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08 February 2021

Dear Mr Gray,

Re: Redevelopment of Perceval House, Ealing - Daylight & Sunlight Review

1. Introduction and Scope

Eb7 was instructed by Ealing Borough Council to review and provide our professional opinion on the daylight and sunlight assessment provided by the developer's consultants (GIA) in relation to the mixed-use redevelopment of Perceval House, Ealing.

Our review considers the planning application plans/documents submitted to LE Ealing under reference 203275FULR3 relevant to this letter and the GIA reports dated 23rd June 2020 (pre-application) and 7th August 2020 (with the application), which encompasses the analysis and discussion of the results of all previously submitted reports (and Environmental Statement) and includes further relevant analysis and commentary on sites of comparable nature and typology in the Borough.

The review does not extend to a separate detailed technical analysis undertaken by eb7, nor have eb7 been instructed to check in detail the computer modelling, or calculations undertaken by the applicant's consultants. The technical analysis carried out by GIA corresponds to normal practice and there is no reason therefore to conclude that the results are likely to be any different to what eb7 would have found. On this basis, we have accepted GIA's results as accurate for the purpose of this review and only provide an opinion on what the results demonstrate and the conclusions to be drawn therefrom.

2. Guidance and Planning Policy

We understand the Council's planning policy advises that new development will only be permitted where it is shown not to cause unacceptable loss of daylight or sunlight amenity to neighbouring properties. Also that the assessment of daylight and sunlight implications of new developments should be undertaken following the methodologies set out within the Building Research Establishment (BRE) Guidance 'Site layout planning for daylight and sunlight: A guide to good practice'.

The need to protect amenity of neighbours is echoed within recent publications from the Mayor of London and the Secretary of State for Housing, Communities and Local Government. Although, these documents also stress that current guidance needs to be used flexibly where developments are located in urban areas and intend to achieve higher densities. Specifically, these documents suggest that the nationally applicable criteria given within the BRE guidance needs to be applied in consideration of the development's context.

From my knowledge of the site and locality in central Ealing, I consider the application site to lie within in an urban area of the type contemplated by these policy documents. In saying that I recognise that more traditional style suburban housing adjoins the site to the north west on Craven Avenue and north, on Gordon Road, albeit separated by the mainline railway.

The GIA report has considered local, regional and national planning policy relating to daylight and sunlight as follows. We are satisfied that this includes all of the relevant planning policy and technical guidance relevant to the daylight and sunlight assessments.

- National Planning Policy Framework (NPPF - Ministry of Housing Communities and Local Government - June 2019)
- National Planning Practice Guidance Updated (NPPG - Ministry of Housing Communities and Local Government - October 2017)
- The London Plan (The Spatial Development Strategy for London Consolidated with Alterations Since 2011 – March 2016)
- The London Plan – Intend to Publish (December 2019)
- The Housing Supplementary Planning (March 2016, updated 2017)
- Ealing Development (Core) Strategy DPD 2026 (April 2012)
- Ealing's Development Sites DPD (December 2013)
- Ealing's Development Management DPD (December 2013)
- Central Ealing Neighbourhood Plan 2017-2026 (October 2017)
- Building Research Establishment Guidelines (2011)

3. Methodology and Application of the BRE Guidance

The Building Research Establishment (BRE) guidelines – 'Site Layout Planning for Daylight and Sunlight: a guide to good practice (2011)' is the document referred to by most Local Planning Authorities when considering daylight and sunlight matters affecting new development. It sets the technical methodology and criteria by which daylight, sunlight and overshadowing assessments should be undertaken. We have provided a more detailed summary of the BRE guidance within appendix 1.

It is important to note that the BRE guidance is applicable to all types of development in all types of location and the introduction to the guide suggests that some flexibility will be required when applying the numerical criteria to development in higher density locations. More recent guidance set out by the Government's Housing White Paper, National Planning Practice Guidance and the Mayor of London's London Plan

reinforce the need for a flexible approach and suggest that numerical criteria for assessment of developments in London should be informed by the local context.

Assessment of Neighbouring Properties

The BRE guide sets out numerical criteria for the assessment of impact to neighbouring properties (as described in the guidance at appendix 1). Both the BRE guidance and planning policy are also careful to note that there are various other factors that need to be considered when determining the acceptability of impacts arising from proposed developments in London, or any other dense urban area. These include: -

1. The requirement for a development to meet the height and proportions of other large-scale buildings in the area.
2. The requirement for the development to meet the densification requirements of local and national planning policy. The DCLG Housing White Paper and the Mayor's London Housing SPG both suggest that new residential developments should be assessed 'drawing on broadly comparable residential typologies within the area'. To this end GIA have presented a 'contextual' assessment of other residential development in the local area upon which I comment later in this report.
3. Whether the neighbouring property is itself a good neighbour? i.e., whether it has windows that are unreasonably close to the development site and 'take more than their fair share of light', thereby placing undue burden upon the development site. (The BRE guide suggests this can be demonstrated with a 'mirrored neighbour' assessment).
4. Whether windows in the neighbouring property are self-inhibited by balconies or other features of the building? i.e., whether it has balconies or other obstructions that place reliance / undue burden upon the development site.

In light of the above, we have considered the impacts to neighbouring properties using a two-stage process:

- Whether there would be a material impact to the daylight and sunlight received by neighbouring properties; and
- Whether there is justification for the impact given the context of the site and wider considerations set out above.

In the first instance, the BRE guidance suggests criteria for the assessment of daylight and sunlight where a material level of impact is defined as that which would be 'noticeable' to occupants. So, if the impact to a neighbouring property is shown to comply with the BRE criteria, then there would not be a material impact. Secondly, if the development creates impacts that go beyond the BRE criteria, whether there are mitigating factors in-line with the wider considerations set out above.

