

ENCOURAGING GREEN LIFESTYLE THROUGH NEIGHBORHOOD  
PLANNING AND DESIGN

NOORASLINAA BTE HASSAN

A Master's Project fulfilment of the  
requirements for the award of the degree of  
Master of Science in Urban and Regional Planning

Faculty of Built Environment  
Universiti Teknologi Malaysia

JANUARY 2012

All praises to Allah the Almighty  
for the strengths and His blessings in completing this master's project.

This work is specially dedicated to;  
My beloved parents Hassan and Salmah  
My eldest sister, Dr. Rohayanti and her family, Ranafie and Nadya.R  
My wonderful siblings Shahril, Yaya, Din, Shida, Aisha, Hairi and Sikin

*Man Jadda Wa Jada*  
*Shukran Jazilan*

## ACKNOWLEDGEMENT

“In the name of Allah, the most Gracious and the most Merciful”

Many people have contributed a lot towards my understanding and thoughts. Firstly, I want to acknowledge my supervisor, Assoc. Prof. Dr. Ibrahim bin Ngah for his guide in conducting the systematic review on which this master’s project is based. A bunch of thanks goes to my examiner, Assoc. Prof. Dr. Muhammad Rafee bin Majid for his comments and suggestions and also my coordinator of MSc. Urban and Regional Planning course for one and half years, Assoc. Prof. Dr. Foziah binti Johar. In particular, I would love to thank for the advice and assistance along the earlier stages up to the completion of this master’s project.

My sincere appreciation also extends to MPJBT and JPBD Johor especially URPJB team for supplying the relevant data of study area. Also to the officers who are very cooperative in detailing out and providing the vital data, plans and the statistic of relevant issues.

Besides, I would like to thank my family for their endless love and moral support. I also appreciate their financial support. I also want to express my appreciation to my wonderful friends for their helpful comments of this research especially Fatimah, Syamimi, Nurul Huda, Nurul Atiqah, Azila, Suzie, Adila, Mohd. Ghazali, Mohd. Zulkifi, Mustaqim, my classmates and whoever that have provided assistance at various occasions.

My deepest appreciation to those who had contributed directly and indirectly towards the successful completion of this master’s project. May God bless.

## ABSTRACT

In recent years, human lifestyle has led to a more ‘consumption-oriented’ lifestyle. This phenomenon has resulted in more unsustainable lifestyle practices. Therefore, this research aims to explore and gain information on how the neighborhood planning and design would be able to encourage the green lifestyle. Literature review is prepared in the earlier stage of the research. The instruments used in this research are observation and questionnaire distribution to two selected study area which are Taman Universiti and Taman Mutiara Rini. The first objective of the research is to identify on how far the green lifestyle is being practiced while the second objective is to identify the planning and design factor that supports the green lifestyle. Descriptive analysis is used to analyze the data. The main finding of this study showed that both neighborhoods has significance difference for three green lifestyle indicator which are recreation, transportation and waste recycling behavior. Other findings showed there is a lot of dissatisfaction and inadequate facilities which can be seen from similarly on waste recycling part in which majority of the respondent did not even know the location of recycle bins and recycle centre in their neighborhood area. Besides, dissatisfaction in the available sport facilities and inadequacy of them to fulfill residents’ needs also exist. Most of the respondents use car and motorcycle as main mode of transportation around their neighborhood because of the lack of public transportation option especially in Taman Mutiara Rini and this shows the need to install or improve facilities such as pedestrian lane, bicycle lane and public transportation. The safety also encourages the residents to do physical exercise outside their house. Every part of the issue mentioned can eventually affect the lifestyle of neighborhood residents. Therefore, improvement for the facilities has to be made according to the suggestions given. In conclusion, the findings showed that neighborhood planning and design have minor contribution towards encouraging residents to practice green lifestyle in the physical aspect of the environment but not strongly encourage their behavior to do so. Since there might be another factor like awareness and willingness that more dominant to encourage residents, it is important to first promote the awareness or educate the people on their understanding in the concept of green lifestyle besides providing the neighborhood facilities and services that are able to encourage green lifestyle.

