

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 706 – HIGHWAYS

Transport – Roads

461TH – Central Kowloon Route – Main Works

Members are invited to recommend to the Finance Committee the upgrading of **461TH** to Category A at an estimated cost of \$42,363.9 million in money-of-the-day prices.

PROBLEM

Currently the traffic flow along existing major east-west roads in Kowloon, including Lung Cheung Road, Boundary Street, Prince Edward Road West, Argyle Street, Waterloo Road, Gascoigne Road Flyover (GRF) and Chatham Road North, etc., is approaching or has exceeded their design capacities at peak hours, leading to serious traffic congestion. The situation will deteriorate with future developments in east and west Kowloon.

PROPOSAL

2. The Director of Highways proposes, with the support of the Secretary for Transport and Housing, to upgrade **461TH** (the Project) to Category A at an estimated cost of \$42,363.9 million in money-of-the-day (MOD) prices for the construction of the Central Kowloon Route (CKR) in order to improve the traffic congestion mentioned above.

/ PROJECT

PROJECT SCOPE AND NATURE

3. The proposed scope of works under the Project includes –
- (a) construction of a dual three-lane road tunnel of approximately 3.9 kilometres (km) connecting the Yau Ma Tei (YMT) Interchange and Kai Tak Interchange;
 - (b) construction of approach roads to the proposed tunnel portals of approximately 3.4 km in total length;
 - (c) construction of three ventilation and one administration buildings;
 - (d) reconstruction of GRF (Kansu Street Section) of approximately 300 metres to the west of Nathan Road;
 - (e) installation of noise mitigation facilities including noise barriers of about 1 705 metres and noise enclosures of about 1 140 metres;
 - (f) reprovisioning of affected public facilities, including YMT Public Library, YMT Jade Hawker Bazaar, YMT Methadone Clinic, YMT Dermatology Clinic and YMT Maternal and Child Health Centre;
 - (g) installation of a traffic control and surveillance system (TCSS);
 - (h) associated electrical and mechanical (E&M) works, civil works, drainage, waterworks, landscaping works, slope and geotechnical works; and
 - (i) implementation of an environmental monitoring and audit (EM&A) programme for the works mentioned in items (a) to (h) above.

———— The overall layout plan, cross-sections and artistic impressions of the Project are at Enclosure 1. Subject to the funding approval of the Finance Committee (FC) in this legislative year, the Project can commence in the third quarter of 2017 and be completed in around 2025.

/ JUSTIFICATION

JUSTIFICATION

4. Currently the east-west traffic movements across central Kowloon are primarily served by Lung Cheung Road, Boundary Street, Prince Edward Road West, Argyle Street, Waterloo Road, GRF and Chatham Road North. These roads are already operating close to the full capacity at peak hours. Traffic congestion also poses difficulties to traffic from the side roads turning into these major corridors, and thus spreading the traffic congestion to adjacent areas. With the gradual completion of new development projects in east and west Kowloon such as the West Kowloon Cultural District and Kai Tak Development (KTD), the traffic flow along these roads will continue to increase and the traffic situation will deteriorate seriously if appropriate improvement measure is not carried out timely.

5. The proposed CKR connects the YMT Interchange in West Kowloon with the Kai Tak Interchange in East Kowloon¹, diverting the traffic along the major east-west corridors in Kowloon to relieve the existing traffic congestion and cope with future traffic demand. The CKR will mainly be formed by tunnel and the three ventilation buildings will be equipped with air purification system to filter at least 80% of the nitrogen dioxide and respirable suspended particulates in the exhaust of the traffic in tunnel, which helps reduce the air pollution generated by vehicles in districts along the alignment.

6. With the implementation of the proposed Project, the projected volume/capacity (v/c) ratios² during peak hours will be improved with details as follows –

Road Link	Projected v/c ratio during peak hours in 2026	
	Without the proposed Project	With the proposed Project
Lung Cheung Road	1.2	1.0
Boundary Street	1.3	0.9
Prince Edward Road West	1.1	0.8
Waterloo Road	1.2	1.1
Argyle Street	1.2	0.8
Chatham Road North	1.3	1.1

/7.

¹ The proposed CKR is also one of the main components of Route 6 linking the West Kowloon and Tseung Kwan O. Route 6 is about 12.5 km in length and the other components of Route 6 include Trunk Road T2 under planning and the Tseung Kwan O – Lam Tin Tunnel (TKO-LTT) under construction.

² A volume/capacity (v/c) ratio equals to or less than 1.0 is considered acceptable. A ratio between 1.0 and 1.2 indicates a manageable degree of congestion. A ratio above 1.2 indicates more serious congestion.

7. Without the implementation of the proposed Project, the number of overloaded signal-controlled junctions along major east-west corridors in central Kowloon (including Boundary Street, Prince Edward Road West, Argyle Street, Waterloo Road and Chatham Road North) will increase from 8 in 2012 to 18 in 2026 according to the results of the traffic survey conducted in 2012. The projected reserve capacity (RC)³ of critical junctions during peak hours are as follows –

Critical Junctions	Projected RC of major junctions in 2026	
	Without the proposed Project	With the proposed Project
Argyle Street / Sai Yee Street	-23%	-10%
Boundary Street / Waterloo Road	-13%	9%
Prince Edward Road West / Waterloo Road	-19%	5%
Austin Road / Chatham Road South / Cheong Wan Road	-20%	-11%
Chatham Road North / Wuhu Street	-40%	6%

8. Upon commissioning of the CKR, it is estimated that the journey time between YMT and Kowloon Bay during peak hours would take around 5 minutes, saving about 25 minutes in comparison with the journey time without the CKR. The CKR can also serve as an additional major east-west corridor, strengthening the robustness of the overall road network in central Kowloon. It can serve as a reliable alternative route to divert eastbound and westbound traffic in central Kowloon when there are major emergency incidents on other major east-west corridors or under inclement weather.

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the proposed Project to be \$42,363.9 million in MOD prices (please see paragraph 20 below), with breakdown as follows –

/\$ million

³ The performance of a traffic signalised junction is indicated by its RC. A positive RC indicates that the junction is operating with spare capacity. A negative RC indicates that the junction is overloaded, resulting in traffic queues and longer travel time.

		\$ million
(a)	Tunnel construction works	12,938.6
	(i) Underground tunnel	9,148.6
	(ii) Underwater tunnel	2,827.1
	(iii) Tunnel related structures	962.9
(b)	Tunnel E&M works	1,977.7
	(i) Tunnel ventilation works	846.5
	(ii) Air purification system	484.4
	(iii) Other associated E&M systems	646.8
(c)	Road works	4,391.3
	(i) Depressed road	1,910.2
	(ii) Underpass	216.9
	(iii) At-grade roads	632.3
	(iv) Viaducts	1,415.7
	(v) Footbridge	68.6
	(vi) Other associated roadworks	147.6
(d)	Retaining walls and slopes works	34.4
(e)	Administration and ventilation buildings	2,072.2
	(i) Administration building	453.3
	(ii) Ventilation buildings	1,618.9
(f)	Noise mitigation measures	2,124.5
	(i) Noise barriers	230.1
	(ii) Noise enclosures	1,141.9
	(iii) Landscaped decks	752.5
(g)	Reprovisioning of affected public facilities	653.9
(h)	Landscaping works	876.9
(i)	TCSS	292.0

/\$ million

		\$ million	
(j)	Furniture and equipment ⁴	31.0	
(k)	Consultants' fee	138.2	
(i)	Contract administration	52.8	
(ii)	Management of resident site staff (RSS)	53.0	
(iii)	EM&A programme	32.4	
(l)	Remuneration of RSS	1,866.4	
(m)	Electrical and Mechanical Services Trading Fund (EMSTF) ⁵	54.5	
(n)	Contingencies	2,224.5	
	Sub-total	29,676.1	(in September 2016 prices)
(o)	Provision for price adjustment	12,687.8	
	Total	42,363.9	(in MOD prices)

10. The tunnel construction works described in paragraph 9(a) above cover the cost for an approximately 3.9 km long tunnel (of which approximately 3.5 km is an underground tunnel and approximately 0.4 km is an underwater tunnel⁶) and three access shafts⁷. The cost also covers associated utilities diversion works, road pavement and implementation of temporary traffic measures.

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⁴ The estimated cost of furniture and equipment is based on an indicative list of items.

⁵ Upon its establishment from 1 August 1996 under the Trading Funds Ordinance (Cap. 430), the EMSTF charges government departments for design and technical consultancy services for E&M installation. The services rendered for this Project include checking consultants' submissions on all E&M installations and providing technical advice on all E&M works and their impacts on the Project.

⁶ The section of tunnel in the seabed of the Kowloon Bay is underwater tunnel.

⁷ Since the tunnel between Shanghai Street of YMT and Ma Tau Wai will be constructed at about 30 to 140 metres below existing ground level within the rock stratum, vertical access shafts will have to be constructed at YMT, Ho Man Tin and Ma Tau Wai for manoeuvring of construction plant and materials required for tunnel construction and the mucking out of the demolition materials.

11. The tunnel E&M works described in paragraph 9(b) above cover the cost for the provision of the tunnel ventilation system, air purification system inside the three tunnel ventilation buildings, and other associated E&M systems such as tunnel power supply system, tunnel fire protection system and central control and monitoring system for operation of tunnel ventilation and other E&M facilities etc.

12. The road works described in paragraph 9(c) above cover the cost for the construction of approximately 3.4 km of approach roads including depressed road, underpass, at-grade road and viaduct. It also covers the cost of demolition of two existing subways at YMT and KTD, construction of a footbridge across Kai Fuk Road at KTD, reconstruction of approximately 300 metres long GRF (Kansu Street Section) and the associated utilities diversion works, road pavement, provision of street furniture, ancillary traffic facilities, drainage, waterworks and temporary traffic measures.

13. The items described in paragraph 9(d) above cover the cost for the construction and modification of retaining walls and slopes arising from the site formation works of the ground-level structures e.g. ventilation buildings and access roads, etc.

14. The items described in paragraph 9(e) above cover the cost for building works and building services of the administration building located in KTD and the three ventilation buildings located in YMT, Ho Man Tin and KTD.

15. The noise mitigation measures described in paragraph 9(f) above cover the cost for noise barriers of approximately 1 705 metres and noise enclosures of approximately 1 140 metres. The layout plan and cross-sections of the noise barriers and noise enclosures are at Enclosure 2. The cost also covers the landscaped decks in YMT and Ma Tau Kok (MTK) (but excluding the landscaping works described in paragraph 9(h) above). These landscaped decks will serve as noise mitigation measures as well as amenity and leisure purposes.

16. The reprovisioning of affected public facilities described in paragraph 9(g) above cover the cost for the reprovisioning of YMT Public Library, YMT Jade Hawker Bazaar, YMT Dermatology Clinic, YMT Methadone Clinic and YMT Maternal and Child Health Centre. The reprovisioning arrangement of these facilities is detailed at Enclosure 3.

17. The landscaping works described in paragraph 9(h) above cover the cost for the landscaping works for landscaped decks in YMT and MTK, MTK waterfront promenade and playground and rest gardens at YMT. These facilities are located at the temporary works areas necessary for the construction of the tunnel and depressed road of the CKR, while the landscaped decks are noise mitigation facilities. We will carry out the landscaping works on these above-ground space and landscaped decks after the tunnel and deck structure are completed.

18. The TCSS described in paragraph 9(i) above cover the cost for Traffic Management Computer, Variable Message Signs, Automatic Incident Detection System, Closed Circuit Television (CCTV) System, a data communication network and the associated cables, accessories and spares, etc., for real-time monitoring of the tunnel traffic condition and facilitating the handling of emergency incidents to ensure safe and efficient operation of the tunnel.

19. A breakdown of the estimated consultants' fees and RSS costs by man-months is at Enclosure 4.

20. Subject to funding approval in this legislative year, we will phase the expenditure as follows –

Year	\$ million (Sept 2016)	Price adjustment factor	\$ million (MOD)
2017 – 2018	173.9	1.05750	183.9
2018 – 2019	1,796.8	1.12095	2,014.1
2019 – 2020	2,363.3	1.18821	2,808.1
2020 – 2021	3,014.2	1.25950	3,796.4
2021 – 2022	3,656.3	1.32562	4,846.9
2022 – 2023	4,007.3	1.39190	5,577.8
2023 – 2024	4,022.4	1.46150	5,878.7
2024 – 2025	3,301.9	1.52909	5,048.9
2025 – 2026	2,811.4	1.59790	4,492.3
2026 – 2027	2,467.5	1.66981	4,120.3
2027 – 2028	2,061.1	1.74495	3,596.5
	<hr/> 29,676.1 <hr/>		<hr/> 42,363.9 <hr/>

21. We have derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2017 to 2028. We will implement the works through a number of contracts with provision for price adjustment. Depending on the nature and scale of the contracts, we will award at least one contract based on the New Engineering Contract (NEC)⁸ form. As for the remaining contracts, they will mainly be awarded based on the conventional re-measurement contract form. The Highways Department (HyD) has already initiated parallel tendering for some construction contracts since January 2017 in order to start the construction works as soon as possible. The contracts will be awarded only after obtaining funding approval from the FC.

