

CHAPTER 11

**Buildings Department
Civil Engineering and Development Department**

Safety and maintenance of private slopes

**Audit Commission
Hong Kong
25 October 2011**

This audit review was carried out under a set of guidelines tabled in the Provisional Legislative Council by the Chairman of the Public Accounts Committee on 11 February 1998. The guidelines were agreed between the Public Accounts Committee and the Director of Audit and accepted by the Government of the Hong Kong Special Administrative Region.

Report No. 57 of the Director of Audit contains 12 Chapters which are available on our website at <http://www.aud.gov.hk>.

Audit Commission
26th floor, Immigration Tower
7 Gloucester Road
Wan Chai
Hong Kong

Tel : (852) 2829 4210
Fax : (852) 2824 2087
E-mail : enquiry@aud.gov.hk

SAFETY AND MAINTENANCE OF PRIVATE SLOPES

Contents

	Paragraph
PART 1: INTRODUCTION	1.1
Background	1.2 – 1.10
Audit review	1.11
General response from the Administration	1.12 – 1.13
Acknowledgement	1.14
PART 2: PROMOTION OF PRIVATE-SLOPE MAINTENANCE	2.1
GEO actions to enhance safety of private slopes	2.2 – 2.5
Maintenance surveys of private slopes	2.6
Audit observations and recommendations	2.7 – 2.11
Response from the Administration	2.12
Public opinion surveys	2.13 – 2.16
Audit observations and recommendation	2.17 – 2.20
Response from the Administration	2.21
Proposed private-slope maintenance audits	2.22 – 2.23
Audit observations and recommendation	2.24 – 2.26
Response from the Administration	2.27 – 2.29

	Paragraph
PART 3: SAFETY-SCREENING STUDIES OF PRIVATE SLOPES	3.1
Safety-screening studies under the LPMP	3.2 – 3.3
Safety-screening studies under the LPMitP	3.4
Audit observations and recommendation	3.5 – 3.8
Response from the Administration	3.9 – 3.10
Selection of private slopes for safety-screening studies	3.11 – 3.14
Audit observations and recommendation	3.15 – 3.18
Response from the Administration	3.19
Progress in conducting safety-screening studies	3.20 – 3.23
Audit observations and recommendations	3.24 – 3.34
Response from the Administration	3.35 – 3.37
 PART 4: ADMINISTRATION OF DANGEROUS HILLSIDE ORDERS	 4.1
Administration of outstanding DHO cases	4.2 – 4.7
Audit observations and recommendations	4.8 – 4.11
Response from the Administration	4.12
Actions on outstanding DHO cases	4.13
Audit observations and recommendations	4.14 – 4.20
Response from the Administration	4.21
Assistance provided for meeting DHO requirements	4.22 – 4.26
Audit observations and recommendations	4.27 – 4.33
Response from the Administration	4.34 – 4.35

	Paragraph
Publishing information on private slopes issued with DHOs	4.36
Audit observations and recommendation	4.37 – 4.40
Response from the Administration	4.41
PART 5: MANAGEMENT OF DEFAULT WORKS ON PRIVATE SLOPES	5.1
Time targets for completing default works	5.2 – 5.4
Audit observations and recommendations	5.5 – 5.13
Response from the Administration	5.14
Appointment of consultants for default works	5.15
Audit observations and recommendation	5.16 – 5.19
Response from the Administration	5.20
Monitoring the performance of consultants	5.21
Audit observations and recommendation	5.22 – 5.23
Response from the Administration	5.24
Monitoring the performance of term contractors	5.25
Audit observations and recommendation	5.26 – 5.28
Response from the Administration	5.29

	Paragraph
PART 6: RECOVERY OF COSTS OF DEFAULT WORKS	6.1
Cost recovery	6.2 – 6.3
Outstanding cases for cost recovery	6.4 – 6.6
Actions to recover costs of default works	6.7 – 6.8
Audit observations and recommendations	6.9 – 6.16
Response from the Administration	6.17
Implementation of cost recovery by stages	6.18 – 6.20
Audit observations and recommendation	6.21 – 6.23
Response from the Administration	6.24

	Page
Appendices	
A : GEO maintenance surveys of private slopes (1993-94 to 2009-10)	65
B : Acronyms and abbreviations	66

PART 1: INTRODUCTION

1.1 This PART describes the background to the audit and outlines the audit objectives and scope.

Background

Slope safety in Hong Kong

1.2 Hong Kong has a mountainous terrain, with natural hillsides covering about 60% of the land area. Urban development over the years has resulted in the formation of a large number of man-made slopes. Both natural slopes and man-made slopes are prone to landslides, particularly during the rainy season from May to September. In the past 20 years, on average, there were about 300 reported landslides each year. The numbers of reported landslides were 863 in 2008, 101 in 2009 and 203 in 2010. Most of these landslides were small in scale and did not cause casualties or significant damage to properties.

Role of the Geotechnical Engineering Office

1.3 The **Geotechnical Engineering Office (GEO — Note 1)** of the Civil Engineering and Development Department (CEDD — Note 2) has the overall responsibility for slope safety, under the policy direction of the Development Bureau (DEVB). The GEO has implemented the following measures (under the Hong Kong Slope Safety System) for improving slope safety:

- (a) upgrading substandard government man-made slopes to bring them to current safety standards;
- (b) checking the design and construction of all new slopes so as to contain the number of substandard slopes;
- (c) promoting proper maintenance of man-made slopes; and
- (d) implementing mitigation measures at natural hillside catchments.

Note 1: *In 1977, the Geotechnical Control Office was set up for enhancing slope safety. In 1991, the Office was renamed the GEO. For simplicity, the Geotechnical Control Office is referred to as the GEO in this Report.*

Note 2: *The CEDD was formed in 2004 by merging the then Civil Engineering Department and the then Territory Development Department. For simplicity, the Civil Engineering Department is referred to as the CEDD in this Report.*

1.4 From 1977 to 2010, the GEO carried out investigations and upgrading works of substandard slopes under the **Landslip Preventive Measures Programme (LPMP)**. According to the GEO, upon completion of the LPMP in 2010, the landslide risk from man-made slopes has been substantially reduced to a reasonably low level that is commensurate with the international best practice in landslide risk management. In April 2010, the GEO launched the new **Landslip Prevention and Mitigation Programme (LPMitP)** to contain the risk of both man-made slopes and natural slopes. Besides, the GEO conducts publicity campaigns and public education to promote slope safety and maintenance.

Slope ownership and maintenance responsibility

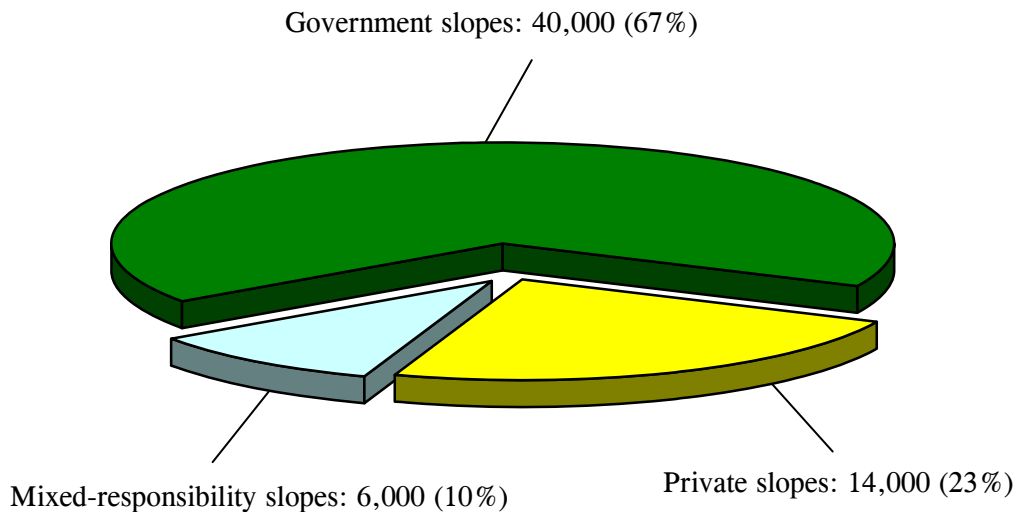
1.5 The Slope Information System (SIS) maintained by the GEO contains records of all registered man-made slopes. Slope information maintained in the SIS has been uploaded onto the Hong Kong Slope Safety Website. As of June 2011, there were about 60,000 man-made slopes registered in the SIS.

1.6 Man-made slopes require regular maintenance to ensure their stability. The **Lands Department (LandsD)** is responsible for determining the maintenance responsibilities of the 60,000 man-made slopes based on land lease conditions, building plans, site formation plans, aerial photos and other relevant documents. The Slope Maintenance Responsibility Information System (SMRIS) maintained by the LandsD contains information of the parties responsible for maintaining each of the 60,000 slopes. The LandsD has uploaded slope information maintained in the SMRIS onto its website to facilitate the identification of the parties responsible for the maintenance and safety of individual slopes.

1.7 In terms of ownership and maintenance responsibility, man-made slopes can be classified into government slopes, private slopes and mixed-responsibility slopes. The distribution of the 60,000 man-made slopes is shown in Figure 1.

Figure 1

60,000 man-made slopes
(2011)



Source: GEO records

Maintenance of government and mixed-responsibility slopes

1.8 For government slopes, the GEO is responsible for conducting assessment of their stability for implementing necessary upgrading works. Depending on their locations and associated facilities, government slopes are maintained by various government departments, including the Housing Department and the LandsD. For a mixed-responsibility slope, some portions are owned by the Government and the remainder by private parties. The Government and the private parties are responsible for maintaining the portions they own.

Maintenance of private slopes

1.9 Owners of private slopes are responsible for the safety and maintenance of their slopes. They are responsible for the inspection, maintenance, repair and upgrading works of slopes located within their land lots, as well as adjoining slopes specified in the land leases or other land title documents.

1.10 The GEO conducts safety-screening studies of private slopes. For a private slope where there is prima facie evidence that it is dangerous or liable to become dangerous, the GEO will make a recommendation to the **Buildings Department (BD — Note 3)** for issuing a **Dangerous Hillside Order (DHO)** under the Buildings Ordinance (BO — Cap. 123) to the slope owner, requiring him to conduct investigations and carry out necessary works to rectify the situation. For a private slope which has been assessed to have immediate danger that requires immediate remedial action, the GEO will make a recommendation to the BD to carry out emergency repair works, and the BD will recover the costs from the owner under the BO. For private slopes where their owners have been served with DHOs, the BD has implemented a mechanism to monitor the slope safety before the required upgrading works have been completed (see para. 4.6).

Audit review

1.11 In 2002, the Audit Commission (Audit) conducted a review of slope safety and landslip preventive measures, the results of which were included in Chapter 10 of the Director of Audit's Report No. 38 of March 2002. Audit has recently conducted another review of slope safety, covering the Government's measures for enhancing the safety and maintenance of **private slopes**. The review focuses on the following areas:

- (a) promotion of private-slope maintenance (PART 2);
- (b) safety-screening studies of private slopes (PART 3);
- (c) administration of Dangerous Hillside Orders (PART 4);
- (d) management of default works on private slopes (PART 5); and
- (e) recovery of costs of default works (PART 6).

Audit has found areas where improvements can be made by the responsible government departments and has made a number of recommendations to address the issues.

Note 3: *Under the Buildings Ordinance (Cap. 123), the authority to issue a Dangerous Hillside Order is vested in the Building Authority, who is the Director of Buildings. For simplicity, the Building Authority is referred to as the BD in this Report.*

General response from the Administration

1.12 The **Secretary for Development**, the **Director of Buildings** and the **Director of Civil Engineering and Development** welcome the audit review and agree with the audit recommendations. They have said that the audit report provides useful recommendations on making further improvements in promoting the safety and proper maintenance of private slopes.

1.13 The **Secretary for Development** has said that the DEVB will endeavour to follow up on all the audit recommendations with a view to enhancing the efficiency and effectiveness of government work on private slopes.

Acknowledgement

1.14 Audit would like to acknowledge with gratitude the full cooperation of the staff of the DEVB, the BD, the CEDD and the LandsD during the course of the audit review.

PART 2: PROMOTION OF PRIVATE-SLOPE MAINTENANCE

2.1 This PART examines the GEO's actions in promoting proper maintenance of private slopes, focusing on the following areas:

- (a) maintenance surveys of private slopes (paras. 2.6 to 2.12);
- (b) public opinion surveys (paras. 2.13 to 2.21); and
- (c) proposed private-slope maintenance audits (paras. 2.22 to 2.29).

