

# Fire Services Department's 2021 Year-end Review

The following is the 2021 Year-end Review issued by the Fire Services Department today (January 13):

## Preamble

The past two years saw Hong Kong thrown into turmoil by riots and the epidemic. The Fire Services Department (FSD) was put through one challenge after another. Keeping up the efforts to fulfil the prime mission of "Serving with courage, passion and commitment", the FSD stood as one to discharge its duties on all fronts, including firefighting and rescue, fire prevention, ambulance services, and mobilising and communications. In the days to come, the FSD will continue to uphold professionalism and go all out to safeguard Hong Kong.

## Firefighting and rescue services

### 1) Fire calls

In 2021, the FSD received a total of 33,891 fire calls, representing an increase of 0.8 per cent as against the 2020 figure (33,632 cases). Of the building fire calls in 2021, 93.75 per cent were responded to within the graded response time, about 1.2 percentage points higher than the department's performance pledge of 92.5 per cent. There were six No. 3 alarm fires, more as compared to four in 2020. Among them were two vessel fires in the waters off Stonecutters Island and at Aberdeen South Typhoon Shelter, both occurring in June. A more notable No. 3 alarm fire that broke out recently was the one on December 15 at a commercial centre in Causeway Bay. As there were a large number of people in the mall and at various places inside the building, the department's personnel were faced with added challenges in firefighting and rescue.

In 2021, a total of 23 members of the public lost their lives in fires. There were also 306 members of the public and eight fire personnel injured in blazes, while 11,434 persons were rescued by fire personnel from fires.

### 2) Special services calls

There were 36,176 special services calls received in 2021, representing an increase of 11.8 per cent as against the 2020 figure (32,358 cases). Among these calls, 1,798 members of the public were injured and 927 lost their lives. In particular, there were 951 cases involving mountain rescue, which was 58.0 per cent higher than the amount in 2020 (602 cases). These incidents left 598 persons injured and 14 dead. In addition, 10 fire personnel were injured in the mountain rescue operations.

## Fire protection regulatory work

## 1) Amendment of legislation on fire protection

Last year, the FSD made vigorous efforts to formulate a number of fire prevention policies. The amendment of the Dangerous Goods Ordinance and its subsidiary regulations was completed, and the amended regulations will come into force in early 2022. The amendments are made to improve the local regulatory regime on dangerous goods, bringing it into alignment with international standards, which can facilitate the operation of trade and give better protection to the local population.

Furthermore, the FSD took the initiative to amend the Fire Service (Installations and Equipment) Regulations (Cap 95B). With the restrictions lifted by the legislative amendment in 2021, members of the public are free to buy stand-alone fire detectors by themselves and install them at their premises.

## 2) Voluntary recognition scheme for fire service installation (FSI) technicians

To enhance the professionalism and performance standard of practitioners carrying out the maintenance work of FSI, the FSD implemented the Voluntary Recognition Scheme for FSI technicians in 2021. Eligible FSI practitioners can apply to become a recognised FSI technicians after completing the prerequisite training.

## 3) Enhancement of fire safety of old buildings

In 2021, the FSD embarked on the amendment of the Fire Safety (Buildings) Ordinance to enhance the fire safety of old buildings in a more efficient and effective manner. Views were sought from the Panel on Security of the Legislative Council (LegCo) on the proposals.

## 4) Keeping pace with infrastructure developments in Hong Kong

As a gatekeeper for the fire safety of Hong Kong, the department has continued to carry out its work proactively to ensure fire safety compliance in infrastructure developments in 2021:

### \* Hong Kong International Airport three-runway system

The Airport Expansion Project Division completed FSI acceptance inspection for SkyCity Phase 1 of Hong Kong International Airport as well as the vetting of building plans and proposed performance-based designs of the tunnels for the new automated people mover system and baggage handling system, the Terminal 2 Concourse and expansion of Terminal 2. The FSI acceptance inspection for the associated building structures of the three-runway system is under way.

