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Our Ref: AD/22659

24 January 2023

David Fowler Deputy Team Leader Regeneration and Planning Supporting Communities London Borough of Camden

Dear David,

# 2021/2954/P – Selkirk House, 166 High Holborn, 1 Museum Street, 10-12 Museum Street, 35-41 New Oxford Street and 16A-18 West Central Street, London WC1A 1JR Independent review of daylight, sunlight and overshadowing assessment

As instructed, I have reviewed the daylight and sunlight reports prepared by the Applicant's consultant, GIA ("the assessment") submitted in support of the planning application for the proposed development at Selkirk House.

My instructions are to advise on the suitability of the scope, method of assessment, criteria used, results produced, and conclusions reached therein to assist the Council in understanding the potential effects of the proposed development, and the levels of natural light provision to proposed new dwellings, so it may make an informed judgement as to their acceptability.

I have not been supplied with or checked the consultant's 3D computer model or calculations; nor have I run any calculations of my own. I have assumed the assessment is accurate and simply report on the results and conclusions; although, if I feel there is reason to seek confirmation on matters affecting accuracy I have stated so below. I have not undertaken a site inspection.

#### 1. Guidelines for daylight, sunlight, overshadowing

The leading guidelines on daylight, sunlight, and overshadowing are published by the Building Research Establishment in BR209 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' (third edition, 2022).

I have included at Appendix 1 a glossary of key terminology and acronyms used in this letter, and at Appendix 2 a summary of the relevant guidelines for daylight, sunlight, and how they should be applied by reference to a number of key appeal and judicial review decisions. Appendix 2 forms a key part of my advice.

The Applicant's assessment also summarises the relevant guidelines, which it appears to do appropriately.

#### 2. Planning policy and guidance

Local plans typically seek to ensure provision of adequate daylight and sunlight for future occupiers of new residential development and avoid unacceptable deterioration in daylight and sunlight to surrounding buildings and unacceptable levels of overshadowing to surrounding amenity space.

To the extent that the proposed development may be considered to provide housing, regard should be had for the National Planning Policy Framework (NPPF), the London Plan, and the Mayor of London's 'Housing Supplementary Planning Guidance'. These encourage a flexible approach in applying daylight/sunlight policies or guidance where they would otherwise inhibit making efficient use of land for housing, provided the resulting scheme would provide acceptable living standards. Account should be taken of local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time.

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#### 3. Scope of the assessment

Daylight and sunlight levels within the proposed dwellings, and sunlight to proposed amenity spaces within the development, have been assessed.

The potential impacts on the following neighbouring sensitive receptors have been assessed:

- daylight and sunlight to existing surrounding residential properties; and
- sunlight/overshadowing to back gardens and other amenity spaces.

The locations of all receptors that have been assessed are shown in the assessment.

I consider the scope of the assessment to be appropriate.

#### 4. Applicant's assessment methodology and application of the guidelines

I have reviewed the assessment methodology and am generally satisfied that it is appropriate and in accordance with the guidelines

#### 3D modelling and sources information

The 3D computer model used in the assessment was built from various sources of information including detailed elevational drawings, a 3D massing model produced from photogrammetry, and site photos. I have no reason to doubt it is sufficiently accurate for the purposes of the assessment.

The assessment notes that research was undertaken to obtain floor plans of the neighbouring properties, so that room uses could be identified and room layouts adopted, which is relevant to NSL testing. The properties where plans have been used is explained in the report. In other properties, room layouts have been assumed. This is considered an acceptable approach. Arguably, less weight should be applied to NSL results for rooms whose layouts have been assumed, as they may be less accurate.

#### Assessment methodology – daylight and sunlight within the proposed development

Daylight to the proposed dwellings has been assessed using the current BRE 3<sup>rd</sup> edition methodologies. Daylight provision has been checked using the illuminance method, and sunlight using the sunlight exposure method.

It is noted that the applicant has reported based on the UK National Annex BS EN 17037 which is appropriate. This was introduced given that the daylight targets contained within EN 17037 were considered to be difficult to achieve within the UK.

The applicant's assessment has used the following parameters, which are clearly labelled within the report in Section 3 – Simulation Assumptions:

- Glazing transmittance: 0.7
- Window frame & glazing bar factor: 0.67-1 (varies by window type and building)
- Maintenance factor (effects of dirt on glass): 0.92 (0.76 for overhung windows)
- External walls and obstructions: 0.2
  - Reflectance of room finishes:
    - Internal Ceilings: 0.8
    - Internal Walls: 0.68
    - Internal Floors: 0.4

The sunlight exposure results illustrate that three separate dates have been selected to assessed the proposed development; 1 February, 25 February and 21 March, to determine the date where the greatest number of hours of sunlight is achieved.

