

GVA Schatunowski Brooks

Planning Daylight & Sunlight Report

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Bacton Low Rise Redevelopment, London

London Borough
of Camden

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1. Introduction

- 1.1 GVA Schatunowski Brooks has been appointed by Arcadis on behalf of the London Borough of Camden to undertake a daylight and sunlight assessment of the proposed redevelopment of the site known as Bacton Low Rise in Gospel Oak.
- 1.2 The proposal is for the demolition and redevelopment of a number of existing blocks of flats with a new development which has a different form of height, profile and 'massing' in comparison to the existing buildings. Those changes could therefore have an impact on the existing neighbouring residential dwellings.
- 1.3 Planning permission was first granted for the development in April 2013 (2012/6338/P). A Minor Material Amendment application for the removal and replacement of four trees on Vicars Road was approved in March 2015 (2015/1189/P) and a further Minor Material Amendment application for four additional residential units within phase 1 was approved in March 2016 (2014/3633/P).
- 1.4 The purpose of this report is to assess the potential impact of the proposed development on the existing levels of daylight and sunlight amenity enjoyed by existing neighbouring dwellings in the context of the policy objectives in the Council's amenity policy in terms of safeguarding existing residential amenity. As a part of the design process, GVA Schatunowski Brooks were commissioned to provide advice on the design of the proposed development in relation to optimising the availability of internal daylight within the proposed new development. As the proposed development is for new residential apartments, the quality of daylight that will be received within the new habitable rooms has also been tested to ensure that the future occupants of those rooms would enjoy an adequate amount of daylight amenity.
- 1.5 The recognised standards used for measuring daylight and sunlight are the standards contained in the Building Research Establishment (BRE) Guidelines: 'Site Layout Planning For Daylight and Sunlight – A Guide to Good Practice' 2011, together with the standards contained in the British Standard Code of Practice for Daylighting, BS8206 Part 2.
- 1.6 In testing the availability of daylight and sunlight, a computer 3D model of the 'existing' and 'proposed' buildings has been constructed. In order to undertake this exercise we have relied on the following information:

- For the existing and surrounding buildings, our 3D model was built up using the 3D model prepared by MBS Survey Software Limited, received on 15 September 2012.
- For the proposed scheme, we have relied upon the following Karakusevic-Carson Architects LLP drawings:

PLAN

- 307-A-D-100-B02 BLR Site Proposed Basement Plan
- 307-A-D-100-B01 BLR Site Proposed Basement Plan Rev 03
- 307-A-D-100-00 BLR Site Proposed Ground Floor Plan Rev 06
- 307-A-D-100-01 BLR Site Proposed First Floor Plan Rev 06
- 307-A-D-100-02 BLR Site Proposed Second Floor Plan Rev 06
- 307-A-D-100-03 BLR Site Proposed Third Floor Plan Rev 06
- 307-A-D-100-04 BLR Site Proposed Fourth Floor Plan Rev 06
- 307-A-D-100-05 BLR Site Proposed Fifth Floor Plan Rev 06
- 307-A-D-100-06 BLR Site Proposed Sixth Floor Plan Rev 06
- 307-A-D-100-07 BLR Site Proposed Seventh Floor Plan Rev 06
- 307-A-D-100-08 BLR Site Proposed Roof Plan Rev 02

SECTIONS

- 307-A-D-200-01 BLR Site Proposed Section A-A B-B Rev 04
- 307-A-D-200-02 BLR Site Proposed Section C-C D-D Rev 04
- 307-A-D-200-03 BLR Site Proposed Section E-E F-F Rev 04
- 307-A-D-200-04 BLR Site Proposed Section G-G H-H Rev 04
- 307-A-D-200-05 BLR Site Proposed Section J-J K-K Rev 04
- 307-A-D-200-06 BLR Site Proposed Section L-L Rev 04

ELEVATIONS

- 307-A-D-300-00 BLR Site Proposed Block D & E Elevations 01 Rev 04
- 307-A-D-300-01 BLR Site Proposed Block D & E Elevations 02 Rev 04
- 307-A-D-300-02 BLR Site Proposed Block D & E Elevations 03 Rev 04
- 307-A-D-300-03 BLR Site Proposed Block D & E Elevations 04 Rev 04
- 307-A-D-300-04 BLR Site Proposed Block D & E Elevations 05 Rev 04
- 307-A-D-300-05 BLR Site Proposed Block F Elevations 01 Rev 04
- 307-A-D-300-06 BLR Site Proposed Block F Elevations 02 Rev 04

