

Prospect of Redevelopment of the Showarighat Area of Dhaka Central Jail

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Abstract

Dhaka Central Jail shifted to Keranigonj has enormous open land parcel, which is about 36.76 acres. It has been proposed to convert the old central jail place into public space. Such land use change will have an impact on the areas surrounding the central jail. A redevelopment plan is therefore required to control and guide this change in neighboring areas compatible with land use change of old central jail considering the aspirations of local residents. The purpose of this study is to ensure the participation of local people while preparing the redevelopment plan. In this regard, PRA tool is used while conducting the study. The study area is primarily a business hub with wholesale and retail activities and transport agencies. Small scale chemical industries are also visible in this area. Moreover, the area is bestowed with many inconveniences, like narrow road, traffic congestion, undesirable land use, water logging and lack of open spaces. In field survey, it is found that most local residents think that old central jail should be converted as a public space for recreational and community activities. Although different people have different views concerning the redevelopment, their opinions are accommodated in the proposals for redevelopment in this area.

Background of the Study

Dhaka Central Jail was the largest jail in Bangladesh, located in Nazimuddin Road of old Dhaka. It was a fort during pre-Mughal period which was built by Ibrahim Khan. Later in 1638, Islam Khan rebuilt the fort containing a palace, a court and a mint inside the fort. Most of the important public services were carried out there (Banu *et. al.*, 2015). In the early 19th century, the fort was renovated, and converted into a jail; the Kotowali Police station was also co-located here until 1836. The records from 1833 show that the capacity of the jail at that time was 800 inmates, and the jail had an average of 526 inmates every day. The Dhaka jail was converted into the central jail for East Bengal (Mamoon, 1993). During Anti-British Movement, many activists were held in this prison. In the Pakistan Period, especially during the Language Movement of 1952, the 6 Point Movement, and the Bangladesh Liberation War, it was used to house criminals as well as political prisoners. In recent years, War Criminals are captivated at the Central Jail and a few of them are sentenced to death and hanged till death in the Jail premises (Mamoon, 1993). Few years ago, the central jail was planned to be shifted to Rajendrapur, Keraniganj and it was shifted on July, 2018 and the space of old central jail has been proposed to

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transform into public space, such as children's park, convention center, community center, swimming pool, gymnasium, modern shopping mall and parking place (Daily Star, 2016). The alteration of land use of central jail into public space is expected to bring positive impact on surrounding areas (Song *et. al.*, 2016). Regeneration and redevelopment of these areas are expected to occur, which can bring improvement into economic, physical, social and environment condition of the area by a mixture of demolition, construction and refurbishment of dwellings having regard to urban design guidelines (Said *et. al.*, 2014). It should occur in a planned way so that it improves the existing condition of the surrounding areas. It is also required to ensure that the change in surrounding land use reflects the hope and aspirations of local community. In this regard, local peoples' participation in planning is required for the fulfillment of people's demand and expectation (Mwiru, 2015). Community participation also plays in promoting sustainable physical planning in developing countries because people feel the sense of belonging and they recognize the benefits of their involvement (Ahenkan *et. al.*, 2011). The research aimed to identify the expectations and aspirations of local residents regarding the regeneration and redevelopment of the surrounding areas of old central jail. The study also focused on the identification of the problems of the locality through the discussion with the local inhabitants and the suggestions provided by them will be accumulated in order to identify a way forward to it.

Research Objectives

The following are the objectives of the research:

- Study the physical and socio-economic characteristics of the surrounding areas of Dhaka central jail.
- Explore the opportunities of redevelopment of the area considering the vision of local people and ensuring their participation in redevelopment plan.

Literature Review

The literature review on the practice of community participation suggests that the values of public participation are widely recognized in redevelopment of an area (Van Empel, 2008). The town Hameln introduced urban regeneration and redevelopment of old town with local citizen involvement in the planning and implementation. Regeneration requirements of Hameln's old town was marked by its extremely dense and small-proportioned town structure, the deficient state of the historical building substance, as well as capacity constraints on the volume of traffic. The aim of the study was to look after the townscape, the modernization of buildings, additional new buildings, the creation of open spaces and provisions for traffic calming were planned. Within 1974, a total of 265 residences, 53 business units and 5 public facilities were redeveloped (William, n.d.). Contemporary planning theories acknowledge the value of community participation suggesting that community involvement has the potential for sustainable outcome in city development (Van Empel, 2008). A manual for City of San Diego's General Plan was introduced which provided citywide policies that will guide development with their own land use plans, referred as community plans. The process of

preparing or updating community plans would incorporate community participation and the sharing of their knowledge and ideas that stimulates the public process. For this, outreach strategy would offer a variety of participation options such as surveys, workshops, open houses, visual displays, charrettes, and regular monthly meetings to ensure public involvement approach (City Planning and Community Investment, 2009).

