



WASTELINE : Edition 1/2020

The Newsletter of the Hong Kong Waste Management Association
Web Site: www.hongkongwma.org.hk

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Message from the Editor:
This Newsletter requires your participation. We would like to hear your experiences in implementing good waste management practices in Hong Kong or overseas. If you have an interesting story to tell, please write to me at david.pegg@arup.com

Learning:
Billie Upcycling Plant

Event:
HKWMA 26th Annual General Meeting



Focus:
Covid-19 Impacts on Waste Management

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MSW Charging: Consequences of Delayed Legislation



Covid-19 Impacts on Waste Management

Covid -19 has impacted our daily lives throughout 2020 but have we stopped to reflect on the waste management impacts of how waste is being handled and treated during the pandemic.

A simple overview of waste generators and waste generated by different sectors highlights that the Waste Disposal Ordinance complemented by guidance from the Centre for Health Protection (CHP) has served Hong Kong robustly and provided resilience in how waste is being handled and treated arising from a pandemic such as Covid -19.

- Healthcare – The treatment and care of Covid 19 patients results in regulated medical waste/sharps. The healthcare sector already has stringent guidelines for handling of clinical and medical waste for disposal at regulated facilities including the Chemical Waste Treatment Centre (CWTC) at Tsing Yi (see subsequent article). Whilst Covid-19 may have resulted in increased levels of Personal Protective Equipment (PPE) disposal the guidelines and protocols for collection and disposal remain robust with enhanced guidance for use of PPE by waste handlers as provided within CHP interim guidelines prepared in response to Covid-19.
- Quarantine sites – to our understanding waste continues to be classified as MSW with enhanced levels of PPE for workers;
- Travel industry (planes, cruise ships) – waste continues to be classified as MSW with enhanced levels of PPE for workers; reusable items such as blankets, food utensils and service trays being subject to routine levels of cleaning and disinfection and occupied spaces (seating areas and toilets) being subject to deep cleansing after each journey.
- Commercial, business and institutional premises – cleaning and disinfection of these types of premises starting to occur on a greater scale and the resulting waste is typically being treated as MSW. The major impact is that waste handlers are being provided increased levels of PPE.
- Households – cleaning and disinfections of residential homes is occurring on a greater scale with waste typically being treated as MSW.

Importantly, the Waste Disposal Ordinance has not required modification throughout the pandemic and has ensured Hong Kong has been handling waste in a manner that is consistent with best practice from leading authorities such as the WHO.

The HKWMA takes the opportunity to recognize and acknowledge the commitment and dedication of all waste operators and front line workers in the waste management industry in protecting the community during Covid-19.

同心抗疫 *Together,*
We Fight the Virus!





CWTC Gears Up for Covid-19

The Chemical Waste Treatment Centre (CWTC) located at Tsing Yi occupying an area of about 2 hectares provides a cradle-to-grave solution for land-based chemical and clinical waste generated in Hong Kong, as well as collection and treatment for marine pollutants (MARPOL waste) generated from ocean-going vessels.

Ecospace Limited (Ecospace), was contracted by the Environmental Protection Department (EPD) of the Hong Kong Special Administrative Region Government to operate the CWTC starting in December 2009. Ecospace strives to protect the environment of Hong Kong by assisting waste producers to handle and dispose of the chemical and clinical wastes properly and safely. Ecospace ensures chemical and mercury contained wastes are handled safely by following a stringent treatment procedure and emission standard, hence preventing toxic materials spillage and pollution caused to our environment.

During the COVID-19 pandemic, Ecospace has been defending and safeguarding Hong Kong's health and safety by offering professional and uninterrupted terminal treatment to the clinical waste generated by over 180 public hospitals, private clinics and laboratories. Since the surge of coronavirus cases in January 2020, additional clinical waste and the raise in public concerns in regards to clinical waste treatment have possessed a new challenge to the facility, which needs to be handled with care by a team of experts and special technical knowhow. On top of that, the Ecospace team had to compete with time to treat the waste within 48 hours upon waste arrival. After all, safe treatment and disposal of clinical waste is a critical final step to safeguard the community.

The Ecospace Clinical Waste Reception Team has therefore tightened up their best-practice hygiene and disinfection protocols from the first warnings. Personal Protective Equipment (PPE) and hand sanitizer have been secured for every staff; checking temperatures of all staff and waste collectors became a must at site entrances. All trucks arriving – and leaving – were rigorously disinfected. While the new preventive measures stretched personal protective gear and disinfectant resources at first, within a few days the COVID-19 handling responsibilities had become employees' commitment to the public health of Hong Kong. The menace of the known hazard of COVID-19 was overcome by professional knowledge, discipline to strictly follow the safety protocols, devotion with support of the team and management to stand firm in their job. From our front line workers to the top management of Ecospace, we all have been proud of serving the Hong Kong community by steadfastness in our positions with our commitment and professionalism.



