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RICS

DAYLIGHT & SUNLIGHT REPORT

relating to the

PROPOSED DEVELOPMENT

of

MERCURE LONDON BLOOMSBURY HOTEL

on behalf of

FAIRVIEW HOTELS LIMITED

Project Ref: MLB03

Date: August 2018

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About CPMC Ltd

CPMC Chartered Surveying Ltd is a multi-disciplinary surveying practice, specialising in rights of light and BRE daylight and sunlight for the planning process, the Party Wall etc Act 1996, access agreements, condition scheduling and crane oversail licences.

We are an industry leading Chartered Surveying practice with considerable experience in relation to resolving 'neighbourly matters' issues and related disputes in all parts of the UK. We have significant experience with regard to the provision of daylight and sunlight assessment criteria and regularly produce comprehensive assessments to assist planning authorities understand the impact of an applicant's site on its neighbours. We are also regularly asked to assess the light levels within new developments, so the benefit of the proposals for future occupants can be better understood.

Our client base is broad and we work with developers, authorities and private individuals in order to effectively manage their neighbourly matters concerns. We are consistently rated 'excellent' by our clients and offer clear and concise advice in relation to this complicated area of surveying practice.

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Section 1: Overview

There is no national planning policy relating to daylight and sunlight and overshadowing impacts. However, general guidance is given on the need to protect existing amenity as set out in the National Planning Policy Framework.

The 2011 (2nd Edition) Building Research Establishment's 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' (The BRE Guide) and BS8206-2:2008 enable an objective assessment to be made as to whether the proposals will adversely affect the daylight and sunlight reaching existing habitable rooms and relevant external amenity spaces.

When considering the BRE Guide's requirements, it is important to be aware that the Guide is not a set of planning rules, which are either passed or failed. Numerical values are given and used, not as proscriptive or prescriptive values but as a way of comparing situations and arriving at a balanced judgement. The BRE Guide is conceived as an aid to planning officers and designers by giving objective means of making assessments. The values given as desirable in the BRE Guide may not be obtainable in dense urban areas where the grain of development is tight while higher values might well be desirable in suburban or rural areas where the grain is contrastingly open.

The need to apply daylight and sunlight advice flexibly was reinforced in the recent National Planning Policy Framework (NPPF) draft revisions (March 2018, at para 123 [c]).

Section 2: Executive Summary

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

The need to apply daylight and sunlight advice flexibly was repeated in the recent National Planning Policy Framework (NPPF) draft revisions.

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 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 central London, a higher degree of obstruction may be unavoidable. We would therefore consider strict compliance with the BRE Guide to be an unreasonable expectation in this instance.

In this case, we have been asked to review the effect that the proposed additional hotel mass has on several surrounding buildings (see Fig. 02). Our results show that most of the neighbouring habitable windows and rooms comfortably fulfil the planning guidance. Where there are transgressions, these are frequently marginal or relate to rooms we believe are not habitable. The results for external amenity spaces are also positive, with only one neighbouring transgression. It is also notable that the large balconies of 3 Queen Square significantly 'self-shade' the level beneath.

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, and particularly given the dense urban context, the proposals accord with the intent of the planning guidance in this case.

Section 3: Introduction

The purpose of this report is to assess the impact of the proposed extension of the Mercure London Bloomsbury Hotel, London, WC1B 5AF has on the daylight and sunlight of several surrounding buildings (see Fig. 02).

This report considers the daylight and sunlight effects of the proposed development against the criteria contained in the following guides:

- Site Layout Planning for Daylight & Sunlight (SLPDS / BRE Guide), PJ Littlefair 2011 published by the BRE (Building Research Establishment). The tests prescribed by the BRE Guide are approved by the Department of the Environment and prescribe a clear methodology and the provision of comprehensive testing.

- BS 8206-2:2008 Code of practice for skylighting.

Compliance with the BRE Guide is not a planning criterion and the foreword to the Guide is careful to make this point. There are therefore no minimum mandatory requirements for sunlight & skylight in Building Regulations for England & Wales but the guidance set out in BRE Guide is widely accepted as the approved methodology when calculating daylight and sunlight.

It is worthy of note that BRE Guide 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 the new guidance document.

Section 4: Description of the Development

The scheme comprises of an additional storey within the roof void (amending the roof as require), a full height infill extension in place of an existing fire escape and an extension to the flat roof area within the courtyard.

The property is located on the corner of the north-east side of Southampton Row and north of Cosmo Place. The building is situated amongst a number of other similarly sized properties adjoining both roads.

Fig. 01 – Image taken from Southampton Row (Cosmo Place is visible to the right of the photograph)

Section 5: 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)

Sun on the ground (sunlight and external amenity 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:

- Russell Mansions, 144-148 Southampton Row, London, WC1B 5AJ
- The Swan (public house)
- Cosmoba
- 2 Queen Square
- 3 Queen Square
- Unidentified building 01 (on Cosmo Place)

The proposed assessment is based on the following drawings[1], provided by Dexter Moren Associates:

- A 100 001 – Proposed Ground Floor
- A 100 003 – Proposed first Floor
- A 100 004 – Proposed Second Floor
- A 100 005 – Proposed Third Floor
- A 100 006 – Proposed Fourth Floor
- A 100 007 – Proposed Fifth Floor
- A 100 008 – Proposed Sixth Floor
- A 100 009 – Proposed Seventh Floor
- A 110 001 – F2 Proposed Southampton Row Elevation
- A 110 001 – Proposed Elevations
- A 110 004 F0 – Proposed North Elevation
- A 120 001 – Proposed Sections

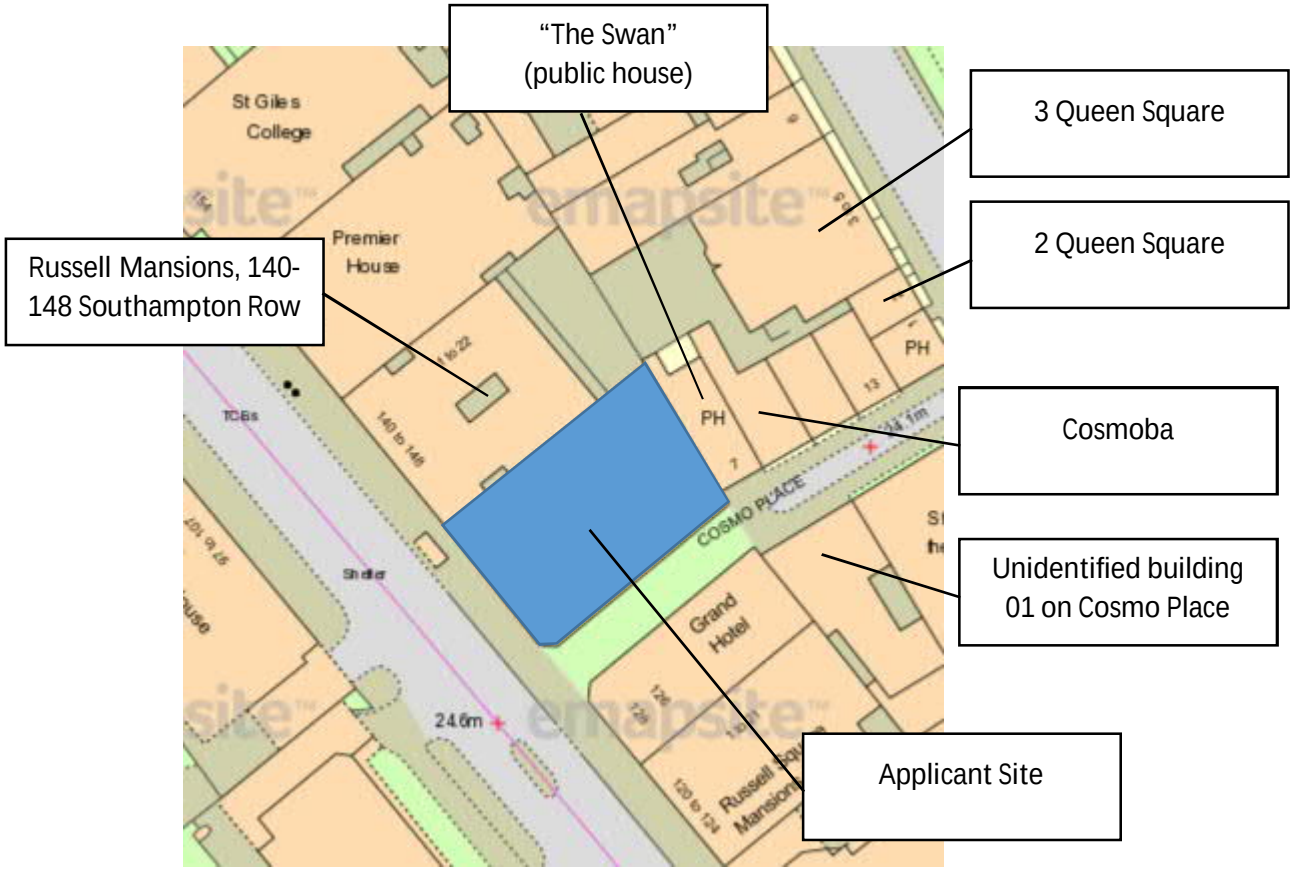


Fig. 02 – Site Plan

[1] Of those drawings changing the envelope of the building.

Section 6: Daylight

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 Guide recommends that where the VSC value as proposed is below 27 percent, then the amount by which it is reduced (if any) should be checked and if the reduction is greater than 20 percent or one fifth of its former value, then the reduction is likely to be "noticeable" to the average occupant.

If the VSC is more than 27 percent then enough light would still reach the window of the neighbouring building. However if the VSC is less than 27 percent as well as less than 0.8 times (one fifth) its former value the occupants will notice the reduction in the amount of skylight.

