A Student's Guide
to Landscape Architecture

Editor:
Suriati Ahmad[1]
Email:
suria564@uitm.edu.my[1]

Abstract: A Student's Guide to Landscape Architecture is an academic coursebook produced by the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch, aiming to provide additional reference material to the student while supporting the running of the current sylabus. My deepest gratitude to Allah for His guidance and blessing, where all teh hard work and efforts finally come to an end after two years of planning. The unique features aded to this book are the illustration and detailed manual sketches and render drawn by the academic members of this programme. This effort depicts the seriousness of this coursebook that can be a good source of reference, guided reading material and extended excercise handout, especially for students, designers, and other potential readers who keen to understand knowledge related to landscape architecture. Fice chapter were designed for this coursebook, encompassing important landscape architecture strand that focuses on landscape design principles, landscape design process, landscape construction, landscape sciences and landscape planting.

Keywords: Landscape architecture, design principles, manual sketches, design process, reference material

A STUDENT'S GUIDE TO LANDSCAPE ARCHITECTURE

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SURIATI AHMAD

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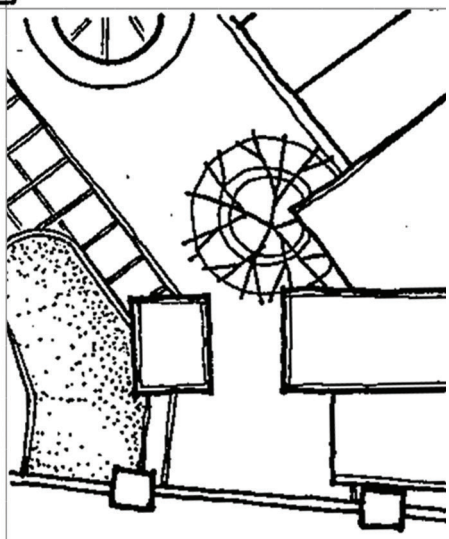

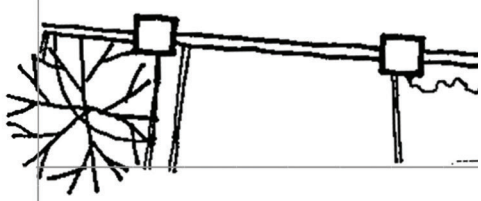

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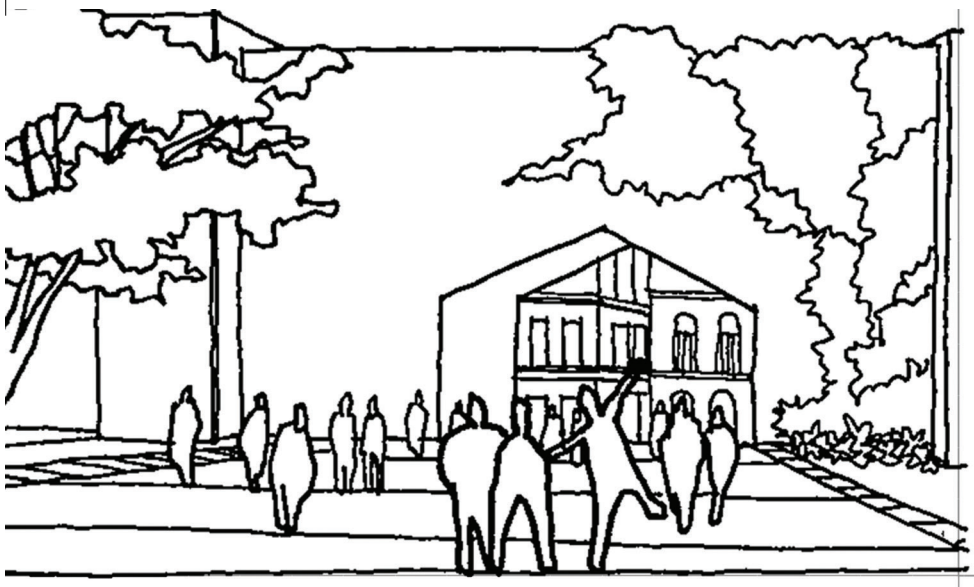