DETAILS

- 307-A-D-400-01 Proposed Detailed Section 1

- 307-A-D-400-02 Proposed Detailed Section 2
 - 307-A-D-400-03 Proposed Detailed Section 3
 - 307-A-D-400-04 Proposed Detailed Section 4
 - 307-A-D-400-05 Proposed Detailed Section 5
 - 307-A-D-400-06 Proposed Detailed Section 6
- Ordnance Survey Plan.
- Information in relation to existing trees was provided by Greengage by reference to documents 550355nfAug16_Data_Tables.pdf and 550355nfAug16V1_TCP

1.7 Research was also undertaken using Bing aerial photography and Google Maps.

2. Executive Summary

- 2.1 For daylight and sunlight amenity to the neighbouring residential properties, our study indicates that there will be a limited reduction to the daylight and sunlight levels currently enjoyed, with the majority of the rooms satisfying one or more of the daylight tested, with almost total adherence to the sunlight tests. Whilst there will be some reduction in daylight, this will be limited to the lowest rooms or those 'self-harming' rooms with balconies above, that have restricted access to daylight or those that currently enjoy untypically high levels of daylight and sunlight and therefore the retained value remain excellent.
- 2.2 For daylight and sunlight amenity within the proposed development, the vast majority of rooms will be well lit for their particular room use. This is demonstrated by the Average Daylight Factor (ADF) test results which indicate that a large proportion of the rooms will exceed the target values at ground and first floors and this is only expected to improve further still to the upper floors, due to the increased daylight and sunlight availability.
- 2.3 In summary, the proposed development will only have a limited effect on daylight and sunlight to the neighbouring residential dwellings, with the vast majority of windows/room retaining excellent light levels. Also the internal daylight and sunlight that will be achieved will be excellent. Therefore the proposals satisfy both the BRE Guidelines and British Standard for daylight and sunlight.

3. Daylight and Sunlight Principles (Planning)

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 gives advice on site layout planning to achieve good daylighting and sunlighting, within buildings and in the open spaces between them.

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 (VSC) 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 VSC 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 state 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% 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 considered more a measure of the potential for good daylight within a given room. Depending upon the room and window size, the room may still be adequately lit with a lesser VSC value than the target values referred to above.
- 3.8 The no sky-line or daylight distribution (DD) contour shows the extent of light penetration into the room at working plane level, 850mm above floor level. If a substantial part of the room falls behind the no sky-line contour, the distribution of light within the room may look poor.
- 3.9 Appendix C of the BRE Guidelines sets out various more detailed tests that assess the interior daylight conditions of proposed habitable rooms. These include the calculation of the average daylight factors (ADF) and no sky-lines.
- 3.10 The ADF value determines the level of interior illumination that can be compared with the British Standard, BS 8206: Part 2. This recommends a minimum of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms.
- 3.11 BS8206-2: 2008 notes that "Where one room serves more than one purpose, the minimum average daylight factor should be that for the room type with the highest value. For example, in a space which combines a living room and a kitchen the minimum average daylight factor should be 2%".

Sunlighting

- 3.12 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.

- 3.13 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."

- 3.14 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 or the reduction in sunlight received over the whole year is 4% or less, then the sunlight loss will not be noticeable.
- 3.15 Where sunlight reductions fall below a ratio of 0.8 (the same as saying greater than 20%) then the sunlight losses may be noticeable to occupants.

