

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

New Territories North Development

Civil Engineering – Land development

658CL – Remaining engineering infrastructure works for Pak Shek Kok development – stage 2

Members are invited to recommend to Finance
Committee –

- (a) the upgrading of part of **658CL**, entitled
“Engineering infrastructure works for Pak Shek
Kok development – stage 2A”, to Category A at
an estimated cost of \$191.8 million in money-of-
the-day prices; and
- (b) the retention of remainder of **658CL**, retitled
“Engineering infrastructure works for Pak Shek
Kok development – stage 2 remaining works”, in
Category B.

PROBLEM

We need to provide essential engineering infrastructure, including road network, drainage and sewerage system at Pak Shek Kok to serve the Science Park Phase 2 development which is scheduled for commissioning in early 2006.

/PROPOSAL

PROPOSAL

2. The Director of Territory Development (DTD), with the support of the Secretary for Housing, Planning and Lands, proposes to upgrade part of **658CL** to Category A at an estimated cost of \$191.8 million in money-of-the-day (MOD) prices for construction of road network, drainage and sewerage system and other facilities to serve the proposed developments at Pak Shek Kok.

PROJECT SCOPE AND NATURE

3. The scope of the part of **658CL** we propose to upgrade to Category A comprises the construction of the following engineering infrastructure at Pak Shek Kok –

- (a) 400 metres of local road (Road L4) with associated drainage and sewerage works;
- (b) two kilometres of waterfront promenade (including landscape node structures);
- (c) 600 metres of footpaths, 900 metres of cycle tracks and roadside amenities;
- (d) public landing steps;
- (e) ancillary works including fire mains, a public toilet and a refreshment kiosk;
- (f) landscaping works; and
- (g) implementation of environmental mitigation measures and an environmental monitoring and audit (EM&A) programme for the works mentioned in items (a) to (f) above.

_____ The site plan and section diagrams of the proposed works are at Enclosures 1 and
_____ 2 respectively. We plan to start the proposed works in December 2003 for completion in phases from September 2005 to March 2007.

4. The remainder of **658CL** to be retained in Category B (coloured green on the site plan at Enclosure 1) comprises the construction of a fire tug pier¹, Roads L3, L5 (part) and L7, Road L7 Bridge, the extension and realignment of two sections of Yau King Lane, and associated works including construction of taxi/public light bus lay-bys, a car park, noise barriers, drainage, sewerage and landscaping works. We plan to implement these remaining works at a later stage to tie in with the remaining planned developments at Pak Shek Kok.

JUSTIFICATION

5. Science Park Phase 2 is currently scheduled for commissioning in early 2006. To provide timely support for commissioning of Science Park Phase 2, we need to commence construction of the proposed Road L4 and the associated drainage and sewerage works in December 2003 for completion in September 2005.

6. The provision of a promenade along the waterfront at Pak Shek Kok will enhance the amenity value of the area and offer a prominent leisure and recreational area with panoramic seaview of Tolo Harbour and the mountains beyond. The original cycle track alongside Tolo Highway will be reprovisioned along the western side of the promenade with cycle parking and seating areas. Cyclists using the reprovisioned cycle track will enjoy the seaview as well as the new facilities. The promenade will be nicely landscaped and will be compatible with the seafront and the Science Park development. It will provide a comfortable outdoor environment for the enjoyment of visitors and holiday goers.

7. The building of a new public landing steps facility mid-way along the Pak Shek Kok development shoreline will provide additional marine access to serve the Science Park and other visitors to the area. As the two existing piers at Ma Liu Shui with ferry services to Tap Mun and Tung Ping Chau are well patronised by the public during weekends and public holidays, the provision of a public landing step facility at Pak Shek Kok will provide an additional point of

/aboard

¹ The original scope of the Stage 2A project included a fire tug pier, which has now been taken out as Fire Services Department is now reviewing the overall operational requirements for the relevant areas, both on land and at sea. Subject to the review, the fire tug pier will be included in the stage 2 remaining works for implementation at a later stage.

aboard for the public as well as attracting the people to visit the waterfront promenade. Also, given the limited land access to Pak Shek Kok development from the adjacent Tolo Highway, it would be reasonable to provide marine access as supplementary infrastructure in order to cater for emergency or incidental occasions.

