

**For discussion  
on 3 November 2015**

## **Legislative Council Panel on Security**

### **Proposed Introduction of the Registered Fire Engineer Scheme by the Fire Services Department**

#### **PURPOSE**

The Fire Services Department (FSD) proposes to introduce the Registered Fire Engineer Scheme (the RFE Scheme) with a view to leveraging the expertise of professional engineers and qualified persons in the market to provide third-party fire safety risk assessment and certification services. This paper seeks Members' views on the proposed Scheme and the related legislative proposals to provide for the Scheme through the proposed Fire Services (Amendment) Bill.

#### **FIRE SAFETY RISK ASSESSMENT AND CERTIFICATION SERVICES**

2. Currently, a person who intends to run certain types of premises<sup>1</sup> (hereafter referred to as "the Applicant") has to obtain a certificate or letter issued by the Director of Fire Services (hereafter referred to as "DFS"), certifying that the premises concerned have complied with all relevant fire safety requirements and will not expose persons therein to any undue risk of fire, before the Applicant can be issued a licence or a similar instrument (hereafter collectively referred to as "a licence") by the regulatory authorities. Under the Fire Services Ordinance (FSO, Cap. 95), FSD is the only party vested with the statutory authority to issue fire safety certification for buildings or premises.

3. Before issuing the certificate or letter, FSD officers will inspect the premises to assess the fire risk. According to the fire risk assessment result, FSD officers will issue a set of fire safety requirements to the

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<sup>1</sup> Under the existing legislation, certain types of premises will require a "licence", a "permit", a "certificate of compliance" or a "certificate of registration" to operate. For instance, those premises requiring a "licence" or a "permit" to operate include general restaurants, factory canteens, funeral parlours, cinemas, theatres, karaoke establishments, hotels, guesthouses, places of public entertainment etc. A club-house requires a "certificate of compliance" to operate, whereas a school needs a "certificate of registration". Such premises are hereafter collectively referred to as "**prescribed premises**".

Applicant, stipulating the fire safety works required (e.g. provision of fire service installations and equipment (FSI) and ventilating systems (VentS)). The Applicant will then engage a registered fire service installation contractor (RFSIC), other contractors or workers to carry out the required works. Upon notification by the Applicant that the required fire safety works have been completed, FSD officers will conduct compliance inspection. If the requirements have been complied with, FSD will issue a certificate or letter to the Applicant, with which he / she can submit to the relevant regulatory authority for obtaining the relevant licence. In 2014, the total number of licence applications involving provision of fire safety risk assessment and certification services by FSD was about 3 600.

4. The Efficiency Unit (EU) conducted a Departmental Business Study for FSD with a view to enhancing FSD's business-friendliness. EU recommended FSD to reduce its involvement in day-to-day inspection and certification by devolving the responsibility of fire safety certification to the industry. Taking the licensing process of food premises as an example, it currently takes around 17 days for FSD to conduct fire safety risk assessment and formulate fire safety requirements, and around 14 days to conduct compliance inspection and certification. There is no alternative way to complete the relevant process in a shorter period of time even if the Applicant so wishes. If FSD were to comprehensively shorten the time taken for completing the relevant process, a vast amount of additional resources and manpower would be required. In order to facilitate business operation and optimise the use of professional human resources, there is a case for reducing FSD's involvement in the inspection and certification of FSI and VentS through engaging qualified professionals in the market to provide fire safety risk assessment and certification services.

## **PROPOSED REGISTERED FIRE ENGINEER SCHEME**

5. Against this background, we propose to implement the RFE Scheme to leverage professional engineers and qualified persons in the market for the provision of services in fire safety risk assessment and formulation of fire safety requirements, as well as fire safety compliance inspection and certification. As a prudent start, we propose to implement the RFE Scheme in the licensing process for prescribed premises first. A list of the premises proposed to be covered under the Scheme is at **Annex A**.

