



**CENTRE OF STUDIES FOR LANDSCAPE ARCHITECTURE
FACULTY OF ARCHITECTURE PLANNING AND SURVEYING
UNIVERSITI TEKNOLOGI MARA**

**REHABILITATION OF LANDFILL BY USING
PHYTOREMEDIATION APPROACH TO BECOME A
COMMUNITY GREEN AREA: CASE STUDY AT WORLWIDE
LANDFILLS PARK, AIR HITAM, PUCHONG, SELANGOR.**

NUR ANIYAH NAZURAH BINTI SAMAD

2014413776

JULY 2018

AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Under Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

Name of Student : Nur Aniyah Nazurah Binti Samad

Student I.D. No. : 2014413776

Programme : Bachelor of Landscape Architecture (Hons.) – AP248

Faculty : Architecture, Planning and Surveying

Dissertation Report : Rehabilitation of Landfill by Using Phytoremediation

Title : Approach to Become a Community Green Area: Case
Study at Worldwide Landfills Park, Air Hitam, Puchong,
Selangor.

Signature of Student :

Date : July 2018

ABSTRACT

Rehabilitation can be simply defined as restoring the land to better condition. For this study, it will rehabilitate the former landfill site of Worldwide Landfills Park towards community green area by enhancing and providing a solution for the stated issues. The physical character will be emphasized on the function of green spaces, linkages between spaces and solving the environmental concerns. The methodology of this study involves the implementation stages of secondary data from a government department and existing data from previous researchers which have been published. The primary data has been identified through observation and data recorded method. The data collected are synthesized to identify the potential area to be developed and preserved. Based on the strategy and design ideas inspired by the concept of Reverse Inverse that has been transformed into a physical form in designing the green spaces to be more functional, good linkages between spaces and better solution for environmental issues make the pace more functional and lively with its own identity following the concept. Engaging the public with nature will give opportunities to learn and educate them throughout outdoor activities. Hopefully, this project can be used as design strategies and guidelines for stakeholders in rehabilitating the former landfill site to create a place that has inter-relation between human and landscape.

Keywords: Rehabilitation, former landfill site, green spaces, environmental, human and landscape.

TABLE OF CONTENTS

ABSTRACT	i
ACKNOWLEDGEMENT	ii
LIST OF CONTENTS	iii
LIST OF FIGURES	vi
LIST OF TABLES	ix

LIST OF CONTENTS

Chapter 1: Introduction to Topic

1.1 Introduction	10
1.2 Background	11-12
1.3 Issues	12
1.3.1 Physical Issues	12
1.3.2 Social Issues	13
1.3.3 Environmental Issues	13-14
1.4 Aim and Objectives	14
1.4.1 Aim	14
1.4.2 Objectives	15
1.5 Relevance of the Study	15
1.5.1 Significance of Study	15
1.5.2 Rationale of Study to Landscape Architecture	16
1.6 Research Methodology	16
1.6.1 Secondary Data	16-17
1.6.2 Primary Data	17-20
1.6.3 Data Collection	20
1.6.4 Analysis and Synthesis	21
1.6.5 Propose Design	21

Chapter 2: Literature Review and Reference Cases

2.1 Introduction	22
2.2 Topic Definition	22-23
2.3 The Concept of Ex-Landfill Park	23-24
2.4 The Importance of Ex-Landfill Park	24
2.5 The Ex-Landfill Development Policy	25
2.6 Environmental Issues Facing Ex-Landfill Development	25-26
2.7 The Influence of Phytoremediation Approach	26-32
2.8 Reference Case 1 – Qiaoyuan Park, Tianjin, China	
2.8.1 Background	32-33
2.8.2 Site Condition	33-35
2.8.3 Issues	35-36
2.8.4 Design Strategies and Solutions	36-37
2.9 Reference Case 2- Freshkills Park, New York	
2.9.1 Background	37-42
2.9.2 Site Condition	42-45
2.9.3 Issues	45-46
2.9.4 Design Strategies and Solutions	47
2.10 Analytic Comparison of Reference Cases	48-49
2.11 Summary	50

Chapter 3: Inventory and Analysis

3.1 Introduction	51
3.2 Background Of Site Study	
3.2.1 Site Location	51-53
3.2.2 Site History	53-54
3.3 Site Inventory and Analysis	
3.3.1 Land Use	55-59
3.3.2 Circulation	59-66
3.3.3 Vegetation and Wildlife	67-69
3.3.4 Climate	69-72
3.3.5 Landform and topography	72-73
3.3.6 Soil type	74
3.3.7 Drainage System	74-75