ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land Development

- 747CL Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area
- 759CL First stage of site formation and engineering infrastructure at Kwu Tung North new development area and Fanling North new development area
- 828CL Remaining phase of site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area
- 793CL Site formation and infrastructure works for Police facilities in Kong Nga Po

HEAD 704 – DRAINAGE

Environmental Protection – Sewerage and Sewage Treatment 388DS – Shek Wu Hui Effluent Polishing Plant

HEAD 701 – LAND ACQUISITION

Civil Engineering – Land Acquisition

37CA – Special Ex-gratia Cash Allowance for the Kwu Tung North and Fanling North New Development Area

Members are invited to recommend to the Finance Committee -

- the upgrading of **747CL**, **759CL**, part of **828CL**, **793CL** and **388DS** to Category A at estimated costs of \$17,320.1 million, \$896.4 million, \$764.5 million, \$1,913.0 million and \$11,972.8 million in money-of-the-day (MOD) prices respectively;
- (b) an estimated total cost of \$732.6 million for Subhead 37CA under Head 701 Land Acquisition; and
- (c) the retention of the remainder of **828CL** in Category B.

PROBLEM

We need to commence infrastructural works starting from the second half of 2019 so that population intake for the Kwu Tung North ("KTN") and Fanling North ("FLN") New Development Area ("NDA") can start in 2023. We also need to start detailed design for the remaining phases of works so as to expedite the completion of the entire NDA. To clear land in time for the infrastructural works, we also need to set aside sufficient provision for payment of Special Ex-gratia Cash Allowance ("SEGCA") to eligible households.

2. There is a case to co-locate in Kong Nga Po police training facilities currently scattered in different parts of the North District so as to release existing or planned sites for police facilities within the NDA area for more beneficial uses. The existing Shek Wu Hui Sewage Treatment Works ("SWHSTW") is in need of expansion and upgrading to enhance its performance and to cope with additional sewage load from the NDA and other developments in the North District.

PROPOSAL

- 3. The Director of Civil Engineering and Development, with the support of the Secretary for Development (SDEV), proposes to upgrade the following projects to Category A
 - (a) **747CL** at an estimated cost of \$17,320.1 million in MOD prices for carrying out advance site formation and engineering infrastructure works to support the First Phase development of the KTN and FLN NDA ("Advance Works");
 - (b) **759CL** at an estimated cost of **\$896.4 million** in MOD prices for carrying out first stage site formation and engineering infrastructure works to support the First Phase development of the KTN and FLN NDA ("First Stage Works");
 - (c) part of **828CL** at an estimated cost of **\$764.5 million** in MOD prices for engaging consultants to undertake detailed design and site investigation for the Remaining Phase development of the KTN and FLN NDA ("Detailed Design"); and
 - (d) **793CL** at an estimated cost of **\$1,913.0 million** in MOD prices for carrying out site formation and engineering infrastructure works for co-location of police facilities at Kong Nga Po so as to free up sites within the KTN and FLN NDA for other uses ("KNP Works").
- 4. The Director of Drainage Services, with the support of the Secretary for Environment, proposes to upgrade **388DS** to Category A at an estimated cost of **\$11,972.8 million** in MOD prices for redeveloping the existing SWHSTW into Shek Wu Hui Effluent Polishing Plant ("SWHEPP") to cope with additional sewage treatment demand arising from the KTN and FLN NDA and other new developments in the North District and enhance its environmental performance.
- 5. The Director of Lands, with the support of SDEV, proposes an estimated total cost of \$732.6 million for Subhead 37CA under Head 701 Land Acquisition to meet payment of SEGCA to eligible households arising from the clearance for the KTN and FLN NDA.

BACKGROUND INFORMATION

Overview of KTN and FLN NDA

- 6. NDA projects in the New Territories, including the KTN and FLN NDA, form a core part of our multi-pronged land supply strategy in the medium and long term. After more than 10 years of planning, consultation and preparation, the funding applications in paragraphs 3 to 5 above, if approved by the Legislative Council ("LegCo"), will take the NDA project to the implementation stage land resumption and clearance, as well as construction for the First Phase development which will commence in a progressive manner from the second half of 2019.
- 7. Upon full development, the KTN and FLN NDA will provide a total of about 71 800 housing units (of which about 48 500 or nearly 70% are public housing), accommodating additional population of about 188 100; and provide about 868 000 square metres ("m²") floor areas for economic activities which together with proposed community uses will generate some 40 100 job opportunities. Population intake is expected to start in 2023, and infrastructure works to complete in 2031.
- 8. The KTN and FLN NDA will be implemented in two phases: First Phase and Remaining Phase. The entire development involves resumption of about 180 hectares ("ha") of private land under Land Resumption Ordinance (Cap. 124) and other legislation, as well as clearance of about 230 ha of government land. The resumption and clearance exercise will affect about 4 200 people in 1 500 households, and some 440 business undertakings (including brownfield operations).
- 9. For the First Phase development, we will resume about 68 ha of private land and clear about 100 ha of government land. The land resumption and clearance will affect about 445 households involving about 1 160 persons and some 3 482 domestic/non-domestic and ancillary structures. To tie in with the works programme, these 445 households will need to move out of existing squatters over a period of two years or so starting from the second half of 2019. About 141 business and industrial undertakings and 18 graves and two urns will also be cleared. We will offer various prevailing administrative ex-gratia allowances to affected eligible landowners and occupiers and, where eligible, rehousing arrangements to residents affected by clearances on an ex-gratia basis in accordance with the unified and enhanced general ex-gratia compensation and

rehousing ("C&R") arrangement announced by the Government in May 2018. The ex-gratia allowances will not affect those with legal interests to claim statutory compensations under the relevant ordinances instead.

10. Rey figures of the KTN and FLIN NDA are tabulated below -	10.	Key figures of the KTN and FLN NDA are tabulated below -
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	First Phase	Remaining	Entire
		Phase	Development
Housing yield	21 000 units	50 800 units	71 800 units
(public housing)	(18 000 units)	(30 500 units)	(48 500 units)
Floor areas for economic activities	102 500 m ²	765 500 m ²	868 000 m ²
Private lots to be resumed	68 ha	114 ha	182 ha
Government land to be cleared	100 ha	133 ha	233 ha
Households affected	445	1 062	1 507
Business undertakings affected	141	302	443
Infrastructural works programme	2019-2026	2024-2031	2019-2031

<u>Infrastructural Works for First Phase Development and Detailed Design for Remaining Phase Development</u>

The First Phase development comprises the Advance Works under **747CL** and First Stage Works under **759CL**. Specifically, it covers site formation and engineering infrastructure works (including drainage, sewerage, waterworks, landscaping works and slope works); construction of the Fanling Bypass (Eastern Section) connecting the FLN NDA to Fanling Highway, junction improvements, local roads and cycle tracks; establishment of the Long Valley Nature Park ("LVNP") and reprovisioning/enhancement of egretry sites as ecological mitigation measures; and reprovisioning of public facilities. Detailed justifications for the Advance Works and First Stage Works are provided at Enclosures 1 and 2 respectively.

/12.

12. In tandem with the implementation of the First Phase development, we will commence the Detailed Design for Remaining Phase under **828CL** to meet the target of completing all infrastructural works by 2031. The Remaining Phase covers the remaining site formation and engineering infrastructure works; construction of the Fanling Bypass (Western Section), Po Shek Wu Road Flyover, local roads and cycle tracks; and widening of Fanling Highway for connection to KTN NDA. Under the Detailed Design we will also review the land use or development intensity of six sites within the NDA area that are no longer required for their originally intended uses or where there may be room to intensify their development potential owing to changing circumstances, including the four sites to be freed up upon co-location of police facilities in Kong Nga Po as discussed in the following paragraph. Detailed justification for the Detailed Design is provided at Enclosure 3.

Co-location of Police Facilities at Kong Nga Po

Two sites within the KTN NDA are currently occupied by Police's firing range and helipad facilities, while another two sites within the FLN NDA have been reserved for reprovisioning existing police training facilities at Fan Garden near Fanling. Consolidating these police facilities in a single location can release four sites within the NDA for other more beneficial uses, while enhancing Police's operational efficiency. We propose to carry out site formation and engineering infrastructure as well as road improvement works under **793CL** for co-location of the police facilities at Kong Nga Po in the New Territories North. Detailed justification for the KNP Works is provided at Enclosure 4.

Shek Wu Hui Effluent Polishing Plant

14. The SWHSTW is currently a secondary sewage treatment plant with planned capacity expected to be fully utilised by 2022. To cope with projected additional sewage treatment demand arising from the KTN and FLN NDA and other new developments in the North District, we propose to redevelop the existing SWHSTW into an Effluent Polishing Plant ("SWHEPP") under 388DS to increase its treatment capacity and upgrade the sewage treatment level to tertiary standard. Detailed justification for SWHEPP is provided at Enclosure 5.

Estimated Total Cost for SEGCA Subhead

15. In July 2018, while endorsing the unified and enhanced general ex-gratia C&R package for government development clearance exercises

including the clearance for the KTN and FLN NDA, the Finance Committee ("FC") of LegCo agreed that the SEGCA arrangement should be retained as an additional option for eligible households affected by clearance for the NDA and accordingly approved the creation of a new **Subhead 37CA** under **Head 701** – **Land Acquisition**. We propose an estimated total cost of \$732.6 million for the approved new subhead to meet possible claims for SEGCA. Detailed justification is provided at Enclosure 6.

FINANCIAL IMPLICATIONS

16. We estimate that the total costs in MOD prices of the proposed works/detailed design are as follows:

(a)	747CL – Advance Works		\$ million (in MOD prices) 17,320.1
(b)	759CL – First Stage Works		896.4
(c)	828CL – Detailed Design		764.5
(d)	793CL – KNP Works		1,913.0
(e)	388DS – SWHEPP		11,972.8
		Total	32,866.8

- 17. We estimate the total cost of SEGCA for eligible households affected by the KTN and FLN NDA development to be \$732.6 million.
- 18. Apart from the proposed SEGCA provision, we estimate that the cost of land acquisition and payment of other ex-gratia payment for the First Phase development is about \$13,334.5 million, the annual cashflow of which will be charged to **Subhead 1100CA** of **Head 701 Land Acquisition** under Capital Works Reserve Fund (CWRF). The funding approval for block allocations under CWRF for each financial year will be separately sought per established procedures (Paper No. PWSC(2018-19)35).

WAY FORWARD

19. Subject to Members' comments, we plan to seek the approval of FC as soon as possible so that land resumption and clearance as well as infrastructural works for the First Phase development can commence starting from the second half of 2019. Meanwhile, we will continue to make preparations for land resumption and clearance for the First Phase development. A summary of progress with such preparation work is at the Annex.

Development Bureau February 2019

747CL – Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

PROJECT SCOPE AND NATURE

The proposed scope of works under **747CL** (the "Advance Works") comprises –

- (a) site formation of about 70 hectares ("ha") of land (including soil treatment works) in the Kwu Tung North ("KTN") and Fanling North ("FLN") New Development Area ("NDA");
- (b) construction of the Fanling Bypass (Eastern Section) ("FLBP(E)") of about 4 kilometres ("km") long, which is a dual two-lane carriageway connecting the FLN NDA to Fanling Highway, about 10 km of local roads and about 10 km of footpaths, and about 4 km cycle tracks within the NDA area, and associated junction/road improvements;
- (c) engineering infrastructure works including drainage, sewerage (including two sewage pumping stations), waterworks (including a fresh water service reservoir of about 27 500 cubic metres ("m³") capacity and a flushing water service reservoir of about 11 500 m³ capacity in the KTN NDA), landscaping works and slopeworks;
- (d) part expansion and upgrading of Shek Wu Hui Sewage Treatment Works ("SWHSTW") to increase its treatment capacity by 20 000 m³ per day;
- (e) reprovisioning works; and

- (f) implementation of environmental mitigation measures and environmental monitoring and audit ("EM&A") programme for the works mentioned in paragraphs (a) to (e) above.
- 2. Layout plans showing the scope of Advance Works are at Annex 1 to this Enclosure. Details of the proposed FLBP(E), Lung Yeuk Tau Interchange of FLBP(E), two sewage pumping stations, two service reservoirs, and junction improvement at Pak Shek Au are at Annexes 2 to 6 to this Enclosure respectively.
- 3. Subject to funding approval of the Finance Committee ("FC") of the Legislative Council ("LegCo"), we plan to commence construction of the Advance Works in the third quarter of 2019 for completion in end 2026. To meet the works programme, the Civil Engineering and Development Department ("CEDD") will invite tenders for the works contracts from February 2019 progressively, but the works contracts will only be awarded upon obtaining funding approval from the FC.

JUSTIFICATION

4. The KTN and FLN NDA will be implemented in two phases: First Phase and Remaining Phase. As part of the First Phase development, we will under the Advance Works form about 70 ha of land for housing, commercial, community and other developments from 2022 onwards. The soil in the KTN NDA contains naturally-occurring arsenic material. Notwithstanding the negligibly low risk associated with this natural material as concluded in the Environmental Impact Assessment ("EIA") report for the North East New Territories NDAs Planning and Engineering Study ("NENT NDAs Study")¹, which was approved with conditions under the Environmental Impact Assessment Ordinance ("EIAO") (Cap. 499) in October 2013, we will fully comply with the recommendations and approval conditions of the EIA report in carrying out the soil treatment works for hotspots with high levels of arsenic.

/5.

The North East New Territories New Development Areas Planning and Engineering Study was a planning and engineering study to establish a planning and development framework for the KTN, FLN and Ping Che/Ta Kwu Ling NDAs.

- 5. To cope with additional road-based traffic demand arising from the NDA development and divert existing traffic of Sha Tau Kok Road away from Fanling/Sheung Shui Town Centre to upkeep the traffic condition at acceptable level there, we will construct the FLBP(E) connecting the FLN NDA to the Fanling Highway. Other road works include construction of local roads and cycle tracks within the NDA area, and other improvement works to enhance the performance of junctions at the existing road network. We will also build new drainage, sewerage and water supply systems for the NDA through construction of drainage facilities, sewage pumping stations with associated sewers, as well as watermain distribution networks and fresh water and flushing water reservoirs.
- 6. Under the Advance Works, we have budgeted for the partial expansion and upgrading of existing SWHSTW to increase its treatment capacity by 20 000 m³ per day to cope with projected sewage treatment demand arising from the First Phase development. The works will be carried out by the Drainage Services Department together with the expansion and upgrading works for converting SWHSTW into an effluent polishing plant under the works contracts of 388DS Shek Wu Hui Effluent Polishing Plant (please see Enclosure 5).
- 7. We will reprovision under the Advance Works several public facilities affected by the NDA development and its associated engineering infrastructure works, including the North District Temporary Wholesale Market for Agricultural Products, the On Lok Mun Street Playground and a bus-bus interchange at Fanling Highway.
- 8. To tie in with the NDA development, timely completion of the engineering infrastructure works as well as formation of the land parcels is necessary. Upon completion, the formed land will be handed over by phases to relevant parties for housing and other developments, and the infrastructure works will be handed over to relevant government departments for management and maintenance.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the Advance Works to be \$17,320.1 million in money-of-the-day ("MOD") prices (please see paragraph 11 below), broken down as follows –

\$ mill	ion
(in MOD	prices)

(a)		formation works for 70 ncluding soil treatment s)		2,241.1
	(i) (ii)	site formation works soil treatment works	1,493.5 747.6	
	(b)	Construction of roads and associated junction/road improvements		5,906.6
	(i)	4-km dual carriageway FLBP(E)	4,296.3	
	(ii)	10-km local roads	185.9	
	(iii)	10-km footpaths and 4-km cycle tracks	89.1	
	(iv)	junction improvement works	888.2	
	(v)	others	447.1	
	(c)	Engineering infrastructure works		3,312.0
	(i)	drainage	352.4	
	(ii)	sewerage	550.1	
	(iii)	waterworks	503.9	
	(iv)	landscaping works	695.6	
	(v)	slopeworks	1,210.0	
	(d)	Part expansion and upgrading of SWHSTW		1,225.4
	(e)	Reprovisioning works		349.7
	(f)	Environmental mitigation measures and EM&A programme		1,389.3

			\$ million (in MOD prices)
(g)	Consultants' fees		107.3
(i)	contract administration	57.8	
(ii)	management of resident site staff ("RSS")	21.9	
(iii)	EM&A programme	27.6	
(h)	Remuneration of RSS		1,214.4
(i)	Contingencies		1,574.3
	Total		17,320.1

10. We propose to engage consultants to undertake contract administration and site supervision for the Advance Works. A detailed breakdown of the estimates for consultants' fees and RSS costs by man-months is at Annex 7 to this Enclosure.

11. Subject to funding approval, we plan to phase the expenditure as follows -

Year	\$ million (MOD)
2019-2020	125.9
2020-2021	1,574.5
2021-2022	3,338.6
2022-2023	4,082.3
2023-2024	3,042.2
2024-2025	1,833.3

Year	\$ million (MOD)
2025-2026	1,225.6
2026-2027	1,025.3
2027-2028	903.8
2028-2029	168.6
	17,320.1
	

- 12. 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 for the period from 2019 to 2029. Subject to funding approval, we will deliver the Advance Works under contracts using the New Engineering Contract ("NEC") form² with provision for price adjustments.
- 13. We estimate the annual recurrent expenditure arising from the Advance Works to be about \$124.7 million.

PUBLIC CONSULTATION

Planning of the NENT NDAs resumed in 2008 when Government commissioned the NENT NDAs Study. Following a three-stage public engagement exercise, the NENT NDAs Study was completed in 2013. In July of the same year, the Government decided to take forward the KTN and FLN NDA. The draft Outline Zoning Plans ("OZPs"), gazetted in December 2013, received more than 53 000 representations and comments. In April 2015, the Town Planning Board decided not to amend the draft OZPs. In June 2015, the Chief Executive in Council approved the draft OZPs.

/15.

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

15. We gazetted in December 2015 and January 2016 the proposed road schemes for the Advance Works and First Stage Works respectively (the "Road Schemes") under the Roads (Works, Use and Compensation) Ordinance (Cap. 370), as well as the proposed sewerage scheme for the Advance Works (the "Sewerage Scheme") under Cap. 370 as applied by the Water Pollution Control (Sewerage) Regulation (Cap. 358AL). Later, in two consecutive weeks of November 2016, we gazetted amendments to the Road Schemes (the "Amendment Road Schemes") and the Sewerage Scheme (the "Amendment Sewerage Scheme") to address objectors' concerns and accommodate design development. A large number of objections were received in each of the two gazettals, and the compensation and rehousing ("C&R") arrangement was amongst the key concerns. Following the announcement of the unified and enhanced general ex-gratia C&R package in May 2018, we briefed stakeholders and provided information of the enhanced C&R package to objectors who expressed concerns on the C&R arrangement during the statutory objection period of the above two gazettals.

