

**CONSULTATION PAPER ON  
THE IMPLEMENTATION OF  
THIRD PARTY FIRE SAFETY CERTIFICATION  
BY INTRODUCING  
A REGISTERED FIRE ENGINEERS SCHEME  
IN HONG KONG**

**INTRODUCTION**

In 2004, the Business and Services Promotion Unit of the Commerce, Industry and Technology Bureau commissioned the Efficiency Unit (EU) of the Hong Kong Special Administration Region Government to conduct a Departmental Business Study (DBS) for the Fire Services Department (FSD) on (i) fire service inspection and certification and (ii) ventilation safety provisions in new buildings and premises that require a licence for operation (hereafter called the “licensed premises”<sup>\*</sup>). The purpose of the DBS was to enhance the FSD’s business-friendliness. It included an international benchmarking exercise in which the practices of fire safety aspects in overseas building regulatory regimes were examined.

2. The DBS concludes that Hong Kong property owners and licensees of premises have been relied heavily on FSD to undertake the inspection and certification of fire protection system. International benchmarking exercise reveals that overseas jurisdictions are moving to a regime in which industry plays a larger role in the certification of fire service installations (FSI) and ventilating system. Third party can provide speed and efficiency that most businesses have demanded, and it is expected that the related industry in Hong Kong can provide services in reviewing FSI plans, inspection and certification of FSI and ventilating systems. In view of such, EU recommends that FSD should reduce its involvement in day-to-day inspection and certification by shifting the responsibility of fire safety certification to the industry.

3. In the DBS, EU proposes, amongst other aspects, improvement measures in (i) the role and responsibility of FSD on fire safety certification and (ii) FSI and ventilation contractors as follows-

Role and responsibility of FSD on fire safety certification

- be a regulator and reduce involvement in day-to-day inspection and certification;

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<sup>\*</sup> *Licensed premises means premises which require the issue of a fire services certificate/letter of compliance for licensing or registration purpose*

- shift the responsibility of certification to the industry in the long run; and
- transfer the product certification of FSI and equipment for use in construction projects or licensed premises to qualified accredited bodies.

#### FSI and ventilation contractors

- strengthen the relevant Building Regulations to require compliance with the technical standards and safety requirements in a Code of Practice for Mechanical Ventilating Systems;
- impose heavier penalties on registered contractors for sub-standard work;
- introduce registration renewal and a new demerit point system for registered contractors;
- take over the responsibility of registration and disciplining of registered specialist contractors (ventilation works category) from Buildings Department (BD); and
- monitor closely the performance of ventilation contractors before a decision is made on compulsory registration.

4. EU recommends FSD to adopt a phased approach in the introduction of third party participation in fire safety certification.

5. To bring the recommendations on third party certification forward, FSD issued a consultation letter to the following stakeholders in November 2004 for their views on EU's recommendations-

- Hong Kong Institution of Engineers (HKIE);
- Hong Kong Institute of Surveyors (HKIS);
- Association of Architectural Practices Ltd. (AAP);
- Hong Kong Institute of Architects (HKIA); and
- The Association of Registered Fire Service Installation Contractors of Hong Kong Ltd. (FSICA)

6. In general, most of the institutions/associations supported the idea but had concerns/comments on the following aspects-

- the role of the Hong Kong Accreditation Service in evaluating and qualifying the third party certifiers;
- the third party certifiers should better be individuals rather than organizations; and
- the problems in conflict of interests and malpractices, etc.

7. In February 2005, FSD sent a delegation to Singapore to study the Third Party Certification Programme in Singapore, namely (i) the Registered Inspector Scheme and (ii) Product Listing Scheme.

8. After the visit, the delegation recommended to explore the possibility of adopting a Third Party Certification Programme in dealing with matters vis-à-vis certification of fire service installations/fire safety requirements for buildings and “licensed premises”, and certification of fire safety products by FSD.

