

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land Development

718CL – Ma On Shan development – roads, drainage and sewerage works at Whitehead and Lok Wo Sha phase 1

Members are invited to recommend to Finance Committee the upgrading of **718CL** to Category A at an estimated cost of \$219.7 million in money-of-the-day prices to carry out site formation and associated infrastructure at Lok Wo Sha, Ma On Shan.

PROBLEM

We need to carry out infrastructure works to serve the proposed development at Lok Wo Sha, Ma On Shan.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade **718CL** to Category A at an estimated cost of \$219.7 million in money-of-the-day (MOD) prices to carry out site formation and infrastructure works for the planned development at Lok Wo Sha, Ma On Shan.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **718CL** comprises –
- (a) formation of two sites of about 3.1 hectares (ha) in total;
 - (b) construction of distributor roads (Roads D1(W) and D1(N)) of a total length of about 800 metres (m), a local road (Road L3) of a length of about 160 m, and the associated footpaths, cycle tracks and planting areas;
 - (c) construction of a sewage pumping station;
 - (d) construction of pressurized sewers of a length of about 950 m;
 - (e) construction of associated drains, sewers and water mains;
 - (f) landscaping works; and
 - (g) implementation of environmental mitigation measures and an Environmental Monitoring and Audit (EM&A) programme for the works mentioned in (a) to (f) above.

———— The site plan of the proposed works is at Enclosure 1.

4. We plan to commence the construction works in May 2009 for completion in August 2011.

JUSTIFICATION

5. We completed the “Feasibility Study for Housing Development at Whitehead and Lee On in Ma On Shan” (the Study) in February 2003. The Study recommended developing the Whitehead headland, Lok Wo Sha and Wu Kai Sha Station into a residential area with recreational development for a population of about 17 400. The Ma On Shan Outline Zoning Plan (OZP) No. S/MOS/13, incorporating the land use proposals recommended in the Study, was approved by the Chief Executive in Council on 5 October 2004.

6. According to the Master Layout Plan approved by the Town Planning Board in May 2005, the Lok Wo Sha area will be developed for residential purpose comprising the Lok Wo Sha – A and Lok Wo Sha – B sites (LWS-A and LWS-B sites) as well as a Government, Institution or Community site (G/IC site). The formation and development of the LWS-A site would be undertaken by a private developer whilst the LWS-B site and G/IC site would be formed by the Administration. The development of the LWS-A site is in progress with preparatory works being implemented. The LWS-B site when formed will be included in the Master List as a potential land sale site. Our target is to complete the site formation and infrastructure works by 2011 to accommodate the planned residential development.

FINANCIAL IMPLICATIONS

7. We estimate the cost of the project to be \$219.7 million in MOD prices (see paragraph 9 below), made up as follows -

	\$ million
(a) Site formation and earthworks	23.8
(b) Road works	41.2
(c) Drainage and sewerage works	84.8
(i) drainage and sewerage works	68.5
(ii) sewage pumping station	16.3
(d) Water mains	9.7
(e) Landscaping works	2.9
(f) Environmental mitigation measures and EM&A Programme	2.8
(i) general mitigation measures	2.2
(ii) EM&A Programme	0.6
(g) Consultants' fees	17.7
(i) construction stage	1.2
(ii) resident site staff costs	16.5

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		\$ million	
(h)	Contingencies	18.3	
	Sub-total	201.2	(in September 2008 prices)
(i)	Provision for price adjustment	18.5	
	Total	219.7	(in MOD prices)

8. 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 2.

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

Year	\$ million (Sept 2008)	Price adjustment factor	\$ million (MOD)
2009 – 2010	50.1	1.04000	52.1
2010 – 2011	75.9	1.08160	82.1
2011 – 2012	55.2	1.12486	62.1
2012 – 2013	20.0	1.16986	23.4
	201.2		219.7

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 2009 to 2013. We will invite tenders for the proposed works under a standard remeasurement contract because the quantities of the site formation and earth works may vary depending on actual ground conditions. The contract will provide for price adjustments.

11. We estimate the annual recurrent expenditure arising from this project to be about \$1.2 million.

PUBLIC CONSULTATION

12. We consulted the Traffic and Transport Committee of Sha Tin District Council on the proposed works under **718CL** on 10 May 2007, 5 July 2007 and 6 September 2007. We obtained the Committee's support of the project at the meeting on 6 September 2007.

