

1-7 Hargrave Place

Daylight and Sunlight Report

18 January 2022



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1-7 Hargrave Place

DAYLIGHT AND SUNLIGHT REPORT

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Reference: 1414

DOCUMENT HISTORY

First Issued: 18 January 2022

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CONTENTS

Executive Summary

- 1. Introduction
- 2. Summary of how daylight and sunlight are considered for planning
- 3. Assumptions Used in the Analysis
- 4. Sources of Information Used in the Report
- 5. Daylight & Sunlight Analysis
- 6. Conclusions
- Appendix 1: Drawings
- Appendix 2: Daylight & Sunlight Analysis Results

Appendix 3: Window Maps



EXECUTIVE SUMMARY

- This is a report into the impact of the proposed development at 1-7 Hargrave Place on the daylight and sunlight to surrounding residential properties. This analysis has been based upon scheme drawings provided by Genesis Architects Ltd, a measured survey, and site photography.
- The analysis has been carried out in accordance with the methodologies contained in the Building Research Establishment's *Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice* (2011) (the "BRE Guidelines"), which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.
- The analysis shows that the impacts of the proposed development to the daylight and sunlight available to all habitable residential rooms within the neighbouring properties are within the levels recommended within the BRE Guidelines.



1 INTRODUCTION

Waldrams have been instructed to provide daylight and sunlight analysis for the proposed development of the site at 1-7 Hargrave Place. This analysis is based upon scheme drawings by Genesis Architects Ltd, a measured survey of the site and surrounding context and site photography.

The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

The existing site can be seen on drawings 1414-03-04 to -03-06 with the proposal on drawings 1414-03-07 to -03-09, all in Appendix 1. The numerical results of the quantitative daylight and sunlight analysis can be found in Appendix 2. Window maps showing the locations of the windows analysed in the neighbouring property can be found on drawings 1414-03-10 and -03-11 in Appendix 3.

2 SUMMARY OF HOW DAYLIGHT AND SUNLIGHT ARE CONSIDERED FOR PLANNING

2.1 INTRODUCTION TO THE BRE GUIDELINES

Daylight and sunlight are planning considerations. The main reference used by local planning authorities to determine the acceptability of proposals in terms of their internal daylight and sunlight and the impact on daylight and sunlight to the surrounding properties is the Building Research Establishment (BRE) Guidelines, used in conjunction with British Standard BS8206 Part 2. The BRE Guidelines provide scientific, objective methods for establishing the acceptability of daylight and sunlight internal to the scheme and the surrounding properties. In practice, it is principally the main habitable rooms internal to the scheme and within the surrounding residential properties that are sensitive in terms of daylight and sunlight. This report therefore focuses on the internal daylight and sunlight and sunlight and sunlight and sunlight to habitable rooms in the surrounding residential property.

The BRE Guidelines specify that the daylight and sunlight results be considered flexibly and in the context of the site. Clearly, there would be a higher expectation for daylight and sunlight in a rural or suburban environment than in a dense city centre location. The important factor in all cases is that the levels of daylight and sunlight are appropriate, taking into account all the planning policy requirements of the site. The BRE Guidelines acknowledge this in the introduction where the BRE Guidelines state:

"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and thus this



document 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 because natural lighting is only one of the many factors in site layout design. In special circumstances the developer or planning authority may wish to use different target values."

(Page 1, BRE Guidelines)

The numerical figures should not be rigidly applied, but instead used as part of the overall evaluation of the daylight and sunlight to the surroundings in context of the site, its existing massing, and the need for regeneration and local planning policy guidance for the site. In particular, existing local precedents or recent planning consents may provide a good indication as to appropriate levels in the vicinity.

The BRE Guidelines specifies in Paragraph H1.2:

"Where the effect of a new building on existing buildings nearby is being analysed, it is usual to ignore the effect of trees. This is because daylight is at its scarcest and most valuable in winter months when most trees will not be in leaf."

We have not therefore included trees within our assessment model.

