Tasmania Department of Resources and Energy

Division of Mines and Mineral Resources — Report 1991/36

Examination of proposed drainage measures at St Anthony's School, North Riverside

by W. L. Matthews

A very brief visit was made to St Anthony's School at North Riverside to examine proposed drainage near an embankment, part of which has failed due to landslide movement.

Two steep parallel embankments some four metres high have been cut to produce two flat areas for playing fields. Drains parallel to the embankment tops and base have been suggested by a drainage contractor to remove surface and groundwater from the area and maintain the embankments in a dry condition. It is important to maintain cuttings such as this to be free from water as far as possible. As the degree of saturation increases, clays become softer and slumping can result.

The proposed drainage, in principle, should have a stabilising effect. However it must be ensured that the drainage system works. If ponding within the drains occurs it could have an adverse effect, while if the material is dry to the depth of the drains they may allow moisture to readily reach levels that were previously dry. In this case the drains could have a some destabilising effect.

Because of the height and steepness of the cuttings it may be necessary, in the long term, to combine the drainage measures with buttressing of the slope in some way to ensure stability is maintained.

In summary, provided the drains work in removing surface and groundwater from the area quickly, they should, under most circumstances, have a stabilising influence.

[20 May 1991]