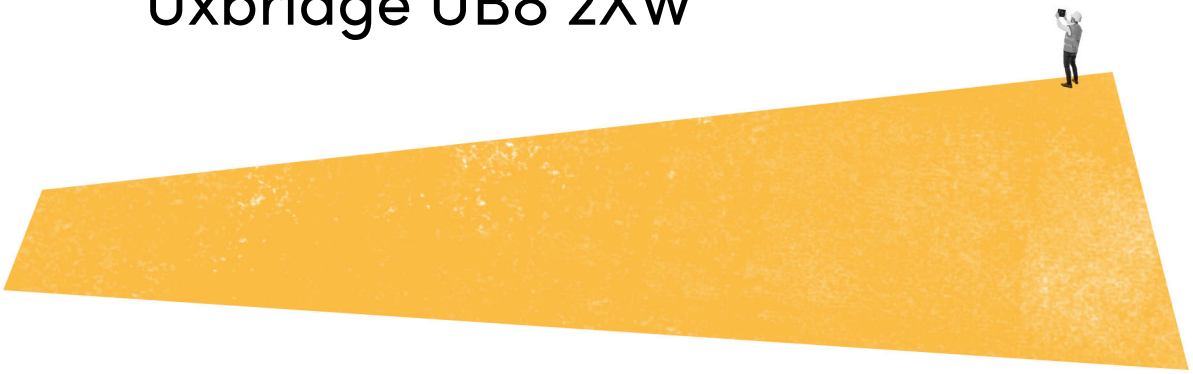
HOLLIS

Daylight and Sunlight amenity report for the proposed development at

Wellington House, 4-10 Cowley Road, Uxbridge UB8 2XW



Prepared for: Dunmoore Properties Limited
Prepared by: Barney Soanes-Cundle BA (Hons)
Date: 03 March 2023
Reference: 119955-100/16/BSC/DA

HCL08472-1224665488-1494\1.0

Hollis, 140 London Wall, London, EC2Y 5DN
T +44 20 7622 9555 **hollisglobal.com**

Regulated by RICS

HOLLIS

Contents

1. Executive summary

1.1. Scope

1.1.1. We have been instructed by Dunmoore Properties Limited to determine the effects upon the daylight and sunlight amenity of the existing surrounding buildings which may arise from the proposed development at Wellington House, 4-10 Cowley Road, Uxbridge UB8 2XW.

1.1.2. We have also undertaken an internal daylight and sunlight analysis to determine whether the proposed building itself will receive sufficient daylight and sunlight.

1.2. Assessment criteria

1.2.1. To ensure that this assessment can be appropriately evaluated against London Borough of Hillingdon's planning policy, daylight and sunlight calculations have been undertaken in accordance with the Building Research Establishment Report 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' 3rd Edition, 2022 (the "BRE guide") and also BS EN 17037 'Daylight in buildings ' and the UK National Annex, to which the BRE guide refers. The standards and tests applied within this assessment are briefly described in Appendix A.

1.3. Summary of effect of proposed development on existing surrounding buildings

Daylight

1.3.1. Of the 66 relevant windows in surrounding properties that have been assessed, all 66 will meet the BRE's numerical criteria for Vertical Sky Component (VSC).

1.3.2. Of the 53 relevant rooms surrounding the site assessed for Daylight Distribution (DD), all 53 will meet the BRE's numerical targets.

1.3.3. The results of the analysis demonstrate that the proposed development will not materially effect the daylight amenity within the surrounding residential properties.

Sunlight

1.3.4. Of the 53 windows assessed for sunlight availability, 51 will meet the BRE's numerical targets (96% will meet the targets).

1.3.5. The two windows that fall short are located within Windsor Court and are secondary windows to the main living areas, which have their main window facing north west. The BRE guide notes at paragraph 3.2.13 that the assessment of sunlight for surrounding properties should be focussed on living spaces which have their main windows within 90 degrees of due south. Furthermore, the residual level of sunlight retained at these secondary windows is considered to be reasonable.

