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1 June 2002

To : Authorized Persons	The H.K. & China Gas Co.
Registered F.S.I. Contractors	The Lift & Escalator Contractors Association
Registered Ventilation Contractors	Pacific Century CyberWorks Limited
Registered Lift & Escalator Contractors	Hong Kong Construction Association
Fire Insurance Association of H.K.	Director of Architectural Services
The Association of Registered F.S.I. Contractors of Hong Kong	Director of Buildings
Structural Division, H.K.I.E.	Director of Housing
Power Companies	Petroleum Companies

Dear Sirs,

FSD Circular Letter No. 1/2002
Rules for Fire Detection and Alarm Systems for Buildings

This Circular Letter announces the adoption, with local modifications, of Rules of the Loss Prevention Council for automatic fire detection and alarm installations for the protection of property (LPC Rules) and British Standard for the installation of automatic fire detection and alarm systems for buildings (BS 5839 : Part 1 : 1988) for the system design, installation and servicing of fire detection system.

Subsequent to the replacement of Rules of the Fire Office's Committee for automatic fire alarm installation 12th edition (FOC Rules) by the LPC Rules, the Working Group on Fire Service Installations Inspection Procedures was given the task to look into the feasibility and practicability of adopting the LPC Rules and BS 5839 for local application. After prolonged discussion and extensive consultation with the industry and respective interested parties, the Working Group has now completed its study and recommended, subject to modifications as specified in Lists One to Four annexed to this Letter, to adopt the LPC Rules and BS 5839.

The new standard will take effect from 1 January 2003 and the reference of FOC Rules in the current Code of Practice for Minimum Fire Service Installations and Equipment will be amended to LPC Rules and BS 5839 in due course.

Yours faithfully,

(LAU Kwai-shan)
for Director of Fire Services

Encl.

Recommendations of the Working Group
for FSI Inspection Procedures

Except those named in the following lists, all clauses stipulated in the following rules and code of practice including Notes, Commentary and Recommendations are to be followed :-

- (a) Loss Prevention Council Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property (Schedule for the use of BS 5839:Part 1:1988)
- (b) BS 5839 : Part 1 : 1988 – Fire Detection and Alarm Systems for Buildings, Part 1. Code of Practice for System Design, Installation and Servicing

- List One : Clauses not to be applied
- List Two : Clauses to be replaced by modified conditions
- List Three : Clauses to be provided with acceptable alternatives
- List Four : Clauses to be taken as reference only
- Annex : Table 2: Spacing and siting of detectors on
honeycomb, waffle and similar ceilings
(for BS Clause 12.2.3)

Abbreviations :

The following abbreviations shall be used in this document.

- BS 5839 or BS - BS 5839 : Part 1 : 1988 – Fire Detection and Alarm Systems for Buildings, Part 1. Code of Practice for System Design, Installation and Servicing
- EECoP - Code of Practice for the Electricity (Wiring) Regulations issued by Electrical and Mechanical Services Department
- FRC Code - Code of Practice for Fire Resisting Construction, 1996 issued by the Buildings Department
- FSCC - Fire Services Communication Centre
- FSCoP - Codes of Practice for Minimum Fire Service Installations and Equipment and Inspection, Testing and Maintenance of Installations and Equipment issued by Hong Kong Fire Services Department
- HKFSD or FSD - Hong Kong Fire Services Department
- LPC Rules or LPC - Loss Prevention Council Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property (Schedule for the use of BS 5839:Part 1:1988)

Definition :

The following definition is to be used in this document.

- Fire Compartment - An enclosed space or compartment which shall be in full compliance with the compartmentation requirements as stipulated in Clause 5 of the FRC Code. It is not intended to refer to fire compartments for separating protected areas, areas of different uses, areas of different occupancies, and areas of special hazards.

List One : Clauses not to be applied

List One : Clauses not to be applied
LPC Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property
(Schedule for the use of BS 5839 : Part 1 : 1988) and BS 5839 : Part 1 : 1988

List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
1.1	Definitions (Page 2)	-	“together with the following: Listed system An automatic fire detection and alarm system included in the Loss Prevention Council’s <i>List of approved products and services</i> Part 3, Section 1. Listed transmission system An alarm transmission system included in the Loss Prevention Council’s <i>List of approved products and services</i> Part 3, Section 1.”	Foreign definitions shall not be applied.
1.2	Clause 1 (Page 2)	-	“The insurer shall be consulted at an early stage on any aspects of the installation not conforming to these Rules.”	Foreign requirements shall not be applied.
1.3	Clause 4(a) (Page 2)	-	“The insurer shall be consulted as appropriate as indicated without this document.”	Foreign requirements shall not be applied.
1.4	-	Clause 7.2 Para. 1(g) (Page 12)	“For systems in buildings in multiple occupation (see 4.4) the zoning arrangement should take account of the fact that premises may not all be occupied at the same time and no zone should include areas in more than one occupancy.”	It is impractical to implement the requirements of this Clause locally.
1.5	-	Clause 9.3 Para. 1 (Page 13)	“in all accessible parts of the building.”	It is impractical to implement this requirement.
1.6	-	Clause 9.12 (Page 15)	“Where intercommunication or public address equipment is used in lieu of conventional sounders, the following should be ensured. (a) Where the transmitted alarm is not a voice message, its audibility should comply with the recommendations of 9.2 for property protection systems or 9.3 for life protection systems.”	It is impractical to implement the requirements of this Clause locally.
1.7	-	Clause 9.13 (Page 17)	“In some systems much information about both the state of the system and any fire condition is available. , the amount of information given is limited to that which is both necessary and sufficient.”	It is impractical to implement the requirements of this Clause locally.
1.8	-	Clause 9.14 (Page 17)	“In general, fire alarm sounds should be used for other purposes only if the response required is identical to that which would be with one of the sounds being reserved for fire alarm use.”	It is impractical to implement the requirements of this Clause locally.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
1.9	-	Clause 12.1 Para. 5 (Page 20)	“Before a fire detection system is installed for insurance purposes, early consultations should be held with the insurers.”	Fire detection system is classified as one of the fire service installations under the FSCoP and should be designed in full accordance with FSD’s requirements.
1.10	-	Clause 12.2.6 (Page 21)	“Although an increased ceiling height means that the fire will be larger when it is detected, , or by point-type smoke detectors if their height does not exceed 18 m.”	The requirements of this Clause have been incorporated into the modified BS Clause 12.2.5.
1.11	-	Clause 12.2.16 Para. 1 (Page 22)	“In general, if the room ventilation rate exceeds four changes per hour then additional detectors may be required. For applications in computer suites or data processing areas, BS 6266 should be consulted.”	The fire service requirements for ventilation/air conditioning control systems shall follow FSCoP.
1.12	-	Clause 13.1 Para. 1 (Page 24)	“In some very small premises simple hand-operated devices such as hand bells or gongs may be sufficient. However, in most other premises a more sophisticated alarm system will be necessary, able to be heard throughout the premises and perhaps incorporating automatic fire detection.”	In accordance with FSCoP, pure manual systems such as hand bells, whistles, rotary gongs, etc. are not within the scope of the FSCoP and the sound level of the alarm signals shall comply with the requirements as stipulated in the modified BS Clause 9.4.1.
1.13	-	Clause 13.4 (Page 24)	“, modified as recommended in 13.5 to 13.7.”	As HKFSD has no such classification as type L1, L2 and L3 systems, Clause 13.5 to 13.7 which are related to type L3, L2 and L1 systems shall not be applied.
1.14	-	Clause 16.2 Para. 6 (Page 30)	“Any switch that can disconnect the power supplies to all or part of the system should be coloured red and labelled ‘FIRE ALARM : DO NOT SWITCH OFF’.”	The requirements of warning labels have been incorporated in the modified Para. 3 of BS Clause 16.2.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
1.15	-	Clause 16.5.2 (Page 32)	“ <i>Systems installed primarily to protect property (type P)</i> , at which time a further 24 h supply will remain; hence a total duration of 48 h will be needed. ”	For practical purposes, the requirements on standby supply for property protection as stipulated in clauses 16.5.2.1 to 16.5.2.3 shall be the same for life protection as stipulated in the modified BS Clauses 16.5.1 and 16.5.1.1.
1.16	-	Clause 17.2 Para. 2(a) (Page 33)	“Cables used within the protected premises for the transmission of the alarm to a remote centre should be included in this class.”	Once this type of cable has transmitted the signal, its function for prolong operation is no longer required.
1.17	-	Clause 17.11 (Page 35)	“and should be considered as needed to give prolonged operation in a fire (see 17.4.2).”	Once this type of communication cable has transmitted the signal to the FSCC, its function for prolong operation is no longer required.
1.18	Clause 21(b) (Page 4)	-	“The insurer shall be consulted with regard to any deviations from these Rules encountered during installation.”	Inappropriate to be adopted locally.
1.19	Clause 26(c) (Page 4)	-	“The insurer shall be invited to witness these functional / compatibility tests.”	Foreign requirements shall not be applied.
1.20	Clause 26(d) (Page 4)	-	“If it is uncertain that detectors have been placed in the best positions, or that adverse environmental conditions might cause detection problems, The insurer shall be invited to witness such a test.”	Inappropriate to be adopted locally.
1.21	Clause 26(e) (Page 4)	-	“After the successful conclusion of the above, the installer or his supervisory listed installer shall issue the user with a certificate, described in Appendix A. Any deviations (which shall have been previously accepted by the insurer) shall be stated.”	Inappropriate to be adopted locally.
1.22	-	Clause 29.2.2 Para. 2 (Page 43)	“If the fire alarm system is connected to a 999 automatic dialing unit, , but where used the inhibited state should be indicated by the use of a notice on the control equipment.”	Inappropriate to be adopted locally.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
1.23	-	Clause 29.3.2 Para. 1(a) (Page 45)	“(See appendix E)”	Foreign statutory requirements shall not be applied.
1.24	-	Appendix E (Page 52)	“Ionization chamber smoke detectors contain small amounts of radioactive materials. , from the Health and Safety Executive, or from the National Radiological Protection Board*.”	Foreign statutory requirements shall not be applied.