VSC Results

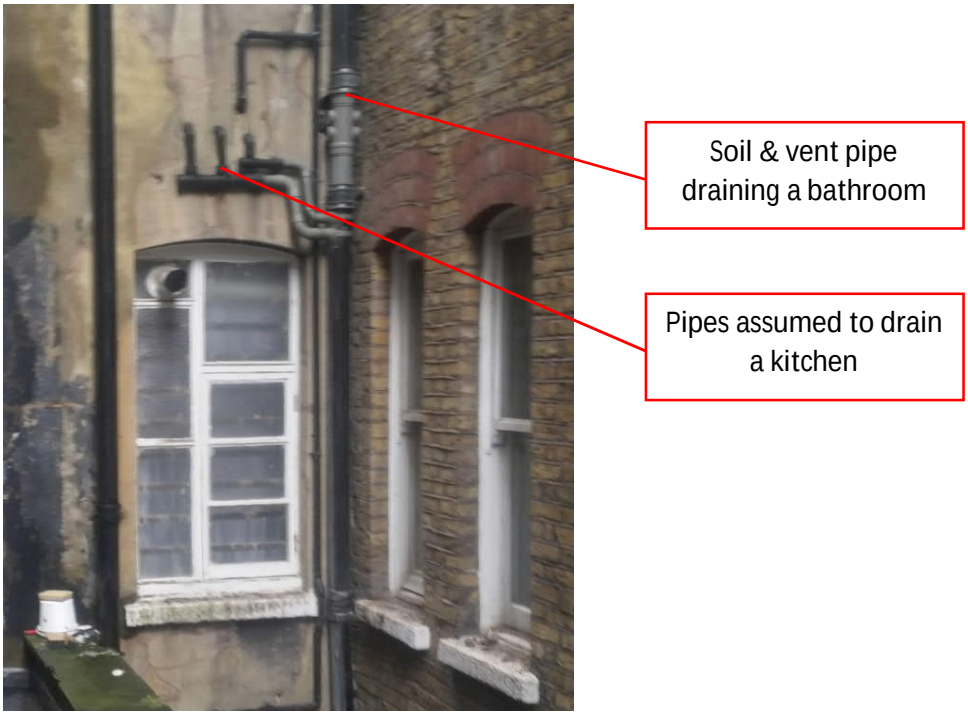
Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide. Detailed results are in Appendix A.

- 140-148 Southampton Row – using the arrangement of external pipes (see Fig. 03 & 04) and the information available on marketing sites, we believe that on levels 1 – 5 room R1 is a kitchen, R2 is a bathroom, R3 is a living room and R4 is unknown. On level six, we are unsure of the nature of the two rooms assessed, but have considered them habitable for the purposes of this assessment.

  It should be noted that the BRE guidance would regard the flank neighbouring windows that are the subject of this report as being built close to the boundary and therefore should not be considered in quite the same way as windows built a reasonable distance from a boundary.

  Nonetheless, the results show that the three habitable rooms (the unknown room has been included within this category for completeness) on levels first and second all pass the VSC test. On third, fourth and fifth floors, the results show that room R1/W1 falls sort of the BRE guidance. On the fifth floor R3/W4

falls marginally short of the BRE guidance (0.01 lower than the recommendation of 0.8)[2]. All other windows pass.



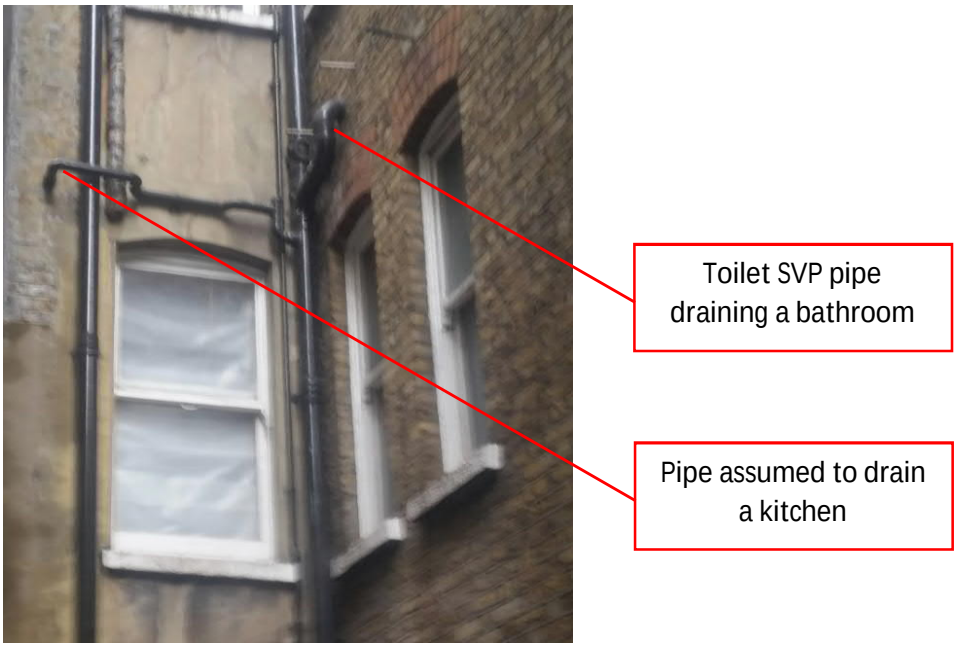


Fig. 03 & 04 – Images of Russell Mansions adjacent the applicant site

[2] Paragraph 2.2.6 of the BRE guide states that where a room has "two or more windows of equal size, the mean of the VSCs may be taken". In this instance the mean comfortably passes (on the 5th floor this is 0.92 which is a clear pass).

- 2 Queen Square – all windows pass.
- 3 Queen Square – all windows pass.
- Unidentified Building 01 – all windows pass.
- The Swan – we do not believe that this property requires assessment due to the commercial nature of the building and because it does not have any windows facing the proposed mass[3] (see Fig 05 & 06 below). However, all those windows that can reasonably be established very comfortably pass the BRE tests.
- Cosmoba – the rear windows that could be established all comfortably pass.

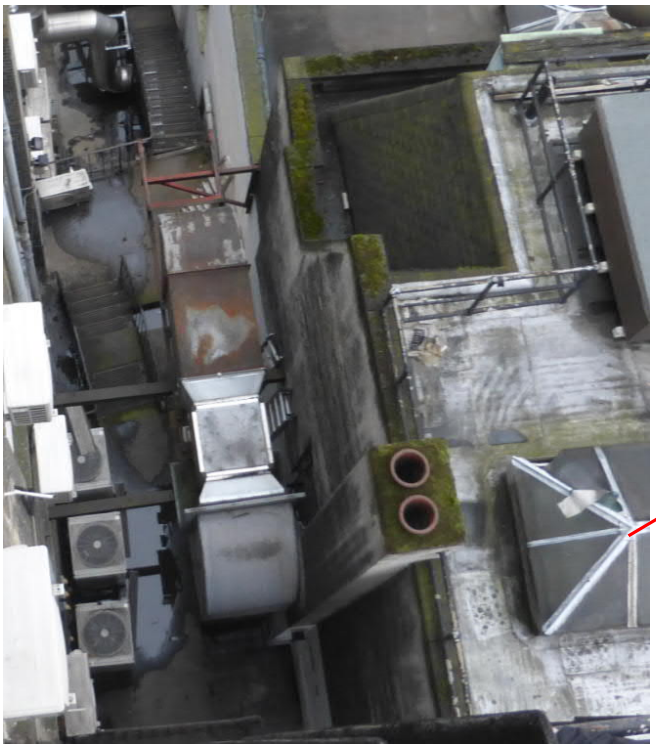


Fig. 05 – Rear flank wall of The Swan public house (no windows)

[3] The skylight visible in Fig. 05 will continue to receive a significant amount of light due to its vertical nature.

Fig. 06 – Front flank wall of The Swan public house (confirming no windows)

Fig. 07 – Rear of The Swan (public house)

Rear windows within main property tested

Rear addition/outrigger extension has a very limited view of the proposed mass & cannot be easily determined from online sources or site inspection

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.

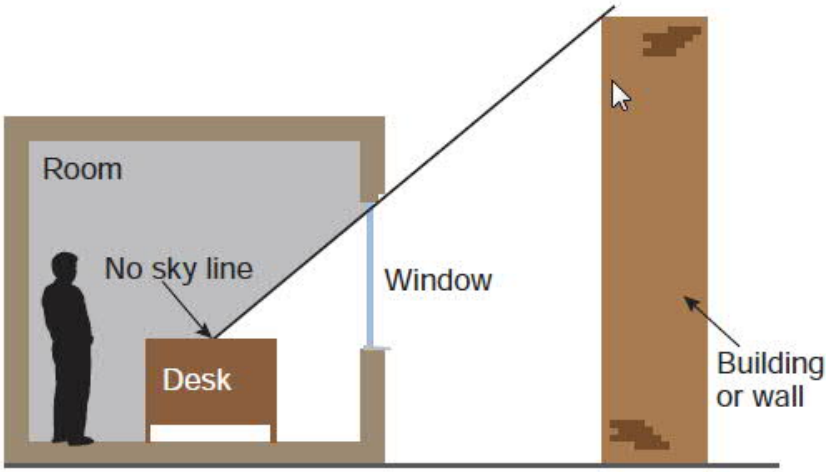


Fig. 08 Excerpt taken from the4 BRE 209 Guide

Following the construction of a new development, if 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 average occupant.

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

Daylight Distribution Results

Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide. Detailed results are in Appendix A.

- 140 – 148 Southampton Row – our results show that there will be two relatively minor transgressions (Fourth R1 and R2), but we believe that only one of these is a habitable room (R2).

- 2 Queen Square – there will be 3 (relatively minor) transgressions (Ground R1, First R1 and Second R1). Due to the 'staggered' nature of the windows, these spaces are likely to be supplying a staircase, and therefore non-habitable rooms.

