

# BEWLAY HOUSE, 32 JAMESTOWN ROAD CAMDEN, LONDON DAYLIGHT AND SUNLIGHT STUDY

Ref: DW/dw/13083 Date: August 2013

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# INTRODUCTION

Delva Patman Redler LLP has been instructed by London & Regional Properties to prepare a daylight and sunlight study to assess the likely impact of the proposed redevelopment of Bewlay House, 32 Jamestown Road, Camden, London by Ben Adams Architects on the neighbouring residential amenity.

This study has been carried out in accordance with the recommendations of the Building Research Establishment Report "Site Layout Planning for Daylight & Sunlight 2011" (BRE209).

### THE PROPOSAL

The existing building provides B1 office accommodation with ancillary car parking and storage space at Basement Level.

The proposed scheme seeks to retain and extend the existing B1 use and to add C3 residential use in a roof extension over two levels. Part of the Ground Floor space that fronts onto Jamestown Road is to be converted to A3 use to improve the amenity of the building and to create an active street front at Ground Floor level. It should be noted that the additional stories are set back from the main building lines on both Jamestown Road and Grand Union Canal elevations which assist with protecting quality of daylight and sunlight to neighbouring amenity.

### **POLICY / GUIDELINES**

This study has been carried out in accordance with the Camden UDP requirements by using the recommendations of the Building Research Establishment (BRE) Report "Site Layout Planning for Daylight & Sunlight 2011".

# **M**ETHODOLOGY

The Daylight & Sunlight assessments have been undertaken in accordance with the Building Research Establishment (BRE) guidelines "Site Layout Planning for Daylight & Sunlight. A Guide to Good Practice".

The BRE Report advises that daylight levels should be assessed for the main habitable rooms of neighbouring residential properties. Habitable rooms in residential properties are defined as kitchens, living rooms and dining rooms. Bedrooms are less important as they are mainly occupied at night time. The report also makes reference to other property types, which may be regarded as 'sensitive receptors' such as schools, hospitals, hotels and hostels, small workshops and most offices.

# Daylight

The BRE Guide states that:

"If, for any part of the new development, the angle from the centre of the lowest affected window to the head of the new development is more than 25°, then a more detailed check is needed to find the loss of skylight to the existing buildings."

The BRE guidelines propose several methods for calculating daylight.

The two main methods predominantly used are those involving the measurement of the total amount of skylight available the vertical sky component (VSC) and its distribution within the building (the No-Sky line).

The VSC calculation is a general test of potential for daylight to a building, measuring the light available on the outside plane of windows.

The "No-Sky" Line divides those areas of the working plane which can receive direct skylight, from those which cannot. It provides an indication of how good the daylight distribution is within a room.

The third recognised method of assessment for daylight is the Average Daylight Factor (ADF) calculation which assesses the quality and distribution of light within a room served by a window and takes into account the VSC value, the size and number of the windows and room and the use to which the room is put. ADF assesses actual light distribution within a defined room area whereas the VSC considers potential light. British Standard 8206, Code of Practice for Daylighting recommends ADF values of 1% in bedrooms, 1.5% in living rooms and 2% in kitchens. For other uses, where it is expected that supplementary electric lighting will be used throughout the daytime, such as in offices, the ADF value should be 2%. There is no general requirement within the BRE guidelines to assess ADF values, other than for neighbouring residential buildings.

This report fully considers the VSC method of assessment.

All neighbouring residential properties likely to be affected by the development proposals have been included in the daylight assessment and identified on drawing 13083/LOC/800 in Appendix A, these are:

- 61 Jamestown Road
- 63 Jamestown Road
- 30 Oval Road

All listed properties likely to be affected by the development proposals have been included in the daylight assessment, these are

Brunel Building, Gilbey's Yard

Flats 1-14, The Iceworks, 36 Jamestown Road have been discounted from the daylight and sunlight assessment by virtue of the fact that the Grand Union Canal and Jamestown Road elevations face away from the proposal, whilst the "half-moon" elevation in the middle of the building is obstructed by its own crescent shape effectively shielding the 32 Jamestown Road development. Therefore the windows to this property will not be affected by the development.

# Sunlight

The BRE have produced sunlight templates for London, Manchester and Edinburgh indicating the Annual Probable Sunlight Hours (APSH) for these regions. The London template has been selected for this study as the London indicator template is the closest of the three available from BRE in terms of latitude.

Sunlight analysis is undertaken by measuring annual probable sunlight hours (APSH) for the main windows of rooms which face within 90° of due south. The maximum number of annual probable sunlight hours for the London orientation is 1,486 hours. The BRE guidelines propose that the appropriate date for undertaking a sunlight assessment is on 21<sup>st</sup> March, being the spring equinox. Calculations of both summer and winter availability are made with the winter analysis covering the period from the 21<sup>st</sup> September to 21<sup>st</sup> March. For residential accommodation, the main requirement for sunlight is in living rooms and it is regarded as less important in bedrooms and kitchens.

Due to room use and orientation only the following properties windows assed for daylight qualify for sunlight assessment in accordance with BRE Guidance.

- 30 Oval Road
- Brunel Building, Gilbey's Yard

### **SOURCE DATA**

The studies have been undertaken by calculating the daylight based on the template drawings provided within the BRE guidelines. The studies have been undertaken with plan drawings derived from:

- Existing and surrounding buildings: 3D Z-Mapping Model Provided;
- Ben Adams Architects Scheme: Provision of Sketchup Model.
- Drawing of assessed buildings derived from Camden planning searches.
- Site Photos taken by Delva Patman Redler 17 May 2013.

