



UNIVERSITI PUTRA MALAYSIA

**COMPARING SOFT-SCAPE QUALITY STANDARD BETWEEN
MALAYSIA AND DEVELOPED COUNTRIES**

**ROZIYA BINTI IBRAHIM
FRSB 2009 5**

**COMPARING SOFT-SCAPE QUALITY STANDARD BETWEEN
MALAYSIA AND DEVELOPED COUNTRIES**

By

ROZIYA BINTI IBRAHIM

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

October 2009



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

**COMPARING SOFT-SCAPE QUALITY STANDARD BETWEEN
MALAYSIA AND DEVELOPED COUNTRIES**

By

ROZIYA BINTI IBRAHIM

October 2009

Chair : Nordin Abdul Rahman, PhD

Faculty: Design and Architecture

The Malaysia government's vision towards a "Garden Nation" in year 2005, followed by 'The Most Beautiful Garden Nation' by the year 2020 has boosted rapidly the landscape development throughout the country. However, as reported by the Malaysia Construction Industry Development Board (CIDB, 2000), these massive and hasty developments have led to a devastating compromise in quality. This issue is critical in landscape development, as currently, there is no specific quality standard to monitor and control the quality of soft-scape materials and works. Landscape projects are it is a quite unique form of construction that blend the inert materials with the living plants, or commonly known as the hard-scape and the soft-scape, within the environment. Based on the building industry practice, the quality of the hard-scape is specific and codified. For soft-scape, however, there is a



wide range of subjectivity with regard to the quality of the soft-scape materials and works. Therefore, there is a need to evaluate the quality standard of soft-scape as it is an important document in specifying the quality aspect of the landscape development in Malaysia.

This research used a mixed-method approach. It adopted a constant comparative method to explore the similarities and differences between the quality standard of soft-scape practices in Malaysia and those in the USA and UK. Tender documents and the soft-scape specifications together with data from the interviews with local professional landscape personnel were the two main important data sources to identified the issues and problems related to the quality standard of soft-scape in this country. It also verifies the strength and weaknesses of the present soft-scape practices in Malaysia. Site observations at the nurseries and at the landscape construction site on the other hand helped to validate the written documents. These findings identified the insufficient standard to monitor and control the quality of soft-scape materials and works in this country. At the end of the research, recommendations were provided for improving the quality standard of soft-scape materials and works that represent the overall landscape development towards sustainability in Malaysia.

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

**PERBANDINGAN PIAWAIAN KUALITI LANDSKAP LEMBUT DI
ANTARA MALAYSIA DAN NEGARA MEMBANGUN**

Oleh

ROZIYA BINTI IBRAHIM

Oktober 2009

Pengerusi: Nordin Abdul Rahman, PhD

Faculty: Rekabentuk dan Senibina

Visi kerajaan Malaysia ke arah mencapai “Negara Taman” pada tahun 2005 di ikuti “Negara Taman Terindah” menjelang tahun 2020 telah menggalakkan pembangunan landskap di seluruh Negara. Walaubagaimanapun, Construction Industry Development Board (CIDB, 2000) melaporkan bahawa pembangunan yang di alami dalam tempoh yang singkat telah menyebabkan kurang penekanan diberikan terhadap aspek kualiti. Isu ini amat kritikal di dalam pembangunan landskap, kerana sehingga kini tiada piawaian kualiti yang spesifik untuk memantau dan mengawal quality bahan dan landskap lembut. Pembinaan projek landskap adalah unik kerana ianya melibatkan penyatuan bahan kejur dengan tumbuh-tumbuhan, ataupun lebih dikenali sebagai landskap kejur dan landskap lembut di dalam ruang persekitaran. Berbeza dengan ke arah pembinaan yang mana kualiti bahan binaan yang digunakan



lebih spesifik dan berkod, kualiti bahan dan kerja landskap lembut adalah subjektif. Berdasarkan pengalaman penyelidik sebagai arkitek landskap, kualiti bahan dan kerja-kerja landskap di Malaysia adalah tidak konsisten. Oleh yang demikian, adalah perlu untuk memperbaiki piawaian kualiti bagi landskap lembut kerana ia merupakan dokumen penting di dalam menekankan aspek kualiti pembangunan landskap di Malaysia.

