

**For information  
on 4 October 2024**

**Legislative Council Panel on Transport  
Subcommittee on Matters Relating to Railways**

**Smart and Green Mass Transit Systems**

This paper briefs Members on the latest development of the smart and green mass transit system (SGMTS) projects.

**Background**

2. The Chief Executive announced in the 2023 Policy Address to implement SGMTS in East Kowloon, Kai Tak and Hung Shui Kiu/Ha Tsuen (HSK/HT) New Development Area (NDA) serving as light and green feeder services to nearby railway stations and major public transport interchanges in these three areas. The “Hong Kong Major Transport Infrastructure Development Blueprint” promulgated by the Transport and Logistics Bureau in December 2023 also covers these three SGMTS projects.

**Smart and green mass transit systems**

3. The SGMTS is a transportation system that integrates environmentally friendly and smart technologies to enhance transport efficiency, safety and convenience. Compared to the heavy rail system, the SGMTS is a system with medium-to-low carrying capacity characterised by its energy-efficient, intelligent and convenient nature.

4. The SGMTS focuses on the use of energy-efficient technologies to minimise energy consumption and achieve environmentally friendly and efficient mobility. The system will be integrated with new technologies to achieve real-time monitoring of traffic conditions and passenger demand,

efficient traffic management, responsive service adjustments and provision of real-time information to passengers, etc., to enhance the convenience of the system and commuting experience of passengers.

5. In mid-2024, we awarded consultancy agreements for SGMTS in East Kowloon, SGMTS in Kai Tak, and Road Works for SGMTS Phase 1 in HSK/HT NDA respectively. We have been carrying out investigation and design works for the respective projects in full swing with a view to completing the design scheme, technical and financial analysis, impact assessments, site investigation works and other related statutory procedures as soon as possible.

6. At the same time, to further ascertain the market's interest and capability in constructing and operating the SGMTS in East Kowloon and Kai Tak, and obtain feedback on different aspects, including the feasibility of extending the system alignments in the future and measures to expedite the commissioning of the systems, we invited local, mainland and overseas suppliers and operators to submit Expressions of Interest (EOI) for the East Kowloon and Kai Tak projects respectively in August this year. The views obtained from the EOI will help us gain a deeper understanding of various technical aspects of the projects, including system characteristics, operational capabilities, repair and maintenance requirements, and enable us to explore with the market a delivery mode that meets public interests and is financially viable. Such information will serve as a reference for ascertaining the technical details, delivery mode and financial arrangement of the projects in future. Relevant details of the above-mentioned EOI invitation are at **Annex 1**. We will also invite relevant suppliers and operators to submit EOI for the HSK/HT project by the end of this year to ascertain the market's interest and capability towards the project.

7. Considering that it would be the first time for SGMTS to operate in Hong Kong, in addition to formulating the requirements of the technical details, financial assessments and procurement arrangements for these three projects, we have also initiated the preparatory work for formulating the relevant regulatory regime and the legislation for the operation of the systems, etc., to prepare for the introduction of the new systems.

8. The latest development of each proposed SGMTS project is set out below.

## **Latest Development**

### SGMTS in East Kowloon

9. With a length of about seven kilometres, eight stations are proposed for the SGMTS in East Kowloon. It will provide convenient transport feeder service in the uphill areas of Kwun Tong, facilitating the public to gain access to MTR Choi Hung Station and Yau Tong Station, improving the overall transportation and unleashing development potential of East Kowloon. The preliminary alignment passes through Choi Wan, Shun Lee, Shun On, Sau Mau Ping, Po Tat and Ma Yau Tong, serving over 300 000 residents in these areas. The system will mainly operate on a dedicated and elevated corridor. The section from Ma Yau Tong to Yau Tong near Lam Tin North is proposed to operate in a tunnel, but the feasibility of non-tunnel section will also be explored.