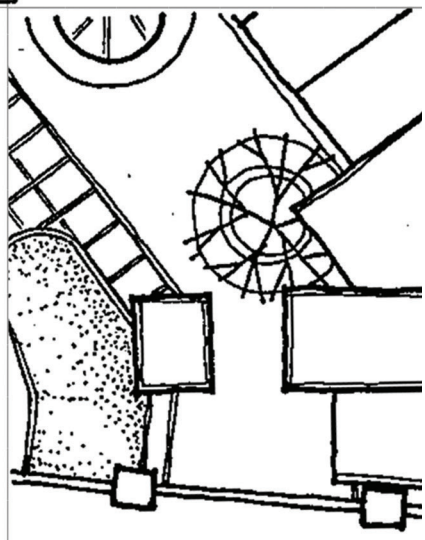

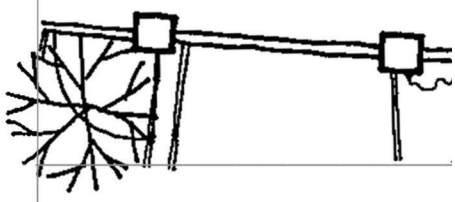

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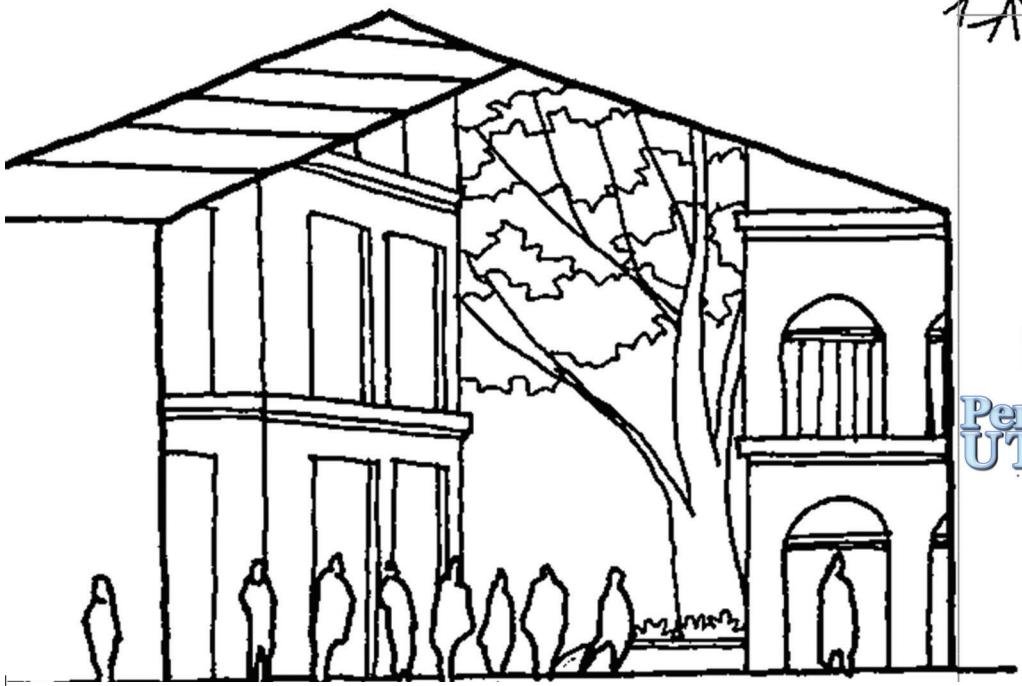

Penerbit UTHM
2023

Perpustakaan Negara Malaysia

Editor: Suriati Ahmad

ISBN: 978-967-0061-88-7

Published and printed by:
Penerbit UTHM
Universiti Tun Hussein Onn Malaysia
86400 Parit Raja,
Batu Pahat, Johor
Tel: 07-453 7051 / 7454
Fax: 07-453 6145

Website: http://penerbit.uthm.edu.my
E-mail: pt@uthm.edu.my
http://e-bookstore.uthm.edu.my

Penerbit UTHM is a member of
Majlis Penerbitan Ilmiah Malaysia
(MAPIM)

Cataloguing-in-Publication Data

Perpustakaan Negara Malaysia

A catalogue record for this book is available from the National Library of Malaysia

ISBN 978-967-0061-88-7

EDITOR

Dr Suriati Ahmad

ILLUSTRATOR

Azrul Bahaluddin (Leader)
Ismail Hafiz Salleh
LAr Khairul Adham Ibrahim
Muhammad Falihin Jasmi
LAr Azran Mansor
Marina Abdullah

LIST OF AUTHORS

CHAPTER 1: LANDSCAPE DESIGN PRINCIPLES

Dr Suriati Hj.Ahmad
Ismail Hafiz Salleh
Dr Nor Izana Mohammed Shobri
Azrul Bahaluddin

CHAPTER 2: LANDSCAPE DESIGN PROCESS

Wan Noor Anira Wan Ali Yaacob
LAr Dr Zulkefle Hj. Ayob
Siti Syamimi Omar
Dr Noraini Bahari
Prof. Madya Ts. Dr Norhafizah Abdul Rahman
Muhammad Falihin Jasmi

CHAPTER 3: LANDSCAPE CONSTRUCTION

LAr Ruwaidah Borhan
Ts. Mohd Zulhaili Teh
LAr Nur Hanim Ilias

LAr Azran Mansor
Ts. Dr Izham Abdul Ghani
LAr Khairul Adham Ibrahim
Norasikin Hassan
Aisha Shakirah Abdul Mutalib

CHAPTER 4: LANDSCAPE SCIENCES

LAr Ahmad Zamil Zakaria
LAr Dr Helmi Hamzah
IDr Dr Nadiyanti Mat Nayan

CHAPTER 5: LANDSCAPE PLANTING

Prof. Madya Ts. Dr Siti Rasidah Md Sakip
Dr Atikah Fukaihah Amir
Marina Abdullah
Dr Nur Huzeima Mohd Hussain
LAr Dr Norizan Mat Akhir

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABREVIATIONS

ASME	American Society of Mechanical Engineers
BEAM	Building Environmental Assessment Method
BQ	Bill of Quantities
BREEAM	Building Research Establishment Environmental Assessment Method
CAD/CAAD	Computer Aided Architectural Design
CPTED	Crime Prevention Through Environmental Design
GBI	Green Building Index
GIS	Geographic Information System
HKGBC	Hong Kong Green Building Council
JLN	Jabatan Landskap Negara in Bahasa Malaysia
JPBD	Jabatan Perancangan Bandar dan Desa
LEED	Leadership in Energy Efficient Design
NPP	National Physical Plan
OH	Overall Height
TD	Trunk Diameter
TH	Trunk Height
TW	Top of Wall
UHI	Urban Heat Island
2-D	Two-dimensional
3-D	Three-dimensional

Dedication

This book is dedicated to every landscape architecture student and designer who wishes to learn essential knowledge and skills related to landscape architecture. All sketches and written works are thoughtfully outlined by the academic team from the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch, Malaysia.

FOREWORD

Assalamualaikum warohmatullahi wabarokatuh,

Alhamdulillah, praises to Allah for the merciful, by whose grace and blessings have enabled this coursebook to be finally completed. *A Student's Guide to Landscape Architecture* is a coursebook written by an experienced academic from the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch, Malaysia. Through an interesting combination of illustration, manual sketches and exciting writing, the thoughtful and carefully planned content of this coursebook is anticipated to comprehend students' and designers' understanding related to the field of landscape architecture. This book can provide an overview of five central strands that emphasize landscape design principles, landscape design process, landscape construction, landscape sciences and landscape planting.

Escaping from the norm, this coursebook has been specially designed to grasp readers' interest through sketches and illustrations that expand the concept, theory, and design principles through multiple layers of landscape practice. Through this special injection, it is hoped that readers will enjoy reading this coursebook and, at the same time able to gain knowledge related to landscape architecture field. My most profound appreciation and a special thanks to the editor, all writers, and illustrators from the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch for making this effort a success.

