

URBAN EDGE AS A RESPONSIVE URBAN SPACE

*Examination of the impact on the city with
special reference to City of Colombo*

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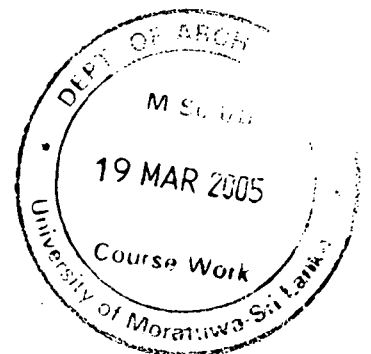
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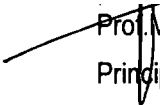
DECLARATION

I declare that this dissertation represents my own work, except where due acknowledgement is made, and that it has not been previously included in a thesis, dissertation or report submitted to this university or to any other institution for a degree, diploma or other qualification.

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Most urban built environment in the past has spontaneously responded to social and cultural values as well as political and functional needs. Consequently they have respond to qualitative needs as well as qualitative needs of people generating authentic and unique characteristics.

However as a result of rapid development and their consequential destructions, most of the cities lost their identity and legibility and have not provided proper "architectural settings" for the urban spaces. As a result of that, generate more and more lost spaces day by day in our cities. The negative effect of this rapid development could thus be found at all places in all levels. Towns, open spaces, public buildings and other areas around the world are becoming similar, due to standardization of production methods improper use of materials and lack of concern in urban environmental design. This is directly affected to create socially unresponsive urban space in all over the city.



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The urban edges are the boundaries of the city, defining a big entity of enclosure; the city form and its spatial contents. Therefore it is an element of the city. As such defined city edges are necessary constituent of a positive image and responsiveness to the city. But that is also in a threat of lost space in an urban situation as an urban space.

Therefore need of "meaningful, socially responsive urban places and urban edges" which are capable to accommodate various urban public activities. Thus the study focused on positive transformation of negligible edges, as a responsive urban space in a city.

TOPIC EXPLANATION

The “urban edges” are the boundaries of the city, defining the big entity of enclosure, the city form and spatial contents. *“A boundary is not that at which something stops, but as the Greek recognized, the boundary is that, from which something beginnings it presenting”* Heidegger, (1974:154). The boundaries of the city and act as a figural outdoor space of the urban periphery and functioned as a public gathering place. Therefore the edges of the city play a crucial role, in order to respond positively to urban activities. Hence the edges define an urban space and become an important factor of being the emotional city image.

“Responsiveness” can be identified as a quality which has a greater potential to change this negative phenomena. Responsiveness will link human values into activities and places, so as to create meaningful social space for the built environment. Therefore re-evoke of neglected urban edges in a city is discussed further in study. And get a better understanding to implement with much sensitivity towards the social context and prevailing quality of “Urban space” in the area.



Most development plans in the cities concentrate only on visual character and the visual form. But the nature of urban life closely relates and operated on other senses too such as an auditory, olfactory, Thermal etc. Therefore man responses to his environment through these senses. People interact with the environment; by means of “responsiveness” is a significantly character of an urban space. Therefore the “urban space” plays an important role in the life of every human being at present context. This implies to categories different uses of different urban spaces.

This study further more discusses the above facts under the title of “Urban edge as a responsive urban space” by doing an examination of the impact on the city with special reference to the city of Colombo.

OBSERVATION IDENTIFIED

The city plays the main role in the drama of lives, is not merely a concept or an abstract. It is a direct experience in live-world with full of memories and a place which we embody our feelings, images and thoughts. Therefore a city must become an utmost goal of human built environment is to offer pleasure to its inhabitants. The cohesiveness of its elements are always a dramatic events for the inhabitants that make meaningful relationship, to evoke long last memories and experiences.

It has been observed and noticed that rich public realms are under the threat in many cities in modern context. This may result to make cities move to extinction. The quality and the meaning of the spaces changes with time. And there by acquires new meanings and values. This has been a decline of public realm with is considered to be the most important social aspect of the urban context.

Urban peripheries or the edges in the modern city, is tied by rather dull and soulless elements due to several reasons. Such as pollution of inner city, traffic congestion etc. Therefore the end result is a creation of lost spaces in a city. Also it has been changing attitudes from historic aspects to functional economic aspects.

This study pays more prominence to observe and understand the "urban edges" in the light of urban responsiveness.

NEED OF THE STUDY

Present day public spaces especially urban spaces are in threat, to increasingly losing it live and its human and physical interaction. Hence social attachments to such spaces are loosing. Therefore such urban context bringing back livability to the urban forms spatially, socially and physically thus a great necessity. Even in Lynch (1960) identification the urban spaces as "distinct and unforgettable place", where as a clearly delimited place, it was most easily imaginable and represents a goal for movement.

Urban edges are vital element of the city urban space and it becomes a main determinant factor of the emotional city image that is perceived by millions of city inhabitants with long lasting memories. Therefore the development and design of the urban edges become an important area that needs to be looked in to. Hence there is a greater need of identifying the key character and responding to them and integrating the features that enclosure the image of the city.

SCOPE AND LIMITATION

The intention of this study is to examine the urban edges and its responsiveness of spaces in the urban context. Hence the study focuses on the elimination of negative effects attached to the lost edge and creating a “responsive urban space” for could also attribute to creating a meaningful social space or such spaces are or land mark, for the local towns.

This study intends to highlight the importance of the urban edge and identify the edge as an element. Also it governs on social activities and affects the behavioral patterns of the people as seen in the Sri Lankan situation context. However this has been architecturally ignored. Therefore it is important to focuses on a positive transformation of negligible edges of the city and its implicit role. Also it realizing its potential under a strategically frame work of a posses which has been driven towards the city.

The edges can be studied in many ways and analyzed according to various theories and principles. “Responsiveness” will be taken in to consideration as they are a group of principle that directly relates of the way in people experience and perceived urban space.

International examples will be used in order to explain these principles and a few local examples for the case studies. The case studies will be selected to establish these principles in the Sri Lankan context. Several situations of case studies will be mainly discussed to identify the crucial factors between the urban edges and the activity pattern of the people.

The study is limited to the city of Colombo. Because it is a city which has a historical significance with unique identity among other urban setting of the study are as follows Fort, Pettah and Beira Lake.

METHODOLOGY

The study area selected to explore urban edges, factors to lose of positive edge spaces and strategies for the positive transformation. Final aim is to identify and derive facts and issues in order to create responsive urban space. Hence the urban space and its edges should be studies and research in order to identify certain patterns spatially and socially within the urban context.

Therefore this will be in depth study analyzing of practical situations, with a theoretical base. Through out the study urban edges, lost spaces, responsive urban spaces are used to key words, which determined the basic area that should be subjected to this study.

In the first chapter, it is identified the urban edges as a spatial element of the city. It is focused definition, concepts and principles for the formation of edges. Later phase of the first chapter concentrates problems of lost spaces including urban edges and qualities and characteristics of the responsive environment.

Therefore need to be study various theories on positive urban space, with local and foreign examples. Hence the second chapter based on the frame work will highlight the achieving of transformation of urban edges to positive responsive urban space.

The third chapter is case studies will be concentrate to identified edges and its significant to the city. For that case studies focused to city of Colombo and identified lost edge spaces and potential of such edges for the positive transformation.

Methodology of case studies

Observation

Interview

Photographic documentation

Finally focuses present situation of utilized and underutilized urban edges of the city of Colombo and identified supportiveness of activities and creating implications to achieve the responsive urban space.



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URBAN EDGE AS A RESPONSIVE URBAN SPACE

Examination of the impact on the city with special reference to city of Colombo

Chapter One: Urban edge as an element of the city

1.1 The city and elements of the city

The city links the history, the present and the future. All these components together represent the spatial organization of the city and a cohesive entity is created by order, hierarchy, continuity and unity. This makes the unified place.

1.1.1 The city

A good environmental image gives its possessor an important sense of emotional sensitivity. He can establish a harmonious relationship between himself and the out side world "A city is said to be an assembly of people a congregation drawn together to the end they may there by the better live at their ease in wealth and plenty, and the greatness of the city is said to be, not the largeness of the site or the circuit of the walls but the multitude and number of inhabitant and their power now men are drawn together upon sundry causes and occasions there in to them moving ;some by authority; some by force; some by pleasure; and some by profit and proceed it." Botero, (1956:7) quoted by Kostof, (1992:2). According to that the city is in itself the powerful symbol of a complex of society. If visually well set forth, it can also have strong expressive meanings. "A city ought to be like the human body and for this reason it should be full of all this gives life to man" (Shute, Jhon; 1956:45) Therefore the city is a live place which could be compared with a living organism.

The significant part of the city area is in the form of streets, pedestrian areas, parks & civic reserves. These provide broad scope for the creative treatment of a space arrangement, landscaping, street furniture, lighting, signs and structures. Therefore the city has become the repository of collective meanings, human experiences and comprehensive representation of culture. In a good city form there could be components such as physical, social, functional, cultural, and historical and organization. These components are composed and create a harmonious city.

Even though in the western theories many ways are given, it is important to understand the local conditions. Example studies are important to understand the social-physical interrelationship in local context. But in order to build good based for understanding various issues involve. This first chapter is used to clarify the terms and concepts which generally two broad and abstract.

1.1.2 Elements of the city

According to Lynch, (1960:46) the contents of the city images so far studied, which are referable to physical forms, can conveniently be classified in to five types of "physical elements".

- Paths
- Edges
- Districts
- Nodes
- Landmarks



Paths

Paths are channels along which the observer customarily, occasionally or potentially moves. They may be streets; walkways transit lines, canals and railroads.



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Edges

Edges are the linear elements not used or considered as paths by the observer. They are the boundaries between two paths, linear breaks in continuity: shores Railway cuts, edges of development of walls. They are rather than coordinate axis.

Districts

Districts are the medium-to-large section of the city, conserved as having two dimensional extents, which the observer mentally enters "inside" of and which are recognizable as having some common, identifying characters.

Nodes

Nodes are points, the strategic spots in a city in to which an observer can enter, and which are the intensive foci to and from which he is traveling.

Landmarks

Land marks are another type of point reference. But the observer does not enter within them, they are external. They are usually simply defined physical objects, building, signs, stores or mountains.

1.2 Definition of urban edges and spatial characteristics

Dividing lines between districts are the linear elements, not used or considered as paths by the observer. They are boundaries between two phases or linear breaks in continuity: shores, railroad cuts, and edges of development, walls, and the termination of district are its edges. Some districts have no edges at all but gradually taper off and blend into another district. When two districts are joined at one edge they form a seam.

1.2.1 Definition of the urban edge

Urban edges are very significant in people's perception of the city; they shape how people move within the city. Lynch, (1962:65) says that, *"Edges are often paths as well where this is so and where the ordinary observation was not shut off from moving on the path, than the correlation images seemed to be dominant one. The element was the usually pictured as a paths reinforced by boundary characteristics."* Edges can disrupt the urban fabric or unite it; they define neighborhoods and establish spatial hierarchies. When two strongly contrasting edges are set in close juxtaposition, and their meeting edge is land open to view, than visual attention is easily concentrated as Lynch, (1962:100).

The strong visual transition is a pleasing experience of the edge, which often associated. When the edge is formed due to natural features, especially the water. But in man made edges contrasting two lateral phases and they close off two settings can not be perceived. Lynch, (1962:10) *"Particularly where the region bounded are not of contrasting nature, then it is useful to differentiate the two side of an edge, to orient the observer in the "inside –outside" sense. It may be accomplished by contrasting materials by a constituent of line or by planting."*



Plate – 1.1 Urban edge define the city structure

The impenetrability is not a necessary character at the edge, when lateral visibility, visual transition and continuity are strong enough to define the edge. Edge also can act as a path, as explained by Lynch, (1962:65). The urban edges are the boundaries of the city defining a big entity of enclosure; the city form and its spatial contents. Such a define city is the man's ultimate level of human built environment, but today we have missed.

1.2.2 Characteristics of the urban edge

According to Lynch (1962:100) the form of linearity of the edge and the nature of response from beginning to end that leaner form is considered in the manifestation of the edge. *"As space begins to be captured, enclosed molded, and organized by the elements of form, architecture comes in to being"* Ching. F.D.K, (1943:10) edges in architectural form have contributed towards articulation of space in unique manners from time to time. In other words, different architectural language evaluated because of unique manipulations of edges in built form.

