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## ELEMENTS OF PATHS, EDGES, NODES, DISTRICTS AND LANDMARKS IN FISHING VILLAGE WATERFRONT, GEORGE TOWN, PENANG

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### ABSTRACT

The city of Georgetown, located in the north-east tip of Penang Island, has rapidly economically and socially grown tremendously over the past 60 years. The clan jetties locating the traditional fishing villages is one of the important contributing factor for the overall urban planning in Penang. After the modern port were built in the 1970s only clan 6 jetties out of 12 remained exist on the waterfront. The information were collected through survey, observation, interview, simulation, internet, etc. The study found that the planning patterns of the fishing villages waterfront is an outward water village concept. The clan jetties can be easily recognized by the visitors because of its well-planning. However, sadly the traditional uses, and culture of the clan jetties communities are now affected by the impact of growing tourism and commercialization. Finding from this research shows that mostly the developed and successful cities were once started from a fishing village that grows into a port area. A well-planned of urban design elements plays an important roles to ensure sustainable urban development.

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## 1. INTRODUCTION

Penang, the famous Malaysian island in the Straits of Melaka, has a long rich history with different races of people came from many different directions of the world. Penang witnesses great varieties of faiths, cultures, architecture, social and easily reflected in so many especially festivals celebrated every year (Abujrad & Hassan, 2017). George Town has been recognized by The United Nations Educational, Scientific and Cultural Organization (UNESCO) as the World Heritage zones in 2008 (Chua, 2008) and the studied clan jetties also is located within this city. The clan jetties was a traditional fishing villages existed in the 19<sup>th</sup> century. Every jetty are usually consisting of more than 10 rows of houses built on stilts over the water. However, after the Ferry Terminal Raja Tun Uda and Pier Swettenham were built in the 1970s only seven jetties remained at the fishing village. Six of them belong to specific surname families like the Chew, Lee, Tan, Ong, Lim and Yeoh and the last

New Jetty where families of various surnames live together. The families were used to be living close to the water for many years. Most of them are worked as fishermen and as laborer in the port area. The port Swettenham was the main trade center zone in Penang since it was built.

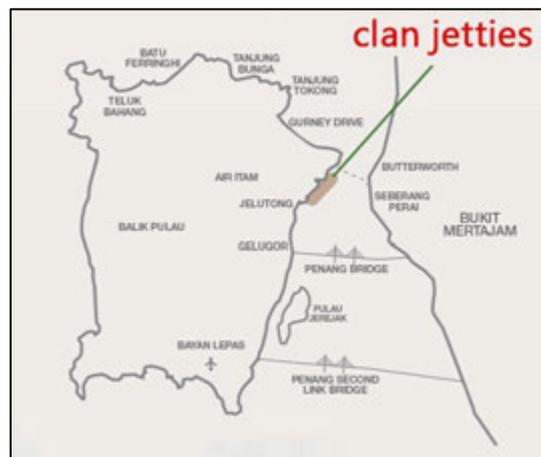
The only thing the resident of clan jetties is lacking a proper sewerage system. The waters around the jetty seriously polluted where they are now no longer suitable to fish in that area (Clement Liang, 2015; Linssen, 2012). A literature review was conducted to search and identify the urban design elements through the methods of a case study of a fishing village in George Town Penang. The objective of this study is to highlight the major urban planning elements of a fishing village with the specific objectives to:

- I. Identify the types of settlement.
- II. Identify the 5 types of urban design elements of the site.

Urban design is the design of towns and cities, streets and spaces. It is the collaborative and multi-disciplinary process of analysing and shaping the physical setting for life in cities, towns and villages (Moughtin, 1999; Shirvani, 1985; Wong et al., 2018). Urban design normally involves not only the design of buildings but also the public spaces, infrastructure and also landscaping (Planning Commision, 2009; Spreiregen, 1965). The city urban planning can be categorised into five types of elements which are paths, edges, districts, nodes, and landmarks (Lynch, 1960).