# SIGNIFICANCE CRITERIA

In describing the significance criteria as set out below, it should be noted that they have been developed to protect residential properties, which are the most sensitive receptors.

TABLE 1: BRE DAYLIGHT GUIDANCE USED IN THE ASSESSMENT

Issue	Criteria
Daylight	A window may be affected if the vertical sky component <b>(VSC)</b> measured at the centre of the window is less than 27% and less than 0.8 times its former value.
Sunlight	A window may be adversely affected if a point at the centre of the window receives in the year less than 25% of the annual probable sunlight hours including at least 5% of the annual probable sunlight hours (APSH) during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period.

It is noted that for both sunlight and daylight calculations, total reliance upon numerical values and particularly percentage changes may be misleading particularly where baseline values are already comparatively low, as is often the case in dense urban locations such as this. A percentage change of more than 20% may well represent only a very small difference in actual light value.

It should also be noted that the usage of the room should be considered when deciding on whether or not a particular room suffers an adverse loss. For example, the value of light to a room would be more beneficial to a living room rather than a bedroom where the room is occupied at night-time.

Additionally, it should be borne in mind that Page 1 of the BRE guidance suggests that circumstances will exist where an alternative criteria value may be used, for example, in a city centre:

"...where a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

In such instances, the BRE guidance advises that the numerical guidelines should be interpreted flexibly, and alternative numerical values may be used. The Site's dense urban location justifies this flexible interpretation of the BRE guidance, particularly when the basement windows of 61 & 63 Jamestown Road are considered.

### BASELINE CONDITIONS

An analysis of the impact of the baseline conditions against which to compare any potential impact arising from the development has been undertaken based on Drawing 13083/SPT/800 & 801 in Appendix A.

It is noted that the Site is in close proximity to the adjacent properties around the site and the existing building.

The neighbouring properties generally receive good levels of existing light at lower floors. The upper floors of the majority of properties assessed currently enjoy light levels above 27%.

This can be seen from the technical results in tabular form in the Technical Appendices.

An analysis of the existing daylight levels enjoyed by the neighbouring residential property and amenity has been undertaken in order to provide a baseline against which the impacts arising from the proposed development can be assessed.

# **RESULTS - COMPLETED DEVELOPMENT**

# DAYLIGHT - VSC

The full results of the daylight analyses are presented in Appendix B in tabular form. A summary of the results of the Vertical Sky Component (VSC) analysis on the relevant overlooking windows are presented in the Table 2 below. This identifies where habitable rooms / windows are left with adequate light.

TABLE 2: NUMBER OF WINDOWS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (VSC METHOD)

Address	Total Number of W Tested	indows Number of Windo BRE Guidelines fo	
Total	47	47	0

Table 2 indicates that all 47 windows assessed will exceed BRE target values when measured against the BRE assessment criteria for VSC. The windows assessed can be identified using the Key Window Location diagrams on drawings 13083/LOC/801-803 in Appendix A.

The VSC assessment shows that all windows assessed will be left with adequate daylight for their use.

## **SUNLIGHT**

Due to room uses and orientation, only some of the windows assessed for daylight qualify for a sunlight assessment in accordance with BRE Guidance.

The full results of the sunlight analyses are presented in Appendix B in tabular form. A summary of the results of the Annual Probable Sunlight Hours (APSH) analysis on the relevant overlooking

windows are presented in the Table 3 below. This identifies where habitable rooms / windows are left with adequate light.

TABLE 3: NUMBER OF WINDOWS EXPERIENCING SUNLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT

(APSH METHOD)

Address	Total Number of Windows Tested	Number of Windows Meeting BRE Guidelines for APSH	Number of Windows Experiencing Adverse Impacts
Total	29	29	0

The assessed at 30 Oval Road and Brunel Building will continue to receive adequate levels of sunlight and therefore remain in excess of BRE criteria.

# **CONCLUSIONS**

To assess the potential impact of the Development on daylight to the neighbouring properties a baseline assessment was undertaken which was used to compare the levels of light left after any development takes place.

This study adopts the BRE Site Layout Planning for Daylight & Sunlight 2011, a guide to good practice daylight & sunlight as the standard to cover the protection of residential amenity under which daylight & sunlight can be considered. This is the most recognised form of Daylight & Sunlight standard in the UK and adopted within the London Borough of Camden UDP.

The VSC daylight analysis indicates that all windows assessed will continue to receive levels of daylight akin to a sub-urban setting. Therefore the BRE criteria are met and the policy for daylight is fulfilled.

The ASPH sunlight analysis indicates that all relevant windows assessed will continue to receive levels of sunlight akin to a sub-urban setting. Therefore the BRE criteria are met and the policy for sunlight is fulfilled.

Overall, it is felt that Ben Adams Architects have worked to minimise the adverse nature of impact on daylight and sunlight through their design process and have taken neighbouring residential amenity into consideration where reasonably practically possible with this design.

Therefore, the analysis undertaken demonstrates that given the approach recommended by the BRE guidelines, the impact of the proposed development is considered acceptable in daylight, and sunlight terms on the surrounding amenity in this location.

The development proposals by Ben Adams Architects are therefore considered to recognise and observe the intentions of the London Borough of Camden Planning Guidance and BRE Guidance Note 209 and should therefore be considered to address the requirements of the Unitary Development Plan in daylight and sunlight terms.

