

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

New Territories North and West Development

Civil Engineering – Land Development

460CL – Tai Po development – Formation and servicing of Areas 12 (part) and 39, phase 2 remaining works

Members are invited to recommend to Finance
Committee –

- (a) the upgrading of part of **460CL**, entitled “Tai Po development – advance site formation and engineering infrastructure works at southern portion of Tai Po Area 39” to Category A at an estimated cost of \$56.3 million in money-of-the-day prices; and
- (b) the retention of remainder of **460CL** in Category B.

/PROBLEM

PROBLEM

The southern portion of Tai Po Area 39 has yet to be formed and serviced with engineering infrastructure to meet the programme of the proposed developments in the vicinity, including engineering infrastructure works under **713CL**¹, **723CL**² and **727CL**³, and the development of the Government, Institution or Community (GIC) site in Tai Po Area 39.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Housing, Planning and Lands proposes to upgrade part of **460CL** to Category A at an estimated cost of \$56.3 million in money-of-the-day (MOD) prices for part of the site formation and engineering infrastructure works at Tai Po Area 39.

PROJECT SCOPE AND NATURE

3. The scope of works under **460CL** comprises mainly the formation of about 10.8 hectares of land at the southern part of Tai Po Area 39, and the construction of about 160 metres (m) of a one-lane each way carriageway as the last section of Yau King Lane, about 320m of drainage box culverts, public carparks, a public transport terminus and a refuse collection point.

/4.

¹ PWP Item **713CL** "Tai Po development – formation and servicing of Areas 12 (part) and 39, phase 2A" is in Category B for providing roads, emergency vehicular accesses and associated engineering infrastructure, improvement of river channel and landscape works at Cheung Shue Tan and Tai Po Mei. The construction works are scheduled to commence in January 2008 for completion in August 2010.

² PWP Item **723CL** "Engineering infrastructure works for Pak Shek Kok development – stage 2D" is in Category B for construction of the proposed Road L7 and L7 Bridge linking Cheung Shue Tan with Pak Shek Kok. The construction works are scheduled to commence in January 2008 for completion in May 2011.

³ PWP Item **727CL** "Engineering infrastructure works for Pak Shek Kok development – stage 2B – extension of Yau King Lane" was upgraded to Category A in January 2007 for the proposed extension of the existing Yau King Lane at Cheung Shue Tan. The construction works are scheduled to commence in June 2007 for completion in November 2009.

4. The scope of the part of **460CL** which we propose to upgrade to Category A comprises –

- (a) formation of about 7.1 hectares of land at the southern part of Tai Po Area 39 for GIC use and Road L7;
- (b) construction of about 60 m of a single-cell drainage box culvert and 260 m of a multi-cell drainage box culvert connecting the existing Tai Po Mei Hang with the existing drainage box culvert at Pak Shek Kok;
- (c) construction of the associated drainage, slope and landscaping works; and
- (d) implementation of environmental mitigation measures and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in items (a) to (c) above.

———— The site plan and section diagram of the proposed works are at Enclosure 1.

5. We plan to commence the construction works in November 2007 for completion in January 2010.

JUSTIFICATION

6. At present, the southern portion of Tai Po Area 39 is a low-lying area which is prone to flooding during rainstorm at high tide condition. The site is currently left vacant. There are several proposed projects in its vicinity, including the extension of Yau King Lane under **727CL**, construction of Road L7 for Pak Shek Kok development under **723CL** and construction of access roads and drainage channel at Cheung Shue Tan and Tai Po Mei under **713CL**.

/7.

7. The Chinese University of Hong Kong (CUHK) needs to expand its campus to accommodate additional students due to the implementation of the four-year undergraduate programme under the New Academic Structure for Senior Secondary and Higher Education (i.e. the “3+3+4” academic structure) from the 2012/13 academic year onwards. A part of CUHK’s expansion plan is the construction of a Centralised General Research Laboratory Complex (CGRLC), which is scheduled to be completed in early 2012. CUHK has applied for land allocation at Tai Po Area 39 to construct the CGRLC.

8. To tie in with the construction programmes of the adjacent projects and CUHK’s campus development, the site at the southern portion of Tai Po Area 39 must be formed in phases from mid-2008 onwards. Engineering infrastructure including box culverts and associated drainage will also be required to serve the formed site.

FINANCIAL IMPLICATIONS

9. We estimate the cost of the project to be \$56.3 million in MOD prices (see paragraph 10 below), made up as follows -

	\$ million
(a) Site formation	15.7
(b) Box culverts	21.4
(c) Drainage works	5.3
(d) Landscaping works	1.0
(e) Environmental mitigation measures and EM&A programme	1.0
(i) mitigation measures at construction stage	0.6
(ii) EM&A programme	0.4
(f) Consultants’ fees	6.2
(i) construction stage	0.6
(ii) resident site staff costs	5.6

/(g)

(g)	Contingencies	5.1	
	Sub-total	55.7	(in September 2006 prices)
(h)	Provision for price adjustment	0.6	
	Total	56.3	(in MOD prices)

Due to insufficient in-house resources, we propose to engage consultants to supervise the proposed works. A breakdown by man-months of the estimate for consultants' fees is at Enclosure 2.

