

# **Modernization of Traditional Malay House in the Kampong Baharu(Kulala Lumpur)**

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**ABSTRACT:** Kampong Baharu located in the central part of Kuala Lumpur, Malaysia, literally meaning “New Village” came into existence in 1899. It was reserved as the Malay Agricultural Settlement (M.A.S), an exclusive area only for Malay ethnic group. Over time, urban growth resulted in the settlement losing its agricultural value and now it is a unique preserved housing area for Malays.

Many traditional Malay houses which were built at 1900s still exist in the Kampong Baharu. The typologies of traditional houses in Kampong Baharu were not original vernacular houses. They were transformed and modernized into unique typologies in between traditional and recent modern. They were influenced by strait eclectic styles starting from 1800s and also by modern international style in 1900s.

This study defines those houses as modern traditional Malay houses and attempts to explore the typologies of traditional Malay houses built from 1900s to 1950s in Kampong Baharu. More than 100 traditional Malay houses in the Kampong Baharu were investigated and analyzed with respect to three elements which are major constructive elements of traditional Malay house; roof, pile and wall.

As a result of this study, several representative modern traditional Malay house typologies were proposed. Those typologies are worth of documentation because they show the modernization process how the traditional Malay houses are transformed into modern houses.

**Keywords:** Typology, Modern Traditional Malay House, Vernacular house, Kampong Baharu

## **1. INTRODUCTION**

### **1.1 Background and Objectives**

Houses, which are reflecting lifestyle of the times based on ethical, cultural and local background from the past, evolve into different style by absorbing new changes in

the times. Therefore, it can be said that houses are part of cultural contents because they show new styles whenever changes happen. During this process, Traditional Malay Houses have also made independent development, naturally integrating new styles and technology, which reflect

traditional indigenous housing style and flow of the times.

Traditional Malay Houses have been designed to be fit for tropical humid weather. They have floor lifted structure. Their roof is high and steep and their walls are designed to secure maximum air circulation.

Traditional Malay houses have been directly and indirectly affected by social and economic changes, introduction of modern cultures and new building materials brought by the colonial period governed by the western powers. During such changes, traditional Malay houses have also shown changes to modern architectural style.

Existing studies about traditional Malay houses have mainly focused on characteristics and changes in space organizations. In addition, the definition of a modern traditional house which was emerged in the stage between traditional and modern style is not clearly established and no academic definition of such style of houses is in progress.

The purpose of this study is to investigate modern traditional houses in Malaysia, which were new architectural style buildings emerged in Malaysian modernization process, and identify characteristics of the style of modern traditional houses.

It is expected that experience identifying changes in a style from starting tradition in the past to localization through integrating process foreign relics with Malaysian tradition may provide us with the opportunity to estimate how Malaysian contemporary housing will be transformed by absorbing new demands from social changes and international trends.

### 1.2 Scope and Methodology of Study

This study aims to identify typology of housing style, focusing on modernized traditional Malay houses built between 1900 and 1950s in Kampong Baharu (KB) area, which was constructed to protect Malay agricultural settlements from rapid growth of Kuala Lumpur (KL).

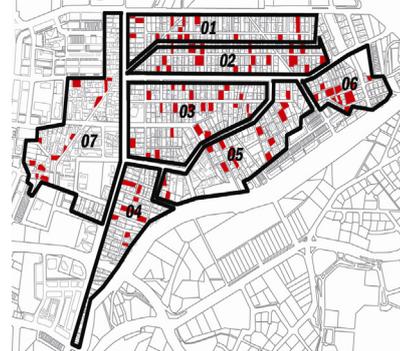
The selection criteria and process of modern traditional houses, which are very important starting points of this study, are as followings.

First, a modern traditional house must have wooden structure excluding new extension part of the old building. In addition, it must maintain major elements of traditional house in the outside or it should be supplemented, keeping characteristics as a traditional houses.

Second, this study firstly reviewed 111 cases, which were classified as traditional Malay houses in ‘Planning Feasibility Report, Urban Redevelopment of Kampong Baharu, Kuala Lumpur’(UITM, 2008).

