Land at Shepherds Close,

N6

Daylight and Sunlight Assessment

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Contents

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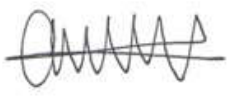


1.0 Introduction

1.1 This daylight and sunlight assessment has been prepared in relation to a planning application for the proposed construction of a new dwelling on land to the west of Shepherds Close, London N6.

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

1.3 The report concludes that the proposal meets the BRE guidance in relation to the impacts on neighbouring daylight and sunlight amenity.

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 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.

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.

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

1.8 The report concludes that the proposed works are well within the BRE guidance and therefore fully acceptable and in accordance with planning policy requirements in relation to daylight and sunlight.

2.0 Project Summary

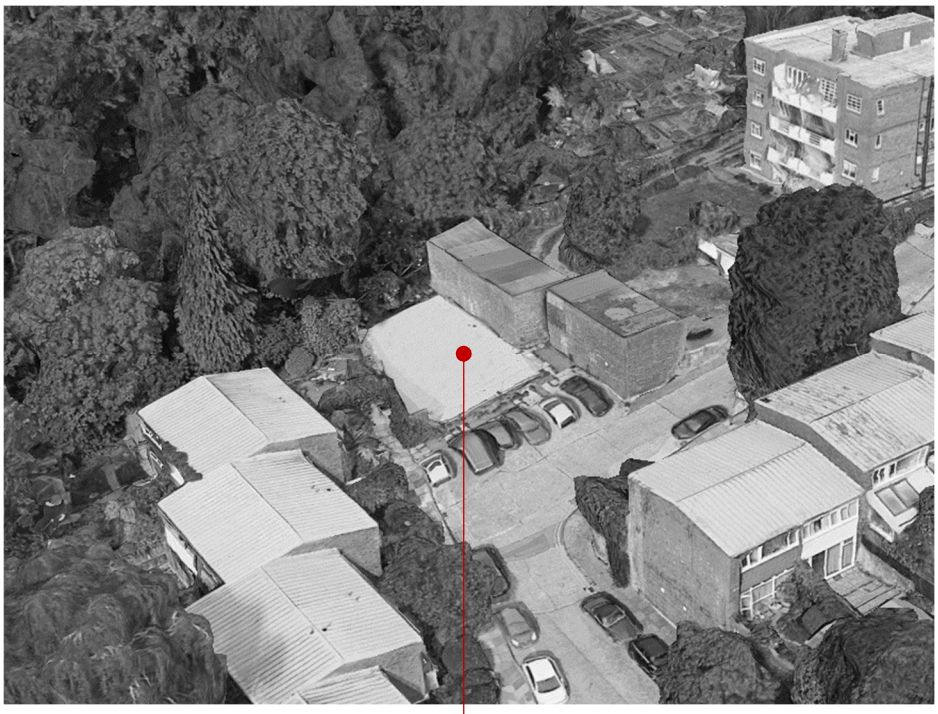
2.1 The site is located a vacant parcel of land opposite to 26 & 27 Shepherds Close, London N6

2.2 The proposal is for the construction of a new, 2-storey detached house on the land

2.3 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.

2.4 The site is at a distinct gradient, and this has been factored into the analysis model.

2.5 Further details on the location of the assessed neighbours and their windows are given in Section 5.0



Site Location

3.0 Methodology

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

- Vertical Sky Component (VSC) and No Sky Line (NSL) for daylight impacts
- Annual Probable Sunlight Hours and Winter Probable Sunlight Hours (WPSH) (APSH) 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 For non-vertical windows (such as rooflights) a higher VSC is achievable,

3.4 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.

3.5 The NSL test calculates the distribution of daylight within rooms by determining the area of the room at desk / work surface height (the 'working plane') which can and cannot receive a direct view of the sky and hence 'sky light'. The working plane height is set at 850mm above floor level within residential property.

3.6 The NSL test can be carried out where neighbouring room layouts are known.

3.7 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.

