

# **Outdoor Space as Integral Component in Home making at Low-cost Housing in Bangsar**

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## **ABSTRACT**

Low-cost housing is often subjected to minimum dwelling space and this forces the life of its residents to spill outdoors. Outdoor space provided at multilevel low-cost housing especially is usually the product of an afterthought by the designer and developer. It is often stereotyped with poor condition and if not neglected maintenance-wise, it is often abused for other purposes. This also affects the perception and usage of the residents of this outdoor space provided at their home. The role of outdoor space at low-cost housing is often overlooked, while in reality, the provision of this outdoor space is vital for the residents as it helps the residents in the process of home making and to define and achieve the quality of life, especially in low-cost housing. Therefore, this paper aims to study the residents' usage of outdoor spaces that can contribute to the wellbeing and home making of the residents.

Limited to the communal outdoor space provided at the ground floor of low-cost housing, this study used systematic observation method to study the usage of the outdoor space provided at three selected multilevel low-cost housings in Bangsar. The patterns and behaviours of residents using the outdoor space are recorded and categorised into social and retreat activities. This study also used semi-structured interview conducted to various respondents found at the outdoor space to get personal opinions from the residents of the selected sites. Recurring themes and keywords among the respondents interviewed are mapped and analysed.

It was determined that outdoor space plays an integral role in both fostering social engagements between residents as well as being the personal retreat option in the process of home making, especially among kids, stay-at-home adults and elderly due to less attachment to commitments. It is also found that outdoor space configuration and location, as well as the presence of immigrants affect the usage of the outdoor space provided at low-cost housing. Combination of both social and retreat activities at outdoor space shows that residents tend to appropriate these outdoor spaces to cater the spill over activities that are not favourable to be happening at their home. Notably, appropriation of outdoor space at low-cost housing provides room for social interaction to happen. Social interaction in return build familiarity and trust among the residents which is vital in creating a cohesive neighbourhood. A cohesive neighbourhood creates attachment to a place by instilling sense of belonging. These transactional process eventually contributes to home making at low-cost housing.

*Keywords: low-cost housing, outdoor space, home making*

## **INTRODUCTION**

### **1.1 Background of Study**

The growing urbanization in Malaysia, particularly in city centre like Kuala Lumpur has resulted in the demand and need to provide urban housing for the low income group. This is due to ever increasing land price and cost of living, however the need to live in city centre for job opportunities. Development of low cost housing has been an important social and political agenda in Malaysian development policies. Evidently, in the Eighth Malaysia Plan, 200,513 units of low cost housing were built and later followed by 165,400 units during the Ninth Malaysia Plan (Government of Malaysia 2005).

According to Syarikat Perumahan Negara Berhad (SPNB), low cost house can be defined as a house with built up area of 700 square feet and priced from MYR35,000.00 in Peninsular Malaysia while from MYR50,000.00 in East Malaysia or Malaysia Borneo. The Program Perumahan Rakyat (PRR) on the other hand, the selling price for its units are MYR30,000.00 or MYR35,000.00 in Peninsular Malaysia, depending on location. Under this program, multi-storey low cost housing between 5 to 18-storey were built with the minimum 700 square feet floor area.

Due to the need for economic efficiency and building guidelines, layout variations of these low cost housing have been restricted. Concerns over the liveability of flats grow as studies on residential preference and satisfaction repeatedly show the importance of such low cost housing design to be more sensitive to the social implications of physical planning (Paim & Yahaya, 2004)

Neighbourhood satisfaction is very important in housing quality as it indicates the residents' quality of life. Therefore, it is crucial to ensure residents' satisfaction in housing to acquire good quality of life. In the notion of low cost housing, due to restriction in design to achieve economic efficiency, the Outdoor Environment Quality (OEQ) the risk is much higher than other type of housing. The Importance of outdoor environment in low cost housing is more critical since the indoor space limitation may encourage the occupants to spend more time outside with various activities, especially to children and teenagers. However, it is always the quality of outdoor environment in low cost housing that is being compromised. For instance, due to the minimum number of parking provided over the high density of residents in low cost housing, the open outdoor space, which is

the place where vibrant social activities usually take place, always being abused to cater the insufficient parking spaces. This has resulted in poor OEQ which will affect the neighbourhood satisfaction and the essence of home making in low cost housing being compromised.

Home making is about sense of place, combining both physical and social environment. Due to sheer lack of space and standardization of design, low cost housing barely satisfies the fundamental human needs for shelter and neglects other needs that people aspire of a home including psychological, social, and aesthetic needs and ultimately, the need for self-actualization (Israel, 2003). These needs are clearly influenced by people's personal, cultural, and social background, values and lifestyles. Together, they determine the goals people set for their picture of ideal homes (Festinger et al, 1950)

However, it can be seen that due to lack of resources and provision of minimal space, residents in low cost environment strive harder to achieve these goals and struggle to distinguish their self-presentation and and deflect the negative stigma of living in the depressing conditions (Klaufus, 2000).

The activities of making home place is a combination of physical and social environment, the interplay of which may create either a stimulating, satisfying background for people or a dull and frustrating one. It is the quality of physical aspects of 'place' and the opportunities for social life and activity offered which will largely determine how good a home is.

Hence, basing on field observations, it is accordingly important to study about the residents' perception of having open outdoor space in low cost housing, besides promoting the vitality of having this outdoor space as an integral component in home making.

## **1.2 Statement of Problem**

Being high in density and limited built up area for families to dwell in, the provision of outdoor space can be seen as a secondary space where living could occur in low cost housing. Having outdoor space in low cost housing could also be used as social

space which in return contribute to neighbourhood liveliness, an essential too in home making. It is therefore important to know whether the provision of outdoor space essential in the home making of low cost housing.

Hence, several research problems have been identified:

- 1.2.1) Residents' of low cost housing do not utilize the outdoor space provided at their homes.
- 1.2.3) Outdoor space at low cost housing is poorly maintained and often abused for other purposes.

### **1.3 Research Questions**

Based on this, there are several questions being raised:

- 1.3.1- What is the relationship between the provision of outdoor space and home making at low-cost housing?
- 1.3.2- How do the residents perceive the provision of outdoor space at low-cost housing?
- 1.3.3- How effective does outdoor space contribute to home making at a low-cost housing?

### **1.4 Research Aim and Objectives**

The aim of this research is to study the usage of outdoor spaces at low-cost housing that can contribute to the wellbeing of the residents.

#### **Objectives of the Study:**

- 1.4.1- To identify the attributes of home making at low-cost housing.
- 1.4.2- To study about the residents' usage of outdoor spaces at their home.
- 1.4.2- To promote outdoor spaces as an integral component in home making at low-cost housing.

## **1.5 Scope of Study**

This research will be focusing on the residents' perception on the quality of outdoor environment, particularly the open outdoor space. The scope of the study shall focus on the needs of the residents for outdoor open spaces looking at the aspect of use and security. The study shall cover three low-cost multilevel residential which are Flat Sri Pahang, Apartment Abdullah Hukum and Apartment Putra Ria, are all located in Bangsar, Kuala Lumpur due to research limitation.

## **1.6 Research Gap**

There are several studies that have been conducted pertaining to the issue of outdoor space in low cost housing, however mostly covering on the perception of residents towards the provision of the space only.

Presently, there are no specific guidelines or criteria in terms of the design of outdoor space in low cost housing outlined by the Malaysian building authorities. It is noticeable that there is gap in the study that is more focused on physical realm aspect of the outdoor space provided that could contribute to the home making of the low cost housing.

## **1.7 Research Methodology**

Described by Babbie (2007) as the science of finding out, research methodology is a central driver directing the research along the right path. The aim is to explain the methods that were used in the course of this study of sustainable low cost high rise housing in urban areas in Kuala Lumpur, Malaysia. When a researcher decides on and designs their research they are involved in a series of choices and selections, therefore these decisions are also reflected upon so that each one can be justified. The research shall be conducted via Quantitative Methods, through systematic observation and interview.

