

LEGISLATIVE COUNCIL BRIEF

Waste Disposal Ordinance
(Chapter 354)

Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Amendment of Schedules) Notice 2016

INTRODUCTION

A The Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Amendment of Schedules) Notice 2016 (“Amendment Notice”), made by the Secretary for the Environment at Annex A, will be published in the Gazette on 6 May 2016 and will be tabled at the Legislative Council for negative vetting on 11 May 2016. It seeks to increase the public fill charge, the sorting charge and the landfill charge (collectively “construction waste disposal charges”) under the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N) (“CDCW Regulation”) with effect from 7 April 2017.

JUSTIFICATIONS

Present Position

2. In general, construction and demolition (“C&D”) materials of different nature are abandoned from our daily construction works, most of which are reusable inert materials such as rock, rubble, boulder, earth, soil, sand, concrete, asphalt, brick, tile, masonry and used bentonite. We encourage on-site sorting by works contractors to reuse the reusable inert materials in suitable projects. These reusable C&D materials are generally referred to as “public fill”¹. Two fill banks, namely the Tseung Kwan O Fill Bank and the Tuen Mun Fill Bank, were set up in 2002 and 2003 respectively to stockpile surplus public fill generated from local construction works pending reuse. The fill banks are each coupled with a sorting facility to cater for situations where on-site sorting is

¹ Or “inert construction waste” in the context of the CDCW Regulation.

infeasible. Since 2002, local reuse cannot absorb all public fill generated in Hong Kong. We then commenced the delivery of surplus public fill to Taishan (台山市) for reclamation in 2007 after entering into an agreement with the State Oceanic Administration.

3. On the other hand, mixed construction waste containing non-inert C&D materials such as wood waste and other miscellaneous substances may only be disposed of at the landfills. Previously up to half of our landfilled waste was mixed construction waste². In order to promote waste reduction and recycling in the construction industry, we implemented the Construction Waste Disposal Charging Scheme in 2006, imposing construction waste disposal charges comprising (i) a public fill charge (at \$27 per tonne), (ii) a sorting charge (at \$100 per tonne) and (iii) a landfill charge (at \$125 per tonne). These charges were at that time set at levels that represented 100% recovery of the full costs of the relevant construction waste handling facilities. The stratified disposal charges were intended to provide economic incentives for construction waste producers to reduce waste and to practise sorting. In response, the construction industry has adopted various construction waste reduction measures such as selective demolition, on-site sorting and reuse/recycling, modular building design and pre-casting of building components etc. As a result, the disposal of mixed construction waste at the landfills has declined substantially. Statistics on the disposal of construction waste at the relevant designated waste disposal facilities are summarized at Annex

B

4. At present, construction waste management is mainly undertaken by the Civil Engineering and Development Department (“CEDD”) and the Environmental Protection Department (“EPD”). In 2015, the various construction waste handling facilities operated by the two departments received about 38,000 tonnes per day (“tpd”) C&D materials³ in total. Over 90% were public fill and the rest was mixed construction waste. Notwithstanding the efforts made and the waste reduction achieved in the past decade, mixed construction waste still makes up over 25% of all waste disposed of at the three landfills. Even though public fill is reusable, temporary stockpiling involves high opportunity cost for the land that the two fill banks occupy and the

² For instance, in 2002, among the 7 Mt of solid waste being disposed of at the three landfills, about 48% of them were construction waste, 45% were municipal solid waste (“MSW”) and 7% were other special waste.

³ Excluding such waste that has been reused or recycled after generation without going through any designated waste disposal facilities.

ultimate delivery to the Mainland is also costly. In recent years, an increasing amount of various C&D materials is generated and abandoned from our daily construction works, causing a heavy burden on our construction waste handling facilities.

REVIEW OF THE CHARGING SCHEME

5. It is an established policy that government fees should in general be set at levels adequate to recover the full costs of providing the goods or services. Since the existing construction waste disposal charges have not been adjusted since introduction in 2006, we consider it necessary to review the construction waste disposal charges having regard to the established fees and charges policy and the “polluter pays” principle⁴. Further, the effectiveness of the existing charges in reducing construction waste has diminished over time.

