

GVA Schatunowski Brooks



BRE Report

GVA  
65 Gresham Street  
London  
EC2V 7NQ

**357 Euston Road,  
London**

Goals Uk Community Interest  
Company Limited

October 2015

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Appendix I Drawings WA88/04/BRE07-08 and Associated Technical Results Data

## 1. Introduction

- 1.1 GVA Schatunowski Brooks has been retained by Goals Uk Community Interest Company Limited to assess impact of the proposed redevelopment of the proposed residential redevelopment.
- 1.2 The buildings with the potential to be impacted are:
- 29 Warren Street;
- 1.3 The reference drawing WA88/04/BRE07 is included to locate tested buildings.

## 2. Sources of Information

2.1 A detailed 3D computer model of the existing neighbouring buildings, the existing building and the and proposed building was built using the following information:-

- Digital O.S. Plan
- Scheme info PD Architectural PD-15-288 19-25.
- Exiting site massing estimated
- Adjoining elevation estimated.

2.2 We have no information on the internal layouts of any of the neighbouring buildings.

### 3. Daylight/Sunlight Planning Principles

- 3.1 The Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011) is the document referred to by most local authorities. The BRE guidelines cover amenity requirements for sunlight and daylight to buildings around any development site as well as the quality of daylight within a proposed habitable development. The BRE guidelines should also be read in conjunction with the British Standard, BS 8206-2:2008 Lighting for Buildings Part 2: Code of Practice for Daylighting as they both refer to each other.

- 3.2 The introduction to the guidelines state:-

*"The guide is 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 developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."*

#### Daylighting

- 3.3 The requirements governing daylighting to existing residential buildings around a development site are set out in Part 2.2 of the guidelines. The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the vertical sky component at the centre of the window. The guidelines advise that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines also suggest that distribution of daylight within rooms is reviewed although bedrooms are considered to be less important.
- 3.4 The vertical sky component can be calculated by using the skylight indicator provided as part of the guidelines, by mathematical methods using what is known as a Waldram diagram or by 3D CAD modelling.

3.5 The guidelines states the following:-

*"If this vertical sky component is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component with the new development in place, is both less than 27% and less than 0.8 times its former value, then occupants of the existing building will notice the reduction in the amount of skylight."*

3.6 It must be interpreted from this criterion that a 27% vertical sky component (VSC) constitutes adequacy, but where this value cannot be achieved a reduction of up to 0.8 times its the former value (this is the same as saying a 20% reduction when compared against the existing condition) would not be noticeable and would not therefore be considered material.

3.7 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the room window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

3.8 Appendix C of the BRE guidelines sets out various more detailed tests that assess the interior daylight conditions of rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines. The ADF value determines the level of interior illumination that can be compared with the British Standard, BS 8206: Part 2. This recommends a minimum of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.

3.9 The no sky-line or daylight distribution contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. If a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

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## Sunlighting

- 3.10 Requirements for protection of sunlighting to existing residential buildings around a development site are set out in Part 3.2 of the BRE guidelines. There is a requirement to assess windows of surrounding properties where the main windows face within 90 degrees of due south. The calculations are taken at the window reference point at the centre of each window on the plane of the inside surface of the wall. The guidelines further state that kitchens and bedrooms are less important in the context of considering sunlight, although care should be taken not to block too much sun. The guidelines sets the following standard:-

*"If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months of 21st September and 21st March, then the room should still receive enough sunlight. The sunlight availability indicator in Appendix A can be used to check this.*

*Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times their former value, either over the whole year or just during the winter months then the occupants of the existing building will notice the loss of sunlight."*

- 3.11 To summarize the above, a good level of sunlight to a window is 25% annual probable sunlight hours, of which 5% should be in winter months. Where sunlight levels fall below the suggested level, a comparison with the existing condition is reviewed and if the ratio reduction is within 0.8 (the same as saying a 20% reduction) its former value then the sunlight loss will not be noticeable. Sunlight reductions that fall below 0.8, i.e. 0.7 (the same as saying greater than 20%) then the sunlight losses will be noticed by the occupants.

## 4. Assessment Results

- 4.1 We set out below our commentary on the assessments for the daylight/sunlight tests, all results are shown graphically on the attached plans and in tabular format.