Literatures from various sources will be reviewed to formulate a checklist that will be used during systematic observation. Residents' behaviour at outdoor space shall be observed and recorded at selected sites utilizing behavioural checklist obtained from

various literatures. Semi structured interview is conducted to to random respondents at selected sites to get their personal opinions about outdoor space provided.

### **1.8 Limitation of Study**

This study is also limited by resources, notably time and financial. Larger samples and multiple cases may have added to the generalizability of the study if greater resources had been available.

### **1.9 Significance of Research**

At the end of this research, the issues and the residents' perception on outdoor space in low cost housing will be identified. These research findings may be used by the building authorities or agencies, such as Projek Perumahan Rakyat (PPR) to help in outlining the guidelines in designing outdoor space in low cost housing that could contribute to home making. This in return will benefit in terms of residents' satisfaction and quality of life.

## **LITERATURE REVIEW**

Reviews contributes to the theoretical understanding of the whole research. It starts with the definition of low-cost housing in Malaysia and is followed by outdoor space in low-cost housing and home making in low-cost housing.

### **2.1 Low-cost Housing in Malaysia**

Aiming to promote the welfare of the lower income group in Malaysia, low-cost housing was first introduced in the First Malaysia Plan through Economic Planning Unit (EPU), implemented through the State and with the financial assistance by the Federal Government. During its early introduction, low-cost housing was constructed to relocate and solve the squatter settlements issues in urban areas and for renting purposes (Aziz, 200; EPU, 1065).

The provision of housing in Malaysia is through two sectors, both Public and Private. The Public sector is mainly catering for the middle and low-cost housing while the Private sector is mainly catering for the middle and high end housing, as mentioned by Guerguil (1988). However, it is noticeable that there are various organisations and federal agencies that are assigned to manage and implement the provision of low-cost housing. This has resulted in the disorganisation of responsibilities between different parties which subsequently risks the quality of housing and implementation process.

Program Perumahan Rakyat (PPR), a programme that was introduced by the Government has helped to curb the need to provide an affordable housing for the lower income group in urban areas. The Prime Minister, Dato' Seri Najib Tun Razak during the Eleventh Malaysia Plan presentation stated that the Government aims to provide 47,000 units of low cost house, which will be implemented from 2016 to 2020 to cater the need of the low income group in the city. As of today, there has been 74,300 units of affordable houses built through Tenth Malaysia Plan.

The development of low cost housing is mainly focusing on achieving economic efficiency through its standardisation of design and minimum space provision. This has often lead to a socially unsustainable design due to many aspects of achieving quality of life being neglected. Demographically, the dwellers of low cost housing consist of those who are financially limited and are subjected with minimal housing options. There are growing literatures pointing about the issues relating to the quality of life in low cost housing.

A study conducted by Mohamed M. A, et al. (2014) for instance, pertaining to a case study of Flat Taman Sentosa mentioned about low-cost housing always being associated with poor quality of outdoor environment due to poor quality of workmanship, minimum quality of materials, poor maintenance, lack of facilities and security and minimal carpark when compared to other types of high-density housing.



## **2.2 Outdoor Space in Low-cost Housing**

Due to limited space provision in each unit of low cost housing to achieve economic efficiency, outdoor space plays a vital role to ensure that living could take place. Outdoor space by its definition can be defined as a space outside the internal living unit which consists of communal open space, common facilities including playground et cetera. These outdoor spaces are especially essential in low cost housing due to the presumption that the demography of its dwellers is those with limited financial ability to have options in terms of entertainment mobility thus, outdoor space can be used as a place where various social activities could take place. This in return will contribute to the liveliness of the neighbourhood and improve the quality of life there (Azhan et al., 2011).

The role of outdoor space is indeed robust and is sought after in a high-density development. It can be used as a place where spill over activities could take place considering that the minimal internal unit layout has limited the activities to be held, especially when it comes to those with high number of household. This outdoor space is vital in low-cost housing as it promotes social interaction between residents which will eventually lead to the liveliness of the neighbourhood and develop sense of attachment for to achieve good quality of life. However, due to minimal car parking provision in most low-cost housing development, it is often noticeable that outdoor open space being abused for another socially unsustainable purpose; carpark extension.

There have been many studies conducted by individuals over the provision of outdoor space in low-cost housing and it can be deduced that outdoor space does promote good quality of living. A study conducted by Azhan et al. (2010) for instance mentioned about low-cost flats' outdoor space being a vital social environment for children. In his study, he found out that spatial standard and economic efficiency has limited outdoor space near the home areas and the differences of flats configurations will affect the pattern of children appropriation of the outdoor space.

A study conducted by Mohamed M. F et al. (2014) regarding the the outdoor environment of low-cost housing on the other hand stipulates that the residents are generally satisfied with the outdoor environment of their homes, except that there are concerns regarding safety and poor maintenance. This is however arguable due to the fact that people tend to adapt to the surrounding environment and be satisfied with it even

though the living condition is poor not up to minimum criteria of what constitutes as a good living environment.

As of today, there has been no specific design guidelines outlined by Government agencies and authorities regarding the provision of outdoor space in low-cost housing. The current guidelines only mention about the need to provide a percentage of outdoor space and common facilities, but not on how an outdoor space in low-cost housing should be designed to achieve residents' satisfaction and home making.

### **2.3 Home making in Low-cost Housing**

Home making as defined by Oxford Dictionaries is the creation and management of a home, especially as a pleasant place in which to live. In most developing countries including Malaysia, the issue of low-cost housing is mainly about the neglect of quality of life and home making elements due to poor design quality because of the lack of space and standardisation of design to achieve economic constraints. Due to this, the outdoor space in low-cost housing plays an essentially important role in complementing the house unit and the residents' home making process.

The process of making house a home comprises of both physical and emotional attributes. These attributes are influenced by the people's personal cultural and social background, values and lifestyles which in the case of low-cost high density housing, it combines together to form a cumulative shared idea of an ideal home (Festinger et al. 1986).

The high density of low-cost housing will have the issue of social isolation and the role of outdoor space is indeed relevant and important to promote social interaction between residents. Hence, outdoor space should be a place where social engagement between residents takes place. Social interactions between residents promote social sustainability, one of the key important thing that contributes to sense of attachment to a place. This will eventually contribute to home making in low-cost housing (Mee, 2007).

Werner, Altman, & Oxley (1985) came out with a comprehensive framework in describing home making process. They discuss that people relate to places with meaning

and significance and act in ways that reflect their bondage and linkage with place by ways of appropriation, attachment and identity (Werner, et al., 1985).

Appropriation as defined by Brower (1980) is the exercise of control or the ability to appropriate and act upon the space to exert territoriality, care, ownership, visual and physical security. B. Brown, Perkins, & Brown, (2003) define attachment to a place as the bonds people have to physical and social settings that support their identity and provide them with other psychological benefits. It also includes experiences and perception of place, memories and history and last but not least, comfort. Identity in the context of home making as defined by Brower (1980) is attachment in the sense that the place of attachment affords territory for associations with self-image of social identity. Hence, it is noticeable that home making in residential environment is an interactive process between the residents and the surrounding social contexts of the residential area.

Table 2..1 Summary of Attributes to Home Making

Attribute	Definition
Appropriation	<p><i>“The exercise of control or the ability to appropriate and act upon the space to exert territoriality, care, ownership, visual and physical security.”</i></p> <p>Brower (1980)</p>
Attachment	<p><i>“The bonds people have to physical and social settings that support their identity and provide them with other psychological benefits.”</i></p> <p>B. Brown, Perkins, &amp; Brown, (2003)</p>
Identity	<p><i>“Attachment in the sense that the place of attachment affords territory for associations with self-image of social identity.”</i></p> <p>Brower (1980)</p>

Home making is interrelated to quality of life. A housing that promotes quality of life is a manifestation of a successful home making process towards an ideal home. The provision of successful outdoor space will improve the quality of outdoor environment in low-cost housing which eventually develop a sense of attachment to a place, regardless of different types of housing. A research conducted by G. Rowles & Watkins (2003) found out about a framework to develop a sense of place that is contributed from the habitual use of space (physical aspects), social interaction (social aspects) and meanings and events attached to the place (personal aspects).

