

A geomorphological approach in predicting environmental impacts of proposed development in hilly terrain

TAJUL ANUAR JAMALUDDIN¹ AND AHMAD NIZAM HASSAN²

¹Geology Department
University of Malaya
50603 Kuala Lumpur

²Cadence Technical Services, Lot 4694A, Batu 8½
Jalan Sungai Tua
68100 Batu Caves, Selangor D.E.

Classification of slopes and the associated risk by means of slope angle alone is often not adequate to give appraisal on possible risk and environmental impacts. This is mainly because the geomorphic processes that take place differ with locations. This paper presents an example of geological studies with emphasis on geomorphology for an EIA report, which has been conducted recently at the proposed site of Ringlet National Secondary School, Cameron Highland, Pahang Darul Makmur. The study area is a sub-catchment within the larger catchment area of Sungai Bertam. The geology of the area consists of granitic and schist bedrock, which is locally unconformably overlain by alluvial/colluvial deposits notably in the valley floor. Natural slopes in the study area were divided into 9 geomorphic units based on the predominant geomorphic and pedogenic processes. Each geomorphic unit mapped has distinctive geomorphic processes and problems. In this way, prediction of the associated environmental impacts and

planning for mitigation and abatement measure can be executed more effectively. Amongst the significant environmental impacts predicted due to the development activities in this area include landslide, erosion and associated problems, disaggregation, compaction and pollution, notably during the site clearing and construction phase. However, with well-planned mitigation measures, such as slope stabilisations, minimising slope cuttings, provision of vegetative covers and siltation traps, the impacts can be greatly reduced and minimised.
