

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Transport – Roads

823TH – Tseung Kwan O – Lam Tin Tunnel

Members are invited to recommend to Finance Committee –

- (a) the upgrading of part of **823TH**, entitled “Tseung Kwan O – Lam Tin Tunnel – main tunnel and associated works”, to Category A at an estimate cost of \$15,093.5 million in money-of-the-day prices; and
- (b) the retention of the remainder of **823TH** in Category B.

PROBLEM

At present, the Tseung Kwan O (TKO) Tunnel is the main connection between TKO and East Kowloon. The TKO Tunnel is congested during peak hours. It is envisaged that the TKO Tunnel will not be able to cope with the future traffic demand arising from the further developments in TKO and Kwun Tong district.

/ **PROPOSAL**

PROPOSAL

2. The Director of Civil Engineering and Development proposes to upgrade part of **823TH** to Category A at an estimated cost of \$15,093.5 million in money-of-the-day (MOD) prices for the construction of the main tunnel and associated works of the Tseung Kwan O – Lam Tin Tunnel (TKO-LTT). The Secretary for Transport and Housing supports the proposal.

PROJECT SCOPE AND NATURE

3. The part of **823TH** which we propose to upgrade to Category A comprises –

- (a) construction of a dual two-lane highway, approximately 3.8 kilometres (km) long (of which about 2.2 km is in the form of a tunnel) connecting Po Shun Road of TKO, Eastern Harbour Crossing (EHC) and Cha Kwo Ling (CKL) Road of Kwun Tong;
- (b) construction of slip roads, depressed Road P2, viaducts, TKO Interchange, ventilation building, tunnel portal facilities and reclamation of about 3 hectares of land for construction of the depressed Road P2 at TKO;
- (c) construction of slip roads, branch tunnels, viaducts, Lam Tin Interchange, tunnel portal facilities, ventilation and administration buildings at Kwun Tong; and
- (d) associated site formation, slopes, construction of retaining walls, buildings, civil, structural, marine, tunnel ventilation system and other electrical and mechanical engineering, landscaping and environmental protection and mitigation works as well as installation of traffic control and surveillance system.

———— A layout plan of the above works is at Enclosure 1.

4. Subject to the funding approval of the Finance Committee (FC) in this legislative year, we plan to commence construction in phases from July 2016 for completion in mid-2021. The Civil Engineering and Development Department (CEDD) invited tenders for some of the contracts in August 2015 and January 2016 but will only award the tenders after the FC has approved the funding proposal.

5. We will retain the remainder of **823TH**, which mainly serves to provide connection with a neighbouring Trunk Road T2¹ project, in Category B. The scope of the remainder mainly comprises –

- (a) construction of the about 0.4 km-long CKL tunnel connecting Lam Tin Interchange and Trunk Road T2, branch tunnel, vent adit and footbridge linking the administration building and Trunk Road T2's ventilation building; and
- (b) the associated civil, structural, tunnel ventilation system and other electrical and mechanical engineering and environmental protection and mitigation works as well as installation of traffic control and surveillance system.

We shall seek funding in time for the construction of the remainder of **823TH** to dovetail with the implementation programme of Trunk Road T2.

JUSTIFICATION

6. With the gradual completion of new developments (for example, developments at TKO Town Centre South and remaining developments at LOHAS Park), the population of TKO is increasing continuously. This will aggravate the traffic load of TKO. TKO residents and the local community have been requesting for the early implementation of the TKO-LTT.

/ 7.

¹ Trunk Road T2 is a dual two-lane trunk road of approximately 3.0 km long connecting the proposed Central Kowloon Route and the TKO-LTT. About 2.7 km of the trunk road is in the form of tunnel.

7. At present, the TKO Tunnel is the main connection between TKO and East Kowloon (details at Enclosure 2). Traffic congestions have already occurred during peak hours. Its volume/capacity (v/c) ratio² is around 1.2. According to the traffic impact assessment of the detailed design study of the TKO-LTT Project, it is envisaged that, without the TKO-LTT, congestion during peak hours at TKO Tunnel would worsen in 2021, with a v/c ratio reaching about 1.4, indicating that the congestion would be rather serious. It is anticipated that the queue length of the Kowloon bound traffic (measured from the toll plaza) will be about 3 km. The congestion will lead to an increase in traveling time by around 16 minutes from TKO to Kowloon as compared with the present situation.

8. We therefore need to construct the TKO-LTT in a timely manner so as to meet the traffic demand resulting from the anticipated population increase. Upon the completion of the TKO-LTT, it is anticipated that the v/c ratio during peak hours of Kowloon-bound traffic of the TKO Tunnel in 2021 can be reduced from about 1.4 to about 0.9.

9. Besides, the TKO-LTT will provide a more direct route for travelling between Tiu Keng Leng and EHC. At present, the travelling distance between TKO Tiu Keng Leng Sports Centre and EHC is about 7 km. Upon the completion of the TKO-LTT, the concerned travelling distance will be reduced to about 4.2 km. For the Kwun Tong district, after completion of the TKO-LTT, some of the existing traffic between TKO and EHC can make use of the new tunnel without routing through roads such as TKO Road and Lei Yue Mun Road of the Kwun Tong district, thereby significantly relieving the heavy traffic load at these roads during peak hours and improving the traffic conditions of the Kwun Tong district. At the same time, with the spare capacity of TKO Road resulting from the commissioning of the new tunnel, TKO Road can cope with the future developments in Kwun Tong district, including the proposed housing development in the vicinity of Anderson Road Quarry.

/ DESIGN

² Volume/capacity (v/c) ratio is an indication of the traffic conditions of roads during peak hours. A v/c ratio equals to or less than 1.0 is considered acceptable. A v/c ratio between 1.0 and 1.2 indicates a manageable degree of congestion. A v/c ratio above 1.2 indicates more serious congestion.

DESIGN FOR GREENING AND INTEGRATION WITH ENVIRONMENT

10. In addition to improving the traffic condition, the CEDD will include environmental mitigation measures in the construction scheme of the TKO-LTT to minimise the environmental impact along the route. The CEDD proposes to construct the main carriageway of the Lam Tin Interchange at around 20 metres (m) below the adjacent ground level and cover it with a landscape deck and noise cover. Moreover, a variety of measures will be implemented on the slip roads of the Interchange so as to alleviate noise and visual impacts. For example, some slip roads will be constructed in tunnel form, hidden between cut-slopes or provided with noise barriers or noise enclosures. As regards the proposed Road P2 in TKO, it will be constructed in the form of a depressed road and will be partly covered by a landscape deck. For details of the design features of the project, please refer to Enclosures 3 to 7.

FINANCIAL IMPLICATIONS

11. We estimate the cost of the proposed works to be \$15,093.5 million in MOD prices (please see paragraph 12 below), with breakdown as follows –

	\$ million
(a) Tunnel construction works	2,485.8
(i) Earthworks	825.0
(ii) Tunnel structures	1,660.8
(b) Tunnel electrical and mechanical (E&M) works	671.3
(i) Tunnel ventilation system	145.7
(ii) Other E&M works	525.6
(c) Roads and drains	565.0
(d) Structures for depressed road	821.6
(e) Viaducts	1,568.4
(f) Footbridges	248.3
	/ \$ million

		\$ million
(g)	Landscaped deck and other landscaping works	210.9
(h)	Noise mitigation facilities	294.4
(i)	Site formation works, slope works and construction of retaining walls	1,239.6
(j)	Administration building ³ , ventilation buildings and ancillary buildings	1,031.1
(k)	Reclamation works	453.3
(l)	Traffic control and surveillance system	257.6
(m)	Consultants' fees	105.9
	(i) Contract administration	40.1
	(ii) Management of resident site staff (RSS)	30.6
	(iii) Environmental monitoring and audit (EM&A) programme and independent environmental checker	35.2
(n)	Remuneration of RSS	860.9
(o)	Electrical and Mechanical Services Trading Fund (EMSTF) ⁴	20.5
		/ \$ million

³ The administration building will serve both TKO – LTT and Trunk Road T2 project.

⁴ Upon its establishment from 1 August 1996 under the Trading Funds Ordinance, the EMSTF charges government departments for design and technical consultancy services for E&M installations. The services rendered for this project include checking consultants' submissions on all E&M installations and providing technical advice to the Government on all E&M works and their impacts on the project.

			\$ million	
(p)	Contingencies		824.7	
		Sub-total	11,659.3	(in September 2015 prices)
(q)	Provision for price adjustment		3,434.2	
		Total	15,093.5	(in MOD prices)

_____ A breakdown of the estimates for the consultants' fees and RSS costs by man-months is at Enclosure 8.

12. Subject to the approval of the application, we will phase the expenditure as follows –

Year	\$ million (Sept 2015)	Price adjustment factor	\$ million (MOD)
2016 – 17	562.8	1.05775	595.3
2017 – 18	1,143.7	1.12122	1,282.3
2018 – 19	2,260.6	1.18849	2,686.7
2019 – 20	2,355.3	1.25980	2,967.2
2020 – 21	1,942.7	1.33539	2,594.3
2021 – 22	1,496.2	1.40549	2,102.9
2022 – 23	1,223.6	1.47577	1,805.8
2023 – 24	479.1	1.54956	742.4
2024 – 25	195.3	1.62122	316.6
	<u>11,659.3</u>		<u>15,093.5</u>

13. The CEDD has derived the MOD estimate 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 2016 to 2025. The CEDD will implement the works through a number of contracts with provision for price adjustment and will, depending on the nature and scale of the contracts, award some contracts based on the New Engineering Contract (NEC)⁵ form. As for the remaining contracts, they will be awarded based on the conventional re-measurement contract form.

14. We estimate the annual recurrent expenditure arising from the proposed works to be \$158.19 million, mainly for operating and maintaining the tunnel and associated facilities. According to the existing toll policy, tolls or fees of Government tolled tunnels and roads are determined in line with the "cost-recovery" and "user-pays" principles. In determining the toll of the TKO-LTT, the Government will take into account a series of factors, including traffic management, costs of the provision of the relevant tunnels and roads (including the capital costs spent), the toll of alternative routes and public affordability and acceptability, etc. Since there will not be a toll plaza for the TKO-LTT due to its geographical constraints, we will study the feasibility of electronic toll collection and consult the Legislative Council in due course. Any fee proposal shall be implemented through legislation.

PUBLIC CONSULTATION

15. Since 2009, the CEDD has carried out a public engagement (PE) exercise comprising three stages to discuss issues of this Project that were of public concerns and explore different design options. Taking into account views collected in the PE exercise, environmental impact and engineering technical considerations, the CEDD developed the current scheme of the TKO-LTT.

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⁵ NEC is a suite of contracts developed by the Institution of Civil Engineers, United Kingdom. It is a contract form that emphasises cooperation, mutual trust and collaborative risk management between contracting parties. Since 2009, we have adopted NEC form in some pilot public works projects.

16. The CEDD consulted the Kwun Tong District Council (KTDC) on 8 January 2013 about the TKO-LTT Project and further briefed the Traffic and Transport Committee of KTDC on 28 May 2015 on the updates of the project. The KTDC in general supported the implementation of the TKO-LTT Project.

17. The CEDD consulted Sai Kung District Council (SKDC) on 8 January 2013 about the TKO-LTT Project and further briefed the SKDC on 5 May 2015 about the updates of the project. The SKDC in general supported the implementation of the TKO-LTT Project.

18. The CEDD consulted the Task Force on Kai Tak Harbourfront Development of the Harbourfront Commission on 18 August 2015. The Task Force reminded the Department to take the opportunity to improve landscaping and minimising environmental impact to the harbourfront during the construction phase. The CEDD has incorporated the view of the Task Force in the project.

19. The CEDD have consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)⁶ on the aesthetic design of the proposed noise mitigation facilities, landscape decks, footbridges and viaducts, etc. The Committee accepted the proposed aesthetic design.

20. We consulted the Legislative Council Panel on Transport on 23 March 2016. Members in general supported the project. For the supplementary information requested by the Panel members, please refer to paragraph 14 above.

/ 21.

⁶ ACABAS comprises representatives of the Hong Kong Institute of Architects, Hong Kong Institution of Engineers, Hong Kong Institute of Planners, Architectural Services Department, Highways Department, Housing Department, Civil Engineering and Development Department, and an academic institution to be invited by the Chairman of ACABAS (such as an architectural school from a local institution). It is responsible for vetting the designs of bridges and other structures associated with highway systems, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

21. We gazetted the proposed road scheme of the TKO-LTT Project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) on 10 May and 16 May 2013. In response to the gazettal of the road scheme, we received 1 429 objections. Two objectors agreed to cancel two duplicated objections. Among the remaining 1 427 objections, 70 objections were subsequently withdrawn unconditionally after receiving responses from the CEDD. Detailed descriptions of the objections and the responses of the Government at that time are detailed in Enclosure 9.

22. The Director of Environmental Protection gazetted the proposed sewerage scheme of the TKO-LTT Project under the Roads (Works, Use and Compensation) Ordinance as applied by section 26 of the Water Pollution Control (Sewerage) Regulation on 10 May and 16 May 2013. In response to the gazettal of the sewerage scheme, the Director of Environmental Protection received 346 objections. Six of the objections were subsequently withdrawn unconditionally after receiving responses from the CEDD. Detailed descriptions of the objections and the responses of the Government at that time are detailed in Enclosure 10.

23. The Transport and Housing Bureau (THB) and the Environmental Protection Department (EPD) submitted the road and sewerage schemes as well as the unresolved objections to the Chief Executive in Council for consideration. The Chief Executive in Council authorised the road and sewerage schemes on 29 April 2014 without modification. Subsequently, the THB and the EPD informed the objectors of the above-mentioned authorisations.

/ ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

24. The TKO-LTT is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and an environmental permit (EP) is required for its construction and operation. The EPD approved the EIA Report for the TKO-LTT Project with conditions⁷ under the EIA Ordinance on 11 July 2013 and issued an EP for the construction and operation of the project on 15 August 2013. The EIA Report concludes that the environmental impacts of the project can be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on EIA Process. The CEDD will implement the environmental mitigation measures and environmental monitoring and audit (EM&A) programme recommended in the approved EIA Report, and comply with relevant conditions under the EP and other statutory requirements for environmental protection. The recommended mitigation measures include installation of noise barriers and noise enclosures, low noise road surfacing, silt curtains for reclamation works and implementation of the construction noise control measures including adopting quiet powered mechanical equipment and temporary noise barriers and setting up of community liaison groups. The CEDD has included the provision of the necessary environmental mitigation measures and implementation of the EM&A programme in the project estimate.

25. At the planning and design stages, the CEDD has considered adopting measures in the proposed works and construction sequence to reduce the generation of construction waste where possible. In addition, the CEDD will require the contractors to reuse inert construction waste (e.g. excavated materials) on site or in other suitable construction sites as far as possible, in order to minimise the disposal of inert construction waste to public fill reception facilities⁸. The CEDD will encourage the contractors to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

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⁷ The conditions are:

- (a) The project proponent should set up community liaison groups (CLGs) comprising representatives of affected parties, including local committees, residents and schools in the affected areas along the route alignments, to facilitate communications, enquiries and complaint handlings on environmental issues related to the project. Respective community liaison teams and designated complaint hotlines should be set up for the project to address related concerns and enquiries in an efficient manner. The proponent should also follow up with the respective CLGs on the implementation of mitigation measures as necessary; and
- (b) The project proponent should conduct a post-construction marine water quality monitoring in the embayment area fronting Ocean Shores for one year after the proposed reclamation for Road P2 is completed.

