

## **Survey Findings on the Impacts of Plastic Shopping Bag Charging**

### **Introduction**

This paper briefs the Waste Management Subcommittee of the Advisory Council on the Environment (“WMSC”) of the survey findings on the impacts of plastic shopping bag (“PSB”) charging in reducing the excessive use of PSBs since its full implementation on 1 April 2015.

### **Background**

2. Plastic bags are usually made of materials that are not easily degradable. In 2014, about 665 tonnes per day of plastic bags were disposed of at the landfills, and a considerable portion of these bags are PSBs. The extensive use of PSBs and their subsequent disposal creates pressure on the already stretched landfill resources. To address the problem, the Government launched the Environmental Levy Scheme on Plastic Shopping Bags (“PSB Levy Scheme”) on 7 July 2009 as the first producer responsibility scheme (“PRS”) to create an economic incentive to encourage reduction in the distribution of PSBs in 3 000 to 3 500 retail outlets, which according to the criteria set out in the relevant legislation, should be registered under the scheme. These outlets were mostly supermarkets, convenience stores and medicare and cosmetics stores. The relevant registered retailers were required to charge their customers an amount of 50 cents as an environmental levy for each PSB provided to them. The PSB Levy Scheme helped drastically reduce PSB distribution from the registered retail outlets.

3. Subsequently in May 2011, the Government launched a three-month consultation, which showed that the community generally supported extending the coverage of the PRS. The Product Eco-responsibility (Amendment) Bill 2013 was later introduced into and enacted by the Legislative Council (“LegCo”) to provide for the full implementation of PSB Charging with effect from 1 April 2015. Consequent to the extension, all retailers in Hong Kong, irrespective of operation and business nature, have to charge customers not less than 50

cents for each PSB provided in retail sales of goods. Exemptions are provided for PSBs used for food hygiene reasons and those for the pre-packaging of goods. Bags provided with services fall outside the scope of regulation. To streamline the compliance system, the PSB charge would be retained by the retailer, while a fixed penalty of \$2,000 for non-compliance was introduced to enhance enforcement efficiency and provide the necessary deterrent effect.

## **Impacts of PSB Charging**

### PSB Disposal at Landfills

4. Since 2009, the Environmental Protection Department (“EPD”) has been conducting annual disposal surveys at landfills and refuse transfer stations (“RTSs”) as part of the annual waste composition surveys of municipal solid waste. In accordance with the established survey methodology, we randomly selected a total of 282 waste samples from landfills and RTSs between October and December 2015 for annualising the full-year disposal figures of PSBs in 2015. While the PSB charging was fully implemented with effect from 1 April 2015, and the estimated full-year disposal figures, with an overall margin of error of around 10% at a confidence level of 95%, is statistically sound and valid. A comparison with the disposal figures in 2014 is set out in Annex A.

5. Overall, the total number of PSBs disposed of at landfills in 2015 dropped by 25% from some 5.24 billion in 2014 to about 3.93 billion of PSBs in 2015. This shows that extending PSB charging has helped reduce PSB disposal at the landfills further, in line with the overseas experiences which suggest that the application of an economic disincentive at the retail end could reduce PSB distribution and disposal.

6. On a sectoral basis –

- (a) for retail categories that have been covered under the PSB Levy Scheme (i.e. supermarkets, convenience stores and medicare and cosmetics stores), the total PSB disposal was estimated to have reduced by about 35%. As most of the retail outlets were already covered under the regulation before its extension, the reduction could be largely attributable to PSBs distributed by retail outlets falling outside the original scope of the scheme;

- (b) for the non-food-related retail categories, the estimated reduction ranged from 34% for fashion and footwear shops to some 83% for newspaper and magazine stores. As the products being sold by these retail outlets do not qualify for food hygiene exemption, the drastic reduction in the disposal figures of PSBs from these outlets shows that the full implementation of PSB charging has been most impactful on these categories; and
- (c) the food-related retail categories registered a relatively modest reduction, due to the fact that their products are largely covered by the food hygiene exemption. Yet, it is worth noting that the disposal of PSBs from bakeries and cake shops dropped by about 20%, which could be partly attributable to the trade's response to the community's call for the avoidance of multiple-layer wrapping of bakery items. In the case of cooked food outlets, the situation remained largely the same before and after the full implementation of PSB charging.