4. Site Context

- 4.1 The current Phase 2 Minor Material Amendment comprises of as a “Variation of conditions: 3 (detailed drawings), 6 (overlooking), 7 (refuse & recycling), 9 (cycle storage), 10 (car parking), 11 (electric vehicle charging points), 12 (car club bay), 13 (motorcycle parking), 23 (wheelchair units), 25 (contaminated land measures), 26 (biodiverse roofs), 27 (bird and bat details), 28 (lighting strategy), 29 (landscaping details), 32 (building foundations), 34 (drainage details), 36 (CCTV strategy), 37 (car club parking), 40 (re-appraisal of financial viability), 43 (energy efficiency), 44 (code for sustainable homes), 45 (car free), 47 (construction management plan) and 58 and 59 (approved plans) of planning permission 2012/6338/P dated 25/04/2013 (as amended by planning permissions 2014/3633/P and 2015/1189/P) (for the redevelopment of Bacton Low Rise Estate, Gospel Oak District Housing Office and Vicar's Road workshops following the demolition of all existing buildings, to provide a total of 294 residential units and associated works), namely to; provide 20 additional Class C3 residential units (19 market and 1 intermediate units), alter the housing mix, reconfigure the employment floorspace, deliver the outstanding parts of the development as a single phase, various external alterations and reconfigurations, revise the on-site car parking provision and the amount of cycle storage, and associated works”.
- 4.2 The MMA application proposals are as follows:
- 4.3 The applicant has reconsidered elements of the Bacton Low Rise development in order to provide an enhanced scheme that is appropriate to the needs of the borough's residents. The applicant's intention is to now deliver phases 2 and 3 of the development as a single phase. The housing mix of the scheme has been reconsidered in order to better suit the needs of Camden residents. One unit within phase 1 is being changed from a market sale to an intermediate tenure. The Phase 2 MMA proposals include an uplift of 20 additional units. To facilitate these changes to the scheme's housing mix, as well as enhance the scheme's functionality, the applicant is required to make various alterations to the scheme's design, including; the rationalisation of Phase 2's internal layout, the relocation of the commercial units, a reduction in lift numbers, revising the landscape strategy and increasing the provision of cycle storage and disabled parking in accordance with the uplift of dwellings on site.

- 4.4 The proposed development on phase 2 is for the demolition of the existing buildings on the BLR (Phase 2) site and the development of 247 residential units, two employment units, new open space and ancillary development. The residential development will contain a mix of sizes and will be a mix of market, social rented and intermediate tenures. The proposed development also includes a number of design based alterations to the extant Bacton planning permission.
- 4.5 The approved scheme includes 156 dwellings per hectare and 486 habitable rooms per hectare. This will increase to 166 dwellings per hectare and 487 habitable rooms per hectare under the Phase 2 MMA proposals. The approximate number of residents on site under the approved scheme is 1102. The Phase 2 MMA proposals will not change the approximate number of residents expected on site.

THE APPLICATION SITE

- 4.6 The site is located in north London, within the London Borough of Camden and within the Gospel Oak ward. The site is bound to the north by the mainline railway line which runs between Kentish Town and West Hampstead, to the east by Vicars Road and Wellesley Road, to the south by Wellesley Road and to the west by Haverstock Road.
- 4.7 The extent of the application site is shown on the accompanying site location plan prepared by KCA Architects and has a total area of 1.89ha.

Phase 1 (DHO site) previously District Housing Office:

- 4.8 The DHO site was previously used for offices for a small team of Camden's housing and adult social care staff. The office space was underutilised and scheduled to be closed as part of a Camden Council policy and programme of rationalisation of office spaces. The DHO site also contained 16 employment units at 2-16 Vicars Road arranged over two floors with a total area of 970sqm (GEA). The offices and
- 4.9 employment units have now been demolished and replaced with the residential blocks which currently occupy the DHO site.
- 4.10 There are 67 dwellings consented on the DHO part of the site. As part of the forthcoming MMA application we will be proposing to change one of the 2 bedroom units from market sale to an intermediate tenure.

Phase 2 Bacton Low Rise Estate (BLR) (formerly known as phases 2 and 3)

- 4.11 The BLR site is currently vacant apart from one residential unit. The majority of residents who previously lived on the site have moved to Block A and B1 of Phase 1. Other residents have moved away from the estate. There is one dwelling currently occupied on the BLR site - the remaining objector to which the ongoing compulsory purchase order inquiry relates to.
- 4.12 The BLR site comprises eight individual blocks of development arranged around three courtyards. There are 99 units.
- 4.13 The existing unit mix on the BLR site is:
- 38 x two bedroom units
 - 56 x three bedroom units
 - 5 x four bedroom units
- 4.14 In terms of current open space, there is one area of public amenity space in the north-east of the BLR site, three internal semi-private courtyards, and a strip of fenced green space to the south of the site. In total, this represents 3,655 sqm.
- 4.15 There are currently 227 residential units and three commercial (B1) units consented on the BLR part of the site. The changes proposed to phase 2 are set out in the section above.

