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EMAIL cathryn.buckland@colliers.com

14th December 2018

Tower Street Limited
C/o BRC
4th Floor
2 London Bridge
SE1 9RA

Dear BRC,

RE: Daylight & Sunlight Letter Report for the Proposed Extension at 22 Tower Street

Colliers have been instructed to undertake a Daylight Sunlight analysis of the proposed extension at 22 Tower Street. This assessment has been undertaken by constructing a 3d model using aerial photogrammetry, inserting nearby rooms and apertures and testing these with industry leading software.

For discretionary purposes, we have not taken any internal measurements of the neighbouring buildings. Please note that access to the rear of 22 Tower Street is limited and some dimensions have been obtained from online sources or if these cannot be found or identified through Site visits, they have been assumed.

Daylight & Sunlight

Daylight & Sunlight is a key consideration in the Planning process, particularly in City Centres where the requirement for density is ever increasing; light is an increasingly valuable commodity.

The BRE Guidelines 'Site Layout Planning for Daylight & Sunlight 2011' sets out the numerical recommendations to establish if a neighbouring owners light levels will be adequate following implementation of a Proposed Development.

It is important to consider that the figures within the Guide are to be treated flexibly and are 'Guidelines'. The Guide states the following;

'The Guide intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument 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 many factors in site layout design (see Section 5). ***In special circumstances the developer or Planning Authority may wish to use different target values. For example, in an historic city centre, or in an area with modern high-rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings'****.*

The guidance goes on to say ***'These values are purely advisory and different targets may be used based of the special requirements of the proposed development or its location'***

As such, we often consider other factors when assessing Daylight & Sunlight levels, namely Planning Policy and the other benefits that a Proposed Development may bring, such as regeneration to an area.

Methodologies

Vertical Sky Component (VSC)

In the BRE guide, this is described as a *'Ratio of that part of illuminance, at a point on a given vertical plane, that is received directly from a CIE standard overcast sky, to illuminance on a horizontal plane due*

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to an unobstructed hemisphere to this sky. *Usually the 'given vertical plane' is the outside of a window wall. The VSC does not include reflected light, either from the ground or from other buildings'.*

In simpler terms, this is a ratio of the available skylight compared to the maximum amount of skylight from a sky dome, measured from the external surface of the window.

This is demonstrated as a percentage and the BRE guide recommends that a minimum figure of 27% should be achieved to the window of a habitable room. This would indicate a reasonable lit space and one that is deemed acceptable. For surrounding windows, an important attribute of the development, is to prevent any noticeable change to surrounding buildings. The BRE guide suggests that the VSC figure should not be reduced to any less than 0.8 its original value (20% reduction) in order to achieve this.

No Sky Line (NSL)

In the BRE guide, this is described as a *'the outline on the working plane of the area from which no sky can be seen'.*

The No Sky Line test looks at the depth at which daylight can penetrate into the room, measured from a working plane of 850mm above floor level. The surrounding habitable rooms can experience some loss, but the guidance states that this should be limited to no less than 0.8 of its original value (20% reduction).

Sunlight (APSH)

The BRE guide puts emphasis on domestic buildings, however it does mention that care should be taken for 'non-domestic buildings where there is a particular requirement for sunlight'.

The United Kingdom being situated in the Northern Hemisphere, we therefore predominately get our sunlight from the South. Unlike daylight which is uniform and achieved from the sky, sunlight will be largely determined due to orientation of the windows. Due to this reason, the BRE advises that only windows within 90º or due south should be tested.

In existing buildings, the BRE guide suggests that; *'If a living room or an existing dwelling has a main window facing 90º of due south, and any part of a new development subtends an angle of more than 25º to the horizontal measured from the centre of the window in a vertical section perpendicular to the window., then the sunlighting to the existing dwelling may be adversely affected. This will be the case if the centre of the window;*

- receives less than 25% of annual probable sunlight hours, or less than 5% or annual probable sunlight hours between 21st September and 21st March;
- receives less than 0.8 times its former sunlight hours during either period; and
- has a reduction in sunlight received over the whole year greater than 4% or annual probable sunlight hours.

Technical Analysis

It is important to note that properties in Commercial use have not been considered as per the BRE Guideline recommendations.

