

UR1974-39

Stability of land owned by W.E. Ashton at Parklands, Burnie.

W.L. Matthews

Mr. Ashton owns about 0.2 ha of land at Parklands [DQ061555] which he proposes to subdivide into two blocks. Two single storey dwellings would probably be built on the land. He requested advice on the stability of the area.

GEOLOGY AND RELIEF

The land is situated on a zone with a low angle of slope at the foot of steep slopes which rise 60-70 m to a dissected plateau. This scarp runs approximately E-W. A small re-entrant in the contours of these slopes occurs above the western part of the block.

Clay and basalt talus underlie the blocks but Tertiary basalt and Precambrian quartzite occur on the slopes above. Quartzite crops out strongly near the south-east corner of the land but it is not exposed on the slope to the west near the re-entrant. Basalt talus from old landslips covers the slopes in this area. The re-entrant zone possibly represents a low in the pre-basalt surface. Basalt talus and weathered basalt occur above the quartzite to the top of the plateau.

DISCUSSION OF STABILITY AND RECOMMENDATIONS

Because of the relatively low slope of the land owned by Mr Ashton, there is little chance of slips occurring. Slips have taken place in the past on the steep slopes above, particularly in the area of the re-entrant. There are also strong seepages coming from this zone and these extend across the western part of the land.

The owner proposes to build on the eastern part of the land, which is remote from the seepages and will be protected to some extent from the effects of slips forming on the steep slopes by the fact that the quartzite will have a stabilising effect on the steep land. In addition, the trees on the slope should help prevent mass movement. As slips might form on these slopes and extend to the flatter land, the houses should not be built within 6 m from the southern (uphill) boundary in the eastern part of the land or within a greater distance on the western part of the land.

The area affected by the seepage on the western part of the land should be drained even if no structures are to be built on it. A drain should also be installed around the uphill side of the land to collect water coming from the steep slopes. This should have a sealed bottom to prevent percolation into the soil.

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