

Contextual Modernization; New Town Planning in Petaling Jaya, of Malaysia

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Abstract

The post-war period has witnessed the emergence of new towns in a number of countries in Southeast Asia. The new town development in Malaysia started with Petaling Jaya (PJ) as a satellite town. PJ was designed in accordance with British town planning principles, which were based on the model of a modern ideal city. PJ also constituted a new regional character because it was developed with consideration for factors such as local technologies as well as social conditions. Kenneth Frampton (1998) and others discussed Asian regionalism and described this type of development in terms of the concept of "contextual modernization". This study is in concurrence with this concept and adopts the viewpoint that the impact of universal civilization can be reduced and modified by means of critical regionalism.

The goal of this study is to identify how the new town planning principles of Malaysia which were first applied in the 1950s, were developed over time and how they were regionalized and transformed in a cultural and regional context. For the analysis, the authors chose 5 sections in PJ according to the building period which ranged; from the 1950s to the 2000s. To identify the planning principles, they analyzed the sections in terms of their history, land use, density, street system, distribution of public, religious and commercial facilities, and housing typologies.

Keywords: new town planning; contextual modernization; regionalism; new towns; Petaling Jaya; Malaysia

1. Introduction

Since World War II, many countries in Southeast Asia have experienced urbanization problems that resulted from rapid population influx into cities and changes in industrial structure. New towns started to develop as one of the solutions to reduce urbanization problems. The concept of the new modern town originated from E. Howard's Garden City in Britain in the late 19th century. This concept spread all over the world as an alternative to poor environments in big cities, which emerged as a result of urbanization (Lee, 2006). Kuala Lumpur, the capital city of Malaysia, also experienced urban sprawling because of rapid population influx. Accordingly, the Malaysian government introduced new town development projects as an initiative to improve unfriendly urban and dwelling environments. In this development effort, the government adopted the British urban development system and legislation. Petaling Jaya (PJ), the first new town in Malaysia, was designed in accordance with the

British town planning principles, which were based on the model of a modern ideal city. PJ also constituted a regional character because it considered factors such as local technologies as well as social conditions. Kenneth Frampton (1998) and others discussed Asian regionalism and described this type of development referring to it as "contextual modernization".

This research, which focuses on PJ as a case study, has the following objectives:

First, to understand development strategies and the background of new towns.

Second, to identify design principles of the development of new towns and investigate what changes took place through time.

Third, to study what kind of housing typologies are allocated within new towns, and the changes that took place through time.

Finally, to identify the unique characteristics of new town development in Malaysia by reviewing the original principles of development of new towns in the Malaysian environment and the periodical changes in these principles.

This study focuses on PJ, the first new town in Malaysia, since its development efforts began in the 1950s. The authors chose 5 areas in PJ according to the building period; which ranged from the 1950s to the 2000s. These areas are the Old town, Section 17, Damansara Jaya, Kelana Jaya, and Kota Damansara¹⁾.

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Typically, the components required to develop a city include urban space, street system, and housing blocks and units²⁾. The framework of this study is based on these components. Detailed elements were developed and selected according to viewpoints related to each of the components as in Table 1.

Using this framework, the study employed literature review, interviews and field surveys for data collection purposes. The interviewing process focused on local urban design professionals. Field surveys included photographing, observation and measurement, and were conducted twice in 2009³⁾.

Table 1. Framework of Analysis

View point of Urban Space	View point of Street Structure	View point of Housing Block/Units
Residential Density (Population/ Household) Land Utilization Location of Public Facilities	Road System (Major Arterial/ Collector road/ Local road) Pedestrian Road System Types of Parking	Housing Typology Block Layout Facade Style (Roof Style)

2. The Development of New Towns in Malaysia

2.1 The Birth of New Towns

New towns in Malaysia can be mainly divided into two types (Lee, 1987). The first type of new towns such as Petaling Jaya, Shah Alam, and Bangi were developed with the main purpose of solving urban problems related to the congestion of a metropolitan city. These new towns built on the outskirts of metropolises were located within 10 to 30km from the city. The second type of new towns such as Bandar Pusat in the Jengka Triangle, Pahang; Bandar Tenggara in Johor Tenggara; and Bandar Muadzam Shah in Pahang Tenggara were built in frontier areas to provide rural residents with urban services.

