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Regenerating the Identity in Historic Waterfront: A Case Study of Central Market Waterfront, Kuala Lumpur

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Abstract. The study focused on assessing the attributes of identity in the historic waterfront to regenerate the historic waterfront with eroding identity. Kuala Lumpur, the capital city of Malaysia, is succumbed by unprecedented urbanization in the past few decades. Thus, Sungai Klang and Sungai Gombak are overshadowed by new developments which are insensitive to the existing character and setting of the historic waterfronts. Consequently, this threatens the historic waterfront identity, even though the rivers were the starting point of Kuala Lumpur. This study aimed at assessing the factors to regenerate the identity in the historic waterfront and propose strategies that can contribute to the regeneration of identity of the area. The research methodology adopted is qualitative approach. Attributes that contribute to the identity of the historic waterfront were identified through literature review and evaluated by townscape appraisal and field observation. The area selected as the case study is the Central Market area at the historic Klang waterfront. Central Market is a Category Two Heritage building separated from water edge by the new LRT infrastructure. Historically the former wet market, Jalan Benteng and the water body created a combined genius loci for the place, as boats carried goods to and from the Central Market, forming a significant node. Key findings indicated that several attributes of identity are eroding, causing poor accessibility and legibility, poor water quality and no block permeability to extend activities. Also, the new landscape elements by ROL Project at Jalan Benteng affect the enclosure of the historic waterfront promenade. The natural and manmade landscape elements surrounding the waterfront are not coherent, does not aid in legibility to the waterfront but rather affect the meaning and association with the historic setting. The open spaces in the waterfront precinct are misused, such as the car park of Central Market, which has immense potential to be a major node. These scenarios are deteriorating the identity of the historic waterfront. Finally, the study proposed several urban design recommendations aimed at regenerating the identity in the historic waterfront.

1. Introduction

The development of waterfronts, as the main public space for cities, started in the 1970s when the industries relocated, leaving back areas in need for renewal. Hence, since 1990 new housings were proposed to cater to local people near these waterfronts, then in early 2000 the issue of sustainability emerged significantly and now the concern is to search for the identity of the waterfront [1]. Kuala Lumpur is undergoing unprecedented urbanisation in the past few decades. Shuhana (2011) mentioned that the changing trend of urbanisation has threatened the historic fabric of many Malaysian cities [2]. Shuhana et al. (2013) positioned that even though the historic city centre of Kuala Lumpur grew from the waterfront, the new developments do not consider it [3]. Relph (1976) mentioned that when a place

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starts to lose its distinct character, the phenomenon is placelessness [4]. Relph (1976) mentioned that the contributing factors for placelessness are inauthentic development, mass production, McDonalization, speculatively driven economies and increased dependency on mobility infrastructure [4]. This factor causes casual eradication of distinctive places and makes standardized landscapes where the concept of place identity is diminished. Urbanisation that is insensitive to the existing character and setting of historic waterfronts caters to placelessness, causing loss of place identity. Regenerating the identity in historic waterfront will be an effective placemaking tool. The key research questions of this study are; what are the attributes that contribute to the loss of identity in the historic Klang waterfront and; how to regenerate identity in the historic Klang waterfront. The research aims to explore factors to regenerate the identity in the historic waterfront. To achieve the research aim, two objectives have been formulated based on the research questions. The two objectives of this research are to identify the attributes that will provide identity in the historic Klang waterfront and to regenerate identity in the historic Klang waterfront.

