

For discussion
on 22 July 1998

PWSC(98-99)6

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 - HOUSING
Territory Development
Transport - Roads
643TH - Trunk Road T7 in Ma On Shan

Members are invited to recommend to Finance Committee -

- (a) the upgrading of part of **643TH**, entitled "Trunk Road T7 in Ma On Shan - detailed design and site investigations", to Category A at an estimated cost of \$66.7 million in money-of-the-day prices; and
- (b) the retention of the remainder of **643TH** in Category B.

PROBLEM

The existing road network in Ma On Shan will not be able to cope with the future traffic demand in the area.

/PROPOSAL

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Housing and the Secretary for Transport, proposes to upgrade part of **643TH** to Category A at an estimated cost of \$66.7 million in money-of-the-day (MOD) prices for site investigations and the engagement of consultants to undertake detailed design for Trunk Road T7 in Ma On Shan.

PROJECT SCOPE AND NATURE

3. The scope of **643TH** comprises -

- (a) construction of about 3.2 kilometres of dual 2-lane carriageway and the associated highway structures;
- (b) the provision of grade separated junctions at the junctions of the proposed trunk road with Ma On Shan Road and Sai Sha Road;
- (c) the provision of environmental mitigation measures; and
- (d) associated geotechnical, drainage, utility and lighting works.

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

- (a) detailed design for the proposed engineering works described in paragraph 3 above;
- (b) associated site investigations; and
- (c) preparation of tender documents and assessment of tenders.

/JUSTIFICATION

JUSTIFICATION

5. The Sha Tin and Ma On Shan District Traffic Study completed in March 1996 revealed that the developments at Sai Sha and Cheung Muk Tau would generate a significant volume of traffic passing through Ma On Shan. The study predicted that some critical road junctions in Ma On Shan would be overloaded from the year 2001 onwards.

6. We have investigated various measures to resolve the congestion problems and found that local improvement measures could only resolve part of the anticipated traffic capacity problems. We therefore propose to construct Trunk Road T7 to provide a by-pass to accommodate through traffic between Sha Tin and Sai Sha/ northern part of Ma On Shan. This will help to relieve traffic congestion in Ma On Shan Town Centre. The by-pass will also cater for the traffic flows generated by the large-scale residential developments at Sai Sha.

7. We plan to start the construction works of Trunk Road T7 in May 2000 for completion in June 2003. To tie in with the construction programme, we intend to start detailed design work as soon as practicable after funding approval and start site investigation work by January 1999. We aim to complete the site investigation work in July 1999, the detailed design work in January 2000 and tendering procedures in April 2000.

8. Due to insufficient in-house resources, DTD proposes to engage consultants to supervise the site investigation works and to carry out the detailed design and tender preparation/assessment.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$66.7 million in MOD prices (see paragraph 10 below), made up as follows -

	\$ million
(a) Site investigations	16.0
(b) Consultants' fees	38.0
	/(i) supervision
(i) Supervision of site	2.0

	investigations		
(ii)	Detailed design	32.0	
(iii)	Preparation of tender documents and assessment of tenders	4.0	
(c)	Contingencies	5.0	
	Sub-total	59.0	(at December 1997 prices)
(d)	Inflation allowance	7.7	
	Total	66.7	(in MOD prices)

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

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

Year	\$ million (Dec 1997)	Price adjustment factor	\$ million (MOD)
1998 - 1999	18.0	1.06000	19.1
1999 - 2000	36.0	1.14878	41.4
2000 - 2001	5.0	1.24642	6.2
	<u>59.0</u>		<u>66.7</u>

11. We have derived the MOD prices on the basis of the Government's forecast of trend labour and construction prices for the period between 1998 and 2001. We will instruct the Consultants of an existing consultancy agreement for

/Sha Tin

Sha Tin New Town Development to carry out the detailed design works. We will tender the site investigation works under a standard remeasurement contract

because the quantities of works involved may vary depending on the actual ground conditions. The contract for the site investigation works will not provide for inflation adjustments as the contract period will not exceed 21 months.

12. The proposed consultancy has no annually recurrent financial implications.

PUBLIC CONSULTATION

13. We consulted the Development and Housing Committee of the Sha Tin Provisional District Board and the Traffic and Transport Committee of the Tai Po Provisional District Board on the proposed works on 24 February 1998 and 14 May 1998 respectively. Both Committees supported the proposal.

ENVIRONMENTAL IMPLICATIONS

14. We completed an Environmental Impact Assessment (EIA) for the construction works of Trunk Road T7 in February 1998. The EIA identified traffic noise as the key environmental impact of the works and recommended measures to mitigate the impact. The recommended measures include construction of low noise road surfacing and 3 metres to 5 metres high noise barriers. The EIA concluded that with these recommended mitigation measures, the environmental impact of the project will be controlled to within the established standards. The Advisory Council on the Environment endorsed the EIA report in March 1998.

15. The proposed consultancy will have no adverse environmental implications. We will incorporate all the environmental mitigation measures in the detailed design.

LAND ACQUISITION

16. The proposed consultancy does not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

17. We upgraded **643TH** to Category B in September 1996.

18. We engaged consultants in March 1997 and October 1997 to undertake the EIA study and preliminary design for Trunk Road T7 in Ma On Shan respectively. The purpose of carrying out the preliminary design is to determine the road alignment and prepare the land requirement plan for processing land resumption. We completed the EIA in March 1998 and the preliminary design in May 1998.

19. We plan to start the proposed consultancy as soon as practicable after funding approval, in any case not later than October 1998. The proposed consultancy will take some 19 months inclusive from start to finish. We aim to complete the proposed consultancy by April 2000.