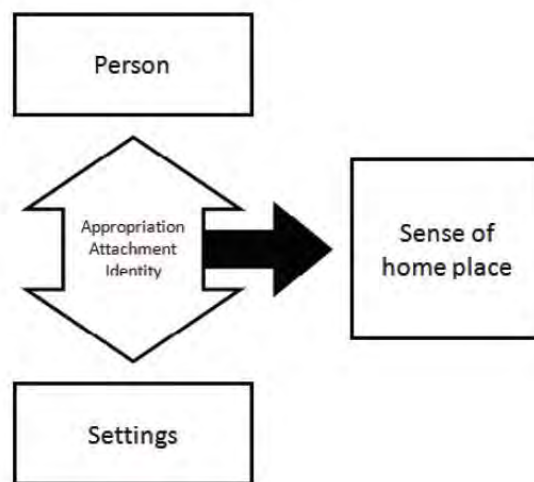


Figure 0.1 Sense of Home Place Attributes

A study by Sahin N. P. et al. (2017) on the assessment of quality of life in residential environments on the other hand uses an assessment tool that was developed from various indicators; physical attributes, functional attributes, social attributes, standard of living, environmental health and access to goods, economic condition and last but not least, happiness and freedom.

Table 2..2 Quality of Life Assessment Tool

Indicator	Determinant	Method of assessment
Physical Attributes	<ul style="list-style-type: none"> <li>-Physical characteristics of building interiors and exteriors,</li> <li>-Physical characteristics of public open spaces,</li> <li>-Attractiveness of place</li> </ul>	<ul style="list-style-type: none"> <li>-Determining level of obsolescence</li> <li>-Structural condition</li> <li>-Quality of construction Material</li> </ul>
Functional Attributes	Functional diversity	Determining variety of functions in the area
Social attributes	-links with social environment	<ul style="list-style-type: none"> <li>Questioning sense of acceptance by intimate others</li> <li>-# of family friends</li> </ul>
Standard of living	<ul style="list-style-type: none"> <li>-employment</li> <li>-physical health</li> <li>-personal hygiene</li> <li>-physical appearance and clothing</li> <li>-# of family members</li> <li>-purposeful activities to achieve personal goals</li> </ul>	<ul style="list-style-type: none"> <li>-questioning place of employment</li> <li>-observing general appearance, cleanliness, health</li> <li>-determining # of people living in one house</li> <li>-questioning day to day actions (domestic activities, activities promote relaxation and stress reduction)</li> <li>-cleanliness of the living area</li> </ul>
Environmental health and access to goods	<ul style="list-style-type: none"> <li>-presence of health and social services</li> <li>-level of air quality</li> <li>-access to resources available to community members</li> </ul>	<ul style="list-style-type: none"> <li>-determining existence/proximity of health and social services</li> <li>-determining availability of educational, recreational programs and community activities</li> <li>-cleanliness of the environment</li> </ul>
Economic condition	-level of income	-questioning adequacy of income
Happiness and freedom	<ul style="list-style-type: none"> <li>-psychological health and adjustment</li> <li>-feelings</li> <li>-personal values</li> <li>-spiritual beliefs</li> </ul>	<ul style="list-style-type: none"> <li>-evaluations concerning the self and self control</li> <li>-questioning person's fit with his/her environment</li> <li>-questioning connections of the person with his/her environment (home, neighborhood, school, work place, community, neighborhood)</li> </ul>

These frameworks gathered from different literatures should be used to provide a guideline to design an outdoor space in low-cost housing as currently, there is no specific guidelines outlined by the Malaysia Housing Policy Board on how to design an outdoor space in low-cost housing to achieve quality of life and successful home making.

## METHODOLOGY

### 3.2 Research Design

This research uses a qualitative research method to analyse the residents' usage of outdoor space in low-cost housing. As defined by Qualitative Research Consultants Association (QRCA), qualitative research is designed to reveal a target audience's range of behaviour and the perceptions that drive it with reference to specific topics or issues. This will bring to a results that is more descriptive rather than predictive. In another words, qualitative research is an approach that allows assessment on people's experiences in detail, by using a set of research methods such as in depth interviews, observation, content analysis, visual methods and life histories or morphological studies. Among the main salient features of qualitative research is that it allows identification of issues from the perspective of study participants and to comprehend the meanings and interpretations that they give to behaviour, events or objects (Hennink, Hutter, & Bailey, 2011).

In relation to studying the usage of outdoor spaces in low-cost housing, research is headed towards this type of method as it helps to give a deeper depth of information. Outdoor space act as the main subject in which it will be analysed thoroughly for its role that contributes to home making in low-cost housing. To conduct the procedure of doing qualitative method, research is designed with consideration of several aspects such as:

1. Period of conducting research
2. Type of data collection
3. Instrument of research
4. Location of research
5. Strategy and procedures of collecting data
6. Methods of arranging, analysing and interpreting data

*“A methodological framework is viewed as a reference guideline throughout the study and will allow the researcher to set path of the research using specific method and techniques, and to remain committed to the research design in a creative way.”*

(Sarantakos, 2005)

### 3.3 Research Area

Bangsar is famous for its affluent neighbourhood located at the outskirts of Kuala Lumpur. It is a part of Lembah Pantai parliamentary constituency and is administered by Dewan bandaraya Kuala Lumpur (DBKL). Malays make up the majority of the population at 61% followed by Chinese at 24 %, and Indian at 15% (Wikipedia). Amidst all the fancy lifestyle and upper class addresses and destinations, there lies the only three multilevel low-cost housing which are Flat Sri Pahang, Apartment Abdullah Hukum and Apartment Putra Ria. These low-cost housing will be the sites for field observation to be conducted. As for being the socioeconomically underprivileged in Bangsar, it is essential to study how the residents of these low-cost housing make do with what they have. This research aims to study how residents of these low-cost housing define home through the selected subject matter which is outdoor space.



Figure 0.1 Research Area in Bangsar



#### Site 1 – Flat Sri Pahang (S1)



Figure 0.2 Photo of Flat Sri Pahang

This housing low-cost housing were built to house the poor in the late 1960s and was officially opened by former prime minister Tun Abdul Razak on Sept 10, 1975. There are a total of 1,017 units spread over nine blocks. Six hundred and thirty units are one-room flats measuring 380sq ft, and 387 units are two-room flats measuring 550 sq ft. Out of the nine blocks, six are five-storey blocks, and three are 17-storey blocks. Currently the total number of tenanted units is 842.

#### Site 2 – Apartment Abdullah Hukum (S2)



Figure 0.3 Photo of Apartment Abdullah Hukum



Apartment Abdullah Hukum is a high-rise low-cost apartment located off Jalan Bangsar, just at the tip of Mid Valley City. The typical, average units' size for this apartment is 750 sq.ft. with 3 bedrooms and 2 bathrooms. This apartment has basic facilities for its residents such as surau, covered parking bays built on annexe, community hall and children's playground. Shopping malls such as MidValley Megamall and The Gardens are just a 5-minute walk away from the apartment.

Apartment Abdullah Hukum is well-connected via major road networks that include Lingkar Syed Putra, the Federal highway, the East-West Link highway, the KL-Seremban highway and the New Pantai Expressway. The nearest train station is walking distance away at Mid Valley Megamall's KTM Komuter station and the RapidKL Abdullah Hukum station. There are ample RapidKL buses and city taxis servicing the area providing convenient commuting.

