AGAR GROVE

DAYLIGHT AND SUNLIGHT ASSESSMENT

DECEMBER 2013

AnsteyHorne

Document prepared on behalf of the London Borough of Camden (Applicant) by:

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DAYLIGHT & SUNLIGHT REPORT

for

PROPOSED DEVELOPMENT

at

AGAR GROVE ESTATE, CAMDEN, LONDON

Prepared by

Anstey Horne

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Figure 1: Oblique aerial photograph of the site looking north

(Source: Microsoft Bing)

Figure 2: 3D view of computer model in the proposed condition

1. INTRODUCTION

1.1. This report is submitted in support of a planning application by the London Borough of Camden ("the Applicant") for the redevelopment of the Agar Grove Estate in Camden.

1.2. The Agar Grove Estate was constructed by Camden Council in the 1960s and comprises some 249 dwellings arranged as a series of low / medium rise blocks of flats and an 18 storey tower (Lulworth House). The application proposals entail demolition of the existing low-rise blocks; refurbishment of Lulworth House; and creation of new dwellings set within areas of landscaped open space.

1.3. In developing the application proposals the Applicant has been conscious of the need to minimise the impact of the development on the light to neighbouring properties, particularly those with residential content. Accordingly, they instructed Anstey Horne to work with the design team from the outset of the design process so that the effects of the proposed development could be properly understood and, where possible, minimised.

1.4. Anstey Horne has been commissioned to undertake a formal technical assessment of the effect of the planning application scheme upon the existing surrounding properties around the site having regard to the recommendations in BRE Report 209 '*Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice*'.

1.5. Our study has been carried out using 3D computer modelling and our specialist computer simulation software.

1.6. This report summarises the relevant planning policy, the basic principles of daylighting and sunlighting, the methods used to assess the potential impact of the development, the information used in compiling our 3D computer model and the results of our technical assessment. Drawings and full tables of results of our technical assessment are attached in the appendices.

1.7. The application site is bounded by Agar Grove to the north, Camley Street to the east, a railway track to the south and Agar Place/Wrotham Road on the western boundary.

1.8. The proposed development is designed by Hawkins Brown and Mae Architects and comprises the demolition of the existing buildings on the site, with the exception of Lulworth House, Cranbourne House, Ferndown House and the Agar Children's Centre, the creation of new build dwellings and the extension and refurbishment of Lulworth House.

2. QUALIFICATIONS AND EXPERIENCE

2.1 I am Lance John Harris and I am a Member of the Royal Institution of Chartered Surveyors, qualified as a member of the Building Surveying Division since 1988.

2.2 Throughout my career I have specialised in the fields of rights of light (common law), sunlight and daylight (Town & Country Planning) and party wall/boundary procedure. I commenced my training with Anstey Horne & Co (a long established specialist practice) in 1978. I then spent several years widening my experience prior to professional qualification. For approximately three years I was head of the Rights of Light and Party Wall Department of a firm of general building surveyors, William Martin & Partners. In 1989 I rejoined Anstey Horne & Co as an Associate, became a Partner of the practice in 1992 and then joint Senior Partner in 1999. I am now a Director of Anstey Horne & Co Limited.

2.3 My initial grounding in the sunlight and daylight field dates back to the early/mid 1980s and my professional time has been almost exclusively committed to rights of light and sunlight and daylight issues for the best part of twenty years.

2.4 I advise both developers and objecting neighbours alike and have now been involved with many hundreds of cases. In recent years the mainstay of my workload has related to urban developments, with an increasing move towards taller buildings and increased densities.

2.5 On a daily basis I analyse technical studies relating to light and regularly provide formal reports, including BRE daylight and sunlight reports relating to planning applications and, where necessary, Planning Appeals and Public Inquiries.

2.6 I regularly provide lectures on both the legal and planning aspects of light. In 2007 I completed (for RICS Books) a revised edition of John Anstey's book *'Rights Of Light And What To Do With Them'*, which was first published in 1986.

2.7 Anstey Horne's technical studies are undertaken using specialist computer software, specifically written for the purposes of carrying out the daylight and sunlight tests recommended in Report 209 *'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice'* published by the Building Research Establishment (BRE).

2.8 Anstey Horne's software has been in use for many years and the technical results have been utilised and accepted by Courts, Planning Authorities and other consultants in thousands of assessments for both common law and town planning purposes.

3. PLANNING POLICY AND GUIDANCE

National Planning Policy and Guidance

3.1 The document 'The Planning System: General Principles', published in 2005 by the Office of the Deputy Prime Minister (now Communities and Local Government) explains: "*The planning system does not exist to protect the private interests of one person against the activities of another, although private interests may coincide with the public interest in some cases... The basic question is... whether the proposal would unacceptably affect amenities and the existing use of land and buildings which ought to be protected in the public interest*".

3.2 A useful advisory text is BRE Report 209 'Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice' (second edition, 2011) by PJ Littlefair (the 'BRE Guide'). The BRE Guide gives advice on site layout planning to achieve good daylighting and sunlighting in new buildings and to retain it in existing surrounding buildings. Whilst the BRE Guide is intended for use by designers, consultants and planning officials it specifically states in its introduction that "*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*."

Local Planning Policy and Guidance

3.3 The development site is located within London Borough of Camden ('LBC').

3.4 LBC adopted their Local Development Framework ('LDF'), in November 2010.

3.5 LBC's LDF Policy DP26, 'Managing the impact of development on occupiers and neighbours', states: "*The Council will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors we will consider include: … b) overshadowing and outlook; c) sunlight, daylight and artificial light levels….*"

3.6 Policy DP26 goes on to confirm that: "*To assess whether acceptable levels of daylight and sunlight are available to habitable spaces, the Council will take into account the standards recommended in the British Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (1991).*"

3.7 LBC has also published additional advice on their planning policies in their Supplementary Planning Documents ('SPD'). The relevant guidance on daylight and sunlight amenity is found within its SPD 'Camden Planning Guidance 2011', under 'CPG 6 – Amenity'. It states that: "*while we strongly support the aims of the BRE methodology for assessing sunlight and daylight we will view the results flexibly and where appropriate we may accept alternative targets to address any special circumstances of a site. For example, to enable new development to respect the existing layout and form in some historic areas. This flexible approach is at the Council's discretion and any exception from the targets will be assessed on a case by case basis*."

3.8 The Council's Planning Guidance 2011 continues: "*As the BRE guidance suggests, the readings will be interpreted flexibly as their aim is to support rather than constrain natural lighting. However, daylight is only one of the many factors in site layout design. Therefore, when applying these standards in Camden, we will take into consideration other site factors and constraints*."

3.9 The guidance also states that: "*we will expect a daylight study to be submitted with the planning application showing the windows that will be affected and provide before development and post development figures for VSC and ADF. Other methods can be used to measure daylight and these can be incorporated in daylight and sunlight reports, where necessary, as a supplement to VSC and ADF measurements, such as the No Sky Line ('NSL') test contained within BRE guidance*".

