

For discussion
on 19 May 2018

PWSC(2018-19)17

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT
Civil Engineering – Land Development
804CL – Site formation and infrastructure works for development at Kam
Tin South, Yuen Long – advance works

Members are invited to recommend to the Finance Committee the upgrading of **804CL** to Category A at an estimated cost of \$697.0 million in money-of-the-day (MOD) prices for the construction of infrastructure to support the proposed housing developments at Kam Tin South.

PROBLEM

We need to provide infrastructure to support the proposed housing developments at Kam Tin South as well as to improve the traffic condition of the road network in the vicinity.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade **804CL** to Category A at an estimated cost of \$697.0 million in MOD prices for the construction of the proposed infrastructure.

/PROJECT

PROJECT SCOPE AND NATURE

3. **804CL** which we propose to upgrade to Category A (the proposed works) comprises —

- (a) widening of a section of about 970 metres (m) long of Kam Ho Road between Kam Tin Road and Tung Wui Road from a single two-lane carriageway to a dual two-lane carriageway, including construction of a bridge of about 95 m long across Kam Tin River;
- (b) widening of a section of about 360 m long of eastbound Kam Tin Road between Ko Po Tsuen and Kam Ho Road from a two-lane to three-lane carriageway;
- (c) provision of four bus laybys along Kam Sheung Road;
- (d) construction of sewers along Tung Wui Road, Kam Ho Road and Kam Tai Road;
- (e) road junction improvement at Kam Tin Road/Kam Tin Bypass/Kam Ho Road, Kam Tin Road/Kam Sheung Road, Kam Ho Road/Tung Wui Road, Tung Wui Road/Kam Sheung Road, Pat Heung Road/Kam Sheung Road and Tsing Long Highway Slip Road/Pat Heung Road junctions;
- (f) geotechnical, drainage, water supply, landscaping and other miscellaneous re-provisioning works; and
- (g) implementation of environmental mitigation measures including construction of noise barriers at Kam Tin Road, re-provisioning of wetland near the junction of Chi Ho Road and Shui Tau Road, and an environmental monitoring and audit (EM&A) programme for the works mentioned in 3(a) to (f) above.

_____ A layout plan of the proposed works and an artist impression drawing of the proposed bridge across Kam Tin River are at Enclosures 1 and 2 respectively.

4. Subject to funding approval of the Finance Committee, we plan to commence the proposed works in mid 2018 for completion in end 2021. To achieve this programme, we invited tenders for the proposed works in March 2018 but will only award the contract after the Finance Committee has approved the funding proposal.

/JUSTIFICATION

JUSTIFICATION

5. To meet housing and associated development needs, the Government adopts a multi-pronged strategy to increase land supply in the short, medium and long term. Kam Tin South is one of the areas contributing to the increase in housing land supply. To support three proposed public housing sites¹ and two West Rail property development projects² in Kam Tin South, it is necessary to carry out the proposed road works to cater for the increase in traffic demand arising from the housing developments. The proposed road works can also help address the existing demand for improving the traffic condition of Kam Sheung Road, and hence early completion of the proposed works would enable the local community to benefit from the proposed road improvement sooner.

6. There is no public sewerage system serving the proposed housing sites in Kam Tin South. The proposed sewerage, which will be connected to the existing Kam Tin Sewage Pumping Station, is required to provide proper and hygienic means to dispose of the sewage generated from the proposed developments.

7. Currently, West Rail Kam Sheung Road Station (KSRS), MTR Kam Tin Building and Pat Heung Maintenance Centre are served by an on-site makeshift sewage storage facility which occupies part of the residential development site at KSRS. It is necessary to commence the proposed sewerage works in mid 2018 for completion by end 2021 so that the makeshift sewage storage facility can be demolished in a timely manner to make way for the residential development thereat in order to tie in with the first population intake of Phase 1 of KSRS project in 2024-25.

/FINANCIAL

¹ The proposed Sites 1, 4a and 6 are currently undergoing land use rezoning procedures. The projected yields for the three sites are 3 700, 3 750 and 1 550 flats respectively. The first population intake is anticipated to be 2025-26 the earliest.

