Slope stability at Rosevears, trial pits.

S. Elmer

Mr. R.J. Eastoe of Rosevears has requested a further examination of the stability of his land [Proposal Plan Bd-560] following the recommendations of an earlier report (Elmer, 1971). Two trial pits were dug with a back-hoe and examined on 2 September 1971. Their positions are shown on Figure 1.

RESULTS OF TRIAL PITS

Hole 1

Depth (ft)	*Description*
0-½	Top soil.
½-2	Mainly silt (wet, saturated with water).
2-10	Slightly yellowish grey clay.

The clay from 2-10 ft seemed fairly dry when squeezed in the hand but behaved plastically. It was not saturated with water.

The clay appeared to become stiffer with depth and had a higher content of coarse material and a more yellow-brownish colour at the bottom than at the top of the clay section. The clay is probably derived from basalt but has no visible joints. Small pebbles and some sand were found in the bottom section. This section was less plastic, more brownish and unevenly coloured and the clay was less cohesive than in the upper section. There was no water in the hole and the walls stood up well during the examination. No signs of movement could be seen in the clay.

Hole 2

Depth (ft)	*Description*
0-½	Top soil.
½-4	Yellow-grey, fairly dry clay.
4-10	Yellow-grey sand and silt with a minor clay content.

At 6½ ft a zone of approximately 4 ins was encountered and contained traces of extremely weathered basalt (possibly *in situ*). The clay from ½-4 ft contained some silt and a few pebbles, and had a greater water content than in Hole 1. It behaved plastically when squeezed in the hand.

The section of sand and silt from 4-10 ft may be divided into three sections. The top 2 ft and the bottom 1 ft appeared to be composed of the same material, being a yellow silty sand with a minor content of clay that is probably less than 10%. When squeezed and poured from the hand it generally behaved like a fine sand. The water content was low but the material was not dry. The middle 3 ft was of a very similar composition, but the colour was grey and the clay content was slightly higher while the sand content was slightly lower. The particles had a tendency to adhere together. The silt and sand section drains well. The walls stood up well and no water appeared in the hole.

As a consequence of this, building may be permitted in certain parts of the area provided that additional water is not allowed to enter the ground. Such water could change the present dry and stiff conditions of the clay.

RECOMMENDATIONS

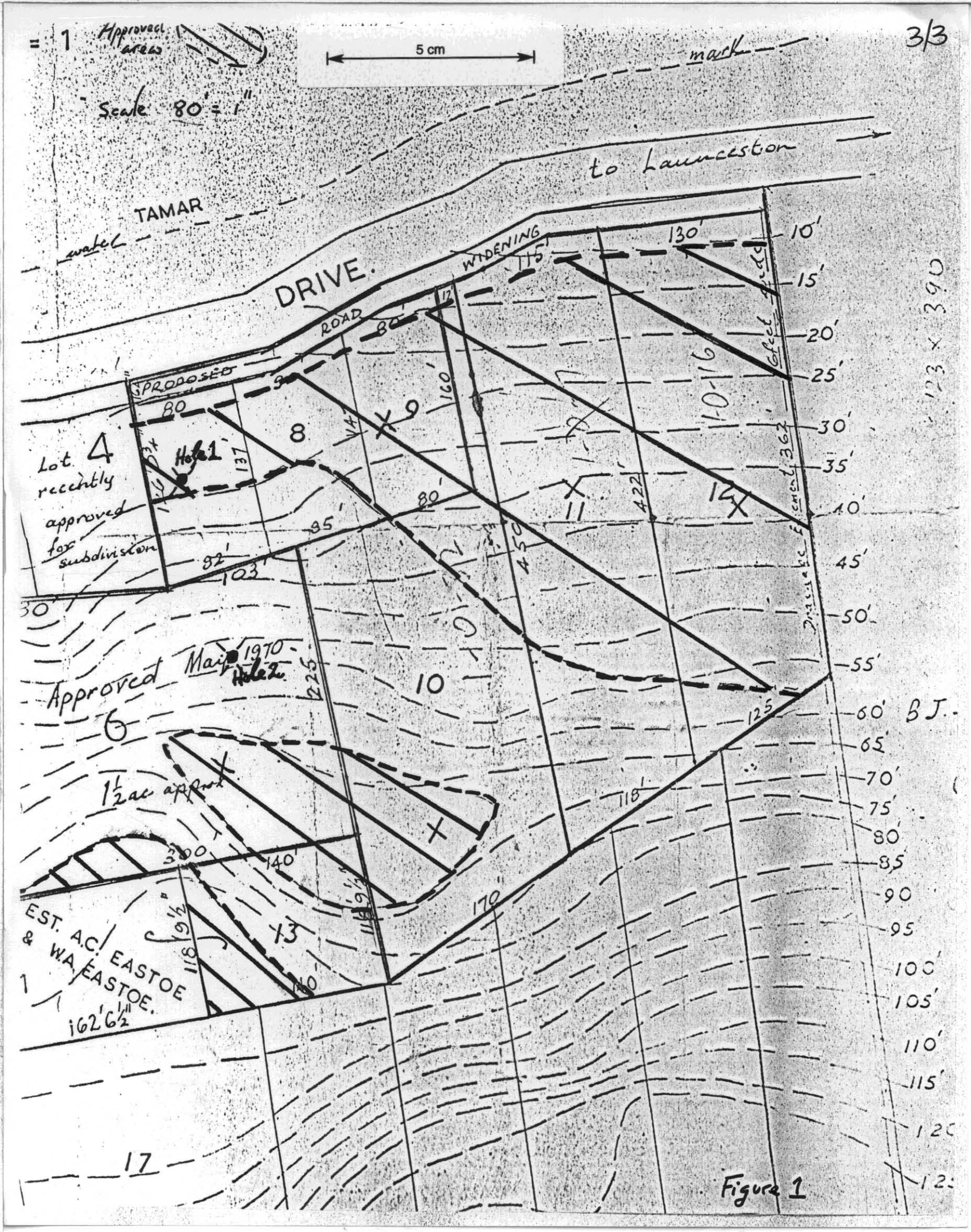
Building should be restricted to the bottom, flat part of the land and the upper gentle sloping areas that are well away from the crest of the slope (fig. 1). Effluents from stormwater and septic tanks should not be allowed to soak into the ground within the area of the subdivision or the adjoining road reserve.

REFERENCES

ELMER, S. 1971. Slope stability at Rosevears. *Unpubl.Rep.Dep.Mines Tasm.* 1971.

MATTHEWS, W.L. 1968. Stability of block of land - Rosevears. *Tech.Rep.Dep. Mines Tasm.* 12:115-116.

[7 September 1971]


= 1 Approved areas
5 cm
Scale 80' = 1"
mark
to Launceston
TAMAR
water
DRIVE.
ROAD
WIDENING
PROPOSED
Lot 4
recently
approved
for
subdivision
Hole 1
Approved May 1970
Hole 2
1½ ac apprd
EST. A.C. EASTOE
& W.A. EASTOE.
162'6½"
Figure 1