

1976/53. Subsurface conditions at a property at Freshwater Point, West Tamar.

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Mr W.M. Greenhill requested that the Department investigate his property, Lot 14, Freshwater Point subdivision, in reference to the installation of a domestic septic sewage system. The request followed advice given by the Department of Health, Launceston, that as a portion of the block is situated in a proclaimed landslip area (fig. 1), any such installation must be approved by the Department of Mines. The site was examined on 23 and 24 June.

GEOLOGY

The block occupies an area of approximately 0.9 ha. The western half adjoining Nobelius Drive, is on near-level ground which falls away rapidly to the east towards the River Tamar.

A series of shallow auger holes, in addition to those augered by the land owner, show a thin soil horizon developed on 0.5-1.0 m of unconsolidated and partly consolidated Tertiary gravels, sands and sandy clays, which overlie a firm-stiff compact yellow clay. The thickness of the underlying clay was not determined from augering, but sections exposed in cliffs formed as a result of earth movements in the vicinity of Lots 3 and 4 show the thickness of clay to be in excess of several metres.

DISCUSSION

The western section of the block is available for building purposes. This land slopes from a high point situated in the centre of the block, toward the north-west corner of the block, with a maximum fall of approximately one metre. More importantly, the underlying clay surface has a similar overall slope away from the river.

No physical investigations were carried out to trace the actual movement of subsurface water over this area. Provided a suitable subsurface disposal trench system is installed in accordance with the shape and levels of the area available, it is unlikely that the movement of septic effluent through the porous subsoil would be a contributing factor in reducing the stability of those portions of the block classified as landslip areas. It should be noted that whilst septic tank effluents, sullage and storm water may, with proper planning, be successfully directed away from the river, those sections of the block charted as landslip zones are potentially liable to movement, especially following periods of excessive rainfall or undue disturbance of the ground through excavation.

CONCLUSION

Provided the drains are laid to an even gradient so that effluent is directed away from the river, the installation of a domestic sewage system within the area specified (below) should, under normal conditions, present no immediate problems with respect to the stability of the remainder of the block.

RECOMMENDATIONS

The most favourable area available for septic tank installation is in the vicinity of the western boundary of the block, approximately 10 m from the boundary or as close to Nobelius Drive as is permitted. The effective absorption area required for the disposal of the effluent should be as large as practicable. This will minimise the effect of the relatively high retention

of effluent in the subsoil during the winter months. The planting of certain shrubs near the irrigation area will help to keep the soil open, and considerable quantities of the sewage liquids will be absorbed by the plant growth.

The area recommended for the installation of a septic sewage system is shown hatched in the accompanying map.

[24 August 1976]

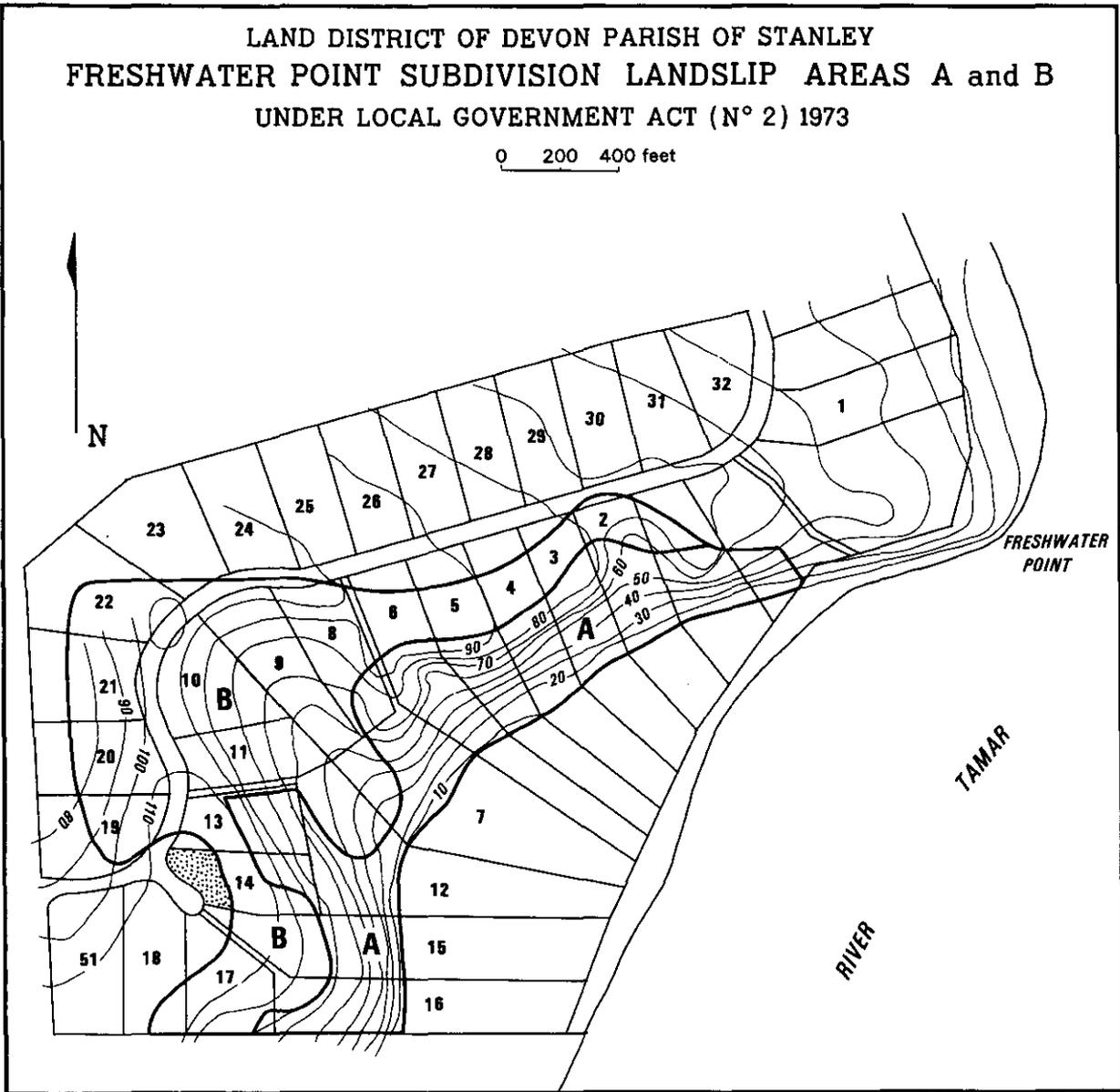


Figure 1. Area recommended for septic tank installation.

5 cm