2 Falkland Place

Daylight and Sunlight Assessment

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Document Control

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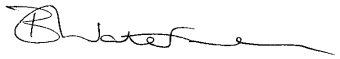
BW	06.11.18	

1.0 Introduction

1.1 This daylight and sunlight assessment has been prepared to support a full planning application for the redevelopment of the site at 2 Falkland Place.

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 (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 Annual Probable Sunlight Hours (APSH) is 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. External garden spaces can also be assessed using this method. In this instance, no adjacent gardens are considered to be adversely affected by the proposal.

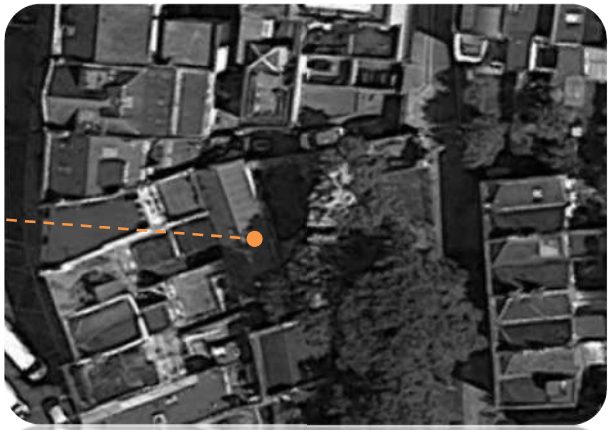
3.0 Existing Site and Proposal

3.1 The existing site is currently a 2 Storey house with two bedrooms in an urban setting.

3.2 The proposal is to extend the site up by one storey, and outwards to create a six bedroom house.

3.3 Other neighbouring buildings are a mix of residential and commercial uses. Where the use is not clear, the windows have been included for completeness as noted on the window schedules.

Site Location



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 easily with the proposal.

4.2 The 3D model that is produced from drawings provided by the scheme Architect is exported into the specialist daylight analysis software, and calculations are then run, for both existing and proposed.

4.3 The outputs of those calculations can be exported numerically. Using the BRE guidance which gives absolute figures for the acceptable reduction in lighting value, we can then establish if the proposal will have a significant and measurable impact on the enjoyment of the occupiers of the adjacent dwellings.

4.4 Sufficient detail is added to the model for the analysis. It is important to note that not all nearby features have been modelled, only those that will affect the daylighting. In accordance with BRE recommendations, trees 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 of the site as existing and proposed. OS data and information and photographs have also been used to establish window positions. Although a full measured survey of the neighbouring windows has not been undertaken, a good level of detail has been obtained from the various sources available.

5.0 Measurement Criteria

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:

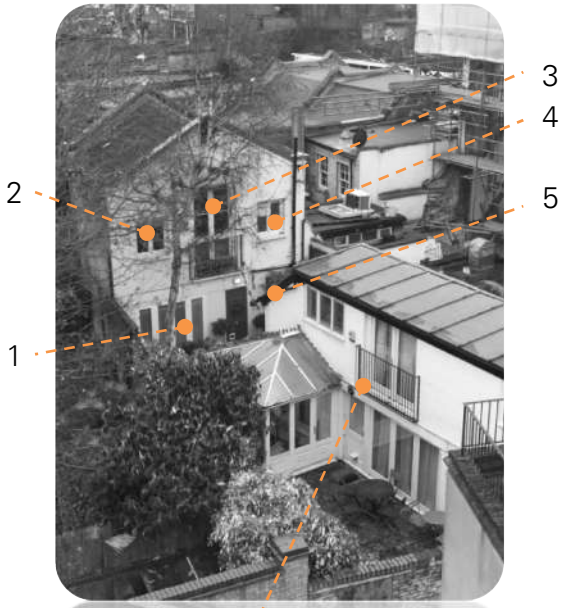
- *"While this guide supersedes the 1971 Department of the Environment document 'Sunlight and Daylight' which is now withdrawn, the main aim is the same - to help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good 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."*

5.4 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.