22. To strengthen cost control, we have reduced unnecessary design and contractual requirements. For this purpose, we have endeavoured to explore various cost saving and risk management measures to ensure that the Project can be completed according to planned schedule within the estimated cost.

23. We estimate the annual recurrent expenditure arising from this Project to be about \$271.2 million.

PUBLIC CONSULTATION

24. The HyD completed two phases of public engagement exercise between November 2007 to July 2009 and between December 2012 to March 2013 respectively to collect public views on the CKR project through interview surveys, focus group meetings and public forums. The public engagement exercise reflected that the public generally supported the implementation of the Project in order to relieve the traffic congestion at the existing major east-west corridors in central Kowloon and to cope with traffic demands arising from the various developments in Kowloon.

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⁸ NEC is a suite of contracts developed by the Institution of Civil Engineers, United Kingdom. It is a contract form that emphasizes cooperation, mutual trust and collaborative risk management between contracting parties.

25. The HyD also consulted the Yau Tsim Mong (YTM) District Council (DC), Kowloon City (KC) DC, Wong Tai Sin (WTS) DC and Kwun Tong (KT) DC between December 2012 and January 2013. Furthermore, the HyD also consulted the Harbourfront Commission in January 2013. The KTDC and KCDC generally supported the proposed Project. The WTSDC raised no objection to the proposed Project. The YTMDC gave conditional support to the Project subject to replacing the semi-enclosure (130 metres long) along GRF fronting Blocks 1 and 5 of Prosperous Garden (PG) with a full enclosure (the Central Full Enclosure), and extending the full enclosure along GRF fronting Blocks 3 and 4 of PG 60 metres northwards beyond Yaumati Catholic Primary School (the Northern Extension). The YTMDC passed a motion at the meeting on 12 December 2013 for the above requests.

26. We have explained many times that these two full enclosures are not required under the Environmental Permit (EP). In fact, after implementing the mitigation measures recommended in the Environmental Impact Assessment (EIA) report (see Enclosure 2), the traffic noise impact on the residents of PG will be improved, and the noise level of around 700 dwellings of PG residents will be reduced by 10 dB(A) at most and 3 dB(A) on average. Regarding the requests of the residents, the HyD assessed that the implementation of the Central Full Enclosure would render the total length of the fully enclosed road section along GRF to exceed 230 metres. In order to meet the requirements in the codes of practices for fire safety, additional fire services installation and equipment, including an extensive dynamic smoke extraction system and fire protected escape passage, are required in the said road section. As it is technically not feasible to accommodate such installation and equipment in the said road section, we cannot accept the request for the Central Full Enclosure. As for the Northern Extension, since it is not within the project scope of the CKR, we cannot handle this request under the CKR project either.

27. We gazetted the road scheme for the proposed works of the Project under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 1 and 8 November 2013. During the statutory period, 344 objections were received, and 81 of them were subsequently withdrawn unconditionally. The reasons for the objections were mainly related to the planning issues related to the Project, and the impact of the Project on environment, building safety and redevelopment potential. Over 90% of the objections were raised by those who were concerned about the environmental impact of CKR on PG. They worried about the air pollution and noise caused by the busy traffic at GRF and requested the implementation of the Central Full Enclosure and Northern Extension. In respect to the environmental impacts on PG, by implementing the mitigation measures recommended in the EIA report,

/CKR

CKR will comply with the requirements in the EP issued by the Director of Environmental Protection. Regarding the building safety and redevelopment potential aspects, majority of the tunnel of the CKR will be constructed deep in rock stratum. The construction works will not affect the structural integrity and normal use of the buildings along the alignment of the CKR or their redevelopment potentials. The HyD had also explained to the objectors with regard to the above two requests.

28. Later on, to suit the design developments and to indicate the correct extent of creation of easement and other permanent rights in some land lots, we gazetted the amendment scheme on 27 March and 2 April 2015. Three objections were received during the statutory period. The reasons for the objections were mainly related to the impact of the Project on environment, building safety and redevelopment potential. These concerns have been addressed in the impact assessments and design.

29. Having considered the 266 unresolved objections and the above amendments, the Chief Executive-in-Council authorised the proposed works of the proposed Project under the Ordinance without modification. The authorisation notice of the Project was gazetted on 15 and 22 January 2016.

30. The HyD has consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)⁹ on the proposed aesthetic design of the noise barriers, noise enclosures, YMT landscaped deck, viaducts and footbridge of the Project. ACABAS accepted the proposed aesthetic design.

31. We consulted the Legislative Council Panel on Transport on the funding application for the Project on 17 March 2017. While Members generally supported the implementation of the CKR, they demanded that the PG's requests for the Central Full Enclosure and the Northern Extension, as well as the transitional and reprovisioning arrangements of parking in YMT after the demolition of the YMT Multi-storey Carpark Building be addressed. Four motions were passed for the above requests. We provided our written response to the above motions to the Secretariat of the Panel on 7 June 2017, in which a compromise scheme is proposed to respond to Members' views in a pragmatic manner. The written response is at Enclosure 5.

/ ENVIRONMENTAL

⁹ ACABAS, comprising representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, the Hong Kong Institution of Planners, the Architectural Services Department, the HyD, the Housing Department, the Civil Engineering and Development Department, and architectural or relevant faculties from local institutions, is responsible for vetting the design of bridges and other structures associated with the highway system, including noise barriers and enclosures, from the aesthetic and visual impact points of view.

ENVIRONMENTAL IMPLICATIONS

32. The Project is a designated project under Schedule 2 of the EIA Ordinance (Cap. 499) and an EP is required for the construction and operation of the Project. After public inspection and consultation with the Advisory Council on the Environment, the EIA report for the Project was approved by the Environmental Protection Department with conditions¹⁰ in July 2013 and the EP was issued under the EIA Ordinance in August 2013. The EIA report concluded that the environmental impact of the Project can be controlled to within the criteria under the EIA Ordinance and the Technical Memorandum on the EIA Process.

33. The HyD shall implement the mitigation measures and EM&A programme recommended in the approved EIA report. For the construction phase, the recommended mitigation measures mainly include adoption of quieter equipment, movable temporary noise barriers and noise insulation materials to minimize construction noise impact; regular water spraying for dust control; control of dredging and filling rates for marine construction with deployment of silt curtains to minimize water quality impact; and setting up of community liaison groups to handle enquiries and complaints. For the operation phase, the mitigation measures mainly include adoption of an air purification system to filter at least 80% of the nitrogen dioxide and respirable suspended particulates away from vehicular exhaust of the traffic in tunnel before discharging to the atmosphere via ventilation buildings; installation of noise barriers and noise enclosures; and tree planting, provisioning of landscaped decks and improving the landscaping of the ventilation buildings. We have included the cost of about \$2,641.3 million (in September 2016 prices) in the overall project estimate for the implementation of the environmental mitigation measures (including air purification systems) and EM&A programme.

/34.

¹⁰ The conditions include setting up community liaison groups and incorporating more innovative and greening features for the landscaped decks and ventilation buildings.

34. At the planning and design stages, the HyD has considered all the proposed works and construction sequences to reduce the generation of construction waste where possible. In addition, the HyD will require the contractors to reuse inert construction waste (e.g. materials excavated within site area for backfilling use) on site or in other suitable construction sites as far as practicable, in order to minimise the disposal of inert construction waste to public fill reception facilities¹¹. The HyD will require the contractors to maximise the use of recycled or recyclable inert construction waste, as well as encourage the use of non-timber formwork to further minimise the generation of construction waste.

35. At the construction stage, the HyD will require the contractors to submit for approval a plan setting out the waste management measures. The plan will include appropriate mitigation measures to avoid and reduce the generation of inert construction wastes, and to reuse and recycle such waste. The HyD will ensure that the day-to-day operations on site comply with the approved plan. The HyD will require the contractors to separate inert construction waste from non-inert construction waste on site to facilitate their transportation to appropriate facilities for disposal. The HyD will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively for disposal through a trip-ticket system.

36. We estimate that the Project will generate in total 7.86 million tonnes of construction waste. Of these, we will reuse 2.51 million tonnes (31.9%) of inert construction waste on site and deliver 5.32 million tonnes (67.7%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of the remaining 0.03 million tonnes (0.4%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites for the Project is estimated to be \$383.7 million (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).

HERITAGE IMPLICATIONS

37. The HyD has conducted a cultural heritage impact assessment for the Project in accordance with the EIA Ordinance. The assessment is included in the approved EIA report.

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¹¹ 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 in public fill reception facilities requires a license issued by the Director of Civil Engineering and Development.

38. We understand the public aspiration for the preservation of the new wing and old wing of the Yau Ma Tei Police Station (YMTPS). Under the Project, the new wing and old wing of the YMTPS, which has been accorded with a Grade 2 historic building status, can both be preserved. The HyD will require the contractors to comply with the requirements on protection and monitoring of the YMTPS as set out in the approved EIA report.

LAND ACQUISITION

39. The Project does not require resumption or clearance of private land. However, this Project requires creation of rights of temporary occupation of about 3 064 square metres (m²) of private land and the land occupied by sections of the approach roads within the Western Harbour Crossing tunnel area, and easements and other permanent rights in the underground strata of about 72 041 m² of private land.

TRAFFIC IMPLICATIONS

40. The HyD has conducted traffic impact assessment for the Project, covering the traffic impact during the construction period. According to the findings of the assessment, with the implementation of appropriate temporary traffic arrangement (TTA), the construction works will not cause significant impact on the traffic network in the area concerned.

41. The HyD will consult the relevant DCs prior to the implementation of major TTAs for the Project. A traffic management liaison group comprising representatives of the HyD, the Police, the Transport Department and other concerned Government departments will be established to assess the practicality of the TTAs to be proposed by the contractors.

BACKGROUND INFORMATION

42. We upgraded **461TH** to Category B in September 2001.

43. In April 1998, the FC approved the upgrading of **582TH** “Central Kowloon Route – consultants’ design fees and site investigations” to Category A and approved the increase in funding in April 2007 for the consultancy study and site investigations at an approved project estimate of \$192.3 million in MOD prices. The HyD engaged consultants in August 2007 and June 2011 to carry out the investigation and design of the CKR respectively. The detailed design of the Project has been largely completed.

44. The HyD completed two phases of public engagement exercise between November 2007 and July 2009 and between December 2012 and March 2013 respectively. The HyD also consulted the YTMDC, KCDC, WTSDC and KTDC between December 2012 and January 2013. Furthermore, the HyD consulted the Harbourfront Commission in January 2013.

45. Since construction of the proposed CKR will require occupation of the YMTPS, to ensure that the services of the police station will be maintained during construction of the CKR, the FC approved in June 2013 the funding application of **277LP** “Reprovisioning of Yau Ma Tei Police Station”. The reprovisioning works commenced in 2013 and was completed in January 2016.

46. Since the Yaumatei Specialist Clinic Extension (YMTSCE) and the Yau Ma Tei Multi-storey Carpark (YMTMCP) have to be demolished to make way for the construction of the CKR, reprovisioning of the clinic and the government offices in YMTMCP will be required. The FC approved the funding application of **71MM** “Reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital” and **74KA** “Construction of West Kowloon Government Offices” in June 2013 and June 2015 respectively. The reprovisioning works of YMTSCE commenced in 2013 and have all been reprovisioned in the new building in Queen Elizabeth Hospital in March 2017. The construction of West Kowloon Government Offices commenced in 2015 and is anticipated to be completed in 2019.

47. There are 3 248 trees within the project boundary. Among them, 1 269 trees will be preserved. The Project will require removal of 1 978 trees, including 1 858 trees to be felled and 120 trees to be transplanted within the project boundary. Besides, one important tree¹² will be affected during implementation of the Project. A summary of the important tree affected is provided at Enclosure 6. The HyD will incorporate planting proposals into the proposed Project, including the planting of 1 859 heavy standard trees¹³ at various locations and 684 680 shrubs, covering a planting area of about 54 600 m².

