

**For discussion
on 9 February 2021**

**Legislative Council Panel on Food Safety and Environmental Hygiene
Subcommittee on Issues Relating to the Improvement of
Environmental Hygiene and Cityscape**

Measures to Improve Refuse Collection and Street Cleanliness

Purpose

This paper briefs Members on the measures to improve refuse collection and street cleanliness by the Food and Environmental Hygiene Department (FEHD).

Background

2. FEHD is responsible for providing public cleansing services, including street sweeping and washing, management and cleaning of public toilets and refuse collection points (RCPs), gully and litter container emptying, to maintain environmental hygiene and street cleanliness. FEHD adopts a multi-pronged approach to improve refuse collection facilities and services, step up monitoring and tackling of illegal dumping blackspots, and strengthen monitoring of street cleansing services and improvement measures, including enhancing outsourced street cleansing services.

Enhancing Street Cleansing Services

Allocating additional resources

3. In recent years, FEHD has allocated additional manpower and resources to step up street cleansing work under a multi-pronged approach to address public expectation for environmental hygiene in public places. FEHD and its cleansing contractors have employed about 12 900 cleansing staff to keep the city clean and provide public cleansing services, including street sweeping and washing, waste

collection and other cleansing work. Moreover, FEHD has increased the manpower and resources under the requirements of street cleansing service contracts, which include: increasing street cleansing posts for day time, evening and midnight; providing dedicated central divider cleansing teams with shadow vehicles; setting up cleansing teams at designated locations for emptying and washing litter containers and removing bagged refuse near litter containers; providing additional street washing vehicle teams; providing additional inspection teams to inspect the overall performance of services delivered by contractors; and adding grab lorry service to street cleansing and waste collection services contracts.

4. In 2020-21, FEHD has deployed in-house resources and those of its service contractors in accordance with operational needs for anti-epidemic efforts against COVID-19. The estimated expenditure for street cleansing service contracts, including increasing street cleaners, mini-street washing vehicle teams and public toilet deep cleansing teams, is about \$2.15 billion, representing an increase of about \$500 million (about 30%) from that of 2019-20. Since June 2020, FEHD has employed more manpower from contractors to step up street washing, rear lane sweeping and litter container emptying. Since September 2020, more mobile cleansing teams have been hired to increase deep cleansing services for public toilets and RCPs. Since January 2021, more mobile cleansing teams have been engaged, and more attendants have been provided for RCPs and public toilets with extended opening hours. A total of 135 additional street washing and mobile cleansing teams have been employed for enhancing street cleansing service to maintain environmental hygiene.

5. In response to the COVID-19 pandemic, FEHD has stepped up the cleansing of facilities under its management, including public markets, cooked food centres, hawker bazaars, public toilets, RCPs, etc. Street cleansing services are strengthened on a need basis, including enhancing cleansing of locations where littering and other public cleanliness offences are prevalent. Enforcement actions against illegal conduct such as spitting and littering are also stepped up.

Improving monitoring of service performance of outsourced contractors

6. To ensure that the service performance of its outsourced contractors meets the contract requirements, FEHD monitors their performance by conducting regular spot checks and surprise inspections in accordance with the frequency and

patterns of inspections determined by the existing mechanism. In addition, FEHD maintains effective communication with its outsourced contractors through verbal exchanges, telephone messages, emails, meetings, etc., to advise and remind them of the areas requiring attention, follow-up and improvement in the provision of street cleansing services.

7. FEHD is enhancing its complaint management information system by further dividing the complaints into categories of refuse collection, removal and street cleansing to strengthen the analysis of data on street cleanliness complaints. The contract management system is also revamped. FEHD will collect data from its complaint management information system and contract management system for compilation of consolidated management returns, so as to facilitate the collection and analysis of information about the number of complaints and follow-up actions to be taken (e.g. issuance of default notices), which assists the monitoring of outsourced contractors and improvement of performance.

Better occupational safety and health protection for frontline workers

8. In 2019, FEHD, in collaboration with local academic institutions, developed and designed new working uniforms with the functions of moisture management, aeration and light reflection. Frontline staff of cleansing contractors were arranged to try the uniforms, and the results were satisfactory. The new uniforms have been successively adopted by all districts. To safeguard the safety of frontline cleansing workers and increase their working efficiency, FEHD has introduced low-entry driver cab type refuse collection vehicles (RCVs). Such vehicles help reduce the risk of injury of drivers and cleansing workers due to frequent getting on and off the vehicles and provide drivers with a wider vision, hence enhancing the safety of both drivers and road users.