1.3.6. In this instance therefore, the small loss of sunlight to these secondary windows is not considered to be material.

Overshadowing

1.3.7. Of the 6 surrounding amenity areas assessed for Overshadowing, all 6 will meet the BRE's numerical targets. Therefore, the proposed development will not cause any significant harm to the neighbouring garden amenity areas in terms of sunlight.

1.4. Summary of analysis of daylight, sunlight and overshadowing for the new development

Internal daylight

1.4.1. Of the 33 new habitable rooms within the proposed development, all will meet the numerical targets for daylight illuminance (E_t).

1.4.2. The results of the assessment therefore demonstrate that the LKD spaces and bedrooms will meet the target values for daylight.

Internal sunlight

1.4.3. Of the 33 new habitable rooms assessed for sunlight exposure (SE), 31 will meet the BRE's numerical targets. 2 bedrooms, one at fourth floor and one at fifth floor, fall short of the sunlight target. However, it is noted that both of these rooms face significantly north of due east and due west, and therefore have limited exposure to sunlight from the south.

1.4.4. The BRE guide recognises that it is not always possible to position rooms with a southerly aspect, and therefore priority should be given to main habitable living spaces where possible. Furthermore, the BRE guides states at paragraph 3.1.2 that sunlight is viewed as less important in kitchens and bedrooms.

1.4.5. With this is mind, all main living spaces and LKD rooms within the proposed development will meet the sunlight targets, and the two bedrooms which fall short are not considered to be a material issue.

1.5. Overall

1.5.1. The results of the technical assessment demonstrate that the surrounding properties will not be materially affected in terms of natural light amenity by the proposed development. This is because the daylight levels will meet the BRE's numerical target values for VSC and DD, while the Sunlight levels to the main habitable rooms surrounding the site will also meet the targets. The gardens and open spaces surrounding the site will also be unaffected in terms of overshadowing.

1.5.2. Internally, the new units within the proposal have been arranged around the central core and have utilised dual aspect rooms where possible. The results of the technical analysis show that the main habitable rooms within the development meet the BRE targets and will provide a good standard of natural light amenity for residents.

2. Introduction

2.1. Scope

2.1.1. We have been instructed by Dunmoore Properties Limited to determine the effects upon the daylight and sunlight amenity that may arise from the proposed development of Wellington House, 4-10 Cowley Road, Uxbridge UB8 2XW in respect of the existing surrounding buildings.

2.1.2. We have also undertaken daylight and sunlight assessments of the proposed development itself to determine whether the rooms will receive sufficient daylight and sunlight amenity.

2.2. Planning policy

2.2.1. London Borough of Hillingdon's Local Plan refers to the following documents as those being used to review adequacy of daylight and sunlight. This Report is therefore based on the following publications which contain the accepted standards for assessing daylight and sunlight:

- Building Research Establishment (BRE) Report "Site Layout Planning for Daylight and Sunlight – a guide to good practice, 3rd Edition, 2022" ("the BRE guide")
- BS EN 17037 Daylight in buildings

2.3. Assessment criteria

2.3.1. To ensure that this assessment can be appropriately evaluated against the London Borough of Hillingdon's Local Plan, daylight and sunlight calculations have been undertaken in accordance with the 'BRE guide' and also BS EN 17037 to which the BRE guide refers. The standards and assessments applied are briefly described in Appendix A.

2.3.2. The existing buildings adjacent to the proposed development site are shown on the site plan (see below) and comprise:

Name/address of building	Assumed use	Position in relation to the development
Windsor Court	Residential	East
22 To 33 Cochrane House	Residential	North
11 To 12 Whitehall Close	Residential	Southeast
19 Hows Close	Residential	Northwest
19A Hows Close	Residential	Northwest
Cobden Close Flats	Residential	Southwest

Key:

- Proposed Development
- Surrounding Buildings (Analysed)
- Surrounding Buildings (Context)

Shadows in this drawing are for illustrative purposes only and do not represent a set time or date.

