Design Intervention in a Suburban Town with its Heritage Value: Case Application at Tamluk, West Bengal

An Urban Design Thesis Report

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DESIGN INTERVENTION IN A SUB URBAN TOWN WITH ITS HERITAGE VALUE: CASE APPLICATION AT TAMLUK, WEST BENGAL

POST GRADUATION THESIS REPORT

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ABSTRACT

Culture is the soul of characteristic towns, which determines the charm of the towns. The article analyses the connotation of characteristic towns and discusses the expression and inheritance ways of culture in characteristic towns planning and design. In the process of planning and design, with the combination of viewing activities and tourism activities, the combination of culture and the Internet, digital information and intelligent green, the combination of cultural symbols and garden landscapes such as landscapes, plants, buildings, garden accessories, road paving, the article penetrates the culture into the planning field of the characteristic towns.

The characteristic town is a developing space platform and a new type of community that is independent of the urban area and has clear industrial orientation, cultural connotation, tourism, and certain community functions.

In some traditional small-town planning, emphasis is placed on the development of space, while the consideration of style is insufficient, and characteristics are not valued.

Cultural heritage includes the material aspects of culture – sites, buildings, landscapes, monuments, and objects – as well as the non-material aspects, which are embodied in social practices, community life, values, beliefs and expressive forms such as language, arts, handicrafts, music and dance. In the field of heritage, multiplying recent initiatives indicate of the essential need and general trend of linking and integrating cultural heritage within sustainable development.

The theory has been developing since the beginning of the twentieth century, and global policy concepts had been developed, it was observed as a trend of heritage management moving towards an urban scale only by the end of the twentieth century. The study indicates that additionally to 'historic monuments, which had been the main conservation focus, increasing concern was given to traditional habitat, the built environment as such, and what came to be defined as cultural landscape'.

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Introduction

1.0 **INTRODUCTION**

1.1 BACKGROUND

1.1.1 DESIGN INTERVENTION

"**Design** is a plan or specification for the construction of an object or system or for the implementation of an activity or process, or the result of that plan or specification in the form of a prototype, product or process."   .... *Wikipedia*

"**Intervention** is an intended, planned, and targeted operation in a system or process which aims at removing or preventing an undesirable phenomenon.

.... *Springer Link*

So collectively, **Design Interventions** are prototypes that provoke real world action and intervene in human behaviour. It means action and behaviour are important to interaction design.

HOW TO CONSTRUCT A DESIGN INTERVENTION

1ST PART -THE DESIGN

Design interventions are very popular when assessing early concepts or ideas. Because we're looking at people's **behaviour** and **routines**, so thus very little technology is required.

2ND PART --THE INTERVENTION

Here we need to have established the **routine**, **behaviour** or **action** you're designing around. Need to find out what part of an experience can be used, maybe identify extreme variations of an experience.

(Source : https://medium.com/@careyhillsmith/design-interventions-76a8d1827ad7)

1.1.2 SUB-URBAN TOWN

" All places within a **municipality**, **corporation**, **cantonment board** or **notified town** area committee, etc. with a minimum population of 5000 can be defined as a **Town**."

….. *Census 2011*

"A **suburb** (or suburban area) is a **mixed-use** or **residential area**, existing either as part of a city/urban area, or as a separate residential community within commuting distance of one."

......*Wikipedia*

"A **town** is a **human settlement**. **Towns** are generally larger than villages and smaller than cities, though the criteria to distinguish between them vary considerably in different parts of the world."

......*Wikipedia*

So collectively, **Sub-Urban Towns** are lower density areas that separate residential and commercial areas from one another. They are either part of a city or urban area or exist as a separate residential community within commuting distance of a city.

CHARACTERISTICS OF A SUB URBAN TOWN

- In the suburbs, **we usually see quieter streets** with houses lining them.
- There are **parks & lots of schools** in a Sub-Urban Town.
- The Sub-Urban towns are mostly **small Main Streets with some shops, restaurants, and businesses.**
- The houses are located outside of the town area.
- The suburban area is probably the most popular **area for families to live** because it gives the best of both worlds.

Figure 1: A Typical Sub-Urban Town Street with houses lining them.

(Source : https://www.canstockphoto.com/nature-suburban-landscape-and-cityscape-89244060.html)

POSITIVE ISSUES

- **Affordability** – buying a house or renting an apartment is usually cheaper than in a city.
- **More Space** – houses in the suburbs have a bigger front yard and backyards.
- **Better Education** - schools are in close proximity and rods & infrastructure are well-designed.
- **Nature & Community** – offer local parks where you can enjoy fresh air and natural scenery.
- **Healthier Lifestyle** – the busyness and noise of a city can lead to stress and sleep disturbances.

NEGETIVE ISSUES

- The **commute to work** maybe long and excessive
- Due to **traffic and distance,** it may take longer to get to work.
- Usually don't have **dependable public transportation** so we'll most likely need a car to go to work and other places.

HOW SUB-URBAN IS DIFFERENT FROM RURAL AND URBAN?

- **Rural areas** are **open and spread out** with a small population. The **Suburban areas** are **residential areas with a larger population** than rural areas. On the other hand, the **Urban areas** are with a high population for both **living and working**.
- **Rural areas** are a countryside where **farming and natural resources** are taken in use to earn income. In **Suburban areas**, more no of **single-family housing** areas are available. **Urban areas** include high population where generally the number of people per block are more than a thousand. They are very congested.
- **Rural areas** have small grocery and dairy shops. **Suburban areas** have comparatively bigger shopping marts. **Urban areas** have big shopping malls, showrooms and other shops.

Figure 2: Graphics showing differences between Urban, Suburban and Rural

(Source:https://www.google.com/search?q=suburban+vs+urban+GRAPHICS)

(Source:https://www.texaslending.com/2016/10/28/advantages-of-living-in-the-suburbs/)

1.1.3 HERITAGE VALUE

The heritage value of a site, building or object lies in its cultural significance, which is a **combination of historical, symbolic, spiritual, aesthetic and social values**.

"**Heritage** is the full range of our inherited traditions, monuments, objects, and culture. Most important, it is the range of contemporary activities, meanings, and behaviours that we draw from them."   .... *UMass Amherst Centre for Heritage & Society*
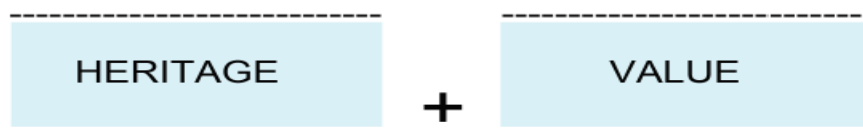
"**Value** is the regard that something is held to deserve; the importance, worth, or usefulness of something."

.... *Oxford Lexica Dictionary*

So collectively, the term **'heritage values'** refers to the **meanings and values that individuals or groups of people show on heritage** (including collections, buildings, archaeological sites, landscapes and intangible expressions of culture, such as traditions).

TYPES OF HERITAGE VALUES

- **Historic Value** – the historical character and content provide connection with the past and a sense of continuity.
- **Symbolic Value** – the symbolic meaning and power of certain places and objects adds to people's cultural identity.
- **Spiritual Value** – promote insights in the meaning of religious, sacred and transcendental practices and experiences.
- **Aesthetic Value** – is an impportant element of cultural object for its enjoyment and may inspire new artistic creativity.
- **Social Value** – facilititates connection with others and the shared social experience can help promote local values and social cohesion.

(Source - Creative Cultural Heritage Cooperation)

1.1.4 TAMLUK: HEADQUARTER OF PURBA MEDINIPUR DISTRICT, WEST BENGAL
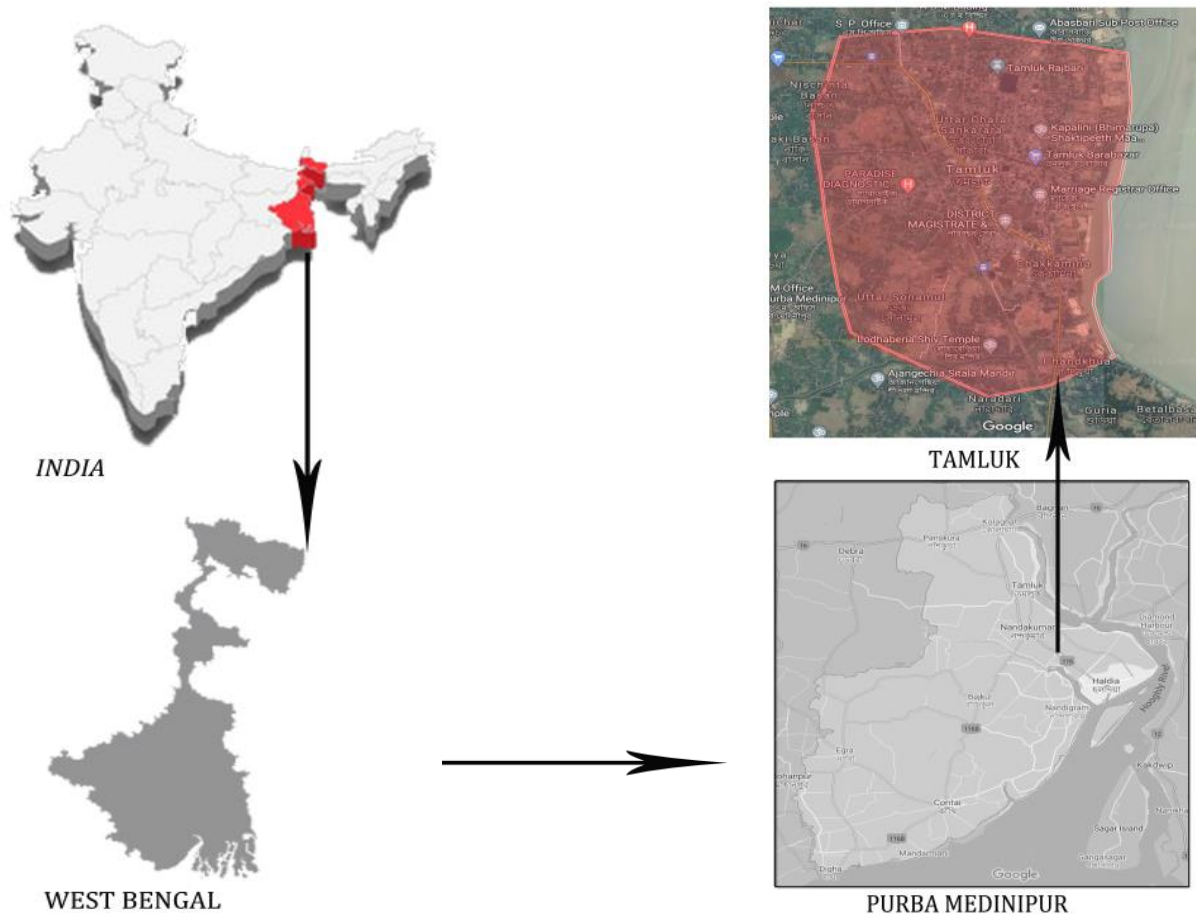
Figure 3: Map of India, West Bengal, Purba Medinipur, Tamluk

(Source: Google Maps, Modified by Author)

- Archaeological excavations reveal that the site of modern day **Tamluk** has been continuously inhabited since about **300 years** before the **birth of Christ**, having spent most of its life as a **port city** on the Bay of Bengal.
- In ancient India, Tamluk was a thriving **business port**, functioning as the exit point for the **Mauryan trade** routes for the south and south-east.
- Archaeological excavations at **Mogolmari** confirm the presence of **Buddhist 'viharas'** in the area.
- Heritage sites such as the **Devi Bargabhima temple**, the **Tamluk Palace** built by the **Mayuradhwaja dynasty** and **Rakshit Bati**, the house which became the **meeting point** for such secret revolutionary organisations as the **Anushilan Samity**.

Today, the economy of Tamluk depends primarily on agriculture, and it is one of the foremost producers and exporters of 'paan' (betel leaf). However, tourism is a major revenue earner too, thanks to such sites as the Devi Bargabhima temple, the Tamluk Palace built by the Mayuradhwaja dynasty, the picturesque picnic spot of Geonkhali, and Rakshit Bati, the house which became the meeting point for such secret revolutionary organisations as the Anushilan Samity.

Of these, Devi Bargabhima temple is undoubtedly the oldest. An old Kali temple, it was built nearly 1,150 years ago by a king of the Mayur dynasty and reflects a fascinating mix of both Oriya and Bengali temple architecture, and Hindu and Buddhist cultures. Popular with devotees throughout the year, the temple is considered as one of the 51 'shakti peethas', where the left heel of Sati is said to have fallen and has been declared a heritage site by the state government.
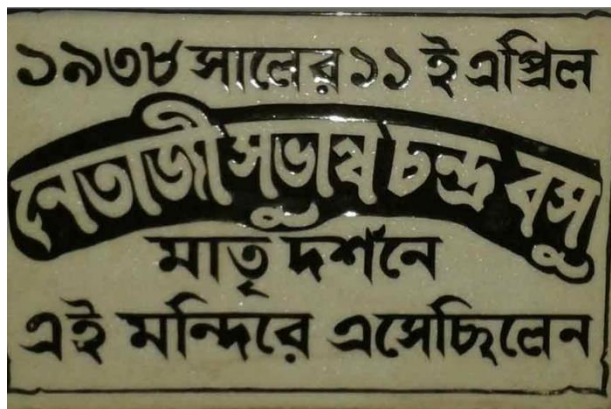
Figure 4: Proof of Netaji Subhas Chandra Bose's Visit at Bargabhima Temple, Tamluk

(Source: https://www.getbengal.com/details/the-ancient-charm-of-tamluk)

The temple as it stands today was rebuilt after the Islamic occupation of Bengal in the Middle Ages, though there are several references to it in old Bengali literature, implying that it is even older than we know it to be, though there is no historical evidence of this as yet. Durga Puja, Nabobarsho (Bengali new year) and Kali Puja remain important festivals still celebrated at the temple.

(Source: https://www.getbengal.com/details/the-ancient-charm-of-tamluk)

1.1.5 RELEVANCE / JUSTIFICATION

- Heritage Values of an area plays an important role in helping us to examine our history and traditions and enables us to develop an awareness about ourselves. It helps us understand and explain why we are the way we are.

- Heritage is a keystone of our culture that plays an important role in our politics, society, business and world view.

- So, arranging the heritage zones and connecting them with proper design interventions can give a new identity and image for the sub urban town.

- Tamluk, being a sub urban town has its own heritage value as it has many heritage sites and there are proposals for its restoration and redevelopment. So, connecting those sites will be a major attractive element of the town and will be a major tourism spot.

Figure 5: News Reports on Morphological Analysis on Tamluk as an Historical Urban Landscape
(Source: Article from Department of Geography, Vidyasagar University, Midnapore)

Figure 6: Tamluk Rajbari declared as a Monument of National Importance by Archaeological survey of India, Kolkata Circle

(Source: Photography by Author)

1.2 AIM

Designing an area in the **sub urban town** of **Tamluk** for future urban development depicting its existing **local culture and heritage**.

1.3 OBJECTIVES

- To **study** and **delineate the heritage zones** of **Tamluk.**
- To **identify the urban issues** related to new developments in such areas.
- To derive **urban design guidelines** respecting the **local culture and heritage** based on the above studies.
- To connect the **heritage areas through active networks**, making it as a **hotspot**.
- To improve the **image and create a new identity** for **Tamluk** based on its **heritage values.**

Figure 7: Graphics Showing importance of Heritage building as a landmark and its attraction for the tourists.
(Source: Camstock photos)

1.4 SCOPE OF WORK

- Delineation of the **major historical buildings** and **landmarks** in the **heritage zone** of **Tamluk**
- Creation of a **strong transportation network** with the adjoining areas
- Creation of **vibrant public spaces** with proper accessibility
- Implementation of **tourist hotspots** within the **heritage zones**
- **Redevelopment of the riverbanks** connecting them with the heritage zones.

02

Literature Study

2.0 LITERATURE STUDY

2.1 THEORY

2.1.1 REDEVELOPING THE SUBURBS

Radical Suburbs was written by Amanda Kolson Hurley and explores the history of suburbia looking at how it once was a place of utopian planning, communal living, social conscious design, and integrated housing.

The book explores different case studies of projects including two residential neighbourhoods designed by younger architectural members of Architects' Collaborative or TAC in 1947. These two neighbourhoods were known as Six Moon Hill and Five Fields located in Lexington Massachusetts and were developed to escape the city for its privacy and nature while still being close to Cambridge and Boston.

(Source: Guidelines for Managing the Integration of Culture into Development Programmes" – Compiled by Kevin C. Kettle & Libby Saul)

By examining the literature of contemporary planning, it has been found that ideas associated with new urbanism have significantly influenced planning principles in Canada, the US and England (Grant 2006, Tiesdell 2002). Professional organizations in Canada have pushed values such as vibrancy, connectivity, mix and diversity to the top of the planning agenda (Grant 2003, 2002b). The dominance of new urbanism has affected the priorities of urban and regional plans to promote mixed use, compact form, infill development, street connectivity, transit-oriented development, an enhanced public realm and pedestrian orientation. Provincial, state and national government agencies have joined the movement, especially as the language of new urbanism increasingly turned to smart growth, and sustainable development.

By the late 1990s "smart growth" appeared to offer a new synthesis for planning. The theory suggests that with appropriate planning and design strategies growth can be good. Smart growth employs many approaches promoted in earlier movements, as it focused on finding physical and policy solutions to improve the outcomes of growth. The social responsibility implicit in the healthy communities movement and the environmental responsibility central to sustainable development were downplayed as economic vibrancy rose to a place of greater prominence in the new model. To a considerable extent the new paradigm appropriated principles of new urbanism and the rhetoric of health and sustainability as it put growth back into the equation (Grant 2004, 2007). "Smart growth" served to elevate growth in the information age; new urbanism improved the aesthetics of consumption; and sustainability added a "green sheen" to continued development.

(Source: Paper for "A Suburban World? Global decentralization and the new metropolis" Conference in Reston, Virginia, April 2008)

2.1.2 INTEGRATING HERITAGE AND DEVELOPMENT

The notion of an integral and holistic approach towards heritage and urban development is highlighted in almost every heritage-related international cultural policy document since the 1960s.

The World Heritage Convention wants states parties to adopt general policy which aims to give the cultural and natural heritage a function in the life of the community and to integrate the protection of that heritage

(Source: heritage & society, Vol. 60 No. 2, November 2013)
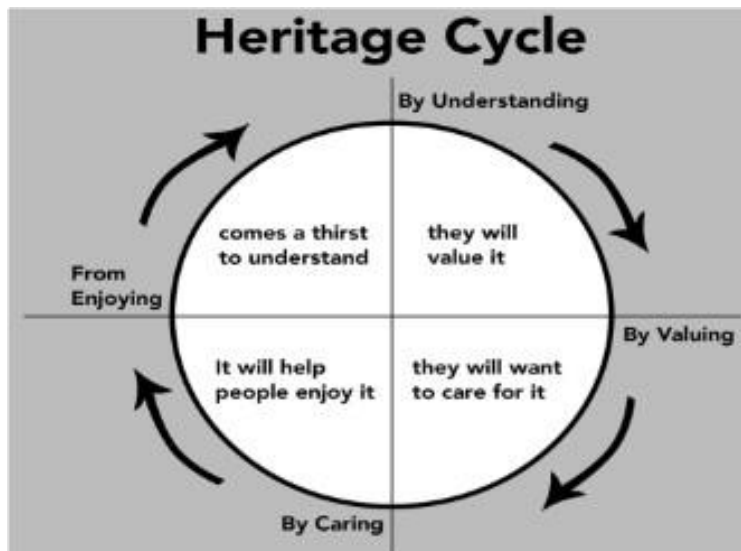
Figure 8: Graphics Showing Heritage Cycle
(Source: heritage & society, Vol. 60 No. 2, November 2013)

Cultural heritage includes the material aspects of culture – sites, buildings, landscapes, monuments, and objects – as well as the non-material aspects, which are embodied in social practices, community life, values, beliefs and expressive forms such as language, arts, handicrafts, music and dance. In the field of heritage, multiplying recent initiatives indicate of the essential need and general trend of linking and integrating cultural heritage within sustainable development.

The history of heritage as a subject of research perceived in its complexity and totality is not long. Different disciplines in the social and human sciences have explored heritage in a rather fragmented or heavily thematic way, through their specific lens and methodologies, preoccupied with preserving and even reinforcing their disciplinary distinctions. History and archaeology, geography, cultural studies, anthropology, art and architectural history, museology and conservation studies, sociology, philosophy, politics, psychology, linguistics, semiotics and others have addressed the issue of heritage in their own way, prioritizing its scientific value above all others. These traditional cognate disciplines to heritage have studied (and to some extent still do) just the "raw materials of heritage" (Ashworth and Howard, 1999:26), focusing largely on the physical side of heritage, ignoring its multiple potential and

meanings in contemporary society. However, the growing number of heritage-interested groups has brought a growing number of viewpoints, opinions, definitions, and attitudes to heritage that has further complicated its concept and field of study and increased the number of relevant issues to be dealt with both in theory and practice.

(Source: Tourism and Culture in the Age of Innovation: Second International Conference, IACuDiT Athens 2015 (pp.3 - 22)

2.1.3 SUBURBAN AREAS

Suburban areas are lower density areas that separate **residential and commercial areas** from one another. They are either part of a city or urban area or exist as a separate residential community within commuting distance of a city.

HOW CAN SUBURBAN AREAS ENCOURAGE PHYSICAL ACTIVITY?

Residents of suburban communities enjoy greater access to opportunities for **healthy food stores** and active lifestyles facilities such as fitness centres.

Suburban areas enjoy a variety of opportunities for physical activity available like.

- Playgrounds and sports field
- Sidewalks and bikeways
- Public swimming pools and lakes
- Nature parks and pet parks
- Walking, biking, and bus riding to school

HISTORY AND EVOLUTION OF SUBURBS

Late 18th Century	Due to the rapid migration of the rural poor to the industrialising cities, a trend in the opposite direction began to develop, as a result outskirts of the city began to develop.
Early 19th Century	The trend accelerated and were growing rapidly, as a result suburban districts sprung up around the city centres to accommodate those who wanted to escape the squalid conditions of the industrial towns
Mid - 19th Century	Major suburban areas were springing up and became more overcrowded and unsanitary. A major catalyst for suburban growth was the opening of the Metropolitan Railway in the 1860s.
Turn of 20th Century	Suburbanisation in the interwar period was heavily influenced by the garden city movement. Various Acts allowed for the building of large new housing estates in the suburbs after the First World War, and marked the start of a long 20th century tradition of state-owned housing, which would later evolve into council estates.

Table 1: Evolution of Suburbs

(Source: Author)

2.2 EXISTING CONCEPTS

2.2.1 CULTURAL HERITAGE

Cultural heritage is the legacy of tangible and intangible heritage assets of a group or society that is inherited from past generation.

…… Wikipedia
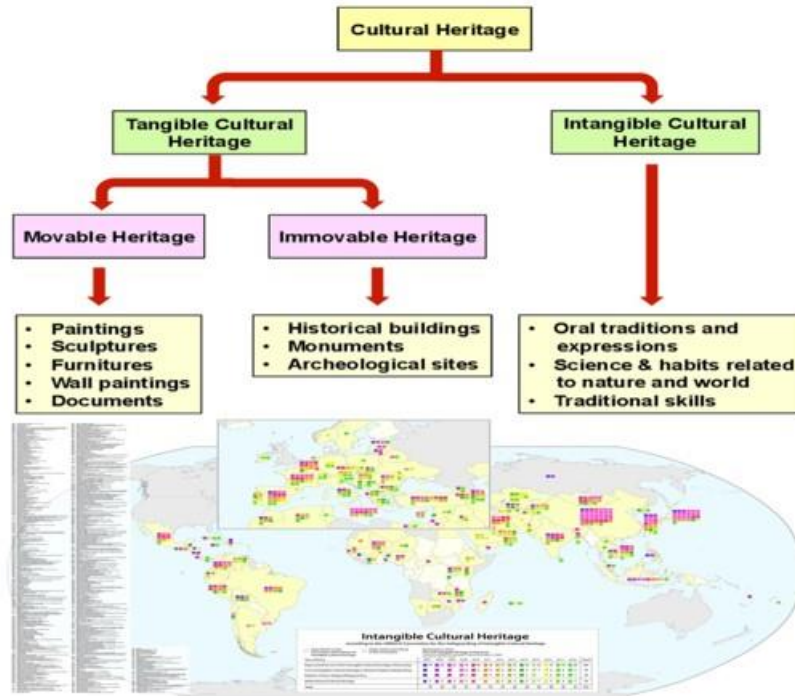
Table 2: Classification of Cultural Heritage

(Source: heritage & society, Vol. 60 No. 2, November 2013)

2.2.2 BUILT HERITAGE

The revitalisation of the economics, social and environmental factors in the designed area is done by enhSancing the 'old' and constructing the 'new' developments (Rosly & Rashid,2013).

Thus, culture is a strategic improvement component both for financial overflows and aids that create a quality of life, social capital and social inclusion (Simeon & Martone,2014).
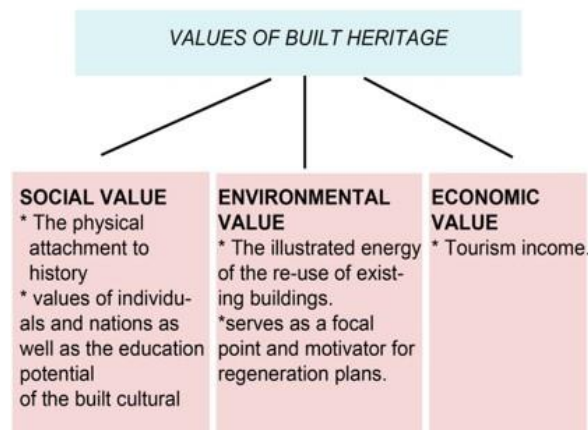
2.2.3 CHANGING TERMS, CHANGING CONCEPTS (CASE OF AMSTERDAM)

Amsterdam included the **HUL** approach in its world heritage management. As such, the trend on theory is followed by application in policy, and those are an essential premise of the **HUL approach**, culminating in the **UNESCO** recommendation of 2011; however, the **HUL** approach does not necessarily aim to reflect all those previous policies and practices, rather it aims to provide an overarching frame, which would help to structure and improve polices involved in **urban heritage management**.

The theory has been developing since the beginning of the twentieth century, and global policy concepts had been developed, it was observed as a trend of heritage management moving towards an urban scale only by the end of the twentieth century. The study indicates that additionally to '**historic monuments**, which had been the main conservation focus, increasing concern was given to **traditional habitat, the built environment** as such, and what came to be defined as **cultural landscape**'.

The trends towards broadening the concept of heritage are commonly addressed, but seldom evidenced. An analysis of the list of cultural heritage policy documents, as gathered for the Getty Conservation Institute, shows this change very clearly.

This regraded urban-related terms (specified by terminology: town, urban, city, landscape, district, ensemble, place, settlement, fabric, site, area and complex or equivalences (i.e., city/cities, district/districts etc.)) and object-related terms (specified by terminology: building, monuments, architecture, object, and artefact or artefact or equivalences (i.e., artifact(s)/artefact(s))

Figure 9: Historic Urban Landscape of Amsterdam
(Source: Case study on urban landscape of Amsterdam. HUL)

Amsterdam is truly a historic urban landscape, and it is considered as such by the local authorities. The Canal Ring Area as World Heritage.

Property is a distinct area within the historic urban landscape, of Amsterdam. The management plan also includes the historic urban landscape approach.

2.3 PARAMETERS FOR STUDY

The urban design parameters necessary for an in-depth analysis on case specific examples and implementation of principles for Design Intervention based on its Heritage Value on site has been derived from the above research study. Various authenticated literary sources and a comprehensive understanding of Cultural Heritage led development forms the foundation for drawing inferences related to the fundamental study parameters. The parameters take into consideration not only the physical and natural structure of Suburban Town sites having its heritage value but also the indispensable elements for improving the urban aesthetics. The table below showcases the parameters and sub-parameters essential for preparing design guidelines.

5 BASIC PARAMETERS USED TO CONSTRUCT THE MENTAL IMAGE OF A CITY (KEVIN LYNCH - THE IMAGE OF THE CITY)
DISTRICTS
EDGES
PATHWAYS
NODES
LANDMARKS

16 OTHER PARAMETERS THAT CONSTITUTE THE CHARACTERISTICS OF A CITY	
LANDFORM & NATURE	ROUTES
LOCAL CLIMATE	ACTIVITIES
SIZE	SPACES
SHAPE	FORMS
PATTERN	VISTA & SKYLINE
DENSITY	ORIENTATION
GRAIN & TEXTURE	DETAILS
DISTRICT	NON - PHYSICAL ASPECTS

Table 3: Urban Design Parameters for Study

(Source: Author)

03

Case Example

3.0 CASE EXAMPLES

3.1 SELECTION OF CASE EXAMPLES

Criteria for selecting the case examples with respect to the site:

- Similar texture and pattern
- Development by engaging local Culture & Heritage
- Interventions aimed at more gathering of tourists
- Enhancing public recreational space
- Creating new identity of existing heritage buildings and landmarks

Three Case Example have been selected based on my study requirement:

| PATIALA, INDIA | AHMEDABAD, INDIA | ORCHHA, INDIA |
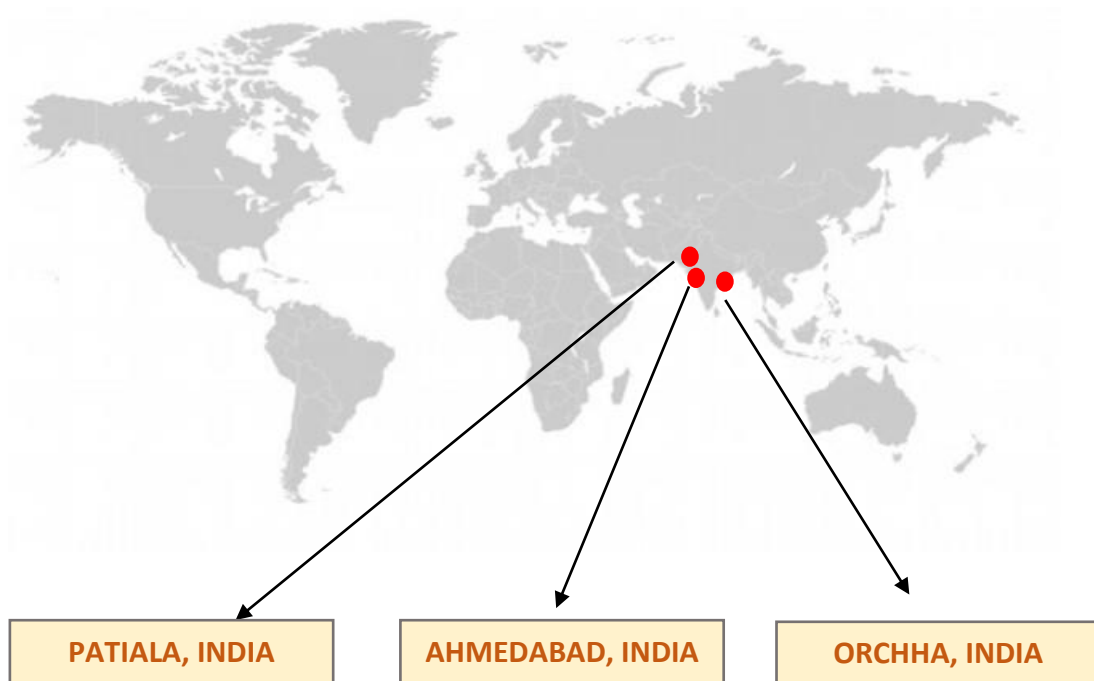
Figure 10: Representation of Case examples (Source: Author)

CASE EXAMPLE 1: THE WALLED CITY OF AHMEDABAD, GUJARAT, INDIA

Figure 11: View of Walled City of Ahmeadabad, Gujrat (Source: Google Image)

CASE EXAMPLE 2: THE WALLED CITY OF PATIALA, PUNJAB, INDIA

Figure 12: View of Walled City of Patiala, Punjab (Source: Google Image)

CASE EXAMPLE 3: ORCHHA, MADHYA PRADESH, INDIA

Figure 13: View of Orchha Town, Madhya Pradesh (Source: Google Image)

3.2 THE WALLED CITY OF AHMEDABAD, GUJRAT, INDIA

3.2.1 DESCRIPTION

Founded by Sultan Ahmad Shah in the 15th century, on the eastern bank of the Sabarmati River. The walled city has large concentration of commercial activities. It is also having the traditional neighbourhoods down the narrow winding lanes that gives it a distinct identity. There are about 600 "Pols". The city is also distinctly marked by several monuments of 15th - 17th century including Jama Masjid, Bhadra Fort, Teen Darwaja etc. It also depicts the heritage value of the city.

