APPENDIX 2 | DAYLIGHT AND SUNLIGHT ASSESSMENT

FIRSTPLAN

1 Lymington Road,

London, NW6

Daylight and Sunlight Assessment

Job No: 5910

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Contents

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1.0 Introduction

1.1 This daylight and sunlight assessment has been prepared in relation to a planning application for the proposed construction of a new dwelling to the rear of 1 Lymington Road, NW6.

1.2 The report assesses the proposals in respect of daylight, sunlight and overshadowing matters, having regard to industry standard guidance.

1.3 The report concludes that the proposal is acceptable and in accordance with planning policy requirements in relation to daylight and sunlight.

1.4 There is no existing specific National Planning Policy relating to the prospective impacts of developments on daylight and sunlight on their surrounding environment.

1.5 However, the NPPF (Para 129) does refer to daylight and sunlight in relation to density, encouraging Local Planning Authorities to take a flexible approach to applying policies and guidance relating to the impacts of proposals where they would otherwise inhibit making effective use of the site.

1.6 The BRE Report 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' (3rd Edition, 2022) is the established National guidance to aid the developer to prevent and/or minimise the impact of a new development on the availability of daylight and sunlight in the environs of the site and the assessment of light within proposed new dwellings.

1.7 It refers in turn to the daylight and sunlight recommendations in BS EN 17037: 2018+A1:2021 (with UK Annexe): 'Daylight in Buildings'

1.8 These reference documents are accepted as the authoritative works in the field on daylight, sunlight and overshadowing and the BRE guidance specifically referred to in many Local Authorities' planning policy guidance for daylighting.

1.9 The methodology therein has been used in numerous lighting analyses and the standards of permissible reduction in light are accepted as the industry standards.

2.0 Project Summary

2.1 The proposal site is a parcel of land to the rear of 1 Lymington Road, NW6.

2.2 The proposal is for new single storey, self-contained dwelling.

2.3 1 Lymington Road itself has planning consent for a rear extension and associated works, which are currently under construction. This has been modelled as if it were complete.

2.4 The impacts of the scheme have been assessed, in line with BRE guidance. Generally, it is the impacts on residential neighbours which are of primary concern.

2.5 In this instance, only the existing host building requires assessment.

2.6 Further details on the location of the assessed neighbours and windows are given in Section 5.0.

Site Location

3.0 Methodology

3.1 For this analysis, we have undertaken the most common calculations for the change in daylight and sunlight to existing buildings, as recommended in BRE Digest 209. These are:

- Vertical Sky Component (VSC) for daylight
- Annual Probable Sunlight Hours and Winter Probable Sunlight Hours (A/WPSH) for sunlight impacts

3.2 The VSC method measures the general amount of light available on the outside plane of the window as a ratio (%) of the amount of total unobstructed sky viewable following introduction of visible barriers such as buildings. The maximum value is just under 40% for a completely unobstructed vertical wall.

3.3 The VSC is calculated using computer simulation under a CIE overcast sky. This works by simulating the amount of visible sky from the centre point of each window. It is not affected by orientation and so all potentially affected windows are assessed.

3.4 Annual Probable Sunlight Hours (APSH) and Winter Probable Sun light Hours (WPSH) are a measure of the amount of potential direct sunlight that is available to a given surface. APSH covers sunlight over the whole year and WPSH from September 21st to March 21st. The number of total available hours is calculated from a data file in the software, built up over a number of years of actual weather data records.

3.5 Only windows which face within 90° of due south need be assessed for sunlight. In this instance, no windows are within this orientation and so no calculations have been undertaken.