3.8 Only windows which face within 90° of due south need be assessed for sunlight. This is looked at in Section 8.

3.9 The sunlight hours test can also be used to assess the impact on external spaces such as gardens. This is looked at in Section 9.

4.0 Modelling & Data Sources

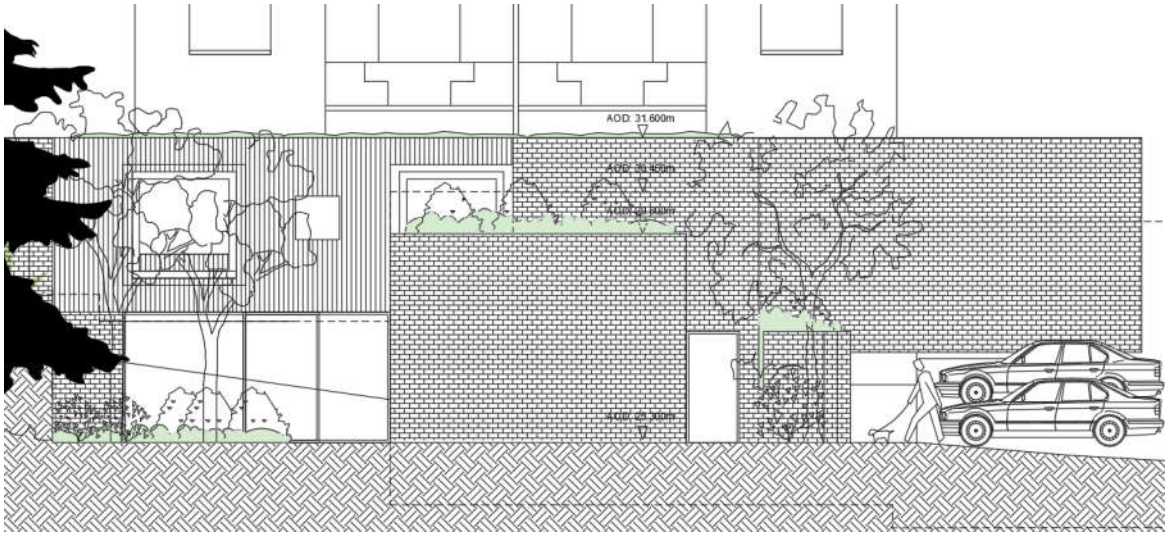
4.1 The first stage of the analysis is to create the analysis model of the existing site condition and the proposal. This allows us to analyse the impact of the proposal in terms of loss of daylight and sunlight.

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. The site previously had numerous large trees, but these have now been removed.

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 and photographs of the site and surroundings.

4.5 Web-based mapping sources and planning records for neighbouring buildings have also been used where available.



South Elevation as Proposed

5.0 BRE Guidance Targets

5.1 The reference document for this analysis, BRE Digest 209, 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' (3rd Edition, 2022) gives the methodology for undertaking the calculations.

5.2 It also provides benchmark figures for the acceptable reduction in the daylight on existing properties which might be affected by development.

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

5.4 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."

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 27%, or if reduced to below this, no less than 0.8 times the former value.
- The area of the room beyond the No Sky Line should not be reduced to 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), or, where this is not the case, 80% of its former value.

6.0 Window Schedules

10-11 Shepherds Close

26-27 Shepherds Close

Eton Court

7.0 Daylight Impact Results

7.1 The Vertical Sky Component has been calculated for each of the 18 assessed windows for both the existing and proposed conditions.

