# THE VALUE OF LANDSCAPE DESIGN TOWARDS RESIDENTS IN HOUSING AREAS IN THE KLANG VALLEY

BY

#### FITRYNADIA BINTI MOHD SHAHLI

A thesis submitted in fulfilment of the requirement for the degree of Master of Science (Built Environment)

Kulliyyah of Architecture and Environmental Design International Islamic University Malaysia

OCTOBER 2015

#### **ABSTRACT**

Landscape design becomes an exercise that can give benefit to the community. The implementation of landscape design in housing areas has become a demand in the development of the housing industry nowadays. This is due to the awareness regarding the importance values of landscape design as one of the indicators to achieve a sustainable environment has been aware of. The impact on its values such as social, environmental, aesthetic and functional values, on a community has become a priority in this study. Therefore, the aim of this study is to investigate the value of landscape design on influencing the residents in housing areas. To complete this purpose, this study employed qualitative and quantitative methods of data collection consisting of questionnaire surveys, interviews and observations conducted in housing areas within the Klang Valley. The methods of analysis used are the statistical, content and visualization analysis. The findings indicate several characteristic of landscape design values can give impact to residents of housing areas. The characteristics divided into two major aspects: i) macro, landscape designs consists of the implementation of general use of landscape design such as recreation facilities, streetscape and back lane area; and ii) micro, landscape design consists of important of yard in the compound of the house. Besides that, findings also indicate that by implementation of landscape design values in housing can contribute to significant needs such as social, environmental, aesthetic and functional for residents. It is hoped that, this study can become a contribution in promoting the importance of landscape design toward the residents' needs in a living environment. Thus, the exposure on landscape design and awareness on the importance of landscape design for creating a sustainable environment should be introduced for all residents and developers to achieve a quality of living environment. The housing built today will not only help to reshape the environment at present, but it will also be a legacy in determining the environmental quality for the future.

## ملخص البحث

أصبح تصميم المناظر الطبيعية أمراً مهما في إفادة المجتمع، ويُعد تنفيذ تصميم المناظر الطبيعية في المناطق السكنية مطلبا في تطوير صناعة الإسكان في الوقت الحاضر. وذلك بسبب الوعى بأهميته كمؤشر من المؤشرات المحققة للبيئة المستدامة. وتُعد معرفة آثار تصميم المناظر الطبيعية الاجتماعية والبيئية والجمالية والوظيفية من أهم أهداف هذا البحث. لذا فإن البحث يهدف إلى معرفة الأثر التصميمي للمناظر الطبيعية بسبب قيمة المناطق السكنية. وإكمالا لهذا الغرض فقد استخدمت هذه الدراسة الأساليب الكمية والنوعية من جمع البيانات، وتتكون من استبيانات الاستطلاعية المسحية، والمقابلات، والملاحظات داخل المناطق السكنية لوادي كلانج. وطرق التحليل المستخدمة، هي: الطريقة الإحصائية، وتحليل المحتوى والتصور. وتشير نتائج البحث إلى سمات عدة لتصميم المناظر الطبيعية والتي يمكن أن تؤثر على قيمة المناطق السكنية، وتنقسم خصائص تصميم المناظر الطبيعية إلى قسمين رئيسين، هما: أ. التصميم العام للمشهد الكلى لتصميم المناظر الطبيعية، مثل: مرافق الترفيه، الشوارع، والأذقة الضيقة ب. التصميم الجزئي للمناظر الطبيعية، وأهمية الساحات حول المنازل. إضافة إلى ذلك فإن النتائج تشير أيضا إلى أن تنفيذ قيم تصميم المناظر الطبيعية في المناطق السكنية يُسهم كثيرا في الاحتياجات الاجتماعية، والبيئية، والجمالية، والوظيفية للسكان. ومن المؤمل أن تُسهم هذه الدراسة في ترويج أهمية المناظر الطبيعية تجاه احتياجات السكان في البيئة المعيشية، وبالتالي ينبغى التطرق إلى أمور تصميم المناظر الطبيعية، وأهمية الوعى بتصميم المناظر الطبيعية من أجل خلق بيئة مستدامة لجميع المقيمين والمطورين، وتحقيق جودة البيئة المعيشية. لذا فإن الأماكن السكنية التي أنشئت في الوقت الراهن لن يُسهم في إعادة تشكيل البيئة فحسب، بل ستكون إرثا في تحديد نوعية بيئة المستقبل.