2.4. Limitations

2.4.1. Our assessment is based on the scheme drawings provided by WAW ARCHITECTS as listed below. Other third party information utilised in producing our analysis model, such as 3D mapping and/or topographical survey data is also listed below:

Title	Date Received
WAW ARCHITECTS	
4780 160223 Junction Plans and Elevations REV A ISSUE.dwg	17 February 2023
ACCUCITIES.COM	
High detail 3d map 003216_Cowley Road, Uxbridge_HD_MASTER.dwg	14 February 2023

2.4.2. Access was not available to the neighbouring properties and therefore our assessment has been made on the basis of online research and assumptions as to the likely location of windows, room dimensions and uses.

2.4.3. A topographical survey has not been undertaken and all levels and elevation details are approximate, having been obtained from the OS data and elevation drawings. However, it is noted that there were no significant changes in ground level between the proposed development and the existing surrounding buildings.

3. Assessment and results – effects of new development on existing, surrounding buildings

3.1. Daylight

3.1.1. In accordance with the BRE guide (see also Appendix A) and our site inspection the following buildings required assessment:

- Windsor Court.
- 22 To 33 Cochrane House.
- 11 To 12 Whitehall Close.
- 19 Hows Close.
- 19A Hows Close.
- 51-57 Cobden Close.

3.1.2. We have the Salvation Army building to the south of the site as it is non-residential and would not require an assessment for natural light amenity. Furthermore, the relationship between the two properties means that it is unlikely that any material changes would occur.

3.1.3. We have excluded 1 Wellington Road (Kwik Fit Garage) from the analysis based on its commercial use, which would not require an assessment for natural light amenity.

3.1.4. The results of our VSC analysis are shown in full in Appendix D. The following table is a summary of our findings:

Building Address	No. of Windows Analysed	Meet BRE		Total Percentage
		Yes	No	
Windsor Court	22	22	0	100
22 To 33 Cochrane House	26	26	0	100
11 To 12 Whitehall Close	5	5	0	100
19 Hows Close	3	3	0	100
19A Hows Close	2	2	0	100
51-57 Cobden Close	8	8	0	100
Totals	**66**	**66**	**0**	**100**

3.1.5. All of the windows assessed for VSC will meet the BRE's numerical targets.

3.1.6. The Daylight Distribution (DD) results are shown in full in Appendix D. Below is a summary of our findings:

Building Address	No. of Rooms Analysed	Meet BRE Yes	No	Total Percentage
Windsor Court	14	14	0	100
22 To 33 Cochrane House	24	24	0	100
11 To 12 Whitehall Close	4	4	0	100
19 Hows Close	2	2	0	100
19A Hows Close	2	2	0	100
Cobden Close Flats	7	7	0	100
Totals	**53**	**53**	**0**	**100**