Delva Patman Redler LLP

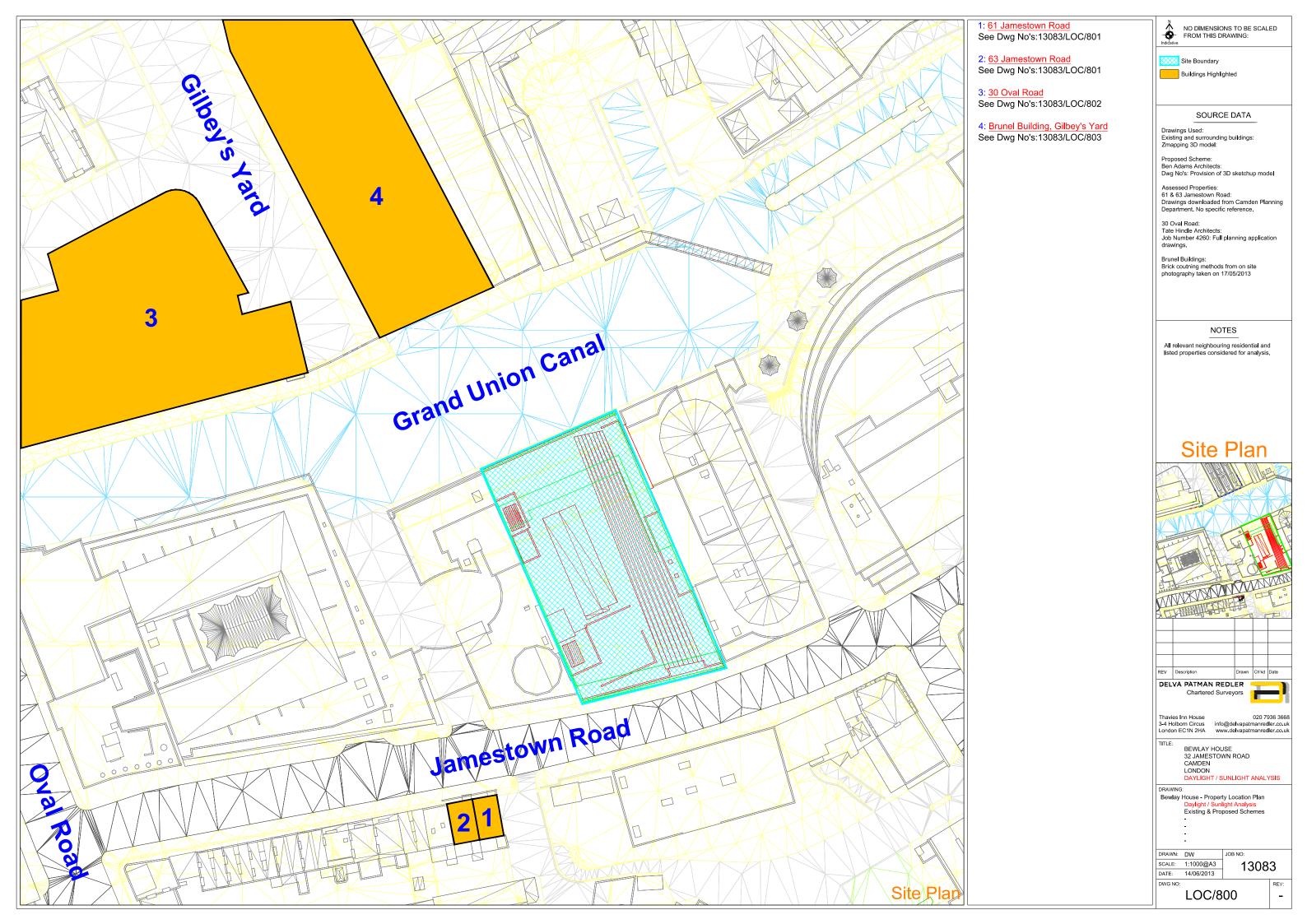
APPENDIX A

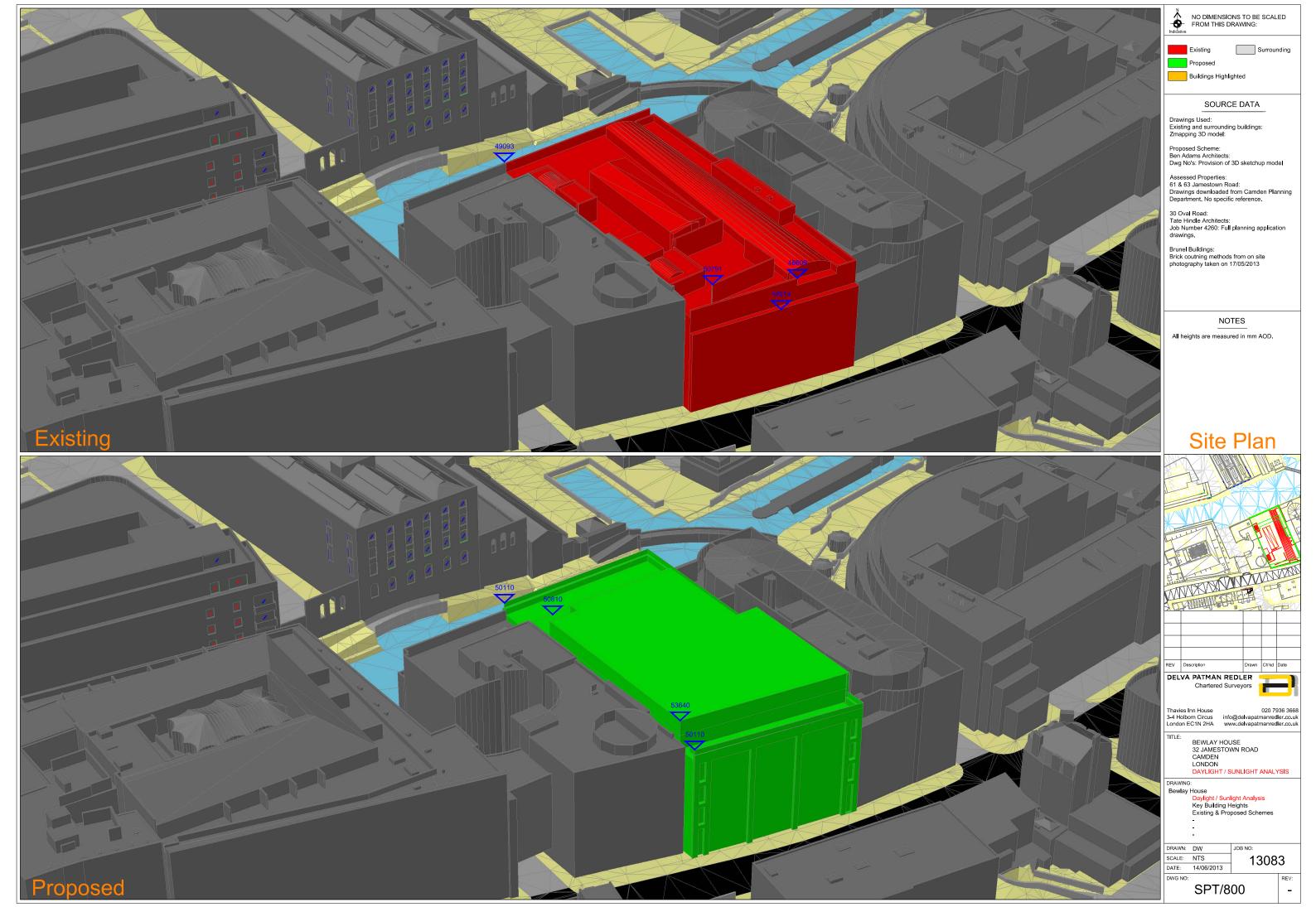
