



**EVALUATIVE IMAGE ALONG WATER FRONTS TO  
ENHANCE THE CITY IMAGE  
WITH SPECIAL REFERENCE TO WATER FRONTS IN  
COLOMBO CITY**

A DISSERTATION PRESENTED TO THE  
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**DECLARATION**

I declare this dissertation is my own account of research and contains as its main content work which has not previously been submitted for a degree at any tertiary institution

***UOM Verified Signature***

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## Chapter one: Introduction

### 1.1 Background of the study.

Image is considered as a one's mental picture of his or her experience or memory. Similarly image is a product of both immediate sensation and of the memory of past experiences. As a result image is not an echo of the past totally the image of a place consists of all the elements associated with the experiences of individuals or groups and their intentions towards that place.

City is a complex entity. Within this complexity identification and understanding of the city is important. Image of the city fulfills the above requirement. An image of a city has been born by tangible physical elements.

*"Imageability of a town, city can be defined as a necessary quality of a city environment. Which evokes vividly identified. Powerfully structured, highly meaningful city image to the user"*

(Lynch, 1960, page6).

Waterfronts in the urban context are important resources in cities, where its various living dimensions will have a remarkable impact on physical and psychological demands of people. There for presence of waterfronts becomes a vital and necessity in cities. Also in the making of images of cities waterfronts plays a major role.

*"Urban waterfronts have a dramatic and visible impact that is capable not only of enhancing a city's economy but of improving its collective self image."*

(Breen. A, Rigby.D 1994, page13).

In the image making process the qualities of spaces are evaluated by city inhabitants. In this evaluation the observers directly memorize certain places and buildings as likeable and dislikable elements according to the negative and positive feelings and associations with their surrounding environment. These likable or dislikable feelings define the evaluative image of the city

The numbers of studies have attempted to identify these environmental qualities in many countries. Appleyard (1967); people came know city for some combination of their form, visibility, use and significance. Nasar (1996) identifies these environmental qualities as likeable features, which is grouped into such factors as, historical significance, civility, order, natural features and openness these researchers have taken examples from different contexts and have arrived at different frameworks or groupings of such environmental features.

But when consider about the Sri Lankan context, these environmental evaluative qualities has not been investigated well. There for there is a need to find out the environmental qualities along the waterfronts .and their potential contribution towards a good image to the city.

## **1.2 Objectives of the study**

Beira lake and the urban canal system were built in the urban areas during the Dutch and British regime, and canal sides provided ground for social life, with adjoining work places, markets, ware houses, repair yards, housing and as well as a center of commercial activities and notable pleasure resort in the city. Apart from that canal sides were use as reservation areas. At first urban canals were designed to carry away storm water of the city to the sea. Apart from that urban canal system was used for inland navigation.

With the rapid development, the waterways were gradually neglected and lost their identity as an effective and economic means of transport, when roads and railways developed rapidly. People from rural areas found employment in large numbers in the city and migrate in to the city. These people couldn't afford to buy, rent out or built sanitary houses in residential areas. So they put up shanty dwellings along the canal reservation areas. Some places have become dumping yards. Gradually these waterfronts have appeared as left over water fronts.

Most of the striking cities in the world were developed and shaped its urban form, adjoining waterfronts. They were mostly the recaptured banks of the rivers and canals, the shores of the sea, retention areas of the lakes and developing them for mixed users or setting them apart as open public spaces.



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In order to revitalize these canal banks architects, designers or planners are need to know the public evaluative qualities along the canal banks. Accurate consideration of the public ideas of the particular setting determines the degree of successfulness of the urban setting. Therefore it is necessary to examine the evaluative qualities along the waterfronts which were mentioned by the observers of those waterfronts.

*"In the planning of new cities the distance between planners and population tends to be accentuated. Frequently the planners do not live near the site, since much of the planning is carried out in the metropolitan centers where professionals concentrate. Usually there is a time gap between the planners, who are there before the city is built, and the inhabitants, who arrive after it is finished."*

(Appleyard.D, 1976, Page 2)

*"..... answer to the problem of planning for such diversity is to let the people to do it them selves; encourage each population group to articulate its view point."*

(Appleyard.D, 1976, Page 2)

Shaping or designing cities is derive as a part of the urban architecture. But the utmost successfulness of the shaping or revitalizing of these areas not only depends on the architect's aspirations but also the attitudes, expectations, and aspirations of the users of the particular area.

*"The shaping of city form differs from visual arts such as painting or sculptures. City form continually changes as a result of multitude of actions, and it affects many ordinary people in the in their day today activities."*

(Nasar.J, 1996, Page 2)

The nature of the city user's interests and attitude of the city could he understood through the identification of the evaluative image of the particular city. The public evaluative image of the particular area is investigating by the surveying of the users. Then the surveyors can investigate the likable and dislikable environmental features.

.There for the objective of the study is to investigate how people evaluate the environmental qualities along the Wellawatta canal and the Beira Lake.

### 1.3 Method of the study

Wellawatta canal banks and Beira Lake are taken in to account as a case studies. For this kind of purpose we have to get public opinion about liked and disliked areas and the reasons for evaluation. To understand the nature of the evaluative image along Wellawatta canal And Beira Lake, need to identify the environmental features which were used by the observers when evaluating the city image. It was intended to question the observers who were familiar with the functions of the Colombo city.

Sample of observers basically select for the survey and the total sample was randomly selected. The interview was conducted as the questionnaire. Evaluative qualities along the waterfronts were mentioned by the observers of those waterfronts.

To understand the evaluative image along the Wellawatta canal and the Beira Lake, have to get observers impressions along the water bodies. In applying the basic concept of evaluative image along wellawatta canal and the Beira Lake hear used a simple basic method; called content analysis.

From each interview, have to get two evaluative maps from each observer. We compared those maps and got the frequency of overlapped areas and tabulated them.



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### 1.4 Method of data analysis

In the interview of each observer Answer to the first question was likeable and dislikeable features around the area. Then the answers emphasized the environmental features of that area. Thereafter content analyzes the data collected.

Each individual person liked places and disliked places were mapped in different types of maps. Those maps are carefully analyzed and find out common agreed places and common disagreed places. There after votes for each place were calculated to obtain a percentage of like and dislike.

These places were represented on a table as liked places and disliked places. Environmental features mentioned for each place as likable features and dislike features were list out. By careful analysis of the above environmental features, identify the unique environmental features inherent to the local context. . Finally the environmental features which are belonging to the local context are compared with the foreign environmental features.

### 1.5 Scope and limitation

Numbers of researches, architects and designers have examined various aspects between man and his surrounding environment, over last three decades. Image of the environment is one of the major aspects. There are many components in the image and this study has appointed to the one component called, evaluative image of the environment. Environmental evaluation is a vastly discussed subject. This study only intended to deal with evaluative images posses in peoples mind, about the environmental features consider by them in the particular area.

Mostly the people have a habit of evaluating their living environment. Inhabitants of the city can consider as one group. Also the visitors who are the participants of a particular area also evaluate that environment. But this study pays attention only on visitors who are accompanied with the selected environment. Here only consider about the evaluative images posses by observers and the environmental features of the particular entity.

People can evaluate any kind of area in the city. But here this study only focuses to the waterfronts of the city. Because the water fronts can support in higher way, to construct a better image to the city.

*"Waterways and the urban' waterfronts provided opportunities to enhance the urban environment and there have been periods in history when a distinct architectural character, appropriate to the maritime context, has emerged. t"*

(Wylson, 1986, page 25)

The study aims to investigate the nature of the evaluative image which users of selected local city posses in their mind through which enables to identify the environmental features which they use as yard sticks for evaluation.

This study is limited to the waterfronts in Colombo city because it is The most suitable location in Sri Lanka for a study of examining the conflict between the preservation of city image and modernization can be found in the city of Colombo. Colombo is a city which is formed and shape throughout its long history, carved out by the people from generation to generation. There for it is a city with a strong image, which exists as a composition of many historical layers and movements.

Then on the one hand Colombo is the commercial capital of the country since early colonial periods, has become the main gate way which opens and connects the whole country with the world. In this sense the preservation and continuation of the Colombo as a city with along historical and cultural heritage is become and essential as in term it can contribute to the impression of the whole country in the world.

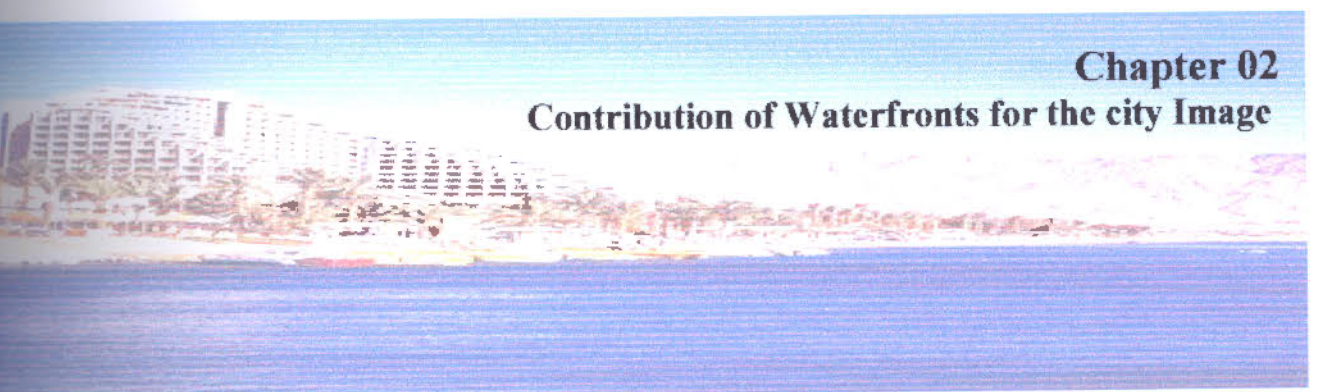
But on the other hand it's important as a commercial capital leads the city towards drastic changes, through the development and modernization to be parallel with the fast moving world. If act become the most suitable context to study the ways and means of establishing and continuing the imageability of a city while allowing the essential changes to be take place without creating a stressful situation for the city dwellings.



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**Chapter 02**  
**Contribution of Waterfronts for the city Image**

## 2.1 Introduction

This chapter mainly focuses on; how the human, who is animal, fantasist, and computer combined experiences and understand the world. The human is a species with inherent emotional needs. He is programmed to seek emotional satisfaction and emotional reward is a fundamental mechanism of survival. When man evolved in to the complex creature, today he invented all kinds of artificial ways to satisfy his emotional appetite. War, religion rites, exploration and art are the diverse expressions of this fundamental need. But among all, the city has been the most complex and all embracing projection of emotional desires.

Here try to investigate in what ways and what basis does people experience their surrounding environment; according to the planners, architects, geographers and psychologists point of view.

The study area is focus to the waterfronts in the local cities and here try to find out the contribution of the water fronts in construction of the city image.

## 2.2 Image



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Every object, place, or even a sense has a particular image. These images arise as a taint of the interaction between the perceiver and the object. Objects suggest distinctions and relations, and the observer with great adaptability and in the light of its own purposes, selects, organizes and endows with meaning what he sees. The usage so developed now limits and emphasizes what is seen, while the image itself is being tested against the filtered perceptual input in a constant interacting process

(Lynch, 1960)

Similar to other objects, segments of the environment also have certain images in perceivers' mind. As Lynch (1960) has explained, these images are a result of a two way process between the man and his environment. Although, due to the variability of tastes, interests, nature and aspirations of individuals' image of a same environment may vary between two different observers.

According to Ralph (1976, page50) images are common mental pictures which are carried by large number of people. Their individual images are constantly socialized through the use of common languages, symbols and experiences.

Kenneth Boulding (1956) classified the image appears in the persons mind in to six aspects.

### 2.2.1 Characters of the Image

Kenneth Boulding (1956) concerned with what a person believes to be true that is his "Subjective Knowledge "builds his image of the world. He classified main six aspects of the image appears in a person to strength the concept.

**Spatial aspect-**The presence of physically referred elements of the space around, that the image assumed for the mental picture.

**Relational aspect-**The inter relationship between the above elements themselves and with the holder of the image.

**Value aspect-**qualities of these elements or their organization, the holder of cares for as a member of a particular social group.

**Emotional aspect-**The feelings evoked by that mental picture and the overall organization of its elements within the holder of the image.

**Personal aspect-**The picture about the universe around, held by the perceiver as an individual of a system regularities. This aspect varies with culture.

**Temporal aspect-**Representation of the stream of time and man's place in it.

Among those spatial aspects, qualities of the elements can be explained by the value aspect. This study is focus to the evaluative qualities of the selected waterfronts in the Colombo city.



### 2.3 Evaluative image

*"The evaluative image arises from the person and the environment and the ongoing interaction between the two. It may vary with biology, personality, socio cultural experience, adaptation levels, goals expectations and internal and external factors. The environment has many attributes. Observers, depending on both internal and environmental factors, overlook some attributes, attend to others evaluate what they see."* (Nasar, 1997.page4)

People make certain images of their living cities. Further they usually evaluate their living environment. Evaluating the living environment means they evaluate the city image they possess in their mind using certain environmental features. According to this evaluation they have a certain image in their mind. This is referred to as the evaluative image of the environment. Similar to variations in Environmental images evaluative images too have variations which root down to the individual level. Cultural variability of environmental evaluation is a vastly discussed subject by many philosophers, architects, and other such professionals.

Although there are innumerable differences a certain group of people in a particular setting like certain places than others and vehemently criticized some of the places. The seeming reason for this is although there are cultural differences and other such differences they have a common evaluative image of their environment. Though there should be common environmental features, which they use as yardstick for evaluating their environment. The aim of the study is to identify the environmental features of a particular local city, which the city residents use as common yard sticks when making their public evaluative image.

## 2.4 Evaluative image of the city

To identify how the meaning conveyed by city form, need to know how people evaluate the prominent features of the city. This combines what people know about their living environment and how they feel about it. To identify those things numbers of studies were done earlier.

Irrespective of the way images are created, people evaluate them using their own yardsticks. As Rapoport (1977) has explained, people evaluate the same environment differently according to their variations in value systems. As he has further explained, these variations root down to the individual levels.

Carl Steinitz, the Professor of Landscape Architecture and Planning at Harvard University Graduate School of Design has, mapped denotative meanings in 1968 -public knowledge of the city. From a field reconnaissance, he mapped form and activity type, form and activity intensity, and form and activity exposure (or significance). He found the measures of form and activity correlated. From interviews, he obtained public judgments of the type, intensity, and significance of places and activities. Relating this knowledge to the actual form and activities in the city, he found strong similarities with "strikingly few differences" in "which places were best known, how they were identified and described, and for whom they were meaningful. Although it is a notable work on evaluating, this work overlooked people's feelings about the places and activities

People's feelings about the places and activities are more relevance to shaping the urban form and the human behavior .from these evaluative decisions the urban designers, planners and architects can get peoples judgments about their surrounding environment. that may assist them when shaping the cities.

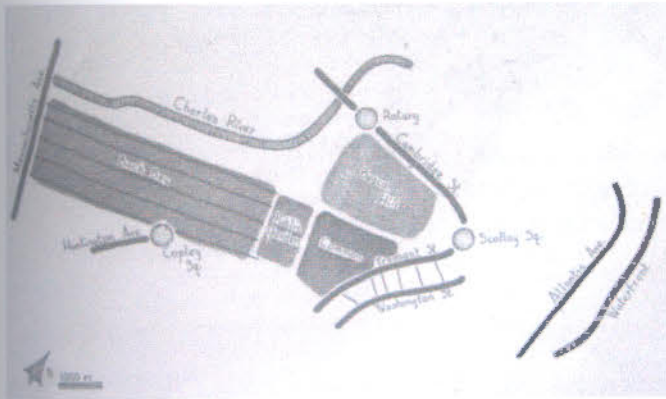
Eight years later, Donald Appleyard (1976) a landscape architect and former colleague of Kevin Lynch, reported research in Ciudad Guyana about evaluation image. He obtained opinions about the attractive and ugly parts of a road, reasons for the opinions, and evaluations of several buildings. He found strong agreement and evidence of the importance of evaluative response, leading him to conclude that

"Buildings were usually viewed in an evaluative manner....."

(Appleyard, 1976, page.98)And

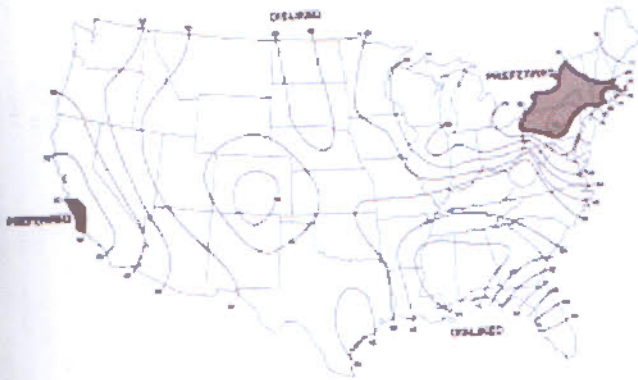
"Both inhabitants and the public at large perceive the urban environment in evaluative terms".

(Appleyard, 1976, page.238)



Map :( 01) Map of Boston.  
According to Lynch's studies.

Geographer Peter Gould (1973) took the evaluative responses one step further by putting them in spatial or map form at a national and international scale. He interviewed students about comparative preferences for states in the United States. From the interviews, he constructed evaluative maps of the nation as seen from California, Minnesota, Pennsylvania, and Alabama. The maps reveal shared preferences and differences, relating to the location of the observer. Views from several northern states display similar patterns of preference-high preferences for California, with a steady decline moving east (except for Colorado), an increasing preference from the Midwest to the northeast, and a decreasing preference to the south. Views from a southern state show the same northern and western peaks, but, unlike the northerners, who tended to lump the south together, the southern students showed a finer discrimination between various southern states. Instead, they tended to lump together much of the north. Using similar methods, Gould also developed evaluative maps for nations in Europe and Africa.



Map :( 02) Northerner's preference map of the U.S  
 Low numbers in the south stand for low preference; high number in the northeast and California stand for high preference.

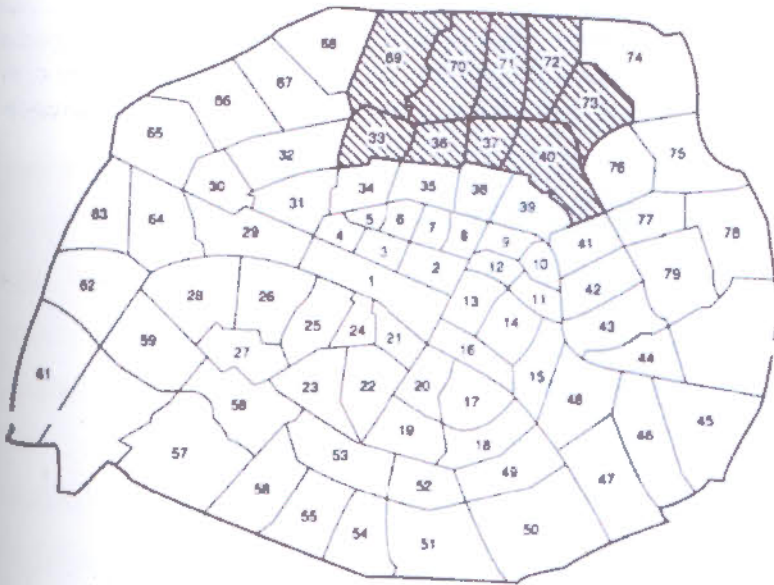
Psychologist Stanley Milgram obtained several psychological maps of the city in 1976. He did research on Paris; His research team used several tasks to describe the mental map of the city. Capturing evaluative qualities like,

- (1) hand-drawn maps,
- (2) Associations to map elements,
- (3) A photo recognition task, and
- (4) Having people say where they would wait to meet someone to maximize the Chance of encountering him or her.

From the hand-drawn maps and meeting-place question, the researchers identified the most frequently cited elements. Then the researchers found number of links to other locations. The photo recognition task allowed the researchers to identify the familiar and unknown parts of the city. They also looked at evaluative responses by,

For example, they asked

- (1) Where the rich and the poor live,
- (2) Where the dangerous areas are,
- (3) Where the snobby Paris is,
- (4) Where one would move if one became wealthy,
- (5) Where the friendlier (more relaxed atmosphere) is,
- (6) Where one would walk if one had one last chance to walk through the city, and
- (7) What areas one liked best.



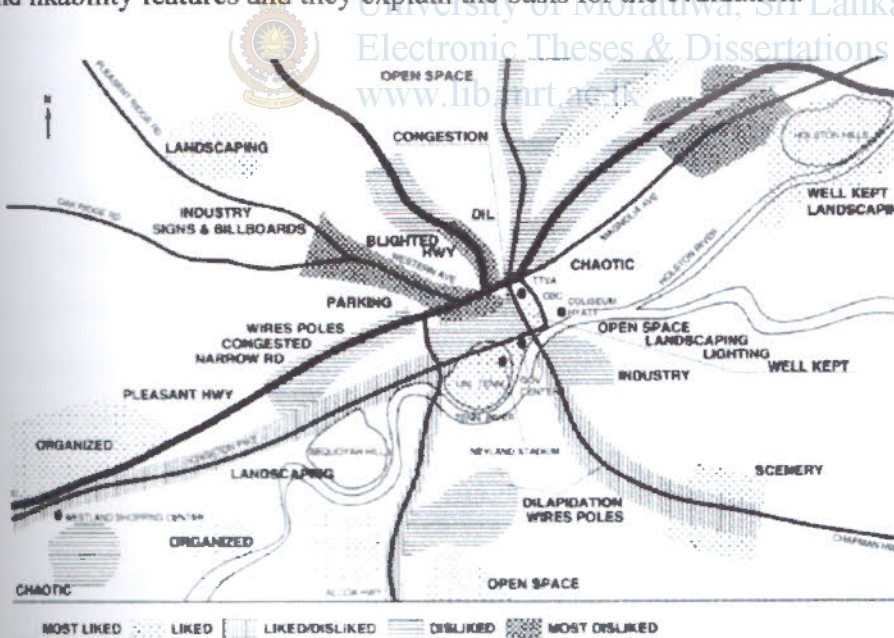
Map:(03) Perceived Areas of Danger in Paris according to Mailgram's researches.

