

An adaptation of the malay kampongs or villages concept on modern housing schemes development in Malaysia

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Abstract. Traditionally, villager's houses organised in groups, surrounded by green nature, landscape, each space connected by informal pathways to form a settlement known as village, kampong or '*kampung*'. The kampong setting grow harmoniously and evolved over the years. Indirectly the culture and values of the Malay community in the village are slowly influenced by the atmosphere and living environment that tested through many years. Today, the existence of a traditional Malay village as an early settlement pattern of the Malay community threatened by the process of urbanisation and modernisation of the country. The kampong setting has replaced by mass production of housing schemes called '*taman perumahan*'. As a result, the existence of traditional Malay kampongs in urban areas has been replaced by a planned housing schemes that is considered modern and well-planned. However, there is an effort to re-adapt the traditional village concept ideally into modern urban housing either through architectural design, landscape and neighbourhood planning at different level. This paper is written based on qualitative approach by collecting and structuring field data through several methods such as observation, and fieldwork study. This paper explores such effort in modern housing schemes at the Precinct 8 (Putrajaya) and Nong Chik Height (Johor Bahru).

1. Introduction

There is a growing awareness of the need to find an alternative design for landed housing schemes due to social problems, urban crowding, traffic generation and others. The need to conserve the land, limited natural sources, urban growth limit, to comply international policies such as Sustainable Development Goal (SDG) and New Urban Agenda (NUA) and providing sufficient affordable houses become the main agenda of the new development approach in developing housing schemes in this country. Since independent, the housing development concept mostly still adopt and influences from the European-British experiences (i.e. planning laws, building codes, and guidelines). Some amendment has been done, but from a design perspective, local planners are still comfortable adopting the same design neighbourhood concept for decades nationwide.

Misnat et al [1] argued that current housing design failed to respond to the needs of dwellers. Somehow the designs are now too much influenced from the west and contrary to the needs of the local design, especially the Malays. For example, a popular residential concept, the 'modern' terrace houses were booming in the 1970s However, the origin can be traced back since the post-independence era of



the late 50s and early 60s Saji [2] claimed the earliest townhouses and shophouses concept dated back since the 17th century during the Dutch occupation. It has become trendy because terrace houses offered quicker construction, less cost, provide number of houses per unit area.

However, due to dissatisfaction with the conventional landed residential layout like the gridiron style, there is a growing awareness among local planners and researcher locally, to relook and explore the potential of applying the 'kampong concept' on the modern housing schemes. From the architectural perspective, mostly they will discuss on how to adopt the traditional Malay house or kampong house design into the modern link-houses (terraced houses), and the references are accessible. However, there is lack of reference, debates or discussion from the urban planner side. Applying the 'kampong concept' does not mean to be beneficially for the Malays community only. The advantages of recreating kampong ambience in modern housing schemes may enhance the quality of life for all dwellers within neighbourhood. The uniqueness of kampong design, setting and environment stimulate a strong sense of community where it was difficult can be found in 'well-planned', or 'sustainable' housing schemes like the developer claimed in their advertisement.

There is no denying that their attempts to introduce new ideas but the number still not significant. The linked houses (terraced houses) are the most common design usually single up to 3-storey completed with minimum 3 or 4 bedrooms. In the first quarter of the year 2019 (Q1), there are 2,286,113 units (58%) terrace house (single and 2-3 storey terrace) in Malaysia property market as compared between total of existing landed residential units nation wide, 3,939,576 units (excluded high-rise i.e. flat, condominium and apartment) [3]. Such housing schemes tend to applied the grid-iron style and monotonous building design. This neighbourhood schemes called as the '*taman perumahan*' nationwide. Harman and Julaihi [4] argued that the designer might use some design elements to present the surface expression, especially on the building design. The designer has less understanding about the function, ideal and cultural norms of design. Such situation may worse at macro level, the whole settlement setting (i.e. residential layout).

Meng et al [5] mentioned that the quality of housing development should not only take into account the physical aspect of design but also be sensitive to human needs. In order to create an ideal housing environment, several components should need to consider, for example, environmental factors, human-made designs, socio-cultural operations and psychological impacts. By observing, reviewing and doing a depth study on survived kampong ambience nowadays, they may start adopting some number of physical design attributes at the macro level.

For example, provision of more communal space (playground and community garden) instead of rarely used multi-purpose hall, windy local road (traffic calming), non-uniform '*denai*' (pedestrian pathway, alley, backland), cluster form of house arrangement (increasing social interaction). Such small change may allow residents to meet their socio-cultural needs. Two physical design attributes namely as residential layout (cluster form) and communal or social spaces become the main focus of this paper.

