



GIBRALTAR FIRE AND RESCUE SERVICE

Fire Safety – Major Development Guide

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The Public Health Act (Sections 44,45 & 46), makes provisions for Building Rules. Section E of the Building Rules 2017 covers Safety in Fire:

- E1 – Means of Warning and Escape
- E2 – Internal Fire Spread (linings).
- E3 – Internal Fire Spread (structure)
- E4 – External Fire Spread
- E5 – Access & Facilities for Fire and Rescue Service.

The above fire safety rules can be achieved by complying with the applicable requirements contained in Approved Document E and any other requirement to fulfil the Building Rules.

This guidance document provides designers / developers or other interested persons with an understanding of the relevant fire safety legislation and guidance that should be followed during the submission process. It provides an overview of the fire safety requirements and the documents, reports, plans and certification that must be submitted. It also provides a list of fire safety requirements that the GFRS will request depending on the fire strategy for the submission.

APPLICABLE LOCAL LEGISLATION, REGULATIONS AND GUIDANCE.

Public Health Act (Rules 44, 45, 46)

The Building Rules – Part E: Safety in Fire

Approved Document E – Fire Safety

GFRS Major Development Guide

The design of any building must comply with the above laws and guidance.

ALTERNATIVE GUIDANCE DOCUMENTS.

BS9999 – Fire safety design, management and use of buildings

BS9991 - Fire safety design, management and use of residential buildings.

Building Bulletin 100 – Design for fire safety in schools.

Health Technical Memorandum 05-02 – Fire Safety in the design of healthcare premises.

NONE CODE COMPLIANT BUILDINGS.

Buildings designs that do not follow any of the guidance documents or are not within the scope of these documents will need to be fire engineered. The following code of practice will apply:

BS7974 Application of fire engineering principles to the design of buildings.

1. A design document must be submitted to the fire safety department detailing the fire strategy applied in the design. This must make reference to the guidance document used and cover the following sections:
 - Means of warning and escape
 - Internal fire spread (linings)
 - Internal fire spread (structure)
 - External fire spread
 - Access and facilities for the fire and rescue service.

2. If the building design or part of the building design is **not** code compliant, then a fire-engineered report must be submitted.

Once the fire strategy has been developed and agreed, the fire strategy plans, based on the fire strategy report must be submitted through the E-Planning Portal. The fire strategy plans will include compartmentation, fire doors, means of escape, fire extinguishers, etc.

The fire safety department will issue the fire safety requirements through the E-planning portal. The requirements are based on, but not limited to, the list below:

GENERAL REQUIREMENTS

1. Sprinkler system.

All buildings with a floor higher than 30m (18m for residential buildings) above ground must be fitted with sprinklers in accordance with BS9251:2021 or BSEN12845:2015.

Sprinklers to residential buildings also applied as per Table 2 BS9991:2024

Note: Certain buildings such as school and residential care homes may require a sprinkler system irrespective of height of building.

2. Automatic fire alarm/detection system

Provide & install an automatic fire alarm/detection system to comply with BS 5839-1: 2017.

The category of the system will depend on the type of building. Zone plans must be provided.

3. Evacuation alert system for Fire Service use

Provide an evacuation alert system for use by the fire service to blocks of flats above 18m. The system must conform to BS8629:2019.

4. Refuge Areas (Emergency Voice Communication System)

Refuge areas should be designed and constructed following recommendations of Annex G BS9999:2017. The emergency voice communication system should conform to BS5839-9:2021.

5. Emergency lighting

Provide & install an emergency lighting system. The system must comply with BS. 5266-1 2016.

6. Exit/emergency exit signs

Provide & install exit/emergency exit signs in such numbers and in such position that they clearly indicate the appropriate route(s). Signs must comply with BS5499-4:2013 and BSEN ISO 7010:2020.

