

For discussion
on 8 December 1999

PWSC(1999-2000)73

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT
New Territories East Development
Civil Engineering - Land development
177CL - Sha Tin New Town - remaining engineering works

Members are invited to recommend to Finance
Committee-

- (a) the upgrading of part of **177CL**, entitled “Site formation, roads and drains at Mui Lee in Areas 4C and 38A, Sha Tin”, to Category A at an estimated cost of \$408.1 million in money-of-the-day prices; and
- (b) the retention of the remainder of **177CL** in Category B.

PROBLEM

We need to carry out site formation works at Mui Lee in Areas 4C and 38A, Sha Tin and construct roads and drains to provide serviced land for residential housing development to meet growing housing demand.

/PROPOSAL

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Planning, Environment and Lands and Secretary for Housing, proposes to upgrade part of **177CL** to Category A at an estimated cost of \$408.1 million in money-of-the-day (MOD) prices to provide serviced land at Mui Lee in Areas 4C and 38A, Sha Tin for the development of public housing, Private Sector Participation Scheme (PSPS) housing and for government, institutional and community facilities.

PROJECT SCOPE AND NATURE

3. The scope of **177CL** comprises engineering infrastructure and site formation works in Areas 4C, 34, 38A, 52 and 56A of Sha Tin.

4. The part of the project we now propose to upgrade to Category A comprises the following works at Mui Lee in Areas 4C and 38A of Sha Tin -

- (a) formation of about 13 hectares of land;
- (b) construction of earth retaining structures;
- (c) construction of roads, and drainage and sewerage system;
- (d) landscaping works; and
- (e) an environmental monitoring and audit (EM&A) programme.

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

JUSTIFICATION

5. The Territorial Development Strategy Review completed in 1996 found that the projected housing supply based on approved plans and housing programmes at that time would not be able to meet the estimated housing demand after 2000-01. Consequently, the Director of Planning identified Mui Lee in Areas 4C and 38A, Sha Tin as a potential site for more intensive residential development. To boost housing supply, we amended the Sha Tin Outline Zoning

/Plan

Plan (OZP) in May 1999 to increase the population density of the proposed development in Mui Lee (see paragraph 13 below). We estimate that upon completion of the development in August 2006, the site will be able to accommodate a population of about 19 450 people.

6. To ensure the timely supply of formed land with adequate infrastructural facilities for the housing developments, we need to complete the site formation works in stages between July 2001 and February 2003. The Director of Housing (D of H) will then provide the public housing flats and the PSPS housing flats at Mui Lee by 2004 and 2006 respectively in accordance with the Public Housing Development Programme.

7. Areas 4C and 38A, Sha Tin are at present unsewered. We will construct a sewer to collect and convey the sewage in these areas to the existing sewerage system south of Tsuen Nam Road. In view of the steep gradient of the existing natural ground terrain, we need to construct earth retaining structures in the form of bored pile retaining walls in order to maximise the area of formed land for housing development. Bored pile retaining walls are more expensive than conventional retaining walls. We will also provide an access road and drains in the site.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the project to be \$408.1 million in MOD prices (see paragraph 9 below), made up as follows –

	\$ million
(a) Site formation	272.2
(i) Earthworks	125.5
(ii) Retaining structures	146.7
(b) Drainage and sewerage works	15.5
(c) Road works	3.0

(d) Landscaping works	1.8	
(e) EM&A programme	5.0	/(e)
(f) Consultants' fees for	34.3	
(i) construction stage	4.5	
(ii) resident site staff costs	29.8	
(g) Contingencies	33.2	
	365.0	(at December 1998 prices)
(h) Provision for price adjustment	43.1	
	408.1	(in MOD prices)
	Total	

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

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

Year	\$ million (Dec 1998)	Price adjustment factor	\$ million (MOD)
1999 - 2000	7.0	1.01500	7.1
2000 - 2001	91.3	1.05814	96.6
2001 - 2002	134.7	1.11104	149.7
2002 - 2003	118.6	1.16600	138.3
2003 - 2004	13.4	1.22493	16.4
	365.0		408.1

- /10.
10. 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 2004. We will proceed with the tendering process for the proposed works under a standard remeasurement contract because the works involve extensive earthworks, the quantity of which may vary depending on the actual ground conditions. The contract will provide for price adjustments as the contract period will exceed 21 months.
11. We estimate the annually recurrent expenditure for the project to be \$255,300.