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

26. At the construction stage, the CEDD will require the contractors to submit for the Government's approval a plan setting out the waste management measures, which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. The CEDD will ensure that the day-to-day operations on site comply with the approved plan and will require the contractors to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. The CEDD will control the disposal of inert construction waste and non-inert construction waste to public fill reception facilities and landfills respectively through a trip-ticket system.

27. The CEDD estimates that the project will generate in total 4.49 million tonnes of construction waste. Of these, the CEDD will reuse 1.51 million tonnes (34%) of the inert construction waste on site and deliver 2.83 million tonnes (63%) of inert construction waste to public fill reception facilities. The CEDD will dispose of 0.15 million tonnes (3%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be about \$95.2 million for the project (the amount is based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne at landfills specified in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

28. The CEDD estimates that the proposed works will generate about 420 000 m³ of marine sediment. Of these, the Department will process and reuse about 75 000 m³ as filling materials and the remaining will be disposed of at designated site to be allocated by the Marine Fill Committee (MFC) or other disposal sites to be agreed by the MFC and the Environmental Protection Department.

HERITAGE IMPLICATIONS

29. Two Grade 3 Historic Buildings⁹, namely CKL Tin Hau Temple and Law Mansion in CKL Village, are located within 300 m from the project boundary. Since CKL Tin Hau Temple is located within 50 m from the nearest works site of the project, necessary mitigation measures as stated in the approved EIA report will be implemented and monitored during construction. The measures include control of the vibration to the building and provision of temporary fenced off buffer zone. Other than the two Grade 3 Historic Buildings, the project will not affect any other heritage sites.

LAND ACQUISITION

30. The proposed works do not require resumption or clearance of private land. The creation of easements and other permanent rights in the underground strata of about 17 100 m² of private land will be required for the proposed works.

BACKGROUND INFORMATION

31. We upgraded **823TH** to Category B in April 2007.

32. On 9 January 2009, the FC approved the upgrading of part of **823TH** to Category A as **827TH** “Tseung Kwan O – Lam Tin Tunnel – investigation and preliminary design” at an approved project estimate of \$198.9 million in MOD prices for engaging consultants to undertake the preliminary design of the TKO-LTT and the associated site investigation works. The preliminary design was completed in 2013.

33. On 10 May 2013, the FC approved the upgrading of another part of **823TH** to Category A as **862TH** “Tseung Kwan O – Lam Tin Tunnel – detailed design and site investigation” at an approved project estimate of \$196.0 million in MOD prices for carrying out the detailed design and site investigation for the TKO-LTT and associated works. The detailed design was substantially completed in 2015.

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⁹ Grade 3 Historic Buildings are defined as buildings of some merits; preservation in some forms would be desirable and alternative means could be considered if preservation is not practicable.

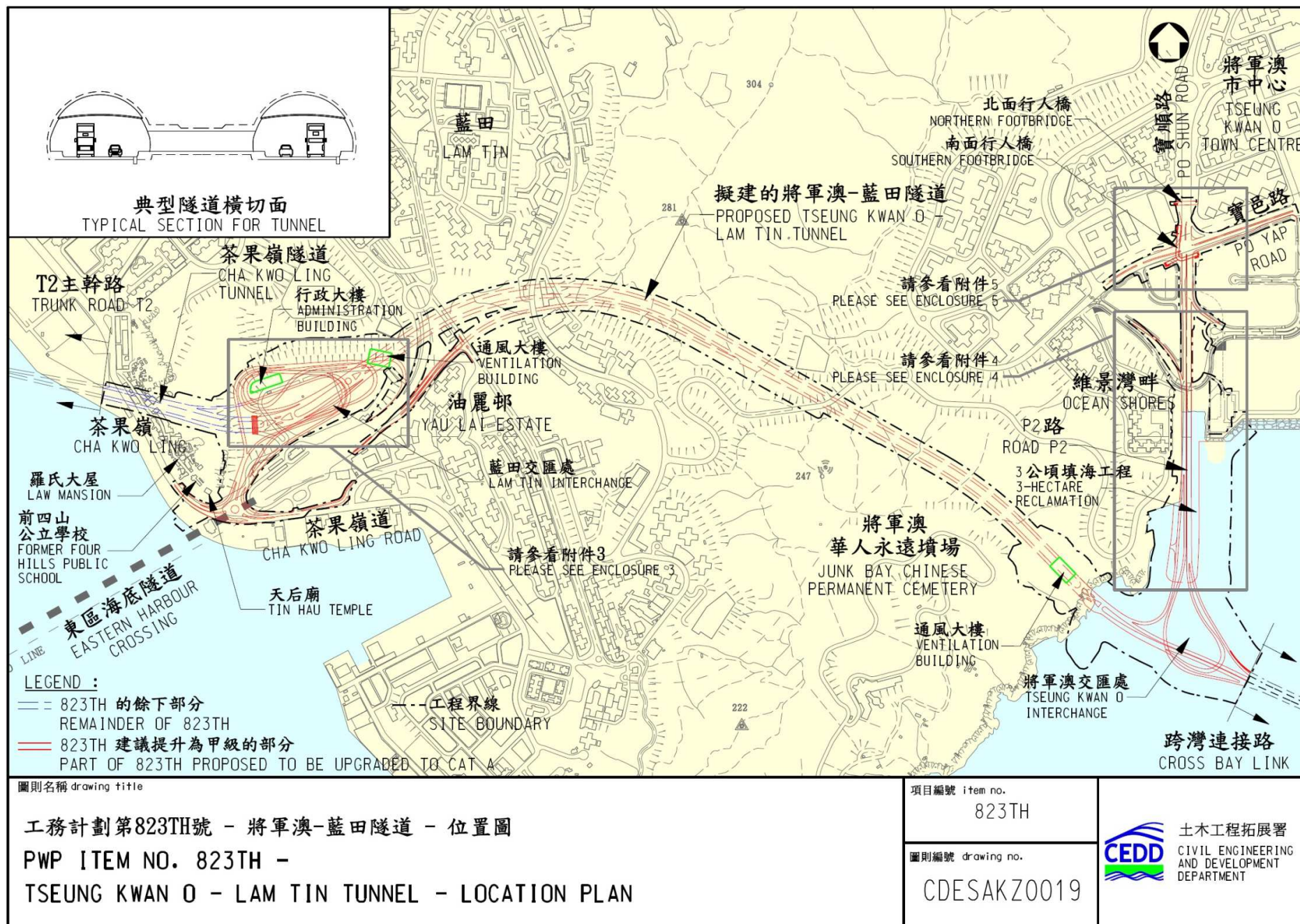
34. Within the project boundary, there are 3 416 trees and no important tree¹⁰ is identified. The proposed construction works will preserve 785 of the trees. Of the remaining 2 631 trees, the CEDD will remove 391 roadside trees (including 41 dead trees) and 2 189 trees growing on slopes, and transplant 51 trees within the project site. The CEDD will plant 391 roadside trees and provide about 15 480 m² of woodland mix planting (including planting about 5 100 whip trees) as compensatory planting.

35. The CEDD estimates that the proposed works will create about 3 400 jobs (2 800 for labourers and another 600 for professional or technical staff) providing a total employment of 143 500 man-months.

Transport and Housing Bureau
April 2016

¹⁰ “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 trees, trees as landmark of monastery or heritage monument, and trees in memory of important persons or events;
- (c) trees of precious or rare species;
- (d) trees of outstanding forms (taking account of overall tree sizes, shapes and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitats; or
- (e) trees with trunk diameter equal or exceeding 1.0m (measured at 1.3m above ground level), or with height or canopy spread of or exceeding 25m.





圖則名稱 drawing title

工務計劃第823TH號 - 連接將軍澳區及觀塘區的現有主要道路
 PWP ITEM NO. 823TH -
 EXISTING MAJOR ROADS CONNECTING TSEUNG KWAN O AND KWUN TONG

項目編號 item no.

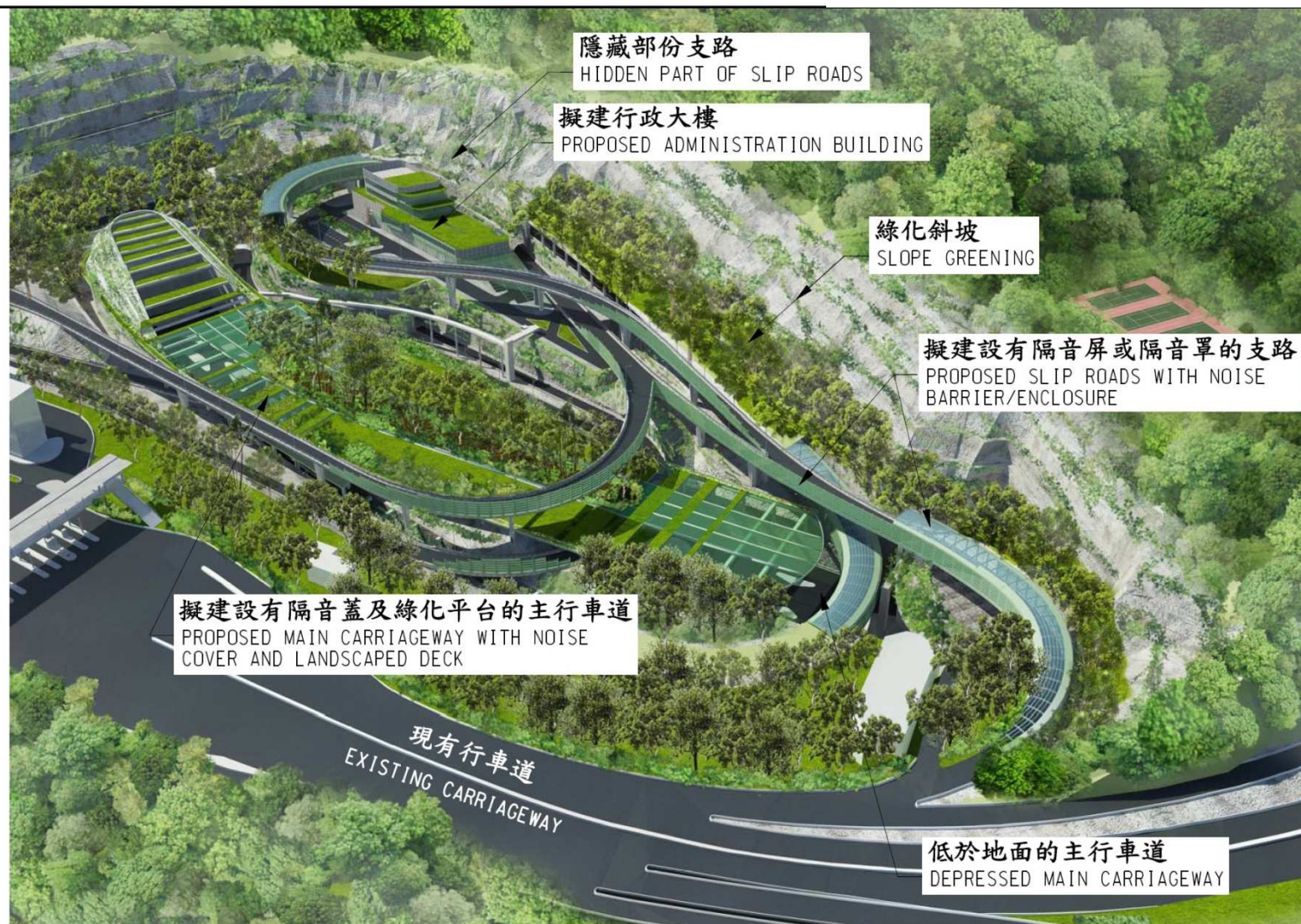
823TH

圖則編號 drawing no.

CDES AKZ0033



土木工程拓展署
 CIVIL ENGINEERING
 AND DEVELOPMENT
 DEPARTMENT



圖則名稱 drawing title

工務計劃第823TH號 - 將軍澳-藍田隧道 - 藍田交匯處模擬照片

PWP ITEM NO. 823TH -

TSEUNG KWAN O - LAM TIN TUNNEL - LAM TIN INTERCHANGE PHOTOMONTAGE

項目編號 item no.

823TH

圖則編號 drawing no.

CDESAKZ0034



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AND DEVELOPMENT
DEPARTMENT



向北眺望低於地面的P2路
VIEW TOWARDS NORTH TO DEPRESSED ROAD P2



向南眺望將軍澳交匯處
VIEW TOWARDS SOUTH TO TSEUNG KWAN O INTERCHANGE

圖則名稱 drawing title

工務計劃第823TH號 - 將軍澳-藍田隧道 - 將軍澳交匯處及P2路模擬照片

PWP ITEM NO. 823TH -

TSEUNG KWAN O - LAM TIN TUNNEL - TSEUNG KWAN O INTERCHANGE AND
P2 ROAD PHOTOMONTAGE

項目編號 item no.

823TH

圖則編號 drawing no.

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DEPARTMENT



南面行人橋
SOUTHERN FOOTBRIDGE



北面行人橋
NORTHERN FOOTBRIDGE

圖則名稱 drawing title

工務計劃第823TH號 - 將軍澳-藍田隧道 - 南面行人橋及北面行人橋模擬照片
PWP ITEM NO. 823TH -
TSEUNG KWAN O - LAM TIN TUNNEL - SOUTHERN FOOTBRIDGE AND
NORTHERN FOOTBRIDGE PHOTOMONTAGE

項目編號 item no.

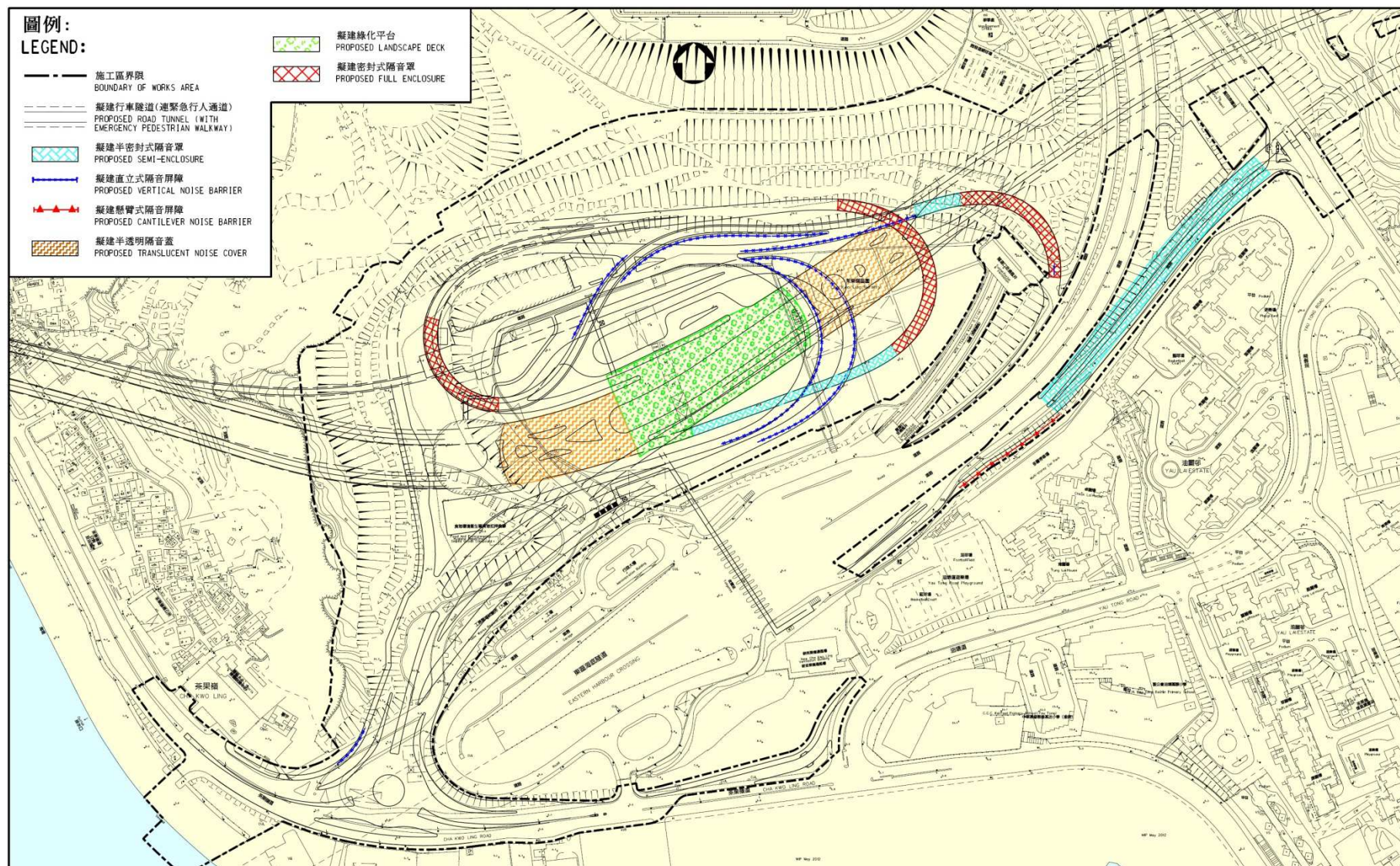
823TH

圖則編號 drawing no.

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AND DEVELOPMENT
DEPARTMENT



圖則名稱 drawing title

工務計劃第823TH號 - 將軍澳-藍田隧道 - 藍田交匯處的噪音緩解措施
PWP ITEM NO. 823TH - TSEUNG KWAN O - LAM TIN TUNNEL
- NOISE MITIGATION MEASURES AT LAM TIN INTERCHANGE

項目編號 item no.

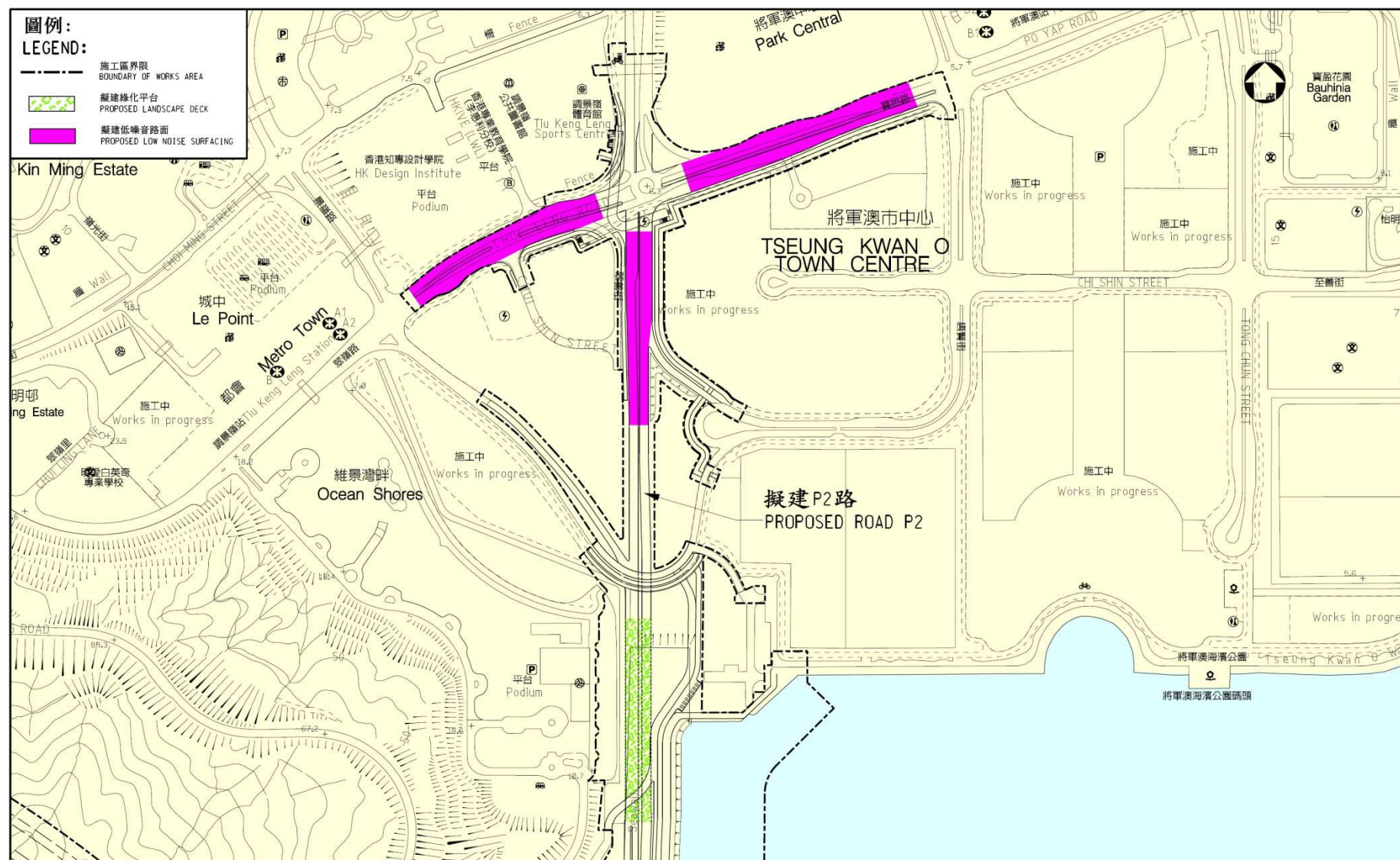
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圖則編號 drawing no.

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DEPARTMENT



圖則名稱 drawing title

工務計劃第823TH號 - 將軍澳-藍田隧道 - P2路的噪音緩解措施
PWP ITEM NO. 823TH - TSEUNG KWAN O - LAM TIN TUNNEL
- NOISE MITIGATION MEASURES AT ROAD P2

項目編號 item no.

823TH

圖則編號 drawing no.

CDESAKZ0030



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**7823TH (Part) – Tseung Kwan O – Lam Tin Tunnel
– Main Tunnel and Associated Works**

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2015 prices)**

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$million)	
(a)	Consultants' fees for						
(i)	Contract administration ^(Note 2)	Professional	–	–	–	35.7	} 40.1
		Technical	–	–	–	4.4	
(ii)	Environmental monitoring and audit programme ^(Note 3)	Professional	152	38	2.0	22.6	} 35.2
		Technical	220	14	2.0	11.2	
(iii)	Independent environmental checker ^(Note 3)	Professional	6	38	2.0	0.9	
		Technical	9	14	2.0	0.5	
					Sub-total	75.3	
(b)	Resident site staff (RSS) costs ^(Note 4)	Professional	3 917	38	1.6	465.1	
		Technical	10 449	14	1.6	426.4	
					Sub-total	891.5	
	Comprising –						
(i)	Consultants' fees for management of RSS					30.6	} 891.5
(ii)	Remuneration of RSS					860.9	
					Total	966.8	

* 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. A multiplier of 2.0 is applied to the average MPS salary point to estimate the full staff cost including the consultants' overheads and profit for the staff employed in the consultants' offices (as at now, MPS salary point 38 = \$74,210 per month and MPS salary point 14 = \$25,505 per month).

2. The consultants' staff cost for contract administration is calculated in accordance with an existing consultancy agreement. The construction phase of the assignment will only be executed subject to the Finance Committee's approval to upgrade the Project to Category A.
3. The actual man-months and actual costs will only be known after selection of the consultants through the usual competitive lump-sum bid system.
4. The actual man-months and actual costs will only be known after completion of the construction works.

Details of Objections to the Road Scheme of the Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) Project under the Roads (Works, Use and Compensation) Ordinance (Cap 370) Gazetted on 10 and 16 May 2013

After gazettal of the road scheme, 1 429 objections were received before the expiry of the statutory objection period. Two objections were duplicated objections, which were cancelled as agreed by the objectors. Among the remaining 1 427 objections, 70 objections were subsequently withdrawn unconditionally after receiving responses from the Civil Engineering and Development Department (CEDD) at that time. Of the remaining 1 357 unresolved objections, 267 objectors did not provide valid contact information.

2. The gist of objections is set out below.

Group A: A total of 826 objections (one from a concern group from Yau Lai Estate (YLE) and 823 proforma objection letters collected by the concern group, the other two were from a Kwun Tong District Council member and a resident of YLE)

3. The main concerns and requests of the concern group and the objectors who submitted the proforma objection letters, and the responses from CEDD at that time are summarised as follows –

- (a) The objectors expressed concerns about the noise and air quality impact of Eastern Harbour Crossing (EHC) and the proposed Lam Tin Interchange on YLE. They suggested that all elevated carriageways of the Lam Tin Interchange should be fully enclosed with noise barriers. Also, double-glazed windows and subsidy for electricity expenses should be provided to residents affected. In response, the CEDD pointed out that the environmental impact assessment (EIA) report had been approved by the Director of Environmental Protection (DEP) with conditions¹. Upon meeting the conditions and implementing the mitigating measures recommended in the EIA report, the TKO-LTT Project would fulfill the statutory requirements. The report has taken into account the possible environmental impact of the EHC, the TKO-LTT Project as well as other relevant projects. The CEDD also mentioned that a number of mitigation measures had been proposed, including constructing the main carriageways of the Lam Tin Interchange at around 20m below adjacent ground level, which would be partly covered by a landscape deck, and placing the vents of the ventilation building such that they would not face YLE.

¹ Please refer to footnote no. 7 of the main paper for the conditions.

- (b) The objectors requested covering the proposed Lam Tin Interchange and the approach road to EHC and constructing a 'central park' on the cover with connection to YLE. The CEDD responded that part of the Lam Tin Interchange would be covered by a landscape deck, and that the feasibility of constructing a park at the concerned locations with connection to YLE would be investigated at the detailed design stage.
- (c) The objectors expressed dissatisfaction with the lack of notice about the gazettal on the internet. In response, the CEDD explained that the Gazette notice of the TKO-LTT Project had been published on the websites of the Gazette and the Transport and Housing Bureau (THB), as well as displayed at prominent positions within the works area.

4. In addition to the concerns on environmental impact to which the CEDD's responses were similar to those in paragraph 3(a) above, other concerns and requests raised by the other objectors in Group A, as well as responses from the CEDD at that time, are summarised as follows –

- (a) An objector requested the Government to repurchase EHC so that noise mitigation measures could be implemented and thus could reduce the noise impact on YLE. He also requested enhancing the transportation link between East and West Kowloon by bus and other transport means, as well as providing leisure facilities. In addition, he requested that the Government should continue to publish leaflets to report on the progress of the works, to introduce the latest design recommendations and to respond to queries of the residents. In response, the CEDD explained that the ownership of EHC would be reverted to the Government in 2016 and the benefit of purchasing EHC prior to 2016 would not be significant. As regards enhancement of public transport services, the CEDD responded that, in formulating the Bus Route Development Programme, the Transport Department (TD) would make reference to the view of the objector. The CEDD also advised the objector that there were existing leisure facilities near YLE which are accessible within about five to 10 minutes walking distance. Also, the CEDD would publish leaflets at appropriate times to provide updated information to the residents.
- (b) An objector mentioned that as there were three primary schools along Yau Tong Road, additional traffic should not be attracted to YLE for road safety reason. The CEDD explained that a traffic impact assessment had been conducted, and the traffic impact on Yau Tong Road would be insignificant.

5. Some objectors attended the objection resolving meetings organised by the CEDD on 7 and 27 September 2013. In addition to reiterating their concerns about the environmental impact of the TKO-LTT Project on YLE and seeking clarification on the coverage of the works of the TKO-LTT Project, some objectors requested for provision of a slip road from Yau Tong Road to EHC. The CEDD advised that adding the proposed slip road would attract more traffic to Yau Tong and Cha Kwo Ling (CKL), which might raise additional environmental concerns. Some objectors were of the view that traffic from West Kowloon and TKO to EHC would be attracted to use Yau Tong Road, causing safety concerns to YLE residents. The CEDD responded that the most direct route from West Kowloon to EHC would be the existing Kwun Tong Bypass rather than the route through Yau Tong Road. Also, there would be a direct slip tunnel from TKO to EHC without passing through Yau Tong Road. Through the written responses and meetings for resolving objections, 62 objections were withdrawn unconditionally. For the 764 unresolved objections, 10 were conditionally withdrawn, 115 were maintained, 471 did not respond to the CEDD and 168 did not provide valid contact information.

Group B: One objection (from the project manager of the beneficial owner of some lots at Yau Tong)

6. The objector was concerned that the proposed roundabout at CKL Road would impose constraints on the proposed access points of some lots of their development. In response, the CEDD replied at that time that TD had no adverse comments on the access points, provided that the following three conditions could be fulfilled: (i) the access point to one of the lots would be maintained at its present position where a traffic island would be provided under the scheme of the Project to avoid traffic conflict between the access point and the roundabout; (ii) the access points to two of the towers of the development would be maintained at more than 45m from the roundabout; and (iii) a 'left-in-left-out' access arrangement would be imposed.

7. The objector withdrew his objection subject to the conditions that the proposed roundabout would be located at more than 45m from the access points to the two towers of the development, and that a traffic island would be provided at the roundabout to avoid conflict with the access point to one of the lots. In response, the CEDD explained at that time that in case the development is modified in future, the roundabout and associated traffic island could not be modified to suit the development as the proposed design of the concerned roundabout and traffic island was the outcome of an extensive 3-stage public engagement exercise and was under serious site constraint. The objection remains unresolved as the objector did not respond further to the CEDD.

Group C: A total of 320 objections (from three organisations and individuals)

8. Most objectors in this group were concerned that the TKO-LTT Project would damage the integrity of the CKL Village and the structures of the huts in the village during construction, posing serious risks to their properties and lives. In response, the CEDD explained at that time that the CKL section of the tunnel would be constructed using non-blasting methods, and precautionary safety measures would be implemented, including pre-condition surveys of the existing buildings and regular monitoring of the vibration and settlement caused by the works. If situation warrants, the construction method would be adjusted or temporarily suspended. Furthermore, the TKO-LTT would pass through the underground strata of the CKL Village in the form of tunnel and would not involve land resumption and clearance of CKL Village.

9. Other concerns and requests of the objectors, as well as the CEDD's responses at that time are as follows –

- (a) some objectors were concerned about construction nuisances. The CEDD responded that the EIA report of the TKO-LTT Project had been approved by DEP with conditions. Upon meeting the conditions and implementing the mitigating measures recommended in the EIA report, the TKO-LTT Project would fulfill the statutory requirements. Also, the traffic impact assessment of the TKO-LTT Project indicated that the traffic flow on CKL Road during construction and after commissioning would not exceed its capacity.
- (b) some objectors were concerned about the impact of the TKO-LTT Project on an existing stormwater drain in CKL Village. The CEDD clarified that the TKO-LTT Project would not affect the drainage facilities of the village.
- (c) some objectors concerned that their houses would be cleared and the unity of the residents would be destroyed. The CEDD explained that the TKO-LTT would pass through the underground strata of the CKL Village in the form of tunnel and would not involve land resumption and clearance of CKL Village. Thus, the whole CKL Village would be left intact.