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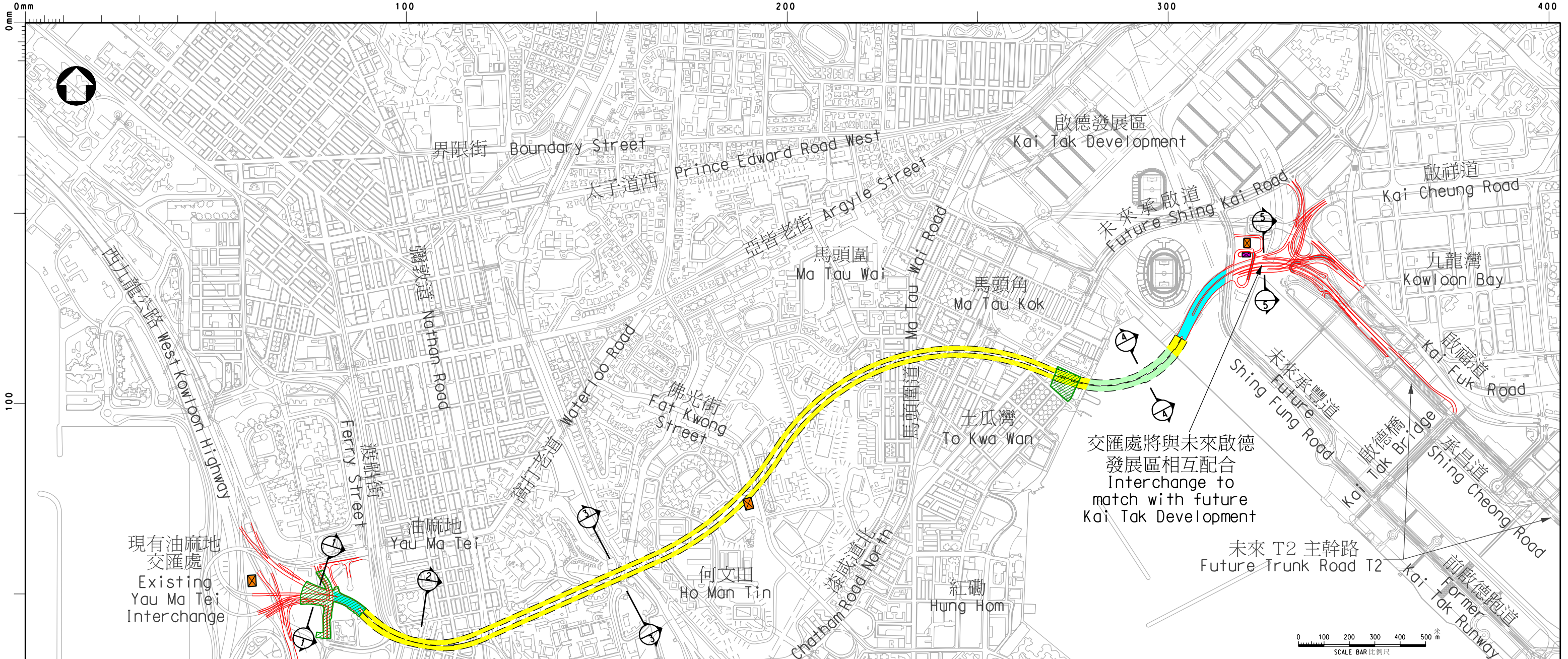
¹² An “important tree” refers to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or
- (e) trees with trunk diameter equal to or exceeding 1.0 metre (measured at 1.3 metres above ground level), or with height/canopy spread equal to or exceeding 25 metres.

¹³ “Heavy Standard Trees” should meet the requirements of height exceeding 3.5 metres, stem diameter exceeding 75 millimetres, well balanced branching head, etc.

48. We estimate that the proposed Project will create about 4 800 jobs (900 for professional/technical staff and 3 900 for labourers) providing a total employment of about 390 000 man-months.

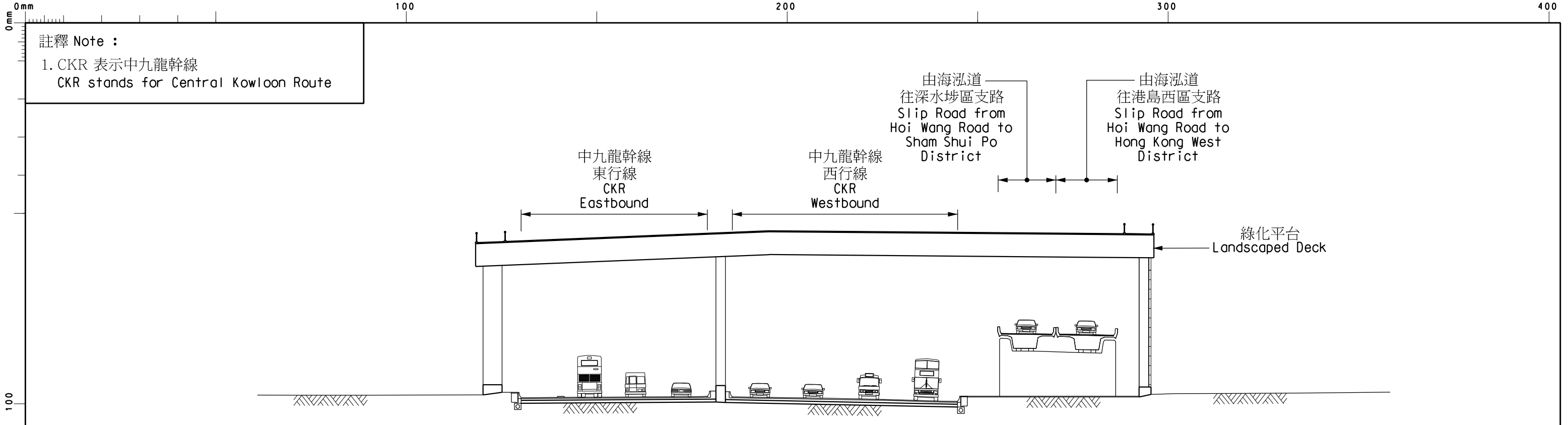
Transport and Housing Bureau
Highways Department
June 2017



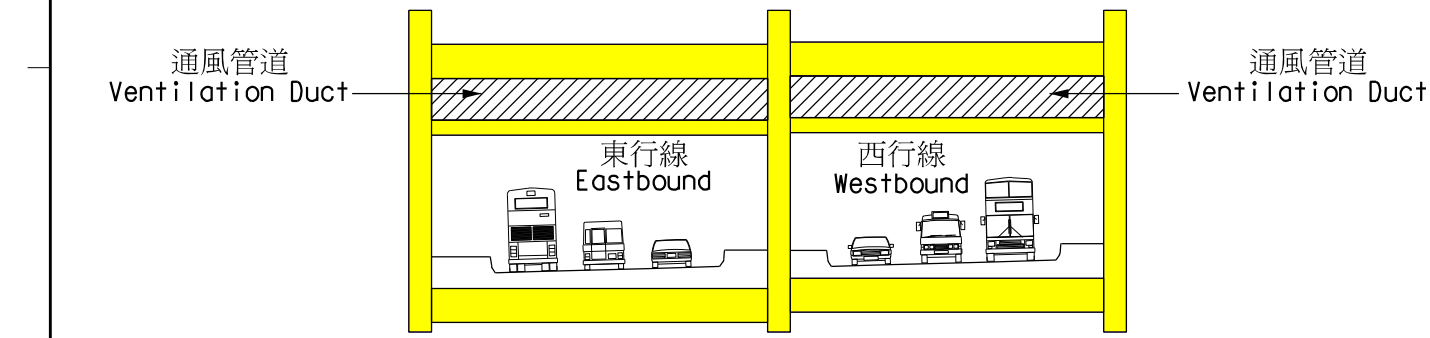
圖例
Legend:

擬建地下隧道 Proposed Underground Tunnel	擬建綠化平台 Proposed Landscaped Deck
擬建海底隧道 Proposed Underwater Tunnel	擬建通風大樓 Proposed Ventilation Building
擬建高架道路/地面道路 Proposed Viaduct/At-grade Road	擬建行政大樓 Proposed Administration Building
擬建低於地面道路及地下通道 Proposed Depressed Road and Underpass	

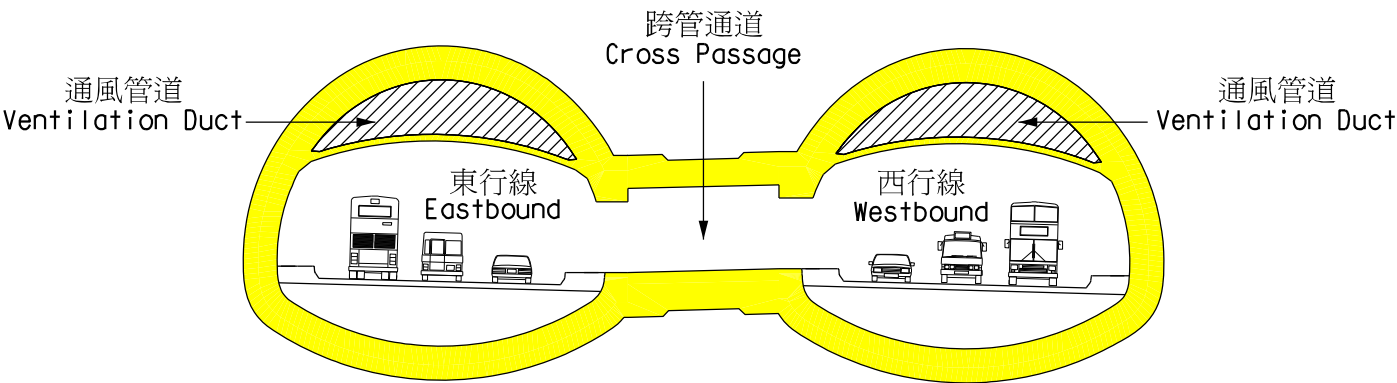
圖則名稱 plan title 工務計劃項目第6461TH號 中九龍幹線 - 主要工程 - 總平面圖 PWP Item No. 6461TH Central Kowloon Route - Main Works - General Layout Plan	圖則編號 plan no. HMW6461TH-SK0735		比例 scale 圖示 AS SHOWN
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	HIGHWAYS DEPARTMENT HONG KONG 路政署		



