

**For discussion
on 25 May 2007**

Legislative Council Panel on Transport

793TH – Improvement to Sunny Bay Interchange

PURPOSE

This paper seeks Members' view on our proposal to upgrade **793TH**, Improvement to Sunny Bay Interchange (formerly known as "Road P1 advance works at Sunny Bay, Lantau"), to Category A in order to carry out the proposed construction works.

PROJECT SCOPE

2. The scope of **793TH** comprises –
 - (a) construction of 2 single two-lane elevated carriageways with a total length of about 2 kilometres (km);
 - (b) construction of about 500 metres (m) at-grade roads and a roundabout connecting the elevated carriageways mentioned in paragraph 2 (a) above;
 - (c) reclamation works for the formation of about 3 hectares (ha) of land at Sunny Bay for the construction works mentioned in paragraphs 2(a) and 2(b) above;
 - (d) construction of about 600m long seawall;
 - (e) ancillary works including drainage works, landscaping works and traffic control and surveillance system (TCSS); and
 - (f) implementation of environmental mitigation

measures during the construction period.

A site plan showing the proposed works is at **Enclosure 1**.

3. We plan to commence the construction works in September 2007 for completion in July 2010.

JUSTIFICATION

4. The infrastructural works at the Penny's Bay area including Penny's Bay Highway (PBH) and Inspiration Lake Recreation Centre were completed in 2005 and an international theme park was opened to the public in 2005. At present, the Penny's Bay area is only served by PBH which connects to North Lantau Highway (NLH). In case there is any incident causing blockage on PBH, traffic going to and from the Penny's Bay area will need to use NLH, local roads at Tung Chung, Cheung Tung Road and Sunny Bay Road as an alternative access. **Enclosure 2** illustrates this alternative route.

5. To use the current alternative route, traffic will suffer from a detour of about 20 km and an additional journey time of about 20 minutes. The proposed road works will provide a complementary connection to and from the Penny's Bay area, which will reduce the detour distance to about 2.5 km. The proposed new access will help to minimize the detour time and disturbance to tourists' itinerary in case there is blockage on PBH.

6. In addition, the road scheme will enhance the access to the vicinity of the Sunny Bay Public Transport Interchange. Without the proposed new roads, traffic going to this area from NLH will need to go through PBH, the Penny's Bay area and Sunny Bay Road, which is also considered as a very inconvenient route.

7. We have evaluated different options of the road scheme. Our current proposal had contained the area of the required reclamation to the minimum.

8. For the purpose of monitoring and controlling the traffic flow, we will install a TCSS comprising closed circuit television cameras with associated communication and installation equipment, lane control signals and variable message signs at appropriate locations.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$547.9 million in money-of-the-day (MOD) prices, made up as follows –

	\$ million	
(a) Elevated carriageways	269.0	
(b) At-grade roads	13.2	
(c) Seawall and reclamation	122.4	
(d) Drainage works	8.2	
(e) Landscaping works	10.5	
(f) TCSS	10.1	
(g) Environmental mitigation and monitoring measures	8.1	
(h) Consultants' fees	51.9	
(i) construction stage	3.5	
(ii) resident site staff costs	46.4	
(iii) environmental monitoring and audit (EM&A) programme	2.0	
(i) Contingencies	48.6	
	<hr/>	
Sub-total	542.0	(in September 2006 prices)
(j) Provision for price adjustment	5.9	
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Total	547.9	(in MOD prices)
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10. We estimate the annual recurrent expenditure upon the completion of the project to be about \$3.3 million.

PUBLIC CONSULTATION

11. We consulted the Tsuen Wan District Council on 31 May 2005. Some members raised concerns over the rights of the fisheries and requested the Administration to consult the Ma Wan Fisheries Rights Association Limited (MWFRAL) on the project.

12. We consulted the MWFRAL on 29 June 2005 and 25 July 2005; and the Hong Kong and Kowloon Timber Merchants Association, representing the operators of the existing log ponds off Sunny Bay, on 14 June 2005, 21 July 2005 and 2 December 2005. We have adopted most of their suggestions in our work plan, including the maintenance of marine traffic and close liaison with them throughout the construction period.

13. We gazetted the proposed road scheme under the Roads (Works, Use and Compensation) Ordinance (the Ordinance) on 25 November 2005 and received one objection. The objector expressed concern on the proposed reclamation works at Sunny Bay would cause serious contamination to the seawater and demanded that the government should grant ex-gratia allowance (EGA) to all the mariculturists within 10 km of the site.

14. We met the objector and explained that we would implement mitigation measures in accordance with the EM&A Manual approved by the Director of Environmental Protection and closely supervise the reclamation works to keep the impact on water quality within the approved allowable limits. We also explained to the objector that the granting of any EGA affected by marine works projects could only be based on the eligibility criteria approved by the Finance Committee of the Legislative Council on 1 December 2000. Notwithstanding our explanation, the objector did not withdraw his objection.

15. Having considered the unresolved objection, the Chief Executive-in-Council authorized the proposed works under the Ordinance on 9 May 2006. The notice of authorization was gazetted on 19 May 2006.

ENVIRONMENTAL IMPLICATIONS

16. The project is a designated project under Schedule 2 of the EIA Ordinance (Cap. 499) and an environmental permit is required for the construction and operation of the project. The key environmental concerns are water quality and ecological impact. A statutory EIA was completed in

July 2005 and the EIA report concluded that the environmental impacts of the project could be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on EIA Process. The Director of Environmental Protection approved the EIA report on 6 September 2005 and issued an environmental permit for the designated project on 10 October 2005. We will implement the measures recommended in the approved EIA report. The key measures include the control on the rates and methods of reclamation for the proposed reclamation works at Sunny Bay. We estimate the cost of implementing the environmental monitoring and mitigation measures to be \$8.1 million (in September 2006 prices). We have included this cost in the overall project estimate.

17. During construction, we will keep noise, dust and site run-off nuisance within established standards and guidelines through the implementation of appropriate mitigation measures in the works contract. We will also implement an EM&A programme to ensure timely and effective implementation of the recommended mitigation measures.

18. We will deploy framed type silt curtains to fully enclose any grab dredgers and additional floated type silt curtains at the eastern and western ends of the reclamation area to contain sediment loss. All filling activities for the reclamation will be carried out with a minimum 100 m lead length behind seawalls unless prior written approval from the Director of Environmental Protection is obtained.

19. We have considered measures in the planning and design stages to reduce the generation of C&D materials where possible. We will require the contractor to reuse inert C&D materials on site to minimize the disposal of C&D materials to public fill reception facilities¹. We will encourage the contractor to maximize the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimize the generation of construction waste.

20. We will also require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to minimize, reduce, reuse and recycle C&D materials. We will require the Contractor to ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of C&D waste to landfills through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at

¹ Public fill reception facilities are specified in Schedule 4 respectively of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

21. We estimate that the project will generate about 84 300 tonnes of C&D materials. Of these, we will reuse about 75 130 tonnes (89%) inert materials on site and dispose of about 9 170 tonnes (11%) remaining waste materials at landfills. The reclamation works for the project will receive public fill of about 522 500 tonnes out of which about 123 500 tonnes will be used for surcharge on top of the reclamation area. After completion of the surcharging period, the surcharge materials will be delivered to public fill reception facilities or other suitable projects for subsequent use. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be about \$4.5 million for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne² at landfills).

22. We estimate that the reclamation works will produce about 692 000 cubic metres (m³) of uncontaminated marine mud. There will be sufficient capacity in the marine disposal areas for disposal of this mud. In addition, about 8 000 m³ of contaminated mud generated by the project will be disposed of at the marine disposal facility at East of Sha Chau.

23. The proposed works will involve the removal of 64 trees including 3 to be felled and 61 to be transplanted and replanted within the project site. All trees to be removed are not important trees³. We will incorporate planting proposals as part of the project, including estimated quantities of 210 trees, 184 290 shrubs and 8 440 square metres (m²) of grassed area.

² This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills, (which is likely to be more expensive) when the existing ones are filled.

³ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria-

- (a) trees over 100 years old;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 m.

LAND ACQUISITION

24. We will resume about 44 m² of land and create easements over the Mass Transit Railway Lot under the Roads (Works, Use and Compensation) Ordinance. A lump sum of \$600,000 will be reserved to cater for any possible compensation claim from Mass Transit Railway Corporation Limited.