**LOCATION DRAWINGS** 

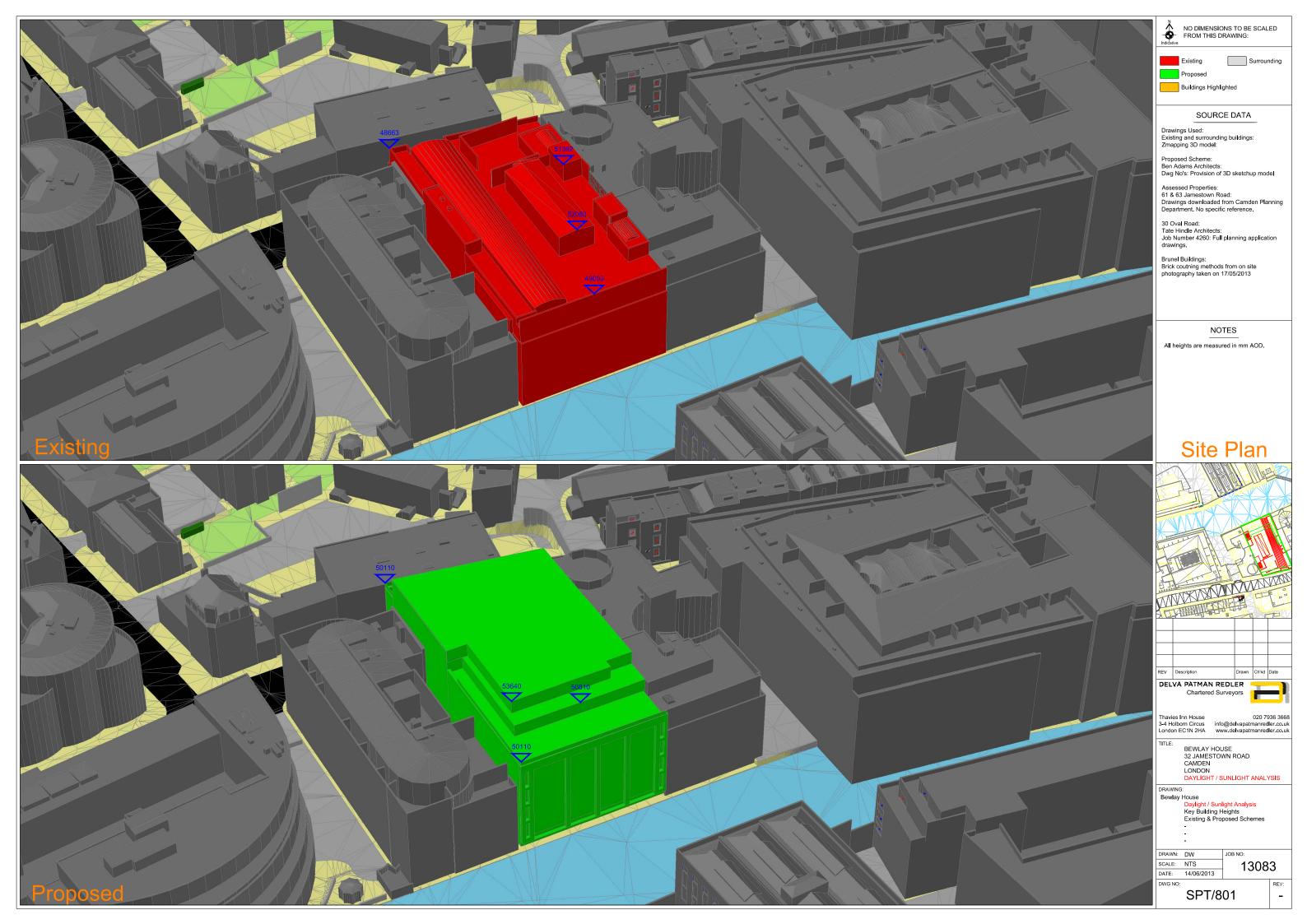
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