1.1. Research Problem

As Malaysian cities compete to derive a cosmopolitan image, there is a risk of losing local uniqueness. According to Rosli (2012), the historic form, massing, scale, proportion, material and features in the historic waterfront setting had a unique identity which is now threatened by insensitive urbanization [5]. The field observation highlighted that the historic Central Market waterfront has a loss of identity as the modern physical setting is not compliant to the historic fabric. The Central Market was initially a wet market located at Jalan Tun Tan Cheng Lock (Foch Avenue), is a prominent place marker of Kuala Lumpur since 1888. According to Shuhana et al. (2013), the Sungai Gombak and Sungai Klang served as a transportation mode for the public since 1911 till 1978, but with the introduction of land-based transport, the city expanded further away from the confluence [3].. The riverbanks were straightened for flood mitigation measures after the 1925 flood. In 1978, the riverbanks were intervened by concrete channelling along it for easy maintenance. Only these few unsympathetic steps led to massive development of buildings, transportation routes and utility networks along the river. Around 1980, there was an attempt to develop pedestrian walkways along some parts of the river, but the Light Rail Transit (LRT) and highways blocked the view of Klang river permanently [3]. The LRT infrastructure has also separated the Central Market and Jalan Benteng physically and visually from the waterfront. The surface car parking at Central Market has compromised potential spaces for spill over activities. Urbanization has also resulted in reduced legibility of the distinct place markers to the waterfront leading to a loss of identity in the historic waterfront. The waterfront has no activity setting. Consequently, these factors depreciate the meaning and association to the place. These issues in a physical setting, observable activities and meaning and association have eventually erode the place identity.

2. Regeneration and Place Identity

There are several aspects of the theory of place that contribute to the place identity relevant for the process of regeneration. Rapoport (1981) argued that identity as a concept is difficult to define. Hence, several authors have been studied to understand identity and its attributes [6]. Relph (1976) advocated for place identity stating that human needs to associate with a place of significance; in the absence of distinct elements, placelessness will occur [4]. Identity encompasses the characteristics of being distinctive, different, unique, dominant, memorable, identifiable by the people, easily recognizable and with its character [7]. Giovanni (1987) suggested that the physical features are an expression of the myths, values and cultures identified by people through meaning, associations and symbolism generating place identity for the inhabitants [2]. According to Norberg Schulz (1980), place identity has three significant attributes which are physical setting, observable activities and meaning and association [8]. In summary, the place identity is perceived through three interdependent attributes, which are physical setting, observable activities and meaning and association.

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2.1 Theory of Place

Montgomery (1998) and Relph (1976) stated that places are made from physical form, activity and meaning [4,9]. Hence, the place is a phenomenon which cannot be reduced to any of its properties without compromising the overall nature [8]. He mentioned three interconnected concepts pertaining to the theory of place, which includes identity, character and genius loci. White et al. (2008) states that the concept of sense of place, place attachment and identity could describe people's connections with a place [10]. To understand the theory of place and its significance to identity genius loci, place attachment and sense of place are studied, see Figure 1.

- 2.1.1 Genius Loci. Norberg-Schulz (1980) mentioned that the genius loci is a vital characteristic for place identity [8]. He explained the character of places and their meanings for people to define the genius loci, which is also referred to as the spirit of the place. The environment facilitates orientation, comprises objects of identification and in relation to nature places and objects avail meaning [8]. Kuala Lumpur started from the confluence of the Klang and Gombak River and is surrounded by seven hills. These hills and rivers existed since the beginning of the city till present; hence, these natural elements are the genius loci of Kuala Lumpur city. Based on Norberg-Schulz (1980) description, it can be concluded that identity can be achieved by safeguarding genius loci such as hills and rivers [8].
- 2.1.2 Sense of Place. Granham (1985) described a sense of place as a condition where a person familiarise with his surrounding aided by individual senses and understanding of elements that give identity [2]. According to Norberg-Schulz (1980) sense of place is also the genius loci of place [8]. Jorgensen and Stedman (2001) and Boerebach (2015) explained that sense of place defines place attachment, place identity and place dependence [11,12]. Montgomery (1998) mentioned that the three components of sense of place are the physical form, activity and meaning [9]. It can be concluded that sense of place is the genius loci and is derived when the physical setting evokes place attachment, meaning and place dependence.
- 2.1.3 Place Attachment. Place attachment is defined as the effective bond between individuals and places [13]. Ismail (2017) mentioned that place attachment is a relationship that exists between positive emotions towards the environment and functions of people influencing a sense of place, imageability and place identity [10]. According to Najafi and Syarif (2012), the attributes of place attachment are physical features, activity and meanings [11].

