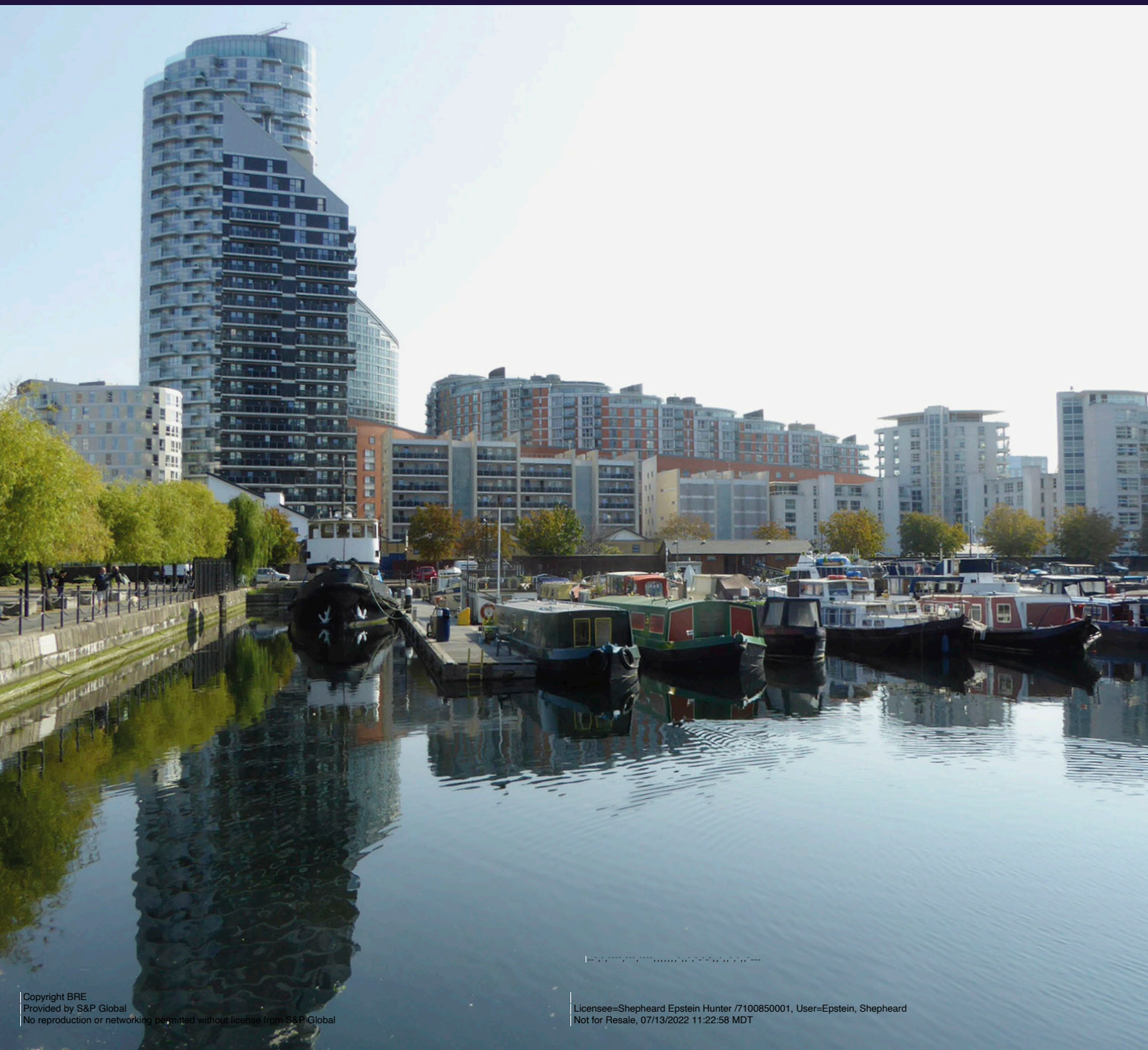




Site layout planning for daylight and sunlight

A guide to good practice

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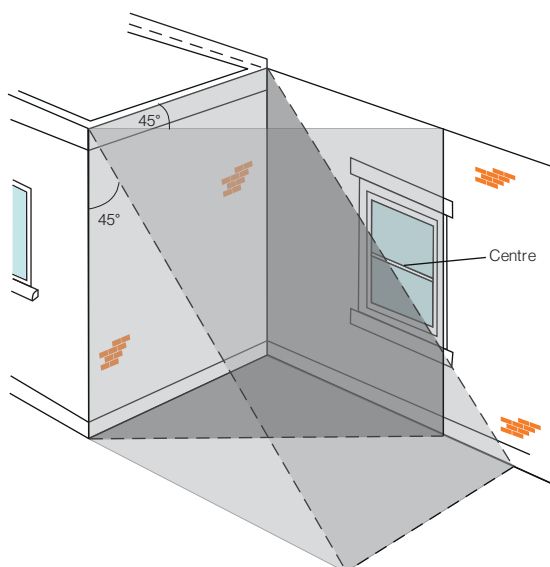


