

For discussion  
on 11 November 1998

PWSC(98-99)38

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

### HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT

Hong Kong Island and Islands Development

Civil Engineering - Land development

194CL - Peng Chau development, package 3, stage 2 engineering works

Members are invited to recommend to Finance Committee an increase in the approved project estimate of **194CL** from \$30 million by \$40.9 million to \$70.9 million in money-of-the-day prices.

### PROBLEM

The approved project estimate of **194CL** is insufficient for the works under the project.

### PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Planning, Environment and Lands, proposes to increase the approved project estimate of the project from \$30 million by \$40.9 million to \$70.9 million in money-of-the-day (MOD) prices.

/PROJECT ..

## PROJECT SCOPE AND NATURE

3. The scope of **194CL** comprises the following -
- (a) formation of a site of 1.85 hectares for a Rural Public Housing (RPH) estate to accommodate 400 families;
  - (b) construction of a landscaped promenade at Tung Wan;
  - (c) upgrading of the existing major pathways in the northern part of Peng Chau; and
  - (d) construction of the associated sewers and stormwater drains.

4. We have completed the site formation works. The other works items ((b), (c) and (d) of paragraph 3) are outstanding and we now seek additional funds to complete the works.

## JUSTIFICATION

5. **194CL** was upgraded to Category A in January 1989. According to the original schedule, the site formation work for the RPH estate (item (a) of paragraph 3) should have been completed by mid-1990. Nevertheless, as part of the resources were re-deployed to meet more urgent commitments under the Airport Core Programme and the longer than expected time to resolve local objections, we were only able to complete the site formation in April 1993. This has resulted in cost increases over the original estimate due to inflation. Furthermore, a small increase in cost was also due to variations in the quantities of work based on actual measurement.

6. With regard to the works on upgrading of the existing footpaths, these works were delayed because they involve clearance affecting a considerable number of households. To meet the aspirations of some affected residents, we need to rehouse the eligible clearances in public housing in Peng Chau before we cleared the land for the necessary works to proceed. Owing to the lack of public housing units in Peng Chau, we can only arrange the rehousing after the completion of the

RPH estate by the Director of Housing in 1996. We have therefore re-programmed the outstanding works under this project to dovetail with the completion of the RPH estate and the subsequent rehousing arrangements. The re-scheduling of the programme has resulted in cost increases over the original estimate due to inflation.

7. The increase in cost estimates is also partly due to the need to upgrade the design of the footpaths to cater for the present requirements for emergency operations. According to the original programme of the pathway upgrading works, we planned to provide a network of upgraded pathways, with a width from 3 to 3.5 metres, to allow for the operation of mini-fire trucks and mini-ambulances in Peng Chau. However, from 1989 to 1998, the population of Peng Chau has grown from about 6 300 people to 7 700 people. At the same time, with the increase in population, newer buildings in Peng Chau are being planned to be built up to six storeys. These relatively more intense developments will pose potential safety problems as the rescue facilities and equipment on mini fire trucks are only able to carry out rescue operations effectively on buildings of up to three storeys high. Therefore, the Director of Fire Services considers it essential to provide and use standard fire appliances equipped with more powerful pumping equipment and more efficient aerial fire fighting/rescue facilities in Peng Chau. Standard fire appliances, which are already widely used in urban areas, need to operate on vehicle access of a minimum width of 4.5 metres. As the originally intended pathways could not meet this requirement, we need to change the design of the promenade and pathways to the current width standard of 4.5 metres for EVAs. The required variation to the original design has resulted in an increase in the project cost.

8. Following a review of the financial position of the project, DTD considers it necessary to increase the approved project estimate of **194CL** from \$30 million (at November 1988 prices) by \$40.9 million to \$70.9 million in MOD prices (see paragraph 9 below) in order to complete the remaining works. A summary of the reasons for the proposed increase of \$40.9 million is as follows -

/Factor ..

Factor	Amount (\$million)	%
(a) Specification changes - change in user's requirement for the promenade and pathways	6.0	18.5
(b) Quantity variation - increase in the quantities of completed works based on actual measurement	1.4	4.3
(c) Price variation for works	19.8	61.1
(i) increase in cost and price fluctuation payments for completed works	4.0	
(ii) increase in cost of remaining works including landscaping since preparation of the last cost estimate	15.8	
(d) Others	5.2	16.1
(i) contingencies	1.4	
(ii) consultants' fees	1.4	
(iii) site staff costs	2.4	
Sub-total	32.4	(at December 1997 prices)
(e) Inflation allowance	8.5	
Total	40.9	(in MOD prices)

9. A comparison of the cost breakdowns of the approved project estimate (at November 1988 prices) and the revised project estimate (at December 1997 and in MOD prices) is at the Enclosure.

## FINANCIAL IMPLICATIONS

10. Subject to approval, we will phase the remaining expenditure of this project as follows -

Year	\$ million (Dec 1997)	Price adjustment factor	\$ million (MOD)
Up to 31 March 1998	18.2	-	18.2
1998 - 1999	1.0	1.06000	1.1
1999 - 2000	15.0	1.12890	16.9
2000 - 2001	17.0	1.19663	20.3
2001 - 2002	8.0	1.26843	10.1
2002 - 2003	3.2	1.34454	4.3
	62.4		70.9

11. We have derived the MOD estimate on the basis of the latest Government's forecasts of trend labour and construction prices over the period between 1998 and 2003. We will tender the remaining works under a lump sum contract because we can clearly define the scope of works in advance. The contract will provide for inflation adjustments as the contract period will exceed 21 months.

12. We estimate the annually recurrent expenditure arising from the remaining works to be \$0.469 million.

**/PUBLIC ..**

## **PUBLIC CONSULTATION**

13. We consulted the Peng Chau and Discovery Bay Area Committee on the proposed remaining works on 13 September 1995 and 29 November 1995. The Committee supported the works.

14. We gazetted the proposed promenade construction works at Tung Wan under the Foreshore and Sea-bed (Reclamations) Ordinance on 16 August 1996, and received 1 objection from a utility company on grounds of impact of the reclamation on its undersea electric cables serving Peng Chau. After a series of discussions, the objector withdrew the objection and agreed to arrange for diversion of the affected cables.

15. We gazetted the proposed pathway upgrading works in the remainder of the project under the Roads (Works, Use and Compensation) Ordinance on 14 March 1997, and received 10 objections from the residents. The objectors opposed to the clearance of their premises due to the widening of a section of existing pathway. The objectors did not withdraw their objections and the Chief Executive in Council overruled the objections in the public interest and authorized the road scheme without modifications on 31 July 1998.

## **ENVIRONMENTAL IMPLICATIONS**

16. The Director of Environmental Protection completed an Environmental Review of the proposed remaining engineering works in January 1996 and concluded that no Environmental Impact Assessment was necessary. The reclamation of the project had been authorised under the Foreshore and Seabed (Reclamations) Ordinance in March 1998.

17. To address short-term impact during construction, we will incorporate relevant clauses in the works contract to control dust, noise, site run-off and impact on water quality to within established standards and guidelines.

## LAND ACQUISITION

18. We will resume about 0.41 hectares of agricultural land and 0.15 hectares of building land for the remaining works. The land acquisition and clearance will affect 53 households involving 174 people. However, out of this total, 104 persons in 32 households are eligible for public housing and have already been re-housed. The Director of Housing will rehouse the remaining persons affected in public housing in line with existing policy. We will charge the cost of land acquisition and clearance, estimated at \$26 million, to **Head 701 - Land Acquisition**.

## BACKGROUND INFORMATION

19. We upgraded **194CL** to Category A in January 1989 at an estimated cost of \$30 million for land formation of a RPH site and construction of roads and drains. We completed the land formation works in April 1993. The Director of Housing subsequently completed the construction of the RPH estate in late 1996. As regards the roads and drainage works, we have programmed to start the works after the completion of the RPH estate due to the need to rehouse the clearerees to public housing units in Peng Chau.

20. We have engaged a consultant to carry out the new detailed design and drawings for the EVAs at 4.5 metres wide. Subject to funding approval, we plan to start the works in February 1999 for completion in August 2001.

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**194CL - Peng Chau development, package 3, stage 2 engineering works**

A comparison of the approved project estimate at November 1988 prices and the revised project estimate at December 1997 prices and in MOD prices is as follows -

	<b>Approved Estimate</b>	<b>\$ million</b>	<b>Revised Estimate</b>	
(a) Engineering works (site formation, seawalls, roads and drains)	23.0		49.1	
(b) Landscaping works and miscellaneous	1.0		2.1	
(c) Consultants' fees				
(i) for design stage	-		1.1	
(ii) for construction stage	0.4		0.7	
(d) Site staff costs	3.0		5.4	
(e) Contingencies	2.6		4.0	
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	30.0	(at November 1988 prices)	62.4	(at December 1997 prices)
(f) Inflation allowance			8.5	
			<hr/>	
			70.9	(in MOD prices)
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2. As regards (a) (engineering works), the net increase of \$26.1 million is due to -

- (a) \$5.4 million is the total increase in costs for the completed the formation works at the RPH site. This increase comprises -
  - (i) \$2.8 million for the increase in construction costs for the works during the period between November 1988, when we prepared the last estimate, and April 1991, when we started the works. As a reference, the Civil Engineering Works Index (CEWI) increased by about 29% during this period;
  - (ii) \$1.2 million for meeting price fluctuation payments due under the contract for works completed during the period between April 1991, when we started the works, and April 1993, when we completed the works. As a reference, the Civil Engineering Works Index (CEWI) increased by about 19% during this period; and
  - (iii) \$1.4 million for the increase in quantities of works completed based on actual measurement on site.
  
- (b) \$20.7 million is the total increase in the estimated costs of the outstanding works. This comprises -
  - (i) \$14.7 million for the increase in construction costs for the outstanding works (\$13.5 million) during the period between November 1988, when we prepared the last estimate, and December 1997. As a reference, the CEWI increased by about 109% during this period; and
  - (ii) \$6 million for the change in design required for upgrading of the pathways and promenade to

EVA standard.

3. **As regards (b) (landscaping works and miscellaneous)**, the increase of \$1.1 million is due to the general increase in costs for landscaping works between November 1988, when we prepared the last estimate, and December 1997.

4. **As regards (c) (consultants' fees for the design and construction stages)**, of the total increase of \$1.4 million -

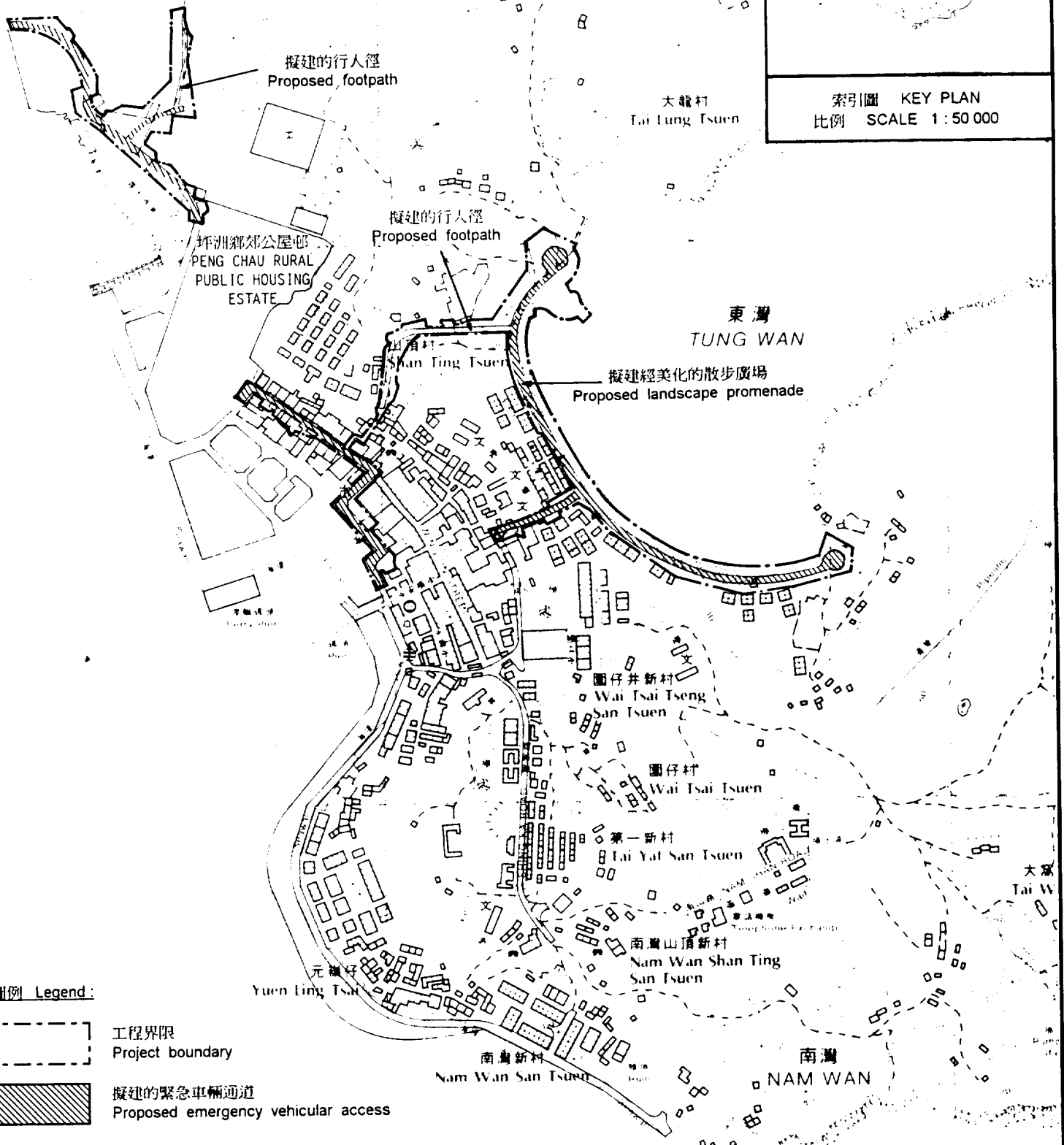
- (a) \$1.1 million is required for the engagement of consultants to carry out the detailed design for the remaining works; and
- (b) \$0.3 million is required for the increase in consultants' fees for the construction stage, which is in line with the increase in the cost of the works.

5. **As regards (d) (site staff costs)**, the increase of 2.4 million is due to the increase in site staff costs estimated at about 11% of the increase in cost of works under paragraphs 2(b) and 3 above, which is consistent with the prevailing site staff costs for contracts of similar size and nature.

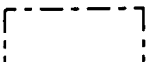
6. **As regards (e) (contingencies)**, we retain \$4 million as contingencies for the remaining works.



索引圖 KEY PLAN  
比例 SCALE 1:50 000



圖例 Legend:



工程界限  
Project boundary



擬建的緊急車輛通道  
Proposed emergency vehicular access

圖則名稱 drawing title 坪洲發展計劃第3組第2階段工程 Peng Chau development, package 3, stage 2 engineering works	繪圖 drawn C M Lo	簽署 initial 	日期 date 2.9.1998	項目編號 item no. 194CL	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
	核對 checked S O Leung	簽署 initial 	日期 date 2.9.1998	比例 scale 1:5 000	
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