99 Camden Road, NW1

Daylight and Sunlight Assessment for Planning

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Contents

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1.0 Executive Summary

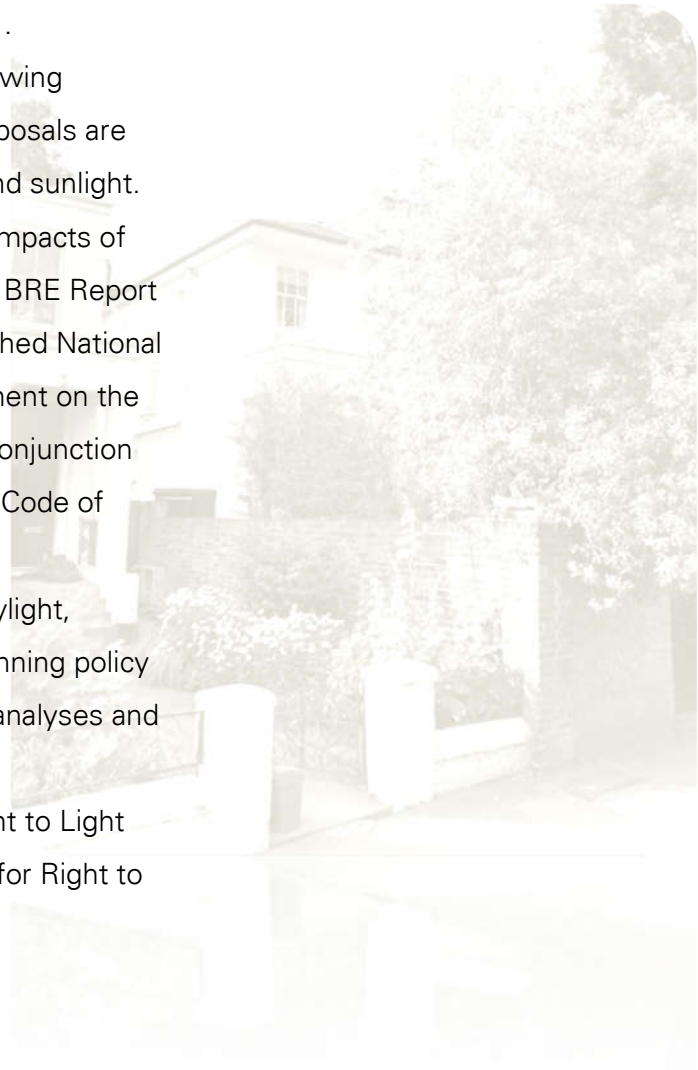
1.1 This daylight and sunlight assessment has been prepared to support a full planning application for the proposed extension of the building at 99 Camden Road, London NW1.

1.2 The report assesses the proposals in respect of daylight, sunlight and overshadowing matters, having regard to industry standard guidance. The report concludes that the proposals are acceptable and in accordance with planning policy requirements in relation to daylight and sunlight.

1.3 There is no existing specific National Planning Policy relating to the prospective impacts of developments on daylight and sunlight on their surrounding environment. However, the BRE Report 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' 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. It has been developed in conjunction with daylight and sunlight recommendations in BS 8206: Part 2: 'Lighting for Buildings - Code of Practice for Daylighting'

1.4 This reference document is accepted as the authoritative work in the field on daylight, sunlight and overshadowing and is specifically referred to in many Local Authorities' planning policy guidance for daylighting. The methodology therein has been used in numerous lighting analyses and the standards of permissible reduction in light are accepted as the industry standards.

1.5 This report has been prepared in support of a planning application, and not a Right to Light dispute. Although the methodology used is similar, this report has not been formulated for Right to Light usage, and must not be used as such.



2.0 Methodology

2.1 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) and No Sky Line (NSL) for daylight
- Annual Probable Sunlight Hours and Winter Probable Sunlight Hours (WPSH) (APSH) for sunlight

2.2 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.

2.3 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.

2.4 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. Only windows which face within 90° of due south need be assessed for sunlight.

2.5 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. In this instance, no assessed windows are within this orientation and so no sunlight calculations need to be carried out.

2.6 APSH can also be used to assess the impact on external spaces such as gardens. In this instance, the external space in the lightwell below the proposal already receives no sunlight on March 21st and so there is no reduction to be calculated.

3.0 Existing Site and Proposal

3.1 The proposal site is 99 Camden Road in London NW1. It is currently occupied by a three-storey terraced dwelling with a self-contained flat at basement level.