3.10 When using the ADF daylight methodology to assess the effect on daylight, LBC states that "*for existing dwellings the Council will consider the overall loss of daylight as opposed to the minimum acceptable levels of daylight*".

3.11 I confirm that we have undertaken our daylight and sunlight study in accordance with BRE Report 209 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice'.

4. APPLICATION OF BRE GUIDELINES

4.1 In its introduction the BRE Guide states:

4.2 (Its) "*main aim 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.*

4.3 "*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.*

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

4.5 Clearly, the BRE Guide is an advisory document, not a rigid set of rules. Care must therefore be taken to apply its recommendations in a manner fitting to the location of the proposed development.

4.6 In theory the BRE Guide's numerical guidelines may be applied to any setting, whether that is a city centre, suburban area or rural village. However, it notes, *"In special circumstances the developer or planning authority may wish to use different target values. For example, in a historic city centre, or in an area with modern high rise buildings, a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings… The calculation methods … are entirely flexible in this respect."* (Para 1.6).

4.7 At paragraph 2.2.3 it states *"Note that numerical values given here are purely advisory. Different criteria may be used, based upon the requirements for daylighting in an area viewed against other site layout constraints."* Appendix F of the BRE Guide gives advice on setting alternative target values for skylight access. At page 62 it states *"different targets may be used, based on the special requirements of the proposed development or its location"*.

4.8 Clearly, rigid application of the numerical guidelines could well give rise to an inappropriate answer and form of development for city centre sites, in which case it may be appropriate to adopt lower target values that are more appropriate to the location concerned. This is acknowledged by LBC in its *'Camden Planning Guidance 2011'* (see paragraphs 3.7 and 3.8 above).

5. BRE METHOD OF ASSESSMENT AND NUMERICAL GUIDELINES

Daylight to existing surrounding buildings

5.1 Section 2.2 of the BRE Guide makes recommendations concerning the impact on daylight to existing buildings. In summary, the BRE Guide states that: *"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 the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either:*

- *the vertical sky component measured at the centre of an existing main window is less than 27%, and less than 0.8 times its former value; or*
- *the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."*

5.2 So, where the angle to the horizontal subtended by the new development measured at the centre of the lowest window in an existing surrounding building (the angle of obstruction) is less than 25°, the diffuse daylight to that building is unlikely to be significantly affected and need not be tested.

5.3 Where the obstruction angle is greater than 25°, both of the more detailed daylight tests should be undertaken, namely vertical sky component ('VSC') and daylight distribution('DD'). For each test the guidelines operate on the general principle that if the amount of daylight is reduced to less than 0.8 times its former value (i.e. there will be more than a 20% loss) the reduction will be noticeable to the building's occupants. "Noticeable" does not necessarily equate to "unacceptable" and the BRE's standard target values should not be considered as pass/fail criteria. Ultimately the local planning authority (or, if necessary the Planning Inspector) will need to make a judgement as to whether any impacts are acceptable when weighed against the many other planning considerations.

5.4 The VSC test measures the amount of skylight available at the centre of a window on the external plane of the window wall. It has a maximum value of almost 40% for a completely unobstructed vertical window wall. As it takes no account of the size of the window being tested, the size of the room it lights or the fact that the room may be lit by more than one window. It does not measure light inside the room, it merely measures the potential conditions in the room. The VSC results can therefore be misleading if considered in isolation and should be read in conjunction with those of the second test - DD.

5.5 The DD test calculates the area at working plane level inside a room that will have a direct view of the sky. This is done by plotting the no-sky line, i.e. the line on the working plane that divides those areas that receive direct skylight from those that do not.

5.6 One benefit of the DD test is that the resulting contour plans show where the light falls within a room, both in the existing and proposed conditions, and a judgement may be made as to whether the room will retain light to a reasonable depth.

5.7 The BRE Guide advocates the assessment of daylight for dwellings and any non-domestic buildings where the occupants have a reasonable expectation of daylight; which could include schools, hospitals, hotels and offices. For dwellings it states that living rooms, dining rooms and kitchens should be assessed. Bedrooms should also be checked, although it states that they are less important. Other rooms, such as bathrooms, toilets, storerooms, circulation areas and garages need not be assessed.

5.8 Where rooms will not satisfy the standard numerical guidelines for VSC and/or DD it can be helpful to calculate the average daylight factor (ADF) for the room with the proposed development in place, so that a comparison may be made with the recommendations in BS8206-2:2008 *Lighting for buildings - Part 2: Code of practice for daylighting.* Appendix C of the BRE Report summarises BS8206, which recommends the following minimum ADFs in dwellings: 1% in bedrooms, 1.5% in living rooms and 2% in kitchens. The ADF test is intended for use in designing new buildings for satisfactory daylight, not for impact assessments. Nevertheless, the results can be of assistance to a local planning authority when judging whether an impact on daylight that is noticeable is nonetheless acceptable when considered in the broader town planning context as they provide an indication as to whether the affected properties remains 'fit for function' from an internal light perspective.

5.9 As noted above at paragraph 3.9, LBC's Planning Guidance 2011 modifies the standard BRE approach to daylight impact assessment by requiring results of the impact on VSC and ADF, but states that other methods can be used such as the No Sky Line test i.e.DD. LBC's Planning Guidance states that for existing dwellings the Council will consider the overall loss of daylight, as opposed to the minimum recommended ADF values for new accommodation. Taking account of both the BRE Guidelines and LBC's specific requirements, we have adopted a comprehensive approach and assessed VSC, ADF and DD.

Sunlight to the existing surrounding buildings

5.10 Section 3.2 of the BRE Guide makes recommendations concerning the impact on sunlight to existing dwellings or non-domestic buildings where there is a particular requirement for sunlight. The guide notes that *"obstruction to sunlight may become an issue if:*

- *some part of a new development is situated within 90° of due south of a main window wall of an existing building; and*
- *in the section drawn perpendicular to the existing window wall, the new development subtends an angle greater than 25° to the horizontal measured from a point 2m above the ground."*

5.11 If these angle criteria are not met, the BRE Guide recommends a more detailed check to calculate the impact of the proposed development on the available sunlight.

5.12 The BRE Guide suggests *"all main living rooms of dwellings, and conservatories, should be checked if they have a window facing within 90° of due south. Kitchens and bedrooms are less important, although care should be taken not to block too much sun. In non-domestic buildings any spaces that are deemed to have a special requirement for sunlight should be checked."*

5.13 The available sunlight is measured in terms of the percentage of annual probable sunlight hours ('APSH') at the centre point of the window on the plane of the inside surface of the wall. 'Probable sunlight hours' means *"the total amount of hours in the year that the sun is expected to shine on unobstructed ground, allowing for average levels of cloudiness for the location in question."*

5.14 The BRE Guide recommends that *"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 between 21 September and 21 March, then the room should still receive enough sunlight".*

5.15 Paragraph 3.2.11 of the BRE Guide summarises its sunlight guidance as follows:

"If a living room of an existing dwelling has a main window facing within 90º of due south, and any part of a new development subtends an angle of more than 25º 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 affected. This will be the case if the centre of the window:

- *receives less than 25% of annual probable sunlight hours, or less than 5% of annual probable sunlight hours between 21 September and 21 March and*
- *receives less than 0.8 times its former sunlight hours during either period and*
- *has a reduction in sunlight received over the whole year greater than 4% of annual probable sunlight hours".*

Sunlight to existing surrounding gardens and open spaces

5.16 Section 3.3 of the BRE Guide makes recommendations concerning the impact of proposed development on sunlight to open spaces between buildings, such as main back gardens of houses, allotments, parks and playing fields, children's playgrounds, outdoor swimming pools, sitting-out areas, such as in public squares and focal points for views, such as a group of monuments or fountains. The BRE Guide recommends that the level of overshadowing on such areas should be checked on the equinox (21 March).

