



PLANNING MALAYSIA:

Journal of the Malaysian Institute of Planners

VOLUME 18 ISSUE 2 (2020), Page 243 – 254

THE DERIVATION OF URBAN DESIGN PRINCIPLES IN MALAY-ISLAMIC TOWN OF KUALA TERENGGANU

Nurul Syala Abdul Latip¹, Nor Zalina Harun², Alias Abdullah³, Mansor Ibrahim⁴

Abstract

Islam took root in the Malay Sultanate kingdom when trade flourished through the Straits of Malacca and the South China Sea. Islamic teaching was accepted by the locals and Islam became the country's official religion. Islam has been assimilated in the way of life of the Malays, including the physical built environment of its cities. However, after colonisation, many of the Malay town structure had changed tremendously following the western planning. Remnants of the Malay-Islamic state footprint can still be traced in the town of Kuala Terengganu. This paper aims to establish the urban design principles influenced by the Islamic values which are embedded in and characterised in Kuala Terengganu. Employing a qualitative method, secondary and primary data (observation using photography) were collected. Content analysis were conducted on the observation data, archival documents, historical literatures and morphological study on Kuala Terengganu Town and triangulated with the literature on principles gathered from the characteristic of Islamic cities. The findings revealed that Kuala Terengganu has similar characteristics to other Islamic cities however it is translated in the local context. The comparison revealed fifteen Urban Design principles related to the Malay-Islamic Town of Kuala Terengganu that are well-assimilated and embedded within the local culture, geography and climate for the reference of future city planners.

Keywords: Urban design principles, Malay-Islamic town, Kuala Terengganu

¹ Senior Lecturer at Universiti Sains Islam Malaysia. Email: nurulsyala@usim.edu.m

INTRODUCTION

Islam reached the Nusantara region as early as 9th century, as determined by the traces of artefacts found in Tanah Melayu. The trade route was instrumental in the spreading of Islam to local lands. Across water, the route spanned from Jeddah through the Red Sea to Aden, south of the Arab peninsular than to Gujerat (India) directly to Nusantara. Across land, it started in Syria or Iraq to Khurasan, north of Parsi to Afghanistan, then to China and later to Nusantara (Muhammad Hasan al-Aydrus, 1996). It brought Muslim traders from the Middle East and Muslim Chinese traders to Nusantara, including port cities such as Melaka, Aceh and in the east, port cities such as Kuala Terengganu. Islam took root and assimilated in the existing local culture. There was clear evidence that Islamic Law was legitimized as the official law in Terengganu in the 1300s based on the evidence in the Inscription Stone found dated 702H (1303M). The aim of this paper is to study how Islam has influenced urban design principles in the Malay town of Kuala Terengganu.

BACKGROUND

The arrival of Islam and its practice

Islam is a way of life. The direct translation on the meaning of Islam is 'peace'. Islam is actually a peaceful religion for a person/ community/ environment when the system guided by Allah through the Quran and conveyed by the Prophet Muhammad S.A.W is implemented, practiced and focused towards submission to Allah in the development of human kind. This includes development of cities as mentioned in Surah Al-Naml 27:91-92:

[Say, O Muhammad], "I have only been commanded to worship the Lord of this city, who made it sacred and to whom [belongs] all things. And I am commanded to be of the Muslims [those who submit to Allah]. And to recite the Qur'an." And whoever is guided is only guided for [the benefit of] himself; and whoever strays - say, "I am only [one] of the warners."

In the Quran, Allah mentioned fourteen (14) times about cities, their features and populations. Based on the theory by Besim Hakim (1986) of Arab-Islamic cities (Figure 1), there were two type of cities established. One type includes those built with Shariah, and the other was assimilated into Shariah, moulded into the existing physical structure (Figure 1). The latter was particularly so when Islam arrived and took root in established cities. Islamic culture 'peacefully' developed, assimilated and embraced the regional cultural characteristics which did not contradict Shariah. This is highlighted in verse 5, Surah Al-Maidah, as Allah allows people to consume or use all good things, and accepts practices of good behaviour and implementation.