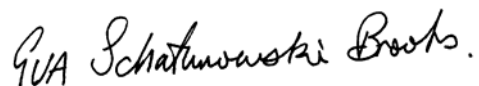
### 29 Warren Street – WE88/04/BRE08

- 4.2 The drawing referenced as above found in appendix 1 shows the results on plan of the properties' windows on all floors. Areas thought to be circulation space have not been tested.
- 4.3 These windows are all thought to be in residential use.
- 4.4 We do not have any information in respect of the internal layouts of the building but it is assumed that the staircase is located centrally.
- 4.5 In its current existing situation there is a reasonably high level of obstruction to these windows given the height of existing buildings on the north side of Warren Street.
- 4.6 The proposal, being stepped in nature from the Warren Street elevation only creates very small loss of potential daylight.
- 4.7 Reductions in Daylight VSC are between two and five per cent, well below the noticeable threshold of 20 %.
- 4.8 The scheme is therefore fully BRE compliant.
- 4.9 There is no requirement to analyse sunlight as the relevant windows face virtually due north.

## 5. Conclusion

- 5.1 We have undertaken a detailed study of the impact of the proposed development on the relevant rooms within the neighbouring dwelling. The tests were undertaken in accordance with the BRE Report 209 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (second edition, 2011) and the British Standard - BS 8206: Part 2.
- 5.2 The proposed development respects the existing heights on Warren Street and thus creates very little additional impact on the neighbour's windows
- 5.3 In conclusion The scheme is fully BRE compliant.

Yours faithfully



GVA Schatunowski Brooks

# Appendices

## Appendix I



This drawing is Copyright © of GVA Grimley Limited.  
**Do not scale this drawing.**  
All dimensions to be checked on site. Drawing to be read in conjunction with any specifications, schedules and Consultants drawings and details.

Legend

Rights of Light

Existing

Proposed

1/16 Grid Loss Hatching

Room Layout

Existing 0.2% Daylight Contour

Proposed 0.2% Daylight Contour

Sources of Information

Digital O.S Plan

Site Inspection & photographs

Room layouts taken from Neutral Corner Ltd drawing LWB/SK/1B (not to Scale)

Existing site massing estimated from photographs

Adjoining owners' properties estimated from photos

PD Architectural

PD-15-288 19

PD-15-288 20

PD-15-288 21

PD-15-288 22

PD-15-288 23

PD-15-288 25

PD-15-288 26

PD-15-288 27

PD-15-288 28

PD-15-288 25

BILFINGER

GVA

08449 02 03 04

GVA Schatunowski Brooks

65 Gresham Street, London, EC2V 7NQ

www.gva.co.uk

Project Name

Warren Street

London

Client

Goals UK Ltd

Drawing Title

Existing and Proposed site plan

Warren Street

Drawn By

Checked By

Scale @ A3

Date

AH

15 Oct 2015

Project No.

WA88/04

Drawing No.

BRE07

Revision

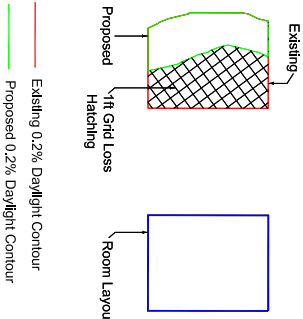
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DAYLIGHT

A3

Legend

Rights of Light



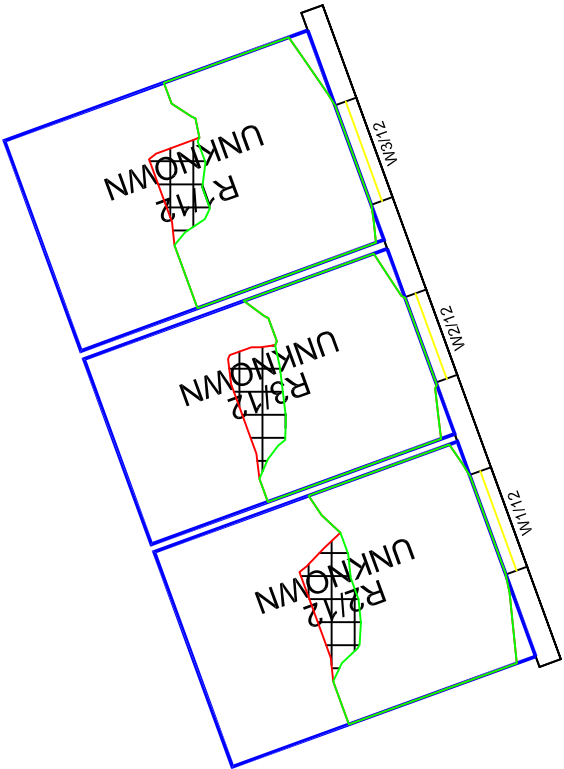
Sources of Information

Digital O.S Plan  
Site Inspection & photographs  
Room layouts taken from Neutral Corner Ltd drawing LWB/SV/1B (not to Scale)

