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AMBASSADOR'S THEATRE

WEST STREET

LONDON WC2H 9ND

DAYLIGHT & SUNLIGHT STUDY

Ref: LT/lt/14312
Date: September 2015

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INTRODUCTION

Delva Patman Redler LLP have been instructed by Delfont Mackintosh Theatres Ltd to prepare a daylight & sunlight study to assess the likely impacts of the proposed redevelopment of the Ambassador's Theatre by RHWL Architects on the neighbouring residential amenity adjacent to the site.

This study has been carried out in accordance with the recommendations of the Building Research Establishment Report "Site Layout Planning for Daylight & Sunlight 2011" (BRE_209).

The template drawings, which are attached, illustrate the results for the daylight and sunlight assessments and identify the drawings used in these studies.

The application proposes a new dedicated theatrical transfer house to accommodate productions that have come to the end of their run in the subsidised sector. The proposed theatre will provide the opportunity for subsidised productions that would not otherwise have the opportunity to transfer to the West End.

It is currently very difficult for successful subsidised productions to transfer to the West End because the internal arrangement of most West End theatres differs substantially from more modern arrangements of the subsidised sector. The vast majority of West End theatres have traditional 'proscenium arch' stages whilst most originating theatres in the subsidised sector have more modern arrangements, such as thrust stages or are arranged 'in the round'. This means that a transfer has to be restaged, often at huge cost to the originating subsidised theatre and eroding the original artistic intention of the director, to the detriment of the audience experience.

There are currently no dedicated theatres in the West End to which productions arising in the subsidised theatre sector can transfer in the event of critical acclaim or audience demand. Typically, publically subsidised productions are pre-programmed in advance at the originating playhouses and run for a period of 6-8 weeks only. The proposed new theatre would provide an opportunity for successful subsidised shows to transfer to the West End for a further 8-16 weeks.

This increased run would provide the subsidised sector with an opportunity to increase revenue at a time of consistently squeezed funding pressures and cuts. It will also diversify the offer for theatre goers and open up a range of quality productions to be viewed as originally intended, enhancing the range and quality of productions and cementing London's status as a world cultural capital in theatre.

Such is the shortage of space in the West End that very many successful subsidised productions are simply never seen again after their original run. Others, due to the physical difficulties of restaging in a proscenium setting simply have no prospect of transfer at all, even if a space in the West End were available.

In order to create a modern and flexible internal arrangement, it is proposed that much of the building is demolished and rebuilt behind the retained West Street façade and the stucco return onto Tower Court. Historically significant elements of plasterwork are to be relocated within the new theatre.

The proposed theatre will then provide a much needed resource for the transfer of productions from the subsidised sector. In turn, the subsidised sector will be able to secure a longer run for critically acclaimed productions that would otherwise close for good, frustrating a large unmet demand from the audience. Thus, the cultural life of the West End will be enhanced along with the audience's opportunity to see good quality subsidised productions for a longer period of time. In their turn, the subsidised sector will realise the opportunity to increase their revenue in an environment of constantly reduced funding.

The proposals have attracted wide ranging support from within the industry. Nicholas Hytner (former Artistic Director of the National Theatre) summarised the situation as:

> *"Over recent years, a large number of the most successful and ambitious productions in the subsidised theatre sector have been unable to find a venue for further life, leaving a significant potential audience without an opportunity to see work it would like to see. Very often this work would not justify the risks involved in a transfer to a large West End theatre. Cameron Mackintosh's plans for his new 450 seat theatre would greatly increase the chances of a future life for successful productions form theatres like the Dorfman, the Almeida, the Royal Court and the Donmar as well as offering a suitable venue for regional transfers."*

Full details of the need for a dedicated transfer house and how the proposed theatre meets that need is set out in the Design and Access Statement and Planning and Heritage Statement that accompany this application.

THE PROPOSAL

The proposals include the demolition of the existing massing and the proposed structure being pushed out further onto Tower Court which includes an additional storey housing two rehearsal rooms and associated roof top planting. These two floors are set back from the main building line

POLICY / GUIDELINES

This study has been carried out in accordance with the recommendations of the Building Research Establishment report "Site Layout Planning for Daylight & Sunlight 2011". This is the standard specifically identified in the London Borough of Camden Planning Policy by which daylight and sunlight should be assessed.

The BRE guide is intended for building designers and their clients, consultants and planning officials. The advice given is not mandatory and the report should not be seen as a part of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design.

Whilst technical analysis can be carried out in accordance with numerical guidelines and reported factually by comparison with those guidelines, the final assessment as to whether affected dwellings are left with acceptable amounts of daylight and sunlight in an inner city context where the findings are to be interpreted in a flexible manner is a matter of subjective opinion.

METHODOLOGY

The Daylight 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 BRE Guide makes clear that where a room has two or more windows the mean of their VSC's can be taken.

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 Day-lighting 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.

For the purposes of this report, all three methods of analysis have been considered for the neighbouring properties surrounding the site.

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 March, being the spring equinox. Calculations of both summer and winter availability are made with the winter analysis covering the period from the 21 September to 21 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 the orientation of the site in relation to some of the neighbouring building elevations not all windows considered for daylight assessment will qualify for sunlight assessment because many of the main habitable reception room windows neighbouring the site do not face within 90° of due south.

SOURCE DATA

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

- Existing and surrounding buildings: Michael Gallie & Partners: Dwg No's: 8543-01A, 02 D, 03D, 04B, 05A, 06A,07-08, 09A, 10-13
- Proposed Scheme: RHWL Architects: Dwg No's: 3D model received 01/12/2015 – Sondheim 02.12.14.skp

SIGNIFICANCE CRITERIA

The guidance given by BRE has been used as a basis for the criteria to assess the Development's potential effects. The BRE guidance specifies:

> *"…In special circumstances the developer or planning authority may wish to use different target values. For example, in an historic city centre a higher degree of obstruction may be unavoidable…"*

The report adds:

> *"…Different criteria may be used, based on the requirements for daylighting in an area viewed against other site layout constraints."*

Under these circumstances, the less stringent, higher BRE target percentage loss values and significance criteria may be justifiable.

