

MANAGEMENT OF FOOD WASTE BY THE ENVIRONMENTAL PROTECTION DEPARTMENT

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1. Lucid waters and lush mountains are invaluable assets. According to the Environmental Protection Department (EPD), about 10,510 tonnes of municipal solid waste were landfilled in Hong Kong per day in 2024, of which around 29% (i.e. 3,001 tonnes) were food waste, constituting the largest municipal solid waste category. At present, most of Hong Kong's food waste is disposed of at landfills together with other municipal solid waste.

2. To reduce the amount of food waste to be disposed of at landfills, in 2018, the Government launched the Pilot Scheme on Food Waste Collection Service to examine the feasibility of implementing government-run food waste collection services in the long run. EPD is responsible for the reduction and collection of food waste. Since 2021, EPD has expanded the pilot scheme to provide point-to-point food waste collection services for public and private premises. With a view to strengthening the support for the collection of food waste from domestic and commercial and industrial (C&I) sectors, EPD has gradually expanded the food waste recycling network covering public rental housing (PRH) estates, private housing estates/buildings and villages, food waste producers of C&I sector and public recycling points. In 2024-25, the total operational expenses incurred for reduction and collection of food waste was \$292 million, including related staff expenditure of \$53.9 million. The Audit Commission (Audit) has recently conducted a review of EPD's work in the reduction and collection of food waste.

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3. *Scope for increasing the quantity of food waste collected.* From August 2021 to September 2025, 11 food waste collection service contracts (i.e. Contracts A to H and J to L) were awarded to contractors by way of 5 tendering exercises (i.e. Tendering Exercises I to V) and 1 contract (i.e. Contract I) was awarded by way of direct engagement. As at 31 October 2025, EPD had 7 food waste

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collection service contracts with a total contract sum of \$524.4 million. According to EPD, the quantity of food waste collected under the food waste collection service contracts of EPD increased significantly from 990 tonnes in 2021 to 100,176 tonnes in 2025. Audit acknowledged EPD's efforts in the significant increase of food waste collected over the years and noted that there was scope for further increasing the quantity of food waste collected. While the quantity of domestic food waste collected had increased by 95% from 22,931 tonnes in 2024 to 44,729 tonnes in 2025, the quantity of C&I food waste collected had increased by 11% from 49,747 tonnes to 55,447 tonnes for the same period. In Audit's view, EPD needs to make continued efforts to increase the quantity of food waste collected (paras. 1.4, 2.2 and 2.5 to 2.7).

4. ***Scope for enhancing the quality of food waste collected.*** According to EPD, food waste would be delivered to the food waste treatment facilities managed by EPD for treatment. Staff at the food waste treatment facilities would reject food waste failing to meet the requirements specified in the food waste collection service contracts, including those with inert materials exceeding certain percentage that are not suitable for biological treatment. For contracts with operational performance requirements relating to non-compliant food waste collected and delivered to the food waste treatment facilities by the service contractors, any relevant complaints or reports from the operators of the food waste treatment facilities should be considered as a non-compliance with the operational performance requirement and relevant deductions would be made from the monthly operation fees to contractors. Audit noted that: (a) the annual proportion of inert materials by weight found in the food waste received at a food waste treatment facility increased from 13% in 2021 to 29% in 2025 (up to March); and (b) from September 2021 to October 2025, there were instances that the operators of the food waste treatment facilities identified and reported cases of non-compliant food waste and inert materials found in the food waste collected and delivered under certain food waste collection service contracts. According to EPD, the contractor had exercised due diligence in checking for inert materials in the incident and no deduction for non-compliance was thus made from the monthly operation fee. However, there were no records documenting the justifications of EPD regarding the case (paras. 2.5 and 2.8 to 2.10).