Participatory Rapid Appraisal (PRA) tool has been proven successful to ensure community participation in successful decision-making, (Kumar, 2002). PRA is a set of methods that enable individuals to share and assess their local knowledge, thereby allowing them to plan and to act (Chambers, 1994), without the influence of outsiders in the process (World Bank, 1994; Alam *et. al.*, 2012). Basic techniques include: understanding group dynamics, surveying and sampling, interviewing, community mapping (Ling, 2011). In this process, oral communication and visual communication such as pictures, symbols, physical objects etc. are used to ensure participation of all groups (Robinson-Pant, 1995). The advantages of PRA include local participation in planning and decision making, use of local and community resources for development activities. It strongly represents the stakeholders' desire and targets which may not be possible in other studies (Madon *et. al.*, 2018). At present, many urban areas around the world use PRA technique for various purposes like education, and disaster management commonly in both urban and rural areas (Kumar, 2002).

Methodology of the Research

Dhaka Central Jail has a great influence in the surrounding areas of old Dhaka. The transfer of the inmates of Dhaka Central Jail has created another opportunity of influence of the surrounding areas as the space will be used for community purpose (Daily Star, 2016). The study aimed to identify the redevelopment opportunity of Showarighat-Chawkbazar area which surrounds a portion of central jail area. To conduct the research, both primary and secondary data was collected. For instance, map of old Dhaka was collected from the Detailed Area Plan (DAP) 2006 for study purpose and different types of PRA techniques was used which is briefly discussed in Theoretical framework.

Theoretical Framework

a) Social Map

Social mapping is the graphical representation of the social and physical features of an area, such as- income pattern, school, college, hospital, mosque, graveyard, waste disposal point etc. (Kumar, 2002; Kathirvel *et. al.*, 2012).

b) Resource Map

Resource map is used mainly for PRA methods, which focuses on the natural resources in the locality and depicts land, hills, rivers, fields, vegetation, etc. Resource map reflects people's perception on their own community in terms of natural resources (Kumar, 2002; Crane *et. al.*, 2003).

c) Transact Work

Transect walk is another PRA method which is used to explore the spatial dimensions of people's realities used for natural resource management. It provides a cross-sectional representation by observing, asking, listening, looking, identifying different zones, seeking opportunities and areas for improvements (Kumar, 2002). The building height, slope of the area etc. can be understood by transect walks and the topography, natural resources, opportunities etc. of the study area can be recognized. In this regard, two sections of transect walk has been prepared.

d) Pair-wise Matrix

Pair-wise ranking is a popular PRA method that helps in decision making processes and criteria used by them to arrive at their preferences. This tool was used in this research for the comparison of problems identified by the local experts through focus Group Discussion (FGD) to determine highly frequented and severe problems of the area (Kumar, 2002; Bozóki *et. al.*, 2011).

e) Cause-effect Diagram

The cause effect diagram represents the casual factors of phenomenon, activity or problems and their effects. It presents visually the cause, effects and their inter linkages, which help to have an in depth understanding of a particular topic (Kumar, 2002) which was used to identify the major issues and problems of the area and four major problems of the community was identified.

f) SWOT Analysis

SWOT analysis is an examination of the study area's internal strengths and weaknesses, its opportunities for growth and improvement, and the threats of the external environment presents to its survival. The SWOT analysis of Showarighat was done to identify the strength and possibility of the development, the limitations and the possible risk of any adversities (Gretzky, 2010).

g) Dream Map

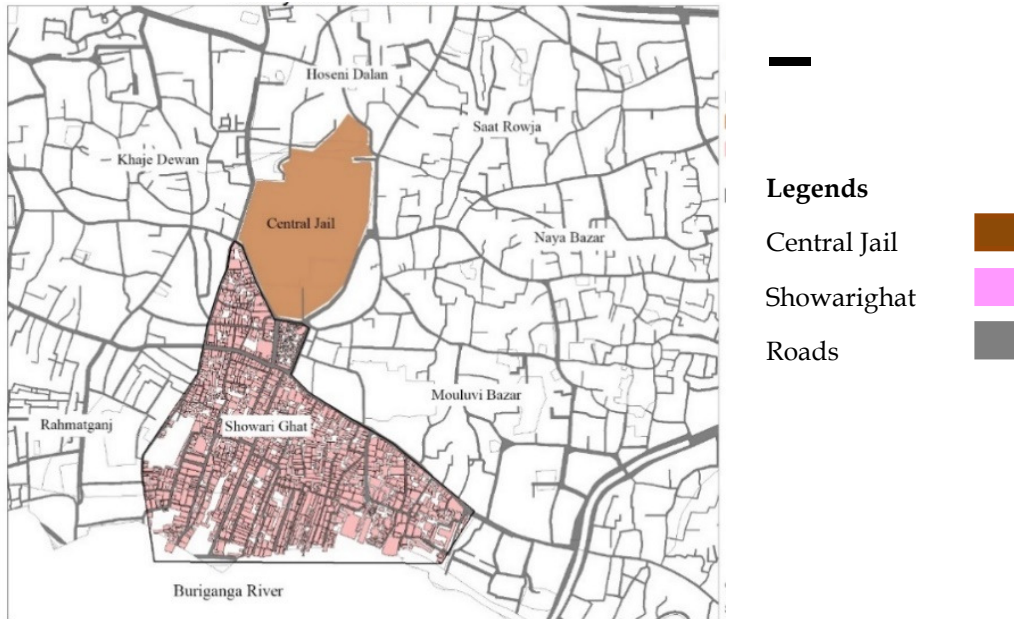
Dream map is a PRA method which was used to depict the future in line with the desires and aspirations of local people regarding their community of Showarighat area. The participants were initially asked to draw a map representing the present situation. Then they were asked to draw another map that represents the desired situation reflecting their ambitions and dreams (Kumar, 2002; Chambers, 2011).

