

# Principles of Waterfront Renovation to Decisive Spaces for Local Identity: A Study Case of Port Adelaide, South Australia

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**Abstract.** If governments have an objective to participate in a globalized economy, they should address the challenges of blighted inner city and particularly older water front areas. In doing the latter there is often a degree of consistency in place making. While the processes and principles behind urban design and planning need to have an internal logic across different scales to create quality public realms, the outcome of these interventions are frequently unresponsive to regional diversities in culture and identity. This indifference can lead to changes in the built form through urban regeneration activities that do not respect, celebrate or represent the history and traditions of the local community associated with an inner harbour or other forms of urban waterfronts. This research was undertaken to develop a set of design principles for the Inner Harbour renewal project in Port Adelaide, South Australia that would be sensitive to the historical role of the water front and in particular to incorporate the sentiments and needs of long term residents for whom the character of the area and their attachment to it shapes their sense of identity. The research established a theoretical framework for the development of design principles such as functionality, accessibility, natural environment and culture, history and memory. The findings showed that the redevelopment did not significantly disrupt residents' sense of place or sense of local identity however some more additional design attributes would nevertheless strengthen the capacity of the project to preserve local identity. This paper concludes with recommendations for preserving local identity for residents adjacent to waterfront renewal projects.

## 1. Introduction

In the recent past, the most noticeable feature of city revitalization is waterfront redevelopment [3]. Cities have grasped the prospect to generate new images of harbour by developing highly visible waterfront sites that have become vacant as a result of changes in traditional port and industrial functions [5]. As a result of the rise of globalization, the flow in waterfront redevelopment has occurred within distinctive political and economic environments. Cities are now faced with the challenge of having to compete in the global market or the risk of falling in-to decline. In this circumstance, waterfronts offer a priceless opportunity to market cities on the global stage. Thus, the community aspirations for public access and open space are often contrasted against political ambitions seeking to utilize the marketing value of waterfront with flagship-projects, while commercial interests seek to exploit maximum financial gain [13]. Thus, the improvement of waterfront contributes clearly to the value of urban life [10].



Renewal of urban waterfronts is unavoidable and vital [19]. Conversely, the successful economic waterfront generation may not be successful culturally or socially [8]. Port Adelaide is characterized with such specific qualities, background and maturity. Port Adelaide waterfront indicates a drastic revolution in the discursive identity, the economic function and the social relations through the redevelopment of it as a future -oriented waterfront landscape [13]. The redevelopment of Port Adelaide waterfront is located at 14 km north-west of the city of Adelaide and is expecting to accommodate over 2000 new up-market dwellings to supply over 4, -500 new residents. This paper presents an Australian perspective of this inclusive trend from a particular position and discussed local identity from the perspectives of planning and design. The findings will help planners identify how the development and growth of Port Adelaide Waterfront can influence the identity of the area. Therefore, this paper has a significant potential to reduce the knowledge gap on how planning and design of waterfront redevelopment project can preserve the identity of a city and also its adjacent neighbourhood.