Contextual analysis of other residential development in the local area

As noted at point 2 above, the DCLG's Housing White Paper and Mayor of London's Housing SPG suggest that the impact of new development upon the daylight and sunlight received by neighbouring properties should be assessed in consideration of its context and may require deviation from the nationally applicable standards presented in the BRE guidance. It should also note the scope for the character and form of an area to change over time.

To this end GIA have presented a 'contextual analysis' in Appendix 05 of their daylight and sunlight report. Their analysis considers the levels of daylight and sunlight received by neighbouring properties of four other large-scale developments in similar areas of London: -

- Dickens Yard, Ealing
- Western Circus, Acton
- Arches Business Centre, Southall
- London Road, Barking

The GIA report provides reasoning for the selection of these properties based upon their PTAL (transport) rating, ground coverage, face-to-face distances of buildings and building heights. A comparison of these factors is presented in 'Table 01 – Contextual Research Summary' and concludes that these developments are similar in type, form and scale to the proposed Perceval House development. Having reviewed these factors we would agree that they are broadly similar to the Perceval House proposals in type, location and scale and present a reasonable means of comparison.

The comparison of daylight levels received by neighbouring properties of the new and proposed developments has been conducted using the Vertical Sky Component (VSC) assessment as described within the BRE guidance (BR209). Whilst we cannot verify the validity of the technical assessments in this report, we agree that the VSC method is the most appropriate means of forming contextual comparison of the developments and is in line with BRE and Mayor of London Guidance in this respect.

The GIA report presents the results of their contextual assessment using a series of images in their report and draws some general conclusions about the results. As such, we have not been able to determine the precise levels of VSC presented in these studies, but have provided a summary of these assessments and the GIA conclusions in the following table.

Development	Summary of VSC Façade Assessment
Dickens Yard, Ealing	Neighbouring properties generally retain VSC of 20%+ but some of the closer properties retain c.10-15%.
Western Circus, Acton	Closest and most constrained properties shown to retain VSC of c.10-15%
Arches Business Centre, Southall	Closest and most constrained properties shown to retain VSC of c.10-15%
London Road, Barking	The closest and most constrained properties retain VSCs of 8-15%, although most properties retain VSCs in excess of c.18%. Planning committee report noted: "the retained values are often greater than would be expected for an urban area such as this site."

Assessment of Proposed Dwellings

The daylight and sunlight amenity provided within the proposed residential accommodation has been assessed using the Average Daylight Factor (ADF), Room Depth Criterion (RDC) and Annual Probable

Sunlight Hours (APSH) tests set out in the BRE guidance and British Standard document BS8206 pt2. Further guidance on these methodologies and the criteria used to assess them is set out within the guidance at appendix 1.

4. Daylight & Sunlight Assessment to Neighbouring Properties

The assessment of daylight and sunlight impacts to the neighbouring properties has been considered within the GIA report dated 7th August 2020 and within chapter 11 of the Environmental Statement dated 11th August 2020. Both of these reports have considered the impact to the neighbouring residential properties listed below. The location of these properties is shown on the drawings submitted within appendix 03 of the GIA report. In terms of scope, we agree that this covers all of the neighbouring residential properties that are likely to receive a material level of impact from the proposals.

- 21-29 Gordon Road (odd only)
- 1-21 Berkley Court
- 1-28 Vernon Court
- 41- 59 Gordon Road (odd only)
- 63 Craven Avenue
- 52-56 Craven Avenue (even)
- 1-55 Longfield House
- 71-81 New Broadway (odd)
- Ealing Filmworks
- 55 & 57 New Broadway
- Apsley House
- Belgravia House
- Skyline Apartments
- 1-47 Fitzroy Apartments

Results of the assessment

The assessments presented within the daylight and sunlight report and the Environmental Statement show that the following properties receive minor levels of impact to daylight and sunlight and remain compliant with the standard BRE targets and thereby consistent with planning policy.

- 21-29 Gordon Road (odd only)
- 45 & 49 - 59 Gordon Road (odd only)
- 71 & 73 New Broadway
- Ealing Filmworks
- 55 & 57 New Broadway
- 1-47 Fitzroy Apartments

There are a number of properties with rooms and windows that do not accord with the standard BRE targets. These have been summarised in the following table. Further discussion on the impacts to these properties and any potentially mitigating factors are discussed within section 8 of the GIA report.

Table 1 – Summary of daylight and sunlight assessment of neighbouring properties

Property	Daylight Summary	Sunlight Summary
1-21 Berkley Court	<p>Minor impact</p> <p>59 of 60 windows meet VSC targets. 1 window with minor impact (23.4% VSC reduction)</p> <p>All 45 rooms meet NSL target</p>	<p>Negligible / Minor impact</p> <p>39 of 40 windows meet BRE targets 1 window with minor impact</p>
1-28 Vernon Court	<p>Moderate impact</p> <p>50 of 66 windows meet VSC target. 16 windows below BRE targets receive reductions between 22% and 40%</p> <p>45 of 46 rooms meet NSL target</p>	<p>Negligible / Minor impact</p> <p>44 of 46 windows meet BRE criteria 2 windows with moderate reductions</p>
41, 43 & 47 Gordon Road	<p>Minor impact</p> <p>33 of 42 windows meet VSC targets. 9 windows receive VSC reductions between 20% and 25%</p> <p>24 of 25 rooms meet NSL targets</p>	<p>Negligible / Minor impact</p> <p>24 of 25 windows meet BRE criteria 1 window marginally below BRE target for winter sunlight</p>
63 Craven Avenue	<p>Moderate impact</p> <p>18 of 26 windows meet VSC targets. 8 windows receive reductions between 20% and 86%</p> <p>6 of 7 rooms meet NSL targets</p>	<p>BRE compliant</p> <p>All windows meet BRE criteria</p>
52-56 Craven Avenue (even)	<p>Moderate impact</p> <p>51 of 77 windows meet VSC targets. 26 windows receive reductions between 23% and 49%</p> <p>All 20 rooms meet NSL targets</p>	<p>BRE compliant</p> <p>All windows meet BRE criteria</p>
1-55 Longfield House	<p>Major impact</p> <p>25 of 152 windows meet VSC targets.</p> <ul style="list-style-type: none"> - 31 windows with Minor reductions - 39 windows with Moderate reductions - 57 windows with Major reductions 	<p>Minor impact</p> <p>11 of 18 windows meet BRE criteria Most apartments not relevant 3 Minor reductions and 4 Moderate reductions in annual sunlight. 1 Major reduction in winter sunlight</p>

