

Urban Renewal Strategy for a Commercial Area: Case Study-Agrabad Commercial Area, Chittagong

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Received: March 15, 2016 | Revised: April 20, 2016 | Accepted: May 23, 2016

Published Online: June 07, 2016

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Abstract Rapid urbanization is a currently a challenging problem for any developing country. To keep pace with the current population growth and ongoing economic development the cities are need to be expanded. But for a developing country, the territorial expansion of any city would be difficult for reducing the load, because of its economic and structural limitations. So for utilizing its limited resources fully, urban renewable strategy is preferable for every developing country. Renewable strategies increase the efficiency of the whole area & bolster economic force. Agrabad Commercial Area, CBD is the main business area in CHITTAGONG. In this study Commercial Business District (CBD) of Chittagong is taken as a case study and paper focuses on finding some suitable strategic proposals for it.

Keywords Urban renewal, Development, Strategy, CBD

1. INTRODUCTION

Chittagong is a port city of Bangladesh. The city of Chittagong is expanding without following urbanization policy because of population growth and lack of proper inspection and planning strategy. Commercial Business District (CBD) in Agrabad area is the main economic hub of the whole city. If the CBD does not function properly then it will affect the overall system of the city. CBD is facing some problems in present day because of its increasing working population and overloaded traffic congestion. The work efficiency might not be properly utilized because of these reasons. Security is always

Journal on Today's Ideas –
Tomorrow's Technologies,
Vol. 4, No. 1,
June 2016
pp. 33–47

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considered to be an important element for any commercial area. Agrabad CBD is identified as one of the crime prone zone in Chittagong which became vulnerable for mugging and other street crimes. At least 40 spots in Chittagong are identified as vulnerable for mugging and other crimes and CBD is one such zone (Swapan, 2012). But for its limited resources it is difficult to spread its working area and other facilities. By renewal policy its efficiency can be regained and working environment can be improved.

1.2 Background of the Study Area

Chittagong, the gateway to Bangladesh has a long tradition of being the most important centre of trade and commerce. Chittagong city is bounded on the north by Tripura State of India, on the east by Khagrachhari, Rangamati and Bandarban zilas, on the south by Cox's Bazar zila and on the west by the Bay of Bengal and Feni and Noakhali zilas. The total area of the Chittagong city is 5282.92 sq. km. (2039.00 sq. miles) of which 1700 sq. km. (456.37 sq. miles) including coastal area is under forest (B.B.S., 2012).

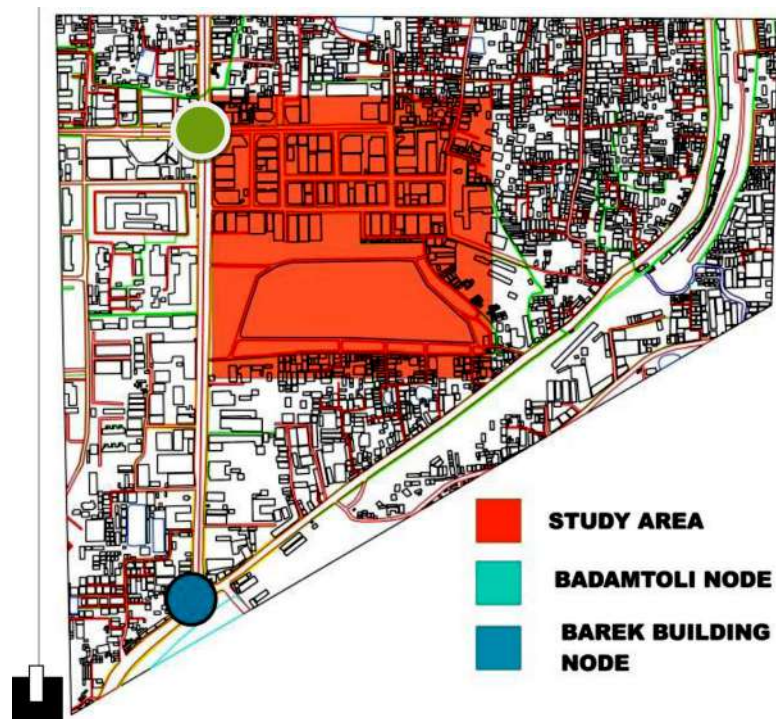


Figure 1: Study area (Base Plan), Source-CDA.

