

PLANNING POLICY NO. 3

Preparation of Geotechnical Reports

1.0 Purpose

The purpose of this Planning Scheme Policy is to:

- ensure that development on land which is steep (has slopes generally greater than 15%), erosion prone, or prone to slip has appropriate regard to factors affecting land stability;
- ensure on-site disposal of wastewater can be sustainably managed within the boundaries of the allotment; and
- provide guidance on the preparation and assessment of geotechnical reports.

1.1 Application of the Policy

This policy applies to development involving works requiring the filling or excavation of land which:

- has slopes generally greater than 15%, or
- is in an area identified on the Steep or Unstable Land Code Map 1, or
- in Council's opinion, may be subject to land instability.

This policy applies as above unless:

- the Council is satisfied that the development is of a nature that is unlikely to affect land stability; or
- a previous geotechnical report addressing geotechnical aspects for development on the land is available to the Council and is relevant to the proposed development.

The preparation of a geotechnical report provides Council with the relevant information for assessing an application or proposal.

2.0 Preparation of a Geotechnical Report

The main aim of a geotechnical report is to ensure development on steep land has had appropriate regard to the geological elements of the site. The report should outline issues such as the sites suitability for the proposal on the chosen site, having regard to its impacts on the environment while highlighting any measures to ensure stability of the site.

2.1 Report to be prepared by a suitably qualified person



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The geotechnical investigation is required to be directed by a responsible professional, qualified in geological and/or geotechnical engineering, having membership of the Institution of Engineers, Australia and being a Registered Professional Engineer of Queensland (or from a Registered Professional Engineering company). It is desirable that the person has local experience with steep land, land slip areas and/or erosion prone areas and the mitigation of possible adverse effects.

Laboratory testing is required to be undertaken by a National Association of Testing Authority (NATA) certificated laboratory.

All investigations, testing and design should be undertaken in accordance with industry practice and the provisions of relevant Australian Standards.

2.2 *Report format and content*

Where a development site is subject to the provisions of this policy, the proponent is strongly encouraged to meet with Council Officers prior to lodgement of the application, this will assist in determining and clarifying the relevant items, identified below, to be addressed in the report. As a general guide the following format and contents description indicates the depth of detail required:

1. **Introduction**

- Details of the proposed development, such as site location and description including the real property description
- Method and scope of investigations
- Qualifications of responsible individual(s) and/or company

2. **Description of Existing Conditions**

- Existing research material (if any) including:
 - Aerial photographs
 - Geological maps
 - Geological reports
 - Site classification
- Geology (local and regional), including:
 - Surface and subsurface materials
 - Geomorphology (slopes, ground contours, natural features, terrain analysis, landslip features)
- Groundwater, including:
 - Water table
 - Springs and seepage areas in the local area of interest
- Surface drainage patterns
- Vegetation cover on and around the site
- Buildings, other structures, earthworks, etc.

3. **Assessment of Land Stability/Suitability**



- Site history:
 - Location and classification of any existing slips (type, severity and likely mode of failure)
 - Extent and type of any existing occurrences of erosion
 - Information on hazards (of rockfall, landslip, etc) on land above the site
- Proposed development components
- Potential geotechnical effects - from field and/or laboratory testing or assessment, classification of surface and subsurface materials to determine:
 - Erosion potential
 - Foundation conditions that could affect structural performance
 - Suitability for wastewater disposal
 - Any other relevant characteristics

4. Assessment of Development Impacts

- Site layout
- Roadworks, driveways and other pavements
- Earthworks (excavation, materials usage)
- Foundations
- Surface drainage
- Wastewater (treatment and disposal)
- Detail existing stability of the subject land and of geotechnical constraints on building/s and/or other development works on the site as well as on land above and below the site
- Overall effect of development on the stability of the land as well as on land above and below the site and;
- Overall effect of any on-site sewage disposal system on:
 - (1) surface and groundwater integrity; and
 - (2) surrounding land uses; and
 - (3) slope stability due to reduced cohesiveness, increased pore water pressure, increased lubrication of bedding planes, etc

5. Measures Recommended to Mitigate Impacts

- Recommendations on appropriate measures required to avoid or minimise risks of instability, or other adverse environmental effects, on the subject site as well as land above or below the site, including:
 - Preferred locations for buildings, other structures, driveways, etc
 - Foundation requirements such as bearing pressures, piling parameters, special techniques for expansive clays, etc
 - Pavement types and design
 - Construction methods to avoid problem areas associated with loose materials and groundwater seepage



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- Preferred excavation/retention/stabilisation techniques and suitability of excavated materials for use in on-site earthworks
- Surface and subsurface drainage requirements
- Preferred methods of wastewater disposal¹
- Vegetation protection and revegetation requirements

6. Summary and Conclusions about the overall suitability of the land for the proposed development

APPENDIX –

- Field and Laboratory Test Results, including the location and level of field investigations such as boreholes, trenchpits and core penetrometer soundings



¹ If addressing the suitability of land for effluent disposal, the Geotechnical Report is to follow AS/NZS 1547:2000 and the NR&M On-site Sewerage Code.