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Daylight and Sunlight Study
The Fitzroy Tavern, 16 Charlotte Street, London W1T 2NA

18 June 2014

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1 EXECUTIVE SUMMARY

1.1 Overview

1.1.1 Right of Light Consulting has been commissioned to undertake a daylight and sunlight study of the proposed development at The Fitzroy Tavern, 16 Charlotte Street, London W1T 2NA.

1.1.2 The aim of the study is to assess the impact of the development on the light receivable by the neighbouring properties at 18 and 20 Charlotte Street. The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice' by P J Littlefair 2011.

1.1.3 The window key in Appendix 1 identifies the windows analysed in this study. Appendix 2 gives the numerical results of the various daylight and sunlight tests.

1.1.4 The results confirm that the development will have a relatively low impact on the light receivable by its neighbouring properties. In our opinion there is no daylight or sunlight related reason why planning permission should not be granted for this scheme.

2 INFORMATION SOURCES

2.1 Documents Considered

2.1.1 This report is based on drawings:

Samuel Smith

P001	Proposed Basement GA Plan	Rev C
P002	Proposed Ground Floor GA Plan	Rev C
P003	Proposed First Floor GA Plan	Rev C
P004	Proposed Second Floor GA Plan	Rev C
P005	Proposed Third Floor GA Plan	Rev C
P006	Proposed Roof GA Plan	Rev C
P011	Proposed Section II	Rev –
P016	Proposed Sections AA and BB	Rev –
P046	Proposed Section JJ	Rev –
P057	Proposed Rear Elevation KK	Rev –
E001	Existing Site plan and Photographs	Rev –
E002	Historic Plan and Photograph	Rev –
E003	Existing Basement Plan	Rev –
E004	Existing Ground Floor Plan	Rev –
E005	Existing First Floor plan	Rev –
E006	Existing Second Floor Plan	Rev –
E007	Existing Third Floor Plan	Rev –
E008	Existing Roof Plan	Rev –
E009	Existing Elevations and Section II	Rev –
E010	Existing Sections AA-BB-CC	Rev –
E011	Existing Sections DD-EE-FF	Rev –
E012	Existing Sections GG-HH	Rev –
E013	Existing Site plan	Rev –

3 METHODOLOGY OF THE STUDY

3.1 BRE Guide : Site Layout Planning for Daylight and Sunlight

3.1.1 The study is based on the various numerical tests laid down in the Building Research Establishment (BRE) guide 'Site Layout Planning for Daylight and Sunlight: a guide to good practice' by P J Littlefair 2011. In general, the BRE tests are based on the requirements of the British Standard, BS 8206 Part 2.

3.1.2 The standards set out in the BRE guide are intended to be used flexibly. The following statement is quoted directly from the BRE guide:

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

3.2 Daylight to Windows

3.2.1 Diffuse daylight is the light received from the sun which has been diffused through the sky. Even on a cloudy day when the sun is not visible, a room will continue to be lit with light from the sky. This is diffuse daylight.

Diffuse daylight calculations should be undertaken to all rooms where daylight is required, including living rooms, kitchens and bedrooms. Usually, if a kitchen is less than 13m^2 it is considered to be a non-habitable room and the daylight tests need not be applied. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

3.2.2 The BRE guide contains two tests which measure diffuse daylight:

3.2.3 Test 1 <u>Vertical Sky Component</u>

The percentage of the sky visible from the centre of a window is known as the Vertical Sky Component. Diffuse daylight may be adversely affected if after a development the Vertical Sky Component is both less than 27% and less than 0.8 times its former value.

3.2.4 Test 2 Daylight Distribution

The BRE guide states that where room layouts are known, the impact on the daylighting distribution can be found by plotting the 'no sky line' in each of the main rooms. The no-sky line is a line which separates areas of the working plane that can and cannot have a direct view of the sky. Daylight may be adversely affected if after the development the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value.

3.3 Sunlight availability to Windows

3.3.1 The BRE sunlight tests should be applied to all main living rooms and conservatories which have a window which faces within 90 degrees of due south. The guide states that kitchens and bedrooms are less important, although care should be taken not to block too much sunlight.

3.3.2 The BRE guide states that sunlight availability may be adversely affected if the centre of the window:

- receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and
- receives less than 0.8 times its former sunlight hours during either period and
- has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours.

3.4 Overshadowing to Gardens and Open Spaces

3.4.1 The availability of sunlight should be checked for all open spaces where sunlight is required. This would normally include:

- Gardens, usually the main back garden of a house
- Parks and playing fields
- Children's playgrounds
- Outdoor swimming pools and paddling pools
- Sitting out areas, such as those between non-domestic buildings and in public squares
- Focal points for views such as a group of monuments or fountains.

3.4.2 The BRE guide recommends that at least 50% of the area of each amenity space listed above should receive at least two hours of sunlight on 21st March. If as a result of new development an existing garden or amenity area does not meet the above, and the area which can receive two hours of sun on 21st March is less than 0.8 times its former value, then the loss of light is likely to be noticeable.