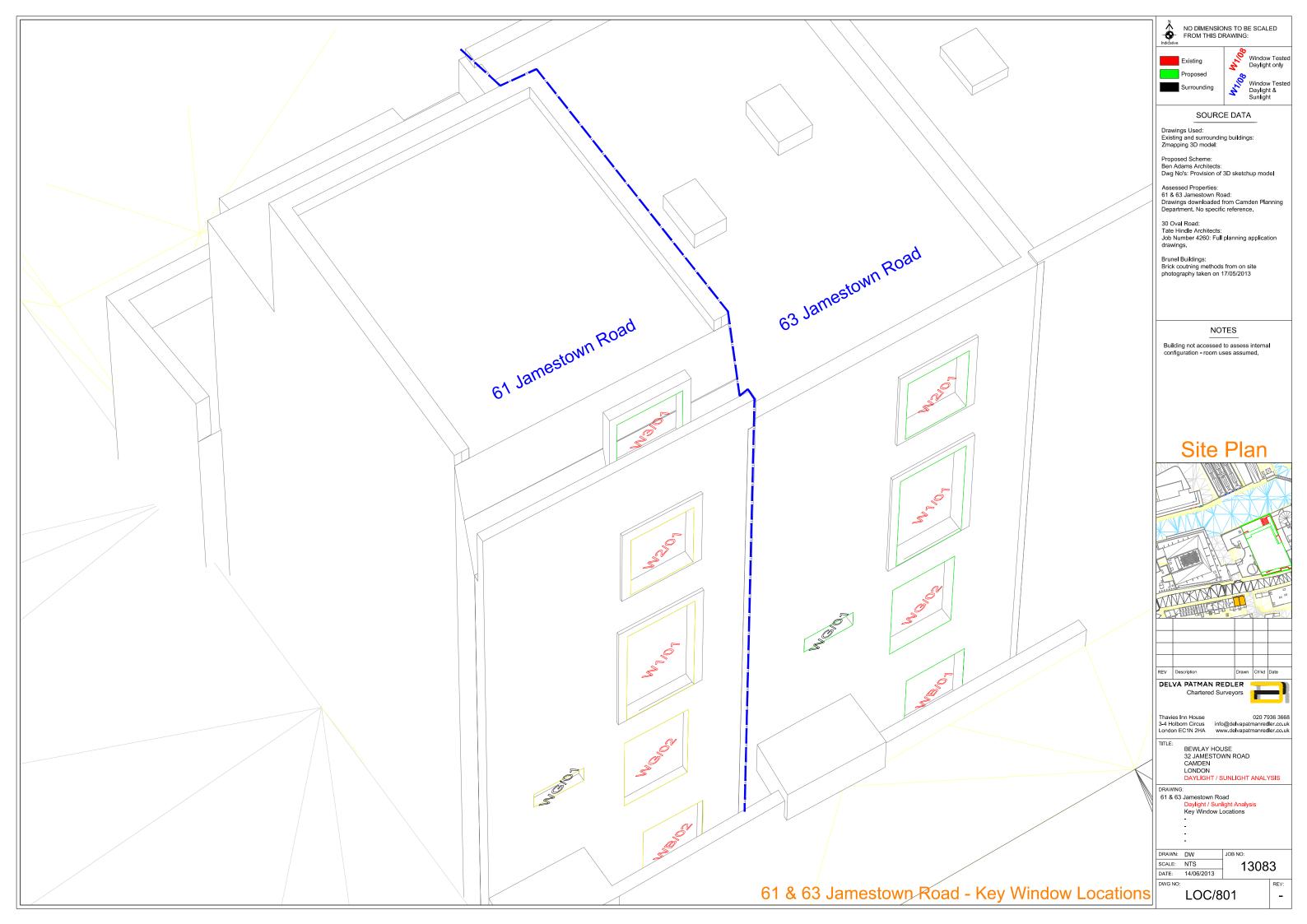
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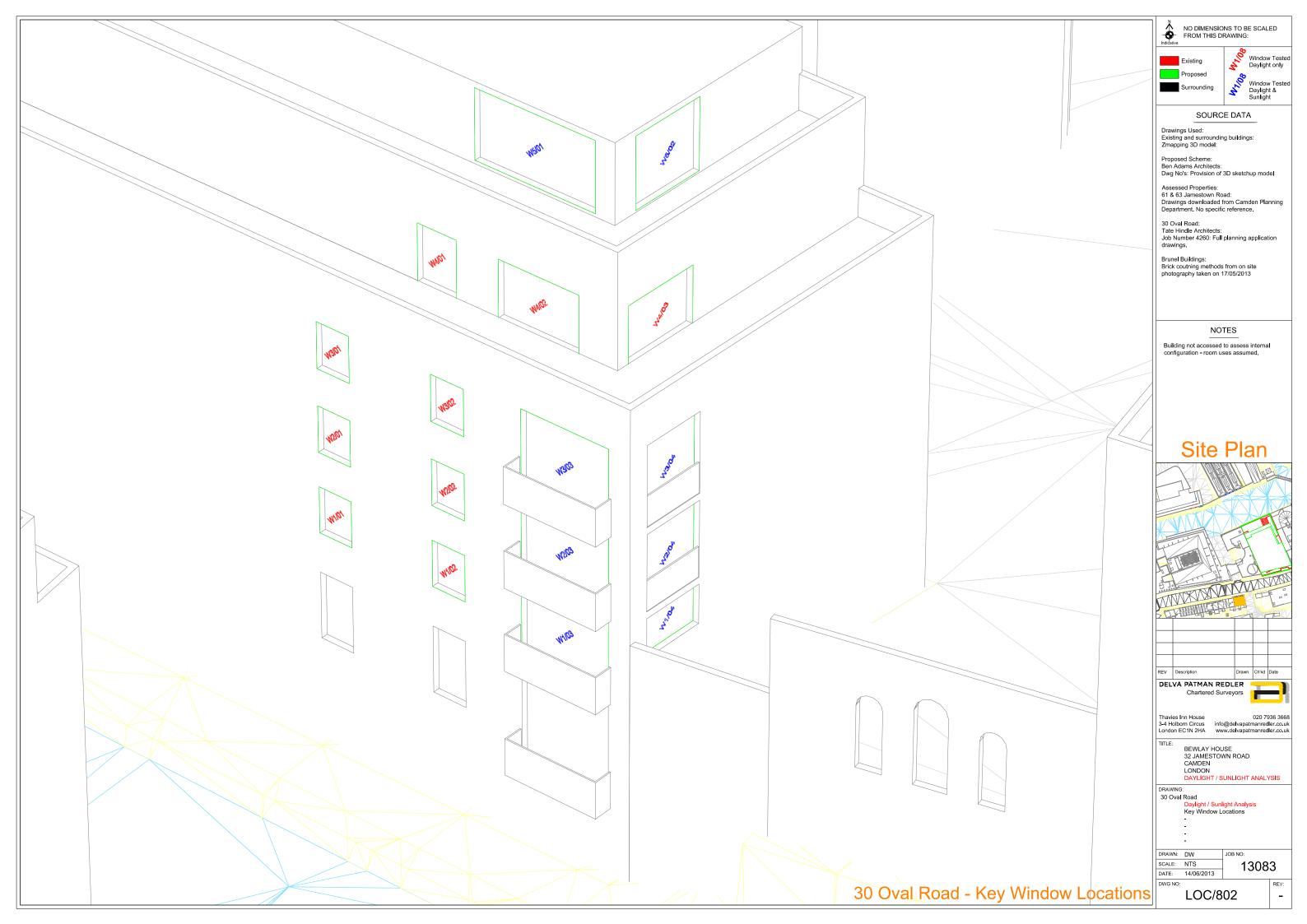