Thank you!

Dr Atikah Fukaihah Amir
Program Coordinator
Diploma of Landscape Architecture (AP148)
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Seri Iskandar Campus

PREFACE

Assalamualaikum warohmatullahi wabarokatuh,

A Student's Guide to Landscape Architecture is an academic coursebook produced by the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch, aiming to provide additional reference material to the student while supporting the running of the current syllabus. My deepest gratitude to Allah for His guidance and blessing, where all hard work and efforts finally come to an end after more than two years of planning. The unique features added to this book are the illustration and detailed manual sketches and render drawn by the academic members of this programme. This effort depicts the seriousness of this coursebook that can be a good source of reference, guided reading material and extended exercise handout, especially for students, designers, and other potential readers who keen to understand knowledge related to landscape architecture. Five chapters were designed for this coursebook, encompassing important landscape architecture strand that focuses on landscape design principles, landscape design process, landscape construction, landscape sciences and landscape planting.

Chapter 1 explores the fundamentals of landscape design that emphasize elements and principles of art and design that aid the landscape process for designing a place. Chapter 2 discusses the landscape design process through three design domains: park and open space, community design and urban design context. Chapter 3 concentrates on landscape construction, focusing on landscape construction materials and specifications, landforms and earthworks, manual and CAD drafting, and landscape construction documentation. Notably, the exploration of landscape horticulture and landscape ecology were further discussed in Chapter 4 of this coursebook. The final chapter (Chapter 5) highlights landscape planting with consideration to parks and open spaces, landscape planting for community design, and urban and rural areas. Landscape planting in this chapter enhances landscape plants and features to achieve the three primary purposes of planting design, including functional, ecological, and aesthetical desires.

I do hope that this publication- *A Student's Guide to Landscape Architecture*- will be able to provide invaluable knowledge and thus inspire all students, designers, and other readers to deepen their understanding of landscape architecture.

Dr Suriati Ahmad
Editor
Programme of Landscape Architecture
Department of Built Environment Studies and Technology
College of Built Environment
Universiti Teknologi MARA Perak Branch
Seri Iskandar Campus

ACKNOWLEDGEMENT

All praise is for Allah, The Most Gracious, The Most Merciful, for all His guidance and blessing; this book has finally been published. We want to express a million thanks to all parties involved, especially to all the academic member of the Programme of Landscape Architecture, Universiti Teknologi MARA Perak Branch, who has patiently and consistently shown their support as writers, illustrators, and editors for this publication. Our illustrators, Azrul Bahaluddin (leader), LAr Khairul Adham Ibrahim, LAr Azran Mansor, Ismail Hafiz Salleh, Falihin Jasmi and Marina Abdullah, for their utmost creativity and patience. Thank you!

A Student's Guide to Landscape Architecture is inspired as a knowledge extension and guided reference to all students and other readers seeking to deepen their understanding of the landscape architecture field. A strong encouragement was received by our previous Program Coordinator, Dr Nadiyanti Mat Nayan, and current Program Coordinator, Dr Atikah Fukaihah Amir, whereby without their support, this publication would be impossible.

Not forgetting, the Head of the Department of Built Environment Studies and Technology, College of Built Environment, UiTM Perak Branch, Associate Professor Ts. Dr Norhafizah Abdul Rahman for her full support of this publication. Also, this acknowledgement is extended to the Rector of UiTM Perak Branch, Associate Professor Dr Nur Hisham Ibrahim and the former Rector, Professor Sr Dr Md Yusof Hamid for their continuous support in facilitating approval to access the AP148 Programme fund to conduct series of writing workshops, proofreading exercises thus financing the publication cost for this coursebook.

Once again, thank you everyone!!

INTRODUCTION

As highlighted in the earlier section, five main chapters have been developed for this first edition publication that covers important landscape architecture niche, diving into landscape design principles, landscape design process, landscape construction, landscape sciences and landscape planting. An insight overview for each chapter is discussed below.

Chapter 1: Landscape Design Principles

Landscape Design Principles provides an insightful overview of the principles of art and design and the landscape design process for the landscape architecture field. This chapter introduces the essential elements and design principles that stand as fundamental knowledge to assist the designer in composing their spaces. With the aid of sketches, basic design elements, including line, shape, form, texture, and colour, are discussed together with the rationale of each design principal application.

The landscape Process for Designing a Place is another subtopic discussed in this chapter. Stand as a fundamental knowledge that guides designers through gathering the site information; this chapter explores the process of identifying the site condition by mapping its physical, biological, and cultural domains. Analysing the site information to evaluate the value and importance of site inventory further expands the potential and constraints of the site through synthesis. The design development further paves the way through the introduction of conceptual development, preliminary design, and master plan that conclude the critical phases of a landscape design process.

Chapter 2: Landscape Design Process

Landscape architecture plays a vital role in designing and developing projects concerning the environment. Chapter 2 provides a brief overview of the definitions and examples of three main scopes in landscape design, namely, Park and Open Space, Community Design and Urban Design.

Park and Open Space overview the definition and typology of parks. The planning and design standard for parks and open spaces is introduced through the explanation of the national, regional, and local planning standards. The basic design approach for parks and open spaces is explained by understanding the basic philosophy and its principle.

