

立法會
Legislative Council

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Panel on Development

Meeting on 26 January 2021

**Updated background brief on the proposed
Environmentally Friendly Linkage System for Kowloon East**

Purpose

This paper provides background information on the proposed Environmentally Friendly Linkage System ("EFLS") for Kowloon East and a brief account of the views and concerns expressed by Members on the subject.

Background

2. The Kai Tak Outline Zoning Plan approved in 2007 has incorporated an indicative alignment of an EFLS running within the Kai Tak Development ("KTD"). In December 2009, the Civil Engineering and Development Department ("CEDD") commissioned a preliminary feasibility study on a rail-based EFLS. In the 2011-2012 Policy Address, the then Chief Executive announced the Energizing Kowloon East initiative to transform Kowloon East, comprising KTD, Kwun Tong and Kowloon Bay, into a central business district ("CBD").

3. The preliminary feasibility study proposed EFLS to take the form of a 9-kilometre long elevated monorail system with 12 stations and a link bridge across Kwun Tong Typhoon Shelter, namely Kwun Tong Transportation Link ("KTTL"), linking the former runway tip and Kwun Tong (**Appendix I**). According to the Administration, in drawing up the preliminary EFLS proposal, the important role of EFLS in enhancing the inter-district and intra-district connectivity of Kowloon East had been considered.

4. The Administration subsequently conducted a two-stage public consultation exercise on the preliminary EFLS proposal between early 2012 and early 2014.¹ Meanwhile, members' views on the said proposal were sought at the meeting of the Panel on Development ("DEV Panel") on 17 April 2012. During the public consultation exercise, a proposal of modern tramway at a lower construction cost as an alternative to elevated monorail was received (**Appendix II**).

5. The Administration briefed DEV Panel on the outcome of the public consultation exercise and sought the Panel's support for a funding proposal for conducting a detailed feasibility study ("DFS") in two stages on the proposed EFLS at the Panel meetings on 27 May, 16 July and 28 October 2014. The scope of DFS is in **Appendix III**. The funding proposal (at an estimated cost of \$92.3 million in money-of-the-day prices) was approved by the Finance Committee ("FC") on 16 July 2015.

6. Stage 1 of DFS, which was completed in 2017, concluded that two elevated modes, i.e. monorail or automated people mover ("APM"), should be selected as the most suitable modes of EFLS to be further examined in Stage 2. An interim public consultation exercise was then conducted to solicit public views on the findings of Stage 1.

7. Based upon the findings of the preliminary feasibility study completed in 2014 and Stage 1 of DFS completed in 2017, CEDD commenced Stage 2 of DFS subsequently to further develop the EFLS scheme, including alignment coverage, station and depot locations, financial evaluation as well as procurement and implementation strategy. According to the Administration, upon completion of the detailed assessment in Stage 2, another round of public consultation exercise will be conducted to further collect public views.

Major views and concerns expressed by Members

8. The major views and concerns expressed by Members on the proposed EFLS at the meetings of the Legislative Council ("LegCo"), FC and DEV Panel are summarized in the ensuing paragraphs.

¹ The approved project estimate of the preliminary feasibility study and public consultation exercise was \$18.7 million.

Scope of the detailed feasibility study and need for elevated modes

9. Some Members stressed the importance for the Administration to avoid adopting a pre-conceived position that the monorail option was the only choice for EFLS, and queried about the Administration's reservations of adopting other more cost-effective options (e.g. modern tramway) for EFLS. They requested the Administration to undertake that under DFS, it would evaluate various transport modes, including modern tramway, monorail, electric buses, travellers, in respect of their suitability for adoption as EFLS. They also asked whether the Administration would consider adopting a mixed-modal system for the proposed EFLS.

10. The Administration advised that it had assessed various green transport modes on equal basis under Stage 1 of DFS. According to a supplementary information paper provided by the Administration in 2017,² a mixed-modal system was not recommended for the proposed EFLS for a number of reasons. For instance, passengers might need to interchange between different green transport modes in a mixed-modal system and take longer journey time. Moreover, infrastructure and facilities requirements (such as guideway, stations and depots) differed among different transport modes and most likely could not be shared. An at-grade EFLS in Kwun Tong and Kowloon Bay was also considered not feasible in view of the limited road space and congested traffic conditions in these two areas. While the former runway in KTD would be the section that could consider an at-grade EFLS, assessment indicated that the efficiency and reliability of EFLS would be diminished due to the traffic disruption by the at-grade road traffic at junctions. Having considered various factors, the elevated monorail or APM modes were eventually selected as the most suitable modes of EFLS under Stage 1 of DFS.