The researchers found strong agreement in evaluative response 70% identified one area as the best liked, 88% agreed on one area as "the Paris of the rich." When asked where they would take a last walk, respondents most often selected four streets and, to a lesser extent, an additional four streets, though Paris has roughly 3,500 streets.

Milgram presents some of the findings in map form, including maps of the perceived rich and poor areas, the last walk areas, and the perceived dangerous areas. Milgram emphasizes the psychological component of the maps.

Jack Nasar in 1996 surveyed in the two U.S. cities-Knoxville and Chattanooga, Tennessee. He interviewed 300 residents and visitors. He looked at visitors as well as residents because of likely differences between insider (resident) and outsider (visitor) meaning. He asked respondents about the areas they liked and the areas they disliked visually, and their reasons. From each interview they prepared an evaluative map of the city. He then overlaid these maps to produce for each city and for residents and visitors separately a composite map representing the evaluative image of the city.

In considering mental maps such as these, bear in mind that the map-in-the-head idea is only an analogy or metaphor, in that people act as if they have something like a map in their head. The process-mapping-differs from the product-the internal mental structure, often called a cognitive or mental map the mental map has incomplete, distorted, and simplified information. The evaluative maps suggest associations with city structure and experience, and they indicate likability associated with five features-naturalness, openness, order, and historical significance of a city. The maps show the identity, location and likability features and they explain the basis for the evaluation.



Map : (04) evaluative map of Knoxville (research Nasar.J)

### 2.4.1 Likeable features

In 1997 Nasar has introduced the concept of "likeability" to justify the public evaluative image of cities. According to him, people evaluate a particular city according to certain likable features inherent to that particular city. He has further identified and categorized them under five kinds of environmental attributes, naturalness, up keep, openness, historical significance and order. The liked areas tend to have these attributes and the disliked areas tend to have their opposites, obtrusive, human made uses, dilapidation, restriction, a lack of historical significance and disorder.

The likable attributes may also have a more general application because they appear in the theory and research on environmental preferences.

#### 2.4.1.1 Naturalness

*"In Knoxville and Chattanooga, people respond strongly to the naturalness of places. They like natural areas, and they dislike areas with intense land uses such as industry. Other research confirms that people notice differences in the naturalness of places and prefer naturalness."* (Nasar; 1997, page 63)

According to the above survey of Nasar People generally prefer the association with the natural elements such as water bodies, mountains, forests, etc. with the high emphasize of the man made qualities of cities the amount or the degree of natural elements often vanishes from the city environment. Contrast to this some of the cities have developed based on a strong water body, mountain, any other such strong natural element.

Lynch (1960) found that people noted vegetation or water "with care and pleasure", as these studies natural ness is a powerful element of preference.

*"The great deal of planting along a path reinforces its image; paths along water or along parks tend to be more memorable"*

(Lynch; 1960, page 51)

The presence of vegetation and water bodies in living premises may act as landmarks and they will strengthen the image ability of the elements.

“Patients with a window view of deciduous trees have faster postoperative recovery, fewer negative evaluations by nurses, and fewer doses of narcotic painkillers than patients with a view of a brick wall”

This is the magical quality of the nature. Nature show more rapid psychological recovery than other things. People walking, gathering around natural area show higher levels of restoration from stress than people gather around built up areas.

*“Naturalness and vegetation may evoke favorable associations and connective meanings associated with content”* (Nasar; 1997.page65)

Cities can improve their evaluative image by adding natural elements such as trees, water and providing views to the nature.

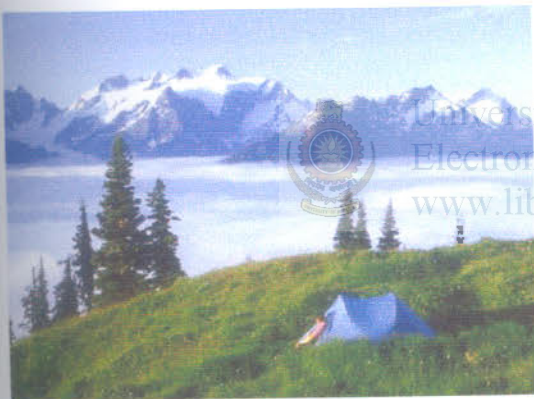


Fig :(01) camper's tales in the view from a tent pitched in a mountain meadow in Washington State's Olympic mountain

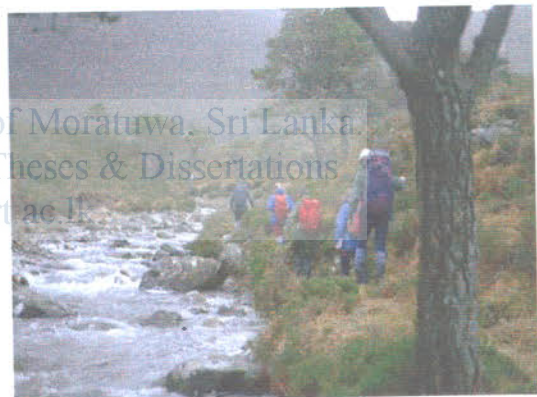


Fig :(02) bag packers walk along a stream in Scottish highland.



### 2.4.1.2 Upkeep

Civility refers to politeness of the city environment, which provides its residents various opportunities for recreational, relaxation and gathering.

According to the Nasar's survey in Knoxville and Chattanooga, peoples disliked areas are full of dilapidation, poles, overhead wires, signs, billboards and vehicles.

*"A controlled study of retail signs found that reductions in sign size and contrast enhanced the evaluative image of a retail scene."*

(Nasar; 1997.page66)

*"Studies of traffic show that lower levels of traffic elicit favorable changes in the evaluative image and quality of life for residential streets and neighborhoods."*

(Nasar; 1997.page67)

Those disliked features; such as incivilities, signs and traffic may increase disorder and also reducing preference .by buffering or removing those elements and introducing desirable elements such as vegetation, water features, open spaces may improve the evaluative image of the city.



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### 2.4.1.3 Order

Order of a city or a place may occur through many ways. The order may occur through segregation of activities.one may see an order of a grid pattern city than other cities.

Researches by Nasar in Knoxville and Chattanooga found that the preferences associated with order and related variables such as organization, coherence, fittingness, congruity, legibility and clarity.

*"The preference for order may relate to its perceptual character or social meaning associated with orderly environments. Order and upkeep may come together to suggest something about status."*

(Nasar; 1997.page73)

Cities can enhance their evaluative image through increase the visual order with variety of design features, including legibility, repetition, replication of façade features, uniformity of texture, low contrast between elements or between buildings and their natural context and identifiably.

#### 4.1.4 Historical significance

Most of the cities are originated with historical background. Though newly added elements are strongly influence by the historical backdrop. The city of Rome, London, Greece, Venice are some well known historical cities, which people usually evaluate on their historical significance. People don't care whether the historical content authentic or not. If observers consider a place historical, it provides historical content to them.

*"In the case of architects interviewed about new buildings designed in historical style; they said they liked it, until they learned it was new. Then they said they disliked it. They liked it when they perceived it as historical"*

(Nasar, 1997, page 69)

According to the above survey people most often choose routes in historic areas. They don't like the replacing of modern offices and apartments in greater charmed the historical areas.

*"People may respond favorably to historical places for one of several reasons. Because historical content enhance building image ability, the preference may relate to improved legibility. Older buildings and areas may have the preferred mix of order and variety."*

(Nasar, 1997, page 72)

Historical significance may evoke favorable responses through favorable association's whether accurate or not. Use of historical content enhances the evaluative image.



Fig :(03) London-a city of historical significance.



Fig :(04) Windsor castle-enhance the historical significance in Windsor London.

### 2.4.1.5 Openness

People like certain places because of the sense of openness of the setting. This sense of openness may provide to the perceiver through various means. The sense of openness may be a result of the form of buildings. Contrast to this the same sense may provide through less use of roof and other such coverings. This sense may be an out come of the ratio between the built and inbuilt.

*“An open view helps the person see and make sense of a scene, whereas a blocked view limits this ability. By making a sense more coherent, the open view may increase preference”* (Nasar; 1997.page68)

According to the research of Lynch 1960 increases in preference associated with defined openness or open but bounded space. Called, “well managed panorama” as “a staple of urban enjoyment” like that peoples preference associated with openness and with lower density development. People prefer moderate and defined openness than wide open or block views.



Fig :(05) people prefer miniature Golf open space. Brighton, England

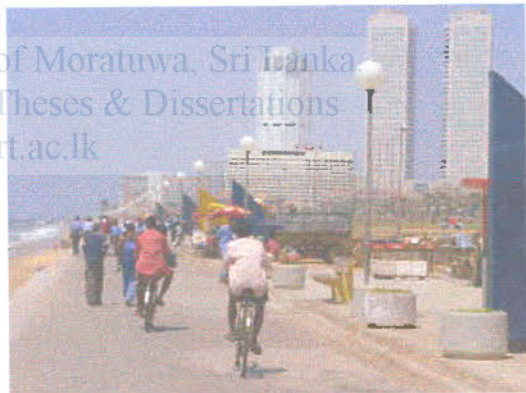


Fig :(06) preferable open space in Sri Lanka, Gall face, Colombo

*“The dual meanings of mystery conform to broader theoretical views on environmental preference, one seeing preference relating to a balance between making sense and involvement and the other seeing preference for an optimal level of uncertainty. As fear and uncertainty increase, hidden information becomes incompatible and making sense becomes more important. At the same time, when fear and uncertainty become high, a person refers environments that reduce the uncertainty. In each case, people dislike deflected vistas.”* (Nasar; 1997.page69)

People enjoy open spaces in the first as observers of the scenery and second as participants in the space. For urban design research suggests a blending of defined open spaces with panoramas of pleasant elements to create an enjoyable spatial variety. It also suggests the careful design of deflected vistas will give pedestrians open prospect.

## 2.5 City

Cities depict the nature of additions, alterations, and modifications, which the mankind has adopted to the natural environment in a higher degree. Even though, natural elements exist, because of the high emphasize of physical components such as buildings, paths, the city could be consider as a man made environment. High density of people and their activities compared to those of other environments further uplifts its quality of man made ness.

*“City is not only an object which is perceived by millions of people of widely diverse class and character, but it is the product of many builders who are constantly modifying the structure for reasons of their own”*

(Lynch, 1960, page 2)

However, in broadly it may be stable organization some time, but ever changing in partly.

*“While it may be stable in general outlines for some time, it is ever changing in detail.”*

(Lynch, 1960, page 2)



Fig :(07) London, largest city in Europe. It lies along the Thames River.



Fig :(08) Toronto; largest city in Canada.



Fig :(09) Chicago; third largest city in the United States.



Fig :(10) Tokyo; largest city in Japan.

City has been an object of curiosity for very long time. Many ways of conceptualizing it have been proposed, analyzed, and described as a social system, an economic system, in political terms, as a work of art, an instrument of communication, a historical artifact, and there have been correspondingly many approaches to its planning and design. The city, it self, is a powerful symbol of a complex society.

If visually well set forth, it can also have a strong expressive meaning (Lynch: 1960). Similar to other environments cities also give certain impressions for their inhabitants o various means. *“City is a collection of different groups, with different life styles. Reflecting different cultures and subcultures”* (Rapport: 1977).

Apart from all these, similar to other environments city also could be considered as an assembly of meanings.

*“The city is a place, center of meaning, par excellence. It has many highly visible symbols more important....”* (Tuan Yi-Fu, 1977, page 173)

For instance, certain characteristics of a city may depict the social and cultural interests of the particular city inhabitants. A playground at the centre of a city may depict the inhabitants' interest on sports. Contrast to this a playground with few people may express the majority's rejection of sports as a prime activity or busy life of city inhabitants. Although it is, again a matter highly depends on the perceiver's point of view. Before investigate the basis of how inhabitants evaluate the city image, it is essential to study the attributes of the city and its elements, which lead support in making vividly different images.

## 2.6 Urban Water fronts

Urban waterfront is a unique natural resource as well as a context for economic activity in urban city. Over the centuries the urban waterfront provided for religious activities, civic ceremonies, defence, transportation, access for maritime trade and fishing, ware housing and waterside industry. In today, again access to the water front and the potential amenity value of the water front has been improved by various redevelopment activities in urban city. In many cases pressure to provide new urban highways to cope with increasing city traffic has required a solution to be found in the neglected waterside routes. Then these reinstatements of the water front amenity within an urban context can provide a significant force for urban renewal.

The appreciation of the water space as a leisure sport amenity has created additional value to waterfront development. But these developments including new uses must be relevant to modern urban living and total rehabilitation concept for the water front.

*"The canal, or man made river is also an important connector and communicator. Canals can physically connect cities to bodies of water, lace together neighbored or distinct or link several cities in one line."*

(Moore,1995,page 23)

Most great cities have developed along water fronts, which either thread through them as rivers and canals or front on them as bays and oceans; they are the greatest resource for enjoyment and open space available to city dwellers.



Fig :(11) Waterfronts are greatest resource for enjoyment and open space available to city dwellers.



Fig :(12) Louisville, Kentucky Ohio River act a vital role in shaping the Louisville city

The strong incentives for locating cities upon waterfronts had important effects upon the disposition of open space and the form of the typical city. (Heckscher and Robinson , 1913 : P. 88). The most recent trend has been toward recapturing the banks of canals or the shores of the sea, developing them for mixed uses or setting them apart as open spaces for the enjoyment of the public. It is caused to increase the public access to this area. Then various connections and relationships are created between the city and waterfront, by it. And it has great potential to shape the city with waterfront.

In this, scale of every thing connected with the waterfront development should be related with the scale of the near by city buildings. (Heckscher and Robinson, 1913, P.91). A better system may be that all the waterfront elements step-down towards the water from the city centre. It can be caused, to see the whole city in clearly across the waterfront. In this situation, city was shaped with the waterfront, with using other physical and visual connections between the city and water front.



Fig :(13) multi level promenade in south gate Melbourne Australia



Fig :(14) waterfront promenade forward Trade mart



### 2.6.1 The contribution of urban waterfronts to enhance the city image

Man is considering as a part of nature, so he can not confirm his presence and the continuity with totally dissolving his bonds with the nature.

*“Waterways and the urban’ waterfronts provided opportunities to enhance the urban environment and there have been periods in history when a distinct architectural character, appropriate to the maritime context, has emerged. The significance of waterfront structures has progressed with man’s alliance with the development of maritime transport”*

(Wylson, 1986, page 25)

Water is being used with architecture, from the early historic cities to the new urban cities. Physical qualities of water have a great impact on human lives. Its complex qualities signify various means of incorporation of water in to the mainstream of human lives. The water is a pull factor for the people to settle themselves along the water bodies hence evolving a place of survival. This resulted as water being the main survival factor as a utility for consumption and as means of transport and as a source of defense.

In the evolution of cities, the aesthetic qualities of natural topography, including the water bodies, has played an increasingly important role in enhancing the urban environment. The topography or a strong tradition of the city led not only to a close relationship between buildings, natural landscape and water scenery, but also to the integration of water-based leisure and non - utilitarian uses within the building complex.

*“ancient city states were welded together to form the great empires of Greece, Persia and China, each established a cultural identity with its own attitude towards city beautification that included the utilitarian, metaphysical, recreational and aesthetic appreciation of water, valued that have permeated in to the modern world”*

(Wylson, 1986, page 4)



The Progressive development of marine technology has caused continuous waterfronts with structures, conveying images of military or commercial strengths. In that context the port and its relationship to the built environment, Greek & Roman ports were closely associated with public areas and were lined with significant public buildings, establishing close relationship between utilitarian and civic needs. By that time, the urban waterfronts were seen as places for civic grandeur, porticoes, terraces, staircases and distinctive buildings. Therefore most of the cities in this era have been planned as port cities.

Apart from that, the classical world established architectural values and planning forms. Water required an architectural significant, both as a feature within civic spaces, as an element of pleasure in the landscaped gardens.

The classical architectural language applied to the cities included the waterfront and water crossings, serving to enclose the water element in a cohesive architectural language. Then the river settlements, which were to become great cities, had originated in harmony with the water edge. For the water-based community, water was the means of transportation system in the city complex. These waterways provided both access & defense.

Most countries have developed their waterfronts to enhance the built environment and to shape the new cities. This open space system have an important role in development projects, to create all types of connections among water, built fabric, city activities and the economy.



Fig :(15) The Seine river front France.



Fig :(16) canals in Venice

Rivers and streams are the abstract streets in a living domain, and are waters of finite nature. Rivers and canals were the inspiration for the human settlements. This natural device physically connects spaces on land and psychologically connects spaces on land and psychologically connects with other spaces. Configuration and the flow of rivers and streams generated layouts of streets, avenues and parts in many historic river cities. It is a physical divider as well as the visual connector of spaces. Water fronts can be found as a spatial element in an urban context.

A waterfront of an urban situation can be a dynamic place with its interrelationships with the society that is its inhabitants. It will be come vividly live with many kinds of activities taking place. It is a potential of a urban situation to make a lively, unique place with proper care and identity given to it.

Venice is a fine example of great waterfront development as a canal city still functioning to its very best with the changing functions. The Grand Canal sweeps through the city with connecting buildings neighborhoods and settlements with each other.

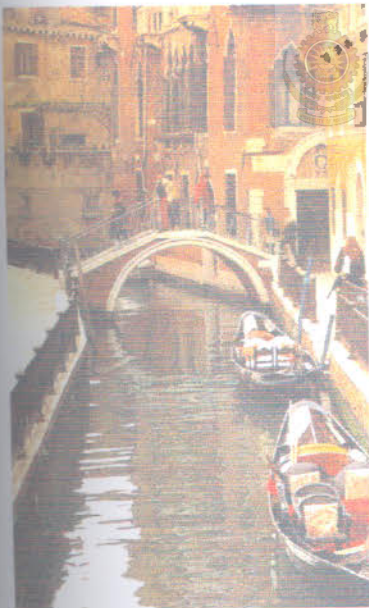
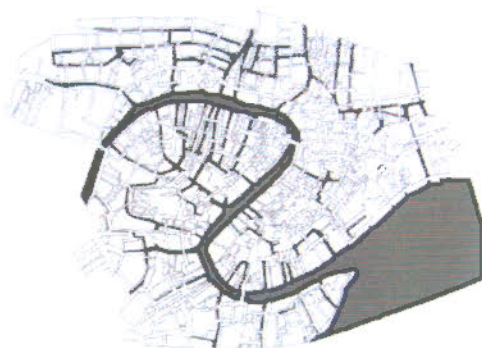


Fig : (17) grand canals net work in Venice



Fig : (18) canal fronts in Amsterdam Netherlands



Map : ( 05) Venice Italy

*"Few natural rivers such as the Cam in Cambridge and Seine in Paris were developed as an amenity within an urban community. Like wise, public oriented activities along the waterfront help to make tourist attraction. In respect to the situation, an action plan for the waterfront of the city should be prepared to correct the imbalance and extend usage of the area beyond a seasonal interest."*

(Moore, 1995,page23)

The waterfront mainly occupied with public spaces thus having intimate relationship with canal water. I.e. whole spatial system was inter-linked, spatially, visually and functionally. The dominating buildings along the waterfronts act as land marks thus generate a pause for the activities. The activities, the built form, spatial structure and the atmosphere all contribute towards making the Venice with full of rich urban spaces.

Buildings were packed in between the water ways, creating little islands overlaid with a labyrinth of passages, squares, bridges and sidewalks. The water pervades every setting in Venice. Every district every church and every garden absorbs some hint or memory of the water reflected light.

Netherlands is a very good example for a well - planned property functioning canal city. Its striking canal network mostly consisted with streets on both sides and provided sites for many public civic or private activities along the edges. In addition parks and recreational features were placed at significant points to provide a thread of continuity between existing and new developments.



Fig :(19) many activity levels are appear in the Amstel river banks in Amsterdam

Amsterdam is another example for waterfront development. Amsterdam began as a simple town around a dam on the Amstel River. As the town grew canals were built successively around in the river. In here the canal environment was structured in to three levels with different type of activities



Fig : (20) Both sides of the river promenades

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Fig: (21) canal fronts in Venice, Italy

The frontage along the principle canals was located large business houses, and town houses of merchants and upper middle class and artesian dwellings and these circumferences of the canals emphasizing the social hierarchy of the city. This spatial entity is in a dynamic form with variety of activities and built fabric. Residential area creates an elegant corridor space with trees lined along the water edge and distant separation between town and the residential belt. This contrasting space created by the canal and the street.