## 2. Methods

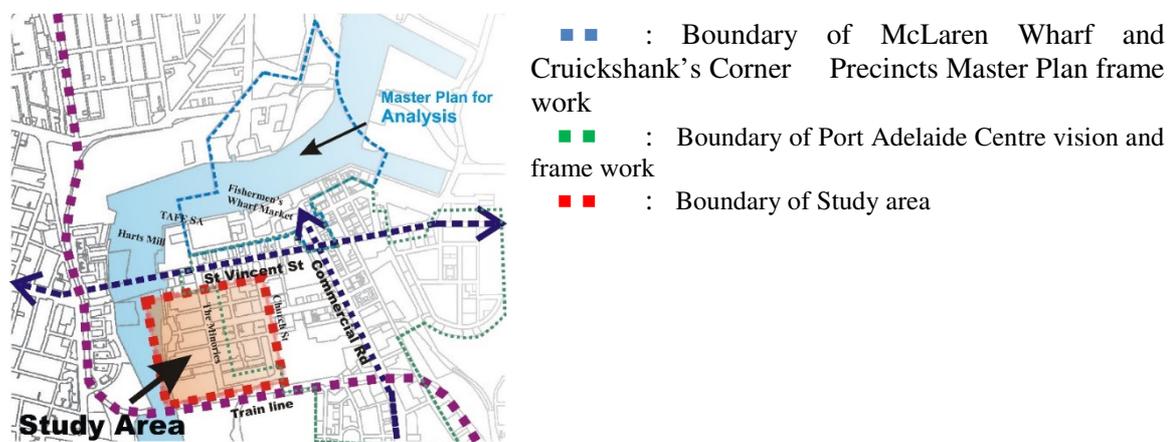
### 2.1. Study case

A case study approach is used due to its ability to explore a case in detail and depth [4],[11]. [20] claims that a case study is preferable when “how” and “why” questions are being asked in condition where researcher has less control in the actual living situation. The most important strength of a case study method is the use of many different sources of evidences such as participant-observation, questionnaires and interviews to allow researcher to address a broader range of behavioural issues [20]. The key components of research design involved analysis of policy and planning documents, site visits and interviews with a sample of residents.

### 2.2. Questionnaire survey

A questionnaire survey was conducted of 180 residents (number of properties) of both sides of ‘The Minorities street’, Ethelton- Port Adelaide and district (Figure 1). The site was chosen based on the nearest redevelopment area, also as the research aims to evaluate the involvements of adjacent community around the waterfront redevelopment in Port Adelaide and the impacts of redevelopments among the adjacent residential neighbourhood through resident’s satisfaction in terms of behavioural response towards it. Below is the image of boundary of McLaren Wharf and Cruickshank’s Corner Precincts Master Plan frame work site and the Port Adelaide Centre vision and frame work boundary which embraces a significant relation or impacts in this research study area.

The study area covers approximately 2.25 ha with 360 residents. Among those 360 residents, 180 residents were chosen randomly for the survey. In the North side of the study area is St. Vincent St. with church St and Port Mall in East side. In the West side of the area is Old Port Reach (water body) and Port Princess Dolphin cruises in the South.



**Figure 1.** Study area and nearest redevelopment boundary.

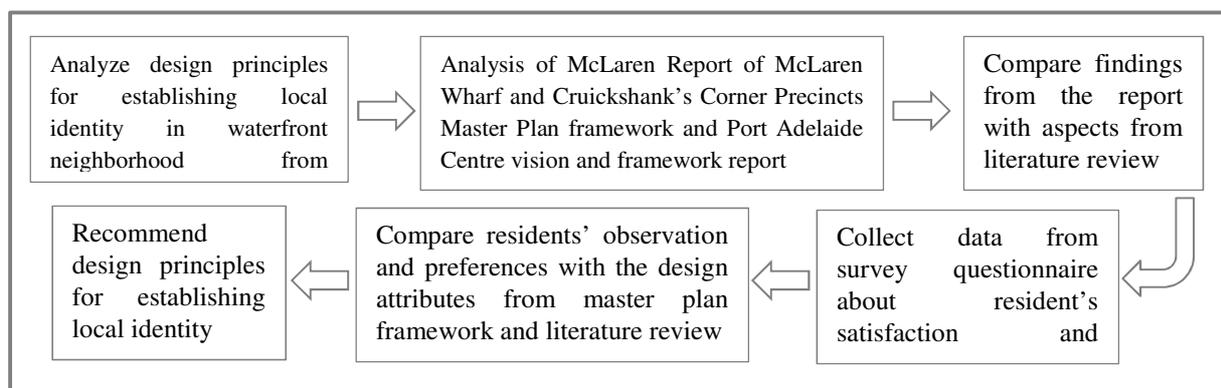
As a quantitative approach, a survey was conducted among the residents who live near the redevelopment project (Figure. 1) of Port Adelaide and somehow are affected (positively or negatively). The survey was accomplished between medium samples of 36 adults (age 18+) from local community. At first, the survey questionnaire was piloted to 5 respondents. After the pilot study, the questionnaire was reviewed again; then researcher distributed survey questionnaire to participants; these include information sheet, research description, aim and objectives, which were put in envelopes and placed in-to randomly 180 residents' post box with a small note about how the questionnaire will be collected and the time of collection. The survey was carried out from May 2015. Among them, 36 residents responded and returned the completed questionnaire. Questionnaire is not only useful for gaining factual data such as ages, genders and living period, but also gathering data like opinions and values (Neuman 2007). The questionnaire was designed to investigate the residents' perceptions and preferences towards the nearest redevelopment and feelings about their own neighbourhood.