#### Assessment methodology – impacts on surrounding environment

#### Principal assessments

The BRE assessment methodology has been used for assessing the effects on existing surrounding properties, including daylight (the two-part assessment of VSC and NSL) and sunlight (the two-part assessment of APSH annually and in winter) to buildings and sun-on-ground to amenity spaces.

Detailed tabulated results have been provided showing the daylight and sunlight levels in the existing and proposed conditions, the absolute loss (existing value minus proposed) and relative loss (absolute loss divided by existing value, expressed as a percentage).

The BRE standard numerical guidelines have been applied to establish the number of impacts on each property (or group of properties) that are within the guidelines and the number that are outside the guidelines.

To assist your understanding of the magnitude of the impacts, in this review report I will use the terms 'negligible', 'low', medium' and 'high' for the magnitude of impact, based on the categorisation set out in Table 1 below.

Table 1 – Categorisation of magnitudes of effect used in this review

Impact satisfies the BRE	Impact does not satisfy the BRE guidelines		
guidelines	20.1% to 29.9% loss	30% to 39.9% loss	more than 40% loss
Negligible impact	Low magnitude impact	Medium magnitude impact	High magnitude impact

Appendix H of the BRE guide provides guidance for use in EIAs to determine the significance of effect ('negligible', 'minor', 'moderate', and 'major' adverse). Whilst the Application is not EIA development, the guidelines are nonetheless helpful in understanding the significance of the effects of the development. Significance takes into account the number of impacts that are outside the BRE guidelines, the magnitude of the impacts and the margin by which they are outside, the sensitivity of the receptors (in terms of the strength of their requirement for daylight and sunlight), whether the receptors have other sources of light and whether there are particular reasons why an alternative, less stringent, guideline should be applied.

#### 5. Internal daylight and sunlight to proposed dwellings and sunlight to proposed amenity spaces

Daylight and sunlight to all of the proposed dwellings has been assessed. The results suggest that:

- 29% of the 79 habitable residential rooms within West Central Street will satisfy or exceed the minimum recommended lux targets and 60% of units will satisfy the sunlight target;
- 12% of the 41 habitable residential rooms within Vine Lane will satisfy or exceed the minimum recommended lux targets and 16% of units will satisfy the sunlight target; and
- 31% of the 13 habitable residential rooms within High Holborn will satisfy or exceed the minimum recommended lux targets and 50% of units will satisfy the sunlight target.

The applicant has stated that one of the three units within High Holborn would meet the sunlight target (33%), however this property has four units with the results demonstrating that two units (50%) would meet this target.

Overall, the development appears to provide a relatively low level of adherence to daylight and sunlight guidelines. It should be noted that there would be a number of rooms where none of the area would see the target lux and/or see no sunlight.

Sun on ground has also been considered for the two proposed amenity spaces within the scheme and the results are shown in Section 6 within the report. The assessment demonstrates that the amenity area at Vine Lane building will receive the minimum BRE recommendations of 2 hours of direct sunlight to 78% of the area on March 21<sup>st</sup>. The amenity area at West Central Street will not meet the guidelines, seeing less than 2 hours of sunlight to its entire area on this date.

The courtyard arrangement restricts sunlight outside of the summer months and so an additional assessment has been run on the 21 June. This demonstrates that the West Central Street amenity area will see more than 2 hours of direct sunlight to the majority of its area on this date.

#### 6. Effects of proposed development on existing surroundings

#### Daylight and sunlight to neighbouring properties

I agree that the following properties would fully comply with the BRE guidelines for daylight and sunlight and therefore experience a negligible effect:

- Sovereign House
- Shaftesbury Court
- 7 Grape Street
- 40 New Oxford Street
- 42 New Oxford Street

I agree that the above properties would not experience unacceptable harm.

A detailed commentary of the daylight and sunlight impacts to the remaining properties is given in the assessment and I summarise this below.

#### <u>190-191 Drury Lane (The White Hart PH)</u>

Seven of the 10 windows assessed would meet the guidelines for VSC. Of the remaining three windows, two would experience a low magnitude impact of between 20.1%-29.9% and one would experience a medium magnitude impact between 30%-39.9%.

For NSL, one room would meet the guidelines. Of the remaining three rooms, two would experience a low magnitude impact of between 20.1%-29.9% and one would experience a medium magnitude impact between 30%-39.9%.

All windows would meet the guidelines for sunlight.

Overall, I consider this property to experience a minor adverse effect in daylight and negligible effect in sunlight. I agree that this property would not experience unacceptable harm.

#### 178 High Holborn (Student Accommodation)

24 of the 124 windows assessed would meet the guidelines for VSC. Of the remaining 100 windows, 36 would experience a low magnitude impact of between 20.1%-29.9%, 51 would experience a medium magnitude impact of between 30%-39.9% and 13 would experience a high magnitude impact over 40%.

For NSL, 42 rooms would meet the guidelines. Of the remaining 35 rooms, 24 would experience a low magnitude impact of between 20.1%-29.9%, 6 would experience a medium magnitude impact of between 30%-39.9% and 5 would experience a high magnitude impact over 40%.