Third, based on first and second criteria, we conducted a field survey from 4th to 19th of May, 2009 and selected total 121 cases again.

Locations and the number of cases can be seen in the Fig.1 and Table 1.



**Figure 1:** Locations and the number of case

**Table 1:** The number of case

No.	name of area	meaning	number of case
01	Kg Atas a	above A	38
02	Kg Atas b	above B	
03	Kg. Masjid	Mosque	22
04	Kg. Hujung pasir	the end of sand	11
05	Kg. Paya	Marsh	13
06	Kg. Pindah	Move	17
07	Kg. Periok	pot	20
total			121

The facade styles of selected cases were analyzed with photographing and sketching

from the outside. The construction time of the buildings were decided on documents provided by M.A.S in KB and his memories.

In addition, interpretation of the findings of the analysis was supplemented with advices of local professionals who research on traditional Malaysian houses.

## 2. UNDERSTANDING OF KB

### 2.1 The Birth of KB

KB is located in the central part of KL, the capital city of Malaysia. It is the residential area for Malaysian settlements, literally meaning “New Village”

Prior to the arrival of the British in 1874, land in Malay was owned by the community. Land was plentiful and there was no need for an elaborate system of land ownership. The development of land was approved by a *Sultan*<sup>1)</sup> or community leaders. As there was no particular system, everyone can own land when they had a proper permission. But the British created a system where land could be bought and sold. It was familiar to them and also to their economic advantage. However, this system was unfamiliar to the Malays (Debra Wiggins, 1993). With such change system of land had brought the influx of other ethnic group quickly and rapid urbanization. However, native Malay people could not adapt themselves to the changed environment and started to leave the city.

To stop developing such phenomenon and protect Malays, KL, in 1899, constructed KB on 223 acres between *Klang* River and *Batu* Road, with purpose to protect Malay Agricultural Settlement (M.A.S). 1/3 to 1/2acre of land was given to Malays who settled in this area, free of charge (Debra Wiggins., 1993). On the other hand, although there was *Penghulu*<sup>2)</sup> in KB, it was not easy to develop the area because

it was strictly governed by a government appointed committee.

With such background, development of KB was relatively slow, compared with other areas. As a result, this area has formed as the unique space to still watch traditional Malay style houses and ethnic Malay lifestyle. Now, there is consistent discussion about development of this area in KL due to the importance of the location. Therefore, it is a very urgent issue to study and document materials related to houses in this area.



**Figure 2:** The view of the KB

### 2.2 The Present Condition of KB<sup>3)</sup>

As the oldest residential area in KL, KB shows many traditional houses. On the other hand, other various styles of houses are also found in the area because it is located in the center of the KL.

Building use of KB consists of housing 57.38% (809unit), commercial 37.80% (533unit), facilities 2.13% (30unit) and other 2.70% (38unit), based on the ground floor.

Considering types of 809 houses, there are many different types of houses, such as traditional house, terrace house, semi-detached house, flat and bungalow.

With regard to housing types, there are traditional House (111Unit), single story terrace house (432Unit), double story terrace

3) The content of a part was arranged base on the ‘Planning Feasibility Report, Urban Redevelopment of Kampong Baharu, Kuala Lumpur (UITM, 2008). KB is composed of MAS area and outside of the MAS area. UITM report was handled whole area of KB. However, this paper focused on the MAS areas which are ATAS A, ATAS B, MASJID, HUJUNG PASIR, PAYA, PINDAH and PERIOK.

1) *Sultan* means ‘a ruler in some Muslim countries’ in Malay.

2) *Penghulu* means ‘Headman’ in Malay.

house (208Unit), semi-detached house (15Unit), flat (33Unit) and bungalow (10Unit). Percentage of traditional houses is 18% of the total houses.

### 3. ANALYSIS OF ELEMENTS OF MODERN TRADITIONAL MALAY HOUSE IN KB

#### 3.1 Transformation of Roof

Many studies about types and modifications of traditional Malay houses are classifying houses using their roof types<sup>4)</sup>.