3.1.7. All of the rooms assessed for DD will meet the BRE's numerical targets.

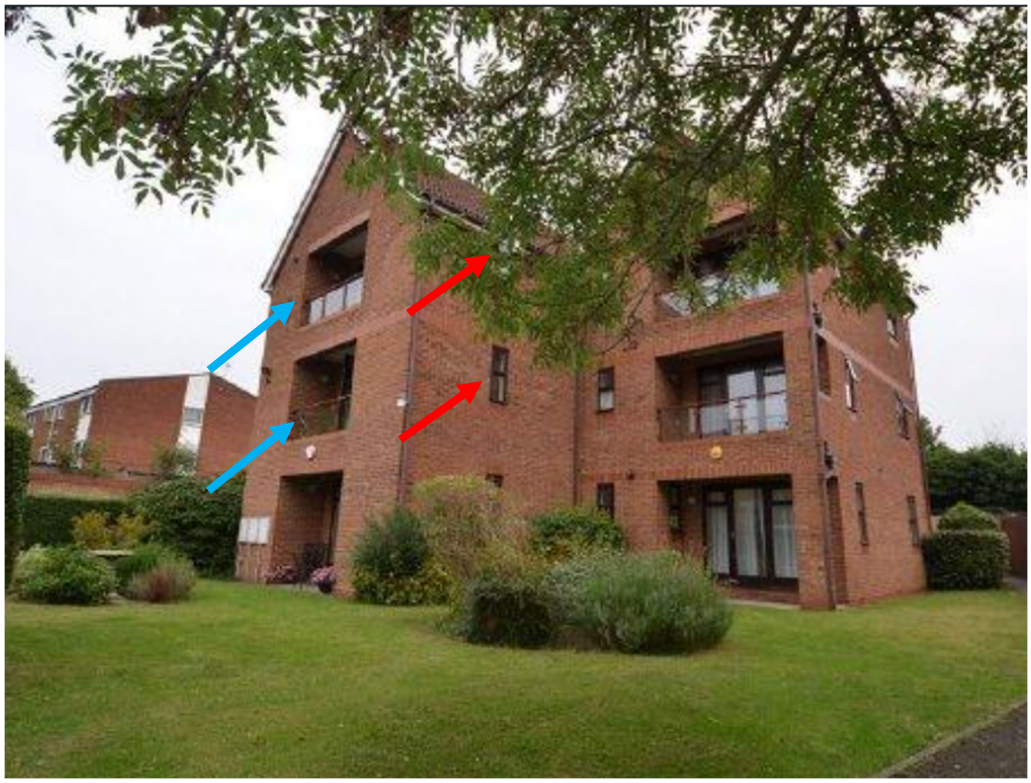
3.2. Sunlight

3.2.1. The table below shows a summary of the results of the APSH assessment. Full numerical results are contained in Appendix E.

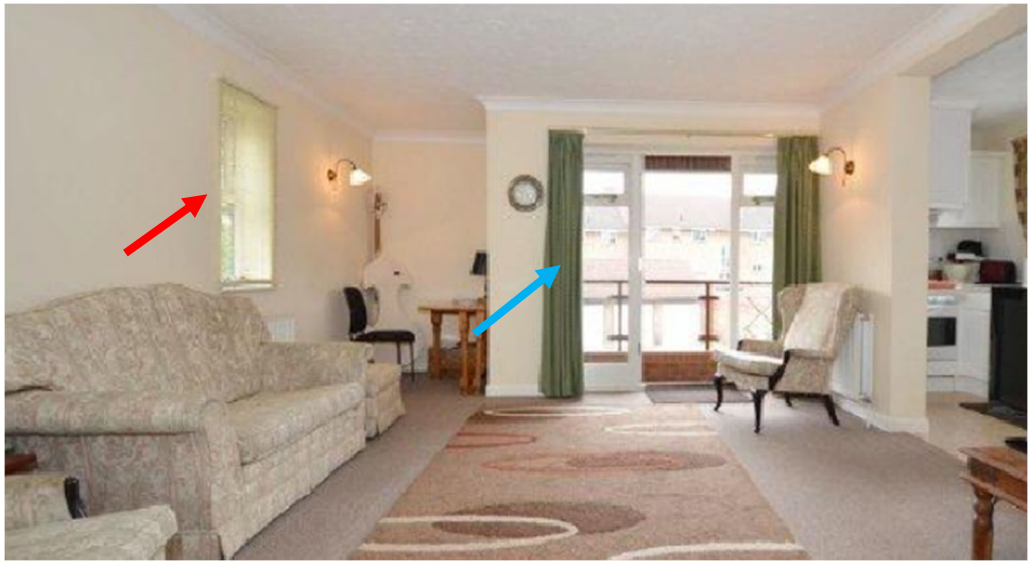
Building Address	No. of Windows Analysed	Meet BRE Yes	No	Total Percentage
Windsor Court	16	14	2	88
22 To 33 Cochrane House	26	26	0	100
11 To 12 Whitehall Close	5	5	0	100
19 Hows Close	3	3	0	100
19A Hows Close	2	2	0	100
Cobden Close Flats	1	1	0	100
Totals	**53**	**51**	**2**	**96**

3.2.2. The majority of windows assessed will meet the BRE's numerical target values for sunlight.

3.2.3. Two windows within Windsor Court fall short of the target. Our research indicates that these two windows are secondary apertures to the main living spaces on the first and second floors of the property, on the northern edge of the building. The images below show the location of the rooms and windows in context:



Windsor Court – secondary window red arrow, main window blue arrow.



