

REGISTERED FIRE ENGINEER SCHEME

**FIRE SAFETY REQUIREMENTS
FOR**

- 1. FACTORY CANTEENS WITH HIGH FIRE POTENTIAL**
2. BARBECUE/HOT POT RESTAURANTS WITH HIGH FIRE POTENTIAL
3. GENERAL RESTAURANTS WITH HIGH FIRE POTENTIAL
(Explanatory Notes)

Introduction

1. This document consists of three parts :
 - 1.1 These explanatory notes, Form PPA/101(J)-1, containing information relevant to the safe operation of:
 - 1.1.1 Factory canteens with high fire potential,
 - 1.1.2 Barbecue/hot pot restaurants with high fire potential, and
 - 1.1.3 General restaurants with high fire potential.
 - 1.2 The standard requirements, Form PPA/101(J)-2, to be complied with prior to the issue of Fire Safety Certificate required for the licensing of food premises under Section 33B of the Food Business Regulation (Cap. 132 sub. leg. X); and
 - 1.3 Fire precautions, Form PPA/101(J)-3, that should be observed for the safe operation of food business after issue of licence.
2. For food businesses already licensed, the licensees are advised to upgrade the fire protection to the standard as stipulated in this document at the earliest opportunity.
3. For other types of food business classified according to the risks they impose, please refer to :
 - 3.1 PPA/101(A) - Food businesses in small houses;
 - 3.2 PPA/101(B) - Bakeries and food factories for manufacture only;
 - 3.3 PPA/101(C) - Bakeries and food factories for manufacture and sale on premises;
 - 3.4 PPA/101(D) - General (fast food) restaurants;
 - 3.5 PPA/101(E) - Factory canteens with low fire potential;
 - 3.6 PPA/101(F) - Light refreshment restaurants with low fire potential;
 - 3.7 PPA/101(G) - Light refreshment restaurants with high fire potential;
 - 3.8 PPA/101(H) - Barbecue/hot pot restaurants with low fire potential;
 - 3.9 PPA/101(I) - General restaurants with low fire potential;

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Application

4. The contents of this document apply to food businesses operating in premises over 126 m² in area and lavishly decorated to pose a high fire potential due to any one of the following conditions:
 - 4.1 The average quantity of combustible materials in the seating accommodation exceeds 60 kg/m²;
 - 4.2 Combustible materials are used for the false ceiling (Applicable to Factory Canteen only);
 - 4.3 More than 30% of the seating accommodation are partitioned by combustible materials to form cubicle/s; or
 - 4.4 The designed openable/breakable windows are obstructed by decoration or sealed up for more than 50% of the area totally, or 25% of these areas on the upper part.

Restriction

5. The food premises shall not be located :
 - 5.1 In any buildings/structures which are of sub-standard construction;
 - 5.2 On level 4 of basement or below;
 - 5.3 On any floor below ground level, if liquefied petroleum gas is to be used;
 - 5.4 In area designed for emergency use, such as the buffer floor (also referred to as the refuge floor);
 - 5.5 In area designed for other use, such as car parks;
 - 5.6 Vertically below or immediately above to pose a fire hazard to a registered school/child care center; or
 - 5.7 In any industrial building, unless the premises are intended for use as factory canteen with high fire potential.

Fire Safety Requirements

6. The fire safety requirements as detailed in Form PPA/101(J)-2 are formulated for three purposes :
 - 6.1 To reduce the probability of fire;
 - 6.2 To mitigate the effect of fire; and
 - 6.3 To limit the spread of fire.
7. These requirements do not include those stipulated by the Building Authority, as the controlling authority on:
 - 7.1 Means of escape although whatever required under the Buildings Ordinance may be, after issue of licence, enforced by the Fire Services Department under Sections 14 and 15 of the Fire Services (Fire Hazard Abatement) Regulation (Cap.95 sub. leg. F); and

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- 7.2 Building construction such as compartmentation and fire resistance of building elements. For houses of sub-standard construction or where there have been serious alterations to affect the fire safety, the Director of Fire Services may refuse to issue Fire Services Certificate in accordance with Section 33B of the Food Business Regulation (Cap. 132 sub. leg. X).