5.17 The BRE Guide recognises that each of these spaces has different sunlighting requirements and that it is difficult to suggest a hard and fast rule. It recommends that at least half of the amenity area should receive at least two hours of sunlight on the equinox on 21 March.

5.18 When assessing the impact of a proposed development on the level of overshadowing of an existing open amenity, the BRE Guide recommends that "if, as a result of new development the area which can receive two hours of direct sunlight on 21 March is reduced to less than 0.8 times its former size, this further loss of sunlight is significant. The garden or amenity area will tend to look more heavily overshadowed".

5.19 Sunlight at an altitude of 10° or less does not count, because it is likely to be blocked by planting anyway. Driveways and hard standing for cars is usually left out of the area calculation. Around housing, front gardens which are relatively small and visible from public footpaths can be omitted with only main back gardens needing to be analysed.

5.20 Fences or walls less than 1.5 metres high can be ignored. The BRE Guide notes that "normally, trees and shrubs need not be included, partly because their shapes are almost impossible to predict, and partly because the dappled shade of a tree is more pleasant than a deep shadow of a building". This is especially the case for deciduous trees, which provide welcome shade in the summer whilst allowing sunlight to penetrate during the winter months.

Computer simulation

5.21 Appendix A of the BRE Guide describes a method for calculating VSC and APSH using various indicator templates and Appendix D shows how the no-sky line may be plotted inside a room. Where the obstructions on the skyline are complex this method can be difficult to apply and the results can be crude. We therefore prefer to use our computer simulation, which is based on the more accurate Waldram method, which is described in Appendix B of the BRE Guide.

5.22 The information upon which our computer model was based is explained in the next section of this report.

6. INFORMATION USED IN THE TECHNICAL STUDY

6.1 In order to carry out the tests recommended in the BRE Guide, we commenced by building a 3D computer model of the existing buildings on the site, the existing surrounding buildings to be studied, other relevant background massing and the proposed scheme, based on the information listed below.

6.1.1 Proposed scheme:

- Hawkins Brown Architects and MAE Architects' 3D computer model.
- 131018_SITESKETCHUP.dwg
- Parapet heights taken from 1423/SK/131018.

6.1.2 Existing building on the site and existing surrounding buildings:

- Greenhatch Group Drawings Numbered:- 3D CAD Model received 25/07/13 and 18313A – Lulworth House – 3D.dwg
- Hawkins Brown Architects' and MAE Architects' Sketch Up model received 03/07/13 (surrounding massing)
- OS map.
- Aerial photography from Microsoft Virtual Earth.
- Site visits and photographs.

6.1.3 Appendix I shows the source information for internal arrangements within existing surrounding buildings.

6.2 Where we have had to estimate the internal arrangements and room uses, as noted above, this has no bearing upon the tests for VSC or APSH because the reference point is at the centre of the window being tested and windows have been accurately drawn from the survey information. It is relevant to the DD assessment and ADF assessment, but in the absence of suitable plans, estimation is a conventional approach.

6.3 The computer model is illustrated on the drawings at Appendix A.

6.4 We have been informed by the Architects that some revisions were made to the proposed massing as a result of fine tuning the design with the site levels. These amendments can be seen on attached drawings numbered ROL6940_4_055 and 056 where we have marked the revised AOD heights in red adjacent to the original AOD in black. The original AOD heights are those which we have used in our model. From reviewing the changes to the building heights in drawings ROL_4_055 and 056, it can be seen that the majority of the changes result in a reduction in height to Blocks A, B, B1, D, G and Lulworth Tower. There are minor increases in height to Blocks J, K and L of between 150mm and 640mm. We do not consider that the changes identified above will make any material change to the daylight and sunlight results in this report.

7. SCOPE OF TECHNICAL STUDY

7.1 In our experience local planning authorities are usually mainly concerned with the impact on dwellings and, perhaps, schools, hospitals and nursing homes. This is the basis on which we have scoped our technical study. We would not usually expect commercial units to be assessed for the impact upon daylight and sunlight in accordance with the BRE Guide, however, for completeness, we have included the light industrial properties at 120-136 Camley Street within our report.

7.2 Having regard to the preliminary 25°-line test and orientation test recommended in the BRE Guide, as explained above in paragraphs 5.1 – 5.3 and 5.9, we have calculated the impact of the proposed development on the daylight and sunlight levels to relevant rooms in the following existing surrounding buildings:

Properties	**Daylight**	**Sunlight**
1-5 Stratford Villas	Yes	Yes
1-34 Inwood Court	Yes	Yes
7, 9 and 11 Stratford Villas	Yes	Yes
1-18 Gairloch House	Yes	Yes
1 to 25 Agar Grove	Yes	Yes
Cranbourne House	Yes	Yes
Ferndown House	Yes	Yes
120-136 Camley Street	Yes	Yes
114-214 Barker Drive	Yes	No
Agar Community Nursery	Yes	Yes
8, 10 and 12 Wrotham Road	Yes	No
1, 3 and 5 Wrotham Road	Yes	Yes
1, 3 and 5 Agar Place	Yes	Yes

7.3 We have only tested the impact on the main rooms in each property, as advised in the BRE guidelines. It is not necessary to test staircases, hallways, bathrooms, toilets etc.

7.4 Each of the existing surrounding buildings tested is shown labelled on the plan views of the computer model on our drawings at Appendix A of this report.

7.5 The DD contour plans at Appendix B show the window positions and room layouts that have been tested in each of the buildings concerned.

7.6 Where we have tested all adjoining properties listed above for ADF using the following assumptions for glazing transmittance and internal reflectance:

- Double Glazed window units – Transmittance = 0.68
- Single Glazed window units – Transmittance = 0.64
- Internal Reflectance = 0.5 (cream ceiling, cream walls, light coloured floor)

7.7 We have calculated the impact of the proposed development on sunlight on 21 March to the gardens/open spaces within the proposed development and the rear gardens to Cranbourne House. The locations of these spaces and the proportion of each that receives at least two hours of sunlight on 21 March in the existing and proposed conditions are shown on our drawing at Appendix G.

8. IMPACT UPON SURROUNDING PROPERTIES

8.1 In this section we set out my analysis of the results of our impact study under the headings of daylight and sunlight. For each element I will provide commentary on the results taking each property, or groups of properties, in turn in a clockwise order.

