

**For discussion
on 26 January 2021**

Legislative Council Panel on Development

**Findings and Recommendations of
Detailed Feasibility Study for
Environmentally Friendly Linkage System for Kowloon East**

PURPOSE

This paper serves to brief Members' on the findings and recommendations of the Detailed Feasibility Study (DFS) for the Environmentally Friendly Linkage System (EFLS) for Kowloon East (KE), and seek Members' views on the recommendations.

BACKGROUND

2. With the gradual development and transformation of KE into the second core business district (CBD) of Hong Kong, there is progressive rise in the residential and working populations in the area. Relevant government departments have been striving hard to the provisioning of appropriate transport infrastructure facilities, as well as convenient public transport services to cope with the traffic demand in the area. Among others, the Government has incorporated its planning intent and an indicative alignment of the proposed EFLS on the Kai Tak Outline Zoning Plan for enhancing the intra-district connectivity. The technical and financial viabilities, etc., of the proposed EFLS would be explored and studied in-depth by the Civil Engineering and Development Department (CEDD). Based upon the findings of the preliminary feasibility study (PFS)¹ completed in 2014 and the first stage of the

¹ CEDD conducted public consultation exercises based on a preliminary proposal of elevated rail-based EFLS under the PFS. While there were general support to enhance the connectivity for KE, diversified views were received on the proposed elevated monorail system. Some comments questioned the financial viability of the proposal and some raised concerns on the potential impacts to the existing facilities and environment during the construction and operation stages.

DFS² completed in 2017, CEDD commenced the second stage of the DFS in the second half of 2017.

3. In the course of study on the EFLS, CEDD encountered more-than-expected complicated challenges, thus requiring more time to review and explore feasible solutions, including studying on options other than the elevated mode. Besides, the long-term financial viability and cost-effectiveness of EFLS are also one of the important considerations of DFS. At present, the Government has substantially completed the DFS on the proposed EFLS.

FINDINGS AND RECOMMENDATIONS OF THE DFS

4. The DFS reveals that the construction of a single elevated mode of EFLS in KE will encounter lots of technical complications and challenges, particularly for those parts in developed areas. For instance, it would be difficult for the proposed EFLS to be efficiently constructed in the narrow road space and crowded environment of the area, such as Hoi Yuen Road in Kwun Tong; it would be technically challenging to construct the EFLS structures above the Kwun Tong Bypass and the elevated bridge of MTR railway line without affecting the operations and safety of the railway and road traffic underneath; and it would also be difficult for the EFLS to run through Hoi Yuen Road and meet the statutory requirements of emergency vehicular access thereat. The DFS also reveals that, in the presence of the above major technical complications and challenges, the construction cost and recurrent cost of providing such an elevated mode system in the area would be very costly, thus not a sustainable and pursuable option for the EFLS.

5. On the other hand, there is already a diversified, effective and convenient public transport service network in KE, comprising railway lines, numerous franchised bus routes and green minibus (GMB) routes, to connect KE with other districts and serve people to and fro different destinations. Regarding railway connectivity, apart from the Kwun

² Based on the findings of PFS, CEDD commenced a DFS in two stages to address the various public concerns. The first stage of the DFS is to assess various green transport modes. An interim public consultation was conducted in mid-2017 on the findings of the first stage of DFS. Public views on adopting the elevated mode as the proposed EFLS remained diversified. Some views supported the elevated mode but some still had reservations on the proposal, including concerns on the financial viability to use the elevated mode as the proposed EFLS. Others suggested to consider non-elevated option and other green transport modes, such as options of at-grade mode or mixed modes.

Tong Line, the Tuen Ma Line Phase 1 providing connection between Tai Wai Station and Kai Tak Station commissioned in mid-February 2020. Upon commissioning of the entire Tuen Ma Line in the third quarter of this year, a more convenient and efficient railway service commuting between KE, New Territories East and New Territories West will be available to serve the people thereat. As for road-based public transport services, there are currently more than 130 franchised bus routes and more than 30 GMB routes serving KE.

6. In the Kai Tak Development (KTD) Area, apart from the commissioned Shing Kai Road and Kai Sun Road as well as the widened Shing Cheong Road and Shing Fung Road, Road D3 (Metro Park Section) has commenced construction in full steam for completion by 2022, providing connection to Shing Kai Road, the Kai Tak Cruise Terminal and the Hong Kong Children's Hospital (HKCH). Upon completion of the said road works, the transport infrastructure of KTD will be further enhanced. On the provisioning of inter-district roads, the Government is proactively taking forward the Route 6 project to directly link up West Kowloon and Tseung Kwan O, thus providing traffic relief to the major east-west road corridors in Kowloon and Tseung Kwan O.

