



Our Ref: AR/sy/17302

1 November 2017

Ms K Smith  
Planning Officer  
Regeneration & Planning  
London Borough of Camden  
5 Pancras Square  
London N1C 4AG

Dear Ms Smith

**Camden Goods Yard, Camden, London NW1  
Daylight and Sunlight Review**

In accordance with instructions, I have reviewed the daylight and sunlight reports prepared by GIA and submitted in support of this planning application for the redevelopment of The Camden Goods Yard site, London NW1. This review is undertaken on behalf of the London Borough of Camden. We have been asked to review the daylight, sunlight and overshadowing assessment to advise on the suitability of the methods of assessment, the criteria used for the study and the conclusions derived from those criteria and the results obtained. This is to assist the Council in understanding the technical conclusions of the report, and the implications of these results on planning policy.

This review does not extend to a detailed technical analysis. We have not constructed a 3D computer model nor run our own calculations. This report assumes that the study undertaken by the applicants is accurate and simply reports on the results and the conclusions and recommendations given.

***London Borough of Camden Requirements***

The London Borough of Camden requires that the assessment of daylight and sunlight effect should be undertaken in accordance with Camden Planning Guidance CPG6 and by reference to the Building Research Establishment (BRE) report "Site Layout Planning for Daylight & Sunlight : A Good Guide to Good Practice 2011". The scope of the assessment should include those windows/rooms in the existing neighbouring properties to the development which are likely to be affected by that development (as defined in the BRE Guidance). These will principally be main habitable rooms to residential properties.

For daylight, the London Borough of Camden will base their considerations on the vertical sky component (VSC) and Average Daylight Factor (ADF) methods of measurement.

Average daylight factor (ADF) can also be calculated for the daylight to new residential units within a proposed development. This should be presented on an absolute scale for testing the adequacy of proposed new dwellings and can also be submitted to supplement, but not in place of, VSC and NSL for measuring the impact on neighbouring properties. In calculating the ADF values, the input variables for glazing transmittance, reflectance values and frame correction factors should be agreed with the London Borough of Camden beforehand.

The no skyline/contour (NSL) calculations can be calculated to provide additional information on internal sky visibility.

For sunlight, the Applicant should calculate the annual probable sunlight hours (APSH) for windows of main habitable rooms of neighbouring properties that face within 90° due south and are likely to have their sunlight reduced by the development massing. The results should be presented on an absolute scale followed by a comparative scale measuring the percentage reduction.

For the shadow assessment, gardens to residential properties and public amenity areas should be assessed. The BRE report suggests that for a garden or amenity area to appear adequately sunlit throughout the year, at least half of the area should receive at least two hours of sunlight on 21 March. If as a result the new development and existing area which can receive direct sunlight on 21 March does not meet the above and is reduced to less than 0.8 times its former value, then this further loss of sunlight will be significant.

For the solar glare assessment it is necessary to assess whether the nature of glazing on the proposed façade will cause solar dazzle to road junctions and possibly railway lines to the extent that this could pose a long term problem to drivers.

### **Appropriate Standards**

I have reviewed the methodology and significance criteria set out in the daylight sunlight and overshadowing report. I agree with the methodology. The report sets significance criteria for the daylight and sunlight assessment that we agree with. This applies to VSC where VSC is reduced to less than 27%, to NSL, and to APSH where the APSH is reduced to less than 25% and/or less than 5% in the winter months.

- Reduction of 0% of 20% negligible impact
- Reduction of 20% to 30% minor adverse impact
- Reduction of 30% to 40% moderate adverse impact
- Reduction of more than 40% major adverse impact

This criteria should however be considered by reference to the overall impact on an individual dwelling or block of dwellings rather than necessarily related to one window alone.

Where I have expressed an opinion on impacts in this report, it is by reference to these criteria, as they apply to buildings as a whole or in relation to individual parts of the buildings.

### **Key Site Considerations**

The proposed development site currently has an unusually low level of massing compared to that typical within London urban areas and within the London Borough of Camden. It consists of a single storey Morrisons supermarket with large car park to half of the site area. This means that the neighbouring properties have very high levels of sky visibility at present, and therefore high levels of daylight and sunlight. The proposal development involves construction of much taller buildings occupying most of the site area and all substantially taller than the existing building.

The primary assessment for daylight and sunlight as set out by the Building Research Establishment sets minimum standards of daylight and sunlight which are commensurate with a typical suburban housing estate development massing and, if reduced to below that level, allows a 20% reduction from existing. The Applicant makes the case that requiring strict compliance with the BRE requirements would significantly limit the development that can be implemented on this site. They have therefore provided the full results in accordance with the BRE requirements but have also provided additional studies to make a case for the impacts on daylight and sunlight, and the retained daylight within the new development, to be considered acceptable in order to comply with overall planning policy and not just policy in relation to daylight and sunlight. This includes a document titled "*Contextual Density and Daylight Research*" dated 29 June 2017.

Our assessment of the Applicant's study will therefore include assessment of those additional analyses and conclusions that they make.