13. We gazetted the proposed road scheme of **718CL** under the Roads (Works, Use and Compensation) Ordinance (RO) on 7 March 2008. We received 110 objections, of which 108 had subsequently been withdrawn upon clarification by the Administration of the project details, local planning and Government's policies on works, clearance and resumption. The Administration had also proposed to modify the scheme such that the number of Small House sites in the adjacent Wu Kai Sha Village would remain unchanged. The remaining two unwithdrawn objections were concerned about the inadequate supply of land for Small House development in Wu Kai Sha Village. One objector asked the Government to resume more land for Small House development and the other requested the Government not to resume his land for the proposed works. On 2 December 2008, the Chief Executive in Council overruled these two objections and authorised the road scheme with the modification as set out above.

14. On 7 March 2008, we gazetted the proposed sewerage scheme of **718CL** under the RO as applied by the Water Pollution Control (Sewerage) Regulations. No objection was received. The Director of Environmental Protection authorised the sewerage scheme on 5 December 2008.

15. We consulted the Legislative Council Panel on Development on the proposed works by circulation of an information paper on 15 December 2008. Members raised no objection to the proposed works.

ENVIRONMENTAL IMPLICATIONS

16. Roads D1(N) and D1(W) and the associated box culvert of this project are designated projects (DP) under the Environmental Impact Assessment Ordinance (EIAO) while all the other works items are non-DP under the EIAO. The then Territory Development Department completed an EIA report covering

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the works items of the project, and the EIA report was approved under the EIAO on 18 December 2002. According to our schedule, the Environmental Permit (EP) required for the construction and operation of the DPs will be obtained before the invitation of tenders tentatively scheduled for end February 2009. The EP will take into account the recommendations of the approved EIA report and any changes since its approval. With the implementation of the recommended mitigation measures and environmental monitoring and audit programme, the environmental impacts will be controlled to ensure compliance with the statutory requirements.

17. For the proposed sewage pumping station, which is a non-DP under the EIAO, CEDD completed a Preliminary Environmental Review (PER) in October 2008. The PER concluded that, with the appropriate mitigation measures in place during construction and operation stages, there would not be any significant environmental impacts.

18. We will incorporate the recommended mitigation measures for all works items of the project into relevant works contract to control the environmental impact to within established criteria. The measures include watering of the site, provision of wheel-washing facilities, covering of materials on trucks, use of silenced construction plant, and provision of mobile noise barriers. We have included \$2.2 million in the project estimate for the implementation of environmental mitigation measures.

19. We have considered the design of the proposed works and construction sequence in the planning and design stages to reduce the generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste to public fill reception facilities¹. We will encourage the contractor to maximize the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimize the generation of construction waste.

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¹ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

20. We will also require the contractor to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation measures to avoid, reduce, reuse and recycle inert construction waste. We will ensure that day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

21. We estimate that the project will generate about 196 000 tonnes of construction waste. Of these, we will reuse about 173 100 tonnes (88.3 %) on site and deliver 3 500 tonnes (1.8 %) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of 19 400 tonnes (9.9 %) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$2.5 million for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne² at landfills).

HERITAGE IMPLICATIONS

22. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, and Government historic sites identified by the Antiquities and Monuments Office. We are conducting archaeological field evaluation to ascertain the impacts on the Wu Kai Sha Archaeological Site (see Enclosure 1). Mitigation measures will be designed and implemented before commencement of the construction works to ensure that no cultural remains will be affected by the works.

/LAND ACQUISITION...

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

LAND ACQUISITION

23. We have to resume 114 private agricultural lots (about 1.3 ha) for the project. Two Short Term Tenancies covering some 14 600m² of land for a pavement research laboratory and a recreational and storage depot will be affected. The cost of land acquisition and clearance is about \$49.6 million, which will be charged to **Head 701 – Land Acquisition**. A breakdown of the land acquisition costs is at Enclosure 3.

BACKGROUND INFORMATION

24. We upgraded **718CL** to Category B in September 2005.

25. We engaged consultants to carry out site investigation and detailed design for the proposed works in February 2007. We have charged the cost of about \$4.4 million to block allocation **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. We have completed the site investigation, detailed design and preparation of tender documents for the proposed works.

26. Of the 580 trees within the project boundary, 49 are dead. Of the remaining 531 trees, 245 will be preserved. The proposed works will involve the removal of 286 trees including 98 to be felled and 188 to be transplanted within the project boundary as far as possible. All trees to be removed or transplanted are not important trees³. We will incorporate planting proposals as part of the project, including estimated quantities of 422 trees and 40 000 shrubs.