Medical Waste for Treatment



Worker with Enhanced PPE



MSW Charging: Consequences of Delayed Legislation

The Hong Kong Waste Management Association has been in support of MSW Charging since its inception and held many events to promote the benefits and share experience from other Cities and Authorities that have already embarked on MSW Charging Schemes, in particular Taiwan and Korea that have similar cultural and waste management challenges to Hong Kong.

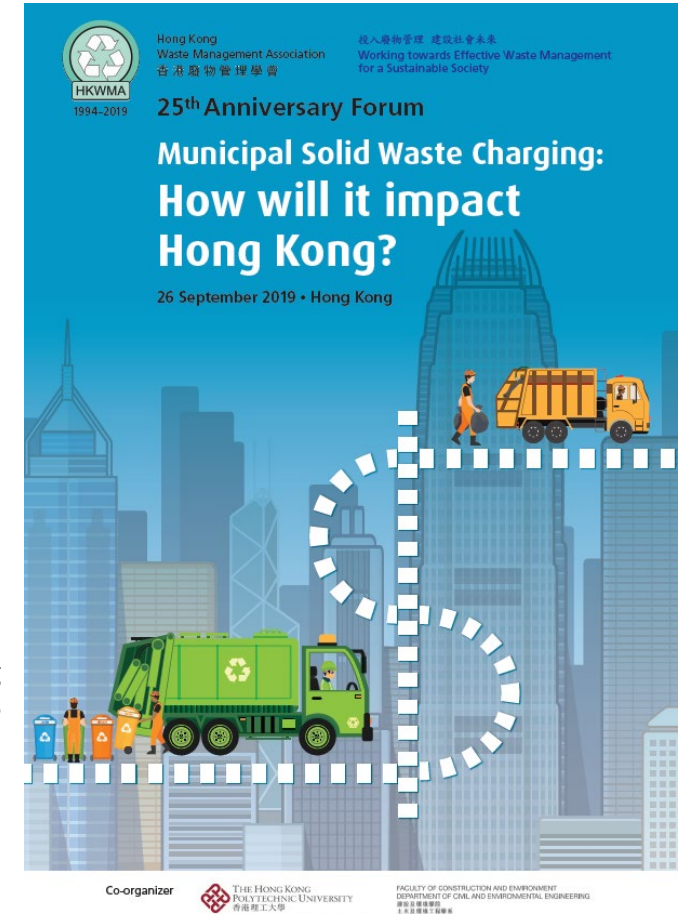
In June 2020 time expired on progressing the legislation necessary to implement the long-awaited MSW Charging Scheme with legislators voting to shelve progress of the bill within the previous legislative session. The recent Policy Address 2020 has seen specific reference to the Legco House Committees decision to study the bill in the current legislative year as well as the Environmental Bureaus intention to launch a long-term strategy blueprint on waste management. These initiatives when combined will give a renewed urgency to tackle the looming waste management challenges facing Hong Kong.

Since issue of the Blueprint for Sustainable Uses of Resources 2013-2022 the target to reduce the per capita disposal has not trended towards the 0.8 kg/person target set for 2022. The blue print placed significant emphasis on diversion of waste from landfill through provision of infrastructure and governance such as charging schemes and producer responsibility schemes.

To wean the City off its reliance on landfill and the ability to capture and develop a commercially viable and sustainable recycling industry requires there to be in place mechanisms to make other disposal or recycling choices more attractive than disposal to landfill. The implementation of MSW Charging has been seen to affect substantive change in people's behavior towards recycling and recovery of resources, especially when coupled with source separation. This in turns yields a larger supply of resources for the recycling industry to operate in a sustainable manner. The potential increase in supply of recyclable material does require there to be in place supporting treatment/processing infrastructure so that the public can be reassured that the material is being properly recycled. The private sector and NGO's are already embarking on numerous initiatives to get themselves ready for more substantive change that may arise from MSW Charging. The Beverage Industry is seeking to reduce Single Use Plastic and NGO's such as Drink without Waste have extensive levels of community engagement and support from the waste sector (see Newsletter 2019 on the New Life Plastics initiatives at Eco-Park that have established recyclable processing infrastructure).

The consequences of inaction are that our landfills will continue to swell and the shift change required in per capita disposal rate will remain unattainable with valuable recycling resources going to waste.