Daylight and Sunlight to Existing Surrounding Properties

8.2 The numerical results of the vertical sky component ('VSC') test are tabulated at Appendix C. For the daylight distribution ('DD') test, the numerical results are tabulated at Appendix D and no-sky contour plans are shown on our drawings at Appendix B. The Average Daylight Factor ('ADF') results are tabulated at Appendix E.

8.3 We have only assessed sunlight for properties which have windows which face within 90 degrees of due south in accordance with Section 3.2 of the BRE Guide.

8.4 All of the sunlight results can be viewed in Table P3 at Appendix F.

1-5 Stratford Villas

8.5 This block is located to the north of the Agar Grove Estate on the corner of Stratford Villas and Agar Grove. We were not able to obtain any information on room dimensions so have used assumed room layouts for the DD analysis.

8.6 The VSC results confirm that all of the windows retain VSC values of more than 27% VSC in the proposed condition or retain between 0.9 and 0.99 times their former value. The results therefore meet the recommendations of the BRE Guide.

8.7 The DD results confirm that all of the rooms will retain more than 0.8 times the former DD value and therefore meet the recommendations of the BRE Guide.

8.8 The APSH results confirm that all windows would retain more than 25 % total APSH including at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

1-34 Inwood Court

8.9 This property is located on Stratford Villas to the north of the Agar Grove Estate. The windows which could be affected are located on the flank elevation directly overlooking the Agar Grove Estate. Room layouts for the building have been taken from drawings obtained from Camden's planning records.

8.10 The VSC results confirm that the windows tested all retain more than 33% VSC in the proposed condition and therefore meet the recommendations of the BRE Guide.

8.11 The DD results confirm the rooms tested are currently well lit and that there will be no change to the no-sky contour. The results therefore meet the recommendations of the BRE Guide.

8.12 The APSH results confirm that all windows would retain considerably more than 25 % total APSH including at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

7, 9 and 11 Stratford Villas

8.13 These properties are located on Stratford Villas to the north of the Agar Grove Estate and comprise semi-detached houses with accommodation on basement to first floor with a second floor constructed within the eaves of the building. We were not able to obtain any information on room dimensions so have used assumed room layouts for the DD analysis.

8.14 The VSC results confirm that all of the windows retain VSC values of more than 27% VSC in the proposed condition or retain between 0.95 and 0.96 times their former value. The results therefore meet the recommendations of the BRE Guide.

8.15 The DD results confirm the rooms tested are currently well lit and that they will all retain at least 0.96 times their former daylit area. The results therefore meet the recommendations of the BRE Guide.

8.16 The APSH results confirm that all windows would retain considerably more than 25 % total APSH including at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

1-18 Gairloch House

8.17 This is a five storey block of flats located directly opposite the Agar Grove Estate on the north side of Agar Grove. We were not able to obtain any information on room dimensions, so have used assumed room layouts for the DD analysis.

8.18 The VSC results confirm that 33 of the 48 windows tested meet the recommendations of the BRE Guide. Those that do not are situated at ground and second floor level, either beneath or close to balconies to the floor above. At ground floor level, 11 windows serving six rooms will retain between 0.57 and 0.63 times the former VSC value. At second floor level, four of the six windows tested will retain 0.78 or 0.79 times their former VSC value, so only marginally below the target in the BRE Guide

8.19 The VSC transgressions at ground and second floor level occur to windows beneath or close to overhead balconies which significantly limit the amount of available daylight. The BRE guidance states in paragraph 2.2.11 that because balconies cut out light from the top part of the sky, even a modest obstruction opposite may result on a large relative impact on the VSC. The guide suggests that one way to demonstrate this is to carry out an additional calculation of the VSC for both the existing and proposed situations without the balcony in place. We have therefore rerun the VSC assessment at ground floor level without balconies, and the results can be seen at Appendix H. We did not run the additional test at second floor level as the results with the balconies in place are only just below the BRE target, so it is clear that they would meet the targets if the balconies were removed.

8.20 The results at Appendix H confirm that half of the ground floor windows would retain at least 0.8 times their former VSC value with the balconies removed and therefore meet the recommendations of the BRE Guide. The other six windows (serving three rooms) would retain 0.78 or 0.79 times their former VSC, only marginally below the target in the BRE Guide. These results therefore demonstrate that the presence of the balconies plays a significant role in the effect of the proposed development on the VSC results for these particular windows.

8.21 The DD results confirm that all of the rooms assessed retain more than 0.8 times their former daylit area. The results therefore meet the recommendations of the BRE Guide.

8.22 The APSH results confirm that all of the windows assessed adhere to the BRE guidance with the exception of two windows to each room at ground floor level. Rooms R2/70, R4/70 and R6/70 have windows which are located beneath or immediately to the north of balconies. However, all three rooms will retain 33% or 37% total APSH, with one room having 2% available during the winter months and the other two with access to 4% winter APSH which is only marginally below the recommended level, all despite the presence of the balconies.

1&3 Agar Grove

8.23 These semi-detached properties are located directly to the north of the Agar Grove Estate and have accommodation between basement and second floors with the second floor set back within the eaves. Room layouts have been taken from drawings obtained from Camden's planning records.

8.24 The VSC results confirm all of the windows assessed between basement and second floor retain between 0.70 times and 0.79 times the former VSC value, so close to the target of 0.8%. In this instance it can be seen, when comparing the existing and proposed massing on drawings at Appendix A, that in the existing condition these properties have a relatively open aspect compared to the prevailing townscape and therefore the introduction of any meaningful massing on the site is likely to have an effect which does not fully meet the targets in the BRE Guide. What is important to note is that the retained VSC values in the proposed condition would be more than 22% VSC at basement level and more than 24% VSC at ground floor level, which are good for an urban location.

8.25 The DD results confirm all of the rooms will retain in excess of 0.8 times the former DD value with the exception of room R2/79 at basement level and R3/82 at second floor level to No. 1 Agar Grove. They retain 0.73 and 0.66 times their former daylit area respectively. What should be noted is that at second floor level, the windows to the rooms are small and set within dormers which limit the amount of daylight entering the room. The basement room would have access to direct daylight to almost 70% of its area.

8.26 When one considers the DD and retained VSC values to these properties the results indicate that these properties will remain well lit for the urban setting

8.27 The APSH results confirm that all windows would retain considerably more than 25% total APSH including at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

5&7 Agar Grove

8.28 These semi-detached properties are located directly to the north of the Agar Grove Estate and have accommodation between basement and second floors with the second floor set back within the eaves. Room layouts have been taken from drawings obtained from Camden's planning records.

8.29 The VSC results confirm that all of the windows assessed retain between 0.70 and 0.79 times their former VSC value with retained VSC values between 22% and 27% VSC. Like 1 & 3 Agar Grove the existing built development opposite 5 & 7 is limited, so the introduction of any meaningful massing on the site is likely to have an effect which does not meet the targets in the BRE Guide. However, the retained VSC values demonstrate that these properties retain the potential for good daylighting in the proposed conditions.