16. The following table summarises the number of objections received following gazettal of the Road Schemes, Amendment Road Schemes, Sewerage Scheme and Amendment Sewerage Scheme, as well as objections withdrawn following objection resolving meetings between Government and objectors and/or provision of relevant information:

		Advanc	e Works		First St	age Works
	Road Scheme	Amendment Road Scheme	Sewerage Scheme	Amendment Sewerage Scheme	Road Scheme	Amendment Road Scheme
Objections received after gazettal (a) (through standard letter)	5 932 (5 725)	5 501 (4 363)	5 757 (5 725)	5 048 (4 363)	5 760 (5 725)	4 536 (4 363)
Objections withdrawn* (b)	52	34	43	28	43	28
Objections unresolved (a)-(b)	5 880	5 467	5 714	5 020	5 717	4 508

^{*}The figure represents the cumulative number of objections withdrawn following objection resolving meetings in 2016 and 2017, and provision of information of the unified and enhanced general ex-gratia C&R package in 2018.

- 17. The unresolved objections were mainly related to the overall planning and development of the KTN and FLN NDA, resumption of land affected by the proposed works, C&R arrangement for affected villagers, as well as health risks, environmental and traffic impacts arising from the proposed works. In November 2018, the Chief Executive in Council authorised the works as well as the associated modification³. The notices of authorisation were gazetted in December 2018.
- 18. Since the announcement of the implementation of NDAs development in July 2013, we have been continuously engaging the stakeholders (such as LegCo Members, relevant District Councils, Rural Committees), as well as the affectees (including residents' groups and concern groups) to listen to and understand their views on the NDA project on various occasions. In particular, taking the opportunity of announcement of the unified and enhanced general ex-gratia C&R arrangement in May 2018, we have been meeting with the relevant stakeholders and affectees not only to brief them on the enhanced ex-gratia C&R package but also to address their concerns on the NDA project.
- In June 2018, while rendering support to the enhanced ex-gratia C&R package, the North District Council ("NDC") also endorsed the implementation of the KTN and FLN NDA. In addition, further to the support of the Traffic and Transport Committee of the Tai Po District Council ("TPDC T&TC") to the Advance Works given at the meeting in September 2015, we updated the TPDC T&TC in November 2018 regarding the proposed works on the connection of the FLBP(E) to Fanling Highway under the Advance Works and received no objection.
- 20. We consulted the LegCo Panel on Development in January 2019. Most Members supported the submission of funding applications in relation to the KTN and FLN NDA to the Public Works Subcommittee for consideration. Members also expressed views on a number of issues including the traffic impact brought by the additional population; the commissioning of the proposed Kwu Tung Station and Northern Link; C&R arrangements for affected villagers, farmers and business operators; relocation of elderly homes at the Dills Corner Garden; rehabilitation arrangements for farmers; availability of assistance to brownfield operators to relocate their business; and handling of pet animals.

/21.

The modification for the Amendment Road Scheme of the Advance Works involves the reduction of the works area of about 44 m² and deletion of land resumption area of about 1 921.2 m² in FLN NDA.

21. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures⁴ on the proposed aesthetic design of the major highway structures of the Advance Works. The Committee accepted the proposed aesthetic design at its meetings in April, June and August 2018.

ENVIRONMENTAL IMPLICATIONS

- 22. The NENT NDAs Study is a Designated Project ("DP") under Schedule 3 of the EIAO (Cap. 499). Some of the proposed works under the NENT NDAs are DPs under Schedule 2 of the EIAO and Environment Permits ("EPs") are required for their construction and operation.
- 23. In October 2013, the EIA report for the NENT NDAs was approved with conditions under the EIAO. The relevant EPs for construction and operation were issued in November 2013. The EIA report concluded that the environmental impacts of the NENT NDAs can be controlled to within the criteria under the EIAO and the Technical Memorandum on EIA Process. implement the measures recommended in the approved EIA report, and comply with the relevant conditions under the EPs. Key measures to be implemented in the First Phase development include soil treatment works for hotspots identified with high level of arsenic, noise barriers on the FLBP(E) and other road sections, and odour control measures for SWHSTW under the Advance Works, as well as ecological mitigation measures to develop the 37-ha nature park at Long Valley to compensate for wetland loss in the KTN and FLN NDA; and enhancement of egretry sites under the First Stage Works. We have included the cost of implementing the environmental mitigation measures as well as the EM&A programme in the overall project estimates for Advance Works and First Stage Works.

/24.

The Advisory Committee on the Appearance of Bridges and Associated Structures, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, the Architectural Services Department, the Highways Department, the Housing Department, the CEDD, and architectural or relevant faculties from local institutions, 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.

- 24. For controlling the short-term environmental impacts caused by the proposed works during construction, we will incorporate the recommended mitigation measures and implementation of EM&A programme into the relevant works contracts to control environmental impacts arising from the construction works to comply with established standard and guidelines. These measures include regular watering of exposed site area to reduce emission of fugitive dust, the use of movable noise barriers and of quiet plant to reduce noise generation, and the use of trucks with cover or enclosed containers for waste transportation.
- 25. At the planning and design stages, we have considered all the proposed works and construction sequences to reduce generation of construction waste where possible. In addition, we will require the contractors to reuse inert construction waste (e.g. excavated soil) 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 facilities ("PFRF")⁵. We will encourage the contractors to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.
- 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 plan. We will require the contractors to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of construction waste through a trip-ticket system.
- We estimate that the Advance Works and the First Stage Works will generate in total about 7 025 800 tonnes⁶ of construction waste. Of these, we will reuse about 6 195 600 tonnes (about 88%) of inert construction waste on the sites under the Advance Works and the First Stage Works and temporarily

/stockpile

Public fill reception facilities ("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.

The figure is approximate only and could only be confirmed after land resumption/clearance.

stockpile about 677 600 tonnes (about 10%) of inert construction waste for subsequent reuse mainly in the Remaining Phase of the KTN and FLN NDAs development. We will dispose of the remaining 152 600 tonnes (about 2%) of non-inert construction waste at landfills. The total cost for disposal of the construction waste at landfills is estimated to be about \$30.48 million for the Advance Works and the First Stage Works (based on a unit charge rate of \$200 per tonne for disposal at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N))⁷.

TRAFFIC IMPLICATIONS

- 28. We completed a traffic impact assessment which showed that the traffic impact due to planned population intake of the First Phase of the NDA development would be reasonably mitigated with commissioning of FLBP(E) and local junction improvement works mentioned in paragraph 5 above.
- 29. The traffic impact of the First Phase of the NDA development during the construction stage will also be manageable. Temporary traffic arrangements ("TTAs") will be implemented to facilitate the construction works. We will establish a Traffic Management Liaison Group ("TMLG") comprising representatives of the CEDD, the Transport Department, the Hong Kong Police Force and other stakeholders to discuss, scrutinise and review the TTAs proposed by the contractors with a view to minimising traffic impact arising from the Advance Works and the First Stage Works. We will maintain close contact with the TMLG members as well as the relevant District Offices, relevant District Councils, various public transport operators and utility undertakers. We will also consult relevant District Councils prior to the implementation of major TTAs for In addition, we will set up a telephone hotline to respond the First Phase works. to public enquiries or complaints.

/LAND

Breakdown of the waste generation, proposed treatments and disposal costs for the Advance Works and First Stage Works:

		Total (tonnes)	Reuse of inert construction waste on sites (tonnes)	Temporarily stockpiling of inert construction waste (tonnes)	Disposal of non-inert construction waste at landfills (tonnes)	Disposal cost
(a)	7747CL	6 976 600	6 153 300	671 600	151 700	\$ 30.3
			(88%)	(10%)	(2%)	million
(b)	7759CL	49 200	42 300	6 000	900	\$ 0.18
			(86%)	(12%)	(2%)	million
	Total	7 025 800	6 195 600	677 600	152 600	\$ 30.48
						million

LAND ACQUISITION

- 30. We have reviewed the design of the Advance Works and the First Stage Works to minimize the extent of land acquisition. We will resume about 68 ha of private land and clear about 100 ha of government land for **747CL** and The land resumption and clearance will affect about 445 households involving about 1 160 persons and some 3 482 domestic/non-domestic and ancillary structures. About 141 business and industrial undertakings and 18 graves and two urns have to be cleared. We will offer various prevailing administrative ex-gratia allowances to affected eligible landowners and occupiers and, where eligible, rehousing arrangements to residents affected by clearances on an ex-gratia basis in accordance with the unified as well as enhanced ex-gratia C&R arrangement announced by the Government in May 2018. The ex-gratia allowances will not affect those with legal interests to claim statutory compensations under the relevant ordinances instead.
- 31. We will charge the cost of land resumption and clearance for **747CL** and **759CL** estimated at about \$13,334.5 million to **Head 701 Land Acquisition**. A breakdown of the land acquisition cost is at Annex 8 to this Enclosure. The annual cashflow will be sought separately according to established procedures together with other block allocation subheads under the Capital Works Reserve Fund. In addition, we estimate the total cost of Special Ex-gratia Cash Allowance for eligible households affected by the KTN and FLN NDAs development to be \$732.6 million. Approval for this allocation is sought via Enclosure 6.

HERITAGE IMPLICATIONS

- 32. We have completed a cultural heritage assessment under the EIA for the NENT NDAs. It concluded that the NDA development would 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 ("AMO").
- 33. However, part of the Site of Archaeological Interest identified by the AMO at Sheung Shui Wa Shan would be affected by the Advance Works. When the construction details for the proposed works in the concerned site are

/formulated

formulated, we will require the contractors to conduct an Archaeological Impact Assessment to determine the need for archaeological follow up actions in the impacted area before commencement of any construction works according to the EIA report. For areas with medium archaeological potential identified during the EIA study which would be affected by the Advance Works, but surveys could not be conducted before land resumption, we will also conduct the assessment before commencement of any construction works, and recommend mitigation measures if necessary, according to the EIA report.

34. For the First Phase development, we will comply with the recommendations of the EIA report to carry out a baseline condition survey and baseline vibration impact assessment for identified built heritage adjacent to the works sites before commencement of the works and to evaluate if construction vibration monitoring and structural strengthening measures are required during construction to safeguard compliance with the vibration standard stated in the EIA report.

BACKGROUND INFORMATION

- 35. We upgraded **747CL** to Category B in September 2010.
- 36. In June 2014, the FC approved upgrading of part of **747CL** to Category A as **772CL** as "Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area detailed design and site investigation" at an approved project estimate of \$340.8 million in MOD prices for engaging consultants to undertake the detailed design and site investigation for the Advance Works. We have substantially completed the detailed design of the Advance Works.
- 37. Of the 8 647 trees within the boundary of the Advance Works, 1 838 trees will be preserved, whereas 6 809 trees will be affected, including 6 644 trees to be felled and 165 trees to be transplanted. Among the above, 10 important

/trees

trees⁸ will be affected and the proposed treatments to these important trees are at Annex 9 to this Enclosure. We will incorporate planting proposals as part of the Advance Works, including about 1 452 trees, 5 470 whips and 140 200 shrubs as compensatory planting⁹.

38. We estimate that the Advance Works will create about 2 200 jobs (1 780 for labourers and 420 for professional/technical staff) providing a total employment of about 168 600 man-months

Development Bureau February 2019

⁸ "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;

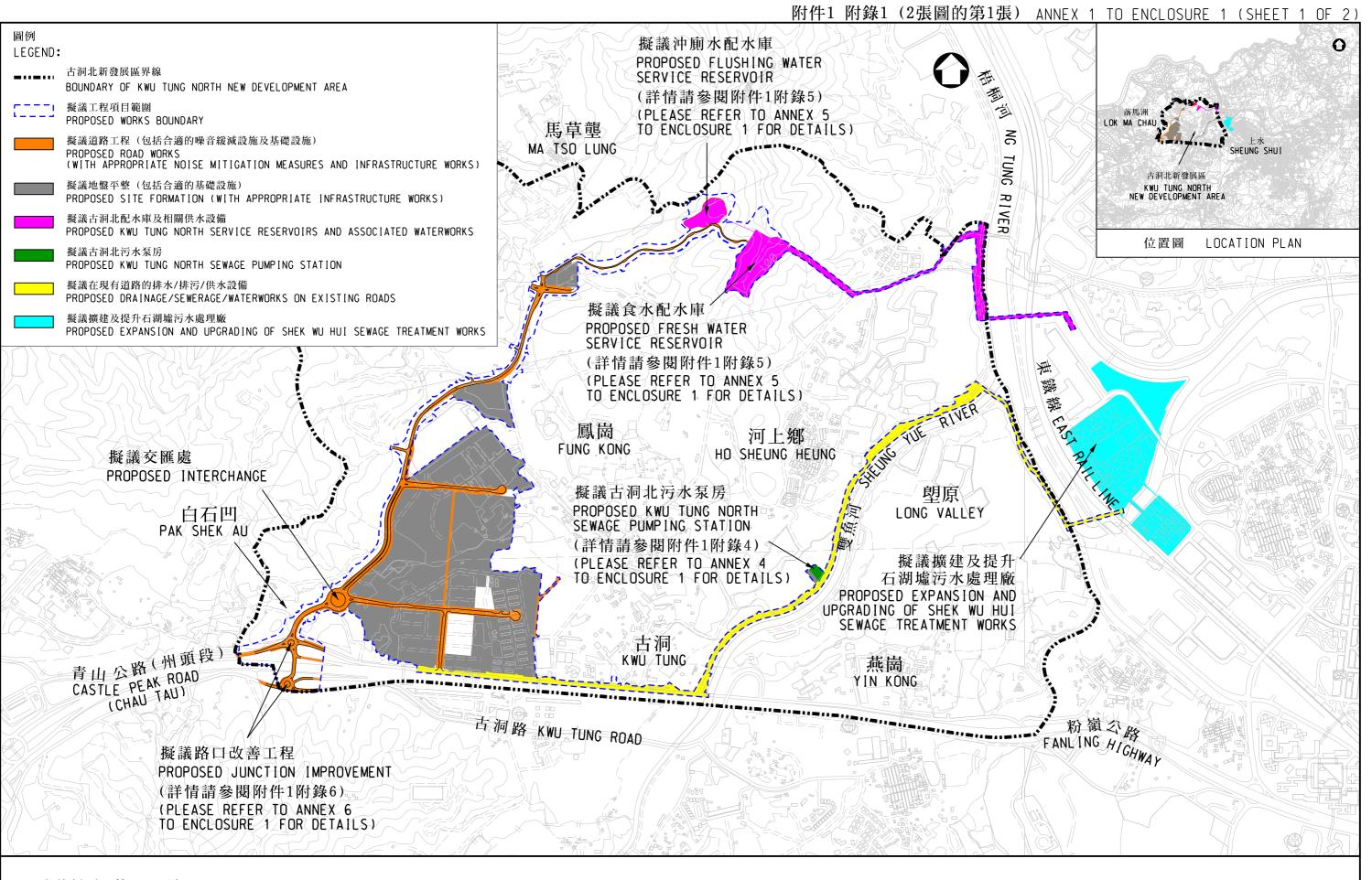
⁽b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;

⁽c) trees of precious or rare species;

⁽d) trees of outstanding form (taking account of 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 trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with height/canopy spread equal to or exceeding 25 m.

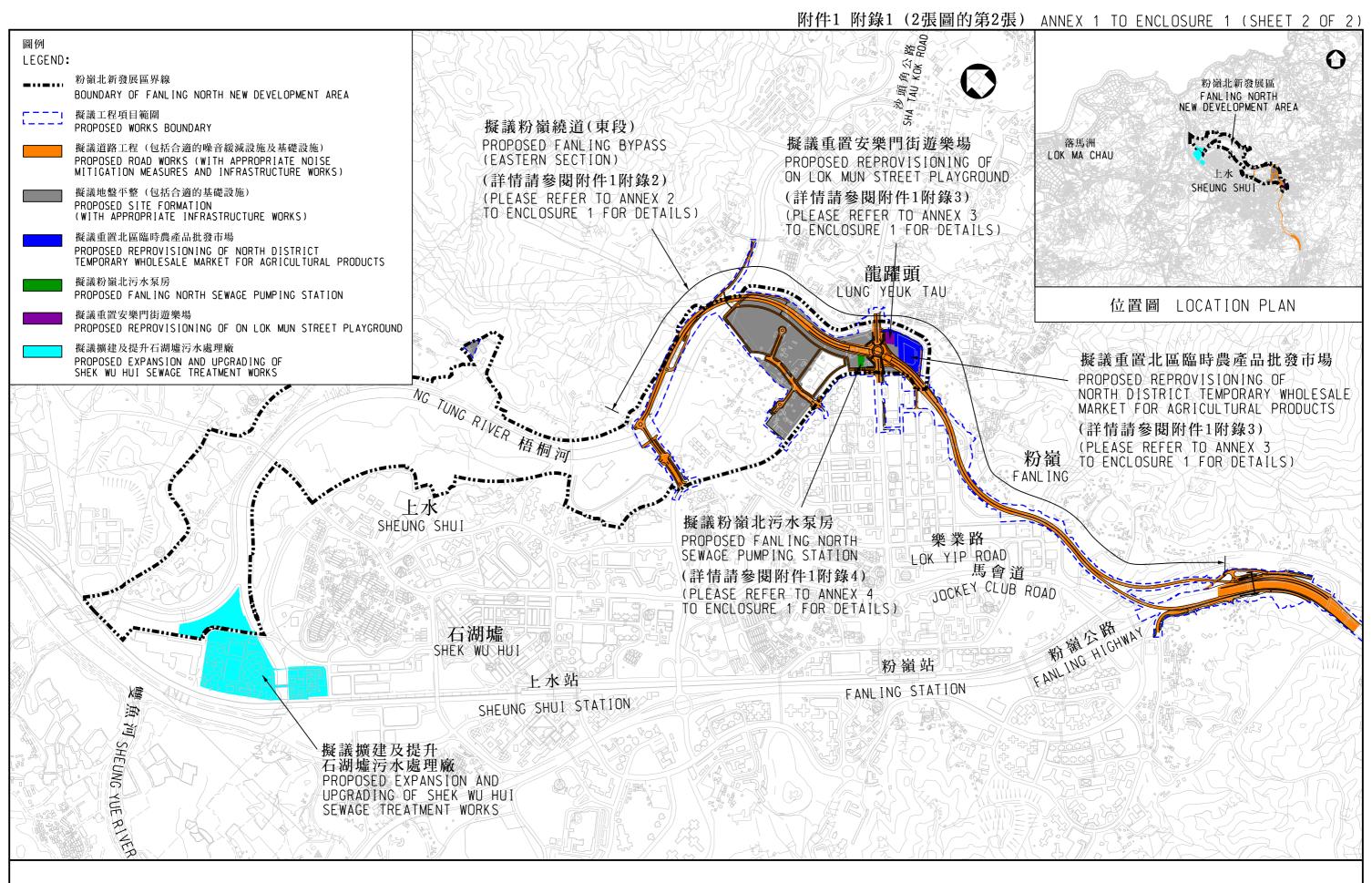
The figures are approximate only and could only be confirmed after land resumption/clearance.



