GVA Schatunowski Brooks

Our ref: KW10
Your ref:

23 January 2013

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

gva.co.uk
Direct Dial: 020 7911 2496
Email: kaivin.wong@gvasb.co.uk

Michael Holland
E C Harris LLP
ECHQ
34 York Way
London
M1 9AB

Dear Michael

PARKER HOUSE, PARKER STREET & ST. JOSEPH'S SCHOOL – DAYLIGHT & SUNLIGHT

I attach a set of results for the daylight and sunlight analysis undertaken for St. Joseph's School.

Where the BRE Guidelines are extended and applied to school buildings, their application is usually limited to classrooms or rooms which children/students use for study purposes such as the school library. In spite of this, we more commonly find that one of the problems encountered with schools and educational buildings is the problem of "glare", and solar gain. We therefore find that many schools choose to retro-fit blinds or louvers in an attempt to exclude daylight, and in particular, sunlight.

Attached to this letter are the results tables for the VSC, daylight distribution and Average Daylight Factor analysis, followed by a table setting out the results of the sunlight analysis together with our drawing numbers PA61/20 – BRE/136, 137, 138 and 139 which are the graphical results of the daylight distribution analysis. We have also included a separate overshadowing analysis of the school playground.

The results of the daylight analysis show that all of the windows that face onto the proposed development will satisfy the BRE VSC recommendations in that all of the windows will either receive more than 27% VSC or the percentage reduction in VSC will be within 20%.

Turning the to the daylight distribution results, all of the classrooms will also satisfy the BRE standards for the No Skyline tests but five rooms will experience a loss of internal daylight distribution that is above the BRE recommendations. Of those five, only one is used by the children and that room is the 1st floor nursery which we have labelled room R2/101 where the percentage loss in daylight distribution will be 27.83%. That room will however, still receive daylight distribution across 68.27% of the Working Plane. It will also achieve an ADF value of 4.79%, which is extremely good for any conventional use.

The four remaining rooms that fall below the daylight distribution standard are the small kitchen area and three school offices at the south western end of the school buildings. As these rooms are not used by the children, they would not normally be included within any analysis in any event.

The results of the sunlight analysis show that all of the classrooms, the school hall and nursery will receive well in excess of the target sunlight standards recommended for principal living rooms in conventional domestic dwellings and therefore all comfortably satisfy the BRE recommendations. As mentioned above, even though these rooms have been tested for the availability of sunlight, and /or shown to comply with the Guidelines, in our experience, it is more common for measures to be adopted to reduce the penetration of daylight within classrooms especially when that sunlight is received at lower angles due to the problems created by "glare". Sunlight received at low angles applies to sunlight received early in the morning or late in the afternoon, and also to Winter Sunlight.

The only rooms that do not meet the BRE Sunlight standards are the stairways and communal hallways at the south western end of the building and two small school offices and the small school kitchen. Due to the uses of these parts of the school, they do not fall within the BRE Sunlight standards.

Our drawing number PA61/23-SHAD-140 shows the results of the overshadowing analysis of the school playground.

In order to satisfy the BRE Guidelines, amenity areas, including school playgrounds should be capable of receiving more than 2 hours of sunlight on the spring equinox across more than 50% of the area of that particular amenity space. The overshadowing analysis demonstrates that 33.04% of the school playground will receive less that 2 hour of sun-on-the-ground, whereas 66.96% of the playground will receive more than 2 hours of sunlight on the spring equinox. The proposed development therefore comfortably satisfies the BRE overshadowing standards.

In overall conclusion, all of the school classrooms, school hall and nursery satisfy the BRE guidelines with only one minor transgression in respect of the daylight distribution results for the nursery where the percentage reduction was 27.83%. That nursery did however comfortably satisfy the VSC recommendations and achieved a very good ADF value indicating that internal lighting conditions will remain very good. It should also be noted that the nursery itself is a relatively deep room and the daylight distribution tests should be viewed with greater flexibility. The proposed development will also comfortably satisfy the BRE overshadowing standards. There therefore will be no material impact on the use of the school buildings.

Yours sincerely

pp

Kaivin Wong
Director
GVA Schatunowski Brooks