

## Daylight and Sunlight commentary (Lymington Road)

### 1. Introduction

The Revised Daylight and Sunlight BRE (Neighbouring Properties) Assessment submitted to the Council in June 2016, retested the revised proposed development at 156 West End Lane by calculating Vertical Sky Component (VSC) and Average Daylight Factor (ADF), for the sites surrounding properties in accordance with Part 2.2 of the BRE Guidelines.

The BRE Guidelines states the following in relation to Vertical Sky Component calculation:

*“If the Vertical Sky Component is greater than 27% then enough skylight should still be reaching the window of the existing building. Any reduction below this level should be kept to a minimum. If the vertical sky component with the new development in place, is both less than 27% and less than 0.8 times it's former value, the occupants of the existing building will notice the reduction in the amount of skylight.”*

When reviewing VSC calculations it should be borne in mind that depending upon the room, size of a window or number of windows serving a room, the room may still be adequately lit with a lesser VSC value than the target values referred to above.

Notwithstanding a extremely high level of compliance with VSC values at neighbouring properties. The Council recommended that Average Daylight Factor (ADF) was applied to neighbouring properties to assist in the consideration of the overall daylight impacts of the development on the amenity of adjoining occupiers.

The BRE Guidelines states the following in relation to Average Daylight Factor calculation:

*“The ADF is a measure of the overall amount of daylight in a space. BS 8206-2 Code of Practice for daylighting, recommends an ADF of 5% for a well daylight space and 2% for a partly daylight space...In housing BS 8206-2 also gives minimum values of ADF of 2% for kitchens, 1.5% for living rooms and 1% for bedrooms”.*

### 2. Overall results

The Revised BRE Daylight and Sunlight (Neighbouring Properties) Assessment confirms that 93% (362 out of 391 tested) of the habital room windows on neighbouring properties meet or surpass the numerical values of the BRE Vertical Sky Component target. This is considered to be an extremely high compliance with the BRE Guidelines in a urban environment.

Only 7% (29 out of 391 tested) of the windows fall marginally short of the Guideline targets, which contains special provisions in certain situations, including cases in urban locations of whether the window is one of multiple windows serving the same room. The analysis confirms that of the 29 windows, 11 are secondary windows (i.e the room which the window serves also benefits from at least one additional window). The results confirm that where a room is served by multiple windows, at least one window within the room passes the VSC test. The remaining 18 windows that do not achieve an ideal standard of daylight fall only marginally short of the VSC target (windows achieving a reduction ratio of 0.7 and above against the target of 0.8).

Further consideration has been given to each residential property which have a window/s that do not meet the numerical value of the BRE VSC test.

### 3. Impact on amenity

#### 8 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 13 of 14 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Only one window out of 14 does not retain greater than 27% or 0.8 of their former value of skylight. Window 212 is considered to be a secondary window that serves the same Dining/Kitchen as Window 213 and 214. The tests indicate a 0.77 loss, 0.03 greater than the level of loss considered as acceptable. This marginal loss, to one window of three serving a room, is not considered to have a material impact on residential amenity.

Furthermore, when considering the ADF test for the Dining/Kitchen room which is served by Window 212, the room surpasses the BRE Guidelines with a calculation of 6.1%. The BRE Guidelines suggests a minimum value of 2% for kitchens and considers an ADF value of 5% as a well daylight space. The room would therefore, by this criteria, be considered to be a well daylight space. It is therefore considered that the minimal reduction in VSC at Window 212, will not have a material impact on the amenity of the Dining/Kitchen room.

It is also noteworthy that with regard to sunlight, when applying the APSH test all windows aforementioned will retain both 25% annual and 5% winter sunlight, and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 10 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 12 out of 13 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Only one window of 13 does not retain greater than 27% or 0.8 of their former value of skylight. Window 230, is assumed to be a secondary window to a lower ground bedroom, referring to the planning application 2015/0398/P. The tests indicate a loss of 0.76, 0.04 greater than the level of loss considered acceptable. This marginal loss to one window of two to a bedroom is not considered to have a material impact on amenity.

When considering the ADF test for this window, the Daylight and Sunlight Assessment the room as 'unknown', as it cannot be guaranteed that planning application 2015/0398/P has been implemented. If the room is a bedroom, the window does pass the ADF value at 1.4%. It is therefore considered that the minimal reduction in VSC and acceptable ADF values to a secondary window will not have a material impact on the amenity of the room.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 12 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 14 out of 19 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Five windows out of 19 (Windows 239, 240, 241, 247 and 248) fall marginally short of the VSC target, with borderline ratios 0.72 and higher of their former value against a recommendation of 0.8.

It has been assumed that Window 239 (VSC 0.73 value) and Window 240 (VSC 0.74 value) both serve the same room, which use is unknown and therefore the highest ADF guideline figure of 2% has been applied. It is noteworthy that Window 240, as existing, does not meet the VSC target of 27% of skylight and therefore any loss of relatively small values results in a disproportionately high percentage change. When assessing the room against the ADF test it surpasses the highest value for any room use with a proposed ADF value of 2.9%.

Window 241 has a marginal loss of former VSC value of 0.76 against a recommendation of 0.8. It is believed that both Window 242 and Window 243, which meet the VSC target values, serve the same room as Window 241. Notwithstanding this when reviewing the room against the ADF test, the room, which use is unknown, surpasses the highest value for all room types with a ADF value of 5.3%.

It has been assumed that Windows 247 (VSC 0.72 value) and 248 (VSC 0.72 value) both serve the same room, along with Window 249 which meets the VSC target values. When assessing the room against the ADF test, the room surpasses the highest value for all room types with a ADF value of 4.4%.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 14 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 8 out of 12 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Window 258 and Window 259 fall marginally short of the VSC target values at 0.77 and 0.73 their former value of skylight. It has been assumed by the Council that these windows both serve a kitchen and when assessing the room against the ADF test the minimum value of 2% is maintained. It is therefore considered that the loss of light to the kitchen would be negligible when considering the ADF analysis.

Window 265 and Window 266 fall marginally short of the VSC target values at 0.76 and 0.75 their former value of skylight. It has been assumed by the Council that these two windows serve a living room, along with Window 264 which meets the VSC target values. Notwithstanding this when assessing the room against the ADF test the minimum value of 1.5% is surpassed with an ADF value of 5.4% (which surpasses the minimum for all room types), which is considered to be a well daylight room.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 16 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 14 out of 17 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Window 270 falls short of the VSC target value at 0.7 its former value of skylight. This window serves a living room with four other windows (Windows 271, 272, 273 and 274), including two skylights, that all surpass the VSC target values. It is therefore considered that the VSC shortfall of Window 270 will not be noticeable when taking into account the four other windows that serve this living room. Notwithstanding this, when applying the ADF test to this living room the minimum value of 1.5% is surpassed with 5.7% (which surpasses the minimum for all room types), which is considered a well daylight room.

Window 275 falls marginally short of the VSC target values at 0.77 its former value of skylight. The use of this room is unknown and when applying the ADF test to the unknown room, the highest value of 2% is surpassed with a ADF value of 2.5%, which surpasses the value for all room types.

Window 279 falls marginally short of the VSC target values at 0.77 its former value of skylight. This window serves a kitchen along with both Window 280 and Window 281 which meet the VSC target values. When applying the ADF test to this kitchen, the minimum value of 2% is surpassed with a ADF value of 3.1%.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 18 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 8 out of 10 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Window 293 and Window 294 fall marginally short of the VSC target values at 0.75 and 0.78 their former value. These two windows serve a living room, along with Window 292 which meets the VSC target values. When applying the ADF test to this living room the minimum value of 1.5% is surpassed with a ADF value of 2.7%.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 22 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 8 out of 13 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Window 310 and Window 311 fall marginally short of the VSC target values at 0.77 and 0.75 their former value. Assuming that the existing floor plans are correct in relation to planning application 2015/0602/P, it is considered that these two rooms serve a bedroom. When applying the ADF test to this bedroom the minimum value of 1% is surpassed with a ADF value of 2.6%, which passes the assessment for any room type.

Window 315, which serves a dinning room, falls marginally short of the VSC target values at 0.76 of its former value. When applying the ADF test to this dinning room the minimum value of 1.5% is surpassed with a ADF value of 3.1%, more than double the recommended minimum and passes any room type.

Window 316, which serves a small kitchen, falls short of the VSC target by 0.01 with a VSC value of 0.79. When applying the ADF test to this small kitchen the value of 2% is marginally reduced to 1.7%. It is considered that any noticable loss of light in this kitchen will be minor.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 24 Lymington Road

This property is to the north of the proposal, with windows facing predominantly south. The VSC calculations indicate that 12 out of 15 windows tested at the property will either retain greater than 27% or 0.8 of their former value of skylight.

Window 323 falls marginally short of the VSC target with a VSC value of 0.76 its former value. Window 324, which can reasonably be assumed serves the same room as Window 323, falls short of the VSC target by 0.01 with a VSC value of 0.79. The room's use is unknown and when applying the ADF test to this room highest value of 2% is applied. When assessed this room has an ADF value of 3.4%.

Window 331 falls marginally short of the VSC target with a VSC value of 0.77 its former value. When applying the ADF test to this room it is considered that there is little alteration from the existing daylighting environment, with a 0.1% change.

It is noteworthy that with regard to sunlight, when applying the APSH test, all windows aforementioned will retain both 25% annual and 5% winter sunlight and therefore the BRE Guidelines are satisfied in this regard.

It is therefore considered, that when applying the BRE Guidelines the proposed development will not have a material impact to the light amenity of this property.

#### 4. Conclusion

The Revised Daylight and Sunlight BRE (Neighbouring Properties) Assessment (June 2016) concluded that the proposal achieved a high level of compliance with the BRE recommendations and there is no material impact on amenity of residents.

This further assessment reconfirms that when applied as intended, the proposal adheres to the BRE Guidelines and does not significantly reduce the sunlight or daylight to existing neighbouring properties and does not materially affect the amenity of the neighbouring residents.