Total Area = 5.43 Sq. Km

Total Population = 3.75 Lakhs

GEOGRAPHIC AREA OF THE WALLED CITY
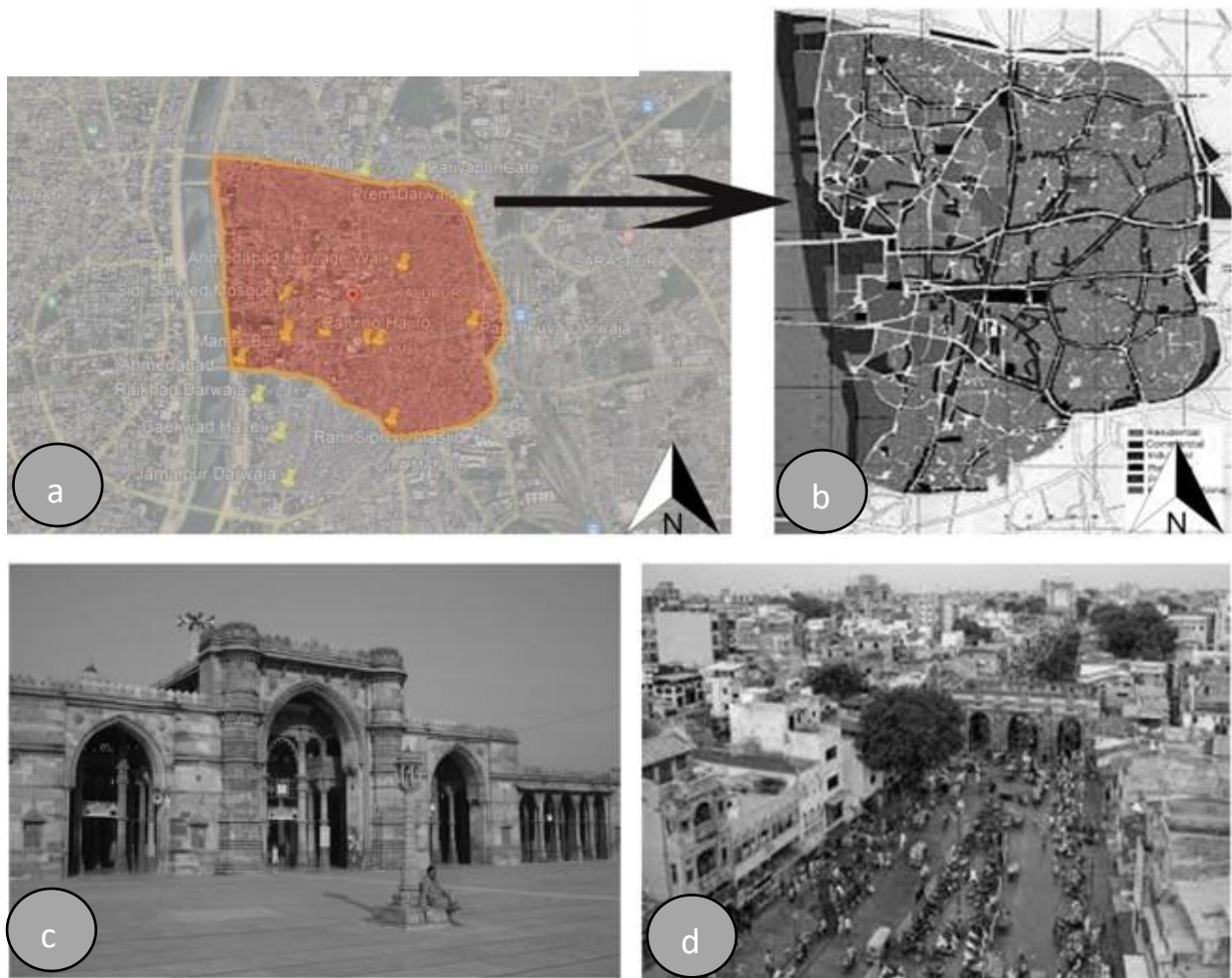
Figure 14: (a) Map showing area under walled city of Ahmedabad, (Source: Author), (b) Blow up Map of Walled City of Ahmedabad (Source: Google Image), (c) & (d) View of Walled City of Ahmedabad (Source: Google Image)

HERITAGE VALUE OF THE CITY

Urban archaeology of the city strengthens its historic significance based on remains from the **Pre-Sultanate and Sultanate periods**.

The architecture of the Sultanate period monuments exhibits a unique fusion of the **multicultural character of the historic city**.

This heritage is associated with the **complementary traditions** embodied in other **religious buildings** and the old city's very **rich domestic wooden architecture** with its distinctive "**havelis**" (neighbourhoods)

The timber-based architecture of the historic city is of exceptional significance and is the most unique aspect of its heritage. It demonstrates Ahmadabad's significant contribution to **cultural traditions, to arts and crafts**, to the design of structures.
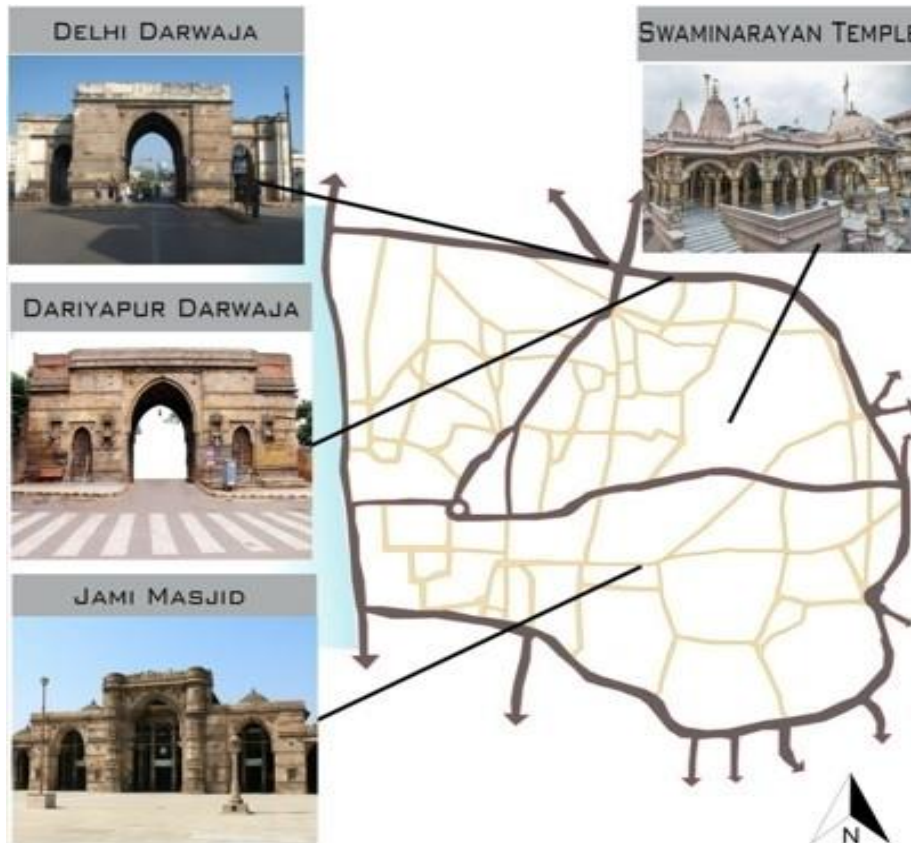
Figure 15: Map representing different heritage building in Walled City of Ahmedabad (Source: Author)

Ahmedabad includes **28 monuments listed by the Archaeological Survey of India** (ASI), one monument listed by the State Department of Archaeology (SDA), and **2,696 important buildings** protected by the Heritage Department at the Ahmadabad Municipal Corporation (AMC).

<u>HERITAGE WALK</u>

The heritage walk introduced in 1997 begins at the Swaminarayan Temple & ends at the Jami Masjid and enroute several pols.

Time: 7:45 A.M. to 10:30 A.M
Starting Point: Swaminarayan Mandir Road, Old City, Kalupur, Ahmedabad
Reporting Time: 07:30 A.M
End Point: Manek Chowk, Gandhi Rd, Danapidth, Khadia, Ahmedabad
Length: 2 Km (2 Hours 30 Minutes)
Number of Pause Points: 22 Points
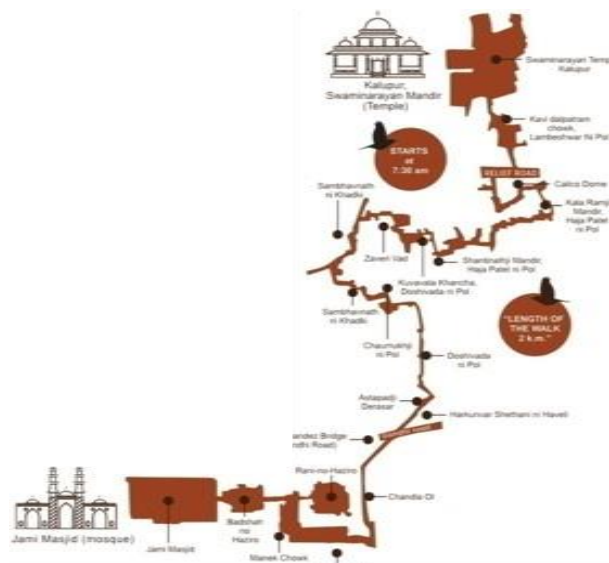
3.2.2 SURVEY
NODES

Analysis: There are many nodes in the site area. Maximum nodes are **minor nodes**, and few are **major nodes**. Major nodes are at the important junctions having its own **historic value** due to the presence of important landmarks of the site.

Observations: The nodes are very **unplanned** and thus are very **congested with the heavy traffic movement** present in the site. The major nodes are not much more spacious and the presence of unplanned adjacent buildings surrounding the nodes makes it narrower and thus hampers the visual effects.

This intersecting node is being surrounded by tall buildings with less offsets and thus making it congested

The built forms adjacent to the roads are not chamfered and thus doesn't provide much visibility. Also, the built forms are exactly along the periphery of the roadsides.
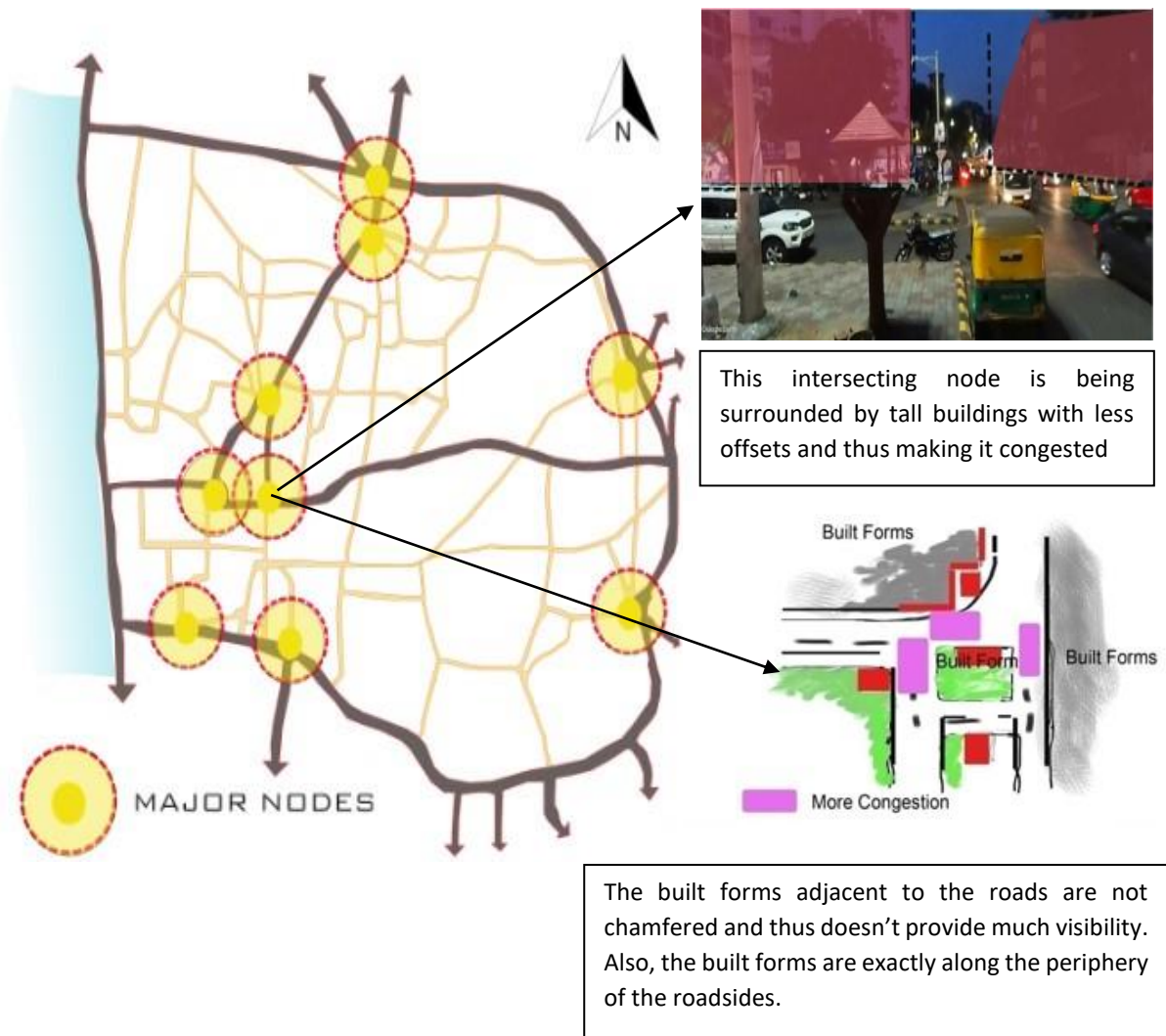
Figure 16: Map showing important nodes in Walled City of Ahmedabad (Source: Author)

Conclusions:

- The major nodes should be **more spacious and more planned** to avoid the congestion.
- The edge of the building blocks surrounding the nodes should be with respect to the nodes.

LANDMARKS

Analysis: Due to the presence of numerous historic buildings with its own heritage value, there is the presence of large number of prominent landmarks in the study area. Many of those landmarks are being incorporated in the heritage walk.

Observations: The location of some landmarks are such that it itself making an important node with creates a **major reference point**, but most of the landmarks **are lacking its visibility from long distance**. Most of the landmarks are human made landmarks such as monuments or gates or such prominent distinctive built structures.

Presence of a historic building makes the node itself an important landmark and thus making the place more vibrant.

The visibility of the landmark is greatly hampered by the surroundings and thus losing the actual importance of it.
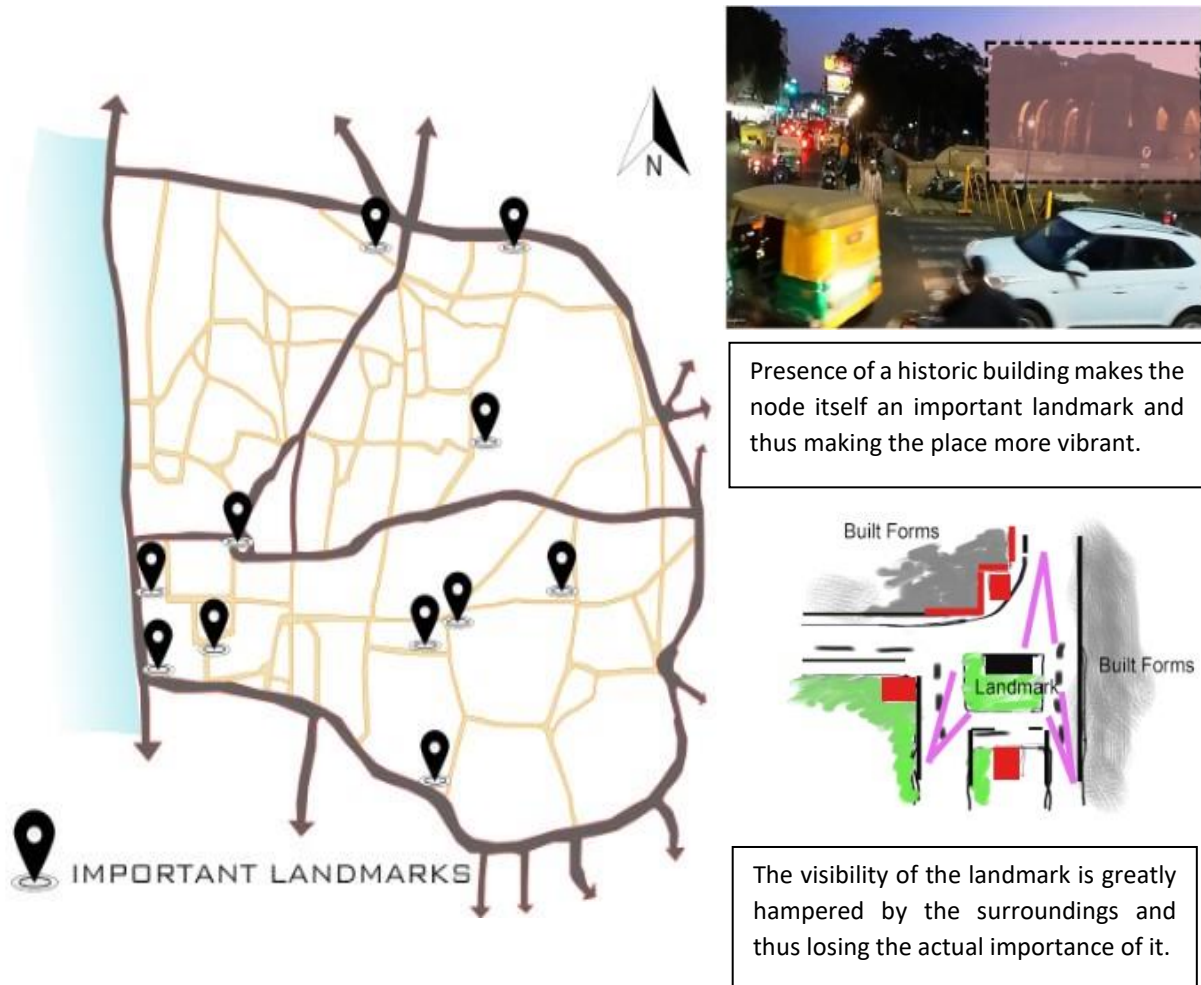
Figure 17: Map showing important landmarks in Walled City of Ahmedabad (Source: Author)

Conclusions:

- The landmarks should be in such a position that it can be used as an artificial feature for navigation.
- Necessary steps should be taken so that there is no loss of visibility to the landmark from long distance.

PATTERN

Analysis: The road intersections are very irregular. The area contains organic patterns in its street morphology.

Observations: The area was organised on a human scale and is highly walkable. It provides a low speed of travel within the narrow streets and a high speed of travel in the recently built linear pattern. There is a lack of Geometrical Open Spaces, and the spaces follow the irregular pattern of the roan intersections.
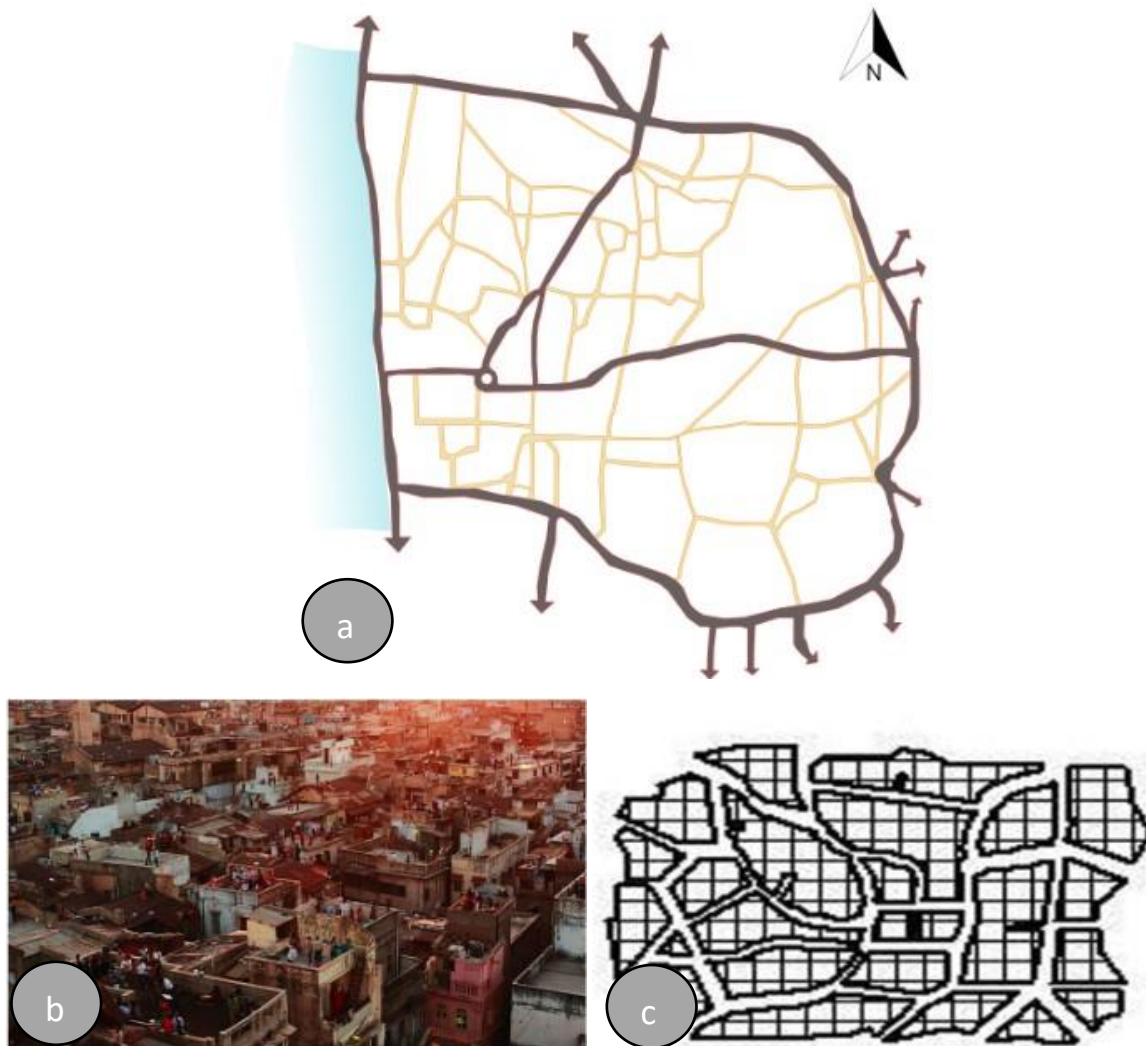
Figure 18: (a) Map showing pattern of walled city of Ahmedabad, (Source: Author), (b) Arial View showing pattern of Walled City of Ahmedabad (Source: Google Image), (c) Basic Unorganised pattern layout(Source: Google Image)

Conclusions:

- The building blocks are thus following the organic pattern of the area and having irregular shapes and sizes.
- The pattern should be regularised to some extent for the easy placements of geometrical blocks and open spaces.

ROUTES

Analysis: The road is grade separated for the movement of particular type of vehicles and pedestrians. There are streets which are very narrow and connects different "pols".

Observations: The routes are followed by different commercial activities which gathers and enhance the movement of the pedestrians as well as the vehicular. The road network of the area has been classified into major arterial roads and sub arterial roads.

Figure 19: Map Showing different types of road within the Walled city of Ahmedabad (Source: Author)

Major Arterial Road:

Heavy vehicular arterial road to regulate the heavy traffic & congestion with parking spaces.

Sub-Arterial Road:

Mostly suitable for light vehicles and are naturally safer for pedestrians. heritage walk is mostly dependent on these roads.

Narrow pathway, only suitable for pedestrians and light vehicles

The Municipality made several new roads to encourage a spread of settlement, relieve congestion, connect the centre of the city to the railway station, and open the pols.
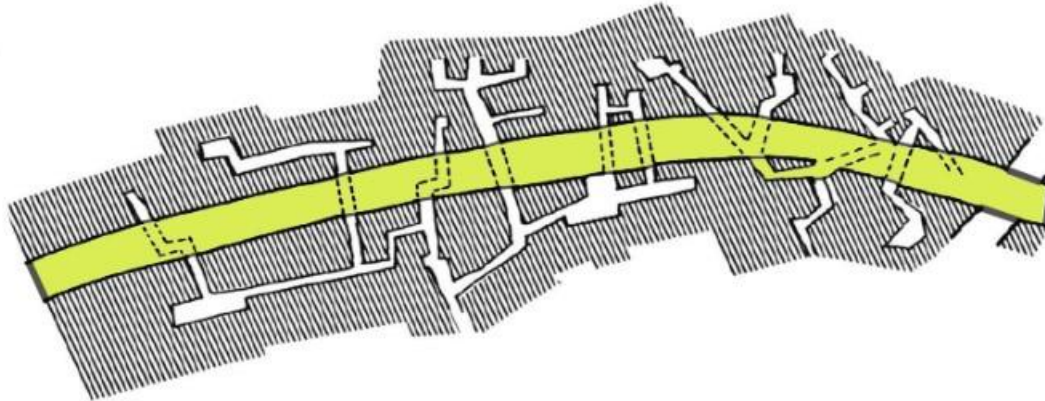
Figure 20: Pols demolished to create new roads in the walled city. (Source: Wikipedia)

Primary Streets

Secondary Streets with Cul-de-Sacs

Figure 21: Lay-out of a pol showing the primary street and cul-de-sacs around which houses are located (Source: Wikipedia)

Figure 22: View of a Primary Street within the Pols (Source: Google Image)

Conclusions:

- There should be classification of routes depending on the requirement of movements and other activities.
- The streets should be wider enough for the easy access of the pedestrians and separate pathway should be there for pedestrians.

ACTIVITIES

Observations: Mostly Residential buildings are present in the area. Being Heritage site, there is a presence of numerous religious structures.

Analysis: Commercial activities are found along the streets of the major connecting roads. Religious activities and some Commercial areas are the major attractions of the site. Presence of parks and educational zones makes the site more vibrant.
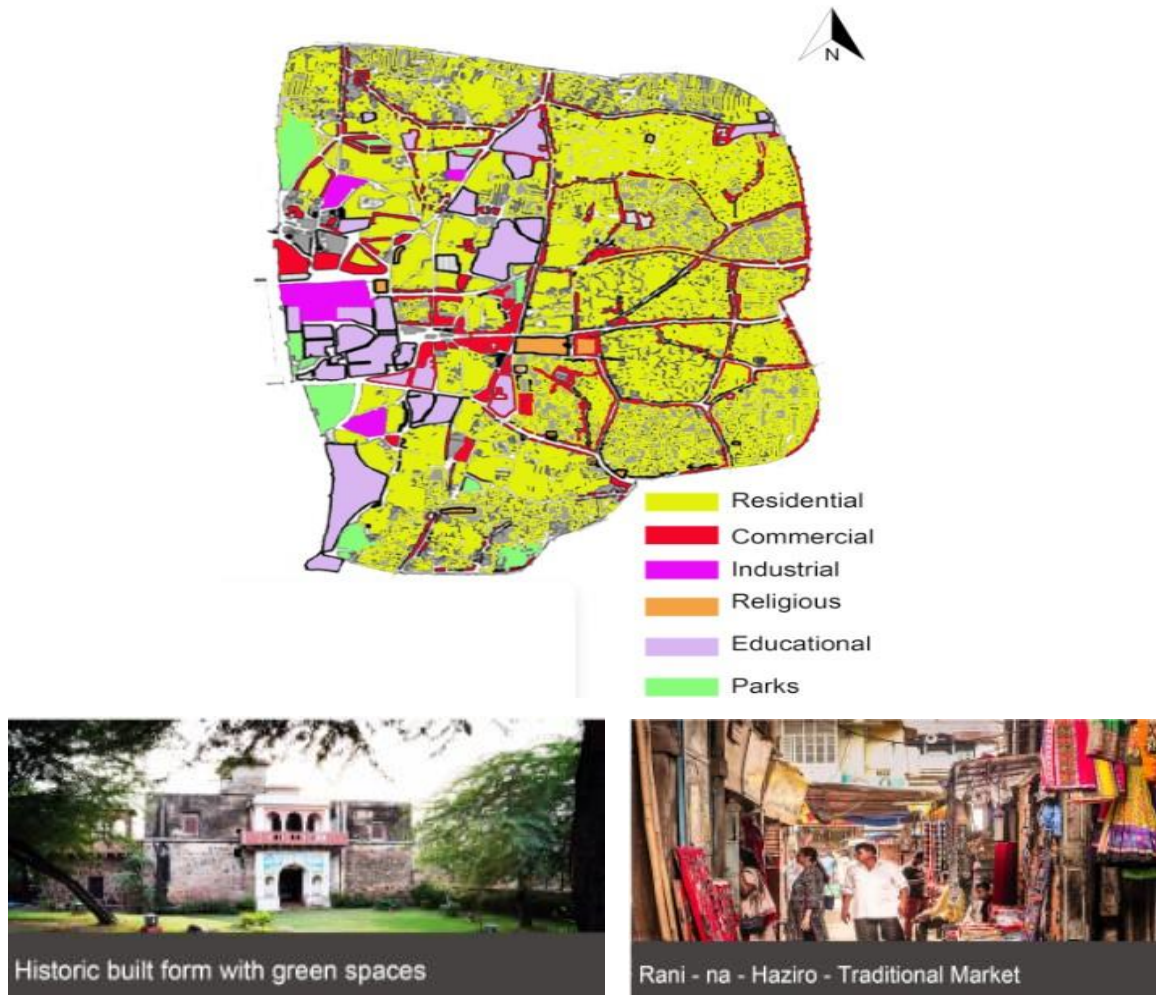
Figure 23: Map Showing Different types of Activities within the Walled city of Ahmedabad (Source: Google Image)

Conclusions:

- There should be restrictions in unorganised development.
- The area is having a strong potential of heritage sites with historic value and major commercial streets.
- Open spaces need more interventions.

3.2.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• The major nodes should be **more spacious and more planned** to avoid the congestion. • The edge of the building blocks surrounding the nodes should be with respect to the nodes.
LANDMARKS	• The landmarks should be in such a position that it can be used as an **artificial feature for navigation**. • Necessary steps should be taken so that there is no loss of **visibility to the landmark** from long distance.
PATTERN	• The building blocks are thus following the organic pattern of the area and having **irregular shapes and sizes.** • The pattern should be regularised to some extent for the easy placements of g**eometrical blocks and open spaces.**
ROUTES	• There should be classification of routes depending on the **requirement of movements and other activities**. • The streets should be wider enough for the easy access of the pedestrians and **separate pathway should be there for pedestrians.**
ACTIVITIES	• There should be **restrictions in unorganised development.** • The area is having a strong potential of heritage sites with historic value and major commercial streets. • Open spaces need more interventions.

Table 4: Inferences based on study parameters for Case Example of Walled City of Ahmedabad.
(Source: Author)

3.3 THE WALLED CITY OF PATIALA, PUNJAB, INDIA

3.3.1 DESCRIPTION

Patiala district is one of the important historical districts of the Punjab. Patiala is a city in southeastern Punjab, north-western India. Patiala is the land of Maharajas is famous for its peg, pagri, dresses, jutti, Patiala sahi salwar, Reshmi naale , Food like "Makki de roti" and "Saraason da saag", folk songs , dances like Gidha and Bhangra , its traditions and culture. This city is also known as Patiala- The Royal City and Patiala-The Beautiful City. A small walled settlement to a city, Patiala has been developed to fourth largest city on the Punjab.

Total Area = 5.94 sq. km

Total Population = 4.4 Lakhs

GEOGRAPHIC AREA OF THE WALLED CITY
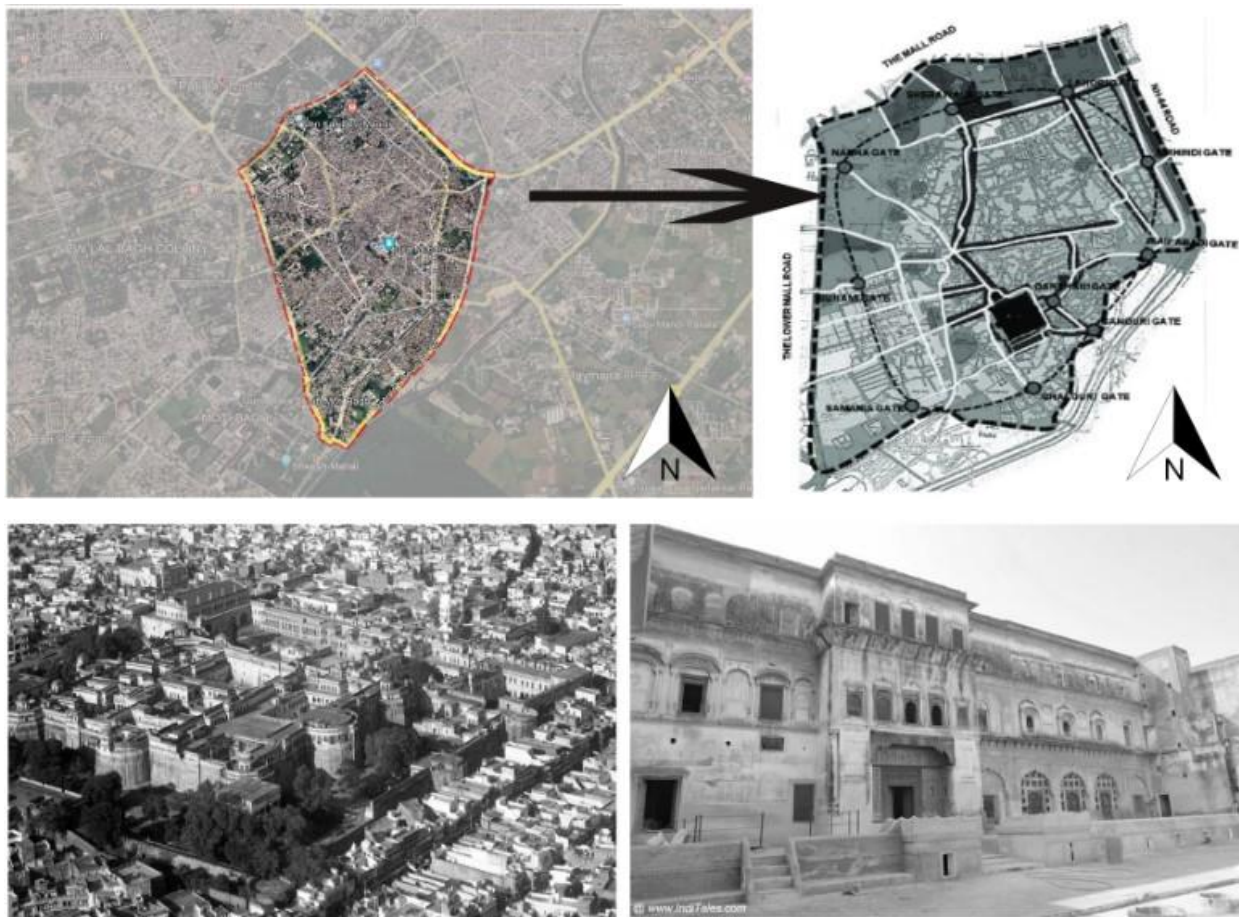
Figure 24: (a) Map showing area under walled city of Patiala, (Source: Author), (b) Blow up Map of Walled City of Patiala (Source: Google Image), (c) & (d) View of Walled City of Patiala (Source: Google Image)

HERITAGE VALUE OF THE CITY

The present Patiala city represents royal heritage and rich culture with magnificent Forts, Palaces, and extensive gardens like Qila Androon Sheesh Mahal, Moti Bagh Palace, Baradari Gardens, Art Galleries and National Institute of Sports, Baradari Gardens, Gurudwara Dukhniwaran Sahib and Temple Kali Devi. The Qila Mubarak was first developed as a mud fort or Kachi Garhi. Moti Bagh Palace is also a great architectural place was constructed in 1847 by Maharaja Narendara Singh. Its designing is as like as Shalimar Gardens of Lahor with beautiful gardens, water channels, terraces and Sheesh Mahal.