- 3 Queen Square – all rooms pass.

- Unidentified building 01 – all rooms pass.

- The Swan (public house) – We tested two rooms to the rear of the property (Second R1 & Third R1) that we believe may be in residential use. There was no discernible effect on these rooms. Because the proposed mass is not parallel with the face of the window, but off-set and perpendicular, we would not expect any negative effect as a consequence of the proposed construction and the front of the property cannot significantly 'see' the new massing. This is confirmed by the above VSC results.

- Cosmoba – due to inspection restrictions, it was only possible to test one space (Third R1) to the rear of the property. There is no discernible effect on this space as a consequence of the applicant's mass.

Since The Swan and Cosmoba are the nearest Cosmo Place properties to the proposed mass, and there is little discernible effect, we do not believe further testing of more distant properties on Cosmo Place is necessary.

Section 7: 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 degrees 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 percent of the total annual probable sunshine hours, to include a minimum of 5 percent 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 percent of the total annual probable sunshine hours, to include a minimum of 5 percent 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 degrees of due north so windows that fall into this category have not been considered for sunlight calculations.

Available Sunlight Hours Results

Our assessment was undertaken in accordance with the guidance and methodology contained in the 2011 BRE Guide.

- 140 – 148 Southampton Row – our results show that all windows are either orientated north or pass from level one to three. On level four, there is an annual transgression (R3/W4) on the bay window unit adjacent the proposed works, but the winter test passes, and the room benefits from three windows. One of the two (non-habitable) bathroom windows (W3) is also reduced below the target level. On level five, R3/W4 (also a bay window unit) fails the annual and winter test (as do the non-habitable / bathroom windows). All other windows pass.

- 2 Queen Square – all windows pass.

- 3 Queen Square – on the ground floor there are two annual APSH transgressions. However, it is believed that the ground floor is in commercial use and likely that the room these windows supply is also lit form a number of other windows. There is a further (winter) transgression on the second floor

(W2). From our analysis of the technical Waldram diagram, it is clear that the effect on this property is slight, and significantly exasperated by the overhang of the balcony above this window (see Fig. 09). On the third and fourth floors W2 also falls short of the winter test guidance. On the third and fourth floors, windows W3-W4 also fall short of the winter guidance, as does W5 on the fourth floor.

Fig. 09 – 3 Queen's Square (demonstrating 'self-shading' of balcony windows)

- Unidentified Building 01 – all windows are orientated north.

- The Swan – the first floor windows W2 and W3 results are winter hour transgressions, but the windows are believed to be commercial and the effect is in practice slight due to the very low existing result. There is a further winter transgression on the third floor (W2) and one facet of the third floor skylight (facet W9) does not pass the annual or winter tests. In the case of the latter transgression, it is important to note that W10 currently receives a relatively significant amount of APSH, and continues to do so after the proposed mass has been constructed.

- Cosmoba – the tested windows are orientated north.

Section 8: Amenity Space

The BRE guidance suggests that at least 50 percent of any garden or open space should receive no less than 2 hours of direct sun on the spring equinox (approximately March 21st).

Open spaces would normally include:

- Residential gardens, usually the main back garden of a house
- Parks and playing fields
- Children's playgrounds
- Outdoor swimming 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

Where the sun on the ground on the 21st March is less than 0.8 times (one fifth) its value before the proposed mass was introduced, the BRE guide considers this a transgression.

Amenity Space Results

There are relatively few adjacent amenity spaces requiring assessment, but there are several relatively distant areas within 2 and 3 Queen Square:

- 2 Queen Square – the 4th floor terrace passes the BRE test.

- 3 Queen Square – there are balconies to the rear of this property on levels 1-5, and a larger rooftop terrace. All of these spaces pass the BRE criteria with the exception of first floor terrace A1. It is important to note (as shown in Fig. 09) that the balconies above significantly 'self-shade' those below and therefore in practice the effect is in practice slight.

Appendix A

Results:

Vertical Sky Component (neighbouring properties),

Available Sunlight Hours (neighbouring properties):

Mercure Bloomsbury - Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
140 - 148 Southampton Row															
First	R1	Residential	Kitchen	W1	Existing	4.89	0.91	YES	50°N		*North*			*North*	
					Proposed	4.49									
	R2	Residential	Bathroom	W2	Existing	1.49	0.72	NO	141°	0	0.00	YES	0	0.00	YES
					Proposed	1.08				0			0		
				W3	Existing	1.78	0.81	YES	141°	0	0.00	YES	0	0.00	YES
					Proposed	1.45				1			0		
	R3	Residential	Living Room	W4	Existing	15.20	0.98	YES	97°	6	1.00	YES	0	0.00	YES
					Proposed	14.94				6			0		
				W5	Existing	26.55	0.99	YES	50°N		*North*			*North*	
					Proposed	26.45									
				W6	Existing	24.03	1.00	YES	4°N		*North*			*North*	
					Proposed	24.03									
	R4	Residential	Unknown	W7	Existing	0.60	0.80	YES	140°	0	0.00	YES	0	0.00	YES
					Proposed	0.48				0			0		
Second	R1	Residential	Kitchen	W1	Existing	6.14	0.85	YES	50°N		*North*			*North*	
					Proposed	5.27									
	R2	Residential	Bathroom	W2	Existing	2.36	0.60	NO	141°	0	0.00	YES	0	0.00	YES
					Proposed	1.43				0			0		
				W3	Existing	2.73	0.71	NO	141°	0	0.00	YES	0	0.00	YES
					Proposed	1.95				1			0		
	R3	Residential	Living Room	W4	Existing	18.12	0.96	YES	97°	10	1.00	YES	0	0.00	YES
					Proposed	17.51				10			0		
				W5	Existing	30.17	0.99	YES	50°N		*North*			*North*	
					Proposed	29.98									
				W6	Existing	26.62	1.00	YES	4°N		*North*			*North*	
					Proposed	26.62									
	R4	Residential	Unknown	W7	Existing	0.87	0.87	YES	140°	0	0.00	YES	0	0.00	YES
					Proposed	0.76				0			0		
Third	R1	Residential	Kitchen	W1	Existing	8.50	0.74	NO	50°N		*North*			*North*	
					Proposed	6.29									
	R2	Residential	Bathroom	W2	Existing	4.40	0.46	NO	141°	0	0.00	YES	0	0.00	YES
					Proposed	2.06				0			0		
				W3	Existing	5.10	0.55	NO	141°	1	1.00	YES	0	0.00	YES
					Proposed	2.84				1			0		
	R3	Residential	Living Room	W4	Existing	21.69	0.92	YES	97°	11	0.90	YES	0	0.00	YES
					Proposed	20.15				10			0		
				W5	Existing	33.58	0.98	YES	50°N		*North*			*North*	
					Proposed	33.18									
				W6	Existing	28.65	1.00	YES	4°N		*North*			*North*	
					Proposed	28.65									
	R4	Residential	Unknown	W7	Existing	1.38	0.94	YES	140°	0	0.00	YES	0	0.00	YES
					Proposed	1.31				0			0		
Fourth	R1	Residential	Kitchen	W1	Existing	12.90	0.61	NO	50°N		*North*			*North*	
					Proposed	7.97									
	R2	Residential	Bathroom	W2	Existing	9.72	0.35	NO	141°	5	0.20	YES	0	0.00	YES
					Proposed	3.42				1			0		
				W3	Existing	11.35	0.40	NO	141°	10	0.20	NO	0	0.00	YES
					Proposed	4.61				2			0		
	R3	Residential	Living Room	W4	Existing	26.73	0.84	YES	97°	22	0.45	NO	0	0.00	YES
					Proposed	22.50				10			0		
				W5	Existing	36.38	0.97	YES	50°N		*North*			*North*	
					Proposed	35.55									
				W6	Existing	30.05	1.00	YES	4°N		*North*			*North*	
					Proposed	30.05									

Mercure Bloomsbury - Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
	R4	Residential	Unknown	W7	Existing	2.66	1.04	YES	140°	1	1.00	YES	0	0.00	YES
					Proposed	2.79				1			0		
Fifth	R1	Residential	Kitchen	W1	Existing	20.43	0.59	NO	50°N		*North*			*North*	
					Proposed	12.20									
	R2	Residential	Bathroom	W2	Existing	18.91	0.48	NO	141°	34	0.26	NO	2	1.00	YES
					Proposed	9.19				9			2		
				W3	Existing	22.15	0.50	NO	141°	46	0.39	NO	1	1.00	YES
					Proposed	11.11				18			1		
	R3	Residential	Living Room	W4	Existing	32.37	0.79	NO	97°	31	0.48	NO	3	0.00	NO
					Proposed	25.67				15			0		
				W5	Existing	38.63	0.97	YES	50°N		*North*			*North*	
					Proposed	37.52									
				W6	Existing	32.86	1.00	YES	4°N		*North*			*North*	
					Proposed	32.86									
	R4	Residential	Unknown	W7	Existing	7.63	1.07	YES	140°	9	1.11	YES	0	0.00	YES
					Proposed	8.24				10			0		
Sixth	R1	Residential	Unknown	W1	Existing	25.70	1.00	YES	50°N		*North*			*North*	
					Proposed	25.73									
	R2	Residential	Unknown	W2	Existing	14.48	1.04	YES	140°	24	1.04	YES	0	0.00	YES
					Proposed	15.17				25			0		
2 Queen Square															
Ground	R1	Residential	Unknown	W1	Existing	5.11	0.89	YES	240°	8	0.87	YES	0	0.00	YES
					Proposed	4.58				7			0		
First	R1	Residential	Unknown	W1	Existing	6.68	0.90	YES	240°	11	1.00	YES	0	0.00	YES
					Proposed	6.05				11			0		
	R2	Residential	Unknown	W2	Existing	8.01	0.91	YES	240°	8	1.00	YES	0	0.00	YES
					Proposed	7.30				8			0		
Second	R1	Residential	Unknown	W1	Existing	9.50	0.92	YES	240°	24	0.91	YES	1	1.00	YES
					Proposed	8.81				22			1		
	R2	Residential	Unknown	W2	Existing	12.74	0.94	YES	240°	23	0.95	YES	0	0.00	YES
					Proposed	12.00				22			0		
Third	R1	Residential	Unknown	W1	Existing	13.59	0.94	YES	240°	36	1.00	YES	7	1.00	YES
					Proposed	12.88				36			7		
	R2	Residential	Unknown	W2	Existing	18.28	0.95	YES	240°	42	0.95	YES	8	1.00	YES
					Proposed	17.51				40			8		
Fourth	R1	Residential	Unknown	W1	Existing	20.16	0.97	YES	240°	48	0.97	YES	16	0.93	YES
					Proposed	19.75				47			15		
	R2	Residential	Unknown	W2	Existing	23.43	0.97	YES	239°	48	0.97	YES	13	1.00	YES
					Proposed	22.82				47			13		
3 Queen Square															
Ground	R1	Commercial	Unknown	W1	Existing	14.11	0.93	YES	239°	20	0.80	YES	0	0.00	YES
					Proposed	13.25				16			0		
	No-Room			W2	Existing	6.71	0.91	YES	150°	20	0.70	NO	0	0.00	YES
					Proposed	6.12				14			0		
	R1	Commercial	Unknown	W3	Existing	13.74	0.93	YES	239°	20	0.65	NO	0	0.00	YES
					Proposed	12.89				13			0		
				W4	Existing	13.44	0.93	YES	239°	16	0.81	YES	0	0.00	YES

