

1979/2. Stability assessments of some low-density residential areas in the Huon Valley.

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Abstract

Assessments of stability at Seabrook Road, Bullock Hill, Mountains River, Bakers Creek, Crabtree Road and at Lanes Road, Glen Huon were made and site inspections are recommended for the last three areas.

INTRODUCTION

This work was done at the request of the Commissioner for Town and Country Planning as supporting information for zoning to be included in the Huon Planning Scheme.

The field visits were made on 5 and 11 January 1979. The areas dealt with are shown on Figure 1.

ASSESSMENT

Assessments of stability and the consequent recommended actions are as follows:

*Lanes Road, Glen Huon* [DNG85352]

This area consists of a steep sandstone escarpment with lines of 10 m cliffs separated by steeply sloping (15 - 30°) talus slopes, rising above moderately sloping (8 - 10°) valley sides.

Soil thicknesses are less than one metre on steep slopes and are estimated as greater than 2 m on the lower slopes.

Springs flowing even in summer appear along the escarpment and probably indicate the existence of impermeable mudstones in the succession. The springs give rise to wet, steep gullies running down from the steeper slopes.

No landslide activity either active, dormant or fossil is apparent, although there is some toppling failure of sandstone blocks from the cliffs.

The area is not an easy one for development because of the steep slopes and the potentially dangerous cliffs. These are reasonably stable under rural conditions but the construction of roads and housing is already disturbing the drainage and the slope profiles. Fills have oversteepened some slopes, and culverts carrying run-off under access roads have been under-designed.

It is therefore suggested that in view of the limited experience that exists in the development of areas of this kind, that inspections of house sites and road routes be made at the stage where this work is planned to prevent or avoid actions which may precipitate local slope instability.

*Seabrook Road area* [EN060365]

This area lies on slopes of 10 - 20° on the fine-grained Permian sandstones of the Ferntree formation.

These rocks give rise to thin poor dusty soils and are rarely involved in slope instability.

There appears to be no problems on this score in the area.

*Bullock Hill area* [EN088408]

Wooded slopes up to 25° are formed on Permian Ferntree mudstone and Jurassic dolerite. Soils are thin or absent on the steeper slopes, and no instability is apparent. The rocks are dry and stable and no problems are foreseen.

*Mountain River area* [EN112455]

Here low slopes (<10°) lie on Ferntree mudstone. Some thick sections of derived slope deposits are seen but these are normally of angular fragments and occasion no concern for stability.

*Bakers Creek area* [EN023423]

Slopes of 2° - 20° lie on Triassic sandstone and mudstone. The lower slopes cause no concern but where slopes are greater than 10° some thicker soil profiles might become unstable under adverse conditions of development. Site and road inspections, perhaps supplemented by auger holes or trial pits might reveal such risk.

*Crabtree Road area* [EN055452]

Slopes up to 15° lie on Permian Malbina mudstones. These rocks have developed a considerable thickness of talus possibly of solifluxion origin. These deposits are not regarded as unstable except perhaps in the steepest areas. In view of the advent of construction in this new area, site inspections are recommended.

#### RECOMMENDATIONS

Site inspections are recommended in the steeper parts of Lanes Road, Bakers Creek and Crabtree Road subdivisions.

Such precaution appears unnecessary at Bullock Hill, Seabrook Road and Mountain River.

[17 January 1979]

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