Georgiana Street, London NW1 0QS

Bangor Wharf

Report to accompany planning application:

Daylight & Sunlight Report
CHP Surveyors Ltd
February 2016

ONE HOUSING
LIVING BETTER

Daylight and Sunlight Report

Bangor Wharf,
Georgiana Street,
London
NW1 0QS

Prepared for:-

One Housing Group
100 Chalk Farm Road
London
NW1 8EH

Prepared by

James M A Crowley

Date

23rd February, 2016

Contents

Appendices

This report is solely for the benefit of **One Housing Group** and the benefit cannot be transferred to any other party without the express written consent of CHP Surveyors Limited.

CHP Surveyors Limited

CHP Surveyors Limited

1.0 Executive Summary

1.1 In accordance with our instructions by One Housing Group, we have considered the implications the proposals for the above site will have on the daylight and sunlight enjoyed by the neighbouring residential properties with reference to the Building Research Establishment's publication "*Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice*" (2011) (the "**BRE Guidelines**").

1.2 The standards and tests applied within this assessment are briefly described in Appendix A.

1.3 Our analysis has considered 40 St. Pancras Way, 42 St. Pancras Way, 118-138 Royal College Street and Reachview Close.

1.4 Our daylight analysis demonstrates that all windows within 40, 42 St Pancras Way and Reachview Close will achieve the numerical values contained within the BRE Guidelines. In relation to 118-138 Royal College Street, our analysis has considered 34 habitable rooms. Of these 34 rooms, all except 5 rooms will achieve the numerical values set out in the BRE Guidelines with regard to daylight. Concerning the 5 habitable rooms that do not achieve the numerical values, as set out in the BRE Guidelines, where neighbouring properties are constructed close to the site boundary, alternative numerical values are applicable. This is acknowledge in Camden Planning Guidance 6 where it states "*..we will view the results flexibly and where appropriate we may accept alternative targets*". It also needs to be taken into account the urban location of the site and is underdeveloped nature. From our investigations of the five rooms, one serves a bedroom, which the BRE Guidelines state are less important and two small kitchens which due to their size could be considered non-habitable rooms. Of the two rooms that we have been unable to establish the use, one will achieve an ADF greater than that recommended for a bedroom. Our analysis also indicates that all except the window serving the bedroom achieving a VSC of at least 0.72 times the existing value.

1.5 Our analysis of the proposed accommodation demonstrates that all rooms will achieve the recommended minimum ADF.

1.6 The sunlight analysis also demonstrates that all windows within Reachview Close and 40 St. Pancras Way that needed to be considered will achieve the numerical values within the BRE Guidelines.

1.7 With regard to the canal our transient shadow analysis demonstrates that this will enjoy a good level of daylight on the 21st March and therefore throughout the year.

1.8 The results of our analysis demonstrates that taking into account the specific site conditions, meaning that the numerical values within the BRE Guidelines need to be applied flexibly, as stated in the guidelines and acknowledged in CPG6, the aims of the Building Research Establishment's publication "*Site Layout Planning for Daylight and Sunlight. A Guide to Good Practice*" are achieved.

2.0 Instruction

2.1 We have been instructed by One Housing Group to establish the implications the proposals for the above site will have on the daylight and sunlight enjoyed by the neighbouring residential properties.

3.0 Assessment

3.1 To ensure that this assessment has been appropriately considered, daylight and sunlight assessments have been undertaken in accordance with the BRE Guidelines and with reference to Camden DP26 and CPG6.

3.2 CPG6 requires an assessment in accordance with the BRE Guidelines and states that whilst it supports the aims of the BRE Guidelines, the results will be viewed flexibly and where appropriate targets will be accepted.

3.3 To assist in the understanding of the analysis that has been undertaken as part of this report, a summary of the relevant BRE Guidelines, entitled the "Principles of Daylight and Sunlight" is at Appendix A.

4.0 Information

4.1 We have made reference to the following information:-

Ordnance Survey
Site Plan

TM Architects
Drawings numbered 194-SK35_P8, SK36_P8, SK91_P1, SK92_P1 and SK93_P1