	45 of 92 rooms meet NSL targets	
75-81 New Broadway (odd)	Minor impact All 18 windows meet VSC targets 2 of 12 rooms meet NSL targets	Not relevant
Apsley House	Major impact 36 of 164 windows meet VSC targets 126 windows with Major reductions 45 of 120 rooms meet NSL targets	Major Impact 63 of 120 windows meet BRE criteria 51 windows see Major reduction in annual sunlight and 11 see Major reduction in winter sunlight
Belgravia House	Minor impact 122 of 142 windows meet VSC targets. - 11 windows with Minor reductions - 3 windows with Moderate reductions - 6 windows with Major reductions rooms meet NSL targets	Minor impact 74 of 87 windows meet BRE criteria.
Skyline Apartments	Minor impact 213 of 215 windows meet VSC targets. 2 windows receive Minor reductions All 112 rooms meet NSL targets	Minor impact 109 of 112 windows meet BRE criteria.

Some of these properties receive impacts that are only marginally beyond the standard BRE targets. On the basis that BRE guidance and planning policy suggest some flexibility needs to be used when applying the targets in an urban context, I consider that these impacts are likely to be considered acceptable.

The following properties are considered by the GIA Report to receive more material levels of impact to daylight and/or sunlight (categorised as moderate or major impacts within the Environmental Statement): -

- 1-28 Vernon Court
- 63 Craven Avenue
- 52-56 Craven Avenue (even)
- 1-55 Longfield House
- Apsley House

Section 8 of the GIA report addresses the mitigating circumstances affecting these properties and I have set out a summary of these below.

1-28 Vernon Court

This property is located across the railway line to the north of the development site approximately 50m away at its closest point. Most of its windows face either east or west and do not have a direct view of the proposals.

The GIA report summarises the impacts to this property as follows:

- 33 (71.7%) of 46 windows relevant for consideration meet BRE criteria in both VSC and NSL assessments for daylight.
- Ground Floor – 6 windows (serving 5 rooms) will fall below standard BRE criteria. 3 windows serving rooms with unknown uses receive reductions of 36%-40.2% (retained VSC of 9.8%-12.1%), 1 bedroom window receives a reduction of 32.4% (retained VSC of 11.9%) and 2 living room windows receive reductions of 21.3%-29.1% (retained VSC of 13.7% & 23.1%). All rooms conform to BRE guidance within daylight distribution (NSL) assessment.
- First Floor – a living room (served by 4 windows) will receive reductions to 2 windows of 28% and 21.7% (retained VSC of 23.9% & 14.1%) and 1 bedroom window receives a reduction of 30.3% (retained VSC of 12.2%). Both rooms demonstrate BRE compliance to NSL methodology.
- Second Floor – A kitchen (served by 2 windows) will receive a reduction to 1 window of 22.8% (retained VSC of 15.6%) and 1 bedroom window will receive a reduction of 26.9%. A living room (served by 4 windows) will receive reductions to 2 windows of 27.6% and 22.3% (retained VSC of 24.1% & 13.9%). The GLA considers retained VSC values in the mid-teens as acceptable in an inner urban area. All rooms receive NSL compliance.
- Third Floor – 2 bedroom windows will receive reductions of 20.1% and 30.1% (retained VSC of 12.3% & 7.9%) and a living room (served by 4 windows) will receive a reduction to 1 window of 34.9% (retained VSC of 16.6%). All rooms demonstrate BRE compliance to NSL methodology.
- 55 (94.8%) of 58 windows relevant for consideration achieve BRE compliance for sunlight.

The worst affected windows are smaller secondary windows in the facing flank elevation of the building, which serve rooms with other larger mitigating windows that remain compliant with BRE guidance. The impact upon this property is therefore relatively minor.

63 Craven Avenue

This is a three-storey house that directly abuts the western boundary of the development site. Its main habitable rooms are served by bay windows in the front south-facing elevation and north-facing windows in the rear elevation.

The GIA report summarises the impacts to this property as follows:

- 2 (28.6%) of 7 rooms relevant for consideration achieve BRE compliance in relation to daylight methodologies (VSC and NSL).
- Ground Floor – A living room (served by 8 windows) will receive minor reductions to 2 windows of 20.3% and 21.8% (retained VSC of over 22%) which the GLA considers reasonably good within an

inner-city location. This room demonstrates BRE compliance in consideration of daylight distribution (NSL assessment).