2. Literature review

2.1. The kampongs concept

The term 'kampong' or '*kampung*' means the village is a Malay word commonly used in Southeast Asia (i.e. Malaysia, Singapore, Indonesia and Brunei). A Malay kampung is a traditional settlement which emphasises friendly and habitable design that adapts to the natural environment [5]. Kampong is majority inhabited by the Malays community. It is home to the Malay community and each cluster of houses usually inhabited by linked family members. The villagers used local sources like wood from nearby jungle to build their houses wisely. The river that located next to the settlement became their primary source for daily needs (food, water supply and irrigation) and transportation routes for trading. They have used the natural resources surrounding it with full of respect. Although the traditional kampong typically found in scattered and organic form, the sense of belonging and among the villagers was stronger than what we call 'modern housing schemes' today. The villagers frequently interact with each other at the courtyard of their house which becomes communal space (social space).

By understanding their daily needs, beliefs, culture and way of life, the kampong environment may offer several opportunities. An architectural, landscape and settlement form of kampongs frequently defined from a Malay culture perspective. However, Jamil [6] argued that there is no distinct architectural or landscape expression that can be described as “Malaysian” style clearly. He stated that the built environment in this country today comprises a real amalgam of the Malay, Chinese, Indian and a collection of other influences.

However, initially the kampongs are ‘designed’ and slowly ‘planned’ accordingly to fulfil the Malay’s needs either socially and culturally. For example, the different shape and size of space between the unit of houses allowed the dweller to optimise their surrounding space as the communal space based on their needs. In kampong, such space may be used for many purposes as the place for festive (weddings, ceremonies and religious festivals) or other social activities (greetings, playing together, chatting and others). Even though the kampong house often seen arranged in scattered form and unclear geometric order.

The ‘fenceless’ kampong setting encourages the dwellers to interact with neighbours socially. The space outside the Malay house or kampong house separated into several sections, and it is reflecting the physical, spatial and function namely front, side and backspace. While Yuan [7] reported that the spaces inside a house divided into several sections known as the *Serambi* (porch), *Rumah Ibu* (main house) and *Rumah Dapur* (kitchen area). Each area represents different privacy level either public, semi-private and private. The transition of space privacy level slowly shifts from outside space-public into *Serambi* - semi-private and into private part, *Rumah Ibu* and *Rumah Dapur*. In other words, communal space outside of the house will allow community intimacy but not compromise family intimacy.

The house of villagers surrounded by greenery landscape, built-in groups or cluster form with low density, informally organised and shared communal space. In the past, such settlement may be found easily in rural areas closely located at the river mouths, along the riverbank, stream and coastal area. The small kampong may change, and growth becomes a vital city later on. After the modern transportation system has introduced, the rivers are playing fewer roles. New towns and commercial centres established growth far away in hinterland area. Through time, the physical setting of kampong changes drastically. Today, such living environment may surrounded by modern urban setting like the ‘*taman perumahan*’ (housing schemes or estates) or high-rise service apartment at the next door.

Some traditional kampong in the centre of the urban area has been relocated into a new area and is known as the ‘*kampung tersusun*’ (well-planned village) and ‘*kampung baru*’ (new village). Due to the limited land in urban areas, villagers also may be relocated into multi-storey low-cost housing provided by government within the same area. Many kampongs have rebuilt to allow new development took place on the original site. Such area may keep ‘*kampung*’ name but with different living environment, building style and landscape. In major cities of Malaysia, introduction of link-houses (terraced housing schemes) become game-changers for majority Malay urban dweller’s since it introduced since 1960’s. The drastic change in living environment atmosphere from rural kind of environment into uniform housing setting created rigidity. An opportunity that villagers have to do or practised in daily activities during lived in kampong may be limited in urban areas due to the limited space that people can afford.

2.2. Application of kampongs concept in modern design

The traditional house in this region has been arranged in groups or cluster because it is a basic form for human settlement settings that can accommodate the local socio-cultural needs. However, at the same time, a clustered lot configuration creates large areas of open space whereby create an opportunity for children playing near the house and communal space for social activities like ‘*kenduri-kendara*’ (feast). The concentrated form or cluster form believed an ideal arrangement in the traditional Malay kampongs, which believed can enhance social relations within the neighbourhood. The houses that arranged to face each other will encourage public surveillance indirectly in order to create a safe living environment and sense of belonging. Untermann [8] believed that many early civilisations in this world start inhabited ‘cluster’ form of settlement. He argued that society might never be able to adapt to high-density or high-rise urban housing environments throughout the world. Such living environment has been proven by not

supporting an ideal place for human living settings. Historically, clustering or grouping of human dwellings in relatively compact arrangement is probably the most basic form of human settlement.

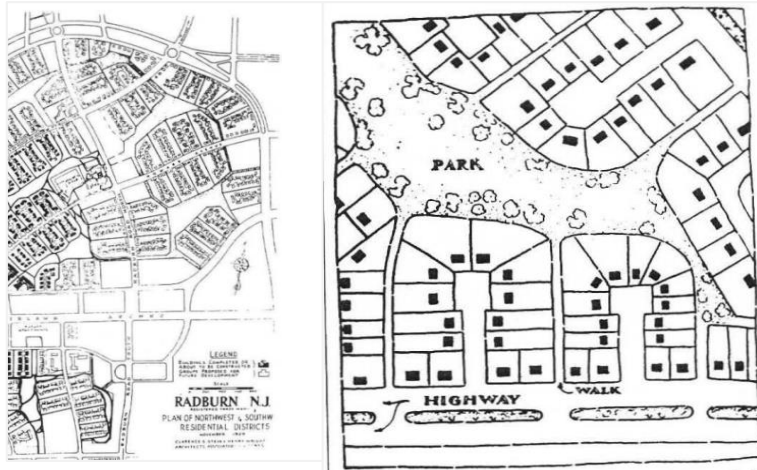


Figure 1. An example of housing schemes that applied Radburn concept or model in the 20th century. Source: An original figures from Birch (1980) in Radburn and the American Planning Movement [9]

In the modern world, clustered layouts is not a new idea. One of the most prominent classical residential development concepts were the neighbourhood unit introduced by Clarence Perry. For example, in Radburn, New Jersey, the first conscious application of this idea were introduced since 1929 and later on known as the ‘Radburn Concept’ (Figure1) [9]. This concept has been an essential influence in the planning movement and acted as a reference for generations of planners around the world. According to Martin [10], one of the advantages of applying a clustered layout can provide more open space as compared with typical gridiron type of planning. At the end it will promote a more sustainable community by providing a large portion of green space and green networking within neighbourhood. This concept can maintain the rural character of the area, providing a sense of community among residents, cheaper site development costs involving road construction and utility provisions [11].

Nowadays, the dwellers have no much influence on the exterior space of the neighbourhood, especially within the mass housing schemes (terrace houses and multi-storey houses). While a detached house like the kampong house is allowed the owner-builder (*tukang*) designs a house that is uniquely suited to the owner or family needs socially and culturally. The rigid patterns, standard and monotonous design of modern urban housing create barriers that discourage the community from fulfilling their needs. Besides, the community need access to open space, and outdoor activities within neighbourhood become more desirable aspects of the dwellers in order to enhance the sense of community and enrich community socio-cultural aspects. Clustered layouts concept in the United States (US) that has been promoted and famous through the Radburn concept were different from the East world like the traditional kampongs in this country. Purposely the cluster housing in U.S probably more concern on protecting the surrounding natural environment by reducing house size lot by grouping it.

2.3. Housing and Islamic values

In Malaysia, the cluster form layout in kampong area consists of what is called an ‘Islamic values’. Several studies proved that the design of traditional Malay houses and its surrounding in kampong from macro to micro-level always relied on three dominant aspects of relationships, i.e., between Man and God, Man to Man and Man to the Environment. Such values system become the guiding principle that shaped human behaviour and interpreted through their built environment. Karim and Rezo [12] concluded that influenced the way of thinking, how we behave, human relationships and the implementation of our daily tasks influenced by values they believed.

From the perspective of the Muslim world, Musa et al. [13] argued that the Western-based interpretation of human habitation is derived from the human-centred paradigm that only features functional and aesthetic aspects. The Islamic residential design should be applied in a way that;

- The house and its immediate environment should be a place to foster the growth of a family, developing a real Muslim personality for oneself, the children and other family members.
- The spaces are peaceful to the heart, soul and offer a sense of repose
- The space that is isolated from the outside world
- The spaces to exercise socialising based on the tenets of Islam.
- Space to draw closer to God in order to achieve the highest level of faith.
- The use of the latest technologies and techniques appropriate to the current situation as long as it can help to achieve the level of comfort, thus improving the relationship with God.

Nowadays, the housing schemes designed senseless without 'soul', values and became too simple as a result of neglecting the spiritual and socio-cultural of dwellers in the design process.

3. Methodology

Generally, the research method of this paper is explorative. This paper study on the concept of kampong from existing literature source and explore the potential of application such concept on the modern housing schemes in Putrajaya and Johor Bahru. In the first stage, this paper getting through various papers, book and journals that describing the kampongs attributes as part of Malay settlement concept. By focusing on several physical characteristics and kampong attributes such as the settlement layout, house arrangement, communal space, villagers' house architectural style, landscape and more, general idea about what is kampong, physically can be understood clearly. Besides, this paper also reviewing the aspect of application of kampongs concept in modern design and housing and the Islamic values aspect.

Following this, the next stage of this study is observed and studied at least two housing schemes in Malaysia. Firstly, the linked - houses in the Precinct 8, Putrajaya, the new well-planned and modern housing schemes. Secondly, the study discusses the redevelopment area of urban village in Johor Bahru, Nong Chik Height. In this paper, research method used is analysis and commentary, which are study of related documents and observation in study area by using checklists.

4. Case study

The area of study is the observation and studied two housing scheme in Malaysia, which is linked-houses in the Precinct 8, Putrajaya and the redevelopment area of urban village in Johor Bahru, NongChik Height. Both study areas offered different level of application kampong concept on the modern housing schemes.

4.1. Precinct 8, Putrajaya

Putrajaya is the largest integrated urban development project in Malaysia [14]. The achievement of Putrajaya development until today has marked a new milestone level for local urban planners and architects of Malaysia. The whole of Putrajaya's planning and development process was an excellent opportunity for Malaysian professionals to initiate on a mega-scale project which fully represents Malaysian's identity, values and culture. The government also has endorsed the concept of the Total Planning Doctrine for land use planning and design within the area. According to Omar [15], the design of residential units applies a neighbourhood concept where fifteen neighbourhood units are planned to accommodate 52,000 houses.

In Malaysia, the Malay culture promoted as the basis of national identity. As Mustafa [16] claimed, some residential precinct in Putrajaya was developed using the 'kampong concept', inspired by the traditional Malay kampong settings. An original Malay kampong was planned organically with unclear and unwritten 'planning standard'. Each unit of dwellers houses built differently, and each courtyard only divided by natural elements such as fruit trees. Each cluster of houses links via a windy pathway

called '*denai*' passing through trees and shrubs. This '*denai*' connect from one house and open space to another. Such non-fences environment, less physical boundaries and surrounded by greenery elements.

Residential area with no fences was believed creating an environment that can encourage interaction between neighbours. This concept will help to increase the social interaction between neighbourhood for enhancing the Islamic value towards kampung concept in modern housing scheme. However, the effectiveness of using the concept of non-fence community in Putrajaya is still unclear, and no related study has done. King [17] argued that, at Putrajaya, the genius of the kampung concept, lessons of Malay house and potential of kampung settlement forms had ignored. Such experimentation opportunity presented by Putrajaya has not fully explored, extended and adopted on-site. The Putrajaya Land-use Masterplan since was approved by the Perbadanan Putrajaya (Putrajaya Corporation) on 31st March 1997 reaffirms the concept of an 'intelligent city' and 'city in a garden' which is in line with the Putrajaya Structure Plan.

The link-houses at Precinct 8, Putrajaya area since established still used non-fence concept until today. Such situations create an openness environment within the neighbourhood. Each row connected with 'green' back lane. The back lane designed with more greenery element, proper pavement and connected with small pocket space at the end. This concept also related to "Radburn Concept" which promotes a more sustainable community by providing a large portion of green space and green networking within neighbourhood. It was different as compared with other conventional link houses in the market. There are few small pocket spaces located within the area and link with lakeside which believed used as communal space for dwellers (Figure2 and Figure 3). According to Tan [18], buyers are more willing to pay extra to live in neighbourhood with lush landscaping and greeneries. Such area may use by locals for playing, gathering and recreational space. The application level of 'kampung concept' may not appear at the macro level of Putrajaya development; however it can be observed existed and implement at micro levels such as residential layout design and landscape settings.

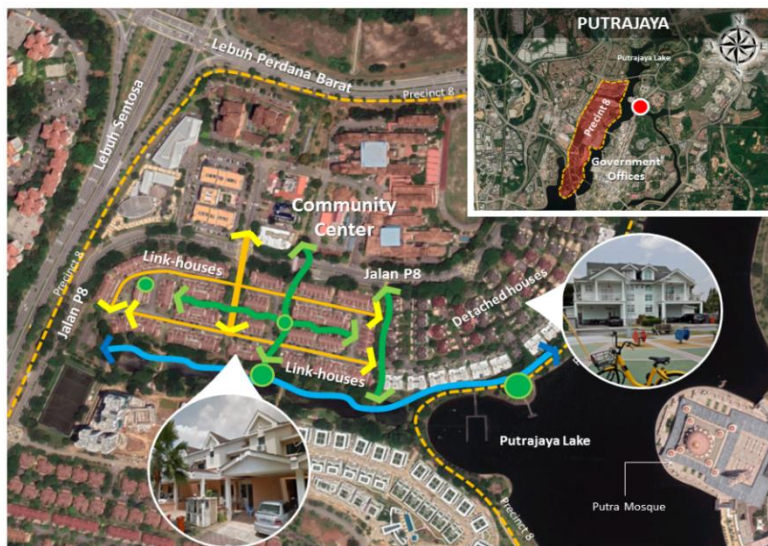


Figure 2. Green lane within Precinct 8 link-houses. Edited from Google Maps, 2019.