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3. GENERAL RESTAURANTS WITH HIGH FIRE POTENTIAL

(Explanatory Notes)

1. All fire service installations and equipment provided for the premises shall be retained and maintained in efficient working order. For all maintenance, alterations and additions, such works shall be carried out by a Registered FSI Contractor who shall issue Certificate(s) of Fire Service Installations and Equipment (FS 251) to the owner with copies forwarded to the Director of Fire Services within 14 days after completion of the works. A certificate of compliance (FSI/314A or FSI/314B as appropriate) shall also be submitted by the responsible Registered FSI Contractor to the Director of Fire Services for the alteration and addition works.
2. FSIs at the following scales shall be provided for premises occupying areas exceeding 126m²:
 - 2.1 For premises occupying an area exceeding 126m² but less than 230m²:
 - (i) A hydrant/hose reel system in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment;
 - (ii) A manual fire alarm system with visual alarm signals (please see FSD Circular Letter 4/2001 for installation specification) in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment with fire alarm call point at the cashier's counter;
 - (iii) A fire detection system in accordance with the Rules of the Loss Prevention Council for Automatic Fire Detection and Alarm Installations for the Protection of Property and BS 5839 : Part 1 : 1988 or other standards acceptable to the Director of Fire Services and connected to the Fire Services Communication Centre or such other premises as may be agreed with the Director of Fire Services; and
 - (iv) A dedicated smoke extraction system as the alternative to reinstating at least 50% of the designed openable/breakable windows to their original condition unless the premises are located in basements not protected by sprinkler system in which event retro-fitting of such sprinkler system shall be provided.
 - 2.2 For premises occupying an area exceeding 230m² but less than 7000m³ in cubic volume:
 - (i) A hydrant/hose reel system in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment;
 - (ii) A manual fire alarm system with visual alarm signals (please see FSD Circular Letter 4/2001 for installation specification) in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment with fire alarm call point at the cashier's counter for single storey premises;

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- (iii) A sprinkler system in accordance with current Code of Practice for Minimum Fire Service Installations and Equipment. For retro-fitting of such system, a compromised standard with water supplied directly from town' s mains may be accepted subject to approval of Director of Water Supplies;
- (iv) A dedicated smoke extraction system as the alternative to reinstating at least 50% of the designed openable/breakable windows to their original condition unless the premises are located in curtain-walled buildings or basements in which event the sprinkler heads of the sprinkler system shall be of the fast response type and each spaced to protect an area of 9m²; and
- (v) Each exit shall be provided with schematic signs firmly fixed on the wall outside to depict the layout of the premises. These signs shall be made of yellow plastics of not less than 300mm wide and 300mm high and engraved to the scale of not more than 1:200 with the following information :-
 - (a) general layout of the premises showing the rooms partitioned, locations of furniture and fixtures;
 - (b) passages designed for circulation and evacuation, and the related exits/doors; and
 - (c) the locations of electrical main switch and fuel supply valve.

2.3 For premises with a cubic volume of exceeding 7000m³:

- (i) A hydrant/hose reel system in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment;
- (ii) A manual fire alarm system with visual alarm signals (please see FSD Circular Letter 4/2001 for installation specification) in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment with operating switch at the following locations:
 - (a) Outside the kitchen near its entrance / exit;
 - (b) Near each exit; and
 - (c) At the cashier's counter;
- (iii) A sprinkler system in accordance with current Code of Practice for Minimum Fire Service Installations and Equipment. For retro-fitting of such system, a compromised standard with water supplied directly from town' s mains may be accepted subject to approval of Director of Water Supplies;
- (iv) A dedicated smoke extraction system as the alternative to reinstating at least 50% of the designed openable/breakable windows to their original condition. In respect of the premises located in curtain-walled buildings or basements this system shall be provided; and
- (v) Each exit shall be provided with schematic signs firmly fixed on the wall outside to depict the layout of the premises. These signs shall be made of yellow plastics of not less than 300mm wide and 300mm high and engraved to the scale of not more than 1:200 with the following information :
 - (a) general layout of the premises showing the rooms partitioned, locations of furniture and fixtures;

