

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

713CL – Tai Po development – Formation and servicing of Areas 12 (part) and 39, phase 2A

Members are invited to recommend to Finance Committee the upgrading of **713CL**, entitled “Tai Po development – formation and servicing of Areas 12 (part) and 39, phase 2A” to Category A at an estimated cost of \$160.4 million in money-of-the-day prices for the construction of access roads and engineering infrastructure in Area 12, Tai Po.

PROBLEM

There is no proper access and drainage and sewerage infrastructure to serve the Cheung Shue Tan Village and Tai Po Mei Village in Area 12, Tai Po.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Housing, Planning and Lands, proposes to upgrade **713CL** to Category A at an estimated cost of \$160.4 million in money-of-the-day (MOD) prices for the construction of access roads and engineering infrastructure in Area 12, Tai Po.

/PROJECT.....

PROJECT SCOPE AND NATURE

3. The scope of **713CL** comprises –
- (a) construction of an approximately 440 metres(m) long and 6.75m to 7.3m wide two way single carriageway;
 - (b) construction of approximately 350m long and 4.5m to 6m wide village roads and 680m long 4.5m wide emergency vehicular access roads in Cheung Shue Tan and Tai Po Mei;
 - (c) construction of footpaths and carparks;
 - (d) construction of associated works including waterworks, slope stabilisation works, retaining walls and landscaping works;
 - (e) construction of drainage works including reconstruction of an affected section of the existing Tai Po Mei Hang and a stormwater pump house;
 - (f) construction of sewerage works and a sewage pumping station;
 - (g) construction of two refuse collection points and relocation of an existing latrine; and
 - (h) implementation of environmental mitigation measures and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in items (a) to (g) above.

———— The site plan and section diagram of the proposed works are at Enclosures 1 and 2 respectively.

4. We plan to commence the construction works in November 2007 for completion in August 2010.

/JUSTIFICATION.....

JUSTIFICATION

5. The existing Cheung Shui Tan Village and Tai Po Mei Village in Area 12, Tai Po are now connected to Tai Po Road by narrow village roads with very steep gradients, which pose road safety problems to the public and affect the operation of emergency vehicles in response to emergency calls. The area also does not have the engineering infrastructure for proper drainage, sewerage and refuse collection.

6. There is a pressing need to improve the village roads and provide emergency access to meet the general transport needs of the residents and the operation requirements of emergency vehicles. Upon completion of the project, the area will be connected to Tai Po Road through Yau King Lane and its extension (which will be constructed under **727CL**¹) by a standard road. The project will also improve the environment and development potential of the villages and adjacent areas.

FINANCIAL IMPLICATIONS

7. We estimate the cost of the project to be \$160.4 million in MOD prices (see paragraph 8 below), made up as follows -

	\$ million
(a) Road works	20.0
(b) Drainage works including river channel and stormwater pumping station	48.2
(c) Sewerage works including sewerage pumping station	8.1
(d) Slopeworks and retaining walls	38.2
(e) Miscellaneous works including refuse collection points, re-provision of public latrine and waterworks	4.8

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¹ 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 at end May 2007 for completion in November 2009.

		\$ million	
(f)	Landscaping works	7.7	
(g)	Environmental mitigation measures and EM&A programme	1.4	
	(i) mitigation measures at construction stage	1.0	
	(ii) EM&A programme	0.4	
(h)	Consultants' fees	14.5	
	(i) construction stage	1.8	
	(ii) resident site staff costs	12.7	
(i)	Contingencies	14.3	
	Sub-total	157.2	(in September 2006 prices)
(j)	Provision for price adjustment	3.2	
	Total	160.4	(in MOD prices)

Owing 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 3.

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

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2007 – 2008	2.0	0.99900	2.0
2008 – 2009	39.7	1.00649	40.0
2009 – 2010	48.6	1.01656	49.4
2010 – 2011	45.6	1.02672	46.8
2011 – 2012	15.2	1.03699	15.8
2012 - 2013	6.1	1.05514	6.4
	157.2		160.4

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9. 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 2013. We will invite tenders for the proposed works under a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustments as the contract period will exceed 21 months.

10. We estimate the annual recurrent expenditure arising from this project to be about \$2.2 million.

PUBLIC CONSULTATION

11. We consulted the Village Representatives (VRs) of Cheung Shue Tan Village and Tai Po Mei Village, and a concerned member of Tai Po District Council (TPDC) on 8 April 2002 and 20 June 2005. The VRs and the TPDC member supported the proposed works and urged for its early implementation.