GEO actions to enhance safety of private slopes

2.2 According to the GEO, lack of maintenance is a major factor for many landslides in Hong Kong. Slopes without adequate maintenance may lead to landslides and cause casualties and damage to properties. The GEO has adopted the following strategies for enhancing private-slope safety:

- (a) encouraging private-slope owners to carry out slope maintenance;
- (b) providing assistance to slope owners to facilitate their slope maintenance through publicity campaigns, public education, public information services and community advisory services (see para. 2.5);
- (c) carrying out safety-screening studies of private slopes to ascertain whether there is prima facie evidence that the slopes are dangerous or liable to become dangerous (see PART 3); and
- (d) making recommendations to the BD to issue DHOs to private-slope owners requiring them to investigate and upgrade private slopes found to be dangerous or liable to become dangerous (see PARTs 3 and 4).

Guide to slope maintenance

2.3 In 1995, the GEO published the "Geoguide 5 — Guide to Slope Maintenance" which contained recommended good practices for the maintenance of man-made slopes for reference by government departments and private-slope owners. Furthermore, as laid down in the Code of Practice on Building Management and Maintenance promulgated under

section 44(1)(b) of the Building Management Ordinance (Cap. 344), any slope for which an owner is responsible shall be maintained in a state of good condition in accordance with Geoguide 5. According to section 44(2) of the Ordinance, a person failing to observe the Code of Practice is not subject to criminal liability, but such failure may be used to establish liability in other civil or criminal proceedings.

2.4 The recommended practices included in Geoguide 5 cover maintenance inspections and maintenance works necessary to keep well-designed and properly constructed slopes in good condition. The recommended maintenance inspections include:

- (a) ***Routine maintenance inspections.*** These cover visual inspections of any debris or other obstructions in drainage channels, and cracks on slope surfaces, which can be carried out by a person without professional engineering training, and should be carried out once a year; and
- (b) ***Engineer inspections for maintenance.*** These should be carried out by a professionally-qualified geotechnical engineer once every five years.

Publicity campaigns and public education on slope maintenance

2.5 The GEO has set up the Community Advisory Unit (CAU) to provide information and advisory services to the public and private-slope owners on matters relating to slope safety and maintenance. The CAU has carried out the following activities:

- (a) organising slope safety and maintenance seminars and talks for private-slope owners and parties involved in slope maintenance;
- (b) providing meet-the-public service to answer queries and provide information on slope safety matters;
- (c) meeting private-slope owners or their representatives who have been served with DHOs to advise them on how to proceed with the necessary slope remedial works; and
- (d) meeting Owners' Corporations (OCs) and mutual aid committees of private buildings to advise them on how to undertake slope maintenance works.

Maintenance surveys of private slopes

2.6 Since 1993, the GEO has carried out annual surveys of the maintenance conditions of private slopes for the purpose of assessing the effectiveness of its publicity campaigns on slope safety. The GEO has selected 60 to some 300 private slopes a year for carrying out visual inspections, focusing on signs of lack of maintenance. Some 35% to 63% of the private slopes were found to be in “apparently acceptable” maintenance conditions (see Appendix A).

Audit observations and recommendations

Areas for improvement in private-slope maintenance surveys

2.7 Audit examination revealed that there was room for improvement in the following areas:

- (a) ***Survey periods covered by survey reports.*** As shown at Appendix A, during the nine years from 1993-94 to 2001-02, surveys had been conducted within periods of the survey report years. However, during the eight years from 2002-03 to 2009-10, survey periods were different from the survey report years. For example, the results of the surveys conducted in February 2011 were included in the survey report for 2009-10, instead of that for 2010-11. **Audit considers it desirable to adopt a consistent basis and include survey results in survey reports of corresponding periods;**
- (b) ***Sample selection methodology.*** The survey reports stated that the surveyed slopes were selected from the SIS (see para. 1.5). Audit noted that the GEO had adopted a documented sample selection methodology for selecting slopes for the surveys. However, the sample selection methodology was not specified in the survey reports. **Audit considers it desirable for the GEO to specify in survey reports the sampling methodology for selecting representative samples of slopes for survey; and**
- (c) ***Survey of slopes in public housing estates.*** Audit noted that the GEO sometimes selected for surveys slopes located within public housing estates owned by the Hong Kong Housing Authority and maintained by the Housing Department adopting Geoguide 5. For example, eight and five of such slopes were selected for surveys in 2008-09 and 2009-10 respectively (representing 13% and 8% respectively of the total numbers of slopes selected). **In Audit’s view, it is not appropriate to select slopes owned by the Hong Kong Housing Authority for surveys, because they are maintained by the Housing Department which has already adopted Geoguide 5.**

Changes in assessment criteria

2.8 Based on pre-defined criteria, the GEO determines whether slopes selected in private-slope maintenance surveys are in “apparently acceptable” maintenance conditions. Before 2006-07, the GEO would classify a slope as being in “apparently acceptable” conditions if it met the following criteria:

- (a) less than 25% of slope protection surface, surface drainage, underground drainage, and maintenance access facilities requiring repair works;
- (b) no sign of leakage at the water-carrying services;
- (c) no or very minor defects observed at ground reinforcement;
- (d) no sign of slope instability; and
- (e) no need to issue a letter to notify the owners of any defects.

2.9 Since 2006-07, the GEO has changed the assessment criteria by adopting only the criterion in paragraph 2.8(a) for determining slope maintenance conditions. **Audit however could not find documented justifications for the change in criteria.** In August 2011, the GEO informed Audit that:

- (a) the survey of maintenance conditions of private slopes was only a “light-weight” exercise to help the GEO assess the effectiveness of its publicity campaigns on promotion of slope maintenance; and
- (b) having noted that there was a steady increase in the percentage of slopes found to be in “apparently acceptable” maintenance conditions, the GEO decided in 2006-07 to relax the assessment criteria so that resources could be redeployed to serve other purposes.

Use of survey results

2.10 Since 2006-07, the GEO has concluded in its survey reports that the maintenance survey results (see Appendix A) indicate that **“the Government’s publicity campaign to promote slope maintenance is effective”**. **In Audit’s view, while the survey results can be indicative of the maintenance conditions of private slopes, the results alone cannot reflect the effectiveness of the Government’s publicity campaigns to promote slope maintenance. Such effectiveness may be more directly gauged by other means, such as conducting opinion surveys on slope owners (see para. 2.14).**

Audit recommendations

2.11 **Audit has recommended that, in conducting maintenance surveys of private slopes in future, the Director of Civil Engineering and Development should:**

- (a) **take action to ensure that survey results are included in survey reports of corresponding periods;**
- (b) **specify in survey reports the sampling methodology for selecting representative slope samples for survey;**
- (c) **refrain from including slopes owned by the Hong Kong Housing Authority in the surveys;**
- (d) **document the justifications for any future changes in the criteria for determining the maintenance conditions of private slopes; and**
- (e) **adopt additional appropriate methodologies for evaluating the effectiveness of the Government's publicity campaigns to promote slope maintenance.**

Response from the Administration

2.12 The **Director of Civil Engineering and Development** agrees with the audit recommendations.

Public opinion surveys

2.13 Since 1996, the GEO has appointed consultants to conduct annual public opinion surveys by interviewing selected members of the public on their awareness of issues relating to slope safety. In the opinion survey conducted in 2010, the GEO found that:

- (a) 77% of respondents considered that slopes in Hong Kong were safe;
- (b) 85% of respondents had come across the message of “regular slope maintenance”;
- (c) 65% of respondents were concerned about slope safety problems in Hong Kong; and
- (d) 79% of respondents were aware that private property owners were responsible for maintaining their slopes.

2.14 In 1998 and 1999, the GEO interviewed a sample of private-slope owners to ascertain their reasons for maintaining or not maintaining their slopes. The opinion survey results revealed that the main reasons for slope owners not maintaining their slopes included the following:

- (a) they considered that their slopes were safe and did not require inspections and maintenance;
- (b) they did not know whether they were the slope owners;
- (c) there was a lack of coordination among the slope owners and the building management;
- (d) they had financial difficulties; and
- (e) there was no statutory requirement for slope maintenance.

2.15 In March 2001, the Administration informed the then Panel on Planning, Lands and Works (PLW Panel) of the Legislative Council (LegCo) that the GEO had completed a comprehensive review of the maintenance of private slopes in 2000 (2000 Review), which identified the following **maintenance issues**:

- (a) only about 40% to 45% of private slopes were in a fully satisfactory state of maintenance despite the fact that most private-slope owners were concerned about slope safety;
- (b) some owners did not know that the subject slopes fell within their private lots or within their maintenance responsibility; and
- (c) some owners did not initiate maintenance actions because there was no legal requirement to do so, or because of poor building management or owners' financial difficulties.

2.16 To address the maintenance issues, the Administration informed the LegCo PLW Panel that:

- (a) there were no statutory requirements for private-slope owners to inspect and maintain their slopes regularly. It was considered that voluntary action was preferred to statutory action and prosecution, which should be reserved as a last resort in very serious cases;

- (b) the majority of slope owners were responsible but they might lack the necessary technical understanding or incentive to act;
- (c) the GEO would continue to step up its publicity campaigns and public education on slope safety and continue to provide advisory services to the public through the CAU (see para. 2.5);
- (d) financial assistance would be provided to private-slope owners with financial difficulties for maintaining their slopes through a loan scheme on building safety (see para. 4.26); and
- (e) the GEO had planned to launch a new initiative to carry out an annual programme of systematic audit of the maintenance of private slopes (see para. 2.22).

Audit observations and recommendation

Periodic surveys on private-slope owners

2.17 Audit noted that, since the opinion surveys in 1998 and 1999 (see para. 2.14) and the 2000 Review (see para. 2.15) carried out more than ten years ago, the GEO had not conducted surveys on private-slope owners on matters relating to their slope maintenance. Furthermore, it was found in the 2000 Review that only about 40% to 45% of private slopes were in a fully satisfactory state of maintenance (see para. 2.15(a)).

2.18 In August 2011, the CEDD informed Audit that:

- (a) the CAU, in meeting members of the public from time to time, had gathered information on the extent of compliance with Geoguide 5 by private-slope owners and their difficulties in carrying out slope maintenance; and
- (b) the annual public opinion surveys (see para. 2.13) also provided a general picture of the situation.

2.19 **In Audit's view, surveys on private-slope owners will help ascertain the extent of compliance with Geoguide 5 by private-slope owners in slope maintenance, and their difficulties in carrying out satisfactory slope maintenance.**

Audit recommendation

2.20 **Audit has recommended that the Director of Civil Engineering and Development should consider conducting periodic surveys on private-slope owners on matters relating to their slope maintenance.**

Response from the Administration

2.21 The **Director of Civil Engineering and Development** agrees with the audit recommendation.

Proposed private-slope maintenance audits

2.22 In January 2001, the CEDD informed the Financial Services and the Treasury Bureau (FSTB — Note 4) of a plan to carry out annual private-slope maintenance audits (see para. 2.16(e)), and sought funding approval of \$3 million under the LPMP block vote of the Capital Works Reserve Fund. The maintenance audits aimed to ascertain the extent of private-slope owners' compliance with Geoguide 5. In March 2001, the Administration informed the LegCo PLW Panel that:

- (a) the programme of maintenance audits of private slopes would cover 1,200 private slopes a year;
- (b) the GEO aimed to complete auditing all private slopes in 10 years; and
- (c) where maintenance defects were identified, private-slope owners would be advised to take prompt follow-up actions.

2.23 In September 2001, the FSTB informed the CEDD that it could not support the funding application on the grounds that:

- (a) by carrying out the maintenance audits without prior agreement of, or consultation with, private-slope owners, the Government in fact assumed the slope maintenance responsibility and encouraged inertia on the part of the owners;

Note 4: *The FSTB was formed in 2002 to take over the policy portfolio of the then Finance Bureau. For simplicity, the Finance Bureau is referred to as the FSTB in this Report.*

- (b) this initiative would lead to greater government involvement in the maintenance of private slopes; and
- (c) it was a new policy area beyond the scope approved under the LPMP.

In October 2001, the CEDD informed the FSTB that the proposed initiative would not be proceeded with.

Audit observations and recommendation

Conduct of private-slope maintenance audits

2.24 In Audit's view, there are merits for the CEDD to examine the cost-effectiveness of conducting private-slope maintenance audits. These audits will help provide useful information to slope owners about the conditions and maintenance requirements of their slopes, as well as information to the CEDD for reviewing strategies and policies to enhance private-slope safety.

2.25 In August 2011, the CEDD informed Audit that the small-scale annual private-slope maintenance surveys (see para. 2.6) and the annual public opinion surveys (see para. 2.13) had provided some information on maintenance conditions of private slopes.

Audit recommendation

2.26 Audit has *recommended* that the Director of Civil Engineering and Development should examine, in collaboration with the Secretary for Development, the cost-effectiveness of conducting private-slope maintenance audits.

Response from the Administration

2.27 The Director of Civil Engineering and Development agrees with the audit recommendation.

2.28 The Secretary for Development agrees to review, in collaboration with the Director of Civil Engineering and Development, the cost-effectiveness of conducting private-slope maintenance audits.