7. The DFS reveals that on the basis of the increasingly comprehensive road and railway infrastructures facilities, as well as convenient public transport services provision in the area, it is recommendable to implement a supplementary "multi-modal" EFLS in KE, which can meet the travelling need of people and connect with the neighbouring areas conveniently and shape KTD into a green community.

PROPOSED "MULTI-MODAL" EFLS

8. The DFS suggests implementing a "multi-modal" EFLS in KE, which comprises a package of green initiatives that serve complementarily to enhance connectivity in the area. They include:

- (i) Enhancing public transport services in KE, and deploying electric vehicles to run new bus / GMB routes in the area
- (ii) Developing a travellers network that links up the former runway of Kai Tak, the Kowloon Bay Action Area (KBAA) and the Kwun Tong Action Area (KTAA)

- (iii) Providing a GreenWay network that runs through promenades and open spaces in the KTD Area for shared use by pedestrians and cyclists
- (iv) Constructing an elevated landscaped deck to connect the MTR Kwun Tong Station
- (v) Establishing a “water taxi” service point in the KTD Area

A plan showing the distribution of the various facilities proposed to be included in the “multi-modal” EFLS is at **Enclosure 1**.

(i) Enhancing public transport services in KE, and deploying electric vehicles to run new bus / GMB routes in the area

9. As mentioned in paragraphs 5 and 6 above, there is already a diversified, effective and convenient public transport service network in KE. For its gradual development and transformation into another CBD, the Transport Department (TD) is strengthening in a progressive manner public transport services in the area, including the addition of four franchised bus routes and two GMB routes introduced in phases between 2019 and 2028 for connecting KTD, KBAA and KTAA with MTR stations and neighbouring districts, such as Yau Tong, Sau Mau Ping and Diamond Hill, etc. These new public transport services will avoid routing through the highly patronized Kwun Tong Road so as not to add further traffic to this road. Plans showing the major railway and road infrastructure facilities, and the additional franchised bus / GMB routes in KE are respectively at **Enclosure 2** and **Enclosure 3**.

10. The above six new routes will largely cover the areas intended to be served by the elevated mode of EFLS, which are capable of meeting the projected transport demand of people in KE. Among these routes, GMB Route 90A (connecting Yau Lai Estate (MTR Yau Tong Station) and HKCH) and GMB Route 90B (connecting Sau Mau Ping and HKCH) were introduced in March 2019 already, whilst Citybus Route 22M (connecting the Kai Tak Cruise Terminal and Kowloon City (Prince Edward Road East)) was introduced in mid-February 2020. For the remaining three franchised bus routes, they will be launched progressively from 2023 to 2028 for providing feeder services plying between KBAA, KTAA and MTR Sung Wong Toi Station, express services between KTAA and MTR Diamond Hill Station, and circular services between KBAA and KTD. TD will consult relevant District

Council(s) in their annual “Bus Route Planning Programme” on the details of operation of the three franchised bus routes.

11. The Government will also introduce green and smart transport initiatives, adhering to the vision of shaping KTD into a green community. We plan to gradually introduce from this year onwards the deployment of electric buses / electric public light buses for the above-mentioned six additional routes. Moreover, smart public transport interchanges will be provided at KTAA, KBAA and the Tourism Node site, with the provision of charging facilities to support the deployment of electric buses / electric public light buses, offering better passenger waiting environment and add-on passenger facilities, such as air-conditioned waiting halls with seats, free Wi-Fi service and interactive display panels, etc.

(ii) Developing a travellers network that links up the former runway of Kai Tak, the KBAA and the KTAA

12. In addition to the timely construction of road and railway infrastructure facilities to meet the transport needs, and provide people in KE with convenient public transport services, the Government also proposes to develop a travellers network in KE that links up the former Kai Tak runway, KBAA and KTAA for enhancing the overall pedestrian connectivity. The travellers network distribution is shown at **Enclosure 4**.

