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Panel on Environmental Affairs

Meeting on 24 February 2014

**Updated background brief on "Extension of landfills"
prepared by the Legislative Council Secretariat**

Purpose

This paper provides updated background information on the extension of the existing landfills, and gives a brief account of the views and concerns expressed by Members on the subject.

Background

Management of municipal solid waste in Hong Kong

2. Hong Kong relies principally on landfills to treat its waste. In 2011, about 13 500 tonnes of waste are disposed of at landfills every day, of which the main trunk are 9 000 tonnes of municipal solid waste ("MSW") (comprising domestic waste as well as commercial and industrial waste). MSW is collected, transferred and disposed of at the three strategic landfills, namely, the Southeast New Territories ("SENT") Landfill in Tseung Kwan O ("TKO"), the Northeast New Territories ("NENT") Landfill at Ta Kwu Ling, and the West New Territories ("WENT") Landfill at Nim Wan.

3. According to the Waste Disposal Plan published in 1989, the three strategic landfills were identified on a regional catchment basis and have strategic roles to spread the burden on traffic and operation. They take up in total 270 hectares of land, cost \$6 billion to construct and more than \$400 million to run annually. They are also equipped with state-of-art liners, leachate collection and treatment systems, landfill gas management systems, and surface and ground water management systems to respond to the stringent environmental requirements. It is anticipated that the remaining capacities of the SENT Landfill, the NENT Landfill and the WENT Landfill will be

exhausted in 2014-2015, 2016-2017 and 2018-2019 respectively if waste levels continue to increase at the present rate.

4. In December 2005, the Administration published the Policy Framework for the Management of Municipal Solid Waste (2005-2014) ("the Policy Framework"), which set out the strategy and measures to reduce the generation of waste and promote waste recovery, reuse and recycling. The target of the Administration is to commission landfill extension before the exhaustion of the existing landfills. In this connection, the engineering feasibility and environmental impact assessment studies on the extension of the three strategic landfills have been completed.

5. Faced with the imminent waste management problem, the Administration announced in January 2011 an action agenda for Hong Kong along the experience of other major cities, using the Policy Framework as the basis. Under the theme of "Reduce, Recycle and Proper Waste Management", the strategy to reduce waste at source was accorded the highest priority. Apart from setting out a series of initiatives relating to waste reduction at source, the action agenda also introduced the development of advanced waste treatment facilities as well as timely extension of the three strategic landfills.

6. In May 2013, the Environment Bureau issued the "Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022" ("the Action Blueprint"), which maps out a comprehensive strategy, targets, policies and action plans for waste management for the coming 10 years. The Action Blueprint has illustrated that, even if measures and facilities are taken forward as planned, and waste reduction targets are achieved as set, there will still be about 10 000 tonnes of waste that require disposal every day in 2017. As advised by the Administration, with the three existing landfills to be exhausted one by one by 2019, while large scale waste-to-energy facilities have yet to come on stream by then, Hong Kong has no means to tackle such waste apart from extending landfills in time.

Funding proposals for the extension of landfills

7. In March 2012, the Administration presented funding proposals for the integrated waste management facilities ("IWMF") Phase I project and the extension of the three existing landfills as a package to the Panel on Environmental Affairs ("the Panel"). According to the Administration, IWMF would require some seven years for reclamation, construction and commission, while landfill extension would need a few years for site preparation works. As such, the IWMF Phase I project and the landfill extension projects should be pursued as a package to ensure that Hong Kong could maintain environmental hygiene and handle waste properly and timely. The funding proposals, however,

were not supported by the Panel for submission to the Public Works Subcommittee ("PWSC") for consideration.

8. The Administration again submitted the funding proposals for the three landfill extension projects for the Panel's consideration at its meeting on 27 May 2013. Under the revised proposal, the Administration would designate the proposed SENT Landfill Extension for reception of only construction waste with no odour problem, so as to address community concerns on odour. The Administration advised that the SENT Landfill Extension project could provide additional landfill capacity to maintain a continuous disposal service for construction waste in the urban and south-eastern part of Hong Kong. However, the Panel objected to the extension of the SENT Landfill in view of the odour, traffic and environmental issues pertinent to the operation of the landfill.