List Two : Clauses to be replaced by modified conditions

List Two : Clauses to be replaced by modified conditions
LPC Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property
(Schedule for the use of BS 5839 : Part 1 : 1988) and BS 5839 : Part 1 : 1988

List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.1	Scope (Page 1)	-	“This document specifies Insurers’ requirements for the design, installation, commissioning/testing, use and servicing of fire detection and alarm systems primarily for the protection of property, that are additional to the requirements of BS 5839: Part 1, Life safety requirements are covered in BS 5839: Part 1: 1988.”	“This document specifies HKFSD’s requirements for the design, installation, commissioning/testing, use and servicing of fire detection and alarm systems primarily for the protection of property, that are additional to the requirements of BS 5839: Part 1 and all modifications to the BS to suit local applications, Life safety requirements are covered in BS 5839: Part 1: 1988.”	To suit local requirements.
2.2	Clause 2 (Page 2)	-	“Only fire detection and alarm equipment conforming to one of the following shall be used: where systems do not meet the above criteria, yet are deemed most suitable for a particular situation, the Insurer shall be consulted.”	“Only fire detection and alarm equipment conforming to HKFSD’s requirements shall be used. List of fire service installations and equipment requiring approval from HKFSD shall follow FSD Circular Letter No. 4/98.”	To suit local requirements.
2.3	Clause 3 (Page 2)	-	“Systems shall be designed, installed and commissioned by either: (i) an LPC listed installer (ii) an installing company not listed but supervised by an LPC listed installer.”	“All installation, maintenance, inspection, testing and commissioning works shall be done by a registered fire service installation contractor. In case there are electrical works involved, all the associated electrical works shall be done by a registered fire service installation contractor who shall also be a registered electrical contractor.”	To suit local requirements.
2.4	Clause 6(d) (Page 3)	-	“(Specific reference to BS Clause 6.6). No single detection loop circuit shall cover an area greater than 10 000 m ² or be used to monitor more than five detection zones unless prior agreement has been given by the insurer.”	“No single detection loop circuit shall cover an aggregate floor area greater than 10,000 m ² calculated on those portions of the premises installed with fire detectors unless prior agreement has been given by the HKFSD.”	To clarify the calculation method of 10 000 m ² . The limits on the number of detectors for one single loop circuit should be in accordance with manufacturer’s recommendation.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.5	-	Clause 6.6.1 Para. 1 (Page 8)	“Care should be taken to ensure compatibility of all components which are part of the fire alarm system or connected with it in any way (see 6.7).”	“Care should be taken to ensure compatibility of all components which are part of the fire alarm system or connected with it in any way (see 6.7). Manufacturer’s confirmation or certification on the compatibility of all components including the types and brand of detector used shall be provided for verification in each HKFSD’s fire service installation acceptance test or inspection.”	To suit local practice and requirements.
2.6	-	Clause 6.6.1 New Para. (Page 8)	-	Add the following Para. to the last Para. of this Clause : “Details of fire service installations and equipment requiring approval from HKFSD shall follow the list in the FSD Circular Letter No. 4/98.”	To add local practice and requirements.
2.7	-	Clause 6.6.2 Para. 1(3) (Page 8)	“if a circuit is used for more than one zone and multiple faults within one fire compartment could remove protection from an area greater than that allowed under 7.2 (a) to (d) for a zone, then the circuit within that compartment is suitably protected (see 17.15);”	“if a circuit is used for more than one zone and multiple faults within one fire compartment could remove protection from an area greater than that allowed under 7.2 (a) to (d) for a zone, then the circuit within that compartment shall be mechanically protected in accordance with Clause 17.5.2;”	To clarify the meaning of “suitably protected” for alarm circuit under this clause.
2.8	-	Clause 6.6.2 Para. 1(4) (Page 8)	“two simultaneous faults should not remove protection from an area greater than 10 000m ² .”	“two simultaneous faults should not remove protection from an aggregate area greater than 10,000 m ² calculated on those portions of the premises installed with fire detectors.”	To clarify the calculation method of 10 000 m ² .