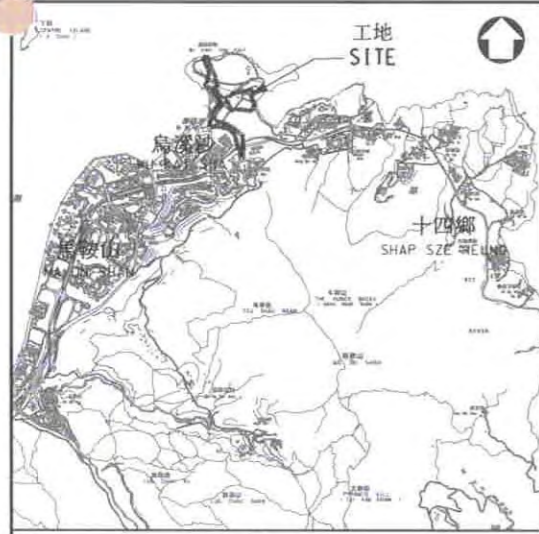
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³ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance, e.g. Fung Shui trees, trees 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 the 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 a trunk diameter equal to or exceeding 1.0 m (measured at 1.3 m above ground level), or with a height/canopy spread equal to or exceeding 25 m.

27. We estimate that the proposed works will create about 177 jobs (143 for labourers and another 34 for professional/technical staff), providing a total employment of 4 000 man-months.

Development Bureau
December 2008

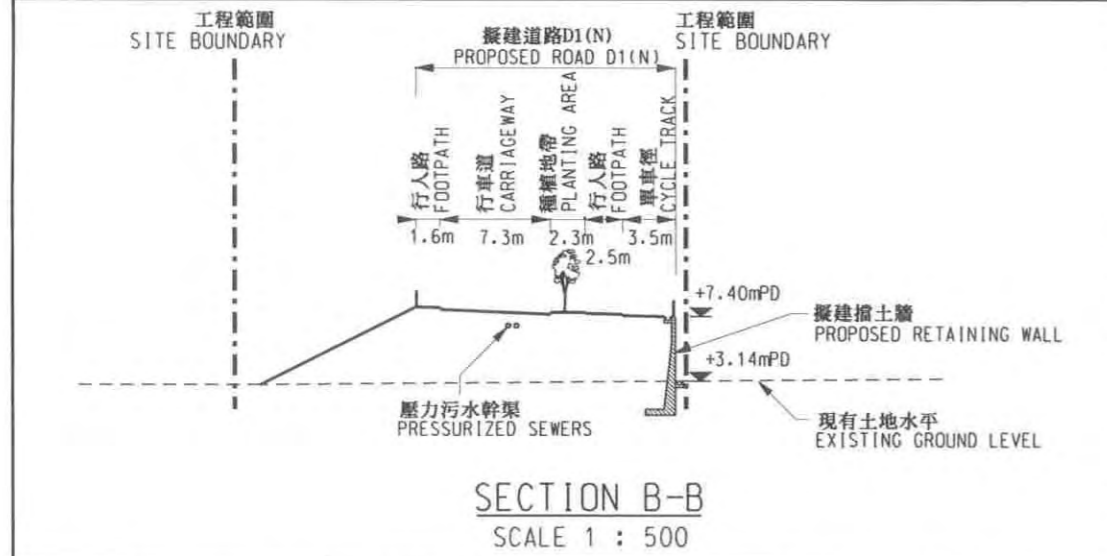
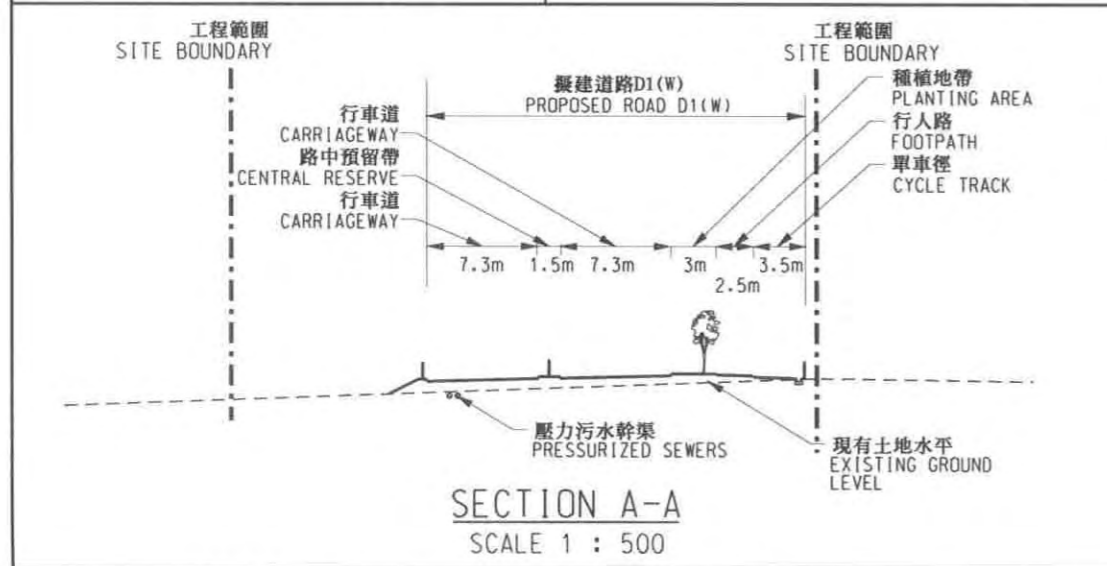