13. The DFS suggests providing an elevated walkway of about 1.3-kilometre long at Wai Yip Street to link up KBAA and KTAA, providing a convenient pedestrian corridor to enhance the connectivity between the two action areas. The proposed elevated walkway will be equipped with travellers to enhance walking comfort. Provision would be made for direct connection with the developments on the two sides of Wai Yip Street to enhance the flow of pedestrians. Consideration will also be made to provide roof-top garden at suitable locations along the elevated walkway. CEDD plans to commence this year a detailed technical study on the proposed elevated walkway.

14. Besides, to strengthen the pedestrian connectivity between KBAA and MTR Kowloon Bay Station, the DFS proposes to provide an elevated walkway of about 230-metre long at Sheung Yee Road to connect KBAA and the future footbridge across Wai Yip Street near Siu Yip Street, and further to MTR Kowloon Bay Station. The proposed elevated walkway will be equipped with traveller and will help relieve

the over-crowded condition of the existing footbridge across Wai Yip Street near Sheung Yuet Road. CEDD plans to commence this year the investigation and design study of this proposed elevated walkway.

15. At the same time, the DFS proposes the construction of a 600-metre long pedestrian cum cyclist bridge with travellators across Kwun Tong Typhoon Shelter (KTTS) to provide a more direct and convenient linkage between the Kwun Tong promenade and former Kai Tak runway on its both sides. It will also serve a comfortable and convenient walking and cycling environment, as well as facilitate pedestrians to move between the former runway area and MTR Ngau Tau Kok Station via Lai Yip Street. The bridge across KTTS will form an iconic structure with magnificent architectural design to express its prominent location. Nevertheless, being located within Victoria Harbour, the bridge proposal is subject to the control of the Protection of the Harbour Ordinance (Cap. 531). CEDD plans to commence a technical study this year for gathering the relevant cogent and convincing materials and consulting the public, so as to comply with the requirements of the Ordinance.

(iii) Providing a GreenWay network that runs through promenades and open spaces in the KTD Area for shared use by pedestrians and cyclists

16. The Government proposes to develop a 13-kilometre long GreenWay network in KTD, which will link up various points including Kai Tak Station Square, Kai Tak Sports Park, Kai Tak River, and the promenades along both sides of KTTS. Unlike conventional separated footway and cycle path, the GreenWay mainly adopts a shared-use concept for cyclists and pedestrians to allow better utilization of the open spaces and waterfront area; facilitate integration of cycle tracks into the surrounding environment; enhance connectivity of various open spaces; and improve coherence of open spaces design of KTD as a whole.

17. CEDD plans to commission a study on the design and implementation of GreenWay in early this year, including the review of relevant design standards, ancillary facilities, modes of management and operation; as well as exploration on the feasibility of adopting smart measures to enhance the daily management and operation of Greenway. The proposed GreenWay will be implemented in two phases through the various open spaces / infrastructure projects or private developments. The first phase of about 7.5 kilometres long is targeted to be completed

by 2023, with the remaining phase of about 5.5 kilometres long beyond 2025. Details of the proposed GreenWay network in KTD are given in **Enclosure 5**.

(iv) Constructing an elevated landscaped deck to connect the MTR Kwun Tong Station

18. The Government is planning to develop a “Government, Institution or Community” site adjacent to the MTR Kwun Tong (KT) Station for composite development, and the Urban Renewal Authority is also implementing its Kwun Tong Town Centre Redevelopment project in close proximity to the MTR station. Upon completion of these projects, there will be a facelift to the centre of Kwun Tong area, with better living environment and new community facilities.

19. We propose to construct an elevated landscaped deck of about 120 metres in length to link up the above two developments with the MTR KT Station, so as to enhance the connectivity and ease the pedestrian flow in the area, as well as create room for relieving the congestion in the Station during peak hours. CEDD has established the preliminary feasibility of the proposed elevated landscaped deck and will commence within this year the investigation and design study of the proposal. Details of the proposed elevated landscaped deck are shown in **Enclosure 6**.

(v) Establishing a “water taxi” service point in the KTD Area

20. Regarding waterborne transport service, there is a ferry route currently plying between “North Point - Kwun Tong - Kai Tak” serving Kwun Tong waterfront and the KTD Area. TD has also granted operation licence in early 2020 for launching the “water taxi” service. The operator is preparing for the “water taxi” service plying Central, West Kowloon, Tsim Sha Tsui East, Hung Hom and Kai Tak. Subject to the passengers’ demand, the operator may apply for adding “short-distance” route. CEDD will render technical support to set up the “water taxi” service point at the existing landing steps of the Kai Tak Runway Park pier, which helps to enhance the connectivity of KTD with the above-mentioned districts, and provide the public and tourists with more choices of transportation. Details of the “water taxi” service are given in **Enclosure 7**.

