

Fire Safety (Buildings) Bill

**Administration's response to issues raised by
the Bills Committee at its meeting on 23.11.2001 (part 2)**

To improve the draft guidelines, drawn up by the Fire Services Department and the Buildings Department respectively, by providing illustrations where owners or occupiers might be exempted from complying with certain fire safety requirements stipulated in the Bill.

———— We have critically reviewed the draft guidelines. The revised drafts are now provided at Annex for members' reference.

Security Bureau
December 2001

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To : Authorized Persons

Registered FSI Contractors
Registered Ventilation Contractors
Registered Life & Escalator Contractors
Fire Insurance Association of HK
The Association of Registered FSI
Contractors of Hong Kong
Structural Division, HKIE
Power Companies

The HK & China Gas Co.
The Lift & Escalator Contractors Asso.
Hong Kong Telecom Company Ltd.
Hong Kong Construction Association
Director of Architectural Services
Director of Buildings
Director of Housing
Petroleum Companies

Dear Sirs,

FSD Circular Letter No. XX/XX
Fire Service Installations and Equipment
required under the
Fire Safety (Buildings) Ordinance

The Fire Safety (Buildings) Ordinance (hereinafter referred to as the Ordinance) will be implemented on xx.xx.200x. The purpose of the Ordinance is to improve the fire safety condition of certain old composite buildings and domestic buildings to better protect life and property.

We understand that in many of these old buildings, construction of new works in meeting the current fire safety standards may be difficult due to spatial or structural constraints. The Ordinance therefore requires the carrying out of only those improvement works which are considered essential. The specific improvement requirements stipulated in a fire safety direction are also drawn up in a like spirit following inspection of the building concerned.

Normally, at least one year will be allowed for owners to complete the improvement works. To avoid unnecessary spending, owners may consider combining such requirements with the routine maintenance works as appropriate. Besides, there might be additional constraints on construction that would make compliance with the fire safety requirements difficult. In those special circumstances, relaxation may be considered on the merits of each case, taking into account such factors as the potential fire risk, floor layout, nature of uses, actual occupancy, combustible materials, etc.

Some examples of possible relaxation that may be accepted are given below for reference. They are, however, by no means exhaustive. Other improvement works or alternative methods may be acceptable provided that a reasonable level of fire safety is achieved.

A) Non-domestic Portion of Composite Building (Overall Building Height Not Exceeding 6 storeys)

● Automatic Sprinkler System

- Will not be required if the aggregate area of the non-domestic floors does not exceed 230m².
- Should there be structural or spatial constraints for retrofitting a standard sprinkler system, an improvised sprinkler system with a direct town's main water connection (applicable for non-domestic portion of a height not exceeding 15m), a connection from the existing fire hydrant/hose reel system, or a sprinkler water tank of a reduced capacity may be considered acceptable.

(Note - For an improvised sprinkler system, the system alarm shall be connected to the Fire Services Communication Centre of Fire Services Department by direct telephone line.)

e.g. ~ If there is limitation on floor loading or insufficient space to accommodate a new water tank due to ownership problem.

- Fire Hydrant System

- Will not be required if direct vehicular access to the major face of the building is available.

- Hose Reel System

- Should there be spatial or structural constraints, or other difficulties in providing a standard hose reel system, hose reels of reduced length (i.e. hose reel drums of smaller size) or installation of hose reel drums at high level positions may be considered acceptable.

e.g. ~ If the standard provision would entail the narrowing of the means of escape to an effective width which is below the minimum acceptable standard.

e.g. ~ If the space at common area/staircase enclosure is insufficient to accommodate the hose reel drums.

- Fire extinguishers may be acceptable in place of a hose reel system if substantial difficulties are further encountered in providing such improvised hose reels.

e.g. ~ If there still exists insurmountable situation in which the means of escape would be seriously obstructed after the installation of the hose reel system.

- Emergency Lighting

- Will not be required for separately occupied area/room with an area of less than 8m² for accommodating a limited number of habitual staff and located adjacent to exit routes with emergency lighting.

B) Non-domestic Portion of Composite Building (Overall Building Height More than 6 storey)

- Automatic Sprinkler System

- Will not be required if the aggregate area of the non-domestic floors does not exceed 230m².

- Should there be structural or spatial constraints for retrofitting a standard sprinkler system, an improvised sprinkler system with a direct town's main water connection (applicable for non-domestic portion of a height not exceeding 15m), a connection from the existing fire hydrant/hose reel system, or a sprinkler water tank of a reduced capacity may be considered acceptable.