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.9	-	Clause 6.6.2 Para. 4 (Page 8)	“In particular it is desirable that provision should be made so that individual detectors can be tested without either sounding an alarm or requiring the complete system to be disabled to prevent such an alarm.”	“In particular it is required that provision should be made so that individual detectors can be tested without either sounding an alarm or requiring the complete system to be disabled to prevent such an alarm.”	To confirm the mandatory requirements of this Para.
2.10	-	Clause 6.6.3 Para. 1 (Page 8)	“Any sounder that is necessary in order to reach the audibility levels recommended in clause 9 should be capable of electrical disconnection from the alarm sounder circuit only by the use of a special tool”	“Any sounder that is necessary in order to reach the audibility levels recommended in clause 9 should be capable of electrical disconnection from the alarm sounder circuit only by the use of a tool recommended by the manufacturer”	To clarify the meaning of “special tool”.
2.11	-	Clause 7.2 Para. 1(a) (Page 11)	“The floor area of a single zone should not exceed 2000 m ² .”	“The aggregate floor area of a single detector zone should not exceed 2,000 m ² calculated on those portions of the premises installed with fire detectors.”	To clarify the calculation method of 2000 m ² .
2.12	-	Clause 7.2 Para. 1(f) (Page 11)	“In systems containing only manual call points (type M systems) location of a fire will usually it may be difficult to locate a call point from which an alarm originated. NOTE 1. This relaxation on the size of the zone does not apply to the recommendations for power supplies in type M systems given in 16.6.”	“The zoning of manual call points (break glass units) shall be at least one zone per floor or storey.”	To suit local practice.
2.13	Clause 8(b) (Page 3)	-	“The method of connection shall be via an LPC listed transmission system.”	“The method of connection shall be via an HKFSD acceptable transmission system.”	To suit local practice.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.14	Clause 8(d) (Page 3)	-	“A permanently manned on-site private fire brigade control room may be acceptable as an alternative to the facilities listed in Clause 8 (c), at the discretion of the insurer. (Also see Clause 3 (b)).”	“A permanently manned on-site private fire brigade control room may be acceptable as an alternative to the facilities listed in Clause 8 (c), at the discretion of the Director of Fire Services.”	To suit local practice.
2.15	-	Clause 8.1 – 8.3 (Page 12)	“8.1 General For a fire detection system to give the maximum benefit, and to any consequential need for fire protection.”	“A direct line connection shall be provided to the FSCC or such other premises as may be agreed with the Director of Fire Services.”	To suit requirements as stipulated in FSCoP.
2.16	-	Clause 9.1 Para. 2 (Page 13)	“and its case should be clearly marked ‘FIRE ALARM’.”	“and its case should be painted in red colour and clearly marked ‘FIRE ALARM’ ‘火警’ in white colour. The height of all the English and Chinese wordings shall not be less than 10 mm and 15 mm respectively.”	To suit local practice.
2.17	-	Clause 9.2 Para. 1 (Page 13)	“In the areas where an alarm is required, it should meet the audibility recommendations of 9.4.”	“In the areas where an alarm is required, it should meet the audibility recommendations in 9.4 except all required staircases as defined in the FRC Code and the associated protected lobbies which lead only to such staircases.”	To adopt a more practical way for implementation.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.18	-	Clause 9.3 Para. 1 (Page 13)	<p>“The number of fire alarm sounders used should be sufficient to produce the sound level recommended in 9.4 in all accessible parts of the building.”</p> <hr/> <p>“At least one sounder should be provided in each fire compartment.”</p>	<p>“The number of fire alarm sounders used should be sufficient to produce the sound level recommended in 9.4 except all required staircases as defined in the FRC Code and the associated protected lobbies which lead only to such staircases.”</p> <hr/> <p>“All buildings except domestic buildings shall be provided with at least one sounder in each fire compartment.”</p>	To adopt a more practical way for implementation.
2.19	-	Clause 9.4.1 (Page 13)	<p>“<i>Level of sound.</i> A minimum sound level of either 65 dB(A), or 5 dB(A) above any other noise likely to persist for a period longer than 30 s, can reasonably be expected to wake a sleeping person in most circumstances.”</p>	<p>“<i>Level of sound.</i> For domestic building, a minimum sound level of either 60 dB(A), or 5 dB(A) above any other noise likely to persist for a period longer than 30 s, whichever is the greater. For other types of building, a minimum sound level of either 65 dB(A), or 5 dB(A) above any other noise likely to persist for a period longer than 30 s, whichever is the greater.</p> <p>The location of all sound measurement shall be taken at three (3) metres from the inside of the main entrance door with all doors shut off at</p> <p>(a) all flats for domestic buildings, (b) all rooms for institutional / hotel buildings, and (c) all rooms / premises for other types of buildings.”</p>	To adopt a more practical approach for the requirements on the audibility of alarms as agreed in the 121 th meeting of the Working Group for FSI Inspection Procedures.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.20	-	Clause 9.5 Para. 2 (Page 14)	“If the fire alarm system extends to several buildings, or to other parts of a building unlikely to be affected by a fire in one zone, perhaps because of flammable contents or difficult egress.”	“The zoning on the sounder operation of the manual and automatic fire detection system shall comply with those requirements as stipulated in FSD Circular Letter No. 4/96, Part VIII, Item 4.”	To suit requirements as stipulated in FSD Circular Letter No. 4/96.
2.21	-	Clause 9.7 Para. 4 (Page 14)	“but not so high as to cause difficulty in vision due to glare.”	“but not so high as to cause difficulty in vision due to glare. In addition, the provisions, flashing light intensity, and colour, labeling, power supply requirement shall comply with the requirements as stipulated in FSD Circular Letter No. 4/2001. Other acceptable standard and requirements for the design of the visual fire alarm signals and system can also be found in FSD Circular Letter No. 4/2001.”	Add local requirements for visual fire alarm system.
2.22	-	Clause 9.11 Para. 3 (Page 15)	“In addition to the silencing switch at the control equipment, provision may be made for silencing switches in individual zones remote from the control equipment. Operation of a remote silencing switch should : (1) (2) (3) be automatically reset on operation of the main silencing switch or cessation of the alarm condition.”	“No silencing switch device can be installed as a single component. These devices have to be incorporated in either the main fire services control panel or a repeater panel.”	To confirm that the installation of remote silencing switches are not allowed locally.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.23	-	Clause 10.2 Para. 1 (Page 17)	“Manual call points should be located on exit routes and in particular on the floor landings of stairways and at exits to open air.”	“Manual call points should be located at each hose reel point and, in particular, adjacent to all storey exits (or the entrance lobby in lieu if such lobby leads only to the storey exits) and adjacent to all exits to open air (whether or not the exits are specifically designated as fire exits).”	To clarify that manual call points should not be located in the floor landings of staircases and should be installed at all storey exits and at locations as stipulated in FSCoP i.e. at each hose reel point.
2.24	-	Clause 10.2 Para. 2 (Page 17)	“In general, call points should be fixed at a height of 1.4 m above the floor, at easily accessible, well illuminated and conspicuous positions free from obstruction.”	“In general, call points should be fixed at a height of 1.2 m above the finished floor level, at easily accessible, well illuminated and conspicuous positions free from obstruction.”	To comply with the requirements as stipulated in FSCoP.
2.25	Clause 12(b) (Page 3)	-	“With reference to Table 1 (Limits of ceiling heights), the “Rapid attendance” limits are only applicable for Class A installations (see Clause 3(b), otherwise the “General limits” shall be used.”	“The maximum ceiling height design and installation limits for detector shall follow the “Rapid attendance” limits of Table 1 (Limits of ceiling heights).”	In order to suit current local practice, the data shown in the column of “Rapid attendance” in Table 1 shall be used as general design and installation limits.
2.26	-	Clause 12.2.3 New Para. (Page 20)	-	Add the following Para. to the last Para. of this Clause : “Where a ceiling comprises a series of small cells (a honeycomb or waffle ceiling), detector spacing and siting should be in accordance with Table 2 of the Annex.”	To add the spacing and siting requirements of detectors on honeycomb, waffle and similar ceilings.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.27	-	Clause 12.2.5 (Page 21)	“detectors should not normally be mounted on ceilings higher than the general limits of table 1. If small sections of a ceiling (not exceeding in total 10 % of the ceiling area) exceed in height the general limits of table 1, those higher sections may be protected by point-type heat detectors provided that the ceiling height in the higher sections does not exceed 10.5 m, or by point-type smoke detectors provided that the ceiling height in the higher sections does not exceed 12.5 m.”	“detectors should not normally be mounted on ceilings higher than the rapid attendance limits of table 1. If small sections of a ceiling (not exceeding in total 10 % of the ceiling area) exceed in height the rapid attendance limits of table 1, those higher sections may be protected by point-type heat detectors provided that the ceiling height in the higher sections does not exceed 15 m, or by point-type smoke detectors provided that the ceiling height in the higher sections does not exceed 18 m.”	In order to suit current local practice, the data shown in the column of “Rapid attendance” in Table 1 shall be used as general design and installation limits.
2.28	-	Clause 12.2.11 (Page 21)	“Voids less than 800 mm in height need not have independent coverage precautions against the deposition of dirt or dust may be needed.”	“Voids or that portion of voids 800 mm or less in height / depth shall not require the installation of detectors.”	To suit local practice.
2.29	-	Clause 12.2.17 (Page 22)	“If a detector is concealed, for example in a void, then it may be desirable to provide a remote indication of its operation. If necessary a label should be provided at the indicator to show the location of the detector.”	“If a detector is concealed, for example in a void, then it is required to provide a local indication with label to show the location of the detector.”	To suit local mandatory requirement for detectors installed in concealed space.
2.30	Clause 13(a) (Page 4)	-	“However, where life safety is also a consideration, Clause 13 shall be consulted and any measures regarded as necessary by the Insurers shall be in addition to those required in BS Clause 12.”	“However, where life safety is also a consideration, Clause 13 shall be applied in addition to those required in BS Clause 12.”	To suit local requirements.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.31	-	Clause 13.1 Para. 3 (Page 24)	“A type M system, operated by manual call points only, may be all that is needed , or alternative escape routes will always be available.”	“In addition to the requirements of this standard, all manual fire alarm systems shall be in full compliance with the specification of fire alarm systems as stipulated in FSCoP.”	To suit additional requirements as stipulated in FSCoP.
2.32	Clause 14(a) (Page 4)	-	“are not permitted unless prior agreement has been given by the insurer.”	“are not permitted unless prior agreement has been given by the Director of Fire Services.”	To suit local requirements.
2.33	-	Clause 14.6 Para. 1 (Page 27)	“it unlikely that a fire would go undetected by human agency, it may be useful to consider a time related, dual sensitivity system.”	“it unlikely that a fire would go undetected by human agency, subject to the approval from the Director of Fire Services, the incorporation of time related, dual sensitivity system in the fire detection system may be considered. The approval criteria for such system shall follow FSD Circular Letter No.4/2001.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.
2.34	-	Clause 14.6 Para. 4 (Page 27)	“Repeated switch operations may be used to extend the delay, but the delay should not extend more than 45 min after the last operation of the switch.”	“Repeated switch operations should not extend more than 6 min after the last operation of the switch.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.
2.35	-	Clause 14.7 Para. 1 (Page 27)	“it may be desirable to delay the automatic transmission of an alarm to the fire brigade for a sufficient time to allow the alarm to be investigated. For this purpose the incorporation of a transmission signal delay unit may be considered.”	“it may be desirable to delay the automatic transmission of an alarm to the fire brigade for a sufficient time to allow the alarm to be investigated. For this purpose, subject to the approval from the Director of Fire Services, the incorporation of a transmission delay unit may be considered. The approval criteria for such unit shall follow FSD Circular Letter No.4/2001.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.36	-	Clause 14.7 Para. 3(b) (Page 28)	“The call to the fire brigade or remote manned centre may be delayed for an initial period not exceeding 2 min.”	“The call to the fire brigade or remote manned centre may be delayed for an initial period not exceeding 1 min.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.
2.37	-	Clause 14.7 Para. 3(c) (Page 28)	“indicating that an investigation is in progress, then the alarm may be delayed for a further period, not exceeding 5 min from the manual operation, subject to agreement with interested parties.”	“indicating that an investigation is in progress, subject to the approval by the Director of Fire Services, then the alarm may be further delay for a period, not exceeding 5 min from the manual operation.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.
2.38	-	Clause 14.7 Para. 4 (Page 28)	“The alarm should be automatically transmitted to the fire brigade after a fixed delay period not greater than 2 min, unless a manual override operation has been carried out.”	“The alarm should be automatically transmitted to the fire brigade after a fixed delay period not greater than 1 min, unless a manual override operation has been carried out.”	To suit requirements as stipulated under FSD Circular Letter No. 4/2001.
2.39	-	Clause 15.2.1 (Page 28)	“such that the response of alarm sounders meets the recommendations of 10.1.”	“such that the response of alarm sounders meets the recommendations of 10.1. All fire alarm control panels, detectors, alarm sounders integrated with strobe light for use in conjunction with automatic fire alarm system shall be approved by HKFSD.”	To suit requirements as stipulated in FSD Circular Letter No. 4/98.
2.40	-	Clause 15.2.2 (Page 28)	“However, if the area covered by a manual system could fall within the limits of a single zone under the recommendations of 7.2, irrespective of how many zones are actually used, then control and indicating equipment complying with all the recommendations of appendix G may be acceptable subject to the approval of the appropriate authority.”	“All fire alarm control panels, manual call points and alarm bells shall be approved by HKFSD.”	To suit requirements as stipulated in FSD Circular Letter No. 4/98.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.41	-	Clause 15.3.7 (Page 29)	“If it is necessary for practical reasons to mount the control and indicating equipment outside the building Similar precautions may be necessary if the equipment has to be installed in a severe environment within a building.”	“A weather proof protective enclosures with adequate ventilation should be provided to protect the control and indicating equipment from being damaged by high humidity and water if the equipment has to be installed in a severe environment within or outside a building.”	To clarify the requirements for protection of control and indicating equipment from the effect of severe environment.
2.42	-	Clause 15.4.1 (Page 29)	“The indications should be such that they can be easily, quickly and unambiguously related to the position in the building from which the alarm has originated.”	“The indications should be displayed in both Chinese and English such that they can be easily, quickly and unambiguously related to the position in the building from which the alarm has originated.”	To suit local practice.
2.43	-	Clause 16.2 Para. 1 (Page 30)	“Any cable or apparatus directly connected to a public or private distribution supply should be in accordance with the current edition of the IEE Wiring Regulations in accordance with the IEE Wiring Regulations : TN-C, TN-S, TN-C-S, TT.”	“Any cable or apparatus directly connected to the public supply shall be in accordance with the current edition of the EECOP.”	To suit local practice.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.44	-	Clause 16.2 Para. 2 (Page 30)	“Connections to the mains supply should be via an isolating protective device (e.g. an isolating switch-fuse) reserved solely for the purpose, its cover coloured red and labelled ‘FIRE ALARM : DO NOT SWITCH OFF’. The isolating protective device should be secured from unauthorized operation. It may be desirable for the isolating protective device to be contained in a securely closed box with a frangible cover.”	“Connections to the mains supply should be via an isolating protective device (e.g. an isolating switch-fuse) reserved solely for all the fire service installations. Except fused spur units installed adjacent to fire alarm and repeater panels, every isolator, switch and protective device that is capable of disconnecting the mains supply to the fire alarm system should be situated in a position inaccessible to unauthorized persons or be protected against unauthorized operation.”	To suit local practice.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.45	-	Clause 16.2 Para. 3 (Page 30)	“An additional warning label should be provided, , a label should be fixed to the main isolating device reading ‘Warning : this switch also controls the supply to the fire alarm system.’ ”	“Every isolator and protective device that can isolate the supply to the fire alarm system, other than the main isolator for the building, should be labelled either : (a) ‘FIRE ALARM’ ‘火警警報’, in the case of a protective device that serves only the fire alarm circuit, but incorporates no switch; (b) ‘FIRE ALARM. DO NOT SWITCH OFF’ ‘火警警報. 切勿切斷電源’, in the case of a switch (whether incorporating a protective device or not) that serves only the fire alarm circuit. (c) ‘WARNING. THIS SWITCH ALSO CONTROLS THE SUPPLY TO THE FIRE ALARM SYSTEM’ ‘警告. 此電掣乃供應火警警報系統電源’, in the case of any switch that disconnects the mains supply to both the fire alarm system and to other circuits. All labels shall be engraved in white letter/character with red colour background. The height of all the English and Chinese wordings shall not be less than 10 mm and 15 mm respectively.”	To clarify the requirements and provision of warning labels.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.46	-	Clause 16.2 Para. 4 (Page 30)	“The design of the system should ensure that residual current devices are not necessary as a preventive measure against electric shock. in response to a fault on the general wiring does not result in interruption of the fire alarm supply.”	“The circuit supplying the fire alarm system should not be protected by a residual current device unless this is necessary to comply with the requirements of the EECOP. Where a residual current device is necessary for electrical safety, a fault on any other circuit or equipment in the building should not be capable of resulting in isolation of the supply to the fire alarm.”	To suit local practice.
2.47	-	Clause 16.3.1 Para. 2 (Page 30)	“Where no public supply system is available, privately generated power may be used.”	“Where no public supply system is available, subject to the approval of the Director of Fire Services, privately generated power may be used.”	This should be considered case by case on each individual project.
2.48	-	Clause 16.5.1 (Page 31)	“ <i>Systems installed primarily for life safety (type L)</i> ”	“ <i>Systems installed primarily for life safety and / or Property Protection (type L and P)</i> ”	For practical purposes, requirements on duration of standby supply for both life safety and property protection shall be the same.
2.49	-	Clause 16.5.1.1 (Page 31)	“In a system installed to protect life, the fire alarm system should be in an operation condition at all times that people are present on the premises.”	“In a system installed to protect life and property, the fire alarm system should be in an operation condition at all times.”	This clause shall apply to both systems on life safety and property protection.
2.50	-	Clause 16.6 (Page 32)	“Power supplies for manual systems should generally comply with the recommendations of 16.1 to 16.5. However, if the area covered by a manual system could fall within the limits if public or private electricity mains are not available.”	“Power supplies for manual systems should generally comply with the recommendations of 16.1 to 16.5.”	Requirements for power supply of manual system shall be the same as that for automatic system.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.51	Clause 17(b) (Page 4)	-	“One of the cable types indicated in BS Clause 17.4.2 or a cable determined by LPC to be equivalent* shall be used. However, should the cable types be unsuitable for a certain application (eg transmission of high baud rate digital information), then another cable type may be used subject to the agreement of the insurer.”	“One of the cable types indicated in BS Clause 17.4.2 or a cable comply with other international standards recommended by the manufacturer and acceptable to HKFSD shall be used. However, should the cable types be unsuitable for a certain application (eg transmission of high baud rate digital information), then another cable type may be used subject to the assessment and acceptance of the Director of Fire Services.”	To suit local practice.
2.52	Clause 19(a) (Page 4)	-	“The insurer shall be consulted with regard to the operation of ancillary services by the fire detection and alarm system.”	“HKFSD shall be consulted with regard to the operation of ancillary services by the fire detection and alarm system.”	To suit local practice.
2.53	-	Clause 24.4.1 Para. 1 (Page 39)	“The installation should be undertaken generally in accordance with the latest edition of the IEE Wiring Regulations. NOTE 1. Although those parts of the fire alarm system connected to a safety source are specifically excluded from coverage by the IEE Wiring Regulations, the general principles of good practice in wiring installations outlined in the regulations should be followed throughout the fire alarm system.”	“The installation shall be done in accordance with the latest edition of the EECOP.”	To suit local practice.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.54	-	Clause 24.4.3 (Page 39)	“it should be enclosed in a suitable and accessible junction box labelled ‘FIRE ALARM’ to avoid confusion with other services.”	“it should be enclosed in a suitable and accessible junction box labelled ‘FIRE ALARM’ ‘火警警報’ engraved in white letter/character with red colour background. The height of all the English and Chinese wordings shall not be less than 10 mm and 15 mm respectively to avoid confusion with other services.”	To suit local practice.
2.55	-	Clause 25.4 (Page 40)	“If detectors contain radioactive material, then the installer may have responsibilities under legislation (see appendix E).”	“If detectors contain radioactive material, then the installer may have responsibilities under radiation Ordinance Cap 303. License will be required if the total radioactivity of the detectors exceeds a certain limit as determined by the Hong Kong Radiation Board.”	To suit local statutory requirements.
2.56	Clause 26(b) (Page 4)	-	“An inspection of the installation shall be carried out in accordance with BS Clause 26.2, 26.3 and 26.4.”	“An inspection and HKFSD’s acceptance test of the installation shall be carried out in accordance with BS Clause 26.2, 26.3, 26.4 and 26.6.”	To incorporate the statutory requirements in the modified BS Clause 26.6 for HKFSD’s acceptance test.
2.57	-	Clause 26.3 (Page 40)	“should be in accordance with the IEE Wiring Regulations.”	“should be in accordance with the EECOP.”	To suit local requirements.
2.58	-	Clause 26.4 (Page 40)	“should be tested to ensure compliance with the IEE Wiring Regulations.”	“should be tested to ensure compliance with the EECOP.”	To suit local requirements.

