This Guidance Note gives advice on standards for door furniture for commercial properties.

This Note is one of a series produced by the Authority to provide advice on various aspects of fire safety. If you require any further guidance on the advice given or require advice on another topic please contact your local borough Fire and Community Safety Centre or visit the London Fire Brigade web site at http://www.london-fire.gov.uk

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1 INTRODUCTION

1.1 The type of door fittings used on a door must not detract from the function of the door be it solely to serve as a means of ingress or egress of a building or have an additional purpose such as high security or fire/smoke stopping requirements. Not only will the efficiency of the door be influenced by the choice of door fittings but also by the degree of expertise and method employed in the fixing.

2 AUTHORITIES YOU MAY NEED TO CONSULT

2.1 Where security is the main concern the advice of the local police may be helpful. However, advice regarding security may not coincide with the need for ease of escape through the door in an emergency therefore, the advice contained in this guidance note regarding locks is particularly important. If in doubt contact the Fire Brigade.

2.2 Fire doors are mainly the concern of the Fire Brigade although the local authority Building Control Office should be consulted where large heavy fire doors are used or automatic release mechanisms are proposed, as they may be a condition of the Building Regulations.

3 GENERAL PRINCIPLES

3.1 The following general recommendations are to be considered when fitting door furniture.

Screws and Bolts

3.2 Screws and bolts used in the fitting of any item of hardware to fire doors should be of iron, steel or high melting point alloy and of sufficient strength to carry the load, even under fire conditions, but not so long or placed that heat can be conducted through the thickness of the door.

Hinges

3.3 Hinges, in common with other hardware, must be of suitable quality and strength for the purpose for which they are intended. Thus hinges and the screws used to attach them to fire doors and frames should be made of iron, steel or brass and not of aluminium, plastic or an alloy with a melting point of less than 800 degrees centigrade.

3.4 Fire doors are normally of such a weight that they need to be fitted with three hinges per door. For extra large or unusually heavy doors four hinges should be used. The hinges should be fixed as indicated in BS 4787: Part 1: Specification for Dimensional Requirements (of wooden door sets).

3.5 Hinges should be a least 100mm long. While they should be sufficiently wide to allow the screw fixings to be as near as possible to the centre of the door, they should not be so wide as to extend across the full thickness because of problems associated with conducted heat.

3.6 Rising butt hinges are not recommended for fire doors.

Security Fittings

3.7 Fire escape doors must be able to be opened from the inside without the use of a key; a key kept in a glass fronted box adjacent to the doors is not acceptable.

3.8 Locks and latches fitted to fire resisting doors must not contain low melting point materials such as aluminium or nylon.

3.9 Suitable security fittings for use of fire escape doors include the following:

(a) escape mortise deadlocks - this type of mortise lock, allows the door to be opened by turning a knob from within;

(b) mortise nightlatches - these are suitable only providing that they are not fitted with a deadlocking mechanism and thus cannot be disabled by the key from outside;

(c) break glass locks - these are available in several forms. They may consist of a glass bolt that must be broken to enable the door to be opened or a glass cover may be placed over a lever handle or both. Break glass locks, as well as giving easy access to a door locking mechanism,
may be used as a security device; the broken glass indicating that the door may have been opened.

**NOTE:** Break glass locks should not be used on doors which are:

- likely to be used by the public; or
- likely to be used by more than 10 (ten) employees; or
- situated at the base of a stairway; or
- on an escape route from a high risk area.

(d) panic bolts - the most commonly encountered devices suitable for opening final exit doors are panic bolts and panic latches, which are the subject of BS EN 1125:2008 Building hardware. Panic exit devices operated by a horizontal bar, for use on escape routes. Requirements and test methods.

(e) bolts - these are known by various names i.e., barrel bolts, tower bolts, draw bolts, flush bolts etc.

(f) magnetic or motor actuated locks controlled centrally - these are only suitable for fire exits if they fail safe (i.e., the door is unlocked) in the event that the power supply fails, unlock upon operation of the fire alarm and have a manually operated control switch nearby. These types of locks should comply with BS 7273: Part 4.

(g) a simple electric alarm or flimsy strap - these may be fitted to a door to give indication that the door has been opened.

4 **DOOR CLOSING DEVICES**

4.1 Self closing devices should cause a door to close at a safe, controlled speed which will ensure that the door is held firmly in the closed position without the aid of a catch. Double doors should have a plain meeting stile or, if rebated, be fitted with a selector device to ensure the doors close in the correct order.

5 **AUTOMATIC DOOR RELEASES (DOOR HOLDERS)**

5.1 Only automatic release mechanisms that comply with BS 5839: Part 3 may be used and their method of actuation should comply with BS 7273: Part 4.

They may be fitted in most situations, however the fire authority should be consulted before installation.

6 **DOOR SELECTORS**

6.1 Door selectors may be necessary on double doors with rebated stiles to ensure that the doors close in the correct order. Care should be taken when selecting these devices that they are compatible with any latches fitted, and are suitable for the thickness of the door.

7 **DOOR LIMITING DEVICES**

7.1 Door stops and limiting stays are designed to protect the door, its fittings or decoration nearby, they should not be fixed to limit the opening of the door to less than 90 degrees.

8 **LETTER BOXES**

8.1 Letter boxes should not be fitted into fire-resisting doors. An alternative, e.g., wall mounted letter box should be provided. Where no alternative exists the outer flap of the box should be spring loaded in order to keep it in the closed position when not in use and the box provided in a material having a high melting point i.e., over 800 degrees centigrade. Additionally a separate fire-resisting flap should be
fitted to the inside of the door using similar materials secured with its own fixing screws. The hole cut in the door should not be larger than 250 x 38mm and should be about 900mm from the bottom of the door.

9 SPY HOLES

9.1 In a door required to be fire-resisting, the incorporation of a "spy hole" view device is satisfactory provided that it is fitted in a solid part of the door, that the cylinder body is of metal with an outside diameter not exceeding 13mm and the lenses are made of glass (not plastic).

10 AUTOMATIC DOOR CONTROLS

10.1 Automatic door controls (pressure mat, photo electrical cell, infra-red or ultrasonic) are not suitable for fire doors.

11 BIBLIOGRAPHY

11.1 The publications can be obtained from the following addresses:

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