

TR 11. 103

## 16. STABILITY OF LAND AT BOAT HARBOUR, MR. J. GRAHAM'S PROPERTY

by W. L. Matthews

Mr Graham has a week-end shack at Boat Harbour Beach which he would like to extend and improve so that it would be suitable as a permanent dwelling. The Wynyard Council requested an examination of the area to see what effects the extra water entering the soil and the extra loading would have on the stability of the land.

The block fronts on the access road to Boat Harbour Beach just before the centre of the settlement is reached. Weathering of the Tertiary basalt which occurs in this area is deep and the whole area has been subject to landsliding in the past. The most recent movement was a subsidence in the road a few chains E of Mr Graham's block. Uphill from the block are two large, deep-seated, old slides, one of which has internal drainage in the heel zone. The shack is directly below the intersection of these two slides and is situated in the toe zone. Because of heavy rainfall just prior to the examination, it was difficult to determine permanent seepage zones.

As the shack appears to be in the toe area, any extra weight caused by extensions would have a stabilizing effect, although this would be small considering the size of the slides. Excavations would have the reverse effect. Small amounts of additional water in the soil around the shack should not greatly affect the overall stability unless it promoted small slides in this area.

Although it does not appear that the proposed extensions will have much bearing on the stability of the area, it should be pointed out that in the past mass movements have been common, and the large slides at the rear of the block are likely to move again at some future date.