

**For discussion on
24 November 2020**

**LEGISLATIVE COUNCIL
PANEL ON DEVELOPMENT**

**Tung Chung New Town Extension
– Site Formation and Infrastructure Works, and
the District Cooling System
for Tung Chung East Area**

PURPOSE

This paper briefs Members on the following funding applications in relation to the Tung Chung New Town Extension (“TCNTE”):

TCNTE – Site Formation and Infrastructure Works

- (a) upgrading of part of **7786CL** (the “First Phase development”) to Category A for site formation and infrastructure works to support the development of the TCNTE (**Enclosure 2**); and

The District Cooling System for TCNTE (East)

- (b) upgrading of **5049CG** to Category A for the District Cooling System (“DCS”) for Tung Chung East (“TCE”) (**Enclosure 3**).

OVERVIEW

TCE Reclamation Progressing Well

2. The TCNTE is one of the major development projects being taken forward by Government to increase land supply over the next 10 years. It covers areas on the eastern and western flanks of the existing Tung Chung New Town – the extension in TCE involves new land creation of 130 hectares (“ha”) from reclamation, while that in Tung Chung West (“TCW”) involves resumption of private lots for public development. In October 2017, we first secured funding of \$20,210.0 million from the Legislative Council (“LegCo”) mainly for the TCE reclamation works. Reclamation

has since been progressing well and is on schedule for completion within 2023. So far, about half of the 130 ha has been completed, with land parcels so reclaimed to be made available for development in batches. The first batch comprising two public housing sites (about 7 ha) and a commercial site (about 1.2 ha) was handed over in March and June 2020 for development and land disposal respectively, with a lead time of slightly over two years since reclamation commenced in December 2017. The second batch comprising two public housing sites (about 3 ha) was made available for development in October 2020. A photo showing the TCE reclamation as at end October 2020 is at **Enclosure 1**.

Supplying More Public Housing

3. The TCNTE was originally planned with 49 400 housing units with public / private housing split of 63:37. To meet keen housing demand and optimise infrastructural investments, we have recently reviewed the technical feasibility of intensifying the development density of TCNTE housing sites. With the spare infrastructural capacity so identified and revision of the public housing flat design, we are able to increase the overall housing yield from 49 400 units to 62 100 units for total population of 184 000 subject to subsequent planning approvals to be obtained. The increase of 12 700 units will all be public housing with the resultant public/private housing split adjusted to 72:28. In terms of commercial facilities, the TCNTE will provide about 877 000 square metres (“m²”) floorspace generating some 40 000 jobs.

TCNTE – Site Formation and Infrastructure Works (7786CL)

4. To move forward with the TCNTE to support population intake commencing from 2024, we need to seek LegCo’s funding support for the majority of TCNTE site formation and infrastructure works to be implemented under the First Phase development¹. The remaining site formation and infrastructure works will be carried under the Remaining Phase with funding to be sought in 2023 tentatively. The phasing plan of the TCNTE development is at **Enclosure 4**. Key figures of the TCNTE development are tabulated below –

	First Phase	Remaining Phase	Entire Development
Housing yield (public housing)	59 700 units (43 200 units)	2 400 units (1 500 units)	62 100 units (44 700 units)

¹ Infrastructure works cover both TCE and TCW. Site formation is only applicable to TCW as the 130 ha of new land at TCE will be reclaimed up to a level that is fit and ready for development.

	First Phase	Remaining Phase	Entire Development
Planned population	177 000	7 000	184 000
Floor areas for economic activities	858 000 m ²	19 000 m ²	877 000 m ²
Private lots to be resumed ^[Note]	8 ha	8 ha	16 ha
Government land to be cleared	51 ha	6 ha	57 ha
Households affected ^[Note]	2	3	5
Business undertakings affected ^[Note]	15	7	22

Note:

The 130 ha reclaimed land at TCE does not involve land resumption or clearance. The figures reflect the land, households and business undertakings affected by works implemented by the Government in TCW.

5. The First Phase development covers site formation for public housing development in TCW; construction of the Road P1 (Tung Chung – Tai Ho Section) and Tai Ho Interchange connecting TCE and North Lantau Highway, as well as other road works in TCNTE including roads, footpaths, cycle tracks, and junction improvements; engineering infrastructure works (including drainage, sewerage, waterworks, common utility tunnels (“CUT”)² and landscaping works); construction of open space in Area 29A, first phase of River Park, and sustainable urban drainage system (“SUDS”)³ in TCW; and implementation of environmental mitigation measures and environmental monitoring and audit (“EM&A”) programme for the above-mentioned works. Subject to LegCo’s funding approval being available in early 2021, we will commence the First Phase development around mid-2021 for phased completion between 2024 and 2027. More details about the works under the First Phase development are at **Enclosure 2**.

The DCS for TCNTE (East) (5049CG)

6. DCS is a large-scale centralised air-conditioning system which produces chilled water at central chiller plants for distribution to user buildings for air-

² A CUT is an underground tunnel housing various utility cables and pipelines so that maintenance and repair can be carried out without digging up roads, which will in turn minimise disturbance to road users.

³ SUDS is a drainage system including stormwater attenuation and treatment ponds, bioswales and permeable pavements to control the amount and water quality of surface runoff to be discharged into Tung Chung Stream.

conditioning purpose. It is a major infrastructure in support of low-carbon development. The 2018 Policy Address stated that the feasibility of providing DCS in TCE would be studied. Since the estimated cooling demand of non-domestic buildings and facilities in TCE would be sufficient to support the development of DCS, we propose to construct a DCS to promote energy efficiency and conservation in TCE. The scope of works covers construction of a chiller plant cum seawater pump house, as well as pipe-laying works. Subject to LegCo’s funding approval being available in early 2021, we plan to commence the construction of the proposed works in phases and to substantially complete the main works of DCS by 2030. Details about the DCS works are at **Enclosure 3**.

FINANCIAL IMPLICATIONS

7. We estimate that the total costs in money-of-the-day (“MOD”) prices of the proposed works are as follows:

	\$ million (in MOD prices)
(a) 7786CL – TCNTE – Site Formation and Infrastructure Works	19,332.9
(b) 5049CG –The DCS for TCNTE (East)	3,918.2
Total	23,251.1

8. We will charge the cost of land resumption and clearance for **7786CL** estimated at about \$1,381.7 million to **Head 701 – Land Acquisition**. The annual cashflow will be sought separately according to established procedures together with other block allocation subheads under the Capital Works Reserve Fund.

WAY FORWARD

9. Members are invited to consider the funding applications in relation to the site formation and infrastructure works for TCNTE under **7786CL** and the DCS for TCNTE (East) under **5049CG** as set out in paragraph 1 above. Subject to Members’ comments, we plan to seek funding approval from the Finance Committee (“FC”) after consulting the Public Works Subcommittee.

10. Meanwhile, we will continue to make preparation for land resumption and clearance for the First Phase development of TCNTE. A summary of progress with such preparation is at **Enclosure 2**.

