

## **Legislative Council Panel on Transport**

### **Footbridge system and road improvement works at the junction of Che Kung Miu Road and Hung Mui Kuk Road, Sha Tin – Proposed Increase in Approved Project Estimate**

#### **PURPOSE**

This paper seeks Members' views on the proposed increase in the approved project estimate (APE) for the project **112TB** – “Footbridge system and road improvement works at the junction of Che Kung Miu Road and Hung Mui Kuk Road, Sha Tin” by \$18.6 million from \$193.4 million to \$212 million in money-of-the-day (MOD) prices.

#### **BACKGROUND**

2. The project was planned to provide a footbridge system at the junction of Che Kung Miu Road and Hung Mui Kuk Road, which is heavily trafficked, for safe pedestrian accesses to the Kowloon Canton Railway Tai Wai Station and the adjacent areas. The scope of works comprises –

- (a) the 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 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 showing the scope of works is at Enclosure 1.

#### **PROPOSED INCREASE IN APPROVED PROJECT ESTIMATE**

3. In March 1994, the Finance Committee approved the upgrading of item **112TB** to Category A, at an estimated cost of \$86 million. In January 1995, the APE was increased from \$86 million by \$94 million to \$180 million to cover additional works due to unforeseen ground

conditions and price variations after receipt of tender. In April 1998, the Secretary for the Treasury approved under delegated authority an increase in the APE 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.

4. 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.

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 completion of the works, disruption to steel reinforcement in the superstructure of the footbridge system, and prolongation costs. Subsequently, the contractor served another Notice for Mediation on 3 February 2000 on a further dispute on seventeen measurement and valuation issues. The Government agreed to enter into mediation with the contractor on the five disputes on 25 January and 3 March 2000. The quanta for the first four disputes and the fifth dispute claimed by the Contractor were \$56.6 million and \$2.8 million respectively excluding interest. The adjusted value of the first four disputes and the fifth dispute inclusive of finance charges to the end of April 2000 is \$71 million and \$3.6 million respectively. The contractor further claimed an interest of about \$690,000 per month beyond April 2000 if payment was not made by then. The total quantum of contractor's claim is therefore about \$80.8 million including interest adjusted to end December 2000.

6. During the period from mid May to early June 2000, we entered into Mediation discussions with the contractor. We examined in detail the claims being made and sought further views and clarifications from the consultant managing the contract. We then sought legal opinion and assessment of the potential chance of success should each dispute be taken forward to arbitration in the event that they could not be resolved in the mediation process.

7. A thorough analysis and review of the disputes, taking into account the risk of losing in arbitration associated legal costs, led us to the conclusion that the contractor is entitled to additional payments 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 due to a significant increase in quantities of boulder obstructions encountered in the bored piles 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 consultant decided that payment for these additional quantities of boulder and rock excavation should be made at the Contractor's tender rates. The Contractor disputed that decision in their notice for mediation and argued that a higher rate for excavation for the bored pile construction should be adopted due to the significant increase in quantities as additional resources had to be deployed to maintain progress. We consider that the Contractor may have reasonable ground to establish a claim in the case of proceeding to arbitration and therefore recommend settling this claim to avoid referring to arbitration.

9. The contractor claimed \$3.2 million due to the difference in measured quantities and \$7.4 million on the extra resources they had to deploy to maintain progress of the bored pile works. We consider that the contractor may have reasonable ground to establish a case if proceed to arbitration and therefore recommend settling this claim to avoid referring to arbitration. We assessed that \$5.1 million is due to the contractor in this

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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. Detailed site investigation cannot be carried out before tender as the piles are mostly located within heavy trafficked road. Site investigation works could not therefore proceed without substantial traffic diversions and disruptions to the general public, which was not considered to be justifiable at the time.

item taking into account the extent of risk that Government may lose in the case of arbitration.

