For discussion
on 21 April 2021

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 – HOUSING
Civil Engineering – Land development
810CL – Site formation and infrastructure works for public housing development at Long Bin, Yuen Long

Members are invited to recommend to the Finance Committee the upgrading of **810CL** to Category A at an estimated cost of $1,642.7 million in money-of-the-day prices.

PROBLEM

We need to carry out site formation and infrastructure works to support the proposed public housing development at Long Bin, Yuen Long.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Transport and Housing, proposes to upgrade **810CL** to Category A at an estimated cost of $1,642.7 million in money-of-the-day (MOD) prices for the site formation and infrastructure works.

PROJECT SCOPE AND NATURE

3. The proposed scope of works of **810CL** comprises –

/(a) …..

(a) site formation works and construction of associated retaining walls and slopes;

(b) construction of a carriageway and footpath connecting Ma Fung Ling Road with Long Tin Road, associated noise barrier, pedestrian crossings, and improvement of associated cycle track;

(c) construction of a lay-by and widening of footpath at a section of Ma Fung Ling Road;

(d) construction of a public transport interchange with associated noise covers, widening a section of Long Tin Road to provide an additional northbound traffic lane and footpath, and improvement of associated cycle tracks;

(e) extension of an existing bus lay-by, widening of footpath and construction of an associated roundabout at a section of Castle Peak Road - Ping Shan;

(f) construction of three footbridges –

(i) a footbridge with associated lift facilities across Castle Peak Road – Ping Shan;

(ii) a footbridge with associated lift facilities across Long Tin Road; and

(iii) a footbridge across Yuen Long West Nullah;

(g) road improvement works of a section of Long Tin Road slip road near Castle Peak Road - Ping Shan;

(h) construction of a sewage pumping station and associated sewerage works; and

(i) ancillary works including drainage, waterworks, land decontamination and landscaping works.

4. The location and site plans together with sections of the proposed works are at **Enclosure 1**.

/5. …..

5. We plan to commence the proposed works after obtaining funding approval from the Finance Committee for target completion in around five and a half years to support the public housing development.

JUSTIFICATION

6. We propose to carry out **810CL** to provide formed land and associated infrastructure for the public housing development project at Long Bin, Yuen Long. The key development parameters and the conceptual plan of the public housing development are at **Enclosure 2** and **Enclosure 3** respectively.

7. According to the findings of the traffic impact assessment (TIA), we propose to carry out the road improvement works as listed in items (b) to (g) in paragraph 3 above to accommodate the traffic and transportation needs arising from the proposed development.

FINANCIAL IMPLICATIONS

8. We estimate the capital cost of the proposed works to be $1,642.7 million in MOD prices, broken down as follows –

		$ million (in MOD prices)
(a)	Site formation works and associated retaining walls and slopes	456.8
(b)	Road works	305.8
(c)	Footbridges with associated lift facilities	222.5
(d)	A sewage pumping station and associated sewerage works	92.8
(e)	Ancillary works including drainage, sewerage, water supply, noise barrier and landscaping	217.0
(f)	Consultants' fee for	15.2

/(i) …..

	(i) contract administration	9.2	
	(ii) management of Resident Site Staff (RSS)	6.0	
(g)	Remuneration of RSS		183.3
(h)	Contingencies		149.3
		Total	1,642.7

9. In view of insufficient in-house resources, we propose to engage consultants to undertake contract administration and site supervision of the proposed works. A breakdown of the estimates for consultants' fees and RSS costs by man-months is at **Enclosure 4**.

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

Year	**$ million (in MOD prices)**
2021 – 2022	50.3
2022 – 2023	183.0
2023 – 2024	326.4
2024 – 2025	562.4
2025 – 2026	395.7
2026 – 2027	124.9
	1,642.7

11. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period from 2021 to 2027. Civil Engineering and Development Department (CEDD) will deliver the proposed works under New Engineering Contract[1]. The contract will provide for price adjustments.

