

This Part contains five Sections:

- **Section 1 – General**
- **Section 2 – Fire Safety Management**
- **Section 3 – Maintenance Plan**
- **Section 4 – Training Plan**
- **Section 5 – Fire Action Plan**
- **Appendix F1 – Sample Checklist on Housekeeping**

Section 1 – General

Subsection F1 – Use of this Part

Clause F1.1

This Part provides guidelines for managing and maintaining the fire safety provisions of buildings and should be read in conjunction with all other Parts in this Code.

Commentary

Management and maintenance of fire safety provisions are important as it is necessary to assure that the fire safety provisions installed can operate effectively for the intended life of the building.

Effective fire safety management can reduce potential fire danger, assist occupants to reach the ultimate place of safety in case of fire and regular maintenance will ensure all fire safety provisions in the building can be kept in good workable conditions. Of particular concern is the existence of unauthorized building works (UBW) affecting the fire safety of the occupants.

Subsection F2 – Performance Requirements for Fire Safety Management

Clause F2.1

Performance Requirements for the maintenance and management of fire safety provisions are stipulated in Subsection A11 of Part A.

Subsection F3 – Scope

Clause F3.1

This Part is applicable to all Use Classifications in Table A1 of Part A.

Commentary

Maintenance and management of fire safety provisions should be carried out through the following means:

- (a) Passive fire safety provisions at common parts should be inspected and repaired under the Buildings Ordinance (Cap. 123).
- (b) Active fire safety provisions should be inspected, tested and maintained by registered fire service installation contractors under the Fire Service (Installations and Equipment) Regulations (Cap. 95B).
- (c) Ventilating systems should be inspected by registered specialist contractor (ventilation works) under the Building (Ventilating Systems) Regulations (Cap. 123J).
- (d) Competent persons, e.g. authorized persons, should be commissioned by the building owners to carry out inspections, maintenance and certification of fire safety provisions.
- (e) Checklist on housekeeping (sample at Table F1) should be provided to guide the carrying out of routine maintenance works on passive fire safety provisions and the rectification of any irregularities identified. Such guidelines would enhance the owners' awareness on fire safety and are effective means on fire safety management for buildings.

A competent person should be responsible for carrying out inspections, making recommendation on maintenance and repair works and ensuring the appropriate contractors have completed the necessary maintenance and repair works for fire safety provisions in compliance with the relevant statutory requirements.

Building owners (or Owners' Corporation) should engage a competent person to coordinate all maintenance and repair works. The competent person should also be responsible for:

- (a) Documenting all fire safety provisions within the building.
- (b) Documenting the period of inspections, testing and replacement, as appropriate.
- (c) Checking the record keeping of maintenance actions.
- (d) Checking that the actions in fire safety management plan are undertaken.
- (e) Checking the period of maintenance and repairs.
- (f) Allowing all documentation to be checked by relevant authority, when required.

Section 2 - Fire Safety Management

Subsection F4 - Fire Safety Management

Clause F4.1

Fire safety management should be carried out at regular intervals through routine inspections and maintenance of fire safety provisions for rectifying any identified irregularities. The following guidelines on fire safety management are advisory in nature. However, where fire engineering approach is adopted in fire safety design of a building, the submission of an FSAR for an Alternative Solution may require the support of a fire safety management plan which will then form part of the approved general building plans. Compliance with the fire safety management plan will also be imposed as a condition when granting modification under section 42 of the Buildings Ordinance for not meeting the relevant requirements laid down in Building (Planning) Regulations 41(1), 41A, 41B, 41C, 41D and Building (Construction) Regulation 90.

Clause F4.2

To ensure effectiveness, fire safety management should be implemented through the documentation and implementation of a fire safety management plan, as required in Clause F4.5.

The authorized person should assist in compiling the fire safety management plan. For example, the authorized person should advise the developer/owner/the future management office to gather a set of approved general building plans (with exit routes highlighted), the fire service installations plans and any relevant documents of the fire safety provisions installed from relevant authorities, for incorporating into the fire safety management plan.

The management office and the Owners' Corporation should keep the fire safety management plan in the management office and to ensure that the management procedures stated in the fire safety management plan are implemented effectively, for example, conducting regular inspection and maintenance of fire rated doors, conducting regular fire drill, providing training to the management staff on how to use fire hose reels and fire extinguishers etc.

Clause F4.3

Where fire engineering approach is adopted for fire safety design of a building, the authorized person should ensure that the Bounding Conditions (to be included as part of the general building plans) and a copy of the final FSAR adopted are included in the fire safety management plan.

The Bounding Conditions listed in the approved general building plans should be included in the Deed of Mutual Covenant (DMC), where applicable, to ensure compliance.

Clause F4.4

The fire safety management plan and the Bounding Conditions (applicable when adopting fire engineering approach in building design), should be observed during the life of a building. Periodic review and audit to the procedures stated in the fire safety management plan should be conducted for ensuring the adequacy of the existing fire safety provisions for accommodating any new changes occurred in the building. All the records of building alterations should be included in the fire safety management plan.