Time: 8:00 A.M. to 11:30 A.M

Starting Point: Ironically begins from a mausoleum

Reporting Time: 07:30 A.M

End Point: Shahi Samadhan, Patiala, punjab

Length: 1.5 Km (2 Hours)

Number of Pause Points: 7 Points
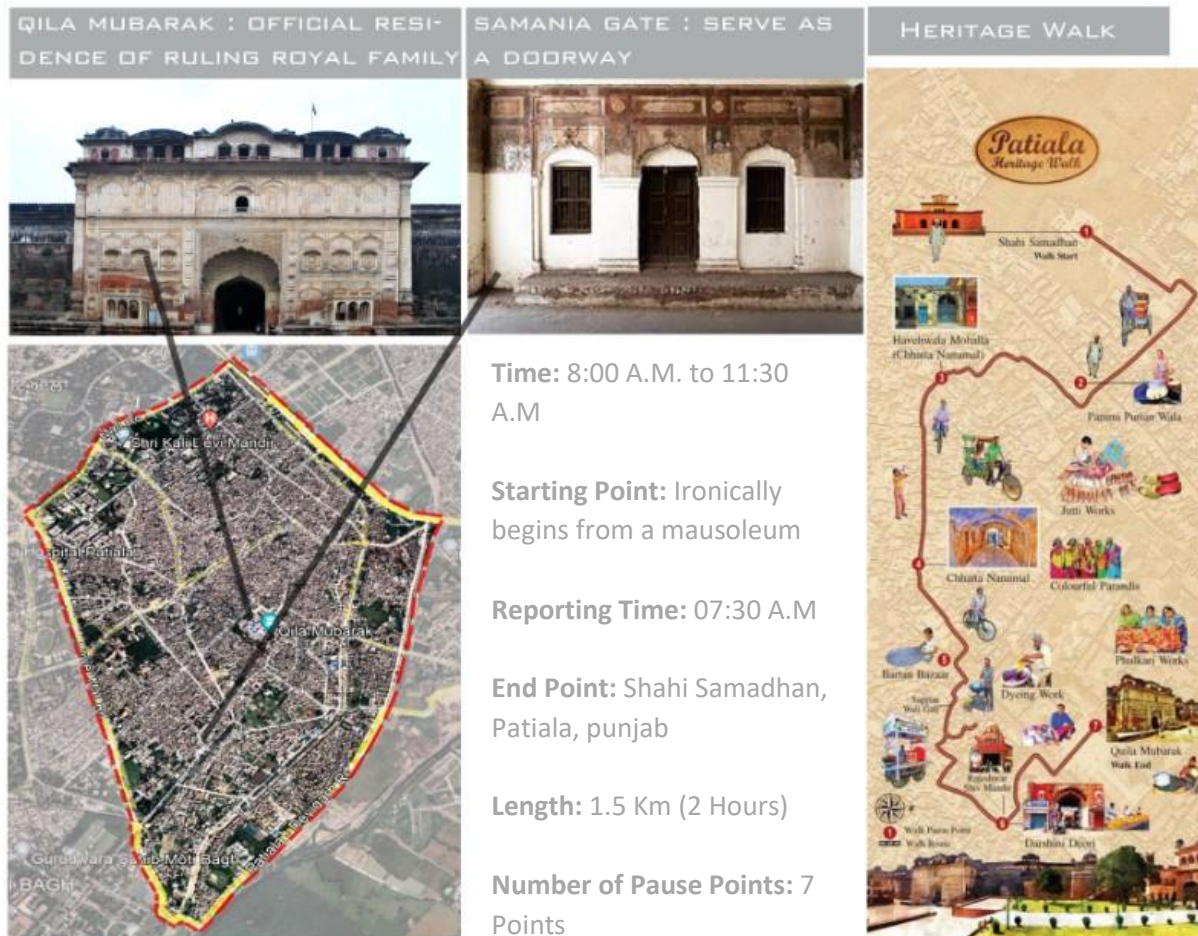
Figure 25: Map representing different heritage building in Walled City of Patiala (Source: Author)

3.3.2 SURVEY
NODES

Observations: There are many nodes in the site area. Maximum nodes are minor nodes and few are major nodes. Major nodes are on the intersections of the major arterial roads and are not planned.

Analysis: The built forms are exactly at the edge of the nodes. The roads are very narrow in the sub arterial roads and thus nodes have sharp bending. The built forms are not much tall, but it does not leave adequate space in the nodes.

| Lack of separate footpath for pedestrians. Also due to the lack of proper parking space the node becomes congested | Due to narrow roads the node is having sharp bending. |

Figure 26: Map showing important nodes in Walled City of Patiala (Source: Author)

Conclusions:

- The major nodes should be more spacious and there must be separate pedestrian pathway.
- Parking nearby the nodes must be avoided to minimise the congestion.

LANDMARKS

Observations: The landmarks are not exactly in the intermediate nodal points. Some landmarks lack proper visibility due to which it is not easily recognizable by the travellers. Major Landmarks are renowned for its historic value.

Analysis: Landmarks in the selected area are basically some historic monuments and buildings with its own heritage value. These landmarks are the basic identity of the heritage walled city and is a part of the heritage walk.

Moti Bagh Palace serves as an important landmark of the walled city of Patiala. Also, it adds to the city's heritage value.	**Baradari Garden** was built in a Mughal style and it has its own importance and can be ascertained from its name.

Figure 27: Map showing important landmarks in Walled City of Patiala (Source: Author)

Conclusions:

- Landmarks with its own identity is always useful for the proper navigation.
- Landmarks should have more visibility

PATTERN

Observations: The Road Intersections are not following any pattern and are irregular in shapes. Being old city, the buildings blocks and road layouts are not very planned.

Analysis: Lack of presence of geometrical shapes and pattern in the Built forms and the opens spaces. Due to organic streets the area is highly walkable as it provides low speeds of travels in the organic streets.
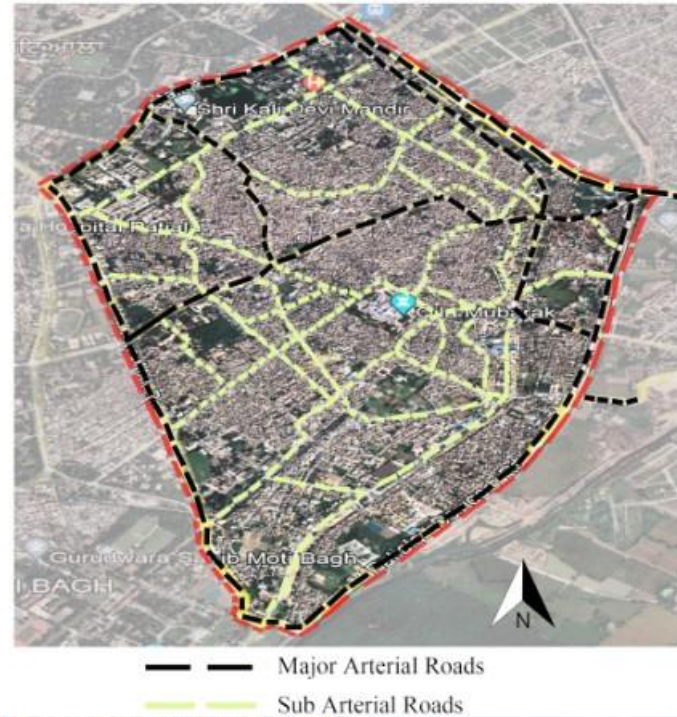
Figure 28: Map showing the pattern in Walled City of Patiala (Source: Author)

Conclusions:

- Need for the regularization of the irregular road intersections to some extent for the better design interventions.

ROUTES

Observations: The focus is on the mode of transport and implemented by grade separated movements. Connected Pedestrian network throughout the walled city.

Analysis: The routes are followed by different activities and focusing on the heritage zones of the walled city. The pedestrian movement is basically dedicated to all users including commuters, tourists, and shoppers**.**
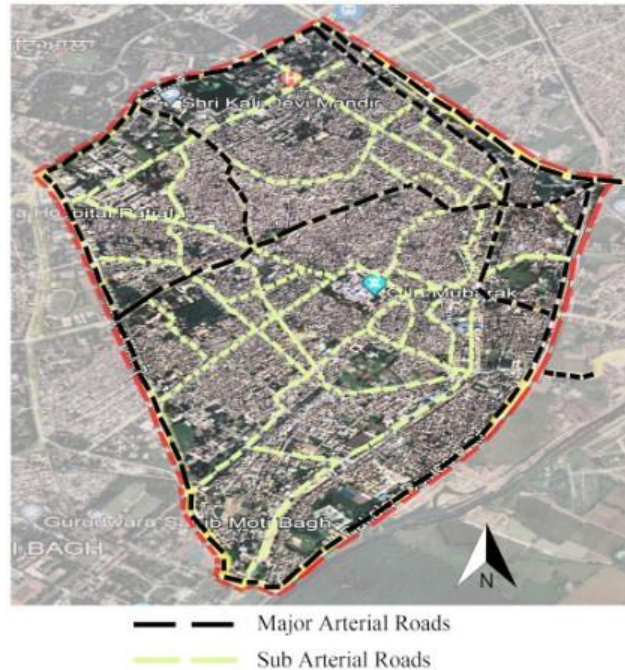
Lack of presence of dedicated pedestrian pathway in the Sub - Arterial roads.	Need for parking area in the collector roads.

Figure 29: Map showing the different types of routes in Walled City of Patiala (Source: Author)

Conclusions:

- Need for the design of the roads focusing on the slow movements, i.e., walking, bicycling etc. Need for the separate pedestrian pathway and parking areas**.**

ACTIVITIES

Observations: Majorly Residential activities are present in the area. Commercial Activities are majorly along the periphery on the major roads.

Analysis: Presence of Religious Activities makes the area always congested and vibrant. Presence of traditional markets like Bartaan Bazaar and Phulkari bazaar makes the area for active for the tourists and the passers-by.

Bartan Bazaar is the famous Traditional market in the walled city of Patiala.	**Phulkari Bazaar** is famous for having royal traditional Patiala items.
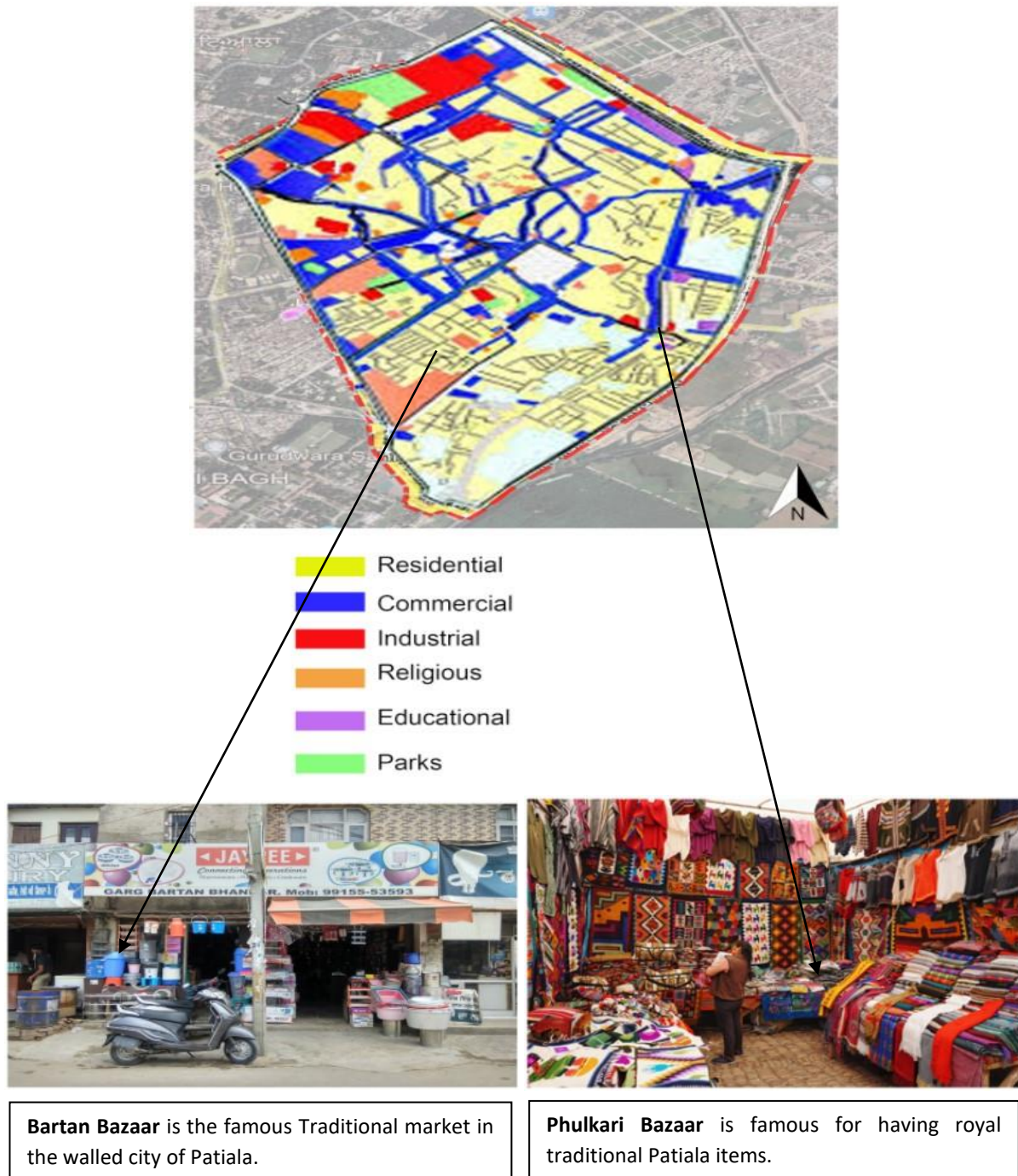
Figure 30: Map showing the different types of Activities in Walled City of Patiala (Source: Author)

Conclusions:

- Need for the proper connections between different major activities.
- Traditional markets need to be regularised.

3.3.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• The major nodes should be more spacious and there must be separate pedestrian pathway. • Parking nearby the nodes must be avoided to minimise the congestion.
LANDMARKS	• Landmarks with its own identity is always useful for the proper navigation. • Landmarks should have more visibility
PATTERN	• Need for the regularization of the irregular road intersections to some extent for the better design interventions.
ROUTES	• Need for the design of the roads focusing on the slow movements, i.e., walking, bicycling etc. Need for the separate pedestrian pathway and parking areas
ACTIVITIES	• Need for the proper connections between different major activities. • Traditional markets need to be regularised.

Table 5: Inferences based on study parameters (Source: Author)

3.4 ORCHHA, MADHYA PRADESH, INDIA

3.4.1 DESCRIPTION

Orchha (or Urchha) is a town in **Niwari** district of Madhya Pradesh state, India. The town was established by Rajput ruler **Rudra Pratap Singh** sometime after **1501**. The town, located on the banks of **river Betwa**, around 80 km from MP's Tikamgarh district and 15 km from Jhansi district of UP. The most fascinating of all the magnificent surroundings is the **Orchha's Fort complex** also known as **Chaturbhuj temple**. Numerous cenotaphs or chhatris dot the vicinity of the fort and the Betwa river. There is an unusual variety of **temples and tombs**.

Total Area = 4.92 sq. km

Total Population = 8501

SELECTED AREA OF ORCHHA
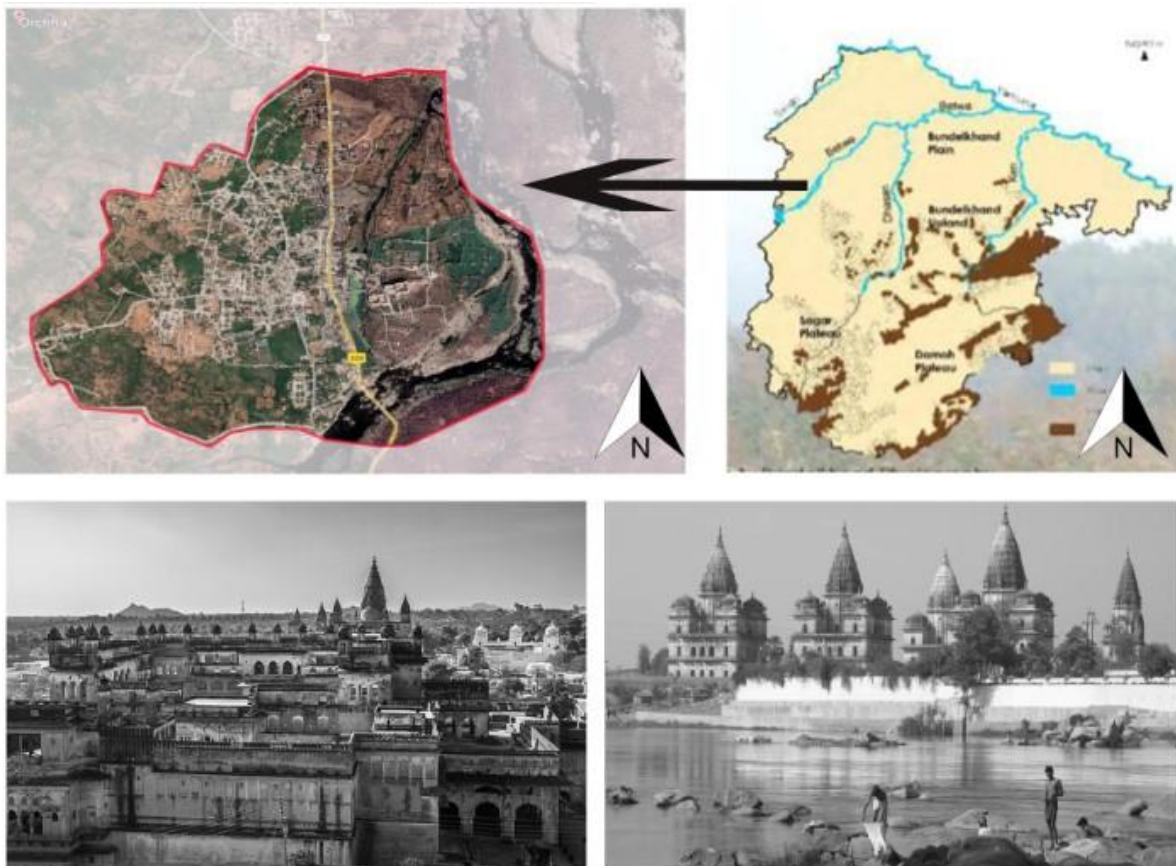
Figure 31: (a) Map showing area under Orchha Heritage Town, (Source: Author), (b) Blow up Map of Orchha Town (Source: Google Image), (c) & (d) View of Orchha Town (Source: Google Image)

HERITAGE VALUE OF THE CITY

Orchha architecture has a blend of Bundelkhandi and Mughal influences. The structures are not only appreciated for their **mesmerizing beaut**y but also for their intelligent engineering. The **Raj Mahal** was once the prime residence of Bundela kings and their queens. **Secret alleys, steep stairs and exquisite murals** depicting avatars of Lord Vishnu, whom the

super religious king of Bundelkhand; **Madhukar Shah** worshipped, narrate the story of a powerful era gone by. The **Jahangir Mahal** is considered to be a singularly beautiful specimen of **Mughal architecture**.

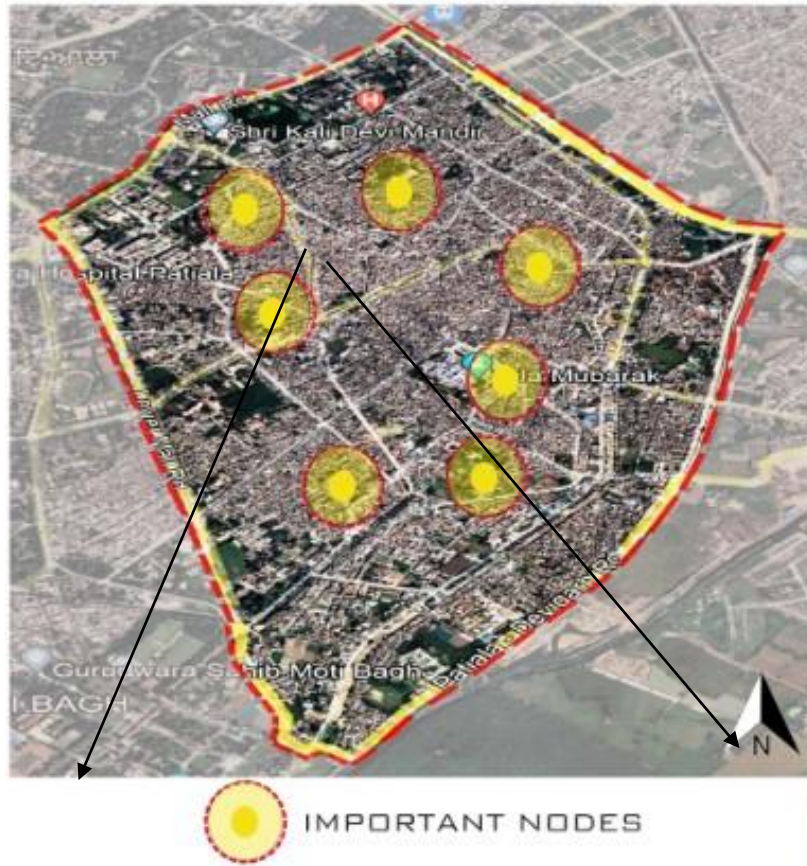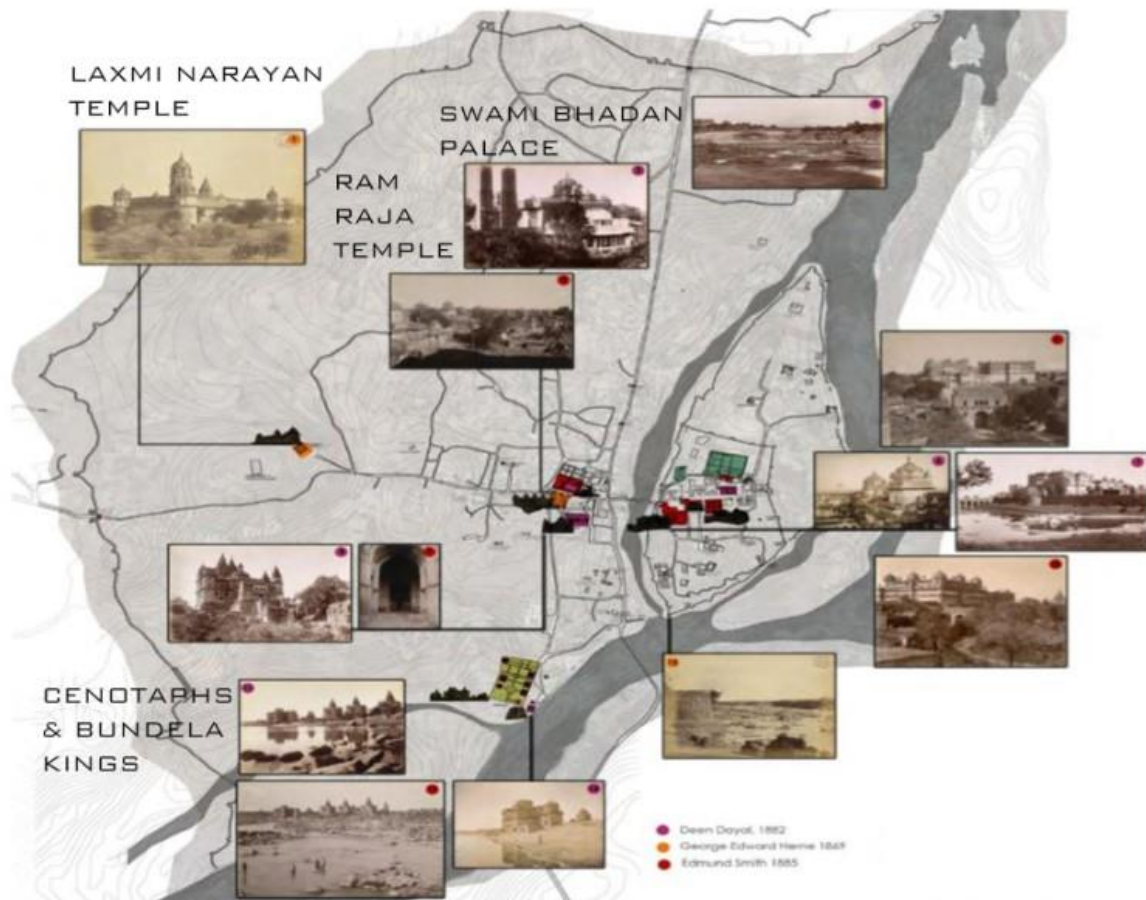*Figure 32: Map representing different heritage building in Orchha Town (Source: Author)*

3.4.2 SURVEY
NODES

Observations: There are many nodes in the site area. Maximum nodes are minor nodes, and few are major nodes. Major nodes are on the intersections of the major arterial roads and are not planned.

Analysis: The built forms are exactly at the edge of the nodes. The roads are very narrow in the sub arterial roads and thus nodes have sharp bending. The built forms are not much tall but it does not leave adequate space in the nodes.

| Lack of separate footpath for pedestrians. Also due to the lack of proper parking space the node becomes congested. | Due to narrow roads the node is having sharp bending. |
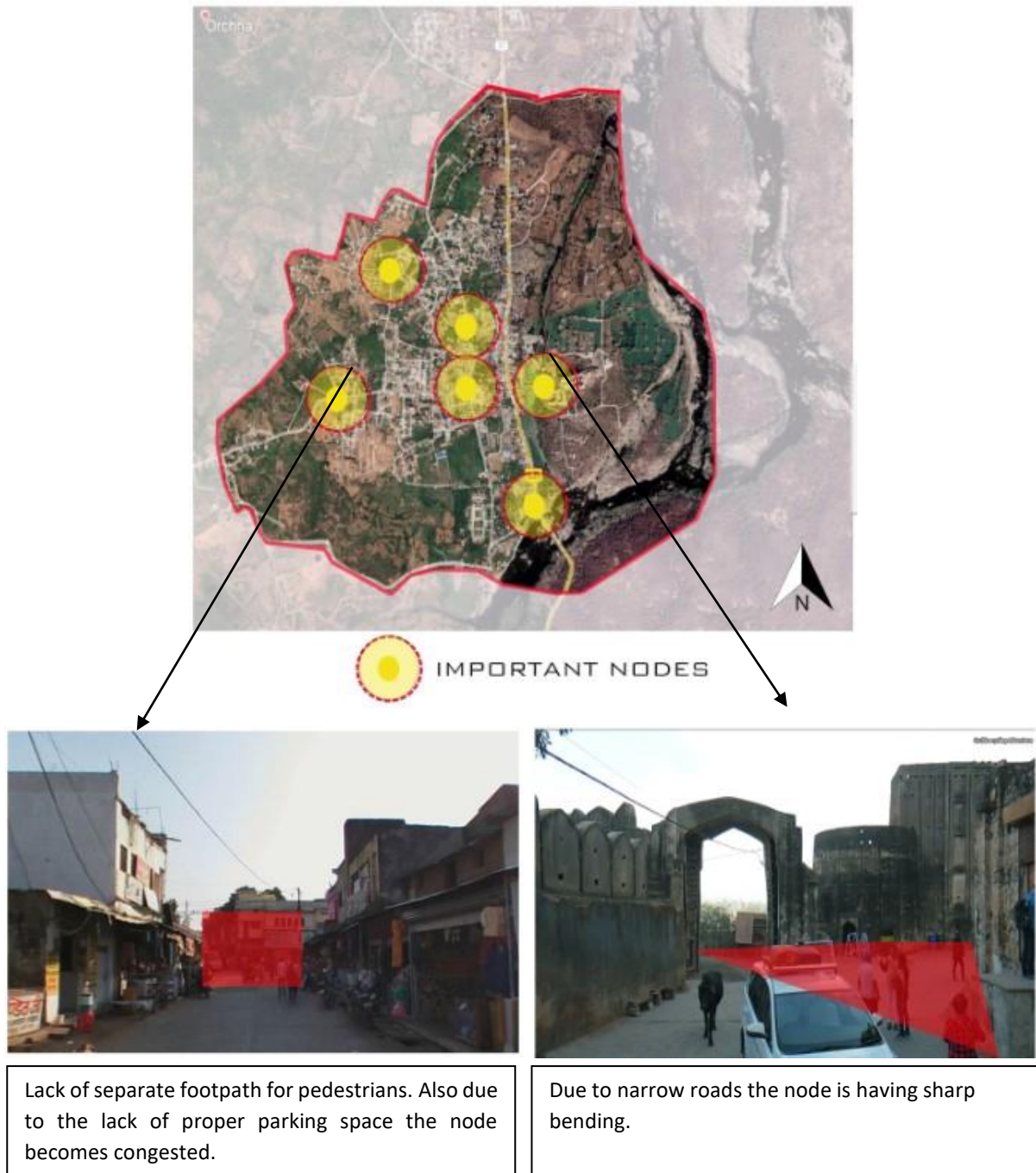
Figure 33: Map showing important nodes in Orchha Town (Source: Author)

Conclusions:

- The major nodes should be more spacious and there must be separate pedestrian pathway.
- Parking nearby the nodes must be avoided to minimise the congestion.

LANDMARKS

Observations: The landmarks are not exactly in the intermediate nodal points. Some landmarks lack proper visibility due to which it is not easily recognizable by the travellers. Major Landmarks are renowned for its historic value.

Analysis: Landmarks in the selected area are basically some historic monuments and buildings with its own heritage value. These landmarks are the basic identity of the heritage walled city and is a part of the heritage walk.

| A.   Laxmi Narayan temple | B. Ram Raja temple |

| C. Jahangir Mahal |

Figure 34: Map showing important Landmarks in Orchha Town (Source: Author)

Conclusions:

- Landmarks with its own identity is always useful for the proper navigation.
- Landmarks should have more visibility

PATTERN

Observations: The Road Intersections are not following any particular pattern and are irregular in shapes. Being old city, the buildings blocks and road layouts are not very planned.

Analysis: Lack of presence of geometrical shapes and pattern in the Built forms and the opens spaces. Due to organic streets the area ih highly walkable as it provides low speeds of travels in the organic streets.

Major Arterial Roads
Sub Arterial Roads
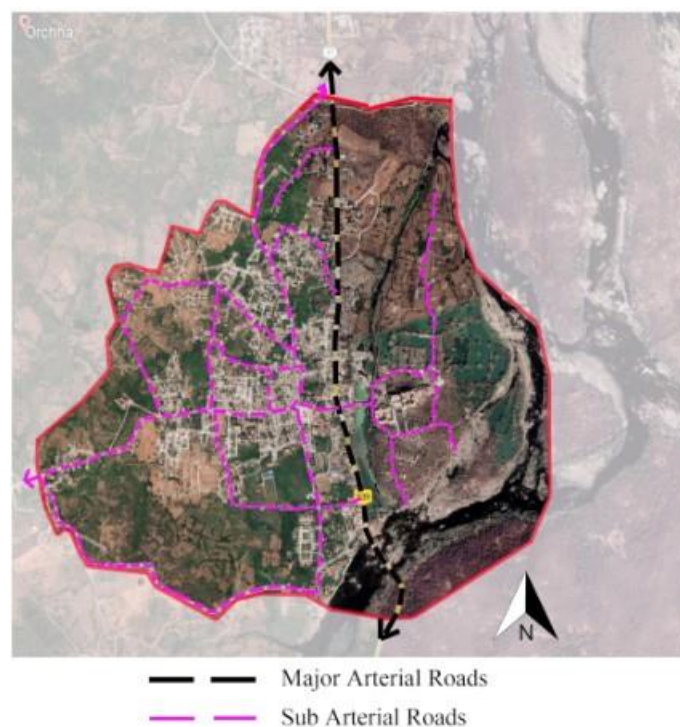
Figure 35: Map showing the pattern of Orchha Town (Source: Author)

Conclusions:

- Need for the regularization of the irregular road intersections to some extent for the better design interventions.

