Daylight & Sunlight Report

Client: Ian Ritchie Architects

Project: London School of Hygiene & Tropical Medicine
Keppel Street
London
WC1E 7HT

Report date: 22nd January 2018

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About *MES Building Solutions*

***MES Building Solutions (MES)* is an established consultancy practice specialising in providing building solutions throughout the UK.**

We offer a full range of services for both residential and commercial buildings from small individual properties through to highly complex mixed use developments.

We are an industry leader in delivering a professional, accredited and certified service to a wide range of clients including architects, developers, builders, housing associations, the public sector and private householders.

Employing highly qualified staff, our team comes from a variety of backgrounds within the construction industry with combined knowledge of building design, engineering, assessment, construction, development, research and surveying.

MES Building Solutions maintains its position at the forefront of changes in building regulations as well as technological advances. Our clients, large or small are therefore assured of a cost effective, cohesive and fully integrated professional service.

About the Authors

Chris Jones is the Technical Director at *MES Building Solutions*. Chris has a Masters Degree in Energy Efficient & Sustainable Building, as well as an Honours degree in Mechanical Engineering. Chris has over 15 years' experience in providing sustainable building solutions and leads the Neighbourly Matters team at MES. He undertakes daylighting, sunlight and shadow cast analysis for planning applications. Chris is also a qualified BREEAM and Code for Sustainable Homes assessor and has worked with some of the UK's top developers, as well as housing associations and local authorities.

Andrew Pickersgill is an Associate member of the Royal Institution of Chartered Surveyors and is a member of our neighbourly matters team. He has a BSc (Hons) degree in Building Surveying. Andrew undertakes daylighting, sunlight and shadow analysis for planning applications. He is also involved in party wall issues and carries out other building surveying services for our clients.

List of contents

Section 1: Executive Summary

We have carried out calculations following guidance in Site Layout Planning for Daylight & Sunlight (SLPDS), PJ Littlefair 2011 to ascertain the impact of the proposed installation of additional plant on the roof of London School of Hygiene and Tropical Medicine (LSHTM), on the daylight and sunlight of neighbouring properties.

In dense urban locations such as this, site constraints, including the number, height and proximity of other neighbouring buildings means that windows and rooms will often fall short of the guidance figures.

Daylight and sunlight is one of a number of considerations when designing a building and should therefore be balanced with other planning issues, such as the appearance of the building, the need for additional local housing, the existing street scene and the commercial viability of the project.

The guidance is clear that the advice is not mandatory, should be used flexibly and that in certain environments (such as this) a higher degree of obstruction may be unavoidable.

For all neighbouring buildings assessed it has been assumed that windows serve residential type habitable rooms. This is a conservative assumption.

In this case all of the assessed neighbouring windows and rooms comfortably fulfil the planning guidance for both vertical sky component daylight distribution and annual sunlight hours. The majority of windows also meet the guidance for winter sunlight hours.

We have provided our further comments on those spaces that could be regarded as falling outside the planning guidance in detail in the following report.

In our opinion the proposals accord with the intent and context of the planning guidance in this case.

Section 2: Introduction

The purpose of this report is to assess the impact of the proposed installation of additional plant on the roof of London School of Hygiene and Tropical Medicine (LSHTM), on the daylight and sunlight of neighbouring properties.

This report considers the daylight and sunlight issues against the criteria set out for national guidance in the following publications:

- Site Layout Planning for Daylight & Sunlight (SLPDS), PJ Littlefair 2011 published by the BRE (Building Research Establishment).

  The SLPDS is the culmination of research undertaken by the BRE to determine whether or not a new development will adversely affect the light to nearby properties. The BRE tests are approved by the Department of the Environment and are widely used by local authorities when deciding on development applications.

- BS 8206-2- Code of practice for skylighting.

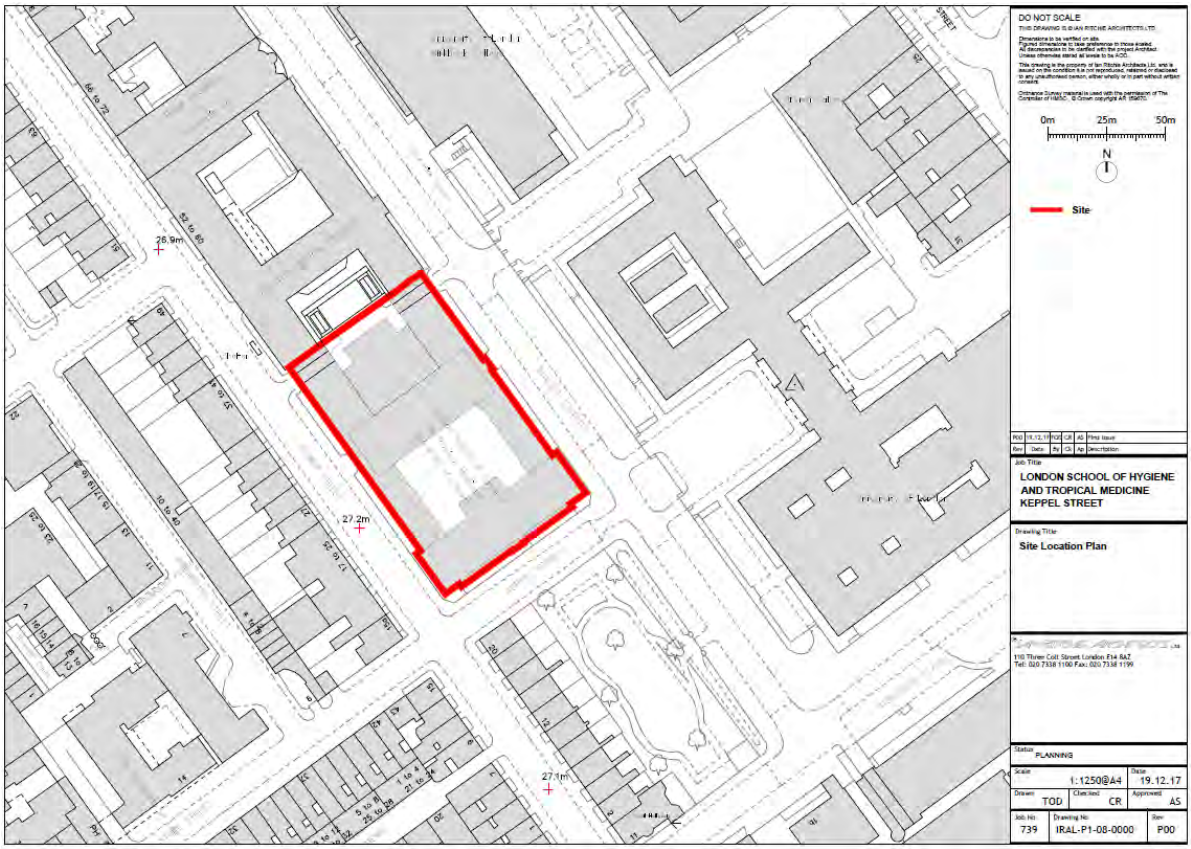
There are no minimum mandatory requirements for sunlight & skylight in Building Regulations for England & Wales but the guidance set out in SLPDS is widely accepted as the approved methodology when calculating sunlight & skylight.

It is worthy of note that SLPDS was first published in 1991 and BS 8206-2 in 1992. However SLPDS was updated in Oct 2011 and we have therefore undertaken this study on the basis of this guidance document.

Section 3: Description of Development

The scheme comprises installation of additional plant on the roof of the existing building.

The property is located on the north west side of Keppel St, Bloomsbury, London WC1E 7HT and is situated amongst a number of other similarly sized buildings adjoining the road.



Site Location Plan (Ian Ritchie Architects 19/12/2017)

Section 4: Assessment Process

The effect on neighbouring properties:

The SLPDS describes three parameters to be assessed in order to measure the impact of the proposed new building on Daylight/Sunlight availability to the key adjacent properties. The three parameters to be assessed are as follows:

1) Daylight:
Vertical Sky Component (VSC)
Daylight Distribution (DD)

2) Sunlight:
Annual Probable Sunlight Hours (APSH)

3) Overshadowing (Amenity Space)
On relevant open spaces

The guidance states that rooms to be assessed should be living rooms, kitchens and bedrooms in residential properties. In non-domestic buildings rooms where occupants 'have a reasonable expectation of daylight' should be assessed. Although these spaces are not defined, examples are given of the type of non-domestic buildings that would normally fall into this category. These include schools, hospitals, hotels and hostels, small workshops and *some* offices.

As it is difficult to be sure of the specific use of neighbouring spaces we have taken a view on the relevance of the spaces adjacent to the proposed development. If we have been in any doubt we have carried out the assessment. However it should be noted some of the spaces we have assessed could fall outside the test requirement criteria.

It is important to note that the numerical values in the guidance are advisory and different criteria may be used based on the requirements for daylighting in an area viewed against other site layout constraints.

The neighbouring properties we have assessed are as follows:

- 31 Gower Street
- 33 Gower Street
- 35 Gower Street
- 37-41 Gower Street
- Warwickshire House

The use class of the properties on Gower Street is unclear, although several are known to be commercial (hotels). For the purpose of this report they are assumed to be residential in nature and that they serve habitable rooms.

