



# **Redesigning Old Dhaka Central Jail into Urban Open and Social Interaction Space for People**

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## **Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

Urban open space is essential in an urban area. It helps to improve the general health and well-being of the residents. Dhaka is one of the fastest-growing cities globally but the numbers of urban open spaces in this city are decreasing day by day. Old Dhaka is the oldest and most densely populated area in the city of Dhaka. Here, people do not have minimum urban open space for social interaction and for creating a neighborhood. Old Dhaka Central Jail is an abandoned jail that is situated in the Chawkbazar area of old Dhaka; the jail is currently identified as a "Brown Field" in this area. Though the space is abandoned, the jail also has some historical structures and significance. This paper examined the way to convert the jail area into an urban open space for people to interact socially. A broad field survey and observation survey were done to develop morphological analysis and also a literature study was done to develop some strategies for spatial framework. The goal of this paper is not only creating open spaces but also proposing a process of preserving historic structures. The design has been conceptualized in a process that also solves many problems of the surrounding area.

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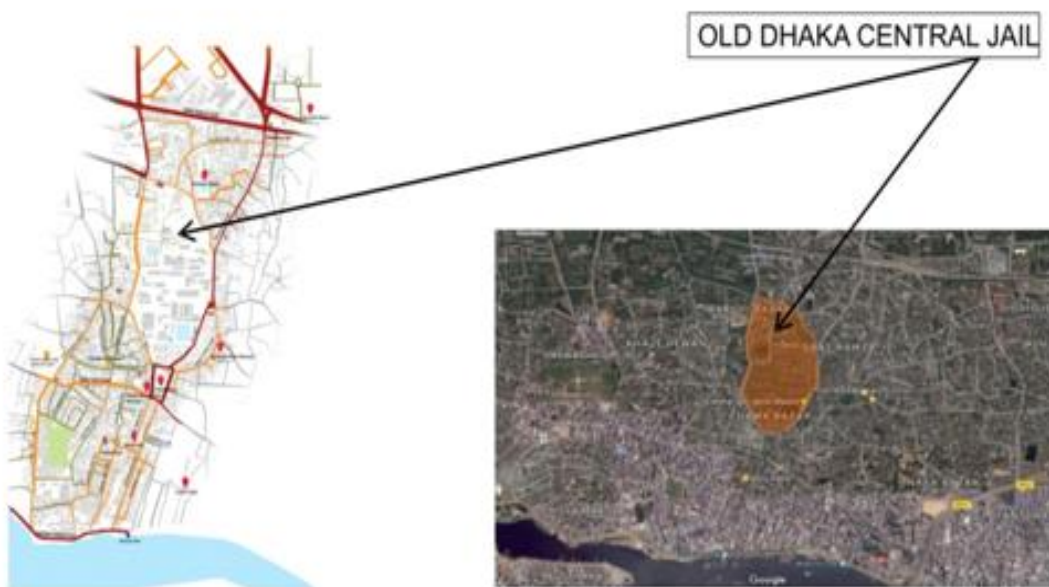
## 1. INTRODUCTION