Mercure Bloomsbury - Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
					Proposed	12.61				13			0		
				W5	Existing	13.07	0.93	YES	239°	15	0.73	YES	0	0.00	YES
					Proposed	12.27				11			0		
				W6	Existing	12.64	0.93	YES	239°	11	0.63	YES	0	0.00	YES
					Proposed	11.79				7			0		
				W7	Existing	12.16	0.92	YES	239°	10	0.70	YES	0	0.00	YES
					Proposed	11.27				7			0		
				W8	Existing	10.01	0.91	YES	240°	15	0.80	YES	0	0.00	YES
					Proposed	9.13				12			0		
First	R1	Residential	Unknown	W1	Existing	12.76	0.93	YES	240°	35	0.94	YES	6	0.83	YES
					Proposed	11.94				33			5		
				W2	Existing	0.04	1.00	YES	240°	0	0.00	YES	0	0.00	YES
					Proposed	0.04				0			0		
	R2	Residential	Unknown	W3	Existing	0.04	1.00	YES	240°	0	0.00	YES	0	0.00	YES
					Proposed	0.04				0			0		
				W4	Existing	0.04	1.00	YES	240°	0	0.00	YES	0	0.00	YES
					Proposed	0.04				0			0		
				W5	Existing	0.04	1.00	YES	240°	0	0.00	YES	0	0.00	YES
					Proposed	0.04				0			0		
				W6	Existing	1.59	0.89	YES	240°	3	1.00	YES	1	1.00	YES
					Proposed	1.42				3			1		
				W7	Existing	9.15	0.88	YES	240°	25	0.92	YES	1	1.00	YES
					Proposed	8.11				23			1		
				W8	Existing	13.53	0.91	YES	240°	27	0.88	YES	0	0.00	YES
					Proposed	12.43				24			0		
Second	R1	Residential	Unknown	W1	Existing	14.96	0.94	YES	240°	41	0.95	YES	9	0.88	YES
					Proposed	14.18				39			8		
				W2	Existing	0.57	0.84	YES	240°	2	0.50	YES	1	0.00	NO
					Proposed	0.48				1			0		
	R2	Residential	Unknown	W3	Existing	0.69	0.86	YES	240°	2	1.00	YES	0	0.00	YES
					Proposed	0.60				2			0		
				W4	Existing	0.74	0.83	YES	240°	2	1.00	YES	0	0.00	YES
					Proposed	0.62				2			0		
				W5	Existing	1.11	0.88	YES	240°	3	1.00	YES	2	1.00	YES
					Proposed	0.98				3			2		
				W6	Existing	3.00	0.87	YES	240°	6	1.00	YES	3	1.00	YES
					Proposed	2.63				6			3		
				W7	Existing	11.79	0.90	YES	240°	32	0.96	YES	5	1.00	YES
					Proposed	10.66				31			5		
				W8	Existing	16.96	0.92	YES	240°	37	0.94	YES	5	1.00	YES
					Proposed	15.75				35			5		
Third	R1	Residential	Unknown	W1	Existing	17.17	0.96	YES	240°	47	1.00	YES	14	1.00	YES
					Proposed	16.57				47			14		
				W2	Existing	1.64	0.80	YES	240°	2	0.50	YES	1	0.00	NO
					Proposed	1.32				1			0		
	R2	Residential	Unknown	W3	Existing	2.12	0.82	YES	240°	5	0.80	YES	3	0.66	NO
					Proposed	1.75				4			2		
				W4	Existing	2.40	0.80	YES	240°	6	0.83	YES	3	0.66	NO
					Proposed	1.94				5			2		
				W5	Existing	2.95	0.82	YES	240°	8	0.87	YES	5	0.80	YES
					Proposed	2.43				7			4		
				W6	Existing	5.10	0.84	YES	240°	10	0.90	YES	5	0.80	YES
					Proposed	4.31				9			4		
				W7	Existing	14.68	0.92	YES	240°	41	0.92	YES	11	0.90	YES
					Proposed	13.64				38			10		
				W8	Existing	20.54	0.94	YES	240°	47	0.89	YES	12	0.83	YES
					Proposed	19.39				42			10		
Fourth	R1	Residential	Unknown	W1	Existing	19.55	0.98	YES	240°	50	0.98	YES	16	0.93	YES
					Proposed	19.19				49			15		
				W2	Existing	2.93	0.91	YES	240°	4	0.75	YES	2	0.50	NO
					Proposed	2.67				3			1		
	R2	Residential	Unknown	W3	Existing	3.83	0.92	YES	240°	7	0.85	YES	4	0.75	NO
					Proposed	3.53				6			3		
				W4	Existing	4.20	0.91	YES	240°	8	0.87	YES	4	0.75	NO
					Proposed	3.84				7			3		
				W5	Existing	4.84	0.92	YES	240°	10	0.90	YES	6	0.83	YES
					Proposed	4.49				9			5		
				W6	Existing	7.29	0.90	YES	240°	13	1.00	YES	7	1.00	YES
					Proposed	6.63				13			7		

Mercure Bloomsbury - Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
				W7	Existing	18.01	0.95	YES	240°	45	0.97	YES	15	0.93	YES
					Proposed	17.25				44			14		
				W8	Existing	25.22	0.96	YES	240°	53	0.98	YES	16	0.93	YES
					Proposed	24.36				52			15		
Fifth	R1	Residential	Unknown	W1	Existing	22.74	0.99	YES	240°	51	0.98	YES	17	0.94	YES
					Proposed	22.62				50			16		
				W2	Existing	22.66	0.99	YES	240°	52	0.98	YES	20	0.95	YES
					Proposed	22.53				51			19		
	R2	Residential	Unknown	W3	Existing	28.49	0.99	YES	240°	56	1.00	YES	19	1.00	YES
					Proposed	28.33				56			19		
				W4	Existing	30.05	0.99	YES	240°	57	1.01	YES	19	1.05	YES
					Proposed	29.84				58			20		
				W5	Existing	30.72	0.99	YES	240°	58	1.01	YES	19	1.05	YES
					Proposed	30.46				59			20		
				W6	Existing	31.15	0.98	YES	240°	58	0.98	YES	19	0.94	YES
					Proposed	30.81				57			18		
				W7	Existing	31.41	0.98	YES	240°	57	0.98	YES	18	0.94	YES
					Proposed	31.00				56			17		
				W8	Existing	31.63	0.98	YES	240°	59	1.00	YES	19	1.00	YES
					Proposed	31.16				59			19		
Unidentified Building 01															
Ground	R1	Residential	Unknown	W1	Existing	12.45	0.97	YES	328°N		*North*			*North*	
					Proposed	12.12									
	R2	Residential	Unknown	W2	Existing	11.32	0.96	YES	328°N		*North*			*North*	
					Proposed	10.89									
				W3	Existing	10.45	0.95	YES	328°N		*North*			*North*	
					Proposed	9.96									
	R3	Residential	Unknown	W4	Existing	8.98	0.92	YES	328°N		*North*			*North*	
					Proposed	8.32									
				W5	Existing	9.01	0.92	YES	328°N		*North*			*North*	
					Proposed	8.32									
				W6	Existing	8.63	0.90	YES	328°N		*North*			*North*	
					Proposed	7.83									
First	R1	Residential	Unknown	W1	Existing	19.34	0.96	YES	328°N		*North*			*North*	
					Proposed	18.70									
	R2	Residential	Unknown	W2	Existing	17.49	0.94	YES	328°N		*North*			*North*	
					Proposed	16.61									
	R3	Residential	Unknown	W3	Existing	14.91	0.92	YES	328°N		*North*			*North*	
					Proposed	13.80									
Second	R1	Residential	Unknown	W1	Existing	25.15	0.95	YES	328°N		*North*			*North*	
					Proposed	24.13									
	R2	Residential	Unknown	W2	Existing	23.17	0.93	YES	328°N		*North*			*North*	
					Proposed	21.72									
	R3	Residential	Unknown	W3	Existing	20.33	0.90	YES	328°N		*North*			*North*	
					Proposed	18.49									
Third	R1	Residential	Unknown	W1	Existing	28.24	0.96	YES	328°N		*North*			*North*	
					Proposed	27.38									
	R2	Residential	Unknown	W2	Existing	26.78	0.95	YES	328°N		*North*			*North*	
					Proposed	25.54									
				W3	Existing	27.72	0.94	YES	328°N		*North*			*North*	
					Proposed	26.28									
	R3	Residential	Unknown	W4	Existing	23.68	0.91	YES	328°N		*North*			*North*	
					Proposed	21.61									

