23 RAVENSHAW STREET LONDON, NW6 1NP

Daylight, Sunlight & Overshadowing Impact Assessment

TECHNICAL NOTE & EXECUTIVE SUMMARY

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Written by: Gary Jackson (SpaceStrategy)
Checked by: Gary Jackson (SpaceStrategy)

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Executive Summary

This technical note and summary covers the results of an assessment of the relationship between the proposed redevelopment of 23 Ravenshaw Street, London and adjoining properties, in accordance with the methods set out in BRE Report 209 – Site Layout Planning for Sunlight and Daylight, 2nd Edition, 2011 ("BR209")

This Executive Summary and Technical Note is to be read in conjunction with the attached Report that contains a series of figures.

8 dwellings are proposed by way of demolition and redevelopment of an existing house (comprising 2 dwellings) and accompanying car park area. A three dimensional computer model of the site was produced.

It was based on;

- 3D model of existing and adjoining blocks; based on photogrammetric survey data (using FARO Scanner Point Cloud Survey data).
- 3D model of the proposed buildings.

Site Observations.

On the basis of the modelling undertaken, the following observations and conclusions can be drawn:

- Daylighting: Vertical Sky Component calculations, calculated at the exterior face of the adjoining building, confirm that access to daylight meets acceptable BRE standards.

- Sunlight: Based on the assessment methods set out in BR209, the adjoining building has good access to sunlight, both in the summer and winter. All of the sampled points identified good solar access.

- Overshadowing: Detailed analysis of the impact of shading on adjacent amenity spaces was undertaken and remained within the acceptable range defined by the BRE.

- Summary: based on the methods set out in BRE Report 209 – Site Layout Planning for Sunlight and Daylight, 2nd Edition, 2011 ("BR209") the adjacent building to the proposed development at 23 Ravenshaw Street, London will continue to receive acceptable levels of access to daylight & sunlight.

  In terms of the reasonable, formal, objective assessment of the daylight & sunlight relationship between the adjoining building and proposals and whilst it is impossible to anticipate the views of every individual occupier, it is clear that sunlight and daylight access should not reasonably obstruct grant of planning permission.

Contents

1 Introduction

SpaceStrategy has been appointed to undertake a daylight, sunlight and overshadowing impact assessment of the adjoining property to the rear of a proposed development at 23 Ravenshaw Street, London, NW6 1NP.

The predicted impact of the development has been assessed in relation to the guidelines defined in BRE Report 209 – Site Layout Planning for Sunlight and Daylight, 2nd Edition, 2011 ("BR209") by Dr. Paul Littlefair.

The analysis presented in this report is based on the following information:

- 3D model of existing and adjoining blocks; based on photogrammetric survey data (using FARO Scanner Point Cloud Survey data).
- 3D model of the proposed buildings.
- Site Observations