## 2. CASE STUDY: CLAN JETTIES

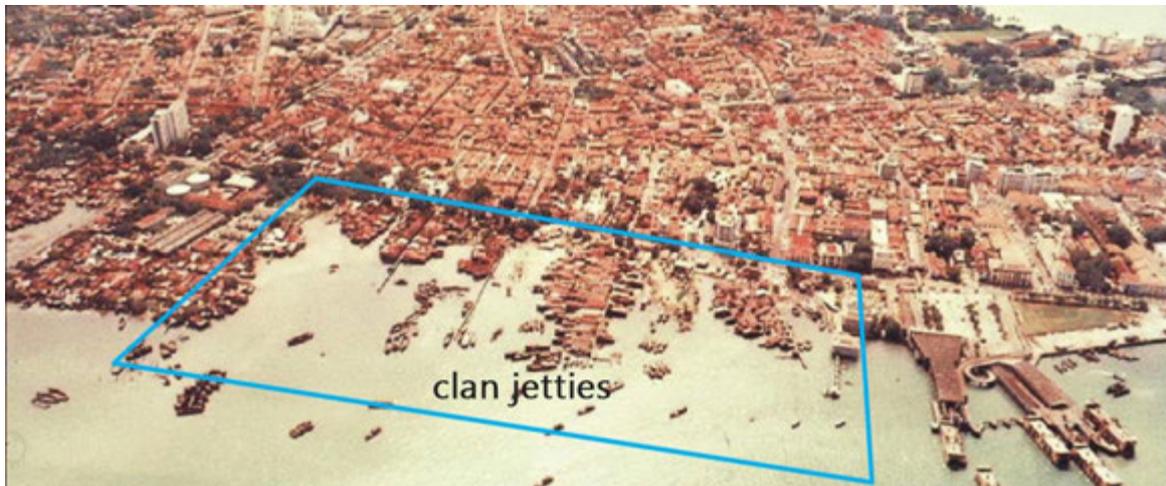
The Clan Jetties is located along Weld Quay, a hundred meters away from the Penang ferry terminal. It is a unique traditional settlements with their homes built on stilts along the wooden piers that extended to the sea (Hassan & Khozaei, 2018). Figure 1, Clan Jetties became places of dwelling in the late 19th century by the Chinese immigrants. Those who shared common surnames who originated came from the similar hometowns in China line together with the same pier. Typically, all houses are supported by wood and concrete beams, stand in a row on one or both sides of about 2 meters width wooden walkway. These houses are usually a single storey and covered by metal roofing, and there is a 2 meter's wide front door foyer to park their bicycles or motorcycles. All the houses are connected by timber planked walkways (Liang, 2015; Linssen, 2012).



**Figure 1:** Key plan.

Figure 2, the planning pattern of clan jetties is the outward water village. Normally it has a density ranging from 52 to 62 units per hectare. The first settlement occurs on mudflats of the riverbanks,

estuaries, or coastal area, and as the condition of the existing wetland is swampy and the depth of the sea is shallow, the development of the village evolves in an outward direction. The process continues until it reaches its deepest foundation on the seabed at about 3-5 meters where the building is still feasible with traditional techniques and timber materials (Hassan, 1999 & 2002).



**Figure 2:** Aerial View (Source: Georgetown World Heritage Incorporated)

Ong Jetty was the first to be built lining the coast of Weld Quay. Unlike the other clan jetties, Ong Jetty was not fully developed into a dwelling settlement of traditional house on stilts but retains its original function as a labor jetty to present days. There are several temporary building built for the needs of the workers from the Ong clan. Originally Ong Jetty actually located where the current ferry terminal is. Today, those temporary buildings are still been used as parking spaces for motorbikes, and the wooden piers are for boats parking. It remains largely undiscovered and now shadowed by its neighbouring Penang Port Commission building (Linszen, 2012).



**Figure 3:** Site plan.

The Lim Jetty was formerly the largest settlement with 42 houses before World War II. Unfortunately many of the houses were burnt down and destroyed during the war. The reconstruction began slowly after the war and new temples were built to cater to the spiritual needs of the residents. Chew Jetty is now the largest amongst the settlement and the most visited jetty also. It consists the most Chinese temples and many annual prayers ceremony are held here (Liang, 2015; Linssen, 2012). Figure 2 shows the site plan.

### 3. METHODOLOGY

The case study area is traditional Chinese fishing village of approximately 25 acres. One of the main objectives of this research is to study the quality of urban design elements of a fishing village in the clan jetties. The information were collected basically through site visit, observation, interview with local residents and literature surveys. This research is exploratory by applying the five visual aspects of urban design elements based on Lynch's approach which Path, Edge, District, Node, and Landmark. The study involves both the physical and spatial aspects of the place.



