PROPOSED HOTEL CONVERSION

203 HIGH HOLBORN
LONDON WC1V 7BD

DAYLIGHT/SUNLIGHT REPORT

SEPTEMBER 2011

EDISTON OPPORTUNITY FUND

Daylight/Sunlight Report

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Appendices

Appendix 1 Site Location Plan

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For and on behalf of GVA Grimley Ltd

1. Introduction

1.1 GVA Schatunowski Brooks has been instructed by Ediston Opportunity Fund to review the daylight/sunlight effects from the proposed extension on the neighbouring residential properties.

1.2 We have attended site, reviewing the Council Tax records and estimated which properties contain residential use and at what floor level. We have used the existing and proposed drawings prepared by Axiom Architects, drawing series 2902. We have counted brick courses in order to establish the height and locations of the neighbouring residential windows, assuming where there are habitable uses.

1.3 From our assessment of the surrounding residential properties we have identified habitable rooms to 8 Newton Street and 15-19 Newton Street.

2. Executive Summary

2.1 The daylight and sunlight assessments demonstrate that the neighbouring residential occupants should not, on the whole, experience a noticeable reduction in daylight or sunlight with the proposed extension in place.

2.2 There are five windows that have very marginal daylight reductions which would not comply with the BRE criteria on ratio reductions. However four of the windows have radio reductions at 0.79, whereas the BRE guidelines recommend a ratio reduction of 0.80 is not deemed a noticeable reduction.

2.3 The sunlight assessments demonstrate that the proposed extension would not have a material impact on the adjacent residential properties and neighbouring residential properties will retain a good level of sunlight, in keeping with the inner city context.

3. Daylight/Sunlight Planning Principles

3.1 The Building Research Establishment (BRE) guidelines – Site Layout Planning for Daylight and Sunlight: a guide to good practice is the document referred to by most local authorities. The BRE Guide covers amenity requirements for sunlight and daylight to buildings around any development site.

3.2 The introduction to the guidelines state: -

"*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 developer. Although it gives numerical guidelines, these should be interpreted flexibly because natural lighting is only one of the many factors in site layout design.*"

Daylighting

3.3 The requirements governing daylighting to existing residential buildings around a development site are set out in Part 2.2 of the guidelines. The amount of light available to any window depends upon the amount of unobstructed sky that can be seen from the centre of the window under consideration. The amount of visible sky and consequently the amount of available skylight is assessed by calculating the vertical sky component at the centre of the window. The guidelines advise that bathrooms, toilets, storerooms, circulation areas and garages need not be analysed. The guidelines also suggest that distribution of daylight within rooms is reviewed although bedrooms are considered to be less important.

3.4 The vertical sky component can be calculated by using the skylight indicator provided as part of the guidelines, by mathematical methods using what is known as a waldram diagram or by 3D CAD modelling.

3.5 The guidelines states the following:-

"*If this vertical sky component is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component with the new development in place, is both less than 27% and less than 0.8 times its former value, then occupants of the existing building will notice the reduction in the amount of skylight.*"

3.6 It must be interpreted from this criterion that a 27% vertical sky component (VSC) constitutes adequacy, but where this value cannot be achieved a reduction of up to 0.8 times its the former value (this is the same as saying a 20% reduction when compared against the existing condition) would not be noticeable and would not therefore be considered material.

3.7 The VSC calculation only measures light reaching the outside plane of the window under consideration, so this is potential light rather than actual. Depending upon the window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

Sunlighting

3.8 Requirements for protection of sunlighting to existing residential buildings around a development site are set out in Part 3.2 of the BRE guidelines. There is a requirement to assess windows of surrounding properties where the main windows face within 90 degrees of due south. The calculations are taken at the window reference point at the centre of each window on the plane of the inside surface of the wall. The guidelines further state that kitchens and bedrooms are less important in the context of considering sunlight, although care should be taken not to block too much sun. The guidelines sets the following standard:-

"If this window reference point can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours during the winter months of 21st September and 21st March, then the room should still receive enough sunlight. The sunlight availability indicator in Appendix A can be used to check this.