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-平面圖(古洞北新發展區)

PWP ITEM NO. 747CL

ADVANCE SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (KWU TUNG NORTH NEW DEVELOPMENT AREA)



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-平面圖(粉嶺北新發展區)

PWP ITEM NO. 747CL

ADVANCE SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (FANLING NORTH NEW DEVELOPMENT AREA)



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-擬議粉嶺繞道(東段)的平面圖及構思圖

PWP ITEM NO. 747CL

ADVANCED SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN AND ARTISTIC IMPRESSION OF THE PROPOSED FANLING BYPASS (EASTERN SECTION)



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-擬議粉嶺繞道(東段)龍躍頭交匯處的平面圖及構思圖

PWP ITEM NO. 747CL

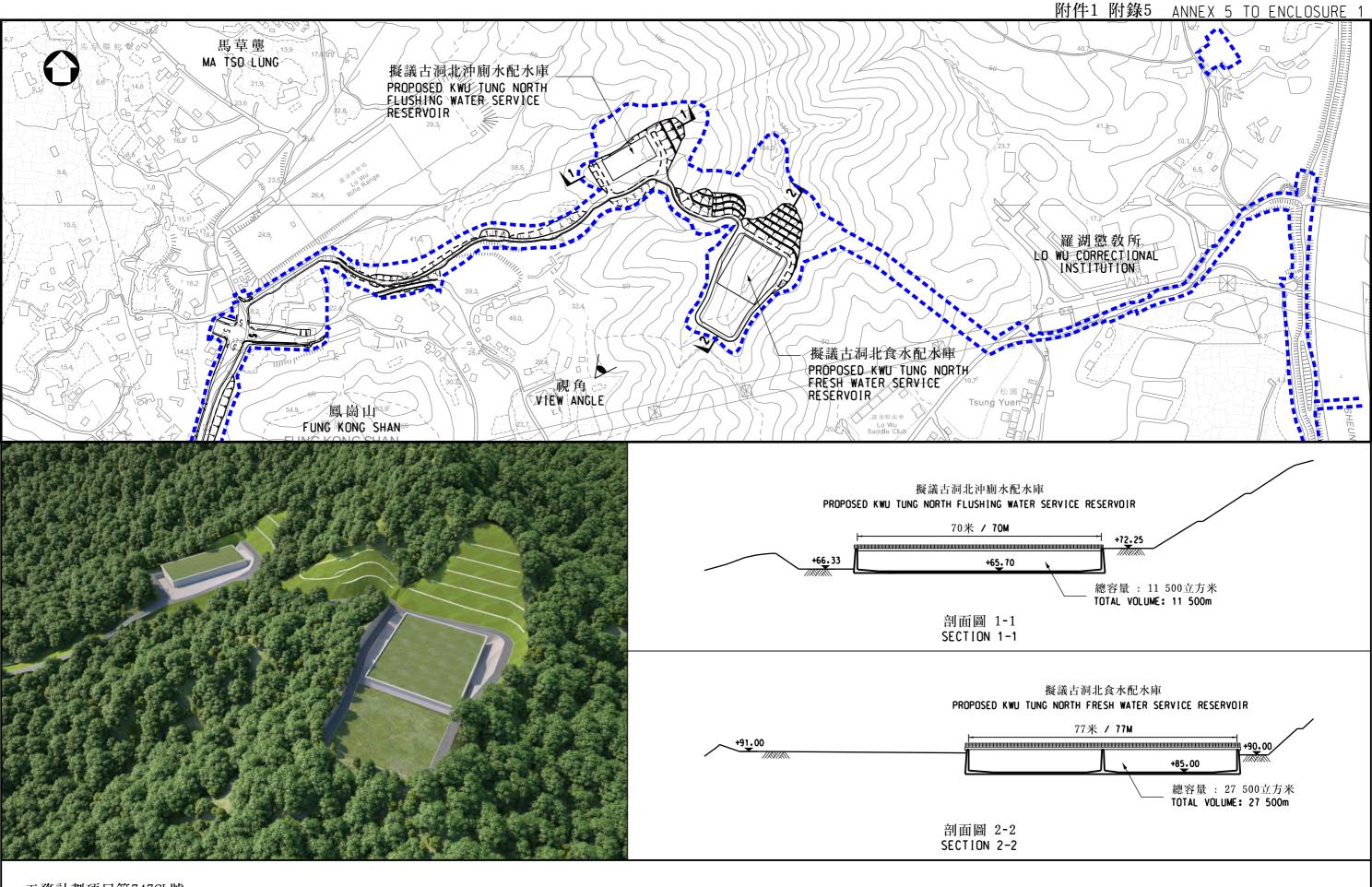
ADVANCED SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN AND ARTISTIC IMPRESSION OF PROPOSED LUNG YEUK TAU INTERCHANGE OF FANLING BYPASS (EASTERN SECTION)



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-擬議的古洞北污水泵房及粉嶺北污水泵房的構思圖

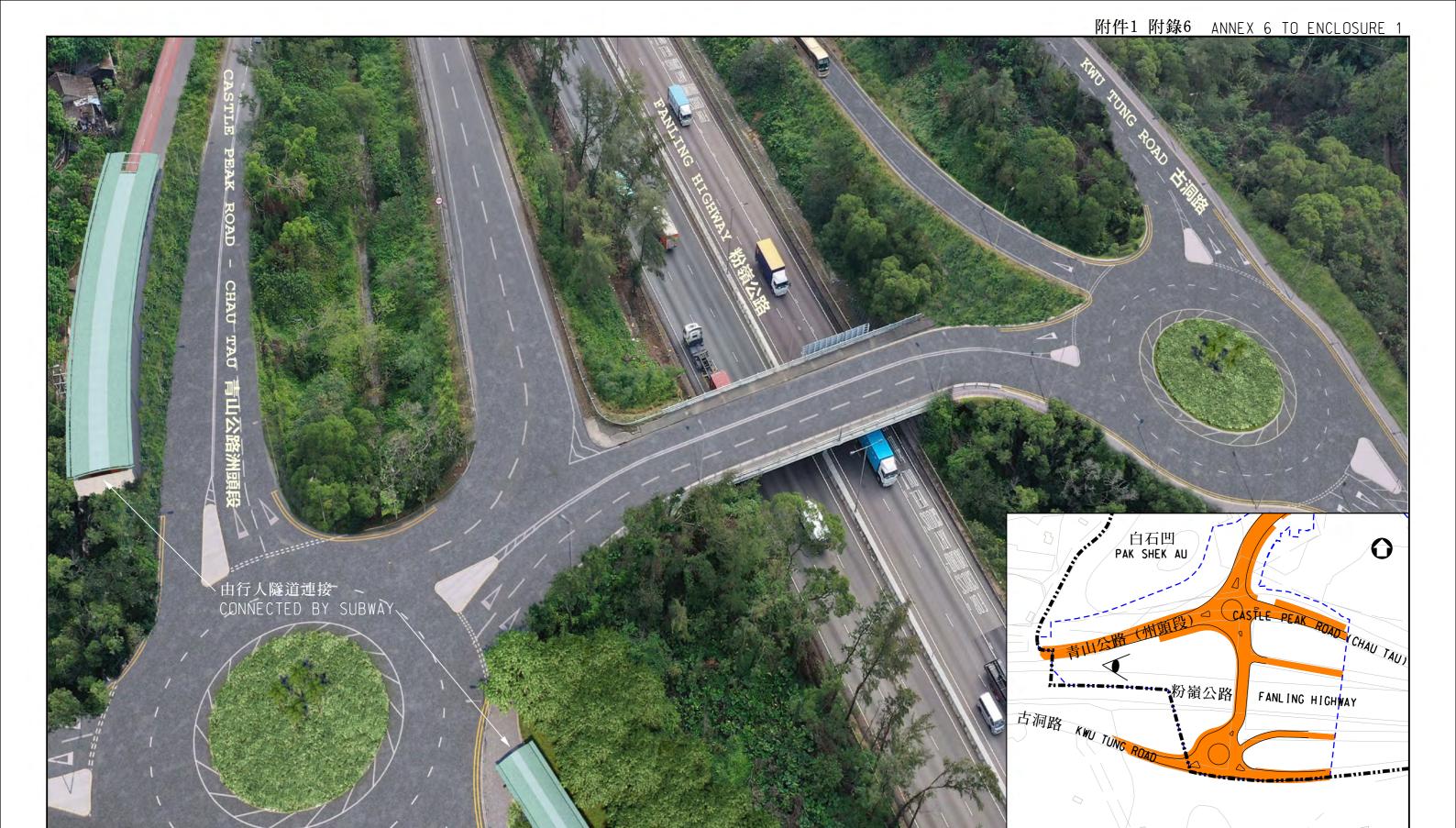
PWP ITEM NO. 747CL

ADVANCED SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-ARTISTIC IMPRESSION OF PROPOSED KWU TUNG NORTH SEWAGE PUMPING STATION AND FANLING NORTH SEWAGE PUMPING STATION



工務計劃項目第747CL號 古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-擬議古洞北沖廁水配水庫及食水配水庫的剖面圖及構思圖 PWP ITEM NO. 747CL

ADVANCED SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-CROSS-SECTION AND ARTISTIC IMPRESSION OF THE PROPOSED FLUSHING WATER SERVICE RESERVOIR AND FRESH WATER SERVICE RESERVOIR IN KWU TUNG NORTH



古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程-擬議白石凹路口改善工程的構思圖

PWP ITEM NO. 747CL

ADVANCED SITE FORMATION AND INFRASTRUCTURE WORKS FOR KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-ARTISTIC IMPRESSION OF PROPOSED JUNCTION IMPROVEMENT AT PAK SHEK AU

位置圖 LOCATION PLAN

747CL – Advance site formation and engineering infrastructure works at Kwu
Tung North new development area and Fanling North new
development area

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

(a) Consultants' from for	Duefassianal	Estimated man- months	Average MPS* salary point	Multiplier	Estimated fee (\$ million)
(a) Consultants' fees for contract administration (Note 2)	Professional Technical	_	-	-	40.8 5.4
contract administration	recimicai	_	_	_	5.4
				Sub-total	46.2#
(b) Consultants' fees for	Professional	88	38	2.0	14.4
Environmental Monitoring and Audit Programme (Note 3)	Technical	134	14	2.0	7.7
•				Sub-total	22.1#
(c) Resident site staff (RSS) costs	Professional	3 792	38	1.6	497.4
(Note 4)	Technical	10 990	14	1.6	505.1
				Sub-total	1,002.5
Comprising –					
(i) consultants' fee for management of RSS				17.8#	
(ii) remuneration of RSS				984.7#	
				Total	1,070.8

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost for the staff employed in the consultants' office (including the consultants' overheads and profit). 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 point 38 = \$81,975 per month and MPS point 14 = \$28,725 per month.)
- 2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **747CL**. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **747CL** to Category A.
- 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 figures in this Annex 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 9 of Enclosure 1.

747CL – Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

759CL – First stage of site formation and engineering infrastructure at Kwu Tung North new development area and Fanling North new development area

Breakdown of land acquisition cost under Lands Resumption Ordinance (Cap. 124), Roads (Works, Use and Compensation) Ordinance (Cap. 370), and

Roads (Works, Use and Compensation) Ordinance (Cap. 370) as applied by Water Pollution Control (Sewerage) Regulation (Cap. 358AL)

\$ million

(I) Estimated cost for land acquisition

11,269.12

(II) Estimated cost for land clearance

326.10

156.11

169.99

- (a) Ex-gratia allowances (EGAs) for domestic occupiers (e.g. EGA for permitted occupiers of licensed structures and surveyed squatters affected by clearance and domestic removal allowance, etc.) **
- (b) Other ex-gratia allowances (e.g. crop disturbance compensation, allowance cultivators, EGA for miscellaneous permanent improvements to farms, EGA for shops, workshops, slipways, godowns, schools, ornamental fish churches and breeding undertakings, EGA for open-air/ outdoor business undertakings, EGA for clearance of graves, urns ("Kam Taps") and shrines and EGA for "Tun Fu" ceremonial fees, etc.)

(III) Interest and Contingency Payment#

1,739.32

Total 13,334.54 (say 13,334.5)

Note

The above estimated land acquisition cost is based on the prevailing rate as at October 2018.

^{**}This has not included Special Ex-gratia Cash Allowance (SEGCA) for Qualified Households affected by land resumption and clearance under the project.

The contingency provision will also cover the requirements for payment of EGAs to eligible squatter households affected by Remaining Phase of KTN and FLN NDA applying for early surrender of and departure from their squatter structures.

工務計劃項目第 747CL 號一古洞北新發展區及粉嶺北新發展區前期地盤平整和基礎設施工程 10 棵受影響珍貴樹木的詳情

PWP Item No. 747CL - Advance site formation and engineering infrastructure works for Kwu Tung North new development area and Fanling North new development area <u>Details of Ten Important Trees Affected</u>

樹木/樹組編號(1)	品種 Species	:		量度 Measureme	ents	觀賞價值 Amenity value ⁽³⁾	形態 Form	健康狀況 Health condition	結構狀況 Structural condition		移植合適度 ⁽⁽⁾ Suitability for transplanting ⁽⁴⁾	保育狀況 ⁽⁵⁾ Conservation	建議處置方法 (保留/移植/砍伐) Recommendation	提供專業意見予 地政總署的部門 Department to
Tree/ Tree Group No. ⁽¹⁾	學名 Scientific name	中文名 Chinese name	高度 (米) Height (m)	胸徑 ^② (毫米) DBH ^② (mm)	樹冠闊度 (米) Crown spread (m)			一般/差劣) /Fair/Poor)		(高/中/低) (High/Med/Low)	備註 Remarks	status ⁽⁵⁾	(Retain/Transplant/Fell	provide expert advice to LandsD
T1219 ⁽⁵⁾	Aquilaria sinensis	土沉香 (牙香 樹)	7	170	4	一般 Fair	一般 Fair	一般 Fair	一般 Fair	中 Medium	樹木位置與擬議工程的施工地點有衝突。 樹木生長在斜坡上,健康狀況一般,預計移植後的存活率是中等。 由於此品種保育價值高,因此建議移植。 Tree location is in conflict with the proposed works. Tree grows on slope with fair health condition. The survival rate after transplanting is medium. This species is of high conservation value. It is therefore recommended to be transplanted.	是 Yes	移植 Transplant	地政總署 Lands Department
T1617 ⁽⁶⁾	Eucalyptus urophylla	尾葉桉	15	1120	10	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。 樹木的高度、胸徑和樹冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。 因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
T6149 ⁽⁶⁾	Ficus microcarpa	細葉榕	13.5	1369	13	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。 樹木的高度、胸徑和閱冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。 因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
T2638 ⁽⁶⁾	Ficus microcarpa	榕樹	14	1180	12	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。樹木的高度、胸徑和樹冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。因此不建議移植。 Tiee location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department

附件1附錄9

Annex 9 to Enclosure 1

樹木/樹組 編號 ⁽¹⁾ Tree/ Tree Group No. ⁽¹⁾	品種 Species		量度 Measurements			觀賞價值 Amenity value ⁽³⁾	形態 Form	健康狀況 Health condition	結構狀況 Structural condition		移植合適度 ⁽⁴⁾ Suitability for transplanting ⁽⁴⁾	保育狀況 ⁽⁵⁾ Conservation status ⁽⁵⁾	建議處置方法 (保留/移植/砍伐) Recommendation (Retain/Transplant/Fell	提供專業意見予 地政總署的部門 Department to provide
T6006 ⁽⁶⁾	Ficus microcarpa	細葉榕	12	1793	10	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。樹木的高度、胸徑和閱冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
T6010 ⁽⁶⁾	Ficus microcarpa	細葉榕	12	1866	10	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。樹木的高度、胸徑和閱冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
T6016 ⁽⁶⁾	Ficus microcarpa	細葉榕	14	1506	10	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。 樹木的高度、胸徑和樹冠闊度非常大。健康狀況一般,但形態差劣,預計移植後的存活率是低。 因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large. The health condition is fair but the form is poor. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
T4354 ⁽⁶⁾	Cinnamomum camphora	樟	8	1000	8	一般 Fair	一般 Fair	一般 Fair	一般 Fair	低 Low	樹木位置與擬議工程的施工地點有衝突。 樹木的高度、胸徑和樹冠闊度非常大, 健康狀況一般,預計移植後的存活率是低。因此不建議移植。 Tree location is in conflict with the proposed works. The size of the tree is very large and the health condition is fair. The survival rate after transplanting is low. It is therefore recommended not to be transplanted.	不是 No	砍伐 Fell	漁農自然護理署 Agriculture, Fisheries and Conservation Department
KT-G9_5 (5) (2 nos. of tree) (兩 棵樹)	Aquilaria sinensis	土沉香 (牙香樹)	3 - 5	100 - 120	2 - 4	一般 Fair	一般 Fair	一般 Fair	一般 Fair	中 Medium	預計移植後的存活率是中等。 由於此品種保育價值高,因此建議移植。 The survival rate after transplanting is medium. This species is of high conservation value. It is therefore recommended to be transplanted.	是 Yes	移植 Transplant	漁農自然護理署 Agriculture, Fisheries and Conservation Department

註: (1) 這 10 棵樹並非《古樹名木冊》內的樹木。

- (2) 樹木胸徑是指測量人員從其胸部高度位置量度的樹木直徑(量度的高度是離地 1.3 米)。
- (3) 評估樹木的觀賞價值是基於它的遮蔭、避風雨、屏障、減低污染及消減噪音功能方面的效用,以及「風水」方面的重要性;分級如下一

良好:屬重要樹木,應予保留,並相應調整設計佈局。

一般:屬適宜保留的樹木,以締造優美環境,包括稍遜於「良好」級的健康樹木。

差劣:屬枯死、垂死或有潛在危險的樹木,應予移除。

- (4) 有關評估已顧及個別樹木在調查進行期間的狀況(包括健康、結構、樹齡和根部的狀況)、樹木生長環境(包括地形和易達程度),以及樹木品種的內在特性(移植後的存活率)。
- (5) 樹木編號 T1219 及兩棵位於樹組編號 KT-G9_5(共三棵)均為土沉香(牙香樹),屬貴重或稀有品種的樹木,受《保護瀕危動植物物種條例》(第 586 章)保護。
- (6) 樹木編號 T1617, T6149, T2638, T6006, T6010, T6016 及 T4354 (共七棵)的樹幹直徑等於或超逾 1.0 米 (在地面以上 1.3 米的位置量度),因此屬珍貴樹木。
- (7) 該兩棵位於樹組編號 KT-G9_5 的樹木之資料須待收回/清理土地後方能作實。

附件 1 附錄 9 Annex 9 to Enclosure 1

Notes: (1) The ten trees are not listed on the Register of Old and Valuable Trees.

- (2) DBH of a tree refers to its Diameter at Breast Height (i.e. measurement at 1.3 m above ground level).
- (3) Amenity value of the tree is assessed by its functional values for shade, shelter, screening, reduction of pollution and noise and also its "fung shui" significance, and classified into the following categories.
 - Good: important trees which should be retained by adjusting the design layout accordingly.
 - Fair: trees that are desirable to be retained in order to create a pleasant environment, which includes healthy specimens of lesser importance than "Good" trees. Poor: trees that are dead, dying or potentially hazardous and should be removed.
- (4) Assessment has taken into account conditions of individual trees at the time of survey (including health, structure, age and root conditions), site conditions (including topography and accessibility), and intrinsic characters of tree species (survival rate after transplanting).
- (5) Tree No. T1219 and two trees located at Tree Group No. KT-G9_5 (three trees in total) are *Aquilaria sinensis*, which are precious or rare species. They are protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
- (6) Tree Nos. T1617, T6149, T2638, T6006, T6010, T6016 及 T4354 (seven trees in total) with trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level). They are regarded as important trees.
- (7) The information in these two trees in Tree Group No. KT-G9_5 could only be confirmed after land resumption/clearance.