Housing Bureau
July 1998

643TH - Trunk Road T7 in Ma On Shan

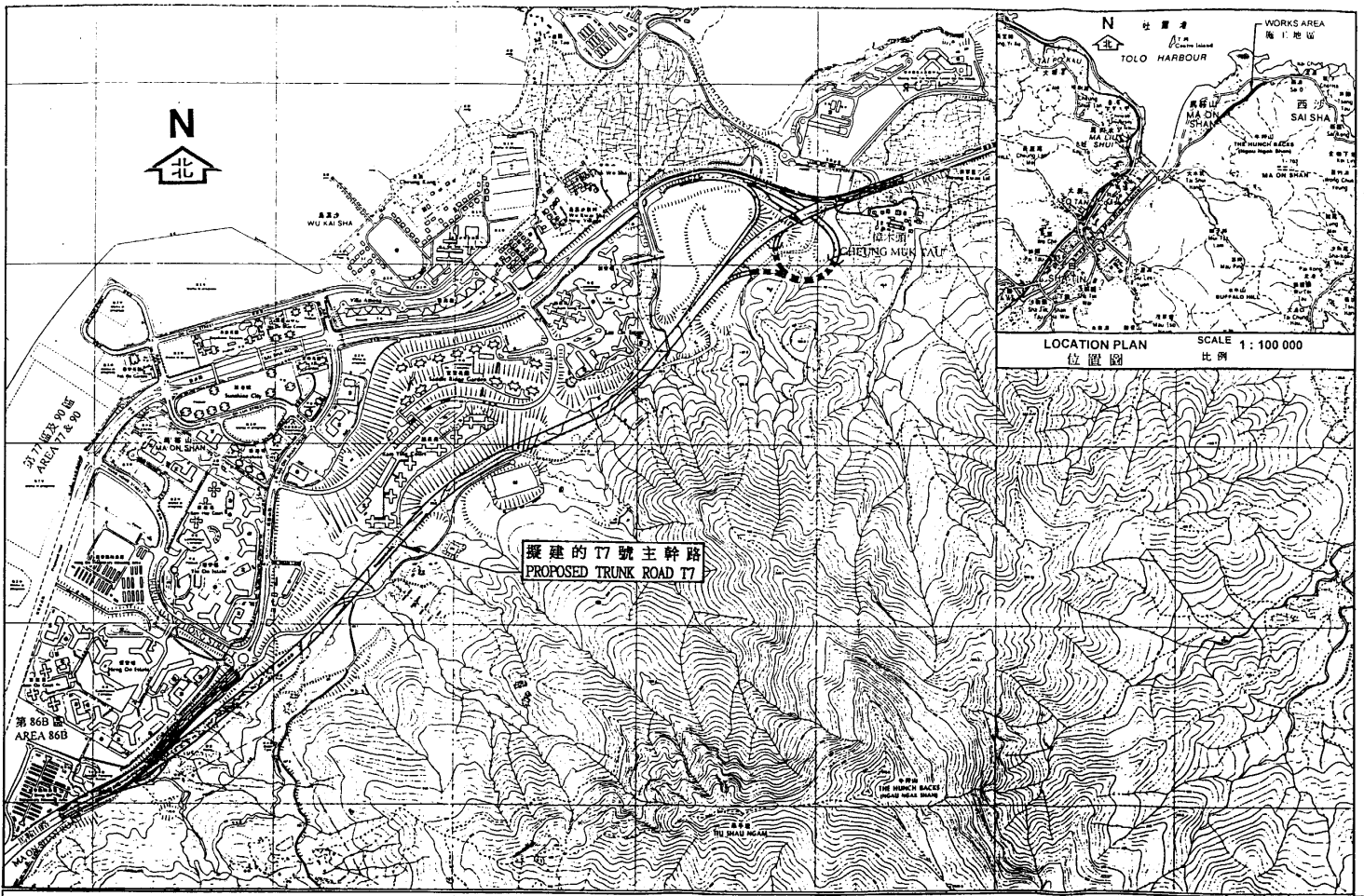
Breakdown of the estimate for consultants' fees

Consultants' staff costs			Estimated man months	Average MPS* salary point	Multiplier factor	Estimated fees (\$ million)
(a)	Supervision of site investigations	Professional	8	40	3.0	1.4
		Technical	10	16	3.0	0.6
(b)	Detailed design	Professional	105	40	3.0	18.7
		Technical	223	16	3.0	13.3
(c)	Preparation of tender documents and assessment of tenders	Professional	14	40	3.0	2.5
		Technical	26	16	3.0	1.5
Total consultants' staff costs						38.0

*MPS = Master Pay Scale

Notes

- (1) A multiplier factor of 3 is applied to the average MPS point to arrive at the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. (At 1.4.97, MPS pt. 40 = \$59,210 p.m. and MPS pt. 16 = \$19,860 p.m.)
- (2) The figures given above are based on estimates prepared by the Director of Territory Development. The consultancy works of this project is part of the overall consultancy agreement for New Town Development at Sha Tin. The actual consultants' fees will be calculated as a percentage of the cost of the works according to a fixed scale percentage charge.



PWSC SUBMISSION 1998/99 一九九八/九九年度工務小組委員會文件

圖則名稱 drawing title

馬鞍山 T7 號主幹路
TRUNK ROAD T7 IN MA ON SHAN

drawn by Y C LEUNG	date 2-6-98
approved W H KWAN	date 2-6-98
office 新界東拓展處 TERRITORY DEVELOPMENT OFFICE	

圖則編號 drawing no. ST1935A	圖則號碼 drawing no. 643TH
比例 scale 1:10 000	比例 scale 1:10 000
 拓展署 TERRITORY DEVELOPMENT DEPARTMENT	