1.2.2.1 Self closed edge

These edges have a definite termination point along their lines. The start and end of these edges have particular relationship. Termination points are external references for orientation along these edges. As Lynch says, (1962:100) when the edges do not continue and self close, then it is important that its ends have definite termini recognizable encroaches which complete and locate the line. The definite termination points which act as the external references for the orientation of the edge, maintain a particular relationship and responsiveness to each other along the line.



Plate -1.2 Relationships along the water edge Boston shore line

1.2.2.2 Continuous edge

The edge does not have a definite termination along its line. Its ends are not visible. It gives an orientation along its length by its gradient or identifiable points at intervals. The length of continuous edge along its linear form refers to the self closed edge that is more at the continuous edge. If the edge is continuous more and more, where beginning and end are not visible to each other that could be the continuous edge.



Plate -1.3 Beginning and end are not visible to each other.

1.2.2.3 End from end character

Urban edge is a linear element. This linearity is one feature which makes it latterly referable. It needs a considerable length along it to serve this purpose. Therefore there should be a starting point and a finishing point for an "urban edge". These two points demarcates this element. They are common features with regards to this limit such as falling in same line. For an example a building line, line of trees, sea shores, a river bank or any other feature which spreading in an undistorted manner. They give a strong identify to the "urban edge".

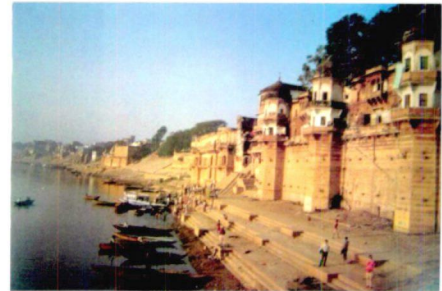


Plate -1.4 The edge makes linearity

1.2.2.4 Side from side character

The urban edge refers to two sides. The two sides will continue though its course. Those two sides or the two regions could be identified due to a contrast. This contrast could be perceived in different ways. It could be in appearance, function, usage etc. The space common two or more regions is called a boundary and this could be called the "urban edge". An urban edge has ways of heightening the contrast. It is very strong if it is laterally referable. Sea shores or river banks in the context of the cityscape could be identified as strong "urban edges".



Plate -1.5 Galle face green edge define by two different lateral references.

1.3 Formation and Transformation of urban edges in city

Any enclosure is defined by a boundary. Heidegger says, that a boundary or an edge is not that which something terminates but is that from which something begins to originate. The Sky and the earth are the most fundamental edges in nature, where the sky is the uppermost edge and the earth is the lower most edge. The urban edges are defined geographically, topographically or by man made built form but they specify with particular purpose or purposes. "*Space change with sun, place change with the movement of the people.*" Meiss, (1986). This could be a space for social gathering or functional space.

1.3.1 Formation of edges

The boundaries of a landscape are structurally similar and consist of ground, horizon and sky. The boundaries or the edges of a built space are known as floor; wall and ceiling. In general boundary of the edge makes the spatial structures visible as continuous or discontinuous extension, direction and rhythm. On the other hand the boundary or the edge could be non physical but psychological and intangible. For an example, the edge between inside and outside could be felt from the luminous and warmth, in contrast to cold darkness outside. However the edges are physically formulated by naturally or man made situations.

1.3.1.1 Natural edges

Natural setting in a space which gains its own peculiar dimensions, including length, direction, position, axis, center etc.

- **Geographically**



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Presence of water and mountains which are almost natural and vast edges should be identified in city. Geographical location is the utmost important factor of the formation of cities. The word 'city' derived from the human civilization fundamentally relates with the correct responsiveness of a particular geographical setting.

Presence of water

Water is the form of rivers, lakes, ocean etc. are edges, separating from land and it is a physical barrier between its banks. Water edges, are visible to all and accessible throughout most of its length. The contrast the differentiation of events along the line and the lateral breadth are all very strong.

In Greek cities most important element of the city edge, especially in cities built along rivers or on the sea where it gained prominence as a sky line feature.



Plate -1.6 The edge demarcated by sea

A grate many towns are built on water-along rivers on their delta, or at the meeting of two or more rivers or on the edge of lakes or seas. Many river towns stayed put on one bank. In some cases - cologne is a familiar instance this was because the river was too wide to bridge until modern items.

Mountains

Mountains play the role of edges or the boundaries by separating land form each other, visually and physically. City formation on the mountain is not very prominent but probably functioned for military activities.

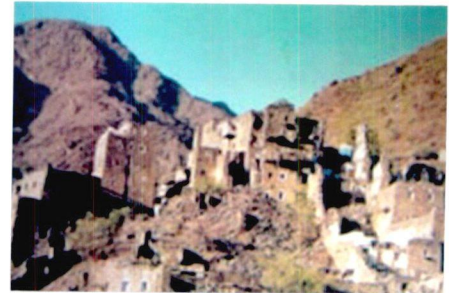


Plate – 1.7 Edge separate the land

- **Topographically**

The topographical features mean immediate surface including its relief and man made features which are tiny edges of the city. Topographical variations have become mainly obstructions to the sprawling of the cities. But these tiny edges are important to the city and they act as physically and socially rich places on the city. This type of variation on the topography has created edges in the city. These edges are can be seen in inland water bodies and trees and tiny level differences of land.

Trees

Trees contribute in a major way to make the city a better place. Trees too play the role of a transitional urban edge. The shade of trees along the edge adds spatial directional quality. The trunks of trees along a pathway create a barrier, just like a colonnade, but without the adverse effect of too much enclosure. In terms of helping to work functionally when planted in lines along street effectively separate pedestrian from street traffic.



Plate -1.8 A series of trees define a continuous space "A pathway"

Water bodies - Inland

Inland water bodies are the important feature of tiny edges of the city, because it provides horizontal planes, vertical planes, elevated and directional paths. These types of edges provide opportunity to intimate human relations in the cityscape.



Plate -1.9 Water edge as a relaxing place –Beira Lake

1.3.1.2 Man made built form

Naturally oriented edges are too often functioned as public places but man made built form of edges are more commercially oriented, residentially oriented and military oriented. Built form is used in a variety of ways to create a clear, defined edge. At the junction of the built edge line, and national and scenic routes, “gateways” and sense of arrival-type spaces should be created.

City wall



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City walls are prominently seen in historical cities, used for military purposes. *“The fortification becomes the significance character of the medieval and renaissance cities, which are demarcated by city walls” Morris, (1974:147).* So they are defensive walls as an urban edge would entail a brief world history of military architecture.



Plate -1.10 The wall of Beijing base is 16 ft wide, their breadth at the top about 40 ft, their height also averages 40 ft.

The memory of these defenses is often preserved, in name of shape, even when they have long vanished. *“Others drawn to the walled city edge were the powerful and rich. Here they could stake out pleasure gardens in the open spaces of the fortifications. This as especially so when, with the advent of the cannon- ball at the end of the 15th century, and machicolated galleries become obsolete.” Kostof, (1992:26).* City walls are simply abandoned, but they become host to the number of mixed uses and many cities have their wall streets.

Building

Building facades line up along the street providing physical separation of two areas. They are the indicators of extension of the physical form of a place. *“A building is most often thought of as something which turns inward-towards its rooms. People do not often think of a building as something which must also be oriented towards the outside.”* Alexander, (1997:753). The public edge of the building should house activities which benefit from interaction with the public realm, and can contribute to the life of the public.



Plate -1.11 Building edge separate public square and the city structure

Arcades

Arcades and verandahs act as transitional edges, between the built form and the street. These have become one of the most significant elements which offer enclosure for a range of human activities, in an urban context. Arcades have become shaded spaces and neither public or private.



Plate - 1.12 Arcades provides shaded spaces – Standard chartered bank in Pettah

They are transitional spaces or buffers with required access points between public and private domains. The stating of these spaces could be physical or visual depending on the interior exterior association attached of them. These spaces may be static or dynamic. This promotes walking, sitting, gossiping, waiting, shopping or relaxing space for people.

1.3.2 Transformation of edge

1.3.2.1 Role of the urban edge as space

Urban space is defined in terms of its created elemental features. Composition and organization of elements, image of city, activity pattern that govern the social structure are some of the generating features of urban space. Unification of these features and manifestation of social structure creates urban cities.

Particularly in urban situation, the activities in outdoor places are strongly influenced by what goes on in the building round their edges. *"Outdoors, people always try to find a spot, where they can have their backs protected looking out some larger opening beyond the space immediately in front of them."* Alexandra, (1997:600). Therefore it is clear that the urban edge effects the liveliness of the immediate urban space. Therefore where ever there is an urban edge there is an action in the place. *"The spots which are the most inviting are those high enough to give people a vantage point and low enough to put them in action."* Alexandra, (1997:604). This clarifies that the edge has a direct response with the adjoining space or the defining edge of the urban space.

Urban edge as social gathering space

With the emergence of a "society", which can be defined as a gathering of human designs, to fulfill their needs in terms of survival, the space become a part of a human life .The interaction between man-man, man-space, and space-space, evolved a formal society. *"The life of the public squares forms naturally around its edge falls, and then the space never becomes lively"* Alexandra, (1997:753). Moghtin, (1992) states that the most important space of the urban space are the squares and street mainly because of they act as accommodative spaces for ceremonial events, because they are activate as major gatherings in daily occasions etc. Streets have also been paid a major attention as shopping streets with welcoming arcades and as a community space.



Plate - 1.13 Building edge as a gathering place – Campo in Siena Italy

In such a context identifying the urban edge and its potential as a socially focus gathering place is very important. Formation of the urban water edges are also enormously feature of the city is more popular to generate social gathering places. Because of its various living dimensions have remarkable impact on the physical and psychological demand of public realm.

These places are most important in a cityscape as they allow greatest amount of human contact and interaction take place. This is what we lost in nowadays and in such a context identifying the urban edge and its potential as a socially focus gathering place is very important.



Plate - 1.14 water edges as a gathering place - India

Urban edge as transitional space

Transitional places are culture – bound, they can be categorized basically as belonging to either private or public domain, according to their role. Both these domains have their own role as behavioral clue, and they have a larger impact on the character and imagery of urban space, and the behavior pattern of people.

Alexander's states that the stage of the development of a "new zone" between the outdoors and the indoors can be identified as "transitional space", where most of the urban situations public can see, feel and attach in creating urban identity. It is important to treat the edge as a thing, a place, and a zone with volume to it, not a line or interface which has no thickness.

Hence the edges are not dead place and increase the connection inside and outside and encourage the movement form start to end point. Presence of water and trees as the geographical feature of the city, also affect as transitional edges.



Plate - 1.15 Transitional edges, which is direct people one place to another

Urban edge as functional oriented space

Functionally edges could be categorized either location or special purpose. Therefore the subject is exploitation of strategic for residential edges, military oriented edges and commercial edges.

Residential edges

Residential edges, a memorable treat to inhabitants and also to the city. Domestic environmental edges of building facades generate a pleasing setting of the city. Residential oriented edges are seen in towns rather than in places close to water, hillside or cliff tops.



Plate - 1.16 Verity of details playing kids, women, at door steps denote the life in the city

Military edges

In early cities, military significance was high and defensive function play a vast role. Kostof, (1992:27) describe the city wall as *"with a definite physical barrier or any kind from simple to the most elaborate, the settlement is locked in place. Expansion is possibly only through the construction of ever larger concentrate circuits; otherwise growth is forced to remain internal. Contact with the world outside is focused at the access point of these defenses."* Therefore the military edge is functionally used as defensive wall and then it become the main component of the city.

"Topography then is a major determinant of the shape of the city edge. They may appear as a thing they occupy enough space to be represented instead as wide band." Kostof, (1992:27). That says the military edges eventually determinant by its urban form. For example ancient lost cities Machy, Picc (10th centaury B.C.) are the most famous cities which were highly defensive military edges.



Plate - 1.17 Bastian walls, moat and earth works – By Bellotto's view

Commercial edges

Commercial oriented edges are directly related with social involvement. Therefore this commercial edge is not only a functional edge but could also be realized as an intimate social space. Squares, streets, down town core, retail district etc. are identified as commercial oriented urban edges.