ROUTES

Observations: The focus is on the mode of transport and implemented by grade separated movements. Connected Pedestrian network throughout the walled city.

Analysis: The routes are followed by different activities and also focusing on the heritage zones of the town. The pedestrian movement is basically dedicated to all users including commuters, tourists, and shoppers.

Major Arterial Roads
Sub Arterial Roads
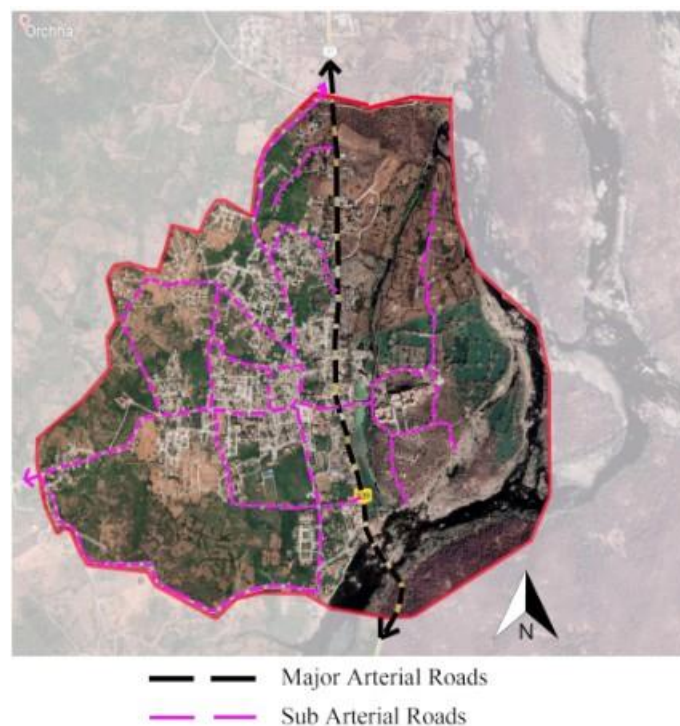
Lack of presence of dedicated pedestrian pathway in the Sub - Arterial roads.

Need for grades of seperation.

Figure 36: Map showing the different types of routes of Orchha Town (Source: Author)

Conclusions:

- Need for the design of the roads focusing on the slow movements, i.e. walking, bicycling etc.
- Need for the separate pedestrian pathway and parking areas.

ACTIVITIES

Observations: Majorly Residential activities are present in the area. Commercial Activities are majorly along the periphery on the major roads.

Analysis: Presence of Religious Activities makes the area always congested and vibrant. Presence of traditional markets like the area for active for the tourists and the passers-by**.**
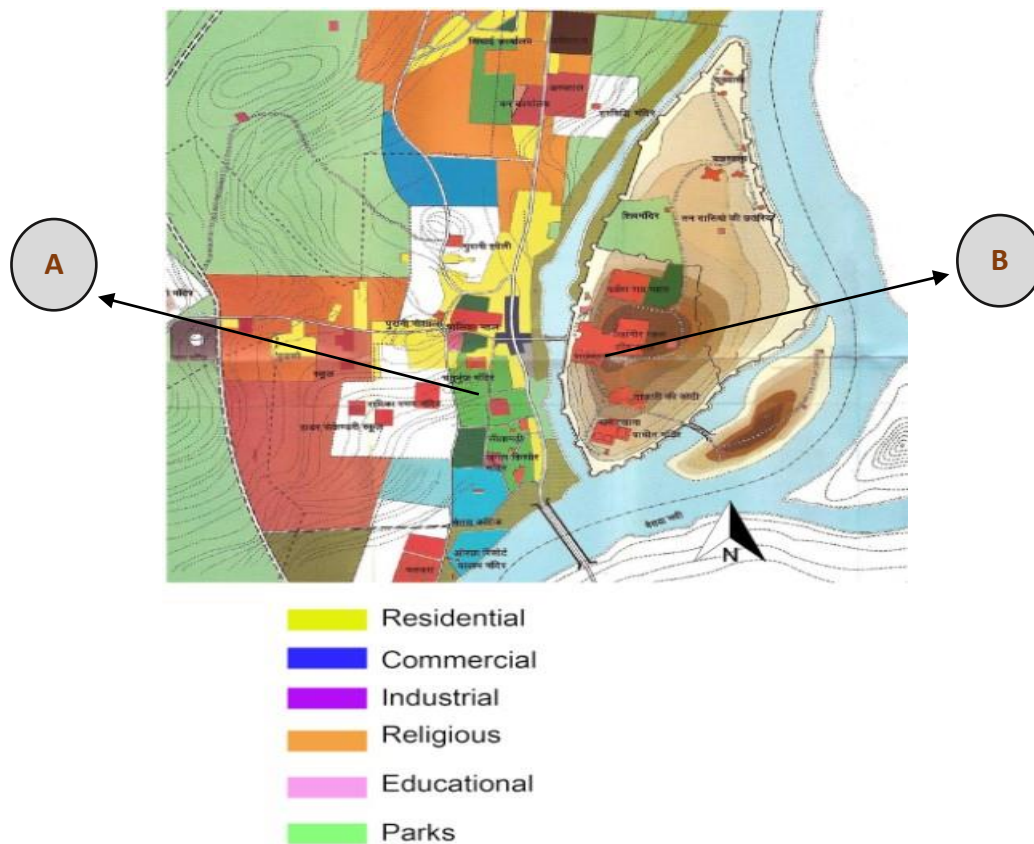
| | A. Traditional Market | B. Market During Occasions |

Figure 37: Map showing the different types of Activities of Orchha Town (Source: Google Image)

Conclusions:

- Need for the proper connections between different major activities.
- Traditional markets need to be regularised.

3.4.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• The major nodes should be more spacious and there must be separate pedestrian pathway. • Parking nearby the nodes must be avoided to minimise the congestion.
LANDMARKS	• Landmarks with its own identity is always useful for the proper navigation. • Landmarks should have more visibility
PATTERN	• Need for the regularization of the irregular road intersections to some extent for the better design interventions.
ROUTES	• Need for the design of the roads focusing on the slow movements, i.e., walking, bicycling etc. • Need for the separate pedestrian pathway and parking areas.
ACTIVITIES	• Need for the proper connections between different major activities. • Traditional markets need to be regularised.

Table 6: Inferences based on study parameters (Source: Author)

3.5 COMPARISON OF CASE EXAMPLES

PARAMETERS	THE WALLED CITY OF AHMEDABAD, GUJRAT, INDIA	THE WALLED CITY OF PATIALA, PUNJAB, INDIA	ORCHHA, MADHYA PRADESH, INDIA
NODES	There are many nodes in the site area. Maximum nodes are **minor nodes**, and few are **major nodes**. Major nodes are at the important junctions having its own **historic value** due to the presence of important landmarks of the site.	There are many nodes in the site area. Maximum nodes are minor nodes, and few are major nodes. Major nodes are on the intersections of the major arterial roads and are not planned.	There are many nodes in the site area. Maximum nodes are minor nodes, and few are major nodes. Major nodes are on the intersections of the major arterial roads and are not planned.

LANDMARKS	Due to the presence of numerous historic buildings with its own heritage value, there is the presence of large number of prominent landmarks in the study area. Many of those landmarks are being incorporated in the heritage walk.	The landmarks are not exactly in the intermediate nodal points. Some landmarks lack proper visibility due to which it is not easily recognizable by the travellers. Major Landmarks are renowned for its historic value.	The landmarks are not exactly in the intermediate nodal points. Some landmarks lack proper visibility due to which it is not easily recognizable by the travellers. Major Landmarks are renowned for its historic value.
PATTERN	The road intersections are very irregular. The area contains organic patterns in its street morphology. The area was organised on a human scale and is highly walkable. It provides a low speed of travel within the narrow streets and a high speed of travel in the recently built linear pattern.	The Road Intersections are not following any pattern and are irregular in shapes. Being old city, the buildings blocks and road layouts are not very planned. Lack of presence of geometrical shapes and pattern in the Built forms and the opens spaces.	The Road Intersections are not following any pattern and are irregular in shapes. Being old city, the buildings blocks and road layouts are not very planned. Lack of presence of geometrical shapes and pattern in the Built forms and the opens spaces.
ROUTES	The road is grade separated for the movement of vehicles and pedestrians. There are streets which are very narrow and connects different "pols". The routes are followed by different commercial activities which gathers and enhance the movement of the	The focus is on the mode of transport and implemented by grade separated movements. Connected Pedestrian network throughout the walled city. The routes are followed by different activities and focusing on the heritage zones of the walled city.	The focus is on the mode of transport and implemented by grade separated movements. Connected Pedestrian network throughout the walled city. The routes are followed by different activities and also focusing on the

	pedestrians as well as the vehicular.		heritage zones of the town.
ACTIVITIES	Mostly Residential buildings are present in the area.

Being Heritage site, there is a presence of numerous religious structures.

Commercial activities are found along the streets of the major connecting roads. Religious activities and some Commercial areas are the major attractions of the site. | Majorly Residential activities are present in the area.

Commercial Activities are majorly along the periphery on the major roads.

Presence of Religious Activities makes the area always congested and vibrant.

Presence of traditional markets like Bartaan Bazaar and Phulkari bazaar makes the area for active for the tourists and the passers-by. | Majorly Residential activities are present in the area.

Commercial Activities are majorly along the periphery on the major roads.

Presence of Religious Activities makes the area always congested and vibrant. |

Table 7: Comparative study of three case examples based on study parameters (Source: Author)

04

Case Application

4.0 CASE APPLICATION

TAMLUK: HEADQUARTER OF PURBA MEDINIPUR DISTRICT, WEST BENGAL

DESCRIPTION

Tamluk is the site of the ancient city variously known as **Tamralipta or Tamralipti**. The present town is located on the banks of the **Rupnarayan River** close to the Bay of Bengal. **Tamluk** was also known as **Bhivas**, in religious texts, and **Madhya Desh**, as the Middle State of Utkal/Kalinga and Banga.

Nearest Railway Station - Tamluk Rly Station
Nearest Highway Connectivity - NH 116

Total area = 17.86 sq. km
Total population = 65306
Density = 3700/sq. km

SELECTED SITE AREA
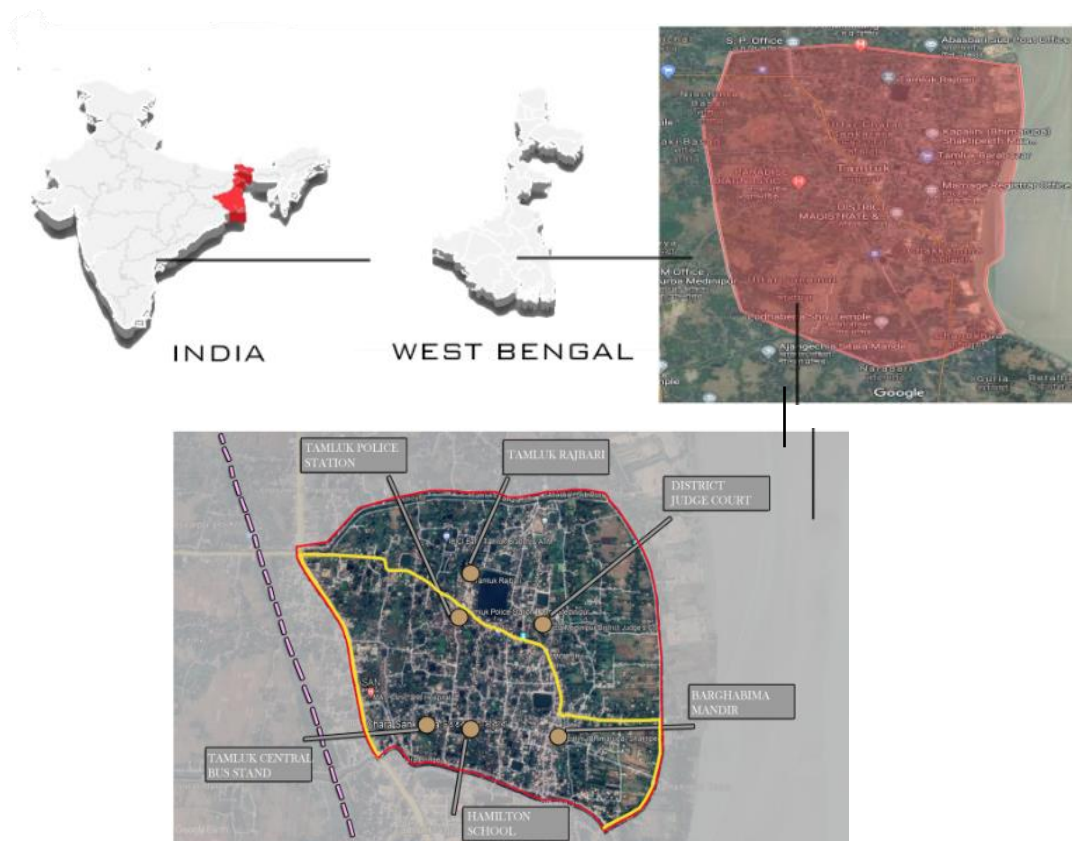
Figure 38: Map showing the selected area of study of Tamluk Town (Source: Google Image & Author)

My site area has been selected primitively based on the historic values of the locality. Also, my area boundary is selected based on the **canals, river, and the main arterial road layout.**

4.1 AREA LEVEL STUDY

4.1.1 SELECTION OF THE AREA

Justifications:

The area has been identified by its **cultural and heritage related background**. Major landmarks having its historical importance has been found within the selected area. Tamluk Railway Station and Tamluk Central Bus Stand are within its approachable distance.

`Tamluk Main Bazaar is a **congested market area**, which is located within the selected area. It pulls maximum crowd from the entire Tamluk Town. Presence of the **adjoining riverbank** beside the selected site area, which is one of the major tourist attractions.

H. TAMLUK RAJBARI

G. RAJBARI JHEEL

F. HAMILTON SCHOOL

E. TAMRALIPTA MAHAVIDYALAYA

B. BARGHABIMA TEMPLE

D. DISTRICT HOSPITAL

C. TAMLUK RLY STATION

A. DISTRICT COURT

Figure 39: Map showing major landmarks of Tamluk Town (Source: Author)

4.1.2 DELINEATION

The area is majorly delineated by the **canal on the northern side**. In the southern side there is also **canal delineating its edge**. In the Western side the area **is delineated by the major Sub – Arterial Road (Haldia-Mecheda Road).** In the Eastern side the area is delineated by **Rupnarayan River.**

Figure 40: Map showing Delineating edges of selected area of Tamluk Town (Source: Author)

4.1.3 SURVEY

NODES

Observations:

Major nodes are mainly at the outer edge of the selected area, which are the major entry portion to the area. Major nodes are widened enough, and the built forms are not far enough from the edge of the nodes respecting its importance.

Minor nodes are much congested as the pathways are narrow and the built forms are at the immediate edge of the nodes.

Figure 41: Map showing Important Nodes of selected area of Tamluk Town (Source: Author)

Conclusions

- Major nodes need to be regularised through design interventions.
- Minor nodes need to be wider to avoid congestions due to the traffic.

LANDMARKS

Observations:

Presence of numerous historic buildings with its own heritage value, which itself are treating as major landmarks in the selected area.

Some major nodes are having sculptures which is being treated as landmarks and thus are depict the nodal points having its own identity.

Figure 42: Map showing Important Landmarks of selected area of Tamluk Town (Source: Author)

Conclusions:

- Historic places need to be more identifiable to give new identity and image and thus needs design intervention.
- Nodal points should be incorporated with a specific feature which can be treated as landmark and thus helpful for the navigation

PATTERN

Observations:

Road intersections does not follow any pattern and are very irregular. It is depicting the organic pattern of growth.
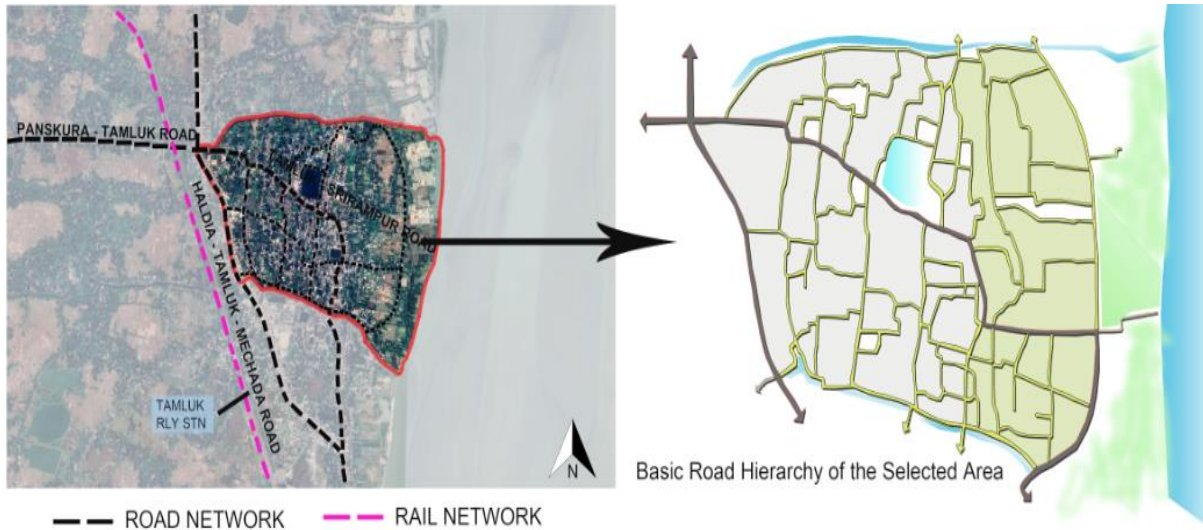
Figure 43: Map showing the pattern of selected area of Tamluk Town (Source: Author)

Conclusions:

- Design Interventions needs to follow the typical organic pattern of the road intersections

ROUTES

Observations:

Major Arterial Roads are widened enough with dedicated pathways for the pedestrians. Other Roads in the selected area are not much wider and are suitable only for light vehicles and pedestrians. No separate pedestrian pathway in the local roads.
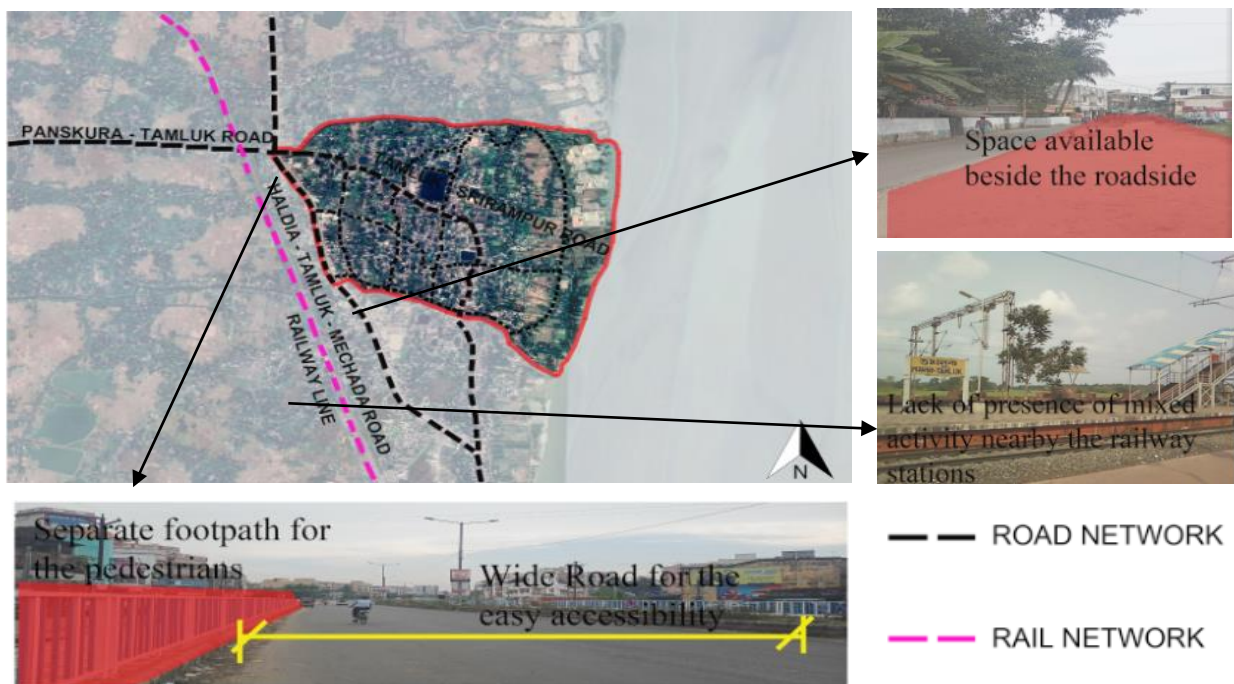
Figure 44: Map showing the different routes of selected area of Tamluk Town (Source: Author)

Conclusions:

- Connectivity to the heritage zones of the site needs more connectivity so that it can be easily accessible.
- Separate pathways for the pedestrians need to be maximize in the sub arterial roads.
- Connectivity from and to the Tamluk Rly Station needs to be improve.

ACTIVITIES

Observations:

Most of the areas in the selected site are Residential zones. Commercial activities are mostly found along the main streets. Mixed use activities are mostly found along the Major arterial road on the western delineate road. Major recreational activities are found along the riverbank and few areas around the Rajbari complex. There is a large no hospital along the major street.
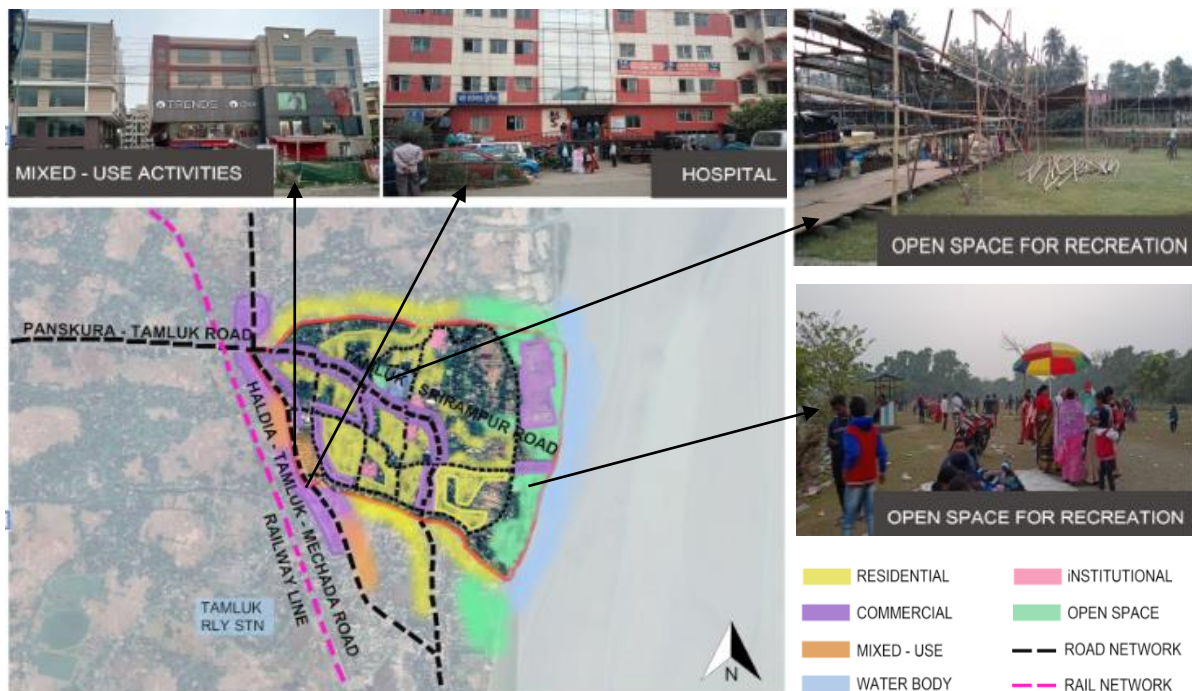
Figure 45: Map showing the different types of Activities of selected area of Tamluk Town (Source: Author)

Conclusions:

- The area has a strong potential for the new recreational development based on its heritage value.
- There is a need to segregate areas for further developments based on activities.

4.1.4 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• Major nodes need to be regularised through design interventions. • Minor nodes need to be wider to avoid congestions due to the traffic.
LANDMARKS	• Historic places need to be more identifiable to give new identity and image and thus needs design intervention. • Nodal points should be incorporated with a specific feature which can be treated as landmark and thus helpful for the navigation
PATTERN	• Design Interventions needs to follow the typical organic pattern of the road intersections
ROUTES	• Connectivity to the heritage zones of the site needs more connectivity so that it can be easily accessible. • Separate pathways for the pedestrians need to be maximize in the sub arterial roads. • Connectivity from and to the Tamluk Rly Station needs to be improve.
ACTIVITIES	• The area has a strong potential for the new recreational development based on its heritage value. • There is a need to segregate areas for further developments based on activities.

Table 8: Inferences based on study parameters (Source: Author)

4.1.5 IDENTIFICATION OF THE INTERVENTION ZONES

Figure 46: Map showing the intervention zones selected area of Tamluk Town (Source: Author)

4.2 ZONAL LEVEL STUDY

4.2.1 ZONE 1

Figure 47: Map showing the selected area for Zone 1 (Source: Author)

4.2.1.1 DELINEATION

The zone is majorly delineated by the **canal on the northern side**. In the southern side there is **delineating sub-arterial road (Tamluk - Srirampur Road).** In the Western side the zone **is delineated by the College Road**.
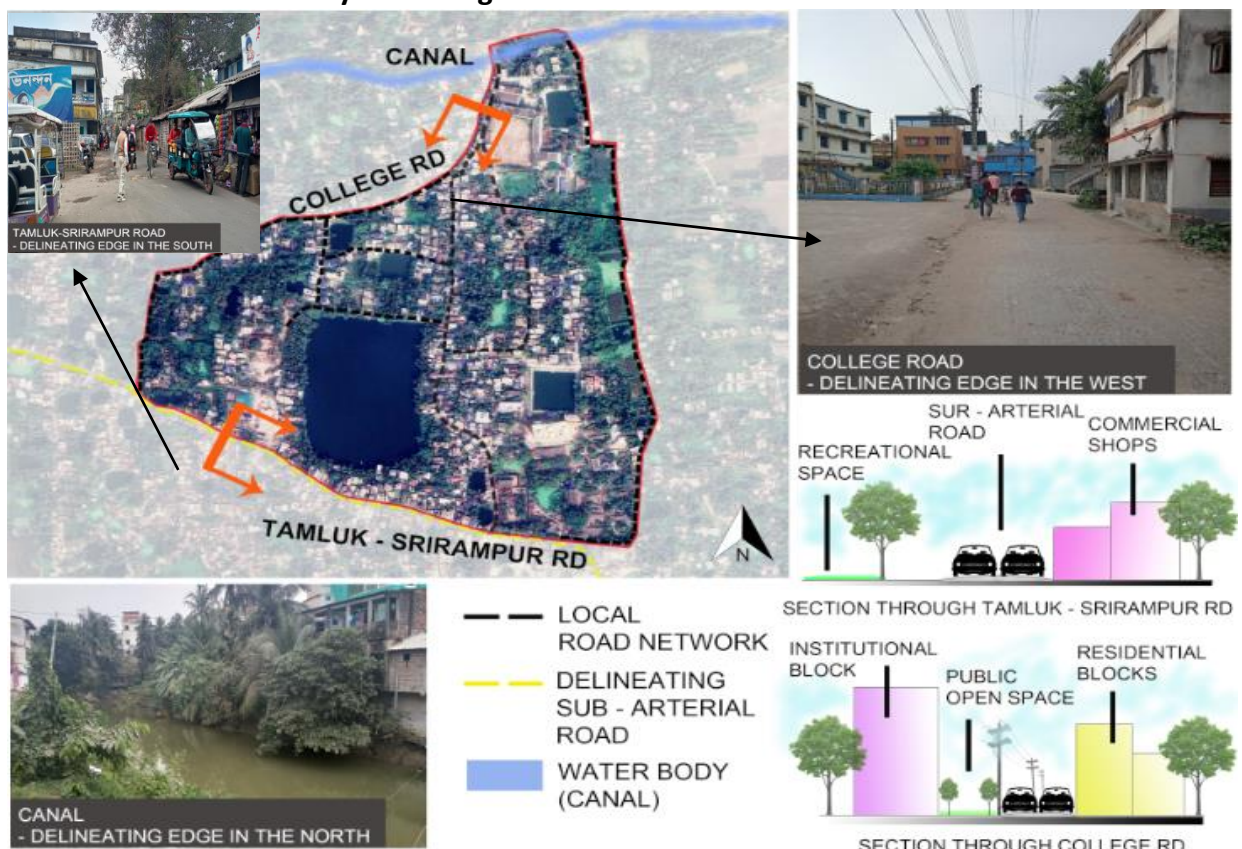
Figure 48: Map showing the delineating edges for Zone 1 (Source: Author)

4.2.1.2 SURVEY

NODES

Observations:

The internal nodes along the local roads are very narrow and congested and the built forms are exactly along the road. There is no proper signage at the nodal junctions. Only few nodes have wider access but are not properly designed.
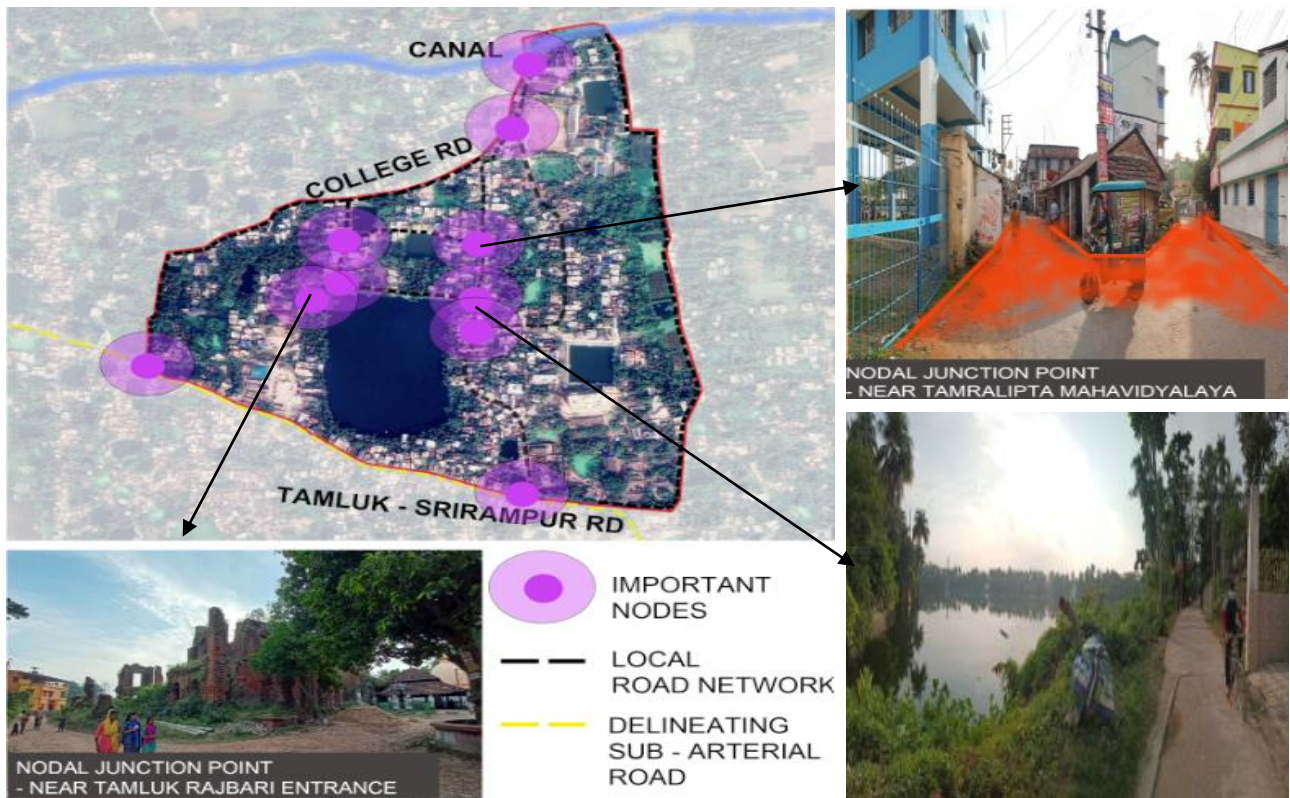
Figure 49: Map showing the important nodes for Zone 1 (Source: Author)

Conclusions:

- The internal nodes need wider means of access, and the built forms must have some gap from the road edge.
- Proper signage should be incorporated at the nodal junctions.