9. The three landfill extension projects were submitted to PWSC for consideration at its meeting on 26 June 2013. At the meeting, the Administration announced that it decided to withdraw the proposed SENT Landfill Extension project as it could not secure the majority support of PWSC. PWSC members eventually agreed that the NENT and WENT Landfill Extension projects should be submitted to the Finance Committee ("FC") for consideration.

10. At the FC meeting on 12 July 2013, members generally urged the Administration to further consult the local residents and District Councils affected by the NENT and WENT Landfill Extension projects. FC passed two motions to adjourn the discussion on the two projects.

Measures to address concerns on landfill extension

11. To address the concerns expressed by members, the Administration has been taking forward a number of initiatives as detailed below -

- (a) the Steering Committee to Promote the Sustainable Development of the Recycling Industry, which is led by the Chief Secretary for Administration, was set up in August 2013 to step up concerted efforts in promoting the healthy development of the recycling industry. Initiatives under consideration include arrangements for short-term tenancy sites and public cargo working areas, the feasibility of setting up a "Recycling Fund", and ways to provide support measures to the recycling industry. The Steering Committee will also explore means to foster community support in recycling through public education and community involvement projects, and to promote training and development of the workforce;

- (b) to address TKO residents' concerns on air quality, odour and dust arising from the operation of the SENT Landfill, the Administration has proposed the "Waste Diversion Plan" under which MSW will be diverted away from the SENT Landfill. The Plan comprises the designation of the SENT Landfill to receive only construction waste and other complementary measures to facilitate diversion of waste through the waste collection system and to minimize the consequential traffic and environmental impacts; and
- (c) to address complaints from the local community about the odour concern arising from the unsatisfactory hygienic conditions of some refuse collection vehicles ("RCVs"), all RCVs used for delivering waste to landfills, refuse transfer stations and any other new designated waste disposal facilities will be required to be equipped with a metal tailgate cover and a waste water sump tank for more effective avoidance of nuisance arising from their operations. On 15 November 2013, FC approved the funding application of \$18.8 million for providing a one-off subsidy to assist private RCV owners to retrofit their vehicles for meeting the new equipment standards.

12. To take forward the proposals mentioned in paragraph 11(b) and (c) above, the Waste Disposal (Designated Waste Disposal Facility) (Amendment) Regulation 2013 and the Waste Disposal (Refuse Transfer Station) (Amendment) Regulation 2013 were gazetted on 29 November 2013 and subsequently approved by the Legislative Council ("LegCo") under the negative vetting procedure.

Funding proposals for the landfill extension projects under the Capital Works Reserve Fund ("CWRF") block allocations

13. Four items related to the preliminary investigations and preparatory studies for the landfill extension projects, and IWMF Phase I were included in the funding proposals for the CWRF block allocation for 2014-2015, which was considered by FC at its meeting on 10 January 2014. Members were concerned that including the landfill extension projects in the block allocations represented the Administration's attempt to implement the projects before funding for the main construction works was approved. While the Administration explained that it had already made an undertaking that no funding sought for the CWRF block allocations would be incurred until the funding proposals for the respective construction works had been approved by FC, it decided to exclude the items related to the landfill extension projects from the total allocation sought for the CWRF block allocations to reflect its commitment.

Deliberations by Members

14. The major views and concerns expressed by Members at various meetings of the Panel, PWSC and FC are set out below.

Discussion by the Panel on Environmental Affairs

15. The Panel held two meetings on 26 March 2012 to discuss the funding proposals for IWFPM Phase I and the extension of the three strategic landfills as well as to receive views from the public in this regard. Members noted that the vast majority of the over 100 deputations were opposed to the proposed IWMF project and landfill extension having regard to the possible impacts on the environment. It was considered that more effort should be made to reduce and recycle waste.

16. The Panel held another special meeting on 20 April 2012 to continue discussion on the funding proposals. Noting that many measures pertaining to the Policy Framework had yet to be implemented, members were opposed to the reliance on landfills for waste disposal in view of the associated environmental nuisances, as well as the long lead time and cost incurred from restoration of landfills. They stressed the need for a holistic package of waste management measures (including waste reduction, separation and recycling) with waste incineration as a last resort and better communication between the two terms of Administration on environmental policies, in particular on the need for incineration. They also urged the Administration to identify other suitable outlying islands for IWMF and promote the local recycling industry. In view of the foregoing, members did not support the submission of the funding proposals to the PWSC for consideration.

