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 engineers, slope owners, maintenance agents and property managers, and their consultants in slope inspections and 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.

Slope Cataloguing Exercise

To provide comprehensive information on sizable man-made slopes in Hong Kong, the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department started a 4-year project - "Systematic Identification and Registration of Slopes in the Territory (SIRST)" in 1994 to systematically identify, catalogue and register sizable man-made slopes in Hong Kong. The methodology for identifying registrable slopes for the SIRST project included review of documentary records, field inspection and interpretation of aerial photographs and topographic plans. This was the most practical means for the task, but there were technical constraints, e.g. slopes concealed by dense vegetation or buildings and poor quality of aerial photographs due to unfavourable weather conditions or incomplete coverage. However, it was estimated that there was only a small percentage of registrable slopes which were not identified for registration. The SIRST project was completed in 1998, with some 50,000 slopes being registered in the Catalogue of Slopes (known as the Slope Catalogue) at that time.

Updating and Completeness of Slope Catalogue

To ensure the completeness of the Slope Catalogue, the GEO continues to identify registrable slopes as an on-going task after the completion of the SIRST project. Procedures have been established for registration of new sizeable man-made slopes, being constructed or modified in connection with new engineering projects and building developments or as part of slope maintenance programmes. To reduce the number of “missed slopes” (i.e. registrable slopes but not yet identified) to as low as practicable, effective measures have also been introduced to identify them in the course of slope maintenance inspections, new building and engineering developments, landslide investigations or other slope safety works by government staff and their consultants. Despite our continual effort to ensure the completeness of the Slope Catalogue, “missed slopes” cannot be totally eliminated but their number is believed to constitute only a very small percentage of the total registrable slopes and should not pose a significant landslide risk to the community. The Slope Catalogue currently contains about 60,000 registered man-made slopes1 in Hong Kong, one third of which (i.e. about 20,000) are of private responsibility and the remaining (i.e. about 40,000) are government slopes.

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1 Registrable features comprise: (a) cut slopes, including any associated retaining walls, and retaining walls greater than 3m high; (b) fill slopes, including any associated retaining walls, greater than 5m high; (c) fill slopes, including any associated retaining walls, less than 5m high which pose a direct consequence to life in the event of failure; (d) disturbed terrain features which contain repairs to landslip scars (not including those registrable as cut slopes) or comprise a series of composite cut and/or fill slopes where the ground surface has been disturbed, the natural slope gradient is greater than 15° and although the individual slopes do not meet the height criterion for registration, the total height does meet the criterion for registration; and (e) natural terrain hazard mitigation measures, including stabilization measures constructed on natural hillsides to prevent failure and defence measures to contain landslide debris and hence protect buildings and infrastructure at the toe in case of landslide or boulder fall from the natural terrain above.
Slope Information System

A computerized Slope Information System (SIS), has been developed to contain all slope 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, 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 engineers, slope owners, maintenance agents and property managers and their consultants in slope inspections and works. 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 personnel.

The Internet version of the SIS at the Hong Kong Slope Safety Website (http://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), or by downloading from the CEDD Website (http://www.cedd.gov.hk).

Slope Maintenance Responsibility

The maintenance responsibility for slopes rests with the owners as defined in the Building Management Ordinance (Chapter 344, Laws of Hong Kong) or the party assigned such a responsibility. Land ownership is conferred by lease documents issued by the Lands Department and the public can have accesses to these land documents and records of owners at the Land Registry. Owners may also be liable for maintenance of slopes adjoining their lot as a consequence of their actions, such as cutting into the adjoining land as part of previous site formation works. The Lands Department maintains a Slope Maintenance Responsibility Information System (SMRIS) to provide a quick and convenient reference for the public to identify the owner or party who is responsible for the maintenance of registered slopes in the Slope Catalogue. The public can access the SMRIS from the Internet web site (http://www.slope.landsd.gov.hk/smris/). It should be noted that the SMRIS only provides preliminary information on maintenance responsibility of slopes. Private slope owners should carefully examine the relevant lease documents to ascertain the extent of the land they are required to maintain. 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.

Slope Safety Division
Geotechnical Engineering Office
Civil Engineering and Development Department
October 2014
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)

PARTICULARS OF APPLICANT

Name in English: (Mr/Ms/Mrs) ____________________________ Name in Chinese: __________ (先生/女士)

Company (if applicable): __________________________________________

Address: _______________________________________________________

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: _____________________________________________

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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 Slope Maintenance Responsibility Information Centre at 2/F, North Point Government Office, 333 Java Road, North Point, Hong Kong (Tel: 2231 3333). The information is also available on the INTERNET at http://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.