切面 Section 1-1



切面 Section 2-2

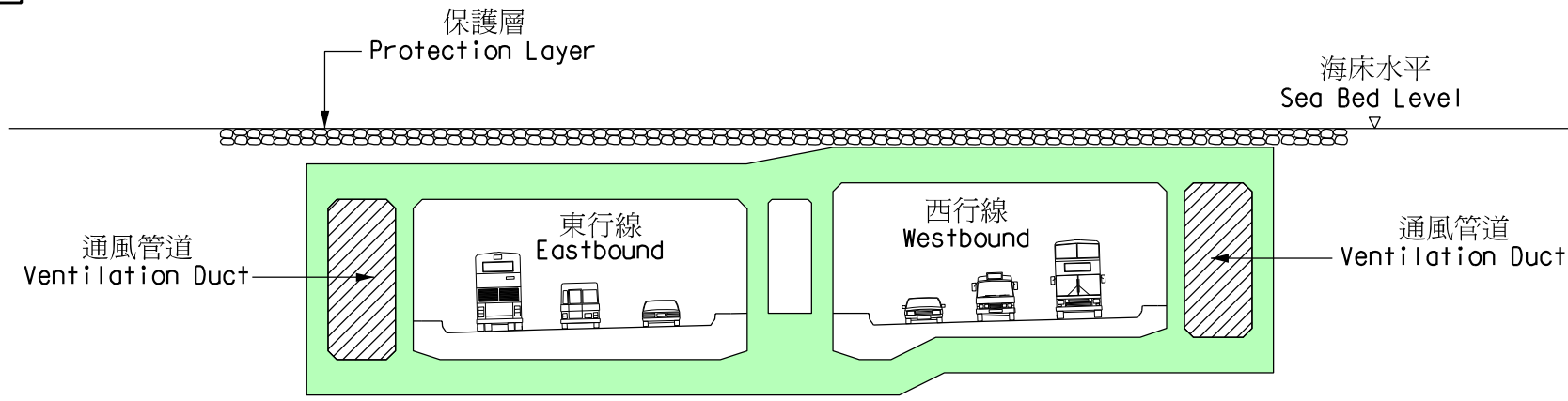


切面 Section 3-3

圖則名稱 plan title 工務計劃項目第6461TH號 中九龍幹線 - 主要工程 - 切面圖 PWP Item No. 6461TH Central Kowloon Route - Main Works - Cross Sections	圖則編號 plan no. HMW6461TH-SK0736	比例 scale 示意圖 DIAGRAMMATIC
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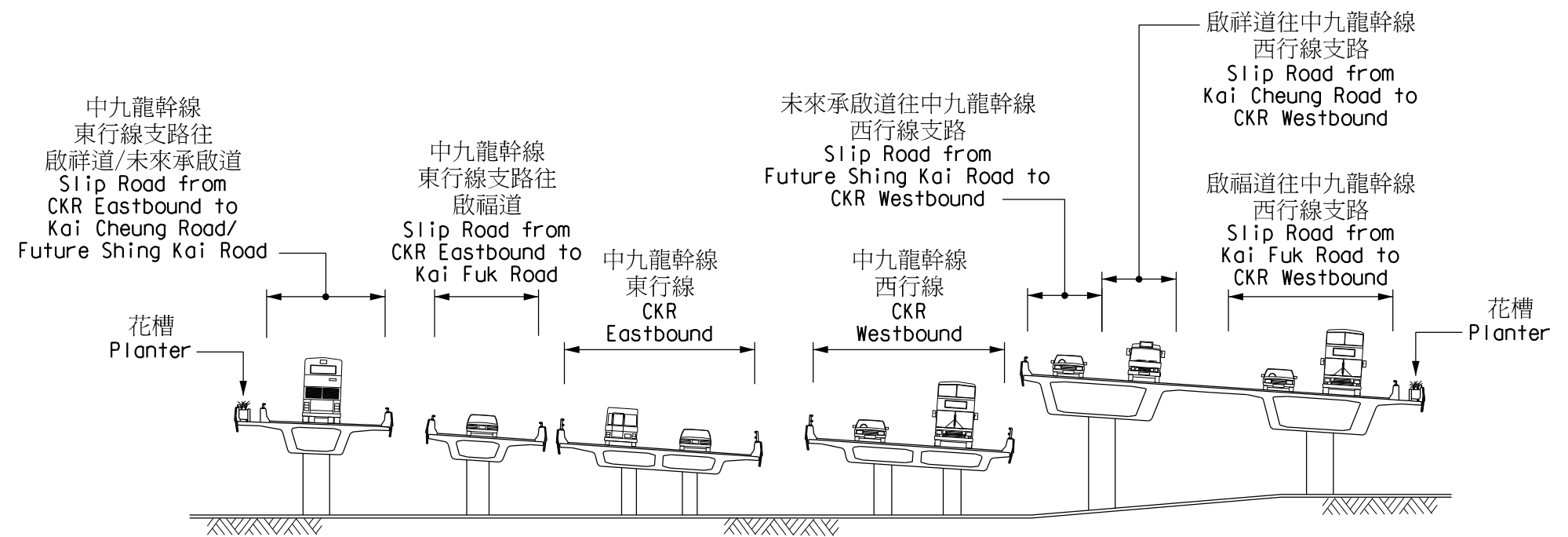
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註釋 Note :
1. CKR 表示中九龍幹線
CKR stands for Central Kowloon Route



切面 Section 4-4

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切面 Section 5-5

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<p>圖則名稱 plan title</p> <p>工務計劃項目第6461TH號 中九龍幹線 - 主要工程 - 切面圖</p> <p>PWP Item No. 6461TH Central Kowloon Route - Main Works - Cross Sections</p>	<table> <tr> <td data-bbox="2478 1785 2775 1869"> <p>圖則編號 plan no.</p> <p>HMW6461TH-SK0737</p> </td><td data-bbox="2775 1785 2908 1869"> <p>比例 scale</p> <p>示意圖 DIAGRAMMATIC</p> </td></tr> <tr> <td colspan="2" data-bbox="2478 1869 2908 2005"> <p>© 版權所有 COPYRIGHT RESERVED</p> <p> HIGHWAYS DEPARTMENT HONG KONG 路政署</p> </td></tr> </table>	<p>圖則編號 plan no.</p> <p>HMW6461TH-SK0737</p>	<p>比例 scale</p> <p>示意圖 DIAGRAMMATIC</p>	<p>© 版權所有 COPYRIGHT RESERVED</p> <p> HIGHWAYS DEPARTMENT HONG KONG 路政署</p>	
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油麻地交匯處
Yau Ma Tei Interchange



啟德交匯處
Kai Tak Interchange



建議緩解噪音設施 - 加士居道天橋
Proposed Noise Mitigation Measures - Gascoigne Road Flyover



油麻地綠化平台
Yau Ma Tei Landscaped Deck

註釋 構思圖只作展述一般佈局之用，設計因實質需要或須作出修改
Notes: Artistic impressions are for general illustration purpose only and design is subject to change to suit site constraints

圖則名稱 plan title
工務計劃項目第6461TH號
中九龍幹線 - 主要工程 - 構思圖
PWP Item No. 6461TH
Central Kowloon Route - Main Works - Artistic Impressions

圖則編號 plan no. HMW6461TH-SK0738	比例 scale 示意圖 DIAGRAMMATIC
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行政大樓及啟德通風大樓
 Administration Building and Kai Tak Ventilation Building



何文田通風大樓
 Ho Man Tin Ventilation Building

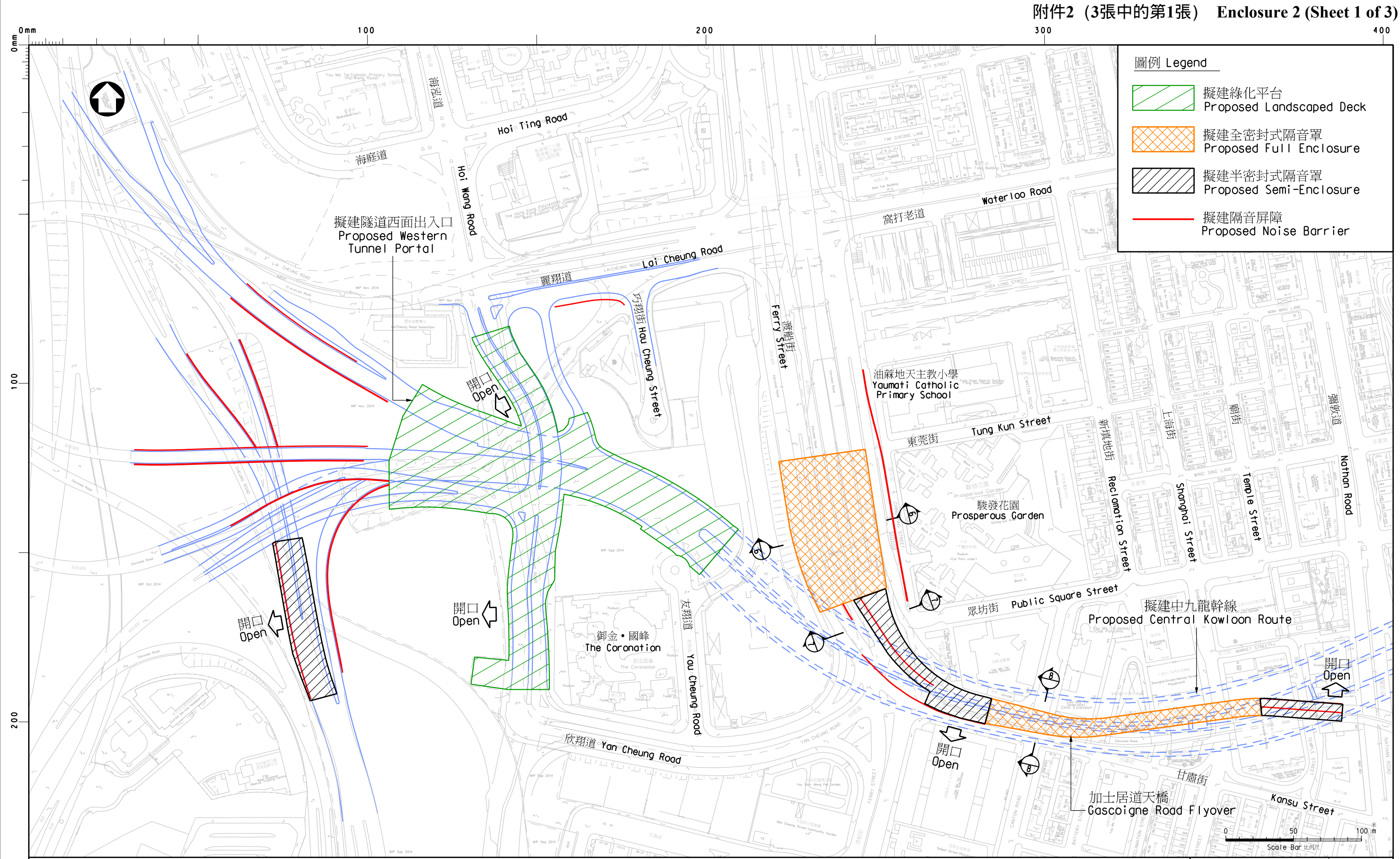


油麻地通風大樓
 You Ma Tei Ventilation Building

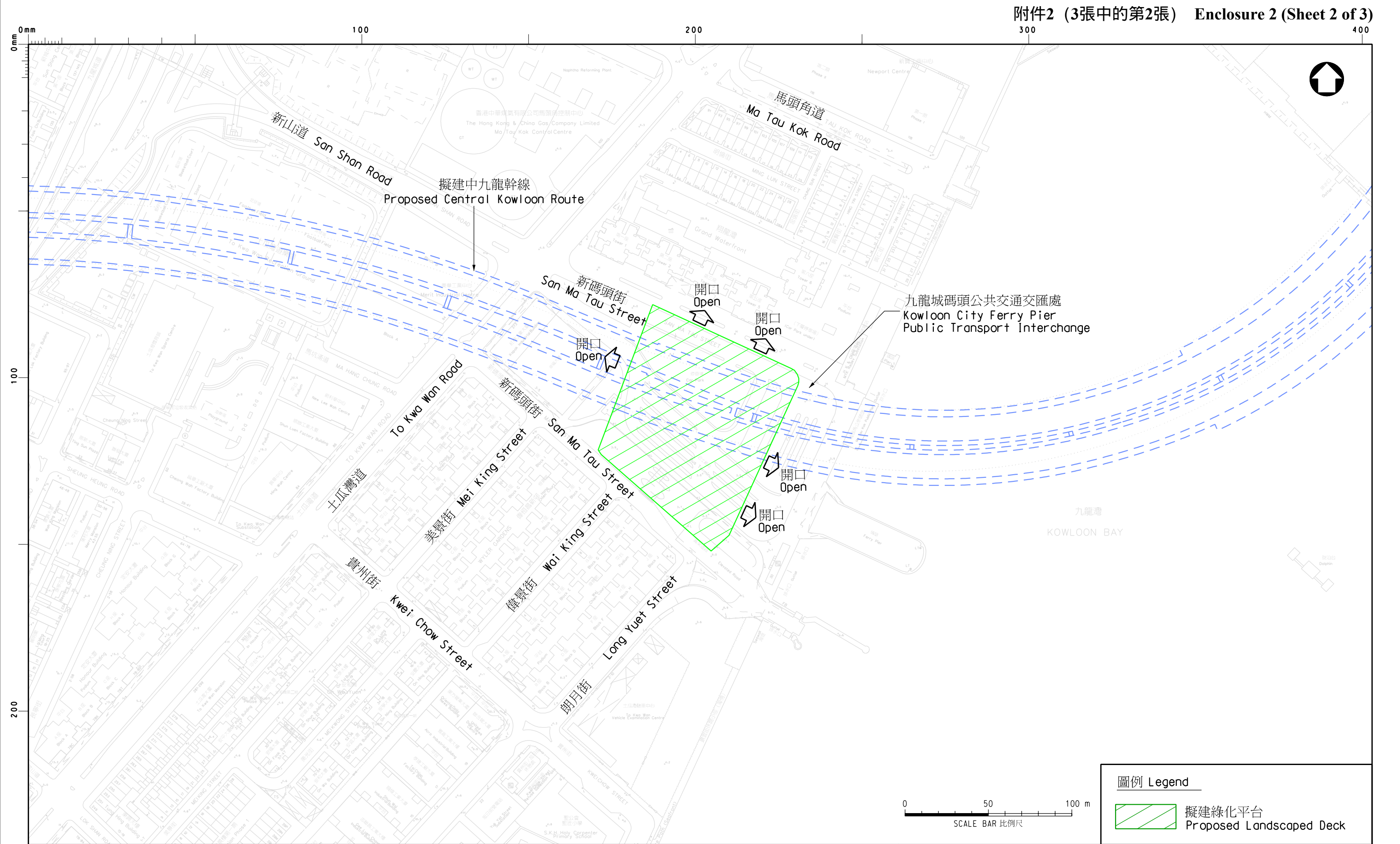
註釋
 Notes:
 構思圖只作展述一般佈局之用，設計因實質需要或須作出修改
 Artistic impressions are for general illustration purpose only and design is subject to change to suit site constraints

圖則名稱 plan title
 工務計劃項目第6461TH號
 中九龍幹線 - 主要工程 - 構思圖
 PWP Item No. 6461TH
 Central Kowloon Route - Main Works - Artistic Impressions