12. We estimate the annual recurrent expenditure arising from the proposed works to be about $13.38 million.

PUBLIC CONSULTATION

13. We gazetted the proposed road works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (RO) and the proposed sewerage works under RO as applied by Section 26 of the Water Pollution Control (Sewerage) Regulation (Cap. 358AL) on 20 December 2019. After the gazettal, we received 199 objections to the proposed road works. No objection was received regarding the proposed sewerage works. We met the objectors to explain the details of the works. In the end, an objector withdrew two objections unconditionally, but the remaining 197 objections were not withdrawn. The unresolved objections are mainly related to traffic and transport, compensation and rehousing issues. We subsequently submitted the objections and the correspondence with the objectors (including meeting minutes) to the Chief Executive in Council (CE in C) for consideration. On 5 January 2021, the CE in C authorised the proposed road works and proposed sewerage works without modification. The notice of authorisation was subsequently gazetted on 22 January 2021.

14. Yuen Long District Council (YLDC) and Ping Shan Rural Committee (PSRC) had previously expressed concerns about the public housing development at Long Bin. Therefore, CEDD sent a letter to the PSRC on 8 January 2021 to report the progress of the proposed works and explained that when the proposed road improvement works were completed, the public housing development at Long Bin would not cause unacceptable impact to nearby traffic.

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

15. We consulted the Housing, Town Planning and Development Committee of the YLDC on the proposed works and the concerned public housing development on 17 March 2021. The Committee expressed concerns about the details of the public housing development at Long Bin, the social welfare facilities, traffic arrangements, compensation and rehousing issues. We had provided detailed explanations to the Committee on various concerns, for example, the air ventilation assessment, visual impact assessment and traffic impact assessment for the concerned housing development. The Committee still expressed reservations about the public housing development at Long Bin and demanded the government to provide detailed information of the concerned development in due course. The Government will continue to liaise with the relevant stakeholders.

16. Besides, CEDD consulted the Advisory Committee on the Appearance of Bridges and Associated Structures[2] (ACABAS) about the aesthetic design of the footbridge, the noise barrier and the retaining structures. The Committee accepted the design in principle and provided some suggestions on the appearance of the structures. We will refine the aesthetic design of the relevant structures according to the suggestions and will continue to consult ACABAS.

17. We briefed Members of the Legislative Council Panel on Housing on 29 March 2021 on the Government's proposal to upgrade **810CL** to Category A. The Panel supported the submission of the funding proposal for the proposed works to the Public Works Subcommittee for consideration.

ENVIRONMENTAL IMPLICATIONS

18. The proposed sewage pumping station is a designated project (DP) under the Environmental Impact Assessment Ordinance (EIAO) (Cap. 499) and requires an environmental permit (EP) for its construction and operation of the project. Having regard to the project profile, the Director of Environmental Protection (DEP) is satisfied that the impact of the proposed works and the mitigation measures meet the requirements of the Technical Memorandum on Environmental Impact Assessment Process. The permission to apply directly for an EP for the proposed works was granted on 9 March 2021. We will implement the environmental mitigation measures and conduct regular site audit in accordance with the EP conditions.

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[2] The ACABAS comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institute of Planners, an academic institution, Architectural Services Department, Highways Department, Housing Department, and Civil Engineering and Development Department. It is responsible for vetting the design of bridges and other structures associated with the public highway system, including noise barriers and semi-enclosure, from aesthetic and visual impact points of view.

19. We will implement the environmental mitigation measures for the proposed works in accordance with project profile and as required under the EP. The recommended mitigation measures mainly include installation of deodorizing unit, soundproof doors and silencers in the sewage pumping station. For the short-term environmental impacts caused by the proposed works during construction, CEDD will incorporate into the works contracts the proposed mitigation measures that the contractor should implement to control noise, dust and site run-off nuisances during construction to within established standards and guidelines. These measures include the use of movable noise barriers or enclosures and quiet plants to reduce noise generation, regular cleaning and watering of the work sites, installations of sprinklers and the provision of wheel-washing facilities to minimise dust generation, and the use of temporary drains to collect site run-off for on-site treatment before discharge.