5. ***Scope for improvement in site inspections conducted by EPD staff.*** According to EPD, to monitor the service performance of food waste collection service contractors, EPD would conduct site inspections at food waste collection points (FWCPs). Audit noted that there was scope for improvement in site inspections conducted by EPD staff: (a) as at 31 October 2025, there were no guidelines setting

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out the requirements of site inspections conducted by EPD staff on food waste collection service contractors; (b) EPD did not compile management information summarising the site inspections conducted by its staff on food waste collection service contractors with the intended purposes and scope of each inspection conducted; and (c) in January 2026, Audit observed the routine inspections conducted by EPD at 7 FWCPs under 3 contracts and noted that the practices adopted by EPD staff during site inspections varied among inspection teams and the time during which some inspections were conducted did not match with the food waste collection schedule of contractors (paras. 2.15 and 2.16).

6. *Scope for improvement in evaluating the performance of contractors.* According to the Stores and Procurement Regulations, departments should evaluate the performance of contractors at least once every six months until completion of the contract for contracts lasting more than one year and upon completion of the contract for contracts lasting a year or less. Audit noted that, as at 31 October 2025, there were no guidelines setting out the requirements for preparing and endorsing the contractor's performance reports by EPD staff. Of the 27 contractor's performance reports that should be prepared by EPD for the evaluation period up to October 2025, the dates of preparing and endorsing the contractor's performance reports ranged from 5 to 583 days (averaging 128 days) and 5 to 593 days (averaging 132 days) respectively after the end of the respective evaluation periods (paras. 2.23 and 2.24).

7. *Need to ensure compliance with relevant rules and guidelines in conducting tendering exercises.* Food waste collection service contracts rely heavily on the deployment of non-skilled workers. According to the relevant Financial Circular, for service contracts that rely heavily on the deployment of non-skilled workers, government bureaux/departments should follow the standard marking scheme framework and the technical marks assigned to "wages" must be no less than 25% of the total technical marks. Audit noted that under Tendering Exercise I: (a) during technical assessment, the tender assessment panel (TAP) under EPD evaluated the technical proposals received from the tenderers based on an incorrect marking scheme, in which 18% of the total technical marks was allocated to the proposed monthly wage rates for the cleansing workers, instead of no less than 25% as specified in the Financial Circular, leading to the withdrawal of the tender report submitted to the Government Logistics Department Tender Board (GLDTB); and (b) in the event, after the approval of the revised tender report by GLDTB in July 2021, Contract A was awarded to Contractor A in August 2021 with service commencement on 30 September 2021, which was at least 4 months later than the target commencement date in May 2021 (paras. 2.29 and 2.30).

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8. *Scope for improving the accuracy of pre-tender estimates.* In July 2021, in considering Tendering Exercise I, in view of the pre-tender estimates appearing to be on the low side, GLDTB reminded EPD to review the pre-tender estimate formulation methodology. Moreover, according to the tender report submitted by TAP under EPD to GLDTB for Tendering Exercise III in November 2022, in order to provide more realistic pre-tender estimates, EPD would apply a more comprehensive pre-tender estimate formulation methodology and provide better tender information at the market research stage in future. However, Audit noted that significant differences were noted between the pre-tender estimates and the recommended tender prices for Contracts J to L under Tendering Exercise V. In particular, the recommended tender prices for Contracts J to L were lower than their respective pre-tender estimates by 43% to 69% (para. 2.32).

9. *Need to improve the planning of tendering schedule and expedite tendering exercises.* According to the Financial Services and the Treasury Bureau, as a matter of principle, contract extension should be avoided as far as possible and normally be used as a stop-gap measure. Audit noted that EPD issued variation orders at a total cost of \$34.4 million to extend the original contract periods of 4 contracts for 6 months (for Contracts A, C and D) or 3 months (for Contract B). In approving the contract extensions of Contracts A and B in July 2023 and January 2024 respectively, EPD was reminded by the Financial Services and the Treasury Bureau to expedite the tendering exercise to ensure that the follow-on contracts would commence before the end of their respective proposed extension periods and avoid the need for extending the other contracts providing food waste collection services in the districts as far as possible. Notwithstanding that, in February 2025, EPD sought the approval of the Financial Services and the Treasury Bureau for the extension of the contract periods of Contracts C and D (paras. 2.37 and 2.38).