5. Report

Daylight and Sunlight Amenity to Neighbouring Residential Properties

- 5.1 From our inspection of the site, we have identified the existence of existing residential premises in the following buildings:
- 113 Wellesley Road
 - 24 Vicar's Road
 - The flats in 2-104 Wellesley Road
 - 58-74 Haverstock Road
 - 1-120 Haverstock Road
- 5.2 We understand that 1 Wellesley Road is used for sheltered housing and as this use is residential in nature, it has also been included within our analysis.
- 5.3 Annexed at Appendix I are our drawing numbers BA81-30-BRE138 to BRE141 are images of the 'existing' and 'proposed' site plans and 3D massing models used within our analysis. Those drawings are followed by drawing numbers BA81-30-BRE131 to 141 which are the room location plans used within our analysis. The window and room locations set out on those drawings should be cross-referenced with the equivalent window and room references used in our daylight and sunlight analyses tables.
- 5.4 The existing buildings on and around the Site are presently and predominantly high density blocks of flats with other smaller scale residential and non-domestic properties. These circumstances are significantly different from the low rise suburban housing model used for setting the numerical standards in the BRE Guidelines. It is therefore inevitable that a certain degree of flexibility will need to be applied when the performance of the proposed development is assessed against the BRE recommendations.
- 5.5 Concerns have been raised in respect of the potential impact of the existing trees upon daylight levels to both the existing neighbouring residential properties and the future

dwellings with the new development. In accordance with the BRE Guidelines, ordinarily one would not undertake daylight assessments with trees as obstruction, unless they are a dense bank of Evergreen trees, which create a dense obstruction all year round. However, it has been suggested that the existing trees will have a material impact upon the daylight enjoyed by the residential occupants, present and future, that an assessment with the trees in place is necessary. In order to provide a direct indication of the influence the tree will have on the daylight enjoyed we have undertaken our assessment on the basis of a 'with trees' and 'without trees' basis.

113 Wellesley Road

- 5.6 The only notable changes in lighting conditions to the flats within 113 Wellesley Road will be experienced at the western end of the block. Fortunately the rooms at the western end are dual aspect in that they have windows in two separate elevations. It is therefore inappropriate to focus on any single window serving a dual aspect room, but to consider the contribution made by both sets of windows.
- 5.7 The windows at the extreme western end of the block will experience losses in VSC, i.e. the amount of light striking the face of the windows, in excess of the BRE recommendations but those rooms that are dual aspect will continue to receive very good levels of internal Daylight Distribution due to the contribution made by having windows in two separate elevations. They therefore will all comply with the internal Daylight Distribution standards. Only two rooms will fail to meet both BRE standards, and they are the rooms that are single aspect and do not have the benefit of a secondary source of light. Those rooms have been identified as rooms R13/11 and R11/12 in our analysis. The impact on VSC to both of these rooms is however within a reasonable margin in that the residual values were 17.84% and 20.60%, both of which are reasonably good for an inner city urban environment. The percentage reductions also do not exceed 30% and whilst the changes will be noticeable, they will not be unreasonable.
- 5.8 The availability of sunlight to all of the windows that fall within the BRE sunlight criteria comfortably meet the BRE recommendations.

'With Trees' Condition

- 5.9 With 'existing' trees retained within Wellesley Road, more specifically Tree T8 (by reference to the Greengage survey) there will be no perceptible change in the daylight and sunlight condition to this property.

24 Vicar's Road

- 5.10 The ground floor rooms will satisfy the BRE Guidelines in that the percentage loss of VSC will be less than 20% of the former value, with no loss of internal Daylight Distribution.
- 5.11 To the first floor, all windows will retain a VSC value in excess of the 27% BRE recommendations. There will also be no reduction to the internal Daylight Distribution (NSL) and ADF values in excess of 1%. This satisfies the design target.
- 5.12 All of the windows that fall within the BRE sunlight criteria will comfortably satisfy the BRE recommendations.

