

## ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

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

#### New Territories East Development

#### Transport – Footbridges and pedestrian tunnels

#### 112TB – Footbridge system and road improvement works at the junction of Che Kung Miu Road and Hung Mui Kuk Road, Sha Tin

Members are invited to recommend to Finance Committee an increase in the approved project estimate of **112TB** from \$193.4 million by \$18.6 million to \$212.0 million in money-of-the-day prices.

### PROBLEM

The approved project estimate of **112TB** is insufficient to cover the cost of works under the project.

### PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Transport, proposes to increase the approved project estimate of **112TB** from \$193.4 million by \$18.6 million to \$212.0 million in money-of-the-day (MOD) prices.

/ Project .....

## PROJECT SCOPE AND NATURE

3. Project **112TB** provides for a footbridge system at the junction of Che Kung Miu Road and Hung Mui Kuk Road connecting the Kowloon Canton Railway Tai Wai Station to adjacent areas. The scope of works comprises -

- (a) construction of a covered footbridge system with four ascending escalators at the junction of Che Kung Miu Road and Hung Mui Kuk Road; and
- (b) improvement works for the road junction, which include converting the signalised road junction into a roundabout, widening and re-aligning the approach roads to the road junction, and re-constructing road drainage, central dividers, footpaths and cycle tracks, and associated landscape works.

----- A site plan is at Enclosure 1.

## JUSTIFICATION

4. We started the works under **112TB** in February 1995 and substantially completed the project in October 1998.

5. On 28 December 1999, the contractor for the works served a Notice for Mediation on four disputes relating to bored pile excavation and additional toe-in depths to bored piles, extension of time for the completion of the works, disruption to steel reinforcement in the superstructure of the footbridge system and prolongation costs. On 3 February 2000, the contractor served a second Notice for Mediation on a further dispute concerning 17 remeasurement and variations issues.

6. We sought legal advice on the best way to proceed, taking account the perceived validity of the claims and the option of having the claims resolved by arbitration with the attendant risk and legal costs involved. On the basis of the advice received, we entered into mediation discussions with the contractor between mid May and early June 2000.

7. A thorough analysis and review of the disputes, taking into account the risk of arbitration and associated legal costs, led to the conclusion that for the purposes of the mediation additional payments were justified on the following four main headings -

- (a) additional construction costs arising from additional obstruction in bored pile excavation and toe-in depths to bored piles;
- (b) additional construction costs arising from disruption to steel reinforcement in the superstructure of the footbridge system;
- (c) additional costs arising from various remeasurement and variations issues; and
- (d) prolongation costs arising from the extended contract period.

**Additional obstruction in bored pile excavation and additional toe-in depths to bored piles**

8. The footbridge system is supported on bored pile foundations. During the course of construction, substantial delays to the bored piling occurred because of a significant number of obstructions due to the presence of boulders in the bored pile excavation and a variation to increase the toe-in depths (the depth that the bottom of the pile is embedded into the bedrock) of the piles<sup>1</sup>. The contractor argued that a higher rate for excavation for the bored pile construction should be adopted because additional resources had to be deployed to maintain progress in the light of the unforeseen obstructions. Our assessment is that there would be risks in proceeding to arbitration on this issue. We therefore recommend settling this claim.

**/ Disruption .....**

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<sup>1</sup> Underground geology at pile locations varied substantially from the assumed subsurface details used in tendering of the contract. As the piles were mostly located within a heavily trafficked road, site investigation works could not be carried out before tender without substantial traffic diversions and disruptions to the general public, which were not considered to be justifiable at the time.

### **Disruption to steel reinforcement**

9. The contractor claimed that congestion of steel reinforcement and a significant increase in steel reinforcement quantities caused delay and disruption to steel fixing in the superstructure of the footbridge system. He argued that the reinforcement details were extremely difficult and, in some cases, impossible to overcome. The progress of work was significantly disrupted as a result. Such disruption also resulted in idling of resources and abortive works. Initially, we paid the contractor for the increase in reinforcement quantities in accordance with the tender rates on a re-measurement basis. However, because of the substantial increase in quantities, which could increase the complexities in fixing the reinforcement, we believe an additional payment is justifiable.

### **Remeasurement and Variations Issues**

10. The contractor has disputed the consultant's assessment on a number of remeasurement and valuation of variation issues. Our assessment is that additional payment in respect of this head of claim is justified.

### **Prolongation Costs and Finance Charges**

11. The project was substantially completed on 31 October 1998 whilst the originally scheduled contract completion date was 28 May 1997 (a delay of 520 days). The contractor claimed prolongation costs to cover staff costs, and overheads at head office and on site. For the purposes of the mediation, we assessed that the contractor is entitled to a portion of the prolongation costs claimed as a result of inclement weather and additional works ordered (including those mentioned in paragraphs 7(a) and 7(b) above). With respect to additional payment for prolongation costs, the Government has negotiated a separate settlement with the Consultant under which we will recover from the latter a sum of \$6.0 million. The Consultant has agreed to pay this on a strictly "without liability" basis.

### **Assessment of the claims**

12. We have sought legal opinion which agreed that, since the claims were reasonably complex, the direct and indirect costs of arbitration would be substantial and resolution of the claims by mediation was preferred. Moreover, some of the legal costs involved would not be recoverable, even if the

Government's position were to be upheld. Having taken into account the legal costs and risks associated with arbitration we consider it is in Government's interest to settle the disputes by mediation.

13. In the light of the above, we have reached a provisional settlement with the contractor under which we have agreed to pay the latter a sum of \$24.3 million. This amount includes finance charges up to 31 March 2001 and is conditional upon payment being made by 31 March 2001. Payment is subject to Finance Committee's (FC) approval to increase the approved project estimate by \$18.6 million. A breakdown of the amount for individual claims is set out below.

14. Following a review of the financial position of the project, DTD considers that the approved project estimate of **112TB** is insufficient to settle the mediation payments as agreed in the provisional settlement agreement. The provisional settlement has also resulted in corresponding increases in the consultants' fees for detailed design and site supervision charges. It is necessary to increase the approved project estimate of **112TB** from \$193.4 million by \$18.6 million to \$212.0 million in MOD prices to settle the payments. A summary of the proposed increase of \$18.6 million is as follows -

	<b>Factor</b>	<b>Amount (\$ million)</b>	<b>% of the total increased amount</b>
(a)	Mediation Settlement	24.3	130.6%
	(i) Additional construction costs arising from additional obstruction in bored pile excavation and toe-in depths to bored piles	5.1	
	(ii) Additional construction costs arising from disruption to steel reinforcement in the superstructure of the footbridge system	2.5	
	(iii) Remeasurement and variation issues	1.3	

/(iv) ....

Factor	Amount (\$ million)	% of the total increased amount
(iv) Prolongation costs incurred during the extended contract period	10.2	
(v) Finance Charges	5.2	
(b) Consultants' contribution	(6.0)	(32.3%)
(c) Consultants' fees and site staff costs	1.6	8.6%
(i) consultancy fees adjustment	0.8	
(ii) additional site staff costs incurred during the extended contract period	0.6	
(iii) additional site staff costs incurred during mediation on re-investigation of contractor's claims	0.2	
(d) Price adjustment for construction works completed beyond June 1998	1.6	8.6%
(e) Contingencies	(1.7)	(9.1%)
(f) Provision for price adjustment	(1.2)	(6.4%)
Total (in MOD prices)	18.6	100.0%

15. A comparison of the cost breakdowns of the approved and the revised project estimates in MOD prices, together with reasons leading to the proposed increase in the approved project estimate, are at Enclosure 2.

**FINANCIAL IMPLICATIONS**

16. Subject to approval, we will phase the expenditure as follows -

<b>Year</b>	<b>\$ million (MOD)</b>
Up to 31 March 2000	192.9
2000 - 01	19.1
Total	212.0

17. The proposed increase in the approved project estimate will not give rise to any additional recurrent expenditure.

**PUBLIC CONSULTATION**

18. As we have completed the works, public consultation is unnecessary.

19. We will consult the LegCo Panel on Transport about the project on 15 February 2001 and will brief Members of the outcome.

**ENVIRONMENTAL IMPLICATIONS**

20. The proposed increase in the approved project estimate does not have any environmental implications. As the works are completed, there will not be any generation of construction or demolition material.

**LAND ACQUISITION**

21. The proposed increase in the approved project estimate does not involve land acquisition.

**BACKGROUND INFORMATION**

22. In March 1994, FC approved the upgrading of **112TB** to Category A at an estimated cost of \$94 million for the provision of a footbridge system at Che Kung Miu Road/Hung Mui Kuk Road roundabout.

23. In January 1995, FC approved an increase in the approved project estimate from \$94 million by \$86 million to \$180 million to cover additional works due to unforeseen ground conditions and price variations after receipt of tender.

24. In April 1998, the Secretary for the Treasury approved under delegated authority an increase in the approved project estimate from \$180 million by \$13.4 million to \$193.4 million to meet price fluctuation payments and the increase in site staff costs as a result of delay in completion of the works.

25. We started the works in February 1995 and substantially completed the works in October 1998. We are now processing the final accounts of the project.

26. The proposed increase in the approved project estimate will not create any new jobs.

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**Enclosure 2 to PWSC(2000-01)98**

**112TB - Footbridge system and road improvement works at the junction of Che Kung Miu Road and Hung Mui Kuk Road, Sha Tin**

A comparison of the approved and the revised project estimate in MOD prices is as follows -

		<b>Approved Estimate</b>	<b>Revised Estimate</b>	<b>Difference</b>
		<b>\$ million (in MOD prices)</b>		
(a)	Roadworks	29.8	29.8	-
(b)	Footbridge system	128.9	139.4	10.5
(c)	Escalators	9.2	9.2	-
(d)	Landscaping	2.1	2.1	-
(e)	Prolongation Costs	-	10.2	10.2
(f)	Finance charges	-	5.2	5.2
(g)	Consultants' contribution	-	(6.0)	(6.0)
(h)	Consultants' fees	3.0	3.8	0.8
(i)	Site staff costs	17.5	18.3	0.8
(j)	Contingencies	1.7	0	(1.7)
(k)	Provision for price adjustment	1.2	0	(1.2)
<b>Total</b>		193.4	212.0	18.6

2. **As regards (b) (footbridge system)**, the increase of \$10.5 million is to cover additional construction costs arising from (i) additional obstruction in bored pile excavation and toe-in depths to bored piles (\$5.1 million); (ii) disruption to steel reinforcement in the superstructure of the footbridge system (\$2.5 million); (iii) remeasurement and variation issues (\$1.3 million); and (iv) price adjustment for construction works originally scheduled for completion before June 1998 but were delayed until October 1998 (\$1.6 million).

3. **As regards (e) (prolongation costs)**, the increase of \$10.2 million is to cover the prolongation costs incurred during the extended contract period.

4. **As regards (f) (finance charges)**, the increase of \$5.2 million is to cover the financial charges incurred up to 31 March 2001 for the additional monies due to the contractor as contained in the provisional mediation settlement. These finance charges are calculated from the time when the additional payments should have been made.

5. **As regards (g) (consultants' contribution)**, an amount of \$6.0 million is to be contributed by the Consultant on a "without liability" basis under a separate settlement agreement with the Government.

6. **As regards (h) (consultants' fees)**, the increase of \$0.8 million is to cover the additional consultants' fees due under the consultancy agreement for the mediation settlement.

7. **As regards (i) (site staff costs)**, the increase of \$0.8 million is to cover (i) the additional site staff remuneration during the extended contract period for the necessary site supervision works (\$0.6 million); and (ii) the additional site staff remuneration during the mediation period to provide support and re-investigation of records which is necessary for the assessment the contractor's claim as contained in the Notices for Mediation (\$0.2 million).

8. **As regards (j) (contingencies)**, this has been reduced to zero as the final accounts for the works have been finalized.

9. **As regards (k) (provision for price adjustment)**, this has been reduced to zero as the mediation settlement has included financial charges up to March 2001 when payment would be due to the contractor.