This type of edges which are too often associated with waterfront has potential to function as restaurants, cafes, pubs, shopping malls, etc. Therefore commercial oriented edges are to be exploited as a resource to achieving livable city.



Plate - 1.18 Commercial activities in urban edge especially in street

1.3.2.2 Urban edge as element of public space

Public spaces function in terms of human activities. The public realm is therefore the most important part of the cities and it is the place lots of activities are happening and human contacts and interactions are taking place. *"The physical environment of the man, especially in the built environment, has not been still not and controlled by the designer. The environment is the result of vernacular (or folk or popular) architecture; and it has been largely not been clearly discussed in history of architecture. Rrapopot, (1969). Social rituals and cultural values of groups or individuals and their behavioral patterns create a city livable. This relationship is bound with urban edges of the cityscape. "As nodes and landmarks, public spaces became a means by which to navigate in the city. Hence street and squares become the alphabet with which to read, and design urban spaces. Creating lively and active edges for these spaces was seen as an important condition for their success. Small mixed land uses that generate a strong relationship between the public spaces and the buildings around it were promoted, it became a absolutely essential for urban design to create positive "urban space", space enclosed by building rather than what is leftover after the construction of buildings." Knocks, (2000:119)*

As Knocks says, the urban edge can be identified as an unforgettable element in the urban environment. Thus it is obvious that the edge has been plying a crucial role in representing social, cultural and economical values of a society.



1.4 Urban edge as a resource

The urban edges are well defined as functioning public gathering places of the city, from the past. The urban edges are formed due to the geographical location or man made situation and it becomes a visually and perceptually grand space to the rest of the city core. Too often this lobby provides the access to the cultural and historical significance of the city which leads to the social and economic developments.

Especially the abandon edges of the water front have an exceptional opportunity to come back and give livens to the city, which had already fallen down. In such a situation urban edges are a resource to the city, which have to be exploring to the new dimension as a public place with regarding of social, economical and cultural interaction.

1.4.1 Urban edge as a socially vibrant place

People are fundamental elements of the public places, and the variations of the people in different settings are a significant factor of the socially vibrant places. In the past, edges of the cities have been used as socially vibrant places. Most of water front edges highlighted the above interaction of convergence public place. The grand public places in historic western cities, such as urban squares, plazas, palazzos, street cafes, coffee shops and beer halls etc. had high level of welfare. Therefore the space becomes livable space in the urban situation. In the local situation, even though do not have such culture, but edges of the city have been used as socially vibrant places from the past. For an example, traditional shop houses, carts and human scale had given that proper responsive urban edge to the street.

But today the advanced development of technology and mobilization of urban situation exposes to the outer world more and more, for the affirmation of techno-economic aspects. Therefore the need of re-evoked the urban edges are crucial in the urban situation as a socially vibrant space.



Plate - 1.19 In the past, streets are vibrant place to the city with highly social interaction

1.4.2 Urban edge as a culturally vibrant space

In addition to function and social aspects, man is bound with a place, more complex intentions, experiences and customs. These spiritual and intellectual minds come together in a particular place and they are shape with religious or cultural aspects. Then these places become utmost public spaces in the city.

In the Eastern context these intellectual interference harmonize with their religious and cultural aspects. These aspects create symbolically significant social gathering spaces and can be mostly seen in the edges of the water bodies. In Indian context, lots of cultural associated functions are concentrated in edges of the water bodies (Puja), Spiritual water bath, and Ayurvedic treatment). In Sri Lankan context "Diya Kapima" is the best example of the religious vibrant water edge activity.



Plate - 1.20 Water edges are usually used for their cultural aspects -India



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Kandy perahara is another cultural example, where the urban space is contributes towards the activities of the streets of the city. Its clearly expressed cultural vibrant places are catered towards the edges. Hence these edges are giving the responsiveness to the public place. Therefore the urban edges become symbolically vibrant places and it is remarkable to the city form, and also valuable resources to the city and its inhabitants.

1.4.3 Urban edge as an economically vibrant space

The arcaded pavement and the sheltered edges associated with building provide a perfect place for informal trade base activities. Water front edges are most active places for the public oriented commercial functions, such as shopping cafes, restaurant etc. and these places giving livability to the city day and night.

Therefore street edges and waterfront edges are the most important commercial activities which are economically vibrant spaces. *"The building in town and cities are more than just collections of buildings. They are essentially for and about people. They accommodate their activities, the better used and varied they are; the more they are liked to have the quality of people friendliness."* (Tibbalds: 28) that argues, uses and activities are more important than buildings in the city life and greater diversity helps to create livable city. Therefore urban edges of the city can be identified as economically vibrant spaces.



Plate - 1.21 Informal trading activities along the pavement edges - Panchikawatta

But in present cities establish banks, large food courts, show rooms etc. not done in a proper mutual support with each other. Number of impressive buildings and functions attached with buildings can be seen over and over there in a city. Result of that; create separate public spaces in terms of activities. Hence these economically vibrant places revitalized in the city and should be getting as a resource.



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1.5 Urban edge as lost space and its Impact on the city

Public spaces are predominant spatial typology which are exists in an urban setting today's cities. Changing economic, industrial and employment patterns have further exacerbated the problem of lost space in the urban core. However the lost of urban edges in the city contribute series of problems and it directly affect to the meaning of the city.

1.5.1 Lost spaces in a city

This is especially true along highways, railroads, and waterfronts where major gaps disrupt the overall continuity of the city form. *"Unutilized, underutilized or abandoned land or areas and premises which exist in urban areas, due to outdated or defunct uses; defined as urban voids."* Perera, (1994:44) that defines as lost spaces as urban voids, which is vacant and abundant.

Trankic, (1986:2) defined that, lost space is a left over instructed landscape, square away from flow of pedestrian activity in the city...There are no man's lands along the edges of the free ways that nobody cares about maintaining, much less using.

Therefore in an urban design today the emphasis should be on the groups and sequences of outdoor rooms of the district as a whole, rather than on the individual space as an isolated entity. Therefore there is need to direct attention to these residual spaces between district and wasteland at their edges. The initial action of the transformation to positive city should be examined to find out the causes for the lost spaces.

1.5.2 Factors and its impact on city

Trankic (1986:2) points out factors that are contribute to the lost spaces in a city. The automobile, zoning and urban renewal, privatization of public spaces and changing land use are the most important factors which are studied here.



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The automobile

Automobile has becomes the major and most difficult factor to deal with, since it is penetrates to the city. Urban edges and public spaces in cities are utilized to devote to the parking of automobile and it is threat to the meaning of public life.

Mobility is the strongest way of communication of urban life, with an enormous potential to use for cohesive city in the physical and social aspects that has been realized in the past, which is lost much of its cultural meaning. But mobilization has destructed the diversity and richness of the urban public life.



Plate - 1.22 All most all the spaces has been used for car parking

Zoning and urban renewal

Urban renewal projects in terms of human welfare are concerned about only the utilitarian values, but very rarely correspond to the spatial structure of the city. Massive urban renewal projects introduce new and alienated structures. They have frequently become a tool for segregation connections between areas in the city. There by minimizing the distance in-between living space and working place.

This directly affects the public life. Under the urban renewal projects, vast areas of cities were demolished to make way for high rises and high ways. The disaster was the result of inappropriate designs, misunderstood social needs, and poorly conserved public spaces.

Public elements of the city such as edges, squares, paths and their tiny spaces are engaged danger and they can't properly function with the environment. Therefore both urban renewal and zoning can be utilized in the process of positive transformation of lost spaces.

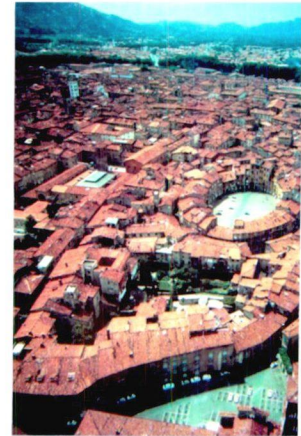


Plate - 1.23 Scale and appearance in medieval city - Clearly identified its elements



Plate - 1.24 Scale and appearance in Modern city – Cannot be identified its elements

Privatization of public spaces

The economic efficiency is plays a vast role in the modern city. The heavy demand of spaces creates only profit oriented and variable in forms can be use only for the rentable purposes. This increases of physical and symbolic barriers within the public space.

Almost all public spaces today are especially designed for functional purposes. Such as bus stands, railway stations, and religious spaces etc. When the revitalization of public spaces, local authorities trying to erase the memories of manufacturing industries; by improving the quality of their environment to attract local and foreign tourist people.

Changing land use

Trancik,(1986:17) says that the changing land used for rehabilitation of industry, transportation facilities; abandoned military properties and vacant commercial or residential buildings have created vast areas of unused land. These abandoned and wasted areas such as highways, rail way lines and water fronts disrupted the overall continuity of the city form.

Today this pathetic situation is more alarming. Therefore well - conceived spatial changes and revitalizations should be introduced, and then it becomes a global phenomenon to overcome the problems crated by chaos of lost spaces.

1.6 Concluding Remarks

The edge, a city main element, must be treated as separate entry to get particular identity among other elements; paths, nodes, landmark and districts. It makes a pattern, which connects with the rest of the city form.



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Hence the urban edge is a vital element of the city. The formation and the transformation of the urban edges are discussed in the first chapter as a historical overview with emphasize to social, economical and cultural. The rootless modernism with a rapid development greatly affects the loss city structure. Subsequently the result of is a decline of public realm and the creating of lost space and eventually lost of memorable city image.

Therefore urban edge contributes for the city image as an element and space for inhabitants as public foci in city. Such qualities of defining at the urban edge can be identified as positive place. Hence it is vital to explore the potential of the urban edges in creating a "responsive urban space" in a city.



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URBAN EDGE AS A RESPONSIVE URBAN SPACE

Examination of the impact on the city with special reference to city of Colombo

**Chapter Two: Urban edge as positive and responsive urban space
in the city**

2.1 The spatial dimensions of the positive urban edge

Psychological attributes and physical attributes which are enhance the quality of the space and it can be used to derive the urban edges as positive and strengthening spaces in the city.

2.1.1 Psychological attributes to the urban edge

The urban edges have physically and psychologically attributes which are become an element of the city and they are combined with nodes landmarks, paths and districts to positive city image. Psychological attributes mean the human sensation of the place. Hence at the most fundamental level as a harmonized place, city edges should denote center, enclosure and continuity.

2.1.1.1 Center

This is the reference point of understanding the space, which is the utmost important fact. Man has then, thought of the whole world as centralized. To reach the center it self entails experience, interaction, journeys and goals. *"From the very beginning then, the center represents to man what is known in contrast to the unknown to somewhat frightening world around"* Schulz,(1971:19).Center while in detail urban situation designations a destination mark for the starting point or the beginning.

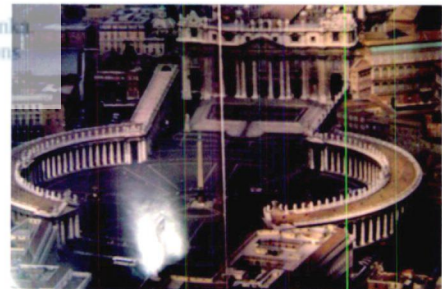


Plate – 2.1 Building edge define the center Piazza of St. Peter. Rome

It is by being there that man refers himself to other surrounding spaces. There by it essentially carries a sense of attachment with it. It is the reference point of man for harmonic relationship with the tangible of man his existence space and whole space boarding. The ancient Greek placed the navel of the world (Comphalos) in Delhi, while the Roman considered their capital as Capcut Mundi, for Islam the Ka' aba is still the center of the world, that is described as Schulz, (1971:19).Therefore it is a symbolized vertical element or an axis contrasting form other elements of the city. In historical cities this was more prominent and a center of the positive city the urban edges have to be deliberately defined by city geographical location which affects the city image.



2.1.1.2 Enclosure

Enclosure makes an internal part in mans spatial experience, which brings meaning in to the space. In this instance the enclosure is rather a quantitative creation which essentially brings out a qualitative spatial experience and it can be a visible entity or rather invisible creation presenting the desired sense of enclosure.