Surah Al-Maidah 5 verses 5:

“This day [all] good foods have been made lawful, and the food of those who were given the Scripture is lawful for you and your food is lawful for them....”

Based on Figure 1, the physical changes that happen in a city with the macro setting of the urban area are decided by the rulers, while the micro setting of the dwellings and neighbourhoods are determined by citizens. These decisions were made very much depending on the site, environmental and geographical condition of the place so and does not contradict with the natural law. The importance of responding to the natural law is mentioned by Allah in Surah As-Syuara 26:7-9.

‘Did they not look at the earth - how much We have produced therein from every noble kind?’ ‘Verily, in this is a Sign: but most of them do not believe’. And verily, thy Lord is He, the Exalted in Might, Most Merciful.

These verses have guided decision makers to look at the earth, study the geographical and climate conditions of a place before decisions are made to fulfil the needs of the people. Based on Imam Abu Hanifa (80 A.H-150 A.H) and Imam Malik (93 A.H-179 A.H), the founder of a predominant school of law, the nucleus of a *medina/city* should be in the interconnection of these three aspects: governance (*kadi*), the masjid, and the market (*suq*) market and its surroundings (Figure 2). The interrelationships between these components make up a strong Islamic city (Shojaee, 2015). A great sample of the nucleus is the development of the first Islamic City, Madinah, by Prophet Muhammad S.A.W. All the three components were very closely related physically through linkages. The governor, the Prophet S.A.W himself, had his house next to the Masjid Nabawi, which was then the centre of learning, recreation, community and health. Surrounding the mosques were the *suq* and the residences. Their close proximity allows the people to contact the leader/ governor for any problems. The linkages were also well-shaded and well-ventilated with clear air space in response to the climate. through the enclosures created by the proximity of the buildings and organic urban patterns. Furthermore, within the residences were the district rules, which were comparatively different to those of contemporary cities.

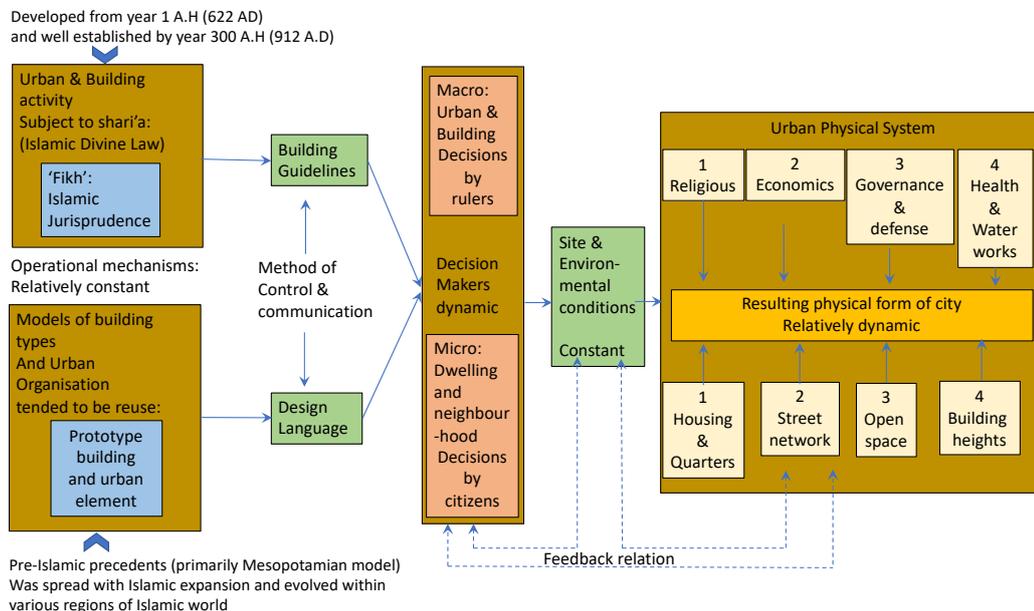


Figure 1. Conceptual Model of Selected Factors that shaped the traditional Arab-Islamic City (Source: Besim Hakim, 1986: Redrawn by Author)