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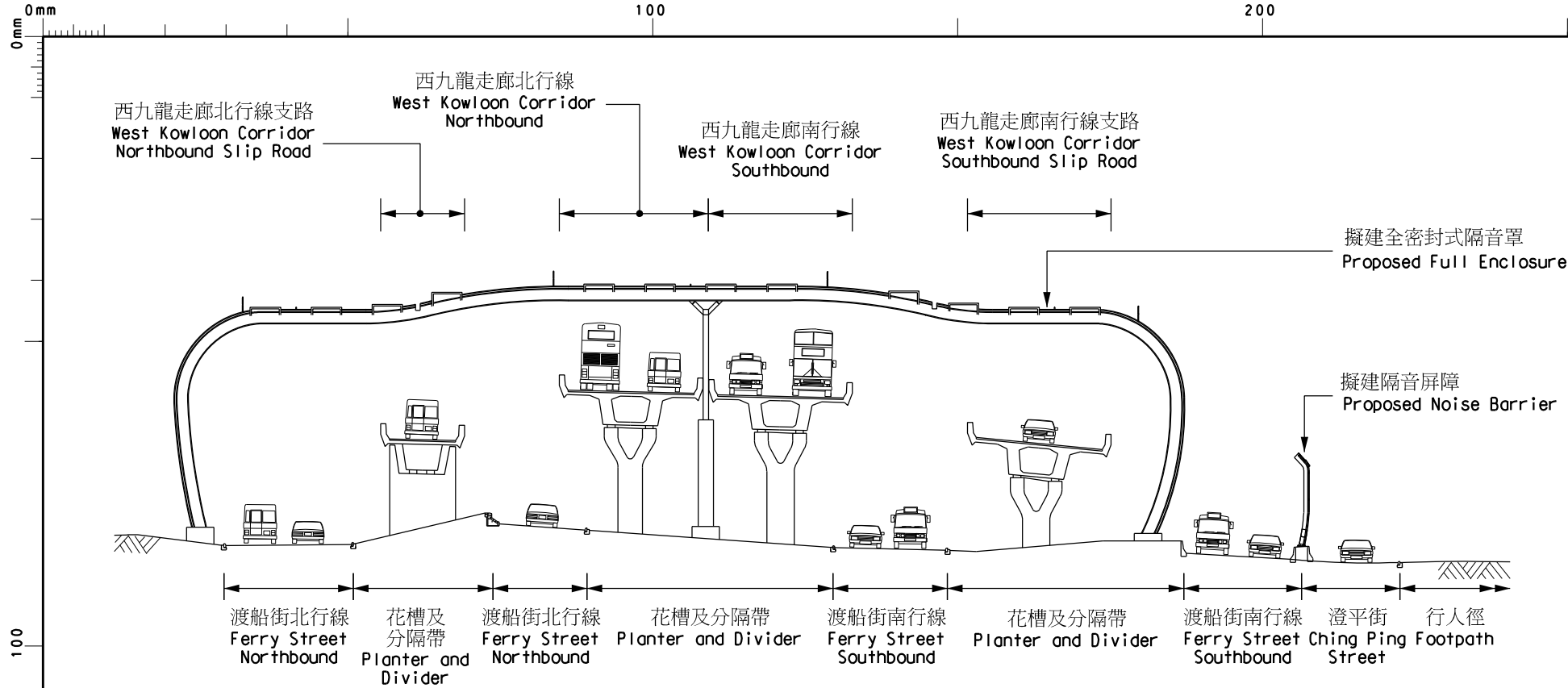


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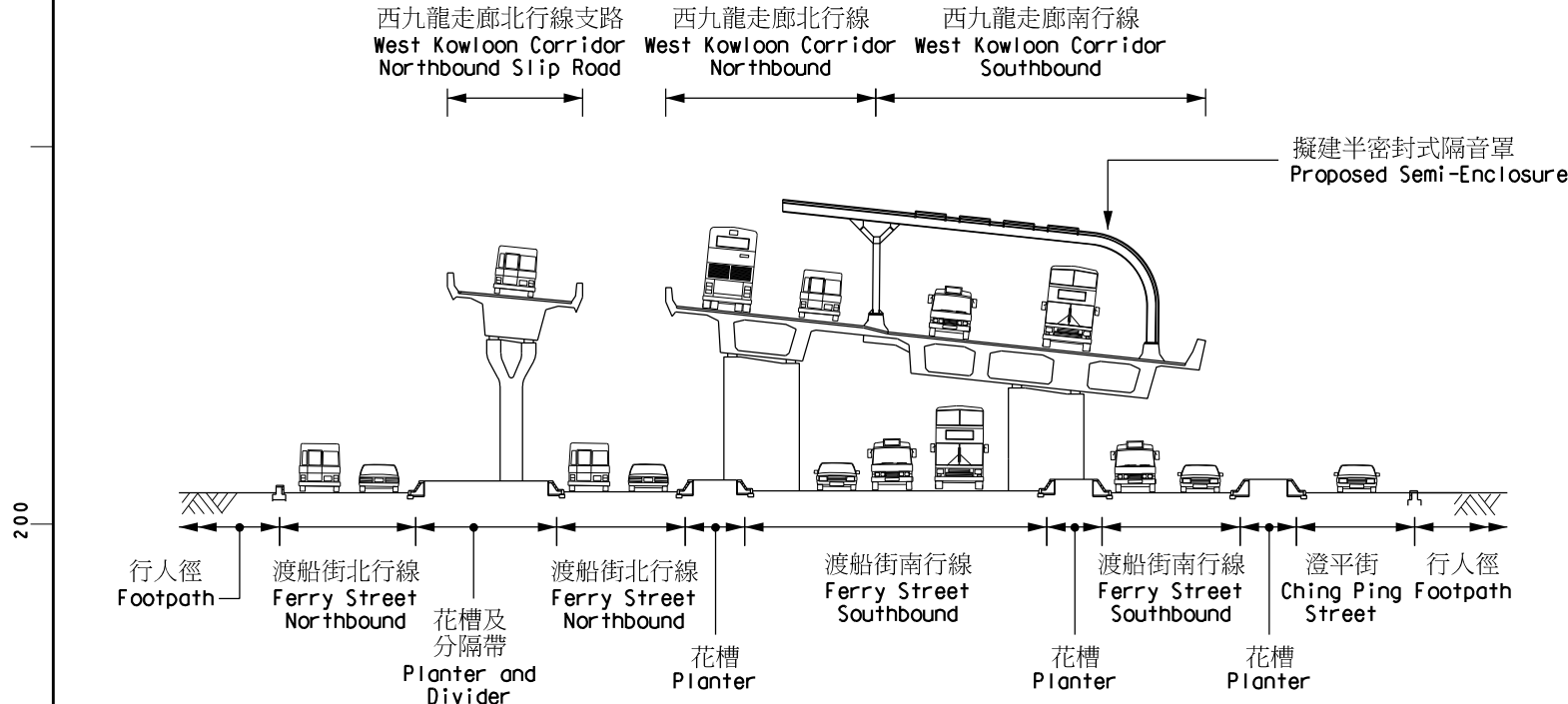


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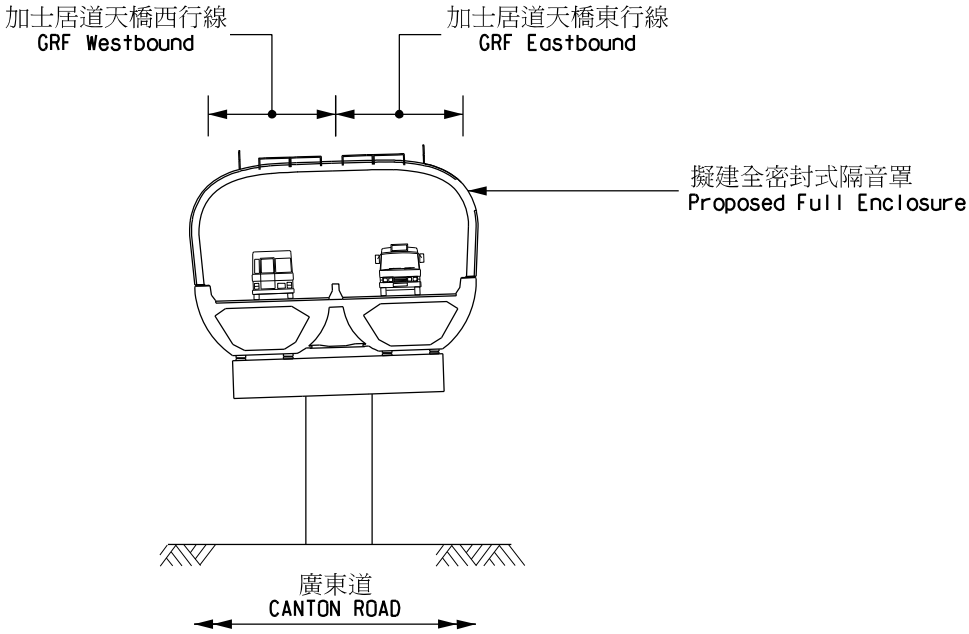
註釋 Note :
1. GRF 表示加士居道天橋
GRF stands for Gascoigne Road Flyover




切面 Section 6-6



切面 Section 7-7



切面 Section 8-8

圖則名稱 plan title 工務計劃項目第6461TH號 中九龍幹線 - 主要工程 - 切面圖 PWP Item No. 6461TH Central Kowloon Route - Main Works - Cross Sections	圖則編號 plan no. HMW6461TH-SK0741	比例 scale 示意圖 DIAGRAMMATIC
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**461TH – Central Kowloon Route – Main Works
Reprovisioning Arrangement of Affected Public Facilities**

OVERVIEW

A section of the Central Kowloon Route (CKR) tunnel of about 400 metres long will be constructed at the section of Kansu Street between Hoi Wang Road and Nathan Road. Several public facilities along the tunnel alignment will need to be reprovisioned to facilitate the construction works. We have formulated the reprovisioning arrangements. These arrangements have been widely discussed by the public in the two phases of public engagement exercise between November 2007 and July 2009 and between December 2012 and March 2013 respectively. We have enhanced the reprovisioning arrangements taking into account the public views and the public generally support the enhanced proposals.

**REPROVISIONING OF AFFECTED PUBLIC FACILITIES TO
BE FUNDED BY 461TH (SEE ATTACHED DRAWING AT
ENCLOSURE 3)**

Yau Ma Tei Public Library

2. Subject to the construction programme, the Yau Ma Tei Multi-storey Carpark (YMTMCP) will be demolished about three years after the commencement of the works. The Yau Ma Tei (YMT) Public Library in YMTMCP will be temporarily relocated to the rest area at the south of Henry G. Leong YMT Community Centre and accommodated in the same temporary building with the YMT Jade Hawker Bazaar. Upon completion of the works, the YMT Public Library will be relocated into a new building to be constructed at the original site of the YMTMCP.

Yau Ma Tei Jade Hawker Bazaar (YMTJHB)

3. The YMTJHB will be demolished during the construction of the project. In January 2013, we had a focus group meeting with operators of the YMTJHB. At that time, operators of YMTJHB requested that the two existing bazaars should be temporarily reprovisioned on a single site. Therefore, the two bazaars will be temporarily relocated to the rest area at the south of Henry G. Leong YMT Community Centre and accommodated in the same temporary building with the YMT Public Library. The Highways Department will continue to liaise with the Food and Environmental Hygiene Department, Planning Department and the relevant stakeholders on permanent reprovisioning of the YMTJHB.

Yaumatei Specialist Clinic Extension (Department of Health's Facilities)

4. Subject to the construction programme, Yaumatei Specialist Clinic Extension (YMTSCE) will be demolished about two years after the commencement of the works. The facilities of Department of Health within the YMTSCE including the Dermatological Clinic and the Methadone Clinic will be reprovisioned in the adjacent YMT Jockey Club Polyclinic. The Maternal and Child Health Centre will be temporarily reprovisioned in a temporary building at Yau Cheung Road in YMT. The Food and Health Bureau and Department of Health plan to permanently reprovide the Maternal and Child Health Centre within the proposed Community Health Centre at the ex-Mong Kok Market site. The service of the clinic will not be affected during the reprovisioning period.