### 2.3. Data analysis

A statistical analysis process was followed to analyse the quantitative data collected from the survey questionnaire [11]. In order to work with data more carefully and successfully, raw data were coded. The questionnaire survey data were coded using Statistical Package for the Social Science (SPSS) software. The statistical techniques used in the analysis were descriptive statistics including, Chi square ( $X^2$ ) to test statistical significance between gender and perceptions, frequency distribution and cross tabulations (crosstab). Descriptive statistics might present a strong impending for the understandings of the data where very minor is known about particular subjects [16]. Standard deviation and Mean of data using Likert Scale were required to identify the degree of participants' replies and the allocation of these replies [6].

Descriptive and inferential statistics were used to analyse the data from the findings. Furthermore, a thematic analysis assisted in comprehending and describing the meaning of the data. For thematic analysis, comments from the survey questionnaire were written in Microsoft excel sheet. Then, those comments were categorized under some main topics or ideas and presented by a frequency table. To focus on the overarching themes and categories, the thematic analysis was presented in the following chapter by using diagrams or specific quotations from the data.

Finally, the research method is followed by synthesis and analysis of the findings in terms of the residents' behavioural responses and satisfaction (attitudes, values, and feelings) with the analysis of Port Adelaide Redevelopment Master plan. Some conclusions are then drawn from the analysis and synthesis of both quantitative and qualitative findings in the research. Figure 2 is describing different phases of the data analysis.



**Figure 2.** Phases of data analysis.

### 3. Findings and discussions

### 3.1. Synthesis of design guidelines

The strategies are intended to facilitate planners to inform the planning and design of waterfronts in order to create a local identity by providing them with design phases that assist to foster a local identity and to assist professionals to identify key characteristics to consider when analysing and assessing a waterfront development project, particularly, on how to produce a public place for local communities through design and planning. The key strategies, namely functionality, accessibility, natural environment and culture, history and memory, offer a brief logical implementation for studying the place identity for any waterfront improvement. The synthesis of design attributes is presented in Table 1 below where green is defining the attributes are provided, red is defining not provided and orange defining the attributes are partially provided.

**Table 1:** Synthesis of design guidelines, source: Author 2015.

Design strategies for the establishing local identity through planning and design in Waterfront Development (Port Adelaide)		
Key aspects	Design Attributes	Outcome
Functionality	Mixed land uses and different services to attract more people	Green
	Affordable housing for low- income groups to promote social equality	Red
	Diverse retail services within walking distance	Green
	Recreational functions on the water edge with basic services	Green
	Design resolution that balance the privacy of the waterfront neighborhoods and the street level activities for tourists	Red
	More job opportunities and volunteering openings	Green
	International hotel and long term consolidation and redevelopment of townhouses	Green
	Increase car parking facilities	Green
Accessibility	Student services and student accommodation	Green
	Well design public transit system connecting to city core and other regional area- extended tram services	Green
	Water based transport along the river	Green
	Opportunities for people accessing the water	Green
	Improve way finding signage to key attractions in Port Adelaide	Green
	Pedestrian and biking road connection to local paths with proper security	Green
	Connection between St Vincent St and the waterfront	Green
	Frequency bus and train service and alternate location for bus interchange	Green
Natural Environment	View corridors from inner city to waterfront	Yellow
	Find a home for the 'Falie' and 'Nelcebee' that complements the renewal of the area	Green
	Restoring and showcasing the vessels in an Interpretive Precinct	Green
	Protecting and restoring natural attributes in the waterfront	Yellow
	Creating habitats for wildlife	Red
	Bioengineering approaches to soften banks and landscapes	Red
Culture, history and memory	Landscape features for natural and educational activities	Green
	Managing storm water	Green
	Local plants and plants with cultural meanings	Red
	Public spaces that highlight the culture and history of the site such as, plaza, parks	Yellow
	Cultural facilities, such as theatre, museum, library to enrich the spiritual life of local residents	Green
	Celebrate Kaurna Culture and History through public art	Green
	Increase the connection between maritime museum and Cruickshank's Corner	Green
	Restoration of heritage vessels	Green
	Restoration of heritage building for future uses	Green
	Incorporating existing histories and themes such as, the maritime history, the indigenous history, the transport history or themes into the hard and soft built form, open spaces, landscape treatments etc.	Green
A building for historic boat repairs, boat building and other maritime trades	Green	
Providing public place for cultural gathering or cultural events	Red	

