

ITEM FOR FINANCE COMMITTEE

HEAD 60 – HIGHWAYS DEPARTMENT

Subhead 700 General non-recurrent

New item “Strategic Study on Railways beyond 2030”

HEAD 186 – TRANSPORT DEPARTMENT

Subhead 700 General non-recurrent

New item “Strategic Study on Major Roads beyond 2030”

Members are invited to approve the following two new commitments–

- (a) \$64.9 million under Head 60 – Highways Department Subhead 700 General non-recurrent for conducting the “Strategic Study on Railways beyond 2030”; and
- (b) \$27.5 million under Head 186 – Transport Department Subhead 700 General non-recurrent for conducting the “Strategic Study on Major Roads beyond 2030”.

PROBLEM

We need to formulate strategies for meeting the transport demands beyond 2030 to ensure that large-scale transport infrastructure can support the needs for long-term land use developments.

PROPOSAL

2. The Director of Highways proposes to create a new commitment of \$64.9 million to engage consultants to conduct the “Strategic Study on Railways beyond 2030”, and the Commissioner for Transport proposes to create a new commitment of \$27.5 million to engage consultants to conduct the “Strategic Study

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on Major Roads beyond 2030”. The Secretary for Transport and Housing supports the two proposals, collectively referred to as the “Strategic Studies on Railways and Major Roads beyond 2030” (the Studies).

JUSTIFICATION

Encl. 1

3. To update the spatial planning framework to guide the planning, land and infrastructure development, construction, and the shaping of the natural environment of Hong Kong beyond 2030¹, the Development Bureau and the Planning Department jointly commissioned the “Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030” (Hong Kong 2030+) planning study in 2015. The planning study proposed two key strategic directions relating to traffic and transport planning. Firstly, to meet the need for long-term economic and social developments of Hong Kong, new strategic transport infrastructure should be provided and the existing facilities should be improved (see the proposed transport corridors shown in Enclosure 1). Railways will continue to be the backbone of the public transport system, complemented by other public transport modes, walking, cycling and other low-carbon transport modes. Secondly, traffic demand has to be properly managed, including optimising the spatial distribution of population and jobs when developing the strategic growth areas (SGAs), and clustering population and economic activities within the coverage of public transport nodes, in order to reduce the use of vehicles, particularly the private cars.

4. We are constructing and planning various transport infrastructure projects to support the planning of new development areas and extension of new towns to support their external connectivity on the one hand and alleviate the existing and potential bottlenecks on the other hand, as well as to enhance coverage of the existing transport network. The railway under construction is the Shatin to Central Link; while the major roads under construction include Tuen Mun-Chek Lap Kok Link (Northern Connection), Route 6 (Tseung Kwan O – Lam Tin Tunnel, Trunk Road T2, and Central Kowloon Route), and Cross Bay Link. Moreover, there are seven railway projects under planning, including Northern Link (and Kwu Tung Station), Hung Shui Kiu Station, Tung Chung West Extension (including Tung Chung East Station), Tuen Mun South Extension, East Kowloon Line, South Island Line (West) and North Island Line, which are recommended in the “Railway Development Strategy 2014” (RDS-2014)²; while the major roads under planning

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¹ Since the 1970s, the Government has reviewed the territorial development strategy around every decade to embrace new needs and expectations. The last review, “Hong Kong 2030: Planning Vision and Strategy”, was promulgated in 2007, which provided the broad directions for land supply and town planning of Hong Kong up to 2030.

² The latest blueprint of railway development in Hong Kong is the RDS-2014, which aims at providing a framework for planning the expansion of Hong Kong’s railway network up to 2031.

Encl. 2

include Tuen Mun Western Bypass, Route 11 and Tsing Yi – Lantau Link. The layout of the existing railways and major roads, as well as those under planning and under construction, is shown in Enclosure 2. Overall speaking, except for a few longer-term projects, the above-mentioned projects would form a blueprint for transport infrastructure up to 2031.