Due to orientation, no windows qualify for sunlight assessment.

When looking at the retained daylight levels, 99 windows would experience 'mid-teen' and above VSC values, with 54 of these experiencing VSCs in excess of 20%. The NSL results demonstrate that 74 of the 77 rooms would experience retained values of at least 50%. Use of a mid-teen VSC benchmark has been held to be appropriate in denser, more built-up areas, whilst a higher benchmark (c. 20% VSC) has been held to be more appropriate in more suburban areas. The Council may have its own view as to an appropriate benchmark in this location.

Overall, I consider this property to experience a minor-moderate adverse effect in daylight and negligible effect in sunlight. Given the transient nature of the property and the retained daylight values, the effects could be considered acceptable and should be weighed against other planning issues to determine whether unacceptable harm is caused.

#### 14 West Central Street

15 of the 20 windows assessed would meet the guidelines for VSC. Of the remaining five windows, two would experience a low magnitude impact of between 20.1%-29.9% and three would experience a high magnitude impact over 40%.

24 January 2023

For NSL, 13 of the 18 rooms would meet the guidelines. Of the remaining five rooms, four would experience a low magnitude impact of between 20.1%-29.9% and one would experience a medium magnitude impact of between 30%-39.9%.

The sunlight assessment demonstrates that four of the nine rooms assessed would meet the APSH guidelines. Of the remaining five rooms, one would experience a low magnitude impact of between 20.1%-29.9%, two would experience a medium magnitude impact of between 30%-39.9% and two would experience a high magnitude impact over 40%.

The applicant has stated that the massing of 7 Grape Street acts as a projecting wing, which may result in a larger relative reduction in VSC. The BRE guide recognises that such an obstruction may lead to an unavoidable reduction in VSC. The BRE guide suggests removing a balcony to determine whether that is the main factor in the relative loss of light rather than the size of the new obstruction. Although not specifically mentioned within the guide, it is considered that the same test could be applied here, with the projecting wing being removed.

From review of the NSL contour plots, the windows and rooms that experience reductions beyond the BRE guidelines serve three separate flats which would face directly onto the proposed Vine Lane Building. In each case these windows are the only ones serving the flats. I consider the daylight effect to the first and second floor flats to be moderate adverse, and the daylight effect to the third floor flat to be minor adverse. In sunlight terms, I consider the effect to the first floor flat to be minor adverse, the effect to the second floor flat to be moderate adverse and the effect to the third floor flat to be minor adverse. I can agree that no unacceptable harm would be caused to the third floor flat. The harm caused to the second floor flat and more particularly the first floor flat is greater, and I believe that this needs to be considered alongside other planning matters to determine whether no unacceptable harm would be caused.

The flats that front West Central Street would all meet the guidelines and therefore experience a negligible effect. I agree that no unacceptable harm would be caused to these flats.

#### King Edward Mansions

84 of the 96 windows assessed would meet the guidelines for VSC. The remaining 12 windows would experience a low magnitude impact of between 20.1%-29.9%.

For NSL, 45 of the 47 rooms would meet the guidelines. The remaining two rooms would experience a low magnitude impact of between 20.1%-29.9%.

The sunlight assessment demonstrates that 10 of the 11 rooms assessed would meet the APSH guidelines. The remaining one room would experience a low magnitude impact of between 20.1%-29.9%.

Overall, I consider this property to experience a minor adverse effect in daylight and sunlight. I agree that this property would not experience unacceptable harm.

#### 43A New Oxford Street

One of the six windows assessed would meet the guidelines for VSC. Of the remaining five windows, three would experience a low magnitude impact of between 20.1%-29.9% and two would experience a medium magnitude impact of between 30%-39.9%.

None of the six rooms would meet the guidelines for NSL. Two would experience a low magnitude impact of between 20.1%-29.9%, three would experience a medium magnitude impact of between 30%-39.9% and one would experience a high magnitude impact over 40%.

The sunlight assessment demonstrates that three of the six rooms assessed would meet the APSH guidelines. Two of the remaining rooms would experience a medium magnitude impact of between 30%-39.9% and one would experience a high magnitude impact over 40%.

Whilst the applicant's report is based on assumed layouts, I have been able to source a third floor plan (shown in Figure 1) taken from online estate agent particulars. The floor plan demonstrates that the windows that face onto the site serve a small kitchen and bathroom. Assuming the layout is correct and mirrored on the other floors means that there would be no requirement to test the bathroom for daylight and neither room would qualify for sunlight assessment.

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#### Figure 1 – Third floor plan

Based on the above assumptions, I consider this property to experience a minor adverse effect in daylight and negligible effect in sunlight. I agree that this property would not experience unacceptable harm.

#### The Old Crown PH

None of the three windows assessed would meet the guidelines for VSC. All three would experience a high magnitude impact over 40%.