10 Earlham Street

10 Earlham Street has not been considered within the Daylight & Sunlight analysis as the rear windows that are Site facing serve a WC and would not be considered to be a 'habitable room' in accordance with the BRE209 Daylight Sunlight Guidance (habitable rooms being Kitchens, Living Rooms and Bedrooms).

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12 Earlham Street

12 Earlham Street has a Living Room at ground floor level with a window to the rear, this appears to be under a rooflight and experiences poor lighting values in the existing conditions. We would need further clarification into the arrangement of this rear section and have currently modelled using available Planning drawings.

The VSC results indicate that the Living Room at basement level will go from 2.57 % VSC to 1.53 % VSC in the proposed condition and the Living Room at ground floor level will go from 6.20 % to 4.91 % VSC. Although this indicates a 40 % and 21 % change respectively, which would constitute major and minor technical reductions it is clear that there is limited amenity enjoyed in the existing conditions with both windows falling below the recommended 27 % VSC target values.

The two remaining rooms at first and second floor level serving a Bedroom and Kitchen will meet the BRE's suggested target values.

For NSL (No Sky Line), three of the four rooms (75 %) will meet the BRE's suggested target values. The single room that does not meet the criteria serves a Living Room and will experience a 23 % change between the existing and proposed NSL values. This is only marginally in excess of the 20 % recommended criteria set out within the BRE Guidance.

For APSH (Annual Probable Sunlight Hours), the analysis indicates that two of the four windows (50%) assessed will meet the BRE's recommended target values; the two remaining windows do not currently meet BRE target values under existing conditions and the proposed development will further impact their APSH. The Living Room window at basement level goes from 9% APSH to 0% APSH Annually with no Sunlight in the winter months in either the existing or proposed. Whilst the Living Room window at ground floor goes from 20 % APSH to 10 % APSH annually and will retain 1 % APSH in the winter months.

14 Earlham Street

Our analysis indicates that this property will remain fully compliant in accordance with the Daylight & Sunlight methodologies.