***Daylight – VSC and NSL***

The appendices to the ES Chapter include detailed daylight results set out in tables and a summary of the overall impact against the significance criteria is provided as table 10.7 of ES Chapter 10 in the main ES report. I am satisfied that the report includes analyses for all of the neighbouring residential properties that are close enough to the development site that they are likely to be affected.

The ES Chapter identifies those neighbouring properties for which the BRE criteria will be met and as a result the impact will be negligible. For those properties where the BRE criteria are not met, a narrative is given explaining the results for both VSC and NSL and reporting the impacts that they consider would be caused by reference to the significance criteria. In applying those impacts, they have made a judgment not only in relation to the percentage reduction in VSC or NSL that is caused but also by reference to the number of windows that experience the different levels of reduction and by reference to retained levels of daylight where they consider these will be a level commensurate with a typical urban location. It is not typical to assess the impact assessment by reference to retained levels of daylight but on this site, where existing levels of daylight are particularly high due to the substantially undeveloped nature of the site, I consider that it can be appropriate to assess the impacts in the way they have done.

On that basis I agree with the impact assessments that they report with the exception of Gilbys Yard Block B where I consider the impact is major adverse due to the fact that all but one of the windows experience a reduction in VSC or more than 40% from existing and the retained level of VSC of 15% is materially lower than the existing level although still comparable with a dense urban location.

Therefore, the majority of properties assessed will experience a minor to moderate adverse impact with Gilbys Yard Block A having a moderate to major adverse impact and Gilbys Yard Block B having a major adverse impact.

The use of retained VSC levels to moderate the impact assessment is based on the contextual density and daylight research document submitted by GIA. This provides the results of an analysis on buildings throughout the London Borough of Camden where elevations are divided on a grid pattern with the VSC results for each grid square shown by reference to a colour gradient. Specific locations are identified as typical examples of comparable urban massing with VSC daylight levels. These show that within Central Camden and Camden Town Centre VSC levels down to 15% at ground floor level are typical with lower levels of VSC within the central activity zone in the south of the Borough. Particular examples are given of areas in the vicinity of Gilbys Yard and Juniper Crescent. Overall results for seven different neighbourhoods are summarised by showing bandings of VSC levels together with a similar summary for the Camden Goods Yard site.

Having reviewed this evidence I agree with GIA that the daylight results that will remain for the neighbouring residential properties will be within the range that is commensurate with other comparable locations in Camden. Therefore, I consider it appropriate for the impact assessment to have the reductions in VSC and NSL moderated by the retained VSC levels.

***Sunlight – APSH***

The appendices to the ES Chapter include detail sunlight results for both annual probable sunlight hours and winter sunlight hours. These are summarised in table 10.8 of Chapter 10 of the ES. The only properties assessed are those which have windows that face within 90° due south and are to the south of the development site. Of those assessed, the majority have results that meet the BRE criteria and the impact is therefore negligible. Of those properties where there are reductions that do not meet the BRE criteria only a very limited number of windows are affected and I agree with the ES Chapter that the result for all of these, which are in Juniper Crescent and at 90 Camden Lock Place, are minor adverse.

***Overshadowing***

The ES Chapter includes a full transient overshadowing assessment and, from that, analysis of the areas of amenity spaces that are in permanent shadow on 21 March. The only amenity areas of neighbouring properties that have been assessed are gardens and the amenity space in Juniper Crescent. These are the only amenity areas located north of the development site.

The results show that the BRE standard is met for all of the amenity spaces except one, which is a garden area serving 85-92 Juniper Crescent. Therefore, we agree that the overall impact on the shadow to amenity areas is minor adverse.

### **Solar Glare**

The ES Chapter includes analysis of solar glare caused by the proposed buildings on the roads and railways surrounding the sites with snapshot results provided for numerous points as identified on the location plan. The analysis is sufficiently detailed and identifies key points on the overground railway line between Camden Road and Kentish Town West Stations where the solar glare will constitute a major adverse impact. This will occur at a sufficient number of points that appropriate mitigation will be needed to reduce that risk.

In order to avoid solar glare causing a problem for the railway line located to the north of the site and for cars on Chalk Farm Road the building design now incorporates external shading with projecting vertical mullions that are 75mm deep on the north façade and 250mm deep on the south façade. This breaks up the solar glare that would otherwise occur and whilst some glare will occur it will come from the full sun disc and will not be continuous as experienced from a moving vehicle. Therefore, the impact will be minimal.

### **Cumulative Analysis**

The ES Chapter includes a cumulative analysis taking account of potential developments at 100, 100A and 100B Chalk Farm Road and 44-45A Gloucester Avenue. The ES Chapter identifies that the cumulative analysis will result in lower levels of daylight in the proposed condition to 54-64 Juniper Crescent and 81-84 Juniper Crescent and 101-103 Juniper Crescent. For these properties, as grouped, the impact identified as being slightly worst being minor to moderate adverse at 54-64 Juniper Crescent and moderate adverse to the other properties. However, in all cases the retained daylight level will be 15% VSC and therefore still within the daylight levels commensurate with similar urban locations as explained above.