20. Except for the proposed sewage pumping station mentioned in paragraphs 18 and 19 above, the remaining parts of **810CL** are not a DP under the EIAO. CEDD has completed the Preliminary Environmental Review (PER) for the project. The PER concluded that the project would not cause any long-term adverse environmental impacts. We will implement mitigation measures recommended in the PER to control short-term environmental impacts due to the proposed works to within the established standards and guidelines. We have included in the project estimate the cost to implement suitable environmental mitigation measures.

21. At the planning and design stages, CEDD has considered the design and layout of the proposed site formation so as to reduce the generation of construction waste where possible. In addition, CEDD will require the contractor to reuse inert construction waste (e.g. excavated soil and rock fill) on site or at other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste at public fill reception facilities[3] (PFRF). CEDD 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 generation of construction waste.

22. At the construction stage, CEDD will require the contractor to submit for approval a plan setting out the waste management measures by the Government, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. CEDD will ensure that the day-to-day operations on site comply with the approved plan. CEDD will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate

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

facilities. CEDD will control the disposal of inert construction waste and non-inert construction waste at PFRF and landfills respectively through a trip-ticket system.

23. CEDD estimates that **810CL** will generate in total about 101 000 tonnes of construction waste. Of these, CEDD will reuse about 69 000 tonnes (68%) of inert construction waste on site and deliver 7 000 tonnes (7%) of inert construction waste to PFRF for subsequent reuse. CEDD will dispose of the remaining 25 000 tonnes (25%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRF and landfill sites is estimated to be about $5.50 million for this project (based on a unit charge rate of $71 per tonne for disposal at PFRF and $200 per tonne for disposal at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N).

HERITAGE IMPLICATIONS

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

TRAFFIC IMPLICATIONS

25. CEDD has conducted a TIA on the traffic impact of the proposed development on the roads in the vicinity. According to the findings of TIA, the traffic condition between Long Bin and urban area would be at acceptable level. With the full implementation of the proposed traffic improvement measures in the district, the road network at Long Bin can generally accommodate the traffic and transport needs arising from the proposed development. During the construction period of the proposed works, CEDD will implement temporary traffic arrangement and appropriate control measures on construction vehicles to minimise traffic impact on nearby roads.

/ **LAND** …..

LAND ACQUISITION

26. We will resume about 4.8 hectares of private land and clear about 6.2 hectares of government land. A total of about 250 domestic households (involving about 650 persons) and about 20 business undertakings will be affected, and about 1020 temporary structures (including 2 urns (Kam Taps)) will be cleared on the relevant private and government land. We will offer statutory compensation under the relevant ordinances, various prevailing administrative ex-gratia allowances to affected eligible land owners and occupiers and rehousing arrangements to eligible domestic households affected by clearance in accordance with the prevailing general ex-gratia compensation and rehousing arrangements.

27. The land acquisition cost, estimated at about $805 million including payment to eligible land owners, business undertakings, domestic occupiers of squatters and farmers will be charged to **Head 701 – Land Acquisition**. A breakdown of the estimated land acquisition cost is at **Enclosure 5**.

BACKGROUND INFORMATION

28. We upgraded **810CL** to Category B in September 2016.

29. CEDD engaged consultants in March 2018 to undertake the detailed design and site investigation for **810CL** at an estimated cost of about $25.75 million in MOD prices. This amount is charged to the Block Allocation **Subhead B100HX** "Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme". CEDD has substantially completed the detailed design for **810CL**.

30. Of the 491 trees within the project site boundary, 82 trees will be preserved. The proposed project will involve the removal of 408 trees, including 397 trees to be felled and 11 trees to be transplanted. In addition, one important tree[4] will be affected, of which the details were summarised at **Enclosure 6**. We

/will …..

