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# Groundwater prospects on P.W. Manning's property, Cambridge.

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Mr Manning owns a property [EN362600] of about 25 ha situated 3 km north of Cambridge on the south side of Hanslowes Lane. He requested advice on the groundwater potential of the area. Water is required mainly for stock use.

## RELIEF AND GEOLOGY

The area has been mapped by Leaman (1972) (fig. 1). Most of the property is underlain by Jurassic dolerite. A small area in the south-west corner of the property forms part of a fairly extensive area of Triassic rocks, while along the north-eastern boundary a thin veneer of Tertiary sediments may overlie the dolerite. Baked Triassic sediments overlie the dolerite on top of the ridge at some locations. Towards the margins of the dolerite the grainsize decreases, indicating its intrusive nature. In most of the areas underlain by Triassic rocks, sandstone boulders and outcrops occur at the surface but shale beds may be interbedded with the sandstone at depth.

## GROUNDWATER POTENTIAL

Most of the property is elevated and underlain by dolerite and therefore the prospects for obtaining groundwater are not good. There are more favourable areas on the property but these involve some risks. A shallow valley in the north-eastern part of the property where the dolerite is probably more deeply weathered, may contain some water. If drilling is undertaken in this area, the hole should be sited near the property boundary. Probably the most promising part of the property is the small area of Triassic rocks in the south-west corner. Triassic rocks are generally reliable suppliers of small quantities of groundwater but near dolerite contacts, these water-bearing properties may be altered. The quartz in the sandstone may be recrystallised, thus reducing the porosity. On the other hand the intrusion of the dolerite may increase the jointing of the rock which would increase the water-bearing qualities, provided the joints are not filled by vein material such as zeolites or calcite.

In both of the above situations, the quality of any water obtained is likely to be poor although it would probably be suitable for stock.

## CONCLUSIONS

The prospects for obtaining groundwater on the property are not good although there are two areas where some might be obtainable. Of the two, the most promising site appears to be in the small area of Triassic rocks near the dolerite contact in the south-west corner of the property.

## REFERENCE

LEAMAN, D.E. 1972. Geological atlas 1:50 000 series. Zone 7 Sheet 82 [8312S]. Hobart. *Explan.Rep.geol.Surv.Tasm.*

[3 January 1975]

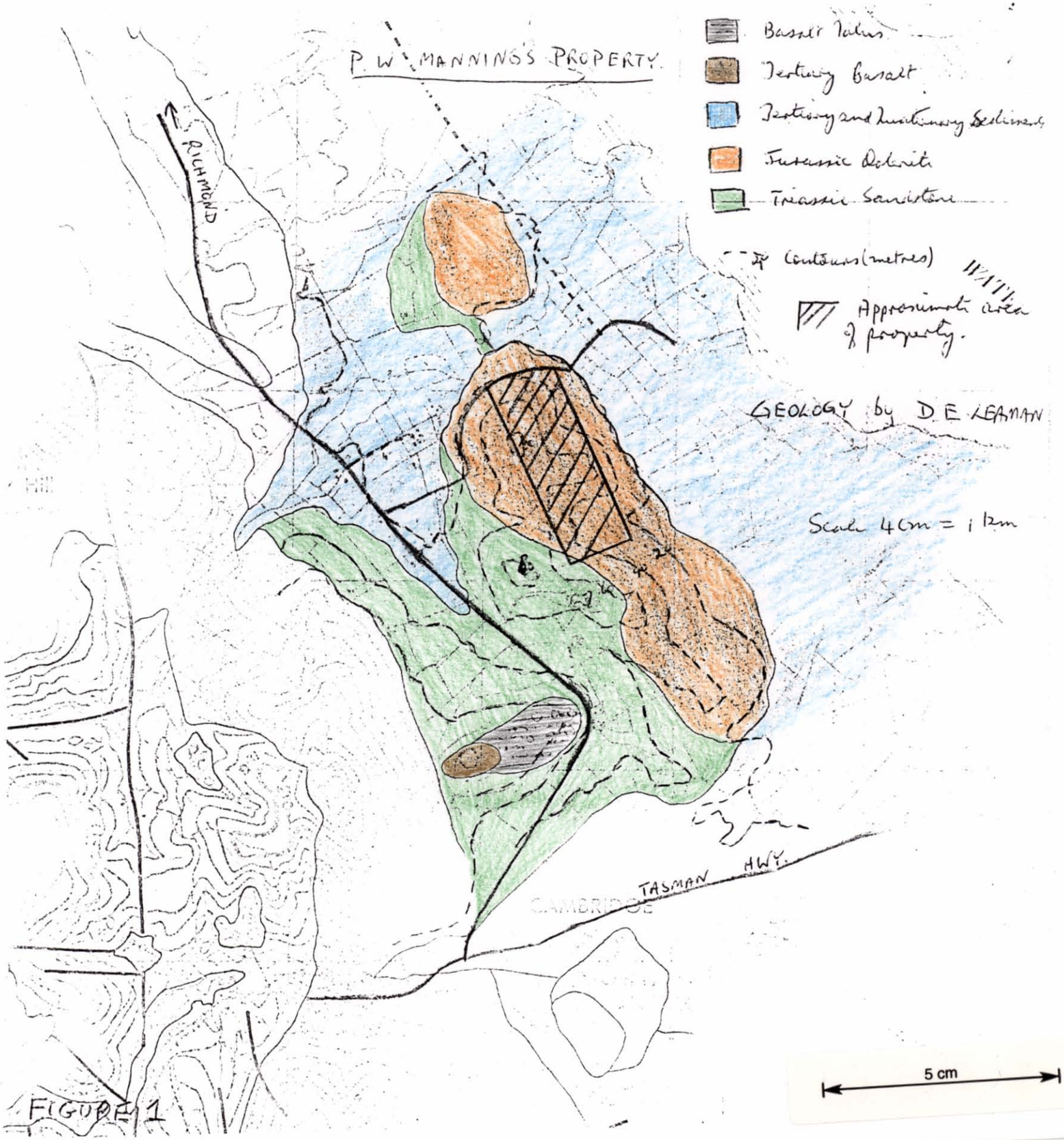
P. W. MANNING'S PROPERTY.
RICHMOND
CAMBRIDGE
TASMAN HWY.
Basalt Talus
Tertiary Basalt
Tertiary and Quaternary Sediments
Jurassic Dolerite
Triassic Sandstone
Contours (metres)
Approximate area of property.
GEOLOGY by D. E. LEAMAN
Scale 4 cm = 1 km
5 cm

FIGURE 1