Mercure Bloomsbury - Vertical Sky Component (VSC) & Average Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Property Type	Room Use.	Window Ref.		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
Fourth	R1	Residential	Unknown	W1	Existing	59.71	0.99	YES	328°N		*North*			*North*	
					Proposed	59.14									
				W2	Existing	59.90	0.99	YES	328°N		*North*			*North*	
					Proposed	59.36									
	R2	Residential	Unknown	W3	Existing	22.14	0.96	YES	328°N		*North*			*North*	
					Proposed	21.28									
				W4	Existing	25.79	0.96	YES	328°N		*North*			*North*	
					Proposed	24.80									
	R3	Residential	Unknown	W5	Existing	22.50	0.93	YES	328°N		*North*			*North*	
					Proposed	20.99									
The Swan															
Ground	No-Room			W1	Existing	8.07	1.03	YES	150°	6	0.83	YES	0	0.00	YES
					Proposed	8.36				5			0		
First	No-Room			W1	Existing	10.84	0.95	YES	150°	17	1.00	YES	0	0.00	YES
					Proposed	10.31				17			0		
	No-Room			W2	Existing	11.83	0.99	YES	150°	22	0.95	YES	1	0.00	NO
					Proposed	11.82				21			0		
	No-Room			W3	Existing	12.56	0.99	YES	150°	26	0.92	YES	2	0.50	NO
					Proposed	12.55				24			1		
	No-Room			W4	Existing	57.06	0.96	YES	61°N		*North*			*North*	
					Proposed	54.98									
	No-Room			W5	Existing	62.53	0.95	YES	331°N		*North*			*North*	
					Proposed	59.50									
	No-Room			W6	Existing	45.31	0.89	YES	241° Inc	0	0.00	YES	0	0.00	YES
					Proposed	40.54				0			0		
	No-Room			W7	Existing	32.53	0.90	YES	151° Inc	0	0.00	YES	0	0.00	YES
					Proposed	29.50				0			0		
Second	No-Room			W1	Existing	14.33	0.96	YES	150°	30	0.93	YES	0	0.00	YES
					Proposed	13.89				28			0		
	No-Room			W2	Existing	16.27	1.00	YES	150°	37	0.97	YES	1	1.00	YES
					Proposed	16.27				36			1		
	R1	Residential	Unknown	W3	Existing	24.39	0.98	YES	329°N		*North*			*North*	
					Proposed	24.00									
				W4	Existing	24.47	0.98	YES	329°N		*North*			*North*	
					Proposed	24.01									
Third	No-Room			W1	Existing	19.14	0.96	YES	150°	41	0.95	YES	3	1.00	YES
					Proposed	18.51				39			3		
	No-Room			W2	Existing	20.60	0.99	YES	150°	45	0.97	YES	4	0.75	NO
					Proposed	20.59				44			3		
	No-Room			W3	Existing	21.74	0.99	YES	150°	50	1.00	YES	6	1.00	YES
					Proposed	21.73				50			6		
	R1	Residential	Unknown	W4	Existing	25.04	0.97	YES	330°N		*North*			*North*	
					Proposed	24.34									
				W5	Existing	26.99	0.96	YES	330°N		*North*			*North*	
					Proposed	26.06									
				W6	Existing	27.44	0.95	YES	330°N		*North*			*North*	
					Proposed	26.12									
				W7	Existing	78.84	0.91	YES	61°N		*North*			*North*	
					Proposed	71.75									
				W8	Existing	67.66	0.78	YES	331°N		*North*			*North*	
					Proposed	53.00									
				W9	Existing	46.90	0.62	YES	241° Inc	7	0.00	NO	2	0.00	NO
					Proposed	29.14				0			0		
				W10	Existing	61.06	0.82	YES	151° Inc	41	0.90	YES	6	1.00	YES
					Proposed	50.60				37			6		
Cosmoba															
Third	R1	Residential	Unknown	W1	Existing	23.19	0.99	YES	329°N		*North*			*North*	
					Proposed	22.96									
				W2	Existing	23.56	0.99	YES	329°N		*North*			*North*	
					Proposed	23.50									
				W3	Existing	21.37	1.00	YES	329°N		*North*			*North*	
					Proposed	21.37									

Daylight Distribution (neighbouring properties):

Mercure Bloomsbury - Daylight Distribution Results

Floor Ref.	Room Ref.	Property Type	Room Use.		Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
144 Southampton Row								
First	R1	Residential	Kitchen	Area m2	4.15	4.05		
				% of room	63%	61%	0.97	YES
	R2	Residential	Bathroom	Area m2	1.35	1.18		
				% of room	21%	18%	0.87	YES
	R3	Residential	Living Room	Area m2	14.27	14.27		
				% of room	99%	99%	0.99	YES
	R4	Residential	Unknown	Area m2	2.22	1.91		
				% of room	23%	20%	0.86	YES
Second	R1	Residential	Kitchen	Area m2	4.31	4.03		
				% of room	65%	61%	0.93	YES
	R2	Residential	Bathroom	Area m2	1.96	1.73		
				% of room	30%	26%	0.87	YES
	R3	Residential	Living Room	Area m2	14.28	14.28		
				% of room	99%	99%	0.99	YES
	R4	Residential	Unknown	Area m2	2.88	2.55		
				% of room	30%	27%	0.88	YES
Third	R1	Residential	Kitchen	Area m2	5.20	4.26		
				% of room	79%	65%	0.81	YES
	R2	Residential	Bathroom	Area m2	3.03	2.82		
				% of room	46%	43%	0.93	YES
	R3	Residential	Living Room	Area m2	14.28	14.28		
				% of room	99%	99%	0.99	YES
	R4	Residential	Unknown	Area m2	3.65	3.31		
				% of room	38%	35%	0.90	YES
Fourth	R1	Residential	Kitchen	Area m2	6.14	4.69		
				% of room	93%	71%	0.76	NO
	R2	Residential	Bathroom	Area m2	5.54	4.31		
				% of room	85%	66%	0.77	NO
	R3	Residential	Living Room	Area m2	14.33	14.28		
				% of room	99%	99%	0.99	YES
	R4	Residential	Unknown	Area m2	5.02	4.99		
				% of room	52%	52%	0.99	YES
Fifth	R1	Residential	Kitchen	Area m2	6.31	6.07		
				% of room	96%	92%	0.96	YES
	R2	Residential	Bathroom	Area m2	6.08	5.82		
				% of room	93%	89%	0.95	YES
	R3	Residential	Living Room	Area m2	14.35	14.31		
				% of room	100%	99%	0.99	YES
	R4	Residential	Unknown	Area m2	6.50	6.78		
				% of room	68%	71%	1.04	YES
Sixth	R1	Residential	Unknown	Area m2	7.25	6.72		
				% of room	97%	90%	0.92	YES
	R2	Residential	Unknown	Area m2	6.60	6.73		
				% of room	69%	70%	1.01	YES
2 Queen Square								
Ground	R1	Residential	Unknown	Area m2	3.47	2.62		
				% of room	59%	45%	0.75	NO
First	R1	Residential	Unknown	Area m2	2.79	2.05		
				% of room	48%	35%	0.73	NO
	R2	Residential	Unknown	Area m2	9.23	9.10		
				% of room	85%	84%	0.98	YES
Second	R1	Residential	Unknown	Area m2	3.83	2.74		
				% of room	66%	47%	0.71	NO
	R2	Residential	Unknown	Area m2	6.06	5.06		
				% of room	86%	72%	0.83	YES
Third	R1	Residential	Unknown	Area m2	5.46	4.54		
				% of room	94%	78%	0.83	YES
	R2	Residential	Unknown	Area m2	6.35	5.44		
				% of room	90%	77%	0.85	YES
Fourth	R1	Residential	Unknown	Area m2	10.02	10.02		
				% of room	100%	100%	1.00	YES
	R2	Residential	Unknown	Area m2	9.23	8.43		
				% of room	74%	68%	0.91	YES
3 Queen Square								
Ground	R1	Commercial	Unknown	Area m2	32.86	31.72		
				% of room	30%	29%	0.96	YES
First	R1	Residential	Unknown	Area m2	10.72	10.65		
				% of room	43%	43%	0.99	YES
	R2	Residential	Unknown	Area m2	18.15	17.16		
				% of room	56%	53%	0.94	YES
Second	R1	Residential	Unknown	Area m2	13.88	13.74		