8. As regards the landscaping works, we will provide about 29 500 square metres of amenity areas along the proposed roads and within the waterfront promenade. We will plant about 1 000 new trees using native species as far as possible.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$191.8 million in MOD prices (see paragraph 10 below), made up as follows –

	\$ million
(a) Road works (including cycle tracks, footpaths and associated facilities)	9.5
(b) Drainage and sewerage works	39.1
(c) Waterfront promenade	70.1
(d) Public landing steps	24.2
(e) Ancillary works including fire mains, public toilet, and refreshment kiosk	5.3
(f) Landscaping works	7.1
(g) Environmental mitigation measures and EM&A programme	13.3
(h) Consultants' fees for	18.7

/(i)

		\$ million	
	(i) construction stage	1.8	
	(ii) resident site staff costs	16.9	
(i)	Contingencies	18.7	
	Sub-total	206.0	(in September 2002 prices)
(j)	Provision for price adjustment	(14.2)	
	Total	191.8	(in MOD prices)

Due to insufficient in-house resources, DTD proposes to employ consultants to carry out the construction supervision of the proposed engineering infrastructure works. A breakdown by man-months of the estimate for the consultants' fees is at Enclosure 3.

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

Year	\$ million (Sept. 2002)	Price adjustment factor	\$ million (MOD)
2003 - 2004	5.0	0.94300	4.7
2004 - 2005	50.0	0.93003	46.5
2005 - 2006	65.0	0.93003	60.5
2006 - 2007	45.0	0.93003	41.9
2007 - 2008	26.0	0.93003	24.2
2008 - 2009	15.0	0.93003	14.0
	206.0		191.8

11. We have derived the MOD estimate on the basis of the Government's latest forecast of trend labour and construction prices for the period 2003 to 2009. We will tender the proposed works under a lump-sum contract with firm bills of quantities because we can clearly define the scope of the majority of these 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 \$3.1 million.

PUBLIC CONSULTATION

13. We consulted the Development and Housing Committee of the Sha Tin District Council on 31 October 2000, and the Tai Po District Council on 7 November 2000. Both District Councils supported the proposed works.

14. We gazetted on 26 October 2001 the full scope of the proposed roadworks of **658CL** under the Roads (Works, Use and Compensation) Ordinance (RO) and received two objections from Villa Castell concerning the road works at Yau King Lane. Despite our explanation and proposed modifications, the objectors maintained their objections. On 22 October 2002, the Chief Executive in Council overruled these objections and authorised the road scheme with modifications. The modifications mainly involve shifting the road realignment of Yau King Lane away from Villa Castell.

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

16. We gazetted on 26 October 2001 the proposed fire tug pier and public landing steps under the Foreshore and Sea-bed (Reclamations) Ordinance and received one objection. After our clarification and explanation on the details of the project, the objector withdrew his objection without conditions. The Director of Lands authorised the proposed marine works on 14 June 2002.

/17.

17. We circulated an information paper to the LegCo Panel on Planning, Lands and Works in June 2003 to brief Members on the proposed works. Members have no comments on the project.

ENVIRONMENTAL IMPLICATIONS

18. Pak Shek Kok Development (PSKD) is designated under Schedule 3 of the Environmental Impact Assessment (EIA) Ordinance. However, all works under **658CL** are not designated under Schedule 2 of the EIA Ordinance and no environmental permit is required for the construction and operation of the proposed works.

19. In May 1998, we completed an EIA report on the PSKD which includes the proposed works of **658CL**. On 6 July 1998, the Advisory Council on the Environment endorsed the findings and recommendations of the EIA report. The Director of Environmental Protection approved the EIA report on 10 August 1998.

20. We will incorporate into the works contracts 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, the use of silenced construction plant to reduce noise generation, the provision of silt curtains for the dredging works for the public landing steps, and other procedures as recommended in EPD's Recommended Pollution Control Clauses. The proposed marine works will not cause adverse impact on water quality to sensitive receivers in the Tolo Harbour area. Furthermore, we will implement the EM&A programme recommended in the EIA report. We have included in the project estimate a sum of \$13.3 million for implementing the environmental mitigation measures (\$9.3 million) and the EM&A programme (\$4.0 million).