Figure 4: Paths

### 4. RESULT OF ANALYSIS

#### 4.1 IDENTIFIED URBAN DESIGN ELEMENTS OF CLAN JETTIES

Figures 4-6, the 2 meter's wide walkways defined as the main paths in this fishing village settlement. All the jetties are accessible from the main road Weld Quay and located not far away from each other approximately 100-150m apart. A person can identify the entrance into each clan jetty easily by the signpost erected by the road side. The paths arrangement of the characteristics in term of organisation gives the sense of harmony and order. Observation always refer to certain special places or a landmarks as reference points to enter different jetties. For example, most of the famous local food stalls are located along the Chew and Tan Jetty the longest and best-preserved clan jetties. These reference points become mental images for people. Chew Jetty also being the most occupied among all. This waterfront village houses the largest community whom still uphold most to the traditional lifestyles and cultures.



**Figure 5:** The 2m wide wooden walkway at Chew Jetty-view towards inland



**Figure 6:** The 2m wide wooden walkway at Chew Jetty-view towards the sea



**Figure 7:** Food Stalls along the main road of Weld Quay

Today, some of the Clan Jetties still serve the function as a public jetty for ferrying goods to the bigger boats that anchored further away from the harbor. Throughout the visit and research, fishing is one of the major sources of income in the community. There are several houses doing their small business like souvenir shop along the pathways. The pathways also act as part of their storage area. We can find many fishing gears along the wooden piers. Clan jetties contain a variety of nodes and landmarks, the uniqueness of which is enhanced by a variety of physical characteristics such as traditional architectural style and also by the famous local food stalls and temples at Clan Jetties. The nodes created basically located at the junction of every entrance to the jetty, see Figure 8. Figure 9 shows the district of the studied area.



**Figure 8:** Important nodes of fishing village waterfront, George Town, Penang.



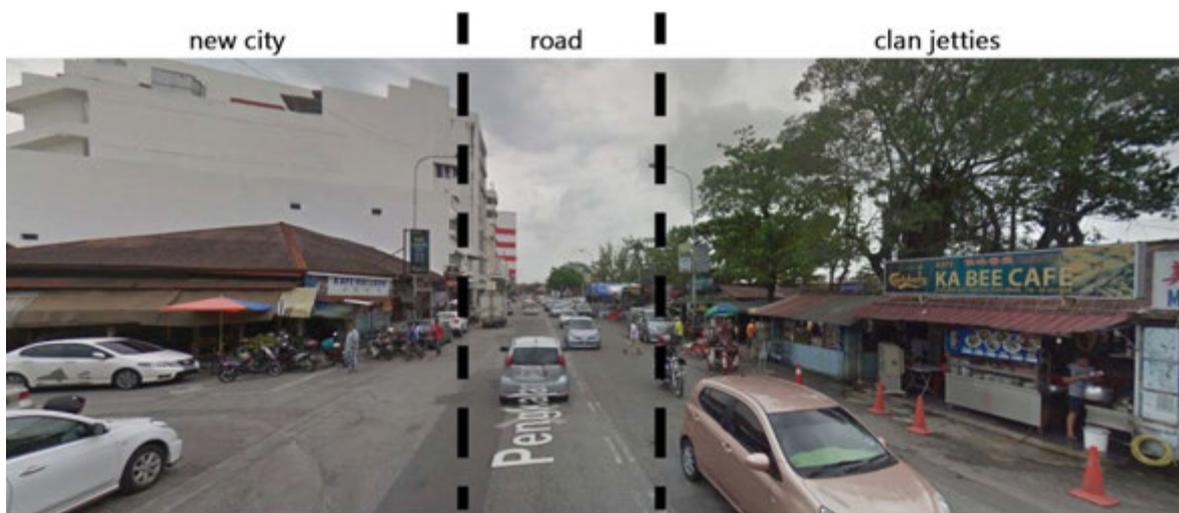
**Figure 9:** District of fishing village waterfront, George Town, Penang.

District had clearly been defined at that area by a variety of physical characteristics such as architectural style, streets and similarity of land uses. The contrast of colonial shop houses architecture and traditional fishing village on both side of the road Weld Quay has defined the edges for the two districts, Figure 11. The new commercial and public areas were planned along the road of

Weld Quay. Before 20<sup>th</sup> century, temples and community hall become one of the most recognized landmarks by many visitors who went to clan jetties to practice their religion and culture, see Figures 12 and 13.