### \* Railway developments

Stations along the MTR Tuen Ma Line were commissioned on June 27, 2021,

following the acceptance inspection of their FSIs by the Railway Development Strategy Division in the first quarter of 2021. The FSI acceptance inspection for the stations along the MTR East Rail Line Cross-Harbour Extension (including the Hung Hom Station Extension, Exhibition Centre Station and the Admiralty Station Extension), as well as the ventilation buildings and tunnels along that rail line, is scheduled for completion in January 2022.

\* West Kowloon Cultural District

To facilitate the development of the West Kowloon Cultural District, during the year under review, the FSD issued fire safety certificates to nine Places of Public Entertainment (PPE) Licence applications for the M+ museum before its official opening in November. For the Hong Kong Palace Museum, the FSI acceptance inspection was completed in September 2021, and the compliance inspection of fire safety certification of 12 PPE Licences is under way. The department has maintained close liaison with various departments and the Hong Kong Palace Museum to complete all licensing and certification processes by the end of the second quarter of 2022.

\* Taking forward pilot projects on automated parking systems

The FSD rendered full support to bring forward the pilot projects on automated parking systems. The FSI acceptance inspection for the puzzle-stacking automated parking system on Hoi Shing Road, Tsuen Wan, was completed in November 2021. In addition, vetting of the building plans of the large car park to be built on the artificial island at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port boundary crossing is in progress. Fitted with another type of automated parking system, the car park is expected to provide over 6,000 parking spaces in stages.

\* Other major building projects

The FSD is now scrutinising the proposed performance-based designs and the building plans of the Main Stadium and the Indoor Sports Centre as well as the building plans of other associated facilities such as the Public Sports Ground in the Kai Tak Sports Park. Furthermore, the department will commence the FSI acceptance inspection for the Tseung Kwan O – Lam Tin Tunnel project in January 2022.

A summary of the FSD's fire safety inspections and law enforcement actions conducted in 2021 is tabulated below:

Fire safety inspections	414,778 (260,275 of them are inspections of FSIs in buildings to ensure their proper maintenance)
Fire Hazard Abatement Notices issued	6,694
Prosecutions	1,033

Regarding dangerous goods control in 2021, the work of the Anti-illicit

Fuelling Activities Task Force of the FSD is summarised in the table below:

Inspections	1,043
Surprise operations	105
Complaints handled	402
Illicit fuel seized	183,395 litres
Prosecutions	128

## Ambulance service

### 1) Ambulance service calls

There were 765,614 ambulance calls received in 2021, representing an increase of 10.99 per cent (75,848 cases) against the 2020 figure. Of them, 715,194 were emergency calls, representing an increase of 11.71 per cent as against the amount in 2020 (640,236 cases).

Last year, 92.4 per cent of the emergency calls were responded to within the target response time of 12 minutes, which was 0.1 percentage points lower than the department's performance pledge of 92.5 per cent. To improve the response time of ambulance services, the FSD strategically redeployed available resources to individual districts (such as converting a fire station at Ta Kwu Ling into an ambulance depot in October 2021 and setting up an ambulance deployment point at Kwu Tung in November 2021) to cope with the demand for ambulance service in the district and shorten the response time.

### 2) Outbreak Control and Response Team (OCRT)

Amid the raging COVID-19 epidemic, the FSD allocated additional resources to support the frontline operations. In addition to the immediate procurement of relevant anti-epidemic equipment and supplies, the department also installed additional disinfection facilities in several ambulance depots within a short period of time. Nonetheless, to enhance its capability in fighting infectious diseases, the FSD set up the OCRT under the department's Ambulance Command. It comprises members with professional knowledge of infectious disease control, clinical skills and special personal anti-epidemic equipment and tools.

### 3) Close co-operation with the Hospital Authority (HA)

#### \* Pre-hospital 12-lead Electrocardiogram Scheme

The Pre-hospital 12-lead Electrocardiogram Scheme has expanded to cover all Accident and Emergency (A&E) Departments under the HA since February 1, 2021. Defibrillator monitors have now been installed in all ambulances and can be used by ambulance personnel to analyse a patient's condition in the ambulance. The data will then be sent to hospital healthcare professionals for early preparation, if and when necessary, for corresponding emergency treatment as soon as possible.

