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An investigation was made of the possibility of obtaining underground water suitable for toilet and garden use on the property of the Dunalley State School at the request of the Public Works Department.

The school property is located on a small rise, immediately west of the Arthur Highway at Dunalley, some 180 m from the canal. The site is about 10-15 m a.s.l.

GEOLOGY

The hills immediately west of Dunalley are composed principally of dolerite. North of Dunalley, some coal-bearing sandstone and mudstone also occur, but there is no evidence of these materials at Dunalley itself. At the northern end of the township, a few hundred metres north of the canal, dolerite crops out on the shores of Blackman Bay. East of the canal, dolerite forms the small rise upon which the hotel is built. The low-lying region, through which the canal has been dug, is composed of soft clay and fine sand deposits. Traces of these blue-grey clays, which weather to a reddish-brown colour, are to be found all about the township at elevations up to 30 m. Boulder beds, possibly talus remnants composed almost exclusively of dolerite boulders, overlie the clay deposits.

The thickness of the boulder beds is unknown but variable. The clay deposits are also of unknown thickness but by analogy with similar deposits and structural position elsewhere could be more than 30 m thick.

The school property is situated on the clay deposits, which are seen in small cuttings around the football oval. Part of the property is capped by the boulder beds, exposures of which are visible in the road cuttings near the school buildings.

WATER PROSPECTS

No water could be recovered from the boulder beds, and it is unlikely that useful supplies could be obtained easily from the clay deposits. This type of unconsolidated material presents a great array of drilling and development problems and in view of lack of detailed knowledge of any sand or gravel bands capable of storing and transmitting water it could not be considered feasible to attempt boring for water in it.

Deeper bores taken to bedrock (dolerite) are unlikely to be successful, since neither the quantity nor the quality of the water is likely to be suitable.

The quality of any water recovered by boring, from any of the materials present is likely to be poor and certainly unsuitable for gardening.

CONCLUSION

No drilling can be recommended on account of lack of suitable water-bearing rocks, the drilling difficulties to be expected and the probable poor quality of the water.