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Daylight and Sunlight Study
62A Grafton Terrace, Camden, London NW5 4HY

21 January 2016

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CONTENTS

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 62A Grafton Terrace, Camden, London NW5 4HY.

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 60, 62b, 64 Grafton Terrace and 2 to 6 Southampton Road. 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 All neighbouring windows pass the BRE diffuse daylight requirements. The development also satisfies the BRE overshadowing to gardens and open spaces test.

1.1.5 The results of the study show that the proposed development will have a relatively low impact on the light receivable by its neighbouring properties. In our opinion there is no daylight/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:

Dreamstudio Architecture

001	Site Plan	Rev 5
002	Gf Existing Plan	Rev 5
003	Gf Proposed Plan	Rev 5
004	Proposed First and Second Floor Plans	Rev 5
005	Proposed Roof Plan	Rev 5
006	Existing Elevation Front	Rev 5
007	Existing Elevation Rear	Rev 5
008	Front Elevation Proposed	Rev 5
009	Rear Elevation Proposed	Rev 6
010	Existing Section AA	Rev 5
011	Existing Section BB	Rev 5
012	Proposed Section AA	Rev 5
013	Proposed Section BB	Rev 5
014	3D Views	Rev 3

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 pass both the total annual sunlight hours test and the winter sunlight hours test with the exception of windows 17, 20 & 21 at 4 Southampton Road and window 28 at 6 Southampton Road. However, there are mitigating factors to mention. Firstly, since we have not had access to the neighbouring properties, we are not able to confirm room uses. However, the direct sunlight hours targets stated in the BRE guide are only intended to be applied to main living room windows. From our external observations, it seems unlikely that the windows which fall short serve main living rooms. Secondly, these windows only just face within 90 degrees of due south and do not benefit from an ideal southerly aspect. Had the windows not faced within 90 degrees of due south, they would not be required to be tested for direct sunlight under the BRE guidelines. Finally, 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 The proposed development will not create any new areas which receive less than two hours of sunlight on 21st March. The before/after ratios are 1 (no loss) and the

proposed development therefore passes the BRE overshadowing to gardens and open spaces test.