(Note - For an improvised sprinkler system, the system alarm shall be connected to the Fire Services Communication Centre of Fire Services Department by direct telephone line.)

e.g. ~ If there is limitation on floor loading or insufficient space to accommodate a new water tank due to ownership problem.

● Hose Reel System

- Should there be spatial or structural constraints, or other difficulties in providing a standard hose reel system, hose reels of reduced length (i.e. hose reel drums of smaller size) or installation of hose reel drums at high level positions may be considered acceptable.

e.g. ~ If the standard provision would entail the narrowing of the means of escape to an effective width which is below the minimum acceptable standard.

e.g. ~ If the space at common area/staircase enclosure is insufficient to accommodate the hose reel drums.

● Emergency Lighting

- Will not be required for separately occupied area/room with an area of less than 8m² for accommodating limited number of habitual staff and located adjacent to exit routes with emergency lighting.

C) Domestic Building or Domestic Portion of Composite Building (Overall Building Height Not Exceeding 6 Storeys)

● Fire Hydrant System

- Will not be required if direct vehicular access to the major face of

the building is available.

- Hose Reel System

- Should there be spatial or structural constraints, or other difficulties in providing a standard hose reel system, hose reels of reduced length (i.e. hose reel drums of smaller size) or installation of hose reel drums at high level positions may be considered acceptable.

e.g. ~ If the standard provision would entail the narrowing of the means of escape to an effective width which is below the minimum acceptable standard.

e.g. ~ If the space at common area/staircase enclosure is insufficient to accommodate the hose reel drums.

- Fire extinguishers may be acceptable in place of a hose reel system if substantial difficulties are further encountered in providing such improvised hose reels.

e.g. ~ If there still exists insurmountable situation in which the means of escape would be seriously obstructed after the installation of the hose reel system.

(D) Domestic Building or Domestic Portion of Composite Building (Overall Building Height More Than 6 Storeys)

- Hose Reel System

- Should there be spatial or structural constraints, or other difficulties in providing a standard hose reel system, hose reels of reduced length (i.e. hose reel drums of smaller size) or installation of hose reel drums at high level positions may be considered acceptable.

e.g. ~ If the standard provision would entail the narrowing of the means of escape to an effective width which is below the minimum acceptable standard.

e.g. ~ If the space at common area/staircase enclosure is insufficient to accommodate the hose reel drums.

This Department will continue to adopt a flexible and pragmatic approach in handling cases where owners encounter practical difficulties in complying with the new fire safety standards. Should you have any question on this Circular Letter, please contact the Senior Divisional Officer of the Building Improvement and Support Division at 2170 9500.

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for Director of Fire Services

Guidance notes to owners/occupiers
Construction Works Required under the
Fire Safety (Buildings) Ordinance

The Fire Safety (Buildings) Ordinance (hereinafter referred to as the Ordinance) will be implemented on xx.xx.200x. The purpose of the Ordinance is to improve the fire safety condition of certain old composite buildings and domestic buildings to better protect life and property.

We understand that in many of these old buildings, construction of new works in meeting the current fire safety standards may be difficult due to spatial or structural constraints. The Ordinance therefore requires the carrying out of only those improvement works which are considered essential. The specific improvement requirements stipulated in a fire safety direction are also drawn up in a like spirit following inspection of the building concerned.

Normally, at least one year will be allowed for owners to complete the improvement works. To avoid unnecessary spending, owners may consider combining such requirements with the routine maintenance works as appropriate. Besides, there might be additional constraints on construction that would make compliance with the fire safety requirements difficult. In those special circumstances, relaxation may be considered on the merits of each case, taking into account such factors as the potential fire risk, floor layout, nature of uses, actual occupancy, combustible materials, etc.

Some examples of possible relaxation that may be accepted are given below for reference. They are, however, by no means exhaustive. Other improvement works or alternative methods may be acceptable provided that a reasonable level of fire safety is achieved.

A) Schedule 1 - Non-domestic part of composite building:

Clause 2 (a)(i) Staircase width and number.

Problem	Circumstances	Possible Relaxation
Inadequate number of staircases.	Low occupancy or fire load (e.g. watch shop if the contents are mostly non-combustible and there is low customer flow).	Take into account other staircases which are not properly protected.
Excessive population.	Low fire load (e.g. church assembly if the contents are mostly non-combustible).	Accept actual number of population to exceed the permitted figures laid down in the Code of Practice by 10%.
Inadequacy in width or headroom.	Minor localized projections (e.g. pipes, columns, plaster thickness)	Accept slightly less overall width or headroom.

Clause 2 (a)(ii) & (iii) Protection of exit routes.