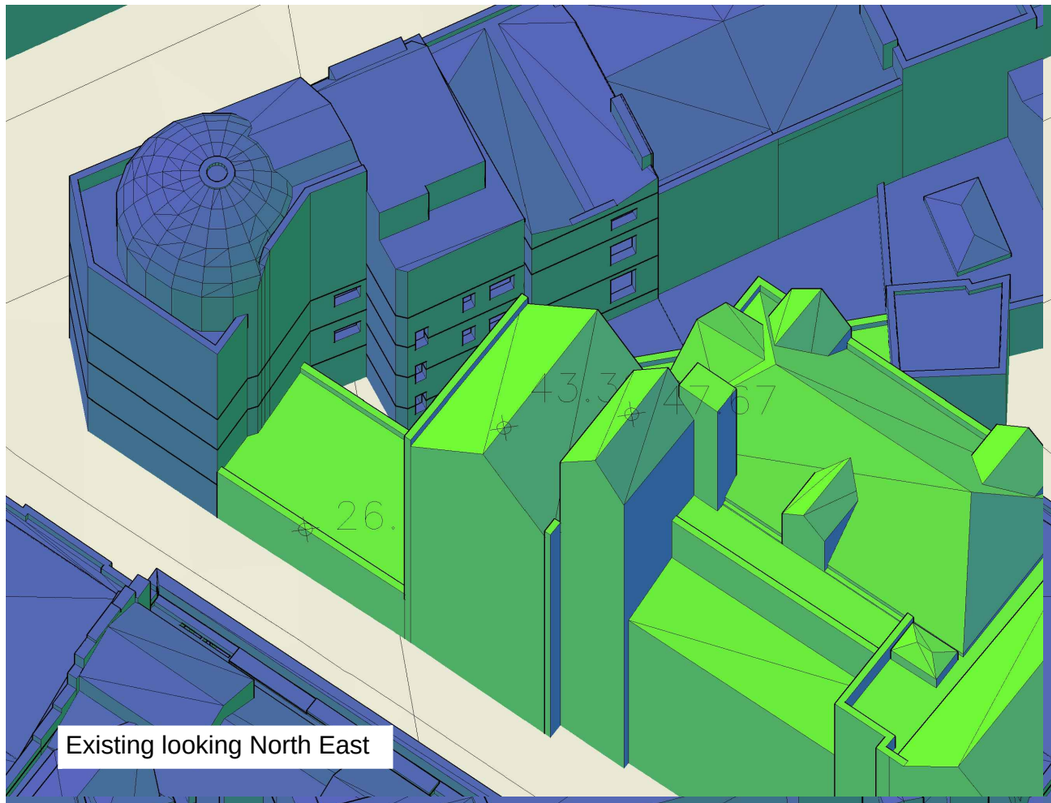
4-10 Tower Street

Our analysis indicates that this property will remain fully compliant in accordance with the Daylight & Sunlight methodologies.

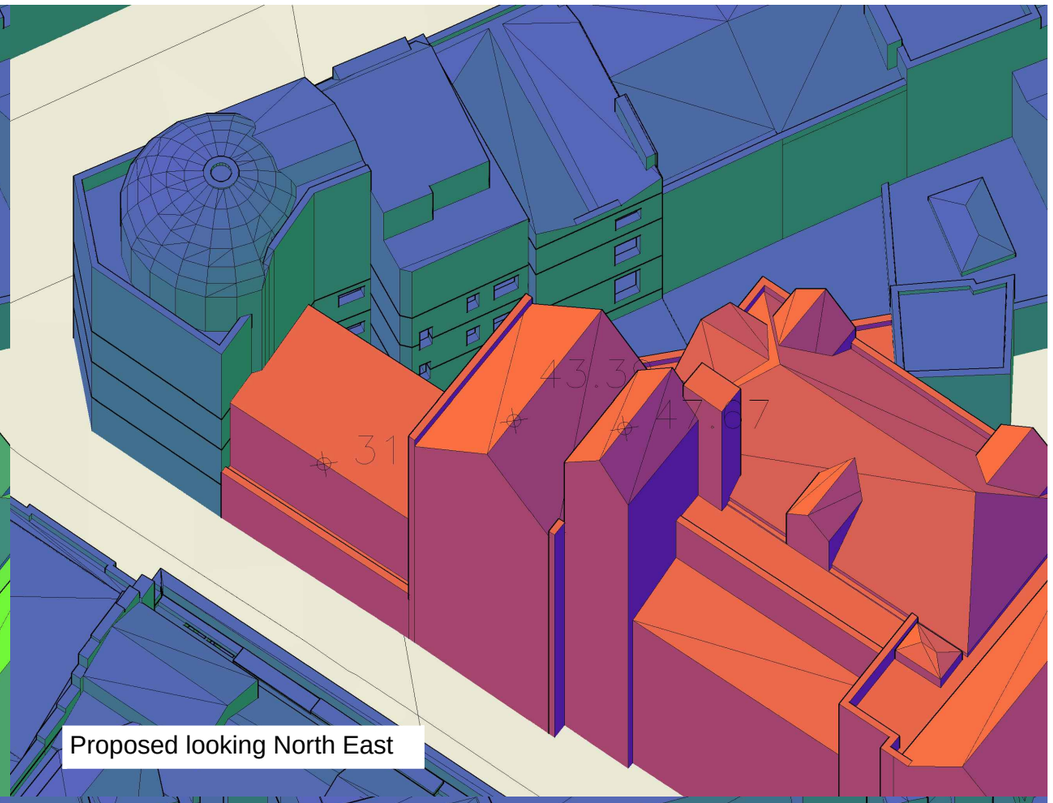
I trust that this provides sufficient information to accompany the Planning Submission for 22 Tower Street. However, please do not hesitate to contact Colliers should you require any further information.