Provision of food waste recycling network

10. *Scope for enhancing the provision of food waste smart recycling bins (FWSRBs) in PRH estates.* In October 2022, EPD launched the Food Waste Collection Scheme in PRH Estates to install FWSRBs for food waste collection in PRH estates. With a view to providing services for a wider coverage of FWSRBs in PRH estates, in May 2024, EPD awarded 3 service contracts (Contracts M to O) at a total contract sum of \$58.7 million to contractors (Contractors M to O). In October 2024, the Environment and Ecology Bureau (EEB) informed the Panel on Environmental Affairs of the Legislative Council that, under the 2024 Policy Address,

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the Government would progressively increase the number of FWSRBs in PRH estates with higher usage, with a view to achieving “one bin per block” in PRH estates by 2026. As at 31 October 2025, there were 218 PRH estates in Hong Kong with a total of 1,473 blocks covered under the Food Waste Collection Scheme in PRH Estates. Audit noted that, as at 31 October 2025, 955 FWSRBs under Contracts M to O had been deployed in 941 (64% of 1,473) blocks in 218 PRH estates and the target of “one bin per block” had been achieved in 110 (50% of 218) PRH estates. After the deployment of the remaining FWSRBs under Contracts M to O, there would be 445 FWSRBs yet to be secured if the target of “one bin per block” in all the 218 PRH estates was to be achieved. According to EPD, it plans to procure the services for simplified FWSRBs to cover the remaining blocks in PRH estates and replace all the existing FWSRBs by phases. In Audit’s view, EPD needs to expedite the procurement of services for simplified FWSRBs with a view to achieving the target of “one bin per block” in PRH estates by 2026 (paras. 1.5 and 3.2 to 3.5).

11. *Need to ensure timely submission of deliverables by contractors.* According to Contracts M to O, contractors should submit various deliverables relating to the performance of services (e.g. testing and commissioning reports and monthly reports) to EPD on a regular basis. Audit noted that, since the commencement of Contracts M to O in May 2024 and up to October 2025, there were late submission of some deliverables by Contractors M to O: (a) operation and training manuals were submitted late by 41, 41 and 47 days by Contractors M, N and O respectively; (b) all the eight testing and commissioning reports were submitted late by Contractors M to O, ranging from 20 to 67 days (averaging 35 days); (c) 9 (60%) of 15, 9 (60%) of 15 and 9 (56%) of 16 monthly reports were submitted late by Contractors M, N and O respectively, ranging from 1 to 79 days (averaging 12 days); and (d) no annual audited accounts had been submitted by Contractors M to O (paras. 3.9 and 3.10).

12. *Long processing time for some FWSRB applications under the Environmental Campaign Committee (ECC) Scheme.* Since December 2023, ECC has collaborated with EPD in implementing the Pilot Scheme on FWSRBs in Private Housing Estates which provides FWSRBs to eligible applicants for a period of two years. According to EPD, it processes all FWSRB applications under the ECC Scheme according to ECC’s Guidance Notes for Pilot Schemes on FWSRBs in Private Housing Estates. In particular, for applications received before 25 July 2025, EPD will notify applicants of the application results within six months (i.e. 180 days) from the date of receipt of the application. Before 25 July 2025, 251 applications were received (comprising 173 processed applications and 78 applications under

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processing as at 31 October 2025). Audit noted that: (a) of the 173 processed applications, the time taken to complete the processing of 84 (48%) applications were more than 180 days, ranging from 181 to 639 days (averaging 424 days), from the date of receipt of applications; and (b) of the 78 applications under processing, 62 (79%) applications had been received for more than 180 days, ranging from 199 to 652 days (averaging 517 days), from the date of receipt of applications (paras. 3.13, 3.19 and 3.20).