None of the three rooms would meet the guidelines for NSL. All three would experience a medium magnitude impact of between 30%-39.9%.

The sunlight assessment demonstrates that none of the three rooms assessed would meet the APSH guidelines. All three rooms would experience a high magnitude impact over 40%.

Overall, I consider this property to experience a moderate adverse effect in daylight and sunlight. It is likely that the windows facing towards the site are secondary windows or serve small secondary spaces, with the main living rooms facing onto New Oxford Street and Museum Street. On the basis that the impacts are limited to these windows and rooms I agree that this property would not experience unacceptable harm.

#### Sunlight to neighbouring amenity spaces

The overshadowing assessment demonstrates that there will be a negligible impact on sunlight to surrounding amenity spaces.

#### 7. Conclusions and recommendations

The assessment has been undertaken in accordance with the published guidelines.

#### Internal daylight and sunlight within the proposed development

Overall, 32 (24%) of the 133 habitable residential rooms across the three sites will satisfy or exceed the minimum recommended lux targets for daylight. 20 of the 48 units (42%) will satisfy the sunlight target.

One of the two proposed amenity spaces within the development will benefit from adequate levels of sunlight. The second amenity space will not meet the recommended target on 21 March but would see more than 2 hours of sunlight to over half of its area on 21 June.

#### Effects on existing surrounding properties and amenity spaces

Five of the 11 neighbouring properties assessed would experience a negligible effect in daylight and sunlight terms. These are Sovereign House, Shaftesbury Court, 7 Grape Street, 40 New Oxford Street and 42 New Oxford Street.

The remaining six properties would experience negligible to moderate adverse effects for daylight and negligible to major adverse effects for sunlight.

There will be no significant adverse effect on sunlight to surrounding amenity spaces.

#### Planning balance

The applicant has concluded that they do not consider that unacceptable harm would be caused to the neighbouring properties. Whilst I have provided my opinion on this for each property, the question for you and, ultimately, the Council's decision makers is whether, in the site context, the effects are acceptable. Ultimately it comes down to a matter of judgment and overall planning balance, which is beyond my remit.

I trust this provides you with what you need. If you have any queries, please let me know.

Yours sincerely

Dnovan

Amy Donovan BA (Hons) Associate amy.donovan@delvapatmanredler.co.uk

Encs: Appendix 1 – Glossary of terms Appendix 2 – Summary of guidelines for assessing daylight, sunlight, and overshadowing

### Appendix 1 – Glossary of terms

Term	Meaning	
Annual probable sunlight hours ( <b>APSH</b> )	The long-term average of the total number of hours during a year in which direct sunlight is expected to shine on the unobstructed ground, allowing for average levels of cloudiness for the location in question.	
Daylight factor (D)	Ratio of total daylight illuminance at a reference point on the working plane within a space to outdoor illuminance on a horizontal plane due to an unobstructed CIE standard overcast sky.	
Illuminance	The angular altitude of the top of an obstruction above the horizontal, measured from a reference point in a vertical plane in a section perpendicular to the vertical plane.	
KD, LD, LKD	Acronyms for kitchen-diner, living/dining room, living/kitchen/dining room.	
No-sky line ( <b>NSL</b> )	The outline on the working plane inside a room of the area from which no sky can be seen. It divides points on the working plane which can and cannot see the sky.	
Obstruction angle	The angular altitude of the top of an obstruction above the horizontal, measured from a reference point in a vertical plane in a section perpendicular to the vertical plane.	
Sky factor	Ratio of the parts of illuminance at a point on a given plane that would be received directly through unglazed openings from a sky of uniform luminance, to illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The sky factor does not include reflected light, either from outdoor or indoor surfaces.	
Sun on ground ( <b>SOG</b> )	The measure of sunlight potential to gardens and amenity spaces. It is measured in hours on the spring equinox (21 March) at a point on the ground accounting for the latitude of the site location. Sunlight below an altitude of 10° is usually discounted as it is likely to be prevented from reaching the ground by fences, plants or other low-level obstructions.	
Target illuminance (E⊤)	Illuminance from daylight that should be achieved for at least half of annual daylight hours across a specified fraction of the reference plane in a daylit space.	
Vertical sky component ( <b>VSC</b> )	The amount of daylight falling on a vertical wall or window. It is the ratio of that part of illuminance, at a point on a given vertical plane (e.g. window), that is received directly from a CIE standard overcast sky, to simultaneous illuminance on a horizontal plane due to an unobstructed hemisphere of this sky. The VSC does not include reflected light, either from the ground or from other buildings. The ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall.	
Working plane	Horizontal, vertical or inclined plane in which a visual task lies. Normally the working plane may be taken to be horizontal, 0.85 m above the floor in housing.	

The daylight and sunlight terminology used in our review is explained below.

