

Notes for Registration of Slope Features & Updating of Government Catalogue of Slopes

General:

1. The proposed new features shall conform to the registration criteria set out in DEVB TC(W) No. 2/2018 or Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADV-8 provided that:
 - (a) Walls at toe, at crest or on a slope shall combine with the corresponding slope portion and be registered as a CR or FR type feature. However, walls beside a slope portion shall be registered separately.
 - (b) U-shape self-standing structural walls and walls that are monolithic with a building or structure shall not be registered.
 - (c) Exposed slopes below building structure shall be registered.
2. It is essential to check for existing registered slope features in the area concerned before making submissions for feature registration. Information of existing registered slope features is available at the Slope Information System (SIS), which is accessible via the Hong Kong Slope Safety Website at <https://hkss.cedd.gov.hk/hkss/en/facts-and-figures/slope-information-system/index.html>.
3. Two features cannot be registered at the same location on plan. If existing features are found at the same locations of proposed new features, consideration should be given to de-register the existing features before registration of new features, or to adopt the existing feature numbers with modified feature boundaries for updating respective records in the Catalogue of Slopes. The former option is preferred for features with layout substantially altered.
4. Unless proved otherwise by documented records, masonry facing to a feature that inclines at an angle steeper than 75° should be treated as a wall.
5. Minor toe wall (e.g. planter wall) of height less than 700 mm and not forming an integral component of a feature may be excluded for registration purpose.
6. For features newly formed under public works projects, registration may be proceeded when the slope works are substantially completed with the actual feature boundary determined. Upon completion of the slope works, updated feature details shall be provided for updating the record in Catalogue of Slopes.

Modified Features:

7. Features partially modified or affected by the same project should also be reported to Chief Geotechnical Engineer/Slope Safety (CGE/SS) with updated feature details, including revised boundaries if appropriate. Updated feature details shall be submitted for whole features, despite that they may be partially upgraded.
8. Wrongly classified features, e.g. a fill slope registered as a cut-slope, shall be re-registered with new feature types and new feature numbers. The process for change of feature type shall follow that for registration of new features.

Feature Numbers:

9. New feature numbers will be assigned on a sequential manner upon registration for newly

formed features, including those features with change in feature type. To avoid confusion, feature numbers should not be mentioned in a submission for registration of newly formed features.

10. For modification of feature boundaries, existing feature numbers may be retained where considered appropriate.

Feature Boundaries:

11. Demarcation of new features shall be on the basis of their design, function, maintenance practice, physical boundaries, construction histories and geological properties but not be dependent on imaginary delineation such as lot/site boundaries. Features shall be marked on plan as follows:
 - (a) Feature layouts shall be the on plan projections of 'surfaces' of slopes and retaining walls. Flat or pseudo-level areas above or below features concerned shall not be included for feature registrations. For registration of retaining walls, generally the exposed wall faces (plan projections) are to be registered.
 - (b) Boundary of each feature shall be marked clearly as a **closed** polygon on part print of Government survey map of scale 1:1000 indicating its perimeter. Appropriate annotation, e.g. 'existing boundary', 'new boundary', 'modified boundary' or 'feature for de-registration', etc., shall also be added. Overlapping of features is not permitted.
 - (c) Existing features in the area, including those for boundary modification or for de-registration, shall also be shown on plan together with relevant topographical details.
 - (d) Digital plans in Microstation DGN format, if available, shall be submitted. Location plans in other vector formats (e.g. DWG) or GIS formats (e.g. SHP or FGDB), may also be acceptable for submission on prior agreement with CGE/SS.
 - (e) Pictorial scale indicator, e.g. pairs of annotated parallel grid lines, etc., shall be included on all feature location plans if submitted in hardcopy/image format (e.g. jpg or pdf).

