

**For discussion  
on 28 February 2017**

## **Legislative Council Panel on Development**

### **751CL - Planning and engineering study on Sunny Bay reclamation**

#### **PURPOSE**

This paper briefs Members on the proposal to upgrade **751CL** to Category A at an estimated cost of \$99.8 million in money-of-the-day (MOD) prices for carrying out a planning and engineering study (the Study) on Sunny Bay reclamation and the associated site investigation works.

#### **PROJECT SCOPE AND NATURE**

2. The scope of **751CL** comprises -
  - (a) a detailed planning and engineering study to establish the reclamation extent, land uses and technical feasibility, including the formulation of a recommended outline development plan and recommended layout plan, planning and engineering assessments on baseline review, land use options, air ventilation and urban design, site formation and reclamation, traffic and transport, drainage and sewerage, water supplies and utilities etc. and preparation of preliminary design of engineering infrastructure for supporting the proposed developments;
  - (b) environmental impact assessment (EIA) for the proposed developments and the associated engineering infrastructure;
  - (c) community engagement exercises with relevant stakeholders;
  - (d) formulation of the implementation strategy and programme; and
  - (e) associated site investigation works including supervision.

Encl. 1 A location plan showing the study area and the potential reclamation site at Sunny Bay (about 60 to 100 hectares) is at **Enclosure 1**.

3. Subject to funding approval of the Finance Committee (FC), we plan to commence the Study and the associated site investigation works in the third quarter of 2017 for completion in the third quarter of 2019. The Civil Engineering and

Development Department (CEDD) invited tenders for the Study on 11 November 2015, but the tender will be awarded only upon obtaining FC's funding approval.

## JUSTIFICATION

4. Reclamation on an appropriate scale outside Victoria Harbour has been identified as one of the possible measures to expand our land resources. CEDD started technical studies and a two-stage public engagement (PE) exercise for the "Enhancing Land Supply Strategy: Reclamation outside Victoria Harbour and Rock Cavern Development" (ELSS) in July 2011. During the Stage 1 PE conducted from November 2011 to March 2012, there was a wide support for the six-pronged approach<sup>1</sup> for enhancing land supply, including reclamation outside Victoria Harbour.

5. After the Stage 1 PE, taking into consideration the public views on site selection criteria, CEDD identified five potential near-shore reclamation sites including Sunny Bay<sup>2</sup>, and the potential of constructing artificial islands in the central waters between Hong Kong Island and Lantau as possible means to provide new land that would pose smaller impact to developed areas while allowing comprehensive planning.

6. During the Stage 2 PE conducted from March to June 2013, the public was consulted on possible land uses for the proposed reclamation sites and artificial islands as well as areas of concern for further study. For the Sunny Bay reclamation site, residential development, commercial uses mainly for tourism-related facilities such as hotels, retail or dining, government, institution or community uses including parks and recreational or leisure facilities and land reserve are the major land uses supported by the public. The impacts of reclamation on the marine ecology, ecological conservation, transportation, cost-effectiveness and the need to expedite land supply are the major public concerns. A summary of the views on the proposed Sunny Bay reclamation collected during the Stage 2 PE is at **Enclosure 2**.

Encl. 2

7. In response to the concerns about potential impacts on marine ecology and environment arising from reclamation, CEDD conducted a cumulative environmental impact assessment (CEIA) and an on-site survey of Chinese white dolphins (CWD) between August 2013 and December 2014 for three reclamation sites in the western waters north of Lantau (viz Sunny Bay, Siu Ho Wan and Lung Kwu Tan). The CEIA study aimed to strategically assess the overall effect of these three reclamation sites on four key environmental aspects, namely air quality, water quality,

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<sup>1</sup> The six-pronged approach includes re-zoning, resumption, redevelopment, reclamation outside Victoria Harbour, rock cavern development and re-use of ex-quarry sites.

<sup>2</sup> The remaining potential near-shore reclamation sites are Lung Kwu Tan, Ma Liu Shui, Siu Ho Wan and Tsing Yi Southwest.

ecology and fisheries, taking into consideration the major development projects in the vicinity, including the Hong Kong-Zhuhai-Macao Bridge (HZMB) related projects in Hong Kong, Hong Kong International Airport (HKIA)'s three-runway system (3RS) and the Tung Chung New Town Extension.