WAY FORWARD

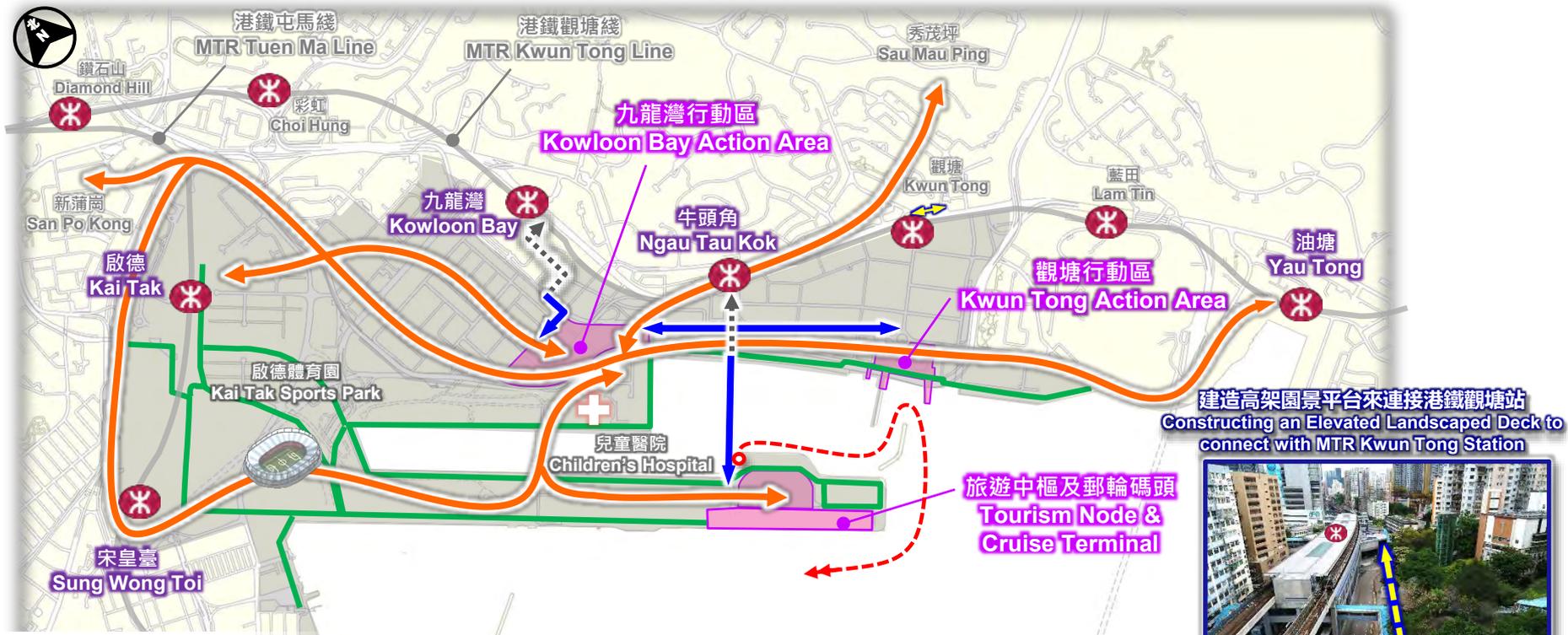
21. Through the “multi-modal” EFLS, we wish to provide people with various environment-friendly and convenient links to different railway stations and public transport interchanges in KTD, Kwun Tong, Ngau Tau Kok and Kowloon Bay, etc. We also wish to encourage people to walk more and cycle within KTD, thereby less relying on vehicles and roads. This package of linkage measures will help shape a green community and facilitate the transformation of KE into the second CBD.

22. We will listen to and collect views of Members and the public on the proposed “multi-modal” EFLS, so as to enhance the recommended measures. We will kick start their implementation as soon as possible, striving to progressively realise the various recommended measures in the next few years.

ADVICE SOUGHT

23. Members are invited to note the findings and recommendations of the DFS, and provide advice on the proposed “multi-modal” EFLS.