7. The landfill disposal survey shows that the disposal of “Other Bags”, i.e. PSBs bearing no logos or signs that show their sources, dropped by about 25%. Since “Other Bags” comprise a significant portion of the PSBs, to complement the above disposal survey, we commissioned a follow-up survey to assess the possible sources of these PSBs<sup>1</sup>. Fieldwork of the survey has been completed and the preliminary findings of the data obtained show that about 70% of these “Other Bags” could have been distributed from food-related retail establishments and eligible for exemption for food hygiene reasons. Assuming the disposal of “Other Bags” from such establishments in 2014 was at a similar level as 2015, we estimated that the impact of the full implementation of PSB charging on the disposal of “Other Bags” from non-food-related retail establishments could be well above the aggregated figure of 25%.

8. Apart from the number of PSBs disposed at landfills, as suggested by the Audit Commission in its report published in October 2015, we have also carried out an analysis of the weight of the PSBs disposed of at the landfills as shown in Annex B. As compared to the figure in 2014, there is a drop of about 26% in 2015. In addition, the

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<sup>1</sup> A consultant was commissioned in late March 2016 to conduct interviews at sampled retail outlets to identify the sources, quantities, types and uses of “Other Bags” distributed by them.

Audit Commission also recommended the conduct of dedicated surveys to track behavioural changes of consumers and to strengthen actions to collect statistics for impact assessment. To this end, we have commissioned of the “Other Bags” survey discussed in paragraph 7 above and the opinion survey expounded in the next paragraph.

### Opinion Survey

9. Apart from the disposal survey, we also conducted a telephone survey to solicit public opinion and feedback on possible behavioural change in response to the full implementation of PSB charging across the board. The survey, which was conducted between February and March 2016, covered some 1 000 respondents. The responses about the scheme were generally positive, as shown below –

- (a) 99% of the respondents were aware of the full implementation of PSB charging since April 2015;
- (b) 85% of the respondents observed that retail outlets reduced PSB distribution following the implementation of the full implementation of PSB charging and non-compliance was not common; and
- (c) 79% of the respondents agreed that the full implementation of PSB charging could strengthen the adoption of the green habit of “Bring Your Own Bag” (“BYOB”) by the general public.

### Publicity and Compliance Facilitation

10. Apart from mounting extensive publicity, we also set up a dedicated hotline since mid-2014 for the trade and the public to make enquiries and complaints. The relevant statistics are summarised at Annex C. The number of enquiries and complaints has been gradually decreasing from over 4 800 in the beginning of the launch to about 150 cases in May 2016, which indicates that the trade and public are getting more and more familiar with the scheme. We will maintain a suitable level of publicity and public education programmes to sustain public awareness of the importance of BYOB culture.

### Enforcement Actions

11. In the first month after the commencement of the PSB charging,

we adopted an educational and publicity-based approach by giving verbal warnings and on-site explanations of the legal requirements to retailers who were found to have contravened the requirements<sup>2</sup>. Starting from 1 May 2015, immediate enforcement actions have been taken against contraventions. As at end May 2016, 222 fixed penalty notices were issued to non-complying retailers involving different types of retail outlets. We will take into account the various statistics in paragraphs 5 to 9 when planning for compliance facilitation and enforcement actions.

### PSB Distribution by Retailers

12. To better monitor the distribution of PSBs, we have invited the Hong Kong Retail Management Association (“HKRMA”) to administer a voluntary reporting system under which members of HKRMA would be encouraged to provide information on their PSB usage on a yearly basis. HKRMA advised in May that a total of 17 retailers participated in the voluntary reporting. A total of 47 million PSBs were distributed between 1 April 2015 and 31 March 2016 from 1 922 retail outlets operated by them.

### Proceeds of PSB Charges

13. We have been encouraging retailers to donate the proceeds of PSB charges to support environmental or other charitable causes. To this end, a poll was conducted between April and May 2016. Questionnaires were sent to the some 240 retail chains and 39 responses were received. They showed that some retail chains had either donated or had plans to make donations, and the sum involved in each case ranged from a few hundred dollars to over \$1 million. While the number of responses was relatively limited, the poll helped indicate that some individual retailers did designate the PSB charges received for environmental or other charitable purposes. We would continue to appeal to the trade.