Study Area Profile

Location of the Study Area

The Showarighat area is situated to the south direction of Central Jail, where Gabtali-Sadarghat road forms the southern boundary and Buriganga River flows in the south of the study area. Mouluvibazar and Rahmatganj are situated in the east and west of the study area respectively. On the other hand Chawkbazar is located on the northern bank of river Buriganga at Old Dhaka. The areas are under the jurisdiction of Dhaka South City Corporation (DSCC). An embankment was constructed in 1980s along the

Showarighat (Buriganga River) which is now known as Shadarghat-Gabtolli Road. The areas are vulnerable to fire hazards. Several fire accidents have taken place in Chawkbazar which led to renovation and reconstruction of the area (Huq, 2016). The socio-cultural characteristics of these areas have also undergone through significant changes. Population densities have risen exponentially, and new settlements are being constructed without following any rules and regulations (Islam *et. al.*, n.d.).



Source: Detailed Area Plan, 2006

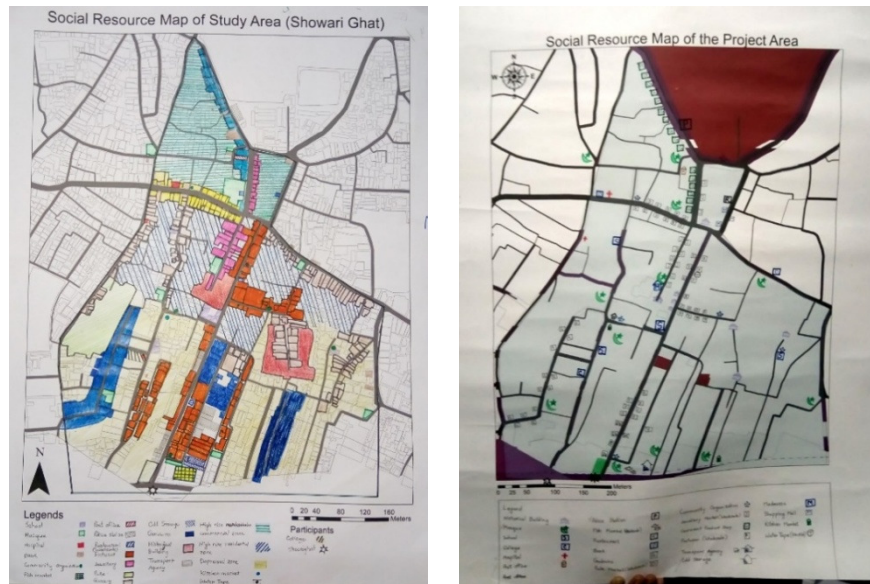
Figure 1: Map of Showarighat

Land Use Pattern of the Study Area

Most of the land parcels of Showarighat are used for multiple purposes, whereas in some buildings beside Chawkbazar Circular Road, commercial use is prominent. In most cases of mixed use buildings, ground floors are used for commercial purpose and upper floors are used for residential purpose. Several transport agencies are found near the Gabtali-Sadarghat road.

Social and Physical Characteristics of the Study Area

The provision of high rise buildings is noticed in Chawkbazar area, which are the residences of high income group. The residence of middle income group are usually mixed use buildings which are old and in poor conditions. Low income people live near the Buriganga River in Katcha or Semi-pucca structures. Four schools, one college, one madrasa, two hospitals, one ward commissioner office, five community organizations and 12 mosques are found in this area.