3.6 APSH can also be used to assess the impact on external spaces such as gardens. This is looked at in Section 8.

4.0 Modelling & Data Sources

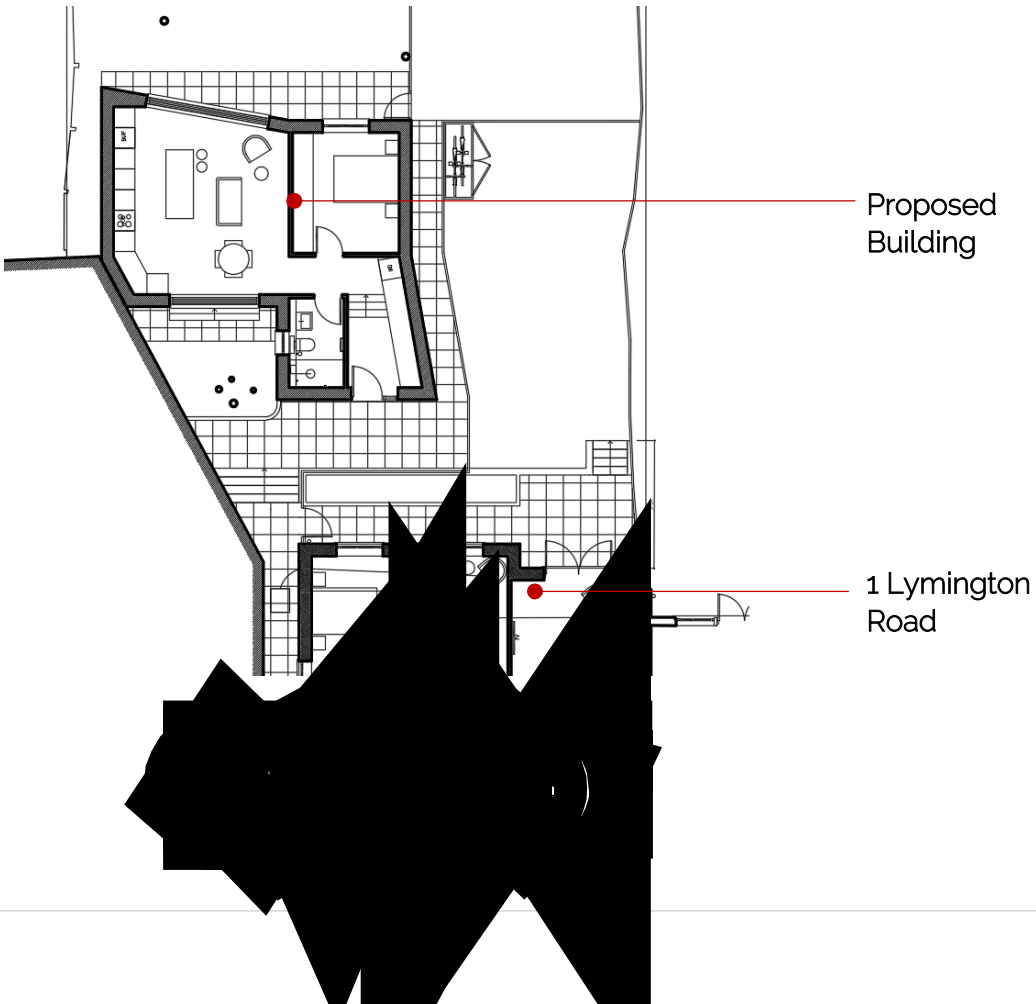
4.1 The first stage of the analysis is to create the analysis model of the existing site condition and the proposal. This allows us to analyse the impact of the proposal when compared to the existing condition.

4.2 2D drawings have been provided by the design team. These drawings are used to construct a 3D analysis model which is exported into the specialist daylight software. Calculations are then run, for both existing and proposed scenarios.

4.3 Sufficient detail is added to the model for the analysis. In accordance with BRE recommendations, trees and foliage have been omitted from the calculations.

4.4 Information on the properties has been provided to us by the design team in the form of drawings giving the site as existing and proposed.

4.5 Web-based mapping sources and photos have been used to for location and size of neighbouring windows.



5.0 BRE Guidance Targets

5.1 The reference document for this analysis, BRE Digest 209, gives the methodology for undertaking the calculations. It also provides benchmark figures for the acceptable reduction in the daylight on existing properties which might be affected by development.

5.2 Specifically, the guidance gives figures for the VSC and APSH, as a percentage reduction that is "permissible" for the effect on existing windows.