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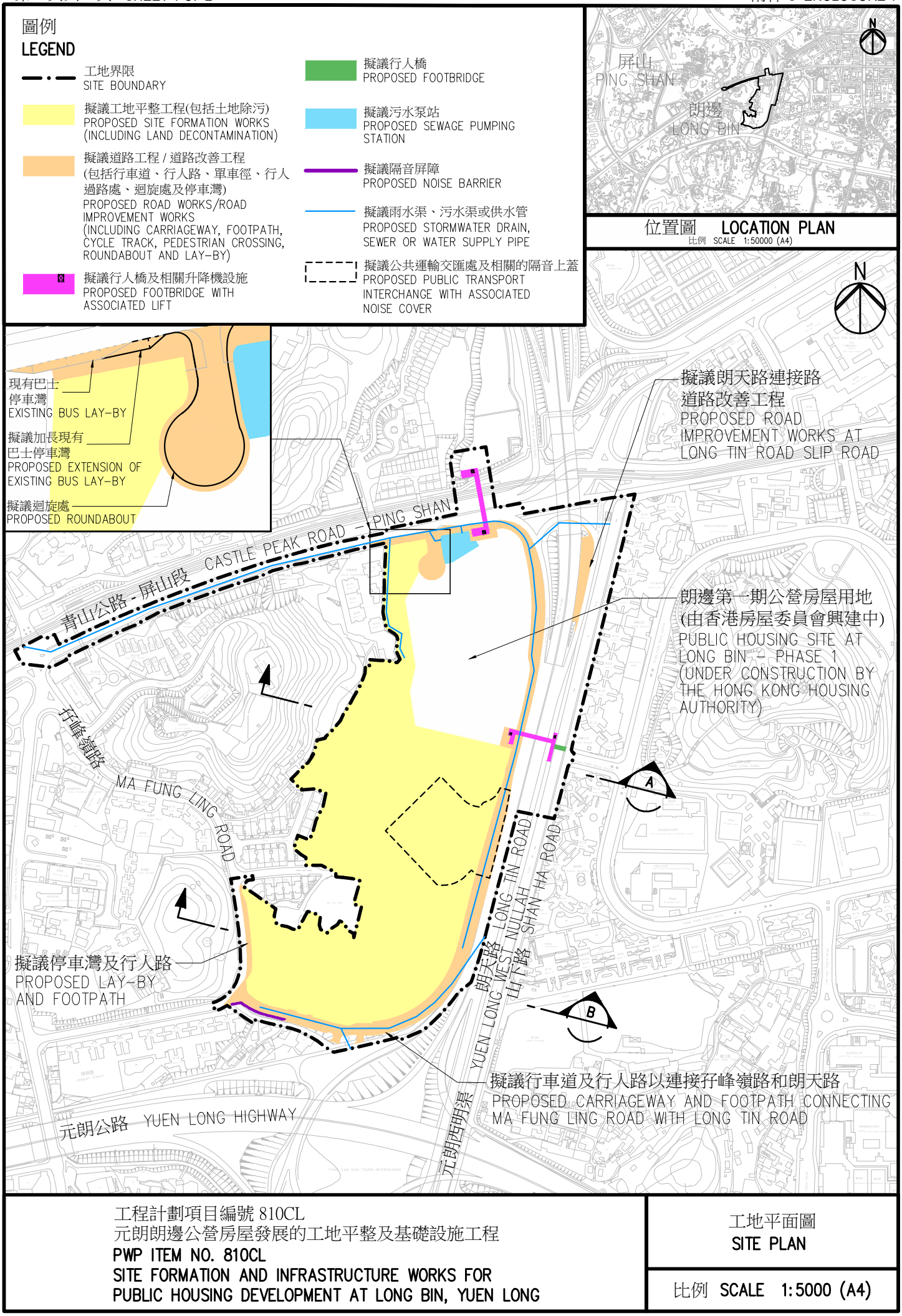
[4] "Important tree" refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –
(a) trees of 100 years old or above;
(b) trees of cultural, historical or memorable significance e.g. Fung Shui trees, trees as landmark of monastery or heritage monument, and trees in memory of an important person or event;
(c) trees of precious or rare species;
(d) trees of outstanding form (taking account of the overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
(e) trees with trunk diameter equal to or exceeding 1.0 metre (m) (measured at 1.3 m above ground level), or with a height/canopy spread equal to or exceeding 25 m.

will incorporate planting proposals as part of the proposed works, including estimated quantities of about 240 whips and about 67 000 shrubs.