Development Bureau

Environment Bureau

November 2020



工務計劃項目第786CL號
東涌新市鎮擴展 - 工地平整及基礎設施工程 - 東涌東的填海進度

PWP ITEM NO. 786CL
TUNG CHUNG NEW TOWN EXTENSION - SITE FORMATION AND INFRASTRUCTURE WORKS - RECLAMATION PROGRESS OF TUNG CHUNG EAST

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Civil Engineering – Land development

786CL – Tung Chung New Town Extension

PROJECT SCOPE AND NATURE

The part of **786CL** (the “First Phase development”) which we propose to upgrade to Category A comprises –

- (a) site formation of about 6 hectares (“ha”) of land for public housing development in Tung Chung West (“TCW”);
- (b) construction of Road P1 (Tung Chung – Tai Ho Section) of about 2.5 kilometres (“km”) long, Tai Ho Interchange (including slip roads) of about 2.5 km long, other roads of about 10 km long, footpaths of about 22 km long, and cycle tracks of about 11 km long in the Tung Chung New Town Extension (“TCNTE”), and associated junction / road improvement works;
- (c) engineering infrastructure works covering drainage, sewerage (including upgrading of the existing Chung Mun Road Sewage Pumping Station and construction of three new sewage pumping stations), waterworks (including a fresh water service reservoir, a salt water service reservoir and a salt water pumping station), common utility tunnels (“CUT”) and landscaping works;
- (d) construction of the first phase of River Park including a visitor centre at TCW;
- (e) construction of proposed open space in Area 29A in TCW;
- (f) construction of sustainable urban drainage system (“SUDS”) in TCW; and

- (g) implementation of environmental mitigation measures and environmental monitoring and audit (“EM&A”) programme for the works mentioned in paragraphs (a) to (f) above.

2. Layout plans showing the scope of the First Phase development are at **Annex 1**.

3. Subject to LegCo’s funding approval being available in early 2021, we will commence the First Phase development around mid-2021 for phased completion between 2024 and 2027. To meet the works programme, the Civil Engineering and Development Department (“CEDD”) plans to invite tenders for the First Phase development from end 2020 progressively, but the works contracts will only be awarded upon obtaining funding approval from the FC.

4. Area 42 is the largest public housing site in TCW capable of producing about 6 600 units. In order to enable resumption and clearance of 124 private lots involved to be completed in time for site formation and housing construction so that population intake can occur in 2027, we will, after consulting the Development Panel (“Panel”), initiate land resumption procedures for Area 42 under the Lands Resumption Ordinance (Chapter 124) in January 2021. Resumption of other private lots in TCW will be carried out in the normal course upon obtaining funding approval from the FC. The approximate location of the land to be resumed for Area 42 is shown at **Annex 2**.

5. We will retain the remainder of **786CL** to be implemented under the Remaining Phase development in Category B, for which funding would be sought in 2023 tentatively. The scope of the remainder of **786CL** mainly covers the remaining site formation works at TCW and infrastructure works at Tung Chung East (“TCE”) and TCW, open spaces at TCE, and the associated construction supervision cost.

JUSTIFICATION

6. Having regard to the keen demand for public housing, the Government is working towards providing a total of about 62 100⁴ housing units for a total population of about 184 000¹ in TCNTE (vis-à-vis 49 400 housing units as estimated in 2017 when we sought funding approval for reclamation and advance works). Among them, about 44 700 or about 72% are public housing. The TCNTE will provide about 877 000 square metres (“m²”) floor areas for commercial development generating some 40 000 job opportunities.

7. The site formation and infrastructure works of the TCNTE will be

⁴ The above figures are achievable through deployment of spare infrastructural capacity to public housing development and revision of the flat design of public housing. The minor relaxation of development parameters of selected public housing developments is subject to the approval of Town Planning Board.

implemented in two phases, viz. the First Phase development and the Remaining Phase for the remainder as mentioned in paragraph 5 above. The First Phase development is crucial to facilitating the TCNTE population intake commencing from 2024.

8. Under the First Phase development, we will carry out site formation for three public housing sites in TCW. We will also construct the Road P1 (Tung Chung – Tai Ho Section) and Tai Ho Interchange so as to provide a direct connection between the TCE and the North Lantau Highway. Other road works include the construction of roads, footpaths and cycle tracks in the TCNTE, as well as improvement works to enhance the performance of junctions at existing road network. There will also be infrastructure works for the drainage, sewerage and fresh and salt water supply systems to serve the proposed TCNTE development.

9. Following the visions in the 2018 Policy Address and the Sustainable Lantau Blueprint, the TCNTE will adopt smart, green and resilient city concepts, and aspire to be developed into a smart and low-carbon community. In this regard, we will build electric vehicle charging facilities, water intelligent network and automatic meter reading for water supply system, comprehensive cycle track network, green and pedestrian-friendly environment, and the CUT (detailed in paragraph 10 below), as well as the River Park and SUDS in TCW (detailed in paragraphs 11 and 12 below).

10. To minimise the number of road openings and support the growing need for underground utility service, the Government has been exploring the use of CUT to house underground utility cables / pipelines in new development areas (“NDAs”). CUT is also recommended for NDAs according to the Smart City Blueprint for Hong Kong. We will implement CUT in major roads of TCNTE in support of this policy direction.

11. The Tung Chung Stream in Tung Chung Valley has high ecological value. While a section of the existing Tung Chung Stream at its downstream in the northeast of Shek Lau Po is channelised, we will restore the ecological connection between upstream and downstream of the Tung Chung Stream by revitalising this channelised section (about 600 metres (“m”) long) to its natural setting and developing a section (about 415 m long) into a River Park⁵ to promote water-friendly culture and activities. To promote conservation and enrich visitors’ experience, we will set up a visitor centre within the River Park.

12. To improve the water quality of Tung Chung Stream, a series of SUDS is proposed in TCW, including stormwater attenuation and treatment ponds, as well as bioswales and permeable pavements, to control the amount and improve the quality of surface runoff to be discharged into the Tung Chung Stream. In addition, the stormwater attenuation and treatment ponds in TCW will serve as buffers for flood

⁵ The remaining part of the River Park will be implemented in the Remaining Phase.

prevention purpose for the Tung Chung Stream.

13. In response to public calls for early implementation of the proposed open space in Area 29A in TCW (near Ma Wan Chung) to serve existing population of Tung Chung New Town, we will implement the proposed open space project under the First Phase development by preserving the natural setting of the environment while providing a range of facilities for better public enjoyment. Such facilities include upgrading the walking trails, provision of multi-purpose activity area, exercise corner, pet garden and look-out points, as well as construction of a boardwalk along the coastal area.

FINANCIAL IMPLICATIONS

14. We estimate the capital cost of the First Phase development to be \$19,332.9 million in money-of-the-day (“MOD”) prices.

PUBLIC CONSULTATION

15. From 2012 to 2014, we conducted under the “Planning and Engineering Study on the Remaining Development in Tung Chung – Feasibility Study” (the “P&E Study”) a three-stage public engagement exercise on the development proposal of the TCNTE. The Panel was consulted during the process. The development proposal was generally supported, with calls urging for early implementation of the TCNTE to meet the housing, economic and social needs.