Windsor Court – secondary window red arrow, main window blue arrow.

3.2.4. These secondary windows face within 90 degrees of due south, while the main windows face within 90 degrees of due north. The main windows are unlikely to receive much (if any) sunlight due to their orientation and have not been included within the sunlight analysis.

3.2.5. Given that the secondary windows retain a reasonable amount of sunlight, and the fact that the BRE recommends sunlight assessments of main windows only, the results for these two windows are not considered to be a material concern in terms of sunlight amenity.

3.3. Overshadowing

3.3.1. We have assessed a number of garden spaces associated with the neighbouring properties for Overshadowing.

3.3.2. The results of the overshadowing analysis are shown in full in Appendix F. The table below summarises the results:

Building Address	No. of Amenity Areas Analysed	Meet BRE		Total Percentage
		Yes	No	
Windsor Court	1	1	0	100
11 To 12 Whitehall Close	1	1	0	100
9 To 10 Whitehall Close	1	1	0	100
19 Hows Close	1	1	0	100
19A Hows Close	1	1	0	100
Uxbridge Memorial	1	1	0	100
Totals	**6**	**6**	**0**	**100**

3.3.3. Our results demonstrate that all of the gardens and amenity areas assessed meet or exceed the BRE target criteria for sunlight because at least 50% of their area receives at least two hours of direct sunlight on 21 March, or the reduction in area receiving sun on that date is less than 20%.

4. Assessment and results – daylighting, sunlighting & overshadowing in the new development

4.1. Internal daylight

4.1.1. Interior Illuminance (Et) tests have been undertaken to the principal habitable rooms within the proposed development. The numerical assessment results are shown in full in Appendix D, along with the associated contour diagrams. Below is a summary of our findings:

Property	Number of Rooms Tested	Rooms Meet BRE		Rooms not Meet BRE
		Number	%	
Proposed	33	33	100%	0
Total	33	33	100%	0

4.1.2. Each of the habitable rooms within the proposed development will meet the BRE's numerical target for daylight illuminance.

4.2. Internal sunlight

4.2.1. Sunlight Exposure analysis has been undertaken to the principal habitable rooms within the proposed development, including rooms of all orientations. The numerical results are shown in full in Appendix E. Below is a summary of our findings:

Property	Number of Rooms Tested	Meet BRE				No. of Rooms Meet BRE
		High	Medium	Minimum	No	
Proposed	33	6	18	7	2	31
Total	33	6	18	7	2	31

4.2.2. All but 2 rooms will meet the BRE's numerical targets for sunlight exposure. The two rooms falling short are bedrooms located on the north elevation of the building, which face away from the southern aspect of the sky.

4.2.3. The BRE's main requirement for sunlight is within principal living rooms, and it is viewed as less important in bedrooms and kitchens.

4.2.4. Given that all of the main LKD spaces will meet the Sunlight targets, the overall results are positive for the proposed development.

Appendix A

Assessments to be applied

HOLLIS

Introduction

The main purpose of the guidelines in the Building Research Establishment Report "Site Layout Planning for Daylight and Sunlight – a guide to good practice 2022, 3rd Edition" ("the BRE guide") is to assist in the consideration of the relationship of new and existing buildings to ensure that each retains a potential to achieve good daylighting and sunlighting levels. That is, by following and satisfying the tests contained in the guidelines, new and existing buildings should be sufficiently spaced apart in relation to their relative heights so that both have the potential to achieve good levels of daylight and sunlight. The guidelines have been drafted primarily for use with low density suburban developments and should therefore be used flexibly when dealing with dense urban sites and extensions to existing buildings, a fact recognised by the BRE Report's author in the Introduction where Dr Paul Littlefair says:

'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. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings.....'