Clause F4.5

The fire safety management plan should include the following:

- (a) maintenance plan,
- (b) training plan, and
- (c) fire action plan

as detailed in Sections 3, 4 and 5 respectively.

Section 3 – Maintenance Plan

Subsection F5 – Maintenance Plan

Clause F5.1

The maintenance plan should include the following documents and information:

- (a) Approved general building plans with the exit routes highlighted;
- (b) Documents indicating the details/specifications of the fire safety provisions installed;
- (c) Period for regular maintenance of the fire safety provisions installed;
- (d) Method statements for maintenance;
- (e) Repair methods;
- (f) Records of maintenance or repair works carried out;
- (g) Housekeeping; and
- (h) A copy of the final FSAR, if any.

Clause F5.2

Inspection to fire safety provisions should be conducted by competent person or registered fire service installation contractors at regular intervals. The competent person should assess the conditions of the fire safety provisions and make recommendations on the maintenance or repair works.

Clause F5.3

Maintenance of active fire safety provisions, which include installations and equipment, should comply with the requirements in the Code of Practice for Inspection, Testing and Maintenance of Installations and Equipment.

Clause F5.4

UBW will affect the fire safety provisions of buildings and may cause fatal consequences endangering the safety of the occupants. Before carrying out any building works or change in use of a building, building professionals should be consulted.

Commentary

Regular inspections can identify any UBW, changes in use, alterations and other issues such as blocking of exit routes, which may affect the fire safety of the building. Immediate and appropriate action must be taken to ensure all fire safety provisions are maintained properly and are effective in case of emergency.

Besides the enforcement actions that can be taken under the Buildings Ordinance (Cap. 123), there are other legislations that can be enforced by other departments to rectify the irregularities. For example:

- (a) Under the Fire Services (Fire Hazard Abatement) Regulation (Cap. 95F), it is an offence to block exit routes, such as obstructing or locking the “means of escape”. Apart from issuing a fire hazard abatement notice to the responsible person, who may be the building owner, tenant, occupier or person in charge of the premises,

the Director of Fire Services may institute direct prosecution against the person concerned.

- (b) As defined in the Fire Services (Fire Hazard Abatement) Regulation (Cap. 95F), “means of escape” means such means of escape as may be required for the safety of persons having regard to the use or intended use of the premises. Hence, the Fire Services Department requires all building exit door(s) including any door or gate erected at the section of a common staircase between the topmost floor and the roof to be readily and conveniently openable from the staircase side without the use of a key.
- (c) Under the Fire Service (Installations and Equipment) Regulations (Cap. 95B) 7(1) and 9(1), only a registered contractor who satisfies the requirements under regulation 3A of the Fire Service (Installation Contractors) Regulations (Cap. 95A), should maintain, inspect or repair; and should issue maintenance certificate for any fire service installation.
- (d) The Occupational Safety and Health Ordinance (Cap. 509) requires the provision of a safe environment for building occupants. It states the responsibilities of employers and occupiers of premises to contribute to safety and health in the workplaces including fire precautions, by providing good maintenance for means of escape and other fire safety measures.
- (e) The Education Regulation (Cap. 279A) 38 requires fire drill to be carried out at least once every 6 months for all schools. The written record of all such drills should be documented in a school log book.

Clause F5.5

Good housekeeping should be maintained to reduce the chances of fire and blockage of exit routes and temporary refuge spaces. Housekeeping methods include methods for proper waste disposal, keeping combustible materials from possible ignition sources and ensuring exit routes and temporary refuge spaces are free from obstruction etc. A sample checklist is given in Table F1 for reference.

Clause F5.6

When carrying out alteration, additions, renovation and repair works, the following items should be observed:

- (a) All means of escape should be maintained at all times. It should be free from obstruction and adequately signed and lit.
- (b) All fire rated doors along exit routes should be maintained and kept closed at all times.
- (c) All fire barriers should be maintained.
- (d) Alternative measures for ensuring adequate standard of fire safety should be provided if any means of escape, fire rated doors or fire barriers etc. have to be temporarily removed.
- (e) Flame-retardant sheetings should be used for covering the scaffoldings erected around the building.

- (f) Any inflammable and combustible materials to be kept in the building should be stored under safe custody and avoid accumulating excessive quantity. Attention is drawn to the Dangerous Goods Ordinance and Regulations (Cap. 295).
- (g) All relevant notifications to the Fire Services Department regarding temporary shut-down of fire service installations should be made in accordance with the Fire Services Department's requirements.
- (h) First-aid and firefighting equipment should be located where it is readily accessible. Training should be provided to all workers on the operation of the equipment.
- (i) Emergency plan should be established and appropriate training should be provided to all workers.

The above requirements should be observed and brought to the attention of all concerned in carrying out alteration, additions, renovation and repair works under their supervision.