Kuching waterfront development is another example. The redevelopment of old Kuching waterfront near the heart of the city is as bold and dramatic as will be found anywhere. The abandoned and squalid living conditions had been transformed into a beautiful new promenade and public space. The central waterfront deteriorated. Squatter camps grew up, ware houses were abandoned and the rivers edge was degraded and used for rubbish disposal.



Fig : (22) Kuching waterfront development at Malaysia



Fig : (23) Kuching waterfront near the heart of the city



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## 2.7 Conclusion

Image ability and other attributes of cities, wear help to make certain images in observers mind, wear overall discussed. Thereafter the features of the environment, which city residents consider in evaluating these images, were discussed. It was realized that there is an overall framework for evaluating city images, which was establish by various scholars, researches etc.

The study areas of the most of the previous studies were the large cities.the foreign researches were investigate how people define their cities and living environment. The aim of this study is to identify how those theories were parallel to the water fronts in local cities.the latter part of the study is mentioning about the water fronts and the contribution of waterfronts to construction the city image.

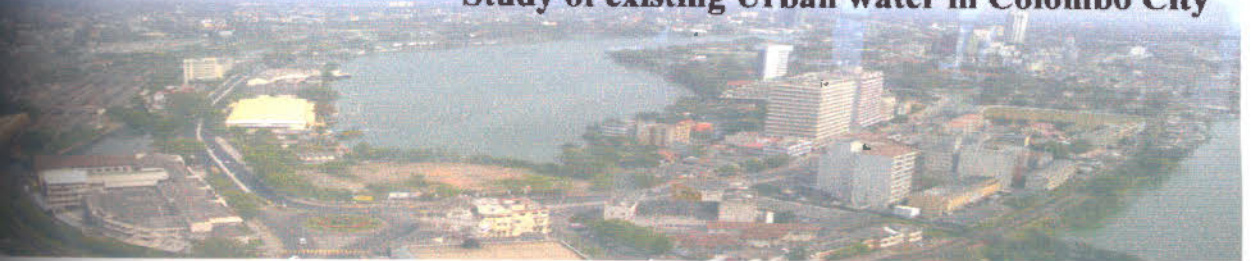
The aim of the next study is to investigate the historical background and the existing situation of the selected water bodies. The existing background and the history may assist to investigate the environmental features along these water fronts.



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## **Chapter 03**

### **Study of existing Urban water in Colombo City**



### 3.1 introductions

Aim of this part of the study is to investigate the historical background of the Wellawatta canal and Beira Lake and the existing situation of the eater fronts. Before ascertain the environmental features which the observers of those waterfronts consider in, when evaluating their surrounding environment, it is then intended to investigate the existing social, physical and cultural background of the water fronts.

### 3.2 Canal network in Colombo.

Canal network in Colombo consist of following canals.

- St Sebestian canal
- Dematagoda canal
- Serpentine canal
- Wellawatta Canal
- Kirulapone Canal
- Dehiwala canal
- Tonington south canal
- Heen ela -kotte ela connection canal
- Bolgoda canal
- Colombo -Puttlam canal
- Colombo- Kalutara canal

To identify these canals in a net work other water resources such as rivers, lakes, and

Ela have to integrated

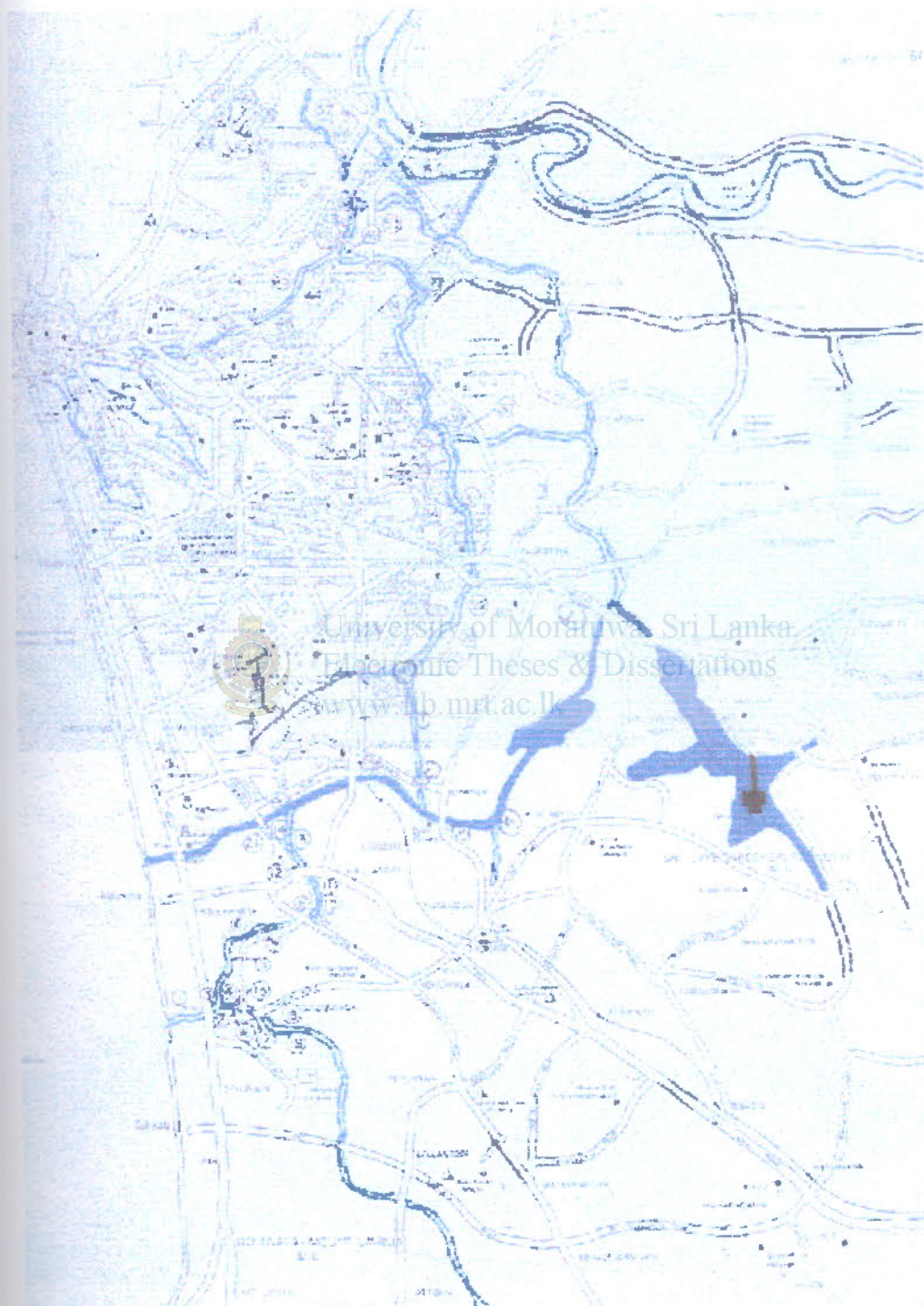
- |        |               |
|--------|---------------|
| Lakes  | Beira lake    |
|        | Kotte lake    |
| Ela    | Heen Ela      |
|        | Kolonnawa     |
|        | Ela Kolte Ela |
|        | Mahawatte     |
|        | Ela           |
| River- | Kelani River  |
|        | Bolgoda River |
|        | Kalu River    |

Map No: (06) system in Colombo





Map No: (07) Kotte-Wellawatta canal



Map No: (08) Kotte-Wellawatta canal  
And the surrounding area.



### 3.3 Case study one -Wellawatta cannell.

#### 3.3.1 Historical background of the Canal network in Colombo.

The city of Colombo was originally built on low -lying marshy land situated around clusters of isolated and scatted hillocks adjacent to the Keleni River. The Portuguese came to the island in 1505 and established a fortress in Colombo by 1518. The Portuguese made use of the waterways within the city mainly for defense purposes and also for transport. They were the creators of the Beira Lake. The Beira Lake was previously connected by canals with the river of Kaluthara and Panadura, and Also with the Keleni River. This was noted by Reven-hart, a traveler who came in to Ceylon during the 18<sup>th</sup> century.



Map :(09)  
Map of the bay, city and fortifications of  
Colombo: 17th century



Fig :(24)  
Galle face in 18<sup>th</sup> century

After ward an efficient canal system had been created for linking the lake to transport goods to the Fort of Colombo. Experience of their home country Netherlands, Dutch hydraulic engineers linked up the streams, lakes and lagoons by a system of canals mainly for transport. This system was identified as the most economic and safe mode of transport during the period. The completions of canals, from Hendella to Pamunugama through the Muthurajawela swamp, connection of the canal from Negombo to Puttalam and the development of the canal transport system from "Kelani"to "Kalu Ganga", were some work to their credit. The Keleni River was connected to the Bolgoda Lake with Kirulapone canal and Bolgoda canal. By this period

St. Sebastian, Urugodawatta, Denratagoda, Kolonnawa, Kotte canals and Kirullopone-Dehiwela canals came into existence.

The British, who succeeded the Dutch, made improvements to the canal system. They were responsible for the construction of Hamilton canal in 1872. Hamilton canal was referred to as Hamilton's Folly or locally as "Moda Ela". Walewatta canal was called Layard's Folly, because the bed of the canal was made higher than the flooded areas. However subsequently it was further deepened and widened. The British were interested in draining the city. At that time large areas suffered yearly from river inundation and stench following on the receding of floodwater. Mahawatta Ela, Heen Ela, Mutwal main drain and tunnel, Wellawatta-Dehiwela canals were the outcome of their effort to drain the city.



Fig : (25) The bridge of boats over the Kelani Ganga, in 1882.

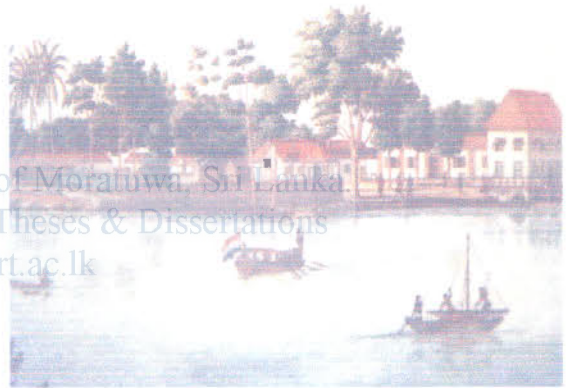


Fig : (26) use of horse carts and barges for transporting goods-drawbridge at Grandpass

The warehouses and harbor, through the canal continued. People from rural areas found employment in large numbers in the city and influx into the city. These people could not afford to buy, rent out or built sanitary houses in residential areas. So, they put up shanty dwellings along these canals. These canals provided them with the water they needed, some washed away their refuse into the sea during rainy season, but at other times the refuse polluted the canals. As more and more shanty dwellings appeared and pollution increased the canals became insanitary due to human excreta. Refuse deposited on canal banks, polluted the water and obstructed the water flow.



Fig : (27)  
Garbage yard in Thalakotuwa garden



Fig : (28)  
Drainage outlet near the St Peters  
college playground.



Fig : (29)  
Polluted canal water

### 3.2 Analysis of Existing situation along the Kotte Wellawatta canal banks:

The Kotte Wellawatta canal is starting from the Kotte marsh and it meets the sea at Wellawatta. It connects major towns of the Colombo district. Starting point and end point are two major locations. Kotte is Sri Lank's administrative capital.



Fig :( 30 )

View from the Galle road. Buildings turned their backs on the canals and used it as Drainage network-no any reservation



Fig :(31)

Congested Wellawatta area.

Wallewatta is a high density and crowd business center which is situated between Bambalapitiya and Dehiwala. Mostly the Tamil communities are dominated in this area. Wallewatta is one of the main storm water outlet of the southern Colombo region. Wallewatta area and Havelock town area are being connected by this canal, as well as by the existing vehicular road (Dhammarama road). The duplication road (R.A.DE MEL mawatha) meets it near the St. Peter's college playground.



Fig : ( 32 )  
View of the Duplication road, newly constructed bridge.

Wallewatta outlet is the latter part of the Kotte Kirulapone channel. It embraces the sea in Wallewatta while linking major towns. It cuts six major transport tracks, Marine drive, Galle road, Duplication road, Havelock road, Baseline road and Nawala road. The Gall road is 7.5m higher from the Wallewatta out let, and Havelock road is 4.5m higher from it. It also cuts down south railway tracks and Awissawella railway tracks

The level difference provides the canal corridor with the strong sense of enclosure and a cooler canal walk in sunny days. This gives the canal a distinct quality being isolated from vehicular traffic.

Near the Galle road, the commercial activities are going on along the both sides of the Dhammarama road. Upper levels of these shops are utilizing as middle class and upper middle class houses. When we go down the Dhammaram road, can identify the business houses are convert in to upper middle class houses. These residential blocks achieved canal air space and its beauty, with their direct views to the water. also these residential areas have a great potential to develop as a calm and pleasant waterfront.



Fig : ( 33 )  
Existing high income residential belt  
Along the Wellawatte canal.

The path along the Wallewatta canal which is up to Kirulapone is lost the canal's view from the Buddhist temple. After the temple, the road is turned opposite to the canal. From this short distance, beside the motorway is consisted of high-income residential block faced to water corridor over the street. They are faced to the canal through the vehicular road; and their private roads are connected with the vehicular road. Then they have direct access to water. These areas can be seen beautifully across the canal water, from Galle road.



Fig :( 34 )  
The Saddarmarama Viharaya  
Obstructs the path along the canal.

St Peters College and its playground, residents Lumbini College are consisted in the north side of the canal. also it is not provided with an access way in that side. Those buildings neither are care about the existing canal. Those institutional buildings and few residential buildings which were situated in that canal bank are not responding to the view of the canal.



Fig :(35)  
Area between YMBA and  
Duplication road.



Fig :(36)  
The St. Peters college playground is  
not responding the adjoining water  
body.





**Fig : (37)**  
Existing high income apartments  
Along the north canal bank. Of the  
Wallewatta canal



**Fig : (38)**  
Neglected waterfront promenade use as a  
dumping yard.

Near the High level road, both canal banks are filled with heavy vegetation, and upgraded low income housing. A foot path (Darmarama road and Thalakotuwa Gardens) along the southern bank is the one and only access shaking along the canal. It is not functioning as a towing path or for recreational activities, but for means of transport of day today activities. Canal side houses are not responding to the water, which is encouraging lot of pollution. the Kirulapone canal divided in to two parts as Wallawatta canal and Dehiwala out let from the end point of Thalakotuwa garden.



**Fig : (39)**  
Low income housing crowded,  
Along Kirulapone canal



**Fig : (40)**  
Kirulapone canal divided in to two parts  
As Wallewatta canal and Dehiwala out let  
From the end point of Thalakotuwa garden.

An access road along the Kirulapone canal between Kirulapone roads consisted of high income residential blocks faced to water corridor over the street. Some residential blocks achieved canal air space with their direct access to the water this area can be seen beautifully across the canal water from Kirulapone road.



Fig :(41) Open University buildings  
Are facing to the canal, without civic  
Interest.

From Kirulapone to Nawala, mostly the canal surrounded by the residential institutional and mixed commercial developments. This Kirulapone canal meets Heen Ela at Nawala and the Open University is situated in the opposite side here. The existing character and land use pattern around Nawala road, appears as calm and tranquil atmosphere. Rather than the Wellawatta area these buildings around Nawala are provide pleasant waterfront without polluting it. This canal loop still do not cause higher degree of industrial pollution or suffer from shanties. But for some extent it was abundant and misused.



Fig :(42)  
Nawala-KoswatteBridge  
Near the Open University

After passing the, Kirulapone area the canal is called Kotte marsh because it covers vast area of Kotte. The canal banks of Kotte Ela area are consisting of vegetation. Important administration buildings along this area are Sethsiripaya, and parliament. Other than those two important institutions all the other buildings are residential buildings or commercial buildings. The area of Kotte marsh is a highly vegetated area with full of birds.

### 3.4 Study on Beira Lake

#### 3.4.1 Historical background

##### 3.4.1.1 Portuguese period.

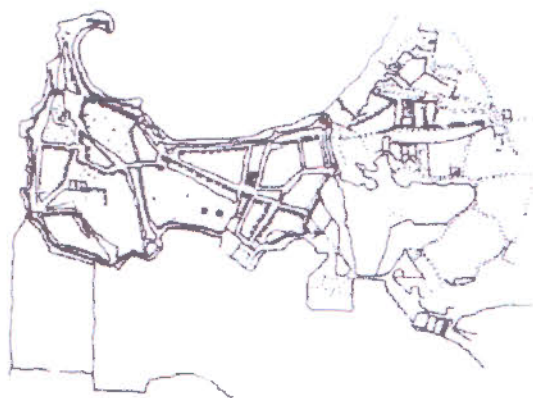
The Portuguese discovered the island in 1505 and established a fortress in Colombo by 1518. The Portuguese made use of the waterways within the city mainly for defense purposes and also for transport. They cut ditches and built moats with the natural topography, to fortify the city. In 1521 they have created the Beira lake. The lake surrounded the southern and eastern sides of the city, while the sea protected the north and west sides. With the creation of the lake, the city was protected on all sides.

"Pictorial maps show the city of Colombo at the zenith of Portuguese prosperity. It exhibits the religious zeal, which culminated in numerous churches, convents and monasteries. There were villas, often of two stories. Occupied by higher officials and a large number of less distinguished houses for merchants and minor officials" (Silva, 1976:217)

It implies the power of the Portuguese nucleus and the important role played by religion. The fort reflects a powerful 'image' of sacredness outlined with strong political stability.



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Map : (10) Plan of Portuguese Fort at Colombo

### 3.4.1.2 Dutch period.

The Dutch arrived in 1602 for purposes of trade. Dutch established the political power in 1655, and extended the outer limits of the city to cover Woulfandhal and Hulftsdrof. The fortress erected by the Dutch was less than half the size of the Portuguese 'city Del', it was confined more or less to the area now called the Fort. The governor, all the merchants, officers and soldiers have been dwelling within the fort. Both Dutch and Portuguese used the potential of the lake in their battle strategies. Also they used the lake as a transportation mode by launching vessels. The Portuguese used the lake to transport their defense material and the Dutch used it to transport their soldiers and break through enemy lines.



Map :(11) Plan of Dutch Fort at Colombo

The Fort was connected to Pettah and, now Main Street, which started at the delft Gate, or East Gate, crossed the moat by a draw bridge, ran between the sea and the Pettah and ended on the other side at Kyman's Gate. During the Dutch period crocodiles were introduced to the lake for the purpose of guarding the gate leading out to the city of Colombo.

The Dutch were arrived from Holland; a low-lying country always threatened by water. As a result they became experts in water management and inland navigating systems. When they establish the fort water became the major factor of the city design. They use their water technology when expanding of Beira lake and, connecting it to the canal system as transportation net work. The log gates clearly reflect their water management skills. The indigenous response made to the Portuguese city, based on the collective consciousness, which they brought here from their Mother land. In fact, Holland is below the sea level and the Beira Lake is above the sea level, evidence the geographical response they made to the Lake.

The houses which were inside the Fort and in the Pettah were built according to the standardized ground floor plans that had evolved from the houses in Holland. But these houses had been adapted to the tropical climate to provide enough shade and ventilation, while responding to the urbanity.

#### 4.1.3 British period.

All Maritime Provinces of Ceylon had fallen to British command, in 1795 including Colombo. With the fall of Kandyan kingdom, the whole country came under the rule of British and Colombo became the capital of the country.



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*"Once the Dutch had altered the fortifications and divided Colombo into Fort and City areas, the main buildings and streets appear not to have changed through the years. The Fort itself remained in fact until the 1860's when the British, who captured, Colombo in 1796, dismantled it."*

(Silva, 1976, page 225)

The British demolished the fort in 1870 after capturing the island, because they no longer needed the defenses. They needed to reconstruct the city to earn the utmost profit. In the dawn of the British era, the banks of Beira Lake were extensively used for parties and other recreational activities such as concerts, theatre, balls. Beira Lake was a centre of commercial activity as well as a notable resort in the city. Further, it is said that a big ball was held at the Beira, in June 1850 by the Fourth Ceylon Regiment to celebrate Napoleon's defeat.

The canal network communicated with surrounding water bodies like Kelani River, Negambo, Panadura River, Kalu Ganga, Bolgoda Lake. British have demolished the walls of the fort and expand the city while applying modernist theories explored the city to the entire city structure. Those Theories were used in the Europe to; solve the problems caused by the industrial revolution in Europe.

#### 3.4.1.4. Post - Independence Period

After Ceylon gained independence in 1948, considerable political and economic changes took place in the country. The state ownership of production, moved towards an export-oriented free market economy



Map (13) Colombo during Post Independence period

As a result of increased port activities, the lake underwent further encroachment. Sections of the east lake were reclaimed to put up warehouses and the boatyard of the Port Commission. Rational and logical planning theories which were introduced by the British, made the development reduce to a commercial or industrial, leading man towards the inhuman quality excluding emotional aspects of life.

The Beira Lake was gradually neglected and lost its identity even as an effective and economic means of transport, when roads and railways developed rapidly. The meaning and the presence of the Beira Lake to the city were gradually lost. The city organization was mostly based on economy and function.

When becoming the commercial hub of south East Asia, this image of cultural continuity must be established. In success the usability of the Beira Lake and its ability all the above cultural images, must be fully explored in the cityscape, as it was inextricably entwined with that of the city of Colombo.

### 3.4.2 Parts of the Beira Lake.

Beira Lake has highly urbanized catchments of 488 ha that is mostly flat, with ground levels ranging from less than 1 m to 6m above mean sea level. The lake covers 65.4 ha and has a mean depth of 2.0m. It comprises four main basins; the east lake is the largest and the deepest basin while the other three basins are much smaller and shallower.

