

A Review on the Development and Challenges of Green Roof Systems in Malaysia

Authors : M. F. Chow, M. F. Abu Bakar

Abstract : Green roof system is considered a relatively new concept in Malaysia even though it has been implemented widely in the developed countries. Generally, green roofs provide many benefits such as enhancing aesthetical quality of the built environment, reduce urban heat island effect, reduce energy consumption, improve stormwater attenuation, and reduce noise pollution. A better understanding on the implementation of green roof system in Malaysia is crucial, as Malaysia's climate is different if compared with the climate in temperate countries where most of the green roof studies have been conducted. This study has concentrated on the technical aspect of green roof system which focuses on i) types of plants and method of planting; ii) engineering design for green roof system; iii) its hydrological performance on reducing stormwater runoff; and iv) benefits of green roofs with respect to energy. Literature review has been conducted to identify the development and obstacles associated with green roofs systems in Malaysia. The study had identified the challenges and potentials of green roofs development in Malaysia. This study also provided the recommendations on standard design and strategies on the implementation of green roofs in Malaysia in the near future.

Keywords : engineering design, green roof, sustainable development, tropical countries

Conference Title : ICECC 2016 : International Conference on Environment and Climate Change

Conference Location : Zurich, Switzerland

Conference Dates : January 12-13, 2016