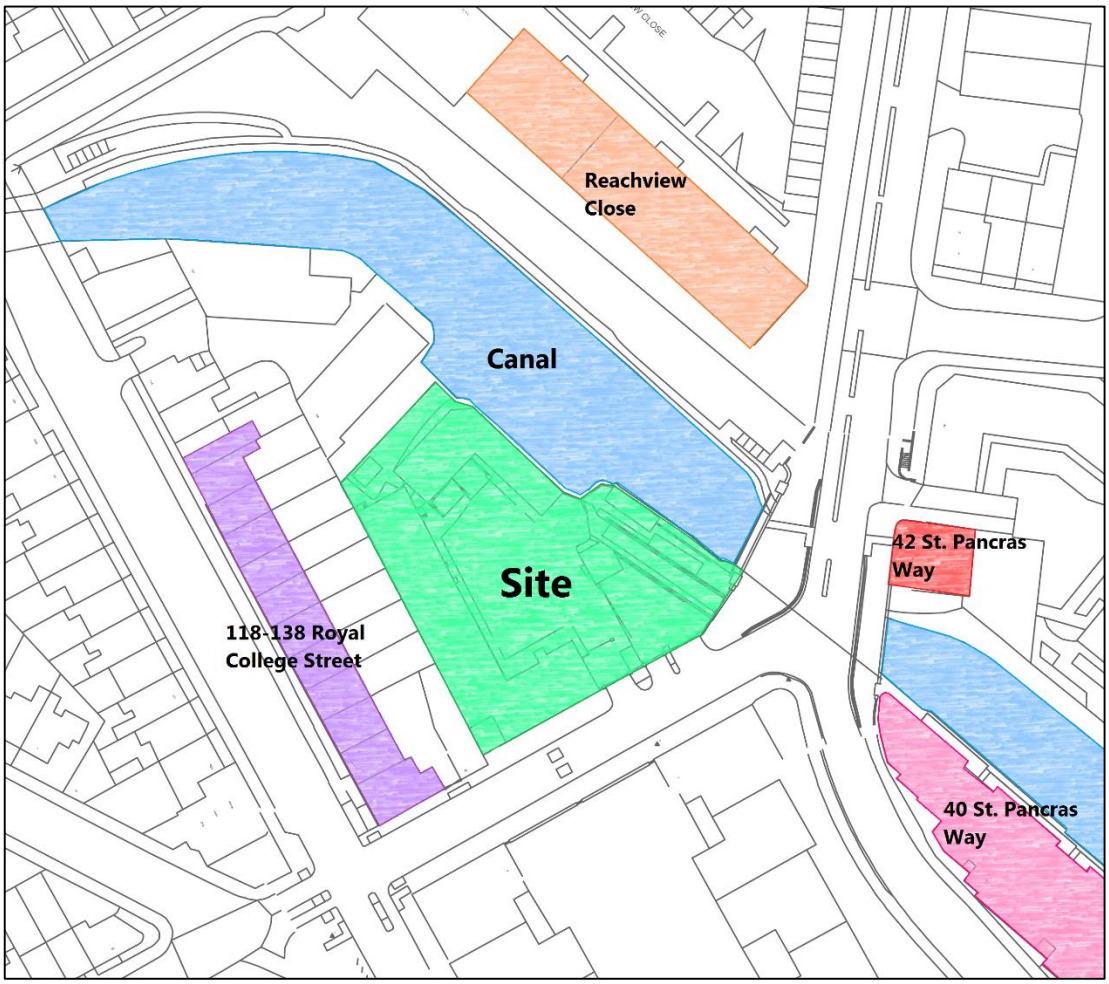
CHP Surveyors Ltd
Site visit and online research

5.0 Proposals

5.1 The proposals for the site are to demolish the existing structures on the site and construct a new structure over ground and up to five upper floors to provide a mixed use scheme as indicated on drawing numbers 1944-210, 211, 212 and 213 attached at Appendix B.

4.2 The neighbouring properties that have been considered as part of this report are:-

- 40 St. Pancras Way – shaded pink
- 42 St. Pancras Way – shaded blue
- 118-138 Royal College Street – shaded purple
- Reachview Close – shaded orange



6.0 Limitations

6.1 Our assessment is based on the proposed development drawings by TM Architects.

6.2 With regards to the neighbouring properties we have obtained information from the planning records.

6.3 We refer you to the drawings set out in clause 4.1 above for a list of the third party information relied upon which our 3D computer model and resultant analyses are based.

7.0 Methodology

7.1 Based on online research and onsite observations, we have produced a 3D computer model of the neighbouring properties listed in point 5.2 above. This includes the window locations and internal configuration. We have not had access to the neighbouring properties and therefore the internal configuration and room usage has been based on onsite observations and other information we have been able to obtain.

7.2 Using a specialist computer programme, we have undertaken the analysis set out in the BRE Guidelines, both in the existing situation, to provide a base line, and following the implementation of the proposals. There is no requirement to consider the implications during the development process as these will be short term.

7.3 As clearly stated within the BRE Guidelines, the aims are to help designers, not constrain them and the numerical values contained within this document should be interpreted flexibly since natural light is only one of many factors in site layout design. It also states that different target levels may be used in such an urban location as we are considering.

7.4 The numerical values contained within the BRE Guidelines, to establish whether the proposals will have a significant effect on the daylight enjoyed by the neighbouring properties, are based initially on a Vertical Sky Component analysis (VSC). It seeks for each window to achieve a VSC of 27% or 0.8 times the existing. These values are for suburban rather than urban locations where it is considered a VSC of more than 20% is more appropriate.

7.5 Where the numerical values set out in the BRE Guidelines are not achieved, based on a VSC analysis, in accordance with BS8206 Part 2, we have calculated the Average Daylight Factor to demonstrate that the rooms will still enjoy a good level of daylight.