## ABSTRAK

Sejak kebelakangan ini, gaya hidup manusia telah menjurus ke arah gaya hidup yang lebih 'berorientasikan penggunaan'. Fenomena ini telah mengakibatkan amalan gaya hidup yang tidak mampan. Oleh itu, kajian ini bertujuan untuk mengkaji bagaimana perancangan dan reka bentuk kejiranan dapat menggalakkan gaya hidup mesra alam. Kajian literatur disediakan di peringkat awal penyelidikan. Instrumen yang digunakan dalam penyelidikan ini adalah pemerhatian dan pengedaran soal selidik kepada dua kawasan kajian yang dipilih iaitu Taman Universiti dan Taman Mutiara Rini. Objektif pertama kajian adalah untuk mengenal pasti sejauh mana gaya hidup mesra alam diamalkan manakala objektif kedua adalah untuk mengenal pasti faktor perancangan dan reka bentuk yang menyokong gaya hidup mesra alam. Analisis deskriptif digunakan untuk menganalisis data. Penemuan utama kajian ini menunjukkan bahawa kedua-dua kawasan kejiranan mempunyai perbezaan bagi tiga penunjuk gaya hidup mesra alam iaitu rekreasi, pengangkutan dan kitar semula. Penemuan lain menunjukkan terdapat banyak rasa tidak puas hati bagi kemudahan yang boleh dilihat dari persamaan pada bahagian kitar semula sisa di mana majoriti responden tidak tahu lokasi tong kitar semula dan pusat kitar semula di kawasan kejiranan mereka. Selain itu, rasa tidak puas hati dalam kemudahan sukan yang tersedia untuk memenuhi keperluan penduduk juga wujud. Kebanyakan daripada responden menggunakan kereta dan motosikal sebagai mod pengangkutan utama di sekitar kejiranan mereka kerana kekurangan pilihan pengangkutan awam terutamanya di Taman Mutiara Rini dan ini menunjukkan keperluan untuk memperbaiki kemudahan-kemudahan lain seperti laluan pejalan kaki, lorong basikal dan pengangkutan awam. Faktor keselamatan juga menggalakkan penduduk untuk melakukan aktiviti luar di kejiranan mereka. Setiap isu yang dikaji akhirnya boleh member implikasi terhadap gaya hidup penduduk. Oleh itu, penambahbaikan untuk kemudahan-kemudahan perlu dibuat mengikut cadangan yang diberikan. Kesimpulannya, kajian menunjukkan bahawa perancangan dan reka bentuk kejiranan mempunyai sumbangan kecil ke arah menggalakkan penduduk untuk mengamalkan gaya hidup mesra alam dalam aspek fizikal alam sekitar tetapi tidak menggalakkan kesedaran mereka untuk berbuat demikian. Faktor lain seperti kesedaran dan kesanggupan yang lebih dominan untuk menggalakkan penduduk, justeru adalah penting untuk menggalakkan kesedaran atau mendidik masyarakat pada pemahaman mereka dalam konsep gaya hidup mesra alam di samping menyediakan kemudahan kejiranan dan perkhidmatan yang dapat menggalakkan gaya hidup mesra alam.

## TABLE OF CONTENTS

|          |   |              |
|----------|---|--------------|
|          | <b>ACKNOWLEDGEMENT</b>                                    | <b>iv</b>    |
|          | <b>ABSTRACT</b>   | <b>v</b>     |
|          | <b>ABSTRAK</b>  | <b>vi</b>    |
|          | <b>TABLE OF CONTENTS</b>                                  | <b>vii</b>   |
|          | <b>LIST OF TABLES</b>                                     | <b>xii</b>   |
|          | <b>LIST OF FIGURES</b>                                    | <b>xiv</b>   |
|          | <b>LIST OF SYMBOLS</b>                                    | <b>xvi</b>   |
|          | <b>LIST OF ABBREVIATIONS</b>                              | <b>xvii</b>  |
|          | <b>LIST OF APPENDICES</b>                                 | <b>xviii</b> |
|          | <b>INTRODUCTION</b>                                       | <b>1</b>     |
|          | 1.1 Background of Study                                   | 1            |
|          | 1.2 Problem Statement                                     | 2            |
|          | 1.3 Research Objectives                                   | 3            |
|          | 1.4 Scope of study  | 4            |
|          | 1.5 Significance of Research                              | 4            |
|          | 1.6 Chapter Outlines                                      | 5            |
| <b>2</b> | <b>GREEN LIFESTYLE PRACTICE AND NEIGHBORHOOD PLANNING</b> | <b>6</b>     |
|          | 2.1 Neighborhood  | 7            |
|          | 2.1.1 Definition of Neighborhood                          | 7            |
|          | 2.1.2 Neighborhood Planning                               | 7            |
|          | 2.1.3 Neighborhood Pattern                                | 8            |
|          | 2.2 Neighborhood Principle and Design                     | 10           |

|          |   |           |
|----------|---|-----------|
| 2.2.1    | Accessibility   | 11        |
| 2.2.2    | Mixed Use   | 11        |
| 2.2.3    | Space   | 12        |
| 2.2.4    | Land Use Zoning   | 13        |
| 2.2.5    | Neighborhood Size   | 13        |
| 2.3      | Green Lifestyle   | 14        |
| 2.3.1    | Indicator for green lifestyle in the neighborhood                     | 15        |
| 2.4      | Relationship of Green Lifestyle with Neighborhood Planning and Design | 19        |
| 2.5      | Conclusion  | 21        |
| <b>3</b> | <b>STUDY AREA</b>   | <b>23</b> |
| 3.1      | Introduction  | 23        |
| 3.2      | Background of Study Area  | 24        |
| 3.2.1    | Taman Universiti  | 24        |
| 3.2.2    | Taman Mutiara Rini  | 26        |
| 3.3      | Physical Aspect the Study Area  | 27        |
| 3.3.1    | Land Use  | 27        |
| 3.3.2    | Distribution of Facilities  | 28        |
| 3.3.3    | Circulation system  | 31        |
| 3.4      | Conclusion  | 34        |
| <b>4</b> | <b>RESEARCH METHODOLOGY</b>   | <b>35</b> |
| 4.1      | Introduction  | 35        |
| 4.2      | Data Collection   | 35        |
| 4.2.1    | Primary data  | 36        |
| 4.2.2    | Secondary Data  | 37        |
| 4.2.3    | Administrative of Data Collection                                     | 37        |
| 4.2.4    | Instrument Designation  | 37        |
| 4.3      | Data Analysis   | 38        |

