

Laying waste

With Hong Kong's landfills due to be full by 2018 and alternatives being thwarted by bureaucratic navel gazing, the time for trash talk has long passed. **Stuart Heaver** reports

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The South East New Territories (Sent) Landfill, Tseung Kwan O. Photos: Dickson Lee; May Tse; Stuart Heaver

Last year more than 13,458 tonnes of waste were dumped into three large holes in the ground every day in Hong Kong.

Of that total, according to statistics published in October by the Environmental Protection Department (EPD), 8,996 tonnes were municipal solid waste (MSW) – the common-or-garden type produced by households and businesses. That’s equivalent to 1.27kg produced by each and every man woman and child in Hong Kong every day. More than the weight of the Eiffel Tower in Paris is buried in the city every 24 hours; and, not surprisingly, those enormous holes are going to start overflowing very soon.

The fact is that Hongkongers produce a lot more rubbish than our neighbours and the EPD estimates that the first landfill site will be full in 2014, the other two by 2018, at the latest. But those who assume there is already

a comprehensive government plan in place to address the issue and avoid the risk of Hongkongers having to wade through a sea of stinking black bags on their way to work are sadly mistaken.

It is a crisis that no one wants to deal with. No wonder many green and recycling groups are hopping mad and urging the government to do something radical to solve the problem.

“Oh yes, it’s a crisis alright,” says Ellen Chan Ying-lung, assistant director of the EPD’s environmental infrastructure division, which is responsible for waste management. Dr Trash, as she is sometimes unflatteringly referred to, is urbane, erudite and eloquent. “This concern is not exclusive to green groups, many of whom think we are cold-blooded bureaucrats who don’t know what we are doing,” she adds.

“We must always talk about waste reduction first. We are trying hard to promote this message and we do engage with green groups and NGOs [to achieve this] but it is idealistic to say recycling will solve the problem. We need infrastructure, too.”

By infrastructure, Chan means the controversial incinerator plant – or Integrated Waste Management Facility, to give it its formal title – that is planned for a new artificial island at Shek Kwu Chau, off the southern coast of Lantau. The project is embroiled in a lengthy judicial review, and beset by concern over the technology involved and the location.

“Even if the judicial review goes in our favour, nothing will be commissioned until 2020, two years after all the existing landfill sites have been filled up,” says Chan. “This is why we must extend all three landfills as soon as possible.”

Critics say the government has been dithering for too long and is floundering by forcing through inadequate solutions. Why wasn’t something done years ago?

“It’s a very difficult issue if you talk to politicians; it’s never a good time, always 1,000 excuses. It’s so much easier just to talk about recycling,” says Chan.

Even if the incinerator does get built, its capacity would be only 3,000 tonnes per day, hardly enough to cope with the 13,500 tonnes Hongkongers dispose of daily.

It certainly looks like this is far too little, far too late and when even environmental campaigners start calling for landfills to be extended, it is clear the city faces nothing short of an emergency.

Celia Fung Sze-lai, environment affairs officer for **Friends of the Earth**, **concedes that the** landfill extensions and **incinerator are necessary**, but, she says, they should be introduced only as part of an overall strategy that includes waste reduction, education, recycling and a charging scheme.

“We need to educate young people that upgrading their mobile phone three times a year is just not sustainable,” she says.

Modifying the behaviour of teenagers in the grip of relentless marketing and peer pressure will not happen overnight, however. Fung has a more immediate suggestion: a charging scheme similar to those implemented in Taipei and South Korea, which she has observed in action. Under the plan, Hongkongers would pay about HK\$2 for a 20-litre rubbish bag and fly tipping would be policed and punished with stiff fines. *(oh yeah, by whom ???)*

“Once waste charging is implemented, the waste disposal rate reveals a significant drop – 27.4 per cent for Korea and 37.8 per cent for Taipei,” she says.

Chan agrees that charging would be a “powerful policy tool” and last week, Environment Secretary Wong Kam-sing vowed to introduce MSW charges by 2016, with a public consultation on how to collect the fees slated for next year.

Fung remains sceptical.