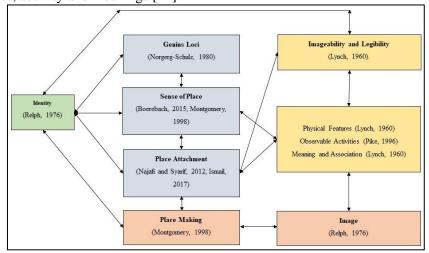


Figure 1. The interrelationship between identity, placemaking, image, genius loci, sense of place, place attachment, imageability, physical features, observable activities and meaning and association (Source: adapted from 4,7–11,13 by authors, 2018)

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2.2 Waterfront

Giovinazzi and Moretti (2010) stated that the waterfront is the interface between land and water and is the interactive space between these two different systems [15]. Breen and Rigby (1996) consider the bay, canal, lake, pond, and river, including man-made water bodies as waterfront [15]. Malaysia's Department of Drainage and Irrigation (2003) describes the waterfront as an area which is within 50 meters, or two lots of building, from the banks where water is visible. Breen and Rigby (1994) identified seven categories of waterfront features, which are culture, environment, history, mixed-use, recreation, housing and employment beach [16]. This research will be focusing on the historic feature. According to Tibbalds (1992), when town relates to significant physical features such as waterbody, a strong identity of town is derived [2].

2.3 Attributes forming the Identity of Historic Waterfront

Relph (1976) identified three interconnected attributes of place identity; these components are physical features, observable activities and meanings or symbols [4].

- 2.3.1 Physical Features of Waterfront. In order to understand physical dimension of historic waterfront the principles of urban form, urban space and legibility are to be studied [3]. A structured place gives a vivid image and hence, identity [7]. The urban structure is illustrated by five elements of Lynch (1960). The attributes of legibility are urban structure [7], accessibility, circulation and movement, signage and parking [3]. Urban form is the block pattern of the buildings that create the built form of the city [2]; evaluated through a morphological study. The urban form also includes grain and texture of a town identified by evaluating building massing and articulation. Fine grain of heritage buildings creates distinct townscape. Coarse grain modern hinder immediacy of view to distinct elements [6]. The urban space must also be legible and distinct to be perceived [6]. Shuhana et al. (2013) further explained that the physical character of the water body is the waterfront features (water quality, access to the water body, edge treatment), building massing and articulation, heritage structures, open spaces and public art [3].
- 2.3.2 Observable Activities of Waterfront. According to Tugnutt (1987), human activity is one of the important components of place identity [2]. Human activities are the behavioural manifestation of man's response to his environment, to derive a purposeful transformation of matter or information, such as reading, eating, etc [4]. Both indoor and outdoor activities give identity to a place [2]. Diversity in use and activity setting are crucial attributes of observable activities [2,3].
- 2.3.3 Meaning and Association of Waterfront. Generally, there are seven aspects of meaning, which makes a place unique and possess identity [2]. These are familiarity, historical significance, nostalgic memories, affinity, the special quality of a place, dislikes and associations. An integrated physical setting with structural clarity and vivid identity are the prerequisite for strong symbols [2]. Lynch (1960) stated that comfort generates positive image hence generate meaning and association [7]. It can be concluded that comfort, symbolism and memory in historic places generate meaning and association. The attributes of comfort are seating, shades, lighting and universal design [3].

2.4 Waterfront Regeneration by placemaking

Roberts (2000) describes urban regeneration to be a comprehensive and integrated vision and action to solve urban problems bringing sustained improvement. Marshal (2001) proposed that the new city extension should be connected to the historic city centre, by the water body, to link the past and present [3]. The waterfront regeneration will regenerate the attributes mentioned in Table 1 by placemaking. According to Relph (1976), placemaking considers the theory of place to design public spaces [4]. According to Najafi and Syarif (2012), physical features, activities, and meanings are the main components of placemaking [11]. According to Rodwell (2007), historic waterfront reinforces the identity of the city if contextually designed [17]. Hence the waterfront regeneration has to be contextual

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to retain the historic character of the case study. The attributes mentioned in Table 1 and discussed in subsection 2.3.1, 2.3.2 and 2.3.3, will be considered for waterfront regeneration.

Table 1. Attributes of place identity.