759CL – First stage of site formation and engineering infrastructure at Kwu Tung North new development area and Fanling North new development area

PROJECT SCOPE AND NATURE

The proposed scope of works under **759CL** (the "First Stage Works") comprises –

- (a) development of a nature park at Long Valley of about 37 hectares ("ha") including provision of a visitor centre and a footbridge of about 50 metres ("m") long spanning across Sheung Yue River for connection between the nature park and the visitor centre:
- (b) reprovisioning of two egretry sites in the Fanling North ("FLN") New Development Area ("NDA") and enhancement works to an existing egretry site in the Kwu Tung North ("KTN") NDA;
- (c) site formation of about 2.3 ha of land (including soil treatment works) for a village resite area and a district police station in the KTN NDA;
- (d) engineering infrastructure works including roads, drainage, sewerage, waterworks, slopeworks and landscaping works; and
- (e) implementation of environmental mitigation measures and environmental monitoring and audit ("EM&A") programme for the works mentioned in items (a) to (d) above.
- 2. Layout plans showing the scope of First Stage Works are at **Annex 1** to this Enclosure.

/2.

3. Subject to funding approval of the Finance Committee ("FC") of the Legislative Council, we plan to commence construction of the First Stage Works in the fourth quarter of 2019 for completion in end 2026. To meet the works programme, the Civil Engineering and Development Department will invite tenders for the works contracts from March 2019 progressively, but the works contracts will only be awarded upon obtaining funding approval from the FC.

JUSTIFICATION

- 4. The KTN and FLN NDA will be implemented in two phases: First Phase and Remaining Phase. As part of the First Phase development, we will under the First Stage Works conserve and enhance the ecologically important environment of the core area of the Long Valley, and carry out other ecological mitigation/enhancement works in tandem with the NDA development. These works were identified in the Environmental Impact Assessment ("EIA") report for the North East New Territories NDAs Planning and Engineering Study¹, which was approved with conditions under the Environmental Impact Assessment Ordinance (Cap. 499) in October 2013.
- 5. Being the largest contiguous freshwater wetland in Hong Kong, Long Valley is widely recognised for its high ecological value and environmental significance. As part and parcel of the NDA project, we will develop some 37 ha of land at the core area of Long Valley into a nature park for conserving and enhancing the ecologically important environment as well as for compensation of the wetland loss due to the NDA development (the Long Valley Nature Park ("LVNP")). Within the 37-ha LVNP, we will set aside 4.8 ha for development into an outdoor visitor zone to allow members of the public to appreciate the diversity of wetland ecosystem at close distance and promote public awareness on nature conservation. The visitor zone will be equipped with facilities such as a visitor centre², boardwalks, bird hide and different landscape features to enrich visitors' experience through exploring wetlands, crops and wildlife in a natural The visitor centre will be connected with the LVNP through a footbridge of 50 m long spanning across the Sheung Yue River. The remaining 32 ha will be rehabilitated and conserved to accommodate existing farmers to

/continue

The North East New Territories New Development Areas Planning and Engineering Study was a planning and engineering study to establish a planning and development framework for the KTN, FLN and Ping Che/Ta Kwu Ling NDAs.

The site area of the visitor centre is about 1 000 square metres.

continue farming there. The general layout plan of the LVNP and the artistic impression of the visitor centre and footbridge are at **Annexes 2** and **3** to this Enclosure respectively.

- 6. We will reprovision/enhance egretry sites as replacement of the existing egretry sites at Man Kam To Road which will be affected by the NDA development. Compensatory planting and habitat enhancement works will be carried out at the egretry reprovisioning/enhancement sites under the First Stage Works.
- 7. The First Stage Works also include site formation works for the sites reserved for a village resite area (involving 1.1 ha. of land) and a district police station (involving 1.2 ha. of land) in the KTN NDA. The village resite area in the KTN NDA is for reprovisioning affected village houses/building lots in the KTN under the Village Removal Terms. We will fully comply with the recommendations and approval conditions of the EIA report in carrying out soil treatment works for hotspots with high levels of arsenic.
- 8. To tie in with the NDA development, timely completion of the engineering infrastructure works as well as environmental mitigation/enhancement works is necessary. Upon completion, the formed land will be handed over to relevant parties for development. The LVNP and infrastructure works will be handed over to relevant government departments for management and maintenance.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the First Stage Works to be \$896.4 million in money-of-the-day ("MOD") prices (please see paragraph 11 below), broken down as follows –

	\$ milli	on
(in	MOD	prices)

(a)	Development of 37-ha LVNP		632.6
(b)	Reprovisioning/ enhancement works of egretry sites		2.1
(c)	Site formation works (including soil treatment works)		47.8
(d)	Engineering infrastructure works (including roadworks, drainage, sewerage, waterworks, landscaping works and slopeworks)		18.6
(e)	Environmental mitigation measures and EM&A programme		34.8
(f)	Consultants' fees (i) contract administration (ii) management of resident site staff ("RSS") (iii) EM&A programme	3.1 1.2 0.8	5.1
(g)	Remuneration of RSS		74.7
(g) (h)	Contingencies		80.7
	Total	_	896.4

- 10. We propose to engage consultants to undertake contract administration and site supervision for the First Stage Works. A detailed breakdown of the estimates for consultants' fees and RSS costs by man-months is at **Annex 4** to this Enclosure.
- 11. Subject to funding approval, we plan to phase the expenditure as follows $\,$

Year	\$ million (MOD)
2019-2020	16.5
2020-2021	152.9
2021-2022	274.0
2022-2023	148.9
2023-2024	166.0
2024-2025	73.3
2025-2026	39.6
2026-2027	19.0
2027-2028	4.4
2028-2029	1.8
	896.4

- 12. We have derived the MOD estimates on the basis of the Government's latest forecast of the trend rate of change in the prices of public sector building and construction output for the period from 2019 to 2029. Subject to funding approval, we will deliver the First Stage Works under contracts using the New Engineering Contract ("NEC") form³ with provision for price adjustments.
- 13. We estimate the annual recurrent expenditure arising from the First Stage Works to be about \$36.2 million.

PUBLIC CONSULTATION

- 14. Please refer to paragraphs 14 to 20 of Enclosure 1.
- 15. Regarding the development of LVNP, we held two consultation forums in January 2017 and September 2018 respectively with green groups including the Conservancy Association, the Environmental Association, the Green Power, the Hong Kong Bird Watching Society, the Kadoorie Farm and Botanic Garden, and the World Wide Fund for Nature, Hong Kong to solicit their views on the proposed works. They generally welcomed the proposal.
- 16. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures⁴ on the proposed aesthetic design of the footbridge connecting the visitor centre and LVNP. The Committee accepted the proposed aesthetic design at its meeting in November 2018.

/ENVIRONMENTAL

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

The Advisory Committee on the Appearance of Bridges and Associated Structures, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, the Architectural Services Department, the Highways Department, the Housing Department, the CEDD, and architectural or relevant faculties from local institutions, 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

17. Please refer to paragraphs 22 to 27 of Enclosure 1.

TRAFFIC IMPLICATIONS

18. Please refer to paragraphs 28 to 29 of Enclosure 1.

LAND ACQUISITION

19. Please refer to paragraphs 30 to 31 of Enclosure 1.

HERITAGE IMPLICATIONS

20. Please refer to paragraphs 32 to 34 of Enclosure 1.

BACKGROUND INFORMATION

- 21. We upgraded **759CL** to Category B in September 2012.
- We engaged consultants to carry out detailed design and site investigation for **759CL** in November 2014. The consultancy fees and site investigation works for the First Stage Works were charged to block allocation Subhead 7100CX "New towns and urban area works, studies and investigation for items in Category D of Public Works Programme" at a total cost of about \$28.96 million in MOD prices. We have substantially completed the detailed design of the First Stage Works.

- Of the 696 trees within the boundary of the First Stage Works, 656 trees will be preserved, whereas the remaining 40 trees will have to be felled. All trees to be felled are not important trees⁵. We will incorporate planting proposals as part of the Advance Works as compensatory planting.
- We estimate that the First Stage Works will create about 240 jobs (200 for labourers and 40 for professional/technical staff) providing a total employment of about 8 850 man-months.

Development Bureau February 2019

⁵ "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 –

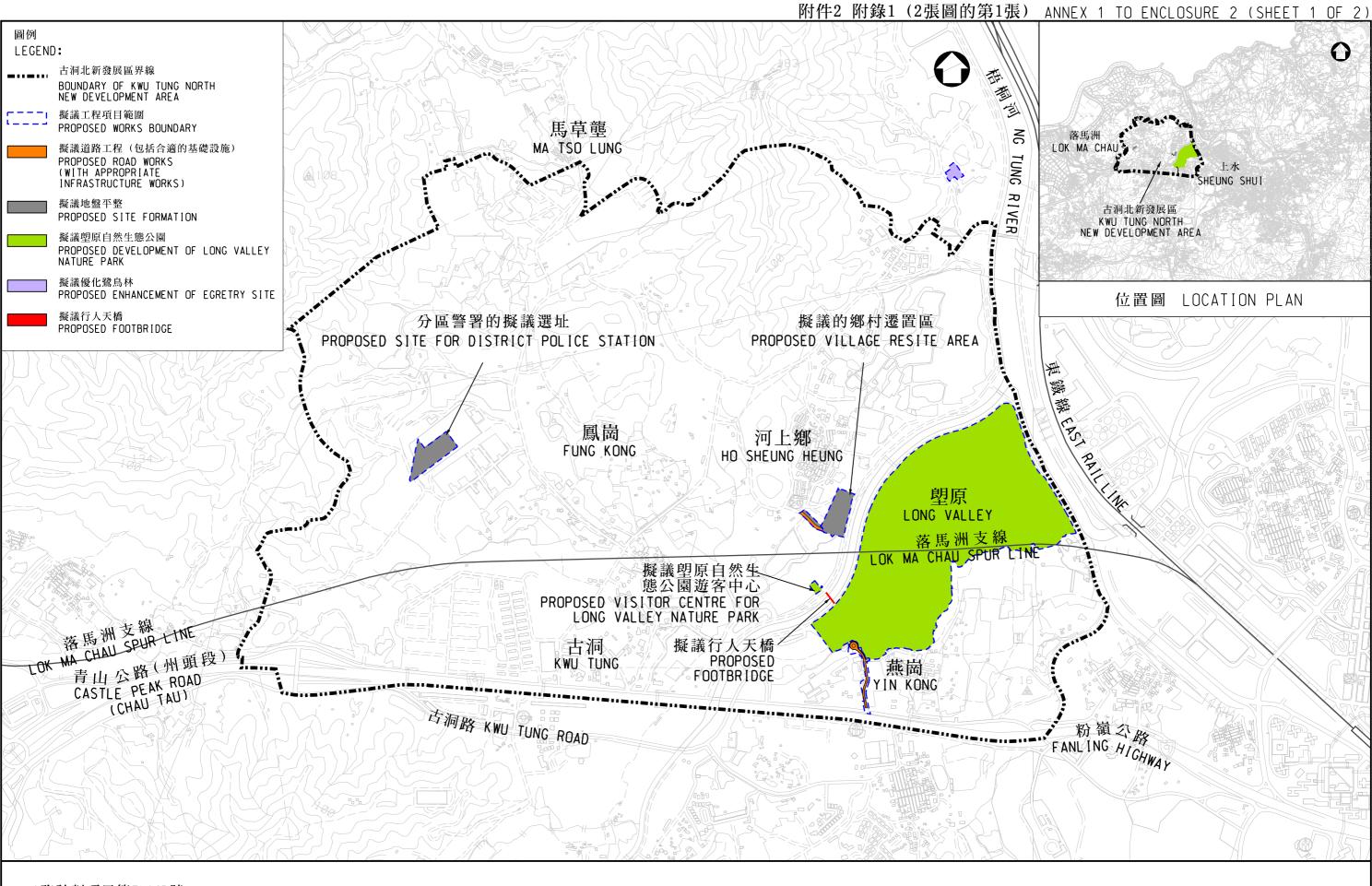
⁽a) trees of 100 years old or above;

⁽b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree 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 overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or

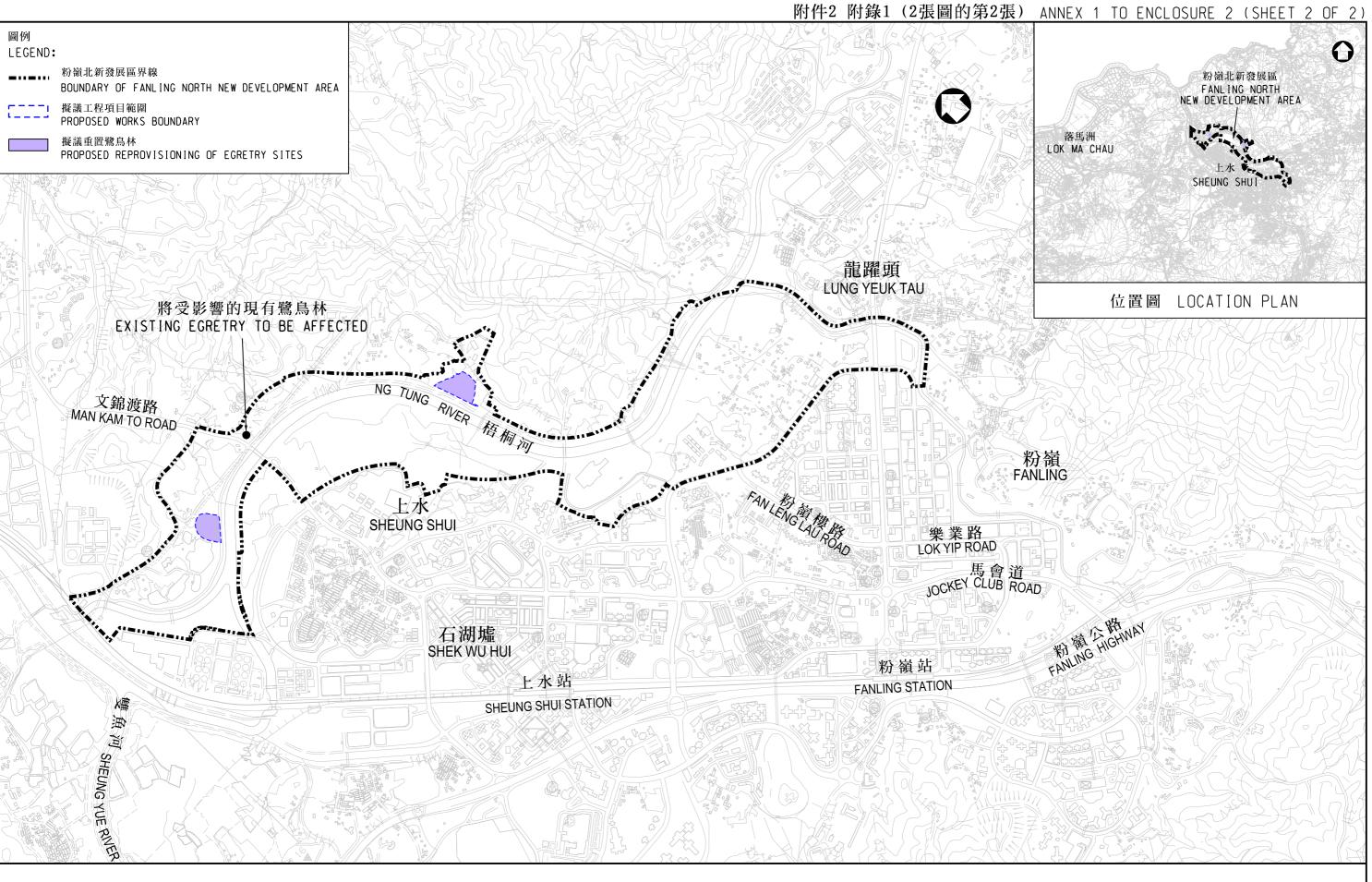
⁽e) trees with trunk diameter equal to or exceeding 1.0 m (measured at 1.3 m above ground level), or with height/canopy spread equal to or exceeding 25m.