“In 2005, we were told by the government that waste charging would be implemented in 2007 and we are still waiting,” she says. *(ah yes, the tenure of Bowtie, Edward Yau and Anissa Wong)*

Waste charging has been shown to have a positive impact on recycling rates, too, although it is worth noting that the local statistics for recycling are already impressive to the point of being astonishing.

Forty-eight per cent of Hong Kong’s rubbish is *(not locally)* recycled *(exported !)*, putting the SAR far ahead of Japan, France and the United States, and on a par with Singapore.

However, as Fung points out, “There is virtually no recycling industry in Hong Kong. Our waste for recycling is exported to mainland China.”

EPD figures confirm that only 1 per cent of recycling occurs in Hong Kong and that the rest is exported. Indeed, the EPD boasts that the rubbish export industry is worth HK\$8.2 billion.

In Fortress Hill, Fung points out a private scrap business to which elderly women drag trolleys piled high with paper and aluminium cans that they sell to supplement their incomes.

Betty Leung has run Wing Hing Gather Metal Waste and Paper for more than 30 years and deals with many such women.

“We take in all their rubbish. Sort it. Compact it and send it on a big boat to China,” she explains, pointing to the latest scrap prices on the wipe-board in the middle of her shop – a sort of Hang Seng Index for local scavengers. “It’s only eight cents for a tin can and the mainland is getting very fussy about any dirt or anything in the can.”

So does Leung get help from the government, as a valuable recycler reducing the pressure on our precious landfills?

“No. I get no help at all,” she says, sounding surprised that anyone should even ask.

“These old ladies are doing the recycling for Hong Kong and they are the only reason the recycling rate is as high as it is,” says Fung.

Having vulnerable old people rummaging through bins for recyclable materials to supplement their income is probably not an initiative Hong Kong will be exporting to Europe and North America any time soon. Nonetheless, these women deserve our gratitude – without their hard work our landfills would have overflowed years ago.

The EPD insists the 48 per cent recovery rate was achieved through a combination of government programmes, community involvement and the participation of recyclers. It says the government has promoted waste reduction, reuse and recycling and, to be fair, there is no shortage of programmes or initiatives, **such as the Islands Community Recycling Booths scheme, set up in March.**

Jo Wilson is the founder of community environmental group Living Lamma and has hands-on experience of this particular EPD scheme. But it has left her sceptical of government ambitions on the recycling front.

“The Lamma Island programme had no advance notice, no communications strategy and no community feedback in place,” she says.

After her group of volunteers got involved with the scheme, by encouraging participation among the community, weekly glass recycling increased from about 15kg to more than 1.5 tonnes, she says, with group members carrying the glass to a recycling point. Not bad going for a project that runs only two afternoons a week, one of which is a Friday, when most locals are at work.

Living Lamma also managed to sign up local bars and restaurants to the scheme. But, says Wilson: **“It has been confirmed to us that, despite our hard work and success, the scheme will end on December 30 [it was scheduled to run until the end of February]. I want to believe that the EPD is serious about recycling but the fact is that the government is the biggest inhibitor to progress. They just want meetings; we want the facilities so we can get on with the job.”**

AS ALL THE TALK OF RUBBISH and what to do with it drags on, the reality is that 1,000 lorries per day rumble down Tseung Kwan O’s Wan Po Road to empty their cargos of waste at the Sent landfill site, which is forecast to be the first of the three sites to fill up.

Sent feels more like a massive military installation than a municipal tip, and is packed with technology, including 15 static deodorisers, automatic lorry sprays, environmental monitoring posts and a huge treatment plant to deal with the 2,500 cubic metres of biogas that are emitted from the site each day.

“It’s not just a hole in the ground; it’s a properly engineered solution,” says Chan, proudly.

The viewing platform offers a panorama of vehicles spreading, bulldozing, compacting and sifting tonne after tonne of rubbish into the earth. Sent takes about 5,000 tonnes of waste every day and is about 80 per cent full.

Down in the centre of the giant crater is an ominous looking cover, some 10 metres by three metres wide, with four vertical vents. This is the “special waste trench” and no rational person would want to look inside. From it wafts a ghastly odour – like a mingling of boiled cabbage and sewage.