10. Since the initiation of the East Kowloon project, we have been conducting a number of investigation and design works concurrently, including reviewing project alignment and station locations, developing the design scheme, conducting feasibility studies on the potential extensions of the system to different areas and conducting site investigations, etc. Regarding the environmental impact assessment (EIA), with the issuance of the EIA study brief for the project in August this year by the Environmental Protection Department, we immediately commenced impact assessments on aspects such as environment, traffic, heritage and land, etc., so as to optimise the design scheme, formulate appropriate mitigation measures for the project, and prepare for the gazettal of the project.

11. In parallel with pressing ahead the alignment from Choi Hung East to Yau Tong East, we will also through inviting relevant system suppliers and operators to submit EOI exchange views with them on the feasibility of extending or adjusting the alignment to Tsz Wan Shan, Chuk Yuen, Tsui Lam and Hong Sing areas, etc., as well as adopting a non-tunnel section from Ma Yau Tong to Yau Tong East, and adding an intermediate station at Lam Tin North. We will conduct feasibility study on the proposals making reference

to the views from suppliers and operators, and explore ways to reserve space for future extension.

12. We strive to invite tenders in 2026 with an aim to awarding the construction contract in 2027. Subject to the SGMTS eventually adopted, we will stipulate in the tender documents the requirement for the tenderers to complete the construction works as soon as possible, with the aim of completing the system and putting into operation by 2033 or earlier.

### SGMTS in Kai Tak

13. The SGMTS in Kai Tak is about 3.5 kilometres long with five proposed stations. Adopting a dedicated and elevated corridor (in the form of viaducts/track systems) design, it will connect the former runway area of Kai Tak to the MTR Kai Tak Station, strengthening the connectivity among the residential and commercial developments, facilities on tourism, culture and recreation, sports and community within the area, as well as the connection with the existing railway network. The system will serve a living and working population of around 50 000 and the visitors.

14. Following the commencement of investigation consultancy study in June this year, we are taking forward the relevant planning and investigation works in full swing. Regarding the EIA, the Environmental Protection Department issued the EIA study brief for the project in August this year. We are carrying out the impact assessments on the environment, noise, heritage and other aspects to optimise the design scheme and explore appropriate mitigation measures for the project.

15. In response to the public views on expanding the project's coverage, we have invited relevant suppliers and operators to submit their views on the engineering feasibility and financial viability of future extensions to serve Kwun Tong, Yau Tong, Hong Kong Children Hospital and the future New Acute Hospital, as well as Sung Wong Toi / To Kwa Wan areas. We will conduct feasibility study on the proposals with reference to the views from suppliers and operators, and explore ways to reserve space for future extension.



16. We will adopt an innovative implementation approach, including further advancing the tender invitation and arranging part of the statutory processes to be carried out in tandem with the detailed design stage. We strive to commence the works contract in 2026. Meanwhile, we will review the viability of compressing the implementation programme in various stages from planning, design to construction, such as adopting Design for Manufacturing and Assembly, Multi-trade Integrated Mechanical, Electrical and Plumbing, etc. Subject to the procurement option adopted, we will require the contracted party to complete the construction works no later than three years after the commencement of construction once the detailed design and statutory procedures have been completed, in order to start testing and commissioning, and strive to complete and put the system into operation as soon as possible.

#### SGMTS in HSK/HT

17. The SGMTS in HSK/HT is about 16 kilometres in length, most of which are dedicated roads. At the major and busy road junctions, grade-separation arrangements (e.g. provision of elevated sections, etc.) will be adopted to segregate the system from the other road-based traffic, so as to achieve overall smooth traffic flow. The system will adopt a green road-based mode without the need for physical rail tracks, allowing a higher degree of flexibility to cater for the phased development of the NDAs and the actual transport demand at different junctures. The system will be powered by green energy, which is in line with the global trend.

18. The Government had earlier conducted a feasibility study on the system and formulated a preliminary alignment of about 16 kilometres through the HSK/HT and Yuen Long South (YLS) NDAs, connecting to Hung Shui Kiu (HSK) and Tin Shui Wai Stations of the Tuen Ma Line (TML), Chung Fu and Nai Wai Stops of the Light Rail (LRT), as well as the existing and to-be-built public transport interchanges. Serving some 300 000 residents and a working population of about 160 000 in the areas, the system will provide convenient feeder services to facilitate commuting to various districts of Hong Kong. The findings and recommendations of the feasibility study were presented to the relevant District Councils and Rural Committees between August and September 2023.

