

**For information**

**Legislative Council Panel on Development**

**705CL – Hang Hau Tsuen Channel at Lau Fau Shan**

**PURPOSE**

This paper briefs Members on the Administration's proposal to upgrade **705CL** entitled "Hang Hau Tsuen Channel at Lau Fau Shan" to Category A, at an estimated cost of about \$91.2 million in money-of-the-day (MOD) prices, for the drainage improvement works at Hang Hau Tsuen, Lau Fau Shan.

**PROJECT SCOPE AND NATURE**

2. The scope of **705CL** comprises the construction of –
  - (a) about 370 metres (m) drainage channel of 25m to 30m in width from Deep Bay Road to Deep Bay;
  - (b) four footbridges of 4m wide;
  - (c) a vehicular access road alongside the proposed drainage channel with a car park, footpaths, and associated drainage and water works ;
  - (d) about 16m of triple-cell box culvert with internal cell dimensions of 5m in width by 3 m in height underneath Deep Bay Road; and
  - (e) implementation of necessary environmental mitigation measures including landscaping works and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in items (a) to (d) above.

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

3. We plan to start the construction works in December 2009 for completion by June 2013.

## JUSTIFICATION

4. The existing Hang Hau Tsuen stream is under-capacity due to siltation and its meandering alignment. Further, changes in land use in areas upstream over the years have resulted in tracts of natural ground being replaced by impermeable pavings. Rainwater can no longer dissipate naturally through ground infiltration as in the past and surface run-off increases as a result. Because of the inadequate drainage capacity of the Hang Hau Tsuen stream, the low-lying Hang Hau Tsuen is susceptible to flooding.

5. To alleviate the problem, we propose to carry out drainage improvement works as mentioned in paragraph 2 above. Upon completion of the proposed works, the drainage system in this area will generally be able to withstand flooding with a return period<sup>1</sup> of one in 50 years, and the risk of flooding will be greatly reduced. A 3.5 m wide access road will be constructed alongside the drainage channel for maintenance access. It will also provide access to the seafront for the public to enjoy the scenery of Deep Bay.

## FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the project to be \$91.2 million in MOD prices, made up as follows –

	<b>\$ million</b>
(a) Drainage Channel	37.5
(b) Four footbridges and a box culvert	9.0
(c) Associated roadworks, drainage and water works	19.1
(d) Environmental mitigation measures including landscaping works	2.0
(e) Environmental Monitoring and Audit programme	1.2

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<sup>1</sup> “Return period” is the average number of years during which a certain severity of flooding will occur once, statistically. A longer return period means a rarer chance of occurrence of a more severe flooding.

		<b>\$ million</b>	
(f)	Consultants' fees for contract administration	0.5	
(g)	Resident site staff costs	8.1	
(h)	Contingencies	7.7	
	Sub-total	85.1	(in September 2008 prices)
(i)	Provision for price adjustment	6.1	
	Total	91.2	(in MOD prices)

## **PUBLIC CONSULTATION**

7. We consulted the Ha Tsuen Rural Committee on 2 January 2008. We also consulted the Environmental Improvement Committee of the Yuen Long District Council on the proposed works and the main findings of the Environmental Impact Assessment (EIA) study report on 10 March 2008 and 9 March 2009 respectively. Members of the Committees supported the proposed works, and had no adverse comments on the main findings of the EIA study report.

8. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 11 July 2008 and received four objections. The four objectors all agreed to withdraw their objections whilst two of them asked for minor adjustment to the land clearance boundary to avoid resumption of existing houses. As the modifications are minor, the road scheme with the minor modifications would be considered by the Executive Council for authorization before PWSC meeting.

9. We gazetted the proposed works under the Foreshore and Sea-bed (Reclamations) Ordinance (Cap. 127) on 19 September 2008 and no objections were received. The Chief Executive authorised the proposed works on 13 January 2009.

