

Investigation of proposed sites for a treatment plant in the
Gawler area.

P.C. Stevenson

Three sites were examined on 26 January in reference to a request from Gutteridge Haskins and Davey, Consulting Engineers, on 20 January.

SITE INVESTIGATION

Three sites were to be considered together with a site previously inspected on 7 November 1972 (Stevenson, 1974; Site A).

Site B [DQ289374]

This site is completely soil covered and no bedrock is exposed. From the soil colour, the underlying rock is basalt, but deep weathering and soil accretion has produced a mantle probably some metres thick. The slope has an overall value of about 16° , but local irregularities produce slopes up to 20° . Minor turf slips are present nearby and the widespread hummocks provide a strong suggestion of past instability.

Site C [DQ293397]

Soil cover on the lower parts of this site bordering the road is less than one metre thick and the bedrock consists either of weathered but still competent basalt or of more scoriaceous and friable weathered basalt. The rock could be ripped easily by heavy plant to a depth of at least 4 m.

The slopes range from 5° on the crest of the ridge to 10° - 20° on the incipiently gullied slopes, but the irregularities are the result of normal rain wash erosion and not mass movement or landslipping.

Site D [DQ304414]

Only basalt soil is visible on this site and it is unlikely that rock is present within 5 m. of the surface. Slopes are uniformly gentle at about 4° and no instability is evident or likely.

CONCLUSIONS

Since the intended loadings at the three sites are not high, and the rock or soil materials are adequate, the preferences will be dictated by the potential for instability. Quite clearly Site D is to be preferred. Site C is not unstable, and has adequate rock but is awkwardly steep. Site B is a poor site and should be avoided if at all possible.

Further investigation as far as the geology is concerned could be limited to two or three auger boreholes at Site D, while a seismic survey and four or more auger boreholes would be appropriate at Site C, depending on the location of the items of the treatment plant.

REFERENCE

STEVENSON, P.C. 1974. A report on the site for treatment works, Isandula Creek. *Tech. Rep. Dep. Mines Tasm.* 17:131.

[27 January 1978]