

**A brief account of Chapter 8 of Report 70  
“Sha Tin Section of Route 8”  
by the Director of Audit  
at the Public Hearing of the Public Accounts Committee  
of the Legislative Council on Tuesday, 29 May 2018**

Mr. Chairman,

Thank you for inviting me to give a brief account of Chapter 8 of Report No. 70 of the Director of Audit, entitled “Sha Tin Section of Route 8”.

This Audit Report comprises four PARTs.

PART 1 of the Report, namely “Introduction”, describes the background to the audit.

Route 8 links Sha Tin with North Lantau via Cheung Sha Wan and Tsing Yi. This 27.7-kilometre (km) expressway comprises three road sections, namely North Lantau Section (14.5 km), Tsing Yi Section (7.6 km) and Sha Tin Section (5.6 km). In order to alleviate traffic congestion at the then existing road links between Kowloon and Sha Tin, and meet the future traffic demand, the Government commenced the construction of Sha Tin Section (linking Sha Tin and Cheung Sha Wan) in 2002. The construction was implemented through awarding three works contracts (referred to as Contracts A, B and C in the Report) and a traffic control and surveillance system (TCS System) contract (Contract D). The project works under Contracts A, B and D were implemented by the Highways Department (HyD) while those works under Contract C were entrusted to the Civil Engineering and Development Department (CEDD) for implementation. The design and construction supervision work of Sha Tin Section were conducted under Consultancy X (for Contracts A and B by Consultant X) and Consultancy Y (for Contract C by Consultant Y).

The Finance Committee (FC) of the Legislative Council approved funding of \$7,080 million in total for the investigation, detailed design and construction of Sha Tin Section. After the substantial completion of the main works, Sha Tin Section was commissioned in March 2008. As of December 2017, the Government had incurred \$6,180 million for the Sha Tin Section

project. Although the total expenditure of the four contracts was higher than the original contract sum by about \$1,000 million, the total expenditure of the Sha Tin Section project was \$900 million (13%) below the funding approved by the FC.

The Audit Commission (Audit) has recently conducted a review of Sha Tin Section of Route 8, covering mainly Contracts A to C. For contract D which involved the implementation of the TCS System for both Sha Tin Section and Tsing Yi Section, an audit review of Tsing Yi Section in 2014 had covered this contract.

PART 2 of the Report examines the administration of Contract A by the HyD.

Contract A mainly covered the construction of a dual three-lane Lai Chi Kok (LCK) Viaduct from Lai Wan Interchange to Butterfly Valley and a carriageway within Butterfly Valley, with a total length of 1.9 km. The HyD awarded Contract A to Contractor A in September 2003 at a contract sum of \$1,070 million and the contract period was about 49 months. The contract works were completed in November 2009, about 24 months later than the original completion date. The total contract expenditure (including payment for contract price fluctuation) was \$1,445 million. In the construction of the viaduct, there were disputes under Contract A and disputes under Consultancy X. The disputes under Contract A mainly consisted of two key issues, namely adequacy of the design for viaduct structure and erection, and measurements and valuations of additional or varied works (a majority of which were related to the viaduct design). The disputes under Consultancy X were mainly in respect of the viaduct design issues. In the event, on a “without admission of liability” basis, the Government agreed to pay \$273 million to Contractor A and Consultant X agreed to pay \$133 million to the Government to settle all the disputes under Contract A and Consultancy X.

Audit examination revealed that in the course of disputes resolution, having considered legal opinion and views of an engineering expert on the design of LCK Viaduct, the HyD noted that the construction and erection loadings did not appear to have been properly considered in Consultant X’s design and that Consultant X’s response to a tender query requesting clarification of the temporary loads used in Consultant X’s design could lead to confusion that construction and erection loadings had been considered in Consultant X’s design. Therefore, Audit has recommended that the HyD

should, in implementing a works project in future, take measures to strengthen vetting of a consultant's design and handling responses to tender queries, including reminding consultants to provide a clear and accurate response.

PART 3 of the Report examines the administration of Contract B by the HyD and Contract C by the CEDD.

Contract B covered the construction of a 2.1 km long dual three-lane Eagle's Nest (EN) Tunnel and associated works. The HyD awarded Contract B to Contractor B in September 2003 at a contract sum of \$1,836 million and the contract period was about 49 months. The contract works were completed in February 2009, about 15 months later than the original completion date. The total contract expenditure (including payment for contract price fluctuation) was \$2,317 million. Audit examination revealed that, in Contract B, there were discrepancy between contract clause and contract drawing and unclear contract clauses for measurement of tunnelling works. As a result, relevant works items were omitted in the Bills of Quantities. In the event, the HyD paid \$98.3 million in total to Contractor B for the relevant works items. In this connection, Audit has recommended that the HyD should, in preparing documents for a works contract in future, take measures to strengthen the checking of consistency between contract clauses and contract drawings and the vetting of tender documents regarding contract clauses for the measurement of works.

Contract C mainly covered the construction of a dual three-lane Sha Tin Heights (STH) Tunnel and a tunnel approach road in Tai Wai, with a total length of 1.6 km. The CEDD awarded Contract C to Contractor C in November 2002 at a contract sum of \$1,074 million and the contract period was about 54 months. The contract works were completed in September 2008. The total contract expenditure (including payment for contract price fluctuation) was \$1,200 million. Audit examination revealed that, due to a processing error during the drafting of Contract C by the CEDD, the period for Contractor C to provide facilitation works to enable the HyD contractors to carry out follow-on works at its site areas was defined to be about 7.5 months, instead of the agreed duration of 9 months. Therefore, Audit has recommended that the CEDD should, in preparing contract clauses for time programmes for a works contract in future, take measures to ensure their accuracy and consistency.

PART 4 of the Report examines the usage and management of Sha Tin Section.

One of the justifications for constructing Sha Tin Section of Route 8 was to alleviate the traffic congestion at the road links between Kowloon and Sha Tin, in particular Lion Rock Tunnel and Tate's Cairn Tunnel. According to the statistics of the Transport Department (TD), as of April 2017, during weekday peak hours, EN Tunnel and STH Tunnel of Sha Tin Section still had spare capacity while Lion Rock Tunnel and Tate's Cairn Tunnel had exceeded their respective design capacities. In this regard, Audit has recommended that the TD should explore measures to make better use of the spare capacity of Sha Tin Section of Route 8 to alleviate the traffic congestion at the road links between Kowloon and Sha Tin.

Sha Tin Section, together with Tsing Yi Section of Route 8, form the Tsing Sha Control Area (TSCA). The TD has outsourced the management, operation and maintenance of the TSCA to an operator through open tender since commissioning of Sha Tin Section. Government departments (such as the TD, the Electrical and Mechanical Services Department and the Architectural Services Department) monitor the operator's performance under their respective purview. Audit examination revealed that the operator was not able to continuously maintain the required staff manning level since the commencement of the contract in September 2013. In particular, the staff shortfall problem for electrical and mechanical staff was more significant. In addition, as of December 2017, the manning level of administrative and supporting staff and that of building maintenance staff had not been monitored since the commencement of the contract. Therefore, Audit has recommended that the TD should, in collaboration with the relevant departments, take measures to ensure that the TSCA operator complies with the manning level requirement in the contract and to monitor the operator's performance effectively.

Our views and recommendations were agreed by the relevant departments. I would like to take this opportunity to acknowledge with gratitude the full cooperation, assistance and positive response of their staff during the course of the audit review.

Thank you, Mr. Chairman.