## **ENVIRONMENTAL IMPLICATIONS**

10. 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. We completed an EIA report on the project in December 2008, which concluded that the environmental impact arising from the

project could be controlled to within established standards and guidelines through the implementation of the recommended mitigation measures. The EIA report was endorsed by the Advisory Council on the Environment on 26 March 2009 and approved by the Director of Environmental Protection (DEP) on 1 April 2009.

11. We will incorporate the environmental mitigation measures recommended in the EIA report into the works contract to control any pollution arising from the construction works within established standards and guidelines. The contractors are required to follow the procedures as recommended in Environmental Protection Department's Recommended Pollution Control Clauses such as frequent watering of the site and provision of wheel-washing facilities to reduce emission of fugitive dust, and the use of quiet construction plant to reduce noise generation. We will also provide an area for growth of mangroves at the downstream and adopt grasscrete channel bedding at the upstream in order to provide higher ecological value for the channel. Furthermore, we will implement the Environmental Monitoring and Audit programme recommended in the EIA report. We have included \$3.2 million (in September 2008 prices) in the project estimate for implementing the environmental mitigation measures and the Environmental Monitoring and Audit programme.

12. We have determined the drainage alignment such that excavation and demolition of existing structures would be minimised to reduce the generation of construction waste. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites, in order to minimise the disposal of inert construction waste to public fill reception facilities. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to minimise the generation of construction waste.

13. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities<sup>2</sup> and landfills respectively through a trip-ticket system.

14. We estimate that the project will generate in total about 16 400 tonnes of construction waste. Of these, we will reuse about 14 700 tonnes (90%) of inert construction waste on site and deliver 685 tonnes (4%) of inert construction waste to public fill reception facilities for subsequent reuse. In

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<sup>2</sup> Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

addition, we will dispose of 1 015 tonnes (6%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$145,370 for this project (based on an unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne<sup>3</sup> at landfills).

15. We estimate that the project will generate about 4 650 tonnes of uncontaminated mud and about 2 450 tonnes of contaminated mud. We will deliver the contaminated mud by barges to the contaminated mud disposal area at East Sha Chau and re-use the uncontaminated mud on site.

## **HERITAGE IMPLICATIONS**

16. This project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

## **LAND ACQUISITION**

17. We have to resume about 4 300 square metres of agricultural land for the project. The land resumption and clearance will affect 22 families involving 64 persons and 165 temporary structures. These families will be offered ex-gratia allowances and, where eligible, accommodation in public housing in accordance with the established rehousing policy. The estimated cost of land acquisition and clearance is about \$20.0 million.

## **TRAFFIC IMPACT**

18. We have assessed that the proposed works would not cause significant traffic impact.

## **BACKGROUND INFORMATION**

19. We upgraded **705CL** to Category B in October 2004.

20. Of the 53 trees within the project boundary, 27 trees will be preserved. The proposed works will involve the removal of 26 trees, including 16 to be felled and 10 to be transplanted within the project site. All trees to be

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<sup>3</sup> 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/m<sup>3</sup>), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

removed are not important trees<sup>4</sup>. We plan to plant 114 trees and 14 260 shrubs as part of the project.

21. We estimate that the proposed works will create about 45 jobs (36 for labourers and another 9 for professional/technical staff) providing a total employment of 1 400 man-months.

## **WAY FORWARD**

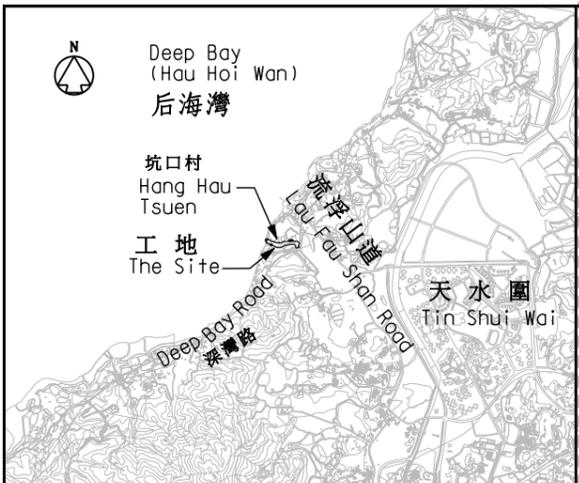
22. Members are invited to support our proposal for upgrading **705CL** for consideration by the Public Works Subcommittee in June 2009 and for funding approval by the Financial Committee in July 2009.