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## Appendix 2 – Summary of guidelines for assessing daylight, sunlight, overshadowing and solar glare

1. The key guidelines relating to daylight, sunlight and overshadowing and solar glare, are contained in 'Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice' (Building Research Establishment (**BRE**), BR209, third edition, 2022).

#### Guidelines on daylight and sunlight within new buildings

#### Detailed design

#### Daylight Illuminance

- 2. Daylight illuminance method involves using climate data for the location of the site (weather file within the software) to calculate the illuminance from daylight at each point on an assessment grid on the reference plane at an at least hourly interval for a typical year.
- 3. A target illuminance (E<sub>T</sub>) should be achieved across at least half of the reference plane in a daylit space for at least half of the daylight hours.
- 4. Appendix C, *Interior daylighting recommendations,* of the BRE guide gives guidance on how to calculate the illuminance. This methodology require assessment via detailed computer modelling to simulate the illuminance or daylight factor at calculation points within a proposed space. Appropriate simulation settings must be used. The calculation model should include all the room surfaces, and any surface outside the room that could affect the light received.
- 5. The BRE guide 2022 gives the target illuminance recommendations of 200 lux for kitchens, 150 lux for living rooms and 100 lux for bedrooms in UK dwellings. These values to be exceeded over at least 50% of the assessment points in the room for at least half of the daylight hours.
- 6. Living rooms and kitchens need more daylight than bedrooms. Areas without a special requirement for daylight, like bathrooms, stairwells, garages and storage areas, need not be assessed.
- 7. Internal and external surfaces and obstructions should be modelled including appropriate surface reflectance. Glazing transmission factors, including maintenance factors, need to be included in the simulation along with account for, or modelling of, window framing.
- 8. The calculation of illuminance or daylight factor needs to be carried out on a grid of points on a reference plane within each room assessed. The calculation plane should normally be 0.85m from the floor level and is sometimes described as a working plane.
- 9. It is recommended that a band of 0.3m should be excluded. Professional judgement should be used in cases with irregular-shaped spaces or rooms with corridors or annexe areas. For example, in a room with a corridor, the corridor need not be included in the assessment grid area if it is less than 1.5m).

#### Sunlight to new dwellings

#### 10. The BRE guide states:

In housing, the main requirement for sunlight is in living rooms, where it is valued at any time of day but especially in the afternoon. Sunlight is also required in conservatories. It is viewed as less important in bedrooms and in kitchens, where people prefer it in the morning rather than the afternoon.

Sensitive layout design of flats will attempt to ensure that each individual dwelling has at least one main living room which can receive a reasonable amount of sunlight.

The overall sunlighting potential of a large residential development may be initially assessed by counting how many dwellings have a window to a main living room facing south, east or west. The aim should be to minimise the number of dwellings whose living rooms face solely north, north east or north west, unless there is some compensating factor such as an appealing view to the north.

- 11. The BRE guide recommends that space should receive a minimum of 1.5 hours of direct sunlight on 21st March. For dwellings, at least one habitable room, preferably a main living room, should meet at least the minimum criterion.
- 12. Where groups of dwellings are planned, site layout design should aim to maximise the number of dwellings that meet this recommendation.
- 13. Although the criteria applies to rooms of all orientations, if a room faces significantly north of due east or west, the guide notes they are unlikely to be met.

#### 14. When calculating the sunlight, the BRE guide advises that:

...if window positions are already known, a reference point on the inside face of the window aperture at the centre of the opening width and at least 1.2m above the floor and 0.3 m above the sill (whichever is the higher) is used.

#### 15. It also advises that:

Sunlight blocked by window reveals and balconies or overhangs above the window should not be included, but the effect of window frames and bars can be discounted. Surrounding obstructions should be modelled in detail, and if this is done a minimum solar altitude, as suggested in BS EN 17037, need not apply. If a room has multiple windows, the amount of sunlight received by each can be added together provided they occur at different times and sunlight hours are not double counted.

#### Amenity spaces

- 16. Proposed amenity spaces should be assessed on the equinox (21 March). The sunlighting requirements of each space may differ depending on use, but in general it will be considered adequately sunlit if at least half its area can receive at least two hours of sunlight on 21 March (the two-hours sun-on-ground test). Normally trees and shrubs, fences or walls less than 1.5 metres high and sunlight at an altitude of 10° or less are all ignored.
- 17. Where a large building is proposed, it can be illustrative to plot shadow plots at different times of day and year, with the equinox (21 March) being the best assessment date. Summer and winter solstices (21 June and 21 December) are optional additional dates.

## Guidelines on impact of development on daylight, sunlight and overshadowing to neighbouring properties

18. The BRE guide provides methodologies and numerical guidelines for assessing the effects of development on daylight and sunlight to neighbouring properties and sunlight to amenity spaces.