#### Site 3 – Apartment Putra Ria (S3)



Figure 0.4 Photo of Apartment Putra Ria

Putra Ria Apartment is one of the most strategic low-cost flat apartments in the entire Klang Valley. It is sited right next to Apartment Abdullah Hukum. Conveniently located in Bangsar, this apartment is sited in between Mid Valley City, KL Eco City and Bangsar commercial hub. This high-density low-cost apartment comprises 4 tall blocks and houses units with built-up size of 606 sf and 646 sf. Each unit is built with 3 bedrooms and 2 bathrooms. Only basic facilities are provided at the apartment such as surau, car parks and a community hall.

Being located in the matured Bangsar neighbourhood, the complete amenities surrounding Putra Ria Apartment is one of the main reasons why residents call this apartment home. Conveniently, Mid Valley Megamall and The Gardens are just less than five minutes walk.

### **3.4 Research Instrument**

The instrument used for this study is researcher-made checklist to gather the needed data for the residents and the outdoor space profile. The checklist is formulated based on researcher's readings on various literatures relevant to this study and is used during the data collection which are systematic observation and semi-structured interview.

The checklist will be used to observe the outdoor space located at each site and the criteria for the formulation of this checklist includes:

1. Function
2. Location
3. Cleanliness
4. Safety
5. Aesthetic
6. Social
7. Environment

Another instruments used to conduct this research are sketches and photographs which are used to record the observation at all three sites.

RESEARCH QUESTIONS	RESEARCH OBJECTIVES	RESEARCH METHODS	APPROACH / WAY	INSTRUMENT	EXPECTED OUTCOME
<b>What</b> is the relationship between the provision of outdoor space and home making at low-cost housing?	To <u>identify the attributes of home making at low-cost housing</u>	Qualitative	Literature Review	<ul style="list-style-type: none"> <li>- Home making criteria / checklist</li> </ul>	Determine: Home making criteria at low-cost housing
<b>How</b> do the residents perceive the provision of outdoor space at low-cost housing?	To <u>study about the residents' usage of outdoor spaces at their home.</u>	Qualitative	Systematic Observation Interview	<ul style="list-style-type: none"> <li>- Site visit</li> <li>- Sketches</li> <li>- Photographs</li> </ul>	Identify: Residents' usage of outdoor space at low-cost housing  Residents' perception of having outdoor space at their home
<b>How</b> effective does outdoor space contribute to home making at a low-cost housing?	To <u>promote outdoor spaces as an integral component in home making at low cost housing.</u>	Qualitative	Analysis Precedence / case study	<p>Comparison:</p> <p>Home making criteria from literature review to validate outcome of systematic observation and interview.</p>	Determine: What are the current issues and how the criteria and precedence study found help to improve outdoor space provided at low-cost housing.

## Overview of Research Design

The following content summarizes the actions used to carry out this research.

- I. Before the actual collection of data, literatures from various contributing fields are reviewed and brought together to study the definition of outdoor space, low-cost housing and home making. These literatures will help to identify the behavioural components of home making attributes in order to develop a conceptual framework that will allow researcher to describe the objective of home making behaviours in low-cost housing.
- II. Research area is chosen and three sites are selected to test the conceptual framework formulated. Research area is limited to multilevel low-cost housing in Bangsar.
- III. Using systematic observation method, field observation is conducted at selected sites. Age, gender and behaviours of the residents of each site are recorded and mapped by researcher at four predetermined time periods; morning (9am to 10am), afternoon (2pm to 3pm), evening (5pm to 6pm) and at night (9pm to 10pm), covering all seven days of a week. Behaviours observed are categorized as social and non-social activities (Sullivan, Kuo and Depooter, 2004). Non-social ones are further defined as domestic and retreat activities.
- IV. Semi-structured interviews are conducted with random residents with various profiling found at outdoor space of each site, done during the predetermined time periods to obtain the perceptual data of the residents. Questions asked are based of the theoretical framework of making home place as discussed by (Werner, et al., 1985) which are appropriation, attachment and identity, but are modified to easy terms for better understanding of residents. The interviews are designed to understand the residents' perception of outdoor space usage at their homes.
- V. All literature reviews, observations and interview data are recorded and descriptively analysed, and are presented to portray the home making of low-cost housing through the usage of outdoor space.

### 3.6 Data Collection Procedure

For this research, there are two methods that are being used to collect data which are systematic observation and semi-structured interview. Data collection is a process that begins before the analysis and output stage.

#### 1. Systematic Observation

Using systematic observation method, field observation is conducted at selected sites. Field observation will be conducted through a combination of participant

observation and direct observation. Age, gender and behaviours of the residents of each site are recorded and mapped by researcher at four predetermined time periods; morning (9am to 10am), afternoon (2pm to 3pm), evening (5pm to 6pm) and at night (9pm to 10pm), covering all seven days of a week. Checklist formulated from the literature reviews is used during the field observation. Behaviours of the residents observed are categorized as social and non-social activities (Sullivan, Kuo and Depooter, 2004). Non-social ones are further defined as domestic and retreat activities. The differences between participant observation and direct observation are as follows

Table 3.2 Difference between Participant Observation and Direct Observation

Participant Observation	Direct Observation
<ul style="list-style-type: none"> <li>• Mainly descriptive / interpretative</li> <li>• Subjective / humanistic</li> <li>• Emphasis on meaning / interpretation</li> <li>• Largely informal</li> <li>• Flexible on information collection</li> <li>• Analysis primarily interpretative</li> </ul>	<ul style="list-style-type: none"> <li>• Mainly analytic / categorical</li> <li>• Objective</li> <li>• Emphasis on observed behaviour</li> <li>• Formal and disciplined</li> <li>• Highly structured in data collection</li> <li>• Analysis primarily quantitative</li> </ul>

## 2. Semi-structured Interview

This method involves direct interaction between the researcher and a respondent or a group. According to Research Methods Knowledge Base, it differs from the traditional structured interview which is more technical and has certain protocol that should be followed. However, semi-structured interview should not be confused with unstructured interview as the latter suggests an approach that tends to be unique with no predetermined set of questions. The semi-structured interview that is used in this research has a set of predetermined questions which the researcher devised based on the three attributes to home making which are appropriation, attachment and identity. However, even with the predetermined questions, researcher is free to move the conversation in any direction of interest

that may come up. The questions are altered to easy comprehensible terms considering the residents' knowledge preparedness.

Table 3.3 Types of Interview

Structured Interview	Technical and has protocol to be followed
Semi-structured Interview	Has predetermined set of questions but free to move conversation to area of interest
Unstructured Interview	Unique and no predetermined set of questions

Interviews are conducted with random residents at each site during the fieldwork conducted at the predetermined time periods. This method is used in the research to get an overview of residents' perception of having outdoor space and its usage that contributes to home making at their homes.

## DISCUSSION

The data collection of study in the context of three research questions. All the findings from the field observations are showed here The data findings are discussed and compared in order to evaluate the usage of outdoor space and its role that contributes to home making in low-cost housing.

### 4.1 Introduction

this research aims to study the usage of outdoor spaces at low-cost housing that can contribute to wellbeing of the residents. The objectives are:

1. To identify the attributes of home making at low-cost housing
2. To study about the residents' usage of outdoor spaces at their home
3. To promote outdoor spaces as integral component in home making at low-cost housing

It is explained that field observation procedures, through systematic observation and semi-structured interview is used. The information consists of all the data collection conducted during site visit to all three sites in Bangsar.