'With Trees' Condition

- 5.13 With 'existing' trees retained within Wellesley Road, more specifically Tree T8, there will be no perceptible change in the daylight and sunlight condition to this property.

2-104 Wellesley Road

- 5.14 This is a relatively long and tall slab block of flats and it is only the northern end of that block that needs to be considered.
- 5.15 Some of the windows in that block serve non-habitable spaces in the form of staircases.
- 5.16 The impact on the northern end of the block will be more noticeable with no noticeable loss of light at the southern end which will continue to have a relatively unobstructed outlook over the open area of ground and open landscaped gardens. Whilst the rooms that have a direct outlook onto the Site will experience losses in VSC in excess of the BRE recommendations, they will nonetheless continue to receive reasonably good internal Daylight Distribution as light will continue to pass around the new development at an oblique angle. This is supported with retained ADF figures that, in all but one room that still retains 1.41%, all rooms will be in excess of 1.5% and in most instances much greater. It should also be noted that the residual VSC values that were recorded are in the mid to high teens and none fall into single figures. VSC values of this magnitude are relatively

good in an inner city urban environment and the availability of daylight both in terms of the light striking the face of the windows and internal Daylight Distribution will therefore continue to be adequate.

- 5.17 The results of the sunlight analysis shows that practically all of the windows that fall within the BRE sunlight criteria will **comfortably** meet and exceed the BRE recommendations. There therefore will be no material impact on annual or winter sunlight.

'With Trees' Condition

- 5.18 With 'existing' trees retained within Wellesley Road, more specifically Tree T12 and T13, there will no perceptible change in the daylight and sunlight condition to this property.

1 Wellesley Road

- 5.19 We understand that the land occupied by 1 Wellesley Road (and the land occupied by 58-78 Haverstock Road) is part of future wider redevelopment proposals for the area as a whole. However, as there are existing buildings on that site comprising sheltered housing, it has been modelled and tested. Those results show that there will be a number of rooms which will experience losses of light, both in terms of VSC and internal daylight distribution that will go beyond the recommendations of the BRE Guidelines. We have not had the benefit of an internal inspection of this property, or been able to obtain record drawings of the building, but it would appear from an external inspection that some of the windows do not serve habitable rooms, but others clearly do.
- 5.20 The results show that there will be a noticeable loss of daylight to approximately a third of the habitable rooms that have a direct outlook onto the site. The proposed development will therefore have a material impact on the existing levels of amenity enjoyed by the occupants of those rooms, but with the exception of a handful of those rooms which incidentally appear to be non-habitable rooms set in the corners and recesses of the building, (identified in rooms R6/170, R7/170, R8/170,. R15/170) the residual VSC values and the amount of internal daylight distribution will not be so low as to leave those rooms inadequately day lit, with the majority of the rooms receiving in excess of 50% daylight to the room area.
- 5.21 The vast majority of the windows in question are not orientated within 90 degrees due south and therefore do not fall within the BRE sunlight criteria. Only four windows needs to be assessed and none of those windows will experience any loss of annual or winter sunlight.

'With Trees' Condition

- 5.22 With 'existing' trees retained within Wellesley, more specifically Tree T14 to T22, our results suggest that there will be small reductions to the retained daylight and sunlight values, however these are unlikely to be perceptible to the occupant.

58-74 Haverstock Road

- 5.23 Under existing conditions, the windows in question enjoy very good levels of natural daylight and the loss of light will exceed the recommendations of the BRE guidelines, both in terms of VSC and internal daylight distribution. However, from a review of the residual VSC values that will be achieved, no one room will be reliant upon a window that will fall below 13% VSC, with the majority being in the low 20s. In many instances, we see VSC values of this magnitude in an inner city urban environment are very good and the availability of daylight to the rooms in question will remain adequate, even though they do not fully comply with the BRE guidelines.
- 5.24 Although the proposed development does not fully satisfy the BRE sunlight recommendations, the results of the sunlight analysis shows that in the vast majority of cases the windows will continue to receive well in excess of the BRE recommendations for annual sunlight and winter sunlight and each room will have at least one window which will meet the BRE sunlight requirements. Impact of sunlight is therefore not an issue.

