

立法會
Legislative Council

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Panel on Transport
Meeting on 19 April 2013

Background brief on Tuen Mun-Chek Lap Kok Link

Purpose

This paper sets out the background to the Tuen Mun-Chek Lap Kok Link ("TM-CLKL") and summarizes the discussions held by Legislative Council Members in recent years on the project at the meetings of the Panel on Transport ("the Panel"), the Public Works Subcommittee ("PWSC") and the Finance Committee ("FC").

TM-CLKL

2. TM-CLKL will be a dual two-lane carriageway connecting Tuen Mun Western Bypass ("TMWB"¹) at Tuen Mun Area 40 in the north with the proposed Hong Kong-Zhuhai-Macao Bridge ("HZMB") Hong Kong Boundary Crossing Facilities ("HKBCF"), the Airport and North Lantau in the south. The northern connection between Tuen Mun and the HKBCF will be a sub-sea tunnel while the southern connection between the HKBCF and North Lantau will be on viaducts. Please refer to **Appendix I** for the location of the viaducts, northern and southern connections, the proposed sub-sea tunnel, HKBCF and North Lantau Highway ("NLH").

3. According to the Administration, TM-CLKL helps complete a regional transportation network between Hong Kong, Macao, Shenzhen and Zhuhai, and is very important for fostering closer economic integration of Hong Kong with the Pearl River Delta Region. This road network will also bring about significant benefits for Hong Kong in the following aspects –

- (a) benefiting the development of various sectors, such as tourism, logistics, finance and commerce;

¹ TMWB will be a dual two-lane carriageway connecting TM-CLKL, Tsing Tin Road and Kong Sham Western Highway.

- (b) satisfying the transportation needs of Lantau and Northwest New Territories ("NWNT");
- (c) improvement of journey time and road capacity between NWNT and Lantau; and
- (d) provision of an alternative route to Airport.

Funding required for TM-CLKL

4. In January 2008, FC approved a funding of \$88.6 million (in money-of-the-day ("MOD") prices) for engagement of consultants to undertake site investigation and preliminary design of TM-CLKL and TMWB.

5. In November 2011, FC approved a funding of \$1,909.6 million (in MOD prices) for engagement of consultants to undertake the detailed design and associated site investigation for TM-CLKL and to construct the advance TM-CLKL southern landfall reclamation works. TMWB is retained in Category B.

Schedule of works and impact of a judicial review case

6. With regard to the construction of cross-boundary transport infrastructures between Hong Kong and the Mainland, a motion was passed at the Council meeting on 7 February 2007. The wording of the motion is in **Appendix II**.

7. The Administration scheduled to commence the construction of HZMB-related local projects, including HKBCF, Hong Kong Link Road ("HKLR") projects and advance works for TM-CLKL, before end 2010. However, the works commencement date for those projects has been affected by the legal proceedings of a judicial review ("JR") case against the decisions of the Director of Environmental Protection ("DEP") as regards the approval for the Environmental Impact Assessment ("EIA") Reports and the granting of Environmental Permits ("EPs") relating to the HZMB HKBCF and HKLR projects.²

2 On 22 January 2010, a Tung Chung resident filed an application with the Court of First Instance ("CFI") for leave for JR against the decisions of the DEP as regards the approval for the EIA Reports and the granting of EPs relating to the HKBCF and HKLR projects. The CFI handed down its judgement on 18 April 2011 quashing the EPs and therefore their construction could not commence. DEP appealed against the court's judgment. The Court of Appeal handed down its judgment on 27 September 2011, unanimously allowing DEP's appeal and therefore the EIA reports and EPs of HKBCF and HKLR projects are maintained valid.

8. According to the Administration, it was originally planned to commission the TM-CLKL together with the HZMB, but due to the abovesaid JR case, the Administration would implement the project by phases. As the 3 km viaduct of southern connection linking up the HKBCF with the NLH has to be commissioned to tie in with the commissioning of the HZMB, the Administration will, through arrangement of works, complete the southern connection of the TM-CLKL first in 2016. Regarding the sub-sea tunnel portion connecting HKBCF with Tuen Mun to the North, it would be completed in 2017 as it would not affect the commissioning of the HZMB.

9. Members raised concern about the impact on the traffic load in NWNT due to the one-year delay in the commissioning of the northern connection of the TM-CLKL. In response to a question raised at the Council meeting on 23 November 2011, the Administration advised that according to traffic impact assessment carried out by the consultants engaged by the Highways Department, the main traffic network to NWNT via NLH would become busier in 2016 (the early years after the opening of HZMB), but there should be no congestion. Under the scenario without the northern section of TM-CLKL in 2017, the vehicle/capacity ("v/c") ratio³ of the Tuen Mun Road (Sham Tseng section) would increase to 1.25 in 2017, indicating traffic congestion during peak hours. However, if the northern section of the TM-CLKL could be commissioned in 2017, the ratio was expected to drop to 1.18, indicating that congestion would not appear. This could timely avoid traffic congestion that might appear on Tuen Mun Road (Sham Tseng section) during peak hours.

10. Because of the legal proceedings, the construction commencement programme has about one year's difference with the original one. It was estimated that the overall cost increase for the HZMB related local projects due to JR is about \$6.5 billion (in MOD prices). The main reasons include the need to adjust the construction method to compress the works programme (about \$0.2 billion) such that the Bridge can be commissioned as scheduled, as well as the increase in construction prices (about \$6.3 billion).

11. Members expressed concern that the cost of the remaining works of TM-CLKL might further increase. The Administration advised that the overall cost increase of about \$6.5 billion in MOD prices for the HKBCF and advance works of TM-CLKL did not include the remaining works of TM-CLKL (involving construction of about 4 km long viaducts and about 5 km long sub-sea tunnel and associated works), and the detailed design and construction of TMWB.

³ The v/c ratio is the professional indicator to measure traffic congestion. Generally speaking, a v/c ratio of 1.2 or smaller indicates that the situation of the concerned roads during peak hours is still acceptable. If the v/c ratio is above 1.25, it indicates that there will be traffic congestion.

Quality control of works

12. On the need to compress the works programme to make up for the lost time, members expressed concern that the quality of works might be affected and the occupational safety of workers might be compromised. The Administration assured members that the adjustment of works and construction method were premised on the safety of workers and quality of works. In addition, there are established quality control guidelines governing the quality of public works in Hong Kong.

Construction manpower

13. In view of the increasing demand arising from the implementation of a large number of infrastructure projects in the following decade, some members expressed concern about the adequacy of construction manpower in Hong Kong.

14. The Administration advised that the Development Bureau and the Construction Industry Council ("CIC") had studied the demand and supply of professionals, supervisors/technicians and workers for the construction industry in the next few years. The results indicate that no major problem is anticipated in most construction-related disciplines of professionals and supervisors/technicians and the anticipated minor shortage would be manageable. Whereas, there would be adequate construction workers in head count to meet the demand of the construction industry but individual trades might face shortage and/or ageing problems. To address the anticipated minor shortage of manpower of individual trades, the Administration had collaborated with CIC to launch various initiatives to attract more people to join the industry and to enhance the skills and competitiveness of the construction workforce through training and re-training.

Environmental protection measures

15. At the Panel meeting on 26 October 2011, members noted that the Administration would implement the environmental mitigation measures, and environmental monitoring and auditing programme as recommended in the approved EIA Report for the TM-CLKL project and comply with relevant conditions under the EP and other statutory requirements for environmental protection. It would adopt mitigation measures during construction of the advance works, with particular emphasis on the protection of the Chinese White Dolphins living in the vicinity of the project site. Members also noted that the sub-sea tunnel of TM-CLKL was proposed to be constructed by tunnel boring machine ("TBM") instead of the traditional immersed tube

method. In addition, non-dredge reclamation method would be adopted in the project.

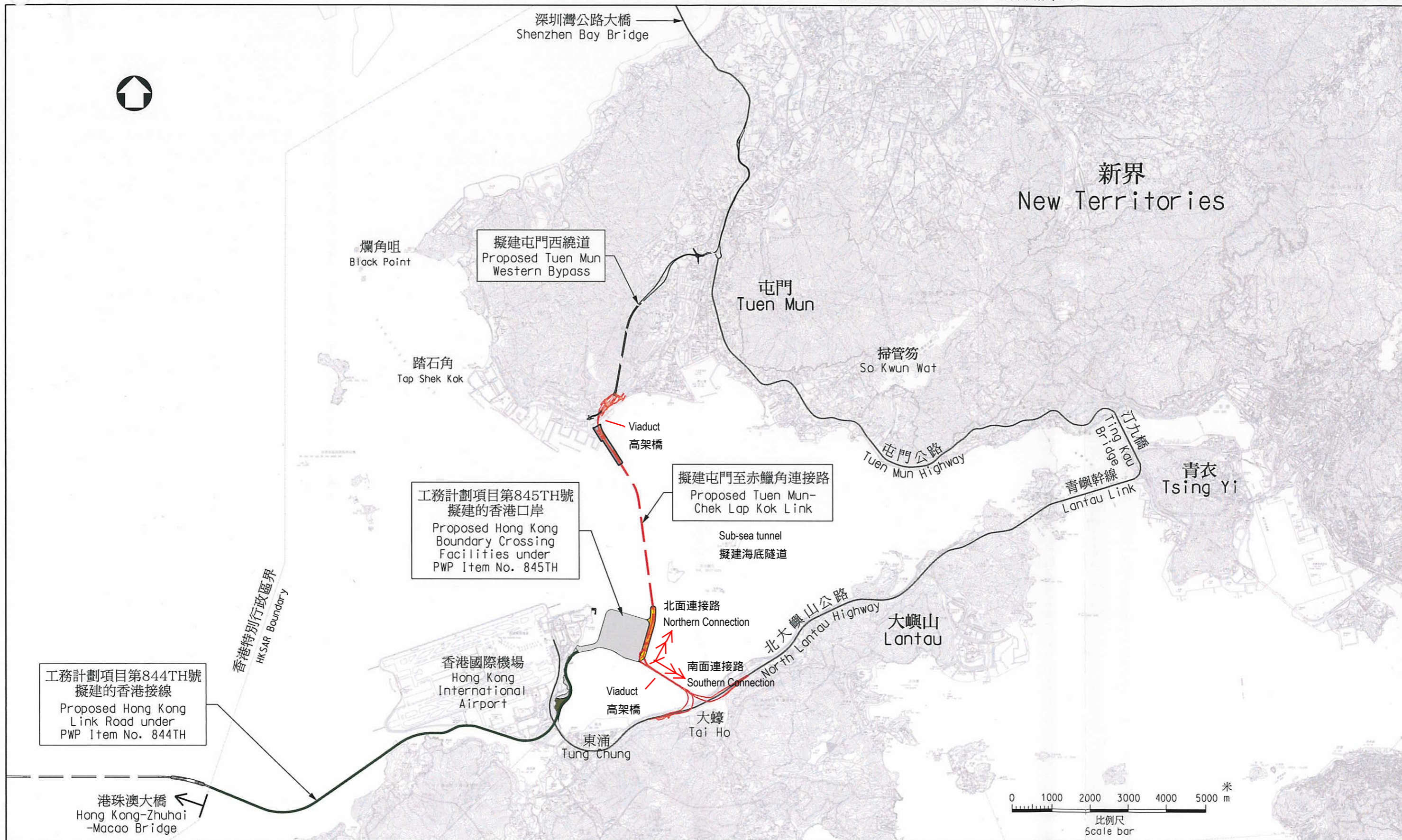
16. Some members expressed concern about the viability of the proposed construction method by TBM, and the adoption of the new non-dredge reclamation method, which would be the first of its kind in Hong Kong in carrying out reclamation. The Administration advised that the construction of the sub-sea tunnel of TM-CLKL by TBM could greatly reduce dredging and disposal of substantial amount of marine sediment and minimize the impact on the marine ecology. As regards the non-dredge reclamation method, it had been used in Japan, Singapore and the United States, and had proven to be environmental friendly for it could reduce dredging and disposal of marine mud to a large extent. This reclamation method was also adopted for the construction of HZMB Main Bridge, the western artificial island as well as eastern artificial island. The Administration had carried out the ground investigation works for the HKBCF island reclamation, which had affirmed that the new reclamation method was suitable for Hong Kong.

Latest development

17. The Administration plans to seek support for the funding application for the construction of TM-CLKL at the Panel meeting to be held on 19 April 2013.

Relevant papers

18. A list of relevant papers is in **Appendix III**.



圖則名稱 plan title

工務計劃項目第825TH號 - 屯門至赤鱗角連接路及屯門西繞道 - 位置圖
 PWP Item No. 825TH - Tuen Mun-Chek Lap Kok Link and Tuen Mun Western Bypass - Location Plan

圖則編號 plan no. HZM6825TH-SK0063
 比例 scale 1:90000

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HIGHWAYS DEPARTMENT HONG KONG 路政署 香港

(Translation)

**Motion on
“Expediently implementing the construction of cross-boundary
transport infrastructures between Hong Kong and the Mainland”
moved by Hon CHEUNG Hok-ming
at the Legislative Council meeting
of Wednesday, 7 February 2007**

Motion as amended by Hon Albert HO Chun-yan

“That, as the Government has announced its Action Agenda to tie in with the National Eleventh Five-Year Plan and fully affirmed the importance of cross-boundary cooperation between Hong Kong and the Mainland, this Council urges the Government to expedite the construction of various cross-boundary transport infrastructures between Hong Kong and the Mainland, such as the Guangzhou-Shenzhen-Hong Kong Express Rail Link, Liantang Eastern Corridor and Hong Kong-Zhuhai-Macao Bridge, and to resume the ferry services between Shatin and Eastern Guangdong, etc; at the same time, the Government should expediently review and expedite the construction of ancillary facilities for cross-boundary transport infrastructures within Hong Kong’s territory, including:

- (a) Route 10 (Northern Section), the Tuen Mun Western Bypass, Tuen Mun-Chek Lap Kok Link, Tuen Mun Eastern Bypass and the easterly link road connecting Deep Bay Link with Route 3, and taking proactive measures to optimize the use of Route 3; and
- (b) expediently completing the extension of Tuen Mun Road and widening part of its expressway section to four-lane carriageway;

to comprehensively enhance the integration with the Mainland’s transport infrastructures, so as to promote sustainable and steady development of Hong Kong’s economy.”

Tuen Mun-Chek Lap Kok Link

List of relevant papers

Date of meeting	Committee	Minutes/Paper	LC Paper No.
7.2.2007	Council Meeting	Motion on "Expediently implementing the construction of cross-boundary transport infrastructures between Hong Kong and the Mainland"	http://www.legco.gov.hk/yr06-07/english/legco_rpt/legco_motion0208-e.pdf
		Administration's Progress Report	http://www.legco.gov.hk/yr06-07/english/counmtg/motion/cm0207-m1-prpt-e.pdf
23.11.2007	Panel on Transport ("TP")	Administration's paper on Tuen Mun-Chek Lap Kok Link and Tuen Mun Western Bypass	CB(1)263/07-08(03) http://www.legco.gov.hk/yr07-08/english/panels/tp/papers/tp1123cb1-263-3-e.pdf
		Background brief on Tuen Mun - Chek Lap Kok Link and Tuen Mun Western Bypass prepared by the Legislative Council Secretariat	CB(1)264/07-08 http://www.legco.gov.hk/yr07-08/english/panels/tp/papers/tp1123cb1-264-e.pdf
		Minutes of meeting	CB(1)398/07-08 http://www.legco.gov.hk/yr07-08/english/panels/tp/minutes/tp071123.pdf
21.12.2007	Public Works Subcommittee ("PWSC")	Administration's paper on 825TH Tuen Mun - Chek Lap Kok Link and Tuen Mun Western Bypass	PWSC(2007-08)64 http://www.legco.gov.hk/yr07-08/english/fc/pwsc/papers/p07-64e.pdf

		Minutes of meeting	PWSC 46/07-08 http://www.legco.gov.hk/yr07-08/english/fc/pwsc/minutes/pw071221.pdf
11.1.2008	Finance Committee ("FC")	Administration's paper on recommendations of PWSC on Public Works Programme and Capital Subvention Projects	FCR(2007-08)42 http://www.legco.gov.hk/yr07-08/english/fc/fc/papers/f07-42e.pdf
		Minutes of meeting	FC85/07-08 http://www.legco.gov.hk/yr07-08/english/fc/fc/minutes/fc080111.pdf
26.10.2011	TP	Administration's paper on latest progress of Hong Kong-Zhuhai-Macao Bridge related infrastructure projects in Hong Kong	CB(1)126/11-12(01) http://www.legco.gov.hk/yr11-12/english/panels/tp/papers/tp1026cb1-126-1-e.pdf
		Updated background brief on Hong Kong-Zhuhai-Macao Bridge prepared by the Legislative Council Secretariat	CB(1)133/11-12 http://www.legco.gov.hk/yr11-12/english/panels/tp/papers/tp1026cb1-133-e.pdf
		Administration's supplementary information	CB(1)249/11-12(01) http://www.legco.gov.hk/yr11-12/english/panels/tp/papers/tp1026cb1-249-1-e.pdf
		Minutes of meeting	CB(1)475/11-12 http://www.legco.gov.hk/yr11-12/english/panels/tp/minutes/tp20111026.pdf

8.11.2011	PWSC	Administration's paper on 825TH Tuen Mun-Chek Lap Kok Link and Tuen Mun Western Bypass	PWSC(2011-12)32 http://www.legco.gov.hk/yr11-12/english/fc/pwsc/papers/p11-32e.pdf
		Minutes of meeting	PWSC16/11-12 http://www.legco.gov.hk/yr11-12/english/fc/pwsc/minutes/pwsc20111108.pdf
18.11.2011	FC	Administration's paper on recommendations of PWSC on Public Works Programme and Capital Subvention Projects	FCR(2011-12)48 http://www.legco.gov.hk/yr11-12/english/fc/fc/papers/f11-48e.pdf
		Minutes of meeting	FC74/11-12 http://www.legco.gov.hk/yr11-12/english/fc/fc/minutes/fc20111118.pdf
23.11.2011	Council meeting	Hon CHEUNG Hok-ming raised a question on commissioning of Tuen Mun-Chek Lap Kok Link and Tuen Mun Western Bypass and Tuen Mun Road Improvement Project	http://www.info.gov.hk/gia/general/201111/23/P201111230283.htm