Source: Field Survey, 2017

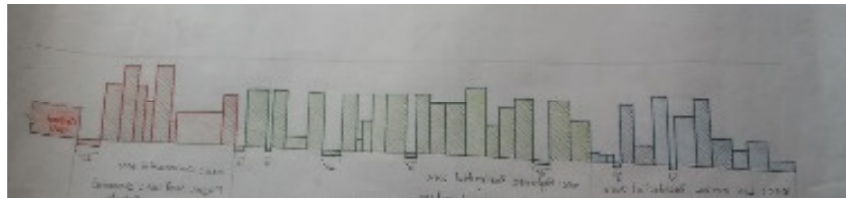
Figure 2: Social and resource map and social and physical characteristics of the study area

View of the Study Area through Transect Walk

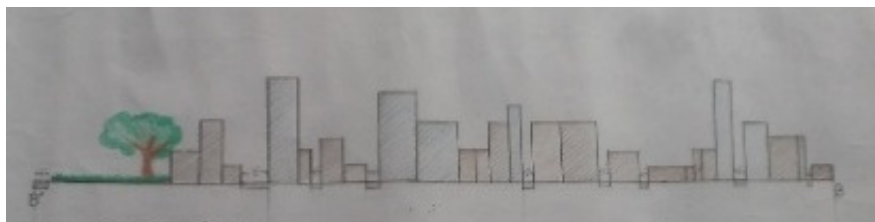
For Section AA':

The whole section is divided into 4 major zones and central jail in one side of the section. The zones are formulated based on the land use and height of the building.

Section AA'



Section BB'



Source: Field Survey, 2017

Figure 3: Sections of Transect Walk

Zone 1: Commercial Zone

Zone 1 is a commercial area with high rise buildings where ground floors are used as footwear, jewelry, clothing shops etc. Construction of multi-storied buildings was

inaugurated with the permission of RAJUK after 2005. Water logging is not pragmatic due to the higher elevation of roads. The maximum width of the road is 20ft and common transport modes are rickshaws, auto rickshaw, CNG etc. Trucks and push carts reduce the capacity of the roads and result in traffic congestion.

Zone 2: High Rise Residential Zone

The dominance of mixed use (residential cum commercial) buildings can be visible in zone 2. Bara Katra is situated in this zone the ground floor of which is used for commercial purpose. Leather industries and chemical industries are also found without any fire protection measures. The maximum road width is 20ft and although some roads are too narrow and heavy vehicles result in traffic congestion and water logging deteriorates the situation. Several transport agencies are located in this region.

Zone 3: Low Income Residential Zone

The slope of this region is lower than the surrounding areas and so water logging has become a regular occurrence. As cold storage, fish market, chemical, leather and plastic industries are situated in this zone, heavy transport movement can be seen. Narrow roads, poor road condition and imbalanced vehicular movement cause massive traffic congestion. In Friday, the volume of truck increases although traffic movements are restricted.

For Section BB':

Zone 1: Commercial Zone

The zone is mainly commercial area with buildings below four storied and the ground floors are used as stores, grocery shops, wholesale pulse market, footwear etc. The upper floors of those buildings are residential houses. Most chemical, plastic and leather industries are one storied buildings. High rise building construction was initiated after 2005. Due to high elevation, no water logging is seen in this area.

Zone 2: High Rise Mixed Zone

In this zone, there is provision of both residential and commercial land use. The first two storeys of maximum buildings are used for commercial purpose and the upper floors are used for residential use. Roads are narrow in this area and there is poor road condition. Maximum building structure is pucca and 6 storied buildings are constructed after 2005.

Zone 3: Low rise Mixed Zone

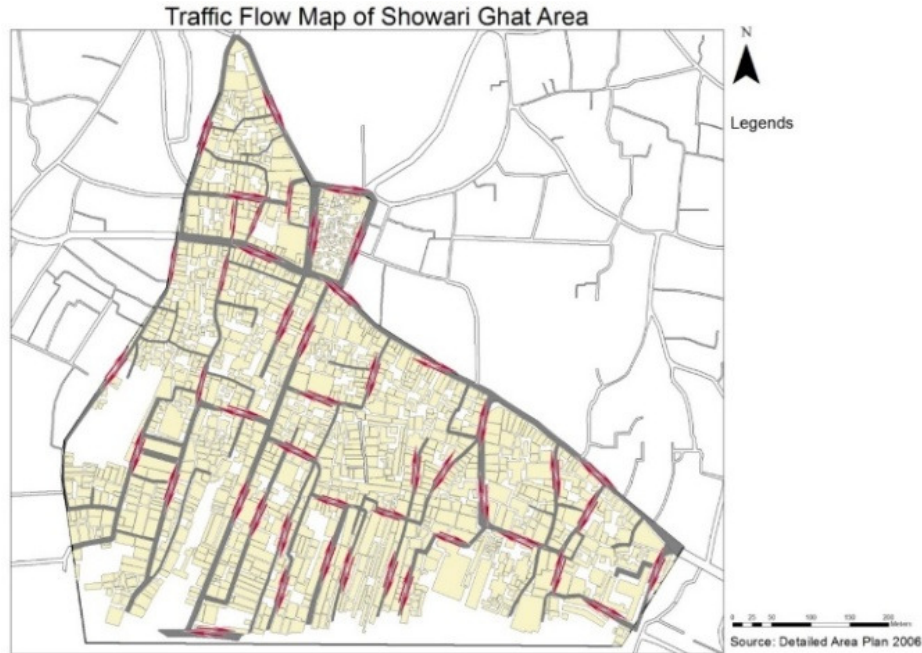
The zone contains an open space and some commercial buildings are also found. Plastic industry and leather market is located in this low rise buildings. Most buildings are pucca structures. Water works road is the widest road of this area and the road condition is good.