#### \* Regularisation of pre-hospital stroke assessment notification mechanism

The FSD in collaboration with the HA has expanded the Pre-hospital Stroke Notification mechanism to cover all A&E Departments under the HA since August 2021. Ambulance personnel will obtain information about patients suspected to be suffering from stroke by conducting standardised medical assessment to identify stroke victims as early as possible. They will then notify the hospital by phone for arranging corresponding treatment.

#### 4) Logistics solutions for dangerous drugs

The FSD introduced in 2021 a logistics management system for counting and recording the stock of dangerous drugs. The automatic recording system will record the quantity of drugs and the time when drugs are collected. The system helps strengthen the department's management of dangerous drugs.

#### Post-dispatch advice service

The FSD launched the post-dispatch advice (PDA) service in October 2018 to provide emergency ambulance service callers with first aid advice. In 2021, the department provided PDA for a total of 566,326 emergency ambulance calls, accounting for 95.1 per cent of all applicable calls. The results were encouraging in view of the successful handling of some life-threatening cases, most of which pertained to cardiac or respiratory arrest, accounting for 7,705 cases. There were also 1,500 and 2,300 cases of choking and childbirth/miscarriage respectively.

#### View of national security and counter-terrorism (CT) work

The implementation of the Hong Kong National Security Law in 2020 has significantly curbed radical and violent acts. Nevertheless, in the face of the potential threats from local terrorism, the FSD has actively collaborated with the other government departments concerned through the Inter-departmental Counter Terrorism Unit (ICTU) to prevent and combat terrorist activities. Apart from stepping up efforts in exercises and training as well as CT public education and publicity work, the department also conducts risk assessment on critical infrastructure and formulates operational plans to reinforce prevention against and response capacity for threats from terrorist attacks.

#### 1) CT@Community Activity Day

The ICTU held the first CT@Community Activity Day at the Fire and Ambulance Services Academy (FASA) on August 18, 2021, to enhance the public's CT awareness through games, exhibitions and other activities. Around 120 members from the youth and community engagement programmes associated with the six disciplined forces attended the event. The Guided Emergency Response Demonstration provided participants with the experience of applying the strategy of "Run, Hide, Report" and the "Three Basic Skills on Emergency Preparedness" in the event of a terrorist attack.

#### 2) National Security Education Day

To mark National Security Education Day, the FSD held a FASA Open Day on April 15, 2021, to showcase its efforts on safeguarding national security to the public. The fun-filled programme included Chinese-style foot drill performances, demonstration and experience sessions of the "Three Basic Skills on Emergency Preparedness", tours of simulated training facilities and guided tours of the Fire and Ambulance Services Education Centre cum Museum.

### 3) Fire & Ambulance Services Teen Connect (FAST Connect)

The FSD announced on December 14, 2021, the establishment of FAST Connect. The youth group's objectives are to foster positive thinking, law-abiding awareness, self-discipline and team spirit among its teenage members by providing a wide range of practical training programmes for them. Elements of national education will be embedded in the activities offered to nurture this young generation into citizens with a sense of social responsibility and national identity, an affection for Hong Kong and an international perspective. Exchange sessions with community leaders and Hong Kong elite athletes will also be arranged for the members.

### 4) Constitution Day

The Constitution of the People's Republic of China lays out the legislative backing and source of power for the Basic Law, and together they form the constitutional basis of the Hong Kong Special Administrative Region. On Constitution Day (December 4, 2021), the FSD held a flag-raising ceremony at the FASA to deepen service members' understanding of the country and the constitutional basis of Hong Kong.

### 5) Full implementation of Chinese-style foot drill

Adopting the Chinese-style foot drill can raise service members' sense of identification with and pride in the country. The FSD commenced a programme in July 2021 for the full implementation of the Chinese-style foot drill in the department. With all uniformed members having received training now, the department will switch to adopt the Chinese-style foot drill in various daily ceremonial occasions from January 24, 2022.