Yours sincerely,
For and on behalf of Colliers International,

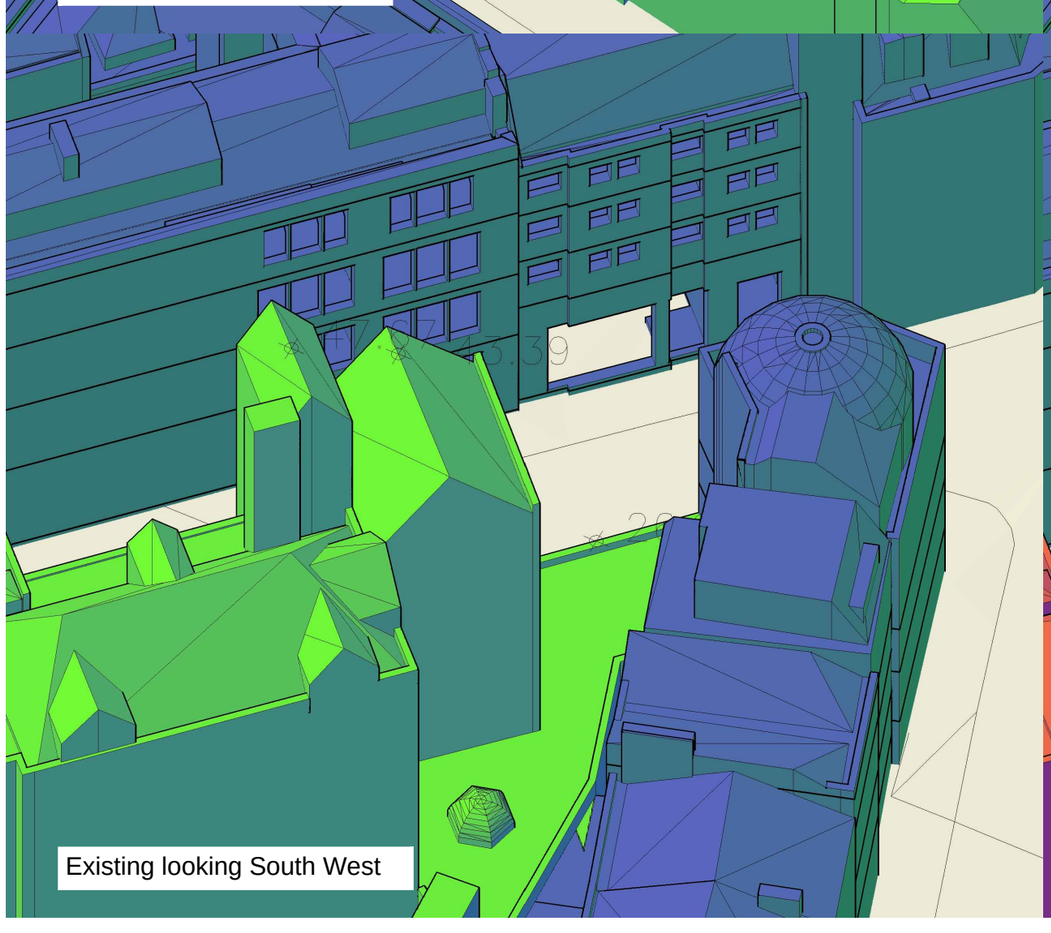
Cathryn Buckland
Associate Director – Project & Building Consultancy