**REPROVISIONING OF AFFECTED PUBLIC FACILITIES
FUNDED BY OTHER PROJECTS**

277LP "Reprovisioning of Yau Ma Tei Police Station" (FC approved the funding application in June 2013)

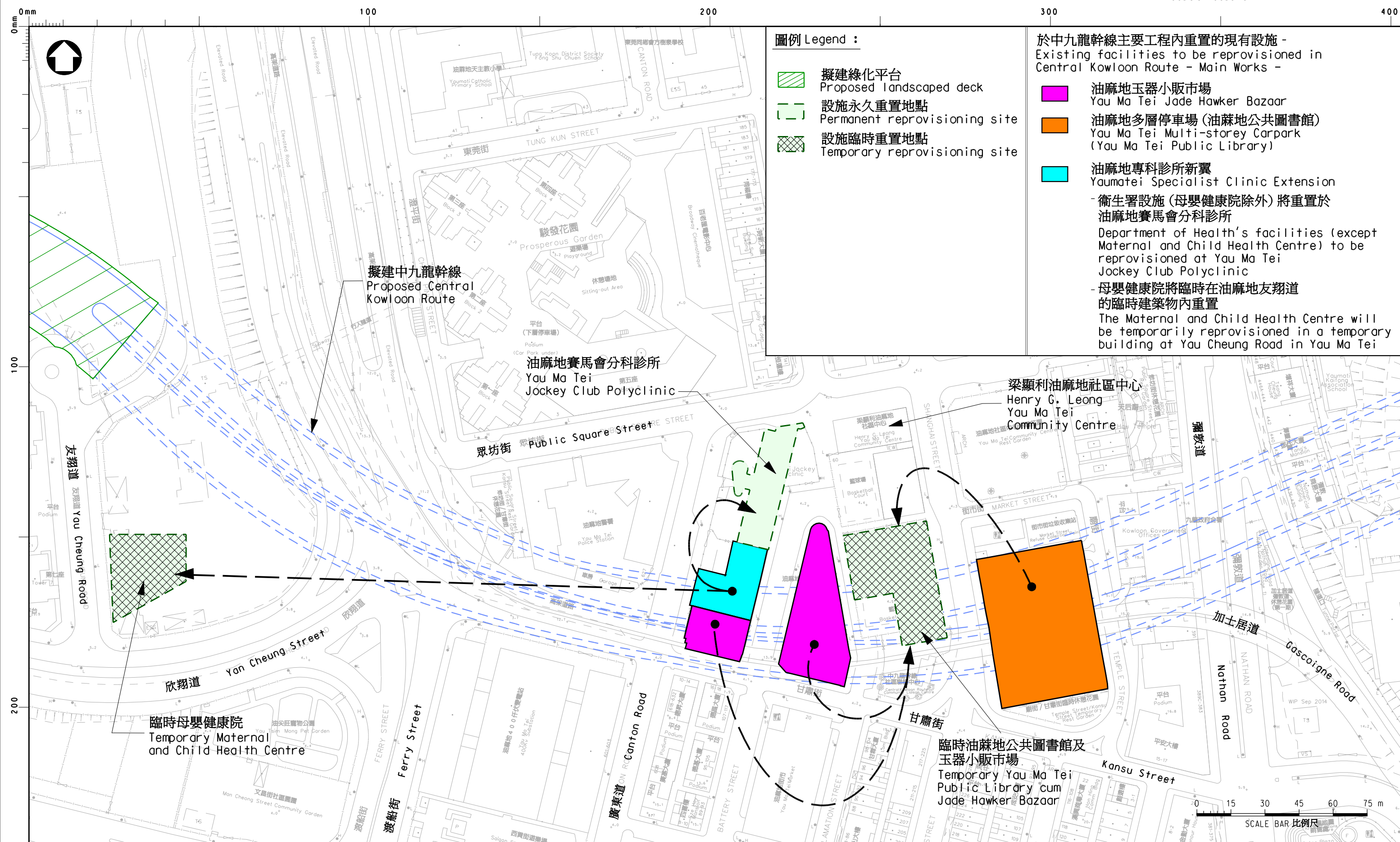
5. The tunnel of the CKR will pass underneath part of the new wing, kitchen, laundry and carpark of the YMT Police Station (YMTPS). The YMTPS will be occupied as works site when CKR construction works are in progress, but both the old wing and new wing of the YMTPS can be preserved while the kitchen, laundry and carpark will be demolished. To ensure that the existing services of the police station will be maintained during construction, the police station has already been relocated to a new YMTPS in May 2016 at Yau Cheung Road. Besides, the operation of the Police Reporting Centre in the YMTPS will be maintained.

71MM “Reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital” (FC approved the funding application in June 2013)

6. The facilities of Hospital Authority within the Yaumatei Specialist Clinic, namely, Ear, Nose and Throat Specialist Clinic (including Speech Therapy and Audiology services), Child Psychiatric Outpatient Clinic, Child Psychiatric Day Hospital, Renal Dialysis Centre and Geriatric Day Hospital (including Community Geriatric Assessment service) have all been reprovisioned in the new building in the Queen Elizabeth Hospital in March 2017.

74KA “Construction of West Kowloon Government Offices” (FC approved the funding application in June 2015)

7. The offices of Social Welfare Department, Lands Department and Transport Department inside the YMTMCP will be reprovisioned in the West Kowloon Government Offices.



圖則名稱 drawing title	圖則編號 drawing number
1. 總圖	1
2. 平面圖	2
3. 剖面圖	3
4. 詳圖	4
5. 大樣圖	5
6. 構造圖	6
7. 材料表	7
8. 說明書	8
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工務計劃項目第6461TH號

現有位於油麻地內受中九龍幹線影響設施及建議重置地點位置圖

PWP Item No. 6461TH

Locations of Affected Existing Facilities and Proposed Reprovisioning Sites in Yau Ma Tei Area

圖則編號 drawing no.

HMW6461TH-SK0742

比例 scale

圖示
AS SHOWN

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461TH – Central Kowloon Route – Main Works**Breakdown of estimates for consultants' fees and resident site staff costs
(in September 2016 prices)**

			Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a)	Consultants' fees for contract administration ^(Note 2)	Professional	-	-	-	39.6
		Technical	-	-	-	13.2
		Sub-total				52.8
(b)	Resident site staff costs ^(Note 3)	Professional	7 781	38	1.6	962.6
		Technical	22 398	14	1.6	956.8
		Sub-total				1,919.4
	Comprising –					
	(i) consultants' fee for management of RSS					53.0
	(ii) remuneration of RSS					1,866.4
(c)	Environmental Monitoring and Audit programme	Professional	-	-	-	10.8
		Technical	-	-	-	21.6
		Sub-total				32.4
	Total					2,004.6

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants (as at now, MPS salary point 38 = \$77,320 per month and MPS salary point 14 = \$26,700 per month).
2. The consultants' staff cost for contract administration is calculated in accordance with the existing consultancy agreement for the design and construction of the project. The construction phase of the assignment in respect of works will only be executed subject to FC's approval to upgrade the project to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.

**政府總部
運輸及房屋局**

運輸科
香港添馬添美道 2 號
政府總部東翼



**Transport and
Housing Bureau
Government Secretariat**

Transport Branch
East Wing, Central Government Offices,
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7 June 2017
(Fax No : 2840 0269)

Panel on Transport
Legislative Council Secretariat
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong
(Attn: Ms Doris LO)

Dear Ms Lo,

Panel on Transport

**PWP Item No. 461TH
Central Kowloon Route – Main Works**

**Motions passed at the meeting on 17 March 2017
on Central Kowloon Route (“CKR”) project**

Thank you for your letter of 20 March 2017 to the Secretary for Transport and Housing regarding the captioned issue, requesting the Government to follow up the following four motions passed under 461TH – “Central Kowloon Route – Main Works” –

- (i) To address public demands concerning the impacts on health and safety, this Panel requests that the following improvements must be made:
 - 1. replacing the semi-enclosure along the Gascoigne Road Flyover (“GRF”) fronting Blocks 1 to 5 of Prosperous Garden (“PG”) with a full enclosure;

2. extending the full enclosure fronting Block 3 of PG northwards beyond Yaumati Catholic Primary School (“YMTCPs”), since primary school students should not be educated in a confined space and their physical and psychological health must be protected; and
 3. ensuring that the noise and air quality levels generated by related works are not in violation of the existing environmental requirements.
- (ii) This Panel requests the Administration to, under the CKR project, consider duly extending the full enclosure to be installed along the GRF near the PG, so as to protect residents of the PG from noise nuisance and reduce air pollution of the district, thereby safeguarding the residents’ health.
- (iii) This Panel requests that the full enclosure be extended 230 metres southwards continuously from YMTCPs to Yau Ma Tei Police Station, followed by a semi-enclosure along certain road sections and then another full enclosure along a further 230 metres, so as to achieve a win-win situation.
- (iv) This Panel requests the Administration to make proper arrangements regarding the transitional arrangement after the demolition of the Yau Ma Tei public car park and the reprovisioning plan for the car park, and provide specific data on the parking spaces in the district before commencing the CKR project.

Our responses to the above motions are as follows –

Request for installing additional noise enclosures along the Gascoigne Road Flyover (“GRF”) fronting the Prosperous Garden

2. Three of the motions passed by Members involve replacing the semi-enclosure for the section of the existing GRF fronting Blocks 1 and 5 of PG with a full noise enclosure (the “**Central Full Enclosure**”); and extending the full noise enclosure adjacent to Blocks 3 and 4 of PG northward beyond the YMTCPs (the “**Northern Extension**”).

Requirements under the Environmental Impact Assessment

3. The CKR is a designated project under the Environmental Impact Assessment Ordinance (“EIAO”) (Chapter 499) and the Highways Department (“HyD”) has conducted an Environmental Impact Assessment (“EIA”) for the CKR in accordance with the requirements of the Technical Memorandum on Environmental Impact Assessment Process (“EIAO-TM”) and the Environmental Impact Assessment Study Brief (“SB”). The HyD has made available the EIA report, including the proposed mitigation measures, for public inspection and comment in accordance with the EIAO. The report complies with the statutory requirements (including the air quality objectives) applicable at that time and was approved by the Environmental Protection Department (“EPD”) with conditions¹ on 11 July 2013 in accordance with the EIAO after vetting by the Advisory Council on the Environment. The EPD also issued the Environmental Permit (“EP”) for the CKR under the EIAO on 9 August 2013.

4. On noise impact assessment concerning PG, the noise mitigation measures recommended under the CKR project along the GRF near PG, as shown at **Annex 1**, comprise mainly (i) an about 145m long semi-enclosure² covering the section of the existing GRF fronting Blocks 1 and 5 of PG; (ii) an about 110m long full noise enclosure covering the section of the existing GRF fronting Blocks 2 and 3 of PG; and (iii) an about 200m long full noise enclosure to the east of the semi-enclosure. With the implementation of the mitigation measures recommended in the EIA report, the CKR not only complies with the statutory requirements in EIAO, but it will also benefit about 1,600 dwellings in Yau Ma Tei, including around 700 dwellings of PG. Their noise level will be reduced by 10 dB(A) at most and 3 dB(A) on average as compared with the scenario without the CKR. In addition, the noise generated by the project roads of the CKR to the YMTCPs would not exceed 65 dB(A), complying with the requirements under the relevant legislations and guidelines. Furthermore, the classroom noise level at the YMTCPs has already been reduced to acceptable level by provision of acoustic window insulation and air conditioning under the School Insulation Programme of the Education Bureau.

¹ The conditions include setting up community liaison groups and incorporating more innovative and greening features for the landscape decks and ventilation buildings.

² The about 145m long semi-enclosure comprises two parts, including (i) a section of semi-enclosure of about 100m long covering mainly the eastbound traffic lane, and (ii) a section of semi-enclosure of about 45m long with both traffic bounds covered leaving about 2m tall vertical openings on the vertical side of the south side of the enclosure fronting Yan Cheung Road and farther away from PG.

5. On air quality impact assessment, the Air Pollution Control (Amendment) Ordinance 2013 passed by the Legislative Council (“LegCo”) on 10 July 2013 stated that the updated Air Quality Objectives came into effect on 1 January 2014. As the EIA process for the CKR was completed in August 2013, the construction and operation of the CKR should be in accordance with the statutory requirements applicable at the time when the EIA report was approved in 2013. As such, the updated Air Quality Objectives effective since 1 January 2014 were not applicable at the time when the EIA report for the CKR was approved in 2013. The EIA report of the CKR revealed that with the implementation of recommended mitigation measures, the environmental impact arising from the operation of the CKR (including the western tunnel portal), including the noise and air quality aspects, would comply with the various statutory requirements.

6. The HyD has adopted a number of mitigation measures for the design at the western tunnel portal of the CKR to minimize the environmental impact of the project. According to the current design, a landscaped deck would be constructed at the western tunnel portal to cover an about 250m long section of the mainline and a section of Hoi Wang Road between Waterloo Road and Yan Cheung Road to minimize the environmental impact of the tunnel portal. The proposed western tunnel portal is about 350m away from PG. We have also relocated the ventilation building from the original location near Ferry Street to the Yau Ma Tei Interchange of the West Kowloon Highway, increasing the distance between the ventilation building and PG from 120m to 570m.