2.29 The **Secretary for Financial Services and the Treasury** agrees with the audit recommendation. He has said that:

- (a) the FSTB is prepared to reconsider the proposal taking into account the outcome of the review to be conducted by the CEDD and the DEVB (see para. 2.28); and
- (b) cost-effectiveness is one of the key considerations. The FSTB needs to consider whether there will be any duplication of efforts between the proposed maintenance audits and the safety-screening studies under the LPMitP, particularly when the focus of safety-screening studies has since 2010 been switched to private slopes of moderate risk, subsequent to the completion of similar studies of all high-risk private slopes under the LPMP (see paras. 3.3 and 3.4).

PART 3: SAFETY-SCREENING STUDIES OF PRIVATE SLOPES

3.1 This PART examines actions of the GEO and the BD in conducting safety-screening studies of private slopes, focusing on the following areas:

- (a) safety-screening studies under the LPMitP (paras. 3.4 to 3.10);
- (b) selection of private slopes for safety-screening studies (paras. 3.11 to 3.19); and
- (c) progress in conducting safety-screening studies (paras. 3.20 to 3.37).

Safety-screening studies under the LPMP

3.2 Since its setting up in 1977, the GEO had conducted safety-screening studies under the LPMP (completed in 2010) on pre-1977 slopes to ascertain whether there was prima facie evidence (see para. 1.10) for making recommendations to the BD for issuing DHOs to private-slope owners, requiring them to carry out investigations and upgrading works.

3.3 From 2000 to 2010, the GEO conducted safety-screening studies on some 300 private slopes a year under the LPMP. Upon completion of the LPMP in 2010, about 5,200 private slopes had been screened, and about 3,100 DHOs had been issued to the owners of some 2,500 slopes. According to the GEO, by 2010, the safety of all high-risk slopes had been assessed with necessary slope improvement measures taken, such as slope upgrading works.

Safety-screening studies under the LPMitP

3.4 In November 2007, the Administration submitted a paper to the LegCo Panel on Development (Note 5) on the launch of the LPMitP to dovetail with the LPMP upon the latter's completion in 2010. According to the paper, the LPMitP would adopt a more pragmatic and cost-effective approach to identifying and rectifying potentially problematic man-made slopes of moderate risk. As stated in the paper, the planned annual output under the LPMitP was:

Note 5: *Since October 2007, the LegCo Panel on Development has taken over the functions of the then LegCo PLW Panel.*

- (a) upgrading 150 government man-made slopes;
- (b) conducting safety-screening studies for 100 private man-made slopes; and
- (c) implementing risk mitigation works for 30 natural hillside catchments.

Audit observations and recommendation

Information in LegCo paper

3.5 The LPMitP was launched in 2010 to dovetail with the LPMP. However, in the paper submitted to the LegCo Panel on Development in November 2007 introducing the LPMitP, the paper only stated the planned annual output under the LPMitP (see para. 3.4), but not that under the LPMP (namely upgrading 250 government man-made slopes and conducting safety-screening studies for 300 private man-made slopes a year) for Members' information.

3.6 In August and September 2011, the DEVB and the CEDD informed Audit that:

- (a) the scope of the LPMP and that of the LPMitP were different and therefore the target annual output under the LPMP had little significance in the LPMitP. The annual output under the LPMP had been widely published in the public domain, including the Controlling Officer's Report and the Policy Agenda;
- (b) the LPMP dealt with a certain number of high-risk man-made slopes whereas the LPMitP dealt with the remaining landslide risk arising mainly from moderate-risk slopes and natural hillsides;
- (c) the target output of the LPMitP was set taking into account the possible increase in landslide risk due to slope degradation and encroachment of developments on hillsides, which was not related to the target output of the LPMP; and
- (d) the DEVB always endeavoured to include pertinent information in papers submitted to LegCo.

3.7 In Audit's view, the provision of the information on planned annual output under the LPMP in the LegCo Panel paper of November 2007 would be useful for Panel Members' consideration.

Audit recommendation

3.8 **Audit has recommended that the Director of Civil Engineering and Development should, in collaboration with the Secretary for Development, endeavour to provide more pertinent information of a previous related programme in future submissions to LegCo on the introduction of a new programme.**

Response from the Administration

3.9 The **Director of Civil Engineering and Development** agrees with the audit recommendation.

3.10 The **Secretary for Development** accepts the audit recommendation in principle. She has said that the DEVB would endeavour to ensure that the CEDD would provide more pertinent information of previous related programmes in future submissions to LegCo on the introduction of a new programme.

Selection of private slopes for safety-screening studies

3.11 Under both the LPMP and the LPMitP, the GEO would select private slopes for safety-screening studies by adopting a risk-based approach according to the priority score of each slope, taking into account:

- (a) probability of a slope failure; and
- (b) consequence of a slope failure.

The GEO computed the priority score of each slope based on a range of numeric values assigned to the above-mentioned factors, and classified slopes with a score of 1.5 (**cut-off score**) or higher as high-priority slopes.

3.12 Since 2000, the GEO has launched a lot-by-lot approach for selecting slopes for safety-screening studies. Under the approach, if a private slope is selected for screening based on its high priority score, other private slopes which are located within or associated with the same land lot will also be selected for safety-screening studies in the same exercise. According to the GEO, the adoption of this approach will help:

- (a) minimise inconvenience to slope owners because DHOs, where required, for all private slopes within a land lot can be issued to them at the same time; and
- (b) reduce administrative efforts to identify the slope owners responsible for the maintenance of the slopes concerned.

3.13 The GEO appoints consultants to conduct safety-screening studies of private slopes. For each consultancy assignment, the GEO provides the consultant with a list of private slopes with the highest priority scores (**assigned slopes**). Under the lot-by-lot approach, the consultant will search for other slopes (**related slopes**) located in the vicinity, including those in the same land lot of each assigned slope. The consultant will then carry out screening of the assigned slopes with the highest scores as well as their related slopes, subject to the maximum number of slopes for safety-screening studies stated in the consultancy assignment.

3.14 According to the GEO, both assigned slopes and related slopes selected for safety-screening studies should be high-priority slopes, because:

- (a) slopes selected under the LPMP should generally have priority scores higher than the cut-off score (see para. 3.11) and should have been dealt with by 2010; and
- (b) slopes selected under the LPMitP should likely be screened in the forthcoming ten years.

Audit observations and recommendation

Effectiveness of the lot-by-lot approach

3.15 In August 2011, the CEDD informed Audit that:

- (a) the GEO had not compiled statistics on the proportion of assigned slopes and related slopes selected for safety-screening studies;
- (b) no ceiling was set on the maximum number or proportion of related slopes to be selected in each consultancy assignment for safety-screening studies; and

- (c) slopes not selected for screening would be pooled back to the system for subsequent action together with other slopes not yet selected for screening.

3.16 Between July 2006 and March 2010, three safety-screening consultancy assignments (covering 650 private slopes) commenced and were completed under the LPMP. Audit examination of the three assignments revealed that a high proportion of slopes selected for safety-screening studies were related slopes, and the priority scores of many of these slopes were below the cut-off score (see Table 1).

Table 1
Slopes selected for safety-screening studies
(July 2006 to March 2010)

Consultancy assignment	Assigned slope (a) (No.)	Related slope			Total (e) = (a) + (d) (No.)
		Priority score \geq cut-off score (b) (No.)	Priority score $<$ cut-off score (c) (No.)	Sub-total (d) = (b) + (c) (No.)	
A	80	74	46	120	200
B	83	77	40	117	200
C	42	96	112	208	250
Total	205	247	198	445	650

Source: Audit analysis of GEO records

3.17 While the lot-by-lot approach may provide convenience to private-slope owners and may improve the efficiency of the GEO (see para. 3.12), Table 1 shows that:

- (a) of the total 650 slopes selected for safety-screening studies, 445 (68%) were related slopes; and
- (b) of the 445 related slopes, the priority scores of 198 (44%) were lower than the cut-off score.

Audit considers that the GEO should assess the effectiveness of the lot-by-lot approach.

Audit recommendation

3.18 **Audit has recommended that the Director of Civil Engineering and Development should conduct a review of the effectiveness of the lot-by-lot approach for selecting private slopes for safety-screening studies, taking into account the high proportion of related slopes with low priority scores having been selected for screening in recent consultancy assignments.**

Response from the Administration

3.19 The **Director of Civil Engineering and Development** agrees with the audit recommendation.

Progress in conducting safety-screening studies

3.20 For a private slope selected for safety-screening study, the consultant would compile two reports, namely a **safety-screening study report** with an assessment of the stability of the slope (based on a desk study of available information, such as aerial photographs, and site visits) and a **maintenance responsibility review report** with an analysis of the lease documents and the available evidence collected for identifying the parties responsible for maintaining the slope.

3.21 For a private slope that requires an investigation and improvement works, the GEO will forward the maintenance responsibility review report to the LandsD and the BD for comments. The GEO will amend the review report taking into account their comments. Thereafter, the GEO will make recommendations to the BD for issuing DHOs to the owners. During site inspections, if a slope is identified to have immediate danger, the GEO will make a recommendation to the BD for carrying out emergency repair works by one of the latter's term contractors.

3.22 In August 2011, the CEDD informed Audit that:

- (a) before 2006, the GEO used to make recommendations to the BD for the issue of DHOs based on findings of safety-screening study reports, whilst the LandsD was responsible for determining the maintenance responsibility. Since 2006, to expedite the determination of maintenance responsibility of a slope, the GEO had undertaken to prepare a maintenance responsibility review report documenting the maintenance responsibility with background and relevant supporting information;
- (b) in the process, the GEO would pass the maintenance responsibility review report to the BD and the LandsD for review and comments (see para. 3.21). The BD might request the GEO to arrange a land-lot boundary survey to ascertain the ownership of a slope. After conducting such a survey, the GEO would seek the agreement of the LandsD on the survey results. In some cases, the BD and the LandsD might need to seek legal advice, which was normally a lengthy process, on the interpretation of the lease documents. If a slope also involved unauthorised building works, a DHO recommendation could only be made after clearance of such unauthorised building works; and
- (c) the GEO could only make recommendations to the BD for issuing DHOs after completion of the processes in (a) and (b) above.

3.23 Table 2 shows the number of private slopes screened, number of DHO recommendations made to the BD and number of DHOs issued by the BD from 2005 to 2010.

Table 2

**Safety-screening studies of private slopes
(2005 to 2010)**

Year	Slope screened (No.)	DHO recommendation to BD (Note 1) (No.)	DHO issued by BD (Note 2) (No.)
2005	311	184	168
2006	310	114	144
2007	301	95	140
2008	305	94	140
2009	312	67	141
2010	155	67	140
Total	1,694	621	873

Source: GEO and BD records

Note 1: A slope may have more than one owner, and hence may have more than one DHO recommendation made by the GEO. Furthermore, a slope with a DHO recommendation to the BD for issue of a DHO in a year may have been screened in an earlier year.

Note 2: A DHO issued in a year may relate to a DHO recommendation made by the GEO in an earlier year.

Audit observations and recommendations

DHO recommendations made by GEO

3.24 Audit noted that the GEO had not set a time target for making recommendations to the BD for the issue of DHO(s) to the owner(s) of a private slope, from the time of receiving a safety-screening study report from a consultant. **Audit examination revealed that, from 2005 to 2010, the average time was 15 months.**

3.25 As of June 2011, of the 1,694 private slopes screened (see Table 2 in para. 3.23), the GEO was taking action on 114 private slopes for making DHO recommendations to the BD. **Audit noted that, of these 114 cases, 47 (41%) related to safety-screening study reports received from 2006 to 2008 (4 in 2006, 25 in 2007 and 18 in 2008), more than two to four years ago.**

3.26 In August 2011, the CEDD informed Audit that:

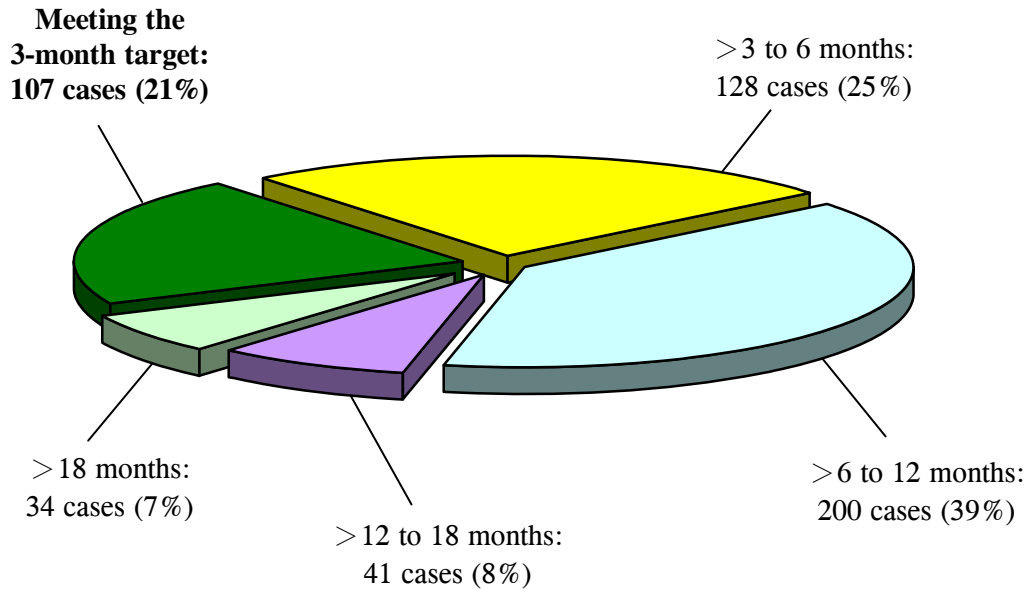
- (a) there were practical difficulties in setting a time target, because most of the required actions were beyond the GEO's control. Such actions might include carrying out boundary surveys at the request of the BD, reviewing the slope maintenance responsibilities by the LandsD, and seeking legal advice by the BD and the LandsD;
- (b) the progress of the 47 cases mentioned in paragraph 3.25 was regularly monitored by the GEO; and
- (c) it agreed that the GEO, the BD and the LandsD should look into the problem and explore continuous improvement measures to expedite action on the issue.