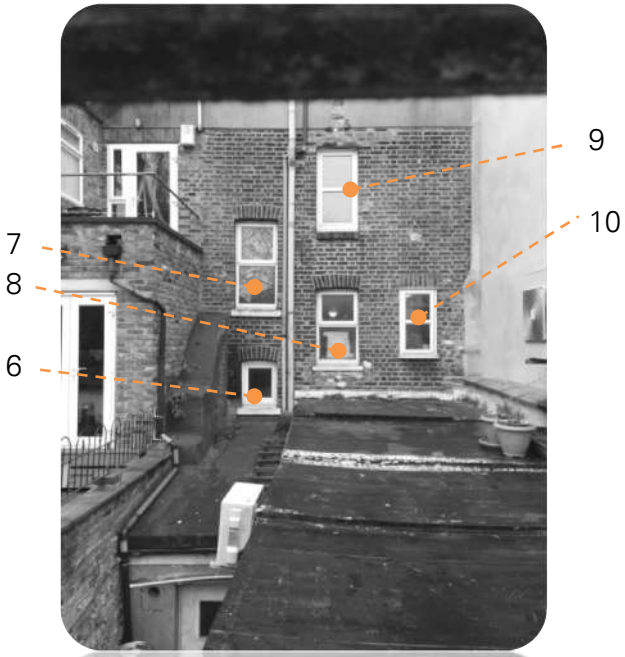
5.5 The relevant BRE recommendations for daylight and sunlight are:

- The Vertical Sky Component measured at the centre of a window should be no less than 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.

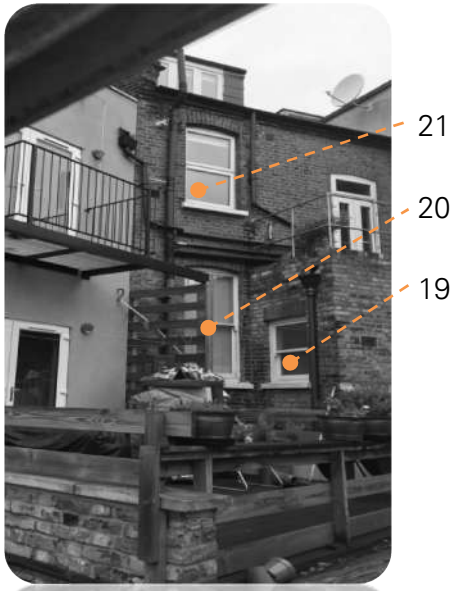
6.0 Window Schedules

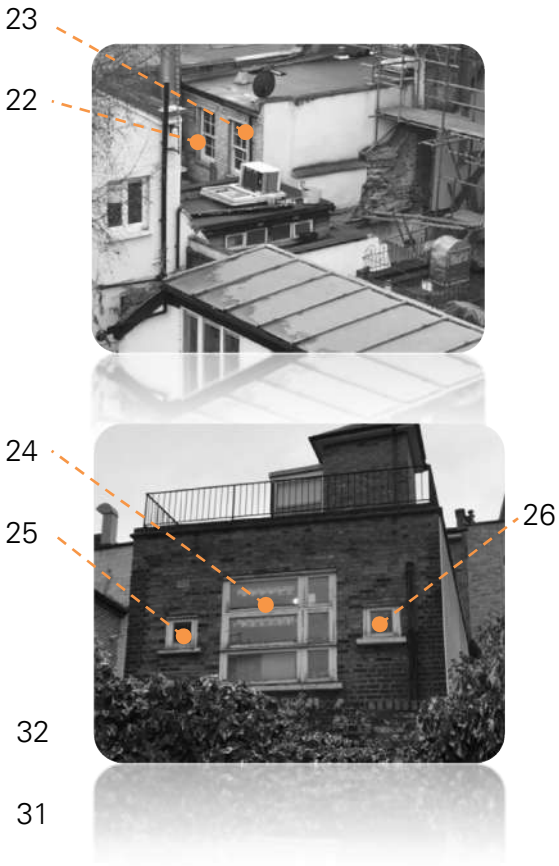


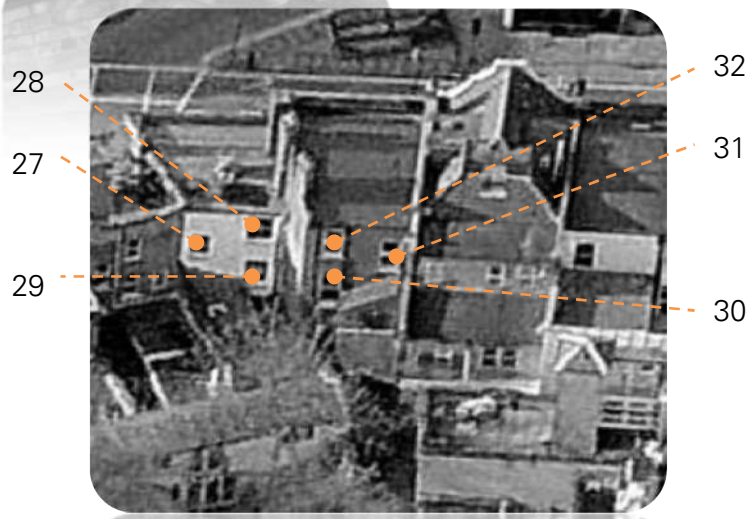
Site Location



6.0 Window Schedules







7.0 Daylight Results

7.1 The Vertical Sky Component has been calculated for each of the 32 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 and the scheme is therefore compliant with BRE guidance. There will therefore be no noticeable impact on neighbouring residents.