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

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2007 – 2008	6.8	0.99900	6.8
2008 – 2009	29.3	1.00649	29.5
2009 – 2010	15.2	1.01656	15.5
2010 – 2011	4.4	1.02672	4.5
	<u>55.7</u>		<u>56.3</u>

11. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices for public sector building and construction output from 2007 to 2011. We will invite tenders for the proposed works under a lump-sum contract because we can clearly define the scope of the majority of the works in advance. The contract will provide for price adjustments as the contract period will exceed 21 months.

12. We estimate the annual recurrent expenditure arising from this project to be about \$184,000.

/13.

PUBLIC CONSULTATION

13. We consulted the Environmental Improvement and Works Subcommittee of Tai Po District Council (TPDC) on 12 July 2002 on the parent item “Tai Po Development – Formation and Servicing of Areas 12 (Part) and 39, Phase 2”, which included **713CL** and **460CL**. Members of the sub-committee supported the implementation of the project.

14. We consulted the Village Representatives of Cheung Shue Tan Village and Tai Po Mei Village, the TPDC member of the constituency concerned and a representative of the Tai Po Rural Committee on 22 March 2007 on **460CL**. They supported the project and urged for its early implementation. We circulated a consultation paper to the TPRC and the Environment, Housing and Works Committee of TPDC on 23 March 2007, and did not receive any adverse comments on the proposed works.

15. We circulated an information paper to the LegCo Panel on Planning, Lands and Works on 24 April 2007. We have not received any adverse comments on the proposed works.

ENVIRONMENTAL IMPLICATIONS

16. The proposed works under **460CL** is not a designated project under the Environmental Impact Assessment (EIA) Ordinance and an environmental permit is not required for the construction and operation of the proposed works.

17. In June 1996, we completed an EIA report on “Tai Po Development - Formation and Servicing of Areas 12 (part) and 39” which includes the proposed works of **460CL**. On 12 August 1996, the Advisory Council on the Environment (ACE) endorsed the findings and recommendations of the EIA report. In February 1999, we completed a supplementary environmental study (SES) for the construction of the proposed works of **460CL**. On 7 April 1999, the ACE endorsed the findings and recommendations of the SES report. In February 2007, we completed a review of the SES based on the latest scope of **460CL**. The review confirms that the findings and recommendations of SES are still valid.

18. We will incorporate into the works contract mitigation measures recommended in the EIA report to control pollution arising from construction works to within established standards and guidelines. These measures include frequent watering of the site and provision of wheel-washing facilities to reduce emission of fugitive dust, and other procedures as recommended in Environmental Protection Department's Recommended Pollution Control Clauses. Furthermore, we will implement the EM&A programme recommended in the SES report. We have included \$600,000 in the project estimate for implementing the environmental mitigation measures.

19. We have considered the design level of the box culverts in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. In addition, we will require the contractor to reuse inert C&D materials (e.g. excavated materials) on site as far as possible, in order to minimise the disposal of C&D materials to public fill reception facilities⁴. We will encourage the contractor to maximise the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimise the generation of construction waste.

20. We will also 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. We will ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of C&D waste to landfills through a trip ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

/21.

⁴ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of public fill in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

21. We estimate that the project will generate about 59 500 tonnes of C&D materials. Of these, about 53 100 tonnes (89%) will be reused on site. The remaining 6 400 tonnes (11%) are C&D waste and they will be disposed of at landfills. The total cost for accommodating C&D waste at landfill sites is estimated to be \$800,000 for this project (based on a unit cost of \$125/tonne⁵ for disposal at landfills). We estimate that the project will require about 430 200 tonnes of fill materials for the site formation works. Apart from the C&D materials reused on site, we will use about 377 100 tonnes of public fill stockpiled in Pak Shek Kok area.

LAND ACQUISITION

22. The project does not require any resumption of private land. We will clear about 74 000 m² of government land for the proposed works. We will charge the clearance cost, estimated to be about \$1.2 million, to **Head 701 – Land Acquisition**.

BACKGROUND INFORMATION

23. In December 1997, the Finance Committee approved the upgrading of part of **460CL** to Category A as **491CL** “Tai Po development – formation and servicing of areas 12 (part) and 39, phase 1” to provide formed land, roads and drains in the area. The construction works commenced in January 1998 for completion in January 2003.

/24.

