

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land Development

716CL – Tseung Kwan O further development – infrastructure works for Tseung Kwan O Stage 1 landfill site

Members are invited to recommend to the Finance Committee the upgrading of the remainder of **716CL** to Category A at an estimated cost of \$301.6 million in money-of-the-day prices.

PROBLEM

We need to carry out the remaining infrastructure works of **716CL**, entitled “Tseung Kwan O further development – infrastructure works for Tseung Kwan O Stage 1 landfill site” (the Project), in Tseung Kwan O (TKO) to enhance the pedestrian connectivity of TKO Area 68 and TKO Area 77, and facilitate recreational development in TKO Area 77.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Development, proposes to upgrade the remainder of **716CL** to Category A at an estimated cost of \$301.6 million in money-of-the-day (MOD) prices, for the construction of a footbridge, sewerage facilities and ancillary works for the Project.

PROJECT SCOPE AND NATURE

3. The remainder of **716CL** that we propose to upgrade to Category A, hereinafter referred to as “Remaining Works”, comprises –

- (a) construction of a footbridge with a length of about 150 metres (m) and a width of about 6 m, over the Eastern Channel connecting TKO Area 68 and TKO Area 77 (Southern Bridge);
- (b) construction of a sewage pumping station, a pair of sewage rising mains of about 560 m long and associated sewage pipes at LOHAS Park Road (Sewerage Facilities); and
- (c) ancillary works¹.

———— The location plans, layout plans and artist’s impressions of the proposed Remaining Works are at Enclosure 1.

4. Subject to funding approval of the Finance Committee (FC), we plan to commence the proposed Remaining Works in the second half of 2019 for completion in the second half of 2022.

/JUSTIFICATION

1 The ancillary works include landscaping works, seawall modification, footpath construction, drainage and utilities works, and related electrical and mechanical works.

JUSTIFICATION

5. We completed the “Further Development of Tseung Kwan O – Feasibility Study”² in December 2005 which recommended various infrastructures at the restored TKO Stage 1 landfill site³ (i.e. TKO Area 77) to support recreational development thereat⁴, including improvement of the linkage between the restored landfill site and adjacent areas such as TKO Town Centre South at TKO Area 68 and the development at TKO Area 86 (i.e. LOHAS Park). Phase 1 of the infrastructure works, comprising footpaths and cycle tracks along the toe of the restored landfill site and in TKO Town Centre South, and a combined pedestrian and cycle bridge (Northern Bridge) over the northern end of the Eastern Channel, was completed and opened for public use in April 2012.

6. TKO Area 77 is zoned primarily for recreational use in the approved TKO Outline Zoning Plan No. S/TKO/26. The proposed Southern Bridge is to enhance the pedestrian connectivity between the promenade areas on both sides of the Eastern Channel, i.e. TKO Area 68 and TKO Area 77, thereby facilitating recreational development at TKO Area 77. The proposed Southern Bridge will also enhance the pedestrian connectivity amongst the residential developments at TKO Town Centre South and LOHAS Park. The proposed Sewerage Facilities are to collect sewage from the recreational developments at TKO Area 77.

/FINANCIAL

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- 2 “Further Development of Tseung Kwan O - Feasibility Study” is a comprehensive planning study for further development of Tseung Kwan O with new developments mainly in Town Centre South, Tiu Keng Leng and Pak Shing Kok.
- 3 The Environmental Protection Department completed the restoration of TKO Stage 1 landfill site in 1999 and has since then been conducting environmental monitoring on the restored site for a period of 30 years. So far, all the monitoring results have complied with the relevant contract requirements.
- 4 The recreational developments include the existing Jockey Club Hong Kong Football Association Football Training Centre, the Wan Po Road Pet Garden, cycle tracks and promenade, as well as a water sports centre under planning.

FINANCIAL IMPLICATIONS

7. We estimate the cost of the proposed Remaining Works to be \$301.6 million in MOD prices, broken down as follows –

		\$ million (in MOD prices)
(a)	Southern Bridge	192.7
	(i) Main Bridge	140.6
	(ii) Ramp Structures	52.1
(b)	Sewerage Facilities	39.1
(c)	Ancillary works	3.6
(d)	Environmental mitigation measures	2.9
(e)	Consultants' fees for	5.6
	(i) contract administration	2.5
	(ii) management of resident site staff (RSS)	3.1
(f)	Remuneration of RSS	30.3
(g)	Contingencies	27.4
Total		<u>301.6</u>

8. We propose to engage consultants to undertake contract administration and site supervision of the Remaining Works. A detailed breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Enclosure 2.

