

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 - HOUSING

Civil Engineering - Land development

575CL - Site formation works for Lei Yue Mun Phase 2 housing site

Members are invited to recommend to Finance Committee the upgrading of **575CL** to Category A at an estimated cost of \$64.9 million in money-of-the-day prices to carry out site formation and associated infrastructure works for the Lei Yue Mun Phase 2 public housing development.

PROBLEM

We need to carry out site formation works for building platforms and construction of road, drainage and slope stabilisation works for the Lei Yue Mun Phase 2 (LYM2) public housing development.

PROPOSAL

2. The Director of Civil Engineering (DCE), with the support of the Secretary for Housing, proposes to upgrade **575CL** to Category A at an estimated cost of \$64.9 million in money-of-the-day (MOD) prices to carry out site formation and associated infrastructure works for the LYM2 public housing development.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of 575CL comprises -
- (a) the formation of about 2 300 square metres (m²) of building platform and construction of about 100 metres (m) of associated earth retaining structures;
 - (b) the construction of a cascade and a twin cell box culvert to replace existing structures;
 - (c) the construction of drainage works;
 - (d) the construction of slope stabilisation works including erection of boulder barriers;
 - (e) the construction of an access road to the LYM2 housing platform and a roundabout for improvement of the existing Ko Chiu Road / Lei Yue Mun Road junction¹; and
 - (f) the employment of consultants for contract administration and site supervision of the proposed works.

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

JUSTIFICATION

4. The site at Lei Yue Mun Area has been identified to provide public rental housing of about 3 200 flats for a total population of about 9 750 persons in two phases. Phase 1 with 2 400 flats will be ready for occupation in 2002 to accommodate about 7 750 persons.

5. The proposed site at Phase 2 will be developed for a public housing development of about 800 flats to accommodate 2 000 persons. These flats are currently scheduled to be completed in early 2007. In order to provide the necessary site formation and infrastructure to tie in with the Housing Authority (HA)'s development programme, we plan to commence the proposed works in December 2001 for completion in August 2003.

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¹ The proposed roundabout is to cater for the increase in traffic due to the population intakes of the public housing development in the vicinity, which includes Ko Chiu Road Estate Phases 3 & 5, Yau Tong Estate Phase 5 and Lei Yue Mun Phase 1, for a total of about 23 000 persons by end of 2002. The proposed roundabout is scheduled for early completion in June 2002 to tie in with the population intakes.

6. We will entrust the proposed site formation and associated infrastructure works to HA to ensure a more co-ordinated implementation approach. This arrangement will avoid works interface problems since there will be interface activities with other HA development projects including LYM Phase 1, Yau Tong Estate Phase 5 and Ko Chiu Road Estate Phases 3 & 5, which are in progress in the same area. The entrustment arrangement also allows a smooth, phased handover of the proposed works to HA for completion of the building works as programmed.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the project to be \$64.9 million in MOD prices (see paragraph 8 below), made up as follows -

	\$ million
(a) Site formation and retaining structures	10.7
(b) Diversion of box culvert and cascade	12.5
(c) Drainage works	4.5
(d) Slope stabilisation works	18.8
(e) Roadworks	3.5
(f) Mitigation measures for environmental impacts	0.5
(g) Consultants' fees for	7.8
(i) contract administration	1.0
(ii) site supervision	6.8
(h) Contingencies	5.2

/(i)

(i)	Housing Authority on-cost ²	1.3	
		64.8	(in September 2001 prices)
(j)	Provision for price adjustment	0.1	
		64.9	(in MOD prices)

Due to insufficient in-house resources, the Director of Housing (D of H) will engage consultants to carry out the contract administration and site supervision of the proposed works. 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 (Sept 2001)	Price adjustment factor	\$ million (MOD)
2001 - 2002	0.7	1.00000	0.7
2002 - 2003	40.1	0.99700	40.0
2003 - 2004	17.5	1.00398	17.6
2004 - 2005	6.5	1.01101	6.6
	64.8		64.9

9. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period 2001 to 2005. D of H will tender the proposed works through a standard remeasurement contract because the quantities of earthworks involved may vary depending on actual ground conditions. The contract will not provide for price adjustments as the contract period will not exceed 21 months.

/10

² There is a standard arrangement for the Government to pay HA a 2% on-cost for administrative and supervision works (i.e. on items 7(a) – (h)) which HA undertakes for the Government on an entrustment basis.

10. We estimate the annually recurrent expenditure arising from this project to be \$51,500.

PUBLIC CONSULTATION

11. On 23 March 1999, we consulted the Housing Committee of the Kwun Tong Provisional District Board on the comprehensive housing developments in Kwun Tong East, which included the LYM2 public housing development. Members did not raise any objection to the LYM2 public housing development.