7.6 In relation to daylight, the BRE Guidelines also set out numerical values for Daylight Distribution and seeks to ensure that a significant portion, which is considered to mean at least 0.8 times the exiting area of each habitable room, lies in front of the NSL.

7.7 With regard to sunlight, the BRE Guidelines seek that all windows within 90° of due south achieve 25% of the Average Probable Sunlight Hours (APSH) with at % during the winter months. Where this is not achieved and the difference between the existing and proposed APSH is more than 4%, the BRE Guidelines state that the proposals will not have a noticeable effect on sunlight provided the results for the proposed APSH, as well as during the winter months, are within 0.8 times the existing.

8.0 Daylight Assessment

8.1 General

8.1.1 With regard to daylight enjoyed by the neighbouring residential properties, as the proposals will subtend a 25° line drawn from their lowest window, in accordance with the BRE Guidelines we have calculated the Vertical Sky Component (VSC) to all habitable rooms both in the existing and proposed situation. This establishes the amount of daylight currently enjoyed on the face of the window and as a result of the proposed development over and above the existing baseline.

8.1.2 The BRE Guidelines state that if the VSC calculated at the centre of each window is 27% or more, then enough skylight should be reaching the window. If with the implementation of the proposals the window does not achieve 27% VSC but is more than 0.8 times its former value, then the BRE Guidelines state that skylight is unlikely to be seriously affected. It should be appreciated however that these levels relate to a suburban rather than urban location and that therefore a VSC of 20% is considered more appropriate in this instance.

8.1.3 In addition to the above, to ensure that the room will achieve good daylight distribution the NSL is plotted. The BRE Guidelines state that for a room to enjoy good daylight distribution a significant area of the room, which is considered to be 80% or at least 0.8 times the existing area should be in front of the NSL.

8.1.4 Where the above is not achieved, in accordance with the BRE Guidelines and the Mayor of London's Housing SPG (November 2011), we have calculated the Average Daylight Factor for each habitable room as this is a more accurate reflection on the level of daylight each room will enjoy as it takes into account the size of the room and the size of the window serving it.

Within these documents they set out the recommended minimum ADF levels depending on the room use with these being 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.

8.2 40 St. Pancras Way

8.2.1 This property is located to the east of the site on the opposite side of St. Pancras Way.

8.2.2 The results of our analysis, as set out in the table attached at Appendix C, demonstrate that in all instances a VSC of at least 27% or 0.8 times the existing is achieved.

8.2.3 Based on our assumptions, we have also considered daylight distribution and this demonstrates, as set out in the table attached at Appendix C that all rooms will have a significant portion of their area in front of the NSL.

8.2.4 The results of our analysis demonstrate that in relation to this property the BRE Guidelines are met.

8.3 42 St. Pancras Way

8.3.1 This property is located to the north east of the site on the opposite side of St. Pancras Way and the canal and it is assumed provides residential accommodation at first and second floor level.

8.3.2 The results of our VSC analysis are set out in the table attached at Appendix C and demonstrates that in all instances a VSC of greater than 27% is achieved.

8.3.3 We have, based on our assumptions as to the internal configuration of this property, considered daylight distribution and the results set out in the table attached at Appendix C demonstrate that all rooms will have a significant portion of their area in front of the NSL.

8.3.4 The results of our analysis therefore demonstrate that in relation to the daylight, this property will achieve the BRE Guidelines.

8.5 118-138 Royal College Street

8.5.1 These properties are located to the south west of the site and would appear to be a terrace of generally residential properties, providing accommodation over lower ground, ground and two upper floors.

8.5.2 The results of our daylight analysis are set out in the table attached at Appendix C and demonstrate of the 37 windows analysed, all except 13 will achieve a VSC of at least 27% or 0.8 times the existing. This however is not considered unusual for properties in such an urban location, constructed close to the site boundary and overlooking an underdeveloped site. It is for reasons like these that the BRE Guidelines and CPG6 acknowledge that the numerical values are applied flexibly. Of the 13 windows concerned, 7 are located at ground floor, 5 at first floor and 1 at second floor level, with all except 1 at first floor and 1 at second floor will achieve a VSC of at least 0.73 times the existing. The two windows that achieve below this, both serve bedrooms, which the BRE Guidelines state are less important.

8.5.3 For those windows that do not achieve the recommended numerical values based on a VSC analysis, from our research we have established what would appear to be the internal configuration of the neighbouring properties and calculated the ADF for each room.

8.5.4 The results set out in the table attached at Appendix C demonstrates that all except five rooms will achieve the recommended minimum ADF, taking into account their use. Of these, from our investigations we have been able to establish the nature of three, one is a bedroom, which the BRE Guidelines state are less important and two kitchens that due to their area, could be considered non-habitable rooms. Of the two that we have been unable to establish the nature of, one will exceed the recommended minimum for a bedroom.

