

## Stability of a building block at Beauty Point

*By I. B. Jennings*

A building block owned by Mrs J. Smith, situated off Bagot Street, Beauty Point, was examined on 18 December.

The block is situated on a moderate slope between two terraces. The upper terrace is thought to be the heel of a major landslip whilst the lower terrace may also be the heel of a smaller ancient slip. The surface material in this locality consists of a mixture of quartz sand and gravel about five feet deep and contains occasional very large basalt boulders. This surface material is underlain by a less permeable layer of sandy clay which gives rise to a small seepage in the embankment along the rear of the Merchant Seaman's Hall, about 250 feet east of Mrs Smith's property. A further fairly large seepage has recently been intersected in an extension of the Public Works Department drain about 500 feet northwest of the allotment. The landslip which has affected the West Tamar Highway lies about 500 feet to the northeast of the building block. Houses close to Mrs Smith's property, which appear to have been erected during the past five to ten years, do not appear to have suffered any obvious damage due to earth movements. The indications therefore are that this building block is situated in a relatively unstable area but that no movements have occurred in the immediate vicinity during the past ten years or so.

The above observations confirm the general opinion expressed previously. That is, the slopes at Beauty Point are inherently unstable, landslips have occurred in the past, and some small areas are still active. The subsurface conditions are such that further movements could occur under appropriate conditions. A series of dry years would tend to restore stability to the district whilst a series of wet years could cause further movement.

The addition of one further house to these slopes would perhaps have only a small effect on the stability. However, the continuation of unrestricted building, under the existing conditions, will ultimately result in increased landslip activity under average climatic conditions.

The erection of a dwelling upon Mrs Smith's land entails a certain degree of risk. The magnitude of this risk is dependant upon such factors as the rainfall and the long term effects of the proposed drainage and sewerage works. The geological and other factors are such that it is not possible to draw any firm conclusions as to the stability of any particular allotment.

*[19 December 1963]*