



62 Wolseley Road, N8

Daylight and Sunlight Assessment for Planning

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1.0 Introduction

1.1 This daylight and sunlight assessment has been prepared to support a planning application for the proposed redevelopment of the land to rear of 62 Wolseley Road, N8.

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 proposal is 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.

1.4 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.

1.5 It has been developed in conjunction with daylight and sunlight recommendations in BS 8206: Part 2: 'Lighting for Buildings - Code of Practice for Daylighting'

1.6 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.

2.0 Project Summary



Site Location

- 2.1 The site is currently occupied by a single storey building to the rear of 62 Wolseley Road N8
- 2.2 It sits at the rear of 62 Wolseley Road on a suburban North London road.
- 2.3 The proposal is to build a two storey dwelling over lower ground floor and upper ground floor.
- 2.4 The design has been formulated with consideration to its impacts on neighbouring buildings.
- 2.5 Generally it is the impacts on residential neighbours which are the primary concern. The BRE guidance states that non-residential neighbours can also be assessed for uses where occupants have a "reasonable expectation of daylight"
- 2.6 Further details on the location of neighbours and their windows is given in Section 5.0



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 (WPSH) (APSH) for sunlight**

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.

3.6 APSH can also be used to assess the impact on external spaces such as gardens. In this instance the gardens to the north and east of the site have been assessed.

4.0 Modelling & Data Sources

- 4.1 The first stage of the analysis is to create an analysis model of the existing site and the proposal.
- 4.2 A 3D analysis model has been created from 2D drawings provided by the Architect. This model is exported into the specialist daylight analysis software.
- 4.3 Calculations are then run, for both existing and proposed conditions, allowing a comparison between the two to be made.
- 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 Drawn information on the properties has been provided to us by the design team in the form of 2D drawings giving the site as existing and proposed. Web-based mapping sources and site photographs have also been used.
- 4.6 A good level of detail on the site and neighbours has been made available for the analysis.

5.0 Window Schedules



6.0 BRE Guidance Targets

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:

- "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 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 Impact Results

- 7.1 The Vertical Sky Component has been calculated for each of the 11 assessed windows for both the existing and proposed conditions.
- 7.2 As can be seen in the results below, all of the assessed windows meet the 80% criteria for daylight.
- 7.3 The scheme is therefore compliant with BRE guidance with regards to daylight impact.

Vertical Sky Component			
Window	Existing VSC	Proposed VSC	% Retained
1	36.384	35.097	96.46%
2	36.629	35.037	95.65%
3	36.717	34.797	94.77%
4	36.405	34.426	94.56%
5	37.745	35.73	94.66%
6	35.483	34.51	97.26%
7	39.398	38.577	97.92%
8	39.408	38.5	97.70%
9	39.379	38.313	97.29%
10	39.288	38.539	98.09%
11	39.173	38.482	98.24%

8.0 Sunlight Impact 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, all 11 windows fall into this category.

8.2 The Probable Sunlight Hours have been calculated for these window for both the existing and proposed conditions using the methodology described previously, both over the whole year, and through the "winter months" (September 21st until March 21st)

8.3 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.

8.4 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.

8.5 The results below show that all windows retain greater than 80% of current values and so the scheme is compliant with BRE guidance for sunlight.

8.0 Sunlight Impact Results

Annual Probable Sunlight Hours

Window	Existing Hrs Received	Proposed Hrs Received	Percentage Retained
1	63.73%	62.95%	98.77%
2	65.21%	62.57%	95.94%
3	64.85%	61.69%	95.13%
4	65.44%	62.67%	95.77%
5	67.18%	64.41%	95.88%
6	63.61%	62.45%	98.17%
7	68.83%	68.69%	99.80%
8	70.32%	69.95%	99.48%
9	70.31%	69.82%	99.29%
10	70.31%	70.02%	99.59%
11	70.31%	69.98%	99.54%

Winter Probable Sunlight Hours

Window	Existing Hrs Received	Proposed Hrs Received	Percentage Retained
1	27.86%	27.08%	97.19%
2	28.86%	26.22%	90.84%
3	27.70%	24.54%	88.59%
4	29.69%	26.93%	90.71%
5	29.75%	27.21%	91.47%
6	29.82%	28.94%	97.05%
7	30.20%	30.07%	99.55%
8	31.46%	31.09%	98.84%
9	31.45%	30.96%	98.42%
10	31.45%	31.23%	99.32%
11	31.44%	31.27%	99.43%

9.0 Sunlight To Neighbouring Gardens

- 9.1 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.
- 9.2 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.
- 9.3 The garden of the neighbouring dwelling to the east has been assessed using this method as identified below. As can be seen, the garden retains over 80% of their area receiving 2 hours or more of direct sunlight on March 21st and so the scheme is compliant with BRE recommendations.