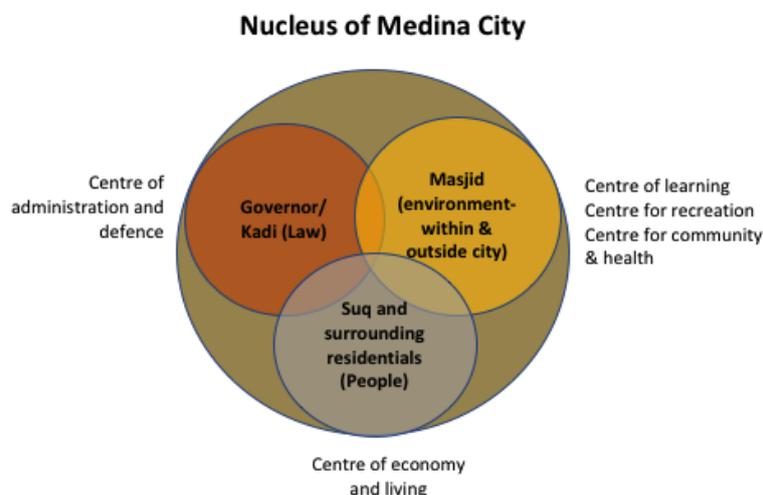


Figure 2. Nucleus of a Medina/ City by Imam Abu Hanifa and Imam Malik (Source: Besim Hakim, 1986. Illustrated by Author)

In the layout of a *medina*, the proximity of different income groups within the same cluster encourages interdependence and mutual respect to neighbours regardless of their income or status (Besim Hakim, 1986). This is in contrast to

contemporary cities, which encourage segregation based on plot size, which invariably means economic and social segregation. The medina cities were also built based on Shariah, and the neighbourhood building guidelines prioritize the aspect of privacy and safety. Free water supply is also a crucial aspect in a *medina*. The evidence is clear based on the history of Sayyidina Uthman, the Prophet’s companion, whom bought the water well in Medina and later open free for all communities because water is the right given by Allah to human being without charge. Finally, in Madinah, the Islamic governance embraced the different cultural and religion and thorough consideration was given in the Madinah Constitution for the peacefulness of the city. Each culture has their own area to freely conduct their practices without conflict with others. The spaces to meet and mingle are in the common areas such as the street, the market and open spaces. Based on the discussion above, it can be concluded on the basic principles implemented in Arab-Islamic cities are as shown in Table 1. Based on integrative theory of urban design (Sternberg, 2007) and the characteristics identified in the Arab-Islamic Cities, this paper will evaluate whether the same principles were applied in the context of the Malay-Islamic cities of Kuala Terengganu.

Table 1. Integrative Urban Design Theory and characteristic of Arab-Islamic Cities.

Integrative Urban Design Theory		Characteristics of Arab-Islamic Cities	Descriptions
Physical Dimension	Good Form	Based on the Islamic Jurisprudence (Law)	Response to the Natural Law, building principles & respect the culture of the place which is according to the guidance of the Quran
		Pedestrian-scaled environment (Religious and Cultural Beliefs)	Humane and comfortable to pedestrian – no cars Separating public and private domain – land use emphasizes the separation of male and female uses
		Same form & pattern for housing (Religious and Cultural Beliefs)	Only the size of living area, type of building materials and sophistication of applied decoration distinguish one from another
Legibility		Legible to the locals but not legible for first timers/ outsiders	Well link to all three components (governance, masjid, <i>souq</i> & residential) within a 400m radius.

		The locals knew their neighbours well but it is not legible for first timers/ outsiders for safety purposes so that the neighbourhood knew that an outsider has arrived.	Accessible and permeable within neighbourhood and to the three main components of the leader's house – the mosque -market & surrounding residential
		Furthermore, it is legible with high accessibility and permeability.	
Functional Dimension	Vitality	Common public areas - Robust in function	Masjid, Market and Open spaces (e.g. streets are also use for children to play)
		Living and working area is in close proximity	low carbon foot print
	Comfort	Climatic responsive, safety and privacy	Well shaded and ventilated public spaces and considered the safety and privacy aspect
		Water for all	God Gift
	Meaning	Cluster according to kinship	Culturally responsive which allows different race and religion to practice their culture in their own vicinity
			Closely link neighbourhood – will know if strangers are in the area
		No segregation between housing area for rich and poor	Different status of people living next to each other and within the same housing cluster

METHODOLOGY

The research approach of a case study of Malay-Islamic Town of Kuala Terengganu. Kuala Terengganu was chosen because the city provides clear evidence of the implementation of Islamic laws, earlier than Malacca, and it was the last state in the country to accept a British advisor (Haji Buyong Adil, 1982). The town planning was established by the Malay Sultanate. However, it is believed that Islam has arrived earlier than the recorded date, because the Inscription Stone portrayed a very strong root of the Malays Muslim due to the establishment of *jawi* writing. The content of the Inscription stone bears an

established Language, Writing, Systemised Social Structure, Islamic Law, Economics, Astronomical Knowledge, Mathematics and others, and shows that Malay Muslim has established a civilisation and cities (Abdullah Zakaria Ghazali, 1984). Furthermore, the estimated population of Kuala Terengganu in 1905 was 25,000 people with the largest urban Malay population in Malay Peninsula. The population number was the largest in the Unfederated Malay state, five times larger than Kuala Lumpur. The town flourished economically the highest compared to any other state in Malaya during that time. It practices barter trading of its own resources such as brass, batik production with other parts of the world (Khoo Kay Kim, 1974). Most of the original urban footprint remained until today. The study employs qualitative technique using morphological analysis and content analysis of archival maps and literatures. Morphological analysis is used to understand the physical development of an area since its early establishment to the current situation. Observations using photography were used to document the existing physical development. Triangulation data from these techniques allowed the evolution of the actual urban space, its building forms and the city's core principles.

FINDINGS AND DISCUSSION

Through the morphological study, the Urban Design Principles in Kuala Terengganu are identified based on the description of the characteristic of town and its components as shown in Table 2. The city shares distinct similarities to the principles available in Arab-Islamic cities but was built within the needs of the Kuala Terengganu local context. The implementation of these principles in each settlement can be seen clearly in Kuala Terengganu. The houses were built according to the Islamic Jurisprudence, taking into consideration the privacy and cleanliness in its space planning and architecture based on the teaching of the Quran. Their design respects the natural law with the use of renewable material and responsive to the local climate and geographical context. The height of the buildings was comfortably humane and all streets were designed for pedestrian only - wonderfully achieved before motor vehicles were introduced to Terengganu. The form of the buildings had a strong identity, with the pointed roof and the *janda berhias* wall, which are identifiable as forming the character of the traditional house of Terengganu.

Table 2. Urban design principles in Kuala Terengganu Malay-Islamic town

<i>BUILT BY THE GOVERNMENT</i>			
<i>Integrative Theory of Urban Design</i>	<i>Urban Design Principles in the Malay-Islamic Settlement</i>	<i>Description of Malay-Islamic Settlement Characteristic</i>	Components
<i>Functional Dimension</i>			

Comfort	Complete neighbourhood	People can live, work and receive basic needs (shelter, food and clothing)	City has all basic needs (e.g market/ shops, masjid, governance, houses, rightful location of community well)
	Health & Safety	Safety and defence	Governance (e.g Palace)
		Source of clean water	Defence (e.g Fort/ watch tower)
Vitality	Integration	Life Long learning	Community well
	Conviviality	Mix of different culture at common spaces	Masjid) / <i>Surau/ Madrasah (Pondok)</i>
Meaning	Heritage Conservation	Preserve architecture and culture	Shops & Market
			Open Space (<i>Padang</i>)
Physical Dimension			
Good Form	Blue Green City	Response to the river as the source of water and main transportation mode	Palace / Government buildings
		Integrated with greens around the city	Trees planted around the cities
	Sustainable design	Uses green technology (e.g rainwater harvesting)	Government Building
	Efficiency	Energy & resource efficient e.g Well shaded and naturally ventilated	Government Building
		Well shaded	Streets
Transition design	Growth according to the needs of people	overall city development	
Linkages	Human Scale	Streets and height of building along the streets is pedestrian scaled	Government Building
			Streets
	Ease of Movement	Permeable	Streets
	Conviviality	Provision of three main components: Masjid, the palace and market/ shops within 400m radius	Public building/ space
	Public Space	Place for public gathering	Medan/ Padang
BUILT BY THE CITIZEN			
Functional Dimension			
Comfort	Compactness	Many close distance work and living. Agriculture field or jetty for fishing are within walking distance	house with working space

