— safety

— economy.

The value of illuminance may be adjusted by at least one step of illuminance on the scale of illuminances (see below) if the visual conditions differ from the normal assumptions.

A factor of approximately 1.5 represents the smallest significant difference in subjective effect of illuminance. In normal lighting conditions, approximately 20 lx is required to just discern features of the human face, and is the lowest value taken for the scale of illuminances. The recommended scale of illuminances (in lx) is:

20–30–50–75–100–150–200–300–500–750–
1000–1500–2000–3000–5000

The required maintained illuminance should be increased when:

— visual work is critical

— errors are costly to rectify

— accuracy or higher productivity is of great importance

— the visual capacity of the worker is below normal

— the details of the task are of an unusually small size or low contrast

— the task is undertaken for an unusually long time.

The required maintained illuminance may be decreased when:

— task details are of an unusually large size or high contrast

— the task is undertaken for an unusually short time.

It is also assumed that the people doing the work have normal vision. If a significant number of building occupants have some degree of visual impairment, the maintained illuminance could be increased. The most common effects of old age on vision are an increase in the shortest distance at which an object can be focused, reduced light transmission through the eye, and an increase in the scattering of light in the eye. Spectacles or contact lenses can be used to correct the first effect. Increasing the illuminance will offset the loss in transmission and will increase visual sensitivity. A 70-year-old person can require around three times the illuminance needed by a 20-year-old, in order to achieve similar visual performance. The recommendations given in the Lighting schedule (section 2.5) generally assume an age of 40–50 years.

Although increasing the illuminance and avoiding glare will benefit most people with some degree of visual impairment, there are some severe forms of visual defect (e.g. cataract) for which increasing the illuminance may be detrimental. It is essential to match the lighting conditions to the nature of the visual defect.

The Lighting schedule is not intended to cover lighting for the visually handicapped.

2.3.3 Illuminance variation

For the task area and immediate surround, uniformity is important. A task area is not usually the entire area of a workstation. On