

UR1976-30

1976/30. Groundwater investigations near South Arm.

W.C. Cromer

The Department of Mines recently reported on the groundwater prospects of Mr A.D. Fenton's property "Lennaville" near South Arm (Cromer, 1976). The investigations were confined to unconsolidated deposits near the owner's existing residence and showed that a domestic water supply was unlikely to be obtained from groundwater. Mr Fenton has since requested that an additional part of his property be examined. The 13 ha site is subject to a sub-division proposal and groundwater may be required for gardening and toilet purposes on about six 2 ha lots.

The gently undulating area, fronts onto Bezzant's Road, and is underlain mainly by aeolian quartz sand which overlies Triassic sandstone. The eastern part of the site is a clayey deflated marsh inundated after heavy rain. At [338381]\*, in the marshy area, a 12 cm steel-cased bore was sunk many years ago for a previous owner, who apparently used it for irrigation. At present it is only 5 m deep, having been filled with debris. The standing water level is 0.6 m and the quality about 440 ppm TDS. The original depth and yield are unknown.

Two mechanically augered holes were sited on the block, at [338378] and [337379]. Logs show that each hole penetrated about 1.5 m of dry grey-brown sand and about 5-8 m of grey saturated slightly clayey sand (table 1). Clay, which probably represents weathered basement, was struck at a depth of 10 m in Hole 1. The water table was at about 1.5 m in both holes.

Geologically and topographically the block is favourably sited, and sufficient groundwater supplies exist in the unconsolidated quartz sand to cater for gardening and toilet needs of any future sub-division. The water quality and yield of the aquifer are unknown, but the resource is expected to be suitable for the required purposes.

The water may be extracted by spear bores or wells, sited collectively in a central area or individually on each lot.

Groundwater may also be obtained from the existing bore, but it will need to be adequately developed as years of disuse have destroyed its effectiveness.

Irrespective of the method of groundwater extraction, contamination from domestic effluent will probably preclude its use for drinking purposes.

Table 1. LOGS OF AUGERED HOLES

---

Hole 1 [338378]

Depth (m)

0.0-0.2	Grey sandy top soil.
0.2-5.5	Pale brown-buff medium grained slightly shelly quartz sand.
5.5-10	Slightly clayey saturated grey-buff medium grained quartz sand.
10	Stiff grey clay (probably weathered basement).

---

\*All localities lie within the AMG 100 kilometre grid square EN.

Table 1 (continued)

---

*Hole 2 [337379]**Depth (m)*

0.0-0.1	Grey-black carbonaceous sand.
0.1-0.3	Brown-buff clean fine-grained quartz sand.
0.3-11	Coarser-grained brown-buff saturated slightly clayey and shelly quartz sand.

---

## REFERENCE

CROMER, W.C. 1976. Groundwater prospects near South Arm. *Unpubl. Rep. Dep. Mines Tasm.* 1976/11.

[31 May 1976]