4.6 Conclusion

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

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

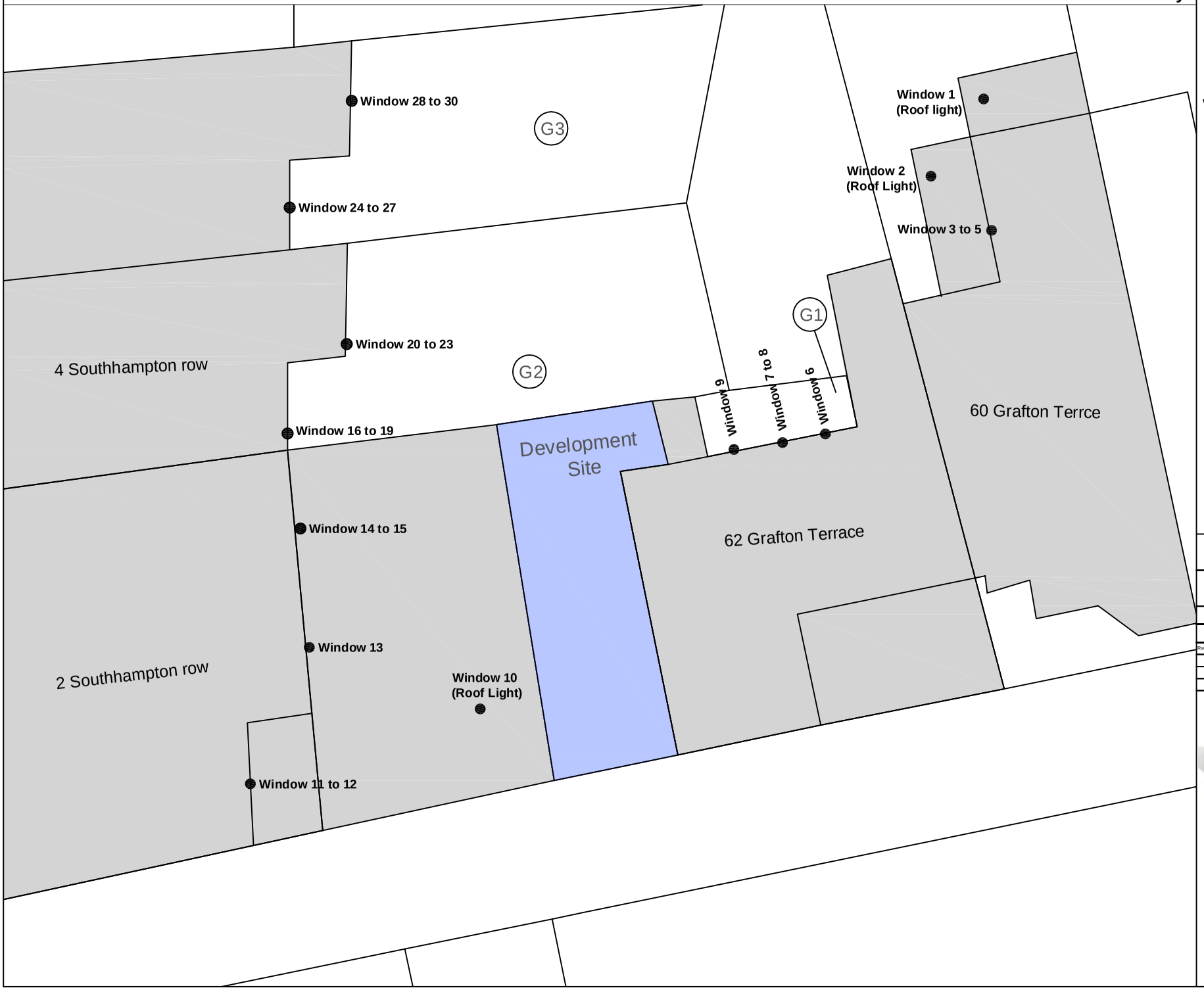
5.2.1 None

APPENDICES

APPENDIX 1

WINDOW & GARDEN KEY

Window & Garden Key



Key

Window 1 ● Window reference

Development site

Neighbouring Properties

G1 Neighbouring Gardens and Amenity Areas