List Two : Clauses to be replaced by modified conditions
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.59	-	Clause 26.6 (Page 40)	“26.6 Certification The installer should certify that the installation complies with the recommendations of this Part of BS 5839 or, if deviations have been agreed (see 4.3), a statement of these deviations should be given by the installer (see appendix B).”	“26.6 Acceptance Test and Certification The installer should certify that the installation complies with the recommendations of this Part of BS 5839 using HKFSD’s prescribed forms. Upon the completion and testing of all the required fire service installations, the Authorized Person and the registered fire service installation contractor shall arrange with HKFSD for inspection and acceptance tests. Details shall be in accordance with the procedures as stipulated in the FSCoP.”	To suit local requirements.
2.60	Clause 27(a) (Page 5)		“The insurer shall be consulted with regard to extensions and alterations to existing systems.”	“HKFSD shall be consulted with regard to extensions and alterations to existing systems.”	To suit local requirements.
2.61	-	Clause 27 Para. 2 (Page 41)	“Following completion of the alterations, inspection, testing, commissioning and certification should be carried out as recommended in Clause 26.”	“Following completion of the alterations, inspection, testing, and commissioning, Forms FSI/314A, FS 251 together with one set as-fitted drawings should be submitted to HKFSD for comment, spot checking and record.”	To suit local requirements.
2.62	-	Clause 27 Para. 3 (Page 41)	“fault conditions should only be undertaken by competent personnel.”	“fault conditions should only be undertaken by a registered fire service installation contractor.”	To suit local requirements.
			“sensor locations to be altered by personnel authorized by the responsible person.”	“sensor locations to be altered by a registered fire service installation contractor.”	