13. ***Scope for maintaining a consolidated big data platform under the ECC Scheme.*** According to the contracts for the provision of FWSRBs under the ECC Scheme, FWSRB contractors should provide their big data platforms (i.e. central data management systems) with their FWSRBs connected. As at 31 October 2025, there were four big data platforms provided by the contractors of FWSRBs under the ECC Scheme. Audit noted that: (a) while individual FWSRB contractors provided their own big data platforms for their respective FWSRBs, EPD did not maintain a consolidated platform for recording the food waste collection data obtained from the contractors' big data platforms; and (b) there were inconsistencies in the types of food waste collection data and analyses available from the big data platforms provided by different FWSRB contractors, which made comparison and consolidation difficult. In Audit's view, EPD needs to maintain a consolidated big data platform for recording the food waste collection data obtained from FWSRB contractors' big data platforms and standardise the data and analyses available from the platforms provided by all the contractors under the ECC Scheme (paras. 3.23 to 3.25).

14. ***Scope for enhancing the provision of FWSRBs in public markets.*** Since November 2022, to collect food waste generated by street-level eateries and residents of residential premises without food waste recycling bins, EPD has begun to set up public recycling points at "GREEN@COMMUNITY", refuse collection points and public markets, and food waste recycling spots in the street. With a view to further expanding the target users of FWSRBs to include residents who live in buildings without sufficient space to install food waste recycling bins, in November 2024, EPD awarded a contract (Contract P) to a contractor (Contractor P) to provide services for 45 FWSRBs in public markets at a contract sum of \$1.1 million for an 18-month trial until June 2026. Audit noted that, as at 31 October 2025 (i.e. 10 months after the commencement of the 18-month trial period), only 25 (56% of 45) FWSRBs had been deployed. According to EPD, given the practical difficulties encountered in the installation of FWSRBs at some of the markets identified, some of the FWSRBs had been deployed in locations other than public markets in order to better utilise the contract resources. In Audit's view, EPD needs to draw lessons from the provision

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of services for FWSRBs in public markets under Contract P with a view to facilitating the deployment of FWSRBs in the follow-on contracts for public markets (paras. 1.5, 3.33 to 3.35 and 3.37).

15. ***Scope for enhancing the collection service of food waste recycling spots.*** As at 31 October 2025, 104 food waste recycling spots had been set up in 17 districts across Hong Kong. Audit noted that some of the food waste recycling spots operated until 8 p.m. or before, which were earlier than the peak hours in the usage of FWSRBs (i.e. from 7 p.m. to 9 p.m.) as identified from the user behaviour in PRH estates (para. 3.39).

Other related issues

16. ***Scope for enhancing the procurement of services for FWSRBs under the ECC Scheme.*** According to EPD, ECC approved the allocation of funding of \$13 million and \$31 million from the Environment and Conservation Fund in June 2023 (i.e. Phase 1) and December 2024 (i.e. Phase 2) respectively for the provision of services for FWSRBs. Audit noted that:

- (a) ***Significant variance in contract sums for similar services.*** According to EPD, to minimise the risk of relying on a single contractor and in order to ensure a stable supply of FWSRBs and attract more suppliers to drive down future prices, it was specified in the tender documents under both tendering exercises for Phases 1 and 2 that ECC would award 2 contracts to different tenderers with the 2 highest combined scores based on the technical and price assessment. However, for the tendering exercise under Phase 1, despite the fact that the services to be provided under the 2 contracts awarded (i.e. Contracts R and S) were very similar, the contract sum of Contract S was 96% (i.e. \$2.6 million) higher than that of Contract R; and
- (b) ***Under-estimation of demand of FWSRBs.*** In the tendering exercise under Phase 1, EPD prepared to procure services for 120 FWSRBs to private housing estates. However, the response from private housing estates was overwhelming and ECC had received 190 applications (involving 710 FWSRBs). In the event, ECC approved the variation order under Contract R of \$4.8 million (i.e. 178% of the original contract sum of \$2.7 million).

