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Daylight and Sunlight Study

9 Langtry Walk, London NW8 0DU

23rd November 2010

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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 9 Langtry Walk, London NW8 0DU.

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 1 to 8 & 9 Langtry Walk and 10 & 20 Alexandra Place. 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 good practice guide' by P J Littlefair 1991.

1.1.3 In summary, the proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in BRE guide 'Site Layout Planning for Daylight and Sunlight'.

2 INFORMATION SOURCES

2.1 Documents Considered

2.1.1 This report is based on drawings:

Siaw Architectural Workshop

LW10-Site	Existing Site Plan	Rev –
LW10-Block	Proposed Block Plan	Rev –
LW10-DE01	Proposed Demo Plans and Sections E-E & F-F	Rev –
A-LW10-SE01	Section Elevation	Rev –
A-LW10-SE02	Side Elevation	Rev –
LW10-CP-00	Comparison Ground Floor Plan	Rev –
LW10-CP-01	Comparison Basement Plan	Rev –
LW10-CP-02	Comparison First Floor Plan	Rev –
LW10-CP-03	Comparison Second Floor Plan	Rev –
LW10-CP-04	Comparison Roof/Third Floor Plan	Rev –
LW10-DE01	Comparison Plans Sheet	Rev –
LW10-PL00	Proposed Ground Floor Plan	Rev –
LW10-PL01	Proposed Basement Plan	Rev –
LW10-PL02	Proposed First Floor Plan	Rev –
LW10-PL03	Proposed Second Floor Plan	Rev –
LW10-PL04	Proposed Roof 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 good practice guide' by P J Littlefair 1991. 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. In instances where there is a special requirement for daylight or sunlight, higher levels may be deemed necessary. In other situations, such as with urban developments, lower daylight and sunlight levels may be unavoidable. 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 is not mandatory and this document should not be considered 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."

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.

3.2.2 Diffuse daylight calculations should be undertaken to all main windows at adjoining residential properties. The calculations should be applied to non-domestic buildings where there is a reasonable expectation of daylight. The BRE guide states that windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

3.2.3 The BRE guide contains three tests which measure diffuse daylight. These are explained in the following sections.

3.2.4 Test 1 Vertical Sky Component

The percentage of the sky visible from the centre of a window is known as the Vertical Sky Component. Diffuse daylight will 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.

3.2.5 Test 2 No-Sky Line

The no-sky line test involves calculating the percentage of a room's area which can receive direct sky light. Diffuse daylight is likely to be adversely affected if after the development the area of a room receiving direct skylight is less than 0.8 times its former value.

3.2.6 Test 3 Average Daylight Factor

The Average Daylight Factor takes into account a range of variables. For example, the size of the window, the type of glazing, whether the room has more than one window and factors such as the reflectivity of the internal decor.

The BRE test is based on the British Standard BS 8206 Part 2, which recommends an Average Daylight Factor of 5% or more if there is no supplementary electric lighting, or 2% or more if supplementary lighting is provided. There are additional minimum recommendations for dwellings of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.

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. In non-domestic buildings, any spaces which are deemed to have a specific requirement for sunlight should be checked.

3.3.2 The BRE guide recommends that main living room windows should receive at least 25% of the total annual probable sunlight hours, including at least 5% of the annual probable sunlight hours during the winter months between 21st September and 21st March. Sunlight availability will be adversely affected if both the total number of sunlight hours falls below these targets and is less than 0.8 times the amount before the development.

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, and allotments
- 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

3.4.2 The BRE guide recommends that for an open space to appear adequately lit throughout the year, no more than 40% and preferably no more than 25% of its area should be prevented from receiving any sunlight at all on 21st March. Sunlight availability will be adversely affected if these targets are not met and the amount of sunlight received on 21st March is less than 0.8 times the amount before the development.

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 and No Sky Line diffuse daylight tests. The Average Daylight Factor test indicates that some of the neighbouring rooms receive a relatively small amount of daylight before the proposed development. The results confirm that the losses resulting from the development are negligible. The proposed development therefore satisfies the BRE daylight requirements.

4.4 Sunlight to Windows

4.4.1 Windows 1, 3 to 6, 9, 10 and roof lights A to E pass both the total annual sunlight hours test and the winter sunlight hours test. All other windows do not face within 90 degrees of due south and do not need to be tested for direct sunlight. The proposed development therefore satisfies the BRE direct sunlight to windows requirements.