Plate -2.2 Man made built form articulate the space around it and interact with the enclosure of the space

In urban situations building facades, streets and squares are the major man made elements of physical enclosure. They form a great variety of built structure as meaningful spatial entities.

According to the urban edges, enclosure is thus a physical needed to well define an edge. Hence the urban edges become a separate element as well as psychological urban space of the city.

2.1.1.3 Continuity



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Continuity is the implied of path or direction. When there is the beginning to path, a sense of direction commence and the destination. Continuity is common to all forms of mans spatial experiences. *"Perceptual as a scheme any path is characterized by its continuity. Where as the place is determined by the proximity of its defining elements and eventually by enclosure, the path is imagined as a linear succession"* Shults, (1991:22). Therefore Continuity is also experienced as having a character of its own.



Plate -2.3 Sense of directional quality along the line

In certain urban situations continuity has the function of being an organizing axis for elements by which it is accompanied while goal is relatively less important. Hierarchical composition is extremely important in urban situations. Therefore continuity is an essential psychological attribute to achieve the positive urban space.

2.1.1.4 Direction

The urban enclosure has a directional quality. People moving along the edges and moving towards “Urban edge” by making them laterally referable part also play a big role. The rhythm is established by columns, arcades and various other elements. The rhythm makes dynamic to the space.



Plate -2.4 Vertical edge of the built façade giving the sense of direction

2.1.2 Physical attributes to the urban edge

Physical attributes which can be physically graspable attributes can be used to create positive urban edges. These are visually graspable and immediately attached by eye. Physical attributes which are important to positive urban edge as unity, order, composition, balance, rhythm, scale, proportion, colour, textures, light and shade. Loose of the physical identification of the space in terms of physical and psychological identity. Loose the physical identity means the detachment of constant contact in visual, aural and psychological experience of the space.

2.1.2.1 Unity

Unity is the concept of perceiving with physical issues but at the deepest level it is directly related to the human mind. “All serious architecture aims at an effect of unity” (1992:2). Hence the unity express the completeness in it self and represents the perfect situation.

City is the collective entity by its elements. Therefore the perfect urban form must express complete unity, Hence the unity is plays a vital role of the city regarding with every other visual qualities of the urban edge.



Plate – 2.5 The edge expresses perfect demarcation with harmonized its elements

2.1.2.2 Order

Order is hierarchical relationship in each elements are in correct order. In terms of achieving order there should be deeply established hierarchical relationship with functions, locations and architectural form etc. in an urban man made environment.



Plate – 2.6 Buildings laid along the edge in orderly

The urban edge and linear elements are directed along the line by ordered components. Thus it also affects the form of the city. Therefore for achieving good city, positive edge is an important element.

2.1.2.3 Composition, balance, rhythm



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Composition, balance and rhythm are the rich visual qualities of an architectural place. Good composition derives both symmetry and asymmetry. In historical city forms this can be clearly identified as symmetrical composition was given grand expression while asymmetric composition given to the dynamic quality probably used as public places.

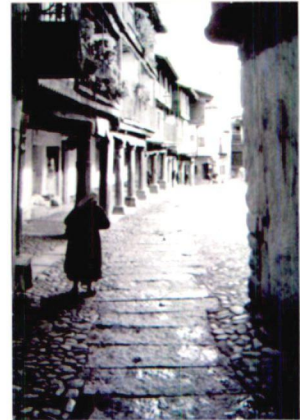
Balance is also derived from symmetrical and asymmetrical composition. The symmetrical balance denotes the grand effects of the stable and the asymmetrical balance denotes the dynamic quality of the public spaces.

“Rhythm” the word which is imposed in mind, waves, times tock beat of the clock, dance and music. *“Rhythm in architecture is the product of grouping elements; of emphasis interval, accent, and direction. It is the sense of movement achieved by the articulation by the members making up the composition.”* Moughtin (1992:56). Therefore the grouping of elements produce the rhythm, but in an urban situation grouping can suggest monotonous effects over the rhythm. Therefore composition, balance and rhythm are visual qualities and physical dimension of the city.

2.1.2.4 Scale and proportion

Scale and proportion denote; the length, breadth and height, the fundamental dimensional relationship of the volume of a place. Hence, scale and proportion are closely related to each other strictly in architectural sense that represents the geometric concept.

The size of an object or form is the three dimensional values that determine the proportions of the form. Its scale will relate to other objects and forms in the surrounding context. Also the scale will be determined by the way in which each individual will perceive the solid or void volume.



The forms will relate to each other dimension and identify it among the objects; one in relation to another. Proportion in the basic sense is the relationship to width to height which denotes the most pleasing situation to the eye. But deeper in the concept it rather more complex, and is attached to the strict geometry. Hence the urban edges as public foci with especially refer the human figure, proportion and scale.

Plate – 2.7 Human figure in relation to the breadth, length and height of the space giving the sense of proportion

2.1.2.5 Light and shadow

Light and shadow effects make the place richness with its quality with shallow of the space, depth of the space and enhanced its spatial quality. This lighting effect can be categorized as direct lighting, indirect lighting and day and night lighting which are effects to the quality of the public space.



Plate – 2.8 Giving great depth to the space

2.1.2.6 Colour and texture

Texture is the surface character as well as accent of the form. It helps to unite the form and enhance the quality of the object by emphasizing the edges. Texture is the surface characteristics of a form. This affects tactile and light reflective characteristics of a form surface.

The variation of a texture in a form mostly takes place according to its material. Also the texture of a form can be created by the detail, openings, and other forms of patterns created on the form. Many textures are created by the materials used and detailing that takes place on the street facades. Smooth plain surfaces depict a more intricate texture.



Plate – 2.9 Texture organized to create visual and tactile effect

Colour is the strongest visual attributes that clearly distinguishes a form from its environment. Colour can create specific moods and atmospheres in the human percept of space or solid form. Colour can intensify the shape and form of an object or even make it dull.

The size of the object could be perceived usually in many ways according to its colour. The vision is captured by the brightness and light that is created by the colour of the object. *“It is quite clear, though those colours generally do have meaning, both in them by contrast with non colours and in terms of increasing the redundancy of other ones. For example, in ancient Peaking most of the city was low and gray; the scared and hierarchically important section was centrally located, larger in scale, more elaborate and higher and the use of colours was restricted to that section.”* Amos Rapoport, (1982:113). It may be useful to consider colour in more detail, since there is evidence that it is one of the clearest noticeable differences.



Plate – 2.10 Contrast in colors emphasize edges of separations

2.2 Responsiveness and responsive urban space in the city

A responsive environment is an associated set of place with architectural style, nature and activity of its setting. Therefore associated set of buildings are the ones, which carry certain characteristic to show relationship between them. Making a city a responsive environment has become a complex process, as the city is experienced not in a state manner, but dynamically. By studying the responsiveness of man to his environment, one can actually understand what part of the city environment and relationship of the human habits and how it concentrates in the city.

2.2.1 Introduction to responsiveness

Bentley (1985) used an analytical frame work of seven visual and physical attributes for achieving responsiveness in built environment. Thus Bentley defines the responsive places as, "*The built environment should provide its users, with an essentially democratic setting, enriching their opportunities by maximizing the degree of choice available to them: we shall call such places responsive.*" (Bentley, 1985:9). Hence according to Bentley, responsive places or settings can be identified as places where the users are provided maximum choice available in a place. Thus, it can be said that responsive has essentially social components.

2.2.2 Responsive urban space

This study is focused on affects on urban edges, activity pattern of the people and the intention in creating urban responsive urban spaces. Therefore it is crucial to understand the attributes of responsive environment. "*A responsive built environment is where, human values are linked to activities and places in order to create an image that the nature of that environment. Therefore to link, human values to activities and places the designer should, appreciate the important components of the built environment, viz; spatial personal, temporal, psychological, private, public and value components.*" This quotation expresses that clearly the qualities of responsive urban environment and identified the urban spaces as a place where the social and spatial attributes are intertwined. Therefore it explains that, no space exists, no place has making happened without conductive activities and social interaction. However the final goal of such a city is the cohesive and harmonic picture that is associated with unity.

2.3 Need of responsiveness

Responsiveness design approach should be start from the idea of relationship between social life and arrangement of the built environment is important. In the past, great cities in history give a spatial pleasure but today in a modern city the urban situation has been chaotic even with a phenomenal increase of urban growth and designers never made a concentrated effort to work out the form implication of their social and political ideas. Therefore designers must make sure that to link human values to activities and places. In other words, this can be identified as the path to achieve responsive urban space in the city.

2.3.1 Need of responsive urban space

Urban space may once more become communal space. Communal space is extended private space, while public space is akin to non space set aside to permit public movement and activities. Therefore the urban space has close relationship of the public realm



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Looking at the historical cities, they reveal the hierarchical order of connective block patterns. Public spaces are clearly identified and have been gives the meaningful identity of the city with the continuous built mass. In this environment clearly identified edges, streets, nodes, land marks and districts which are element of the city.

Considering the modern cities urban form is predominantly horizontal instead of modern vertical buildings, towers, slabs or sky separates which points out as objects and the spaces within them are confused. Therefore in modern cities largely confuse elements of the city and urban public spaces. As Perera, (2001:14) explains, it has become a trend among the present designers that, they consider private realm of built environment as the responsibility of Architects; public private interference; as the responsibility of landscape architects and public realm as the responsibility of urban designers.



Plate – 2.11 Medieval city spaces mostly use for public gathering

But today modern cities, urban planners also attempt to affiliate the responsibility of built environment to their profession while taking urban design to their fold, and assigning only the task of building design to the architects. Therefore the field of urban design has to face the challenge of creating outdoor environment in a collective unifying frame.

This is a pathetic situation and a serious issue for the public environment. As Rapoport, (2002:7) describes designers, architects, urban designers and landscape architects will need to work interdisciplinary teams involving a variety of professions. But designers work individually and they specify to a specific role, has led to create unresponsive buildings and urban space. *“To make a design whole, it is absolutely essential that the space created by the building have a positive character. This is difficult to grasp, because in our time urban space has become negative...the left over building are built. However, in all cultures which produce great cities and buildings, space was understood as a positive thing created by the building.”* Alexander, (1977:65). Therefore need of the responsive urban space is important and makes sure that, link human value to activities and places.

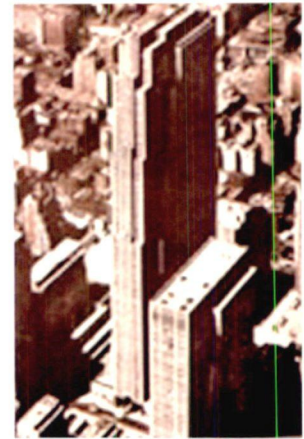


Plate – 2.12 Modern city spaces, missed their livable spaces

2.3.2 The need of responsive urban edges

The aim in the third chapter would be to study this relationship between man and urban space in order to understand to conserve the idea of urban edges of the city. The idea of how designers can preserve the time experiences of a city by preserving the life filled places along the edges; is very much a part of human existence and life.

Urban edges as lost space caused to implement serious of problems in the urban environment. This abandon and neglected edges that increase the crime and violence rate have become a crucial issue of the city.



Plate – 2.13 Abandon Charmers Granary canal edge

Especially the abandoned water edges with ware houses are creating in perfect places for crime and violence. Therefore the need of attention to direct for desired city image in terms of prevents encroachment drug dealers and other criminal activities.

The squatter settlements and haphazard development associates with water edges caused to neglect the importance and value of the edge and also it is subjected to illegal activities. The entire length of water edge is used for dumping; both domestic and industrial refuse, sewerage and garbage also affect to create non-responsive urban space in a city.



Plate – 2.14 Beira lake water front edge as a garbage dumping area

In addition to the above aspects these factors are cause environmental and health hazards. Considering these neglected edges they are always accompanied by demoralization physical and social atmosphere which draws human senses away form it.



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Within the local context, most of the urban streets are spontaneously developed. Urban building edges at presently use for car parking, parking area of carts belonging to Natamie's and the edge plat forms of the shops have become only their resting spots. Hence the public not more use of the spare part of the building edges as public spaces.