9. Further to the visit, FSD has recently completed a comprehensive study on the options for the implementation of a third party certification scheme with foci on the following aspects -

- current practices in fire safety certification of “licensed premises”;
- certification of FSI provisions for new buildings;
- registration of professionals in Hong Kong;
- control on the conduct and performance of professionals in Hong Kong; and
- possible duties of third party fire safety certifiers.

## **CURRENT PRACTICES IN FIRE SAFETY CERTIFICATION OF “LICENCED PREMISES”**

10. Under the extant legislation, issue of certain business licences (e.g. general restaurant, light refreshment restaurant, food factory, factory canteen, bakery, place of public entertainment, cinema/theatre, non-designed school, child care centre, etc.) requires a certificate issued by the Director of Fire Services (D of FS) - Fire Services Certificate, certifying that the premises for the intended business operation have complied with all fire safety requirements or will not expose persons therein to any undue risk of fire. A letter of compliance from the Fire Services Department may also be required if a ventilating system is installed at the premises.

11. The two Regional Offices and the Ventilation Division of FSD are involved in the formulation and certification of fire safety requirements for premises that require a Fire Services Certificate. The main duties of Regional Offices include-

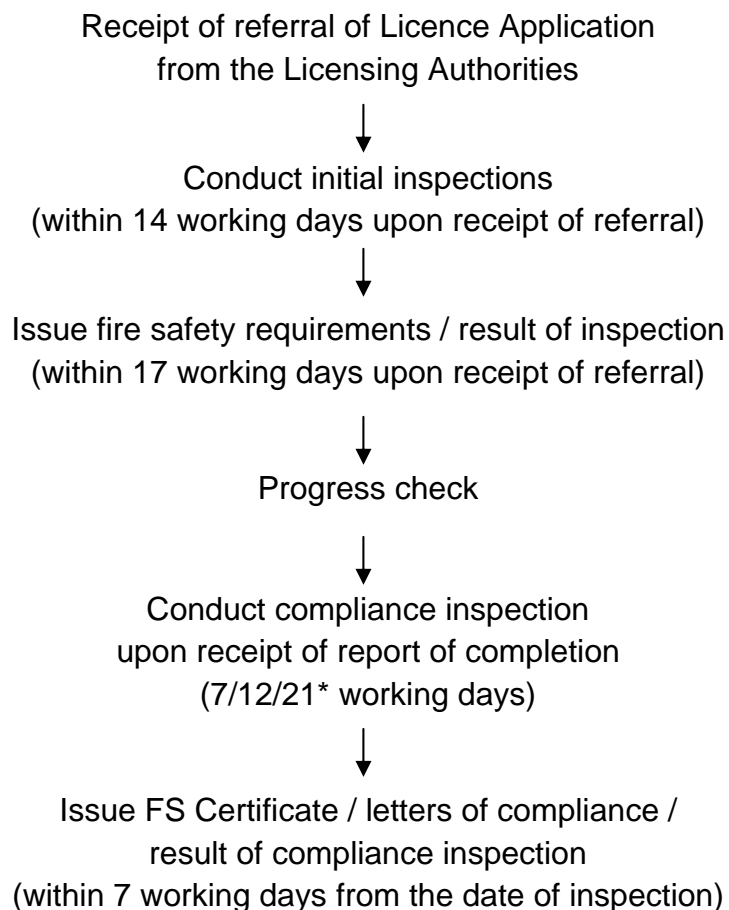
- conduct initial inspection to the premises to assess potential fire risk;
- formulate fire safety requirements for the premises (other than the ventilating system);
- check compliance with fire safety requirements upon receipt of report of work completion; and
- issue Fire Services Certificate to the licence applicant following a satisfactory compliance inspection.

12. Under the Building (Ventilating Systems) Regulations and the Ventilation of Scheduled Premises Regulation, the D of FS is responsible for testing and certifying ventilating systems in buildings/scheduled premises to ascertain their safety and

efficiency and ensuring that annual inspection has been carried out by a Registered Specialist Contractor (Ventilation Works Category). In this regard, the Ventilation Division of FSD is responsible for the following duties-

- conduct initial inspection to licensed premises;
- formulate fire safety requirements for the ventilating systems;
- check compliance of the ventilating system with fire safety requirements upon receipt of report of work completion;
- issue letter of compliance to the applicant following a satisfactory compliance inspection; and
- conduct random checks to the annual inspection certificates submitted by the Registered Ventilation Contractors.

