

Fire Door Maintenance - Code of Practice

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1. Overview

Fire doors form an essential part of the system of measures designed to protect occupants from a fire within a building. As such, it is plainly essential that they are subject to an acceptable form of routine maintenance. When carrying out this work, decisions will need to be made regarding the standards to be achieved. Doors that may have met historic requirements might not pass current tests. Many such doors have, however, performed effectively in fires and can in many cases, if maintained properly, continue to serve as fire doors, generally without modification. Moreover, it may not be possible to simply replace some doors due to other legislative requirements (where, for example, a building is listed). Ultimately, a risk assessment is necessary to determine if the risk posed by doors deviating from current guidance can be tolerated. Any such risk assessment will need to consider such things as the likely performance of the door and whether that would be adequate given its location within a particular building.

2. Purpose

This document summarises the fire door inspection and maintenance regime at the University that is necessary to ensure that fire doors adequately resist fire and (where necessary) smoke. A fire door's function in terms of other requirements (for eg. the need to reliably facilitate escaping occupants) is beyond the scope of the document.

3. Scope

The provisions within this document apply to all buildings for which the University is the responsible person (as defined within the Regulatory Reform (Fire Safety) Order 2005).

4. Definitions

Fire door: A door designed to resist the spread of fire and smoke for a set period of time. Fire doors may vary from recently installed doors provided with full test evidence, to doors that were fitted historically. These historic doors may be regarded as having satisfied the requirements for fire doors at the time of installation, subject to an assessment of available records, the door's construction and general appearance.

Nominal fire door: A door that is unlikely to have been fitted as a fire door originally but through its inherent features and/or modifications will provide a degree of fire and smoke resistance.

Fire doorset: A complete fire door unit including door leaf, frame and hardware from a single source.

Fire door assembly: A complete fire door comprised of compatible parts from different sources.

Routine door check: Routine door checks are designed to efficiently and promptly identify fundamental problems that would have a significant detrimental effect on fire door performance. The checks can be carried out by any responsible individual that has been provided with suitable guidance, instruction and training.

Full condition survey: A full condition door survey is carried out exceptionally where more a more detailed analysis is deemed necessary. Such a survey might be indicated where, for

example, a new building is taken over and doubts exist as to whether fire doors will perform effectively. A full survey naturally takes a little longer to complete and the competence required to do this work is of a higher order than that required for those carrying out routine checks (individuals would be expected to have a recognised fire door inspection qualification).

Competent person: A person is to be regarded as competent for the purposes of this document where they have sufficient training and experience or knowledge and other qualities to enable them to properly to carry out the tasks that are allocated to them.

5. Roles and Responsibilities

5.1. Governing Body

The Governing Body is the 'responsible person' for the University of Greenwich and ultimately responsible for compliance with fire safety legislation.

5.2. Vice Chancellor

The Vice Chancellor acts on behalf of the Governing Body to ensure that statutory fire safety obligations are met across the University through the provision of adequate arrangements, management and resources.

5.3. Health and Safety Section and University Fire Safety Officer

The Health and Safety Section (HSS) and University Fire Safety Officer must ensure:

- That the Director of Estates is provided with guidance as to how to comply with the legislative requirements as far as they apply to fire doors.
- That the effective maintenance of fire door maintenance is monitored through audit and assessment.

5.4. The Director of Estates

The Director of Estates must ensure that an adequate system of fire door maintenance, in line with the requirements of this document, is in place across the University.

5.5. Fire wardens

Fire wardens are expected to monitor fire doors in the area in which they are located and report any discovered issues to their line manager.

5.6. All staff

All staff are expected to be vigilant in respect of the functioning of fire doors and report any concerns to their line manager.

5.7. All managers

All managers are required to report to EFD any defective fire doors they are made aware of.

6. Procedure

6.1. Routine door checks

The primary method of ensuring that fire doors across the University will perform effectively in the event of fire is through a system of regular basic checks. The frequency of these checks varies depending upon the location of the door (notionally higher risk doors will be

checked more frequently). The checks can be carried out reasonably quickly (it should take no more than a couple of minutes to examine a door).