Community Design in landscape architecture explores the components of community development in Malaysia. This section describes community design and its main need-

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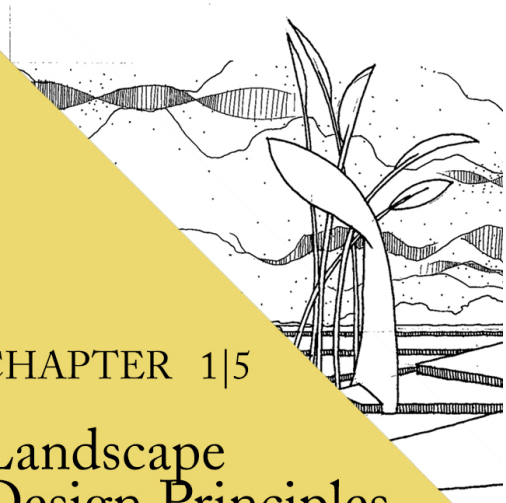
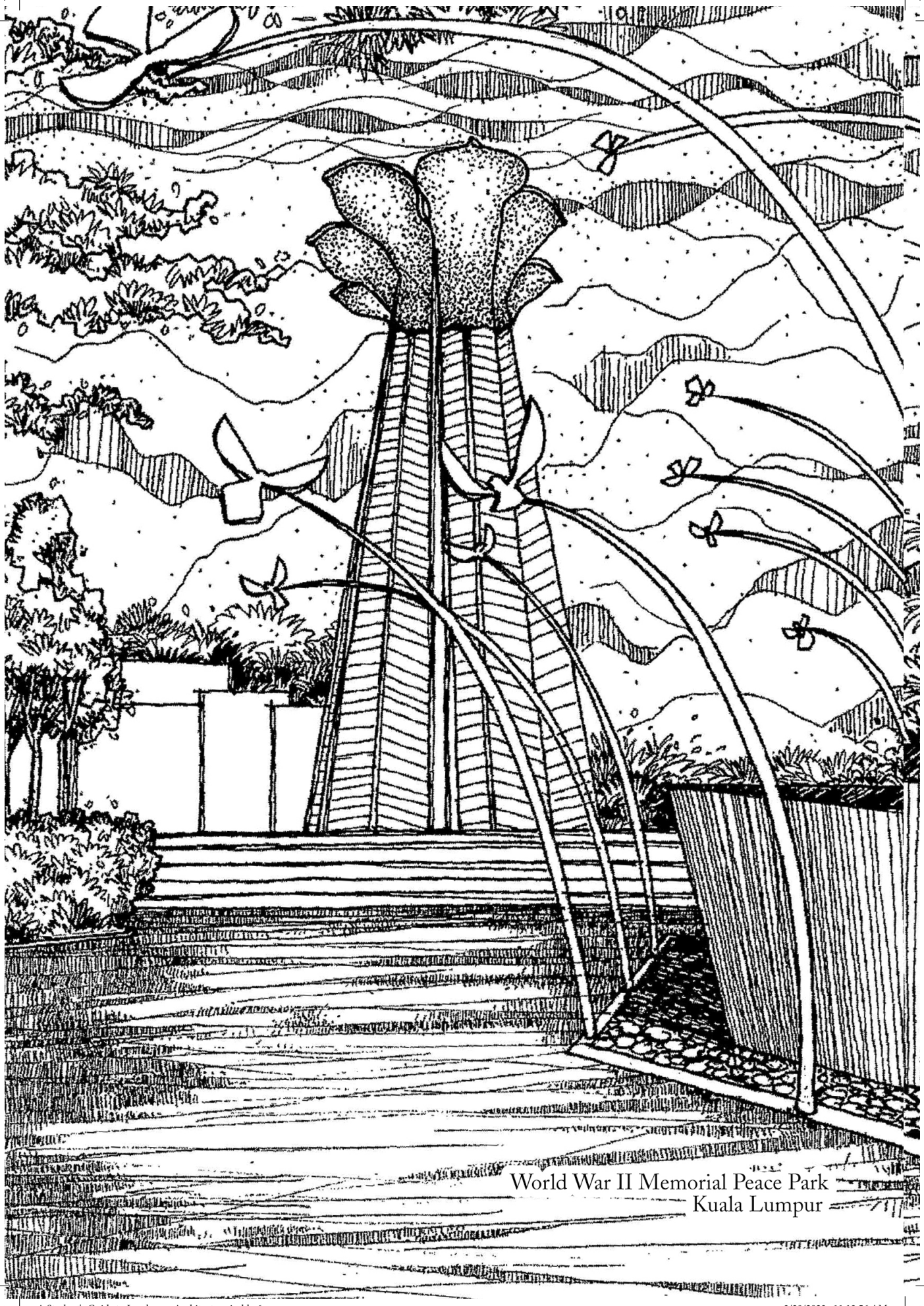


CHAPTER 1|5

Landscape Design Principles



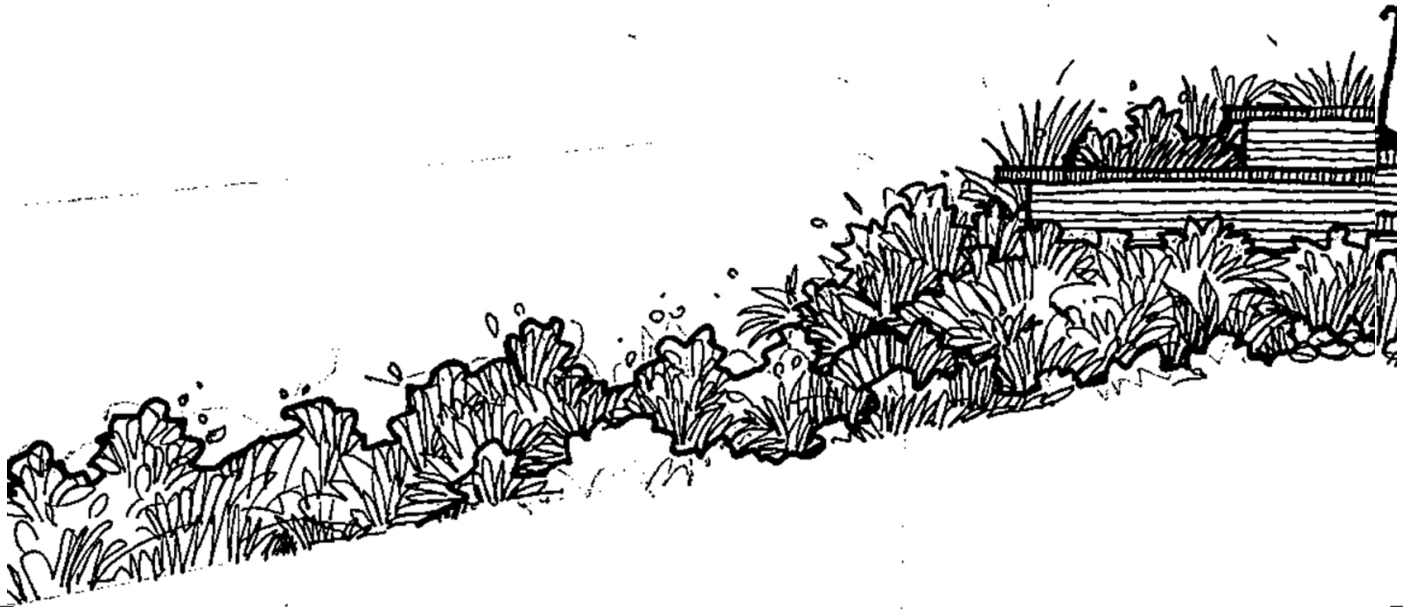
World War II Memorial Peace Park
Kuala Lumpur