# APPROVAL PAGE

I certify that I have supervised and read this str to acceptable standards of scholarly presentati quality, as a thesis for the degree of Master of S	on and is fully adequate, in scope and
	Mohd Ramzi Mohd Hussain Supervisor
	Izawati Tukiman Co-Supervisor
I certify that I have read this study and that in standards of scholarly presentation and is full thesis for the degree of Master of Science (Buil	y adequate, in scope and quality, as a
	Khalilah Zakariya Internal Examiner
I certify that I have read this study and that in standards of scholarly presentation and is full thesis for the degree of Master of Science (Buil	y adequate, in scope and quality, as a
	Hasanuddin Lamit External Examiner
This thesis was submitted to the Departme accepted as a partial fulfilment of the requirem (Built Environment).	<u> </u>
	Zainul Mukrim Baharuddin Head, Department of Landscape Architecture
This thesis was submitted to Kulliyyah of Archis accepted as a partial fulfilment of the region Science (Built Environment).	
	Alias Abdullah Dean, Kulliyyah of Architecture and Environmental Design

## **DECLARATION**

I hereby declare that this thesis is the result of my own	investigations, except where
otherwise stated. I also declare that it has not been	previously or concurrently
submitted as a whole for any other degrees at IIUM or other	ner institutions.
Fitrynadia Binti Mohd Shahli	
Signature	Date

#### INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

# DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH

# THE VALUE OF LANDSCAPE DESIGN TOWARDS RESIDENTS IN HOUSING AREAS IN THE KLANG VALLEY

I declare that the copyright holder of this thesis are jointly owned by the student and IIUM.

Copyright © 2015 Fitrynadia Mohd Shahli and International Islamic University Malaysia. All rights reserved.

No part of this unpublished research may be produced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocoping, recording or otherwise without prior written permission of the copyright holder except as provided below

- 1. Any material contained in or derived from this unpublished research may only be used by others in their writing with due acknowledgement.
- 2. IIUM or its library will have the right to make and transmit copies (print or electronic) for institutional and academic purpose.
- 3. The IIUM library will have the right to make, store in a retrieval system and supply copies of this unpublished research if requested by other universities and research libraries.

By signing this form, I acknowledged that I have read and understand the IIUM Intellectual Property Right and Commercialization Policy

Affirmed by Fitrynadia Binti Mohd Shahli		
Signature	Date	

#### ACKNOWLEDGEMENTS



In the name of Allah, The Most Gracious and The Most Merciful

Alhamdulillah praise to Allah S.W.T, the Lord of the worlds, because of His blessings throughout my life, I am able to complete this research study to be done smoothly.

First and foremost, I would like to express my deepest thanks and appreciation to both my supervisor and co-supervisor, Assoc. Prof. Dr. Mohd Ramzi Mohd Hussain and Asst. Prof. Dr. Izawati Tukiman, for their faithful, continuous support and advice from the beginning until end of this study. The guidance, commitment and opportunities they have given to me to explore precious knowledge, which the knowledge, this research study may not be finish completed as it is.

Apart from that, I would like to thank my husband, Mohamad Zulhilmi Mohamad and my daughter Hannah Khalisah for your support, boost spirit, love and always been with me through my hard times. My greatest appreciation also to my dearest family members, especially my beloved parents, which inspire me, parents in law and siblings for supporting me in everything I did. Last but not least, I would also like to take this opportunity to thank my dearest friends for thoughts, moral supports and sharing knowledge. I wish them good luck in their future life.

All their assistances and supports are highly appreciated and may be rewarded by Allah SWT.

Therefore, it is hoped that this research will become a benchmark for the awareness regarding landscape design in housing development and build environment profession in future. It is our responsibility to create a sustainable environment and appreciate the values which will benefit the Ummah.

I end with thank you and Wassalam

## TABLE OF CONTENTS

Abstract		ii
	ı Arabic	iii
	Page	iv
	n	V
		vi
100	dgements	vii
	oles	xii
	ures	XV
	breviations	xv xxiii
LIST OF AU	Jieviations	XXIII
СНАРТЕ	R ONE: INTRODUCTION	1
	Introduction	1
	Research Background	1
	Problem Statement	3
		5
	Research Aim and Objectives	
	Research Questions	5
	Research Methodology	6
	Research Scope	10
	Structure of the Thesis.	10
1.9	Summary	12
CHAPTE	R TWO: LANDSCAPE DESIGNS FOR HOUSING AREAS	13
	Introduction	13
2.2	Definition	13
	2.2.1 Landscape Design	13
	2.2.2 Housing Areas	14
2.3	Housing Landscape Design	16
	2.3.1 Types of Housing Landscape Design	17
	2.3.2 Principles of Housing Landscape Design	22
	2.3.3 Characteristics of Landscape Design in Housing	
	Area	26
	2.3.4 The Elements of Landscape Design in Housing Areas	30
	2.3.4.1 Softscape Elements in Housing Areas	32
	2.3.4.2 Hardscape Elements in Housing Areas	37
2.4	Factors that Influence Housing Landscape Design	38
۷.4	2.4.1 The Natural Factors	38
	2.4.1 The Natural Factors	39
		39 41
	2.4.4 The Demographic and Social Factors	45
	2.4.5 The Location and Accessibility Factors	48
_	2.4.6 The Affordability Factors	49
	The Importance of Housing Landscape Design	49
2.6	Current Application of Landscape Design in Housing Areas	52

