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Panel on Transport
Special meeting on 24 November 2015

Background brief on emergency transport arrangements
after the closure of Kap Shui Mun Bridge

Purpose

On the night of 23 October 2015, Kap Shui Mun Bridge ("KSM Bridge") connecting Ma Wan and Tsing Chau Tsai Peninsula of Lantau Island was struck by a vessel, triggering the ship impact alarms of KSM Bridge. As a result, all lanes of KSM Bridge and Tsing Ma Bridge were closed for nearly two hours to facilitate inspection by engineering staff. During the closure period, no vehicle could enter or leave the Lantau Island, and the train services of the MTR Airport Express and Tung Chung Line were also suspended. It was the first time KSM Bridge and Tsing Ma Bridge were fully closed since their opening about 18 years ago.

2. The above incident has aroused wide public concern. This paper provides background information on the Administration's contingency strategies formulated in the 1990s to cater for the closure of land link to North Lantau and the Airport. The major views and concerns expressed by Members of the Legislative Council ("LegCo") after the incident are also summarized in the paper.

Background

KSM Bridge

3. KSM Bridge is one of the important structures in the Lantau Link which provides a direct access to the Hong Kong International Airport at Chek Lap Kok. KSM Bridge is 820-metre long and is the world's longest cable stayed bridge carrying both road and rail traffic. Similar to the Tsing Ma Bridge, it is a double decked bridge carrying a dual three lane expressway at the upper deck with two railway tracks and two single lane sheltered carriageways within the lower deck. The sheltered carriageways cater for maintenance access and

traffic diversion during high winds or in emergencies.

Contingency strategies for the closure of land link to North Lantau and the Airport

4. Before the opening of the Chek Lap Kok Airport, the then Transport Branch of the Government Secretariat briefed the Panel on Transport ("Panel") in April 1997 and March 1998 the contingency strategies for the closure of land link to North Lantau and the Airport¹. According to the Administration, the general approach is that when the Airport Railway is disrupted, the other transport services will be mobilized to use the road to help clear the traffic. Conversely, when road links are disrupted, the Airport Express Line and Tung Chung Line will be mobilized to provide the additional evacuation capacity to keep the traffic to and from the airport moving. In the event that both road and rail links are disrupted, **ferries** will be mobilized to keep the traffic moving.

5. According to the Administration, the arrangement of emergency ferry services is however constrained by the number of vessels readily available, the capacities of pier facilities at Chek Lap Kok and Tung Chung, and the difficulties in luggage handling in local ferry services. The emergency ferry services will take about two hours to mobilize. With these constraints, it is estimated that these emergency ferry services can only meet about 40% to 50% of the peak hour airport passenger demand and 15% to 25% of those of the residents and airport workers.

Follow up actions taken by the Administration after the incident

6. On the next day after the KSM Bridge incident, the Chief Executive and the Secretary for Transport and Housing ("STH") convened an inter-departmental meeting to discuss the follow-up actions. Detailed inspection was also completed by the Highways Department ("HyD"). According to HyD, the major structural components at the bridge soffit had not been damaged and the overall structural condition of the bridge was satisfactory. Only the six rails for carrying the inspection platform near the mid-span of the bridge were found damaged by the collision. Some bolts near these rails were found missing and this did not affect the structural safety of the bridge. HyD has instructed the operator of Tsing Ma Control Area to complete the repair of damaged components as soon as possible, including the damaged optical fibres, the rails of the inspection platform and the missing bolts.

¹ Paper Nos. CB(1)1227/96-97(03) and CB(1)1116

Major views and concerns of Members

7. After the incident, Members expressed grave concerns over the Administration's handling of the incident and the emergency transport arrangements after the closure of KSM Bridge. A question was asked at the Council meeting of 11 November 2015 regarding the matter. The major views and concerns of Members are summarized in the following paragraphs.

Dissemination of information to members of the public

8. Some Members were concerned that the Transport Department ("TD") has failed to respond expeditiously after the occurrence of the incident and has disseminated information in a confusing manner as reflected by members of the public. They queried whether the authorities had reviewed if the Emergency Transport Coordination Centre ("ETCC")² under TD had disseminated accurate information relating to the aforesaid incident, including information on temporary traffic arrangements, to members of the public promptly after the occurrence of the incident. There were also suggestions that HyD should use more advanced technologies to speed up the inspection process of bridges.

9. STH explained that on the night of the incident, ETCC informed the public of the enhanced frequency of Discovery Bay ferry services and the feeder buses only when it had ensured that they were ready. In the same vein, ETCC also released information to the public only after it had confirmed the details of the service provided by the Hong Kong & Kowloon Motor Boats & Tug Boats Association Ltd ("MBTA"). This is to avoid the public receiving incomplete information when the whole set of emergency service was not ready yet, which may create problems.

10. STH further said that after the incident, TD reviewed and agreed that ETCC should have informed the public of the closure of the bridge and the contingency traffic arrangements earlier. Should similar incidents happen in the future, ETCC would inform the public of the road closure and contact and coordinate with public transport operators and the Airport Authority Hong Kong ("AA") at the same time. When making the announcement, TD should also let the public know that contingency plans had been activated by the Government, including arranging emergency ferries to provide limited service, and reminding the public to consider adjusting their journey and to keep abreast of the latest information. STH further advised that to further improve the channel of information dissemination, TD was considering putting in plan a mobile phone application for the dissemination of special traffic news so that the public could get hold of the latest situation directly and immediately.

² The Emergency Transport Coordination Centre of the Transport Department monitors traffic condition 24-hour a day. Its main task is to liaise and coordinate among government departments, public transport operators and relevant organizations on the handling of traffic incidents. It also disseminates the latest traffic information to the public.

11. STH added that the Administration would adjust the alarm system so that key departments and organisations, including the Marine Department ("MD"), TD, HyD, AA and MTR Corporation Limited etc. be notified concurrently, and were aware that when the bridge alarm was triggered, full closure of the bridge would be required for emergency inspection. TD and AA would develop a one-stop platform for information dissemination as soon as possible.

Provision of temporary relief transport services by public transport operators

12. Some Members also expressed concern over the Administration's arrangement of providing emergency alternative transport services during the full closure of KSM Bridge. Some Members suggested the Administration to consider temporarily opening the SkyPier for emergency use.

13. STH advised that on the night of 23 October 2015, TD had taken action in accordance with the established contingency traffic plan. On one hand, TD requested the Discovery Bay ferry operator to enhance the frequency of services between Central and Discovery Bay which had carried a total of about 4 500 passenger trips. At the same time, TD had requested the strengthening of the bus feeder service between Discovery Bay and the Airport/Tung Chung. On the other hand, based on the emergency ferry services agreement signed between TD and MBTA, TD requested MBTA to have the first boat arrived within two hours to take passengers pursuant to the agreement. MBTA later confirmed that they were able to provide at least four sailings (i.e. two sailing each time) of emergency ferry services between Tsuen Wan West Pier and Tung Chung Development Pier at 10 pm and 10:30 pm with a total carrying capacity of around 700 passengers. However, since the Lantau Link had re-opened at around 9:40 pm that night, the planned emergency ferry services were not needed. ETCC had therefore not informed the public of the emergency ferry services arrangements.

14. Regarding the concern over the contingency traffic arrangements in case a similar incident happens again, STH advised that at present, the Lantau Link and Airport Express were the only land links connecting Lantau and other parts of Hong Kong. In case of full closure of land links, the relevant contingency measures had their limitations. For instance, the capacity and speed of sea ferries could not be compared with that of land transport. Therefore, it was imperative that the Administration prevented similar incidents from happening again. In the light of this incident, MD would seek to secure resources to strengthen marine patrols around the height restricted area of the bridge. It would also study how the alert system could be enhanced to ensure the safety of large vessels passing the relevant fairway.

Provision of alternative routes to the Lantau Island and the Airport

15. Members were concerned over the progress of constructing the Tuen Mun-Chek Lap Kok Link ("TM-CLKL") as the second trunk road connecting the Airport and the Lantau Island with other areas. Some Members suggested constructing the fifth cross-harbour railway in Hong Kong to link up Tuen Mun with Lantau Island.

16. STH advised that TM-CLKL, which is now under construction, would provide another route to connect Lantau, including the Airport, with urban areas upon commissioning. The completion time of the Southern Connection³ will tie in with that of the Hong Kong-Zhuhai-Macao Bridge Main Bridge whilst the Northern connection⁴ is targeted for completion in 2018. STH also advised that the Administration was starting to consider the need for a Route 11 which would connect Yuen Long and North Lantau. On the suggestion of constructing the fifth cross-harbour railway, STH advised that depending on the future development plan of the Lantau Island, including the East Lantau Metropolis, the transport infrastructure development arising from the development plan would also be considered in tandem.

Latest position

17. The Panel will hold a special meeting on 24 November 2015 with the Administration to discuss the emergency transport arrangements after the closure of KSM Bridge.

Relevant papers

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

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Legislative Council Secretariat
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³ The southern section of TM-CLKL is a road section of approximately 3.5 km long linking the Hong Kong-Zhuhai-Macao Bridge ("HZMB") Hong Kong Boundary Crossing Facilities ("HKBCF") and the road network of North Lantau.

⁴ The northern section of TM-CLKL is a road section of approximately 5.5 km long (including approximately 5 km of sub-sea tunnel) linking Tuen Mun Area 40 and HZMB HKBCF.

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List of relevant papers

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
11.4.1997	Panel on Transport	Administration's paper on Contingency Strategies for the Closure of Land Link To North Lantau and the New Airport Before Airport Opening	http://www.legco.gov.hk/yr96-97/english/panels/tp/papers/tp1104-6.htm
		Minutes of the meeting	CB(1)1762/96-97 http://www.legco.gov.hk/yr96-97/english/panels/tp/minutes/tp110497.htm
24.10.2015	-	Press release on CE convenes inter-departmental meeting on Kap Shui Mun Bridge incident	http://www.info.gov.hk/gia/general/201510/24/P201510240441.htm
		Press release on transcript of remarks by CE at media session	http://www.info.gov.hk/gia/general/201510/24/P201510240552.htm
		Press release on Highways Department completes the inspection of Kap Shui Mun Bridge	http://www.info.gov.hk/gia/general/201510/24/P201510240813.htm
		Press release on Transport Department's response to emergency closure of Kap Shui Mun Bridge	http://www.info.gov.hk/gia/general/201510/24/P201510240874.htm

Date of meeting	Meeting	Minutes/Paper	LC Paper No.
24.10.2015	-	Letter dated 24 October 2015 from Hon TANG Ka-piu on the incident of closure of Kap Shui Mun Bridge and the contingency arrangements	
29.10.2015	-	Press releases on transcripts of remarks by STH	http://www.info.gov.hk/gia/general/201510/29/P201510290613.htm http://www.info.gov.hk/gia/general/201510/29/P201510290822.htm http://www.info.gov.hk/gia/general/201510/29/P201510290628.htm
11.11.2015	Council meeting	Hon TAM Yiu-chung raised a question on emergency closure of Kap Shui Mun Bridge	http://www.info.gov.hk/gia/general/201511/11/P201511110551.htm

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