

**立法會**  
***Legislative Council***

LC Paper No. CB(1)211/13-14  
(These minutes have been seen  
by the Administration)

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**Panel on Environmental Affairs**

**Minutes of special meeting  
held on Tuesday, 17 September 2013, at 2:30 pm  
in Conference Room 3 of the Legislative Council Complex**

**Members present** : Hon Cyd HO Sau-lan (Chairman)  
Hon Christopher CHUNG Shu-kun,  
BBS, MH, JP (Deputy Chairman)  
Hon Vincent FANG Kang, SBS, JP  
Hon CHAN Hak-kan, JP  
Hon CHAN Kin-por, BBS, JP  
Hon WU Chi-wai, MH  
Hon Gary FAN Kwok-wai  
Hon CHAN Han-pan  
Dr Hon Kenneth CHAN Ka-lok  
Hon Dennis KWOK  
Hon SIN Chung-kai, SBS, JP  
Dr Hon Helena WONG Pik-wan  
Ir Dr Hon LO Wai-kwok, BBS, MH, JP  
Hon CHUNG Kwok-pan  
Hon Tony TSE Wai-chuen

**Members attending** : Hon Ronny TONG Ka-wah, SC  
Hon LEUNG Kwok-hung  
Dr Hon Fernando CHEUNG Chiu-hung

**Members absent** : Hon Albert CHAN Wai-yip  
Hon Claudia MO  
Hon Steven HO Chun-yin  
Hon Charles Peter MOK  
Hon KWOK Wai-keung  
Dr Hon Elizabeth QUAT, JP

**Public Officers attending** : **For item I**

Mr WONG Kam-sing, JP  
Secretary for the Environment

Ms Christine LOH, JP  
Under Secretary for the Environment

Mr TSE Chin-wan  
Deputy Director of Environmental Protection (1)  
Environmental Protection Department

Mr Elvis AU  
Acting Deputy Director of Environmental Protection (2)  
Environmental Protection Department

Mr David WONG  
Assistant Director (Environmental Compliance)  
Environmental Protection Department

Dr Ellen CHAN  
Assistant Director (Environmental Infrastructure)  
Environmental Protection Department

Mr LO Kin-hung  
Acting Assistant Director/Electrical and Mechanical  
Drainage Services Department

**Clerk in attendance** : Ms Miranda HON  
Chief Council Secretary (1)1

**Staff in attendance** : Mrs Mary TANG  
Senior Council Secretary (1)1

Miss Mandy POON  
Legislative Assistant (1)1

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Action

**I. Incident of Leachate from North East New Territories Landfill**

(LC Paper No. CB(1)1774/12-13(01) — Administration's paper on "Incident of Leachate from North East New Territories Landfill")

The Assistant Director of Environmental Protection (Environmental Infrastructure) ("ADEP(EI)") gave a power-point presentation on the incident of leachate leakage from the North East New Territories ("NENT") Landfill.

*(Post-meeting note: A set of the power-point presentation materials was circulated vide LC Paper No. CB(1)1812/12-13(01) on 19 September 2013.)*

Notification mechanism

2. Mr Christopher CHUNG enquired about the causes of the leakage and the measures taken to contain the leakage and prevent future recurrences. The Secretary for the Environment ("SEN") replied that the leakage arose from a tear in the impermeable layer of a temporary leachate storage lagoon which was detected on 27 July 2013. Short and mid-term measures had been adopted to improve the operation and management of landfills to prevent future recurrences. Meanwhile, a review would be conducted on the notification mechanism on leachate leakage and a report would be provided by the NENT Landfill Contractor ("the Landfill Contractor") on the leakage incident.

3. Mr CHAN Hak-kan expressed concern about the belated notification of the leakage incident. As the public was only notified one month after the occurrence of the leakage, this might have posed serious threat to neighbouring residents. He hoped that the notification mechanism could be improved so that affected residents could be notified earlier. His concern was shared by Mr CHAN Kin-por. SEN responded that following the leachate leakage on 27 July 2013, the affected residents were notified on the following day, instead of one month later.