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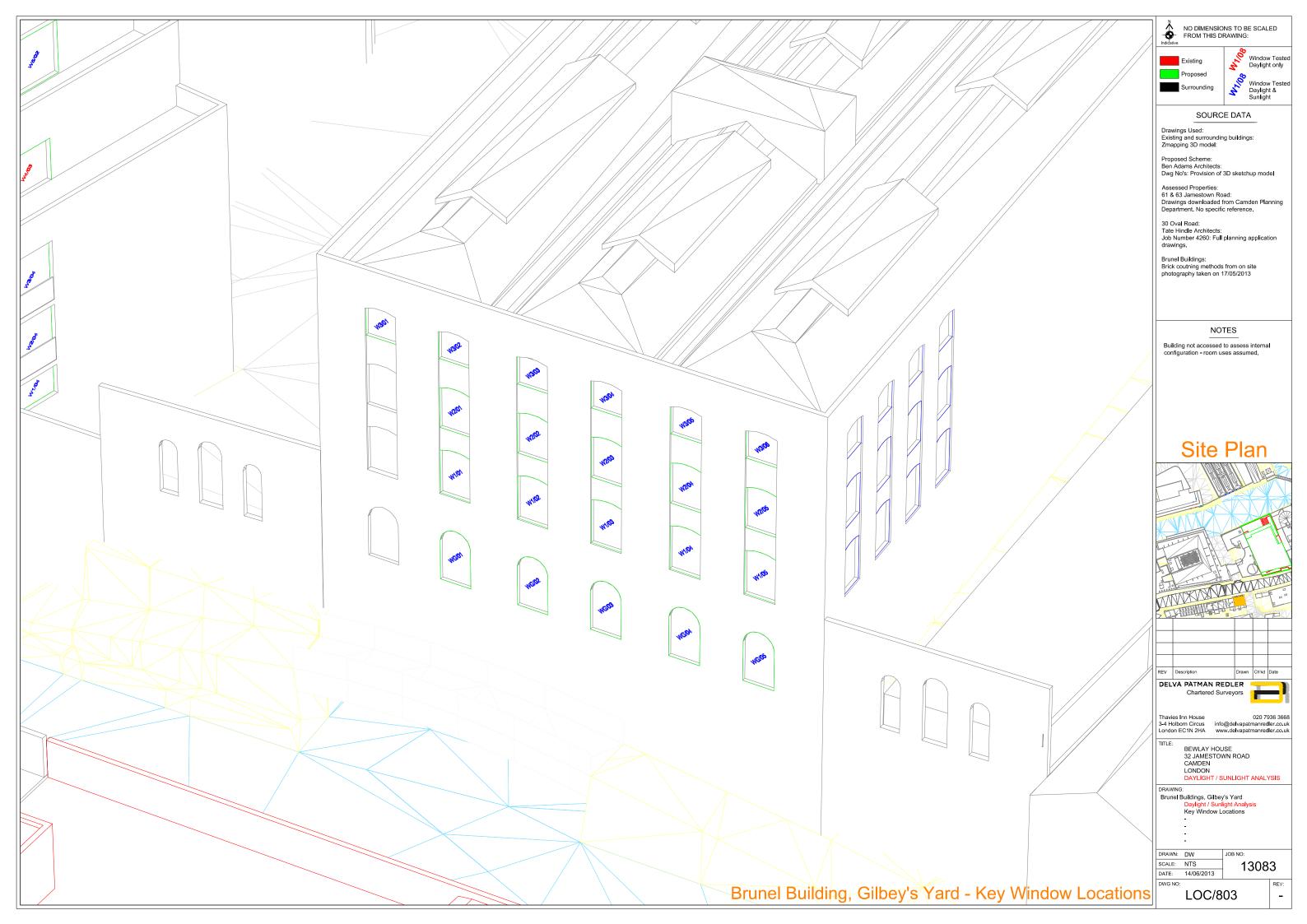