HKWMA stands with many others in the community in support of MSW Charging Legislation for the sustainable future of Hong Kong.





Offer Your Opinion: Effectiveness of Waste Separation Bins

The Ombudsman, Ms Winnie Chiu, announced (30 November) the launch of a direct investigation to examine the management of waste separation bins by the Environment Bureau and the Environmental Protection Department (EPD), and the effectiveness of the relevant programme.

Ms Chiu said, “Waste reduction and recycling is a topic of community concern. Though introduced for years, the waste separation bins’ effectiveness is still called into question. I therefore initiate this direct investigation to examine the management of waste separation bins by the departments concerned and their effectiveness in implementing the relevant programme, with a view to making improvement recommendations where necessary.”

The Ombudsman is inviting information and views from members of the public on this topic. Written submissions should reach the Office of The Ombudsman by 30 December 2020:

The HKWMA will be offering its opinion and views and we would encourage members to share opinions, comments and observations as experienced practitioners with the waste management industry.

https://ofomb.ombudsman.hk/abc/en-us/press_releases/detail/242



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Press Release - Ombudsman probes into management and effectiveness of waste separation bins

30 November 2020



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Opinion



HKWMA 26th Annual General Meeting

28 September 2020

The HKWMA conducted its first virtual AGM on 28 September 2020 due to ongoing Covid-19 social distancing restrictions. A total of 41 members joined the occasion of the 26th AGM with the HKWMA Chairman, Kaimin Shih, commencing proceedings by describing the protocol for the conducting the virtual meeting and an electronic show of hands to accept the minutes of meeting from the last AGM.

The Chairman's report provided an overview of activities in the last year commencing from the 26th AGM HKWMA that had been arranged to celebrate the HKWMA's 25th anniversary. At that time, a forum focused on MSW Charging and How will it Impact Hong Kong was arranged to coincide with the anniversary and a number of international speakers shared experience on MSW Charging. The Chairman remarked that despite these efforts Legco put on hold progression of the MSW Charging Bill in June 2020 and that renewed efforts were required by the industry to highlight the importance of MSW Charging.

The Chairman outlined the HKWMA's ongoing commitment to engage with regional organizations and its continued to support the Two Coast Four Place Forum, that was held in Xian in late 2019, but activities from January 2020 onwards were severely impacted by Covid -19 and the HKWMA efforts had migrated to online media and platforms with articles being published in the Newsletter.

The HKWMA remained actively engaged with Government and attended the recent on-line consultation for the Policy Address and highlighted the importance of MSW Charging to reduce waste and the need to kick start legislations that was put on hold prior to the Legco summer recess.

The Chairman reported on plans to re-engage young members once gathering restrictions are withdrawn and highlighted that the Executive committee had continued to meet regularly and had sought to update the website and social media connectivity for the associations. In terms of membership the association has 283 member and the overall financial position of the association was robust. The audited accounts being approved by a show of hands. Procedurally a number of Exco members retired in 2019/20. These included Rex Lai, Lawrence Cheung, Daniel Tsang. The chairman expressed gratitude for their service and advised that nominations for Exco for the 20/2021 session had been received. All retiring members had applied for continuation of term and this was approved by a show of hands.

Due to impact of Covid-19 the Chairman proposed that the current year subscriptions also cover the period 2021-2022. This was approved unanimously by all members. The AOB received comments from members to enhance collaboration with other international collaboration and relationship with CIWM and provide online CPD and virtual visits during Covid-19 to engage with members more remotely. The AGM conclude with Chairman expressing thanks for the continued support of members.



Executive Committee Members (Chairman, Vice Chairmen, Secretary and Treasurer) Hosting the Virtual AGM



Billie Upcycling Plant: Reusing Textile

Hong Kong-based Novetex Textiles Limited has launched an innovative new mill in Tai Po, the first of its kind in Hong Kong in over 50 years. The mill makes use of the patented system “Billie System” to process up to 3 tonnes of textile waste, excess inventory, unused raw materials per day.

The Billie System is the result of a collaboration between Novetex and the Hong Kong Research Institute of Textiles and Apparel (HKRITA). It combines new and existing technologies to create a waterless solution for recycling textile waste, lowering harmful effects to the environment. No wastewater or chemical waste is generated in the process. The Billie System is almost entirely automated, thereby reducing the labour cost usually associated with textile recycling.

