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AN INVESTIGATION ON THE EFFECT OF IMPROPER DRAINAGE
SYSTEM AT RESIDENTIAL AREA IN KLANG VALLEY

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ACADEMIC PROJECT II (BSB658)

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ABSTRACT

Drainage system is a basis infrastructure when planning and designing a housing area or to develop any area. It must be design properly so that it may perform it function efficiently in irrigate surface runoff from its catchment to the nearby main drainage system and forward discharges water to the adjacent river. It also must meet the economic factor in two aspect which is its construction and maintenance cost. The rapid development of Malaysia such as urbanization recently contributes to the increasing on pollution thus increases the leavings into the existing drainage system. The volume of surface runoff will increase due to the huge runoff coefficient of that area and flash flood happen due to the existing drainage system can no longer hold its function and irrigate the high volume of runoff water to the nearby river. There are three objectives of this study which is to identify the current issues and problems which occur on the current system of drainage at the residential area. The second objective is to investigate the effect of improper drainage to the house owner at the selected area. The third objective is to give suggestion and recommendation on the effective drainage system at the residential area. The target groups of this case study is a house owner where the case study area is limited to Klang Valley and the type of housing selected is a terraced house. The study was carried out by three methods which is interviewing, distributing questionnaire and observing the selected area. From the study, the existing drainage still uses the conventional method that will bring many effects to the residential area. The use of Urban Stormwater Management Manual are still new and their implementation need to be consider as a current approach that will bring benefit to the our country.

1.1 INTRODUCTION

According to Abdul Ghani (2000), in his talk on “ Feasibility of a Concealed Drainage System For Housing Project in Malaysia ”, drainage system in Malaysia are predominantly open channel drainage beginning from building perimeter drains to major river channel. It was different with the other country, which widely practiced on the concealed drainage. The used of the open channel drainage is to save cost of the construction. Without realised, this open channel drainage allowed all kinds of rubbish and waste water to flow into the drainage system thus clogging waterways. This is because open drainage cannot separate the rubbish or treat released drainage including household waste from the bathrooms and sinks where it should be collected in public sewer that contain oil, fat and organic waste. The used water from the toilets, bathroom, laundry and kitchen are part of domestic wastewater. Household which not connected to public sewerage will discharge the wastewater into the drains (Abdullah & Mohamed).

According to the dean of the Chemical and Natural Resource Engineering Faculty of Universiti Teknologi Malaysia, more than 50 per cent of the river pollution load in Malaysian cities was caused by the drainage system that contained sewage (which should be channelled to the sewer operated by Indah Water Konsortium) and industrial waste that had not been properly treated (Mohd Ariff, 2007). This waste will affect the environment when sewage is inadequately treated and design. This is the responsibility of the Local Authority with the awareness from the public to solve this problem. Without realize, the Local Authority influence the design of the drainage through their development plans.