ST GEORGES COURT

10 BLOOMSBURY WAY, LONDON

DAYLIGHT AND SUNLIGHT STUDY ON 34 BLOOMSBURY WAY

DELVA PATMAN REDLER

Chartered Surveyors



Thavies Inn House 3-4 Holborn Circus London EC1N 2HA

020 7936 3668 info@delvapatmanredler.co.uk www.delvapatmanredler.co.uk

Ref: DW/dw/14286 Date: July 2014

Contents	PAGE	
INTRODUCTION	2	
THE PROPOSAL	2	
POLICY / GUIDELINES	2	
METHODOLOGY	2	
Daylight Standard		
Sunlight Standard		
Source Data		
SIGNIFICANCE CRITERIA	3	
Daylight	-	
Sunlight		
BASELINE CONDITIONS	3	
RESULTS – COMPLETED DEVELOPMENT	3	
Vertical Sky Component Results		
Average Daylight Factor Results		
No Sky Line Results		
Annual Probable Sunlight Results		
Conclusions	4	
APPENDIX A – LOCATION DRAWINGS		
14286/LOC/800		
14286/SPT/800		
14286/LOC/801		

APPENDIX B – DAYLIGHT ANALYSIS

Daylight and Sunlight Tables 14286/NSL/001

INTRODUCTION

This report has been provided on the request of a neighbouring occupier to understand the daylight /sunlight implications of the development proposals on their property. Delva Patman Redler has been instructed by London & Regional Properties Ltd to prepare a daylight and sunlight study to assess the likely impact of the proposed redevelopment St Georges Court, 10 Bloomsbury Way, London WC1 by Buckley Gray Yeoman Architects on the neighbouring commercial amenity at 34 Bloomsbury Way.

This study has been carried out in accordance with the recommendations of the Building Research Establishment Report "Site Layout Planning for Daylight & Sunlight 2011" (BRE209).

THE PROPOSAL

Variation of condition 3 (approved plans) of planning permission 2012/1400/P dated 31/01/2013 (for erection of single storey glazed extension with associated roof terraces and new rooftop plant to provide additional office space (Class B1) at 9th floor level (following removal of existing 9th floor rooftop plant), change of use from offices to three flexible retail or restaurant units (Class A1/A3) at part ground floor level, reconfiguration of front entrance to corner of Bloomsbury Way and New Oxford Street, replacement of ground and first floor facade with double storey glazed frontages to all elevations and associated alterations for refurbishment of existing offices (Class B1)), namely to change use of part ground floor office (Class B1) to retail (Class A1), enlarged roof terrace at 9th floor level, provision of acoustic screen at roof level and associated external and internal alterations.

POLICY / GUIDELINES

This BRE Report is used in conjunction with the interior daylighting recommendations in the British Standard BS 8206-2:2008 Lighting for buildings – Part 2: Code of practice for daylighting and the Applications Manual: window design of the Chartered Institution of Building Services Engineers (CIBSE). If the BRE, BS and CIBSE guidelines are followed there is the potential to achieve good daylighting in new buildings, to retain it in existing buildings nearby, and to protect the daylighting of adjoining land for future development. This is the standard used by the London Borough of Camden by which daylight and sunlight should be assessed as policy within their Core Strategy and their Development Policies DPD.

METHODOLOGY

The Daylight & Sunlight assessments have been undertaken in accordance with the Building Research Establishment (BRE) guidelines "Site Layout Planning for Daylight & Sunlight. A Guide to Good Practice".

The BRE Report advises that daylight levels should be assessed for the main habitable rooms of neighbouring residential properties. Habitable rooms in residential properties are defined as kitchens, living rooms and dining rooms. Bedrooms are less important as they are mainly occupied at night time. The report also makes reference to other property types, which may be regarded as 'sensitive receptors' such as schools, hospitals, hotels and hostels, small workshops and most offices.

Daylight Neighbouring Assessment

The BRE Guide states that:

"If, for any part of the new development, the angle from the centre of the lowest affected window to the head of the new development is more than 25°, then a more detailed check is needed to find the loss of skylight to the existing buildings."

The BRE guidelines propose several methods for calculating daylight.

The two main methods predominantly used are those involving the measurement of the total amount of skylight available, the vertical sky component (VSC) and its distribution within the building (the No-Sky line).

The VSC calculation is a general test of potential for daylight to a building, measuring the light available on the outside plane of windows.

The "No-Sky" Line divides those areas of the working plane which can receive direct skylight, from those which cannot. It provides an indication of how good the daylight distribution is within a room.