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
Neighbouring Daylight	A window may be affected if the vertical sky component **(VSC)** measured at the centre of the window is less than 27% and less than 0.8 times its former value.
	A room may be affected if the area of the working plane in a room which can receive direct skylight **(No Sky Line)** is reduced to less than 0.8 times its former value
	A room may be adversely affected if the average daylight factor **(ADF)** is less than 1% for a bedroom, 1.5% for a living room or 2% for a kitchen.
Neighbouring 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 of note that for 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.

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.

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 14312/SPT/800 in Appendix A.

Ambassador's Theatre is a corner site which is bounded by Tower Street to the north, Tower Court to the south-east and West Street to the south. It is in close proximity to a number of adjacent properties.

All relevant neighbouring residential buildings within the vicinity of the site have been included as part of this assessment. For both daylight and where relevant sunlight as illustrated on site plan dwg no: 14312/LOC/800 and the window location drawings dwg no's: 14312/LOC/801 – 803.

The neighbouring properties generally receive good levels of existing light over and around the existing buildings.

The technical results, both in graphical and tabular form can be found in the Technical Appendices.

An analysis of the existing daylight levels enjoyed by the neighbouring residential 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 analysis 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 are left with adequate light.

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

Address	Total Number of Rooms Tested	Number of Rooms Meeting BRE Guidelines for VSC	Number of Rooms Experiencing Adverse Impacts
22 Tower Street	**7**	**6**	**1**
6 Tower Court	**7**	**7**	**0**
5 Tower Court	**7**	**7**	**0**
4-10 Tower Court	**17**	**13**	**4**
Total	**38**	**33**	**5**

Table 2 shows that 33 of the 38 (86.8%) neighbouring rooms assessed for VSC will comfortably comply with the BRE guidelines.

1 of the rooms is located on 22 Tower Street. This only marginally exceeds the threshold outlined in the BRE Guidelines with the reduction of -22.19%.

The other 4 rooms are situated at 4-10 Tower Court. Of these, 3 are located underneath an external balcony which naturally inhibits the access of light into the rooms and is the main factor that results in these 3 rooms failing.

Paragraph 2.2.11 recognises that the presence of balconies artificially:

> *"…cuts out light from the top part of the sky."*

and that:

> *"…even a modest obstruction opposite may result in a large relative impact on the VSC."*

In order therefore to get a better demonstration of how the scheme impacts the neighbouring building an assessment can be made discounting the self-obstructing elements of the neighbour. The result for this assessment is listed below in tabulated form. The full results of the study are presented in Appendix C in tabular form.

TABLE 3: NUMBER OF ROOMS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (VSC METHOD)

Address	Total Number of Rooms Tested	Number of Rooms Meeting BRE Guidelines for VSC	Number of Rooms Experiencing Adverse Impacts
4-10 Tower Court (without balconies)	**3**	**1**	**2**

In this assessment, 1 of the 3 rooms comfortably complies with the VSC assessment when tested without the self-obstructing elements. The other 2 rooms experience a reduction of no more than 25% which is only marginally beyond the 20% threshold set out in the BRE guidelines. Therefore, the impact to these rooms and the building as a whole is considered as relatively minor in significance terms.

DAYLIGHT – NO SKY LINE (NSL)

The full results of the daylight analysis are presented in Appendix B in tabular form. A summary of the results of the No Sky Line (NSL) analysis on the relevant overlooking windows are presented in the Table 4 below. This identifies where habitable rooms are left with adequate light.

TABLE 4: NUMBER OF ROOMS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (NO SKY LINE METHOD)

Address	Total Number of Rooms Tested	Number of Rooms Meeting BRE Guidelines for NSL	Number of Rooms Experiencing Adverse Impacts
22 Tower Street	**7**	**7**	**0**
6 Tower Court	**7**	**7**	**0**
5 Tower Court	**7**	**7**	**0**
4-10 Tower Court	**17**	**16**	**1**
Total	**38**	**37**	**1**

Table 4 shows that 37 of the 38 (97.3%) neighbouring rooms assessed for NSL will comfortably comply with the BRE guidelines. The 1 room which falls below the requirements set out in the BRE guide remains in excess of 50% lit in the proposed scenario which is considered to be good given the dense urban location such as this.

DAYLIGHT – AVERAGE DAYLIGHT FACTOR (ADF)

The full results of the daylight analysis are presented in Appendix B in tabular form. A summary of the results of the Average Daylight Factor (ADF) analysis on the relevant overlooking windows are presented in the Table 5 below. This identifies where habitable rooms are left with adequate light.

TABLE 5: NUMBER OF ROOMS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (AVERAGE DAYLIGHT FACTOR METHOD)

Address	Total Number of Rooms Tested	Number of Rooms Meeting BRE Guidelines for ADF	Number of Rooms Experiencing Adverse Impacts
22 Tower Street	**7**	**7**	**0**
6 Tower Court	**7**	**7**	**0**
5 Tower Court	**7**	**7**	**0**
4-10 Tower Court	**17**	**16**	**1**
Total	**38**	**37**	**1**

Table 5 shows that 37 of the 38 (97.3%) neighbouring rooms assessed for ADF will comfortably comply with the BRE guidelines. The 1 room which falls below the requirements set out in the BRE guide is on the cusp at 21.09% which is considered relatively minor in significance terms.