LANDMARKS

Observations:

There are some important landmarks in the selected zonal area. The landmarks are having its own historic significance, and few are having its recreational value. There is a lack of connectivity to the landmarks (both physically and visually).
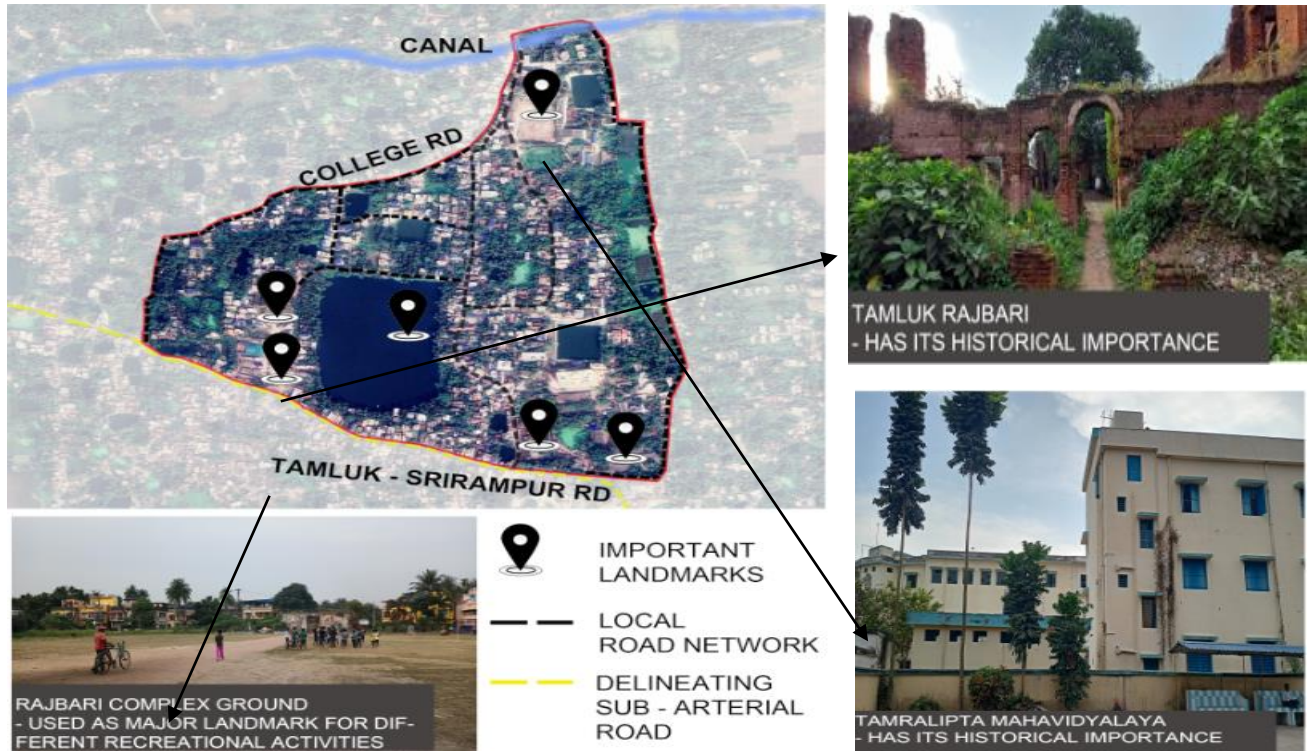
Figure 50: Map showing the important Landmarks for Zone 1 (Source: Author)

Conclusions:

- **Tamluk Rajbari** needs more visual connectivity as it is a major historic landmark and thus will increase its **identity value**.
- Restoration works needs to be done to bring back its **heritage value**.

PATTERN

Observations:

The selected zone is highly walkable as the road intersections are very irregular. Lack of geometrical open spaces.
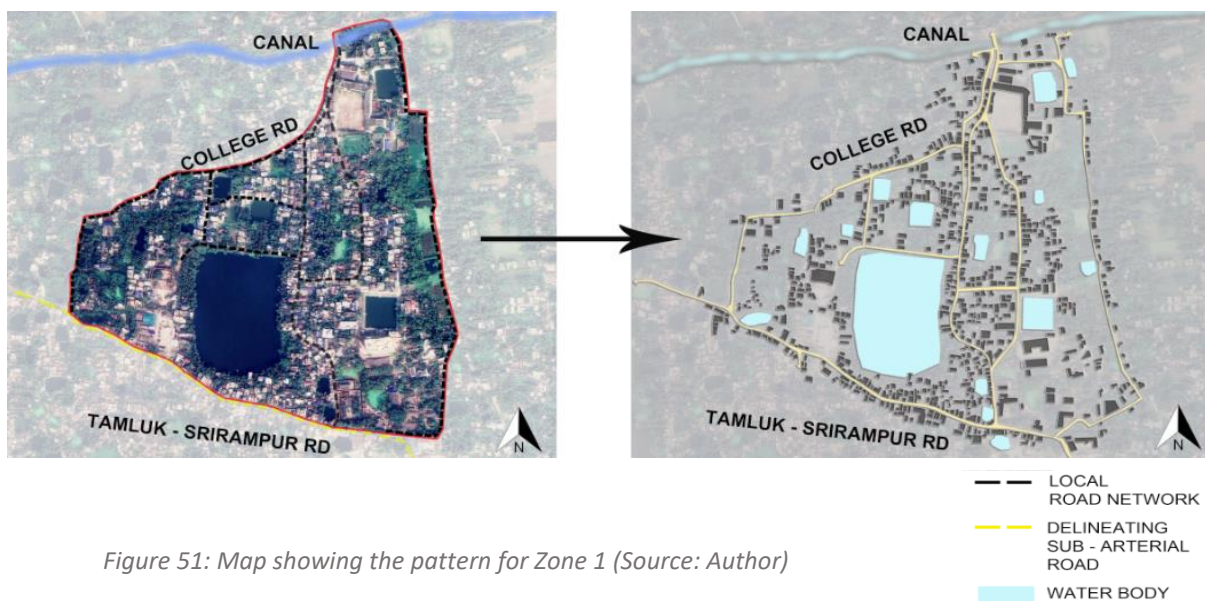
Figure 51: Map showing the pattern for Zone 1 (Source: Author)

Conclusions:

- The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.

ROUTES

Observations:

Lack of Grade separation of road network, thus there is a lack of proper public connectivity to important locations. No adequate space for light vehicles and pedestrians in the major roads. Bus stops are not well organised and there is a lack of proper parking space.
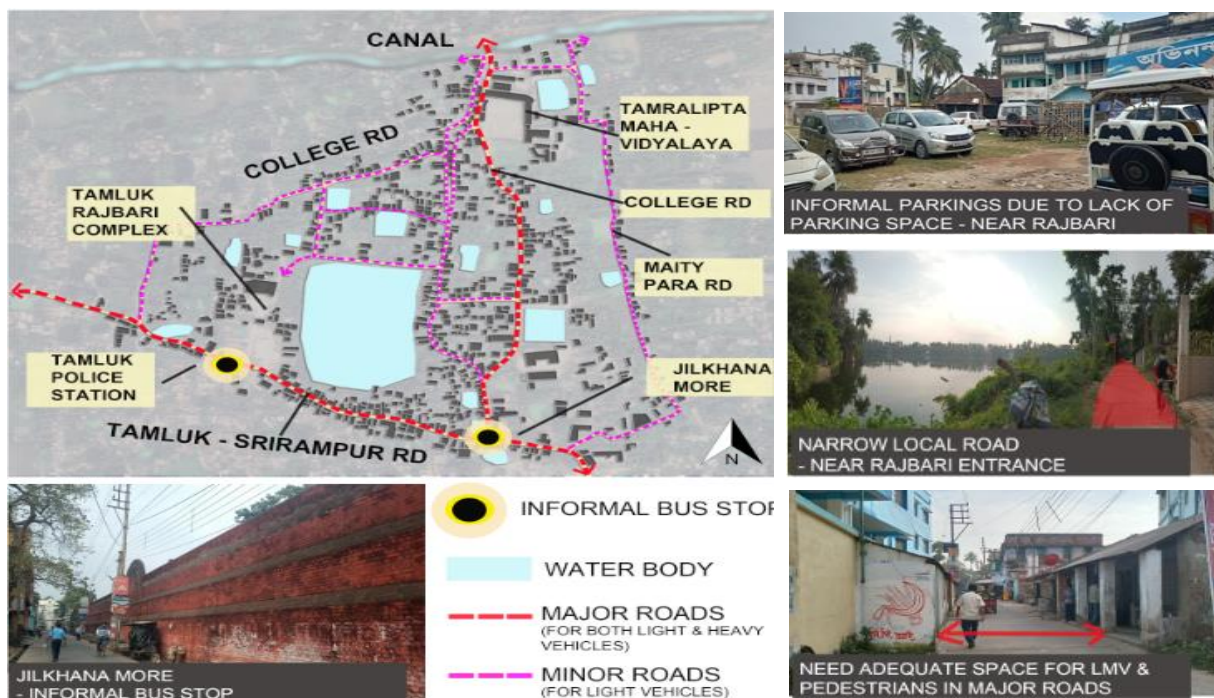
Figure 52: Map showing the different types of routes for Zone 1 (Source: Author)

Conclusions:

- Need proper connectivity to important places through public transport.
- Need for well-organised bus stops and proper parking spaces.

ACTIVITIES

Observations:

Lack of segregation of different zone depending on its land-use pattern and also control and restrict unorganised development.
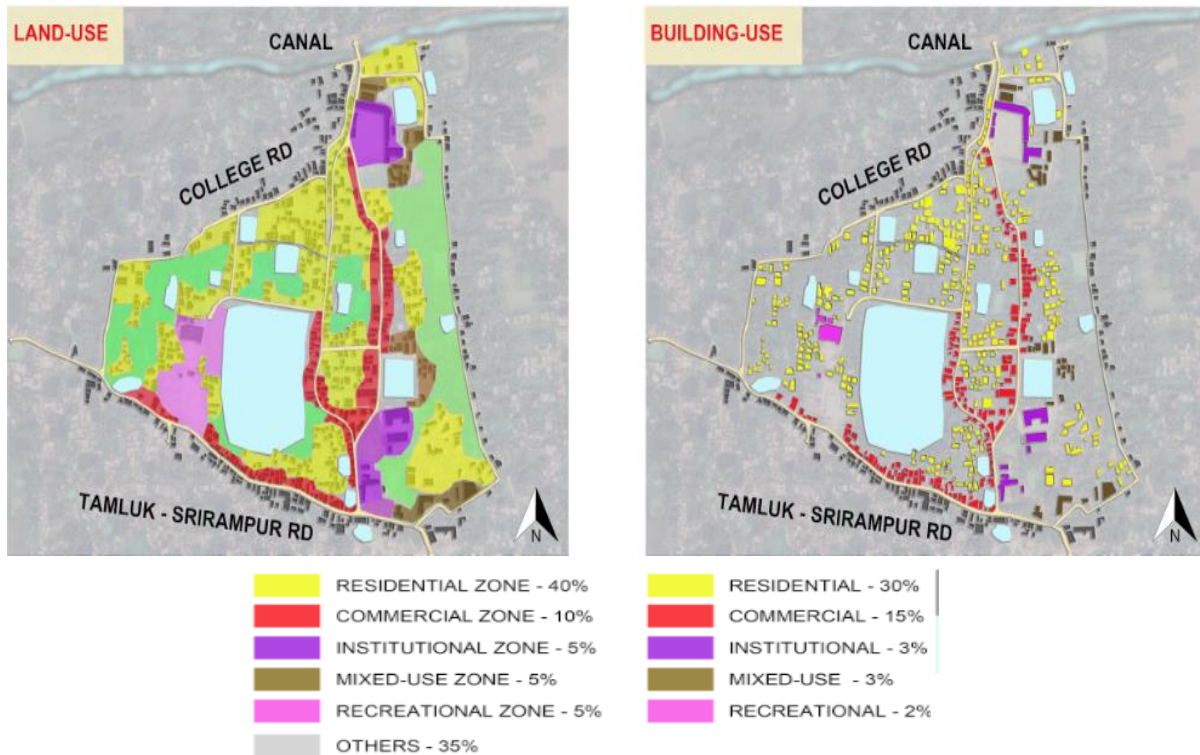
Figure 53: Map showing the different types of Activities for Zone 1 (Source: Au
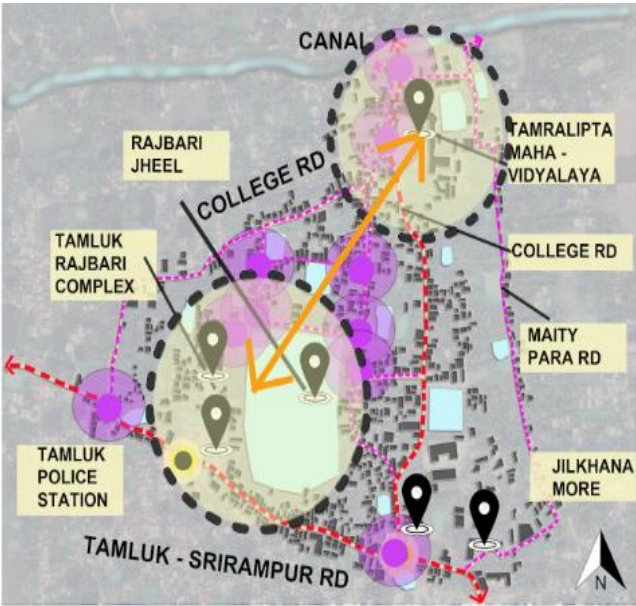
Conclusions:

- Need for proper segregation of different activities.

4.2.1.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• The internal nodes need wider means of access, and the built forms must have some gap from the road edge. • Proper signage should be incorporated at the nodal junctions.
LANDMARKS	• **Tamluk Rajbari** needs more visual connectivity as it is a major historic landmark and thus will increase its **identity value**. • Restoration works needs to be done to bring back its **heritage value**.
PATTERN	• The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.
ROUTES	• Need proper connectivity to important places through public transport. • Need for well-organised bus stops and proper parking spaces.
ACTIVITIES	• Need for proper segregation of different activities.

Table 9: Inferences based on study parameters (Source: Author)

4.2.1.4 PROPOSALS

> INTERVENTION THROUGH DESIGN IN THE AREAS ADJACENT TO THE RAJBARI COMPLEX

> INCORPORATING PERMANENT DESIGNED BUILT STRUCTURES IN THE RAJBARI COMPLEX GROUND WHERE DIFFERENT RECREATIONAL ACTIVITIES CAN TAKE PLACE.

> AVOIDING THE INFORMAL PARKINGS NEAR RAJBARI GROUND & TAMLUK POLICE STATION BY PROVING PROPER PARKING ZONES

> INTERVENTION THOUGH DESIGN IN THE AREAS ADJACENT TO THE TAMLUK MAHAVIDYALAYA.

> INFORMAL BUS STOPS NEEDS TO BE WELL ORGANISED, ALSO THERE IS A NEED FOR MORE CONVENIENT PUBLIC TRANSPORT SERVICE

> THERE IS A NEED FOR PROPER WELL DEFINED ENTRANCE TO THE RAJBARI COMPLEX INCREASING ITS ACCESS AND VISIBILITY TO THE TOURISTS.

> RAJBARI JHEEL CAN BE WELL ORGANISED AND CAN BE USED AS ONE OF THE MAJOR RECREATIONAL FUNCTION.

> THE ROAD NETWORK SYSTEM CAN BE MODIFIED AND THUS INCREASING CONNECTIVITY TO MAJOR LANDMARKS.

> THE NODAL POINTS NEEDS TO WIDER ENOUGH AND PROPER SINAGES CAN BE INCORPORATED FOR EASY ACCESSIBILITY.

4.2.1.5 IDENTIFICATION OF THE INTERVENTION ZONES

BASED ON THE STUDY DONE IT IS ESTABLISHED THAT THE SELECTED SITES HAVE THE MOST POTENTIAL TO BE DEVELOPED BY THE DESIGN INTERVENTIONS WITH ITS HERITAGE VALUE.

SITE : B

THE SITE IS SELECTED BASED ON THE CONTEXT ON HERITAGE BUILDING OF TAMLUK MAHAVIDYALAYA. THE SITE IS BASICALLY THE ADJOINING AREAS OF IT.

TOTAL SITE AREA : 16.2 ACRE

SITE : A

THE SITE IS SELECTED BASED ON THE CONTEXT ON HERITAGE COMPLEX OF TAMLUK RAJBARI. THE SITE IS BASICALLY THE ADJOINING AREAS OF IT.

TOTAL SITE AREA : 25.1 ACRE

SITE LEVEL STUDY WILL BE LIMITED TO SITE : A ONLY, AS IT HAS IDENTIFIED AS THE APPROPRIATE AREA FOR DEVELOPING THE EXISTING RECREATIONAL ACTIVITIES RECLAIMING ITS HERITAGE VALUE.

HENCEFORTH THIS SITE : A WILL BE TERMED AS SITE : 1 IN MY FURTHER SITE LEVEL STUDY

4.2.2 ZONE 2

Figure 54: Map showing the selected area for Zone 2 (Source: Author)

4.2.2.1 DELINEATION

The zone is majorly delineated by the **Rupnarayan River on the eastern side**. In the **western side there is delineating sub-arterial road** (Tamluk - Srirampur Road). In the **Northern Side the zone is delineated by the Ferry-Ghat Road**. In the **Southern side** there is **canal** meeting the Rupnarayan River.
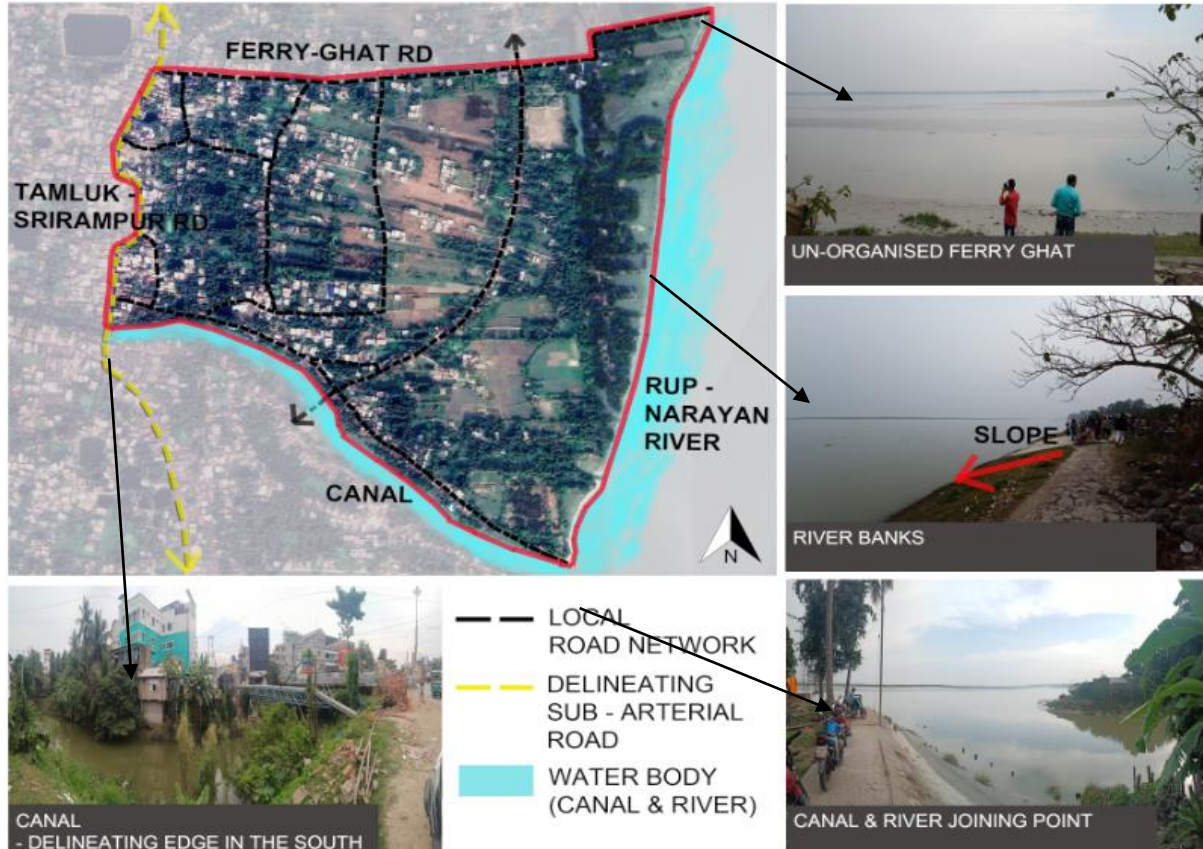
Figure 55: Map showing the delineating edges for Zone 2 (Source: Author)

4.2.2.2 SURVEY

NODES

Observations:

Due to very congested market area along the roadside few important nodes are having blind turn. At some nodal points-built forms are exactly at the edge of the roads taking the exact shape of road. Also, few nodes acts as important junction at certain seasonal time.
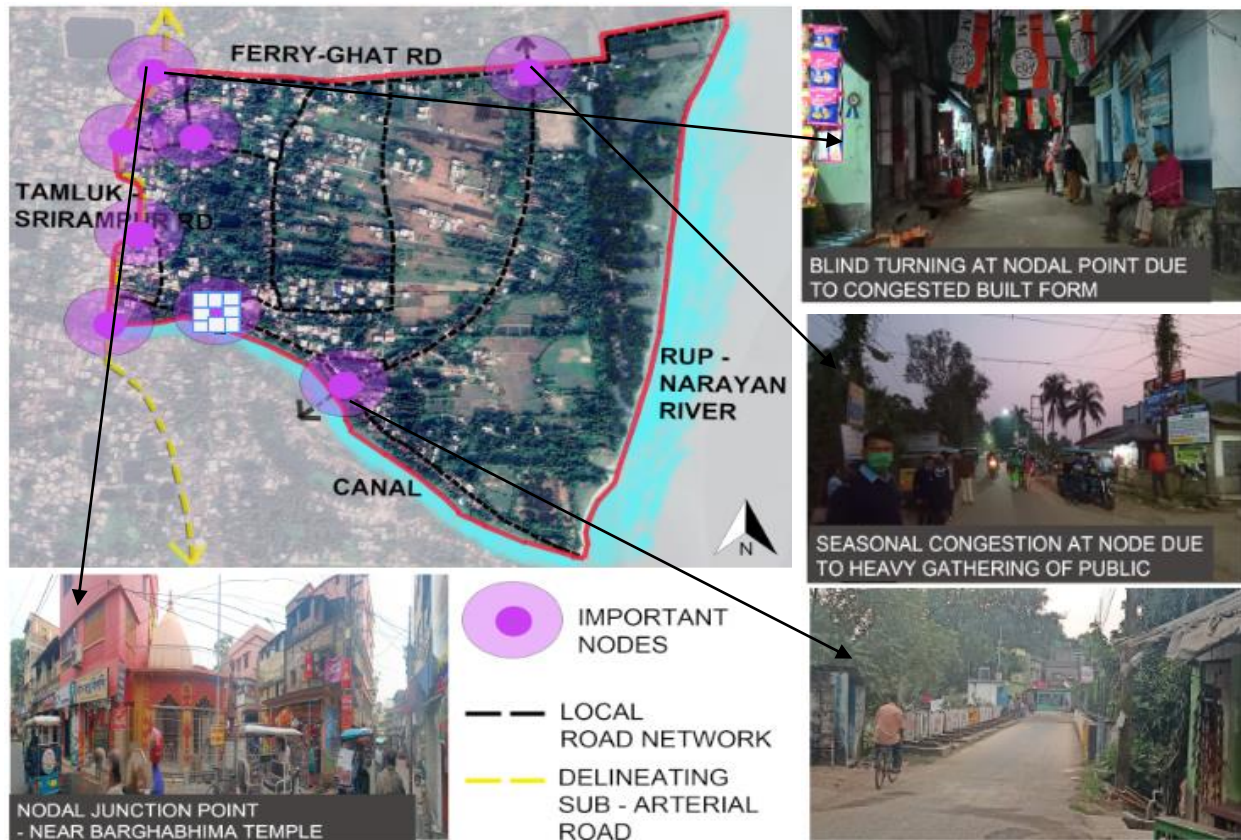
Figure 56: Map showing the important nodes for Zone 2 (Source: Author)

Conclusions:

- Few nodes need wider means of access, and the built forms must have some gap from the road edge.
- Proper signage should be incorporated at the nodal junctions.

LANDMARKS

Observations:

Major landmarks are heritage sites & recreational spaces having its own importance of public uses. There is lack of proper identity to few landmarks due to its accessibility. Few landmarks having its most public uses at certain seasonal time of the year.

Figure 57: Map showing the important landmarks for Zone 2 (Source: Author)

Conclusions:

- The landmarks can be redeveloped to bring its own identity and needs to increase its accessibility.
- The riverbanks can be reorganised and proper functions and be imposed to maximize its public use.

PATTERN

Observations:

The selected zone is highly walkable as the road intersections are very irregular. Lack of geometrical open spaces.
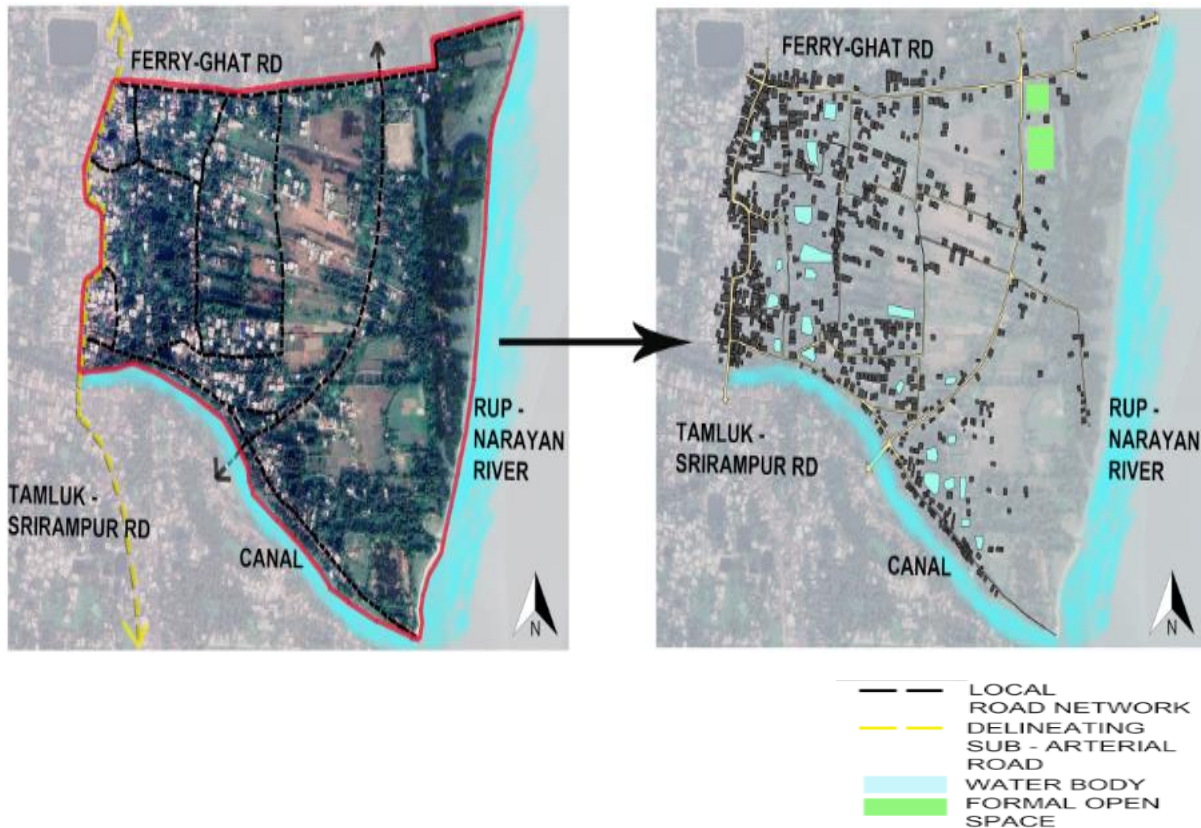
Figure 58: Map showing the pattern for Zone 2 (Source: Author)

Conclusions:

- There is a plenty of non-geometrical open spaces which can be regularised to geometrical shapes to have a new implementation to the pattern of the zone.

ROUTES

Observations:

The Major connecting road (Tamluk-Srirampur Rd) is accessible for both light & heavy vehicles but is very congested due to the active market area. Minor road in the zone is narrow and is not suitable for heavy vehicles. Bus stops are not formal and no separate pedestrian space.
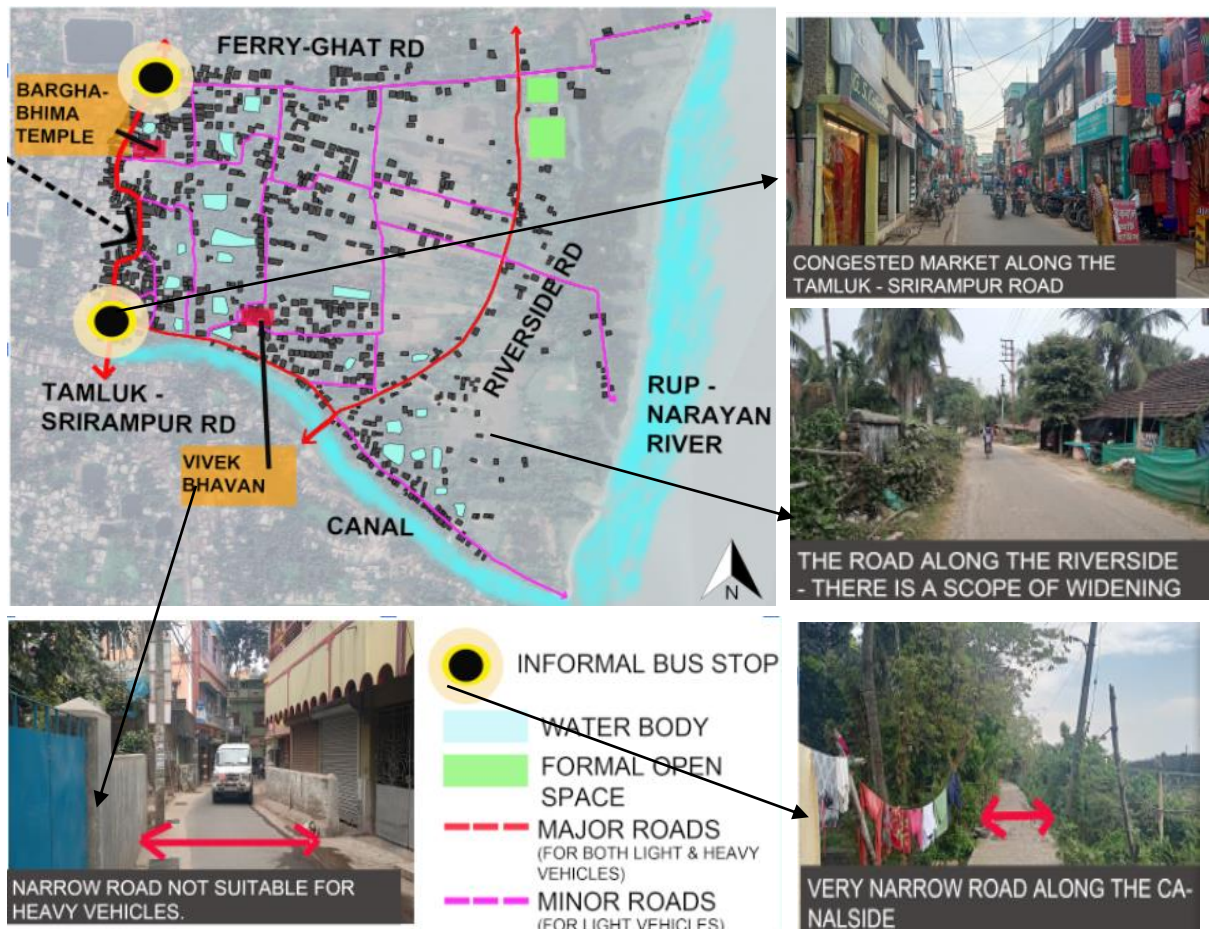
Figure 59: Map showing the different types of routes for Zone 2 (Source: Author)

Conclusions:

- Road network needs to be improvised to have proper connectivity to important places through public transport.
- Need for well-organised bus stops and proper parking spaces.

ACTIVITIES

Observations:

There is a plenty of informal open spaces along with adequate area for recreational uses.
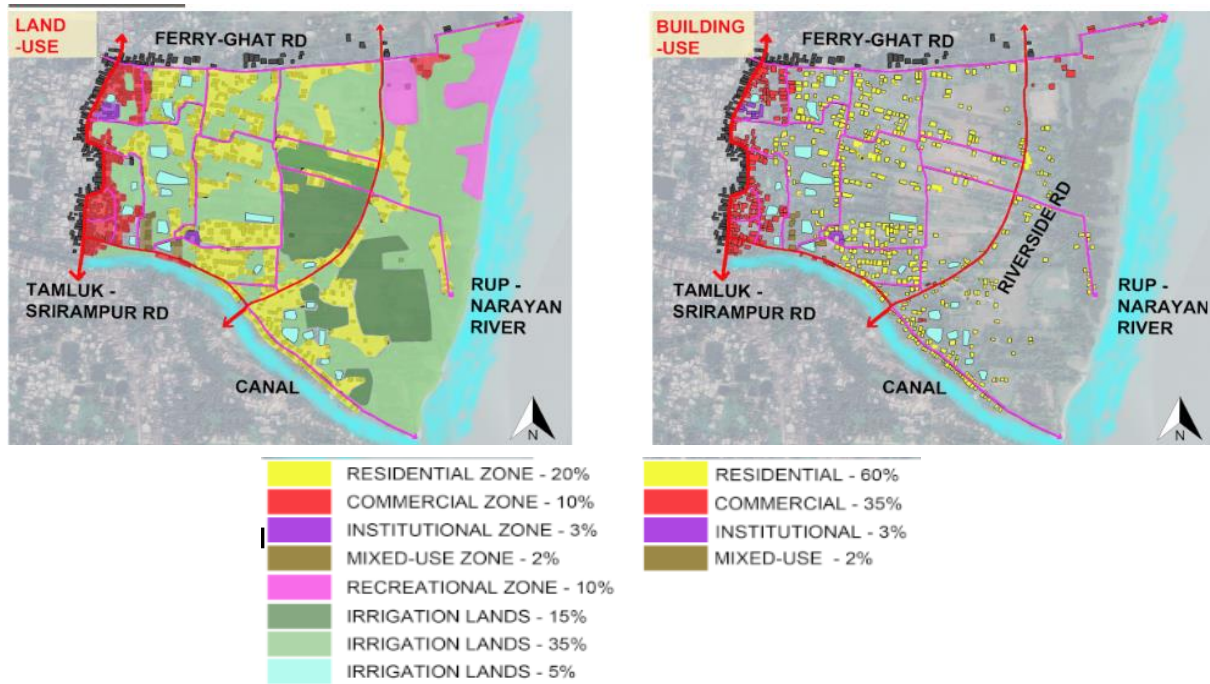
Figure 60: Map showing the different types of activities for Zone 2 (Source: Author)

Conclusions:

- Informal open spaces can be formalised to certain extent.
- Recreational spaces can be majorly implemented.

4.2.2.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• Few nodes need wider means of access, and the built forms must have some gap from the road edge. • Proper signage should be incorporated at the nodal junctions.
LANDMARKS	• The landmarks can be redeveloped to bring its own identity and needs to increase its accessibility. • The riverbanks can be reorganised and proper functions and be imposed to maximize its public use.
PATTERN	• There is a plenty of non-geometrical open spaces which can be regularised to geometrical shapes to have a new implementation to the pattern of the zone.
ROUTES	• Road network needs to be improvised to have proper connectivity to important places through public transport. • Need for well-organised bus stops and proper parking spaces.
ACTIVITIES	• Need for proper segregation of different activities.

Table 10: Inferences based on study parameters (Source: Author)

4.2.2.4 PROPOSALS
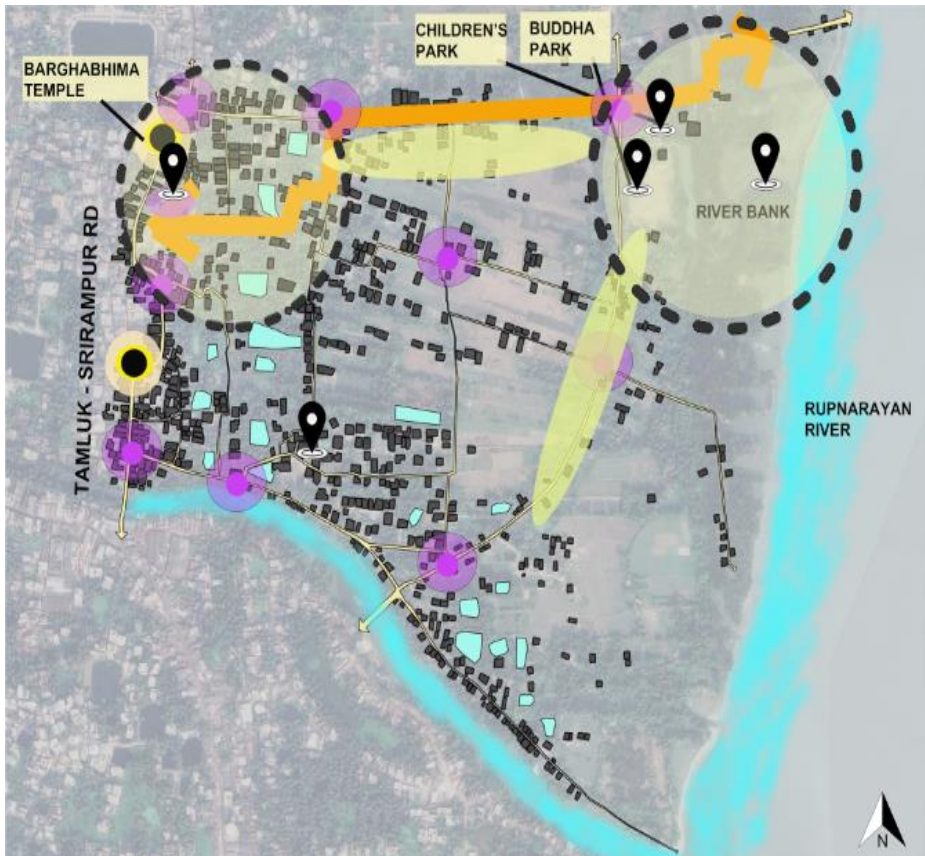
> INTERVENTION THOUGH DESIGN IN THE RIVER BANK AREAS, MAJORLY CAN BE TRANSFORMED INTO TOURIST HOPSPOT.

> INFORMAL BUS STOPS NEEDS TO BE WELL ORGANISED, ALSO THERE IS A NEED FOR MORE CONVENIENT PUBLIC TRANSPORT SERVICE

> THERE IS A NEED FOR PROPER WELL DEFINED ENTRANCE TO THE RECREATIONAL RIVER BANK AREA INCREASING ITS ACCESS AND VISIBILITY TO THE TOURISTS.

> THE ROAD NETWORK SYSTEM CAN BE MODIFIED AND THUS INCREASING CONNECTIVITY TO MAJOR LANDMARKS.

> INTERVENTION THROUGH DESIGN IN THE AREAS ADJACENT TO THE BARGHABHIMA TEMPLE

> INCORPORATING PERMANENT DESIGNED BUILT STRUCTURES IN THE RIVERFRONT AREA WHERE DIFFERENT RECREATIONAL ACTIVITIES CAN TAKE PLACE.

> INFORMAL AREAS SURROUNDING THE TEMPLE CAN BE WELL ORGANISED AND CAN BE USED AS ONE OF THE MAJOR RECREATIONAL FUNCTION.

> THE NODAL POINTS NEEDS TO WIDER ENOUGH AND PROPER SINAGES CAN BE INCORPORATED FOR EASY ACCESSIBILITY.

> AVOIDING THE INFORMAL PARKINGS NEAR RBARGHABHIMA TEMPLE BY PROVING PROPER PARKING ZONES

4.2.2.5 IDENTIFICATION OF THE INTERVENTION ZONES

BASED ON THE STUDY DONE IT IS ESTABLISHED THAT THE SELECTED SITES HAVE THE MOST POTENTIAL TO BE DEVELOPED BY THE DESIGN INTERVENTIONS WITH ITS HERITAGE VALUE.
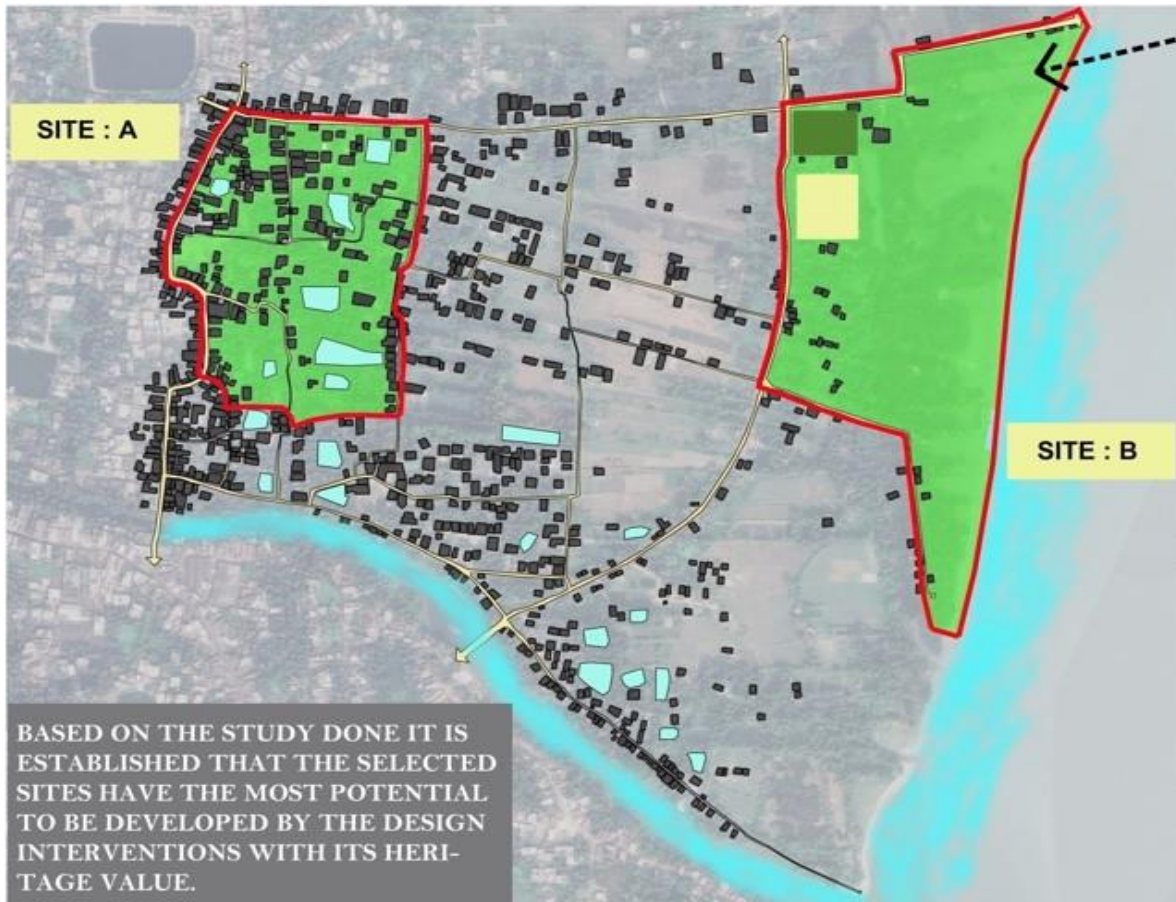
SITE : B

THE SITE IS SELECTED BASED ON THE CONTEXT ON RECREATIONAL ZONE ON THE RIVER BANK. THE SITE IS BASICALLY ADJOINING THE RIVER BANK SIDE.

TOTAL SITE AREA : 30.1 ACRE

SITE : A

THE SITE IS SELECTED BASED ON THE CONTEXT ON HERITAGE SITE OF BARGHABHIMA TEMPLE COMPLEX. THE SITE IS BASICALLY THE ADJOINING AREAS OF IT.

TOTAL SITE AREA : 17.1 ACRE

SITE LEVEL STUDY WILL BE FOR BOTH SITE : A & SITE : B, AS BOTH HAVE IDENTIFIED AS THE APPROPRIATE AREA FOR DEVELOPING THE EXISTING RECREATIONAL ACTIVITIES RECLAIMING ITS HERITAGE VALUE.
HENCEFORTH SITE : A WILL BE TERMED AS SITE : 2 IN & SITE : B AS SITE : 3 FOR MY FURTHER SITE LEVEL STUDY

4.3 SITE LEVEL STUDY

4.3.1 SITE 1

Figure 61: Map showing the selected area for Site 1 (Source: Author)

4.3.1.1 DELINEATION

The site is majorly delineated by the **Tamnluk - Srirampur Road** on the southern side. In the northern side there is delineating **local connecting road** which is also the back entrance to the Rajbari complex. In the Western side the site is delineated by residential buildings adjacent to Rajbari.
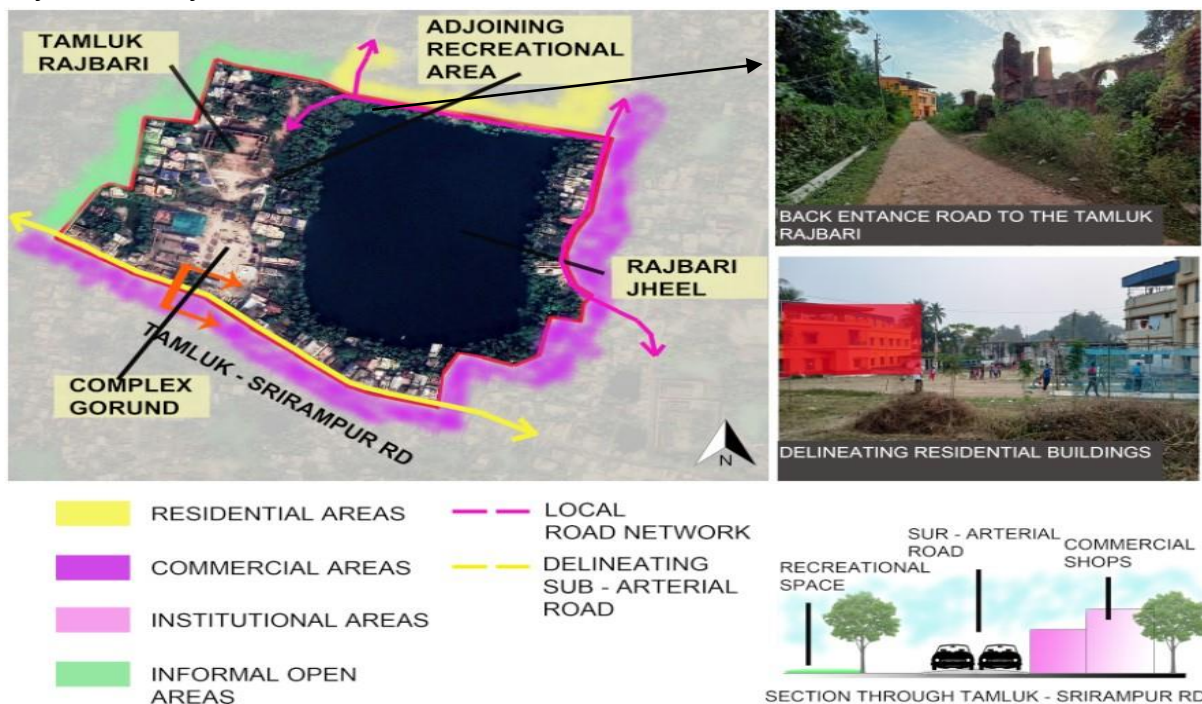
Figure 62: Map showing the delineating edges for Site 1 (Source: Author)

4.3.1.2 SURVEY

NODES

Observations:

There are few intersecting nodes inside the Rajbari Complex which is not well organised at all as there is a less movement. There is no proper signage at the nodal junctions. Only few nodes have wider access but are not properly designed.

Figure 63: Map showing the important nodes for Site 1 (Source: Author)

Conclusions:

- The intersecting nodes inside the Rajbari complex can be majorly implemented with its importance.
- Proper signage should be incorporated at the nodal junctions.

LANDMARKS

Observations:

The site is having many important historical landmarks but due to lack of maintenance all of them has lost its identity.
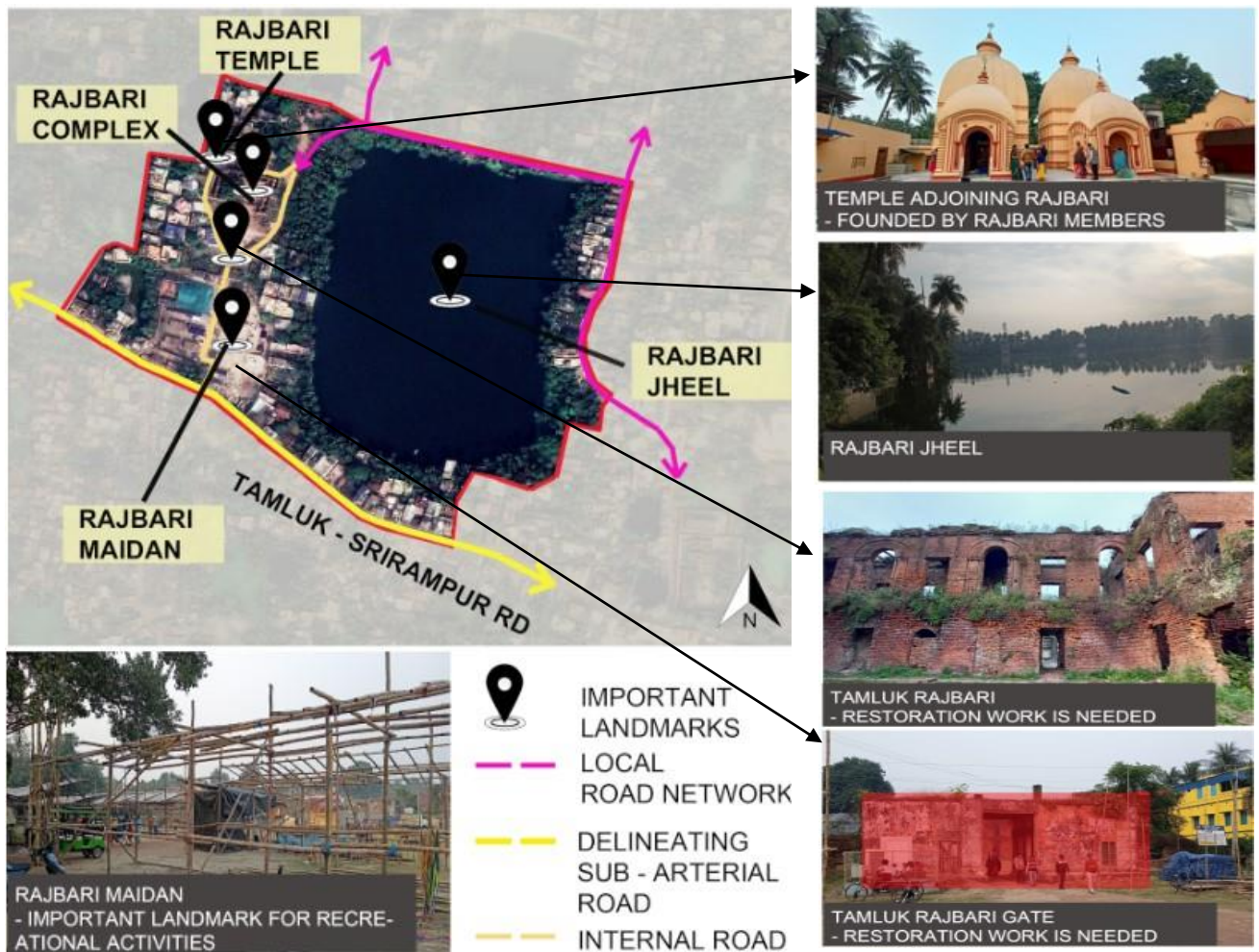
Figure 64: Map showing the important Landmarks for Site 1 (Source: Author)

Conclusions:

- Restoration work is much to needed to all the historical landmarks to bring back its identity and its heritage value.
- Need for proper connectivity amongst the landmarks.

PATTERN

Observations:

The internal road intersections are very irregular and thus the built forms are irregular. Lack of geometrical open spaces.
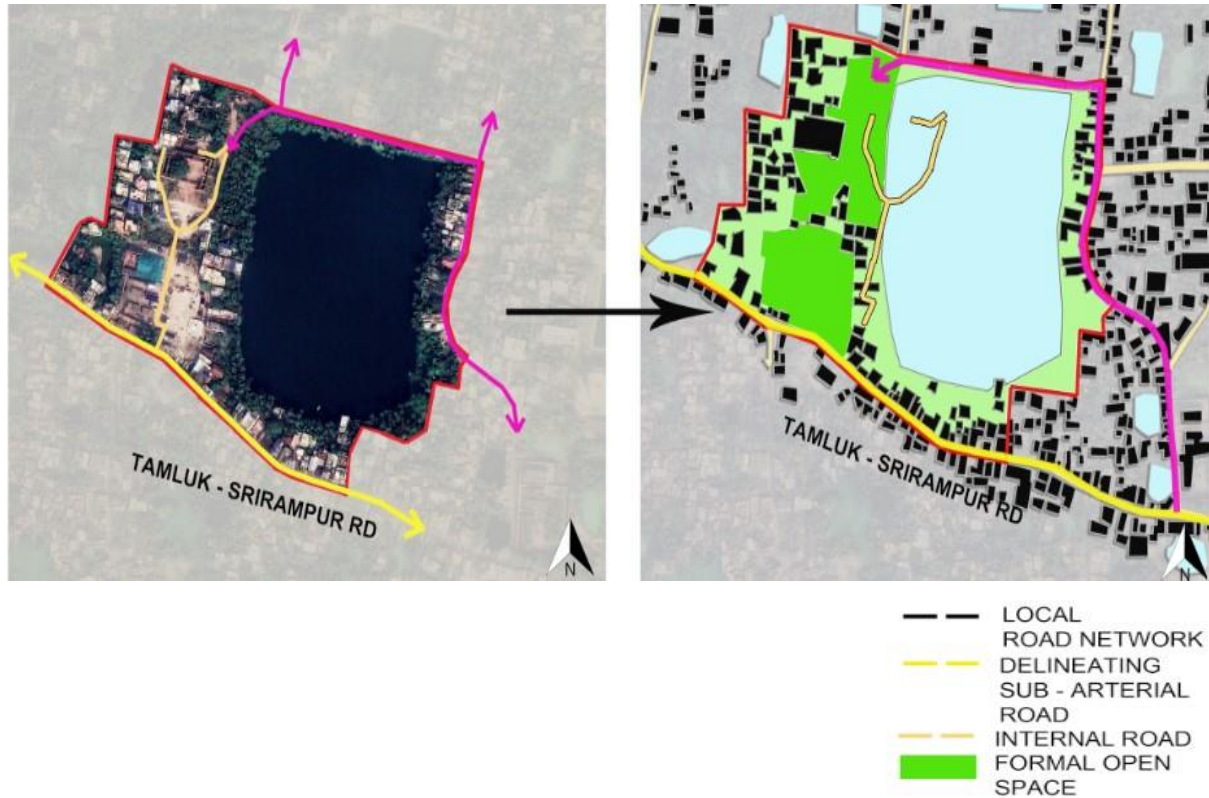
Figure 65: Map showing the Pattern for Site 1 (Source: Author)

Conclusions:

- The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.

ROUTES

Observations:

Lack of Grade separation of road network. Mostly Presence of informal road network inside the selected site. Bus stops are not well organised and also there is a lack of proper parking space.

Figure 66: Map showing the different Routes for Site 1 (Source: Author)

Conclusions:

- Informal road network needs to be formalised through proper interventions.
- Need for well-organised bus stops and proper parking spaces.

ACTIVITIES

Observations:

There is plenty of recreational zone in the selected site with its uses for different recreational & cultural activity.
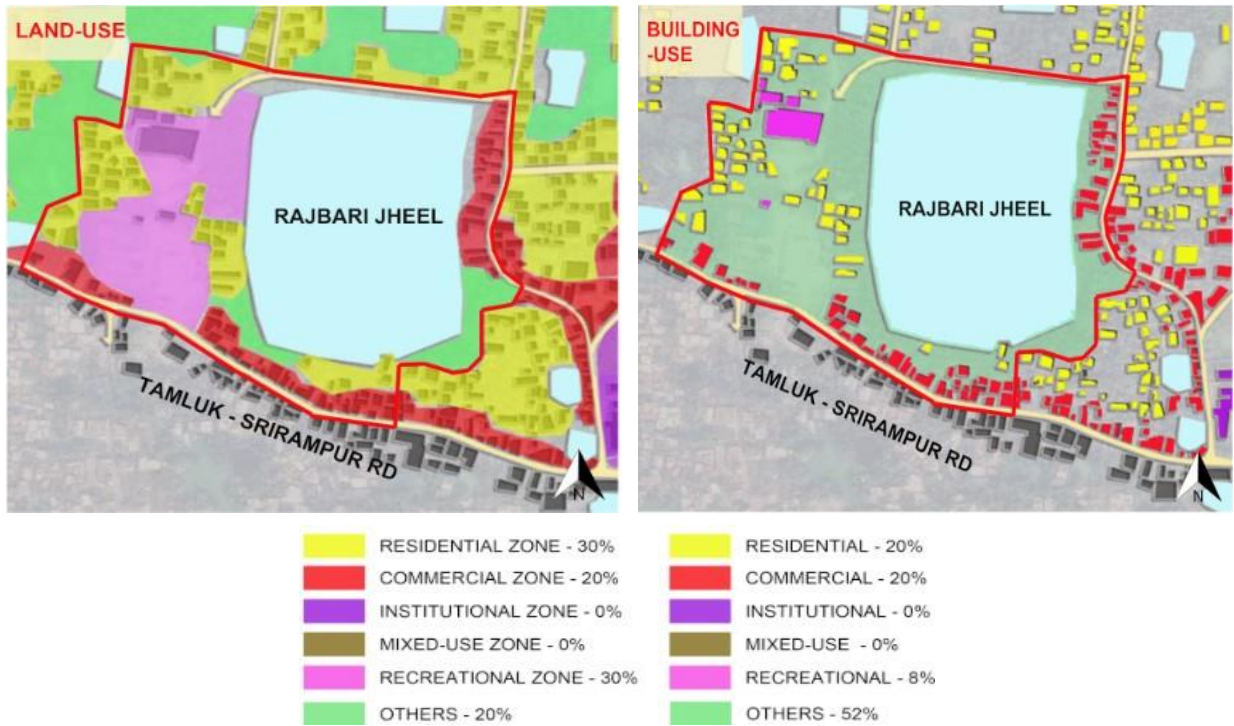
Figure 67: Map showing the different Activities in Site 1 (Source: Author)

Conclusions:

- Need for proper design interventions in the recreational zone for its different seasonal activity**.**

4.3.1.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	- The intersecting nodes inside the Rajbari complex can be majorly implemented with its importance. - Proper signage should be incorporated at the nodal junctions.
LANDMARKS	- Restoration work is much to needed to all the historical landmarks to bring back its identity and its heritage value. - Need for proper connectivity amongst the landmarks.
PATTERN	The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.
ROUTES	- Informal road network needs to be formalised through proper interventions. - Need for well-organised bus stops and proper parking spaces.
ACTIVITIES	Need for proper design interventions in the recreational zone for its different seasonal activity**.**

Table 11: Inferences based on study parameters (Source: Author)

4.3.1.4 DESIGN GUIDELINES

NODES

TO ORGANIZE THE NODES WITH MORE ADEQUATE SPACES AT THE EDGES

TO RESTRICT UNNECESSARY ACTIVITIES SUR-ROUNDING THE NODAL POINTS
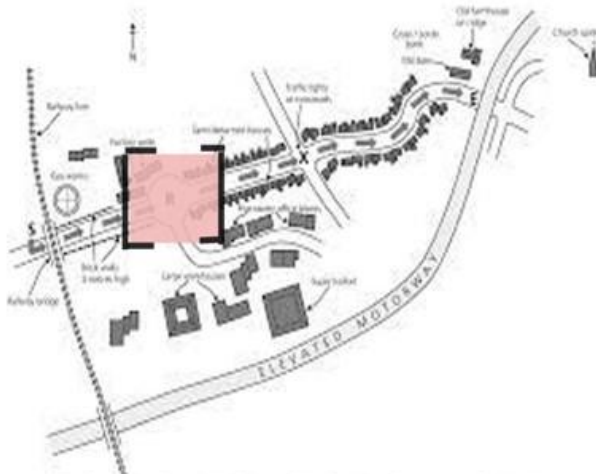
HAVING ADEQUATE SPACE SURROUNDING THE NODES

LANDMARKS

TO ENHANCE MORE VISIBILITY TO THE FOCUSING LANDMARKING ELEMENT

TO ALLOW MORE ACCESSIBILITY TO THE LAND-MARKING ELEMENT

ENHANCING PROPER VISTAS FOR THE LANDARK EL-EMENT

PATTERN

TO FORMALIZE THE ROAD INTERSEC-TIONS TO CERTAIN EXTENT

TO PROVIDE MORE GEOMETRICAL OPEN SPACES

REGULAR ROAD INTERSECTION & GEOMETRICAL OPEN SPACES CREATE VISTAS

ROUTES

TO RESTRICT THE INFORMAL MOVE-MENTS AND TO FORMALIZE THE ROAD NETWORK

TO CREATE PROPES PARKING AREAS TO MEET THE NEEDS OF LARGE NO THE VEHICLES.

UNRESTRICTED INFORMAL PATHWAYS

FORMALIZATION OF PATHWAYS

ACTIVITIES

TO MAKE THE BEST USES OF ACTIVITIES IN THE INFORMAL & FORMAL OPEN SPACES TO GIVE A NEW IDENTITY

TO CONTROL THE DEVELOPMENT OF UNORGANISED BUILDINGS IN OPEN SPACES TO MAXIMIZE THE USABILITY
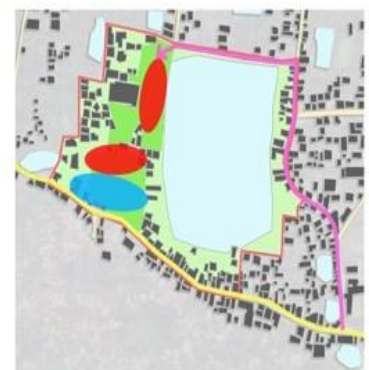
INTRODUCTION OF ACTIVITES IN THE INFORMAL OPEN SPACES

4.3.1.5 PROPOSALS

> REGERATING THE ACTIVE OPEN SPACE OF RAJBARI COMPLEX ALONG WITH THE RAJBARI GORUND DEMARKATING THE CUTURAL THE HERITAGE VALUE

> REDEVELOPING THE GATE COMPLEX OF RAJBARI ALONG WITH THE ELEMENTS OF RAJBARI'S HERITAGE.

> DEVELOPING THE ROAD NETWORK WITHIN IN THE SITE FOR EASY ACCESS ALONG WITH GRADE SEPARATIONS.

> GENERATING RECREATIONAL FACILITIES IN AND AROUND THE RAJBARI JHEEL TO MAKE IT A PLACE OF ATTRACTION FOR THE PUBLIC.

SCHEMATIC SECTION THROUGH RAJBARI MAIDAN

SCHEMATIC SECTION THROUGH RAJBARI JHEEL

INFORMAL BUS STOP

MAJOR ROADS (FOR BOTH LIGHT & HEAVY VEHICLES)

NODES

FORMAL OPEN SPACE

MINOR ROADS (FOR LIGHT VEHICLES)

MODIFICATION OF ROAD NETWORK

INFORMAL OPEN SPACE

RESTORATION AREAS

BASIC PROPOSAL AREA FOR DESIGN INTERVENTION SURROUDING THE JHEEL

BASIC SELECTION OF DESIGN INTERVENTION

PROPOSED AREA FOR PARKING ZONE

INSPIRATIONAL IDEA TO REGENARATE TAMLUK RAJBARI COMPLEX

> FORMULATING PROPER PARKING AREAS WITHIN THE SELECTED SITE FOR PUBLIC USE.

> WIDENING THE DEMARCATED NODES WITH IMPLEMENTATION OF CERTAIN NODAL FACILITY TO ENHANCE THE ACCESSIBILITY TO THE SITE.

> MAKING INFORMAL BUS STOP TO THE FORMAL ONE FOR BETTER CONNECTIVITY WITH PUBLIC TRANSPORT

4.3.2 SITE 2
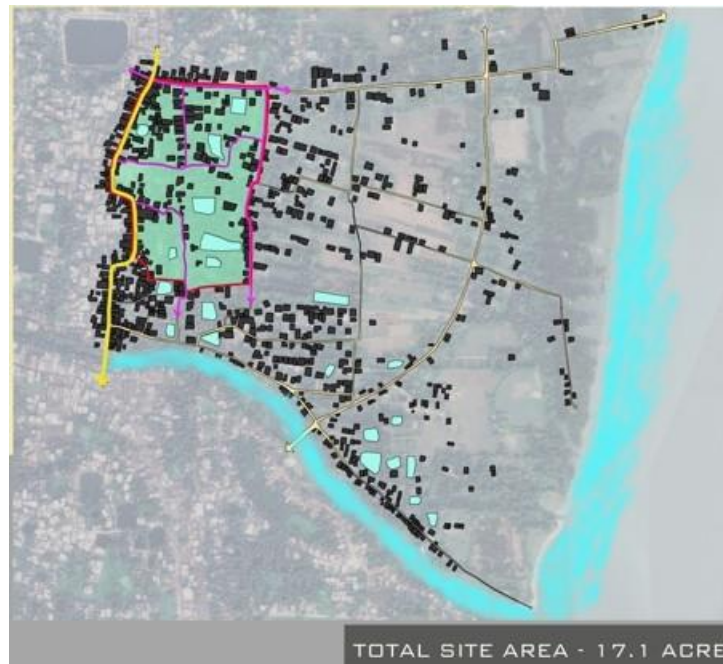
Figure 68: Map showing the selected area for Site 2 (Source: Author)

4.3.2.1 DELINEATION

The site is majorly delineated by the **Tamnluk - Srirampur Road** on the western side. In the northern side there is delineating **local connecting road to the steamer ghat** (Ferry-Ghat Road). The site basically selected based on the **adjoining areas of Barghabhima Temple**.
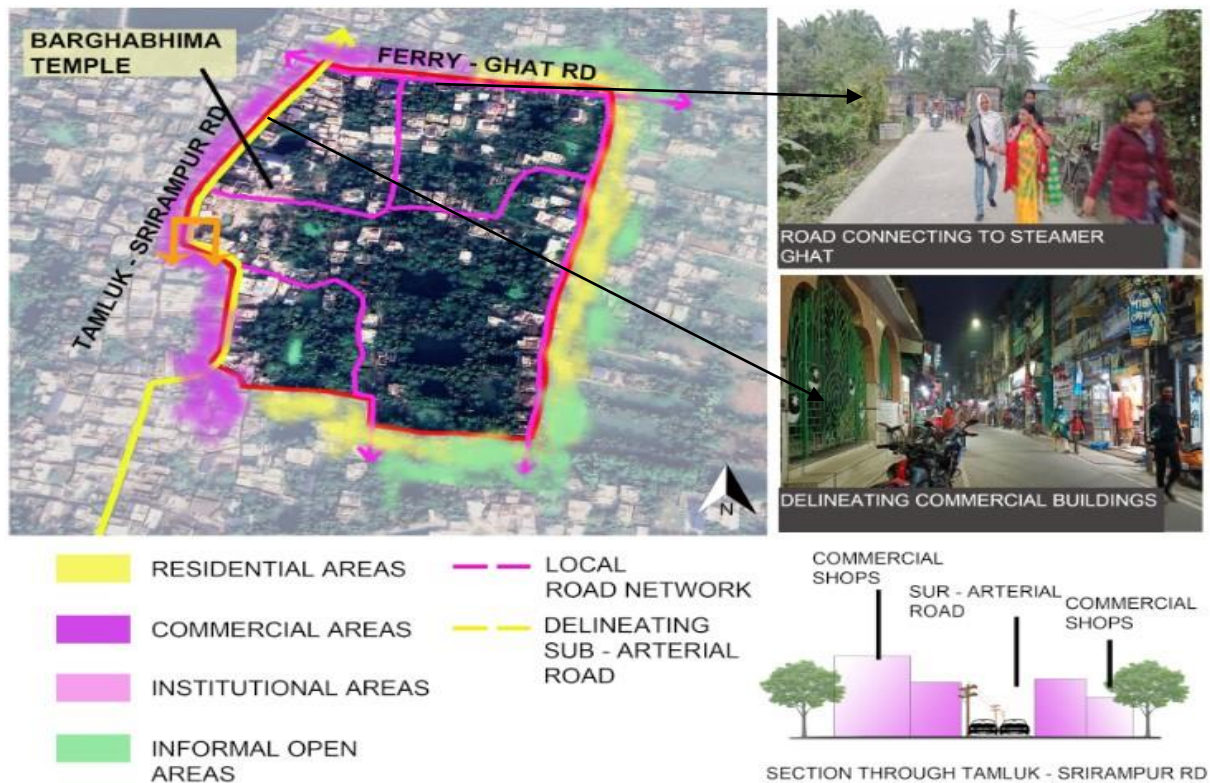
Figure 69: Map showing the delineating edges for Site 2 (Source: Author)

4.3.2.2 SURVEY

NODES & LANDMARKS

Observations:

The major nodes are very narrow, and the buildings are exactly at the edge of the road. The major historical landmark is the Barghabhima Temple Complex based on the site context is selected. As the local roads are narrow, the internal nodes are very sharp.