'With Trees' Condition

- 5.25 With 'existing' trees retained within Haverstock Road, more specifically Trees T22 to T26, our results suggest that there will be a material worsening to the daylight and sunlight values to the second floor bedrooms, with further reductions of approximately 10% when compared to the value omitting the trees. This will result in some retained VSC values fall to single figures. The influence of the trees less to the third floor rooms; however the comparative absolute VSC values will still reduce by approximately 1%.

1-120 Haverstock Road

- 5.26 One living room at 2nd floor level and three small kitchens at 2nd floor level will not fully satisfy the BRE recommendations. However, the residual VSC values for these rooms will be above 24%, which is extremely high for an inner city urban environment. Therefore,

although the loss of light for these particular rooms will be noticeable, it will not result in any material harm to the existing levels of amenity enjoyed by the occupants and this is confirmed by reference to all of the retained Daylight Distribution and ADF levels.

- 5.27 The in the vast majority of instances the sunlight values for these rooms will not only satisfy the BRE recommendations, it will do so by a very comfortable margin. We they fall short sunlight availability is limited due to windows are either prominently east-facing or recessed below their own balconies. One this basis self-imposed poor design has resulted in the windows being particularly sensitive to changing light conditions and therefore should be disregarded. Therefore one should consider that this building will remain well sunlit and therefore satisfies the BRE Guidelines.

'With Trees' Condition

- 5.28 With 'existing' trees retained within Haverstock Road, more specifically Trees T33, T34, T35, T47 and T48, our results suggest that there will be small reductions to the retained daylight and sunlight values, however these are unlikely to be perceptible to the occupant.

Quality of Daylight to the Proposed New Dwellings

- 5.29 Annexed at Appendix 2 are our drawing nos. BA81/27-27/ BRE81 to 105 which illustrate the floor layouts for the proposed new dwellings at Blocks E1-E3, F1-F4, H and M1-M2. For those proposed new dwellings we have undertaken comprehensive daylight tests to all habitable rooms. Those drawings are followed by the daylight amenity analysis table.
- 5.30 We have undertaken a 3D computer study of the proposal in respect of internal daylight and sunlight amenity in accordance with BS 8206: Part 2, as described in section 3.10 and 3.11 above. We have tested all rooms to accurately assess the daylight and sunlight levels within the building as a whole.
- 5.31 The BRE Guidelines also suggest that for dwellings, kitchens should obtain 2.0% ADF, living/dining rooms 1.5% and bedrooms 1.0%. For this development, the dwelling configuration requirements dictate that the majority apartments contain small galley kitchens to the rear that are located away from the main glazing.
- 5.32 In respect of these kitchens, the guidelines infer in paragraph 2.1.14 that they do not require direct access to daylight and sunlight, but they should be directly connected to a well-lit living room. This scenario occurs on a number of occasions where the kitchens

are at the rear of the units; however these directly connected to well-lit living dining areas at the front of the property, served by the main windows.