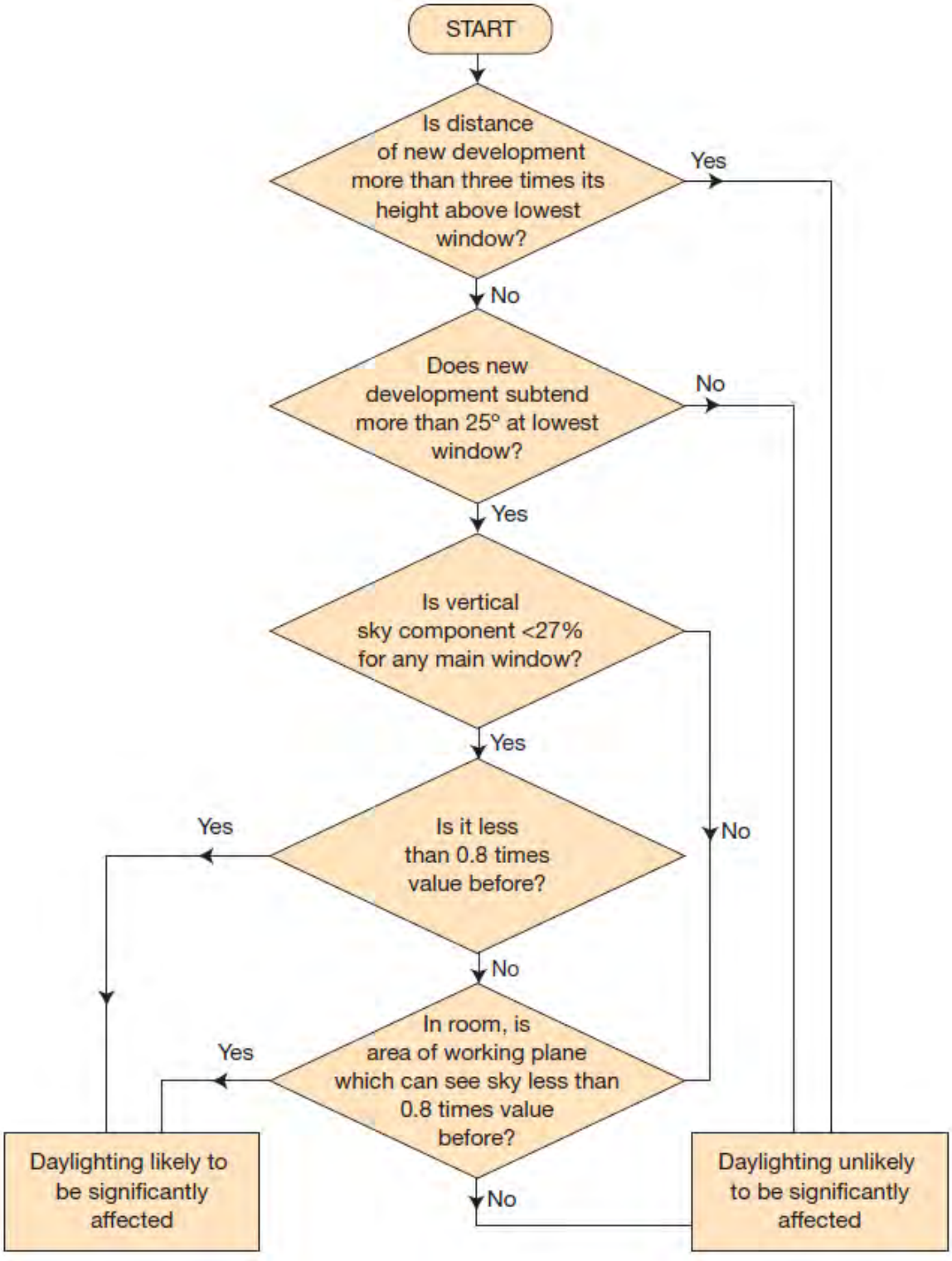
Although it is understood that the windows assessed within Warwickshire House serve residential accommodation, it is unclear whether they all serve habitable rooms. For the purpose of this report it has been assumed that they do.

The assessment is based on the following drawings, provided by Ian Ritchie Architects

- IRAL-P1-08-0000_P00 - Site Location Plan
- IRAL-P1-08-0100_P00- GA Plan - Ground Floor Level – Existing
- IRAL-P1-08-0101_P00 - GA Plan - Level 1 - Existing
- IRAL-P1-08-0102_P00 - GA Plan - Level 2 - Existing
- IRAL-P1-08-0103_P00 - GA Plan - Level 3 - Existing
- IRAL-P1-08-0104_P00 - GA Plan - Level 4 - Existing
- IRAL-P1-08-0105_P00 - GA Plan - Level 5 - Existing
- IRAL-P1-08-0106_P00 - GA Plan - Level 6 - Existing
- IRAL-P1-08-0201_P00 - North Courtyard Building Existing North Elevation
- IRAL-P1-08-0202_P00 - North Courtyard Building Existing East-West Section
- IRAL-P1-08-0203_P00 - North Courtyard Building Existing North-South Section
- IRAL-P1-08-0204_P00 - North Courtyard Building Existing Section Through Atrium
- IRAL-P1-08-1102_P00- GA Plan - Level 2 - Proposed New Works
- IRAL-P1-08-1103_P00- GA Plan - Level 3 - Proposed New Works
- IRAL-P1-08-1112_P00 - GA Plan - Level 2 - Proposed New Wet Labs
- IRAL-P1-08-1113_P00 - GA Plan - Level 3 - Proposed New Wet Labs
- IRAL-P1-08-1201_P00 - North Courtyard Building Proposed North Elevation
- IRAL-P1-08-1202_P00 - North Courtyard Building Proposed East-West Section
- IRAL-P1-08-1203_P00 - North Courtyard Building Proposed North-South Section
- IRAL-P1-08-1204_P00 - North Courtyard Building Proposed Section Through Atrium
- IRAL-P1-08-2001_P00 - North Courtyard Building Proposed Roof Plant Plan
- IRAL-P1-08-2002_P00 - North Courtyard Building Proposed Roof Plant Section
- IRAL-P1-08-2003_P00 - North Courtyard Building Proposed Roof Plant Axonometric

Section 5: Daylight

Site Layout Planning for Daylight & Sunlight contains the following flow chart showing the steps which should be taken in order to establish whether a building will receive adequate daylight:



Distance Check:

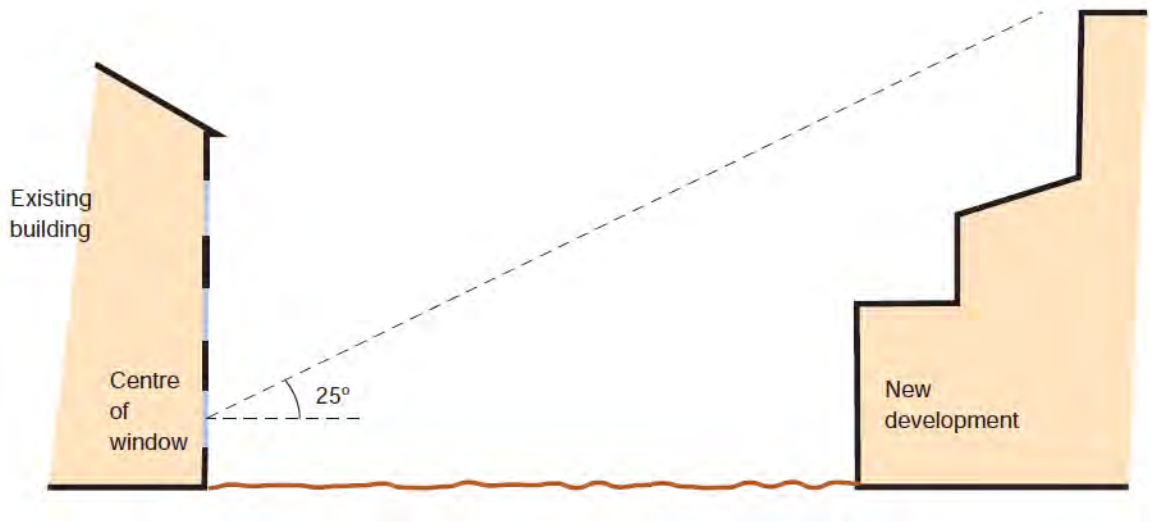
Site Layout Planning for Daylight & Sunlight (2011) states: "Loss of light to existing windows need not be analysed if the distance of each part of the new development from the existing window is three or more times its height above the centre of the existing window."

Distance Check Results

On this occasion the ratio of the height of the proposed building to its distance from the centre of the lowest existing window is less than 1:3 and the 25^{O} rule must be applied.

25^{O} Rule:

The angle to the horizontal subtended by the new development at the level of the centre of the lowest affected window should be no greater than 25^{0}. If this is the case then it is unlikely to have a noticeable effect on diffuse skylight enjoyed by the existing building.



If, for any part of the development, the angle is more than 25^{0}, a more detailed check is needed to find the loss of skylight to the existing building:

25^{O} Rule Results

On this occasion the angle to the horizontal subtended by the new development at the level of the centre of the lowest affected window will be greater than 25^{o} and more detailed checks are necessary:

Vertical Sky Component:

Daylight is the light received from the sun which is diffused through the sky's clouds. 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 also known as 'diffuse light'. Any reduction in the total amount of daylight can be calculated by finding the 'Vertical Sky Component'.

The Vertical Sky Component (VSC) is the ratio of the direct skylight illuminance falling on a vertical face at a reference point (usually the centre of a window), to the simultaneous horizontal illuminance under an unobstructed sky.

The guidance states that the VSC will be adversely affected if after a development it is both less than 27% of the overall available diffuse light and less than 0.8 times its former value.

Therefore if the VSC is more than 27% then enough light would still be reaching the window of the neighbouring building. However if the VSC is less than 27% as well as less than 0.8 times its former value the occupants will notice the reduction in the amount of skylight.

VSC Results

Calculations were undertaken in accordance with the planning guidance contained in BRE document 209 'Site Layout Planning for Daylight & Sunlight' - PJ Littlefair 2011.

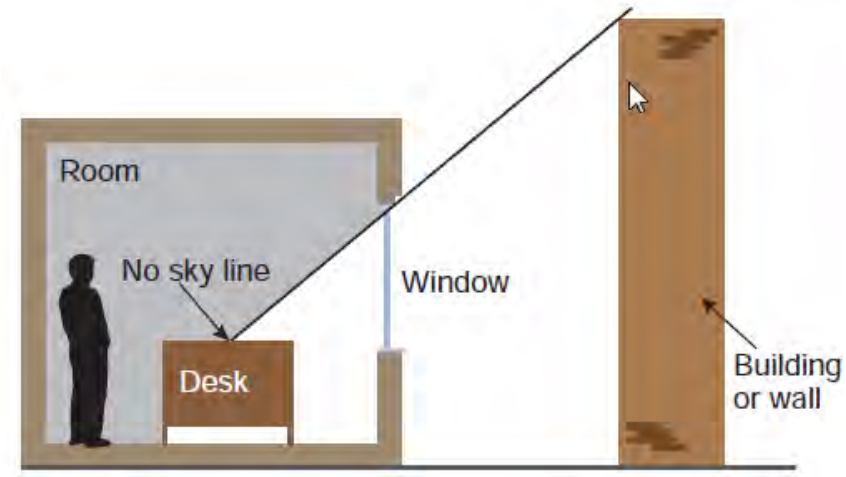
Detailed results are in Appendix A.

