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# Groundwater prospects at Park Beach.

*W.C. Cromer*

Mr C. Sugden owns a small block of land [EN502537] overlooking Park Beach. Water is needed for gardening and possibly for domestic purposes.

The property slopes down to the south-west and is underlain by an unknown but probably highly variable thickness of windblown Quaternary sand, and is sited on undulating land above a cliff of sub-horizontal cross-bedded Triassic sandstone, 15 m high. A number of seepages issue from the sand/sandstone contact along the cliff, and also from within the sandstone itself.

Small amounts of water sufficient for gardening purposes, will be found in the sand. However, the proximity of septic tanks will determine its suitability for domestic supplies. If the latter usage is intended, the water should be tested by the appropriate authorities for bacterial content.

Water can be extracted from sands by a variety of methods. *Spear points* which comprise a small diameter (50 mm) galvanised iron pipe with an appropriate screen at the lower end, (and connected to a small suction pump), are readily available and offer relatively cheap means of supplying sufficient water for gardening purposes. Alternatively, *wells*, when properly constructed are also efficient suppliers.

Initially it is recommended that a test hole be dug (with a small post-hole digger, using extensions) to determine the depth to water. The hole should be placed at the extreme rear of the property where the land is flatter. Because of the overall slope of the land, the water table surface can also be expected to have considerable slope, and may be relatively deep.

If water is struck at a depth less than 3-4 m, a well should be seriously considered. To prevent collapse, it should be supported by sections of large diameter (about one metre) concrete pipe, and be excavated about one metre below the water table. If constructed properly, it may deliver water at a rate of about 15-20 *l*/min.

Alternatively, if deeper water table conditions are encountered, a spear point can be placed in the test hole and then rammed an extra 2-3 m below the water table. The selection of an appropriate screen size is critical to prevent excess sand being pumped during extraction. Individual spear points will deliver 15-20 *l*/min when correctly installed.

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