

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land Development

756CL – Ma On Shan development – roads, drainage and sewerage works at Whitehead and Lok Wo Sha, phase 2

Members are invited to recommend to the Finance Committee the upgrading of **756CL** to Category A at an estimated cost of \$252.8 million in money-of-the-day prices for the construction of additional infrastructure to support various planned developments at Whitehead, Ma On Shan.

PROBLEM

We need to provide additional infrastructure to support various planned developments at Whitehead, Ma On Shan.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade **756CL** to Category A at an estimated cost of \$252.8 million in money-of-the-day (MOD) prices for the construction of additional infrastructure to support various planned developments at Whitehead, Ma On Shan.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **756CL** comprises –
- (a) widening of Yiu Sha Road from a single two-lane to a dual two-lane road of about 500 metres (m) long, and construction of associated retaining walls, footpaths, cycle tracks and amenity areas;
 - (b) construction of a covered footbridge of about 32 m long and 7.6 m clear width with lift across Yiu Sha Road;
 - (c) construction of a sewage pumping station and sewers; and
 - (d) ancillary works including storm drains, water mains, landscaping and utility works.

———— A layout plan showing the proposed works is at Enclosure 1.

4. Subject to funding approval of the Finance Committee, we plan to commence the construction works in June 2015 for completion in December 2017 so that the provision of the infrastructure could cater for the anticipated population intake of the residential developments at Whitehead.

JUSTIFICATION

5. In order to maximise the development potential for both residential and recreational developments and to increase housing land supply, the Government recommended revising the land use at Whitehead headland in 2012. The proposed amendments include the rezoning of the Comprehensive Development Area (“CDA”) site at Whitehead headland mainly into different sites zoned “CDA(2)”, “CDA(3)” and “Recreation” (“REC”) with increased development intensity to facilitate early implementation of the development by phases. As a result of the rezoning, the population of the area will be increased from about 1 200 to about 3 200 upon full development.

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6. The Ma On Shan Outline Zoning Plan (OZP) No. S/MOS/18 incorporating the above amendments was approved by the Chief Executive-in-Council on 30 July 2013. The Sha Tin District Council is in support of the residential development proposals in the area. Major recreational/sports facilities and uses in support of the recreational developments may be permitted in the “REC” zone subject to planning permission. At present, part of the “REC” zone is used as a velodrome for cycling training purpose.

7. In view of the increased population and facilities in the area, it is necessary to provide the infrastructure required to support the developments at Whitehead. Specifically, we propose to construct a covered footbridge across Yiu Sha Road that will be opened round-the-clock. The design capacity of the proposed footbridge will be able to cope with the estimated peak pedestrian flow (two-way) of about 5 500 pedestrians per hour. The proposed covered footbridge will be provided with a passenger lift on the side near the CDA(2) site. The other side of the proposed covered footbridge will connect to the 24-hour public pedestrian walkway within the Sha Tin Town Lot No. 502 which leads to the Mass Transit Railway Wu Kai Sha Station through Lok Wo Sha.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the project to be \$252.8 million in MOD prices (please see paragraph 9 below), broken down as follows –

	\$ million
(a) Widening of Yiu Sha Road	42.5
(b) Construction of footbridge	41.3
(i) civil works	32.3
(ii) electrical and mechanical (E&M) works	9.0
(c) Construction of sewage pumping station and sewers	76.9
(i) civil works	56.2
(ii) E&M works	20.7
(d) Ancillary works including storm drains, water mains, landscaping and utility works	19.1

/(e)

	\$ million	
(e) Consultants' fees for	2.5	
(i) contract administration	2.0	
(ii) management of resident site staff	0.5	
 (f) Remuneration of resident site staff	 16.8	
 (g) Contingencies	 <u>18.9</u>	
 Sub-total	 218.0	(in September 2014 prices)
 (h) Provision for price adjustment	 <u>34.8</u>	
 Total	 <u>252.8</u>	(in MOD prices)

In view of insufficient in-house resources, we propose to engage consultants to undertake the contract administration and site supervision for the proposed works. A breakdown of the estimates for consultants' fees and resident site staff costs by man-months is at Enclosure 2.

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

Year	\$ million (Sept 2014)	Price adjustment factor	\$ million (MOD)
2015 – 2016	30.0	1.06000	31.8
2016 – 2017	93.0	1.12360	104.5
2017 – 2018	66.0	1.19102	78.6
2018 – 2019	16.0	1.26248	20.2
2019 – 2020	7.5	1.32876	10.0
2020 – 2021	5.5	1.39519	7.7
	<u>218.0</u>		<u>252.8</u>

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10. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period from 2015 to 2021. Subject to funding approval, we will deliver the works under standard re-measurement contract because the quantities of works may vary depending on actual ground conditions. The contract will provide for price adjustment.