As can be seen the proposed development has little impact on neighbouring properties with all of the neighbouring windows assessed comfortably meeting the BRE Guidance for vertical sky component.

Daylight Distribution:

Where room layouts are known (or estimated) the impact on daylighting distribution can be found by plotting what is known as the 'no sky line' in each of the main rooms. These are the same rooms as used for the VSC test.

The no sky line effectively divides the points on the working plane (0.85m high for residential properties and 0.7m high for offices) that cannot see the sky. Therefore areas beyond the no sky line will receive no direct daylight but will instead be lit from reflected light.



BRE 209

If, following the construction of a new development, the no sky line moves so that the area of the existing room, which does not receive direct skylight, is reduced to less than 0.8 times its former value, this will be noticeable to the occupants.

We have estimated internal layouts to assess the Daylight Distribution in rooms adjacent to the development.

Daylight Distribution Results

Calculations were undertaken in accordance with the planning guidance contained in BRE document 209 'Site Layout Planning for Daylight & Sunlight' - PJ Littlefair 2011.

Detailed results are in Appendix A:

As can be seen; the proposed development has little impact on neighbouring properties with all of the neighbouring rooms assessed comfortably meeting the BRE Guidance for daylight distribution.

Section 6: Sunlight

Available Sunlight Hours

Guidance for minimum sunlight values can be found in Section 3 of Site Layout Planning for Daylight and Sunlight (SLPDS).

Habitable rooms in domestic buildings that face within 90° of due south are tested, as are rooms in non-domestic buildings that have a particular requirement for sunlight.

The recommendations are that applicable windows should receive a minimum of 25% of the total annual probable sunshine hours, to include a minimum of 5% of that which is available during the winter months between 21st September to the 21st March (the approximate dates of the spring and autumn equinoxes).

However if this is not possible (or the amount of sunlight is already reduced because of the effect of existing obstructions) then a further reduction in sunlight availability will be noticeable to an occupier if the total number of sunlight hours is below the target 25% of the total annual probable sunshine hours, to include a minimum of 5% of that which is available during the winter months, *and* is less than 0.8 times its former value prior to the development.

There is no requirement for windows that face within 90° of due north so windows that fall into this category have not been considered for sunlight calculations.

Available Sunlight Hours Results

Calculations were undertaken in accordance with the planning guidance contained in BRE document 209 'Site Layout Planning for Daylight & Sunlight' - PJ Littlefair 2011:

Detailed results are in Appendix A:

The properties on Gower Street have windows facing within 90° of north and therefore are not required to be tested.

Warwickshire house Of the 138 windows assessed, 36 are facing within 90° of north. Of the remaining 102 windows; all meet the BRE guidelines for annual sunlight hours while 77 meet the BRE guidance for winter sunlight hours. It must be noted that all of these windows face into a narrow enclosed courtyard and as such this should be considered a high level of compliance given the densely built up location.

Appendix A

Results:

Vertical Sky Component
Available Sunlight Hours

Daylight Distribution

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
31 Gower Street													
Gnd	R1	W1	Existing	17.68	1.00	YES	54°N		*North*			*North*	
			Proposed	17.68									
	R2	W2	Existing	17.15	1.00	YES	54°N		*North*			*North*	
			Proposed	17.15									
		W3	Existing	17.20	1.00	YES	54°N		*North*			*North*	
			Proposed	17.20									
1st	R1	W1	Existing	19.93	1.00	YES	54°N		*North*			*North*	
			Proposed	19.93									
	R2	W2	Existing	20.03	1.00	YES	54°N		*North*			*North*	
			Proposed	20.03									
		W3	Existing	20.11	1.00	YES	54°N		*North*			*North*	
			Proposed	20.11									
2nd	R1	W1	Existing	23.53	0.99	YES	54°N		*North*			*North*	
			Proposed	23.52									
	R2	W2	Existing	23.66	0.99	YES	54°N		*North*			*North*	
			Proposed	23.64									
		W3	Existing	23.73	0.99	YES	54°N		*North*			*North*	
			Proposed	23.69									
3rd	R1	W1	Existing	27.00	0.99	YES	54°N		*North*			*North*	
			Proposed	26.85									
	R2	W2	Existing	27.16	0.99	YES	54°N		*North*			*North*	
			Proposed	26.96									
33 Gower Street													
Gnd	R1	W1	Existing	17.82	1.00	YES	54°N		*North*			*North*	
			Proposed	17.82									
	R2	W2	Existing	17.32	1.00	YES	54°N		*North*			*North*	
			Proposed	17.32									
		W3	Existing	17.36	1.00	YES	54°N		*North*			*North*	
			Proposed	17.36									
1st	R1	W1	Existing	20.19	1.00	YES	54°N		*North*			*North*	
			Proposed	20.19									
	R2	W2	Existing	20.26	1.00	YES	54°N		*North*			*North*	
			Proposed	20.26									
		W3	Existing	20.32	1.00	YES	54°N		*North*			*North*	
			Proposed	20.32									
2nd	R1	W1	Existing	23.83	0.99	YES	54°N		*North*			*North*	
			Proposed	23.79									
	R2	W2	Existing	23.92	0.99	YES	54°N		*North*			*North*	
			Proposed	23.88									
		W3	Existing	24.00	0.99	YES	54°N		*North*			*North*	
			Proposed	23.95									
3rd	R1	W1	Existing	27.16	0.99	YES	54°N		*North*			*North*	
			Proposed	26.96									
	R2	W2	Existing	27.29	0.99	YES	54°N		*North*			*North*	
			Proposed	27.07									

Project Name: LSHTM
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Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
35 Gower Street													
Gnd	R1	W1	Existing	17.96	1.00	YES	54°N		*North*			*North*	
			Proposed	17.96									
	R2	W2	Existing	17.39	1.00	YES	54°N		*North*			*North*	
			Proposed	17.39									
		W3	Existing	17.41	1.00	YES	54°N		*North*			*North*	
			Proposed	17.41									
1st	R1	W1	Existing	20.37	1.00	YES	54°N		*North*			*North*	
			Proposed	20.37									
	R2	W2	Existing	20.41	1.00	YES	54°N		*North*			*North*	
			Proposed	20.41									
		W3	Existing	20.44	1.00	YES	54°N		*North*			*North*	
			Proposed	20.44									
2nd	R1	W1	Existing	24.07	0.99	YES	54°N		*North*			*North*	
			Proposed	24.02									
	R2	W2	Existing	24.12	0.99	YES	54°N		*North*			*North*	
			Proposed	24.08									
		W3	Existing	24.14	0.99	YES	54°N		*North*			*North*	
			Proposed	24.10									
3rd	R1	W1	Existing	27.49	0.99	YES	54°N		*North*			*North*	
			Proposed	27.24									
	R2	W2	Existing	27.57	0.99	YES	54°N		*North*			*North*	
			Proposed	27.32									

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Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
37-41 Gower Street													
Gnd	R1	W1	Existing	17.42	1.00	YES	54°N		*North*			*North*	
			Proposed	17.42									
	R2	W2	Existing	17.45	1.00	YES	54°N		*North*			*North*	
			Proposed	17.45									
		W3	Existing	17.49	1.00	YES	54°N		*North*			*North*	
			Proposed	17.49									
	R3	W4	Existing	17.53	1.00	YES	54°N		*North*			*North*	
			Proposed	17.53									
	R4	W5	Existing	18.22	1.00	YES	54°N		*North*			*North*	
			Proposed	18.22									
		W6	Existing	17.66	1.00	YES	54°N		*North*			*North*	
			Proposed	17.66									
1st	R1	W1	Existing	20.40	1.00	YES	54°N		*North*			*North*	
			Proposed	20.40									
	R2	W2	Existing	20.43	1.00	YES	54°N		*North*			*North*	
			Proposed	20.43									
		W3	Existing	20.46	1.00	YES	54°N		*North*			*North*	
			Proposed	20.46									
	R3	W4	Existing	20.51	1.00	YES	54°N		*North*			*North*	
			Proposed	20.51									
	R4	W5	Existing	20.57	1.00	YES	54°N		*North*			*North*	
			Proposed	20.57									
		W6	Existing	20.62	1.00	YES	54°N		*North*			*North*	
			Proposed	20.62									
2nd	R1	W1	Existing	24.04	0.99	YES	54°N		*North*			*North*	
			Proposed	24.01									
	R2	W2	Existing	24.08	0.99	YES	54°N		*North*			*North*	
			Proposed	24.05									
		W3	Existing	24.13	0.99	YES	54°N		*North*			*North*	
			Proposed	24.10									
	R3	W4	Existing	24.18	0.99	YES	54°N		*North*			*North*	
			Proposed	24.15									
	R4	W5	Existing	24.25	0.99	YES	54°N		*North*			*North*	
			Proposed	24.22									
		W6	Existing	24.29	0.99	YES	54°N		*North*			*North*	
			Proposed	24.25									
3rd	R1	W1	Existing	26.96	0.99	YES	54°N		*North*			*North*	
			Proposed	26.74									
	R2	W2	Existing	26.91	0.99	YES	54°N		*North*			*North*	
			Proposed	26.70									
		W3	Existing	22.85	0.99	YES	54°N		*North*			*North*	
			Proposed	22.64									
	R3	W4	Existing	27.26	0.99	YES	54°N		*North*			*North*	
			Proposed	27.06									
	R4	W5	Existing	27.35	0.99	YES	54°N		*North*			*North*	
			Proposed	27.14									
		W6	Existing	27.41	0.99	YES	54°N		*North*			*North*	
			Proposed	27.20									