|          |       |  |           |
|----------|-------|--|-----------|
|          | 4.3.1 | Descriptive Analysis   | 38        |
|          | 4.3.2 | Cross-Tabulation and Chi-Square Test                         | 39        |
|          | 4.4   | Conclusion   | 39        |
| <b>5</b> |       | <b>ANALYSIS OF GREEN LIFESTYLE PRACTICE</b>                  | <b>41</b> |
|          | 5.1   | Introduction   | 41        |
|          | 5.2   | Respondents' Profile   | 42        |
|          | 5.3   | Analysis of Recreation Behavior                              | 45        |
|          | 5.3.1 | Habits to Do Physical Exercise                               | 45        |
|          | 5.3.2 | Time spend for exercise                                      | 45        |
|          | 5.3.3 | Involvement in Sport Event                                   | 46        |
|          | 5.3.4 | Habits to Do Gardening                                       | 47        |
|          | 5.3.5 | Sufficiency of Recreational and Sport Facilities             | 47        |
|          | 5.3.6 | Satisfaction on Recreational and Sport Facilities            | 48        |
|          | 5.3.7 | Fear on safety to do physical exercise                       | 49        |
|          | 5.3.8 | Safety of children to play outside                           | 49        |
|          | 5.3.9 | Differences of recreation behavior                           | 50        |
|          | 5.4   | Analysis on Transportation Behavior                          | 56        |
|          | 5.4.1 | Owning vehicle   | 56        |
|          | 5.4.2 | Mode of transportation                                       | 56        |
|          | 5.4.3 | Reasons using car or motorcycle                              | 57        |
|          | 5.4.4 | Reason for walking, cycling and taking public transportation | 58        |
|          | 5.4.5 | Willingness to walk or cycle                                 | 58        |
|          | 5.4.6 | Satisfaction on public transportation                        | 59        |
|          | 5.4.7 | Problem on walking and cycling environment                   | 60        |
|          | 5.4.8 | Distance and mode of transportation to some measured place   | 60        |
|          | 5.4.9 | Improvement on walking facilities                            | 62        |



|          |  |           |
|----------|--|-----------|
| 5.4.10   | Improvement on cycling facilities                                      | 62        |
| 5.4.11   | Improvement on public transportation services                          | 63        |
| 5.4.12   | Safety influence on mode of transportation                             | 64        |
| 5.4.13   | Differences of transportation behavior                                 | 64        |
| 5.5      | Analysis of Waste Recycling behavior                                   | 71        |
| 5.5.1    | Recycle at home  | 71        |
| 5.5.2    | Recycle outside home   | 71        |
| 5.5.3    | Knowing the location of recycle bin/ recycle centre                    | 72        |
| 5.5.4    | Advertisement of recycle bins/ recycle centre                          | 73        |
| 5.5.5    | Provision of recycle bin/ recycle centre                               | 73        |
| 5.5.6    | Differences of waste recycling between neighborhoods                   | 74        |
| 5.6      | Differences of perception on planning and design between neighborhood  | 78        |
| 5.6.1    | Recreational and sport facilities design                               | 78        |
| 5.6.2    | Pedestrian, bicycle lane and public transportation design and services | 78        |
| 5.6.3    | Waste recycling facilities   | 79        |
| 5.6.4    | Consideration of safety in neighborhood design                         | 80        |
| 5.6.5    | Differences of perception on planning and design between neighborhoods | 81        |
| 5.7      | Discussion   | 84        |
| 5.8      | Conclusion   | 85        |
| <b>6</b> | <b>CONCLUSIONS AND RECOMMENDATIONS</b>                                 | <b>86</b> |
| 6.1      | Research Conclusion  | 86        |
| 6.2      | Green Lifestyle Practice in Study Area                                 | 87        |
| 6.3      | Differences of Green Lifestyle Practice between Neighborhood           | 88        |
| 6.4      | Limitations during Research  | 88        |
| 6.5      | Recommendations for Further Research                                   | 89        |

|                      |           |
|----------------------|-----------|
|                      | xi        |
| 6.6 Conclusion       | 89        |
| <b>REFERENCES</b>    | <b>90</b> |
| <b>BIBLIOGRAPHY</b>  | <b>94</b> |
| A Questionnaire Form | 96        |