8.30 The DD results confirm that all rooms tested to 7 Agar Grove retain more than 0.8 times the former daylit area and so meet the targets in the BRE Guide. At 5 Agar Grove a kitchen will meet the BRE targets and the other rooms will retain between 0.59 times and 0.79 times their former DD value. These rooms enjoy almost total access to direct skylight in the existing conditions due to their unusually open aspect. Any meaningful massing on the site is therefore likely to lead to a movement of the DD contour greater than that recommended in the BRE Guide, but the rooms to 5 Agar Grove – which is understood to be the main living rooms – would have access to direct skylight to between 62% to 77% of their area in the proposed conditions. This is again good for an urban location.

8.31 The APSH results confirm that all windows would retain considerably more than 25% total APSH including at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

9 & 11 Agar Grove

8.32 This block of flats between ground and second floor levels is located directly to the north of the Agar Grove Estate. Room layouts have been taken from drawings obtained from Camden's planning records.

8.33 The VSC results confirm that 8 out of the 10 windows assessed retain more than 0.8 times their former VSC value and therefore meet the recommendations of the BRE Guide. The two windows which do not do so, R3/100 and R4/100 at ground floor level retain 0.77 and 0.78 times their former VSC values respectively. These results are only just below the BRE target and both windows retain very good VSC values of more than 25% VSC.

8.34 The DD results confirm that all the rooms retain more than 0.96 times the former daylit area, so the recommendations of the BRE Guide will be met.

8.35 Although there are two windows with minor VSC transgressions, considering their retained VSC values and the DD results, all rooms to 9 & 11 Agar Grove will remain well daylit.

8.36 The APSH results confirm all windows tested would retain considerably more than 25% total APSH and at least 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

13 and 15 Agar Grove

8.37 These semi-detached properties have accommodation between basement and second floor level and are located to the north of the Agar Grove Estate. Room layouts have been taken from drawings obtained from Camden's planning records.

8.38 The VSC results confirm that all of the windows at first floor level will retain more than 27% VSC and so meet the BRE targets. Elsewhere, windows retain between 0.72 and 0.79 times the former VSC value. Although these are relatively minor transgressions to the BRE guidance, this is another example of the existing condition presenting a relatively unobstructed outlook, so any meaningful massing on the site is likely to produce results which do not meet the targets in the BRE Guide. What is important to note is that the retained VSC values are very good (above 23% at basement level, almost 26% at ground floor level and almost 25% at second).

8.39 The DD results confirm that 11 of the 15 rooms tested retain more than 0.8 times the former daylit area, so meet the recommendations of the BRE Guide. The four rooms

which do not do so are all bedrooms (one each to 13 and 15 Agar Grove at basement and second floor level) which would retain between 0.65 and 0.69 times their former daylit areas. The BRE Guide states bedrooms are less important than living rooms, but in any event all four would be lit to more than 62% of their floor area. Overall, the retained daylight conditions to these buildings will be good.

8.40 The APSH results confirm that all windows would retain considerably more than 25% total APSH including 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

17 and 19 Agar Grove

8.41 These semi-detached properties have accommodation between basement and second floor level and are located to the north of the Agar Grove Estate. Room layouts have been taken from drawings obtained from Camden's planning records.

8.42 The VSC results confirm that 7 of the 16 windows assessed either retain VSC values above 27% or more than 0.8 times their former VSC value and so meet the recommendations of the BRE Guide. The remaining 9 windows are all located at basement and ground floor levels and retain between 0.71 and 0.78 times their former VSC value. However, this is another example where the retained VSC values are good for an urban context (above 23% VSC at basement level and above 26% at ground floor level).

8.43 The DD results confirm 12 or the 14 rooms assessed retain more than 0.8 times the former daylit area so meet the recommendations of the BRE Guide. The other two rooms are basement bedrooms (one each to 17 & 19 Agar Grove). The BRE Guide states bedrooms are less important than living rooms, however these rooms would still retain 0.65 and 0.66 times their former daylit areas, so good daylight penetration will be retained.

8.44 The APSH results confirm all windows tested would retain considerably more than 25% total APSH and 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

21 and 23 Agar Grove

8.45 These semi-detached properties are located to the north of the Agar Grove Estate and have accommodation between basement and second floor. Room layouts have been taken from drawings obtained from Camden's planning records.

8.46 The VSC results confirm that all but one of the windows assessed either retain VSC values above 27% or more than 0.8 times their former VSC value and so meet the recommendations of the BRE Guide. The one exception is the basement living room in 21 Agar Grove, (room R1/139) which retains 0.77 times its former VSC value and a good value VSC in the proposed conditions of 23%.

8.47 The DD results confirm that all but one of the rooms tested would retain at least 0.8 times its existing daylit area and so meet the recommendations of the BRE Guide. The one exception is the basement living room to 21 Agar Grove (R1/139) which will retain 0.73 times its former daylit area. This room has almost total access to direct skylight in the existing conditions due to the relatively open aspect. Any meaningful massing on the site is therefore likely to lead to a movement of the DD contour greater than that recommended in the BRE Guide, but it should be noted that the room would still have access to direct skylight to over two thirds of its area in the proposed conditions.

8.48 Given the urban context of the site, we do not consider that the minor transgressions from the BRE guidance with respect to 1 room in the basement floor of 21 Agar Grove to be problematic particularly bearing in mind the low level of obstruction in the existing conditions.

8.49 The APSH results confirm all windows tested would retain considerably more than 25% total APSH and 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

25 Agar Grove

8.50 This property has retail accommodation at ground floor level with residential at first to third floor levels and is located to the north of the Agar Grove Estate. We were not able to obtain any information on room dimensions so have used assumed room layouts for the DD analysis.

8.51 The VSC results confirm that all of the windows assessed retain VSC values of more than 27% in the proposed conditions or more than 0.8 times their former VSC value and so meet the recommendations of the BRE Guide.

8.52 The DD results confirm that all of the rooms tested would retain at least 0.98 times the existing daylit area and so meet the recommendations of the BRE Guide.

8.53 The APSH results confirm all windows tested would retain considerably more than 25% total APSH and 5% APSH during the winter months, so the recommendations of the BRE Guide will be met.

Cranbourne House

8.54 Cranbourne House is a two storey residential block located within the Agar Grove Estate to the east of the site. The building is to be retained during the development. Room layouts have been taken from drawings obtained from Camden's planning records.

8.55 The VSC results confirm that none of the windows tested fully adhere to the suggested target values in the BRE Guide. However, 21 of the 22 windows tested will retain between 0.70 and 0.78 times their former VSC values, therefore close to the BRE target of 0.8. In addition, the majority of the rooms tested to Cranbourne House are served by more than one window, so that considering individual VSC results in isolation can be misleading. For example, the window which will retain 0.68 times its former VSC value serves a room with four other windows (R1/360) and will retain very good Daylight Distribution.