31. We estimate that **810CL** will create about 340 jobs (270 for labourers and another 70 for professional or technical staff) providing a total employment of about 15 800 man-months.

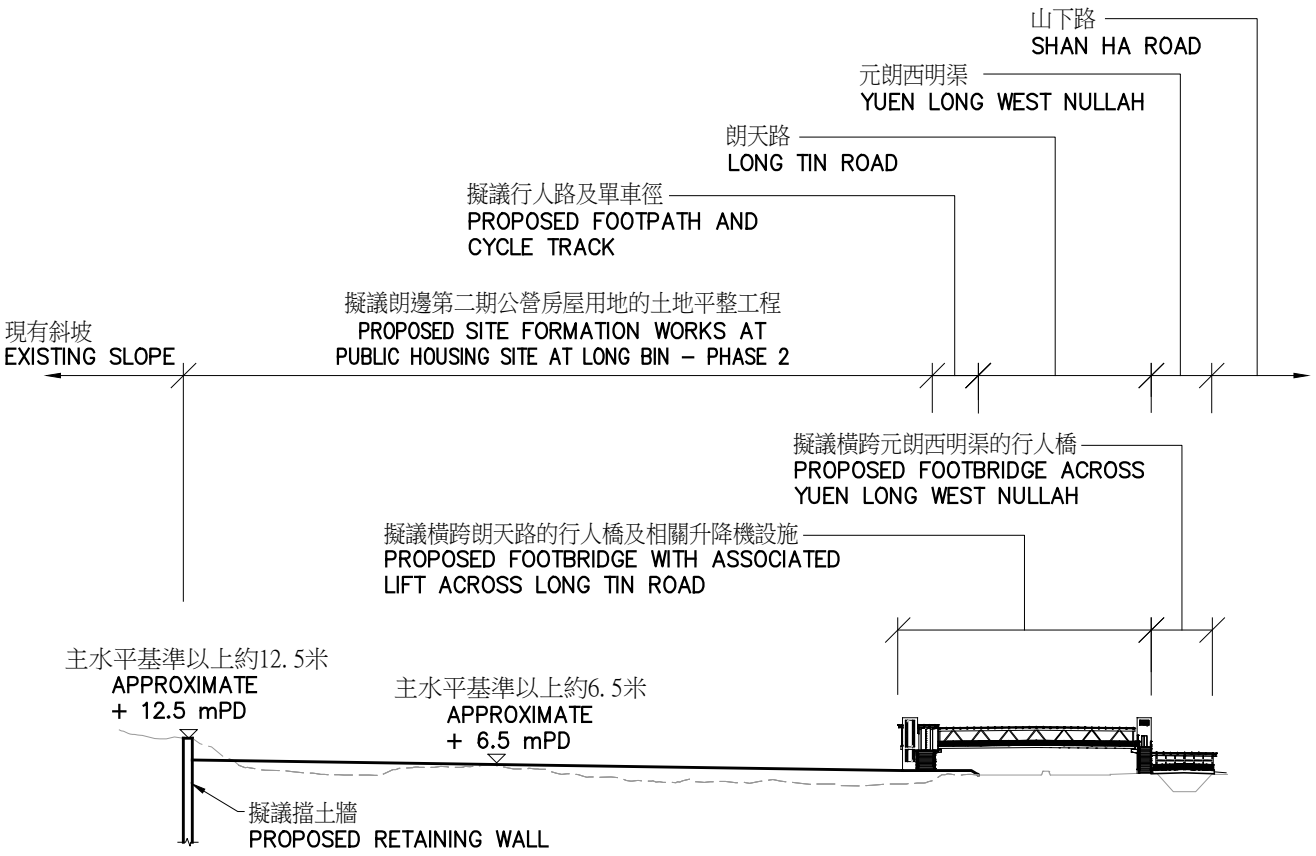
Transport and Housing Bureau