## LIST OF TABLES

| <b>TABLE NO.</b> | <b>TITLE</b>   | <b>PAGE</b> |
|------------------|--|-------------|
| Table 2-1        | Green Lifestyle Indicator in neighborhood  | 16          |
| Table 3-1        | Number of houses in Taman Universiti's study area  | 25          |
| Table 3-2        | Number of houses in Taman Mutiara Rini's study area  | 26          |
| Table 3-3        | Land use in Taman Universiti and Taman Mutiara Rini study area   | 27          |
| Table 3-4        | Number of facilities, distance from home and time estimation for Taman<br>Universiti   | 30          |
| Table 3-5        | Number of facilities, distance from home and time estimation for Taman<br>Mutiara Rini   | 31          |
| Table 4-1        | Data Collection  | 36          |
| Table 5-1        | Frequency and percentage for of respondent profile   | 42          |
| Table 5-2        | Association of habits to do physical exercise with neighbourhood   | 50          |
| Table 5-3        | Association of time spend for exercise with neighbourhood  | 51          |
| Table 5-4        | Association of involvement in sport event with neighbourhood   | 51          |
| Table 5-5        | Association of habits to do gardening with neighbourhood   | 52          |
| Table 5-6        | Association of sufficiency of recreational and sport facilities with<br>neighbourhood  | 52          |
| Table 5-7        | Association of satisfaction on recreational and sport facilities with<br>neighbourhood   | 53          |
| Table 5-8        | Association of fear on safety to do physical exercise with<br>neighbourhood  | 53          |
| Table 5-9        | Association of fear on safety of children with neighbourhood   | 54          |
| Table 5-10       | Summary of the differences on respondents' lifestyle, perception and<br>satisfaction between neighborhood on recreation behaviour. | 54          |
| Table 5-11       | Distance and mode of transportation to some measured place   | 61          |

|  |    |
|--|----|
| Table 5-12 Association of owning vehicle with neighbourhood  | 65 |
| Table 5-13 Association of main mode of transportation with neighbourhood   | 66 |
| Table 5-14 Association of reason for using car as main mode of transportation with neighbourhood   | 66 |
| Table 5-15 Association of reason for walking and cycling as main mode of transportation with neighbourhood                                     | 67 |
| Table 5-16 Association of willingness to walk with neighbourhood   | 67 |
| Table 5-17 Association of satisfaction on public transportation facilities with neighbourhood  | 68 |
| Table 5-18 Association of problem on walking and cycling environment with neighbourhood  | 68 |
| Table 5-19 Association of improvement on transportation facilities with neighbourhood  | 69 |
| Table 5-20 Summary of the differences on respondents' lifestyle, perception and satisfaction between neighborhood on transportation behaviour  | 69 |
| Table 5-21 Association of habits to recycle at home with neighbourhood   | 74 |
| Table 5-22 Association of habits to recycle outside home with neighbourhood  | 75 |
| Table 5-23 Association of knowing the location of recycle bins/ recycle centre with neighbourhood  | 75 |
| Table 5-24 Association of advertisement of recycling with neighbourhood  | 76 |
| Table 5-25 Association of visibility of recycle centre with neighbourhood  | 76 |
| Table 5-26 Summary of the differences on respondents' lifestyle, perception and satisfaction between neighborhood on waste recycling behaviour | 77 |
| Table 5-27 Summary of the differences on respondents' perception on planning and design between neighbourhoods.                                | 81 |
| Table 5-28 Association of transportation facilities design with neighbourhood  | 81 |
| Table 5-29 Association of waste recycling facilities with neighbourhood  | 82 |
| Table 5-30 Association of perception on planning and design with neighbourhood   | 82 |
| Table 5-31 Summary of the differences on respondents' perception on planning and design between neighborhood                                   | 83 |
| Table 5-32 Suggestions to waste recycling, recreation and transportation   | 84 |

## LIST OF FIGURES

| <b>FIGURE NO.</b> | <b>TITLE</b>   | <b>PAGE</b> |
|-------------------|--|-------------|
| Figure 2-1        | Grid pattern   | 9           |
| Figure 2-2        | Cluster pattern  | 9           |
| Figure 2-3        | Hybrid pattern   | 10          |
| Figure 2-4        | Transit Oriented Development                             | 11          |
| Figure 2-5        | Tree structure   | 13          |
| Figure 2-6        | Neighbourhood Unit concept                               | 14          |
| Figure 3-1        | Location plan of Taman Universiti and Taman Mutiara Rini | 24          |
| Figure 3-2        | Clinic in Taman Universiti                               | 28          |
| Figure 3-3        | SK Taman Universiti 4                                    | 28          |
| Figure 3-4        | SK Mutiara Rini  | 29          |
| Figure 3-5        | Commercial area in Taman Mutiara Rini                    | 29          |
| Figure 3-6        | Playground in Taman Mutiara Rini                         | 30          |
| Figure 3-7        | Sidewalks in Taman Universiti                            | 32          |
| Figure 3-8        | Pedestrian lane in Taman Mutiara Rini                    | 33          |
| Figure 3-9        | Bicycle lane in Taman Mutiara Rini                       | 33          |
| Figure 3-10       | Bus stop in Jalan Pendidikan                             | 33          |
| Figure 3-11       | Bus stop in Jalan Kebudayaan                             | 33          |
| Figure 5-1        | Number of respondent                                     | 43          |
| Figure 5-2        | Habits to do physical exercise                           | 45          |
| Figure 5-3        | Time spend for exercise                                  | 46          |
| Figure 5-4        | Involvement in sport event                               | 46          |
| Figure 5-5        | Habits to do gardening                                   | 47          |
| Figure 5-6        | Sufficiency of recreational and sport facilities         | 48          |
| Figure 5-7        | Satisfaction on recreational and sport facilities        | 48          |