- First Floor – A living room (served by 8 windows) will receive minor reductions to 2 windows of 26.9% and 22.1% (retained VSC of over 22%). A bedroom (served by 2 windows) will receive a reduction to 1 window of 86%, however VSC to the room sees a reduction of less than 20% (16.3%). This room demonstrates BRE compliance in consideration of daylight distribution (NSL assessment).
- Second Floor – 1 window serving a room (believed to be a bedroom) will receive a reduction of 56.8% (retained VSC of 15.5%) against the BRE recommended 20% change. However, the GLA considers mid-teen VSC values to be acceptable within an inner urban location. Using NSL methodology, the room will experience a reduction of 66.5%. the BRE recognises under section 2.2.8 of the guide that bedrooms are less important for daylight distribution. A living room (served by 3 windows) will receive reductions of 59.7% and 56.5% (retained VSC of 14.5% & 15.7%). The living room is fully compliant using NSL methodology.
- All 19 windows relevant for consideration achieve BRE compliance for sunlight.

The adversely affected windows are located in the flank, east-facing elevation overlooking the development site. There is a soil vent pipe that runs alongside these windows, with waste connections suggesting that they are bathrooms or kitchens. All but one of these windows will retain a VSC (Vertical Sky Component) above 14.5%, which can be considered reasonable for a property in an urban location like this in London and is in line with the Mayor of London's guidance.

The worst affected window (W13/F01 in the GIA Report) receives a reduction from 24.3% VSC down to 3.4% VSC, which in isolation represents a relatively severe impact to daylight. The GIA analysis suggests that the room served by this window is also served by another window in the rear elevation that continues to receive good daylight above BRE targets. Additionally, the rooms served by these windows continues to receive a good level of daylight distribution with NSL at 96.9% of the room area.

Whilst the impact to some windows in isolation is relatively severe, the impact to the property as a whole can be considered minor.

52-56 Craven Avenue (even)

These are three-storey houses located to the west of the development. They have bay windows in their front elevations that appear to serve the main living rooms and bedrooms, which are impacted by the proposals. Windows in the rear elevation remain predominantly unaffected.

The GIA report summarises the impacts to these properties as follows:52 Craven Avenue

- 3 (60%) of 5 relevant rooms achieve BRE compliance using VSC and NSL methodologies.
- First Floor – A bedroom (served by 3 windows) will receive a reduction to 1 window of 28.9% (retained VSC of 18%) and a bedroom (served by 8 windows) will receive a reduction to 2 windows of 23.1% and 24.2% (retained VSC in excess of 20%). Both rooms comply with daylight distribution (NSL) methodology.
- No windows in this property face within 90 degrees of due south and therefore are exempt from sunlight (APSH) assessment.

54 Craven Avenue

- 1 (25%) of 4 relevant rooms will achieve BRE compliance using VSC and NSL methodologies.
- Ground Floor – A room (understood to be a living room) served by 8 windows will see a reduction to 2 windows of 32.9% and 31.6% (retained VSC of 19.6% & 20.6%). When considering daylight distribution (NSL), the room complies with BRE guidelines.
- First Floor – A room (assumed to be a bedroom) served by 8 windows will see a reduction to 2 windows of 30.4% and 37.3% (retained VSC of 21.3% & 14.6%). The GLA considers retained VSC values in excess of 20% to be reasonably good and mid-teens to be acceptable within an inner-city location. Another room (understood to be a bedroom) served by 3 windows will see a reduction to 1 window of 34.8% (retained VSC of 13.1%). When considering daylight distribution (NSL), both rooms comply with BRE guidelines.
- No windows in this property face within 90 degrees of due south and therefore are exempt from sunlight (APSH) assessment.

56 Craven Avenue

- 7 (63.6%) of 11 relevant rooms will achieve BRE compliance using VSC and NSL methodologies.
- Ground Floor – A room (assumed to be a living room) served by 6 windows will receive a reduction to 5 windows of between 20.8% and 21.7% (retained VSC of between 25.4% & 26.7%). Another room (understood to be a living room) served by 8 windows will see a reduction to 6 windows of between 29.2% and 48.5%. 4 of the windows retain VSC values of between 23.5% and 24.7% and the remaining 2 windows will retain VSC values of 16.9% and 18%. When considering daylight distribution (NSL), both rooms comply with BRE guidelines.
- First floor – A room (assumed to be a bedroom) served by 2 windows will see a reduction to 1 window of 22.3% (retained VSC of 26.9%). Another room (assumed to be a bedroom) served by 8 windows will see a reduction to 4 windows of between 26.2% and 27.9% (retained VSC of 25.9%-26.2%). When considering daylight distribution (NSL), both rooms comply with BRE guidelines.
- 1 window is relevant for sunlight (APSH) assessment and is fully compliant with the BRE guidelines.

Whilst there are individual windows within the front bays that receive relatively severe impacts to VSC in isolation, the BRE guide suggests that the VSC results for bay windows is averaged to measure the cumulative impact. In this case, the averaged VSC values for these windows show far less serious impacts, with the worst reductions ranging between 21% and 32% and retained VSC above 20%. As such, the impacts to these properties are considered minor.

1-55 Longfield House

This is a six-storey block of residential apartments located directly to the west of the development site. It has a large number of windows in its east facing elevation that overlook the proposed development. These windows serve a mixture of rooms including main habitable rooms (bedrooms, living rooms and kitchens).