5.3 It is worth noting the following statement in the Guidance introduction:

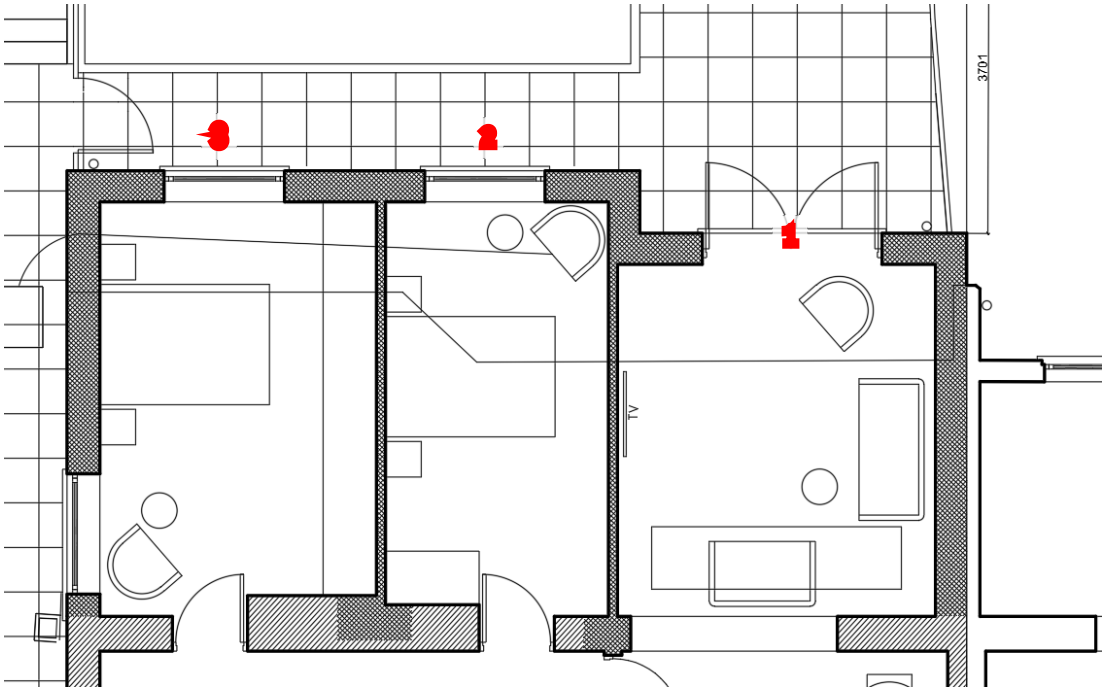
5.4 "The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the developer.

5.5 Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design.

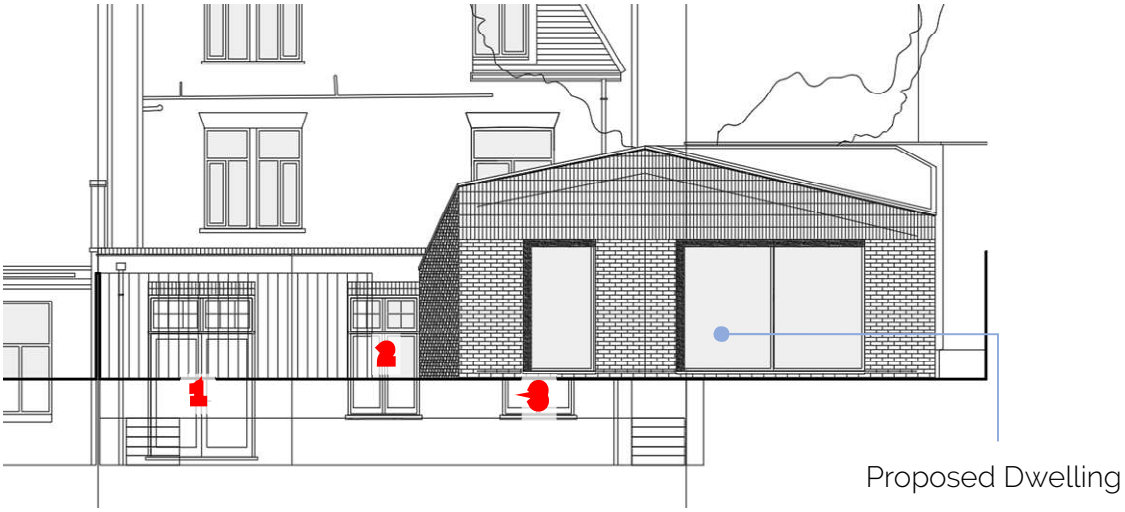
5.6 The relevant BRE recommendations for daylight and sunlight are:

- The Vertical Sky Component measured at the centre of a window should be no less than 27, or if reduced to below this, no less than 0.8 times the former value.
- The window should receive at least 25% of available annual sunlight hours and more than 5% during the winter months (September 21st to March 21st), or, where this is not the case, 80% of its former value.

