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Panel on Development

Meeting on 23 April 2013

**Updated background brief on increasing land supply through
reclamation outside Victoria Harbour and rock cavern development**

Purpose

This paper provides background information on the Administration's strategy to increase land supply through reclamation outside Victoria Harbour and rock cavern development, and summarizes the major views and concerns expressed by Members since the 2010-2011 legislative session on the subject.

Background

Initiatives to increase housing land supply under the 2010-2011 and 2011-2012 Policy Addresses

2. Initiatives to increase land supply were introduced under the 2010-2011 and 2011-2012 Policy Addresses to meet the strong housing demands from members of the public. When revealing such initiatives under the 2010-2011 Policy Address¹, the then Chief Executive announced that in order to generate more land in the long run, the Administration would consult the public on the proposals of reclamation on an appropriate scale outside Victoria Harbour and developing cavern and underground

¹ The initiatives to increase land supply under the 2010-2011 Policy Address included rezoning about 30 hectares of land for residential use, fine-tuning land supply arrangements, speeding up infrastructure construction at the Kai Tak Development Area, setting up a Steering Committee on Housing Land Supply, etc.

space. Under the 2011-2012 Policy Address, two of the six measures² identified for expanding land resources were to explore the option of reclamation on an appropriate scale outside Victoria Harbour, and to actively explore the use of rock caverns to re-provision existing public facilities so as to release the sites for housing and other uses.

Reclamation outside Victoria Harbour

3. Following the enactment of the Protection of the Harbour Ordinance (Cap. 531) in 1997 and the Court of Final Appeal's ruling in 2004, reclamation within Victoria Harbour to create new land is legally constrained but such constraint is not applicable to other sea area outside the Harbour. Therefore, reclamation on an appropriate scale outside Victoria Harbour is a possible way to increase land supply. According to the Administration, reclamation outside Victoria Harbour will also facilitate the disposal of surplus public fill and contaminated sediments generated from construction activities and fairway dredging in an environmentally-friendly manner.

Rock Cavern development

4. The Civil and Engineering Development Department ("CEDD") commissioned a study on the enhanced use of underground space in Hong Kong in March 2010. According to the findings of the study, Hong Kong is particularly suitable for developing rock caverns from the geological perspective. By re-provisioning suitable Government facilities inside caverns and releasing the original land as well as the adjacent sterilized land for housing and other uses, cavern development is a viable option to increase land supply. Cavern development can also be a good source of land supply for accommodating new infrastructure facilities, such as sewage treatment plants and refuse transfer stations, which will otherwise occupy land and territorial space.

Identifying potential reclamation sites and suitable existing facilities for relocating to rock caverns

5. At the meeting of the Panel on Development ("DEV Panel") on 24 May 2011, the Administration briefed members on its plan to launch a

² The other measures were: release of industrial land for non-industrial use, use of green belt sites, review of "Government, Institution or Community" sites and conversion of agricultural land.

search for potential reclamation sites outside Victoria Harbour, identify suitable existing facilities for relocating to rock caverns, and conduct relevant technical studies. In conjunction with these technical studies, a two-stage public engagement ("PE") exercise will be conducted to initiate public discussions with a view to gauging the public's views on the two land supply options (reclamation outside Victoria Harbour and rock cavern development).

6. On reclamation outside Victoria Harbour, some Panel members expressed support for using surplus public fill for reclamation so as to reduce the transportation costs and the nuisance to the public in the disposal of such fill. Some members suggested that the Administration should consider reclamation in the form of constructing individual islands along the shore but leaving waterways in between. In this way, the shoreline can be preserved and more waterfront areas will be created for public enjoyment and other uses.

7. On the use of rock caverns to house government facilities, some members expressed concern about the consumption of a large amount of energy for ventilation and lighting inside the caverns. The Administration advised that the amount of energy to be consumed for maintaining the operation of the facilities in caverns would depend on the nature of the facilities. On the future PE exercises, some members stressed that, to make the exercises meaningful and effective, they should be conducted in a knowledge-based manner, with sufficient background information including difficulties in the land development process and the pros and cons of the two options disseminated to the public.

Stage 1 public engagement (November 2011 to March 2012)

8. In November 2011, the Administration provided an information paper (LC Paper No. CB(1)323/11-12(01)) to update Panel members about the latest development of the technical studies and the Stage 1 PE under the Study on Enhancing Land Supply Strategy: Reclamation outside Victoria Harbour and Rock Cavern Development.