APPENDIX B

DAYLIGHT TABLES

SUNLIGHT TABLES

Dwg No	Address	Floor Level	Room Name	Window ID		APSH %			Winter %				
					Existing	Proposed	% Diff	Pass/Fail	Existing	Proposed	% Diff	Pass/Fa	
-		Basement	Bedroom	WB/02				North	Facing	<u> </u>			
-		Ground	Kitchen	WG/02	North Facing								
-	61 Jamestown Road	First	Kitchen	W1/01	North Facing								
-		Second	Bedroom	W2/01				North	Facing				
•		Third	Bedroom	W3/01				North	Facing				
-		Basement	Bedroom	WB/02				North	Facing				
-	1	Ground	Kitchen	WG/02				North	Facing				
-	63 Jamestown Road	First	Kitchen	W1/01					Facing				
-	1	Second	Bedroom	W2/01					Facing				
-		First	Bedroom	W1/01				Assessmen		ed			
-	-	First	Bedroom	W1/02					t Not Requir				
_	-	First	Kitchen / Living	W1/03	42	41	-2.38%	Pass	12	11	-8.33%	Pass	
-	-	First	Kitchen / Living	W1/04	27	27	0.00%	Pass	7	7	0.00%	Pass	
-	-	Second	Bedroom	W2/01	-				t Not Requir				
	-	Second	Bedroom	W2/02					t Not Requir				
		Second	Kitchen / Living	W2/03	47	47	0.00%	Pass	17	17	0.00%	Pass	
	-	Second	Kitchen / Living	W2/04	36	36	0.00%	Pass	7	7	0.00%	Pass	
	30 Oval Road	Third	Bedroom	W2/04 W3/01	30	30	0.0078	l .	t Not Requir		0.0078	1 833	
	- So Oval Road	Third	Bedroom	W3/01 W3/02					t Not Requir				
<u>-</u>	-	Third		W3/02 W3/03	71	70	-1.41%	Pass	20		-5.00%	Poss	
	-		Kitchen / Living		37	37	0.00%		8	19	0.00%	Pass	
-	-	Third Fourth	Kitchen / Living Bedroom	W3/04 W4/01	37 37 0.00% Pass 8 8 0.00% Pas  Assessment Not Required							Pass	
-					Assessment Not Required								
-	-	Fourth	Bedroom	W4/02									
-		Fourth	Bedroom	W4/03	70	70	0.000/	1	t Not Requir		0.000/	_	
-	-	Fifth	Penthouse	W5/01	79	79	0.00%	Pass	28 7	28	0.00%	Pass	
-		Fifth	Penthouse	W5/02	36	36	0.00%	Pass	-	7	0.00%	Pass	
-	-	Ground	Office	WG/01	60	59	-1.67%	Pass	15	14	-6.67%	Pass	
-	-	Ground	Office	WG/02	60	60	0.00%	Pass	15	15	0.00%	Pass	
-	-	Ground	Office	WG/03	60	60	0.00%	Pass	15	15	0.00%	Pass	
-	-	Ground	Office	WG/04	60	60	0.00%	Pass	15	15	0.00%	Pass	
-	-	Ground	Office	WG/05	60	60	0.00%	Pass	15	15	0.00%	Pass	
-	-	First	Office	W1/01	64	63	-1.56%	Pass	22	21	-4.55%	Pass	
•	-	First	Office	W1/02	64	64	0.00%	Pass	22	22	0.00%	Pass	
•	-	First	Office	W1/03	64	64	0.00%	Pass	22	22	0.00%	Pass	
-	-	First	Office	W1/04	64	64	0.00%	Pass	22	22	0.00%	Pass	
-		First	Office	W1/05	64	64	0.00%	Pass	22	22	0.00%	Pass	
-	Brunel Building	Second	Office	W2/01	65	64	-1.54%	Pass	23	22	-4.35%	Pass	
-		Second	Office	W2/02	65	64	-1.54%	Pass	23	22	-4.35%	Pass	
-	-	Second	Office	W2/03	65	64	-1.54%	Pass	23	22	-4.35%	Pass	
-		Second	Office	W2/04	66	66	0.00%	Pass	24	24	0.00%	Pass	
-	4	Second	Office	W2/05	66	66	0.00%	Pass	24	24	0.00%	Pass	
-	_	Third	Office	W3/01	63	63	0.00%	Pass	24	24	0.00%	Pass	
-	_	Third	Office	W3/02	63	63	0.00%	Pass	24	24	0.00%	Pass	
-	_	Third	Office	W3/03	63	63	0.00%	Pass	24	24	0.00%	Pass	
-	_	Third	Office	W3/04	63	63	0.00%	Pass	24	24	0.00%	Pass	
-	_	Third	Office	W3/05	63	63	0.00%	Pass	24	24	0.00%	Pass	
-		Third	Office	W3/06	63	63	0.00%	Pass	24	24	0.00%	Pass	