The main seaport of Bangladesh is located at the estuary of the Karnafuli River. Chittagong is also called the commercial capital of Bangladesh (B.B.S., 2012).

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Agrabad area is act as the downtown for the port city. Chittagong city is developing towards south west part after 1947. After the end of the colonial rule, the village Halisohor, Agrabad, Askarabd became integrated, and then the modern financial district developed during the year 1950 (Chowdhury, 2009). Agrabad area was developed as a commercial business area by Chittagong Development Authority (CDA). Agrabad Commercial Area is within the boundary of Double Mooring Thana, inside DPZ-3, DPZ-2. Total Area is almost 638.82 acres. (DAP, 2008).

The grid iron pattern of road network, socio economic environment, work place image make Agrabad area different from the other areas and the first choice for business and corporate office.



Figure 2: Grid iron road pattern of Agrabad CBD (Base Plan), Source- CDA.

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1.3 Methodology

The study is done by exploring the case studies to help to understand the criteria for Urban renewal policy that could be used for a commercial area. SWOT (Strength, Weakness, Opportunities, Threat) analysis was done to find out the key criteria in renewal process. An extensive field survey was done for collecting data to portray the present situation.

2. URBAN RENEWAL STRATEGY

Urban renewal is a phase of design process, where main focus gives on the existing physical forms. (D.B.H.K. 2011). In renewal process main target is to increase the efficiency of the existing social and economic conditions through alternation of the physical forms. According to ROSE, F.C. (1993), only the local condition can indicate the social, economic or other issues to be considered in the urban renewal agenda. But the main principals for all renewal process is to improve make the degraded condition better.

For an urban renewal, it is very much important to analysis the site condition into several criteria. Otherwise the process might lose its track in the midway. In this paper, the site was analyzed and surveyed based some values. They are character of the area, community, enclosure, public realm, accessibility, legibility, adaptability (Carnona, 2001).

2.2 Why Good Urban Space Required For Commercial Area

Good quality urban spaces are very much essential for any kind of sustainable development. It has direct effect on economy. It helps to develop mixed use options, providing cost effective high dense areas, reduce maintenance and energy use cost, create scopes for more investments due to good connectivity and security. It also helps to develop social & cultural parameter which indirectly benefits the economy. A quality urban space can create interesting images of the whole area which increase the public interest about it. If public accessibility can improve throughout the site, then private business firms will feel the interest to invest more. Occupies profit from better performance, satisfaction of their employees and from the increased prestige while a well-designed development satisfies visitors and clients.

2.3 Study of Different Urban Spaces

2.3.1 Alexanderplatz, Berlin, Germany

Alexanderplatz is a large public Square and transport hub in the central Mitte district of berlin, near the Fernsehturm. It is a cattle market in the middle ages,