PUBLIC CONSULTATION

12. We consulted the Development and Housing Committee of the Sha Tin District Board on the proposed works on 15 April 1997. The Committee had no objection to the proposed works. Some Committee members were concerned about the adverse traffic impacts of the development and the Committee passed a motion requesting a reduction in the population density of the proposed housing developments. We explained that we had already carried out traffic and sewerage impact assessments, which confirmed the acceptability of the proposed housing developments.
13. The proposed housing developments require amendments to the Sha Tin OZP to change the land use of the area. We gazetted the amendments to the draft Sha Tin OZP on 14 August 1998. The Tai Wai Village Rural Committee raised an objection to the draft Sha Tin OZP on the grounds that the proposed housing developments would deprive villagers of land for village expansion development. The Town Planning Board considered the issue on 4 December 1998 and 12 February 1999 but disallowed the objection. The Chief Executive in Council approved the amendments to the draft Sha Tin OZP on 11 May 1999.
14. We gazetted the proposed road works under the Roads (Works, Use and Compensation) Ordinance on 9 January 1998 and received no objections. The Secretary for Transport authorised the proposed road works on 30 October 1998.
15. We gazetted the proposed sewerage works under the Water Pollution Control (Sewerage) Regulation on 17 July 1998 and received no

objection. The Director of Environmental Protection (DEP) authorised the proposed sewerage works on 23 October 1998.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

16. In June 1998, we completed an environmental study on the proposed site formation works. DEP has vetted the study report and has agreed that the key environmental issue is the loss of about 3 hectares of secondary woodland, which will be mitigated by the same amount of compensatory replanting, within the project area. We will control dust, noise and site run-off impacts during construction in compliance with the established standards/guidelines by incorporating appropriate environmental pollution control clauses into the relevant contracts. We have included the costs of an EM&A programme (\$5 million) and landscaping works (\$1.8 million) in the overall project estimate.

17. At the planning and design stages we considered how to reduce the generation of construction and demolition material (C&DM) as much as possible. To do so, we have adopted in the design of the works the use of extensive soil nailing to maintain steeper cut slopes; the construction of high retaining structures; and maximisation of the gradient of the access road to the housing platforms to minimise the extent of excavation. We have allowed for the reuse of about 140 000 cubic metres (m³) of C&DM generated from this project for the development in Yuen Long Areas 13 and 14 and about 1.1 million m³ of public fill will be delivered to public filling areas. Although about 5 000 m³ of C&D waste will be disposed of at landfills, we shall continue to identify, during the construction stage, other projects which can utilise the C&DM generated from this project.

18. We shall require the contractor under the contract to submit a waste management plan to the Engineer for approval on the advice of the Environmental Protection Department. The waste management plan shall include appropriate mitigation measures including the allocation of an area for waste segregation. We shall require the Engineer to ensure that the day-to-day operations on site comply with the waste management plan submitted. We shall require the contractor to separate public fill from C&D waste for disposal at appropriate locations and to sort the C&DM by category on-site to facilitate re-use/recycling in order to reduce the generation of waste. The reuse/recycled materials shall include paper/cardboard timber and metal. We shall control the disposal of C&DM to the appropriate public filling facility and/or landfill through a trip ticket system. We shall record the disposal, reuse and recycling of C&DM for monitoring purposes.

/LAND

LAND ACQUISITION

19. The proposed works do not require any land acquisition. The clearance of the government land for the project will affect 238 households involving 697 persons. D of H will offer eligible families accommodation in public housing in accordance with the existing housing policy. We will charge the cost of clearance, estimated at \$13 million, to Head 701 - Land Acquisition.