**Development Bureau
Civil Engineering and Development Department
January 2021**



建造高架園景平台來連接港鐵觀塘站
Constructing an Elevated Landscaped Deck to connect with MTR Kwun Tong Station



加強九龍東公共交通服務，並採用電動車輛
行駛區內新增巴士／專線小巴路線
Enhancing Public Transport Services in
Kowloon East, and Deploying Electric Vehicles
to run New Bus / GMB Routes in the Area



發展自動行人道網絡
Developing a Travellers Network



打造行人與單車共用的共融通道網絡
Providing a GreenWay Network



在啟德發展區設置「水上的士」站
Establishing a "Water Taxi" service point in KTD

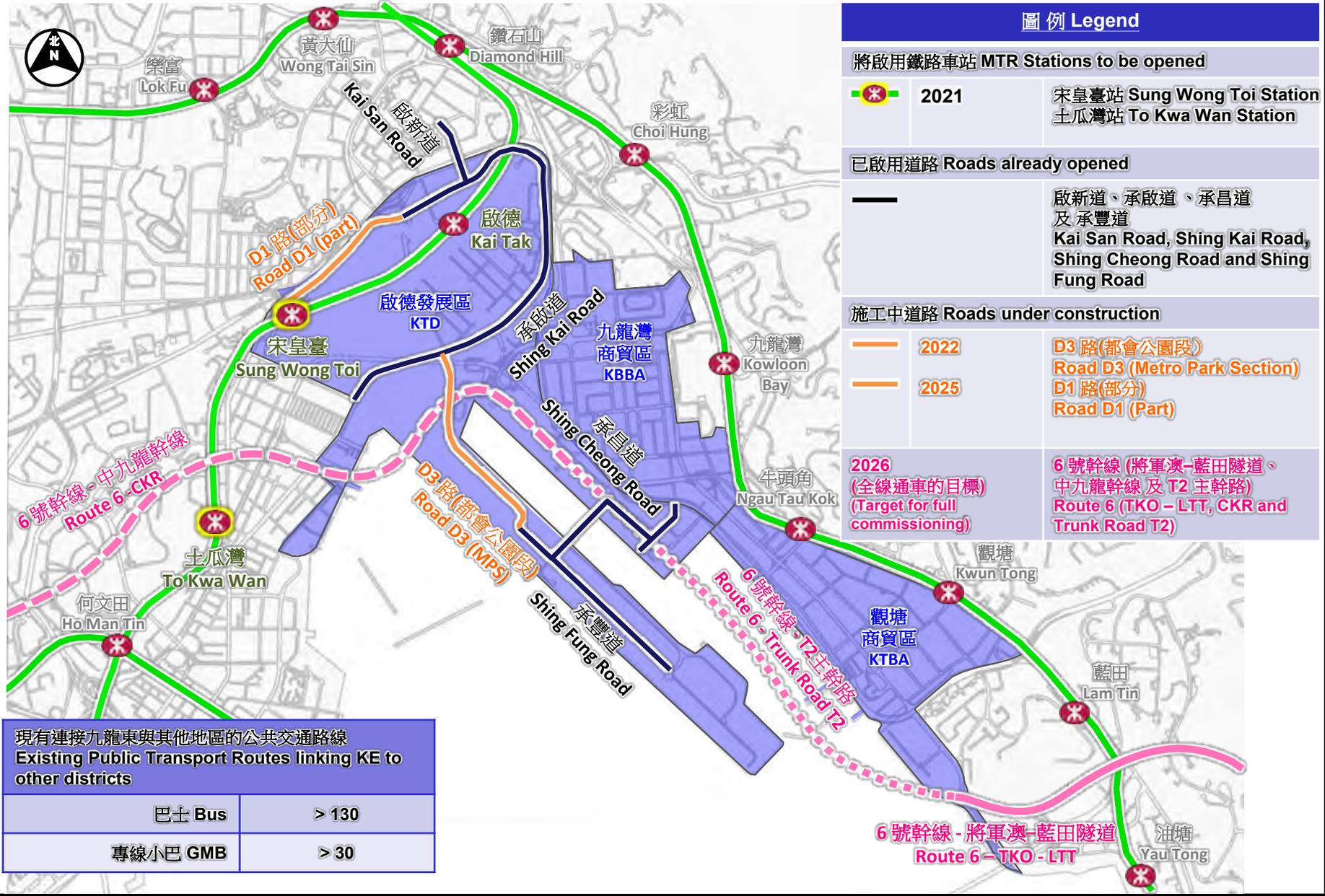


註：部分資料為設計圖片。
Note: Part of the information are artists' impressions.

