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**(English Translation
of the letter issued on 7 June 2016 (PWSC250/15-16(01))**

Legislative Council Secretariat
Legislative Council Complex
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(Attn: Ms. Sharon CHUNG)

By E-mail and Fax
(E-mail: chung@legco.gov.hk)
(Fax: 2978 7569)

7 June 2016

Dear Ms CHUNG,

**Public Works Subcommittee under the Finance Committee of
the Legislative Council
Meeting on 21 May 2016
823TH – Tseung Kwan O – Lam Tin Tunnel
Supplementary Information**

At the meeting held on 21 May 2016, Members of the Public Works Subcommittee under the Finance Committee of Legislative Council requested the Government to provide supplementary information on the above project. Our reply is as follows.

Matters Related to Tolling of Tunnels

2. Generally, tunnels and bridges constructed by the Government are tolled based on the “cost-recovery” and “user-pays” principles. Nevertheless, some tunnels and bridges constructed by the Government are not tolled because of individual circumstances or special reasons. For example, Cheung Tsing Tunnel (CTT), Ting Kau Bridge (TKB) and Lantau Link are within the Tsing Ma Control Area (TMCA). As some vehicles using CTT and TKB would route through the toll plaza of TMCA in Lantau and are subject to tolls, the Government did not impose

any separate toll for using CTT and TKB.

3. In determining the tolls of tunnels and bridges, the Government will take into account a series of factors, including traffic management, costs of the provision of the relevant tunnels and bridges (including the capital costs spent), the toll of alternative routes, and public affordability and acceptability, etc.

4. The Civil Engineering and Development Department (CEDD) has conducted a preliminary analysis of the effect of the toll level of the proposed Tseung Kwan O - Lam Tin Tunnel (TKO-LTT) on the diversion of traffic flow from the existing Tseung Kwan O (TKO) Tunnel. The findings indicate that if the tolls of TKO-LTT and TKO Tunnel are both \$3, the vehicles to and from Kowloon during morning and afternoon peak hours using TKO Tunnel would be slightly more than those using TKO-LTT. The split of vehicles using the two tunnels would be about 56% : 44% at most. If the toll of TKO Tunnel is kept at \$3 while the toll of TKO-LTT is set at \$6, the split would be widened to 65% : 35% at most.

5. As mentioned in paragraph 14 of PWSC (2016-17)¹⁴, any fee proposal shall be implemented through legislation. Therefore, the Legislative Council will have sufficient time to deliberate on the issue. In determining the toll level, we will make reference to the latest traffic data and carry out thorough scenario analysis so as to estimate the effect of different toll levels on the usage of the tunnels more accurately. We will timely submit the toll level proposal, factors considered and other relevant data to the Legislative Council for discussion.

6. According to our understanding, Singapore, Taiwan and United Kingdom etc. have adopted automatic toll collection methods instead of toll booths in the collection of tolls for roads or tunnels. At present, Radio Frequency Identification (RFID), Dedicated Short-range Radio Communication (DSRC) or Automatic Number Plate Recognition (ANPR) are commonly used in automatic toll collection systems. Adopting RFID or DSRC requires pre-installation of tolling devices or chips in vehicles for wireless communication of data with equipment installed on gantries / posts. ANPR, on the other hand, relies on cameras installed on gantries / posts to take images of the number plates of passing vehicles. The images are then processed to obtain the plate numbers for tolling purpose. No installation in the vehicles is required.

7. Generally speaking, the selection of automatic toll collection method is determined by many factors, including the merits and demerits of different

technologies (including protection of privacy, the coverage of the service, accuracy of vehicle number recognition), requirements on devices to be installed in vehicles, cost to be borne by car owners for devices installed in vehicles, overall cost, compatibility with the automatic toll collection systems of toll tunnels in Hong Kong and the number of occasional drivers who do not use the toll system regularly, etc. As mentioned in paragraph 14 of PWSC (2016-17)¹⁴, we will study the feasibility of electronic toll collection and consult the Legislative Council in due course. At present, the RFID chips to be installed in vehicles are inexpensive and cost only a few US dollars. In the case of Taiwan, the first-time installation of chip is free of charge whereas the fee for subsequent replacement is TWD99 (about HK\$24). Singapore now adopts DSRC, which requires installation of devices inside vehicles. We understand that, in 1998, the Singapore government provided free-of-charge installation of the devices for all vehicles before implementation of electronic toll collection. At present, the charge to install or replace the device is SGD150 (about HK\$850).

Measures to Alleviate the Noise and Light Nuisances of the Eastern Harbour Crossing Toll Plaza

8. The Eastern Harbour Crossing (EHC) was commissioned in 1989. During the planning of Yau Lai Estate Phases 1 and 5 from 2003 to 2006, the Housing Department considered the impact of the traffic noise of the approach roads to Kowloon of the EHC, Lei Yue Mun Road and Yau Tong Road. To mitigate the noise impact on the residents of Yau Lai Estate arising from these roads, noise mitigation measures (including the construction of vertical and cantilever noise barriers, provision of architectural fins on buildings to screen off traffic noise, positioning of a 20-metre high structure with car-parks between buildings and carriageways to serve as a barrier of noise, etc.) have been implemented in the estate according to the Hong Kong Planning Standards and Guidelines (HKPSG). Following the HKPSG, to reduce impact on residents, the Housing Department has also installed openable well-gasketed windows with 6mm-thick glass for units of Yau Lai Estate Phases 1 and 5 which would still be subject to noise impact due to design constraints.

9. Currently, EHC is managed and operated by New Hong Kong Tunnel Company Limited (NHKTC) under the relevant ordinance and the Build-Operate-Transfer franchise agreement. According to the information provided by NHKTC, low noise road surfacing materials meeting the required standard were laid on suitable road sections of the Kowloon approach roads to EHC

to reduce traffic noise. After the EHC franchise expires in August this year, the Government will take over the ownership of EHC. Upon the transfer of ownership, the Environmental Protection Department and other relevant departments will consider to investigate if there is scope to further mitigate the traffic noise impact on Yau Lai Estate.

10. Regarding the mitigation measures for light nuisance, upon the government taking over the ownership of EHC in August this year, the Transport Department will require the EHC operator to switch off the advertisement lighting system in the toll plaza from 11 pm to 7 am the next morning so that the impact of the advertisement lighting on the residents will be reduced.

11. The CEDD has incorporated mitigation measures in the TKO-LTT project to minimise the impact on the environment along the alignment (including Yau Lai Estate). For instance, the main carriageway at Lam Tin Interchange will be constructed at around 20 metres below the adjacent ground level and be covered by landscape deck and noise cover. Some slip roads in the Interchange will be constructed in tunnel forms and hidden between cut-slopes or are provided with noise barriers or enclosures so as to reduce the noise impact. The recommended environmental mitigation measures of the project have met the requirements of the Environmental Impact Assessment (EIA) Ordinance. The Environmental Protection Department approved the EIA Report of the project with conditions (please refer to PWSC (2016-17)14 footnote no. 7 for the conditions) on 11 July 2013 and issued the Environment Permit for the construction and operation of the project on 15 August 2013.

Yours sincerely,

(Jessica LEE)
for Secretary for Transport and Housing

c.c.

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