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In Audit's view, EPD, in collaboration with EEB, needs to draw lessons from the previous procurement exercises in conducting future procurement of services for FWSRBs under the ECC Scheme (paras. 4.4 and 4.5).

17. ***Scope for reviewing the effectiveness of the Food Wise Hong Kong Campaign (FWHKC).*** In May 2013, EEB launched FWHKC with a view to promoting reduction of food waste at source and EPD is responsible for supporting EEB in implementing the initiative (paras. 1.6 and 4.11). Audit noted that:

- (a) ***Need to encourage participants to provide feedback for individual promotion and education activities.*** Since the implementation of the Food Wise Charter in May 2013 and up to October 2025, the return rate of the annual implementation proforma (for providing feedback) from the signees was less than 40%, ranging from 0.4% to 37% (averaging 16%). Besides, participants of the Food Wise Eateries Scheme were not required to submit regular reports to EPD on their latest food waste reduction practices or progress, nor to update EPD on any changes to their practices (para. 4.13(a));
- (b) ***Lack of quantifiable performance targets in the work plan for FWHKC.*** The expected results (i.e. performance targets) specified in the work plan for FWHKC were qualitative in nature and lacked quantifiable performance targets for assessing the effectiveness of the proposed events and activities (para. 4.13(b)); and
- (c) ***Need to conduct a review on the overall effectiveness of FWHKC.*** EPD had not conducted a review on the overall effectiveness of FWHKC since its launch in May 2013. As at 31 October 2025, FWHKC had been implemented for more than 12 years. Audit considers that it is an opportune time for EPD to conduct a review on the overall effectiveness of FWHKC with a view to determining its way forward (para. 4.13(c)).

18. ***Scope for enhancing the monitoring of the trial of technologies for on-site treatment of food waste.*** EPD has been actively exploring the feasibility of applying on-site food waste treatment technologies (e.g. Food TranSmarter and food waste composter) under different trial government projects (para. 4.16). Audit noted that:

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- (a) ***Scope for encouraging involvement of government departments and public in the trial projects.*** As at 31 October 2025, only 6 Food TranSmarters and 1 food waste composter had been installed under the trial government projects funded by EPD in 7 government premises for use by 4 government departments and 1 statutory body. In October 2025, the utilisation rates of the 6 Food TranSmarters and the food waste composter ranged from 31% to 90% (averaging 60%) (paras. 4.17 and 4.18(a)); and
- (b) ***Need to keep under review the operation of the Food TranSmarters by drawing lessons from the difficulties encountered.*** As at 31 October 2025, while the 6 Food TranSmarters had been operated by the participating government departments for 1 to 2.6 years, there were difficulties (e.g. odour problem and power outage caused by the food waste treatment process) encountered by these departments during the course of the trial projects that warrant the review of the operation of the Food TranSmarters (para. 4.18(b)).
19. ***Need to conduct a holistic review on the effectiveness of food waste reduction and collection.*** Audit noted that, from 2018 to 2024: (a) the total quantity of food waste generated in Hong Kong decreased by 10% from 3,639 tonnes per day (tpd) in 2018 to 3,287 tpd in 2024 and the proportion of food waste recovered for recycling increased from 2% in 2018 to 9% in 2024; and (b) of the total quantity of food waste generated in 2024 of 3,287 tpd, 91% (i.e. 3,001 tpd) was still disposed of at landfills, which was still a long way in achieving the vision of zero landfill as specified in the “Waste Blueprint for Hong Kong 2035”. While the food waste collection services and food waste recycling network had been expanded since 2021, EPD has not conducted any review on their overall effectiveness. In Audit’s view, it is an opportune time for EPD to conduct a holistic review to evaluate the effectiveness of reduction and collection of food waste and determine the way forward (paras. 4.21 and 4.22).