8. According to the CWD survey, Sunny Bay is unlikely a CWD hotspot and has only low and probably occasional dolphin use. Overall, the CEIA has revealed that there is no insurmountable environmental problem with respect to the four key environmental aspects for the Sunny Bay reclamation. CEDD briefed the Advisory Council on the Environment about the findings of the CEIA and CWD survey at its meeting on 9 March 2015. A summary of the findings of the CEIA (including findings of the CWD survey) related to Sunny Bay reclamation is at

Encl. 3 **Enclosure 3.**

9. Lantau is strategically located in the western part of Hong Kong, with several major infrastructure and development projects under construction, including the HZMB, the Tuen Mun-Chek Lap Kok Link and HKIA's 3RS, and a number of projects under planning, including HKIA north commercial district development, Tung Chung New Town Extension, topside development of the HZMB Hong Kong boundary crossing facilities island, Siu Ho Wan development, the East Lantau Metropolis, etc.

10. In the public engagement exercise for Lantau development conducted by the Lantau Development Advisory Committee (LanDAC) and the Government (see more details in paragraph 23 below), we found that the proposal of developing the North-eastern Lantau node (where the proposed Sunny Bay reclamation forms a part) for leisure, entertainment and tourism development was generally supported by the public.

11. Having considered the locational advantages and key economic development concepts of Lantau, land requirement and supply of different types of commercial uses in the territory, opportunities and constraints of major sites for economic developments, stakeholders' views, etc., it is recommended that the Sunny Bay reclamation site be mainly used for recreation and tourism-related developments, particularly those targeting the mass-tourism market. This site, together with Hong Kong Disneyland, can be developed into a recreation and tourism gateway for Northeast Lantau by establishing new tourist attractions, recreational or leisure facilities, themed hotels, as well as retail, catering and entertainment facilities. In addition, if there is a demand, other business uses that are compatible with the above developments will be considered.

12. We propose to carry out the Study to develop detailed proposals for the

reclamation, including land uses and engineering infrastructure. The following key issues will also be addressed:

- (a) the Study will review the findings and recommendations of previous studies in which a leisure and entertainment node was proposed at Sunny Bay, and the latest strategic planning, traffic, transport and infrastructure proposals relevant to the study area. We will also take account of the latest situation of the Tung Chung New Town Extension as well as the public views collected during the public engagement exercises for the ELSS and Lantau development;
- (b) emphasis will be put on the synergy of the proposed Sunny Bay reclamation and the surrounding areas such as the Hong Kong Disneyland, the proposed topside development of the HZMB Hong Kong boundary crossing facilities island and the HKIA north commercial district; and
- (c) opportunities will be sought to investigate the conversion of the existing seawall into eco-shoreline for enhancing the marine ecology and the public enjoyment along the seafront.

13. In view of the multi-disciplinary nature of the Study requirements and inadequate in-house resources, we propose to engage consultants to undertake the Study and to supervise the associated site investigation works.

## **FINANCIAL IMPLICATIONS**

14. We estimate the costs of the Study and the associated site investigation works to be \$99.8 million in MOD prices, made up as follows-

	<b>\$million</b>
(a) Consultants' fees for	54.1
(i) planning study	11.1
(ii) engineering study	30.4
(iii) EIA for the proposed developments and associated engineering infrastructure	10.7
(iv) supervision of associated site investigation works	1.9
(b) Site investigation works	23.8

(c)	Expenses for community engagement exercise and other miscellaneous items	3.7	
(d)	Contingencies	8.1	
	Sub-total	89.7	(in September 2016 prices)
(e)	Provision for price adjustment	10.1	
	Total	99.8	(in MOD prices)

## **COMMUNITY ENGAGEMENT**

15. We will conduct community engagement activities to gather comments from stakeholders and the public in formulating the development proposals during the Study. A community engagement strategy setting out the detailed arrangement and programme of the engagement activities will be formulated under the Study.