19. Phase 1 of the system is about 4.5 kilometres long with seven proposed stations with a view to tying in with the Second Phase Development of HSK/HT NDA. Phase 1 of the system will connect Nai Wai to the vicinity of the Logistics, Enterprise and Technology Quarter in HSK/HT NDA, passing through the town centre and residential area of the NDA, and connecting to TML HSK Station, LRT Nai Wai Stop and the future Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu-Qianhai). The preliminary alignment and the photomontages of the system are set out at **Annex 2**.

20. The investigation and design works for Phase 1 road works of the system have commenced in May 2024. We are working in full swing to proceed with the relevant works for implementing the project, including reviewing the alignment and station arrangements, formulating design schemes and impact assessments, preparing for the invitation for EOI, etc. We target to invite relevant suppliers and operators to submit EOI in end 2024, so as to obtain feedbacks on various aspects, including system characteristics, operational capabilities, repair and maintenance requirements, etc., and to ascertain the market's interest and capability in providing and operating the system, with a view to firming up the specific requirements and designs of the system and the relevant infrastructures. Subject to the EOI submitted by the relevant suppliers and operators and other relevant factors, we target to invite tenders for the project within 2026.

21. We will continue to implement the SGMTS in HSK/HT in phases to tie in with the traffic and transport demand of the different stages of development of the HSK/HT and YLS NDAs, with a view to providing convenient feeder services to the public. Depending on the SGMTS eventually adopted for the HSK/HT project, we will specify in the tender documents the requirement for the tenderer to complete the construction works as soon as practicable, such that the commissioning of the system will tie in with the programme for major population intake of the NDAs.

## **Way Forward**

22. We will continue to take forward the three projects in full swing and strive to complete the projects as soon as practicable to bring more convenient and diversified travel options to the society. Throughout the process, we will

consult the Legislative Council, relevant District Councils and stakeholders as appropriate. Members are invited to note the latest development of the SGMTS projects.

**Transport and Logistics Bureau**  
**Highways Department**  
**Civil Engineering and Development Department**  
**Transport Department**

**September 2024**

### **Smart and Green Mass Transit System in East Kowloon and Kai Tak Details of Invitation for EOI**

The Transport and Logistics Bureau, jointly with the Civil Engineering and Development Department and Highways Department, invited relevant system suppliers and operators to submit expressions of interest (EOI) for Smart and Green Mass Transit Systems (SGMTS) in Kai Tak and East Kowloon respectively on 29 August 2024 to gather views from the market. This EOI exercise is not a tender exercise, nor part of the procurement exercise. In particular, the Government would like to gather feedback from the market through this EOI exercise, including the following -

- level of interest and capability of the market in undertaking the projects;
- associated technical information of suitable systems for the projects (e.g. system configuration, transport performance, technical feasibility, costs and operation and maintenance requirements, etc.);
- views and suggestions on procurement and financial arrangements including funding arrangements, contract period, delivery model, etc.;
- views on fare level, fare type and fare adjustment mechanism;
- views on operational arrangements;
- views on feasibility of possible extensions of the alignment and expansion in carrying capacity of the systems;
- for the East Kowloon project, views on feasibility of non-tunnel options for the alignment section between Ma Yau Tong and Yau Tong near Lam Tin North and additional station in Lam Tin North;
- views on measures to expedite the commissioning of the systems; and
- views on measures to reduce the capital cost and/or operation and maintenance cost of the systems.

2. For these two projects, the Government proposes a single party to be responsible for each project for undertaking the detailed design and construction of the system, as well as its operation and maintenance during the contract period of around 20 to 30 years, and handing over the system in good operation conditions to the Government at the end of the contract period. The future operators need to run the systems on commercial basis and provide high-quality public transportation services with publicly

acceptable fare. If necessary, the Government will explore providing financial support for the projects, including granting property development rights at the proposed depot sites. The target parties for this EOI invitation include relevant system suppliers and operators, and other companies with related business such as contractors and developers, etc. The closing date and time for submission of EOI for the Kai Tak and East Kowloon projects are 12:00 noon on 24 October 2024 and 12:00 noon on 7 November 2024 respectively.