**Development Bureau**  
**May 2009**

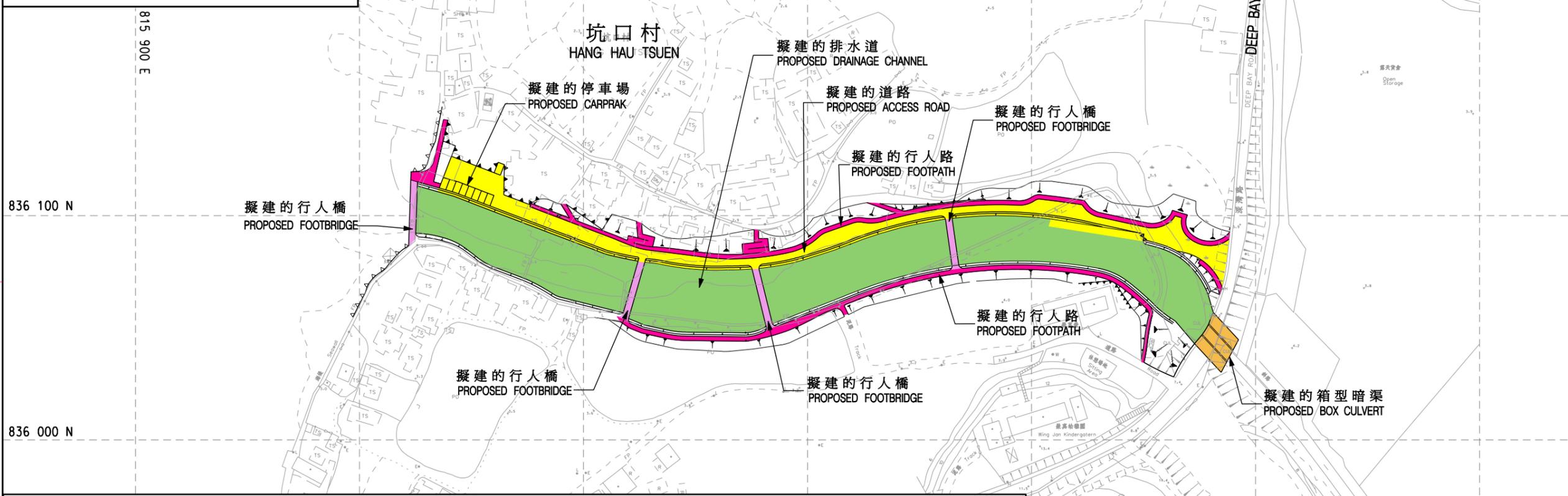
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<sup>4</sup> An “important tree” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria:-