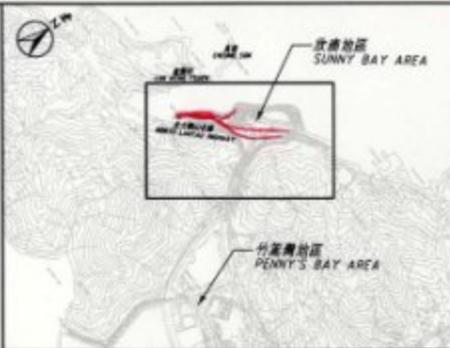
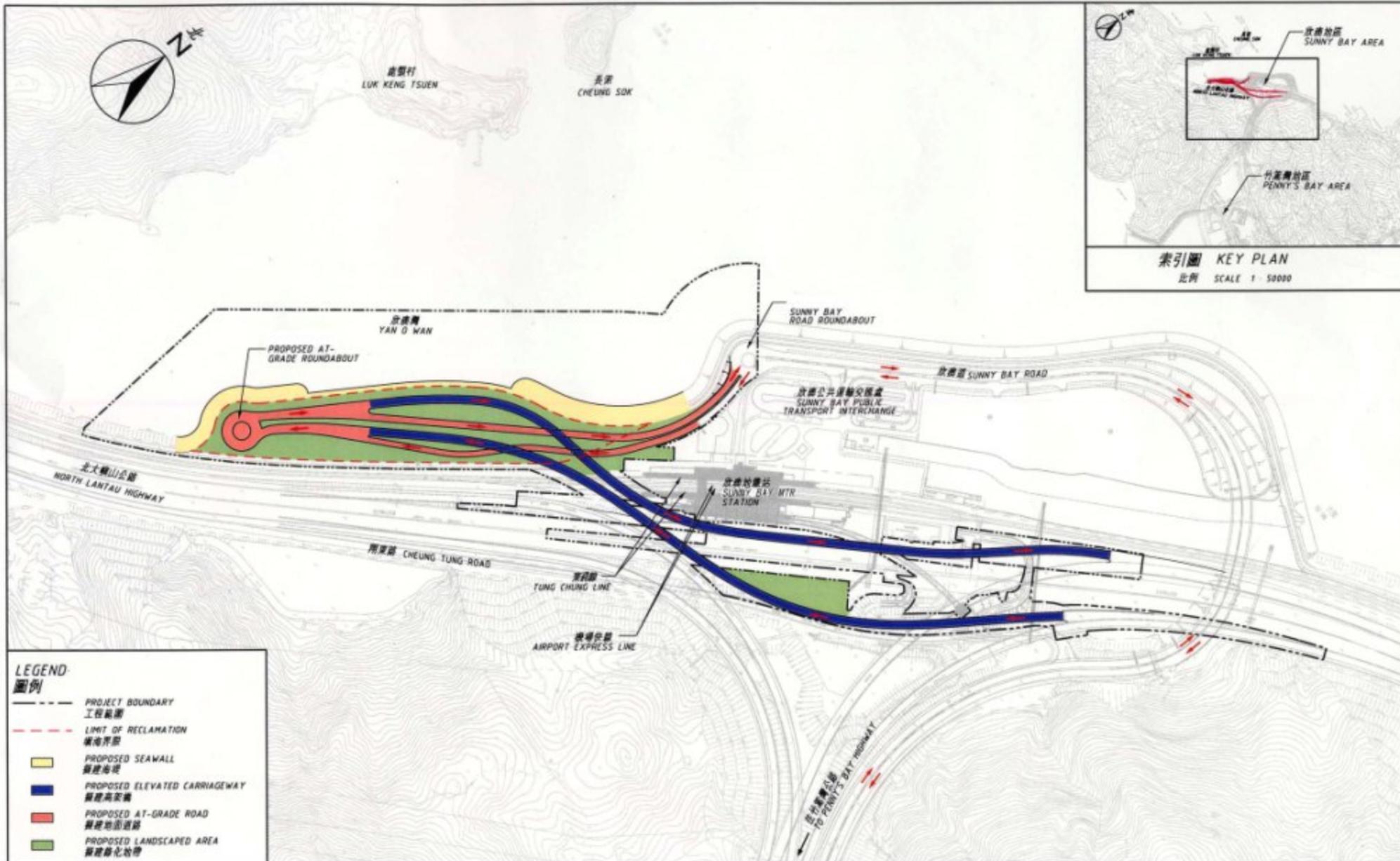
THE WAY FORWARD

25. We intend to submit the project to the Public Works Subcommittee and Finance Committee of the Legislative Council on 20 June 2007 and 6 July 2007 respectively for upgrading the project to Category A. Subject to funding approval, we plan to start construction works in September 2007 for completion in July 2010.

