

For discussion
on 24 May 2000

PWSC(2000-01)35

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 - HOUSING

Territory Development

Transport - Roads

**651TH – Local roads, drainage and associated engineering works in Area 11A,
package 13, Sha Tin**

Members are invited to recommend to Finance Committee the upgrading of **651TH** to Category A at an estimated cost of \$147.5 million in money-of-the-day prices for the construction of roads, drains and associated engineering works in Area 11A at Shek Mun, Sha Tin.

PROBLEM

The existing roads, and drainage and sewerage systems in Area 11A at Shek Mun, Sha Tin will not be able to cope with the future demand arising from the proposed development of a Private Sector Participation Scheme (PSPS) housing project and a primary school in the area.

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Housing, proposes to upgrade **651TH** to Category A at an estimated cost of \$147.5 million in money-of-the-day (MOD) prices for the construction of roads, drains and associated engineering works in Area 11A at Shek Mun, Sha Tin.

/ PROJECT

PROJECT SCOPE AND NATURE

3. The scope of the project comprises -
- (a) construction of about 800 metres of single 2-lane carriageway road;
 - (b) drainage and sewerage works;
 - (c) waterworks and landscaping works; and
 - (d) installation of a noise barrier 570 metres long and 7 metres high.

A site plan showing details of the proposed works is at Enclosure 1.

JUSTIFICATION

4. According to the Territorial Development Strategy Review (TDSR) completed in 1996, the projected housing supply in accordance with approved plans and programmes will not be able to meet the estimated housing demand after 2000/01. Consequently, the Director of Planning set out to identify potential sites for boosting housing supply in the territory. A formed site in Area 11A at Shek Mun, Sha Tin which was originally earmarked for industrial use was identified as one such site.

5. We completed the “Feasibility Study for Housing Sites in Sha Tin District – Rezoning of Industrial Zone in Shek Mun for Residential Use” (the Study) in April 1998. The proposed development in the Shek Mun site comprises a PSPS housing development which will provide some 4 300 housing units for a population of about 10 000 people along with a primary school. The Study confirmed the feasibility of the development proposal and concluded that the existing local roads and drainage and sewerage systems would need improvement to cope with the proposed development. The Study also identified the need to construct a noise barrier along the existing Tate’s Cairn Highway to mitigate excessive traffic noise affecting the proposed development. Consequently, the Town Planning Board’s approval of the Government’s application to the change in land use was made conditional upon the implementation of the engineering works and sound mitigation measures identified in the Study. The proposed noise barriers will enable the predicted traffic noise level at the PSPS housing development to comply with existing standards.

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6. In accordance with the Public Housing Development Programme, the Director of Housing (D of H) aims to make the PSPS flats available at Shek Mun by 2003. The Director of Education plans to complete the construction of the primary school at the same time. In order to meet these building development programmes, we need to start the construction of engineering infrastructure in July 2000 for completion in September 2002.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$147.5 million in MOD prices (see paragraph 8 below), made up as follows: –

	\$million	
(a) Roadworks	26.0	
(b) Drainage and sewerage works	8.3	
(c) Noise barrier	74.5	
(d) Waterworks	4.0	
(e) Landscaping works	1.0	
(f) Consultants' fees for	13.0	
(i) construction stage	1.6	
(ii) site staff costs	11.4	
(g) Contingencies	12.7	
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Sub-total	139.5	(in December 1999 prices)
(h) Provision for price adjustments	8.0	
	<hr/>	
Total	147.5	(in MOD prices)
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/ Owing

Owing to insufficient in-house resources, DTD proposes to employ consultants to carry out the construction supervision. A breakdown by man months of the estimate for the consultants' fees is at Enclosure 2.

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

Year	\$ million (Dec 1999)	Price adjustment factor	\$ million (MOD)
2000 – 2001	25.0	1.00000	25.0
2001 – 2002	76.0	1.04500	79.4
2002 – 2003	31.0	1.10770	34.3
2003 – 2004	7.5	1.17416	8.8
	139.5		147.5

9. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices over the period 2000 to 2004. We will proceed with the tendering process for the proposed works under a standard re-measurement contract because the extent of the foundation works for the noise barrier construction, which constitutes the major portion of the contract sum, may vary according to the actual ground conditions. The contract will provide for price adjustments because the contract period will exceed 21 months.

10. We estimate the additional annually recurrent expenditure to be \$2.1 million.

PUBLIC CONSULTATION

11. We consulted the Development and Housing Committee of the Sha Tin Provisional District Board on the proposed works on 30 June 1998. The Committee supported the proposal.

12. We gazetted the proposed road scheme under the Roads (Works, Use and Compensation) Ordinance on 12 February 1999. We received no objections to the proposed works. The Secretary for Transport authorised the proposed road works on 7 May 1999.