## **PUBLIC CONSULTATION**

16. We have completed a two-stage PE exercise on the ELSS as mentioned in paragraphs 4 and 6 above.

17. As part of the Stage 2 PE, we briefed the Tsuen Wan District Council (TWDC), among others, on the potential reclamation at Sunny Bay on 28 May 2013. We further consulted the Community Building, Planning and Development Committee of the TWDC on the Study on 17 March 2014. Members had no objection to the proposal to conduct the Study.

18. In the fifth Legislative Council Term, after briefing the Panel on Development (the Panel), we submitted the funding proposal to the Public Works Subcommittee (PWSC) for consideration.

19. At the meetings on 26 November 2014 and 9 January 2015, PWSC Members considered the proposal (vide PWSC(2014-15)34) and expressed concerns about whether the proposed reclamation works would cause adverse impacts on

fisheries (in particular Ma Wan mariculturists) and on marine ecological conditions. Members were also concerned about whether the aircraft noise present at the vicinity would hinder future developments on the reclamation.

20. After these meetings, we completed the investigation work and assessments under the CEIA and CWD survey, which can help to address the PWSC Members' concerns about the impacts on fisheries and marine ecology. The related assessment findings are summarised in paragraphs 7 and 8 above.

21. We are aware of the potential impact of aircraft noise generated from HKIA's operation on the future developments at the proposed Sunny Bay reclamation. Noise-sensitive land uses, such as residential developments and educational institutions, are considered not suitable at areas within the Noise Exposure Forecast (NEF) 25 contours<sup>3</sup> related to aircraft operation. The Study will consider the future NEF 25 contours as included in the EIA report for HKIA's 3RS in the detailed assessment of planning constraints.

22. Owing to the concerns of some academia and fisheries groups about the issue on tidal flushing, we have revised the boundary of the potential reclamation site as shown in Enclosure 1 to leave a wider sea entrance to Yan O Wan.

23. The LanDAC and the Government conducted a series of public engagement events on the proposed development strategy for Lantau from end January to April 2016. The Panel on Development was also consulted for views on 23 February 2016. During the public engagement, we found that there was general public support to the proposal of developing the North-eastern Lantau node (where the proposed Sunny Bay reclamation forms a part) for leisure, entertainment and tourism development. However, there was concern about the possible impacts on marine ecology arising from the proposed reclamation at Sunny Bay. The fisheries groups were specifically concerned about the potential impacts on fisheries due to the reclamation works. As stated in paragraph 8 above, the CEIA has revealed that there is no insurmountable environmental problem identified with respect to the four key environmental aspects, including ecology and fisheries, for the proposed reclamation at Sunny Bay. Notwithstanding this, we will conduct the Study which will further assess the impacts of the proposed reclamation on ecology and fisheries, and recommend suitable mitigation measures as necessary.

24. In the public engagement, we also received general comments about lack

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<sup>3</sup> Noise Exposure Forecast (NEF) contour, which takes into account the duration of flyover, the peak noise level, the tonal characteristics and the number of aircraft movements in both the daytime and night-time period, is used to represent noise impact arising from aircraft operation.

in details and impact assessments arising from the leisure and tourism proposals in the Lantau development. Some would like to see detailed land use proposals for reclamations. The Study will aim to draw up land use proposals at Sunny Bay to address these concerns.

## **ENVIRONMENTAL IMPLICATIONS**

25. The Study is a designated project under Schedule 3 of the Environmental Impact Assessment Ordinance (EIAO) (Chapter 499). We will prepare and submit an EIA study report in compliance with the requirements under the EIAO, the Technical Memorandum on the EIA Process and the EIA Study Brief. An application for approval of the EIA study report will be submitted to the Director of Environmental Protection under the EIAO. Some works items (such as reclamation, major roads and sewage pumping stations) that may be proposed under the Study to support the developments in Sunny Bay are designated projects under Schedule 2 of the EIAO that require Environmental Permits prior to construction and operation. The assessments to be carried out in the EIA will cover all necessary aspects such as air quality, water quality and hydraulics, ecology, fisheries, heritage and archaeology, noise, landscape and visual impacts arising from these works items.

26. The Study and the associated site investigation works will only generate very little construction waste. We will require the consultants to fully consider measures to minimise the generation of construction waste and to reuse and recycle construction waste as much as possible in the future implementation of the construction projects.