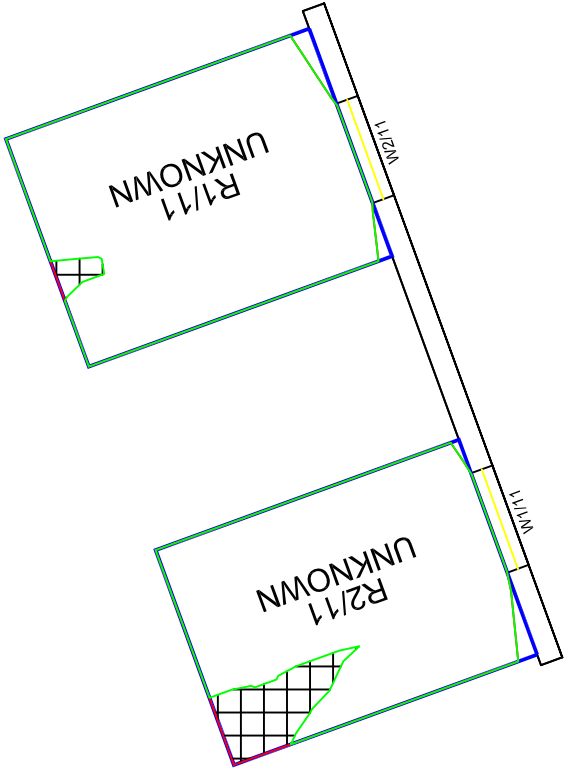
Existing site massing estimated from photographs  
Adjoining owners' properties estimated from photos

- PD Architectural
- PD-15-288 19
  - PD-15-288 20
  - PD-15-288 21
  - PD-15-288 22
  - PD-15-288 23
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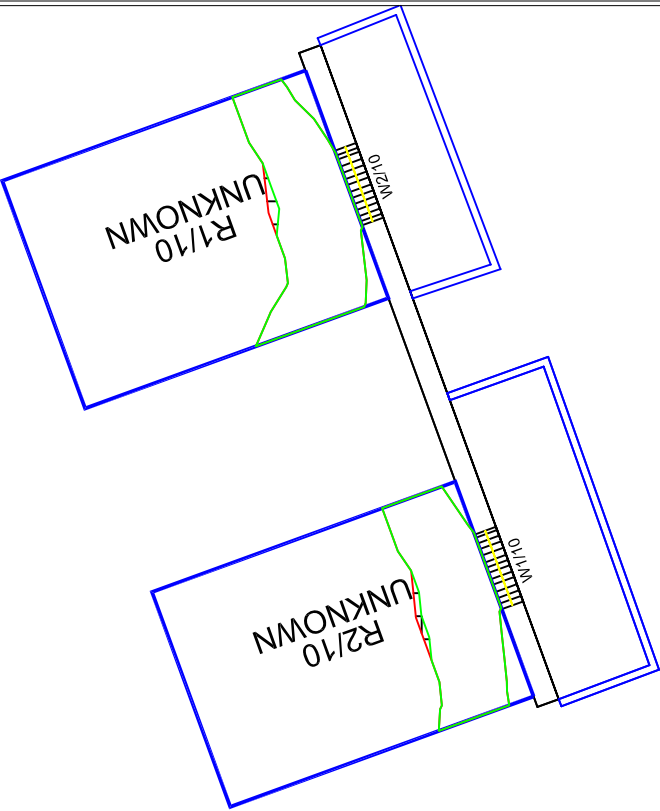
1st Floor



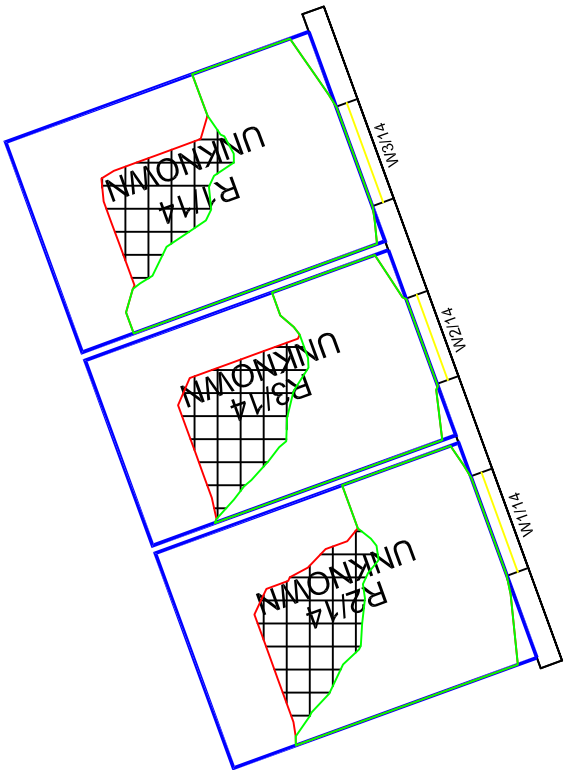
Ground Floor



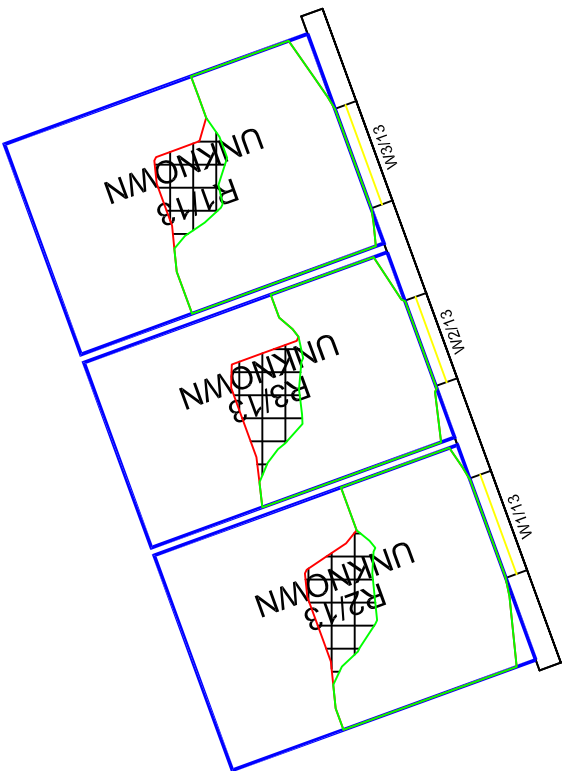
Base Floor



3rd Floor



2nd Floor



08449 02 03 04  
**GVA** Schatunowski Brooks  
65 Gresham Street, London, EC2V 7NQ  
www.gva.co.uk

Project Name  
Warren Street  
London

Client  
Goals UK Ltd

Drawing Title  
No Sky-line contours for  
29 Warren Street

Drawn By  
AH

Checked By  
Scale @ A3  
1:100

Date  
15 Oct 2015

Project No.  
WA88/04

Drawing No.  
BRE08

Revision  
-

## Warren Street, London

### Daylight analysis results

Job 4

15-Oct-15

Room/Floor	Room Use	Window	%VSC			% Daylight Factor			Proposed No Sky	
			Exist	Prop	% Loss	Exist	Prop	% Loss	% of Room Area	% Loss of Existing
29 Warren Street    WA88/04/BRE07										
Base Floor										
R1/10	UNKNOWN	W2/10	13.31	13.03	2.10%	1.08	1.06	1.76%	23.98%	2.22%
R2/10	UNKNOWN	W1/10	13.12	12.84	2.13%	1.11	1.08	1.90%	22.46%	2.50%
Gnd Floor										
R1/11	UNKNOWN	W2/11	17.00	16.53	2.76%	2.25	2.21	2.04%	96.74%	1.59%
R2/11	UNKNOWN	W1/11	16.80	16.33	2.80%	2.33	2.28	2.11%	88.48%	10.36%
1st Floor										
R1/12	UNKNOWN	W3/12	19.60	19.03	2.91%	2.61	2.55	2.15%	49.71%	9.41%
R2/12	UNKNOWN	W1/12	19.22	18.64	3.02%	2.52	2.46	2.26%	49.03%	11.79%
R3/12	UNKNOWN	W2/12	19.45	18.81	3.29%	2.38	2.32	2.52%	47.33%	13.44%
2nd Floor										
R1/13	UNKNOWN	W3/13	23.16	22.26	3.89%	2.24	2.17	3.17%	46.24%	13.64%
R2/13	UNKNOWN	W1/13	22.56	21.70	3.81%	2.15	2.08	3.11%	44.71%	16.64%
R3/13	UNKNOWN	W2/13	22.97	21.96	4.40%	2.06	1.99	3.64%	43.07%	18.35%
3rd Floor										
R1/14	UNKNOWN	W3/14	26.48	25.24	4.68%	1.91	1.83	3.93%	51.03%	22.68%
R2/14	UNKNOWN	W1/14	25.64	24.48	4.52%	1.82	1.75	3.90%	47.37%	27.45%
R3/14	UNKNOWN	W2/14	26.24	24.85	5.30%	1.75	1.67	4.63%	45.33%	30.56%