Proposed New Charges and Implementation Timetable

6. Having conducted a costing review, we *propose* to –
- (a) increase the landfill charge and the public fill charge from \$125 per tonne to \$200 per tonne and from \$27 per tonne to \$71 per tonne respectively, so as to achieve full-cost recovery; and
 - (b) increase the sorting charge from \$100 per tonne to \$175 per tonne, so as to maintain the current differential of \$25 between this charge and the landfill charge in order to promote the use of sorting facilities. At this proposed fee level, the sorting charge will only attain cost recovery rate of 66% (i.e. \$90 below its full cost). But charging at its full-cost recovery level (which is \$265 per tonne) will be higher than the proposed landfill charge and run contrary to our intention of promoting the use of the sorting facilities.
7. As specified in the Amendment Notice, the proposed construction waste disposal charges will take effect on 7 April 2017 and the new charges will apply irrespective of whether a billing account is

⁴ The existing cost recovery rates are in the region of about 40% to 60% (at 2017-18 price level).

opened before or after the commencement date. A reasonably substantial notification period is allowed before actual implementation so that stakeholders in the construction industry may re-negotiate their contracts if necessary.

Further Review of the Disposal Charges in Future

8. We are taking concurrent actions in taking forward the various initiatives committed under *Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022* (“*The Blueprint*”), which has set an ambitious target to reduce the per capita municipal solid waste (“MSW”) disposal rate by 40% by 2022. Amongst other things, MSW charging will be a key policy driver under *The Blueprint*. Following an extensive public engagement, the Council for Sustainable Development (“SDC”) recommended amongst other things that a weight-based gate fee be imposed on the disposal of MSW delivered to the landfills or refuse transfer stations by private MSW collectors. Based on the feedback received during its public engagement, the SDC advised that the community would find the MSW gate fee at \$400 to \$499 per tonne acceptable.

9. The policy intent of introducing quantity-based MSW charging in Hong Kong is to create an economic incentive to drive the necessary behavioural change so as to promote waste reduction and recovery. As mixed construction waste is occupying landfill space in a similar way as MSW does, we need to review the charging basis and the charging levels under the Construction Waste Disposal Charging Scheme when we consider MSW charging. Of note is that the MSW gate fee as mentioned in the SDC’s report (at \$400 to \$499 per tonne) is higher than the currently proposed landfill charge for mixed construction waste. As we are concurrently making necessary preparation for the implementation of MSW charging, we will further review the construction waste disposal charges in the light of the charging principles in respect of the MSW gate fee having regard to the policy objective of driving behavioural change and the need to address the differential (if any) between landfill charge for construction waste and the MSW gate fee.

COMPLEMENTARY MEASURES

Enhanced Control of Fly-tipping of Construction Waste

10. While construction waste is subject to a statutory disposal charge,

some free-riders may seek to evade the charge through fly-tipping. The proposal to increase the construction waste disposal charges has led to concerns about aggravation of the fly-tipping problem, and we aim to enhance the existing control using appropriate technologies. In this regard, EPD completed a trial scheme of using surveillance cameras at 12 black spots of fly-tipping of construction waste to aid our investigation. It is generally observed that the installation of surveillance cameras at the black spots could help provide useful information for identification of the fly-tippers, and also help deter fly-tipping at the black spots to some extent. The information collected from the trial scheme would facilitate the planning of sustained deployment of an extended surveillance camera system.

11. Furthermore, building upon relevant studies of the Construction Industry Council (“CIC”), CEDD launched in October 2015 a pilot trial to examine the technical feasibility and stakeholder acceptance of mandating the use of positioning technology, e.g. the global positioning system, at construction waste collection vehicles such as dump trucks. This automatic monitoring technology may help track and log their activities, which may in turn deter fly-tipping of construction waste and facilitate investigations. The records may be used to assist investigations in fly-tipping incidents. We may also conduct random checks of the records to ensure that the positioning system installed in a particular vehicle is operating and functioning as required.

12. Initial findings from CEDD’s pilot trial suggest that positioning technology is technically mature and there are affordable applications in the market. Indeed the trade is also gradually adopting the technology for fleet management purpose. Technical issues aside, we are aware that there could be possible concerns on privacy, compliance cost and other operational issues. To this end, we would continuously engage the affected trades through the pilot trial.

