

**For Information on
5 July 2016**

Legislative Council Panel on Security and Panel on Development

**Issues relating to the No. 4 alarm fire at an industrial building
on Ngau Tau Kok Road on 21 June 2016 and the follow-up work**

Purpose

This paper briefs Members on the issues relating to the No. 4 alarm fire at an industrial building on Ngau Tau Kok Road on 21 June 2016, and the follow-up work being taken by the Government.

The No. 4 Alarm Fire on 21 June

2. A fire broke out at an industrial building at 7 Ngau Tau Kok Road at 10:59 am on 21 June, and was upgraded to No. 3 alarm and No. 4 alarm at 12:14 pm and 7:46 pm on the same day respectively. The fire was put under control at 7:38 pm on 24 June, and was largely put out at 11:15 pm on 25 June.

3. The third and fourth floors of the industrial building were severely damaged by the fire, and the fifth floor slightly damaged. To tackle the fire, the Fire Services Department (FSD) mobilised 653 fire appliances and ambulances as well as 2 894 fire and ambulance personnel count to the scene for firefighting and rescue. Fire personnel used a total of ten jets, four turntable ladder monitors, one aerial ladder platform monitor, five ground monitors, 12 breathing apparatus teams, six thermal imaging cameras and two positive pressure ventilating blowers to fight the blaze.

4. Twelve fire personnel had been sent to United Christian Hospital and Tseung Kwan O Hospital for treatment, among whom a Senior Station Officer and a Senior Fireman passed away. The rest of them have been discharged after treatment. On 27 June, one of the injured fire personnel went to Tseung Kwan O Hospital for follow-up consultation and was transferred to Prince of Wales Hospital on the same day for hospitalisation and further treatment.

Firefighting and Rescue Strategies

5. In the firefighting and rescue operation, the toughest challenge faced by FSD was the vast area of the fire scene, the intense heat and the heavy smoke produced by the blaze. There were some 200 mini-storage cubicles on the third floor where the fire first broke out. The layout was complicated,

with maze-like partitions and narrow passageways. Some of the windows were sealed by iron plates, and all the cubicle doors were outward-swinging which caused obstruction to access by fire personnel after breaking them open and greatly increasing the difficulties of firefighting and rescue. Worse still, each cubicle was surrounded by iron sheets, making heat generated from burning articles within one cubicle disperse quickly to the adjacent cubicles. Many of these cubicles were locked, presenting the hardest task to firefighters as they had to break them open one by one under the adverse conditions to verify if the articles inside were on fire. Otherwise, the blaze could not be put out completely.

6. FSD's frontline commanders adopted the best possible firefighting and rescue strategies based on dynamic risk assessments conducted at scene, having regard to the physical environment and circumstances. Generally speaking, the firefighting and rescue strategies of FSD comprise external firefighting from the outside and entering the centre of the fire ground to extinguish the fire. On external firefighting, frontline personnel will use turntable ladder monitors and firefighting jets to apply water into the fire scene in order to lower the temperature for preventing the spread of fire to nearby floors or buildings. If the Incident Commander at scene considers the circumstances permitting, he will deploy frontline personnel to enter the fire ground to battle the blaze. After a firefighting strategy has been adopted, in order to promptly adjust the strategy to ensure the safety of frontline personnel and efficiency of the firefighting and rescue operation, the Incident Commander at scene will still keep assessing the risk dynamically having regard to the changing environment and circumstances. To conduct dynamic risk assessments, the Commander will enter the fire scene personally from time to time to evaluate the conditions. Trained frontline personnel will also continuously assess the environment and circumstances of the fire scene and report to the commander, with a view to determining if the firefighting strategies need to be adjusted and whether retreat is required on sudden changes of circumstances.

Monitoring Structural Safety of the Building Under Fire

7. In general, in the event that firefighting is on-going, personnel of the Building Department (BD) will not be able to enter the premises affected by the fire for an inspection. They may instead conduct an exterior inspection to identify whether there is any tilting of the building, settling, distortion and spalling of the floor and its structural elements and so forth, or enter the floors unaffected by the fire to a limited extent, in order to assess the impact of the fire on building safety. Furthermore, BD personnel may assess the building condition by means of the information relayed by fire personnel at the fire ground, which include verbal descriptions and photographs, and then offer advice to fire personnel accordingly. Upon putting out the fire and dropping of the on-scene temperature to a suitable level, BD will assign its personnel to

conduct an interior inspection of the building structure in a bid to assess the impact of the fire on building safety in a detailed manner.

8. As far as this fire incident is concerned, BD took the above approach to evaluate the impact of the fire in respect of building safety. Given that the fire lasted for a relatively long span of time, while the fire was being attended by FSD, BD personnel stationed at the scene round the clock from 7 am on 22 June to 5 pm on 26 June to assess the exterior condition of the building and maintain close communication with FSD, so as to grasp the condition of the fire ground and the changes therein. Fire personnel, in addition to keeping a close watch of the on-scene condition of the building structure, provided photographs of the fire ground and relayed their observations to BD for evaluation.

9. After the fire was put out, BD personnel inspected the interior of the building concerned and did not find concrete spalling at the columns. However, spalled concrete was found at a number of beams on the third and fourth floors, and more serious concrete spalling was spotted at certain points at the ceiling on the third floor. BD personnel are still unable to conduct inspection at certain locations as there are still large quantities of miscellaneous objects. According to BD's initial assessment on the inspected structural elements of the building, there is no sign of danger of collapse of the building's structural elements. BD will conduct an in-depth assessment on the degree of damage on the building caused by the fire, which will include laboratory tests on samples collected from the site.

Follow-up work

10. The Government is very concerned about the fire. The inter-departmental working group formed to enhance the fire safety of mini-storages convened its first meeting on 27 June to discuss short, medium and long-term measures to enhance the fire safety of mini-storages and similar premises.

11. FSD, BD, the Lands Department and the Labour Department have started inspections of all mini-storages and similar premises for any breach of the existing law on 28 June. Inspections will first target mini-storages located in industrial buildings without automatic sprinkler systems, followed by other mini-storages. The relevant departments will take enforcement actions as soon as possible if there is any non-compliance found during inspections. For instance, where fire hazards are identified in mini-storages, FSD will issue Fire Hazard Abatement Notices in accordance with the Fire Services Ordinance (Cap. 95), and will even consider requesting operators to carry out improvement works to remove fire hazards. Besides, on identification of unauthorised building works, BD will issue order for removal of such works under the Buildings Ordinance (Cap. 123).

12. FSD and relevant government departments have arranged to meet with the major operators of mini-storages in Hong Kong. The departments will request the operators of mini-storages to take all possible management measures as soon as possible to improve fire safety, including increasing the number of security personnel, preventing storage of dangerous goods, strengthening fire prevention training for their employees, etc.

13. The working group will next discuss how to amend the law in order to strengthen the regulation of mini-storages.

14. Moreover, FSD has established an inter-departmental Fire Investigation Task Force comprising the Police, BD, the Electrical and Mechanical Services Department, the Government Laboratory and an independent professional to carry out investigation into the incident in four aspects, namely: (a) to identify the causes of the fire and to see whether any criminal elements have been involved; (b) to identify the circumstances leading to the death and injuries of fire personnel; (c) to review the uses and modes of operation of industrial buildings; and (d) to review the operational procedures of FSD currently in force to see if they can be enhanced. The Task Force has already started taking evidence at the fire scene and will submit a report to the Coroner's Court later.

Conclusion

15. Members are invited to note the above information.

Security Bureau
Development Bureau
Fire Services Department
Buildings Department

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