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**THE EFFECTIVENESS OF NATURAL VENTILATION IN LOW COST HOUSES  
(SINGLE, DOUBLE STOREY AND RENOVATED TERRACED HOUSES)**

**This dissertation is submitted in partial fulfillment of the requirement  
for the award of Bachelor Surveying (Hons)**

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## **ABSTRACT**

For the past few decades, Malaysia has been housing its people to support the growing population. It is expected to reach 32 million in the next two decades. To fulfill the demand, the government has taken the action of increasing the number of housing needs for the people, including the low income group that includes low cost houses.

It is the government as well as other related party's responsibility to provide comfortable, sound living quarters for the people. This includes providing a better ventilation design. Many have complained about the unbearable heat they have to put up with everyday. This has drawn few attentions but no action has yet been taken to improve the condition despite researches that have been done.

Overall, the objective of this dissertation is to highlight the problems caused by inadequate natural ventilation and how it can be optimized through planning and design of openings, materials, etc.

The study is focused on low cost terraced houses in Shah Alam. Questionnaires will be distributed to 50 respondents to gather data and finally make an analysis on the findings.

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# **CHAPTER 1**

## **INTRODUCTION**

### **1.0 INTRODUCTION**

Housing low-income families is one of the greatest problems that ail humanity. With the ever increasing awareness and concerns in building low cost houses for the low-income earners the government had set up in the 7<sup>th</sup> Malaysia Plan (1996 – 2000) a target to reach 200,000 units of low cost houses to accommodate this group. This was announced by the Ministry of Housing and Local Government, Datuk Ting Chew Peh<sup>1</sup>.

The government's main objectives of building low cost houses are to relocate the poor who were living in slums to a better housing environment besides making it affordable for those who are not able to purchase a house of their own. This in turn would gradually eliminate poverty and clear the city of unwanted slums.

Despite the steps that have been taken has it really given these people a healthy and comfortable living environment? From what has been observed most flats and low cost terraces are poorly built. This

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<sup>1</sup> Ghani Salleh, Lee Lik Meng/Low Cost Housing in Malaysia, 1996.

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includes the materials used and also the design of the building such as openings for ventilation. Ventilation design in particular has not been taken into great consideration where problems such as window openings that do not follow the standard size requirement and rooms not having any openings at all still exist to this day. This will gradually result in excessive use of energy as well as an increase in cost.

The question of whether the ventilation design of low cost houses meets the required standard still remains a question that needs to be answered. The research will be concentrated on the effectiveness of the design of natural ventilation for low cost terrace houses. A study will be done on single and double storey houses as well as renovated single and double. Hopefully this research will find the answers as to why these problems occur and whether any action has been taken to improve them.