8.56 The DD results confirm that five of the eight rooms tested will retain more than 0.8 times their former daylit area and so meet the recommendations of the BRE Guide. Two of the remaining three rooms are first floor bedrooms (which the guide says are less important) which will retain 0.77 and 0.76 times their former daylit areas respectively, again very

close to the 0.8 target. There is one living room at ground floor level, room R2/360 which will retain 0.41 times the former value. Because this is a single aspect room, the increased massing has a disproportionate effect on the DD.

8.57 Cranbourne House only has eight windows within a multi-faceted bay window which face just within 90 degrees of due south and therefore require APSH testing. Seven of these windows retain the target of at least 25% total APSH with 5% in the winter months and so meet the recommendations of the BRE Guide. The one window which does not do so serves a ground floor living room (R2/360). This room is also served by a second bay window which retains the BRE target APSH values, so the room as a whole would continue to receive the levels of sunlight recommended in the BRE Guide.

Ferndown House

8.58 Ferndown House is a four storey residential block located within the Agar Grove Estate to the east of the site. The building is to be retained during the development. Room layouts have been taken from drawings obtained from Camden's planning records.

8.59 The VSC results confirm that 34 of the 81 windows tested will retain more than 0.8 times their former VSC value and so meet the recommendations of the BRE Guide. However, this is another building where the majority of the rooms tested are served by more than one window, so considering the VSC results in isolation can be misleading. For example, we have assessed eight living rooms within the building, seven of which have at least one window which meets the VSC targets in the BRE Guide. These seven living rooms also meet the BRE DD targets. The window serving the eighth living room (room R4/370) will retain 0.67 times its former VSC value, but the DD results show that the room will have access to direct skylight to very nearly two thirds of its area as discussed below.

8.60 The DD results confirm that 22 of the 35 rooms tested would retain at least 0.8 of their existing daylit area and so meet the recommendations of the BRE Guide. Eight living rooms, 11 kitchens and 16 bedrooms have been tested.

8.61 Seven of the eight living rooms retain more than 0.8 times their former daylit area and so meet the recommendations of the BRE Guide. The eighth living room retains 0.75 times its former daylit area with 65% of the room having access to direct skylight. Eight of the 11 kitchens meet the DD recommendations in the BRE Guide; the remaining three kitchens retain between 0.70, and 0.76 times their former daylit area with 65% to 70% of the room having access to direct skylight. Seven of the 16 bedrooms tested meet the recommendations of the BRE Guide for DD. The remaining nine rooms retain between 0.44 to 0.73 times their former daylit areas which will be more noticeable. However, the BRE Guide states that bedroom are less important than living rooms and kitchens.

8.62 40 windows face within 90 degrees of due south and therefore require testing for APSH. 37 retain the target of at least 25% total APSH with 5% in the winter months and so meet the recommendations of the BRE Guide. The three windows which do not do so, serve rooms R6/370 and R7/370 at ground floor and room R5/371 at first floor (all bedrooms). These rooms are all served by another two windows which would each retain in excess of the BRE target APSH values so the bedrooms would all continue to receive the levels of sunlight recommended in the BRE Guide.

120-136 Camley Street

8.63 These properties are light industrial units located immediately adjacent to the railway line to the east of the Agar Grove Estate and are used as motor repair garages. These commercial units would not usually be assessed for the impact upon daylight and sunlight in accordance with the BRE Guide, however, for completeness we have included them within our report.

8.64 The VSC results confirm that of the 18 ‘windows’ tested (9 of these are the roller shutter doors to the garage entrances), 11 do not adhere to the BRE guidance as they will not retain more than 0.8 times their current VSC value. However the industrial units/garages will retain VSC values of between 22% VSC and 26% VSC which would usually be considered good for residential use. In addition, it is clear that these large open spaces also rely on additional artificial lighting.

8.65 The DD results confirm that the smaller office areas at the front of the units would all retain at least 0.8 of their existing daylit area and so meet the recommendations of the BRE Guide. There will be large movements of the no-sky contour to the deep workshop areas. However, given the fact that some of these units are over 10 metres deep, a significant movement to the no-sky contour may be unavoidable and the BRE Guide recognises this fact. It is also worth noting that although we have not taken account of them, the workshop areas are lit by additional roof lights which supplement the light from the roller shutters.

144-214 Barker Drive

8.66 These blocks of flats are located on the south side of the railway line and embankment to the south of the Agar Grove Estate and have windows which overlook the site. Given the distance of these properties from the site, only the ground floor level was tested. We were not able to obtain any information on room dimensions so have used assumed room layouts for the DD analysis

8.67 The Vertical Sky Component results confirm that all of the ground floor windows tested have VSC values in excess of 27% in the proposed conditions, so these windows and those on the floors above would meet the recommendations of the BRE Guide.

8.68 The DD results confirm that there is no movement to the no-sky contour and the rooms will remain fully lit.

Agar Community Nursery

8.69 This property is located within the Agar Grove Estate to the south of the site and comprises a purpose built single storey pre-school and nursery. The building is to be retained during the development.

8.70 The Vertical Sky Component results confirm that the six windows to the single aspect playroom (R2/380) will retain between 0.47 and 0.5 times their former VSC values. The true picture is that by looking at VSC values for individual windows will not show the true level of light enjoyed by the room as a whole, the large area of glass serving this room means that it will retain 0.82 of its existing daylit area and meet the DD targets in the BRE Guide.

8.71 To the dual aspect playroom (R1/380), although its windows to the east elevation would retain between 0.64 to 0.66 of their existing VSC values, its windows to the south elevation will all meet the recommendations of the BRE Guide with seven of the eight windows having VSC values in excess of 27% in the proposed conditions. The south elevation will be unaffected by the development and the DD results for this room confirm that it will retain access to direct skylight in the proposed conditions to very nearly its entire area, and so meet the recommendations of the BRE Guide.

8.72 The APSH results confirm that all windows serving R1/380 (including those to the east elevation) would retain considerably more than 25% total APSH and 5% APSH during the winter months, so the recommendations of the BRE Guide will be met for this room. Four of the six windows serving the single aspect playroom would also retain more than 25% total APSH and 5% APSH during the winter months, so it is of no materially that two windows do not do so, because the room as a whole will meet the APSH recommendations in the BRE Guide.

8, 10 and 12 Wrotham Road

8.73 This terrace of two storey properties is located to the west of the Agar Grove Estate. Room layouts for 12 Wrotham Road have been taken from drawings obtained from Camden's planning records and we have used assumed internal layouts for 8 and 10 Wrotham Road based on this information.

8.74 The VSC results confirm that all of the windows retain VSC values of more than 27% VSC in the proposed condition or 0.95 times their former VSC value. The results therefore meet the recommendations of the BRE Guide.

8.75 The DD results confirm that all of the rooms tested would retain at least 0.95 times the existing daylit area and so meet the recommendations of the BRE Guide.

1, 3 and 5 Wrotham Road

8.76 We have assessed the rear elevations to these three storey properties to the west of the Agar Grove Estate. Room layouts for 3 Wrotham Road have been taken from drawings obtained from Camden's planning records. We have used assumed internal layouts for 1 and 5 Wrotham Road based on this information.

