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IMPLEMENTATION OF GREEN ROOF SYSTEM IN MALAYSIA URBAN AREA

Dissertation submitted in partial fulfilment
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ABSTRACT

Green roof systems are a type of sustainable building practice that can provide various benefits for urban areas, such as reducing ambient temperature, air pollution, and stormwater runoff. However, the implementation of green roof systems in Malaysia faces several barriers, such as lack of information, high initial cost, limited expertise, and maintenance issues. The aim of this research is to investigate the implementation of green roof systems in Malaysia, especially among contractor companies in Kuala Lumpur and Putrajaya. The study aims to enhance the use of the green roof system in Malaysia. The objective of this study is to identify the critical characteristics of green roofing systems, to determine the barriers in implementing green roofs, and to suggest initiatives to promote the implementation. The questionnaire survey is distributed to the contractor companies in Kuala Lumpur & Putrajaya. For this research study, the sampling method that has been used is purposive sampling. The researcher achieved 49 respondents out of 118 respondents which is equivalent to 42%. The data were tabulated, interpreted, and analysed using Statistical Packages for Social Science (SPSS) version 26. As a result, the critical characteristics of green roof systems in Malaysia are analysed from the contractor view. In addition, the initiatives to promote the implementation of green roof systems in Malaysia are also identified. Therefore, the implementation of green roof system in Malaysia can be beneficial in many ways as it has its importance towards the social, economic and environment. Thus, this study can help the contractors discover the initiatives in enhancing the implementation of green roof system in Malaysia.

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INTRODUCTION

1.0 INTRODUCTION

Environmental sustainability is the commitment to conserve natural resources and protect global ecosystems for current and future health and well-being. This is supported by Sustainable Development Goals from United Nations stated that one of the goals is to make cities and human settlements inclusive, safe, resilient, and sustainable. The 12th Malaysia Plan (RMK 12) also come out with the theme of Advancing Sustainability in improving the environment.

The heating and cooling of residential buildings are responsible for most of the energy used in the modern world. As a result, there has been a drastic increase in the development of sustainable energy sources, particularly in residential buildings, intending to lower the amount of energy consumed within buildings. One of the best ways to save energy is with a comprehensive green roof system. This has a positive impact on people's health and the appearance of their homes in addition to reducing the impact that living things have on their surroundings. A green roof system is an extension of an existing building's roof to grow greenery. The plants may be modular or have drainage layers, depending on the style of green roof installation. This is supported by Tabatabaee et al., (2019), the built environment's increased energy and resource consumption has prompted a global shift to sustainable building practices. As a result, many countries have begun to explore green roof (GR) systems, which are more environmentally friendly than traditional roofs. Vegetated roofs (GRs) are characterized as roofs with various layers,