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

Year	\$ million (MOD)
2019 – 20	8.4
2020 – 21	79.5
2021 – 22	100.0
2022 – 23	40.8
2023 – 24	41.8
2024 – 25	31.1
	<hr/>
	301.6
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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 2019 to 2025. We will deliver the proposed Remaining Works under a New Engineering Contract (NEC)⁵ form of contract with provision for price adjustments.

11. We estimate the annual recurrent expenditure arising from the proposed Remaining Works to be \$2.1 million.

/PUBLIC

5 NEC 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 collaboration for risk management between contracting parties.

PUBLIC CONSULTATION

12. For the proposed Southern Bridge, we consulted the Traffic & Transport Committee (T&TC) of Sai Kung District Council (SKDC) in 2013 and 2014. T&TC of SKDC supported the proposed Southern Bridge. For the proposed Sewerage Facilities, we consulted the Housing & Environmental Hygiene Committee (HEHC) of SKDC in 2014. HEHC of SKDC had no objection to the proposed Sewerage Facilities. Subsequently, we reported to SKDC on the latest development of the proposed Remaining Works on 6 November 2018. SKDC supported the proposed Remaining Works and urged for early commencement.

13. We gazetted the scheme of the proposed Southern Bridge under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 17 October 2014 and 24 October 2014 and received one objection⁶, which was ultimately an unresolved case with the objector. In this regard, the Chief Executive in Council authorised the proposed scheme of the Southern Bridge without modification on 21 September 2015, and the authorisation was gazetted on 25 September 2015 and 2 October 2015.

14. We gazetted the scheme of the proposed Sewerage Facilities under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) as applied by Section 26 of the Water Pollution Control (Sewerage) Regulation (Cap. 358AL) on 24 December 2014 and 2 January 2015, and no objection was received. The scheme was authorised on 30 April 2015, and the authorisation was gazetted on 30 April 2015 and 8 May 2015.

15. We consulted the Legislative Council Panel on Development on 22 January 2019 on the proposed Remaining Works. Members generally supported the proposed Remaining Works. Some Members enquired whether the construction cost of the Southern Bridge was comparable to that of other footbridges with similar nature. We provided supplementary information (LC Paper No. CB(1)1123/18-19(01)) to the Panel on Development on 28 May 2019 to address the enquiry.

/ENVIRONMENTAL

6 The objector queried the need for the proposed Southern Bridge, and requested shifting its alignment.

ENVIRONMENTAL IMPLICATIONS

16. The project is not a designated project (DP) under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). In September 2005, we completed an EIA report under Schedule 3 of the EIA Ordinance for “Further Development of Tseung Kwan O - Feasibility Study”⁷ which covered the proposed Remaining Works.

17. The EIA report concluded that the proposed Remaining Works would not cause long-term adverse environmental impacts. We will implement environmental mitigation measures recommended in the EIA report to control the short-term environmental nuisances during construction to within established standards and guidelines. These measures include the deployment of silt curtain, frequent watering of the site, provision of wheel-washing facilities, use of quiet-powered mechanical equipment and provision of temporary noise barriers, and use of temporary drains to discharge the surface run-off of sites. We will also implement landfill gas precautionary and protection measures as the proposed Remaining Works are located within the 250 m consultation zone of the TKO Stage 1 landfill. We have included a sum of \$2.9 million (in MOD prices) in the overall project estimate for implementation of these measures.

18. At the planning and design stages, we have reviewed the alignment, design level and construction method of the Remaining Works to minimise the generation of construction waste where possible. In addition, we will require the contractors to reuse inert construction waste (e.g. excavated soil and rock) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities⁸ (PFRF). We will encourage the contractors to maximise the use of recycled and recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

/19.

7 The study is a DP under schedule 3 of the EIA Ordinance requiring an EIA report. The Director of Environmental Protection approved the EIA report in December 2005.