The third recognised method of assessment for daylight is the Average Daylight Factor (ADF) calculation which assesses the quality and distribution of light within a room served by a window and takes into account the VSC value, the size and number of the windows and room and the use to which the room is put. ADF assesses actual light distribution within a defined room area whereas the VSC considers potential light. British Standard 8206, Code of Practice for Daylighting recommends ADF values of 1% in bedrooms, 1.5% in living rooms and 2% in kitchens. For other uses, where it is expected that supplementary electric lighting will be used throughout the daytime, such as in offices, the ADF value should be 2%. There is no general requirement within the BRE guidelines to assess ADF values, other than for neighbouring residential buildings.

This report fully considers all three methods of assessment on 34 Bloomsbury Way.

Sunlight Neighbouring Assessment

The BRE have produced sunlight templates for London, Manchester and Edinburgh indicating the Annual Probable Sunlight Hours (APSH) for these regions. The London template has been selected for this study as the London indicator template is the closest of the three available from BRE in terms of latitude.

Sunlight analysis is undertaken by measuring annual probable sunlight hours (APSH) for the main windows of rooms which face within 90° of due south. The maximum number of annual probable sunlight hours for the London orientation is 1,486 hours. The BRE guidelines propose that the appropriate date for undertaking a sunlight assessment is on 21st March, being the spring equinox. Calculations of both summer and winter availability are made with the winter analysis covering the period from the 21st September to 21st March. For residential accommodation, the main requirement for sunlight is in living rooms and it is regarded as less important in bedrooms and kitchens.

This report fully considers the Annual Probable Sunlight Hours and Winter Hours methods of assessment on 34 Bloomsbury Way.

SOURCE DATA

The studies have been undertaken by calculating the daylight based on the template drawings provided within the BRE guidelines. The studies have been undertaken with plan drawings derived from:

 Existing Buildings: Buckley Gray Yeoman Architects: Dwg No's: 770_EX_00 Rev P1, 770_EX_01 Rev P1, 770_EX_09 Rev P1, 770_EX_020

Rev P1, 770_EX_21 Rev P1, 770_EX_22 Rev P1, 770_EX_25 Rev P1, 770_EX_26 Rev P1.

- Proposed Scheme: Buckley Gray Yeoman Architects: Dwg No's: 770_GA 00 Rev-P12, 770_GA 01 Rev-P10, 770_GA 09 Rev-P10, 770_GA RF Rev-P11, 770_GE 01_P7, 770_GE 02_P7, 770_GE 03_P7, 770_GS 01_P5, 02_P5, 03_P5,
- Surrounding Buildings: Zmapping Contextual Model
- 34 Bloomsbury Way: Front Elevation: Dwg No: Rolfe Judd 4504/T(30) E02 Rev A
- Topographical Survey: Aworth Survey Consultants: Dwg No: 3143 3A

SIGNIFICANCE CRITERIA

The guidance given by BRE has been used as a basis for the criteria to assess the Development's potential effects. The BRE guidance specifies:

"...In special circumstances the developer or planning authority may wish to use different target values. For example, in an historic city centre a higher degree of obstruction may be unavoidable..."

The report adds:

"...Different criteria may be used, based on the requirements for daylighting in an area viewed against other site layout constraints."

In consideration of the above, it is important to note that the Site is located in a dense urban centre that, in parts, currently experiences adverse daylight and sunlight levels. This is discussed within the 'Baseline Conditions' section of this report. Thus, in these instances the BRE guidance states that the:

"...guidelines should be applied sensibly and flexibly".

Under these circumstances, the less stringent, higher BRE target percentage loss values and significance criteria may be justifiable.

In describing the significance criteria as set out below, it should be noted that they have been developed to protect residential properties, which are the most sensitive receptors.

TABLE 1:	BRE DAYLIGHT GUIDANCE USED IN THE ASSESSM
Issue	Criteria
	A window may be affected if the vertical sky component (N window is less than 27% and less than 0.8 times its forme
Daylight	A room may be adversely affected if a significant are of th less than 0.8 times its former value.
	A room may be adversely affected if the average daylight bedroom, 1.5% for a living room or 2% for a kitchen. For required.
Sunlight	A window may be adversely affected if a point at the centre less than 25% of the annual probable sunlight hours inclu- sunlight hours (APSH) during the winter months (21 Septe former sunlight hours during either period.

It is noted that for both sunlight and daylight calculations, total reliance upon numerical values and particularly percentage changes may be misleading particularly where baseline values are already comparatively low, as is often the case in dense urban locations such as this. A percentage change of more than 20% may well represent only a very small difference in actual light value.

It should also be noted that the usage of the room should be considered when deciding on whether or not a particular room suffers an adverse loss. For example, the value of light to a room would be more beneficial to a living room rather than a bedroom where the room is occupied at night-time.