The GIA report summarises the impacts to this property as follows:

- Due to its proximity to the proposed development, there will be noticeable reductions in daylight (VSC and NSL).
- Existing light levels at ground and first floor are circa. 13%-18%, much lower than 27% recommended in BRE guidance. In the proposed scenario, these floors will retain the lowest VSC values.
- 94 of the impacted windows will retain less than 14.9% VSC, 26 will retain values of between 15% & 19.9% VSC and 7 will see values between 20%-26.9% VSC.
- There will be improvements to daylight distribution (NSL) in the proposed scenario for the central portion of the building due to an opening between buildings, where the existing building is a solid block. These windows achieve BRE compliance with less than 20% change from the existing to the proposed.
- 11 of 35 windows will see transgressions beyond the recommended BRE criteria for sunlight (APSH).
- Whilst there are noticeable changes to daylight/sunlight using BRE methodology, consideration should be given to the specific site context within an evolving metropolitan area earmarked for regeneration. Contextual research identifies similar developments with broadly comparable retained daylight values within the surrounding area (adjacent Dickens Yard).

The table below provides a summary of the levels of VSC (daylight) results for these windows, showing the ranges of reduction at each floor and the range of retained VSC levels following the proposed development.

Table 2 – Summary of VSC levels within 1-55 Longfield House

Floor	Range of reduction in VSC	Retained levels of VSC
Ground	18% and 62% - Predominantly c.50%	5% to 12% - Predominantly 8%
First	18% and 60% - Predominantly c.50%	0.2% to 28% - Predominantly 10%
Second	16% and 53% - Predominantly c.45%	0.5% to 32% - Predominantly 13%
Third	17% and 50% - Predominantly c.40%	9% to 33% - Predominantly 16%
Fourth	5% and 46% - Predominantly c.35%	11% to 35% - Predominantly 18%
Fifth	5% and 42% - Predominantly c.30%	16% to 36% - Predominantly 20%

The contextual studies presented by GIA show that the closest neighbouring properties to the comparable developments experience retained VSC values broadly in the range of 10-20% with some deviations above and below these values, sometimes as low as 0% and as high as 39.6% (the maximum possible VSC).

As shown in the table above, the levels of VSC values retained by Longfield House are generally between 8% at the lower levels and 20% at the upper levels. This appears to be broadly similar to the levels presented in the GIA contextual analysis.

Apsley House

This is an eight to nine-storey block of residential apartments located to the east of the development site, across Longfield Avenue. There are a number of residential apartments on the first to ninth floors that have windows directly overlooking the proposed development and these have been included within GIA's assessment. Some of the facing units have a dual-aspect meaning they have windows in other elevations that provide mitigating light to the rooms which also overlook the proposed development.

The GIA report summarises the impacts to this property as follows:

- There will be noticeable transgressions in daylight (VSC & NSL) and sunlight (APSH) using BRE methodology.
- In its existing state, the site-facing façade experiences unusually high levels of daylight due to the underdeveloped nature of the car park. This is not typical of the site's location within an inner-urban area and when increasing density, it is generally expected/accepted that retained daylight values will be much lower.
- 81 of the impacted windows will retain less than 14.9% VSC, 42 windows will retain VSC values between 15% & 19.9% and 5 windows will see values between 20% and 26.9% VSC. Windows with the lowest retained values are located on the lowest levels of the site-facing façade.
- NSL reductions are focussed in the central portion of the site-facing façade as rooms with side elevations have other mitigating windows which improve daylight distribution throughout these rooms.
- 78 of 146 windows assessed will see transgressions beyond BRE guidelines for sunlight (APSH). However, retained sunlight values are good with the majority of windows retaining annual APSH values of 20%+ and winter values show compliance.

The table below provides a summary of the levels of VSC (daylight) results for the facing windows in this property, showing the ranges of reduction at each floor and the range of retained VSC levels following the proposed development.

Floor	Range of reduction in VSC	Retained levels of VSC
Ground	Not relevant	Not relevant
First	10% and 67% - Predominantly c.60%	8% to 30% - Predominantly 8%
Second	9% and 65% - Predominantly c.55%	9% to 33% - Predominantly 10%
Third	9% and 62% - Predominantly c.55%	11% to 34% - Predominantly 11%
Fourth	8% and 59% - Predominantly c.50%	13% to 35% - Predominantly 13%
Fifth	7% and 56% - Predominantly c.50%	15% to 35% - Predominantly 16%
Sixth	5% and 75% - Predominantly c.45%	4% to 36% - Predominantly 6%
Seventh	6% and 65% - Predominantly c.60%	7% to 21% - Predominantly 8%

Eighth	13% and 45% - Predominantly c.40%	17% to 30% - Predominantly 17%
Ninth	0% and 28% - Predominantly c.1%	28% to 37% - Predominantly 35%

The contextual studies presented by GIA show that the closest neighbouring properties to the comparable developments experience retained VSC values broadly in the range of 10-20% with some deviations above and below these values, sometimes as low as 0% and as high as 39.6% (the maximum possible VSC).

As shown in the table above, the levels of VSC values retained by Apsley House are generally between 8% and 17%, but with deviations as low as 4% and high as 37%. This appears to be broadly similar to the levels presented in the GIA contextual analysis.

5. Daylight & Sunlight Assessment within the Proposed Development

The assessment of daylight within the proposed dwellings is considered in the GIA report dated 23rd June 2020. The report uses the methodology and criteria set out within the BRE guide, which in turn references the assessment methodologies set out within the British Standard document BS8206 pt2.

Daylight

The GIA report presents an assessment of daylight within the proposed development using the Average Daylight Factor (ADF) and Room Depth Criterion (RDC). In line with BRE guidance, the assessment has considered all of the main habitable rooms (bedrooms, living rooms and kitchens).

The results have shown that all 1264 habitable rooms will meet or exceed the Room Depth Criteria (RDC) and that 1038 (82%) rooms will meet the ADF targets for their particular use (1% for bedrooms, 1.5% for living rooms and 2% for kitchens). The application states that 92% of flats are dual aspect, 7% triple and 1% single.