Kajian ini menggunakan pendekatan “mixed-method”. Kaedah perbandingan “constant comparative” digunakan bagi mencari persamaan dan perbezaan amalan landskap lembut di antara Malaysia dengan negara membangun khususnya USA dan UK. Dokumen tender dan spesifikasi landskap lembut serta hasil temuramah dengan pakar landskap tempatan merupakan dua sumber data utama yang penting dalam mengenalpasti isu dan masalah berkaitan piawaian kualiti landskap lembut. Ia juga menjelaskan kelebihan dan kekurangan di dalam amalan landskap lembut di Malaysia ketika ini. Pemerhatian di tapak semaian dan tapak pembinaan pula membantu mengukuhkan lagi hasil kajian dokumen. Kesemua analisis di atas membantu mengenalpasti kekurangan piawaian kualiti bagi mengawal kualiti bahan dan kerja landskap lembut di negara ini. Di akhir kajian, cadangan diberikan untuk memperbaiki kualiti bahan dan kerja landskap yang dapat digunakan di dalam pembangunan landskap ke arah pembangunan mapan di Malaysia.

ACKNOWLEDGEMENTS

I would like to express my gratitude to many people who made this thesis possible. First of all my very special thanks to both my supervisors, Associate Professor Dr. Nordin Abdul Rahman and Associate Professor Dr. Osman Mohd Tahir for their enthusiasm, inspiration and persistent guidance and constructive comments in helping me throughout the study.

My Special thanks also goes to Haji Mohd Taib b. Haji Zain, the Deputy Director General (Development), JLN, and the staff in the Landscape Department, DBKL as well as the Landscape and Parks Department, Putrajaya Corporation for their cooperation in providing the specification documents and other related information for the study. I would also like to thank all the respondents involved in the interviews for their cooperation and contributions to this research.

Finally yet importantly, my deepest gratitude goes to my family for their love and support, especially to my beloved husband for his constant encouragement and understanding. It is to them that I dedicate this thesis.



I certify that an examination Committee has met on 7 October 2009 to conduct the final examination of Roziya binti Ibrahim on her Master of Science thesis entitled “Comparing the Quality Standard of Soft-scape between Malaysia and Developed Countries” in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the student be awarded the degree of Master Science.

Member of the Examination Committee were as follows:

Mustafa Kamal Mohd Shariff, PhD

Professor
Faculty of Design and Architecture
Universiti Putra Malaysia
(Chairman)

Suhardi Maulan, PhD

Faculty of Design and Architecture
Universiti Putra Malaysia
(Internal Examiner)

Dr. Azizah Salim Syed Salim, PhD

Associate Professor
Faculty of Design and Architecture
Universiti Putra Malaysia
(Internal Examiner)

Julaihi Wahid, PhD

Associate Professor
School of Housing, Building and Planning
Universiti Sains Malaysia
(External Examiner)

BUJANG KIM HUAT, PhD

Professor and Deputy Dean
School of Graduate Studies
University Putra Malaysia

Date:



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

Nordin Abdul Rahman, PhD

Associate Professor
Faculty of Design and Architecture
Universiti Putra Malaysia
(Chairman)

Osman Mohd Tahir, PhD

Associate Professor
Faculty of Design and Architecture
Universiti Putra Malaysia
(Member)

HASANAH MOHD GHAZALI, PhD

Professor and Dean
School of Graduate Studies
University Putra Malaysia

Date: 11 February 2010



DECLARATION

I hereby declare that the thesis is my original work except for quotations and citations that have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degrees at Universiti Putra Malaysia or at any other institutions.