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Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
Warwickshire House													
Bmnt	R1	W1	Existing	6.26	0.97	YES	144°	5	0.80	YES	0	0.00	YES
			Proposed	6.08				4			0		
	R2	W2	Existing	7.12	0.96	YES	144°	7	1.00	YES	0	0.00	YES
			Proposed	6.84				7			0		
Gnd	R1	W1	Existing	12.66	1.00	YES	54°N		*North*			*North*	
			Proposed	12.66									
	R2	W2	Existing	12.73	0.99	YES	54°N		*North*			*North*	
			Proposed	12.71									
		W3	Existing	12.86	0.99	YES	54°N		*North*			*North*	
			Proposed	12.82									
	R3	W4	Existing	10.01	0.99	YES	54°N		*North*			*North*	
			Proposed	9.98									
	R4	W5	Existing	11.00	0.96	YES	54°N		*North*			*North*	
			Proposed	10.58									
	R5	W6	Existing	10.65	0.90	YES	144°	15	1.00	YES	0	0.00	YES
			Proposed	9.62				15			0		
		W7	Existing	11.42	0.90	YES	144°	14	1.00	YES	0	0.00	YES
			Proposed	10.35				14			0		
	R6	W8	Existing	7.13	0.90	YES	189°	19	0.78	YES	0	0.00	YES
			Proposed	6.45				15			0		
		W9	Existing	12.70	0.90	YES	144°	20	0.80	YES	0	0.00	YES
			Proposed	11.47				16			0		
		W10	Existing	12.89	0.90	YES	144°	25	0.88	YES	1	0.00	NO
			Proposed	11.65				22			0		
		W11	Existing	12.82	0.90	YES	144°	24	0.87	YES	1	0.00	NO
			Proposed	11.59				21			0		
		W12	Existing	12.65	0.90	YES	144°	25	0.84	YES	1	0.00	NO
			Proposed	11.43				21			0		
		W13	Existing	11.92	0.90	YES	144°	25	0.88	YES	1	0.00	NO
			Proposed	10.74				22			0		
		W14	Existing	4.95	0.88	YES	99°	18	0.83	YES	2	0.50	NO
			Proposed	4.39				15			1		
	R7	W15	Existing	9.94	0.95	YES	234°	27	0.92	YES	3	0.66	NO
			Proposed	9.53				25			2		
	R9	W16	Existing	11.37	0.96	YES	234°	27	1.00	YES	1	1.00	YES
			Proposed	10.94				27			1		
	R10	W17	Existing	13.88	0.99	YES	234°	18	1.00	YES	0	0.00	YES
			Proposed	13.85				18			0		

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
1st	R1	W1	Existing	16.57	0.99	YES	54°N		*North*			*North*	
			Proposed	16.42									
	R2	W2	Existing	17.23	0.97	YES	54°N		*North*			*North*	
			Proposed	16.88									
	R3	W3	Existing	17.07	0.96	YES	54°N		*North*			*North*	
			Proposed	16.46									
	R4	W4	Existing	15.78	0.96	YES	54°N		*North*			*North*	
			Proposed	15.15									
		W5	Existing	14.55	0.96	YES	54°N		*North*			*North*	
			Proposed	13.97									
	R5	W6	Existing	12.48	0.95	YES	54°N		*North*			*North*	
			Proposed	11.98									
	R6	W7	Existing	11.79	0.90	YES	144°	19	0.89	YES	0	0.00	YES
			Proposed	10.64				17			0		
		W8	Existing	13.87	0.90	YES	144°	21	0.95	YES	0	0.00	YES
			Proposed	12.60				20			0		
	R7	W9	Existing	15.18	0.91	YES	144°	24	0.91	YES	1	1.00	YES
			Proposed	13.84				22			1		
		W10	Existing	16.25	0.91	YES	144°	29	0.89	YES	2	0.50	NO
			Proposed	14.85				26			1		
	R8	W11	Existing	17.28	0.91	YES	144°	30	0.90	YES	2	0.50	NO
			Proposed	15.83				27			1		
	R9	W12	Existing	17.62	0.91	YES	144°	33	0.84	YES	3	0.33	NO
			Proposed	16.14				28			1		
		W13	Existing	17.62	0.91	YES	144°	34	0.85	YES	4	0.50	NO
			Proposed	16.15				29			2		
	R10	W14	Existing	17.29	0.91	YES	144°	37	0.94	YES	5	0.60	NO
			Proposed	15.86				35			3		
	R11	W15	Existing	16.28	0.91	YES	144°	37	0.91	YES	5	0.60	NO
			Proposed	14.90				34			3		
		W16	Existing	15.21	0.91	YES	144°	39	0.92	YES	7	0.71	YES
			Proposed	13.88				36			5		
	R12	W17	Existing	13.85	0.90	YES	144°	34	0.94	YES	6	0.66	NO
			Proposed	12.57				32			4		
	R13	W18	Existing	11.71	0.90	YES	144°	32	0.90	YES	6	0.50	NO
			Proposed	10.55				29			3		
	R14	W19	Existing	12.63	0.95	YES	234°	35	0.88	YES	7	0.42	NO
			Proposed	12.11				31			3		
	R16	W20	Existing	14.18	0.95	YES	234°	36	0.91	YES	8	0.62	YES
			Proposed	13.61				33			5		
	R17	W21	Existing	16.22	0.95	YES	234°	31	0.90	YES	4	0.50	NO
			Proposed	15.56				28			2		
		W22	Existing	17.01	0.96	YES	234°	30	0.96	YES	3	1.00	YES
			Proposed	16.35				29			3		
	R18	W23	Existing	17.29	0.97	YES	234°	31	1.00	YES	2	1.00	YES
			Proposed	16.80				31			2		
	R19	W24	Existing	18.41	0.98	YES	234°	26	1.00	YES	1	1.00	YES
			Proposed	18.18				26			1		

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
2nd	R1	W1	Existing	22.42	0.99	YES	54°N		*North*			*North*	
			Proposed	22.24									
	R2	W2	Existing	21.78	0.95	YES	54°N		*North*			*North*	
			Proposed	20.79									
	R3	W3	Existing	21.15	0.95	YES	54°N		*North*			*North*	
			Proposed	20.25									
	R4	W4	Existing	19.36	0.96	YES	54°N		*North*			*North*	
			Proposed	18.60									
		W5	Existing	17.67	0.96	YES	54°N		*North*			*North*	
			Proposed	17.00									
	R5	W6	Existing	14.73	0.96	YES	54°N		*North*			*North*	
			Proposed	14.17									
	R6	W7	Existing	13.71	0.90	YES	144°	23	0.91	YES	1	0.00	NO
			Proposed	12.45				21			0		
		W8	Existing	16.56	0.91	YES	144°	26	0.92	YES	1	0.00	NO
			Proposed	15.17				24			0		
	R7	W9	Existing	18.31	0.92	YES	144°	29	0.93	YES	1	1.00	YES
			Proposed	16.86				27			1		
		W10	Existing	19.70	0.92	YES	144°	34	0.94	YES	3	0.66	NO
			Proposed	18.19				32			2		
	R8	W11	Existing	20.99	0.92	YES	144°	40	0.97	YES	5	0.80	YES
			Proposed	19.42				39			4		
	R9	W12	Existing	21.39	0.92	YES	144°	42	0.95	YES	6	0.83	YES
			Proposed	19.81				40			5		
		W13	Existing	21.43	0.92	YES	144°	44	0.90	YES	6	0.50	NO
			Proposed	19.85				40			3		
	R10	W14	Existing	21.07	0.92	YES	144°	46	0.93	YES	8	0.62	YES
			Proposed	19.51				43			5		
	R11	W15	Existing	19.83	0.92	YES	144°	46	0.91	YES	11	0.63	YES
			Proposed	18.34				42			7		
		W16	Existing	18.44	0.92	YES	144°	45	0.91	YES	10	0.60	YES
			Proposed	17.00				41			6		
	R12	W17	Existing	16.62	0.91	YES	144°	41	0.92	YES	10	0.70	YES
			Proposed	15.24				38			7		
	R13	W18	Existing	13.63	0.90	YES	144°	38	0.89	YES	11	0.63	YES
			Proposed	12.39				34			7		
	R14	W19	Existing	14.99	0.96	YES	234°	39	0.92	YES	11	0.72	YES
			Proposed	14.42				36			8		
	R16	W20	Existing	17.20	0.96	YES	234°	41	0.95	YES	11	0.81	YES
			Proposed	16.54				39			9		
	R17	W21	Existing	19.98	0.95	YES	234°	39	0.97	YES	9	0.88	YES
			Proposed	19.16				38			8		
		W22	Existing	21.03	0.95	YES	234°	40	0.90	YES	8	0.62	YES
			Proposed	20.11				36			5		
	R18	W23	Existing	21.62	0.95	YES	234°	37	0.89	YES	5	0.40	NO
			Proposed	20.62				33			2		
	R19	W24	Existing	23.42	0.95	YES	234°	34	0.94	YES	5	0.80	YES
			Proposed	22.31				32			4		

