

# **Legislative Proposal to Upgrade the Fire Safety of Old Industrial Buildings**

## **Consultation Paper**

### **INTRODUCTION**

The Government proposes to introduce a new piece of legislation for upgrading the fire safety standards of old industrial buildings (“IBs”), and invites views from the public.

### **BACKGROUND**

2. The fire safety measures in existing buildings generally meet the prevailing standards at the time of their construction. Pursuant to the Buildings Ordinance (Cap. 123) (“BO”), the planning, design and construction of a building have to comply with the Ordinance and its subsidiary legislation. As far as fire safety standard is concerned, such requirements are stipulated in the respective codes of practice which are in force at the time of the submission of the relevant building plans, including: (i) the requirements on fire safety construction<sup>1</sup> (i.e. means of escape, fire resisting construction, means of access for firefighting and rescue) as stipulated in the Codes of Practice published by the Buildings Department (“BD”); and (ii) the requirements on the provision of fire service installations and equipment (“FSI”)<sup>2</sup> according to the Code of Practice for Minimum Fire Service Installations and Equipment (“FSI Code”) published by the Fire Services Department (“FSD”).

3. However, the fire safety standards of old buildings fall short of the standards as prescribed in the prevailing FSI Code<sup>3</sup> and the Code of Practice for Fire Safety in Buildings (“FS Code”). For instance, automatic sprinkler

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<sup>1</sup> Examples of “fire safety construction” are protection of exit routes and staircases with separating walls of fire resisting construction, provision of exit routes of sufficient width for the means of escape, etc.

<sup>2</sup> Examples of “fire service installations and equipment” are automatic sprinkler systems, fire hydrant / hose reel systems, fire alarm systems, emergency lighting, exit signs, etc.

<sup>3</sup> The FSI Code was substantially revised in 1987. Buildings designed in accordance with the standards laid down in the 1987 FSI Code should have been fitted with modern FSI of standards similar to, if not the same as, those of FSI nowadays.

system is a highly effective FSI capable of limiting or extinguishing a fire prior to the arrival of firefighters, and hence reducing the damage to life and property. Yet only some of the IBs constructed before 1973 were required to install automatic sprinkler systems. FSD then amended the requirement to require all IBs and godowns built after March 1973 of more than two storeys to be equipped with automatic sprinkler systems<sup>4</sup>. In 1987, FSD further revised the FSI Code to govern the FSI in buildings built thereafter, including extending the requirement of installing automatic sprinkler systems to all IBs, irrespective of height. This version of the FSI Code also incorporated modern standards very close to the prevailing ones today (published in 2012)<sup>5</sup>.

4. The Government has implemented the Fire Safety (Commercial Premises) Ordinance (Cap. 502) (“FS(CP)O”) and the Fire Safety (Buildings) Ordinance (Cap. 572) (“FS(B)O”), aiming at upgrading the fire safety standards of old commercial, composite and domestic buildings respectively. The two Ordinances were enacted and brought into force in the 1990s and 2000s respectively, mandating the upgrading of fire safety standards of pre-1987 commercial, composite and domestic buildings to provide better protection for their users and visitors.

5. With the implementation of the above two Ordinances, IBs have become the remaining major category of pre-1987 buildings to be dealt with. The fires at certain old IBs in recent years heightened public concern over the fire risks of old IBs. It is therefore imperative to raise the fire safety standards of these buildings through further legislation.

## **THE PROPOSAL**

6. The Government proposes to introduce a new piece of legislation to require owners and/or occupiers of pre-1987 IBs to upgrade the fire safety standards of such buildings. The framework of the new legislation will be generally consistent with the FS(CP)O and the FS(B)O.

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<sup>4</sup> IBs built before 1973 are subject to a less stringent set of requirements, in that installation of sprinkler systems is “only required for compartment exceeding 7 000 m<sup>3</sup> (or 250,000 cubic feet) and basement for storage exceeding 500 m<sup>2</sup> (or 5,000 square feet)”. For godowns and warehouses, installation of sprinkler systems is determined by the Director of Fire Services on a case-by-case basis.