2 Site

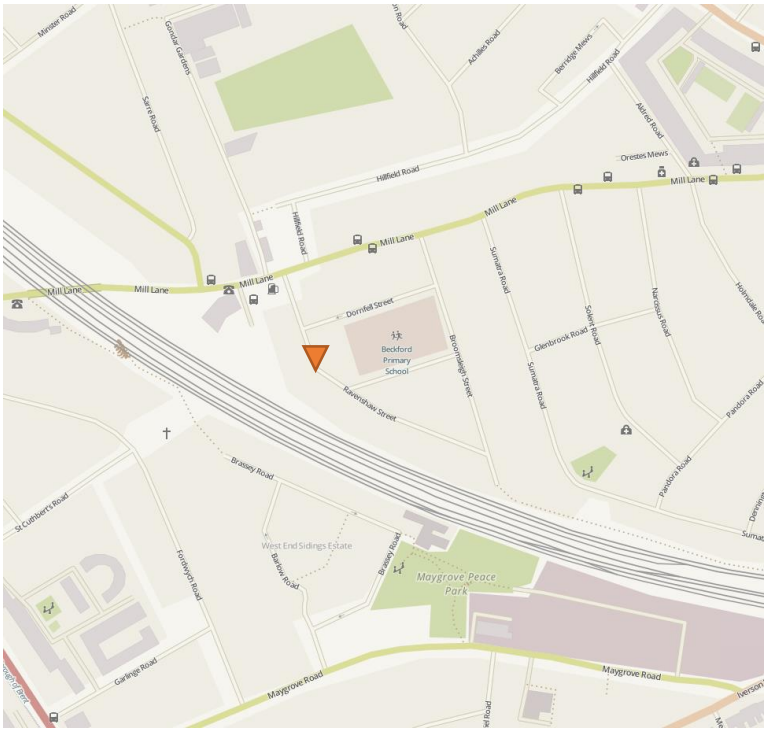

Figure 1: Location Map (Source: OpenstreetMap)

The site is at 23 Ravenshaw Street, London. NW6 1NP
(Grid Ref: TQ 24856 85032; 185032N, -0.200643E).

3 Policy

The Local Planning Authority (London Borough of Camden) identify the following requirement within their current policy.

DAYLIGHT AND SUNLIGHT ASSESSMENT

Where your proposed development has the potential to negatively impact the existing levels of daylight or sunlight on neighbouring properties, a daylight and sunlight assessment will need to accompany your planning application.

The information below provides further details about when a daylight and sunlight assessment is required, what information this document should include, how to submit it to us and where further information can be found.

When is a daylight and sunlight assessment required?

A daylight and sunlight assessment should accompany planning applications where the proposed development has the potential to negatively impact the existing levels of daylight or sunlight on neighbouring properties.

What information should be included in a daylight and sunlight assessment?

A daylight and sunlight assessment should include the necessary information to meet the criteria outlined in the Site layout planning for daylight and sunlight: a guide to good practice published by the Building Research Establishment (BRE).

The information included should be sufficient to determine:

- The existing and expected levels of daylight, sunlight and overshadowing on neighbouring properties.
- The measures that will be taken to mitigate against the expected impact of the proposed development.

4 Methodology

A 3D computer model of the proposed development was produced using a specialist photogrammetric survey in order to accurately and objectively assess the impact of the development proposals.

To undertake the assessment, it has been necessary to complete the following:

- Vertical Sky Component ('VSC') Analysis of the existing and proposed blocks.

A Vertical Sky Component measures 'how much of the sky' a given point can see; technically "*the ratio of the parts of illuminance at a point on a given vertical plane that is received directly from a CIE Standard Overcast Sky to the illuminance on a horizontal plane due to an unobstructed hemisphere of this sky.*"

- The shading of amenity spaces (i.e. gardens of dwellings).

The BRE guidance, BR209, states that there is sufficient access to sunlight where, 'a*t least half of the garden receives more than 2hrs direct sunshine on the 21st March; the mid-point between summer and winter*'.

- In accordance with the methods set out in BR209, access to sunshine within the building has been calculated. This assessment is based on local Average Monthly Sunshine Durations; derived from standardised 30-yr average climate data. Results were derived annually and for the winter months for living room windows that face with 90 degrees of south
(i.e. have a reasonable prospect of receiving sunlight).

BR209 defines acceptable access to sunshine as, '*25% of Annual Probable Sunshine Hours, with at least a 5% contribution in the Winter Months (Sept-March)*'

The objective of this study is to determine the residual impact, if any, of the proposed development.

5 Daylight Analysis

BR209 states,

"In designing a new development or extension to a building, it is important to safeguard the daylight to nearby buildings. A badly planned development may make adjoining properties gloomy and unattractive."

It goes on to define the methodology for this assessment.

In para 2.2.4 & 2.2.5 of BR209, the BRE identify that adjoining windows should be screened;

Loss of light to existing windows need not be assessed if,

- The distance of each part of the new development from the existing window is three or more times its height above the existing window, or
- The new development does not subtend an angle of 25 degrees drawn from the centre the existing window perpendicular to the existing building.