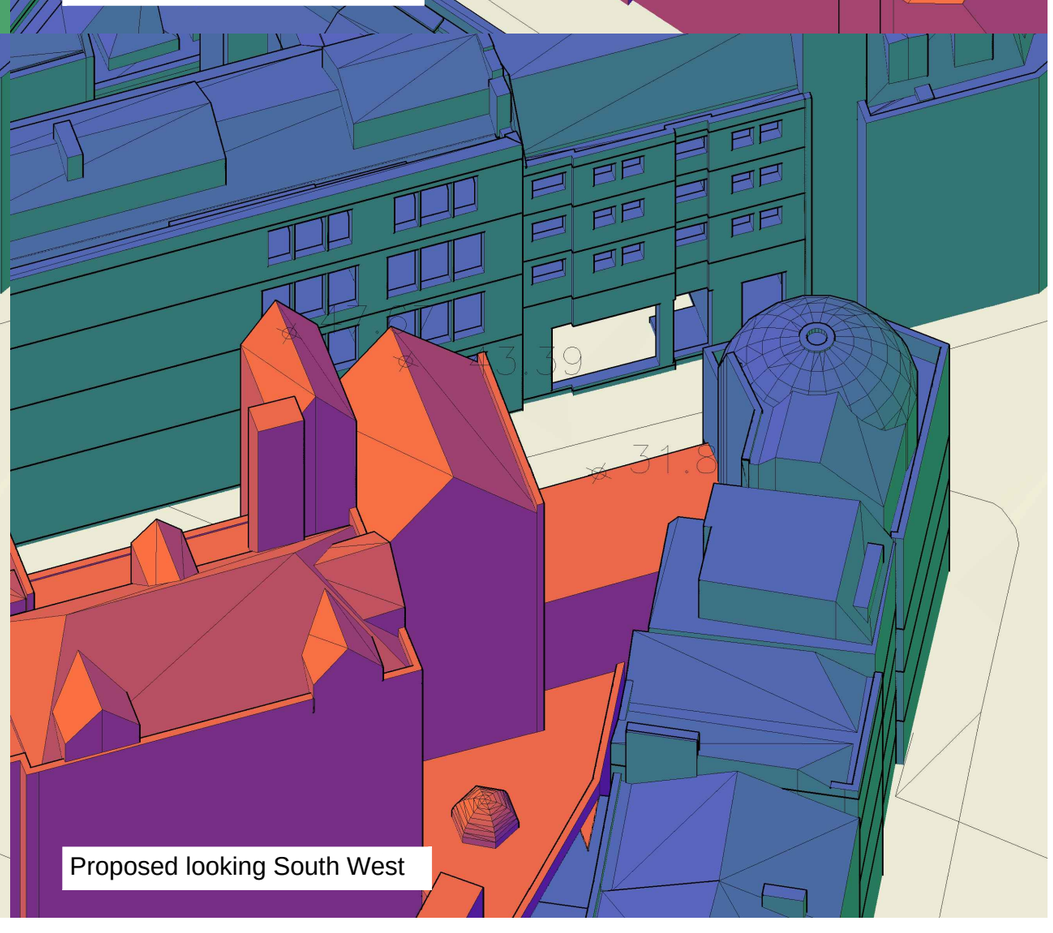
Existing looking North East



Proposed looking North East



Existing looking South West



Proposed looking South West

SOURCES OF INFORMATION:

REV:	DESCRIPTION:	BY:	DATE:
G			
F			
E			
D			
C			
B			
A	-	-	-

PROJECT:
22 Tower Street,
London

TITLE:
3D Views

DATE:	DRAWN:
24/11/18	CRB
DRG NO:	SCALE:
TWST_ROL//07	NTS @ A3

Colliers INTERNATIONAL

SOURCES OF INFORMATION:

N

REV:	DESCRIPTION:	BY:	DATE:
G			
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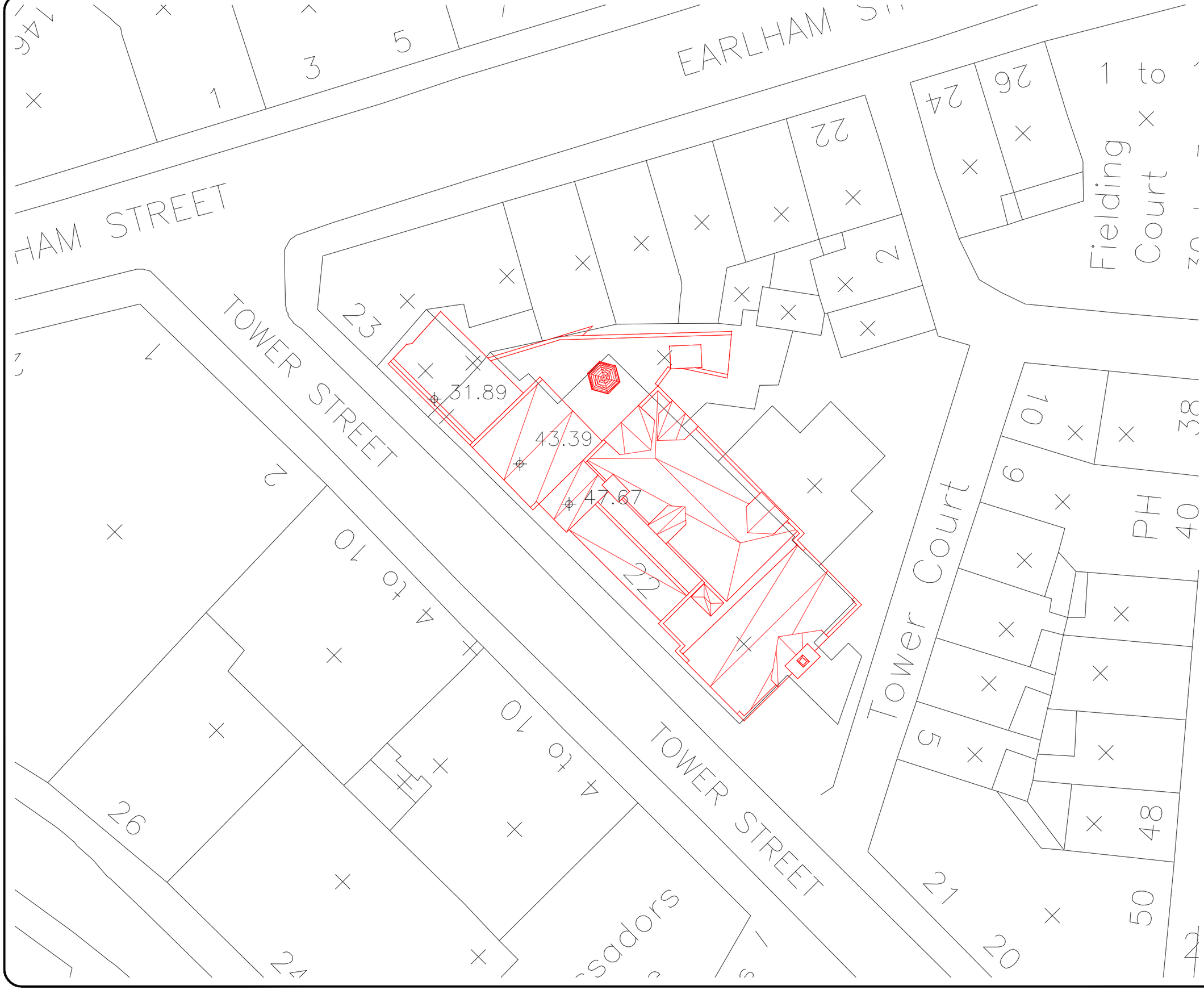
E			
D			
C			
B			
A	-	-	-

PROJECT:
22 Tower Street,
London

TITLE:
Existing Site Plan

DATE:	DRAWN:
24/11/18	CRB
DRG NO:	SCALE:
TWST_ROL//01	1:250 @ A3

Colliers INTERNATIONAL



SOURCES OF INFORMATION:

N

REV:	DESCRIPTION:	BY:	DATE:
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C			
B			
A	-	-	-