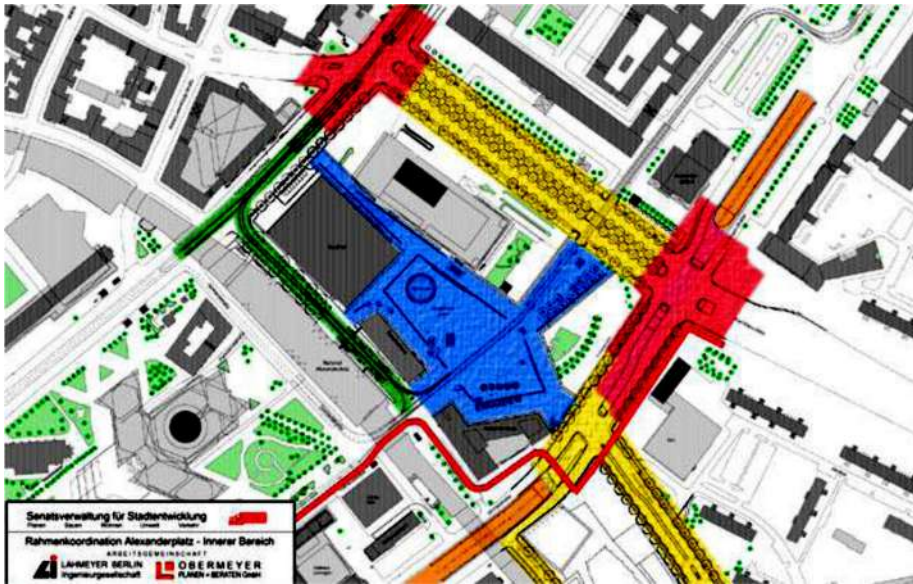


Figure 3: Location Map: Alexanderplatz, Berlin, Germany, Source: www.stadrentwicklung.berlin.de (April, 2015).

a military parade square and an exercise ground for nearby barracks until the mid 19th century. The square named after the Alexander I, Tsar of Russia, on his visit to Berlin in 1805. Layer upon layer of Berlin's urban history is located in Alexanderplatz. In 1930, it was developed as a traffic circle and transit hub. After 40 years it again redeveloped as pedestrian plaza. After the reunification of Germany the area again goes through a renewal project (Fahey, 2014).

Alexanderplatz shows a good functional solution in terms of connectivity. It has multiple points of access. It is framed by 5 tall buildings. The plaza was constructed of Granite, for expressing its cold impersonal feel. This plaza has few trees which does not attract the visitors much in a hot sunny day. This is a place of social interaction, so different cultural and social programs are held in the plaza. The plaza is not designed for considering any dominant user group. This plaza has both the formal and informal use. The plaza is basically used for crossing through different places. So when persons pass through the plaza they can interact with others. Sometimes vendors sell their hand goods in here, so people can buy products from the vendors. Respondents said that it is a major hub for public transportation which makes it a convenient location for eating and shopping. For the lack of galleries and dominant plaza it has lost its appeal as a public civic space. This plaza is basically used in

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Figure 4: Alexanderplatz in 1796.



Figure 5: Alexanderplatz in 1912.



Source: www.guenterschneider.de.

Figure 6: Aerial View-Alexanderplatz (Present).



Figure 7: Public Use, Alexanderplatz, Berlin, Germany.

the weekends, but on a regular basis (Fahey, 2014). From the analysis it is clear that discomfort environment does not attract peoples much to spend their time more. Social integrity is also hampered by physical discomfort and that affect the surrounding business. In a word, Alexanderplatz is become a missed opportunities due to the design policy.

Swot Analysis of Alexanderplatz

Strength	Weakness	Opportunities	Threats
<ul style="list-style-type: none"> - Place for social activity -Variety of user groups - Good social interaction - Has different function like market place - Major hub of transportation for the city 	<ul style="list-style-type: none"> -lack of vegetation and seating -uncomfortable environment specially in the sunny day 	<ul style="list-style-type: none"> - By creating more comfortable area, it can attract peoples - which helps to increase business opportunities - if peoples spend more time here, it benefits the sidewalk cafes, interactive arts, amenities. 	<ul style="list-style-type: none"> Main threat is the complacency and stagnation

3. PRIMARY CONSIDERATION OF AGRABAD CBD

Agrabad CBD is the main commercial area for Chittagong city. From the case study it is found that a commercial area can be improved by developing the social aspect. For developing an attractive, affective and lively area, it is very important to consider the socio economic aspect for design. Public interaction, public realm space, easy accessibility all are very important consideration for design. Proper safety is also an important point, which directly related to the effectiveness of any commercial area. During the peak hour the area facing huge load and at that period availability of proper accessibility option like both pedestrian and traffic is very important. After the peak times, the area become a dead place which is a negative point for Agrabad area. Mixed use development can be used as a way to make the area more useful. Community development is also necessary for the effective, safe and secure working area.