1.1 Principles of Art and Design in Landscape Architecture

Suriati Ahmad & Ismail Hafiz Salleh

1.1.1 Introduction

In composing a good landscape design, the basic knowledge of elements and principles is a fundamental discipline that can guide designers in their arts of composing. Forming as an elementary that aid designers in establishing their visual perspectives on; line, shape, form, texture, colour, and their relation to space are the core factors that serve as the foundation for designing a landscape. Hence from the fundamental conception of elements of art, creative arrangement through the application of design principles can translate the designer's inspiration towards creating their desired environment. These include balance, focalisation, repetition, rhythm, scale and proportion, order, complexity/variety, simplicity, and unity. Accordingly, these principles may be interwoven or bond with one another in forming the aesthetic and functional arrangements that inspire viewers in landscape creation.



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CHAPTER 2|5

Landscape Design Process

Forest City Iskandar Johor
Johor

2.1 Park and Open Space

Wan Noor Anira Wan Ali Yaacob & Zulkefle Ayob

2.1.1 Introduction

Parks and open spaces are vital elements for a community's cultural and social development. The first open space park was developed at Central Park, in the United States by Frederick Olmsted in the nineteenth century. The Central Park was developed for 'real' park and recreation movement in the United States. The initiative of Central Park is to motivate and educate the community on the importance of urban green space. This social space is used as an important gathering and resting area that tie the community from all walks of life to this green environment. Open park spaces are significant as they provide a connection to public health by improving their general mode and attitude. The greenness of these areas is seen as the most effective at increasing happiness, defined as the presence of a positive emotional mind-set. Parks and open spaces, being restorative and playful in nature, have provided the public with engagement of activities, accessibility to outdoor environment and enjoyment of the space (see Figure 2.1.1).

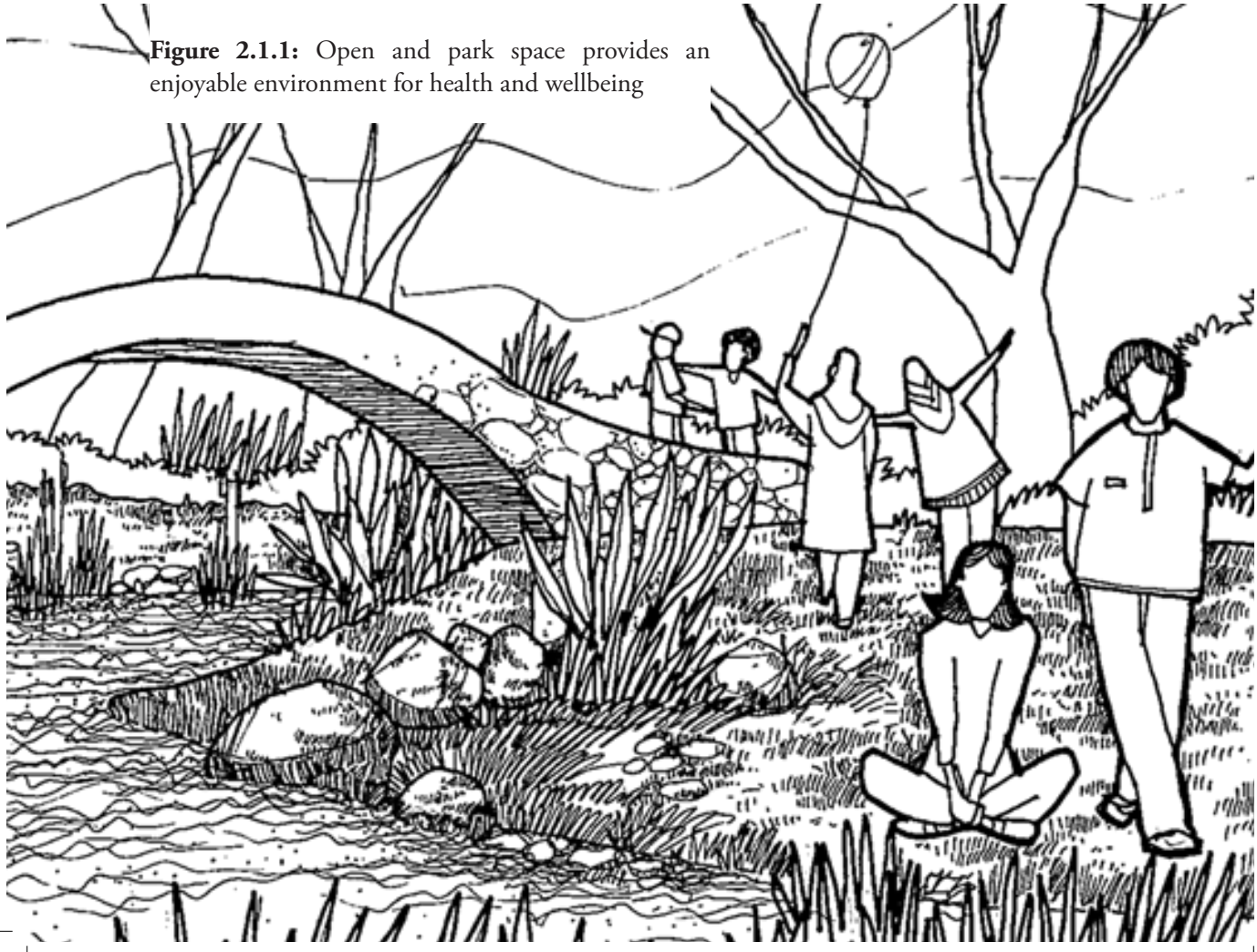

Figure 2.1.1: Open and park space provides an enjoyable environment for health and wellbeing