	2.6.1 The Macro Scale Landscape Design	54
	2.6.2 The Micro Scale Landscape Design	63
2.7	Islamic Perspective on Landscape Design in Housing Areas	66
	Summary	68
	•	
<b>CHAPTEI</b>	R THREE: HOUSING LANDSCAPE DESIGN VALUES	69
3.1	Introduction	69
3.2	Overview on Housing Landscape Design and Value	69
	3.2.1 Relationship between Housing Landscape Design	
	and Values	70
3.3	Values of Landscape Design Towards Residents in Housing	
	Area	72
	3.3.1 Landscape Design Influences Social Values	73
	3.3.2 Landscape Design Influences Environmental Values	76
	3.3.3 Landscape Design Influences Aesthetic Values	78
	3.3.4 Landscape Design Influences Functional Values	79
3.4	Summary	82
CHAPTE	R FOUR: RESEARCH METHODOLOGY	83
4.1	Introduction	83
4.2	Research Design.	83
	Corresponding to Research Objectives	85
4.4	Questionnaire Survey	87
	4.4.1 Questionnaire Design	87
	4.4.2 Reliability of the Questionnaire	89
4.5	Research Population and Sample	91
	4.5.1 Representative Sample	93
	4.5.1.1 Sentul / Manjalara	94
	4.5.1.2 Wangsa Maju / Maluri	95
	4.5.1.3 Damansara / Pencala	96
	4.5.2 Sampling Technique	97
4.6	Semi-Structured Interview	97
4.7	Observation	98
4.8	Triangulation Design	100
4.9	Methods of Analysis	100
	4.9.1 Statistical Analysis	101
	4.9.2 Content Analysis	102
	4.9.3 Visualization Technique Analysis	103
4.10	Summary	105
	·	
<b>CHAPTEI</b>	R FIVE: USER PERCEPTION TOWARDS LANDSCAPE	
	DESIGN VALUES IN HOUSING AREAS	106
5.1		106
5.2	Profile of Respondents	106
	Inventory of Housing Areas	109
	5.3.1 Taman Tun Dr Ismail (TTDI)	111
	5.3.2 Taman Melati	113
	5.3.3 Taman Wangsa Melawati	115
	5.3.4 Taman Kenong	117