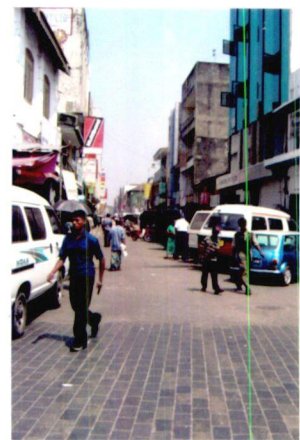


Plate – 2.15 Encroached of the building edges Alleyways in Pettah

The encroachment of building edges by private companies to mark their territories has managed them individually on their concern. This can be seen as dominating the building and almost over controlling the public pavement and undermine the pedestrian movement.

Therefore there is a greater need for the designers, and an issue relates to understand the relation to the "Urban space" and the "urban edge" in creating responsive urban space. Hence the knowledge and awareness directed to these subject area of the urban edge is used as the tool to observe and analyze the responsiveness to man.

2.4 Human response to the urban space

As a city is a place designed for man, it should respond to a man. *"The casual experience and observation of the urban environment can lead to significant relationship to the individual"* Maughtin, (1992:12). In other word, change entire meaning of the city to the human mind. In order to study and understand mans response to the built fabric a simple situation is taken as an example and the means of responsiveness as discussed earlier is applied to it. As a result one could understand how man could taper, change and create a built environment as a responsive place of sensitive architecture.

If the physical and social components are clearly understood it could be said that designers are meant to see this physical and social part of the site, but to go one step forward is to understand how these two elements are interwoven. The relationship or the link which is a mechanism that makes a site work must be understood. Therefore the study will especially try to find out this link or connection. Responsiveness or man will be the measure used to study these aspects. It is obvious that there should be socially responsive places in a city. Therefore this study is focused on socially responsive urban space, based on urban edges. Hence it is crucial to understand the attributes of responsive environment combining with human activities.

2.4.1 Permeability - move and connect

The number of alternative ways through an environment is therefore central to making environment. A desirable characteristic of a place is the ease with which one can move through and get to other locations. Such places are therefore integrated physically or psychologically connected to their surrounding areas. *"The extent to which an environment allows people a choice of access through it from place to place is therefore a key measure of its responsiveness."* Bentley, (1985:12). This can be identified as, only places which are accessible to places that can offer them choices. This does not mean that, the every where, accessible to everybody; physically or visually which effects greatly for the privacy of both public and private environments.



But as Bentley, (1985:13) says that private and public places cannot be isolate. They are complementary and people need access across the interface between them. Indeed this interplay between public and private gives people another major source of richness and choice. Therefore the private, public spaces and their interface should be implicated by permeability.

Permeability and public place

Both physical and visual permeability depend on how the network on public space divides the environment in to blocks. Thus the permeability can be identified as an essential quality of an urban public environment for the purpose of this study. It is necessary to identify the permeable qualities associated with edges.

a. Segregation of users and permeability

Segregation of users in public spaces, it reduces permeability. For example vehicle users and pedestrians, if they segregate in different routes they don't get equal permeability in an environment. Therefore a high level of permeability for every one should be made in initially.

b. Visual and physical permeably

Permeability can be identified as physical and visual permeability. Physical permeability provides access physically from one part to another but visual permeability is also prominent.

Visual permeability

Visual permeability between public and private space can also enrich the public domain. Therefore to maintain the public and private distinction, the most private activities must be kept away from visual contact with public space.

Physical permeably

Physical permeability between public and private spaces occurs at entrances to buildings or gardens. This can be enriched with increasing variety of activities around its edges.

c. Physical form and permeability

Most of the private spaces are closed with barriers, their fronts facing to the outwards like streets, parks or squares. But they are close enough to enjoy livability of public. Their back of facades faces the public places. Therefore public and private interface of edges should be made richer for both public and private life.

Maximizing the permeability

High permeability is the basis for any democratic sustainable urban form. Tibbald, (1992:58) described that permeability for every one, not for a person or particular group of people in the city. *"The aim as opportunities for the change around should create a barrier free urban space. One where people can easily see and get any where they want to go and where a person pushing a person or obliged to use crushers or person pushing a wheel chair can go around us easily as every one else."* Therefore the permeability is significant both visually and physically.

There are three factors that occur for the decline public of permeability as described by Bentley, (1985:13)

- Increasing scale of development
- Use of hierarchical layouts
- Pedestrian / vehicle segregation

Therefore when designing initially make high level of permeability and secondarily achieve development and segregation. Otherwise it's not a place for every one and livable area. Thus the permeability depends on a number of routes. But these routes must be visible, visually and physically otherwise people who know the area can take advantage of them but not those who are not familiar.

The most fundamental character in the urban edges as public gathering places most fundamental character is the permeability both visually and physically. In renaissance cities had higher permeability with grid iron pattern based in city structures. That was helpful for people to choices and change. Therefore permeability is important visually and physically and it should be the fundamental need of a public space to be considered in the early stage of design.

2.4.2 Variety - diversity 'the spice of life'

Variety is locate users on the site and offer a choice of experiences and can be identified as a quality which expresses "The range of users" available to people. "Accessible places are only valuable if they offer experiential choice" Bentley, (1985:27). Thus the variety is identified as a key quality in urban space.

Variety of experience implies places with varied building types of varied forms. It attracts varied people at varied times for varied reasons. Because the different activities forms an people provide a rich perceptual mix, different users in interrupt the places in different ways. It takes on varied meanings, Bentley, (1985). Thus the variety of use is therefore the key to variety as whole.

According to the above argument promoting variety can be identified as increasing the choice. But the choice also depends on mobility, because people who are highly mobile can take the advantage of mobility. But children, poor people, disabled people and women generally cannot afford high mobility.



Introduce variety of experiences.

Variety of experiences implies that varied forms, uses and meanings as explained above. In renaissance cities, building facades provide variety of places that enhance the livability of the city. But in modern cities highly use of glasses, concrete facades or steel facades are added nuisance and monotonous facades to the city. According to Bentley 1985, the variety of uses can support depends on three main factors.

- The range of activities which want to locate there which we shall call demand
- The possibility of supplying affordable space in the scheme to house these activities
- The extend to which the design encourages positive interaction between them

Therefore variety directly depends on visual sensation and also psychological comfort. Thus, to improve the variety of built fabric, colors, textures, solid void compositions, architectural details, variety of materials etc. should be added.

Therefore it is full of these linear, built mass. Other wise it is unresponsive urban edge not contributing livability of the city. *"Multiple uses in a single place also add variety, in terms of activity. Places which can be used for many different purposes, offer their users more choice than places whose design limits them to a single fixed use."* Bentley, (1985:56). Therefore the urban edges as a public place should be a memorable element of the city, mixing variety of activities experiences enhance the quality of it and provide responsive urban place to the city.

2.4.3 Legibility- where am I? How do I get there?

Legibility is a successful and legible development of a place that has a clear image and is easy to understand. It is a quality how people can understand what opportunities it offers or in other words; legibility is the quality, which makes a place graspable.

Bentley argues that legibility is important at two levels; that is "physical form" and "activity pattern". The legibility of both form and use is reduced in, modern environments. This is easily seen by comparing the traditional city with its modern concepts. Modern city buildings are worse, because important public buildings and publicly irrelevant private ones often look alike. Premathilaka (1993) has seen the similar problem in Sri Lankan cities as visual chaos. *"Our cities and country side are a cacophony of ill-fitting buildings in uneasy relationship with their neighbors. We are unable to agree on the larger parameters of design. As a consequence our temples look like villas, villa look like police stations, and police stations look like temples. As a society we appear in phenomenal disharmony"*.

According to Bentley places may be read at level separately, (physical form and activity pattern). For example it is possible to develop a clear sense of the physical form of the place, perhaps enjoy it, Only on aesthetic level. Equally pattern of use may be grasped without much concern with form, but to use a place potential to the full, awareness of physical form and patterns of use must complement one another.

This is particularly important to the outsider who needs to grasp the place quickly. Therefore reduce or neglecting the quality of legibility in urban edges as mentioned before in present urban situation.

Enhancing the legibility

According to Lynch, (1992:46), city consist of five types of elements, as nodes, paths, landmarks, edges and districts. In a legible city these five elements support each other and they are separately identified. Therefore urban edges play a major role as a key physical element of the legibility. In renaissance cities these five elements can be easily identified. Public places were clearly identified and nodes and landmarks along the paths provide legible directions to the pubic space. Therefore the legibility is the must component of the city.

2.4.4 Robustness- change and adapt as required

A desirable quality of a development is to create a place which can be used for many different purposes by different people and can be changed and adapted for different uses. This quality, which offers this choice, can be identified as robustness.

Quality of robustness can be increased in both inside and outside of the buildings and also natural edges like water bodies. For the purpose of this study of the problems associated in present public outdoor spaces seems possible to be solved by increasing outdoor robustness.

In public out door spaces designers tend to create specialized spaces for different activities separated off from one another. But activities in public they rarely need to be separated from one another for reasons of privacy, security, etc.

Indeed in the public space it is the activities themselves that acts as the most important support for other activities. Hence the creation of robust spaces will greatly help for the supportiveness of such activities. Therefore as designers Robustness should always be pushed as far as possible especially in public spaces.

In urban situations the activities in out door places are strongly influenced by what goes on in the buildings around their edges and along the natural edges of the city. Hence the building edges and other urban edge adjacent outdoor places will be mostly affected to the robustness qualities in order to make them more livable for different users; different scales at different times.

Most of the robust outdoor spaces depend on what goes on in the parts of the building immediately next to them. This must be taken in to account in order to create robust outdoor spaces. Thus some of the activities within the building may benefit from being able to extend outwards in to adjacent outdoor spaces. When this occurs they will contribute to the activity in the public space it self or even other indoor activities may contribute to the level of outdoor activities. Visual contact with them can make the place more interesting for spectators.

Therefore public edges should address to the activities, which benefit from interaction with the public realm and contribute to the life of the public space itself. Hence, ground floor local public spaces and urban edges have a great potential to increase the robustness.

Improve the robustness

To increase robustness the edge between buildings and public space must be designed to enable a range of indoor private activities to co-exist in close physical proximity with a range of indoor private activities. This has a variety of design implications depending both of the building activities concerned and on the nature of the activities in the public space. For an example active building front can be achieve by verity of activities in together.

2.4.5 Visual appropriateness

The decisions already made determine the general appearance of the scheme. Design the external image. This quality affects whether the detailed appearance of the place makes people aware of the choices available. The quality can be as visual appropriateness.

This is important, because it strongly affects the interpretations people put on the place; whether designers want them to or not, people will interpret places as having meanings. Therefore when their meanings support responsiveness the place has a quality we call visual appropriateness. Even though visual appropriateness is important both indoors and outdoors but this quality is mostly important in the more public spaces. So far as public outdoor space is concerned it is particularly relevant to the outside of the buildings which defines the public realm.

As discussed interpretations people give to a place can reinforce it is responsiveness by different levels, supporting its legibility, variety and robustness play a crucial role in reinforcing the responsiveness of a particular place as well as the detail appearance of a building has an important role to play in supporting responsiveness. Hence in order to encourage this responsiveness, it is important to understand how people interpret place.

According to Bentley, people interpret visual cues as having particular meanings because they have learned to do so. But people do not learn in a social vacuum. *"A great deal of, both formal; and informal, is shared by groups of people whose members will therefore tend to make similar interpretation of a given place."* Bentley, (1985:77)

As well as, members of different social groups may well make different interpretations of the same place. This happens for two main reasons.

- Difference of environment experience
- Difference of objectives from other groups

Thus the visual appropriateness is a major part in urban revitalization and designers have to be concerned about cues interpreted as supporting legibility, variety and robustness.

Unifying the visual appropriateness

This quality affects whether the detailed appearance of the place make people aware of the choices available. Visual appropriateness places use cues which different groups of users are like to interpret as supporting legibility, variety and robustness.

Variety contributed by visual appropriateness to the place is based on the principle of unity but not on the multiplicity. Therefore variety is a key element of the visual appropriateness and enhancing it can create responsive urban space. Two ways of legibility effects visual appropriateness

- Legibility of form
- Legibility of use

Therefore enhancing of these two ways of legibility improve the responsiveness. For that color, textures, details etc. are to be well articulated to offer the opportunities of interpretation to users. The urban edges as a quality of gathering place should be unified the visual appropriateness along these edges.