16. The draft Tung Chung Extension Area Outline Zoning Plan, draft Tung Chung Valley Outline Zoning Plan and the draft Tung Chung Town Centre Area Outline Zoning Plan (“OZPs”) were gazetted in January 2016. During the statutory planning process, a total of 59 representations and 78 comments were received. After giving due consideration to the representations and comments, the Town Planning Board decided not to propose any amendment to the draft OZPs upon its deliberation on 18 November 2016. In February 2017, the Chief Executive in Council (“CE in C”) approved the three draft OZPs. The approved OZPs were then exhibited for public inspection in February 2017.

17. We gazetted the proposed road schemes for the First Phase development under the Roads (Works, Use and Compensation) Ordinance (Cap. 370), as well as the proposed sewerage schemes for the First Phase development under Cap. 370 as applied by the Water Pollution Control (Sewerage) Regulation (Cap. 358AL) in seven packages in phases from 2017 to 2019. The table in **Annex 3** summarises the dates of gazettal, number of objections received following gazettal, objections withdrawn following objection resolving meetings between Government and objectors and / or provision of relevant information, dates of CE in C authorisations and dates of gazettal of

authorisations.

18. Objections were received on the Package 1, Package 3 and Package 7 as summarised in the table in **Annex 3**. The objections were mainly related to the design and extent of the schemes, environmental disturbance, resumption of private lots, the impacts on an existing bee farm, trees, graves and urns and the businesses. The CE in C authorised the works in Package 1 and Package 3 in August 2020, and Package 7 in October 2020. The notices of authorisation were gazetted in October 2020.

19. We consulted the Tung Chung Rural Committee (“TCRC”) and the Islands District Council (“IsDC”) in August and October 2020 respectively. The TCRC offered in-principle support for the funding application of the TCNTE project. The IsDC supported the funding application and implementation of the TCNTE project.

ENVIRONMENTAL IMPLICATIONS

20. The TCNTE project is a Designated Project (“DP”) under Schedule 3 of the Environmental Impact Assessment Ordinance (“EIAO”) (Cap. 499). The proposed Road P1 (Tung Chung – Tai Ho Section) and the distributor roads, the sewage pumping stations and the de-channelisation works at Tung Chung Stream are also DPs under Schedule 2 of the EIAO and an Environmental Permit (“EP”) is required for their construction and operation. The environmental implications of these works were covered by the environmental impact assessment (“EIA”) report approved in April 2016, and also the EP for TCNTE issued in August 2016. The EIA report concluded that with the implementation of the recommended mitigation measures, these works would not cause adverse environmental impacts. For the fresh water service reservoir which is not a DP under the EIAO, we have carried out a Preliminary Environmental Review (“PER”) which concluded that the works would not cause long-term adverse environmental impacts.

21. We will implement measures and the EM&A programme recommended in the approved EIA report and the PER, and comply with the relevant conditions under the EP. Key mitigation measures to be implemented include noise barrier and low noise road surfacing for roadworks, as well as deodouriser, noise reduction and emergency sewage bypass prevention measures at sewage pumping stations, etc. during operation phase.

22. For controlling short-term environmental impacts caused by the First Phase development during construction, we will incorporate relevant contract conditions and require the future contractors to implement environmental mitigation measures. These measures include regular watering of exposed site area to reduce emission of fugitive dust, the use of movable noise barriers and quiet plant to reduce noise generation, and the use of trucks with cover or enclosed containers for waste

transportation. We have included the cost of implementing the environmental mitigation measures as well as the EM&A programme in the overall project estimates.

23. At the planning and design stages, we have considered all the First Phase development 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”)⁶. 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.

24. 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.

25. We estimate that the First Phase development will generate in total about 1 716 000 tonnes of construction waste. Of these, we will reuse about 690 000 tonnes (about 40.2%) of inert construction waste for the reclamation works being in progress, and reuse about 380 000 tonnes (about 22.2%) of inert construction waste on site. We will dispose of the remaining 640 000 tonnes (37.3 %) of inert construction waste at PFRF and 6 000 tonnes (about 0.3%) of non-inert construction waste at landfills. The total cost for disposal of the construction waste at PFRF and landfills are estimated to be about \$46.64 million for the First Phase development (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)).

TRAFFIC IMPLICATIONS

26. We completed a traffic impact assessment which showed that the traffic impact due to the planned population intake of the TCNTE development would be reasonably mitigated with commissioning of the proposed road network and local junction improvement works mentioned in paragraph 8 above.

27. The traffic impact of the TCNTE development during the construction stage will also be manageable. Temporary traffic arrangements (“TTAs”) will be

⁶ 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.

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 First Phase development. We will maintain close contact with the TMLG members as well as the Islands District Office, IsDC, various public transport operators and utility undertakers. We will also consult IsDC prior to the implementation of major TTAs for the First Phase development. In addition, we will set up a telephone hotline to respond to public enquiries or complaints.

HERITAGE IMPLICATIONS

28. We have completed a cultural heritage impact assessment under the EIA for TCNTE and a Preliminary Archaeological and Built Heritage Impact Assessment for Coastal Pedestrian Access, Widening of Tung Chung Road North and Site Investigation (“PABHIA”). They concluded that the First Phase development would not affect any heritage sites, i.e. all declared monuments, proposed monuments, graded historic sites and buildings and Government historic sites identified by the Antiquities and Monuments Office. As part of the First Phase development will be executed within the Ma Wan Chung Sites of Archaeological Interest, Sha Tsui Tau Sites of Archaeological Interest and archaeological potential areas, we will implement mitigation measures as recommended by the approved EIA report and the PABHIA accordingly. A marine archaeological investigation has been conducted under the EIA. It concluded that adverse impact on marine archaeology was not anticipated.

LAND ACQUISITION

29. We have reviewed the design of the First Phase development to minimise the extent of land acquisition. We will resume about 8 ha of private land in TCW and clear about 51 ha of government land in TCNTE. The land resumption and clearance will affect 2 households involving 3 persons. About 15 business undertakings and 3 graves and 29 urns have to be cleared. Apart from the provision for statutory compensation under the relevant ordinances, 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 general ex-gratia compensation and rehousing arrangements.

BACKGROUND INFORMATION

30. We upgraded **786CL** to Category B in September 2014.

31. On 27 May 2016, the FC approved the upgrading of part of **786CL** to Category A as **799CL** “Tung Chung New Town Extension – Detailed Design and Site Investigation” at an approved project estimate of \$729.5 million in MOD prices for engaging consultants to undertake the detailed design and site investigation works for the TCNTE project. The site investigation was completed and the detailed design is still in progress.

32. On 13 October 2017, the FC approved the upgrading of part of **786CL** to Category A as **814CL** “Tung Chung New Town Extension – Reclamation and Advance Works” at an approved project estimate of \$20,210.0 million in MOD prices for the reclamation works at TCE and advance works for the TCNTE. The reclamation works at TCE and advance works for the TCNTE commenced in 2017 for phased completion from early 2020 to end 2023.