3.27 **Audit is concerned about the long time taken by the GEO, the BD and the LandsD in determining the slope maintenance responsibilities for issuing DHOs to private-slope owners. The GEO needs to review, in collaboration with the BD and the LandsD, the long time taken and expedite actions to make recommendations to the BD for issuing DHOs for the long outstanding cases.**

Issue of DHOs

3.28 According to internal guidelines of the BD, DHO(s) for a private slope should be issued **within three months** of the date of receipt of a recommendation from the GEO. Based on the 621 DHO recommendations made by the GEO from 2005 to 2010 (see Table 2 in para. 3.23), up to 30 June 2011, the BD had served 510 DHOs on private-slope owners. Audit analysis of the time taken for serving these DHOs is shown in Figure 2.

Figure 2
Time taken for issuing DHOs after
receiving recommendations from GEO in 510 cases
(January 2005 to June 2011)



Source: Audit analysis of BD records

3.29 Figure 2 shows that, of the 510 DHOs issued, 403 (128+200+41+34) DHOs (79%) were issued more than three months after receiving DHO recommendations from the GEO. Audit analysis also shows that, on average, the BD took about **7.4 months** to issue DHOs after receiving recommendations from the GEO.

3.30 As of June 2011, of the 621 DHO recommendations of the GEO (see Table 2 in para. 3.23), the BD was assessing the need to issue DHOs on 23 cases. **Audit noted that, of these 23 cases, 10 (43%) related to DHO recommendations received from the GEO from 2007 to 2009 (2 in 2007, 3 in 2008 and 5 in 2009), which were more than one to three years ago.**

3.31 In September 2011, the BD informed Audit that:

- (a) the long time taken for issuing DHOs after receiving the recommendations from the GEO was mainly due to:
 - (i) the technical complexity of the cases where the BD had to liaise with the GEO or other government departments for clarification (e.g. to consult the GEO and the LandsD on the boundary of a slope or a land lot); and
 - (ii) the need to clarify with the LandsD on the maintenance responsibility of the subject slope; and
- (b) such procedures were necessary since the BD was exercising statutory power under the BO to issue DHOs. The BD had a duty to ensure that the subject matter and contents of a DHO were correct, legally in order, and without ambiguity.

3.32 **In Audit's view, the BD needs to conduct a review to ascertain the reasons for not issuing DHOs according to its time target of 3 months after receiving recommendations from the GEO, with a view to identifying and implementing improvement measures. It also needs to expedite action to issue DHOs to private-slope owners of the long outstanding cases.**

Audit recommendations

3.33 **Audit has recommended that the Director of Civil Engineering and Development should:**

- (a) **review, in collaboration with the Director of Lands and the Director of Buildings, the long time taken for determining the slope maintenance responsibilities, with a view to identifying and implementing improvement measures;**

- (b) expedite action to make recommendations to the Director of Buildings for issuing DHOs for the long outstanding cases; and
- (c) consider setting a time target for making recommendations to the Director of Buildings for issuing DHOs to private-slope owners, from the time of receiving safety-screening study reports from the consultants.

3.34 **Audit has also recommended that the Director of Buildings should:**

- (a) review the long time taken (significantly exceeding the time target of three months) for issuing DHOs after receiving recommendations from the GEO, with a view to identifying and implementing improvement measures; and
- (b) expedite action to issue DHOs to private-slope owners of the long outstanding cases.

Response from the Administration

3.35 The **Director of Civil Engineering and Development** agrees with the audit recommendations in paragraph 3.33.

3.36 The **Director of Buildings** agrees with the audit recommendations in paragraph 3.34. He has said that:

- (a) the BD will conduct a review in collaboration with other government departments concerned to work out a more realistic time target for issuing DHOs in the light of the present situation and available resources; and
- (b) the BD supports the audit recommendation in paragraph 3.33(a) and is prepared to participate in the review.

3.37 The **Director of Lands** has said that the LandsD will collaborate with the CEDD in the conduct of a review of the long time taken for determining the slope maintenance responsibilities.

PART 4: ADMINISTRATION OF DANGEROUS HILLSIDE ORDERS

4.1 This PART examines the BD's actions in administering DHOs and government assistance provided to private-slope owners for compliance with DHOs, focusing on the following areas:

- (a) administration of outstanding DHO cases (paras. 4.2 to 4.12);
- (b) actions on outstanding DHO cases (paras. 4.13 to 4.21);
- (c) assistance provided for meeting DHO requirements (paras. 4.22 to 4.35); and
- (d) publishing information on private slopes issued with DHOs (paras. 4.36 to 4.41).

Administration of outstanding DHO cases

4.2 Upon receipt of a DHO, a private-slope owner is required to carry out an investigation and submit a slope works proposal to the BD for approval. As specified in the DHO, the BD will allow the private-slope owner to appoint an Authorised Person (AP — Note 6) in **2 months** for the investigation, and another **5 months** for conducting the investigation and submitting a works proposal to the BD for approval. After approval of the works proposal, the private-slope owner needs to carry out the works according to the proposal. Subject to meeting certain conditions, an extension of time may be granted to the owner upon application.

4.3 Under the BO, a private-slope owner served with a DHO may appeal to the Appeal Tribunal (Note 7) within 21 days of the issue of the DHO. Under the circumstance, the DHO should not be enforced until a decision from the Tribunal is made.

Note 6: *An AP is a person on the Authorised Persons' Register kept under section 3 of the BO.*

Note 7: *An Appeal Tribunal is formed comprising a chairman and not less than two members to hear and determine an appeal against a decision made by the BD in the exercise of a discretion under the BO, including a decision of issuing a DHO.*

Enforcement actions on non-compliance with DHOs

4.4 If a private-slope owner does not carry out the required tasks by the dates specified in the DHO (see para. 4.2 — **specified dates**), the BD may, under the BO, carry out the investigation and any subsequent works (**default works**) and recover the costs plus supervision charges from the owner (see PARTs 5 and 6).

4.5 A person who fails to comply with the requirements under a DHO without reasonable justifications may be subject to prosecution under the BO. The person is liable, on conviction, to a maximum fine of \$50,000 and to imprisonment for one year, and to a daily maximum fine of \$5,000 for each day during which the failure to comply with the DHO has continued. From 2001 to 2010, the BD had taken prosecution action relating to 91 DHOs with 17 private-slope owners having been convicted.

Monitoring the safety of private slopes issued with DHOs

4.6 An AP engaged by a private-slope owner, or a consultant appointed by the BD to carry out default works, is required to monitor the conditions of a slope issued with a DHO and inform the BD of any signs of impending danger. The BD has appointed consultants to monitor the safety of private slopes issued with DHOs which are not attended by APs or default works consultants. Such cases include those where appeals have been lodged by owners, those pending the appointment of APs, and those where prosecution is in progress. The consultants will inspect, assess and report to the BD the conditions of each unattended slope once every six months until the slope is attended by an AP or a default works consultant.

DHO Monitoring Committee

4.7 In February 2006, the BD set up the DHO Monitoring Committee to monitor the progress of the outstanding DHO cases, and to resolve long outstanding and difficult cases. The Committee, chaired by the Deputy Director of Buildings, holds a meeting every three months. The Committee has set targets for clearing the DHO cases, for example, clearing a certain percentage of long outstanding DHO cases by a specific target year.

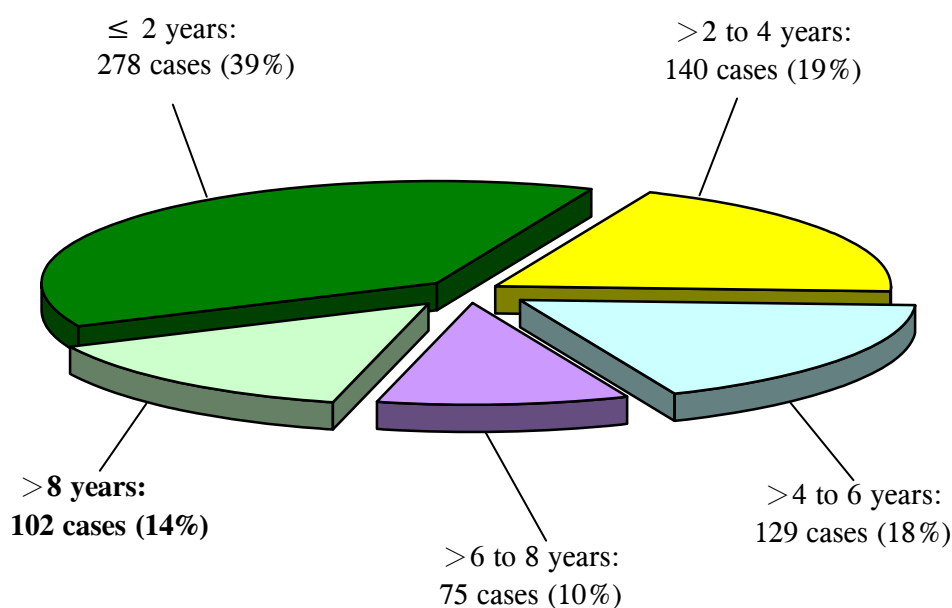
Audit observations and recommendations

Publishing ageing analyses and performance targets

4.8 During the ten years from 2001 to 2010, the BD had served a total of 1,648 DHOs, of which 939 (57%) had been discharged or cancelled (Note 8). As at 31 March 2011, there were 724 outstanding DHOs not yet discharged, but their specified dates (see para. 4.4) for action had elapsed. An ageing analysis of these 724 outstanding DHO cases (counting from their specified dates) is shown in Figure 3.

Figure 3

Ageing analysis of 724 outstanding DHO cases (31 March 2011)



Source: Audit analysis of BD records

Note 8: A DHO may be cancelled for the following reasons:

- (a) investigation work for the slope is no longer required due to redevelopments; and
- (b) it has been served on a person not responsible for the slope maintenance.

4.9 Audit notes that, other than DHOs, the BD also serves other statutory orders related to building safety, including:

- (a) orders for removal of unauthorised building structures under section 24 of the BO; and
- (b) orders for investigation and repair of building drainage facilities under section 28 of the BO.

4.10 In relation to the orders mentioned in paragraph 4.9(a) and (b), the BD has published on its website information on performance targets (Note 9), and actual performance against the targets, on clearance of outstanding orders, together with ageing analyses of the outstanding cases. However, similar information on DHOs has not been published. **To enhance public accountability, the BD needs to consider publishing such information for DHOs.**

Audit recommendations

4.11 **Audit has recommended that the Director of Buildings should:**

- (a) **expedite action to deal with long outstanding DHO cases with a view to clearing them as early as possible;**
- (b) **publish targets and actual performance against targets on clearance of outstanding DHO cases; and**
- (c) **publish ageing analyses of outstanding DHO cases.**

Response from the Administration

4.12 The **Director of Buildings** agrees with the audit recommendations. He has said that:

- (a) for the audit recommendation in paragraph 4.11(a), the BD will expedite action to deal with long outstanding cases as soon as possible based on available resources. The DHO Monitoring Committee (see para. 4.7) will actively monitor the progress; and

Note 9: *For orders served under section 24 of the BO (see para. 4.9(a)), the targets for 2011-12 included clearing all outstanding orders served in or before 2007 by March 2012. Similar targets have been set for orders served under section 28 of the BO.*

- (b) for the audit recommendations in paragraph 4.11(b) and (c), the BD is arranging to collate the data and compile the required information with a view to publishing the information by the first quarter of 2012.

Actions on outstanding DHO cases

4.13 Of the 724 outstanding DHO cases with specified dates for action having elapsed (see para. 4.8), the progress of actions taken as at 31 March 2011 is shown in Table 3.

