

BRE Client Report

Review of daylight and sunlight reports for 43/43A London Street, Reading

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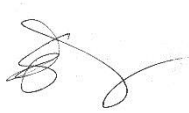
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Executive Summary

A planning application, reference 191043, has been submitted to Reading Borough Council for a proposal to redevelop 43 and 43A London Street, Reading to provide a mixed used development. An assessment of the daylight and sunlight impact of the proposed development and daylight and sunlight provision to the new flats is contained in two reports by Point 2 Surveyors. BRE have been commissioned by Reading Borough Council to evaluate these reports.

The first Point 2 report assesses loss of daylight and sunlight to existing properties using the BRE Report BR 209, 'Site Layout Planning for Daylight and Sunlight, a guide to good practice'. The guidance is advisory in nature and is intended to assist with good design. There is no formal requirement to comply with the advice it contains.

Loss of daylight to the existing properties assessed would be well within the guidelines in the BRE Report for all of the existing properties considered except 2 and 3 London Court. The four windows in the main elevation would have losses outside the guidelines in the BRE Report. The losses would be moderate to major in scale. The major loss would be to one flat at 3 London Court. London Court stands on the site boundary and is dependent on daylight across the site. If the development were to have the same relationship with the boundary as London Court, the windows would receive no light at all. It is therefore reasonable to apply some flexibility to the loss of daylight, provided the rooms are left with an acceptable level of daylight. One of the four windows would retain a vertical sky component which is not far below the standard recommended VSC in the BRE Report. The other three are more typical of VSCs with substantial levels of obstruction from other buildings. Significant changes in the design would be needed to reduce the impact of the development on these properties.

Both of the flats at 3 London Court are currently listed online as serviced apartments. As such, they would be occupied for short periods of time rather than as a permanent place of residence. Local authorities may take a more flexible view of daylight and sunlight to serviced apartments, treating them more like hotels.

The consented East Street student accommodation was not included in the loss of light report but calculation data were provided on request. As it does not yet exist, it is reasonable to consider retained daylight and sunlight rather than loss, as occupants will not have the opportunity to become accustomed to the current levels. Changeover in student occupants each academic year would have the same effect. The amount of daylight they retain would be more important than degree of change.

The student rooms would already all be very poorly daylit due to their own design. ADF levels would be well below the recommended minimum ADF. The development would reduce this substantially below the top floor. The rooms on all of the floors except the lowest would retain enough sunlight, or would lose a small amount which would be within the BRE guidelines. Ten rooms on the lowest floor would retain an amount of sunlight below the recommended levels. Similarly, the garden would already be poorly sunlit on 21 March and would become worse. In summer it would be better sunlit, and the proposed development would have very little impact.

We disagree with Point 2's opinion that the student accommodation would not have a reasonable expectation of daylight due to the poor daylighting afforded by its own design, but their mirror image calculations suggest that the impact of the development would be reasonable if it is to be given the opportunity to match the height and dimensions of its neighbours. Significant changes to the design would be needed to reduce the impact of the development.

The second report deals with daylight and sunlight provision to the development. Five rooms in the proposed development would be poorly daylight; three bedrooms, one study and one study/bedroom. One of these, a bedroom, is so poorly lit as to be essentially non-daylit. These rooms all look into lightwells which present a significant constraint to daylight. Whether the study is an issue will depend on whether the local authority considers it a habitable room. Daylight provision to rooms in the development without the constraint of lightwells would be reasonable.

The development has significant constraints on sunlight provision due to the presence of another building right on the site boundary to the site. Given these constraints, the amount of sunlight received by the living rooms could be considered reasonable.

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1 Introduction

- 1.1.1 A planning application, reference 191043, has been submitted to Reading Borough Council for a proposal to redevelop 43 and 43A London Street, Reading to provide a mixed used development. An assessment of the daylight and sunlight impact of the proposed development and daylight and sunlight provision to the new flats is contained in two reports by Point 2 Surveyors:
- 43 & 43A London Street Reading Daylight and Sunlight Report, referenced P1965, dated June 2019
 - 43 & 43A London Street Reading Internal Daylight and Sunlight Report, referenced P1965, dated June 2019
- 1.1.2 BRE have been commissioned by Reading Borough Council to evaluate these reports. The evaluation was to review the scope, methodology, text and conclusions of the reports, but not verification of the calculations. This report gives the results of the evaluation.
- 1.1.3 Additional information was provided by Point 2 on request in the course of the review.
- 1.1.4 A site visit was not carried out.