⁵ This 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 is likely to be more expensive) when the existing ones are filled.

24. We split the phase 2 works into two projects, i.e. phase 2A (713CL) and phase 2 remaining works (460CL) in 2004 to suit the required development programme. We upgraded the remainder of 460CL to Category B in September 2006.

25. Of the 597 trees within the project boundary, 61 trees will be preserved. The proposed site formation works will involve the removal of 536 trees including 534 trees to be felled and two trees to be replanted within the project site. All trees to be removed are not important trees⁶. We will incorporate planting proposals as part of the project, including estimated quantities of 120 trees, 2700 shrubs, and 2300 m² of grassed area. We will use hydroseeding to protect formed slopes as appropriate.

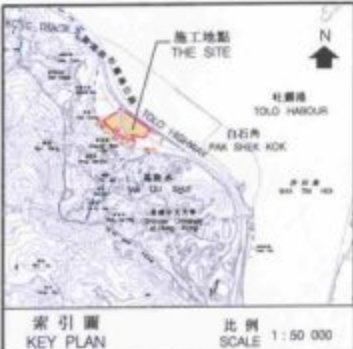
/26.

⁶ "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria:-

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metre above ground level), or with height/canopy spread equal or exceeding 25 m.

26. We estimate that the proposed works will create about 52 jobs (41 for labourers and another 11 for professional/technical staff) providing a total employment of 1 000 man-months.

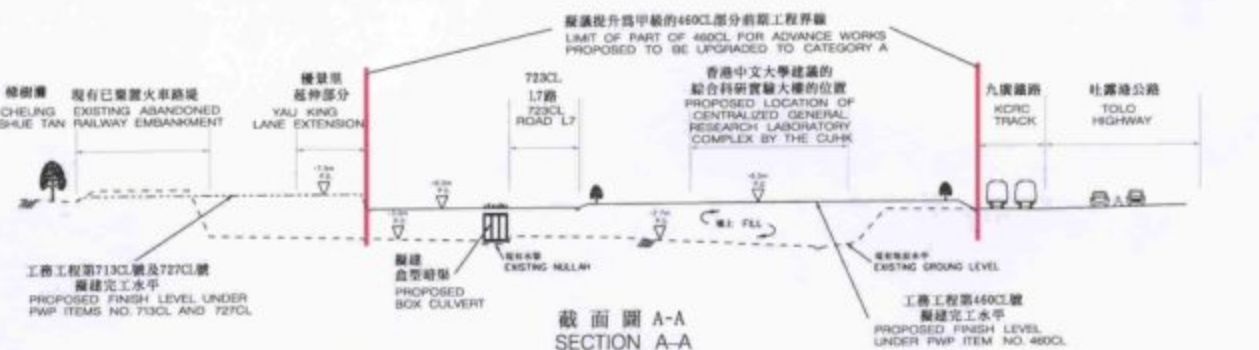
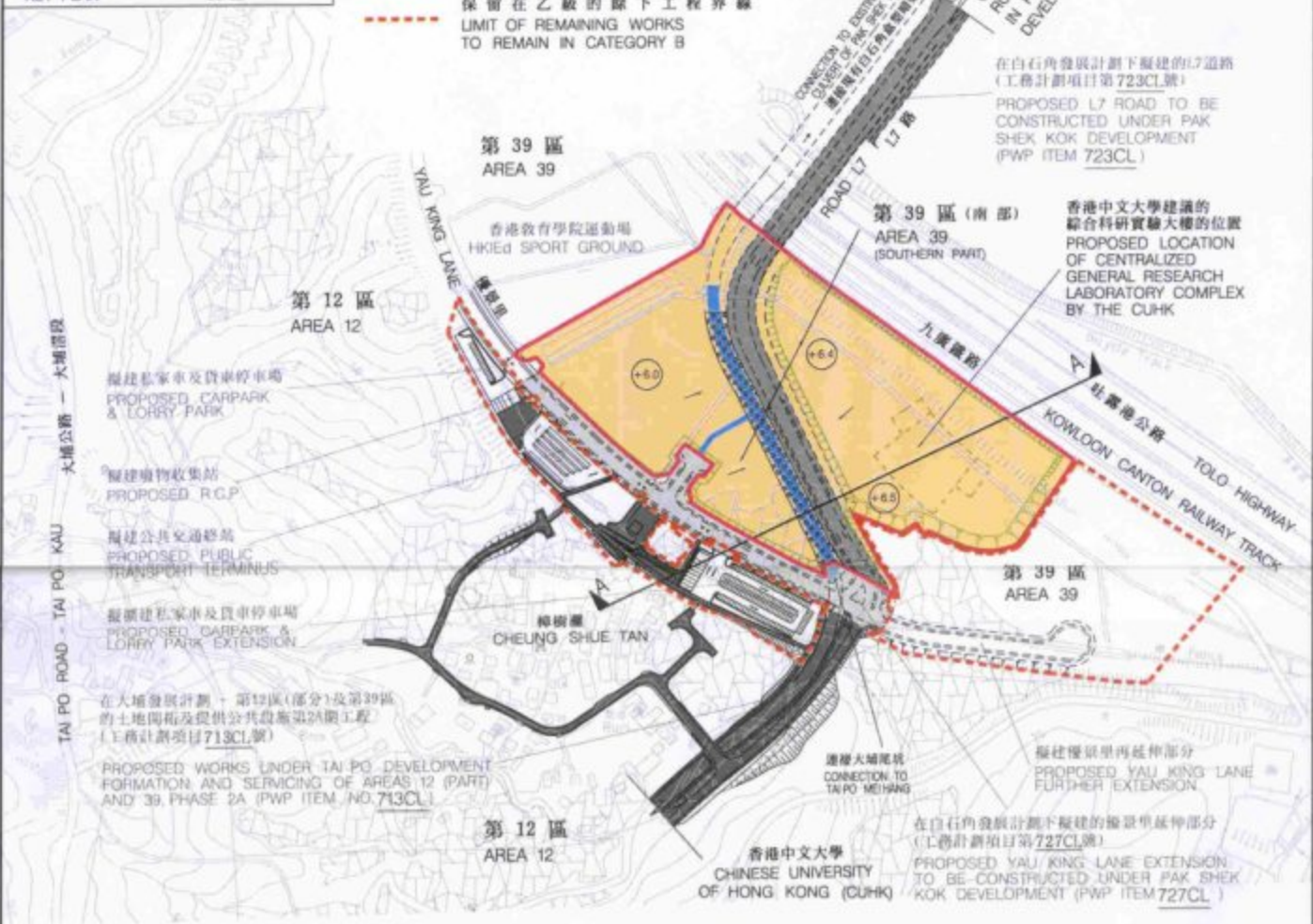
Housing, Planning and Lands Bureau
April 2007