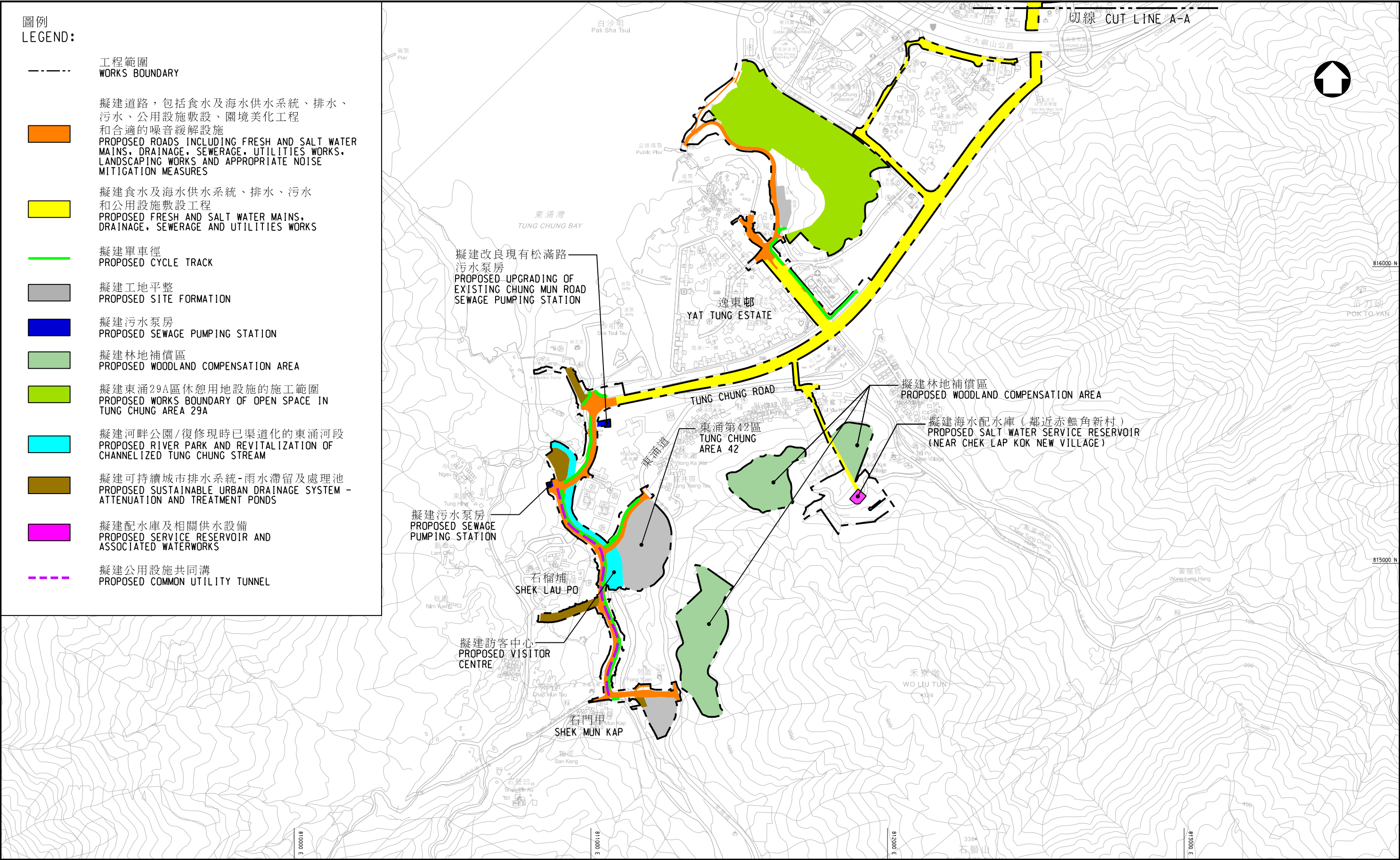
33. Of the 9 950 number of trees within the project boundary, 5 960 number of trees will be preserved. The proposed site formation and infrastructure works will involve removal of 3 990 number of trees, including 3 860 number of trees to be felled and 130 number of trees to be replanted within the project site. Among the above, 22 number of important trees⁷ will be affected during the implementation of the project. A summary of important trees affected is provided at **Annex 4**. We will incorporate planting proposals as part of the project, including estimated quantities of 2 000 number of trees, 36 000 number of whip trees, 626 000 number of shrubs, and 75 800 number of groundcovers / climbers / herbaceous plants⁸.

Development Bureau
Civil Engineering and Development Department
November 2020

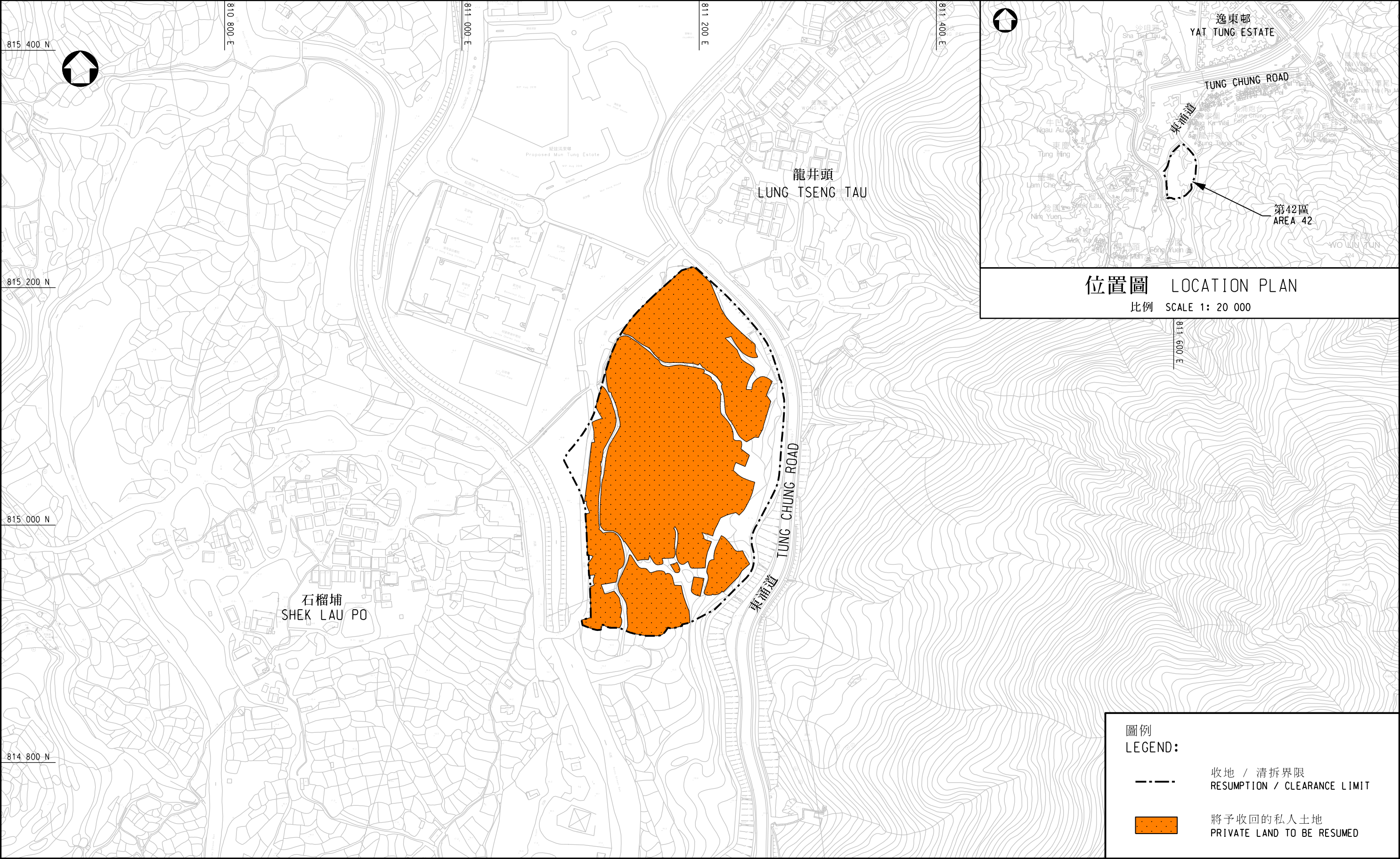
⁷ “Important trees” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (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 25 m.

⁸ The figures are approximate only and could only be confirmed later.



工務計劃項目第786CL號
東涌新市鎮擴展 - 工地平整及基礎設施工程 - 平面圖（東涌西）
PWP ITEM NO. 786CL
TUNG CHUNG NEW TOWN EXTENSION - SITE FORMATION AND INFRASTRUCTURE WORKS - LAYOUT PLAN (TUNG CHUNG WEST)



工務計劃項目第786CL號
東涌新市鎮擴展 - 工地平整及基礎設施工程 - 第42區將予收回的私人土地

PWP ITEM NO. 786CL
TUNG CHUNG NEW TOWN EXTENSION - SITE FORMATION AND INFRASTRUCTURE WORKS - PRIVATE LAND IN AREA 42 TO BE RESUMED

PWP Item No. 786CL – Tung Chung New Town Extension - site formation and infrastructure works

Summary of Road and Sewerage Schemes Gazettals and Authorisations

Package ^[Notes]		Date of gazettal	Objections received after gazettal (a)	Objection withdrawn (b)	Objections unresolved (a) – (b)	Date of CE in C authorisation	Date of gazette of notice of authorisation
1	Road scheme	September 2017	0	-	-	25 August 2020	October 2020
	Sewerage scheme		0	-	-		
	Amendment road scheme	May and June 2018	1	0	1		
2	Sewerage scheme	April and May 2018	0	-	-	-	August and September 2018
3	Road scheme	May and June 2018	494	4	490	25 August 2020	October 2020
	Sewerage scheme	April 2019	420	3	417		
	Amendment road scheme		338	0	338		
	Amendment sewerage scheme		335	0	335		
4	Road scheme	May and June 2018	0	-	-	-	October 2020
5	Road scheme	May and June 2018	0	-	-	-	September 2018
	Sewerage scheme		0	-	-		
6	Sewerage scheme	November 2019	0	-	-	-	March 2020
7	Road scheme	November 2019	9	5	4	6 October 2020	October 2020
	Sewerage scheme		2	0	2		

Annex 3 to Enclosure 2

Notes:

Package 1 – “Ma Wan Chung Road Works” and “Ma Wan Chung Sewerage Works”

Package 2 – “Sewerage Works at Yu Tung Road”

Package 3 – “Widening of Tung Chung Road North” and “Tung Chung Road North Sewerage Works”

Package 4 – “Coastal Pedestrian Access”

Package 5 – “Tung Chung East and Road P1 (Tung Chung East to Tai Ho Section) Road Works)” and “Tung Chung East and Road P1 (Tung Chung East to Tai Ho Section) Sewerage Works)”

Package 6 – “Sewerage Works at Chung Yan Road”

Package 7 – “Road Works at Yu Tung Road, Chung Mun Road, Road L29, Road L30 and Shek Mun Kap Road” and “Sewerage Works at Yu Tung Road, Chung Mun Road, Road L29, Road L30 and Shek Mun Kap Road and Sewage Pumping Station in Area 66B, Tung Chung”

工務計劃項目第 786CL 號– 東涌新市鎮擴展 – 工地平整及基礎設施工程

22棵受影響珍貴樹木的詳情

PWP Item No. 786CL – Tung Chung New Town Extension - site formation and infrastructure works

Details of 22 Important Trees Affected

樹木/樹組 編號 ⁽¹⁾ Tree/ Tree Group No. ⁽¹⁾	品種 Species		量度 Measurements			觀賞 價值 ⁽³⁾ 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⁾⁽⁶⁾ Conservation status ⁽⁵⁾⁽⁶⁾	建議處置方法 (保留／移植 ／砍伐) Recommendation (Retain/ Transplant/Fell)
	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)	(良好／一般／差劣) (Good/Fair/Poor)				(高／中／ 低) (High/Med/Low)	備註 Remarks		
T3537	<i>Aquilaria sinensis</i>	土沉香	6	140	5	一般 Fair	差劣 Poor	一般 Fair	差劣 Poor	中 Med	形態和結構狀況稍欠理想，但仍適合移植 Suboptimal form & structure but otherwise in transplantable condition	RPPHK; Cap.586	移植 Transplant
T6612	<i>Aquilaria sinensis</i>	土沉香	4	110	4	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	中 Med	形態欠理想,但仍適合移植 Suboptimal form but otherwise in transplantable condition	RPPHK; Cap.586	移植 Transplant
T8259	<i>Gmelina chinensis</i>	石梓	8	140	5	一般 Fair	差劣 Poor	一般 Fair	差劣 Poor	低 Low	形態和結構狀況差劣;位於陡峭的斜坡,難以挖掘根球 Poor form & structure; on steep slope, impractical to form a viable root ball	RPPHK	砍伐 Fell
T8260	<i>Aquilaria sinensis</i>	土沉香	10	170	5	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	形態差劣;位於陡峭的斜坡,難以挖掘根球 Poor form; on steep slope, impractical to form a viable root ball	RPPHK; Cap.586	砍伐 Fell
T8262	<i>Gmelina chinensis</i>	石梓	8	250	6	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	形態差劣;位於陡峭的斜坡,難以挖掘根球 Poor form; on steep slope, impractical to form a viable root ball	RPPHK	砍伐 Fell
T8271	<i>Aquilaria sinensis</i>	土沉香	7	210	5	一般 Fair	差劣 Poor	一般 Fair	一般 Fair	低 Low	形態差劣;位於陡峭的斜坡,難以挖掘根球 Poor form; on steep slope, impractical to form a viable root ball	RPPHK; Cap.586	砍伐 Fell
T8282	<i>Aquilaria sinensis</i>	土沉香	7	260	4	一般 Fair	差劣 Poor	差劣 Poor	一般 Fair	低 Low	形態和健康狀況差劣;位於陡峭的斜坡,難以挖掘根球 Poor form & health; on steep slope, impractical to form a viable root ball	RPPHK; Cap.586	砍伐 Fell