### 6) Value-driven-Actions (VdA) Campaign

In 2021, the FSD launched the VdA Campaign to prompt service members to reflect on departmental vision, mission and value. Through workshops, seminars, movie sharing sessions, talks and other activities, the VdA Campaign prompts service members to reflect on departmental beliefs from multiple perspectives and follow these beliefs in their daily lives and work.

### Anti-epidemic efforts

Members of the FSD have remained undaunted in undertaking the mission of fighting against COVID-19 to protect Hong Kong professionally since the outbreak.

### 1) Calls related to confirmed COVID-19 cases

During the year under review, the FSD handled a total of 3,317 calls related to confirmed COVID-19 cases, with the involvement of 2,099 fire and ambulance personnel. Five ambulance personnel were infected after handling infected patients. All of them have recovered. A further four fire personnel and six ambulance personnel who had handled infected patients were put into compulsory quarantine at quarantine centres (QCs).

## 2) Assisting in arranging for people in "restricted areas" to undergo compulsory testing

During the period between January and February 2021, the Government made "restriction-testing declarations" under relevant regulations and required people within the specified "restricted areas" to stay in their premises and undergo compulsory testing. The FSD mobilised about 2,100 service members to participate in the operations in various "restricted areas". They carried out such duties as notifying and arranging for persons staying in the affected units to undergo the tests, registering their information and verifying the testing certifications. Many participating members came from ethnic minorities (EMs), and they also served as interpreters for the EM residents, making the operations ever smoother.

## 3) Flexible deployment of resources to support anti-epidemic efforts

Since March 2020, the FSD has deployed Rapid Response Teams comprising off-duty fire personnel to six QCs. They have provided round-the-clock services to ensure fire safety of the QCs. On the other hand, the department flexibly deployed resources, including the Special Support Unit of the Ambulance Command, to assist in transferring confirmed or suspected patients/close contacts/inbound commuters with symptoms to hospitals, community isolation/treatment facilities, QCs or temporary testing centres for treatment or corresponding arrangements. The FSD also conveyed the close contacts from senior care homes to QCs to reduce the risk of virus transmission.

## 4) Secondment of service members to Department of Health

The department seconded a total of 38 fire personnel to the Contact Tracing Office of Centre for Health Protection which is located in Kai Tak Community Hall. Five Ambulance Officers were also seconded to the Confinee Hotline Centre under the Centre for Health Protection. A further 78 service members were also seconded to two Community Vaccination Centres to provide assistance in the management and operation of the centres.

In addition, hundreds of serving and retired FSD members participated in various kinds of voluntary work selflessly, such as putting electronic wristbands on people under compulsory quarantine, providing support and information to the confinees at call centres through phone contact, and conveying and distributing anti-epidemic supplies to people and organisations in need.

Reaching out to community and publicity work

## 1) "AED Anywhere for Anyone" (AAA) Programme

Launched in June 2021 and led by the FSD with support from various government departments, as well as public and private organisations, the AAA Programme aims to incrementally increase the number of automated external defibrillators (AEDs) to be set up across the territory that can be readily accessed anywhere by anyone. The roll-out of the "Centralized AED Registry for Emergency", an FSD-developed online information platform, was launched at the same time. The platform is available for the public and is now providing information about over 1,300 AEDs across the territory.

## 2) Youth and fire prevention initiatives for EM groups

In 2021, the FSD continued to actively support and participate in the Cross-disciplined Forces Training Programme for Ethnic Minority Youth and organise activities of the Ethnic Minority Youth Development Team. The purposes are to assist EM youths in integrating into the community and cultivate positive values among them through discipline, physical and team building training and sharing sessions on the department's work.

On recruitment, the department introduced the areas of its work and entry requirements of its posts to participants of the above activities to enhance their interest in joining the department. Furthermore, three EM Contract Community Programme Assistants able to communicate in South Asian languages were employed. In the year under review, they organised talks in several mosques and participated in the Education and Careers Expo 2021, in which they introduced the work and posts of the department to EM youths in Urdu. In the future, on top of the Pakistani and Indian communities, the department will get in touch and communicate with more EM groups and organise more recruitment activities for them.