Beira Lake serves ten municipal wards of Colombo namely,

Fort

Slave Island

Kollupitiya

Hunupitiya

Cinnamon garden

Suduwella

Maradana

Maligakanda

Kuppiyawatta west



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The working population and other occupants contribute as the major population than residential population. Situating closer proximity to the heart of Colombo and its functional viability as a highly urbanized area is the key factor to this situation.

Parts of the Beira

East Beira

D, R Wijewardana mawatha to the north

T.B.Jayah mawatha to the east

Kew road to the south

Sir Chittampalam .A. Gardiner mawatha to the west.

Galle face and west lakes	<p>section of the Lotus road and Regal cinema block to the north</p> <p>Section of Sir Chittampalam .A. Gardiner mawatha to the east.</p> <p>Section of duplication road and Baladaksha mawatha on the western boundary.</p>
South west lake	<p>Nawam mawatha to the north</p> <p>Section of Sir James Peiris mawatha to the east</p> <p>Perahara mawatha to the south</p> <p>Duplication road to the west.</p>

Approximately 26% of the Beira lake catchments area is used for residential purposes and commercial premises account for 15% and institutional premises such as public, semipublic, educational, health, religious etc. occupy 8.5%.

When considering the land use, which is more essential part, in developing process, lands mainly bordering the east lake, the Galle face lake and the northern section of the west lake are under government ownership.

Beira Lake represents one of the important scenic assets of the city. As it is located in heart of Colombo it relates to, many of the areas including the new city, the magnificence of Echelon Square, which can be seen from East Beira Lake.

The presidential secretariat stands in dignity in Galle Face Lake and some hotels and the Colombo rowing club are some of the few buildings benefiting from the scenic potential of the lake.

The scenic beauty is enhanced in South West Lake mainly by the Seema Malakaya and the institutional buildings designed responding to the water body. The reflections of the built fabric on water surface during both day & night enhances the scenic potential of the area.



Map No (14): Beira Lake indicating its four basins.



Map No (15) Beira Lake indicating its four basins.



### 3.4.3 Study of the existing situation around the Beira Lake.

This area located at the extreme north point of Beira Lake. Adjacent to the heart of Colombo, the appointed area surrounded by major existing buildings as ,Rowing Club on south-west and Exhibition Centre on north-east sides. Furthermore the Mc Call um lock gates on north-east side are important historic landmarks.



Fig : (43)  
View from the Beira place.



Fig : (44) View from the rowing club  
Adjacent to the Beira place



Fig : (45) Mc Call um lock gates on north-  
east side  
Of the Beira place



Fig : (46) Bank of Ceylon near the  
Chittampalam gardenia mawatha.

The adjoining area of the Beira place, is a relatively narrow land along the north and east shorelines. D. R. Wijewardana Mawatha is in the north boundary and Beira Lake in the south, the lock gate on the West side and CW and Macy warehouses at the East point. This linear site with narrow widths may limit large comprehensive development. . An adequate parking facility in the surrounding is lacking. Position of the wear houses obstructs the direct public access to waterfront. Apart from that public movement patterns along Lake Front are restricts.



Fig : (47) Position of the wear houses obstructs the direct public access to the waterfront



Fig : ( 48) the end point of the narrow Land along the North and east shorelines



Fig :(49) Visual link between the D R Wijewardana Mawatha and Beira lake, near by the exhibition



Fig :(50) New postal building, between D R Wijewardana Mawatha Beira Lake.

The adjacent area of the linear strip is almost triangular situated between warehouses on the West side and Home for the Aged on East side and on the North, it is limited by D.R. Wijewardana Mawatha. A local road goes from this street towards the lake.

On the front of the lake, there are a spontaneous vegetation and soft natural shore; there is also a lock gate and the newly constructed postal building is located here. Next is a triangular land area bounded by St. Joseph's College to the North, Darley Road to the East, Beira Lake to the West and South. Nestle buildings, Old wear houses, the excel world are located strip between the Beira Lake and the Darly road.



Fig : ( 51)  
St. Joseph's College facing to the Beira Lake.



Fig : ( 52)  
Old wear houses along the Beira Lake



Fig : ( 53)  
Akbar building facing to the Beira.



Fig : ( 54) Excel world premises in the Beira front. It is not responding to the

The linear strip of land starting from Muttayah Park was full of shanties. Without responding to the lake the shanty dwellers are continuously polluting it. After the narrow strip there is large extent of land with existing playgrounds and police quarters. The insurance co-operation of Sri Lanka multi stored office building; Hindu Kovil and mosque are important landmarks in this area. In these areas squatter settlements are located on the banks of Beira Lake. Human activities in lake include fishing, recreational and competitive rowing, the Sri Lanka ports authority and security forces also use the lake occasionally.



Fig : (55)

Building next to the St. Joseph's College



Fig : (56)

View of the Beira Lake obstructed by shanties.

The next area is surrounded to the north and east by east Beira Lake, to the west by sir Chittampalam gardenia Mawatha and to the North West by Trans Asia hotel. Most of the areas has neglected by treating the lake as a backyard.

### 3.5 Conclusion

The aim of this part of the study was to investigate the historical background and the existing situation of the Beira Lake and the Wellawatta canal which help the observers to make vividly different images in their minds. further it was revealed the several places of high use intensity and some places with less intensity

The aim of the next part of the discussion is to discover the environmental features along the Wellawatta canal and the Beira Lake, which the users of the surrounding areas consider when evaluating the image of the waterfronts. it is intended to compare the observers of the Wellawatta canal and the Beira lake waterfront, evaluations of their living environments with the previous likable features which were cited by Nasar in 1996 and to identify unique likable features specific to the researched area.



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## **Chapter 04** **The evaluative image along selected water bodies in Colombo**





The next part of the questions, "(1) Reasons for likeness?"

"(2) Reasons for not like?"

The reasons for the likeness had few variations for the each liked or disliked place. Considerable number of people questioned and they preferred the reflexive life with the beautiful natural surrounding in the city.

By questioning the reason for the first and second answers it was aimed to investigate the most prominent environmental feature along the water fronts that attracts or distracts the attention of people towards the city. But since the study focuses to identify the likenesses based on environmental features.

To understand the evaluative image along the Wellawatta canal and the Beira Lake, have to get the impressions of the observers about this water fronts. By doing this we can get the idea of evaluative image along the Wellawatta canal and Beira Lake, and can learn features associated with it and can derive design guide lines for canal bank appearance.

#### 4.2.3 Methods

In applying the concept of evaluative image along wellawatta canal here used a simple basic method; called content analysis.

**Content analysis** (also called: textual analysis) is a well established methodology in the social sciences on the subject of communication content. Earl Babbie(1969) defines it as *"the study of recorded human communications, such as books, web sites, paintings and laws"*.

Harold Lasswell formulated the core questions of content analysis: *"Who says what, to whom, why, to what extent and with what effect?"* Ole Holsti (1969) offers a broad definition of content analysis as *"any technique for making inferences by objectively and systematically identifying specified characteristics of messages"*

*As an evaluation approach, content analysis is considered to be quasi-evaluation because content analysis judgments need not be based on value statements. Instead, they can be based on knowledge. Such content analyses are not evaluations. On the other hand, when content analysis judgments are based on values, such studies are evaluations* (Frisbie, 1986).

Here have to inform observers, the study purpose, to reduce biases in response, have to tell the observers that there were no right or wrong answers and that we were only wanted their honest opinions. From each interview, we got two evaluative maps for each observer. We compared those maps and got the frequency of overlapped areas and tabulated them.

This method may have more value in identifying problems than in developing innovative solutions. The method did prove useful. After walk along the waterfronts, had short interviews enabled to gather the necessary information from a broad sample of observers fairly quickly. Each interview took about 15 minutes and observers appeared quite animated and interested in the interview. The age, the income they got and occupation of the observers did not take in to account.

#### 4.2.4 Method of data analysis

Answer to the first question was likeable and dislikeable features around the area. Then the answers emphasized the environmental features of that area. Thereafter content analyzes the data collected. Each individual person liked places and disliked places were mapped in two different types of maps.

(1) Liked maps

(2) Disliked maps

Those maps are carefully analyzed and find out common agreed places and common disagreed places. There after it was possible to calculate the votes for each place in order to obtain a percentage of like and dislike. By checking the boundaries of those places it was checked wear the observers are taking about the same area.

After that definitions and boundaries of those places were found out. There may be some places of which the entire sample agreed and some places only few observers mentioned. Most agreed places got higher percentage, and they were the places along the canal all the people liked or disliked. Other places got fewer votes, but still have some identity as liked or disliked places.

These places were represented on a table. This was done in two separate tables - liked and disliked places. After that it was possible to map all the places on one map to obtain the evaluative image along the water fronts. Environmental features mentioned for each place as likable features and dislike features were list out. Though, it was possible to categorize those features in to different categories. Through which it was easy to identify the unique environmental features inherent to the local context. The findings of the research were presented by means of maps, tables, photos, etc. Further, environmental features of each liked and disliked place were described with the own observations and the support of the likeable and dislikeable features found from the interviews. Finally the environmental features which are belonging to the local context are compared with the foreign environmental features which were discovered by various researches.



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### 4.3 Case study one-Wellawatta canal

#### 4.3.1 Liked places

According to the table (13) the prominent liked areas are the area between YMBA and duplication road, St Peters playground, Saddarmaramaya Viharaya, Lumbini Maha Vidyalaya, some areas of canal side promenade from Saddarmaramaya Viharaya to Havelock road, a place where Kirulapone canal separate in to two sides; to Wellawatta and to Dehiwala, a place in front of the park road and near the bridge, and open university premises. Also the table lists the reasons observers reported for liking them.

Observers like the appearance of the several areas. They reported that they liked several qualities of those areas. They said they liked these areas for features as greeneries; more open, and free areas, well landscaped and well maintained areas, clean areas, and areas with religious backdrop like the Saddarmaramaya temple.

Reasons for the likeness of the mentioned places were carefully note down during the survey. Some of the reasons were similar for some places, while significant variations could be identified in some reasons. The aim of this part of the discussion is to consider the places, which were liked by the majority, and to investigate the given reasons for the likeness. The observers described the same liked and disliked qualities in different words.

Those words are carefully converted to the one interpretation (attributes)

Map (16) is representation of likeable places mentioned by the observers. The votes given for each place was calculated and percentages are indicated in one Colum. Agreeable definitions and boundaries were found of most of the places mentioned.



Fig :( 57) Open University premises



Fig :( 58) Landscaped area of the Open University canal bank.



Map No (16)

Liked map (Summary from the observers liked maps)



### 4.3.1.1 Environmental features of liked places

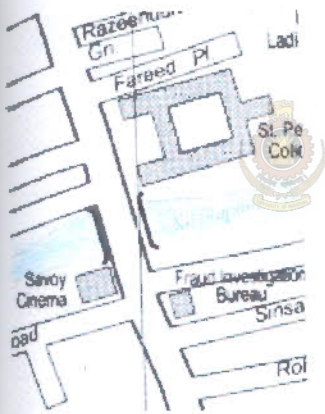
The reasons for the likeness of the mentioned places were carefully note down during the survey. Some of the reasons were quite similar for some places, while significant variations could be identified in some of the reasons. The aim of this part of the discussion is to consider the places, which were liked by the majority, and to investigate the given reasons for the likeness.

#### A. Near St Peter's college

1. Large, beautiful trees
2. Open place
3. Shaded area



Fig :( 59) Near the St Peters College



Map :( 17) plan of the St Peters College

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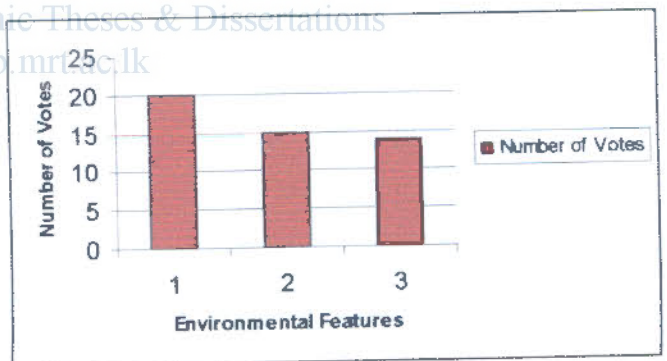
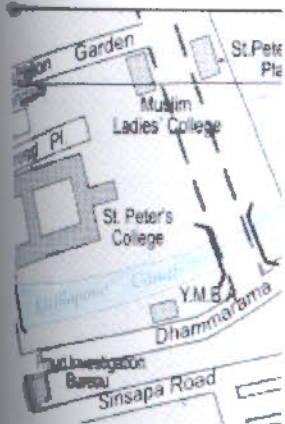


Table :( 01) environmental features Near the St Peters College according to the observers

**B. Area between YMBA and Duplication road**

1. Greenery
2. Can look at all around
3. Very cool (windy)
4. Open space
5. Clean



Map : ( 18) plan Near the YMBA and Duplication



Fig : ( 60) Near the YMBA and Duplication road

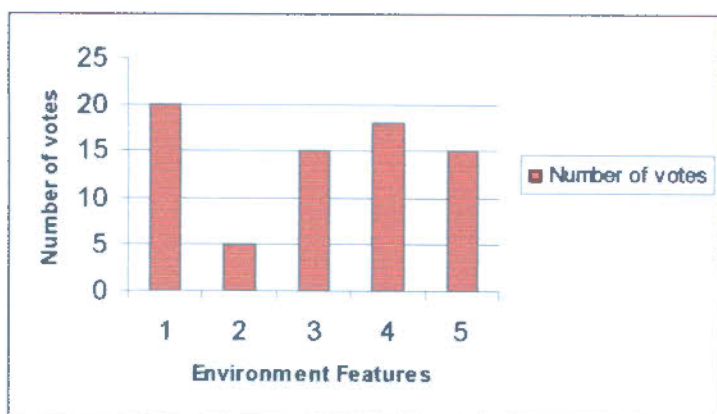
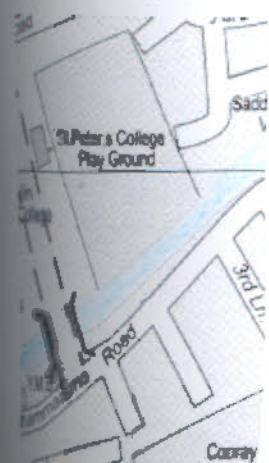


Table : ( 02) environmental features Near the YMBA and Duplication road according to the observers

**C. Near the St Peters college playground**

1. Views of the playground
2. Greenery
3. Fresh air
4. Open area
5. Clean background



Map : ( 19) plan of the St Peters college playground



Fig : ( 61) Near the St Peters college

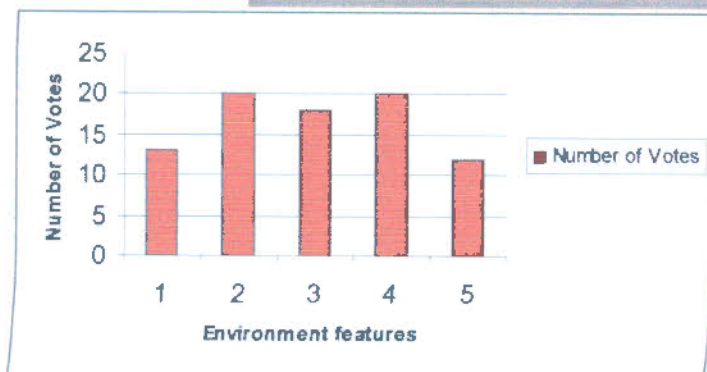


Table : ( 03) environmental features Near the St Peters college playground according to the observers

**D. Corner of the Dammarama road**

1. Clean
2. Open area
3. Shaded by trees



Map : ( 20) plan of the corner of the Dammarama



Fig : ( 62) corner of the Dammarama road

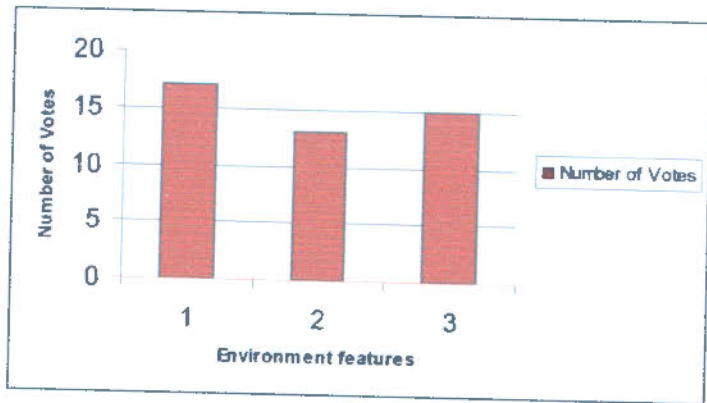


Table : ( 04) environmental features near the corner of the Dammarama road according to the observers

**E. Saddarmaramaya Viharaya**

1. Calm and quite
2. Open
3. Clean
4. Well maintained
5. Religious Background



Map : ( 21) plan of the Saddarmaramaya Viharaya



Fig : ( 63) corner of the Saddarmaramaya Viharaya

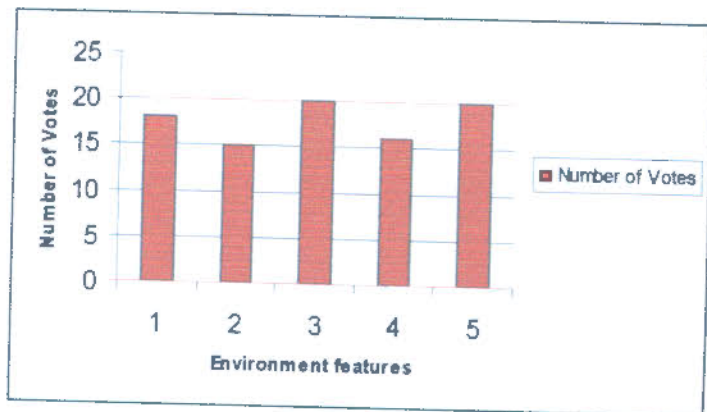


Table : ( 05) environmental features of the Saddarmaramaya Viharaya according to the observers



**F. Canal side promenade from Saddarmaramaya Viharaya to Havelock road.**

1. Open area
2. Calm and quit
3. Trees along the path



Map :( 22) plan from Saddarmaramaya Viharaya to Havelock road

Fig :( 64) promenade from Saddarmaramaya Viharaya to Havelock road

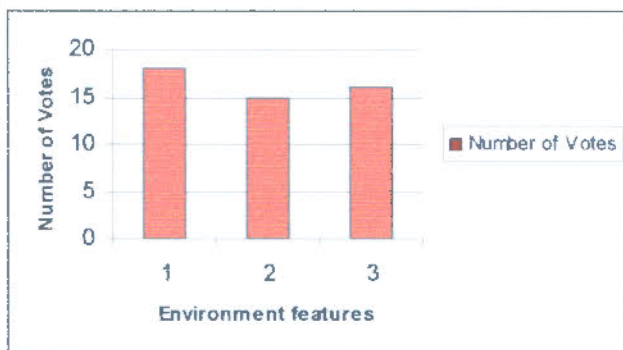


Table :( 06) environmental features along the promenade from Saddarmaramaya Viharaya to Havelock road according to the observers

**G. Lumbini Maha Vidyalaya**

1. Well landscaped
2. Clean environment
3. Full of vegetation
4. Calm and quit



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Map :( 23) plan of Lumbini Vidyalaya

Fig :( 65) Lumbini Vidyalaya

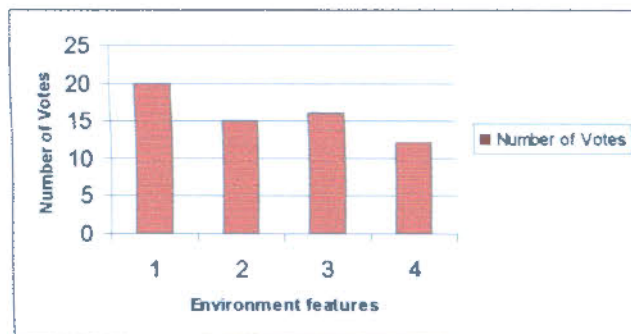
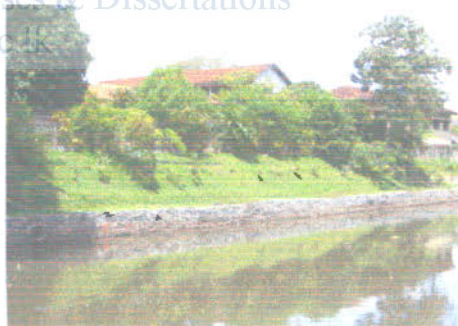


Table :( 07) environmental features around Lumbini Vidyalaya according to the observers

**H. A place where kirulapone canal separate in to two sides; to wellawatta and Dehiwala**

- 1. Open space
- 2. Views of the water



Map :( 24) plan of Talakotuwa area



Fig :( 66) Kirulapone cannel separate in to two

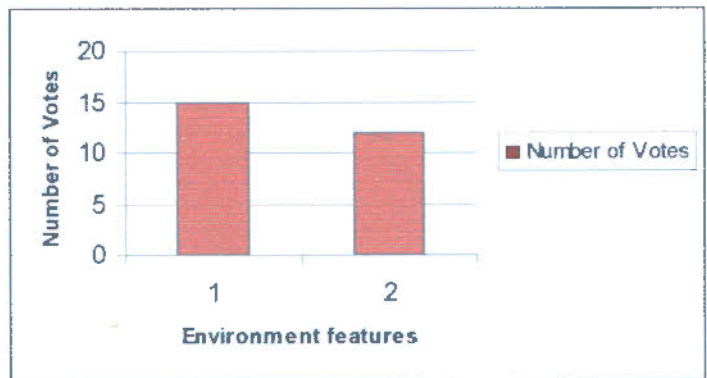
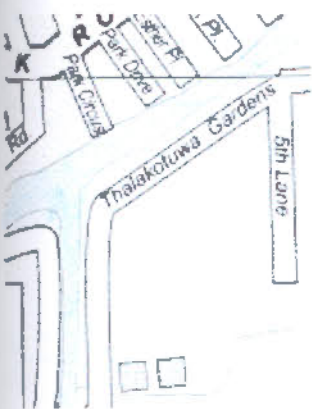


Table :( 08) environmental features around a place where Kirulapone cannel separate in to two ways according to the observers

**I. In front of fifth lane**

- 1. Open space
- 2. Views of the water
- 3. clean



Map :( 25) plan of the fifth lane and canal front promenade along it.