2.2 DAYLIGHT AND SUNLIGHT CRITERIA TO SURROUNDING RESIDENTIAL PROPERTY

According to the BRE Guidelines, a surrounding existing building to a proposed scheme will retain the potential for good interior daylighting if the scheme subtends less than 25 degrees from the horizontal as measured from the lowest habitable windows in the neighbouring windows. If this is not achieved, then good daylighting to the neighbouring properties is still achieved if the Vertical Sky Component (VSC) is in excess of 27% or is reduced by less than 20% from its existing level and if the area of the room that can see the sky at desk height (known as the daylight distribution or no sky contour) is reduced by less than 20% of its existing area. The BRE Guidelines state this in paragraph 2.2.21 as:

"If any part of a new building or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:

- The VSC measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value
- The area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."



The BRE Guidelines state in paragraph 2.2.2:

"Bathrooms, toilets, storerooms, circulation areas and garages need not be analysed."

In certain situations, as outlined in paragraph F8 of the BRE Guidelines, it may also be appropriate to analyse the Average Daylight Factor. The ADF measure of daylight takes into account the main factors that affect the actual daylight appearance of a room including the area of sky visibility, which is closely related to VSC, the area of the window serving the room, the glazing transmittance, the total area of the room's surfaces and the internal reflectance of the room. ADF then provides an absolute measure of daylight expressed as a ratio of daylight for the room in question as a proportion of the daylight outside at any moment in time.

The BRE Guidelines refers to BS 8206-2 Code of practice for daylighting and CIBSE Lighting Guide LG10, which gives recommended minimum values of ADF of 2% for kitchens, 1.5% for living rooms, and 1% for bedrooms.

The test for sunlight to the neighbouring properties is calculated for each living room with a main window facing within 90° of due south. Bedrooms and kitchens are considered by the BRE Guidelines as less important for sunlight. The BRE Guidelines state that any south facing window may potentially receive up to 1486 hours of sunlight per year on average, representing 100% of the annual probable sunlight hours (APSH).

The BRE Guidelines state that, each main window facing within 90° of due south serving a main living room may be adversely affected if it has less than 25% of the APSH across the whole year or less than 5% APSH during the winter months (defined as the 6 months from September 21st through to March 21st); and receives less than 0.8 times its former sunlight hours as a result of a proposed development; and has a reduction in sunlight hours received over the whole year greater than 4% of annual probable sunlight hours with the development in place.

Following the BRE Guidelines recommendations, VSC and APSH are measured from a point on the outer window wall whilst ADF is measured from the point halfway between the inner and outer window wall.

2.3 METHOD USED FOR CALCULATING THE DAYLIGHT AND SUNLIGHT RESULTS

The analysis provided in this report utilizes state-of-the-art software to calculate in three dimensions the daylight and sunlight following the methods specified in the BRE Guidelines. A three dimensional accurate computer model has been created for the existing site in context of the immediate surrounding properties, based upon a measured survey of the site and surrounding properties, site photographs and Ordnance Survey information.



Drawings of the existing and proposed building in context of the surrounding properties are shown in Appendix 1.

2.3.1 SURROUNDING PROPERTIES

Daylight and sunlight levels comparing the existing and proposed daylight (VSC and daylight distribution) and sunlight (APSH) situation are then calculated for the surrounding properties. These results are provided in Appendix 2.

REFERENCES:

BRE Guidelines (BR 209): Site layout planning for daylight and sunlight: a guide to good practice, by PJ Littlefair (2011).

These Guidelines provide the basis of the analysis described in this report. Please refer to this document for a detailed description as to the approach, methodology, and implementation of the numerical analysis used in this report. A summary of the approach and methods recommended by the BRE Guidelines is included in Section 2 above of this report.

3 ASSUMPTIONS USED IN THE ANALYSIS

Uses of the surrounding properties have been based on external appearance to determine whether they are residential or commercial use. Where this is ambiguous, we have researched the Council Tax records for the property, which if listed would indicate residential use.

It is important to note that, in some cases, the window positions in the surrounding property elevations has been estimated based on brick counts from site photographs. The floor levels for the surrounding buildings are assumed unless otherwise indicated, which may affect the daylight distribution and ADF calculations.