圖則名稱
Drawing Title

「多元組合」模式的九龍東環保連接系統
"Multi-modal" EFLS for Kowloon East

附件一
Enclosure 1

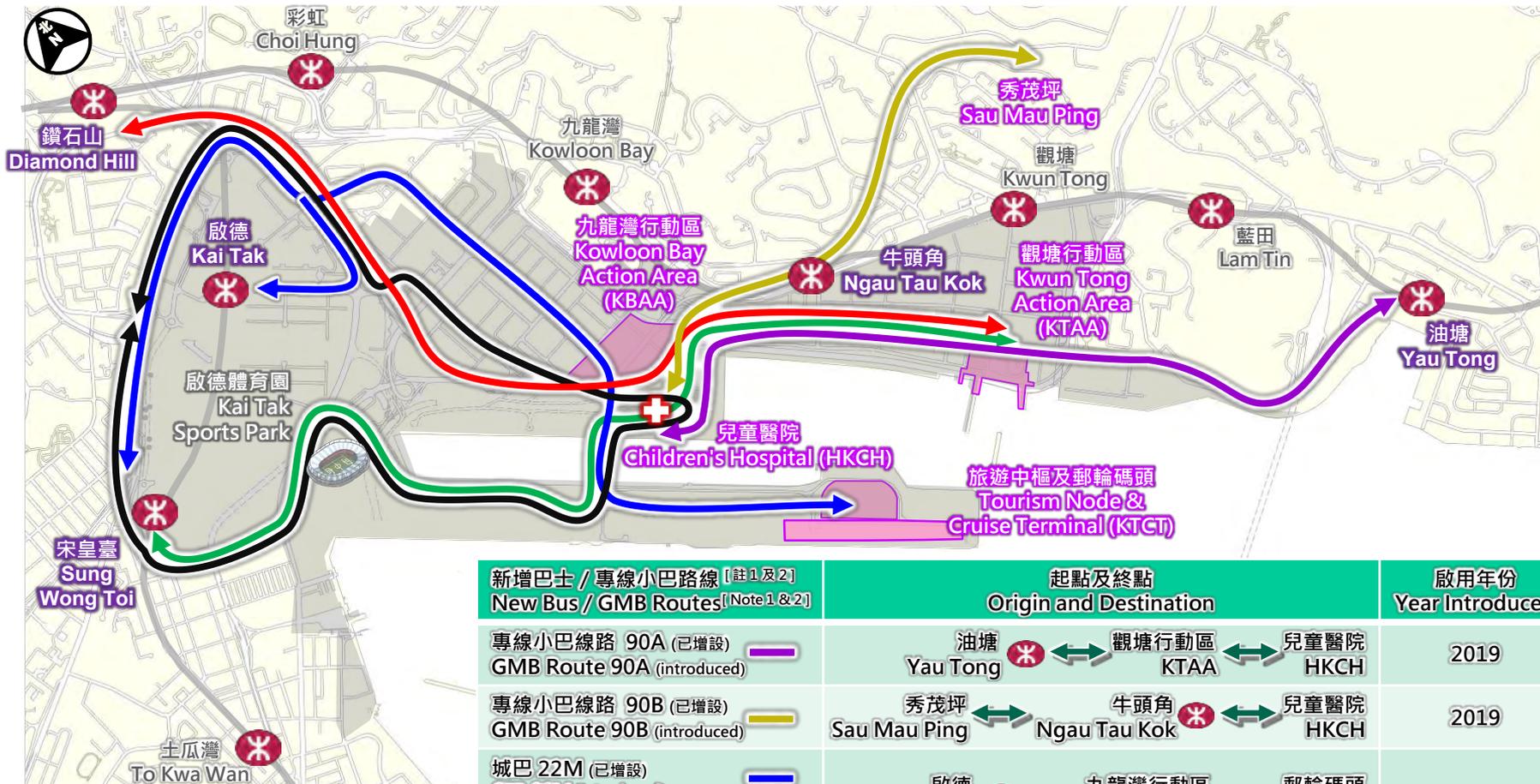


圖例 Legend

將啟用鐵路車站 MTR Stations to be opened		
	2021	宋皇臺站 Sung Wong Toi Station 土瓜灣站 To Kwa Wan Station
已啟用道路 Roads already opened		
		啟新道、承啟道、承昌道及承豐道 Kai San Road, Shing Kai Road, Shing Cheong Road and Shing Fung Road
施工中道路 Roads under construction		
	2022	D3路(都會公園段) Road D3 (Metro Park Section)
	2025	D1路(部分) Road D1 (Part)
	2026	6號幹線(將軍澳-藍田隧道、中九龍幹線及T2主幹路) Route 6 (TKO - LTT, CKR and Trunk Road T2)