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

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

Vertical Sky Component				
Window	Existing VSC	Proposed VSC	% Retained	Meets BRE Guidance?
1	30.215	28.973	95.89%	Yes
2	32.240	31.804	98.65%	Yes
3	33.305	32.190	96.65%	Yes
4	35.311	34.973	99.04%	Yes
5	21.993	21.138	96.11%	Yes
6	30.385	29.931	98.51%	Yes
7	30.468	27.328	89.69%	Yes
8	36.219	34.611	95.56%	Yes
9	32.097	26.459	82.43%	Yes
10	36.425	33.731	92.60%	Yes
11	33.034	27.692	83.83%	Yes
12	34.039	33.610	98.74%	Yes
13	36.904	36.417	98.68%	Yes
14	8.817	8.397	95.25%	Yes
15	10.038	9.563	95.27%	Yes
16	8.266	7.857	95.06%	Yes
17	9.564	9.101	95.16%	Yes
18	35.283	34.830	98.72%	Yes

8.0 Daylight Impact Results – NSL Test

8.1 BRE guidance states that the No Sky Line can additionally be calculated "where neighbouring room layouts are known".

8.2 In this instance, indicative floor plans have been sourced for the terrace of units at 26-27 Shepherds Close and so NSL calculations can be undertaken for the room which previously caused concern, identified below.

8.3 This test is more detailed and represents better the actual impact on a room, as it considers both the size of the room and the window(s), and accounts for multiple windows serving the same space, which VSC does not.

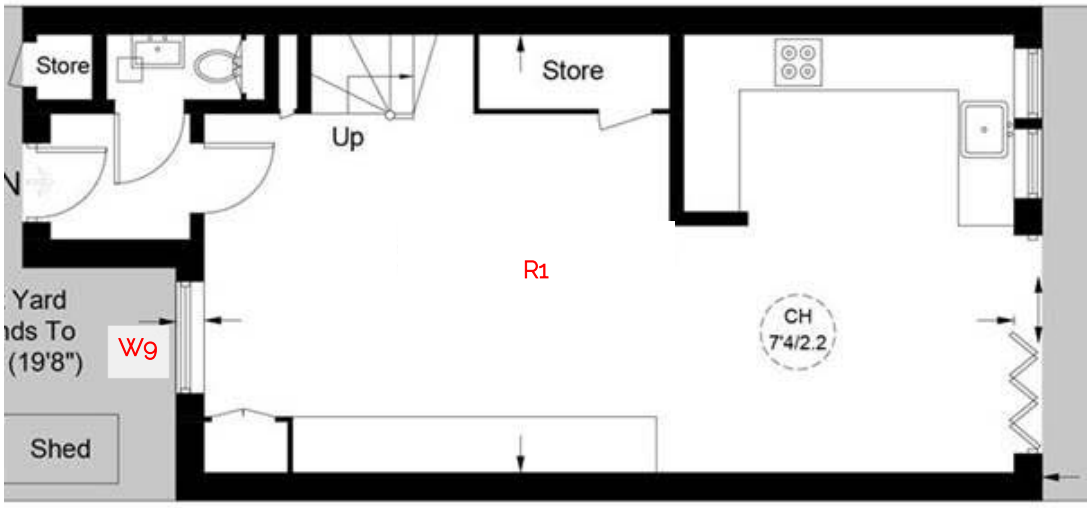
8.4 Concern was raised previously that the development would cause someone standing in the living room of No. 27 to have less view of the sky and that the sky visibility line would decrease as the occupants moved further into the room.

8.5 At the time this was raised, there were very large conifers on the application site which are no longer there and so this is now less of an issue, but the most suitable method to demonstrate that there will continue to be good daylight distribution in the room is the No Sky Line test.

8.6 As can be seen in the results below, the assessed room retains well in excess of 80% of its respective areas within the No Sky Line.

8.7 The scheme is compliant with BRE guidance when assessed using the No Sky Line test.

8.0 Daylight Impact Results – NSL Test



27 Shepherds Close – Indicative Ground Floor Plan

No Sky Line						
Room	Window Ref	Room Served	Existing NSL (%)	Proposed NSL (%)	% Retained	Meets BRE Guidance?
R1	W9	K/L/D	88.6%	85.9%	96.95%	Yes

9.0 Sunlight Impact Results

9.1 BRE guidance states that only windows which face within 90° of due south need be assessed for sunlight provision. In this instance, 11 windows fall into this category. The remaining windows do not need to be assessed as they face within 90° of north.