11. We estimate the annual recurrent expenditure arising from the proposed works to be about \$1.6 million.

PUBLIC CONSULTATION

12. We consulted the Transport and Traffic Committee of the Sha Tin District Council on the proposed works on 9 July 2013. The Committee supported the project.

13. We gazetted the proposed road works under the Roads (Works, Use and Compensation) Ordinance (RO) (Cap. 370) and the proposed sewerage works under RO as applied by the Water Pollution Control (Sewerage) Regulation (Cap. 358AL) on 29 November 2013 and 6 December 2013. No objection was received. The authorisation notices were gazetted on 21 and 28 February 2014.

14. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)¹ on the aesthetic design of the proposed project. ACABAS supported the project.

15. We consulted the Legislative Council Panel on Development on 22 April 2014. Panel Members generally supported the proposed works.

/ENVIRONMENTAL

¹ ACABAS comprises representatives of the Hong Kong Institute of Architects, Hong Kong Institution of Engineers, Hong Kong Institute of Planners, academic institutions, Architectural Services Department, Highways Department, Housing Department, and Civil Engineering and Development Department. It is responsible for vetting the design of bridges and other structures associated with the highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

ENVIRONMENTAL IMPLICATIONS

16. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause any long-term adverse environmental impact. We have included in the project estimate the cost of implementing standard pollution control measures during the construction.

17. For controlling the short-term environmental impacts caused by the proposed works during construction, mitigation measures will be implemented under the works contract. These measures include regular watering of the exposed site area to reduce emission of fugitive dust, the use of movable noise barriers and quiet plant to reduce noise generation, and the use of trucks with cover or enclosed containers for waste transportation.

18. At the planning and design stages, we have considered the alignment, design level and construction method of the proposed works so as 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 and rock fill) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities². We will encourage the contractor to maximise the use of recycled/recyclable inert construction waste and the use of non-timber formwork to further reduce the generation of construction waste.

19. At the construction stage, we will 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 the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from the non-inert construction waste on site for disposal at appropriate facilities. Besides, we will control the disposal of inert and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

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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 (Cap. 354N). Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

20. We estimate that the proposed works will generate about 9 920 tonnes of construction waste in total. Of these, we will reuse about 5 380 tonnes (54%) on site and deliver about 1 710 tonnes (17%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 2 830 tonnes (29%) 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 \$399,920 for this project (based on a unit charge rate of \$27 per tonne for disposal at public fill reception facilities, and \$125 per tonne for disposal at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation).

HERITAGE IMPLICATIONS

21. The proposed works 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. The proposed works encroach upon the edge of Wu Kai Sha Archaeological Site. Based on the results of the previously conducted archaeological survey cum excavation, no mitigation measure is required.

TRAFFIC IMPLICATIONS

22. The proposed works will not cause any significant traffic impact. Temporary traffic arrangements will be implemented to facilitate the construction works which will require a temporary road closure. We will display publicity boards on site giving details of the temporary traffic arrangements, and the anticipated completion dates of individual section of works. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

LAND ACQUISITION

23. The proposed works do not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

24. 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. The Ma On Shan OZP No. S/MOS/13, which has incorporated the land use proposals recommended in the Study, was approved by the Chief Executive-in-Council in October 2004. To carry out site formation and infrastructure works for the planned developments at Whitehead and Lok Wo Sha, Ma On Shan based on the Ma On Shan OZP and the Master Layout Plan approved by the Town Planning Board in May 2005, we substantially completed **718CL** “Ma On Shan development – roads, drainage and sewerage works at Whitehead and Lok Wo Sha, phase 1” in January 2012.

25. We upgraded **756CL** for the phase 2 works to Category B in June 2012.

26. We engaged consultants in October 2012 to undertake the detailed design and site investigation for the proposed works at an estimated cost of about \$5.7 million under the 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 detailed design for the proposed works mentioned in paragraph 3 above.

27. The proposed works will involve the removal of 29 trees including 26 trees to be felled and three trees to be transplanted within the project site. All the trees to be removed and transplanted are not important trees³. We will incorporate planting proposal as part of the project, including a total of 37 trees, 15 750 shrubs and 1 220 m² of grassed area.

/28.

