

LCQ10: Handling of construction waste

Following is a question by the Hon Tony Tse and a written reply by the Secretary for Development, Ms Bernadette Linn, in the Legislative Council today (January 8):

Question:

According to a research publication of the Legislative Council Secretariat, the construction waste generated in Hong Kong in 2022 accounted for 75 per cent of the overall amount of solid waste in the territory, and nearly two-thirds of such construction waste were sent to public fill banks awaiting reuse (e.g. for use in reclamation projects), while the rest was disposed of by other means, including being sent directly to landfills for dumping. Under the existing arrangement, if local reuse cannot absorb all the public fill materials generated in Hong Kong, the surplus fill materials will be sent to the Mainland for handling, for which the Government has to pay a handling fee each year amounting to hundreds of millions of dollars. With the works of the airport's third runway and the reclamation in Tung Chung being completed one after another, and reclamation projects such as the Kau Yi Chau Artificial Islands being deferred, the stockpile of fill materials stranded at public fill banks reached a record high in March last year. In this connection, will the Government inform this Council:

(1) in each of the past five years, of (i) the quantity of construction waste generated in Hong Kong and the methods of handling such waste, (ii) the stockpiles at various public fill banks, and (iii) the quantity of fill materials needed to be sent to the Mainland for handling and the related costs; whether it has made projections on the relevant figures in the coming five years; if so, of the details; if not, whether it will make such projections expeditiously;

(2) whether it has assessed the impact of surplus of public fill materials on the operation, expenditure and estimated closure time of various landfills; and

(3) of the measures in place to reduce the generation of construction waste, address the surplus of public fill materials, as well as step up efforts in combating the problem of illegal dumping of construction waste?

Reply:

President,

Most of the construction waste generated locally is inert construction waste, commonly known as public fill which includes rock, rubble, sand, concrete, asphalt, brick, tile, etc, and is non-decomposable materials that can be reused as construction materials. The non-inert construction waste (such as bamboo and wood pieces) accounts for a smaller portion of the

overall construction waste. The Government has been properly controlling and managing construction waste through reducing generation, proper reuse and recycling, including direct reuse of public fill through matching between projects, or storage of public fill in the two fill banks for future reuse. As reuse in local projects could not absorb all the public fill generated in Hong Kong in recent years, coupled with the fact that the capacities of the fill banks are limited, surplus public fill is required to be delivered to the Mainland for reuse. Non-inert construction waste not suitable for reuse as construction materials would be disposed of at landfills.

In consultation with the Environment and Ecology Bureau (EEB), the consolidated reply to the question (in three parts) raised by the Hon Tony Tse is as follows:

(1) The quantities of construction waste generated locally in Hong Kong from 2019 to 2023 are tabulated below:

Year	Quantity of construction waste generated locally (million tonnes)	Quantity of public fill reused locally (Note) (million tonnes)	Quantity of surplus public fill delivered to the Mainland (million tonnes)	Net increase/decrease of year-end quantity of public fill stored in local fill banks (million tonnes)	Quantity of construction waste disposed of at landfills (million tonnes)
2019	17.6	17.7	7.7	-9.2	1.4
2020	20.7	20.8	0.9	-2.3	1.3
2021	19.3	13.5	1.0	3.5	1.3
2022	18.2	7.2	1.9	7.6	1.5
2023	16.6	7.6	2.5	4.9	1.6

Note: Including the quantities of public fill reused through direct matching of fill-generating and fill-demanding projects, or from the stored public fill in local fill banks.

From 2019 to 2023, the year-end quantities of public fill stored in local fill banks are tabulated below:

Year	Year-end quantity of public fill stored in local fill banks (million tonnes)		
	Tseung Kwan O	Tuen Mun	Total
2019	5.2	4.0	9.2
2020	3.1	3.8	6.9

2021	6.0	4.4	10.4
2022	12.7	5.3	18.0
2023	17.5	5.4	22.9

The Government's expenditure on the management of public fill in the past five financial years is tabulated as follows:

Financial Year	Expenditure (\$ million)
2019-20	1,254
2020-21	1,186
2021-22	855
2022-23	796
2023-24	1,079

The above expenditure mainly includes the operation and maintenance of public fill reception facilities, supply of public fill stockpiled in the fill banks to local projects for reuse, provision of required facilities for disposal of public fill at the disposal ground in the Mainland, delivery of surplus public fill to the Mainland, associated staff costs and administrative arrangement, etc. As the supply of public fill stockpiled in the fill banks to local projects for reuse and the delivery of surplus public fill to the Mainland are both undertaken by a single contractor, there is no cost breakdown of individual operations in the contract.