- 5.33 The results of our study confirm that of the 716 habitable rooms tested, 632 (88.2%) will satisfy the ADF criteria for their particular room use, which should be considered to be a high ratio, particularly for the location. A further 31 rooms (4.3%) will be within 20% the ADF criteria, with another 28 rooms (3.9%) between 20% and 40% of the criteria. The ratio of rooms that meet the criteria should be considered high for an inner-city location.
- 5.34 When dealing with inner-city developments, it is typical for lower ADF values to be deemed acceptable as housing density requirements and existing constraints often prevent these figures from being achievable. Therefore it is reasonable to suggest that certainly those figures within 20%, and arguably those within 40%, should also be deemed acceptable. On this basis the overall number of rooms considered to satisfy the criteria should be **691 of 716 i.e. 96.5%.**
- 5.35 The remaining "shortfalls" identified i.e. only 3.5%, daylight levels are limited as a result of unavoidably being located in internal corner locations, providing connected living space or the "canopy effect" of balconies above that provide necessary amenity spaces. Therefore we would suggest that this small degree of rooms with lower ADF value should be deemed acceptable.
- 5.36 Furthermore, the BRE Guidelines recognise the effect of projecting balconies or recessed balconies in testing for daylight and has addressed this particular anomaly in the advice for measuring the VSC value. That advice is contained in the section relating to measuring daylight received by existing neighbouring buildings, but the principle applies equally to VSC values received by proposed new dwellings. As the VSC is the measure of daylight on the face of the window, it is perhaps the most important component of internal lighting when calculating the ADF value. The Guidelines recommend that the VSC value is calculated with and without the balcony projection or recess in place in order to determine if the low value in daylight is due to the Block Spacing, or the projection or recess. If that principle is applied in the present circumstances, it is clear that the only reason why the internal lighting levels are below standard is directly due to the effect of the private amenity balconies. This is a common design feature.
- 5.37 By reference to the above, our findings suggest that the proposals, when considering the existing constraints, will achieve excellent daylight and sunlight results, in many the vast majority of instances exceeding the BRE Guidelines and the BS 8206: Part 2.

'With Trees' Condition

- 5.38 Once again, we have been asked to consider the influence that the trees located along Haverstock Road and Wellesley Road, more specifically Tree T14 to T26 and T29 to T35, will have on the daylight levels achievable. Our results confirm that with trees retained the number of rooms that achieve the ADF criteria will reduce from 632 to 627 i.e. five rooms. In percentage terms this is reduction from 88.2% to 87.6%, although where applicable the absolute values achieved would fall by approximately 10%. When including those rooms that will achieve daylight within 40% of the specified criteria the percentage would reduce from **96.5%** to **95.9%**.

BRE '2 Hour Time-in-Sun' Overshadowing Study of the Proposed New Courtyards

- 5.39 Annexed at Appendix 5 our drawing reference Time/153 which illustrates the tests for the overshadowing of the proposed new courtyards. Those drawings identify those parts of the courtyard which will receive over 2 hours of sun-on-the-ground on the Spring Equinox.
- 5.40 An inherent characteristic of enclosed courtyards is the overshadowing that arises due to the very nature of a four sided structure and results show that large parts of each of the courtyards will receive relatively low levels of direct sun-on-the-ground.
- 5.41 Drawing BRE08 assesses the total sunlight availability to the total communal amenity areas. The diagram indicates that one courtyard achieves 2 hours of direct sunlight on the ground to 99.64% of the total area, which exceeds that BRE guidance of 50%. One further area is on the cusp of achieving of achieving the guideline with 49.3% of the area achieving two hours of sunlight. The remaining areas will fall short of the guidelines.
- 5.42 Although a number of the courtyard areas will fall short in BRE Guidelines in respect of overshadowing/sunlight availability, there are likely to be periods where sunlight can still be enjoyed, albeit for periods of less than two hours. It is reasonable to expect that users of the areas may relocate to areas enjoying direct sunlight, if so desired or alternatively occupy those areas that will enjoy prolonged periods of direct sunlight.
- 5.43 On this basis, it is reasonable to conclude that the amenity areas as a whole provide reasonable access to direct sunlight, considering the inner-city location. Particularly

when considering the same users are likely to enjoy sunlight to their own private amenity areas i.e. balconies.

6. Conclusions

- 6.1 The London Borough of Camden's planning policy seeks to safeguard daylight and sunlight to existing buildings and promote adequate standards for new developments by reference to the guidance published in BRE Report 209 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'.
- 6.2 The results of our study confirm that the vast majority of rooms and windows to neighbouring residential properties will remain well lit, where daylight restrictions have not been unduly placed upon them, and that in many instances retain excellent daylight levels, far in excess of the BRE Guidelines.
- 6.3 For daylight and sunlight amenity within the proposed development, our analysis confirms that the vast majority of habitable rooms tested will exceed the target values for their use in respect of daylight and sunlight amounting to almost total adherence, which should be considered excellent.
- 6.4 In conclusion, our findings indicate excellent daylight and sunlight design consideration by virtue of the rooms/windows consistently exceeding the BRE guideline tests. We therefore consider the London Borough of Camden's planning policy on daylight and sunlight will be satisfied.