

**TASMANIA DEPARTMENT OF MINES
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Examination of land at O'Brien's subdivision, Dilston

by W. R. Moore

Lot 3, the northern middle block of the Warrawong (O'Briens) subdivision at Dilston, was examined on 17 January. This land covers an area from the East Tamar Highway down to the River Tamar and has been subdivided into six lots.

The upper section of this subdivision, bordering the highway, is on a 50 m high river terrace which has a low slope of 3° that increases gradually to 5°. Then with a noticeable break the slope increases to a steep 13 to 14°. This slope is long and uniform and continues to the river reserve, which is a level bank 10 m wide, at the foot of the slope. From pacing the distances, lot 3 appears to have approximately 30 m of the low sloping 5° terrace area, with the remainder of the lot having a 13° slope.

A series of shallow pits has been dug on the subdivision. In all of these pits a light grey sandy silt soil (ML) mixed with gravel of 0.5 to 0.8 m depth is exposed, overlying a subsurface mottled red and orange plastic clay (CH).

This clay is the sediment in the Tamar Valley which has the potential for slope failure when it becomes wet, as well as being frequently expansive with high linear shrinkage. In this subdivision the clay thickness is unknown but it could be considerable as it is exposed in all the pits and appears to overlie dolerite, which is exposed towards the foot of the slope.

Because of the slope of 13° and the underlying clay there is a potential for slope failure in the steeper section of lot 3, and this is a zone III landslide risk area. The risk of a slope failure on the 30 m wide terrace section of the lot, with a slope of 5°, is considered to be very low. Under these circumstances it would be preferable to site the house in this area, back away from the break of slope. If possible the septic tank and its overflow should be kept on this terrace and away from the 14° slope.

Since completing the inspection of the block, the writer has been informed that it is proposed to build a double-brick house on the site. Therefore a linear shrinkage test should be undertaken on the underlying clay to see if foundation movement causing house cracking is a possibility.

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