Audit recommendations

20. **Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in this Executive Summary. Audit has recommended that the Director of Environmental Protection should:**

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- (a) **make continued efforts to increase the quantity of food waste collected and take necessary actions to rectify the situation of high proportion of inert materials found in the food waste received at food waste treatment facilities (para. 2.26(a) and (b));**
- (b) **establish guidelines setting out the criteria for assessing and determining whether incidents relating to delivering non-compliant food waste to the food waste treatment facilities should be regarded as non-compliance events that warrant the deduction of monthly operation fees to the food waste collection service contractors, and document the justifications for cases when food waste is rejected by the operators of the food waste treatment facilities but not regarded as non-compliance events (para. 2.26(c) and (d));**
- (c) **establish guidelines relating to site inspections conducted by EPD staff on the food waste collection service contractors, including setting out the criteria for selecting FWCPs for site inspections, the required inspection procedures and the relevant scope (e.g. food waste collection process) to be covered in site inspections, and ensure compliance with the guidelines (para. 2.26(g));**
- (d) **compile regular management information summarising the site inspections conducted by EPD staff on the food waste collection service contractors with the intended purposes and scope of each inspection conducted for monitoring purpose (para. 2.26(h));**
- (e) **ensure that the contractor's performance reports are timely prepared and endorsed, including establishing guidelines setting out the requirements for preparing and endorsing the contractor's performance reports (para. 2.26(j));**
- (f) **strengthen the checking of the marking scheme to ensure accuracy and compliance with relevant rules and guidelines in conducting tendering exercises (para. 2.39(a));**
- (g) **step up efforts in reviewing and refining EPD's pre-tender estimate formulation methodology (para. 2.39(b));**

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- (h) **improve the planning of tendering schedule and expedite the tendering exercises with a view to avoiding the need for extending the contracts providing food waste collection services as far as practicable (para. 2.39(d));**

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- (i) **expedite the procurement of services for simplified FWSRBs with a view to achieving the target of “one bin per block” in PRH estates by 2026 (para. 3.11(a));**
- (j) **ensure timely submission of deliverables by the contractors of services for FWSRBs in PRH estates (para. 3.11(d));**
- (k) **complete the processing of FWSRB applications received under the ECC Scheme as early as practicable (para. 3.30(b));**
- (l) **maintain a consolidated big data platform for recording the food waste collection data obtained from FWSRB contractors’ big data platforms and standardise the data and analyses available from the platforms provided by all the contractors under the ECC Scheme (para. 3.30(c));**
- (m) **draw lessons from the provision of services for FWSRBs in public markets under Contract P with a view to facilitating the deployment of FWSRBs in the follow-on contracts for public markets (para. 3.42(a));**
- (n) **consider adjusting the operating hours of the food waste recycling spots with a view to better catering for public’s needs (para. 3.42(e));**

Other related issues

- (o) **step up efforts in enhancing the response rate of the signees of the Food Wise Charter regarding their feedback on the Food Wise Charter, and consider requiring the participants of the Food Wise Eateries Scheme to provide their feedback on a regular basis (para. 4.14(a) and (b));**

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- (p) set quantifiable performance targets in the work plan for FWHKC and consider conducting a review on the overall effectiveness of FWHKC with a view to determining the way forward of FWHKC (para. 4.14(c) and (d));
 - (q) encourage government departments and public to participate in the trial projects for on-site treatment of food waste (para. 4.23(a));
 - (r) keep under review the operation of the Food TranSmarters by drawing lessons from the difficulties encountered by the participating government departments during the course of the trial projects (para. 4.23(b)); and
 - (s) conduct a holistic review to evaluate the effectiveness of reduction and collection of food waste and determine the way forward (para. 4.23(d)).
21. **Audit has *recommended* that the Director of Environmental Protection, in collaboration with the Secretary for Environment and Ecology, should draw lessons from the previous procurement exercises in conducting future procurement of services for FWSRBs under the ECC Scheme, including examining the costs and benefits of awarding contracts to multiple tenderers under each tendering exercise, and making better estimates of the demand of FWSRBs as far as practicable (para. 4.8(b)).**

Response from the Government

22. The Secretary for Environment and Ecology and the Director of Environmental Protection agree with the audit recommendations.