GVA Schatunowski Brooks

10 Stratton Street
London, W1J 8JR
T: +44 (0)20 7269 4740
F: +44 (0)20 7911 2560

gva.co.uk

AH/SW/GR140/BRE/10

January 2011

The Charlton Brown Partnership
The Old Chapel
4a Shepherd's Walk
Hampstead
London NW3 5UE

Dear Sirs

Ref: 12 The Grove, London N6 – Daylight and Sunlight Report

Further to your instruction we have carried out an internal daylight amenity assessment with respect to the new building that is proposed to be constructed on the site at 12 The Grove.

We understand that the Local Planning Authority has raised a concern regarding the amount of daylight amenity that will be enjoyed by the rooms at lower ground floor and raised ground floor level and the levels that the future occupiers will enjoy. There are no rooms at basement level that are considered to be habitable as the two Kitchens are less than 11sq metres.

In that connection, we have carried out an assessment for the 2 bedrooms at lower ground floor level together with the living room accommodation and the dining room at raised ground floor level. These are the only habitable rooms which we believe will need to be assessed as it is quite clear that the other windows within the property are either in an elevated position and will enjoy good levels of natural daylight or have little obstruction in front of the windows as with the lower floors to the rear elevation.

We have not assessed the daylight and sunlight amenity to the surrounding neighbouring properties as the new massing is not significantly different to the existing building and changes in amenity levels would not be considered material.

In order to undertake our assessment we have used the Charlton Brown Partnership drawings numbered 1129/AP01 through to AP07. We have also carried out our own site investigation to assess the size of the neighbouring properties which will form obstructions to the daylight to create a 3D model in AutoCAD so that the proposed lighting levels can be calculated in accordance with the BRE guidance using our in house daylighting software.

We attach to this report copies of our drawing numbered GR140/BRE/CAD01A that shows the room configuration at lower ground floor and raised ground floor levels together with a table spreadsheet that shows the daylight and sunlight amenity values.

BRE CRITERIA FOR NEW BUILDINGS

The BRE Guide covers amenity requirements for sunlight, daylight and overshadowing for residential developments.

Before dealing specifically with the requirements of the Guide under the various headings, we would note certain relevant aspects set out in the Introduction to the Guide which are as follows:-

"While this guide supercedes the 1971 Department of the Environment document 'Sunlight and Daylight' which is now withdrawn, the main aim is the same - to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions.

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

The guidelines regarding the quality and quantity of daylight to residential habitable rooms are set out in Part 2.1 of the Guide. 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 Guide advises that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.

The vertical sky component can be calculated by using the skylight indicator provided as part of the Guide or by mathematical methods using what is known as a waldram diagram. The use of the skylight indicator is, in our view, the less accurate and can only be relied upon for indicative results. The mathematical method which

actually measures the amount of visible sky gives far more accurate and truly representative results, and this is the method we have used.

The Guide states the following:-

"..a vertical sky component of 27% or more indicates the potential for good daylight."

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 and window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

Appendix C of the BRE Guide sets out various more detailed tests that assess the interior daylit 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 1.5% for living rooms and 1% for bedrooms.

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. The guide advises that if a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.

SUNLIGHTING

Requirements for provision of sunlighting to new residential buildings are set out in Part 3.1 of the BRE Guide. Sunlight is considered important for living rooms and conservatories but is viewed as less important in Bedrooms and in kitchens. Access to sunlight can be quantified for the interior of rooms. The guidelines state:-

"The British Standard recommends that interiors where the occupants expect sunlight should receive at least one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months, between 21 September and 21 March."

The guide further recommends that where window positions are known, the centre of each main living window can be used for the calculation.

Results

When one considers daylight amenity to a new building, the most important calculation to assess is the Average Daylight Factor as this measures the internal luminance within the room. The Average Daylight Factor takes into account the room size together with the window size and the obstruction in front of the window. This is then measured in conjunction with the No Sky Contour which measures the daylight distribution in the room and the guidance states that a majority of the room should be covered by the No Sky Contour. Any areas outside of this coverage would appear gloomy.

With respect to the lower ground floor level, the main rooms for consideration are the living rooms R2/10 and R3/10 and it can be seen that these achieve an Average Daylight Factor of 4.70% and 4.76% ADF. It can also be seen that the No Sky coverage of the room is 89% and 96% respectively.

The 2 bedrooms at lower ground floor level will receive an Average Daylight Factor of 1.17% and 1.54% for rooms R1/10 and R4/10 and again it can be seen that the No Sky contour measuring the daylight distribution within the room is above 75% for both rooms.

The British Standard for internal daylight amenity states that the minimum daylight factor for a living room should be 1.5% and 1% for bedrooms. Clearly the levels achieved by this proposal far exceed the minimum standard. With respect to the dining rooms at ground floor level, again it can be seen that the Average Daylight Factors are 4.45% for room R1/11 and 4.5% for R2/11. Again the daylight distribution is very high with the No Sky Contour covering more than 95% of the room and we can therefore state that these rooms will be very well lit.

With respect to sunlight, the standard states that a window capable of receiving sunlight i.e. within 90 degrees of due south should receive at least 25% Annual Probable Sunlight Hours (APSH) with at least 5% of this total achieved in the winter months. From reviewing the spreadsheet it can be seen that all of the rooms capable of receiving sunlight exceed the minimum standard with exception to bedroom R1/10 which has a window which receives a total of 14% APSH.

We do not consider this bedroom to be an issue as the guidance clearly states that bedrooms are less important for sunlight and the main room for consideration should be the living room.

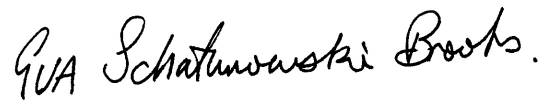
Conclusion

From carrying out the necessary tests as required by the British Standard and BRE Guidance we can confirm that all of the rooms will experience daylighting levels in excess of the minimum standard and will be well lit. With respect to sunlight, all of the rooms exceed the minimum standard with the exception of the bedroom at lower ground floor level however the guidance clearly states that the bedrooms are less important and we would therefore not consider this to be problematic.

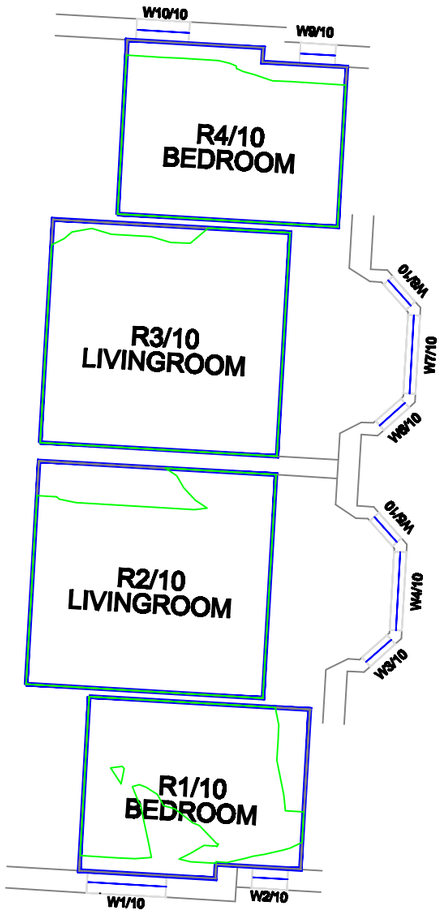
Should you have any queries then please do not hesitate to contact me.

We trust the foregoing is satisfactory.

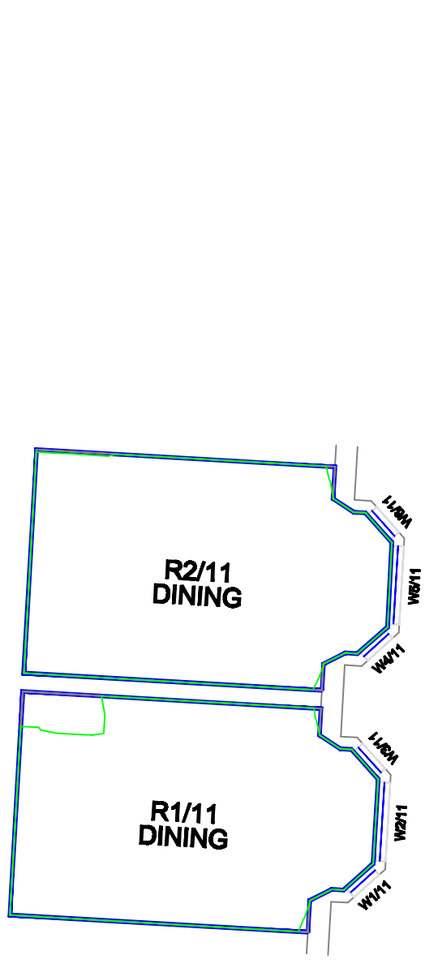
Yours faithfully



GVA Schatunowski Brooks



Lower Ground floor



Raised Ground floor

SOURCES OF INFORMATION

Architects Drawings:

The Charlton Brown Partnership
1129/AP 01
1129/AP 02
1129/AP 03
1129/AP 04
1129/AP 05
1129/AP 06
1129/AP 07

THE RED NO-SKY LINE CONTOUR REPRESENTS THE EXISTING

THE GREEN NO-SKY LINE CONTOUR REPRESENTS THE PROPOSED

GVA Schatunowski Brooks

CHARTERED BUILDING SURVEYORS
RIGHTS OF LIGHT CONSULTANTS

GVA Schatunowski Brooks
10 Stratton Street
London W1J 8JR
Telephone: 0870 900 89 90
Fax: 020 7269 4747

JOB	12 The Grove Highgate, London
TITLE	No Skyline Contours for 12 The Grove
SCALE	1:100@A3
DATE	Dec 2010
DRAWN	Mike S
REVISION	A
DRAWING NO	GR140/BRE/CAD01A

GVA Schatunowski Brooks

12 THE GROVE

BRE AMENITY ANALYSIS

DEC 2010 Scheme

Room/Floor	Room Use	Window	%VSC	%ADF	No Sky % of Room	%Sun Summer	%Sun Winter	%Sun Total
12 The Grange - CAD01A								
Lower Ground floor								
R1/10	BEDROOM	W1/10	10.84	1.17	75.73%	8.00	6.00	14.00
		W2/10	15.86			4.00	8.00	12.00
R2/10	LIVINGROOM	W3/10	19.30	4.70	89.14%	23.00	2.00	25.00
		W4/10	27.31			22.00	6.00	28.00
		W5/10	23.42			N/A	N/A	N/A
R3/10	LIVINGROOM	W6/10	22.70	4.76	96.31%	23.00	8.00	31.00
		W7/10	27.61			25.00	5.00	30.00
		W8/10	20.74			N/A	N/A	N/A
R4/10	BEDROOM	W9/10	27.51	1.54	89.50%	N/A	N/A	N/A
		W10/10	27.73			N/A	N/A	N/A
Raised Ground floor								
R1/11	DINING	W1/11	28.51	4.45	95.52%	31.00	12.00	43.00
		W2/11	30.30			28.00	8.00	36.00
		W3/11	26.32			N/A	N/A	N/A
R2/11	DINING	W4/11	25.46	4.50	99.44%	28.00	10.00	38.00
		W5/11	30.56			30.00	7.00	37.00
		W6/11	30.45			N/A	N/A	N/A