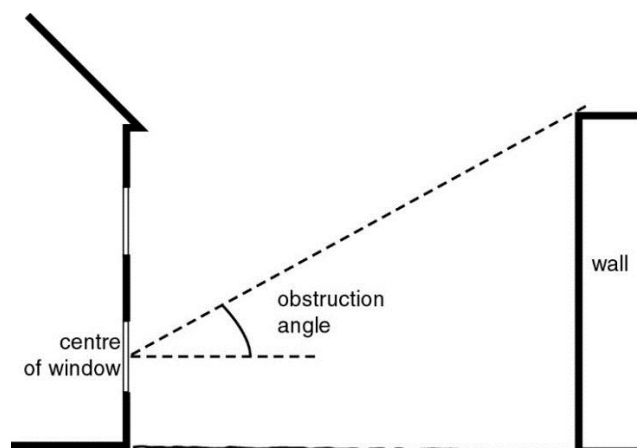
2 Evaluation criteria

2.1 Loss of light to existing dwellings

- 2.1.1 The Point 2 report evaluates loss of daylight and sunlight to existing properties using the BRE Report BR 209, 'Site Layout Planning for Daylight and Sunlight, a guide to good practice'¹. This source is appropriate and is widely used by local authorities to help determine planning applications. The guidance is advisory in nature and is intended to assist with good design. There is no formal requirement to comply with the advice it contains.
- 2.1.2 The BRE Report states that its own numerical guidelines '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 a higher degree of obstruction may be unavoidable if new developments are to match the height and proportions of existing buildings'.
- 2.1.3 The National Planning Policy Framework² states that authorities should take a flexible approach in applying policies or guidance relating to daylight and sunlight where they would otherwise inhibit making efficient use of a site (as long as the resulting scheme would provide acceptable living standards).
- 2.1.4 Two policies in the Reading Borough Local Plan³ have been identified as relevant by the local authority for consideration. CC8 states that "a development will not cause a detrimental impact on the living environment of existing residential properties or unacceptable living conditions for new residential properties, in terms of:... access to daylight and sunlight." CR10 refers to buildings of ten storeys or more. The proposed development comprises five storeys.
- 2.1.5 The guidelines apply to rooms where daylight is required, including living rooms, kitchens and bedrooms. Toilets and bathrooms are not included.

2.2 Loss of daylight to windows

- 2.2.1 To assess the impact on the amount of diffuse daylighting entering existing buildings, and sunlight where relevant, the Report first recommends the measurement or calculation of obstruction angle. This is the angle to the horizontal subtended by the new development at the centre of the lowest window in each affected window wall, in a plane perpendicular to it. If this angle is less than 25° for the whole of the development, then the new building would not have a substantial effect on the diffuse skylight (or sunlight) enjoyed by the existing building.



2.2.2 Figure 1 Example of obstruction angle

2.2.3 Where the obstruction angle exceeds 25°, a calculation is needed to assess the impact on the amount of diffuse daylighting entering existing buildings. The Report recommends the calculation of the vertical sky component (VSC). This is the ratio of the direct sky illuminance falling on the outside of a window, to the simultaneous horizontal illuminance under an unobstructed sky. The standard CIE Overcast Sky⁴ is used and the ratio is usually expressed as a percentage. The maximum value is almost 40% for a completely unobstructed vertical wall. The vertical sky component on a window is a good measure of the amount of daylight entering it.

2.2.4 The BRE Report sets out the following two guidelines for vertical sky component:

- Where the vertical sky component at the centre of the existing window exceeds 27% with the new development in place, then enough sky light should still be reaching the existing window.
- Where the vertical sky component with the new development is both less than 27% **and** less than 0.8 times its former value, then the area lit by the window is likely to appear more gloomy, and electric lighting will be needed for more of the time.

2.2.5 Losses are expressed as percentages in the Point 2 report. This is an alternative way of presenting the same information as the ratios of after/before used in the BRE Report, with a loss of 20% being equivalent to a ratio of 0.8. To avoid confusion, in this review we will use the same method of description as the Point 2 report. As vertical sky component and annual probable sunlight hours are themselves percentage values, if we refer to an actual value of these, we will place the percentage symbol in brackets to distinguish it from a proportional loss.