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Replaced by	Reason
2.63	Clause 29(a) (Page 5)	-	“A servicing schedule shall be implemented and shall be agreed by the insurer.”	“All installations shall be maintained, inspected and certified by a registered fire service installation contractor in accordance with the maintenance requirements as stipulated in FSCoP or BS Clause 29 at least once in every 12 months.”	To suit local practice or allow flexibility by adopting the requirements of Clause 29 as an alternatives to the maintenance requirements as stipulated in the FSCoP.
2.64	Clause 29(b) Para. 2 (Page 5)	-	“DISCONNECTIONS OR FAILURES OF AN INSTALLATION OR PARTS OF AN INSTALLATION LIKELY TO LEAVE AREAS UNPROTECTED FOR 12 HOURS OR MORE SHALL BE MADE KNOWN TO THE INSURERS IMMEDIATELY”	“DISCONNECTIONS OR FAILURES OF AN INSTALLATION OR PARTS OF AN INSTALLATION LIKELY TO LEAVE AREAS UNPROTECTED OVERNIGHT OR OVER 24 HOURS SHALL BE MADE KNOWN TO HKFSD IN ACCORDANCE TO THE REQUIREMENTS AS STIPULATED IN FSD CIRCULAR LETTER NOS. 1/99 AND 4/99.”	To incorporate the requirements of FSD Circular Letter Nos. 1/99 and 4/99.
2.65	-	Clause 29.1 Para. 1 (Page 43)	“Normally an agreement should be made with a manufacturer, supplier or other competent contractor for regular servicing.”	“An agreement should be made with a registered fire service installation contractor for regular servicing.”	To suit local requirements.
2.66	-	Clause 29.2.8 Para. 1 (Page 44)	“The responsible person should ensure that every 5 years (or more frequently if the building electrical system is tested at shorter intervals) the installation should be tested in accordance with the testing and inspection requirements of the IEE Wiring Regulations.”	“The responsible person should ensure that the installation should be tested in full accordance with the EECOP.”	To suit local requirements.