8.5.5 We have also considered daylight distribution, with the results set out in the table attached at Appendix C. This demonstrates that all rooms will have a significant portion of their area or at least 0.8 times the existing area in front of the NSL.

8.5.6 Taking into account the urban location of the site, the close proximity of these properties to the site boundary and the underdeveloped nature of the site as stated in the BRE Guidelines they need to be applied flexibly. It is therefore considered that with 26 of the 34 rooms analysed achieving the numerical values set out in the BRE Guidelines, the aims of the guidelines are achieved.

8.6 Reachview Close

8.6.1 These properties are located to the north of the site on the opposite side of the canal and provides residential accommodation at ground and three upper floors.

8.6.2 The results of our daylight analysis set out in the table attached at Appendix C demonstrates that in all instances a VSC of at least 27% or 0.8 times the existing value is achieved.

8.6.3 Based on our assumptions as to the internal configuration of this property, our daylight distribution analysis, the results of which are set out in the table attached at Appendix C, demonstrates that in all instances a significant portion of the room will lie infront of the NSL.

8.6.4 The results of our analysis therefore demonstrate that this property will achieve the BRE Guidelines with regard to daylight.

9.0 Sunlight

9.1 General

9.1.1 The BRE Guidelines require that all windows within 90° of due south should be considered for sunlight analysis. The only properties that therefore need to be considered are Reachview Close and 40 St. Pancras Way.

9.2 40 St. Pancras Way

9.2.1 The results of our sunlight analysis are set out in the table attached at Appendix D and demonstrate that in all instances at least 25% APSH will be achieved, with at least 5% during the winter months.

9.2.2 Our analysis therefore demonstrates that the BRE Guidelines will be achieved.

9.3 Reachview Close

9.3.1 The results of our sunlight analysis are set out in the table attached at Appendix D and demonstrate that in all instances at least 25% APSH will be achieved, with at least 5% during the winter months.

9.3.2 Our analysis therefore demonstrates that the BRE Guidelines will be achieved.

10.0 Internal Analysis

10.1 In accordance with the BRE Guidelines, BS8206, Camden Policy DP26 and the Mayor of London's Housing SPG, we have calculated the level of daylight the proposed accommodation at ground and first floor level will achieve, with the results set out in the table attached at Appendix C and illustrated on drawing numbers 1944-214 and 215 attached at Appendix B.

10.2 These demonstrate that all rooms will achieve, the recommended minimum ADF, taking into account their use.

11.0 Overshadowing

11.1 We have also considered the level of direct sunlight the canal will achieve on the 21st March

11.2 Drawing numbers 1944-200 to 204 attached at Appendix B indicates the transient shadow analysis on the 21st March and demonstrates that a good level of direct sunlight will be enjoyed with significantly more than 50% of the area enjoying at least 2 hours of direct sunlight.

11.3 We have also considered the direct sunlight that will be enjoyed on the 21st June, with this indicated on drawing numbers 1944-205 to 209 attached at Appendix B.

11.4 The analysis therefore demonstrates that in accordance with the BRE Guidelines the canal will enjoy a good level of direct sunlight.

12.0 Conclusion

12.1 We have considered the implications the proposals will have on the daylight and sunlight enjoyed by 42 St. Pancras Way, 40 St Pancras Way, 118-138 Royal College Street and Reachview Close.

12.2 The results of our daylight analysis demonstrates that all except 5 rooms within 118-138 Royal College Street will achieve the numerical values set out in the BRE Guidelines. Of these five rooms, one is a bedroom, which the BRE Guidelines state are less important and two are kitchens that due to their area could be considered non-habitable rooms. Of the other two, one will achieve an ADF in excess of that recommended for a bedroom. Our analysis demonstrates that all except the window serving the bedroom will achieve a VCS of at least 0.72 times the existing. Taking into account the urban location and under developed nature of the site, together with the fact that these properties are constructed close to the site boundary, as stated within the guidelines, the numerical values need to be applied flexibly and it is therefore considered that these are appropriate and achieve the aims of the guidelines.

12.3 With regards to sunlight, our analysis demonstrates that all windows that required to be analysed will achieve at least 25% APSH with at least 5% during the winter months.

12.4 With regard to the sunlight enjoyed by the canal, our transient shadow analysis demonstrates that the will enjoy a good level of direct sunlight throughout the year.

12.5 The results of our analysis demonstrate that taking into account the specific site conditions, the aims of the Building Research Establishments publication "*Site Layout Planning for Daylight and Sunlight A guide to good practice*" are met.

Appendix A

Principles of Daylight and Sunlight

In 2011 the Building Research Establishment (BRE) published a handbook titled "Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice" to provide advice to building designers on site layout planning in order to achieve good daylight and sunlight amenity to the proposed development, the open spaces between the proposed blocks and the existing surrounding properties.