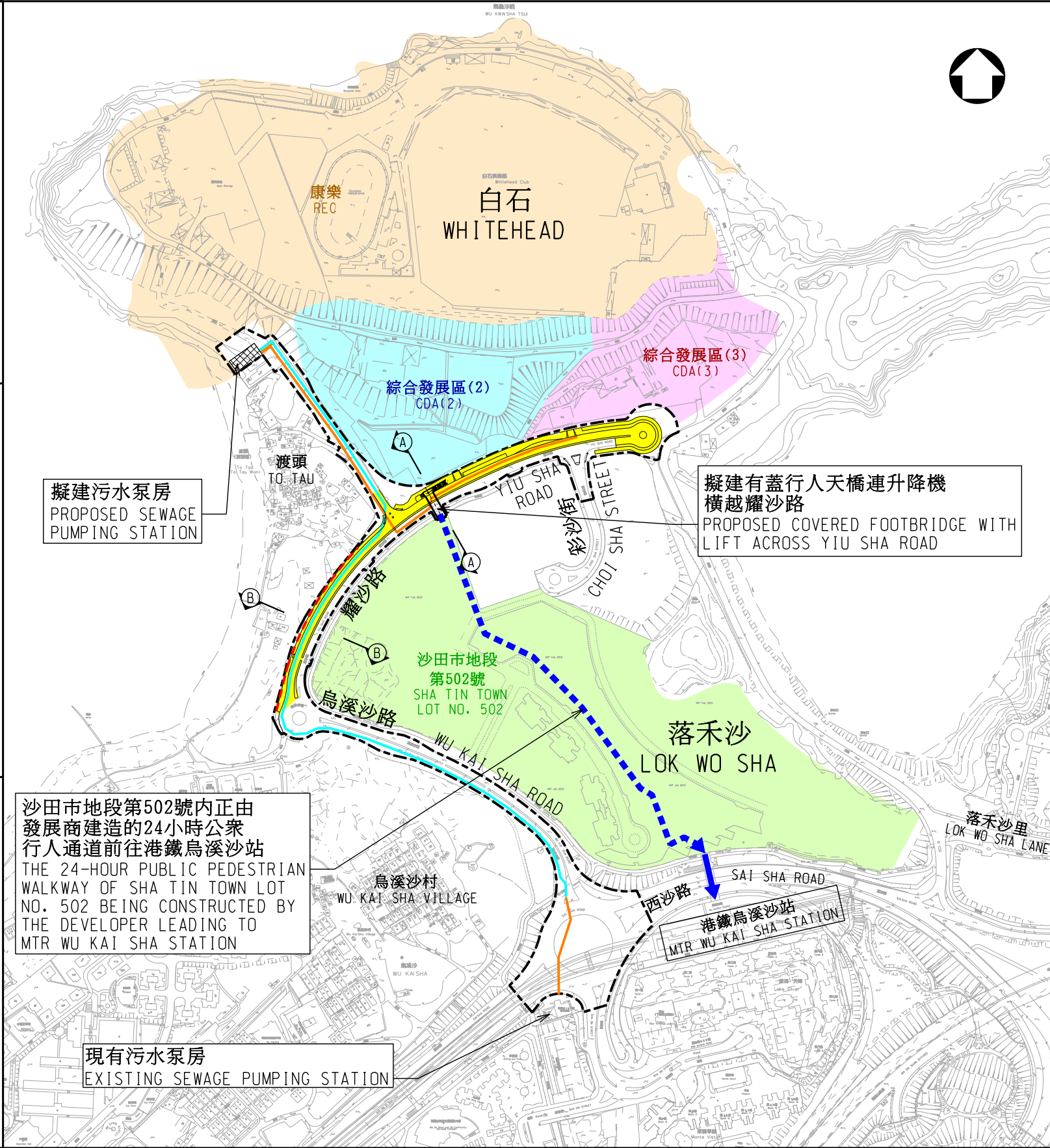
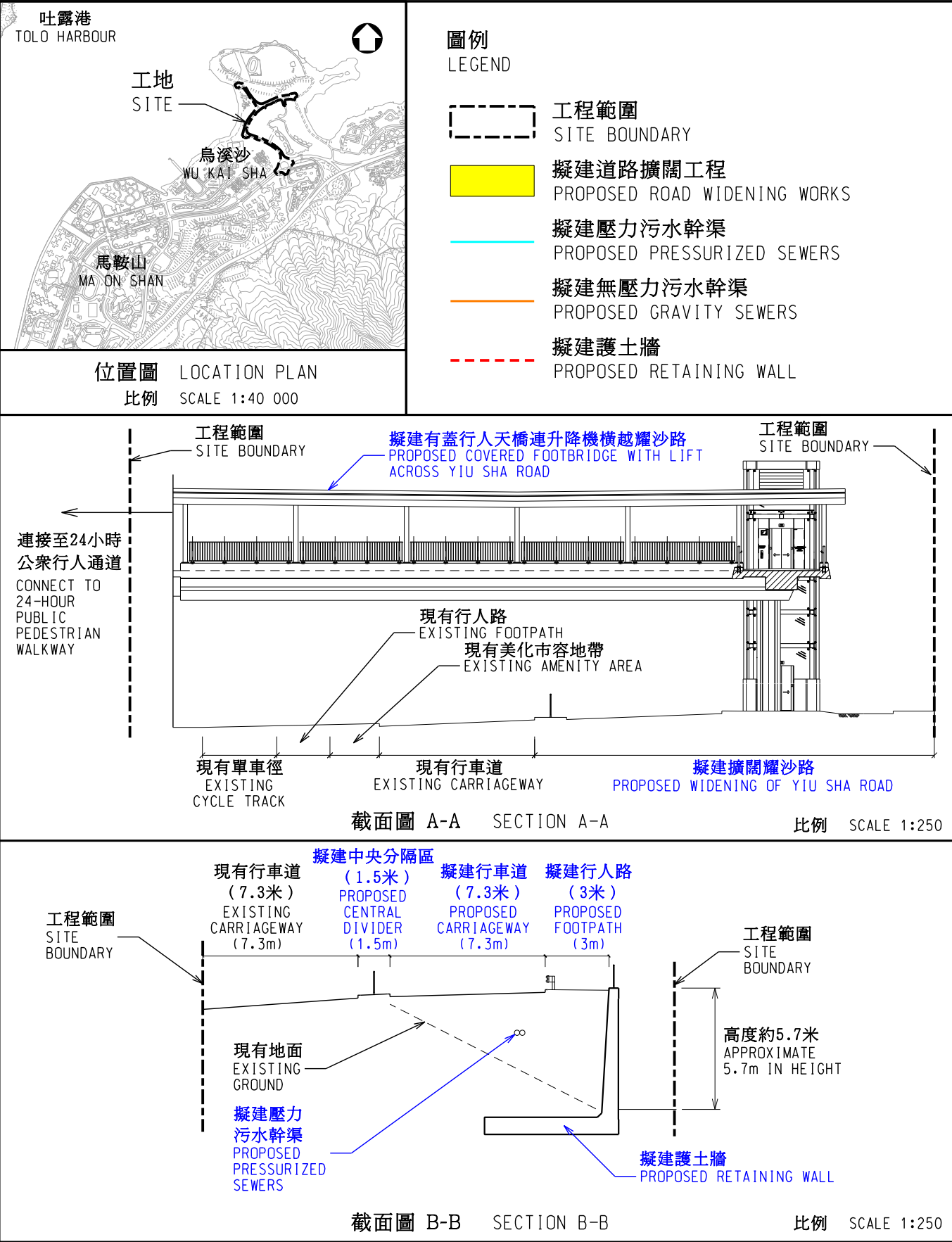
³ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (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.