Figure 70: Map showing the important nodes & landmarks for Site 2 (Source: Author)

Conclusions:

- The historical landmark of Barghabhima Temple Complex needs more design interventions in terms of its accessibility.
- Internal nodes need to widen for better movement and also use of signage.

PATTERN

Observations:

The internal road intersections are very irregular and thus the built forms are irregular. Lack of geometrical open spaces.
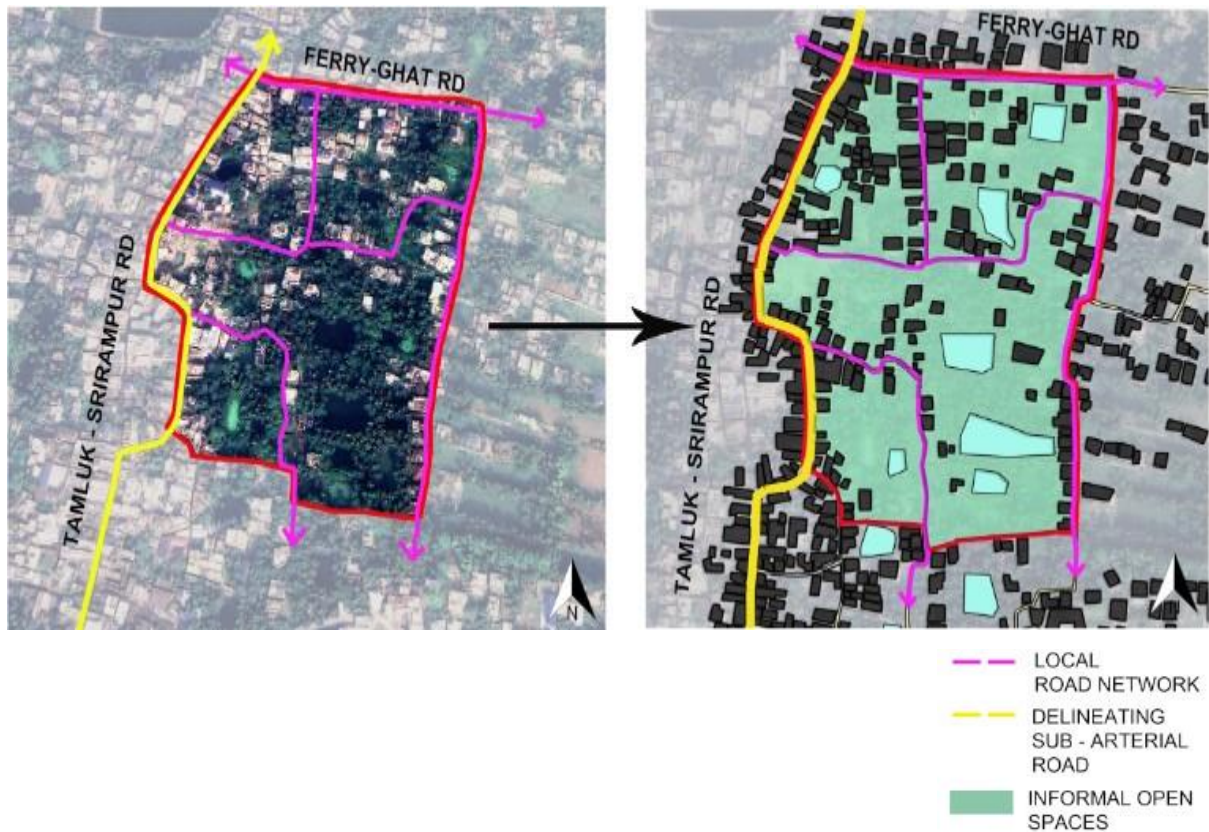
Figure 71: Map showing the pattern of Site 2 (Source: Author)

Conclusions:

- The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.

ROUTES

Observations:

Lack of Grade separation of road network. The routes are mainly followed by the heavy congested commercial shops and adjacent residential buildings. Bus stops are not well organised and there is a lack of proper parking space.
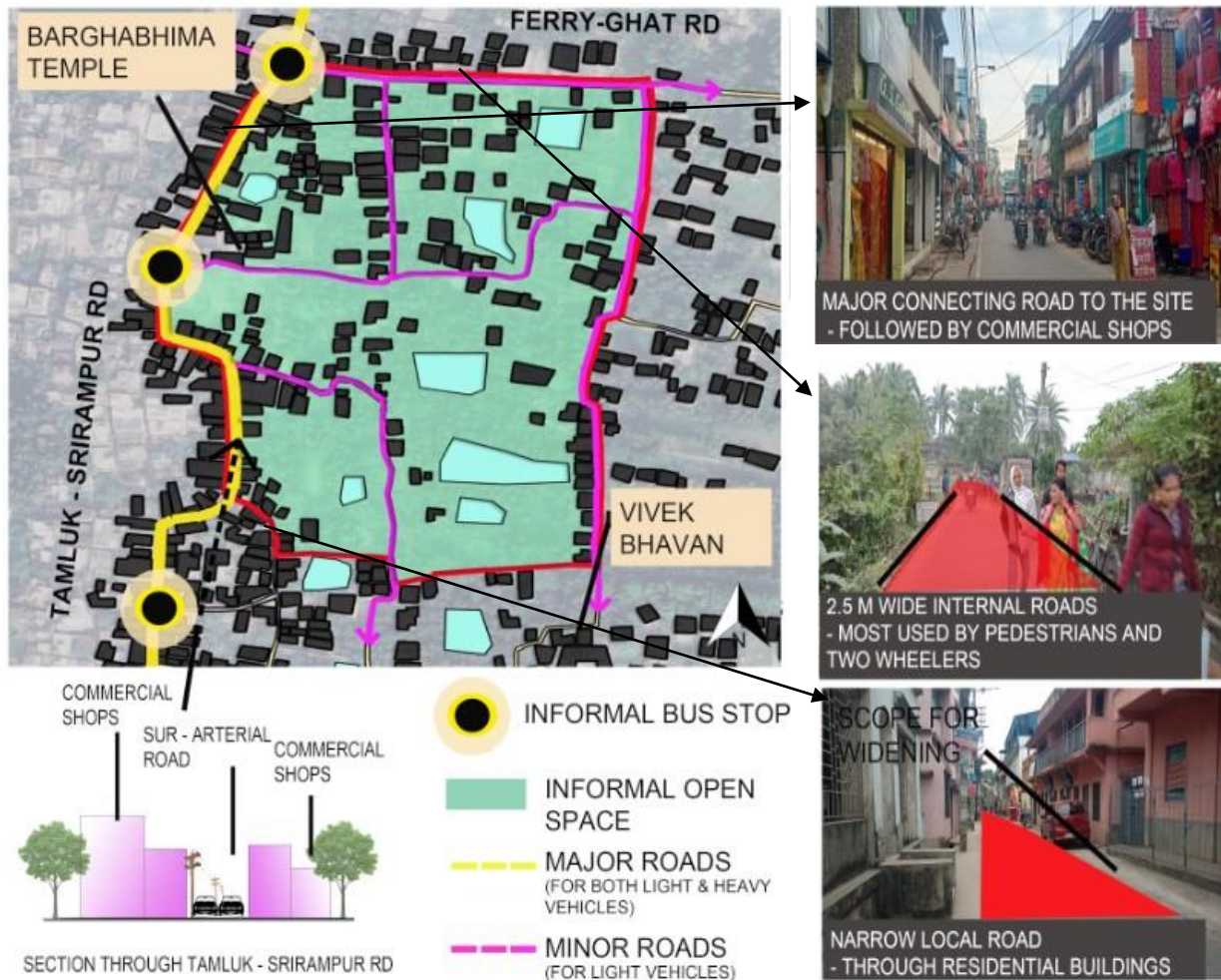
Figure 72: Map showing the different types of routes for Site 2 (Source: Author)

Conclusions:

- Need for proper connectivity between internal routes mostly for pedestrian and light vehicle movements.
- Need for well-organised bus stops and proper parking spaces.

ACTIVITIES

Observations:

The site is majorly delineated by the commercial zones. There is a plenty of informal open spaces.
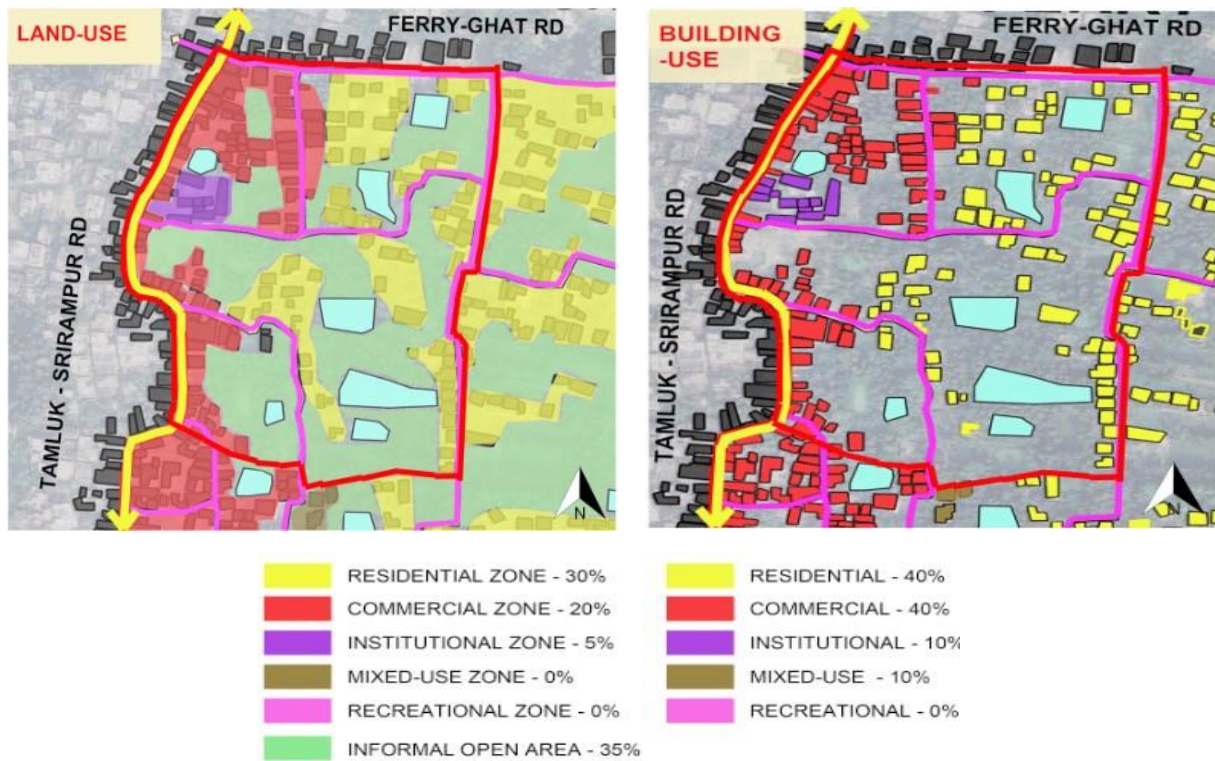
Figure 73: Map showing the different types of activities for Site 2 (Source: Author)

Conclusions:

- The informal open areas can be intervened with proper use of activities with respect to the surrounding areas.

4.3.2.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• Internal nodes need to widen for better movement and also use of signage.
LANDMARKS	• The historical landmark of Barghabhima Temple Complex needs more design interventions in terms of its accessibility.
PATTERN	• The pattern can be regularised to some extent so that Geometrical built forms can be incorporated.
ROUTES	• Need for proper connectivity between internal routes mostly for pedestrian and light vehicle movements. • Need for well-organised bus stops and proper parking spaces.
ACTIVITIES	• The informal open areas can be intervened with proper use of activities with respect to the surrounding areas.

Table 12: Inferences based on study parameters (Source: Author)

4.3.2.4 DESIGN GUIDELINES

NODES

TO ORGANIZE THE NODES WITH MORE ADEQUATE SPACES AT THE EDGES

TO RESTRICT UNNECESSARY ACTIVITIES SURROUNDING THE NODAL POINTS

LANDMARKS

TO ENHANCE MORE VISIBILITY TO THE FOCUSING LANDMARKING ELEMENT

TO ALLOW MORE ACCESSIBILITY TO THE LANDMARKING ELEMENT

HAVING ADEQUATE SPACE SURROUNDING THE NODES

ENHANCING PROPER VISTAS FOR THE LANDARK ELEMENT

PATTERN

TO FORMALIZE THE ROAD INTERSECTIONS TO CERTAIN EXTENT

TO PROVIDE MORE GEOMETRICAL OPEN SPACES

ROUTES

TO CREATE EASY ROUTES FOR PEDESTRIAN ACCESSS AS WELL AS FOR THE LIGHT VEHICLES

TO CREATE PROPES PARKING AREAS TO MEET THE NEEDS OF LARGE NO THE VEHICLES.

ACTIVITIES

TO MAKE THE BEST USES OF ACTIVITIES IN THE INFORMAL OPEN SPACES TO GIVE A NEW IDENTITY

TO CONTROL THE DEVELOPMENT OF UNORGANISED BUILDINGS IN OPEN SPACES TO MAXIMIZE THE USABILITY

REGULAR ROAD INTERSECTION & GEOMETRICAL OPEN SPACES CREATE VISTAS

CREATING PEDESTRIAN PATHWAY AND FORMALIZING THE BUS STOPS

INTRODUCTION OF ACTIVITES IN THE INFORMAL OPEN SPACES

4.3.2.5 PROPOSALS

> UTILIZATION OF THE INFORMAL OPEN SPACES ALONG-SIDE THE BARGHABHIMA TEMPLE FOR ITS OWN USES

> MODIFYING THE INTERNAL ROUTE TO SOME EXTENT TO INCREASE THE CONNECTIVITY WITH THE TEMPLE COMPLEX AND OTHER INFORMAL SPACES

> FORMALIZING THE BUS STOPS

> WIDENING THE EXISTING ROADS & NODES

TEMPLE COMPLEX

BUS STOP

ROAD

PARKING ZONE

SCHEMATIC SECTION

MODIFYING THE ROUTE

INFORMAL OPEN SPACE

FORMAL OPEN SPACE

MAJOR ROADS
(FOR BOTH LIGHT & HEAVY VEHICLES)

MINOR ROADS
(FOR LIGHT VEHICLES)

NODES

BASIC SELECTION

INFORMAL BUS STOP

4.3.3 SITE 3

Figure 74: Map showing the selected area for Site 3 (Source: Author)

4.3.3.1 DELINEATION

The site is majorly delineated by the **Riverside Road on the western side**. In the **northern side** there is delineating **local connecting road to the steamer ghat** (Ferry-Ghat Road). In the Eastern side the site is delineated by the **Runarayan Riverbank**.
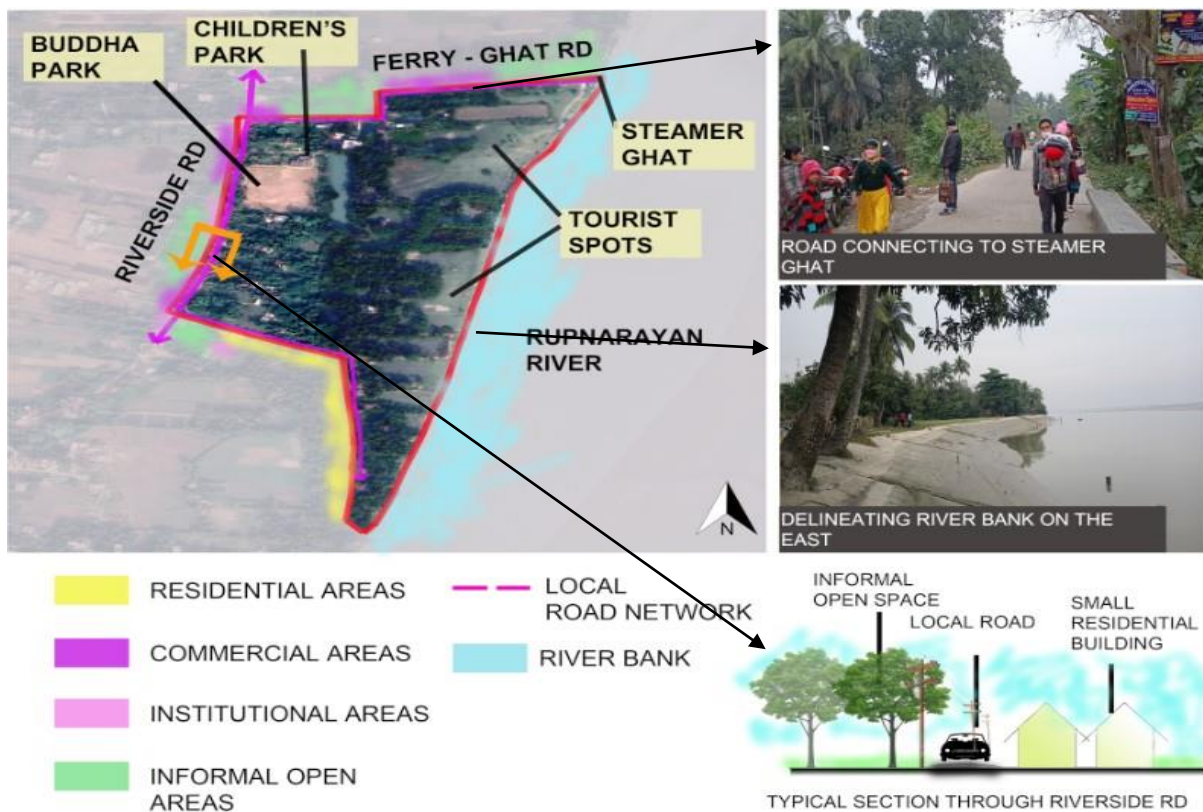
Figure 75: Map showing the delineating edges for Site 3 (Source: Author)

4.3.3.2 SURVEY

NODES & LANDMARKS

Observations:

The nodes are minor nodes but becomes congested during heavy public gathering in occasions, as the connecting road are very narrow. The landmarks are majorly recreational (both formal and informal) based having its attraction towards the tourists.

Figure 76: Map showing the important nodes and landmarks for Site 3 (Source: Author)

Conclusions:

- The nodes need to be much more organised with adequate space at the edges.
- Design interventions needs to be implemented on all the recreational landmarks as it gathers major tourism attraction.

PATTERN

Observations:

Inter-road intersections are majorly informal (over the riverbank). Presence of few geometrical open spaces.
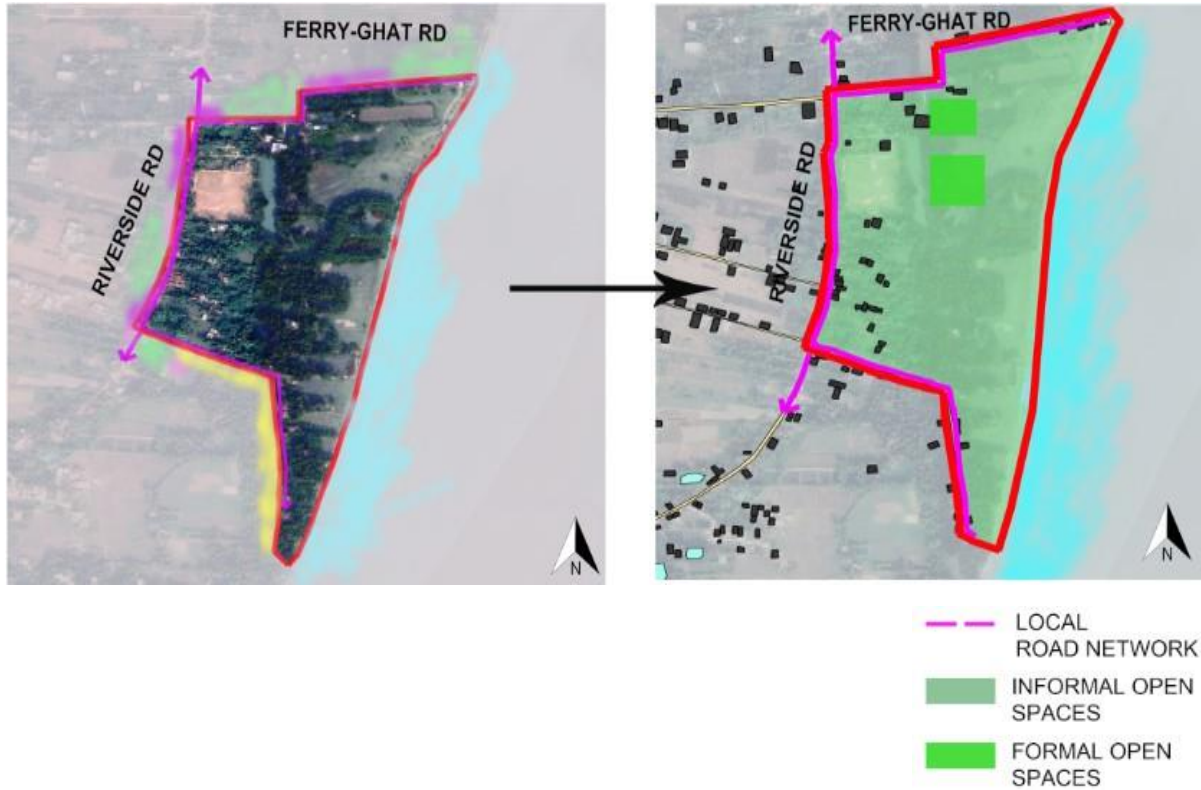
Figure 77: Map showing the pattern of Site 3 (Source: Author)

Conclusions:

- There is a need for formal road intersections.
- More geometrical open spaces are needed.

ROUTES

Observations:

Presence of informal routes within the riverbank edges. The major connecting road to the site is accessible for both light & heavy vehicles while the internal roads are very narrow, suitable for only pedestrians. No formal connectivity of local transport.
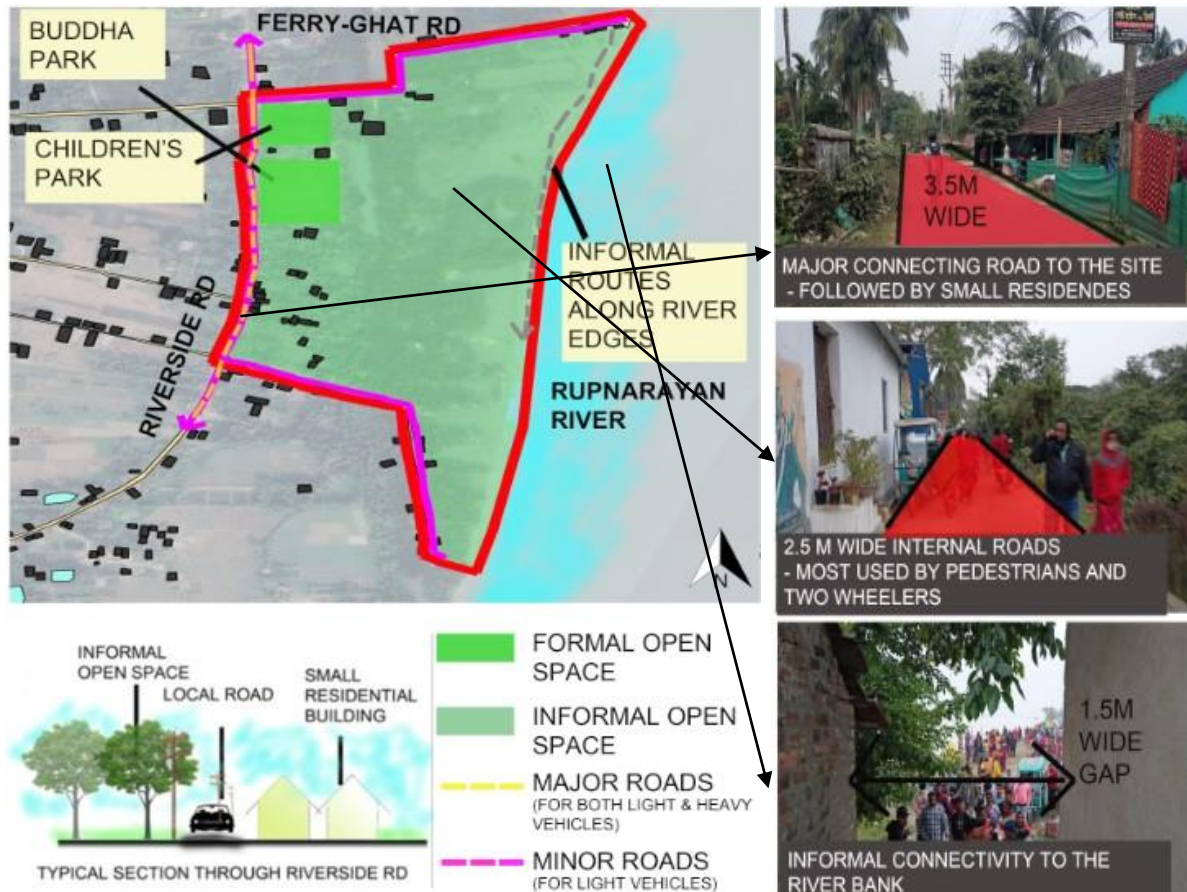
Figure 78: Map showing the different types of routes of Site 3 (Source: Author)

Conclusions:

- The Informal routes needs to be formalised for better public uses.
- Need for well-organised public transport connectivity to connect the site to other zones.

ACTIVITIES

Observations:

The site is majorly delineated by the recreational activities along the river side. There is a plenty of informal open spaces**.**

LAND-USE
- RESIDENTIAL ZONE - 10%
- COMMERCIAL ZONE - 5%
- INSTITUTIONAL ZONE - 5%
- MIXED-USE ZONE - 0%
- RECREATIONAL ZONE - 30%
- INFORMAL OPEN AREA - 50%

BUILDING-USE
- RESIDENTIAL
- COMMERCIAL
- INSTITUTIONAL
- MIXED-USE
- INFORMAL OPEN AREA
- FORMAL OPEN AREA
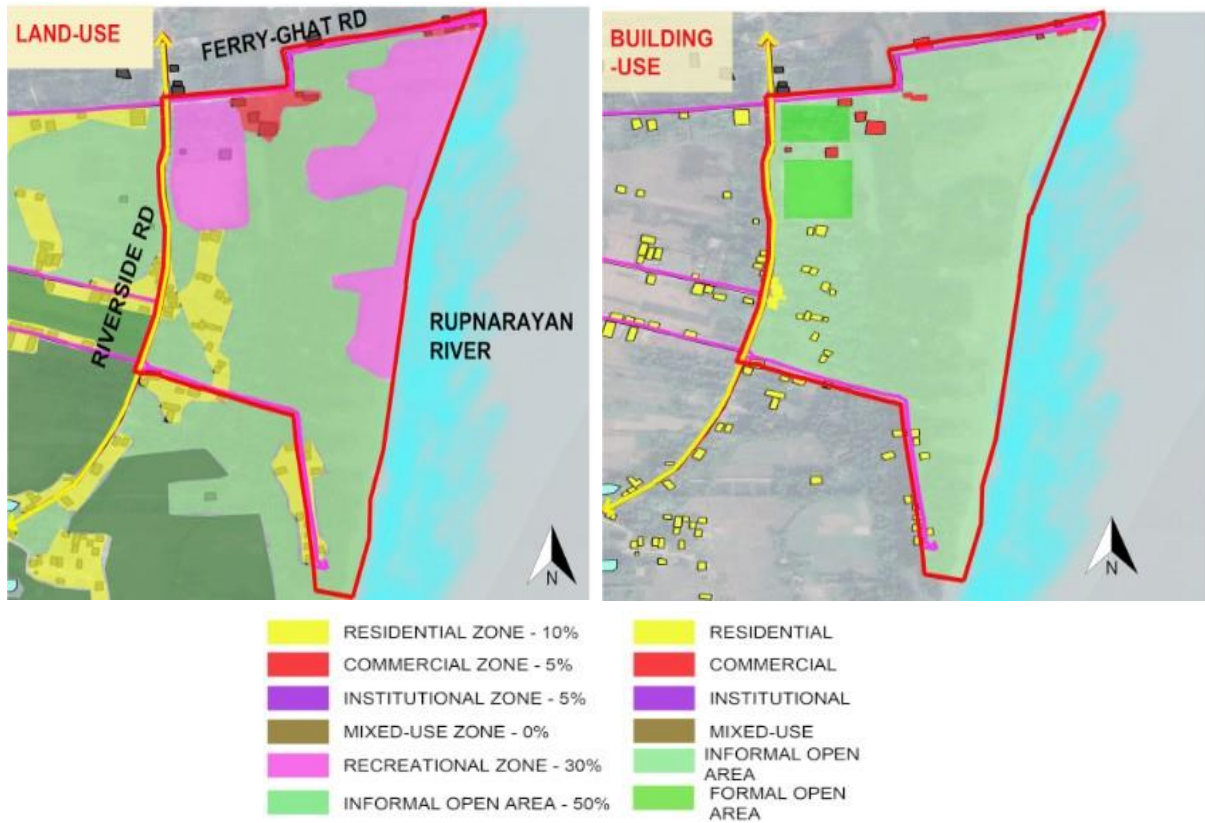
Figure 79: Map showing the different types of Activities of Site 3 (Source: Author)

Conclusions:

- The recreational activity is a major part for the selected, hence it needs major design interventions.

4.3.3.3 CONCLUSIONS

PARAMETERS	INFERENCES
NODES	• The nodes need to be much more organised with adequate space at the edges.
LANDMARKS	• Design interventions needs to be implemented on all the recreational landmarks as it gathers major tourism attraction.
PATTERN	• There is a need for formal road intersections. • More geometrical open spaces are needed.
ROUTES	• The Informal routes needs to be formalised for better public uses. • Need for well-organised public transport connectivity to connect the site to other zones.
ACTIVITIES	• The recreational activity is a major part for the selected, hence it needs major design interventions.

