TR15-72

19. Preliminary examination of groundwater problems in the Morris Street - Bruce Street area, Prospect Vale, Launceston

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The subdivision is situated immediately to the north of the Bass Highway in Prospect Vale and immediately to the east of St Patricks College and is bounded on the west and north by Stanley and Peel Streets.

I visited it on 1 December 1970 with M. Bushby representing the subdivider and Mr Neuhoff of Scott & Furphy, the Westbury Council's engineers. They pointed out to me several points where iron-stained water had recently issued from the ground, and where the bitumen surface of roads has been heaved up and is at present cushioned by water beneath. It is obvious that after rain the groundwater table is very close to surface, at least in some places. The situation is aggravated to some extent by surface drainage from St Patricks College, but the groundwater table is very shallow in any case.

The area is but 800 m from the local watershed to the south-west and is very gently sloping towards a neck in the north-east. Inconspicuous outcrops of dolerite are present and dolerite is also said to have been encountered in house foundations. In surface drainage trenches deeply weathered dolerite is seen to the north of the area and this is overlain by dolerite-derived sandy clays and a thin veneer of Tertiary clays, sands and gunshot gravels. The cover of the dolerite is obviously very variable in thickness, from 0-6 m and contains both permeable and impermeable layers, so that the resulting groundwater situation is probably complex in detail. A controlling factor will be the depth of the dolerite rockhead beneath, but thin layers of clay may also control water pressures locally.

It is recommended that a combined seismic and electrical resistivity survey be carried out in order to determine the position of the solid dolerite beneath the area. It is anticipated that some drilling will be required as indirect methods are unlikely to reveal the groundwater situation in detail. The geophysical surveys will, however, enable the drilling to be planned in the most efficient and economical manner.