SUNLIGHT - APSH

The full results of the sunlight analysis are presented in Appendix B in tabular form with a sample attached. A summary of the results of the Annual Probable Sunlight Hours (APSH) analysis on the relevant overlooking windows are presented in Table 6 below. This identifies where habitable rooms are left with inadequate light.

Due to the orientation of the site and room uses, not all of the windows tested for the daylight analysis qualify for sunlight analysis.

TABLE 6: NUMBER OF RESIDENTIAL ROOMS EXPERIENCING ADVERSE SUNLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (APSH METHOD)

Address	Total Number of Rooms Tested	Number of Rooms Meeting BRE Guidelines for ADF	Number of Rooms Experiencing Adverse Impacts
22 Tower Street	**5**	**5**	**0**

Table 6 shows that all windows considered remain comfortably compliant as a result of the scheme proposals.

CONCLUSIONS

Ambassador's Theatre is a corner site which is bounded by Tower Street to the north, Tower Court to the south-east and West Street to the south. It is in close proximity to a number of adjacent residential properties in particular 22 Tower Street, 5 & 6 Tower Court and 4-10 Tower Court.

To assess the potential impact of the Development on daylight on neighbouring properties a baseline assessment was undertaken. The method of assessment used was the Vertical Sky Component (VSC) and No Sky Line for daylight and Annual Probable Sunlight Hours (APSH) for sunlight.

The London Borough of Camden Planning Policy identifies the Building Research Establishment report "Site Layout Planning for Daylight & Sunlight 2011" by which daylight should be assessed.

The VSC analysis demonstrates that generally the scheme proposals will have a negligible impact on neighbouring amenity adjacent to the site with only highly localised areas of impact isolated to 5 rooms at 22 Tower Street and 4-10 Tower Court.

The additional VSC analysis (recommended by the BRE) whereby the balconies at 4-10 Tower Court have been discounted demonstrates that 1 additional room comfortably complies with the VSC assessment.

The No Sky Line analysis demonstrates that only 1 neighbouring room falls below the BRE guidelines. However, the room remains in excess of 50% which is considered to be good given the dense urban location such as this.

The Average Daylight Factor (ADF) analysis demonstrates that only 1 neighbouring room falls below the BRE guidelines. This room is on the cusp with a reduction of 21.09% which is considered as minor negligible.

The sunlight analysis demonstrates that all habitable rooms remain comfortably above the requirements in the BRE guide.

Overall, RHWL have worked hard to minimise any adverse impact to neighbouring residential amenity through their design process in daylight and sunlight terms.

The scheme proposals demonstrate minimal impact on neighbouring residential amenity with only highly localised infringements of the BRE Guidance. Where there are infringements of the

daylight criteria the effects measured are not sufficiently adverse so as to make the light in the neighbouring properties unacceptable for their purpose.

The development proposals by RHWL are therefore considered to recognise and observe the intentions of London Borough of Camden Planning Policy and therefore should be considered to generally address the requirements of the London Borough of Camden Planning Policy in daylight and sunlight terms.