#### 4.2 Flat Sri Pahang (S1)

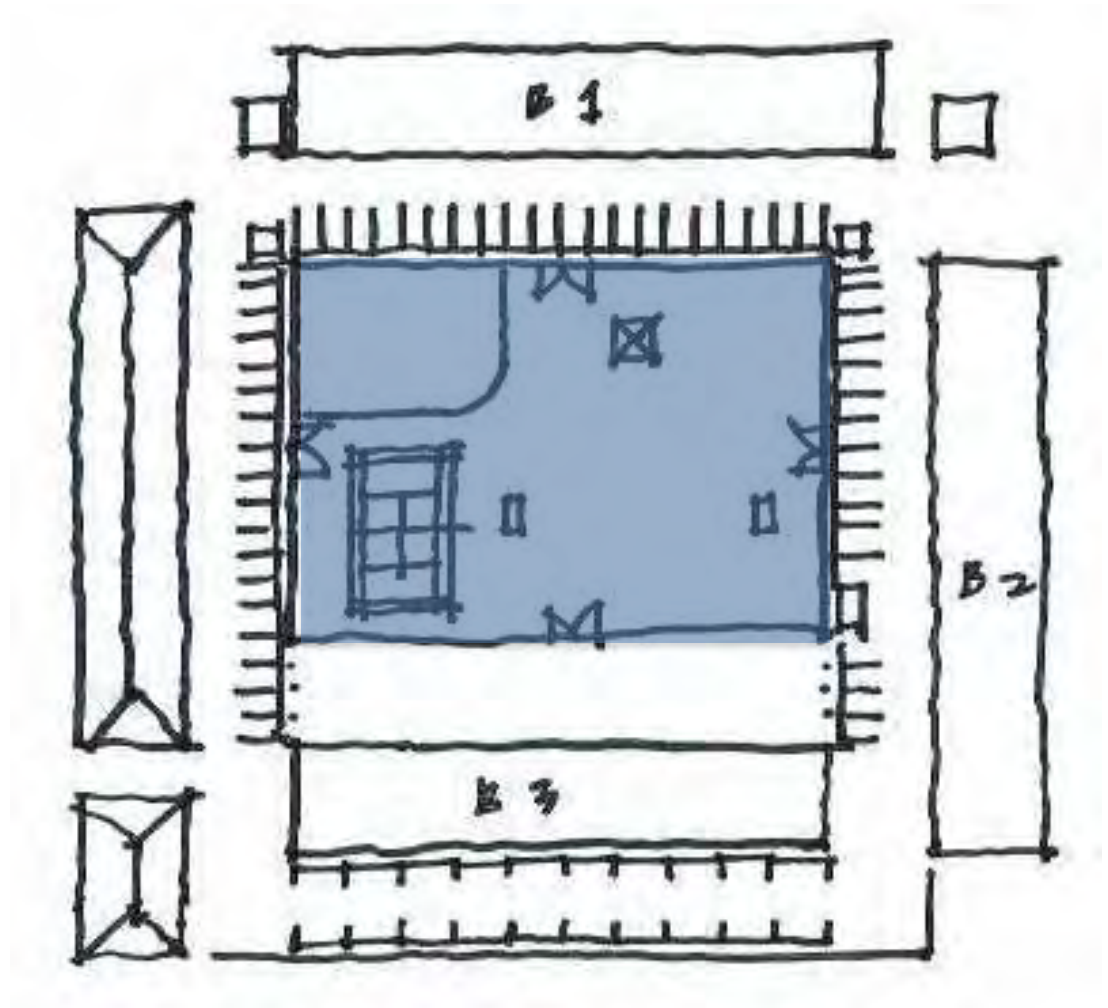


Figure 0.5 Site Plan of Flat Sri Pahang

The outdoor space as indicated with the colour blue in the sketch above is located at the centre in between residential block B1, B2, B3 and food stalls as shown on the left side. The centralised outdoor space comprises of playground, outdoor courts and several gazebos. There is road and parking lots circulating the outdoor space there.

The table below tabulates the observation done by researcher according to the checklist formulated earlier in the research stage:

Table 4.1 Observation Checklist of Flat Sri Pahang

	<b>Observation</b>
<b>Function</b>	<ul style="list-style-type: none"> <li>• Facilities provided includes playground, multifunction outdoor courts and several gazebos</li> <li>• No bench provided for comfort of residents</li> <li>• At times, the road adjacent to outdoor space is transformed to function space. E.g. wedding.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• Location of outdoor space has made it possible for social interaction between residents</li> <li>• Outdoor space, when empty will be used to travel to opposite blocks by residents</li> </ul>
<b>Cleanliness</b>	<ul style="list-style-type: none"> <li>• No dustbin provided, hence very dirty. Residents seem okay with the poor environment</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Outdoor space is gated with several entrances</li> <li>• Gazebo provides surveillance form parents hanging out there</li> <li>• Road surrounding the outdoor space tends to get busy at times and dangerous for kids to cross without supervision</li> </ul>
<b>Aesthetic</b>	<ul style="list-style-type: none"> <li>• Playground has been vandalised and some play structures are not functioning and are dangerous</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• Vibrant. People tend to greet each other when they bump into each other</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Very sunny and warm at times because less shady trees planted</li> <li>• Regardless of poor environment, residents still utilise the outdoor space provided</li> </ul>



The top photo shows the poor condition of the playground that has undergone incidents of vandalism. Some play structures are no longer working and are dangerous. The bottom photo shows kids playing at the outdoor court and mothers chit chatting at the gazebo.



Figure 0.6 Playground in Poor Condition



Figure 0.7 Kids Playing at Outdoor Court



The photo on top shows the road and parking lots adjacent to the outdoor space converted allow function to happen while the bottom photo shows some residents hanging out at the gazebo playing carom and checkers.



Figure 0.8 Canopies Installed during Wedding



Figure 0.9 Gazebo where Elderly Enjoys Spending Time At

Tables below show the tabulated behaviours of the residents at the outdoor space of the low-cost housing. 'S' indicates social, 'D' for domestic, 'R' for retreat while 'X' for no event recorded.

Table 4.2 S1 Kids' Behaviour

**Kids (Kindergarten)**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am - 10am)	X	X	X	X	X	X	X
Afternoon (2pm - 3pm)	X	X	X	X	X	X	X
Evening (5pm - 6pm)	S	S	S	S	S	S	S
Night (9pm - 10pm)	X	X	X	X	S	S	S

Table 4.3 S1 Teenager's Behaviour

**Teenager**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	X	X	X	X	X	X	X
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	SR	SR	SR	SR	SR	SR	SR

Table 4.4 S1 Adults' Behaviour

**Adults**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	X	X	X	X	X	X	X
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	SR	SR	SR	SR	SR	SR	SR

Table 4.5 S1 Elderly's Behaviour

**Elderly**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	SR	SR	SR	SR	SR	SR	SR
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	S	S	S	S	S	S	S

For S1, it is noticeable that the outdoor space is vibrant with activities by all age groups during evening. No event recorded at all for all age groups everyday during afternoon while only elderly recorded with both social and retreat activities every morning. At night, the outdoor space is happening with activities for all age group everyday except for kids, which has no event recorded during school days.