3. Upon receipt of the EOI, we will make reference to and analyse the feedback while carrying out the investigation and design, financial assessment, and preparation of tender documents, etc. We will also carry out the feasibility study on extending or adjusting the alignment and explore making provisions for future extension concurrently. The views obtained from the EOI will help us gain a deeper understanding on various technical aspects of the projects, including system characteristics, operation capabilities, maintenance and repair requirements, and enable us to explore with the market a delivery mode that meets public interests and is financially viable. Such information will serve as a reference for ascertaining the technical details, delivery mode and financial arrangement at a later stage.

4. Please refer to **Enclosure 1** and **Enclosure 2** for brief information on the SGMTS in East Kowloon and Kai Tak.

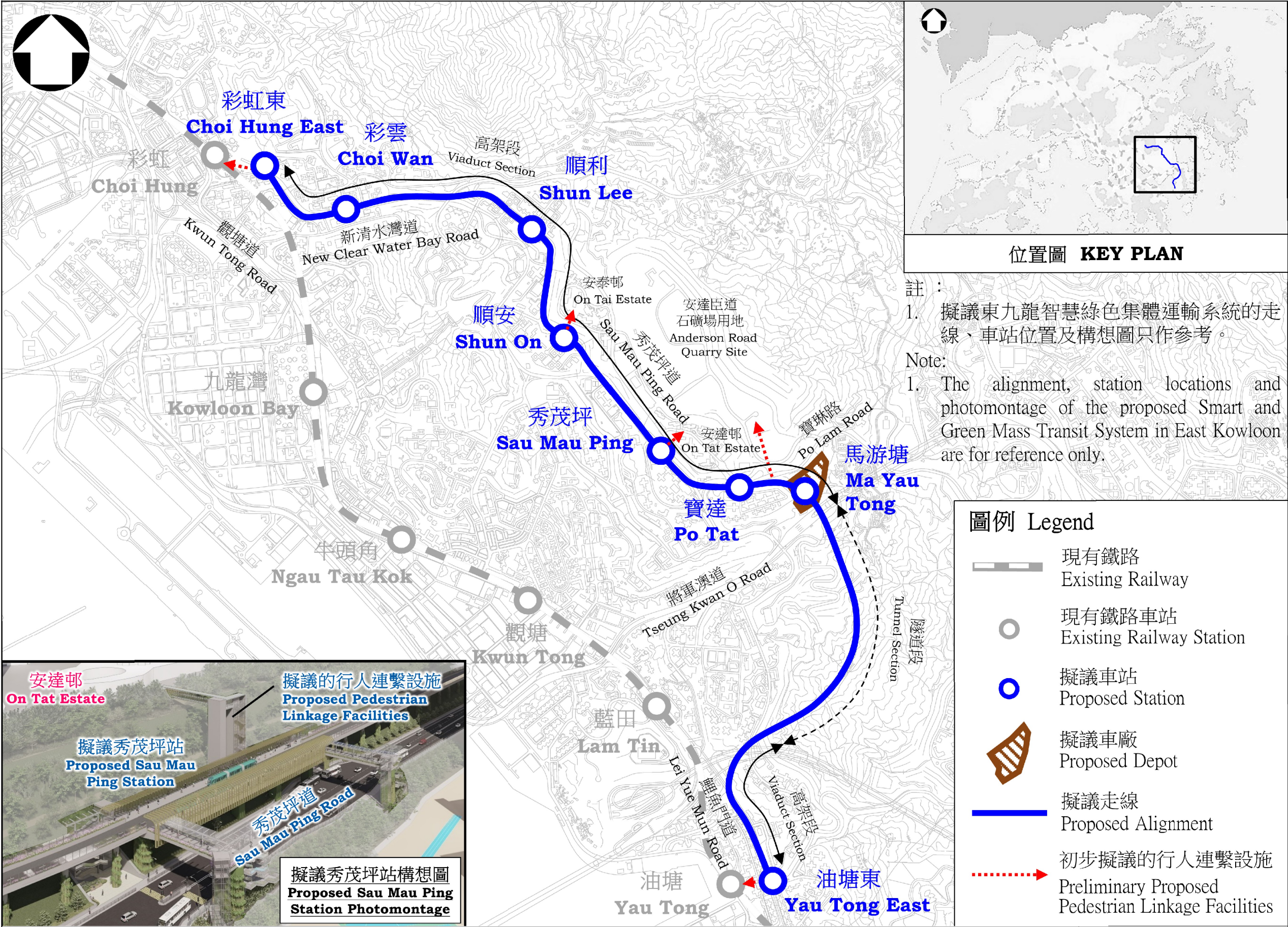
### Smart and Green Mass Transit System in East Kowloon