4. Dr Fernando CHEUNG also questioned why the analysis results of the water samples were only announced on 23 August 2013, which was almost one

Action

month after the occurrence of the incident. He pointed out that an earlier notification of the pollutant level of the wastewater discharged from the landfills would have alerted affected residents on the risks associated with exposure. SEN agreed on the need to review the notification mechanism. Meanwhile, the Government Laboratory would be requested to expedite the analysis of samples of wastewater discharged from the landfills.

5. Mr Ronny TONG was of the view that the leakage incident had demonstrated adverse publicity amidst the Administration's proposals to extend landfills. There was clearly a lack of an open, transparent, scientific and effective notification and monitoring mechanism on leachate management. Up till now, the Administration was still awaiting the report findings by the Landfill Contractor. As demanded by the Hong Kong Institution of Engineers, the use of the temporary leachate storage lagoon in question should be suspended to allay public concerns about the leachate leakage. SEN assured members on the safety of landfills which had been in use worldwide. The present leakage incident was an isolated case and it was not necessary to suspend the use of the temporary leachate storage lagoon in question. ADEP(EI) explained that there were on-site staff from the Environmental Protection Department ("EPD") who were monitoring the operation of the landfills. On the day of the incident on 27 July 2013, the EPD staff had overseen the remedial actions taken by the contractor to contain the problem. (a bit out of context here as this was in response to how the level was monitored)

Monitoring of water quality

6. Mr CHAN Hak-kan enquired whether the Administration had taken more proactive measures to detect leachate leakage other than monitoring the quality of groundwater. He also noted with concern that despite the remedial measures taken to contain the leakage problem, the analysis results of the legal samples of wastewater collected from the NENT Landfill on 23 and 30 August as well as 2 September 2013 had indicated that their pollutant levels had exceeded the legal standards. He enquired whether this was due to the percolation of leachate into the groundwater and if so, the timeframe for the groundwater to return to acceptable standards. He further queried about how the Administration would be able to convince residents of the safety of the proposed extension of landfills given the public concerns about leachate leakage. There might be a need to increase the frequency of sampling from four to eight times a year, or perhaps on a monthly basis. His concern was shared by Mr CHAN Han-pan and Dr Helena WONG.

7. SEN responded that the quality of groundwater had not been affected by the leakage incident. The leaked leachate which had been mixed with rainwater had entered the surface water system serving the landfill and was discharged into the nearby Kong Yiu Channel ("the Channel"). As there was residual

Action

leachate remaining in the landfill, this could have been carried to the surface water by heavy rainfall, which explained why the water samples exceeded the legal standards. EPD had been closely monitoring the situation and improvements had been seen. The Deputy Director of Environmental Protection (1) ("DDEP(1)") said that EPD staff had been monitoring the situation at the Channel and had collected further legal samples on the wastewater discharged from the NENT Landfill on 2 September 2013. While the acceptable limits had been slightly exceeded, possibly due to heavy rainfall on the previous day, the situation had improved. Members' request for increasing the frequency of taking water samples of wastewater from the NENT Landfill would be considered.

8. Dr Fernando CHEUNG noted with concern that the pollutant levels of the legal samples of wastewater taken from the NENT Landfill on 2 September 2013 still exceeded the legal standards despite that the leakage incident was detected on 27 July 2013 and that remedial measures had already been taken. While the Administration had attributed the pollution to the heavy rain which had caused the overflow of mixed leachate to the surface water, he was more concerned about the possibility of other undetected leachate leakages and whether the remedial measures were effective enough. There might be a need to increase the capacity of the leachate storage lagoons and to improve the leachate treatment mechanism.

9. SEN responded that the pollutant levels of the legal samples of wastewater taken from the NENT Landfill on 2 September 2013 had only slightly exceeded the legal standards. There had been an apparent improvement in the quality of wastewater from the NENT Landfill since. DDEP(1) reiterated that due to the heavy rainstorm, some of the residual leachate mixed with a large amount of rainwater had entered the surface water system serving the Landfill, thereby polluting the system. He stressed that the leachate leak was an isolated incident and had never occurred before. The operation of the NENT Landfill had met the stringent safety requirements. The Chairman shared the concern about the impact of heavy rainfall on leachate management.