|  |    |
|--|----|
| Figure 5-8 Fear on safety to do physical exercise                                  | 49 |
| Figure 5-9 Safety of Children to play outside                                      | 49 |
| Figure 5-10 Owning vehicle   | 56 |
| Figure 5-11 Main mode of transportation  | 57 |
| Figure 5-12 Reason using car or motorcycle   | 57 |
| Figure 5-13 Reason for walking, cycling or taking public transportation            | 58 |
| Figure 5-14 Willingness to walk or cycle   | 59 |
| Figure 5-15 Satisfaction on public transportation                                  | 59 |
| Figure 5-16 Problem on walking and cycling environment                             | 60 |
| Figure 5-17 Improvement on walking facilities                                      | 62 |
| Figure 5-18 Improvement on cycling facilities                                      | 63 |
| Figure 5-19 Improvement on public transportation services                          | 63 |
| Figure 5-20 Safety influence on mode of transportation                             | 64 |
| Figure 5-21 Recycle at home  | 71 |
| Figure 5-22 Recycle outside home   | 72 |
| Figure 5-23 Knowing the location of recycle bin and recycle centre                 | 72 |
| Figure 5-24 Advertisement of recycle bins/ recycle centre                          | 73 |
| Figure 5-25 Provision of recycle bin/ recycle centre                               | 73 |
| Figure 5-26 Recreational and sport facilities design                               | 78 |
| Figure 5-27 Pedestrian, bicycle lane and public transportation design and services | 79 |
| Figure 5-28 Waste recycling facilities   | 79 |
| Figure 5-29 Consideration of safety in neighborhood design                         | 80 |

**LIST OF SYMBOLS**

|           |   |                                  |
|-----------|---|----------------------------------|
| $\mu$     | - | The mean of the study population |
| $\bar{x}$ | - | Sample mean                      |
| $\alpha$  | - | Probability of Type I error      |
| $\nu$     | - | Degrees of Freedom               |
| m         | - | Meter                            |

**LIST OF ABBREVIATIONS**

- LEED - Leadership in Energy Efficiency and Environmental Design  
CPTED - Crime Prevention through Environmental Design  
JPBD - Jabatan Perancangan Bandar dan Desa  
MPJBT - Majlis Perbandaran Johor Bahru Tengah



**LIST OF APPENDICES**

| <b>APPENDIX</b> | <b>TITLE</b>       | <b>PAGE</b> |
|-----------------|--------------------|-------------|
| A               | Questionnaire Form | 96          |

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background of Study**

The term “Green” has become an established concept and being widely used as a label for diverse set of products, ideas and phenomena which are considered to be better in environmental perspective compared to some other alternatives Alfredsson (2002). The concept of green label has also been referred to eco-friendly or become phenomenon that fits into the society’s perception on green sustainable lifestyle.

According to Department of Environment’s IMPAK Bulletin (2010), the ‘green’ theme frequently appears in many segments of world’s debate and conferences and became global development agenda leading to a Green Culture. The green debate has led to serious concerns on human current lifestyle and the need for direct and indirect changes in promoting a harmonious relationship between mankind and the environment.

Lifestyle defined and differentiate us. They are the way we live our lives, what we do with whom, where, how, and what we use to do it. Everything from the food we eat, to how we interact and the way we get around (Kee, 2010). Alfredsson (2002) defined lifestyle as “expressions of individual’s ambitions to create their own specific, personal, cultural and social identities within the historically determined structural and positional framework of their society”.

Xinxin (2011) discussed on the crucial role of the neighbourhood environment and the social interaction on residents physical as well as the psychological health impacts. Xinxin (2011) proposed seven key elements on designing the health-promoted community; (1) land use patterns, (2) street connectivity, (3) transit access, (4) safety, (5) parking, (6) streetscape, (7) pedestrian amenities. The design of these elements also concerns special groups including women, children, the elderly, low-income groups, and people with disabilities. This concept also benefits social health such as prolonged life, better health, good cardiovascular health, faster recovery from illness and improved mental health.

Xinxin (2011) has also established set of principles that could provides guidelines on design implication on lifestyle based on current research on public health, neighbourhood safety, social interaction as well as Smart Growth and New Urbanism. Among the principles include (1) density and form, (2) circulation, (3) dwelling, (4) pedestrian, (5) open space, (6) paring and (7) public service.

Therefore, this study will look into whether green lifestyle is influenced by the planning and design of the neighbourhood.

## **1.2 Problem Statement**

Human behaviour has direct relationship to the environment. Proper planning of environment without the right of human behaviour, things do not work. This is especially the world population is continuously increasing; the urge to have a greener community to protect the natural environmental can clearly be seen. According to Ahmad et al. (2009), the current trend Malaysian's lifestyle in recent years is leading to a more 'consumption-oriented' lifestyle. This phenomenon, in turn, resulted in more unsustainable practices and finally many urban life problems such as pollution, climate change and solid waste management.

Unsustainable lifestyle practice by Malaysian also led to higher energy consumption. According to Tai (2009) the rapid urbanization and high economic growth and industrialization in Malaysia have contributed to the relatively high GHG

emission of Malaysia as compared to the world average and other Southeast Asian countries. In terms of per capita CO<sub>2</sub> emission, Malaysia emits 5.45 metric tons per capita, which is much higher than the world (4.22 metric tons) and Asian (excluding China) average (1.25 metric tons per capita). Even though the CO<sub>2</sub> emission per capita is much lower than most of the developed countries, it ranked number three in Southeast Asia, after Brunei and Singapore.

