



اَوْنُوْرَسِيْتِي تِيْكْنُوْلُوْجِي مَارَا  
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**THE ENHANCEMENT CRITERIA OF  
GREEN BUILDING IMPLEMENTATION  
FOR PROPERTY DEVELOPMENT IN PERAK,  
MALAYSIA – VALUERS' PERSPECTIVE**

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## ABSTRACT

This study was conducted to assess valuers' perspectives regarding the laggard performance of Green Building implementation for property development in Perak, Malaysia. The objectives of this research is to evaluate the factors that contribute to the lack of green building development in Perak and to develop a framework of enhancement criteria of green building development relevant to property valuation in Perak, Malaysia. The study involved valuers in Perak who consisted of registered valuers, appraisers, probationary valuers and non-registered or probationary valuers in private and government sectors. With a total population of 176 respondents, a questionnaire survey was conducted among valuers or appraisers with registered business addresses in Perak, Malaysia. The identified variables were selected and consolidated through close-ended questionnaire developed from the inputs from in-depth literature review. The data and feedback gathered were analysed using the Factor Analysis technique of varimax rotation process using the Statistical Package for Social Sciences. The derived criteria were tested through the Reliability Test analysis where the results revealed nine enhancement criteria for the Green Building implementation in Perak with Cronbach's Alpha values ranged from 0.667 to 0.868. The derived enhancement criteria are *Green Awareness and Knowledge*, *Green Commitment*, *Green Collaboration of the Construction and Financial Sectors*, *Green Information Database*, *Green Incentive Schemes*, *Green Continuous Professional Development Centre*, *Green Integrated Professional Experts*, *Green Feedback* and *Green Returns on Investment*. These criteria could be applied for the future of Green Building implementation in the state of Perak where the collaboration between stakeholders and market representatives in the green property market through valuers' expert opinions will ensure that the success of Green Building development. Although this conceptual framework is derived from one state that show laggard performance of green building implementation, this conceptual framework could be recommended in other inactive states in enhancing green building implementation in the future.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

The first chapter of this research focuses on the background of the issues regarding green architecture, as well as green building development based on the literature review conducted on sources from mainstream media and internet in the context of the local construction industry. Subsequently, the research aims and objectives were determined accordingly based on the problem statement and research questions which required effective solutions in accordance to the significance of the research. Further explanation will be highlighted on the research methodology within the scope and limitations of the research. At the end of this chapter, the general outline of the research conducted will be defined thoroughly, so that successful recommendation and enhancement of the conceptual framework can be achieved.

### **1.2 BACKGROUND OF THE STUDY**

Green Architecture or generally addressed as Green Building (GB) (Esa et al. 2011; Austin, 2012; and Sharif et al.,2013) has a lot of environmental and social benefits. Consequently, professionals like architects, engineers, developers, planners, valuers and other property industry players have shown growing interests in the concept as part of sustainable development.

In Malaysia, the first green building's rating tool was established through collaboration between the Malaysian Institute of Architects (PAM) and the Association of Consulting Engineers of Malaysia (ACEM). This collaboration was conducted in order to facilitate widespread the green building development in Malaysia through the certification of new and existing developments (Green Building Index (GBI), 2014). In this regard, The Green Building Index or GBI was developed in 2009 to measure green technology features in buildings.

In 2012, three years after Malaysia's first green rating tool was enforced, the state of Perak, had initiated its first green building development in September 2012.