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# Construction of New Residential/Retail buildings at 2 Swains Lane, NW6 6QS, Highgate – Daylight Impact Report

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## Introduction

It is proposed to demolish an existing residential/retail building at 2 Swains Lane in Highgate and replace it with a new modern building with similar use.

Concern has been raised about the impact on daylight and sunlight on a neighbouring property (the Carab Tree), which has a window serving a habitable room facing the proposed new building.

In light of this concern a daylight analysis of this windows was made. The analysis has been carried out using the methodology set out by Paul Littlefair in BR209 "Site layout planning for daylight and sunlight: a guide to good practice" (2011) (BRE Trust). The window is not facing within 90 degrees of due south and therefore a sunlight assessment was not undertaken.

## Light from the sky

It is important to safeguard the daylight that is available for nearby buildings in living rooms, kitchens and bedrooms. Non-habitable rooms, such as circulation spaces, bathrooms and storage rooms, are not required to be considered. The Vertical Sky Component (VSC) is a measure of available daylight on a particular surface or window. The guidelines in the BRE209 document state that where a window has a VSC of 27 % or more daylighting is unlikely to be affected. In cases where the VSC is less than 27%, it is unlikely that a change in daylighting will be noticeable if a reduction in VSC is not less than 0.8 times the original value.

Where a room has more than 1 window the average weighted VSC should be used.

The VSC has been determined using the Virtual Environment building modelling software by IES (version 2021.3.0.0).

## The London Plan and Daylight and Sunlight Impacts

The London Plan 2021 includes a policy with regards to the daylight and sunlight impacts on neighbouring properties in "Chapter 3 Designs". Policy 6 Housing Quality and Standards states in clause D:

"*The design of development should provide sufficient daylight and sunlight to new and surrounding housing that is appropriate for its context, whilst avoiding overheating, minimising overshadowing and maximising the usability of outside amenity space.*"

At this moment there are no revised guidelines in the London Plan on how to address this issue and the London Plan 2021 refers to the 2016 Housing SDP in this regard. In paragraph 1.3.45 it states:

"*An appropriate degree of flexibility needs to be applied when using BRE guidelines to assess the daylight and sunlight impacts of new development on surrounding properties, as well as within new developments themselves. Guidelines should be applied sensitively to higher density development, especially in opportunity areas, town centres, large sites and accessible locations, where BRE advice suggests considering the use of alternative targets. This should take into account local circumstances; the need to optimise housing capacity; and scope for the character and form of an area to change over time.*"

**The analysis**

Figure 1 provides a 3D overview of the proposed new development.

