



7 Tenterden Road

Haringey

Internal Daylight and Sunlight Assessment

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Calculations are based on the drawings and information provided to us, which have been accepted in good faith as being accurate and valid. The accuracy of this information may have an impact on any daylight and sunlight assessments carried out.

We have used our best endeavours to ensure that all relevant windows and features of the proposed development and surrounding buildings have been identified.

We can make no guarantee as to the status (successful/unsuccessful) of the planning application following the submission of our report.

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1.0 Executive Summary

An internal daylight and sunlight assessment has been carried out for the proposed development of No. 7 Tenterden Road, Haringey. This report outlines the results of the assessment in order to assist with the developments planning application.

Calculations have been based on the drawings and information provided to us by the client / architect, internet and OS mapping sources, and publicly available planning records, which have been accepted in good faith as being accurate and valid. The accuracy of this information may have an impact on the daylight and sunlight assessments carried out.

The methodology used for this assessment follows the most recognised guidance document for daylight within dwellings and is titled 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' *Third Edition 2022* and is published by the Building Research Establishment (BRE).

This report has investigated the natural daylight and sunlight received by the proposed new flats habitable rooms. The following daylight and sunlight assessments have been carried out with the use of computer modelling software in order to provide the most accurate results possible.

- Daylight Factors
- Interior Sunlight

The daylight factor method results show that both the Bedroom Area and Living Area of the Flat would achieve a satisfactory amount of daylight, satisfying the BRE Guidelines in regard to Daylight.

The interior sunlight results show that at least one main habitable room, the main living area, within the flat would receive greater than 1.5 hours of sunlight on 21st March, therefore the BRE Guidelines in regard to interior sunlight would also be satisfied.

For these reasons we believe that the proposed flat should be considered as acceptable overall in terms of its natural daylight and sunlight received.

2.0 Introduction

EEABS (Elmstead Energy Assessments & Building Services) were instructed to undertake an internal daylight and sunlight assessment for the proposed new dwelling at No. 7 Tenterden Road, Haringey. The key elements of this report are:

- To review the relevant guidance and methodology with respect to daylight and sunlight that relate to the development.
- Calculate the proposed daylight factor values and interior sunlight hours received within the main habitable rooms of the development.
- To summarise and compare the findings against regulation guidelines for daylight and sunlight within new properties.

2.1 The Site and Development Proposal

The site is located at 7 Tenterden Road, Haringey and can be seen outlined in red on the satellite image below.