On the promotion of fire prevention, the FSD often took the initiative to visit the gathering places of the EM communities and their neighbourhoods. It taught them fire safety tips in their languages about how to react in case of fire and use fire extinguishers, fire blankets and more. The department will continue to recruit EM Fire Safety Ambassadors and Building Fire Safety Envoys to help further enhance EM groups' awareness and knowledge of fire safety.

## Other major initiatives in 2021

### 1) Grade structure review for disciplined services

In August 2021, the Chief Executive in Council decided to accept in full the recommendations in the Report on the Grade Structure Review for the Disciplined Services. Such recommendations were endorsed by the Establishment Subcommittee of LegCo in the same month, and then approved by the Finance Committee of LegCo upon deliberation in September 2021. The salary and increment recommendations in the report came into force on September 1, 2021.

### 2) Continuous professional development

The FASA applied to the Hong Kong Council for Accreditation of Academic



and Vocational Qualifications (HKCAAVQ) for accreditation of its Fireman/Firewoman (Operational/Marine) Foundation Training Course under the Qualifications Framework (QF) as a pilot project. Accredited by the HKCAAVQ in September 2021, the course has been included in the Qualifications Register under the Accreditation of Academic and Vocational Qualifications Ordinance since October 2021. Newly recruited firemen, who have completed the foundation training course in January 2022 onwards, will be recognised as attaining QF Level 4, which is equivalent to the level of an Associate Degree or a Higher Diploma.

### 3) Reprovisioning of Tuen Mun Fireboat Station

Following the completion of the Tuen Mun-Chek Lap Kok Link, Tuen Mun Fireboat Station has been strategically reprovisioned at a location that helps enhance the efficiency of marine firefighting and rescue operations for the northwestern waters (including Hong Kong International Airport) in Hong Kong. The new fireboat station, which took around three years to build, was officially commissioned in July 2021.

### 4) Unmanned aircraft system for fire and emergency services

The department's proposal on Setting Up Unmanned Aircraft System (UAS) for Fire and Emergency Services won the second runner-up prize in the Leading Towards Robotics Technologies Innovation Competition organised by the Office of the Government Chief Information Officer in July 2021.

The system is able to create 3D terrain models of a scene through real-time imagery including the employment of a large unmanned aircraft weighing over 7 kilograms, along with tools for remote sensing, image processing and analysis, as well as the adoption of the 5G mobile network and artificial intelligence technology. It can also conduct long-range search operations and airdrop supplies. With the use of the system, the department can enhance the efficiency of search and rescue operations. The new system is expected to be put into service in mid-2022.

### 5) FSD Intelligence Dashboard Platform

The FSD rolled out the FSD Geographic Information System Portal and the FSD Intelligence Dashboard Platform in September 2021 to strengthen the application of information technology in fire and ambulance services. The portal and the dashboard collate the operational data kept by the department with the use of analytic data methods, coupled with the target-based data analysis service, to explore the associations or trends between different operational data from multiple perspectives to help FSD personnel to enhance the efficiency and effectiveness of operations.

### 6) FSD Pak Shing Kok Married Quarters

The FSD Pak Shing Kok Married Quarters in Tseung Kwan O was completed in May 2021. It comprises five building blocks of 16 to 17 storeys with 648 three-bedroom flats. The quarters, built using a total of 3,726 integrated modules, is the first pilot project of the Government to promote the adoption

of the concrete modular integrated construction method in Hong Kong.

Plans for the year ahead

1) Vigilance against the epidemic

To curb the epidemic, the FSD will stay vigilant and keep a close watch on the epidemic development. The department will develop well-conceived plans covering all fronts including operational strategy, protection equipment, resources deployment and logistical support, with public interest and health being of the greatest importance, to safeguard people's health. The FSD will also continue to give its best to co-operate with and support the anti-epidemic work of the Government.

