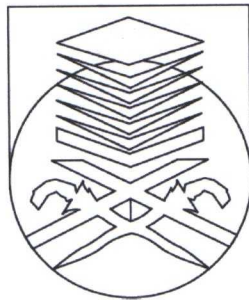


**REVITALIZING UNDERPASS SPACES
AT PEKAN PORT KLANG, SELANGOR**

NUR LIYANA BINTI MUHAMMAD ISMAYUJA

2015208998



Thesis submitted to the University Teknologi Mara Malaysia
in partial fulfillment for the award of degree of
Bachelor of Landscape Architecture (Hons.)

JULY 2019

ABSTRACT

The study for underpass spaces is very significant especially in a developing country like Malaysia. As a developing country, rapid urbanisation occurs throughout the nation, resulting in a huge increase of road infrastructure. Parallel to the rapid growth of road infrastructure, the underpass spaces also increases. The underpass spaces are most likely become a negative space, which is unfavourable for the users. Therefore, this study is beneficial in order to utilize and give new life to the underpass spaces, in accordance to the setting of the surrounding spaces. In order to revitalize the underpass spaces, necessary actions need to be taken by establishing attractive and functional open spaces for community gathering and healthy recreational use. This can maximise the potential of the under-utilized spaces and to further improve liveability in the city.

ACKNOWLEDGEMENTS

I am utterly grateful to God for the good health and wellbeing that were necessary to complete this topical study entitled *Revitalizing Underpass Spaces at Pekan Port Klang, Selangor*. I wish to express my sincere thanks to Dr. Raziah Ahmad, Head of Centre of Studies for Landscape Architecture, for providing me with all the necessary facilities for the research. I place on record, my sincere thank you to LAr. Dr. Nurhayati Abdul Malek, LAr. Zalina Jaal, LAr. Siti Zabeda Mohammad, LAr. Ts. Sharifah Khalizah Syed Othman Thani, LAr. Zul Azri Aziz, and LAr. Ahmad Nadzri Alias, my coordinators of Independent Landscape Architecture Studio, for the continuous encouragement.

I am also especially grateful and indebted to LAr. Siti Zabeda Mohammad, for her expertise, guidance and encouragement extended to me as my supervisor. I take this opportunity to express gratitude to all of the Centre of Studies for Landscape Architecture members for their help and support.

I also thank my parents for the unceasing encouragement, support and attention. I also place on record, my sense of gratitude to one and all, who directly or indirectly, have lent their hand in this venture.

NUR LIYANA BINTI MUHAMMAD ISMAYUJA

10th July 2019

TABLE OF CONTENTS

ABSTRACT	I
ACKNOWLEDGEMENTS	II
TABLE OF CONTENTS	III
LIST OF TABLES	VI
LIST OF PHOTOS	VII
LIST OF FIGURES	IX
LIST OF ILLUSTRATIONS	X
CHAPTER ONE: INTRODUCTION TO TOPIC	1
1.1 BACKGROUND STUDY	1
1.2 PREVAILING ISSUES	2
1.2.1 <i>Physical Issues</i>	2
1.2.2 <i>Social Issues</i>	2
1.3 DEFINITION OF TERMINOLOGIES	3
1.3.1 <i>Revitalizing</i>	3
1.3.2 <i>Underpass</i>	3
1.3.3 <i>Spaces</i>	4
1.4 SIGNIFICANCE OF THE STUDY	5
1.5 AIM & OBJECTIVES	5
1.5.1 <i>Aim</i>	5
1.5.2 <i>Objectives</i>	5
1.6 RESEARCH METHODOLOGY	6
1.6.1 <i>Data Collection</i>	6
1.6.1.1 <i>Primary Data</i>	6
1.6.1.2 <i>Secondary Data</i>	8
1.6.1.3 <i>Tertiary Data</i>	8
1.6.2 <i>Data Documentation and Analysis</i>	8
1.6.3 <i>Design Development</i>	8
1.7 CHAPTER SUMMARY	9
CHAPTER TWO: LITERATURE REVIEW AND REFERENCE CASES	10
2.1 CHAPTER INTRODUCTION	10
2.2 LITERATURE REVIEW	10
2.2.1 <i>The Concept of Urban Transformation</i>	11
2.2.1.1 <i>Urban Renewal</i>	12
2.2.1.2 <i>Urban Conservation</i>	12
2.2.1.3 <i>Urban Revitalization</i>	12
2.2.1.4 <i>Urban Redevelopment</i>	13
2.2.1.5 <i>Infill Development</i>	13
2.2.1.6 <i>Building Rehabilitation</i>	13
2.2.1.7 <i>Building Refurbishment</i>	14
2.2.2 <i>Urban Street Design</i>	14
2.2.2.1 <i>Street Design Elements</i>	15
2.2.2.2 <i>Interim Design Strategies</i>	17
2.2.2.3 <i>Intersection Design Elements</i>	18
2.2.2.4 <i>Design Controls</i>	18
2.2.2.5 <i>Pedestrianisation</i>	20
2.2.2.6 <i>Pedestrian User Groups</i>	21

CHAPTER ONE: INTRODUCTION TO TOPIC

1.1 Background Study

Urban infrastructure mainly consists of transportation systems. The transportation infrastructure usually causes landscape fragmentation. It affects many aspects of landscapes, including recreational, ecological, aesthetical, and historical qualities. Due to the rapid development of transportation infrastructure, empty and unused spaces would eventually occur. The spaces under elevated highways may affect the city experience; by causing unfavourable views, disengaging interaction between areas, and act as barriers. It will induce social and economic problems and may decrease the value of neighbouring properties (Mohamed Anuar, 2011).

As an example, the problem of underpass spaces can be seen at Kuala Lumpur. Similar to other developing worlds, Kuala Lumpur has encountered rapid development which results in a disjointed city and lacking in spatial consistency in both visual and physical aspects. One of the affected areas is the Maju Expressway (MEX), previously known as the Kuala Lumpur- Putrajaya Expressway (KLPE). Parts of the highway cross dense neighbourhoods, which leads to multiple interstitial spaces (Mohamed Anuar, 2011).

Therefore, in order to revitalize the underpass spaces, necessary actions need to be taken by establishing attractive and functional open spaces for community gathering and healthy recreational use. This can maximise the potential of the under-utilized spaces and to further improve liveability in the city.