附件 2 附錄 4
Annex 4 to Enclosure 2

樹木/樹組 編號 ⁽¹⁾ Tree/ Tree Group No. ⁽¹⁾	品種 Species		量度 Measurements			觀賞 價值 ⁽³⁾ 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⁾⁽⁶⁾ Conservation status ⁽⁵⁾⁽⁶⁾	建議處置方法 (保留／移植 ／砍伐) Recommendation (Retain/ Transplant/Fell)
	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)	(良好／一般／差劣) (Good/Fair/Poor)				(高／中／ 低) (High/Me d/Low)	備註 Remarks		
T8331	<i>Aquilaria sinensis</i>	土沉香	3	250	4	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK; Cap.586	砍伐 Fell
T8468	<i>Aquilaria sinensis</i>	土沉香	5	290	3	一般 Fair	差劣 Poor	一般 Fair	差劣 Poor	低 Low	形態和結構狀況差劣 Poor form & structure	RPPHK; Cap.586	砍伐 Fell
T8509	<i>Aquilaria sinensis</i>	土沉香	4	230	2	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK; Cap.586	砍伐 Fell
T8557	<i>Gmelina chinensis</i>	石梓	4	120	3	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK	砍伐 Fell
T8685	<i>Aquilaria sinensis</i>	土沉香	4	120	3	良好 Good	一般 Fair	一般 Fair	一般 Fair	中 Med	-	RPPHK; Cap.586	移植 Transplant
T8690	<i>Aquilaria sinensis</i>	土沉香	5	240	4	一般 Fair	差劣 Poor	一般 Fair	差劣 Poor	低 Low	形態和結構狀況差劣; 與相鄰樹木根部糾纏,難以 挖掘根球 Poor form & structure; tree roots tangle with adjacent tree, impractical to form a viable root ball	RPPHK; Cap.586	砍伐 Fell
T8835	<i>Aquilaria sinensis</i>	土沉香	4	120	2	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure; growing on rock, impractical to form a viable root ball	RPPHK; Cap.586	砍伐 Fell
T8936	<i>Gmelina chinensis</i>	石梓	5	110	1	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK	砍伐 Fell
T8996	<i>Aquilaria sinensis</i>	土沉香	5	110	4	一般 Fair	差劣 Poor	一般 Fair	差劣 Poor	中 Med	形態和結構狀況稍欠理想, 但仍適合移植 Suboptimal form & structure but otherwise in transplantable condition	RPPHK; Cap.586	移植 Transplant
T8998	<i>Aquilaria sinensis</i>	土沉香	3	100	3	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK; Cap.586	砍伐 Fell
T9006	<i>Aquilaria sinensis</i>	土沉香	5	170	3	一般 Fair	差劣 Poor	差劣 Poor	差劣 Poor	低 Low	形態,健康和結構狀況差劣 Poor form, health & structure	RPPHK; Cap.586	砍伐 Fell

附件 2 附錄 4

Annex 4 to Enclosure 2

樹木/樹組 編號 ⁽¹⁾ Tree/ Tree Group No. ⁽¹⁾	品種 Species		量度 Measurements			觀賞 價值 ⁽³⁾ 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⁾⁽⁶⁾ Conservation status ⁽⁵⁾⁽⁶⁾	建議處置方法 (保留／移植 ／砍伐) Recommendation (Retain/ Transplant/Fell)
	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)	(良好／一般／差劣) (Good/Fair/Poor)				(高／中／ 低) (High/Me d/Low)	備註 Remarks		
RT-03 / 樹 組 編號 Tree Group G82 ⁽⁷⁾	<i>Gmelina chinensis</i>	石梓	8	280	4	良好 Good	一般 Fair	一般 Fair	一般 Fair	低 Low	生長在斜坡上,但整體健康及結構狀況仍適合移植 Growing on slope but otherwise in transplantable condition	RPPHK	移植 Transplant
RT-06 / 樹 組 編號 Tree Group G62 ⁽⁷⁾	<i>Gmelina chinensis</i>	石梓	6-8	120-160	4-5	良好 Good	一般 Fair	一般 Fair	一般 Fair	低 Low	生長在斜坡上,但整體健康及結構狀況仍適合移植 Growing on slope but otherwise in transplantable condition	RPPHK	移植 Transplant
RT-07 / 樹 組 編號 Tree Group G62 ⁽⁷⁾	<i>Gmelina chinensis</i>	石梓	6-8	120-160	4-5	良好 Good	一般 Fair	一般 Fair	一般 Fair	低 Low	生長在斜坡上,但整體健康及結構狀況仍適合移植 Growing on slope but otherwise in transplantable condition	RPPHK	移植 Transplant
RT-08 / 樹 組 編號 Tree Group G62 ⁽⁷⁾	<i>Gmelina chinensis</i>	石梓	6-8	120-160	4-5	良好 Good	一般 Fair	一般 Fair	一般 Fair	低 Low	生長在斜坡上,但整體健康及結構狀況仍適合移植 Growing on slope but otherwise in transplantable condition	RPPHK	移植 Transplant

註:

- 這 22 棵樹並非《古樹名木冊》內的樹木。
- 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)。
- 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－
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。
- 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)。
- 樹木編號 T3537, T6612, T8260, T8271, T8282, T8331, T8468, T8509, T8685, T8690, T8835, T8996, T8998, T9006 (共 14 棵) 均為土沉香(牙香樹)，該品種載於漁農自然護理署出版《香港稀有及珍貴植物》之內，屬貴重或稀有品種的樹木，並受《保護瀕危動植物物種條例》(第 586 章)保護。
- 樹木編號 T8259, T8262, T8557, T8936、位於樹組編號 G82 的 RT-03，位於樹組編號 G62 的 RT-06、RT-07 及 RT-08，(共 8 棵) 均為石梓(華石梓)，該品種載於漁農自然護理署出版《香港稀有及珍貴植物》之內，屬貴重或稀有品種的樹木。
- 該些位於樹組的樹木之準確資料須待收回/清理土地後方能作實。

附件 2 附錄 4

Annex 4 to Enclosure 2

Notes:

1. The 22 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. T3537, T6612, T8260, T8271, T8282, T8331, T8468, T8509, T8685, T8690, T8835, T8996, T8998, T9006 (14 trees in total) are *Aquilaria sinensis*, which are precious or rare tree species. They are listed in Agriculture, Fisheries and Conservation Department’s publication “Rare and Precious Plants of Hong Kong”, and are protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).
6. Tree No. T8259, T8262, T8557, T8936, Tree No. RT-03 in Tree Group No. G82, Tree Nos. RT-06, RT-07 and RT-08 in Tree Group No. G62 (8 trees in total) are *Gmelina chinensis*, which are precious or rare tree species. They are listed in Agriculture, Fisheries and Conservation Department’s publication “Rare and Precious Plants of Hong Kong”.
7. The accurate information of the trees in tree groups shall be confirmed after land resumption/clearance.

Head 705 – CIVIL ENGINEERING

Civil Engineering – Multi-purpose

49CG- The District Cooling System for Tung Chung New Town Extension (East)

PROJECT SCOPE AND NATURE

The scope of works under the district cooling system (“DCS”) at Tung Chung East (“TCE”) comprises –

- (a) a chiller plant cum seawater pump house;
- (b) seawater pipes;
- (c) chilled water distribution pipes; and
- (d) connection facilities at user buildings.