5. Transport infrastructure projects are complex and large in scale. With reference to past experience in taking forward large-scale transport infrastructure projects, it generally takes more than ten years from the early planning stage to commissioning to carry out the necessary investigation³, detailed design⁴ and construction⁵. To ensure that large-scale transport infrastructure can support the needs for land use development, it is necessary to commission the Studies as soon as possible.

Planning for Transport Needs beyond 2030

6. Upon completion, the Hong Kong 2030+ planning study will recommend a territorial development strategy which includes the proposed SGAs. Besides, the continuous growth in population and economic development of Hong Kong will generate corresponding transport demand. To this end, we propose to take forward the Studies on the basis of the conceptual spatial requirements to be firmed up under the Hong Kong 2030+ planning study. Based on the latest planning information, we will examine the demand and supply of the transport infrastructure, including railways and major roads, in Hong Kong from 2031 to 2041 or later. Based on the final development strategy of the Hong Kong 2030+ planning study, we will conduct strategic studies, which include examining the layout of the proposed railway and major road infrastructure, and carrying out a preliminary engineering technical assessment on the route alignment and associated infrastructure for projects that had not been planned, in order to ensure that the planning of large-scale transport infrastructure can meet the needs for the overall long-term land use developments of Hong Kong. We will also examine the impact of the proposed transport infrastructure on the existing transport network in order to formulate the corresponding strategies.

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³ Investigation stage covers preliminary design, consultation with stakeholders, carrying out environmental impact assessment and applying for Environmental Permit according to the Environmental Impact Assessment Ordinance (Chapter 499), gazettal and applying for authorisation of the associated works according to the Roads (Works, Use and Compensation) Ordinance (Chapter 370) or the Railways Ordinance (Chapter 519), etc.

⁴ Detailed design stage covers detailed design, land resumption and handling of the associated compensation, preparation of contract documents and tendering, etc.

⁵ Construction stage covers actual construction, testing and commissioning, handing over the completed works to the relevant management and maintenance parties, etc.

Encl. 3

7. Separately, to complement the development of the artificial islands near Kau Yi Chau, the Government plans to take forward a set of new major roads and railways to link up the artificial islands, Hong Kong Island, Lantau and the coastal area of Tuen Mun (Enclosure 3) under the Lantau Tomorrow Vision. The Development Bureau, in collaboration with the Civil Engineering and Development Department and the Planning Department, are seeking funding approval⁶ to commence the studies related to the artificial islands in the Central Waters, which will include a transport infrastructure study covering the aforementioned new major roads and railways. The focus of the Studies is on the layout of railways and major roads other than those to be studied under the aforementioned studies related to the artificial islands in the Central Waters. Nevertheless, we will closely coordinate with the Civil Engineering and Development Department and the Planning Department in the process.

Updating “Railway Development Study Model” (RDS Model)

8. By applying transport models with the latest planning data from time to time, the Transport Department and the Highways Department forecast transport demands and examine the development of transport infrastructure in Hong Kong, including updating the need, scale and implementation programme of each of the proposed large-scale transport infrastructure projects. The RDS Model of the Highways Department is a transport computer model for railway patronage forecast. The model can produce railway patronage forecast based on various planning and economic assumptions, including population and employment data, economic growth situation, land use, transport infrastructure planning and traffic data. As the current model has been in use since its last update in 2011, we consider it necessary to update and enhance the current RDS Model under the Studies in accordance with the latest planning data and socio-economic assumptions, in order to enable the computer model to provide updated forecasts. The Transport Department completed in 2015 the update and enhancement of the “Comprehensive Transport Study Model” and, therefore, no further update is required in the Studies.

Proposed Scope of the Studies

9. The scope of the Studies are set out below –

(a) “Strategic Study on Railways beyond 2030”–

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⁶ Details are set out in LegCo Paper No. PWSC(2019-20)5
(<https://www.legco.gov.hk/yr18-19/english/fc/pwsc/papers/p19-05e.pdf>).