4.5 Overshadowing to Gardens and Open Spaces

4.5.1 The proposed development will not cause any garden or amenity area to remain in permanent shadow on the 21st March. The proposed development therefore passes the BRE overshadowing to gardens and open spaces test.

4.6 Conclusion

4.6.1 In summary, the proposed development will have a low impact on the light receivable by its neighbouring properties. Right of Light Consulting confirms that the development design satisfies all of the requirements set out in BRE guide ‘Site Layout Planning for Daylight and Sunlight’.

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 External areas will have been inspected from best vantage points or a standard twelve-foot surveyor's ladder. We shall have undertaken the survey following the guidelines of the RICS publication "Surveying Safely".

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

5.1.4 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.

5.1.5 Right of Light Consulting have indicated the sources of all information used in the report.

5.1.6 Right of Light Consulting will notify those instructing them immediately and confirm in writing if for any reason the report requires any correction or qualification.

5.1.7 Right of Light Consulting confirm that they have not entered into any arrangement where the amount or payment of fees is in any way dependent on the outcome of a planning decision.

5.1.8 Right of Light Consulting confirm that they have used their best endeavours to ensure that the facts stated in this report are correct and that the opinions expressed represent a true and complete professional opinion.

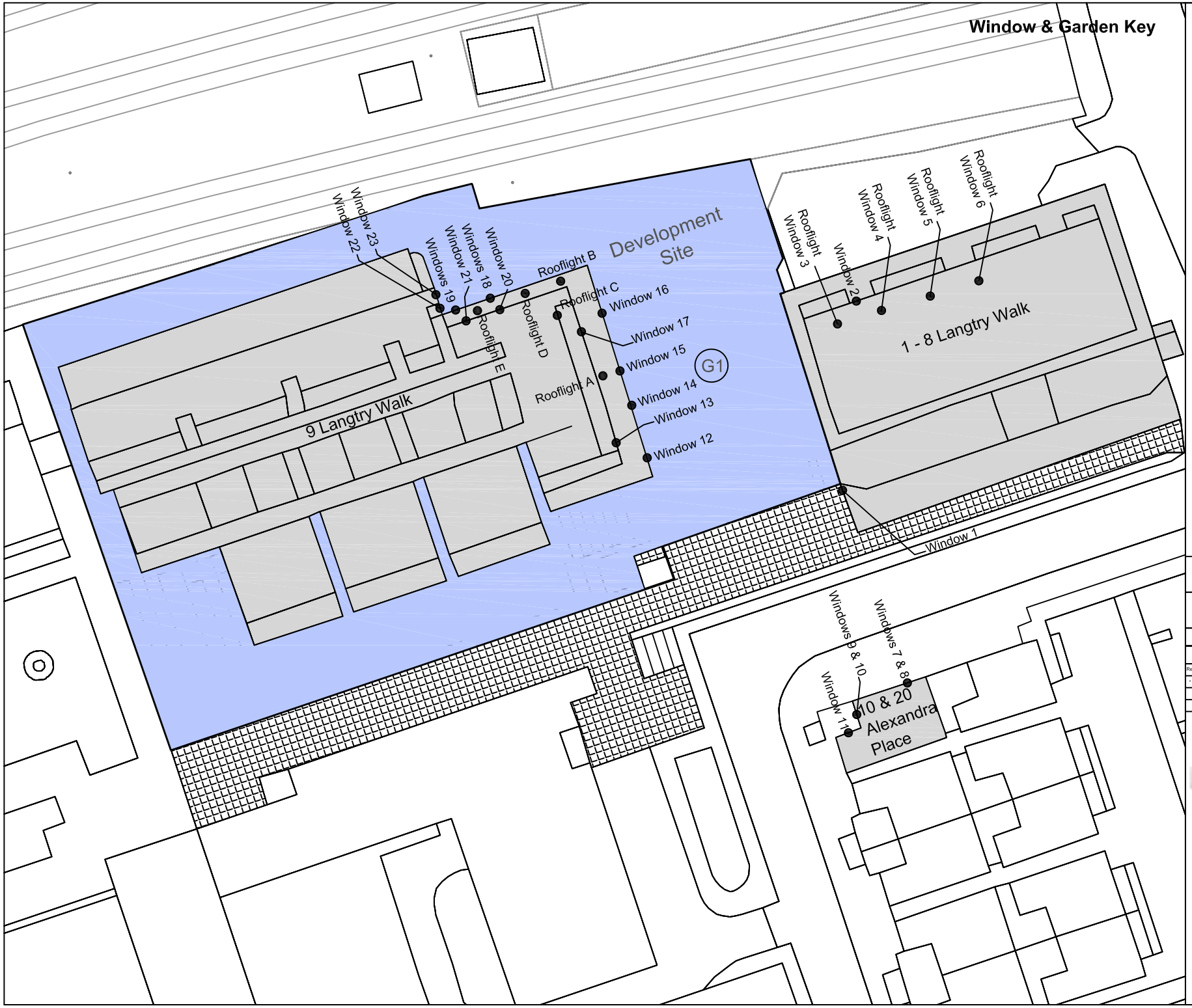
5.2 Project Specific

5.2.1 None

APPENDICES

APPENDIX 1

WINDOW & GARDEN KEY


Window & Garden Key