21. At the planning and design stages, we have given due consideration to the design of roads and construction sequence to minimise the generation of construction and demolition (C&D) materials as far as possible. We estimate that about 7 000 cubic metres (m³) of C&D materials will be generated by the project.

/Of

Of these, about 6 800 m³ (97%) will be reused on site and 200 m³ (3%) will be disposed of at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$25,000 for this project (based on a notional unit cost² of \$125/m³).

22. We estimate that the construction of the public landing steps will generate about 20 000 m³ of dredged marine mud. Of these, about 8 000 m³ dredged marine mud are uncontaminated and will be delivered to the marine dumping site at East Ninepin or South Cheung Chau. The remaining 12 000 m³ dredged marine mud are contaminated and will be delivered to the contaminated mud disposal facility at East Sha Chau.

23. We will require the contractor to submit a waste management plan for approval. The plan will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials, including the allocation of an area for waste segregation. We will require the contractor to ensure that the day-to-day operations on site comply with the approved waste management plan. To further minimise the generation of C&D materials, we will encourage the contractor to use non-timber formwork and recyclable materials for temporary works. We will also require the contractor to separate public fill from C&D waste for disposal at appropriate locations and sort the C&D materials by category on-site to facilitate reuse/recycling of paper/cardboard, timber and metal. We will control the disposal of C&D waste to designated landfills through a trip-ticket system. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

LAND ACQUISITION

24. The proposed works do not require land acquisition.

/BACKGROUND

² 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 are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

BACKGROUND INFORMATION

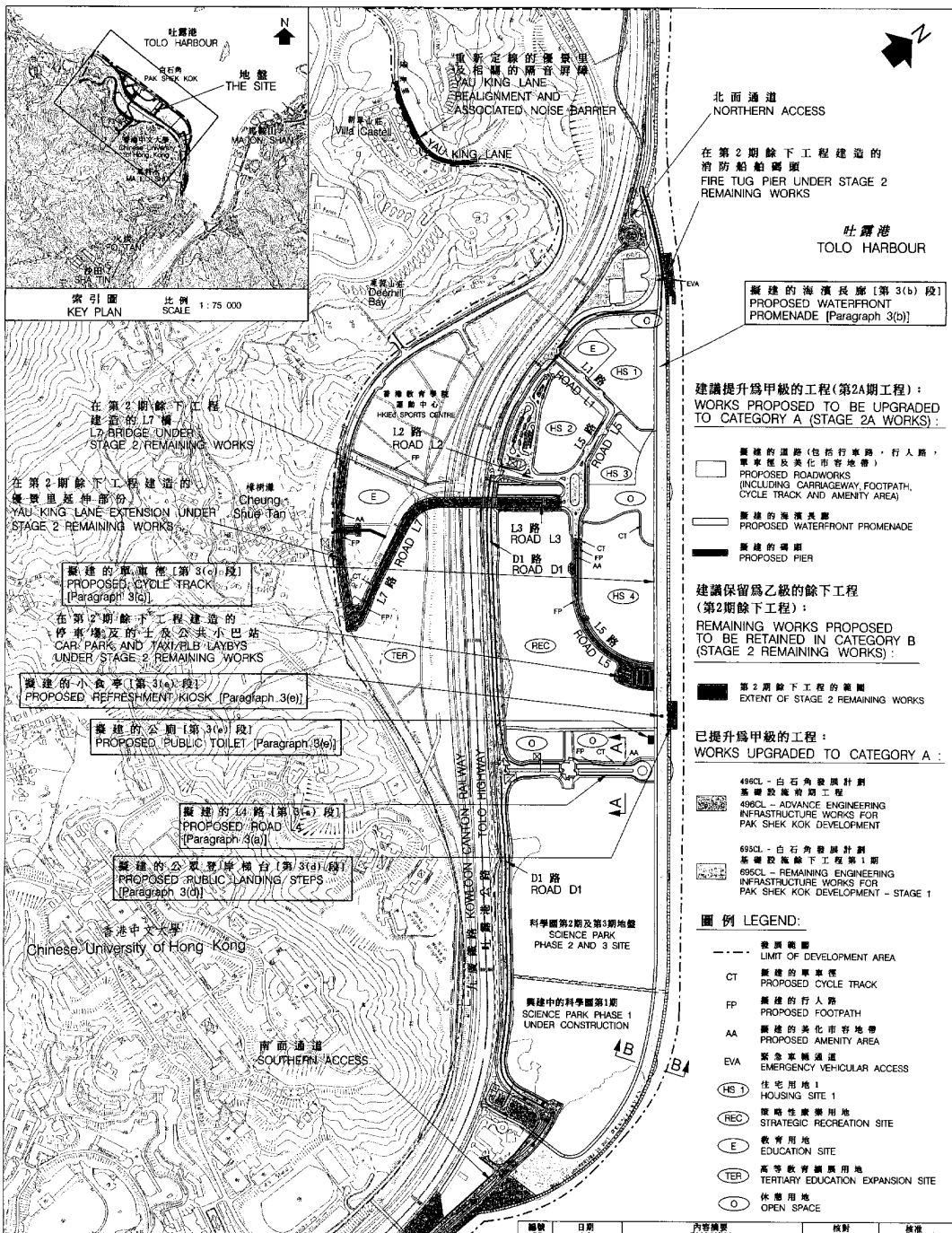
25. The development of Science Park is divided into three phases. The first part of Phase 1 was commissioned in June 2002 with the remaining part scheduled for completion in mid 2004. To serve Science Park Phase 1, we upgraded **496CL** “Advance engineering infrastructure works for Pak Shek Kok development” to Category A in June 1999 at an estimated cost of \$357.3 million in MOD prices for the advance engineering infrastructure works at Pak Shek Kok and commenced the works in October 1999 for completion in June 2003.

26. We upgraded **658CL** to Category B in September 1999.

27. In January 2000, FC approved the upgrading of part of **658CL** to Category A as **663CL** “Site investigation works and consultants’ fees for remaining engineering infrastructure works for Pak Shek Kok development” at an estimated cost of \$30.3 million in MOD prices for engaging consultants to carry out the site investigation and detailed design of the project. The consultants have completed the site investigation, detailed design and preparation of tender documents for the proposed works.

28. In December 2001, we upgraded another part of **658CL** to Category A, as **695CL** “Remaining engineering infrastructure works for Pak Shek Kok development – stage 1” at an estimated cost of \$537 million in MOD prices, to provide access and supporting services to part of Science Park Phase 2 and the planned housing sites in the area. The works commenced in April 2002 for completion in phases from October 2003 to December 2006.

29. We estimate that the project will create some 120 jobs comprising 15 professional/technical staff and 105 labourers, totalling 4 300 man-months.

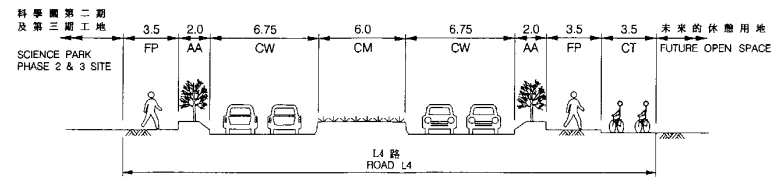


二〇〇三至二〇〇四年度工務小組委員會文件 P.W.S.C. SUBMISSION 2003/2004		圖號 no.		日期 date		內容摘要 description		核對 checked		批准 approved	
修訂 REVISION											
圖號 no.		日期 date		內容摘要 description		核對 checked		批准 approved		圖則編號 drawing no.	
K S LO		SIGNED 12.02.2003		項目編號 item no. 658CL		核對 checked		批准 approved		圖則編號 drawing no. NTN 2139	
Y F TANG		SIGNED 30.04.2003		比例 scale 1:7 500		核對 checked		批准 approved		圖則編號 drawing no. NTN 2139	
M Y MA		SIGNED 30.04.2003		圖則編號 drawing no. NTN 2139		核對 checked		批准 approved		圖則編號 drawing no. NTN 2139	

