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## MENTAL MAPPING ASSESSMENT OF LOKE YEW-PUDU AREA, KUALA LUMPUR

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### ABSTRACT

This study investigates and identifies five main urban design elements in Pudu of Jalan Loke Yew and an observation on the architecture planning style of which the urban planning of the area falls into based on a Malaysian context. The research conducted by visiting the site, observations, and open-ended interviews to understand the area. Targeted interviewees are observers who frequently use this area. The research findings show that this area has been developed to include all the five main urban design elements, according to Lynch (1960). Several landmarks within this area are also identified. Issues touched on in this paper discuss the lack of free pedestrian movement, diversity in land use and people, no clear demarcation of all educational and religious districts and landmarks and nodes as wayfinding cues. The study concludes that Loke Yew- Pudu has proper urban planning based on the presence of these dominant elements and in the context of Malaysia. It is observed that planning in this area falls into the 1950s-1970s periods.

**Disciplinary:** Urban and Town Planning, Southeast Asia History.

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## 1. INTRODUCTION

This study is to investigate and identify the urban design elements in the Loke Yew-Pudu area. This study is essential to identify successful town planning in Malaysia (Hassan, 2005), which is how to improve future developments with a deeper understanding of existing urban plans (Canniffe, 1970). The study area (Figure 1), Loke Yew-Pudu, located 7km away from Kuala Lumpur City Center (KLCC), is considered within the heart of the city centre. The site is bordered two main roads, Jalan Maharajalela and Jalan Loke Yew in the South West and Jalan Hang Tuah in the North West (Ying, 2014). There is a Light Rail Transit (LRT) line running along the North-East side of the study area. The area consists of a mix of commercial, residential, governmental, religious, and

educational areas.



**Figure 1:** Loke Yew-Pudu Area, Kuala Lumpur

## 2. LITERATURE REVIEW

### 2.1 IMAGE OF THE CITY

Based on Kevin Lynch (1960), five city elements are paths, edges, districts, nodes, and landmarks.

#### 2.1.1 PATHS

“Paths” are a route that users usually or will circulate on. Paths are typically roads, pedestrian walkways, railways among many examples. For many people, transiting through a path is how they observe a city (Lydon et al., 2015).

#### 2.1.2 EDGES

Paths that are not considered a means of circulation by users are known as “edges”. They are linear elements that act as continuous linear boundaries between two phases like the shoreline, railway line, or parameters of new developments. Edges are lateral references in a city where it seems like it is the area where two regions meet.

#### 2.1.3 DISTRICT

“Districts” are medium to large parts of the city. It is an area in which users in a city can go in and be a part of it. Districts are grouped by having similar identities. For example, if an area of the city has very prominent European influence over the district’s architecture, the district could be conveniently called French Quarter.

#### 2.1.4 NODES

“Nodes” are also known as points or concentrated areas that are of strategic locations within a city in which users gather around. These points are concentrated with people typically because they carry a sort of importance, such as being a hangout corner or a busy intersection.

#### 2.1.5 LANDMARK

Lastly, “landmarks” are prominent physical references in a city. They are easily visible from a distance and multiple angles, thus being used as a radial reference. Another type of landmarks is those that are more local and can be found in the littlest detail, for example, doorknobs or certain shop signage. These landmarks are clues to users who pass them every day.

## 2.2 CITY: REDISCOVERING THE CENTER

Whyte (1988) observed pedestrian's behaviour in public spaces. He discusses the patterns of pedestrian behaviour, the role of the street-corner store, the affiliation between buildings and the street, and to the rise of self-contained megastructure like shopping malls. Whyte (1988) states "what is fascinating about the street are the interchanges between people that take place in it". Whyte is a strong advocate of busy streets where business and social life spills onto the street. He argues that a city should contain more congestion, and the city is all about the people who live in it. He says that "the key to the success or failure of internal public space is its relationship to the street".

## 2.3 DESIGNING NAVIGABLE INFORMATION SPACES

Foltz (1998) says that there are a few design principles for wayfinding. Among which are to create an identity at each location (different from all others), using landmarks as wayfinding cues and memorable locations, create a clear path and others. Remarkable features of a space are used to assist wayfinding. This is why landmarks in an area are useful wayfinding cues. They stand out from their surroundings. He also mentioned that nodes are points where people make decisions.

## 2.4 URBAN DESIGN IN PENINSULA MALAYSIA

Hassan (2005) focuses on the architectural style and town planning that has evolved in Malaysia after the colonial era., in his book, states that the morphology of urban design in Malaysia can be categorized into three categories which are Before Independence (1950)-1970, from 1970-1990 and 1990- 2010.

### 2.4.1 BEFORE INDEPENDENCE (1950-1970)

Malaysian developments during 1950-1970 were built by the British to house their government officials. The planning and idea developments are based on Raymond Unwin (1917) and Barry Parker's design of an ideal model village. Curvilinear roads dominate street patterns in this period as a reflection of Garden City's informal housing layout patterns. In this period, Hassan (2005) observes that the streets have hierarchical access from collector roads to arterial roads and not immediately to highways (Miller, 1992).

### 2.4.2 1970-1990

During 1970-1990, new towns were built as part of a decentralizing program to carry traffic away from the city centre. Street patterns in this period embrace the idea of a simple geometric style like squares, rectangle, triangles, and circles. Similar to its predecessor, streets have hierarchical access from collector roads to arterial roads and not immediately to highways. Cultural factor has been neglected in this period, and a universal approach in design was adapted.

### 2.4.3 1990-2010

From 1990 to 2010, a new town such as Seremban 2 and Putrajaya was developed. These towns exist as part of a decentralization program similar to what has happened from 1970 to 1990. It can be observed that there has been a mix of European styles during this period.

## 3. CASE STUDY

Kuala Lumpur (KL) has morphed from a jungle to a tin mining town and then the modern capital it is today (welovepudu website). It was founded in the 19<sup>th</sup> century by Raja Abdullah as he sent Chinese prospectors in search for tin in the area. After the discovery of tin, KL underwent rapid

development. Due to disorderliness that was happening in KL at that time, Yap Ah Loy was appointed by the local sultan at that time to get the Chinese groups in line, and it was under the watchful eye of Yap Ah Loy that Kuala Lumpur grew from a settlement into a real city. In the year 1984, Sir Frank A. Swettenham began the modernization development of Kuala Lumpur. The studied area is located at Pudu, off Jalan Loke Yew. It encompasses the area from Masjid Albukhary which is across Jalan Hang Tuah, Kenanga Wholesale City Mall to Jalan Sg Besi- Jalan Loke Yew roundabout (Figure 1).

This research is conducted by having a field study by observing the behaviour of people in the area and carrying out interviews with people who frequently visit the area. After completing the analysis, a ground map is produced, and diagrams were made to assist in conveying the findings of this report.

An on-site study was conducted at Loke Yew- Pudu to understand and identify the site boundary and study area, at the same time to identify the urban design elements in the area. The on-site study was conducted in two sessions, morning 9am to 12 pm, and 2-5 pm. These sessions were across two days, with five respondents. The observations were structured to observe the behaviour of people at different times of the day in the area. Observations were recorded through photography and notes to identify and to relate the findings on the actual site condition through Lynch's theory.

An open-ended interview was conducted to understand the area from the locals' point of view. The questions were simplified and jargon-free. Data that were obtained from the respondent were basic demographic data such as their age, visitor or businessmen, and others. The participants were also asked about the pedestrian movement in the area, whether or not they feel like the railway is a prominent age of the area, to identify the busiest intersection (identification of nodes), the landmarks they refer to while in the area, and the district they think they are in right now (if any).



**Figure 2:** Ground Map.

## 4. ANALYSIS

Since the area of study is located in an urban context, the urban design elements will be viewed from two contexts; the movement of cars and people in the study area. Figure 2 shows a ground map that displays the relationship between the built space and the unbuilt space.

### 4.1 PATHS

#### 4.1.1 HIGHWAYS

On the perimeter of the site, there are four major roads which are Jalan Loke Yew, Jalan Hang

Tuah, Jalan Pudu, and Jalan Yew (Figure 6 highlighted in green). These roads have the highest density of cars. For the pedestrian from observation, it is quite seldom to find people walking along these roads except to go to reach for the bus stops along these roads. There are no other reasons for pedestrians to use these main roads, especially when all activities like trading is located in the middle of the area of study.

#### 4.1.2 ARTERIAL ROADS

The arterial roads (Figure 6, highlighted in blue) run in the middle of the study area which is Jalan Sungai Besi, Jalan San Peng, Jalan Gelugor, and Jalan Kenanga. In terms of size, Jalan Sungai Besi and Jalan San Peng are the widest. These two roads lead cars across the area of study into the other areas of Pudu; hence it is busier than Jalan Gelugor and Jalan Kenanga. Jalan Gelugor and Jalan Kenanga are also considered arterial roads although they are narrower than Jalan Sungai Besi and Jalan San Peng. These two roads cater traffic on the central side of the site and are also the main road that brings traffic to Kenanga Wholesale City, the prominent landmark on-site, and also to exit the mall areas heading to Jalan Hang Tuah.

#### 4.1.3 COLLECTOR ROADS

The collector roads (Figure 8, highlighted in light purple) connects the other smaller roads to the main arterial roads.

#### 4.1.4 ENTRANCES

Five entrances were identified on site (Figure 6); primary entrances off Jalan Loke Yew and Jalan Sg Besi; and the secondary entrances from Jalan Hang Tuah and Jalan Yew. The busiest junction into the site is the entrance next to the Shell Service Station (Figure 5) from Jalan Yew where the road leads towards the commercial district on site. On the south side of the site, the junction is at the entrance next to Jalan Pudu Fire Station. The only pedestrian entrance to the site is highlighted in red in Figure 5. It punches through the Star LRT railway line bridge at Jalan Pudu heading towards Rumah Pangsa Sri Selangor (Figure 3).



**Figure 3:** Shell Service Station (left) and Pedestrian Entrance along Jalan Pudu (right)

#### 4.1.5 PATHS

The pedestrian paths in the study area are highlighted in figure 6. The Star LRT and Monorail interchange station located along Jalan Hang Tuah (Figure 4) encourages pedestrian movement into and out of the area.

Another pedestrian path (Figure 6, highlighted in red) which can be identified on-site is the path that connects Jalan Pudu to the residential area across the railway line (Figure 6, Path 3). This path does not cater for vehicles. According to the interview done with an interviewee, it is mentioned that this path is mainly used by pedestrians to get from the flats to the other side of Pudu, and the next Star LRT Station. The path runs along a small drain and under the Star LRT line as can



be seen in Figure 3 (Personal interview, 2017).



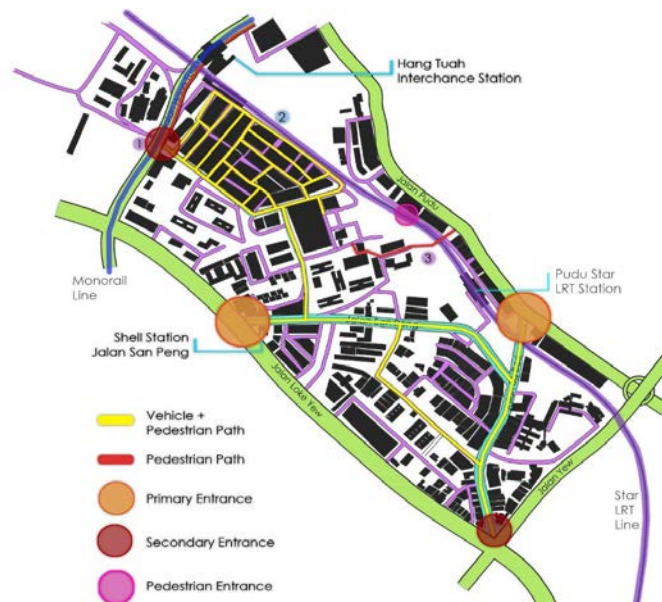
**Figure 4:** Pedestrian Walkway towards Train Interchange Station (left) and Train Interchange Station (right).

#### 4.1.6 RAILWAY LINE

The rail line runs parallel to Jalan Pudu, and it connects Hang Tuah station to Pudu Station off Jalan Sarawak. The Star LRT line (Figure 8, highlighted in dark purple) can be seen in Figure 7. The Hang Tuah station is an interchange station between the Star LRT line and the Monorail Line (Figure 5). The Monorail station shares its name with the Star Lrt station, Hang Tuah Station.



**Figure 5:** Star LRT Line (left) Monorail Line (right).



**Figure 6:** Paths

#### 4.2 EDGES

Edges on site are clearly created by the highways surrounding the site, as shown in Figure 7. These busy roads defined the human activities which concentrate on the part of the area from other neighbours around them.



**Figure 7: Edges**

Another edge that can be identified is the edges created by the railway lines which run along Jalan Pudu and Jalan Hang Tuah. The Star LRT railway line is a very prominent edge (Figure 8) as half of its railway line is built on the land; this creates a physical edge for users in the area. The railway line towards Pudu station is built on an elevated line. Here the edges are not as prominent as the railway lines towards Hang Tuah station because pedestrians can pass at designated areas under the elevated line.



**Figure 8: Railway Edge (left), Eatery Edge (right)**

Other edges include the edge that separates the commercial area from the residential area (Figure 7). The edges here are prominent in terms of the users around the areas. People come to the area to conduct businesses or to do their shopping in the commercial area, while parents who send their children to the school will be in the educational area and people who live in the area would hang around the residential areas (Figure 7). This creates edges between the areas based on the type of users from a different district.

### 4.3 DISTRICTS

Five districts identified on site are, residential, commercial, religious, educational, and eatery (Figure 10). The area is predominantly a commercial area, where most of its businesses involving the clothing wholesaler. Other minor businesses include the sale of food and beverages, sundries, electrical and electronic appliances, hardwires, hotels, and leisure clubs among many.

There are fifteen blocks of low-cost flats and two blocks of medium-cost apartments scattered mostly in the western part of the residential district. The low-cost flats are Rumah Pangsa Jalan Hang Tuah (two blocks), Rumah Pangsa Sri Selangor (six blocks), Rumah Pangsa Loke Yew (five blocks), Perumahan Awam Seri Sarawak (two blocks). The apartment blocks are the Kenanga Point



Apartments cluster. Besides these high rise residential towers, there are also squatter houses and low-rise houses located around the site. These squatters are located along with Jalan San Peng while the single-story government quarters are located in front of Kenanga Wholesale City Shopping Mall.

The schools around the area include Tsun Jin Chinese Independent High School, SJK (C) Chung Kwo, SMK Dato Onn, and SMK Perempuan Pudu. These schools however are not concentrated in one area but scattered into three different locations; east, central, and west.

On Jalan Hang Tuah, Masjid Albukhary is the biggest religious building found. There is also a Hindu temple located behind Pangsapuri Sri Selangor, but no Chinese temple found (Figure 19). Similar to the educational district, the religious districts are not concentrated in one area, therefore, they hardly can be recognized as a district.

The smaller district identified is the eateries along Jalan Kenanga which are very busy during lunch hour. They are approximately a 300m stretch of Malay food stalls along Jalan Kenanga that draw in many customers every day.



**Figure 9:** Masjid Albukhary (left) Eateries (middle) Rumah Pangsa Sri Selangor (right).



**Figure 10:** District

#### 4.4 NODES

In the area, nodes are mostly usual gathering spots like the markets and the public transportation stations, or bus stops. There is a market (Figure 11) located next to Kenanga Wholesale City Shopping Mall, which is a busy spot in the morning when people do their grocery shopping and have their breakfast.



Another important node is the trains interchange station at the Hang Tuah Station (Figure 11). An interview with several school students informed since it is just a short walk from the Hang Tuah LRT Station, they stop and walk to the nearest shopping complex such as Berjaya Times Square and Sungei Wang. This station is also a bust spot especially during Friday prayers where Masjid Albukhary is located opposite the station.

There is a node at the entrance of the pedestrian off Jalan Pudu walkway which is a café. It is busy from lunchtime onwards where people gather to get a quick bite or some coffee (Figure 14).



**Figure 11:** Train Interchange Station (left), Café along Jalan Pudu (middle), Kenanga Wholesale City Shopping Mall (right)

#### 4.5 LANDMARKS

Figure 14 dictates the landmarks located within the study area. Masjid Albukhary is a prominent landmark not only because of the building size but also its distinctive architectural style. There are two Malaysian Fire and Rescue Department Station (MFRD) at the Central MFRD Station (Figure 12) and Pudu MFRD Station. These fire stations are easily recognized as landmarks because they are painted in a striking red, and located adjacent to major roads.



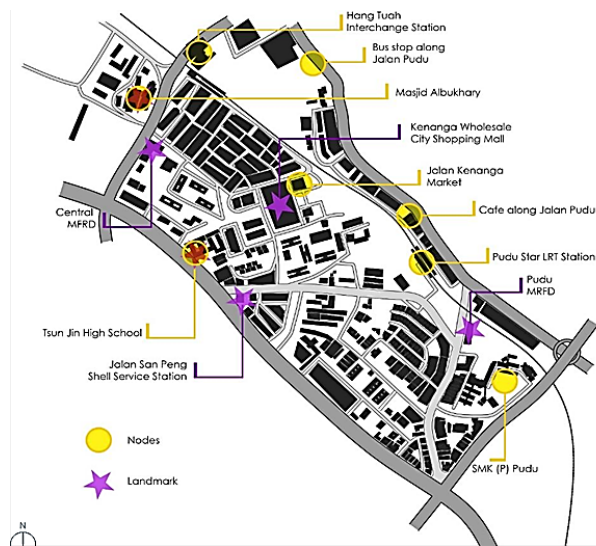
**Figure 14:** Kenanga Wholesale City Mall visible from different distances around the site.

Kenanga Wholesale City Mall with its unique façade treatment is the largest mall within the vicinity which makes it an obvious landmark. The building towers over other buildings in its immediate surrounding. The mall can be seen from several distances (up to 500m) (Figure 13).



**Figure 13:** Central MFRD (left), Shell Service Station (right)

Lastly, the Shell Service Station on Jalan San Peng (Figure 13) is recognized as a landmark because of its location at a busy intersection of Jalan Loke Yew. Many parents who send and pick up their children to Tsun Jin High School used the service station as a landmark.



**Figure 14:** Nodes and Landmark

#### 4.6 URBAN PLANNING STYLE

The urban style of Loke Yew-Pudu can be classified under the 1950s-1970s timeline. Curvilinear roads can be found as street patterns as a reflection of Garden City’s informal housing layout patterns (Figure 16). The roads do not directly branch out into highways but have hierarchical access from collector roads to arterial roads and finally onto the highway (Stern, 2013).



**Figure 15:** Playground in Rumah Pangsa Hang Tuah (left) Playground in Perumahan Awam Sri Selangor (right)



**Figure 16:** Map Indicating Curvilinear Roads, Grid Housing, and Cul De Sac Houses.

For housing areas in Loke Yew Pudu, they are made up of smaller grids of the building create



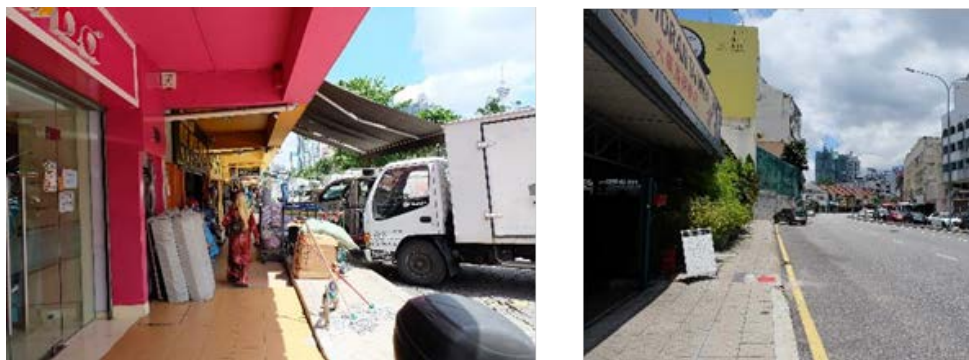
the entire study area which is a reflection of Raymond Unwin and Barry Parker’s grid housing design in the Letchworth Master Planning. It can be seen in Figure 16 highlighted in green. Another element that is similar to Letchworth is the presence of playgrounds in each housing area (Figure 15) and how each housing area is in a cul de sac placement highlighted in blue in (Figure 16)

## 5. DISCUSSION

Four issues are highlighted to help improve the overall development of the studied area.

### 5.1 LACK OF FREE PEDESTRIAN MOVEMENT

60% of the identified paths on-site are mainly vehicular oriented. Pedestrian pathways, however, are provided along with road tables and in front of the shophouses as five-foot walkways). Walking on the roadside is hazardous for pedestrians because of fast-moving vehicles. It is also unpleasant to walk on the not so well shaded walkways (Figure 17). At the same time, the path is always obstructed by the merchants’ selling goods (Figure 17). Whyte (1988) says that the city is always about the people who live in it. Whyte also mentions having conversations in the middle of a busy pedestrian path are typical pedestrian behaviours. Hindering a smooth pedestrian movement will not create a successful city, as people are the life of a city according to Whyte.



**Figure 17:** Obstructed five-foot walkway (left), sidewalk with no shade (right)



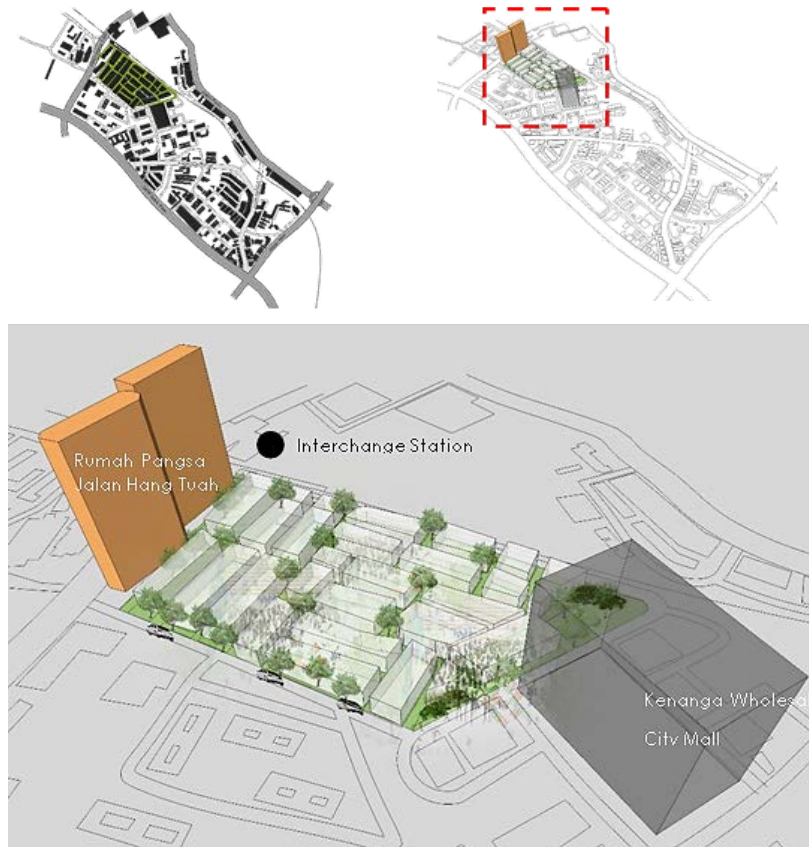
**Figure 18:** Proper pedestrian walkway.

However, there are still some pedestrian walkways in this area to be considered successful. The

location is along Jalan Hang Tuah. This path leads to the train interchange station from the Central MFRD Station (Figure 18).

A car-free zone could be proposed to eliminate vehicles and provide safer pedestrian circulation to solve the issue. The commercial area can be turned into an outdoor mall (Figure 19). This outdoor mall can incorporate the use of gardens turning the area into a green park-mall. This could increase pedestrian paths hence creating more pedestrian movement to the area. This is in line with Whyte's principle that social activities should spill into the streets *"(to) enable natural interaction among city dwellers within the unnatural landscape of the city"* therefore make the area livelier.

This area also is ideal for a green park-mall because of the established wholesale clothing businesses, and other businesses can also attract more movement from the outside area into this proposed green park-mall area. Increase the movement of people (inside and outside of the area) will probably help in generating more sales to existing businesses. Since Malaysia is a hot and humid country, plenty of shade and ventilation should be incorporated in the proposed green park-mall area to give the pedestrians pleasant walking experiences.



**Figure 19:** Proposed Outdoor Park- Mall

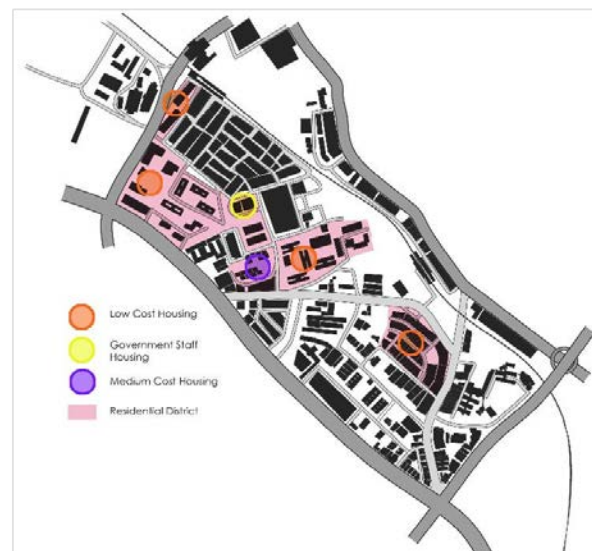
## 5.2 DIVERSITY OF LAND USE AND PEOPLE

From the research, the entire studied area has a mixture of different land uses (Figure 10). The most dominant land use in the area is commercial area followed by the residential areas, educational areas, religious areas, and finally, the eatery area. According to Jane Jacobs (2011), she believed that vital neighbourhoods are what makes a city desirable. To achieve vitality, a city should have diversity in its land use for a higher degree in desirability. It can be concluded that the area of study has a sense of vitality as there is a diversity in land use.



Jacobs (2011) also mentioned that the diversity of people in a city is important to create vitality. The diversity of people in the study area (Figure 20) shows that majority of the people living there are from low-income families however there is also a mix of medium-cost apartments in the area as well as government staff housings. Therefore, it can be concluded that there is a diversity of people in the study area.

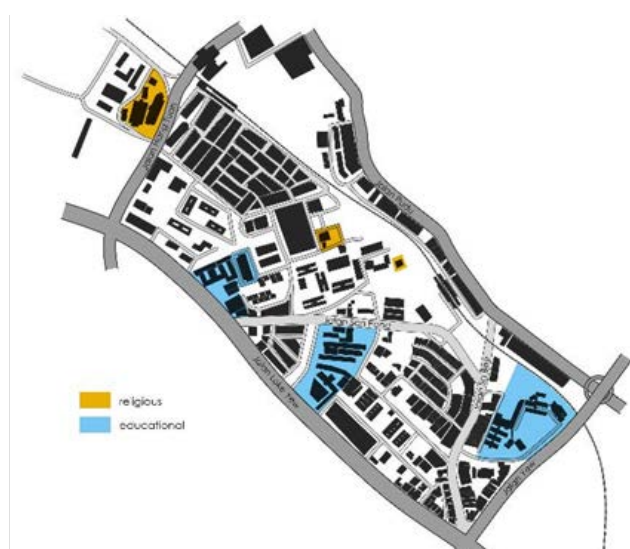
Finally, the study finds that the area of study is successful in terms of having diversity in terms of land use and people, as stated by Jacobs.



**Figure 20:** Diversity in Population.

### 5.3 NO CLEAR DEMARCATION FOR EDUCATIONAL AND RELIGIOUS DISTRICTS

In term of districts, the educational and religious areas are scattered around the site (Figure 21). Each district is a single entity and not a cluster of entities. Schools have the same time start and end time. By being scattered around the site, traffic congestion is dispersed instead of being concentrated the one area.



**Figure 21:** Scattered Districts

As for the religious district, the mosque will be busy on Fridays and at its current location, will cause congestion on Jalan Hang Tuah. The Hindu temple will be busy on Saturdays and Sundays. With it being located within the residential areas will cause congestion in the residential areas on the weekends. It will not make a difference if these buildings are located at the same areas of not,

but for future planning, sufficient space for parking should be allocated for these places of worship and also it should be located near residential areas and away from the main roads of highways to avoid congestion. The educational and religious district does not cause any issues on-site; however, sufficient space for worshipers to park their cars should be provided in the future.

#### 5.4 LANDMARK AND NODES AS WAYFINDING CUES

There is a prominent landmark hierarchy on site. The most dominant landmark is the Kenanga Wholesale City (Figure 22) where it has a unique facade design and can be seen from all around the area of study due to its height. This helps navigation within the area of study greatly as the landmark can be a point of reference for users of the area. Foltz (1998) mentions that “*landmarks are memorable locations that help to orient the navigator; regions are distinct areas that place (a person) in one part of the environment*”.

The secondary landmark on-site can be the Shell Service Station at the intersection (Figure 22) This landmark is especially important for parents who send their children to Tsun Jin High School.



**Figure 22:** Kenanga Wholesale City Mall as Dominant Landmark (left), Shell Service Station as Landmark for Tsun Jin High School Parents (right).

Finally, the node that acts as wayfinding cues especially for the pedestrian is the cafe located at the pedestrian entrance from Jalan Pudu (Figure 6). The cafe serves as a cue due to a modern design in temporary structures (metal deck sheds) along the row (Figure 23). This can be a cue for people walking from Pudu into the area of study using the path that travels under the elevated LRT track.



**Figure 23:** Café as Node (left), Neighboring Shops to Café (right)

## 6. CONCLUSION

From this study, we find that Pudu of Jalan Loke Yew consists of the five urban design elements identified by Lynch (1960). There are clear vehicular paths across the site; however, as mentioned in the previous section, pedestrian pathways are inferior to vehicular paths. There is also a clear distinction between edges and districts on site. From this study, nodes are mainly building

with a specific purpose like markets and schools, not so much of a busy intersection as pedestrian traffic is not dominant on site. Finally, landmarks and nodes on site act as wayfinding cues to ease pedestrian movements. All the findings above support the result that the area of study has an overall successful urban planning but except for weak pedestrian movements.

From the observation done, aerial views of the site, and references made to Hassan (2005), it can be concluded that the area of study was built during the 1950 to 1970 period. By identifying the period, similar solutions to resolve issues of the area can be applied.

Taking Pudu off Jalan Loke Yew as an example, future urban designers and planners would be able to learn the importance of prioritizing pedestrian movements instead of creating a development that is vehicular centred. Whyte (1988) recognizes the importance of people in the city and observed their behaviour hence disclosing the importance of pedestrian movements within an area.

## 7. AVAILABILITY OF DATA AND MATERIAL

Data can be made available by contacting the corresponding author.

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