#### Effects on daylight and sunlight to buildings

- 19. Where some part of the proposed development will subtend an angle greater than 25° to the horizontal measured from the level of the centre of the lowest neighbouring windows, the effect on daylight and sunlight to the habitable rooms should be assessed using the following tests:
  - Daylight:
    - vertical sky component (VSC) at the window, which assesses the total available skylight; and
    - no-sky line contour (NSL) on the working plane inside rooms (where layouts are known<sup>1</sup>), which assesses the distribution of daylight around the room.
  - Sunlight:
    - percentage of annual probable sunlight hours (APSH) at the window, where it faces within 90° due south, both annually and in the winter months.

The author of the BRE Guide, Dr Littlefair, recommends not running the NSL test using estimated layouts because it can give inaccurate findings. (BRE Client Report dated 5 March 2019 for a review at Reardon and Lowder Houses, Wapping on behalf of London Borough of Tower Hamlets - planning application reference PA/18/03541/A1)

- 20. The assessments are run in the existing and proposed scenarios on an absolute scale, followed by a comparative scale measuring the factor of former value (or percentage reduction), so that the magnitude of impact is quantified.
- 21. For daylight, all habitable rooms should be assessed. For sunlight, all main living rooms and conservatories should be assessed.
- 22. The BRE numerical guidelines work on the principle that, unless certain minimum values will be retained with the proposed development in place (27% VSC and 25% APSH with 5% APSH in winter), or in the case of sunlight the annual loss will be no greater than 4% APSH, a reduction to less than **0.8 times former value** (i.e. relative losses exceeding 20% of the existing value) will be noticeable to occupiers.

#### Effects on sunlight to gardens and amenity spaces

- 23. The effects on sunlight to gardens/amenity spaces can be checked by calculating the percentage of each area that can receive at least two hours of sunlight on 21 March. If, after development, it will reduce to less than 50% and less than 0.8 times its former value, the loss of sunlight will be noticeable to users of the space.
- 24. Where a large building is proposed, shadow plots can be produced at different times of day and year. The equinox (21 March) is the best assessment date. Summer and winter solstices (21 June and 21 December) are optional additional dates.

#### Cumulative effects

25. If planning consent has been granted for other nearby developments that have not yet been built, it is customary to assess the cumulative effects of the proposed development and nearby consented developments on the surrounding receptors so that the combined effects can be understood.

#### Setting alternative target values

- 26. Appendix F of the BRE guide provides advice on setting alternative target values for daylight and sunlight. This notes that the numerical target values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location.
- 27. Alternative targets may be generated from the layout dimensions of existing development or be based on an extant planning permission. Table F1 of the BRE guide gives various building-to-building angles of long, uniform obstructions and their corresponding VSC values. An example is given of a narrow mews in an historic city centre where the VSC values derived from the obstruction angle could be used as a target vale for development in that street if new development is to match the existing layout.
- 28. The guide notes that a similar approach may be adopted in cases where an existing building has windows that are unusually close to the site boundary and taking more than their fair share of light. This is an acknowledgement that the first built scheme of a local cluster could otherwise prevent the full potential of adjacent sites from being realised. In such cases, a greater reduction in daylight and sunlight may be unavoidable if one site is not to be unfairly prejudiced by how another has been developed.<sup>2</sup> In such circumstances where it is appropriate to enable new development to match the height and proportions of existing buildings, alternative target values for VSC and APSH for the relevant windows may be set to those for a 'mirror-image' building of the same height and size, an equal distance away on the other side of the boundary.<sup>3</sup>
- 29. Where there is an **extant planning consent** for the application site and the developer wishes to change the design, the BRE guide states:

In assessing the loss of light to existing windows nearby, a local authority may allow the vertical sky component (VSC) and annual probable sunlight hours (APSH) for the permitted scheme to be used as alternative benchmarks. However, since the permitted scheme only exists on paper, it would be inappropriate for it to be treated in the same way as an existing building, and for the developer to set 0.8 times the values for the permitted scheme as benchmarks.

<sup>&</sup>lt;sup>2</sup> Appeal Reference APP/E5900/W/17/3191757, Enterprise House, 21 Buckle Street, London E1 8NN, London Borough of Tower Hamlets, Inspector's decision dated 17 December 2018, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=30276955</u>

<sup>&</sup>lt;sup>3</sup> BRE Guide, Appendix F, paragraph F5

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#### Environmental Impact Assessments (EIAs)

#### 30. Appendix H of the BRE guide provides advice on ascribing a significance to effects in EIAs. The guide states:

Adverse impacts occur when there is a significant decrease in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space. The assessment of impact will depend on a combination of factors, and there is no simple rule of thumb that can be applied.

Where the loss of skylight or sunlight fully meets the guidelines in this document, the impact is assessed as negligible or minor adverse. Where the loss of light is well within the guidelines, or only a small number of windows or limited area of open space lose light (within the guidelines), a classification of negligible impact is more appropriate. Where the loss of light is only just within the guidelines, and a larger number of windows or open space area are affected, a minor adverse impact would be more appropriate, especially if there is a particularly strong requirement for daylight and sunlight in the affected building or open space.