- (i) To conduct a strategic study based on the latest planning data and the final development strategy under the Hong Kong 2030+ planning study to review the performance of the whole railway network and to recommend necessary measures to meet future transport demands, taking account of the scenarios of the progressive development of the SGAs. The study includes forecast of railway patronage demand; assessment of the performance of the territorial railway network; preliminary engineering technical assessment of different railway options; study on the layout of the railway infrastructure, route alignment and associated infrastructure; and preliminary recommendations on the implementation strategy. In addition, as regards new railway proposals identified under the study, preliminary studies on engineering planning, geotechnical assessment, strategic environmental assessment, economic and financial analysis, etc. will be carried out. We will also examine the impact of the proposed transport infrastructure on the existing transport network to formulate relevant transport strategies; and
 - (ii) To update and enhance the current RDS Model of the Highways Department, including model calibration and baseline analysis.
- (b) “Strategic Study on Major Roads beyond 2030”–

To conduct a strategic study based on the latest planning data and the final development strategy under the Hong Kong 2030+ planning study to review the traffic performance of the whole major roads network, to recommend the corresponding major road projects or road improvement measures and to assess the priority of the proposals, taking account of the scenarios of the progressive development of the SGAs. For the proposals identified under the study, preliminary engineering technical assessment on route alignment, engineering planning, geotechnical assessment, strategic environmental assessment, economic and financial analysis will be carried out to facilitate the subsequent taking forward of the proposals. We will also examine the impact of the proposed transport infrastructure on the existing transport network to formulate relevant transport strategies. At the initial stage of the study, we will review the final recommendations of the relevant transport and traffic studies, and conduct a general study to come up with the corresponding short- to medium-term proposals to alleviate

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congestion at the bottlenecks of the major roads connecting the New Territories and the urban areas, thus facilitating the works departments to take forward the proposals under the Public Works Programme.

10. In view of the complexity and multi-disciplinary nature of the Studies, which include analysis of transport network performance, technical assessment of transport infrastructure, complicated programming and calibration of railway transport computer models, etc., we will employ consultants to conduct the Studies.

FINANCIAL IMPLICATIONS

11. We estimate the cost of the Studies to be \$92.4 million, with breakdown as follows –

		\$'000
(a)	Railways	64,900
	(i) Strategic Study on Railways beyond 2030	57,000
	(ii) Update and Enhancement of RDS Model of the Highways Department	2,000
	(iii) Contingencies [10% of Items (a)(i) to (a)(ii)]	5,900
(b)	Major Roads	27,500
	(i) Strategic Study on Major Roads beyond 2030	25,000
	(ii) Contingencies [10% of Item (b)(i)]	2,500
	Total	92,400

We will engage separate consultants to undertake the studies on railways and major roads respectively.

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12. It is anticipated that expenditure will be incurred by phases as follows –

Year	\$'000
2020-21	10,900
2021-22	26,400
2022-23	32,900
2023-24	22,200
Total	92,400

13. The Studies have no additional recurrent financial implication.

IMPLEMENTATION

14. We propose to commence the Studies at the earliest when funding is secured. The study on railways will take about 38 months whereas the study on major roads will take about 27 months to complete. The tentative implementation timeline is as follows –

(a)	Commence the study on railways	Second half of 2020
(b)	Commence the study on major roads	Second half of 2020
(c)	Complete the study on major roads	Second half of 2022
(d)	Complete the study on railways	Second half of 2023

PUBLIC CONSULTATION

15. We consulted the Legislative Council Panel on Transport on the Studies on 16 June 2017. Members noted the submission of this funding proposal to the Finance Committee. Subsequently at the Legislative Council Panel on Transport meeting held on 21 July 2017, four motions relating to the transport infrastructure planning under the Studies were passed. In response to Panel members' suggestions, we submitted supplementary information to the Panel on 6 September 2017 (LC Paper No. CB(4)1571/16-17(01)), and responded to the four motions on 11 September 2017 (LC Paper No. CB(4)1584/16-17(01)).