13. The work processes of the two offices of Regional Offices and Ventilation Division are quite similar though they have different performance indicators-



\* *Regional Offices will conduct compliance inspection within 7 working days upon receipt of report of compliance whilst Ventilation Division will conduct compliance inspection within 12 working days for 1<sup>st</sup> and 2<sup>nd</sup> reports, and 21 working days for the 3<sup>rd</sup> report and onwards.*

Existing workflow for Regional Offices and Ventilation Division (As-is)

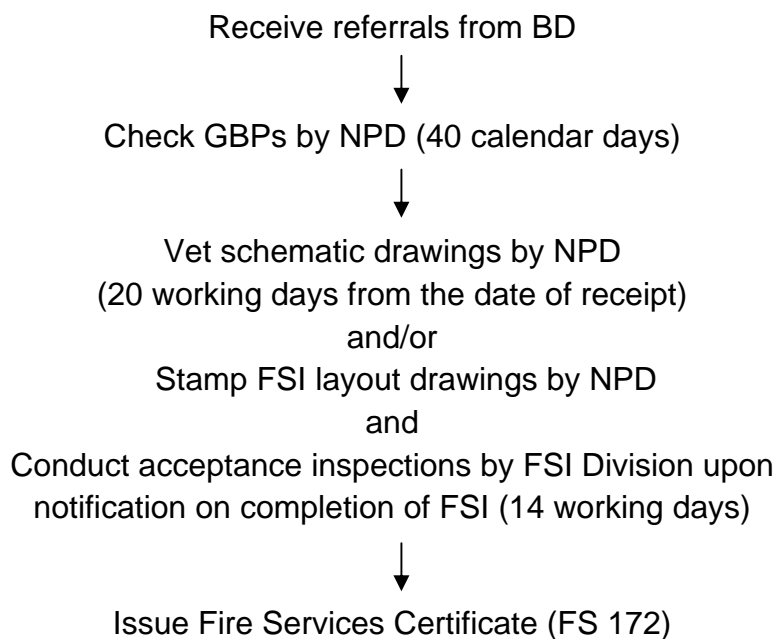
14. According to FSD's experience, it is not uncommon that the fire safety requirements have not been fully complied with at time of the first compliance inspection. Rectification works and arrangement for follow up inspections will unavoidably delay the issue of Fire Services Certificate/letter of compliance.

## **CERTIFICATION OF FSI PROVISIONS FOR NEW BUILDINGS**

15. For new buildings, the New Projects Division and the Fire Service Installations Division of FSD are involved in the certification of FSI provisions.

16. New Projects Division (NPD) works under Section 16(1)(b) of Buildings Ordinance (BO), which specifies that all plans of building works require a certificate from the D of FS to the effect that the plans have shown all the FSI and equipment as necessary for such building in accordance with the Code of Practice for Minimum Fire Service Installations and Equipment published by the Director of Fire Services. FS certification is required before the commencement of actual building works.

17. FSI Division works under Section 21 (6)(d) of BO, which specifies that the D of FS is required to certify that the FSI and equipment shown on the General Building Plans (GBP) approved by him have been provided for and they are in efficient working order and satisfactory condition. This certification is crucial to the issue of occupation permits by the Building Authority upon completion of building works.



Existing work flow for NPD and FSI Division (As-is)

## **REGISTRATION OF PROFESSIONALS IN HONG KONG**

18. At present, there is no regulatory system for competent certifiers in the private sector to inspect and certify fire safety requirements of licensed premises and FSI of new buildings. With due reference to the recommendations made by the EU and the information/opinions gathered from the trade, FSD has tried to identify in various industries/professions in Hong Kong a group of persons in possession of suitable qualification and competency to inspect and certify fire safety works, and if available, to introduce a new registration scheme for them.