Window	Vertical Sky Component		
	Existing	Proposed	% Retained
1	24.921	22.696	91.07%
2	32.2	31.149	96.74%
3	31.927	30.813	96.51%
4	30.435	28.889	94.92%
5	16.669	15.661	93.95%
6	18.864	16.007	84.85%
7	26.933	25.644	95.21%
8	27.936	24.262	86.85%
9	34.322	33.938	98.88%
10	33.079	30.692	92.78%
11	33.517	28.015	83.58%
12	27.898	27.847	99.82%
13	33.603	30.594	91.05%
14	37.546	37.546	100.00%
15	24.058	24.058	100.00%
16	30.159	26.526	87.95%

Window	Vertical Sky Component		
	Existing	Proposed	% Retained
17	34.081	34.081	100.00%
18	36.655	36.655	100.00%
19	18.474	17.558	95.04%
20	26.423	25.75	97.45%
21	28.517	28.517	100.00%
22	26.911	26.261	97.58%
23	22.154	22.043	99.50%
24	34.688	31.01	89.40%
25	34.148	30.075	88.07%
26	35.742	33.848	94.70%
27	38.008	38.008	100.00%
28	35.585	35.585	100.00%
29	33.995	32.919	96.83%
30	35.153	34.026	96.79%
31	37.21	37.204	99.98%
32	38.537	38.537	100.00%

8.0 Sunlight Results

8.1 Annual Probable Sunlight hours is a measure of the number of hours of direct sun falling on a surface over a given period. This is of particular importance to living spaces where direct sunlight is welcomed.

8.2 BRE Guidance is that windows should continue to receive in excess of 80% of their pre-development value, 25% of available hours over the year, and 5% of hours in winter.

8.3 Only windows which face within 90° of due south need be assessed for sunlight. In this instance, 9 windows meet this criterion.

8.4 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.

8.5 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.

8.6 The results below show that all windows either retain greater than 25% of annual hours, 5% of winter hours and in most cases. In excess of 80% of their existing values.

8.7 The scheme is therefore compliant with BRE guidance for sunlight.

8.0 Sunlight Results

Window	APSH - Whole Year			APSH - Winter Months		
	Existing %	Proposed %	% Retained	Existing %	Proposed %	% Retained
24	69.96%	65.22%	93.22%	31.37%	25.61%	81.64%
25	68.08%	62.53%	91.85%	30.92%	25.36%	82.03%
26	73.13%	70.49%	96.40%	32.64%	30.05%	92.07%
27	51.14%	51.14%	100.00%	19.55%	19.55%	100.00%
28	50.89%	50.89%	100.00%	19.55%	19.55%	100.00%
29	48.94%	46.04%	94.08%	19.31%	16.41%	84.98%
30	51.24%	48.13%	93.92%	21.75%	18.52%	85.14%
31	52.15%	52.15%	100.00%	21.83%	21.83%	100.00%
32	52.64%	52.64%	100.00%	21.82%	21.82%	100.00%

9.0 Conclusions

9.1 Using industry standard methodology, we have made numerical analyses to ascertain the effects of the proposal at 2 Falkland Place, Kentish Town, London and the levels of change in daylight and sunlight for the windows of the neighbouring properties.

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 daylight, measured using the VSC method, 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 all windows meet the BRE criteria by virtue of either retaining 80% of their existing value, or 25% of annual hours and 5% of winter hours. There will therefore be no adverse impact on sunlight receipt to neighbouring properties.

9.5 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 neighbouring dwellings.

Appendix 1- Schedule of drawings used

Drawing Title	Drawing Number	Revision	Originator
Ground & Site Layout	Drg P-20	0	Philip M Roys
Ground Floor Plan	Drg P-20	0	Philip M Roys
First Floor Plan	Drg P-21	0	Philip M Roys
Second Floor Plan	Drg p-22	0	Philip M Roys
Roof Plan	Drg p-23	0	Philip M Roys
Sections A-A	Drg p-24	0	Philip M Roys
Sections B-B	Drg p-25	0	Philip M Roys
Sections C-C	Drg p-26	0	Philip M Roys
Open Space Elevation	Drg p-28	0	Philip M Roys
Frontage Elevation	Drg p-29	0	Philip M Roys
South Elevation	Drg p-30	0	Philip M Roys
Rear Elevation	Drg p-31	0	Philip M Roys
North End Elevation	Drg p-32	0	Philip M Roys