Characterisation of the Physical Properties of Debris and Residual Soils Implications for the Possible Landslides Occurrence on Cililin West Java

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Abstract : Landslide occurence at Mukapayung, Cililin West Java with material movement downward slope as far as 500m and hit residential areas of the village Nagrog cause eighteen people died and ten homes were destroyed and twenty-three heads of families evacuated. In order to test the hypothesis that soil at the landslides area is prone to landslides, we do drilling and the following tests were taken: particle size distribution, atterberg limits, shear strength, density, shringkage limits and triaxial unconsolidated and consolidated undrained test. Factor of safety was calculated to find out the possibility of subsequent landslides. The value of FOS of three layers is 1,05 which means that the soil in a critical condition and would be imminent to slide if there is disruption from the outside.

Keywords : atterberg limits, particle size distribution, shear strength parameters, slope geometry, factor of safety