

**UNIVERSITI TEKNOLOGI MARA**

**RENEWABLE ENERGY: A GREEN  
TECHNOLOGY TOWARD SUSTAINABLE  
HOUSING DESIGN. CASE STUDY AT  
BUNGALOW RESIDENCE, BANDAR ENSTEK,  
NEGERI SEMBILAN.**

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## ABSTRACT

The "technology" term was referring a utilization of information for practical purposes. The "green technology" incorporates continuous evolve methods and materials, from technique to generated an energy to cleaning items. This study is to design a phase of bungalow houses through sustainable development and green technology approach in Bandar Enstek, Negeri Sembilan. The data were collected and analysed to identify the issues and potential of the area. In order to in line with the Theme of Bandar Enstek Township, green technology has been applied with the housing planning in Bungalow Residence Phase. Finally, this study will come out with a proposed of master plan, which consists of design and approach to achieve the design goal. This study is for planning the development of Bungalow Residence with inject a green technology to provide knowledge and sustainable toward environment.

*Keywords: Green technology, development, bungalow, sustainable design, renewable energy,*



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## CHAPTER 1: INTRODUCTION.

### 1.1 INTRODUCTION

The residential area is the land use that dominated by houses, opposite to commercial and industrial areas. Housing is significant in residential areas such as single family housing, multi residential, or manufactured homes. Zoning for residential may allow a few administrations or work opportunities or may thoroughly avoid business and industry. This way may either allow the high-density land use or only allow low density uses. The zoning of residential usually consist of small commercial or industrial or zoning of manufacturing. The size of the area can be either large or small. The transportation system is needed in certain residential areas such as rural, large tracts of land may have no services whatever, in order residents to seek services, thus it causes the change of existing land development or infrastructure of planning transportation such as rail and road.

The liveable and healthy residential area proof by its social interaction between its resident and the clean environment. The good neighborhood provides a system where activities of walking and cycling are safe where all types of residents have the opportunity to be active in physical (Steve, 2015). Bandar Enstek was a new township with slogan new culture of living and technology city as its concept. The township was rapidly developed with complete facilities for its resident other than the residential area such as business, institutional, and industrial area that located within its township. T.H Properties Sdn. Bhd. which is the developer of Bandar Enstek was bought the land that originally belong by Kampung Felda LB Johnson that originally uses for agriculture such as oil palm plantation and rubber plantation that now transform into township that dominated by mix housing area. The bungalow residence phase at Bandar Enstek has taken as the case study for this thesis that still an undeveloped area that dominated by secondary forest.