Lifestyle of the human being may be influenced by several factors. The factors can be the environment, physical and social aspect. The awareness on practicing green lifestyle might be the most important factor that encourages the lifestyle but on this study the researcher seeks to identify whether the in terms of the environment aspects of the neighbourhood planning and design do encourage the lifestyle of the residents.

In urban planning principles, several strategies have been proposed in achieving aims, on promoting a compact city, green buildings, smart transportation and land use intensification. Urban planners and designers try to re-inculcate the nature and environment into human living areas through revising the traditional and historical design approaches that vital for fortune neighbourhood planning and design to encourage and promote green lifestyle.

Therefore, the question arises is whether neighbourhood planning and design encourage the lifestyle of the resident to the issue raised above or the lifestyle of the residents very much influence by other factors.

### **1.3 Research Objectives**

The following objectives have been identified in this study:

1. To identify how far the green lifestyle being practice in the study area.
2. To identify the planning and design factor that supported the green lifestyle
3. To identify the implications of findings in planning practice of encouraging green lifestyle.

#### **1.4 Scope of study**

The scope of study includes:

1. To carry out a literature review on theories, ideas and concept of the green lifestyle and related field on neighborhood planning and design.
2. To carry out field observation to see the physical aspect of the study area.
3. To carry out a survey on green lifestyle practice in the study area.
4. To determine the implications of neighborhood planning and design on green lifestyle.

Hence, the scope of study is focused only on the residents in Taman Universiti and Taman Mutiara Rini. Methods of conducting field observation and distributing the questionnaire will be carried out.

#### **1.5 Significance of Research**

This study will examine that Green Lifestyle can enhance the health functioning of urban residents physically, cognitively and socially and contribute to well-being of the community. In the aspects of design and planning, it would reveal the properties, attributes and key dimensions of neighbourhood planning and design that would be appreciated and valued by users and the organization of spaces in towns would be improved. From the residents' responses, an analysis of humans' preferences could be formulated.

This analysis will emphasize the importance of quality neighbourhood that makes people appreciate the contribution of neighbourhood to health and well-being, hence, quality of life of urban community. Thus, the implications of planning and design will be guidelines that can be proposed to authority and help to improve the conditions of the neighbourhood. Besides, it can also helps in identifying the barrier faced to fulfill the concept of green lifestyle and the suggestion given will then enable improvement or to find solving method to solve the barrier or problem.

## 1.6 Chapter Outlines

There are six chapters for this study. Chapter 1 highlights on the introduction of the importance of good neighbourhood planning and design. This chapter covers the area of problem statement, objectives of study, significance of study and scope of study. This chapter also briefly discussed on the methodology used and outline of the study.

Chapter 2 emphasizes on the key issue of the study. The literature, theories, ideas and concept of the green lifestyle and related field will be explained in detail in this chapter. Chapter 3 addresses on the background of the study area which are Taman Mutiara Rini and Taman Universiti which is located in Skudai, Johor.

Chapter 4 described the research process created for this study. This includes the method used to gather data and quantitative techniques that adopted in order to produce the information which is required for this study. The analysis and findings of this analysis of this study will be presented in Chapter 5. The ideas, comment, opinions and comments from the targeted research groups will be gathered accordingly to achieve the objectives of this study.

Chapter 6 would be the final chapter that summarizes the findings reported in. Thus, the implications of neighborhood planning and design will be discussed in this chapter and conclusion will be made based on the findings. Summary of findings, limitations of research and recommendations for future studies will state accordingly in this chapter.

## REFERENCES

- Ahmad, Z., Ahmad, N. and Abdullah, H. (2009). Urbanism, Space and Human Psychology: Value Change and Urbanization in Malaysia. *European Journal of Social Sciences*. Volume 11, Number 3, 1 – 7. Universiti Putra Malaysia.
- Alfredsson, E. (2002). *Green Consumption Energy Use and Carbon Dioxide Emission*. Centre Umeå University: Department of Social and Economic Geography Spatial Modelling
- Balsas C.J.L (2002). *Sustainable Transportation Planning on College Campuses*. Transport Policy 10 (2003) pp35-49.
- BBC Health, (2010). *Recommended Activity Levels. How much exercise?* Available from:  
[http://www.bbc.co.uk/health/treatments/healthy\\_living/fitness/daily\\_howmuch.shtml](http://www.bbc.co.uk/health/treatments/healthy_living/fitness/daily_howmuch.shtml)
- Bell S. and Morse S. (2008). *Sustainability Indicators: Measuring the Immeasurable*. (2<sup>nd</sup> ed) London: Earthscan Publications Limited.
- Burns, R. B. (1997). *Introduction to Research Methods*. (3<sup>rd</sup> ed.) United Kingdom: Addison Wesley Longman LTD.
- Calthorpe, P. (1993). *The Next American Metropolis*. New York: Princeton Architectural Press, Inc.
- Carmona, M. (2003). *Public Places – Urban Spaces. The Dimension of Urban Design*. London: Architectural Press.
- Center for Sustainable Building Research, University of Minnesota. (2008). *Concordia College: Roadmap to a Sustainable Campus*. University of Minnesota.
- Centre for Sustainable Development, University of Westminster. (2004). *Overcoming the challenges to researching, promoting and implementing sustainable lifestyle*. Available from: [www.wmin.ac.uk/cfsd](http://www.wmin.ac.uk/cfsd)