PROJECT:
22 Tower Street,
London

TITLE:
Proposed Site Plan

DATE:	DRAWN:
24/11/18	CRB
DRG NO:	SCALE:
TWST_ROL//02	1:250 @ A3

Colliers INTERNATIONAL

No Sky Line

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.		Room Area	Lit Area Existing	Lit Area Proposed	Pr/Ex	Meets BRE Criteria
12 Earlham St										
B01	R1		Residential	Living Room	Area m2	12.28	1.24	0.95		
					% of room		10%	8%	0.76	NO
F00	R1		Residential	Living Room	Area m2	12.28	4.47	4.09		
					% of room		36%	33%	0.91	YES
F01	R1		Residential	Bedroom	Area m2	4.77	0.87	0.86		
					% of room		18%	18%	0.98	YES
F02	R1		Residential	Kitchen-Resi	Area m2	10.52	2.21	2.21		
					% of room		21%	21%	1.00	YES
14 Earlham St										
F01	R1		Residential	Assumed	Area m2	13.61	6.67	6.67		
					% of room		49%	49%	1.00	YES
F02	R1		Residential	Assumed	Area m2	13.61	6.96	6.96		
					% of room		51%	51%	1.00	YES
F03	R1		Residential	Assumed	Area m2	13.61	6.27	6.27		
					% of room		46%	46%	1.00	YES
4-10 Tower St										
F01	R1		Residential	Assumed	Area m2	20.91	19.37	19.37		
					% of room		93%	93%	1.00	YES
	R2		Residential	Assumed	Area m2	22.68	22.26	22.26		
					% of room		98%	98%	0.99	YES
F02	R1		Residential	Assumed	Area m2	20.91	20.37	20.37		
					% of room		97%	97%	1.00	YES
	R2		Residential	Assumed	Area m2	22.68	22.57	22.57		
					% of room		99%	99%	1.00	YES
F03	R1		Residential	Assumed	Area m2	20.91	20.76	20.76		
					% of room		99%	99%	1.00	YES
	R2		Residential	Assumed	Area m2	22.68	22.41	22.41		
					% of room		99%	99%	1.00	YES
2 Tower St										
F01	R1		Residential	Assumed	Area m2	7.32	6.79	6.79		
					% of room		93%	93%	1.00	YES
	R2		Residential	Assumed	Area m2	9.46	8.33	8.33		
					% of room		88%	88%	1.00	YES
	R3		Residential	Assumed	Area m2	7.27	5.46	5.46		
					% of room		75%	75%	1.00	YES
	R4		Residential	Assumed	Area m2	10.78	9.72	9.72		
					% of room		90%	90%	1.00	YES
F02	R1		Residential	Assumed	Area m2	7.32	7.16	7.16		
					% of room		98%	98%	1.00	YES
	R2		Residential	Assumed	Area m2	9.46	9.11	9.11		
					% of room		96%	96%	1.00	YES
	R3		Residential	Assumed	Area m2	7.27	6.52	6.52		
					% of room		90%	90%	1.00	YES
	R4		Residential	Assumed	Area m2	10.78	10.43	10.43		
					% of room		97%	97%	1.00	YES
F03	R1		Residential	Assumed	Area m2	7.32	7.25	7.25		
					% of room		99%	99%	1.00	YES
	R2		Residential	Assumed	Area m2	9.46	9.34	9.34		
					% of room		99%	99%	1.00	YES
	R3		Residential	Assumed	Area m2	7.27	7.04	7.04		
					% of room		97%	97%	1.00	YES
	R4		Residential	Assumed	Area m2	10.78	10.58	10.58		
					% of room		98%	98%	1.00	YES

Vertical Sky Componant (VSC) & Annual Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
12 Earlham St																	
B01	R1		Residential	Living Room	W1		Existing	2.57	0.59	NO	162°	9	0.00	NO	0	0.00	YES
							Proposed	1.53				0			0		
F00	R1		Residential	Living Room	W1		Existing	6.20	0.79	NO	162°	20	0.50	NO	1	1.00	YES
							Proposed	4.91				10			1		
F01	R1		Residential	Bedroom	W1		Existing	6.83	0.95	YES	162°	22	0.95	YES	1	1.00	YES
							Proposed	6.55				21			1		
F02	R1		Residential	Kitchen-Resi	W1		Existing	9.12	1.00	YES	162°	42	1.00	YES	5	1.00	YES
							Proposed	9.12				42			5		
14 Earlham St																	
F01	R1		Residential	Assumed	W1		Existing	12.52	1.00	YES	163°	36	1.00	YES	3	1.00	YES
							Proposed	12.52				36			3		
F02	R1		Residential	Assumed	W1		Existing	15.13	1.00	YES	163°	48	1.00	YES	5	1.00	YES
							Proposed	15.13				48			5		
F03	R1		Residential	Assumed	W1		Existing	17.14	1.00	YES	163°	58	1.00	YES	7	1.00	YES
							Proposed	17.14				58			7		
4-10 Tower St																	
F01	R1		Residential	Assumed	W1		Existing	13.71	1.00	YES	45°N		*North*			*North*	
							Proposed	13.71				*North*			*North*		
					W2		Existing	14.09	1.00	YES	45°N	*North*			*North*		
							Proposed	14.09									
					W3		Existing	14.73	1.00	YES	45°N	*North*			*North*		
							Proposed	14.73									
	R2		Residential	Assumed	W4		Existing	16.37	1.00	YES	45°N	*North*			*North*		
							Proposed	16.37									
					W5		Existing	16.98	0.99	YES	45°N	*North*			*North*		
							Proposed	16.97									
					W6		Existing	17.52	0.99	YES	45°N	*North*			*North*		
							Proposed	17.50									
F02	R1		Residential	Assumed	W1		Existing	18.74	1.00	YES	45°N	*North*			*North*		
							Proposed	18.74									
					W2		Existing	19.15	1.00	YES	45°N	*North*			*North*		
							Proposed	19.15									
					W3		Existing	19.91	1.00	YES	45°N	*North*			*North*		
							Proposed	19.91									
	R2		Residential	Assumed	W4		Existing	21.79	1.00	YES	45°N	*North*			*North*		
							Proposed	21.79									
					W5		Existing	22.58	1.00	YES	45°N	*North*			*North*		
							Proposed	22.58									
					W6		Existing	23.26	1.00	YES	45°N	*North*			*North*		
							Proposed	23.26									
F03	R1		Residential	Assumed	W1		Existing	24.71	1.00	YES	45°N	*North*			*North*		
							Proposed	24.71									
					W2		Existing	25.74	1.00	YES	45°N	*North*			*North*		
							Proposed	25.74									
					W3		Existing	25.77	1.00	YES	45°N	*North*			*North*		
							Proposed	25.77									
	R2		Residential	Assumed	W4		Existing	27.82	1.00	YES	45°N	*North*			*North*		
							Proposed	27.82									