Any reduction in sunlight access below this level should be kept to a minimum. If the available sunlight hours are both less than the amount given and less than 0.8 times

their former value, either over the whole year or just during the winter months then the occupants of the existing building will notice the loss of sunlight."

3.9 To summarize the above, a good level of sunlight to a window is 25% annual probable sunlight hours, of which 5% should be in winter months. Where sunlight levels fall below the suggested level, a comparison with the existing condition is reviewed and if the ratio reduction is within 0.8 (the same as saying a 20% reduction) its former value then the sunlight loss will not be noticeable. Sunlight reduction that fall below 0.8, i.e. 0.7 (greater than 20%) then the sunlight losses will be noticed by the occupants.

4. Adjoining Properties

4.1 We have identified 8 Newton Street and 15-19 Newton Street as residential properties that should be assessed with regard to daylight/sunlight effects. Only 15-19 Newton Street should be assessed for sunlight reductions as the windows to 8 Newton Street are facing due north.

4.2 For the existing plant room housing we have assumed that the louvered panelling will be one solid obstruction as the daylight and sunlight levels obtained from between the louvered grills will vary and not be of sufficient quality.

8 Newton Street

4.3 We have tested four assessment points along the north facing elevation of this property to represent the habitable rooms facing towards the development site (see Appendix 1 for the location plan). The assessments have been undertaken at ground, first, second, third, fourth, fifth, sixth and seventh floor levels.

Point 1	Existing VSC	Proposed VSC	Ratio reduction
Ground Floor	12.0%	12.0%	1.0
First Floor	14.5%	12.0%	0.83
Second Floor	19.5%	16.0%	0.82
Third Floor	24.0%	20.5%	0.85
Fourth Floor	29.5%	24.0%	0.81
Fifth Floor	>27%	30.0%	Pass
Sixth Floor	>27%	35.0%	Pass
Seventh Floor	>27%	40.0%	Pass

4.4 Assessment point 1 demonstrates that there will be no noticeable reduction in daylight with the proposed development in place. The ratio reductions range from between 1.0 and 0.81 from first to fourth floor, with the fifth floor level and above obtaining VSC levels in excess of 27%.

Point 2	Existing VSC	Proposed VSC	Ratio reduction
Ground Floor	10.0%	9.5%	0.95
First Floor	13.0%	11.5%	0.89
Second Floor	17.5%	12.5%	0.71
Third Floor	22.5%	18.0%	0.80
Fourth Floor	28.5%	22.5%	0.79
Fifth Floor	>27%	28.0%	Pass
Sixth Floor	>27%	35.0%	Pass
Seventh Floor	>27%	40.0%	Pass

4.5 At assessment point 2 the ground, first, third, fifth, sixth and seventh floor levels pass the BRE guideline tests, with ratio reductions of 0.8 or higher, or VSC levels in excess of the suggested 27%. At second floor level the ratio reduction is 0.71, whereas the BRE guidelines recommend a ratio reduction of 0.8 or higher. At fourth floor level the ratio reduction is at 0.79, which is only just below the suggested 0.80.

Point 3	Existing VSC	Proposed VSC	Ratio reduction
Ground Floor	12.5%	11.0%	0.88
First Floor	14.0%	13.5%	0.96
Second Floor	19.0%	15.0%	0.79
Third Floor	24.0%	19.0%	0.79
Fourth Floor	29.0%	23.0%	0.79
Fifth Floor	>27%	29.0%	Pass
Sixth Floor	>27%	35.0%	Pass
Seventh Floor	>27%	40.0%	Pass

4.6 At assessment point 3 the ground, first, fifth, sixth and seventh floor levels pass the daylight tests with ratio reductions of 0.8 or higher, or obtaining a VSC level of 27% or higher. At second, third and fourth floor levels the ratio reductions are at 0.79 whereas the BRE guidelines suggest a reduction of 0.8 or higher would not be noticeable.

