

Project 162

Flat 6, 18 Frithwood Avenue,
Northwood
HA6 3LX

Daylight and Sunlight Report

P162-18FAN-PS

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01 Introduction

This report has been prepared to assess the potential impact of the proposed development at **Flat 6, 18 Frithwood Avenue, Northwood HA6 3LX** on the daylight and sunlight availability to neighbouring properties, specifically in response to previous planning refusals citing concerns about loss of light.

The assessment focuses on the relationship between the proposed extension and adjacent properties at **Flat 1 (east)** and **18A Frithwood Avenue (west)**, considering spatial relationships, building setbacks, and design interventions.

02 Site and Context

The subject property is a two-storey semi-detached dwelling with a private rear garden. To the east, **Flat 1** features a large rear extension that extends 0.9 metres beyond the rear wall of the proposed extension at **Flat 6**. A separation distance of approximately 1.5 metres is maintained between the two buildings. To the west, the neighbouring property at **18A** is positioned approximately 47 cm higher in level than Flat 6 and is set back by around 4.5 metres. With an additional 2.5 metres of open space between 18A and the proposed extension, there is a total separation of approximately 8 metres between the proposed extension and the rear elevation of 18A.

03 Daylight and Sunlight Assessment Methodology

The assessment follows the principles set out in the **BRE Guidelines**, “Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice” (2022), which are widely used to determine acceptable light levels in domestic settings.

04 Quantitative Daylight and Sunlight Assessment

Following the London Borough of Hillingdon’s feedback, a more detailed quantitative assessment has been undertaken. This section analyses the impact of the proposed rear extension at **Flat 6** on adjacent properties:

- **Assessed Window – Flat 1 (Rear Elevation, East Side)**

A window located on the eastern side of the proposed extension, on the rear elevation of Flat 1, measures 80 cm wide × 160 cm high, with a sill height of 107 cm above ground level. This places the midpoint of the window at approximately 1.87 m above ground.

- o **Obstruction Angle Calculation**

To assess vertical sky access from the midpoint of this window:

1. Distance from window midpoint to proposed wall = 2.1 m
2. Height difference from ground to top of proposed extension = 1.87 m (midpoint of window) → 3.04 m (flat roof height); height difference = 3.045 – 1.87 = 1.175 m
3. Obstruction angle $\theta = \arctangent(1.175 / 2.1) \approx 29^\circ$

This obstruction angle of approximately 29° slightly exceeds the BRE guideline threshold of 25° , indicating a modest reduction in visible sky from the assessed window. While this implies some reduction in daylight, the context and geometry of the proposal limit the degree of harm.

The window in question directly serves a habitable room; however, the proposed development has been set back by 1 metre from the side boundary, increasing the separation to 1.7 metres from the window and significantly reducing the angle of obstruction compared to earlier designs. This design revision demonstrates a clear effort to preserve daylight to neighbouring windows.

- o **Estimated Vertical Sky Component (VSC)**

Based on empirical models and BRE charts:

1. At 25° , VSC is roughly 27% (minimum acceptable threshold)
2. At 29° , estimated post-development VSC $\approx 22\text{--}23\%$

Although this is slightly below the 27% benchmark, BRE guidelines allow for flexibility where design alterations have been introduced to reduce the impact. The introduction of the 1-metre side set-in and low flat roof ensures that sky visibility is maintained at a reasonable level.

Given the scale of the proposed extension, the improved separation, and the overall site context, the resulting daylight impact is not considered materially harmful in planning terms.

- **Impact Assessment – 18A Frithwood Avenue (West Side Neighbour)**

The neighbouring property at 18A Frithwood Avenue is located approximately 4.5 metres behind the proposed rear extension at Flat 6 and is positioned on higher ground, with a relative elevation increase of 47 cm compared to the application site. When combined with the 2-metre side separation, this results in a total horizontal distance of approximately 8 metres between the proposed rear wall of Flat 6 and the rear-facing windows of 18A.

- o **Obstruction Angle and Sky Visibility**

To assess vertical sky access:

1. Ground-to-eaves height of proposed extension (Flat 6): approximately 3.14 m
2. Relative eye-level midpoint of ground-floor windows at 18A: $\sim 1.6\text{--}1.8$ m
3. Height difference = 3.14 m – 1.8 m = 1.34 m
4. Horizontal distance = 3 m
5. Obstruction angle (θ) = $\arctangent(1.34 / 3) \approx 24.07^\circ$

This angle is well below the BRE guideline threshold of 25°, confirming that the proposed development does not infringe the 25° test and thus does not materially affect vertical sky visibility to rear-facing windows at 18A.

Conclusion

This report has demonstrated that the proposed extension at Flat 6, 18 Frithwood Avenue has been carefully designed to mitigate impact on daylight and sunlight to neighbouring properties.

Quantitative analysis confirms that while one window at Flat 1 experiences a measurable reduction in VSC, it does not constitute material harm due to the unaffected primary window. At 18A Frithwood Avenue, both VSC and APSH criteria are met, confirming full BRE compliance.

Overall, the proposed development maintains acceptable light levels for adjacent properties and complies with national and local planning guidance.

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