- With a length of about 7 km, the SGMST in East Kowloon will provide convenient transport feeder services to over 300 000 residents in the uphill areas of Kwun Tong, facilitating the public to gain access to MTR Choi Hung Station and Yau Tong Station, improving the overall transportation and unleashing development potential of East Kowloon. The system will mainly operate on a dedicated and elevated corridor. The section from Ma Yau Tong to Yau Tong near Lam Tin North is proposed to operate in a tunnel, but the feasibility of non-tunnel section will also be explored. Please refer to the attached drawing for the preliminary alignment and the photomontage of the project.
- Eight proposed stations:
  - Choi Hung East Station: near the existing public transport interchange on Clear Water Bay Road;
  - Choi Wan Station: located on New Clear Water Bay Road, adjacent to Choi Wan Estate;
  - Shun Lee Station: located on Lee On Road, adjacent to Shun Lee Estate and Shun Chi Court;
  - Shun On Station: located on Shun On Road, adjacent to Shun Tin Estate and On Tai Estate;
  - Sau Mau Ping Station: near Sau Mau Ping Road and adjacent to Sau Mau Ping Estate;
  - Po Tat Station: near Po Lam Road and adjacent to Po Tat Estate;
  - Ma Yau Tong Station: located near the east of Po Tat Estate; and
  - Yau Tong East Station: located on Lei Yue Mun Road, adjacent to Yau Mei Court.
- The proposed depot site is located at Ma Yau Tong with an area of approximately 6 hectares. The area is currently zoned as "Green Belt" and "Open Space". The preliminary plan is to locate ancillary buildings/structures (such as operations control centre) on the depot site. We will also explore the use of property development rights on the depot site to provide financial support for the project and unleash the development potential of the depot site.

- The EOI document requires the respondents to assess
  - (i) The feasibility of adopting a non-tunnel section from Ma Yau Tong to Yau Tong East;
  - (ii) The feasibility of providing an intermediate station at Lam Tin North; and
  - (iii) The feasibility of extension options:
    - Extending westward to Tsz Wan Shan / Chuk Yuen areas
    - Extending eastward to Tsui Lam / Hong Shing areas
- Next steps:

<b>Key Activity</b>	<b>Tentative Timeframe</b>
Invitation of Tenders	Year 2026
Award of Construction Contract	Year 2027





東九龍智慧綠色集體運輸系統 - 擬議初步方案  
SMART AND GREEN MASS TRANSIT SYSTEM IN EAST KOWLOON - PROPOSED PRELIMINARY ALIGNMENT