Fig :( 67) in front of the fifth lane

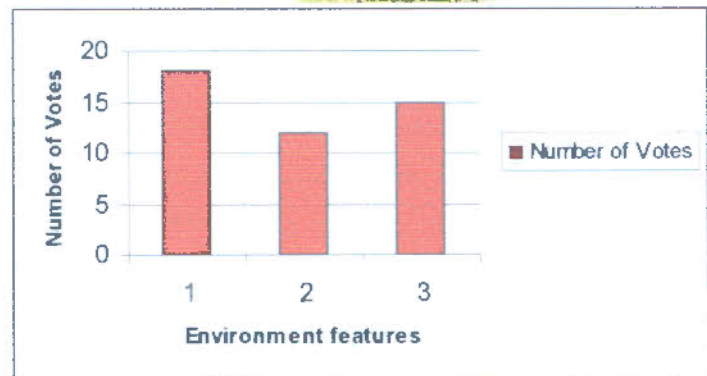
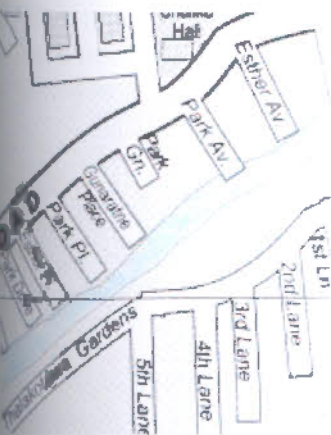


Table :( 09) environmental features in front of the fifth lane according to the observers

**J. Area next to the Tamil international school**

- 1. Open space
- 2. Views of the water
- 3. Calm and quit



Map :( 26) plan of the Talakotuwa garden road

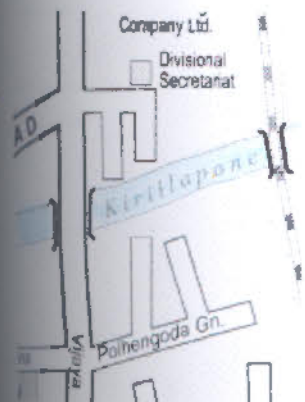


Table :( 10) environmental features near the Tamil international school according to the observers

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**K. A place in front of the park road near the Kumaratunga road**

- 1. Open space with
- 2. Greenery
- 3. Clean space well kept
- 4. Silent space



Map :( 27) plan of the Kumaratunga mavatha near the Kirilapone canal.

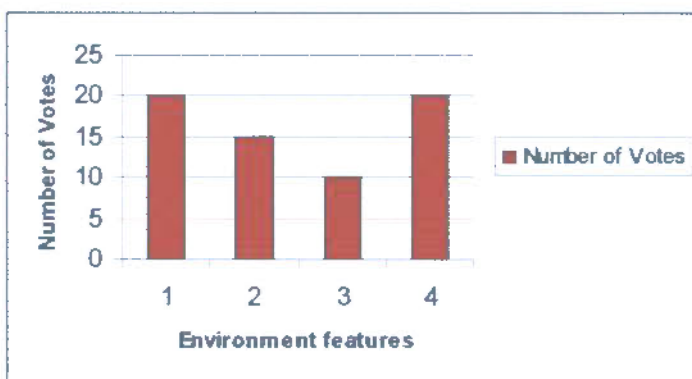
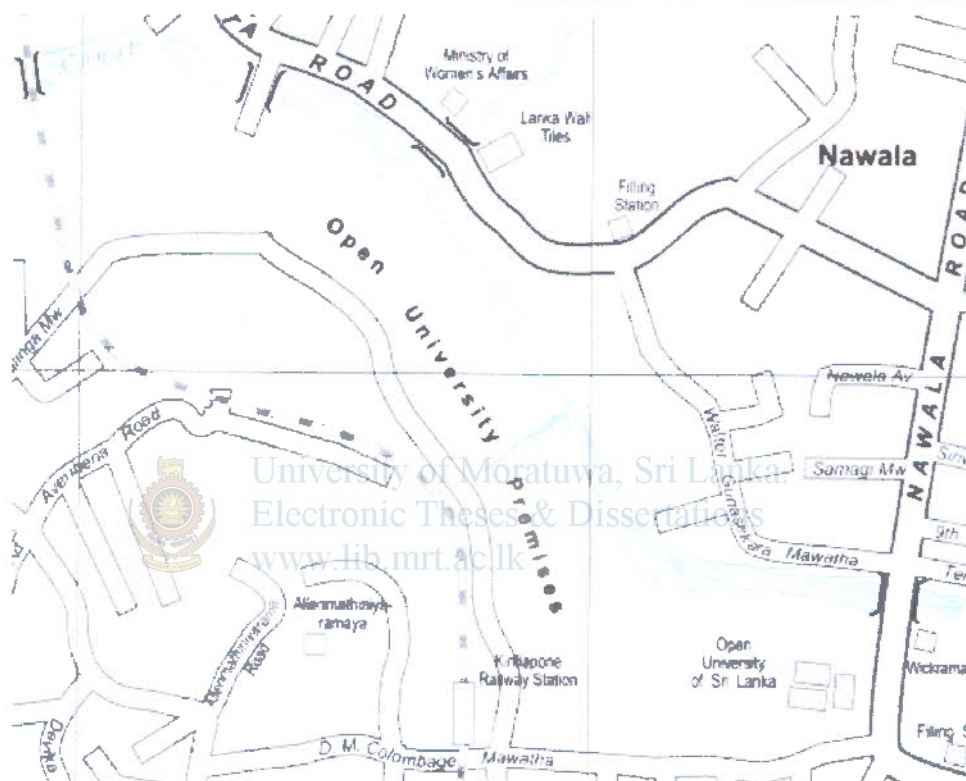


Table :( 11) environmental features near the Kumaratunga mavatha according to the observers

**L. Open university**

1. Good vegetation
2. Views of the canal
3. Well landscaped
4. Clean spaces
5. Relax space
6. Place without noises
7. Windy atmosphere

Figs :( 68)  
The Open  
University  
Premises

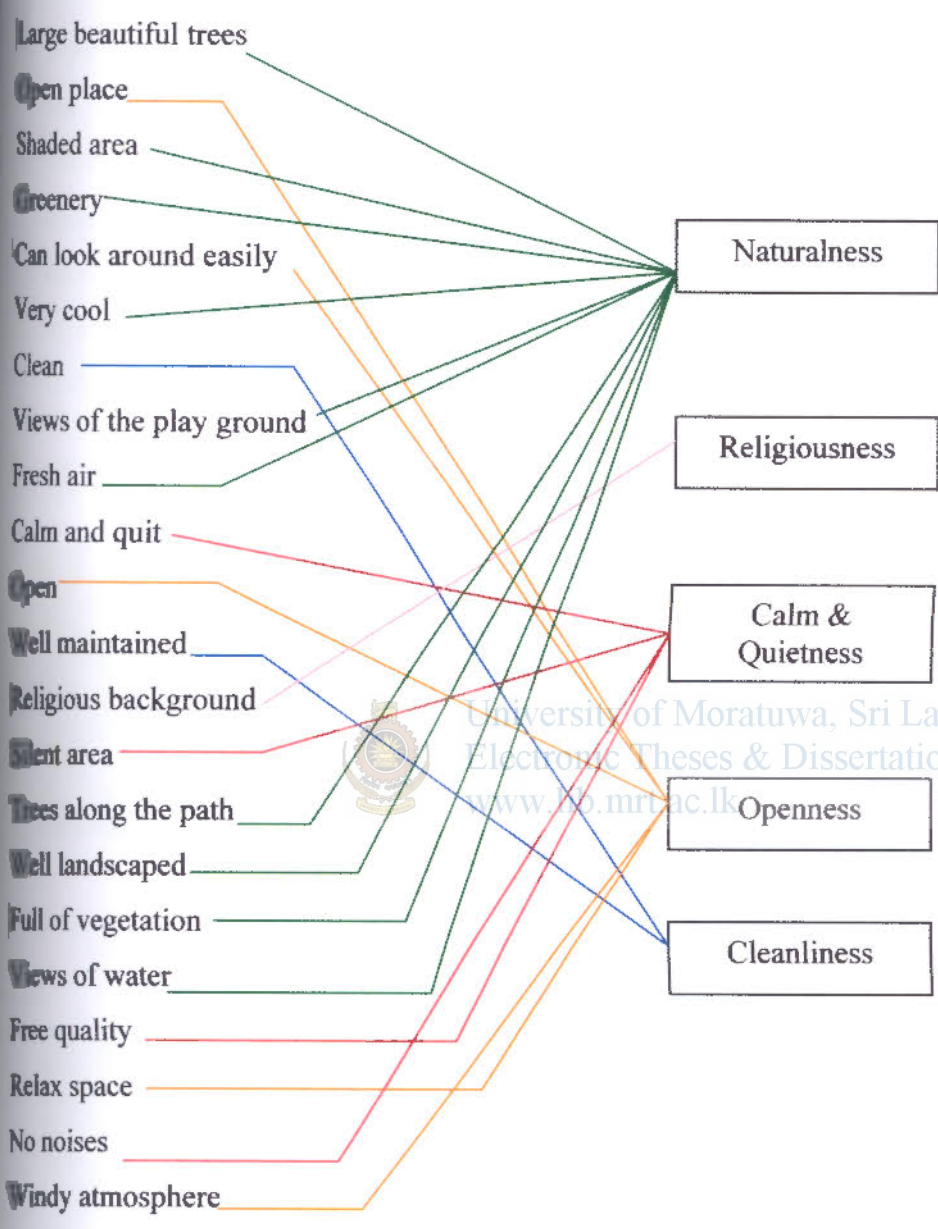


Map :( 28)  
plan  
Of the Open  
University



Table :( 12) environmental features along the Open  
University premises according to the observers

Liked elements	Expressed reasons for likeness
A. Near St Peter's college	1.Large ,beautiful trees 100%
	2.Open place 75%
	3.Shaded area 65%
B. Area between YMBA and Duplication road	1.Greenery 100%
	2.Can look around easily 25%
	3.Very cool(windy) 75%
	4.Open space 85%
	5.clean 75%
C. Near the St Peters college playground	1.Views of the playground 65%
	2.Greenery 100%
	3.Fresh air 75%
	4.Open area 100%
	5.Clean background 55%
D. Corner of the Darmarama road	1.Clean 78%
	2.Open area 65%
	3.Shaded by trees 75%
E Saddarmaramaya Viharaya	1.Calm and quite 86%
	2.Open 75%
	3.Clean 100%
	4.Well maintained 80%
	5.Religious background 100%
F. Canal side promenade from Saddarmaramaya Viharaya to Havelock road.	1.Open area 85%
	2.Silent area 75%
	3.Trees along the path 80%
G. Lumbini Maha Vidialaya	1.Well landscaped 100%
	2.Clean environment 75%
	3.Full of vegetation 80%
	4.Silent area 60%
H. A place where kirulapone canal separate in to two sides; to wellawatta and Dehiwala	1.Open space 75%
	2.Views of the water 60%
I. In front of fifth lane	1.Open space 85%
	2.Views of the water 60%
	3.Clean 75%
J. Area next to the Tamil international school	1.Open space 75%
	2.Views of the water 50%
	3.free quality 50%
K. A place in front of the park road near the Kumaratunga road	1.Open space with 100%
	2.greenery 75%
	3.Clean space well kept 50%
	4.Silent space 100%
L. Open university	1.good vegetation 100%
	2.Views of the canal 75%
	3.Well landscaped 85%
	4.Clean spaces 80%
	5.Relax space 85%
	6.no noises 85%
	7.Windy atmosphere 80%



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### 4.3.2 Disliked places

According to the maps, the prominent disliked elements and the reasons respondents reported disliking them. Respondents gave negative evaluations to the surrounding area of the Galle road, some areas between Saddaharmarama Viharaya to Havelock road, Darmarama road and Udyanapura road, areas around Thalakotuwa garden and hridge and areas along Walter Gunasekara Mawatha. Majority of the observers rejected these areas because of congestion, disorder, very dirty, some places are use as dumping yards, poor up keep, some buildings are facing their backside to the canal, some industries are facing to the canal and they throw all their garbage in to the canal.



Fig :( 69) the opposite side of the Open University premises, is not maintain properly



Fig :( 70) the opposite canal bank of the Open University premises, is not

Map (29)

Disliked places (Summary from the observers liked maps)





**4.3.2.1. Environmental features of Disliked places**

**A. Area near the Galle road**

1. Back sides of the shops and garages
2. Dirty areas
3. Not maintain properly
4. So much congested

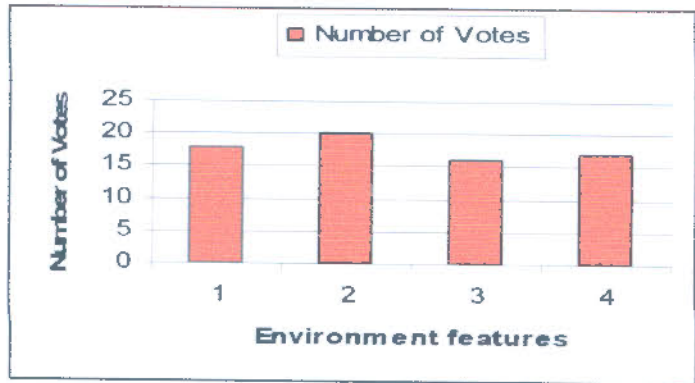


Table :(14) dislikeable features around the Galle road, according to the observers

**B. Some areas between Saddharmarama Vihara to Havelock road**

1. Use as dumping yards
2. Dirty
3. No maintenance

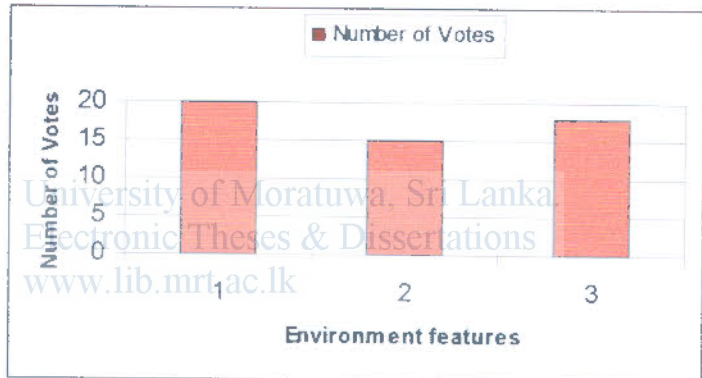


Table :( 15) dislikeable features between Saddarmaramaya Viharaya to Havelock road, according to the observers

**C. Darmarama road and Udyanapura road**

1. Fully crowded
2. Dirty
3. Collect garbage

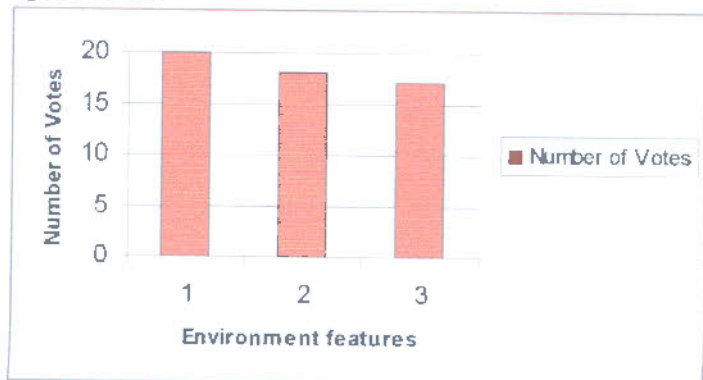


Table :( 16) dislikeable features around Darmarama road and Udyanapura road, according to the observers

**D. Areas around Thalakotuwa garden and bridge**

1. Very dirty
2. Crowded shanties
3. Garbage collected
4. Poor maintenance

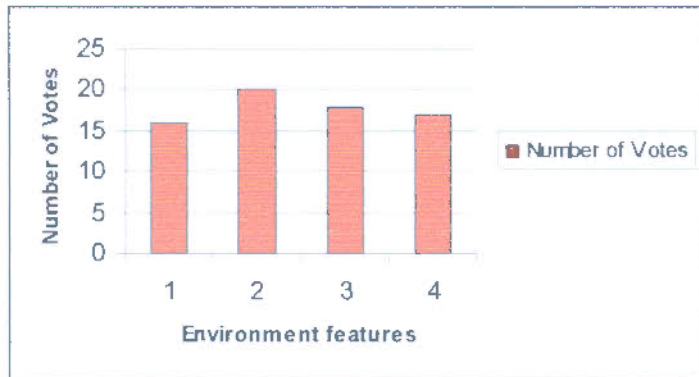


Table :(17) dislikeable features around Talakotuwa garden and bridge, according to the observers

**E. Talakotuwa garden near to the Wijaya Kumaratunga Mawatha**

1. No maintenance
2. Dirty and ugly
3. Garbage collection
4. Some areas are abandoned

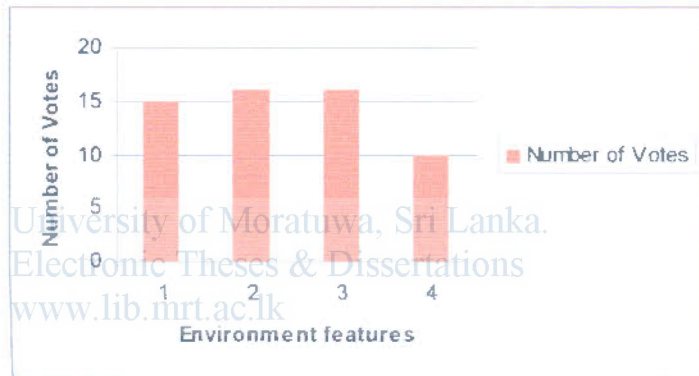


Table :(18) dislikeable features around Talakotuwa garden near the Wije Kumaratunga Mawatha



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**F. Areas along Walter Gunasekara Mawatha**

1. Some industries are Facing to the canal
2. No maintenance
3. Dirty
4. Congested some areas Are abandoned

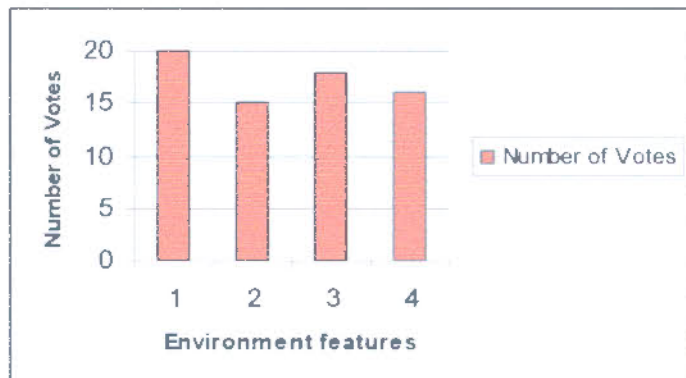


Table :(19) dislikeable features along Walter Gunasekara Mawatha According to the observers

Table (20):

## Prominent disliked elements and reasons

disliked elements	Expressed reasons for dislike ness	Attributes	No. of votes percentage
A. Area near the Galle road	1.Back sides of the shops and garages 2.Dirty areas 3.Not maintain properly 4.So much congested	Industry poor upkeep congested	60%
B. Some areas between Saddharmarama Vihara to Havelock road	1.Use as dumping yards 2.Dirty 3.No maintenance	poor upkeep congested	30%
C. Darmarama road and Udyanapura road	1.Fully crowded 2.Dirty 3.Collect garbage	poor upkeep congested	100%
D. Areas around Thalakotuwa garden and bridge	1.Very dirty 2.Crowded shanties 3.Garbage collected 4.Poor maintenance	poor upkeep congested	100%
E. Talakotuwa garden near to the Wijaya Kumaratunga Mawatha	1.No maintenance 2.Dirty and ugly 3.Garbage collection 4.Some areas are abandoned	poor upkeep congested	50%
F. Areas along Walter Gunasekara Mawatha	1.Some industries are facing to the canal 2.No maintenance 3.Dirty 4.Congested Some areas are abandoned	Industry poor upkeep congested	75%

#### 4.4 Analysis Public evaluative images along the canal

Intention of this part of the discussion is to briefly examine the agreeability of the environmental features cited by the observers. This analysis cited through their experience along the Wellawatta canal.

