## PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

9.4.3 Implementation of the maintenance plan may require 'enforcement' by annotation on the land title so that subsequent purchasers become aware of the requirements and that relevant documents are available for the maintenance plan. Such 'enforcement' will be a benefit to subsequent owners as they will be better informed as to their required input responsibilities.

## 10 REPORTING STANDARDS

# 10.1 The report on the risk assessment is to document the data gathered, the logic applied and conclusion reached in a defensible manner.

The practitioner will gather relevant data, will assess the relevance of the data and will reach conclusions as to the appropriate geotechnical model and basic assessment of the slope forming processes and rates. Full documentation of these results provides evidence of completion, provides transparency in the light of uncertainty, enables the assessment to be re-examined or extended at a later date and enables the assessment to be defended against critical review. The process often identifies uncertainties or limitations of the assessment which also need to be documented and understood.

#### 10.2 The data to be presented includes:

- a. List of data sources.
- b. Discussion of investigation methods used, and any limitations thereof.
- c. Site plan (to scale) with geomorphic mapping results.
- d. All factual data from investigations, such as borehole and test pit logs, laboratory test results, groundwater level observations, record photographs.
- e. Location of all subsurface investigations and/or outcrops/cuttings.
- f. Location of cross section(s).
- g. Cross section(s) (to scale) with interpreted subsurface model showing investigation locations.
- h. Evidence of past performance.
- i. Local history of instability with assessed trigger events.
- j. Identification of landslides, on plan or section or both, and discussed in terms of the geomorphic model, relevant slope forming process and process rates. Landslides need to be considered above the site, below the site and adjacent to the site.
- k. Assessed likelihood of each landslide with basis thereof.
- 1. Assessed consequence to property and life for each landslide with basis thereof.
- m. Resulting risk for each landslide.
- n. Risk assessment in relation to tolerable risk criteria (e.g. regulator's published criteria where appropriate).
- o. Risk mitigation measures and options, including reassessed risk once these measures are implemented.

Where any of the above is not or cannot be completed, the report should document the missing elements, including an explanation as to why.

The report needs to clearly state whether the risk assessment is based on existing conditions or with risk treatment measures implemented. In some cases, the assessment for both existing and after treatment should be documented to demonstrate the effect of risk control measures on reducing risk.

A report which does not properly document the assessment is of limited value and would appear to have no reasonable basis.

# 11 SPECIAL CHALLENGES

#### 11.1 MINOR WORKS

Adoption of all the provisions of the Practice Note for minor works may not be appropriate or reasonable. However, the basic principles still need to be considered. Although some policies may make provision for less onerous consideration for minor works, the practitioner will still have a duty of care to advise on all aspects and may have other landslides not connected with the proposed works that will still need to be considered.

Minor works should be evaluated on a site by site basis but are likely to comprise proposed works of relatively low monetary value (such as may be completed by an owner builder with appropriate approvals and insurances) or those which do not change the existing risk, provided the existing risk has been assessed to be within the tolerable range. In some cases, the risk to life may be much higher than the risk to property and may dictate the need for risk mitigation to achieve tolerable risk levels.