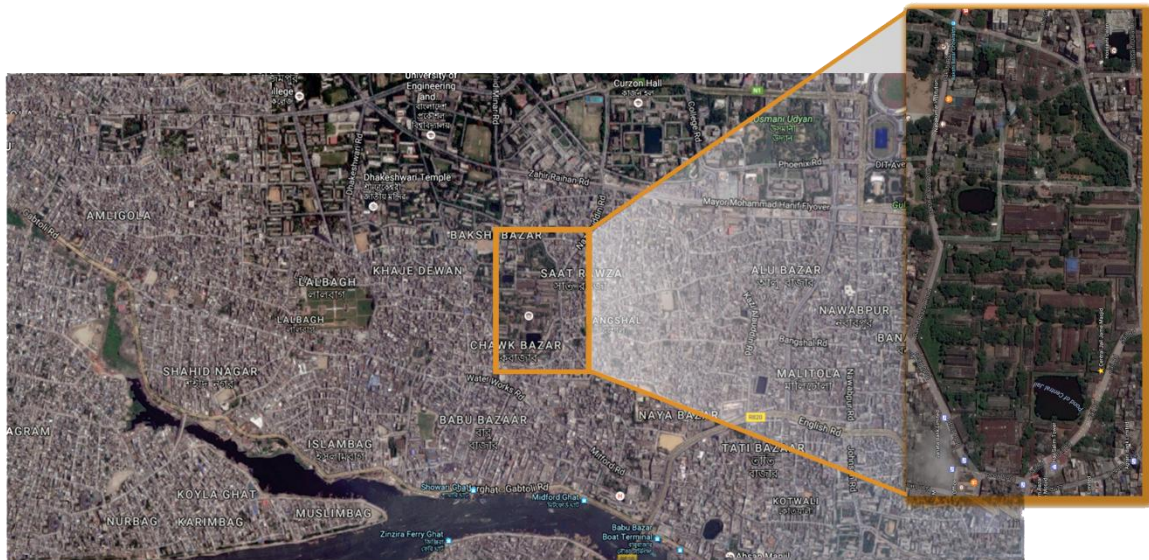
Bangladesh is in the 8th position in population in the world with 167.4 million people [1]. After liberation, the Urban-rural population increased alternatively. People need exercise games, recreation, and cultural program for enjoyment and that is why open spaces are essential in an urban area. Dhaka is Bangladesh's capital city, with a population of 22.4 million [2] it is 300 square kilometers, with 23,234 people living per square kilometer which makes it one of the highest-densely populated cities in the world [3]. The city of Dhaka has a massive lack of urban open spaces and open field. According to World Health Organization, there should be 9 square meters of urban open space for each resident in an ideal city [4] but Dhaka has only 1 square meter. It has been perceived that Dhaka city needs 1300 playgrounds but has only 250 [5]. Due to this lack of urban open spaces, people cannot have the space to socially interact with each other and build a healthy neighborhood. Old and New Dhaka are the two parts of the city and Old Dhaka Central jail is an abandoned jail situated in the Old Dhaka Chawkbazar area. Chawkbazar is a high-density urban mixed-use development area where people live for jobs, business, and other activities. In old Dhaka, all the buildings are congested and moreover, there are fewer open and green spaces for people to

socialize. This paper intends to find out how to convert the old Dhaka central Jail into a green and urban open space so that people can breathe fresh air and interact with others. Furthermore, this paper will also help to improve the business quality of this area. Old Dhaka Central Jail has a historical value in Bangladesh and for this reason while doing this paper the historical significance of the jail has been kept in mind.

## 2. METHODOLOGY

The sources of data for this study are based on a field survey and some literature studies. A morphological study is done through a field survey. Old Dhaka's land use pattern and existing open spaces have been studied. The condition of the existing open spaces surrounding the study area and the connection of the road network has been identified. The pedestrian movement around the site is also being surveyed. A literature study has been done to understand the importance of urban open space and understand the process to create a social interaction space. A survey was done on the site to sort out the historical building inside the site, which should be preserved. Through survey and literature study, the researcher proposed some recommendations to create a design.





**Fig. 1. Location of the study area**  
 Source: Google map (modified by author, 2017)

Location of Site area: Old Dhaka Central jail is situated in the heart of Old Dhaka under Kotwali thana Ward no. 63, 64, and 67. It is near the famous Chawkbazar of old Dhaka. Though study area is very important in Dhaka urban context but the main target audiences are the residents of Ward 63, 64 and 67. The total population of these ward 82000+ now.

### 3. LITERATURE REVIEWS

#### 3.1 Urban Open Spaces

Urban open space means a place in an urban settlement with less structure and more green space, and it should be accessible to people [6]. The places are open for public entry. Sometimes town open areas can be owned by private organizations [7]. Urban open space gives access to people so that they can increase their social interaction and it also provides scope for various plants to grow [8]. Majority of urban people's social and physical activities always occur in these urban open spaces [9]. The parks and open fields outside the city are not considered urban open spaces. But urban brown spaces like abandoned land areas and public buildings in the city can also convert into urban open spaces [10]. Urban squares, piazzas, plazas and streets are also considered as urban open spaces in planning [11]. Urban open space can be labeled as an ecological balancer [12].

#### 3.2 Social Interaction Space

Social interaction is significant for urban residents to create a neighborhood [13,14]. Both paid and unpaid services can be used in the Social interaction space. The market, exhibition space, community hall, restaurant, and street market are among the paid services of the social interaction spaces: field, park, and plaza fall under the unpaid services [15]. The social interaction process can differ from person to person at different ages. The young generation interacts with their friends through playing in the field, hanging out in the park, market or in restaurants. Whether middle-aged and older people interact with their friends by hanging out in the park or market, and older people interact with their friends by hanging out in gardens, markets or restaurants. .