/BACKGROUND

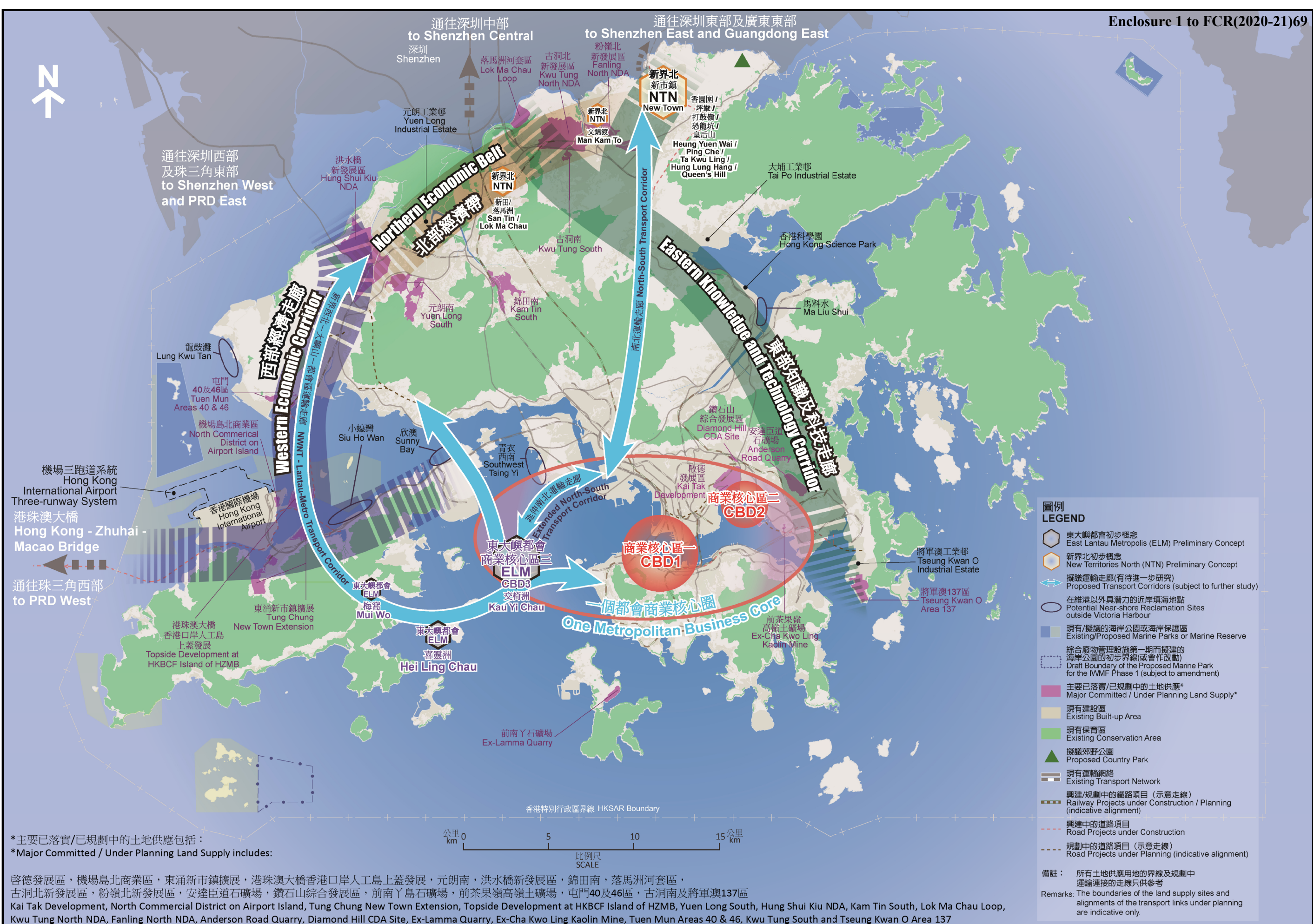
BACKGROUND

16. The Hong Kong 2030+ planning study aims to formulate a territorial planning framework of Hong Kong beyond 2030. A six-month public engagement exercise of the Hong Kong 2030+ planning study was conducted from October 2016 to April 2017 to collect views from the public particularly on the proposed three building blocks and a conceptual spatial framework. The three building blocks are “Planning for a Liveable High-density City”, “Embracing New Economic Challenges and Opportunities”, and “Creating Capacity for Sustainable Growth”, while the conceptual spatial framework proposes the focus of the future development of Hong Kong within a metropolitan business core, two SGAs (i.e. East Lantau Metropolis and New Territories North) and three primary development axes (i.e. Western Economic Corridor, Eastern Knowledge and Technology Corridor and Northern Economic Belt).