**Figure 10:** Edges of fishing village waterfront, George Town, Penang.



**Figure 11:** The road of Weld Quay defined as edges to differentiate the districts.  
(Source: Google Map)

## 5. DISCUSSION

### 5.1 DISCUSSION ON DISTRICTS

From the survey, they are seven districts existed. Due to this is the reality that every jetty has their specific ownership by surnames. They do have the similarity on the architectural style and characteristic but each of them has their own identity as (Figure 14):

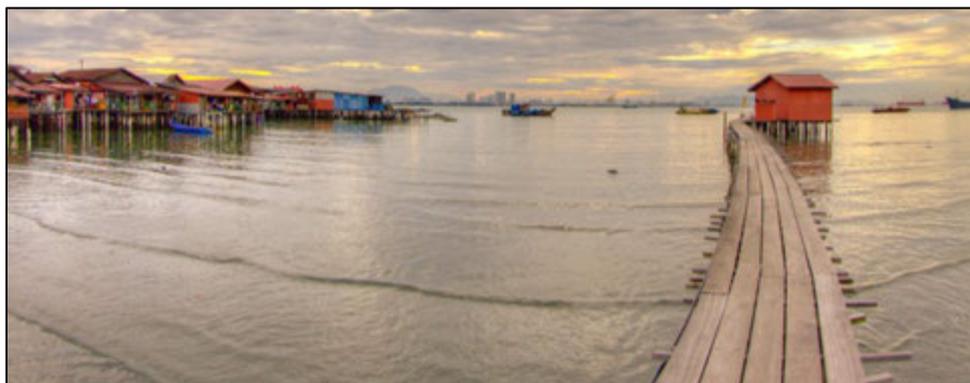
- Ong Jetty- Initially located Raja Tun Uda Terminal before the terminal was built. Today, Ong Jetty still functions as work jetty.
- Lim Jetty- One of the famous Chinese festivals which is the hungry ghost festival will

hold here. Lim Jetty is famous of its local hawker food stalls where located along the entrance of the jetty.

- Chew Jetty- The biggest water village has 75 houses located at this jetty. It has the most numbers of temples located inside this jetty. The jetty has also offers boat shuttle service for the public. Between this, the annual prayer ceremony of the Lunar New Year will be celebrated here. There is a multi-purpose community hall located at inland of the jetty for various activities and performance of various festivals.
- Tan Jetty- It has the longest bridge towards the sea amongst others. Tan jetty is also the venue the Chinese believe where the sacred boat of Nine-Emperor Gods from the Kuan In See Temple is sent off to the sea.
- Lee Jetty- similar to Ong Jetty where the original it was built and located at where the ferry terminal lies today. They moved to the current site in early 1960s and the resident had been gone through the tough life at that time.
- New Jetty- unlike the other clan jetties, it catered mainly for people from different backgrounds and family surnames.