古洞北新發展區及粉嶺北新發展區第一期地盤平整和基礎設施工程-平面圖(古洞北新發展區)

PWP ITEM NO. 759CL

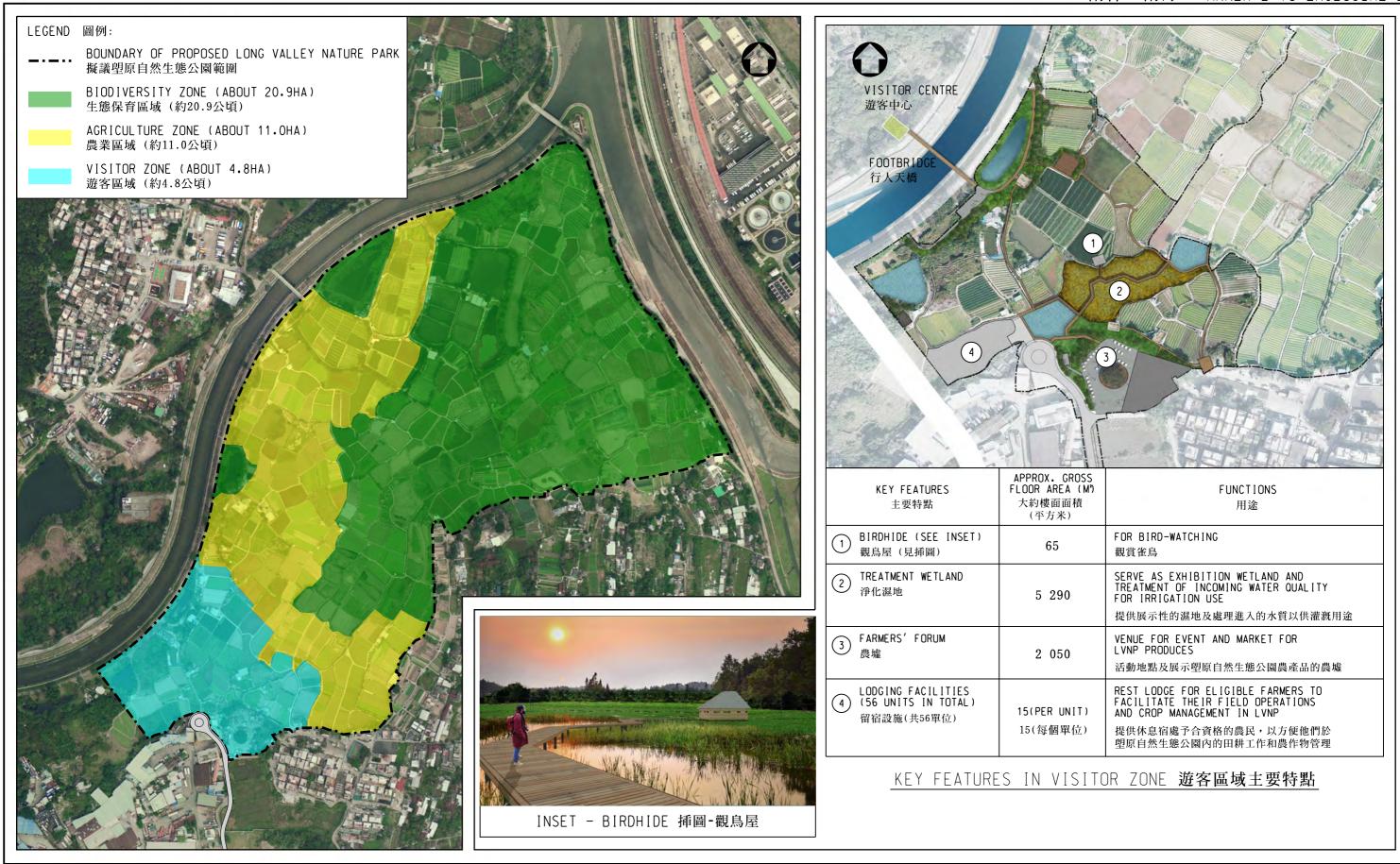
FIRST STAGE OF SITE FORMATION AND INFRASTRUCTURE AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (KWU TUNG NORTH NEW DEVELOPMENT AREA)



古洞北新發展區及粉嶺北新發展區第一期地盤平整和基礎設施工程-平面圖 (粉嶺北新發展區)

PWP ITEM NO. 759CL

FIRST STAGE OF SITE FORMATION AND INFRASTRUCTURE AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (FANLING NORTH NEW DEVELOPMENT AREA)



古洞北新發展區及粉嶺北新發展區第一期地盤平整和基礎設施工程-擬議塱原自然生態公園平面圖

PWP ITEM NO. 759CL

FIRST STAGE OF SITE FORMATION AND INFRASTRUCTURE AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN OF PROPOSED LONG VALLEY NATURE PARK





古洞北新發展區及粉嶺北新發展區第一期地盤平整和基礎設施工程-擬議塱原自然生態公園遊客中心的構思圖

擬議行人天橋 PROPOSED FOOTBRIDGE

PWP ITEM NO. 759CL

FIRST STAGE OF SITE FORMATION AND INFRASTRUCTURE AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-ARTISTIC IMPRESSION OF PROPOSED VISITOR CENTRE FOR LONG VALLEY NATURE PARK

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A3 420MM X 297MM

759CL – First stage of site formation and engineering infrastructure at Kwu Tung North new development area and Fanling North new development area

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

(a)	Consultants' fees for contract administration (Note 2)	Professional Technical	Estimated man- months - -	Average MPS* salary point - -	Multiplier (Note 1)	Estimated fee (\$ million) 2.3 0.3
					Sub-total	2.6#
(b)	Consultants' fees for Environmental Monitoring and Audit Programme (Note 3)	Professional Technical	3 3	38 14	2.0 2.0	0.5 0.2
					Sub-total	0.7#
(c) Resident site staff (RSS) costs (Note 4)		Professional Technical	192 825	38 14	1.6 1.6	25.2 37.9
					Sub-total	63.1
	Comprising –					
	(i) consultants' fee for management of RSS				1.0#	
	(ii) remuneration of RSS				62.1#	
					Total	66.4

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost for the staff employed in the consultants' office (including the consultants' overheads and profit). 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 point 38 = \$81,975 per month and MPS point 14 = \$28,725 per month.)
- 2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **759CL**. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **759CL** to Category A.
- 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 figures in this Annex 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 9 of Enclosure 2.

828CL – Remaining phase of site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

PROJECT SCOPE AND NATURE

The part of **828CL** (the "Detailed Design"), which we propose to upgrade to Category A, comprises –

- (a) detailed design of works in the Remaining Phase development of the Kwu Tung North ("KTN") and Fanling North ("FLN") New Development Area ("NDA") ("the Remaining Phase Works") described in paragraph 2 (a) to (c) below;
- (b) land use review of six sites in KTN and FLN NDA and other services;
- (c) associated site investigation works as well as supervision; and
- (d) preparation of tender documents and assessment of tenders for the Remaining Phase Works.

2. The Remaining Phase Works mainly cover –

- (a) site formation of about 247 hectares of land (including soil treatment works) in the KTN and FLN NDA for housing, community, commercial and other developments as well as engineering infrastructure works;
- (b) engineering infrastructure works including Fanling Bypass (Western Section), Po Shek Wu Road Flyover, new interchanges together with widening of Fanling Highway for connection with KTN NDA, local roads, cycle tracks, drainage, sewerage, waterworks, pumping stations, fresh water and flushing water service reservoirs, and landscaping works; and

(c) implementing the environmental mitigation measures for the works mentioned in (a) to (b) above.

Layout plans showing the scope of Remaining Phase Works to be covered under the Detailed Design, as well as the six sites subject to land use review, are at **Annex 1** to this Enclosure.

3. Subject to funding approval of the Finance Committee ("FC") of the Legislative Council ("LegCo"), we plan to commence the Detailed Design in the second half of 2019. We will retain the remainder of **828CL** for construction of the Remaining Phase Works in Category B. Funding for the remainder of **828CL** will be sought in 2023 tentatively upon substantial completion of the Detailed Design for construction to start in 2024.

JUSTIFICATION

- 4. The KTN and FLN NDA will be implemented in two phases: First The First Phase development comprises the Phase and Remaining Phase. Advance Works (i.e. 747CL) and the First Stage Works (i.e. 759CL), for which we are seeking funding approval with a view to commencing land resumption and clearance as well as construction starting from the second half of 2019 for population intake beginning 2023 (please see Enclosures 1 and 2 respectively). In tandem with implementation of the First Phase development, we will commence the Detailed Design for the Remaining Phase so as to ascertain the scope of works and land resumption limits, and complete the required statutory and administrative procedures as early as possible amongst others. We need to complete these pre-construction works timely in order to meet our target of having all infrastructure works for the NDA development completed in 2031. Moreover, there are strong calls from stakeholders for expediting land resumption and clearance for the Remaining Phase development during the engagement activities for the unified and enhanced general ex-gratia compensation and rehousing arrangement for government development clearance exercises. Early start of the Detailed Design could help addressing such demand.
- 5. Under the Detailed Design, we will also review the land use or development intensity of six sites within the NDA area. Four of these sites are no longer required for their existing or planned uses as a result of the co-location

of various police facilities at Kong Nga Po (please see Enclosure 4), while there may be room to review the land use or enhance the development intensity of two sites owing to development changes¹. The review can enable us to optimise the use of these sites and incorporate their infrastructural requirements in the Remaining Phase Works having regard to the revised land use or development intensity.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the Detailed Design and associated site investigation works to be \$764.5 million in money-of-the-day ("MOD") prices (please see paragraph 8 below), broken down as follows –

			\$ million (in MOD prices)
(a)	Consultants' fees for detailed design		469.8
(b)	Consultants' fees for land use review and other services		44.6
(c)	Associated site investigation works as well as supervision (i) site investigation works	118.5	131.1
	(ii) remuneration of resident site staff ("RSS") for site investigation works	11.9	
	(iii) consultants' fee for management of RSS for site investigation works	0.7	
			/(d)

With the co-location of police facilities in Kong Nga Po, two sites in FLN originally reserved for reprovisioning police facilities at Fan Garden and two sites in KTN currently occupied by firing range and helipad facilities could be released for other uses. The removal of the firing range and helipad facilities in KTN opens up an opportunity to consider enhancing the development intensity of an adjoining site originally reserved for research and development. Likewise, the uplifting of the Potentially Hazardous Installation consultation zone for Sheung Shui Treatment Works (as chlorine is no longer stored there) enables us to review the land use and development intensity of a site in FLN originally reserved for accommodating facilities supporting a possible environmental friendly transport system.

			\$ million (in MOD prices)
-	Consultants' fees for paration of tender documents I assessment of tenders		49.3
(e)	Contingencies		69.7
	Т	otal	764.5

- 7. We propose to engage consultants to undertake the Detailed Design. A detailed breakdown of the estimates for consultants' fees and RSS costs by man-months is at **Annex 2** to this Enclosure.
- 8. Subject to funding approval, we plan to phase the expenditure as follows -

Year	\$ million (MOD)
2019-2020	26.5
2020-2021	84.8
2021-2022	115.7
2022-2023	150.9
2023-2024	205.4
2024-2025	124.3
2025-2026	39.5
2026-2027	17.4
	764.5

- 9. 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 for the period from 2019 to 2027. Subject to funding approval, we will invite tenders for the detailed design assignment on a lump sum basis and site investigation works contract on re-measurement basis using the New Engineering Contract ("NEC") form⁴ with provision for price adjustments.
- 10. The proposed detailed design and associated site investigation works will not give rise to any recurrent expenditure.

PUBLIC CONSULTATION

11. The North District Council endorsed at its meeting in June 2018 the implementation of the KTN and FLN NDA, including commencement of the Detailed Design for the Remaining Phase development. At the meeting of the LegCo Panel on Development in January 2019, most Members supported the submission of funding applications in relation to the KTN and FLN NDA to the Public Works Subcommittee for consideration, including that for the Detailed Design.

ENVIRONMENTAL IMPLICATIONS

12. The Detailed Design for the Remaining Phase development is not a designated project under the Environmental Impact Assessment ("EIA") Ordinance (Cap. 499) and will not generate adverse environmental impacts. We will take into account the relevant approval conditions and recommendations in the approved EIA report for the North East New Territories ("NENT") NDAs during the Detailed Design. The proposed site investigation works under the Detailed Design will only generate very little construction waste. We will require the consultant to fully consider measures to minimise the generation of construction waste and to reuse/recycle construction waste as much as possible during construction stage.

/LAND.

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

LAND ACQUISITION

13. The Detailed Design will not require any land acquisition. The details and scope of land acquisition for the Remaining Phase development will be ascertained in the Detailed Design.

HERITAGE IMPLICATIONS

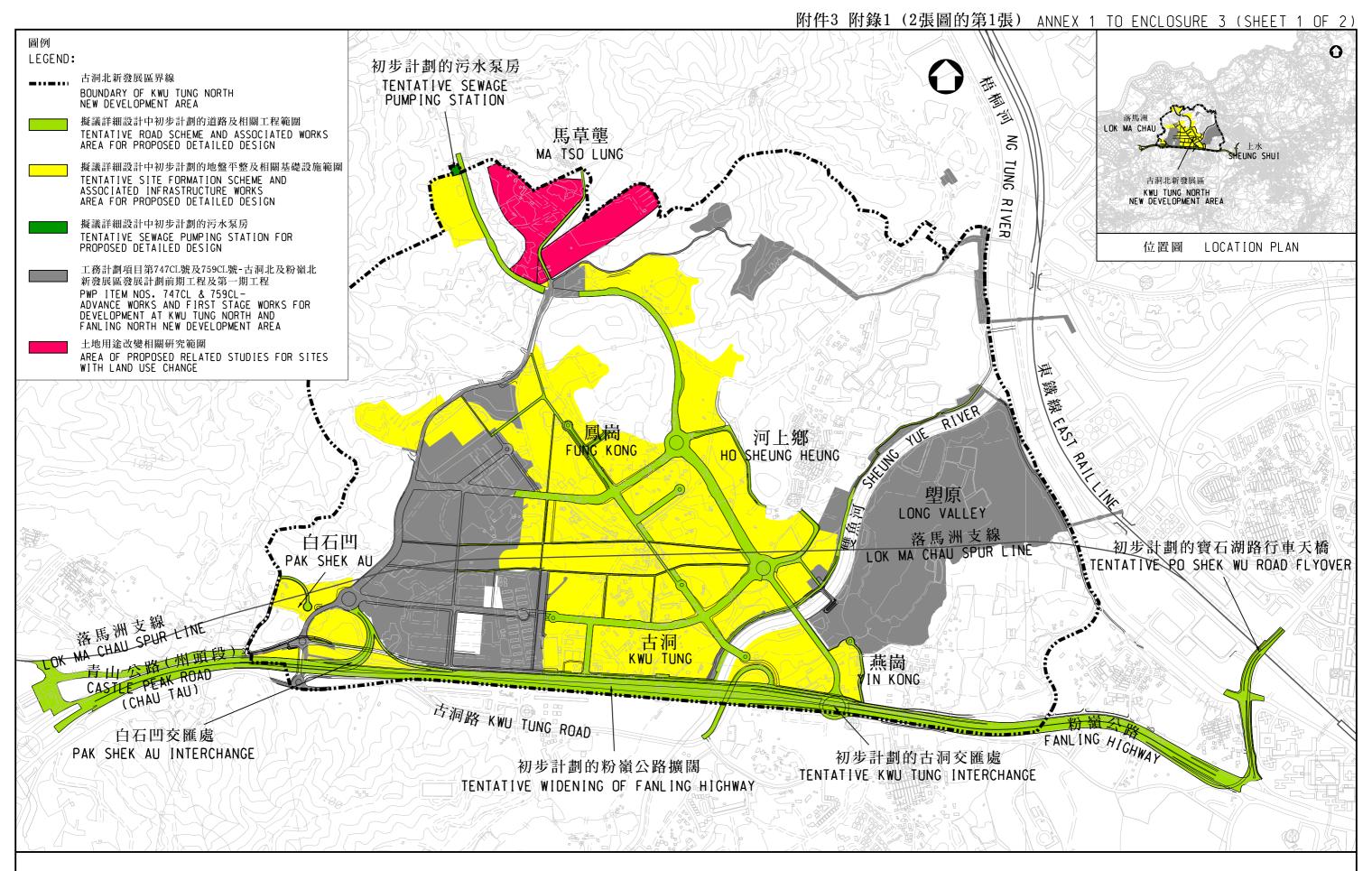
14. We have completed a cultural heritage assessment under the EIA for the NENT NDAs. It concluded that the NDA development would not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings and government historic sites identified by the Antiquities and Monuments Office. However, the site investigation works may affect the Site of Archaeological Interest identified by the AMO at Sheung Shui Wa Shan. When the details for the proposed site investigation works in the concerned site are formulated, we will require the contractors to conduct an Archaeological Impact Assessment to determine the need for archaeological follow up actions in the impacted area before commencement of any site investigation works according to the EIA report. For areas with medium archaeological potential identified during the EIA study which may be affected by the site investigation works, we will also conduct the assessment before commencement of any site investigation works, and recommend mitigation measures if necessary, according to the EIA report.

BACKGROUND INFORMATION

- 15. We upgraded **828CL** to Category B in September 2018.
- 16. The Detailed Design will not involve any tree removal or planting proposals. We will take into consideration the need for tree preservation, and formulate tree preservation, removal, compensatory and new planting proposals in the Detailed Design. Such proposals, if required, will be implemented under the Remaining Phase Works.

17.	We estimate that the Detailed Design will create about 60 jobs (25
for labourers	and 35 for professional/technical staff) providing a total employment
of about 2 20	0 man-months.

Development Bureau February 2019

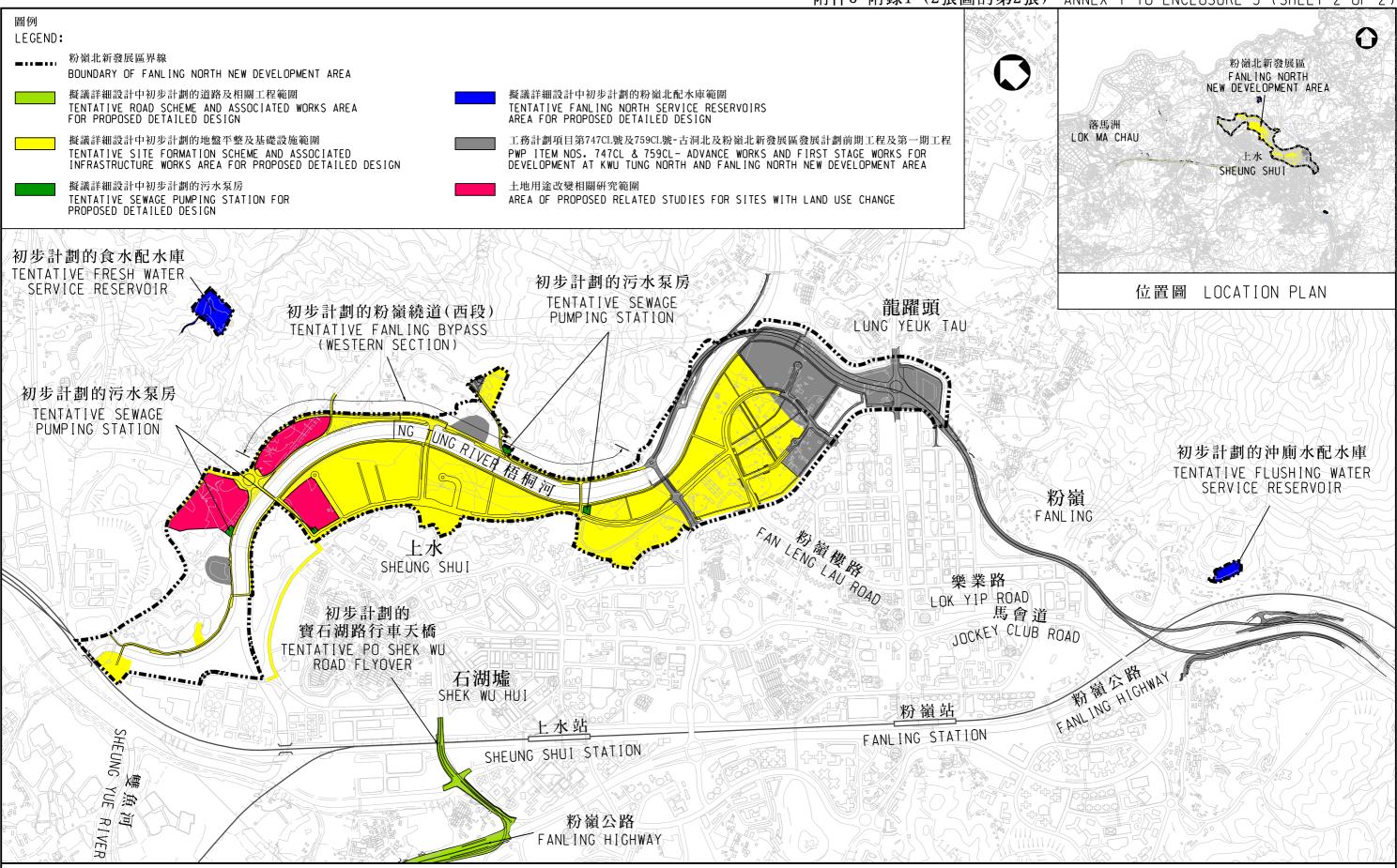


工務計劃項目第828CL號

古洞北新發展區及粉嶺北新發展區餘下地盤平整和基礎設施工程-平面圖(古洞北新發展區)

PWP ITEM NO. 828CL

REMAINING PHASE OF SITE FORMATION AND INFRASTRUCTURE WORKS AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (KWU TUNG NORTH NEW DEVELOPMENT AREA)



工務計劃項目第828CL號

古洞北新發展區及粉嶺北新發展區餘下地盤平整和基礎設施工程-平面圖(粉嶺北新發展區)

PWP ITEM NO. 828CL

REMAINING PHASE OF SITE FORMATION AND INFRASTRUCTURE WORKS AT KWU TUNG NORTH NEW DEVELOPMENT AREA AND FANLING NORTH NEW DEVELOPMENT AREA-LAYOUT PLAN (FANLING NORTH NEW DEVELOPMENT AREA)

828CL – Remaining phase of site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

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

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' fees for detailed	Professional	2140	38	2.0	350.9
	design (Note 2)	Technical	531	14	2.0	30.5
					Sub-total	381.4#
(b)	Consultants' fees for land use	Professional	197	38	2.0	32.3
(0)	review and other services (Note 2)	Technical	47	14	2.0	2.7
					Sub-total	35.0#
(c)	Resident site staff (RSS) costs (Note 3)	Professional	48	38	1.6	6.3
	(1010 3)	Technical	96	14	1.6	4.4
					Sub-total	10.7
	Comprising –					
	(i) remuneration of RSS for s investigation works	ite			10.1#	
	(ii) consultants' fee for manage for site investigation work				0.6#	
(d)	Consultants' fees for	Professional	210	38	2.0	34.4
	preparation of tender documents and assessment of tenders (Note 2)	Technical	52	14	2.0	3.0
					Sub-total	37.4#
					Total	464.5

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff costs for the staff employed in the consultants' offices (including the consultants' overheads and profits). 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 actual man-months and actual fees will only be known after the consultants have been selected.
- 3. The actual man-months and actual fees will only be known after completion of the site investigation works.

