

Shedding Light and Luminance on the Third Edition of the BRE Guidance 209

August 2022

BRE have issued a “comprehensive revision of the 2011 edition of *Site layout planning for daylight and sunlight*”. Like its predecessor, this 2022 third edition “gives advice on site layout to achieve good sunlighting and daylighting both within buildings and in the open spaces between them”. Equally it is “purely advisory and the numerical target values within it may be varied to meet the needs of the development and its location.”



Photo source: planningresource.co.uk

Daylight

So what is new? Out go the average daylight factor (ADF) and No Skyline/Daylight Distribution Tests as recommended measures to assess the overall amount of daylight in a space. Those familiar with the old minimum values of 2% ADF for kitchens, 1.5% for living rooms and 1% for bedrooms must set this methodology aside since the third edition supersedes the second edition which “has been withdrawn”. All outstanding applications, environmental impact assessments & appeals which include daylight assessments will need to be re-assessed against the third Edition of BRE 209.

Daylight is now to be checked using either of two methods set out in British Standard 17037: 2018 “Daylight in Buildings” (“BS EN 17037”). Appendix C to the BRE 209 guidance summarises the two methods, both of which are more complex than the old ADF method.

The first (“the illuminance method”) is based on target illuminances from daylight to be achieved over specified fractions of the reference plane (a plane at table top height covering the room) for at least half of the daylight hours in a typical year. This requires climatic data for the site location “at an at least hourly interval for a typical year” and is described as “detailed and calculation intensive”. The alternative method (“the daylight factor method”) is based on calculating the daylight factors achieved over specified fractions of the reference plane but we are told that “usually a detailed simulation model is still used”. The results have then to be tested against the new BRE recommended daylight targets. Appendix C explains that the guidance in BRE 209 is intended to be used with BS EN 17037 and its UK National Annex. BS EN 17037 gives three levels of recommendations for daylight spaces and its Annex A provides values for different room types. For compliance with the standard we are advised the minimum level should be used. BRE 209 warns against very high daylight levels, where summertime overheating (of which more later) can arise.

Under the heading “Presentation of Results”, paragraph C32 of BRE 209 advises that for each room the median illuminance or median daylight factor should be presented “as this enables a comparison with the different recommendations in BS EN 17037”. This sentence needs to be read in the wider context of both BS EN17037 and the UK National Annex. “For non-domestic interiors where daylight calculations are undertaken, the minimum illuminance or median daylight factor should also be presented” the reader is advised. Practitioners will be alive to the fact that development planning policies or supplementary planning documents refer to the BRE Guidance rather than to BS standards. It is the advice in BRE 209 which is to be applied in such cases.

Specified default values are given to be used if none are measured or specified, and there are also maximum reflectances indicated for specific surfaces. Where specific surfaces finishes are used, appropriate factors for maintenance and furniture should be included. It is notable that the guidance is clear that the surfaces utilised in the assessment, as well as the maximum reflectances, need to be presented in the results. Where specific surfaces are relied upon either to achieve compliance or near compliance, it will be important to prove the characteristics of the material by reference to the manufacturer's specification. Checking on the longevity of the product would also be useful. The wider the palette of materials with these characteristics, the more choice the developer will have at their disposal.

There will inevitably be pressure to impose planning conditions on planning permissions informed by such assessments to ensure that the surfaces relied upon to show compliance (or near compliance) with BRE 209 are used in the final development and thereafter maintained. It is unrealistic to think this can be avoided unless default values are used. The risk of planning conditions should be identified with the client up front. A decision needs to be taken to see if reliance on default values is preferable in order to avoid this risk. In high end bespoke developments with luxury space this could be a significant factor.

Sunlight

The Annual Probable Sunlight Hours (APSH) test has also been replaced for new buildings (the test is retained for assessing impacts on existing buildings). Sunlight amenity is now to be tested on March 21st when a habitable room, preferably a main living room, can receive a minimum of 1.5 hours of sunlight. This is to be assessed at the inside of the window. Sunlight received by different windows serving one room can be counted, but only if the sun lights the windows at different times. Where the positions of the windows are not known, availability of sunlight is to be assessed at points no more than 5m apart, and at a point of 1.6m above ground level. Though the minimum of 1.5 hours is given in the BS EN 18037, BRE 209 notes that a local planning authority may legitimately seek a different target value for hours of sunlight.

Further Tests for View, Sunlight Exposure & Glare are introduced.

Solar Panels



Photo source: london.gov.uk

This third Edition of BRE 209 contains more guidance on the use of photovoltaics ("PVs"). The case of *R (on the application of McLennan) v. Medway Council* [2019] EWHC 1738 established that the potential interference with solar panels is capable in law of amounting to a material planning consideration. In that case, the failure of an officer report to consider this impact led to the quashing of the permission.

Within BRE 209, the overshadowing or obstruction of PVs is noted as potentially capable of having a considerable negative impact on performance: where a proposed development of any type is near to an existing solar installation or building it is good practice to try to minimise any loss of solar radiation. Section 4.3 offers new more detailed guidance on this topic.

Most development plan policies that reference the BRE Guidance do so in the context of daylight and sunlight and broad residential amenity considerations, rather than specifically in the context of energy consumption. However, it has long been noted by decision makers that reductions in daylight can lead to increased energy consumption and the associated costs. In the context of Environmental Impact Assessment (EIA), there is no reason why existing solar panels are not capable of forming part of the wider "environment" which might be the subject of "likely significant effects".

Accordingly, where there are likely significant effects, they will need to be assessed. Scoping opinions and directions will need to consider if these effects should be scoped in or out in the same way as broader daylight & sunlight impacts.

Overheating

As in the previous edition, the risk of overheating is referenced and needs to be borne in mind. This is an area which is acquiring increased significance especially in the context of specialist accommodation for the elderly, where people can reasonably be expected to spend more time inside. The London Plan leads the way by including a policy directed to managing risks to the city from heat (Policy SI4), which highlights orientation and shading as key elements of the cooling hierarchy.

The Building Regulations 2010 Part O took effect on 15 June 2022 but apply only to new residential buildings. It does not apply to extensions added to residential buildings after they are built, nor does it apply to changes of use. Developers will require designers to heed the Building Regulations since compliance is mandatory. The need to comply with the Building Regulations is a material consideration for the designer just as much as the decision maker determining an application. Securing a consent for a scheme being designed now which is then not deliverable without requiring alterations to comply with the Buildings Regulations is likely to be problematic and time consuming. However, there may be a number of ways in which compliance can be achieved. If the need to comply with the Building Regulations resulted in a design that gave rise to identified planning harms, it should not be assumed that the permission would be granted in all cases. This would be a fact specific judgement weighing competing planning considerations in the overall planning balance.



Photo source: building.co.uk

Mary Cook
Barrister & Partner
Town Legal LLP
mary.cook@townlegal.com



Aline Hyde
Paralegal
Town Legal LLP
aline.hyde@townlegal.com

