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Panel on Environmental Affairs

Meeting on 27 May 2013

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

Purpose

This paper provides 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. At present, 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, 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 Government 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 Government 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 Government 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 his 2013 Policy Address, the Chief Executive has stated that expansion of landfills is an integral part of the overall strategy of waste management. There is an urgent need to extend the three landfills to serve as the final repositories for non-recyclable and residual waste as the associated tendering and construction works for landfill extension projects will take several years to complete. The Government will maintain close communication with relevant parties including the District Councils, local community and other relevant stakeholders to allay their concerns on landfill extension projects.

Proposed extension of the SENT Landfill

7. As it was estimated that the SENT Landfill would be full by around 2013 or 2014, the Government proposed in 2010 to expand the SENT Landfill by 50 hectares to extend its lifespan by another six years. The extension would cover the adjoining Tseung Kwan O ("TKO") Area 137, and an encroachment of about 5 hectares of land of the Clear Water Bay Country Park ("CWBCP"). The Country and Marine Parks Board ("CMPB") had been consulted since December 2005 on the proposed encroachment. Noting that there was a genuine need to extend the lifespan of the SENT Landfill, CMPB accepted the proposed encroachment of 5 hectares of land into CWBCP for the SENT Landfill extension. Having regard that landfilling was not compatible with the

use of country park land, CMPB recommended the excision of the proposed encroached area from the approved map of CWBCP.

8. The Sai Kung District Council ("SKDC") and the local community had also been consulted on the proposed extension project since April 2004. SKDC expressed grave concern over the odour, traffic and environmental hygiene problems arising from the operation of the SENT Landfill, and on this basis objected to the SENT Landfill extension.

9. The Panel on Environmental Affairs ("the Panel") was briefed on the possible environmental impacts associated with the proposed extension of the SENT Landfill to CWBCP at its meeting on 27 October 2008. Noting the grave concerns of SKDC and TKO residents about the possible odour, traffic and environmental problems associated with the proposed landfill extension, members urged the Administration to tackle the waste management problem and odour nuisance in collaboration with the local community.

Repeal of the the Country Parks (Designation) (Consolidation) (Amendment) Order 2010

10. On 4 June 2010, the Country Parks (Designation) (Consolidation) (Amendment) Order 2010 ("the Order") was gazetted to replace the original approved map in respect of CWBCP with a new approved map under which five hectares of land of CWBCP would be used for the extension of the SENT Landfill. Given the strong opposition from SKDC, and that the Government was unable to address the odour problem, the subcommittee formed to study the Order decided to move a motion to repeal the Order. The motion was passed at the Legislative Council ("LegCo") meeting on 13 October 2010.

11. In response to the motion passed by LegCo, the Government announced on 4 January 2011 that it would scale down the extension of the SENT Landfill into TKO Area 137 to 13 hectares without encroaching into CWBCP, which might allow the continuous handling of the construction waste delivered to SENT until 2020 so as to tie in with the planning of the long-term construction waste transfer facility. It would also engage in dialogue with relevant parties concerned on the revised proposal.

Funding proposals for the development of integrated waste management facilities and the extension of landfills

12. Despite that the waste reduction and recovery initiatives under the action agenda had brought about a reduction in the volume of waste requiring disposal, the waste problem of Hong Kong could not be resolved solely through waste reduction and recovery. As such, while the initiatives to reduce waste at source

were implemented, the Government planned to take forward the development of integrated waste management facilities ("IWMF") with advanced incineration as the core technology and the extension of the three strategic landfills. The funding proposals for the following landfill extension projects and the construction of the first phase of IWMF were presented as a package to the Panel at its meeting on 26 March 2012 –

- (a) 5163DR: NENT landfill extension project;
- (b) 5164DR: SENT landfill extension project; and
- (c) 5156DR: WENT landfill extension project.

13. Details of the funding proposals for the three landfill extension projects are set out in LC Paper No. CB(1)1369/11-12(01) which is hyperlinked in the **Appendix**. According to the Government, IWMF would require some seven years for reclamation, construction and commission, while landfill extension would need a few years for site preparation works. In this connection, 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. Deliberations by the Panel on the funding proposals for landfill extension are summarized in the ensuing paragraphs.

Deliberations by the Panel on Environmental Affairs

14. The Panel held two meetings on 26 March 2012 to discuss the funding proposals for IWMF 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.

15. 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 Government on environmental policies, in particular on the need for incineration. They also urged the Administration to identify other suitable

outlying islands for IWWMF and promote the local recycling industry. In view of the foregoing, members did not support the submission of the funding proposals to the Public Works Subcommittee for consideration.

Council questions

16. Hon CHAN Hak-kan, Hon Miriam LAU and Hon James TIEN raised questions relating to landfill operation at the LegCo meetings on 4 March 2009, 23 June 2010, 18 May 2011 and 19 December 2012. Details of the Council questions are hyperlinked in the **Appendix** for ease of reference.

Latest development

17. The Administration will consult the Panel on Environmental Affairs at the meeting scheduled for 27 May 2013 on the environmental infrastructure projects (i.e. the extension projects of the SENT Landfill, the NENT Landfill and the WENT Landfill).

Relevant papers

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

Council Business Division 1
Legislative Council Secretariat
24 May 2013

List of relevant papers

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs	15 December 2005	<p>Administration's paper on "A Policy Framework for the Management of Municipal Solid Waste in Hong Kong" (LC Paper No. CB(1)486/05-06(04)) http://www.legco.gov.hk/yr05-06/english/panels/ea/papers/ea1215cb1-486-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)723/05-06) http://www.legco.gov.hk/yr05-06/english/panels/ea/minutes/ea051215.pdf</p>
Panel on Environmental Affairs	19 January 2006	<p>Administration's paper on "A Policy Framework for the Management of Municipal Solid Waste in Hong Kong" (LC Paper No. CB(1)486/05-06(04)) http://www.legco.gov.hk/yr05-06/english/panels/ea/papers/ea1215cb1-486-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1120/05-06) http://www.legco.gov.hk/yr05-06/english/panels/ea/minutes/ea060119.pdf</p>
Panel on Environmental Affairs	26 March 2007	<p>Administration's paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" (LC Paper No. CB(1)1182/06-07(06)) http://www.legco.gov.hk/yr06-07/english/panels/ea/papers/ea0326cb1-1182-6-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1372/06-07) http://www.legco.gov.hk/yr06-07/english/panels/ea/minutes/ea070326.pdf</p>

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs	25 February 2008	<p>Administration's paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)" (LC Paper No. CB(1)844/07-08(03)) http://www.legco.gov.hk/yr07-08/english/panels/ea/papers/ea0225cb1-844-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1215/07-08) http://www.legco.gov.hk/yr07-08/english/panels/ea/minutes/ea080225.pdf</p>
Panel on Environmental Affairs	27 October 2008	<p>Administration's paper on "Possible Environmental Impacts associated with the Proposed Extension of South East New Territories Landfill to the Clear Water Bay Country Park" (LC Paper No. CB(1)88/08-09(06)) http://www.legco.gov.hk/yr08-09/english/panels/ea/papers/ea1027cb1-88-6-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)222/08-09) http://www.legco.gov.hk/yr08-09/english/panels/ea/minutes/ea20081027.pdf</p>
Panel on Environmental Affairs	27 April 2009	<p>Administration's paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" (LC Paper No. CB(1)1357/08-09(03)) http://www.legco.gov.hk/yr08-09/english/panels/ea/papers/ea0427cb1-1357-3-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1943/08-09) http://www.legco.gov.hk/yr08-09/english/panels/ea/minutes/ea20090427.pdf</p>
Panel on Environmental Affairs	29 March 2010	<p>Administration's paper on "Update on the Progress of the Key Initiatives in the "Policy Framework for the Management of Municipal Solid Waste (2005-2014)"" (LC Paper No. CB(1)1443/09-10(04)) http://www.legco.gov.hk/yr09-10/english/panels/ea/papers/ea0329cb1-1443-4-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)1922/09-10) http://www.legco.gov.hk/yr09-10/english/panels/ea/minutes/ea20100329.pdf</p>

Council/ Committee	Date of meeting	Paper
Legislative Council	13 October 2010	Report of the Subcommittee on Country Parks (Designation)(Consolidation)(Amendment) Order 2010 (LC Paper No. CB(1)3017/09-10) http://www.legco.gov.hk/yr09-10/english/hc/sub_leg/sc09/reports/sc091013cb1-3017-e.pdf
Panel on Environmental Affairs	24 January 2011	Legislative Council Brief issued by the Environment Bureau/Environmental Protection Department on 4 January 2011 (EP 86/03/175A) http://www.legco.gov.hk/yr10-11/english/panels/ea/papers/ea-ep8603175a-e.pdf Minutes of meeting (LC Paper No. CB(1)1509/10-11) http://www.legco.gov.hk/yr10-11/english/panels/ea/minutes/ea20110124.pdf
Legislative Council	21 February 2011*	Legislative Council Brief issued by the Environmental Protection Department in February 2011 http://www.legco.gov.hk/yr10-11/english/panels/ea/papers/ea-epd201102-e.pdf
Panel on Environmental Affairs	26 March 2012	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 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 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 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

Council/ Committee	Date of meeting	Paper
Panel on Environmental Affairs	20 April 2012	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 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
Panel on Environmental Affairs	28 January 2013	Administration's paper on "2013 Policy Address - Policy Initiatives of Environment Bureau: Environmental protection" (LC Paper No. CB(1)431/12-13(02)) http://www.legco.gov.hk/yr12-13/english/panels/ea/papers/ea0128cb1-431-2-e.pdf Minutes of meeting (LC Paper No. CB(1)732/12-13) http://www.legco.gov.hk/yr12-13/english/panels/ea/minutes/ea20130128.pdf

*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
18 May 2011	Council question raised by Hon Miriam LAU http://www.info.gov.hk/gia/general/201105/18/P201105180172.htm
19 December 2012	Council question raised by Hon James TIEN http://www.info.gov.hk/gia/general/201202/01/P201202010263.htm