ADVICE SOUGHT

26. Members are invited to comment on this paper.

Environment, Transport and Works Bureau
May 2007



索引圖 KEY PLAN
比例 SCALE 1 : 50000

LEGEND
圖例

	PROJECT BOUNDARY 工程範圍
	LIMIT OF RECLAMATION 填海界限
	PROPOSED SEAWALL 擬建海堤
	PROPOSED ELEVATED CARRIAGEWAY 擬建高架橋
	PROPOSED AT-GRADE ROAD 擬建地面道路
	PROPOSED LANDSCAPED AREA 擬建綠化地帶

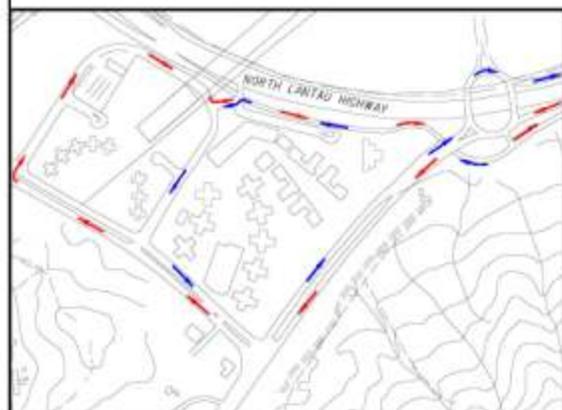
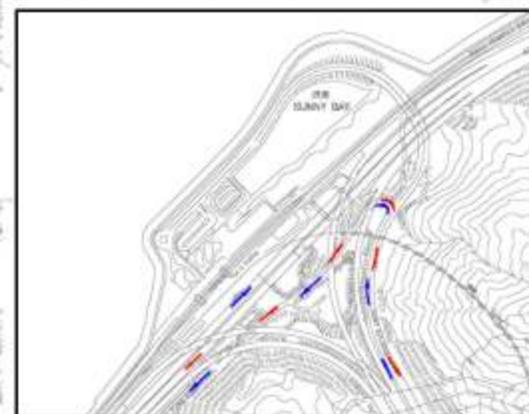
drawing title 圖則名稱
**PWP ITEM NO. 793TH - IMPROVEMENT TO SUNNY BAY INTERCHANGE
SITE PLAN**

	name 姓名	initial 簽字	date 日期	drawing no. 圖則編號	scale 比例
designed 設計	W.M. IP	SIGNED	May 07	SD 2001-130	A3 1 : 4000
checked 核對	M.C. LEE	SIGNED	May 07		
approved 核准	C.M. CHAN	SIGNED	May 07		
office 辦事處	土木工程處 CIVIL ENGINEERING OFFICE				土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

LEGEND :

圖例

- ALTERNATIVE ROUTE ENTERING PENNY'S BAY
進入竹篙灣的替代路線
- ALTERNATIVE ROUTE EXITING PENNY'S BAY
離開竹篙灣的替代路線

ENLARGE "A"
放大圖 ASEE ENLARGE "A"
見放大圖 AENLARGE "B"
放大圖 B

drawing title 圖則名稱

ALTERNATIVE ROUTE TO AND FROM PENNY'S BAY AREA
進出竹篙灣區的替代路線

	name 姓名	initial 簽名	date 日期
designed 設計	W.M. IP	SIGNED	May 07
checked 校對	M.C. LEE	SIGNED	May 07
approved 核准	C.M. CHAN	SIGNED	May 07
office 辦事處	土木工程處 CIVIL ENGINEERING OFFICE		

drawing no. 圖則編號

SD 2001-131

scale 比例

A3 1 : 30000



土木工程拓展署
CIVIL ENGINEERING
AND DEVELOPMENT
DEPARTMENT