The Billie System comprises six key stages. To begin with, the discarded garments go through a first step of disinfection with ozone, with the ozone subsequently decomposed and released to the atmosphere as oxygen. After disinfection, the non-fiber portion of the garments (e.g. zips and buttons) are trimmed and removed manually, and optical sensors automatically sort the trimmed fabrics into nine colour ranges. The color-sorted fabrics are subsequently transferred by automated guided vehicle into the mechanical recycling system which breaks down the fabrics into fibers. The fibers then go through a two-stage ultra-violet light process for sanitization process, and finally processed into fibre sliver, ready to be exported to the Novotex factory in Zhuhai where it is blended virgin materials and spun into yarn and new fabric.

Looking into the future, Novetex hopes to scale-up their system into industrial scale to solve Hong Kong’s textile waste recycling problem. Hopefully “The Billie System” marks the beginning of many innovative ideas from the private sector in enhancing textile upcycling in Hong Kong.

To know more the HKWMA YMC will be soon be arranging an on-line seminar about this facility.



The Billie System

Source: <https://thebillieupcycling.com/meet-billie>



Recycling of Glass into Eco Bricks

Hong Kong generated over 70,000 tonnes of waste glass containers in 2018 with a significant proportion disposed at landfills (84%). In view of this, in 2018 EPD launched three glass collection contracts for Hong Kong Island & Outlying Islands, Kowloon, and the New Territories. The contractors are required to provide collection bins, arrange collection services and to make beneficial reuse of the glass. Hong Kong Glass Reborn Limited (Glass Reborn) was appointed by EPD as the Glass Management Contractor for the Kowloon region, while Baguio was appointed for Hong Kong Island & the Outlying Islands.

The process at Glass Reborn involves tipping the glass containers into a production line by an automatic bin tipping device. The non-glass portion and the contaminated glass containers are then removed in the preliminary sorting process. After that, the low quality glass (non-standard size, colour, and/or broken glass containers) are diverted out from the production line and fed into a glass crushing system with air-blowers to remove impurities (such as stickers, caps etc.) and subsequently ground into glass sand (<20mm). The glass sand can be used as construction materials for local application (e.g. eco-blocks, fill materials).

The glass containers that are matching with the standard are further sorted into four different colors (i.e. flint, brown, emerald green and olive green) by an automatic color separation equipment and then crushed into glass cullet. The color-sorted glass cullet then goes through a metal removal & purification process, and is exported to an overseas outlet for cullet melting, and ultimately, the glass is “reborn” into new bottles and products. The process at Baguio is similar, without the colour separation process, and creates mixed-colour glass-sand and cullet for mixed uses.

The major beneficial uses of the processed glass include local use in construction materials such as sand replacement, eco-blocks and drainage materials, or can be exported as a product to glass bottle manufacturers subject to quality criteria.

An innovative use of some of the glass was “The Recycled Glass Brick Spiral”, one of the selected entries in the deTour 2020 architectural festival. Local architects teamed up with Glass Reborn to promote glass recycling to mix the color-sorted recycled glass cullets with resin to form semi-transparent recycled glass bricks. The structure demonstrated that glass containers can have a glamorous second life and encouraged local innovation and eco-application.



Source: <http://www.glassreborn.com/>



Hong Kong Community Composting

Launched in March 2019, HKCC has been offering a solution to city-dwellers who want to compost but don't have the space or time to do so at home.

HKCC operates a subscription model with users paying a flat fee for up to 3 users per household to access a bin using the 'Master Lock' app. The founders (or neighbourhood ambassadors) personally meet all new subscribers to provide the first set of compostable bags, check the lock app, and run through the do's and don'ts of what can go into the bin. This helps to provide good quality source separation of food waste. Currently there are over 200 active households across 9 neighbourhood collection points in Hong Kong Island with plans to extend the network in future.

The food waste is collected several times per week and is taken to O.PARK1 in North Lantau, making it the first private domestic source for O.PARK1 (EPD runs pilot schemes in residential estates). Over 38 tonnes of food waste have been diverted from landfill from March 2019 to September 2020.

This scheme is a useful addition to other domestic composting facilities already occurring in some housing estates and some of the outlying islands, and demonstrates that 'early adopters' are willing to pay for proper food waste management.

Co-founder Ming Chan commented 'When we started HKCC, we really didn't expect this level of enthusiasm and support from individuals, businesses and the government. Building management companies still tend to be skeptical but thanks to some very persistent ambassadors, our food waste bins have started to find a home next to residential recycling bins.'

For further information see <https://www.hkcomposting.com/>





On Line Technical Seminar 25 Nov 2020

Mil Mill Recycling Plant

Mil Mill is the only drinks carton pulping factory in Hong Kong. It opened in 2019 in Yuen Long Industrial Estate. The facility was partially funded by the Recycling Fund and developed by the paper recycling company SSID.