##### 4.4.1 Likable features

###### 4.4.1.1 Cleanliness

By considering of Area between YMBA and duplication road, St Peters playground, Saddarmaramaya Viharaya, Lumbini Maha Vidialaya, some areas of canal side promenade from Saddarmaramaya Viharaya to Havelock road, a place where Kirulapone canal separate in to two sides; to Wellawatta and to Dehiwala, a place in front of the park road and near the bridge, and Open University premises we can find out these areas are well managed areas. Observers prefer the cleaned areas with free and Relaxive quality.

Along the Wellawatta canal observers recall areas as dislike because of garbage, congestion, some shops and industries are facing their back side to the canal, poor maintenance. The removal or buffering of these elements with more desirable elements may improve the evaluative image along the Wellawatta canal.

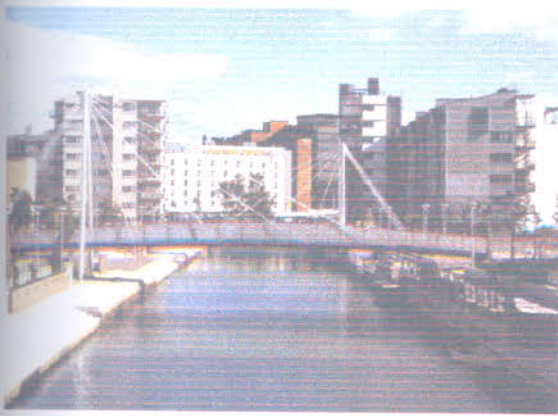


Fig :(71)  
A well maintenance entrance with a distinctively  
Designed apartment building, Ruoholahti  
Helsinki



Fig :(72)  
A view down the canal towards the city center  
shows the well maintained public spaces and  
canal walkway.

#### 4.4.1.2 Open spaces

Observers gave favorable mention to openness, appointing as “big”, and “wide open space”, “not crowded”. As St Peters playground, Saddarmaramaya Viharaya, , some areas of canal side promenade from Saddarmaramaya Viharaya to Havelock road, a place where Kirulapone canal separate in to two sides; to Wellawatta and to Dehiwala, a place in front of the park road and near the bridge, and open university premises .

*“Preference associated with defined openness or open but bounded space”*

(Lynch 1960, page44)

They gave negative evaluations to crowding and constriction. Those places are referred as “crowded” or “too small” .Some of the answers was based on comparisons with other famous open spaces. The observers were impressed about the less density of high rise buildings, availability of public open spaces which are accompanied with greeneries along the Wellawatta canal.



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Fig :(73)  
Café and restaurants at the rivers edge provide out door dinning .boat quay, Singapore.



Fig :(74)  
The 450 meters long stepped and landscaped public promenade overlooks the bay and the port of Osaka facilitates. Ceseno square. Japan.

#### 4.4.1.3 Greeneries

Along Wellawatta canal, people responded strongly to the naturalness of places. They like natural areas, and they dislike areas with intense land uses such as industry, houses and commercialized areas. Other research confirms that people notice differences in the naturalness of places and prefer naturalness.

Observers show that adding vegetation to scenes may increase preferences by appointing the places As St Peters playground, Saddarmaramaya Viharaya, , a place in front of the park road and near the bridge, and open university premise .

*"Vegetation may strengthen the imageability of elements"*

(Lynch 1960, page44)

As he said the path along water or parks tend to be more memorable, the observers appoint the path between Saddarmaramaya Viharaya and Havelock road as preferable element.

*"The presence of nature around the building contributed to building imageability as a landmark."* (Nasar, 1996, page64)

Though it was evident that considerable amount of evaluations were based on a certain likeable features of the environment, which is mentioned by Nasar (1996) as naturalness.



Fig :(75)  
people prefer the areas which  
are shaded by trees.

#### 4.4.1.4 Religiousness

Majority of observers justified their likeness of the area in terms of the inherent religiousness. The observers reported the Saddarmaramaya Viharaya as a liked area and reported the reasons as calm and quiet environment with the religious background. Most of them specially talked much about the Saddarmaramaya Viharaya and what they have felt in there.

When investigating the nature of the likeable places of the evaluative image, it was realized that people have preferably selected religious places than other places. Religious buildings have another role; research shows that those places increase imageability of area as landmarks. The religious buildings have preferred mix of order and variety. The elements of the temple are fit within a recognizable pattern. The survey along the Wellawatta canal suggests that uses of religious buildings are enhancing the evaluative image.



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Fig :(76)  
Seemamalakaya in west Beira



Fig :(77)  
Achedi at Sukhothai, the first Thai capital

#### 4.4.1.5 Calm and quit environment

Most of the people mention about the calm and quit spaces along the Wellawatta canal. Most of them preferred the location of the Saddarmaramaya Vihara, Open University premises and path from Saddarmaramaya Viharaya to Havelock road; which are located away from the major traffic roots. They mentioned about the high quality of freedom they felt in this area. Front bare land of the Open University premises gives the high sense of the freedom which is away from the hustle and bustle of the city. Further the green backdrops of the Open University premises enhance the calm and quite appearance.

All the observers mentioned Saddarmaramaya Vihara as one of their favorite place. Most of them preferred the location because of the peace full hackdrop. The Bo tree which is in the border of the canal has given a special attraction for the area.



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Fig : (78)  
Cultural center plaza  
Kowloon Hong Kong



Fig : (79)  
Washington  
Monument  
Washington



#### 4.4.2 Dislikeable features

The areas along Walter Gunasekara Mawatha were a highly dislikeable place to almost every observer questioned. Apart from that congested area around Gall road, garbage disposal area between Saddarmaramaya Viharaya and Havelock road, shanty area around Talakotuwa garden and Udyanapura road were the another dislikeable places it could be noticed that Some of these

A broader set of directions emerged from tallying the reasons across each city. These tallies reveal negative evaluations associated with chaotic commercial and residential developments, garbage, weeds, industries, and dirtiness.

It could be noticed that the some Places possess a high movement appearance for its busyness and high congestion. People criticized those place because for its polluted environment, busy ness and the less discipline. It is revealed that the dislikes in this case has occurred through the less order, politeness and naturalness of the environment.



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## 4.5 Case study two-Beira lake

### 4.5.1 Liked places

According to the table () the prominent liked areas are the Beira place, conventional hall premises, St. Josef church, St. Josef college, Muttayyah park, near the Janatha building premises, Trans Asia hotel premises, Colombo rowing club premises. Also the table lists the reasons observers reported for liking them.

Observers like the appearance of the several areas. They reported that they liked several qualities of those areas. They said they liked these areas for features as full of vegetation; more open, free and Relaxive areas, well landscaped and well maintained areas, clean areas with wind, and areas with religious backdrop like the St. Josef church

Beira has not proper and regular lake promenade around it. Above areas are only reachable from DR Wijewardana Mawatha, Darly road, (T.B. Jaya Mawatha,) Woxol Street and Sir Chittampalam Gardenia Mawatha. From above areas the observers prefer the appearance of these places and its direct link with Beira Basically their liked qualities are naturalness, openness and cleanness. Apart from the liked maps the observers have note down the reasons for the like ness. Some of the reasons were similar for some places, but considerable variations could be identified in some reasons.

The aim of this part of the discussion is to consider the places, which were liked by the majority, and to investigate the given reasons for the likeness. Map below is representation of likeable places mentioned by the observers. The votes given for each place was calculated and percentages are indicated below. Agreeable definitions and boundaries were found of most of the places mentioned.

Map (30)

Liked map

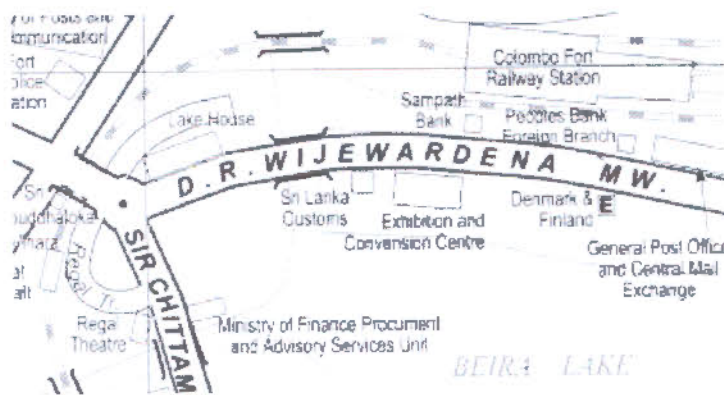


4.5.1.1 Environmental features of liked places

The observers have note down the liked places around Beira and the reasons for likeness. Then the mentioned places were carefully note down with the reasons. Some places have similar reasons for likeness and some places haven't. Also some reasons are similar to the likable features along the Wellawatta canal bank. Following are the liked places around Beira and the reasons for likeness according to the observers.

A. Beira place

1. Trees and bushes
2. Open place
3. Clean spaces
4. Some places shaded



Figs :( 31) plan around Beira place and conventional



Figs :( 80) Beira place and Chithampalam gardiniya mavatha.

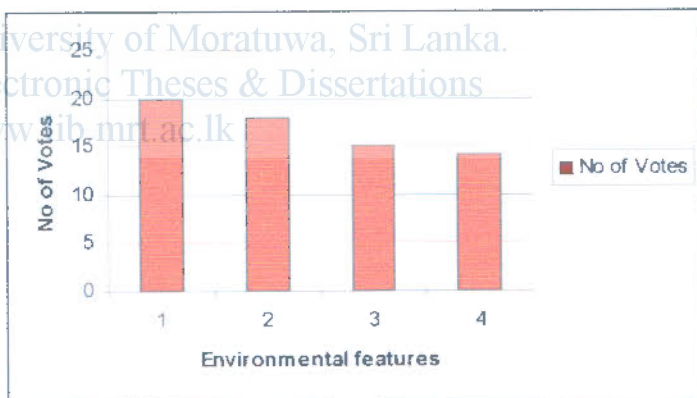


Table :( 21) environmental features Near the Beira place according to the observers

B. Conventional building premises

**B. Conventional building premises**

1. Beautiful trees
2. Silent area
3. Very cool (windy)
4. Open space
5. Clean
6. Well maintained

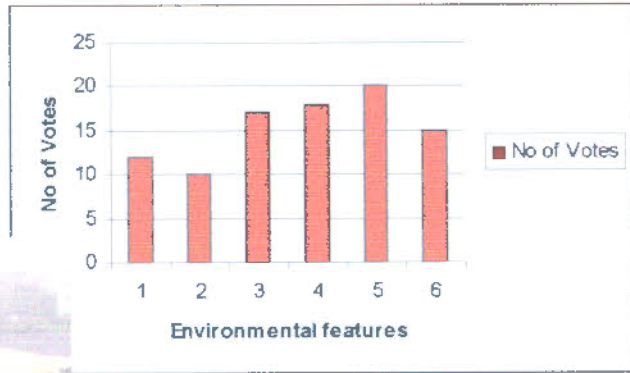


Table :( 22) Environmental features Near Conventional hall area

Fig :( 81) Conventional hall

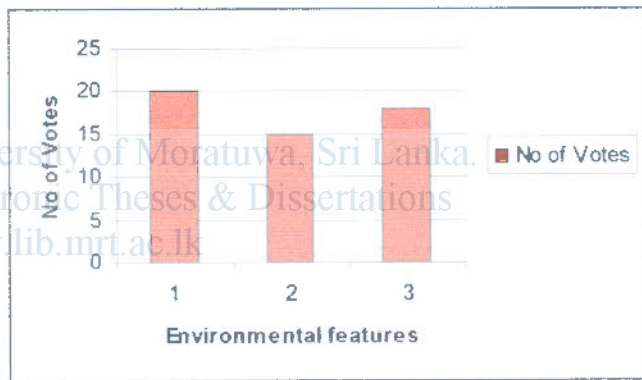
**C. Area between central mail exchange and St Josef church**

1. Full of large and small trees
2. Calm area
3. Relaxive space

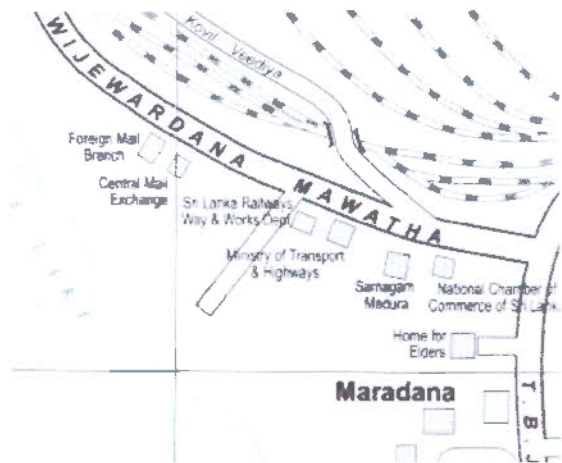
Table :( 23) Environmental features around St Josef College.



Fig :( 82) surrounding area of Central mail exchange.



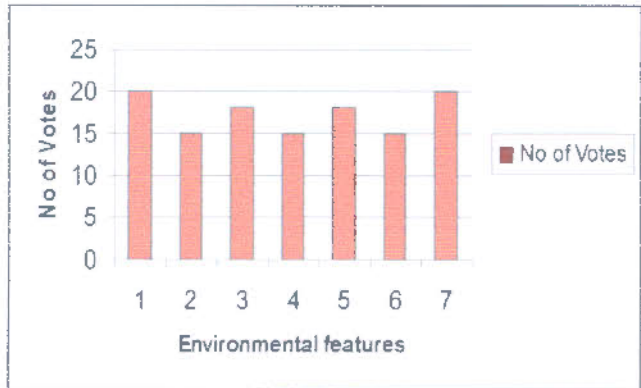
Figs :( 32) plan around Maradana.



**D. Near the St Josef church**

1. Religious background
2. Trees and bushes
3. Fresh air
4. Open area
5. Clean hackageground
6. Relaxive place
7. Calm and quite area

Table :( 24) environmental features  
Near the St Josef church



Figs :( 33) plan along  
T.B Jaya Mawatha.

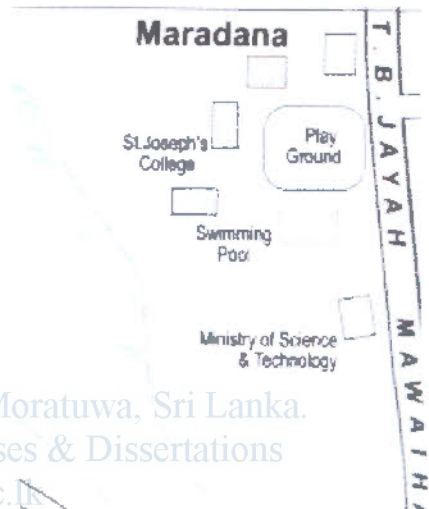


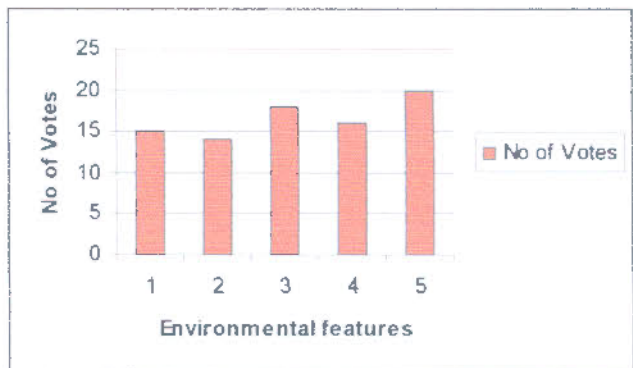
Fig :( 83) surrounding area  
of St.Josef College.

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**E. Near the St Josef College**

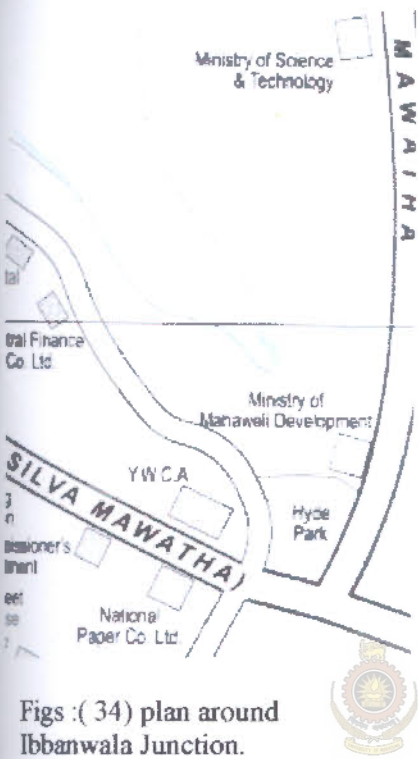
1. Clean
2. Relax space
3. Shaded by trees
4. Open area
5. Calm and quite area

Table :( 25) environmental features  
Near the St Josef church



**F. In front of the Akbar tea stores**

1. Clean
2. Open area



Figs :( 34) plan around Ibbanwala Junction.

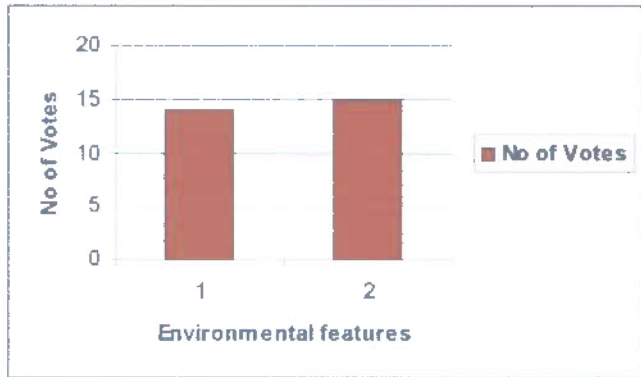


Table :( 26) environmental features Near Akbar tea stores



Figs :( 84) Akbar Telecom tea stores.

**G. In front of the Akbar Telecom building**

1. Clean
2. Open area



Figs :( 85) Akbar Telecom building

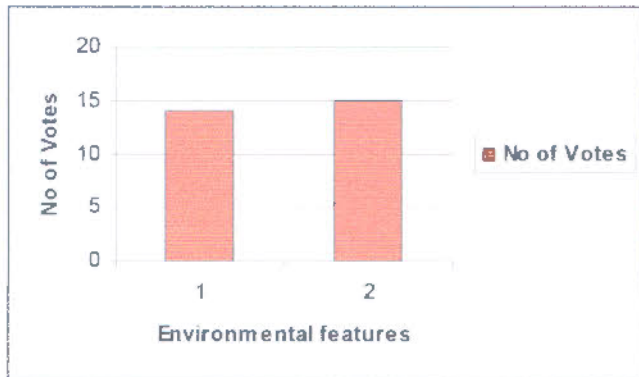


Table :( 27) environmental features Near Akbar Telecom tea stores

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**H.Mutthyah Park**

1. Shaded by trees
2. Open
3. Clean
4. Well maintained

Table :( 28) environmental features Near Muttayah Park.

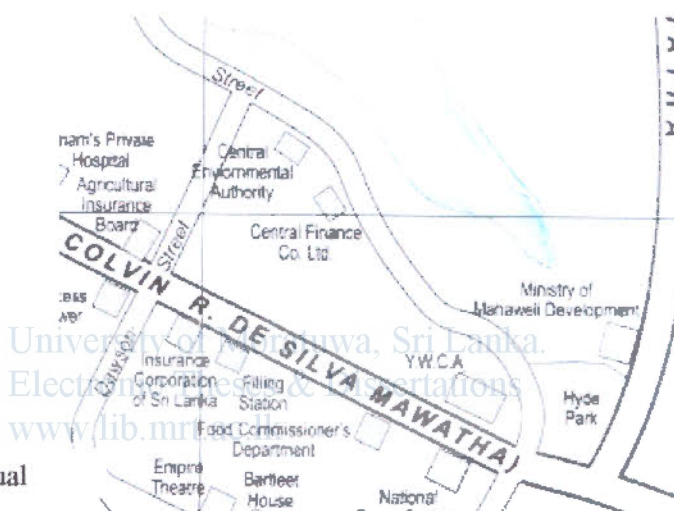
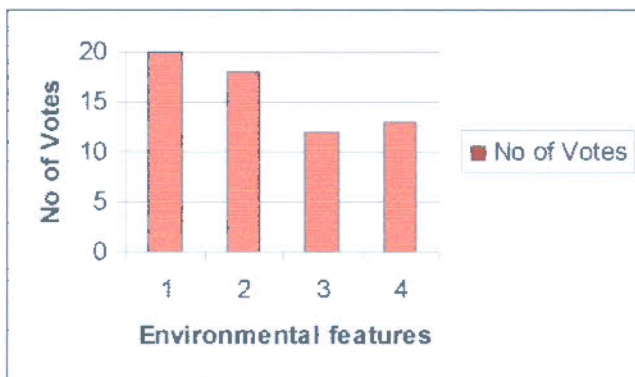


Fig :( 35) Plan around Wauxhall

**L Near the Janatha showroom**

1. Open area
2. Free silent quality
3. Windy atmosphere
4. Coverd by small and big trees

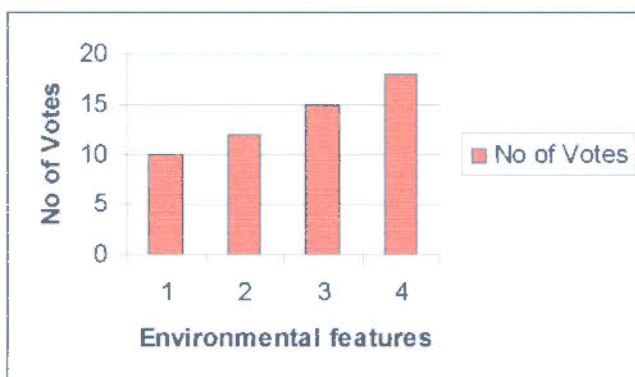


Table :( 29) environmental features Near Muttayah Park.



