Fire Protection Notes for Guidance
Information Sheet 1
Fire Doors, Frames and Fittings

EASTBOURNE Borough Council
www.eastbourne.gov.uk

Improving Fire Resistance of Existing Doors and Frames

There are many designs of doors used in houses in Eastbourne. The method of upgrading must be tailored to the characteristics of individual doors. The following recommendations are likely to be effective in most cases but it is vital that owners/managers and their contractors discuss and agree their proposals with the Means of Escape Officer before starting work. When upgrading doors in listed buildings the work must be done in such a way as to retain the character and appearance of the door, close liaison with the Council's Conservation Officer is also necessary and listed building consent may be needed.

Thirty Minute Type Doors

1. Panelled Doors

a) Where the thickness of the door stiles and rails is not less than 45 mm (1¾"), the door may be retained if the panel hollows are infilled on the risk side with masterboard, or other proprietary fire resisting building board, glued and screwed flush with the framing of the door.

b) Where the thickness of the door stiles and rails is less than 45 mm (1¾") but not less than 35 mm (1½") the doors may be retained if the panel hollows are completely infilled on the risk side with a proprietary fire resisting building board and the entire face of the door covered by not less than 6 mm (¼") of fire resisting building board, glued and screwed in position.

c) Where the finished thickness of the door will be at least 45 mm (1¾"), the panels on both sides may be infilled with hardboard flush with the door stiles and rails, the hardboard to be at least 12 mm (1½") in thickness. The door to be faced on both sides with hardboard at least 3 mm ($^1/_8$) in thickness.

The infills to the panels to be nailed to the stiles and rails and screwed to each other ie through the existing panel using 25 mm (1") wood screws at 225 mm (9") intervals.

The hardboard facing panels to be nailed at the edges at 75 mm (3") intervals and at middle rail and muntin at 150 mm (6") intervals, using lost head hardboard nails.

2. Flush Doors

Flush doors need to have a substantial sub-frame not less than 37 mm (1½") in thickness. Unless the precise specification of a flush door is known, it is difficult to be sure about its suitability for upgrading.

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a) ***Substantial Construction*** the entire face of the door on the risk side covered with 6 mm (¼") proprietary fire resisting building board, glued and screwed into solid wood.

b) ***Hollow Construction*** the entire face on both sides of the door covered with 6 mm (¼) proprietary fire resisting building board or 9 mm ($^3/_8$") masterboard.

3. Solid, Tongue and Grooved, Heavy Type Doors

Where the door is to be improved on the ledged and braced side the area between the ledges and braces should be completely infilled with proprietary fire resisting building board at length 6 mm (¼") thick.

4. Alternative Methods

Other methods of improving may be acceptable in particular circumstances. If alternatives are to be suggested they must be discussed and agreed with the Means of Escape Officer before commencement of works. The Means of Escape Officer may require to see evidence (such as test certificates from responsible independent research bodies) before accepting individual methods of materials.

5. Listed Buildings

The method of upgrading doors in listed buildings must be agreed beforehand with the Council's Conservation Officer. In general terms the required fire resistance must be provided whilst retaining the character and appearance of the door. For example, it may be possible in principle to remove the panel mouldings, to insert any fire resisting material in the panel and to replace the mouldings. However, each and every case must be considered and agreed individually as such works may not always be practicable or possible. If it is not possible to upgrade a door to these requirements, or if a new door is needed the Conservation Officer may require that an approved, appropriate replica door is made to the appropriate standard of fire resistance.

General Information

6. Fire and Smoke Seals

A combined intumescent fire and smoke seal conforming to BS 476: Part 22: 1987 must be fitted to all sixty minute or thirty minute fire resisting door sets which form part of a protected route.

7. Rebates

Doors which are required to be fitted with intumescent fire and smoke seals should have rebates with a minimum depth of 12 mm (½") and a width of not less than 35 mm ($1^3/_8$).

8. Fitting of Door

The door should be reasonably straight and true and lie flush against its rebates when closed. The gaps between the door and door frame and between the door and floor should be as small as possible and should not exceed 3 mm ($^1/_8$").

The rebates of the door frame must not be cut away to facilitate other fittings.

9. Fixings

Panel infilling and facing panels to doors must be securely screwed or glued in position (for acceptable adhesives see paragraph below).

Masterboard infilling should be chamfered over any mouldings and skew nailed from both sides, into the stiles and rails, in addition to screwing. The screws should be staggered between door faces.

10. Adhesives

The adhesives used must be capable of resisting high temperatures which will occur in a fire. Synthetic resin and cold setting glues are suitable types. Contact adhesives must not be used.

11. Decoration

The face of any improved door may be covered with a sheet of 3 mm ($^1/_8$") plywood or hardboard for appearance purposes. The panel may then be painted in the normal way.

12. Self Closing Devices

The self closing of doors should be achieved by using an automatic self closing device. The device should not be easily removed or tampered with and, in every case, be capable of ensuring a tight fit against the door rebates. Rising butt hinges are not normally acceptable as effective self closing devices.

Self closing devices must conform to the appropriate British Standard and be approved for use for a thirty minute fire resisting door, which may or may not be fitted with fire and/or smoke seals. They must be provided with the minimum force necessary to close and latch the door effectively.

Restricted ventilation or the fitting of door seals must not affect efficient operation of the self closing device.

13. Door Furniture

Fittings to secure the door in a closed position should not be dependent upon plastics or low melting point materials. Existing hinges should e checked to ensure that they are capable of taking the extra weight. It may be necessary to fit an additional hinge which should be located near the centre of the leaf height.

14. Letter Plates

Wherever possible the provision of a letter plate to a fire resisting door should be avoided, as it affects its stability and integrity. Consideration should therefore be given to installing the letter plate elsewhere.

Fire doors with existing plates may be acceptable providing they are provided with a spring loaded external and internal plate, the latter being made of high melting point brass or steel, with a melting point in excess of 800°C.

The provision of intumescent letter boxes that have been tested to BS 476: Part 22: 1987 will be acceptable. Alternatively a totally enclosed box of fire resisting construction may be provided over the inner face of the slot.

This information is available on our website **www.eastbourne.gov.uk**