Physical Features		Observable Activities	Meaning and
Legibility	Urban Form and Spaces	-	Association
Urban Structure	Waterfront features	Diversity in use along waterfront	Comfort
• Path	 Water quality 	Activity setting	 Seating
• Edge	 Access to water body by stairs 		 Shading
 Landmark 	 Boarded walks 		 Lighting
 District 	 Bridges 		 Universal Design
• Node	 Soft edge embankment finishes 		Symbolism
Accessibility	 Profile and setting 		Memory
 Side walks 	Morphological		·
	Studies Urban Block		
	Design		
 Five-foot 	 Permeability to 		
walkways	water body		
• Cycle paths	 Permeability of facades 		
• Continuity of linkage along the waterfront	Building massing and articulation		
• Landscape element used to establish links and give direction	Grain and texture		
• Focal point at nodes to direct view	• Enclosure		
• Place markers should be linked to waterfront	Open space		
Circulation and	 Landscape 		
Movement	inventory		
• Public	Significant and		
Transportation	Historical Structures		
 Movement pattern 	Building inventory		
a.	of past and present		
Signage	Public Art		
Parking	 Interpretive form 		

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3. Research Methodology

Considering the research questions, aim and objectives, the qualitative method approach was adopted. The method was adopted by urban designers in similar waterfront setting [19]. According to Cresswell (2003), qualitative research is an emergent process rather than tightly prefigured [20]. The qualitative method focuses on collecting and analysing quantitative data from a single case study [20]. Yin (2013) describes the case study method as an empirical inquiry that investigates a contemporary phenomenon within real-life context when the boundaries between phenomenon and context are not clear; it uses multiple sources of evidence [21]. The case study is surveyed by a qualitative approach to derive indepth data collection on physical features, observable activities and meaning and association. The research includes three research techniques for data collection, which are field observation to retrieve primary data, literature review of secondary data and document review of policies and guidelines. The data availed was used for data analysis comprising of content analysis and SWOT analysis. Findings from the data analysis were later used to establish the design recommendations. The case study area contains the historic waterfront of Kuala Lumpur; referred to as the genius loci or starting point of Kuala Lumpur. The site is in the Chinatown district designated by KLCP 2020 [22]. It comprises of heritage buildings such as Central Market (category 2), National Textile Museum (category 1) and traditional shophouses (category 3) at Jalan Hang Kasturi. These heritage buildings contribute to the distinct physical features. To summarize the case study area, in the historic city centre, is comprised of the river (genius loci), Chinese quarter and heritage buildings.

4. Findings and Analysis

This section presents the analysis and recommendations based on the research questions, aim and objectives. Historic waterfront appraisal includes (i) evaluation of physical features (ii) evaluation of observable activities and (iii) evaluation of meaning and association.

4.1 Assessment of Study Area

In 1857 Raja Abdullah, a member of the Selangor royal family, aided by 87 Chinese workers, explored the now historic city centre of Kuala Lumpur in search of tin mining areas. They travelled up the Klang River to its confluence with Gombak river, making way through deep jungle and finally found tin mining area near to Ampang. This moment of discovery is the starting of Kuala Lumpur's development. The development started in the city centre at the confluence of these two rivers. The word Kuala Lumpur means muddy confluence, which refers to the meeting point of Klang and Gombak river [2]. Shuhana (2011) states that the identity of a place is related to the presence of distinct elements which are concentrated in the historic city centre of Kuala Lumpur [2]. According to Wheeler (2004), these distinct heritage zones and heritage buildings along the water body contribute to the identity of the historic waterfront [10]. According to Chay (1989), the two rivers and the unique architectural styles surrounding it comprise the character of the historic city centre [23]. The case study area comprises mostly of Category 1, 2 and 3 heritage building with significant architectural qualities and historic significance; refer to Figure 2. Before boats carried goods to and from Wet Market (Central Market); this made the waterfront a vibrant public space and an interactive node having an identity. The former wet market, the waterfront promenade known as Jalan Benteng and the waterfront created a combined genius locus for the place with market activities. At present, the physical setting, observable activities and meaning and association do not compliment the case study area i.e., the waterfront which weakens the place identity.

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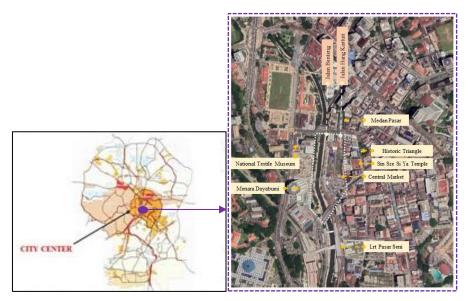


Figure 2. Map of federal territory of Kuala Lumpur indicating the site (Source: authors, 2019)

4.1.1 Evaluation of Physical Features. The Physical Setting has notable weaknesses in urban form, urban spaces and legibility; it is eroding the place identity. The elements of urban structure, such as the heritage place markers and nodes, have poor accessibility to the water edge. The exiting pedestrian links which include the sidewalks, five-foot walkways of traditional shophouses and cycle paths are not continued to the water edge. The river edge embankment space has paramount potential to be used as a pedestrianized linear path along the water body. The landscape lacks directional quality to guide views from distinct physical features to the waterfront. The circulation and movement pattern are also not catered for as the waterfront is not formally linked to public transport such as the LRT Pasar Seni and the bus stops. The movement pattern of vehicles and pedestrians have a conflict due to lack of physical setting to facilitate the issue. These spaces of pedestrian flow also need to be connected to the waterfront and the surrounding heritage city centre through appropriate view corridors and defined the physical axis. The signage is not contextual to the historic waterfront setting. The urban form and spaces are also not integrated into the waterfront creating a disengaged waterfront. The waterfront features are eroding the place identity due to poor water quality and lack of lateral and longitudinal access to the water body. The urban block design is not permeable to the water edge. The building massing and articulation effect the ideal enclosure ratio of 1:2 (width of water body: height of the building) due to a narrow water body with respect to the uneven texture of Modern Highrises. The heritage structures have fine grain facades making a place distinct and have an identity. The two potential urban spaces include a space near the Menara dayabumi and the Central Market open car park. These have immense potential to be new nodes of the historic waterfront to connect the historic city centre to the modern city extension.

4.1.2 Evaluation of Observable Activities. The Central Market is a vibrant hub of culture and art. The Central Market and surrounding retail activities of shophouses and kiosks give diversity to the physical setting. These activity settings are located indoors and do not spill over at the waterfront. The facades are also not permeable to show transparency of indoor activities. There are only dynamic activities along the waterfront, such as walking. But there is no continuous static water-dependent or water-related activity along the waterfront to retain the crowd. The waterfront has the potential to be an activity setting. Throughout the day, homeless people can be seen resting on the sitting area designed by River of Life project. The indoor activities end by 10pm, making the place deserted at night. These factors are eroding place identity.

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4.1.3 Evaluation of Meaning and Associations. In the case study area, the Klang river is the genius Loci, being the starting point of Kuala Lumpur. The surrounding areas is under the KLCP 2020 heritage zone with a strong historical background [22]. It has the presence of heritage structures like the Central Market and the traditional shophouses at Jalan Hang Kasturi. This gives the case study area a strong symbolism and place memory. The heritage buildings have distinct architecture, culture and history, which contribute to the place identity. But now these structures are under threat by modern coarse grain developments and by landscape interventions that clutter the views towards it. The comfort factor is lacking in terms of adequate seating, shading, lighting and universal design, making it difficult to experience the historic city centre.

Table 2. Summary of issues related to attributes of identity

Urban Form and Space	The physical character of the water body is in poor condition with the concrete embankment, no accessibility and poor water quality which deteriorate the genius loci
	and place identity. The overall setting lack coherence in the landscape, the urban blocks are impermeable to the water edge; and there is no connectivity to surrounding
	open spaces, nodes and place markers. There is a threat by modern coarse grain buildings interfering with this historic character affecting the river enclosure and vistas.
Legibility	The poor legibility is affecting linkage of waterfront to overall urban structure and hence deteriorating the place identity. It is caused by inappropriate landscaping, poor termination of vista and lack of connection between place markers and nodes. Jalan Hang Kasturi and Jalan Tun Sambanthan is a busy street hindering pedestrian flow.
	The water edge is unused and can be included in city network. The area has public transport facilities to ensure circulation.
Activity	Activities at the waterfront are not diverse and indoor activities are water independent. There are no continuous activities along the water edge affecting the place identity.
Meaning and	The heritage building of Central Market and other heritage shophouses add meaning and association. But the poor comfort level hampers meaning and association.
Association	