6. The proposed Scheme will provide greater flexibility to the Applicants by offering them an **additional option** in completing the fire safety risk assessment and certification process. Given the resources and manpower available to RFEs, they are expected to be able to complete the required risk assessment and certification services within a **shorter turnaround time** than it takes for FSD, thus creating an incentive for the Applicants, particularly those who can afford the likely higher fees to be charged by RFEs, to switch from using FSD's services. Taking the licensing process of food premises as an example, it is estimated that the time required for the risk assessment and formulation of fire safety requirements by an RFE could be shortened from the current 17 days by FSD to around five days by an RFE; whereas the time taken for the compliance inspection and certification could be shortened from the current 14 days by FSD to around two days by an RFE. Besides, the RFEs are expected to be able to provide services with **more flexibility**, such as conducting on-site inspections or compliance checks at more flexible hours. The proposed Scheme would also create business opportunities for RFEs and help develop the fire engineering profession in Hong Kong. The above notwithstanding, FSD will maintain its existing risk assessment and certification services to the Applicants, thus providing flexibility for those who may prefer to continue using FSD's services.

### **Proposed Categories of RFEs**

7. Under the proposed Scheme, the RFEs will be categorised into three classes to carry out the tasks in conducting fire risk assessment as well as compliance inspection and certification. A qualified person may register as an RFE for any one or all of the following three classes –

- (a) Registered Fire Engineer (Risk Assessment) [RFE(RA)] – who will conduct fire risk assessment and formulate fire safety requirements for prescribed premises;
- (b) Registered Fire Engineer (Fire Service Installation) [RFE(FSI)] – who will conduct compliance inspections on the fire safety requirements (except those relating to VentS) in prescribed premises and issue the fire safety certificate upon confirmation of compliance;
- (c) Registered Fire Engineer (Ventilating System) [RFE(VentS)] – who will conduct compliance inspections on the fire safety

requirements relating to VentS in prescribed premises and issue the fire safety certificate upon confirmation of compliance.

8. The existing risk assessment and certification services provided by FSD will remain available to the Applicants. Hence, upon implementation of the proposed Scheme, an Applicant may, based on his / her preference, choose to engage different types of services provided by RFEs and / or FSD at different stages of the licencing process. The workflow is illustrated at **Annex B**, and the different combination options are listed below –

Types of services	Options of Service Provider			
	(i)	(ii)	(iii)	(iv)
Risk assessment and formulation of fire safety requirements	RFE(RA)	RFE(RA)	FSD	FSD
Compliance check upon completion of FSI and / or VentS installation works	RFE(FSI) / RFE(VentS)	FSD	RFE(FSI) / RFE(VentS)	FSD

### **Proposed RFE Registration Mechanism**

9. Under the proposed Scheme, a person applying to register as an RFE has to be a registered professional engineer of relevant disciplines (such as the fire, building services, electrical or mechanical engineering disciplines) under the Engineers Registration Ordinance (Cap. 409), or has to possess the relevant fire engineering qualification considered appropriate by DFS. All applicants for becoming an RFE are required to have a minimum period of practical experience relevant to the class for which registration is sought.

10. A **Registration Committee** will be established to advise DFS on the policy and assessment criteria for RFE registration. The Committee will be chaired by an FSD representative and comprise members from the Engineers Registration Board (ERB)<sup>2</sup> as well as other professional / academic bodies, and / or other members as considered appropriate by FSD.

<sup>2</sup> The Engineers Registration Board is a statutory body set up under the Engineers Registration Ordinance (Cap. 409) for the registration of professional engineers, recognition of disciplines with the profession and disciplinary control of the professional activities of registered professional engineers, and related matters.

