

**The Legislative Council, Panel on Environmental Affairs**

**Special meeting on 22 March 2014**

**Environmental infrastructure projects**

- (a) 5163DR: Northeast New Territories landfill extension**
- (b) 5164DR: Southeast New Territories landfill extension**
- (c) 5165DR: West New Territories landfill extension**
- (d) 5177DR: Integrated Waste Management Facilities Phase 1**

Submitted by The Chartered Institution of Water and Environmental Management Hong Kong

The Chartered Institution of Water and Environmental Management (CIWEM) is a UK based Institution and has a history of working in environmental management dating back to 1895. The Hong Kong Branch (CIWEM HK) was formed in 1987 providing a platform for engineers and scientists working in water and environmental management. We have currently over 230 members based in Hong Kong. We have provided delegation teams to study waste management practices in region (including Taiwan, Japan, Seoul and PRC) and have organized technical seminars and visits on the subject. On behalf of CIWEM HK, I would like to provide our general views on the landfill extension proposals as follows:

CIWEM HK supports the policy directions to take multiple concurrent actions to prevent and reduce waste, make all out efforts to mobilize the community to participate and fill missing gaps in Hong Kong's waste-related infrastructure. With the change in community attitude and participation in waste prevention, reuse and recycling, we can reduce the generation of waste.

However no matter how hard we try to reduce the generation of waste, we still need infrastructure to carry out recycling, recovery and disposal. Landfills are necessary for final disposal of waste. The current three large, modern state-of-the-art strategic landfills established in three corners of Hong Kong – North East New Territories (NENT), South East New Territories (SENT) and West New Territories (WENT) began operation in the 1990s and they will reach their designed capacities one-by-one by 2019 if not planned for extension. It is the right time for us to extend these existing landfills to provide a sustainable waste management strategy.

The three strategic landfills are engineered to a very high standard including stringent control measures to prevent potential nuisances caused by odour, landfill gas and leachate to its surrounding environment. In conjunction with the proposed extensions to these three landfills, the Government has conducted Environmental Impact Assessment (EIA) for the construction and operation stages. The Environmental Permits for NENT, SENT and WENT were obtained in November 2007, January 2012 and June 2010 respectively. The potential environmental impacts, in particular for odour and dust,

arising from the construction and operation of these landfills should have been identified, assessed and mitigated to an acceptable level in accordance to the EIAO procedures. CIWEM HK supports the Government to extend the existing three strategic landfills to cater for the imminent need for waste disposal.

Specifically to address the concerns raised by the local residents, we would suggest the implementation of the following measures to enhance the environment in particular during operation of the landfills:

1. As all the refuse collection vehicles (RCVs) are diesel commercial vehicles, the scheme on early retirement of pre-Euro IV diesel commercial vehicles should be implemented to reduce the age of the fleet and improve the environment; and
2. The enforcement of Code of Practice on the operation of RCVs and the stepping up of monitoring to reduce and minimize the environmental nuisance of RCVs running in public roads. All dump trucks should be installed with speed monitor; and provided with proper hood to cover the construction waste.
3. Sections of the road in vicinity to local sensitive receivers should be (semi- or fully-) enclosed subject to the approval of relevant authorities (e.g. EPD, HyD and FSD).
4. Deodorization should be stepped up to further mitigate odour nuisance.

CIWEM HK has no in-principle objection to the extension of SENT landfill for construction and demolition (C&D) wastes and would recommend that measures be stepped up to reduce /recycle C&D waste with the aim of avoiding all C&D waste to get buried at landfill in the future.

We tend to support that waste charging and waste-to-energy are also indispensable in the Blueprint for Sustainable Use of Resources and the effectiveness of the two measures is well demonstrated by other countries/cities on waste management. Yet more needs to be done to increase public confidence and ownership of the solutions (interim and long term inclusive) to ensure that facilities come on stream when required. Noting that relying solely on the extension of existing landfills would not be sustainable and the waste-to-energy project has not come up with a final decision yet, immediate actions should be taken on upstream waste avoidance and minimization. Although two organic waste treatment facilities are being developed, the total handling capacity is still limited (with a total capacity of 500 tons per day) and there is currently a large volume of organic food waste from domestic source awaiting immediate and long-term solutions. Below are some pointers for consideration:

1. Derive immediate stop gap measures for handling organic wastes (mainly food waste) which accounted for around 40% municipal solid waste (MSW).
2. Expedite the diversion of organic waste from landfilling with a view to alleviating landfill burden/local nuisance and making the most out of the waste resources.
3. Incentivize onsite treatment of food waste in particular remote communities with a view to minimizing carbon footprint of transportation and conventional treatment.

4. Develop and implement a robust MSW charging scheme complemented with facilitation of recycling trades and outlets.
5. Develop and implement a range of "producer responsibility" directives on specific waste streams such as packaging, waste electrical and electronic equipment, end of life vehicles and batteries, and more.
6. Install sorting facilities at the existing landfills to recover the recyclable and extend the lifespan of the landfill sites.

We understand the proposed mass burn moving grate facility will incorporate state-of-art waste incineration technology which is well proven. The emission standards will be compatible with those in EU, being the most stringent in the world. The EIA report of the proposed incineration facility has been endorsed by the ACE and approved under the EIAO. We trust that the emissions from the said incineration facility will not pose threat to the general public health of the nearby community like Cheung Chau nor the environment provided that all the recommended mitigating measures are timely and appropriately implemented. Reference can be made to the forthcoming Sludge Incineration Facility at Tuen Mun (construction to be completed in 2014) which may serve as future example of benchmarking the effectiveness of waste incineration in Hong Kong.