There are mainly four types of roof in traditional Malay houses. The basic houseform are the *Bumbung Panjang*(PJ), *Bumbung Lima*(LM), *Bumbung Perak*(PR) and *Bumbung Limas*(LMS) (Lim Jee Yuan, 1987).

PJ is a traditional roof and can be found most areas in Malaysia. It is a long gable roof. As it has simple architectural structure, it is easy to extend and modify a roof; As a result, there are various modifications.

LM is a hipped roof. It consists of a big ridge part on the top and hip valleys expanding to the four directions. This style is influenced by colonial Dutch and British houseforms. This house has higher headroom which allows the use of modern furniture (Lim Jee Yuan, 1987).

PR is a roof influenced by Dutch houseforms in the Colonial period. Zinc and other types of materials are used. It is a gambrel roof. This house type is found extensively along the West Coast especially in the northern states.

LMS is a pyramidal roof and rarely found in houses. It is usually found in mosques and *surau*<sup>5)</sup>. It commonly found in Malacca and the southern states on the West Coast.

**Table 2:** The Type of Traditional Malay House roof<sup>6)</sup>

House type	Bumbung Panjang (PJ)	Bumbung Lima (LM)	Bumbung Perak (PR)	Bumbung Limas (LMS)
Diagram				

With regard to a roof of a main house, PJ style roofs are 52 (42.97%), PR style roofs are 47 (38.84%), LM style roofs are 4 (3.30%) and other style roofs are 18 (14.87%) out of the total 121 roofs. The diagram of each roof style is shown in the Table 3.

**Table 3:** The Roof of KB Modern Traditional Malay House

Roof Part		diagram	number		Type	
Main	Other					
PJ			52	26	R1	
	PJ			23	19	R2
					4	R3
	PR			3	R4	
PR			47	4	R5	
	PJ			17	11	R6
					4	R7
					1	R8
					1	R9
	PR			25	8	R10
					13	R11
					4	R12
	LM			1	R13	
	LM	PJ			4	2
PR			2	1		R15
				1		R16
etc.			18	R17		
total			121			

For a roof of modern traditional house in KB, according to the analysis of combination of a main house roof and other building roofs, PJ, PJ+PJ, PJ+PR, PR, PR+PJ, PR+PR, PR+LM, LM+PJ and

4) Abdul Halim Nasir, 1996; Chen Voon Fee, 1988; Lim Jee Yuan, 1987; Phillip Gibbs, 1988  
 5) *Surau* means 'Small Mosque' in Malay.

6) Refer to the following Lim Jee Yuan, The Malay House: Rediscovering Malaysia's Indigenous Shelter System, 1987, p22~24.

LM+PR types of roofs have been found. Typical types of roofs are PJ(26), PR+PR(25), PJ+PJ(23) and PR+PJ(17).

However, some roofs, which were different from traditional roofs<sup>7)</sup>, were also found. They had different proportion and slope of a gable (e.g. bigger roof size and gentle slope).

Although the number of LM style roofs is small, they show the transformed traditional roof type.

In addition, there is an interesting example. Although colonial style roofs<sup>8)</sup> were classified into other roof style category, they rather showed modern elements.

For roof materials, modern materials such as zinc sheets and asbestos sheets were more frequently used than attap, wooden shingles and clay tiles, which were main materials of traditional roofs.

With regard to decorating elements on a roof, there were wooden panels, called as ‘tebar layar’<sup>9)</sup>, on the gable ends of a traditional Malay house. They served as passages for wind to close a roof and circulate air, as well as important sculpture decorations for facade of a house. However, it is found that these decorations were simplified or closed with wall panels.



Figure 3: A picture of ‘tebar layar’

### 3.2 Transformation of Pile

Because of hot and humid tropical environment with heavy rainfall, traditional Malay houses generally show a floor lifted structure. Therefore, piles supporting a building are very important structures. A

7) Traditional Malay house roof has high and sloped by as much as 45 degrees (Abdul Halim Nasir, 1996).