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
3rd	R1	W1	Existing	28.41	0.94	YES	54°N		*North*			*North*	
			Proposed	26.82									
	R2	W2	Existing	26.46	0.95	YES	54°N		*North*			*North*	
			Proposed	25.26									
	R3	W3	Existing	25.76	0.96	YES	54°N		*North*			*North*	
			Proposed	24.73									
	R4	W4	Existing	23.68	0.96	YES	54°N		*North*			*North*	
			Proposed	22.86									
		W5	Existing	21.56	0.96	YES	54°N		*North*			*North*	
			Proposed	20.85									
	R5	W6	Existing	17.35	0.96	YES	54°N		*North*			*North*	
			Proposed	16.78									
	R6	W7	Existing	15.77	0.91	YES	144°	27	0.88	YES	2	0.00	NO
			Proposed	14.45				24			0		
		W8	Existing	19.81	0.92	YES	144°	33	0.90	YES	3	0.33	NO
			Proposed	18.33				30			1		
	R7	W9	Existing	22.10	0.93	YES	144°	40	0.97	YES	5	0.80	YES
			Proposed	20.56				39			4		
		W10	Existing	23.73	0.93	YES	144°	44	0.93	YES	7	0.57	NO
			Proposed	22.14				41			4		
	R8	W11	Existing	25.16	0.93	YES	144°	50	0.96	YES	7	0.71	YES
			Proposed	23.52				48			5		
	R9	W12	Existing	25.63	0.93	YES	144°	53	0.98	YES	8	0.87	YES
			Proposed	23.97				52			7		
		W13	Existing	25.72	0.93	YES	144°	54	0.98	YES	9	0.88	YES
			Proposed	24.07				53			8		
	R10	W14	Existing	25.37	0.93	YES	144°	55	0.98	YES	12	0.91	YES
			Proposed	23.74				54			11		
	R11	W15	Existing	24.06	0.93	YES	144°	54	0.98	YES	13	0.92	YES
			Proposed	22.49				53			12		
		W16	Existing	22.43	0.93	YES	144°	52	1.00	YES	16	1.00	YES
			Proposed	20.92				52			16		
	R12	W17	Existing	20.05	0.92	YES	144°	48	0.97	YES	14	0.92	YES
			Proposed	18.62				47			13		
	R13	W18	Existing	15.78	0.91	YES	144°	42	0.97	YES	14	0.92	YES
			Proposed	14.49				41			13		
	R14	W19	Existing	17.83	0.96	YES	234°	46	0.95	YES	16	0.87	YES
			Proposed	17.23				44			14		
	R16	W20	Existing	21.02	0.96	YES	234°	47	0.93	YES	15	0.80	YES
			Proposed	20.33				44			12		
	R17	W21	Existing	24.55	0.96	YES	234°	47	0.95	YES	13	0.84	YES
			Proposed	23.64				45			11		
		W22	Existing	25.71	0.95	YES	234°	46	0.91	YES	12	0.66	YES
			Proposed	24.65				42			8		
	R18	W23	Existing	26.32	0.95	YES	234°	41	0.92	YES	8	0.62	YES
			Proposed	25.08				38			5		
	R19	W24	Existing	28.12	0.94	YES	234°	41	0.87	YES	9	0.44	NO
			Proposed	26.58				36			4		

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
4th	R1	W1	Existing	32.97	0.94	YES	54°N		*North*			*North*	
			Proposed	31.22									
	R2	W2	Existing	31.41	0.95	YES	54°N		*North*			*North*	
			Proposed	30.14									
	R3	W3	Existing	30.89	0.96	YES	54°N		*North*			*North*	
			Proposed	29.84									
	R4	W4	Existing	29.13	0.97	YES	54°N		*North*			*North*	
			Proposed	28.36									
		W5	Existing	26.90	0.97	YES	54°N		*North*			*North*	
			Proposed	26.27									
	R5	W6	Existing	20.87	0.97	YES	54°N		*North*			*North*	
			Proposed	20.38									
	R6	W7	Existing	18.12	0.94	YES	144°	31	1.00	YES	4	1.00	YES
			Proposed	17.04				31			4		
		W8	Existing	24.18	0.95	YES	144°	43	1.00	YES	5	1.00	YES
			Proposed	22.99				43			5		
	R7	W9	Existing	26.79	0.95	YES	144°	58	0.98	YES	9	0.88	YES
			Proposed	25.55				57			8		
		W10	Existing	28.34	0.95	YES	144°	61	0.96	YES	11	0.81	YES
			Proposed	27.06				59			9		
	R8	W11	Existing	29.57	0.95	YES	144°	65	0.98	YES	17	0.94	YES
			Proposed	28.25				64			16		
	R9	W12	Existing	29.98	0.95	YES	144°	66	0.96	YES	18	0.88	YES
			Proposed	28.63				64			16		
		W13	Existing	30.09	0.95	YES	144°	65	0.96	YES	18	0.88	YES
			Proposed	28.74				63			16		
	R10	W14	Existing	29.88	0.95	YES	144°	67	0.95	YES	21	0.85	YES
			Proposed	28.54				64			18		
	R11	W15	Existing	28.91	0.95	YES	144°	64	0.96	YES	21	0.90	YES
			Proposed	27.60				62			19		
		W16	Existing	27.47	0.95	YES	144°	64	0.95	YES	22	0.86	YES
			Proposed	26.21				61			19		
	R12	W17	Existing	24.81	0.95	YES	144°	58	0.96	YES	21	0.90	YES
			Proposed	23.60				56			19		
	R13	W18	Existing	18.44	0.93	YES	144°	49	0.95	YES	20	0.90	YES
			Proposed	17.31				47			18		
	R14	W19	Existing	21.81	0.97	YES	234°	52	0.96	YES	21	0.90	YES
			Proposed	21.25				50			19		
	R16	W20	Existing	26.38	0.97	YES	234°	56	0.92	YES	20	0.80	YES
			Proposed	25.71				52			16		
	R17	W21	Existing	30.02	0.96	YES	234°	54	0.94	YES	17	0.82	YES
			Proposed	29.11				51			14		
		W22	Existing	30.93	0.96	YES	234°	56	0.94	YES	18	0.83	YES
			Proposed	29.82				53			15		
	R18	W23	Existing	31.29	0.95	YES	234°	52	0.90	YES	16	0.68	YES
			Proposed	29.97				47			11		
	R19	W24	Existing	32.58	0.94	YES	234°	50	0.90	YES	15	0.66	YES
			Proposed	30.94				45			10		

Project Name: LSHTM
Report Title: Daylight & Sunlight - Neighbour Analysis Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Window Ref.		VSC	Pr/Ex	Meets BRE Guidance	Window Orientation	Annual	Pr/Ex	Meets BRE Guidance	Winter	Pr/Ex	Meets BRE Guidance
5th	R1	W1	Existing	37.28	0.95	YES	54°N		*North*			*North*	
			Proposed	35.59									
	R2	W2	Existing	36.03	0.97	YES	54°N		*North*			*North*	
			Proposed	34.96									
	R3	W3	Existing	36.00	0.97	YES	54°N		*North*			*North*	
			Proposed	35.14									
	R4	W4	Existing	35.56	0.98	YES	54°N		*North*			*North*	
			Proposed	34.94									
		W5	Existing	34.66	0.98	YES	54°N		*North*			*North*	
			Proposed	34.15									
	R5	W6	Existing	32.82	0.98	YES	54°N		*North*			*North*	
			Proposed	32.38									
		W7	Existing	29.04	0.98	YES	54°N		*North*			*North*	
			Proposed	28.65									
	R6	W8	Existing	23.55	0.96	YES	144°	42	0.97	YES	7	0.85	YES
			Proposed	22.69				41			6		
		W9	Existing	31.41	0.97	YES	144°	69	1.00	YES	16	1.00	YES
			Proposed	30.50				69			16		
	R7	W10	Existing	32.58	0.97	YES	144°	74	1.00	YES	21	1.00	YES
			Proposed	31.66				74			21		
		W11	Existing	33.26	0.97	YES	144°	74	0.98	YES	21	0.95	YES
			Proposed	32.33				73			20		
	R8	W12	Existing	33.86	0.97	YES	144°	78	0.97	YES	25	0.92	YES
			Proposed	32.94				76			23		
	R9	W13	Existing	34.08	0.97	YES	144°	76	1.00	YES	24	1.00	YES
			Proposed	33.14				76			24		
		W14	Existing	34.19	0.97	YES	144°	74	0.97	YES	23	0.91	YES
			Proposed	33.26				72			21		
	R10	W15	Existing	34.15	0.97	YES	144°	77	0.97	YES	26	0.92	YES
			Proposed	33.23				75			24		
	R11	W16	Existing	33.81	0.97	YES	144°	77	0.98	YES	25	0.96	YES
			Proposed	32.90				76			24		
		W17	Existing	33.27	0.97	YES	144°	74	0.97	YES	25	0.92	YES
			Proposed	32.35				72			23		
	R12	W18	Existing	32.05	0.97	YES	144°	71	0.95	YES	25	0.88	YES
			Proposed	31.14				68			22		
	R13	W19	Existing	24.24	0.96	YES	144°	59	0.96	YES	24	0.91	YES
			Proposed	23.35				57			22		
	R14	W20	Existing	30.56	0.98	YES	234°	60	0.96	YES	23	0.91	YES
			Proposed	30.10				58			21		
	R16	W21	Existing	34.39	0.98	YES	234°	62	0.96	YES	22	0.90	YES
			Proposed	33.83				60			20		
	R17	W22	Existing	35.80	0.97	YES	234°	64	0.95	YES	21	0.85	YES
			Proposed	34.99				61			18		
		W23	Existing	36.02	0.97	YES	234°	66	0.95	YES	22	0.86	YES
			Proposed	35.02				63			19		
	R18	W24	Existing	36.02	0.96	YES	234°	65	0.93	YES	22	0.81	YES
			Proposed	34.78				61			18		
	R19	W25	Existing	36.68	0.95	YES	234°	61	0.95	YES	18	0.83	YES
			Proposed	35.07				58			15		