8 PFRF are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste in PFRF requires a licence issued by the Director of Civil Engineering and Development.

19. At the construction stage, we will require the contractors to submit for approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. We will ensure that the day-to-day operations on site comply with the approved plans. We will require the contractors 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 construction waste and non-inert construction waste to PFRF and landfills respectively through a trip-ticket system.

20. We estimate that the proposed Remaining Works will generate in total 17 600 tonnes of construction waste. Of these, we will reuse about 6 240 tonnes (35.5%) of inert construction waste on site and deliver 10 760 tonnes (61.1%) of inert construction waste to PFRF for subsequent reuse. We will dispose of the remaining 600 tonnes (3.4%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRF and landfills is estimated to be about \$0.9 million for the proposed Remaining Works (based on a unit charge rate of \$71 per tonne for disposal at PFRF and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

21. We estimate that the proposed Remaining Works will generate 170 cubic metres of marine sediment which will be disposed of at a designated site to be allocated by the Marine Fill Committee (MFC) or other disposal sites to be agreed by the MFC and the Environmental Protection Department.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

23. The proposed Remaining Works do not require any land acquisition or clearance.

BACKGROUND INFORMATION

24. We upgraded **716CL** to Category B in September 2005.

25. In April 2009, FC approved the upgrading part of **716CL** to Category A as **743CL** “Tseung Kwan O further development – infrastructure works for Tseung Kwan O stage 1 landfill site (phase 1)” at an approved project estimate of \$168.9 million in MOD prices for the construction of footpaths and cycle tracks at TKO Stage 1 landfill site and TKO Town Centre South, and the Northern Bridge. **743CL** was completed and opened for public use in April 2012.

26. In October 2013, we engaged consultants to undertake the detailed design of the proposed Remaining Works at an estimated cost of \$7.7 million in MOD prices 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". The detailed design has been substantially completed.

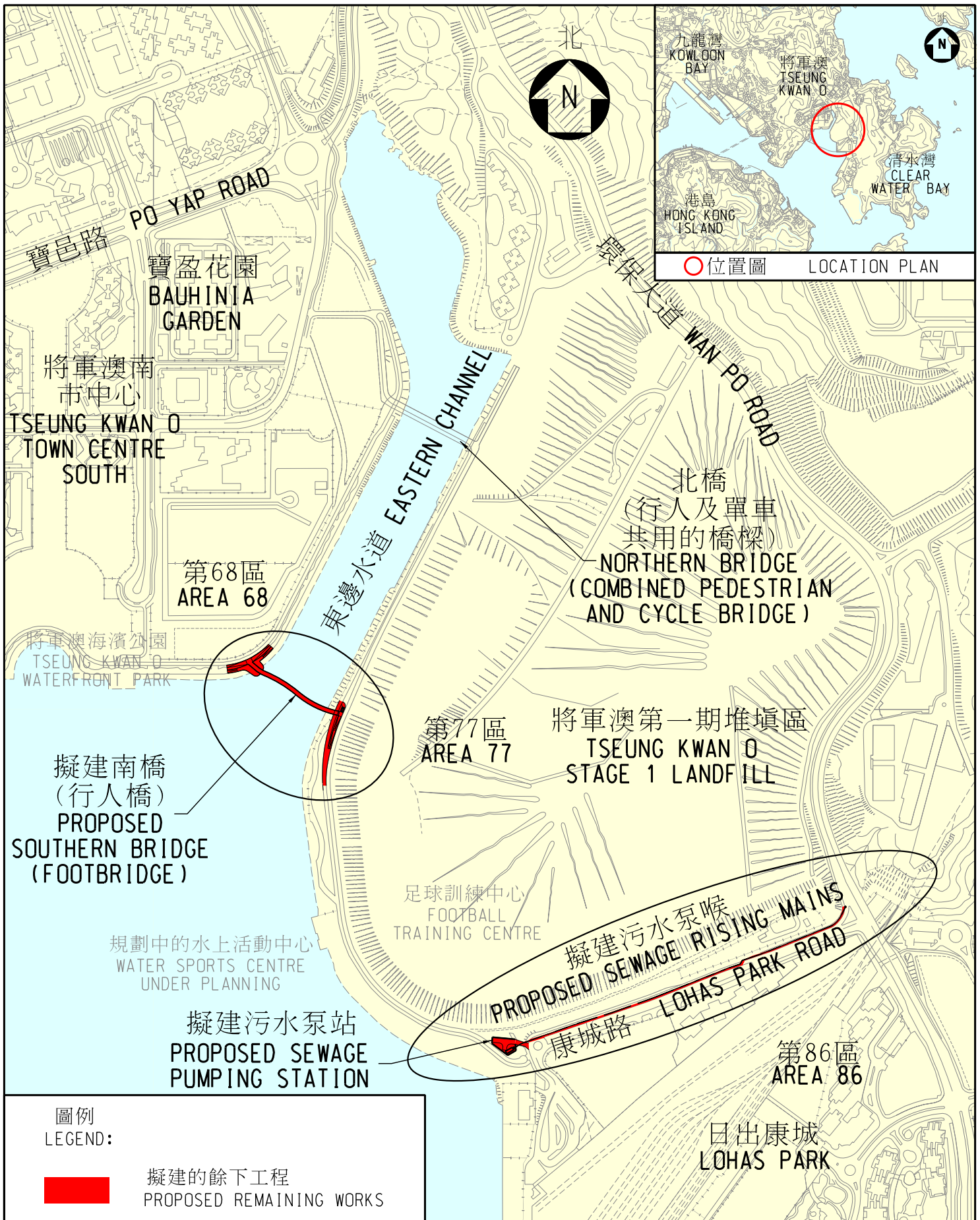
27. Of the 21 trees within the boundary of the proposed Remaining Works, 11 trees will be preserved. The proposed Remaining Works will involve removal of 10 trees. All trees to be removed are not important trees⁹. We will incorporate planting proposal as part of the project, including estimated quantities of about 10 trees and 3 500 shrubs.