19. The study mentioned in paragraph 9 above identifies the recognition and control mechanism of similar professionals in Hong Kong, such as for the architects, engineers, surveyors, etc. It is revealed that the Architects Registration Ordinance, Cap 408 and the Engineers Registration Ordinance, Cap 409 were enacted in 1990 respectively to provide for the registration of architects and professional engineers, the recognition of disciplines within the profession and disciplinary control of the professional activities of these professionals, and for related matters. In 1991, the Surveyors Registration Ordinance, Cap 417 was also enacted for the registration and control of professional surveyors in Hong Kong.

20. Since the enactment of the aforesaid ordinances, anyone, who wants to become a registered professional in these professions, is required to apply for membership of respective professional institute and to be elected by respective registration board. These professional institutes and registration boards are governed by the legislation of Hong Kong. For registered architects, registered professional engineers in the civil or structural engineering discipline, registered professional surveyors and registered professional engineer in the geotechnical engineering discipline who wish to take up the building works or street works as specified in the BO, they are further required to go through a registration procedure to be registered as an authorized person, a registered structural engineer or a registered geotechnical engineer as appropriate under the BO.

21. The Study reveals that there are several types of professional who might be competent to certify the provision of FSI in new buildings. However, having considered the uniqueness of fire service installations and ventilating systems, the certifiers are desirable to have an engineering background. After examined various types of engineers available in Hong Kong, it is found that HKIE has a list of qualified professional engineers who may possess the qualifications and experience required to be qualified as 'competent person (fire)' under the proposed registration scheme.

## **CONTROL ON THE CONDUCT AND PERFORMANCE OF PROFESSIONALS IN HONG KONG**

22. In general, there are three distinct types of control mechanism on the conduct and performance of professionals in Hong Kong, namely, single-tier system, 2-tier system and 3-tier system.

### Single-tier control system

23. For the single-tier control, the enforcement authority has the sole liability to control the conduct and performance of the professionals. These professionals are required to register in the enforcement authority, but not any other registration boards nor professional institutes. An example of this registration and control mechanism is the registration of lift engineers and escalator engineers by the Director of Electrical and Mechanical Services under the Lifts and Escalator (Safety) Ordinance, Cap. 327.

### 2-tier control system

24. For the 2-tier control, the conduct and performance of registered professionals are controlled by their professional institute (e.g. Hong Kong Institute of Engineers) and the statutory enforcement authority (e.g. Engineers Registration Board) under the constitution published by their professional institute and the Engineers Registration Ordinance, Cap. 409 respectively.

### 3-tier control system

25. For the 3-tier control system, the professionals are required to register in respective professional institute, statutory body and the authority:

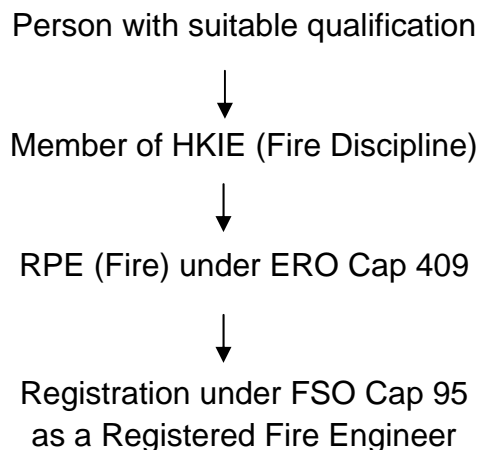
- i. Tier 1– by the professional institute, e.g. HKIE for engineers, HKIA for architects and HKIS for surveyors;
- ii. Tier 2– by the statutory body, e.g. Engineers Registration Board (ERB) for Registered Professional Engineers (RPE), Architects Registration Board for Registered Architects (RA), Surveyors Registration Board for Registered Professional Surveyors (RPS); and
- iii. Tier 3– by the authority, e.g. the Building Authority for authorized persons (AP), registered structural engineers (RSE) and registered geotechnical engineers (RGE); the Director of Electrical and Mechanical Services for registered examiners for builder's lifts and tower working platforms.

## PROPOSED SOLUTION

### (A) Registered Fire Engineer Scheme

26. Having compared the registration mechanisms of other professionals in Hong Kong and studied the application of third party certification in other developed countries, and taking into consideration of the comments made by respective institutions/associations during the first round consultation, it is considered feasible to introduce a new registration mechanism for third party fire safety certifiers under the Fire Services Ordinance, Cap. 95, Laws of Hong Kong. The controlling authority can make use of the RPE (Fire) available in market, whose academic qualifications and professional knowledge have already been assessed by the HKIE and the ERB. Furthermore, it is FSD's obligation to ensure both quality assurance and stringent control over the performance of the certifiers to ensure that fire safety of the premises is not compromised.

27. FSD proposes to establish a new registration mechanism for fire safety certifiers (so called Registered Fire Engineers [RFE]) under the Fire Services Ordinance, Cap 95 similar to the registration of AP/RSE/RGE under the Buildings Ordinance, Cap 123. To apply for registration via a proposed Fire Engineer Registration Board as an RFE, a person with suitable qualification must become a member of the Fire Discipline in HKIE first and subsequently obtain at least 1 year of post qualification experience to be elected as an RPE (Fire).



28. A Registration Committee will be formed to assist the D of FS in considering applications for inclusion in the RFE Register by-

- examining the qualifications of applicants;
- inquiring to ascertain whether an applicant has the relevant experience;
- conducting professional interviews with the applicants with questions focusing on the Fire Services Ordinance and relevant codes in related to fire safety; and



- advising the D of FS to accept, defer or reject applications for inclusion in the RFE Register.

29. A Disciplinary Board will be formed to inquire into and deal with matters relating to the conduct and standard of performance of the RFE. An appeal mechanism shall also be introduced for any applicant who is aggrieved by the order made by the Disciplinary Board to lodge an appeal.

30. Under this proposal, FSD will play a regulatory role to:

- sit in the Registration Committee;
- maintain a Fire Engineers' Register and be responsible for the registration of RFE;
- monitor the performance of RPE(Fire) by carrying out audit inspections;
- conduct investigation into complaints related to any deviations or non-compliance due to improper conduct or negligence of the RFE;
- refer the cases to the Disciplinary Board for disciplinary actions if necessary; and
- refer the cases to ERB and/or HKIE for investigation or disciplinary actions deemed necessary.

31. The names of the RFE will be published in the gazette annually. They are required to renew their registration at determined intervals in par with similar mechanism adopted under BO. The fees for registration and renewal will be published in a new Schedule to the Fire Services Ordinance.

### **(B) Third Party Certification**

32. The study recommended that all competent certifiers in the private sector are required to register in FSD as RFE under the Fire Services Ordinance for practicing third party certification relating to FSI/equipment, ventilating systems and other fire safety requirements. FSD will play a regulatory role in the Registration Committee by assessing the competency of an RFE during the registration interview, in which most questions will be asked on the relevant legislation and local fire safety codes. Furthermore, FSD will also be responsible for monitoring the performance of RFE by carrying out audit inspections.

33. As the proposed third party fire safety certification scheme is a new mechanism, to make it a success, it is vital that the implementation should be carefully staged, taking into account of actual progress. As a start, FSD will allow RFE to perform third party certification of fire safety in "licensed premises", which will be optional to the licence applicants. This will allow the trade and the society to nurture a third party certification culture before putting forward other new initiatives such as mandatory certification of alteration and addition (A&A) works for

FSI, and certification of FSI provisions in new buildings.

34. In the future, FSD will continue to conduct initial inspection to the “licensed premises” to assess its potential fire risk and formulate appropriate fire safety requirements. The licence applicants may choose either to use the current practice or to adopt third party certification to certify the fire safety of the premises. Should the latter be adopted, an RFE, being appointed by the licence applicant, will inspect and certify compliance of fire safety requirements within the “licensed premises” upon completion of works. According to overseas experience, third party certifiers can provide better customer service to the licence applicants.