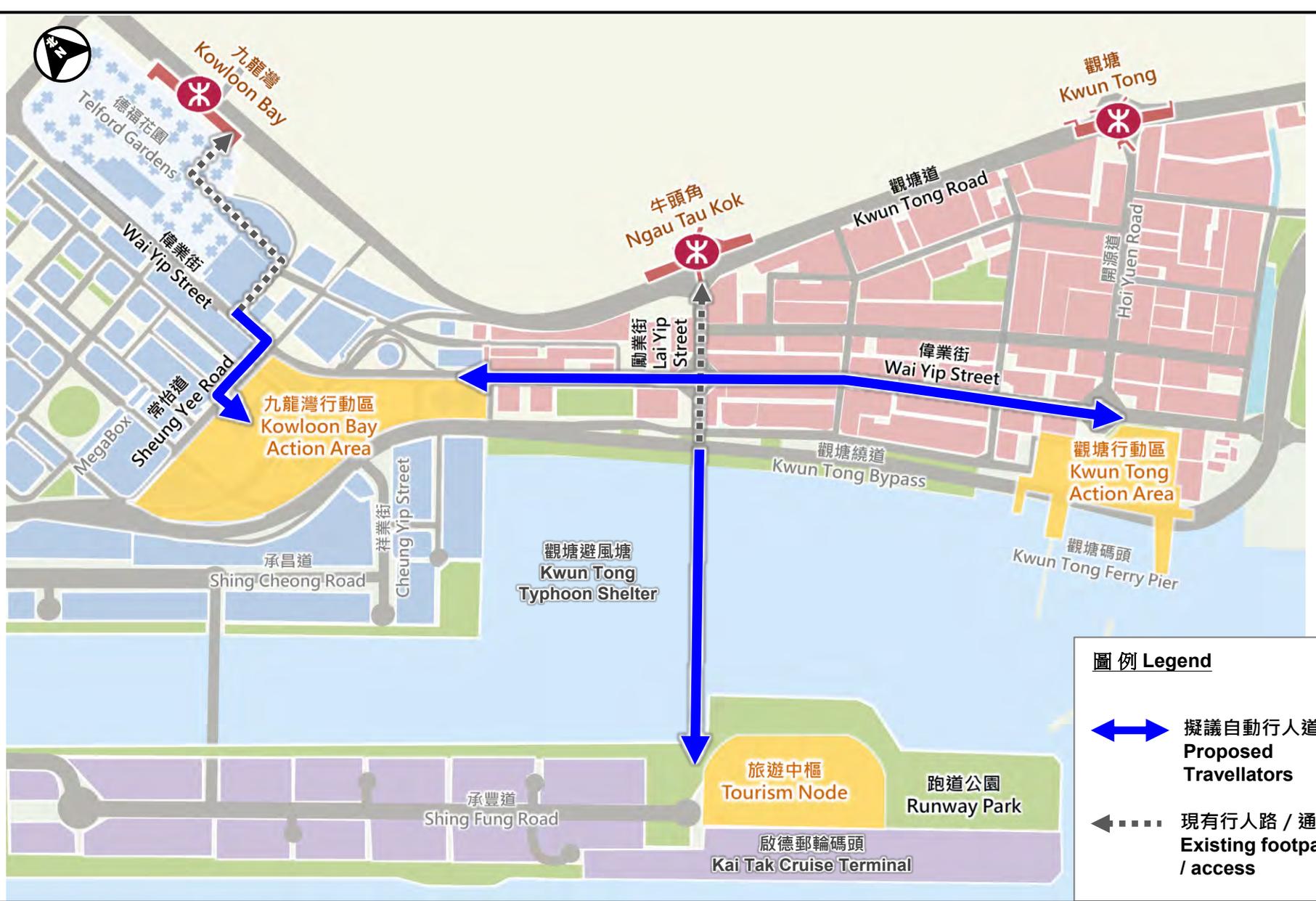
現有連接九龍東與其他地區的公共交通路線
Existing Public Transport Routes linking KE to other districts