3.2 Street Use

Street use is very important for any commercial area. In Agrabad there was found multiple street uses. Hawkers are found very commonly in the area.

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Figure 8: Agrabad Area Land Use Map, Source- CDA.

Different types of products are sold by those hawkers in different points of the area. Various types of street food shops, “Tongs” (Small tea stalls) are very common in this area. They basically used the footpath and road sides, which creates traffic problems in the peak period.

3.3 Traffic Flow Analysis

An extensive amount of field survey was done in the important node points of the business area in Badamtoli & Berek Building Mor. Here roads can be classified in two major categories, Primary road & secondary road. In Chittagong both motorized and non-motorized vehicles travel in the same roads. Roads are classified according to the flow of the public service and private service. In Chittagong bus (40-45 seats), mini-bus (30 seats), rider (14 seats), tempo (10 seats) are basically used. Rickshaw (2 seats) is a non-motorized public service. Car & taxi (3-4 seats) considered as a private service. Here data shows the both inflow and outflow late from the both direction.

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Figure 9: Street hawkers, Source- Author.

Chart 1- Badamtoli Node (no/hour)

Vehicle Type	8.00am-11.00am	11.00am-2.00pm	2.00pm-5.00pm	5.00pm-8.00pm
Bus	30	20	12	40
Car	100	60	20-25	50
Taxi	60	50	30	40
Tempo	70	50	25	30
Rickshaw	90	60	40	80
Pedestrian	1500-1800	1000	600	1500

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Chart 2- Barek Building Node (no/hr)

Vehicle Type	8.00am- 11.00am	11.00am- 2.00pm	2.00pm- 5.00pm	5.00pm- 8.00pm
Bus	30	20	12	40
Car	80	40	30	60
Taxi	70	60	30	60
Tempo	70	50	25	30
Rickshaw	100	80	50	120
Pedestrian	1000	700	500	900

According to field survey of the two important node's of the primary roads, the point is clear that traffic flow is high at the morning time and gradually decreasing up to evening time, but after 5.00pm the flow rate is increasing and after 8.00pm the flow rate is gradually came to zero with the time spending.

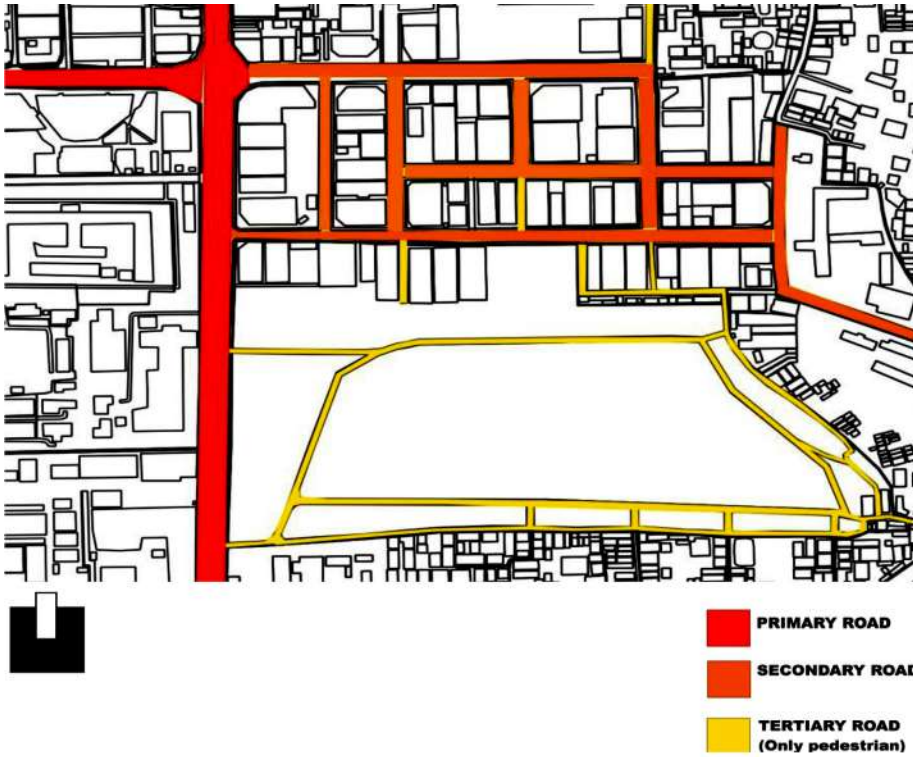
In the secondary roads, no bus, mini bus, tempo, rider service is available. Here the main traffic is private car, rickshaw, and taxi.

