

UR 1975-71

Test pits on a proposed subdivision at Ambleside, East Devonport.

W.L. Matthews

Following a previous surface investigation of this subdivision [DQ 476380] (Matthews, 1975), ten test pits (fig. 1) were dug to enable investigation of subsurface conditions.

## EXAMINATION OF TEST PITS

Test pits 1, 2, 3, 4 and 10 encountered sediments over their entire depth, while pits 5, 6, 7, 8 and 9 struck weathered basalt at depth, usually overlain by sandy soil. The basalt is deeply weathered to clay with occasional unweathered centres. The materials encountered in the test pits were generally quite stiff. With the exception of pits 7 and 10, no visible seepage occurred, although moisture could be seen on fracture surfaces in some pits. Detailed descriptions of the materials encountered in the test pits are given in Table 1.

## CONCLUSIONS

The material underlying the proposed subdivision is essentially unconsolidated sandy clay, weathered basalt and dolerite talus. Although most of the material encountered in the test pits was fairly stiff and there was little seepage (except in holes 7 and 10), this material could become unstable on the steeper slopes where slips have occurred in the past.

The position of the line drawn on the previous plan (Matthews, 1975), separating the areas that could be developed with reasonable safety from the areas where there is some risk of instability, appears to be justified. Steep slopes underlain by unconsolidated or weathered materials could be subject to slip.

Steep slopes occur in the area considered safe for development, and houses should be placed as far as possible from these slopes. As the blocks are large, there should be enough space in most places to achieve this. If landslip zones are proclaimed in the Devonport area, the topography and materials underlying the area may result in the classification of some of the steeper slopes as Landslip Zone B.

## REFERENCE

MATTHEWS, W.L. 1975. Stability of land at Ambleside, Devonport. *Unpubl. Rep. Dep. Mines Tasm.* 1975:63.

[28 November 1975]

Table 1. MATERIALS ENCOUNTERED IN TEST PITS AT AMBLESIDE.

Depth (m)	Description
<b>Hole 1</b>	
0 - 0.2	Loose sandy soil.
0.2 - 0.6	Fairly compact sand with a little clay.
0.6 - 0.9	Fairly loose brown clay with a little sand.
0.9 - 2.7	Mottled grey and red brown sandy clay, a little mica, moderate strength.
<b>Hole 2</b>	
0 - 0.3	Sandy grey organic soil.
0.3 - 1.1	Loose brown clayey sand.
1.1 - 2.9	Very stiff grey and brown mottled clay.
<b>Hole 3</b>	
0 - 0.5	Brown sandy soil.
0.5 - 0.8	Loose clayey sand.
0.8 - 2.1	Mottled grey and brown clayey sand with some mica flakes.
2.1 - 2.6	Hard iron oxide cemented sandy clay (iron oxide almost black and nodular).
<b>Hole 4</b>	
0 - 0.3	Dark brown sandy soil.
0.3 - 1.1	Fairly loose brown sandy clay.
1.1 - 2.6	Sandy clay, brown with a little grey mottling, compact and fairly hard, some shiny slip surfaces.
<b>Hole 5</b>	
0 - 0.3	Grey sandy soil.
0.3 - 0.8	Yellowish clayey sand.
0.8 - 1.7	Grey and brown mottled sandy and silty clay, some mica.
1.7 - 2.4	Iron oxide pisoliths in grey and red mottled hard clay (possibly deeply weathered basalt).
<b>Hole 6</b>	
0 - 0.3	Grey brown sandy soil.
0.3 - 0.9	Brown sandy clay, a few unweathered basalt boulders.
0.9 - 3.1	Deeply weathered basalt with a few unweathered basalt kernels some slip surfaces. Material is friable.
<b>Hole 7</b>	
0 - 0.3	Sandy clay soil.
0.3 - 0.8	Fractured fairly loose brown clay.
0.8 - 3.2	Weathered basalt-clay with some texture remaining, becoming a little less weathered towards the bottom. Small seepage at 1.8 m and moisture on fracture surfaces.
<b>Hole 8</b>	
0 - 0.3	Dark grey brown sandy soil.
0.3 - 0.9	Brown fractured clay (derived from basalt?).
0.9 - 2.7	Weathered basalt-clay with some visible texture, only occasional unweathered centres.

Table 1. (continued)

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Hole 9	Depth (m)	Description
	0 - 0.3	Sandy soil.
	0.3 - 0.9	Brown fractured clay, some slip surfaces.
	0.9 - 2.9	Weathered basalt-friable clay, reddish brown some moisture on fracture surfaces towards bottom of pit.
Hole 10		
	0 - 0.5	Grey sandy clayey soil.
	0.5 - 1.4	Fractured silty brown clay.
	1.4 - 2.3	Mottled grey and brown silty clay, some mica. Seepage from 0.8 m to bottom of pit.

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