Table 3
Progress of outstanding DHO cases
(31 March 2011)

Progress	Number
Action by owners	
(a) Appeal lodged by owner	26
(b) Pending appointment of AP	139
(c) Preparing investigation/remedial works proposals	212
(d) Conducting remedial works	166
Subtotal	543
Enforcement action by the BD	
(e) Taking prosecution action	58
(f) Carrying out default works	123
Subtotal	181
Total	724

Source: BD records

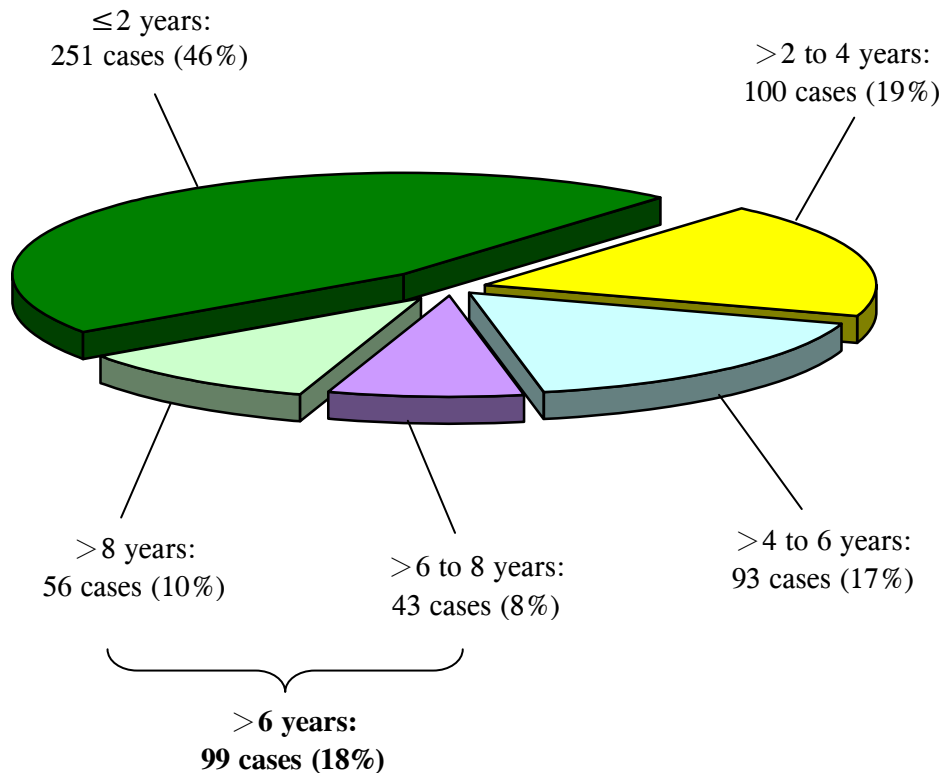
Audit observations and recommendations

Time for enforcement action

4.14 Of the 724 outstanding DHO cases with specified dates for action having elapsed, as at 31 March 2011, 543 (75%) related to cases where actions were being taken by slope owners, such as making appeals or carrying out the required works, and 181 (25%) related to cases where the BD was taking enforcement actions. Figures 4 and 5 respectively show the ageing analyses (counting from their specified dates) of these two categories of DHO cases.

Figure 4

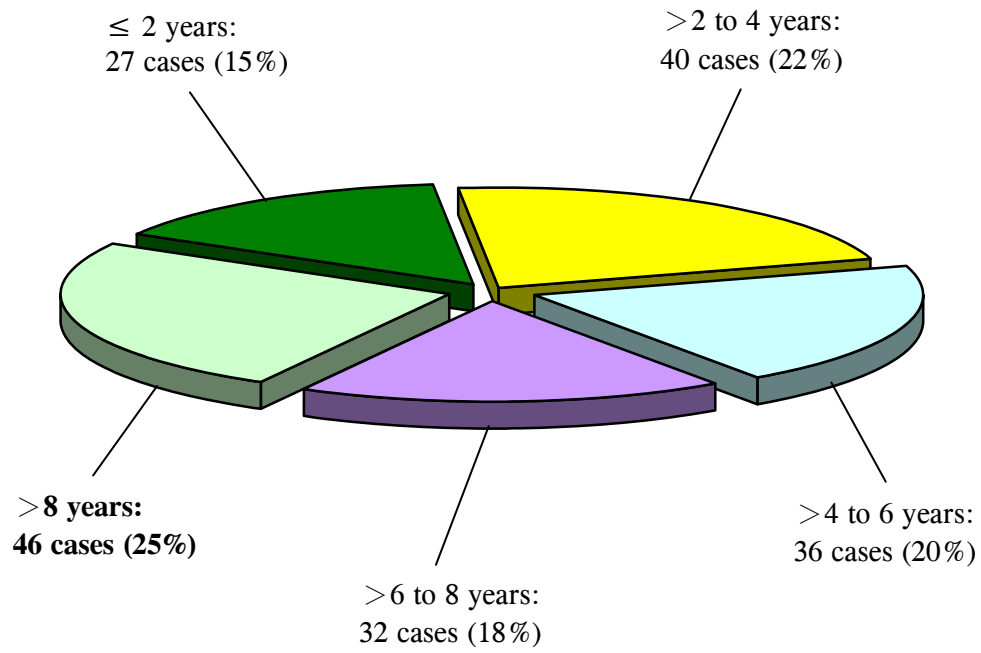
**Ageing analysis of 543 DHO cases
with actions being taken by slope owners
(31 March 2011)**



Source: Audit analysis of BD records

Figure 5

**Ageing analysis of 181 DHO cases
with enforcement actions being taken by BD
(31 March 2011)**



Source: Audit analysis of BD records

4.15 As at 31 March 2011, of the 543 outstanding DHO cases with action being taken by slope owners, 99 (18%) had been outstanding for more than 6 years from their specified dates (see Figure 4). Cases 1 and 2 are two examples.

Case 1

Long outstanding DHO case on Lantau Island

1. In February 2005, the BD issued a DHO to a slope owner.
2. The BD issued warning letters on 25 April 2005, 28 December 2005 and 1 February 2006 to the owner for not appointing an AP.
3. Since May 2006, BD staff had approached several times the owner who claimed to have financial difficulties.
4. In October 2010, the BD considered the conduct of the required works on behalf of the owner as default works, but no decision was subsequently made.
5. Up to August 2011, the slope owner had not yet appointed an AP for the works.

Audit comments

6. Six years after the issue of a DHO, the slope owner had not appointed an AP for the works.

Response from BD

7. In September 2011, the BD informed Audit that:
 - (a) this was an isolated and complicated case involving an owner which was a Tso Tong (a traditional Chinese institution which held some land for a group of people of a common ancestor) in a rural area; and
 - (b) as the owner had failed to comply with the DHO, the BD would instigate enforcement action.

Source: *BD records*

Case 2

Long outstanding DHO case on Hong Kong Island

1. In September 1997, the BD issued a DHO to the owner of a portion of a slope within a private lot.
2. In September 1998, an AP submitted an application to the BD on proposed remedial works.
3. In November 1998, the GEO noted that the portion of the slope outside the lot boundary might also fall under the responsibility of the owner. The GEO therefore requested the BD to consider extending the DHO to cover the whole slope.
4. In March 2002, the BD requested the LandsD to review the maintenance responsibility of the portion of slope outside the lot boundary. The LandsD later found out that the Highways Department was responsible for maintaining that portion of slope.
5. In January 2007, the owner appointed a new AP.
6. In May 2007, the BD approved a remedial works proposal submitted by the AP in February 2007.
7. In August 2009, the owner appointed another AP and informed the BD that he would later submit a revised works proposal to the BD for approval.
8. Up to August 2011, the AP had not submitted a revised works proposal to the BD, and the slope remedial works had not yet commenced.

Audit comments

9. Up to August 2011, 14 years after the issue of the DHO, the slope remedial works had not yet commenced.

Response from BD

10. In September 2011, the BD informed Audit that:
 - (a) this was a complicated case as the owner was involved in two other DHOs in respect of other private slopes; and
 - (b) the BD had just requested the owner to commence slope remedial works according to the proposal approved in May 2007 (see para. 6 above).

Source: *BD records*

4.16 The BD may take the following enforcement actions against a private-slope owner who fails to comply with the requirements under a DHO:

- (a) taking prosecution action against the owner under the BO; or
- (b) carrying out the works as default works and recovering the cost from the owner.

4.17 Audit examination revealed that, as at 31 March 2011:

- (a) of the 58 outstanding DHO cases with prosecution action taken against the slope owners (see Item (e) of Table 3 in para. 4.13), information on 38 cases only was available for Audit examination. In 12 (32%) of the 38 cases, the BD only commenced prosecution action **more than four years** after the issue of DHOs; and
- (b) of the 123 outstanding DHO cases with default works in progress (see Item (f) of Table 3 in para. 4.13), information on 56 cases only was available for Audit examination. In 10 (18%) of the 56 cases, the BD only commenced action to carry out default works **more than six years** after the issue of DHOs.

4.18 In July 2011, the BD informed Audit that:

- (a) time was required to locate, contact, persuade and/or assist owners to comply with DHOs voluntarily; and
- (b) the BD might take prosecution actions against an owner for not complying with a DHO. Default works would only be considered if prosecution actions were not successful.

4.19 **In view of the long time taken by some slope owners to meet the requirements under the DHOs, the BD needs to consider taking prosecution action or carrying out default works on long outstanding cases at an earlier time. Audit noted that BD internal guidelines did not clearly specify the time and circumstances for taking prosecution action and carrying out default works after the issue of DHOs.**

Audit recommendations

- 4.20 **Audit has recommended that the Director of Buildings should:**
- (a) **consider taking prosecution action or carrying out default works on long outstanding DHO cases at an earlier time; and**
 - (b) **conduct a review of BD internal guidelines to clearly specify the time and circumstances for taking prosecution action and carrying out default works after the issue of DHOs.**

Response from the Administration

- 4.21 The **Director of Buildings** agrees with the audit recommendations. He has said that:
- (a) default works action demands considerable time, professional input and manpower. In view of the tremendous workload, the BD needs to carefully consider the resource implications of the audit recommendation in paragraph 4.20(a). However, the BD will endeavour to make the best use of its available resources to instigate enforcement action as far as possible; and
 - (b) the BD will conduct a review of its internal guidelines taking into account resource implications, with a view to making further improvement.

Assistance provided for meeting DHO requirements

4.22 In February 2010, in response to a question from a LegCo Member, the Administration said that the primary reasons for slope owners not complying with DHOs were that some private-slope owners did not have the capability to organise the repair works by themselves or they had financial difficulties.

4.23 The GEO has set up the CAU (see para. 2.5) to provide assistance and advice to private-slope owners on carrying out slope maintenance and upgrading works. In coordination with the Home Affairs Department, the CAU provides the following services to private-slope owners and OCs of private buildings on slope safety and maintenance:

- (a) seminars and talks; and
- (b) face-to-face advisory service on undertaking slope maintenance works.

For a private building without an OC, the Home Affairs Department encourages and assists owners to form an OC to deal with building management matters, including slope maintenance if the slope concerned forms part of the land that is commonly owned by the building owners.

4.24 The GEO has issued the following publications relating to DHOs, which are available for collection at the CAU, CEDD library and district offices, and can be downloaded from CEDD website and the Hong Kong Slope Safety Website (see para. 1.5):

- (a) “What to do when you receive a Dangerous Hillside Order”;
- (b) “Simple Guide to Dangerous Hillside Orders”; and
- (c) “GEO Information Note 01/2009: Dangerous Hillside Order”.

4.25 Furthermore, in the covering letter of a DHO, the BD will advise a private-slope owner that he may contact the CAU if he needs advice and assistance. The CAU will send a separate letter (with a 24-hour hotline number) and an information pack to the private-slope owner informing him that he can telephone the CAU anytime for assistance.

Financial assistance provided by the BD

4.26 Since July 2001, through the Comprehensive Building Safety Improvement Loan Scheme (CBSILS — Note 10), the BD has provided loans to individual owners of private buildings who wish to obtain financial assistance in carrying out works for improving the safety of their buildings and/or private slopes, subject to a loan ceiling of \$1 million for each unit of accommodation. Applicants with financial difficulties may apply for interest-free loans which are subject to means tests, whereas applicants for low interest loans are not subject to such tests.