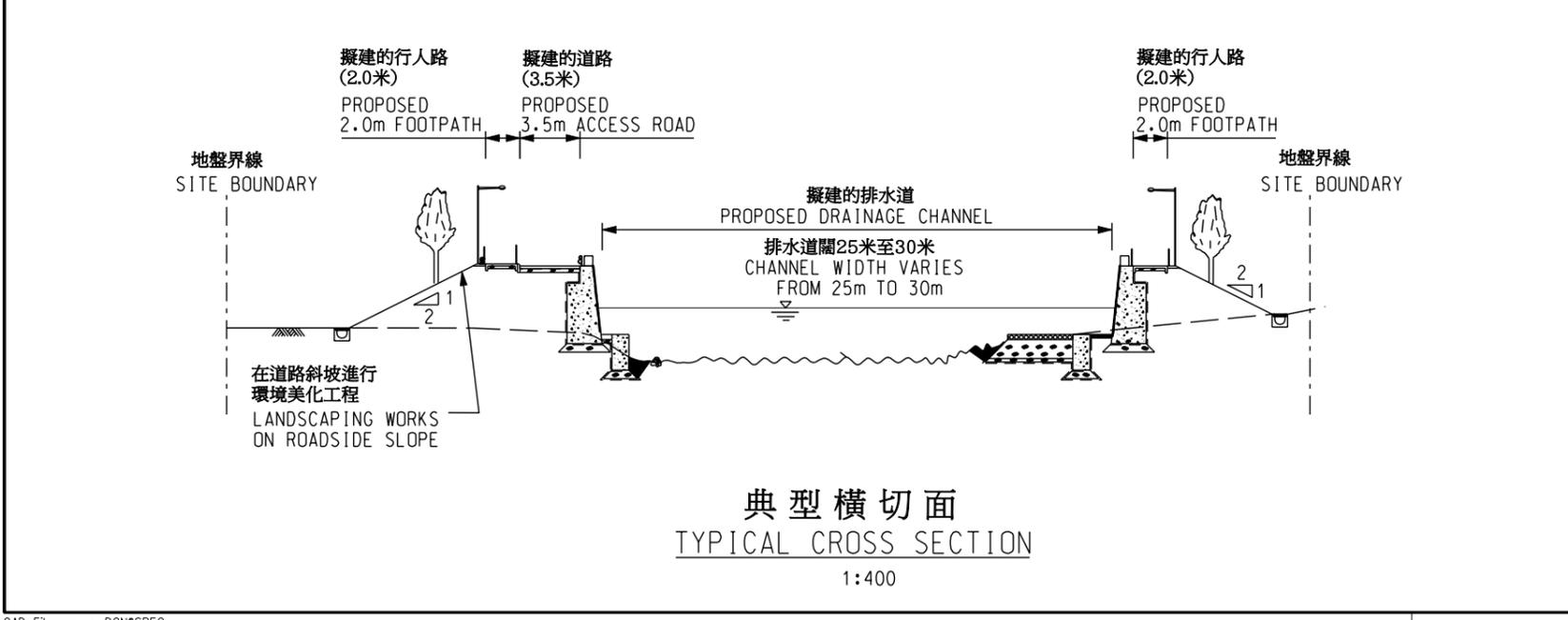
- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking 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 equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.



索引圖  
LOCATION PLAN  
比例 Scale  
1 : 80000



- 圖例 LEGEND:**
- 擬建的排水道  
PROPOSED DRAINAGE CHANNEL
  - 擬建行車道及斜路  
PROPOSED ACCESS ROAD AND RAMP
  - 擬建的行人路  
PROPOSED FOOTPATH
  - 擬建的行人橋  
PROPOSED FOOTBRIDGE
  - 擬建的箱型暗渠  
PROPOSED BOX CULVERT
  - 擬建的斜坡  
PROPOSED SLOPE



修訂 REVISED	日期 DATE	內容 DESCRIPTION	校對 CHECKED	核准 APPROVED
修訂 REVISED	姓名 name	簽署 Initial	日期 date	
繪圖 DRAWN	K H LO	SIGNED	09.02.2009	
校對 CHECKED	W K CHAN	SIGNED	12.05.2009	

核准 Approved  
( SIGNED )  
Y M CHAN  
12.05.2009  
日期 Date

合約編號 contract no.  
合約 contract

圖則名稱 drawing title  
**流浮山的坑口村排水道**  
HANG HAU TSUEN CHANNEL  
AT LAU FAU SHAN

圖則編號 drawing no. NTN 2262  
辦事處 office  
新界西及北拓展處  
NEW TERRITORIES NORTH AND  
WEST DEVELOPMENT OFFICE

比例 Scale A3 1:2000  
**土木工程拓展署**  
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT