

UR1975-37

Stability of blocks affected by proposed road works,  
Westbury Road, Launceston.

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The Launceston City Council plans to purchase a narrow strip of land in front of no. 77, 79, 81 and 83 [EQ121099] Westbury Road so that the road side can be reshaped to improve visibility along the road and to instal a footpath. The council requested advice on whether the proposed earthworks would affect the stability of the blocks behind.

#### TOPOGRAPHY AND GEOLOGY

The land fronts onto Westbury Road just downhill from the Village Motel and on the opposite side of the road. The land forms part of an area of sloping ground which slopes towards a creek on the opposite side of Westbury Road. The angle of slope of the blocks is about  $8^\circ$  and the land has been zoned as Class III and lies near the boundary of an area of Class IV on the Tamar Valley Landslip Zone Map.

The area is underlain by Tertiary sediments made up mainly of clay and sandy clay. Some rather massive zones of iron oxide are present within the sediments near the surface.

#### DISCUSSION OF STABILITY

The only known slip in the area is about 200 m downhill and backing onto Westbury Road. The slip developed as a result of clay quarrying operations in the 1950s and some movement has persisted ever since. The blocks and nearby land show no signs of movement. Very minor slumping may have taken place in a 3 m cutting along the road side but this has no signs of recent movement.

The cuttings in the proposed excavations are expected to be a little higher than those bordering the road at present if they are cut down to present road level. Higher cuttings will increase the chance of unstable conditions developing around them. The cuttings should be cut at an angle no greater than  $40^\circ$  and faced with rock to prevent the erosion by water of the cutting face. If steeper cuttings are required then some retaining structure should be installed. The danger of instability may be reduced if the footpath is not cut down to present road level but cut 1-2 m above the road leaving a stepped cutting and a lower overall slope. The effect of a stepped cutting on visibility has not been considered.

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