



DEPARTMENT OF BUILDING SURVEYING  
FACULTY OF ARCHITECTURE, PLANNING AND SURVEYING  
UNIVERSITI TEKNOLOGI MARA

A STUDY ON SAFETY ROOFTOP GARDEN

This academic project is submitted in partial fulfillment of the requirement for the Bachelor Of Building Surveying (Hons.)

TEUKU MOHD HASBI BIN TARMIZI  
(2007278264)

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## ABSTRACT

Rooftop garden are mostly found in urban areas. On rooftop garden, there are several types of plants that include trees, shrubs, vines or an assortment of flowers and turf. The function of rooftop garden is for aesthetic views and indirectly to reduce overall heat absorption of the building. Besides, roof plantings may provide habitats for bird and can be used as a recreational area. In Malaysia, rooftop garden is a new practice of landscaping area which is introduce by Landscape Architect and uncommon practice in Malaysia.

The issue that has always been highlighted regarding to rooftop garden is on a safety issue the safety issue related to the maintenance issue when all the safety equipment not be maintained properly. It is seen that fire extinguishers (CO<sup>2</sup>) and sprinklers that are not active due to the building is not running the maintenance of safety equipment in the building and also in the vicinity of rooftop garden area. The problem is the safety practice on rooftop garden is still at the very low level.

For this research, interview session were carry out to determine and to gather information in order to achieve objectives of the study. Using this method, the researcher was conducting an interview with an individual that related with the study field. They are chosen based on their qualification, knowledgeable and responsibility on the study field. Data analysis will be analyzed that obtain from the case studies site visit. Conclusion is made base on the finding done.

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# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

Rooftop garden are mostly found in urban areas. On rooftop garden, there are several types of plants that include trees, shrubs, vines or an assortment of flowers and turf. The function of rooftop garden is for aesthetic views and indirectly to reduce overall heat absorption of the building. Besides, roof plantings may provide habitats for bird and can be used as a recreational area. In Malaysia, rooftop garden is a new practice of landscaping area which is introduce to Landscape Architect. Therefore, it's hardly seen in Malaysia. However, rooftop garden has been used widely in overseas like Europe (Sarah Dowdey, 2008).

A rooftop garden development involves the creation of vegetated space integrated structurally on top of a man made structure. The word 'roof' in this context refers to any continuous surface designed for the protection of inhabitants from the elements, whether open or closed on the sides. The word 'top' refer to of on or top, in part that is high. The vegetated space may be below, at, or above grade, located on a podium deck, a 'sky garden' on an intermediate floor level, or at the very top level of the building, but in all cases the plants are not planted in the ground. Freestanding planters placed on top of a roof do not constitute the recognized international landscape industry definition of a rooftop garden, which is characterized by the integration of the vegetation containment structure with the building roof structure. However, there are circumstances, particularly in retrofitting, where use of planting in pots or planters may provide a practical solution and an acceptable greening effect (Brenneisen, 2001).

## 1.1 Problem Statement

The issue that has always been highlighted regarding safety concerns that can be seen on the rooftop garden is the maintenance issue. Maintenance that is not done regularly at the rooftop garden causes risk to the safety equipment for the building functionality. It is seen that fire extinguishers (CO<sup>2</sup>) and sprinklers that are not active is due to the building is not running the maintenance of safety equipment in the building and also in the vicinity of rooftop garden area. The problem is the safety practice on rooftop garden is still at the very low level It is not a good idea to put unnecessary weight such as wrong choose of on flat rooftop garden, the material lightweight containers are always be recommended, such as fiberglass or plastic tubs and troughs (Pinkey, 2011).

The Safety judgment was another worry highlighted by some 7–9% of respondents. It was cited by about a third of those households living near a roof gardens who did not support this appropriation as a reason for not welcoming more roof gardens in Singapore to interestingly, all those families had not visited the roof gardens in the vicinity of their flats. This very much reflects people's perception of the level of risk rather than any true measure of actual risk. Public perception of urban safety is an important pre-requisite for people's use of the place and may not be neglected and also their relating with park setting and to reminded that a fears of danger especially to the about person can restrict park usage (Madge , 1997)

In compliance with safety and building regulations, fire safety systems formed an important part of the project. A protective fire barrier has been installed cladding the exposed side of the emergency stairwell from the rooftop trailer park down to the safe level. Cape Town- based national fire protection and security system specialists, fire specification, was called in to install the fire wall, with a two – hour protection rating, running the full height of the emergency staircase, down the atrium. The fire wall is not obvious and blends in with the surroundings. There are several reasons why protection is needed down this atrium”, says Fire spec CEQ, Leo Sloomans.