

## **Appendix 7**

### **Slopes & Retaining Walls**

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### 1 Maintenance Responsibility

- Private building owners (owners) are responsible for the maintenance and repair of slopes/retaining walls within their lots.

The owners include such of individual flats in a multi-storey building and any persons holding premises directly from the Government under lease, licence, etc. The public can have access to lease documents and records of owners at the Land Registry.

- Some owners are also liable under the lease to maintain and repair slopes/retaining walls outside their lot boundaries.

Government Leases may contain specific clauses regarding the maintenance responsibility for areas outside the lot boundaries. Sometimes, such responsibility may not be specific but only implied under conditions of the lease such as the General Maintenance Clause.

In some cases, owners may also have liabilities under common law for maintenance and repair of slopes/retaining walls adjoining their lots. If the owners have queries on the maintenance responsibilities in this regards, advice from lawyers and estate surveyors should be sought.

- For private lots which have been developed and held in multiple ownership, the Building Management Ordinance applies and that responsibility for slope/retaining wall within the common areas rests with the Incorporated Owners. Owners are also advised to refer to the Deed of Mutual Covenant and any Management Agreement for information.
- The public may obtain the information on slope maintenance responsibility from the Slope Maintenance Responsibility Information Centre of the Lands Department on 1/F of North Point Government Offices at No. 333 Java Road in North Point, Hong Kong. They may also enquire via telephone hotline No. 2231 3333 or visit the Lands Department website: [www.slope.landsd.gov.hk/smris/](http://www.slope.landsd.gov.hk/smris/).
- If a slope or retaining wall is not properly maintained, it will deteriorate and a landslide may occur. This could result in injury to persons or damage to properties. The responsible owners or parties may have to bear significant expense to render the slope safe, to repair the property and to compensate those injured.

## Appendix 7 Slopes and Retaining Walls

### 2 Routine Maintenance

#### 2.1 Scope of routine maintenance

In typical routine maintenance, owners should:

- clear accumulated debris from drainage channels and slope surfaces
- repair cracked or damaged drainage channels or pavement
- repair or replace cracked or damaged slope surfaces
- clear obstructions in weepholes and outlet drain pipes
- repair missing or deteriorated pointing in masonry walls
- remove any vegetation causing severe cracking of slope surfaces and drainage channels
- replant vegetation in areas where the vegetation has withered
- remove loose rock debris and undesirable vegetation from rock slopes or around boulders
- investigate and repair buried water-carrying services in or adjacent to slopes or retaining walls where signs of possible leakage are observed

#### 2.2 Frequency and timing of routine maintenance inspections

- Routine Maintenance Inspections should be carried out at least once a year.
- Any required maintenance works should preferably be completed before the wet seasons.
- Owners should arrange to inspect the drainage channels and clear any blockages after a heavy rainstorm or a typhoon.

#### 2.3 Personnel for routine maintenance inspections

- The purpose of routine maintenance inspections is to ascertain the need for maintenance works. Such inspections do not demand professional geotechnical knowledge and can be carried out by a layman, including property management or maintenance staff.

## **Appendix 7 Slopes and Retaining Walls**

### **2.4 Regular checks of buried water-carrying services**

- Leakage from buried water-carrying services may not produce visible signs on slopes or retaining walls. Therefore, regular inspection of these services should be carried out.
- Any damaged water-carrying services should be repaired without delay.
- Checking of buried drains and sewers can be carried out by drainage contractors using a number of methods, general guidance on which can be found in the leaflet “Advisory Note on Inspection and Maintenance of Private Drainage and Water Services Affecting Slopes” available from District Offices.

### **2.5 Routine maintenance works**

- Routine slope maintenance works can be carried out by a general building contractor or a specialist contractor in site formation works category as per the advice of building professionals.
- A list of registered contractors is available for inspection at District Offices and the Buildings Department or from the department’s web site at [www.info.gov.hk/bd](http://www.info.gov.hk/bd).

## **3 Engineer inspections for maintenance**

### **3.1 Scope of the inspections**

- Although proper routine maintenance of a slope or retaining wall can greatly reduce the risk of a landslide, the slope/retaining wall may still not be sufficiently safe for various reasons, such as inherent design or construction deficiencies, or changes of soil properties that have taken place in the vicinity. Therefore, an Engineer Inspection should be carried out to assess the need of maintenance and condition of the slopes/retaining wall from an in-depth professional standpoint.
- A model brief for the Engineer Inspections for Maintenance has been included in the “Layman’s Guide to Slope Maintenance”, which is available from District Offices.

## Appendix 7 Slopes and Retaining Walls

### 3.2 Frequency of the inspections

- Minimum once every 5 years.
- More frequent inspections may be recommended by the original designer of the slope in the Maintenance Manual.
- More frequent inspections may be recommended by the engineer commissioned to carry out the previous inspection.
- It may also be requested by those who carry out the Routine Maintenance Inspections on a need basis.

### 3.3 Personnel for the inspections

- An Engineer Inspection for Maintenance should be carried out by a geotechnical engineer professionally qualified in Hong Kong.
- A suitable qualification is Registered Professional Engineer (Geotechnical), information on which can be obtained from the Engineers Registration Board. The address is : Engineers Registration Board, c/o Hong Kong Institution of Engineers, 9/F, Island Beverley, 1 Great George Street, Causeway Bay, Hong Kong.

Website : [www.erb.org.hk](http://www.erb.org.hk)  
(Tel: 2895 4446)  
(Fax: 2577 7791)

## 4 Publications Available from the Civil Engineering Department

Civil Engineering Department publishes a number of information leaflets, booklets and promotional materials to raise public awareness of slope safety. These include:

- How to Protect Yourself and Your Family when the Landslip Warning is in Force
- Keep Your Slope Safe
- Don't Carry Out Unauthorized Cultivation
- Advice to Squatters in Respect of Landslips
- Training Video CD on slope safety problems and common methods of slope maintenance

## Appendix 7 Slopes and Retaining Walls

Documents that provide guidance on good practice related to slope maintenance include:

- Guide to Slope Maintenance (Geoguide 5)
- Layman's Guide to Slope Maintenance
- What to Do When You Receive a Dangerous Hillside Order
- Model Slope Maintenance Plan for Private Slope Owners

Copies of Geoguide 5 can be directly purchased from Government Publications Centre. The other publications may be obtained free of charge from District Offices or by writing to:

Chief Geotechnical Engineer/Slope Safety  
Geotechnical Engineering Office,  
Civil Engineering Department,  
7/F., Civil Engineering Building,  
101 Princess Margaret Road,  
Homantin, Kowloon.

### 5 Additional Sources of Information :

- (1) Code of Practice on Inspection & Maintenance of Water Carrying Services Affecting Slopes, Works Branch (now Works Bureau)
- (2) Advisory Note on Inspection and Maintenance of Buried Drainage and Water Services Affecting Slopes/Walls, Geotechnical Engineering Office, Civil Engineering Department
- (3) Practice Notes for Authorized Person and Registered Structural Engineers No. 205 : Code of Practice on Inspection and Maintenance of Water Carrying Services Affecting Slopes, Buildings Department
- (4) Slope Safety Hotline at Tel : 2885 5888 of GEO of CED
- (5) Community Advisory Unit, Geotechnical Engineering Office, Civil Engineering Department at Tel : 2760 5800
- (6) Hong Kong Slope Safety Website at <http://hkss.ced.gov.hk>
- (7) Lands Department Website on Maintenance Responsibility of Slopes at <http://www.slope.landsd.gov.hk/smr/s/>

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