12. We consulted the Traffic and Transport Committee of the Kwun Tong Provisional District Board / Kwun Tong District Council on the proposed roadworks and drainage works on 7 September 1999 and 22 March 2001 respectively. Members supported the proposed works.

ENVIRONMENTAL IMPLICATIONS

13. We have completed a Preliminary Environmental Review (PER) for the proposed site formation and associated infrastructure works. The Director of Environmental Protection has agreed to the necessary mitigation measures recommended in the PER. These measures, including erection of temporary noise barriers, use of plant with noise reduction equipment and regular watering of the site, will contain the short-term environmental impacts within established standard and guidelines. We have included \$0.5 million in the project estimate for the implementation of these mitigation measures. The project will not cause any long-term environmental impact.

14. D of H has considered in the planning and design stages the need to minimize the generation of construction and demolition (C&D) materials. The design of the building platforms has been optimized in this respect. We will use suitable excavated materials for filling within the project site to minimize off-site disposal.

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15. We estimate that the project will generate about 40 000 cubic metres (m³) of C&D materials. Of these, we will reuse about 39 000 m³ (98%) on site and dispose about 1 000 m³ (2%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$125,000 for this project (based on a notional unit cost³ of \$125/m³).

16. D of H will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. D of H will ensure that day-to-day operations on site comply with the approved WMP. The contractor will be required to separate reusable C&D materials from C&D waste for reuse on site. D of H will control the disposal of public fill and C&D waste at appropriate locations through a trip-ticket system. D of H will record the disposal, reuse and recycling of C&D materials for monitoring purposes. To further minimize the generation of C&D materials in the construction stage, D of H will encourage the contractor to use non-timber formwork and recyclable material for temporary works. In addition, the contractor will be required to use metal hoarding and precast units as far as practicable.

LAND ACQUISITION

17. The proposed works do not require any land acquisition.

BACKGROUND INFORMATION

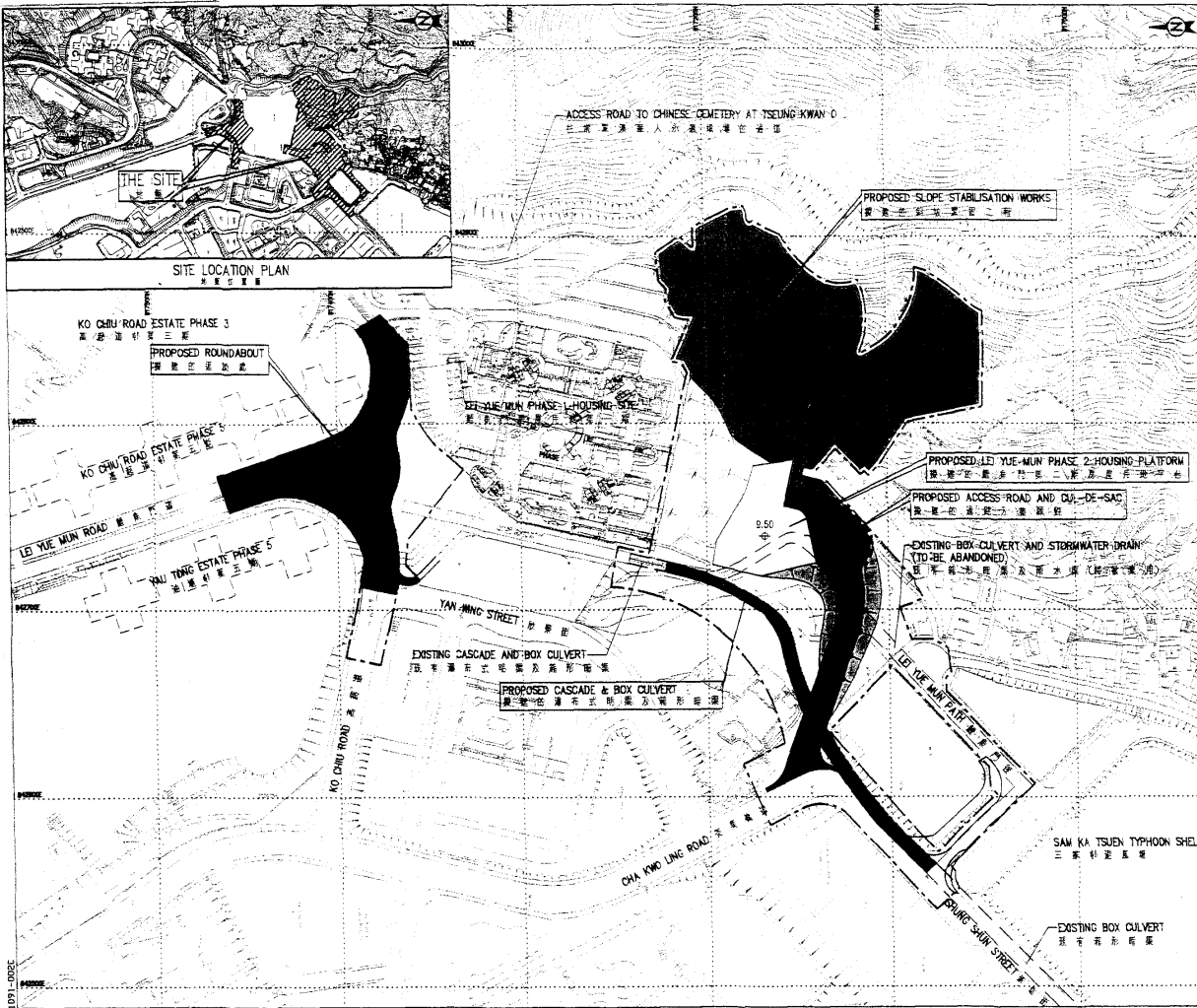
18. We included **575CL** in Category B of the Public Works Programme in September 2000. We have also included an item under the block allocation **Subhead B100HX** “Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme” at an estimated cost of \$4.54 million in MOD prices for engaging consultants to undertake the detailed design and the associated site investigation and survey works for the project. The consultants have now completed the detailed design for the proposed works.