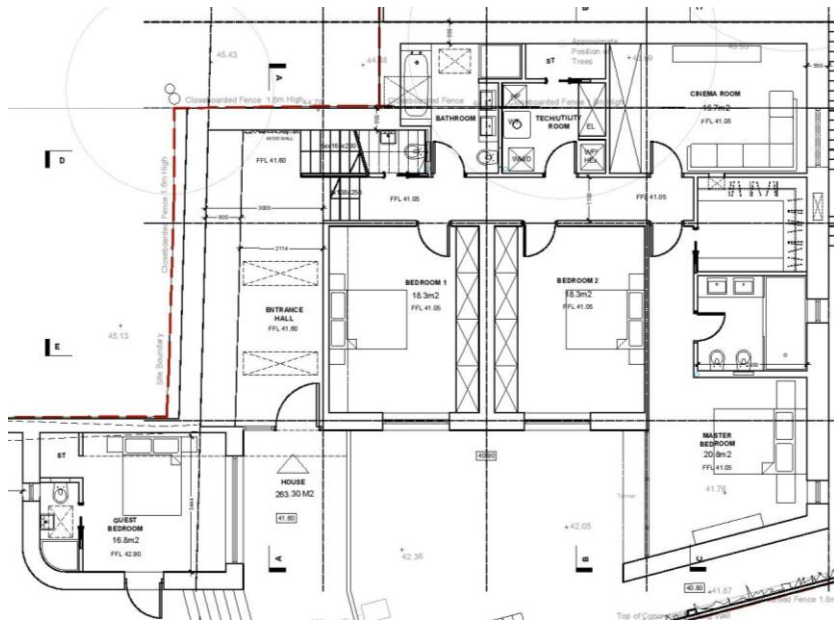
Site Location

Amenity Sunlight Hours			
Garden	Existing Area Receiving 2 Hours	Proposed Area Receiving 2 Hours	Percentage Retained
G1	92.3	92.3	100.00%
G2	96.6	96.3	99.69%
G3	90	89.5	99.44%
G4	88.6	86.1	97.18%
G5	89.9	86.6	96.33%
G6	90.9	88.4	97.25%

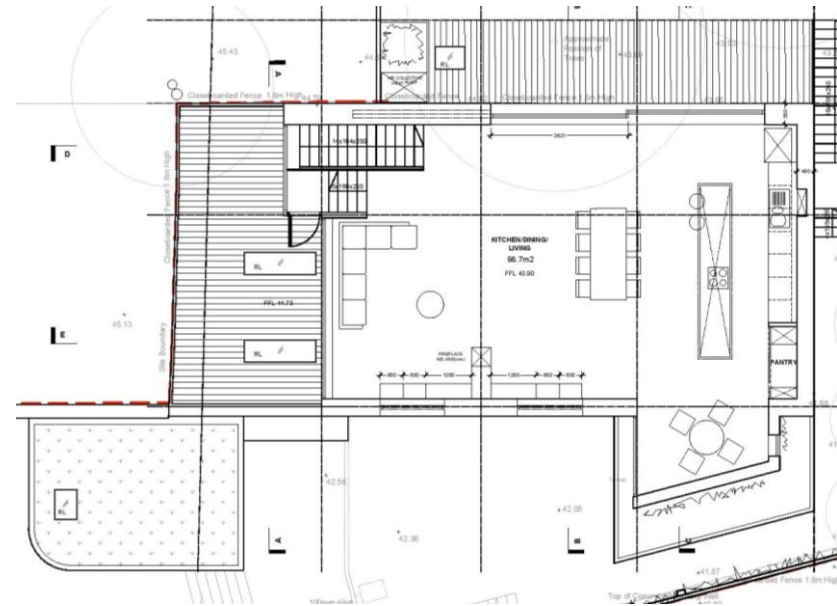
10.0 Conclusions

- 10.1 Using industry standard methodology, we have made numerical analyses to ascertain the effects of the proposal at 62 Wolseley Road, N8 and the levels of change in daylight and sunlight for the windows of the neighbouring properties.
- 10.2 The main criteria used in this analysis to show compliance are the Vertical Sky Component test for daylight and the Annual/Winter Probable Sunlight Hours tests for sunlight.
- 10.3 As has been shown, the effect on VSC is within the 80% guidance value in all cases.
- 10.4 There will therefore be no adverse impact on neighbouring residents in terms of daylight.
- 10.5 In terms of sunlight, all windows and gardens retain in excess of 80% of current values both annually and over the winter months (for windows) and on March 21st (for gardens).
- 10.6 The scheme is therefore compliant with BRE guidance in relation to sunlight.
- 10.7 From a planning perspective therefore, it is the conclusion of this report that the proposed development is entirely acceptable in planning terms without adverse impact on the neighbours.