The BRE guidance suggests that rooms with a dual use should attain the higher of relevant targets, E.g. a living/kitchen/dining room should achieve 2% as it contains a kitchen. In practice, however, the predominant use of this type of room will be as a living room and generally the living room area will be closest to the main windows. As such, it is also relevant to consider whether L/K/Ds achieve the 1.5% target for a living room. In this case, 1047 (83%) of rooms would meet the relevant targets.

Table 2 – Summary of Average Daylight Factor (ADF) results for habitable rooms within the development

Room Type	ADF Criteria	No. Rooms	No. rooms meet BRE target
Kitchen	2%	36	26 (72%)
L/K/D	2%	161	139 (86%)
L/K/D – using living room target	1.5%	161	148 (92%)
Living Room	1.5%	319	251 (79%)
Bedroom	1%	748	622 (83%)

Total		1264	1038 (82%)
Total (assuming L/K/D – 1.5%)		1264	1047 (83%)

Sunlight

The assessment of sunlight has been conducted using the Annual Probable Sunlight Hours (APSH) assessment defined within the BRE guidance. This suggests that the main living room within each apartment should achieve 25% of annual probable sunlight with 5% in the winter period. The results have shown that 216 (64%) of the 335 south-facing living rooms will meet these targets.

Table 3 – Summary of Annual Probable Sunlight Hours (APSH) results for living rooms within the development

Room Type	No. Rooms	No. rooms meet annual sunlight target	No. rooms meet winter sunlight target
L/K/D or living room (with windows that are within 90 degrees of due south)	335	216 (64%)	246 (73%)

There are 480 living rooms or LKDs across the development and the GIA report has considered the 335 that have windows facing within 90 degrees of due south. The BRE guidance does not explicitly state that rooms without a south-facing window can be excluded from the assessment, although it does suggest they are unlikely to meet the relevant targets and that it will be difficult to provide every dwelling with a south-facing living room window in a large-scale development. This is particularly true where development is located in a city centre.

“For larger developments of flats, especially those with site constraints, it may not be possible to have every living room facing within 90° of due south”.

The British Standard guidance BS8206 part 2 advises that the degree of satisfaction for occupants is related to the expectation of sunlight, so if a room is north facing, or if the building is in a densely built urban area, the absence of sunlight is more acceptable than where its exclusion seems arbitrary.

“The degree of satisfaction is related to the expectation of sunlight. If a room is necessarily north facing or if the building is in a densely built urban area, the absence of sunlight is more acceptable than when its exclusion seems arbitrary.”

6. Conclusions

Daylight and sunlight assessment to neighbouring properties

The assessment of neighbouring properties has shown that the majority will receive impacts that are either compliant with BRE targets, or only marginally beyond the targets such that the impacts in our professional opinion are considered acceptable for a large-scale development of this type in this part of London.

Properties that remain compliant with BRE guidance, or receive minor impacts: -

- 21-29 Gordon Road (odd only)

- Ealing Filmworks
- 45 & 49 - 59 Gordon Road (odd only)
- 55 & 57 New Broadway
- 71 & 73 New Broadway
- 1-47 Fitzroy Apartments
- 1-21 Berkley Court
- 1-28 Vernon Court
- 63 Craven Avenue
- 52-56 Craven Avenue (even)
- 41, 43 & 47 Gordon Road
- 75-81 New Broadway (odd)
- Belgravia House
- Skyline Apartments

Properties that receive more material impacts: -

- 1-55 Longfield House
- 1-70 Apsley House

1-55 Longfield House and 1-70 Apsley House experience the greatest impacts to daylight and sunlight. This is largely due to their proximity to the proposed development, the current site condition (predominantly an underdeveloped car park) and the existing architectural design of the neighbouring buildings (i.e. single aspect flats and the presence of recesses, overhangs & balconies etc.).

It is clear that planning policy does not suggest there should be no reductions at all in sunlight/daylight neighbouring properties as a result of development proposals, only that there should be no unacceptable loss. The BRE Guidance can be used as a tool to inform that assessment, but it must be applied in a flexible way, especially when dealing with urban brownfield sites where there is a need to make best use of land.

The assessment of the impact of any loss of daylight or sunlight to neighbours is a two-part process; first, as a matter of calculation, whether there would be a material deterioration in conditions; and secondly, as a matter of judgment, whether that deterioration would be acceptable in the particular circumstances of the case, including the local context.

GIA have presented a 'contextual' analysis of daylight conditions that exist within and around other comparable large-scale developments in London. This is attached in appendix 05 of their report dated 7th August 2020. The aim of this analysis is to provide a benchmark of retained daylight levels experienced by neighbours of similar developments in comparable parts of London. I would agree that this analysis shows the impact created by the proposed Perceval House development is broadly comparable to these other large-scale developments in London.

In summary:

- 18 of the 35 relevant properties comply with BRE guidance on daylight & sunlight
- 15 properties have windows/rooms which fall below the recommended BRE guidance but experience marginal and/or isolated reductions that are considered minor and likely to be acceptable given the character of this urban location
- 2 properties (1-55 Longfield House and Apsley House) receive more material impacts to daylight and sunlight that may constitute significant harm and will need to be balanced against the benefits of the proposals. Comparison of the impacts created by this development with other large-scale developments in London has shown the scheme is consistent with these other developments.

Daylight and sunlight within the proposed dwellings in the planning application

The assessment of daylight within the proposed development has shown that all of the habitable rooms will meet the room depth criteria and 82% will meet the ADF targets. The majority of rooms that fall below the ADF targets are shown to do so only marginally (163 of 226 rooms are within 0.5% of ADF target) and many have been provided with balconies limiting their access to skylight.