In many cases in low-rise housing, meeting the criteria for daylight and sunlight may mean that the BRE criteria for other amenity considerations such as *privacy* and *sense of enclosure* are also satisfied.

The BRE guide states that recommended minimum privacy distances (in cases where windows of habitable rooms face each other in low-rise residential property), as defined by each individual Local Authority's policies, vary widely, from 18-35m[1]. For two-storey properties a spacing within this range would almost certainly also satisfy the BRE guide's daylighting requirements as it complies with the 25^0 rule and will almost certainly satisfy the 'Three times height' test too (as discussed more fully below). However, the specific context of each development will be taken into account and Local Authorities may relax the stated minimum, for instance, in built-up areas where this would lead to an inefficient use of land. Conversely, greater distances may be required between higher buildings, in order to satisfy daylighting and sunlighting requirements. It is important to recognize also that privacy can also be achieved by other means: design, orientation and screening can all play a key role and may also contribute towards reducing the theoretical 'minimum' distance.

A sense of enclosure is also important as the perceived quality of an outdoor space may be reduced if it is too large in the context of the surrounding buildings. In urban settings the BRE guide suggests a spacing-to-height ratio of 2.5:1 would provide a comfortable environment, whilst not obstructing too much natural light: this ratio also approximates the 25^0 rule.

[1] The commonest minimum privacy distance is 21m (Householder Development Consents Review: Implementation of Recommendations – Department for Communities and Local Government – May 2007)

Daylight

The criteria for protecting daylight to existing buildings are contained in Section 2.2 of the BRE guide. There are various methods of measuring and assessing daylight and the choice of test depends on the circumstances of each particular window. For example, greater protection should be afforded to windows which serve habitable dwellings and, in particular, those serving living rooms and family kitchens, with a lower requirement required for bedrooms. The BRE guide states that circulation spaces and bathrooms need not be tested as they are not considered to require good levels of daylight. In addition, for rooms with more than one window, secondary windows do not require assessment if it is established that the room is already sufficiently lit through the principal window.

The tests should also be applied to non-domestic uses such as offices and workplaces where such uses will ordinarily have a reasonable expectation of daylight and where the areas may be considered a principal workplace.

The BRE has developed a series of tests to determine whether daylighting levels within new developments and rooms within existing buildings surrounding new developments will satisfy or continue to satisfy a range of daylighting criteria

Note: Not every single window is assessed separately, only a representative sample, from which conclusions may be drawn regarding other nearby dwellings .

Daylighting Tests

'Three times height' test - If the distance of each part of the new development from the existing windows is three or more times its height above the centre of the existing window then loss of light to the existing windows need not be analysed. If the proposed development is taller or closer than this then the 25^0 test will need to be carried out.

25^0 test – a very simple test that should only be used where the proposed development is of a reasonably uniform profile and is directly opposite the existing building. Its use is most appropriate for low density well-spaced developments such as new sub-urban housing schemes and often it is not a particularly useful tool for assessing urban and in-fill sites. In brief, where the new development subtends to an angle of less than 25^0 to the centre of the lowest window of an existing neighbouring building, it is unlikely to have a substantial effect on the diffuse skylight enjoyed by the existing building. Equally, the new development itself is also likely to have the potential for good daylighting. If the angle is more than 25^0 then more detailed tests are required, as outlined below.

VSC Test - the VSC is a unit of measurement that represents the amount of available daylight from the sky, received at a particular window. It is measured on the outside face of the window. The 'unit' is expressed as a percentage as it is the ratio between the amount of sky visible at the given reference point compared to the amount of light that would be available from a totally unobstructed hemisphere of sky. To put this unit of measurement into perspective, the maximum percentage value for a window with a completely unobstructed outlook (i.e. with a totally unobstructed view through 90° in every direction) is 40%.