Appendix 1 – Drawings Used

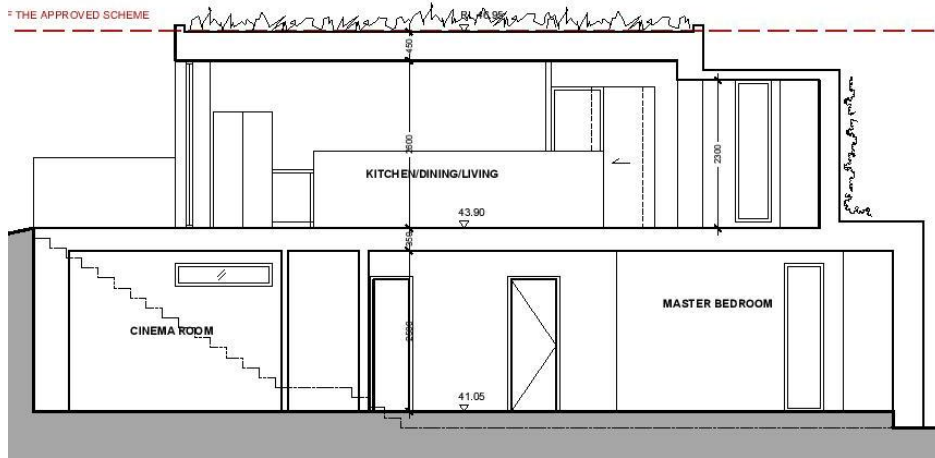


Proposed Ground Floor

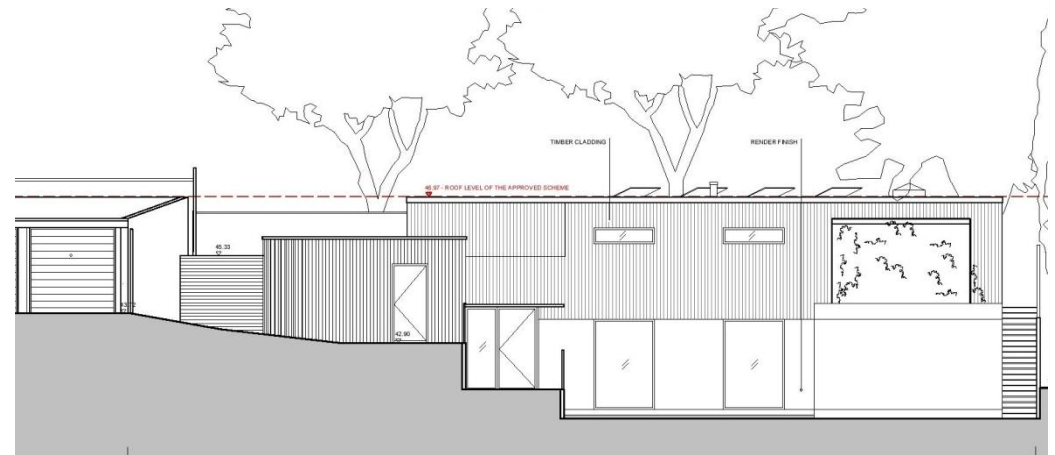


Proposed First Floor

Appendix 1 – Drawings Used



Section CC

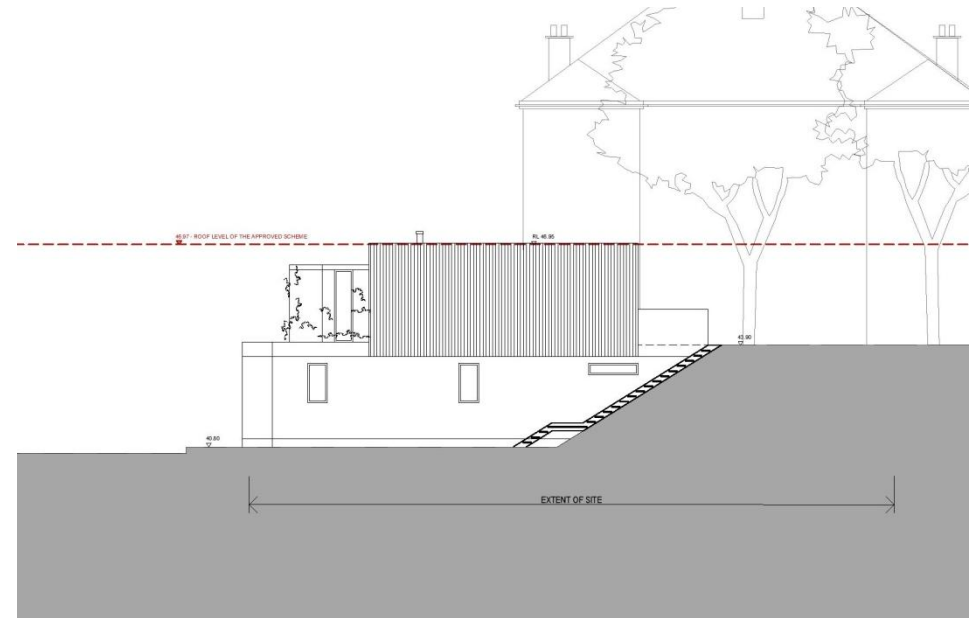


North East Elevation

Appendix 1 – Drawings Used



Front Elevation



Rear Elevation

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