8) This style usually extended in front of core roof and doesn’t have ridge part on the top. hip valleys expanding to the four directions.

9) It is called also ‘tebeng layar’. It is a gable panels (Syed Iskandar Ariffin, 2001).

pile consists of ‘pelapit tiang’<sup>10)</sup>, and ‘tiang’<sup>11)</sup>.

It is found that some of traditional houses in KB are double story houses. The height of pile is higher than others and people use that space for living or rent. Wooden pile couldn’t found this house.

The number of houses with 0~600mm height piles is 23 (19.0%), the number of houses with 600~1200mm height piles is 60 (49.95%), the number of houses with 1200~1800mm height piles is 22 (18.18%) and the number of houses with other height of piles is 16 (13.22%).

In Table 4, piles are classified by their height materials. The first category is for a traditional wood pile, the second is for modern materials such as brick, concrete and cement. The third is for a pile with closed sides.

Table 4: The Pile of KB Modern Traditional Malay House

type of pile		material	number	type	
					ground Level
0		timber	23	12	p1
~		concrete		3	p2
600		blocked		8	p3
600		timber	60	18	p4
~		concrete		21	p5
1200		blocked		21	p6
1200		timber	22	0	p7
~		concrete		7	p8
1800		blocked		15	p9
etc.			16	p10	
total			121		

10) It is a stone or concrete used as footing to the column; also called ‘Alas tiang’ or ‘pelapik’.

11) It is a column, pillar or post.

Wooden piles are more frequently found when the floor height is shorter, while the height is increasing, brick and concrete piles are used and utilization of empty space is getting more efficient.

When piles are very high, the space can be used as a living area or rental space. Such behaviors can be used as the intention to increase space efficiency.

Also, changes in materials and decorations are found. In the P2, P5 and P8, modern materials are found, such as bricks, concrete and cement. Regarding the height of piles, the number of houses made out of wooden piles is getting decreased in the 600~1200mm height piles and they are eventually not found in the 1200~1800mm height piles. Such phenomenon may happen because wooden piles are not suitable to support bigger and higher structures.

It is an interesting fact that modern Malay houses also consider ventilation of air in the floor by closing sides of piles using holed bricks while traditional Malay houses have no decorations on pile parts.



**Figure 4:** A Picture of Transformation of Pile

### 3.3 Transformation of Wall

Wall panels of traditional Malay houses are made out of woods, the natural material. They show various shapes according to plank arrangements such as horizontal, vertical and mixed. In addition, walls have various types according to window panels.

A window panel can be divided into three parts: top, middle and bottom. The top section is usually configured with ventilation panels and decorated with carvings or wooden grilles. According to the second and bottom sections, window forms are decided. If the window only on the middle section, it is called as a ‘*Tingkap*’ which means window. If there is a window

on the middle and bottom sections, it is called as a ‘*Jendela*’ which means tall window. And ‘*Jendela*’ has wooden grilles on the bottom section.



**Figure 5:** A Picture of ‘*Tingkap*’(left) and ‘*Jendela*’(right)

Walls of modern Malay houses in KB are made out of wooden panel and horizontal and vertical types of wall are found. Out of 121 panels, horizontal panels are 111 (91.73%), vertical panels are 2 (1.65%) and other panels are 8 (6.61%). As indicated in the analysis, most of the walls have been designed with a horizontal pattern.

The types of wall have been classified by design pattern of wall panels and detail categories are shape of windows. Diagram of each type and number of walls in modern traditional Malay houses in KB can be found in the Table 5.

**Table 5:** The Wall of KB Modern Traditional Malay House

Type of wall				
panel	shape of the window	variations of wall	number	Type
		.	1	w1
			58	33 w2
				25 w3
			36	19 w4
				17 w5
			15	2 w6
				13 w7
			2	w8

		1	w9
etc.		8	
total		121	

Horizontal panels are divided into 4 types according to the shape of window. This classification was performed, based on 'Jenang pintu'<sup>12)</sup>, the original window panel frame. The first item includes the panel frame whose length is from the top to the middle. The second type of panel frame is the full frame from the top to the bottom and it has a 'Tingkap'. The third type is the full-length windows and it has a 'Jendela'. The last type is the windows without 'Jenang pintu', which is hardly found in the original form. This window type usually has glass louver windows.

