Engineering geology of Cyberjaya, Selangor Darul Ehsan

VUN, B.O. & YEAP, E.B.

Department of Geology
University of Malaya
50603 Kuala Lumpur

Cyberjaya, encompassing an area of 100 km^2 and located on the NE of the Dengkil District is being developed as the IT centre for the Multimedia Super Corridor (MSC). The construction of the infrastructure is almost complete while presently the University of Telecommunication and several other private venture IT facilities are being built. The development is expected to be accelerated in the near future. The government has expressed the intention of developing Cyberjaya as a zero defect city. It is thus very important that as much geotechnical information as possible be gathered to make this zero defect city a reality.

All exposed rocks in the Cyberjaya area are affected by tropical weathering and shows Grades of III, IV, V and VI. Soil, rock and complex soil-rock mass failures were observed in 9 out of the 28 cut slopes in Cyberjaya. Soil slope failures include earth fall, slump and planar failure. Many slopes were also affected by rill and gully erosion. Rock mass failure observed include wedge and planar slide. Complex soil-rock mass failures take the form of slump and affects only cut slopes in the Kenny Hill Formation. The schist of the Hawthornden Formation though affected by weathering (Grade IV) is still a moderately strong rock. The Kenny Hill Formation rocks show lesser strength and are regarded as weak rocks. Flat and rolling areas underlain by residual soil of the Kenny Hill and Hawthornden Schist are geotechically sound for infrastructure development and construction of buildings and other facilities. Large tracts of alluvium between the residual soil areas in Cyberjaya required special consideration as they contain peaty soils and clays which are geotechnically not sound. The far western part of Cyberjaya is underlain by bedrock of mainly buried karstic marble with minor schist and granite. This far western part of Cyberjaya had been used and is presently being mined for alluvial tin. The very thick alluvial sediments and tailings (> 40 m) which may trap slime layers and the buried karstic limestone bedrock required special investigation technique if it is to be used for any development.

In order to achieve the expressed intention of constructing a zero defect city, the geological and geotechnical aspect of Cyberjaya must be given utmost consideration.

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