巴士 Bus	> 130
專線小巴 GMB	> 30



- 註：
Note:
1. 視乎未來發展，路線或會延伸至旅遊中樞及九龍灣行動區等。
1. Routes may be extended to tally with the future developments of Tourism Node, KBAA, etc.
 2. 計劃由2021年開始，逐步採用電動巴士/電動小巴行走有關路線。
2. Planned to gradually introduce from 2021 onwards the use of electric buses / electric public light buses for the related routes.

新增巴士 / 專線小巴路線 [註1及2] New Bus / GMB Routes [Note 1 & 2]	起點及終點 Origin and Destination	啟用年份 Year Introduced
專線小巴線路 90A (已增設) GMB Route 90A (introduced)	油塘 * ↔ 觀塘行動區 KTAA ↔ 兒童醫院 HKCH	2019
專線小巴線路 90B (已增設) GMB Route 90B (introduced)	秀茂坪 * ↔ 牛頭角 * ↔ 兒童醫院 HKCH	2019
城巴 22M (已增設) CTB 22M (introduced) (現行路線: 啟德 * ↔ 郵輪碼頭 KTCT) (Existing Route: Kai Tak * ↔ KTCT)	啟德 * ↔ 九龍灣行動區 KBAA ↔ 郵輪碼頭 KTCT	2020
擬新增巴士線路 2 New Bus Route 2 (under planning)	宋皇臺 * ↔ 觀塘行動區 KTAA	2023 – 2028
擬新增巴士線路 3 New Bus Route 3 (under planning)	鑽石山 * ↔ 觀塘行動區 KTAA	
擬新增巴士線路 4 New Bus Route 4 (under planning)	啟德 * ↔ 九龍灣行動區 KBAA	



圖例 Legend

-  擬議自動行人道
Proposed Travellers
-  現有行人路 / 通道
Existing footpath / access

圖則名稱
Drawing Title

發展自動行人道網絡串連啟德前跑道區、九龍灣行動區和觀塘行動區
Developing a Travellers Network linking up the Former Runway of Kai Tak, Kowloon Bay Action Area and Kwun Tong Action Area



-  預計於2023年落成的首階段共融通道
Phase 1 GreenWay Anticipated Completion by 2023
-  預計於2025年後落成的第二階段共融通道
Phase 2 GreenWay Anticipated Completion Beyond 2025
-  共融通道(有待將來項目發展/研究)
GreenWay (Subject to Future Development/Study)
-  擬議行人及單車天橋(見附件四)
Proposed Pedestrian cum Cyclist Bridge (see Enclosure 4)
-  主要單車泊位(規劃中)
Key Bicycle Parking Facilities (Under Planning)
-  公共運輸交匯處
Public Transport Interchanges



圖則名稱
Drawing Title

打造貫通啟德發展區內海濱長廊和休憩用地的行人與單車共用的共融通道
Providing a GreenWay Network running through Promenades and Open Spaces in the Kai Tak Development Area for shared use by Pedestrians and Cyclists



圖則名稱
Drawing Title

建造高架園景平台來連接港鐵觀塘站

Constructing an Elevated Landscaped Deck to connect the MTR Kwun Tong Station

附件六
Enclosure 6



啟德
Kai Tak

西九
West Kowloon

紅磡
Hung Hom

尖東
Tsim Sha Tsui East

中環
Central

地圖由地政總署提供
Map from Lands Department

圖例 Legend

-  「水上的士」主線
Main Route of "Water Taxi"
-  「水上的士」臨時路線 (在西九南面登岸設施啟用前)
Temporary Route of "Water Taxi" (Before the opening of the landing facilities in the South of West Kowloon)
-  「北角 — 觀塘 — 啟德」的渡輪航線
Ferry Services for North Point, Kwun Tong and Kai Tak

啟德「水上的士」站
Kai Tak "Water Taxi" Service Point



上蓋及座椅
Shelter and Seats



登岸梯級
Landing Steps

圖則名稱
Drawing Title

在啟德發展區設置「水上的士」站
Establishing a "Water Taxi" Service Point in the Kai Tak Development Area

附件七
Enclosure 7