VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN
IN PAYA INDAH WETLANDS, MALAYSIA

MOHD KHER BIN HUSSEIN.

FRSB 2005 1
VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA

MOHD KHER BIN HUSSEIN

MASTER OF SCIENCE
UNIVERSITI PUTRA MALAYSIA

2005
VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA

By

MOHD KHER BIN HUSSEIN

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfillment of the Requirements for the Degree of Master Science

November 2005
DEDICATION

Dedicate to my beloved family: parents, three daughters named Nurliyana Azlin, Nurathirah Amiza, Nursyahirah Aina and son named Muhammad Najmi Aiman.

Specially dedicated to my wife, Norhayati Binti Bakeri, for her unfailing patience and encouragement.
ABSTRACT

Abstract of this thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA

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Chairman: Associate Professor Noorizan Mohamed, PhD
Faculty: Design And Architecture

Visual quality of landscape is becoming an important element in eco-friendly design for nature-based tourism areas in Malaysia. However, the majority of the man-made landscape elements of nature-based tourism areas such as buildings do not harmonize with the natural environment and are considered as not eco-friendly in design. A study was conducted in Paya Indah Wetlands aimed at assessing visual rating and perception of the man-made landscape using expert judgment technique. This study used selected photographs of the man-made landscape elements in Paya Indah Wetlands representing different types of buildings, park furniture, parking features, pedestrian facilities, drainage and signage. The scoring scheme for visual quality and landscape features was valued using the six basic design elements, namely, form, line, colour, texture, shape and space. Data were gathered from 100 experts using a structured questionnaire with surrogated photos, distributed equally among landscape architects and architects. The
results revealed that the visual quality of Paya Indah Wetlands were categorized as moderate in quality, and some of the elements were considered as of poor quality. The results of regression analysis revealed that the visual rating was affected significantly by the respondents’ age, sector of employment and professional memberships in certified bodies. The Mann-Whitney and Kruskal-Wallis test revealed that the differences in visual rating differed with regards to the education background, sector of employment and professional membership. From the results, the basic design elements (form, line, colour, texture, shape and space) should be taken into consideration at the early stage in the design process to lend a higher visual quality to the wetland landscape of Paya Indah Wetlands.
ABSTRAK

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains

VISUAL ASSESSMENT OF THE QUALITY OF LANDSCAPE DESIGN IN PAYA INDAH WETLANDS, MALAYSIA

Oleh

MOHD KHER BIN HUSSEIN

November 2005

Pengerusi: Profesor Madya Noorizan Mohamed, PhD
Fakulti: Reka Bentuk Dan Senibina

Acknowledgements

I wish to express my gratitude and sincere thanks to my supervisor, Associate Professor Dr. Noorizan Bte Mohamed, for her persistent guidance, assistance, support and understanding throughout the study period.

Gratitude and thanks are also extended to all members of the graduate committee, Associate Professor Dr. Awang Noor Bin Abd. Ghani and Dr. Kamariah Bte Dola for their constructive comments, advice and guidance.

Special thanks are due to Cik Haslayati Bte Hashim, Educational Officer in Paya Indah Wetlands, for her time and sincere in giving me information and cooperation throughout the field study period. Thanks are also extended to her for giving me permission to use the study area and providing data and other useful information. My gratitude is also due to the staff of the Faculty of Design and Architecture for their contribution in this research.

Finally, I wish to express special thanks to my family and others for their support and encouragement, especially to my beloved wife for her encouragement, prayer, support and understanding for making this study possible.
APPROVAL

I certify that an Examination Committee met on 9th September 2005 to conduct the final examination of Mohd Kher Bin Hussein on his Master of Science thesis entitled “Visual Assessment of the Quality of Landscape Design in Paya Indah Wetlands, Malaysia” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

Elias @ Ilias Bin Salleh, Ph.D.
Professor
Faculty of Design and Architecture
Universiti Putra Malaysia
(Chairmain)

Azizi Bin Hj. Muda, Ph.D.
Associate Professor
Faculty of Environmental Studies
Universiti Putra Malaysia
(Internal Examiner)

Ahmad Bin Shuib, Ph.D.
Associate Professor
Faculty of Economics and Management
Universiti Putra Malaysia
(Internal Examiner)