Feature Details:

12. Details of features for registration or for updating records in Catalogue of Slopes shall be submitted in digital format, including relevant digital photographs and a standard data file (a template can be downloaded at https://hkss.cedd.gov.hk/hkss/filemanager/common/facts-figures/std_data_file.zip). Hard copies of feature details are not required other than location plans for new feature boundaries, modified feature boundaries and/or feature types. However, new submissions or changes to existing SIS records with respect to the following items shall be tabulated explicitly as part of the submissions:

Consequence-to-life (including relevant toe/crest Facility Groups)

Feature boundary

Feature type (i.e. change from C to CR, C to F, etc.)

13. Details of features to be submitted for updating Slope Information System shall be verified properly with due attention on the following issues:

- (a) The height of a feature component, e.g. a cut portion or a wall portion, shall be taken as the

maximum height of that component.

- (b) Unless otherwise specified, face angle of the respective feature component shall be taken as its average angle to the horizontal.
 - (c) Toe/crest Facility Groups and Consequence-to-life Categories for features shall conform to Table 1 of GEO Report No. 68 and associated supplementary documents.
 - (d) Toe/crest facilities of a feature are determined at its critical sections. In accordance with GEO Report No. 68, the critical section of a feature should be taken as the location of worst-consequence, i.e. at maximum Consequence Score (CS) with highest consequence-to-life category, and that at the location of maximum feature height if the height of critical section is less than 75% of the maximum feature height. The Report and associated supplementary documents should be referred to for other requirements relevant to critical sections of a feature.
 - (e) The 'Explanatory Notes for the Grouping of Toe/Crest Facilities' shall be referred to for details on grouping of facilities. The Notes can be downloaded on the Hong Kong Slope Safety Website (<https://hkss.cedd.gov.hk/hkss/filemanager/common/facts-figures/FacilitiesNotes.pdf>).
 - (f) In general, footpaths along a carriageway are considered integrated components of the road and should not be reported separately. Classification of roads as Facility Groups shall refer to the respective Annual Average Daily Traffic (AADT) outlined in GEO Report No. 68 Table 3 and the report entitled 'The Annual Traffic Census' published by Transport Department.
 - (g) Features affecting Facility Groups 1(a), 1(b) & 2(a) in Table 1 of GEO Report No. 68 are classified as Consequence-to-life Cat. 1. Those affecting Groups 2(b) & 3 are classified as Consequence-to-life Cat. 2. Features affecting facilities of the remaining Groups are classified as Consequence-to-life Cat. 3. Corresponding Consequence-to-life categories are given in GEO Technical Guidance Notes No. 15 Table 1 (<https://www.cedd.gov.hk/eng/publications/geo/geo-technical-guidance-notes/index.html>).
14. Feature details shall be submitted for the whole feature concerned, despite that it may be subject to partial modification works.

Record Photographs:

15. Digital record photographs (at least 2 nos. for each feature) shall be submitted together with all submissions for feature registration, de-registration and updating of SIS records. Overall views of features concerned with indication of toe/crest facilities are preferred and the photographs shall be submitted in individual jpg image files of minimum size 800 x 600 pixels.

File names:

16. Image files of the same type, e.g. digital photographs or location plans, shall be stored in a common directory in a proper media, e.g. CD-R. The corresponding file names shall be in the form of:

mmmm-mffxxxx_y.ttt (e.g. 12nw-ccr1001_a.jpg)

Where:

'mmmm-m' is the relevant Government map sheet number of scale 1:5000, e.g. 12nw-c

'ffxxxx' is the feature registration number (if available), e.g. cr1001

'_' is optional and shall only be used for record photographs with **overall** view of features

'y' is an alphabet in sequential order, i.e. a, b, c,

't' is the digital file type, i.e. either as 'jpg' or 'pdf'

In case of new feature without feature registration number, 'ff' and 'xxxx' shall be replaced by the proposed feature type (i.e. c, cr, f, fr, r, ns & nd) and a non-numeric code in sequential order (e.g. aaaa, aaab, aaac,, etc.) respectively. Blank space in file name would not be processed.

- End -