7. Smoke stopping & compartmentation

All fire doors must have the appropriate fire resistance and performance given in Table B1 of Approved Document E. These must comply with BS 476-22:1987 or BS EN 1634-1:2014+A1:2018

All fire doors must be fitted with signs conforming to BS ISO 7010:2020 and BS ISO 3864-1:2011 with text as detailed in Appendix B of ADE.

Fire Doors must also be provided with a self-closing device. Door closing devices must comply with BS EN 1154:1997. Any automatic release devices linked to the fire alarm system must comply with BS 5839-3:1988

Note: Double-leafed doors must be provided with door selector mechanisms.

All compartmentation requirements conforming to Section E3 of Approved Document E must be adhered to.

8. Combustibility of external walls

The external walls of the building should not provide a medium for fire spread. The requirements vary depending on the height of the building and the type of occupancy. These must meet the required standard.

Note: Residential Buildings above 11m = A2-s1-d0 or better

9. Door locks / fastenings

Where a door on an escape route has to be secured against entry, it should only be secured with a lock that is readily openable, without a key, from the side approached by people making their escape. Further guidance can be obtained from Approved Document E Section E1.11.3.1.

10. Fire Fighting Shafts/Stairs

Fire-fighting shafts must be provided in accordance with Approved Document E Section E5.5. The fire-fighting shafts should be constructed in accordance with the recommendations of BS9999:2017 including provisions for Ventilation of Fire-fighting shafts.

11. Fire Fighting Lifts

The fire-fighting shaft must be provided with at least one firefighting lift, which must comply with BS EN 81-72:2020. These must be provided with a euro key/triangular key locking mechanism.

A euro key must also be provided in the electrical rescue panel to facilitate lifts rescues.

12. Evacuation Lifts

At least one evacuation lift must be provided for each stairway, or more if required by capacity which must comply with BS EN 81-76. These must be provided with a euro key/triangular key locking mechanism.

A euro key must also be provided in the electrical rescue panel to facilitate lifts rescues.

13. Non-firefighting lifts (normal lifts)

These should be provided with a switch/euro key for use by fire service during a fire situation. The fire service can gain control of the lift to transport equipment. A euro key must also be provided in the electrical rescue panel to facilitate lifts rescues.

14. Fire Vehicle Access

There should be vehicle access to within 18m of each Dry Fire Main inlet connection point. The inlet should be visible from the fire appliance.

For Wet Fire Mains the fire pumping appliance access should be within 18m and within sight of a suitable entrance giving access to the main outlet and in sight of the inlet for the replenishment of the suction tank for the main.

15. Dry Fire Mains

The Dry Fire Mains within the fire-fighting shafts must comply with BS 9990: 2015.

There must be access for a pumping appliance within 18 m from the fire service inlet. The inlet should also be visible from the appliance.

16. Wet Fire Mains (above 50m)

The Wet Fire Main within the fire-fighting shaft must comply with BS9990:2015

There must be access for a pumping appliance within 18m and within sight of the inlet for the emergency replenishment of the suction tank for the main.

17. Landing valves, inlets and boxes

Landing valves, inlet breechings and boxes for wet and dry fire mains must comply with BS 5041: Part 1:1987, Part 2:1987, Part 3:1975, Part 4:1975 and Part 5:1974.

Any cabinet boxes (if installed) for Dry and Wet Fire Mains must be provided with a euro key/triangular key locking mechanism.

18. Fire Hydrants

Provide fire hydrants in accordance with Approved Document E Section E5.3.5. i.e.

50m to entrance of building if not fitted with fire main.

50m to dry fire main inlet.

Fire hydrants must comply with the following codes;

Pillar Hydrants – BS EN 14384: 2005

Note: Hydrant Heads must be of the following type:

Gunmetal Right Angle Pattern Hydrant Valve, 80mm Inlet Flange and Drilled PN16, Outlet 2½” LFB Male Thread. With PVC Blank Cap and Chain.