17. The Panel was again consulted on the three landfill extension projects on 27 May 2013. It also held a special meeting on 1 June 2013 to receive public views on the proposal.

The SENT Landfill Extension

18. The majority of the deputations and individuals who gave views on the subject objected to the SENT Landfill Extension. Members were gravely concerned about the environmental and health impact associated with the landfill extension. Members who did not support the extension pointed out that the odour nuisances arising from the SENT Landfill had been affecting TKO residents for a long time. The air pollution associated with the transfer of waste along Wan Po Road from dumper trucks and RCVs was another cause for concern. The management of the SENT Landfill should be required to implement measures to reduce environmental nuisances, but no such measures

had been taken. It would be irresponsible on the part of the Administration to extend the SENT Landfill without resolving the environmental problems associated with its operation. It was also unfair to require TKO residents to continue to bear the consequences of the unsatisfactory progress in the implementation of the Government's waste management strategy.

19. Some other members held the view that the landfill extension problem stemmed from the poor urban planning of TKO which allowed residential developments to be located in the vicinity of the SENT Landfill, and the landfill extension would aggravate the odour nuisances and dust problem and pose health risk to TKO residents. Other members criticized the Administration for advocating the development of waste infrastructure projects without taking measures to reduce waste and improve the recycling network. Some members opined that the way forward should be closure of landfills and increased waste recycling rather than landfill extensions.

The NENT and WENT Landfill Extensions

20. A member was dissatisfied that while measures were implemented to reduce the environmental nuisances at the SENT Landfill, no such measures were taken at the NENT and WENT Landfills for the benefit of residents of Ta Kwu Ling and Tuen Mun ("TM"), where the scale of landfill extension was much larger than that of the SENT Landfill. Moreover, the Administration had given an undertaking to TM residents that no additional obnoxious facility would be built in TM after the construction of the sludge treatment facility. Residents of Ta Kwu Ling were also concerned that all odorous food waste would be disposed of at the WENT and NENT Landfills if the SENT Landfill no longer received MSW, including food waste. The nuisance associated with transport of waste was another cause of concern on account of the long distance in the delivery of waste to the two landfills.

21. A member who supported the landfill extension projects was of the view that given the present progress of the waste management strategy, landfills would still be needed in Hong Kong in the near future. If the landfill extension projects were withdrawn, Hong Kong would run into a waste catastrophe. While supporting the extension of landfills, the member urged the Administration to liaise with the districts concerned on the landfill extensions with a view to mitigating the nuisances and providing suitable compensatory measures for the betterment of the districts and affected residents.

22. At the meeting on 27 May 2013, the Panel passed the motion that "this Panel objects to the Southeast New Territories landfill extension project" and negated the motion that "this Panel objects to all landfill extension projects proposed at this stage".

Discussion by the Public Works Subcommittee

23. With the withdrawal of the proposed SENT Landfill Extension project at the PWSC meeting on 26 June 2013, the NENT and WENT Landfill Extension projects were discussed by PWSC on 26 June and 2 July 2013.

24. Notwithstanding the withdrawal of the SENT Landfill Extension project, members urged the Administration to take immediate action to address the concerns of TKO residents who were facing the nuisance associated with the operation of the existing SENT Landfill. As for the NENT and WENT Landfill Extension projects, the majority of members did not support the funding proposals and held the view that the Administration should seek to reduce the generation of waste at source, promote waste recovery and recycling. Incineration and landfill disposal should only be the last resort.

25. Some members criticized the Administration's arrangement to submit the WENT Landfill Extension proposal to PWSC for approval prior to consulting the TM District Council. Such arrangement reflected that the Administration did not respect the views of the District Council.

Discussion by the Finance Committee

26. At the FC meeting on 12 July 2013, members in general held the view that the Administration should map out a comprehensive strategy for waste management and make its best endeavour to address the concerns of local communities over the operation of the three landfills before pursuing waste incineration and landfill extension. Two motions were passed at the meeting to adjourn discussions on the NENT and WENT Landfill Extension projects.

27. At the FC meeting on 10 January 2014 when discussing the CWRFF block allocation for 2014-2015, members generally welcomed the Administration's decision to exclude the relevant items relating to landfill extension projects from the funding proposal. Some members criticized that it was not proper for the Administration to break up the landfill extension projects and include those parts on preliminary investigations and preparatory works for funding under CWRFF block allocations, when the Administration had not yet obtained FC's approval for the main construction works in the previous LegCo session. Some other members considered that the approach to waste management should be examined in a holistic manner, and that more resources should be committed to promoting waste reduction, recovery and reuse. The Administration should spend more efforts to communicate with members and the respective District Councils so as to assure the public that the Administration would implement concrete measures that would address the community's concern.

Council questions

28. Hon CHAN Hak-kan, Hon Miriam LAU, Hon WONG Kwok-hing, Hon IP Wai-ming, Hon James TIEN and Dr Hon KWOK Ka-ki raised questions relating to landfill operation at the LegCo meetings on 4 March 2009, 23 June and 3 November 2010, 18 May 2011, 1 February and 19 December 2012, 26 June 2013 and 6 November 2013. Details of the Council questions are hyperlinked in **Appendix** for ease of reference.

Latest development

29. The Administration will report to the Panel on the landfill extension and the IWMF Phase I development plan at the meeting scheduled for 24 February 2014. Members may refer to the Information Note on IWMF in Hong Kong (IN06/13-14) for background information of the IWMF project.

Relevant papers

30. A list of relevant papers is set out in **Appendix**.

Council Business Division 1
Legislative Council Secretariat
20 February 2014

List of relevant papers

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs	26 March 2012	<p>Administration's paper on "Reduce, Recycle and Proper Waste Management" (LC Paper No. CB(1)1369/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0326cb1-1369-1-e.pdf</p> <p>Updated background brief on "Management of municipal solid waste in Hong Kong" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1369/11-12(02)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0326cb1-1369-2-e.pdf</p> <p>Minutes of special meeting at 10:45 am (LC Paper No. CB(1)2555/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120326a.pdf</p> <p>Minutes of meeting at 2:30 pm (LC Paper No. CB(1)2604/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120326.pdf</p>
Panel on Environmental Affairs	20 April 2012	<p>Administration's paper on "Reduce, Recycle and Proper Waste Management" (LC Paper No. CB(1)1628/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/ea/papers/ea0420cb1-1628-1-e.pdf</p> <p>Minutes of special meeting (LC Paper No. CB(1)2140/11-12) http://www.legco.gov.hk/yr11-12/english/panels/ea/minutes/ea20120420.pdf</p>
Panel on Environmental Affairs	20 May 2013*	<p>"Hong Kong Blueprint for Sustainable Use of Resources 2013-2022" issued by the Environment Bureau http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/eacb1-1076-1-e.pdf</p>

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs	27 May 2013	<p>Administration's paper on "Environmental Infrastructure Projects (a) 5136DR: Northeast New Territories landfill extension (b) 5164DR: Southeast New Territories landfill extension (c) 5165DR: West New Territories landfill extension" (LC Paper No. CB(1)1079/12-13(01)) http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0527cb1-1079-1-e.pdf</p> <p>Background brief on "Extension of landfills" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1079/12-13(02)) http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0527cb1-1079-2-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1536/12-13) http://www.legco.gov.hk/yr12-13/english/panels/ea/minutes/ea20130527.pdf</p>
Panel on Environmental Affairs	1 June 2013	<p>Administration's paper on "Environmental infrastructure projects (a) 5163DR: Northeast New Territories landfill extension (b) 5164DR: Southeast New Territories landfill extension (c) 5165DR: West New Territories landfill extension" (LC Paper No. CB(1)1079/12-13(01)) http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0527cb1-1079-1-e.pdf</p> <p>Background brief on "Extension of landfills" prepared by the Legislative Council Secretariat (LC Paper No. CB(1)1079/12-13(02)) http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0527cb1-1079-2-e.pdf</p> <p>Minutes of special meeting (LC Paper No. CB(1)121/13-14) http://www.legco.gov.hk/yr12-13/english/panels/ea/minutes/ea20130601.pdf</p>