35. There are two options to take forward the fire safety certificates issued by RFE in the proposed third party certification scheme-

Option (A)

FSD, after or without carrying out audit check to the certificates, will issue Fire Services Certificates/letters of compliance to the owner/licence applicant/licensing authorities upon receipt of the fire safety certificates from the RFE; or

Option (B)

The fire safety certificate issued by RFE will have the same validity as the Fire Services Certificates/letters of compliance issued by D of FS.

36. Option (A) will have the benefit of better control on the performance of the RFE and save the trouble of consequential amendments to other legislations that require a certificate in fire safety compliance issued by D of FS, whereas Option (B) will have an advantage of increased efficiency in the issue of fire certificate for licensing purposes. However, with a view to maintaining the fire safety standard as well as to monitoring the performance of the RFE, all fire safety certificates issued by RFE are subject to FSD’s random audit inspections.

37. Under the proposed third party certification scheme, the main duties of Regional Offices and the Ventilation Division of FSD will be revised to include:

- to conduct initial inspection to the premises to assess its potential fire risk;
- to formulate fire safety requirements in relation to the application; and
- to carry out audit inspection to the fire safety certificates issued by RFE for any deviations or non-compliance due to improper conduct or negligence of the RFE and take follow-up actions as necessary.

38. The main duties of an RFE (as a Third Party Certifier) will include:

- to carry out third party certification for compliance of fire safety requirements, including ventilating systems in “licensed premises” (Optional to the licence applicant/licensee);
- to carry out third party certification for compliance of required standards for FSI A&A works for all types of premises/building (Mandatory) but not to FSI of new buildings at this stage; and
- following a satisfactory compliance inspection, to issue fire safety certificates to the licence applicant direct or to submit the fire safety certificates to FSD for certification and issuance of Fire Services Certificate/letter of compliance (depending on the decision of the Administration after consulting the trade and key stakeholders).

39. Before the implementation, the Administration should identify the mode of operation of third party certification, i.e. whether (a) the certifiers have to submit their certificates to D of FS who would then based on the information provided by the certifiers, issue a Fire Services Certificate within a short period of time or (b) the fire safety certificates issued by the certifier carry the same weight of a Fire Services Certificate issued by the D of FS.

40. As a side issue, to make better use of the expertise of the RFE and in view of the drastic increase in the submission of performance-based fire engineering reports to FSD, FSD also plans to require such reports to be submitted by an RFE upon the implementation of the RFE scheme to ensure the quality of the reports. The scope of work of RFE may be further expanded in the light of experience and progress.

41. In order to evaluate the effectiveness of its implementation, a comprehensive review is suggested 18 months after the launching of the third party fire safety certification scheme.

42. In view of this new proposal, comments from relevant stakeholders are invited, in particular, on the following aspects-

- implementation of third party fire safety certification by introduction of RFE Scheme;
- RFEs are to be registered in FSD under the Fire Services Ordinance, Cap 95, Laws of Hong Kong;
- third party certification will be started with “licensed premises” (optional);
- the introduction of a mandatory third party certification scheme to FSI A&A works to ensure the works comply with the required standard and the scope of works to be covered under this new arrangement; and

- status of the fire safety certification issued by the registered certifiers (RFE).

## **CONSULTATION**

43. Consultation starts on 2 October 2007 and will last for three months until 2 January 2008. Based on our proposals and the views collated during the consultation period, we will formulate our strategy on the registration of fire engineers and the implementation of a third party fire safety certification scheme.

## **COMMENTS/VIEWS**

44. Please send your comments/views, if any, on the proposals set out in this paper

- by mail to the Chief Fire Officer (FS), Fire Safety Command Headquarters, North Wing, 7/F, Fire Services Headquarters Building, 1 Hong Chong Road, Tsim Sha Tsui East, Kowloon;
- by fax to Fire Safety Command Headquarters at 2312 0376; or
- by email to [fschq@hkfsd.gov.hk](mailto:fschq@hkfsd.gov.hk)

before 2 January 2008. Any request to treat all or part of a response in confidence will be respected, but if no such request is made, it will be assumed that the response is not intended to be confidential.

**Fire Services Department**  
**September 2007**