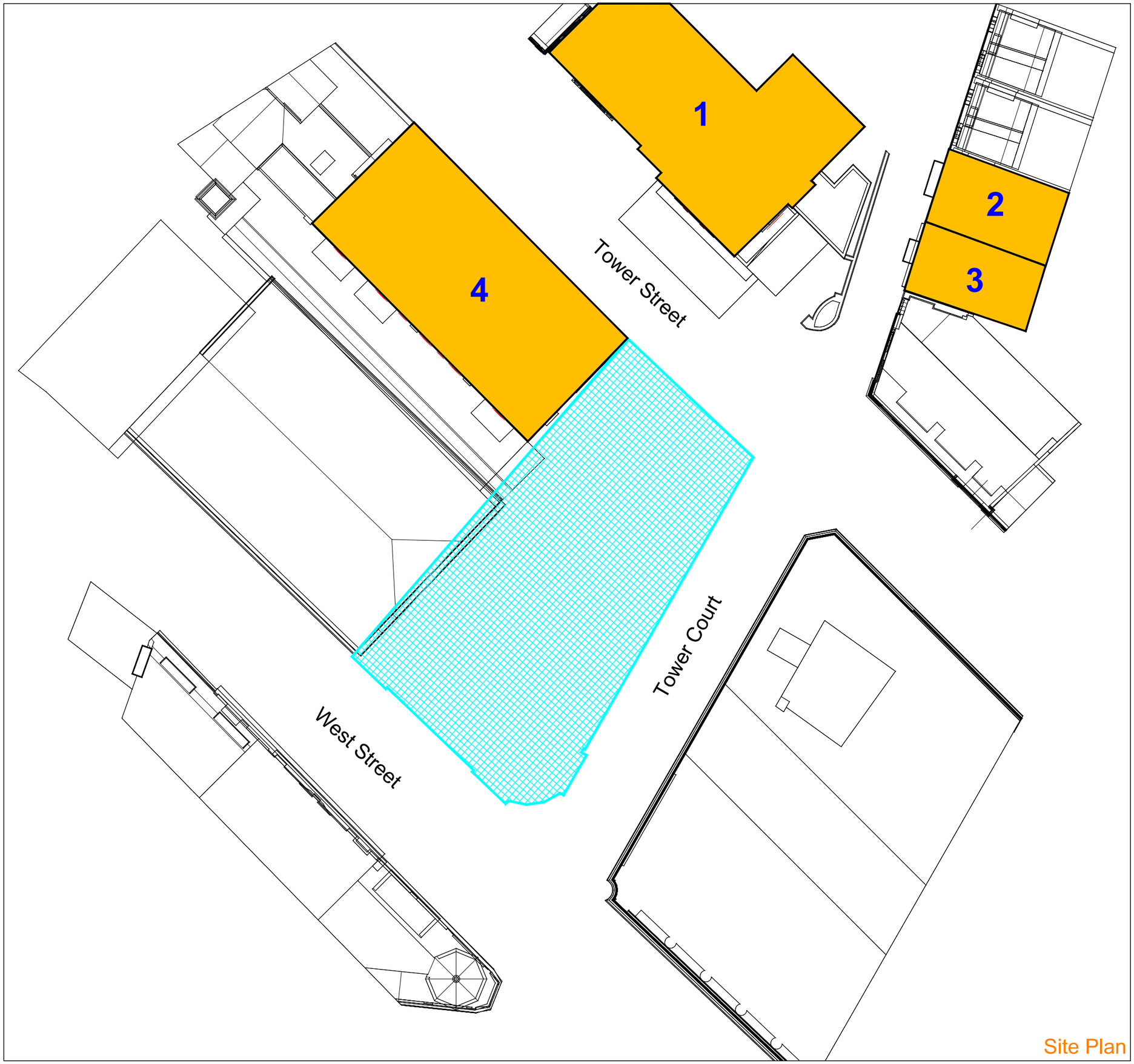
Delva Patman Redler LLP

APPENDIX A

LOCATION DRAWINGS

14312/LOC/800-803

14312/SPT/800



Site Plan

1: 22 Tower Street
See Dwg No's: LOC/801

2: 6 Tower Court
See Dwg No's: LOC/802

3: 5 Tower Court
See Dwg No's: LOC/802

4: 4-10 Tower Court
See Dwg No's: LOC/803

N
Indicative

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Site Boundary

Buildings Highlighted

SOURCE DATA

Drawings Used:
Existing and surrounding buildings:
Michael Gallie & Partners:
Dwg No's:
8543-01A, 02D, 03D, 04B, 05A, 06A, 07-08, 09A, 10-13

NOTES

All neighbouring properties considered for analysis.