10. The CEDD held an objection resolving meeting on 30 August 2013. The meeting focused on the measures to ensure the structural safety of the buildings in the CKL Village during tunnel construction and the measures to avoid construction nuisances. At the meeting, the CEDD elaborated on the safety measures and advised the objectors that construction wastes would be disposed of through a vertical shaft in the ex-CKL Public Cargo Working Area but not through CKL Village. The CEDD would also minimise the entrances/exits to and from the construction site next to CKL Road. Finally, eight objections were unconditionally withdrawn after receiving the CEDD's responses. For the 312 unresolved objections, 13 were conditionally withdrawn,

55 were maintained, 145 did not respond to the CEDD and 99 did not provide valid contact information.

Group D: A total of 277 objections (from three organizations, a Kwun Tong District Council member and 273 individuals/companies)

11. The objector's main concerns and requests, as well as responses from the CEDD at that time, are summarised as follows –

- (a) most objectors considered that an alternative scheme called H2b² presented during the TKO-LTT Project's public engagement exercise would have less disturbance to the CKL Village and hence would be more acceptable. The CEDD responded that the H2b scheme would require demolishing the former Four Hills Public School and cause more disturbances to the Tin Hau Temple during construction. In addition, the H2b scheme was about 230 m longer, generating more construction waste and involving higher cost and risk, compared with the scheme of the Project.
- (b) as the proposed CKL tunnel would pass through the underground strata of CKL Village, most objectors raised objections on ground of Fung Shui, the impact on redevelopment potential and value, or the impact on the integrity of the village. On the Fung Shui issue, the CEDD responded that the tunnel was located far away from Tin Hau Temple and works on the ground surface of CKL Village would be avoided, which would minimise the impact on the surrounding environment. As for the impact on redevelopment potential or value, the CEDD responded that for redevelopment of the private land concerned in the form of low-rise buildings similar to the existing structures, the tunnel would not affect the redevelopment potential or value as the relevant loading had already been taken into account in the tunnel design. If the whole CKL Village was to be redeveloped, the tunnel would not constitute a significant constraint as it would only occupy a small part of the CKL Village and the redevelopment could cater for the tunnel through proper design and arrangement of the redevelopment layout. Regarding the integrity of CKL Village, the CEDD responded that the TKO-LTT would pass through the underground strata of the CKL Village and would not involve land resumption and clearance of the CKL Village. Thus, the whole village would be left intact.

² Four schemes (H1a, H1b, H2a and H2b) have been considered in the TKO-LTT Project. The Scheme gazetted is the H1b scheme which passes through the underground strata of the CKL Village. H1a takes the form of a depressed road while H1b is a tunnel. Both H1a and H1b share the same horizontal alignment. The horizontal alignment of H2a and H2b passes through the former Four Hills Public School at the south-eastern edge of CKL Village. Similarly, H2a and H2b share the same horizontal alignment, with H2a adopting the form of a depressed road while H2b is a tunnel.

- (c) many objectors criticised that the CEDD had distorted public opinions. The CEDD responded that a 3-stage public engagement exercise had been conducted. The proposed scheme of the Project was the optimum scheme, taking into account factors such as traffic needs, engineering and technical considerations and the impact on the residents along the alignment.
- (d) some objectors raised concerns on the risk to life and properties due to the tunnelling works. The CEDD's responses were similar to those in paragraph 8 above.
- (e) some objectors were concerned about compensation. The CEDD responded that concerned persons could follow statutory procedures to claim for compensation under the Roads (Works, Use and Compensation) Ordinance.
- (f) one objector said that affixing Gazette notices to lamp post was furtive. The CEDD responded that the Gazette notice of the TKO-LTT Project had been published on the websites of the Gazette and the THB, as well as displayed at prominent positions within the works area.
- (g) one objector said that the traditional rights and interests of CKL Village should be protected under the Base Law Article 40. The CEDD responded that CKL Village was not a recognised indigenous village of the New Territories and Basic Law Article 40 was not applicable.

12. Subsequent to the CEDD's written responses, some objectors made further submissions and attended an objection resolving meeting on 30 October 2013. In addition to reiterating their concerns about Fung Shui and safety of houses in CKL Village, for which the CEDD's responses were similar to those in paragraphs 11(b) and 8 above, some objectors mentioned that the loss to CKL Village arising from adopting the scheme and the alternative H2b scheme would be \$2 billion and \$0.5 billion respectively, and that the Government should compensate the residents accordingly. Some objectors suggested that the Government should resume the private land for the scheme through land exchange or offer a special ex-gratia package to compensate the residents. Some objectors also said that the dominant preference of CKL Village residents was the alternative H2b scheme. The CEDD responded that concerned persons could serve written claims for compensation under the Roads (Works, Use and Compensation) Ordinance. The CEDD also explained that the alternative scheme H2b would require demolition of the former Four Hills Public School and cause more disturbances to the Tin Hau Temple during construction. Also, the H2b scheme would generate more construction wastes and involve higher cost and risk, compared with the current scheme. Finally, 162 objections were conditionally withdrawn and 17 were maintained while the objectors for 98 objections did not respond. All 277 objections are considered as unresolved.

Group E: A total of three objections (two from an individual as the chairman of an owners' committee of an estate and as a Sai Kung District Council member, and one from the chairman of an owners' committee of another estate)

13. The objectors' concerns and requests, as well as the CEDD's responses at that time, are summarised as follows –

- (a) the objectors said that the proposed Road P2 under the scheme should be extended in the form of tunnel to bypass the junction of Po Shun Road and Po Yap Road to avoid impact on nearby estates. The CEDD responded that the EIA report of the TKO-LTT Project had been approved by DEP with conditions. Upon meeting the conditions and implementing the mitigating measures recommended in the EIA report, the TKO-LTT Project would fulfill the statutory requirements. The CEDD also advised that an existing culvert at the relevant section of Po Shun Road would obstruct the construction of the requested tunnel. In addition, if Road P2 was to be extended in the form of a tunnel, traffic in Chui Ling Road and Po Yap Road could not access the TKO-LTT directly and had to detour, which would have an impact on the neighbouring environment.
- (b) one of the objectors suggested that restrictions on working days and hours and machinery should be imposed on construction works, and that construction waste and dust should be properly handled. He also suggested that environmental monitoring data should be published. In response, the CEDD advised that the works would be executed according to the requirements of labour legislation, the EIA Ordinance (Chapter 499) and government works contracts. The mitigation measures stated in the EIA report would also be implemented. The CEDD also advised that the environmental monitoring data would be published on the websites of the TKO-LTT Project and the Environmental Protection Department.
- (c) one of the objectors considered that one of the proposed slip roads would dissect the future Tiu Keng Leng Park and cause danger to students of nearby schools. He requested that cycle track should be constructed in the Lam Tin tunnel to enhance the cycle track networks for connection with other areas. In response, the CEDD explained that, without the slip road, the traffic had to use the junction of Road P2 and Po Yap Road, which would cause additional traffic noise to nearby estates. The CEDD also advised that the facilities and arrangements for pedestrians across the slip road would be considered at the detailed design stage. As for the cycle track, the CEDD responded that as there is no cycle track network in Kwun Tong, it is not necessary to construct a cycle tunnel to connect TKO and Kwun Tong.

14. The objectors attended an objection resolving meeting on 3 September 2013. They reiterated their request to modify the design of Road P2 of the TKO-LTT Project such that it would bypass the junction of Po Shun Road and Po Yap Road in order to reduce the environmental impact on a nearby estate and to reduce traffic accidents. One of the objectors even proposed not to construct Road P2 because the benefit of the road to residents of the nearby estate would be insignificant. The road would also cause environmental and noise impacts, dissect the future Tiu Keng Leng Park and affect the safety of park users. The CEDD explained that if Road P2 was not constructed, traffic from TKO town centre would have to detour. The CEDD also reiterated that the EIA report of the TKO-LTT Project had been approved by DEP with conditions. Upon meeting the conditions and implementing the mitigating measures recommended in the EIA report, the TKO-LTT Project would fulfill the statutory requirements. The junction of Po Shun Road and Po Yap Road would be turned into a signal controlled junction, which would improve traffic safety. The northern and southern parts of the park would be designed to serve different users in order to minimise the need for road crossing. The facilities and arrangements for pedestrians across the slip road would be considered at the detailed design stage. Despite the written responses and objection resolving meeting, the objectors maintained their objections. Hence, the objections remain unresolved.

Details of Objections to the Sewerage Scheme of the Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) Project under the Roads (Works, Use and Compensation) Ordinance (Cap 370) as applied by Section 26 of the Water Pollution Control (Sewerage) Regulation (Cap 358AL) Gazetted on 10 and 16 May 2013

After gazettal of the sewerage scheme, 346 objections were received before the expiry of the statutory objection period. After receiving the responses from the Civil Engineering and Development Department (CEDD) at that time, 6 objections have subsequently been withdrawn unconditionally.

2. The gist of objections is set out below.

Group A: A total of 340 objections (from 340 individuals)

3. One objection was submitted by a resident of the Cha Kwo Ling (CKL) Village and the rest of the objection letters in Group A were proforma objection letters collected by the resident. The proforma objection letters provided spaces for individual objectors to add their comments. The printed contents of the objection letters expressed dissatisfaction with the lack of consultation on the proposed sewerage works. The CEDD explained to the objectors that the purpose of the proposed sewerage works was to convey wastewater generated in the proposed administration building of the TKO-LTT Project to an existing public sewer in CKL Road. As the proposed sewerage works would be located in public footpaths and carriageways and at a longer distance from the CKL Village and the Tin Hau Temple than some existing sewers, the CEDD had not expressly mentioned the proposed sewerage works in the consultation with the Kwun Tong District Council on the TKO-LTT Project. The CEDD also supplemented that the most effective and reliable way to dispose of wastewater was by connecting to public sewers leading to government sewage treatment works in accordance with the guidelines issued by the Environmental Protection Department.

4. Other main concerns and requests of the objectors, as well as the CEDD's responses at that time are as follows –

- (a) some objectors were concerned that Fung Shui of the CKL Village would be affected by the construction of the proposed sewers and the TKO-LTT. The CEDD responded that the proposed sewers would be located at a distance further away from the Tin Hau Temple than some existing sewers. All sewerage facilities would be located within public pedestrian walkways and

vehicular roads outside the CKL Village and the Tin Hau Temple. The tunnel would be located far away from the Tin Hau Temple and works on the ground surface of the CKL Village would be avoided, minimizing the impact on the surrounding environment.

- (b) some objectors were concerned about the environmental impact of the proposed sewerage works. The CEDD explained to the objectors that the environmental impact assessment (EIA) report of the TKO-LTT Project had been approved by the Director of Environmental Protection (DEP) with conditions and the environmental impact of the TKO-LTT Project would meet the statutory requirements.

5. The CEDD met the objectors in two objection resolving meetings on 30 August 2013 and 30 October 2013 respectively to discuss both the road scheme and the sewerage scheme of the Project. They raised concerns on construction nuisances, the impact on Fung Shui and safety of the buildings in the CKL Village during the construction of the TKO-LTT, and requested for compensation from the Government. For details, please refer to paragraphs 10 and 12 of Enclosure 9.

6. Through the written responses and after the objection resolving meetings, four objections were unconditionally withdrawn, 15 objections were conditionally withdrawn and 39 objections were maintained while the objectors for 159 objections did not respond and 123 objections did not have valid contact information. Except for the four objections unconditionally withdrawn, all other 336 objections are considered as unresolved.

Group B: One objection (from a Kwun Tong District Council member)

7. The objector's concerns and the CEDD's responses at that time are summarised as follows –

- (a) The objector expressed dissatisfaction with the lack of consultation on the proposed sewerage works and considered that the works would bring adverse effect on the Tin Hau Temple, to which the CEDD's responses were similar to those mentioned in paragraph 3 above.

- (b) The objector considered that the proposed sewerage works would bring serious adverse effect on the roads of the CKL Village and cause visual impact to the village. The CEDD advised the objector that no works would be carried out on the ground surface of the CKL Village and suitable temporary traffic arrangement measures would be in place to ensure that CKL Road could cope with the traffic demand during construction. In addition, the CEDD responded that all proposed sewers would be laid underground and the associated sewage pumping station would be separated from the CKL Village by a hill. Hence, there would not be any visual impact to the CKL Village.

8. Subsequent to the CEDD's written responses, the objector made a further submission questioning why a noise barrier under the road scheme of the TKO-LTT Project would be constructed at the footpath in front of the Tin Hau Temple which would seriously obstruct the yearly celebration activities of the temple. He also queried whether the CEDD had sufficiently explained the proposed sewerage works to the residents of the CKL Village. The CEDD responded that the noise barrier was proposed to meet the requirements of the EIA Ordinance (Chapter 499). In carrying out the detailed design of the noise barrier, the CEDD would avoid obstructing the yearly celebration activities of the Tin Hau Temple. The CEDD also mentioned that all objectors to the proposed sewerage works had been provided with a location plan and other related information about the proposed sewerage works. The objector did not respond to the CEDD's last reply and hence the objection remains unresolved.

Group C: One objection (from an organization)

9. The objector relayed to the CEDD that an organization of CKL Village objected to any sewerage works inside the CKL Village. In addition, the objector quoted Basic Law Article 40 for protection of the CKL Villagers' traditional rights and interests. The CEDD's responses to the objection to the sewerage works inside the CKL Village were similar to those mentioned in paragraph 4(a) above. The CEDD also pointed out that the CKL Village was not a recognised indigenous village of the New Territories and therefore Basic Law Article 40 was not applicable. Despite the CEDD's written responses, the objector maintained its objection and therefore the objection remains unresolved.

Group D: Two objections (from an individual as a Sai Kung District Council member and as the chairman of the owners' committee of an estate)

10. Upon clarification that the proposed sewerage works of the Project would be located at Kwun Tong with no impact on the environment of TKO and after the discussion in an objection resolving meeting held on 3 September 2013, the objector withdrew his two objections unconditionally.

Group E: One objection (from one group of individuals)

11. The objection letter did not mention the proposed sewerage works but raised concern about the impact of the TKO-LTT Project on an existing stormwater drain in the CKL Village. The CEDD clarified at that time that the TKO-LTT Project would not affect the drainage facilities of the CKL Village. The CEDD would also ensure that the design of the TKO-LTT Project would not increase the stormwater flow in the existing drainage facilities of the village. Despite the CEDD's written responses and after the discussion in the objection resolving meeting held on 30 August 2013 as mentioned in paragraph 5 above, the objector maintained their objection, and hence the objection remains unresolved.

Group F: One objection (from three organisations)

12. The three organisations were concerned that the proposed tunnelling works of the TKO-LTT Project underneath the CKL Village would cause serious damage to the houses in the village, which were old and could tolerate much less vibration than other private residential properties. They also condemned the lack of consultation for the proposed sewerage works. The CEDD responded at that time as follows:

- (a) The CEDD would construct the CKL section of the tunnel using non-blasting methods, and precautionary safety measures would be implemented, including pre-condition surveys of the existing buildings and regular monitoring of the vibration and settlement caused by the works. If situation warrants, the construction method would be adjusted or temporarily suspended.

- (b) On the accusation of lack of consultation for the proposed sewerage works, the CEDD's responses at that time were similar to those mentioned in paragraph 3 above.

13. Despite the CEDD's written responses and the discussion in the objection resolving meeting held on 30 August 2013 as mentioned in paragraph 5 above, the objector maintained their objection, and hence the objection remains unresolved.