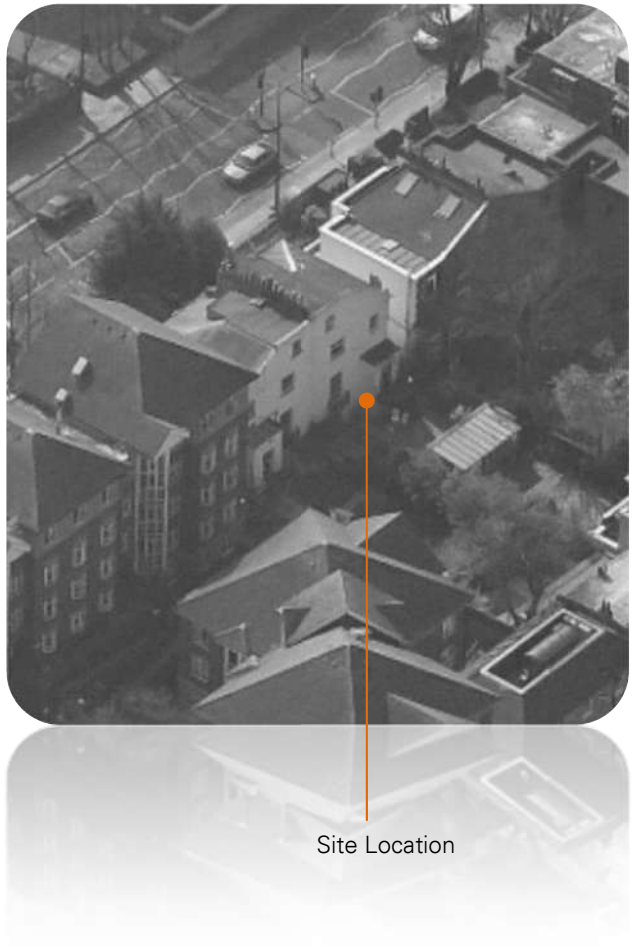
3.2 The proposed development is to extend the existing building to the rear over 2 storeys to allow the conversion of the three storey dwelling into two self-contained apartments.

3.3 The impact of the proposal on the existing neighbours has been considered as part of the design process and the extension is modest in scale.

3.4 The primary cause of concern is the existing flat at basement level which is lit to the rear by a lightwell serving its living room and one of the three bedrooms.

3.5 The neighbouring dwelling at 97 Camden Road has also been assessed. This has a small window on the side elevation which faces the proposal. The rear facing windows will not have any significant view of the proposed extension.

3.6 The neighbour to the north at 101 Camden Road is sufficiently distant from the proposal as to be unaffected.



4.0 Modelling the Site

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 current situation, and compare it with the proposal.

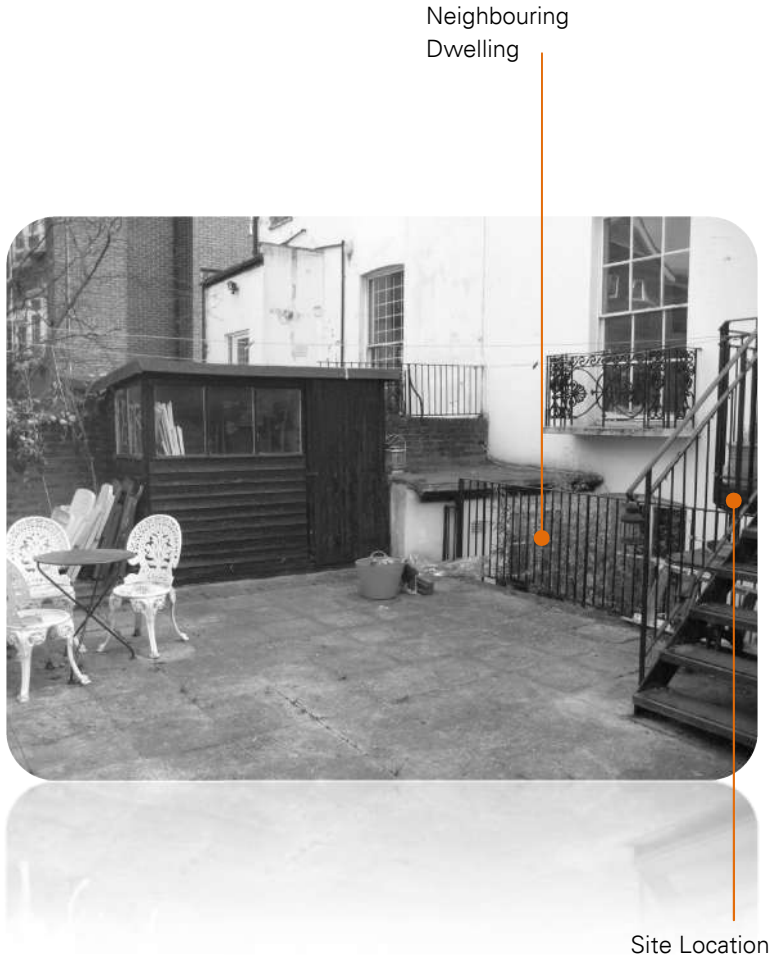
4.2 A 3D model has been created from drawings provided by the Architect. This model is then exported into the specialist daylight analysis software. Calculations are run, for both existing and proposed scenarios.

