of uniformity thus does not apply to the whole working plane, but to a series of defined task areas on the working plane. In the calculation of illuminance diversity, grid points within 0.5 m of walls or large fixed obstructions are ignored (see Figure 3.17). This is because planar illuminances will (under normal circumstances) fall around the room perimeter and near large obstructions, such as partitions or large structural columns, that project above the working plane.

Calculation or measurement of illuminance in these positions will therefore have little practical value, and particular care should be taken in interpretation of computer-generated illuminance grids to make sure that the grid values chosen for assessment of illuminance variation are not at the very edge of rooms or adjacent to obstructions (see section 1.4, Variation in lighting).

Diversity is a measure of the range of lighting over a specified plane, normally the horizontal working plane, in the space. It is meant to limit the peaks and troughs in the levels of lighting seen by the users of that space. If the range or diversity of illuminance is too wide, then the space is likely to be viewed as disconcerting or distracting by most users. If the range of illuminance is too low, then the space may be seen as bland or uninteresting. Diversity is the ratio of minimum illuminance to maximum illuminance found over the working plane of the main area of a room or space, and should not exceed 1 : 5.

3.8.4.1 Calculation of illuminance variation

No design method is available that will enable the various recommendations relating to illuminance uniformity or diversity to be optimised within a particular proposed design solution.

Widespread use is now made of computer programs that are capable of undertaking analysis, in considerable detail, of illuminance conditions in proposed installations. Most programs are capable of calculating illuminance on a grid of points across a

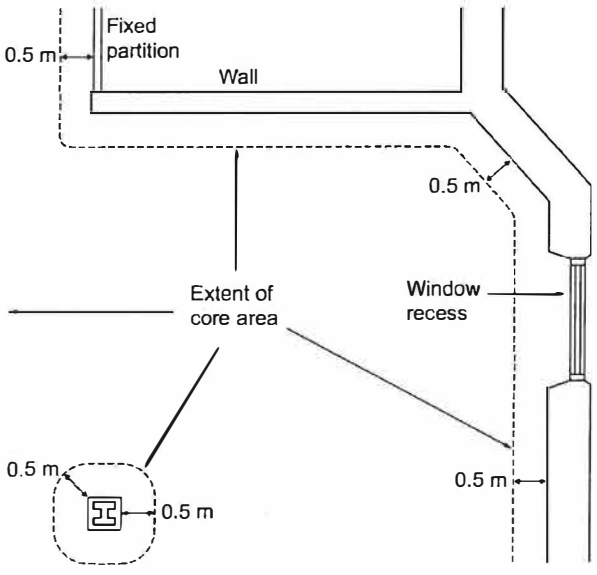

Figure 3.17 Core office space