28. We estimate that the proposed Remaining Works will create about 105 jobs (including 85 for labourers and another 20 for professional or technical staff) providing a total employment of 3 400 man-months.

Development Bureau
June 2019

9 “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 important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding forms (taking account of overall tree sizes, shapes and any special features), e.g. trees with curtain like aerial roots, trees growing in unusual habitats; or
- (e) trees with trunk diameter equal or exceeding 1.0 m (measured at 1.3 m above ground level), or with height or canopy spread of or exceeding 25 m.



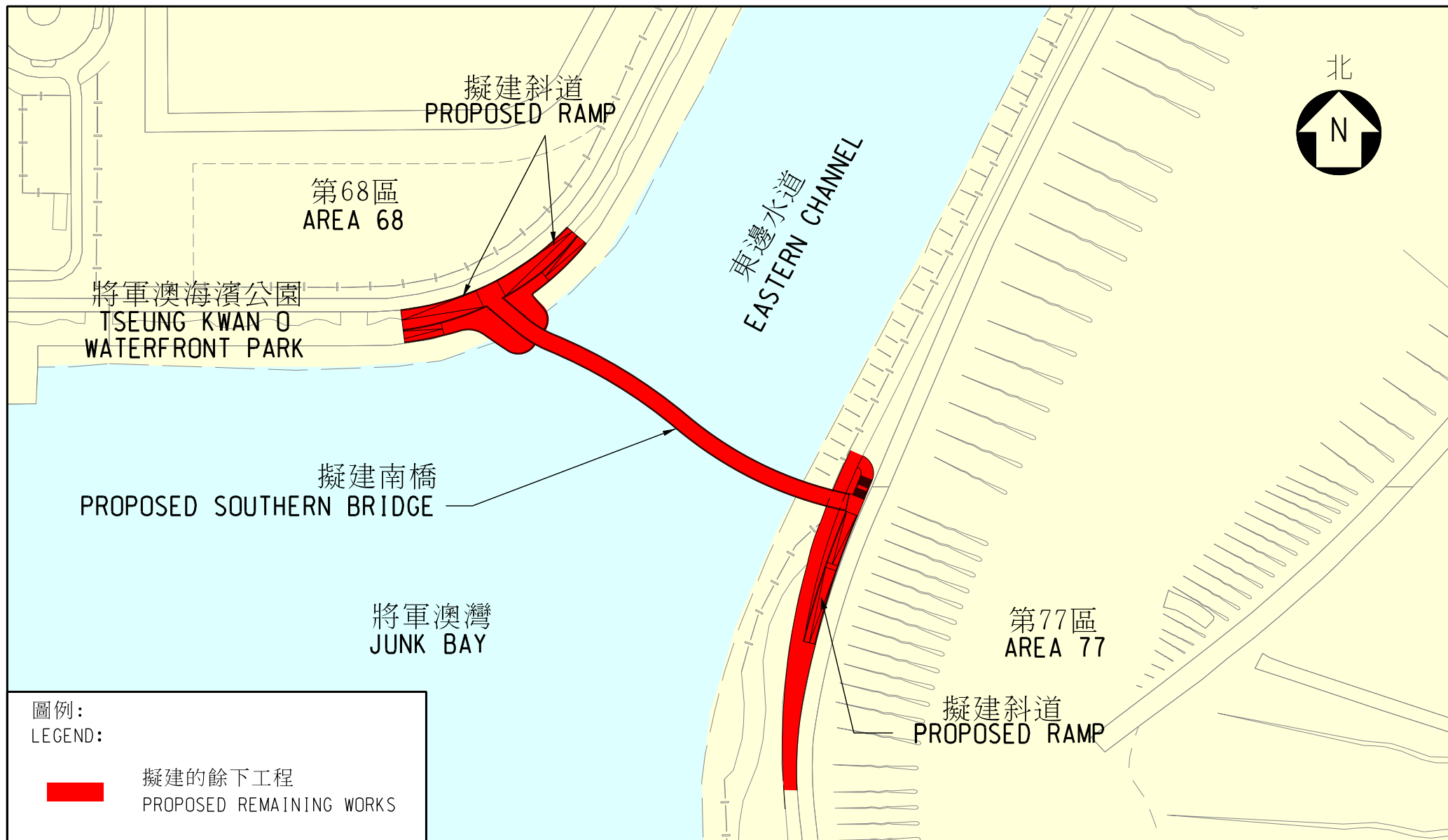
圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 -