April 2021



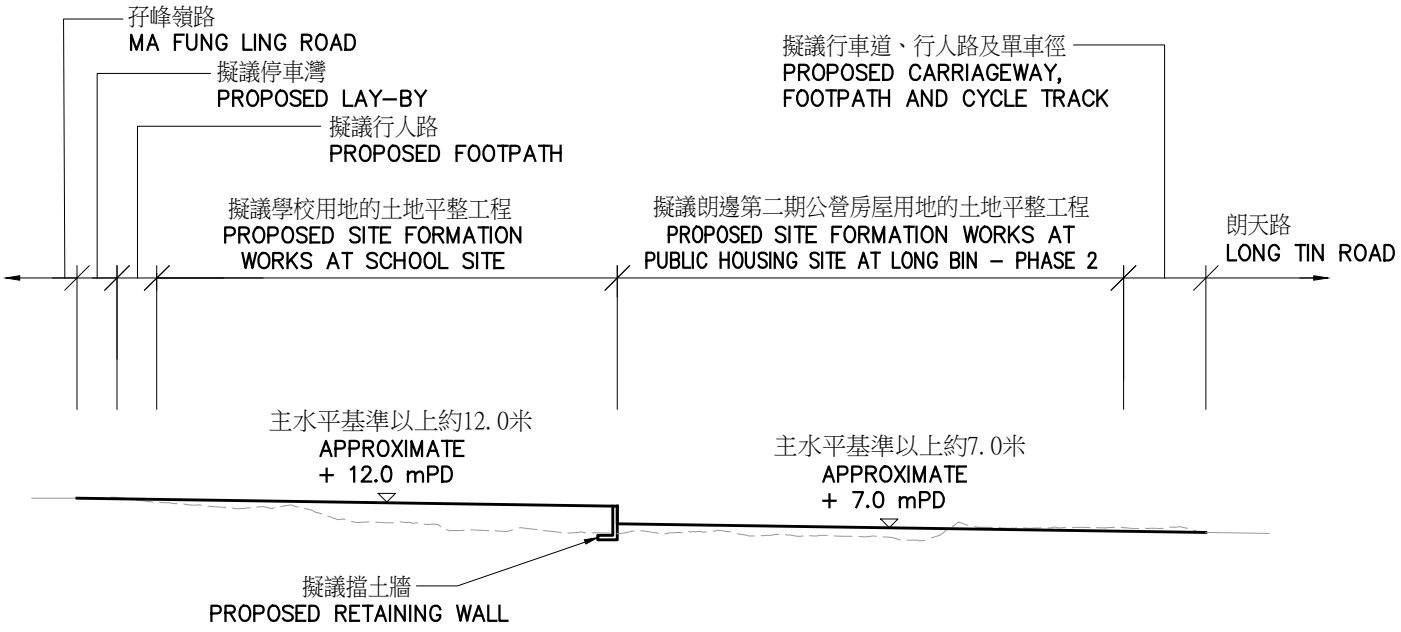
工程計劃項目編號 810CL
元朗朗邊公營房屋發展的工地平整及基礎設施工程
PWP ITEM NO. 810CL
SITE FORMATION AND INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT LONG BIN, YUEN LONG

工地平面圖
SITE PLAN

比例 SCALE 1:5000 (A4)