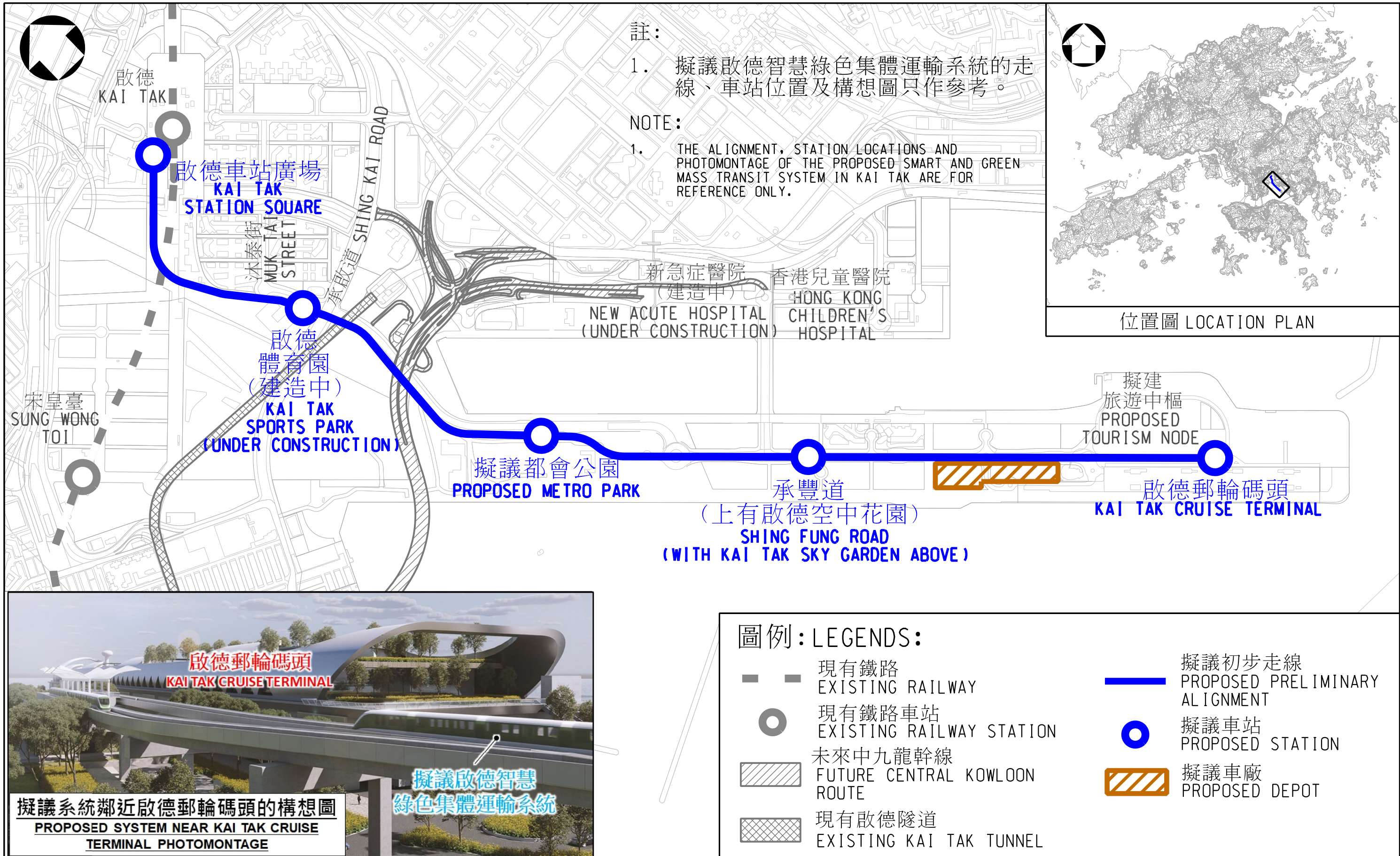


### Smart and Green Mass Transit System in Kai Tak

- The alignment is about 3.5 kilometres long. Adopting a dedicated and elevated corridor (in the form of viaducts/track systems) design, it will connect the former runway area of Kai Tak to the MTR Kai Tak Station, strengthening the connections among the residential and commercial developments, tourism, culture and recreation, sports and community facilities, as well as connecting with the existing railway network. The system will serve a living and working population of around 50 000 and the visitors. Please refer to the attached drawing for the preliminary alignment and the photomontage of the project.
- Five proposed stations:
  - Station No. S1: located at the north of Kai Tak Cruise Terminal (KTCT) and adjacent to its main entrance;
  - Station No. S2: located above Shing Fung Road abutting the Kai Tak Sky Garden;
  - Station No. S3: located along the northern boundary of the proposed Kai Tak Metro Park to the south of the underpass of Shing Fung Road;
  - Station No. S4: located at the north of the future Kai Tak Sports Park; and
  - Station No. S5: located at Kai Tak Station Square adjacent to the existing MTR Kai Tak Station.
- The proposed Depot Site is located to the west of KTCT with a total site area of approximately 2 ha. The Government will explore the topside property development at the proposed Depot Site for providing funding support to the project.
- The EOI document requires the respondents to assess the feasibility of extensions to the following areas:
  - Kwun Tong;
  - Yau Tong;
  - Hong Kong Children Hospital and the future New Acute Hospital; and
  - Sung Wong Toi / To Kwa Wan.