List Three : Clauses to be provided with acceptable alternatives

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Alternative	Reason
3.1	Clause 6(e) (Page 3)	-	“If devices are to be used in hazardous environments, then their design shall be certified by the British Approval Service for Electrical Equipment in Flammable atmospheres (BASEEFA).”	“If devices are to be used in hazardous environments, then their design shall be certified by the British Approval Service for Electrical Equipment in Flammable atmospheres (BASEEFA) or equivalent and approved by the HKFSD.”	Subject to approval by HKFSD, other equivalent standards could be adopted.
3.2	-	Clause 6.8 Para. 1 (Page 10)	“6.8 Compliance with British Standards In general, all components used in the system should comply with relevant British Standards,”	“6.8 Compliance with British Standards or Other Standards In general, all components used in the system should comply with relevant British Standards or other standards acceptable to HKFSD,”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.3	-	Clause 6.8 Para. 2 (Page 10)	“Where there is no relevant British Standard, non-standard components may be used,”	“Where there is no relevant British Standard or other acceptable standards, subject to the agreement with HKFSD, non-standard components may be used,”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.4	-	Clause 6.9 Para. 1(c) (Page 10)	“The decision algorithm used within the control system should be such that the sensitivity of the system cannot fall outside that specified in the relevant Part of BS 5839, BS 5445 or BS 5446, except in time related systems (see 14.6).”	“The decision algorithm used within the control system should be such that the sensitivity of the system cannot fall outside that specified in the relevant Part of BS 5839, BS 5445 or BS 5446 or other standards acceptable to HKFSD, except in time related systems (see 14.6).”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.5	-	Clause 9.3 Para. 1 (Page 13)	“, and hence a minimum of two sounders should be provided even if the recommended sound level could be achieved with a single sounder.”	May not be applied	Not mandatory requirement to provide standby alarm sounders.
3.6	-	Clause 10.1 Para. 1 (Page 17)	“Manual call points should comply with BS 5839: Part 2.”	“Manual call points should comply with BS 5839: Part 2 or other standards acceptable to HKFSD.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Alternative	Reason
3.7	-	Clause 11.2 Para. 3 (Page 18)	“Point heat detectors should comply with BS 5445: Part 5,”	“Point heat detectors should comply with BS 5445: Part 5 or other standards acceptable to HKFSD,”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
			“where heat detectors complying with BS 5445: Part 8 should be used.”	“where heat detectors complying with BS 5445: Part 8 or other standards acceptable to HKFSD should be used.”	
3.8	-	Clause 11.3 Para. 4 (Page 18)	“Point smoke detectors should comply with BS 5445: Part 7”	“Point smoke detectors should comply with BS 5445: Part 7 or other standards acceptable to HKFSD”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
			“Optical beam smoke detectors should comply with BS 5839: Part 5.”	“Optical beam smoke detectors should comply with BS 5839: Part 5 or other standards acceptable to HKFSD.”	
3.9	-	Clause 11.5.2 Para. 2 (Page 19)	“heat detectors complying with BS 5445: Part 8 should be used.”	“heat detectors complying with BS 5445: Part 8 or other standards acceptable to HKFSD should be used.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.10	-	Table 1 (Page 21)	“Heat detectors BS 5445: Part 5”	“Heat detectors BS 5445: Part 5 or other standards acceptable to HKFSD”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
			“High temperature heat detectors BS 5445: Part 8”	“High temperature heat detectors BS 5445: Part 8 or other standards acceptable to HKFSD”	
			“Optical beam smoke detectors BS 5839: Part 5”	“Optical beam smoke detectors BS 5839: Part 5 or other standards acceptable to HKFSD”	
3.11	-	Clause 12.3.2 (Page 23)	“In such cases a heat detector complying with BS 5445: Part 8 should be used.”	“In such cases a heat detector complying with BS 5445: Part 8 or other standards acceptable to HKFSD should be used.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Alternative	Reason
3.12	-	Clause 13.3.2 (Page 24)	“These should comply with BS 5839: Part 5, BS 5445: Part 7”	“These should comply with BS 5839: Part 5, BS 5445: Part 7 or other standards acceptable to HKFSD”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.13	-	Clause 13.3.3 (Page 24)	“These should comply with BS 5445: Part 5 or, in special cases, BS 5445: Part 8 (see 11.5.2).”	“These should comply with BS 5445: Part 5 or, in special cases, BS 5445: Part 8 or other standards acceptable to HKFSD (see 11.5.2).”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.14	-	Clause 15.2.1 (Page 28)	“Control and indicating equipment for automatic fire alarm systems should comply with BS 5839: Part 4*.”	“Control and indicating equipment for automatic fire alarm systems should comply with BS 5839: Part 4* or other standards acceptable to HKFSD.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.15	-	Clause 15.2.2 (Page 28)	“Control and indicating equipment for manual systems should comply with BS 5839: Part 4*.”	“Control and indicating equipment for manual systems should comply with BS 5839: Part 4* or other standards acceptable to HKFSD.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.
3.16	-	Clause 17.3 New Para. (Page 33)	-	Add the following Para. directly below Para. 1, item (k) : “Subject to the assessment and acceptance of the HKFSD, cables complying with other international standards recommended by the manufacturer could be used.”	To allow more flexibility by adopting other international standards in addition to the quoted BS standards.
3.17	-	Clause 26.2 (Page 40)	“that the methods, materials and components used comply with this Part of BS 5839, and that the record drawings and operating instructions (see 26.1) have been supplied.”	“that the methods, materials and components used comply with this Part of BS 5839 or other standards acceptable to HKFSD, and that the record drawings and operating instructions (see 26.1) have been supplied.”	To allow more flexibility by adopting other standards in addition to the quoted BS standards.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Alternative	Reason
3.18	-	Clause 29.1 Para. 2 (Page 43)	“the agreement should preferably include a requirement that an engineer should be on call at all times,”	“the agreement should preferably include a requirement that an appointed person should be on call at all times,”	To allow more flexibility.

List Four : Clauses to be taken as reference only

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LPC Rules for Automatic Fire Detection and Alarm Installations for the Protection of Property
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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
4.1	Forward Para. 1, 2, 3 and 4 (Page 1)	-	“These Rules enable Insurers to apply their own special requirements along with those of the British Standard with the appropriate clause number together with a suffix letter so as not to be confused with the text of the British Standard.”	These Paras. are not part of the contents of the LPC and BS Standards.
4.2	Clause 3(a) (Page 2)	-	“All parts of premises shall be protected. In general, installed systems shall be type P1 systems (installed throughout the protected building) in accordance with the standard. However, at the discretion of the insurer, protection may be relaxed in areas fully protected by an automatic sprinkler system installed in accordance with LPC Rules for automatic sprinkler installations. Such protection would be a Type P2 system (installed only in defined parts of the protected building).”	Exact requirements have been stipulated in the FSCoP.
4.3	Clause 3(b) (Page 2)	-	“The installation shall also be classified in accordance with the anticipated attendance time of the fire Brigade*: Class A – 5 minutes or less Class B – 10 minutes or less Class C – 15 minutes or less , may be acceptable at the discretion of the insurer.”	The present fire services requirements have no such classification.
4.4	Clause 3(c) (Page 2)	-	“If the Fire Brigade attendance time is much longer than 15 minutes, then, in many cases, a fire detection installation as a sole automatic fire protection measure may be inappropriate. In such cases, automatic sprinkler, gaseous or other forms of extinguishing systems may be required. Acceptance of such arrangements would be at the discretion of the insurer.”	The FSCoP has no such mandatory requirements.
4.5	Clause 3(d) (Page 2)	-	“In the case of multiple occupancy premises, the responsibility for the building and the fire protection system(s) shall be identified (see BS Clause 2.13 and 28.1). Any restrictions on coverage shall be pointed out to the insurer at an early stage.”	The Fire Services Ordinance has already identified the responsibility of the Owner / Incorporated Owner.
4.6	-	Clause 3.1 (Page 3)	“Fire alarm systems may be installed in buildings in order to satisfy several different needs. They may be , the number of sounders used will have to be sufficient to give warning throughout the building.”	The present fire services requirements have no such classification of type P1, P2, L1, L2, L3 and M systems.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
4.7	-	Clause 3.2 (Page 4)	“The longest delay in detection of fire is likely to occur when no person is present to detect the fire either at ignition or , having continuous supervision and having good structural fire separation from the remainder of the building. Such a partial cover system is a type P2 system.”	The present fire services requirements have no such classification of type P system.
4.8	-	Clause 3.3 (Page 4)	“In some buildings the hazard to life from fire may be considered so small that no fire alarm is needed. of a type M system depends critically on the presence of people to detect the fire, and on the training they are given in the procedures to be followed if a fire occurs.”	The present fire services requirements have no such classification of type L and M systems.
4.9	-	Clause 3.4 (Page 4)	“In large private dwellings, for example a country mansion, the protection will usually need to be of types L and/or P, , particular where some parts such as wiring might be concealed once the system is installed.”	Exact requirements have been stipulated in the FSCoP.
4.10	-	Clause 3.5 (Page 4)	“Buildings in multiple occupation may be buildings occupied by more than one commercial undertaking, Cooperation and liaison between occupants will then be needed.”	Exact requirements have been stipulated in the FSCoP.
4.11	-	Clause 3.6 (Page 5)	“Because of wide range of systems covered by the recommendations of this Part of BS 5839, it should be , the type or types of protection required in each part of the building should be identifiable from the specification.”	Each designer shall be responsible for drafting his own specification for meeting the requirements as stipulated in the FSCoP.
4.12	-	Clause 4.1 – 4.4 (Page 5)	“4.1 General The system requirements, including those imposed by the configuration and usage of the premises, , since the interactions with other occupancies may significantly affect the design of the system.”	Not mandatory requirements.
4.13	Clause 5(a) (Page 2)	-	“Planning schedules shall be in accordance with BS Clause No. 5.”	Not mandatory requirements.
4.14	-	Clause 5 (Page 6)	“A typical list of events to be taken into consideration in preparing a planning schedule is as follows, Such operation is a matter for agreement between the interested parties (see 26.7).”	Not mandatory requirements.
4.15	Clause 6(b) (Page 2)	-	“In order to determine the most appropriate and effective system for the given conditions, a risk assessment of the premises to be protected shall be carried out. The insurer and other interested parties shall be consulted at this stage..... • the attendance time of the fire brigade.”	Not mandatory requirements.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
4.16	Clause 6(c) (Page 3)	-	“The results of the assessment will determine the most appropriate type of system and extent of installation. For example: (i).....(ii).....(iii)..... and that automatic suppression should also be used.”	Not mandatory requirements.
4.17	-	Clause 6.2 Para. 4 (Page 7)	“In some premises the probable rate of spread of fire may be so high that, or packaging are stacked to a height exceeding 5 m.”	Exact requirements have been stipulated in the FSCoP.
4.18	-	Clause 6.3 Para. 4 (Page 7)	“In premises in which normally active occupants can be expected to react to an emergency in a rational manner, provide an acceptable level of protection, a type L3 system may suffice.”	Exact requirements have been stipulated in the FSCoP.
4.19	-	Clause 6.3 Para. 6 (Page 7)	“In residential premises, where a greater than normal time is required to evacuate the building, A type L1 or L2 system should achieve the required level of protection.”	Exact requirements have been stipulated in the FSCoP.
4.20	-	Clause 6.6.1 Para. 5 (Page 8)	“Even where the wiring of a system is monitored, , but the call point used should be one remote from the control equipment so that all the wiring of the circuit is tested. NOTE, In some systems the connections to call points are such that operation of a call point will not fully test the cables feeding detectors.”	This requirement is considered an additional requirement to the current practice and is not a mandatory requirement.
4.21	-	Clause 6.6.2 Para. 3 (Page 8)	“During the design stage, consideration should be given to the possibility of malicious removal of detectors., detectors of a type that can be removed only by the use of a special tool should be used. NOTE. A special tool in this context is a tool not likely to be carried by a member of the general public. since various articles can be used as ordinary screwdrivers.”	Using a special tool to remove detectors is not common local practice and it would be difficult to implement this requirement.
4.22	-	Clause 7.1 (Page 11)	“In most buildings an alarm of fire may initiate a number of different activities, e.g. the provision of assistance,, it is thus important that in such systems the concepts of ‘zones’ and ‘circuits’ be treated separately.”	This Clause dealt only with general design consideration and it should provide flexibility to designer.
4.23	-	Clause 7.2 Para. 2 (Page 12)	“Where a special fire risk is present within a larger protected area, and it is considered important to obtain rapid identification of a fire in that risk, the risk should be considered as a separate zone.”	Not mandatory requirements.
4.24	-	Clause 9.3 Para. 2 (Page 13)	“Sounders should be suitably distributed throughout the building having regard to the attenuation of sound caused by walls, in order to prevent excessive sound levels in some areas.”	Not mandatory requirements.

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4.25	-	Clause 10.2 Para. 1 (Page 17)	“It may be necessary to have travel distances to a call point much less than 30 m where may make the provision of additional manual call points necessary.”	Not mandatory requirements.
4.26	-	Clause 12.1 Para. 2, 3 and 4 (Page 20)	“Such a system, giving total coverage for property protection, is a type P1 system. In order to prevent such spread, areas protected by a type P2 system should therefore be separated from unprotected areas by fire-resisting construction.”	The present fire services requirements have no such classification of type P1 and P2 systems.
4.27	-	Clause 12.2.7 (Page 21)	“, and the detector manufacturer may be able to supply a cover to prevent direct entry of smoke from below without inhibiting normal entry from the side at ceiling height.”	The application of this type of cover is very limited.
4.28	-	Clause 12.2.14 (Page 22)	“A detector should be sited in any lantern-light used for ventilation or having a height above the ceiling greater than 800 mm. , and should be protected from direct sunlight.”	Not mandatory requirements.
4.29	-	Clause 12.2.15 (Page 22)	“As the plume from a fire rises, it draws in air from round about it. , and even in the presence of stratification smoke detectors are likely to operate before heat detectors.”	Not mandatory requirements.
4.30	-	Clause 12.4.2 Para. 3 (Page 23)	“Where the air from several extract points is combined into one duct To avoid this further reduction it may be necessary to install a smoke detector near each of the extract points.”	Installation requirements of smoke detector inside ventilation duct is regarded as ventilation/ air conditioning control system which shall follow those requirements as stipulated in FSCoP.
4.31	-	Clause 13.2 (Page 24)	“13.2.1 <i>General</i> . In circumstances where a particularly early warning of fire is necessary for the safety of life, automatic fire detectors should be installed. 13.2.4 <i>Total coverage</i> . The third level of protection requires fire detection in all parts of the premises. Such a system is a type L1 system, and gives the maximum degree of improvement in safety that can be achieved by a fire detection system.”	The provisions and requirements of automatic fire detection system have been stipulated clearly in FSCoP and HKFSD has not classified the level of protection as type L1, L2 and L3 systems.
4.32	-	Clause 13.5 (Page 24)	“13.5.1 <i>General</i> . A type L3 system should be so designed that in any fire an alarm is given , or by an optical beam detector with a vertical beam. Detectors may be necessary in dormitories (see 13.6.3).”	The present fire services requirements have no such classification of type L3 system.