Development Site
9 Langtry Walk
1 - 8 Langtry Walk
10 & 20 Alexandra Place
Window 23
Window 22
Windows 19
Windows 21
Windows 18
Window 20
Rooflight B
Rooflight C
Rooflight D
Rooflight E
Rooflight A
Window 16
Window 17
Window 15
Window 14
Window 13
Window 12
G1
Rooflight Window 3
Window 2
Rooflight Window 4
Rooflight Window 5
Rooflight Window 6
Window 1
Windows 9 & 10
Windows 7 & 8
Window 11
Key
Window 1
Window reference
Development site
Neighbouring Residential Properties
G1
Neighbouring Gardens and Amenity Areas
Project Name: Land Adjacent to 9 Langtry Walk, London NW8 0DU
Drawing Title: Appendix 1 - Neighbouring Windows
Scale: Do not scale
Date: 23.11.2010
Drawing No: 1
Rev. -
Rev Date Details of revision
- 23.11.10 Window & Garden Key
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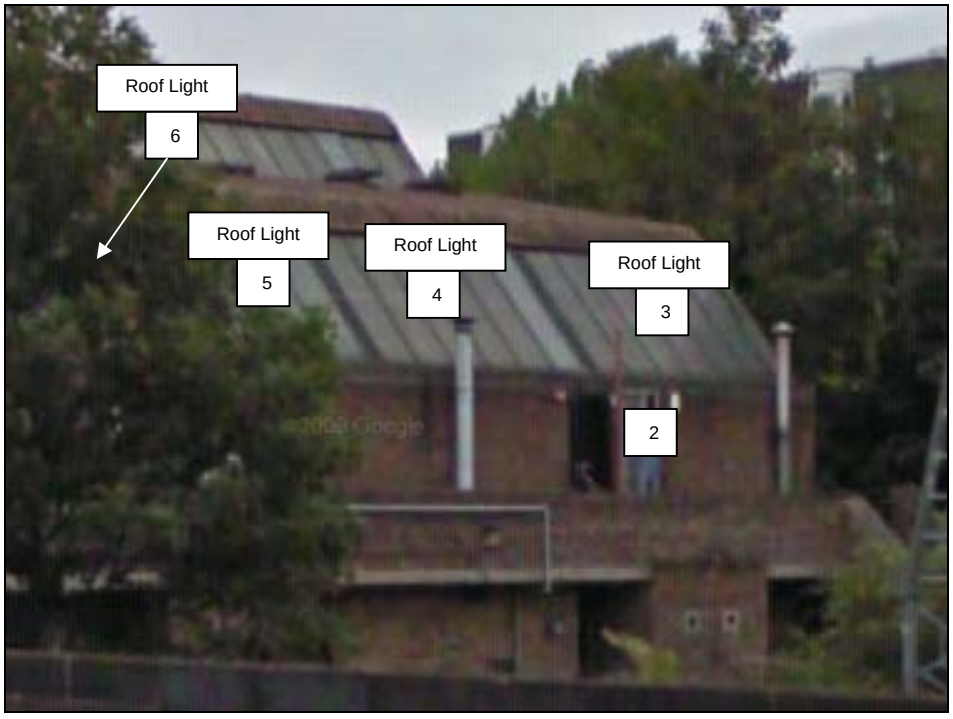
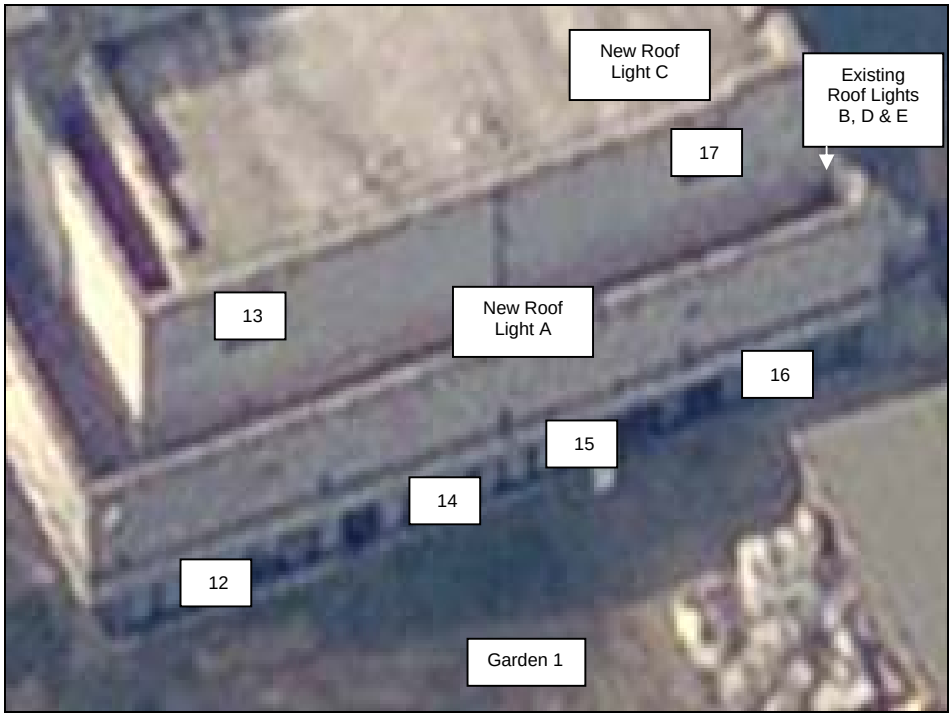
Neighbouring Windows

