



INTRODUCTION

In order that buildings (other than domestic premises occupied as a private dwelling) may be evacuated effectively in the event of a fire, doors on the escape routes must satisfy certain criteria. They must be unobstructed and easily open-able without the use of a key. It should not be necessary to manipulate more than one mechanism to release the door, ie it should be "simple action".

Protected escape routes (ie staircases and certain corridors) are constructed with fire resisting materials to allow persons to escape without being obstructed by fire, heat and smoke. Doors within these escape routes will also have to be fire resisting and fitted with self-closing devices. The period required for fire resistance on escape routes is usually at least 30 minutes.

GENERAL PRINCIPLES

a) Improving Fire Resistance Of Existing Doors And Frames

Advice on improving the fire resistance of existing doors and frames is contained in:

- i) Building Research Establishment Information Paper 8/82 Increasing the fire resistance of existing timber doors and
- ii) Timber Research and Development Association's Wood Information Sheet, Section 1, Sheet 32, "Fire Resisting Doorsets by Upgrading.

NB: An existing timber door can only have its fire resistance improved to a maximum of 30 minutes.

b) New Fire Doors

New doors and frames, which are being installed as a "set", should comply with the relevant sections of the British Standard.

The gap between the door edge and its frame should not exceed 3mm. Where smoke control is required, flexible cold smoke seals should be fitted in addition to intumescent seals

c) Automatic Sliding Doors

Where automatic sliding doors are to be installed, whether electrically or pneumatically operated, they should comply with the relevant British Standard and the following fail safe arrangements should be incorporated:

- i) the doors should fail safe in the open position; or
- ii) the doors should be able to pivot outwards in the direction of exit. Pivoting sliding doors should display a notice "In emergency push to open" in conspicuous plain letters.

d) Mechanical Revolving Doors

In general, revolving doors are not acceptable for means of escape purposes, thus installations using revolving doors must include suitable pass doors of a conventional pattern and of adequate width.

Revolving doors, which convert into fire exit doors, will only be accepted for means of escape in case of fire after full consultation with the Fire Authority.

e) Swing Leaf Doors

A door used for means of escape should normally open in the direction of exit. It should always do so.

- i) if it is from a room in which a fire may develop very rapidly (eg a spray booth), or
 - ii) if the door serves an area from which more than 50 persons may need to escape.
- Where an outward opening final exit door cannot be provided, eg because it would obstruct a public right of way, the inward opening door may need to be kept locked in the open position whilst the premises is in use.

f) Sliding Doors (Manually Operated)

Such sliding doors are only suitable for doors on escape routes, where they will be used solely by members of staff. In every case the door must be made and maintained so that it can be opened easily by hand.

g) Rolling Steel Shutters, Iron Doors and Collapsible Gates

Rolling steel shutters, iron doors, collapsible gates and similarly filled openings do not normally provide satisfactory exits for means of escape in case of fire. However, there may be instances in buildings (or parts of buildings) of low or normal fire risk where it will be possible to regard them as such provided that they are not likely to be obstructed and can be opened manually even if normally power operated. Where these doors are used as a means of escape they should be capable of being easily and immediately opened by persons escaping.

h) "Up And Over" Doors

"Up and Over" doors are not generally acceptable for means of escape in case of fire, but may be used by small numbers of staff. It must be possible to open them easily by hand.

i) Wicket Doors

Full size wicket doors should be provided in large sliding doors and in large rolling shutters on escape routes. Such doors should be clearly visible and conspicuously marked as a fire exits. Where a wicket door is not of full size it may not be suitable for the number of persons that may require to escape.

j) General

Suitable arrangements should be made to ensure that furniture or heavy articles are not placed across a door which is required for means of escape, especially a door communicating between two rooms.

Doors required for means of escape in case of fire must be kept available for immediate use at all material times.

The needs of disabled people should be considered: lever type door handles are easier to operate than door knobs and the clear width of an open door should not be less than 800mm.

Raised thresholds should not be encountered on any escape routes or circulation areas. Fire exit notices, fire door kept shut notices and other notices may have to be provided on doors.

k) Letter-plates (Letterboxes)

The provision of letter-plates in fire resisting doors should be avoided where possible and approval should be obtained from any enforcing authority before they are installed. Letter-plates are not acceptable in any door required to give a fire resistance greater than 30 minutes. An acceptable alternative to the provision of letter-plates is separate mail boxes that can be protected more easily from the effects of fire.

The following criteria should apply before the Fire Authority will consider giving approval for the provision of a letter-plate in a fire-resisting door: -

1. The door must be of suitable construction and the aperture cut in the door must be in an area of solid timber.
2. The size of the aperture cut in the door must not exceed the size of that in the letter-plate.
3. The letter-plate should be sited 900mm up from the floor as this is where the neutral pressure axis is expected to be in a fire situation.
4. The letter-plate must be constructed from metal and have a positive spring closer fitted to it.
5. A stainless steel inner flap with a positive spring closer must be provided. It should have a generous overlap which must not be less than 10mm and it must be independently screwed to the door and not be reliant on the bolt fixings from the back of the letter-plate to hold it in position.
6. A combined smoke and intumescent seal must be provided around the aperture cut in the door and the inner flap must close onto this seal.

OTHER AUTHORITIES YOU MAY NEED TO CONSULT

If the premises are being constructed or altered, it is likely that the approval of the local authority building control department will be required.

There are also other enforcing authorities, which have legislative control over certain premises, which may need to be consulted, before any works are undertaken.

These may include:

- a) Health and Safety Executive
- b) Environmental Health Department (local authority)