13. Subject to the satisfactory conclusion of CEDD’s pilot trial and consideration of relevant legal implications, we will consider mandating the use of positioning technology in construction waste collection vehicles through suitable amendments to the Waste Disposal Ordinance (“WDO”) such that in future, vehicles that collect construction wastes would be required to install a positioning system with suitable tracking, logging and data management functions. Feedback received from the trades during the pilot trial will be taken into account when developing the proposed requirement.

Promotion of Construction Waste Reduction and Recycling

C 14. It would be more effective to achieve the intended waste management objective of the Construction Waste Disposal Charging Scheme if the proposed adjustments to the construction waste disposal charges can be coupled with appropriate waste reduction and recycling initiatives. Latest developments on this front are set out at Annex C.

LEGISLATIVE TIMETABLE

15. The legislative timetable is set out as follows –

- (a) Publication in the Gazette: 6 May 2016; and
- (b) Tabling at the LegCo: 11 May 2016.

IMPLICATIONS OF THE PROPOSAL

D 16. The proposal of increasing the construction waste disposal charges will have environmental, sustainability, economic, financial and civil service implications as detailed at Annex D. The proposal is in conformity with the Basic Law, including the provisions concerning human rights. It will not affect the binding effect of the WDO and its subsidiary legislation. There are no productivity, family and gender implications.

PUBLIC CONSULTATION

17. In October 2015, at an engagement session organized by the Hong Kong Green Building Council (“HKGBC”), representatives from major trade organizations in the construction industry and other relevant stakeholders deliberated the problem of construction waste management in Hong Kong. There was broad consensus that the current construction waste disposal charges are far too low⁵.

18. We consulted the LegCo Panel on Environmental Affairs on 21

⁵ As a comparison, in Germany, unsorted construction waste is charged \$750 to \$1,508 per tonne and in Singapore, it is \$471 to \$495 per tonne.

December 2015. The Panel indicated support to increasing the charging levels. At the meeting of the Waste Management Subcommittee of the Advisory Council on the Environment on 29 January 2016, members were generally supportive of the proposal and made further suggestions, including further liaison with the trade. At another information session organized jointly with CIC and HKGBC on 26 April 2016, we provided updates on the charging review and affirmed the support from the trade. We will continue to keep the stakeholders updated and engage them in further exploring the issues relating to fly-tipping, interface with MSW charging and other operational issues.

PUBLICITY

19. A press release will be issued before the publication of gazette notice and a spokesperson will be available to answer public enquiries.

ENQUIRIES

20. For enquiries on this brief, please contact Mr Samson Lai, Assistant Director (Waste Management Policy) at 3509 8614 or email to samsonlai@epd.gov.hk.

Environment Bureau / Environmental Protection Department
4 May 2016

Waste Disposal (Charges for Disposal of Construction Waste) Regulation
(Amendment of Schedules) Notice 2016

Section 1

1

Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Amendment of Schedules) Notice 2016

(Made by the Secretary for the Environment under section 23 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354 sub. leg. N))

1. **Commencement**
This Notice comes into operation on 7 April 2017.
2. **Waste Disposal (Charges for Disposal of Construction Waste) Regulation amended**
The Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354 sub. leg. N) is amended as set out in sections 3 to 6.
3. **Schedule 1 amended (charges for disposal of construction waste at landfills)**
 - (1) Schedule 1, Part 2, item (a)—
Repeal
"\$125"
Substitute
"\$200".
 - (2) Schedule 1, Part 2, item (b)—
Repeal
"\$12.5"
Substitute

Waste Disposal (Charges for Disposal of Construction Waste) Regulation
(Amendment of Schedules) Notice 2016

Section 4

2

- "\$20".
- (3) Schedule 1, Part 2, item (c)—
Repeal
"\$125"
Substitute
"\$200".
 4. **Schedule 2 amended (charges for disposal of construction waste at refuse transfer stations)**
Schedule 2, Part 2, items (a), (b) and (c)—
Repeal
"\$12.5"
Substitute
"\$20".
 5. **Schedule 3 amended (charges for disposal of construction waste at sorting facilities)**
 - (1) Schedule 3, Part 2, item (a)—
Repeal
"\$100"
Substitute
"\$175".
 - (2) Schedule 3, Part 2, item (b)—
Repeal
"\$10"
Substitute
"\$17.5".