9. In view of the COVID-19 pandemic and the overall tight supply of masks, the Government has made temporary arrangements to provide masks for the frontline staff of outsourced cleansing contractors since February 2020 to safeguard their health and maintain daily cleansing services. As the COVID-19 situation has undergone rapid changes and remains severe around the world, the daily number of masks provided by FEHD for frontline staff has increased to “3 masks per person” since 30 July 2020.

10. FEHD will continue to pay close attention with outsourced contractors to

the latest updates on COVID-19 and health advice announced by the Centre for Health Protection (CHP) of the Department of Health. Such information will be conveyed to cleansing staff in a timely manner to enrich their anti-epidemic knowledge. For example, a letter was sent to inform outsourced cleansing contractors of channels for free COVID-19 tests for consideration by their staff, another letter was sent to notify outsourced contractors of the information translated into nine languages on CHP's COVID-19 Thematic Website for access by their staff of ethnic minorities.

Enhancing Refuse Collection Services

Refuse collection

11. At present, waste collection services are provided by FEHD and private waste collectors. FEHD's service covers mainly residential buildings. Generally speaking, except for large residential estates where central refuse storage chambers and access roads for RCVs are provided, domestic waste generated from households is collected by the cleansing contractors arranged by the owners or property management companies of the residential buildings. Such waste is delivered to RCPs by the contractors or collected by the RCVs as scheduled by FEHD. The property management companies may also hire private waste collectors to collect and deliver waste to refuse transfer stations (RTSs) or landfills by RCVs direct. In rural areas, residents usually place their refuse at village-type RCPs/bin sites for collection by FEHD.

12. FEHD and its cleansing contractors provide about 260 modern RCVs. About 6 100 tonnes of household waste is collected every day, including 1 170 tonnes from Hong Kong Island, 1 890 tonnes from Kowloon, and 3 040 tonnes from the New Territories and outlying islands. The waste is taken to the RTSs or landfills managed by the Environmental Protection Department (EPD) for processing.

13. Currently, FEHD has a total of 162 permanent off-street RCPs, 10 temporary RCPs, 868 village-type RCPs/RCPs with temporary structures, and about 1 900 bin sites for public use. FEHD has been mindful of the possible impacts of the operation of public RCPs on nearby environment. It has been committed to providing refuse collection service in a clean and hygienic manner

as well as reducing the impacts of noise, odour, etc. generated from the operation of public RCPs on the community through suitable hardware designs and operational arrangements, as well as the application of various technologies.

14. On the construction of permanent off-street RCPs, it is the policy of FEHD to require them to be properly designed and equipped with deodorising systems and vehicle exhaust extraction systems, so as to avoid the traffic and residents nearby being affected by the refuse collection operations carried out on the roadside. The design, planning, construction and operation of new permanent off-street RCPs must comply with the environmental standards and guidelines stipulated in Chapter 9 of the Hong Kong Planning Standards and Guidelines. In addition, an enclosed design with a cover would be adopted to minimise impacts on nearby residents. Such a design also serves the objective of making the RCPs visually attractive while odourless. For some newly constructed public RCPs, green features would be provided and new building materials as well as building services installations would be adopted to further enhance the facilities. The design of RCPs would be negative pressure-based, with an independent sewage treatment system, a water scrubber system (or other alternatives as appropriate) and an RCV exhaust extraction system to filter the air inside the RCPs and prevent odour from escaping to surrounding areas.

15. To further mitigate problems such as noise and odour generated from the operation of public RCPs, FEHD has introduced refuse compactors and hook-lift trucks to appropriate RCPs with higher refuse yield to reduce the time for handling refuse at the RCPs and to enhance operation efficiency. The new initiative can also reduce noise and emissions from RCVs. At present, 59 RCPs are provided with refuse compactors and hook-lift trucks.

16. Meanwhile, the Atomised Ozonated Water Technology is currently put on trial at RCPs (including those in rural areas) to abate the odour generated from the refuse temporarily stored inside. The effectiveness is being assessed.

17. In the second half of 2019, stickers featuring the lovely Keep Clean Ambassador Ah Tak were put on the gates of 111 RCPs under FEHD to bring a splash of colour to the community. Positive comments were received from the public. FEHD is now launching the second round of beautification works for RCP gates to beautify 60 RCPs with a new set of Ah Tak stickers. The works are expected to be completed in the first quarter of 2021.