We have obtained layouts for the following properties from the local planning portal and/ or estate agency listings:

- 2 Hargrave Place
- 21 Brecknock Road

We have not been able to obtain layouts or gain access internally to any of the remaining surrounding properties and so details of the internal layouts and floor level heights have been assumed from the external appearance of the building, and the locations of windows. Unless known or otherwise, appropriate the depths of rooms have been assumed at 4.27m for residential properties and 6m for commercial properties, or half the building depth if this is less than these dimensions.



All property addresses are taken from the Land Registry MapSearch website and we advise that these are checked by your solicitor prior to any action being taken based on this report.

4 SOURCES OF INFORMATION USED IN THE REPORT

Genesis Architects Ltd 001 Site existing.pdf 002 Plans.pdf 003 Site Sections.pdf 004 Elevations.pdf 005 Upper plans.pdf Master PC - E Mixed Use.dwg Received 20/5/14

Master – Code Level 4 F.dwg Received 30/10/15

001 SITE EXISTING.pdf 002 SITE GF PLAN.pdf 003 EXIST SITE SECTIONS.pdf 004 EXIST ELEVATIONS.pdf 005 EXIST UPPER PLANS.pdf 010 PROPOSED PLANS.pdf 011 PROP SITE SECTIONS.pdf 012 PROP ELEVATIONS SHEET 1.pdf 013 PROP ELEVATIONS SHEET 2.pdf **Received 04/01/22**

Local Authority Planning Records 2 Hargrave Place 21 Brecknock Road Obtained May 2015 and January 2022

Waldrams Chartered Surveyors

Site Photographs Photogrammetric survey





Photo 1: Existing site

5 DAYLIGHT & SUNLIGHT ANALYSIS

The existing site is shown on drawings 1414-03-04 to -03-06 in Appendix 1 whilst the proposed scheme is shown on drawings 1414-03-07 to -03-09. The existing site in its current condition is shown in photo 1 above.

In terms of daylight and sunlight, the following properties in the table overleaf were analysed due to their proximity to the development site given the height and massing of the proposal.

The table below demonstrates that the following properties meet the target values as set out in the BRE Guidelines for daylight (in terms of VSC and daylight distribution) and sunlight (in terms of APSH) and therefore, are not commented on further:

- 2 Hargrave Place
- 2a Hargrave Place
- 4 Hargrave Place
- 9a Hargrave Place

- .
- 21 Brecknock Road
- 23-25 Brecknock Road

1-16 Landleys Field

27 Brecknock Road

In fact, no window experiences greater than an 11% reduction in VSC, well inside the 20% threshold of an impact being noticeable as per the BRE Guidelines.



² robable It Hours	Windows satisfying BRE criteria		1	4	∞	1	4	2	14	2
Annual F Sunligh	South facing windows tested		1	4	∞	Ч	4	2	14	2
No Sky Line	.RE criteria	>40%								
	Rooms not satisfying B (reduction)	30-39.9%								
		20-29.9%								
	Rooms satisfying BRE criteria		1	ŝ	ъ	m	∞	Ļ	14	2
	Rooms tested		Ч	ŝ	ъ	m	∞	Ч	14	2
Vertical Sky Component	ying BRE ion)	>40%								
	Windows not satisf criteria (reduc	30-39.9%								
		20-29.9%								
	Windows satisfying BRE criteria		7	4	∞	4	12	2	14	2
	Windows tested		1	4	∞	4	12	2	14	2
Property			2 Hargrave Place	2a Hargrave Place	4 Hargrave Place	9a Hargrave Place	1-16 Landleys Field	21 Brecknock Road	23-25 Brecknock Road	27 Brecknock Road



6 CONCLUSIONS

This is a report into the impact of the proposed development at 1-7 Hargrave Place on the daylight and sunlight to surrounding residential properties, amenity spaces, and internally to the scheme itself. This analysis has been based upon scheme drawings provided by Genesis Architects Ltd, a measured survey, and site photography

The analysis has been carried out in accordance with the methodologies contained in the BRE Guidelines, which is used by the local authority to determine the acceptability of a proposal in terms of its effect on neighbouring daylight and sunlight amenity.

The analysis shows that the impacts of the proposed development to the daylight and sunlight available to all habitable residential rooms within the neighbouring properties are within the levels recommended within the BRE Guidelines.