**Figure 12:** Landmarks



**Figure 13:** The longest bridge can found at Tan Jetty.



**Figure 14: Districts**

## 5.2 DISCUSSION ON PATHS

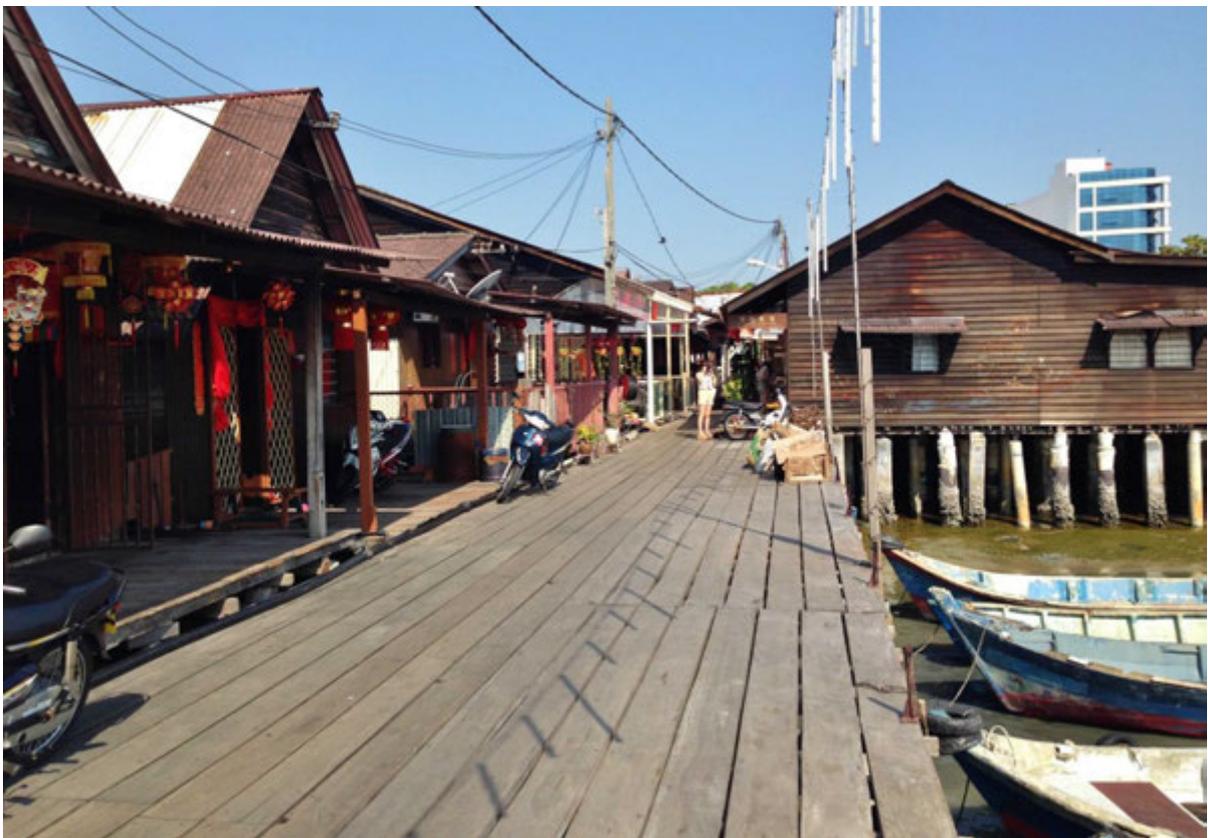
They are two types of pathways: primary paths which are the 2m wide wooden planked walkway connected to all the houses towards the sea and the secondary paths which are mainly connecting the inland houses, open spaces, eateries and the temples (see Figures 15-17). The pattern of the pathways becomes the part to define each community in this fishing village and makes each jetty unique, i.e. by surnames. The jetties directly accessed and visited from Weld Quay. The paths can be accessed by motorcycles and pedestrian walk. They also act as the only access to the houses because most of them do not have back door. These narrow walkways had encouraged and increased more social interaction amongst neighbors.



**Figure 15: Paths**



**Figure 16:** Business along the walkway



**Figure 17:** Fisherman boats parked along the walkway.

### 5.3 DISCUSSION ON NODES

The clan jetties area is well known by the locals to be the best place for reasonably inexpensive but delicious hawker food in Penang. Figures 18 and 19, most of the eateries are located at the junction of Jetty's entrance and these created the nodes. It creates the place where people come together to enjoy the food. The study found that some of the visitors more recognize the location of the eateries rather than the exact entrance of the jetties even though the signpost are clear to be seen. For example, mostly the locals already familiar with the Chew Jetty, one of the reasons is because of its famous local dishes banana fritters and pancakes.



**Figure 18:** Eateries at every junction of the jetties created nodes.



**Figure 19:** Famous Penang food stalls along the road.

#### 5.4 DISCUSSION ON LANDMARKS

Small scale elements or designed ornaments are important components that can be found in Clan Jetties. Especially at the Lee Jetty, the decorated lanterns hanged along the narrow walkway from the jetty entrance all the way till the end of the bridge is a beautiful experience it itself. The decoration makes the Lee Jetty more attractive and adds value to the character of the place. It gives the visitors a sense of place especially the lanterns lighted up at night and is easily recognized by those passing by the road of Weld Quay. This element of design blends harmoniously with the Chinese culture. The lantern decorations also act as the entrance statement to Lee Jetty, and have becoming one of the most recognised landmarks at Clan Jetties.