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- (b) passages designed for circulation and evacuation, and the related exits/doors; and
 - (c) the locations of electrical main switch and fuel supply valve.
3. Portable fire fighting equipment of the approved type, over and above those installed for the occupation of the building, shall be provided as follows:
 - 3.1 _____ x 9L water / 5 kg dry powder type extinguisher at _____
 - 3.2 _____ x 4.5 kg CO₂ gas type fire extinguisher at _____
 - 3.3 _____ x 1.44 m² fire blanket at _____
4. The food serving opening between the kitchen and the seating accommodation not exceeding 0.2m² in area shall be protected by a drop hatch with not less than half-hour fire resisting period. For opening exceeding this area, fire shutters as approved by the Director of Fire Services shall be installed.
5. All exits shall be suitably indicated by illuminated signs bearing the word and characters “EXIT 出口” in block letters and characters of not less than 125mm high with 15mm strokes. The colour of the letters/characters and contrasting colour on the background shall comply with the Code of Practice for Minimum Fire Service Installations and Equipment.
6. If the exit signs are out of sight to any location within the premises, suitable directional signs in same dimensions as the exit signs shall be provided to assist the occupant to identify the exits in the event of an emergency.
7. Emergency lighting shall be provided to the premises and the attached requirements for Self-contained Luminaries Emergency Lighting System (PPA/104(A)) shall be complied with.
8. All combustible materials used as false ceilings, partitions or wall furnishings shall conform to British Standard 476 : Part 7 Class 1 or 2 Rate of Surface Spread of Flame or to another standard¹ acceptable to the Director of Fire Services, or shall be brought up to any of those standards by treating with a fire retardant paint or solution acceptable to the Director of Fire Services. In the latter case, the work shall be carried out by a Class 2 Registered Fire Service Installation Contractor and a certificate (FS251) to this effect from the Contractor shall be forwarded to this Department as documentary proof of compliance.
9. All draperies and curtains, if installed, shall be made of fire resistant material and conform to British Standard 5867: Part 2 fabric type B when tested in accordance with British Standard 5438 or to another standard acceptable to the Director of Fire Services, or shall be brought up to any of those standards by treating with a fire retardant solution acceptable to the Director of Fire Services. In the latter case, the work shall be carried out by a Class 2 Registered Fire Service Installation Contractor and a certificate (FS251) to this effect from the Contractor shall be forwarded to this Department as documentary proof of compliance.

¹ European standard EN 13501-1 classification C or above is considered as another standard acceptable to the Director of Fire Services for wall furnishings

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10. PU Foam
 - 10.1 All polyurethane (PU) foam filled mattresses and covering material used for fabrication of the mattresses shall conform to British Standard 7177 (for use in medium hazard premises/building); or Flammability Test Procedure for Mattresses for Use in High Risk Occupancies (Technical Bulletin Number 121) or Flammability Test Procedure for Use for Mattresses for Use in Public Buildings (Technical Bulletin Number 129) as issued by the Bureau of Home Furnishings and Thermal Insulation, Department of Consumer Affairs, State of California; or to other standard acceptable to the Director of Fire Services.
 - 10.2 All PU foam filled upholstered furniture and covering material used for fabrication of the furniture shall conform to British Standard 7176 (for use in medium hazard premises/building); or Flammability Test Procedure for Seating Furniture for Use in Public Occupancies (Technical Bulletin Number 133) as issued by the Bureau of Home Furnishings and Thermal Insulation, Department of Consumer Affairs, State of California; or to other standard acceptable to the Director of Fire Services.
 - 10.3 Each PU foam filled mattresses and upholstered furniture conforming to British Standard 7177 (for use in medium hazard premises/building) and British Standard 7176 (for use in medium hazards premises/building) respectively shall bear an appropriate label (Appendix).
 - 10.4 Invoices from manufactures/suppliers and test certificates from testing laboratories indicating that the PU foam filled mattresses and/or furniture items have complied with the specified standards shall be produced for verification. Test certificate shall be issued by a testing laboratory accredited to conduct test according to the specified standard, and be authenticated by the company's stamp of manufacturer/supplier.
11. The windows of the food premises shall not in any way be obstructed by any decoration or sealed up for more than 50% of the designed openable/breakable window areas totally, nor 25% of these areas located on the upper part, unless a dedicated smoke extraction system that conforms to the standard set out in Code of Practice for Minimum Fire Service Installations and Equipment as published from time to time by the Director of Fire Services shall be provided.
12. The requirements for the use of fuels in the kitchen are stipulated in Form PPA/102.
13. The frying pan on the counter shall be properly secured from overturning.
14. The requirements for the use of fuels in the seating accommodation are stipulated in Form PPA/117.