9. On the proposal of reclamation, according to the paper, CEDD has developed an inventory of reclamation site constraints in consultation with relevant Government departments. This inventory helps identify the "no-go" areas for reclamation and areas that pose serious constraints and hence facilitates the site search study. As regards cavern development, CEDD was reviewing the suitability of relocating certain public facilities to

caverns and planned to embark on feasibility studies on relocation of the some facilities, including the Sha Tin sewage treatment works, to caverns.

10. The Stage 1 PE, of which the objective was to solicit views on the feasible ways of increasing land supply, the guiding principles and the site selection criteria, was launched on 10 November 2011 and ended on 31 March 2012. The guiding principles for developing the site selection criteria and the initial site selection criteria are listed at **Appendix I**.

11. To facilitate the community's examination and discussion of the site selection criteria for reclamation, the Administration came up with a list of 25 possible reclamation sites in January 2012 as examples after surveying the coastlines throughout the territory and excluding those areas that were subject to serious constraints and thus not suitable for reclamation. A map showing the locations of the 25 possible reclamation sites is in **Appendix II**.

Public views received by the Panel on Development

12. DEV Panel held a special meeting on 10 March 2012 to receive public views on the two land supply options. At the meeting, 70 deputations/individuals presented various views on the subject. The Panel also received a total of 56 written submissions³. While some views were in support of reclamation outside Victoria Harbour and rock cavern development in principle to increase land supply, some were opposed to reclamation on the ground of environmental concerns and the possible adverse impact on the local fishing industry. There were objections to reclamation at specific sites such as Wu Kai Sha, Tuen Mun Area 27, Cheung Chau and Peng Chau. Besides, some organizations stressed the importance of formulating an overall plan for the future use of the reclaimed sites to justify the reclamation works.

Follow-up to the Stage 1 public engagement exercise

13. At the Council meeting of 21 November 2012, a Member raised a question about the Administration's latest position on the selection of sites for reclamation and the results of the Stage 1 PE. The Administration replied that the 25 possible reclamation sites announced in January 2012 did not constitute a list of proposed reclamation sites. Those sites were only named to facilitate the public in considering the proposed initial site

³ The submissions can be viewed via the following hyperlink:
http://legco.gov.hk/yr11-12/english/panels/dev/papers/dev_g.htm

selection criteria. Given the large number of submissions from the public, the Administration needed more time to complete the PE report, select the reclamation sites and conduct the relevant technical studies. The Administration aimed to publish the Stage 1 PE report and propose possible sites worthy for further consideration for reclamation and rock cavern development to launch the Stage 2 PE in the first quarter of 2013. It further advised that the public generally agreed to the site selection criteria encompassing social, environmental and economic benefits, with particular emphasis on the impacts on the community, environment and marine ecology. The hyperlink to the Administration's full reply to the original and supplementary questions is given at **Appendix III**.

Study on the long-term strategy for cavern development

14. In parallel with the Stage 1 PE exercise, the Administration sought the support of DEV Panel on 27 March 2012 on a funding proposal for undertaking a study on the long-term strategy for cavern development. The scope of the strategic study included the formulation of policy guidelines to facilitate cavern development for both public and private sectors, the preparation of cavern master plans to reserve strategic areas for cavern development, and the formulation of a long-term strategy to systematically relocate existing government facilities to rock caverns. While welcoming the early commencement of a strategic study on cavern development in Hong Kong, DEV Panel members urged the Administration to take into account geographic and geologic factors as well as community aspirations, town planning considerations and the uniqueness of the environment surrounding the potential sites in determining the uses of caverns.

Feasibility study on the relocation of Sha Tin sewage treatment works to caverns

15. At the same meeting (held on 27 March 2012), the Administration presented a funding proposal on conducting a feasibility study on the relocation of Sha Tin sewage treatment works ("STSTW") to caverns at Nui Po Shan and sought DEV Panel's support. Panel members urged the Administration to address the grave concerns of the residents of Chevalier Garden, a residential development near the preliminary relocation site, about the possible impact brought about by the operation of the relocated STSTW in respect of air pollution, odour emission, traffic congestion and blasting operations associated with the construction works. Some

members suggested that the Administration should consider changing the position of the ventilation shaft of the relocated STSTW to make it as far away as possible from residential developments, providing further information on the project to the residents and arranging visits for these residents to other Government sewage treatment works housed in caverns. Some opined that the provision of policy guidelines for developing caverns would enable concerned parties to have a comprehensive picture about the criteria for selecting suitable caverns for development and the benefits of such relocations, and would in turn facilitate the building up of consensus and support in society for implementation of individual facilities relocation projects.

