

ABSTRACT

Green Pavement Module Drainage Study for Urban Residential Areas

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In reducing the impact of flooding while maintaining the drainage function properly. Through this research, it is hoped that the results of this study can provide awareness related to the importance of drainage functions and the use of green pavement technology. The Ciliwung Watershed (DAS) has a vital role in sustaining life and activities in the Jakarta and surrounding areas, but has severe damage to the drainage system. Thus, it is used as the object of this research. This is done to determine the capacity of green drainage in holding water, knowing the ability of green drainage to drain water. The method used is testing the prototype green pavement model with a platform of 1 cubic meter for a return period of 2 years, 5 years, and 10 years with water valve openings of 100%, 85%, 75%, 65%, 50%, 45%, 30%, 25%, 15%, 10%, and 5%. Based on the tests carried out, the results are valid with the test results being below the maximum limit and above the minimum limit. The presence of test specimens significantly improved the performance of the green pavement module, both in holding more water and slowing down the capacity reduction. The use of modules without test specimens still produces good performance, although the efficiency is lower. The results of the tests that have been conducted on green pavement in urban residential areas can be stated that green pavement can drain 65%-80% of the water. Testing on sloping areas is needed to determine the capacity and ability of the green pavement optimally. It is necessary to periodically refine the prototype to maximize testing and increase the empty volume on the pavement to optimize zero runoff.

Keywords: *Green Pavement, Green Drainage, Urban Settlement.*

Literature : 25

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