2) Firefighting and rescue facilities

Fire service facilities to tie in with the development of the three-runway system of Hong Kong International Airport will be completed and commissioned in phases between 2022 and 2024. Three of these facilities, namely Airport North Fire Station, Rescue Speedboat Point, and Decontamination and Rescue Facility, are scheduled for commissioning in the second quarter of 2022 to meet fire and ambulance services demand following the commissioning of the new runway.

3) Recruitment

On human resources, the FSD expects to recruit 885 personnel for the fire and ambulance streams in 2022. Of them, 128 are of officer rank and 757 of rank-and-file rank. They will fill the vacancies arising from natural wastage and new posts created in the coming year.

4) Enhancement of emergency services with new technologies

\* Firefighting robots

The FSD is actively exploring new technologies to enhance emergency services. It will use firefighting robots to assist fire personnel in prolonged firefighting and detection operations on complex and high-risk fire grounds to reduce the risks faced by frontline personnel. By transmitting real-time images of incident scenes via communication networks to the command post, the robots can help the incident commander to make more accurate assessment and get a better grasp of the actual situation. Procurement of the robots is under way and they are expected to be put into service in the third quarter of 2022.

\* Application programme for handling multiple casualties incidents

The FSD is also developing an application for handling major incidents. The programme is designed to generate on-site statistics of the number and information of casualties for ambulance personnel to deploy ambulance resources. Each ambulance will be equipped with a designated smart phone installed with system's app. Ambulance personnel will take this phone with

them in rescue operations. While it will incur additional procedures for rescue operations, the new system will remove a large share of workload in terms of manual recording, hence streamlining the working procedures in rescue operations and enhancing accuracy in recording information. The system will allow ambulance personnel to be more focused on handling casualties. The system is expected to be rolled out in the first quarter of 2022.

#### 5) Fourth Generation Mobilising System (4GMS)

The 4GMS will enable the department to handle complicated and serious incidents more effectively and obtain more data which will help improve services and boost the efficiency of resource deployment. Two active Fire Services Communication Centres (FSCCs) will be established under the 4GMS. In the unfortunate event that one FSCC fails, the other FSCC will immediately take over and handle incidents for the entire territory of Hong Kong, thereby enhancing the resilience of the department's mobilising and communications operations.

The design and construction work of the 4GMS commenced on August 19, 2019, and it will take 48 months to complete the entire development process. After more than two years of hard work, the 4GMS Unit in collaboration with the contractor have completed the project commencement, analysis and design. They are now steaming ahead with system installation and development work. The 4GMS is expected to be rolled out in the third quarter of 2023 at the earliest.

#### 6) Implementation of the amended Dangerous Goods Ordinance

The amendment of the Dangerous Goods Ordinance and its subsidiary regulations was completed. The Secretary for Security will appoint an effective date by notice in the Gazette for all the provisions to come into operation on the same date. The tentative plan is to commence the operation of all the provisions in early 2022. To ensure a smooth transition from the extant regulations to the new regulations, a grace period of 24 months will be given for the trades and the public to adapt to the new regulations.

Nevertheless, under the premise of safeguarding public safety, the department will continue to combat illegal fuelling operations through intelligence collection and strategic planning, and maintain close liaison with other law enforcement agencies for intelligence exchange and joint operations.

#### 7) Amendment of the Fire Safety (Buildings) Ordinance

The proposed amendments to the Fire Safety (Buildings) Ordinance were discussed in a meeting of the Panel on Security of LegCo in September 2021, in which the members' views on the basic principles and key issues of the amendments were sought. The department aims to commence public consultation in 2022. After the consultation, the Government will formulate suitable and practicable proposals as soon as possible, and table the bill at LegCo for its consideration.

## Conclusion

In 2022, the FSD will continue to bear its mission of "Serving with courage, passion and commitment" in mind. Driven by professionalism and a can-do spirit, the department will spare no effort to guard and fight against all sorts of disasters and threats, protect the lives and property of the public, maintain social stability and safeguard national security. As always, the FSD will live up to the expectations and trust that the country and the people have so keenly placed in it.