28. We estimate that the proposed works will create about 164 jobs (132 for labourers and another 32 for professional/technical staff) providing a total employment of 2 980 man-months.

29. This paper supersedes PWSC(2014-15)12 which was not discussed by the Public Works Subcommittee during the 2013-14 legislative session. The programme, phasing of expenditure and estimated cost of the project have been updated due to the lapse of time.

Development Bureau
October 2014



二〇一四年至二〇一五年度工務小組委員會文件 P.W.S.C. SUBMISSION 2014-2015

圖則名稱 drawing title

馬鞍山發展計劃－白石及落禾沙第二期道路及渠務工程－平面圖
MA'ON SHAN DEVELOPMENT - ROADS, DRAINAGE AND SEWERAGE WORKS AT
WHITEHEAD AND LOK WO SHA, PHASE 2 - LAYOUT PLAN

繪圖 drawn

簽署 initial

日期 date

項目編號 item no.

辦事處 office

H K TSANG

SIGNED

12.5.2014

7756CL

新界東拓展處

核對 checked

簽署 initial

日期 date

比例 scale

NEW TERRITORIES EAST
DEVELOPMENT OFFICE

C Y KWONG

SIGNED

12.5.2014

1:5 000 OR AS SHOWN

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

N T CHIANG

SIGNED

12.5.2014

ST2074



**756CL – Ma On Shan development – roads, drainage and sewerage works
at Whitehead and Lok Wo Sha, phase 2**

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2014 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees for contract administration (Note 2)	Professional	--	--	--	1.2
	Technical	--	--	--	0.8
				Sub-total	2.0
(b) Resident site staff costs (Note 3)	Professional	70	38	1.6	8.0
	Technical	239	14	1.6	9.3
				Sub-total	17.3
Comprising –					
(i) Consultants' fees for management of resident site staff				0.5	
(ii) Remuneration of resident site staff				16.8	
				Total	19.3

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of resident site staff cost supplied by the consultants. (Subject to approval of the Finance Committee, MPS point 38 = \$71,385 per month and MPS point 14 = \$24,380 per month.)
2. The consultants' staff cost for the contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **756CL**. The construction phase of the assignment will only be executed upon Finance Committee's approval to upgrade **756CL** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.