Mercure Bloomsbury - Daylight Distribution Results								
Floor Ref.	Room Ref.	Property Type	Room Use.		Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
				% of room	56%	55%	0.99	YES
	R2	Residential	Unknown	Area m2	26.11	24.01		
				% of room	80%	74%	0.91	YES
Third	R1	Residential	Unknown	Area m2	18.07	17.86		
				% of room	73%	72%	0.98	YES
	R2	Residential	Unknown	Area m2	31.61	29.54		
				% of room	97%	91%	0.93	YES
Fourth	R1	Residential	Unknown	Area m2	24.73	24.73		
				% of room	100%	100%	0.99	YES
	R2	Residential	Unknown	Area m2	32.50	32.50		
				% of room	100%	100%	1.00	YES
Fifth	R1	Residential	Unknown	Area m2	24.84	24.84		
				% of room	100%	100%	0.99	YES
	R2	Residential	Unknown	Area m2	32.50	32.50		
				% of room	100%	100%	1.00	YES
Unidentified Building 01								
Ground	R1	Residential	Unknown	Area m2	7.25	7.24		
				% of room	63%	63%	0.99	YES
	R2	Residential	Unknown	Area m2	7.30	7.30		
				% of room	64%	64%	1.00	YES
	R3	Residential	Unknown	Area m2	6.92	6.03		
				% of room	60%	52%	0.87	YES
First	R1	Residential	Unknown	Area m2	11.46	11.46		
				% of room	100%	100%	1.00	YES
	R2	Residential	Unknown	Area m2	12.50	12.49		
				% of room	96%	96%	0.99	YES
	R3	Residential	Unknown	Area m2	10.40	9.45		
				% of room	83%	75%	0.90	YES
Second	R1	Residential	Unknown	Area m2	11.46	11.46		
				% of room	100%	100%	1.00	YES
	R2	Residential	Unknown	Area m2	13.00	13.00		
				% of room	100%	100%	1.00	YES
	R3	Residential	Unknown	Area m2	12.55	11.72		
				% of room	97%	91%	0.93	YES
Third	R1	Residential	Unknown	Area m2	11.32	10.84		
				% of room	92%	88%	0.95	YES
	R2	Residential	Unknown	Area m2	10.09	10.08		
				% of room	99%	99%	0.99	YES
	R3	Residential	Unknown	Area m2	9.01	8.45		
				% of room	77%	72%	0.93	YES
Fourth	R1	Residential	Unknown	Area m2	9.53	9.52		
				% of room	73%	73%	0.99	YES
	R2	Residential	Unknown	Area m2	10.35	10.35		
				% of room	99%	99%	1.00	YES
	R3	Residential	Unknown	Area m2	7.80	7.41		
				% of room	67%	63%	0.94	YES
The Swan								
Second	R1	Residential	Unknown	Area m2	21.13	21.09		
				% of room	93%	93%	0.99	YES
Third	R1	Residential	Unknown	Area m2	27.28	27.28		
				% of room	89%	89%	0.99	YES
Cosmoba								
Third	R1	Residential	Unknown	Area m2	16.95	16.95		
				% of room	99%	99%	1.00	YES

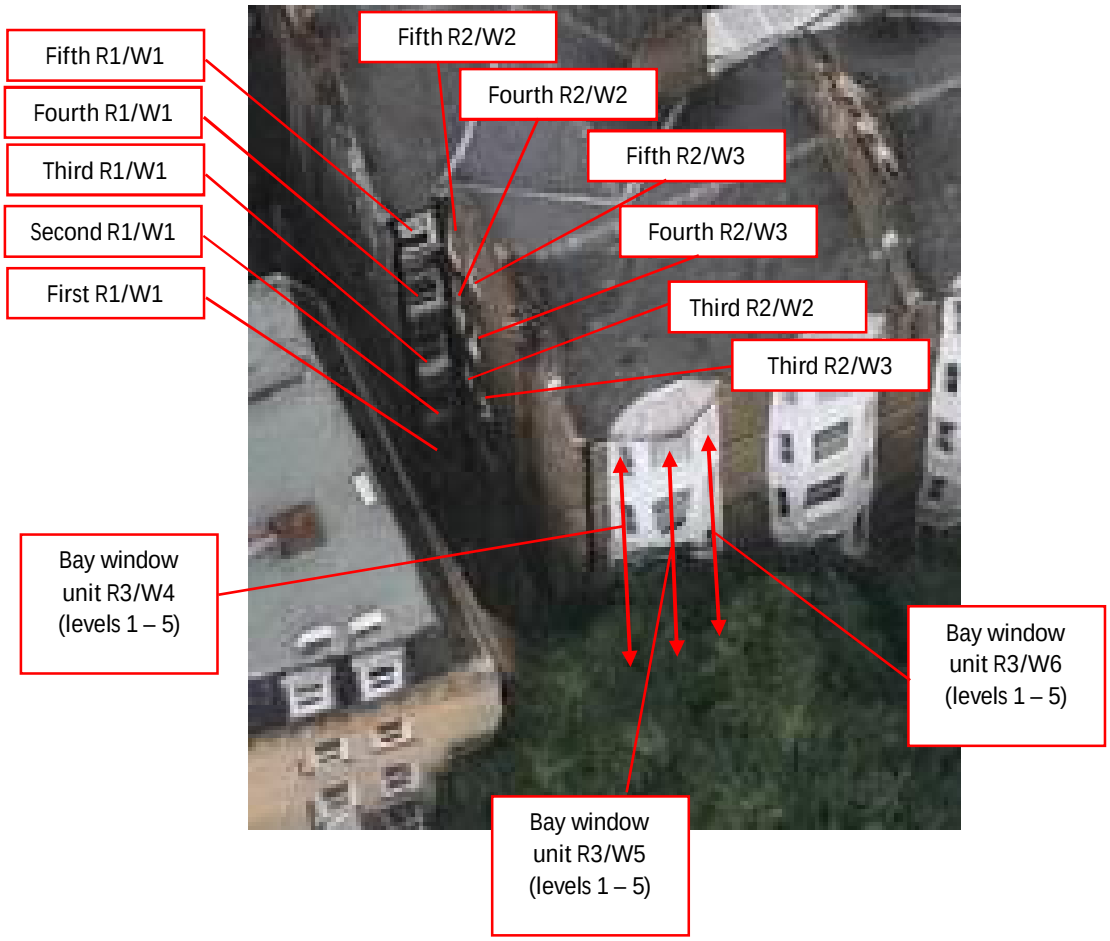
Amenity Spaces (neighbouring properties):

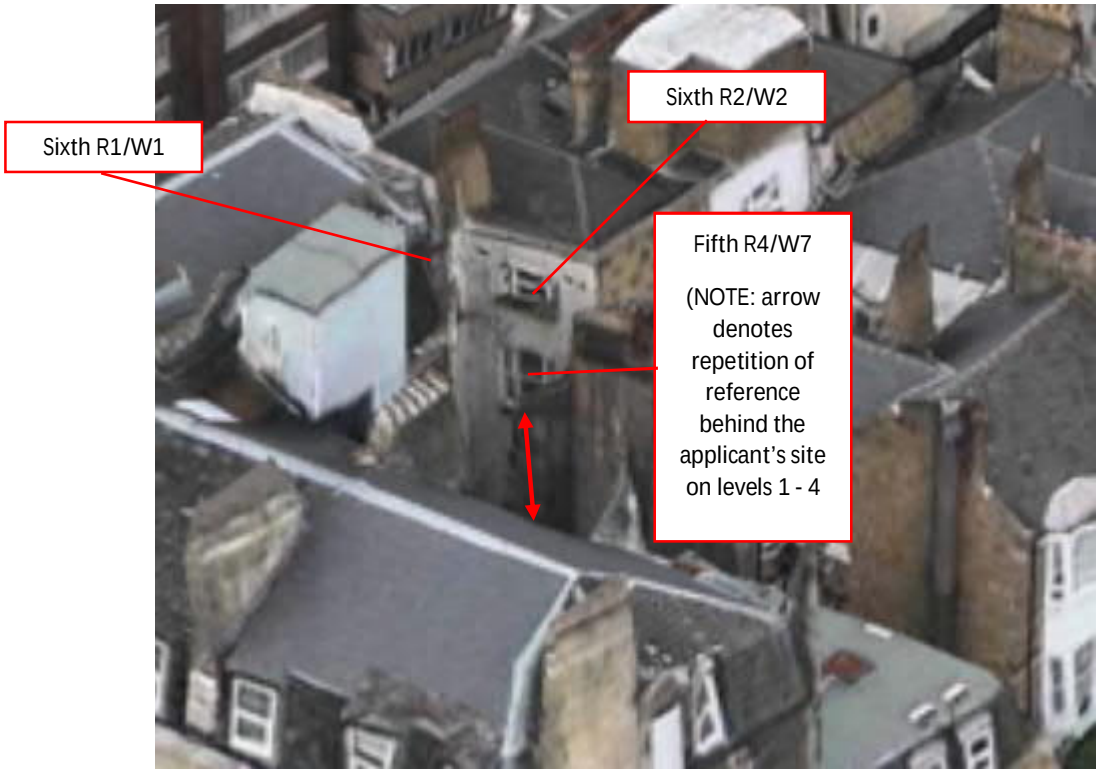
Mercure Bloomsbury - Neighbouring Amenity Test Results						
Floor Ref.	Amenity Ref.		Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
2 Queen Square						
Fourth	A1	Area m2 Percentage	15.80 92%	15.19 88%	0.96	YES
3 Queen Square						
First	A1	Area m2 Percentage	3.33 21%	1.16 7%	0.35	NO
Second	A1	Area m2 Percentage	13.47 84%	10.39 65%	0.77	YES
Third	A1	Area m2 Percentage	15.45 96%	15.05 94%	0.97	YES
Fourth	A1	Area m2 Percentage	15.73 98%	15.72 98%	1.00	YES
Fifth	A2	Area m2 Percentage	120.99 100%	120.99 100%	1.00	YES
Fifth	A1	Area m2 Percentage	15.85 99%	15.85 99%	1.00	YES

