OVERSHADOWING (LOSS OF DAYLIGHT)

2.10 The key to an understanding of overshadowing is the distinction between the two components of daylight (natural light): skylight and sunlight. Skylight, sometimes known as diffuse skylight, is light which is diffused all around us even on cloudy days, whilst sunlight is the light which comes directly from the sun on clear days. BRE define daylight as a combination of skylight and sunlight, stating, “The quantity and quality of daylight inside a room will be impaired if obstructing buildings are large in relation to their distance away”. In a British context skylight is the more important component. Three indicators are suggested by BRE for measuring skylight, and two for sunlight.

2.11 Skylight indicator 1: ‘25 degree’ line This indicator governs new development directly facing existing windows. If a new building or extension breaches a perpendicular line at an angle of 25 degrees above the horizontal taken from a point 2 metres above ground level on an existing house, it is likely that windows in the existing house will be overshadowed. The diagram below illustrates how this indicator works. Where there are no levels changes, the Essex Design Guide suggests that a separation distance of at least 10 metres is required to prevent overshadowing. Our research shows that the 25 degree line is referred to in only a minority of local planning authorities’ householder design guides.

2.12 Skylight indicator 2: ‘45 degree’ line This indicator governs new development at right angles to existing windows. Two 45 degree lines should be drawn on the elevation drawing and plan drawing respectively. The 45 degree line on the elevation plan should be drawn diagonally down at an angle of 45 degrees from the near top corner of the extension towards the nearest neighbouring window. The 45 degree line on the plan drawing should be drawn diagonally back from the end of the extension towards the nearest neighbouring window. If both lines cross the centre point of the nearest neighbouring window then it is likely that overshadowing will occur. The diagram below illustrates how the indicator works.
2.13 Our research shows that the 45 degree line is contained in the majority of local planning authorities’ householder design guides, often with minor variations from the BRE guidance. For instance many local authorities apply the 45 degree line only in the horizontal, applying the rule more strictly to 2 storey extensions, for instance by requiring the 45 degree line to be taken from the quarter point or nearest edge of the window.

2.14 *Skylight indicator 3: ‘43 degree’ indicator* There is one further indicator recommended by BRE for use in instances where a development close to a boundary must avoid harm to potential new development on the other side of the boundary, so as not to sterilise the adjoining land. Although this is not a scenario which occurs when assessing Level 2 impacts, and for this reason the indicator is not found in householder design guides, it has value to this project because it makes no assumptions about what is on the adjoining land other than that it is susceptible to overlooking, overshadowing and overbearing impacts.
2.15 The rule states that if a new building breaches a perpendicular line at an angle of 43 degrees above the horizontal taken from a point 2 metres above ground level on the boundary, then it is likely that adjoining land will suffer from overshadowing. The diagram below illustrates how this indicator works. The indicator confirms that overbearing impacts can be avoided by ensuring that domestic extensions and outbuildings are sited an appropriate distance from common boundaries, and are limited in height in direct proportion to their distance from the boundary. Such a limitation reflects neighbours’ concerns about development in close proximity to their boundary, and links to the ‘3 metre’ rule and its variants, which are discussed below.

2.16 **Sunlight indicator: ‘25 degree’ line** BRE consider that householders are particularly likely to notice a loss of sunlight to their homes, and value sunlighting of their amenity areas. They advocate using the British Standard for sunlighting, which suggests that all windows oriented within 90 degrees of due south, especially living rooms and conservatories, should be checked for possible loss of sunlight. The simplest indicator recommended by BRE is the 25 degree line, which operates in the same way as the indicator explained above (though it is not applicable to north-facing windows). As with the other indicators, BRE emphasise that the guideline is purely advisory, and that planning authorities may wish to devise different criteria.

2.17 **Sunlight indicator: amenity areas** BRE recommend that no more than 40% of any private garden (which excludes small front gardens) should be prevented from receiving any sun at all when the sun at its equinox (i.e. on 21 March). Such a rule of thumb does not guarantee that sunlight is available in specific areas like patios, and does not guarantee sunlight in winter. The presence of trees and fences impact on sunlighting calculations. BRE do not suggest a simple indicator for measuring loss of sunlight to a garden, but advocate the use of shadow plans to assess whether large buildings are likely to affect adjoining gardens. As the attached example shows, such diagrams are complex to calculate, and have the added complication that different indicators are applicable in the north of England compared to the south. Whilst some local
planning authorities use shadow plans as part of their supplementary guidance for householder developments, their complexity limits their value to an HPDO.

2.18 To what extent do these indicators establish absolute standards for new development? BRE make the point that “like most rules thumb, [the 45 degree line] needs to be interpreted flexibly”, and the same is true of the other indicators. Specific examples of where flexibility is required include where the extension has a larger building behind it which already blocks daylight, and where an extension already exists to one side of a host property raising the possibility of a ‘tunnelling effect’ occurring. For sunlighting, the dwelling’s orientation is obviously crucial. The indicators may act simply as a prompt to designers that a better design solution is achievable.

2.19 It should be borne in mind that the current GPDO does not restrict development which breaches these indicators; for instance, it does restrict extensions along common boundaries even though these will frequently breach the 45 degree line. Similarly two storey extensions which can be built which could breach the 25 degree line in relation to houses at the rear. These indicators should not therefore be regarded as mandatory, but should be used (as their name suggests) to indicate whether there is a potential overshadowing issue with a proposed development. Furthermore their complexity may make them difficult to incorporate fully within a self-regulating HPDO.