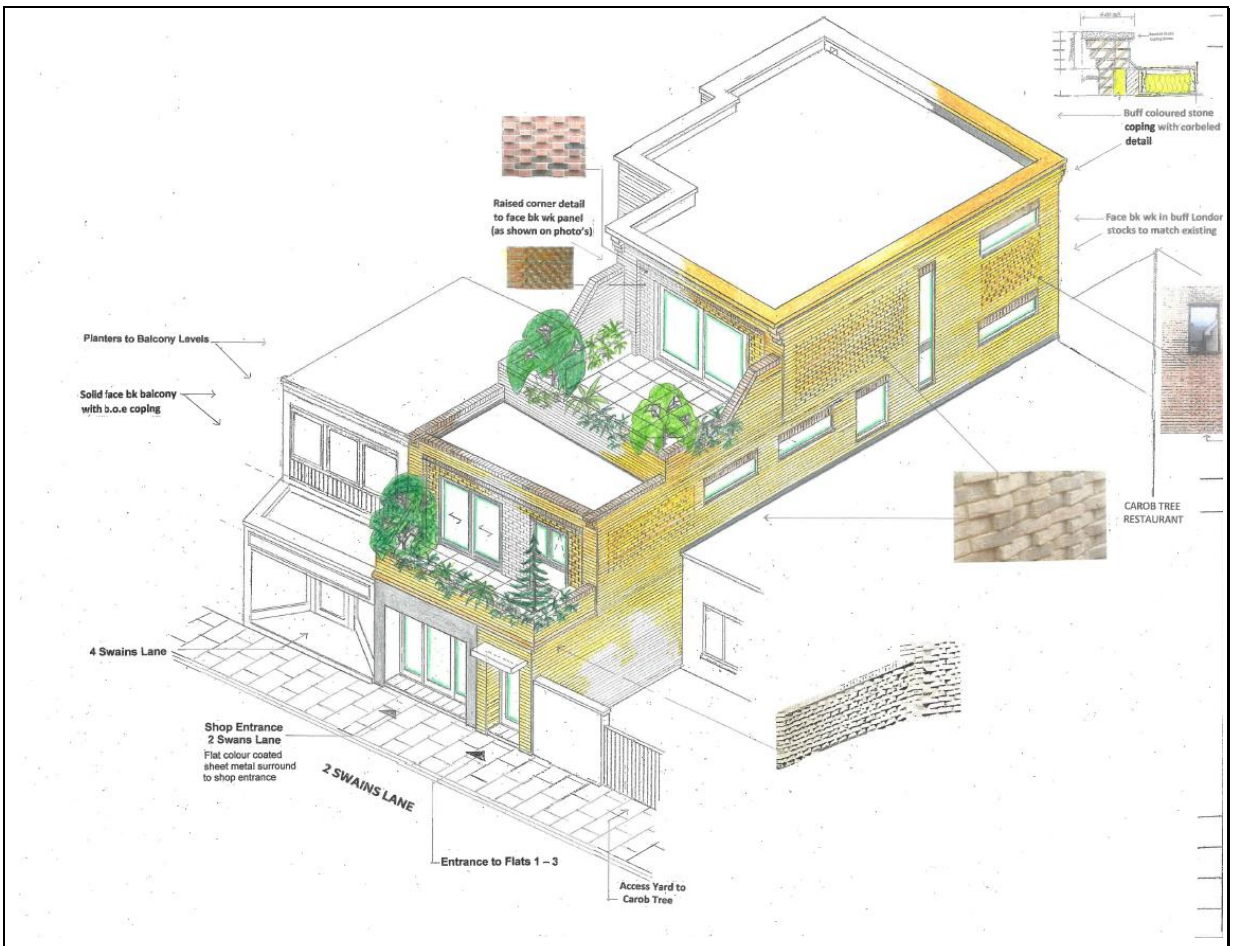


Figure 1. 3D overview of the proposed new development at 2 Swains Lane.

The window at the neighbouring property was analysed both in the current situation and where the new development would be constructed. Figure 2 shows the results of the VCA analysis on the window and the results are also shown in table 1.

