

**CENTRE OF STUDIES BUILDING SURVEYING  
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING  
UNIVERSITI TEKNOLOGI MARA**

**AN INVESTIGATION OF PLANT GROWTH IN RESIDENTIAL  
CONCRETE BUILDING**

**IVVAN JALIE ANAK JULIES  
(2009936747)**

**Academic Project submitted in partial fulfillment of the requirements  
For the degree of  
Bachelor of Building Surveying (Hons)  
Centre of Studies Building Surveying  
Faculty of Architecture, Planning & Surveying**

**July 2012**

## Abstract

Plant growth is not a new defect that can be found in a concrete building or in timber houses in Malaysia. Because of Malaysia climate is always rain all year, this type of defect usually occur on building element. Not only natural causes, this type of defect also can cause by the leaking piping system which usually infected the element of the building.

Plant did not simply grow on element of the building. The seed or spore of the plant somehow being transfer to the element of the building. With the present of the water and exposed to the sunlight, the plant can continue to grow. This creates other problem suck as cracking to the surface of the concrete, decay to the element of the timber houses, and also fungus attack.

Further study about this phenomena will be made by choosing a building that having problem on plant growth. This study is focusing on how the plant can grow on building without the root attached to the soil. The case study will be on concrete building and also timber houses.

## Acknowledgement

For the journey of making, writing, and finishing this dissertation, I really want to thank some of the people that are responsible for my success. Thanks to Sr. Mahayudin Bin Mahmood for all his assistance and guidance through the studies. I also want to thanks for his patience, and support. He always provides me with new knowledge and idea for making my dissertation easier for anyone to understand.

Furthermore, I also would like to thank the University Technology Mara, for giving me such chance for doing this dissertation project which can help me to learn and study more about defect which is mostly related to my course, building surveyor. This is very useful for me as a student of bachelor degree in building surveying. In addition, I also would like to express my appreciation especially to my parents and those friends whom had helped me to accomplish my research and made my way of doing this research.

# **TABLE OF CONTENT**

<b><u>CONTENT</u></b>	<b><u>PAGE</u></b>
ACKNOWLEDGEMENT	
ABSTRACT	

## **CHAPTER 1**

1.1	INTRODUCTION	1 – 2
1.2	ISSUE/PROBLEM	3 – 4
1.3	OBJECTIVE OF STUDY	5
1.4	SCOPE OF STUDY	6
1.5	RESEARCH METHEDODOLOGY	6 – 7

## **CHAPTER 2**

2.0	INTRODUCTION TO RESIDENTIAL BUILDIN	8
2.1.1	TYPE OF RESIDENTIAL BUILDING	9 – 10
2.2	CONSTRUCTION AND ELEMENT OF CONCRETE BUILDING	11
2.2.1	GUTTER	12
2.2.2	BALCONY	13
2.2.3	CAR PORCH	14
2.2.4	WALL	15 -17
2.2.5	WINDOW	18
2.2.6	ROOF	19
2.3	GENERAL ISSUE OF BIOLOGICAL GROWTH	20
2.3.1	TREES AND SHRUBS	21 – 24
2.3.2	MOSSES	25 – 26
2.3.3	FUNGI	27 – 28
2.3.4	ALGAE	29

## CHAPTER 1

## INTRODUCTION

## 1.1 Introduction

Concrete building is a building that used concrete material as one of the main materials to complete built the building. Concrete is a mixed of material such as aggregate, sand, cement and water. To make the structure even stronger, a steel bar are used and combine with the concrete to ensure the structure have the ability to support the load of the building. For concrete building, the components of the building have two types. One is in – situ concrete and the other is precast concrete. The in – situ concrete is a concrete that made on site during the construction. For the precast concrete, the components of the building such as wall are made by factory and will be transfer to side after its finish. All the main structure of the building is made of concrete.

“Rest (Residential) Home” is an institution that provides resident beds and personal care services for persons who are normally able to manage activities of daily living. The home should provide friendly understanding to persons living there as well as appropriate care in order that the resident's self-esteem, self-image, and role as a contributing member of the community may be reinforced.