Remarks

The figures in this Annex 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 6 of Enclosure 3.

793CL – Site formation and infrastructure works for Police facilities in Kong Nga Po

PROJECT SCOPE AND NATURE

The proposed scope of works at Kong Nga Po under 793CL (the "KNP Works") comprises –

- (a) site formation of about 19 hectares ("ha") of land for accommodating various police facilities to be co-located at Kong Nga Po (the "KNP site");
- (b) upgrading of existing Kong Nga Po Road of about 1.7 kilometres long to a 7.3 metres ("m") wide single two-lane carriageway and construction of a new vehicular bridge of about 100 m long; and
- (c) associated infrastructure works, including road works, waterworks, drainage and sewerage works, geotechnical works, landscaping works, environmental mitigation measures, and other ancillary works.
- 2. Layout plans showing the scope of KNP Works are at Annexes 1 to 3 to this Enclosure.
- 3. Subject to funding approval of the Finance Committee ("FC") of the Legislative Council ("LegCo"), we plan to commence construction of the KNP Works in the second quarter of 2019 for completion in phases from end 2021 to end 2022. To meet the works programme, the Civil Engineering and Development Department will invite tenders for the works contract in February 2019, but the works contract will only be awarded upon obtaining funding approval from the FC.

/JUSTIFICATION

JUSTIFICATION

- 4. Various police facilities are currently accommodated in different locations in the North District - the existing Weapons Training Division and Police Driving and Traffic Training Centre are located at Fan Garden near Fanling, while the Ma Tso Lung Firing Range and Lo Wu Firing Range together with a helipad are occupying existing sites within the Kwu Tung North ("KTN") New Development Area ("NDA"). We propose co-locating these police facilities at the KNP site near Man Kam To so as to optimise the land uses and development potential of the KTN and Fanling North ("FLN") NDA. With the co-location of the police facilities at the KNP site, two "Government, Institution or Community" sites in FLN NDA (Site A and Site B at Annex 4) originally reserved for reprovisioning the police facilities at Fan Garden due to be relocated in end 2023 tentatively to make way for housing development and two sites in KTN NDA (Site C and Site D at Annex 4) currently occupied by the firing range and helipad facilities could be released for other uses¹. The KNP site will also accommodate a new Specialist Operation Training Facility². This new facility together with the four other existing police training facilities to be relocated can create synergy on police training. In addition, the co-location will enhance Police's operational efficiency. Please see Annex 4 to this Enclosure for the locations of the four sites within the NDA area, Fan Garden and the KNP site.
- 5. Under the KNP Works, we will form 19 ha of land for co-locating various police facilities at the KNP site. We will also upgrade the existing Kong Nga Po Road³ between Man Kam To Road and the KNP site to a 7.3 m wide single two-lane carriageway⁴ with footpaths to cater for the additional traffic generated from the police facilities at the KNP site and the proposed development of Organic Resources Recovery Centre Phase 2 at Sha Ling, North District.

/6.

We will review the land use of the four sites at the detailed design stage of the Remaining Phase development of the KTN and FLN NDA. Please refer to the funding application at Enclosure 3. The sites to be released at Fan Garden will be considered for rezoning to housing purpose

This new facility will be a purpose-built advanced tactical training facility for anti-terrorist and other specialist operations. In view of the global threat of terrorism, this facility will strengthen Police's capability and preparedness against terrorist activities.

The existing Kong Nga Po Road is a single two-lane carriageway with a road width of 5.5m to 6.5m without footpath.

Due to the need for preserving individual trees of Keteleeria fortunei and other species of conservation interest along existing Kong Nga Po Road as required under the Environmental Permit, a section of about 80 m long of existing Kong Nga Po Road would only be widened to 6.75 m wide.

6. The KNP Works cover site formation and engineering infrastructure works to make ready the KNP site for development. Construction of police facilities thereon will be pursued by the Architectural Services Department separately by means of another Public Works Programme ("PWP") item.

FINANCIAL IMPLICATIONS

7. We estimate the capital cost of the KNP Works to be \$1,913.0 million in money-of-the-day ("MOD") prices (please see paragraph 9 below), broken down as follows –

			\$ million (in MOD prices)
(a)	Formation of the 19-ha KNP site		906.0
(b)	Upgrading of Kong Nga Po Road (including construction of vehicular bridge)		204.5
(c)	Engineering infrastructure works (drainage, sewerage, waterworks, landscaping works and other ancillary works)		409.2
(d)	Environmental mitigation measures and environmental monitoring and audit ("EM&A") programme		40.7
(e)	Consultants' fees		16.4
	(i) contract administration	5.5	
	(ii) management of resident site staff ("RSS")	4.9	
	(iii) EM&A programme	6.0	
(f)	Remuneration of RSS		162.4
(g)	Contingencies		173.8
	Total		1,913.0

/8.

- 8. We propose to engage consultants to undertake contract administration and site supervision for the KNP Works. A detailed breakdown of the estimates for consultants' fees and RSS costs by man-months is at Annex 5 to this Enclosure.
- 9. Subject to funding approval, we plan to phase the expenditure as follows –

Year	\$ million (MOD)
2019-2020	50.0
2020-2021	400.0
2021-2022	700.0
2022-2023	600.0
2023-2024	123.5
2024-2025	39.5
	1,913.0

- 10. 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 for the period from 2019 to 2025. Subject to funding approval, we will deliver the KNP Works under a contract using the New Engineering Contract ("NEC") form⁵ with provision for price adjustments.
- 11. We estimate the annual recurrent expenditure arising from the KNP Works to be about \$22.8 million for the provision of land at the KNP site, upgrading of Kong Nga Po Road and engineering infrastructure works at the KNP site and along the upgrading of Kong Nga Po Road.

/PUBLIC

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

PUBLIC CONSULTATION

- 12. We consulted the District Minor Works and Environmental Improvement Committee of the North District Council in November 2016 on the proposed site formation and infrastructure works for the police facilities at the KNP site. Members supported the proposed works.
- 13. The proposed road works (the "Road Scheme") under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) and the proposed sewerage works (the "Sewerage Scheme") under Cap. 370 as applied by the Water Pollution Control (Sewerage) Regulation (Cap. 358 AL) were gazetted in September 2017 and October 2017. During the statutory objection period, no objection was received, and the Road and Sewerage Schemes were thus authorised accordingly. The notices of authorisation were gazetted in January 2018.
- 14. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures⁶ on the aesthetic design of the retaining structures and vehicular bridge proposed in the KNP Works. The Committee accepted the proposed aesthetic design at its meeting in April 2018.
- 15. We consulted the LegCo Panel on Development in January 2019. Most Members supported submitting funding proposals in relation to the KTN and FLN NDA, including that for the KNP Works, to the Public Works Subcommittee for consideration.

/ENVIRONMENTAL

The Advisory Committee on the Appearance of Bridges and Associated Structures, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, the ArchSD, the Highways Department, the Housing Department, the CEDD, and architectural or relevant faculties from local institutions, 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. The KNP Works is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance ("EIAO") (Cap. 499) and an environmental permit ("EP") is required for construction and operation. The Environmental Impact Assessment ("EIA") report for the KNP Works was approved under the EIAO in October 2016. The EP for the construction and operation of the KNP Works was issued in November 2016. The EIA report concluded that the environmental impacts of the KNP Works can be controlled to within the criteria under the EIAO and the Technical Memorandum on the EIA Process.
- 17. We shall implement the environmental mitigation measures for the KNP Works as recommended in the approved EIA report, and comply with the relevant conditions under the EP. These measures include precautionary and mitigation measures for various environmental aspects, such as dust control, use of quieter plant and movable noise barrier, good site practices for waste handling, erection of temporary protective fence, etc. We estimate the cost of implementing the environmental mitigation measures and EM&A programme to be \$40.7 million⁷. We have included this cost in the overall project estimate.
- 18. At the planning and design stages, we have considered all the proposed works and construction sequences to reduce generation of construction waste where possible. In addition, we will require the contractor to reuse inert construction waste (e.g. materials excavated within area for backfilling use) on site under the KNP Works or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities ("PFRF")⁸. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

/19.

This cost does not include the cost of implementing other environmental mitigation measures (e.g. provision of perimeter wall / boundary wall at the KNP site, provision of side walls at firing ranges and re-establishment of new grassland area at the KNP site, etc) by the ArchSD and funded under a separate PWP Item for construction of police facilities at the KNP site.

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

- 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 means to avoid, reduce, reuse and recycle inert construction wastes. We will ensure that the day-to-day operations on site comply with the approved plan and 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 construction waste through a trip-ticket system.
- We estimate that the KNP Works will generate in total about 1 142 000 tonnes of construction waste. Of these, we will reuse about 390 000 tonnes (34.2%) of inert construction waste on site and deliver 746 000 tonnes (65.3%) of inert construction waste to other construction sites for reuse or to PFRF for subsequent reuse. We will dispose of the remaining 6 000 tonnes (0.5%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRF and landfill sites is estimated to be \$54.2 million for the proposed works (based on a unit charge rate of \$71 per tonne at PFRF and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

TRAFFIC IMPLICATIONS

21. The KNP Works will have no insurmountable traffic impact. During the construction stage, temporary traffic arrangements ("TTAs") will be implemented to facilitate the construction works. We will establish a Traffic Management Liaison Group to discuss, scrutinise and review the TTAs proposed by the contractors with a view to minimising traffic impact arising from the KNP Works. We will maintain close contact with relevant District Councils, and will conduct local consultation prior to the implementation of major TTAs under the KNP Works. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

LAND ACQUISITION

22. The KNP Works do not require any resumption of private land, but clearance of government land⁹ is required. The estimated land clearance cost is

/about

The clearance of government land will include removal of four graves.

about \$1.20 million, which will be charged under **Head 701 – Land Acquisition**. A breakdown of the land clearance cost is at Annex 6 to this Enclosure.

HERITAGE IMPLICATIONS

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

BACKGROUND INFORMATION

- 24. We upgraded **793CL** to Category B in September 2015.
- We engaged consultants to carry out an engineering feasibility study ("EFS") for the co-location of police facilities at the KNP site at an estimated cost of \$16.4 million in MOD prices in December 2014. The cost was charged to 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 EFS has been completed.
- We engaged consultants to carry out detailed design and site investigation for the KNP Works at an estimated cost of \$16.3 million in MOD prices in January 2017. The cost was charged to 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 and site investigation have been largely completed.

Of the 6 856 trees within the boundary of the KNP Works, 2 418 trees will be preserved whereas 4 438 trees will be affected, including 4 435 trees to be felled and 3 trees to be transplanted within the proposed works site. All the trees to be removed are not important trees¹⁰. We will incorporate planting proposals as part of the KNP Works, including about 1 594 trees and 66 370 shrubs¹¹.

28. We estimate that the KNP Works will create 525 jobs (425 for labourers and 100 for professional or technical staff) providing a total employment of about 19 700 man-months.

Development Bureau February 2019

[&]quot;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;

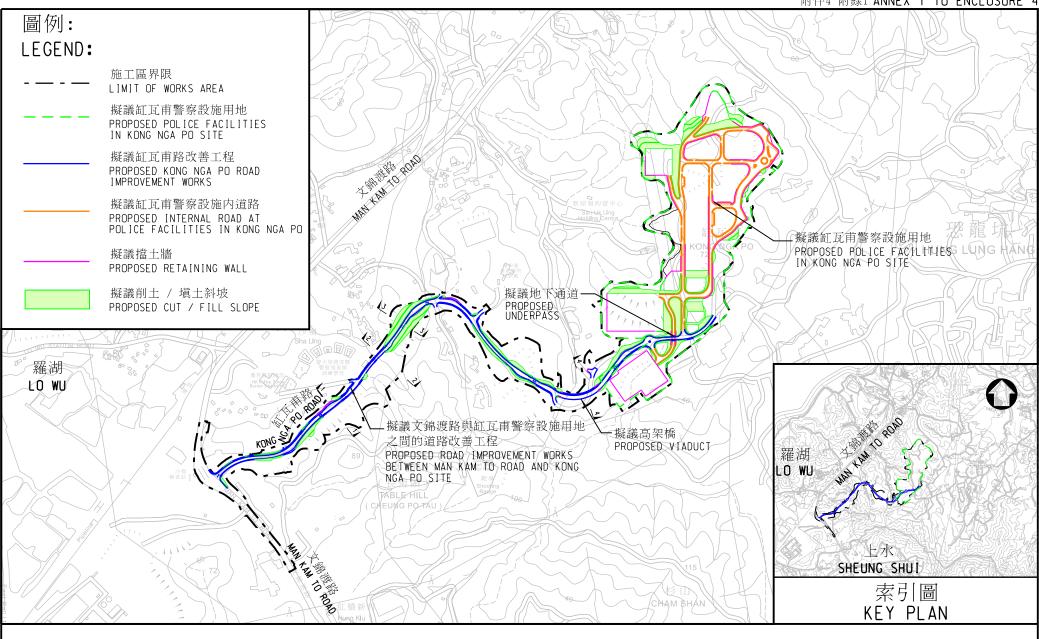
⁽b) trees of cultural, historical or memorable significance, e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an impartment person or event;

⁽c) trees of precious or rare species;

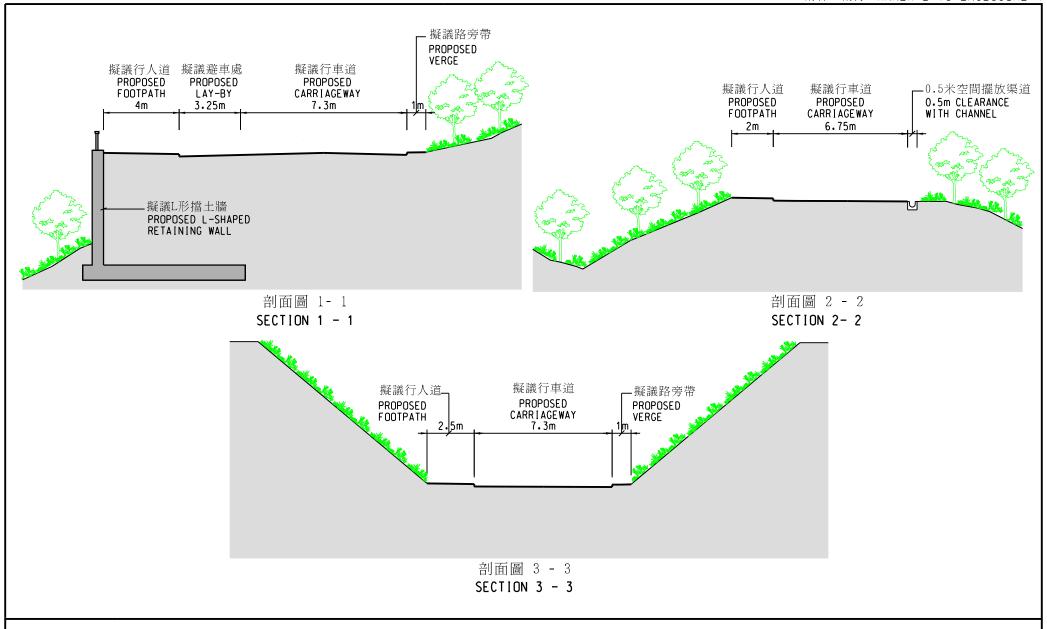
⁽d) trees of outstanding form (taking account of the overall tree sizes, shape and any special features), e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or

⁽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.

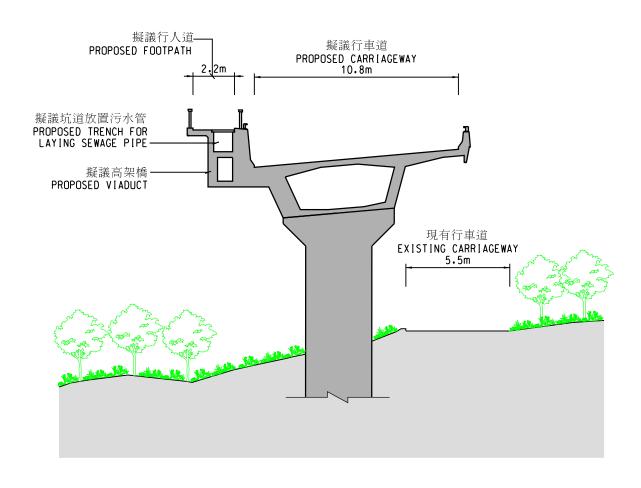
About 6 857 trees and 113 820 shrubs will be included in the planting proposals to be carried out by the ArchSD under a separate PWP Item for construction of police facilities at the KNP site.