As stated within the Introduction of this document, the aim of these guidelines is:- "*To help to ensure good conditions in the local environment, considered broadly, with enough sunlight and daylight on or between buildings for good interior and exterior conditions.*"

The application of the BRE Guidelines are suited more to low density suburban development sites where there is a greater flexibility for site layout planning. In dense urban development sites, these are usually constrained often by adjacent buildings and the guidelines state that these should be applied more flexibly in these instances, as contained within the introduction of the BRE Guidelines:- "*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 designer. Although it gives numerical guides, these should be interpreted flexibly because natural lighting is only one of many factors in site layout design…*"

It must therefore be appreciated and as can be seen from the above extracts and which is reiterated throughout, the handbook is for guidance only.

Daylight

Daylight assessments should be undertaken to habitable rooms where the occupants can expect to receive a reasonable amount of daylight.

The first assessment is to establish whether the proposals will subtend an angle of 25° from the centre of the window. If it does not, then it is considered there will be good daylight. The BRE Guidelines advise:- "*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 a lowest window, subtends an angle of more than 25° to the horizontal may be affected.*"

This assessment is most appropriate for well spaced, low density or low rise, uniform proposed developments. It is not an appropriate assessment for dense urban environments where the existing building on the development site already subtends at an angle greater than 25° to the horizontal from the subject window. It is for this reason that this 25° assessment is generally dispensed with and the more detailed analysis outlined below is undertaken.

- **Vertical Sky Component (VSC)**

  The Vertical Sky Component (VSC) analysis establishes the amount of available daylight received directly from the sky for each individual window. The reference point for the analysis being the centre of the window, on the plane of the outer window wall.

  The VSC is the amount of direct sky a window enjoys, expressed as a percentage of the amount of direct sky a horizontal, unobstructed rooflight would receive.

  The maximum percentage of direct skylight a vertical window can receive is 40%. The BRE have determined that where a VSC of 27% is achieved, then daylight should reach the window of an existing building.

  Where a VSC of less than 27%, is either before the implementation of the proposals enjoyed, or it is enjoyed following the implementation, then the BRE Guidelines state that provided the new value is greater than 0.8 times the existing value, daylight will not be significantly affected.

- **Daylight Distribution**

  The Daylight Distribution analysis is undertaken at working plane level, with this set at 0.85m above floor level of a dwelling.

  The BRE Guidelines state that provided a significant area of the room, which is considered to be 80% is in front of the No Sky Line (the point behind which at desk top level no sky is visible) or at least 0.8 times the existing area, then the room will enjoy good daylight distribution.

  If in the existing situation this is not the case, the BRE Guidelines state that provided that the area following the implementation of the proposals is at least 0.8 times the existing area, there will not be a significant affect.

Sunlight

This analysis is undertaken in a similar method to calculating VSC. Within residential accommodation the analysis for a sunlight analysis relates to the main windows that are within 90° of due south. It is considered that sunlight to kitchens and bedrooms is less important, although care should be taken not to block out too much.

Within commercial or non-domestic buildings, the use of the building will determine whether a sunlight assessment is required.

In relation to neighbouring residential buildings, if a window is facing within 90° of due south and overlooking any part of the proposals subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlight of the existing dwelling may be affected.

- **Annual Probable Sunlight Hours (APSH)**

The 'Probable Sunlight Hours' can be defined as the total number of hours in the year that sun is expected to shine.

The APSH assessment is undertaken to the main window of residential buildings, where the window faces 90° of due south. Within the BRE Guidelines it sets out the criteria for this assessment:-

"*If a living room of an existing dwelling has a main window facing within 90° of due south, and any part of a new development subtends an angle of more than 25° to the horizontal measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely effected. This will be the case if a point at the centre of the window, in the plane of the inner window wall, received in the year less than one quarter (25%) of annual probable sunlight hours including at least 5% of annual probable sunlight hours between 21 September and 21 March, and less than 0.8 times its former sunlight hours during either period.*"

In summary, if it does not achieve the specific numerical values, the sunlight to an existing building may be reduced by 20% in either the annual or winter periods before that loss becomes noticeable as a result of a proposed development.