17. The Development Bureau and Planning Department are finalising the Hong Kong 2030+ study, taking into account the public comments received during the public engagement exercise, findings of various technical assessments, and the vision-driven reassessment of the requirements for different types of land over the next 30 years with reference to the latest policies and initiatives including the Lantau Tomorrow Vision announced in the 2018 Policy Address, the Report of the Task Force on Land Supply accepted by the Government in February 2019, and the Annual Progress Report 2019 of the Long Term Housing Strategy announced in December 2019. It is expected that the Hong Kong 2030+ planning study will be completed within 2020 for promulgation.

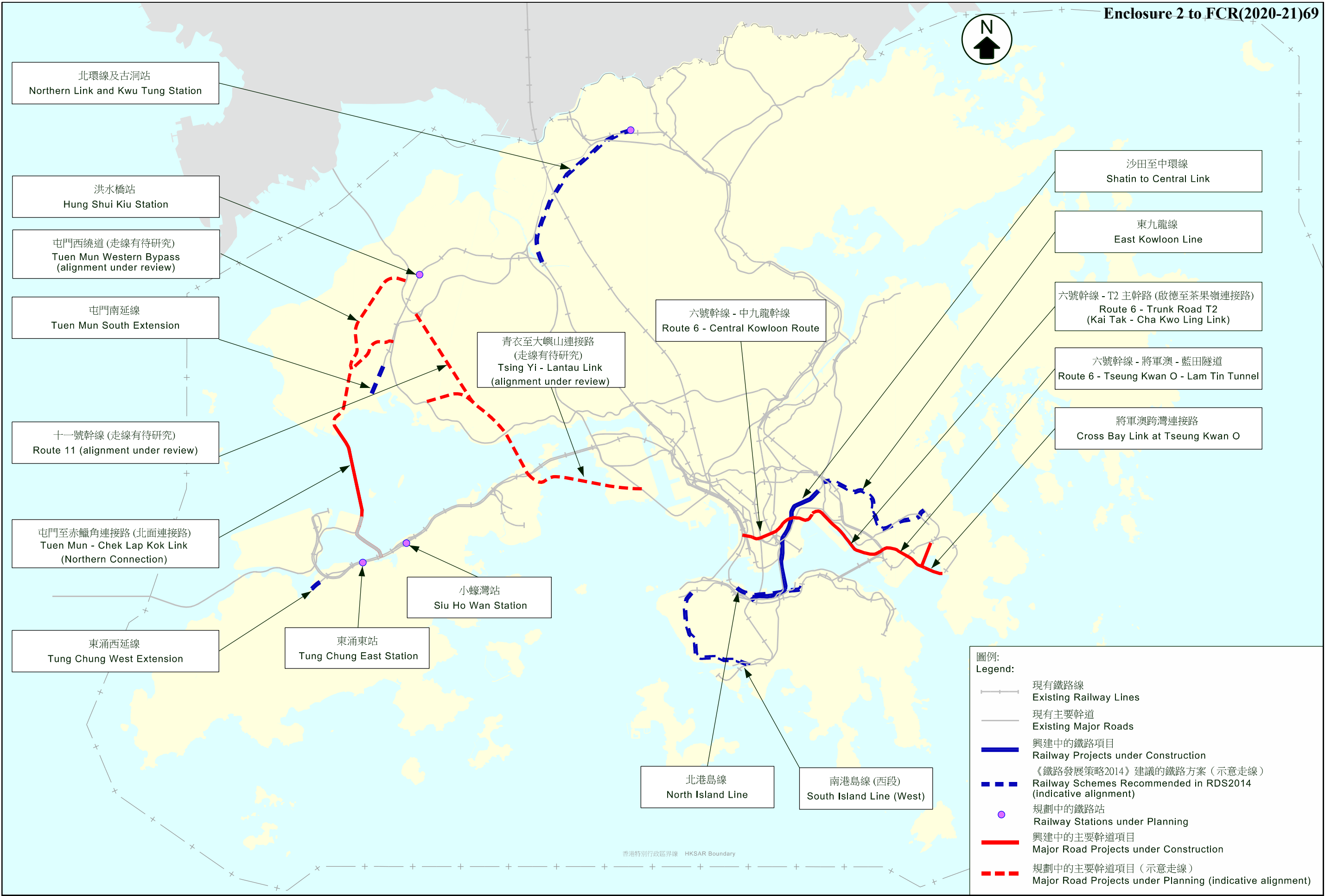
18. At the same time, based on the latest planning data and the final results of the Hong Kong 2030+ planning study, the Transport and Housing Bureau plans to commission the visionary strategic studies on railways and major roads beyond 2030. The Studies will also incorporate new findings (if any) for the 2030+ planning study upon its completion as appropriate.