	Dwg No	Address	Floor Level	Room Name	Window ID	APSH %			Winter %			
F						Existing Proposed	% Diff	Pass/Fail	Existing	Proposed	% Diff	Pass/Fail
_												

Dwg No	Address	Floor Level	Room Name	Window ID	Existing VSC%	Proposed VSC%	Percentage Difference	Condition
-		Basement	Bedroom	WB/02	6.63	6.63	0.00%	Pass
-		Ground	Kitchen	WG/02	15.65	15.41	-1.53%	Pass
-	61 Jamestown Road	First	Kitchen	W1/01	18.83	18.56	-1.43%	Pass
-		Second	Bedroom	W2/01	22.76	22.43	-1.45%	Pass
-		Third	Bedroom	W3/01	26.94	26.56	-1.41%	Pass
-		Basement	Bedroom	WB/02	8.19	8.19	0.00%	Pass
-	63 Jamestown Road	Ground	Kitchen	WG/02	14.99	14.83	-1.07%	Pass
-	- 63 Jamestown Road	First	Kitchen	W1/01	18.04	17.87	-0.94%	Pass
-		Second	Bedroom	W2/01	21.83	21.63	-0.92%	Pass
-		First	Bedroom	W1/01	24.58	24.52	-0.24%	Pass
-		First	Bedroom	W1/02	25.54	25.47	-0.27%	Pass
-		First	Kitchen / Living	W1/03	20.69	20.60	-0.43%	Pass
-		First	Kitchen / Living	W1/04	21.22	21.06	-0.75%	Pass
-		Second	Bedroom	W2/01	27.80	27.70	-0.36%	Pass
-		Second	Bedroom	W2/02	28.67	28.56	-0.38%	Pass
-	1	Second	Kitchen / Living	W2/03	23.76	23.62	-0.59%	Pass
-		Second	Kitchen / Living	W2/04	27.10	26.91	-0.70%	Pass
-	30 Oval Road	Third	Bedroom	W3/01	31.08	30.94	-0.45%	Pass
-	-	Third	Bedroom	W3/02	32.01	31.84	-0.53%	Pass
-		Third	Kitchen / Living	W3/03	32.37	32.17	-0.62%	Pass
_		Third	Kitchen / Living	W3/04	30.87	30.62	-0.81%	Pass
-	-	Fourth	Bedroom	W4/01	34.87	34.70	-0.49%	Pass
-	-	Fourth	Bedroom	W4/02	35.29	35.09	-0.57%	Pass
_	-	Fourth	Bedroom	W4/03	35.40	35.16	-0.68%	Pass
-		Fifth	Penthouse	W5/01	37.69	37.54	-0.40%	Pass
-	-	Fifth	Penthouse	W5/02	38.27	38.13	-0.37%	Pass
-		Ground	Office	WG/01	30.19	29.79	-1.32%	Pass
-		Ground	Office	WG/02	30.43	29.97	-1.51%	Pass
-	-	Ground	Office	WG/03	30.64	30.14	-1.63%	Pass
-		Ground	Office	WG/04	30.86	30.32	-1.75%	Pass
_	-	Ground	Office	WG/05	31.07	30.52	-1.77%	Pass
_	-	First	Office	W1/01	33.47	32.99	-1.43%	Pass
_	-	First	Office	W1/02	33.66	33.13	-1.57%	Pass
_	-	First	Office	W1/03	33.83	33.26	-1.68%	Pass
-	-	First	Office	W1/04	34.00	33.39	-1.79%	Pass
	-	First	Office	W1/05	34.15	33.54	-1.79%	Pass
	Brunel Building	Second	Office	W2/01	35.81	35.27	-1.51%	Pass
	Bruner Building	Second	Office	W2/01	35.96	35.38	-1.61%	Pass
-	-		Office	W2/02 W2/03				
-	-	Second Second		W2/03	36.10	35.48 35.58	-1.72%	Pass
-	-	Second	Office		36.23	35.58	-1.79%	Pass
-	-		Office	W2/05	36.36	35.70	-1.82%	Pass
-	-	Third	Office	W3/01	37.34	36.88	-1.23%	Pass
-	-	Third	Office	W3/02	37.45	36.96	-1.31%	Pass
-	-	Third	Office	W3/03	37.56	37.02	-1.44%	Pass
-	4	Third	Office	W3/04	37.67	37.09	-1.54%	Pass
-	4	Third	Office	W3/05	37.78	37.17	-1.61%	Pass
	1	Third	Office	W3/06	37.86	37.25	-1.61%	Pass

Dwg No	Address	Floor Level	Room Name	Window ID	Existing VSC%	Proposed VSC%	Percentage Difference	Condition