5. Recommendations and Conclusion

The strength of the study area is the distinct heritage buildings that give the place meaning and symbolism. The weaknesses include lack of visual and physical access of waterfront to distinct heritage place markers, nodes and open spaces. There is a conflict between pedestrians and vehicular movement in these designated pedestrian priority zone. The urban blocks are impermeable at ground level and hence activities do not extend to the waterfront. The concrete embankment has the opportunity to be included in the city network as a pedestrian-only link. The public transport can also be connected to the waterfront to facilitate circulation. The waterfront has the opportunity to be an activity setting. There is a constant threat of coarse grain modern high-rises that affect the historic enclosure, profile and setting and disrupt view corridors to distinct place markers. The historic waterfront is now disengaged with surrounding heritage setting with eroding place identity. Several design strategies are recommended to address these issues obtained through waterfront appraisal.

5.1 Design Recommendations:

• Improvement of Legibility

The waterfront is to be connected to the proposed and surrounding heritage nodes through legible linkages to enhance the identity of the place, refer to figure 3. Public transport is included in the waterfront network and pedestrian priory streets are developed to improve circulation and movement. The accessibility of pedestrian links to the waterfront is included to make the waterfront more eligible.

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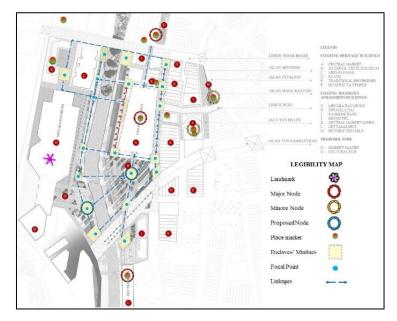


Figure 3. Legibility of urban structure to the waterfront (Source: authors, 2019)

• Improvement of Urban Form and Urban Space

Coarse grain urban blocks are made permeable at ground level to enhance physical and visual access. The linkages are placed axially to connect the maximum number of distinct heritage place markers and nodes to the waterfront. The proposed open spaces articulate the distinct heritage surrounding the waterfront. These urban spaces represent the market square and cultural space. Refer to figure 4 to see the illustration of urban form and spaces and its components.

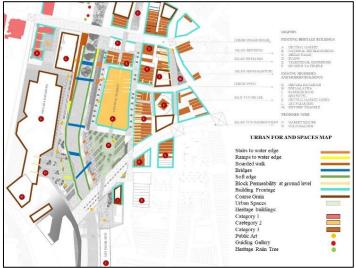


Figure 4. Urban form and spaces (Proposed) (Source: authors, 2019)

• Establishing waterfront as Activity Setting
The activity setting proposed for the waterfront represents the existing retail character of the area
and multicultural ambience of Central Market (refer to figure 5). The proposed urban spaces,

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market square and the cultural space, create a waterfront node to extend the three attributes of identity to the waterfront.

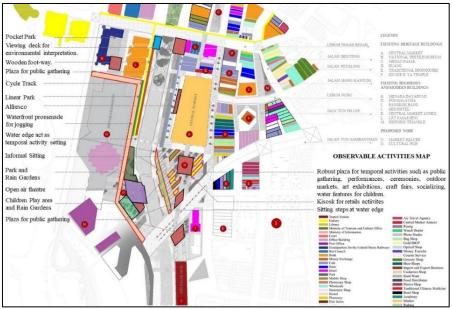


Figure 5. Waterfront as an activity setting with diverse activities (proposed) (Source: authors, 2019)

• Improvement of Meaning and Association

The universal design and comfort are ensured, refer to figure 5 so that the symbolic heritage buildings and the waterfront can be experienced with ease to retain meaning and association of the historic setting ad establish the waterfront identity.

5.2 Conclusion

The design recommendations address the research questions and research objectives. The attributes that cause loss of identity are specified through a literature review and evaluated through field observation in the case study area. The Regeneration is conducted through a placemaking approach where the surrounding distinct physical setting, observable activities and meaning and association is extended to the waterfront to give it identity, refer to figure 6. Regeneration is a rational approach when concerning historic sites as it can sensitively integrate new design interventions in an already-existing setting.



Figure 6. Three-dimensional visualization of the design recommendations at case study area

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