From the field survey of the secondary roads (Fig10), it was found that the traffic flow rate is low in the morning and increases gradually and highest in the evening. But after 8.00 pm traffic flow rate reduces much higher rate and become very low.

So, common scenario is in both cases the night picture is less vehicle and pedestrian flow, which makes the area dead at night, which is not a good sign for a commercial area to leave the space used for a long period of time.

Chart 3- at Secondary road (no/hr)

Vehicle Type	8.00am- 11.00am	11.00am- 2.00pm	2.00pm- 5.00pm	5.00pm- 8.00pm
Car	75	100	110	90
Rickshaw	30	50	40	50
Taxi	40	60	75	50
Pedestrian	400	800	600	700



3.4 Parking Condition

Parking is a problem for the area. There is no fixed parking space in the area. Though office worker can park their own vehicles in the fixed place,



Figure 11: Illegal rickshaw parking, Source Author.

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visitors or other persons who come for different types of services have no fixed place to park. So they park their public vehicles besides the roads. Illegal rickshaw and taxi parking in various points are also very common image in this area. Those illegal parking creates huge problems in the peak periods.

3.5 Land Use Pattern

From the land use map of the area it was found that it is a high dense commercial area, almost every building is multi storied. World Trade Center, which is 21 storied, is the highest building of the area. Chittagong's only ethnological museum is situated in the area. 2 mosques, 2 temples, 1 Government College, 1 shopping mall are also placed near the area.

3.5 Agrabad Deba

Agrabad Deba is a manmade lake situated at the south side of the commercial zone. Area of the lake is 27 acres. World trade center, which become the landmark of the area situated at the northern side of the lake. On the eastern & southern part of the lake there is a railway colony. Though it is a government colony, most of the residents of the area are low income group. It has no direct visual and physical connection with the road side. In the west part of the lake one mosque is situated. All other structures are mainly shops. It has a good opportunity to develop as a public realm space.

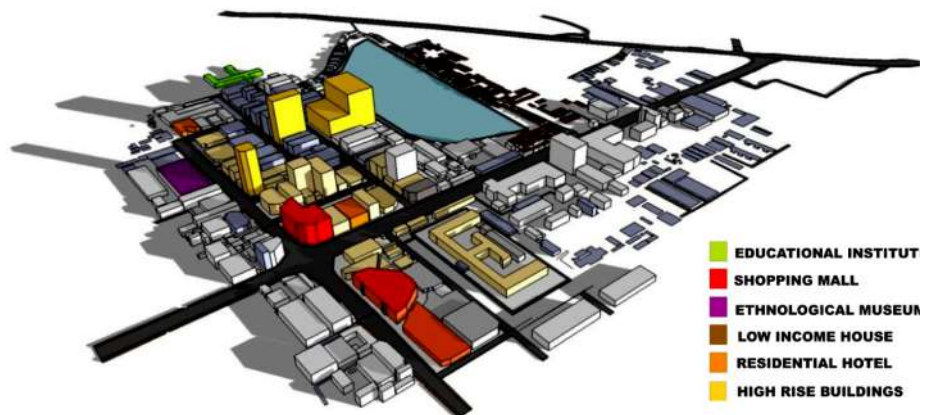


Figure 12: Agrabad Area Land use Pattern, Source Author.

