

**ASSESSMENT OF SOIL CHARACTERISTIC (ROM
SCALE) WITH REGARDS TO RAINFALL PATTERN
(ROSE INDEX) AT LANDSLIDE TRAGEDIC SITES IN
PENANG AND SELANGOR**

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**B. Eng (Hons) (Civil)
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By

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ABSTRACT

Landslides common occur in Malaysia. The majority of slope failures are caused by rainfall. Severe erosion and land sliding typically occur during or shortly after periods of heavy rainfall. Using the ROM Equation and ROSE Equation the risk of landslide occurrences is determined and assessment of landslide occurrences can be rank accordingly based on ROSE Index and ROM Scale values.

The landslides that already occurred at the identified locations in Selangor and Penang is chosen in this assessments. The sample will be taking at the identified locations and the laboratory tests are conducted and then the value of ROM Scale and ROSE Index will be calculated in order to rank the possibility of the landslide.

It shows that the Comparison between the ROM Scale and ROSE Index gives the different value and the relationship

CHAPTER 1

INTRODUCTION

1.1 Background

Basically the majority of slope failures are caused by rainfall. Severe erosion and land sliding typically occur during or shortly after periods of heavy rainfall. Surface runoff on slope and groundwater can have a major impact on slope erosion and stability. In landslide prone areas, the presence of surface runoff on slope is usually the primary factor leading to land sliding and erosion.

Landslides can be broken down into two categories: (1) rapidly moving (generally known as debris flows), and (2) slow moving. Rapidly moving landslides or debris flows present the greatest risk to human life, and people living in or travelling through areas prone to rapidly moving landslides are at increased risk of serious injury. Slow moving landslides can cause significant property damage, but are less likely to result in serious human injuries.

Site development does tend to cause more rapid and concentrated surface runoff. Also, in undeveloped land, much of the rainfall never reaches the ground. It is captured by foliage and evaporates back into the atmosphere. If rapid concentrated runoff is permitted to flow onto or into the slopes it can have a serious impact on slope stability and erosion.