16. At the Public Works Subcommittee ("PWSC") meeting held on 18 April 2012 discussing the feasibility study, the Administration advised that residents of Chevalier Garden had paid a visit to Stanley STW and could sense neither smell nor noise at the drop-off point with a distance of 100 metres away from the STW. The impact of the ventilation shaft on residents of Chevalier Garden would be negligible as it would be located 600 metres away from the Garden. The Administration stressed that when conducting the feasibility study, it would continue to consult the local community and examine possible measures for addressing residents' concerns. The funding for the strategic study as well as the feasibility study was subsequently endorsed by PWSC and approved by the Finance Committee.

Policy Address 2013 -- announcement of potential reclamation sites

17. In his 2013 Policy Address, the Chief Executive announced a number of measures to increase housing land supply in the short, medium and long terms. Among the various long-term measures, the Administration will actively press ahead with reclamation outside Victoria Harbour while keeping the impact on the environment and marine ecology to a minimum. The Chief Executive announced that initially, Siu Ho Wan and Sunny Bay at North Lantau, Lung Kwu Tan in Tuen Mun, Southwest Tsing Yi and Ma Liu Shui near the estuary of Shing Mun River were among the sites identified. They would provide a total of about 600 hectares of land. Apart from near-shore reclamation, the Administration has also considered the option of artificial island in the central waters between Hong Kong Island and Lantau as the location could generally avoid shorelines of high ecological value. If artificial islands were provided with suitable transport infrastructure, they could be extended as new development areas from the current urban areas. The Administration

hopes that a total of about 2 000 to 3 000 hectares of land could be made available through reclamation.

18. At the briefing by the Secretary for Development on the relevant policy initiatives in the Chief Executive's 2013 Policy Address to DEV Panel on 22 January 2013, some members expressed concern about the long time required for taking forward reclamation projects and housing developments on the reclaimed lands to address the pressing housing demand. They considered that, to conserve the natural environment, reclamation should only be considered as the last resort as a measure to increase land supply. The Administration reiterated that the reclamation outside Victoria Harbour was a long-term land supply measure, the purpose of which was to build up land reserve. For the proposed reclamation site at southwest Tsing Yi, some members suggested that the oil depot and the heavy industries at Tsing Yi should be relocated, to caverns if feasible, to release the sites for housing developments and the Administration should formulate a new development plan for the whole island.

19. As regards cavern development, the Administration advised at the same meeting that apart from STSTW, it had proposed three other potential public facilities for relocating to cavern, namely, Diamond Hill Fresh Water and Salt Water Service Reservoirs, Sai Kung STW and Sham Tseng STW. Given the long lead time and the relatively small amount of land, i.e. 6 hectares, to be released from the concerned sites, relocation of these facilities to caverns was not a major initiative, among others, for increasing land supply. In parallel, the Administration would further explore the potential of developing underground spaces in the urban areas. This would include studying the possibility of linking up the underground spaces of existing or planned structures in the urban areas.

Recent developments

20. The Administration launched the Stage 2 PE on Enhancing Land Supply Strategy on 21 March 2013 to seek public views on the five potential reclamation sites announced by the Chief Executive, building artificial islands in the central waters and three schemes (i.e. Diamond Hill Fresh Water and Salt Water Service Reservoirs, Sai Kung STW and Sham Tseng STW) for rock cavern development⁴.

⁴ The press release on the Stage 2 PE, together with the PE digest, is available at the following hyperlink: http://www.devb.gov.hk/en/publications_and_press_releases/press/index_id_7748.html

21. The Administration will brief the Panel at its meetings on 23 April 2013 on the results of the Stage 1 PE⁵ and seek the Panel's views on the potential sites for reclamation and rock cavern development.