	Characteristic of Landscape Design in Housing Areas	121
	5.4.1 Macro Scale	121
	5.4.1.1 Recreation Areas	121
	5.4.1.2 Streetscape	127
	5.4.1.3 Back Lane Areas	130
	5.4.1.4 Pedestrian Walkway	131
	5.4.1.5 Neighborhood Environment	133
	5.4.1.6 Softscape Elements	137
	5.4.1.7 Hardscape Elements	141
	5.4.2 Micro Scale	145
	5.4.2.1 Housing Compound	145
	5.4.2.2 Compound Environment	150
	5.4.2.3 Selection of Plants	152
5.5	Landscape Design Values Influenced Residents in Housing	
	Areas	153
	5.5.1 Social Values	155
	5.5.1.1 Macro Scale: Social Values among Neighbors	155
	5.5.1.2 Micro Scale: Social Values among Family	159
	5.5.2 Environmental Values.	160
	5.5.3 Aesthetic Values	164
	5.5.4 Functional Values.	168
	5.5.4.1 Function of Plants in Housing Areas	169
	5.5.4.2 Function of Landscape Features in Housing Areas	170
5.6	Summary	172
CHAPTE	R SIX: THE IMPORTANCE OF LANDSCAPE DESIGN	
CHAPTE	VALUES TOWARD RESIDENTS IN HOUSING	174
	VALUES TOWARD RESIDENTS IN HOUSING AREAS	
6.1	VALUES TOWARD RESIDENTS IN HOUSING AREAS	
6.1	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174
6.1	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176
6.1	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design.	174 176
6.1	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176 177
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS  Introduction  Landscape Design Application of Housing Areas in the KlangValley 6.2.1 Basic Landscape Design 6.2.2 Concept and Trend of Landscape Design in Housing Areas	174 176 177
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley.  6.2.1 Basic Landscape Design.  6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas.	174 176 177 179 184
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176 177 179 184 185
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction  Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design. 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas. 6.3.1 Social and Public Needs. 6.3.2 Private and Individual Needs.	174 176 177 179 184 185
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley.  6.2.1 Basic Landscape Design.  6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas.  6.3.1 Social and Public Needs.  6.3.2 Private and Individual Needs.  Elements and Design Criteria of Landscape Design in	174 176 177 179 184 185
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176 177 179 184 185 187
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS  Introduction  Landscape Design Application of Housing Areas in the KlangValley 6.2.1 Basic Landscape Design 6.2.2 Concept and Trend of Landscape Design in Housing Areas  The Needs of Landscape Design in Housing Areas 6.3.1 Social and Public Needs 6.3.2 Private and Individual Needs Elements and Design Criteria of Landscape Design in Housing Areas 6.4.1 Elements of Landscape Design In Housing Areas	174 176 177 179 184 185 187
6.1 6.2 6.3	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176 177 179 184 185 187 190 191
6.1 6.2	VALUES TOWARD RESIDENTS IN HOUSING AREAS	174 176 177 179 184 185 187 190 191
6.1 6.2 6.3	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design. 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas. 6.3.1 Social and Public Needs. 6.3.2 Private and Individual Needs. Elements and Design Criteria of Landscape Design in Housing Areas. 6.4.1 Elements of Landscape Design In Housing Areas. 6.4.2 Criteria to Develop Good Housing landscape design. The Impact of Landscape Design Values. 6.5.1 Social and Environmental Aspect.	174 176 177 179 184 185 187 190 191 192 193
6.1 6.2 6.3 6.4	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design. 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas. 6.3.1 Social and Public Needs. 6.3.2 Private and Individual Needs. Elements and Design Criteria of Landscape Design in Housing Areas. 6.4.1 Elements of Landscape Design In Housing Areas. 6.4.2 Criteria to Develop Good Housing landscape design. The Impact of Landscape Design Values. 6.5.1 Social and Environmental Aspect. 6.5.2 Aesthetic and Functional Aspect.	174 176 177 184 185 187 189 190 191 192 193
6.1 6.2 6.3	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design. 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas. 6.3.1 Social and Public Needs. 6.3.2 Private and Individual Needs. Elements and Design Criteria of Landscape Design in Housing Areas. 6.4.1 Elements of Landscape Design In Housing Areas. 6.4.2 Criteria to Develop Good Housing landscape design. The Impact of Landscape Design Values. 6.5.1 Social and Environmental Aspect. 6.5.2 Aesthetic and Functional Aspect.	174 176 177 179 184 185 187 190 191 192 193 195
6.1 6.2 6.3 6.4 6.5	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas 6.3.1 Social and Public Needs 6.3.2 Private and Individual Needs. Elements and Design Criteria of Landscape Design in Housing Areas. 6.4.1 Elements of Landscape Design In Housing Areas 6.4.2 Criteria to Develop Good Housing landscape design. The Impact of Landscape Design Values. 6.5.1 Social and Environmental Aspect. 6.5.2 Aesthetic and Functional Aspect. Summary.	174 176 177 184 185 187 189 190 191 192 193
6.1 6.2 6.3 6.4 6.5	VALUES TOWARD RESIDENTS IN HOUSING AREAS.  Introduction.  Landscape Design Application of Housing Areas in the KlangValley. 6.2.1 Basic Landscape Design. 6.2.2 Concept and Trend of Landscape Design in Housing Areas.  The Needs of Landscape Design in Housing Areas. 6.3.1 Social and Public Needs. 6.3.2 Private and Individual Needs. Elements and Design Criteria of Landscape Design in Housing Areas. 6.4.1 Elements of Landscape Design In Housing Areas. 6.4.2 Criteria to Develop Good Housing landscape design. The Impact of Landscape Design Values. 6.5.1 Social and Environmental Aspect. 6.5.2 Aesthetic and Functional Aspect.	174 176 177 184 185 187 189 190 191 192 193