## **Way Forward**

14. WMSC is invited to note the above findings on the impacts of PSB charging in reducing the excessive use of PSBs. We will continue to monitor developments and arrange appropriate publicity and public

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<sup>2</sup> The arrangements were meant to enable retailers and members of the public to better adapt to the new requirements to facilitate the smooth implementation of PSB charging.

education to sustain the impact of the initiative.

**Environmental Protection Department**  
**June 2016**

## Annex A

### Findings of the Surveys on Disposal of Plastic Shopping Bags (“PSBs”) Estimated Annual Disposal by Number of Bags

	Number of PSBs disposed of at landfills		Year-on-Year Percentage Change (%)
	2014	2015 <sup>(3)</sup>	
	Million/Year (%) <sup>(1)</sup>	Million/Year (%) <sup>(1)</sup>	
<b><i>Retail Categories Already covered under the PSB Levy Scheme <sup>(1)</sup></i></b>			
Supermarket	59.40 (1.13%)	54.85 (1.40%)	-7.66%
Convenience stores	15.54 (0.30%)	18.71 (0.48%)	+20.40%
Medicare and Cosmetic Stores	80.22 (1.53%)	27.76 (0.71%)	-65.40%
<b><i>Sub-total <sup>(2)</sup></i></b>	<b>155.15</b> <b>(2.96%)</b>	<b>101.31</b> <b>(2.58%)</b>	<b>-34.70%</b>
<b><i>Food-related Retail Categories</i></b>			
Bakeries and Cake Shops	377.38 (7.20%)	300.65 (7.65%)	-20.33%
Cooked Food Outlets	315.34 (6.02%)	312.62 (7.95%)	-0.86%
<b><i>Non Food-related Retail Categories</i></b>			
Department Stores and Home Accessories Shops	40.10 (0.76%)	22.59 (0.57%)	-43.67%
Books, Stationeries, Gifts and Novelties Shops	21.88 (0.42%)	7.07 (0.18%)	-67.69%
Fashion and Footwear Shops	59.61 (1.14%)	39.25 (1.00%)	-34.16%
Electrical and Telecom Shops	12.92 (0.25%)	7.25 (0.18%)	-43.89%
Newspaper and Magazine Stores	87.46 (1.67%)	15.24 (0.39%)	-82.57%
<b><i>Others <sup>(4)</sup></i></b>	4171.99 (79.59%)	3124.18 (79.49%)	-25.12%
<b><i>Sub-total <sup>(2)</sup></i></b>	<b>5086.67</b> <b>(97.04%)</b>	<b>3828.85</b> <b>(97.42%)</b>	<b>-24.73%</b>
<b>Total <sup>(2)</sup></b>	<b>5241.82</b> <b>(100.00%)</b>	<b>3930.17</b> <b>(100.00%)</b>	<b>-25.02%</b>

Note:

- (1) Individual retail outlets may fall outside the scope of the PSB Levy Scheme.
- (2) Figures may not add up to total due to rounding off.
- (3) Annualising the survey findings between October and December 2015 to estimate the full-year figures in 2015.
- (4) PSBs bearing no logos or signs that show their sources.

**Findings of the Surveys on Disposal of Plastic Shopping Bags  
Estimated Annual Disposal by Weight**

<b>Year</b>	<b>Total weight in tonnes</b>
2010	67 991
2011	72 995
2012	78 846
2013	67 171
2014	74 334
2015	55 042

Note: The above figures were arrived at through the same landfill disposal surveys mentioned in paragraph 4 of the paper.



**Number of Enquiries and Complaints since  
Full Implementation of Plastic Shopping Bag Charging <sup>(1)</sup>**

Month	No. of Enquiries & Complaints <sup>(2)</sup>
April 2015	4 864
May 2015	2 191
June 2015	1 027
July 2015	619
August 2015	515
September 2015	352
October 2015	329
November 2015	304
December 2015	243
January 2016	191
February 2016	120
March 2016	136
April 2016	148
May 2016	152
<b>Total</b>	<b>11 191</b>

Note:

- (1) A dedicated hotline was set up since mid-2014 for the trade and public to inquire about the new legislative requirements and report suspected non-compliance.
- (2) The majority of the cases (over 91%) were general enquiries on the scope of regulation, exemption arrangements, etc. Others (around 7.5%) were reports against specific retailers related to their charging practices, and expressions of opinion about the initiative. A small number (around 1.5%) were reports of suspected contravention cases.