

**Subcommittee on Country Parks (Designation)
(Consolidation) (Amendment) Order 2010**

**Responses to follow-up actions arising from the discussion
at the meeting on 27 September 2010**

- (a) consider allocating additional resources to provide free full-body vehicle washing services for more private refuse collection vehicles (RCVs);**

By mid October 2010, the landfill contractor will allocate additional resources to further enhance the washing services for private refuse collection vehicles. Under the new arrangement, manpower for the washing service will be doubled, and the washing platform will also be expanded to facilitate the operation. After the expansion, two washing bays will be available and the capacity of the washing facility will be doubled. In addition, we would consider introducing arrangement to require dirty RCVs to be washed before leaving the landfill.

- (b) explore further measures to accommodate those loaded private RCVs requiring overnight parking near the South East New Territories (SENT) Landfill, e.g. providing enclosed parking lots for these RCVs at the two public car parks near the LOHAS Park to park overnight, or designating an area near or within the SENT Landfill for the purpose;**

We have identified that apart from the two public car parks (1 & 2) opposite to LOHAS Park, there are two public car parks (3 & 4) in the adjacent Tseung Kwan O Industrial Estate, as shown in Annex 1. The car parks 3 & 4 also have parking spaces for lorries and overnight parking (8:00 pm to 8:00 am) is free of charge. We will liaise with the Transport Department for possible diversion of refuse collection vehicles (RCVs) now using car parks 1 & 2 to car parks 3 & 4. As regards overnight parking of RCVs within the SENT Landfill, we are discussing with the landfill contractor to overcome the contractual and practical constraints in order to work out some designating area for such purpose.

- (c) **provide detailed information on the findings of the e-nose monitoring at the SENT Landfill and Ocean Shores;**

In response to the request of the Sai Kung District Council (SKDC) members, we have introduced a new technology of electronic odour detection system (i.e. E-nose) and installed two sets of such system at Ocean Shores and SENT Landfill as a trial scheme to help identify the nature and sources of odour reported in the Tseung Kwan O town area.

The two E-noses commenced operation on 15 July 2010. The contractor for the E-nose project has completed the analysis of the data collected (about 50,000 sets) in the first five weeks of the operation. Each set of the data represents the responses recorded by individual E-noses at one-minute intervals. Prior to the commencement of the operation, the E-noses were calibrated to detect and recognise (finger-print) 11 types of odour through samples of waste/wastewater from: (1) domestic waste; (2) commercial and industrial waste; (3) degraded waste from landfill waste trench; (4) landfill gas; (5) landfill leachate; (6) dewatered sludge from the Harbour Area Treatment Scheme at the Stonecutters Island Sewage Treatment Works; (7) sewage screenings from sewage treatment works; (8) dewatered sludge from sewage treatment works; (9) sewage from Tseung Kwan O Sewage Treatment Works; (10) sewage from Ocean Shores; and (11) active tipping face at landfill.

In the data analysis, the contractor studied the change and fluctuation of the E-noses' responses over time. The higher the response from the E-nose, the higher the possibility of an odour problem. Apart from the change of E-nose response, the contractor also studied the pattern (or "finger-print") of the odour associated with an unusual or high response and check the pattern against the finger-prints of the 11 odour types already stored on the E-nose; this would help in analysing the nature of the odour. In order to have a better understanding of the odour situation in the Tseung Kwan O town areas, particular attention was paid to the responses of the E-noses when odour complaints were received from

the residents. Weather information including wind direction, wind speed, rainfall, rainstorm signals and other relevant weather information during the odour complaint periods were collected from the Hong Kong Observatory. By studying the finger-prints of the odours detected by the E-noses together with weather conditions, it was possible to determine whether the odour detected by the E-nose at Ocean Shores was coming from the SENT Landfill.

Analysis of the data collected in the first five weeks of the operation has provided some observation and preliminary results. When the responses of the two E-noses were compared over this time period, no direct relationship was observed. The finger-prints of the odours picked up by the two E-noses were also compared and they were found not similar to each other. The data analysis also indicated that the finger-prints recorded by the E-nose at the SENT Landfill were not similar to those of the 11 calibrated odour types. On the other hand, on some occasions, the finger-prints recorded by the E-nose at Ocean Shores were more specific, and about 5% of time recorded by this E-nose was similar to odour types relating to wastewater, including sewage from Tseung Kwan O STW, foul waste from Ocean Shores, sewage screening from STWs and landfill leachate.

As it is a trial scheme and the first application of such technology to landfill operation in Hong Kong, we together with the E-nose contractor, will continue the investigation work to understand the nature of odours in Tseung Kwan O area and identify their sources. Given that the distance between the two E-noses is about three kilometers and to have better understanding of the odour situation in the Tseung Kwan O area (e.g whether the odour reported in different the Tseung Kwan O town areas comes from the SENT Landfill), additional E-noses are proposed to be installed at locations between the landfill and Ocean Shores, such as the LOHAS Park.

- (d) consider subsidizing private waste collection operators in retrofitting their RCVs with metal tailgate cover and wastewater sump;**

The Administration will liaise further with the trade and consider the feasibility of subsidizing private waste collection operators in retrofitting their refuse collection vehicles with metal tailgate covers and wastewater sump tanks.

- (e) provide information on the outcome of an independent survey on odour intensity conducted by tertiary students during the summer of 2007;**

In August 2007, the EPD has conducted a high level odour detection survey at three different residential estates in the Tseung Kwan O Town South area. The survey was conducted 24 hours a day continuously for a period of 14 days from 18 August 2007 to 1 September 2007 by specially trained tertiary students of environmental science academic background. The results of the survey were that out of the survey period of 336 hours, in 99.8% of the time, "no odour" could be detected at the monitoring locations and the remaining 0.2% of time garbage, sewage, sludge and other odours such as faeces, seawater and rotten eggs could be detected.

- (f) provide the paper considered by the Country and Marine Parks Board on designation of potential sites as part of the Clear Water Bay Country Park; and**

The relevant paper has been provided.

- (g) provide a written response to the motion passed by the Subcommittee below:**

"That this Subcommittee requests the Chief Executive to repeal the Country Parks (Designation)(Consolidation)(Amendment) Order 2010."

The Government considers it undesirable to repeal the Amendment Order since Hong Kong has an imminent waste problem. The three landfills that we rely to dispose of our waste are estimated to be exhausted one by one from mid to end

2010s. There is therefore an urgent need to extend the three landfills as they are required to handle solid wastes. While the proposed first incinerator may be commissioned in the middle of the next decade the earliest, landfills still need to receive the remaining wastes not handled by the incinerator and the residual ashes from incineration.

According to our latest assessment, the SENT Landfill will be full by around 2013/14. We have proposed to extend the lifespan of this landfill by another six years through seeking an expansion of the area by 50 hectares (ha), of which 5 ha of land is to be obtained by excising the area from the Clear Water Bay Country Park (CWBCP). Following detailed consultation with the Country and Marine Parks Board (the CMPB), the CMPB had agreed to excise this 5 ha of land from the CWBCP having regard to the imminence of the waste problem in Hong Kong.

We have tabled the Amendment Order after having thorough deliberations and consultations. In consideration of the pressing need to providing sufficient landfill capacity for future need, the Government maintains that any deferral to the Amendment Order from taking effect would be undesirable.

Environmental Protection Department
October 2010

Locations of car parks near LOHAS Park

Annex 1