Additionally, it should be borne in mind that Page 1 of the BRE guidance suggests that circumstances will exist where an alternative criteria value may be used, for example, in a city centre:

"...where a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings".

In such instances, the BRE guidance advises that the numerical guidelines should be interpreted flexibly, and alternative numerical values may be used. The Site's dense urban location justifies this flexible interpretation of the BRE guidance.

BASELINE CONDITIONS

An analysis of the impact of the baseline conditions against which to compare any potential impact arising from the development has been undertaken based on Drawing 14286/SPT/800 in Appendix A.

34 Bloomsbury Way generally receives average levels of light for a site located in an urban environment.

This can be seen from the technical results, both in graphical and tabular form in the Technical Appendices.

An analysis of the existing daylight levels enjoyed by the neighbouring residential property and amenity has been undertaken in order to provide a baseline against which the impacts arising from the proposed development can be assessed.

ENT

VSC) measured at the centre of the er value.

ne room is beyond the **No-Sky Line** and is

factor (ADF) is less than 1% for a offices a minimum figure of 2% is

re of the window receives in the year ding at least 5% of the annual probable ember to 21 March) and less than 0.8 times its

RESULTS – COMPLETED DEVELOPMENT NEIGHBOURING ASSESSMENT

DAYLIGHT - VSC

The full results of the daylight analyses are presented in Appendix B in tabular form. A summary of the results of the Vertical Sky Component (VSC) analysis on the relevant overlooking windows are presented in the Table 2 below. This identifies where habitable rooms / windows are left with adequate light.

TABLE 2:	NUMBER OF WINDOWS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT	
(VSC METHOD)		

Address	Total Number of Windows	Number of Windows Meeting	Number of Windows		
	Tested	BRE Guidelines for VSC	Experiencing Adverse Impacts		
Total	12	12	0		

Table 2 indicates all 12 windows assessed exceed BRE target reduction values when measured against the BRE assessment criteria for VSC. The windows assessed can be identified using the Key Window Location diagrams on drawings 14286/LOC/801 in Appendix A.

DAYLIGHT - NO SKY LINE (DAYLIGHT DISTRIBUTION)

The full results of the daylight analysis are presented in Appendix B in tabular form. A summary of the results of the No Sky Line analysis on the relevant overlooking windows are presented in the Table 3 below. This identifies where habitable rooms are left with adequate light.

TABLE 3: NUMBER OF ROOMS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (NSL METHOD)

Address	Total Number of Rooms	Number of Rooms Meeting	Number of Rooms
	Tested	BRE Guidelines for NSL	Experiencing Adverse Impacts
Total	4	4	0

Table 3 indicates all 4 rooms assessed exceed BRE target reduction values when measured against the BRE assessment criteria for NSL. The windows assessed can be identified using the Key Window Location diagrams on drawings 14286/LOC/801 in Appendix A. The NSL contours can be seen on drawings 14286/NSL/001 in Appendix B.

DAYLIGHT – AVERAGE DAYLIGHT FACTOR

The full results of the daylight analysis are presented in Appendix B in tabular form. A summary of the results of the Average Daylight Factor analysis on the relevant overlooking windows are presented in the Table 4 below. This identifies where habitable rooms are left with adequate light.

TABLE 4:	NUMBER	OF ROOMS	EXPERIENCING	DAYLIGHT	I MPACTS	AS A	RESULT	OF	THE DEVELOPMEN	Т
(ADF METHOD)										_

Address	Total Number of Rooms	Number of Rooms Meeting	Number of Rooms
	Tested	BRE Guidelines for ADF	Experiencing Adverse Impacts
Total	4	4	0

Table 4 indicates all 4 rooms assessed exceed BRE target reduction values when measured against the BRE assessment criteria for ADF. The windows assessed can be identified using the Key Window Location diagrams on drawings 14286/LOC/801 in Appendix A.

Therefore the BRE criteria for all three methods of daylight assessment show that 34 Bloomsbury Way will be left adequately lit.

SUNLIGHT

The full results of the daylight analyses are presented in Appendix B in tabular form. A summary of the results of the Annual Probable Sunlight Hours (APSH) analysis on the relevant overlooking windows are presented in the Table 5 below. This identifies where habitable rooms / windows are left with adequate sunlight.

TABLE 5: NUMBER OF WINDOWS EXPERIENCING DAYLIGHT IMPACTS AS A RESULT OF THE DEVELOPMENT (APSH METHOD)

Address	Total Number of Windows Tested	Number of Windows Meeting BRE Guidelines for APSH	Number of Windows Experiencing Adverse Impacts
Total	12	12	0

Table 5 indicates all 12 windows assessed exceed BRE target reduction values when measured against the BRE assessment criteria for APSH and Winter sunlight. The windows assessed can be identified using the Key Window Location diagrams on drawings 14286/LOC/801 in Appendix Α.