7. Under the CKR project, we will install air purification system at three ventilation buildings at Yau Ma Tei, Ho Man Tin and Kai Tak Development to filter at least 80% of the nitrogen dioxide and respirable suspended particulates away from vehicular exhaust of the traffic in tunnel. Furthermore, the CKR is mainly in the form of tunnel, together with its function as an alternative expressway, it can significantly reduce the traffic flow at-grade and traffic congestion, reducing the air pollution and noise nuisance generated by vehicles, hence bringing overall environmental benefits. It is estimated that the project can help reduce annual emission of some 20 000 tonnes of carbon dioxide, equivalent to that absorbed by 860 000 new trees per year (covering an area of over 160 numbers of Kowloon Park), 18 tonnes of nitrogen oxides and 2 tonnes of respirable suspended particulates after the commissioning of the CKR.

Additional Noise Enclosures on GRF beyond the EIAO requirements

8. Since the first round of public engagement conducted by HyD in 2007, the HyD learnt that the residents in Yau Ma Tei were concerned about existing traffic noise of GRF and wished to install noise enclosures or noise

barriers on existing GRF. The HyD explained at that time that as the design of the main portion of GRF was carried out more than 10 years ago, the design standard at that time did not allow for capacity for future wind loads caused by additional noise enclosures or noise barriers. From a technical point of view, noise enclosure or noise barrier exceeding the structural capacity of the flyover could not be installed on the existing GRF.

9. The HyD subsequently conducted the EIA in the design stage in accordance with the EIAO and optimized the design of the CKR after taking into account the results of the EIA. As the tunnel portion of the CKR will be constructed underneath the foundation of Kansu Street section of GRF, the affected portion of the flyover will be underpinned or re-constructed. In addition, the Ferry Street section of GRF extending from Tung Kun Street to Kansu Street will be modified due to the construction of the CKR. The HyD will install noise enclosures and noise barriers at these two sections of flyover in accordance with the requirements of the EIA.

10. During the second round public engagement that commenced in December 2012, the HyD introduced to the Yau Tsim Mong District Council (“YTMD”) and the residents along the alignment the proposed noise mitigation measures at the GRF fronting PG. We learnt about the requests from PG residents for the Central Full Enclosure and Northern Extension during the public engagement exercise. Subsequently, the concern group, YTMD and some LegCo members also expressed repeatedly these requests. The YTMD passed motions at the meetings held on 12 December 2013 and 12 January 2016 respectively for the above requests. Over the years, PG residents have been expressing their requests to LegCo Members, and Government representatives have attended six LegCo case conferences and one site visit for their requests since January 2009.

11. We gazetted the road scheme for the proposed works of the project and the subsequent amendment scheme (to suit the design developments and to indicate the exact extent of creation of easement and other permanent rights in some land lots) under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (“Roads Ordinance”) in November 2013 and March 2015 respectively. During the two statutory periods, we also received objections raised by those who were concerned about the environmental impact of the CKR on PG, requesting for the installation of the Central Full Enclosure and the Northern Extension.

12. We have explained many times in the public engagement activities and in handling the objections under the Roads Ordinance in the past that the Central Full Enclosure and the Northern Extension are not required under the EP.

As such, these two full enclosures are not within the project scope of the CKR project. In response to the proposals from the public and the YTMDC, the HyD has duly considered the two requests from PG residents in terms of structure, traffic safety, fire and cost effectiveness, etc. and explained in details on various occasions and via different channels to those concerned about the environmental impact of the CKR on PG the following justifications for not recommending to accommodate the two requests.

The Central Full Enclosure

13. On noise abatement performance, the Central Full Enclosure would not have additional road traffic noise mitigation effect on residential units on lower floors, and would only reduce the traffic noise level of three units on middle and upper floors who will already be protected³ by the mitigation measures originally proposed under the CKR project (the noise level of which will not be more than 70 dB(A)) by 1.0 dB(A). There would be no significant changes to the noise level of other dwellings. On air quality, there would be no significant change in general. The EIA results showed that the operation of the CKR would comply with the statutory requirements for air quality (including Air Quality Objectives) applicable at the time the EP was issued.

14. Since the existing GRF structure could not support the extra loadings of the full enclosure, standalone supporting structures would be required. The junction layout between Ferry Street and Kansu Street would need to be modified by reducing the number of traffic lanes of Kansu Street from three to two in order to accommodate the standalone supporting structures. Furthermore, the standalone supporting structures might block the sight lines of drivers, thus affecting road safety. The standalone supporting structures would also affect the existing open space and trees to the west of Yau Ma Tei Police Station. The installation of a full enclosure at the concerned location would have adverse visual impact on the visual sensitive receivers in the vicinity (including residential units on the lower floors of PG). As such, the overall design of the Central Full Enclosure is not satisfactory.

15. Furthermore, the additional construction cost is about \$250 million based on very preliminary assessment at the time of response to PG residents in 2013 (the cost estimate in September 2016 prices is about \$330 million and that in money-of-the-day (“MOD”) prices is about \$480 million). The Central Full Enclosure does not only lack environmental effectiveness, but its construction cost is also high; hence it is considered not cost-effective. Besides, as

³ Flats protected refer to flats originally being exposed to traffic noise above 70 dB(A) and their mitigated noise levels are reduced to 70 dB(A) or below after the implementation of the noise abatement measures.

mentioned at the LegCo case conference of 23 January 2017 and the LegCo Panel on Transport meeting on 17 March 2017, the HyD assessed that replacing the semi-enclosure for the whole section of the existing GRF fronting Blocks 1 and 5 of PG with a full enclosure would render the total length of the fully enclosed road section along GRF to exceed 230m; and in which case, in order to comply with Fire Services Department's ("FSD") "Codes of Practice for Minimum Fire Service Installations and Equipment", extra fire services installation and equipment will be required for the said road section (including an extensive dynamic smoke extraction system and fire protected escape passage). Hence, the Central Full Enclosure is technically infeasible.

The Northern Extension

16. The Northern Extension is not within the project scope of the CKR project. Furthermore, the construction cost of the some 60m long Northern Extension beyond the YMTCPs would be about \$350 million based on very preliminary assessment at the time of response to PG residents in 2014 (the cost estimate in September 2016 prices is about \$450 million and that in MOD prices is about \$640 million), and it would only benefit about 50 additional residential units of PG facing GRF by reducing the noise level by 1.0 dB(A) or above. Given the high construction cost and the limited number of residential units which could be benefited⁴, the Northern Extension is considered not cost-effective. In fact, with the implementation of the mitigation measures in the EIA report, the noise level of the residents of Blocks 3 and 4 of PG can already be reduced by up to 7 dB(A).

Impacts of accommodating the above two requests

17. Since these two noise enclosures are neither required under the EP nor within the project scope of the CKR project, if it is to incorporate the two requests into the scope of the CKR project, the proposal would require gazettal and obtaining authorization to the amended scheme again under the Roads Ordinance, in order to implement the amended scheme. Taking into account the time required for the statutory and administration procedures, the implementation of the CKR project would be delayed by at least about 2 years. The residents to be benefited by the CKR could not be benefited as scheduled, including the economic benefit of some \$3 billion per year resulted from the travel time saving, the environmental and other non-measurable benefits. Also, the project cost is expected to increase by about \$2 billion per year due to inflation.

⁴ Flats benefited refer to flats being exposed to traffic noise above 70 dB(A) and their mitigated noise levels are reduced by 1.0 dB(A) or more after the implementation of the noise abatement measures.

18. In view of the above considerations and based on the principle of prudent use of public funds, there is no justification for accommodating the two requests under the CKR project.

19. We have explained many times on different occasions via various channels to those concerned about the environmental impact of the CKR on PG, YTMDC and LegCo about the reasons for not accommodating the two requests. In fact, after implementing the mitigation measures recommended in the EIA report, the traffic noise impact on the residents of PG will be improved as compared with the scenario without the CKR. Nevertheless, the residents and Members still strongly request for the two additional sections of noise enclosures. At the LegCo Panel on Transport meeting held on 17 March 2017, Members generally supported the CKR project. Members also passed the three motions mentioned in the first paragraph above. After balancing the various factors and considering the damage to the community in general if the CKR project were deferred, the Government has repeatedly conducted in-depth examination to come up with a compromise scheme.

Compromise Scheme

20. As expounded in paragraph 24 below, we now propose to implement the Compromise Scheme as a separate public work project (“PWP”) item. Details of the scheme are set out below.

21. Regarding the request for the Central Full Enclosure, based on HyD’s preliminary assessment, about 90m of the 100m long central noise enclosure would need to be converted from covering mainly the eastbound traffic lane to covering carriageways of both bounds to maintain the same further noise reduction effect similar to the request, i.e. an additional 1.0 dB(A) reduction for the three dwellings whose traffic noise level would be reduced to not exceeding 70 dB(A) after the implementation of the mitigation measures under the CKR project, and with no significant change to the air quality. In light of the expectations of the residents and Members on covering the road section of GRF as far as possible, the HyD now proposes to convert the 100m long noise enclosure which originally only covers the eastbound traffic lane to cover both bounds in whole, while having vertical opening on the side fronting Yan Cheung Road farther away from PG to comply with the requirements of FSD. This modification scheme will not render the total length of the fully enclosed road section to exceed 230m. From the line-of-sight of PG, the carriageway of the whole section of GRF fronting PG will be fully covered. However, the implementation of this proposed central enclosure is subject to the availability of resources, the confirmation of detailed engineering feasibility, the completion of statutory procedures and the approval of funding application by

LegCo. In MOD prices, the Forecast Cost per Provisional Design (“FCPD”) of this modification scheme is roughly about \$670 million⁵. If LegCo’s funding approval can be obtained for the construction of the modification scheme in time, some of the noise enclosures/ barriers originally recommended under the CKR EIA report could be replaced with a cost saving of about \$150 million⁶.

22. Regarding the request for the Northern Extension, based on HyD’s preliminary assessment, extending the full enclosure northward by 40m would have similar additional noise mitigation effect as extending by 60m beyond YMTCPs, i.e. benefiting about 50 additional dwellings of PG facing GRF by reducing the noise level by 1.0 dB(A) or above, and is thus considered more preferable from the cost-effectiveness perspective. However, the implementation of this proposed northern extension is subject to the availability of resources, the confirmation of detailed engineering feasibility, the completion of statutory procedures and the approval of funding application by LegCo. The FCPD of the proposed scheme is roughly about \$450 million⁷ (in MOD prices), which is lower than that of the 60m extension scheme.

23. The overall layout plan of the above proposed Compromise Scheme is at **Annex 2**.

24. To avoid delaying the implementation programme of the CKR (please refer to paragraph 17 above for details), we consider that the proposed noise enclosures should be implemented under a separate PWP item. We plan to follow the established PWP procedures (including the confirmation of the feasibility of the project, gazettal and seeking authorization of the scheme under the Roads Ordinance, and seeking funding approval from LegCo, etc.) to implement the project. We will strive to implement the proposed noise enclosure construction works as soon as possible to bring benefit to the affected residents earlier.

⁵ The estimate will be higher or lower than the FCPD as a result of factors including subsequent design development, programme change, construction price level changes, etc.

⁶ The additional cost for this modification scheme is roughly estimated to be about \$520 million. This is slightly higher than that of the Central Full Enclosure mentioned in paragraph 15 above, mainly because the estimated cost in 2013 was based on a very preliminary design at the time while the estimated cost for the current Compromise Scheme is based on a preliminary design with more details.

⁷ The estimate will be higher or lower than the FCPD as a result of factors including subsequent design development, programme change, construction price level changes, etc.

Request for proper arrangements regarding the transitional arrangement after the demolition of the Yau Ma Tei public car park and the reprovisioning plan for the car park

25. As we all know, land resources in Hong Kong are scarce. In general, sites suitable for car park use also have the potential for other development purposes. Integrating public car parks into development projects is the best means to maximise the use of land and bring more benefit to the community as a whole. To this end, we are exploring with relevant bureaux and departments to consider the provision of a certain number of public parking spaces in the future development project at the existing site of the Yau Ma Tei Multi-storey Car Park (“YMTCP”). The actual number of parking spaces to be provided will depend on the planning guidelines, demand for parking spaces, overall parking policy and engineering feasibility at the time when the site is to be developed.

26. In the short and medium terms, we will strive to identify suitable sites in the district for use as temporary car parks to make up for the reduction in parking spaces as a result of the demolition of the YMTCP Building during the construction stage. Firstly, with the concerted efforts of various parties, an additional short-term tenancy (“STT”) car park with about 90 parking spaces for private cars was provided at the junction of Hoi Wang Road and Lai Cheung Road in end-2015.