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
31 Gower Street								
Gnd	R1	Residential	Area m2	7.43	2.26	2.26		
			% of room		30%	30%	1.00	YES
	R2	Residential	Area m2	24.90	10.95	10.95		
			% of room		44%	44%	1.00	YES
1st	R1	Residential	Area m2	7.43	3.88	3.88		
			% of room		52%	52%	1.00	YES
	R2	Residential	Area m2	24.90	13.53	13.53		
			% of room		54%	54%	1.00	YES
2nd	R1	Residential	Area m2	7.43	4.81	4.72		
			% of room		65%	64%	0.98	YES
	R2	Residential	Area m2	24.90	17.39	17.14		
			% of room		70%	69%	0.98	YES
3rd	R1	Residential	Area m2	14.60	6.18	6.05		
			% of room		42%	41%	0.97	YES
	R2	Residential	Area m2	14.62	6.10	5.97		
			% of room		42%	41%	0.98	YES
33 Gower Street								
Gnd	R1	Residential	Area m2	7.18	2.31	2.31		
			% of room		32%	32%	1.00	YES
	R2	Residential	Area m2	25.13	11.15	11.15		
			% of room		44%	44%	1.00	YES
1st	R1	Residential	Area m2	7.18	3.97	3.97		
			% of room		55%	55%	1.00	YES
	R2	Residential	Area m2	25.13	13.81	13.81		
			% of room		55%	55%	0.99	YES
2nd	R1	Residential	Area m2	7.18	5.05	4.95		
			% of room		70%	69%	0.98	YES
	R2	Residential	Area m2	25.13	17.69	17.48		
			% of room		70%	70%	0.98	YES
3rd	R1	Residential	Area m2	14.53	5.01	4.94		
			% of room		34%	34%	0.98	YES
	R2	Residential	Area m2	14.55	4.86	4.77		
			% of room		33%	33%	0.98	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
35 Gower Street								
Gnd	R1	Residential	Area m2	6.93	2.25	2.25		
			% of room		32%	32%	1.00	YES
	R2	Residential	Area m2	24.95	11.07	11.07		
			% of room		44%	44%	1.00	YES
1st	R1	Residential	Area m2	6.93	3.86	3.86		
			% of room		56%	56%	0.99	YES
	R2	Residential	Area m2	24.95	13.76	13.76		
			% of room		55%	55%	0.99	YES
2nd	R1	Residential	Area m2	6.93	4.94	4.86		
			% of room		71%	70%	0.98	YES
	R2	Residential	Area m2	24.95	17.45	17.36		
			% of room		70%	70%	0.99	YES
3rd	R1	Residential	Area m2	14.03	4.26	4.17		
			% of room		30%	30%	0.97	YES
	R2	Residential	Area m2	14.05	4.03	3.96		
			% of room		29%	28%	0.98	YES
37-41 Gower Street								
Gnd	R1	Residential	Area m2	8.28	3.65	3.65		
			% of room		44%	44%	1.00	YES
	R2	Residential	Area m2	22.66	9.86	9.86		
			% of room		44%	44%	1.00	YES
	R3	Residential	Area m2	9.16	3.93	3.93		
			% of room		43%	43%	1.00	YES
	R4	Residential	Area m2	25.61	10.07	10.07		
			% of room		39%	39%	1.00	YES
1st	R1	Residential	Area m2	8.28	4.20	4.20		
			% of room		51%	51%	1.00	YES
	R2	Residential	Area m2	22.66	11.37	11.37		
			% of room		50%	50%	1.00	YES
	R3	Residential	Area m2	9.16	4.51	4.51		
			% of room		49%	49%	1.00	YES
	R4	Residential	Area m2	25.61	12.74	12.74		
			% of room		50%	50%	1.00	YES
2nd	R1	Residential	Area m2	8.28	5.30	5.29		
			% of room		64%	64%	0.99	YES
	R2	Residential	Area m2	22.66	14.37	14.31		
			% of room		63%	63%	0.99	YES
	R3	Residential	Area m2	9.16	5.57	5.57		
			% of room		61%	61%	0.99	YES
	R4	Residential	Area m2	25.61	16.06	15.98		
			% of room		63%	62%	0.99	YES
3rd	R1	Residential	Area m2	7.17	1.32	1.31		
			% of room		18%	18%	0.99	YES
	R2	Residential	Area m2	19.62	3.32	3.29		
			% of room		17%	17%	0.99	YES
	R3	Residential	Area m2	9.16	5.12	5.12		
			% of room		56%	56%	0.99	YES
	R4	Residential	Area m2	25.61	14.59	14.43		
			% of room		57%	56%	0.98	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
Warwickshire House								
Bmnt	R1	Residential	Area m2	12.05	2.82	2.64		
			% of room		23%	22%	0.93	YES
	R2	Residential	Area m2	1.87	0.70	0.62		
			% of room		37%	33%	0.88	YES
Gnd	R1	Residential	Area m2	15.62	8.71	8.71		
			% of room		56%	56%	1.00	YES
	R2	Residential	Area m2	21.29	11.37	11.37		
			% of room		53%	53%	0.99	YES
	R3	Residential	Area m2	20.37	6.86	6.86		
			% of room		34%	34%	1.00	YES
	R4	Residential	Area m2	19.51	9.39	9.10		
			% of room		48%	47%	0.96	YES
	R5	Residential	Area m2	21.39	14.50	13.35		
			% of room		68%	62%	0.92	YES
	R6	Residential	Area m2	125.85	53.50	49.19		
			% of room		43%	39%	0.91	YES
	R7	Residential	Area m2	10.84	7.61	7.55		
			% of room		70%	70%	0.99	YES
	R8	Residential	Area m2	6.95	2.20	2.20		
			% of room		32%	32%	1.00	YES
	R9	Residential	Area m2	12.27	6.03	6.03		
			% of room		49%	49%	0.99	YES
	R10	Residential	Area m2	18.69	13.20	13.20		
			% of room		71%	71%	0.99	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
1st	R1	Residential	Area m2	15.62	9.97	9.95		
			% of room		64%	64%	0.99	YES
	R2	Residential	Area m2	14.48	8.23	8.23		
			% of room		57%	57%	0.99	YES
	R3	Residential	Area m2	14.16	10.46	10.14		
			% of room		74%	72%	0.96	YES
	R4	Residential	Area m2	13.73	11.12	11.12		
			% of room		81%	81%	0.99	YES
	R5	Residential	Area m2	13.31	6.74	6.74		
			% of room		51%	51%	0.99	YES
	R6	Residential	Area m2	18.04	13.16	12.23		
			% of room		73%	68%	0.92	YES
	R7	Residential	Area m2	16.77	13.82	12.96		
			% of room		82%	77%	0.93	YES
	R8	Residential	Area m2	12.58	10.17	9.50		
			% of room		81%	76%	0.93	YES
	R9	Residential	Area m2	16.62	13.83	12.76		
			% of room		83%	77%	0.92	YES
	R10	Residential	Area m2	12.45	9.55	8.84		
			% of room		77%	71%	0.92	YES
	R11	Residential	Area m2	15.56	13.00	12.10		
			% of room		84%	78%	0.93	YES
	R12	Residential	Area m2	11.26	8.82	8.06		
			% of room		78%	72%	0.91	YES
	R13	Residential	Area m2	4.48	3.01	2.89		
			% of room		67%	65%	0.96	YES
	R14	Residential	Area m2	10.84	6.49	6.12		
			% of room		60%	56%	0.94	YES
	R15	Residential	Area m2	6.95	3.73	3.73		
			% of room		54%	54%	1.00	YES
	R16	Residential	Area m2	12.27	4.71	4.71		
			% of room		38%	38%	0.99	YES
	R17	Residential	Area m2	17.22	13.59	13.59		
			% of room		79%	79%	0.99	YES
	R18	Residential	Area m2	13.13	8.31	8.31		
			% of room		63%	63%	0.99	YES
	R19	Residential	Area m2	16.91	13.14	13.14		
			% of room		78%	78%	0.99	YES

Project Name: LSHTM
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Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
2nd	R1	Residential	Area m2	15.62	14.24	14.23		
			% of room		91%	91%	0.99	YES
	R2	Residential	Area m2	14.48	11.62	11.62		
			% of room		80%	80%	0.99	YES
	R3	Residential	Area m2	14.16	13.38	13.16		
			% of room		94%	93%	0.98	YES
	R4	Residential	Area m2	13.73	13.66	13.66		
			% of room		99%	99%	0.99	YES
	R5	Residential	Area m2	13.31	8.46	8.46		
			% of room		64%	64%	0.99	YES
	R6	Residential	Area m2	18.04	16.23	14.99		
			% of room		90%	83%	0.92	YES
	R7	Residential	Area m2	16.77	16.52	15.80		
			% of room		99%	94%	0.95	YES
	R8	Residential	Area m2	12.58	12.18	11.29		
			% of room		97%	90%	0.92	YES
	R9	Residential	Area m2	16.62	16.41	15.11		
			% of room		99%	91%	0.92	YES
	R10	Residential	Area m2	12.45	11.78	10.83		
			% of room		95%	87%	0.91	YES
	R11	Residential	Area m2	15.56	15.41	14.66		
			% of room		99%	94%	0.95	YES
	R12	Residential	Area m2	11.26	10.83	9.71		
			% of room		96%	86%	0.89	YES
	R13	Residential	Area m2	4.48	3.65	3.41		
			% of room		82%	76%	0.93	YES
	R14	Residential	Area m2	10.84	8.05	7.85		
			% of room		74%	72%	0.97	YES
	R15	Residential	Area m2	6.95	4.95	4.95		
			% of room		71%	71%	1.00	YES
	R16	Residential	Area m2	12.27	6.45	6.45		
			% of room		53%	53%	0.99	YES
	R17	Residential	Area m2	17.22	17.10	17.10		
			% of room		99%	99%	0.99	YES
	R18	Residential	Area m2	13.13	12.01	12.01		
			% of room		91%	91%	0.99	YES
	R19	Residential	Area m2	15.24	15.14	15.14		
			% of room		99%	99%	0.99	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
3rd	R1	Residential	Area m2	15.62	15.54	15.54		
			% of room		99%	99%	0.99	YES
	R2	Residential	Area m2	14.48	13.79	13.79		
			% of room		95%	95%	0.99	YES
	R3	Residential	Area m2	14.16	13.78	13.77		
			% of room		97%	97%	0.99	YES
	R4	Residential	Area m2	13.73	13.68	13.68		
			% of room		100%	100%	0.99	YES
	R5	Residential	Area m2	13.31	9.12	9.12		
			% of room		69%	69%	0.99	YES
	R6	Residential	Area m2	18.04	17.08	16.83		
			% of room		95%	93%	0.98	YES
	R7	Residential	Area m2	16.77	16.59	16.59		
			% of room		99%	99%	0.99	YES
	R8	Residential	Area m2	12.58	12.20	12.09		
			% of room		97%	96%	0.99	YES
	R9	Residential	Area m2	16.62	16.41	16.41		
			% of room		99%	99%	0.99	YES
	R10	Residential	Area m2	12.45	11.86	11.73		
			% of room		95%	94%	0.98	YES
	R11	Residential	Area m2	15.56	15.42	15.42		
			% of room		99%	99%	0.99	YES
	R12	Residential	Area m2	11.26	10.91	10.66		
			% of room		97%	95%	0.97	YES
	R13	Residential	Area m2	4.48	4.20	4.19		
			% of room		94%	94%	0.99	YES
	R14	Residential	Area m2	10.84	9.78	9.72		
			% of room		90%	90%	0.99	YES
	R15	Residential	Area m2	6.95	5.53	5.53		
			% of room		80%	80%	1.00	YES
	R16	Residential	Area m2	12.27	7.93	7.93		
			% of room		65%	65%	0.99	YES
	R17	Residential	Area m2	17.22	17.14	17.14		
			% of room		100%	100%	0.99	YES
	R18	Residential	Area m2	13.13	12.71	12.71		
			% of room		97%	97%	0.99	YES
	R19	Residential	Area m2	15.24	15.14	15.14		
			% of room		99%	99%	0.99	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