3.6 Comfortable Environment

For a commercial area it is very important to develop comfortable environment. In Agrabad all the roads and other spaces are basically concrete mare. Percentage of green space is very low. So the area absorbs heat in the day time and radiates it at the later part of the day. It is also very important to have enough space between high-rise buildings, so proper wind flow and day light can be available in the inside part of the building. But for high density and land price it is not seen here so artificial mechanical system is used in most of the buildings to maintain comfortable environment. Only open space of the area is the water body, DEBA. But the 21 storied world trade center WTC situated with a narrow spacing of the area, which hampers the affectivity of DEBA.

3.7 SWOT ANALYSIS OF ABGRABAD CBD

3.8 Proposed Policies

From the analysis it is clear that though Agrabad CBD has lot of problems it has some good strength and opportunities to develop the condition of the area far better and comfortable.

First proposal is to develop the traffic system and node points of the area. Traffic flow can be made one way to decrease the pressure on main Badamtoli Node Point.

More emphasize should be given on the pedestrian network. By reducing vehicular traffic and increasing pedestrian flow traffic haphazard can be avoided easily.

Some fixed parking spots need to be identified, with a comfortable distance from the work places. Deba has a great possibility to become a public realm space, so it should be utilized fully. An attractive walkways and seating space around the DEBA can make it attractive. But first of all it is very important to ensure proper visual and physical connectivity with the main road stream.

Another 2 important issues are the hawkers and night time low use. Both the problems can be solved by 1 way. Night market is the best possible solution to utilize the night time fully & make the area livelier (Hollands, Chatterton, 2003). Hawkers can be allowed to sell the products after the office period and their selling time are fixed. So peoples working here and from near areas can come and buy their necessary products at that period. These will make the roads and pedestrian walkways free in the peak time & also ensure the security and liveliness at night. These will also help to develop to improve the local business & also the economic condition of the low income groups.

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STRENGTH	WEAKNESS	OPPORTUNITY	THREAT
<ul style="list-style-type: none"> - Grid iron road pattern - internal roads do not create a dead end - Types of business activity - Different class of people depend on CBD - High land value -Both Government and non-governmental organizations situated -Ethnological museum - Sufficient religious structures - Water body like DEBA 	<ul style="list-style-type: none"> -Water logging - Traffic haphazard in office period - Population drop fall rate after peak hour - Lacking of proper parking - lacking of public interaction space - Poor waste management - Congested high rise buildings without proper open space - Poor pedestrian condition - No organized space for hawkers 	<ul style="list-style-type: none"> - Ethnological museum may become a good place of recreation - Hawkers can bring life in the deserted CBD at night -Development of the internal road network -Better positing floating Hawkers can play a part in the local business - Improvement of pedestrian condition might help to reduce traffic load - Develop a civic space around DEBA 	<ul style="list-style-type: none"> - High density as considered as an asset, it a threat also - Increasing number of traffic flow - Low population flow decrease the security condition at night - Congested high rise buildings are a threat for disaster period



Figure 13: Proposed traffic flow. Source-Author.

4. CONCLUSION

In a high dense commercial area, by developing only multistoried buildings, proper comfortable and pleasing working environment cannot be created. Open comfortable public interaction and realm space is very important for development, which is not waste of space. Community participation is also mandatory for any development policy. That helps to full utilization of the area and also the safety. By the Renewal Strategic Policy the road for the creation of an active, lively space is created, which lead an area to the goal. By only this process without demolishing everything a new era can start.

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ACKNOWLEDGEMENT

I would like to thank my mentors Ar. Kanu Kumar Das, Ar. Debsree Mandal for helping and guiding me in the studio project about Agrabad and also for their precious suggestions. I also thank all the friends for their supports. And last not the least I thank my parents & the almighty God for everything.

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