7.2	Chara	cteristics of Landscape Designs That Have in Housing	
	Area		199
	7.2.1	Macro Characteristic	196
	7.2.2	Micro Characteristic	202
7.3	The In	nfluence of Landscape Design on Values Toward Residents in	
	Housi	ng Areas	203
		Social Development	204
		Environmental Sustainability	206
	7.3.3	Aesthetic Environment	207
	7.3.4	Planning and Design	208
7.4	Recor	nmendations	210
		rch Limitation	212
7.6	Concl	usion	213
		ERENCES AND PROCEEDINGS.	<ul><li>215</li><li>227</li></ul>
APPEND	IX A:	RESEARCH METHODOLOGY STRATEGY	228
APPEND		QUESTIONNAIRE SURVEY	229
APPEND		MAPS	230
APPEND		INTERVIEW QUESTION	231
APPEND		OBSERVATION CHECKLIST	232
APPEND		PAIRED-SAMPLE T TEST	233
APPEND	IX G:	SEMI-STRUCTURED INTERVIEW	
		TRANSCRIPT	234
APPENDI	IX H:	LANDSCAPE DESIGN CHARACTERISTIC	235

# LIST OF TABLES

Table 1.1	Organization of research	9
Table 2.1	Elements and characteristics that contribute to the development of housing areas	27
Table 2.2	Characteristics of good housing areas	27
Table 2.3	Types of plants based on size and height	33
Table 2.4	Characteristic and function of softscape elements in housing areas	36
Table 2.5	Examples of plants suitable to be planted in house compound areas	66
Table 3.1	Comparisons of landscape issues and Maslow's hierarchy of needs	71
Table 4.1	Research methodology corresponding to research objectives	86
Table 4.2	The level of reliability based on the Reliability Cronbanch's Alpha	90
Table 4.3	The level of reliability based on sections of the questionnaire	90
Table 5.1	Distribution of representative sample of the study	107
Table 5.2	Demographic backgrounds of respondents	108
Table 5.3	Socio-economic backgrounds of respondents	109
Table 5.4	Housing backgrounds of respondents	110
Table 5.5	Preferences on recreation areas in housing	122
Table 5.6	Cross tabulation analysis between preferences of location of recreation areas and gender of respondents	124
Table 5.7	Cross tabulation analysis between preferences of location of recreation areas and age of respondents	124
Table 5.8	Perception of streetscape design in housing areas	127

Table 5.9	Preference on back lane in housing areas	130
Table 5.10	Preferences on neighborhood characteristics	133
Table 5.11	Cross tabulation analysis between safe neighborhood environment and age of respondents	134
Table 5.12	Preferences on softscape elements in housing areas	137
Table 5.13	Preferences of hardscape elements in house compounds	141
Table 5.14	Preferences on house compounds	145
Table 5.15	Preferences on environment of house compound	150
Table 5.16	Availability of landscape designs in housing areas	154
Table 5.17	Ranking of importance of social values	155
Table 5.18	Correlation between social values and demographic factors of respondents ( $n = 250$ )	156
Table 5.19	Preferences for the purpose of having landscape design in housing areas	159
Table 5.20	Environmental values of landscape designs	160
Table 5.21	Cross-tabulation analysis of environmental values influenced by gender	161
Table 5.22	Correlation between environmental values, hardscape elements and softscape elements ( $n = 250$ )	162
Table 5.23	Aesthetic values of landscape designs	164
Table 5.24	Paired-sample t test on the landscape design elements can affect the aesthetic value of housing area	Appendix F
Table 5.25	Functional values of landscape designs	169
Table 6.1	Background of interviewees	175
Table 6.2	Themes of content analysis of interview	175
Table 6.3	Keywords for theme A	176
Table 6.4	Keywords for theme B	184
Table 6.5	Keywords for theme C	189

Table 6.6	Keywords for theme D	193
Table 7.1	Landscape design contribution to values of housing areas	Appendix H
Table 7.2	A list of character and function of plants based on the type of space in housing areas	Appendix H
Table 7.3	A list of character and function of plants based on the type of house compound	Appendix H
Table 7.4	Summary of the needs of residents based on the characteristic of the landscape	209
Table 7.5	Recommendations/ suggestions for macro aspect	210
Table 7.6	Recommendations/ suggestions for micro aspect	211

# LIST OF FIGURES

Figure 1.1	Research structure framework	7
Figure 2.1	An interpretation of Maslow's hierarchy of needs, represented as a pyramid with the more basic needs at the bottom	15
Figure 2.2	The importance of housing in a sustainable society	16
Figure 2.3	Different needs of green spaces for different types of housing scheme	18
Figure 2.4	Plinth area for house area	19
Figure 2.5	Basic compound utilizations for terrace type of houses	20
Figure 2.6	Basic compound utilizations for bungalow type of houses	20
Figure 2.7	Examples of typical UK house types with associated garden space: detached, semi-detached and terraced dwellings in Sheffield	21
Figure 2.8	Example of a sacred garden creates unity with the feeling of peace and tranquility	23
Figure 2.9	Simplicity is gained with the shrub row repeating the same plant materials. Variety is added to the tree	23
Figure 2.10	Example of symmetrical and asymmetrical balance in landscape design	24
Figure 2.11	Perception of tree size is based on the relative size of the person. Being emotionally charged, relative scale can create feelings of action or relaxation	25
Figure 2.12	The small trees on the left drawing give the feeling that the house is large. On the right drawing, the large trees give the feeling that the house is small. Both houses are the same size	25
Figure 2.13	Examples of forms in landscape plants	26
Figure 2.14	Examples of landscape designs that use both hardscape and softscape elements in housing areas	31