工程計劃第793CL號 - 缸瓦甫警察設施土地平整及基礎建設工程 PWP ITEM NO. 793CL - SITE FORMATION AND INFRASTRUCTURE WORKS FOR POLICE FACILITIES IN KONG NGA PO

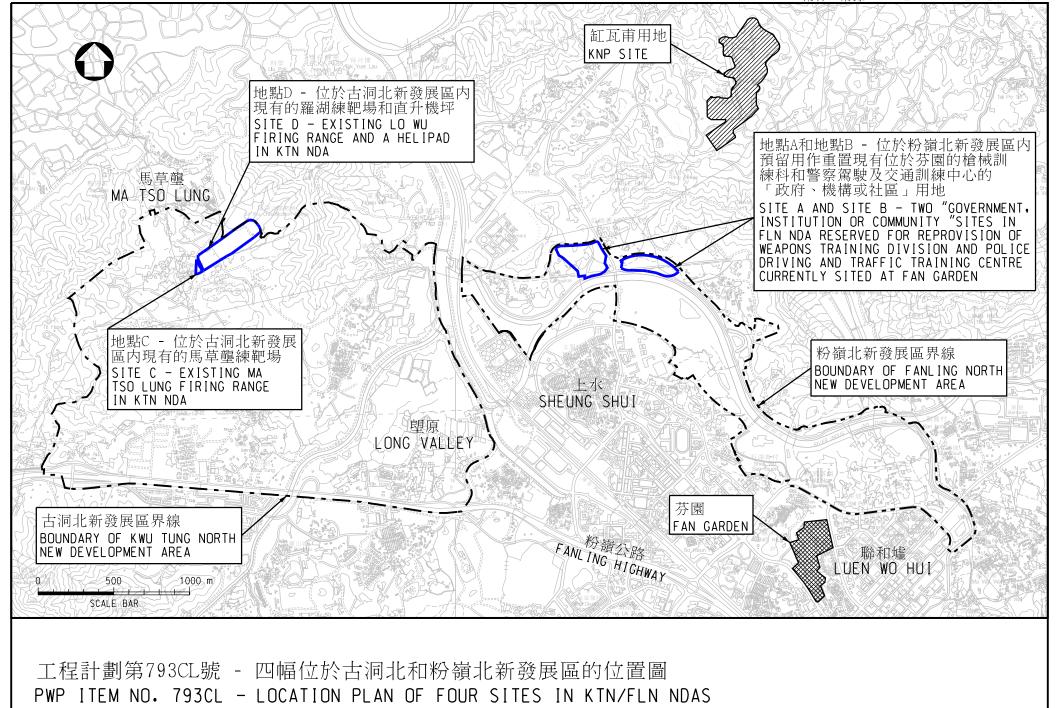


工程計劃第793CL號 - 缸瓦甫警察設施土地平整及基礎建設工程 - 剖面圖 PWP ITEM NO. 793CL - SITE FORMATION AND INFRASTRUCTURE WORKS FOR POLICE FACILITIES IN KONG NGA PO - SECTIONS



剖面圖 4 - 4 SECTION 4 - 4

工程計劃第793CL號 - 缸瓦甫警察設施土地平整及基礎建設工程 - 剖面圖 PWP ITEM NO. 793CL - SITE FORMATION AND INFRASTRUCTURE WORKS FOR POLICE FACILITIES IN KONG NGA PO - SECTIONS



793CL – Site formation and infrastructure works for Police facilities in Kong Nga Po

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

			Estimated man- months	Average MPS* salary point	Multiplier	Estimated fee (\$ million)
(a)	Consultants' fees for	Professional	-	-	-	3.5
,	contract administration (Note 2)	Technical	-	-	-	1.3
					Sub-total	4.8#
(b)	Consultants' fees for	Professional	22	38	2.0	3.6
(-)	environmental monitoring and audit programme (Note 3)	Technical	30	14	2.0	1.7
					Sub-total	5.3#
(c)	Resident site staff	Professional	634	38	1.6	83.2
()	(RSS) costs (Note 4)	Technical	1 371	14	1.6	63.0
					Sub-total	146.2
	Comprising –					
	(i) consultants' fee for management of RSS				4.3#	
	(ii) remuneration of RSS				141.9#	
					Total	156.3

^{*} MPS = Master Pay Scale

Notes

- 1. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost for the staff employed in the consultants' office (including the consultants' overheads and profit). 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 point 38 = \$81,975 per month and MPS point 14 = \$28,725 per month.).
- 2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of **793CL**. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **793CL** to Category A.
- 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 figures in this Annex 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 Enclosure 4.

Annex 6 to Enclosure 4

793CL - Site formation and infrastructure works for Police facilities in Kong Nga Po

Breakdown of land clearance cost

	\$ million	\$ million
(I) Estimated cost for land clearance		1.08
(a) Ex-gratia allowances for agricultural undertakings	0.54	
(b) Ex-gratia allowances for miscellaneous villager matters / removal of graves and Urns (Kam Taps)	0.54	
(II) Interest and Contingency Payment		0.12
(a) Contingency on the estimated land clearance cost	0.12	
Т	Total	1.20

388DS — Shek Wu Hui Effluent Polishing Plant

PROJECT SCOPE AND NATURE

The scope of works under **388DS** that we propose to upgrade to Category A comprises -

- (a) the reconstruction of the existing Shek Wu Hui Sewage Treatment Works ("SWHSTW") to increase the treatment capacity by 65 000 cubic metres ("m³") per day to 170 000 m³ per day, and to upgrade the sewage treatment level to tertiary standard for conversion into a "Shek Wu Hui Effluent Polishing Plant ("SWHEPP")";
- (b) the demolition and reconstruction of all sludge treatment facilities for the entire SWHEPP;
- (c) the demolition and reconstruction of administration building, workshops, storage building and control building; and
- (d) ancillary works ¹ and environmental mitigation measures².
- 2. Drawings showing the location and the photomontage of the proposed works are at Annexes 1 and 2 to this Enclosure.

/3.

Ancillary works include the utilities diversion, provision of manholes, temporary closure and reinstatement of carriageways/footpaths/open space, necessary building services and landscaping works that are required to complete the proposed works and local improvement works for the community such as provision of river-side walkway, etc.

Environmental mitigation measures include comprehensive odour control/mitigation measures such as enclosing fully all treatment units, and provision of ventilation and deodourisation system.

3. Subject to funding approval of the Finance Committee ("FC") of the Legislative Council ("LegCo"), we aim to commence the construction of the proposed works mentioned in paragraph 1 above (the "proposed works") in the third quarter of 2019 for anticipated completion in 2034, to meet the needs of the Kwu Tung North (KTN) and Fanling North (FLN) New Development Area (NDA) and other future developments of the region. To meet the tight works programme, we will invite tenders for the first phase of the proposed works in parallel but the works contracts will only be awarded upon obtaining FC's funding approval.

JUSTIFICATIONS

4. The existing SWHSTW is a secondary sewage treatment plant that serves Fanling, Sheung Shui and neighbouring areas with a design capacity of 93 000 m³ per day. It is now undergoing partial upgrading under **406DS**³ (Shek Wu Hui sewage treatment works – further expansion phase 1A – advance works, consultants' fees and investigation) to increase its sewage treatment capacity to 105 000 m³ per day. However, this increased capacity is expected to be fully utilised by 2022 and further phases of expansion works are required to meet the future development needs of the region. Based on the latest planning data⁴, the population within the SWHSTW catchment is projected to increase from the existing 300 000 to around 600 000 in 20 years and generate 190 000 m³ per day of sewage as a result of the further housing developments and village sewerage programme in Fanling and Sheung Shui as well as the KTN and FLN NDA. propose to increase the treatment capacity of SWHSTW from 105 000 m³ per day to 190 000 m³ per day under two projects, namely **388DS** and **747CL**, through a combined scheme of expansion works⁵. Throughout the course of the proposed expansion works, there is a need to maintain the pre-existing level of sewage treatment service and to timely commission additional treatment capacity to catch up with the flow build-up from Fanling, Sheung Shui and neighbouring areas.

/Hence

We have upgraded part of **388DS** as **406DS** to Category A in 2015 to increase the SWHSTW's sewage treatment capacity to 105 000 m³ per day (without any corresponding upgrading of sludge treatment facilities that will be carried out at a later stage) and to engage consultants to carry out the detailed design and associated site investigation works for upgrading the entire SWHSTW. The construction works commenced in July 2015 and will be completed in 2019.

⁴ 2014-based Territorial Population and Employment Data Matrix.

Part of the increased capacity (i.e. 20 000 m³ per day) is proposed to cater for the needs of the First Phase development of KTN and FLN NDA and funded under **747CL** - Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area. Please see the funding application at Enclosure 1.

Hence, it is necessary to execute the proposed expansion works immediately after completion of the ongoing partial upgrading works in three successive phases spanning a period of 15 years without break between the phases⁶ as follows:

Phase	Treatment capacity to be attained (m³ per day)	Tentative year of completion		
Phase 1	140 000	2025		
Phase 2	160 000	2029		
Phase 3	190 000	2034		

If the proposed expansion works are not timely implemented, some villages and new housing developments would not be served by sewer connection, or there could be a risk of raw or partially treated sewage overflowing into the nearby watercourse, resulting in serious environmental, health and hygiene consequences.

- 5. The existing SWHSTW is located within a very congested site of only 9.4 hectares ("ha") in area next to a cluster of villages. It has been operating for over 30 years and most of its facilities are of outdated design and reaching the end of their design life. We will take this opportunity to upgrade the environmental facilities of the plant and improve the adjoining environment. Hence more construction time and cost will be spent on the proposed full expansion works for SWHSTW on the following:
 - (a) redesigning and replacing all existing secondary sewage treatment facilities that have not already been upgraded under **406DS** and all sludge treatment facilities with more costly yet compact and efficient units so that their capacities can be ramped up without the need to acquire significantly more land;
 - (b) relocating the sludge treatment facilities away from a nearby cluster of villages to a piece of government land of around 2.5 ha in area to the north of the existing site⁷;

/(c)

The three phases of works must be carried out in an integrated manner as many of the works contracts will have to straddle over different phases and be implemented on schedule to ensure the timely provision of the additional treatment capacity and ancillary facilities required.

The existing SWHSTW is located on a 9.4 hectares site in Sheung Shui. This site is not sufficient to fully accommodate all the upgraded facilities of the SWHEPP.

- (c) upgrading its treatment level to tertiary standard to reduce the residual organic content of the effluent by 50% (i.e. reduce the Biological Oxygen Demand concentration from 20 milligrams per litre ("mg/L") to 10 mg/L) with an additional nutrients removal process, so as to ensure that the water quality of the nearby Ng Tung River and the Deep Bay further downstream would not be affected owing to higher volume of effluent discharged into it, and to enable the effluent to be suitable for the production of reclaimed water for non-potable uses⁸, e.g. toilet flushing;
- (d) adopting fully enclosed design to reduce potential odour and noise nuisance to the neighbourhood; and
- (e) incorporating extensive greening features and provision of public co-use facilities for the benefit of the local community.

FINANCIAL IMPLICATIONS

6. We estimate the capital cost of the proposed works⁹ to be \$11,972.8 million in money-of-the-day ("MOD") prices¹⁰ (please see paragraph 8 below), broken down as follows –

/(a)

The reclaimed water facility to produce reclaimed water for northeast New Territories will be implemented separately and funding will be sought in future. **747CL** will fund the service reservoir and water supply system for flushing use with reclaimed water in the KTN NDA.

Exclusive of the cost of the additional capacity to be funded under **747CL** - Advance site formation and engineering infrastructure works at Kwu Tung North new development area and Fanling North new development area

The works involve the phased demolition of most of the outdated facilities and phased reconstruction of the replacement facilities on the existing site to reach a nearly double treatment capacity and tertiary level of treatment standard, while having to maintain the existing sewage treatment service for the entire region during construction. These factors substantially increase the complexity and difficulty of the works, and hence lead to higher cost and longer construction time.

\$ million

		(in MOD	prices)	
(a)	Demolition and reconstruction of sewage treatment facilities with increased treatment capacity and upgraded treatment standard at tertiary level (i) Civil works	2 901 1	5,421.1	
	(i) Civil works(ii) E&M works	2,801.1 2,620.0		
	(ii) Lew works	2,020.0		
(b)	Demolition and reconstruction of sludge treatment facilities		2,459.5	
(c)	Demolition and reconstruction of administration building, workshops, storage building and control building		530.1	
(d)	Ancillary works		406.4	
(e)	Environmental mitigation measures		971.9	
(f)	Consultants' fees for (i) contract administration (ii) management of resident site staff (RSS)	73.8 30.5	104.3	
(g)	Remuneration of RSS		991.1	
(h)	Contingencies		1,088.4	
	Total		11,972.8	

7. We propose to engage consultants to undertake contract administration and site supervision for the proposed works. A detailed breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Annex 3 to this Enclosure.

8. Subject to funding approval, we plan to phase the expenditure as follows -

/**Year**

Year	\$ million (MOD)
2019 – 2020	50.0
2020 - 2021	416.2
2021 – 2022	539.9
2022 - 2023	700.0
2023 - 2024	760.1
2024 - 2025	992.3
2025 – 2026	1,310.6
2026 – 2027	686.0
2027 – 2028	430.6
2028 – 2029	483.3
2029 – 2030	999.2
2030 – 2031	429.0
2031 – 2032	344.8
2032 – 2033	647.0
2033 – 2034	998.2
2034 - 2035	1,394.3
2035 – 2036	260.8
2036 – 2037	272.9
2037 – 2038	257.6
	11,972.8

- 9. We have derived the MOD estimates on the basis of the Government's latest forecast of the trend rate of change in the prices of public sector building and construction output for the period from 2019 to 2038. We will deliver the proposed works under contracts with provision for price adjustment using the New Engineering Contract ("NEC")¹¹ form.
- 10. We estimate the additional annual recurrent expenditure arising from this project to be \$391.1 million. The recurrent expenditure attributable to sewage charges and trade effluent surcharges will be taken into consideration when determining the sewage charge and trade effluent surcharge rates in future.

PUBLIC CONSULTATION

- 11. We have engaged the public on the proposed works since 2013. We conducted community liaison group meetings and carried out a series of local consultation and engagement activities on the project from 2015 to 2018. In particular, we consulted the Sheung Shui District Rural Committee ("SSDRC") in May 2018 and the North District Council ("NDC") in June 2018. The SSDRC did not object to the project and the NDC supported it.
- 12. We consulted the LegCo Panel on Development in January 2019. Other Members including those of the Panel on Environmental Affairs were invited to the meeting. Most Members supported the submission of funding application in relation to the proposed works to the Public Works Subcommittee for consideration, with further information to be provided on the benefits of raising the treatment level to tertiary standard and breakdown of the capital cost.

ENVIRONMENTAL IMPLICATIONS

13. The project is a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance ("EIAO") (Cap. 499) and an environmental permit ("EP") is required for the construction and operation of the

/project

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.

project. The Environmental Impact Assessment ("EIA") Report for the project was approved with conditions in October 2013 under the EIAO. The EIA Report concluded that the environmental impact of upgrading the SWHSTW can be controlled to within the criteria under the EIAO and the Technical Memorandum on the EIA Process. An EP for the project was issued in November 2013. We shall implement the measures recommended in the approved EIA Report. The key measures include the installation of deodourization units for odour control and the provision of standby unit with dual power supply to prevent any emergency discharge during operation stage. We have included in the project estimate of the proposed works the cost for implementation of the necessary environmental mitigation measures.

- 14. At the planning and design stages, we have considered ways to reduce the generation of construction waste where possible. In addition, we will require the contractors to reuse inert construction waste (e.g. excavated soil) on site or in other suitable construction sites as far as possible in order to minimise the disposal of inert construction waste to the public fill reception facilities ("PFRF") ¹². We will encourage the contractors 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.
- 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 plan. We will require the contractors to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert and non-inert construction waste at PFRF and landfills respectively through a trip-ticket system.
- 16. We estimate that the proposed works will generate in total about 926 770 tonnes of construction waste. Of these, we will reuse about 235 620 tonnes (25%) on site, and deliver 689 350 tonnes (74%) of inert construction waste to PFRF for subsequent reuse. We will dispose of the remaining 1 800 tonnes (1%) of non-inert construction waste at landfills. The /total

Public fill reception facilities ("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.

total cost for disposal of construction waste at PFRF and landfill sites is estimated to be \$49.3 million for the proposed 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)).

TRAFFIC IMPLICATIONS

- 17. We have conducted a traffic impact assessment ("TIA") for the project, covering the traffic impact during both construction and operation phases. According to the findings of the assessment, with the implementation of appropriate temporary traffic arrangements ("TTAs"), the construction works will not cause significant impact on the traffic network. The traffic impact during operation phase, after completion of the project, has also been found to be acceptable.
- 18. At the construction stage, we will establish a traffic management liaison group and closely liaise with the Hong Kong Police Force, the Transport Department and other government departments concerned to discuss, scrutinize and review the proposed TTAs with a view to minimising the traffic impact arising from the construction works. We will display publicity boards on site giving details of the TTAs, and the anticipated completion dates of individual sections of works. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

20. The implementation of the proposed works will only involve government land. No land resumption is required.

/BACKGROUND

BACKGROUND INFORMATION

- We upgraded part of **388DS** to Category A as **406DS** in 2015 for the construction of the advance works to increase the treatment capacity of the SWHSTW (from 93 000 m³ to 105 000 m³ per day) to cater for the imminent sewage treatment demand and to engage consultants to carry out the detailed design and associated site investigation works for the remaining upgrading works for SWHSTW. The construction of the advance works commenced in July 2015 is scheduled to be completed in 2019.
- 22. The proposed works will involve removal of 392 trees including 389 trees to be felled and three trees to be transplanted within the project site. All trees to be removed are not important trees¹³. We will incorporate planting proposals as part of the project, including estimated quantities of 469 trees.
- 23. We estimate that the proposed works will create 1 020 jobs (820 for labourers and 200 for professional or technical staff), providing a total employment of about 60 000 man-months.

