

## **A. Introduction**

The Audit Commission ("Audit") conducted a review of the Highways Department ("HyD")'s planning and implementation of the Tung Chung Road ("TCR") Improvement Project.

2. The Committee did not hold any public hearing on this subject. Instead, it asked for written responses to its enquiries.

## **B. Project planning and environmental impact assessment**

3. TCR is the only vehicular access connecting North and South Lantau between Tung Chung and Cheung Sha. From 2002 to 2009, the Government implemented the TCR Improvement Project to progressively upgrade TCR from a single-lane road for two-way traffic to a single two-lane road with lower gradients.

4. The Committee noted that the HyD had spent \$9 million and three years from 1998 to 2000 to examine a road option between Tai Ho Wan and Mui Wo ("Tai Ho Wan Option"), which was eventually abandoned (mainly because the works would affect areas of ecological significance), and reverted back in 2001 to the on-line option between Tung Chung and Cheung Sha ("Adopted Option"). The Committee enquired about the following:

- what was the reason(s) for the HyD spending three years to examine the Tai Ho Wan Option; and
- whether the HyD agreed that it had grossly under-estimated the adverse impacts of the proposed works for the construction of the Tai Ho Wan Option on the surrounding environment.

5. In his letter of 24 May 2013 (in *Appendix 14*), **Director of Highways** explained that:

- the Tai Ho Wan Option was recommended in 1997 in view of its shorter alignment and more desirable gradient, as there had been successful cases of development across Tai Ho Wan before 1997. As the Tai Ho Wan Option was not supported by the Advisory Council on the Environment in July 1999 on grounds of inadequate justifications,

amongst others, the HyD then submitted a revised Environmental Impact Assessment ("EIA") report that included mitigation measures to reduce potential impact and a comparison of the key environmental implications of different alignment options. Coupled with the late changes in development planning such as the designation of Tai Ho Wan as a Site of Special Scientific Interest ("SSSI") in 1999, the Environmental Protection Department informed the HyD in November 2000 that the revised EIA report for the Tai Ho Wan Option did not meet the requirements. The HyD had then re-examined other road options and identified the Adopted Option in early 2001;

- the infeasibility of the Tai Ho Wan Option was only becoming more apparent when the designation of Tai Ho Wan as a SSSI was made in May 1999. With the benefit of hindsight, the HyD could have adopted a more conservative stance in assessing the difficulties and making allowances in delivering the Tai Ho Wan Option in ecological sensitive area under the then newly enacted Environmental Impact Assessment Ordinance (Cap. 499); and
- it was now the standing practice for the HyD to conduct thorough examination to identify various feasible options for comparison before recommending the final option. As part of this process, Project Steering/Working Groups with members from various bureaux and departments would be formed to deliberate and give steer on various planning and engineering matters. The HyD would strengthen the communication with the concerned parties during the EIA process. The HyD would pay particular attention to project areas that were ecologically significant/sensitive, and would critically and promptly review the feasibility of project options when there were significant changes in circumstances.

### **C. Implementation of the TCR Improvement Project**

6. The TCR Improvement Project was carried out under two works projects by two Government departments respectively, namely Project A (from Pa Mei to Lung Tseng Tau) by the Civil Engineering and Development Department and Project B (from Lung Tseng Tau to Cheung Sha Sheung Tsuen) by the HyD. Contract A under Project A commenced in May 2002 was substantially completed in December 2003 at a cost of \$22.6 million, which was on schedule and within budget. Contract B under Project B commenced in June 2004 was substantially completed in June 2009

at a cost of \$743.5 million. There was a 36-month delay and a 32% cost increase in completing Contract B. Single two-lane TCR was open to traffic in February 2009.

7. The Committee enquired:

- whether the HyD had established a mechanism to first consult the views of the Transport Department ("TD") on the number of road permits required for the excavation programme in Contract B, having regard to a number of factors which the TD had to take into consideration, such as the prevailing traffic condition, spare road capacity, road safety concern, nuisance caused to the public and construction details proposed by the works agent, in issuing the road permits; and
- whether the HyD had established a mechanism to first consult the TD on the number of road permits required for the construction works before awarding, since the completion of the TCR Improvement Project.

8. **Director of Highways** replied in the same letter that:

- the HyD had consulted the TD in specifying the number of road permits required for the excavation programme in Contract B taking into consideration the various factors so mentioned; and
- the HyD, in collaboration with the TD, was conducting a post-completion review of the TCR Improvement Project, taking into account the audit observations in the Director of Audit's Report ("Audit Report"). For similar contracts in the future that required road permits, the HyD would consult the TD on the maximum number of permits during the design stage, with reference to the traffic conditions, road capacity, road safety considerations, nuisance caused to the public, proposed construction details etc., and would assess its impact on the programme of works before adopting the requirement in the contract documents. The HyD considered that specifying an exact number of road permits in the contract should be avoided in the future as far as possible. During the construction period, the Contractor/Engineer should maintain close liaison with the TD on the application of the road permits to ensure that it could comply with the contract requirement.

9. As revealed in paragraph 3.21 of the Audit Report, after commencement of works for Project B, the actual site conditions were however found significantly different from those identified in the site investigation. The Committee enquired whether it was a normal occurrence that the ground conditions were found significantly different from those identified in the site investigation and whether there was any mechanism to avoid such occurrence from recurring.

10. **Director of Highways** responded as follows:

- as a norm, site investigation could provide general recognition of underground conditions. It should however be noticed that there were always limitations in taking representative samplings on site; and hence it was not uncommon that the type of foundation and quantities of earthwork would be subject to variations under difficult ground conditions not foreseen before;
- as a rather unique factor for the TCR Improvement Project, the variations to actual ground condition were mainly due to difficulties in carrying out site investigation in areas of highly vegetated and inaccessible areas and the restriction that cutting of trees/shrubs was not allowed within the country parks before commencement of the contract; and
- for similar projects in the future, the HyD would strengthen liaison with relevant parties with a view to conducting pre-contract site investigation as far as practicable where site conditions permitted. The HyD would also carry out risk assessments to analyse the probable variations that might be encountered during construction and would make adequate provisions in the tender and budget.

11. The Committee notes the above replies of Director of Highways and wishes to be kept informed of the progress made in implementing the various recommendations made by Audit.