Note 10: *In April 2001, the LegCo Finance Committee approved a financial commitment of \$700 million for setting up the CBSILS.*

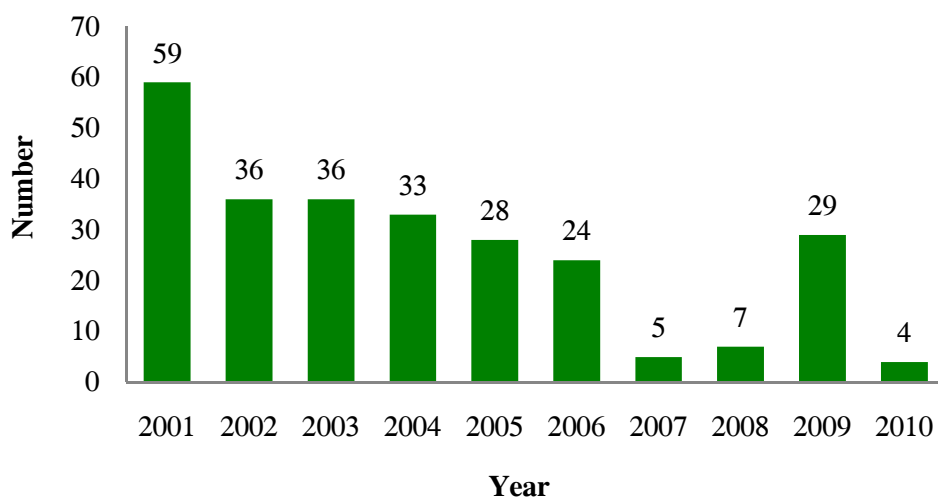
Audit observations and recommendations

CAU advisory services

4.27 The numbers of slope owners served with DHOs who had approached the CAU for assistance from 2001 to 2010 are shown in Figure 6.

Figure 6

**Slope owners seeking CAU assistance
(2001 to 2010)**



Source: GEO records

4.28 As shown in Figure 6, the numbers of DHO cases with slope owners approaching the CAU for assistance decreased from 59 cases in 2001 to 29 cases in 2009 and 4 cases in 2010. **The GEO needs to conduct a review of the significant reduction, with a view to identifying and implementing improvement measures. The GEO also needs to consider enhancing publicity campaigns on CAU services.**

Effectiveness of loan scheme

4.29 During the ten years from 2001-02 to 2010-11, there were 11 loan applications under the CBSILS for slope works related to DHOs. In the event, 2 applications were withdrawn by the applicants and 9 applications were approved, involving a total loan amount of \$410,419 (individual loans ranging from \$2,986 to \$150,000).

4.30 In July and September 2011, the BD informed Audit that:

- (a) as the CBSILS had been running for ten years, the community should be fully aware of its coverage;
- (b) since there were a large number of seminars and workshops organised by district councils and OCs, the BD might not be able to attend each and every one of them to promote the CBSILS;
- (c) the CBSILS was demand-led in nature and building owners had their own considerations when deciding whether or not to apply for loans under the Scheme. The BD did not know why some of the building owners did not apply for loans under the CBSILS;
- (d) upon the implementation of the Integrated Building Maintenance Assistance Scheme (IBMAS — Note 11) from 1 April 2011, building owners were more inclined to apply for subsidies under the IBMAS; and
- (e) when the BD issued a DHO to a private-slope owner, the BD would inform the owner that both the CBSILS and the new IBMAS provided financial assistance to owners who intended to carry out slope remedial works.

4.31 **In view of the fact that there was on average only one loan application a year for slope works related to DHOs in the past ten years, the BD needs to conduct a review of the low application rate, with a view to identifying and implementing improvement measures. The BD also needs to consider enhancing publicity campaigns on the CBSILS.**

Note 11: *The IBMAS is funded and administered by both the Hong Kong Housing Society and the Urban Renewal Authority to provide subsidies and loans to building owners for works in common areas of their buildings, including slope maintenance. Building owners can at the same time obtain financial assistance from the IBMAS and the CBSILS (see para. 4.26).*

Audit recommendations

4.32 **Audit has recommended that the Director of Civil Engineering and Development should:**

- (a) **conduct a review of the significant reduction in the number of slope owners approaching the CAU for assistance, with a view to identifying and implementing improvement measures; and**
- (b) **consider enhancing publicity campaigns on CAU services.**

4.33 **Audit has also recommended that the Director of Buildings should:**

- (a) **conduct a review of the low loan application rate for slope works related to DHOs under the CBSILS, with a view to identifying and implementing improvement measures; and**
- (b) **consider enhancing publicity campaigns on loans available for slope works under the CBSILS.**

Response from the Administration

4.34 The **Director of Civil Engineering and Development** agrees with the audit recommendations in paragraph 4.32.

4.35 The **Director of Buildings** agrees with the audit recommendations in paragraph 4.33. He has said that:

- (a) the BD can further step up its publicity efforts. From September 2011 onwards, in issuing a DHO, the BD has attached to it a leaflet on the IBMAS and the CBSILS; and
- (b) the BD will closely monitor the effectiveness of the above new measures.

Publishing information on private slopes issued with DHOs

4.36 After serving a DHO, the BD will affix a landslip warning sign (see Photograph 1) at a conspicuous location of the private slope concerned to alert nearby residents and members of the public to the potential landslide danger.

Photograph 1

A landslip warning sign affixed on a private slope with a DHO



Source: BD records

Audit observations and recommendation

Publishing a list of private slopes issued with DHOs

4.37 In addition to conducting safety screening of private slopes, the GEO also conducts investigations of government slopes and carries out necessary upgrading works. In its Hong Kong Slope Safety Website, the GEO has published a list of substandard government slopes with upgrading works in progress or to be carried out soon.

4.38 Audit notes that details of DHOs served on slope owners are registered with the Land Registry (LR), which are accessible by members of the public. Furthermore, landslip warning signs (see Photograph 1) are affixed on private slopes where their owners have been served with DHOs. **However, the BD had not published a list of such private slopes, in a similar manner as the practice adopted for government slopes.**

4.39 In September 2011, the BD informed Audit that publishing a list of private slopes where their owners had been served with DHOs had legal and privacy implications, and the BD had to seek the owners' consent before releasing such information on the Internet.

Audit recommendation

4.40 **Audit has recommended that the Director of Buildings should conduct a review of the practicality of publishing a list of private slopes where their owners have been served with DHOs.**

Response from the Administration

4.41 The **Director of Buildings** agrees with the audit recommendation. He has said that the BD will take into account all relevant considerations and look for the best way to provide more information to the public as necessary.

PART 5: MANAGEMENT OF DEFAULT WORKS ON PRIVATE SLOPES

5.1 This PART examines the BD's management of default works carried out on private slopes, focusing on the following areas:

- (a) time targets for completing default works (paras. 5.2 to 5.14);
- (b) appointment of consultants for default works (paras. 5.15 to 5.20);
- (c) monitoring the performance of consultants (paras. 5.21 to 5.24); and
- (d) monitoring the performance of term contractors (paras. 5.25 to 5.29).

Time targets for completing default works

5.2 After assessing a recommendation from the GEO, where appropriate, the BD will issue a DHO to each of the owners of a private slope for carrying out investigations and works to rectify the dangerous (or liable to become dangerous) situation (see para. 1.10). As specified under a DHO, the owners of the private slope concerned are required to appoint a consultant (i.e. an AP — see para. 4.2) to carry out an investigation of the slope, complete the design of the improvement works, and submit a works proposal (with estimated time for completion of works) **within 7 months** to the BD for approval. The 7 months comprise:

- (a) 2 months for appointment of a consultant; and
- (b) 5 months for completing the design work and submitting the works proposal.

5.3 Under sections 27A and 33 of the BO, if slope owners do not comply with DHOs, the BD may carry out default works on a private slope and recover the costs plus supervision charges from the owners. In relation to the execution of default works for a private slope, the BD will take the following actions:

- (a) issuing a letter to notify the slope owners of the BD's proposed default works action;
- (b) appointing an engineering **consultant** by tender for conducting an investigation and preparing a detailed design of the slope works;

- (c) instructing the consultant to carry out pre-construction arrangements (such as preparing a site supervision plan and a related works order); and
- (d) issuing a **works order** to a **term contractor** for carrying out slope works (based on the approved design) under the supervision of the consultant.

5.4 The BD has set a target that default works for a private slope should be completed within **44 months**, comprising the following time targets for different stages of works:

- (a) the BD should appoint a default works consultant within **5 months**;
- (b) the consultant should complete the design work within **20 months** (Note 12);
- (c) the consultant should complete the pre-construction arrangements (see para. 5.3(c)) within **2 months**; and
- (d) the term contractor should complete the slope improvement works within **17 months**.

Audit observations and recommendations

Different time targets for slope owners and BD

5.5 Audit examination revealed that the time requirements set for slope owners for completing the appointment of consultants and design work were significantly shorter than the time targets set for the BD in completing similar tasks relating to default works for private slopes (see Table 4).

Note 12: *According to BD guidelines, if default works require access to or works within nearby premises or government land, additional time may be allowed for making formal agreement with the affected owners or relevant government departments.*

Table 4
Time targets set for slope owners and the BD

Stage of works	Time target	
	Works by slope owners (Note) (month)	Default works by the BD (month)
Appointment of a consultant	2	5
Completion of design work	5	20

Source: BD records

Note: For different DHOs, different time requirements were set for completing pre-construction arrangements and slope improvement works, depending on individual circumstances.

5.6 In September 2011, the BD informed Audit that the tight time requirements set out in DHOs aimed at urging slope owners to comply with DHOs at an early time. Subject to reasonable justifications from an owner or an AP appointed by an owner, without prejudice to a DHO, an extension of time for compliance with a DHO would be considered.

5.7 In Audit's view, the BD needs to conduct a review of the different time targets set for slope owners and for the BD, with a view to identifying and implementing improvement measures.

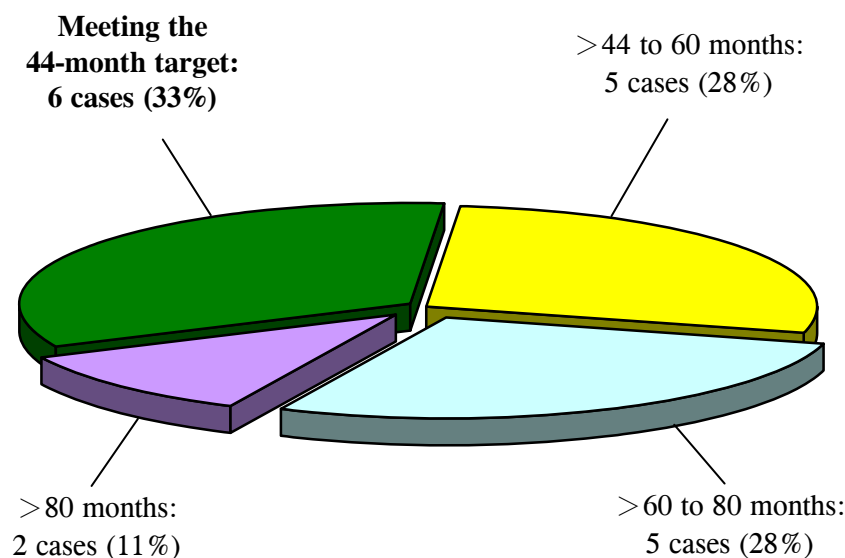
Delays in completing default works

5.8 From January 2000 to March 2011, the BD awarded 48 consultancies for 71 default works cases. Up to March 2011, 18 default works cases had been completed, and the remaining 53 were in progress.

5.9 Audit examination revealed that, of the 18 completed default works cases, 12 (67%) exceeded the 44-month target (see para. 5.4) for completing the works (see Figure 7).

Figure 7

**Time taken for completing default works in 18 cases
(January 2000 to March 2011)**



Source: *Audit analysis of BD records*

5.10 Audit examination also revealed that, as of March 2011, of the 53 default works cases in progress (see para. 5.8), 26 (49%) already exceeded the 44-month target, with extra time taken ranging from 1 to 76 months. As these default works cases were still in progress, the actual time required for completing the works was yet to be determined.

5.11 In September 2011, the BD informed Audit that:

- (a) many unforeseen difficulties and problems had been encountered during the execution of default works; and
- (b) the programme and progress of default works were closely monitored by the BD at internal meetings.

5.12 **Audit considers that the BD needs to strengthen controls over the execution of default works to ensure that they are completed within the BD's time targets as far as possible.**

Audit recommendations

- 5.13 **Audit has recommended that the Director of Buildings should:**
- (a) **conduct a review of the differences in the time targets set for private-slope owners and for the BD relating to the appointment of consultants, and completion of design work for slope improvement works; and**
 - (b) **strengthen controls over the execution of default works with a view to ensuring that they are completed within the BD's time targets as far as possible.**

Response from the Administration

- 5.14 The **Director of Buildings** agrees with the audit recommendations. He has said that the BD will:
- (a) in consultation with the GEO, conduct a review as recommended in paragraph 5.13(a), in particular on the effectiveness of the current strategy in urging slope owners to comply with DHOs; and
 - (b) continue to follow up the execution of default works and monitor the progress closely.

Appointment of consultants for default works

5.15 In 1996, the BD appointed two **term consultants** for the design and supervision of default works for private slopes, each for a term of three years. All BD default works for private slopes during the three-year period were carried out by the two consultants. In 1999, the BD conducted a review of the arrangement. Subsequent to the review, from 2000 to 2006, the BD adopted an arrangement to appoint a consultant for each default works case. Since 2007, with a view to improving efficiency, the BD has adopted a new arrangement to incorporate two or more default works cases into one consultancy.