27. Moreover, we have preliminarily identified a site at the junction of Jordan Road and Lin Cheung Road for temporary car park use. The site is currently being used as a temporary public transport interchange. We are discussing with the District Lands Office to use it as a temporary car park by way of STT upon the completion of a new permanent public transport interchange nearby under the Guangzhou-Shenzhen-Hong Kong Express Rail Link (Hong Kong Section) project. Based on the area of the site, it is estimated that about 700 parking spaces for private cars can be provided, but the actual number will depend on the design and operational mode adopted by the future operator (e.g. valet parking model can provide more parking spaces).

28. Furthermore, there are now also a number of privately operated car parks and STT car parks in Yau Ma Tei which provide public parking spaces that can ease the demand for parking spaces upon the demolition of the YMTCP Building. The utilisation of the YMTCP and the STT car parks in the district is at **Table 1** and the number of public parking spaces provided by the major privately operated car parks nearby is at **Table 2**.

Table 1: Utilisation of public car parks and STT car parks in Yau Ma Tei

Public car park	Number of parking spaces for private cars	Average utilisation rate at peak hours (December 2016)
Yau Ma Tei Car Park Building	750	88%
KX 2666 (Junction of Soy Street and Shanghai Street)	38	63%
KX 2943 (Man Wui Street)	157	71%
KX 3002 (Junction of Hoi Wang Road and Lai Cheung Road)	90	95%
KX 2995 (Yan Cheung Road)	230	88%
Total:	1265	86%

Table 2: Public parking spaces provided by major privately operated car parks in Yau Ma Tei and nearby areas

Location of car park	Number of public parking spaces for private cars
Elements	889
The Victoria Towers	79
China Hong Kong City	213
Park-in Commercial Centre	435
Sun Hing Building	70
Tsan Yung Mansion	57
Austin Tower	125
Hong Kong Scout Centre	530
Miramar Shopping Centre	105
Kowloon Station Car Park	220
Total:	2723

Note: The Transport Department does not have statistics on the utilisation rates of parking spaces provided by privately operated car parks.

29. While we understand that some of the car parks mentioned above are located at some distance away from the YMTCP, we believe that they are close to the destinations of many users of the YMTCP. For motorists whose destinations are located at the west of the YMTCP, such as the area around Ferry Street, the proposed temporary car park at the junction of Jordan Road and Lin Cheung Road would be a convenient choice. Also, motorists going to the south of the YMTCP near Jordan Road can consider using the car park of the Hong Kong Scout Centre which provides 530 parking spaces. As for motorists whose destinations are located at the north-east of the YMTCP near Kwong Wah Hospital, they can also consider using the Park-in Commercial Centre Car Park which provides 435 parking spaces.

30. In fact, Yau Ma Tei, situated at the heart of Kowloon, is served by convenient and well-developed public transport services, including the MTR, franchised buses, minibuses, etc. Motorists driving to Yau Ma Tei can, in most cases, consider commuting by various public transport modes.

Way Forward

31. We will submit the funding application for the PWP Item No. 461TH – Central Kowloon Route – Main Works to Public Works Subcommittee for support with a view to obtaining funding approval within this legislative session, so as to commence and complete the CKR as soon as possible for the earliest realisation of its benefits to the society.

Yours sincerely,

(Jocelyn NG)
for Secretary for Transport and Housing

c.c

Director of Highways (Attn. : Mr Tony LOK)

Fax: 2714 5198

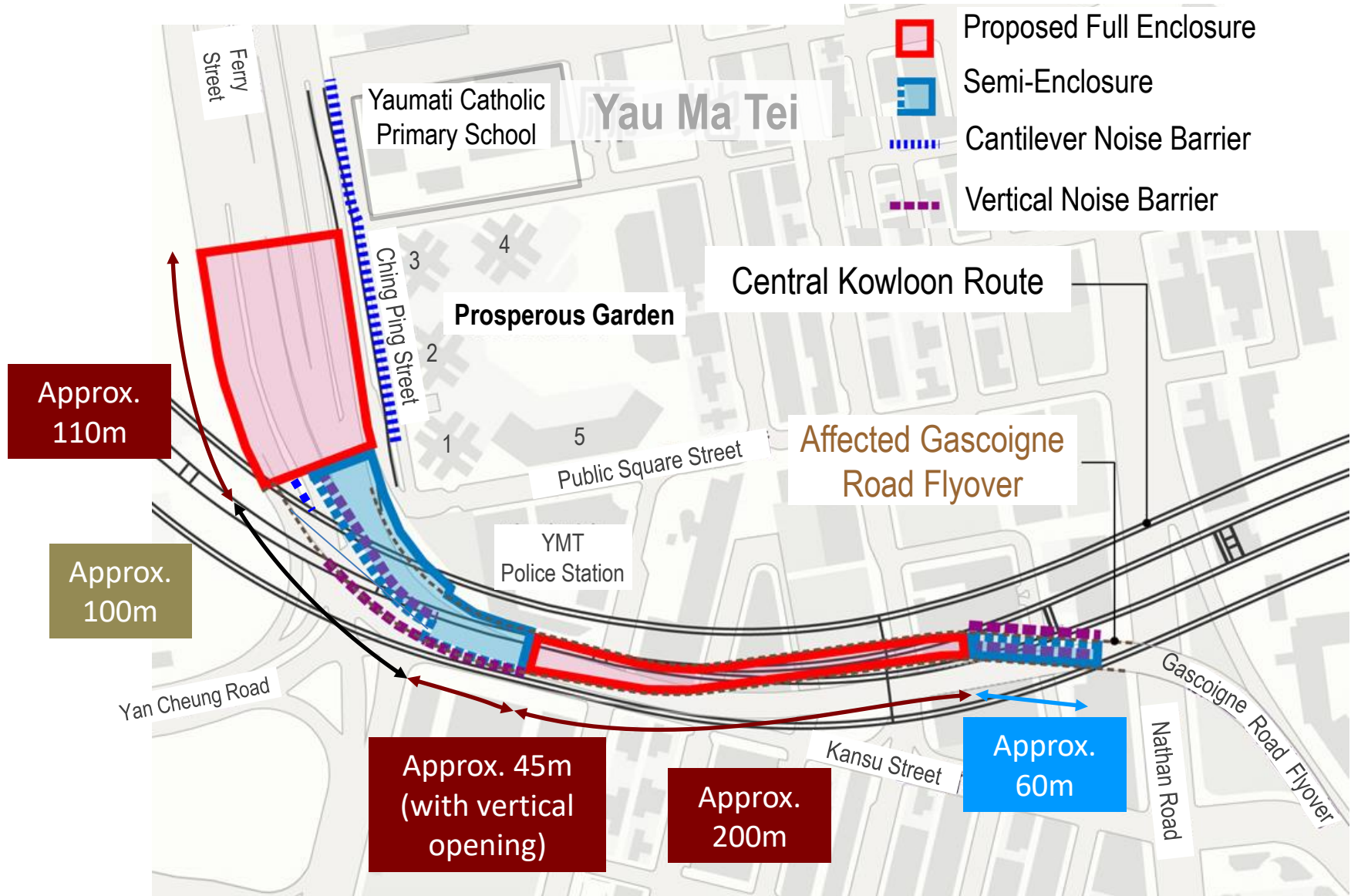
Commissioner of Transport (Attn.: Mr K F CHEUNG)

Fax: 2186 7519

Director of Environment Protection (Attn.: Ms Alice HSU)

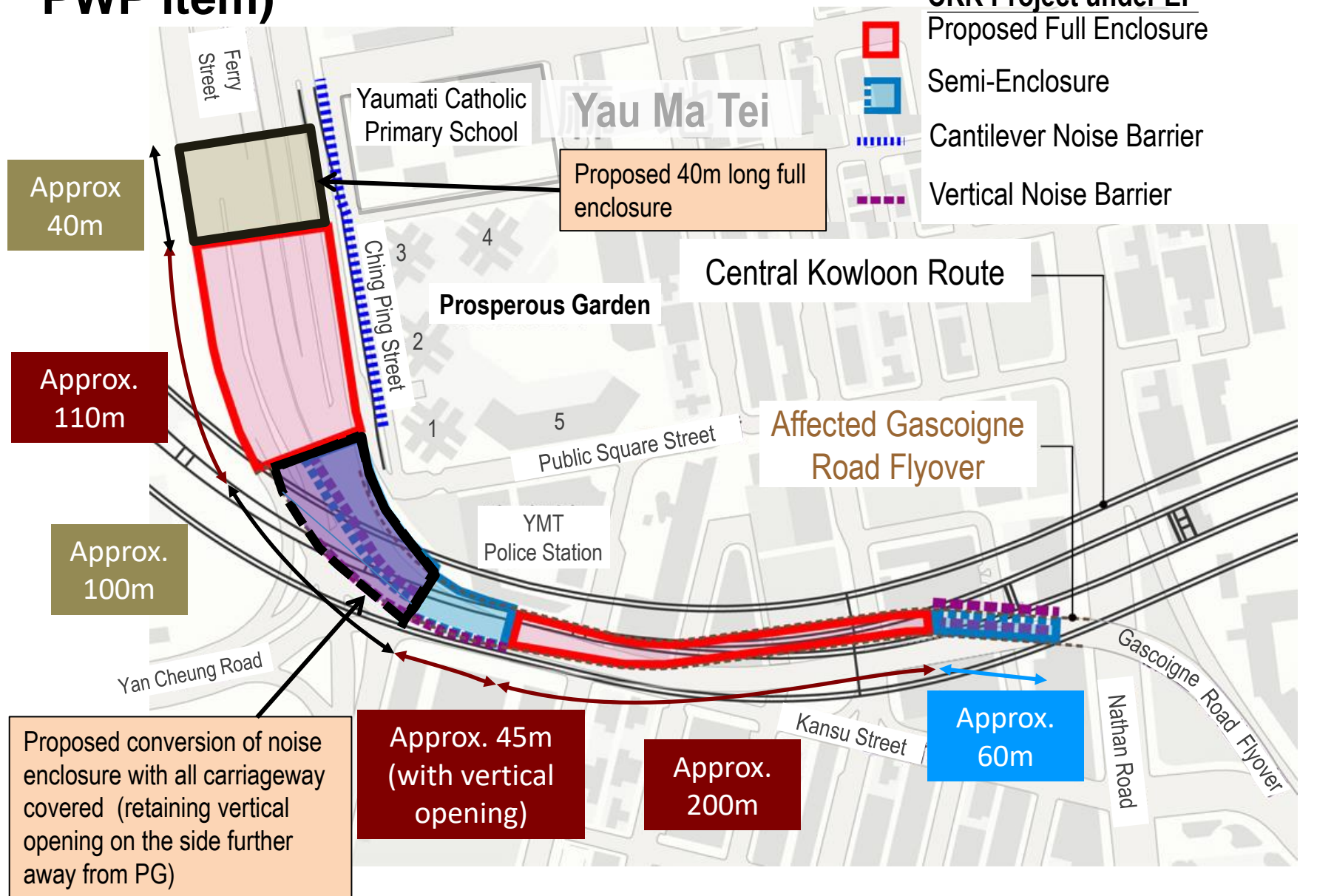
Fax: 2591 0558

Noise Mitigation Measures of the CKR Project under the Environmental Permit (Prosperous Garden)



Proposed Compromise Scheme (To be implemented under a separate PWP item)

Annex II



461TH – Central Kowloon Route – Main Works
Summary of “important tree” affected

Project No. : 461TH **Project Title :** Central Kowloon Route – Main Works

Tree ref. no.	Species		Measurements			Amenity value ¹	Form	Health condition	Structural condition	Suitability for transplanting ²		Conservation status ³	Recommendation	Department to provide expert advice to LandsD	Additional Remarks
			Height (m)	DBH ⁴ (mm)	Crown spread (m)	(Good/Fair/Poor)				(High/Medium/Low)	Remarks		(Retain/Transplant/Fell)		
T1094	<i>Ficus elastica</i>	印度橡樹	16	1 470	9	Good	Fair	Fair	Fair	Low	Preparation of intact and sufficient-sized root ball not practical; Tree already with non-recoverable structural problem such as leaning and girdling roots.	No	Fell	Leisure and Cultural Services Department	Interface with the foundation works at Yau Ma Tei Police Station. Low survival rate after transplanting for reasons mentioned in the “Remarks” column.

¹ Amenity value of the tree is assessed by its functional value 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.

² Assessment has taken into account conditions of the tree 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).

³ Conservation status is based on the rarity and protection status of the species under relevant ordinances in Hong Kong, such as Rare and Precious Plants of Hong Kong, the International Union for Conservation of Nature Red List of Threatened Species and the Forests and Countryside Ordinance.

⁴ Diameter at Breast Height (DBH) of a tree refers to its trunk diameter at breast height (i.e. measured at 1.3 metres above ground level).