

Catalogue of Slopes

Key Message: The Catalogue of Slopes, with the largest databases of its kind in the world, is a principal source of comprehensive and up-to-date slope information which will assist the Government and the public in planning and implementing slope safety measures, including maintenance and upgrading works. Slope data are stored in a computerized Slope Information System, which provides the general public, via the Internet, with a fast, convenient and free access to slope information.

Introduction

Hong Kong is a city with steep mountainous terrain. With the economy development and population grown, land formation in the hillsides are very common to meet the needs on housing, commercial and industrial use. The carving of hillsides often involves major site formation works in cutting back the hillsides or filling platforms, thus creating numerous man-made slopes. Mitigation measures are also built to protect developments from natural terrain hazards. In view of this, sizeable man-made slopes and mitigation measures (collectively termed as man-made slopes) are systemically identified and registered in the Catalogue of Slopes (herein Slope Catalogue).

Slope Cataloguing Exercise and Updating of Slope Catalogue

The Slope Catalogue contains pertinent and important information on man-made slopes and natural terrain hazard mitigation measures, including their type and geometry, formation history, geology and photographs, etc. It is a valuable resource that can facilitate engineers, consultants and owners in planning and implementing various slope safety actions, such as preliminary studies, maintenance, investigation and design of slope upgrading works.

Today, the Slope Catalogue contains about 60 000 registered man-made slopes. About one third of which (i.e. about 20 000) are of private responsibility and the remaining (i.e. about 40 000) are government slopes. With the continuous development in Hong Kong, the Slope Catalogue is kept up-to-date through joint efforts from all the relevant stakeholders, including government departments, private developers and slope owners. Newly constructed slopes and existing slopes modified during maintenance works should be registered and updated in accordance with the established procedures.

In brief, registrable man-made slopes in the Slope Catalogue comprise: (i) cut slopes, with a surface sloping at $\geq 15^\circ$, together with any associated retaining walls, and the total height is $\geq 3\text{m}$ high; (ii) fill slopes, with a surface sloping at $\geq 15^\circ$, together with any associated retaining walls, and the total height is $\geq 5\text{m}$ high; (iii) fill slopes, with a surface sloping at $\geq 15^\circ$, together with any associated retaining walls, which pose a direct consequence to life in the event of failure and the total height is $\geq 3\text{m}$ high; (iv) retaining walls $\geq 3\text{m}$ high; and (v) natural terrain hazard mitigation measures, including stabilization measures constructed on natural hillside to prevent failure and defense measures to contain landslide debris and boulders and hence protect buildings and infrastructure below the natural hillside.

Slope Information System

A Slope Information System (SIS), is digitized to manage more effectively all data contained in the Slope Catalogue to facilitate storage, retrieval and updating. The SIS is built on a Geographic Information System (GIS) that integrates different types of datasets in spatial and textual attributes and enables fast online retrieval, examination and analysis of slope information and the surrounding spatial features.

The SIS provides the general public, via the Internet, with a fast, convenient and free access to obtain slope information and it is an indispensable tool in our slope safety work in Hong Kong. The SIS is highly regarded both locally and worldwide by geotechnical practitioners and natural hazard management professionals.

The Internet version of the SIS at the Hong Kong Slope Safety (HKSS) Website (<https://hkss.cedd.gov.hk>) allows the public and engineering professionals to retrieve slope information. Slope information can also be obtained by submitting an Application Form by mail/fax to the Slope Safety Division of the Civil Engineering and Development Department (fax number : 2762 2389). The form can be obtained from the District Offices, or from the Government Enquires (telephone no. 1823). Online submission of this form is also available via the CEDD Website (<https://www.cedd.gov.hk>) or the HKSS Website.

Slope Maintenance Responsibility

Lack of maintenance of man-made slopes is one of the major contributory factors to many landslides in Hong Kong. Therefore, it is essential for slope owners to maintain them regularly. In order to facilitate private slope owners in carrying out such works, the Lands Department operates a Slope Maintenance Responsibility Information System (SMRIS) to provide a quick and convenient reference for the public for the purpose of assisting them to identify the main information and the owner or party who is responsible for the maintenance of registered slopes in the Slope Catalogue. However, the SMRIS does not itself impose to owners any liability for the maintenance of slopes.

The liability of slope maintenance are governed by relevant clauses in the lease document issued by the Lands Department. Generally speaking, owners are responsible for slopes within the lease boundary, as defined in the Building Management Ordinance (Chapter 344, Laws of Hong Kong). On the other hand, owners may also be assigned such a responsibility under relevant lease condition. For example, if the lease document contains the “Cutting Away Clause” and the site formation works for the development had resulted in slopes created in adjoining government land, the lot owners will be held responsible for the maintenance of the slopes created. Private slope owners should carefully examine the relevant lease documents to ascertain the extent of the slopes that they are required to maintain. The land documents are usually available for inspection at the Land Registry. Where appropriate, professional advice may need to be sought from lawyers or estate surveyors on the interpretation of the lease documents in respect of maintenance responsibility.

The public can access the SMRIS from the Internet (<http://www.slope.landsd.gov.hk/smrisk/>).

Geotechnical Engineering Office
Civil Engineering & Development Department
November 2022

**APPLICATION FOR INFORMATION FROM
THE CATALOGUE OF SLOPES**

To : Slope Safety Division
Civil Engineering and
Development Department
7/F, Civil Engineering and
Development Building
101 Princess Margaret Road
Homantin, Kowloon
(Fax No. : 2762 2389)

- 1. Slope Information is also available on the INTERNET**
at <https://hkss.cedd.gov.hk/>.
- 2. Slope Maintenance Responsibility Information Centre, Lands**
Department (Tel : 2231 3333 or email: slope_enquiry@landsd.gov.hk)
Lands Department website : <https://www.slope.landsd.gov.hk/smris/>.
- 3. 1823 Call Centre.**

PARTICULARS OF APPLICANT

Name in English : (Mr/Ms) _____ Name in Chinese : _____ (先生/女士)

Company (if applicable): _____

Contact Telephone No. during Office Hours : _____

Email Address : _____ Fax No.: _____

LOCATION OF SLOPES & RETAINING WALLS OF INTEREST

Address of Slope/Wall :

Sketch Location of Slope/Wall :

Brief Description :

Signature of Applicant : _____

Date : _____

Notes :

- (1) The Catalogue of Slopes consists of location plan, background information, field observation, photographs, and Stage 1 Study Report of the slope features (if available).
- (2) On receipt of this application, GEO will collect the information required and reply to the Applicant within **five** working days.
Applicants may wish to obtain specialist professional advice to assist in interpreting information provided.
- (3) For information on slope maintenance responsibility, please contact the SIMAR Unit of Lands Department at 22/F, North Point Government Office, 333 Java Road, North Point, Hong Kong (Tel : 2231 3333). The information is also available on the INTERNET at <https://www.slope.landsd.gov.hk/smris/>.
- (4) The personal data required above are for communication purpose and will be kept within the GEO. Transfer of the data to other parties will not be permitted.
- (5) Under the Personal Data (Privacy) Ordinance, the applicant has the right to request access to and correction of the personal data. Such request should be in writing and made to Chief Geotechnical Engineer/Slope Safety of the Civil Engineering and Development Department.

FOR OFFICIAL USE ONLY