The Government has been closely monitoring the generation of and the demand for public fill, and has requested relevant departments to provide estimated quantities of public fill generation or demand during the planning and design stages of major projects. The amount of public fill generated locally will vary depending on the quantity and type of projects. We roughly anticipate that the construction industry will generate an average of about 15 million tonnes of public fill annually in the next few years, which is similar to the amount in 2023.

Due to the substantial completion of recent major reclamation works in Hong Kong and the existing fill banks gradually approaching their stockpiled capacities, the local receiving capability of public fill diminished. Hence, there would be more deliveries of surplus public fill to the Mainland for reuse.

We anticipate that the proposed reclamation projects will enable the progressive absorption of public fill. The Government will continue to implement control and management measures to reduce public fill generation and reuse public fill in suitable local construction projects. Only the surplus public fill will be delivered to the Mainland for reuse, and the actual quantity and the associated expenditure are dependent on the progress of the local construction projects.

In addition, according to the relevant estimated disposal amount during the period from 2019 to 2023, the amount of construction waste disposed of at landfills is about 4 000 tonnes per day (equivalent to around 1.5 million tonnes per year). Nevertheless, since the amount of construction waste disposed of at landfills is subject to the number of public and private construction works (including small-scale works such as home renovations and shop demolitions), as well as the effect of business cycle, it is therefore difficult to provide an accurate forecast of the future trend.

(2) At present, construction waste generated from construction works which comprises entirely of inert construction waste or public fill will be directly reused through matching between projects as far as practicable. In accordance with the requirement of the Waste Disposal (Designated Waste Disposal Facility) Regulation (Cap. 354L), the remaining portion will be transferred to the public fill reception facilities for storage and reuse in future and cannot be transferred to the landfills for disposal. As such, the operation, expenditure and closure of the landfills would not be affected by the public fill.

(3) The Government manages the construction waste arising from various types of construction works through a multi-pronged approach, including controlling and managing through reducing generation, proper reuse and recycling.

On the aspect of reducing generation, we request the construction industry to reduce the generation of public fill at source and achieve cut-and-fill balance as far as practicable through proper planning, design and management in projects to minimise the demand on public fill reception facilities.

On the aspect of proper reuse, the generated public fill is either delivered to earth filling and reclamation projects for direct reuse, or delivered to the two fill banks for temporary storage and later reuse.

On the aspect of recycling, the Civil Engineering and Development Department carries out sorting of the public fill and suitable hard materials are recycled as construction materials. The EEB is assisting a local company in identifying suitable venue for setting up production lines to upcycle locally recovered waste materials, including construction waste such as porcelain tiles, ceramics and glass, for high-valued core materials for electricity-free cooling products. By doing so, it can facilitate energy saving and decarbonisation in buildings, as well as reduce construction waste disposal at the same time.

Moreover, the Government implemented the Construction Waste Disposal Charging Scheme in order to put the "polluter pays" principle to work and provide economic incentives for encouraging the construction industry to reduce construction waste at source. For the construction waste required for disposal at the designated waste disposal facilities as stipulated in Cap. 354L, the Government will collect the prescribed charges in accordance with the Construction Waste Disposal Charging Scheme.

To enhance efforts in combating illegal disposal of construction waste, the Environmental Protection Department (EPD) has been maintaining close liaison with relevant government departments. Through inter-departmental collaboration, relevant departments share information, exchange intelligence, collectively monitor the overall situation of illegal disposal of construction waste, and make concerted efforts to tackle illegal disposal activities according to their respective purviews. Regarding law enforcement, the EPD proactively conducts inspections to closely monitor the locations in different districts where illegal disposal of construction waste frequently occurred, follows up complaint cases on-site, and analyses intelligence for carrying out blitz operations. In the meantime, the EPD has made use of technologies to facilitate law enforcement and enhance the deterrent effect, by installing surveillance camera systems at locations across the territory where illegal disposal of construction waste frequently occurred. The systems currently cover about 250 locations and operate round-the-clock under all weather conditions. The Government has also increased the fixed penalty for the offence of "unlawful depositing of waste" from \$1,500 to \$6,000 in 2023 to enhance the deterrent effect on illegally dumping of large amount of construction or other waste.

In addition, to assist the public and small and medium-sized renovation companies to properly handle construction waste generated by small-scale renovation works, the EPD has commenced a pilot scheme subsidised by the Recycling Fund and led by the trade for collecting and recycling construction waste from small-scale renovation works since 2021, seeking to reduce illegal disposal of construction waste at source.

After the implementation of the above-mentioned multi-pronged measures, the amount of construction waste illegally disposed of in Hong Kong has significantly decreased by nearly 90 per cent from the peak of about 9 000 tonnes in 2017 to about 1 000 tonnes in 2023 (see Annex). The EPD will also review the situation of illegal disposal of construction waste in different districts from time to time, and flexibly deploy resources and manpower based on the latest circumstances, so as to enhance the deterrent effect and effectiveness of law enforcement.