1 – 8 Langtry Walk

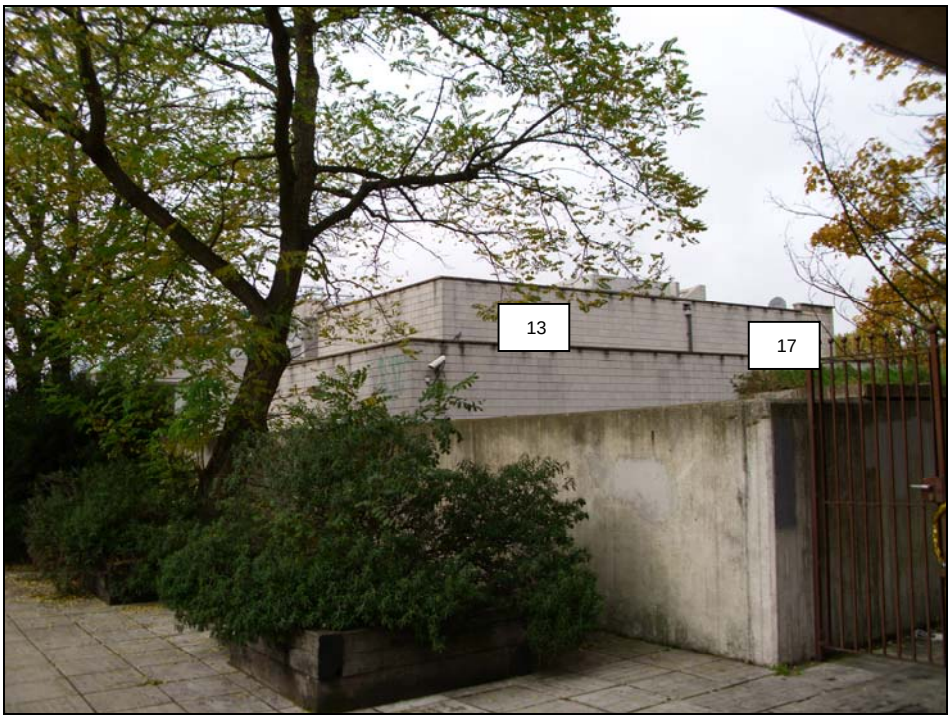


1 – 8 Langtry Walk

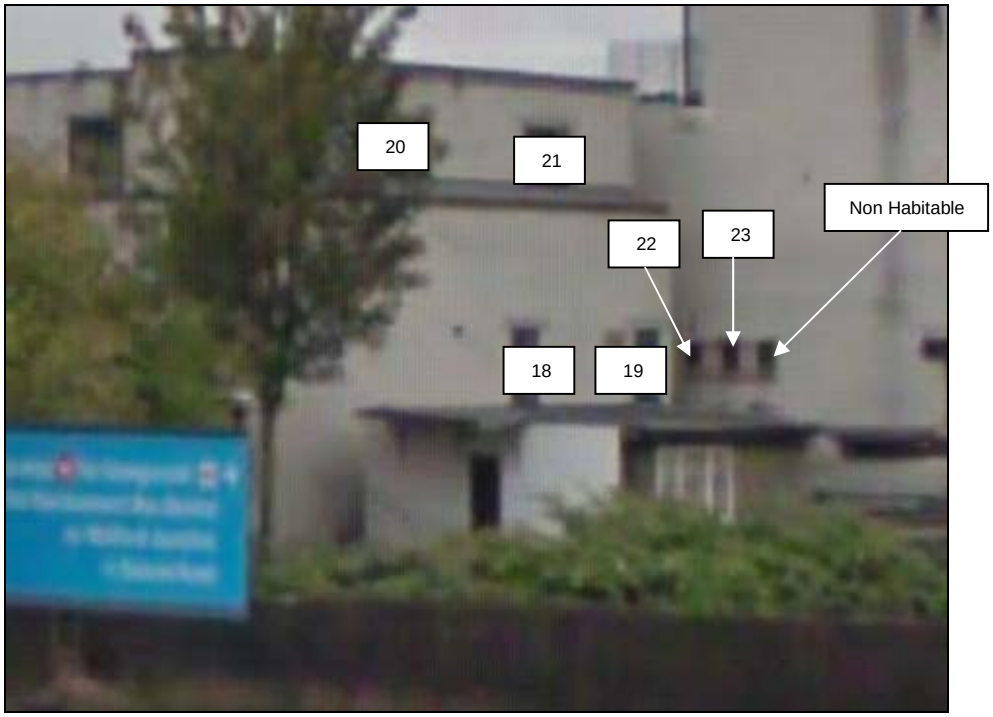
10 & 30 Alexandra Place



9 Langtry Walk



9 Langtry Walk



9 Langtry Walk

APPENDIX 2

DAYLIGHT AND SUNLIGHT RESULTS

Appendix 2 - Daylight and Sunlight to Windows
Land Adjacent to 9 Langtry Walk, London NW8 0DU

