camden High Street	Residential	North



Title Date



- Assessment & results impact of new development on existing, surrounding buildings
- 3.1. Daylight
- 3.1.1. In accordance with the BRE guide (see also Appendix A) and our site inspection the following building required assessment:
  - 144 Camden High Street.
- 3.1.2. We have excluded 7 9 Greenland Street and 1 Greenland Street as these properties are not believed to contain any residential accommodation and the BRE guidelines therefore do not apply.
  - 144 Camden High Street
- 3.1.3. 144 Camden High Street is located to the north of the proposed development with its eastern and southern rear elevation windows facing the site. It is believed to be residential property.
- 3.1.4. The results of our <u>VSC (Vertical Sky Component)</u> analysis are shown in full in Appendix D.
- 3.1.5. For the VSC assessment, two of the eleven windows assessed will not meet the BRE's numerical criteria of 0.8 times the former value. The two windows in questions are located on the first floor on the southern elevation and will experience moderate reductions values of 0.65% and 0.62% In addition, one of the rooms receives sufficient daylight as illustrated in the NSL results as it benefits from a sky light. The beneficial use of this room will therefore not be affected by the development and we consider that the impact to this window will not be noticeable by the occupants of the building. Moreover, the windows in question sit within close proximity to the proposed developments site and due to the already low VSCs and dense setting, any kind of standard development on the site beyond the baseline scenario, would alter the levels of daylight reaching these windows.
- 3.1.6. The NSL (No-Sky Line) assessment results are shown in full in Appendix D.
- 3.1.7. For the NSL assessment, of the eight rooms assessed, only one will fall short of the BRE's numerical criteria achieving a daylight distribution of 3%which is 0.39 times their former value. However, it should be borne in mind that the room in question receives a very low level of daylight in the baseline scenario of 38%of the room receiving daylight distribution. Therefore, any development that matches the height of the surrounding context would cause short falls to the current levels of daylight received by this room. As explained earlier, in the summary section of this report, the author of the BRE Guide acknowledges in paragraph 16 that the numerical target values are purely advisory as it has been drafted primarily for use in low density suburban developments and should therefore be interpreted flexibly when applied to dense urban environments. Therefore, we consider that the development is broadly in line with the recommendations set out in the BRE guidelines.



Appendix A

Test to be applied





The tests should also be applied to non-domestic uses such as offices and workplaces where such uses will ordinarily have a reasonable expectation of daylight and where the areas may be considered a principal workplace.

The BRE has developed a series of tests to determine whether daylighting levels within new developments and rooms within existing buildings surrounding new developments will satisfy or continue to satisfy a range of daylighting criteria

Note: Not every single window is assessed separately, only a representative sample, from which conclusions may be drawn regarding other nearby dwellings.

### **Daylighting Tests**

<u>'Three times height' test</u> - If the distance of each part of the new development from the existing windows is three or more times its height above the centre of the existing window then loss of light to the existing windows need not be analysed. If the proposed development is taller or closer than this then the 25° test will need to be carried out.

<u>25° test</u> – a very simple test that should only be used where the proposed development is of a reasonably uniform profile and is directly opposite the existing building. Its use is most appropriate for low density well-spaced developments such as new sub-urban housing schemes and often it is not a particularly useful tool for assessing urban and in-fill sites. In brief, where the new development subtends to an angle of less than 25° to the centre of the lowest window of an existing neighbouring building, it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building. Equally, the new development itself is also likely to have the potential for good daylighting. If the angle is more than 25° then more detailed tests are required, as outlined below.

The target figure for VSC recommended by the BRE is 27% A VSC of 27% is a relatively good level of daylight and the level we would expect to find for habitable rooms with windows on principal elevations. However, this level is often difficult to achieve on secondary elevations and in built-up urban environments. For comparison, a window receiving 27%VSC is approximately equivalent to a window that would have a continuous obstruction opposite it which subtends an angle of 25° (i.e. the same results as would be found utilising the 25° Test). Where tests show that the new development itself meets the 27%VSC target this is a good indication that the development will enjoy good daylighting and further tests can then be carried out to corroborate this (see under).

Through research the BRE have determined that in existing buildings daylight (and sunlight levels) can be reduced by approximately 20% of their original value before the loss is materially noticeable. It is for this reason that they consider that a 20% reduction is permissible in circumstances where the existing VSC value is below the 27% threshold. For existing buildings once this has been established it is then necessary to determine whether the distribution of daylight inside each room meets the required standards (see under).





The availability of sunlight is also an important factor when looking at the impact of a proposed development on the <u>existing surrounding buildings</u>. APSH tests will be required where one or more of the following are true:

- The 'Three times height' test is failed (see 'Daylight' above);
- The proposed development is situated within 90° of due south of an existing building's main window wall and he new building subtends to angle of more than 25° to the horizontal;
- The window wall faces within 20° of due south and a point at the centre of the window on the
  outside face of the window wall (the reference point) has a VSC of less than 27%

Where APSH testing is required it is similar to the test for the proposed development. That is to say that compliance will be demonstrated where a room receives:

- At least 25% of the APSH (including at least 5% in the winter months), or
- At least 0.8 times its former sunlight hours during either period, or
- A reduction of no more than 4%APSH over the year.

The Guide stresses that the target values it gives are purely advisory, especially in circumstances such as: the presence of balconies (which can overhang windows, obstructing light); when an existing building stands unusually close to the common boundary with the new development and; where the new development needs to match the height and proportion of existing nearby buildings. In circumstances like these a larger reduction in sunlight may be necessary.