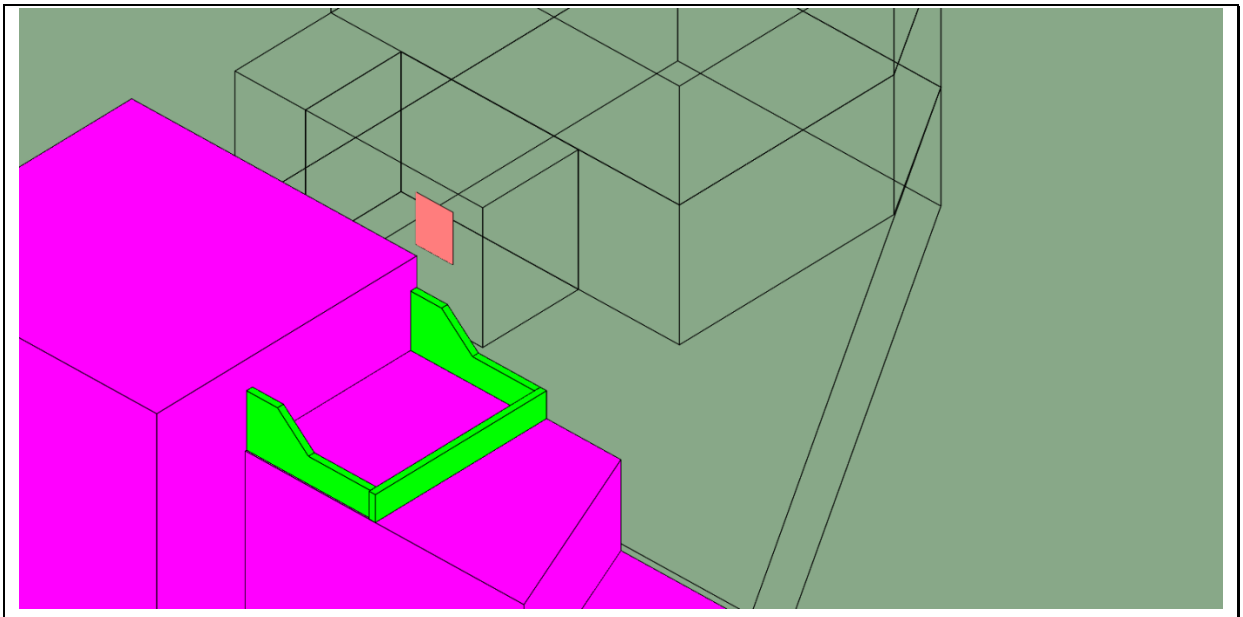

Figure 2. VCA of rear windows in the neighbouring properties. Left is the existing situation and right is the situation with the proposed extension in place. Green windows indicate a VCA of more than 27, Yellow windows indicate a VCA of less than 27 and a reduction of less than 20%, Red windows show a VCA of less than 27 and a reduction of more than 20%.

Table 1 gives a numeric overview of each of the relevant windows.

*Table 1 VCA for the analysed window, before and after the extension would be erected.*

| Window | Existing | VSC | Relative VSC | Status |
|---|---|---|---|---|
| 1 | 34 | 24 | 0.7 | Fail |

Because the VSC guidelines described in the BRE publication are not being met, further consideration was given to the available daylight in the room that is served by the window under study here. Some indicative internal layout was provided to me. This information was unverified and therefore only indicative. From this information it appears that the size of the room is approximately 3m by 5.75 m and used as a bedroom.

Using this information, an analysis was carried out of available daylight in this room expressed as the Average Daylight Factor (ADF). Our analysis showed a ADF of 2% (figure 3). The BRE recommendation for a minimum standard of ADF in bedrooms is 1% and 1.5% for living rooms and dining rooms. This information indicates that, although the reduction in daylight as measured using the VSC parameter is likely to be noticeable, the final daylight availability still meets the minimum recommended level.

**Conclusion**

The results of the Vertical Sky Component indicate that there is a reduction in daylight availability that is noticeable on the window facing 2 Swains Lane in the neighbouring property.

A preliminary analysis of the remaining available daylight in this room indicates that the minimum recommended amount of daylight for a bedroom is met.

The London Plan documentation requires a flexible approach to the application of thresholds described in the BRE guidelines. In fact, the author of the guidelines warns against a strict application of the numerical values in the document: "*these should be interpreted flexibly since natural lighting is only one of many factors in site layout design*".