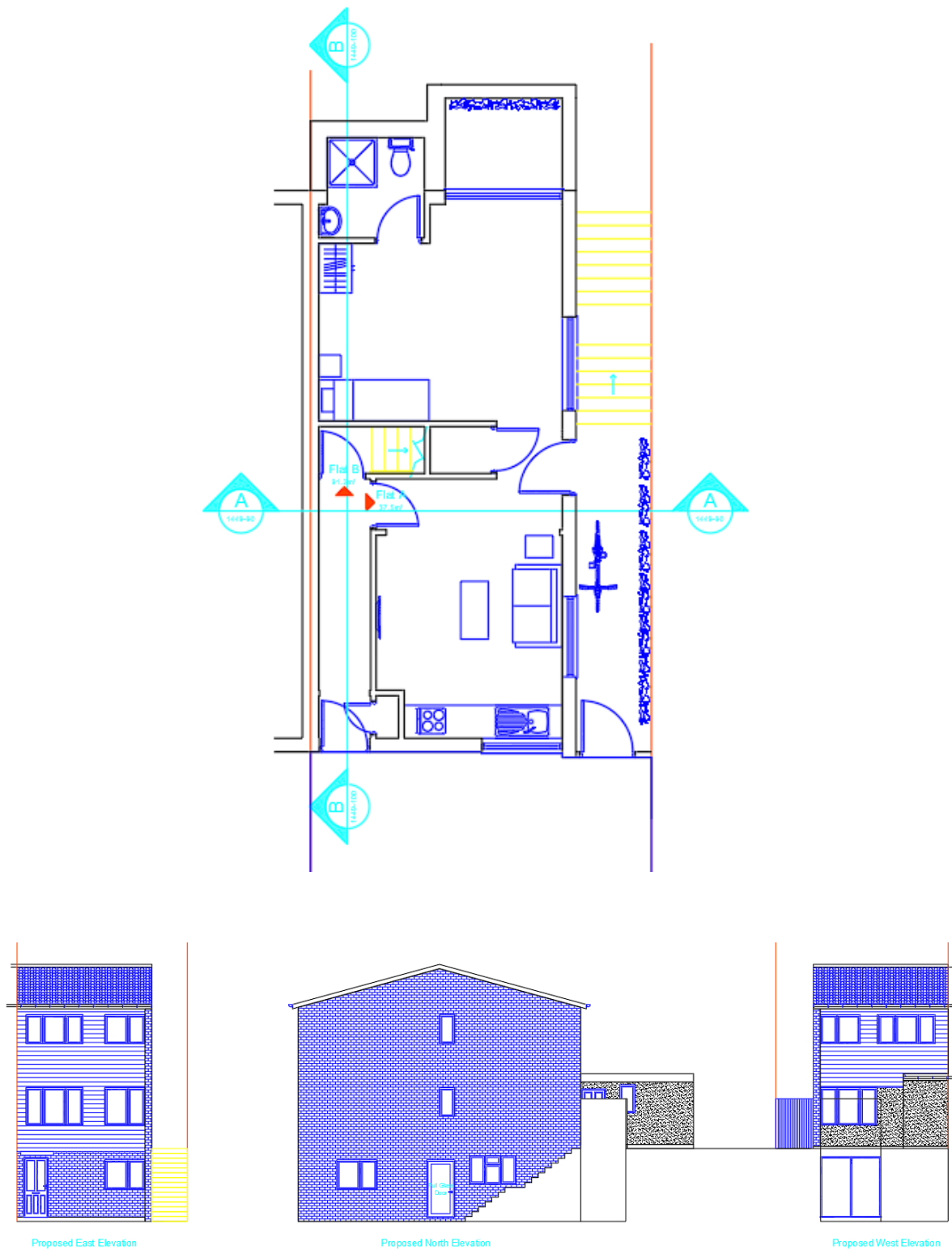


Figure 1 - Satellite Image 7 Tenterden Road

The proposal is for internal configurations to provide one new Studio flat located on the Lower floor. This assessment has investigated the daylight and sunlight received by the proposed new flats habitable rooms.

Floor Plans and elevations of the proposed scheme can be seen in figure 2 below.

This assessment has been based on the drawings and information provided to us by the client / architect, internet and OS mapping sources, and any publicly available planning records. A drawing register can be found within Appendix A.



2.2 Planning Policy and Guidance

The most recognised guidance document for natural light within dwellings is titled 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' *Third Edition 2022* and is published by the Building Research Establishment.



Figure 3 - BRE: Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice

Although the BRE guide clearly states that its recommendations are not mandatory and the document should not be considered as an instrument of planning policy, it can be used in conjunction with the British Standard BS EN 17037.

While the BRE Guidelines are the most recognised document for natural light within dwellings they also do state that:

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly since natural lighting is only one of many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values."

Absent of any particular planning requirements, the methodology and target benchmarks set out within the BRE guide have been used to assess the daylight and sunlight received.

Any trees located close to proposed development have been excluded from the model as recommended by the BRE Guide, which states:

"Normally trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than the deep shadow of a building"

2.3 Methodology

The following methodology and calculations set out within the BRE Guide 'Site Layout Planning for Daylight and Sunlight - A Guide to Good Practice' *Third Edition 2022* were used to carry out the daylight and sunlight assessments for the flat.

2.3.1 Daylight Calculation - Daylight Factor Method

The daylight factor is the ratio of the illuminance at a point on the working plane in a room, divided by the outside illuminance on a horizontal surface under a CIE overcast sky. The ratio is usually expressed as a percentage and guidance for adequate levels of daylight, for different UK Cities, are laid out within the standard BS EN 17037 and referenced within Table C3 of the BRE guide.

Table C3 – Target daylight factors (D_T) to achieve over at least 50% of the assessment grid in UK domestic habitable rooms with vertical and/or inclined daylight apertures			
Location	D_T for 100 lx (Bedroom)	D_T for 150 lx (Living room)	D_T for 200 lx (Kitchen)
St Peter (Jersey)	0.6%	0.9%	1.2%
London (Gatwick Airport)	0.7%	1.1%	1.4%
Birmingham	0.6%	0.9%	1.2%
Hemsby (Norfolk)	0.6%	0.9%	1.3%
Finningley (Yorkshire)	0.7%	1.0%	1.3%
Aughton (Lancashire)	0.7%	1.1%	1.4%
Belfast	0.7%	1.0%	1.4%
Leuchars (Fife)	0.7%	1.1%	1.4%
Oban	0.8%	1.1%	1.5%
Aberdeen	0.7%	1.1%	1.4%

Figure 4 - BRE Target Daylight Factors

As detailed plans have been provided for the proposed new development, the daylight factor calculation will be carried out on the habitable rooms as recommended by the BRE Guide.

“To Check that adequate daylight is provided in new rooms, daylight factor or interior illuminance may be calculated and compared with the recommendations in BS EN 17037 Daylight in Buildings”.