2.4.5 Richness

Richness is the quality, which effects people choice of sensory experiences. For most people, sight is the dominant sense. *"Most of the information we handle channeled through our eyes. Thus it can be visual richness"*. Bentley, (1985). Hence for the purpose of this study, it is concerned with visual richness. Not only visual matter, but other senses like sense of motion, sense of smell and sense of hearing also help for the design implications.

According to Bentley, (1985:89) *"designers are offer sensory choices."* This implies designs so that, people can choose different sense experiences on different occasions. Therefore it is necessary to understand, how users can choose different sense of experiences in fixed environment. Bentley argues there are two ways that the people can chose from different sense of experiences if the environment itself fixed.

- By focusing their attention on different sources of sense experience on different occasions.
- By moving away from one source towards another.

2.4.6 Personalization

Making the design encourage people to put their own mark on the places where they live and work. Personalization in other words can be identified as more physical reaction, because people only develop true participatory relationship with places they like. In robust environment this can be easily identified. In such an environment by encouraging each user to dress the building differently and personalization can make each use of place explicit. Useful literature on personalization is thin on ground, but Bentley has provided a good tone to understand personalization process. There Bentley has identified two clear ways of personalized space.

- To improve practical facilities
- To change image of a place

People mainly personalize places they regularly use for long periods; in practice, homes and work places. Nearly in all buildings sometimes designers may allow, at least a part for the users to obtain their stamp. But according to Bentley, personalization may overwhelm too fragile a pattern altogether.

2.5 Concluding Remarks

The urban edge possesses strong unique characters for harmonize relationship with city inhabitants as a public gathering foci as well as the perception of positive city image. Hence the positive urban edge is plays a vital role of the city image. Therefore the positive transformation though the realizing of such edges are extremely important in order to archive a responsive urban space in the city.

"Responsiveness" will be taken in to consideration as they are group of principles that directly relates to the way in people experience and perceive urban spaces. In this frame work, the responsive environment is the ultimate creation of man. Therefore these principles applied to urban edge in order to case studies.

Hence it is important to derive the methods and strategies which are applicable to Sri Lankan situations. Examination of theories and its applications are combined together which is need to make most suitable guide lines to Sri Lankan situations. For that few selected examples of urban edges in the city of Colombo are examined in order to find out the ways by which the discussed strategies are used to create a positive and responsive environment, a physically and qualitatively unified whole. Hence the case studies will be selected to cater to the broader picture or variety of urban edges, man made, geographical and transitional.

Therefore this second chapter can be considered as a key chapter which really trying to understand the principles, which links the people in to the urban space with positively and responsively. In broader manner; this will then elaborate in the Third chapter (example studies) in practical means considering their applicability in local conditions with merits and demerits.



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URBAN EDGE AS A RESPONSIVE URBAN SPACE

Examination of the impact on the city with special reference to city of Colombo

**Chapter three: Examination and formulation of design implication
for urban edges in the city of Colombo**

3.2 Historical evolution of Colombo and its contribution to the urban edges

Between 9th -16th centuries Colombo was a small seaport used by Arab, Indian, Persian and Chinese sailing crafts. After that the Ceylon came under successive occupation by the Portuguese, Dutch and finally the British. Colombo was their metropolis and in 1815 when the island finally capitulated, Colombo became to be the capital of the whole country. The administration activities were concentrated in to the Colombo fort, and trade activities were concentrated in to both the Colombo Fort, and the Pettah areas.

The Portuguese; who first colonized Sri Lanka built a three miles long fort of reinforced granite encompassing the area of present day fort and Pettah. Thereafter the fort and that surrounding area have developed as to the present day status and it is subject to various changes during the colonized period of Dutch, British and after the independence. In 1656 the Dutch over-powered and relayed the whole area (for the fortress through many a battle carried out was reduced to rubble) following the area of "catchments" (civil station), outer city (indigenous settlement separated by a large open space (often called as the range).



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Fort area was fortified excluding the Pettah area. Both parts of the city were laid out in a strict geometrical grid iron pattern of which the fort continued much wider and spacious grids than the Pettah. Pettah continued low scale buildings mostly houses of the indigenous community and those were very much similar in style. The Beira Lake was a natural feature of Colombo, which originally was extensive reach of flood water from the Kelani River. And it was exploited to provide protection in the nature of a moat and mechanically controlled flooding and it was used for transportation of goods and people.

The Dutch capitulated to British in 1796, without putting up a battle, thus leaving the whole fort intact. The British adopted the same features of the Dutch and these occupied the same buildings within the fort. Raising of ramparts of the fortification and lying of the Galle face greenery were the major changes done to the city at first.

After 1815, the city fortification was demolished, as the presence of a protective wall was not needed since the British by then had established political as well as economical domination over the island.

The city started expanding with the flourish of economy due to newly introduced plantation industry. The fort of Colombo became more and more a commercial and administrative centre. Residents moved away from the city centre mostly to the Cinnamon Gardens, and to the surrounding of Beira Lake except the Governor.

Post independence era has added many new buildings to the city, but its basic physical structure so far, has been unaltered. Sri Lanka was exposed to a new trend of technology and economy after independence as well as after the recent introduction of "open economy", and there by new types of buildings was introduced to the city structure. (E.g.: Echelon Square and the front segment of the Janadhipathy Mawatha became occupied by the high rises of modern technology and symbols of commercial dominance.)

3.2.1 Composition of the city

Considering the city centre as a whole, the city form is defined by the large experience of openness in the guise of the sea, the Galle face greenery and the Beira Lake.

The city centre of Colombo can be identified as the centre of a semi radial special organization where several linear organizations (Galle road, D.R.Wijewardana Mw, Sir Chittampalam A. Gardiner Mw, Olcott Mw, Sea Beach road) covered in a radial manner creating concentrative spaces at points where the city centre is entered. Spaces within the city are confided to linear spaces such as streets and canals and the concentrative spaces such as junctions (nodes).



Plate - 3.1 Lay out map - Colombo



Three major unities of form can be identified in the city centre

- The spacious and massive form of fort
- Compact and low profiled Pettah
- The intermediate situation of Charners Granary

Within fort area again to distinctive unities of forms can be identified.

- Continuous and linearly arranged forms
- Free standing individual buildings
- Focal points (Land marks)



Plate - 3.2 Clock I tower at Kaimen gate as a land mark

Colombo city centre shows a grid iron organization of spaces. Both fort and Pettah are set on a geometrical grid but of a different nature. While fort is set on a wider and spacious grid, Pettah is set as much as a narrower and strait gridiron pattern. In fort, two major linear spaces (Janadhipathi Mawatha, Queen street and the York street) run parallel to each other, oriented towards the fort which is intersected by a set of secondary linear spaces, (Sir Baron Jayasthilake Mw, Prince street, Chatham street, Mudalige Mw, Buillie street, Lotus road, Church road etc.) forming a nature of spaces, square of rectangular compartments and some important concentrative spaces. (Junctions/ nodes)



Plate - 3.3 Bel tower

Fort is separated from Pettah by an extended arm of Beira Lake and the space between the canal and Pettah as defined by a different pattern of building forms. The north edge of the city is defined by the sea and a ridge formed by repetitive forms of ware houses and the south edge along the Beira Lake again by a linear edge formed by ware houses.



Plate - 3.4 Main street entry point Pettah As a focal point

3.2.2 Identified urban edges in the city of Colombo



Plate - 3.5 Colombo map and selected edges

■ Identified edges ■ Responded edges

Colombo is a coastal head land of a peculiar shape. The city and the way are surrounded by the sea from the north and the west and the Beira Lake from the south. The natural edge formed by the rocky nature of the beach; the presence of the open space in the form of the Galle face green, adds the uniqueness to the Colombo. In the case of Fort the south edge is defined by the old parliament and Galle face Beira, while north edge defining by Gaffur building, Grand oriental hotel and Fort church. But there is no clear concentration about east and west edges.

Therefore east and west edges finally become in to lost edges as a “geographical urban edge”. The west side of the edge is demarcated by the Marine drive and the West Sea of this historical core and the east side of the edge is demarcated by dead built masses which do not respond to the place.



Plate - 3.6 Marine Drive edge

Present day, the special organization of Colombo does not show any direct relationship to the natural features of the city. Beira Lake represents one of the important scenic assets of the city. As it is located in the heart of the Colombo, it relates two major areas. Altogether Beira has four distinctive parts as the South-west Lake, West Lake, Galle Face Lake and the east lake. The South-west Lake is treated much more sensitively as an urban space than the others.

The scenic beauty is enhanced in the South west mainly by the Seema Malakaya and the institutional buildings designed respond to the water body. The reflection of the built fabric on the water surface, during both day and night enhances the scenic potential of the area.



Plate – 3.7 Seema Malakaya provide impressive place to the city

The president secretariat building stands in dignity in Galle Face Lake and some hotels and the Colombo rowing club are some of the few buildings that form the scenic potential of the lake. Even though the south-west and the Galle face Beira are well responded, the Importance of the west and the east Beira water edges are neglected.



Plate – 3.8 Galle Face Beira Lake visually connect with Sea

In the case of Sea Beach road, today it is covered by the tall monotonous blank wall. It covers the visual connections between the ocean and the street. However this quality is disputed by the emptiness and the infinity quality and the experience of open space of the sea. Therefore the Sea Beach road is not a well defined responsive "building edge" as an urban edge to the city of Colombo.

Pettah is the high commercial area of the city. Its south boundary is defined by Olcott Mawatha, with modern building mass. The West edge is demarcated by Charmers Granary, and at present the Malwatta street is acting as the west edge which can identified as a transitional edge. And the east is demarcated by the sea Beach road. However the Bodhiraja Mawatha is also functionally full of activities as a transitional edge. It is just like a transitional axis between Olcott Mawatha and the Gunasinghapura bus terminal. But this important major “transitional urban edges” should be enhanced more as a responsive urban space in the city.



Plate – 3.9 Sea beach road covered the harbour and sea



Plate – 3.10 Malwatta Street - monotonous activities

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Plate – 3.11 Bodhiraja Mawatha Pedestrians use as a transitional path

Therefore selected urban edges for study and examine as the responsive urban spaces in the city are as follows.

1. Urban edge with reference to the “Water edge” - geographically
 - East side of the east Beira Lake
 - East side of the west Beira Lake
2. Urban edge with reference to the “building edge” - Man made
 - Marine drive the west side of the historic core
3. Urban edge with reference to the “transitional edge” - Functionally
 - Bodhiraja Mawatha
 - Malwatta Street

3.3 Example studies

Example studies based on the three as above mentioned categories as water edge, building edge and transitional edge are important to enhance as urban edges to achieve responsive urban spaces as discussed above.

3.3.1 Urban edge with reference to the “Water edge” - geographically

East and west side of Beira Lake

The east side of the West Beira is demarcated by the railway cut line and it is given value to the area as an urban edge. Also the east side edge of the east Beira is not responded and it contains variety of public activities in places like Convention Centre and Excel World recreational park. Therefore there are lots of potentials to develop those edges as responsive water edges. As indicate the map of Beira Lake core area, the existing road network creates boundaries for the Beira Lake. This issue can be taken as a primary factor in identifying water edge as an urban edge in the city layout.



Plate – 3.12 East side of the West Lake

The water front of the edge of Beira Lake is neglected physically, visually, and socially. Public realm and the social interrelationships are denied at the water front edge making it a dull atmosphere and creating a lost urban edge. Therefore it becomes a non-responsive urban space in the city. Therefore this study is based on mainly on the west side of the West Lake and the west side of the East Lake as they are neglected water edge of the city, in terms of urban edges.