Vertical Sky Componant (VSC) & Annual Probable Sunlight Hours (APSH)

Floor Ref.	Room Ref.	Room Attribute	Property Type	Room Use.	Window Ref.	Window Attribute		VSC	Pr/Ex	Meets BRE Criteria	Window Orientation	Annual	Pr/Ex	Meets BRE Criteria	Winter	Pr/Ex	Meets BRE Criteria
					W5		Existing	29.17	1.00	YES	45°N		*North*			*North*	
							Proposed	29.17									
					W6		Existing	29.23	1.00	YES	45°N		*North*			*North*	
							Proposed	29.23									
						2 Tower St											
F01	R1		Residential	Assumed	W1		Existing	18.64	1.00	YES	46°N		*North*			*North*	
							Proposed	18.64									
	R2		Residential	Assumed	W2		Existing	19.15	1.00	YES	46°N		*North*			*North*	
							Proposed	19.15									
					W3		Existing	19.43	1.00	YES	46°N		*North*			*North*	
							Proposed	19.43									
	R3		Residential	Assumed	W4		Existing	19.18	1.00	YES	46°N		*North*			*North*	
							Proposed	19.18									
	R4		Residential	Assumed	W5		Existing	20.27	1.00	YES	46°N		*North*			*North*	
							Proposed	20.27									
					W6		Existing	20.51	1.00	YES	46°N		*North*			*North*	
							Proposed	20.51									
F02	R1		Residential	Assumed	W1		Existing	22.93	1.00	YES	46°N		*North*			*North*	
							Proposed	22.93									
	R2		Residential	Assumed	W2		Existing	23.44	1.00	YES	46°N		*North*			*North*	
							Proposed	23.44									
					W3		Existing	23.71	1.00	YES	46°N		*North*			*North*	
							Proposed	23.71									
	R3		Residential	Assumed	W4		Existing	23.23	1.00	YES	46°N		*North*			*North*	
							Proposed	23.23									
	R4		Residential	Assumed	W5		Existing	24.42	1.00	YES	46°N		*North*			*North*	
							Proposed	24.42									
					W6		Existing	24.62	1.00	YES	46°N		*North*			*North*	
							Proposed	24.62									
F03	R1		Residential	Assumed	W1		Existing	27.43	1.00	YES	46°N		*North*			*North*	
							Proposed	27.43									
	R2		Residential	Assumed	W2		Existing	27.78	1.00	YES	46°N		*North*			*North*	
							Proposed	27.78									
					W3		Existing	27.95	1.00	YES	46°N		*North*			*North*	
							Proposed	27.95									
	R3		Residential	Assumed	W4		Existing	27.14	1.00	YES	46°N		*North*			*North*	
							Proposed	27.14									
	R4		Residential	Assumed	W5		Existing	28.59	1.00	YES	46°N		*North*			*North*	
							Proposed	28.59									
					W6		Existing	28.81	1.00	YES	46°N		*North*			*North*	
							Proposed	28.81									