- Chin, Y. K. (2009). *Estimation of Residential Carbon Dioxide Emission of Iskandar Malaysia by Using Energy Snapshot Tool*. Bachelor Degree Project, Universiti Teknologi Malaysia, Skudai.
- Crowe T. D. (2000). *Crime Prevention through Environmental Design: Application Architectural Design and Space Management Concepts*. National Crime Prevention Institute. Amerika Syarikat.
- Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative and Mixed Method Approaches*. (2<sup>nd</sup> ed) London: SAGE Publications.
- Department of Environment, IMPAK (2010). *Malaysia's Strategic Green Initiatives*. (Issue 3, 2010). Ministry of Natural Resources and Environment.
- De Chiara, J., Panero, J. & Zelnik, M. (1995). *Time Saver Standards for Housing and Residential Development*. (2<sup>nd</sup> ed) Sinagpore: McGraw-Hill, Inc.
- Douglas, H. 2011. *Definition of lifestyle*. Available from:  
<http://www.etymonline.com/>
- Duany, A. & Plater-Zyberk, E. (1944). The Neighborhood, the District and the Corridor. In Peter Katz. *The New Urbanism: Toward an Architetcure of Community*. United States of America: McGraw-Hill, Inc.
- Edwards B. (2005). *Rough Guide to Sustainabilty*. (2<sup>nd</sup> ed) London: RIBA Enterprise Ltd.
- Friedman, A. (2007). *Sustainable Residential Development: Planning and Design for Green Neighborhoods*. New York: McGraw-Hill.
- Gallion, A.B. & Eisner, S. (1963). *The Urban Pattern: City Planning and Design*. New York: Van Nostrand Reinhold Company.
- Greater London Council. Dept. of Architecture and Civic Design. *An Introduction to Housing Layout. A GLC Study*. (1980). London: The Architectural Press.
- Hall, K.B., Jr. and Porterfield, G.A. (2001). *Community by Design, New Urbanism for Suburbans and Small Communities*. New York: McGraw-Hill.
- Hester, R.T. (1975). *Neighborhood Space*. Pennsylvania: Dowden, Hutchington & Ross Inc.



- Ho, C.S. and Fong, W.K. (2007). *Planning for Low Carbon Cities - The Case of Iskandar Development Region, Malaysia*. Universiti Teknologi Malaysia, Skudai.
- Jabatan Perancangan Bandar dan Desa, JPBD. (2010). *Draf Garis Panduan Perancangan Perumahan*. Kuala Lumpur: Jabatan Perancangan Bandar dan Desa, Semenanjung Malaysia.
- Jan, G. (1996). *Life between Buildings: Using Public Space*. Denmark: Bianco Lunos Bogtrykkeri.
- Joshua, A. (2006). *From Urban Sprawl to Compact City – An analysis of urban growth management in Auckland*.
- Kee, C. L. L (2010). *Sustainable Students' Lifestyle in Achieving Sustainable Campus Concept*. Master thesis, Universiti Teknologi Malaysia, Skudai.
- Keele University. (2008). *Environment Policy*. Available from: <http://www.keele.ac.uk/>
- Moore, N. (2006). *How to Do Research. A practical Guide to Designing and Managing Research Project*. (3<sup>rd</sup> ed) London: Facet Publishing.
- Morgan, G. A. (2007). *SPSS for Introductory Statistics: Use and Interpretation*. (3<sup>rd</sup> ed) Mahwah, NJ: Lawrence Erlbaum.
- Newman, O. (1973). *Defensible Space: Crime Prevention Through Urban Design in the Violent City*. The Architectural Press Ltd: London, Great Britain.
- OECD. (1999). *Towards more sustainable household consumption patterns: indicators to measure progress OECD*.
- Ong, T. L. (2009). *The Use of Principles of New Urbanism in Ang Mo Kio, Singapore*. Bachelor Degree Project, Universiti Teknologi Malaysia, Skudai.
- Poyner B. and Webb B. (1991). *Crime Free Housing*. Oxford: Butterworth-Architect.
- Ranck, F. N. (1998). "Sidewalks and Paths" in *Design and Safety of Pedestrian Facilities: A recommended Practice of the Institute of Transportation Engineers*. Washington: Institute of Transportation Engineers.
- Rapoport A. (1997). *Human Aspect of Urban Form towards a Man-Environment Approach to Urban Form and Design*. England: Pergamon Press.