Project Name: 62A Grafton Terrace, Camden, London NW54HY

Drawing Title: Appendix 1 - Neighbouring Windows

Scale: Do not scale

Drawing No: 1 Rev: -

Rev	Date	Details of revision

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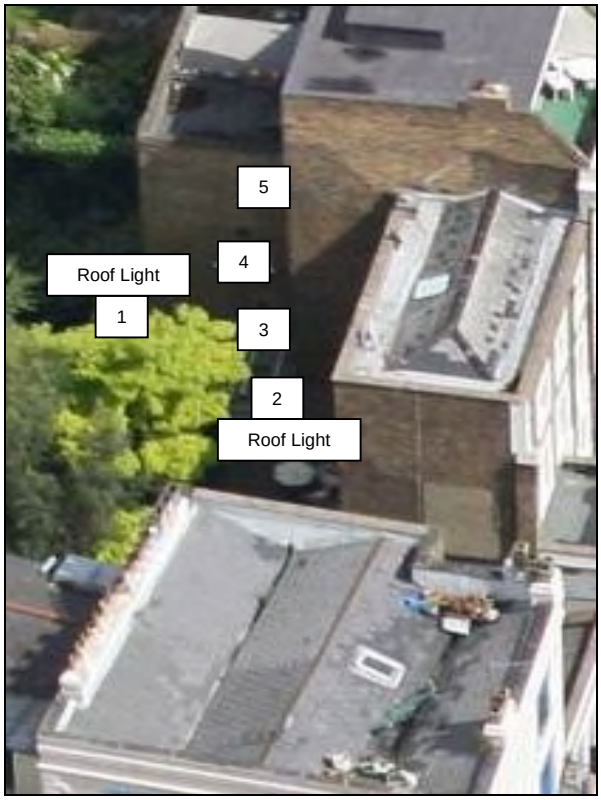
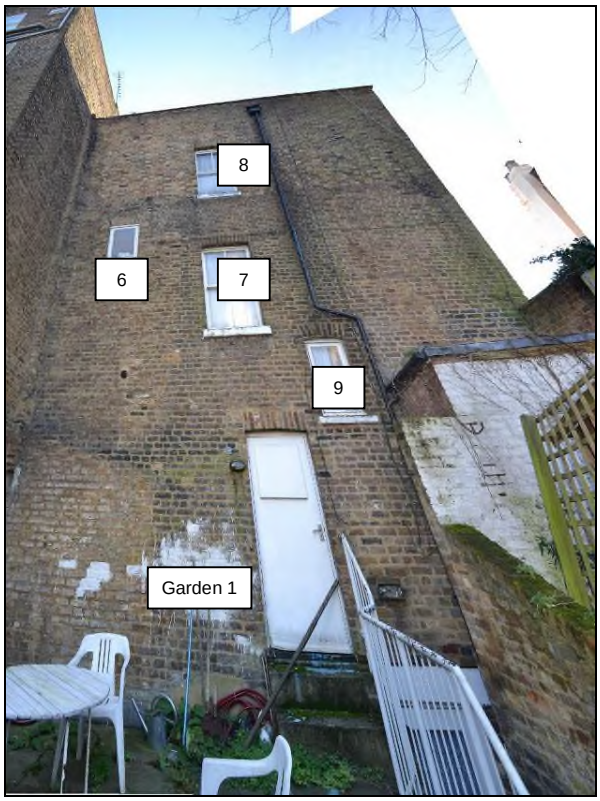
Neighbouring Windows