12. A Legislative Council (LegCo) case conference on the implementation programme of **460CL**, the parent item of **713CL** was held on 1 March 2004 in response to the request of the VRs and the concerned TPDC member. The LegCo members present in the conference supported the project and urged for its early implementation.

13. We consulted the Environment, Housing and Works Committee of TPDC on **713CL** on 16 September 2005. Members of the Committee supported the implementation of the project. We circulated a consultation paper to the Development and Housing Committee of Sha Tin District Council on 8 November 2005 on **713CL**. We did not receive any adverse comments.

14. We gazetted the proposed road works of **713CL** under the Roads (Works, Use and Compensation) Ordinance (RO) on 27 January 2006. We received 12 objections, of which ten were resolved by amendments to the road scheme. The amendments were gazetted on 29 September 2006. One new objection was lodged and subsequently resolved with modifications to the amended road scheme. For the two remaining objections, we tried to address their concerns by reduction of the land to be resumed and modification of the proposed level of the emergency vehicular access in the amended road scheme. Despite our efforts, the two objections remained unresolved. On 27 March 2007, the Chief Executive in Council (CE in C) considered and overruled these two objections and authorised the amended road scheme with modifications. The objectors were notified of the scheme modifications and authorisation on 25 April 2007.

15. On 27 January 2006, we gazetted the proposed sewerage scheme of **713CL** under RO as applied by the Water Pollution Control (Sewerage) Regulation. We received one objection, which was later withdrawn unconditionally. As the amendments in the road scheme affect also the proposed sewerage scheme, amendments to the sewerage scheme were gazetted on 29 September 2006. No objection was received. The Director of Environmental Protection authorised the amended sewerage scheme on 20 April 2007.

16. We circulated an information paper to the LegCo Panel on Planning, Lands and Works on 23 May 2007. We have not received any adverse comments on the proposed works.

ENVIRONMENTAL IMPLICATIONS

17. The proposed works under **713CL** 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.

18. 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 **713CL**. 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 **713CL**. 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 **713CL**. The review confirms that the findings and recommendations of SES are still valid.

19. 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, erection of site hoarding to protect nearby village houses from construction noise and dust, and other procedures as recommended by the Environmental Protection Department. Furthermore, we will implement the EM&A programme recommended in the SES report. We have included \$1.0 million in the project estimate for implementing the environmental mitigation measures.

20. We have considered the alignment and the design level of the carriageway and river channel 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 facilities². 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.

21. 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.

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² 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.

22. We estimate that the project will generate about 82 000 tonnes of C&D materials. Of these, about 76 000 tonnes (93%) will be reused on site. The remaining 6 000 tonnes (7%) 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 \$750,000 for this project (based on a unit cost of \$125/tonne³ for disposal at landfills). We estimate that the project will require about 151 000 tonnes of fill materials for the site formation works. Apart from the C&D material reused on site, we will use about 75 000 tonnes of public fill stockpiled in Pak Shek Kok area.

LAND ACQUISITION

23. We will resume about 24 290 and 150 square metres (m²) of agricultural land and building land respectively involving 217 lots, temporarily occupy about 10 930 m² of land within the lot of the Chinese University of Hong Kong and clear about 42 410 m² of Government land for the proposed works. The land resumption does not affect any households. We will clear 23 temporary structures from Government land and 35 temporary structures from resumed private land for the proposed works. These temporary structures include fences, gates, porch, storage, green house and shed, and do not involve any business undertaking. The land acquisition and clearance costs are estimated to be about \$143 million and will be charged to **Head 701 – Land Acquisition**.

BACKGROUND INFORMATION

24. In December 1997, the Finance Committee approved the upgrading of part of **460CL**, the parent item of **713CL**, 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. Construction of the phase 1 works commenced in January 1998 and completed in January 2003.

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³ 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.

25. We grouped 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 **713CL** to Category B in September 2004. The Finance Committee approved the part-upgrading of **460CL** to Category A on 25 May 2007.

26. Of the 1846 trees within the **713CL** project boundary, 988 trees will be preserved. The proposed works will involve the removal of 858 trees including 854 trees to be felled and four trees, including three important trees⁴, to be transplanted within the project site. A summary of important trees affected is provided at Enclosure 4. We will incorporate planting proposals as part of the project, including estimated quantities of 510 trees, 35 000 whip trees, 32 000 shrubs and 23 000m² of grassed area. We will use hydroseeding to protect formed slopes and open areas as appropriate.

