### APPENDIX 14



#### HIGHWAYS DEPARTMENT MAJOR WORKS PROJECT MANAGEMENT OFFICE

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24 May 2013

Clerk to Public Accounts Committee Legislative Council Secretariat Legislative Council Complex 1 Legislative Council Road Central Hong Kong

(Attn: Ms Mary SO)

Dear Ms So,

# Public Accounts Committee Consideration of Chapter 6 of the Director of Audit's Report No. 60

## **Tung Chung Road Improvement Project**

I refer to your letter ref. CB(4)/PAC/R60 dated 6 May 2013 and am pleased to respond as follows:

## Project planning and environmental impact assessment

(a) Right from the start of the study in 1996, the Highways Department (HyD) recognized that identification of an improved road alignment replacing the original highly sub-standard Tung Chung Road (TCR) which traverses the Lantau North and South Country Parks would be a very difficult task given the need to balancing various technical and geographical constraints and environmental requirements. In fact, the



TCR Improvement Project was among one of the earliest projects implemented under the Environmental Impact Assessment Ordinance (EIAO) that came into effect in April 1998. At that time, experience and expertise in HyD, the consultants and the construction industry were still building up. As there were projects successfully implemented in areas of ecological significance for example the construction of North Lantau Highway across Tai Ho Wan before 1997, HyD had been diligently proposing mitigation measures to address the environmental concerns raised by various parties with a view to meeting the requirements. The infeasibility of the Tai Ho Wan Option was only becoming more apparent when the designation of Tai Ho Wan as a Site of Special Scientific Interest (SSSI) was made in May 1999 which was about one year after commencement of the Study on that Option. With the benefit of hindsight, 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 EIAO.

- (b) Consultant X considered the Tai Ho Wan Option as a feasible option in both technical and environmental aspects in the feasibility study carried out in 1996/97 and in anticipation of the enactment of the EIAO. It was however before the enactment of EIAO or designation of SSSI in Tai Ho Wan when local experience of the consultants on working in ecological sensitive areas under the new EIAO regime had yet to be built up. As mentioned in (a) above, HyD then proceeded with the investigation and preliminary design of the Tai Ho Wan Option including the EIA. After the completion of the TCR Improvement Project, HyD does not have the opportunity of engaging Consultant X again as it has been acquired by another company.
- (c) In fact, HyD started off the study by examining the option of upgrading the original TCR along the on-line alignment but it was found not acceptable due to excessive gradients of some sections of the road and concerns raised by the Country and Marine Parks Board on adverse impacts on the Lautau South Country Park. In 1997, HyD then explored other road options and the Tai Ho Wan Option was recommended in view of its shorter alignment and more desirable gradient. This option was recommended as there had been successful cases of development across Tai Ho Wan before 1997. This option was however not supported by the Advisory Council on the Environment in July 1999 on grounds of inadequate justifications; assessment criteria and comparisons of various options; and mitigation measures in reducing environmental impacts. HyD then submitted a revised 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 SSSI in 1999, the Environmental Protection Department informed HyD in November 2000 that the revised EIA report for the Tai Ho Wan Option did not meet the requirements. HyD had then reexamined other road options promptly and identified the Adopted Option in early 2001. It is apparent that it took time to accommodate all the changes and examine the various alternative alignments including the Adopted Option in that period of time. HyD considers that, without prior examination of the other possible alternative alignment options, the Adopted Option could not evolve over time since the Adopted Option was less desirable in terms of road design standard and engineering difficulties. It was in fact a compromised option taking into account the views of various stakeholders and the need to implement the project as early as possible to allay public concern.

It is now the standing practice for HyD to conduct thorough (d) 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 are formed to deliberate and give steer on various planning and engineering matters. HyD will continue the current practice in implementing a road project with reference to the Technical Memorandum and Guidelines issued by the Environmental Protection Department from time to time. HyD will strengthen the communication with the concerned parties during the EIA process. HyD will pay particular attention to project areas that are ecologically significant/sensitive, and will critically and promptly review the feasibility of project options when there are significant changes in circumstances.

## Implementation of the TCR Improvement Project

- (e) HyD had consulted the Transport Department (TD) in specifying the number of road permits required for the excavation programme in Contract B taking into consideration the various factors so mentioned.
- (f) HyD, in collaboration with TD, is conducting a post-completion review of the TCR Improvement Project, taking into account the audit observations in the Audit Report. For similar contracts in the future that require road permits, HyD will consult 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 will assess its

impact on the programme of works before adopting the requirement in the contract documents. Specifying an exact number of road permits in the contract should be avoided as far as possible. During construction, the Contractor / Engineer should maintain close liaison with TD on the application of the road permits to ensure that it could comply with the contract requirement.

As a norm, site investigation can provide general recognition of (g) underground conditions. It should however be noticed that there are always limitations in taking representative samplings on site; and hence it is 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. For similar projects in the future, HyD will strengthen liaison with relevant parties with a view to conducting pre-contract site investigation as far as practicable where site conditions permitted. HyD will also carry out risk assessments to analyse the probable variations that might be encountered during construction and will make adequate provisions in the tender and budget.

The bilingual versions of this letter will be separately emailed to "sywan@legco.gov.hk" as requested.

Yours sincerely,

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(Mrs Joanna KWOK) for Director of Highways

c.c. Secretary for Transport and Housing (Attn: Mr Edward TO) Secretary for Financial Services and the Treasury (Attn: PEO(G)) Director of Audit (Attn: Mr Albert WONG)