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Other requirements

Remarks

Should the applicants have insurmountable difficulties in complying with the prescribed requirements, they can submit alternative proposals for FSD's consideration. For example, applicants can adopt the Fire Engineering approach, or submit a study report to explain how they will tackle problems of fire suppression, smoke control, evacuation and access of fire services personnel etc.

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(Fire Precautions)

Means of Escape

1. The following are deemed by the Director of Fire Services as means of escape within the meaning of Section 2 of the Fire Services (Fire Hazard Abatement) Regulation (Cap.95 sub.leg. F):
 - 1.1 All normal means of egress from the food premises including corridors, passages and staircases whether or not protected by building elements with rated fire resisting period (FRP);
 - 1.2 Passage of 1 metre wide linking the exit to the opposite end within the premises or other exits to form a clear route for circulation and evacuation;
 - 1.3 All exits/doors giving onto any corridor leading to the open, or directly giving onto the open; and
 - 1.4 All parts of common area leading from designed exits/doors to a place of safety in open air either on the podium, the roof, the buffer floor or the street level.
2. All means of escape should be kept free from obstruction. In particular:
 - 2.1 No matter or thing may be left in the areas as defined at para. 1 above at any time (if in a domestic building)/at all times when persons are present in the building (if in a commercial building); and
 - 2.2 All exits/doors should be kept openable from the inside without the use of a key and all metal gates and shutters, where installed, should be kept in the open position at any time when members of the public are present in the premises.
3. Failure to observe these precautions may result in the operator being prosecuted under Sections 14 and 15 of the Fire Services (Fire Hazard Abatement) Regulation (Cap.95 sub. leg. F) without prior warning.
4. For Factory Canteens with High Fire Potential, the admission of members of the public to any industrial building may expose them to fire dangers they are unaware of, nor prepared to face. Therefore, non-regular users of the building should be discouraged, and persons in the following categories restricted from using any factory canteen;

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- 4.1 Those who are of very old or young age to require care and attention of any other adult;
and
- 4.2 Those who are physically handicapped.

Premises

- 5. Food packaging made of expanded polystyrene foam should be stored in cupboards or contained in metal dispensers to avoid coming into contact with excessive heat or naked flame.
- 6. For parts of premises ventilated by mechanical means, expanded polystyrene foam should not be used for decorative purposes.
- 7. Failure to observe the precautions as described in para. 5 and 6 may result in the operator being served with a Fire Hazard Abatement Notice and failure to comply with the notice may lead to prosecution under Section 9 of the Fire Services (Fire Hazard Abatement) Regulation (Cap.95 sub. leg. F).

Kitchen

- 8. All walls, stoves and exhaust ducts should be cleaned regularly to remove the oils and grease accumulated as a precaution against fire.
- 9. The observance of this precaution is the responsibility of the operator as controlled by the respective food business regulation although in respect of serious breach constituting a fire hazard, a Fire Hazard Abatement Notice may be served to the operator and failure to comply with the notice may lead to prosecution under Section 9 of the Fire Services (Fire Hazard Abatement) Regulation (Cap.95 sub. leg. F).