The estimated cooling capacity of the proposed DCS is about 123MW and the estimated total air-conditioned floor area about 700 000 square metres. An outline of the scope of works and a layout of the DCS plant with pipe networks are at **Annex 1** and **Annex 2** respectively.

2. The construction of the DCS at TCE, including the pipe-laying works, will have to dovetail with the programme of upcoming road construction in TCE to allow coordinated installation of underground utilities and to minimise the need for road excavation and diversion of completed utility services. This coordinated approach will also save project costs.

3. In view of the above, we are planning to entrust the DCS pipe-laying works including the seawater intake culvert and discharge pipes and chilled water distribution pipes to the Civil Engineering and Development Department (“CEDD”) for implementation together with the Site Formation and Infrastructure Works for the TCNTE, as set out in **Enclosure 2**. Funding for the proposed entrustment works to CEDD will be part of the capital cost of the proposed DCS in TCE as stated in paragraph 7 below.

4. To tie-in with the infrastructure works, subject to LegCo's funding approval being available in early 2021, we plan to commence the construction of the proposed works in phases and to substantially complete the main works of DCS by 2030.

JUSTIFICATIONS

5. Implementation of the DCS for non-domestic buildings and facilities in TCE will bring about significant environmental benefits. Owing to better energy efficiency, the maximum annual saving in electricity consumption upon full utilisation of the DCS plant is estimated to be 31 million kilowatt-hour, with a corresponding reduction of about 21 500 tonnes of carbon dioxide emission per annum.

6. Apart from energy saving, the DCS will bring about the following benefits for individual users –

- (a) reduction in users' upfront capital cost, as chiller plants are not required at user buildings. The reduction is about 5 to 10% of the total building cost;
- (b) more flexible building designs for user buildings;
- (c) reduced heat island effects at TCE, and no noise and vibration arising from the operation of heat rejection equipment and chillers of air-conditioning plants in user buildings; and
- (d) a more adaptable air-conditioning system as compared to individual air-conditioning systems. Individual buildings can adjust their cooling capacity to meet air-conditioning demands without having to carry out extensive modification or retrofitting works.

FINANCIAL IMPLICATIONS

7. The estimated capital cost of the proposed works is about \$3,918.2 million in MOD prices.

8. Following the practice of the existing DCS at the Kai Tak Development, private non-domestic developments will be required by their land lease to connect to the DCS. The tariff for using DCS at TCE will be set at a competitive level, comparable to the cost of using individual water-cooled air-conditioning systems using cooling towers (WACS), which is one of the most cost-effective air-conditioning systems available in the market. Our preliminary assessment shows that the proposed DCS is financially viable, as the capital and operating costs for the DCS can be recovered through charges collected from DCS consumers over the project life of 30 years. The estimated unit cost of air-conditioning provided by DCS for all types of buildings is lower than that of WACS. EMSD plans to propose amendments to the District Cooling Services Ordinance (Cap. 624) in due course to promulgate the tariff level.

PUBLIC CONSULTATION

9. The Islands District Council supported the provision of the DCS at the TCE at its meeting on 19 October 2020.

ENVIRONMENTAL IMPLICATIONS

10. The Project is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). We completed a Preliminary Environmental Review (PER) for the project. The PER concluded that the project would not cause long-term adverse environmental impacts with the implementation of the recommended environmental mitigation measures, which include acoustic louvres and silencers to mitigate operational fixed plant noise.

11. For mitigating short-term construction impacts, we will implement measures recommended in the PER to control noise, dust and site run-off nuisances, in order to comply with established standards and guidelines. These measures include the use of quality powered mechanical equipment, movable noise barriers, noise enclosure and acoustic mats for noisy construction activities, frequent cleansing and watering of the site, and provision of wheel-washing facilities. We will also carry out site inspections to ensure that these mitigation measures and good site practices are properly followed and implemented. We have included in the project estimates the costs of implementing these mitigation measures.

12. At the planning and design stages, we have considered the piping alignment, design and construction method of the proposed works to avoid generating construction waste where possible. 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 facilities¹. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to avoid generating construction waste.

13. 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 waste. We will ensure that the operations on site comply with the approved plan. We will require the contractor to separate the inert and non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

14. We estimate that the proposed works will generate about 136 620 tonnes of construction waste. Of this, we will reuse about 46 080 tonnes (33.7%) of inert construction waste on site and deliver about 89 856 tonnes (65.8%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 684 tonnes (0.5%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at public fill reception facilities and landfill sites is estimated to be about \$6.52 million for the proposed works (based on a unit charge rate of \$71 per tonne for disposal at public fill reception facilities and \$200 per tonne at landfills, as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

15. The Government will continue to take the lead in promoting green buildings. We aim to achieve the second highest rating under the BEAM Plus for the DCS plant building which will incorporate green features and renewable energy systems such as photovoltaic panels. The proposed plant building roof greening ratio will be over 20% of the roof area, and the overall greening ratio will be over 30% of the overall site area.

¹ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste at public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