Audit observations and recommendation

Appointment of consultants

5.16 Audit examination revealed that, as of March 2011, the BD was taking action to appoint consultants for 15 default works cases. Of these 15 cases, the time taken for

9 cases (60%) had already exceeded the five-month target for appointment of consultants (see para. 5.4(a)), with extra time taken ranging from 1 to 14 months. As the appointments of consultants for these works cases were still in progress, the actual time required for such appointments was yet to be determined.

5.17 Audit noted that, for 5 of the 9 default works cases exceeding the five-month target, as of March 2011, the BD was taking action to incorporate two or more works cases into one consultancy (see para. 5.15). **In Audit's view, the extra time taken for appointing consultants might be attributed to this arrangement.** Case 3 is an example.

Case 3 — Default Works A

Excessive time taken for appointment of a consultant

1. In September 2009, the BD informed the owners of a private slope located on Lantau Island of its decision to carry out default works (Default Works A).
2. In January 2010, the BD attempted to appoint a consultant to carry out Default Works A together with another default works case, but to no avail.
3. In May 2010, the BD commenced another action to appoint a consultant for the same purpose.
4. In September 2011, the BD appointed a consultant for both Default Works A and another default works case.

Audit comments

5. A consultant was only appointed two years after informing the owners of the decision to carry out Default Works A, significantly exceeding the five-month target.

Response from BD

6. In September 2011, the BD informed Audit that this was an isolated case, as the BD had granted priority to other more urgent cases.

Source: BD records

- 5.18 In September 2011, the BD informed Audit that:
- (a) there were merits in incorporating two or more default works cases into one consultancy, such as attracting larger consulting firms to bid for the consultancy competitively, saving administrative time and cost, and handling more DHO cases at the same time; and
 - (b) if the BD dispensed with the practice of incorporating two or more default works cases into one consultancy, it would have to arrange one consultancy for each works case. This might not be efficient and cost-effective as more administrative work (including tendering and contract administration) was needed. This might result in even longer time required for appointments of consultants.

Audit recommendation

5.19 **Audit has recommended that the Director of Buildings should expedite action on appointments of consultants for default works with a view to meeting the BD's five-month target for such appointments as far as possible.**

Response from the Administration

5.20 The **Director of Buildings** agrees with the audit recommendation. He has said that the BD will review the arrangements for appointing consultants in the light of available resources.

Monitoring the performance of consultants

5.21 The BD has implemented a consultant performance management system to monitor the performance of consultants for default works, which is in line with that implemented by other works departments. Under the system, the BD will assess and rate the performance of each consultant based on a list of factors. The BD has also formulated the following guidelines to monitor the performance of a consultant for default works:

- (a) **holding monthly meetings** with the consultant to monitor the progress of default works;
- (b) **compiling quarterly performance reports** on the consultant's performance;
- (c) **issuing a reminder** to the consultant if the works progress is delayed by more than one month;

- (d) **issuing a written warning** to the consultant if the works progress is delayed for another month;
- (e) **issuing an adverse performance report** on the consultant if he does not show improvement after receiving a written warning;
- (f) **suspending the consultant from bidding for new consultancies** for a minimum period of three months after the issue of two consecutive adverse reports; and
- (g) **extending the suspension period** to a minimum of 12 months if three consecutive adverse reports have been issued.

Audit observations and recommendation

Controls over consultants' performance

5.22 From January 2000 to March 2011, the BD awarded 48 consultancies for 71 default works cases. Audit selected 5 consultancies (10%) for review. Of the 5 consultancies, Audit examination revealed that the BD's monitoring guidelines (see para. 5.21) had not been fully complied with in the consultancies. Audit observations included:

- (a) ***No monthly meetings held.*** In all the 5 consultancies, the BD had only held meetings with the consultants on a need basis, not complying with the monthly-meeting guideline (see para. 5.21(a));
- (b) ***No written warnings issued.*** In 3 consultancies, although the BD had issued reminders to the consultants, no written warnings had been issued to the consultants notwithstanding that there were further work delays by another month (see para. 5.21(d)); and
- (c) ***No adverse performance reports issued.*** In the 3 consultancies in (b) above, although the works progress had been further delayed by the consultants, no adverse performance reports had been issued to the consultants (see para. 5.21(e)).

Case 4 shows a case where the BD did not issue a written warning nor an adverse performance report to a consultant who took a long time to complete the pre-construction arrangements.

Case 4 — Default Works B

Monitoring of consultant's performance

1. In October 2007, the BD approved a detailed design report submitted by a consultant relating to a default works case (Default Works B) for two private slopes located in Happy Valley, and requested the consultant to submit the necessary documents for the slope works, including a quality manual, a draft works order and draft cost estimates.

2. In November 2007, the slope owners informed the BD that they were very concerned about the works progress.

3. From November 2007 to August 2008, the BD issued seven reminders to the consultant asking for timely submission of the required documents.

4. In September 2008, the consultant submitted all the required documents to the BD.

5. In October 2008, the BD issued a works order to a term contractor for the slope works.

Audit comments

6. The consultant had taken 11 months to submit all the required documents. As a result, the pre-construction arrangements took a year to finalise, which was significantly longer than the time target of two months (see para. 5.4(c)).

7. The BD had not issued a written warning nor an adverse performance report to the consultant in respect of the delay in finalising the pre-construction arrangements, at variance with the BD's monitoring guidelines (see para. 5.21(d) and (e)).

Response from BD

8. In September 2011, the BD informed Audit that:

- (a) during the period for pre-construction arrangements from October 2007 to October 2008, the BD had requested the consultant to complete several work items prior to the issue of the works order;
- (b) the BD issued reminders from time to time if a delay for more than one month was noted; and
- (c) as the consultant concerned generally responded to the reminders and was able to submit the required information item by item, a formal written warning was not issued to him.

Source: BD records

Audit recommendation

5.23 **Audit has recommended that the Director of Buildings should take measures with a view to ensuring that the BD's monitoring guidelines on consultant performance are complied with.**

Response from the Administration

5.24 The **Director of Buildings** agrees with the audit recommendation. He has said that the BD will strengthen its contract management measures and examine whether there is room for further enhancement to the existing procedures.

Monitoring the performance of term contractors

5.25 The BD has implemented a contractor performance management system to monitor the performance of term contractors for default works, which is in line with that implemented by other works departments. Under the system, the BD will assess and rate the performance of each contractor based on a list of factors. Similar to the guidelines for monitoring consultants' performance, the BD has formulated the following guidelines to monitor the performance of a term contractor for each default works order:

- (a) **holding bi-monthly meetings** among the BD, the term contractor and the consultant to monitor the progress of default works;
- (b) **compiling quarterly performance reports** on the term contractor over the duration of works;
- (c) **issuing a reminder** to the term contractor if a delay in works progress is caused by him;
- (d) **issuing a written warning** to the term contractor if he does not show improvement after receiving a reminder;
- (e) **issuing an adverse performance report** on the term contractor if he does not show improvement after receiving a written warning;
- (f) **suspending the term contractor from bidding for new contracts** for a minimum period of three months after the issue of two consecutive adverse reports;

- (g) **conducting a site visit** by a BD case officer once every two months; and
- (h) **conducting at least one site audit** by the case officer.

Audit observations and recommendation

Controls over term contractors' performance

5.26 From January 2000 to March 2011, 18 default works cases had been completed by BD term contractors (see para. 5.8). Audit examination revealed that the BD's monitoring guidelines for term contractors (see para. 5.25) had not been fully complied with. Audit observations included:

- (a) ***Frequency of performance reporting.*** Of the 18 completed default works cases, performance reports for the term contractors of 2 works cases (11%) were compiled at intervals longer than every three months, at variance with BD guideline for compiling quarterly performance reports (see para. 5.25(b));
- (b) ***Issue of adverse performance reports.*** Audit noted that a term contractor (Term Contractor A) took 20 months to complete a works order that specified 11 months for completion. During the works period, the slope owners made repeated complaints about the slow works progress. The works consultant had issued eight reminders and the BD had issued a written warning to Term Contractor A. However, Term Contractor A's performance was assessed as satisfactory in the performance reports throughout the works period, at variance with BD guideline (see para. 5.25(e)); and
- (c) ***Site visits and site audits.*** For the 18 completed works cases, Audit could not find documents (e.g. site visit reports) showing that the required site visits (see para. 5.25(g)) had been carried out. Audit also noted that site audits (see para. 5.25(h)) for 4 works orders (22% of 18) had not been conducted.

5.27 In September 2011, the BD informed Audit that:

- (a) regarding Term Contractor A's work, site difficulties had been encountered during the construction stage resulting in a delay in progress; and
- (b) after the issue of a warning letter, Term Contractor A had responded positively to improve progress. As such, no adverse performance report was issued to him.

Audit recommendation

5.28 **Audit has recommended that the Director of Buildings should take measures with a view to ensuring that the BD's monitoring guidelines on term contractor performance are complied with.**

Response from the Administration

5.29 The **Director of Buildings** agrees with the audit recommendation. He has said that:

- (a) the BD has recently implemented measures to ensure that performance reports for all works orders in progress are compiled on time; and
- (b) the BD will ensure that the required site visits and site audits are carried out timely. Furthermore, the progress and quality of default works are closely monitored by the BD's consultants.

PART 6: RECOVERY OF COSTS OF DEFAULT WORKS

6.1 This PART examines the BD's actions in recovering the costs of default works from private-slope owners, focusing on:

- (a) actions to recover costs of default works (paras. 6.7 to 6.17); and
- (b) implementation of cost recovery by stages (paras. 6.18 to 6.24).

Cost recovery

6.2 Under sections 27A and 33 of the BO, if a slope owner does not comply with DHOs, the BD may carry out default works on the private slope concerned (Note 13) and recover the costs plus supervision charges from him.

6.3 Upon completion of default works, the BD will take the following actions to recover the costs from private-slope owners:

- (a) finalising the account of default works and issuing demand notes to slope owners (Note 14);
- (b) for a slope owner who does not promptly settle a demand note, serving a certificate under section 33 of the BO (s.33 certificate), and registering the certificate with the LR, which will constitute a first charge against the title of the property. Under this legal charge, the BD may sell or lease the property for the purpose of settling any outstanding default works cost; and
- (c) referring appropriate cases to the Department of Justice for taking legal action, such as issuing letters to the debtors and mortgagee banks of the slope owners concerned.

Note 13: *The BD may also carry out default works on private slopes requiring emergency repairs (e.g. after landslides), and recover the costs from the slope owners.*

Note 14: *For a slope with multiple owners, the cost will be apportioned with separate demand notes issued to individual owners.*

Outstanding cases for cost recovery

6.4 The BD has maintained a computerised information system to record information on the costs (including those incurred by consultants and term contractors) of default works, time of works completion, demand notes issued to slope owners for recovery of costs and other recovery actions taken.

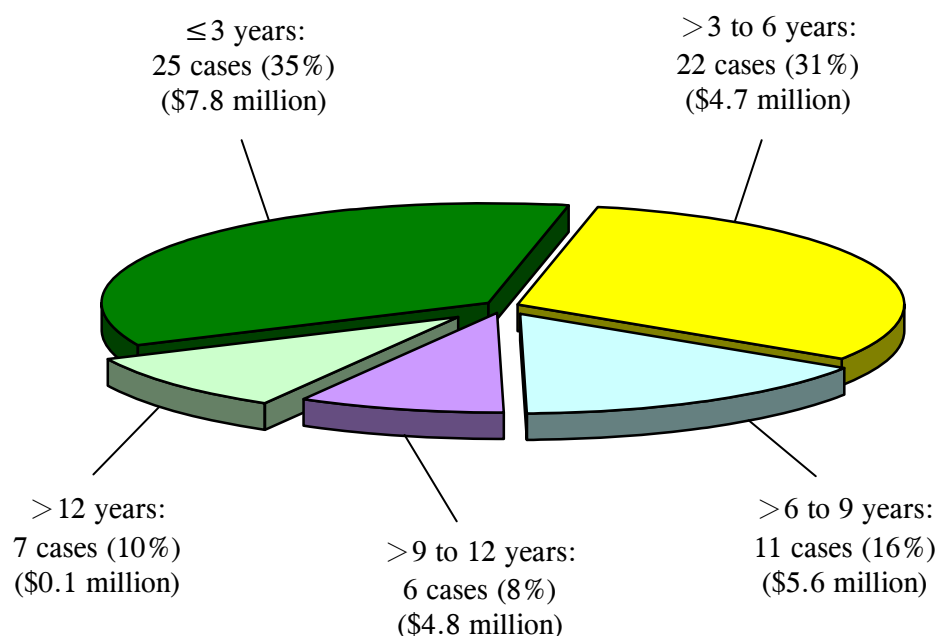
6.5 Audit examination revealed that, as at 31 March 2011:

- (a) **there were 71 completed default works cases (including 34 cases of emergency works) with outstanding costs. These cases had incurred a total sum of \$41 million, of which \$23 million (56%) was yet to be recovered from the slope owners; and**
- (b) there were 44 default works cases in progress, with a total cost of \$11 million, which was to be recovered from the slope owners upon works completion.