## **HERITAGE IMPLICATIONS**

27. The Study and the associated site investigation works will not affect any heritage sites, i.e. all declared monuments, proposed monuments, graded historic sites and buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

## **LAND ACQUISITION**

28. The Study and the associated site investigation works will not require any land acquisition. The Study will examine the need and extent of land acquisition and/or clearance required for implementation of the development at Sunny Bay.

## **BACKGROUND INFORMATION**

29. On 24 May 2011, we briefed Members on the Government's plan to

launch a two-stage PE on the ELSS and conduct technical studies to explore the options of reclamation on an appropriate scale outside Victoria Harbour and rock cavern development. Members expressed support to commence the technical studies and the PE exercise.

30. We upgraded **751CL** in Category B in September 2011.

31. We launched the Stage 1 PE on 10 November 2011 and briefed Members on 22 November 2011 on the progress of the technical studies and Stage 1 PE, key issues including the proposed six-pronged approach of increasing land supply, and the initial site selection criteria for reclamation outside Victoria Harbour and rock cavern development.

32. The Panel held a special meeting on 10 March 2012 to receive public views on the Government's strategy on enhancing land supply.

33. On 22 January 2013, we briefed Members on the policy initiatives of the Development Bureau in the 2013 Policy Address. Among others, we outlined the results of the Stage 1 PE.

34. We launched the Stage 2 PE on 21 March 2013 and briefed Members on 23 April 2013 that Sunny Bay is one of the five near-shore reclamation sites for further consideration.

35. The Panel held a special meeting on 1 June 2013 to receive public views on the proposed reclamation sites including reclamation at Sunny Bay.

36. On 28 January 2014, we briefed Members on the results of Stage 2 PE.

37. In the fifth Legislative Council Term, we briefed the Panel on 22 April 2014 (vide CB(1)1248/13-14(06)). We submitted PWSC(2014-15)34 for upgrading of **751CL** to Category A to the PWSC in November 2014. The proposal was discussed at the PWSC meetings on 26 November 2014 and 9 January 2015 but did not receive majority support from PWSC Members. The Item was submitted in the 2015-16 legislative session vide PWSC(2016-17)34 but was not discussed by the PWSC before the closure of the legislative session.