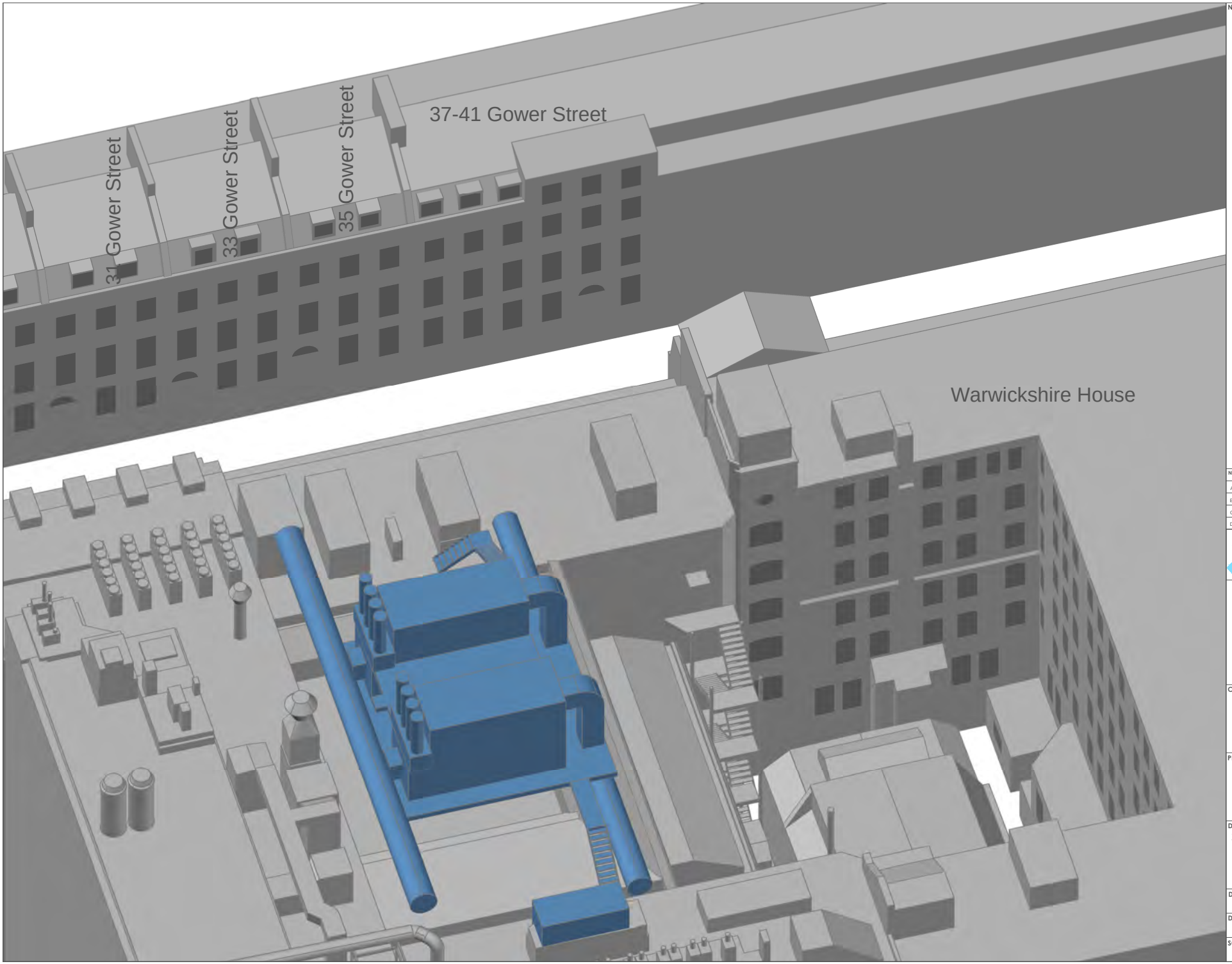
Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
4th	R1	Residential	Area m2	15.62	15.56	15.56		
			% of room		100%	100%	0.99	YES
	R2	Residential	Area m2	14.48	13.89	13.89		
			% of room		96%	96%	0.99	YES
	R3	Residential	Area m2	14.16	13.79	13.79		
			% of room		97%	97%	0.99	YES
	R4	Residential	Area m2	13.73	13.69	13.69		
			% of room		100%	100%	0.99	YES
	R5	Residential	Area m2	13.31	10.16	10.16		
			% of room		76%	76%	0.99	YES
	R6	Residential	Area m2	18.04	17.41	17.41		
			% of room		96%	96%	0.99	YES
	R7	Residential	Area m2	16.77	16.61	16.61		
			% of room		99%	99%	0.99	YES
	R8	Residential	Area m2	12.58	12.20	12.20		
			% of room		97%	97%	0.99	YES
	R9	Residential	Area m2	16.62	16.41	16.41		
			% of room		99%	99%	0.99	YES
	R10	Residential	Area m2	12.45	11.86	11.86		
			% of room		95%	95%	0.99	YES
	R11	Residential	Area m2	15.56	15.43	15.43		
			% of room		99%	99%	0.99	YES
	R12	Residential	Area m2	11.26	10.93	10.93		
			% of room		97%	97%	0.99	YES
	R13	Residential	Area m2	4.48	4.45	4.45		
			% of room		99%	99%	0.99	YES
	R14	Residential	Area m2	10.84	10.06	10.04		
			% of room		93%	93%	0.99	YES
	R15	Residential	Area m2	6.95	6.73	6.73		
			% of room		97%	97%	1.00	YES
	R16	Residential	Area m2	12.27	10.43	10.43		
			% of room		85%	85%	0.99	YES
	R17	Residential	Area m2	17.22	17.14	17.14		
			% of room		100%	100%	0.99	YES
	R18	Residential	Area m2	13.13	12.73	12.73		
			% of room		97%	97%	0.99	YES
	R19	Residential	Area m2	15.24	15.14	15.14		
			% of room		99%	99%	1.00	YES

Project Name: LSHTM
Report Title: Daylight Distribution Analysis - Neighbour Test
Date of Analysis: 16/01/2018

Floor Ref.	Room Ref.	Assumed Room Type		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Guidance
5th	R1	Residential	Area m2	14.45	14.04	13.91		
			% of room		97%	96%	0.99	YES
	R2	Residential	Area m2	14.48	13.91	13.91		
			% of room		96%	96%	0.99	YES
	R3	Residential	Area m2	14.16	13.78	13.77		
			% of room		97%	97%	0.99	YES
	R4	Residential	Area m2	13.73	13.69	13.69		
			% of room		100%	100%	0.99	YES
	R5	Residential	Area m2	13.31	13.11	13.11		
			% of room		98%	98%	0.99	YES
	R6	Residential	Area m2	18.04	17.54	17.54		
			% of room		97%	97%	0.99	YES
	R7	Residential	Area m2	16.77	16.60	16.60		
			% of room		99%	99%	0.99	YES
	R8	Residential	Area m2	12.58	12.21	12.21		
			% of room		97%	97%	0.99	YES
	R9	Residential	Area m2	16.62	16.42	16.42		
			% of room		99%	99%	0.99	YES
	R10	Residential	Area m2	12.45	11.84	11.84		
			% of room		95%	95%	0.99	YES
	R11	Residential	Area m2	15.56	15.43	15.43		
			% of room		99%	99%	0.99	YES
	R12	Residential	Area m2	11.26	10.92	10.92		
			% of room		97%	97%	0.99	YES
	R13	Residential	Area m2	4.48	4.46	4.46		
			% of room		100%	100%	0.99	YES
	R14	Residential	Area m2	10.84	10.13	10.12		
			% of room		93%	93%	0.99	YES
	R15	Residential	Area m2	6.95	6.89	6.89		
			% of room		99%	99%	1.00	YES
	R16	Residential	Area m2	12.27	11.83	11.83		
			% of room		96%	96%	0.99	YES
	R17	Residential	Area m2	17.22	17.14	17.14		
			% of room		100%	100%	0.99	YES
	R18	Residential	Area m2	13.13	12.74	12.74		
			% of room		97%	97%	0.99	YES
	R19	Residential	Area m2	13.35	12.78	12.77		
			% of room		96%	96%	0.99	YES