Appendix B

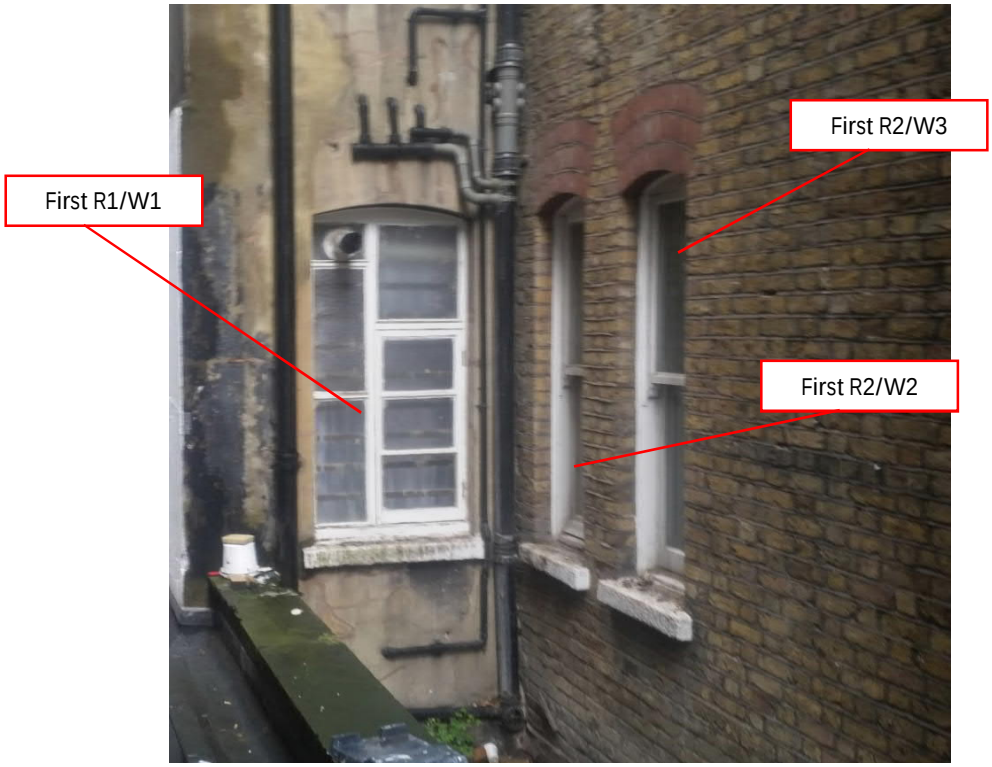
Window & Room References

140-144 Southampton Row:

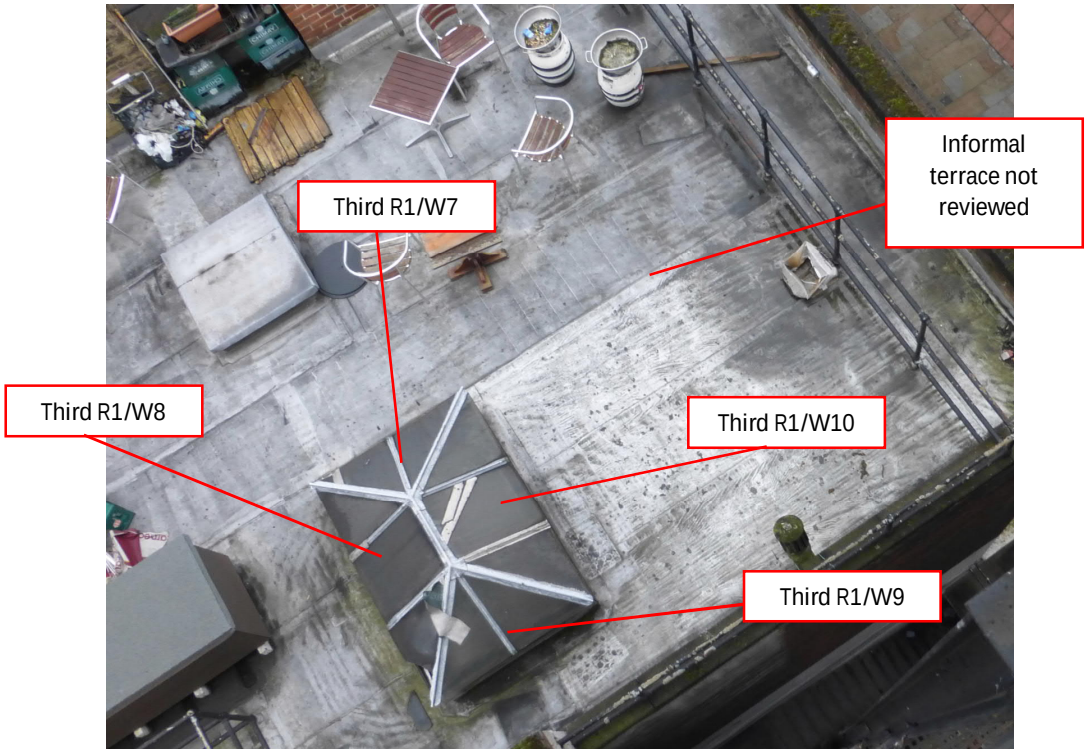


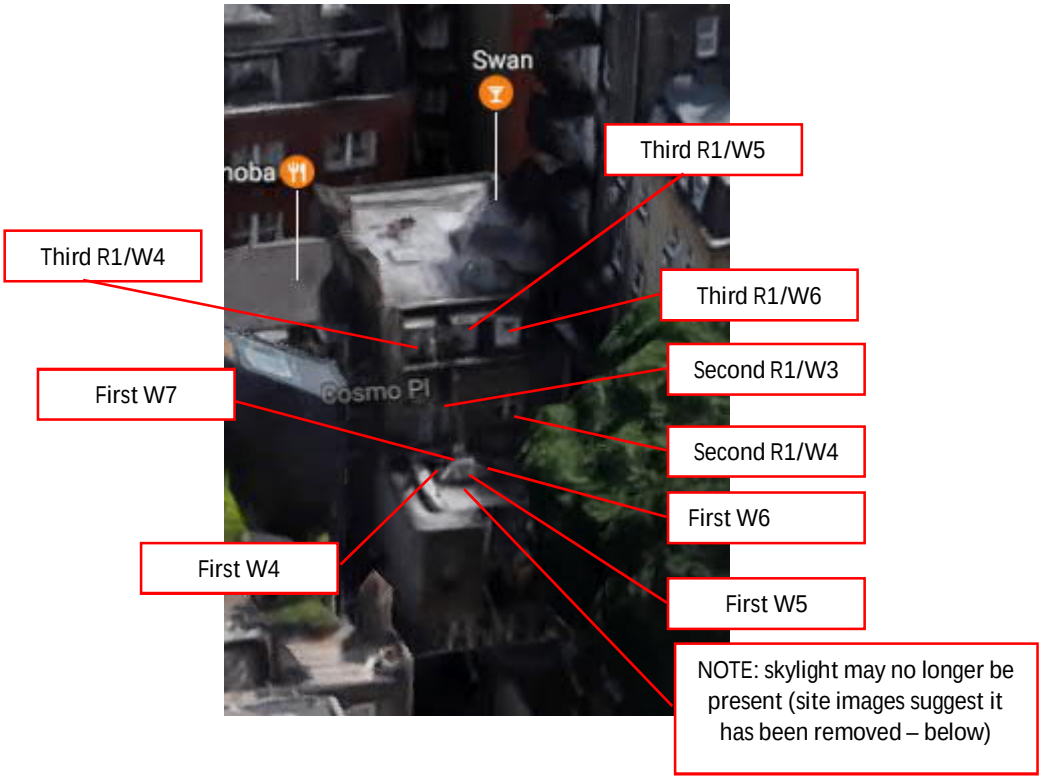

Sixth R1/W1
Sixth R2/W2
Fifth R4/W7
(NOTE: arrow denotes repetition of reference behind the applicant's site on levels 1 - 4