For this development, London is considered to be the nearest city and therefore Bedrooms should achieve 0.7%, Living Rooms should achieve 1.1%, and Kitchens should achieve 1.4% generally over at least 50% of the assessment grid.

For rooms with a shared use the highest target will usually apply, however the guidance does recommend that the target for a living room is used for a Studio apartment.

2.3.2 Sunlight Calculation - Interior Sunlight

BS EN 17037 and the BRE Guide recommends that at least one main window wall should face within 90° of due south and a habitable room, preferably a main living room, should receive a minimum of 1.5 hours of direct sunlight on 21st March in order to appear as reasonably sunlit.

3.0 Dynamic Simulation Modelling

EDSL TAS Dynamic Simulation Modelling software was used to carry out the daylight and sunlight calculations, as this can provide a more accurate means of assessment over the 'by hand' indicator methods outlined within the BRE guide.

The daylight calculations are carried out under a standard CIE overcast sky. For the sunlight calculations, the computer model uses actual hourly weather data for the proposed location, in this instance CIBSE London TRY weather data was used.

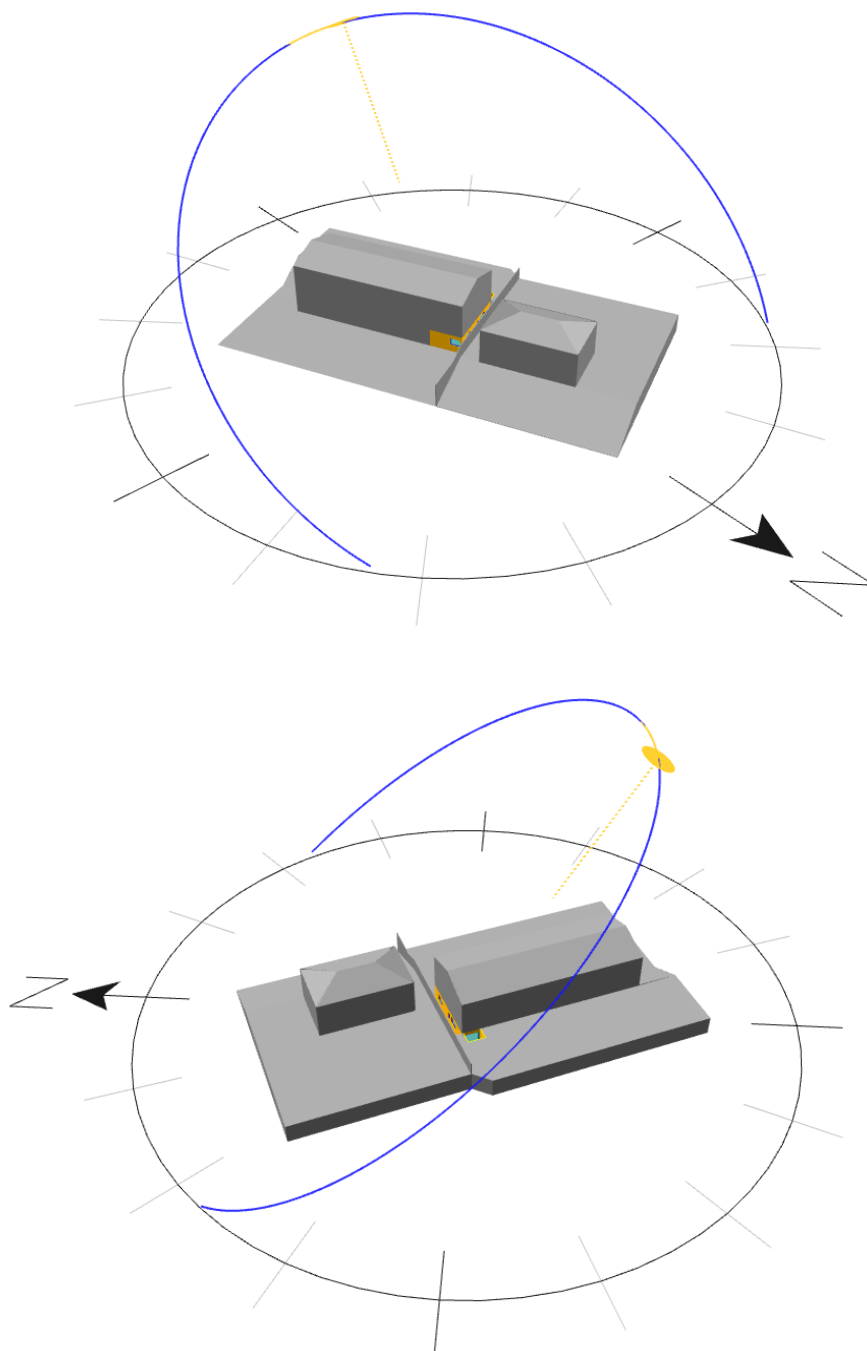


Figure 5 - EDSL TAS Computer Model of the Site

4.0 Daylight and Sunlight Assessment

4.1 Daylight Factors

For the daylight factor calculation, the windows were assumed to be clear double glazing with a light transmittance value of 0.68. The working plane height was assumed to be 0.85m with an assessment grid excluding a band of 0.3m from the walls as recommended.