Noor Azlin Bte Yahya
Lecturer
Urban Forestry and Recreational Program
Forest Research Institute Malaysia
(External Examiner)

ZAKARIAH ABDUL RASHID, Ph.D.
Professor/Deputy Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 27 DEC 2005
APPROVAL

This thesis submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfillment of the requirement for the degree of Master Science. The members of the Supervisory Committee are as follows:

NOORIZAN MOHAMED, Ph.D.
Associate Professor
Faculty of Design And Architecture
Universiti Putra Malaysia
(Chairman)

AWANG NOOR ABD. GHANI, Ph.D.
Associate Professor
Faculty of Forestry
Universiti Putra Malaysia
(Member)

KAMARIAH DOLA, Ph.D.
Lecturer
Faculty of Design And Architecture
Universiti Putra Malaysia
(Member)

AINI IDERIS, Ph.D.
Professor/Dean
School of Graduate Studies
Universiti Putra Malaysia

Date: 12 JAN 2006
DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

MOHD KHER BIN HUSSEIN

Date: 26/2/2005
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GLOSSARY OF TERMS

AGE = Age
BLM = Bureau of Land Management
BT = Building Types
DR = Drainage
EDU = Education
ELITE = Expressway Lingkaran Tengah
EXP = Experience
GEN = Gender
ILAM = Institute Landscape Architect Association of Malaysia
KLIA = Kuala Lumpur International Airport
LAM = Lembaga Arkitek Malaysia
LDP = Lebuhraya Damansara-Puchong
MNS = Malaysian Nature Society
OLS = Ordinary Least Square
PAM = Institute Architect Malaysia
PF = Park Furniture
PFe = Parking Features
PhD = Philosophy of Doctorate
PROF = Professional memberships
SEC = Sector of work
SG = Signage
SPSS = Statistical Programs for Social Science
TV3 = Sistem Television Malaysia Berhad
VR = Visual rating
VRM = Visual Resource Management
CHAPTER 1

INTRODUCTION

1.0 General Background

Malaysia is a very fast-developing country. Although there are improvements in the area of technology, Malaysia faces degradation in term of quality of visual landscape quality, especially in wetland areas. According to the Asian Wetland Bureau’s report, a total of 1,076,670 hectares of wetlands in Peninsular Malaysia in 1966 has been reduced to 977,004 hectares in 1974 because of development. Overall wetland area in Peninsular Malaysia is peat swamp, where the original coverage is approximately one million hectares. However, this area has been reduced to 559,862 hectares in 1982. In 1991, the total extent of peat swamp under Permanent Forest Estate is 210,395 hectares (Shamsudin, Ismail & Samsudin, 2000). This indirectly has resulted in the degradation of the scenic beauty of the wetlands that are rich with aesthetic values, as well as degradation of visual quality of our environment.

The Ministry of Science, Technology and the Environment, Malaysia (2003), defines wetlands (similar to the Ramsar Convention’s definition) as areas of marsh, fern, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salty, including areas of marine water, the depth of which at low tide does not exceed six meters. This definition
encompasses coastal and shallow marine areas (including coral reefs), as well as river courses and temporary lakes or depressions in semi-arid zones.

The Ramsar Convention (1972) provides that they “may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetlands”. So, under Ramsar Convention, wetlands are everywhere, and it is probably simplest to think of the Convention as having an interest in the management of all water ecosystems (whether permanent or temporary) that are not deep marine waters.

Wetlands provide high value of natural landscape resources and are aesthetic in terms of cultural values, human activities, wildlife, plants, religion and history. They also provide opportunities for ecotourism and recreational activities such as bird watching, fishing, kayaking and boating.

One of the wetlands that has played an important role in Malaysia’s environment is Paya Indah Wetlands, Dengkil, Selangor. The area is a green lung of the Multimedia Super Corridor. It presents a mix of ecosystems for a diverse range of flora and fauna and is a habitat for bird population both local and migratory (Zulkafli and Zahari, 2005). This area has a very unique scenic value and offers good recreational activities such as nature study, bird watching, painting and photography. This wetland encompasses a myriad of landscapes, including large open lakes, peat swamp forests, and abandoned mining land. This area has remarkable natural resources and a splendid natural setting. It provides aesthetic values to the area, as well as a