## **Proposed Regulatory Mechanism for RFEs**

### ***Monitoring Measures by FSD***

11. FSD will issue codes of practice and / or practice notes to provide practical guidance to RFEs on fire safety risk assessment and certification. To ensure that consistent fire safety standards will be maintained after the implementation of the proposed Scheme, FSD intends to require at the initial implementation stage that the fire safety requirements formulated by an RFE(RA) should be submitted to FSD for endorsement before such requirements are issued to the Applicants. In addition, to assess the quality of certification performed by the RFEs, FSD will select premises on a random basis and conduct audit inspections on the certification performed by an RFE(FSI) or an RFE(VentS) within seven working days after the RFE issues fire safety certificates to the Applicants (which are required to be copied to FSD).

12. In case of irregularities found in complying with the fire safety requirements during FSD's audit inspections, FSD will take appropriate action and require the licence holder to rectify the irregularities within a specified period while the premises concerned may continue to operate. If the licence holder fails to rectify the problem within the specified period, legal actions may be initiated against the licence holder. The relevant regulatory authority will also be informed of FSD's findings / actions such that they could take appropriate enforcement or follow-up action. If there is evidence showing that the RFE(FSI) or RFE(VentS) concerned may have improperly discharged his / her duties, he / she will also be subject to disciplinary proceedings under the proposed Scheme.

### ***Disciplinary and Appeal Mechanisms***

13. A disciplinary mechanism will be established for inquiring into and dealing with cases where an RFE has, or is suspected to have, failed to discharge his / her duties properly. Examples of the proposed disciplinary offences include misconduct or negligence in any professional aspect, failure to discharge the duties or abide by the requirements imposed on RFEs etc. An appeal mechanism will also be established to handle appeals from any person who is aggrieved by DFS' decision on the registration of RFEs or an order made in a disciplinary proceeding in relation to RFEs.

## **Phased Implementation**

14. As mentioned in paragraph 5 above, we propose to apply the RFE Scheme to the fire safety risk assessment and certification services for the premises listed at **Annex A** first as a prudent start. FSD will closely monitor the progress of implementation and review the effectiveness of the Scheme from time to time. Subject to the outcome of such review, we will consider extending the Scheme to other areas (such as certification of alteration and addition works of FSI in buildings and certification of fire safety upgrading works of buildings, etc.) in future.

## **Public Consultation**

15. FSD conducted trade consultations in 2007 and 2011 respectively to gauge the views from the stakeholders on the proposed Scheme. Various consultation meetings and briefing sessions were held with the Business Facilitation Advisory Committee and its Food Business and Related Services Task Force, the relevant Business Liaison Groups<sup>3</sup> and other stakeholders. In general, the majority of the stakeholders expressed support for the introduction of the Scheme.

16. To better assess the business impact of the proposed Scheme on various stakeholders, FSD, with support from the Security Bureau and the Economic Analysis and Business Facilitation Unit, commissioned a Business Impact Assessment (BIA) study in June 2012. The BIA study assessed the potential supply of and demand for RFE services, the service charges of RFE services and the impact on stakeholders including small and medium enterprises, etc. The BIA study also found that the stakeholders were generally supportive of the proposed Scheme, and there should be a sufficient supply of potential RFE candidates in the market. The key findings of the BIA study are summarised at **Annex C**.

17. During the consultation exercises and the BIA study, the Hong Kong Registered Ventilation Contractor Association opined that the businesses of ventilation contractors could be affected by the proposed Scheme as some of their existing jobs in certifying the compliance of fire safety requirements against the layout of VentS of certain premises during the process of provisional licence applications might be taken over

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<sup>3</sup> A total of ten Business Liaison Groups were consulted including the trades of (i) cinemas, (ii) theme parks, (iii) family amusement centres, (iv) food business - restaurants, (v) food business - non-restaurants, (vi) recreational clubs, (vii) karaoke establishments, nightclubs, bars and other entertainment clubs, (viii) hotels, (ix) billiard establishments, public bowling-alleys and public skating rinks and (x) guesthouses, holiday camps and holiday flats. Members of these Groups are mainly business operators of the respective trades.

by RFE(VentS) under the proposed Scheme. This is however unlikely the case as the BIA study revealed that the scope of work of the proposed RFE(VentS) will unlikely overlap with that of the existing ventilation contractors. This notwithstanding, some members of the ventilation contractor sector expressed interest in registering as RFE(VentS). In this regard, the proposed RFE Scheme would enable certain members of the ventilation contractor sector to be eligible for registration as RFE(VentS), subject to their completion of relevant fire engineering top-up courses and satisfying DFS that they have the relevant fire engineering qualification and experience.