Environment Bureau February 2019

[&]quot;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 –

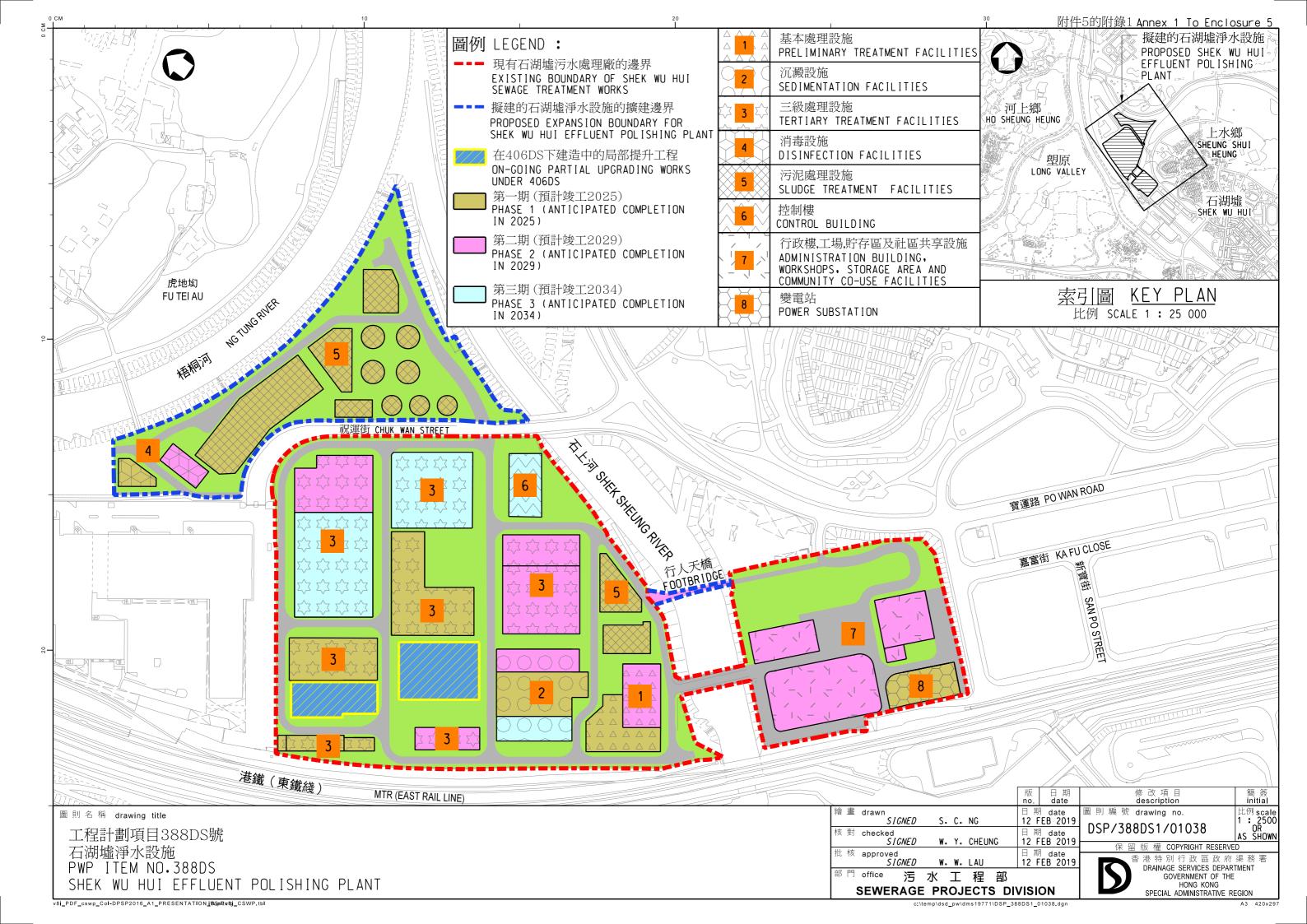
⁽a) trees of 100 years old or above;

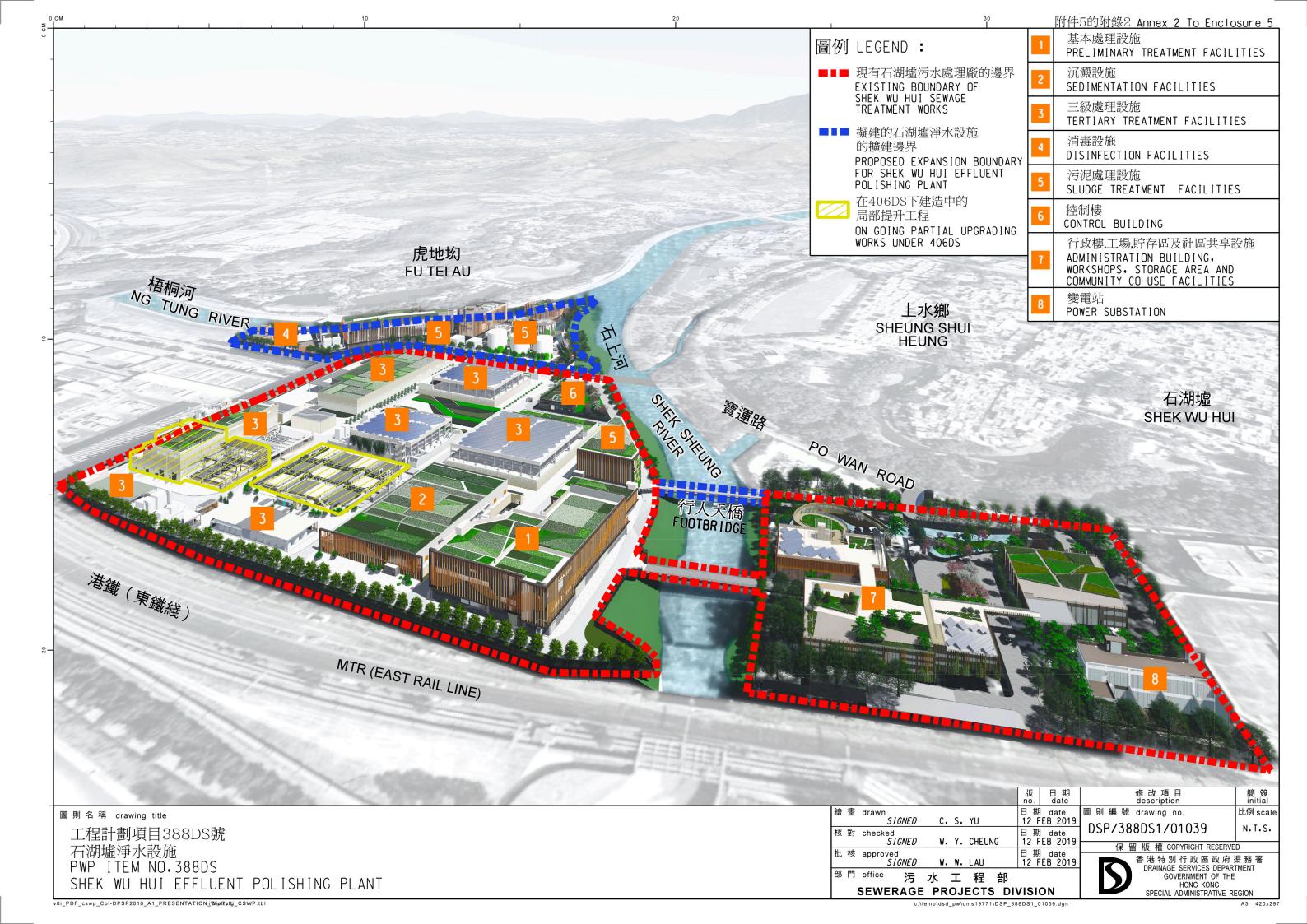
⁽b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;

⁽c) trees of precious or rare species;

⁽d) trees of outstanding form (taking account of 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 trunk diameter equal to or exceeding 1.0 metre ("m") (measured at 1.3 m above ground level), or with height/canopy spread equal to or exceeding 25 m.





388DS – Shek Wu Hui Effluent Polishing Plant

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

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' fees for contract administration (Note 2)	Professional Technical	-	-	-	31.2 15.7
					Sub-total	46.9#
(b)	Resident site staff	Professional	3 232	38	1.6	423.9
(-)	(RSS) costs (Note 3)	Technical	7 374	14	1.6	338.9
					Sub-total	762.8
	Comprising – (i) Consultants' fees for management of RSS				19.4#	
	(ii) Remuneration of RSS				743.4#	
					Total	809.7

^{*} 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 the design and construction of the project. The construction phase of the assignment will only be executed subject to Finance Committee's approval to upgrade **388DS** to Category A.
- 3. The actual man-months and actual costs will only be known after the completion of the construction works.

Remarks

The figures in this Annex 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 6 of Enclosure 5.

37CA – Special Ex-gratia Cash Allowance for the Kwu Tung North and Fanling North New Development Area

PROPOSAL

We propose to seek approval for an estimated total cost of \$732.6 million for subhead 37CA under Head 701 – Land Acquisition to meet payment of Special Ex-gratia Cash Allowance ("SEGCA") to eligible households arising from the clearance for the Kwu Tung North ("KTN") and Fanling North ("FLN") New Development Area ("NDA").

JUSTIFICATION

2. The Government announced in July 2013 that, given the large scale and overriding strategic significance of the KTN and FLN NDA, SEGCA should be offered to eligible households affected by the NDA development which would not opt for rehousing. Each 'Qualified Household', regardless of the area occupied by the relevant structure, may receive either a full SEGCA pitched at \$600,000, or a reduced SEGCA pitched at \$500,000 if the household is purchasing a subsidised sale flat unit at a Dedicated Rehousing Estate. Such a special ex-gratia offer of a one-off nature was meant to be an additional option available to eligible households of the NDA development who might still opt for the prevailing Ex-gratia Allowance for Permitted Occupiers of Licensed Domestic Structures and Surveyed Domestic Squatters Affected by Clearance ("EGAPO") back then in lieu if they so wished.

/3.

A 'Qualified Household' eligible for SEGCA should meet the following conditions –

⁽a) the household should reside in an affected structure at the date of the freezing survey;

⁽b) the affected structure should be a surveyed/licensed domestic structure not built on building land;

⁽c) the household should be covered by the 1984/85 Squatter Occupancy Survey or can produce evidence proving that it has resided in the affected structure for at least the same duration; and

⁽d) the household should fulfil the "no-domestic-property" requirement and related requirements applicable to Ex-gratia Allowance for Permitted Occupiers of Licensed Domestic Structures and Surveyed Domestic Squatters Affected by Clearance ("EGAPO").

- 3. In May 2018, the Government announced a unified as well as enhanced general ex-gratia compensation and rehousing ("C&R") package for, amongst others, eligible domestic occupants in squatters affected by government development clearance exercises. In July 2018, the Finance Committee ("FC") approved the package relating to various existing and new ex-gratia allowances ("EGAs"). Amongst others, FC approved that notwithstanding the enhanced general ex-gratia C&R package which should be able to address the needs of those affected by upcoming NDA projects (including the KTN and FLN NDA), the SEGCA arrangement which had already been announced well before 2018 should be retained, as it would be possible that the SEGCA/reduced SEGCA amount to which individual households are entitled may be higher than the enhanced EGAPO amount. Accordingly, FC gave approval for the creation of Subhead 37CA under Head 701 - Land Acquisition to provide SEGCA to eligible households affected by land resumption and clearance required under the KTN and FLN NDA development, at an estimated total cost to be determined nearer the time of the actual clearance. Details of the eligibility criteria for SEGCA and the Secretary for Development's discretion in offering SEGCA (mainly for eligible households residing in surveyed/licensed domestic structures for less than the requisite duration but for at least ten years immediately preceding the date of the freezing survey or those occupying surveyed/licensed non-domestic structures for domestic use for at least ten years immediately preceding the date of the freezing survey) were set out at paragraphs 10 to 14 of Enclosure 1 as well as Annex II to Enclosure 1 of FCR(2018-19)48 which FC considered in July 2018, reproduced as Annex 1 and Annex 2 to this Enclosure.
- 4. Following FC's approval in July 2018, we have estimated the provision required for the KTN and FLN NDA covering all possible eligible households to be affected, including those affected by clearances in the Remaining Phase of the NDA development which may voluntarily apply for early surrender of and departure from their squatter structures under the flexible implementation arrangement which we informed FC in July 2018².

/FINANCIAL

This flexible implementation arrangement takes into account the concerns expressed by households to be affected by the Remaining Phase development about their having to stay in the vicinity of works areas when the First Phase of construction has commenced, and about the breaking up of a coherent community. For practical considerations, whether and if yes how the applications would be entertained will be subject to capacity (e.g. whether rehousing units are available ahead of the original due date) and prioritisation of claims (e.g. those closer to the First Phase should be given priority).

FINANCIAL IMPLICATIONS

- 5. By making reference to 1982 Squatter Structure Survey record and the freezing survey undertaken for the KTN and FLN NDA development, the number of surveyed/licenced domestic and non-domestic structures affected by the NDA development is about 1 221 in total³. For planning purpose, we estimate that the maximum provision that would be required for SEGCA for the NDA development would be \$732.6 million⁴.
- 6. The proposed injection of funding into a SEGCA subhead carries no recurrent implications.

PUBLIC CONSULTATION

- 7. Since the announcement of the SEGCA offer for eligible households affected by the KTN and FLN NDA development in July 2013, we have arranged briefings, meetings and engagement sessions for various stakeholders (such as Legislative Council ("LegCo") Members, relevant District Councils ("DCs"), Rural Committees ("RCs"), resident groups and concern groups) to listen to and understand affectees' views on the C&R arrangement. Following the announcement of the unified and enhanced general ex-gratia C&R package in May 2018, we briefed LegCo, local stakeholders (such as the relevant DCs, RCs) as well as clearees (including residents' groups and concern groups) affected by key development clearance exercises in the pipeline (including the KTN and FLN NDA development) on various occasions from May to July 2018. Furthermore, we listened to deputations' views at the two joint meetings of LegCo Panel on Development and Panel on Housing held in June 2018. The package relating to EGAs (including SEGCA) was approved by FC in July 2018.
- 8. We consulted the LegCo Panel on Development in January 2019. Most Members supported the submission of funding applications in relation to the KTN and FLN NDA to the Public Works Subcommittee for consideration, including that for the injection of funding into the SEGCA subhead.

/BACKGROUND

It is assumed that there would be one 'Qualified Household' in each of the affected structures.

For planning purpose, we assume that all 'Qualified Households' would opt for SEGCA and get the maximum amount of SEGCA (i.e. \$600,000).

BACKGROUND

- 9. In line with the 'people-oriented' philosophy of the current-term Government, we announced in May 2018 enhancements to the existing ex-gratia C&R arrangements for eligible households in squatters and for business undertakings affected by government development clearance exercises. In so doing, we hope to address the concerns of those affected, and to facilitate land resumption and clearance with a view to securing timely delivery of land for housing, commercial and other community needs. We are also mindful of the need for striking a reasonable balance between meeting the expectations of those being affected and a prudent use of public money and public housing resources.
- 10. Our enhanced ex-gratia C&R arrangements comprise the following key features:
 - (a) replacing "project-specific" packages with a unified as well as enhanced general ex-gratia C&R package applicable to all future government development clearance exercises;
 - (b) offering to eligible households non-means tested rehousing in Dedicated Estates to be built and operated by the Hong Kong Housing Society;
 - (c) relaxing the eligibility criteria and increasing the amount of cash EGAs for eligible households residing in surveyed/licenced structures;
 - (d) suitably extending the arrangements on non-means tested rehousing and enhanced cash EGAs to eligible households currently residing in surveyed/licenced non-domestic structures; and
 - (e) relaxing the eligibility criteria of applicable EGAs for business undertakings on brownfields and in squatters.
- 11. When introducing a unified as well as enhanced general ex-gratia C&R package for all clearance projects, Government has reviewed the need for the special ex-gratia C&R arrangements for the KTN and FLN NDA and Hung

Shui Kiu NDA that had been announced, and proposed to retain the SEGCA arrangements. In other words, eligible households may opt for either SEGCA or enhanced EGAPO.

Development Bureau February 2019

Summary of Preparatory Work for Land Resumption and Clearance for the First Phase Development of Kwu Tung North and Fanling North New Development Area

For domestic households

- 1. Out of the 1 500 households to be affected by the entire Kwu Tung North and Fanling North New Development Area (KTN and FLN NDA), about 445 households involving about 1 160 persons will be affected by the First Phase development. These households are expected to move out of existing squatters over a period of two years or so starting from the latter half of 2019 onward progressively.
- 2. We issued on 27 July 2018 letters to the First Phase households, informing them of a unified as well as enhanced general ex-gratia compensation and rehousing ("C&R") arrangement and the commencement of the detailed screening. Detailed screening for eligibility of the ex-gratia C&R arrangement commenced in July 2018 and is ongoing. By mid-January 2019, Lands Department has contacted about 80% of the 445 households and 60% of them have provided information for eligibility check.

For business undertakings

- 3. Out of the total of 443 business undertakings to be affected by the entire KTN and FLN NDA, 141 will be affected by the First Phase development. The known business undertakings to be affected by the First Phase development are mainly timber yards, open storages, workshops, food processing, godowns, offices, canteens, logistics operations, etc. They are mainly expected to move out progressively over a period of three years or so starting from late 2019 with the majority due to move from latter half of 2020 to 2021.
- 4. We are assessing their eligibility for claiming of ex-gratia ("EGA") allowances. We have also been meeting with the stakeholders to explain the EGA packages.

For residents in the Residential Care Homes for the Elderly (RCHE) in Dills Corner Garden (DCG)

5. As a special compassionate arrangement, we will build in the vicinity of DCG (Area 29 in KTN NDA) a new Multi-welfare Services Complex

(the Complex) for the provision of elderly and rehabilitation services, including a total of 1 750 residential care places for the elderly, which will be able to accommodate all eligible RCHE residents in DCG affected by the clearance programme. Site formation for the Complex in Area 29 of KTN NDA has been completed. We will arrange funding under Lotteries Fund for the construction of the Complex to commence in end 2019.

- 6. The existing RCHEs will be cleared in two phases. Before the commencement of operation of the Complex in 2023, about 160 DCG residents will be affected by the first phase clearance targeted to commence in the first half of 2020. We will make suitable arrangements to minimise the disturbance caused to this group of residents, including the options that they can move within DCG during the transition period, and discussions on these arrangements are ongoing.
- 7. The second phase clearance will take place after the commissioning of the Complex. In other words, the DCG residents will be able to stay in the DCG RCHEs until the new Complex is ready for intake in 2023.
- 8. The Government, through an inter-departmental working group led by Social Welfare Department, has been maintaining dialogue with the RCHE operators to discuss the relocation of the RCHE residents to the Complex and the interim arrangement for the RCHE residents affected by the first phase clearance.

For farmers

- 9. A Farm Operation Survey (FOS) has been completed recently to record the farmers to be affected by the First Phase development. Around 30 crop farms covering a total area of about 4 hectares (ha) will be affected by the First Phase development. Save for a few due to move out in early 2020, the majority are due to move out from the latter half of 2020 to mid-2021.
- 10. If the affected farmers intend to re-farm elsewhere, they are eligible to be relocated to the future Agricultural Park. Furthermore, under the Special Agricultural Land Rehabilitation Scheme, we have identified about 4 ha of government land in the North District for re-farming purpose. We will also continue to liaise with the land owners of private land in the region to facilitate match-making for rehabilitation.
- 11. For Long Valley Nature Park (LVNP), around 50 farms covering a total area of about 31 ha had been recorded in the FOS. The affected farmers will

have priority in applying for farming in the future LVNP. Those applying for farming will be accommodated within the future LVNP as far as possible, and arrangements will be made for them to farm in the LVNP when it is being established by phases.

12. We met with the affected farmers in January 2019 to brief them on the re-farming arrangements and listen to their views. These engagement sessions will continue, including site visits to the 4 ha of government land being arranged for affected farmers.

For pet animals

- 13. Eligible affected households to be rehoused at the public rental housing estates of the Hong Kong Housing Authority (HKHA) or the Hong Kong Housing Society (HKHS) have to follow the respective established pet keeping policies in the respective estates, including any compassionate arrangement by HKHA and HKHS for keeping of service dogs for tenants with visual impairment and for keeping of companion dogs for those with strong special needs for such support.
- 14. As for the pet keeping arrangement in the future Dedicated Rehousing Estates to be operated by the HKHS, the Government will explore with HKHS on allowing the keeping of dogs in subsidised sale flat units by making reference to the precedents in certain existing subsidised sale flats of HKHS. The arrangements in the rental units of Dedicated Estates will largely follow those in HKHS' existing rental estates.
- 15. The Government will continue to work with the animal welfare organisations to promote animal welfare and appeal to the public for animal adoption.

For land owners

- 16. We issued letters to the land owners to be affected by the First Phase development progressively starting from 15 January 2019 to inform them of the latest programme of the First Phase development.
- 17. Subject to approval of funding by Legislative Council in the first half of 2019, we will commence land resumption in the second half of 2019.

18. Zone "A" ex-gratia zonal land compensation will be offered to the land owners for private land to be resumed within the KTN and FLN NDA in accordance with the established practice.