ROZIYA BINTI IBRAHIM

Date: 11 February 2010



TABLE OF CONTENTS

	Page
ABSTRACT	ii
ABSTRAK	iv
ACKNOWLEDGEMENTS	vi
APPROVAL	viii
DECLARATION	ix
LIST OF TABLES	xiv
LIST OF FIGURES	xvi
LIST OF ABBREVIATIONS	xviii
CHAPTER	
1 INTRODUCTION	
1.1 An Overview to Landscape development in Malaysia	1
1.2 The Evolution of Soft-scape Specification in Malaysia	4
1.3 Problem Statement	8
1.4 Research Aim and Objectives	11
1.5 The Significance of the Research	12
1.6 The Scope of the Research	13
1.7 The Thesis Structure	14
2 LITERATURE REVIEW	
2.1 Introduction	17
2.2 What is Quality Standard?	17
2.2.1 Definition of Quality	18
2.2.2 Definition of Standard	21
2.2.3 Definition of Quality Standard in Construction	24
2.3 Specification in Relation to Quality Standard	25
2.3.1 Definition of Specification	25
2.3.2 The Specification Characteristic and Format	27
2.4 The Important Role and Function of Quality Standard	28
2.4.1 A Communication Tool Among Interested Parties	28
2.4.2 An Assurance of production Efficiency and Product Compatibility	29
2.4.3 A Competition Enhancer	30
2.4.4 A Protection of interest of Consumer/Public	30



2.5	Quality Standards of Soft-scape in Landscape Construction	30
2.5.1	Specifying Quality Standard in the Landscape Construction	32
2.6	The Review of Related Studies on Quality Standard in Construction	34
2.7	Conclusion	39

3 METHODOLOGY

3.1	Introduction	41
3.2	Research Development Strategy	42
3.2.1	Stage 1: Research Framework and Background Study	42
3.2.2	Stage 2: Conceptual Framework	43
3.2.3	Stage 3: Result and Analysis	44
3.2.4	Stage 4: Final Discussion, Conclusion and Recommendation	44
3.3	Research Methods and Techniques	46
3.3.1	Review of Document Sources	47
3.3.2	Interview	49
3.3.3	Site Visit and Site Observation	50
3.4	Analysis of Data	50
3.4.1	Document Sources Analysis	52
3.4.2	Interview Analysis	52
3.4.3	Site Observation Analysis	53
3.5	Conclusion	53

4 IN SEARCH FOR THE QUALITY STANDARD OF SOFT-SCAPE: A COMPARISON OF SOFT-SCAPE PRACTICES BETWEEN THE UNITED STATES OF AMERICA (USA), UNITED KINGDOM (UK) AND MALAYSIA

4.1	Introduction	54
4.2	Landscape Construction Standard and Practice in the USA	55
4.2.1	The Responsible Bodies for Soft-scape Practice in the USA	55
4.2.2	The Standard Making Process in the USA	62
4.2.3	Quality Standard of Soft-scape in the USA	64
4.3	Landscape Construction Standard and Practice in the UK	64
4.3.1	The Responsible Bodies for Soft-scape Practices in the UK	65
4.3.2	The Standard Making Process in the UK	70
4.3.3	Quality Standard of Soft-scape in the UK	72



4.4	Landscape Construction Standard and Practice in Malaysia	72
4.4.1	The Responsible Bodies for Soft-scape Practice in Malaysia	73
4.4.2	The Standard Making Process in Malaysia	80
4.5	Conclusion	82
5	THE QUALITY STANDARD OF SOFT-SCAPE MATERIALS AND WORKS IN MALAYSIA: RESULTS AND ANALYSIS	
5.1	Introduction	84
5.2	Results of Document Sources Analysis	85
5.2.1	Issues and Problems in Relation to Quality Standard of Soft-scape	85
5.2.2	A Comparison of Landscape Construction Standard and Practices between the USA, UK and Malaysia	92
5.2.3	A Comparison of Soft-scape Specification between the USA, UK and Malaysia	97
5.2.4	A Comparison of Standard Making Process between the USA, UK and Malaysia	101
5.3	Results of the Interview Analysis	105
5.3.1	Respondents' Background	107
5.3.2	The Quality Standard of Soft-scape in Malaysia	111
5.3.3	The Soft-scape Specification Development in Malaysia	125
5.3.4	Quality Standard of Soft-scape Materials and Works	130
5.3.5	Quality Assurance in the Soft-scape Specification	138
5.4	Results of the Observation	140
5.4.1	Background of the Selected Site	141
5.4.2	Issues and Problems in Relation to Quality Standard of Soft-scape at the Nursery Stage	141
5.4.3	Issues and Problems in Relation to Quality Standard of Soft-scape at the Construction Stage	144
5.5	Conclusion	150
6	DISCUSSIONS AND RECOMMENDATIONS FOR IMPROVING THE QUALITY STANDARD OF SOFT-SCAPE IN MALAYSIA	
6.1	Introduction	153
6.2	The Issues and Problems in Relation to the Quality Standard of Soft-scape in Malaysia	153
6.3	The Lessons Learned From the Experience of the USA and UK	156
6.4	The Need to Improve the Quality Standard of Soft-scape in Malaysia	160
6.5	Recommendations for Improving the Quality Standard	

	of Soft-scape in Malaysia	163
6.5.1	Short-term recommendation: Improvement in the Soft-scape Specification	163
6.5.2	Long- Term Recommendation: Development of a Soft-scape Standard	165
6.5.3	Continuous Support from Related Stakeholders	168
6.6	Conclusion	171

7 SUMMARY, CONCLUSION AND RECOMMENDATIONS FOR FUTURE RESEARCH

7.1	Introduction	173
7.2	The Summary of the Study	173
7.3	The Issues and Problems in Relation to the Quality Standard of Soft-scape in Malaysia	174
7.4	Learning from the Experience of the USA and UK	176
7.5	Recommendations for Improving the Quality Standard of Soft-scape in Malaysia	177
7.6	Recommendations for Future Research	178
7.7	Contribution and Final Remarks	179



LIST OF TABLES

Table	Page
5.1 Landscape Construction Standard: A Comparison Between USA, UK and Malaysia	94
5.2 The Soft-scape Specification Content: A Comparison Between USA, UK and Malaysia	98
5.3 Standard Development Structure: A Comparison Between USA, UK and Malaysia	102
5.4 Standard Development Procedure: A Comparison Between USA, UK and Malaysia	104
5.5 Respondent Grouping According to Type of Organization	108
5.6 Respondents' Academic Qualifications	109
5.7 Respondents' Experience in Landscape Development	110
5.8 Respondents' Professional Membership	111
5.9 Countries Visited by Respondents'	112
5.10 Respondents' Judgement on the Quality Standard of Soft-Scape Material Between Other Countries and Malaysia	113
5.11 Respondents' Perception on Quality Standard of Soft-scape Work between Other Countries and Malaysia.	113
5.12 Respondents' Opinion on the Need for Improvement in Soft-scape Material and Work in Malaysia	125
5.13 Respondents' Involvement in the Soft-scape Specification Development	126
5.14 The Soft-scape Specification Development Background	127
5.15 Respondents' Opinion on the Sufficiency of the Current Soft-scape Specification	129
5.16 Respondents' Awareness on the Quality Standard of Soft-scape	131



5.17	Respondents' Opinion on the Improvement of Quality Standard of Soft-scape	132
5.18	Proposed Committee Members for the Development of Soft-scape Standard as Selected by the Respondents'	135
5.19	Respondent's Opinion on Quality Standard for Soft-scape	138
6.1	Summary of Comparative Analysis of Issues and Problems Related to the Quality Standard of Soft-scape between the Documents Analysis, Interviews and observations	154
6.2	Summary of Comparison of Landscape Construction Standard Practices between the USA, UK and Malaysia	157



LIST OF FIGURES

Figure	Page
1.1 The Front Cover of national landscape Guideline 2 nd Edition	8
1.2 The Thesis Structure	16
2.1 Concepts Related to Quality	19
3.1 The Research Development Strategies	45
4.1 Responsible Bodies for Soft-scape Practice in the USA	56
4.2 MasterFormat™ 2004 Edition Numbers & Titles	58
4.3 Standard Making Process in the USA	63
4.4 Responsible Bodies for Soft-scape Practice in UK	65
4.5 Standard Making Process in the UK	71
4.6 Responsible Bodies for Soft-scape Practice in Malaysia	74
4.7 Standard Making Process in Malaysia	81
5.1 Plant Materials in the Nursery	142
5.2 Plant Materials Handling in the Nursery	143
5.3 The Site Clearing Activity	144
5.4 The Existing Soil Mixed with Construction Debris	145
5.5 The Temporary Storage for Soft-scape Materials	145
5.6 Planting Work	146
5.7 Improper Staking	147
5.8 Poor Turfing Work	148
5.9 Tree Failure	148