10. Ir Dr LO Wai-kyok enquired whether further legal samples of wastewater discharged from the NENT Landfill had been taken after 2 September 2013 and if so, the outcome of the analysis. As the leakage incident arose from a leak in the toe of the temporary leachate storage lagoons and the leaked leachate overflowed to the surface water system due to the heavy rainfall, there might be a need to provide deeper lagoons for storage purposes. He was however pleased to note that the leakage had not affected the groundwater. He sought elaboration on the long-term measures to improve the situation, which might include the expansion of the landfill leachate treatment plant.

Action

11. DDEP(1) explained that EPD staff had been monitoring the situation and taking water samples as necessary. As it was observed that the water discharged from the NENT Landfill after 2 September 2013 was clear and free from odour, it was not considered necessary to take further legal samples for analysis. As for the long-term measures to improve the situation, he advised that there would be expansion of the public sewerage system. Due to the anticipated population increase in the area, a review of the sewerage network was initiated in 2009 and completed in 2012. Improvement works to the sewerage network was being planned to increase its total carrying capacity. The improvement works would be carried out in two stages. The initial stage comprised the upgrading of a section of pipeline that served the NENT Landfill and the diversion of some of the domestic sewage flow to another sewerage network, with a view to increasing the quantity of pretreated leachate that could be accepted by the sewerage network. These works were expected to complete within three years. The latter stage comprised the upgrading of the remaining sewers and pumping stations to receive the ultimate projected flow from the catchment. These works were expected to complete within six years.

12. Mr LEUNG Kwok-hung supported the adoption of an objective standard for assessing water quality as visual inspection was not reliable. Dr Kenneth CHAN shared the view that EPD should not rely on visual inspection but should take actual samples to assess the quality of wastewater from the Landfill. DDEP(1) said that environmental monitoring stations at the NENT Landfill would be monitoring the quality of wastewater discharged from the Landfill and along the Channel.

13. Dr Kenneth CHAN noted that some farmers had been relying on the Channel for irrigation and that since the occurrence of the incident, the Landfill Contractor had been supplying fresh water to the farmers. This had raised concern about the impact of the incident on water quality. Mr WU Chi-wai pointed out that as the Channel was in effect a nullah, it should not be providing water for irrigation purposes and he questioned why farmers were provided with fresh water by the Landfill Contractor after the leakage incident. Dr Helena WONG enquired whether the water along the Channel was suitable for use by farmers for irrigation and other purposes and whether the Shenzhen authorities had been notified of the leakage incident.

14. ADEP(EI) explained that there were a few small farms located along the watercourse which had been using the water along the Channel for irrigation purposes. Since the commissioning of the NENT Landfill in 1995, there had been changes in the water catchment in the area. As a friendly neighbour, the Landfill Contractor had been supplying fresh water to one of the farmers even before the incident at times when the Channel was dry. Following the incident on 27 July 2013, the Landfill Contractor had also liaised with another farmer to provide him with fresh water when required. SEN affirmed that there was a

Action

cross-border notification mechanism between the Mainland and Hong Kong.

Liability of the Landfill Contractor

15. Dr Helena WONG said that it might be necessary to improve the design of the temporary leachate storage lagoons by providing a double layer of lining. It might also be inappropriate to place the lagoons on unsteady landfill areas with newly deposited waste. She was concerned that the leakage was a result of professional negligence on the part of the Landfill Contractor. ADEP(EI) pointed out that the Landfill Contractor was experienced in the management of landfills. There were various engineering considerations on the choice of site for temporary leachate storage lagoons and the use of lining to meet requirements for minimum tear resistance, etc. A report would be made by the Landfill Contractor to explain the causes of the leakage incident. Where necessary, the views of independent consultants would be sought.