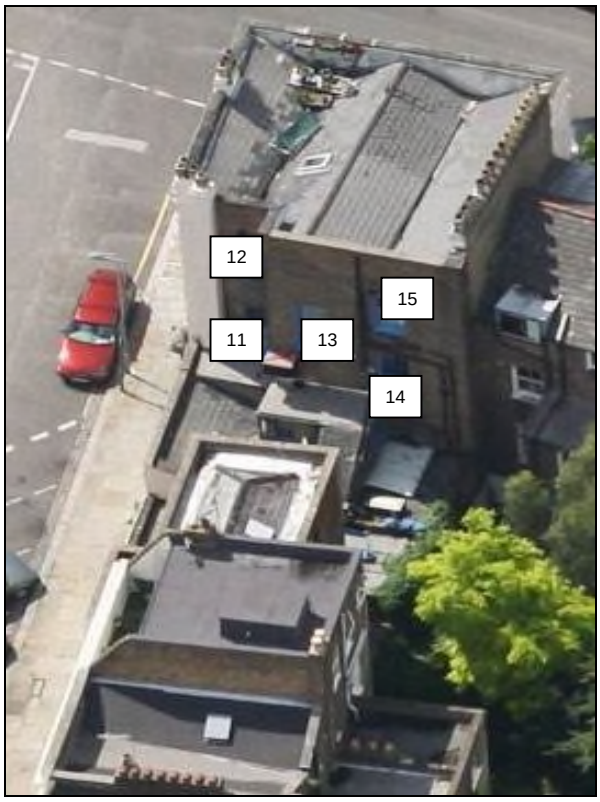


60 Grafton Terrace



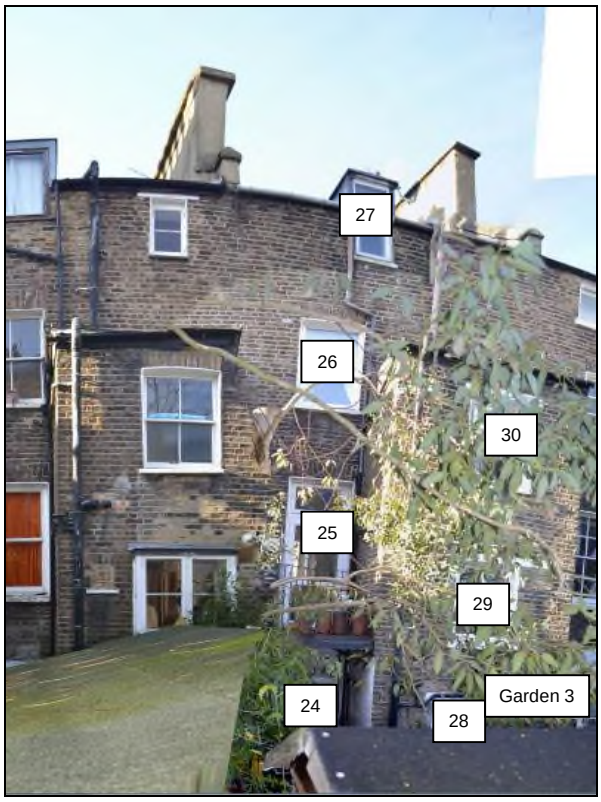
62b Grafton Terrace

64 Grafton Terrace



2 Southampton Row

4 Southampton Row



6 Southampton Row

APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Vertical Sky Component
62A Grafton Terrace, Camden, London NW5 4HY

Reference	Use Class	Vertical Sky Component			
		Before	After	Loss	Ratio
60 Grafton Terrace					
Window 1	Habitable	57.8%	57.7%	0.1%	1.0
Window 2	Habitable	40.4%	39.7%	0.7%	0.98
Window 3	Habitable	19.3%	18.8%	0.5%	0.97
Window 4	Habitable	25.4%	25.2%	0.2%	0.99
Window 5	Habitable	25.8%	25.8%	0.0%	1.0
62b Grafton Terrace					
Window 6	Habitable	25.3%	25.0%	0.3%	0.99
Window 7	Habitable	28.7%	27.8%	0.9%	0.97
Window 8	Habitable	31.7%	30.8%	0.9%	0.97
Window 9	Habitable	28.7%	24.6%	4.1%	0.86
64 Grafton Terrace					
Window 10	Habitable	64.4%	57.5%	6.9%	0.89
Window 10a	Habitable	37.8%	37.8%	0.0%	1.0
Window 10b	Habitable	37.8%	37.8%	0.0%	1.0
Window 10c	Habitable	37.8%	37.8%	0.0%	1.0
2 Southampton Row					
Window 11	Habitable	27.5%	25.9%	1.6%	0.94
Window 12	Habitable	29.5%	29.4%	0.1%	1.0
Window 13	Habitable	36.8%	35.2%	1.6%	0.96
Window 14	Habitable	34.3%	27.7%	6.6%	0.81
Window 15	Habitable	37.3%	36.8%	0.5%	0.99
4 Southampton Row					
Window 16	Habitable	10.4%	8.8%	1.6%	0.85
Window 17	Habitable	17.4%	13.9%	3.5%	0.8
Window 18	Habitable	27.1%	23.3%	3.8%	0.86
Window 19	Habitable	37.0%	36.9%	0.1%	1.0
Window 20	Habitable	10.8%	8.9%	1.9%	0.82
Window 21	Habitable	26.2%	23.0%	3.2%	0.88
Window 22	Habitable	30.5%	27.1%	3.4%	0.89
Window 23	Habitable	35.5%	34.5%	1.0%	0.97
6 Southampton Row					
Window 24	Habitable	12.9%	12.8%	0.1%	0.99
Window 25	Habitable	17.0%	16.7%	0.3%	0.98
Window 26	Habitable	33.3%	32.0%	1.3%	0.96
Window 27	Habitable	36.6%	36.4%	0.2%	0.99
Window 28	Habitable	21.1%	20.0%	1.1%	0.95
Window 29	Habitable	30.7%	29.3%	1.4%	0.95
Window 30	Habitable	32.6%	31.6%	1.0%	0.97