	Complete Neighbourhood	People can live, work and receive basic needs	Neighbourhood has all basic needs (e.g shops, surau, leader, houses, rightful location of community/ individual well)
	Health and safety	Clean water for all	Well at house
Vitality	People's first	No segregation between rich and poor	No zoning of houses
Meaning	Conviviality	Neighbourhood clustered according to kinship	arrangement of houses
	Quality of life	Strong neighbourhood and help each other (<i>gotong royong</i>)	people's activity
	Heritage Conservation	Preserve architecture and culture	Traditional Architecture Traditional Culture
	Public space	neighbourhood gathering	<i>Laman</i>
Physical Dimension			
Good Form	Blue Green Neighbourhood	Response to the river as the source of water and main transportation (street)	Houses
	Sustainable design	Design response to climate and local resources	houses/ public building
	Privacy	Emphasize on the aspect of privacy (form and spatial layout)	Houses
	Efficiency	Well shaded and ventilated	houses/ public building
	Neighbourhood Character	Similar form and pattern for housing (But the size of spaces, type of building materials and sophistication of decoration applied distinguish one from another)	houses
	Human scale	Pedestrian Scaled Environment. Low rise buildings (2-4 stories)	houses/ public building
	Transition design	grow according to the needs of people	overall neighbourhood development
Ease of movement		Well shaded	Street
		High permeability between buildings	Street
		Accessible (within neighbourhood and to all three main components surau, the leaders house and shops)	Street
	People's first	Pedestrian oriented (built for people not for cars)	Street
	Safety	Eyes on the street (With the long windows/ lattice/ carvings on the façade create a safe environment for people on the streets.)	Houses

Linkages	Legible to the locals (It is legible to the locals because they knew their neighbours well but it is not legible for first timers for safety)	Street
	Public space	neighbourhood gathering
		Laman

This approach allows the rich and poor to leave next to each other without feeling inferior, creating a strong sense of belonging to a community. The difference between rich and poor houses can only be seen if one gets closer to the houses and examines the intricacy of its carvings and size of its spaces. Most people chose to stay close to their kin because of their strong bond. This setting encourages the beautiful culture of *gotong-royong* (helping each other) which is currently missing in the contemporary urban setting. The high windows in each house with the lattice or carvings allows for ‘*eyes on the street*’ (Jacob, 1960) to happen throughout the settlement for safety purposes. These characters also allow for natural ventilation to be experienced in each house and building. Water harvesting are also practiced in the gathering of water from the roof and well of each house and building. Furthermore, the working environments being located below the houses creates vitality in terms of building usage. And for those working at the plantation or as fisherman, the field and jetty were at a walking distance (within 400m walking distance). This is similar to the mixed-use development promoted in the contemporary urban design principles, which helps to lower the carbon footprint of both the living and working environments. Linkages between the houses creates a *kampung* or village. These *kampung* merge into the central administration, economic and religious area that comprises of the main leader’s house (palace)(law) – the main mosque (*masjid jamek*) (environment) and the main markets (*pasar payang* and *pasar tanjung*) and the residents of the kinship of the leader and workers/ artisans (people) . This vitality is further enhanced at the public open spaces connected to these main central components of the town, which draw various public activities to these areas. Amazingly, all of these important components of the town include wells, which allow free access to water. Linkages between these components are highly legible and pertinent to the locals, enhancing accessibility to all the major components of the town that bind together the community. However, strategically the organic nature of these settings was not legible to outsiders, which helps to enhance security measures in the neighbourhood. Based on this discussion it is obvious that each of the main components within the village make up a larger nucleus of the Malay-Islamic Town. The essence of the Islamic City can be felt with the duplication of these nucleus and the urban design principles applied within it. According to Shojaee, & Paezeh (2015), Islamic cities are built based on the Islamic values and principles, but how people responded to them will

greatly differ in terms of geography and climate, time and accessibility of resources and facilities and this is evidence in Kuala Terengganu. Table 3 summarizes the Urban Design Principles in Malay-Islamic Town from the characteristic of the Malay-Islamic town of Kuala Terengganu.