Where the loss of skylight or sunlight does not meet the guidelines in this document, the impact is assessed as minor, moderate or major adverse. Factors tending towards a minor adverse impact include:

- only a small number of windows or limited area of open space are affected;
- the loss of light is only marginally outside the guidelines;
- an affected room has other sources of skylight or sunlight;
- the affected building or open space only has a low level requirement for skylight or sunlight; and
- there are particular reasons why an alternative, less stringent, guideline should be applied, for example an overhang above the window or a window standing unusually close to the boundary.

Factors tending towards a major adverse impact include:

- a large number of windows or large area of open space are affected;
- the loss of light is substantially outside the guidelines;
- all the windows in a particular property are affected; and
- the affected indoor or outdoor spaces have a particularly strong requirement for skylight or sunlight, e.g. a living room in a dwelling or a children's playground.

#### Acceptability of impacts on daylight and sunlight

- 31. The assessment of impact on daylight and sunlight amenity is a two-part process<sup>4</sup>: first, as a matter of calculation, whether there would be a material deterioration in conditions by reference to the BRE guidelines; and second, as a matter of judgment, whether that deterioration would be acceptable in the circumstances.
- 32. The first stage can be addressed by applying the BRE assessment methodology and numerical guidelines, as explained above.
- 33. The second stage brings into play much wider considerations, such as:
  - Whether the neighbouring building stands unusually close to the site boundary, including the highway, taking more than its fair share of light, such that a greater reduction in light may be unavoidable if one site is not to be prejudiced by how another has been developed. (A 'mirror-image' study can be informative in such cases – see paragraph 28 above.)
  - Whether windows in neighbouring buildings are self-obstructed by overhanging or inset balconies or other projections such as to make relatively larger reductions unavoidable even if there is a modest new obstruction opposite - in effect themselves taking away more than their fair share of light. (A 'without balconies' study can be informative in such cases – see paragraph 34 below.)
  - iii) In historic city centres or areas characterised by modern tall buildings, high density and close proximity, a higher degree of obstruction may be unavoidable if new buildings are to match the height and proportion of existing buildings.

<sup>&</sup>lt;sup>4</sup> Rainbird, R (on the application of) v The Council of the London Borough of Tower Hamlets [2018], <u>https://www.bailii.org/ew/cases/EWHC/Admin/2018/657.html</u>

- iv) In areas that are designated by planning authorities for substantial growth or providing opportunities for change and sustainable regeneration, the sort of change that would be brought about by the introduction of taller, denser development is to be expected, including reductions in daylight and sunlight levels, closer proximity, loss of outlook, etc.
- 34. Balconies and projecting wings on an existing neighbouring building may mean larger relative reductions in daylight and sunlight are unavoidable. That is because they limit the available daylight and sunlight and may amplify relative reductions in light caused by development. Whether they are the main factor in the relative light loss can be checked by carrying out a supplementary assessment in the existing and proposed situations without the balcony or other projection in place. If, with the balcony, wing, or other projection in place, the proposed VSC/NSL/APSH value would be less than 0.8 times the existing value, yet with it removed the ratio would be well over 0.8, then the balcony, wing or other projection is the main factor in the relative loss of light, rather than purely the size of the new obstruction.<sup>5</sup>
- 35. When judging whether an adverse impact is acceptable, it may be appropriate to consider the levels of daylight and sunlight that would be retained with the proposed development in place and whether the resulting living conditions would nonetheless be acceptable, in context.
- 36. One benchmark that is commonly used in denser, inner-urban areas is to check whether retained VSC values would be in the mid-teens or greater. An example of this approach is the Whitechapel Estate Appeal <sup>6</sup>. There the Inspector noted that development that resulted in a proportion of residual VSC values in the mid-teens, with a smaller proportion in the bands below 15% VSC, have been found acceptable in major developments across London. He stated:
  - 108. The BRE document offers guidance on generally acceptable standards of daylight and sunlight, but advises that numerical values are not to be rigidly applied and recognises the importance of the specific circumstances of each case. Inner city development is one of the examples where a different approach might be justified. This is specifically endorsed by the [Mayor of London's] Housing SPG, which calls for guidelines to be applied sensitively to higher density developments, especially in (among others) opportunity areas and accessible locations, taking into account local circumstances, the need to optimise housing capacity, and the scope for the character and form of an area to change over time. ... I agree with the appellants that blanket application of the BRE guide optimum standards, which are best achieved in relatively low-rise well spaced layouts, is not appropriate in this instance.
  - 109. The SPG advises that the daylight impact on adjacent properties should be assessed drawing on "broadly comparable residential typologies within the area and of a similar nature across London"...
  - 112. The figures [from comparable typologies from a range of example sites across Central London analysed by the appellants, comprising both traditional urban streets and recently permitted areas of significant development] show that a proportion of residual Vertical Sky Component ('VSC') values in the mid-teens have been found acceptable in major developments across London. This echoes the Mayor's endorsement in the preSPG decision at Monmouth House, Islington that VSC values in the mid-teens are acceptable in an inner urban environment. They also show a smaller proportion in the bands below 15%...
  - 113. I acknowledge that a focus on overall residual levels could risk losing sight of individual problem areas. It is accepted that light is only one factor in assessing overall levels of amenity, but I consider that the trade-off with other factors, such as access to public transport or green space, is likely to be of more relevance to an occupier of new development than to an existing neighbour whose long-enjoyed living conditions would be adversely affected by new buildings. However, I also consider that Inner London is an area where there should generally be a high expectation of development taking place. This is particularly so in the case of the appeal site, where the Whitechapel Vision Masterplan and the City Fringe Opportunity Area Planning Framework have flagged the desirability of high density development. Existing residents would in my view be prepared for change and