Traffic Condition and Mobility in the Study Area

The mobility pattern in Showari Ghat area is described keeping in mind some factors. They are: Traffic flow directions in different roads, Traffic volume at different times of the day and major transport modes in different routes in the area. This study has been done through observations and discussion with the local residents and businessmen of the area.

Road Pattern and Traffic Flow

This area has major roads like Sadarghat-Gabtoli road (30 feet), Mitford road (20 feet), Champatoli lane, Devidasghat lane, Chak Circular road, Waterworks road, Showari Ghat lane, Hekim lane, Choto Katra road and so on. Chak circular road encircles the business hub at Chakbazar to the south of the Central Jail. Water works-Mitford road and Gabtoli-Sadarghat roads lay parallel on the north and south side respectively. The Choto Katra road, Showari Ghat road Champatoli lane, Devidas Ghat lane are connecting these two major roads through the study area. All the roads have both direction of traffic-flows.

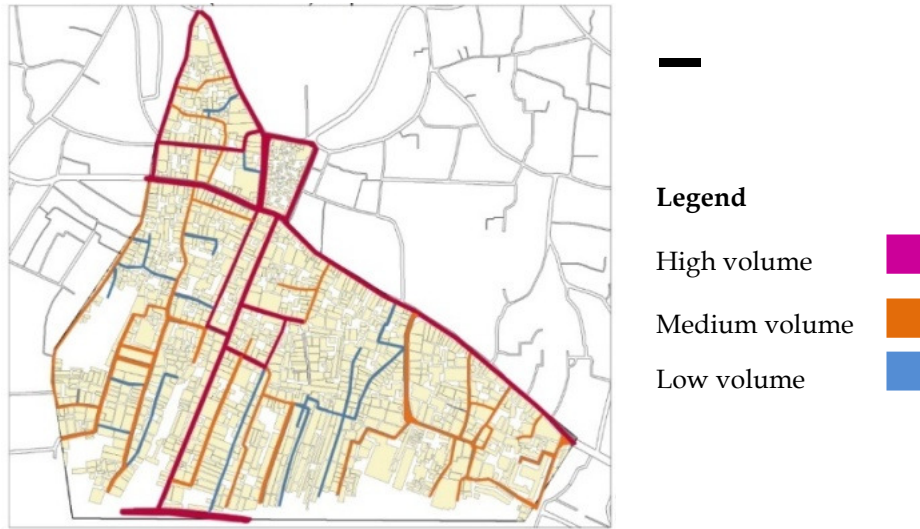


Source: Field Survey, 2017

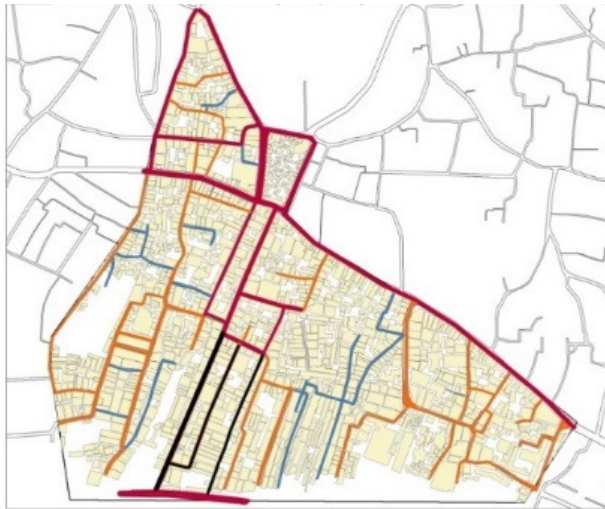
Figure 4: Road network and traffic flow map of Showarighat area

Traffic Volume and Transport mode

Traffic volume in the Chawk circular road, Showarighat lane, Gabtoli-Sadar Ghat road, Waterworks-Mitford road is very high in this area. All types of vehicles ply on these roads including bus, truck, CNG, rickshaw, pushcart and so on. In Waterworks-Mitford road, Champatoli lane, Showarighat road all vehicles except bus are available. No traffic control system exists and road capacity is low with respect to traffic volume resulting congestion of traffic. The area is completely a mixed use area and commercial use has the maximum share. So pushcart and trucks are very common resulting congestion of traffic.