## **PROPOSED FIRE SERVICES (AMENDMENT) BILL**

18. The existing FSO and its subsidiary legislation do not provide for any third party other than FSD to perform fire safety risk assessment and certification, nor do they enable DFS to regulate the RFEs. It is therefore necessary to introduce a bill, namely the Fire Services (Amendment) Bill, for the enabling provisions to empower the Chief Executive in Council (CE in Council) to make regulations to provide for the proposed RFE Scheme, among other related matters. The implementation details of the Scheme, including the duties and qualifications of RFEs, their registration, their retention in and removal from the register, the disciplinary and appeal mechanisms, as well as the issue of codes of practice in relation to the Scheme will be covered in a new piece of subsidiary legislation to be made by CE in Council under FSO after the passage of the Bill.

### **Related and Consequential Amendments**

19. Pursuant to Regulation 7 of the Fire Service (Installations and Equipment) Regulations (FS(IE)R, Cap. 95B) (at **Annex D**), no person other than a RFSIC shall maintain, inspect or repair any FSI which is installed in any premises. To enable RFE(FSI) to conduct compliance inspections of FSI in prescribed premises, it is necessary to amend Regulation 7 of FS(IE)R to that effect. In addition, under the aforesaid Regulation, FSD officers are not allowed to inspect or test the FSI in any premises, unless they are accompanied by an RFSIC. This arrangement has posed operational difficulty for FSD officers to inspect the working order of FSI, in particular during surprise checks. Taking this opportunity, we propose to amend Regulation 7 to empower DFS or a person authorised by him to inspect and test the FSI in any premises for checking its safety and the efficiency of its working order.

20. At present, when processing a licence application for certain types of premises, the relevant regulatory authority is obliged by the respective legislation to grant a licence only if they are satisfied that the fire safety requirements as imposed by DFS are complied with. Some ordinances / regulations even require the regulatory authority to be presented with a certificate from DFS certifying such fire safety requirements are complied with before granting a licence. For instance, under the Food Business Regulation (Cap. 132X), the regulatory authority cannot grant a restaurant licence unless the Applicant produces a certificate from DFS to certify compliance with fire safety requirements.

21. With the introduction of the RFE Scheme, it is necessary to allow the regulatory authorities to accept the fire safety requirements issued by an RFE(RA), and to accept the fire safety certificates issued by an RFE(FSI) or an RFE(VentS), as the proof of compliance with relevant fire safety requirements when processing applications for the prescribed premises. We therefore need to make the necessary consequential amendments to the relevant legislation through the Bill.

## **WAY FORWARD**

22. We plan to introduce the Fire Services (Amendment) Bill in late 2015 or early 2016. After the passage of the Bill, we will work towards introducing a new piece of subsidiary legislation under FSO to provide for the implementation details of the RFE Scheme as early as practicable. The proposed Scheme could be rolled out after the passage of the Bill and the new subsidiary legislation.