Pilot scheme

18. For refuse collection service in rural areas, solar-powered aluminium RCPs were put on trial by FEHD at 31 rural sites in phases from September 2019 to December 2020. When members of the public approach with their refuse in hand, the door at the opening will open automatically, allowing them to put their refuse into the refuse bin inside the RCP. It is both convenient and hygienic. The preliminary results are found satisfactory. FEHD is further assessing its effectiveness and considers to extend it to other RCPs in rural areas.

19. FEHD has launched a pilot scheme for RCPs with lower refuse yield in rural areas on the use of the third-generation solar-powered compacting refuse bins (SCRBs). A total of 24 SCRBs have been installed in rural sites of nine districts (for one year) by two phases since September and October 2020 respectively.

20. For RCPs with higher refuse yield, solar-powered mobile refuse compactors (SMRCs) have been put on trial at three rural RCPs in Yuen Long District (for one year) since July 2020 and one site in Tsuen Wan District (for four months) since October 2020.

Application of Technologies

21. FEHD has been proactively deploying new technologies for mechanisation and automation to enhance the quality and efficiency of street cleansing services. Examples include the trial use of street leaf vacuum cleaners and the introduction of mini-mechanical sweepers, mechanical sweepers, mini-street washing vehicles and pressure washer surface cleaners. Details are set out at **Annex 1**.

22. In parallel, FEHD has adopted a number of new technologies to enhance refuse collection services, with a view to improving environmental hygiene in the vicinities of RCPs. These include a trial run of SCRBs and SMRCs as mentioned above, and the introduction of low-entry RCVs, etc. Details are set out at **Annex 2**.

23. FEHD will review the effectiveness of such technologies after trial use,

including analysing such factors of consideration as the testing data and cost effectiveness, collecting views from various stakeholders, etc., for consideration of extending the application of individual technologies. At the same time, FEHD will continue to identify technologies that can improve refuse collection and street cleansing services through various channels, including making reference to local and overseas experience.

Monitoring and Tackling Illegal Dumping and Construction Waste Deposit Blackspots

24. To improve environmental hygiene, FEHD combats illegal dumping in a multi-pronged manner. Apart from stepping up cleansing services, publicity and education and enforcement actions, FEHD has installed Internet Protocol (IP) cameras at illegal dumping blackspots. The IP cameras capture video footage of the vehicles that illegally dumped the refuse so that FEHD can identify and prosecute the registered owners of the vehicles, and plan for more effective enforcement actions based on the time and mode of such offences for better deterrent effect, thereby enhancing environmental hygiene.

25. FEHD has launched a scheme on installation of IP cameras at illegal dumping blackspots in all districts starting from June 2018. As at the end of 2020, over 220 illegal dumping blackspots had been installed with IP cameras. The installation locations of the IP cameras in districts is available on the FEHD website

(https://www.fehd.gov.hk/english/pleasant_environment/cleansing/list_of_ipcam.pdf). FEHD will continue to combat illegal dumping under a multi-pronged approach, including enhancements in public education, street cleansing work, enforcement actions and application of technology. FEHD will closely monitor the targeted blackspots and suitably adjust its action plans in the light of actual circumstances, including the relocation of IP cameras in a timely manner, so as to enhance the effectiveness of enforcement actions.

26. FEHD has set up dedicated enforcement teams (DETs) against cleanliness offences. At present, there are 35 DETs, and FEHD plans to set up 5 additional teams in the second quarter of 2021 to step up inspection and anti-littering enforcement at more serious fly-tipping blackspots over the territory. In 2020, over 41 700 fixed penalty notices against littering offences were issued by FEHD.

27. FEHD is mainly responsible for handling domestic waste. For industrial, commercial and construction waste, the public should make their own arrangements to deliver their waste to landfills and RTSs managed by EPD or public fill reception facility managed by the Civil Engineering and Development Department. FEHD staff conduct daily inspection and provide street cleansing services. When bulky waste and domestic waste is found on streets, more manpower resources will be deployed for clearance.

28. According to the established division of labour among relevant government departments for illegal dumping of construction waste in public places, EPD is mainly responsible for enforcing the Waste Disposal Ordinance (Cap. 354) and taking enforcement and prosecution actions against offenders. The Highways Department is mainly responsible for clearing construction and demolition materials illegally placed on the public roads under its management. The Lands Department is responsible for handling construction waste disposed on unleased and unallocated government land¹. FEHD is mainly responsible for street cleansing work, including the clearance of domestic waste disposed in public places.