Table 3. Established list of Urban Design principles in Kuala Terengganu Malay-Islamic town.

1) Blue Green City – the buildings are responding to the river/seas or green open space (<i>Laman</i>)	8) Neighborhood character –unique character and values that respond to the local context
2) Compactness –Distance between living and work. Houses combine with working area and distance to jetty or plantation area are in a walking distance	9) People first – cities are built with priority of the people and not for cars. And no segregation between rich and poor
3) Complete Neighborhood – People can live, work and received basic services within the neighborhood	10) Public spaces – open spaces for public gathering and link from one to the other
4) Conviviality – Neighborhoods are social and lively with personal space, family, community and with other cultures	11) Quality of life – Strong neighbourhood: culture of <i>gotong royong</i>
5) Ease of movement – the town is walkable within the 400m radius and also very permeable	12) Heritage conservation –traditional architecture and values are preserved
6) Health and safety – water, air quality and safety/ defense are the fundamental goal	13) Sustainable Design –green technology: water harvesting and local resources for the material
7) Human Scale – cities are built at human scale for the comfort of people	14) Efficiency – Energy and resource efficient: maximum use of natural ventilation
	15) Transition Design – the growth of the town happen as the need comes, change slowly does not transforms overnight

CONCLUSION

Kuala Terengganu is generally a worthy example of an early Malay-Islamic Town which portrayed clarity in its urban design principles. Fifteen Urban Design principles (Table 3) were derived based on the comparisons of the urban design principles in Arab-Islamic cities and the Malay-Islamic City of Terengganu. The findings are very important revelations that highlighted the significant and the relevance of our local heritage which already embedded the urban design principles that is currently being discussed and aimed to be achieved by contemporary scholars and Sustainable Development Goals. In conclusion, it is pertinent for the decision makers of future cities to re-examine and relearn from the achievements of earlier local cities and towns that have taken into consideration a great deal about the rule of the place, as guided by the Quran, and social, economic and environmental sustainability in Urban Design. It is highly

recommended for the development of future cities to take into consideration on the 15 Urban Design principles that has already been embedded in the Malay-Islamic town as stated in Table 3 as a framework to develop future cities in Malaysia towards effort to retain its identity and sense of place and a more sustainable city.

ACKNOWLEDGEMENT

This research is supported and funded by MOHE – Ministry of Higher Learning under TRGS16-03-0020-20002 and Universiti Sains Islam Malaysia (USIM).

REFERENCES

- Abdullah Zakaria Ghazali. (1984). *Terengganu: Dahulu dan Sekarang*. Kuala Lumpur: Persatuan Muzium Malaysia.
- Al-Quran. Translation by: Sahih International
- Besim Hakim (1986). *Arab-Islamic Cities, Building and Planning Principles*, Routledge, London
- Haji Buyong Adil. (1982). *Sejarah Terengganu. (pp 78) Kuala Lumpur: DBP.*
- Khoo Kay Kim. (1974). *Kuala Terengganu: International Trading Centre in Malaysia in History. (pp 16)*. Kuala Lumpur: Persatuan Sejarah Malaysia.
- Jacob, J. (1993). *Death and Life of American Cities*. Random House. New York
- Muhammad Hasan al-Aydrus, *Penyebaran Islam Di Asia Tenggara, Asyraf Hadramaut Dan Peranannya*, (Pent. Ali Yahya, Jakarta: P.T. Lentera Basritama, 1996), 56.
- Shojaee, F., Paezeh, M. (2015). *Islamic City and urbanism, an obvious example of sustainable architecture and city*. Science Journal (CSJ), 36(6), 1300-1949
- Sternberg, E. (2007), *Integrated Theory of Urban Design*. Journal of American Planning Association. Volume 66. Pg 265-278

Received: January 2020. Accepted: 1st April 2020