2.2.6 The Point 2 report states that balconies, where present, have been removed from calculations in accordance with BRE guidelines. The guidelines do not suggest that balconies are excluded from consideration altogether. The balconies should be included in the main calculations, as they show what the actual outcome for the residents would be. The calculation can then be repeated without the balconies to check whether the presence of the balcony, rather than the size of the new obstruction, is the main factor in the relative loss of light.

- 2.2.7 However, aerial views of the surrounding buildings do not show any balconies present, so we do not believe that the omission of balconies is likely to be a concern in the calculations for this site.

2.3 Daylight distribution

- 2.3.1 Where room dimensions are known, the BRE Report also gives guidance on the distribution of light in the existing buildings, based on the areas of the working plane which can receive direct skylight before and after. If this area is reduced to less than 0.8 times its value before, then the distribution of light in the room is likely to be adversely affected, and more of the room will appear poorly lit. Daylight distribution assessment is only recommended by the BRE Report where room layouts are known.
- 2.3.2 Point 2 have used estimated room dimensions where room dimensions are not known. Results based on estimated room dimensions should be treated with caution, as they are liable to considerable inaccuracy. In these circumstances, the VSC results should be given more weight.
- 2.3.3 The risk of inaccuracy in using estimated room dimensions is very limited in this particular report. Room dimensions were available for the key properties which are very close to the proposed building and the more distant properties show such a limited impact that differences in room dimensions would not be expected to lead to a significant change in the result.

2.4 Loss of sunlight to windows

- 2.4.1 The BRE Report recommends that loss of sunlight should be checked for main living rooms of dwellings, and conservatories, if they have a window facing within 90° of due south.
- 2.4.2 According to the BRE Report, if the centre of the window can receive more than one quarter of annual probable sunlight hours, including at least 5% of annual probable sunlight hours (APSH) in the winter months between 21 September and 21 March, then the room should still receive enough sunlight. If the window already receives less than this, a reduction to less than 0.8 times its current value and a reduction of more than 4% of annual probable sunlight hours over the year may lead to the room it serves appearing colder and less cheerful and pleasant.
- 2.4.3 The assessment analyses sunlight to all of the windows facing within 90° of due south. All of the rooms are identified as bedrooms which mean that this analysis would not be required for assessment using the BRE report.

2.5 Alternative target values

- 2.5.1 The Point 2 report discusses use of a mirror image methodology to derive alternative targets for VSC. This method allows new buildings the opportunity to match the height and proportions of existing buildings. A hypothetical building of the same height and size as the neighbouring building is set an equal distance from the boundary. The VSC and APSH at the neighbouring window with this building in place become the target values for daylight and sunlight instead of 27% of VSC and 25%/5% of APSH. Each window has its own individual target.
- 2.5.2 A limitation of the mirror image method is that when properties are right on the boundary of the property, target values of zero result. Clearly it would be unreasonable to completely extinguish the natural light received by a window; the needs of the occupants must be considered. Point 2 have presented a mirror image for information but have used it flexibly and not used it to set zero targets.

2.6 Daylight and sunlight provision to proposed dwellings

- 2.6.1 Daylight and sunlight provision to the proposed properties is normally evaluated using British Standard 8206-2:2008 'Code of Practice for Daylighting'⁵ and supplementary guidance in the BRE Report. Point 2 have used these sources.
- 2.6.2 The Standard contains guidance on daylight and sunlight for new dwellings, including recommended minimum values for Average Daylight Factor (ADF) and Annual Probable Sunlight Hours (APSH).
- 2.6.3 The Standard has recently been withdrawn following the publication of BS EN 17037:2018 'Daylight in buildings', but it is likely that assessments using BS 8206 Part 2 will still be submitted for some time as projects which were underway at the time of the change are completed. The guidance in the BRE Report has not yet been revised and still refers to BS 8206 Part 2. We would therefore consider it reasonable for applicants to continue to submit assessments using BS 8206 Part 2 at this time.

2.7 Daylight provision

- 2.7.1 For daylight provision in new dwellings, the British Standard recommends the following minimum values for ADF:
- Bedrooms 1.0%
 - Living rooms 1.5%
 - Kitchens 2.0%
- 2.7.2 These are minimum values. The Standard states that if a space has an ADF of 5% it will not normally need supplementary electric lighting provided the uniformity is satisfactory, and that an ADF of 2-5% will normally need supplementary electric lighting.
- 2.7.3 Where a room has a shared use, the British Standard states that the higher minimum value should apply. However, local authorities frequently accept the living room standard for a shared kitchen/living room on the basis that a small kitchen would not be considered a habitable room. We have considered an ADF of 1.5% or better to represent a pass in this review.
- 2.7.4 The average daylight factor is calculated using the formula

$$D = \frac{T W \theta M}{A(1 - R^2)} \%$$

Where:

T = transmittance of glass – a typical value for double glazing might be 0.68.

W = net area of window glass (not including frames).

M = maintenance factor, allowing for effects of dirt. For a window in a suburban area without a significant overhang and which is cleaned regularly, this might be 0.96.

A = total area of indoor surfaces: floor + ceiling + walls including windows.

R = average reflectance of the area A. For a fairly light coloured room the BRE Report suggests a value of 0.5. Alternatively, individual reflectance values can be used. If individual reflectances are used, this assumes that those light coloured finishes will be used and maintained in the rooms.

θ = visible sky angle, measured from the centre of the window in the vertical plane normal to the window. This must be expressed in degrees. The BRE Report 'Site layout planning for daylight and sunlight: a guide to good practice', Appendix C, gives a method to calculate an equivalent θ from the vertical sky component where obstructions are discontinuous.

- 2.7.5 Point 2 have applied a glass transmittance factor of 0.68 and a framing allowance of 8%. These are reasonable.
- 2.7.6 The reflectance factors for interior surfaces in the Point 2 report are those given in BS 8206 Part 2 for pristine surfaces with no accumulation of dirt. They would be lower in practice.

2.8 Overshadowing

- 2.8.1 For outdoor amenity areas, the 2011 edition of the BRE Report 'Site layout planning for daylight and sunlight: a guide to good practice' recommends that at least half of the space should receive at least two hours of sunlight on 21 March. Sunlight at an altitude of 10° or less does not count.
- 2.8.2 If as a result of new development less than half of an existing garden or amenity area receives two hours of sunlight and the area that does is reduced to less than 0.8 times its former value, then the loss of sunlight is likely to be noticeable.

3 Loss of daylight

3.1 Windows analysed for loss of daylight

- 3.1.1 A list of properties analysed is given in paragraph 6.1 and the properties are marked on a site plan on the same page. There are some errors in the numbering shown on the site plan but they do not affect the data in the report or the conclusions.
- 3.1.2 The properties assessed comprise:
- 35 London Street
 - 1 New Century Place
 - 1-33 Bourne Stevens Close
 - 1-34 East View Place
 - 1-4 London Court.
- 3.1.3 Loss of daylight would be well within the guidelines in the BRE Report for all of these properties except 2 and 3 London Court. These two properties have been considered in detail below. The others have not been considered further in this review.
- 3.1.4 The development under construction labelled East Street Consented Development has been reasonably included in the model as part of the existing context. Initially it was not included in loss of daylight and sunlight calculations, but calculations were provided by Point 2 on request and the results are considered below. The development will provide student accommodation.

3.2 2 and 3 London Court

- 3.2.1 London Court lies on the site boundary but not all of the units have vertical windows on the elevation directly facing the proposed development. 2 and 3 London Court have four windows in this position between them, one at number 2 and three at number 3. The development appears to have been designed with a gap to allow light to reach these windows. Number 2 also has a dormer window and sloping roof lights.
- 3.2.2 The four windows in the main elevation would have losses outside the guidelines in the BRE Report. The second floor dormer window and the sloping windows would be much less affected and well within the guidelines.
- 3.2.3 The loss to the window at number 2 would be moderate adverse. The room lit by the window, a bedroom, would have a change to its daylight distribution which would be similar in proportion. The BRE Report states that daylight distribution to bedrooms is less important, although it should still be analysed. Drawings of the layout available on the Reading Borough Council planning portal indicate that the bedroom is part of a one bedroom ground floor flat with a living/kitchen/diner on the other side of the building.
- 3.2.4 Drawings of the layout of number 3, also from the Reading Borough Council planning portal, indicate that the affected windows are part of two different flats. The lower window would lose around half its daylight. Changes to daylight distribution in the bedroom would be within the guidelines. The window lights a bedroom which is part of a one bedroom flat on that floor. There is a living/kitchen/diner on the other side of the building. As the affected room is a bedroom and the only room affected, we would consider this loss to be moderate adverse.