4.3 The outputs of those calculations can be exported numerically. Using the BRE guidance which gives recommended limits figures for the reduction in daylighting and sunlighting values, we can then establish the degree to which the proposal will impact on the occupiers of the adjacent dwellings.

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

4.5 Information on the proposal has been provided to us by the design team in the form of a 2D drawings of the site as existing and proposed and photographs of the site and surroundings.

4.6 A measured survey of the neighbouring windows and buildings has not been undertaken but a good level of detail on the site and neighbours has been made available for the analysis.



5.0 Window Schedules

99 Camden Road - Lower Ground Floor

97 Camden Road (Viewed from Above)

6.0 Measurement Criteria

6.1 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.

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

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

- *"While this guide supersedes the 1971 Department of the Environment document 'Sunlight and Daylight' which is now withdrawn, the main aim is the same - to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions. 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.*
- *Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design."*

6.4 In this regard, it is noted that the guidance is discretionary and should be applied flexibly, particularly since the BRE guidance applies nationally in both rural and urban areas.

6.5 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 80% of its 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), and 80% of its former value.

7.0 Daylight Results

7.1 The Vertical Sky Component has been calculated for the three assessed windows for both the existing and proposed conditions using the methodology described previously.

7.2 The results of these calculations are given below. As can be seen, all 3 windows retain over 80% of current levels.

7.3 There will therefore be no significant impact on neighbouring dwellings in terms of VSC and the scheme is compliant with BRE recommendations for daylight.

Window	Vertical Sky Component			
	Existing	Proposed	% Retained	Compliant?
1	12.35	9.97	80.73%	Yes
2	17.43	15.241	87.44%	Yes
3	18.156	14.922	82.19%	Yes

8.0 Sunlight Results

8.1 BRE guidance states that only windows which face within 90° of due south need be assessed for sunlight provision. In this instance, only one of the assessed windows meets this criterion. The Annual and Winter Probable Sunlight Hours have been calculated for this window for both the existing and proposed conditions using the methodology described previously.

8.2 The BRE guidance states that the sun lighting may be adversely affected if the centre of the window:

- Receives less than 25% of annual hours or less than 5% of winter hours

  and

- Receives less than 80% of its current sunlight hours during either period

  and

- Has a reduction in sunlight over the whole year greater than 4%of annual probable sunlight hours.

8.3 It is clear from the wording of the above that all three clauses need to be met to qualify as an adverse impact. Thus, if the window does not meet any one of these criteria, the impact is acceptable.

8.4 The results below show that the assessed window retains in excess of 80% of current levels. The scheme is therefore compliant with BRE guidance for sunlight and there will be no adverse effect on the sunlight received to neighbouring properties.

Window	APSH - Whole Year			WPSH - Winter Months			Compliant?
	Existing %	Proposed %	% Retained	Existing %	Proposed %	% Retained	
1	19.07%	15.34%	80.43%	1.02%	0.83%	81.22%	Yes

9.0 Conclusions

9.1 The Using industry standard methodology, we have made numerical analyses to ascertain the effects of the proposal at 99 Camden Road and the levels of change in daylight and sunlight for the neighbouring property.

9.2 The main criteria used in this analysis to show compliance are the Annual Probable Sunlight Hours and Vertical Sky Component tests.

9.3 As has been shown, the effect on VSC is within the 80% guidance value in all cases. There will therefore be no adverse impact on neighbouring residents in terms of daylight.

9.4 In terms of sunlight, it has been shown that the assessed window meets the BRE criteria by virtue of retaining 80% of their existing sunlight levels, as defined by BRE guidance.

9.5 The lightwell space already receives no sunlight on March 21st, when sunlight to external spaces should be assessed. There can therefore be no reduction in sunlight hours to this space on that date.

9.6 There will therefore be no adverse impact on sunlight receipt to neighbouring properties.

9.7 From a planning perspective therefore, it is the conclusion of this report that the effect of the proposed development is entirely acceptable in planning terms, without adverse impact on the neighbours.

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