



اَوْنِيُوْرَسِيْتِي تِيكْنُوْلُوْجِي مَارَا  
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TEKNOLOGI  
MARA

**UNIVERSITI TEKNOLOGI MARA**

**THE BENEFITS OF USING BIO-  
BRICKS IN AFFORDABLE HOUSING  
PROJECTS IN PERAK**

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## ABSTRACT

In this study, researcher is investigating the benefits of Granite Dust Bio-Bricks. The Granite Dust Bio-Bricks were compared to traditional Clay bricks. The goal of the survey was to determine the level of sustainability awareness among Malaysian construction industry players in Perak, state stakeholders and the actual on-the-ground experience of employing Granite Dust Bio-Bricks in affordable housing projects. This is to discover important facts about Granite Dust Bio-Brick for the building industry and the impact on the environment and living comfort in Perak's. In this study, the things that are tried to be highlighted are the challenges, level of awareness and determining factors to industry players in using bio-brick in the construction of affordable housing. Granite Dust Bio-Brick implementation steps in Perak are formulated using a greater grasp of the challenge. Data will be gathered through the internet, public libraries, books, journals, green buildings and Bio Brick products. A questionnaire will be used as a medium to obtain primary data. The intended respondent was given questionnaires to fill out. The information gathered was examined using the appropriate methodologies. The raw data collected was analyzed and reported. The methodology used in this study will comprise the standard frequencies and cross tabulation to see the link between the independent and dependent variables. Researchers using quantitative research strategies to find links and look for interactions between variables. Quantitative research means exploring relationships between variables in order to verify theories that are based on objective values. The questionnaire survey was distributed to 50 respondents to all relevant section in construction and development industry through email, monkey survey and personal delivery. Responses are collected on a volunteer basis in the case of improving the quality and reliability of the results gathered. Researcher targeted participant which is 50 unfortunately researcher is able to achieve only 35 respondents and it is sufficient to described a sample represent in this study. This data was analysed using Statistical package of Social Science (SPSS) Version 21.0 and T-test analysis using '*one sample test*' were used to generate the result. Reliability test using Cronbach's Alpha have a value of above 0.9 which suggesting that they are on an excellent scale which above the permissible range of 0.7 and above 0.8. The findings of this study are suggested that there is a significant difference between awareness and knowledge, readiness for construction and environmentally friendly in benefits of using Bio-Bricks in constructions of affordable housing projects in Perak and create awareness and enhance knowledge among relevant stakeholders.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Introduction

Housing is critical in any country for ensuring social and economic stability and promoting national growth. Therefore, the Malaysian government has provided a low to medium cost housing categories to assist people in purchasing their first home at a reasonable price. According to Nurshuhada et al., (2017) and Jeffrey and Xin (2017) the goal of Malaysian housing policy is to provide adequate, good, and accessible housing to all lower income group in Malaysia. In addition, house is interpreted as combined meaning of the word 'shelter' with the word 'adequate' to become 'adequate shelter'. Adequate shelter means:

*“Shelter is a fundamental human need. Housing plays an important role in people’s wellbeing, contributing to the physical and mental health, education, employment and security outcomes for individuals” (Baqutaya et al., (2016).*

The challenges for low-cost housing in Malaysia is not only limited to the numbers of housing offered but also substandard housing to address severe housing shortage (Syafie, 2015). Affordable housing is considered suitable for quality and location, but not so costly to prevent its occupants from fulfilling their other basic needs.

Given the broad definition of what constitutes affordable housing, focusing on financial affordability of housing might help determine the extent to which market house prices can exceed a household's financial means in Malaysia (Cheah & Almeida , 2016). Since the First Malaysia Plan, Malaysia's commitment to delivering low-cost and affordable housing has been reflected in the Malaysian government's annual budget and development plans (1960-1970). The private sector's participation began with the second Malaysia plan (1971-1975), when the government recognized the importance of private sector participation in the economy. Under the Seventh (1995-2000) and Eight Malaysian Plan (2001-2005), the Malaysian government has been even more committed to providing adequate, affordable, and high-quality housing for all Malaysians, particularly the low-income group.