8.77 The VSC results confirm that all of the windows tested retain VSC values of more than 27% VSC in the proposed condition or 0.84 times their former VSC value. The results therefore meet the recommendations of the BRE Guide.

8.78 The DD results confirm that all of the rooms tested would retain at least 0.81 times the existing daylit area and so meet the recommendations of the BRE Guide.

8.79 There is only one window to the rear of these properties which needed to be tested for APSH, and the results confirm that the recommendations of the BRE Guide will be met.

1, 3 and 5 Agar Place

8.80 These cottage type terrace houses are located on Agar Place immediately to the west of the Agar Grove Estate. Room layouts for 5 Agar Place have been taken from drawings obtained from Camden's planning records. We have used assumed internal layouts for nos. 1 and 3 Agar Place based on this information.

8.81 The VSC results confirm 11 out of 15 windows assessed retain at least 0.8 times their former VSC value and meet the BRE guidance. There are four minor transgressions - retaining between 0.77 and 0.79 times the former VSC value - to certain facets of the ground floor bay windows, all of which have other facets which meet the VSC targets. These four minor transgressions are therefore not considered problematic, particularly given the DD results for the rooms they serve.

8.82 The DD results confirm that all the rooms tested will retain at least 0.84 times the existing daylit area, so all will meet the DD targets in the BRE Guide. .

8.83 Only the south facing facets to the bay windows at ground floor level to each property face within 90 degrees of due south and required testing for APSH. The results confirm that the windows tested to 3 and 5 Agar Place will meet the targets in the BRE Guide, because although there would be losses, they are less than 4% total APSH. The window tested to the ground floor room R1/320 at 1 Agar Place would lose 5% total APSH (so does not achieve adherence to the BRE Guide by a margin of 1% APSH), and winter APSH would fall from 5% to 1%.

Average Daylight Factor Results

8.84 The BRE Guide says in section 2.2 that that surrounding properties should be assessed using VSC and DD. ADF is not cited as a test for existing buildings and Appendix F of the BRE Guide states in paragraph F7 *"Use of ADF for loss of light to existing buildings is not generally recommended."* However, the London Borough of Camden's Planning Guidance 2011 states that pre and post ADF figures for potentially affected properties should be incorporated within daylight and sunlight reports.

8.85 We have therefore run a full set of ADF results and these can be found at Appendix E. Because the London Borough of Camden's guidance states that they will consider the overall loss of daylight rather than the minimum acceptable levels when using ADF methodology, we have included an ADF summary table below which sets out the percentage of the retained ADF values so one can more easily assesses the overall change.

	Factor Of Former Value							Total Rooms
	1 - 0.9	0.8 - 0.89	0.7 - 0.79	0.6 - 0.69	0.5 - 0.59	0.4 - 0.49	< 0.4	
1-5 STRATFORD VILLAS	8	0	0	0	0	0	0	8
1-34 INWOOD COURT	5	0	0	0	0	0	0	5
7 STRATFORD VILLAS	5	0	0	0	0	0	0	5
9 STRATFORD VILLAS	5	0	0	0	0	0	0	5
11 STRATFORD VILLAS	4	0	0	0	0	0	0	4
1-16 GAIRLOCH HOUSE	9	20	1	0	0	0	0	30
1 AGAR GROVE	0	4	4	0	0	0	0	8
3 AGAR GROVE	0	4	4	0	0	0	0	8
5 AGAR GROVE	0	3	4	0	0	0	0	7
7 AGAR GROVE	0	3	1	0	0	0	0	4
9-11 AGAR GROVE	0	10	0	0	0	0	0	10
13 AGAR GROVE	0	5	2	0	0	0	0	7
15 AGAR GROVE	0	4	4	0	0	0	0	8
17 AGAR GROVE	0	5	3	0	0	0	0	8
19 AGAR GROVE	0	6	0	0	0	0	0	6
21 AGAR GROVE	0	8	0	0	0	0	0	8
23 AGAR GROVE	5	3	0	0	0	0	0	8
25 AGAR GROVE	9	0	0	0	0	0	0	9
CRANBOURNE HOUSE	0	8	0	0	0	0	0	8
FERNDOWN HOUSE	0	21	13	1	0	0	0	35
136 CAMLEY STREET	0	2	0	0	0	0	0	2
134 CAMLEY STREET	0	2	0	0	0	0	0	2
132 CAMLEY STREET	0	2	0	0	0	0	0	2
130 CAMLEY STREET	1	0	0	1	0	0	0	2
128 CAMLEY STREET	0	1	1	0	0	0	0	2
126 CAMLEY STREET	0	1	1	0	0	0	0	2
124 CAMLEY STREET	0	0	2	0	0	0	0	2
122 CAMLEY STREET	0	0	2	0	0	0	0	2
120 CAMLEY STREET	0	0	2	0	0	0	0	2
200-214 BARKER DRIVE	4	0	0	0	0	0	0	4
184-198 BARKER DRIVE	4	0	0	0	0	0	0	4
168-182 BARKER DRIVE	2	0	0	0	0	0	0	2
144-158 BARKER DRIVE	6	0	0	0	0	0	0	6
120-144 BARKER DRIVE	2	0	0	0	0	0	0	2
AGAR COMMUNITY NURSERY	0	0	1	0	0	1	0	2
12 WROTHAM ROAD	3	0	0	0	0	0	0	3
10 WROTHAM ROAD	3	0	0	0	0	0	0	3
8 WROTHAM ROAD	3	0	0	0	0	0	0	3
1 & 3 WROTHAM ROAD	3	0	0	0	0	0	0	3
5 WROTHAM ROAD	0	2	0	0	0	0	0	2
1 AGAR PLACE	0	2	0	0	0	0	0	2
3 AGAR PLACE	0	2	0	0	0	0	0	2
5 AGAR PLACE	0	2	0	0	0	0	0	2
Total	81	120	45	2	0	1	0	249
%	32.53%	48.19%	18.07%	0.80%	0.00%	0.40%	0.00%	

8.86 Setting aside the results for the commercial units at Camley Street, then 192 of the 231 habitable rooms tested (83%) will retain ADF values between 1.00 and 0.8 times their former value. This indicates that on the whole, the changes to the ADF values for the surrounding properties is small and does not represent a significant reduction to the former value.

8.87 A total of 35 habitable rooms, or 16%, will retain ADF values of between 0.79 and 0.70 times the former value. However, it is apparent from reviewing the summary table that these occur to the Agar Grove properties and to Ferndown House. These properties enjoy a relatively open aspect in the existing condition, so that any meaningful massing changes are likely to result in a larger percentage change to the existing ADF values.

8.88 There is one ADF result to a bedroom in Ferndown House which would retain 0.69 of its existing ADF value, however, in the proposed condition the ADF values will be in excess of 1%ADF, which is the British Standard minimum target for bedrooms in new residential accommodation.