**J. Trans Asia hotel premises**

1. Well landscaped
2. Clean environment
3. Full of vegetation
4. Better gathering area
5. Windy situation

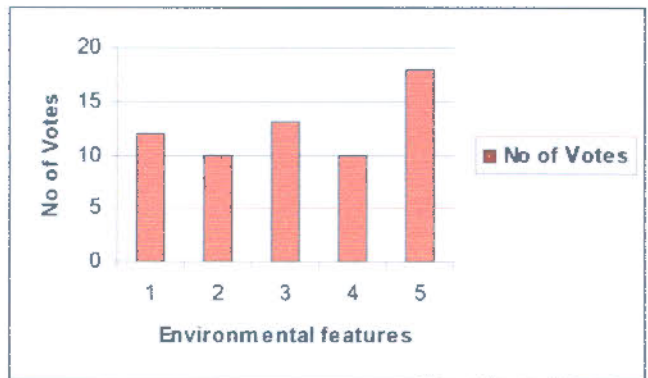


Table :( 30) environmental features near the Trans Asia hotel premises.



Fig :( 36) Plan around Waxual



Fig :( 86) Trans Asia hotel

**K. Colombo rowing club premises**

1. Windy situation
2. Greenery
3. Open area
4. Clean background
5. Relaxive place
6. Calm and quite area

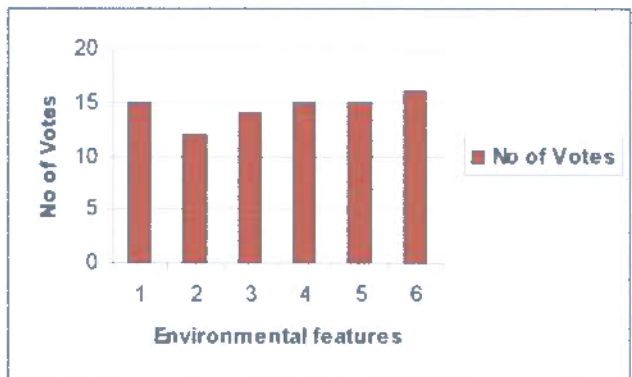


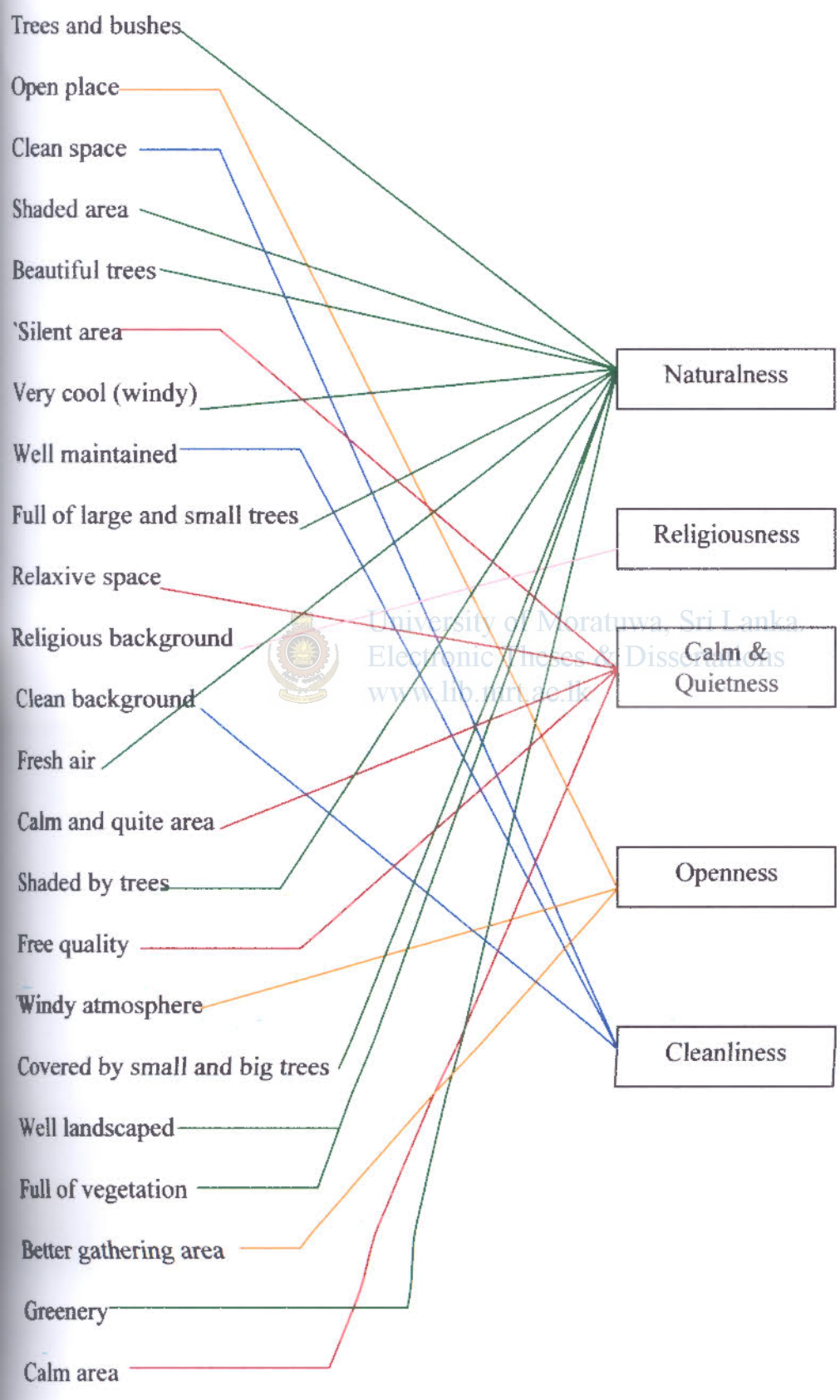
Table :( 31) environmental features near Colombo rowing club



Fig :( 87) Colombo rowing club

Liked elements	Expressed reasons for likeness
A. Beira place	1.Trees and bushes 100%
	2.Open place 90%
	3.Clean space 75%
	4.Shaded area 70%
B. conventional building premises	1.Beautiful trees 60%
	2.Silent area 50%
	3.Very cool(windy) 80%
	4.Open space 85%
	5.Clean 100%
	6.Well maintained 75%
C. Area between central mail exchange and St.Josef church.	1. Full of large and small trees 100%
	2.Very silent area 75%
	3.Relaxive space 80%
D. Near the St.Josef church	1.Religious background 100%
	2.Trees and bushes 75%
	3.Fresh air 80%
	4.Open area 75%
	5.Clean background 80%
	6.Relaxive place 75%
	7.Calm and quite area 100%
E Near the St.Josef college	1.Clean 75%
	2. Relaxive place 70%
	3.Shaded by trees 85%
	4. Open area 80%
	5. Calm and quite area 100%
F. In front of the Akbar tea stores.	1.Clean area 70%
	2.Open area 75%
G. In front of the Akbar telecom building.	1. Clean area 70%
	2. Open area 75%
H. Mutthyah park.	1. Shaded by trees 100%
	2. Open area 85%
	3. Clean area 60%
	4. Well maintained 65%
I. Near the Janatha show room	1.Open space 50%
	2.Free quality 60%
	3.Windy atmosphere 75%
	4.Covered by small and big trees 85%
J. Trans Asia hotel premises	1.Well landscaped 60%
	2.Clean environment 50%
	3.Full of vegetation 65%
	4.Better gathering area 60%
	5.Windy situation 85%
K. Colombo rowing club	1.Windy situation 75%
	2.greenery 60%
	3.Open area 65%
	4.Clean background 75%
	5.Relaxive place 75%
	6.Calm area 80%

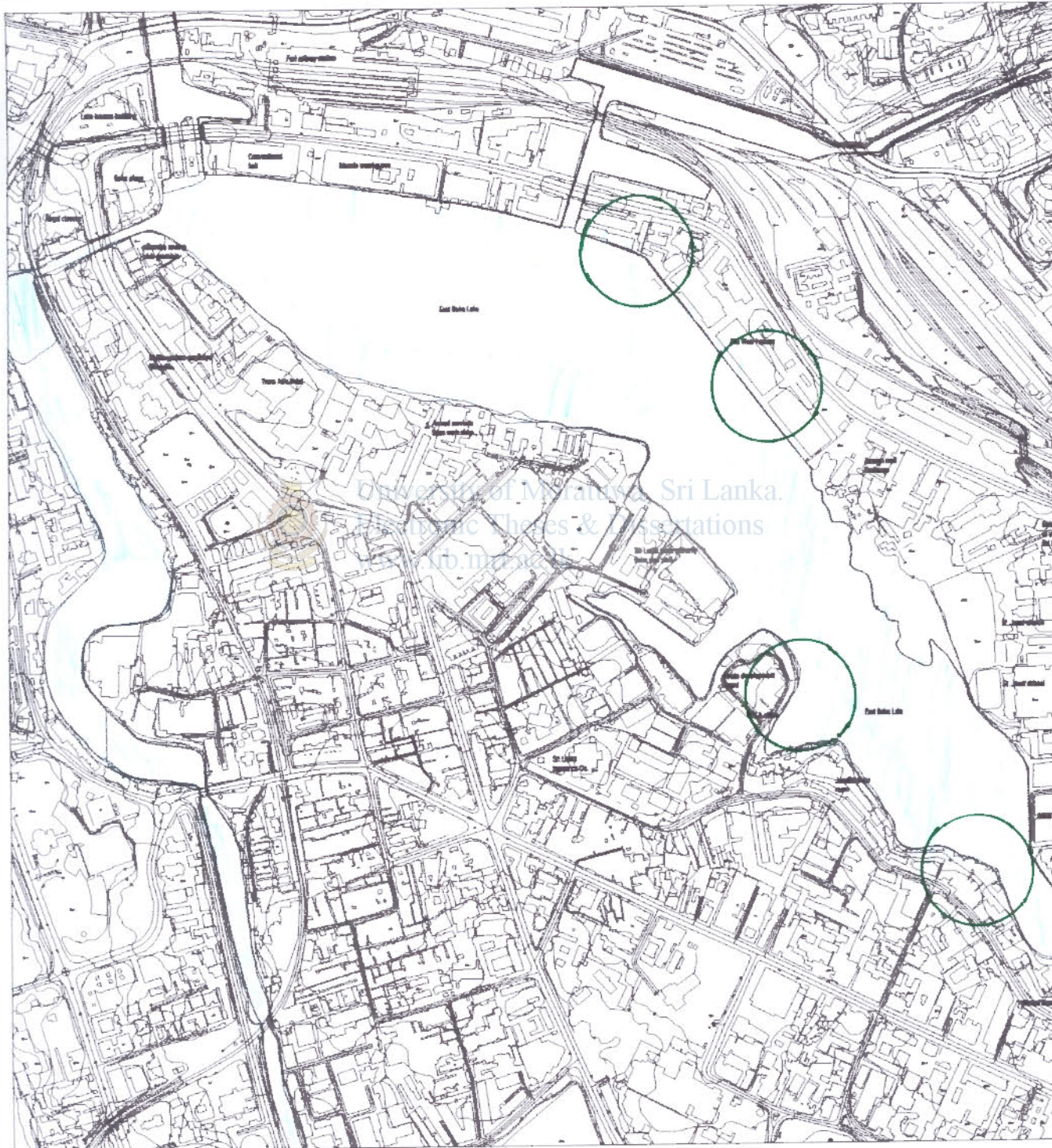




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Map (37)

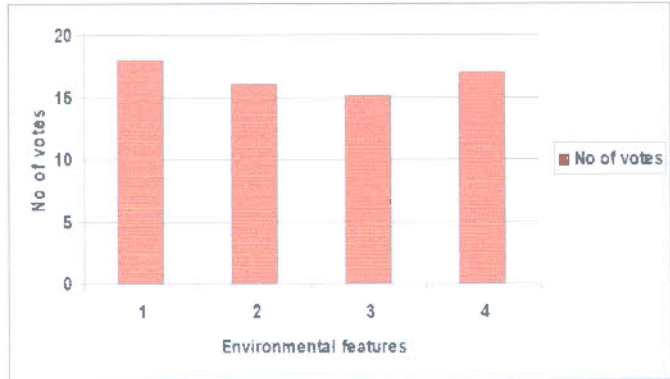
Disliked places



**4.5.2.1 Environmental features of Disliked places**

**A. Abandoned old warehouses near the D.R Wijewardana Mawatha**

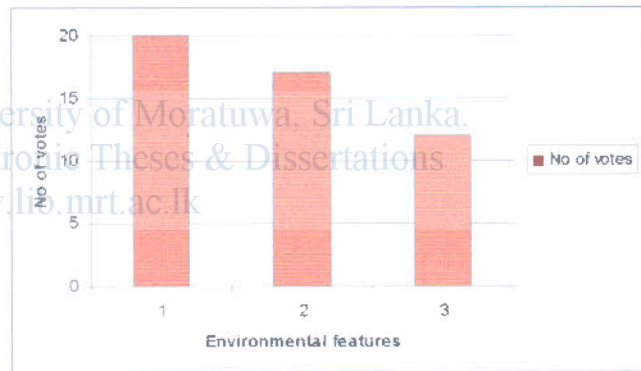
1. Back sides of the shops and garages
2. Dirty areas
3. Not maintain properly
4. So much congested



**Table :( 33) environmental features near abandoned old warehouses near the D.R Wiewardana Mawatha**

**B. In front of the central mail exchange**

1. full of shanties
2. Dirty by garbage dispose ling
3. No any responent to the lake



**Table :( 34) environmental features near central mail exchange**



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**C. In front of the Excel world premises.**

1. No any respondent to the lake
2. Dirty

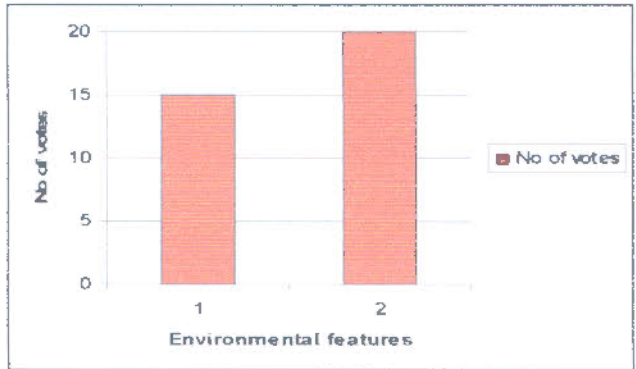


Fig :( 88) In front of the Excel world premises.

Table :( 35) environmental features In front of the Excel world premises.

**D. Areas along Vauxhall Street**

1. Very dirty
2. Crowded shanties
3. Garbage collected
4. No any maintenance
5. No any respondent to the lake



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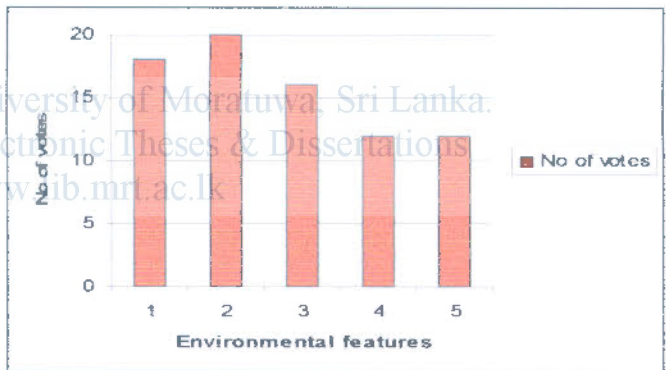


Table :(36) environmental features Areas along Vauxhall Street



Fig :( 89) Areas along Vauxhall Street

Table (37):

## Prominent disliked elements and reasons

disliked elements	Expected reasons for dislike ness	Interpretation	No. of votes percentage
A. abandoned old wear houses near the D.R Wijewardana Mawatha	1.Back sides of the shops and garages 2.Dirty areas 3.Not maintain properly 4.So much congested	Industry poor upkeep congested	60%
B. in front of the central mail exchange	1.full of shanties 2.Dirty by garbage dispose ling 3.no any respondent to the lake	poor upkeep congested	30%
C. in front of the Excel world premises.	1. no any respondent to the lake 2.Dirty	poor upkeep congested	100%
D. Areas along Vauxhall street	1.Very dirty 2.Crowded shanties 3.Garbage collected 4.no any maintenance 5. no any despondent to the lake	poor upkeep congested	100%

#### 4.6 Analysis Public evaluative images around the east Beira.

The purpose of this part is to briefly examine the likable environmental features marked by the observers. This analysis cited through their experience around the East Beira Lake.

##### 4.6.1 Likable features

###### 4.6.1.1 Cleanliness

By considering Conventional building premises, Near the St Josef church , Near the St Josef church , in front of the Akbar building, Muttayah park, Tans Asia hotel premises, Colombo rowing club premises, we can find out these areas are well managed areas.

Around the Beira observers recall areas as dislike because of garbage, shanties, some shops and industries are facing their back side to the lake, poor maintenance. The removal or buffering of these elements with more desirable elements may improve the evaluative image around Beira.



Fig :( 90)  
Thames path, London, a proper maintained path

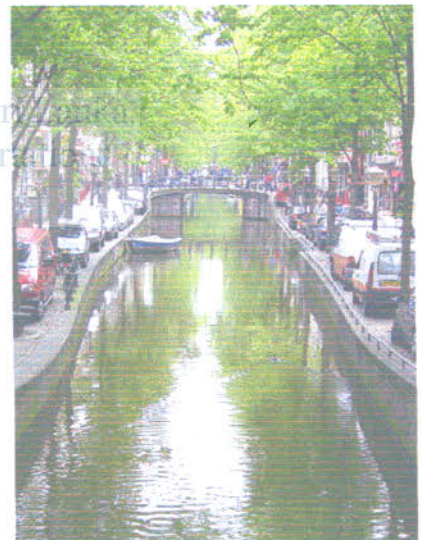


Fig :( 91) well maintained Thames path London.



Fig :( 92)  
Shanghai, China



#### 4.6.1.2 Open spaces

Observers gave favorable mention to openness, appointing as “big”, and “wide open space”, “not crowded”. As the Beira place, St Josef College, St Josef church, Muttayah Park, Trans Asia hotel premises and Colombo rowing club premises were some of them

Some of the answers were based on comparisons with other local areas like Galle face and Parliament ground. They were impressed about the less density of buildings, availability of open public spaces which are enriched by vegetation, free quality and other natural environment.

They gave negative evaluations to closed, dark, and crowded and congested places. Though it is obvious that, the most of the observers have evaluated the city, with reference to “open spaces”.



Fig :( 93)  
Relaxive open space at, Thames River London.



Fig :( 94)  
Relaxive open space at, Chattanooga, London.



Fig :( 95)  
Relaxive open space at, Thames River London.

#### 4.6.1.3 Greeneries

Around the Beira Lake, people responded strongly to the naturalness of places. They like natural areas, and they dislike areas with intense land uses such as industry, houses and commercialized areas. Also they prefer the areas with fresh air and the reflexive quality.

Observers show that adding vegetation to scenes may increase preferences by appointing the places As the Beira place, area between central mail exchange and St Josef College, Muttayah Park, Trans Asia hotel premises and Colombo rowing club premises

*"Vegetation may strengthen the imageability of elements"*

(Lynch 1960, page44)

As Lynch said vegetation along water or parks tend to be more memorable, the observers appoint the vegetated areas as likable areas.

*"The presence of nature around the building contributed to building imageability as a landmark."*

(Nasar, 1996, page64)



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Though it was evident that considerable amount of evaluations were based on a certain likeable features of the environment.



Fig : (96) Stratford upon-Avon canal between prestonBagot and Yaymingdale.



#### 4.6.1.4 Religiousness

The observes appointed the St Josef church as a preferable place and note down the religiousness as the main preferable quality. St Josef church as a liked area and reported the reasons as calm and quit environment with the religious background. When investigating the nature of the likeable places of the evaluative image, it was realized that people have preferably selected religious places than other places. Religious buildings have another role; research shows that those places increase imagebility of area as landmarks. The religious buildings have preferred mix of order and variety. The elements of the church are fit within a recognizable pattern. The survey around the Beira Lake suggests that uses of religious buildings are enhancing the evaluative image.



Fig : (97) temples of the tooth appear as a religious waterfront, in Kandy.



Fig : (98) Kaluthara botree, in the Kalu Ganga river bank.