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4.33	-	Clause 13.6 (Page 25)	“13.6.1 <i>Escape routes</i> . In general, the most vulnerable areas in any building are the circulation areas, since once (c) the means of escape for persons in the duct.”	The present fire services requirements have no such classification of type L2 system.
4.34	-	Clause 13.7 (Page 26)	“Where a total cover system is installed, detectors should be sited in all areas of the building , either heat or smoke detectors may be installed.”	The present fire services requirements have no such classification of type L1 system.
4.35	-	Clause 15.3.5 (Page 29)	“If the system uses automatic detectors, then the area in which the control unit is sited should be covered by the detection system.”	Not mandatory requirements.
4.36	-	Clause 16.3.2.2 (Page 31)	“In some premises, in addition to supplies taken from the public mains, unless a supply is connected from some other source (such as a portable generator brought in for the purpose).”	Not practical to implement.
4.37	-	Clause 16.7.2 (Page 32)	“If the system uses automatic detectors then the areas in which the equipment is sited should be covered by the detection system.”	Not mandatory requirements.
4.38	-	Clause 18.1 – 18.4 (Page 36)	“18.1 General 18.1.1 <i>Radio links</i> . Some alarm systems are available in which some or all of the interconnections between components are made by radio links. 18.4.3 <i>Cabling</i> . Where cables are used in the system, for instance for power supplies or to take signals to remote aerials, they should comply with the recommendations of clause 17.”	Radio-linked systems are not applicable locally.
4.39	-	Clause 21 (Page 38)	“21.1 Verification Arrangements may be specified in the contract for pre-delivery inspection of the equipment, other hazardous materials should be clearly labelled to emphasize the risk of damage during transportation or storage on site.”	Not mandatory requirements.
4.40	-	Clause 22 (Page 38)	“The work on site should consist of the following : (d) inspection, initial testing, commissioning and certification.”	All the sequences and scope of works should be determined by the designer, consultant or contractors.
4.41	-	Clause 26.1 Para. 2 (Page 40)	“The installer should supply the user with a log book and a certificate of installation and commissioning (see 28.2.2 and appendices B and D).”	Not mandatory requirements.

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List-Item	LPC Clause/Paragraph/ Table/Page	BS Clause/Paragraph/ Table/Page	Context	Reason
4.42	-	Clause 26.5 Para. 1(d) (Page 40)	“any radio links have adequate signal strength (see 18.4);”	Radio-linked systems are not applicable locally.
4.43	-	Clause 26.7 (Page 41)	“26.7.1 <i>Normal handover</i> . When commissioning and certification are complete, the system should be formally handed over to the user. The system log book (see 28.2.2) should be properly kept from the date on which the system is put into operation.”	All the handover requirements, procedures and arrangements are not mandatory requirements and should be separately arranged among the designer, installer, owner and occupier.
4.44	-	Clause 26.8 (Page 41)	“In large or complex systems it may be desirable that an operational audit is made, the logging of events and the efficiency of maintenance.”	Not mandatory requirements.
4.45	Clause 28(a) (Page 5)	-	“The user shall be made aware of his responsibilities, as indicated in BS Clause 2.13 and BS Clause 28.”	Not mandatory requirements.
4.46	Clause 28(b) (Page 5)	-	“The log book described in BS Clause 28.2.2, shall be available for inspection by the insurers.”	Not mandatory requirements.
4.47	-	Clause 28.1 – 28.4 (Page 42)	“28.1 Supervision 28.1.1 <i>Responsible person</i> . The owner or other person having control of the premises should appoint a responsible person to supervise the system. After reinstatement, an operation check of the system should be made by a competent person.”	Not mandatory requirements.
4.48	Clause 29(c) (Page 5)	-	“In addition to the above, the installer shall specify any special maintenance procedures necessary The insurer shall be informed of any problems found as a result of maintenance.”	Not mandatory requirements.
4.49	Appendix A	-	“APPENDIX A EXAMPLE OF A COMPLETION CERTIFICATE FOR AUTOMATIC FIRE DETECTION AND ALARM INSTALLATIONS Note : It is the responsibility of the insured to notify the Insurers immediately of any disconnections or failure likely to leave the installation or part of the installation unprotected for 12 hours or more.”	This form is not a statutory prescribed form.

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4.50	-	Appendix A (Page 47)	“A.1 General There are several methods by which alarms of fire can be transmitted automatically , since at busy periods there may be considerable delays in answering it.”	Not mandatory requirements.
4.51	-	Appendix B (Page 48)	“Appendix B. Model certificate of installation and commissioning of a fire alarm system The system documentation is situated _____”	Not mandatory requirements.
4.52	-	Appendix C (Page 49)	“Appendix C. Model certificate of testing of a fire alarm system For and on behalf of (user or service organization) _____”	This form is additional to the statutory required prescribed form e.g. FSI 251 and its content can be agreed between the user and the registered fire service installation contractor.
4.53	-	Appendix D (Page 50)	“Appendix D. Model log book for fire alarm systems D.1 General The data to be recorded in the log book falls into the following D.3 Model log book Expendable component replacement due (list): _____”	The requirements, format, layout and content of this log book can be agreed between the user and the registered fire service installation contractor.
4.54	-	Appendix F (Page 52)	“F.1 General Although this Part of BS 5839 does not cover fire alarm systems integrated with systems for other purposes, F.16 Isolation This fire alarm system should not be adversely affected by provisions made for the isolation of other parts of the system.”	Not mandatory requirements.
4.55	-	Appendix G (Page 53)	“G.1 General This appendix covers the functional recommendations for single zone control equipment for small manual systems; Equipment not meeting all the recommendations of G.2 to G.10 should not be marked with any reference to BS 5839 : Part 1.”	Not mandatory requirements.

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4.56	-	Appendix H (Page 55)	“This appendix consists of the text of booklet FB2 ‘Smoke Alarms in the Home’, 1988, There is also a companion booklet <i>Fire Extinguishers for the Home</i> available.”	Not mandatory requirements.
4.57	-	Appendix J (Page 61)	“J.1 General Most of the recommendations of this Part of BS 5839 are relevant to all types of system. (2) audible and visual alarms : see 9.1.”	Not mandatory requirements.
4.58	-	Appendix K (Page 61)	“K.1 Staged alarms and phased evacuation In the past, the terms ‘staged alarms’ and ‘phased evacuation’ (particularly ‘two-stage alarm’ and ‘two-phase evacuation’) might be acceptable in return for a reduction in the inconvenience due to an unduly high frequency of false alarms (see 14.6).”	Not mandatory requirements.

Annex

**Table 2 : Spacing and siting of detectors on honeycomb, waffle and similar ceilings
(for BS Clause 12.2.3)**

Ceiling height to structural slab, H (to nearest whole metre)	Beam depth, D (to nearest whole metre)	Maximum distance between any point and the nearest smoke (heat) detector	Detector location if $W \leq 4D$	Detector location if $W > 4D$
≤ 6	$< 10\% H$	As per flat ceilings	Underside of beams	On structural slab
> 6	$< 10\% H$ and $\leq 600\text{mm}$	As per flat ceilings	Underside of beams	On structural slab
> 6	$< 10\% H$ and $> 600\text{mm}$	As per flat ceilings	Underside of beams*	On structural slab
3	$> 10\% H$	4.5m (3m)	Underside of beams	On structural slab
4	$> 10\% H$	5.5m (4m)	Underside of beams	On structural slab
5	$> 10\% H$	6m (4.5m)	Underside of beams	On structural slab
≥ 6	$> 10\% H$	6.5m (5m)	Underside of beams	On structural slab

W = Width of cell
D = Depth of beams that form each cell

* Since mounting detectors at a depth of more than 600mm below the highest point in the protected spaces does not comply with the requirements as stated in Para. 1 of BS Clause 12.2.3, protection in these circumstances may need careful consideration to determine the most suitable location and spacing of detectors.