位置圖
LOCATION PLAN
比例 SCALE 1 : 75 000



擬建排水暗渠
PROPOSED BOX
CULVERT

- 圖例 LEGEND
- 工程範圍
SITE BOUNDARY
 - 道路工程
ROAD WORKS
 - 工地平整工程
SITE FORMATION WORKS
 - 擬建壓力污水幹渠
PROPOSED PRESSURIZED
SEWERS
 - 烏溪沙考古遺址
WU KAI SHA
ARCHAEOLOGICAL SITE



二〇〇八年至二〇〇九年度工務小組委員會文件 P.W.S.C. SUBMISSION 2008-2009

圖則名稱 drawing title 馬鞍山發展 - 白石及落禾沙第一期道路及渠務工程 - 平面圖 MA ON SHAN DEVELOPMENT - ROADS, DRAINAGE AND SEWERAGE WORKS AT WHITEHEAD AND LOK WO SHA PHASE 1 - LAYOUT PLAN	繪圖 drawn Y.W.LO	簽署 initial SIGNED	日期 date 05.12.08	項目編號 item no. 7718CL	辦事處 office 新界東拓展處 NEW TERRITORIES EAST DEVELOPMENT OFFICE
	核對 checked C.T.CHUNG	簽署 initial SIGNED	日期 date 05.12.08	比例 scale 1 : 5000 OR AS SHOWN	
	核准 approved B.S.CHOY	簽署 initial SIGNED	日期 date 05.12.08	圖則編號 drawing no. ST2061	土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Enclosure 2 to PWSC(2008-09)58

**718CL – Ma On Shan development – roads, drainage and sewerage works
at Whitehead and Lok Wo Sha phase 1**

Breakdown of the estimates 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)	Professional	--	--	--	0.7
	Technical	--	--	--	0.5
(b) Resident site staff ^(Note 3)	Professional	81	38	1.6	7.8
	Technical	274	14	1.6	8.7
Total					17.7

* 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 April 2008, MPS pt. 38 = \$60,535 per month and MPS pt. 14 = \$19,835 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 **718CL** to Category A.
3. We will only know the actual man-months and actual costs after completion of the construction works.

Enclosure 3 to PWSC(2008-09)58

718CL – Ma On Shan development – roads, drainage and sewerage works at Whitehead and Lok Wo Sha phase 1

Breakdown of the land resumption and clearance costs

	\$ million
(a) Compensation on land resumption	
(i) Ex-gratia compensation (including 7 lots of private land) 468.1m ² @ \$6,520/m ² (Notes 1 and 2)	3.05
(ii) Open Market Value compensation (including 107 lots of private land) 12,782.1m ² @ \$3,260/m ² (Note3)	41.67
(b) Compensation for crops	0.45
(c) Ex-gratia compensation for miscellaneous permanent improvements to farms	0.15
(d) “Tun Fu” ceremonial fees	0.02
(e) Ex-gratia allowances for grave and kam taps removal	0.24
(f) Interest payment on various ex-gratia compensations and contingencies	4.00
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Total costs	49.58 (say 49.6)

Notes

1. The land to be resumed in the project **718CL** is agricultural land within Compensation Zone “A”. As published in the Gazette, the ex-gratia compensation rate for this zone is \$606 per square foot (or \$6,520 per square metre). Hence the ex-gratia compensation rate used for estimating the resumption cost of the 7 lots affected by the project **718CL** is \$6,520 per square metre.
2. There are four ex-gratia compensation zones, namely Zones A, B, C and D, for land resumption in the New Territories as approved by ExCo in 1985 and 1996. The boundaries of these zones are shown on the Zonal Plan for Calculation of Compensation Rates.
3. The Open Market Value compensation rate used for estimating the resumption cost of the 107 lots affected by the project **718CL** is \$303 per square foot (or \$3,260 per square metre).