

Fire Safety Engineers (FSE) workshop

Date: 10 July 2026 (Friday)

Time: 9am to 12pm

Mode/Venue: Physical Workshop (SCDF HQ Level 3 Meeting Room 4)

S/N	Agenda for discussion	Summary of discussion
01	Update on 1. PB Regulatory System • FSE Registration and FSE Register • Number of PB cases and PB waiver issues • FSE Inquiry Committee cases	<u>Presentation</u> See <u>Annex A</u> for the presentation slides. The workshop was attended in person by 44 participants. SCDF also reminded the FSEs to register early for future workshops to facilitate event planning. <u>FSE Registration</u> SCDF shared with the FSEs the number of registered FSEs. SCDF noted that two new FSEs were registered in 2025: Chen Mingliang and Steve Sim who introduced themselves to the participants. SCDF encouraged existing FSEs to support and mentor suitable engineers who may be ready to pursue FSE registration. <u>FSE Register</u> SCDF informed that the FSE register has been updated to reflect only the FSE's name, address, registration status and practice restrictions due to data governance considerations. FSEs were reminded that only Singapore addresses will be accepted for the register, and FSEs with foreign addresses will be removed. FSEs were also reminded to provide a maximum of two email addresses for official correspondence, as SCDF will respond only to the official email address recorded. SCDF also shared on the number of performance-based (PB) submissions and fire engineering issues submitted. <u>FSE Inquiry Committee</u> SCDF informed that the FSE Inquiry Committee was convened twice in the past year. With regards to the findings for the first case, SCDF reminded FSEs to ensure that performance criteria, modelling parameters and report contents are accurate and consistent before submission.

S/N	Agenda for discussion	Summary of discussion
		For the second case, SCDF highlighted that an FSE had issued a Letter of No Objection (LONO) for A&A works affecting an existing PB design, instead of making a full PB submission in accordance with SCDF Circular Ref. CD/FSSD/12/02/03/01 dated 18 October 2013. SCDF stated that where A&A works affect the PB design, a full PB submission is required regardless of whether the impact on the PB design is adverse or non-adverse. FSEs were reminded to clearly demarcate areas where future A&A works can be carried out without affecting the PB design. FSE Bryan Chin queried whether the issue was that FSE did not run simulation to support the LONO. SCDF clarified that while that is a contributing factor, to align with the circular, a full performance-based submission should be carried out. FSE Liew Li Hooi asked whether this would mean a full performance-based submission is required whether the changes have a positive or negative effect on the results. SCDF clarified that a full performance-based submission needs to be made regardless on the effect on the results. FSE Ruth Wong asked what changes would trigger a full performance-based submission and what changes would be sufficient to be captured in a LONO i.e. would additional doors trigger a full performance-based submission. This was echoed by various other FSEs including FSE Victor Ho and FSE Lin Hoong Tat who offered various scenarios where it is not clear when LONO is sufficient. FSE Ruth Wong further highlighted that clients may not be willing to undergo the full performance-based process for AEI projects due to the short turnaround time. She highlighted that clients may not have the time to complete the full PB process for A&A works. SCDF responded that FSEs can exercise their judgement, but the spirit of the LONO Circular is to ensure that changes are regularised through a full performance-based submission process if they affect the existing performance-based design at this juncture. SCDF noted the concerns about time constraints for AEI projects and would engage the Singapore Fire Engineering Guidelines committee to look at the different scenarios. SCDF also stated that FSE can pre-consult with SCDF for specific project scenarios if needed. SCDF will review and provide more clarification based on the feedback received.

S/N	Agenda for discussion	Summary of discussion
		FSE Lin Hoong Tat added that FSEs have been operating in line with guidance from the Fire Safety Engineer Workshop 2018. SCDF stated the need to understand the spirit of the circular and adhere to it nonetheless. In this regard, circular will still take precedence. FSE Bryan Chin also asked if a peer reviewer is required for such projects. SCDF stated that peer reviews are required as part of a full PB process.
02	2. Admin Requirements	<u>CPE Programme</u> SCDF provided a recap of the CPE requirements. FSEs are required to attain a minimum of 48 CPE hours for every two-year cycle and are responsible for tracking their own CPE records. CPE declarations, with supporting documentary proof, shall be submitted <u>only at the end of the training cycle</u> and not later than 30 days after the end of the cycle. FSEs were reminded to ensure that the declared training cycle is correct, all entries fall within the cycle, supporting documents are provided for each entry, and the form is signed and submitted in PDF format. SCDF shared that a digital platform is being developed to facilitate CPE declaration submissions. A trial will be implemented for submissions due in September 2026, and the affected FSEs will be contacted before the deadline. SCDF also reminded FSEs that requests for approval of courses for CPE hours shall be submitted at least one month in advance, supported by course content details in PDF format and confirmation that documentary proof of participation will be provided. FSE Yee Poh Kin suggested whether a self-declaration format similar to Professional Engineers' Board could be adopted for FSEs. SCDF responded that for now, the submissions shall be reviewed and supporting documents are still required though developments are underway to make this process smoother for both parties. <u>Submission and Correspondence requirements</u> SCDF highlighted requirements for PB waivers submitted via CoreNetX. Due to CoreNetX limitations, the same waiver description may be repeated for multiple issues. FSEs were reminded to advise QPs to submit a cover letter requesting that the waiver descriptions for each issue be amended accordingly, and to number all issues separately in the waiver description field.