- 3.2.5 The two windows on the higher floor light the bedroom and living room of another flat. The bedroom window would have a minor adverse impact and changes to the daylight distribution in the room would be within the guidelines. The living room would lose just under half its daylight; this would be a major adverse impact. The changes to daylight distribution would be moderate adverse. The room also has a window on the other side of the building, although the room layout means that it principally lights the kitchen and will contribute a limited amount of daylight to the living room area. Overall, the impact on this flat would be major adverse.
- 3.2.6 Although these flats have Valuation Office Agency listings indicating that Council Tax is payable for them, and we understand that Point 2 have seen the leases for the properties, both of the flats at number 3 are currently listed online as serviced apartments. If they are used as serviced apartments, they will be occupied for short periods of time rather than as a permanent place of residence. Local authorities may take a more flexible view of daylight and sunlight to serviced apartments, treating them more like hotels.
- 3.2.7 As noted by Point 2, London Court stands directly on the site boundary. This makes it dependent upon daylight across the development site. If the development were to have the same relationship with the boundary as London Court, the windows would receive no light at all. It is therefore reasonable to apply some flexibility to the loss of daylight, provided they are left with an acceptable level of daylight. The retained VSCs for these four windows would be 12.61(%), 14.84(%), 23.9(%) and 17.82(%) respectively. The VSC of 23.98(%) is not far below the standard recommended VSC in the BRE Report of 27(%). The other three are more typical of VSCs with substantial levels of obstruction from other buildings. Similar levels can be seen in the tables for 1 New Century Place in the existing scenario, where the windows look out between return walls at the consented building.
- 3.2.8 Significant changes to the design to reduce the amount of obstruction would be needed to bring more light to these windows.

3.3 East Street student accommodation

- 3.3.1 Calculations have been provided for loss of vertical sky component, loss of average daylight factor and for a mirror image scenario at the consented East Street student accommodation.
- 3.3.2 Point 2 have noted that the BRE guide does not expressly include student accommodation in the list of building uses other than dwellings where the occupants may have a reasonable expectation of daylight. This list is not exhaustive, and we are of the opinion that student rooms would count as spaces with an expectation of daylight.
- 3.3.3 However, there are some differences between student accommodation and a house or flat intended as a permanent home. A student would normally occupy a room for one academic year, and student accommodation would therefore not have long term occupants. The amount of daylight they retain could be considered to be more important than the degree of change they would experience as a result of a new development.
- 3.3.4 Where a development is consented or under construction, the final occupants will also not have the opportunity to become accustomed to the existing levels of daylight and sunlight. Appendix F of the BRE Report suggests that average daylight factor might be used in this scenario. We have therefore given more weight to the ADF values provided for the student rooms than the loss of daylight to the windows in this case. We have also considered calculations provided using a mirror image building which is discussed further below.

- 3.3.5 The vertical sky component calculations show significant reductions as a result of the proposed development which would be considered a major adverse impact. However, for the reasons outlined above, it would be reasonable to consider retained levels of daylight.
- 3.3.6 The average daylight factor calculations, which examine how much daylight a room would receive taking into account room and glazing dimensions as well as external obstructions, show that the rooms would already receive well below the recommended level of daylight, regardless of the floor they are on. They have significant constraints on the daylight they receive as a result of their own design. The proposed development would reduce daylight levels further. The reductions would be substantial in most cases until the top floor.
- 3.3.7 In order to give some context to the losses Point 2 have repeated the VSC calculations with a hypothetical building mirroring the distance of the student accommodation from each of its south and west boundaries. This approach affords the development, which sits in the 'L' formed by the student building, the opportunity to match the height and proportions of the student building. The results with the hypothetical building in place are used as an alternative to the standard target VSC of 27%. For all but five windows, the VSC with the development in place would be above the alternative target value and therefore within the BRE guidelines. For three of the remaining five, the results would be relatively close to the target value. Two windows, W10/200 and W13/200, would be rather lower; more than 2(%) of VSC below their target value. The impact of the proposed development would be similar to that which the student accommodation would have itself in the same situation.
- 3.3.8 The windows are currently very well sunlit. Annual probable sunlight hours are calculated at the window and do not depend upon window and room size, and therefore do not have some of the same constraints as average daylight factor. There would be substantial losses to the amount of sunlight they receive, but all of the rooms on the upper floors would either retain the recommended amount of sunlight or lose a small amount which would be within the BRE guidelines.
- 3.3.9 On the lowest floor, ten of the twelve rooms would have a level of APSH below the recommended 25% with the development in place. Six of these would be above 20% and relatively close to the recommended amount. The other four would fall into the teens. Six rooms would retain below the recommended 5% of winter sunlight, but for two of them, this represents no change from their previous levels. Three would lose most or all of the winter sunlight they receive. The mirror image calculations show that the student accommodation itself would have a similar impact in the same scenario.
- 3.3.10 We disagree with Point 2's opinion that the student accommodation would not have a reasonable expectation of daylight due to the poor daylighting afforded by its own design, but their mirror image calculations suggest that the impact of the development would be reasonable if it is to be given the opportunity to match the height and dimensions of its neighbours.
- 3.3.11 Significant changes to the design would be needed to reduce the impact on the student accommodation.