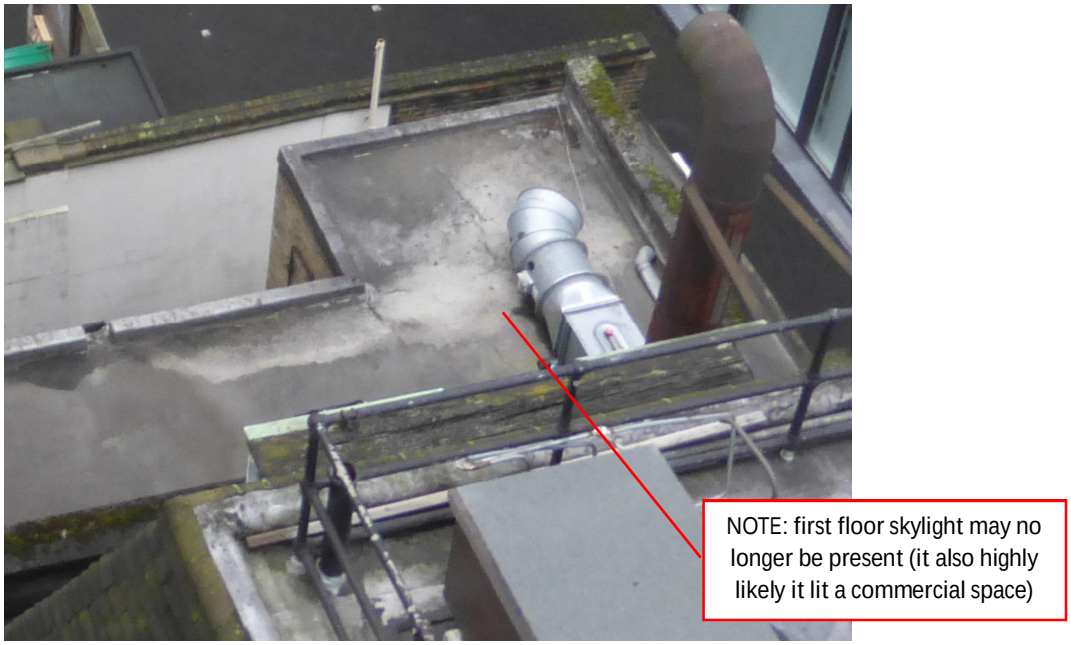

Second R1/W1
Second R2/W3
Second R2/W2



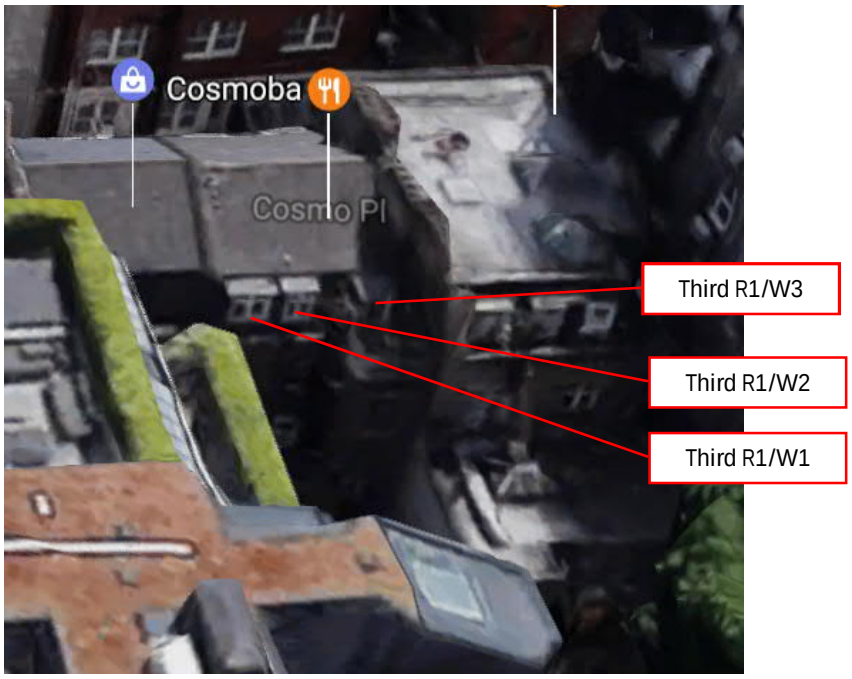
The Swan (public house):


Third R1/W7
Informal terrace not reviewed
Third R1/W8
Third R1/W10
Third R1/W9

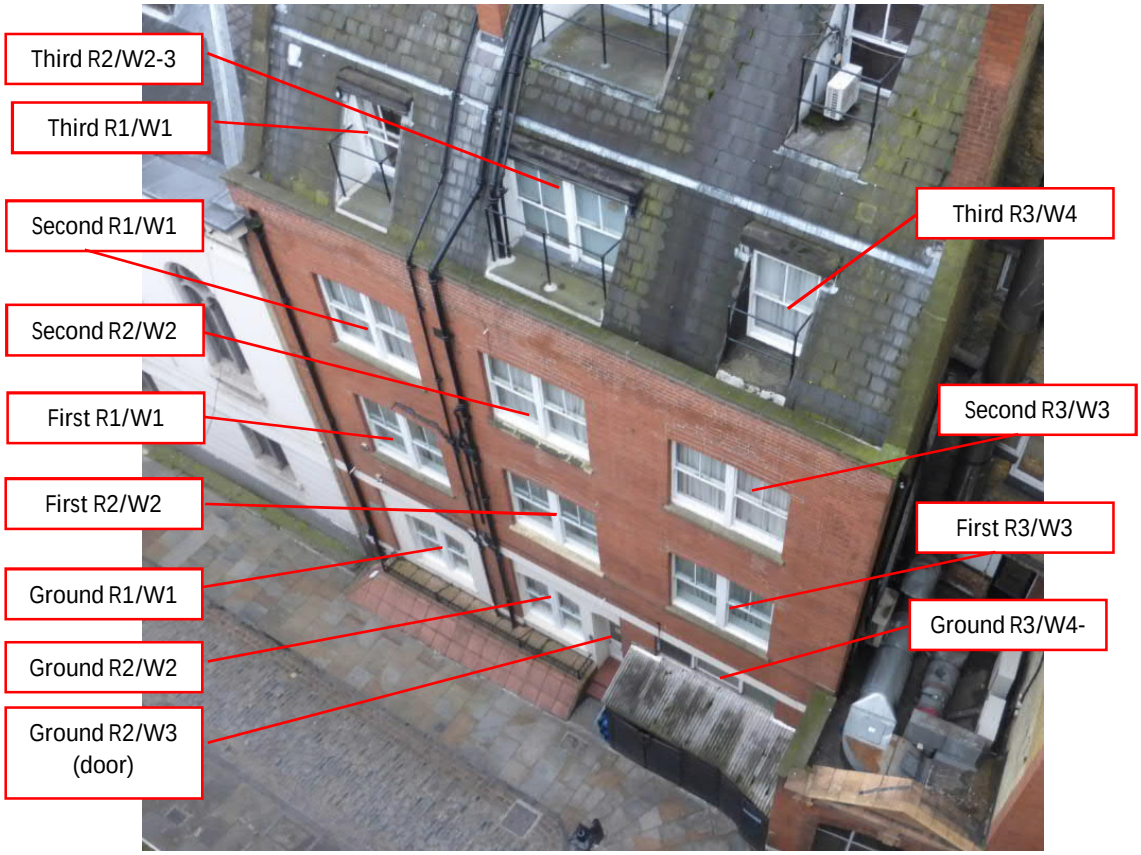

Swan
Third R1/W5
Third R1/W4
Third R1/W6
Second R1/W3
First W7
Second R1/W4
First W6
First W4
First W5
NOTE: skylight may no longer be present (site images suggest it has been removed – below)



Cosmoba (further rooms not tested following the minimal effect on the rear of “The Swan”):

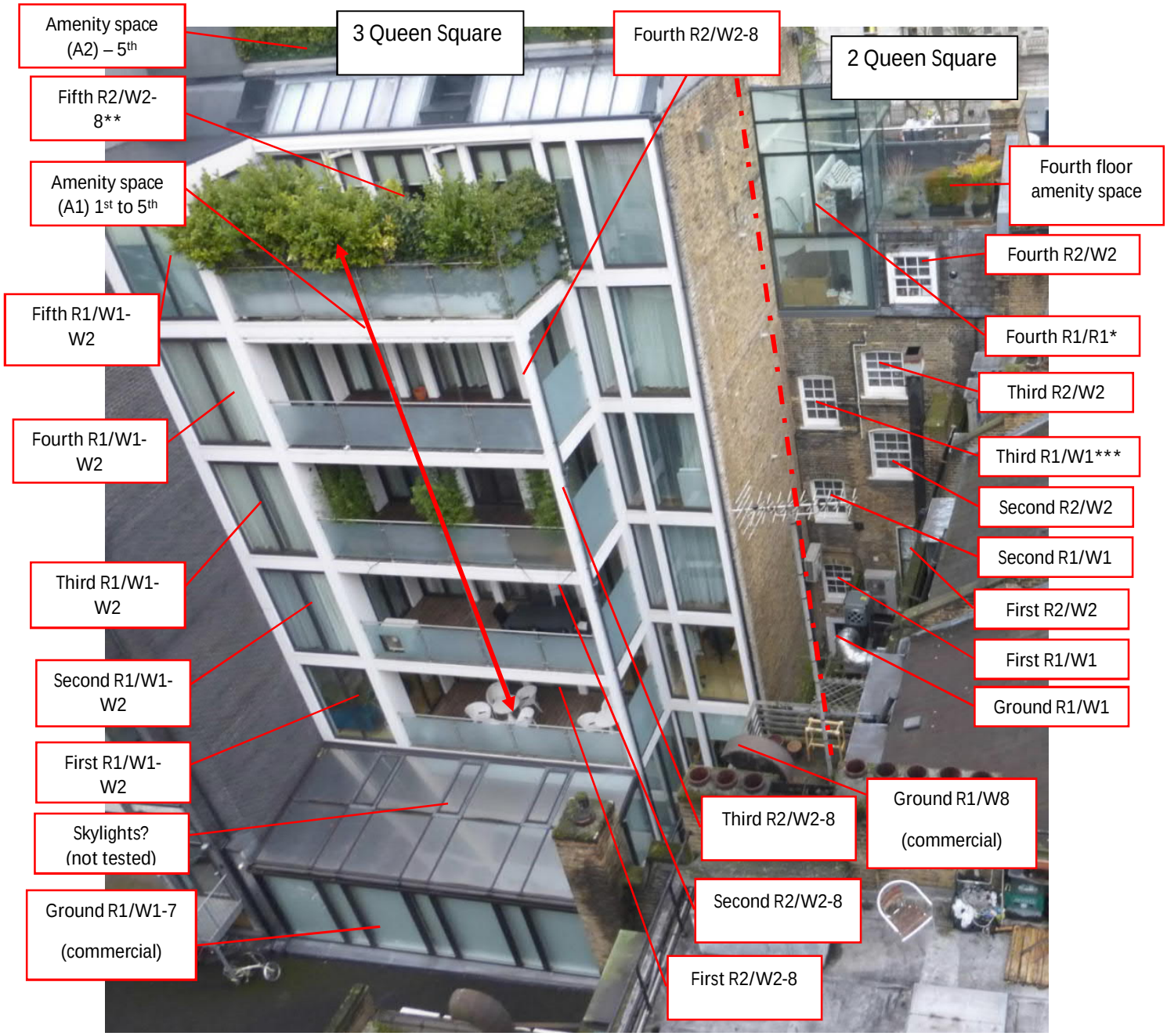


Unidentified Building 01:




Fourth R1/W1-
Fourth R2/W3-4
Fourth R3/W5

2 & 3 Queen Square:



*This area appears to be circulation space. It has been tested as one 'curtain-wall' window. The height of this mass relative to the applicant's proposal and the fully glazed construction mean there will be no significant effect on this part of number 2 Queen Square.

**The skylights supplying fifth R2 will not be affected by the proposals because of the offset, height and angle of the units.

***The differing height of the windows to the rear of 2 Queen Square suggests that this is a staircase.

Notes:

Where 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 neighbouring owners or their consultants concerning this project.

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.