#### 3.3 Principle of creating Social Interaction Space

Social interaction tradition changes in a rapidly changing world. So it is tough to set a fixed principle for creating social interaction space. But due to everyday habits, people use some common spaces to maintain social interaction among themselves. Public spaces play an essential role in social interaction inside the society and create a friendly environment in the neighborhoods [16]. Social interaction spaces can be residential neighborhood spaces, open



urban spaces, and other civic spaces. It has to serve all people of different ages. This space can be used by local communities and by people from other communities too [17]. The social interaction space would be a combination of spaces that are combined of paid and unpaid services. Some business facilities should be provided here to maintain the space. There should be a certain percentage of paid and unpaid areas. The number of the unpaid areas will be more than the paid ones [15]. There should be facilities for people of every age and the design should be according to their physical and psychological condition [18]. Water areas, Small urban pockets, and streets should be designed as social interaction spaces [19,20]. The social interaction space should also uphold the historical and cultural value of the area.

### 3.4 Historical Back Ground of Old Dhaka Central Jail

The site has a great historical heritage. It is older than the Lalbagh Quella and considers the oldest fort in Dhaka. It was an Afghan fort but there is no recorded document to prove that. Mughals used the fort as an administrative building before the Lalbagh Quella was constructed [21]. In the British period, the fort was converted into a jail. There are the existence of historic buildings, such as the cells of the great four leaders of Bangladesh and the cells of Sheikh Mujibur Rahman. Some buildings are 228 years old and have a historical value; there are buildings from the colonial, Pakistan and the Bangladesh period [22,23].

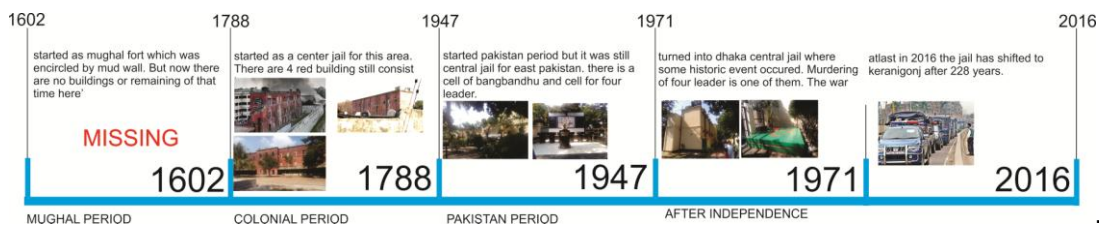


Fig. 2. Historical Development in Old Dhaka central jail  
Source: by Author, 2017

## 4. RESULTS AND DISCUSSION

### 4.1 Morphological Study of the Area

#### 4.1.1 Land use, open spaces and height of buildings around the site area

The survey shows that residential and the mixed-use buildings surround the Old Dhaka central jail area. Ninety percent of the roadside buildings are mixed-use development (Fig. 3), but the buildings which are not near the road belong to residential development. The building heights of this area are mostly three to five floors among them very few buildings are more than seven floors (Fig. 4). There are 11 open spaces in Old Dhaka within a 0.5km radius around the study area (Fig. 5). These open spaces are only 3-5% of the total surveyed area.