38. The Study and the associated site investigation works will not directly

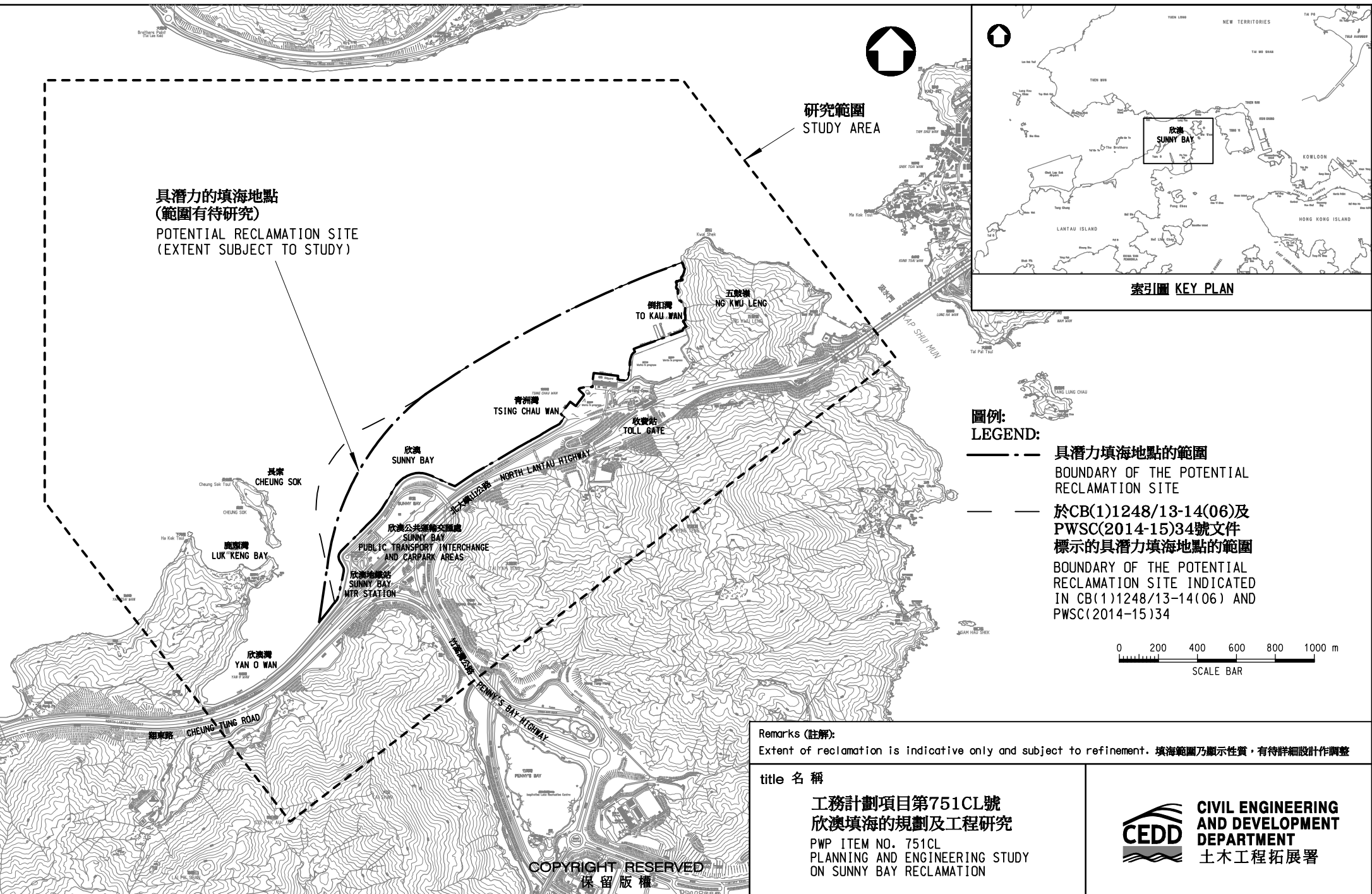


involve any tree removal or planting proposals. We will require the consultants to take into consideration the need for tree preservation during the Study.

## **WAY FORWARD**

39. We plan to seek funding approval from the FC after consulting with the PWSC.

**Development Bureau  
Civil Engineering and Development Department  
Planning Department  
February 2017**





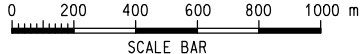
具潛力的填海地點  
(範圍有待研究)  
POTENTIAL RECLAMATION SITE  
(EXTENT SUBJECT TO STUDY)

研究範圍  
STUDY AREA

索引圖 KEY PLAN

圖例:  
LEGEND:

-  具潛力填海地點的範圍  
BOUNDARY OF THE POTENTIAL RECLAMATION SITE
-  於CB(1)248/13-14(06)及PWSC(2014-15)34號文件標示的具潛力填海地點的範圍  
BOUNDARY OF THE POTENTIAL RECLAMATION SITE INDICATED IN CB(1)248/13-14(06) AND PWSC(2014-15)34



Remarks (註解):  
Extent of reclamation is indicative only and subject to refinement. 填海範圍乃顯示性質，有待詳細設計作調整

title 名稱  
工務計劃項目第751CL號  
欣澳填海的規劃及工程研究  
PWP ITEM NO. 751CL  
PLANNING AND ENGINEERING STUDY  
ON SUNNY BAY RECLAMATION

 CIVIL ENGINEERING  
AND DEVELOPMENT  
DEPARTMENT  
土木工程拓展署

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**A summary of views collected in Stage 2 Public Engagement  
on Sunny Bay reclamation**

Land Use

1. Land reserve and residential development (in particular public rental housing) are the most supported land uses for Sunny Bay reclamation.
2. Other major supported land uses covered uses for commercial, tourism related facilities, retail, dining, theme parks, recreational or leisure facilities, public parks, tourist spots and holiday village.