Underground Fire Hydrants & surface box frames & covers – BS 750:2012

Underground Fire Hydrants – BS EN 14339:2005

19. Fire Appliance Turning Area

Fire service vehicles should not have to reverse more than 20m from the end of an access road. A turning circle, hammerhead or other point must be provided to comply. Further information can be obtained from Approved Document E, Section E5.4.4.

20. Fire Extinguishers

Provide and install portable firefighting extinguishers. The type number and positions must be suitable and sufficient for the building. These must be clearly plotted in the fire strategy plan for approval by the Fire Safety Department. Fire extinguishers must comply with BSEN 3.

21. Car Park Ventilation

Open sided car park = there should not be any basement storeys; each storey should be naturally ventilated by permanent openings at each parking level, having an aggregate vent area not less than 1/20th (5%) of the floor area at that level, of which at least half (1/40th 2.5%) should be equally provided between two opposing walls.

Non-open sided car park = if they do not meet the standard ventilation conditions above they are not regarded as open sided. Such car parks require some ventilation, which may be natural or mechanical.

Natural Ventilation = Approved Document E Section E3.7.2.1

Mechanical Ventilation = Approved document E Section E3.7.2.2

22. Number of Common Escape Stairs (Residential Buildings)

Buildings with a top storey of 18M or more in height will require more than one common stair.

23. Fire Safety Signs

Provide & install signs in such numbers and in such position that they clearly indicate the location of any firefighting equipment, including fire extinguisher points, call points, fire alarm panels, dry risers etc. Signs must comply with BS ISO 7010:2020 and BS ISO 3864-1:2011.

SAMPLES



FLATS / APARTMENTS – layouts must be code compliant.

24. Domestic fire alarm/detection system (LD1)

The installation of a domestic automatic fire alarm & detection system to category LD1, Grade D2. The system must comply with BS 5839-6: 2019. The system must be mains powered with battery back-up, and as two or more detectors are installed they must be interlinked.

Note: LD1, Grade D denotes the circulation spaces (i.e. corridor/hallway) and all habitable rooms (i.e. kitchen, living rooms, and all bedrooms).

25. Smoke stopping & compartmentation

All internal fire doors must provide 30 minutes fire resistance (FD30) in accordance with Table B1 of Approved Document E.

These must comply with BS 476-22:1987 or BS EN 1634-1:2014+A1:2018

Note: the front door to the flat or apartment must be provided with self-closing device. Door closing devices must comply with BS EN 1154:1997

26. Front door locks / fastenings

The front door to flats should only be fitted with a lock that is readily openable, without a key, from the side approached by people making their escape (i.e. from inside the flat).

27. Handover of information.

You must ensure that all relevant fire safety information is adequately handed over to the management company and to the occupiers of the building.

DESIGN DOCUMENTS / PLANS

The fire safety requirements as listed above will be based on the fire strategy report. Therefore the following design documents/plans may be required:

Fire strategy plans including compartmentation, fire doors, means of escape, dry/wet fire mains, fire extinguishers, etc.
Fire detection and alarm system design.
Evacuation alert system for fire service use.
Emergency voice communication system – Refuge Areas
Emergency lighting system design.
Sprinkler system design.
Smoke ventilation design (for fire-fighting shaft, protected staircase, car park or other).
External wall construction design conformity with fire safety regulations.
Any fire engineered solution proposal including CFD studies.

CERTIFICATION

This department requires Certificates of compliance with the relevant British or European Standards for:

Domestic fire detection system.
Fire Detection and Alarm system.
Emergency voice communication system.
Evacuation alert system for fire service use.
Sprinkler system.
Emergency Lighting system.
Fire Doors.
Dry/Wet Fire Mains Testing.
Mechanical Smoke Ventilation System.
Fire-fighting lift.
External Wall / Cladding system testing / conformity.

These certificates should be submitted electronically to this department, prior to the final inspection taking place.

NOTES