

## **Part I - GENERAL PROVISIONS**

### **1. Use of the Code**

- 1.1 Authorised persons, registered structural engineers and any person responsible for the design of buildings may find this Code useful in establishing the requirements of the Building Authority for adequate means of escape in case of fire.
- 1.2 This Code gives guidance on how the Building Authority's requirements may be complied with.

### **2. Objectives**

- 2.1 The objective of this Code is to announce provisions for the protection of buildings from the effects of fire by providing adequate means of escape in the event of fire and other emergencies.
- 2.2 There are other fire safety objectives : preventing the outbreak of fire, inhibiting the spread of fire, abating fire hazards, fire suppression, preventing loss of property and assisting in firefighting and rescue. Provisions for some of these can be found in the Buildings Ordinance and other Codes of Practice issued by the Building Authority.

### **3. Two Approaches to Fire Safety**

- 3.1 Prescriptive Provisions : Compliance with the prescriptive provisions in this Code may be regarded as a reliable way to satisfy the Building Authority's requirements. Departure from these provisions will necessitate an alternative approach to be adopted and proved, in individual cases, to the satisfaction of the Building Authority as to compliance with requirements.

3.2 Alternative Approach : The Building Authority recognizes that fire safety may be approached in a number of ways the best of which is not necessarily prescriptive. This is particularly pertinent to buildings of special hazards which, because of their size, height, use, design, construction or location, may necessitate special consideration and specific standards. In this Code, the points to note for an alternative approach are set out.

3.3 For the assessment of the need of a building for fire protection, the Building Authority accepts the following as relevant factors :

- the anticipated risk of a fire occurring in a building;
- the anticipated severity of a fire;
- the ability of the structure of a building to resist the effect of fire and to minimize the spread of fire and smoke; and
- the consequential and possible danger to the people in and around a building.

3.4 Where an alternative approach is adopted, the Building Authority will assess its acceptability by reference to a set of criteria. This includes the means of escape, the means of access, the fire service installations, the fire resisting construction, the size, the height, the use, the location and the management of a building. An acceptable alternative approach should take into consideration these criteria and at the same time, should apply scientific and engineering principles to the protection of people and property from fire. Such an approach, which is also called "a fire engineering approach", may be the only viable means to a satisfactory standard of fire safety in some large and complex buildings.

3.5 A variety of measures may be taken to achieve fire safety in a building. These measures may provide for or enhance the following :

- the means to prevent fire;
- early fire warning by an automatic detection and warning system;
- the standard of the provision of means of escape;

- the facilities for smoke control;
- the control of the rate of spread of fire;
- the resistance of the effects of a fire;
- the capacity for fire containment;
- fire separation between buildings or parts of buildings;
- the standard of active measures for fire extinguishment or control;
- the facilities to assist in fire-fighting and rescue;
- the effectiveness of property management to minimize the outbreak of fire;
- the availability of personnel trained in fire protection; and
- the availability of any arrangement that could ensure the continued maintenance of fire protection systems.

3.6 Quantitative techniques may be used to evaluate risks and hazards. Some factors listed above may be given numerical values in certain circumstances. When quantitative methods are used, any assumptions made should be substantiated, where possible, by documents from competent authorities.

#### 4. Interpretations

"**balcony approach**" means a balcony which is used as an external approach to a common staircase and which serves two or more occupancies.

"**basement**" means any storey of a building which is below the lower or lowest ground storey and from which any required exit route is in an upward direction.

"**capacity**" in relation to a room or storey of a building means that number of persons which the room or storey of a building is, for the purpose of this Code of Practice, to be taken as capable of holding. Provided that where there is on any storey the entrance to a maisonette, that storey shall, for the purpose of this definition, be deemed to include all floors of the maisonette.

"**direct distance**" means the distance measured in straight lines along the notional path from any part of a room to the centre of an exit door of the room.

"**discharge value**" means the number of persons that a staircase of a given width may be assumed to be capable of discharging from a given number of storeys.

"**exit door**" means a door from a storey, flat, or room, which gives access from such storey, flat or room on to an exit route.

"**exit route**" means a route by which persons in any storey of a building may reach a place of safety outside the building and may include rooms, door-ways, corridors, staircases, areas for refuge in refuge floors or other means of passage not being a revolving door, lift or escalator.

"**factory**" is as defined in the Factories and Industrial Undertakings Ordinance.