Reference	Use Class	Daylight to Windows											Sunlight to Windows							
		Vertical Sky Component				No-Sky Line				Average Daylight Factor			Total Sunlight Hours				Winter Sunlight Hours			
		Existing	Proposed	Ratio	Result	Existing	Proposed	Ratio	Result	Target	Existing	Proposed	Existing	Proposed	Ratio	Result	Existing	Proposed	Ratio	Result
1 to 8 Langtry Walk																				
Window 1	Supp Light	35.9%	35.6%	0.99	Pass	97%	97%	1.0	Pass	2.0%	1.6%	1.6%	13%	13%	1.0	Pass	5%	5%	1.0	Pass
Window 2	Supp Light	39.4%	36.6%	0.93	Pass	100%	100%	1.0	Pass	2.0%	23.4%	22.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 3	Supp Light	79.7%	79.4%	1.0	Pass	100%	100%	1.0	Pass	2.0%	23.4%	22.9%	47%	47%	1.0	Pass	1%	1%	1.0	Pass
Window 4	Supp Light	79.7%	79.5%	1.0	Pass	100%	100%	1.0	Pass	2.0%	21.3%	21.0%	47%	47%	1.0	Pass	1%	1%	1.0	Pass
Window 5	Supp Light	79.7%	79.6%	1.0	Pass	100%	100%	1.0	Pass	2.0%	21.3%	21.1%	47%	47%	1.0	Pass	1%	1%	1.0	Pass
Window 6	Supp Light	79.7%	79.6%	1.0	Pass	100%	100%	1.0	Pass	2.0%	21.0%	20.9%	47%	47%	1.0	Pass	1%	1%	1.0	Pass
10 & 20 Alexandra Place																				
Window 7	Supp Light	29.6%	28.9%	0.98	Pass	75%	75%	1.0	Pass	2.0%	0.3%	0.3%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 8	Supp Light	31.8%	31.3%	0.98	Pass	64%	64%	1.0	Pass	2.0%	0.8%	0.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 9	Supp Light	19.8%	19.8%	1.0	Pass	85%	85%	1.0	Pass	2.0%	4.1%	4.1%	17%	17%	1.0	Pass	0%	0%	1.0	Pass
Window 10	Supp Light	31.0%	30.9%	1.0	Pass	67%	67%	1.0	Pass	2.0%	0.6%	0.6%	23%	23%	1.0	Pass	1%	1%	1.0	Pass
Window 11	Supp Light	25.1%	24.4%	0.97	Pass	96%	96%	1.0	Pass	2.0%	1.4%	1.4%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
9 Langtry Walk																				
Window 12	Supp Light	32.3%	29.7%	0.92	Pass	100%	100%	1.0	Pass	2.0%	7.4%	6.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 13	Supp Light	37.7%	37.1%	0.98	Pass	100%	100%	1.0	Pass	2.0%	1.8%	1.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 14	Supp Light	33.2%	28.1%	0.85	Pass	95%	95%	1.0	Pass	2.0%	3.9%	3.4%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 15	Supp Light	33.4%	24.7%	0.74	n/a[1]	100%	100%	1.0	Pass	2.0%	8.2%	7.0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rooflight A	Supp Light	97.9%	92.0%	0.94	Pass	100%	100%	1.0	Pass	2.0%	8.2%	7.0%	88%	87%	0.99	Pass	22%	22%	1.0	Pass
Window 16	Supp Light	31.0%	1.6%	0.05	n/a[1]	100%	100%	1.0	Pass	2.0%	7.2%	2.3%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rooflight B	Supp Light	99.0%	82.4%	0.83	Pass	100%	100%	1.0	Pass	2.0%	7.2%	2.3%	77%	65%	0.84	Pass	22%	22%	1.0	Pass
Window 17	Supp Light	38.5%	1.6%	0.04	n/a[1]	100%	100%	1.0	Pass	2.0%	5.3%	3.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rooflight C	Supp Light	99.5%	99.5%	1.0	Pass	100%	100%	1.0	Pass	2.0%	5.3%	3.9%	99%	99%	1.0	Pass	29%	29%	1.0	Pass
Rooflight D	Kitchen	98.4%	94.9%	0.96	Pass	100%	100%	1.0	Pass	2.0%	2.3%	2.1%	71%	66%	0.93	Pass	22%	22%	1.0	Pass
Window 18	Supp Light	14.9%	21.9%	1.47	Pass	100%	100%	1.0	Pass	2.0%	5.5%	5.6%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 19	Supp Light	25.3%	25.6%	1.01	Pass	100%	100%	1.0	Pass	2.0%	5.5%	5.6%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rooflight E	Supp Light	94.8%	94.1%	0.99	Pass	100%	100%	1.0	Pass	2.0%	5.5%	5.6%	63%	61%	0.97	Pass	17%	17%	1.0	Pass
Window 20	Supp Light	38.7%	35.8%	0.93	Pass	100%	100%	1.0	Pass	2.0%	1.7%	1.6%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 21	Supp Light	36.0%	35.2%	0.98	Pass	100%	100%	1.0	Pass	2.0%	1.2%	1.1%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 22	Supp Light	38.4%	34.0%	0.89	Pass	84%	84%	1.0	Pass	2.0%	0.9%	0.8%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Window 23	Supp Light	38.4%	34.5%	0.9	Pass	92%	92%	1.0	Pass	2.0%	1.0%	0.9%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

n/a = window does not face within 90 degrees of due south; or serves a kitchen or bedroom and the BRE sunlight targets are not applicable.
n/a[1] = Not the main window within the room (BRE test is applied to the main window in each room).

Appendix 2 - Overshadowing to Gardens and Open Spaces
Land Adjacent to 9 Langtry Walk, London NW8 0DU

Reference	Total Area	Area receiving no sunlight on 21st March				Area receiving at least some sunlight on 21st March					Result
		Existing		Proposed		Existing		Proposed		Ratio	
9 Langtry Walk											
Garden 1	341.1 m2	0.02 m2	0%	0.02 m2	0%	341.08 m2	100%	341.08 m2	100%	1.0	Pass