Relevant papers

22. A list of relevant papers is shown at **Appendix III**.

Council Business Division 1
Legislative Council Secretariat
16 April 2012

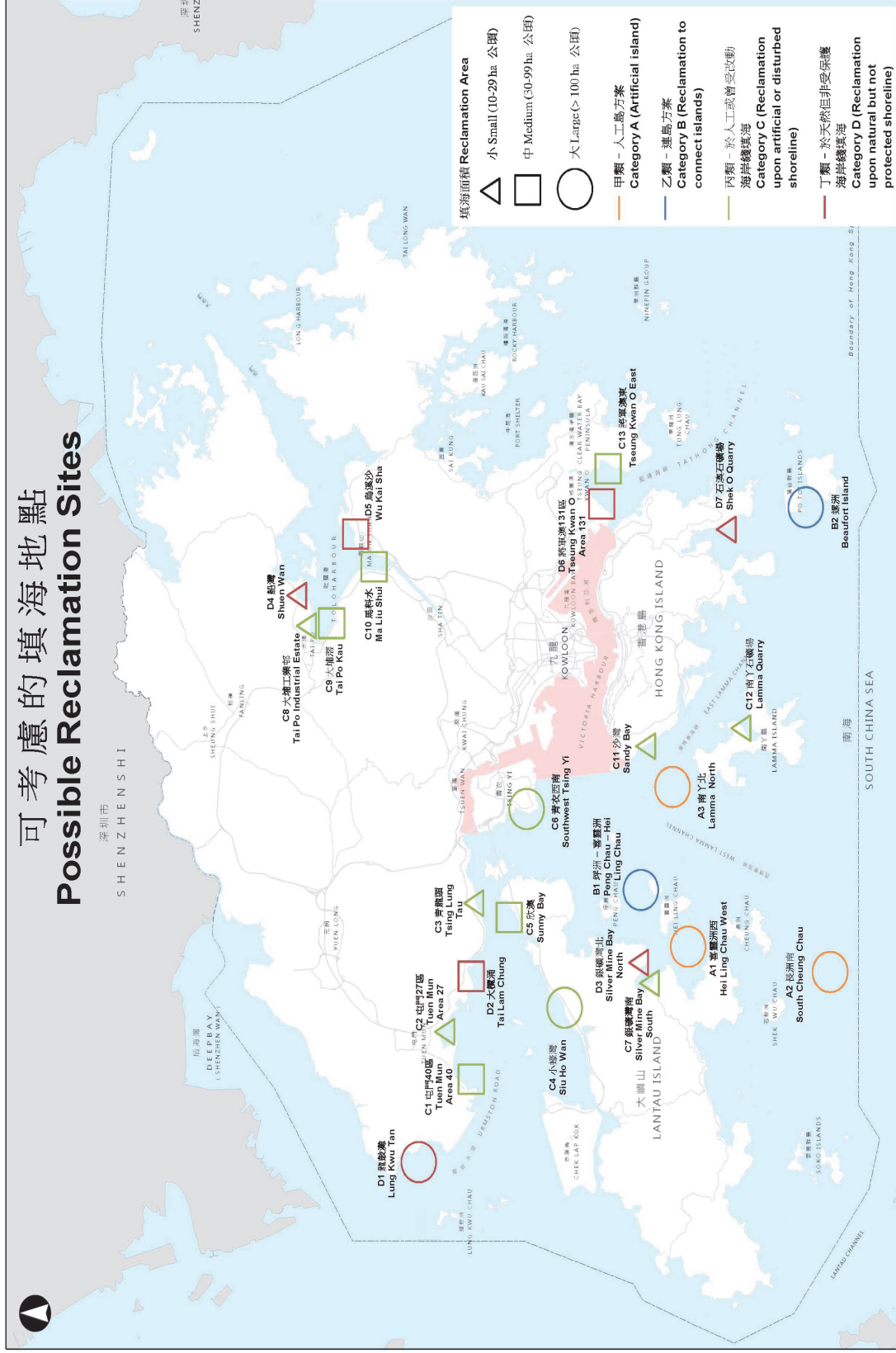
⁵ The Stage 1 PE report is available at: <http://www.landsupply.hk/preview/reportPE1.php?lang=eng>

**Enhancing Land Supply Strategy:
Reclamation outside Victoria Harbour and Rock Cavern Development --
Stage 1 Public Engagement**

**Guiding principles for developing the site selection criteria
and the initial site selection criteria**

	Initial site selection criteria	
Land supply options	Reclamation outside Victoria Harbour	Relocating public facilities into cavern
Guiding Principles		
Social harmony and benefits	<ul style="list-style-type: none"> • Impact on local community • Site location and accessibility • Meeting local needs 	<ul style="list-style-type: none"> • Social benefits at the releasing site upon relocation of existing facilities • Social impact at the cavern development site
Enhanced environmental performance	<ul style="list-style-type: none"> • Environmental impacts • Environmental benefits 	<ul style="list-style-type: none"> • Environmental benefits in the vicinity of the releasing site upon relocation of existing facilities • Environmental impact at the cavern development site
Economic efficiency and practicality	<ul style="list-style-type: none"> • Planning flexibility • Engineering feasibility • Cost effectiveness 	<ul style="list-style-type: none"> • Engineering feasibility • Cost effectiveness • Specific requirements of facility • Suitability of relocation based on existing facility status

Source: The Administration's paper on "Enhancing Land Supply Strategy: Reclamation outside Victoria Harbour and Rock Cavern Development -- Stage 1 Public Engagement" (LC Paper No. CB(1)323/11-12(01))



資料來源：土木工程拓展署網站 (<http://www.landsupply.hk/preview/report/Appendix%20T.pdf>)

Source: Website of the Civil Engineering and Development Department (<http://www.landsupply.hk/preview/report/Appendix%20T.pdf>)

註：土木工程拓展署於2012年1月提出以上地點。

Note: Civil Engineering and Development Department announced the 25 sites in January 2012.