16. Mr LEUNG Kwok-hung enquired whether the Far East Landfill Technologies Ltd, being the Landfill Contractor, had engaged retired civil servants for the management of landfills. He also enquired about the actions to be taken to remedy the situation. ADEP(EI) explained that while the NWS Holdings Ltd was a shareholder of the Far East Landfill Technologies Ltd, the management and operation of the landfill was undertaken by a French company called the SITA Waste Services Company Limited. DDEP(1) said that he was not aware of the engagement of retired civil servants by the Landfill Contractor for managing the landfills.

17. Dr Kenneth CHAN pointed out that as the Administration had been proposing to extend the existing landfills, public concerns about the risks associated with the operation of landfills would need to be addressed. There was also a need to monitor the operation of landfills to ensure their proper management. Mr CHAN Kin-por enquired about the follow-up actions to be taken to improve the management of landfills and to prevent future recurrence of similar incidents.

18. In response, SEN explained that as EPD played an enforcement and supervisory role in the management of landfills, it would closely monitor the situation. ADEP(EI) added that the Environmental Infrastructure Division ("EID") of EPD administered the Design-Build-and-Operate ("DBO") Landfill Contract, managed the Landfill Contractor, conducted regular and routine operational and environmental monitoring and auditing works to ensure the efficient, cost-effective, safe and environmentally satisfactory operation of the NENT Landfill to meet contractual requirements. The Landfill Contractor was required to comply with the provisions of the Water Pollution Control Ordinance ("WPCO") (Cap. 358) as well as the conditions under the terms of the contract. In accordance with the WPCO licence conditions, the Landfill

Action

Contractor was required to notify EID of any leakage incidents within 24 hours. At the NENT Landfill, the on-site EPD staff would carry out various kinds of daily inspection and monitoring of contractor's performance to ensure that they were in compliance with the operational and environmental requirements. Regular assessments would be made on the performance of the Landfill Contractor. Since the occurrence of the leakage incident, the Landfill Contractor had been requested to provide an incident report which would cover the causes of the incident, measures taken on site during the incident period as well as interim and longer term measures to improve the management of leachate on site and prevent the recurrence of similar incidents. Taking into account the findings of the report, consideration would be given to improving the management of leachate through enhanced lining to avoid recurrence of similar incidents as well as the provision of covers for leachate storage lagoons. The Administration would determine the actions as appropriate under the provisions of the contract and in consultation with the Department of Justice.

19. Mr Tony TSE enquired about the availability of qualified landfill contractors who were competent in the management of landfills. He also enquired about the liability of the Landfill Contractor. He considered it necessary that the analysis of the samples of wastewater discharged from the NENT Landfill should be expedited. SEN said that the analysis of water samples by the Government Laboratory had been expedited since the occurrence of the incident. DDEP(1) supplemented that the operation of the NENT Landfill was subject to environmental legislation. The Landfill Contractor needed to comply with the conditions imposed in the discharge licence issued under WPCO. Prosecution actions could be taken against the Landfill Contractor if the wastewater discharged from the NENT Landfill exceeded the legal standards. As to the penalties under WPCO, DDEP(1) advised that a person who discharged any waste or polluting matters into the waters of Hong Kong would commit an offence and would be liable to imprisonment for six months and for a first offence, a fine of \$200,000 and for a second or subsequent offence, a fine of \$400,000.

20. ADEP(EI) explained that landfills were subject to the control of applicable environmental legislation as well as the relevant licences and permits enforced by EID. The three strategic landfills in Hong Kong, including the NENT Landfill, were operated under DBO contracts which specified the necessary performance and environmental requirements for the contractors to comply with. The DBO approach was meant to achieve cohesion between the responsibilities of design, construction, operation and maintenance of the landfills. The Far East Landfill Technologies Ltd was a qualified contractor who had been appointed as the DBO contractor for the NENT Landfill since its inception in 1995 and all along, its performance was found to be satisfactory.



Action

21. Dr Kenneth CHAN said that as the source of leakage had been identified and that there was an apparent violation of WPCO, appropriate actions should have been taken against the Landfill Contractor without having to await the findings of the report. SEN explained that the Landfill Contractor was contractually obliged to submit a report on the leakage incident and actions would be taken as appropriate.