## **ADVICE SOUGHT**

23. Members are invited to comment on the proposed RFE Scheme and the relevant legislative proposals.

**Security Bureau**  
**November 2015**

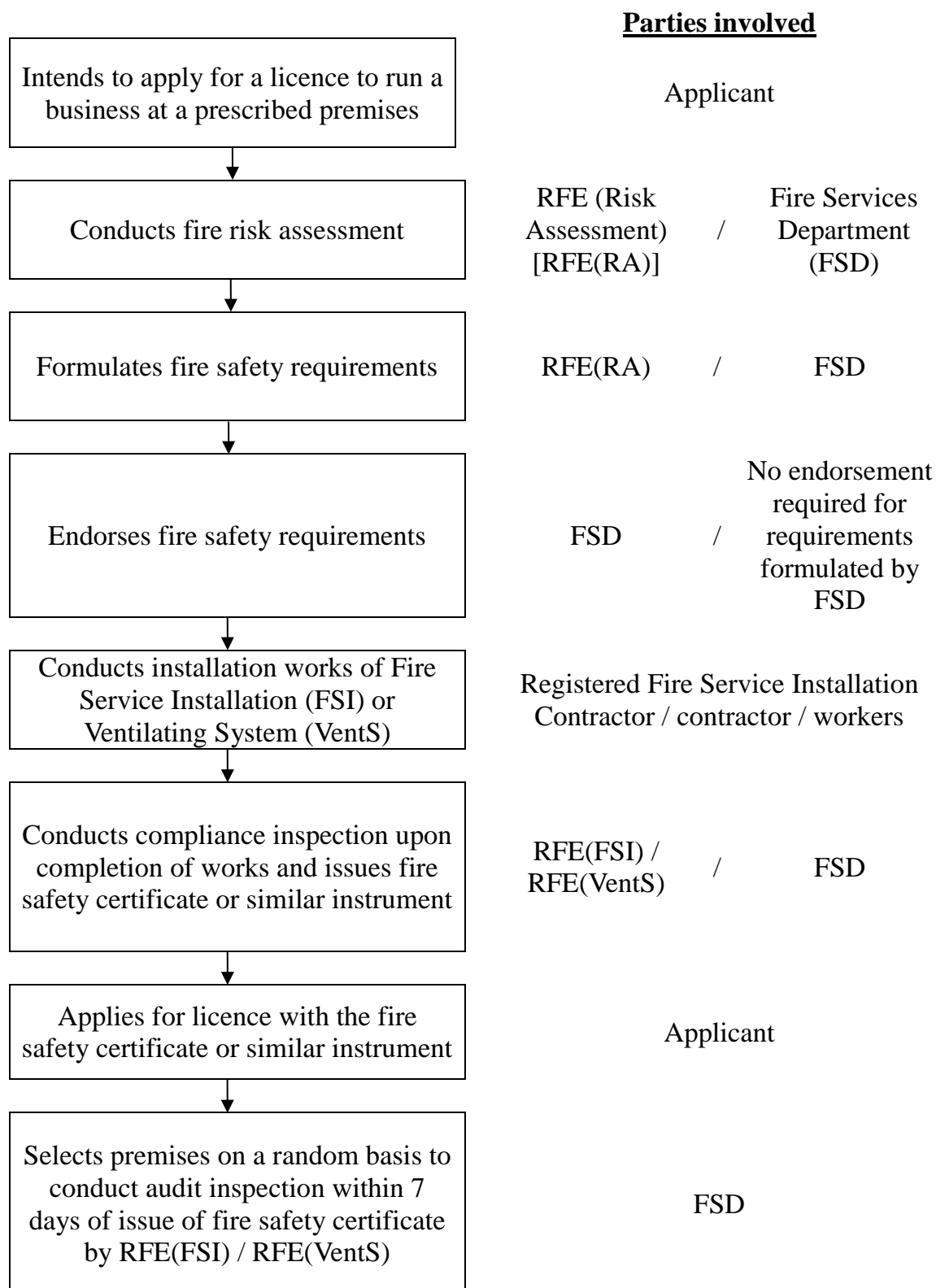


**List of Premises Proposed to be Covered under the  
Registered Fire Engineer Scheme**

	<b>Ordinance/Regulation</b>	<b>Types of premises</b>	<b>Authority</b>
1.	Miscellaneous Licences Regulations (Cap. 114A)	<ul style="list-style-type: none"><li>● Public dance hall</li><li>● Dancing school</li></ul>	<ul style="list-style-type: none"><li>● Public officer appointed by the Secretary for Home Affairs</li></ul>
2.	Food Business Regulation (Cap. 132X)	<ul style="list-style-type: none"><li>● General restaurant</li><li>● Light refreshment restaurant</li><li>● Factory canteen</li><li>● Bakery</li><li>● Food factory</li></ul>	<ul style="list-style-type: none"><li>● Director of Food and Environmental Hygiene</li></ul>
3.	Places of Amusement Regulation (Cap. 132BA)	<ul style="list-style-type: none"><li>● Billiard centre</li><li>● Bowling centre</li><li>● Public skating rink</li></ul>	<ul style="list-style-type: none"><li>● Director of Leisure and Cultural Services</li></ul>
4.	Places of Public Entertainment Regulations (Cap. 172A)	<ul style="list-style-type: none"><li>● Cinema</li><li>● Theatre</li><li>● Place of public entertainment (other than a cinema or theatre)</li></ul>	<ul style="list-style-type: none"><li>● Secretary for Home Affairs or any public officer authorized by him</li></ul>