Mil Mill has the capacity to accept up to 10 tpd of drinks cartons, around 15% of the approximately 67 tpd disposed at landfill in 2018 (Monitoring of Solid Waste in Hong Kong, 2018).

As with all separation and recycling the key is collection, and a large network of collection points is now available throughout Hong Kong. There is now a network of collection points, including mainly local councilor offices, shopping malls, and office towers. The map on the website is updated regularly as new points are added. Some people even post their open, flattened, rinsed and dried drinks cartons to the factory directly.

Mil Mill is also the brand for the paper products – toilet paper, M-fold hand towels, and pop up tissues. These products are made from office paper collected and pulped in Hong Kong, then shipped to a paper mill in Thailand for production and returned.

This is an example of a cross-boundary circular economy and regional collaboration where a waste product initially imported from around the world (office paper) is used, discarded, collected and pulped in Hong Kong, recycled into new products for use in Hong Kong, before finally being disposed after use in Hong Kong. The products displace the use of cut forests for tissue product, have relatively short transport distance, and provide an outlet for our office paper.

Some of the technical challenges involved in the development of the plant included finding and siting of the factory, achieving the water discharge standard, and achieving the water discharge standard. The pulp has a 'shelf life' of a few days, which meant it was critical to find a partner within a short distance to process the material. The conversion from scrap paper (a 'waste') to pulp (a product) within Hong Kong increases the value and removes the concerns associated with exporting 'waste' products to developing countries.

Mil Mill operates an educational facility for schools and groups, and HKWMA will arrange a visit for members when the meeting restrictions allow.

For further information, including collection points, see: <https://www.milmill.hk/>





Events for your Diary

Recently Completed Events

Date	Event	Organization
26 Sept 2019	25 th Year Anniversary Event and AGM	HKWMA
26 Sep 2019	Municipal Solid Waste Charging: How will it impact Hong Kong ?	HKWMA
24 Sep 2019	Food Smart Conference for the Food and Beverage Trade	HKPC with HKWMA Support
27-Sep 2019	13 th Two Coasts Hong Kong and Macao Forum on Sustainable Solid Waste Management	
31 Oct 2019	Eco Asia Conference: Waste to Resources and Waste to Energy	Eco Expo Asia
8 Jan 2020	HKIE Environmental Division Annual Reception	HKIE (Environmental Division)
23-27 Nov 2020	Foresight 2021	HKPC with HKWMA Support
25 Nov 2020	HKWMA Webinar on MilMill	HKWMA YMC

Forthcoming Events

Date	Event	Organization
TBC	HKIE Environmental Division Forum "Decarbonisation – How do we prepare for the transformation"	HKIE
8 Dec 2020	Designing Buildings for a Zero Waste Hong Kong	BEC
15 Dec 2020	Accelerating Sustainable Development in Hong Kong	Green Council
16 Dec 2020	Data-driven Decision Making for Waste Management and Rouse Efficiency: Path to a Circular Economy	HKIE Webinar
	HKWMA Professional Course	Q3/2021



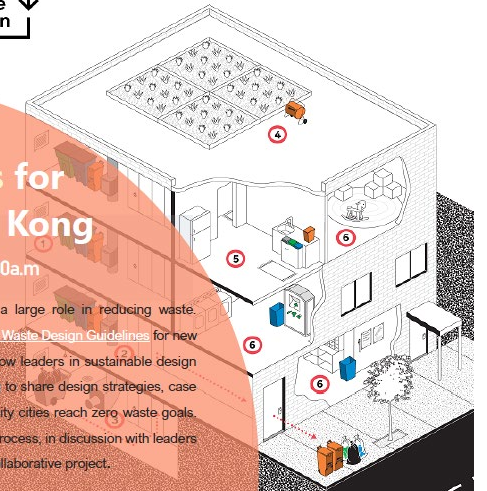
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Designing Buildings for A Zero Waste Hong Kong

8 December 2020 (Tuesday), 9:30a.m – 11:00a.m

In a high-density vertical city, building design plays a large role in reducing waste. Architects in New York City led the development of [Zero Waste Design Guidelines](#) for new and existing buildings to help the city reduce waste. Now leaders in sustainable design from Hong Kong, Singapore and NYC are collaborating to share design strategies, case studies and policy suggestions that can help high density cities reach zero waste goals. Come hear architect Ms Clare Mifflin, who led the NYC process, in discussion with leaders of sustainable design in Hong Kong, as we begin this collaborative project.



Polite Reminder:

Membership for current session will be extended free of charge for the session 2021-2022