(Traffic volume at 10 am)



(Traffic volume at 5 pm)

Source: Field Survey, 2017

Figure: 5: Traffic volume in the Showarighat area

Analysis of the Problems in the Study Area

In this section, the problems of the Showarighat area were analyzed. In this purpose, the pair-wise matrix and problem tree tools of community participation were used. This ensures the participation of the inhabitants, land owners, businessmen, students, old and youth of the area. In this section, only the physical planning related problems of the area were found out and analyzed.

Identification of the Problems

The representatives of the area were asked about the physical planning related problems of Showarighat. They listed the problems through open discussion and arguments. The major problems of the area are mentioned in Table 1. The people were made aware about the physical planning related problems prior to their discussion and arguments.

Problem Prioritization

The local inhabitants listed nine problems related to physical planning. These nine problems are ranked using the pair-wise matrix tool (Table 1). From the pair-wise matrix, four highly frequented problems were identified and their cause-effect diagrams were prepared.

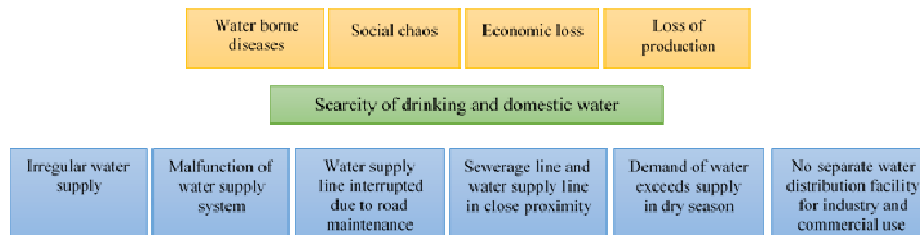
Table 1: Pair-wise Matrix

	Water logging (WL)	Narrow road (NR)	Uncovered drainage (UD)	Scarcity of water (SoW)	Lack of open space (LoOS)	Congested building (CB)	Unusual mix of land use (UMoLU)	Lack of community facilities (LoCF)	Lack of waste disposal system	Total count	Rank
WL		WL	WL	SoW	WL	WL	WL	WL	WL	7	2
NR			NR	SoW	NR	NR	NR	NR	NR	6	3
UD				SoW	UD	UD	UMoLU	UD	UD	4	5
SoW					SoW	SoW	SoW	SoW	SoW	8	1
LoOS						LoOS	LoOS	LoOS	LoOS	5	4
CB							UMoLU	LoCF	CB	1	8
UMoLU								UMoLU	LoWDS	3	6
LoCF									LoWDS	0	9
LoWDS										2	7

Source: Field Survey, 2017

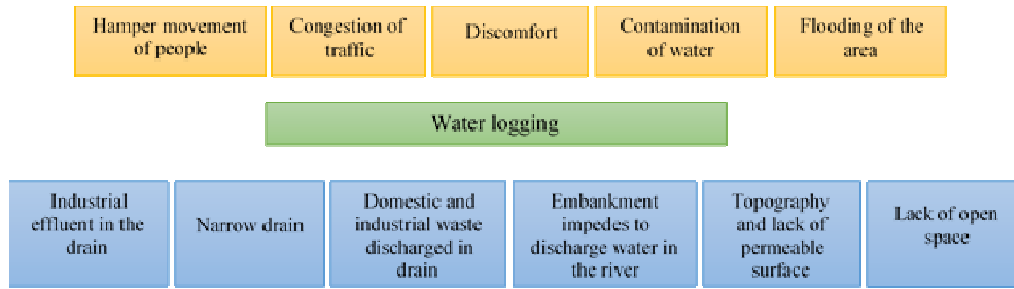
Analysis of Causes and Effects

Top three problems of the area, were analyzed in details. The causes and the effects of the problems have been described with the help of problem tree. The prime problems of the area are scarcity of drinking and domestic water, water logging and narrow roads. The causes and effects of these problems are shown in Figures 6, 7 and 8.