### 4.3 Apartment Abdullah Hukum (S2)

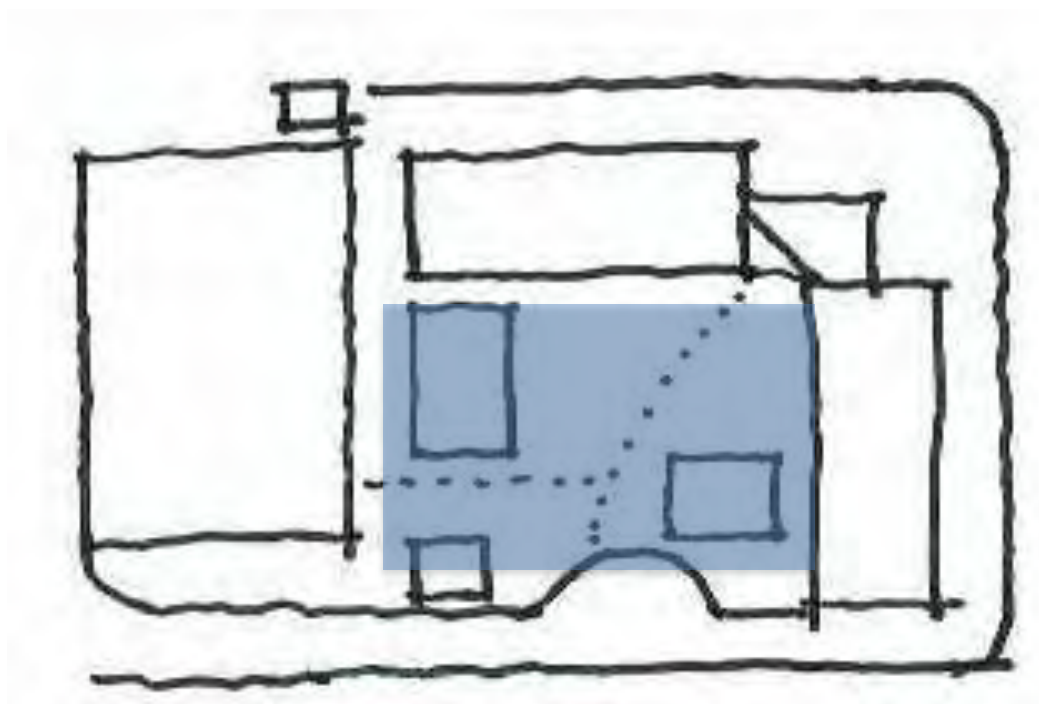


Figure 0.10 Site Plan of Apartment Abdullah Hukum

The outdoor space for this low-cost housing is located in between an L-shaped residential blocks and a multilevel parking level on the left side. The drop off area is at the bottom indicated by a semicircle and on the left side of the drop off area is the refuse chamber. The dotted line indicates uncovered pedestrian pathway connecting the drop off and parking annexe to the lift lobby of the residential blocks.

The table below tabulates the observation done by researcher according to the checklist formulated earlier in the research stage:

Table 4.6 S2 Observation Checklist of Apartment Abdullah Hukum

	Observation
Function	<ul style="list-style-type: none"><li>Facilities provided includes playground, multifunction outdoor courts and a gazebo</li><li>Several bench provided at playground for comfort of residents</li><li>Outdoor space is passed through by residents to get from drop off area to the lift lobby</li></ul>

<b>Location</b>	<ul style="list-style-type: none"> <li>• Location of outdoor space has made it possible for social interaction between residents</li> </ul>
<b>Cleanliness</b>	<ul style="list-style-type: none"> <li>• Dustbin provided, however refuse chamber nearby creates an eyesore and foul smell</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Playground is gated, while outdoor court is not</li> <li>• Gazebo provides surveillance for the children from parents hanging out there</li> <li>• Outdoor space is safe, free from vehicular intervention</li> </ul>
<b>Aesthetic</b>	<ul style="list-style-type: none"> <li>• Playground has recently been refurbished, hence the condition is still good and visually pleasing</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• Vibrant. People tend to greet each other when they bump into each other</li> <li>• When in use, a lot of activities happening, especially in the evening</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Well shaded with shady trees, possible to use outdoor space even if the weather is hot</li> <li>• Nice environment due to well-maintained facilities</li> </ul>



The photo on top shows kids playing at the newly refurbished playground while football at the bottom photo. Some kids come to play with adults' supervision while some not. It is shown in the picture the vibrant atmosphere in one of the evenings. The playground is fenced along the perimeter for safety.



Figure 0.11 Newly Refurbished Playground



Figure 0.12 Kids Playing at Outdoor Court

The photo below shows the gazebo located beside the playground. At times, adults and elderly will be hanging out here while at the same time looking after their kids playing.



Figure 0.13 The Only Gazebo Provided

Tables below show the tabulated behaviours of the residents at the outdoor space of the low-cost housing. ‘S’ indicates social, ‘D’ for domestic, ‘R’ for retreat while ‘X’ for no event recorded.

Table 4.7 S2 Kids' Behaviour

### Kids (Kindergarten)

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am - 10am)	X	X	X	X	X	S	S
Afternoon (2pm - 3pm)	X	X	X	X	X	X	X
Evening (5pm - 6pm)	S	S	S	S	S	S	S



Night (9pm - 10pm)	X	X	X	X	X	X	X
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Table 4.8 S2 Teenagers' Behaviour

**Teenager**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	X	X	X	X	X	X	X
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	X	X	X	X	X	X	X
Night (9pm-10pm)	X	X	X	X	X	X	X

Table 4.9 S2 Adults Behaviour

**Adults**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	S	S	S	S	S	S	S
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	X	X	X	X	X	X	X

Table 4.10 S2 Elderly's Behaviour

**Elderly**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	SR	SR	SR	SR	SR	SR	SR
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	X	X	X	X	X	X	X

For S2, it is noticeable that the outdoor space is vibrant with activities by adults and elderly every morning, kids only on weekend while no event recorded at all for teenagers. During afternoon and night, no event recorded for all age groups everyday while during evening, the outdoor space is happening with activities contributed by kids, adults and elderly. However, no event recorded for teenagers during the same evening.

#### 4.4 Apartment Putra Ria (S3)

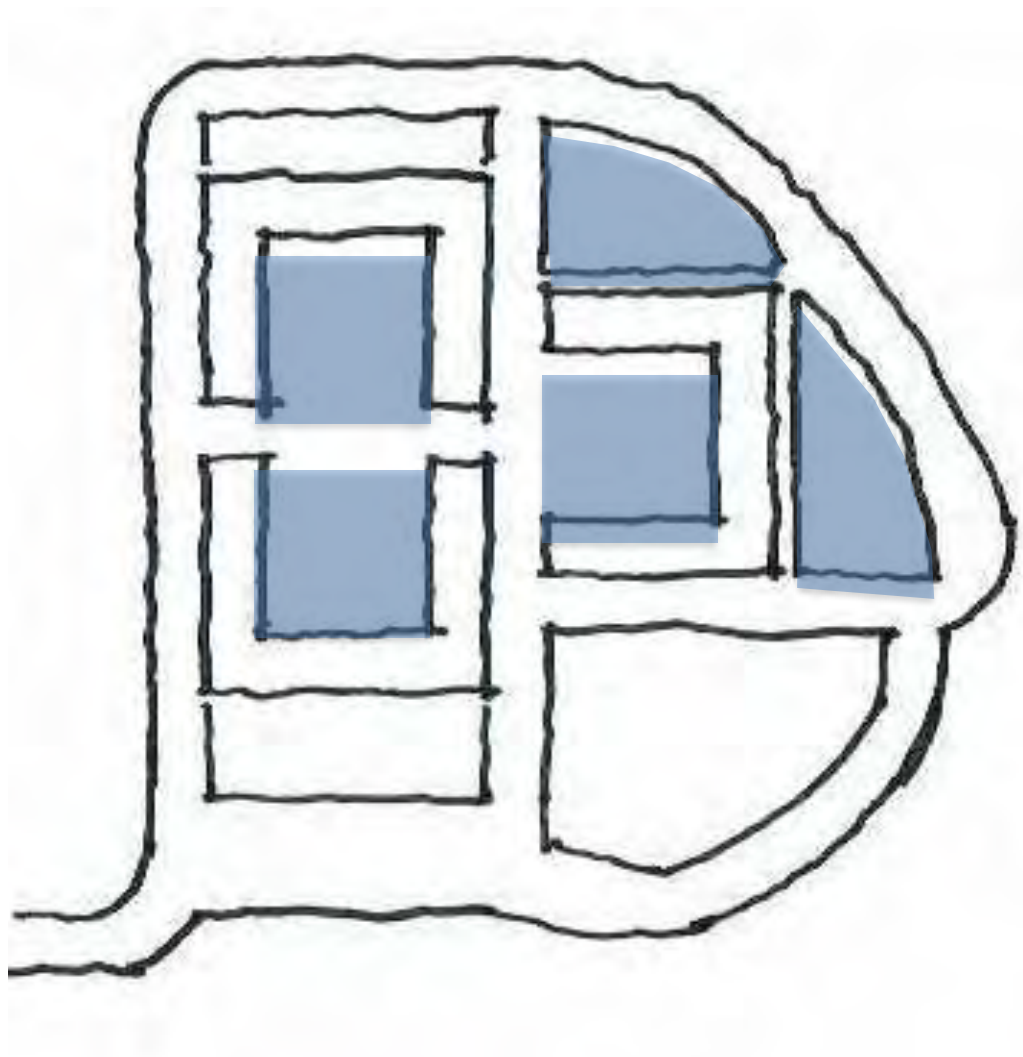


Figure 0.14 Site Plan of Apartment Putra Ria

As outlined in blue, the outdoor spaces at this low-cost housing is segregated. There are the ones located in between a U-shaped residential blocks and there are the remaining ones with the odd quarter of oval shape. Outdoor court is located at the top, while the playground is located on the right.