REV	Description	Drawn	Ch'kd	Date

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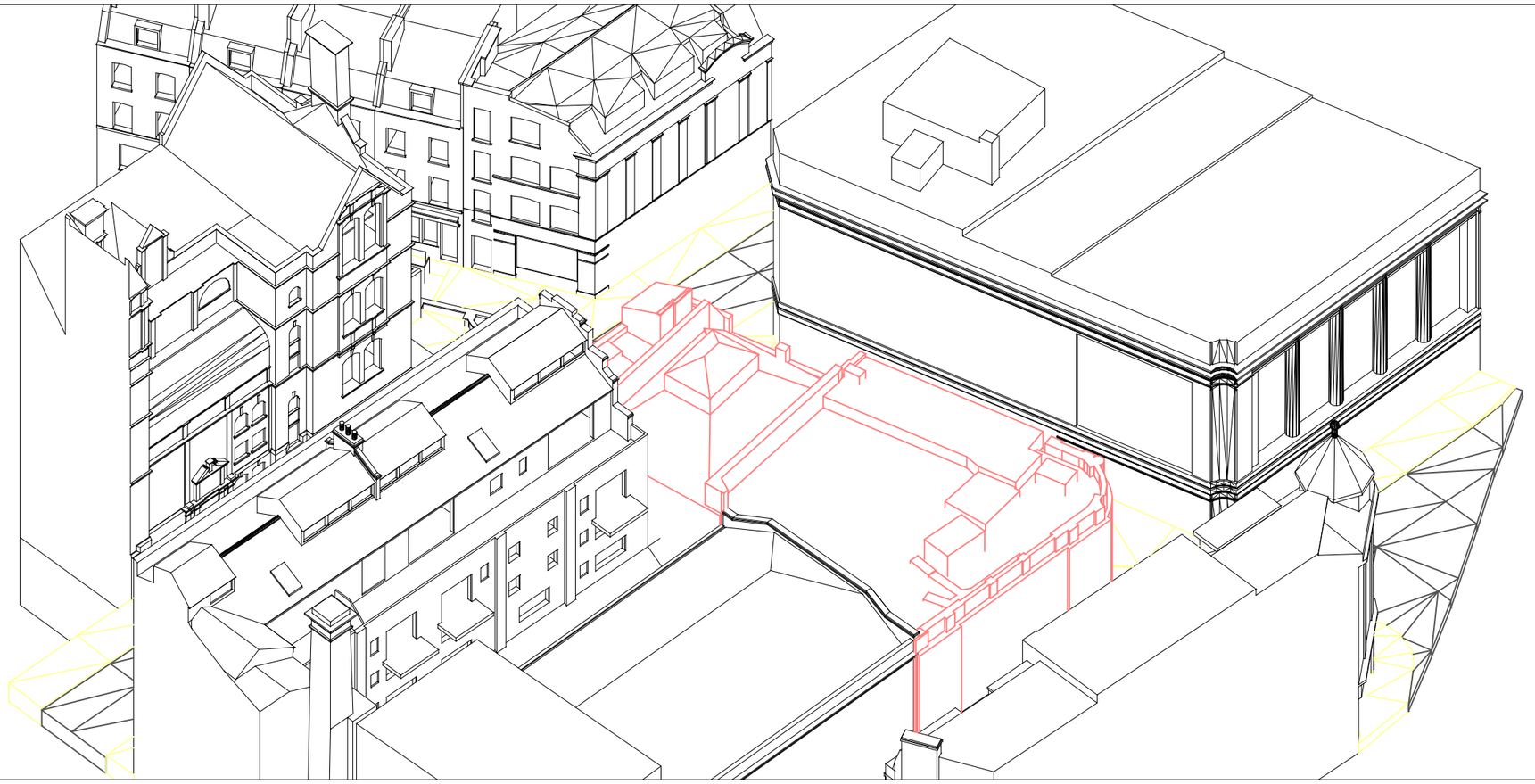
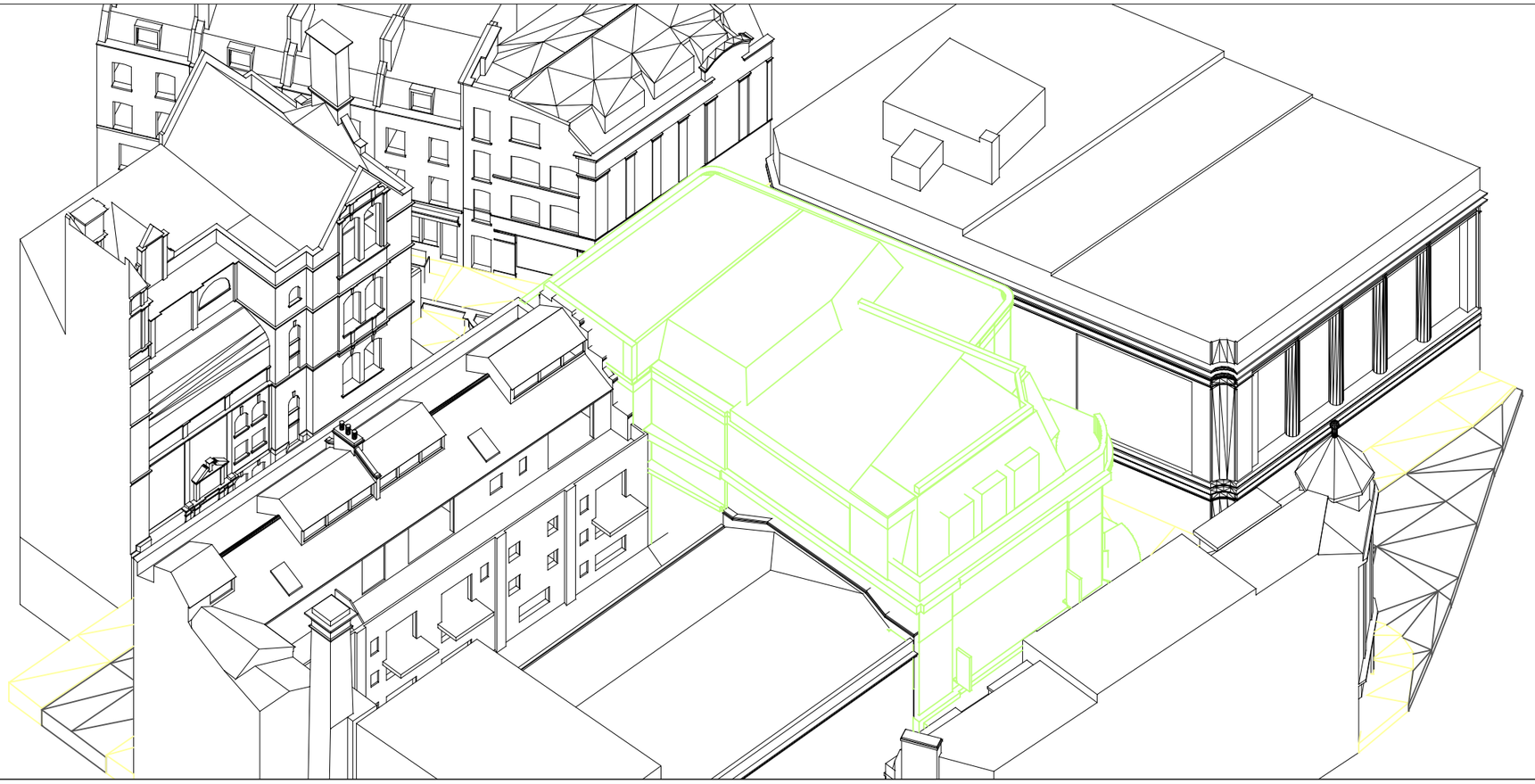
TITLE:
AMBASSADOR'S THEATRE
WEST STREET
LONDON WC1H 9ND
-
DAYLIGHT / SUNLIGHT ANALYSIS

DRAWING:
Ambassador's Theatre - Property Location Plan
Daylight / Sunlight Analysis
Existing & Proposed Schemes
-
-
-
-

DRAWN:	LT	JOB NO:	14312
SCALE:	1:250 @ A3		
DATE:	21/09/2015		
DWG NO:	LOC/800	REV:	-



Existing



Proposed

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Indicative

Existing
Surrounding
Proposed
Buildings Highlighted

SOURCE DATA

Drawings Used:
Existing and surrounding buildings:
Michael Gallie & Partners:
Dwg No's:
8543-01A, 02D, 03D, 04B, 05A, 06A, 07-08, 09A, 10-13

Proposed Scheme:
RHWL Architects:
Dwg No's:
3D model received 01/12/2015 - Sondheim 02.12.14.skp

NOTES

All heights are measured in mm AOD.