The internal light reflectance's of the floors, walls and ceilings were assumed to be typical values of 0.40, 0.70 and 0.80, respectively. (Each surface/paint colour has its own light reflectance value ranging from 0 - 1, with black being on the low end of the scale around 0.05 and white being on the high end around 0.90).

Room	Target Daylight Factor (%)	% Of Room Assessment Grid over Target Factor (%)	Result (50% is the Pass Mark)
Studio	1.1	52.16	Above Target

The daylight factor method results show that the Studio apartment would achieve a satisfactory amount of daylight, satisfying the BRE Guidelines in regard to Daylight.

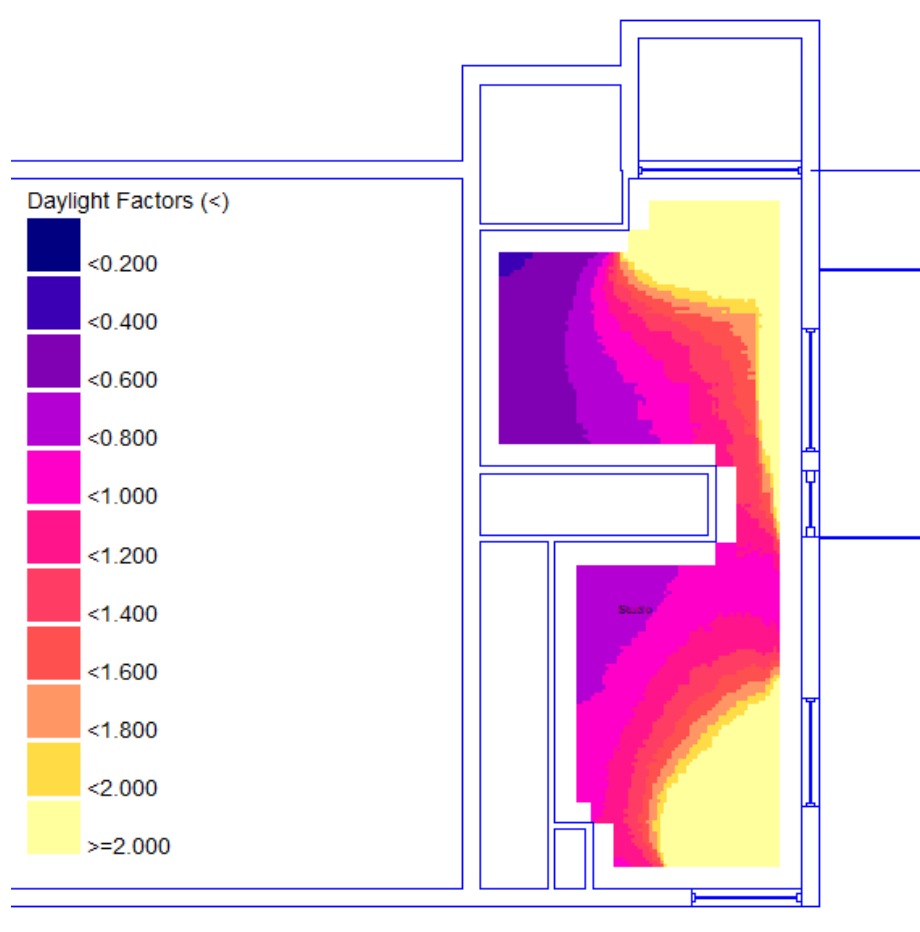


Figure 6 - Daylight Factor Plot of the Flat

4.2 Interior Sunlight

For the interior sunlight calculation at least one habitable room (although preferably a main living room) should receive at least 1.5 hours of sunlight on 21st March. The amount of sunlight received by each habitable room can be seen below.

Room	Target Sunlight Hours	Hours of Sunlight Received	Result
Studio	1.5	2.33	Above Target

The interior sunlight results show that Studio Apartment would receive greater than 1.5 hours of sunlight on 21st March, therefore the BRE Guidelines in regard to interior sunlight would also be satisfied.

Appendix A - Drawing Register

Drawing No.	Drawing Title
B-1449-60	Proposed Block Plan
B-1449-70	Proposed Floor Plans
B-1449-90	Proposed Elevations