圖則名稱 drawing title: 白石角發展計劃基礎設施餘下工程第2期 REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT - STAGE 2

A3 size L:\Drawing_MS\Ntn2139.dgn

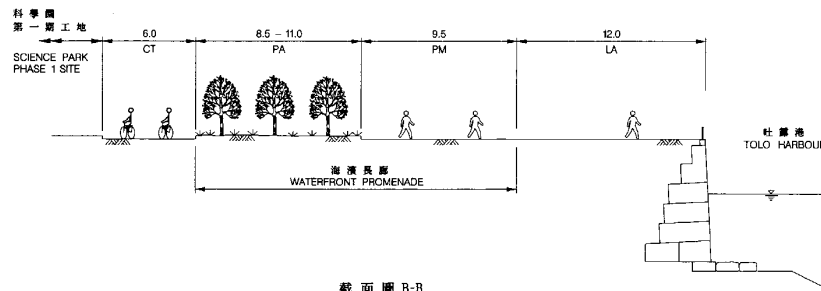
附件 1 ENCLOSURE 1



截面圖 A-A
橫切 L4 路
SECTION A-A
ACROSS ROAD L4

註釋 NOTES :

1. 全部以米為度量單位
ALL DIMENSIONS ARE IN METRES.
2. 所示闊度在其他位置會改變
INDICATED WIDTHS MAY VARY AT OTHER LOCATIONS.



截面圖 B-B
橫切海濱長廊
SECTION B-B
ACROSS WATERFRONT PROMENADE

圖例 LEGEND :

- AA 美化市容地帶
AMENITY AREA
- CM 中央分隔帶
CENTRAL MEDIAN
- CT 單車徑
CYCLE TRACK
- CW 行車道
CARRIAGEWAY
- FP 行人路
FOOTPATH
- LA 觀景區
LOOKOUT AREA
- PA 種植地帶
PLANTING AREA
- PM 散步長廊
PROMENADE

二〇〇三至二〇〇四年度工務小組委員會文件 P.W.S.C. SUBMISSION 2003/2004

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
修訂 REVISION				

圖則名稱 drawing title

白石角發展計劃基礎設施餘下工程第 2 期 - 截面圖
REMAINING ENGINEERING INFRASTRUCTURE WORKS FOR PAK SHEK KOK DEVELOPMENT - STAGE 2
TYPICAL SECTIONS

繪圖 drawn K S LO	簽署 initial SIGNED	日期 date 12.02.2003	項目編號 item no. 658CL
核對 checked Y F TANG	簽署 initial SIGNED	日期 date 12.02.2003	比例 scale 1 : 250
核准 approved M Y MA	簽署 initial SIGNED	日期 date 14.02.2003	圖則編號 drawing no. NTN 2140

辦事處 office
新界北拓展處
NEW TERRITORIES NORTH
DEVELOPMENT OFFICE

拓展署
TERRITORY
DEVELOPMENT
DEPARTMENT

658CL – Remaining engineering infrastructure works for Pak Shek Kok development – stage 2

Breakdown of the estimate for consultants' fees

Consultants' staff costs			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a)	Consultants' fees for construction stage (Note 2)					
(i)	contract administration	Professional	-	-	-	1.2
		Technical	-	-	-	0.4
(ii)	preparation of as-built drawings	Professional	-	-	-	0.1
		Technical	-	-	-	0.1
(b)	Resident site staff costs (Note 3)	Professional	106.0	38	1.6	9.8
		Technical	230.0	14	1.6	7.1
Total consultants' staff costs						18.7

* 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 1.10.2002, MPS pt. 38 = \$57,730 per month and MPS pt. 14 = \$19,195 per month)
2. The consultants' staff cost for contract administration and preparation of as-built drawings is calculated in accordance with the existing consultancy agreement for design and construction supervision of the remaining engineering infrastructure works for Pak Shek Kok development.
3. The consultants' staff cost for site supervision is based on estimates prepared by the Director of Territory Development. We will only know the actual man-months and actual costs after completion of the construction works.