剖面圖 SECTION A–A



剖面圖 SECTION B–B

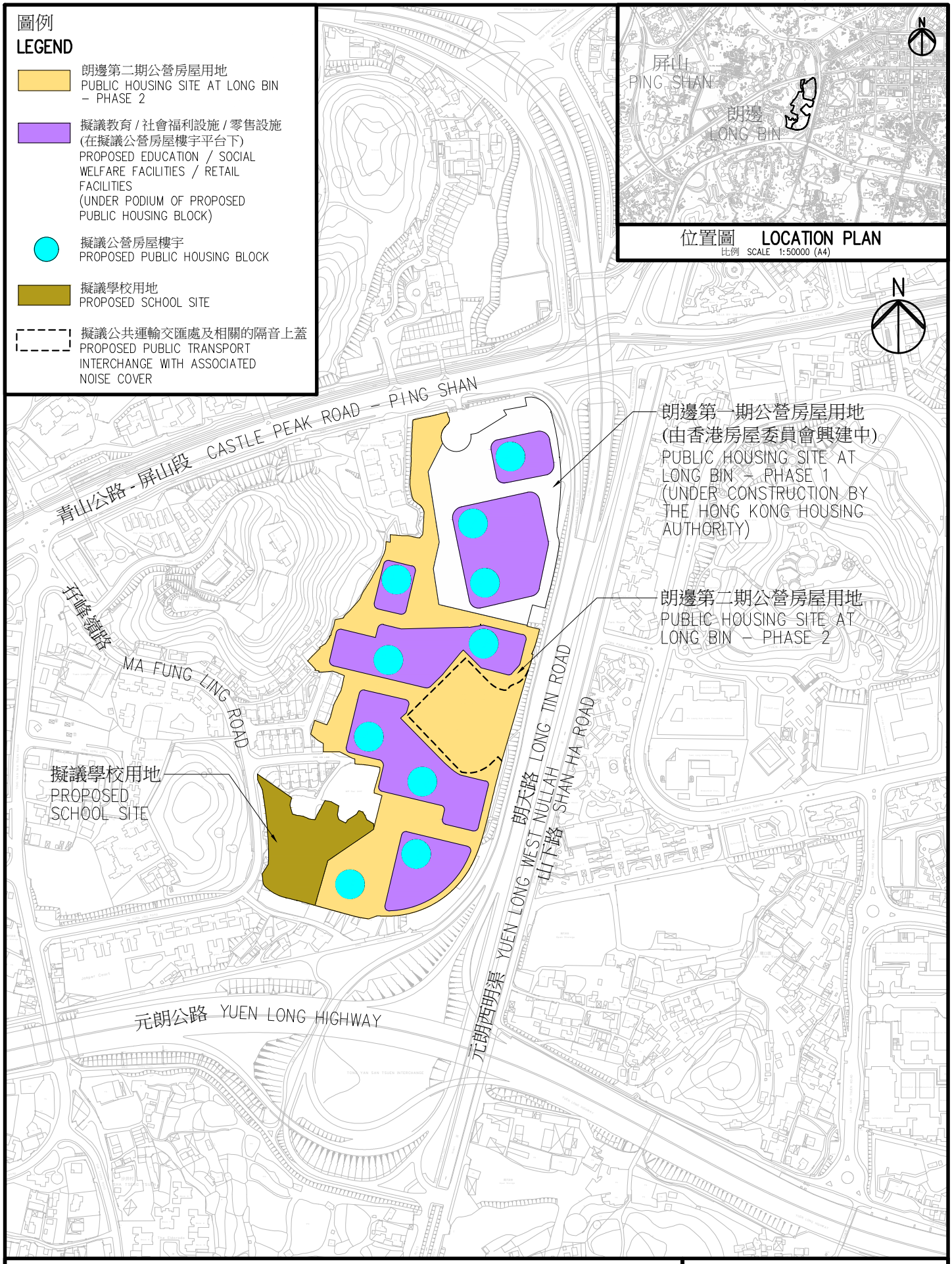
工程計劃項目編號 810CL 元朗朗邊公營房屋發展的工地平整及基礎設施工程 PWP ITEM NO. 810CL SITE FORMATION AND INFRASTRUCTURE WORKS FOR PUBLIC HOUSING DEVELOPMENT AT LONG BIN, YUEN LONG	剖面圖 SECTIONS 不按比例 NOT TO SCALE

Enclosure 2 to PWSC(2021-22)4

Key development parameters of the public housing development at Long Bin, Yuen Long

Site area	Phase 1: about 2 hectares Phase 2: about 6 hectares A total of about 8 hectares
No. of domestic blocks	10 (subject to detailed design)
No. of flats	About 12 000
Projected population	About 33 000
Completion date	In phases from 2025
Non-domestic facilities	Ancillary parking spaces, local open spaces, kindergartens, recreational, social welfare[#] and retail facilities, etc.

The Hong Kong Housing Authority is discussing with Social Welfare Department regarding the details of social welfare facilities. Facilities which will be provided tentatively include: Aided Standalone Child Care Centre, On-site Pre-school Rehabilitation Services (Office Base), Integrated Children and Youth Services Centre, Neighbourhood Elderly Centre, Residential Care Home for the Elderly cum Day Care Unit, Special Child Care Centre, Integrated Vocational Rehabilitation Services Centre, Hostel for Moderately Mentally Handicapped Persons, Supported Hostel for Mentally Handicapped Persons, Hostel for Severely Physically Handicapped Persons, etc.



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概念平面圖
CONCEPTUAL PLAN

比例 SCALE 1:5000 (A4)

810CL - Site formation and infrastructure works for public housing development at Long Bin, Yuen Long

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2020 prices)

			Estimated man-months	Average MPS* Salary point	Multiplier (Note 1)	Estimated fee ($ million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	--	--	--	6.2
		Technical	--	--	--	1.5
					Sub-total	7.7 #
(b)	Resident site staff (RSS) costs(Note 3)	Professional	706	38	1.6	97.0
		Technical	1255	14	1.6	60.7
					Sub-total	157.7
	Comprising –					
	(i) Consultants fees for management of RSS				5.0 #	
	(ii) Remuneration of RSS				152.7 #	
					Total	**165.4**

*MPS = Mater 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 point 38 = $85,870 per month and MPS point 14 = $30,235 per month).

2. The consultants' staff cost for the contract administration is calculated in accordance with the existing consultancy agreement. The construction phase of the assignment will only be executed upon FC's approval to upgrade **810CL** to Category A.

3. We will only know the actual man-months and actual costs 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 8 of the main paper.

810CL - Site formation and infrastructure works for public housing development at Long Bin, Yuen Long

Breakdown of land acquisition cost

			$ million
(a)	**Estimated cost for land acquisition**		**605.9**
(b)	**Estimated cost for land clearance**		**94.4**
	(i) 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.)	52.8	
	(ii) Other EGAs (e.g. crop compensation, disturbance allowance for cultivators, EGA for miscellaneous permanent improvements to farms, EGA for shops, workshops, godowns, slipways, schools, churches and ornamental fish breeding undertakings, EGA for open-air/ outdoor business undertakings, EGA for relocation of urns "Kam Taps" and EGA for "Tun Fu" ceremonial fees, etc.)	41.6	
(c)	**Interest and Contingency payment**		**105.0**
		Total	**805.3**
			(say $805)

The above estimated land acquisition cost is based on the prevailing rates and the valuation as at April 2021.

Enclosure 6 to PWSC(2021-22)4

810CL - Site formation and infrastructure works for public housing development at Long Bin, Yuen Long
Summary of "important tree" affected

Tree ref. no.[1]	Species		Measurements			Amenity Value[3]	Form	Health condition	Structural condition	Suitability for Transplanting[4]		Conservation Status[5]	Recommendation	Department to Provide Expert Advice	Additional Remarks
	Scientific Name	Chinese Name	Height (m)	DBH[2] (mm)	Crown Spread (m)	(Good / Fair / Poor)				(High / Medium / Low)	Remarks		(Retain / transplant / fell)		
T401	*Ficus microcarpa*	細葉榕	22	1 900	25	Good	Fair	Fair	Fair	Low	The tree is currently located on a platform, about 2 metres high, of a village house and some roots of the tree extend from the platform to the surface of a road. It is infeasible to dig the mud for transplant.	-	Fell	LandsD	The tree's existing ground level (approximately +11.5 metres above Principle Datum) and the proposed level (+6.8 metres above Principle Datum) has a large level difference (up to 4.7 metres), hence the tree could not be retained.

1 No tree within site area is in 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 Conservation status is based on the rarity and protection status of the species under relevant ordinances in Hong Kong, such as
RPPHK – Species included in AFCD publication "Rare and Precious Plants of Hong Kong (2003)";
Cap. 586 – Native plants listed in Protection of Endangered Species of Animals and Plants Ordinance, Cap. 586;
Cap. 96 – Species Scheduled under Forests and Countryside Ordinance, Cap 96;
CPRDB – Species Included in "China Plant Red Data Book".