27. We estimate that the proposed works will create about 145 jobs (116 for labourers and another 29 for professional/technical staff) providing a total employment of 3 500 man-months.

Housing, Planning and Lands Bureau
June 2007

⁴ An “important tree” refers 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.



索引圖
KEY PLAN

比例
SCALE 1 : 50 000



在自右角發展計劃下擬建的17號路
(工務計劃項目第 723CL 號)
PROPOSED 17 ROAD TO BE
CONSTRUCTED UNDER PAK
SHEK KOK DEVELOPMENT
(PWP ITEM 723CL)

在工務計劃項目第460CL號下
擬建上池下帶
PROPOSED SITE FORMATION
UNDER P&P PROJECT 460CL

在工務計劃項目第460CL號下
擬建擴充車路部分
PROPOSED YAU KING LANE
FURTHER EXTENSION UNDER
PWP PROJECT 460CL

在自右角發展計劃下
擬建即興車路部分
(工務計劃項目第 727CL 號)
PROPOSED YAU KING LANE
EXTENSION TO BE
CONSTRUCTED UNDER
PAK SHEK KOK
DEVELOPMENT
(PWP ITEM 727CL)

圖例 LEGEND

- 擬議地盤界線
PROPOSED SITE BOUNDARY
- 擬議行車道
PROPOSED CARRIAGEWAY
- 擬議緊急車輛通道
PROPOSED EMERGENCY VEHICULAR ACCESS
- 擬議行人路
PROPOSED FOOTPATH
- 擬議美化帶
PROPOSED AMENITY AREA
- 擬議河道
PROPOSED RIVER CHANNEL
- 擬議斜坡
PROPOSED SLOPE

第 12 區
AREA 12

第 39 區
AREA 39

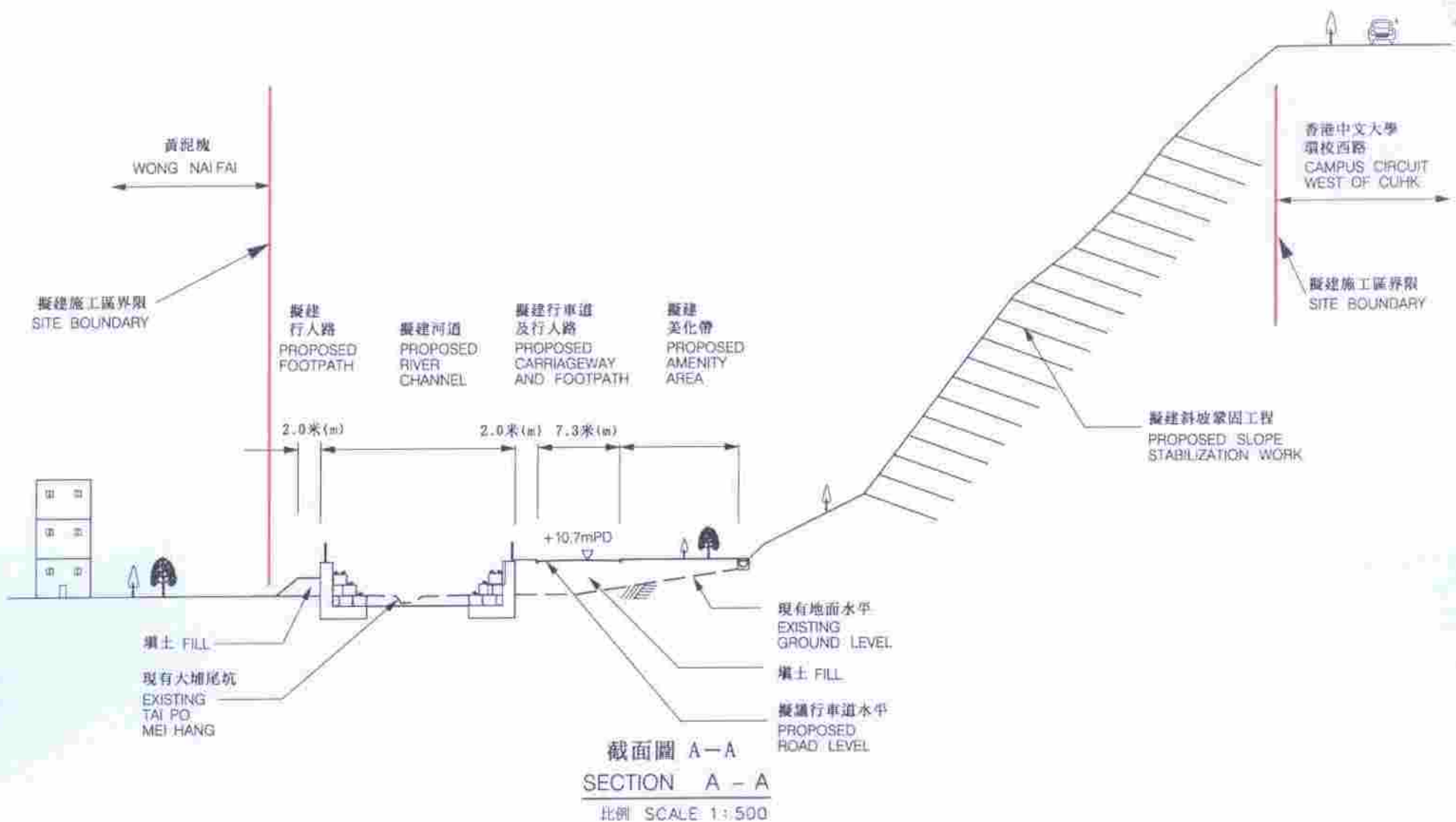
香港中文大學
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OF HONG KONG