S/N	Agenda for discussion	Summary of discussion
		SCDF reminded FSEs to inform all PB officers by email immediately after submitting PB waiver, FEDB or FER submissions through CORENET, including the SCDF reference number. FSEs were also reminded to include all PB officers in email correspondence on PB projects, to attend all meetings concerning their projects, to pre-arrange meetings before turning up for discussions, and to submit source code for waivers supported by fire engineering assessments, failing which the waiver may be rejected.
02	Singapore Fire Engineering Guidelines (SFEG) 2025 Key updates and clarifications	<u>Acknowledgements</u> SCDF acknowledged the contributions of the SFEG Committee for their work in developing the Singapore Fire Engineering Guidelines (SFEG) 2025, including the contributions of past PB officers Nicholas Lee and Khai Chern during their service to SCDF. <u>Key updates on the SFEG</u> SCDF highlighted the inclusion of Chapter 9 on Fire Engineering Assessment in Support of Fire Safety Waiver Application and Annex K. FSEs were reminded to take note of the methodologies for PB waiver applications in Chapter 9, and that PB waiver submissions for clauses not listed in Annex K may be rejected. SCDF reiterated the requirements for sensitivity analysis under Section 2.2, noting that this is still omitted in some submissions despite previous reminders. SCDF also clarified that modelling vents in the closed position, on the side with the most openings, is applicable only for enclosed naturally ventilated spaces such as warehouses with designated high-level vent openings and low-level replacement air inlets. For water monitor systems under Section 3.2.1.d(ii) and (iii), SCDF reminded FSEs to provide the specification and test report of the water monitor to support the time taken for activation and discharge. A minimum safety factor of 2 shall be applied, and fire size justification shall be provided in the FER. SCDF clarified soot yield requirements for industrial buildings, warehouses and carparks. For general carparks, the soot yield value of 0.07 g/g is applicable only to general carparks and does not apply to HGVs and buses in carparks or driveways. Due to possible variation in fuel load and goods carried by such vehicles, FSEs may need to consider a higher soot yield than 0.07 g/g. A default value of 0.1 g/g shall apply otherwise. SCDF highlighted requirements relating to replacement air for smoke control systems, including standby fans. SCDF also clarified the acceptance criteria for setback distance assessment. The receiving plane shall be on

S/N	Agenda for discussion	Summary of discussion
		the site or notional boundary, and not twice the distance of the notional boundary of the building on fire as previously reflected in SFEG 2015. FSE Eng Heok Eng enquired whether the relaxation in separation distances in the Fire Code when there is sprinkler protection can be applied to the assessment. SCDF responded that the Fire Code is used to determine the code compliant separation distance required. Once there are a deviation and performance-based approach is adopted by the QP, the assessment shall follow the guidance in the SFEG. For CFD software selection under Section 3.4.3, SCDF advised FSEs to use the latest major version unless justification is provided that a lower version is more suitable for the evaluation. SCDF also highlighted the assessment approach for non-residential corridors under the relevant clauses listed in Annex K, including consideration of the main door of the unit of fire origin. FSE Chen Mingliang asked how the detection time can be determined if there is a fire rated door to the corridor but no detector installed. SCDF referred to 9.2.1.b(2) of the SFEG 2025 where detection time is determined when 20% of the unit is smoke filled.
03	Other Fire Engineering Technical Requirements Update	SCDF shared requirements for assessments to permit the use of non-perforated automatic roller shutters as means of replacement air, typically for warehouses. Sensitivity analysis shall include failure of one roller shutter serving the space, based on the largest effective opening area or most critical location. The report shall include a table showing the number and area of all roller shutters serving the space to justify the selected shutter failure, and the selected shutter failure shall be indicated in the mark-up. FSEs shall state if all shutters are of equal area; where shutters differ in size, the larger shutter shall be considered closed for the sensitivity analysis where applicable. SCDF reminded FSEs that areas required to be fire sterile under a fire safety engineering assessment shall be marked on site, shown on all submitted building plans, and recorded in the O&M. SCDF clarified that this should not be treated as a statement only, and the requirements shall be discussed with the design team. On-site floor markings should be clear, in contrasting colours, permanent and able to withstand foot traffic; removable tape is not recommended.

S/N	Agenda for discussion	Summary of discussion
		For assessments involving extended staircase discharge, SCDF reminded FSEs that there must be a designated discharge route from the stair to the external space. The route shall be clearly marked and signed, marked out on site and on submitted plans, and the mark-ups shall indicate the full width of the discharge route. The receiving plane for radiation assessment shall be taken at the edge of the width of the discharge route. SCDF also highlighted that Clause 2.3.3.c.(2)(a), which requires the discharge point to be within sight of and with direct access to an external space, cannot be addressed by performance-based approach where there is deviation from the clause. SCDF highlighted that for radiation assessment by FDS, FSEs shall represent the fire both as a block fire and a plane fire in separate scenarios. FSEs were also reminded that radiation assessment via FDS is sensitive to mesh resolution, and they are strongly encouraged to carry out hand calculations as a sense check to ensure that FDS results are within the same order of magnitude.

Drafted by: Ms Farah Binte Mohd Faudzi (Senior Consultant/PBP, FSD)

Amended by: Ms Kristy Chen (Principal Consultant/PBP, FSD)

Vetted by: Mr Heng Chai Liang (Senior Assistant Director, FSD)

Cleared by: SAC Lian Wee Teck (Senior Director, FSD)

Date: 10 July 2026