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CHAPTER 3|5

Landscape Construction

Damansara Foresta
Selangor

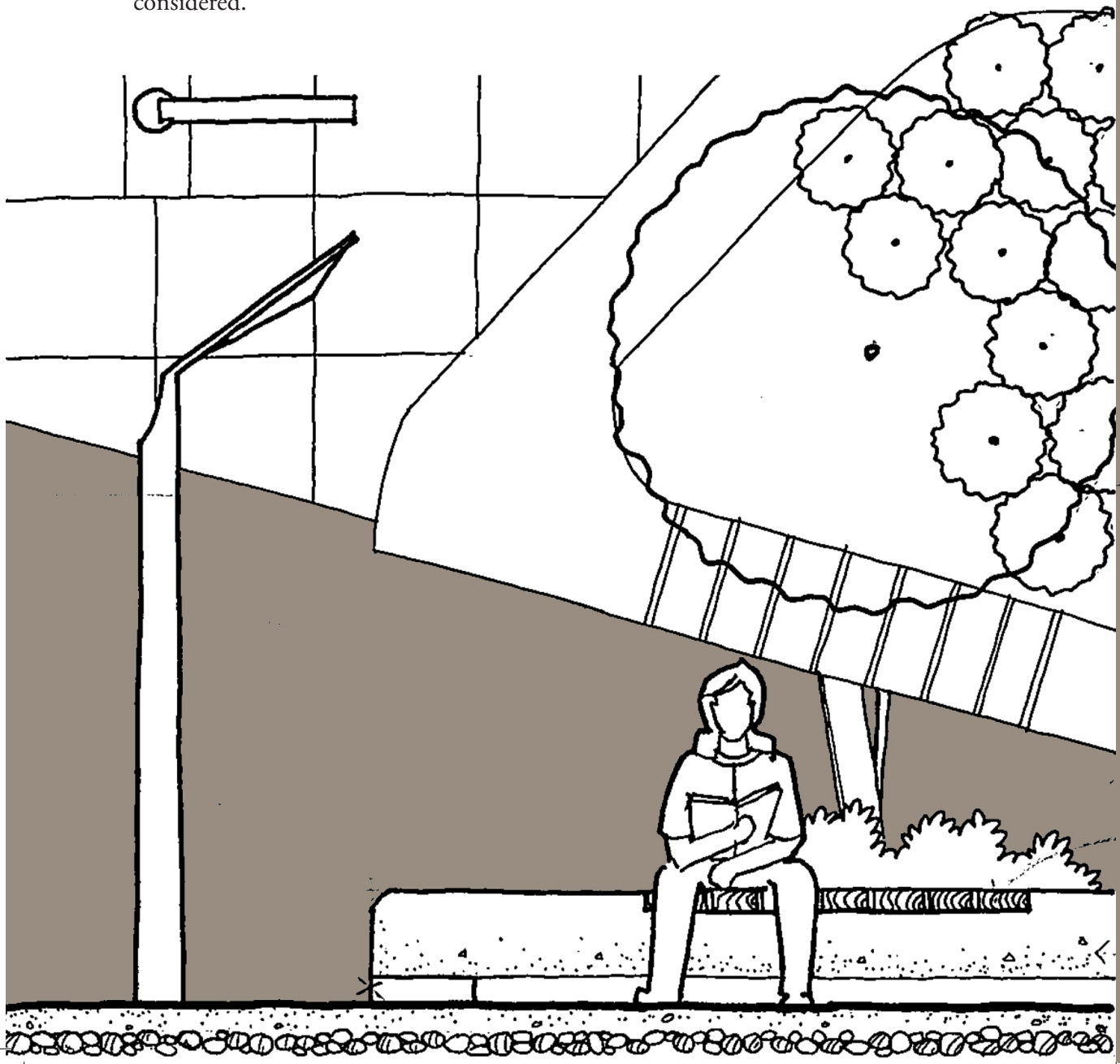
3.1 Landscape Construction Materials and Specification

Ruwaidah Borhan & Mohd. Zulhaili Teh

3.1.1 Intrroduction

Without a good construction work, the design of an idea is nothing until it is installed and implemented on the site accordingly. A good construction work will give an impact on the reality based on the design idea. Between the design idea and its conversion into constructed reality, lie the technical details that can ensure the quality of the design preserved in the complete object.

The fundamental of a successful construction practice is, therefore, a respect for the materials' properties and the suitable construction method for the materials and its function. Given examples in the context of the 'street landscape' as a site, the aspects of materials chosen, construction methods, and good construction drawings must be considered.



