

Damsite investigations in the Bentong area, Pahang Darul Makmur

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This paper presents the results of damsite investigations carried out recently in the Bentong area, Pahang Darul Makmur.

Three damsites were investigated, namely:

1. *The Upper Sungai Perting Dam*
2. *The Lower Sungai Perting Main Dam, and*
3. *The Lower Sungai Perting Saddle Dam.*

Each of the three damsites mentioned above were investigated by 3 boreholes drilled to at least 6 metres into the bedrock. Besides taking soil samples for standard laboratory tests, field tests were also conducted and these include the Standard Penetration Test (SPT), Borehole Permeability Tests for the soil, and Packer Test for the bedrock.

The Upper Sungai Perting Damsite is underlain by granite occurring at depth ranging from 0 m (river exposure) to 21.0 m at the left abutment. Permeability of bedrock can be as low as 0 cm/sec (massive bedrock or tight joints). Residual granite soils consist mainly of clayey sand and sand.

The Lower Sungai Perting Main Dam and Saddle Dam are underlain by graphitic schist occurring at depths of 9.0 m to greater than 60 m. The schist bedrock is highly foliated, fractured and brecciated, giving rise to high permeability values generally of the order of 0.1 to 1.0 cm/sec. Permeability values of the residual schist soils are even higher, and are generally of the order of 1.0 to 10 cm/sec. Residual schist soils are predominantly clayey silt.

Based on geologic considerations, the Upper Sungai Perting Dam appears to be a better site than the Lower Sungai Perting Scheme.