Point 4	Existing VSC	Proposed VSC	Ratio reduction
Ground Floor	13.5%	13.0%	0.96
First Floor	16.5%	15.0%	0.91
Second Floor	21.5%	17.5%	0.81
Third Floor	25.5%	22.0%	0.89
Fourth Floor	30.0%	25.0%	0.83
Fifth Floor	>27%	30.5%	Pass
Sixth Floor	>27%	36.0%	Pass
Seventh Floor	>27%	40.0%	Pass

4.7 At assessment point 4 all the windows from ground to seventh floor level will adhere to the BRE guidelines with ratio reductions of 0.8 or higher, or obtaining VSC levels of 27% or higher.

4.8 The four assessment points do not require sunlight assessments as the proposed development is north of the windows and as highlighted by the BRE guidelines, need not be assessed.

4.9 To summarise the above results, there are five windows that fall below the ratio reduction test, with one window obtaining a ratio reduction of 0.71 and four obtaining ratio reductions of 0.79. We consider that the proposed extension should not have a significant impact on the daylight qualities to the occupants of 8 Newton Street and the daylight levels are consistent with an inner city environment.

15-19 Newton Street

4.10 We have undertaken four assessment points at first, second and third floor levels, aswell as assessing the fourth and fifth floor levels, which are set back at upper level. The ground floor level does not appear to contain residential use.

4.11 The assessment points represent the windows to 15-19 Newton Street, testing the daylight levels along its façade where it is opposite the proposed extension. As highlighted by the location plan, points 5, 6, 7 and 8 represent 15-19 Newton Street.

Point 5	Existing VSC	Proposed VSC	Ratio reduction
First Floor	14.5%	13.0%	0.89
Second Floor	17.5%	16.5%	0.94
Third Floor	19.5%	18.5%	0.95
Fourth Floor	26.5%	25.0%	0.94
Fifth Floor	28.0%	27.0%	Pass

4.12 Assessment point 5 demonstrates that the first, second, third, fourth and fifth floor levels pass the BRE guideline daylight tests obtaining ratio reductions of 0.8 or higher, or VSC levels of 27% or higher.

Point 6	Existing VSC	Proposed VSC	Ratio reduction
First Floor	16.5%	13.5%	0.82
Second Floor	19.0%	17.0%	0.89
Third Floor	22.0%	20.5%	0.93
Fourth Floor	>27%	27.5%	Pass
Fifth Floor	>27%	30.5%	Pass

4.13 At assessment point 6 the results show that the first, second, third, fourth and fifth floor levels pass the BRE guidelines with ratio reductions of 0.8 or higher, or VSC levels of 27% or higher.

Point 7	Existing VSC	Proposed VSC	Ratio reduction
First Floor	14.5%	12.5%	0.86
Second Floor	17.5%	15.0%	0.86
Third Floor	20.0%	18.0%	0.90
Fourth Floor	27%	26.0%	0.96
Fifth Floor	>27%	29.5%	Pass

4.14 Assessment point 7 shows that the first, second, third, fourth and fifth floor levels pass the BRE guidelines obtaining ratio reductions of 0.8 or higher, or obtaining VSC levels of 27% or higher.

Point 8	Existing VSC	Proposed VSC	Ratio reduction
First Floor	15.0%	13.0%	0.86
Second Floor	18.5%	15.5%	0.84
Third Floor	21.0%	18.5%	0.88
Fourth Floor	24.5%	24.5%	1.0
Fifth Floor	>27%	30.0%	Pass

4.15 Assessment point 8 demonstrates that the first, second, third, fourth and fifth floor levels pass the BRE guidelines with ratio reductions of 0.8 or higher, or VSC levels of 27% or higher.