Figure 2.15	Examples of plants; trees, shrubs and groundcovers; a)  Samanea saman/Rain tree, b) Tabernaemontana coronaria/  Susun kelapa, c) Arachis pintoi/Yellow Pintoi plant	32
Figure 2.16	Types of shaded plant species with medium size canopy	34
Figure 2.17	Types of shaded plant species with big size canopy	34
Figure 2.18	Examples of hardscape elements provided in recreational part of housing area	37
Figure 2.19	Residential landscape elements	38
Figure 2.20	Landscape greenery and water elements	39
Figure 2.21	Playground area	40
Figure 2.22	Recreational Park	40
Figure 2.23	Water fountain	41
Figure 2.24	Pond and artificial waterfall	41
Figure 2.25	Images of landscape typologies and characteristics of traditional Malay houses in Malaysia	42
Figure 2.26	Example of Malay edible and herb garden in housing areas	43
Figure 2.27	Cyrtostachys renda /Red palm with red trunks (a) and red Fangipani flower (b) are believed to bring good fortune in the Chinese culture	44
Figure 2.28	Sugarcane planted in Hindu residential communities for the Ponggal celebration	45
Figure 2.29	Examples of tot lot areas for children with seating areas	46
Figure 2.30	Cycling path segregated from the pedestrian walkway	47
Figure 2.31	Skate Park	47
Figure 2.32	The facilities provided for easy access for the elderly and people with disability user (PwD): Parking and ramps	48
Figure 2.33	Recreation area within housing areas	55
Figure 2.34	Distribution of open space for centralized type of neighborhood	56

Figure 2.35	A recreation area for children aged 2 - 8	57
Figure 2.36	A recreation area for children aged 9 and above	57
Figure 2.37	Examples of types of toys with colors and a slope of sliding boards suitable for children	58
Figure 2.38	Visual expression of the streetscape characteristic that has in housing areas	60
Figure 2.39	Example of plants and mounding as buffers in housing areas	60
Figure 2.40	Examples of back lanes	62
Figure 2.41	Different landscape designs applied in low, medium and high-cost housing areas	64
Figure 3.1	Values of landscape design	73
Figure 3.2	a) Recreation areas can become places for ceremony and community event, b) Open space can become places for community activities c) Exercise, physical and leisure activities for all types of users	74
Figure 3.3	Example of landscape design facilities based needs: a) resting areas for adults, b) Playfield for teenagers	75
Figure 3.4	Example of landscape design that serve special needs: a) Playground for children, b) Exercise area for elderly and c) Support facilities such as ramp and railing for people with disabilities	75
Figure 3.5	a) Example use of trees can give shade to surrounding housing environment, b) Landscape enhances ecology and wildlife habitat	77
Figure 3.6	Softscape elements of the landscape create green linkages of housing areas	77
Figure 3.7	Example of aesthetic landscape design of housing for people experience comfortable and pleasing environment	79
Figure 3.8	Clear and open path can help to reduce any hazard for pedestrian users	80
Figure 3.9	Example of back lane of house compound that can be applied to landscape design	81

Figure 4.1	Research design framework	84
Figure 4.2	Methodology strategy based on research objectives	Appendix A
Figure 4.3	Klang Valley region	92
Figure 4.4	Six strategic zones of Kuala Lumpur	93
Figure 4.5	Land use of Kuala Lumpur area	Appendix C
Figure 4.6	Hierarchy of park and open space in Kuala Lumpur	Appendix C
Figure 4.7	Examples of housing area at Taman Kepong in Sentul/ Manjalara areas	95
Figure 4.8	Example of type of residential houses at Taman Wangsa Melawati and Taman Melati in Wangsa Maju/ Maluri area	95
Figure 4.9	Example of type of residential houses at Taman Tun Dr Ismail (TDI) in Damansara/ Pencala area; bungalow house (A1), semi-detached house (A2), single storey terrace house (A3) and double storey house (A4)	96
Figure 4.10	Triangulation Model	100
Figure 5.1	Different size and characteristic of position of terrace house; end lot, intermediate lot and corner lot of terrace house	111
Figure 5.2	Overall map of Taman Tun Dr Ismail (TTDI)	112
Figure 5.3	Example of landscape space provided in Taman TDI	113
Figure 5.4	Overall map of Taman Melati	114
Figure 5.5	Example of landscape space and facilities provide in Taman Melati; open space with multipurpose court, gazebo and resting area, community hall and playground	115
Figure 5.6	Overall map of Taman Wangsa Melawati	116
Figure 5.7	Example of landscape space provides in Taman Wangsa Melawati; sitting area, basketball court, mounding area and playground	117