Problem	Circumstances	Possible Relaxation
Smoke lobby cannot be provided.	Inadequate space for improvement and low fire load (e.g. door opening to cockloft for storage of non-combustible materials).	Exempt smoke lobby if the means of escape is protected by fire rated doors.
Change from one required staircase to another required staircase cannot be made at every floor.	Inadequate space for improvement (e.g. the required space is individually owned).	Accept interchange at roof or at certain storey intervals only. Proper signage be provided to guide the occupants.
Water/drainage pipes not protected by fire resisting construction.	Existing water/drainage pipes are made of metal.	Exempt requirement but add suitable fire check to stop fire spread.
Electrical wiring not protected by fire resisting construction.	Existing conduits/ducting are constructed with metal.	Exempt requirement.

Clause 2 (a)(iv) Fire doors.

Problem	Circumstances	Possible Relaxation
Fire doors not certified to have 1/2 hour fire resisting period.	Existing doors are recently installed and are in good condition.	Accept existing 50 mm thick solid hardwood self-closing door.

Clause 2 (b)(i) & (ii) Fireman's lift.

Problem	Circumstances	Possible Relaxation
Additional fireman's lift required.	Inadequate structural capacity or space to add lift (e.g. space required is individually owned).	Exempt requirement with agreement of Fire Services Department.
Size and rated load of the existing lift inadequate to be used as fireman's lift.	Inadequate structural capacity or space to change to larger lift (e.g. space required is individually owned).	Exempt requirement with agreement of Fire Services Department.

Clause 2 (c)(i) Prevention of spread of fire to adjoining building.

Problem	Circumstances	Possible Relaxation
Opening not protected by fixed window.	Existing openable steel window frame is in good condition.	Accept existing window by welding the openable sashes shut.
Window at a location where fire resisting protection is required.	Window not within 3m of any other opening.	Allow 10% of windows to be of openable design for ventilation purposes.
Glazing without insulation properties.	Window not within 3m of any other opening.	Accept existing wired glass in good condition.
Facade close to adjacent building not protected by 1-hour fire resisting period.	Inadequate space to construct wall and low fire load (e.g. jewellery shop if the contents are mostly non-combustible and there is low customer flow).	Exempt requirement.

Clause 2 (c)(ii) Fire resisting separation.

Problem	Circumstances	Possible Relaxation
Separation between basement and ground floor less than 4-hour fire resisting period.	Inadequate space to construct additional separation (e.g. the required space is individually owned).	Accept 2-hour fire resisting period separation between basement and ground floor.

	Low fire load (e.g. watch shop if the the contents are mostly non-combustible and there is low customer flow).	
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Clause 2 (c)(iii) Smoke vents to basements.

Problem	Circumstances	Possible Relaxation
Inadequate size and number.	Inadequate space to construct additional smoke vents (e.g. the required space is individually owned) Low fire load (e.g. banking premises if the contents are mostly non-combustible).	Accept smoke vents of a smaller size or in less number.

B) Schedule 2 - Domestic part of composite building or domestic building:

Clause 2 (a) Protection of staircases.

Problem	Circumstances	Possible Relaxation
Opening not protected by fixed window.	Existing openable steel window frame is in good condition.	Accept existing window by welding the openable sashes shut.
Window in a location where fire resisting protection is required.	Window not within 3m of any other opening.	Allow 10% of windows to be of openable design for ventilation purposes.
Glazing without insulation properties.	Window not within 3m of any other opening.	Accept existing wired glass in good condition.
Water/drainage pipes not protected by fire resisting construction.	Existing water/drainage pipes are made of metal.	Exempt requirement but add suitable fire check to stop fire spread.
Electrical wiring not protected by fire resisting construction.	Existing conduits/ducting are constructed with metal.	Exempt requirement.

Clause 2 (b) Exit routes at ground floor.

Problem	Circumstances	Possible Relaxation
Inadequacy in width of the exit from upper floors merging with	Inadequate space to widen exit route (e.g. the required space is	Accept 10% deficiency.

ground floor exit.	individually owned). Low fire load (e.g. banking premises if the contents are mostly non- combustible).	
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Clause 2 (c) Fire doors.

Problem	Circumstances	Possible Relaxation
Fire doors not certified to have 1/2 hour fire resisting period.	Existing doors are recently installed and are in good condition.	Accept existing 50 mm thick solid hardwood self-closing door.

This Department will continue to adopt a flexible and pragmatic approach in handling cases where owners encounter practical difficulties in complying with the new fire safety standards. Should you have any query on the guidance notes, please do not hesitate to contact Senior Building Surveyor of the Fire Safety Section at Tel. xxxxxx Fax xxxxxxxx E-mail : xxxx .

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for Director of Buildings