Table 1 below (based on the requirements of Annex I in BS9999¹ and recent Government guidance) summarises what needs to be assessed when carrying out routine checks. Table 2 further below details the frequency of these checks.

| | |
|--------------------|--|
| Gaps | Are door gaps at the sides and the top less than 5mm? Is the gap at the base of the door less than 10mm? |
| Door seals | If door seals are fitted, are they present and undamaged? |
| Door closer | Does the door closer close the door effectively and in line with the frame (or other door, where present)? |
| Door | Is the door secure in the frame and free from significant damage or defects? |
| Frame | Is the door frame secure and free from significant damage or defects? |
| Glazing | Is any glazing within the door or adjacent panels secure and free from obvious defects? |
| Ironmongery | Is ironmongery (handles, doors, hinges, locks, closer, etc) free from significant damage and secure? |

Table 1: Details of routine door inspection

¹ BS9999:2017 Fire safety in the design, management and use of buildings – Code of practice, p350

| | Door/location | Inspection frequency (months) |
|-----------------|----------------------------------|-------------------------------|
| Residential | Flat (bedroom) ² | 12 |
| | Flat (entrance & kitchen doors) | 3 |
| | Refuge | 3 |
| | Staircase (single) | 3 |
| | Staircase (multiple) | 3 |
| | Cross-corridor | 3 |
| | Other common parts fire doors | 3 |
| | Other residential fire doors | 6 |
| Non-residential | Staircase (single) | 3 |
| | Refuge | 6 |
| | Staircase (multiple) | 6 |
| | Cross-corridor | 6 |
| | Protected route | 6 |
| | Other non-residential fire doors | 6 |

Table 2: Door inspection frequency

6.2. Full condition survey

Full condition surveys are carried out on ad hoc basis as a perceived need for them arises. The details of what information should be assessed and recorded as part of a full condition survey (in addition to those included as part of the routine check described above) are listed in Table 3 below.

| | |
|----------------------|--|
| Door age | What age is the approximate age of the door? |
| Construction | Describe general construction of door (flush, raised and fielded, etc) |
| Configuration | How is the door configured (single/double leaf; single/double action, etc) |
| Size | Approximate dimensions |
| Closer type | Standard, concealed, automatic, etc |
| Ironmongery | List the ironmongery fitted to the door and its general adequacy |
| Glazing | Describe the glazing fitted to the door, its dimensions and fire rating |
| Signage | Describe the signage fitted to the door |

² Bedroom doors are regarded as entrances to domestic premises.

| | |
|---|---|
| Design standard | What standard is the door expected to meet (eg FD30, FD30S)? |
| Certification | Is the door certified? |
| Notional fire door | If the door is not certified, does it appear to be a fire door based on its dimensions, weight and other relevant factors. ³ |
| What upgrades have been carried out, if any? | Have modifications been made to improve the door's performance – for example, has intumescent material been added to parts of the door. |
| Other features | Describe any other features that may have a bearing on the door's performance. |
| Frame stopping | Has the gap between the frame and opening been fire stopped in a satisfactory manner? |
| Further investigation | Describe any further investigation that may be necessary (for example, to determine the likely performance of a nominal fire door). |

Table 3: Additional requirements of full survey

6.3. Defect scoring and prioritisation

Any defects identified during a routine check or full survey should be prioritised so that resources are used in such a way as to maximise benefit in terms of risk reduction. To facilitate effective prioritisation, defects and deviations must be adequately described - measurements and photographs should be provided where necessary.

The prioritisation of defect repairs should be carried out by competent persons, be based on the significance of the defects and the risk those defects pose. Here more significant defects will be those that relate to the fundamental requirements of a fire door (i.e. that it must close reliably, fit reasonably well and be free from significant damage). The risk posed will be a combination of the significance of the defects and the exact location of the door.