Stepped-up Year-end Clean-up Campaign

29. In the light of the ongoing pandemic, FEHD has launched a two-week stepped-up clean-up campaign from 4 to 17 January 2021 to enhance street cleaning operations at complaint hotspots in all districts, combat illegal acts of shop front extension, and strengthen rodent prevention and control work. The territory-wide year-end clean-up campaign commenced on 18 January 2021. FEHD aims to arouse public awareness of maintaining personal hygiene and cleanliness in the community as well as consolidate the efforts of keeping Hong Kong clean and containing the pandemic through the year-end clean-up campaign commenced six weeks before the Lunar New Year.

Public Education

30. FEHD has been disseminating information on personal, household and

¹ Not including government land managed by other government departments.

environmental hygiene through different channels, including broadcast of Announcements in the Public Interest on television and radio, display of posters at main public transport facilities such as MTR stations and bus stops, distribution of pamphlets and leaflets, and the use of Facebook and Instagram pages of Keep Clean Ambassador Ah Tak and YouTube. The presence of Ah Tak at public functions is also arranged to appeal to the public to maintain street cleanliness and educate them on proper disposal of refuse.

31. A dedicated thematic website was launched in January 2021, setting out the work done by FEHD on environmental hygiene and street cleansing services. Regular updates, including reports on the efforts and effectiveness of the year-end clean-up campaign, will be uploaded. The website also provides useful information and advice on environmental hygiene, with a view to promoting public collaboration and understanding. For more information, please visit the FEHD website (https://www.fehd.gov.hk/english/events/keep_clean2020-2021/index.html).

Conclusion

32. Through the above improvement and management measures, collaborative efforts with relevant departments and active public participation, FEHD will continue to enhance its refuse collection and street cleansing services.

Advice Sought

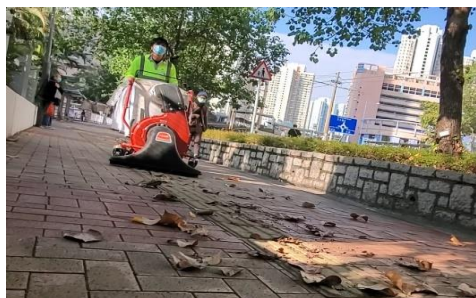
33. Members are invited to provide comments on the above measures.

Food and Health Bureau
Development Bureau
Environment Bureau
Transport and Housing Bureau
Food and Environmental Hygiene Department
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Application of Technologies for Enhancing Street Cleansing Services

(1) Street leaf vacuum cleaner

FEHD is planning for the trial run of street leaf vacuum cleaners at suitable locations in the New Territories to reduce manual sweeping and enhance cleansing efficiency.



(2) Mini-mechanical sweeper

Mini-mechanical sweepers have been used for street sweeping in designated areas of Tai Po and Yuen Long districts to reduce manual sweeping and enhance cleansing efficiency.



(3) Mechanical street sweeper

To safeguard the safety of cleansing workers, mechanical street sweepers are used by FEHD's cleansing contractors to sweep public roads, flyovers and central dividers.



(4) Mini-street washing vehicle (MSWV) and pressure washer surface cleaner (PWSC)

FEHD has introduced MSWVs with PWSC to reduce manual cleansing and remove stubborn dirt in a short period of time.



Application of Technologies for Enhancing Refuse Collection Services

(1) Solar-powered compacting refuse bins (SCRBs)

FEHD launched a one-year pilot scheme on the third-generation SCRBs in September 2020. Twenty-four SCRBs have been installed in rural locations of nine districts for trial use to improve environmental hygiene and to enhance pest control.



(2) Solar-powered mobile refuse compactors (SMRCs)

FEHD has been implementing a one-year trial scheme on SMRCs since mid-2020. Four SMRCs have been deployed to Yuen Long and Tsuen Wan districts for trial use with a view to improving environmental hygiene and enhancing pest control.



(3) Low-entry driver cab type refuse collection vehicles (RCVs)

Low-entry driver cab type RCVs have been introduced by FEHD. The low-floor design of the cab makes it more convenient for drivers and cleansing workers to get on and off the vehicles, reduces risk of accidents, improves occupational safety and health, and provides drivers with a wider vision for better safety of both drivers and road users.