From the above review, it can be seen that there are some draw backs in the proposal of McLaren Wharf and Cruickshanks Corner Master Plan in terms of functionality, environment and culture, history and memory such as, in the phase of functionality-affordable housing for low-income groups to promote social equality, the design resolution that balances the privacy of the waterfront neighbourhoods and the street level activities for tourists, the phase of nature and environment creating habitats for wildlife, the bioengineering approaches to soften banks and landscapes, the landscape features for natural and educational activities, the local plants and plants with cultural meanings, and lastly in the culture, history and memory section providing public place for cultural gathering or cultural events. However, the maximum level of the design attributes been considered in the proposal. In next section of the case study, the residents' perceptions and preferences will be identified.

### 3.2. Residents' characteristics and perceptions

#### 3.2.1. Respondents' age group and gender

From the 36 returned questionnaires, all of them had complete data and therefore, nothing was excluded from the statistical analysis. Table 2 illustrates respondents' age groups and gender.

**Table 2:** Age group and gender; Source: Author 2015

Age group	No. of males	% males	No. of females	% females	Total	% total
36- 45 yrs	3	8.3%	3	8.3%	6	16.7%
46- 55 yrs	2	5.6%	1	2.8%	3	8.3%
56- 65 yrs	5	13.9%	7	19.4%	12	33.3%
66- 75 yrs	6	16.7%	2	5.6%	8	22.2%
76 yrs and over	6	16.7%	1	2.8%	7	19.4%
Total	22	61.1%	14	38.9%		

Table 2 describes the distribution of samples of 36 people. The samples include comparatively more men than women: 61.1% men and 38.9% women. There are more men and women in the middle age groups of 56- 65 years. The number of men and women in the age distribution of youngest age group 36- 45 years were equal: 8.3% males and 8.3% females. However, there were differences in other age groups, such as 12 people in the 56- 65 years age group and of those 5 were male and 7 were female. Also, there were 6 men and 1 women of the respondents' age group of 76 years and over. All of the respondents were from the adjacent neighbourhood of the redevelopment project and had a high probability of being affected (positively or negatively) by the drastic changes.

#### 3.3. Observations and preference toward the existing neighbourhood

According to [2], place attachments are positive bonds to physical and social surroundings that hold identity and offer other emotional settlement. Thus, it is assumed that most of the respondents have a strong place attachment with Port Adelaide and also significant character of sense of belongingness. Responses from questionnaire survey showed almost similar results and pattern in observation and preference. Differences between East side and West side of the Minorities street in regards to residential satisfaction, sense of community and sense of belonging were examined to determine if the different characters of two sides of the streets (East side: Low socio economic & West side: High socio-economic area), influenced the degree to which the residents experienced each variable. The results indicated very minor differences between the two sides of the street on these variables.

Additionally, the participants responded negatively on both quantity and quality of existing situation of neighbourhoods such as, parking facilities in East side of Minorities, security of parking near the shopping Centre, lack of opportunities, poor accessibility to the waterfront. Conversely, they responded positively on the approach of adjacent redevelopment project which they assume will bring more opportunities, more people, and will increase overall functionality, accessibility, and

environment of the locality. There is a strong connection between the participants' observation and preferences where most preferable aspects were those who received negative responses. According to [9], observation is a key aspect in inclination. It is assumed that preference of principle aspects in this study reveals an anticipation of development of the existing character.

### *3.4. Observation and preference toward the redevelopment projects*

The majority of the respondents were very positive and expectant about the nearest redevelopment project. Most of the respondents believed that the redevelopment project will benefit the community in future. However, some responses replicate the issue of losing identity of actual Port. Such as, approximately total 30% respondents from questionnaire survey assumed that there could be an issue of losing identity after the redevelopment. Moreover, 14% respondents considered the redevelopment is an inefficient and uneconomical use of land. Still, the majority of the respondents disagreed with these. Several respondents from both sides of the Minorities Street commented that the redevelopment will bring the opportunity of using more facilities in their own area rather than traveling elsewhere. As an extension of the participant's response, development is very necessary for bringing life back in Port Adelaide.