### **Daylight and Sunlight to New Development**

The application documents include a report assessing the daylight and sunlight to the main habitable rooms of residential properties within the development. This identifies that 88% of the proposed habitable rooms will exceed the levels of ADF recommended by the BRE. The report also provides NSL results for the proposed rooms and identifies that 74% rooms will meet the NSL criteria for self test analysis, with over 50% of the room area seeing direct sky visibility on the working plane. The results are provided by reference to floor plans of the various blocks with accompanying tables showing the ADF and NSL results for each room. The BRE guidelines recommend assessment of the ADF, room depth criteria and no skyline and all of these have been assessed in the Applicant's report. For ADF there are minimum standards of ADF that are recommended for each room use. For the no skyline assessment BRE guidance states that "if a significant area of the working plane lies beyond the no skyline then the distribution of daylight in the room will look poor and supplementary electric lighting will be required." That can be taken to mean that if more than half the room can see direct skylight then the availability of direct sky visibility within the room will be acceptable.

In Block A, the results substantially comply with the required ADF standard. The only exceptions are bedrooms on the second and third floors on the south elevation that are the second bedrooms to two bedroom flats.

In Block B there are non compliant results for living room/kitchen/diners and for bedrooms for rooms in the west elevation and facing into the internal courtyard at second floor level and to some living rooms on third floor. Many of these rooms also have significantly less than half their room area seeing direct sky visibility. Poor results to living rooms are exacerbated where these are very large rooms with overhanging balconies overhead.

In Block C, there is substantial compliance with the required standards except for three living rooms on the first floor and two on the second floor, all but one of these being in the west elevation facing directly toward Block B. However, the ADF levels are all above 1.1%.

In Block D, there are relatively low levels of ADF to kitchens on the north elevation of the ground floor where these face towards Block C, primarily due to the relatively narrow width compared to the depth of these rooms. Above these, some of the bedrooms on the first floor have levels of ADF below recommended level and those are between 0.7% and 0.9% compared to the 1% recommended.

In Block E1, there are two living rooms on each of the first, second and third floors, and one on the fourth floor, that will not have the required level of ADF. On the ground floor, the living rooms will have ADF results of 0.6% and 0.7% which is low for a living room and lower than we would normally consider to be acceptable. This is a result of these

being very large multi-use rooms and only being effectively single aspect. However, these are shown configured with the living rooms areas close to the windows and those areas are likely to have adequate levels of natural light. The dining and cooking areas to the rear will have a requirement for supplementary electrical lighting,

In Block E2, there are kitchens on the north elevation of the ground floor that have ADF levels of between 1.1% and 1.8%. Above those, on the first floor, the bedrooms do not meet the required standard and five of these will have an ADF level of between 0.7% and 0.9%.

In Block F, there are several living rooms and living rooms/diners that do not have required levels of 1.5% ADF. These are primarily where the sky visibility is affected by quite large balconies or where rooms face into the inner courtyard and are quite deep in plan. Some of these rooms with ADF levels of 0.6% and 0.7% will not appear well lit to the occupants but it could be difficult to improve the results without omitting balconies or moving the location of balconies on floors above.

In general, the NSL results are compliant except where identified above in Block B. Apart from Block B, NSL levels will be very good, particularly to living rooms, except for some individual cases.

For the sunlight assessment, only living rooms have been tested and these are illustrated by 3D views of the blocks with the sunlight levels shown by coloured shading. These clearly show where there are lower levels of annual sunlight that do not meet the BRE criteria of 25% APSH but this principally occurs where windows are shaded by balconies. Overall, it would be difficult to achieve better results without a major redesign of the site layout. Additional sunlight is available through access to the balconies.

### **Conclusion**

The ES Chapter is considered to accurately report the results of the technical analysis for the various studies reported. The impact assessment for daylight has been made by reference to generic retained levels of daylight in Camden not simply by reference to the reduction in daylight that occurs as a result of this development alone. On this particular site, considering the existing low level and open nature of the site, this is an appropriate method of assessment and as a result we substantially agree with the impact assessment reported.

We are happy with the reporting of the sunlight analysis.

We are happy with the reporting of the overshadow analysis to amenity areas.

We are happy with the reporting of the solar glare analysis now that the design includes projecting elements that serve to cut the glare from the facades.

The proposed development does generally maintain good levels of daylight and sunlight to the new units being constructed. This report identifies key areas where the minimum levels of ADF are not attained. With the exception of Block B those are relatively low incidents and we suggest that they are less important where these affect bedrooms or individual kitchens. We do recommend that planning officer satisfy themselves that the non-compliant results for living rooms are acceptable in the context of the overall design. The results for Block B show that this will have lower levels of daylight than the other blocks.

Yours sincerely



**Alistair Redler BSc FRICS**  
**Senior Partner**

[Alistair.redler@delvapatmanredler.co.uk](mailto:Alistair.redler@delvapatmanredler.co.uk)