6.6 Figure 8 shows an ageing analysis of the 71 completed cases.

Figure 8

Ageing analysis of 71 completed default works cases with outstanding costs (31 March 2011)



Source: Audit analysis of BD records

Actions to recover costs of default works

Time targets for cost recovery actions

6.7 The BD has set the following targets for taking cost recovery actions:

- (a) **6 months after completion of default works** for issuing demand notes to slope owners; and
- (b) **4 months after issue of demand notes** for registering s.33 certificates with the LR.

Limitation periods on cost recovery actions

6.8 The BD's actions to recover the costs of default works are subject to the following statutory limitation periods:

- (a) according to the Limitation Ordinance (Cap. 347), legal action to recover costs must be taken within **6 years** of the completion date of default works; and
- (b) regarding the issue and registration of s.33 certificate with the LR, the Limitation Ordinance stipulates that any legal action to recover the principal sum of money secured by a charge on a property must be taken within **12 years** of the date of registration.

Audit observations and recommendations

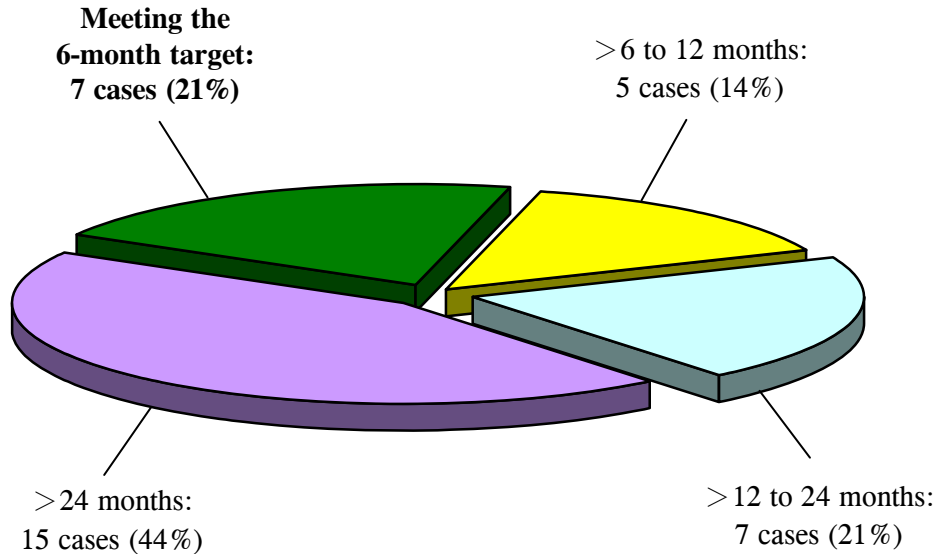
Time targets for cost recovery actions

6.9 As at 31 March 2011, demand notes had been issued and s.33 certificates registered for 34 (48%) of the 71 completed default works cases with outstanding costs (see para. 6.5).

6.10 **Issue of demand notes.** Audit examination revealed that, of the 34 default works cases (see para. 6.9), demand notes for 27 cases (79%) were issued more than six months after works completion, at variance with BD target (see para. 6.7(a)). Figure 9 shows an ageing analysis of the demand notes issued.

Figure 9

Ageing analysis of 34 demand notes issued after works completion
(31 March 2011)

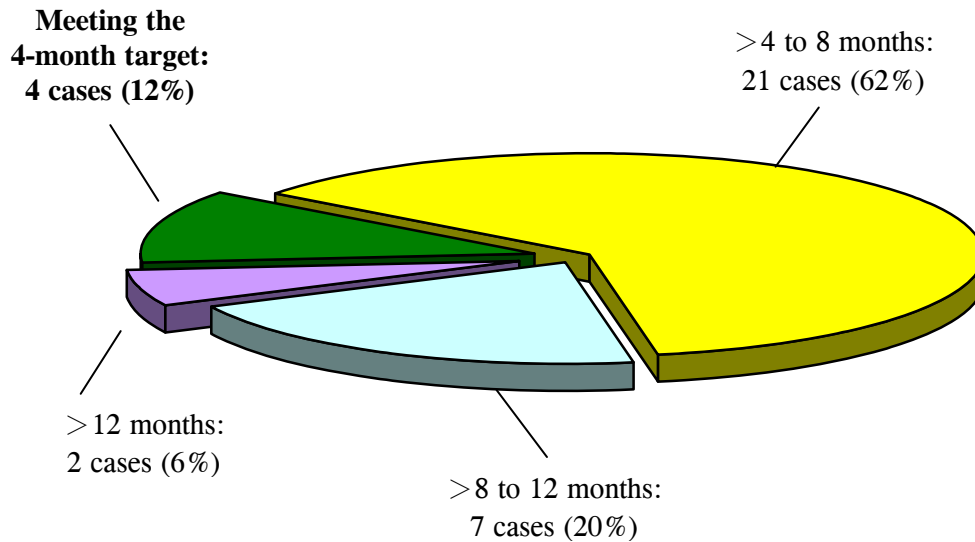


Source: Audit analysis of BD records

6.11 **Registration of s.33 certificates.** Audit examination also revealed that, of the 34 default works cases, the s.33 certificates of 30 cases (88%) were registered more than four months after issue of demand notes, at variance with BD target (see para. 6.7(b)). Figure 10 shows an ageing analysis of the registration of s.33 certificates.

Figure 10

**Ageing analysis of time taken to register
s.33 certificates in 34 cases
(31 March 2011)**



Source: *Audit analysis of BD records*

6.12 In September 2011, the BD informed Audit that:

- (a) the progress of default works was closely monitored by the BD's internal meetings;
- (b) cases requiring longer time for issue of demand notes might be due to the time required for processing final accounts, clarifying ownership particulars and apportioning costs; and
- (c) after the issue of demand notes, some owners might raise enquiries about the cost of works to be paid by them. To avoid disputes, the BD would endeavour to answer all the enquiries prior to registering s.33 certificates.

6.13 Under section 33(9) of the BO, a first charge resulting from registration of an s.33 certificate shall be void and no liability shall accrue to a bona fide purchaser if he has acquired a property and registered an interest in the property after the date of completion of default works but before the registration of an s.33 certificate. **Therefore, the BD needs to expedite action to issue demand notes and register s.33 certificates.**

6.14 Case 5 illustrates the long time taken in a cost recovery case.

Case 5

Delay in taking cost recovery actions

1. In August 2001, the BD issued a DHO to each of the 13 co-owners of a private slope in Happy Valley.
2. In May 2002, the BD decided to carry out default works.
3. In June 2008, the default works were completed. Later in the same month, one of the owners (Owner A) sold a property related to the DHO to another person (Owner B).
4. From June 2008 to March 2011, the BD clarified the boundary of the related land lot with the default works consultant and apportioned the works cost among individual owners.
5. In April 2011, the BD issued demand notes to the 13 co-owners (including Owner B) for recovering a total sum of \$1.3 million of the default works cost.
6. Up to August 2011, four demand notes (including the one issued to Owner B) involving a total amount of \$1.1 million had not been settled, and the BD had not served any s.33 certificates on the owners.

Audit comments

7. The BD took nearly three years (from June 2008 to April 2011) to issue demand notes after works completion, exceeding the time target of six months (see para. 6.7(a)).

Response from BD

8. In September 2011, the BD informed Audit that there were technical complexities in the apportionment of cost in this case, involving 13 co-owners.

Source: BD and LR records

6.15 According to BD records, in many cases, the delays to issue demand notes after works completion were attributable to the long time taken by contractors and consultants to submit the final accounts of default works. The BD has required its term contractors to submit final accounts **within 2 months** of works completion. The default works consultants would check the final accounts for the BD's certification. The BD has set an internal target that final accounts should be certified **within 3 months** of works completion. **The BD needs to take measures to ensure that the final accounts are promptly submitted to the BD for issue of demand notes.**

Audit recommendations

6.16 **Audit has recommended that the Director of Buildings should take measures to ensure that:**

- (a) **BD targets on issuing demand notes within six months of works completion, and on registering s.33 certificates with the LR within four months of issue of demand notes, are met; and**
- (b) **contractors and consultants promptly submit final accounts of default works to the BD for issue of demand notes to slope owners.**

Response from the Administration

6.17 The **Director of Buildings** agrees with the audit recommendations. He has said that the BD will take measures to expedite the cost recovery actions.

Implementation of cost recovery by stages

2005 audit review

6.18 In 2005, Audit conducted a review of the drainage problems of buildings, including an examination of the BD's efforts in recovering costs on various categories of default works (including slope repair works) from property owners. The review results were included in Chapter 1 of the Director of Audit's Report No. 44 of March 2005.

6.19 In the 2005 audit review, Audit recommended that the BD should consider implementing cost recovery actions by stages for default slope works. In response, the BD said that a staged cost recovery arrangement for default slope works had been implemented since early February 2005.

6.20 Under the staged cost recovery arrangement, the BD will recover the costs of default slope works by two stages, namely design stage and construction stage. The BD will issue demand notes after completion of the design work to recover the related costs at an earlier time before completion of the construction works.

Audit observations and recommendation

Staged cost recovery arrangement

6.21 Audit examination revealed that, during the six-year period from February 2005 (commencement of the new arrangement) to August 2011, the BD only adopted the staged cost recovery arrangement in one case (in June 2005 involving \$0.9 million). During the period, the BD did not adopt this arrangement for recovering the design costs of the other 46 cases. **Audit also noted that the BD had not formulated comprehensive guidelines on the issue.**

6.22 In August and September 2011, the BD informed Audit that the staged cost recovery arrangement had not been widely adopted for default works because:

- (a) the cost of design work was much lower than that of construction works;
- (b) the construction periods of many default works cases were not long;
- (c) cost recovery by stages might cause confusion and disturbance to slope owners; and
- (d) under the BD's limited manpower, its administrative workload could be reduced if the cost of default works was recovered in one lump sum.

Audit recommendation

6.23 **Audit has recommended that the Director of Buildings should formulate comprehensive guidelines for adopting the staged cost recovery arrangement for default works on private slopes.**

Response from the Administration

6.24 The **Director of Buildings** agrees with the audit recommendation. He has said that the BD will review its internal guidelines on the staged cost recovery arrangement to optimise the cost recovery process.

**GEO maintenance surveys of private slopes
(1993-94 to 2009-10)**

Survey report year	Survey period	Slope surveyed (a) (No.)	Slope found to be in “apparently acceptable” maintenance conditions	
			(b) (No.)	(c) = $\frac{(b)}{(a)} \times 100\%$ (Percentage)
1993-94	Nov. 1993 — Dec. 1993	63	22	35%
1994-95	Dec. 1994 — Jan. 1995	61	24	39%
1995-96	Nov. 1995 — Dec. 1995	60	27	45%
1996-97	Nov. 1996 — Dec. 1996	100	41	41%
1997-98	Dec. 1997 — Feb. 1998	200	85	43%
1998-99	Dec. 1998 — Mar. 1999	297	122	41%
1999-00	Dec. 1999 — Mar. 2000	300	125	42%
2000-01	Dec. 2000 — Feb. 2001	300	129	43%
2001-02	Nov. 2001 — Feb. 2002	314	136	43%
2002-03	Nov. 2003 — Dec. 2003	60	25	42%
2003-04	Nov. 2004 — Mar. 2005	60	28	47%
2004-05	Jan. 2006 — Feb. 2006	60	29	48%
2005-06	Feb. 2007	60	30	50%
2006-07	Mar. 2008	60	31	52%
2007-08	Feb. 2009	60	33	55%
2008-09	Feb. 2010 — Mar. 2010	60	37	62%
2009-10	Feb. 2011	60	38	63%

Source: GEO records

Acronyms and abbreviations

AP	Authorised Person
Audit	Audit Commission
BD	Buildings Department
BO	Buildings Ordinance
CAU	Community Advisory Unit
CBSILS	Comprehensive Building Safety Improvement Loan Scheme
CEDD	Civil Engineering and Development Department
DEVB	Development Bureau
DHO	Dangerous Hillside Order
FSTB	Financial Services and the Treasury Bureau
GEO	Geotechnical Engineering Office
IBMAS	Integrated Building Maintenance Assistance Scheme
LandsD	Lands Department
LegCo	Legislative Council
LPMP	Landslip Preventive Measures Programme
LPMitP	Landslip Prevention and Mitigation Programme
LR	Land Registry
OC	Owners' Corporation
PLW Panel	Panel on Planning, Lands and Works
SIS	Slope Information System
SMRIS	Slope Maintenance Responsibility Information System