圖例 LEGEND :

- 擬議提升為甲級的前期工程界線
LIMIT FOR ADVANCE WORKS PROPOSED TO BE UPGRADED TO CATEGORY A
- 擬議平整土地水平(米)
PROPOSED LEVEL OF FORMED SITE (mPD)
- 擬議地盤平整工程
PROPOSED SITE FORMATION WORK
- 擬建填土斜坡
PROPOSED FILL SLOPE
- 保留在乙級的餘下工程界線
LIMIT OF REMAINING WORKS TO REMAIN IN CATEGORY B

- 擬建盒型暗渠
PROPOSED BOX CULVERT
- 擬建綠化地帶
PROPOSED AMENITY AREA



二〇〇七至二〇〇八年年度工務小組委員會文件 P.W.S.C. SUBMISSION 2007/2008					修訂 REVISION		核對 checked	核准 approved
編號 no.	日期 date	內容摘要 description		核對 checked	核准 approved			
圖則名稱 drawing title								
大埔發展計劃 - 第12區(部分)及第39區的土地開拓及提供公共設施第2期剩餘工程 TAI PO DEVELOPMENT - FORMATION AND SERVICING OF AREAS 12 (PART) AND 39, PHASE 2 REMAINING WORKS								
繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界西北及北拓發展處 NEW TERRITORIES NORTH AND WEST DEVELOPMENT OFFICE				
K H LO	SIGNED	26.04.2007	460CL					
核對 checked	簽署 initial	日期 date	比例 scale					
H T CHAN	SIGNED	26.04.2007	1:4 000	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT				
核實 approved	簽署 initial	日期 date	圖則編號 drawing no.					
C W KWAN	SIGNED	27.04.2007	NTN 2174					

附件 1 ENCLOSURE 1

Enclosure 2 to PWSC(2007-08)11

460CL – Tai Po development – formation and servicing of Areas 12 (Part) and 39, phase 2 remaining works

Breakdown of the estimates for consultants' fees

Consultants' staff costs		Estimated Man-months	Average MPS* salary point	Multiplier <small>(Note 1)</small>	Estimated fees (\$ million)
(a) Consultants' fees for construction stage <small>(Note 2)</small>	Professional	--	--	--	0.5
	Technical	--	--	--	0.1
(b) Resident site staff <small>(Note 3)</small>	Professional	30	38	1.6	2.6
	Technical	104	14	1.6	3.0
Total					6.2

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. (As at 1 January 2007, MPS pt. 38 = \$54,255 per month and MPS pt. 14 = \$18,010 per month.)
2. The consultants' staff cost for the contract administration and preparation of as-built drawings is calculated in accordance with the existing consultancy agreement. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade part of **460CL** to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.