

**Bills Committee on Waste Disposal
(Charging for Municipal Solid Waste) (Amendment) Bill 2018**

**List of follow-up actions arising from the discussion
at the meeting on 17 March 2020**

This note sets out our response to the follow-up actions arising from the discussion at the meeting of the Bills Committee held on 17 March 2020.

The Administration is requested to provide, in tabular form, the following information in respect of trial schemes/pilot projects, which are ongoing or have been completed in recent years, on innovative rodent prevention and control methods: (a) time frames and scopes of the schemes/projects, such as the technologies tested and geographical coverage; (b) results or preliminary findings; and (c) timetables for employing proven methods on larger scales to tackle rodent problems.

Information on the trial tests conducted by the Food and Environmental Hygiene Department (FEHD) on technologies for rodent control since 2018 is as follows:

Technology applied for rodent control/surveillance	District	Place/venue of application	Period of application of the technology
Rodent trapping device driven by pressurised gas	Sham Shui Po, Wong Tai Sin and Tsuen Wan	Public markets of the FEHD	Put on trial for 8 months (from October 2018 to June 2019)
Night-vision camera surveillance system	Kowloon City and Mong Kok	Public markets of the FEHD in Kowloon City District and a rear lane in Mong Kok District	Put on trial for 3 months (from April to July 2019)
Thermal imaging camera surveillance system	All districts in the territory	Rear lanes in all districts	Put on trial for 1 year (from January to December 2020)

The FEHD has completed the trial test on a rodent trapping device driven by pressurised gas and no rodents were caught during the trial period. As the results have shown that the technology could not enhance the effectiveness of rodent control in the local environment, the FEHD does not intend to employ this type of

device.

The trial scheme on the night-vision camera surveillance system aimed to test the capability of the system for identifying rodents in night-vision images by means of artificial intelligence analysis technology in order to monitor the extent and level of rodent activities. The trial test was completed in late July 2019. Initial test results have shown that the technology is capable of accurately identifying rodents and tracing their movements, which is conducive to quantifying and enhancing the effectiveness of anti-rodent measures. However, if the technology is to be widely applied, a considerable number of night-vision cameras have to be installed in order to achieve the desired results. That may involve issues pertaining to resources, technology (such as locations of installation and power supplies) and privacy.

The FEHD has also conducted a proof of concept test on the use of thermal imaging in order to assess whether artificial intelligence analysis technology can be applied to identify rodents in thermal images. Initial results have shown that the function of this surveillance system is comparable to that of the night-vision camera surveillance system, but no clear images of human faces are captured. The FEHD is conducting a trial test on the thermal imaging camera surveillance system in selected rear lanes in Kowloon City District, and plans to install thermal imaging cameras before and after the 2 phases of anti-rodent operations in designated target areas which will be conducted later in all districts throughout the territory with a view to quantifying and reviewing the effectiveness of the operations. Upon completion of this trial scheme in late 2020, the FEHD will compare the technologies of using night-vision cameras and thermal imaging cameras in terms of their actual application and effectiveness in monitoring rodent activities with a view to developing strategies for on-going application of the technologies and determining their respective scopes of application.

In addition to application of new technologies, the FEHD has kept in view new products for prevention and control of rodent infestation around the world, and has conducted trial tests to assess their suitability for use in Hong Kong. The FEHD is conducting a test on a poisonous bait having flavours of food to assess whether it is more attractive to rodents than traditional poisonous baits. Besides, the FEHD is testing a new break back trap during the special

operation in 6 public markets. The newly designed break back trap which is more sensitive than traditional break back traps is expected to be more effective in catching rodents. The above tests are expected to be completed in July 2020. If the results are satisfactory, the FEHD will put the said bait and break back trap to extensive use in all districts.