4 RESULTS OF THE STUDY

4.1 Windows & Amenity Areas Considered

4.1.1 Appendix 1 provides a plan and photographs to indicate the positions of the windows and gardens analysed in this study.

4.2 Numerical Results

4.2.1 Appendix 2 lists the detailed numerical daylight and sunlight test results. The results are interpreted below.

4.3 Daylight to Windows

4.3.1 All windows pass the Vertical Sky Component test. The proposed development therefore satisfies the BRE daylight requirements.

4.4 Sunlight to Windows

4.4.1 All windows which face within 90 degrees of due south have been tested for direct sunlight. A number of windows fall short of the minimum targets laid down by the BRE guide. However, the direct sunlight hours targets stated in the BRE guide are only intended to be applied to main living room windows. Since we have not had access to the neighbouring properties, we are not able to confirm room uses. Furthermore, in urban locations it is very often not possible to achieve recommended levels of direct sunlight – particularly during the winter months. The net effect of these factors is that it is impractical to avoid the minor transgression of the BRE recommendations in this instance.

4.5 Overshadowing to Gardens and Open Spaces

4.5.1 There are no nearby gardens or amenity areas directly to the north of the development. The proposed development will therefore not create any new areas which receive less than two hours of sunlight on 21st March. The proposed development satisfies the BRE overshadowing to gardens and open spaces requirements.

4.6 Conclusion

4.6.1 The results of the study show that the proposed development will have a relatively low impact on the light receivable by its neighbouring properties.

5 CLARIFICATIONS

5.1 General

5.1.1 The report provided is solely for the use of the client and no liability to anyone else is accepted.

5.1.2 We have undertaken the survey following the guidelines of the RICS publication “Surveying Safely”.

5.1.3 We have used our best endeavours to ensure all relevant windows within the neighbouring properties have been identified.

5.1.4 Where limited access is available, reasonable assumptions will have been made.

5.1.5 We have adopted the conventional approach of assessing all habitable rooms within domestic properties.

5.1.6 Right of Light Consulting have endeavoured to include in the report those matters, which they have knowledge of or of which they have been made aware, that might adversely affect the validity of the opinion given.

5.2 Project Specific

5.2.1 None

APPENDICES

APPENDIX 1

WINDOW & GARDEN KEY

Window & Garden Key

Key

Window 1 ● Window reference

Development site

Neighbouring Properties

Project Name: The Fitzroy Tavern, 16 Charlotte Street, London W1T 2NA

Drawing Title: Appendix 1 – Neighbouring Windows

Scale: Do not scale

Drawing No: 1 of 1 | Rev: -

Rev	Date	Details of revision

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APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Vertical Sky Component

The Fitzroy Tavern, 16 Charlotte Street, London W1T 2NA

Reference	Use Class	Vertical Sky Component			
		Before	After	Loss	Ratio
18 Charlotte Street					
Window 1	Habitable	15.3%	13.3%	2.0%	0.87
Window 2	Habitable	18.6%	15.9%	2.7%	0.85
Window 3	Habitable	24.6%	21.8%	2.8%	0.89
Window 4	Habitable	18.2%	17.1%	1.1%	0.94
Window 5	Habitable	23.9%	23.1%	0.8%	0.97
Window 6	Habitable	29.4%	29.4%	0.0%	1.0
Window 7	Habitable	17.6%	17.0%	0.6%	0.97
Window 8	Habitable	25.9%	25.8%	0.1%	1.0
Window 9	Habitable	30.8%	30.8%	0.0%	1.0
Window 10	Habitable	46.0%	37.3%	8.7%	0.81
Window 11	Habitable	53.4%	49.2%	4.2%	0.92
Window 12	Habitable	51.7%	47.4%	4.3%	0.92
Window 13	Habitable	49.2%	44.9%	4.3%	0.91
20 Charlotte Street					
Window 14	Habitable	22.6%	22.5%	0.1%	1.0
Window 15	Habitable	25.3%	25.3%	0.0%	1.0
Window 16	Habitable	29.4%	29.4%	0.0%	1.0
Window 17	Habitable	20.6%	20.6%	0.0%	1.0
Window 18	Habitable	27.3%	27.3%	0.0%	1.0
Window 19	Habitable	32.2%	32.2%	0.0%	1.0
Window 20	Habitable	18.6%	18.6%	0.0%	1.0
Window 21	Habitable	23.7%	23.7%	0.0%	1.0
Window 22	Habitable	28.2%	28.2%	0.0%	1.0

Appendix 2 - Sunlight to Windows

The Fitzroy Tavern, 16 Charlotte Street, London W1T 2NA

Reference	Use Class	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
18 Charlotte Street									
Window 10	Habitable	5%	0%	5%	0.02	0%	0%	0%	1.0
Window 11	Habitable	9%	2%	7%	0.22	0%	0%	0%	1.0
Window 12	Habitable	7%	1%	6%	0.14	0%	0%	0%	1.0
Window 13	Habitable	8%	1%	7%	0.13	0%	0%	0%	1.0