- (3) Schedule 3, Part 2, item (c)—

Repeal

“\$100”

Substitute

“\$175”.

6. Schedule 4 amended (charges for disposal of construction waste at public fill reception facilities)

- (1) Schedule 4, Part 2, item (a)—

Repeal

“\$27”

Substitute

“\$71”.

- (2) Schedule 4, Part 2, item (b)—

Repeal

“\$2.7”

Substitute

“\$7.1”.

- (3) Schedule 4, Part 2, item (c)—

Repeal

“\$27”

Substitute

“\$71”.

- (4) Schedule 4, Part 2, item (d)—

Repeal

“\$2.7”

Substitute

“\$7.1”.

Secretary for the Environment

2016

Explanatory Note

This Notice amends Schedules 1 to 4 to the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354 sub. leg. N) (*Regulation*) to increase the charges imposed in respect of construction waste accepted for disposal at the following waste disposal facilities—

- (a) landfills specified in Part 1 of Schedule 1 to the Regulation (section 3);
- (b) refuse transfer stations specified in Part 1 of Schedule 2 to the Regulation (section 4);
- (c) sorting facilities specified in Part 1 of Schedule 3 to the Regulation (section 5); and
- (d) public fill reception facilities specified in Part 1 of Schedule 4 to the Regulation (section 6).

Annex B

Disposal of Construction Waste at Relevant Designated Waste Disposal Facilities

| Year | Disposal of Inert Construction Waste at Public Fill Reception Facilities # (tonne per day) | Disposal of Mixed Construction Waste at Sorting Facilities (tonne per day) | Disposal of Mixed Construction Waste at Landfills ^ (tonne per day) |
|-------------|---|---|--|
| 2005 | 22 226 | N/A* | 6 556 |
| 2006 | 16 590 | 4 005 | 1 495 |
| 2007 | 17 177 | 2 446 | 1 303 |
| 2008 | 18 585 | 2 084 | 1 452 |
| 2009 | 18 560 | 2 051 | 1 451 |
| 2010 | 28 362 | 2 091 | 1 718 |
| 2011 | 30 688 | 1 156 | 2 681 |
| 2012 | 34 529 | 1 197 | 2 764 |
| 2013 | 34 867 | 1 361 | 2 759 |
| 2014 | 33 947 | 1 591 | 2 811 |
| 2015 | 43 211 | 1 863 | 2 917 |

Excludes inert C&D materials sorted from Sorting Facilities subsequently delivered to Public Fill Reception Facilities.

* The sorting facilities have started operation since 2006.

^ Excludes mixed construction waste sorted from Sorting Facilities and subsequently landfilled.

Construction Waste Reduction and Recycling: Latest Development

Promotion of Reuse and Recycling of C&D materials

Notwithstanding the availability of a Mainland receptor site as an outlet for surplus public fill generated in Hong Kong, it has been our priority to promote local reuse in suitable fill-absorbing projects. For this purpose, a mechanism is in place amongst the works departments under which –

- (a) a Public Fill Committee, chaired by the Director of Civil Engineering and Development, is responsible for vetting public works projects to determine if the generation of C&D materials is minimized and the use of public fill is maximized;
- (b) project offices are required to draw up and implement a C&D material management plan for major fill generation projects. They are required to critically examine alternatives to reduce public fill produced during design stage and to monitor its implementation during construction; and
- (c) public works contractors are required to prepare and implement waste management plan to carry out on-site sorting and implement a trip-ticket system to ensure that public fill and waste are delivered to the appropriate reception sites or facilities.

2. Looking ahead, a number of fill-absorbing projects will attain implementation stage. We will closely monitor developments and will strive to maximize the reuse of public fill in these projects through enhanced coordination.

3. Separately, the Government has been supporting various studies in relation to exploring the feasibility of recycling different materials found in construction waste. For example, in recent years, CIC has been actively researching into the reuse of waste concrete after processing. The report of the relevant study was published in March 2016.

Review by CIC

4. CIC has engaged a consultant to review the development strategy of the Hong Kong construction industry and construction waste management has been included in the review as a key area of study under the theme of “Promoting a Greener Built Environment”.