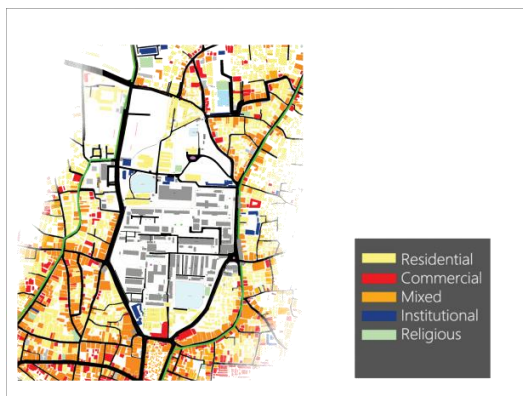


Fig. 3. Land use pattern  
Source: by Author, 2020

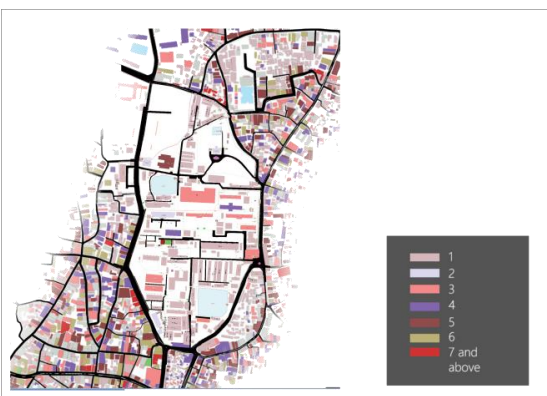
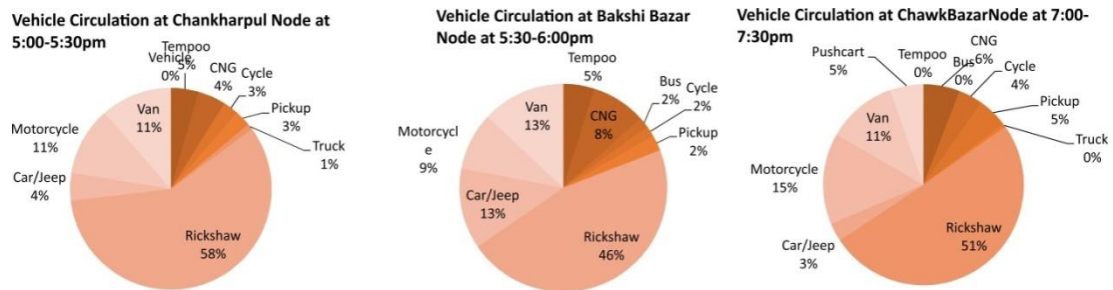


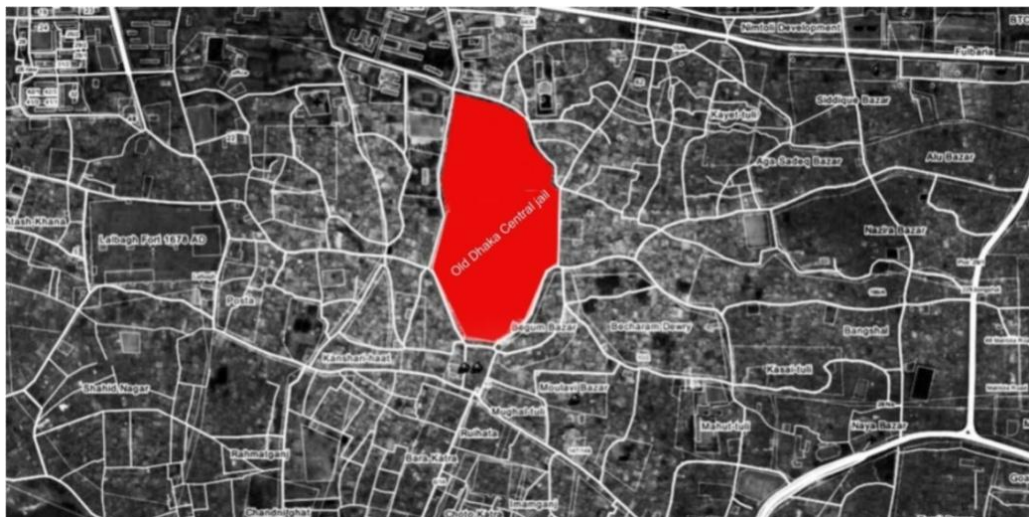
Fig. 4. Building heights  
Source: by Author, 2020



**Fig. 5. Open Spaces around Old Dhaka Central Jail**  
 Source: Google map and survey(modified by Author, 2020)



**Fig. 6. Transport Countdown (by Author, 2021)**



**Fig. 7. Connectivity with site (by Author, 2021)**

#### 4.1.2 Node points around the site, pedestrian movement and transportation pattern

From the survey, it can be observed that various parts of Old Dhaka are connected to the jail area road. It is easily accessible from different areas for multiple people. The Lalbagh Fort is also close to this site. Some important node points around the site connect the old Dhaka central jail with separate areas of old Dhaka. It is also in the center of various historic sites of old Dhaka. A Transportation countdown is done in 3 node points around the site at different times. The node points are Chankharpul Node, Bakshi Bazar Node and ChawkBazarNode (Fig. 6).