The sunlight assessment has shown that 64% of the south-facing living rooms across the development (45% of all living rooms) will receive levels of sunlight above BRE targets. The BRE guide does concede that meeting the suggested targets will be difficult within large-scale urban developments, where it is difficult to provide all dwellings with south-facing living rooms windows.

The levels of daylight and sunlight provided within the proposed development are commensurate with other large-scale developments in London and within L.B Ealing and could be considered acceptable given the large-scale urban nature of the site and proposals.

Design development and mitigation

Chapter 11 of the Environmental Statement (Daylight & Sunlight) and the architects Design and Access Statement both make reference to preliminary daylight and sunlight assessments that were undertaken during the design process in order to inform the massing design in terms of its impact to neighbouring buildings. The different massing options are shown in section 6 of the DAS and involve removing height from Building B04 and redistributing to buildings B01-B03.

We note buildings B05 and B06 remain unchanged in the options presented, so the levels of daylight or sunlight to the most significantly affected neighbouring properties (Apsley House and Longfield House) would not materially change under these options.

I trust that the above is useful in explaining the current position. In the meantime, please do not hesitate to contact us should you have any queries.

Yours sincerely,



Ian Thody
Director

Appendix 1 - Guidance on daylight & sunlight for planning

'Site layout planning for daylight and sunlight: A guide to good practice', BRE 2011

The Building Research Establishment (BRE) Report 209, '*Site layout planning for daylight and sunlight: A guide to good practice*', is the reference document used by most local authorities for assessing daylight and sunlight in relation to new developments. Commonly referred to as 'the BRE guidelines', it provides various testing methodologies to calculate the potential light levels received by neighbours of a development site and provided within proposed new development.

Detailed daylight assessments

The guidance outline three detailed methods for calculating daylight: The Vertical Sky Component (VSC), the No-Sky Line (NSL) and the Average Daylight Factor (ADF).

The VSC and NSL are primarily used for the assessment of existing buildings, while the ADF test is generally recommended for proposed rather than existing dwellings. The ADF may sometimes be useful as a supplementary analysis for existing buildings, particularly newer ones, and a number of local authorities request this as a standard measurement for impact assessments. It can help in judging whether an impact on daylight, which might otherwise be deemed 'noticeable', is nonetheless acceptable, when considered in the broader town planning context.

Where new development is proposed on adjacent properties, but not yet built or occupied, the ADF test is more appropriate than the VSC and NSL tests. Because proposed or consented developments have no occupants, the reduction of daylight is not a particularly relevant test, as there is no one to experience the present value, or reduction. During the design of these apartments the Average Daylight Factor (ADF) test has been used to establish whether a suitable amount of daylight is provided. The ADF test is therefore the more appropriate test of the continuing acceptability of daylight conditions within them.

The BRE guide gives the following in this regard: -

"Appendix F – paragraph F8

However, there are some situations where meeting a set ADF target value with the new development in place could be appropriate as a criterion for loss of light:

(ii) as a special case of (i), where the existing building is proposed and not built. A typical situation might be where the neighbouring building has received planning permission but not yet been constructed."

The VSC test measures the amount of sky that is visible to a specific point on the outside of a property, which is directly related to the amount of daylight that can be received. It is measured on the outside face of the external walls, usually at the centre point of a window.

The NSL test calculates the distribution of daylight within rooms by determining the area of the room at desk / work surface height (the 'working plane') which can and cannot receive a direct view of the sky and hence 'sky light'. The working plane height is set at 850mm above floor level within residential property.

For the above methods, the guidance suggests that existing daylight may be noticeably affected by new development if: -

- Windows achieve a VSC below 27% and are reduced to less than 0.8 times their former value; and / or
- Levels of NSL within rooms are reduced to less than 0.8 times their former values.

Where rooms are greater than 5m in depth and lit from only one side, the guidance recognises that “a greater movement of the no sky-line may be unavoidable” (page 8, paragraph 2.2.10).

Daylight to new buildings

The ADF method calculates the average illuminance within a room as a proportion of the illuminance available to an unobstructed point outdoors under a sky of known luminance and luminance distribution. This is the most detailed of the daylight calculations and considers the physical nature of the room behind the window, including window transmittance and surface reflectivity. The BRE guidance and British Standard sets the following recommended ADF levels for habitable room uses: -

Bedrooms	1% ADF
Living rooms & dining rooms	1.5% ADF
Kitchens	2% ADF

Table 1 - ADF targets by room use

For multi-purpose rooms, the BRE guide suggests applying the higher of relevant targets. For open-plan living / kitchen / diner arrangements the higher 2% ‘kitchen’ target can be difficult to achieve due to the depth of internal space. In such cases, it is not uncommon to apply the living room 1.5% target instead as this is the predominant use of the space.

Detailed sunlight assessments

For sunlight, the Annual Probable Sunlight Hours (APSH) test calculates the percentage of probable hours of sunlight received by a window or room over the course of a year.

In assessing sunlight effects to existing properties surrounding a new development, only those windows orientated within 90° of due south and which overlook the site require assessment. The main focus is on living rooms, with bedrooms and kitchens deemed less important.

The guidelines suggest that the main living rooms within new buildings should achieve at least 25% of annual sunlight hours, with 5% during the winter period. For neighbouring buildings, the guide suggests that occupiers will notice the loss of sunlight if the APSH to main living rooms is both less than 25% annually (with 5% during winter) and that the amount of sunlight, following the proposed development, is reduced by more than 4%, to less than 0.8 times its former value.