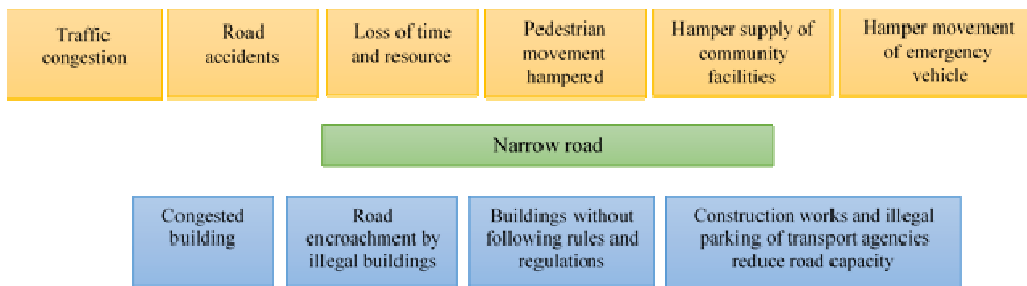
Source: Field Survey, 2017

Figure 6: Cause-effect diagram for scarcity of drinking and domestic water



Source: Field Survey, 2017

Figure 7: Cause-effect diagram for water logging problem



Source: Field Survey, 2017

Figure 8: Cause-effect diagram for the problem of narrow road

Redevelopment Plan of the Study Area

SWOT Analysis of the Study Area

For the research purpose, SWOT analysis of Showarighat area was scrutinized to find out the possible internal and external positive and negative impacts of the study area due to redevelopment. As the central jail is now vacant, government is discerning about planning this land by keeping the old tradition of Chawkbazar and its historical importance. The factors that will facilitate the development process and its outcomes in the surrounding area and the factors that will become a threat for development process can be inspected through the SWOT analysis of the area.

a) *Strength*

- Land owners of the areas close to Central Jail, Chawk Circular Road and Waterworks roads showed their interest about land accumulation and development.
- Private sectors built some high residential buildings through land accumulation and it inspired others.
- Government intervention for accumulation of land owners through compensation.
- Transport agencies are willing to shift their business to the areas adjacent to Sadarghat-Gabtolli road. If the transport agencies are relocated beside the road, it will not only facilitate their business, but also help the normal traffic flow in the Showarighat area.

- Industry owners (leather, plastic and chemical etc.) are willing to shift their factories to a well-planned industrial zone with utility and waste treatment facilities provided by government.
- Adjacent lands of Sadarghat-Gabtolli Road are *khas* land, and covered by temporary buildings so they can be easily acquired and land development can be done here efficiently.
- Buildings which have been constructed not following standard setback and FAR and other planning principles can be acquired for redevelopment showing the legal issues.

b) Weakness:

- Land owners of the middle portion of the area were not interested in land redevelopment because the property belongs to them from their ancestors.
- Most of the buildings in this area are constructed after 1990s, which may be the reason of their disagreement for land redevelopment.
- Utility service lines lies belong the roads are in haphazard condition. Along with the land development and accumulation, the service of utility lines may also be hampered.

c) Opportunity

- The redevelopment will provide opportunity to spread the commercial activity of the adjacent areas.
- Redevelopment of central jail will bring potential land use change in the adjacent areas which is a great opportunity for Showarighat area. It may result in land value increase of adjacent areas.
- Sadarghat-Gabtolli road may facilitate the freight movement if the transport agencies and industries are moved beside the road.

d) Threat

- Land use development of the adjacent areas need to be checked whether it is conforming to the central jail redevelopment or not.
- If the land acquisition of the adjacent areas is not checked properly, the area will be congested again which will increase their problem rather solving it.

Expectation of Local Community, Businessmen, Industrialists and Transport Agencies

From the perspective of local inhabitants, Businessmen, transport agencies and Industrialists, there could be solutions of the existing problems:

- To solve the scarcity of water, they recommended overhead water reservoir and proper water distribution system in Showarighat along with WASA water supply.
- Proper distance should be maintained between sewerage line and water supply because of the risk of contamination of water due to the leakage in sewerage line.
- Separate water supply for industrial use and daily household use should be ensured.
- Drains should be widened and covered with slab so that the waste water can be properly managed without hampering the traffic flow.
- The roads in the lower elevation of the area should be lifted up. Roads should be widened, footpath, median etc. should be provided.

- During heavy rainfall, surface run-off gets trapped due to the embankment. So, they demand some sluice gates at suitable locations of the embankment for water discharge.
- They demanded dedicated solid waste collection for the industries operated by Municipalities with the financial help from the industrial establishments.
- They completely disagreed with the acquisition of land for widening of roads. Rather, they suggested proper management of existing roads and controlling freight movement.
- Transport agencies and the wholesale stores should be re-installed along the Gabtoli-Sadarghat road so that the roads do not become congested in the peak hour.
- They also demanded that the central jail should become an active and passive open space and existing open space needs to be well-managed.
- The existing open spaces should be managed properly.

