Pittwater Council requires a baseline period of 100 years as the context within which the geotechnical risk assessment should be made, broadly reflecting the expectations of the community for the anticipated life of a residential structure.

The practitioner should identify the maintenance required to achieve the required design life in relation to the landslide hazards. The design life should also be nominated, particularly if it is not in accordance with a specific requirement.

On-going maintenance is essential for the effectiveness of the risk control measures. Without such maintenance, the risk may change from acceptable to unacceptable with time.

### C9.4 MAINTENANCE REQUIREMENTS

It is essential that the owner (and occupier) be made aware of the necessity of maintenance to provide effective and sufficient risk control over the design life. The Practitioner should advise on appropriate inspection and maintenance to control the risk. Some guidance is given in the GeoGuides (AGS 2007e)

Future owners need to be made aware of the same requirements. One method available to inform future owners is to have annotation on the Land Title so that the details referred to in the annotation become readily known to new owners. Such details should include the reference details of the risk management report and relevant design and construction records, as well as maintenance records.

## C10 REPORTING STANDARDS

The report has the overriding function to document the data, assumptions and thought process used for the assessment. Such documentation facilitates subsequent review and revision. The report should be technically rigorous but must also be understood by non-technical people who are required to make decisions based on it.

The report should fully document sources of data, extent of investigations completed, assumptions made and associated limitations. The report is to be clear, unambiguous, stating outcomes from the investigations and assessment, and to make clear recommendations. If there is uncertainty, then such doubt needs to be stated in the report together with what can be done to clear up the doubt. A good principle to adopt for such documentation is to assume that the report may be tendered as an expert report to a subsequent court case. Such documentation is necessary to justify the expert's conclusions if it is not to be rejected on the basis of the "Makita Principle" which, broadly speaking, requires reasons based on facts or calculations or precedents, not simply an unsubstantiated opinion.

The report should document the best estimate results for the risk analysis, based on data available at that stage.

Table C12 presents an example checklist of issues to be addressed / considered by LRM reports. The checklist should also assist the practitioner when preparing reports to confirm that all relevant aspects have been addressed, and the regulator when evaluating reports for compliance with policy requirements.

## C11 SPECIAL CHALLENGES

### C11.1 MINOR WORKS

No further comment.

### C11.2 PART OF THE SITE NOT ACCEPTABLE

The requirement to address other parts of the site is derived from the community expectation that unacceptable risks will be identified and addressed as part of a broad duty of care.

### C11.3 ADJOINING AREAS NOT UNDER THE RESPONSIBILITY OF THE SITE OWNER

Again the broad duty of care requires these other such areas to be addressed. Adjoining areas may be under the regulator's control and require direct input.

### C11.4 COASTAL CLIFFS

Stability of coastal cliffs (and bluffs) is often not associated with a rainfall trigger (as is usually the case with soil and colluvial slopes). Cliff stability is often triggered by sea conditions, such as undercutting in storms, wetting by run up and spray leading to frequent wetting and drying cycles and possibly temperature.

Access to coastal cliffs is often difficult due to the physical constraints. Nonetheless, where there are elements at risk (being either property or people, above or below the cliff) then the situation needs to be examined from both above and below to confirm the appropriate site details / features since the likelihood and consequences will be highly dependent on those features.