Therefore the BRE criteria for both methods of sunlight assessment show that 34 Bloomsbury Way will be left adequately sunlit.

CONCLUSIONS

This report has been provided on the request of a neighbouring occupier to understand the daylight /sunlight implications of the development proposals on 34 Bloomsbury Way, a daylight and sunlight assessment has been undertaken to establish the impact St George's court development will have on this commercial property.

This study adopts the BRE Site Layout Planning for Daylight & Sunlight 2011, a guide to good practice daylight & sunlight as the standard to cover the protection of residential amenity under which daylight & sunlight can be considered. This is the most recognised form of Daylight & Sunlight standard in the UK and adopted within the London Borough of Camden's UDP.

The VSC, ADF and NSL daylight analysis indicates that all windows and rooms will continue to receive adequate daylight and fulfil BRE criteria.

The APSH and Winter Sunlight analysis indicates that all windows and rooms will continue to receive adequate sunlight and fulfil BRE criteria.

Therefore overall the BRE criteria are met and the policy for daylight and sunlight is fulfilled.

Overall, it is felt that Buckley Gray Yeoman Architects have worked to minimise the impact on daylight and sunlight through their design process and have taken neighbouring commercial amenity into consideration where reasonably practically possible with this design.

Therefore, the analysis undertaken demonstrates that given the approach recommended by the BRE guidelines, the impact of the proposed development is considered acceptable in daylight, and sunlight terms at 34 Bloomsbury Way.

The development proposals by Buckley Gray Yeoman Architects are therefore considered to recognise and observe the intentions of Camden's Core Strategy, BRE Guidance Note 209 and should therefore be considered to address the requirements of the London Borough of Camden's Development Policies DPD in daylight and sunlight terms.

Delva Patman Redler

5/...

APPENDIX A

LOCATION DRAWINGS

14286/LOC/800

14286/SPT/800

14286/LOC/801







APPENDIX B

DAYLIGHT & SUNLIGHT TABLES

14286/NSL/002

				VSC				Daylight Distribution			ADF			APSH						
Address	Floor Level	Room Name	Window ID	Existing	Proposed	Window %age Diff	Room %age Diff	Existing	Proposed	%age Diff	Existing	Proposed	%age Diff	APSH Existing	APSH Proposed	%age Diff	Winter Existing	Winter Proposed	&age Diff	
Ground			W3	11.93	11.99	0.48%		58.82%			2.30%	2.29%	-0.40%	10	10	0.00%	2	2	0.00%	
	Ground	R2	W4	10.83	10.90	0.64%	0.65%		57.82% -1.69%	-1.69%				11	11	0.00%	0	0	0.00%	
				W5	11.36	11.46	0.82%								17	17	0.00%	1	1	0.00%
		W1	12.96	12.91	-0.37%								14	13	-7.14%	0	0	0.00%		
	First	R1	W2	13.27	13.24	-0.21%	-0.16%	53.87%	53.86%	-0.02%	1.66%	1.65%	-0.69%	18	16	-11.11%	0	0	0.00%	
34 Bloomsbury Way			W3	13.58	13.59	0.12%								20	18	-10.00%	0	0	0.00%	
54 Dioomsbury way			W1	15.14	14.92	-1.44%		51.48%	51.31%	-0.32%	1.54%	1.52%	-1.13%	21	21	0.00%	1	1	0.00%	
	Second	R1	W2	15.41	15.22	-1.24%	-1.19%							23	23	0.00%	1	1	0.00%	
			W3	15.70	15.56	-0.88%								24	24	0.00%	1	1	0.00%	
			W1	17.58	17.08	-2.87%					1.42%	1.42% 1.39%	-1.83%	29	28	-3.45%	1	1	0.00%	
	Third	R1	W2	17.82	17.35	-2.61%	-2.57%	51.56%	50.54%	-1.98%				27	26	-3.70%	1	1	0.00%	
			W3	18.06	17.66	-2.22%								29	27	-6.90%	2	2	0.00%	

ROOM INFORMATION:		ROOM AREA:		BEFORE CONTOUR:			AFTER CONTOUR:			LOSS:			
LEVEL	ROOM NAME	SQ M.	SQ FT.	SQ M.	SQ FT.	%	SQ M.	SQ FT.	%	SQ M.	SQ FT.	%	
Ground	R2\Office	24.46	263.34	14.4	154.9	58.82	14.1	152.3	57.82	0.04	4.45	1.69	