Proposal for Redevelopment Plan

Considering the opinion of different stakeholders, the following proposals are given for redevelopment in Showarighat area:

- The area extended from Chawk circular road to Choto Katra will have to bring under land development scheme. Private land development sector will play a major role in implementation under the intervention of Government.
- Freight movement will be prohibited in the study area. Transport agencies will be relocated beside the Gabtoli-Sadarghat road by acquiring the khas land which are illegally occupied.
- Overhead water reservoir and proper water distribution system will be installed in Showarighat for abating the water related problems in the area. WASA authority will be informed for additional help regarding this.
- For solving water logging, switch gate will be installed in the embankment so that the surface runoff can be passed through the embankment.
- The roads paved from Showarighat to Bara Katra will be elevated. All the roads in the Chawk circular road to Choto Katra will be widened with installing traffic sign, road markings, median and well-designed footpath.
- Central jail will be redeveloped as an active open space and community cohesion. The development in the surrounding area (Chawk circular road to Choto Katra) should be checked properly for compatible development with central jail. Elevation of the buildings should be adjusted and maintained to get the view of the open space.
- Industries like Chemical, Leather, Plastic industries should be abolished from the area. Some places should be designed for industrial hub far away from residential zone.
- The place of historical interests should be preserved and existing uses of these places need to be altered. Vulnerable buildings will have to be reconstructed by keeping the historical accent.
- Existing open space of the area will be brought under the planning scheme. The open spaces will be redesigned aesthetically.

Major Findings of the Research

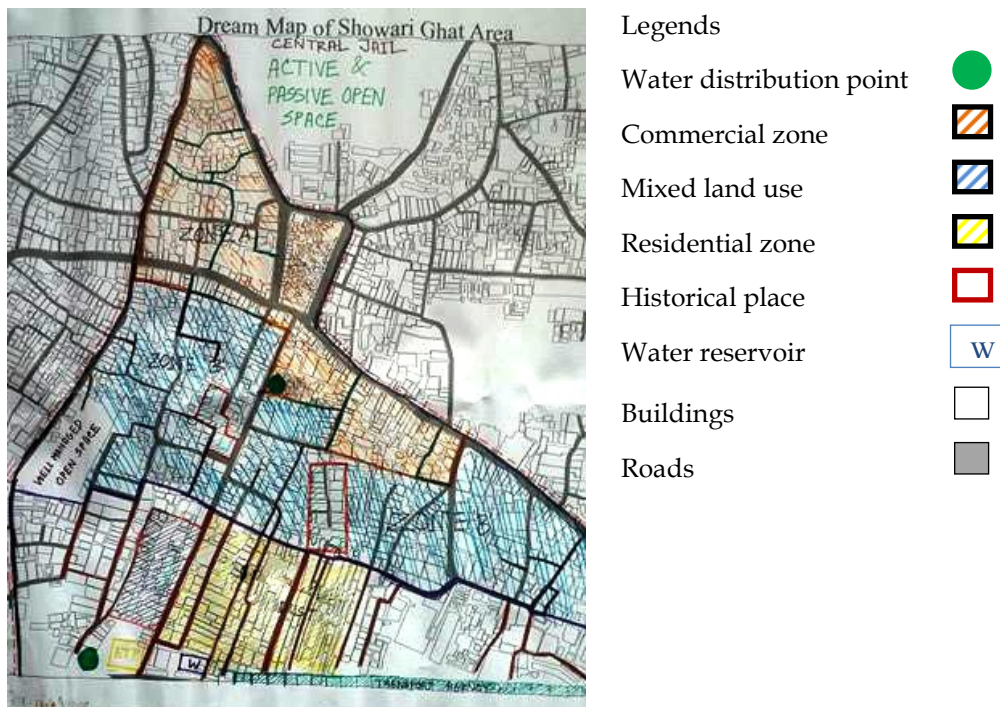
Showarighat area is one of the leading wholesale business hubs of old Dhaka. There is lot of wholesale activities of pulse, rubber and plastic products, small scale chemical products like perfume and cosmetic products, footwear and fish.

Because of wholesale activities, transport agencies have been flourished in this area. Road networks of this region are very narrow with respect to traffic volume. Heavy traffic congestion is regular occurrence accompanied with freight movement.

The transport agencies should be relocated along the Gabtoli-Sadarghat road to avoid the movement of heavy vehicles in the area. This will reduce the traffic congestion.

The landowners of the areas adjacent to central jail from Chak circular road to Choto Katra are interested in land redevelopment by the private sector. Local inhabitants want to see central jail as active open space and place of social cohesion.

There are a lot of Khas land parcels along the Gabtoli-Sadarghat road which can be easily brought under redevelopment scheme.



Source: Field Survey, 2017

Figure 9: Dream map of Showarighat area

Conclusion

Redevelopment of Dhaka Central Jail as a public place or other is certainly going to bring about vast change in the adjacent areas. Originally Showarighat is an area with essence of

old Dhaka with mixed land use, congested buildings, narrow roads, historical buildings, wholesale activities, small scale industrial activities and new apartment buildings. Any major redevelopment will bring significant change in this equilibrium. So redevelopment plan should be proposed in an emergency basis for this area to control and guide the future development compatible with the redevelopment scheme of Dhaka Central Jail and spirit of old Dhaka. This research finds out the prospect of redevelopment in Showarighat area compatible with the redevelopment of Central Jail ensuring public participation.

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