5.	Education Ordinance (Cap. 279)	<ul style="list-style-type: none"><li>● School</li></ul>	<ul style="list-style-type: none"><li>● Permanent Secretary for Education</li></ul>
6.	Non-local Higher and Professional Education (Regulation) Rules (Cap. 493B)	<ul style="list-style-type: none"><li>● Premises for conducting registered courses or exempted courses</li></ul>	<ul style="list-style-type: none"><li>● Registrar of Non-local Higher and Professional Education Courses</li></ul>
7.	Dutiable Commodities (Liquor) Regulations (Cap. 109B)	<ul style="list-style-type: none"><li>● Premises for the sale and consumption of intoxicating liquor</li></ul>	<ul style="list-style-type: none"><li>● Liquor Licensing Board</li></ul>
8.	Funeral Parlours Regulation (Cap. 132AD)	<ul style="list-style-type: none"><li>● Funeral parlour</li></ul>	<ul style="list-style-type: none"><li>● Director of Food and Environmental Hygiene</li></ul>
9.	Child Care Services Ordinance (Cap. 243)	<ul style="list-style-type: none"><li>● Child care centre</li></ul>	<ul style="list-style-type: none"><li>● Director of Social Welfare</li></ul>
10.	Massage Establishments Ordinance (Cap. 266)	<ul style="list-style-type: none"><li>● Massage establishment</li></ul>	<ul style="list-style-type: none"><li>● Commissioner of Police</li></ul>