Appendix C

Bangor Wharf, Georgiana Street, London NW1

Daylight Results

LEVEL	VSC						ADF	NOSKY	
	WINDOW	ROOM	EXISTING	PROPOSED	LOSS	% LOSS		EXISTING	PROPOSED
42 St. Pancras Way									
LEV 1	W10	R2	37.1	33.4	3.7	9.8		>80%	>80%
	W11	R3	37.2	33.3	4.0	10.6		>80%	>80%
LEV 2	W12	R4	37.3	34.3	2.9	7.8		>80%	>80%
	W13	R5	37.5	34.4	3.2	8.5		>80%	>80%
40 St. Pancras Way									
LEV 0	W1	R1	31.4	31.4	0.0	0.0		>80%	>80%
	W2		18.4	18.4	0.0	0.0			
	W3		14.3	11.5	2.8	19.3			
	W4		34.2	29.0	5.1	15.0			
	W5		35.6	31.4	4.2	11.8			
LEV 1	W6	R2	33.6	33.6	0.0	0.0		>80%	>80%
	W7		33.1	32.0	1.1	3.3			
	W8		36.1	31.3	4.7	13.1			
	W9		37.4	32.7	4.7	12.6			
	W10		38.4	34.5	3.9	10.1			
LEV 2	W11	R3	35.6	35.6	0.0	0.0		>80%	>80%
	W12		35.1	34.2	0.9	2.6			
	W13		37.2	33.2	4.0	10.8			
	W14		38.4	34.4	4.0	10.4			
	W15		39.2	35.9	3.3	8.3			
118-138 Royal College Street									
LEV -1	W1	R1	8.0	7.5	0.5	5.8		16.17%	15.25%
	W2	R2	16.5	14.3	2.2	13.2		42.99%	37.85%
	W3	R3	19.2	15.6	3.6	18.8		52.12%	46.82%
	W4	R4	15.5	12.8	2.7	17.4		68.08%	60.44%
	W5	R5	16.2	13.0	3.2	19.6		61.36%	51.09%
	W6	R6	12.6	11.0	1.6	12.4		61.05%	49.12%
LEV 0	W12	R0	13.8	12.2	1.7	11.9			
	W13		24.2	17.9	6.3	26.0	3.7		
	W14		25.6	18.6	6.9	27.1			
	W7	R7	10.2	9.1	1.0	10.2		33.78%	32.62%
	W8	R8	23.1	18.6	4.5	19.5		>80%	>80%
	W9	R9	28.1	21.4	6.8	24.0	1.7	>80%	>80%
	W10	R10	31.1	23.2	7.9	25.3	1.2	>80%	>80%
	W11	R11	31.7	23.2	8.5	26.9		>80%	>80%
	W15	R12	31.7	23.0	8.7	27.4	1.3	>80%	>80%
	W16	R13	22.4	17.2	5.2	23.2	0.9	>80%	>80%
LEV 1	W17	R14	20.7	14.1	6.6	31.9	0.8	>80%	>80%

Bangor Wharf, Georgiana Street, London NW1

Daylight Results

	W19	R16	31.7	23.7	8.0	25.3	2.3	>80%	>80%
	W21	R18	35.4	26.1	9.3	26.4	2.2	>80%	>80%
	W23	R20	36.6	27.4	9.2	25.2		>80%	>80%
	W25	R22	36.7	27.7	9.1	24.7		>80%	>80%
	W27	R24	36.7	27.4	9.3	25.4		>80%	>80%
	W29	R26	36.2	27.0	9.2	25.4		>80%	>80%
	W31	R28	35.7	28.0	7.7	21.5		>80%	>80%
	W33	R30	35.1	28.3	6.8	19.3		>80%	>80%
	W34	R31	32.9	25.9	7.0	21.2	2.1	>80%	>80%
	W35		30.8	24.2	6.7	21.6			
LEV 2	W36	R32	29.0	19.8	9.2	31.9	1.0	>80%	74.42%
	W38	R34	37.1	28.4	8.8	23.6		>80%	>80%
	W40	R36	37.8	29.7	8.1	21.5		>80%	>80%
	W42	R38	37.9	30.7	7.2	19.1		>80%	>80%
	W44	R40	37.9	30.9	7.0	18.4		>80%	>80%
	W46	R42	37.8	30.8	7.0	18.6		>80%	>80%
	W48	R44	37.8	30.6	7.2	19.1		>80%	>80%
	W50	R46	37.7	31.5	6.2	16.4		>80%	>80%
	W52	R48	37.6	32.5	5.2	13.7		>80%	>80%
	W54	R50	37.7	33.6	4.0	10.7		>80%	>80%
Reachview Close									
LEV 0	W1	R1	22.6	18.0	4.6	20.4		>80%	>80%
	W2	R2	36.6	32.6	4.0	10.9		>80%	>80%
	W3		37.0	32.9	4.1	11.1			
	W4		36.6	32.4	4.2	11.4			
	W5	R3	26.5	22.2	4.3	16.3		>80%	>80%
	W6	R4	25.2	20.5	4.6	18.4		>80%	>80%
	W7	R5	36.6	31.7	4.8	13.2		>80%	>80%
	W8		37.1	32.2	4.9	13.2			
	W9		37.2	32.3	4.9	13.3			
	W10	R6	29.5	24.7	4.8	16.3		>80%	>80%
	W11	R7	22.1	17.7	4.4	19.8		>80%	75.36%
	W12	R8	35.9	30.7	5.3	14.7		>80%	>80%
	W13		36.9	31.6	5.3	14.4			
	W14		36.6	31.2	5.3	14.6			
	W15	R9	19.5	19.1	0.4	1.9		>80%	>80%
LEV 1	W16	R10	29.2	26.0	3.2	10.8		>80%	>80%
	W17	R11	38.1	34.7	3.4	8.9		>80%	>80%
	W18		38.0	34.5	3.5	9.1			
	W19		37.6	34.0	3.6	9.5			
	W20	R12	27.6	23.9	3.7	13.4		>80%	>80%
	W21	R13	26.5	22.5	4.0	15.0		>80%	>80%
	W22	R14	37.5	33.4	4.1	11.0		>80%	>80%
	W23		38.1	33.9	4.2	11.0			
	W24		38.1	33.9	4.2	11.1			
	W25	R15	29.9	25.8	4.1	13.7		>80%	>80%