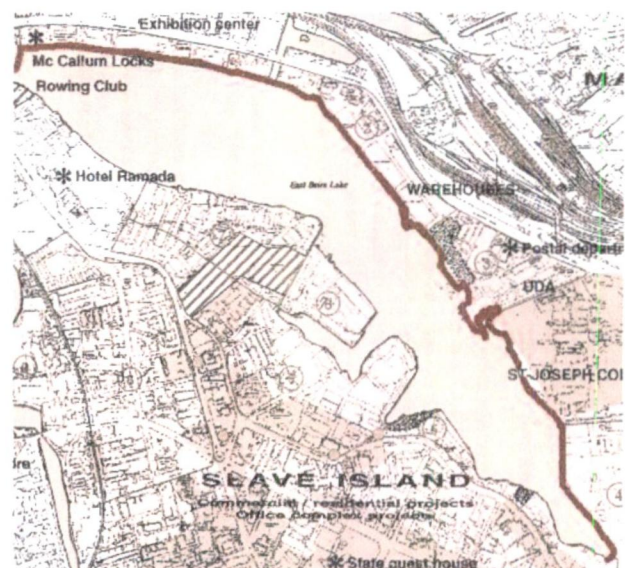


Plate – 3.13 East side of the East Lake



Roads and boundaries connected by East and West Beira Lake

East Lake

- D.R. Wijewardana mawatha
- T.B. Jaya Mawatha
- Kew road
- Sir chittanpalam A.Gardinior Mawatha

West Lake

West Lake is connected with Galle face Green, in the east side and north side. The west side is demarcated by railway line and the south side is connected to the South West Lake. Also it is narrower and linear when comparing with the east lake.

Buildings connected with East and West Beira

East Lake

- Office buildings
- Trans Asia hotel
- Colombo rowing club
- LEW stores
- Water houses

- St. Joseph's collage
- Hyde Park
- S.C.ports authority boatyard
- Excel world recreational park



Plate – 3.14 D.R. Wijewardana Mawatha

West Lake

- Defense ministry
- Army play ground
- Elephant house (Ceylon cold stores)
- Military hospital
- Taj Samudra hotel
- Slave Island railway station



Plate – 3.15 Ware hoses in water front Of the Lake

The Urban development Authority has proposed the Beira lake improvement project and it tries to get a pleasant environment to the surrounding and its inhabitants. Under this design proposal most redevelopments are based on leisure and recreational activities along the edges of the Beira.

The East side of the East Beira and the east side of the West Beira would become a nodal parking and linear recreational parks along the particular edges, according to the proposal. Therefore to become active public place, there are much potential to reveal with reference to the existing context which is to be consider in revitalization of the edge.

East side of the West Lake

3.3.1.1 Supportiveness of the water edge for functions and activities

The existing situation of the selected stretch of the water edge is covered and encroached with squatter settlements. Those settlements are formed without responding to the water front as well as they cause the pollution of the lake too. Therefore it has caused to lose the meaning of responsive water edge to the city.



Plate – 3.16 Squatter settlements along the water edge

Redevelopment of the site as a responsive water edge, which has many strengths and potentials to leisure and recreational activities develop along the stretch in heart of the city. It will lead to make the city much more live.



Plate – 3.17 Buildings closed to the rail way line



Plate – 3.18 Buildings covered the sea view

3.3.1.2 Implications

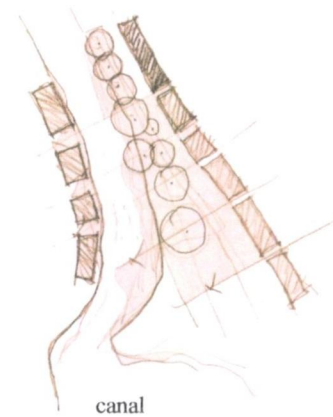
The stretch of the west side of the West Lake from the node to railway station has no proper physical or visual permeability accesses to Galle Face green area at present. Hence the physical and visual permeability should be achieved to create a positive edge. Relocating the squatter settlement is must.

Pedestrian walkways have been proposed along the stretch from the node to railway station and it is connected with Regal cinema which is much closed to the area.

These can be shaded by trees through the stretch while giving the glimpse of sea through the Army complex. To develop the stretch as a public place, visual permeability is important for attracting people to the place.

Therefore Galle Face green area and West Lake should be linked visually along the edge of Army complex. Introduction of elevated bridges; connects the railway station and the Galle Face green area. It is helpful to achieve physical permeability.

As a recreational edge it should be a place of a variety of activities. Introduction of elevated bridges and boat services links to the Galle Face green. Railway station and the proposed public places should link together with Kids Park, cafes and restaurant providing shelter with sufficient seating for individuals and groups. Its provides places to reading, talking and private functions to enhance the quality of variety. The node, stretch of water edge and the railway station should be clearly identified in the plan form but in physically it is missed. Therefore the water edge in the west side West Lake proposed as barrier free edge. To maximize the visual appropriateness improve legibility through the sea, railway station and the node.



canal



canal

Plate – 3.19 Maximizing the permeability



Introducing permeability, legibility and variety to the place, contributes to enhance the value of visual appropriateness.

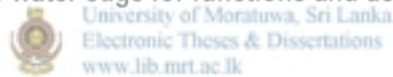
It could help to destroy the monotonous of the place. Restaurant, cafes and recreational activities could be function during day time and also during night time. It will create robustness to the place. The place personalizes by people using the spaces as a recreational, seating, relaxing, waiting and sleeping as they wish. Shop owners could be personalizing their shops by varying colors, textures, scale and portions.



Plate – 3.20 personalize the space
Galle face green

East side of the East Lake

3.3.1.3 Supportiveness of the water edge for functions and activities



Most of the areas in the east side of the East Lake have been neglected by treating the lake as a backyard. Neglecting the presence of lake, Buildings use the rear spaces facing the water front as garbage dumping areas. In addition long stretches of warehouses along the water edge, limit the number of view points from which the lake can be seen and pollutes the water body. One cannot get a single clue of Beira because of the continuous building facade of the D.R.Wijewardane Mawatha.



Plate – 3.21 D.R.Wijewardane mawatha ware houses covered the view of the Beira Lake



Plate – 3.22 Neglected water edge
Excel World recreational park



Plate – 3.23 Polluted water body-Back side of the Convention center

The best examples for the neglected water front as an urban edge can be seen in the conventional center area at D.R. Wijewardana Mawatha and new recreational park "Excel World" in Daryl road which are much more closed to the Beira Lake. Though they are functioning as a public and recreational park, they orient their back yard facades to the water edge. Therefore the integration of the water edge with public activities has been neglected.



Plate – 3.24 Front façade of the Excel World

3.3.1.4 Implications

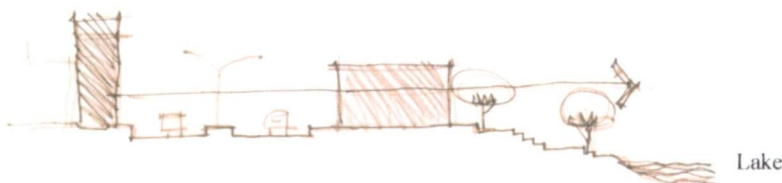
Permeability is totally covered by buildings and private lands along the D.R.Wijewardana mw. Continuous built façade could be cut in several portions and creating visual and physical permeability through the built edge. These permeable portions could be all ways with variety of activities. Introduction of paving patterns, trees, piers, seating along the water edge. Pedestrian side walks along the water stretch become cultural and exhibition plane and it gives the identity to the city.

Variety of activities along the edge such as out door restaurants, cafes, sales outlets could be introduced. Use of various colors, textures and materials enhance the variety.

Legibility through the water edge or street edge couldn't clearly identify. Therefore faced of the buildings should be use various scale, proportions, textures and colours to achieve the legibility. Day and night functions, night bazaars introducing to the area to achieve the robustness.

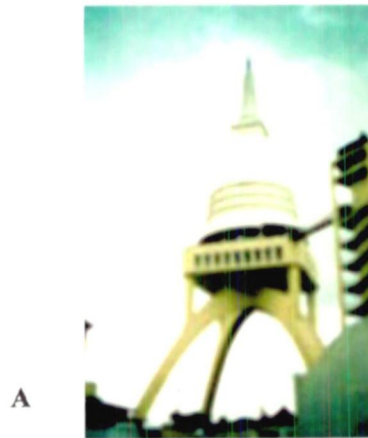


Plate – 3.25 Out door restaurants



3.3.2 Urban edge with reference to the “building edge”

Marine drive - the west side of the historic core



A

Plate – 3.26 Sambodhi chaitiya



B

Plate – 3.27 Light house



Plate – 3.28 Lay out map of the Marine Drive and its elements

An ideal location for this kind of building edge which can be found within the Colombo fort is the Marine Drive edge. (Segment from Galle face green road – from Galle Face junction to harbor node). This marine drive is located at the west edge of Colombo with two main nodes, Galle face node and harbour node. And links up together Galle face central road, Janadhipathi Mw and Lotus road from the land side with building edges. Other side of the edge is the geographically Indian Ocean and man made light house.



3.3.2.1 Supportiveness of the place and the building edge for functions and activities

The Marine Drive plays a great significance by it self due to several reasons. One reason is it is defined by the city geographical location the Indian Ocean by which the edge is naturally demarcated. The second significant feature is the "Sambodhi" chaithiya, which is a land mark to the city of Colombo located at one end of the stretch. "Light house" of the edge is the important land mark that can be used to enhance the responsive environment of the city. Therefore this stretch can be treated as an urban edge of the city.



Plate – 3.29 Starting point of the Marine drive edge immediately after the Galle face node

But the pathetic situation of the landside is the abandoned building edge as police officers mess, wild life and nature protection society now function as military barracks. The dead built mass totally creates unresponsive urban edge and the gaps between existing buildings loose the continuity of the edge.



Plate – 3.30 Abandoned buildings along the land side boundary

The abandoned buildings along the landside boundary do not sense of it as the edge of the buildings, greatly affected to the public life and the responsive environment. Wild life and nature protection society buildings have been set and made the situation worst.

Galle Face node is the only public gathering space in this west side of the sea stretch. Neither Marine Drive nor the harbor node provides easy access to the public. The Marine museum which is close to the harbor node is not well functioning as a public place.



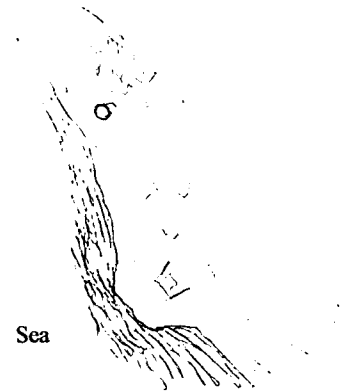
Plate – 3.31 Dead edge of the stretch

The edge is not totally functioning of the west side of the city due to security reasons. Denying accessibility to the general public, check points, barriers with sand and ties indicate this urban edge is a dead unresponsive space to the city. Therefore this edge becomes the lost space in the city.

The factors to being a lost spaces of the city changing land use, privatization of buildings along the land side due to in harmonize way of composition of them. But this edge, which historic core of building edge should explore at one side and the other by sea, which denotes many potentials.

3.3.2.2 Implications

The boundary walls of the Marine Drive fully cutoff the permeability along the road. Hence demolishing the boundary wall at certain intervals along the road can increase the permeability and it will also affect the width of the street. Boundary walls of the buildings which do not response to the road can be demolished to and strengthen the visual permeability of the open spaces between the building and the Marine Drive. Therefore the permeability between the street and the building outdoor spaces can become more potential to achieving a responsive place.



Permeability can be achieved by utilizing the gaps between the existing buildings by treating them as permeable elements. The gap between buildings can be designed as pedestrian walk ways with the water front and the rest of the city. They will act as spatial bridges between two sides. These spaces retain facilities for pedestrians. These gaps can be treated as transitional stretch by introducing potential activities to function them. The ideal types of activities which can be propose for these spaces. Penetrable trade activities and recreational activities on either side of these spaces can be introduced using slight level differences, arcades, paving etc.

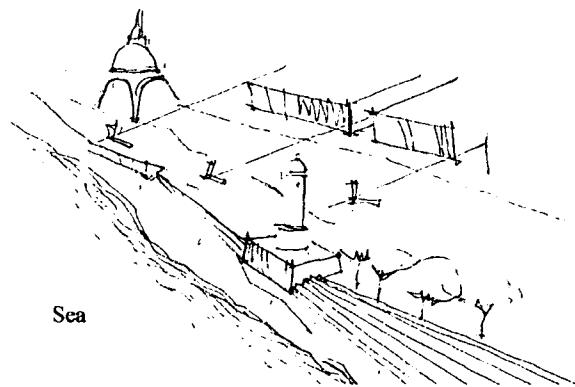


Plate – 3.32 Maximizing the visual experience and permeability

The higher visual permeability can be seen through the edge of the Fort by giving the sense of linearity. The physical permeability already in the existing context layout only link with Chatham Street. It could be used to introduce to enhance the physical permeability through the marine Drive.