Tan Jetty has the longest floating pathway, and it attracted many of visitors come to visit. Visitors like to hang around the jetty to capture photos with uninterrupted sea view, especially at the end of the bridge. Meanwhile, it also becomes one of the pre-wedding photos shooting spot for wedding

studio. The bridge ends with a solitary Temple of Goddess of Seafarers Mazu and had also attracted many of visitors to come because of this floating temple. Another landmark found in this study is the wall art paintings at Chew Jetty. The painting was done by a famous artist Ernest Zacharevic ( Figure 22).



Figure 20: Landmarks

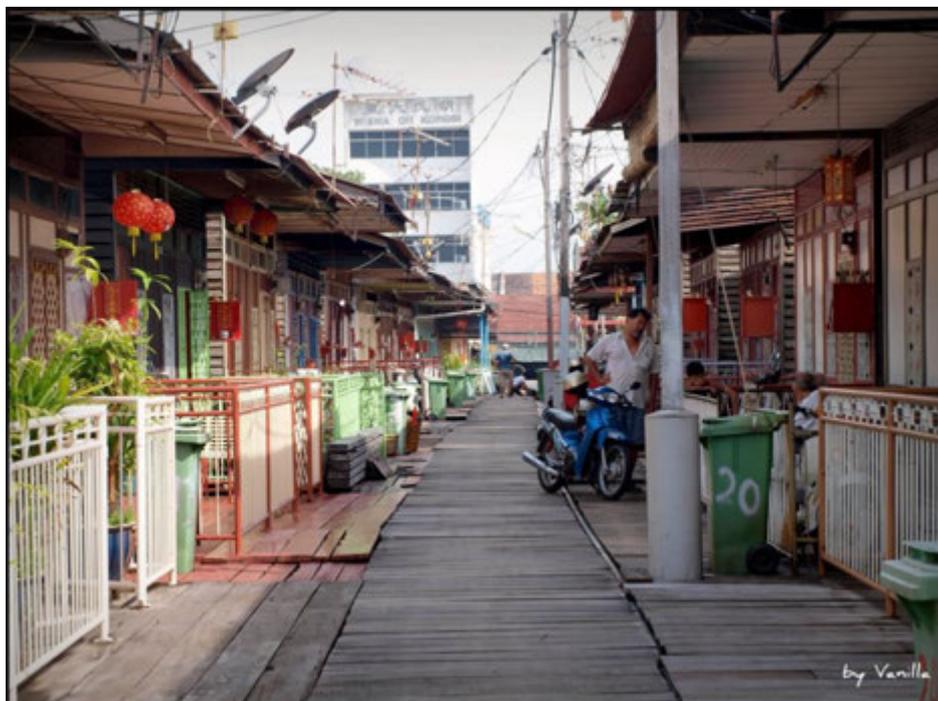


Figure 21: walkway of Lee Jetty-view towards the sea



**Figure 22:** Wall art painting at Chew Jetty

## 6. CONCLUSION

Clan Jetties is a well-planned fishing village and based on the analysis of urban design elements shows that Chew Jetty is the most famous jetty among the rest and Lee jetty is the most attractive jetty at night because of its decorative lantern at the entrance and pathway. Urban design elements are important in every development. From the studied, the strongest urban design elements that can be found at clan jetties is landmark. The landmark is not the tall building or any statue but is their rich culture and famous local foods. Many visitors recognized the jetties by knowing the famous hawker's food stalls and the temples inside the jetties. Clan Jetties is unique traditional fishing village however the jetties are now started to feel the pressure of development and started to also feel the impact of rapid tourism and non-traditional activities such as new business along the pathways and the increasing number of tourism may disrupt the traditional culture and clan's original lifestyle (Hassan, 2010; Hassan & Shaiful Rizal, 2012). In the end of the day, it may cause the original community to move out to seek more privacy living place. The use of modern and incompatible building materials for commercial purposes is changing the original architectural characteristic and the traditional values of Clan Jetties. The relevant department should seriously take into considerations and to make sure that all those living at the developments at the waterfront and non-traditional activities to respect the historical aspects of the site. The residents over there will be disrupted by the tourist. An improvements to conserve culture is needed in order to preserve the original traditional culture and to respect the lifestyle of those residents at the clan jetties.

## 7. AVAILABILITY OF DATA AND MATERIAL

Data can be made available by contacting the corresponding authors

## 8. ACKNOWLEDGEMENT

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