Bangor Wharf, Georgiana Street, London NW1

Daylight Results

	W26	R16	30.8	26.4	4.4	14.3		>80%	>80%
	W27	R17	38.2	33.7	4.6	11.9		>80%	>80%
	W28		38.3	33.7	4.6	12.0			
	W29		38.3	33.6	4.6	12.1			
	W30	R18	33.1	28.5	4.6	13.9		>80%	>80%
LEV 2	W31	R19	21.0	18.6	2.4	11.4		>80%	>80%
	W32	R20	38.3	35.6	2.7	6.9		>80%	>80%
	W33		38.7	36.0	2.7	7.0			
	W34		38.3	35.5	2.8	7.3			
	W35	R21	27.7	24.7	2.9	10.5		>80%	>80%
	W36	R22	27.7	24.6	3.2	11.4		>80%	>80%
	W37	R23	38.3	35.0	3.3	8.5		>80%	>80%
	W38		38.7	35.4	3.3	8.6			
	W39		38.3	35.0	3.3	8.7			
	W40	R24	21.3	18.1	3.2	14.9		>80%	>80%
	W41	R25	31.3	27.9	3.4	10.9		>80%	>80%
	W42	R26	38.9	35.2	3.6	9.4		>80%	>80%
	W43		38.9	35.2	3.7	9.4			
	W44		38.9	35.2	3.7	9.5			
	W45	R27	33.5	29.9	3.6	10.8		>80%	>80%
LEV 3	W46	R28	30.8	29.1	1.8	5.7		>80%	>80%
	W47	R29	39.2	37.4	1.9	4.7		>80%	>80%
	W48		39.2	37.3	1.9	4.9			
	W49		39.3	37.3	2.0	5.0			
	W50	R30	35.8	33.7	2.1	5.8		>80%	>80%
	W51	R31	35.1	32.8	2.3	6.5		>80%	>80%
	W52	R32	39.3	37.0	2.3	5.9		>80%	>80%
	W53		39.3	36.9	2.4	6.0			
	W54		39.3	36.9	2.4	6.1			
	W55	R33	31.6	29.2	2.4	7.7		>80%	>80%
	W56	R34	31.7	29.3	2.4	7.7		>80%	>80%
	W57	R35	38.8	36.2	2.6	6.8		>80%	>80%
	W58		38.8	36.1	2.7	6.8			
	W59		38.8	36.2	2.7	6.9			
	W60	R36	34.0	31.4	2.6	7.6		>80%	>80%

Bangor Wharf, Georgiana Street, London NW1

Internal Analysis Results

LEVEL	ROOM	ROOM USE	REQUIRED	PROPOSED
Ground	R1	Bedroom	1.0	1.73
	R2	Living Room	1.5	3.14
	R3	Bedroom	1.0	1.77
	R4	Bedroom	1.0	1.81
	R5	Living Room	1.5	3.08
	R6	Bedroom	1.0	1.61
	R7	Living Room	1.5	1.50
	R8	Bedroom	1.0	0.84
First	R1	Bedroom	1.0	1.77
	R2	Living Room	1.5	2.01
	R3	Bedroom	1.0	3.33
	R4	Bedroom	1.0	2.57
	R5	Living Room	1.5	2.54
	R6	Bedroom	1.0	1.84
	R7	Bedroom	1.0	1.38
	R8	Living Room	1.5	2.82
	R9	Bedroom	1.0	1.80
	R10	Living Room	1.5	2.89
	R11	Bedroom	1.0	3.02
	R12	Living Room	1.5	2.60
	R13	Bedroom	1.0	1.57
	R14	Living Room	1.5	3.89
	R15	Bedroom	1.0	2.13
	R16	Bedroom	1.0	1.70
	R17	Bedroom	1.0	3.60
	R18	Bedroom	1.0	1.91
	R19	Living Room	1.5	2.77
	R20	Bedroom	1.0	2.86
	R21	Bedroom	1.0	3.35
	R22	Bedroom	1.0	3.43
	R23	Bedroom	1.0	2.23
	R24	Living Room	1.5	2.50
	R25	Bedroom	1.0	2.25
	R26	Living Room	1.5	1.94
	R27	Bedroom	1.0	1.24
	R28	Living Room	1.5	2.17
	R29	Bedroom	1.0	2.22