REV	Description	Drawn	Ch'kd	Date

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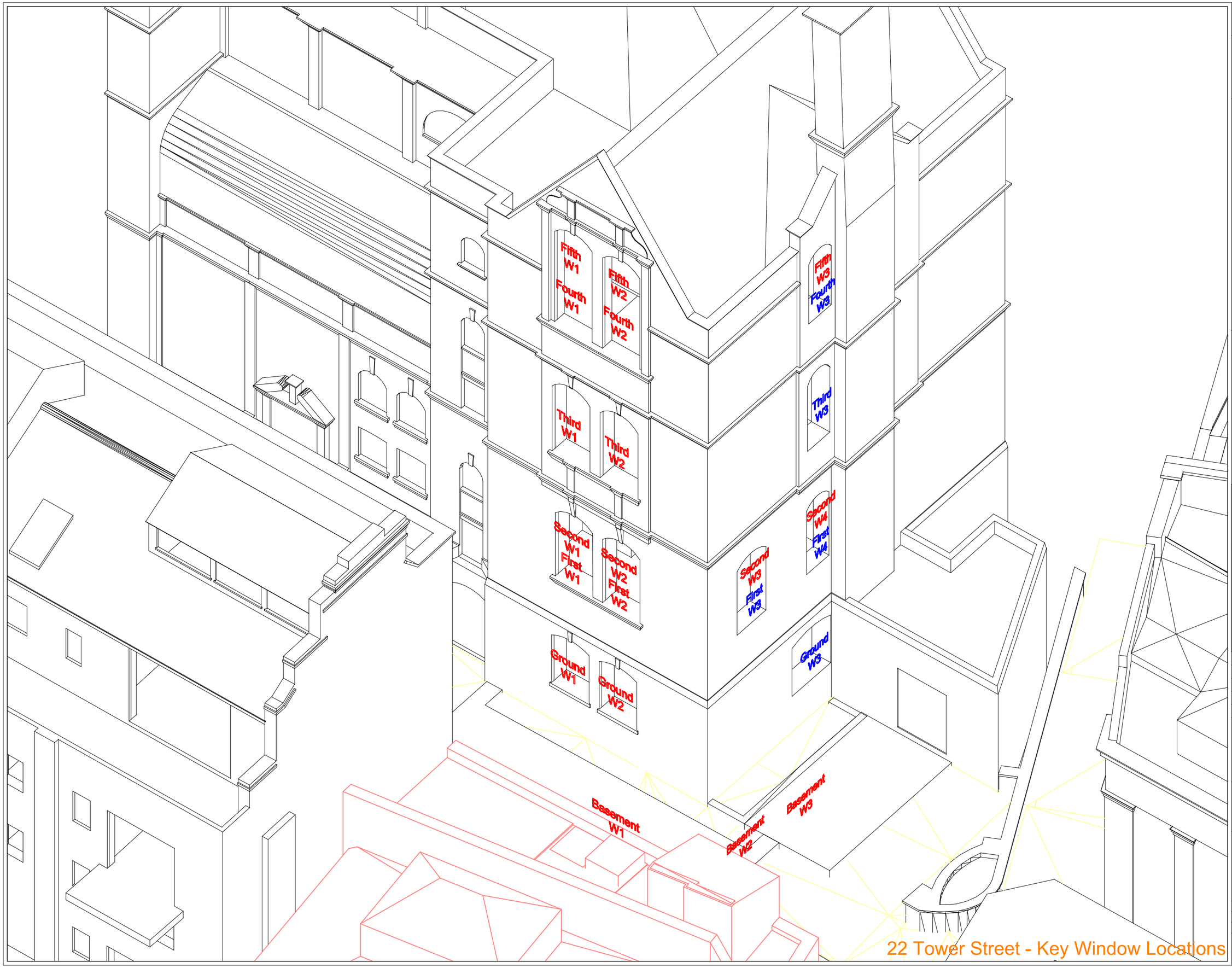
TITLE:
AMBASSADOR'S THEATRE
WEST STREET
LONDON WC1H 9ND
-
DAYLIGHT / SUNLIGHT ANALYSIS

DRAWING:
Ambassador's Theatre
Daylight / Sunlight Analysis
Key Building Heights
Existing & Proposed Schemes
-
-
-

DRAWN:	LT	JOB NO:	14312
SCALE:	NTS		
DATE:	21/09/2015		
DWG NO:	SPT/800	REV:	-



22 Tower Street - Key Window Locations

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Indicative

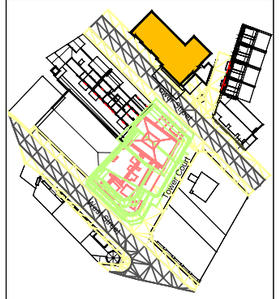
Existing	W1/08 Window Tested Daylight only
Proposed	W1/08 Window Tested Daylight & Sunlight
Surrounding	

SOURCE DATA

Drawings Used:
Existing and surrounding buildings:
Michael Gallie & Partners:
Dwg No's:
8543-01A, 02D, 03D, 04B, 05A, 06A, 07-08, 09A, 10-13

NOTES

Site Plan



REV	Description	Drawn	Ch'kd	Date

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TITLE:
AMBASSADOR'S THEATRE
WEST STREET
LONDON WC1H 9ND
-
DAYLIGHT / SUNLIGHT ANALYSIS

DRAWING:
22 Tower Street
Daylight / Sunlight Analysis
Key Window Locations
-
-
-
-

DRAWN:	LT	JOB NO:	14312
SCALE:	NTS		
DATE:	21/09/2015		

DWG NO:	REV:
LOC/801	-

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Indicative

Existing
Proposed
Surrounding

W1/08 Window Tested Daylight only

SOURCE DATA

Drawings Used:
Existing and surrounding buildings:
Michael Gallie & Partners:
Dwg No's:
8543-01A, 02D, 03D, 04B, 05A, 06A, 07-08, 09A, 10-13

NOTES

Site Plan

REV	Description	Drawn	Ch'kd	Date

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TITLE:
AMBASSADOR'S THEATRE
WEST STREET
LONDON WC1H 9ND
-
DAYLIGHT / SUNLIGHT ANALYSIS

DRAWING:
5, 6 Tower Court
Daylight / Sunlight Analysis
Key Window Locations
-
-
-
-

DRAWN:	LT	JOB NO:	14312
SCALE:	NTS		
DATE:	21/09/2015		
DWG NO:	LOC/802	REV:	-

NO DIMENSIONS TO BE SCALED FROM THIS DRAWING:

Indicative

Existing

Proposed

Surrounding

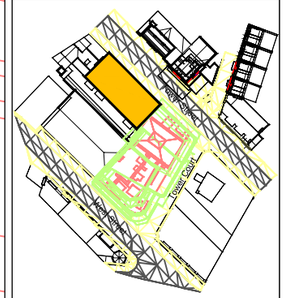
W1/108 Window Tested Daylight only

SOURCE DATA

Drawings Used:
Existing and surrounding buildings:
Michael Gallie & Partners:
Dwg No's:
8543-01A, 02D, 03D, 04B, 05A, 06A, 07-08, 09A, 10-13

NOTES

Site Plan



REV	Description	Drawn	Ch'kd	Date

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TITLE:
AMBASSADOR'S THEATRE
WEST STREET
LONDON WC1H 9ND
-
DAYLIGHT / SUNLIGHT ANALYSIS

DRAWING:
4-10 Tower Street
Daylight / Sunlight Analysis
Key Window Locations
-
-
-
-

DRAWN: LT	JOB NO: 14312
SCALE: NTS	
DATE: 21/09/2015	

DWG NO: LOC/803

REV: -

APPENDIX B

DAYLIGHT & SUNLIGHT ANALYSIS

				VSC				Daylight Distribution			ADF			APSH					
Address	Floor Level	Room Name	Window ID	Existing	Proposed	Window %age Diff	Room %age Diff	Existing	Proposed	%age Diff	Existing	Proposed	%age Diff	APSH Existing	APSH Proposed	%age Diff	Winter Existing	Winter Proposed	&age Diff
22 Tower Street	Basement	Living_Kitchen	W1	2.28	2.28	0.00%	-4.64%	1.70%	1.37%	-19.29%	0.51%	0.50%	-2.90%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	2.73	2.73	0.00%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	1.52	1.31	-13.92%								1	1	0.00%	0	0	N/A
	Ground	Living_Kitchen	W1	12.50	9.32	-25.42%	-22.15%	76.60%	51.20%	-33.16%	2.61%	2.29%	-12.59%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	13.21	9.29	-29.65%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	14.58	12.92	-11.37%								23	20	-13.04%	6	4	-33.33%
	First	Living_Kitchen	W1	18.38	14.31	-22.15%	-16.86%	94.75%	94.74%	-0.01%	5.95%	5.30%	-10.97%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	19.64	14.30	-27.20%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	25.58	23.09	-9.73%								42	37	-11.90%	12	7	-41.67%
			W4	21.14	19.38	-8.35%								37	35	-5.41%	10	8	-20.00%
	Second	Bedroom	W1	18.38	14.31	-22.15%	-16.86%	12.06%	12.06%	0.00%	2.39%	4.27%	79.06%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	19.64	14.30	-27.20%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	25.58	23.09	-9.73%								N/A	N/A	N/A	N/A	N/A	N/A
			W4	21.14	19.38	-8.35%								N/A	N/A	N/A	N/A	N/A	N/A
	Third	Living_Kitchen	W1	27.21	23.61	-13.23%	-11.69%	96.92%	94.80%	-2.19%	5.09%	4.65%	-8.56%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	28.37	23.48	-17.23%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	31.78	30.31	-4.61%								50	49	-2.00%	16	15	-6.25%
	Fourth	Living_Kitchen	W1	36.55	35.07	-4.06%	-3.60%	97.95%	97.95%	0.00%	9.70%	9.35%	-3.63%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	36.82	34.93	-5.13%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	36.51	35.92	-1.62%								52	52	0.00%	18	18	0.00%
	Fifth	Bedroom	W1	36.55	35.07	-4.06%	-3.60%	100.00%	100.00%	0.00%	7.51%	7.30%	-2.79%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	36.82	34.93	-5.13%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	36.51	35.92	-1.62%								N/A	N/A	N/A	N/A	N/A	N/A
6 Tower Court	Basement	R1	W1	14.57	13.55	-6.96%	-6.96%	61.43%	59.75%	-2.73%	2.13%	2.04%	-4.18%	N/A	N/A	N/A	N/A	N/A	N/A
	Ground	R1	W1	18.37	17.08	-6.98%	-6.98%	69.97%	69.54%	-0.60%	3.41%	3.27%	-4.31%	N/A	N/A	N/A	N/A	N/A	N/A
	First	R1	W1	20.52	19.33	-5.79%	-5.79%	60.53%	60.53%	0.00%	2.78%	3.74%	34.84%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	18.66	17.19	-7.88%	-7.88%	49.06%	49.06%	0.00%	2.51%	2.39%	-4.87%	N/A	N/A	N/A	N/A	N/A	N/A
	Second	R1	W1	22.48	21.40	-4.77%	-4.77%	63.79%	63.79%	0.00%	2.52%	2.44%	-3.17%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	20.94	19.58	-6.49%	-6.49%	49.49%	49.49%	0.00%	2.33%	3.45%	48.18%	N/A	N/A	N/A	N/A	N/A	N/A
	Third	R1	W1	25.56	24.59	-3.79%	-3.79%	69.17%	69.14%	-0.05%	1.30%	1.27%	-2.61%	N/A	N/A	N/A	N/A	N/A	N/A
5 Tower Court	Basement	R1	W1	11.06	9.29	-16.05%	-16.05%	35.81%	29.57%	-17.45%	1.05%	0.96%	-9.11%	N/A	N/A	N/A	N/A	N/A	N/A
	Ground	R1	W1	13.80	12.06	-12.59%	-14.55%	65.15%	62.40%	-4.22%	3.77%	3.43%	-8.84%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	13.03	11.11	-14.70%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	12.88	10.77	-16.35%								N/A	N/A	N/A	N/A	N/A	N/A
	First	R1	W1	16.81	14.92	-11.29%	-11.29%	43.85%	43.85%	0.00%	2.57%	2.39%	-6.87%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	16.98	14.59	-14.06%	-14.06%	68.93%	68.93%	0.00%	2.33%	2.13%	-8.64%	N/A	N/A	N/A	N/A	N/A	N/A
	Second	R1	W1	19.70	17.91	-9.09%	-9.09%	45.91%	45.91%	0.00%	2.42%	2.28%	-5.69%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	20.38	18.08	-11.28%	-11.28%	70.87%	70.87%	0.00%	2.20%	2.04%	-7.18%	N/A	N/A	N/A	N/A	N/A	N/A
	Third	R1	W1	24.16	22.50	-6.89%	-6.89%	63.86%	63.84%	-0.03%	1.30%	1.24%	-4.66%	N/A	N/A	N/A	N/A	N/A	N/A
4_10 Tower Street	First	R1	W1	13.99	13.14	-6.10%	-6.10%	41.06%	41.06%	0.00%	1.86%	1.79%	-3.62%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	17.55	16.16	-7.93%	-7.93%	49.62%	49.62%	0.00%	2.13%	2.03%	-4.83%	N/A	N/A	N/A	N/A	N/A	N/A
		R3	W3	22.33	19.65	-12.03%	-12.03%	52.73%	52.69%	-0.07%	2.48%	2.28%	-7.89%	N/A	N/A	N/A	N/A	N/A	N/A
		R4	W4	19.05	14.41	-24.32%	-24.32%	54.80%	53.52%	-2.34%	2.24%	1.90%	-15.43%	N/A	N/A	N/A	N/A	N/A	N/A
	Second	R1	W1	3.75	3.21	-14.17%	-14.17%	52.18%	52.18%	0.00%	0.91%	0.82%	-9.24%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	5.02	3.61	-28.04%	-28.04%	65.22%	65.22%	0.00%	1.07%	0.91%	-15.30%	N/A	N/A	N/A	N/A	N/A	N/A
		R3	W3	28.08	25.41	-9.50%	-9.50%	93.52%	92.63%	-0.95%	1.32%	1.23%	-6.83%	N/A	N/A	N/A	N/A	N/A	N/A
		R4	W4	28.89	25.05	-13.27%	-13.27%	95.88%	95.84%	-0.04%	1.57%	1.42%	-9.67%	N/A	N/A	N/A	N/A	N/A	N/A
		R5	W5	6.33	4.10	-35.18%	-35.18%	79.31%	76.68%	-3.32%	1.23%	0.97%	-21.09%	N/A	N/A	N/A	N/A	N/A	N/A
	Third	R1	W1	27.10	26.33	-2.82%	-2.82%	87.50%	87.50%	0.00%	3.39%	3.32%	-1.93%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	30.71	29.41	-4.23%	-4.41%	98.85%	98.85%	0.00%	4.48%	4.33%	-3.41%	N/A	N/A	N/A	N/A	N/A	N/A
			W3	32.52	31.03	-4.60%								N/A	N/A	N/A	N/A	N/A	N/A
		R3	W4	33.39	31.16	-6.68%	-6.68%	93.54%	93.50%	-0.04%	1.53%	1.44%	-5.85%	N/A	N/A	N/A	N/A	N/A	N/A