Figure 3. An openness concept applied at Precinct 8 link-houses area in Putrajaya. No fences build between unit allowed dwellers interact freely with their neighbours. Edited from Google Maps, 2019.

4.2. Nong Chik Heights, Johor Bahru

Known initially as Kampong Nong Chik (now Nong Chik Heights), this Malay Reserve Land settlement is an urban village located at the edge of Johor Bahru city centre (5 km) and has been home to thousands of Malays. The old neighbourhood had the feel of a rural kampong ambience with low-density single-storey houses, mature trees, a prominent mosque, community centre and kindergarten. More recently, these neighbourhoods have been demolished for redevelopment. In 2009, 74 units of government quarters in the NongChik neighbourhood sitting on about 43 acres of land were demolished to give way for redevelopment by Mudra Tropika Sdn. Bhd. The redevelopment includes 24 units of new shop offices, 54 units of gallery shops and 40 units of bungalows and semi-detached houses. However, the essential part of the development is the 168 units of ‘honeycomb housing’, due for completion by late 2011. The development of new NongChik housing schemes seen preserved the unique character and old charm of kampong as the introduction of closely-knit neighbourhoods concept, cluster form of arrangement.

In this new layout, small groups of houses are laid out around communal courtyards in interconnected cul-de-sacs. Three new types of houses with the quadruplex, sextuplex and duplex houses introduced as alternatives to new terrace houses in Malaysia. This experiment in urban redevelopment, and especially involving Malay reserve land, is now a model for the whole country [19]. The ‘honeycomb housing’ concept is the implementation design of the hexagonal form by using a geometric correlation method of hexagonal shape (hexagonal) like a beehive in its layout concept. The house is arranged in a cul-de-sac with an open space in the middle to create a neighbourhood courtyard. Then, all the houses in the area will have open-air gardens like sitting around a table. Every neighbourhood courtyard will be associated with a distribution path in the form of a ‘Y’ intersection [20]. This housing concept is laid out around a communal courtyard or pocket space (Figure 4).



Figure 4. The ‘honeycomb’ layout concept applied in NongChik, Johor Bahru Source: An original figure from Ghazali (2007) in *Affordable Low and High-Rise Honeycomb Housing* [21]



Figure 5. The comparison aerial photo shown housing layout before and after redevelopment. Edited from Google Map, 2019

This design of residential also related to the ‘‘Radburn Concept’’ which promotes a more sustainable community by make a connection and green networking within neighbourhood. The design also enhances the Islamic value which creates environment and connection within neighbourhood to foster the growth of a family member, the children and neighbours. Such design perhaps encourages dwellers to communicate and interact with each other more frequent within their ‘cluster’. A cul-de-sac design would help dwellers be easily recognised any strangers entering their residents. Next, the loops and bends in the roads leading to the houses and less than 25 metres in any straight stretch will slow down passing traffic. Here, semi-detached houses surrounded small loop with pocket space and utilised as

playground area or communal space. Dwellers can easily oversee their children playing in the courtyard in front of each home. This setting will encourage children to play outside of their houses.

5. Conclusion

Based on the observation in the Precinct 8, Putrajaya and Nong Chik Height, Johor Bahru, this paper was discussed and identified possibilities of applying housing concept that inspired from kampong settings. This study proposed that few physical design attributes from 'kampong concept' may be potentially applied to the modern housing schemes design at a different level, micro and macro of housing schemes. This suggestion is required depth study either philosophical or technical requirements to suit with current planning standard. The next question is, to what extent the kampong and its surrounding setting can meet the aspirations of urban inhabitants in the current market? This paper suggests that an ideal kampong concept should be able to provide some general ideas and inspired local designers (urban planners, landscape architects and architects) in order to initiate an alternative local housing scheme nationwide in market. For further research in future, the kampong physical design attributes potential should study from several points of view namely as 1) Residential layout, 2) Communal or Social spaces, 3) Architectural style & building design. 4) Landscape and 5) Other detail elements.

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