**Increasing land supply through
reclamation outside Victoria Harbour and rock cavern development**

List of relevant papers

Date	Meeting/Event	References
24 May 2011	Panel on Development	<p>Administration's paper -- Increasing land supply by reclamation and rock cavern development (LC Paper No. CB(1)2205/10-11(05)) http://www.legco.gov.hk/yr10-11/english/panels/dev/papers/dev0524cb1-2205-5-e.pdf</p> <p>Administration's paper -- Findings of the study on the enhanced use of underground space in Hong Kong (LC Paper No. CB(1)2205/10-11(06)) http://www.legco.gov.hk/yr10-11/english/panels/dev/papers/dev0524cb1-2205-6-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)265/11-12) http://www.legco.gov.hk/yr10-11/english/panels/dev/minutes/dev20110524.pdf</p>
1 February 2012	Council meeting	<p>Hansard -- written question (No. 15) on "Government's proposal on increasing land supply by reclamation outside Victoria Harbour" (P. 5048 - P. 5053) http://www.legco.gov.hk/yr11-12/english/counmtg/hansard/cm0201-translate-e.pdf</p>
22 February 2012	Council meeting	<p>Hansard -- written question (No. 12) on "Enhancing land supply by reclamation" (P. 6073 - P. 6080) http://www.legco.gov.hk/yr11-12/english/counmtg/hansard/cm0222-translate-e.pdf</p>

Date	Meeting/Event	References
10 March 2012	Panel on Development	<p>Administration's paper on Enhancing Land Supply Strategy: Reclamation outside Victoria Harbour and Rock Cavern Development -- Stage 1 Public Engagement (LC Paper No. CB(1)323/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/dev/papers/devcb1-323-1-e.pdf</p> <p>Paper on increasing land supply through reclamation outside Victoria Harbour and rock cavern development prepared by the Legislative Council Secretariat (Background brief) (LC Paper No. CB(1)1218/11-12(01)) http://www.legco.gov.hk/yr11-12/english/panels/dev/papers/dev0310cb1-1218-1-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)2632/11-12) http://www.legco.gov.hk/yr11-12/english/panels/dev/minutes/dev20120310.pdf</p>
18 April 2012	Public Works Subcommittee	<p>Administration's paper on "Feasibility study on relocation of Sha Tin sewage treatment works to caverns" (PWSC(2012-13)7) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/papers/p12-07e.pdf</p> <p>Administration's paper on "Study on long-term strategy for cavern development (PWSC(2012-13)8) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/papers/p12-08e.pdf</p> <p>Minutes of meeting (LC Paper No. PWSC57/11-12) http://www.legco.gov.hk/yr11-12/english/fc/pwsc/minutes/pwsc20120418.pdf</p>

Date	Meeting/Event	References
7 November 2012	Council meeting	<p>Hansard -- written question (No. 19) on "Reclamation plan in Sham Tseng/Tsuen Wan" (P. 1502 - P. 1505) http://www.legco.gov.hk/yr12-13/english/counmtg/hansard/cm1107-translate-e.pdf</p>
21 November 2012	Council meeting	<p>Hansard -- oral question (No. 6) on "Potential reclamation sites in the New Territories East" (P. 2222 - P. 2232) http://www.legco.gov.hk/yr12-13/english/counmtg/hansard/cm1121-translate-e.pdf</p>
22 January 2013	Panel on Development	<p>Administration's paper on 2013 Policy Address -- Policy Initiatives of Development Bureau (LC Paper No. CB(1)428/12-13(03)) http://www.legco.gov.hk/yr12-13/english/panels/dev/papers/dev0122cb1-428-3-e.pdf</p> <p>Address by the Chief Executive at the Legislative Council meeting on 16 January 2013 -- "Seek Change, Maintain Stability, Serve the People with Pragmatism" http://www.legco.gov.hk/yr12-13/english/panels/1213policy-e.pdf</p> <p>Minutes of meeting (LC Paper No. CB(1)753/12-13) http://www.legco.gov.hk/yr12-13/english/panels/dev/minutes/dev20130122.pdf</p>