Aspects of Specific Concerns

3. A considerable number of respondents indicated that reclamation works would increase job opportunities and help alleviate the housing problem. Some considered that reclamation at Sunny Bay would be beneficial to the local community and economic growth.
4. Impacts on landscape or habitats along the shorelines, marine ecology, ecological conservation, transportation, cost-effectiveness and the need to expedite land supply were the major concerns about the Sunny Bay reclamation.
5. Other concerns included impact on the local community, deterioration of seawater quality, air and noise pollution near the development site, and the importance of environmental impact assessment.
6. The Executive Summary of the Stage 2 Public Engagement is available at website of the Civil Engineering and Development Department<sup>1</sup>.

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<sup>1</sup> <http://www.cedd.gov.hk/eng/landsupply/doc/Report%20on%20Stage%202%20Public%20Engagement%20-%20Executive%20Summary.pdf>

**A summary of the findings of the CEIA  
related to Sunny Bay reclamation**

1. The Civil Engineering and Development Department (CEDD) conducted a cumulative environmental impact assessment (CEIA) and an on-site survey of Chinese White Dolphins (CWDs) to examine strategically the total effects of the three reclamation sites in the western waters north of Lantau (viz Sunny Bay, Siu Ho Wan and Lung Kwu Tan) on marine ecology and the environment. Four key environmental aspects, namely air quality, water quality, ecology and fisheries, were studied, taking into consideration the major infrastructure and development projects in their vicinity, including the Hong Kong-Zhuhai-Macao Bridge (HZMB) related projects in Hong Kong under construction, the Hong Kong International Airport (HKIA)'s three-runway system and the Tung Chung New Town Extension under planning.

2. The CEIA has revealed that there is no insurmountable environmental problem identified with respect to the four key environmental aspects, in relation to the three reclamation proposals. Sunny Bay, according to the CWD survey, is unlikely to be a CWD hotspot and has only low and probably occasional dolphin use. The following summary gives an account of the key potential issues and mitigation options identified in the CEIA related to Sunny Bay reclamation.

*Potential issues in relation to air quality*

3. Siu Ho Wan and Sunny Bay sites at North Lantau were assessed collectively. No adverse impact due to air pollutants is anticipated at the existing air sensitive receivers. However, due to vehicular emissions, air-sensitive uses should be avoided for areas immediately adjoining the North Lantau Highway at Sunny Bay reclamation.

*Potential issues in relation to water quality*

4. Based on the water quality modelling for the construction phase of the three reclamations, the CEIA anticipated that, with the adoption of an eco-friendly construction method, such as non-dredged method, for seawall construction and reclamation, and proper mitigation measures such as double-silt curtain system at appropriate locations, the suspended solid level at the identified water sensitive receivers would comply with the Water Quality Objectives. Nonetheless, as the assessment scenarios were built-up with reference to the latest project information including construction programme available at the time of assessment, the findings should be reviewed in the future statutory environmental impact assessment for Sunny Bay reclamation based on the more

latest project programme and construction details at the time.

5. In the operational phase, the CEIA revealed that the three reclamations would unlikely have a significant effect on the overall flow pattern in the western waters. The impact on the water quality of the receiving water bodies due to the new developments at the three reclamations would be insignificant with the provision of proper sewage treatment facilities and other green infrastructures such as storm water harvest aiming to reduce pollutant discharge.

Potential issues in relation to ecology including CWD

6. Potential impact to CWD was identified as a major issue regarding the ecological impact of the three reclamation proposals. Based on the result of CWD Survey, Sunny Bay reclamation site was found unlikely to be a CWD hotspot, having only low and probably occasional dolphin use. No direct impact to sites of conservation importance near the potential reclamation site is expected.

Potential issues in relation to fisheries

7. The waters to be affected are of low to moderate fisheries production in term of weight and value. The study also revealed that there would be no direct loss of important spawning or nursery grounds, aquaculture sites or artificial reefs from the three potential reclamation proposals. The water quality modeling assessment predicted that the dissolved oxygen level at Ma Wan Fish Culture Zone would be low only in three months of the year under both with and without reclamation scenarios.

8. The Executive Summary of the CEIA is available at website of the CEDD<sup>1</sup>.

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<sup>1</sup> [http://www.cedd.gov.hk/eng/landsupply/doc/Executive%20Summary%20on%20Final%20Report\(S2\)b.pdf](http://www.cedd.gov.hk/eng/landsupply/doc/Executive%20Summary%20on%20Final%20Report(S2)b.pdf)