"**flat**" means a separate and self-contained dwelling, forming part of a building from some other part of which it is divided horizontally, and includes a maisonette and tenement floor.

"**ground storey**" means the storey in which is situated an entrance from a street to the building and, where a building fronts or abuts on more than one street and due to a difference in street levels there are two or more entrances serving different streets and situated in different storeys, means each such storey.

"**industrial undertaking**" is as defined in the Factories and Industrial Undertakings Ordinance.

"**maisonette**" means a flat not being a tenement floor and having more than one but not more than three storeys.

"**notifiable workplace**" is as defined in the Factories and Industrial Undertakings Ordinance.

"**place of public entertainment**" means any building or that part of a building constructed or adapted to be used for any public entertainment and includes the place itself and any means of ingress or egress for the purpose of and in connexion with such place, and in cases in which such place consists of a part or parts only of a building includes also any other part or parts of such building used or intended to be used for the purpose of and in connexion with such place. Public entertainment in this context is as defined in the Places of Public Entertainment Ordinance.

"**protected lobby**" means the intercepted approach, to a staircase or an exit route, which acts as a fire and smoke check between a storey and the staircase or the exit route, and enclosed throughout by walls and doors in accordance with the Code of Practice for Fire Resisting Construction.

"**refuge floor**" means a protected floor that serves as a refuge for the occupants of the building to assemble in case of fire.

"**travel distance**" means the horizontal distance measured on the floor along the centre line of the exit route between the centre of an exit door from a room and

- (a) the centre of the fire-resisting door to the enclosure of any one staircase;
- (b) if there is no such door, the first stair tread of the staircase; or
- (c) if the exit route leads directly to a street or to an open area at ground level complying with paragraph 8.2, any one of the points of discharge to the street or open area.

"usable floor area" means the aggregate of the areas of the floor or floors in a storey or a building excluding, unless otherwise specified, any staircases, public circulation space, lift landings, lavatories, water-closets, kitchens in self-contained flats, and any space occupied by machinery for any lift, air-conditioning system or similar service provided for the building.

## 5. Application

5.1 The provisions in this Code apply to all buildings with the exception of domestic buildings -

- (a) having not more than three main domestic storeys;
- (b) the level of the highest floor of which is not more than 13 m above the ground level; and
- (c) used or intended to be used for occupation by a single family.

5.2 Where any Ordinance or any Regulations made under any Ordinance includes any provision relating to means of escape in case of fire, nothing in this Code of Practice shall be deemed to overrule such provision. In this connexion attention is drawn to the following Ordinances and the Regulations made thereunder -

- (a) Bedspace Apartments Ordinance, Cap. 447;
- (b) Child Care Centres Ordinance, Cap. 243;
- (c) Education Ordinance, Cap. 279;
- (d) Factories and Industrial Undertakings Ordinance, Cap. 59;
- (e) Hotel and Guesthouse Accommodation Ordinance, Cap. 349;
- (f) Residential Care Homes (Elderly Persons) Ordinance, Cap. 459;

- 5.3 For situations not covered in this Code, the means of escape will be determined by the Building Authority according to the circumstances of individual cases.

## **PART II : GENERAL PROVISIONS OF MEANS OF ESCAPE**

### **6. Special Hazard Occupancy**

- 6.1 In a building where an area of special hazard occupancy is directly associated with an occupancy of normal hazard (for example store rooms for combustible material in a hotel; a kitchen attached to a restaurant; a boiler room in a hotel) any opening from such area of special hazard into any exit route should be provided with a protected lobby. The means of escape from an area of normal hazard should not pass through any area of special hazard.
- 6.2 For the purpose of this paragraph, the hazard of occupancy should be the relative danger of the start and spread of fire, the relative danger of smoke or gases generated and the relative danger of explosion or other occurrence which may endanger the lives and safety of the occupants.

[Note : (a) The requirements for fire resisting construction in areas of special hazard occupancy are contained in the Code of Practice for Fire Resisting Construction.

(b) A kitchen attached to a restaurant is an "industrial undertaking" as defined in the Factories and Industrial Undertakings Ordinance.]

### **7. Assessment of Accommodation**

As a guide to assessing the requirements for means of escape, or the capacity or population of various portions of a building, or the number of persons and population density within a building, the following Table 1 and notes should be the basis of calculation.