Shaded Cells do not meet the BRE recommendations
Positive %age figures indicate an improvement
in the natural lighting conditions

See Dwg No: 14312/LOC/801-803

				VSC				Daylight Distribution			ADF			APSH					
Address	**Floor Level**	**Room Name**	**Window ID**	**Existing**	**Proposed**	**Window %age Diff**	**Room %age Diff**	**Existing**	**Proposed**	**%age Diff**	**Existing**	**Proposed**	**%age Diff**	**APSH Existing**	**APSH Proposed**	**%age Diff**	**Winter Existing**	**Winter Proposed**	**&age Diff**
4_10 Tower Street	Third	R4	W5	34.09	30.73	-9.85%	-9.85%	95.88%	95.88%	0.00%	1.80%	1.65%	-8.66%	N/A	N/A	N/A	N/A	N/A	N/A
		R5	W6	34.11	26.38	-22.67%	-22.67%	99.25%	99.25%	0.00%	3.84%	3.14%	-18.16%	N/A	N/A	N/A	N/A	N/A	N/A
	Fourth	R1	W1	36.05	35.12	-2.58%	-2.58%	99.70%	99.70%	0.00%	7.31%	7.16%	-2.07%	N/A	N/A	N/A	N/A	N/A	N/A
		R2	W2	37.24	31.98	-14.11%	-14.11%	99.70%	99.65%	-0.05%	7.51%	6.61%	-11.99%	N/A	N/A	N/A	N/A	N/A	N/A
	Fifth	R1	W1	37.63	36.06	-4.18%	-7.39%	100.00%	100.00%	0.00%	7.52%	7.04%	-6.34%	N/A	N/A	N/A	N/A	N/A	N/A
			W2	37.61	34.23	-8.98%								N/A	N/A	N/A	N/A	N/A	N/A
			W3	37.34	28.49	-23.70%								N/A	N/A	N/A	N/A	N/A	N/A
			W4	35.42	35.39	-0.07%								N/A	N/A	N/A	N/A	N/A	N/A
			W5	34.93	34.92	-0.02%								N/A	N/A	N/A	N/A	N/A	N/A

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APPENDIX C

DAYLIGHT ANALYSIS

(WITHOUT BALCONIES)

Vertical Sky Component Daylight Report: Ambassador's Theatre, West Street, London, WC2H 9ND
Testing: 4-10 Tower Street

Dwg No	Address	Floor Level	Room Name	Window ID	Existing VSC%	Proposed VSC%	Percentage Difference	Condition
-	4_10 Tower Street	First	R4	W4	21.63	16.94	-21.69%	Fail
-		Second	R2	W2	25.97	24.52	-5.57%	Pass
-			R5	W5	29.32	22.01	-24.93%	Fail

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

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