11. More recently at the Council meeting of 17 June 2020, the Administration advised in its reply to a Member's question on the proposed EFLS that, during Stage 2 of DFS, CEDD found that the construction of an elevated EFLS in Kowloon East would encounter lots of technical complications and challenges, particularly for those parts in developed areas, including how EFLS could be efficiently constructed and operated in the narrow road space and crowded environment. As such, CEDD had to take a longer time to complete DFS, including studying options other than the elevated modes, with a view to identifying a suitable, practicable and cost-effective EFLS scheme.

² Source: [LC Paper No. 1424/16-17\(01\)](#)

Financial viability and procurement approach

12. Members expressed concern that the development and operation of the proposed EFLS would involve substantial costs and might be financially not viable. Some Members also expressed concern that if an elevated monorail would be adopted for EFLS, the construction and operation of EFLS might be entrusted to the MTR Corporation Limited ("MTRCL"). As a result, the market of railway service would be further dominated by MTRCL and the residents in Kowloon East might have to pay a high fare for EFLS in future.

13. The Administration advised that the objective of DFS was, after examining all possible options, to recommend the most cost-effective mode(s) that could serve the largest number of passengers in Kowloon East. The said study included financial assessment (covering construction costs,³ recurrent operating costs and fare income), procurement options and implementation programme assessment for the proposed EFLS. As the selection of the future EFLS operator was hinged on the recommended procurement method, the Administration considered it premature for the time being to decide on whether to entrust the EFLS project to MTRCL.

Network coverage

14. At various meetings of DEV Panel and FC, some Members relayed the local communities' requests for extending the coverage of the proposed EFLS to adjacent districts such as Kowloon City, Ngau Tau Kok, San Po Kong, To Kwa Wan and Wong Tai Sin. Noting that an EFLS station located at the public housing estates in KTD was proposed to be relocated to a location closer to the commercial developments, some Members pointed out that the proposed EFLS should not only serve new commercial developments in Kowloon East. It should also address the needs of local residents to travel within Kowloon East. Some other Members expressed concerns on whether there would be sufficient passenger demand to sustain the operation of the elevated monorail system.

15. The Administration advised that apart from revisiting the alignments and locations/numbers of stations, DFS considered the possibility of building in flexibility for future expansion of EFLS to adjacent districts. In estimating the patronage of EFLS, the population

³ According to the Administration in 2017, with reference to an estimate made in 2010, the construction cost of the proposed EFLS was about \$12 billion. An updated cost estimate would be made during Stage 2 of DFS.

residing or working within a zone of 500-metre radius of and eight minutes' walk from any of the proposed EFLS stations would be assumed to be within the catchment areas of the system. According to an initial assessment conducted during the preliminary feasibility study, the forecast daily patronage of EFLS in 2031 would be about 200 000.

Implementation programme

16. When the subject was discussed at a Panel meeting in July 2017, some Members expressed disappointment over the slow progress of the EFLS project and asked, in case the EFLS project could not be proceeded with, whether the Administration had evaluated the impact of the abeyance of the project on the road traffic in Kowloon East.

17. The Administration advised that the implementation timetable for EFLS would depend on the findings of DFS, including the procurement approach to be adopted and the alignment coverage of EFLS. Meanwhile, the Administration was taking forward short-, medium- and long-term measures to improve the traffic conditions in Kowloon East.

Kwun Tong Typhoon Shelter

18. Under the preliminary EFLS proposal, KTTL will run across the entrance of the existing Kwun Tong Typhoon Shelter with a suggested vertical clearance of 21 metres above the sea level, thereby rendering it impossible for some high-mast vessels to use this typhoon shelter. Some Members opined that in the absence of a satisfactory arrangement for accommodating high-mast vessels in other suitable typhoon shelters, height restriction must not be implemented at the Kwun Tong Typhoon Shelter. Some other Members suggested that, in view of the public aspirations to use the said typhoon shelter for water recreational activities, consideration should be given to relocating the Kwun Tong Typhoon Shelter. There was also a view that the alignment of the proposed EFLS should be revised, so that the development of KTTL above the Kwun Tong Typhoon Shelter would no longer be required.

19. The Administration advised that DFS looked into, among others, the alignment options of KTTL to comply with the requirements under the Protection of the Harbour Ordinance (Cap. 531), possible mitigation measures to address the impact of KTTL on high-mast vessels and the re-provisioning options for the Kwun Tong Typhoon Shelter. The trades concerned would also be consulted on the matter.

Council questions

20. At the Council meetings between June 2012 and December 2020, Members raised questions on the proposed EFLS and related subjects. The hyperlinks on the questions and the Administration's replies are provided in **Appendix IV**.

Latest developments

21. In the 2020 Policy Address delivered on 25 November 2020, the Chief Executive announced that the Government has largely completed DFS for the proposed EFLS. The study suggests implementing a multi-modal EFLS in Kowloon East, which will be more effective and desirable than a standalone infrastructure. The proposed multi-modal EFLS includes introducing new bus and green minibus routes in the area; developing travellers network linking up the former runway of Kai Tak, the Kowloon Bay Action Area and the MTR Ngau Tau Kok Station; providing a GreenWay network running through promenades and open spaces in the KTD Area for shared use by pedestrians and cyclists; constructing an elevated landscape deck to connect the MTR Kwun Tong Station; and establishing a water-taxi stand in the KTD Area. The Development Bureau plans to release the details by the end of 2020 and gauge public views on the proposed multi-modal EFLS.

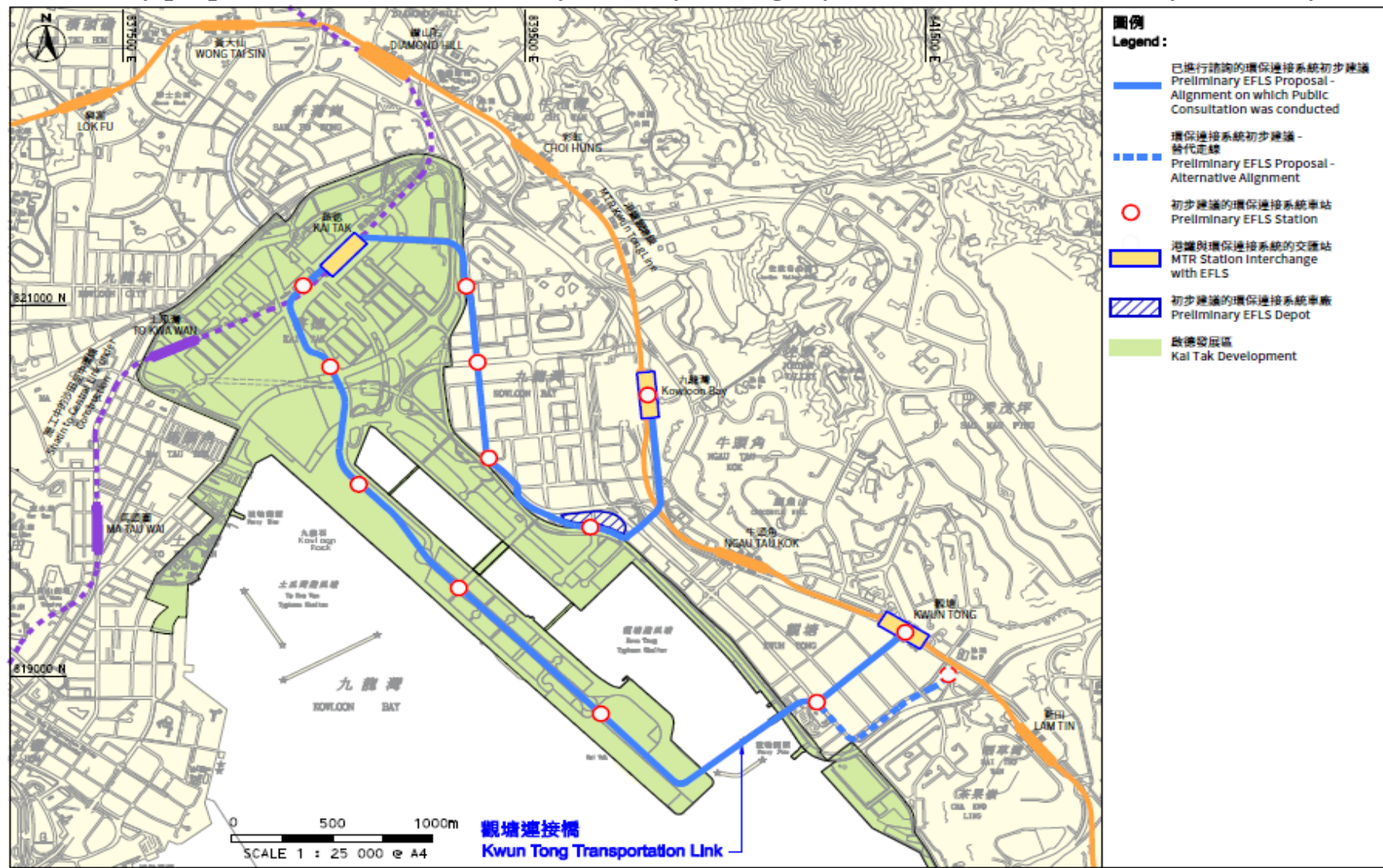
22. At the meeting of DEV Panel to be held on 26 January 2021, the Administration will brief members on the findings and recommendations of DFS for the proposed EFLS.

Relevant papers

23. A list of the relevant papers on the LegCo website is in **Appendix IV**.

初步可行性研究的環保連接系統初步建議

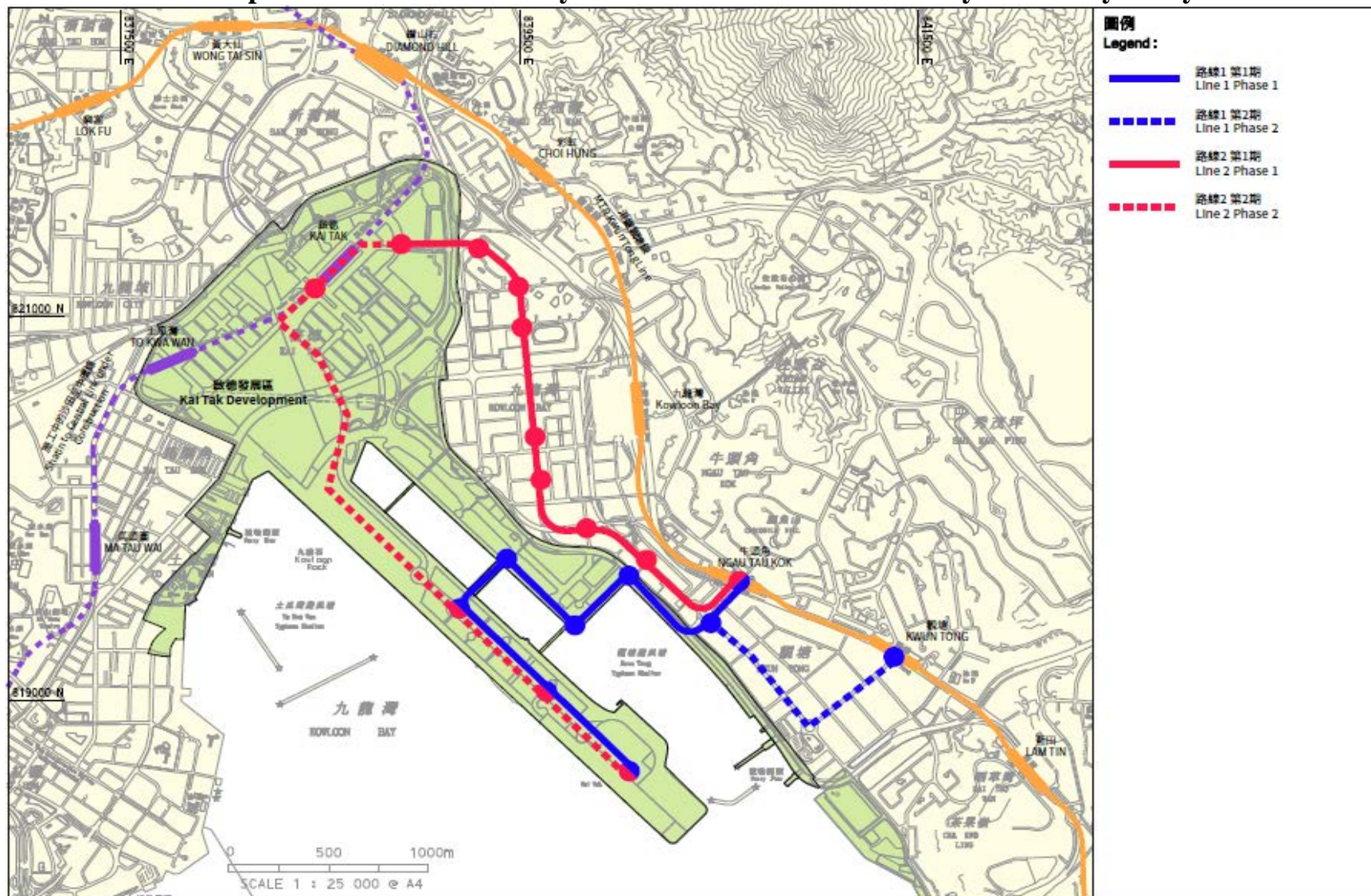
Preliminary proposal of the Environmentally Friendly Linkage System under the Preliminary Feasibility Study



資料來源：立法會CB(1)1165/16-17(05)號文件附件二

Source : Enclosure 2 to LC Paper No. CB(1)1165/16-17(05)

於初步可行性研究收到的現代電車建議
Proposal of modern tramway received under the Preliminary Feasibility Study



資料來源：[立法會 CB\(1\)1165/16-17\(05\)號文件附件三](#)
Source : Enclosure 3 to [LC Paper No. CB\(1\)1165/16-17\(05\)](#)

Scope of the detailed feasibility study for the proposed Environmentally Friendly Linkage System for Kowloon East

The scope of the detailed feasibility study comprises:

- (a) formulation of a well-planned integrated multi-modal linkage system to enhance the connectivity of Kowloon East at different stages of the central business district development;
- (b) in-depth evaluation on the most suitable green public transport mode(s) as the proposed Environmentally Friendly Linkage System ("EFLS") for Kowloon East;
- (c) review on the network development for the proposed EFLS to address key issues identified from the two-stage Public Consultation exercise and the latest development of Kowloon East, with sensitivity tests on alternative alignments or routings, station and stop locations, and connections with MTR stations covering patronage forecast, and associated economic and financial performance assessment;
- (d) study to examine the preferred alignment or routing, operation mode, station and stop design, related electrical and mechanical works, rolling stock and depot requirements of the proposed EFLS, if necessary;
- (e) assessment on innovative designs, and arrangements for enhancing attractiveness and cost-effectiveness for the proposed EFLS;
- (f) technical assessments, including preliminary environmental assessment, for the proposed EFLS;
- (g) financial assessment, procurement options and implementation programme assessment for the proposed EFLS;
- (h) topical study to examine the impacts of the proposed Kwun Tong Transportation Link ("KTTL") on the use of the water body at Kwun Tong Typhoon Shelter and/or Kai Tak Approach Channel, justifications for KTTL, mitigation measures to address impact of KTTL on high-mast vessels and any re-provisioning options of Kwun Tong Typhoon Shelter to comply with the requirements of the Protection of the Harbour Ordinance;
- (i) public consultation with relevant stakeholders; and
- (j) preliminary site investigation works including supervision.

Proposed Environmentally Friendly Linkage System for Kowloon East

List of relevant papers

Committee	Date of meeting	Paper
Panel on Development	17 April 2012	Administration's paper on "Environmentally Friendly Linkage System for Kowloon East" [LC Paper No. CB(1)1514/11-12(02)] Minutes of special meeting [LC Paper No. CB(1)2565/11-12]
	7 January 2013	Administration's paper on "Progress Report of Energizing Kowloon East Office and its Continuing Operation" [LC Paper No. CB(1)287/12-13(03)] Minutes of meeting [LC Paper No. CB(1)581/12-13]
	27 May 2014	Administration's paper on "65TR — Detailed Feasibility Study for Environmentally Friendly Linkage System for Kowloon East" [LC Paper No. CB(1)1456/13-14(04)] Minutes of meeting [LC Paper No. CB(1)2016/13-14]
	16 July 2014	Administration's paper on "65TR — Detailed Feasibility Study for Environmentally Friendly Linkage System for Kowloon East" [LC Paper No. CB(1)1774/13-14(01)] Administration's follow-up paper [LC Paper No. CB(1)89/14-15(03)] Minutes of meeting [LC Paper No. CB(1)132/14-15]
	28 October 2014	Minutes of meeting [LC Paper No. CB(1)347/14-15]

Committee	Date of meeting	Paper
Public Works Subcommittee	30 June 2015	<p>Administration's paper on "65TR — Detailed Feasibility Study for Environmentally Friendly Linkage System for Kowloon East" [LC Paper No. PWSC(2015-16)33]</p> <p>Minutes of meeting [LC Paper No. PWSC242/14-15]</p>
Finance Committee	16 July 2015	<p>Administration's follow-up paper [LC Paper No. FC240/14-15(01)]</p> <p>Minutes of meeting at 4:45 pm [LC Paper No. FC79/15-16]</p> <p>Minutes of meeting at 7:20 pm [LC Paper No. FC80/15-16]</p> <p>Minutes of meeting at 9:25 pm [LC Paper No. FC81/15-16]</p>
Panel on Development	22 November 2016	<p>Administration's paper on "Extending the Operation of Energizing Kowloon East Office" [LC Paper No. CB(1)133/16-17(04)]</p> <p>Administration's follow-up paper [LC Paper No. CB(1)361/16-17(01)]</p> <p>Minutes of meeting [LC Paper No. CB(1)411/16-17]</p>
	17 July 2017	<p>Administration's paper on "Interim Public Consultation on the Detailed Feasibility Study for Environmentally Friendly Linkage System for Kowloon East and Progress Report on Kai Tak Development" [LC Paper No. CB(1)1165/16-17(05)]</p> <p>Administration's follow-up paper [LC Paper No. 1424/16-17(01)]</p>

Committee	Date of meeting	Paper
		Minutes of meeting [LC Paper No. CB(1)1463/16-17]
	26 June 2018	Minutes of meeting [LC Paper No. CB(1)222/18-19]
	18 July 2018	Administration's paper on "Progress Report on Energizing Kowloon East Initiatives" [LC Paper No. CB(1)1242/17-18(03)] Minutes of meeting [LC Paper No. CB(1)1431/17-18]
	26 February 2019	Administration's paper on "Kai Tak Development — Infrastructure at North Apron area of Kai Tak Airport, Provision of an Additional District Cooling System at the Kai Tak Development and Progress Report on Kai Tak Development" [LC Paper No. CB(1)593/18-19(03)] Minutes of meeting [LC Paper No. CB(1)1335/18-19]
	16 December 2019	Minutes of meeting [LC Paper No. CB(1)880/19-20]
	1 December 2020	Administration's paper on "Initiatives of Development Bureau in the Chief Executive's 2020 Policy Address and Policy Address Supplement" [LC Paper No. CB(1)275/20-21(01)]

Hyperlinks to relevant Council questions and the Administration's replies:

Date	Council question
27 June 2012	Question raised by Hon Alan LEONG on " Environmentally Friendly Linkage System for Kowloon East "
24 October 2012	Question raised by Hon Paul TSE on " Ancillary Transport Facilities for New Cruise Terminal "
20 March 2013	Question raised by Hon WONG Kwok-kin on " Ancillary Transport Facilities for Future Development at Anderson Road Quarry "
6 November 2013	Question raised by Hon WU Chi-wai on " Planning for Kai Tak Development Area "
14 May 2014	Question raised by Hon Paul TSE on " Proposed Environmentally Friendly Linkage System in Kowloon East "
15 October 2014	Question raised by Hon Paul TSE on " Kai Tak Cruise Terminal "
20 November 2014	Question raised by Hon Paul TSE on " Ancillary Transport Facilities for Kai Tak Cruise Terminal "
20 April 2016	Question raised by Hon Paul TSE on " Kwun Tong Ferry Pier Waterfront Development Under "Energizing Kowloon East" Initiatives "
31 January 2018	Question raised by Hon WU Chi-wai on " Transport Planning for Kowloon East "
11 July 2018	Question raised by Dr Hon Priscilla LEUNG on " Development of the Roads and Transport Systems within Kai Tak Development "
30 January 2019	Question raised by Hon Paul TSE on " Developing Kowloon East "
20 March 2019	Question raised by Hon Wilson OR on " The Environmentally Friendly Linkage System for Kowloon East "

Date	Council question
3 April 2019	Question raised by Hon Paul TSE on " Kwun Tong Typhoon Shelter "
19 June 2019	Question raised by Hon Paul TSE on " Projects to Improve Pedestrian and Traffic Networks in Kowloon East "
22 April 2020	Question raised by Hon WU Chi-wai on " New Transport Infrastructure for Kowloon East "
17 June 2020	Question raised by Hon WONG Kwok-kin on " Environmentally Friendly Linkage System for Kowloon East "
9 December 2020	Question raised by Hon Wilson OR on " Transport Infrastructure in Kowloon East "