<sup>5</sup> Compared with the 1987 edition of the FSI Code, the 2012 edition is not substantially different in respect of the types of FSI required to be provided, but the detailed technical standards of individual types of FSI have been enhanced.

7. The new legislation targets buildings which were wholly or partly constructed to be used as a factory, workshop, industrial undertaking, godown, warehouse, bulk store or similar industrial premises on or before 1 March 1987, or those constructed for the aforesaid uses with their building plans first submitted to the Building Authority (i.e. the Director of Buildings, “DB”) for approval on or before the same date. The new legislation will not be applicable to buildings which are regulated by the FS(CP)O and the FS(B)O.

8. The new legislation will designate the Director of Fire Services (“DFS”) and DB as the enforcement authorities (“EAs”) and empower them to, after inspection of the target buildings of the legislation, serve **fire safety directions** to mandate the owners and/or occupiers to upgrade the fire safety of such buildings to the required standard. The owners and/or occupiers must comply with the requirements within the period as stipulated in the directions.

#### *Scope of fire safety measures to be upgraded*

9. Broadly speaking, owners and occupiers of pre-1987 IBs have to upgrade the fire safety measures on two fronts: (i) provision of FSI as required by DFS; and (ii) upgrading of fire safety construction as required by DB. The fire safety measures may cover the interior of individual units and the common areas of IBs.

10. The new legislation will empower the EAs to specify those fire safety measures required to be upgraded in the directions they serve on the owners and/or occupiers of pre-1987 IBs. Depending on the actual circumstances, the fire safety measures to be required of these IBs include installation of automatic sprinkler systems; provision of sufficient directional and exit signs; provision of secondary source of electrical power supply; provision of fire hydrant/hose reel systems; provision of adequate means of escape; and/or provision of fire resisting construction to inhibit the spread of fire and ensuring the structural integrity of the buildings. Details of the requirements to be complied with by owners and occupiers of the target IBs are set out at **Annex 1** and **Annex 2** respectively.

11. FSD and BD have conducted a study on the technical feasibility of mandatorily requiring pre-1987 IBs to upgrade their fire safety measures to modern standards. The study reveals that it is basically feasible for pre-1987 IBs to carry out improvement works to upgrade their fire safety measures.

Nonetheless, the study also shows that given their building structure and actual circumstances, it will be difficult for pre-1987 IBs already in existence and being occupied to add firefighting and rescue stairways or to provide refuge floors and staircase interchanges. The new legislation will therefore not impose such requirements on the owners or occupiers.

12. FSD and BD will assign a dedicated case officer for each IB to offer technical advice and assistance in the implementation of the new legislation.

### ***Implementation mechanism***

13. Owner and/or occupiers shall comply with the relevant fire safety requirements within the period as stipulated in the fire safety directions. We propose that in case an owner or occupier fails to comply with a direction without a reasonable excuse, he is guilty of an offence and is liable upon conviction to a fine at level 4 (i.e. \$25,000) and a further fine of \$2,500 for each day during which the failure continues. The EA may also apply to a magistrates' court for a **fire safety compliance order** ("FSCO"), directing the owner or occupier to comply with the requirements in the direction.

14. We propose that failure to comply with an FSCO shall be an offence and shall be liable upon conviction to a fine at level 5 (i.e. \$50,000) and a further fine of \$5,000 for each day during which the failure continues.

15. When the fire safety upgrading works required by a fire safety direction or an FSCO are completed, the owner or occupier should notify the EA concerned. Upon receipt of the notice, the EA will conduct an inspection and, when satisfied that the requirements of a direction or an FSCO have been duly complied with, issue a **certificate of compliance** to the owner or occupier concerned. The relevant direction or FSCO will then cease to have effect.

16. We further propose that, if an owner or occupier fails to comply with a direction or an FSCO and the building concerned may have substantial fire risk, an EA may apply to the District Court for a **prohibition order** prohibiting the occupation of the IB or its relevant parts. Failure to comply with a prohibition order is liable upon conviction to a fine of \$250,000 and imprisonment for 3 years; and a further fine of \$25,000 for each day during which the failure continues. Moreover, while a prohibition order is in force, the owner or occupier must take practicable steps to ensure that the IB or its relevant parts will not be occupied. Otherwise he shall be guilty of an offence

and shall be liable upon conviction to a fine at level 4 (i.e. \$25,000) and imprisonment for 6 months.

17. When satisfied that the fire safety direction or FSCO in relation to the prohibition order has been complied with, the EA will issue the certificate of compliance to the owner or occupier concerned, and apply to the District Court for discharging the prohibition order.

### ***Service of Documents***

18. On the service of documents (such as directions and certificates of compliance) under the new legislation, we suggest allowing EAs to deliver them by the following means: delivery in person, by fax, email or registered post, leaving the document with an adult occupier of the premises concerned, or posting the document at a conspicuous position of the relevant premises.

### ***Registration of FSCOs and prohibition orders in the Land Registry***

19. The new legislation will empower the EAs to register FSCOs and prohibition orders in the land register of the property concerned. When an FSCO ceases to have effect upon its being complied with, or a prohibition order is withdrawn / discharged, the EA shall arrange the relevant registration in the land register as soon as practicable. This arrangement will allow the prospective owners to be aware of the compliance status in respect of the statutory requirements associated with the IB in a property transaction, and motivate the owner to comply with the court orders at the soonest. Similar requirements are also stipulated in the FS(B)O.

### ***Phased implementation***

20. According to BD's record, there are at present around 1 100 IBs which will be subject to the new legislation. Upon enactment, the new legislation will be implemented by EAs in two phases, starting with some 400 IBs built or had their building plans submitted before March 1973.

## **WAY FORWARD**

21. The Government plans to introduce a relevant bill to the Legislative Council in the fourth quarter of 2018.

## **WHEN AND HOW TO RESPOND**

22. Please send us your views on or before 8 October 2018 by any of the following means:

By mail to: Security Bureau (B Division)  
9th Floor, East Wing, Central Government Offices  
2 Tim Mei Avenue, Tamar, Hong Kong

By fax to: 2868 9159

By email to: [fsibb\\_consultation@sb.gov.hk](mailto:fsibb_consultation@sb.gov.hk)

23. Members of the public may choose whether or not to provide their personal data when submitting views on this consultation paper. The submissions and personal data collected may be transferred to the relevant Government bureaux and departments for purposes directly related to this consultation exercise. The Government bureaux and departments receiving the data may only use the data for such purposes.

24. The names and views of individuals and organisations who/which put forth submissions on this consultation paper (“senders”) may be published for public viewing. We may, either in discussions (internal or public) with other parties, or in any documents we publish, cite views submitted with regard to this consultation paper.

25. To safeguard senders’ personal data privacy, we will remove senders’ relevant data, such as residential/return addresses, email addresses, identity card numbers, telephone numbers, facsimile numbers and signatures, when publishing submissions received (if applicable).

26. We respect the wish of senders to remain anonymous and/or keep their views confidential in part or in whole. If senders request anonymity, we will remove their names when publishing their views. If senders request confidentiality, their views will not be published.

27. If senders do not request anonymity or confidentiality in the submissions, it will be assumed that their names and views can be published in entirety.

28. Any sender providing personal data to us in the submission will have rights of access and correction with respect to their personal data. Requests for

access to or correction of personal data should be made in writing through the following means:

By mail to: Access to Information Officer  
Security Bureau  
9th Floor, East Wing, Central Government Offices  
2 Tim Mei Avenue, Tamar, Hong Kong

By email to: [fsibb\\_consultation@sb.gov.hk](mailto:fsibb_consultation@sb.gov.hk)

**Security Bureau**  
**Fire Services Department**  
**Buildings Department**  
**August 2018**

**Fire Safety Requirements for Compliance  
by Owners of Pre-1987 Industrial Buildings**

**1. Provision of fire service installations and equipment**

In relation to the provision of fire service installations and equipment, an owner of a pre-1987 industrial building must comply with the following requirements:

- (a) to provide or improve an automatic sprinkler system, with or without a direct link to the Fire Services Department, to control the spread of fire and sound an alarm;
- (b) to provide or improve a fire hydrant/hose reel system as a source of water supply for firefighting;
- (c) to provide or improve a fire alarm system to alert occupants of the building in the event of fire and activate the fire pump in the fire hydrant/hose reel system;
- (d) to provide or improve the emergency lighting system within the common areas so as to facilitate the evacuation of occupants of the building in the event of a power failure;
- (e) to provide or improve exit signs (including directional and exit signs) indicating an exit route to facilitate the evacuation of people in the building in the event of fire;
- (f) to provide or improve a secondary source of electrical power supply (whether in the form of an emergency generator or otherwise) to provide stand-by power to the fire service installations and equipment and fireman's lifts in the event of loss of normal power supply;
- (g) to provide or improve an automatic cut-off device for the mechanical ventilating system if there is one in the building or part of the building to limit the spread of smoke through the ventilating system; and
- (h) to provide or improve other fire service installations and equipment in accordance with the requirements specified in the Code of Practice for Minimum Fire Service Installations and Equipment 2012 published by the Director of Fire Services.

The detailed specifications and requirements of the installations and equipment in paragraphs 1(a) to (g) above are set out in the Code of Practice for Minimum Fire Service Installations and Equipment 2012.



## **2. Fire safety construction**

In relation to fire safety construction, an owner of a pre-1987 industrial building must comply with the following requirements:

- (a) in relation to means of escape:
  - (i) to improve exit arrangements in terms of exits from storeys and ground storeys;
- (b) in relation to means of access for firefighting and rescue:
  - (i) to improve at least one of the existing lifts, up to the standard of fireman's lifts; and
  - (ii) to install a new lift, up to the standard of fireman's lifts; and
- (c) in relation to fire resisting construction:
  - (i) to protect exit routes and staircases with separating walls of fire resisting construction;
  - (ii) to provide fire rated doors;
  - (iii) to improve the fire resistance of external walls and protect openings therein to inhibit the spread of fire to adjoining buildings;
  - (iv) to provide fire resisting separation between different parts in a building; and
  - (v) to provide smoke vents to basements.

The detailed requirements on the design, construction or installation in relation to fire safety construction in paragraphs 2(a) to (c) above are set out in the Code of Practice for Fire Safety in Buildings 2011 (October 2015 version) published by the Buildings Department.

**Fire Safety Requirements for Compliance  
by Occupiers of Pre-1987 Industrial Buildings**

**1. Provision of fire service installations and equipment**

In relation to the provision of fire service installations and equipment, an occupier of a pre-1987 industrial building must comply with the following requirements:

- (a) to provide or improve the emergency lighting system within the area he occupies so as to facilitate the evacuation of the area in the event of a power failure; and
- (b) to provide or improve an automatic cut-off device for the mechanical ventilating system if one is provided within the area he occupies, which serves not only the occupied area and:
  - (i) has a capacity to process air at a rate exceeding one cubic metre per second; or
  - (ii) serves more than one fire compartment<sup>6</sup> in that area

to limit the spread of smoke through the ventilating system.

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<sup>6</sup> Fire compartment means a space in a building which must be enclosed on all sides by fire barriers or appropriate constructions that meet the standard of fire resistance rating prescribed by the Code of Practice for Fire Safety in Buildings 2011 (October 2015 version), as published by the Buildings Department.