

## **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**

#### **714CL – Engineering infrastructure works for Pak Shek Kok development, stage 2B – improvement and extension of Yau King Lane**

Members are invited to recommend to Finance  
Committee –

- (a) the upgrading of part of **714CL**, entitled “Engineering infrastructure works for Pak Shek Kok development – stage 2B – extension of Yau King Lane” to Category A at an estimated cost of \$56.9 million in money-of-the-day prices; and
- (b) the retention of remainder of **714CL**, retitled “Engineering infrastructure works for Pak Shek Kok development – stage 2B – improvement of Yau King Lane” in Category B.

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## PROBLEM

There is no proper vehicular access to serve Cheung Shue Tan<sup>1</sup> and the adjoining sites including those reserved for planned education, tertiary education expansion and government, institution or community (GIC) facilities.

## 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 **714CL** to Category A at an estimated cost of \$56.9 million in money-of-the-day (MOD) prices for the extension works of Yau King Lane.

## PROJECT SCOPE AND NATURE

3. The full scope of works under **714CL** comprises mainly the construction of a one-lane each way carriageway as an extension to the existing Yau King Lane, about 220 metres (m) of roadside noise barriers, and realignment of an existing section of Yau King Lane in front of Villa Castell.

4. The scope of the part of **714CL** which we propose to upgrade to Category A comprises –

- (a) construction of about 350 m of a one-lane each way carriageway to extend the existing Yau King Lane to the junction of the future access road connecting the nearby villages at Cheung Shue Tan;
- (b) construction of about 200 m of a single cell drainage box culvert extension and 45 m of a 3-cell drainage box culvert crossing the proposed extension of Yau King Lane near Cheung Shue Tan;

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<sup>1</sup> A proposed road network at Cheung Shue Tan is being planned under PWP Item **713CL** “Tai Po development - formation and servicing of areas 12 (part) and 39, phase 2A”. The detailed design is in progress with the construction works scheduled to commence in early 2008 for completion by mid 2010.

- (c) construction of the associated footpaths, roadside amenities, retaining walls, drainage works, sewerage works, 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 plans and section diagrams of the proposed works are at Enclosures 1 and 2.

5. We plan to commence the construction works in June 2007 for completion in November 2009.

6. We will regularly monitor the volume of traffic and the level of traffic noise generated after completion of the extension of Yau King Lane to ascertain the appropriate time for installation of the noise barriers under the remainder of **714CL** to ensure the noise limit of 70 dB(A)L<sub>10</sub>(1 hour)<sup>2</sup> at Villa Castell is not exceeded.

## JUSTIFICATION

7. We need to provide a proper vehicular access to connect Yau King Lane with the proposed road network planned under **713CL** to improve the village access, provide emergency access and enhance the village environment at Cheung Shue Tan. Implementation of this project will need to tie in with the progress of works under **713CL**, which are currently planned to start in early 2008 for completion in mid-2010. Upon completion of the proposed extension of Yau King Lane under this project, the vehicular access will also serve the adjoining sites including those reserved for planned education, tertiary education expansion and GIC facilities. Ultimately, the proposed extension of Yau King Lane will form part of the road networks of the Pak Shek Kok development.

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<sup>2</sup> L<sub>10</sub>(1 hour) is the noise level exceeded for 10% of a one-hour period, generally used for road noise at peak traffic flow. The noise limit of 70 dB(A) for residential premises is stipulated in the Hong Kong Planning Standards and Guidelines.

**FINANCIAL IMPLICATIONS**

8. We estimate the cost of the project to be \$56.9 million in MOD prices (see paragraph 9 below), made up as follows -

	<b>\$ million</b>	
(a) Road works	20.0	
(b) Drainage and sewerage works	18.1	
(c) Landscaping works	2.5	
(d) Environmental mitigation measures and EM&A programme	4.5	
(i) mitigation measures at construction stage	3.4	
(ii) EM&A programme	1.1	
(e) Consultants' fees	4.9	
(i) construction stage	0.5	
(ii) resident site staff costs	4.4	
(f) Contingencies	5.0	
	<u>55.0</u>	(in September 2006 prices)
(g) Provision for price adjustment	1.9	
	<u>56.9</u>	(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 3.

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

Year	\$ million (Sept 2006)	Price adjustment factor	\$ million (MOD)
2007 – 2008	12.0	1.01250	12.2
2008 – 2009	20.0	1.02769	20.6
2009 – 2010	15.0	1.04310	15.6
2010 – 2011	8.0	1.05875	8.5
	<u>55.0</u>		<u>56.9</u>

10. 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.

11. We estimate the annual recurrent expenditure arising from this project to be about \$400,000.

## PUBLIC CONSULTATION

12. We consulted the Development and Housing Committee of the Sha Tin District Council (DC) on 31 October 2000, and the Tai Po DC on 7 November 2000. Both DCs supported the proposed works.

13. We gazetted on 26 October 2001 the full scope of the proposed roadworks of **658CL (part)** "Remaining engineering infrastructure works for Pak Shek Kok development Work Package 2 Phase 2 – Construction of Roads L3, L4(Part), L5(Part), L7 and extension of Yau King Lane at Pak Shek Kok", the parent project of **714CL**, under the Roads (Works, Use and Compensation) Ordinance (RO). We received two objections from Villa Castell concerning the roadworks at Yau King Lane. Despite our explanation and proposed modifications which would shift the road alignment of Yau King Lane away from Villa Castell to reduce the height and visual impact of noise barriers in front of Villa Castell, the objectors maintained their objections. On 22 October 2002, the Chief Executive in Council (CE in C) considered and overruled these objections and authorised the road scheme with the modifications. The objectors were notified of the scheme modifications and authorisation on 5 November 2002.

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14. We gazetted on 26 October 2001 the full scope of the proposed sewerage works of **658CL (part)** under the RO as applied by the Water Pollution Control (Sewerage) Regulation and received two objections from the same two objectors (see paragraph 13 above). On 22 October 2002, the CE in C considered and overruled these objections.

15. We consulted the Village Representatives (VRs) of Cheung Shue Tan and Tai Po Mei in the presence of a Tai Po DC member on the proposed works of **714CL** and **713CL** on 20 June 2005. The VRs supported the proposed works under both projects.

16. We circulated an information paper to the Environment, Housing and Works Committee of Tai Po DC on 6 April 2006 to update members on the implementation of the project. We did not receive any adverse comments. On 24 April 2006, we received a letter from the Incorporated Owners of Villa Castell (IOVC), one of the two objectors to the road scheme, expressing its objection to the implementation of the proposed roadworks at Yau King Lane and the related noise barriers. The IOVC requested an extension of the consultation period by one month. On 28 April 2006, we met with the IOVC to explain that the road scheme with modifications had been authorised by the CE in C in accordance with the statutory procedures and that there was a need to build the proposed roadworks with the noise barriers which were to protect the residents of Villa Castell from the traffic noise. At the meeting, the IOVC repeated its grounds of objections to the road scheme which were considered by the Executive Council (ExCo) on 22 October 2002. The IOVC subsequently wrote to the Chairman of the Finance Committee (FC) on 10 May 2006 reiterating its objection and requesting FC to withhold the funding approval for the proposed works.

17. To address the concern of the IOVC, we carried out an updated review on the traffic forecast and noise assessment in August 2006 (the 2006 traffic noise review). According to the 2006 traffic noise review, the traffic noise level at Villa Castell will exceed the limit of 70 dB(A)L<sub>10</sub>(1 hour) in 2016, and we consider that the noise barriers would need to be in place by that year.

18. We presented the findings of the 2006 traffic noise review to the IOVC on 18 September 2006 in the presence of a LegCo member, two Tai Po DC members and a VR of Cheung Shue Tan and Tai Po Mei. We also explained to them that we would need a lead time of several years to resume the necessary procedures including the seeking of the necessary funding from LegCo, tendering

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and construction of the noise barriers should the installation of the noise barriers be deferred. Moreover, in the event that there is exceptional build-up of traffic, the residents of Villa Castell will be exposed to a traffic noise level exceeding the limit earlier than forecast. However, the IOVC maintained their objection to the early provision of noise barriers and confirmed on 1 December 2006 that their request for deferring the installation of the proposed noise barriers at Yau King Lane was made on behalf of all the owners of Villa Castell. In view of the strong objection from the IOVC representing the residents of Villa Castell who are the sole beneficiary of the proposed noise barriers, we have decided to accede to its request and defer the installation of the noise barriers with measures to be taken as set out in paragraph 6 above.

19. Throughout the period from end-2000 to present, we have consulted the local community fully and tried to address their concerns. We have obtained the support of the DCs, the VRs and completed all the necessary statutory procedures. We need to implement the project without further delay. Except for the objection from IOVC over the construction of noise barriers, there is consensus and community support to proceed with the extension of Yau King Lane.

20. We circulated an information paper to the LegCo Panel on Planning, Lands and Works on 12 December 2006. We have not received any adverse comments on the proposed works.

## ENVIRONMENTAL IMPLICATIONS

21. The proposed work under **714CL** 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 work.

22. 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 **714CL**. On 12 August 1996, the Advisory Council on the Environment endorsed the findings and recommendations of the EIA report. The EIA report concludes that the installation of the proposed noise barriers along this section of Yau King Lane can alleviate the traffic noise impact on Villa Castell to meet the criteria set out in the Hong Kong Planning Standards and Guidelines (HKPSG). Since then, we have conducted reviews of the traffic forecast and noise assessment in May 2002 and August 2006. Based on the latest road alignment

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and traffic figures, traffic noise is predicted to exceed 70 dB(A)L<sub>10</sub>(1 hour) by 2016. With the installation of about 220 m of 2.5 m high noise barriers along this section of Yau King Lane, the mitigated traffic noise level can comply with the HKPSG criteria. We will carry out regular review of traffic forecast and noise assessment to ascertain the time when the noise barriers are required to protect the local residents from a traffic noise level exceeding 70dB(A)L<sub>10</sub>(1 Hour). In this regard, we will ensure that the proposed noise barriers are provided accordingly in good time.

23. 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 EIA report. We have included \$4.5 million in the project estimate for implementing the environmental mitigation measures.

24. We have considered the alignment and the designed level of roadworks at the extension of Yau King Lane 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 or in other suitable construction sites as far as possible, in order to minimise the disposal of C&D materials to public fill reception facilities. 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.

25. 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.

26. We estimate that the project will generate about 15 000 tonnes of C&D materials. Of these, about 13 500 tonnes (90%) will be reused on site. The

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remaining 1 500 tonnes (10%) 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 \$187,500 for this project (based on a unit cost of \$125/tonne<sup>3</sup> for disposal at landfills).

## LAND ACQUISITION

27. We have resumed about 9 150 square metres (m<sup>2</sup>) of agricultural land involving 44 private lots and have cleared about 50 500 m<sup>2</sup> of Government land for the proposed works. The land resumption does not affect any households. We have cleared two temporary structures, which did not involve any business undertaking, from Government land for the proposed works. The land acquisition and clearance costs were about \$52.7 million and were charged to **Head 701 – Land Acquisition**.

## BACKGROUND INFORMATION

28. We upgraded **658CL** “Remaining engineering infrastructure works for Pak Shek Kok development”, the parent item of **714CL**, to Category B in September 1999. We included part of **658CL** for the improvement and extension works of Yau King Lane as a new item of **714CL** in Category B in September 2004.

29. The proposed construction works will involve removal of 200 trees including 190 trees to be felled and 10 trees to be transplanted elsewhere. All trees to be removed are not important trees.<sup>4</sup> We will incorporate planting

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<sup>3</sup> 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/m<sup>3</sup>), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

<sup>4</sup> Important Tree refers to trees on the Register of Old and Valuable Trees, and any other trees which meet one or more of the following criteria –

- (a) trees over 100 years old;
- (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 exceeding 1.0 m (measured at 1.3 m above ground level) or with height/canopy spread equal or exceeding 25 m.

proposals as part of the project, including estimated quantities of 76 trees and 3 300 shrubs. We will use hydroseeding to protect formed slopes as appropriate.

30. We estimate that the proposed works will create about 42 jobs (34 for labourers and another eight for professional/technical staff) providing a total employment of 1 100 man-months.

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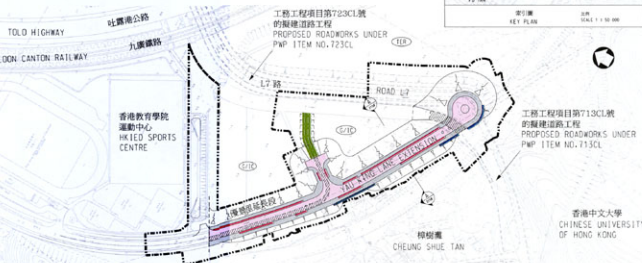
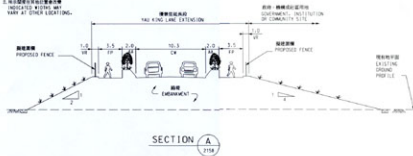
Housing, Planning and Lands Bureau  
December 2006



## 圖例 LEGEND:

- 工程範圍  
LIMIT OF WORKS
- 擬建行車路  
PROPOSED CARRIAGEWAY
- 擬建行人路  
PROPOSED FOOTPATH
- 擬建美化市容地帶  
PROPOSED AMENITY AREA
- 擬建排水箱形暗渠  
PROPOSED DRAINAGE BOX CULVERT
- 擬建明渠  
PROPOSED OPEN CHANNEL
- 擬建圍土牆  
PROPOSED RETAINING WALL
- 政府、機構或社區用地  
GOVERNMENT, INSTITUTION OR COMMUNITY SITE
- 高等教育擴展用地  
TERTIARY EDUCATION EXPANSION SITE
- 擬建美化市容地帶  
PROPOSED AMENITY AREA
- 擬建行車道  
PROPOSED CARRIAGEWAY
- 擬建行人路  
PROPOSED FOOTPATH
- 擬建路旁帶  
PROPOSED VERGE

註釋 NOTES: 1. 所有尺寸均按圖面量度。  
ALL DIMENSIONS ARE IN METRES.  
2. 所有尺寸均按圖面量度。  
INDICATED DIMENSIONS MAY VARY AT OTHER LOCATIONS.



A	21.12.2006	MINOR REVISION	Signed	Signed
編號 NO.	日期 DATE	內容摘要 DESCRIPTION	校對 CHECKED	核實 APPROVED

二〇〇六至二〇〇七年年度工務小組委員會文件 P.W.S.-C. SUBMISSION 2006/2007

圖則名稱 Drawing title

白石角發展計劃基礎設施工程第2B階段 - 優景里延長工程  
ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT,  
STAGE 2B - EXTENSION OF YAU KING LANE

繪圖 DRAWN	簽署 SIGNED	日期 DATE	項目編號 ITEM NO.
K S LO	Signed	08.12.2006	714CL
校對 CHECKED	簽署 SIGNED	日期 DATE	比例 SCALE
M S LAM	Signed	08.12.2006	1:2 500
校對 APPROVED	簽署 SIGNED	日期 DATE	圖則編號 DRAWING NO.
Y M CHAN	Signed	08.12.2006	NTN 2158A

辦事處 OFFICE  
新界西及北拓展處  
NEW TERRITORIES NORTH AND  
WEST DEVELOPMENT OFFICE

CEDD  
土木工程拓展署  
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT

## Enclosure 3 to PWSC(2006-07)61

### 714CL – Engineering infrastructure works for Pak Shek Kok development, stage 2B – improvement and extension of Yau King Lane

#### 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	--	--	--	0.4
	Technical	--	--	--	0.1
(b) Resident site staff <small>(Note 3)</small>	Professional	25	38	1.6	2.2
	Technical	76	14	1.6	2.2
<b>Total</b>					4.9

\* 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 2006, 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 714CL to Category A.
- (3) We will only know the actual man-months and actual costs after completion of the construction works.