8.89 There is one result which shows between 0.4 and 0.49 of the existing ADF value will be retained. This is to the single aspect playroom to Agar Community Nursery where there is the potential for additional roof lights to be installed.

Sunlight to External Amenity Areas

8.90 The only surrounding property that has an external amenity area that could be affected by the proposed development is Cranbourne House. All the other properties surrounding the site have front gardens facing the site and therefore an assessment has not been carried out as the BRE Guide states that it is usually the main back garden of a house that should be assessed. The 2 hour sun on ground assessment for Cranbourne House can be seen on drawing ROL6940_4_301 at Appendix G.

8.91 The results indicate that all of the amenity area is capable of receiving more than 2 hours direct sunlight on March 21st.

9. SUMMARY AND CONCLUSION

9.1 There are no mandatory standards for daylight and sunlight provisions within dwellings in the Building Regulations' Environmental Assessment Method; however a number of good practice guides are available. The London Borough of Camden's Planning policy seeks to protect daylight and sunlight amenity to existing buildings by reference to the BRE Guide but they state that they will view results flexibly at their discretion.

9.2 We have undertaken a study of the daylight and sunlight conditions to all surrounding properties in residential occupation, together with the commercial/industrial properties on Camley Street. The BRE Guide says in Section 2.2 that the effect of a proposed development on daylight to surrounding properties should be assessed using the VSC and DD tests. However, LBC's Planning Guidance 2011 states that ADF results must be submitted, so we have also run this test and appended the results to this report.

9.3 With respect to the Camley Street properties, the daylight results confirm that these industrial units will notice a change to their daylight condition as a result of the proposed development. However, the main reductions are isolated to the large, open plan, working areas which are also lit by roof lights. We do not consider these reductions to be material, and the BRE Guide states such reductions may be unavoidable for rooms greater than 5 metres deep, as is the case here.

9.4 To the residential properties in the vicinity of the site, we have assessed VSC to a total of 355 windows and of these, 202 or 56% fully meet the targets in the BRE Guide. Of the 153 windows that do not meet the VSC target values, over a third serve properties to the north of The Agar Grove Estate i.e. 1 -21 Agar Grove (inclusive). It has been demonstrated that the VSC values for these properties in the proposed condition is above 23% VSC at basement level, and therefore daylight levels will remain good. The large majority of the others serve rooms with more than one window (e.g. Cranbourne and Ferndown House and Agar Community Nursery) so to consider their VSC results in isolation could be misleading.

9.5 A total of 235 rooms were tested for DD and of these, 203 or 86% met the BRE targets. 275 windows were tested for APSH and 267, or 97% met the targets.

9.6 All of the following properties meet the recommended targets in the BRE Guide for the daylight tests of VSC and DD and the sunlight test of APSH: -

- 1-5 Stratford Villas.
- 1-3 Inwood Court.
- 7, 9 and 11 Stratford Villas.
- 23 and 25 Agar Grove.
- 200-214 Barker Drive.
- 3, 5, 8, 10 and 12 Wrotham Road.

9.7 With respect to Gairloch House, although a limited number of transgressions of the VSC and APSH targets in the BRE Guide were recorded, testing without the balconies to this property demonstrates that their presence plays a significant role in these results. The DD to all rooms is good and meets the targets in the BRE Guide.

9.8 A limited number of minor VSC transgressions were also noted to 1, 3 and 5 Agar Place however, these transgressions are to the individual facets of bay windows where at least one other meets the targets in the BRE Guide. In any event the DD meets the targets in the BRE Guide and remains good for all rooms. One minor winter APSH transgression was noted to a south facing faced to the bay window serving 1 Agar Place.

9.9 The results to the properties discussed above either meet all the relevant targets in the BRE Guide or have a number of limited transgression that are not considered to be material. This leaves the following : -

- 1 to 21 Agar Grove
- Crambourne House & Ferndown House
- Agar Community Nursery.

9.10 For 1-21 Agar Grove all properties have a number of windows that would not meet the VSC targets in the BRE Guide. None of these windows would retain less than 0.7 times their former VSC value and in all cases, windows retain VSC values would be considered to be very good for an urban location. For example, basement windows would all retain a VSC value of at least 22% or more. For 3, 7, 9 and 11 Agar Grove, all DD results meet the targets in the BRE Guide and the VSC transgressions which occur are not considered to be material.

9.11 17, 19 and 21 Agar Grove each have one basement room which would not meet the targets in the BRE Guide. 1, 13 and 15 Agar Grove each have one basement room and one second floor room which do not meet the DD targets. All these rooms receive direct skylight to almost their entire area in the existing conditions and would retain access to direct skylight to between approximately 58%-70% of their area. In 5 Agar Grove, only one of the rooms tested would meet the DD targets in the BRE Guide but the others would nevertheless retain direct skylight to approximately 58%-77% of their area.

9.12 A feature common to properties on the north side of Agar Grove which experience DD results below the targets in the BRE Guide is the limited existing obstruction form the buildings on the site so that the introduction of any meaningful massing is likely to have an effect which does not meet the targets in the BRE Guide.

9.13 There are a total of VSC 69 transgressions to 103 windows tested to Crambourne House and Ferndown House, but many of their rooms are lit by more than one window and therefore to assess VSC alone can be misleading. When one also considers the DD to these properties, the DD is good with the exception of one single aspect living room to Crambourne House and a number of bedrooms to Ferndown House. These are all examples of rooms which currently have limited obstruction from the existing massing on the site.

9.14 The final property mentioned at paragraph 9.8 is the Agar Community Nursery. The flank elevation windows of the Agar Community Nursery face Block D and record VSC transgressions however, one of these rooms also has windows to the south elevation and therefore daylight will be unaffected. To mitigate the loss of daylight to the single aspect room, the Council are in negotiation with the nursery to install roof lights.

9.15 Because LBC require ADF results to be submitted, these are attached to this report, but because LBC say they will consider the overall loss of daylight rather than the minimum acceptable levels, we have included a summary table setting out this information. This indicates that 192 of the 231 habitable rooms assessed will retain between 1 and 0.8 times their former value which does not represent a significant reduction. The remaining 16% of habitable rooms retain ADF values of between 0.79 and 0.70 times their former value however all these properties are located where the existing outlook is currently very limited and will therefore be particularly sensitive to changes in massing on the site.

9.16 It was only necessary to assess one external amenity area for sun on ground. The results indicate that there will be no reduction to the sunlight amenity to this area at Cranbourne House.

9.17 Overall, the sunlight and daylight results to the properties in the vicinity on the site are very good with the majority of properties continuing to enjoy good access to sunlight and daylight in the proposed conditions. The buildings currently on the site present a very low level of obstruction to certain neighbouring buildings so they will be more sensitive to changes in massing on the site and reductions in daylight and sunlight that do not meet the targets in the BRE Guide are likely if meaningful mass is to be achieved. Nevertheless, only a very limited number of the neighbouring properties are likely to experience changes to their existing levels of daylight that are would be noticeable, and access to sunlight will remain very good.

……..
Lance J Harris

Director
ANSTEY HORNE

12 December 2013