Appendix 2 - Sunlight to Windows
62A Grafton Terrace, Camden London NW5 4HY

Reference	Use Class	Sunlight to Windows							
		Total Sunlight Hours				Winter Sunlight Hours			
		Before	After	Loss	Ratio	Before	After	Loss	Ratio
60 Grafton Terrace									
Window 1	Habitable	18%	17%	1%	0.94	0%	0%	0%	1.0
Window 2	Habitable	13%	11%	2%	0.85	0%	0%	0%	1.0
Window 3	Habitable	10%	9%	1%	0.9	0%	0%	0%	1.0
Window 4	Habitable	22%	22%	0%	1.0	1%	1%	0%	1.0
Window 5	Habitable	20%	20%	0%	1.0	1%	1%	0%	1.0
62b Grafton Terrace									
Window 6	Habitable	3%	1%	2%	0.33	0%	0%	0%	1.0
Window 7	Habitable	2%	0%	2%	0.05	0%	0%	0%	1.0
Window 8	Habitable	4%	0%	4%	0.03	0%	0%	0%	1.0
Window 9	Habitable	0%	0%	0%	1.0	0%	0%	0%	1.0
64 Grafton Terrace									
Window 10	Habitable	54%	54%	0%	1.0	10%	10%	0%	1.0
2 Southampton Row									
Window 11	Habitable	46%	46%	0%	1.0	14%	14%	0%	1.0
Window 12	Habitable	48%	48%	0%	1.0	14%	14%	0%	1.0
Window 13	Habitable	43%	43%	0%	1.0	13%	13%	0%	1.0
Window 14	Habitable	41%	36%	5%	0.88	13%	13%	0%	1.0
Window 15	Habitable	46%	46%	0%	1.0	13%	13%	0%	1.0
4 Southampton Row									
Window 16	Habitable	3%	3%	0%	1.0	0%	0%	0%	1.0
Window 17	Habitable	25%	16%	9%	0.64	6%	4%	2%	0.67
Window 18	Habitable	40%	33%	7%	0.83	11%	9%	2%	0.82
Window 19	Habitable	49%	49%	0%	1.0	14%	14%	0%	1.0
Window 20	Habitable	12%	7%	5%	0.58	0%	0%	0%	1.0
Window 21	Habitable	25%	13%	12%	0.52	6%	3%	3%	0.5
Window 22	Habitable	36%	30%	6%	0.83	10%	8%	2%	0.8
Window 23	Habitable	44%	44%	0%	1.0	11%	11%	0%	1.0
6 Southampton Row									
Window 24	Habitable	8%	8%	0%	1.0	0%	0%	0%	1.0
Window 25	Habitable	17%	16%	1%	0.94	0%	0%	0%	1.0
Window 26	Habitable	44%	42%	2%	0.95	11%	9%	2%	0.82
Window 27	Habitable	47%	47%	0%	1.0	13%	13%	0%	1.0
Window 28	Habitable	28%	23%	5%	0.82	4%	2%	2%	0.5
Window 29	Habitable	37%	33%	4%	0.89	9%	5%	4%	0.56
Window 30	Habitable	44%	41%	3%	0.93	11%	8%	3%	0.73

Appendix 2 - Overshadowing to Gardens and Open Spaces
62A Grafton Terrace, Camden, London NW5 4HY

Reference	Total Area	Area receiving at least two hours of sunlight on 21st March						
		Before		After		Loss		Ratio
62b Grafton Terrace								
Garden 1	32.72 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
4 Southampton Row								
Garden 2	38.33 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0
6 Southampton Row								
Garden 3	43.69 m2	0.0 m2	0%	0.0 m2	0%	0.0 m2	0%	1.0

APPENDIX 3

OVERSHADOWING TO GARDENS AND OPEN SPACES

Appendix 3 : Overshadowing to Gardens and Open Spaces

Key

- Receives under two hours sunlight on 21st March before and after the development.
- Receives under two hours sunlight on 21st March before the development; but will receive at least two hours sunlight on 21st March after the development (light improved).
- Receives at least two hours sunlight on 21st March before the development; but will receive under two hours sunlight after the development (light loss).
- Receives at least two hours sunlight on 21st March before and after the development.

Notes:

1. Contours derived in accordance with BRE Guide : Site Layout Planning for Daylight and Sunlight

Project Name:	62A Grafton Terrace, Camden, London NW5 4HY
Drawing Title:	Appendix 3 - Overshadowing to Gardens and Open Spaces
Scale:	Do not scale
Drawing No:	1
Rev:	-

Rev	Date	Details of revision

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