² Planned projects at West Rail Kam Sheung Road Station (KSRS) and Pat Heung Maintenance Centre have projected yields of around 3 000 and 6 060 flats respectively. Tender for Phase 1 of KSRS project contributing around 2 000 flats was awarded in May 2017.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the proposed works to be \$697.0 million in MOD prices, broken down as follows –

		\$ million (in MOD prices)
(a)	Roadworks	106.1
(b)	Sewerage works	108.0
(c)	Geotechnical works	93.3
(d)	Drainage works	73.4
(e)	Waterworks	69.4
(f)	Associated landscaping, traffic aids, road lighting and other miscellaneous re-provisioning works	53.7
(g)	Environmental mitigation measures and EM&A programme	58.0
(h)	Consultants' fees for	10.5
	(i) contract administration	6.6
	(ii) EM&A programme	1.6
	(iii) management of resident site staff (RSS)	2.3
(i)	Remuneration of RSS	61.2
(j)	Contingencies	63.4
	Total	<hr/> 697.0

9. A breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Enclosure 3.

10. Subject to approval, we plan to phase the expenditure as follows—

Year	\$million (MOD)
2018 - 2019	84.8
2019 - 2020	169.0
2020 - 2021	177.9
2021 - 2022	167.0
2022 - 2023	49.1
2023 - 2024	29.6
2024 - 2025	19.6
	<hr/> 697.0 <hr/>

11. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output from 2018 to 2025. Subject to funding approval, we will deliver the proposed works under a New Engineering Contract³. The contract will provide for price adjustment.

12. We estimate the annual recurrent expenditure arising from the proposed works to be about \$4.2 million.

PUBLIC CONSULTATION

13. We consulted the Kam Tin Rural Committee (KTRC) and the Pat Heung Rural Committee (PHRC) on the proposed works on 8 and 9 March 2016 respectively. KTRC offered in-principle support for the proposed works, and requested the Government to follow up on a number of issues, including constructing new road(s) connecting KSRS and Route 3 in the long run and implementing the sewerage works on Kam Tin Road at the same time. PHRC indicated no objection to the proposed works, and requested the Government to widen Kam Sheung Road, construct new road(s) and bicycle tracks, and increase parking spaces in the park-and-ride facility and bicycle parking spaces at the KSRS property development project.

/14.

³ New Engineering Contract is a suite of contracts developed by the Institution of Civil Engineers, United Kingdom. It is a contract form that emphasises cooperation, mutual trust and collaborative risk management between contracting parties.

14. We also consulted the Traffic and Transport Committee (T&TC) of Yuen Long District Council (YLDC) on the proposed works on 10 March 2016. A motion was passed by the YLDC T&TC requesting the Government to commit a long-term traffic improvement proposal, including widening of the entire Kam Sheung Road and provision of new roads linking Kam Tin Road and Kam Sheung Road, to resolve the traffic problem of Kam Sheung Road; otherwise, YLDC T&TC would object to the proposed works. To address these concerns, the Government wrote to the YLDC T&TC on 10 May 2016 committing to carry out a number of traffic improvement measures and a feasibility study to review the road infrastructure in respect of the developments in Kam Tin South, which includes the long-term improvement of Kam Sheung Road. The YLDC T&TC noted the positive response from the Government.

15. We gazetted the proposed road works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) and the proposed sewerage works under Cap. 370 as applied by the Water Pollution Control (Sewerage) Regulation (Cap. 358AL) on 24 March and 1 April 2016. During the statutory objection period, 23⁴ and 15 objections to the proposed road works and sewerage works were received respectively. Five objections to the proposed road works were resolved, while others which were mainly concerned with the widening of the entire Kam Sheung Road remained unresolved. On 1 November 2016, the Chief Executive-in-Council authorised the proposed road works (with modification) and the sewerage works, the notices of authorisation of which were gazetted on 25 November and 2 December 2016.

16. We consulted the Legislative Council Panel on Development on 28 November 2017. While the Panel had no objection to submitting the funding proposal to PWSC in general, a motion was passed by the Panel requesting the Government, among other things, to undertake proper and comprehensive transport planning in developing Kam Tin South, including widening Kam Sheung Road and providing new roads to connect new development areas to major trunk roads, the reprovisioning of the existing park-and-ride car parks and increasing the number of parking spaces. We provided responses to the motion in LC Paper No. CB(1)414/17-18(01).

/17.

⁴ A total of 24 objection letters were received. Among them, two objection letters expressing the same concerns and requests submitted by the same person were considered as one objection. Hence, altogether there were 23 objections.

17. To update stakeholders on the progress of the proposed works, we joined the Planning Department (PlanD) in meeting KTRC and PHRC, for the consultation on the proposed rezoning of three public housing sites at Kam Tin South (the rezoning), on 29 November and 6 December 2017 respectively. While KTRC and some PHRC members offered support to seeking funding approval for early commencement of the proposed works, some PHRC members considered that the Government should only take forward the proposed works after the scheme for the improvement of Kam Sheung Road was confirmed. In this connection, members were informed that the Government had already commenced consultant selection for the feasibility study to review the road infrastructure for the development of Kam Tin South.

18. We also joined PlanD in attending the YLDC meeting for the consultation on the proposed rezoning on 22 December 2017. While there was no particular discussion about the proposed works, a member remarked that the Government should accord high priority to the widening of Kam Tin Road and Lam Kam Road. The Chairman concluded that YLDC supported housing developments in principle and suggested the Government to take into account the concerns of the members about inadequate road infrastructure before taking forward the proposed housing developments.

ENVIRONMENTAL IMPLICATIONS

19. **804CL** is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). We have completed the Preliminary Environmental Review (PER) which concluded that the proposed works would not cause adverse environmental impact and the traffic noise performance will be improved with the implementation of mitigation measures. These measures include wetland re-provisioning, the use of noise barriers and low noise road surfacing where practicable. We have also assessed that the proposed works within the main drainage channel would be environmentally acceptable, and will ensure that the implementation of the proposed works will comply with the laid-down requirements.

20. During construction, we will control the short-term environmental impact to within established standards and guidelines through the implementation of suitable mitigation measures in the relevant contract. These include the use of movable noise barriers and quiet plant to reduce noise generation, and provision of wheel-washing facilities and regular watering of exposed site area to minimise dust generation. We have included in the project estimates the cost to implement all necessary measures to mitigate the environmental impacts.

/21.

21. At the planning and design stage, we have considered the design and construction sequence of the proposed works to reduce 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 disposal of inert construction waste at public fill reception facilities⁵. We will also encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce generation of construction waste.

22. 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. 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.

23. We estimate that the proposed works will generate in total about 58 696 tonnes of construction waste. Of these, we will reuse about 22 528 tonnes (38.4%) of inert construction waste on site and deliver 34 734 tonnes (59.2%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 1 434 tonnes (2.4%) 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 \$2.8 million for the proposed works (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne for disposal at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

HERITAGE IMPLICATIONS

24. The proposed works will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites or buildings, sites of archaeological interest and government historic sites identified by the Antiquities and Monuments Office.

/TRAFFIC

⁵ 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.

TRAFFIC IMPLICATIONS

25. The traffic impact assessment conducted reveals that the proposed road works will smoothen the existing traffic of Kam Sheung Road and also alleviate the traffic impact of the proposed housing developments to nearby roads. To minimise disturbance to the traffic during the construction stage, we will maintain the existing number of traffic lanes as far as practicable. In addition, we will establish a Traffic Management Liaison Group and closely liaise with the Transport Department, the Hong Kong Police Force and other stakeholders to discuss, scrutinise and review the proposed temporary traffic arrangements with a view to minimising the traffic impact arising from the construction of the proposed works. In response to the concern of the Panel on Development on the transport planning for Kam Tin South development, the Government has committed to implement a series of traffic improvement measures, and carry out a feasibility study to review the road infrastructure for the development of Kam Tin South, including the study on improvement of Kam Sheung Road and connection road(s) to major strategic route. The study commenced in December 2017.

LAND ACQUISITION

26. The area to be resumed for the proposed works is 951 square metres (m²) and involves seven private lots. The area of government land required to be cleared is 126 000 m². 19 temporary structures on private and government land will be cleared. No clearance of domestic structures is required. The estimated cost of land resumption and clearance is about \$6.2 million and will be charged to **Head 701 – Land Acquisition**. A breakdown of the estimate for land acquisition cost is at Enclosure 4.

BACKGROUND INFORMATION

27. We upgraded **804CL** to Category B in September 2016.

28. We engaged consultants to carry out investigation and detailed design for site formation and infrastructure works for the three proposed public housing sites at Kam Tin South in November 2014, funded by **Subhead B100HX** “Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme”. We have substantially completed the detailed design of the proposed works.

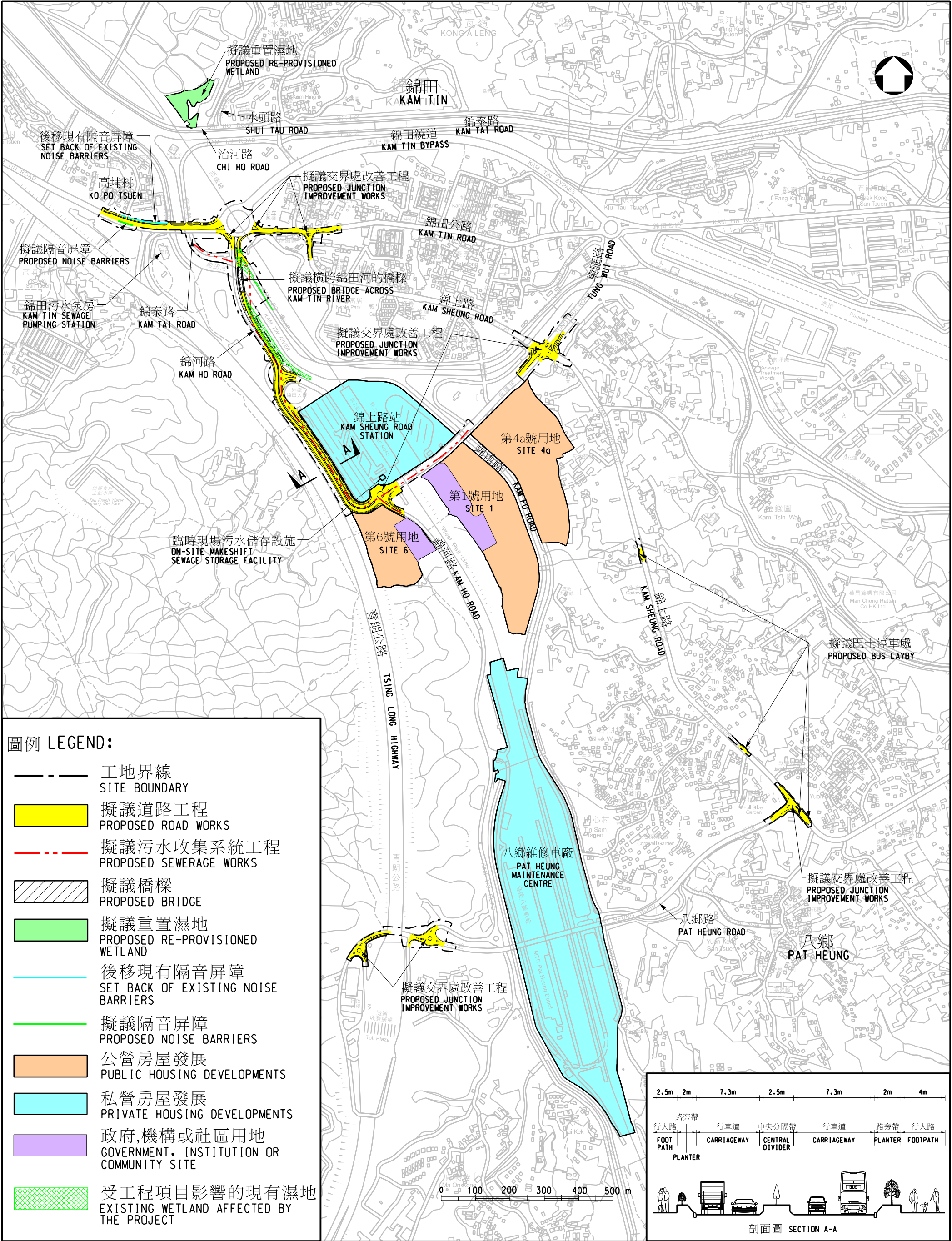
29. Of the 1 722 trees within the site boundary of the proposed works, 400 trees will be preserved. The proposed works will involve removal of 1 322 trees, including 1 286 trees to be felled and 36 trees to be replanted within the site of the proposed works. All the trees to be removed are not important trees⁶. We will incorporate planting proposals as part of the proposed works, including an approximate quantity of 315 trees and 5 742 whip trees.

30. We estimate that the proposed works will create about 230 jobs (180 for labourers and another 50 for professional or technical staff) providing a total employment of 7 300 man-months.

Development Bureau
May 2018

⁶ “Important trees” refer 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 25m.



工務計劃項目第804CL號
元朗錦田南發展計劃工地平整和基礎設施工程 - 前期工程
PWP ITEM NO.804CL
SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT AT
KAM TIN SOUTH, YUEN LONG - ADVANCE WORKS

平面圖
LAYOUT PLAN



工務計劃項目第804CL號

元朗錦田南發展計劃工地平整和基礎設施工程 - 擬議橫跨錦田河的橋樑的構思圖

PWP ITEM NO.804CL

SITE FORMATION AND INFRASTRUCTURE WORKS FOR DEVELOPMENT AT KAM TIN SOUTH, YUEN LONG
- ARTIST IMPRESSION OF PROPOSED BRIDGE ACROSS KAM TIN RIVER

Enclosure 3 to PWSC(2018-19)17

804CL – Site Formation and Infrastructure Works for Development at Kam Tin South, Yuen Long – Advance Works

Breakdown of the estimates for consultants' fee and resident site staff costs (in September 2017 prices)

			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	-	-	-	2.9
		Technical	-	-	-	2.7
					Sub-total	5.6#
(b)	Consultants' fees for environmental monitoring and audit programme (Note 3)	Professional	9	38	2.0	1.4
					Sub-total	1.4#
(c)	Resident site staff (RSS) costs (Note 4)	Professional	152	38	1.6	19.2
		Technical	797	14	1.6	35.0
					Sub-total	54.2
Comprising -						
(i)	Consultants' fees for management of RSS				2.0#	
(ii)	Remuneration of RSS				52.2#	
					Total	61.2

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of RSS supplied by the consultants. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost including the consultants' overheads and profit for the staff employed in the consultants' offices (as at now, MPS point 14 = \$27,485 per month and MPS point 38 = \$78,775 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the investigation, design and construction of the proposed works.

3. The actual man-months and actual fees will only be known after the consultants have been selected.
4. The actual man-months and actual costs will only be known after completion of the construction works.

Remarks

The cost figures in this Enclosure are shown in constant prices correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 8 of the main paper.

Enclosure 4 to PWSC(2018-19)17

804CL – Site Formation and Infrastructure Works for Development at Kam Tin South, Yuen Long – Advance Works

Breakdown of land acquisition cost

		\$ million
(I)	Estimated cost for land acquisition (resumption of private land)	5.32
(II)	Estimated cost for land clearance	0.28
	(a) Ex-gratia allowances for agricultural undertakings	0.18
	(b) Ex-gratia allowances for domestic occupiers	-
	(c) Ex-gratia allowances for business undertakings	-
	(d) Ex-gratia allowances for miscellaneous villager matters (Tun Fu ceremonies)	0.10
(III)	Interest and Contingency Payment	0.56
	(a) Interest payment on land compensation and ex-gratia allowances	-
	(b) Contingency on the estimated land acquisition cost	0.56
	Total	6.16
		(say 6.2)

Note

The above estimated land acquisition cost is based on the prevailing rates as at April 2018.