Sunlight to gardens and outdoor spaces

Where sunlight to an amenity space may be affected by new development, the BRE guidelines recommend that an overshadowing assessment is conducted. The key analysis is the ‘2hr sun on ground’ test, which

quantifies the proportion of an amenity area (e.g. rear gardens, parks and playing fields, public squares etc.) receiving at least 2hrs of sun on the 21st of March.

The BRE guidance recognises that different types of amenity space may have different sunlighting requirements. Generally, the guidelines suggest that if at least 50% of an amenity area receives at least 2hrs of sun on 21st March, then it is likely to be adequately lit throughout the year. If an existing neighbouring open space receives less than 50%, then the guidelines suggest that it should not be reduced below 0.8 times its former value. Where tall buildings are proposed and might affect surrounding amenity space, the BRE guide notes that: -

“it is often illustrative to plot a shadow plan showing the location of shadows at different times of day and year”.

Sometimes referred to as ‘transient overshadowing’. It suggests shadow plots are undertaken at key times during the year to depict the sun’s travel through the sky. Generally, this will include 21st March, June and December, which are the equinox (mid-point) and summer and winter solstices.

No numerical criteria are provided for transient overshadowing and therefore, professional judgement must be applied in determining the effects arising from new development. This is generally done by a comparative commentary describing differences between the pre-existing and proposed shadow paths. The guide also acknowledges that, when assessing shadow plots: -

“it must be borne in mind that nearly all structures will create areas of shadow, and some degree of transient overshadowing is to be expected.”

Application of the guidance

Scope of assessment

Impact analysis for neighbouring buildings

The BRE guidelines advise that, when assessing any potential effects on surrounding properties, only those windows and rooms that have a ‘reasonable expectation’ of daylight and sunlight need to be considered. At paragraph 2.2.2 it states: -

“The guidelines given here are intended for use for rooms in adjoining dwellings where daylight is required, including living rooms, kitchens and bedrooms. Windows to bathrooms, toilets, storerooms, circulation areas and garages need not be analysed.”

Application of the numerical criteria

The opening paragraphs of the BRE guidelines state: -

“The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and the guide should not be seen as an instrument of planning policy; its aim is to help rather than constrain the designer.

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

It is therefore very important to apply the BRE guidance sensibly and flexibly, with careful consideration of the specific site context. Its numerical targets theoretically apply to any built environment, from city centres to rural villages. However, in more tightly constrained environments, achieving the default BRE targets can be very challenging and conflict with other beneficial factors of site layout design.

With the above in mind, rigid adherence to the BRE in certain situations could easily result in an inappropriate form of development. In which case it may be appropriate to adopt lower target values more appropriate to the location concerned. This is acknowledged in the BRE guidance at paragraph 2.2.3 (page 7):

“Note that numerical values given here are purely advisory. Different criteria maybe used, based on the requirements for daylighting in an area viewed against other site layout constraints.

For buildings that neighbour a new development, the guidance suggests that daylight will be adversely affected by the development, if either; its windows achieve a VSC below 27% and have their levels reduced to less than 0.8 times their former value, or the levels of NSC within rooms are reduced to less than 0.8 times their former values.

Some recent planning decisions by the Mayor of London and Planning Inspectorate have suggested that retained levels of daylight (VSC) between 10% and 20% can be considered acceptable for residential properties neighbouring new developments in Central London. Further to these decisions, recent guidance from the Mayor of London (Draft SPG ‘Good Quality Homes for Londoners’) suggests that residential properties in Central London can typically expect VSC values of between 13% and 18%. We have therefore assessed the severity of impacts to the neighbouring residential properties in light of this guidance.

Appendix F – Setting alternative target values

In certain situations, the BRE guidance suggests that alternative target values may be set for the assessment of daylight and sunlight to neighbouring buildings.

“F1 Sections 2.1, 2.2 and 2.3 give numerical target values in assessing how much light from the sky is blocked by obstructing buildings. These values are purely advisory and different targets may be used based on the special requirements of the proposed development or its location. Such alternative targets may be generated from the layout dimensions of existing development, or they may be derived from considering the internal layout and daylighting needs of the proposed development itself.”

“F5. 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. Figure F3 shows an example, where side windows of an existing building are close to the boundary. To ensure that new development matches the height and proportions of existing buildings, the VSC and APSH targets for these windows could 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.”

As suggested above, alternative target values may be set where the context of development is of a dense urban scale, where new buildings need to match the height and proportions of other existing buildings or where neighbouring buildings are set very close to the boundary.

Where the neighbouring properties sit very close to the boundary, this is done by using a 'mirror image' of the neighbouring building as the baseline for an assessment of impact arising from a proposed development.

Assessment of dwellings with balconies

Care must be taken when assessing the impact of a development proposal upon neighbouring properties that have been provided with external overhanging or recessed balconies. These balconies are intended to provide additional outdoor amenity to the apartments, but they also inhibit the access to/potential for daylight and sunlight. The BRE guidance gives the following statements in this regard:

"2.2.11 - Existing windows with balconies above them typically receive less daylight. Because the balcony cuts out light from the top part of the sky, even a modest obstruction opposite may result in a large impact on the VSC, and on the area receiving direct skylight (NSC). One way to demonstrate this would be to carry out an additional calculation of the VSC and the area receiving direct skylight for both existing and proposed situations without the balcony in place."

"2.2.12 - A larger relative reduction in VSC may also be unavoidable if the existing window has projecting wings on one or both sides of it, or if it is recessed into the building so that it is obstructed on both sides as well as above."

It is therefore often relevant and necessary to conduct assessments of the surrounding properties with their balconies omitted, so that the impact upon the potential for good daylight and sunlight can be fully understood.