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³ The estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimated is for reference only and does not form part of this project estimate.

19. We estimate that the project will create some 85 jobs comprising 20 professional/technical staff and 65 labourers, totalling 1 530 man-months.

Housing Bureau
October 2001



NOTES 註釋
 1. ALL DIMENSIONS ARE IN METRES.
 2. ALL LEVELS ARE IN METRES ABOVE PRINCIPAL DATUM (MPD) UNLESS OTHERWISE STATED.
 所有尺寸均以米為單位。
 所有高度均以海平面上方高度為單位，除非另有註明。

LEGEND 圖例
 WORKS AREA BOUNDARY
 PROPOSED SLOPE STABILISATION WORKS
 PROPOSED ACCESS ROAD / ROUNDABOUT / CUL-DE-SAC
 PROPOSED PLATFORM
 PROPOSED CASCADE AND BOX CULVERT
 PROPOSED RETAINING WALL
 PROPOSED PLATFORM LEVEL
 PROPOSED FULL SLOPE
 2000

Scale 1:2000

1 (20.0.0)	NUMBER REVISION	INITIALS	DATE	
A (10.0.0)	NUMBER REVISION	SIGNED	SIGNED	
no.	date	descriptor	checked	approved

REVISION

no.	date	descriptor	checked	approved
designer	KK YIP	SIGNED	[22.08.0]	
checker	KK TONG	SIGNED	[22.08.0]	
tracer	KK TONG	SIGNED	[22.08.0]	
checker	KK YIP	SIGNED	[22.08.0]	

approved
 SIGNED
 CK/HLS
 SE/HS2

contract no.
 file no. HS 6/3/11

project no. 575 CL
 PROJECT 工程
 SITE FORMATION WORKS FOR
 LEI YUE MUN PHASE 2
 HOUSING SITE
 龍魚門第二階段房屋用地
 地盤平整工程

DRAWING TITLE 圖則標題
 SITE PLAN
 地盤平面圖

drawing no. HSD 52B
 scale 1:2000

office
 HOUSING SITES DIVISION
 CIVIL ENGINEERING OFFICE

CIVIL ENGINEERING DEPARTMENT
 HONG KONG

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Breakdown of the estimate for the consultants' fees

Consultants' staff costs		Estimated man-months	Average MPS* salary point	Multiplier factor	Estimated fee (\$ million)
(a) Contract administration	Professional	6	38	2.4	0.87
	Technical	3	14	2.4	0.14
(b) Site supervision by resident site staff of the consultants	Professional	29	38	1.7	2.98
	Technical	116	14	1.7	3.85
Total consultants' staff costs					7.84

*MPS = Master Pay Scale

Notes

1. A multiplier of 2.4 is applied to the average MPS point to estimate the full staff costs including the consultants' overheads and profit, as the staff will be employed in the consultants' offices. A multiplier of 1.7 is applied in the case of site staff supplied by the consultants. (At 1.4.2001, MPS pt. 38 = \$60,395 per month and MPS pt. 14 = \$19,510 per month).
2. The above figures are based on estimates prepared by the Director of Housing. The consultancy works for this project have been included as part of Housing Authority's Agreement No. CRB/CE/2000/02 "Site Formation Works for Lei Yue Mun Phase 2 Housing Site – Design and Construction Assignment". The assignment will only be triggered subject to Finance Committee's approval to upgrade **575CL** to Category A.