

URI975_09

Groundwater investigation near Longley.

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The groundwater possibilities of a 6.4 ha property near Longley [EN 137420] were investigated at the request of the owner, Miss E. Huxley. Water may be required for the future establishment of a nursesey.

The land occupies the gentle slopes of a south facing spur bounded by Coombes Hill to the east and Singes Hill to the west. The property is mostly flat, but falls steeply to Quarrys Creek and the Huon Highway to the west. A number of small soaks and springs are present, but no utilisation of this surface water has taken place.

The property is wholly underlain by clean medium-grained Triassic quartz sandstone which dips gently to the north-east. The sandstone is faulted against Permian (Ferntree Group) rocks near Anderson Road to the west, and fine-grained Jurassic dolerite crops out along a north-west trending intrusive contact just below the southern boundary of the property.

The Triassic sandstone underlying the property is considered to be a reliable aquifer in most parts of the State. Successful bores tap confined water (of a quality suitable for most garden purposes) at a depth usually below 25-30 m, at a rate of about 20-35 l/min.

The Jurassic dolerite is an unreliable aquifer, and drilling is not recommended in this rock. However, its occurrence near the property investigated may enhance the possibility of a successful bore in the Triassic sandstone upslope from it. The more impermeable dolerite may act as a natural dam, retarding the movement of groundwater through fissures and joints in the sandstone.

RECOMMENDATIONS

A bore in the sandstone is not recommended at this stage. Although the catchment area appears adequate, the generally steep topography of the immediate surrounds to the property is unfavourable. Little is known of the sub-surface geology (for instance, dolerite may be struck at shallow depth) and the water table is likely to be deeper than is normally the case, thus adding to drilling costs.

It is suggested that the natural surface drainage of the land be utilised to its maximum extent before drilling is considered. The annual precipitation of about 700-800 mm may ensure adequate supplies for the uses envisaged.

If water supplies then are found to be inadequate a bore site on the north-eastern boundary of the property is recommended.

[16 January 1975]