3.4 Overshadowing

- 3.4.1 There is a rooftop garden to the north of the site at 35 to 39 London Street, part of the Reading International Solidarity Centre (RISC). This has not been analysed. However, the respective heights of the building and the garden, and the distance of the development from the garden indicate that the development would have little to no impact and any loss of sunlight would be well within the BRE guidelines.

- 3.4.2 The drawings for the consented East Street student accommodation show a garden in the 'L' of the building, adjacent to the site. Point 2 have provided additional analysis for this on request.
- 3.4.3 The garden is already heavily overshadowed in the existing condition. 28% of its area would receive direct sunlight on 21 March. With the development in place, this would fall to 15%. As already noted, the loss would be less important in this case. The garden would be poorly sunlit in either condition. With the nominal mirror image building in place, the amount of overshadowing would be similar in either case.
- 3.4.4 Results have also been provided for the 21 June which provide more information about the summer months, although this date is not used for comparison with a guideline value in the BRE Report. The results show that there would be very little difference between the existing and proposed scenarios in the summer.
- 3.4.5 In the mirror massing scenario, the garden would receive slightly more sunlight on 21 March with the proposed building than it would with the mirror massing building. On 21 June there would be no difference.

4 Daylight and sunlight provision

4.1 Rooms assessed

- 4.1.1 The Point 2 report states that all of the bedrooms and living rooms in the development have been assessed. A number of rooms have been omitted from the assessment, which are labelled as studies in the development drawings.
- 4.1.2 All of the living/kitchen/diners and the single kitchen diner would have average daylight factors (ADFs) of at least 1.5%, the recommended minimum for living rooms. All but three would also achieve the recommended minimum for kitchens.
- 4.1.3 There are three bedrooms which would have very low ADFs. These are in the same area of the building, one on the lower ground floor in unit 11 and two on the upper ground floor in unit 13. They look into a lightwell and are therefore very constrained in the daylight they can receive.
- 4.1.4 These rooms would have ADFs of 0.1% (R2/249 on the lower ground floor), 0.4% (R5/250 on the ground floor and 0.7% (R4/250 on the ground floor). The first two, particularly, would be extremely poorly lit. A room with an ADF of 0.1% is essentially non-daylit.
- 4.1.5 Where windows are substantially obstructed, the glazing area needs to be large to bring as much light into the room as possible. Subject to other non-daylight considerations, there appears to be the potential to widen the windows to these rooms. It may be possible to improve the 0.7% result by increasing the glazing area. In the case of the other two rooms, it would be unlikely that these could be improved significantly without reducing the amount of external obstruction.
- 4.1.6 There are two more rooms on the lower ground floor which would also be very poorly daylit, but which have been excluded from the calculations. One is labelled as a study in unit 11. Given the low ADFs of the rooms around it and above it, we would expect this room to also be essentially non-daylit. Whether this is an issue would depend on whether the local authority considered a study to be a habitable room.
- 4.1.7 The other is the room labelled Study/Bedroom 3 in Unit 18. We understand from Point 2 that it was labelled solely as a study at the time of their analysis and therefore not included. They have now analysed it and reported an ADF of 0.6, also below the recommended minimum ADF. The window is already as wide as possible.
- 4.1.8 With the exception of these five rooms, the calculations suggest that the development would generally be well daylit.

4.2 Sunlight provision

- 4.2.1 As noted by Point 2, the potential for the development to receive sunlight is constrained by its position. It is a narrow site with a building to the south which extends right to the boundary. This limits the number of flats which can have a south facing window, and those that do will have a substantial obstruction to the south. These limitations mean that reduced levels of sunlight to living rooms would be expected.

- 4.2.2 The development does relatively well for sunlight provision given these constraints. All of the five living rooms which would not receive the recommended 25% of annual probable sunlight hours would receive an appreciable amount. One would be only just below it.
- 4.2.3 Nine living rooms would not receive the recommended 5% of winter sunlight, but four of them would be only just below it. Winter sunlight is less important than year round sunlight, and can be difficult to receive in urban settings as the winter sun is lower in the sky. An obstruction immediately to the south is a significant constraint in this respect.

4.3 Sunlight to gardens

- 4.3.1 There is a small garden in the cut out section designed to admit light to the windows at 2 and 3 London Court. We would expect it to receive a very limited amount of sunlight given the obstructions around it. The front gardens will also receive limited sunlight as they lie to the north of the development. However, this would be the case for almost any ground floor garden position due to the presence of buildings and walls to the south; and provision of daylight to windows facing into it is the main function of the area. The gardens on the eastern edge would receive more sunlight.

5 Conclusions

- 5.1.1 The daylight and sunlight reports for the proposed development at 43 and 43A London Street have been reviewed using guidance in the BRE Report 'Site layout planning for daylight and sunlight: a guide to good practice'.
- 5.1.2 There would be a moderate to major loss of daylight to three existing flats at 2 and 3 London Court. The flats with the major adverse impact are currently listed online as serviced apartments.
- 5.1.3 London Court stands on the site boundary and is dependent on daylight across the site. If the development were to have the same relationship with the boundary as London Court, the windows would receive no light at all. It is therefore reasonable to apply some flexibility to the loss of daylight, provided the rooms are left with an acceptable level of daylight. One of the four windows would retain a vertical sky component which is not far below the standard recommended VSC in the BRE Report. The other three are more typical of VSCs with substantial levels of obstruction from other buildings.
- 5.1.4 As the consented East Street student accommodation does not yet exist, it is reasonable to consider retained daylight and sunlight rather than loss. Changeover in student occupants each academic year would have the same effect. The amount of daylight they retain would be more important than degree of change.
- 5.1.5 The student rooms will already all be very poorly daylit due to their own design. The development would reduce this substantially below the top floor. The rooms on upper floors would retain enough sunlight, or would lose a small amount which would be within the BRE guidelines. Ten rooms on the lowest floor would retain an amount of sunlight below the recommended levels. Similarly, the garden would already be poorly sunlight and would become worse.
- 5.1.6 We disagree with Point 2's opinion that the student accommodation would not have a reasonable expectation of daylight due to the poor daylighting afforded by its own design, but their mirror image calculations suggest that the impact of the development would be reasonable if it is to be given the opportunity to match the height and dimensions of its neighbours.
- 5.1.7 Significant changes in the design would be needed to reduce the impact of the development on 2/3 London Court or the student accommodation.
- 5.1.8 Five rooms in the proposed development would be poorly daylit, three bedrooms, one study and one study/bedroom. One of these is so poorly lit as to be essentially non-daylit. These look into lightwells which present a significant constraint to daylight. Daylight provision to rooms in the development without the constraint of lightwells would be reasonable.
- 5.1.9 The development does relatively well for sunlight provision given the constraint of the building immediately to the south of it. All of the five living rooms which would not receive the recommended 25% of annual probable sunlight hours would receive an appreciable amount. One would be only just below it.

6 References

1. BRE, BR209 Site Layout Planning for Daylight and Sunlight: A guide to good practice, 2011
2. Ministry of Housing, Communities & Local Government, National Planning Policy Framework, July 2018.
3. Reading Borough Council, Submission Draft Reading Borough Council Local Plan, March 2018
4. Commission Internationale de L'Eclairage (International Commission on Illumination), CIE Standard 011/E:2003 Spatial distribution of daylight - CIE standard overcast sky and clear sky
5. BS8206 Part 2:2008 Lighting for Buildings, Code of Practice for Daylighting