4.16 With regard to the sunlight assessments we have analysed the annual probable sunlight hour levels at point 8 as at this location the proposed extension is 90 degrees due south to the assessment point.

4.17 Point 8 represents the worst case condition to 15-19 Newton Street, with points 5, 6 and 7 having less of an effect with regard to the sunlight penetration. In addition points 5, 6 and 7 will obtain better sunlight levels from between the proposed development site and 8 Newton Street.

Point 8	Existing APSH	Proposed APSH	Ratio reduction
First Floor	19% total, 0% winter	15% total, 0% winter	0.79
Second Floor	21% total, 0% winter	24% total, 0% winter	0.88
Third Floor	30% total, 1% winter	26% total, 0% winter	0.87
Fourth Floor	38% total, 4% winter	38% total, 2% winter	Pass
Fifth Floor	>25% total, 5% winter	42% total, 5% winter	Pass

4.18 The first floor level obtains a ratio reduction of 0.79, which is only just below the suggested 0.8 ratio reduction when comparing the existing and proposed conditions. At second floor level the ratio reduction is in excess of the suggested BRE guidelines, obtaining a ratio reduction of 0.88. At third and fourth floor level the total sunlight hours either exceeds the ratio reduction of 0.8 or APSH level of 25%. The winter sunlight hours shows ratio reductions below the BRE guidelines, but the existing conditions do not comply with the BRE guidelines either, due to the existing massing of 8 Newton Street.

At fifth floor level the window complies with the BRE guidelines obtaining an APSH level in excess of the suggested 25%, of which 5% are in winter months.

4.19 In summary the daylight levels comply with the BRE guidelines, showing no noticeable reduction in daylight with the proposed extension in place. The sunlight assessment demonstrates that a good level of sunlight will be retained in the proposed condition and that the total sunlight hours should not be noticeably reduced. The winter sunlight levels are below the BRE guidelines at the third and fourth floor levels but it should be noted that the existing winter sunlight levels to the first, second, third and fourth floor levels do not comply with the BRE guidelines, which is due to the height/massing of 8 Newton Street. We therefore consider that the daylight and sunlight levels obtained in the proposed condition are good for an inner city environment.