5.10	Poor Site Cleanliness	150
6.1	Short-term Recommendation: Improvement of the Soft-scape Specification	164
6.2	Long-Term recommendation: Development of a Soft-scape Standard	166
7.1	Summary of the Issues and Problems Related to the Quality Standard of Soft-scape in Malaysia	175
7.2	Summary of Recommendations for Improving the Quality Standard of Soft-scape in Malaysia	178



LIST OF ABBREVIATIONS

AESC	American Engineering Standards Committee
AIA	American Institute of Architects
ANLA	American Nursery and Landscape Association
ANS	American national Standard
ANSI	American National Standard Institute
ASA	American Standard Association
ASC	ANCI-accredited Standards Committee
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
BALI	British Association of Landscape Industries
BESA	British Engineering Standards Association
BS	British Standard
BSI	British Standard Institute
BSR	Board of Standard Review
CIDB	Construction Industry Development Board
CSC	Construction Specifications Canada
CSI	Construction Specification Institute
DBKL	Kuala Lumpur City Hall
DLN	National Landscape Policy
ESC	Engineering Standards Committee
ILAM	Institute of Landscape Architects Malaysia
ISC	Industry Standards Committee



ISO	International Organization for Standardization
JLN	National Landscape Department
KLCC	Kuala Lumpur City Centre
KLIA	Kuala Lumpur International Airport
LI	Landscape Institute
MOSTI	Minister of Science Technology and Innovation
MS	Malaysian Standard
MSAC	Malaysian Standards and Accreditation Council
MyNSC	National Standards Committee
NBS	National Building Specifications
NISIR	National Institute for Scientific and Industrial Research
NPS	National Park Service
NRC	National Research Council
NSS	National Standards Strategy
PJC	Putrajaya Corporation
PWD	Public Work Department
SDO	Standards Developing Organization
SILARA	Malaysia Landscape Industry Association
SIRIM	Standard and Industrial Research Institute of Malaysia
SWO	Standard Writing Committee
TC	Technical Committee
TCIA	Tree Care Industry Association
WG	Working Group



CHAPTER 1

INTRODUCTION

1.1 An Overview to Landscape Development in Malaysia

The dawn of landscape development in Malaysia started in the early 1980s, during the leadership of the former Prime Minister's, Tun Dr. Mahathir Mohamad. His Vision 2020, outlined several principles; one of it was to enhance the quality of living through sustainable development (Abdullah, 2003). Tun Dr. Mahathir Mohamad brought Malaysia to an era of modernization in which during this period the physical landscape of the country transformed towards becoming a garden nation.

Since then, the landscape development in Malaysia has been experiencing a major change with the emphasis on landscaping the nation as inspired by Tun Dr. Mahathir Mohamad's desire to balance the economic, social and environmental development in this country (Sreetheran et al., 2006). Following this aspiration, in 1981, the landscape unit was established within the Department of Town and Country Planning to monitor the landscape development. It was on 24 September of the same year that the "Institut Landskap Arkitek Malaysia" or ILAM was formed to support and promote the profession of landscape architect and enhance the quality of landscape development in Malaysia (ILAM 2008). The government's effort continued with the development of the Federal Territory (Planning) Act 1982 (Act 267) which stipulated certain rules and



regulations related to tree planting and conservations in 1982 followed by other related acts to guide the landscape development in Malaysia.

Later in 1996, the effort further continued by the establishment of the National Landscape Department under the purview of the Ministry of Housing and Local Government (Sreetheran et al., 2006). The needs for the development of this department was described in the policy paper “Landscaping the Nation” by Tun Dr. Mahathir Mohamad (JLN, 1998, as cited in Osman, 2005, p. 60). The department acts as the advisor in the landscape planning, development and management at the national level (Ismail, 1997). Furthermore, the government provided a specific budget for the landscape development in Malaysia. Osman (2005) reported that an amount of Malaysian Ringgit Two Hundred Million (RM 200 million) in the 7th Malaysian Plan (1996-2000) was granted to The National Landscape Department (JLN). From this amount RM 121.5 million was used for the implementation of the national landscape development, public park development and landscape research and extension work.