### **Disruption to steel reinforcement in the central portal deck**

10. The Contractor claimed that congestion of steel reinforcement and significant increase in steel reinforcement quantities caused delay and disruption to steel fixing in the superstructure of the footbridge system. The contractor claimed that the reinforcement details were found to be extremely difficult and, in some cases, impossible to fix. The contractor argued that significant disruption to progress arose when conflicts in reinforcement fixing were encountered. The contractor claimed that disruption resulted in idling of resources and abortive works.

11. We adopted a re-measurement method of payment and we paid the contractor on the increase in reinforcement quantities in accordance with the tender rates. We however consider that, if we proceed to arbitration, the contractor may be able to substantiate an increased rate under the terms of the contract due to substantial increase in quantities, which could increase the complexities in fixing the reinforcement. Accordingly, we recommend settling this claim with the contractor rather than referring to arbitration.

12. The contractor claimed \$4.6 million in this item and we assessed that \$2.5 million is due to the contractor taking into account the extent of risk that Government may lose in the case of arbitration.

### **Re-measurement and Variations Issues**

13. The contractor disagreed with the consultant's assessment on various re-measurement and valuation of variations issued and claimed an additional cost of \$2.9 million in his Notice for Mediation on 3 February 2000. We assessed that \$1.3 million is due to the contractor taking into account the extent of risk that Government may lose in the case of arbitration.

### **Extended contract period - Prolongation Costs and Finance Charges**

14. The project was substantially completed on 31 October 1998 whilst the original schedule contract completion date was on 28 May 1997. Hence project completion was delayed by 520 days. The contractor claimed a prolongation cost to cover staff costs, and head office and site overhead during the period of delay. We consider that under the terms of the contract, the contractor is entitled to a portion of the claimed prolongation costs incurred during the extended contract period as a result of inclement weather and additional works ordered, including those mentioned in paragraphs 7(a) and (b) above and the following activities –

- (a) heat treatment to roof posts which were affected by deflection of the parapet beams; and
- (b) bearings re-seating.

15. The contractor claimed a sum of \$56.6 million to cover prolongation costs, including finance charges and interests. We assessed that a sum of \$15.4 million is due to the contractor to cover prolongation costs (\$10.2 million) and finance charges up to 31 March 2001 (\$5.2 million), of which an amount of \$6 million is to be contributed by the consultant under the terms of a settlement agreement. The additional cost to the Government is \$9.4 million in this item.

16. Out of the assessed prolongation costs of \$10.2 million, \$4.8 million is to cover the cost incurred during a 4-months extended contract period from July 1998 to October 1998 which was not anticipated when we previously sought an increase in the approved project estimate in April 1998. The remaining \$5.4 million is the additional amount, agreed during the mediation, extra-over the previously assessed prolongation costs during the 13-months extended contract period up to June 1998 as contained in our previous submission in April 1998.

## **ASSESSMENT OF THE CLAIMS**

17. We have sought legal opinion which agreed that, since the claims were reasonably complex, the direct and indirect costs of arbitration would have been substantial and mediation was therefore an appropriate dispute resolution procedure to adopt. We and the legal opinion have taken into account the risk of Government losing some of these disputes and the legal costs involved in proceeding with the arbitration. Some of those costs would be irrecoverable even if Government's position was held and we consider that it is in Government's interest to settle the dispute by mediation. Based on legal advice and by means of the mediation process, we have reached a settlement agreement with the contractor subject to the approval of the Finance Committee. Under the terms of the agreement we shall pay a settlement sum of \$24.3 million which includes finance charges up to 31 March 2001. The Contractor has advised that they would pursue with arbitration on the disputes in the case that the mediation could not be concluded with payment by 31 March 2001.

## **FINANCIAL IMPLICATIONS**

18. Following a review of the financial position of the project, DTD considers that the APE estimate of **112TB** is insufficient to settle the mediation payment as agreed in the provisional Settlement Agreement necessary. The provisional mediation settlement has also resulted in corresponding increases in the consultants' fees for detailed design and site supervision charges. It is necessary to increase the APE from \$193.4 million by \$18.6 million to \$212 million in MOD prices in order to settle the payment. A summary of the proposed increase of \$18.6 million is as follows –

<b>Factors</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) Re-measurement and variation issues	1.3	
	(iv) Prolongation costs incurred during the extended contract period	10.2	
	(v) Finance Charges	5.2	
(b)	Consultant's 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)	Inflation Allowance	(1.2)	(6.4%)
Total (in MOD prices)		18.6	100.0%

## **PUBLIC CONSULTATION**

19. As we have completed the works, public consultation is not necessary.

## **ENVIRONMENTAL IMPLICATIONS**

20. Works have been completed and the proposed increase in the APE does not have any additional environmental implications.

## **LAND ACQUISITION**

21. The proposed increase in the APE does not require any land acquisition.

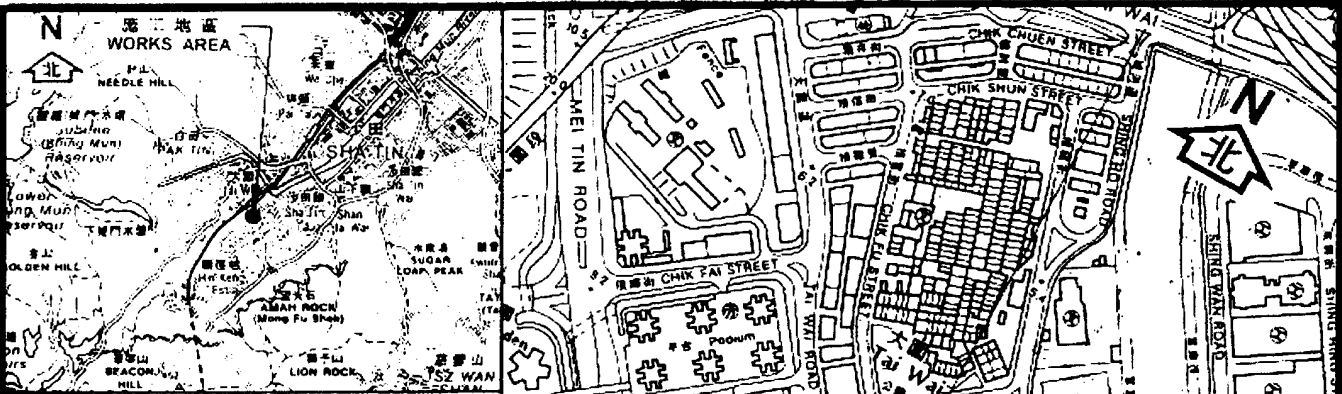
## **THE WAY FORWARD**

22. The provisional Settlement Agreement required the settlement payment to be paid out to the Contractor before end March 2001. As the approved project estimate of 112TB is insufficient to settle the mediation payment as agreed in the provisional Settlement Agreement, increase to the APE of 112TB is therefore urgently required. We will seek the approval of the Public Works Sub-Committee of the Finance Committee on 14 February 2001 to increase the APE of the project.

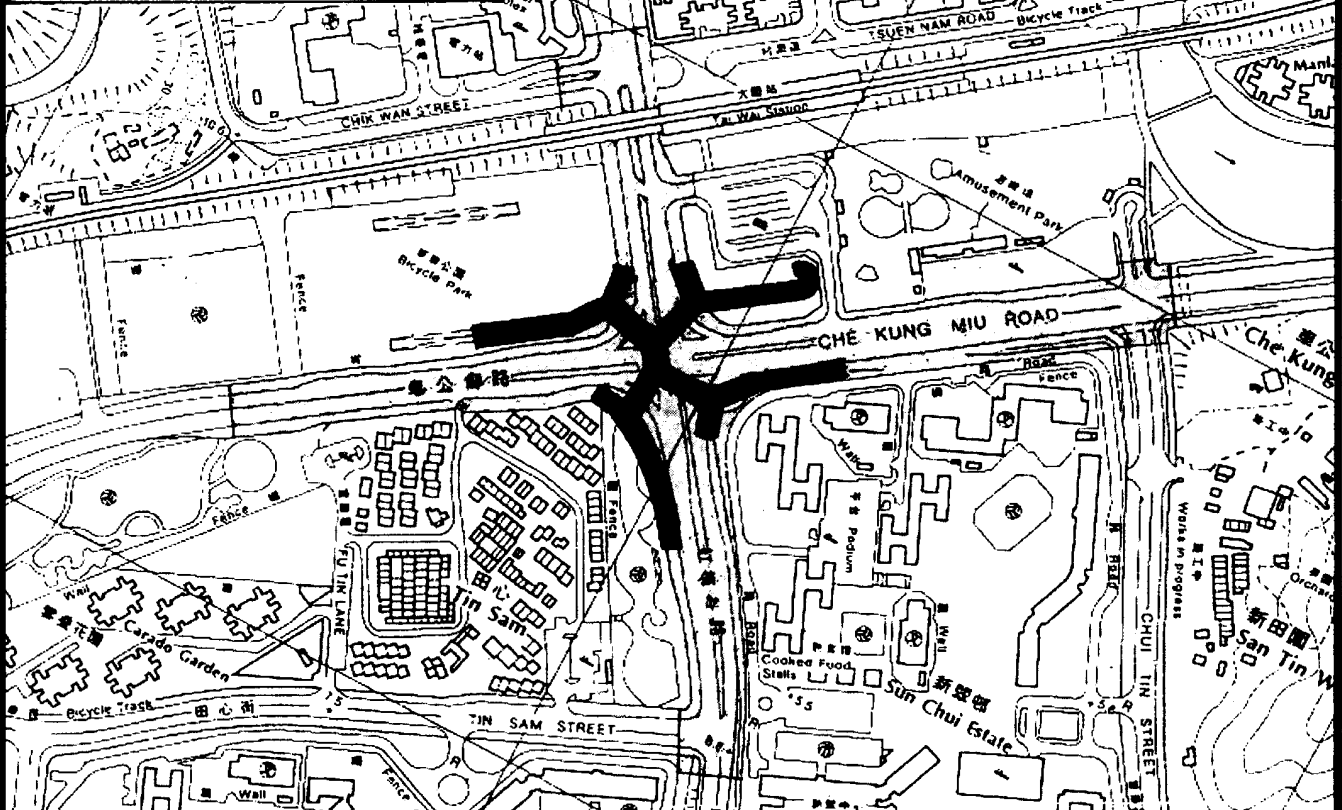
## **ADVICE SOUGHT**

23. Members are invited to provide comments on the project before we seek the approval of the Public Works Sub-Committee.




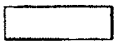




位置圖 比例 1 : 100 000  
LOCATION PLAN SCALE



圖例  
LEGEND

-  行人天橋系統  
FOOTBRIDGE SYSTEM
-  梯級  
STAIRS
-  電動扶梯  
ESCALATOR
-  有關的道路工程  
ASSOCIATED ROADWORKS

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				

圖則名稱 drawing title					項目編號 ITEM No. 112TB/A	
沙田車公廟路與紅梅谷路交界處的行人天橋系統及道路改善工程 FOOTBRIDGE SYSTEM AND ROAD IMPROVEMENT WORKS AT THE JUNCTION OF CHE KUNG MIU ROAD AND HUNG MUI KUK ROAD, SHA TIN					繪圖 drawn	辦事處 office
					W. K. CHUI	新界東拓展處 NT EAST DEVELOPMENT OFFICE
					簽署 initial	日期 date
					<i>WKC</i>	17.10.2000
					核對 checked	日期 date
					T. K. LEE	17.10.2000
					核准 approved	日期 date
					W. TSUI	17.10.2000
					測則編號 drawing no.	拓展署 TERRITORY DEVELOPMENT DEPARTMENT
					STZ0091	