The sunlight criteria in the BRE guide primarily apply to windows serving living rooms of an existing dwelling. This is in contrast to the daylight criteria which apply to kitchens and bedrooms as well as living rooms. Having said that, the guide goes on to say that care should be taken not to block too much sun from kitchens and bedrooms. Non-domestic buildings which are deemed to have a requirement for sunlight should also be checked.

Sunlight - Gardens and Open Spaces

As well as ensuring buildings receive a good level of sunlight to their interior spaces, it is also important to ensure that the open spaces between buildings are suitably lit. The recommendations as set out in the BRE guide are meant to ensure that spaces between buildings are not permanently in shade for a large part of the year. Trees and fences over 1.5m tall are also factored into the calculations.

The BRE guidelines state that:

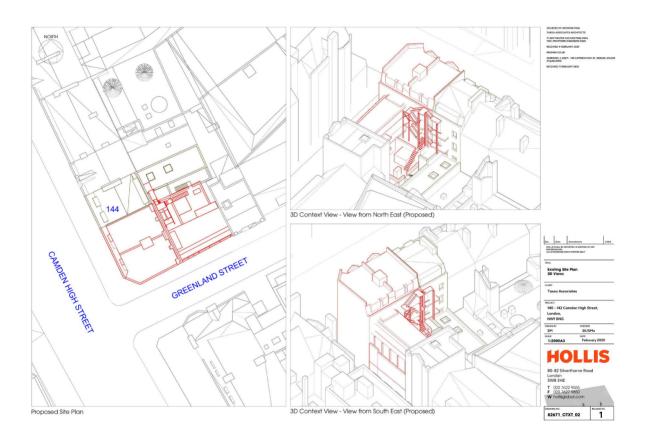
- For a garden or amenity area to appear adequately sunlit throughout the year, at least 50% of the area should receive at least two hours of sunlight on 21March;
- In addition, if, as result of new development, an existing garden or amenity area does not reach the
  area target above and the area which can receive two hours of direct sunlight on 21March is
  reduced by more than 20%this loss is likely to be noticeable.

Appendix G of the BRE guidelines describes a methodology for calculating sunlight availability for amenity spaces.

Appendix B

Context drawings

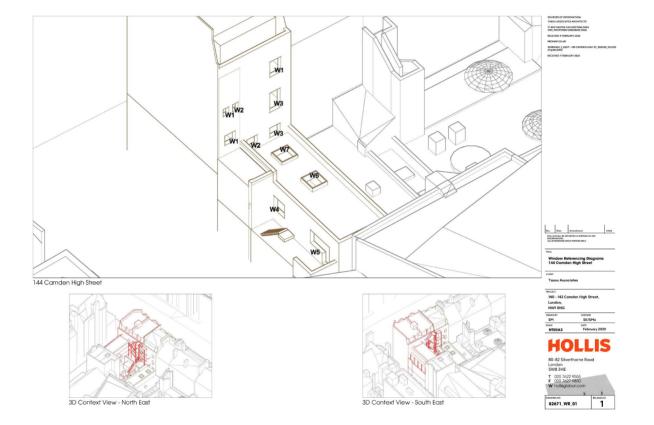




Appendix C

Window/room reference drawings









### VERTICAL SKY COMPONENT ANALYSIS

140-142 Camden High Street, London NW10NG

				Times		
	Window	Existing	Proposed	Former	BRE	
Floor Ref.	Ref.	VSC	VSC	Value	Compliant	
		144 Camder	High Street			
First	W1	20.42	20.01	0.98	Yes	
First	W2	14.80	14.80	1.00	Yes	
First	W3	24.72	24.55	0.99	Yes	
First	W4	9.55	6.21	0.65	No	
First	W6	68.70	67.34	0.98	Yes	
First	W7	52.12	51.02	0.98	Yes	
First	W5	9.46	5.89	0.62	No	
Second	W1	5.81	5.76	0.99	Yes	
Second	W2	6.59	6.59	1.00	Yes	
Second	W3	30.25	30.21	1.00	Yes	
Third	W1	36.10	36.10	1.00	Yes	



### DAYLIGHT DISTRIBUTION ANALYSIS

140-142 Camden High Street, London NW10NG

					Times				
	Room	Room	Existing	Proposed	Former		BRE		
Floor Ref.	Ref.	Use	SQ M	SQ M	Value	%Loss	Compliant		
	144 Camden High Street								
First	R1	Unknown	6.7	6.7	1	0	YES		
First	R2	Unknown	5.4	5.3	0.98	2	YES		
First	R3	Unknown	5.1	5.1	0.99	1	YES		
First	R4	Unknown	22.6	22.6	1	0	YES		
First	R5	Unknown	7.8	3.0	0.39	61	NO		
Second	R1	Unknown	7.3	7.3	1	0	YES		
Second	R2	Unknown	10.9	10.9	1	0	YES		
Third	R1	Unknown	10.9	10.9	1	0	YES		

Appendix E

Sunlight study



### ANNUAL PROBABLE SUNLIGHT HOURS ANALYSIS

140-142 Camden High Street, London NW10NG

						Winter	Annual			
							Times			
Floor	Window	Exis	ting	Proposed		Former	Former	BRE		
Ref.	Ref.	Winter % Annual %		Winter % Annual %		Value	Value	Compliant		
	144 Camden High Street									
First	W4	1	14	0	5	0.00	0.36	NO		
First	W6	3	23	0	18	0.00	0.78	NO		
First	W7	0	15	0	14	1.00	0.93	YES		
First	W5	1	17	0	10	0.00	0.59	NO		





		Amenity	Amenity	Existing	Proposed	Existing	Proposed		Meets BRE
Building Ref	Floor Ref	Ref	Area	Lit Area	Lit Area	%	%	Pr/Ex	Criteria
144 Camden High Street	First	A1	12.8	0.0	0.0	0.00%	0.00%	1	YES