9.2 The Annual Probable Sunlight Hours has been calculated for these windows 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)

9.3 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

9.4 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.

9.5 The results below show that the assessed windows retain in excess of 80% of their existing sunlight hours, both annually and over the winter months.

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

9.0 Sunlight Impact Results

	Annual Sunlight Hours			Winter Sunlight Hours			
Window	Ex. Hrs Received (%)	Prop. Hrs Received	% Retained	Ex. Hrs Received	Prop. Hrs Received	% Retained	Meets Guidance?
1	33.195	33.056	99.58%	6.653	6.514	97.92%	Yes
2	33.818	33.818	100.00%	6.653	6.653	100.00%	Yes
3	53.915	53.915	100.00%	17.117	17.117	100.00%	Yes
4	52.183	52.183	100.00%	17.117	17.117	100.00%	Yes
12	74.844	74.498	99.54%	28.344	27.997	98.78%	Yes
13	77.408	77.408	100.00%	30.146	30.146	100.00%	Yes
14	16.701	16.701	100.00%	16.701	16.701	100.00%	Yes
15	17.533	17.533	100.00%	17.533	17.533	100.00%	Yes
16	16.078	16.078	100.00%	16.078	16.078	100.00%	Yes
17	16.563	16.563	100.00%	16.563	16.563	100.00%	Yes
18	72.211	72.211	100.00%	26.473	26.473	100.00%	Yes

10.0 Sunlight to Neighbouring Gardens

10.1 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.

10.2 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.

10.3 The open space to the north of the site was assessed using this methodology. Other open spaces are either sufficiently distant from, or southerly of, the proposal site.

10.4 As can be seen, the neighbouring space retains in excess of 80% of its existing areas that receives 2 hours or more of sunlight on March 21st and so the scheme is 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	100.00%	100.00%	100.00%	Yes

11.0 Overshadowing

11.1 The assessment of overshadowing is generally undertaken for windows and gardens by measuring the existing and proposed levels of sunlight to windows and gardens/open spaces.

11.2 These numerical assessments have been undertaken in this report (Sections 9 and 10) and conclude that the level of change in sunlight to both is acceptable and well within the BRE guidance.

11.3 As the primary assessed neighbours lie southerly and the east of the proposal, it can be reasonably assumed that they will not experience an increase in overshadowing.

11.4 Likewise, the numerical assessment of sunlight impact to the open space to the north of the site demonstrates that the area of this space which receives 2 hours of direct sunlight on March 21st, is unaffected.

11.5 As the windows of the dwellings to the south face north, they do not need to be assessed for sunlight loss.

11.6 It can therefore be concluded from the assessments provided in this report that there will be no adverse increase in overshadowing of neighbouring windows, gardens and open spaces.

12.0 Conclusions

12.1 Using industry standard methodology, we have made numerical analyses to ascertain the effects of the proposed works to the west of Shepherds Close, N6 and the levels of change in daylight and sunlight and overshadowing for the windows and gardens of the neighbouring properties.

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

12.3 As has been shown, the effect on VSC is well within the 80% BRE guidance value in all cases.

12.4 When the ground floor room at No. 27 Shepherds Close is assessed using the more detailed NSL test, it also shows a pass under the BRE guidance, demonstrating that daylight distribution will also be acceptable.

12.5 We are therefore able to conclude that there will be no adverse impact on neighbouring residents in terms of daylight as a result of the works.

12.6 In terms of sunlight, our analysis shows that the windows which require assessment retain well in excess of 80% of their existing levels of sunlight both annually and over the winter months.

12.7 The neighbouring open space also retains well in excess of 80% of its existing area which can receive 2 hours or more of sunlight on March 21st.

12.8 The scheme is therefore fully compliant with BRE guidance in relation to sunlight impacts and there will be no adverse increase in overshadowing.

12.9 It is therefore the conclusion of this report that the development meets the guidance values in the BRE report and is therefore entirely acceptable, in daylight, sunlight and overshadowing terms.

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