In the pedestrian movement, it has been seen that most of the people want to walk from one node point to another but they are unable to walk around the site as there is a lack of pedestrian path, which make people take a rickshaw and increase the traffic load in surrounding road (Fig. 9).

#### 4.1.3 Building selection for preservation

Dhaka's central jail area is 18 acres and with additional facilities, the area is around 38 acres. In other functions, there is a bungalow of DIG of the prison with 3 acres and a pond, prison school, prison guest house, training center, and staff quarters for jail guards from the point of view of this paper, all will be shifted.

In the jail, there are four red buildings (Padma, Meghna, Jamuna, and medical building), which are a symbol of the colonial period, the jail of Bangabandhu is the symbol of the Pakistan period and independence, the four leader jail is the symbol of the dark history of Bangladesh, the gallows is also essential which showcase the justice of Bangladesh's judicial system. These buildings can be reused for different functions.

The other structures can be removed from the site to create more open spaces for the people.

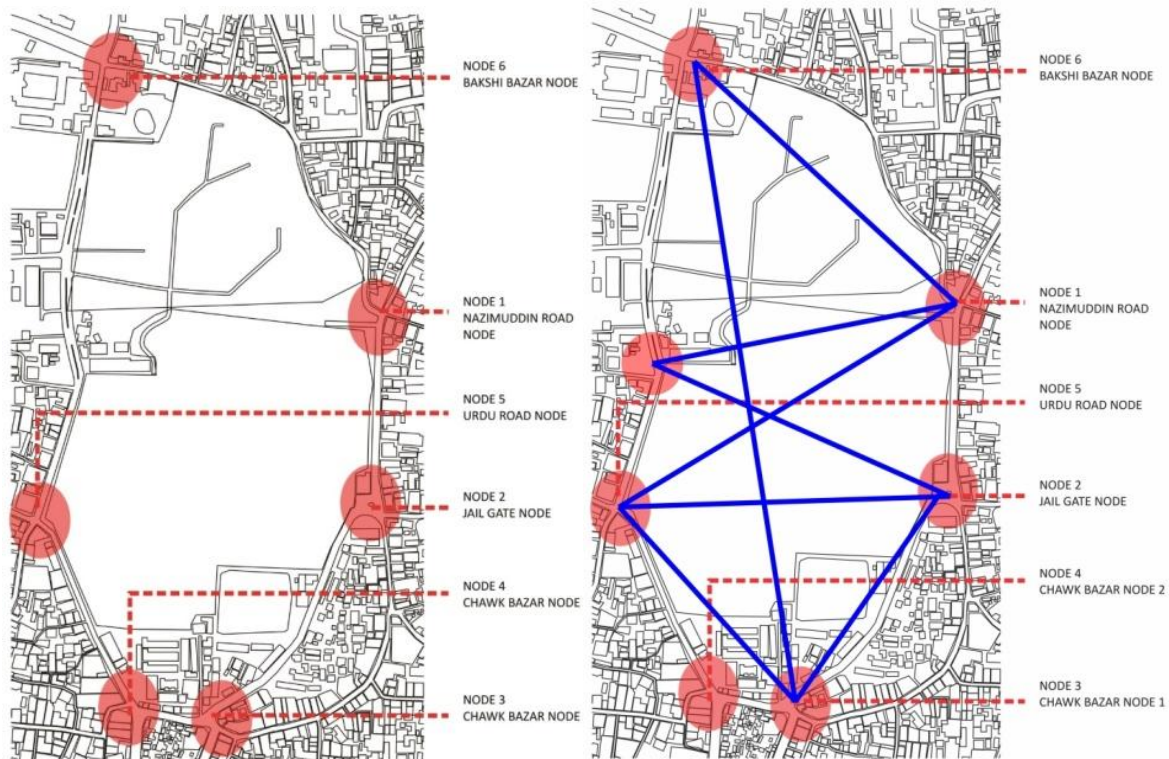


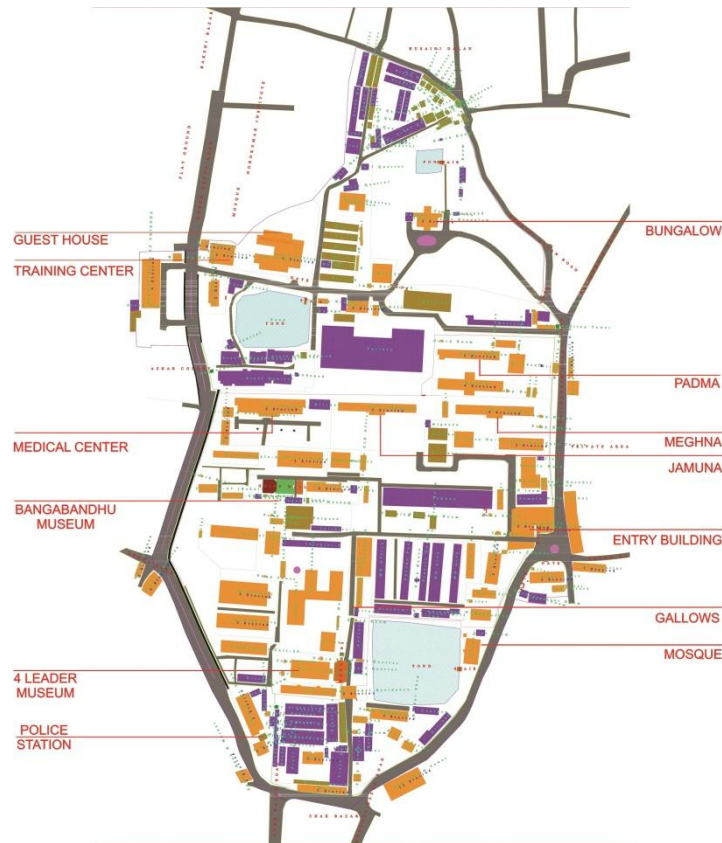
Fig. 8.

Fig. 9.

Fig. 8. Node points around the site (by Author, 2020)

Fig. 9. Pedestrian connection needed between node points around the site (by Author, 2020)





**Fig. 10. Existing Buildings (by Author, 2017)**

#### 4.2 Finding from Morphological Study

The above study shows there are a lot of scopes to work on this site. From the morphological research, we can see that the Old Dhaka central jail area is in the center of the residential area of old Dhaka. Its surrounding roads also connect the heritage buildings, a tourist attraction. This area also has historical buildings and incidents. The site is now working as an urban lost space after the jail has been relocated from this area, which is hampering the area's adjacent business, and there is also less connectivity among the node points. Using this area, the connection of node points through pedestrians should be made.

#### 4.3 Critical Observation of Theoretical Study

The theoretical study shows the importance of social interaction in urban life and how to use urban open spaces as interaction spaces. Social interaction can also be an income-generating space and it also shows social interaction is important to create a community that develops

urban life. The study reveals that for the different age groups the process of social interaction is different and also that the space can be both open and inside a building. In the theoretical study the historical importance of old Dhaka central jail has been studied and among all the buildings which one are an important part of history and should be preserved had been analyzed.

#### 5. RECOMMENDATIONS

- Select the structures for preservation: Some structures should be removed from the site to create more open spaces. Among all the structures, the four red buildings, Bangabandhu jail museum, four leader jail museum, and gallows might be kept for historical purposes. Some newly made buildings are in good condition and can be reused. Other than these, all the structures should be removed from here (Fig. 11).
- Connect Node Points: The jail area is in the center of the old Dhaka residential area. We should connect the jail area's

node points through pedestrian and bicycle lanes. This will help people to move easily to the surrounding area and the business of the surrounding area will improve due to the large movement of people. (Fig. 11 & Fig. 12)

- The Landscape Pattern: The connecting pedestrian inside the area will be designed as the Mughal landscape pattern because in the area there are structures resembling the colonial, Pakistan and Bangladesh periods and the only left-out period is the Mughal period. In the Mughal design, landscape plays a prominent role and there is a common pattern in it. Establishing the Mughal landscape will also separate the open spaces which can be used for different functions. (Fig. 13)
- Structures in use: Among the existing buildings some will be preserved just as they are now. The Bangabandhu (Fig. 15) and 4 leaders (Fig. 16) museums will be preserved and the area of these museums will be surrounded by coconut trees. These trees will set apart these museums from other buildings as the coconut trees will only be planted there. The three colonial buildings in line will be converted to a jail museum (Fig. 17) as they are the oldest one. Another one will turn into a cultural center. The DIG bungalow will be a

library and the other structures will be converted to a restaurant, Guest House, Sports Complex, office of the area and Gym complex. Two new buildings which are newly proposed will be a community center and another will be a primary school which is needed in the area.

- Proposed Street Market: The central pedestrian road of the proposed solution is designed in such a way that it will act as a plaza and there will be a street market. This will encourage a large amount of people to go there and as a result the business will flourish. (Fig. 18)
- Urban Pockets: The node points are the entry point of this area. In every entry point, the researcher proposed to create urban pockets. There will be TONGS or a tea stall and a small plaza in that area. A TONG is a place where middle age to old people spends their time. The plaza will be used for the adjacent local communities for arranging their programs like exhibitions, small gatherings etc.(Fig. 19)

Segregating open spaces: Due to the pattern of the Mughal landscape, all the green spaces are square-shaped. Some of the green spaces are used as an open field for local people to play and the other green spaces will be flower gardens. There is a big open field near the sports complex for arranging small football tournaments.

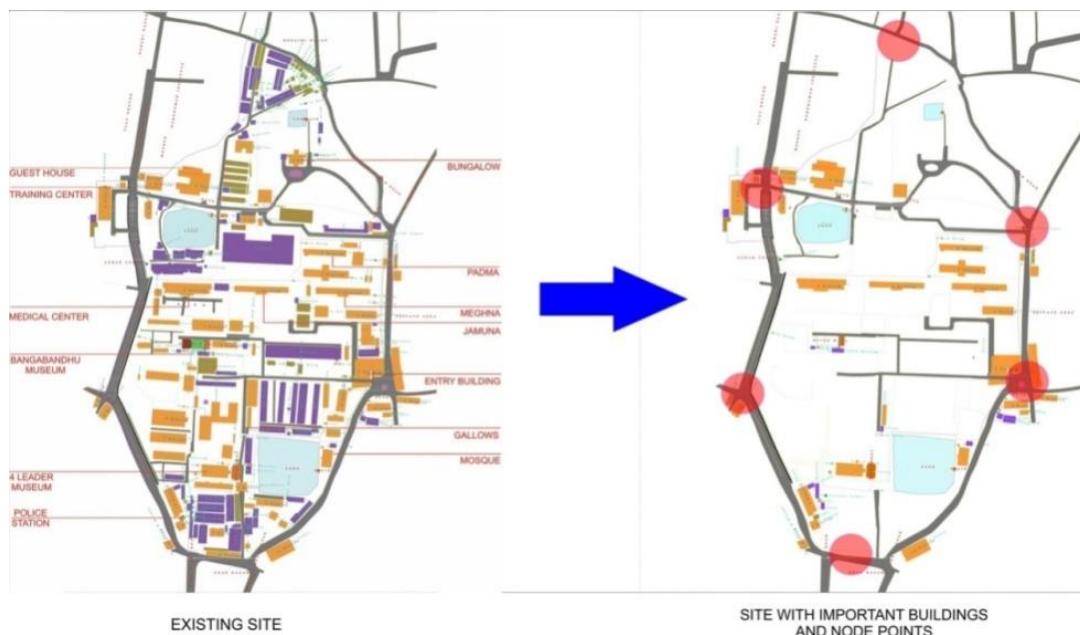


Fig. 11. Vacant the land and identify node points (by Author, 2020)





Fig. 12. Connect the node points with different landscape pattern (by Author, 2021)

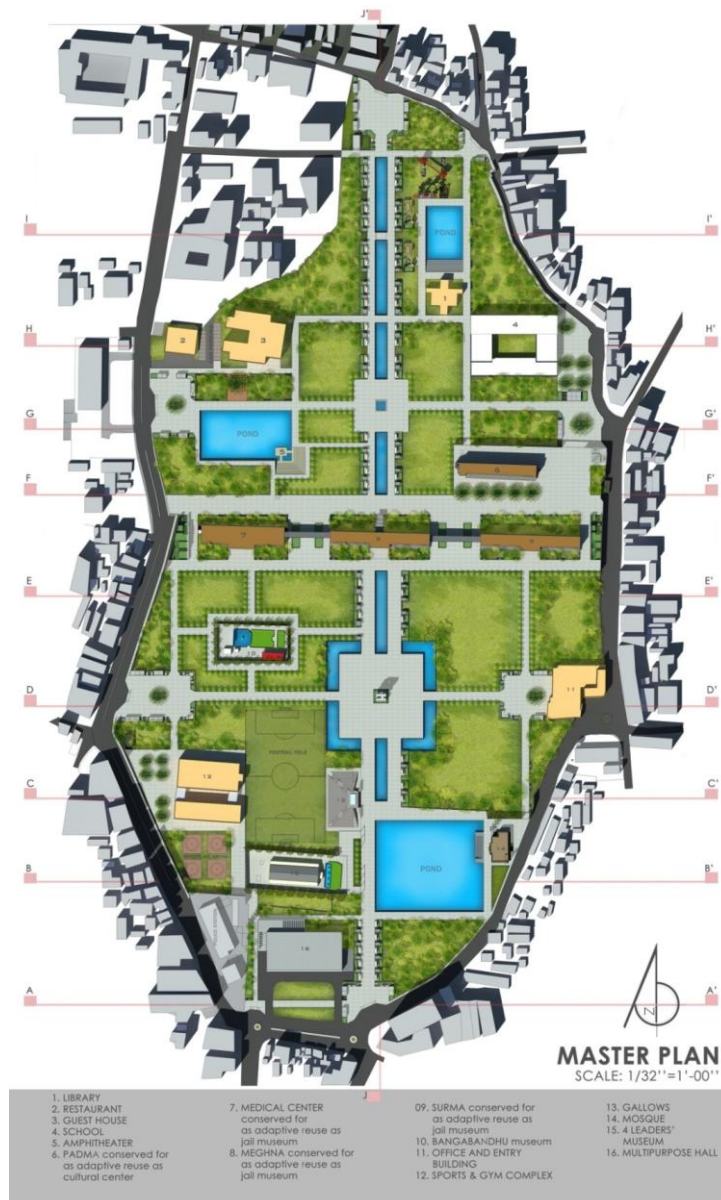


Fig. 13. Final proposal with Mughal landscape pattern (by Author, 2022)

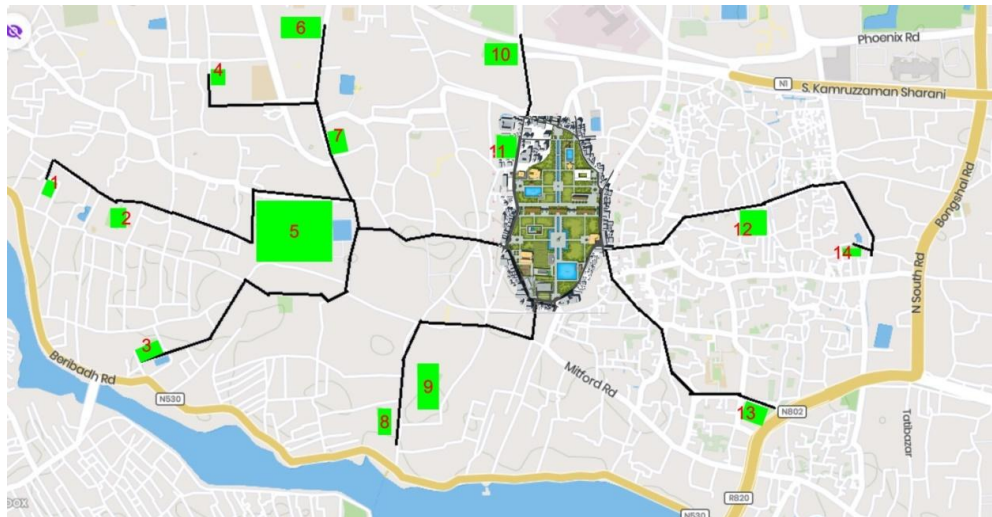


Fig. 14. Connection of site with the open spaces of surrounding area. (by Author, 2022)



Fig. 15. 4 Leader museum



Fig. 16. Bangabandhu museum



Fig. 17. Jail museum



Fig. 18. Street market



Fig. 19. Urban pockets

## 6. CONCLUSION

Connecting all the node points through pedestrians will help people to move from one place to another easily. This will solve the traffic problems around the site. Providing only one football field will help the local young generation to interact with each other. Urban pockets and tongs are also one of places for individual interaction. If we can create an environment where civilians can interact with each other, it will help to develop the social condition and will decrease the crime rate around this area.

The increasing percentage of green, playgrounds and parks will develop the living condition of Dhaka. There is a street market focused on handicrafts and traditional foods. That design will also develop the economic and living conditions of this area. This design also represents history and will help to improve the social condition.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

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