Council/ Committee	Date of meeting	Paper
Public Works Subcommittee	26 June 2013	<p>Funding proposals on Head 705 – Civil Engineering</p> <ol style="list-style-type: none"> 1. 164DR Southeast New Territories Landfill Extension (LC Paper No. PWSC(2013-14)25) http://legco.gov.hk/yr12-13/english/fc/pwsc/papers/p13-25e.pdf 2. 163DR Northeast New Territories Landfill Extension (LC Paper No. PWSC(2013-14)20) http://legco.gov.hk/yr12-13/english/fc/pwsc/papers/p13-20e.pdf 3. 165DR West New Territories Landfill Extension (LC Paper No. PWSC(2013-14)21) http://legco.gov.hk/yr12-13/english/fc/pwsc/papers/p13-21e.pdf <p>Minutes of meeting (LC Paper No. PWSC85/12-13) http://legco.gov.hk/yr12-13/english/fc/pwsc/minutes/pwsc20130626.pdf</p>
Public Works Subcommittee	2 July 2013	<p>Funding proposals on Head 705 – Civil Engineering</p> <ol style="list-style-type: none"> 1. 163DR Northeast New Territories Landfill Extension (LC Paper No. PWSC(2013-14)20) http://legco.gov.hk/yr12-13/english/fc/pwsc/papers/p13-20e.pdf 2. 165DR West New Territories Landfill Extension (LC Paper No. PWSC(2013-14)21) http://legco.gov.hk/yr12-13/english/fc/pwsc/papers/p13-21e.pdf <p>Minutes of meeting (LC Paper No. PWSC87/12-13) http://legco.gov.hk/yr12-13/english/fc/pwsc/minutes/pwsc20130702.pdf</p>

Council/ Committee	Date of meeting	Paper
Finance Committee	12 July 2013	<p>Recommendations of the Public Works Subcommittee made on 24 June and 2 July 2013 (LC Paper No. FCR(2013-14)31) http://legco.gov.hk/yr12-13/english/fc/fc/papers/f13-31e.pdf</p> <p>Minutes of meeting at 3:30 pm (LC Paper No. FC4/13-14) http://www.legco.gov.hk/yr12-13/english/fc/fc/minutes/fc20130712.pdf</p> <p>Minutes of meeting at 5:40 pm (LC Paper No. FC21/13-14) http://www.legco.gov.hk/yr12-13/english/fc/fc/minutes/fc20130712a.pdf</p>
Finance Committee	10 January 2014	<p>Recommendation of the Public Works Subcommittee made on 18 December 2013 (LC Paper No. FCR(2013-14)48) http://www.legco.gov.hk/yr13-14/english/fc/fc/papers/f13-48e.pdf</p> <p>(LC Paper No. FCR(2013-14)48A) http://www.legco.gov.hk/yr13-14/english/fc/fc/papers/f13-48ae.pdf</p>

*Date of issuance of papers

Hyperlinks to relevant Council Questions:

Date	Council Question
4 March 2009	Council question raised by Hon CHAN Hak-kan http://www.info.gov.hk/gia/general/200903/04/P200903040188.htm
23 June 2010	Council question raised by Hon Miriam LAU http://www.info.gov.hk/gia/general/201006/23/P201006230128.htm
3 November 2010	Council question raised by Hon WONG Kwok-hing http://www.info.gov.hk/gia/general/201011/03/P201011030148.htm
18 May 2011	Council question raised by Hon Miriam LAU http://www.info.gov.hk/gia/general/201105/18/P201105180172.htm
1 February 2012	Council question raised by Hon IP Wai-ming http://www.info.gov.hk/gia/general/201202/01/P201202010263.htm
19 December 2012	Council question raised by Hon James TIEN http://www.info.gov.hk/gia/general/201202/01/P201202010263.htm
26 June 2013	Council question raised by Hon James TIEN http://www.info.gov.hk/gia/general/201306/26/P201306260311.htm
6 November 2013	Council question raised by Dr Hon KWOK Ka-ki http://www.info.gov.hk/gia/general/201311/06/P201311060489.htm