13. We also gazetted the sewerage works under the Water Pollution Control (Sewerage) Regulations on 12 February 1999. We received no objections to the proposed works. The Director of Environmental Protection authorised the proposed sewerage works on 7 May 1999.

14. The change of land use of the Shek Mun site required amendments to the Sha Tin Outline Zoning Plan (OZP). We gazetted the relevant amendments on 14 August 1998. We received no objections to the draft Sha Tin OZP related to the proposed housing development at Shek Mun. The Chief Executive in Council approved the amendments to the plan on 11 May 1999.

ENVIRONMENTAL IMPLICATIONS

15. The construction of local roads and drainage works is not a designated project under the Environmental Impact Assessment Ordinance. Consultation with the Advisory Council on the Environment is not required.

16. We completed an Environmental Impact Assessment Study for the proposed housing development in April 1998. The Study recommended the installation of noise barriers in order to meet relevant noise criteria. The Study also concluded that the proposed roadworks would have a negligible contribution to the overall traffic noise in the area and would not have any significant long term impact on air quality as the Air Quality Objectives and other standards will not be exceeded when the roads become operational. Other works items will not have any adverse long term environmental impact.

17. For short term construction impacts, we will control noise, dust and site run-off to comply with established standards and guidelines by incorporating relevant environmental pollution control clauses in the works contract.

18. We estimate the amount of construction and demolition material (C&DM) generated from the project requiring disposal off-site to be in the order of 10 000 cubic metres. In the planning, design and construction stages of the project, we have reviewed measures for reducing the generation and disposal of C&DM, we have incorporated these measures in the works contract for implementation at the construction stage. They include -

- (a) optimisation of the levels of the roadworks;
- (b) separation of public fill from C&DM for disposal at appropriate locations;
- (c) re-use of suitable excavated materials as general filling material on-site to minimise off-site disposal of public fill; and
- (d) use of prefabricated formwork and metal strutting for temporary works on site to minimise the generation of construction and demolition waste.

19. We will use a trip-ticket system to control the disposal of C&DM to the designated public filling facility and landfill. Under the terms of the contract, we will require the contractor to submit a C&DM disposal plan for the engineer's approval.

LAND ACQUISITION

20. The proposed works do not require any land acquisition or clearance.

BACKGROUND INFORMATION

21. We included **651TH** in Category B in December 1991.

22. We completed the formation of Area 11A, Sha Tin for industrial use under **59CL**. The scope of **651TH** covers the completion of the remainder of roads and drainage works in Area 11A, Sha Tin to serve the development in the area. However, due to a shortage in demand for industrial land in the past few years, we have put on hold the implementation of the project. Subsequent to the

TDSR completed in 1996, a number of potential housing sites including the Shek Mun site were identified to boost housing supply in the territory.

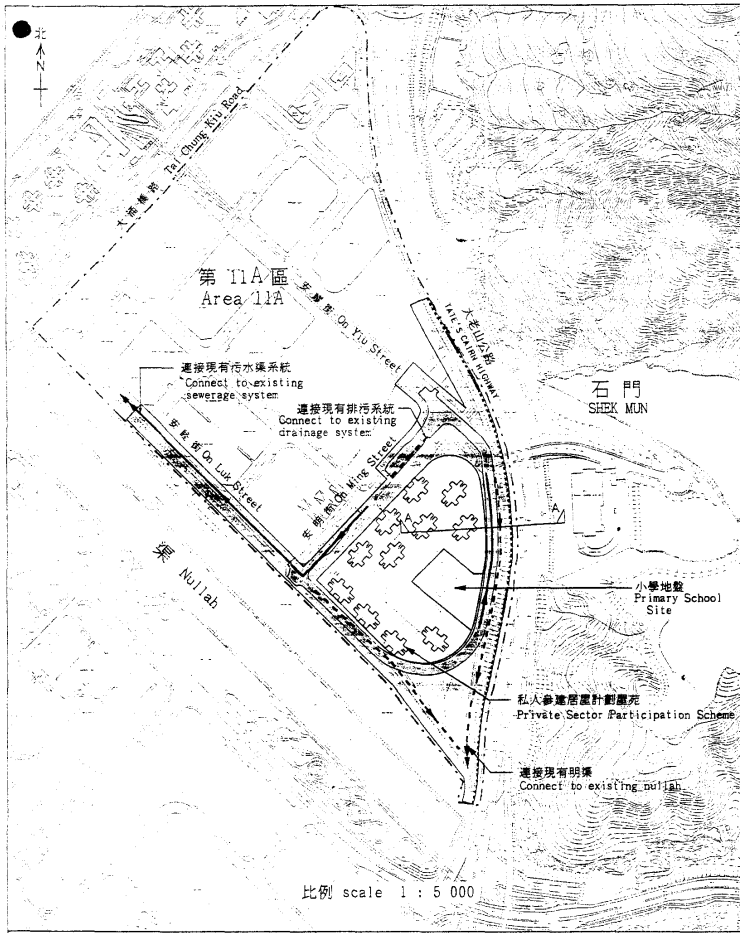
23. In September 1997, we engaged consultants to undertake the “Feasibility Study for Housing Sites in Sha Tin District – Rezoning of Industrial Zone in Shek Mun for Residential Use” and charged the cost of \$4 million to the block allocation **7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. The consultants completed the study in April 1998.

