

AUSTRALIAN GEOGUIDE LR11 (RECORD KEEPING)

RECORD KEEPING

It is strongly recommended that records be kept of all construction, inspection and maintenance activities in relation to developments on sloping blocks. In some local authority jurisdictions, maintenance requirements form part of the building consent conditions, in which case they are mandatory.

CONSTRUCTION RECORDS

If at all possible, you should keep copies of drawings, specifications and construction (i.e. "as built") records, particularly if these differ from the design drawings. The importance of these documents cannot be over-emphasised. If a geotechnical practitioner comes to a site to carry out a landslide risk assessment and is only able to see the face of a retaining wall, the heads of some ground anchors, or the outlets of a number of sub-soil drains, it may be necessary to determine how these have been built and how they are meant to work before completing the assessment. This could involve drilling through the wall to determine how thick it is, or probing the length of the drains, or even ignoring the anchors altogether, because it is uncertain how long they are. Such "investigation" of something that may only have been built a few years before is, at best, a waste of time and money and, at worst, capable of coming up with a misleading answer which could affect the outcome of the assessment. Documentary information of this sort often proves to be invaluable later on, so treat it with as much importance as the title deeds to your property.

INSPECTION AND MAINTENANCE RECORDS

If you follow the recommendations of the Australian GeoGuides it is likely that you will either carry out periodic inspections yourself, or you will engage a geotechnical practitioner to do them for you. The collected records of these inspections will provide a detailed history of changes that might be occurring and will indicate, better than your own memory, whether things are deteriorating and, if so, at what rate. Unfortunately, without some form of written record, all information is usually lost each time a property is sold. It is recommended that a prospective purchaser should have a pre-purchase landslide risk assessment carried out on a hillside site, in much the same way that they would commission a structural assessment, or a pest inspection, of the building. If the vendor has kept good records, then the assessment is likely to be quicker and cheaper, and the outcome more reliable, than if none are available. Each site is different, but noting the following would normally constitute a reasonable record of an inspection/maintenance undertaken:

- date of inspection/maintenance and the name and professional status of the person carrying it out
- description of the specific feature (eg. cliff face, temporary rock bolt, cast *in situ* retaining wall, shallow leach drain system)
- sketch plans, sketches and photographs to indicate location and condition
- activity undertaken (eg. visual inspection; cleared vegetation from drain; removed fallen rock about 500 mm diameter)
- condition of the feature and any matters of concern (e.g. weep holes damp and flowing freely; rust on anchor heads getting worse; shotcrete uncracked and no sign of rust stains; ground saturated around leach field)
- specific outcomes (eg. no action necessary; geotechnical practitioner called in to advise on the state of the anchors; cliff face to be trimmed following the most recent rock fall; leach field to be rebuilt at new location)

A proforma record is provided overleaf for convenience. Photographs and sketches of specific observations can prove to be very useful and should be included whenever possible. Geotechnical practitioners may devise their own site specific inspection/maintenance records.

More information relevant to your particular situation may be found in other Australian GeoGuides:

- | | |
|-------------------------------------|--|
| • GeoGuide LR1 - Introduction | • GeoGuide LR6 - Retaining Walls |
| • GeoGuide LR2 - Landslides | • GeoGuide LR7 - Landslide Risk |
| • GeoGuide LR3 - Landslides in Soil | • GeoGuide LR8 - Hillside Construction |
| • GeoGuide LR4 - Landslides in Rock | • GeoGuide LR9 - Effluent & Surface Water Disposal |
| • GeoGuide LR5 - Water & Drainage | • GeoGuide LR10 - Coastal Landslides |

The Australian GeoGuides (LR series) are a set of publications intended for property owners; local councils; planning authorities; developers; insurers; lawyers and, in fact, anyone who lives with, or has an interest in, a natural or engineered slope, a cutting, or an excavation. They are intended to help you understand why slopes and retaining structures can be a hazard and what can be done with appropriate professional advice and local council approval (if required) to remove, reduce, or minimise the risk they represent. The GeoGuides have been prepared by the [Australian Geomechanics Society](#), a specialist technical society within Engineers Australia, the national peak body for all engineering disciplines in Australia, whose members are professional geotechnical engineers and engineering geologists with a particular interest in ground engineering. The GeoGuides have been funded under the Australian governments' National Disaster Mitigation Program.

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INSPECTION/MAINTENANCE RECORD

(Tick boxes as appropriate and add information as required)

Date.....

Site location (street address / lot & DP numbers / map reference / latitude and longitude)

.....

FEATURE

Slopes & surface protection:

- | | |
|---|--|
| <input type="checkbox"/> Natural slope/cliff | <input type="checkbox"/> Cut/fill slope |
| <input type="checkbox"/> Surface water drains | |
| <input type="checkbox"/> Shotcrete | <input type="checkbox"/> Stone pitching <input type="checkbox"/> Other |

Inspected	Maintained	Tested	By Owner	By Professional

Retaining walls:

- | | |
|--|---|
| <input type="checkbox"/> Cast in situ concrete | <input type="checkbox"/> Concrete block |
| <input type="checkbox"/> Masonry (natural stone) | <input type="checkbox"/> Masonry (brick, block) |
| <input type="checkbox"/> Cribwall (concrete) | <input type="checkbox"/> Cribwall (timber) |
| <input type="checkbox"/> Anchored wall | <input type="checkbox"/> Reinforced soil wall |
| <input type="checkbox"/> Sub-soil drains | <input type="checkbox"/> Weep holes |

Ground improvement:

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Rock bolts | |
| <input type="checkbox"/> Ground anchors | <input type="checkbox"/> Soil nails |
| <input type="checkbox"/> Deep subsoil drains | |

Effluent and storm water disposal systems:

- | |
|---|
| <input type="checkbox"/> Effluent treatment system |
| <input type="checkbox"/> Effluent disposal field |
| <input type="checkbox"/> Storm water disposal field |

Other:

- | | | |
|----------------------------------|--------------------------------------|------------------------------------|
| <input type="checkbox"/> Netting | <input type="checkbox"/> Catch fence | <input type="checkbox"/> Catch pit |
| <input type="checkbox"/> | | |
| <input type="checkbox"/> | | |
| <input type="checkbox"/> | | |

Observations/Notes (Add pages/details as appropriate)

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Attachments: Sketch(es) Photograph(s) Other (eg measurements, test results)

Record prepared by (name):(signature)

Contact details: Phone:..... E-mail:.....

Professional Status (in relation to landslide risk assessment):.....