Appendix B

Window & Room References



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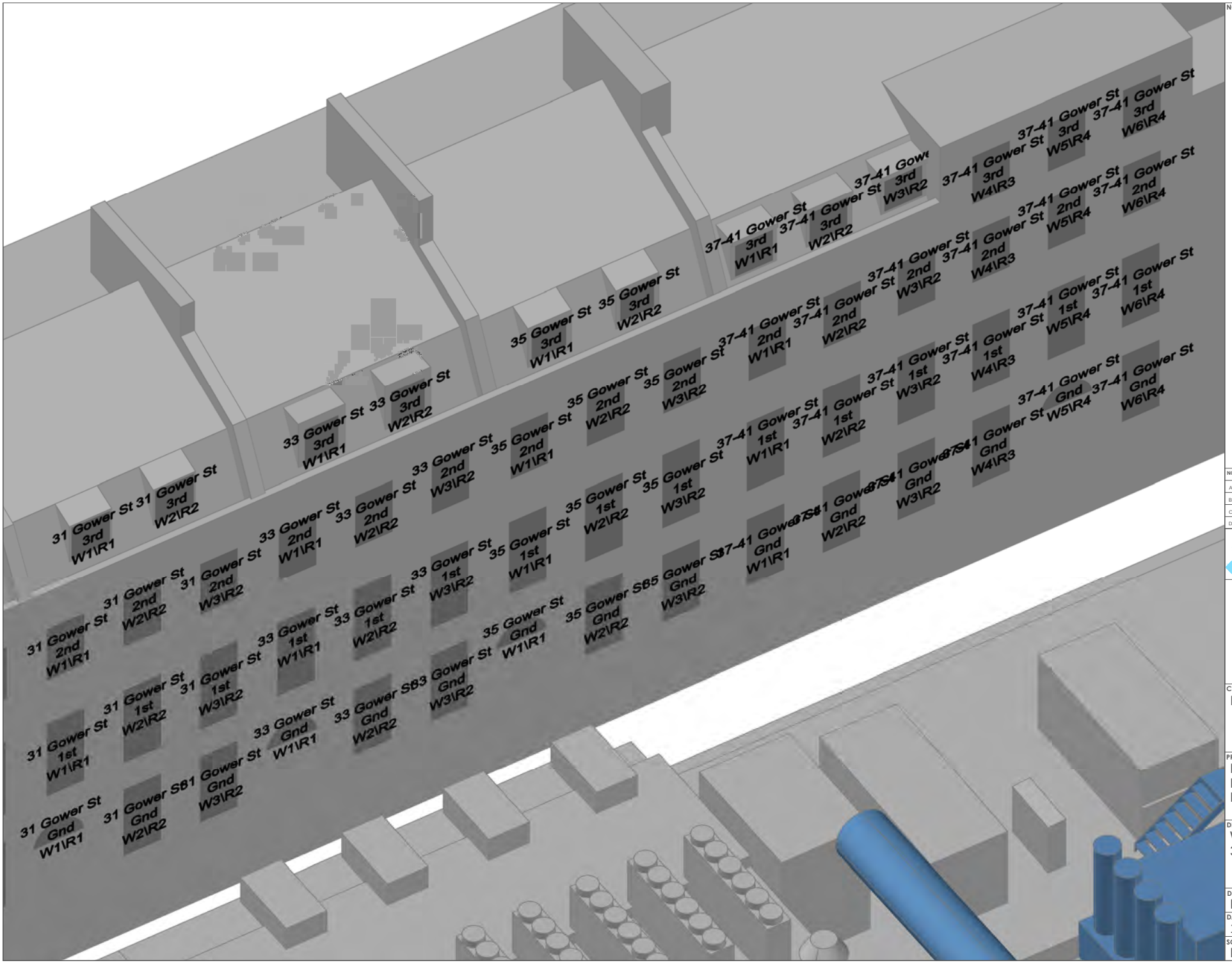

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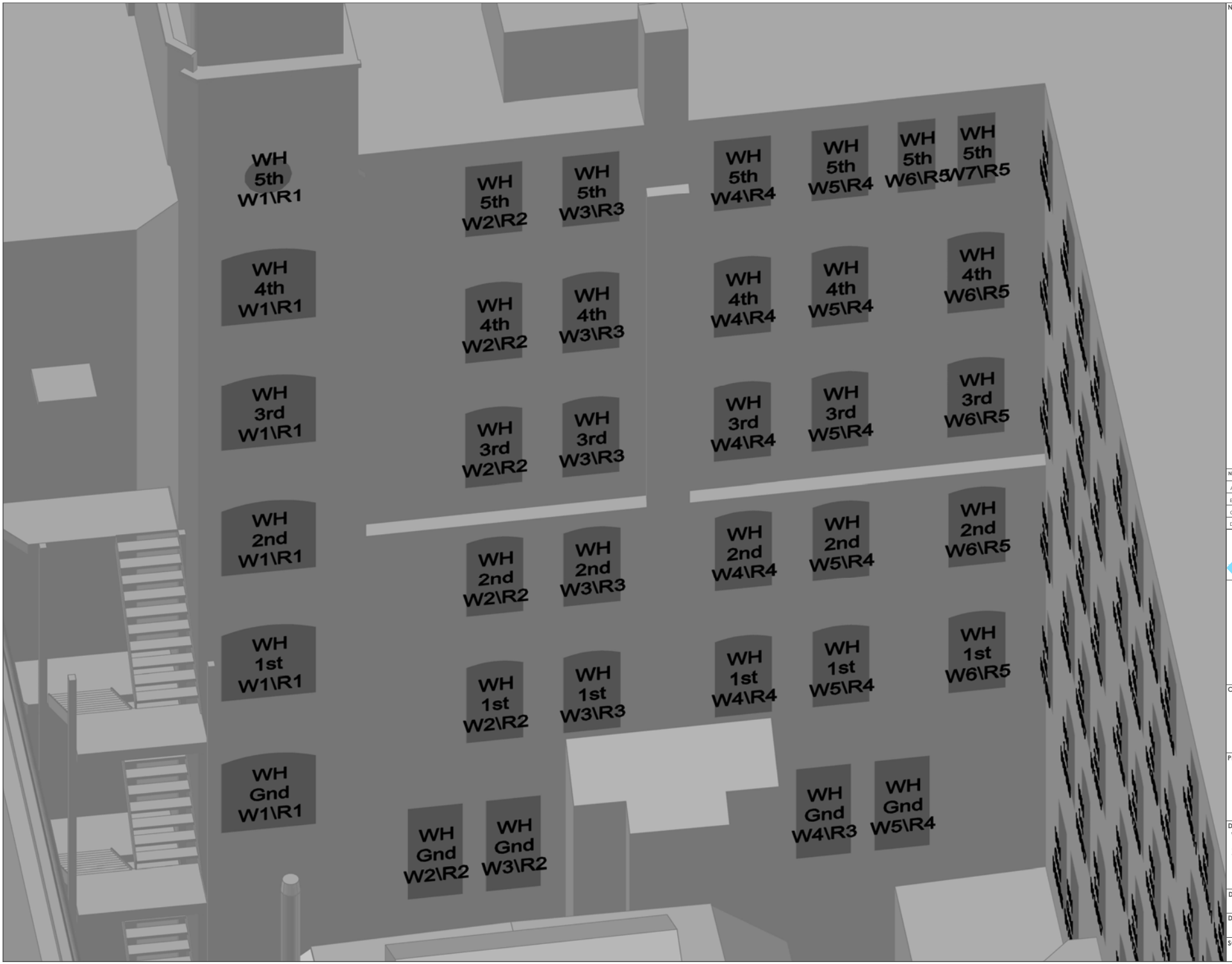

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31-41 Gower Street

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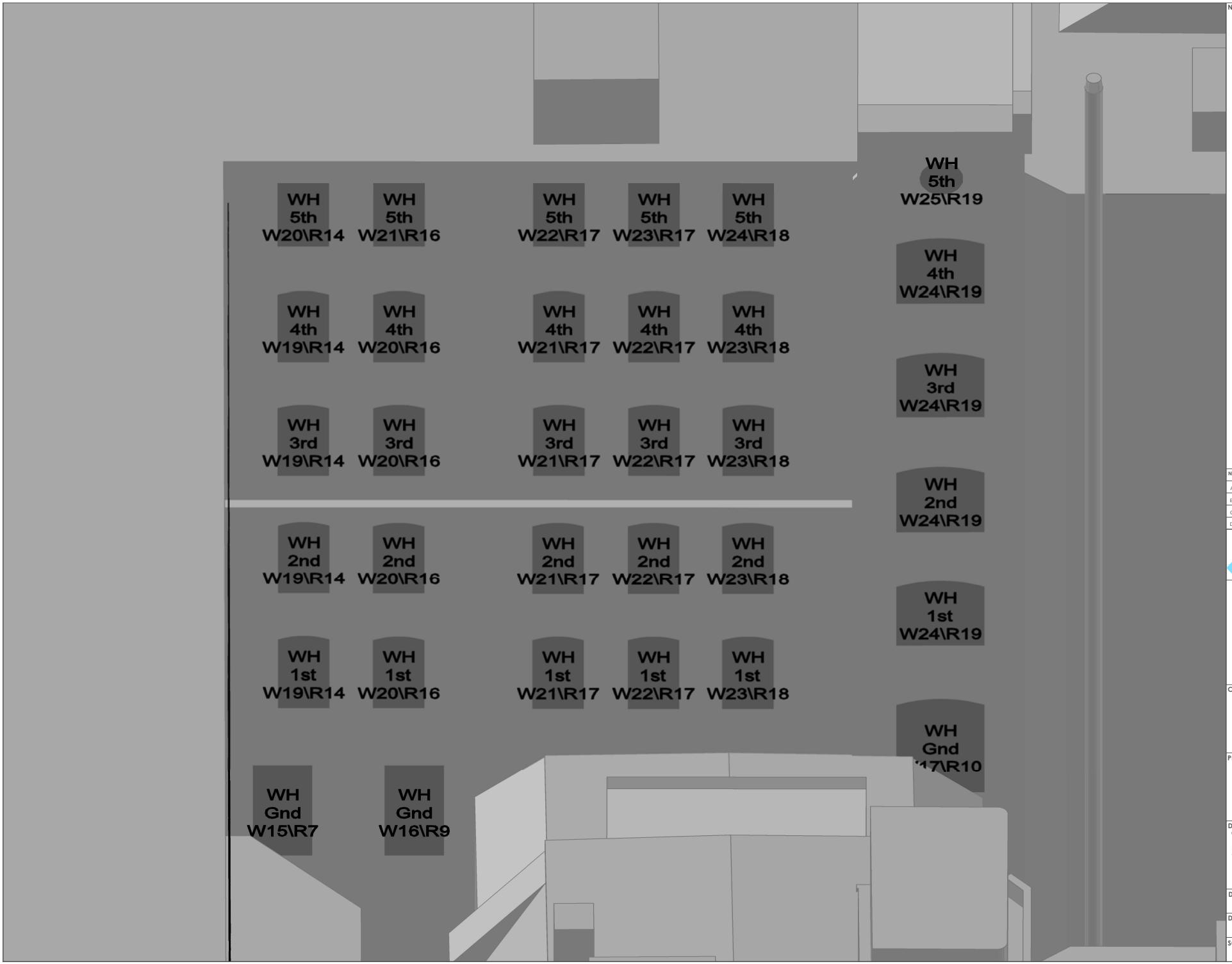

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Window Labels
31-41 Gower Street

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Notes

This report has been prepared for the sole use of the Client. No representation or warranty (expressed or implied) is given to any other parties. Therefore this report should not be relied upon by any third party and we accept no liability from the use of this report by any other party.

Where full access was not available we have made reasonable estimations of internal layouts, floor areas, window sizes and positions etc.

Our calculations model has been built from a combination of architect's plans, partial site survey, site and aerial photographs.

We are not aware of any conflicts of interest between ourselves and any other party concerning this project.