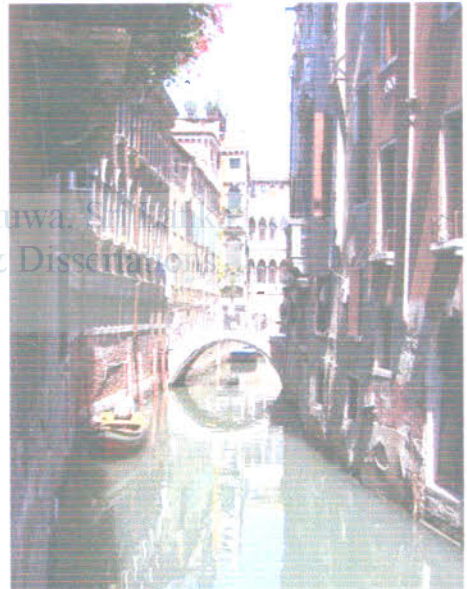
#### 4.6.1.5 Calm and quit environment

Most of the people mention about the calm and quit spaces around Beira Lake. Considerable amount of them preferred the location of the St Josef church, St Josef College, and Colombo rowing club premises, which are located away from the major traffic roots. They mentioned about the high quality of freedom they felt in this area. The area between central mail exchange and St Josef church gives the high sense of the freedom which is away from the hustle and bustle of the city. Further the green facades of the highly urbanized areas enhance the calm and quite appearance.

All the observers mentioned St Josef church, St Josef College as their favorite places. Most of them preferred the location because of the peace full surrounding.



**Fig :( 99)**  
Westminster place waterfront at  
London.



**Fig :( 100)** small cannel  
Venice



**Fig :( 109)** El Gouna canal  
banks, calm quit  
environment

#### 4.6.2 Dislikeable features

#### 4.6.2 Dislikeable features

The areas along Walter Gunasekara Mawatha were a highly dislikeable place to almost every observer questioned. Apart from that congested area around Gall road, garbage disposal area between Saddarmaramaya Viharaya and Havelock, shanty area around Talakotuwa garden and Udyanapura road were the another dislikeable places it could be noticed that Some of these

Places possess a high movement appearance for its busyness and high congestion. Although it possesses a high visibility and high use intensity people criticized the place because for its polluted environment, busy ness and the less discipline. It is revealed that the dislikenes in this case has occurred through the less order, politeness and naturalness of the environment.

#### 4.7 Conclusion

How ever the analysis of collected data revealed that there are similarities between the environmental features that both Wellawatta canal bank observers and Beira lake front observers consider for the evaluation of their image along the water bodies with that of established frameworks of European experiences. But the inherent “religiousness” of the environment and “calm and quite ness “seems to be the prime environmental feature that people consider when evaluating the water fronts in the Colombo city.

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## CHAPTER FIVE:

### CONCLUSION

The ultimate target of this study is to find out the environmental features which were along the selected water ways and to find out evaluative image of the users of the each waterfront. This survey was only carried out along some selected water fronts in the Colombo area. Colombo was selected for this study because Colombo is a city which is formed and shape throughout its long history, carried out by people from generation to generation. There for it is a city with a strong image which exists as a composition of many historical layers and movements. Then on the other hand Colombo is the present commercial capital of the Sri Lanka.

Waterfronts were selected for this study because, it is clear that the water bodies have very close relationship with the built environment. Colombo is a city which is enriched with number of water ways. Due to various reasons and short coming we have been failed in identifying and utilizing this vast potential of water bodies, with our built environment in resent past. But fortunately a new trend is seems to be immerging is identifying significance of water fronts in urban fabric. Because water ways and water bodies as the urban waterfronts have been provided opportunities to enhance the urban environment including the human development. We can get number of examples from European countries to prove it. Ex.

- (1) London has gain image through its respond to river themes. City of London has originated along the banks of the Thames and expanded its development around the river.
- (2) Paris is a city which gains its identity, and significant character through its relationship to a water body river Sein.Etc

From these examples we can clearly see how these water fronts have been utilized, not only as a place for recreation or relaxation but also as a significant part of the urban built environment. The scope of this study was limited to the leftover spaces in an urban context. This study was further limited to selected urban water fronts in Colombo city, because the development of the waterfronts may indirectly benefit to enhance the image of the city.

In order to revitalize these canal banks architects, designers or planners ideas are not enough. Accurate consideration of the social factor of the particular setting determines the degree of successfulness of an architectural creation. Therefore it is necessary to examine the nature and aspirations of user category as a preliminary step in the process of architecture. There after architectural work should cater the nature and aspirations and fulfill the needs of that particular community.

Here in the study it was assumed that public evaluative image along the selected waterfronts reflects, through the likable and dislikable environmental features. The nature of the public evaluative image along the waterfronts was look over by investigating liked and disliked places of the users of the particular area. Questions were appointed to twenty selected users of the each area. When selecting sample of observers, it was only considered the familiarity with the city. Their social, cultural features such as age educational level, religion, sex, ethnicity, was not consider for this survey.

In the first step it was try to identify the number of studies that have been made to explore the environmental features that are used for evaluating the city image. Hear briefly about some planners, geographers, urban architects, designers and physiologist's contribution to discover yardsticks to find out evaluate image of the city. Among those scholars hear deeply discussed about KevinLynch's reaches in 1960, Donald Appleyards findings in 1976, and Jack Nasars researches in 1996.

The chapter two represents the existing situation along the Wellawatta canal and the Beira Lake, with the short description of the historical background. The next step of the study was to investigate environmental features along the east Beira Lake and along Kirulapone Wellawatta canal, which are considered by the users of the each area. the first appointed question was aspire the liked places in particular area .the observers have to note down five or more places which were mostly attract them. The second question aims the most dislikable places in the each location. Finally examine the reasons for likeness and dislike ness of each places. In order to obtain clear picture of public evaluative image of each waterfront, the observers marked the likeable places and dislikable places on the two separate maps .then those maps were carefully examined and find out the total likable and dislikable places along the waterfronts.

Observing these maps revealed that some of the places were mentioned as likable places by the majority while some of other places were just mentioned by one or two observers. Similarly some places were just mentioned by few observers as dislikeable places. Contrast to this few of the places mentioned as dislikeable places were mentioned as likeable places by some other observers.

Most of the observers were worry about the existing situation along the waterfronts. And they required some wonderfully planed waterfronts .they talked much about the few attractive places along the waterfronts .most of these likable places were based on the vegetation in there, open quality and clean background. It was revealed that the some of the environmental features were sited by Nasar in 1996 were similar to the local conditions. Several people mentioned about the large trees and bushes in some places .though it was evident that considerable amount of evaluations were based on certain likable features of the environment, which is mentioned by Nasar in 1996as naturalness. They were highly impressed about the less density of buildings and availability of open spaces which were accompanied with vegetation. Some of these answers were based on comparison with the other local and foreign water fronts. Rather than those places the observers were highly preferred the cleaned environments. Though any way it is obvious that some of the observers were evaluated the waterfronts with openness, clean and naturalness which are another likeable features cited by Nasar in 1996.

Rather than the above mentioned factors majority of the observers justified their likeness of the area in terms of the religiousness, calm and quite ness. Most of them talked much about the Saddarmaramaya viharaya near the Wellawatta canal and St Josef church in front of Beira. Though it could be argued that the religious atmosphere created by sacred places and their architecture. Also the observers mostly mentioned about the calm and quietness without the noise of the vehicles. Specially in St Josef church, St Josef College, conventional hall premises, Colombo rowing club premises, Trans Asia hotel premises, near the Janawasama show rooms, in Beira lake and Saddarmaramaya vihara, Open university premises, St peters playground near the Wellawatta canal. When investigating the nature of the likeable places of the evaluative image, it was realized that people have preferably selected religious places and calm and quit surroundings most.



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How ever the total analysis of collected data revealed that there are similarities between the environmental features that people in Colombo consider for the evaluation of their image of the city with that of established frameworks of European experiences. but the inherent "religiousness" and "calm and quietness" of the environment seems to be the prime environmental features that people consider when evaluating the water fronts in Colombo.

The study established the broad base framework of likeable environmental features adopted specially by Nassar (1997). More importantly it proved that depending on the case there could be other likeable features that get added to this broad base framework. For instance in water fronts the overriding likeable features were its religiousness, and calm and quietness.

For architects, planners and decision makers, the study has given an important insight; while they could use the already established theories and principles as an initial guide, the said theories and principles should always be "testified" in the application of any given context. For that, it is necessary for architects to re align themselves to be more people centered, with the view to get the perception and thus the evaluative image of water fronts. A solution based on such an approach would be much more "socially acceptable". This particularly relevant in the present architectural solutions as the rate of their rejection, by the waterfront observers are on a significant increase.

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### Areas for future research

Through the research it was only investigated the environmental features that the observers of the water fronts use when evaluating the city images. This was investigated through the observation of the public evaluative image of only twenty selected observers. The public evaluative image may vary with the number of samples. Though, possibility exists to obtain a more specific public evaluative image of the waterfronts by questioning more people of the city.

It is obvious that environmental evaluation has a cultural variability. Since the social background of Colombo is multi cultural the degree of the consideration of several environmental features for evaluating the city image may significantly vary between different, ethnic, religious, cultural, and age groups. Though, possibility exists for a future researcher to investigate the cultural viability of the evaluative image along water fronts in Colombo city.

Although this study was only limited to the environmental features that the observers of the waterfront of the Colombo use when evaluating the city images. To investigate the overall evaluative image of the city the future researches can be study along the roads of the city.

Also the public evaluative images vary with the type of the observers. This study is limited to the visitors who are using the waterfronts. But further researches are allowed with the selected residents of the water fronts.

Colombo is different to other local cities for its uniqueness of physical form, historical significance and other such factors. Though, the findings may not possible to generalize to other local cities. Therefore further studies may lead to investigate the nature of the public Evaluative image of other waterfronts in local cities. These findings may help to come to a conclusion of establishing the environmental features of which the water front of local city users evaluates their cities.

## BIBLIOGRAPHY

1. Alexander .C (1977) **A Pattern Language**, Oxford University press, New York.
2. Appleyard.D (1969) **Planning a pluralist city**, MIT press, New York.
3. Boulding .K (1961) **The Image**, university of Michigan press
4. Braithwaite. (1976)**Canals in towns**, Adam and Charles Black, London.
5. Breen. A and Rigby .B, (1994) **The new waterfront**, Thames and Hudson Inc.
6. Brohier R.L (1984) **Changing Face of Colombo**,
7. Hough.M, (1995) **Cities and natural process**.Routledge, 11 New Fetter Lane, Hudson Inc. New York.
8. Kostof.S (1991) **The city shaped** Thames and Hudson Ltd London.
9. Lynch.K (1960) **The image of the city**, MIT press, New York.
10. Lynch.K (1985) **Good city form**, MIT press, Muss..
11. Moore.C.W.Lidz J, (1993) **Water + Architecture**, Thames and Hudson Ltd.London.
12. Munasingha J (2003) **An approach to conceptualizing the environmental image of An urban locality for planning** (Un published thesis)
13. Nasar.J.L, (1997) **The evaluative image of the city**, SAGE publications, Inc.,
14. Premathilake, M and Welandawa.H (1996) **An urbanity for the new Millennium**, Colombo, Architrave, chartered architects.
15. Raheem.I and Colin, **Images of British Ceylon**, (nineteenth century photography
16. Rapport A (1970) **The study of the spatial quality**, Aesthetic Education.
17. Rapport A (1977) **The human aspects of urban form**, Oxford pergamon press
18. Rapport A (1989) **Environmental quality and enjoyment quality profiles**, Open House international.

- 
- 19 Rapport A (1990) **The meaning of the built environment**, the university of Arizona press.
  20. Rodolph El-Khoury and Edward Robbins (2004) **Shaping the city** routledge, UK.
  21. Shachtman.T (1997) **The most beautiful villages of New England**, Thames and
  22. Silva.R.K.D (1976) **Early print of Ceylon**, Rajpal Kumar De Silva, Studio Times Ltd.
  23. Spiro kostof. (1992) **The city assembled**. Thames and Hudson Ltd.London.
  24. Tate. A (2001) **Great City Parks**, Spon press, London
  25. Tettoni L I, and Warren W, (1988) **Living in Thailand**. Thames and Hudson
  26. Trancik.R, (1986) **Finding lost space**, New York, Van Nostrand Reinhold.
  27. Taun, Yi-Fu (1977) **Space and Place; Theperspective of Experience**. Minneapolis: University of Minnesota Press.
  - 28 Taun, Yi-Fu (1990) **Topophilia; a study of environmental perception:** University of Minnesota Press.
  29. Urban development authority (1996) **Beira lake business plan study**.
  30. Verwijnen. J, Lehtovuori.P (1996) **Meaning urban change**, university of art and Design Helsinki Uiah.
  - 31.Wylson.A (1986) **Aquatecture, architecture and water**, architectural press, London

liked elements	Reported reasons
(A) Area between YMBA and Duplication road	<ul style="list-style-type: none"> <li>- Good observation Capability</li> <li>- Cool</li> <li>- Clean</li> </ul>
(B) Near the St. Peterz school Playground	<ul style="list-style-type: none"> <li>- Greenary</li> <li>- clean</li> <li>- Open area with good ventilation</li> <li>- Fresh Air.</li> </ul>
(C) Saddharmaramaya Viharaya	<ul style="list-style-type: none"> <li>- clam &amp; quite</li> <li>- Very clean</li> <li>- Fresh Air</li> <li>- Good observation Capability.</li> <li>- has a historical touch.</li> </ul>
(D) Lumbini Maha Vidyalaya	<ul style="list-style-type: none"> <li>- Open Area</li> <li>- Good observation Capability</li> <li>- Fresh Air</li> <li>- Sunshine all over the place</li> <li>- Cool</li> <li>- Clean</li> </ul>
(E) Canal side promanade from Saddharmaramaya Viharaya to Harelock road.	<ul style="list-style-type: none"> <li>- Open Area</li> </ul>
(F) Dividing point of Kirulapone Canal (Into wellawatta & Deliwata Sub Canals)	<ul style="list-style-type: none"> <li>- Open Area</li> <li>- Good observation Capability (Far sight)</li> </ul>
(G) Place Infront of the park road near the Base Line road.	<ul style="list-style-type: none"> <li>- Open space with Fresh Air</li> <li>- clean &amp; cool.</li> </ul>



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liked elements	Reported reasons
<p>① open university premises</p>	<ul style="list-style-type: none"><li>- Open Space with Fresh Air</li><li>- Good observation facility</li><li>- Cool</li><li>- Clean.</li></ul>



disliked elements	Reported reasons
<p>(A) Area Near the Galle road</p>	<ul style="list-style-type: none"> <li>- Very tidy</li> <li>- Full of Garbage</li> <li>- Population is very high</li> <li>- Observation capability is Nil</li> </ul>
<p>(B) Some Areas between Saddharmaramaya Viharaya &amp; Harelock road</p>	<ul style="list-style-type: none"> <li>- Polluted Air because of shanties</li> <li>- Full of garbage</li> <li>- Polluted water.</li> </ul>
<p>(C) Areas between Thelakotawa gardens &amp; bridge</p>	<ul style="list-style-type: none"> <li>- polluted water</li> <li>- highly populated area</li> <li>- Full of shanties</li> <li>- polluted air.</li> </ul>
<p>(D) Areas along Maratha.</p>	<ul style="list-style-type: none"> <li>- highly populated area</li> <li>- Neglected by people</li> <li>- polluted air</li> <li>- Full of garbage.</li> </ul>



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Liked elements	Reported reasons
Area between YMBA & Duplication road.	It seems to like a Carm place. Very large butiful trees around the place.
Saddarmara maya Viharaya.	Silent, Carm environment. cool place because of the shelter.
Dhammrama Road, St peter's collage playground.	small trees around the place. Carm place, open place.
Cannal site promanade from temple (saddarmaramaya viharaya to Havlock road).	Silent, Carm environment open place.
Lumbini maha Vidyalaya	Trees around the place. silent Carm place
Near Appolo hospital	Near to the main road. town place there is no silent, Carm enviroment.
open university H	Very large trees, Carm,
open university I	beautiful place. open place,



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Disliked elements	Reported reasons
Area near to the Gall road	Noisy place. No trees, rest less place Not a present place. Animals & dirty place.
Same area between Saddarmaramaya Viharaya to Havlock road	Garbage place, untidy environment, No trees.
Dharmara road & Udyanpura.	small houses & untidy place. Animals & noisy environment. unclear place.
Area around Talakotuwa Road, garden & bridge.	No trees, Noisy place. Small houses, unclear environment, restless place.
Area alongs Walter Gunasekara.	lot of Buildings, No trees.

Liked elements

Reported reasons

A. Near St Peter's College

- It place have beautiful and big trees
- Open place
- Near to wall road.

B. Area between YMBA and Duplication road

- It place like Boat yard
- Near to the bridge
- Open place.
- Trees

C. Dharmaramaya road, St Peter's college play ground

- It place have green, Small trees and grass

D. Saddaramamaya Viharaya



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- Calm place
- Open place
- Safe and silent place

E. Canal site Promenade from temple (Saddaramamaya Viharaya to Havlock road)

- Open place
- Calm and silent place
- restfull place.

F. Lunbini Theatre

- Trees
- open place
- Near to the main road
- have green grass

H. A place where Kirulapana canal seperate into two side in to Wallawatta and to Dehiwala

- Open place

liked elements

Reported reasons

I Near Appala hospital

R Open University  
L premises I

M open University  
N premises II and  
Open University  
main gate.


- open place
- calm Environment
- Near to the main road.
- Big and beautiful trees
- Free Environment
- It place have green grass and beautiful Flower pots.
- It place like small ground
- open place
- safe place
- respite place.



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Disliked elements	Reported reasons
1 Area near the Ball road	<ul style="list-style-type: none"> <li>• lot of Buildings</li> <li>• No trees</li> <li>• Noisy place</li> <li>• bad smell</li> <li>• Smoky place.</li> </ul>
2. Some area Between Saddarmaramaya Viharaya to Havlock road	<ul style="list-style-type: none"> <li>• Dirty Environment</li> <li>• No trees</li> <li>• Animals</li> <li>• bad smell</li> </ul>
3 Dharmarama road and Udyanapura.	<ul style="list-style-type: none"> <li>• lot of houses and Vehicals</li> <li>• Noisy place</li> </ul>
4 Area around Talakotuna garden and bridge.	<ul style="list-style-type: none"> <li>• lot of houses</li> <li>• Unclean</li> <li>• bad smell</li> <li>• No trees</li> <li>• restless place</li> </ul>
5 Areas alongs Walter Gurussekara.	<ul style="list-style-type: none"> <li>• No space</li> <li>• No trees</li> <li>• lot of Buildings</li> </ul>

liked elements	Reported reasons
(A) - Beira place	<ul style="list-style-type: none"> <li>- Open Area</li> <li>- Greenery</li> <li>- Good observation ability</li> <li>- Cool &amp; calm.</li> </ul>
(B) - Conventional building premises	<ul style="list-style-type: none"> <li>- Very clean</li> <li>- Cool</li> <li>- Greenery</li> <li>- Open Area</li> <li>- Windy area.</li> </ul>
(C) Area between Central mail exchange & St. Joseph's church	<ul style="list-style-type: none"> <li>- Full of trees (Greenery)</li> <li>- Windy</li> <li>- Open Area</li> <li>- Cool &amp; clean</li> </ul>
(D) Near the St. Joseph's church 	<ul style="list-style-type: none"> <li>- Calm &amp; quite</li> <li>- Windy</li> <li>- Cool</li> <li>- Relative area.</li> <li>- Religious place (sacred place)</li> </ul>
(E) Near the St. Joseph's college	<ul style="list-style-type: none"> <li>- clean</li> <li>- Windy</li> <li>- Open area</li> <li>- Greenery.</li> </ul>
(F) Infront of the Akbar tea stores	<ul style="list-style-type: none"> <li>- clean</li> <li>- Open Area</li> </ul>
(G) Infront of the Akbar Telekom building (Dialog Telekom building)	<ul style="list-style-type: none"> <li>- clean</li> <li>- Open space</li> <li>- Windy</li> <li>- cool</li> </ul>

Liked elements	Reported reasons
<p>(H) Muttiah park</p>	<ul style="list-style-type: none"> <li>- Well maintained</li> <li>- Open space</li> <li>- clean</li> <li>- Cool.</li> </ul>
<p>(I) Near the Janatha Showroom</p>	<ul style="list-style-type: none"> <li>- Open Space</li> <li>- Windy</li> <li>- clean</li> <li>- Greenery.</li> </ul>
<p>(J) Trans Asia Hotel premises</p>	<ul style="list-style-type: none"> <li>- Good Landscaping condition</li> <li>- well maintained land</li> <li>- Cool</li> <li>- dean</li> <li>- Windy</li> </ul>
<p>(K) Colombo Rowing Club premises.</p>	<ul style="list-style-type: none"> <li>- Windy</li> <li>- Fresh air</li> <li>- Greenery.</li> <li>- Clean background.</li> <li>- Open area.</li> </ul>



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disliked elements	Reported reasons
(A) Abandoned old warehouse near the D.R. Wijewardana Mawatha.	<ul style="list-style-type: none"> <li>- Dirty</li> <li>- Filled with garbage of garages.</li> <li>- Not maintained properly</li> <li>- Savage land.</li> </ul>
(B) In front of the Central mail Exchange.	<ul style="list-style-type: none"> <li>- Full of shanties</li> <li>- Shanties cause the lake a garbage keeper.</li> </ul>
(C) In front of the excel world premises	<ul style="list-style-type: none"> <li>- Dirty area</li> <li>- The lake is not considered.</li> </ul>
(D) Area's along Vauxhall Street 	<ul style="list-style-type: none"> <li>- Very Dirty</li> <li>- Crowded shanties cause the lake a garbage holding place</li> <li>- Filled with garbage &amp; mud.</li> <li>- No maintenance had been done to the area since long time.</li> </ul>

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