Figure 5.8	Overall map of Taman Kepong	118
Figure 5.9	Example of landscape space provides in Taman Kepong; Resting area and playground	119
Figure 5.10	Example of landscape space provides in Taman Kepong; open field	119
Figure 5.11	Responses in landscape spaces provided in housing areas	120
Figure 5.12	Location of recreation areas at the center of the housing areas can access by walking distance in Taman TDI	123
Figure 5.13	Location of recreation areas at the edge of the housing areas and near to commercial area in Taman Wangsa Melawati	123
Figure 5.14	Example of gazebo design that can become resting areas for residents in Taman Melati and Taman TDI	126
Figure 5.15	Example of playground equipment for children in Taman Melati, Taman Wangsa Melawati and Taman Kepong	126
Figure 5.16	Example of multipurpose court that provide in housing in Taman Malati, Taman TDI and Taman Wangsa Melawati	126
Figure 5.17	Example of open field that provide in Taman TDI, Taman Wangsa Melawati and Taman Melati	127
Figure 5.18	Streetscape type A: street planting in between the road and pedestrian walkway	128
Figure 5.19	Streetscape type B: pedestrian in between road and street planting	129
Figure 5.20	Example of streetscape attached with lighting and railing for safety purpose in Taman Wangsa Melawati	129
Figure 5.21	Back lane act as service road that can be accessed by transports in Taman TDI	130
Figure 5.22	Back lane used as drainage, sewerage and utilities in	131
Figure 5.23	Taman TDI. It is also for private use through renovation Type 1, Pedestrian walkway in between planting area	131
Figure 5.24	Type 2, Roadside pedestrian walkway	131
Figure 5.25	Different characteristic of pedestrian walkway that connect	132

# residents with other places in Taman TDI

Figure 5.26	a) Pedestrians connection limited to the recreation areas, b) Pedestrians use the roadside area as a walkway to move around create unsafe environment	133
Figure 5.27	Use of gates to create back lanes as private spaces in order to provide a sense of safety and security for the residents	135
Figure 5.28	Fences and plants used as a buffer to segregate private and public road	136
Figure 5.29	Post a guard at the entrance of housing areas for safeties of the residents	136
Figure 5.30	The flower bloom creates the aesthetic visual characteristic of houses in Taman TDI	138
Figure 5.31	Peltophorum pterocarpum (Yellow flame) trees can create shade for surrounding housing areas	138
Figure 5.32	a) Use of street planting to create shade, direct pedestrian movement b) Segregate the private space of housing areas in Taman TDI.	139
Figure 5.33	Different forms and types of trees serve the functions of aesthetic, protect wind and provide shade in Taman TDI	139
Figure 5.34	Lagerstroemia speciosa (Pride of India) and Mangifera indica (Mango tree) used as frontage plants in the housing area at Taman Melati	140
Figure 5.35	Samanea saman/Rain tree at Taman Wangsa Melawati	140
Figure 5.36	Casuarina enguistifolia/Rhu at Taman Wangsa Melawati	140
Figure 5.37	The use of variety of potted plants in the exterior and interior of housing as decorative purposes	142
Figure 5.38	Example of paved finishes of compound of houses: Brick paver, concrete paver and tiles that applied in most residential area	143
Figure 5.39	Example of walkway with roof and fence at Taman Melati	144
Figure 5.40	Example of water fountain applied in the house compound	144
Figure 5.41	Front yard utilize with a combination of plants and paves	146

#### material

Figure 5.42	Size of yard areas for bungalow type of house	147
Figure 5.43	Front yard; the plinth area as an open lawn for private uses. Some of the space finishes with hardscape tiles for porch and welcoming entrance	147
Figure 5.44	Side yard; the use of potted plants and fruit trees	147
Figure 5.45	Back yard; basic kitchen garden for users	147
Figure 5.46	Size of yard areas for semi-D type of house	148
Figure 5.47	Front yard utilize as an open lawn for a semi-D house	148
Figure 5.48	Open lawn for front yard space and use of palm trees at the side yard of a semi-D house	148
Figure 5.49	Size of yard areas for terrace type of house	149
Figure 5.50	End lot position of the double terrace house with an existing side yard that serves as an open lawn for the users	149
Figure 5.51	Green area for corner lot is larger since it has a side yard. Thus, it gives an opportunity for owners to create landscape design	149
Figure 5.52	Most of the landscape area has been utilized as drying and parking areas	151
Figure 5.53	Examples of Malay herb gardens in Taman SS7 and TDI	152
Figure 5.54	Example of plants in frontage of Chinese resident in Taman SS7	153
Figure 5.55	Example of playground areas for children in Taman Melati	157
Figure 5.56	Court and play field support teenager and adults in sport activities	158
Figure 5.57	A community center that serves as a place for community events and the ceremony at Taman Melati	158
Figure 5.58	Lagerstroemia speciosa (Pokok bungor) and Mimusopselengi (Pokok bungan tanjung) used in the frontage and along main road areas	163
Figure 5.59	Andira enermis (Brown-heart), Casuarina equisetifolia	163

	(Common Rhu), <i>Dalbergia oleveri</i> (Tamalan tree) and <i>Peltophorum pterocarpum</i> (Yellow Flame tree) used in recreation areas of housing	
Figure 5.60	Araucaria bidwillii (Bunya-bunya pine) and Baccaurea motleyana (Rambai)	164
Figure 5.61	Example of vertical landscape design that can create aesthetic values of house compound areas	166
Figure 5.62	Scenic view toward structure pattern of house in Setiawangsa, Keramat and Ampang areas	167
Figure 5.63	Scenic view toward structure pattern of house in WangsaMaju, Taman Melawati, Gombak and Kepong areas	167
Figure 5.64	a) Ptychosperma macarthurii/ Macarthur palm, b) Roystonea regia/ Cuban royal palm	168
Figure 5.65	Example of house that planted with palm species in Taman TDI and Taman Wangsa Melawati	168
Figure 5.66	Example of shaded trees in recreational areas and along the pedestrian walkway creates	170
Figure 5.67	The court serves as playing area, especially for teenagers and adults in Taman WangsaMelawati	170
Figure 5.68	A playground and mounding area that provide at Taman Wangsa Melawati can give a sense enjoyment and excitement for the children users	171
Figure 5.69	Jogging track and stairs for exercise purposes	171
Figure 5.70	The elements of streetscape; pedestrian path, bus top, lighting, fence, bollard for pedestrian users in Taman Wangsa Melawati	172
Figure 6.1	Example of advertisement and billboard of how developers promote their housing development by showing landscape design as an attraction	182
Figure 7.1	The relationship between landscape design values and need of residents in housing areas	204

## LIST OF ABBREVIATIONS

CPTED	Crime Prevention through Environmental Design
JPBD	Jabatan Perancangan Bandar dan Desa
JLN	Jabatan Landskap Negara
IN1	Interviewee 1
IN2	Interviewee 2
IN3	Interviewee 3
IN4	Interviewee 4
IN5	Interviewee 5
IN6	Interviewee 6
IN7	Interviewee 7
IN8	Interviewee 8
IN9	Interviewee 9
IN10	Interviewee 10
IN11	Interviewee 11
IN12	Interviewee 12
IN13	Interviewee 13
IN14	Interviewee 14
PWD	People with Disabilities
SPSS	Statistical Packages for Social Sciences
TTDI	Taman Tun Dr. Ismail
UNCED	United Nations Conference on Environment and Development
UK	United Kingdom

#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 INTRODUCTION

This study focuses on the impact of landscape design that can influence the values of housing areas. Landscape design in housing areas should be favorable for the ambience of ecological environment and for enhancing the quality of life for residents. Thus, this chapter presents the introduction to this study, which consists of the research background, the problem statements, the research aim and objectives, the research questions, the research methodology, the research scope and limitation, the structure of the thesis and the conclusion of the chapter.

#### 1.2 RESEARCH BACKGROUND

The understanding of landscape design can be defined as an exercise to plan and design housing areas so that it gives benefits to the community. The landscape that adopts in housing areas has a potential to create a significant value in creating a sustainable lifestyle and lead to the quality of life for people. As such, Rodie and Ellen (1998) recognize the quality of life can examine in a various perspective include in the context of residential development and has received significant attention from researchers in light of the complexities of urban living and the high rates of growth in urban areas. Apart from that, study by Ezeanya (2004) identified that housing development in Malaysia has become a priority for the Malaysian government and other authorities in order to improve the quality of life for society.