	<b>Ordinance/Regulation</b>	<b>Types of premises</b>	<b>Authority</b>
11.	Hotel and Guesthouse Accommodation Ordinance (Cap. 349)	<ul style="list-style-type: none"> <li>● Hotel</li> <li>● Guesthouse</li> </ul>	<ul style="list-style-type: none"> <li>● Hotel and Guesthouse Accommodation Authority</li> </ul>
12.	Clubs (Safety of Premises) Ordinance (Cap. 376)	<ul style="list-style-type: none"> <li>● Club-house</li> </ul>	<ul style="list-style-type: none"> <li>● Secretary for Home Affairs</li> </ul>
13.	Amusement Game Centres Ordinance (Cap. 435)	<ul style="list-style-type: none"> <li>● Amusement game centre</li> </ul>	<ul style="list-style-type: none"> <li>● Public officer appointed by the Secretary for Home Affairs</li> </ul>
14.	Bedspace Apartments Ordinance (Cap. 447)	<ul style="list-style-type: none"> <li>● Bedspace apartment</li> </ul>	<ul style="list-style-type: none"> <li>● Secretary for Home Affairs</li> </ul>
15.	Residential Care Homes (Elderly Persons) Ordinance (Cap. 459)	<ul style="list-style-type: none"> <li>● Residential care home</li> </ul>	<ul style="list-style-type: none"> <li>● Director of Social Welfare</li> </ul>
16.	Drug Dependent Persons Treatment and Rehabilitation Centres (Licensing) Ordinance (Cap. 566)	<ul style="list-style-type: none"> <li>● Drug dependents treatment centre</li> </ul>	<ul style="list-style-type: none"> <li>● Director of Social Welfare</li> </ul>
17.	Karaoke Establishments Ordinance (Cap. 573)	<ul style="list-style-type: none"> <li>● Karaoke establishment (other than that in a restaurant, hotel, guesthouse or club)</li> <li>● Karaoke establishment (in a hotel, guesthouse or club)</li> <li>● Karaoke establishment (in a restaurant)</li> </ul>	<ul style="list-style-type: none"> <li>● Secretary for Home Affairs</li> <li>● Secretary for Home Affairs</li> <li>● Director of Food and Environmental Hygiene</li> </ul>
18.	Residential Care Homes (Persons with Disabilities) Ordinance (Cap. 613)	<ul style="list-style-type: none"> <li>● Residential care home</li> </ul>	<ul style="list-style-type: none"> <li>● Director of Social Welfare</li> </ul>

**Workflow for Fire Safety Risk Assessment and Certification under the Proposed Registered Fire Engineer (RFE) Scheme**



**Key Findings of the Business Impact Assessment Study on  
Third Party Fire Safety Certification Service under the  
Registered Fire Engineer (RFE) Scheme in Hong Kong**

- (1) Stakeholders generally supported the proposed RFE Scheme and considered that there was value in introducing a pool of qualified and regulated professionals to help deliver FSD's fire safety certification services, and provide an additional option for the Applicants.
- (2) The potential RFE supply should be sufficiently large to meet potential demand for services. It was estimated that there were around 130 and 1 235 registered professional engineers (RPEs) meeting the registration requirements for the categories of RFE (Risk Assessment) [RFE(RA)] and RFE (Fire Service Installation) [RFE(FSI)] / RFE (Ventilating System) [RFE(VentS)] respectively<sup>1</sup>.
- (3) Stakeholders generally agreed that there would be greater business benefits and hence demanded for RFE services if and when the scope of the proposed Scheme was expanded.
- (4) In addition to having a choice, Applicants believed that the proposed Scheme can help expedite the overall licence application process, and give them greater control over their projects, especially the larger scale, more complex ones. During the interviews, hotel operators expressed that they were more interested in using the service of RFEs.
- (5) Depending on the size and type of premises as well as the size of the service provider engaged, it was estimated that potential fees charged by RFEs for risk assessment, formulating fire safety requirements and certification could range from about \$30,000 to \$200,000.
- (6) The proposed Scheme would not have negative impact on the small and medium enterprises and the existing stakeholders such as the registered fire service installation contractors and registered specialist contractors in the ventilation works category.

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<sup>1</sup> The figures were based on the findings in 2012. As at 30 September 2015, FSD estimated that there were around 145 and 1 449 RPEs meeting the proposed registration requirements for the categories of RFE(RA) and RFE(FSI) / RFE(VentS) respectively.

**Existing Provision of Regulation 7 of the  
Fire Service (Installations and Equipment) Regulations (Cap. 95B)**

Chapter:	95B	Title:	<b>FIRE SERVICE (INSTALLATIONS AND EQUIPMENT) REGULATIONS</b>	Gazette Number:	
Regulation:	7	Heading:	<b>Maintenance or repair of fire service installations or equipment</b>	Version Date:	30/06/1997

(1) Subject to paragraph (2), no person other than a registered contractor shall maintain, inspect or repair any fire service installation or equipment which is installed in any premises.

(2) Paragraph (1) shall not apply to any portable equipment which is not required by law to be installed in any premises.

(L.N. 269 of 1978)