Results from the analysis of Master Plan and the residents' observation and preferences indicate that inadequate design attributes that contribute to establishing a local identity in waterfront development were achieved. Insufficient provision of supporting facilities such as, poor accessibility, slight esteem for the local history, value and memory, and superseding the green environment lead to an inaccessible and under-utilized waterfront. Moreover, a place that creates an attachment to local communities will benefit the economic in the long term.

The results indicate that the residents' satisfaction level towards the existing neighborhood condition, with respect to functionality, accessibility and culture, history and memory aspects is significantly low. The primary reasons identified are: lack of public place for cultural gathering, lack of concern about protecting and restoring natural attributes in the waterfront, poor accessibility towards the waterfront from East side of the Minorities, lack of concern about restoration of heritage building for future uses, lack of recreational functions on the water edge with basic services and most importantly lack of job opportunities not only for residents also no initiatives for welcoming more students in Port Adelaide neighborhood. Based on the key aspects, design attributes were collected to outline the design strategies. The strategies are proposed as recommendations to support planners to inform their design of waterfronts to try to create a local identity. The design attributes present valuable references and can act as a checklist for designers for assessment of their proposals.

## **4. Conclusion**

This paper concludes with recommendations for preserving local identity for residents adjacent to waterfront renewal projects and are based on the developed design guidelines, the current status of built environment, resident's observation and preferences and the Master Plan frame work of McLaren Wharf and Cruickshanks Corner precinct (Table 3).

**Table 3:** Recommendations for future improvement of waterfront; Source: Author 2015

Key Aspects	Recommendations
Functionality	Integrating different retails and facilities into the greenbelt along the water edge, with café or tea house, enough public toilets and small shops
	Incorporating more recreational facilities, incorporating bikeways in to the boulevard along the water edge, adding enough seating options and spots to enjoy the riverside scene, adding playground and community gardens.
	Affordable housing for low- income groups to promote social equality
	Design resolution that balance the privacy of the waterfront neighbourhoods and the street level activities for tourists
	Mixed land uses and different services to attract more people
	More job opportunities and volunteering openings
Accessibility	Increase car parking facilities
	Pedestrian and biking road connection to local paths with proper security
	Water based transport along the river
	Frequency bus and train service and alternate location for bus interchange
	Well design public transit system connecting to city core and other regional area- extended tram services
Natural environment	Creating habitats for wildlife
	Restoring and showcasing the vessels in an Interpretive Precinct
	Bioengineering approaches to soften banks and landscapes
	Landscape features for natural and educational activities
Culture, history and memory	Local plants and plants with cultural meanings
	Providing gathering places for community activities such as, dancing, playing, celebrating religious festivals and others
	For preserving the historical style of the buildings, apply and consider the design in new construction
	Restoration of heritage vessels and heritage building for future uses
	Incorporating existing histories and themes such as, the maritime history, the indigenous history, the transport history or themes into the hard and soft built form, open spaces, landscape treatments etc.
	A building for historic boat repairs, boat building and other maritime trades
	Public spaces that highlight the culture and history of the site such as, plaza, parks
	Cultural facilities, such as theatre, museum, library to enrich the spiritual life of local residents
Celebrate Karna Culture and History through public art	

However, related studies for the perceptions of planning and design are not enough. The study contributes to the argument by cantering on establishing local identity at a city waterfront level through planning and design. The developed strategies might not be able to assure the social and cultural success of the waterfront development. Yet, literature studies prove that not addressing design issues listed in the strategies will direct to a loss of a sense of place attachment, local community and place identity.

In conclusion, participants responded negatively aspects on the existing facilities and attributes such as lack of functionality, poor accessibility towards the waterfront from the East side of the Minorities, lack of respects on local history, value and memory, and an inaccessible and under- utilized waterfront. On the other hand, the participants responded positively in terms of the expected benefits from the redevelopment project. Recreational facilities, accessibility towards the waterfront, more job opportunities, and maintenance of the all historical buildings become the most preferable attributes that respondents considered should be provided through the waterfront redevelopment project. Several factors were considered regarding framework for the master plan; however, a balance needs to be achieved between the global and the local. Waterfront developments that keep local in mind need to offer functionality that attracts local residents from different backgrounds, support social equality and develop value of life, also be conversely reachable: produce ambience that relates inhabitants to local mores and ethnicity, celebrate local culture and history; and significantly respect the natural

environment. These qualities create a sense of local identity, creating an attachment among local community and their waterfronts.

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