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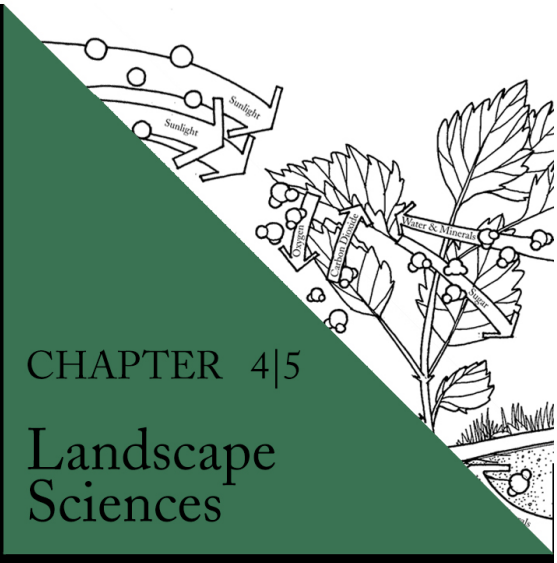
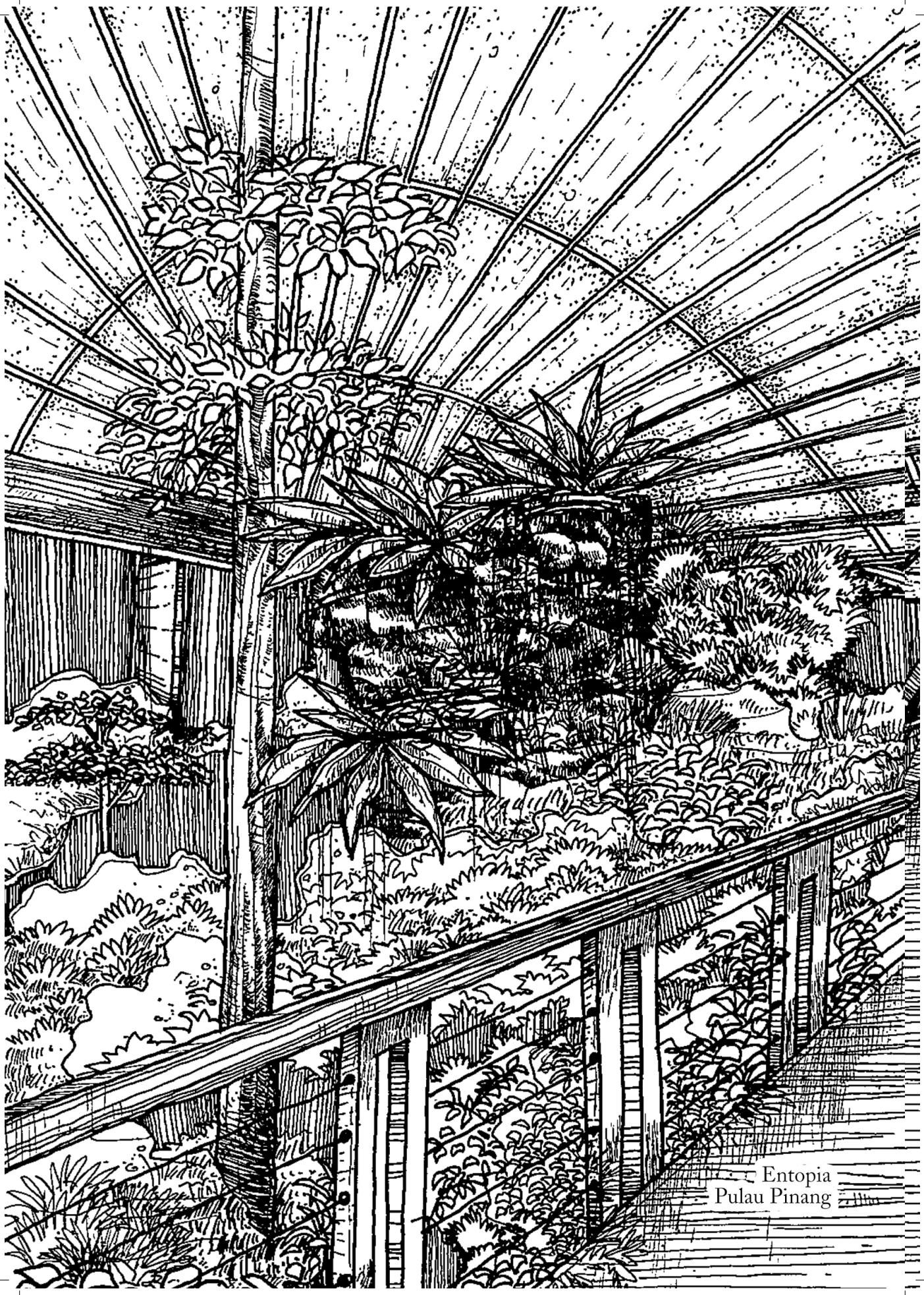


CHAPTER 4|5

Landscape Sciences


Entopia
Pulau Pinang

4.1 Landscape Horticulture in Everday Life

Norasikin Hassan &
Aisha Shakirah Abdul Mutalib

4.1.1 Fundamental of Horticulture Practice

Landscape Horticulture is defined as the science and art of growing plants concerned with the handles and utilises of ornamental plants for the development and maintenance of public and private landscaping spaces, mainly for aesthetic purposes. What has been learned through this subject can be applied to our daily lives.

Horticulture is the science or art of growing or cultivating ornamental plants, vegetables, flowers, and even fruits. It is also intended to beautify the area using the knowledge in cultivation.

Landscape horticulture deals with the art, science, technology, and business of plant cultivation, soil preparation, pruning, and irrigation system to maintain plant vigour as well as utilise appropriate integrated pest management techniques. The discipline of landscape horticulture contributes to the economy and beautifies and enhances the environment.

Landscape Horticulture comprises a variety of speciality areas such as plant identification, landscape design, plant cultivation, and nursery and garden-centre management. Knowledge of horticulture is fundamental to becoming a good landscape architect. The work is a bit tedious, but the result is worth it once everything is prepared. Horticulture practice is the basic science of agriculture. Learning topics include plant breeding and plant maintenance.