二〇〇七至二〇〇八年度工務小組委員會文件 P.W.S.C. SUBMISSION 2007/2008

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用設施第 2A 期工程
TAI PO DEVELOPMENT - FORMATION AND SERVICING OF
AREAS 12 (PART) AND 39, PHASE 2A (SHEET 1 OF 2)

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				
繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界西及北拓發展處 NEW TERRITORIES, NORTH AND WEST DEVELOPMENT OFFICE
K H LO	SIGNED	06.06.2007	713CL	
核對 checked	簽署 initial	日期 date	比例 scale	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
K K LO	SIGNED	06.06.2007	1 : 4 000	
核准 approved	簽署 initial	日期 date	圖則編號 drawing no.	
C W KWAN	SIGNED	06.06.2007	NTN 2169	



二00七至二00八年度工務小組委員會文件 P.W.S.C. SUBMISSION 2007/2008

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用設施第2A期工程
TAI PO DEVELOPMENT - FORMATION AND SERVICING OF
AREAS 12 (PART) AND 39, PHASE 2A (SHEET 2 OF 2)

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				
繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 新界西及北拓展處 NEW TERRITORIES NORTH AND WEST DEVELOPMENT OFFICE
K H LO	SIGNED	06.06.2007	713CL	
核對 checked	簽署 initial	日期 date	比例 scale	
K K LO	SIGNED	06.06.2007	1:500	
核准 approved	簽署 initial	日期 date	圖則編號 drawing no.	 土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
C W KWAN	SIGNED	06.06.2007	NTN 2170	

Enclosure 3 to PWSC(2007-08)31

713CL – Tai Po development – formation and servicing of Areas 12 (part) and 39, phase 2A

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	--	--	--	1.4
	Technical	--	--	--	0.4
(b) Resident site staff <small>(Note 3)</small>	Professional	68	38	1.6	5.9
	Technical	236	14	1.6	6.8
				Total	<hr/> 14.5 <hr/>

* 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 **713CL** to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.

Enclosure 4 to PWSC(2007-08)31

713CL – Tai Po development – formation and servicing of Areas 12 (Part) and 39, phase 2A

Summary of important trees affected

Tree ref. no.	Tree species (Botanical name)	Overall height (metres)	Trunk diameter ¹ (mm)	Average crown spread (metres)	Form ²	Health condition	Amenity value	Recommendation (Retain/ Transplant/ Fell)	Remarks (including justification for proposed tree removal/ecological and historical significance (if any) of affected trees)
T666	Ailanthus fordii	13.7	414	4.5	Fair	Fair	High	Transplant	The tree, being a protected species under Chapter 96 Forests and Countryside Ordinance, is in conflict with proposed road/river channel.
T668	Ailanthus fordii	14.1	379	5.8	Fair	Fair	High	Transplant	
T1303	Ailanthus fordii	9.5	127	2.5	Fair	Fair	High	Transplant	

¹ Trunk diameter of a tree refers to its diameter at breast height (i.e. measured at 1.3 m above ground level).

² Form of a tree will take account of the overall tree size, shape, and any special feature.