

# Report No. 48 of the Director of Audit — Chapter 3

## GREENING WORKS OF THE CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

### Summary

1. The Civil Engineering and Development Department (CEDD) is responsible for carrying out most of the greening works under capital works projects. In the recent four years (2002-03 to 2005-06), the CEDD on average spent \$148 million a year on greening works. The Audit Commission (Audit) has recently conducted a review of the CEDD's administration of greening works under: (a) a trunk road project in Ma On Shan (Project A); (b) a land development project in Kowloon East (Project B); (c) an erosion-control planting term contract; and (d) Greening Master Plans. In the review, Audit has found that there are areas where the CEDD can make improvement.

#### Greening works under Project A

2. Project A was for the construction of a 3.2-kilometre trunk road in Ma On Shan. Of the 2,816,100 plants specified in the contract (Contract A) of Project A, the actual number of plants grown under the contract was 869,100, accounting for only 31% of the quantity specified. The CEDD informed Audit that the shortfall was due to an overestimation of plants in Contract A's Bills of Quantities (BQs) and design changes after the award of the contract.

3. **Room for improvement in checking BQs for greening works.** According to the CEDD's Project Administration Handbook, BQs should be checked before issue to tenderers. However, Audit noted that the CEDD had made an overestimation of 497,400 plants in Contract A's BQs. *Audit has recommended that the Director of Civil Engineering and Development should take measures to strengthen the checking of BQs for accuracy in works contracts.*

4. **Room for improvement in planning greening works.** After the award of Contract A, the CEDD made design changes which resulted in a reduction of 1,455,800 plants. *Audit has recommended that the Director of Civil Engineering and Development should give due consideration to the following factors in estimating the quantities of greening works in works contracts: (a) the availability of site office and storage areas for planting during the contract period; (b) the need to plant more trees and shrubs instead of groundcover plants in areas under urban-landscape designs; and (c) the suitability of amenity planting under bridge decks.*

5. ***Need to improve pest control over imported plants.*** In 2004, some of the imported palm trees planted under Contract A were infested by pest and had to be destroyed. In January 2005, the Agriculture, Fisheries and Conservation Department (AFCD) issued guidelines on the importation of palm trees. *Audit has recommended that the Director of Civil Engineering and Development should comply with the AFCD's guidelines when importing palm trees in future.*

6. ***Need for guidelines on use of native plant species.*** The CEDD's Environmental Impact Assessment study for Project A recommended that plants selected for landscaping should be similar to those of the nearby woodland. However, Audit examination revealed that, under Contract A, only 43% of the plants for slope planting and 20% for amenity planting were native species. *Audit has recommended that the Director of Civil Engineering and Development should consider issuing guidelines on the use of native plant species for greening works under works projects.*

7. ***Need to provide full recurrent cost information.*** According to Financial Circular No. 5/86, a project department should estimate the recurrent cost of a capital works project and provide the information in the funding application. In 2000, in estimating the recurrent cost of Project A, the CEDD did not include the recurrent cost of maintaining the greening works. As a result, there was a delay in the taking over of the greening works maintenance by the Leisure and Cultural Services Department. *Audit has recommended that the Director of Civil Engineering and Development should remind CEDD staff to: (a) provide full recurrent cost information in the funding application for a capital works project; and (b) obtain the maintenance departments' consent to absorb the maintenance costs prior to seeking funding for a capital works project.*

## **Greening works under Project B**

8. Project B involved the provision of 20 hectares of land and infrastructures for housing, school and recreational developments. The CEDD's Environmental Impact Assessment study recommended that greening works should be carried out for this project to minimise the adverse visual impact of the rock slopes.