Prioritisation will result in defects being placed in one of three categories which will entail differing repair priorities. These categories and priorities are detailed in Table 4 below.

| Prioritisation of fire door repairs | |
|--|--------------------------------------|
| Category | Repair priority |
| A | As soon as possible |
| B | Promptly (generally within 6 months) |
| C ⁴ | Non-urgent/longer term |

Table 4: Prioritisation of fire door repairs

³ Such doors may have been fitted in accordance with previous standards and practices in respect of fire doors, for example BS 476-8:1972. If a door being used as a fire door is neither certificated or notional, it should be regarded as merely 'nominal'.

⁴ In isolation, category C defects are those that are not seen as presenting a significant risk to occupants and can consequently be tolerated over a longer period.

As a general guide as to what category defects should be placed in, Table 5 below should be referred to. The table is not a definitive guide but does enable a reasonable initial estimation to be made (it follows that its use does not preclude category variations to be subsequently made – assuming these are done by persons competent to do so).

Some reasonable adjustments have been applied where appropriate. For example, an excessive gap is not considered to be excessive (for the purpose of recording it as a category B defect) unless it exceeds 150mm in length. This is done to ensure a greater focus on gap deviations across an entire side of a door leaf. Additionally, a gap to be seen as excessive is set at 5mm (4mm +1) to allow for humidity related expansion/contraction.

| Issue | Typical defect category | | |
|--------------------|---|---|--|
| | A | B | C |
| Gaps | | Head/side gaps greater than 5mm (and longer than 150mm). Threshold gaps greater than 10mm. | Threshold gaps in excess of 3mm on doors with smoke seals. Lesser noteworthy deviations. |
| Seals | | Damaged/defective areas greater than 150mm in length | Lesser noteworthy damage |
| Closer | All defects that prevent a door from closing (including defects unrelated to the closer itself) | Lesser noteworthy defects | |
| Door | | Major defects (eg, holes left by removed locks). Significant distortion, such as warps greater than 5mm (length) or 3mm (width) | Lesser noteworthy defects or deviations (eg. gouges and dents) |
| Frame | | Loose frames or door stops. Significant frame/stop damage. | Lesser noteworthy defects |
| Glazing | | Loose glass. Loose, missing or damaged glazing beads. Cracks in glass. | Lesser noteworthy defects |
| Ironmongery | | Defective locks, latches and handles (that don't prevent the door closing/being opened). | Other noteworthy defects |

Table 5: Typical defect categories

On some occasions, it may be appropriate to carry out partial repairs to a fire door. For example, if a fire door has some gaps that need to be adjusted promptly and also has some

wear that can be addressed over a longer period, the work to adjust the gaps can be carried out and the work to address the wear deferred.

Ultimately, the ideal objective of any repair programme should be to have no fire door defects anywhere. However, this is naturally very difficult to achieve without what, in risk terms, would be regarded as disproportionate expenditure. Consequently, the primary goal should be to have, as far as this can be reasonably achieved, no category A defects and minimal category B defects.

A flow chart that summarises the entire process can be found at Figure 1 below.

