

## **ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE**

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

**New Territories North development**

**Civil Engineering - Land development**

**658CL – Remaining engineering infrastructure works for Pak Shek Kok  
development**

Members are invited to recommend to Finance  
Committee -

- (a) the upgrading of part of **658CL**, entitled “Site investigation works and consultants’ fees for remaining engineering infrastructure works for Pak Shek Kok development”, to Category A at an estimated cost of \$30.3 million in money-of-the-day prices; and
- (b) the retention of the remainder of **658CL** in Category B.

### **PROBLEM**

The roads, drains and essential infrastructure currently under construction are inadequate to support the full development at Pak Shek Kok. We need to carry out the design works for the remaining engineering infrastructure before proceeding with the construction works.

**/PROPOSAL .....**

## PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Planning, Environment and Lands, proposes to upgrade part of **658CL** to Category A at an estimated cost of \$30.3 million in money-of-the-day (MOD) prices for site investigation works and the engagement of consultants to undertake detailed design of the remaining engineering infrastructure for Pak Shek Kok development.

## PROJECT SCOPE AND NATURE

3. The scope of **658CL** comprises the remaining engineering infrastructure for Pak Shek Kok development, as follows -

- (a) construction of the southern access phase 2 including a 300-metre at-grade carriageway, a 400-metre at-grade slip road, a 150-metre elevated road for connection to the existing Ma Liu Shui Interchange, and a 40-metre pedestrian/cyclist subway;
- (b) construction of a 400-metre vehicular bridge with cycle track and footway across Tolo Highway;
- (c) construction of a 2-kilometre district distributor road connecting the southern access and the northern access;
- (d) construction of a 2.5-kilometre waterfront promenade with cycle track and bicycle parks;
- (e) provision of a fire tug pier and public landing steps;
- (f) building of two sewage pumping stations, and associated sewers and rising mains;
- (g) construction of a 350-metre box culvert and associated drainage works;
- (h) associated roadside amenities and landscaping works;
- (i) construction of a 600-metre seawall and reclamation of about 3.5 hectares of seabed for the southern access phase 2, including reprovisioning of an existing pier; and

/(j) .....

- (j) an environmental monitoring and audit (EM&A) programme for works mentioned in paragraphs (a) to (i) above.

4. The part of the project we now propose to upgrade to Category A covers the following –

- (a) site investigation works;
- (b) detailed design for the engineering works described in paragraphs 3(a) to 3(h) above;
- (c) preparation of tender documents and assessment of tenders for the engineering works described in paragraphs 3(a) to (h) above; and
- (d) EM&A programme at detailed design stage.

## JUSTIFICATION

5. In August 1998, we completed an integrated planning and engineering feasibility study for Pak Shek Kok development (PSKD) under **477CL** “Feasibility study for Pak Shek Kok development area”. The study confirmed the feasibility of PSKD including a Science Park together with private residential and strategic recreational developments. Upon full development in 2016, PSKD will accommodate a population of about 12 000 and will create some 20 000 jobs.

6. To meet the target of opening the Science Park phase 1 in late 2001, and to facilitate reclamation for the remaining areas at Pak Shek Kok, we started the construction of the advance engineering works including the southern access phase 1 and the northern access in October 1999 for completion in October 2001 under **496CL** “Advance engineering infrastructure works for Pak Shek Kok development” (See paragraph 21).

7. The private residential sites located in the northern part of PSKD will accommodate about 4 330 flats providing for a population of 12 000. These sites are scheduled to be available for disposal from 2003-04.

8. The Director-General of Industry plans to open the Science Park phase 2 in 2006. To ensure the timely provision of infrastructural facilities to serve this phase of the Park and the residential development at Pak Shek Kok, we need to start the proposed engineering infrastructure works described in paragraph 3 above in May 2002 for completion in stages from 2003 to 2006. In order to do so, we need to start the site investigation works, detailed design, and preparation of tender documents in April 2000 for completion in April 2002.

9. At the design stage of the project, we need to assess the cumulative environmental impacts arising from other interfacing projects<sup>1</sup> within the PSKD area and to collect the baseline monitoring data prior to the commencement of the construction of the proposed engineering infrastructure works. It is therefore necessary to carry out the EM&A as part of the design process.

10. Owing to site constraints, a section of the southern access phase 2 connecting to Ma Liu Shui Interchange will need to be constructed on reclamation. The Director of Civil Engineering (DCE) undertook to design and supervise the construction of the proposed reclamation works and reprovisioning of the existing pier at Ma Liu Shui described in paragraph 3(i) above using in-house resources. DTD proposes to engage consultants to supervise the site investigation works and to carry out the EM&A, detailed design and tender preparation/assessment mentioned in paragraph 4 above due to insufficient in-house resources.

## FINANCIAL IMPLICATIONS

11. We estimate the capital cost of the project to be \$30.3 million in MOD prices (see paragraph 12 below), made up as follows -

	<b>\$ million</b>
(a) Site investigation works	7.5
(b) Consultant's fees	18.0
(i) detailed design	15.0
(ii) EM&A programme	0.5
	/(iii) .....

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<sup>1</sup> The interfacing projects, for which construction works are being carried out concurrently at Pak Shek Kok during the design stage of **658CL**, include the widening of Tolo Highway, Pak Shek Kok reclamation, advance engineering infrastructure works for PSKD and Science Park phase 1.

(iii) preparation of tender documents and assessment of tenders	1.5	
(iv) supervision of site investigation	1.0	
(c) Contingencies	2.5	
Sub-total	28.0	(at December 1998 prices)
(d) Provision for price adjustment	2.3	
Total	30.3	(in MOD prices)

A breakdown by man months of the estimate for consultants' fees is at the Enclosure.

12. Subject to approval, we will phase the expenditure as follows –

Year	\$ million (Dec 1998)	Price adjustment factor	\$ million (MOD)
1999 - 2000	2.0	1.01500	2.0
2000 - 2001	15.0	1.05814	15.9
2001 - 2002	8.0	1.11104	8.9
2002 - 2003	3.0	1.16660	3.5
	28.0		30.3

13. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period from 1999 to 2003. We will award the proposed consultancy on a lump sum basis with provision for inflation adjustments as the consultancy period will exceed 12 months. We will tender the site investigation works under a standard remeasurement contract because the quantities of works involved may vary depending on actual ground conditions. This contract will not provide for price adjustments as the contract period will not exceed 21 months.

14. The proposed site investigation works and consultancy have no recurrent financial implications.

## **PUBLIC CONSULTATION**

15. We consulted Sha Tin Provisional District Board and Tai Po Provisional District Board on 30 June 1998 and 7 July 1998 respectively on the proposed engineering infrastructure works for PSKD. Both District Boards supported the project.

## **ENVIRONMENTAL IMPLICATIONS**

16. PSKD is a designated project under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance. The remaining engineering works that form part of the PSKD is also a designated project under Schedule 2 of the EIA Ordinance and an environmental permit is required for the construction and operation of the works.

17. In May 1998, we completed the EIA report as an integral part of the PSKD Feasibility Study. On 6 July 1998, the Advisory Council on the Environment endorsed the findings and recommendations of the EIA report. The report recommended certain mitigation measures which could reduce the environmental impacts of the project to within the established standards and guidelines.

18. The proposed site investigation works and consultancy services will have no adverse environmental implications. We will fully incorporate into the detailed design and works contracts the mitigation measures and the EM&A programme recommended in the EIA study and ensure their timely implementation.

19. The proposed site investigation works and consultancy will generate only a very small quantity of construction and demolition material (C&DM). We shall plan and design the works to minimise the generation of C&DM and to reuse/recycle C&DM as much as possible.

## LAND ACQUISITION

20. The proposed site investigation works and consultancy services do not require any land acquisition.

## BACKGROUND INFORMATION

21. We upgraded **496CL** to Category A in June 1999 at an estimated cost of \$357.3 million for the advance engineering infrastructure works at Pak Shek Kok to meet the target of opening Science Park phase 1 in late 2001. We commenced the advance works in October 1999 for completion in October 2001.

22. We upgraded **658CL** to Category B in September 1999.

23. We plan to start the proposed site investigation works and consultancy in April 2000 for completion by April 2002. DCE has commenced the detailed design of the proposed reclamation works and reprovisioning of the pier at Ma Liu Shui mentioned in paragraph 3(i) above using in-house resources.

24. We plan to start the proposed engineering infrastructure works mentioned in paragraph 3 above in May 2002 for completion in stages from 2003 to 2006.

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Planning, Environmental and Lands Bureau  
November 1999





**658CL - Remaining engineering infrastructure works for Pak Shek Kok development**

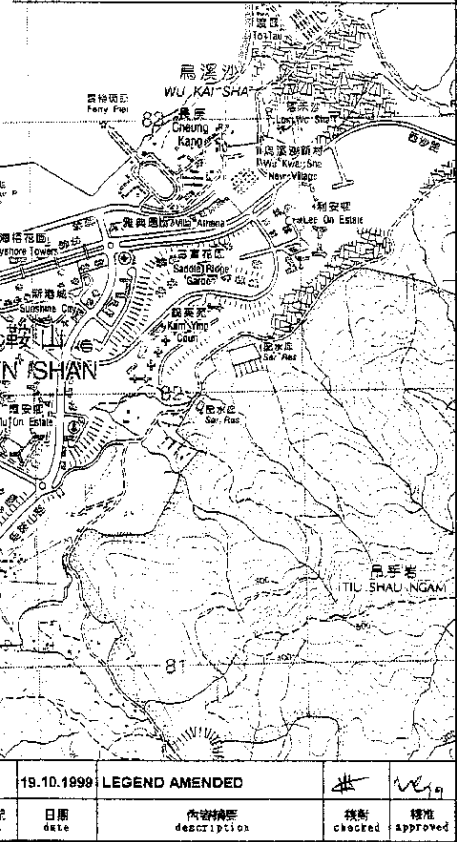
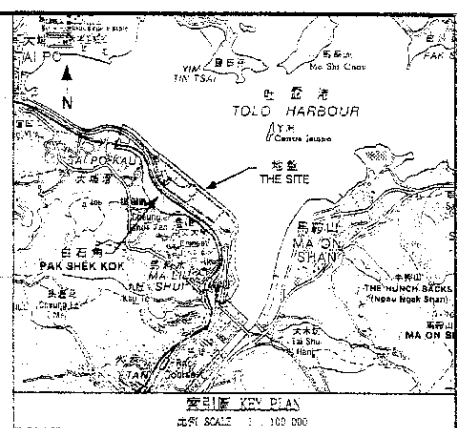
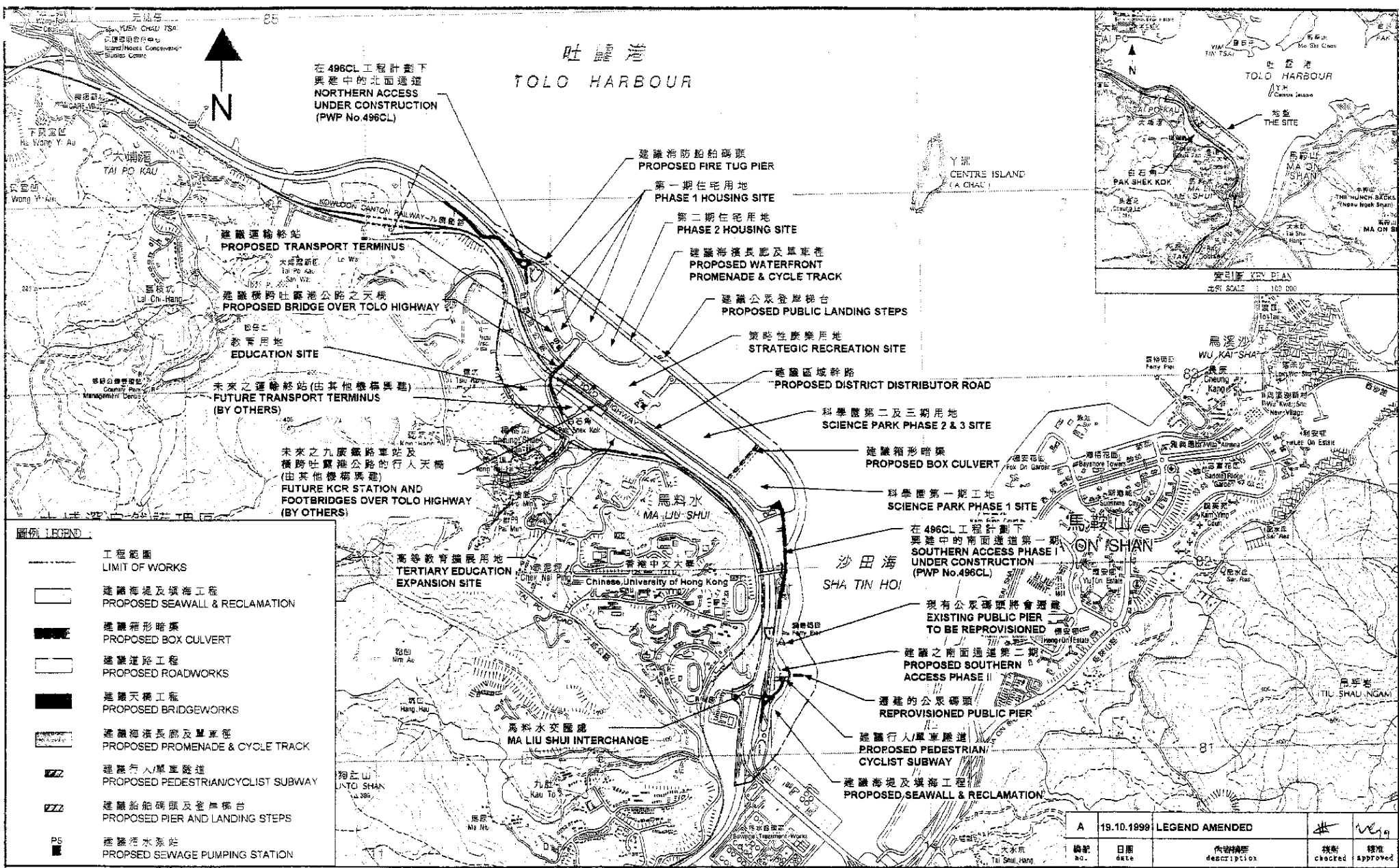
**Breakdown of estimate for consultants' fees**

Consultants' staff costs		Estimated man months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a) Detailed design	Professional	70	40	2.4	10.5
	Technical	90	16	2.4	4.5
(b) EM&A programme	Professional	2	40	2.4	0.3
	Technical	4	16	2.4	0.2
(c) Preparation of tender documents and assessment of tenders	Professional	7	40	2.4	1.1
	Technical	8	16	2.4	0.4
(d) Supervision of site investigation	Professional	5	40	1.7	0.5
	Technical	15	16	1.7	0.5
<b>Total consultants' staff costs</b>					18.0

\* MPS = Master Pay Scale

**Notes**

1. A multiplier factor of 2.4 is applied to the average MPS point to arrive at the full staff costs including the consultants' overheads and profits, as the staff will be employed in the consultants' offices. A multiplier factor of 1.7 is applied to the average MPS point in the case of resident site staff supplied by the consultants. (At 1.4.1998, MPS pt. 40 = 62,780 p.m. and MPS pt. 16 = 21,010 p.m.)
2. The figures given above are based on estimates prepared by the Director of Territory Development. We will only know the actual man months and fees when we have selected the consultants through the usual competitive lump sum fee bid system.



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P.W.S.C. SUBMISSION 1999/2000

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
A	19.10.1999	LEGEND AMENDED		

圖則名稱 drawing title  <b>白石角發展計劃的餘下基礎設施工程</b> <b>REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT</b>	繪圖人 drafter	日期 date	項目編號 sites no.	辦事處 office 新界北拓展處 NEW TERRITORIES NORTH DEVELOPMENT OFFICE
	C. CHUN	09.08.1999	658CL	
	核對 checked	日期 date	比例 scale	拓展署 TERRITORY DEVELOPMENT DEPARTMENT
	Y. F. TANG	09.08.1999	1:20,000	
核准 approved	日期 date	圖則編號 drawing no.	NTN 2051A	
J. C. COORAY	11.08.1999			