9. ***Need for early resolution of maintenance responsibility.*** Before the award of a contract (Contract B) under Project B in November 2001, the CEDD could not reach agreement with another department on the maintenance responsibility for the greening works on some slopes. Subsequent to the award of the contract, the Highways Department agreed to take up the maintenance of the greening works subject to some design changes. The CEDD implemented the changes and incurred additional cost. *Audit has recommended that the Director of Civil Engineering and Development should, on the maintenance of a project involving greening works, remind CEDD staff to obtain in-principle agreement from the relevant maintenance departments at an early stage.*

10. ***Need for improving the appearance of slopes.*** In June 2005, the Housing Department expressed concerns that the greening works under Contract B might not be effective for covering the massive slopes facing a public housing site. In 2006, the CEDD, the Housing Department and the Housing, Planning and Lands Bureau agreed that greening-enhancement works should be carried out for the slopes formed to meet growing public aspirations for a better living environment. The Administration plans to fund the greening-enhancement works under a new public works project item. *Audit has recommended that the Director of Civil Engineering and Development should take measures to maximise greening opportunities for slope formation works near public housing sites to improve slope appearance.*

### **Erosion-control planting**

11. ***Need to take prompt action for improvement measures.*** In 1997 and 1998, the CEDD technical audit team found that there were areas for improvement in the CEDD's site supervision of erosion-control planting works. In its review in 2004, the CEDD found that the technical audit team's findings in 1997 and 1998 were still valid. In 2006, the CEDD implemented new site supervision procedures. *Audit has recommended that the Director of Civil Engineering and Development should promptly implement improvement measures to address the CEDD technical audit team's findings in future.*

12. ***Need to strengthen tender vetting procedures.*** In October 2004, the CEDD awarded a new landscape term contract containing two cost elements which were inconsistent with a contract provision used for contract-price fluctuation adjustment. In 2005, the CEDD entered into a supplementary agreement with the contractor to rectify the inconsistency. In 2006, the CEDD strengthened its tender vetting procedures. *Audit has recommended that the Director of Civil Engineering and Development should closely monitor the implementation of the 2006 procedures for vetting tender documents to ensure compliance by CEDD staff.*

13. ***Room for improvement in conducting public consultations.*** According to Environment, Transport and Works Bureau Technical Circular No. 34/2003, works departments should consult District Councils on the greening works of capital works projects prior to tender invitation. In 2005, the CEDD carried out erosion-control planting works at a site on Lantau without conducting any public consultations. *Audit has recommended that the Director of Civil Engineering and Development should consider issuing guidelines for conducting public consultations on major erosion-control planting works.*

14. ***Need to strengthen monitoring of erosion-control planting works.*** In 2005, in response to concerns over the erosion-control planting works at the Lantau site, the CEDD found during site inspections that: (a) some seedlings were in poor condition; and (b) the contractor's workers had disposed of the plastic wrappings for the seedlings in the soil. Subsequently, the contractor replanted some 55,000 seedlings at his cost. In 2006, the

CEDD implemented new site supervision procedures for erosion-control planting. *Audit has recommended that the Director of Civil Engineering and Development should closely monitor the implementation of the 2006 site supervision procedures for erosion-control planting to ensure compliance by CEDD staff.*

### **Greening Master Plans**

15. ***Need to monitor progress of developing Greening Master Plans (GMPs).*** A GMP defines the overall greening framework for a selected urban district. The CEDD has developed GMPs for Central and Tsim Sha Tsui and has undertaken to complete GMP developments for 25 other selected districts by 2010. Members of the Legislative Council (LegCo) Panel on Planning, Lands and Works have requested the Administration to expedite the implementation of the GMPs. *Audit has recommended that the Director of Civil Engineering and Development should closely monitor the development and implementation of the GMPs for the 25 selected districts.*

16. ***Room for improvement in GMP consultancy study arrangements.*** At a meeting of the Public Works Subcommittee of LegCo in October 2006, a LegCo Member considered that the four-year period required for developing GMPs was too long, and suggested that the planning of greening works for different districts could be undertaken concurrently. *Audit has recommended that the Director of Civil Engineering and Development should try to cover more than one district in each GMP study to achieve economy of scale.*

17. ***Need for partnership with private sector.*** The CEDD enlisted the private sector's support in implementing two street-landscape improvement projects in Central. Partnership with the private sector can help speed up the implementation of greening measures and augment the Government's limited resources for such works. *Audit has recommended that the Director of Civil Engineering and Development should continue to seek opportunities for partnership with the private sector in GMP implementation.*

### **Response from the Administration**

18. The Administration has accepted the audit recommendations.

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