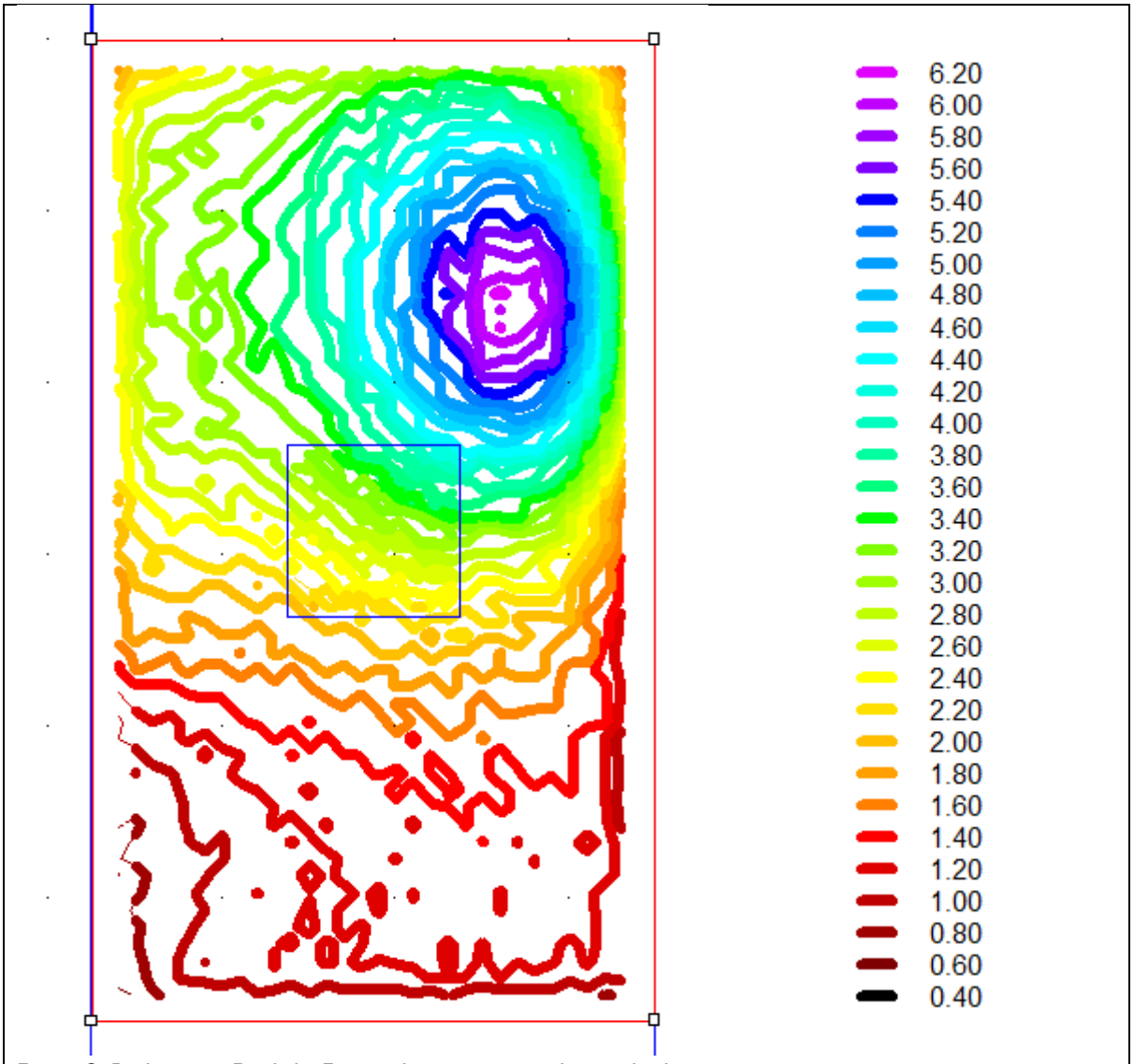

Figure 3: Preliminary Daylight Factor destruction in adjacent bedroom

One of the considerations given is where "*a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings*."

Recent development projects on Swains Lane appear to have at least two floors above the ground floor and the proposed development for 2 Swains Lane is comparable in that sense.

The reduction in available daylight on the window in the neighbouring property might therefore be considered acceptable in this case.

Sincerely yours,

for and on behalf of Planning for Sustainability,

Drs. Paul Giesberg CEnv CSci MIEnvSc
Director