In this case, the bay window facing the proposals subtends a 25-degree line in the existing and proposed condition-- shown on the attached figures (PG/02 & PG/03). Otherwise, none of the adjoining windows are identified by the screening assessment above.

LightUp Analytics, the assessment software, calculated the Vertical Sky Component (VSC) values for the bay and (as a checksum) two other adjoining windows.

Assessment:
The results are set out in the attached report – in a visual form.

As might be expected, the VSC levels are less than might be expected on a green-field site (27%), which is expected in an urban context. The BRE anticipate this, stating that values after development should be no less than 0.8x their former value (para 2.27).

In this situation, one of the windows to the adjoining build has a value of 32.3%. The closest point of the bay anticipates a values of 0.83x it former value and adjoining windows receive 91% and 97% of their former values.

<u>These results represent acceptable access to daylight post-development.</u>

6 Shading Analysis

With regards to shading analysis, BR 209 states,

"Good site layout planning for daylight and sunlight should not limit itself to providing good natural light inside buildings. Sunlight in the spaces between buildings has an important impact on the overall appearance and ambience of a development."

In terms of results, it is recommended that at least half of amenity areas should receive at least two hours of sunlight on 21 March.

Assessment:

The rear garden of the adjoining dwelling was assessed. The results (PG/06) show that the resultant shading will be 0.83x the former value, which is identified as an acceptable result by the BRE (para 3.3.11)

These results indicated that access to sunlight is not reduced detrimentally.

7 Sunshine Analysis

Whilst there is a right to light from the sky, there is no right to receive direct sunlight. However, the BRE guidelines do suggest a minimum number of annual sunlight hours that are maintained for living room windows orientated within 90° of South. BR209 states that such a windows should be able to receive at least 25% of available probable annual sunlight hours, with at least 5% of these being available in the winter months, between the autumn and spring equinox (September – March).

This assessment uses 30-yr averaged climate data and tracks the path of the sun throughout the year.

Shadow studies are often used to assess potential sunlight impacts, but their nature can only provide a subjective view of the impact. They can be used to determine the time and date of potential overshadowing but are based solely on solar geometry and do not account for the likelihood of cloud for any given position of the sun. In order to determine the statistical impact of any given proposals, it is necessary to calculate impact on the Annual Probable Sunlight Hours.

Annual Probable Sunlight Hours ("APSH"), in existing development, is measured at the outside face of the external wall. Where a room has multiple windows on the same wall or on adjacent walls, the highest value of APSH should be taken. If a room has two windows on opposite walls, the APSH due to each can be added together.

Assessment:

All of the assessed living room windows receive more than 25% APSH annually (PG/07; 34.4% and 51.5%) and more than 5% APSH in the Winter (PG/08; 8.9% and 18.0%). These results are stated to be acceptable within BR209 (para 3.2.5)

The assessed access to sunlight within the buildings is more than adequate.

8 Conclusion

In sunlight and daylight assessment terms, the results presented here and in the attached report indicate that the proposed development appears to be reasonable in layout, scale & mass in relation to assessed adjoining buildings.

We are of the view that the residual impacts are a reasonable consequence of the existing grain and not unexpected in terms of urban development generally. Overall, important daylight-access and annual sunlight-access to the buildings remains within an acceptable range.

In terms of the reasonable, formal, objective assessment of the daylight & sunlight relationship between the adjoining building and proposals and whilst it is impossible to anticipate the views of every individual occupier, it is clear that sunlight and daylight access should not reasonably obstruct grant of planning permission.

In summary,

- Daylighting: Vertical Sky Component calculations, calculated at the exterior face of the adjoining building, confirm that access to daylight meets acceptable standards.
- Sunlight: Based on the assessment methods set out in BR209, the adjoining building has good access to sunlight, both in the summer and winter. All of the sampled points identified good solar access.
- Overshadowing: Detailed analysis of the impact of shading on adjacent amenity spaces was undertaken and remain within the acceptable range defined by the BRE.