Although 'Tingkap' or 'Jendela', which are containing original features, are still used in modern traditional Malay houses, the windows are more frequently renovated or modified windows with narrow and long shape are more frequently found. In addition, as windows panels in some houses are used glass instead of wood and especially, glass louver windows show that different style of window.



Figure 6: A Picture of Transformation of Wall

#### 4. THE TYPOLOGIES OF MODERN TRADITIONAL MALAY HOUSE IN KB

12) *Jenang pintu* means 'a jamb; a post that forms the side of a door or window' in Malay

The types of modern traditional Malay houses have been drawn by the mutual relevance analysis between characteristics of each facade. As a result, the four typical types have been selected, which have higher correlation.

The correlations of each element are described in the Fig 6.

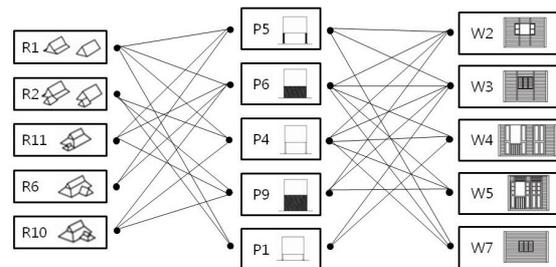


Figure 7: The correlation of elevation elements



Figure 8: Type 1

Type 1 shows R2-P1-w4 correlation. It is the basic type of *Bumbung Panjang*. As a single mass, which does not have spatial differentiation, only 'Anjung'<sup>13)</sup> is added. Overall, an original form is still remained in this type. Materials of roofs can be possibly changed or 'tebar layar' decorations are simplified. Ventilation panels of a window or wood grilles make us feel tradition.



Figure 9: Type 2

Type 2 shows R6-P6-W5 correlation. *Bumbung Perak* forms a main roof. Small *Bumbung Panjang* is located in the middle of main roof. This type plan makes 'T' shape. In the facade, it shows a traditional window style but it is made out of glass to make a luxurious facade. In some houses, western style windows and the entrance with brilliant sculpture panels in the front can be

13) *Anjung* means 'a porch; facade; covered front part of a building' in Malay

found. The pile is made of solid materials and some cases using it as a living space by closing some parts are also found.



**Figure 10:** Type 3

styles introduced in the international style period, rather than modification of traditional style. Slope of a roof is gentler, compared to the traditional style. The length of eaves is also shorter. However, the short eaves are often extended later.

A punched window adopts a glass louver to allow maximized natural air flow and projected canopy to prepare heavy rain. The pile is built by traditional method and main entrance stairs also adopts traditional style.



**Figure 11:** Type 4

the early 1800s. Later, such style had become to splendid bungalows or mansions of 'Strait Eclectic'. The reason for such change is that the combination of the Chinese, Malay, Indian and European architectural styles were built from the memories of immigrant builders and adopted from their pattern books.

## 5. CONCLUSIONS

Through the modern traditional Malay houses at Kg Br, this study analyzed house style elements in terms of a roof, a wall and a pile. As a result, four representative typologies of modern traditional Malay houses in Kg Br were proposed.

Modern traditional houses in KB can be understood as new housing typology, which compromises between introduction of new building materials and practicality while

maintaining traditional roof types and materials, and tries to succeed to traditional life style. They are unique Malaysian modern housing style, which is transitional style created by changes in life from tradition to modern times. Although the four typical styles proposed by this study can show representation typologies of modern traditional houses, in a few cases, very creative, artistic modern traditional houses have been found.

In future, if an analysis of space organizations corresponding houses can be integrated with the results of this study, more systematic and comprehensive typologies about modern traditional Malay houses can be provided.

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