Transport and Housing Bureau
Highways Department
Transport Department
July 2020



公眾參與活動下的香港2030+的概念性空間框架
Conceptual Spatial Framework for Hong Kong 2030+ under Public Engagement

圖一
PLAN 1



現有、興建中及規劃中的鐵路及主要幹道
Existing Railways and Major Roads, and those under Construction and Planning

圖二
PLAN 2

圖例：概念性位置

LEGEND: CONCEPTUAL LOCATION



擬議交椅洲人工島
PROPOSED KAU YI CHAU
ARTIFICIAL ISLANDS



可能的喜靈洲人工島
POSSIBLE HEI LING CHAU
ARTIFICIAL ISLANDS



可能的長洲南人工島
POSSIBLE CHEUNG CHAU SOUTH
ARTIFICIAL ISLAND



優先鐵路連接
PRIORITY RAIL LINK



優先道路連接
PRIORITY ROAD LINK



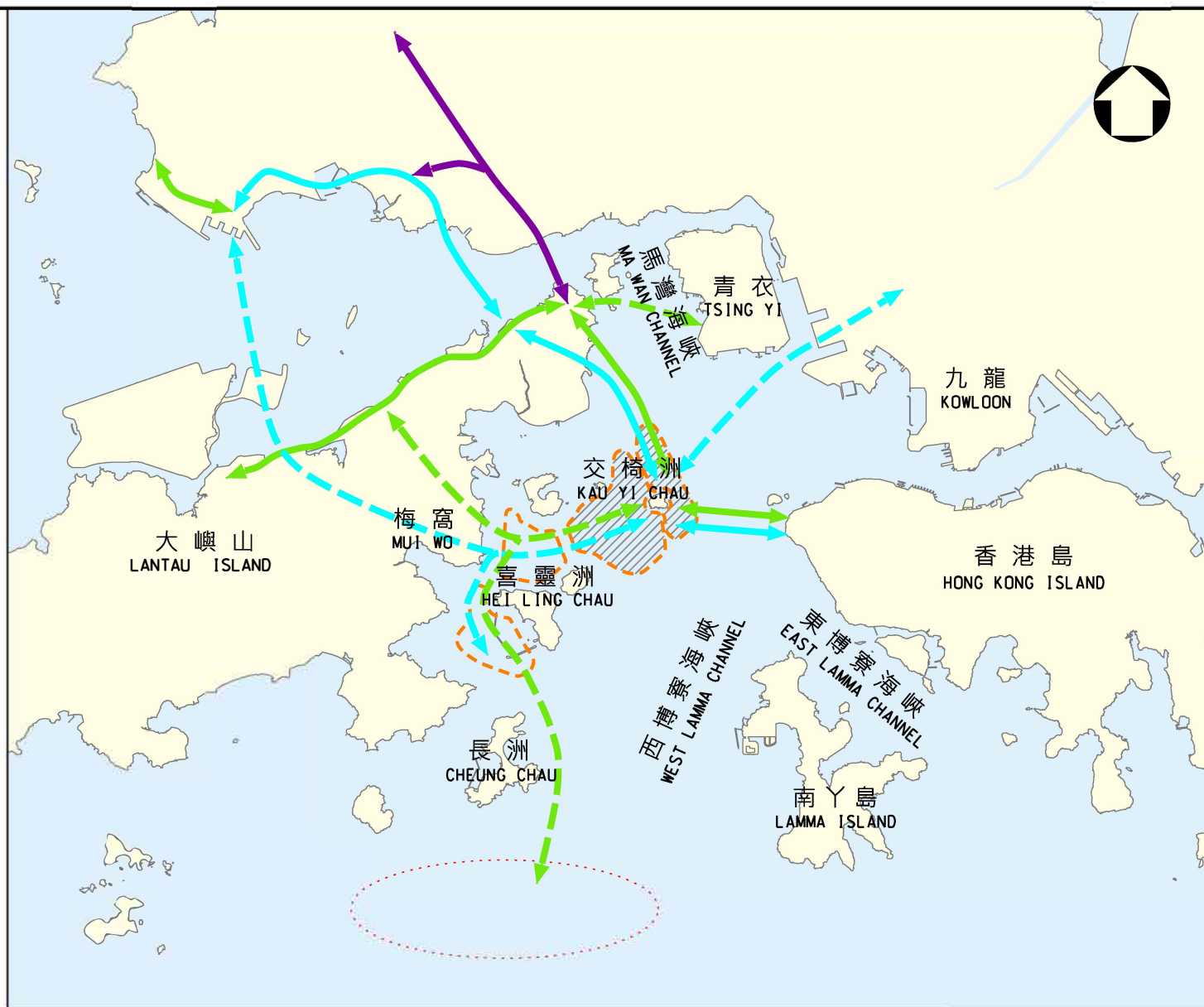
可能的較遠期鐵路連接
POSSIBLE RAIL
LINK IN LONGER TERM



可能的較遠期道路連接
POSSIBLE ROAD
LINK IN LONGER TERM



研究中的十一號幹線
[870TH - 十一號幹線(北大
嶼山至元朗)的可行性研究]
ROUTE 11 BEING STUDIED UNDER
870TH "FEASIBILITY STUDY ON
ROUTE 11 (BETWEEN NORTH
LANTAU AND YUEN LONG)"



圖則名稱 drawing title

中部水域人工島相關研究

STUDIES RELATED TO ARTIFICIAL ISLANDS IN THE CENTRAL WATERS

項目編號 item no.

768CL

比例 scale

1 : 200 000

圖則編號 drawing no.

SLO-Z0221

辦事處 office

可持續大嶼辦事處
SUSTAINABLE LANTAU OFFICE

土木工程拓展署
CEDD CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT