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## RESEARCH PERCEPTION FROM LAYOUT PLAN AND FACILITIES FOR GOVERNMENT LOW COST HOUSING IN KLANG VALLEY, KUALA LUMPUR

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### **Abstract**

*In Malaysia, low cost housing development is undertaken by both the public and private sectors. During 1984, Kuala Lumpur Plan (KLSP) aimed to ensure that sufficient housing would be provided for all income groups in the city and that housing was properly distributed so that its residents could be properly served in terms of infrastructure, utilities and community facilities. Recently space standard for low cost housing in the Ninth Malaysia Plan for new projects have been revised from minimum of 650 square foot to 700 square foot per unit. The same space standard also applies to disabled unit. The objective of this research is to identify the minimum comfort size of PPR (Program Perumahan Rakyat) unit for both normal unit and disabled unit. Furthermore, to determine the suitable ratio for car parking in government low cost high-rise housing. Besides, this research will propose recommendation to improve the aspects of size of the space for both normal unit and disabled unit and car parking provision. These findings can help government and related agencies to better understand the current issues in low-cost housing from different perspectives. This will probably lead to improvements in the implementation of low-cost housing development in Malaysia.*

**Keywords:** Low Cost Housing, PPR unit, Space Standard, Car Parking.

### **1. Introduction**

A house is generally a home, shelter, building or structure that is a dwelling or place for habitation by human beings. The term includes many kinds of dwellings ranging from rudimentary huts of nomadic tribes to high-rise apartment buildings. Houses may express the circumstances or opinions of their builders or their inhabitants (Schoenauer, 2000).

There are many types of housing in Malaysia that can differ between free-standing or detached dwellings and various types of attached or multi-user dwellings (*Wikipedia*, 2010). Thus, a vast and huge house may serve as a sign of conspicuous wealth, whereas a low-profile house built of recycled materials may indicate support of energy conservation (*Wikipedia*, 2010). One of the multi-user dwellings in Malaysia is high-rise apartments or flats. In Malaysia, the term flat often denotes a housing block of lesser quality meant for lower-income groups, whereas apartment is more generic and may also include luxury condominiums. On the other hand, apartments have their own advantages in terms of technical and economic especially in urban areas with high population density. Apartments can accommodate more people in per unit of area of land and also can reduce the cost of the infrastructure works contrast with low-rise houses.

According to Data Standards: High-rise building (2009), high-rise buildings became possible with the invention of the elevator (lift) and cheaper, more abundant building materials. Buildings between 75 feet (23m) and 491 feet (150m) high are, by some standards, considered high-rises. Buildings taller than 492 feet (150m) are classified as skyscrapers. The average height of a level is around 13 feet (4m) high, thus a 79 foot (24m) tall building would comprise six floors. To most individuals housing represents the largest single investment item of a lifetime. This is especially true as family incomes increase and housing viewed less as a basic consumption and more as a key to a secure future (Syafiee Shuid, n.d.). Residential satisfaction is an important indicator of housing condition which affects individuals' quality of life. It determines the way they respond to their residential neighbourhood and environment (Abdul Ghani and Nor'aini, 2006).

During 1984, the Kuala Lumpur Structure Plan (KLSP) aimed to ensure that sufficient housing would be provided for all income groups in the City and that housing was properly distributed so that its residents could be properly served in terms of infrastructure, utilities and community facilities. The strategy been

successfully implemented for the most part. In line with the vision of A World-Class City, the emphasis will now focus on improving the quality of housing and housing environment.

### 1.1 Existing Space Standard

According to Construction Industry Standard (CIS) 2, 1998, the residential unit shall have sufficient width and size that is to ensure the internal space can be used effectively and proper ventilation for the comfort of occupants. The minimum width for the residential unit is six (6) meter. In this research, the space standard for the existing government low cost highrise housing which is 'Program Perumahan Rakyat' (PPR) will be identified. The PPR is often associated with critical social problems until it is labeled as urban slums area. The housing environment, minimal design space and physical condition of the buildings that are less well, disorganized and dirty surrounding which causes of the urban slums. These will lead to various social problems such as crime, drugs, robbery and fighting that always occur in urban slums area.

Besides, the standard space for a disable unit is the same as a normal unit which makes them difficult to move around if the occupier is supported by a wheelchair and living with family members. This research will find the level of satisfaction of the residents both for normal units and disabled units. With regards on improving the quality of housing and housing environment, the minimum comfort residential unit size and also the layout of the space for the low cost highrise housing will be proposed.