- Rogers (2008). *An introduction to Sustainable Development*. Glen Educational Foundation Inc. Earthscan, UK.
- Ropke, I. (1999). *The Dynamics of Willingness to Consume*. *Ecological Economics*. 28: 399-420.
- Sapsford, R. (2007). *Survey Research*. (2<sup>nd</sup> ed.) London: SAGE Publications Ltd.
- Schmitt P. (1992). *Sport for Sustainable Development. Olympic Movements's Agenda 21*. International Olympic Committee Sport and Environment Commission.
- Spaargaren, G., and VanVliet, B. (2000). Lifestyle, Consumption and the Environment: The Ecological Modernisation of Domestic Consumption. *Environmental Politics*. 9(1): 50-75.
- Tai, P. P. (2009). *Application of Energy Snapshot Tool (ESS) in Reducing Carbon Dioxide Emissions of Freight Transportation (The Case of Iskandar Malaysia)*. Bachelor Degree Project, Universiti Teknologi Malaysia, Skudai.
- Taylor, N. (1998). *Urban Planning Theory since 1945*. London: SAGE Publications Ltd.
- University of Iowa (2010). *Sustainability at Iowa*. Available from: <http://sustainability.uniowa.edu/>
- Untermann R. & Small R. (1977). *Site Planning for Cluster Housing*. United State of America: Van Nostrand Reinhold Company.
- Walliman, N. (2006). *Social Research Methods*. London: SAGE Publications.
- Western Australian Government (1997). *Livable Neighborhoods: Community Design Code*. Perth: Western Australian Planning Commission.
- Wheeler S.M. (2004). *Planning for Sustainability: Creating Livable, Equitable and Ecological Communities*. London: Routledge, Taylor & Francis Group.
- Walker, B. (1986). Public health responsibilities, roles, and realities. (1986). *American Journal of Public Health*. Washington.
- Xinxin, C. (2011). *Redesign of a demolished neighborhood: Creating a healthy, safe and sociable Cabrini Green in Chicago*. Master thesis, University of Illinois.

## BIBLIOGRAPHY

- Abu, M. S. and Tasir, Z. (2001). *Pengenalan Kepada Analisis Data Berkomputer: SPSS 10.0 for Windows*. Kuala Lumpur: Venton Publishing.
- Agenda 21 (1992). United Nation Conference on Environment and Development. Rio de Janiero, Brazil.
- Bell D. and Hollows J. (2005). *Ordinary Lifestyle: Popular Media, Consumption and Taste*. United Kingdom: Open University Press.
- Brundtland Report (1987). World Commission on Environmental and Development (WCED).
- Comprehensive Development Plan for South Johor Economic Region 2006-2025. (2006). Kuala Lumpur: Khazanah Nasional.
- Glavic P. and Lukman R. (2007). Review of Sustainabilty Terms and Their Definitions. *Journal of Cleaner Production*. 15 (2007). Pp 1878-1855.
- Grant, Jill. (2006). *Planning the Good Community: New Urbanism in Theory and Practice*. New York: Routledge, Taylor & Francis Group.
- Green, S. B., Salkind, N. J. and Akey, T. M. (2000). *Using SPSS for Windows: Analyzing and Understanding Data*. (2<sup>nd</sup> ed.) Upper Sadle River, N. J.: Prentice Hall.
- Hall, Kenneth B. (2001). *Community by Design: new Urbanism for Sururba and Small Communities*. New York: McGraw-Hill.
- Jackson T. (2008). *The Challenge of Sustainable Lifestyle in State of the World. Innovations for a Sustainable Economy*.
- Jacobs, J. (1961). *The Death and Life of Great American Cities*. New York: Random House.

- Katz P. (1994). *The New Urbanism towards an Architectural of Community*. McGraw-Hill, Inc. New York.
- Ariffin, H. (2011). Kertas Kerja 5. *Perancangan Hijau dan Low Carbon Cities*. 25<sup>th</sup> May 2011. Kuala Lumpur: Jabatan Perancangan Bandar dan Desa Semenanjung Malaysia.
- Lai, S.Y. (2006). *Pencegahan Jenayah Melalui Reka Bentuk Susunatur Perumahan, Kajian Kes: Taman Ungku Tun Aminah dan Taman Mutiara Rini, Skudai*. Bachelor Degree Project, Universiti Teknologi Malaysia, Skudai.
- Llweyn-Davis, Urban Design Compendium, English Partnerships & The Housing Corporation, London.
- Lynch, K. (1960). *The Image of the City*. Cambridge, MA: MIT Press.
- Moore, R.L. (1965). Psychological factors of importance in traffic engineering. In *International Study Week in Traffic Engineering, 1-6 October, 1956, Stresa, Italy*. London: World Touring and Automobile Organisation.
- Muhammad Zaly Shah (2003), *Sampling Design. Quantitative Methods*. Universiti Teknologi Malaysia, Skudai.
- Patspence (2010). *What a "Sustainable Lifestyle" Really Means and How to Live One*. Available from: <http://www.brightbub.com/environment/green-living/articles/77017.aspx>
- Perry, C. A. The Neighborhood Unit. In Watson, D., Plattus, A., Shibley, R. (2003). *Time-Saver Standard for Urban Design*. New York: The McGraw-Hill Companies, Inc.
- Scott K. (2009). *A Literature Review on Sustainable Lifestyle and Recommendation for Further Research*. Stockholm Environment Institute, Project Report.
- Symposium on Low Carbon Asia Research Projects (4<sup>th</sup> -5<sup>th</sup> July 2011). Universiti Teknologi Malaysia.
- The New Urbanism: A better way to plan and build 21<sup>st</sup> Century Communities*. New Urbanism News, Accessed on 10<sup>th</sup> November 2011. Available from: <http://www.newurbannews.com/AboutNewUrbanism.html>
- Zakaria, Z. and Md, H. (2001). *Analisis Data Menggunakan SPSS Windows*. Skudai: Universiti Teknologi Malaysia.