The table below tabulates the observation done by researcher according to the checklist formulated earlier in the research stage:

Table 4.11 S3 Observation Checklist of Apartment Putra Ria

	<b>Observation</b>
<b>Function</b>	<ul style="list-style-type: none"> <li>• Facilities provided includes playground, multifunction outdoor courts and a gazebo</li> <li>• Several bench provided at playground for comfort of residents</li> <li>• Outdoor space in between blocks is used for parking lots</li> <li>• At times, the outdoor spaces located in between blocks are transformed to function space. E.g. wedding.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• Outdoor spaces are segregated throughout the whole development. There is no centralised one.</li> </ul>
<b>Cleanliness</b>	<ul style="list-style-type: none"> <li>• Dustbin is not provided, hence very dirty at all outdoor spaces</li> </ul>
<b>Safety</b>	<ul style="list-style-type: none"> <li>• Playground is open, while outdoor court is fenced</li> <li>• Gazebo provides surveillance for the children from parents hanging out there</li> <li>• Segregated outdoor spaces are linked by vehicular circulation. Dangerous for kids without surveillance</li> </ul>
<b>Aesthetic</b>	<ul style="list-style-type: none"> <li>• Playground is in decent condition. Outdoor court serves its function, less on aesthetics</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• Vibrant. People tend to greet each other when they bump into each other</li> <li>• Location of outdoor space has made it possible for social interaction between residents</li> </ul>
<b>Environment</b>	<ul style="list-style-type: none"> <li>• Well shaded with shady trees and residential blocks, possible to use outdoor space even if the weather is hot</li> <li>• Poor environment due to rubbish</li> </ul>

The photo on top shows kids playing takraw with their peers while the photo at the bottom shows parents looking after their kids playing at outdoor court.

Tables below show the tabulated behaviours of the residents at the outdoor space of the low-cost housing. ‘S’ indicates social, ‘D’ for domestic, ‘R’ for retreat while ‘X’ for no event recorded.

Table 4.12 S3 Kids' Behaviour

**Kids (Kindergarten)**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am - 10am)	X	X	X	X	X	X	X
Afternoon (2pm - 3pm)	X	X	X	X	X	X	X
Evening (5pm - 6pm)	S	S	S	S	S	S	S
Night (9pm - 10pm)	X	X	X	X	X	X	X

Table 4.13 S3 Teenager's Behaviour

**Teenager**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	X	X	X	X	X	X	X
Afternoon (2pm-3pm)	S	S	S	S	S	S	S
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	SR	SR	SR	SR	SR	SR	SR

Table 4.14 S3 Adults' Behaviour

**Adults**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	X	X	X	X	X	X	X
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	X	X	X	X	X	X	X

Table 4.15 S3 Elderly's Behaviour

**Elderly**

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Morning (9am-10am)	S	S	S	S	S	S	S
Afternoon (2pm-3pm)	X	X	X	X	X	X	X
Evening (5pm-6pm)	S	S	S	S	S	S	S
Night (9pm-10pm)	X	X	X	X	X	X	X

For S1, there's no event recorded for all age groups except for elderly every morning. During afternoon the only event recorded is contributed by teenager while during evening, the outdoor space is vibrant with activities contributed by all age groups. However, at night, it can be seen that only teenagers occupy the outdoor space.

## 4.5 Interview

Table below shows the details of each respondent interviewed at each site in Bangsar. Selection of respondent is totally random and is subjected to respondent's willingness.

Table 4.16 Respondent Details

Site	Respondent	Details
S1	R1	Age: 62 Gender: Male Occupation: Retiree Duration of Stay: 30 years Marital Status: Married with kids Residency: Permanent
	R2	Age: 43 Gender: Female Occupation: Housewife Duration of Stay: 20 years Marital Status: Married with kids Residency: Permanent
S2	R3	Age: 38 Gender: Female Occupation: Housewife Duration of Stay: 13 years Marital Status: Married with kids Residency: Permanent
	R4	Age: 67 Gender: Male Occupation: Not working Duration of Stay: 5 years Marital Status: Married with kids Residency: Permanent
S3	R5	Age: 35

		Gender: Male Occupation: Admin clerk Duration of Stay: 5 years Marital Status: married with kids Residency: Renting
	R6	Age: 12 Gender: Male Occupation: Student Duration of Stay: 6 years Marital Status: Single Residency: Permanent

Table below shows the details of each respondent interviewed at each site in Bangsar. Selection of respondent is totally random and is subjected to respondent's willingness.

Table 4.17 Interview Tabulation

No.	Question	Site	Answer	Keyword
1	Do you frequently use the outdoor space provided?	S1	Yes Playing carom and checkers Chit chat	Frequency Usage
			Yes Looking after kids at playground Chit chat	
		S2	Yes Looking after kids playing	
			Yes	
		S3	Sometimes Looking after kids at playground	
			Yes Play with friends	
2	Are you satisfied with the outdoor space provided?	S1	No Due to bad condition, however appreciate the gazebo	Satisfaction



			No Due to bad condition, not well shaded, no protection, no bench, however appreciate the gazebo and patrolling guard	
			Yes Nice playground and well maintained	
		S2	Neutral Enjoy the gazebo but no facilities for elderly	
			Yes But location is not at centre to all blocks, unfair	
		S3	Yes But a bit dirty	
3	In your opinion, what can be done to improve the outdoor space?	S1	<ul style="list-style-type: none"> <li>Refurbish/ repair playground</li> <li>Provide dustbin</li> </ul>	Improvement
			<ul style="list-style-type: none"> <li>Repair playground</li> <li>Redesign layout for protection</li> <li>Provide bench and dustbin</li> <li>Plant more trees</li> </ul>	
		S2	<ul style="list-style-type: none"> <li>Install fence at court for protection</li> </ul>	
			<ul style="list-style-type: none"> <li>Add facilities for elderly</li> </ul>	
		S3	<ul style="list-style-type: none"> <li>Provide dustbin</li> <li>Install fencing at playground for safety</li> </ul>	
			<ul style="list-style-type: none"> <li>Provide dustbin</li> <li>Bigger space to play</li> </ul>	

4	As a resident here, do you feel responsible to take care and maintain the	S1	Yes	Appropriation
			Yes	
		S2	Yes	
			Yes	
		S3	No	
			Maybe	

	outdoor space provided?			
5	Do you enjoy living here? Why?	S1	<p>Yes</p> <p>Due to nice neighbourhood and feels like family</p>	Attachment
			<p>Yes</p> <p>Due to nice neighbourhood</p>	
		S2	<p>Yes</p> <p>Due to great location</p>	
			<p>Not really</p> <p>Prefer kampong life but starting to feel okay</p>	
		S3	<p>Not really</p> <p>Due to less time spent interacting with neighbours</p>	
			<p>Yes</p> <p>Because of friends and near to Mid Valley</p>	
6	Do you feel proud being a resident here? Have you ever thought of moving to other places?	S1	<p>Yes</p> <p>Due to nice neighbourhood</p> <p>Don't want to move out</p>	Identity
			<p>Yes</p> <p>Due to good community spirit</p> <p>Want to move out if can afford</p>	
		S2	<p>Neutral</p> <p>Want to move out if can afford</p>	
			<p>Neutral</p> <p>Want to go back to kampong but inconvenient</p>	
		S3	<p>No</p> <p>Only renting so will move out one day</p>	
			<p>Neutral</p> <p>But prefer not to move out due to friends</p>	
7		S1	Good	Attachment