5. Having completed the first stage of the study, CIC published an interim report in January 2016, which includes amongst other things recommendations of raising the construction waste disposal charges and enhancing the control of fly-tipping through the use of automatic monitoring technologies. We welcome these recommendations and have been making progress in tandem as elaborated in the main text of this brief. As for the other recommendations relating to the reduction, reuse and recycling of construction waste, the broad direction advocated by CIC’s consultancy is to pursue concerted efforts by the Government and the industry to facilitate the development of a vibrant local recycling industry for construction waste with the appropriate treatment technologies, adequate handling capacity as well as effective incentives to promote usage. We will explore the practical feasibility of these suggestions together with the relevant Bureaux and Departments having regard to resource requirements, work priority and other relevant considerations.

Implications of the Proposal

Environmental Implications

In general, the proposed construction waste disposal charges would help strengthen the incentive to reduce construction waste but the extent to which waste reduction can actually be achieved will depend on a wide range of other factors including market demand on recyclables. The construction and recycling industries should be continuously engaged to maximize the waste reduction benefits.

2. The review of possible measures to strengthen the existing control to deter fly-tipping of construction waste could help mitigate the possible impacts on the environment arising from such activities.

Sustainability Implications

3. The proposal to increase the construction waste disposal charges would help strengthen the incentive to reduce and recycle construction waste and ease the pressure on the landfills. It would lessen the adverse impacts of development on the environment and contribute to the sustainable development of our city.

Economic Implications

4. The construction industry will have to face an increased disposal cost. We estimated that the proposed charges could lead to an increase in the aggregate project cost for the entire construction industry by around \$643 million per year. The impacts on certain segments of the industry would understandably be larger, given the greater volume of construction materials involved in their activities, e.g. demolition and site preparation, construction of buildings, and civil engineering.

5. Although the increase in disposal charges would enhance the incentive for the industry to reduce or recycle construction waste, the room for further waste reduction might not be large in the short term, as the creation of construction waste is to a certain extent inevitable in construction activities, and could become rather inelastic to the disposal

charge once certain threshold is reached. As such, the additional construction cost might ultimately pass through to higher private property prices and tender price of public works. Over the longer term, the internalised environmental costs should provide some incentive for the industry to advance its construction technology to the more environmentally friendly and sustainable direction.

Financial and Civil Service Implications

6. The proposed fee adjustments would help improve cost recovery rates to the range of 66% to 100% of the relevant construction waste handling facilities, namely, landfills, sorting facilities and public fill reception facilities. If disposal amounts remain at the 2014 levels, we estimate that the proposed disposal charges could lead to an increase in the annual revenue by around \$643 million. If waste reduction could be achieved, there would also be savings in contractual payment to the operators of fill banks, landfills and sorting facilities but the magnitude of such reduction (and hence savings) could not be ascertained at this stage.

7. The proposed fee adjustments would have implications on expenditure of public works. Based on the actual disposal figures between 2011 and 2013 and assuming the same level of construction activities and waste reduction/recycling, additional disposal cost of \$329 million per annum would have to be incurred as far as public works are concerned⁶, representing an increase by 150% compared with the present situation⁷. Based on the average of total public works expenditure under the Capital Works Reserve Fund, the Housing Authority, and the MTR Corporation Limited for the three financial years from 2011-12 to 2013-14, government works will incur additional disposal cost of about \$270 million and works under Housing Authority and MTR Corporation Limited will incur \$59 million. Such additional costs in total represent about 0.4% of the public works expenditure. If waste reduction could be achieved, the estimated additional cost arising from fee increase would be less.

⁶ It includes projects funded by the Housing Authority, the MTR Corporation Limited and Capital Works Programme of the Capital Works Reserve Fund, etc.

⁷ Between 2011 and 2013, there were a total of 1 601 active billing accounts for public works and the average disposal charges paid from these accounts is \$220 million per annum.

8. EPD has absorbed the manpower requirement within its existing resources for the current review of the Construction Waste Disposal Charging Scheme. For any initiatives to explore or implement new construction waste management measures, EPD will endeavor to absorb the resource requirements from within its existing resources as far as possible and where necessary, justify and seek additional resources required in accordance with the established mechanism.