Clause F5.7

For maintenance or replacement works of lift installations, the integrity of liftwells should be protected in order to inhibit the spread of fire between fire compartments through the liftwells and openings. The following fire safety requirements should be complied with:

- (a) Subject to (b) below, all landing doors should remain in a closed position in the course of maintenance or replacement works of lift installations.
- (b) Where landing doors need to be kept open for the works, normally no more than one such door in a liftwell should be in an opened position at any one time. The door opening, other than the one at which the lift car is levelled with the floor landing, is to be attended by lift workers. If the works necessitate more than one door in a liftwell to be opened at the same time, the following additional conditions should be observed :
 - (i) the maximum number of landing doors to be kept open at the same time is three; and
 - (ii) no hot works or welding operations will be carried out.
- (c) Where landing doors are to be taken down, removal of more than one landing doors in a liftwell at any one time should be avoided.
- (d) If more than one landing door is to be removed at any one time, the door openings should be protected by temporary hoarding having an FRR of not less than -/120/- .
- (e) Openings in the hoarding are not allowed except small openings for ventilation of the liftwell and access doors to the liftwell.
- (f) Each ventilation opening should not exceed 5,500mm² in area and should be located at the upper portion of the hoarding. The number of such openings should be limited to two per liftway, subject to a maximum of four in the hoarding.
- (g) Access door in the hoarding should have an FRR of not less than that of the hoarding. Such door should be self-closing and provided with locking device to prevent trespassing. The locking device should be so arranged that it can be readily opened from the inside without the use of a key.
- (h) Temporary hoarding to enclose a liftwell should not be erected to cause, as far as reasonably practicable, any obstruction or reduction in the width of any exit route.

- (i) Any temporary works including scaffoldings, formworks, plankings and struttings etc. erected inside a liftwell during maintenance or replacement works should be constructed of non-combustible materials.
- (j) Arrangements should be made to ensure that all temporary openings during maintenance or replacement works are protected by either having all opened lift landing doors returned to the closed position or enclosing such openings properly with fire resisting hoarding before leaving any unfinished works unattended during lunch breaks or at the end of a day's work.

The above requirements should be observed and brought to the attention of all concerned in carrying out maintenance or replacement works of the lift installations under their supervision.

Clause F5.8

If open kitchens in flats are provided in accordance with Clause C13.4, the following conditions should be incorporated into the fire safety management plan and DMC, where applicable, to ensure the implementation and operation of the following fire safety provisions:

- (a) Smoke detectors provided inside the flats and at the common lobby outside the flats should not be removed or obstructed;
- (b) Sprinkler head provided at the ceiling immediately above the open kitchen should not be removed or obstructed;
- (c) The full height wall having an FRR of not less than -/30/30 adjacent to the flat exit door should not be removed; and
- (d) The fire service installations in (a) and (b) above should be subject to annual check conducted by the management's registered fire service installation contractor.

The management office should assist the owners to carry out annual maintenance of the fire service installations and submit the maintenance certificate to the Fire Services Department. The owners should allow access for the registered fire service installation contractors to carry out annual check and maintenance.

Section 4 –Training Plan

Subsection F6 –Training Plan

Clause F6.1

Proper and adequate training should be provided to staff for ensuring that they are familiar with the fire safety provisions installed and the actions to be taken in case of fire. For example, the familiarization with the exit routes, evacuation procedures for guiding occupants to the ultimate place of safety in case of fire and use of firefighting equipment etc.

Clause F6.2

The training plan should include descriptions of staff duties on routine inspection and their duties in case of fire, regular staff training programme, staff training records etc. Fire wardens should be appointed for managing evacuation in case of fire.

Clause F6.3

Fire drills and fire safety seminars should be conducted at regular intervals for staff and the occupants, including persons with a disability.

Commentary

A fire drill is a method of practicing the evacuation of a building in case of fire in which the management staff can also identify and remedy the need and problems with the evacuation procedures for the occupants including persons with a disability.

Occupant Training

Tall building evacuation requires not only building elements such as refuge floors, but also requires managed evacuation strategies and training for all occupants.

A key aspect for consideration is whether occupants on upper floors are expected to evacuate to the street level. The training provided to occupants will affect how they will react in a fire or other emergency situation.

Some building occupants may have a perception that they will never have to walk down to the street level in a fire emergency and may just need to stay at the nearest refuge floor. This may result in blockage at refuge floors, as occupants may wait at the refuge floor and not move any further. To overcome this potential blockage of occupants at refuge floors, fire wardens should ensure the occupants do not remain on the refuge floors causing blockage. This is particularly important if whole building is to be evacuated.

Occupants and staff should be trained by regular fire drills to familiarise themselves with the procedure of emergency evacuation in the fire action plan.

Section 5 – Fire Action Plan

Subsection F7 – Fire Action Plan

Clause F7.1

Fire action plan should be formulated to establish the procedures to be taken in case of fire. For example, report the fire to the Fire Services Department by dialling 999, inform the occupants and assist them to escape to the ultimate place of safety etc. It may include any contingency plan or evacuation plan.

Clause F7.2

The fire action plan should include the evacuation procedures for persons with a disability. Where temporary refuge spaces have been provided, their locations should be illustrated in the evacuation plan. If the safety condition permits, management staff should be maintained in the management office for communicating with any person waiting for rescue in the temporary refuge spaces and inform the firefighters of the locations of the temporary refuge spaces where people are waiting for rescue.