<sup>&</sup>lt;sup>5</sup> BRE Guide, paragraphs 2.2.11 to 2.2.12 and paragraph 3.2.9

<sup>&</sup>lt;sup>6</sup> Appeal reference APP/E5900/W/17/3171437, Varden Street and Ashfield Street, London E1, London Borough of Tower Hamlets, Inspector's decision dated 21 February 2018, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=25711269</u>

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would not necessarily expect existing standards of daylight and sunlight to persist after development.

- 37. Whilst use of the mid-teen VSC benchmark may be appropriate in denser and more built-up areas, a higher benchmark may be more appropriate in more suburban areas.<sup>7</sup>
- 38. Another approach to judging acceptability is to consider the retained ADF values in the proposed condition against those recommended in the BRE guide for new dwellings. Such an approach is advocated by the author of the BRE guide, Dr Paul Littlefair, because it relates to the level of daylight actually experienced by an occupant inside their property, rather than the amount of light falling on the outside face of the window. Arguably, it gives a better indication of residual daylight levels as it takes account of window design and room layout. <sup>8</sup>
- 39. Residual ADF values appear to have been a key factor in the dismissal of the Appeal at 8 Albert Embankment. In that case, the impact on a social housing block, which houses families and people with vulnerabilities, would have satisfied the mid-teen VSC benchmark; however, 23 out of 25 living rooms would have been left with daylight levels below minimum recommended ADF values. The Inspector and Secretary of State considered the daylight impacts to be unacceptable. <sup>9</sup>
- 40. In the Appeal at Graphite Square, the Inspector considered several important factors when judging very significant losses of light to be acceptable: <sup>10</sup>
  - a. In relation to a neighbouring social housing block, the relevant factors were:
    - i. the flats were dual aspect, with the affected rooms being predominantly small kitchens, kitchen/diners, bathrooms, and second bedrooms, whilst the main living areas and main bedrooms, which faced in the opposite direction and received much more significant amounts of daylight and sunlight, would be completely unaffected;
    - ii. many of the affected kitchens were too small to qualify as habitable rooms for the purpose of the calculations; and
    - iii. the kitchens and second bedrooms received little daylight due to the overhanging deck-access or roof and relied on electric lighting most of the time to facilitate use, such that the loss of daylight would not make a great difference to their pattern of use or enjoyment.
  - b. In relation to a neighbouring modern private housing block, the relevant factors were:
    - i. the impacts must be seen in the context that the building had a rather privileged position facing minimal massing on the relevant part of the appeal site, as a result of which it received much higher levels of daylight and sunlight than one might reasonably expect in such an urban location;
    - ii. the design of the building contributed to the impacts, because the worst affected rooms were those awkwardly located at an internal corner of the building or below overhanging balconies; and
    - iii. whoever designed that building ought to have considered the strong likelihood that the appeal site, given its central London location and obvious potential, would not remain underused.

<sup>&</sup>lt;sup>7</sup> Appeal reference APP/A5840/W/19/3225548, Burgess Business Park, Parkhouse Street, London SE5, London Borough of Southwark, Secretary of State's decision dated 29 April 2020, paragraphs IR247 and IR248, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=37313536</u>

<sup>&</sup>lt;sup>8</sup> Appeal reference APP/E5900/W/17/3190685, land at **1 Cambridge Heath Road**, London E1, London Borough of Tower Hamlets, Secretary of State's decision dated 10 June 2019, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=32778055</u>

<sup>&</sup>lt;sup>9</sup> Appeal reference APP/N5660/V/20/32542038, 8 Albert Embankment, London SE1, London Borough of Lambeth, Secretary of State's decision dated 23 June 2021, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=43043066</u>

<sup>&</sup>lt;sup>10</sup> Appeal references APP/N5660/W/18/3211223 and APP/N5660/W/19/3225761, Graphite Square, London SE11, London Borough of Lambeth, Inspector's decision dated 25 September 2019, <u>https://acp.planninginspectorate.gov.uk/ViewDocument.aspx?fileid=34348840</u>