HERITAGE IMPLICATIONS

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

LAND ACQUISITION

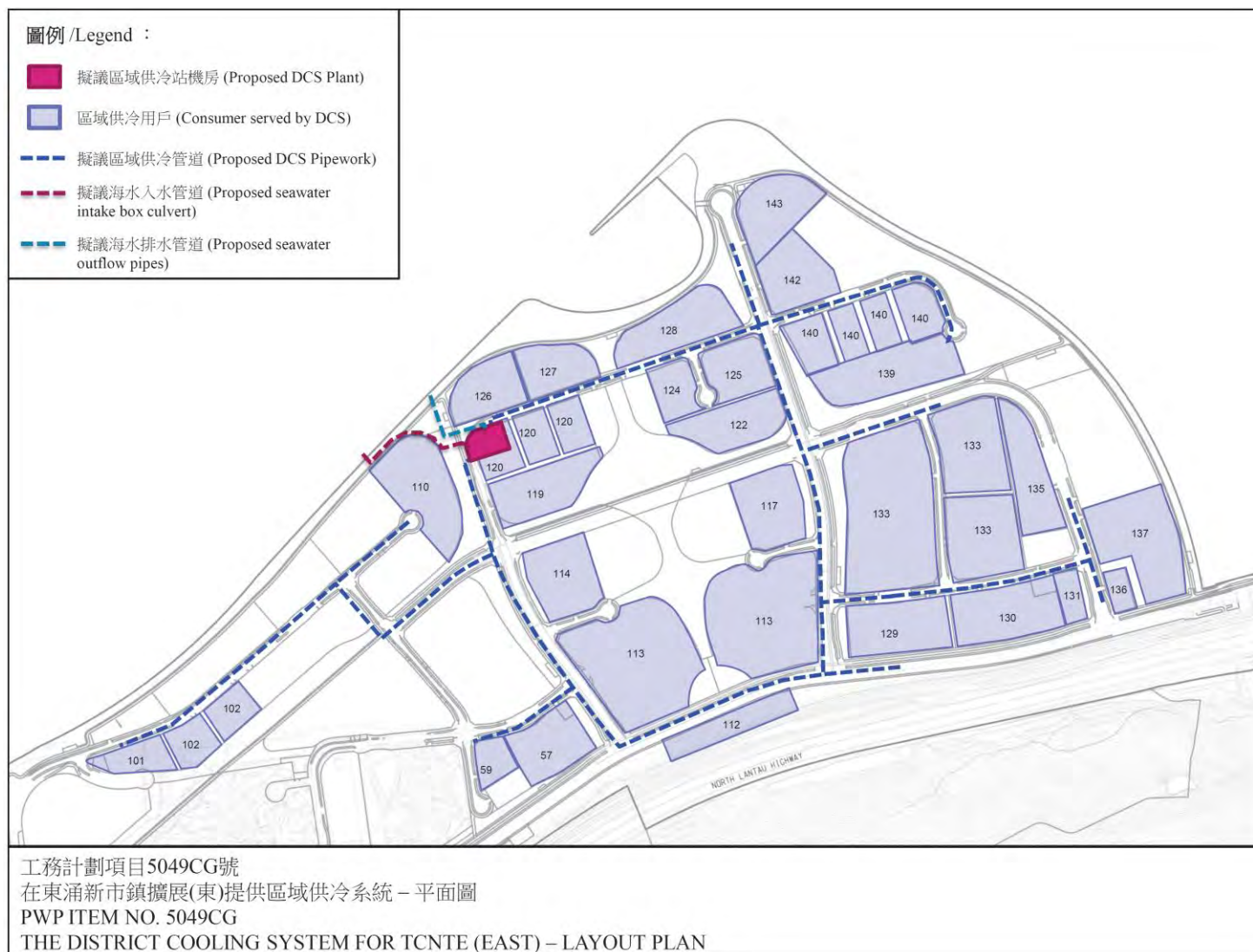
17. The proposed works does not require resumption of private land.

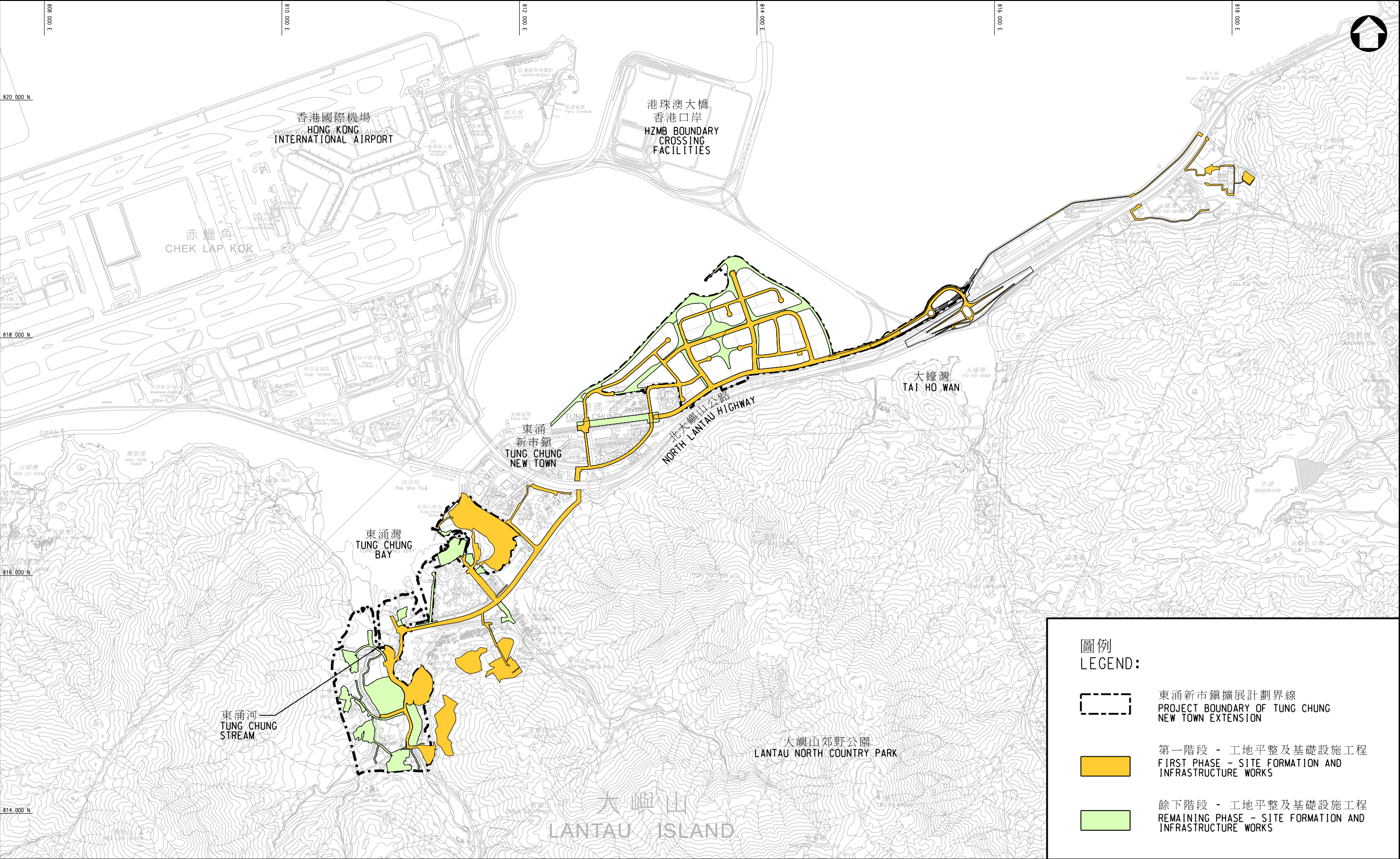
Environment Bureau
Electrical and Mechanical Services Department
November 2020

The District Cooling System for TCNTE (East)
Scope of Works

Works Arrangement	Scope of Works
Entrustment works of DCS by CEDD	<ul style="list-style-type: none"> - Laying of seawater pipes; and - Laying of chilled water distribution pipes
DCS core services under Design, Build and Operate arrangement	<ul style="list-style-type: none"> - Design for the whole DCS; - Building and engineering works, the DCS chiller plant cum seawater pump house to support the operation of the entire DCS; - Supply and installation of electrical and mechanical equipment for meeting the cooling demand of user buildings; and - Provision of connection facilities (including heat exchangers); and <p>[Note : The operation period of DCS is about 10 to 15 years tentatively.]</p>
E&M installation for remaining	<ul style="list-style-type: none"> - Supply and installation of electrical and mechanical equipment for meeting the cooling demand of user buildings; and - Provision of connection facilities (including heat exchangers) at remaining user buildings.

Annex 2 to Enclosure 3





工務計劃項目第786CL號
東涌新市鎮擴展 - 工地平整及基礎設施工程 - 發展階段
PWP ITEM NO. 786CL
TUNG CHUNG NEW TOWN EXTENSION - SITE FORMATION AND INFRASTRUCTURE WORKS - DEVELOPMENT PHASING