Fire Service Installations and Equipment

- 10. All fire service installations and equipment provided should be:
 - 10.1 Kept clear from any obstruction;
 - 10.2 Clearly indicated as regard to their locations and methods of operation;
 - 10.3 Maintained in efficient working order at all times; and
 - 10.4 Inspected at least once every twelve months.
- 11. In addition to and as part of the monthly fire drill, the sprinkler system and hose reel system should be tested to ensure these are operating in efficient working order.

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12. Failure to observe the precautions as described in para. 10.3 and 10.4 may result in the owner of the installations being prosecuted under Regulations 8 of the Fire Service (Installations and Equipment) Regulations (Cap.95 sub. leg. B).

Ventilating System

13. The ventilating system should be maintained in efficient working order at all times and every damper, filter and precipitator that embodies the use of ducting or trunking should be inspected at intervals not exceeding 12 months by a registered specialist contractor (ventilation works category).
14. Failure to observe the precautions as described in para. 13 may result in a recommendation being made by the Director of Fire Services to the Food and Environmental hygiene Department to revoke the food business licence.

Daily Closing Down Inspection

15. The food premises should be thoroughly inspected before closing down each day to:-
 - 15.1 Extinguish any possible source of ignition that may be left unattended;
 - 15.2 Switch off the electrical main supply if possible, or at least switch off those circuits that are not required; and
 - 15.3 Turn off the fuel supply.
16. This precaution aims to prevent fires occurring in unattended food premises, which account for a very high percentage of past statistics.

Emergency Procedures

17. All staff of the food premises should be made aware of the emergency procedures to be taken in the event of a fire. These include:
 - 17.1 Giving warning of the fire by operating the manual fire alarm provided, or by shouting "fire";
 - 17.2 Assisting to evacuate the occupants;
 - 17.3 Reporting to Fire Services Department through "999";
 - 17.4 Turning-off the fuel supply if the fire involves the fuel in the kitchen;
 - 17.5 Turning the main switch to "OFF" position if the fire involves electrical installation. This should be done only after evacuation of the occupants and when it is safe to do so;
 - 17.6 Attempting to extinguish the fire by using the FSI and equipment if it is safe to do so; and
 - 17.7 Reporting the situation to the Fire Officers on their arrival, particularly when persons are being trapped and in need of assistance.
18. The local fire station should be consulted for advice if required.

Monthly Fire Drills

19. Fire drills should be conducted at monthly intervals to:
 - 19.1 Test the sprinkler/smoke extraction system (if installed) and hose reel system; and
 - 19.2 Practise the emergency procedures.

Sample I (樣本 I)

NOTICE

THIS ARTICLE IS MANUFACTURED FOR USE IN PUBLIC OCCUPANCIES AND MEETS THE FLAMMABILITY REQUIREMENTS OF CALIFORNIA BUREAU OF HOME FURNISHINGS TECHNICAL BULLETIN 133"/129"/121". CARE SHOULD BE EXERCISED NEAR OPEN FLAME OR WITH BURNING CIGARETTES.

告示

此家具為供公眾使用而製造，符合加利福尼亞州家具局技術報告(TB)第 133"/129"/121" 的可燃性規定，請勿將此家具放近明火或有香煙的地方。

*Delete wherever inapplicable/請刪去不適用者

Note : The minimum size of the label shall be 5 x 7.5 cm and the minimum size of the type shall be 3 mm in height. All type shall be in capital letters.

註 : 標籤面積最小須為 5 x 7.5 厘米，字體高度最小須為 3 毫米。
(英文版告示的所有字體必須為大楷)

Sample II (樣本 II)

Sample III (樣本 III)



Complies with BS 7176 : 1995 direct test/predictive test* for medium hazard
*Delete whichever is inappropriate
符合英國標準 7176 (1995)
適用於中度危險的直接測試/預報測試標準*
*刪去不適用者

抗火



Complies with BS 7177 : 1996 for medium hazard
符合英國標準 7177 (1996)
適用於中度危險的規定

抗火