The area consisting of Kuala Lumpur (KL) and its surrounding cities in the state of Selangor is known as the Klang Valley. With the rapid expansion of new towns, Klang Valley also demonstrated rapid growth and mega-urbanization.

PJ was constructed in 1953 to accommodate the rapidly growing population of KL. Shah Alam (SA), the second new town, was developed in 1963. Subang Jaya (SJ) was built in 1974 in a location which used to be an old palm plantation area. KL, PJ, SA, and SJ are all located in the Klang Valley and act as an important social and economic development hub in the nation.

2.2 The Development of Petaling Jaya

PJ is located in the district of Petaling, which comprises an area of 97.2km² and has a population of 486,040 residents. It is located 11km from KL. The name Petaling Jaya originated from the word 'Jaya', which means 'success' in Malay. PJ was planned based on the planning principles of British new towns (Lee,



Fig.1. The Development of Petaling Jaya

1987; Goh, 1991). It was planned as a self-contained city to include commercial, residential, industrial, administrative and recreational functions (Concannon, 1955). The initial goal of the city construction and planning, focused on resettling squatters, was later changed to focus on the improvement of the quality of living. This phenomenon was related to the emergence of the middle class, which had grown rapidly.

After 1954, the PJ Local Authority was officially established. Its main sections, which were residential precincts, were constructed on rubber and palm oil plantations (Mohd, 1973). Currently, the city consists of 65 sections or administrative districts. These sections were not all planned at the same time, but rather in different periods. Land owned by one owner was divided into several sections and developed by different developers. For that reason, developers and developmental features were different according to the sections although they were developed in the same period.

The Federal Highway, which was opened to traffic in 1957, is divided into two parts. By connecting KL, PJ and Port Klang, it made PJ a strategically important city. In 1977, the PJ Town Authority was promoted to the PJ Municipal Council (MPPJ). Since then, the growth of PJ accelerated and the city accommodated more people.

By the mid 1970s, two town centers were developed in PJ: 1) the Old town⁴⁾, which was the central district when PJ was initially constructed and contained the first shopping complex for its residents, and later, 2) Section 52, which was planned as an administrative district. However, these two districts did not maintain their functions as geographical centers, as PJ was growing to the northwest. As a result, a commercial area, known as 'SS2' and another center, known as 'Kelana Jaya' were developed. With the continued northward and westward expansion of PJ, newer centers such as SS2, Kelana Jaya, Taman SEA, Megah Mas Uptown, Bandar Utama, Koata Damansara, Ara Damansara and Mutiara Damansara have been developed. Therefore PJ is a poly-nucleated new town unlike most metropolitan centers which are mono nucleated.

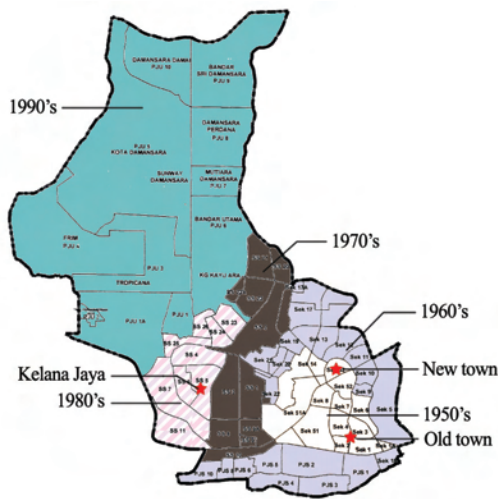


Fig.2. Development of Petaling Jaya

3. Analysis of Case Study

3.1 1950s: Old Town (Section 1)

The inhabitants of PJ were, to quote Concannon (1955:42), 'former residents "directed" from squatters and overcrowded areas of KL'. The first part of a new town was developed based on the residential neighborhood concept, which was planned around a school and open space⁵⁾. The entire plan was thus envisaged for the population to have its residence, work, and recreation within the new town.

The total area of Section 1 is 118.61 acres. It has a population density of 28.859 person/acre (p/a). The number of households is 680 units. It is located in the southern border of PJ. PJ started expanding from section 1 in the northwest direction.

The street pattern of the Old Town is the grid pattern, which can be easily found in earlier urban planning schemes.

The houses were built by the squatters themselves or by local building contractors and were mostly detached units⁶⁾ made of timber and galvanized zinc roofs (Lee, 2006). The style of these bungalows seems to be strongly influenced by Malay traditional timber houses. Recently however, many of them have been renovated, with each house having its own unique facade and style.

3.2 1960s: Section 17

During this period, industrial and commercial sectors were successfully developed in a short



Fig.3. Map of Old Town

period due to the low cost, convenient traffic, and the government's liberal industrial policy. With this accelerated development, PJ shed its image as a squatter resettlement center in the mid-1950s.

The total area of Section 17 is 321.23 acres. It has a population density of 40.136 p/a. The number of households in this section is 3072 units. It is one of the largest residential sectors in PJ. Section 17 is almost rectangular in shape. A primary school is located in the central area while residential and public facilities surround it. The street pattern varies according to the geographical condition and house typology. The road system in the terrace houses area is of a grid pattern while the road system in the bungalow area is a mixed pattern of loops and cul-de-sacs. For terrace houses, there are back lanes that were used for service and sanitary purposes.

There are various housing typologies in this section including bungalows (10.25%), semi-detached houses (3.9%), terrace houses (46.3%) and apartments and flats (39.54%). The major typology is the terrace house. Lots were divided narrowly and deeply to accommodate as many houses as possible.



Fig.4. Map of Section 17

3.3 1970s: Damansara Jaya (SS22, SS22A)

By the late 1970s, PJ became a successful middle-class satellite town of KL rather than a self-sustaining new town. At this time PJ began to expand northwesterly toward SS2, Damansara Utama and Damansara Jaya, and began to expand toward the west in the direction of Kelana Jaya in early 1982.

Damansara Jaya includes SS22 and SS22A. The total area of this township is 294.05 acres and its population density is 28.736 p/a. The number of households is 1932 units. The main commercial area, known as 'Atria', is located in the center of the district. Residential areas were developed surrounding

the commercial area. A primary school is located in SS22 and a secondary school is located in SS22A. In addition, a Hindu Cemetery is located in the east side of the town. Open space is located in the center of the town and includes functions such as walking tracks and parks and provides a delightful living environment. A playground is also located in the center, thus adding to the green space.

While most road systems are based on a grid pattern, some loop patterns are found in Jalan22/27A and Jalan22/37. A voluntary community organization known as DJROA⁷⁾ installed private high-fence gates for each small area for security and traffic control purposes. The district consists of terrace houses (75.75%) with the highest proportion of houses in the area being semi-detached houses (19.23%) and bungalows (5.01%).



Fig.5. Map of Damansara Jaya

3.4 1980s: Kelana Jaya (SS5)

Kelana Jaya includes SS3, 4, 5 and SS6. The development of SS5 was in 1984. The total area of this township is 261.93 acres and its population density is 39.208 p/a. The number of households is 2536 units. It has office buildings as well as residential areas. Green areas and schools are located in the center and are surrounded by residential areas. Many neighborhood parks and schools were originally planned to be built in the residential areas. The area contains many terrace houses (90.05%) and some semi-detached houses (9.95%). Rectangular building lots are arranged in the form of two rows in a grid pattern.

3.5 1990s~2000s: Kota Damansara (Section 6 in PJU5)

Kota Damansara⁸⁾ is located in the northwest region of PJ and is considered the largest district in PJ with an area of 3,993.22 acres. It consists of 14 sections. Section 6 has a total of 235.57 acres and has a population density of 56.947 p/a. The number of households is 2683 units. A lake is planned to be constructed on the boundary of this town using natural river flow. Each section has a 'surau'⁹⁾. Commercial areas are located on both sides of the town.

Overall, this area has a mixed road system that employs both cul-de-sac patterns with loop patterns

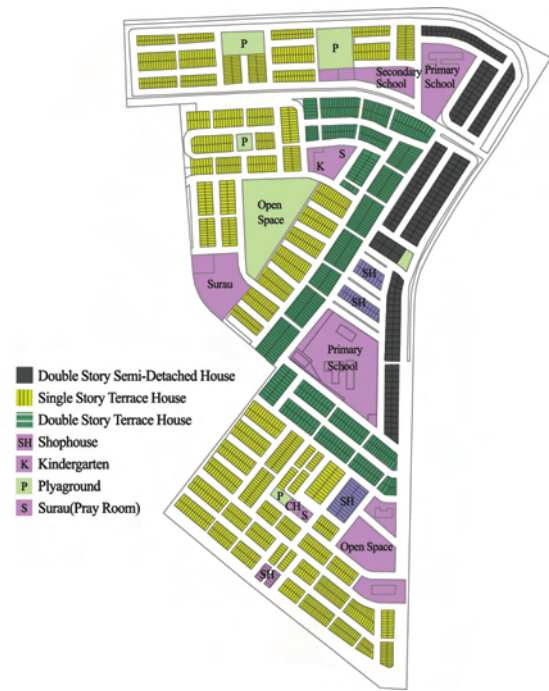


Fig.6. Map of Kelana Jaya

for privacy purposes. There is a relative variety of housing types, including bungalows (3.54%), terrace houses (30.49%), semi-detached houses (1.64%) and apartments (64.33%). By locating apartments at the periphery and terrace houses on slopes near the lake, a nice view is provided to most housing typologies. There are also back-lanes between terrace houses, but they are blocked by fences.



Fig.7. Map of Kota Damansara

4. Periodical Changes in New Town Planning

4.1 Viewpoint of Urban Space

The population density of Malaysia has steadily increased from 28.86 p/a in the 1950s, 40.14 p/a in the 1960s, 39.21 p/a in the 1980s to 56.95 p/a in the 1990s¹⁰⁾. Compared to Britain, Malaysia's population density was lower in the 1950s but recently has become higher than that of Britain.¹¹⁾ However it is definitely lower than that of Korea (170 p/a) and Japan (118 p/

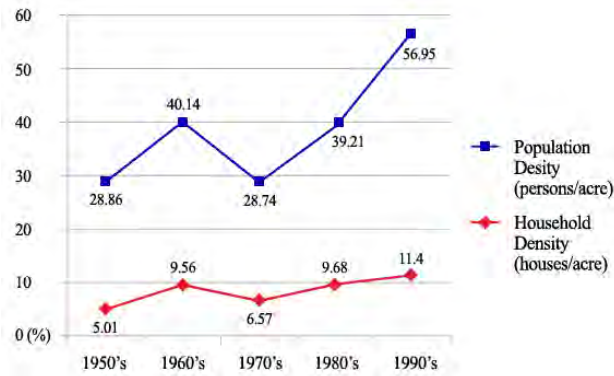


Fig.8. Population & Household Density

a) (Chung, 2006). Land use can be classified into 4 types, including residential space, public facilities, commercial space and public open space.

By investigating the periodical change in the rate of land use, it is found that this change in residential space ranges between 71.8% and 78.82% except for Section 17 (86.87%). The rate of land use seems to be different due to the specific conditions in each precinct. In the case of Damansara Jaya in the 1970s, commercial space (5.65%) and public facilities (12.46%) were greater relative to importance. On the other hand, in the case of Kota Damansara in the 1990s, public facilities and commercial space accounted for 4.83% and 2.24% respectively, while public open spaces increased to 14.11%, thus reflecting aspects of ecological planning.

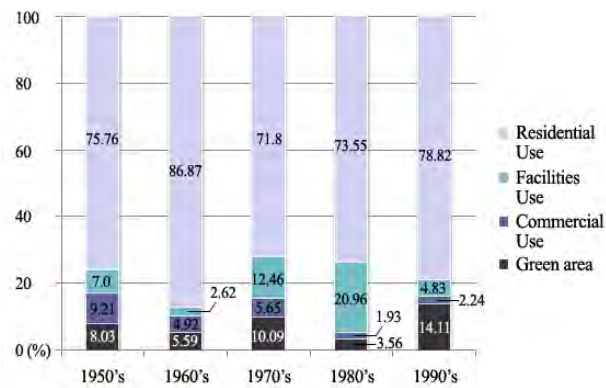


Fig.9. Rate of Land Use

The rates of residential use of Cumbernauld and Milton Keynes in Britain range from 31% to 46% and the rates of green space range from 10% to 34% respectively. The rates of residential use in PJ are higher and the rates of green space lower than those of Britain (Chung, 2006).

After examining the layout of public facilities, it was found that primary schools are located in the center of each precinct except for Damansara Java (the 1970s) while secondary schools are located around the border. The location of kindergartens is dispersed throughout the precinct because most of the kindergarten facilities are remodeled private residential buildings. It was also found that 'surau' and community centers appeared in

the precinct after the 1970s.

Commercial spaces are mostly located around the border except for in Section 17 (the 1960s) where the population density is relatively high. Damansara Jaya (the 1970s) also has a large-scale shopping center located in the center of the town, but it seems to target not only this area but other nearby complexes also.

Open spaces are located in the center of the town. Kelana Jaya (the 1980s) has two open spaces that are characterized by a rectangular yet more linear-shaped site. Kota Damansara (the 1990s) has its open space at the precinct boundary, but the site is adjacent to the natural lake, so the location of the open space serves as a center for the precinct. The number of playgrounds has increased over time, being dispersed and located in each housing cluster. This phenomenon explains that small-scattered playgrounds aim to provide surveillance and intimate open spaces to small housing clusters.

A guideline known as the 'Hierarchy of Recreational Areas' suggests 7 steps for open space town planning in Malaysia according to users, locations and service of recreational areas. According to these guidelines, neighborhood parks, playgrounds and play lots/sport facilities were planned hierarchically in the studied cases in this research. Schools and neighborhood recreational facilities are arranged near open spaces, while shops are arranged at places with easy access.

The most unique element of town planning in Malaysia is the religious facility. The development and scope of the Town and Country Planning in Malaysia before the 1990s were based on a rational planning concept. After the 1990s, this was changed to consider its cultural and regional context. It is the Total Planning Doctrine, which is a holistic spirit and also pursues the sustainable development of the country. The principles are based on the noble universal values of the relationship between man and the creator, between man and man, and between man and the environment. These principles are used in developing guidelines as well as the implementation of any development activity.

Table 2. Typology of Land Use

	1950's	1960's	1970's	1980's	1990's
Public Facility					
Commercial Facility					
Green area					

S; Primary, SS; Secondary School, C; College, K; Kindergarten, SH; Community Hall, P; Surau (Prayer room)
 SH=Shop house, C=Shopping Center
 O=Open Space, P=Playground

Based on this doctrine, the religious facilities such as a *surau* (Muslim praying space), a Chinese temple, or a Hindu temple are an essential element in its own ethnic community.

4.2 Viewpoint of the Street System

Street system features and road patterns are different according to housing typology. The cul-de-sac road pattern, for example, is dominant in the bungalow area, while the grid pattern is mostly applied to the terrace house area. The inner-ring road pattern is dominant in the apartment area, in order to help with traffic circulation in the complex. Other patterns such as the loop and curvilinear pattern exist in some bungalow or semi-detached house areas.

As local distributors are connected to primary and district distributors in grid road patterns in early new towns, vehicles can make a by-pass through the inner road of the precinct. After the 1970s, such inner road systems like loops and cul-de-sacs were introduced to create a traffic free precinct. In addition access was possible only through one or two controlled gates for security purposes. Safety issues in town planning became very important. The 'CPTED (Crime Prevention through Environmental Design)' guideline was developed and is currently being applied.

An interesting findings is that based on the study done by Nor Azlina (2004), the 'loop' and 'curvilinear' layout design fulfills the principles of neighborhood unit better than other 'grid pattern' and 'linear' layouts. (Habsah Hashim, 2005)

4.3 Viewpoint of Housing Blocks and Units

In terms of housing typology distribution, bungalows (81.48%) were predominantly constructed in housing sections in the 1950s as new town development was initiated, but a variety of housing typologies were introduced over time. Section 17 (the 1960s) witnessed the largest variety in housing typologies where bungalows, semi-detached houses, terrace houses, apartments and flats were constructed. In the 1970s and 1980s, the most dominant typology was terrace houses, while the apartment typology increased in the 1990s. In general, the construction of terrace houses was steadily sustained, which demonstrates that the terrace house is the most highly preferred housing typology¹²⁾ in Malaysia.

The wide variety of housing typologies is attributed to the unique Malaysian social feature of a multi-racial nation, which emphasizes the mixture of different social groups¹³⁾ in harmony. As a result, guidelines for residence typology were developed and applied to cities of new town development, such as low cost (30%), medium cost (20%) and medium low cost (20%)¹⁴⁾. Local professionals explained that this is due to the fact that the model of a single housing typology is less marketable than providing a variety of housing typologies.

Detailed guidelines for block designs are different for each city and for each housing typology, but as a

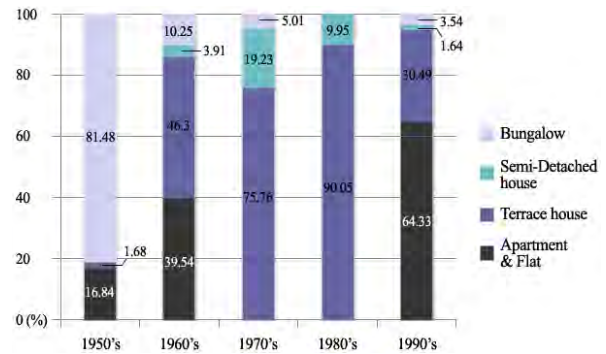


Fig.10. Housing Typology Distribution

general rule, they must be set 20 feet back from the front facing road and 10 feet from the side border. For terrace housing blocks, two rows of houses are placed back to back. The back lane between the two rows has to maintain a width of 20 feet¹⁵⁾, the center of which contains the common gutter where sewage is collected. This back lane idea originated from British industrial cities for sanitary purposes, and was introduced to colonial towns in Malaysia in the late 1880s at the back row of shophouses.

In general, the back side of a house contains the kitchen, and garbage trucks can enter this back lane to collect garbage. Back lanes in the early new towns were wide enough for vehicle access, but recently, the necessity of back lanes is being negotiated¹⁶⁾.

The bungalow style which was built in the 1950s seems to be strongly influenced by the Malay vernacular timber house. A variety of styles, however, have been developed to demonstrate the contemporary trend and style of a specific period. In the case of the terrace house for instance, a simple gable roof style was the most common in the beginning. Over time however, there was a strong tendency to give the impression of a grand mansion with the overall composition being articulated. This was done by segmenting the mass of the roof for each unit or protruding it out or setting it back from the façade. In recent terrace house design, slightly different colors are applied to each individual unit. As is the case with old terrace house precincts, it is easy to find a case where individual units are remodeled as a different style. This can be understood as a desire of residents to express their needs for identity.

5. Conclusion

After World War II, a large number of new towns were developed in Malaysia to support a growing and increasing urban population.

Petaling Jaya (PJ), the first new town became a model for future new town development in Malaysia. In terms of control and supply, unlike the new towns of Britain where the entire responsibility of development and construction was carried out by the authorities concerned, the role of the PJ Authority was merely to acquire and develop the infrastructure of the town and

to leave the construction of houses to the private sector. (Lee, 2006)

The development and expansion of PJ continued until recent years in several stages because the government's policy had changed several times in line with social needs. The whole policy framework was not established until late 1990. As a result, PJ has been developed on a piecemeal basis and to quote Lee (2006:20), is a "poly nucleated" new town unlike most new towns.

Five new towns in PJ were chosen according to the building period from the 1950s to 2000s and analyzed to understand the contextual modernized characteristics of new town planning in Malaysia as follows.

The first characteristic is "social mixture". In one precinct of Malaysian new towns, there are various typologies found such as bungalows, semi-detached houses, terrace houses, apartments and flats. Such a phenomenon resulted from the unique national policy to accommodate the social and cultural needs of a plural society,¹⁷⁾ and also from the intention to reduce the risk of unsold housing stock.

The second characteristic is the "*padang* concept". Malaysian new town planning is similar to Perry's neighborhood unit concept, but the open space in the center of the town may be interpreted as an intention to introduce the '*padang*' which has served as a memorial symbol of the colonial town. However as time went by, the centered open space became weak and the number of small playgrounds has been increased to design or develop surroundings that encourage interaction between neighbors.

The third characteristic is "spiritual development". The most unique element of town planning in Malaysia is the religious facility. The main reasoning behind this was that the construction of worship facilities was thought to influence the formation of human values and ideals. The objective of town planning therefore was to create a balance between physical development and human development in terms of spiritual and noble universal sustainable values for the purpose of continuous national development.

The fourth characteristic is the "security issue". One of the most important considerations in developing a new housing community is security. This is not only applicable in Malaysia, but also in the rest of the world. Moreover, the security issue is an inevitable marketing element for the high class. However, as time passes, the boundaries of the community are designed as closed and the community formulates as a gated community.

The fifth characteristic is "ecological design". The amount of open space increases as times passes and high percentages of total land use are allocated for open space. This expresses the strong desire and need for a sustainable and natural environment. The term sustainable development was first coined in the

national five year plan in the Eighth Malaysian Plan (2000-2005) in the year 2000 and then reemphasized again in the Ninth Malaysian Plan (2006-2010). This is also a global issue. Advancing from wide open space, recent new towns make efforts to design natural streams and even try to recover the natural ecology.

In conclusion, PJ was developed based on the infrastructure that emulated new town development in postwar Britain. However, the British planning principles were customized and developed to suit the social, ethnic, and religious environments of Malaysia.

Acknowledgement

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Notes

- 1) The five new towns were selected based on the recommendation of local urban planners and architects.
- 2) This framework was adapted from Lee, J. H. et al. (2007:143)'s.
- 3) April 2009 and October 2009.
- 4) As the first planned town center, it is called '*Petaling Jaya Lama*' and located between Section 1 and 2.
- 5) Open space in a neighborhood is called '*padang*'. *Padang* means 'field' in Malay. It is a planning concept which allocates open space in the center. Usually the size of the field is suitable for playing soccer.

- ⁶⁾ More than 81.4% of the houses in this town were originally planned as bungalow lots. Only 10 terrace houses were built for trial purposes.
- ⁷⁾ DJROA (The Damansara Jaya Residents and Owners Association) was formed in 1994. It represents the interests of residents in this township. DJROA's community center is located on a piece of land.
- ⁸⁾ The development of Kora Damansara was initiated in 1992 and its still in progress. It was included in the administrative district of PJ in 1997.
- ⁹⁾ A *surau* is a building where Muslims pray but is smaller than a mosque.
- ¹⁰⁾ Damasara Jaya (28.74%) is an exception, since the rate of commercial buildings was higher compared to other precincts and there were no flats or apartments in that precinct.
- ¹¹⁾ The recent population density of Britain is 36 p/a which is the average of 32 cities.
- ¹²⁾ According to the recent statistics of the Housing Stock of Malaysia (CEIC, 2007), the most common housing typologies are terrace houses (40%), flats (19%), detached houses (10%) and semi-detached houses (6%). In Shah Alam, a popular new town in Klang Valley, the number of terrace house units (43.8%), and flats/apartments (46.6%) constitute more than 80% of the housing stock, while detached and semi-detached houses are (5.2%) and (1.6%) respectively, Habsah Hashim(2005).
- ¹³⁾ The population of Kuala Lumpur, Malaysia consists of Malays (56.1%), Chinese (33.1%), Indians (10.29%) and other minority groups. MTR(Mid Term Review) of the Fourth Malaysia Plan 1981-1985, 1984.
- ¹⁴⁾ Most of the local authorities in Malaysia have a mixed residential policy in their structure plan documents.
- ¹⁵⁾ Houses must be 5 feet away from the back lane, and the back lane has to maintain a width of 10 feet thus the overall distance between houses has to be 20 feet in total.
- ¹⁶⁾ There are some cases observed where the back lane is blocked by a fence in order to use it as a back yard. Also, some towns deregulate a distance up to 15 feet, while allowing the extension of the back side of a building and keeping it at a distance as close as possible to the back lane.
- ¹⁷⁾ 'Plural society' can be defined as a society comprising two or more elements of social order which live side by side, yet without mingling, in one political unit. This society is characterized by cultural diversity, politically organized cultural communities and the salience of ethnicity. Furnival, J.S. (1980) 'Plural Society' in Evers, Hans-Dieter(ed.) Sociology of South East Asia: Reading on Social Change and Development, Oxford University Press, Kuala Lumpur, quoted in Saari (1990:3).

Table 3. Analysis of Five Cases

Site		Old Town (Section 1)	Section 17	Damansara Jaya (SS22, SS22A)	Kelana Jaya (SS5)	Kota Damansara (Section 6 in PJU5)	
Location							
General Info.	Development Year	1953	1965	1975	1984	1992~Current	
	Land Size	118.61 acres	321.23 acres	294.05 acres	261.93 acres	235.57 acres	
	Population	3423 persons	12893 persons	8450 persons	10270 persons	13415 persons	
	Household	680 houses	3072 houses	1932 houses	2536 houses	2683 houses	
Urban Space	Population Density	28.859 persons/acre	40.136 persons/acre	28.736 persons/acre	39.208 persons/acre	56.947 persons/acre	
	Household Density	5.008 houses/acre	9.563 houses/acre	6.57 houses/acre	9.681 houses/acre	11.399 houses/acre	
	Land Use	Residential	75.76%	86.87%	71.8%	73.55%	78.82%
		Commercial	9.21%	4.92%	5.65%	1.93%	2.24%
		Public facility	7%	2.62%	12.46%	20.96%	4.83%
		Green area	8.03%	5.59%	10.09%	3.56%	14.11%
Public Facilities	Primary School Kindergarten Padang(Open space) Church, Temple Hindu temple Market, Bus station	Primary School Kindergarten Surau, Church Padang(Open space) Wet market Hotel	Primary School Secondary School Kindergarten Commercial Center Hindu Cemetery	Primary School Secondary School Kindergarten, Surau Community Hall Hostel Jemaah Haji	Primary School Kindergarten Surau Police station		
Street System	Road System 						
	Types of Parking	Roadside parking Parking in housing	Parking in housing Parking lot(Apart.)	Parking in housing Garage(Semi-D)	Roadside parking Parking in housing	Parking in housing Public parking lot	
Housing Block and Units	Housing Typology	SB	358(60.27%)	106(3%)	-	-	-
		DB	126(21.21%)	256(7.25%)	98(5.01%)	-	95(3.54%)
		ST	10(1.68%)	535(15.15%)	-	1534(68.42%)	27(1.01%)
		DT	-	1100(31.15%)	1481(75.76%)	485(21.63%)	791(29.48%)
		SSD	-	48(1.36%)	-	-	-
		DSD	-	90(2.55%)	376(19.23%)	223(9.95%)	44(1.64%)
		A, F	100(16.84%)	1396(39.54%)	-	-	1726(64.33%)
		Total	594(100%)	3531(100%)	1955(100%)	2242(100%)	2683(100%)

Source: Department of Development Planning of MBPJ