Table 13: Inferences based on study parameters (Source: Author)

4.3.3.4 DESIGN GUIDELINES

NODES

TO ORGANIZE THE NODES WITH MORE ADEQUATE SPACES AT THE EDGES

TO RESTRICT UNNECESSARY ACTIVITIES SUR-ROUNDING THE NODAL POINTS
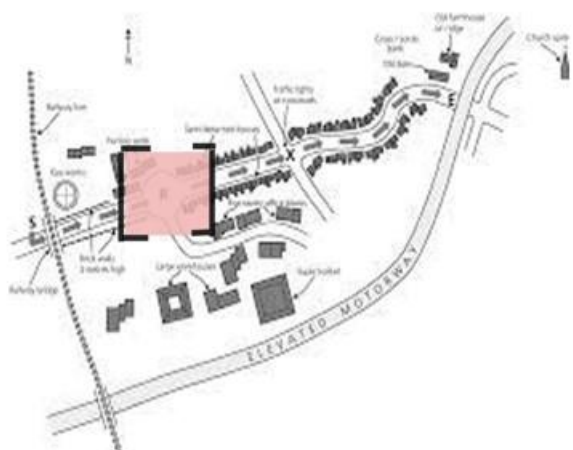
HAVING ADEQUATE SPACE SURROUNDING THE NODES

LANDMARKS

TO ENHANCE MORE VISIBILITY TO THE MAJOR LANDMARKS

TO ALLOW MORE ACCESSIBILITY TO THE RECRE-ATIONAL LANDMARKS

RECREATIONAL LANDMARKS IN THE SITE SHOULD BE OPEN TO THE VISITORS

PATTERN

TO FORMALIZE THE ROAD INTERSEC-TIONS TO CERTAIN EXTENT

TO PROVIDE MORE GEOMETRICAL OPEN SPACES

REGULAR ROAD INTERSECTION & GEOMETRICAL OPEN SPACES CREATE VISTAS

ROUTES

TO FORMALIZE THE INFORMAL ROAD NETWORKS HELPING IN PROPER CON-NECTIVITY

TO CONNECT THE AREA WITH PROPER PUBLIC TRANSPOT SYSTEM REGARDING ITS ATTRACTIVE VALUE

FORMALIZATION OF INTERNAL ROUTES IN AN OPEN RECREATION-AL AREA

ACTIVITIES

TO INCORPORATE MORE PUBLIC ACTIVI-TIES ATE THE RECREATIONAL AREAS, WHICH WILL ACT AS A CATALYST

TO CONTROL THE DEVELOPMENT OF UNORGANISED BUILDINGS IN OPEN SPACES TO MAXIMIZE THE USABILITY

INTRODUCTION OF ACTIVITIES

4.3.3.5 PROPOSALS

> CREATING CONNESTIVITY AMONGST THE INFORMAL OPEN SPACES ANN THE FORMAL OPEN SPACES WITH IN-CORPORATION OF DIFFERENT ACTIVITIES

> ENHANCING VISIBILITY FROM THE RIVERSIDE ROAD TO THE RUPNARAYAN RIVER

> FORMALIZING THE INTERNAL PATHWAYS

> WIDENING THE EXISTING ROADS & NODES

ROAD

RUPNARAYAN RIVER

RECREATIONAL ZONE

SCHEMATIC SECTION

INTERCONNECTING AREAS

INFORMAL OPEN SPACE

FORMAL OPEN SPACE

MAJOR ROADS
(FOR BOTH LIGHT & HEAVY VEHICLES)

MINOR ROADS
(FOR LIGHT VEHICLES)

NODES

BASIC SELECTION

05

Design implementation

DESIGN INTERVENTION IN A SUB URBAN TOWN WITH ITS HERITAGE VALUE: CASE APPLICATION AT TAMLUK, WEST BENGAL

5.0 DESIGN IMPLEMENTATIONS:

5.1 MASTER PLAN + SITES(COMBINED)

RECREATIONAL AREAS

SITE 3

EXISTING PARKS

PROPOSED PARKING LOT

PROPOSED HOTELS

PROPOSED MIXED USE AREA

PROPOSED RESORT

PROPOSED HERITAGE CENTER

SITE 2

PROPOSED OPEN THEATRE

PROPOSED PRIVATE PARKING

RAJBARI JHEEL

SITE 1

PROPOSED RECREATIONAL ZONE

PROPOSED PUJA MANDAP

MAIN ENTRANCE GATE TO THE SITES

EXISTING LANDMARK - TAMLUK RAJBARI

PROPOSED PUBLIC PARKING

RAJBARI MAIDAN

LEGEND:

- MAIN SUB-ARTERIAL ROAD
- RIVER AND CANALS
- CONNECTING ROAD TO SITES AS A PART OF HERITAGE WALK
- MAJOR CONNECTING NODES FOR HERITAGE WALK
- EXISTING HERITAGE ZONES

LEGENDS :

EXISTING	PROPOSED
1. TAMLUK RAJBARI	7. RAISED PLATFORM
2. RAJBARI MAIDAN	FOR CULTURAL ACTIVITY
3. RAJBARI TEMPLE	8. EVENT SPACE
4. RAJBARI AATHCHALA	9. RAISED PLATFORM FOR
5. RAJBARI JHEEL	PODIUMS
6. RAJBARI GATE	10. PARKING LOT
	11. PUJA MANDAP
	12. GHAT
	13. RECREATIONAL AREA

VIEW OF RAJBARI JHEEL
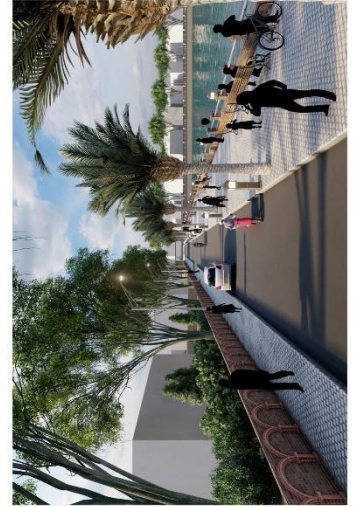
VIEW OF ENTRY TO TAMLUK RAJBARI FROM RAJBARI JHEEL SIDE

5.0 DESIGN IMPLEMENTATIONS:

5.1.1 DESIGN OF SITE 1

DESIGN INTERVENTION IN A SUB URBAN TOWN WITH ITS HERITAGE VALUE: CASE APPLICATION AT TAMLUK, WEST BENGAL

5.0 DESIGN IMPLEMENTATIONS:

5.1.1 DESIGN OF SITE 1

SITE SECTIONS
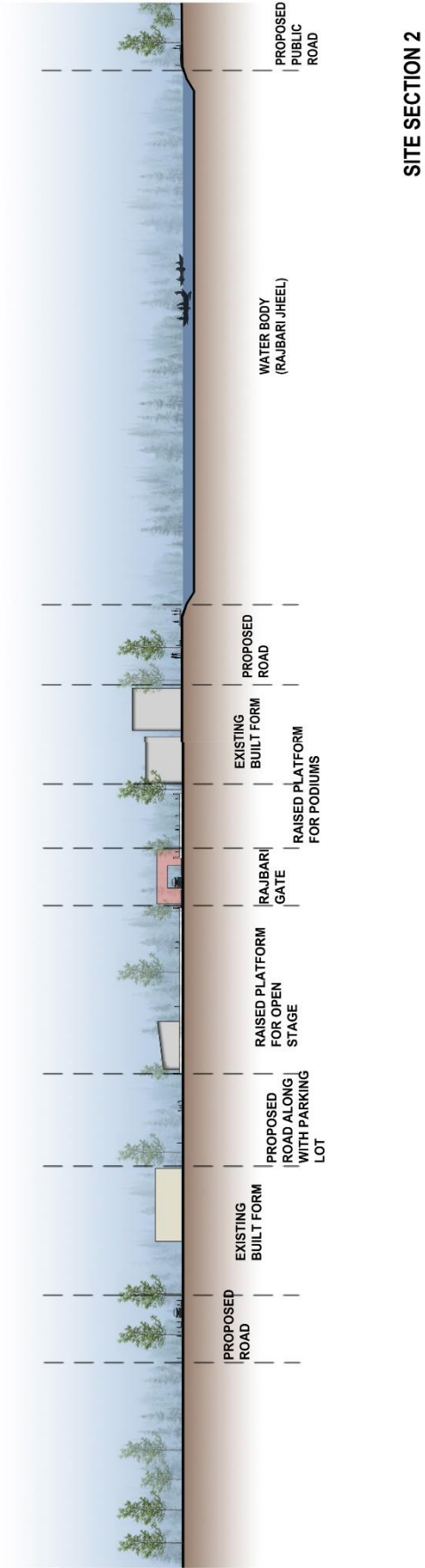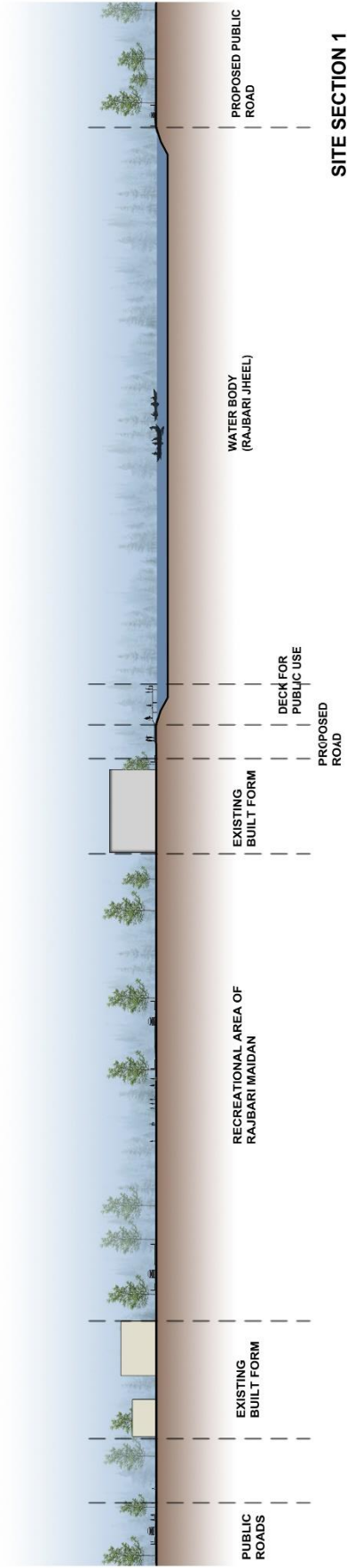
PUBLIC ROADS

EXISTING BUILT FORM

RECREATIONAL AREA OF RAJBARI MAIDAN

EXISTING BUILT FORM

DECK FOR PUBLIC USE

PROPOSED ROAD

WATER BODY (RAJBARI JHEEL)

PROPOSED PUBLIC ROAD

SITE SECTION 1

PROPOSED ROAD

EXISTING BUILT FORM

PROPOSED ROAD ALONG WITH PARKING LOT

RAISED PLATFORM FOR OPEN STAGE

RAJBARI GATE

RAISED PLATFORM FOR PODIUMS

EXISTING BUILT FORM

PROPOSED ROAD

WATER BODY (RAJBARI JHEEL)

PROPOSED PUBLIC ROAD

SITE SECTION 2

5.1.1 DESIGN OF SITE 1

IMPRESSION OF RAJBARI COMPLEX :

IMPRESSION OF RAJBARI JHEEL AT EVEVING TIME :

IMPRESSION OF RAJBARI ENTRANCE FROM RAJBARI JHEEL :

IMPRESSION OF RAJBARI JHEEL BOATING AREA :

IMPRESSION OF SITE 1 FROM PHYSICAL MODEL:

IMPRESSION OF SITE 1 FROM PHYSICAL MODEL:

Key Plan

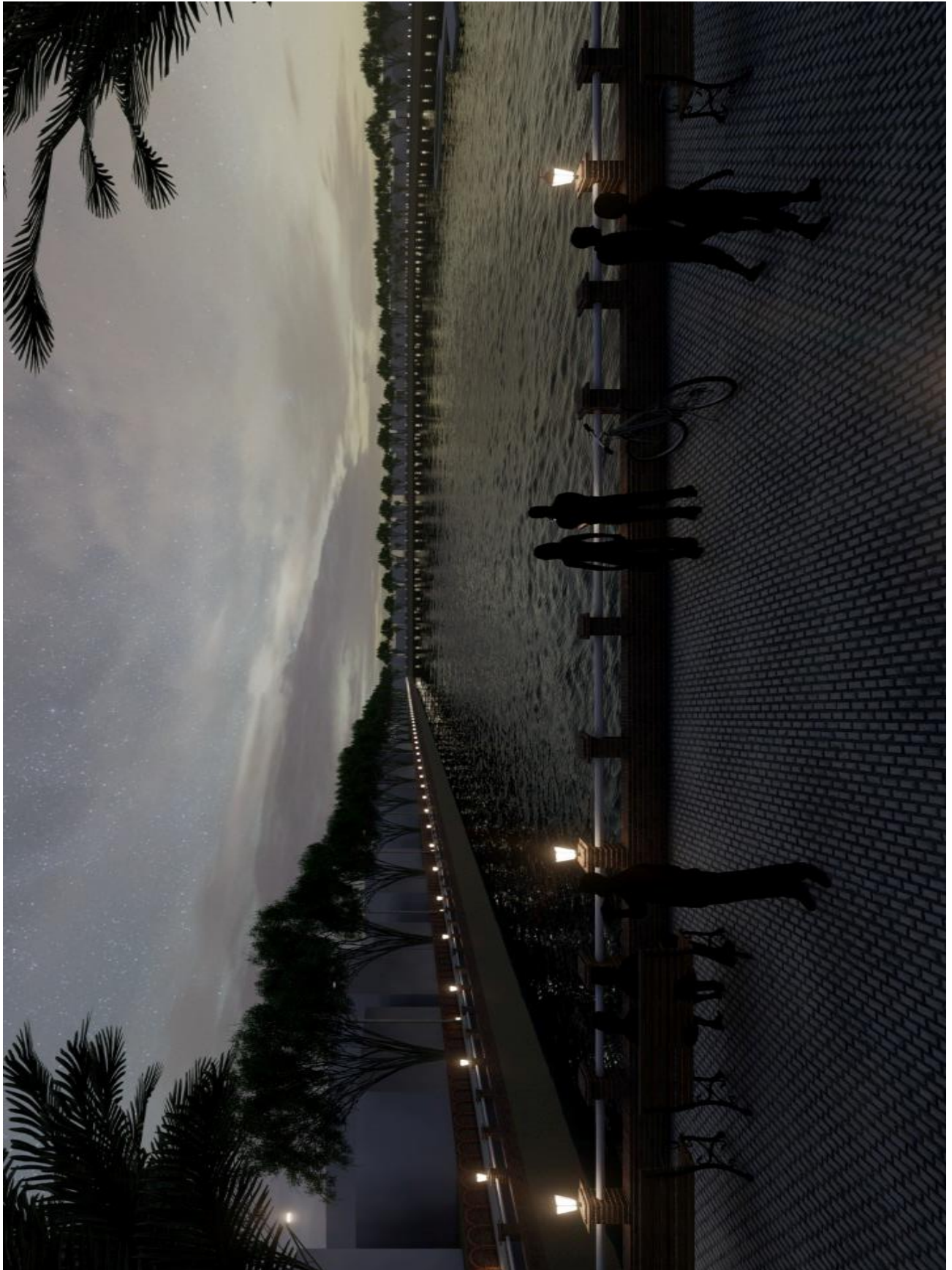**LEGENDS :**

EXISTING	PROPOSED
1. CHILDREN'S PARK	5. HOTELS
2. BUDDHA PARK	6. RESORTS
3. STEAMER GHAT	7. COTTAGES
4. RECREATIONAL ZONE	8. HERITAGE CENTER
	9. INTERPRETATION CENTER
	10. CAFE AREA
	11. PARKING LOT
	12. TRADITIONA MARKET
	13. VIEWING DECK

DESIGN INTERVENTION IN A SUB URBAN TOWN WITH ITS HERITAGE VALUE: CASE APPLICATION AT TAMLUK, WEST BENGAL

5.0 DESIGN IMPLEMENTATIONS:

5.1.1 DESIGN OF SITE 3

Deepayan Barman | 002010202004 | A Postgraduate Thesis | Department Of Architecture, Jadavpur university |

DESIGN INTERVENTION IN A SUB URBAN TOWN WITH ITS HERITAGE VALUE: CASE APPLICATION AT TAMLUK, WEST BENGAL

5.0 DESIGN IMPLEMENTATIONS:

5.1.2 DESIGN OF SITE 3
Site section
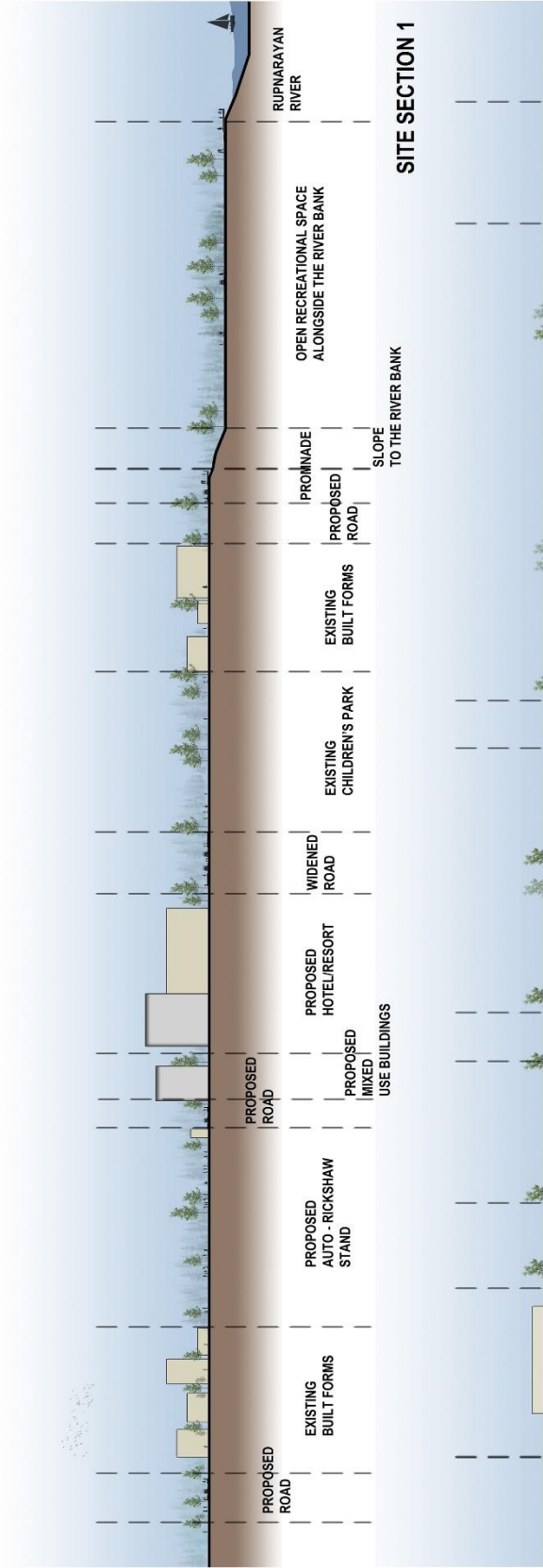
SITE SECTION 1

RUPNARAYAN RIVER

OPEN RECREATIONAL SPACE ALONGSIDE THE RIVER BANK

SLOPE TO THE RIVER BANK

PROMNADE

PROPOSED ROAD

EXISTING BUILT FORMS

EXISTING CHILDREN'S PARK

WIDENED ROAD

PROPOSED HOTEL/RESORT

PROPOSED MIXED USE BUILDINGS

PROPOSED ROAD

PROPOSED AUTO - RICKSHAW STAND

EXISTING BUILT FORMS

PROPQSED ROAD

SITE SECTION 2

RUPNARAYAN RIVER

DECK

OPEN RECREATIONAL SPACE ALONGSIDE THE RIVER BANK

STAIRS

PROPOSED AREA FOR COTTAGES

PROPOSED HOTEL/RESORT

PROPOSED ROAD

SITE SECTION 3

RUPNARAYAN RIVER

PROPOSED GHAT

OPEN RECREATIONAL SPACE ALONGSIDE THE RIVER BANK

DECK

PROPOSED STADIUM

PROPOSED INTERPRETATION CENTER

PROPOSED ROAD

5.1.1 DESIGN OF SITE 1

IMPRESSION OF RAJBARI COMPLEX :

IMPRESSION OF RAJBARI JHEEL AT EVEVING TIME :

IMPRESSION OF RAJBARI ENTRANCE FROM RAJBARI JHEEL :

IMPRESSION OF RAJBARI JHEEL BOATING AREA :

IMPRESSION OF SITE 2 FROM PHYSICAL MODEL:

IMPRESSION OF SITE 2 FROM PHYSICAL MODEL:

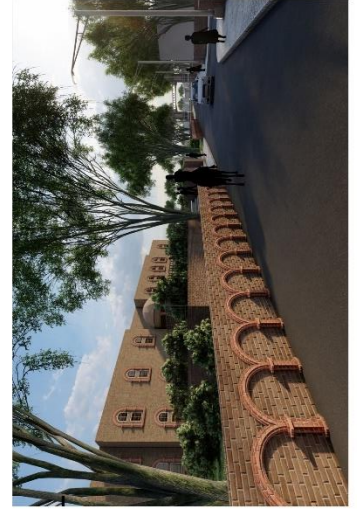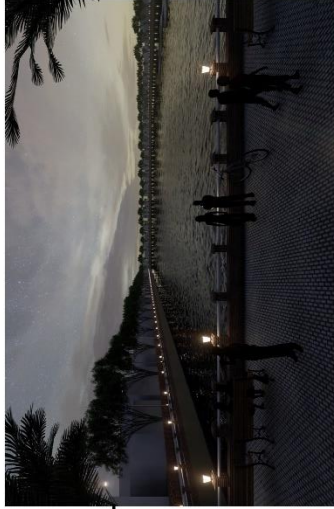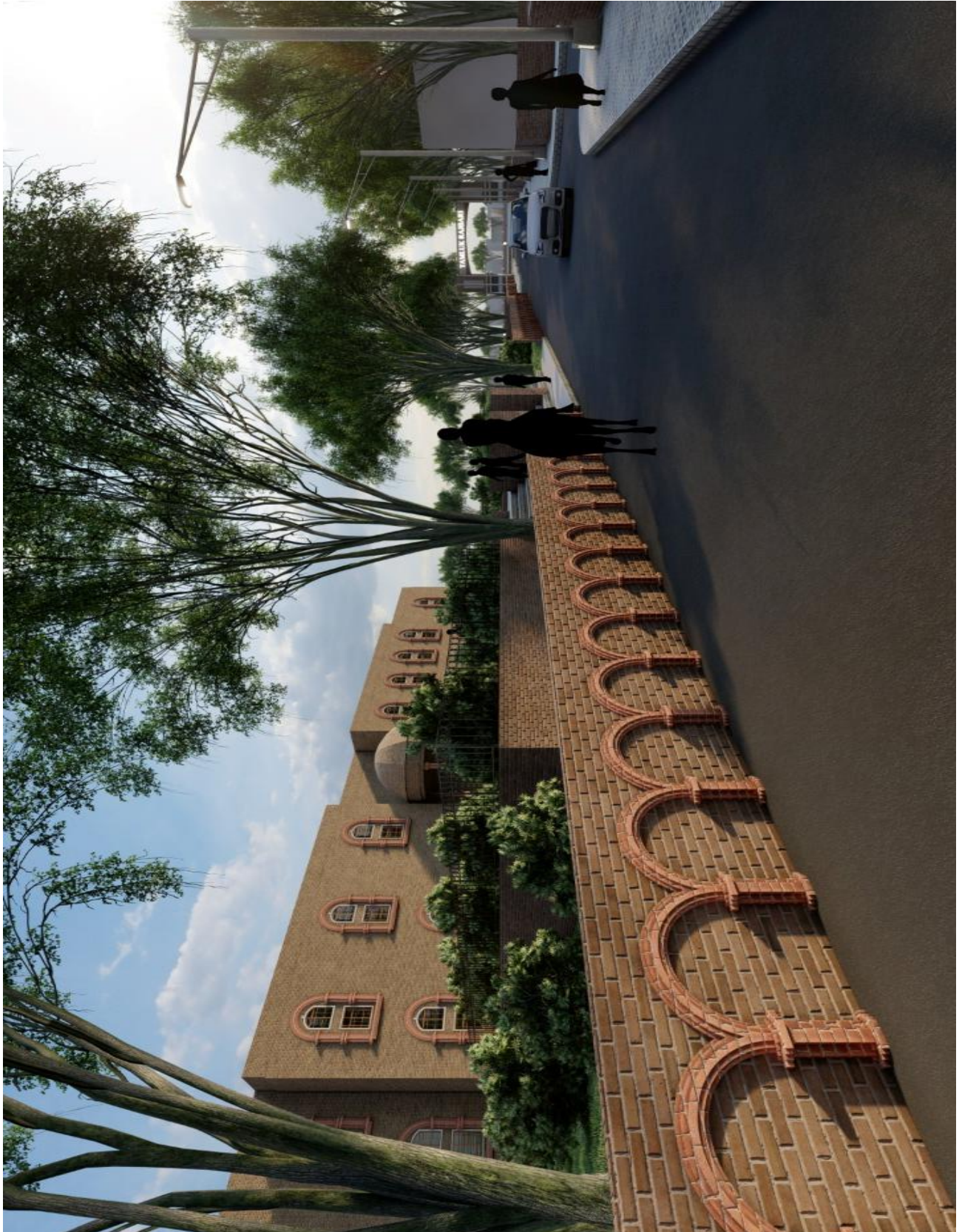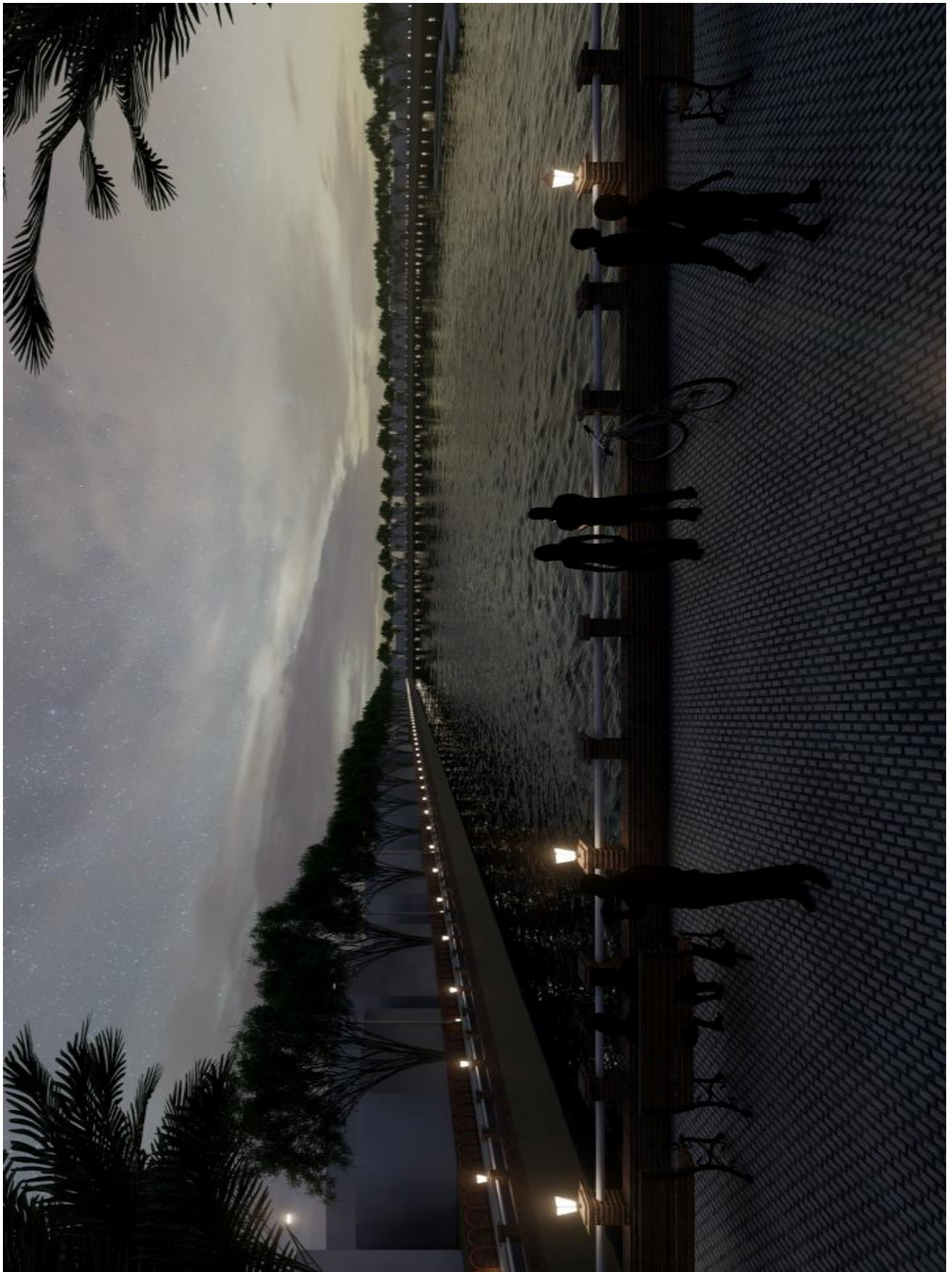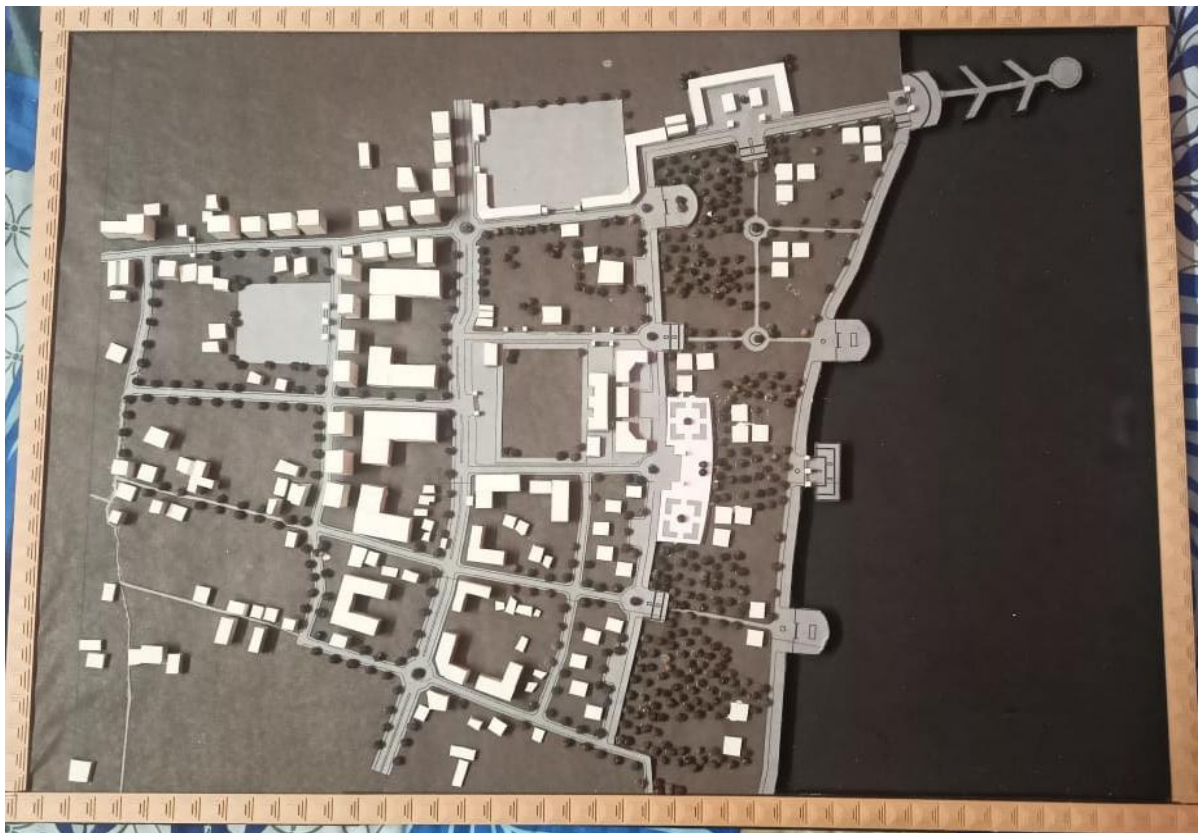**IMPRESSION OF SITE 2 FROM PHYSICAL MODEL:**

06

Conclusion

6.0: CONCLUSIONS

6.1 ISSUES

Suburban areas are lower density areas that separate residential and commercial areas from one another. They are either part of a city or urban area or exist as a separate residential community within commuting distance of a city. As cars became the dominant way for people to get to work, suburbs grew. Tamluk is rich in suburban communities, each with their own successes and struggles at mixing development and health.

6.2 CONTRIBUTION

Sub Urban Town with its heritage value has a significant role in understanding history and culture. This psychological factor is a strong desire to recognize the diversity of any site. To assess the present, it is important to know the past of the places and events that have affected and that continue to affect our collective thinking. As communities lose more traditional forms of economic development, tourism can be a catalyst to start local economies.

Developing a place as heritage city is itself a challenge for the government and its residents both. Without disturbing their peace and usual or natural way of life, there are lots of efforts required to emerge a heritage town. The present study is to determine the role of government and community involvement in developing a heritage city. The study examined all the socio- cultural and economic factors affecting the life of inhabitants.

The aim is to highlight community's involvement and signify it as a major aspect of sustainable tourism development of any place. So, the study focuses on the interest and involvement of local inhabitants towards tourists' arrival, their viewpoint and support revitalize the originality of the place. The attires, songs, dances, festivals, dialects are also the major supportive issue for developing heritage cities. The study presents the overall perspective of inhabitants and tourists about the heritage tourism development in small towns like Tamluk in India.

6.3 FUTURE SCOPE

The future agenda for cultural heritage management relies on an all-inclusive approach that embraces transition and change. On the one hand, heritage in the urban context comprises objects and processes that are valued by people and there-fore the management of such heritage should cover objects and processes, as well as the human factor. On the other hand, the future of heritage management is expected to become increasingly more about transition management: integrative, and gradually working towards common ambitions through innovation, integration, and co-evolution. When conservation is defined as transition management, it is put in a wider perspective of current and future needs of socioeconomic and urban management, and common objectives can be strived for, which will be likely to benefit both the redevelopment and the heritage property.

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