## 2. Literature Review

In Malaysia, low cost housing development is undertaken by both the public and private sectors. The government's commitment towards low-cost housing started during the First Malaysia Plan (1966-1970) while the private sector's involvement was in the Second Malaysia Plan (1971-1975) when the government realized the need and importance of the role of the private sector in ensuring an adequate supply of low-cost housing for the country (Ghani and Lee, 1997).

Public low-cost housing programs were accorded the highest priority in the Fourth Malaysia Plan and were built by both the Ministry of Housing and Local Government and State Economic Development Corporations (SEDC). Government agencies were directly responsible in providing housing for the poor in urban areas through establishment of the SEDC and various urban agencies (Syafiee, n.d.).

Under the Seventh Malaysia Plan (1996-2000) and Eight Malaysia Plan (2001-2005), Malaysian government is committed to provide adequate, affordable and quality housing for all Malaysian, particularly the low income group.

### 2.1 Government Low Cost Housing Concept

#### 2.1.1 Housing Price and Space Standard

Since 1982, the Ministry of Housing and Local Government has introduced and implemented a ceiling price for low cost housing which was fixed at RM 25,000 per unit for people with household income of less than RM 750 per month (Syafiee, n.d.). The minimum design standard built-up area is 550-600 square feet, two bedrooms, a living room, a kitchen and a bathroom-cum-toilet and usually the house types are flats, single storey terrace or detached houses (Noraliyah and Siong, 2008).

The housing price categories in Malaysia based on the Ministry of Housing and Local Government definition can be divided into four categories. In order to improve the quality of low-cost houses and simultaneously meet private developer's argument for a review of the selling prices of these units the government has introduced in 2002 the new pricing guideline for this type of houses. Table 1 summarizes the new selling prices schedule and interestingly this schedule is subject to the approval of the respective state authority where the development is located. With the new selling prices of low-cost houses, it is to be expected that the design specifications be revised too and the new design specifications are summarized in table 2 as follows:

Table 1 : Low Cost Housing Price Structure Based On Location and Target Groups  
Source : Ministry Of Housing and Local Government (2002)

House Price Per Unit	Location (Land Price Per Square Meter)	Monthly Income Of Target Group
RM 42,000	City Centre & Urban (RM45 and above)	RM 1,200 - RM 1,500
RM 35,000	Urban & Sub-urban (RM15-RM44)	RM 1,000 - RM 1,350
RM 30,000	Small Township & Sub-rural (RM10-RM14)	RM 850 - RM 1,200
RM 25,000	Rural (below RM 10)	RM 750 - RM 1,000

Table 2 : Low-Cost Houses : New Design Specifications  
Source : Ministry Of Housing and Local Government (2002)

Elements	Terrace Houses	Flats
Floor Space	48 – 60m <sup>2</sup>	45 – 56m <sup>2</sup>
Bedroom		
-minimum number	3	3
-minimum area of habitable room		
(i) First room	11.7m <sup>2</sup>	11.7m <sup>2</sup>
(ii) Second room	9.9m <sup>2</sup>	9.9m <sup>2</sup>
(iii) Third room	7.2m <sup>2</sup>	7.2m <sup>2</sup>
Kitchen- minimum area	4.5m <sup>2</sup>	4.5m <sup>2</sup>
Living and dining rooms	Provided as one combined space or separately with adequate area according to internal layout.	Provided as one combined space or separately with adequate area according to internal layout.
Bathroom and toilet	Provided separately with minimum area of 1.8m <sup>2</sup> each.	Provided separately with minimum area of 1.8m <sup>2</sup> each.
Storage space and porch	Adequate provision for resident's comfort.	Adequate provision for resident's convenience and comfort.
Drying area	-	Adequate provision for each unit.
(*) Launderette facilities	-	-

Note : (\*) Must be provided according to the 'Guidelines for the provision of launderette facilities in multi-storey buildings' prepared by Local Government Department, Ministry Of Housing and Local Government.

Recently, space standards for low cost housing in the Ninth Malaysia Plan for new projects have been revised from a minimum of 650 square foot to 700 square foot per unit (Ninth Malaysia Plan, 2010). The maximum built up area for low cost housing development is set at 70 percent leaving the remaining 30 percent for utilities and community facilities, while maximum densities have been set at 150 people per hectare (Kuala Lumpur Structure Plan 2020, n.d.).

## 2.2 Government Low Cost Housing In Kuala Lumpur

The purpose of building low cost houses is to ensure that not a single person in Kuala Lumpur is left out in owning an affordable house. This is to ensure squatters settling on government land or those belonging to low-income groups to be relocated to a new house. The National Housing Department has advanced a few low cost housing programmes to cater for the housing needs for these groups and they are:

### 2.2.1 Perumahan Awam Kos Rendah (PAKR)

According to Dewan Bandaraya Kuala Lumpur (DBKL), 2011, this programme is set to provide a satisfying housing service including basic amenities for the low income groups in the urban and rural area. Rationally, this is to improve the standard of living and the same wipe out poverty altogether. The features are a five storey flat and terrace or timber houses in the suburbs with one (1), two (2) or three (3) bedrooms, a living room, a kitchen and bathroom as well as separate toilet. The targeted income is below RM 2,500 per month.

### 2.2.2 Program Perumahan Rakyat (PPR)

According to National Housing Department, Ministry of Housing and Local Government, 2011, this programme is one of the government programmes for squatter resettlement and meets the residence requirements for the low income. In December 1998, PPR implemented by the 'Majlis Tindakan Ekonomi Negara' (MTEN) to provide rental housing for relocation of squatters and low income group and improve economic growth through private sector construction. The features include flats of 11 to 14 or 16 to 18 storeys in large cities and flats of up to five (5) storeys in small cities with three (3) bedrooms, a living room, a kitchen and bathroom as well as a separate toilet. The targeted income is RM 2,500 per month.

### 2.2.3 Low Cost Housing Revolving Fund (LCHRF)

This programme was set up to manage the accounts administered by the 'Kumpulan Wang Amanah Pinjaman Perumahan' to the low income groups. The objective of this programme is to award loans to those who do not have a source of loan to purchase or to build a low cost house in the manner of improving their standard of living. The maximum loan rate is RM 20,000 and the targeted income is less than RM 1,200 a year.

### 3. Methodology

In order to achieve the objectives of the study, this research will go through three main phases of research procedures which are initial study, data collection and analysis of findings. This research will do the methods of literature reviews, case study and observation on the buildings. Firstly, the literature review will be done in order to gain the background of the research, the theoretical framework, the socio-culture and the socio-economy of low cost housing in Kuala Lumpur which cover the life quality of the residents and also the problem that contributed to urban slum environment.

Moreover, the observations will be done at the site in order to study about the architectural designs and spaces layout accommodated for both normal unit and disabled unit of the low cost housing which is called Projek Perumahan Rakyat (PPR) handled by Jabatan Perumahan Negara, Kementerian Perumahan dan Kerajaan Tempatan. The location is mainly located in Klang Valley, Kuala Lumpur. During the visit, interviews will be conducive to compliment information gathered from the observation, literature reviews and historical review.

### 4. Result and Analysis

For data analysis, Statistical Package of Social Sciences (SPSS) will be used based on two methods which are frequency analysis and index scale analysis. Frequency analysis will be applied for analysis on Section A, whereas analysis for Section B, Section C and Section D will be used index scale analysis.

#### 4.1 Frequency Analysis

Frequency analysis used a tabular form to represent the result of data analysis of frequency of response that respondents give to the different variables in the questionnaire. The result was tabulated in the form of frequency number and percentages according to total respondents. For graphic result presentation, bar chart and pie chart will be used as summaries.

#### 4.2 Index Scale Analysis

The maximum and minimum mean scores for each factor should be first identified before calculating average scale deviation to develop index scales. This method of average scale deviation can be explained by the formula below:

$$\text{Average Scale Deviation} = \frac{\text{Maximum Score} - \text{Minimum Score}}{\text{Number of Scales Used}}$$

The examples of developing index scale are shown below; assuming that the minimum and maximum scores are 2.30 and 3.74 and the average scale deviation calculated is 0.36.

Index Scales Calculation:

Index 1	0.36	+	2.30	=	<b>2.66</b>
Index 2	0.36	+	2.66	=	<b>3.02</b>
Index 3	0.36	+	3.02	=	<b>3.38</b>
Index 4	0.36	+	3.38	=	<b>3.74</b>
Index 5	0.36	+	3.74	=	<b>4.10</b>

### 5. Conclusion

The National Housing Policy aims for increase on quality of life for all income groups of the citizens. The latest national plan, Tenth Malaysia Plan (2011-2015) affordable housing programmes and clusters as well as the provision of low-cost housing will be expanded. It shows that government is very concerned about the affordable and low cost housing.

In fact, government also highlights about having houses in a safe, healthy and comfortable built environment befitting the socio-economic status of the country. Furthermore, efforts will be undertaken to incorporate facilities that will encourage greater community development and better access for older persons and persons with disabilities.

The continuity from Eight Malaysia Plan, Ninth Malaysia Plan and Tenth Malaysia Plan can be seen that low cost housing has been emphasized an adequate and affordable home and related facilities thus gradually reducing poverty. In order to achieve the Malaysia Plan, government sector and private sector are playing important roles to reach the target and helping our country to achieve our mission 2020.

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