- Next steps:

<b>Key Activity</b>	<b>Tentative Timeframe</b>
Invitation of Tenders	Year 2025
Award of Contract	Year 2026



圖則名稱 drawing title

# 啟德智慧綠色集體運輸系統 - 擬建初步走線 SMART AND GREEN MASS TRANSIT SYSTEM IN KAI TAK - PROPOSED PRELIMINARY ALIGNMENT

辦事處 Office

東拓展處  
EAST DEVELOPMENT OFFICE



土木工程拓展署  
CIVIL ENGINEERING  
AND DEVELOPMENT  
DEPARTMENT



# 圖例 Legends

- 洪水橋／厦村新發展區  
Hung Shui Kiu/Ha Tsuen New Development Area
- 元朗南新發展區  
Yuen Long South New Development Area
- 屯馬線車站  
Tuen Ma Line Station
- 輕鐵車站  
Light Rail Stop
- PTI 公共運輸交匯處  
Public Transport Interchange
- 擬建智慧綠色集體運輸系統  
Proposed Smart and Green Mass Transit System (SGMTS)
- 初步走線  
Preliminary Alignment
- \* 部分走線有待進一步檢討  
Part of the alignment is subject to further review

註： 本圖只表達示意性概念，智慧綠色集體運輸系統走線會因應有關發展項目的推展情況及環境限制於詳細設計階段有所修改。  
Note: The figure shows the indicative concept only. The SGMTS alignment will be subject to review at the detailed design stage in view of the implementation and environmental constraints of the relevant projects.



圖則名稱 drawing title

洪水橋／厦村智慧綠色集體運輸系統 - 擬建初步走線  
SMART AND GREEN MASS TRANSIT SYSTEM IN HUNG SHUI KIU/HA TSUEN  
- PROPOSED PRELIMINARY SCHEME

辦事處 office

西拓展處  
WEST DEVELOPMENT OFFICE

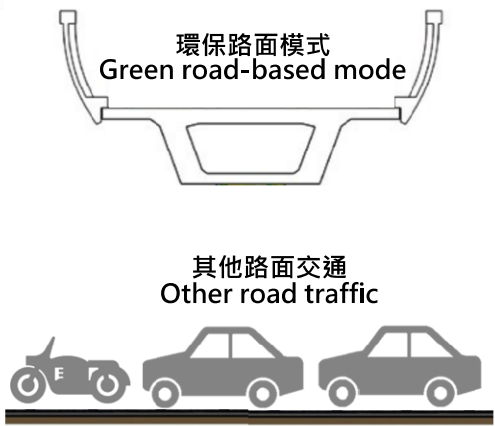


土木工程拓展署  
CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT





地面段  
At-grade section



在主要及繁忙路口的交界處與其他路面交通分隔（如高架段）  
Grade separated from other road traffic at major and busy junctions  
(E.g. elevated section)



車站  
Station

註：此電腦模擬圖內的車輛、車站及建築物僅供示意參考。  
Note: The vehicles, station and buildings shown on the photomontage are for illustrative purpose only.

圖則名稱 drawing title

洪水橋 / 厦村智慧綠色集體運輸系統 - 構想圖  
SMART AND GREEN MASS TRANSIT SYSTEM IN HUNG SHUI KIU/HA TSUEN  
- PHOTOMONTAGE

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CIVIL ENGINEERING AND  
DEVELOPMENT DEPARTMENT