將軍澳第一期堆填區基礎設施 - 餘下工程平面圖

PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT -

TSEUNG KWAN O STAGE 1 LANDFILL SITE - GENERAL LAYOUT OF REMAINING WORKS



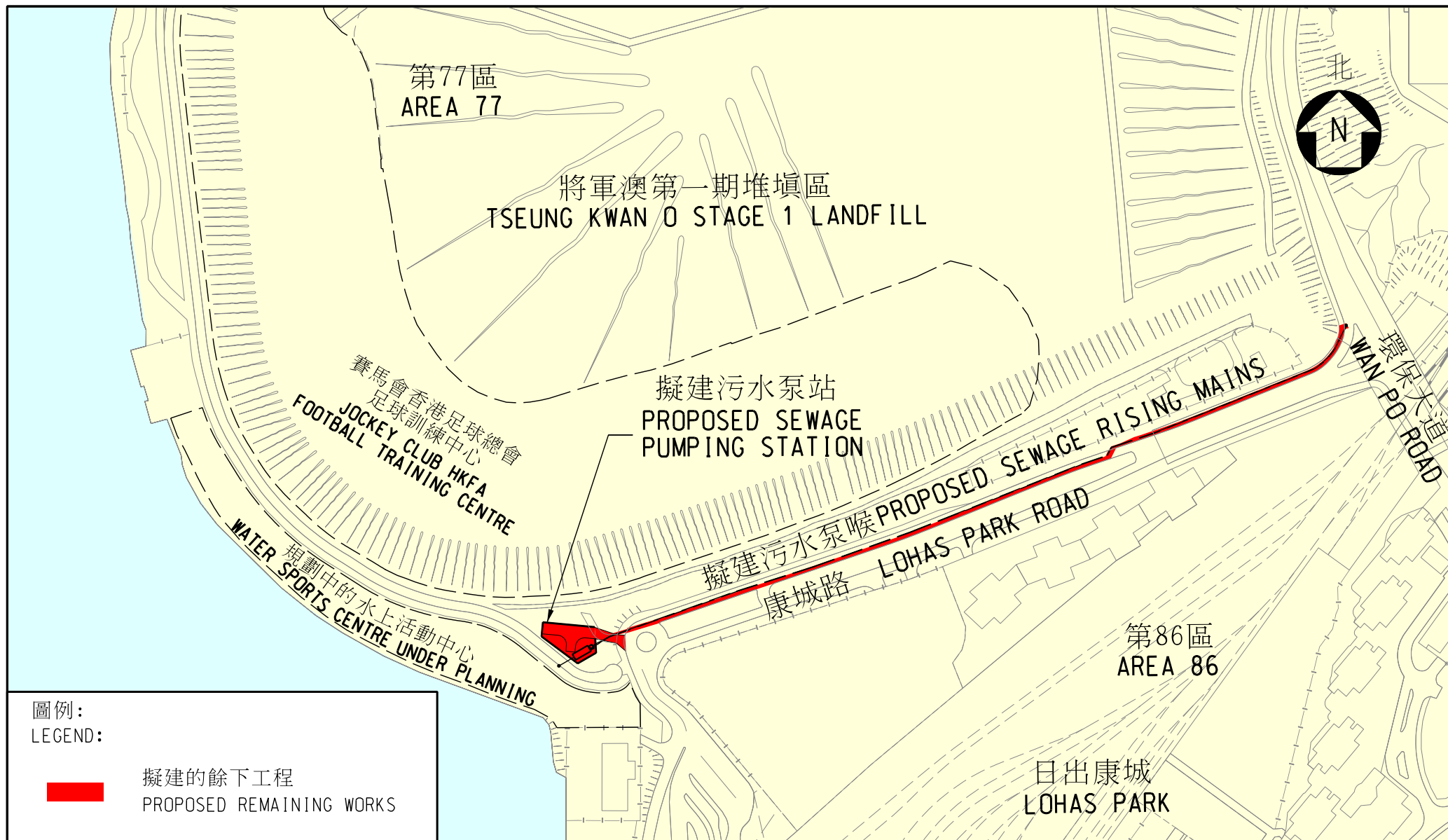
圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施 - 擬建南橋平面圖
PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT -
TSEUNG KWAN O STAGE 1 LANDFILL SITE - GENERAL LAYOUT OF PROPOSED SOUTHERN BRIDGE



圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施 - 擬建南橋構想圖 (只供參考)
 PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT -
 TSEUNG KWAN O STAGE 1 LANDFILL SITE - ARTIST'S IMPRESSION OF PROPOSED SOUTHERN BRIDGE
 (INDICATIVE ONLY)



圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施 -
擬建污水泵站及污水泵喉平面圖

PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE -
GENERAL LAYOUT OF PROPOSED SEWAGE PUMPING STATION AND RISING MAINS



圖則名稱 drawing title

工務計劃第716CL號 - 將軍澳進一步發展 - 將軍澳第一期堆填區基礎設施 -
擬建康城路污水泵站電腦模擬圖

PWP ITEM NO. 716CL - TSEUNG KWAN O FURTHER DEVELOPMENT - TSEUNG KWAN O STAGE 1 LANDFILL SITE -
PHOTOMONTAGE OF PROPOSED LOHAS PARK ROAD SEWAGE PUMPING STATION

**716CL – Tseung Kwan O further development – infrastructure works for
Tseung Kwan O Stage 1 landfill site**

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2018 prices)**

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$million)
(a)	Consultants' fees for					
(i)	Contract administration (Note 2)	Professional	—	—	—	1.5
		Technical	—	—	—	0.6
					Sub-total	2.1#
(b)	Resident site staff (RSS) costs (Note 3)	Professional	107	38	1.6	14.0
		Technical	313	14	1.6	14.4
					Sub-total	28.4
Comprising –						
(i)	Consultants' fees for management of RSS					2.6#
(ii)	Remuneration of RSS					25.8#
					Total	30.5

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants. (As at now, MPS salary point 38 = \$81,975 per month and MPS salary point 14 = \$28,725 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for design and construction of **716CL**. The construction phase of the assignment will only be executed subject to the Finance Committee's approval for upgrading of the remainder of **716CL** to Category A.
3. 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 to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 7 of the main paper.