	Is the neighbourhood good? How is your relationship with your neighbours?		Know each other, Malay majority and strong community spirit	
			Good Know each other There's community welfare group Manage event together (wedding etc.)	
		S2	Moderate Don't really communicate with each other Prejudice towards immigrants	
			Moderate Don't really communicate with each other Prejudice at immigrants at first but better after spend time with them	
		S3	Not really People minding their own business People tend to stay inside because prejudice towards immigrants	
			Not really Parents won't let play outside if no company because of prejudice towards immigrants	
8	In your opinion, do you think outdoor space can contribute to the wellbeing and joy of living here?	S1	Yes Due to small house and can mingle with other residents	Wellbeing
			Yes Due to hassle to go to park outside and can mingle with other residents	
		S2	Maybe Plenty of residents working during daytime No light at night	
			Yes Allows people to communicate	
		S3	May Allows for social interaction	

			Yes Can play with friends, more enjoyable	
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## DISCUSSION

### 5.1 Outdoor Space Configuration

The usage of outdoor space is affected by the configuration of the housing development. The one located in between U-shaped block provides visual surveillance and security. Location of outdoor space plays an important role too. It has to be easily accessible and within the same distance among each residential block so it is well utilised by everyone. Outdoor space that is connected to the main human circulation provides room for accidental social interaction which promotes familiarity among residents.

### 5.2 Outdoor Space Usage

#### 1. Who

The results of this research revealed that outdoor space is generally well used by the residents of low-cost housing especially by kids, stay-at-home adults and the elderly. This is due to the fact that these groups of people are the ones available and not occupied by working commitment. Kids enjoy spending time playing at the playground, however their presence is dictated by parents' supervision. Adults, mothers especially will be supervising their kids while at the same time interacting with other parents available. The usage of outdoor space by local residents is also affected by the prejudice towards immigrants, proven at certain sites with quite a number of immigrants residing at their place. Teenagers are the least active group as they are occupied by studies

What

The activities recorded at outdoor space can be categorised as social and retreat activities. Social is about interaction and is active in nature. Among the social activities recorded includes, playing football, roller blade, takraw, futsal, playground, role playing, carom, checkers and chatting. Retreat on the other hand is passive in nature. The activities recorded includes playing with phone,

hearing music alone and doing nothing alone. The combination of both social and retreat activities at outdoor space shows that residents tend to appropriate these outdoor space to cater the spillover activities that are not favourable to be happening at their house.

## 2. When

Residents tend to use the outdoor space provided almost all the time whenever the weather permits and is favourable. The usage is also dictated by the school days which parents would not let their kids out to play.

### **5.3 Home Making through Outdoor Space**

Appropriation of outdoor space at low-cost housing provides room for social interaction to happen. Social interaction in return build familiarity and trust among the residents which is vital in creating a cohesive neighbourhood. A cohesive neighbourhood creates attachment to a place by instilling sense of belonging. These transactional process eventually contributes to home making at low-cost housing.

#### **Conclusion**

Within the context of low-cost housing, it has been established that the housing unit is not the only aspect that contributes to the process of home making. Outdoor space at low-cost housing is important for social and retreat activities as it build a sense of attachment and sense of place among the residents.

In conclusion, this thesis had reviewed various literatures and research was conducted in the quest of understanding the attributes of home making in low-cost housing through the usage of outdoor space. This study used systematic observation method to study the usage of outdoor space provided at selected sites in Bangsar and semi-structured interview to get personal opinions from the residents. Based on findings from this study and supporting literatures, it was determined that outdoor space plays an integral role in fostering social engagement between residents in the process of home making.

Outdoor space provided at low-cost housing which usually is the product of an afterthought by the designer and developer and often stereotyped with poor condition was

seen from a different perspective by the researcher. The role of outdoor space at low-cost housing is often overlooked, while in reality, the provision of this outdoor space is vital for the residents as it helps the residents to define and achieve the quality of life. Regardless of how bad the condition of the outdoor space provided at low-cost housing, residents would still use it as it is one of the means that contribute to the wellbeing of their life in a low-cost housing.

Hence, the attributes needed to be considered in designing outdoor space at low-cost housing should be stressed on. With these observations in mind, local authority and designers should lead the transformation of the design of outdoor space so that home making process at low cost housing could happen and quality of life could be achieved. It is aspired that the identification of the attributes would be able to formulate hypotheses in understanding how low-income residents at low-cost housing manage to cope with living and the possibility of them to use outdoor space in the process of home making.

## REFERENCES

- Mohamed, M. F., Raman, S. N., Pratama, T. M., & Yusoff, W. F. (2014). Outdoor Environment of Low-cost Housing: A case study of Flat Taman Desa Sentosa. *E3S Web of Conferences*, 3, 01005.
- Aziz, A. A., & Ahmad, A. S. (2012). Home Making in Low-Cost Housing Area. *Procedia - Social and Behavioral Sciences*, 49, 268-281.
- Aziz, A. A., Ahmad, A. S., & Nordin, T. E. (2012). Vitality of Flats Outdoor Space. *Procedia - Social and Behavioral Sciences*, 36, 402-413.
- Aziz, A. A., & Ahmad, A. S. (2012). Low Cost Flats Outdoor Space as Children Social Environment. *Procedia - Social and Behavioral Sciences*, 38, 243-252.
- Syarikat Perumahan Negara Berhad SPNB - Housing for all. 2013 [cited 2017 25.03.2017]
- Jabatan Perumahan Negara. Program Perumahan Rakyat (PPR). 2013 [cited 2017 25.03.2017]
- Paim, L., & Yahaya, N. (Eds.). (2004). *Kesejahteraan Isi Rumah Johor Darul Takzim*. Serdang: Penerbit UPM.
- Israel, T. (2003). *Some Place Like Home*. West Sussex, England: Wiley-Academy.
- Festinger, L., Schachter, S., & Back, K. (1950). *Social pressures in informal groups: A study of human factors in housing*. Stanford, CA: Stanford University Press.
- Klaufus, C. (2000). Dwelling as representation: Values of architecture in an Ecuadorian squatter settlement. *Journal of Housing and the Built Environment*, 15, 341-365.

- Aziz, A. A., & Ahmad, A. S. (2012). Home Making in Low-Cost Housing Area. *Procedia - Social and Behavioral Sciences*, 49, 268-281.
- Aziz, A. A., Ahmad, A. S., & Nordin, T. E. (2012). Vitality of Flats Outdoor Space. *Procedia - Social and Behavioral Sciences*, 36, 402-413.
- Aziz, A. A., & Ahmad, A. S. (2012). Low Cost Flats Outdoor Space as Children Social Environment. *Procedia - Social and Behavioral Sciences*, 38, 243-252.
- Syarikat Perumahan Negara Berhad SPNB - Housing for all. 2013 [cited 2017 25.03.2017]
- Jabatan Perumahan Negara. Program Perumahan Rakyat (PPR). 2013 [cited 2017 25.03.2017]
- Paim, L., & Yahaya, N. (Eds.). (2004). *Kesejahteraan Isi Rumah Johor Darul Takzim*. Serdang: Penerbit UPM.
- Israel, T. (2003). *Some Place Like Home*. West Sussex, England: Wiley-Academy.
- Festinger, L., Schachter, S., & Back, K. (1950). Social pressures in informal groups: A study of human factors in housing. Stanford, CA: Stanford University Press.
- Klaufus, C. (2000). Dwelling as representation: Values of architecture in an Ecuadorian squatter settlement. *Journal of Housing and the Built Environment*, 15, 341-365.