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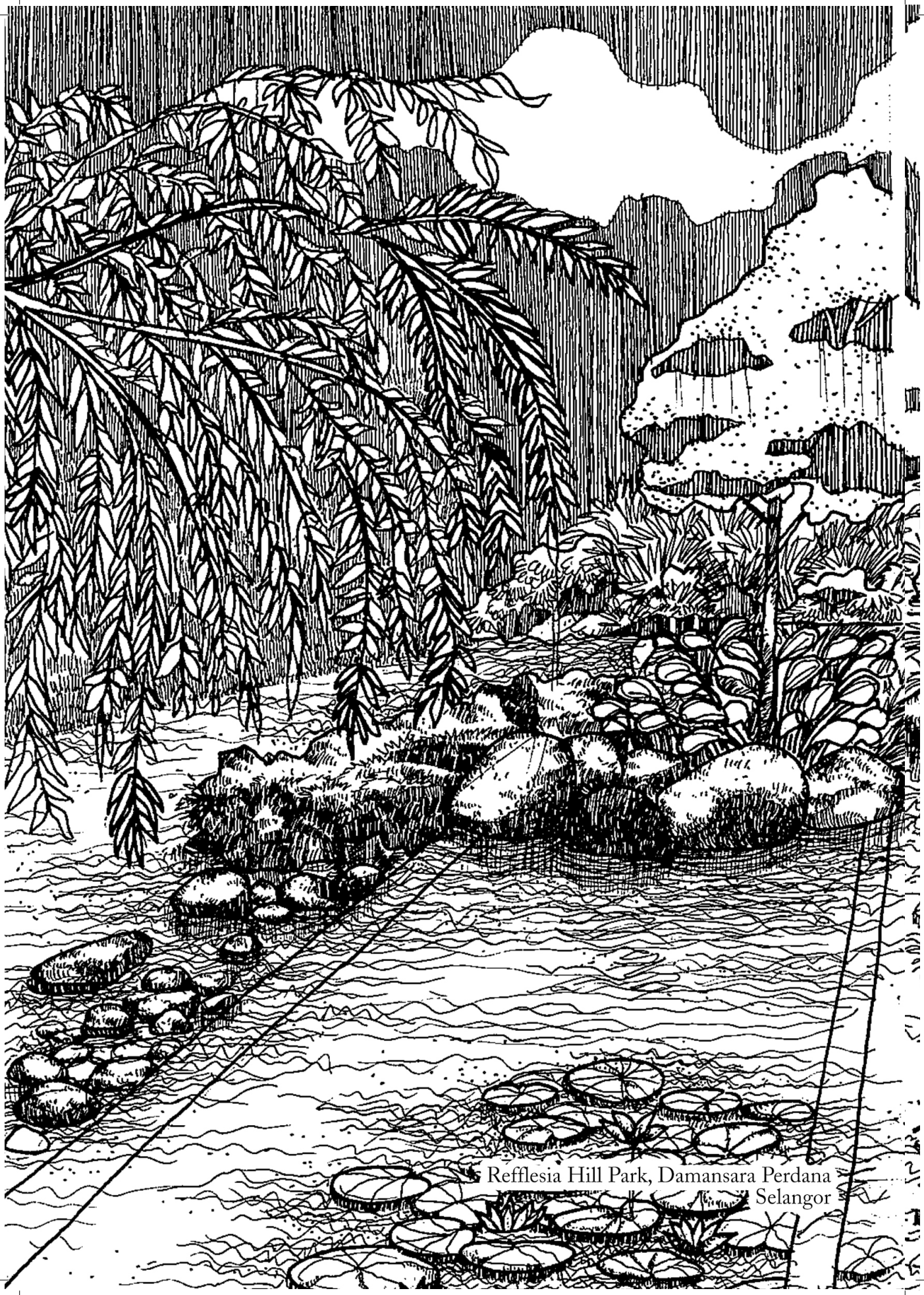
CHAPTER 5|5

Landscape Planting



Refflesia Hill Park, Damansara Perdana
Selangor

5.1 Landscape Planting in Parks and Open Spaces

Siti Rasidah Md Sakip

5.1.1 Introduction to Landscape Planting in Parks and Open Spaces

The landscape is a combination of plants that involves various plant sizes, textures and plant categories, and hardscape elements to create a beautiful and cheerful area. Garden and landscape design are used to enhance and complement the creation of buildings, public spaces, and recreational parks. It shows the decorative arts and is associated with architecture, urban planning, and horticulture. This indicates that the continuity between the external and internal environment is essential to create a sense of dynamics for an area. Of course, there are relationships between people and nature to promote better land use and quality of life.

5.1.2 Understanding Parks and Open Spaces

Parks and open spaces are essential components in a city in any part of the world. It has an element of the relationship puller that draws social interactions. In the days of classical Greece, the park was built to be dedicated to the gods and functioned as a sacred temple for the area. Thus, each area has a garden. In the prehistoric era, the gardens began to be built in areas of human settlement, commercial, religious, and regional government administration. A park is developed to create activities, such as markets and military exhibition. The functions of a garden continue to grow and gardens become more important nowadays as they provide open spaces suitable for leisure and recreational activities. As shown in Figure 5.1.1, water features in an urban area give a sense of calmness for users in the bustle of the city. Parks and open spaces vary according to their size, shape, and function. The strategic approach is required to assess community needs and to plan a series of public areas. That is why, a space is usually categorised into a hierarchy of neighbourhoods, districts, and regions, and can be used for passive or active recreations (Thompson, 2008).

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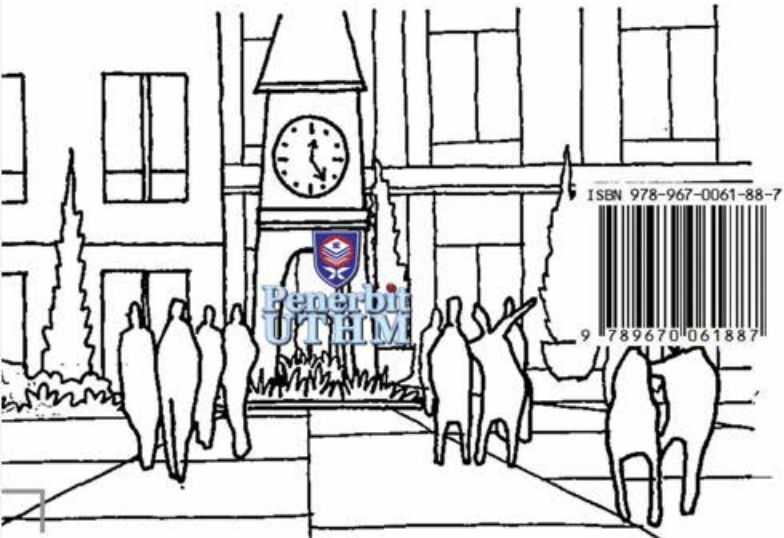

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ISBN 978-967-0061-88-7

9 789670 061887

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