The Malaysian government introduced the concept of ‘Garden Nation’, in 1997, towards achieving sustainable development (Ismail, 1997; Osman, 2005). This concept covered the whole nation by which the landscape needed to be a major component, or a significant part in the overall development of the country (Osman, 2005). This vision has boosted the landscape development rapidly throughout the country which could be seen in the new federal administrative capital Putrajaya, the

Multimedia Super Corridor (MSC) Cyberjaya and the Petronas Twin Tower (Abdullah, 2003).

The first National Landscape Conference about garden nation was held in 1997. Dato Hj. Ismail bin Ngah, the Director General of National Landscape Department stressed a proper planning and implementations as well as impressive strategies which were vital in order to achieve a garden nation status. Therefore, the Malaysian government outlined several strategies in fulfilling its aspiration towards achieving the “Garden Nation”, amongst others was the nationwide tree planting campaign. The aim of the campaign was to enhance the landscape quality in making Malaysia a “Garden Nation” by 2005 (Sreetheran et al., 2006). This campaign received good support from both public and private sectors. Harian Metro (2008) reported that the Mayor of Kuala Lumpur City Hall, Datuk Ab Hakim Borhan announced the allocation of RM 5 million for tree planting project along the main roads of Kuala Lumpur towards a “Sustainable Tropical City” by 2020 which was in line with the nation’s vision.

Another strategy was to legislate for the national landscape policy to ensure a sustainable and comprehensive physical and landscape development in the country. The National Landscape Department (JLN) reported that the National Landscape Policy (DLN) was first drafted in 2002 and is still being revised and waiting for the approval of the Malaysian government (as cited in Osman, 2005). This proposed DLN mooted by Dato Seri Najib Tun Razak (2006) will guide the government’s vision towards ‘The Most Beautiful Garden Nation’ by 2020. The policy would help

not only in achieving a sustainable landscape development but also high quality living environment with a strong Malaysian identity.

After the year 2005, JLN envisaged that landscape development would place more emphasis on the management of and sustaining landscape quality in Malaysia Garden Nation to fulfill the national goal of becoming a developed nation set out in Vision 2020. To implement this development, in 2006, the former Minister of Housing and Local Government reported that the Malaysian government approved the allocation of about Malaysia Ringgit Three Hundred and Sixty One Million (RM 361 Millions) in the 9th Malaysian Plan (2006-2010) for the enhancement of the national landscape quality (Ong, 2006). The budget increment again was an evidence of a strong commitment from the government towards landscape development in the country.

1.2 The Evolution of Soft-scape Specification in Malaysia

Over the last 30 years, the landscape development in Malaysia has grown quite significantly. As landscape development progresses in the country, it has created high demand in the landscape industry such as for landscape construction contracts and nursery productions in Malaysia. The landscape industry players are becoming more aware of the importance of quality standard to regulate the landscape development quality especially the soft-scape.

In the early 1980s, the landscape development project in this country mainly focused on infrastructures and public facilities. Most of the early projects were managed by the Public Work Department. To encourage the standardization and improvement of the construction materials and techniques, the PWD was placed under the Ministry of Public Work in 1983. Some of the projects done by the PWD in 1980s were the North South Highway and the Penang Bridge.

The soft-scape specification used in these projects mainly covered the guideline for streets planting. The first specification developed by the PWD in 1988, is KT 109/89, Guidelines for Landscaping Urban Road, by Norliah Saidin. This specification covers the streets planting considering the road safety which was used by the road authorities in landscape works for new road reserves (JKR, 1997). Later in 1997, this specification was upgraded to Nota Teknik (Jalan) 19/97 with the improvement in its content. The development of this specification refers to the following landscape books and guidelines:

- i. Jabatan perhutanan, Kementerian perusahaan Utama Semenanjung Malaysia. (1983). *Pokok-pokok untuk Menghias Bandar Kawasan perumahan dan Lebuh raya.*
- ii. Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia. (July, 1995). *Garis Panduan Landskap Negara.* Kementerian Perumahan dan Kerajaan Tempatan.
- iii. Parks and Recreation Department, Republic of Singapore Ministry of National Development (1981). *A Guide to Tree Planting.*