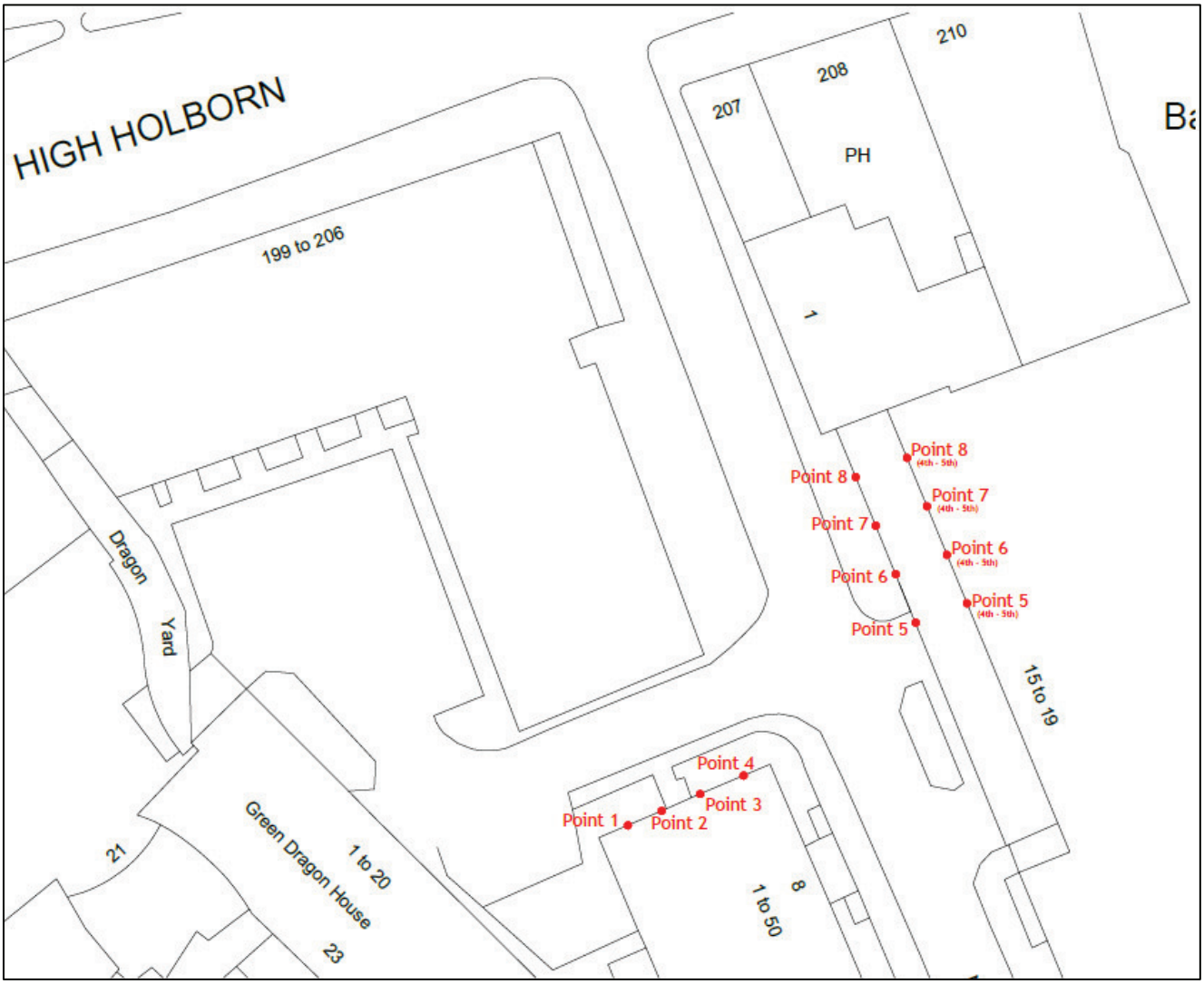
5. Summary

5.1 The daylight and sunlight assessments have shown a good level of compliance with the proposed extension in place. The daylight assessment has shown that only five windows fall below the suggested 0.8 ratio reduction, with one window obtaining a ratio reduction of 0.71, and the other four obtaining a ratio reduction of 0.79. We consider that a ratio reduction of 0.79 would not cause the occupants of the adjacent residential property to notice a reduction in daylight. The ratio reduction of 0.71 is a marginal reduction in its own right and we consider that in the context of this inner city environment that the daylight levels retained in the proposed condition are acceptable.

5.2 With regard to the sunlight assessment, a good level of sunlight will be retained in the proposed condition with only the first floor level obtaining a ratio reduction of 0.79, when comparing the total sunlight hours. Again we consider that a ratio reduction of 0.79 should not be a perceivable reduction in sunlight with the proposed extension in place. The winter sunlight levels are below the BRE guidelines at third and fourth floor levels but we highlight that in the existing condition the sunlight levels are below the BRE guidelines.

5.3 In conclusion we consider that the proposed extension should not have an adverse effect on the daylight and sunlight levels to the proposed habitable rooms. The proposed extension would not have a material impact on the adjacent residential properties and neighbouring residential properties will retain a good level of daylight and sunlight, in keeping with the inner city context.

APPENDIX 1


HIGH HOLBORN
199 to 206
207
208
210
PH
1
Point 8
Point 8
Point 7
Point 7
Point 6
Point 6
Point 5
Point 5
15 to 19
Dragon Yard
Point 4
Point 3
Point 1
Point 2
Green Dragon House
21
1 to 20
23
8
1 to 50