Figure 17: Application of the 45° approach to a domestic extension. A significant amount of light is likely to be blocked if the centre of the window lies within the 45° angle on both plan and elevation. Here the centre of the window lies outside the 45° angle on elevation, so the impact of the extension is likely to be small.

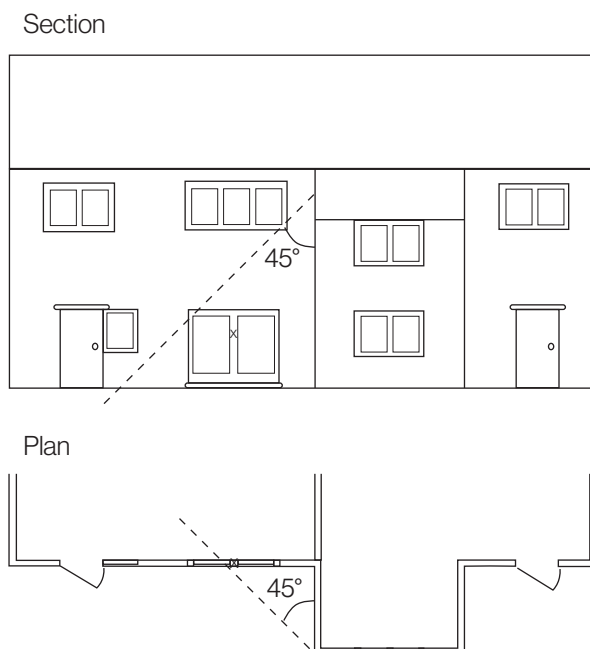


Figure 18: Here the extension has a pitched roof, so a point halfway along the roof slope is used as the start of the 45° line on the elevation. The affected window is a patio door, so a point 1.6 m above the ground has been taken. This point is within the 45° angles on both plan and elevation, so a significant reduction of light is likely.

2.2.17 Figure 17 illustrates the application of the method, the '45° approach'. Take the elevation of the window wall and draw diagonally down at an angle of 45° away from the near top corner of the extension (Figure 17). If the extension has a pitched roof then the top of the extension can be taken as the height of its roof halfway along the slope (Figure 18). Then take the plan and draw diagonally back at an angle of 45° towards the window wall from the end of the extension (note that the section perpendicular to the window is not used here). If the centre of a main window of the next-door property lies on the extension side of both these 45° lines then the extension may well cause a significant reduction in the skylight received by the window. (In the case of a floor-to-ceiling window such as a patio door, a point 1.6 m above the ground on the centre line of the window may be used.)

2.2.18 Like most rules of thumb, this one needs to be interpreted flexibly. For example, if the extension has another extension, or a much larger building, behind it then the daylight from that direction may be blocked anyway. Special care needs to be taken in cases where an extension already exists on the other side of the window, to avoid a 'tunnel effect' (Figure 19). A VSC calculation (see Sections 2.2.5 and 2.2.6) can be used to quantify the loss of light, if required.

2.2.19 Finally, as with the other guidelines in this section, the 45° approach deals with diffuse skylight only. Additional checks will need to be made for the sunlight which may be blocked (see Section 3.2).

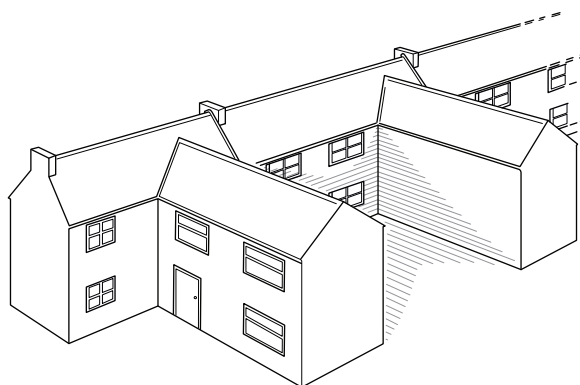


Figure 19: A tunnel effect can occur if a window is obstructed by extensions on both sides