24. In June 1998, we engaged consultants to undertake detailed design and investigation for this project and charged the cost of \$4 million to the block allocation **7100CX**. The consultants have completed the detailed design and drawings.

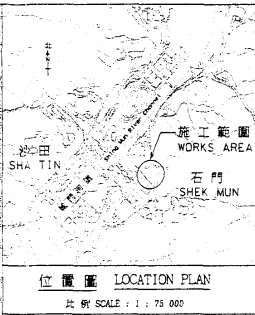
25. We estimate that the project will create some 140 new jobs comprising five professional/managerial staff, 20 technical/ancillary staff and 115 labourers during the construction period.

Housing Bureau
May 2000

(PWSC0252/WIN10)



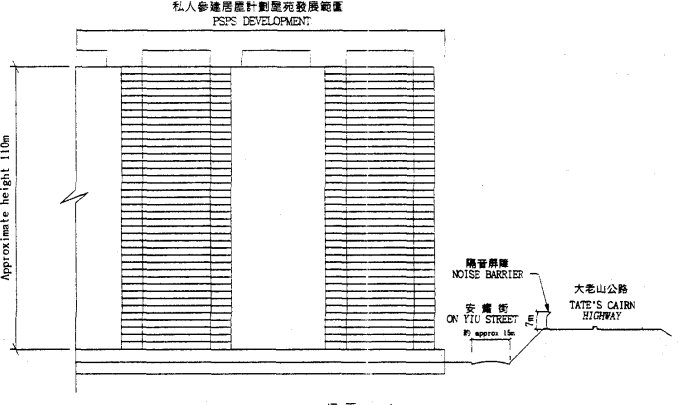
比例 scale 1 : 5 000



比例 SCALE : 1 : 75 000

圖例 LEGEND :

- 規劃區分界線 BOUNDARY OF PLANNING AREA
- 建議的工程界限 PROPOSED WORKS LIMIT
- 擬建的隔音屏障 PROPOSED NOISE BARRIER
- 擬建的污水渠 PROPOSED SEWER
- 擬建的雨水渠 PROPOSED STORM WATER DRAINS
- 擬建的道路 PROPOSED ROAD CONSTRUCTION



切面 A - A
CROSS SECTION A - A
比例 scale 1 : 1 500

B	17.4.2000	修訂副標題名稱 Sub-title revised		
A	28.10.99	更改項目編號 Item no. changed		
圖號 no.	日期 date	內容簡要 description	核准/校核 approved	核准/校核 approved

修訂 REVISION

二〇〇〇年至二〇〇一年度工務小組委員會文件 P.W.S.C. SUBMISSION 2000-2001

圖則名稱 drawing title
沙田第13組工程-第11A區區內道路及排水系統
LOCAL ROADS AND DRAINAGE IN AREA 11A, PACKAGE 13, SHA TIN

繪圖 drawn M K LEE	簽署 initial <i>MKL</i>	日期 date 21-9-99	比例 scale AS SHOWN ST1989B
校對 checked T K LEE	簽署 initial <i>TKL</i>	日期 date 30-9-99	
核准 approved H K CHAN	簽署 initial <i>HKC</i>	日期 date 30-9-99	

項目編號 ITEM No. B651TH

辦事處 office
新界東拓展處
NT EAST DEVELOPMENT OFFICE

拓展署
TERRITORY DEVELOPMENT DEPARTMENT

651TH – Local roads and drainage in area 11A, package 13, Shat Tin

Breakdown of estimate for consultants' fees

Consultants' staff costs			Estimated man months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a)	Consultants' fees for construction stage					
(i)	contract administration	Professional	8.0	40	2.4	1.2
		Technical	4.0	16	2.4	0.2
(ii)	preparation of as-built drawings	Professional	0.6	40	2.4	0.1
		Technical	2.0	16	2.4	0.1
(b)	Resident site staff costs	Professional	46.0	40	1.7	4.9
		Technical	183.0	16	1.7	6.5
Total consultants' staff costs						13.0

* 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 profit, 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 1.4.99, 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. The consultancy works for this project have been included as part of the overall consultancy agreement for the design and construction of Sha Tin New Town, Stage 2 development. We will only know the actual man months and fees when we have appointed the resident site staff.