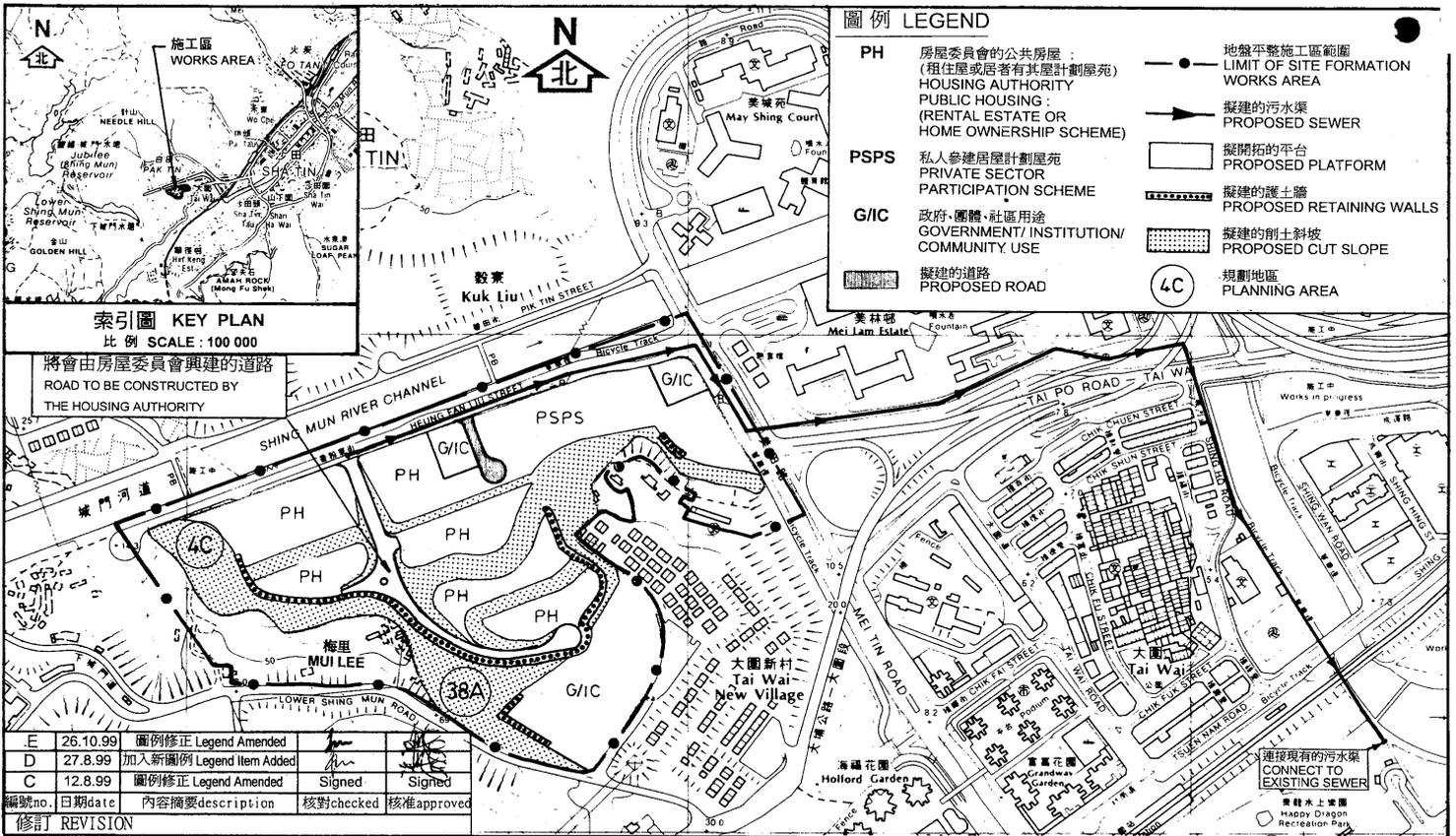
BACKGROUND INFORMATION

20. We retained **177CL** in Category B in March 1994 for the remaining engineering works for the development of Areas 4C, 34, 38A, 52 and 56A of Sha Tin New Town.

21. We engaged consultants in June 1997 to undertake the site investigation and detailed design of the proposed works and charged the cost of \$9.9 million to the block allocation **Subhead 7100CX**, "New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme". The consultants have completed the detailed design and drawings.

22. We plan to start the proposed site formation, roads and drainage works at Mui Lee in January 2000 for completion in February 2003. We will hand over the formed sites to D of H in stages from July 2001 to tie in with the Public Housing Development Programme. We will implement the remaining works under **177CL** in late 2001 for completion in stages by 2005.

Planning, Environmental and Lands Bureau
November 1999



圖則名稱 drawing title				項目編號 ITEM No. 177CL	
沙田新市鎮 - 餘下工程 (梅里第4C及第38A區土地開拓, 道路及渠務工程) SHA TIN NEW TOWN - REMAINING ENGINEERING WORKS (FORMATION, ROADS AND DRAINS AT MUI LEE IN AREAS 4C AND 38A)				繪圖 drawn C. S. LAU	簽署 initial CSL
				日期 date 27.8.99	比例 scale 1 : 5000
				核對 checked G. MAK	簽署 initial GM
				日期 date 27.8.99	圖則編號 drawing no. ST1971 E
				核准 approved P. CHAN	簽署 initial PC
				日期 date 27.8.99	辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE
				拓展署 TERRITORY DEVELOPMENT DEPARTMENT	

177CL – Sha Tin New Town – remaining engineering works

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	Professional		25.0	40	2.4	3.8
administration	Technical		10.0	16	2.4	0.5
(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		117.0	40	1.7	12.5
	Technical		485.0	16	1.7	17.3
Total consultants' staff costs						34.3

* 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 1.4.98, 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 an existing consultancy agreement for the development of Sha Tin New Town (Stage 2). We will only know the actual man months and fees when we have appointed the resident site staff.