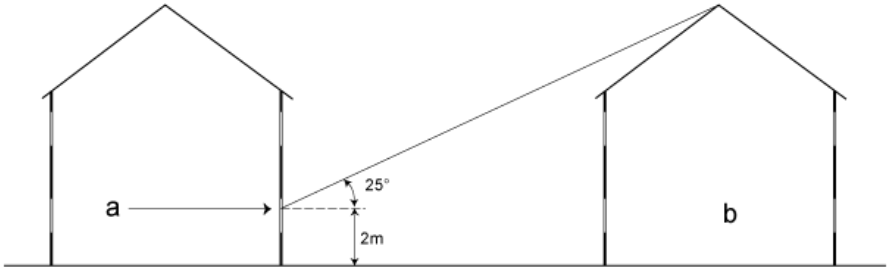
Daylight and Sunlight

Natural light makes dwellings more attractive, pleasant and energy-efficient. Housing layouts should be designed to maximise daylight and sunlight while taking into account other factors, such as privacy and the attractiveness of the wider streetscape.



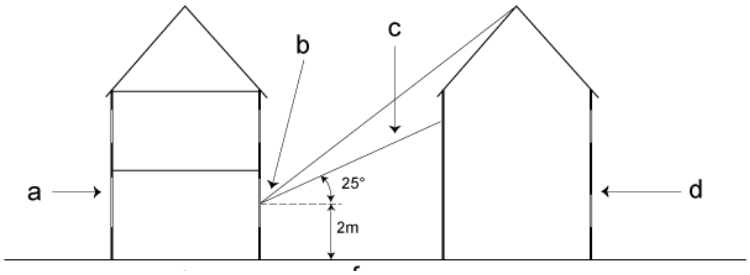
a. Reference line for daylight calculation
b. Obstructing building

1.68 Local authorities will usually only approve a planning application if it will not have an adverse effect on the daylight and sunlight received by neighbouring properties. The daylight and sunlight tests normally used when considering planning applications are set out in the Building Research Establishment (BRE) document 'Site Layout Planning for Daylight and Sunlight: A guide to good practice' (2011).

1.69 This document suggests that adequate daylight in interiors is achieved at an unobstructed 25° angle from a point 2m above floor-level at the facade. This would result in spacing of at least 10m between opposing house-fronts. In most cases, however, and in order to develop and maintain an attractive townscape, it is desirable for this spacing to be less.

1.70 In houses one room deep, the amount of daylight may be supplemented from the rear. Other ways to increase the amount of daylight in closely spaced buildings include:

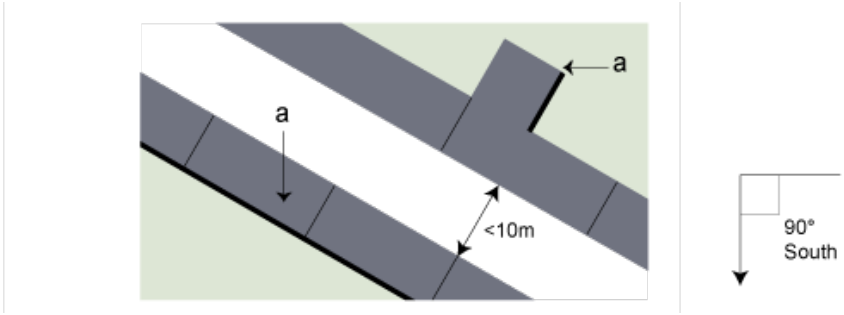
- Raising window head-heights and keeping rooms shallow in plan.
- Application of the 45° rule to projections and extensions.
- In houses on the north side of such streets, ensuring that ground-floor habitable rooms take daylight from both front and rear.



a. Additional light from rear
b. Raised window head-height
c. Daylight obstructed
d. Obstructing building
e. Shallow plan
f. Less than 10m

Sunlight

1.71 It is not reasonable to require all dwellings to have sunlit rooms; often, a view onto an external sunlit space is preferable. However, a room will be sunlit if at least one main living room window faces within 90° of due south and is not obstructed according to the criteria above.

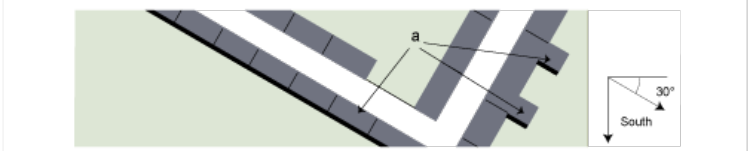


a. Suitable elevations for main living room windows to benefit from sunlight

Passive Solar Gain

1.72 To reduce heating costs during winter, buildings should be oriented and designed to accommodate solar heat gain – though it should be noted that this is not feasible for all types of dwelling.

1.73 Any wall containing windows oriented within 30° of due south will benefit from solar heat gain. Of course, this does not mean that all houses have to be aligned east-west: for example, projecting rear wings on a house aligned north-south can still benefit from passive solar gain.



a. Elevations that would benefit from passive solar gain

1.74 In such cases, it is necessary to incorporate larger glazed areas – especially full-height windows facing the sun – and to zone internal spaces so that living rooms lie behind facades within 30° of due south. Such windows should not be obstructed by buildings or evergreen trees above a 13° vertical angle from the mid-height of the window. Projections which cause permanent shade should be avoided on north facades.