Appendix D

Bangor Wharf, Georgiana Street, London NW1

Sunlight Results

		EXISTING			PROPOSED			% LOSS	
LEVEL	WINDOW	SUMMER	WINTER	TOTAL	SUMMER	WINTER	TOTAL	WINTER	TOTAL
40 St. Pancras Way									
LEV 0	W5	27%	11%	38%	21%	11%	32%	0.00	15.79
LEV 1	W10	27%	13%	40%	23%	13%	36%	0.00	10.00
LEV 2	W15	27%	13%	40%	24%	13%	37%	0.00	7.50
Reachview Close									
LEV 0	W1	17%	16%	33%	17%	12%	29%	25.00	12.12
	W2	37%	20%	57%	37%	15%	52%	25.00	8.77
	W3	37%	20%	57%	37%	14%	51%	30.00	10.53
	W4	35%	20%	55%	35%	14%	49%	30.00	10.91
	W5	28%	18%	46%	28%	11%	39%	38.89	15.22
	W6	20%	19%	39%	20%	13%	33%	31.58	15.38
	W7	37%	20%	57%	37%	14%	51%	30.00	10.53
	W8	37%	20%	57%	37%	15%	52%	25.00	8.77
	W9	37%	20%	57%	37%	14%	51%	30.00	10.53
	W10	30%	13%	43%	30%	9%	39%	30.77	9.30
	W11	16%	19%	35%	16%	13%	29%	31.58	17.14
	W12	38%	19%	57%	38%	13%	51%	31.58	10.53
	W13	37%	21%	58%	37%	13%	50%	38.10	13.79
	W14	35%	21%	56%	35%	13%	48%	38.10	14.29
	W15	22%	18%	40%	22%	11%	33%	38.89	17.50
	W16	28%	17%	45%	28%	16%	44%	5.88	2.22
	W17	37%	20%	57%	37%	18%	55%	10.00	3.51
	W18	37%	20%	57%	37%	18%	55%	10.00	3.51
	W19	35%	20%	55%	35%	17%	52%	15.00	5.45
	W20	28%	18%	46%	28%	13%	41%	27.78	10.87
	W21	23%	20%	43%	23%	15%	38%	25.00	11.63
	W22	37%	21%	58%	37%	17%	54%	19.05	6.90
	W23	37%	21%	58%	37%	18%	55%	14.29	5.17
	W24	37%	21%	58%	37%	18%	55%	14.29	5.17
	W25	30%	15%	45%	30%	12%	42%	20.00	6.67
	W26	29%	19%	48%	29%	14%	43%	26.32	10.42
	W27	38%	21%	59%	38%	15%	53%	28.57	10.17
	W28	37%	21%	58%	37%	15%	52%	28.57	10.34
	W29	37%	21%	58%	37%	15%	52%	28.57	10.34
	W30	33%	18%	51%	33%	12%	45%	33.33	11.76
	W31	9%	17%	26%	9%	17%	26%	0.00	0.00
	W32	37%	21%	58%	37%	20%	57%	4.76	1.72
	W33	37%	21%	58%	37%	20%	57%	4.76	1.72
	W34	35%	21%	56%	35%	20%	55%	4.76	1.79
	W35	26%	18%	44%	26%	16%	42%	11.11	4.55
	W36	24%	21%	45%	24%	18%	42%	14.29	6.67
	W37	37%	21%	58%	37%	17%	54%	19.05	6.90
	W38	37%	21%	58%	37%	18%	55%	14.29	5.17
	W39	35%	21%	56%	35%	18%	53%	14.29	5.36
	W40	14%	15%	29%	14%	12%	26%	20.00	10.34
	W41	29%	20%	49%	29%	16%	45%	20.00	8.16

Bangor Wharf, Georgiana Street, London NW1

Sunlight Results

W42	38%	21%	59%	38%	16%	54%	23.81	8.47
W43	38%	21%	59%	38%	16%	54%	23.81	8.47
W44	38%	21%	59%	38%	21%	59%	0.00	0.00
W45	33%	17%	50%	33%	14%	47%	17.65	6.00
W46	28%	18%	46%	28%	18%	46%	0.00	0.00
W47	38%	21%	59%	38%	21%	59%	0.00	0.00
W48	38%	21%	59%	38%	21%	59%	0.00	0.00
W49	38%	21%	59%	38%	21%	59%	0.00	0.00
W50	35%	19%	54%	35%	19%	54%	0.00	0.00
W51	35%	21%	56%	35%	20%	55%	4.76	1.79
W52	37%	21%	58%	37%	20%	57%	4.76	1.72
W53	37%	21%	58%	37%	20%	57%	4.76	1.72
W54	37%	21%	58%	37%	20%	57%	4.76	1.72
W55	29%	15%	44%	29%	14%	43%	6.67	2.27
W56	32%	19%	51%	32%	18%	50%	5.26	1.96
W57	38%	21%	59%	38%	20%	58%	4.76	1.69
W58	38%	21%	59%	38%	20%	58%	4.76	1.69
W59	38%	21%	59%	38%	21%	59%	0.00	0.00
W60	34%	17%	51%	34%	17%	51%	0.00	0.00