Investigation into the causes of leachate leakage

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22. Mr Ronny TONG did not accept that the Landfill Contractor should be asked to submit a report on the leakage incident when the Administration should be conducting an investigation on its own. He considered that it would be irresponsible on the part of the Administration to rely solely on the findings of the report submitted by the Landfill Contractor. SEN explained that the Landfill Contractor was obliged to prepare a report to explain the leakage incident. Where necessary, independent consultants would be engaged to study and analyze the findings of the report. The Chairman was of the view that investigative studies should be conducted in parallel by the Landfill Contractor and the Administration. She requested the Administration to report to the Panel again after the Landfill Contractor had completed its report. The Panel would hold another meeting to study the findings of the report.

23. Mr LEUNG Kwok-hung stated that the public had the right of access to information on leakage incidents. He shared the view that apart from requesting the Landfill Contractor to prepare the report, the Administration should also conduct its own investigation and/or appoint a third independent party to do so. Dr Helena WONG said that the Administration should try its best to investigate the causes of the leakage incident, identify the party to be held liable, and implement effective improvement measures to prevent future recurrences. SEN agreed to investigate into the leakage incident and take appropriate actions as necessary.

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24. Mr WU Chi-wai said that as the design of the landfill should have allowed for the leachate to be contained within the landfill area, he sought explanation on the overflow of leachate. The Chairman requested the Administration to provide a written response to the various concerns raised by members when it reported to the Panel again on the leakage incident after the completion of the report by the Landfill Contractor.

Other complaints on wastewater discharge from landfills

25. Mr Ronny TONG was concerned about the leachate management of the South East New Territories ("SENT") Landfill which was in close proximity to residential developments. He sought elaboration on the seven complaint cases against wastewater discharge from the SENT Landfill as reported in the

Action

Administration's paper.

26. Mr CHAN Han-pan noted from the Administration's paper that since 2008, there had been a total of 22 complaints received against wastewater discharge from landfills in Hong Kong, of which 12 were about the West New Territories ("WENT") Landfill. As no prosecution action had been taken, he was concerned that the Administration was overly lenient to landfill contractors. He was also aware that Tuen Mun residents had complained about leachate leakage from the WENT Landfill and would like to enquire about the progress of the actions taken to alleviate the situation.

27. DDEP(1) responded that of the 12 complaints about the WENT Landfill, nine of them were unsubstantiated. Investigations carried out by EPD found that three complaint cases concerning the WENT Landfill involved discharge of muddy rainwater after heavy rainstorms. There was also one case where prosecution had been initiated against the contractor as a result of EPD's routine site inspections, although subsequently the prosecution was not proceeded with because the additional evidence proved that the wastewater did not contain any leachate. The discharge was surface runoff caused by the extremely heavy rainstorm associated with a typhoon before the inspection. For the rest, no evidence could be found that there was wastewater discharged from landfills.

28. As regards the seven complaints about the SENT Landfill, DDEP(1) further explained that some of them were related to the soil deposited at Wan Po Road after rainstorms while others were about the muddy discharge from the SENT Landfill which was not related to leachate leakage. In June 2013, there was a complaint that the Ping Yuen River was polluted by wastewater discharged from the NENT Landfill. EPD conducted an investigation and carried out a joint site visit on 28 June 2013 together with Dr Fernando CHEUNG and Mr Frederick FUNG. There was no sign of wastewater generated from the NENT Landfill. Given the topography and the water catchments in the area, it would not be possible for wastewater to be discharged from the NENT Landfill into Ping Yuen River.

29. In concluding, the Under Secretary for the Environment said that the Administration accepted the need to improve the notification mechanism on leakage incidents. It would take measures to rectify the leakage problem and reduce the risk of overflowing of untreated leachate off-site. Efforts would be made to expedite the analysis of the pollutant levels of samples of wastewater discharged from landfills. A report on the progress of works would be made available to members.

Action

**II. Any other business**

30. There being no other business, the meeting ended at 4:30 pm.

Council Business Division 1  
Legislative Council Secretariat  
1 November 2013