6.0 Window Schedules



1 Lymington Road - Ground Floor Plan
(Extract)



Rear Elevation – As Proposed
(Extract)

7.0 Daylight Impact Results

7.1 The Vertical Sky Component has been calculated for the 3 assessed windows for both the existing and proposed conditions.

7.2 As can be seen in the results below, all windows retain 80% of their current values.

7.3 The scheme is therefore compliant with BRE recommendations in relation to daylight impacts.

7.4 As all windows face within 90° of north, no sunlight calculations are required.

Vertical Sky Component				
Window	Existing VSC	Proposed VSC	% Retained	Meets BRE Guidance?
1	31.850	30.993	97.31%	Yes
2	35.072	31.684	90.34%	Yes
3	34.118	27.355	80.18%	Yes

8.0 Sunlight to Neighbouring Gardens

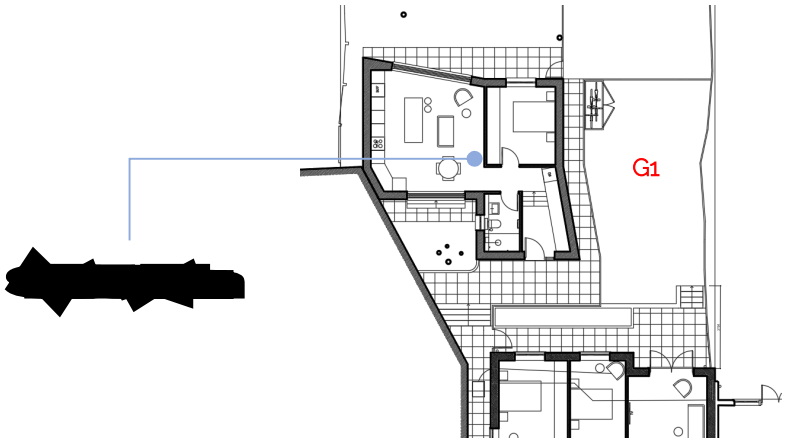
8.1 Residential gardens are generally assessed using the sunlight hours test, but only on March 21st. The guidance describes a well-lit space as being one which receives at least 2 hours of direct sunlight on this date over 50% of its area.

8.2 BRE guidance also uses the "80%" rule for this test, whereby the effects are considered acceptable if the remaining sunlight is in excess of 80% of the existing level. This clause applies if the space is reduced to less than 50% of the area well sunlit.

8.3 The garden of the nearest neighbouring property to the site was assessed using this methodology.

8.4 As can be seen, the neighbouring garden retains in excess of 80% of its current area which receives 2 hours of sunlight on March 21st.

8.5 The scheme is therefore compliant with the BRE guidance in relation to sunlight impacts to gardens and overshadowing.



Amenity Sunlight Hours				
Garden	Existing Area Receiving 2 Hours	Proposed Area Receiving 2 Hours	% Retained	Meets BRE Guidance?
G1	47.20%	47.03%	99.63%	Yes

9.0 Conclusions

9.1 Using industry standard methodology, we have made numerical analyses to ascertain the effects of the proposal to the rear of 1 Lymington Road, NW6, and the levels of change in daylight and sunlight for the window of the neighbouring properties.

9.2 The main criteria used in this analysis to show compliance are the Vertical Sky Component for daylight impacts and Annual and Winter Probable Sunlight Hours for sunlight impacts

9.3 As has been shown, the effect on VSC is within the 80% guidance value for all of the assessed windows.

9.4 There will therefore be no adverse impact on neighbouring residents in terms of daylight.

9.1 In terms of sunlight, no windows face within 90° of south and so no calculations are required.

9.2 The nearest neighbouring garden retains in excess of 80% of its current area which receives 2 hours of sunlight on March 21st.

9.3 The scheme is therefore compliant with BRE guidance in relation to sunlight impacts.

9.4 From a planning perspective therefore, it is the conclusion of this report that the proposed development is entirely acceptable for planning, in daylight and sunlight terms.

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