The introduction of a variety of activities to maximize cultural and public oriented activities helped to achieve maximizing the variety of experiences. Most essential characters to such an achievement provides personal spaces along the edge. According to marine Drive, as a historical core, its value can be enhanced by providing public gathering places along the sea side edge. Providing leisure and recreational activities to penetrate to the Marine Drive, make the place full of variety of experiences.

The built mass along the land side edge can be utilized as trade base or restructure the space as a series of urban rooms and established the visual link to the sea front.



Legibility in the Marine Drive composes of two nodes Galle face Green node and harbor node; which are easily identified in the location, and the light house and the Sambodhi chaithiya are also visually graspable characters which can be need to enhance the legible setting of the edge. But the built mass edge there is no clear legibility.

In the case of unifying the visual appropriateness continuous built mass has to be introduced. The new buildings at the edge must totally respond to existing historic core and be merged with it.

Robustness affects the degree to which the people can use a given place for a different purpose, especially the edge facing a public urban space. The building edge of the Marine Drive also needs to accommodate or offer choices for different groups who are using the urban edge as an urban space. But the Marine Drive built mass edge offer any choices to make it use as a social space.



Plate – 3.33 Visual axis through the road



Plate – 3.34 Sambodhi chaithiya is visualize along the road

Therefore it should be provide spaces as mentioned above such as urban rooms, with transitional paths between built spaces trade activities along the built mass etc. Richness and personalization can be achieved; if the people use the space as they wish.

3.3.3 Urban edge with reference to the “transitional edge”

Malwatta Street

Malwatta Street demarcates the most important edge of the business core of Colombo. While it creating the edge between fort and Pettah it also makes a transitional edge. North side of the street it meets the harbour node and in the south it joint with the railway station at Olcott Mawatha.



Plate – 3.35 Lavout of the Malwata street

The east sides of the road linkes with the commercial core with several cross streets. Because of the unplanned commercial development at the west side of the Malwatta Street it has over-riden the previous urban edge of Charmers Granary with much



Plate – 3.36 Entrance point of the Malwatta Street giving two characters

more live and functional activities. Therefore it has become a separating edge between less busy fort and busiest Pettah area. The Malwatta Street acts as a link road of port area from north, commercial hub from east and the railway station from south. Because of this aspect it is used as a transitional corridor by commuters. Therefore this is almost all in active place.



Plate – 3.37 End point is give the land mark to the street

3.3.3.1 Supportiveness of the place and the transitional edge for functions and activities

The edge of the west side has continuously laid retail shops and it has a monotonous character. Along the side of the street can be seen different activities. Such as trading activities like bags, shoes, electric items, fancy items and no treating tea or eating spaces. During the busy hours in the early morning and in the evening there is a significant movement of people along this street. But there is no place to gather or relax.



Plate – 3.38 Retail shops demarcate the edge as a transitional path

Similar temporary structures along the edge without any breathing space contaminate visual and physical responsiveness of the place. Lack of shady area due to absence of trees makes the situation worst. When comparing the east edge of the street, the west edge is monotonous and therefore it doesn't feel as a positive edge. While the east edge, rather permeable and positive characters with variety, legibility and visual appropriateness. It is always congested with traffic, noise and pedestrians. Therefore it should be the positive and responsive urban space in a city as a major transitional edge.



Plate – 3.39 Shops lay along the edge in monotonously

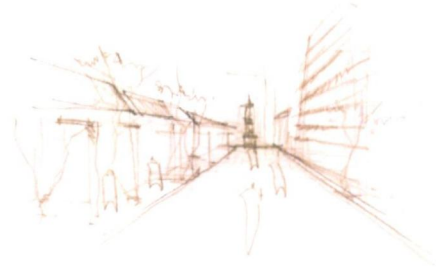
3.3.3.2 Implications

The west edge should be provided with visually and physically permeable alleyways towards the Beira canal although the Charmers Granary is exists as a barrier and the urban void that stretch can be developed as a recreational; or open space to increase the permeability, which is needed for a responsive urban edge.



Plate – 3.40 Beira canal

The monotonous character should be replaced, by removing the continuity of the facade, introducing the level differences between traffic way and pedestrian way and varying the building height, materials, colors and textures. Various activities such as way side cafeterias, shaded shop fronts and landscape could be introduced. The significance of the built facade, Beira canal, Charmers Granary and the harbour node should be raised by providing more penetrate quality to the west side.



Entrance and the end point of the street not clear. Therefore introducing legibility through the entrance and the end could be achieved. The responsive transitional space. There is no clearly identified main center space on the street to emphasize transitional quality the sequence of spaces can be introduced.



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Plate – 3. 41 Introducing serial vision along the road

Pedestrian path should be widened and niches and pockets should be created for the better responsive urban edge. By introducing variety to the area the visual appropriateness can be achieved. By playing the three dimensional volume the visual comfort can be achieved.

Shop fronts with arcaded pedestrian paths or semi private spaces of the built edge can make responsive. The parking areas can integrate with the resting and restaurant area to make it more functional and attractive.

By making the place much more responsive by providing the above attributes people can feel and personalize the space as their choice taste and views. Visual richness and sense of motion contributes to the individual personalization.

Bodhiraja Mawatha

Bodhiraja mawatha (Gas Work Street) which interesting at Bo- tree junction with Olcott Mawatha is a very significant node creating a proper entrance way to the Pettah. While located within the commercial city area it becomes an inevitable place of interchange both for commuters as well as for activities.



Plate – 3.42 Layout of the Bodhiraja mawatha

Bodhiraja Mawatha is a significant location, with the central bus terminals on one side and the Fort railway central bus station on the opposite side. Hence it becomes an important transitional urban edge for commuters, who use these two transport terminals. Therefore it is an urban edge of the city, which connects the inner city area to the west of the city through Olcott Mawatha.



Plate –3.43 Street hawkers and their stalls form a rich character to the street edge

Amidst the noise of people, movement of traffic in the tick of activity the Bo-tree junction evolves in to a meaningful urban space in the urban edge of Pettah. It adds to the social possibilities of a place within the edge and intensely filled with pedestrian and commuters the place of its activities relates to the flow of live character of Pettah.



Plate – 3.44 Variety of activities along the edge



3.3.3.3 Supportiveness of the place and the transitional edge for functions and activities

The Bo-tree gives the sense of entry point to this transitional edge and it accompanies ample attention to become a landmark. Therefore the commuters from distinct parts who came to Colombo do indeed use this as orientation post.



Plate – 3.45 location of the junction forms an important node a view from Olcott Mawatha

The entry Bo-tree junction is defined by the pedestrian space creating a contrasting atmosphere. It mainly is a transitional space generating movement. Area is highly built up with the temporary structures without any breathing space. During the busy hours in early morning and the evening there is an intense movement of people along this street. Because this street intersecting main transit point and main commercial centers in Pettha.

Therefore this point and its surrounding acts as transit point to commuters. Yet there are not any physical or visual forms, because of the highly built up informal commercial activities. Along the side of the street can be seen different activities. Such as clothes, shoes, fruits, sweets, fancy items.

Bodhiraja Mawatha is the significant street which links to bazaar district the in inner city. But the situation if there are many routes along the edge of the road, they are covered and disturbed with informal trading activities.



Plate – 3.46 The place more congested and traffic of vehicles creates unresponsive urban space to the city

If the place provides a positive social space, it is always noisy and congested with traffic. Therefore it should be a positive and responsive urban space in a city as a major transitional edge.

3.3.3.4 Implications

In order to study the responsive urban edge with reference to the Bodhiraja Mawatha, It can be identified as a successful urban place, but it could be focused on social and spatial aspects of the environment rather than emphasizing transitional point of the city.

The physical permeability of the street is covered by informal trading activities which is laid along the edge of the street. Visual permeability is also covered by vehicle and pedestrian traffic with trading activities. By providing permeability to the street an urban edge will become highly accessible. Therefore the street removes the traffic jam and introduce fully pedestrian path.

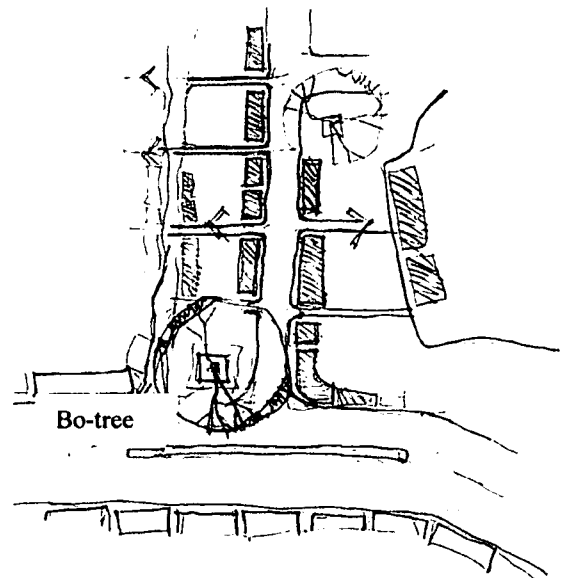


Plate - 3.47 Enhancing the legibility

Introduction of new secondary pathways from the Bodhiraja Mawatha and the bus terminal will reduce the traffic jam. And also maximizes the permeability. The existing rows of stalls on either side of the road provide informal trading activities in unified manner, by providing in physical and visual links with the other streets.

The entry point of the Bodhiraja Mawatha creates a sense of entry, landmark to the beginning of this transitional urban edge. But immediately after the Bo-tree stalls are aligned and it gives the monotonous of the place.

Therefore the entrance is to be more prominent. The Bo-tree of the entrance point and the Bo-tree in the mid point are clearly defined nodes or landmarks to the street. The buildings along the street are a little bit set back to enhance the visibility through these two major land marks.

As mentioned above it penetrates different paths and activities which are introduced at either side by using slight level differences, colonnades, paving, projections and canopies, floor paving niches etc.

Therefore a variety of activities in different scales of trading boutiques, stalls, restaurants and eventually creates commercial oriented public gathering places along the transitional edge. Hence the meaning of the transitional edge is enhanced with socially responsive urban space to the city.

Legibility is clearly identified by both Bo-tree junctions as nodes. But the stalls at a line do not provide quality of legibility. Legibility also can be achieved by maximizing the permeability to improve the variety of experiences.



City is usually considered as an accumulation of events, a process of change, the overlapping of fragmentary sequences, or as existing in media networks or in people's consciousness. However one realizes that such perception alone actually creates a cityscape. A city is not something that can be created and but returns to descriptions of perceptions. Nevertheless, while one is doing so, the city keeps on expanding and changing.

The urban edge, that contributes to enhance the character of the city. Every urban edge maintains such character of physical and social context. The urban edge should be a responsive urban space to make the place live. "Responsiveness" is identified as an essential quality, which should be associated with the urban space, in order to create meaningful social urban places. People can be made happy in many ways such as being together, creating places to sit or stand. These situations facilitate to lead a rich in life in the social context.

The analysis of the study implies several conclusions for the selected case studies as stated below.



Urban edge with reference to the water edge - Geographically

This particular urban edge should be developed as a visually pleasing environment which enhances recreation and relaxation.

Urban edge with reference to the "building edge" - Man made

This particular urban edge should be developed as a functional environment which enhances the dynamic quality.

Urban edge with reference to the "Transitional edge" - Functionally

This particular urban edge should be developed as an easily identified environment which enhances the transitional quality.

According to the above case studies it reveals that, the urban edge as an urban space, which has a potential to express positive values of a society and reflects its social, cultural and economic achievements.

"Architecture" of the present situation tends to represent a beautiful element instead of being a practical solution. In the rush of the fast world and technology, designers and planners have lost the sensitivity to make people happy. For instance shady trees could make a person happier than the grand side walks and technology along the streets.

Designers must have faith in the users of public spaces. Therefore designers should concern about the simple and most basic elements which enhances the physical set up. Thereby man will take over to create and personalize to suite the society's needs and trends.

Each and every city can be transferred in to a "pleasing and effective" urban space by creating noticeable urban edges. Therefore architecture should be created with awareness in this respect to achieve and fulfill the ***"Urban Edge as a responsive urban space"***.



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