Landfills are an unfortunate inevitability and out of sight is often out of mind. In Hong Kong, though, there is hardly a surplus of land, and about two kilometres away from Sent, the top five storeys of a large residential block at Lohas Park are afforded a bird’s eye view of the entire theatre of waste, in which the drama unfolds 15 hours a day.

“Landfill is our only option [but] this is not sustainable,” says Chan. “Compared to most European standards we are backward.”

Ironically, not far from Sent, at the gleaming new Hong Kong Science Park, some of the most advanced scientific research into food waste processing using bio-refineries has been enjoying recognition by experts from around the world.

Carol S.K. Lin and her City University team are undertaking a project, funded by the Innovation Technology Commission and sponsored by Starbucks, to reprocess used coffee grounds and bakery products in a special bio-refinery that creates chemical products that have commercial value.

Food waste is a big problem in Hong Kong, constituting about **35 per cent of all MSW**. And that amount has increased by a staggering 225 per cent since 2002 – due, it is generally believed, to increases in population and affluence.

Along with the waste-charging policy, the environment secretary last week announced the formation of the Food Wise Hong Kong Steering Committee, which, it is intended, will devise the strategies needed to achieve a 10 per cent reduction in food waste within three years.

Quietly spoken and trying hard to explain the technology in layman’s terms, Lin demonstrates how basic food waste can be turned, via fungal fermentation and hydrolysis, into clear succinic acid crystals, which are fast becoming a commodity for their use in making bio-plastics. In very simple terms, Lin and her team are turning trash into cash, and they’re doing it in Hong Kong.

So how overwhelmed has she been with funding opportunities and government inquiries, given the urgency of Hong Kong’s waste crisis?

“In Hong Kong, it is still difficult to get funding because I am still a relatively junior academic,” she says, with a whiff of modesty. “This sort of research is just not very popular here.”



“[The scrap price is] only eight Hong Kong cents for a tin can and the mainland is getting very fussy about any dirt or anything”

Betty Leung, proprietor of a private scrap yard in Fortress Hill.



“We need to educate young people that upgrading their mobile phone three times a year is just not sustainable”

Celia Fung, Friends of the Earth



But is the technology mature enough to be of use now? “The technology is good enough,” she says. “If a company or government could build a large-scale pilot plant, it would significantly reduce food waste in Hong Kong.

“We could also make a good profit from useful products.”

It seems baffling that no one is hammering on Lin’s door.

THE NUMBER OF POTENTIAL solutions to the waste equation appears to be matched by levels of public interest in it. More than 36,000 volunteers turned out for this autumn’s Hong Kong Clean Up, organised by Ecozine, in which 50,000kgs of rubbish were removed from beaches, parks and urban areas. Last year’s clean up attracted 12,000 participants.

Time is running out, however, and there is a distinct lack of urgency in the air. Given the reality that it takes years even to extend an existing landfill site, what would the deadline be for Chan to receive Legislative Council approval on the Tseung Kwan O site extension, to avoid it filling up and being closed down?

“Yesterday would have been nice, but last year or even the year before would have been ideal,” she says, without a trace of a smile.

Denial is often the most comfortable way to deal with a complex problem. The down side in this case is that the rubbish time-bomb is ticking and if it explodes, everyone will be covered in the smelly stuff.

“If we can extend the current landfills the time-bomb will not explode. We need to buy some time,” says Chan. “We can only do our best to get these projects through Legco.”

“We can’t export our municipal waste [for landfill, as distinct from waste for recycling],” says Fung, explaining that there is no market for it – the mainland has enough difficulty dealing with its own waste without taking on that of Hong Kong. “So the worst case scenario is that rubbish will have to be thrown into the sea for reclamation.”

Wilson thinks it might not be such a bad thing if the rubbish time-bomb were to explode.

“It might take a disaster to make Hong Kong people realise we just have to reduce our waste,” she says.

She might be right. As the old Chinese proverb has it, “People don’t start crying until they see the coffin”. Or, in this case, the black plastic sacks.