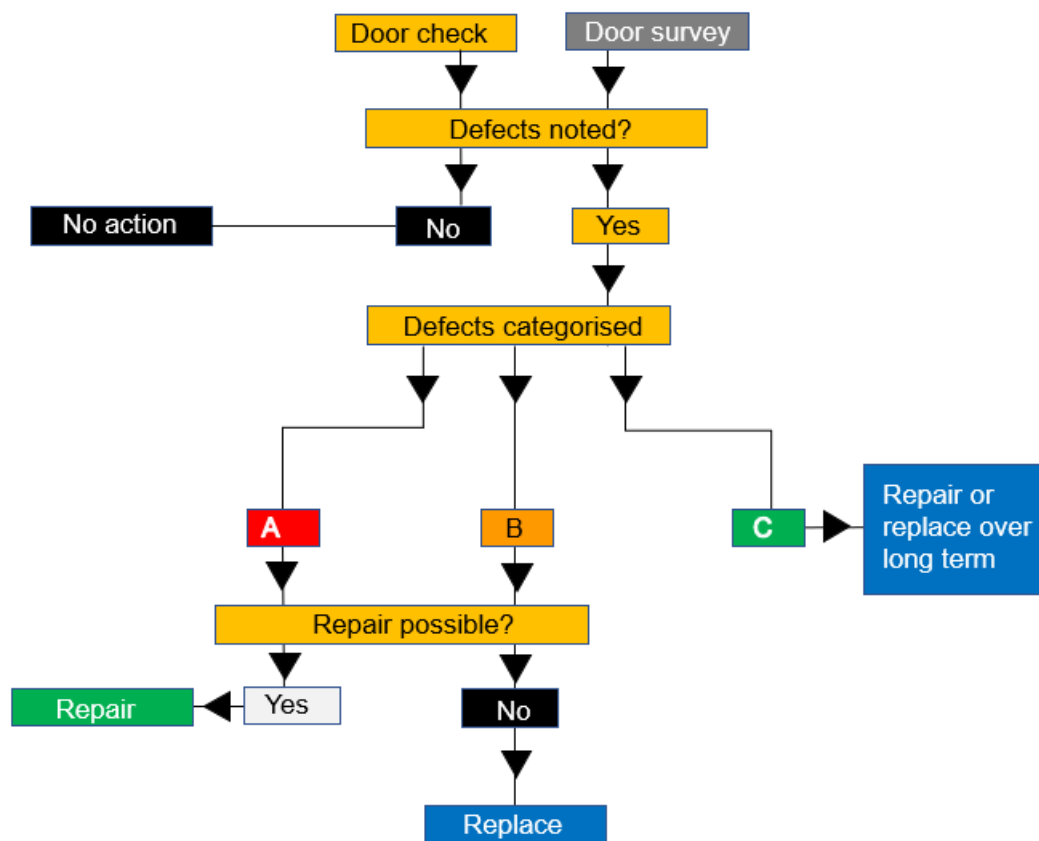


Figure 1: Process flow chart

6.4. Repair or replacement

Doors should be adjusted or repaired as required by competent persons. It is desirable but not strictly necessary for those carrying out work to belong suitable 3rd party schemes such as those operated by BM Trada or the LPCB.

Where it is not possible or economical to repair a door, it should be replaced. Here, a decision needs to be taken as to whether to fit a door set (a complete set (or kit) of fire door components from a single source) or a door assembly (compatible components from separate sources). In respect of the latter route, it may be possible to utilise existing frames.

6.5. Heritage considerations

Doors in heritage buildings need particular consideration and a balance must be struck between the need to preserve the building's character and need to comply with fire safety requirements. Various techniques can be employed to improve an older door's performance, and these must be explored alongside an assessment of the potential fire a door might be exposed to.

6.6. Audit

The effectiveness of the door maintenance within University buildings is monitored via:

- Routine residential/academic building H&S inspections
- The fire risk assessment programme
- Internal and external audits of the Estates and Facilities Directorate

7. Further Guidance

7.1. Related Legislation:

In addition to the general duties contained in the Health and Safety at Work etc Act 1974, other legislation that has a significant bearing on this policy include:

- The Regulatory Reform (Fire Safety) Order 2005

7.2. Related University documents:

- University Fire Policy & Fire Risk Management System
- University Technical Fire Policy & Procedures (General)

7.3. Other related guidance:

- HM Government publication 'Fire safety in purpose-built blocks of flats'
- BS9999:2017 Fire safety in the design, management and use of buildings – Code of practice
- BS 8214: 2016 Timber-based fire door assemblies – Code of Practice

8. Document History

This document will be reviewed at least annually.

Details of previous reviews are as follows:

<ENTER A MAX OF 3 YEARS OF REVIEW INFORMATION>

| Review Date | Reviewer | Summary of Review |
|-------------|-------------|--|
| dd-mmm-yy | Name / Role | e.g First revision (V.24.1) |
| dd-mmm-yy | Name / Role | e.g Annual review – no changes required |
| dd-mmm-yy | Name / Role | e.g Updated to Section 6 reflecting change of process for xyz. New revision V.24.2 |