



Government of the people's Republic of Bangladesh
Ministry of Housing and Public Works
Urban Development Directorate
82 Segunbagicha, Dhaka-1000

PREPARATION OF DEVELOPMENT PLAN FOR MEHERPUR ZILLA

REPORT ON ASSIGNMENT-6

Urban Area Plan Report of Meherpur Paurashava

February 2025

Hafiza Nazneen Labonno
Junior Urban Planner

Table of Contents

Table of Contents.....	1
List of Table.....	2
List of Figure.....	2
Chapter 01: Meherpur Paurashava Development Insights.....	3
1.1 Background and Urbanization Trends of Meherpur Paurashava.....	3
1.1.1 Usherism of Urbanization in Meherpur	3
1.1.2 Indigo Cultivation: Shaping the Urban Landscape of Meherpur.....	4
1.1.3 Urbanization Trend: Establishment of Meherpur Municipality.....	6
1.2 Objectives of the Urban Area Plan	8
1.3 Scope, Approach, and Methodology of the Study	8
1.3.1 Scope.....	8
1.3.2 Approach.....	8
1.3.3 Methodology	8
Chapter 02: City Planning through Community Eyes- Needs, Demands and Emotions.....	9
2.1 Demographic and Population Analysis.....	9
2.2 Stakeholder Engagement and Community Participation in Meherpur Paurashava.....	9
2.2.1 Digital Tools for Community Feedback	9
2.2.2 Insights in Local Economic Activities and Livelihoods	10
2.2.3 Insights in Traffic Congestion and Civic Services	10
2.2.4 Stakeholder Meeting with the Govt. officers	11
2.2.5 Participatory Rapid Appraisal (PRA) Insights.....	11
2.3 Planning Standards for Meherpur Paurashava.....	12
2.3.1 Major Field of the Formulation of Standard	12
2.3.2 Proposed Standards for Meherpur Paurashava	13
2.4 Emotional Dynamics in Urban Planning	15
2.4.1 The Role of Emotions in Urban Planning.....	15
2.4.2 Key Emotional Factors Affecting Urban Area Planning	15
2.4.3 Emotional Impact of Urban Planning Elements	16
2.5 Adaptive Cycle of Emotion in Meherpur Paurashava	17
2.5.1 Analysis of Individual Emotion	17
2.5.2 Analysis of Newspaper Emotion	19
2.6 Expression of Emotion in Meherpur Paurashava.....	21
2.6.1 Expression of Individual Emotion	21
2.6.2 Expression of Newspaper Emotion.....	22

Chapter 03: Land Use of Meherpur Paurashava	24
3.1 Existing Land Use of Meherpur Paurashava	24
3.2 Population Density of Meherpur Paurashava	26
3.3 Land Requirement for Meherpur Paurashava in 2033	26
3.4 Proposed Educational Facilities of Meherpur Paurashava.....	27

List of Table

Table 1: Change of Population in Meherpur Paurashava	6
Table 2: Projected Population of Meherpur Paurashava.....	9
Table 3: Proposed Standards for Meherpur Paurashava	13
Table 4: Existing Land Use of Meherpur Paurashava	24
Table 5: Population Density of Meherpur Paurashava	26
Table 6: Land Requirement for Meherpur Paurashava in 2033.....	26
Table 7: Proposed Primary Schools in Meherpur Paurashava.....	28
Table 8: Proposed High Schools in Meherpur Paurashava.....	30
Table 9: Proposed Colleges in Meherpur Paurashava	31

List of Figure

Figure 1: Expansion of Meherpur in the Early 19th Century	3
Figure 2: Indigo Cultivation and Concern System	4
Figure 3: Concerns and Nilkuthis during the British Period surrounding Meherpur	4
Figure 4: Location of Amjhupi and Bhatpara Nilkuthi.....	5
Figure 5: Paved Roads during British Period	5
Figure 6: Map of Meherpur Paurashava	7
Figure 7: Consultation with local vendors	10
Figure 8: Consultation with LGED and Polli Unnoyon Corporation	11
Figure 9: PRA in Ward no. 2 of Meherpur Paurashava	12
Figure 10: Rhythm of Individual Broad Emotion in Meherpur Paurashava (500m buffer area)	17
Figure 11: Adaptive Cycle of Individual Emotion in Meherpur Paurashava	18
Figure 12: Rhythm of Newspaper Broad Emotion in Meherpur Paurashava	19
Figure 13: Adaptive Cycle of Newspaper Emotion in Meherpur Paurashava.....	20
Figure 14: Expression of Individual Emotion in Meherpur Paurashava.....	21
Figure 15: Expression of Newspaper Emotion in Meherpur Paurashava	22
Figure 16: Percentage of Existing Land Use of Meherpur Paurashava	24
Figure 17: Existing Land Use Map of Meherpur Paurashava.....	25
Figure 18: Map of Proposed Primary Schools in Meherpur Paurashava.....	28
Figure 19: Map of Catchment Area of Primary Schools in Meherpur Paurashava	29
Figure 20: Map of Proposed High Schools in Meherpur Paurashava.....	30
Figure 21: Map of Catchment Area of High Schools in Meherpur Paurashava	31
Figure 22: Map of Proposed Colleges in Meherpur Paurashava	32

Chapter 01: Meherpur Paurashava Development Insights

1.1 Background and Urbanization Trends of Meherpur Paurashava

1.1.1 Usherism of Urbanization in Meherpur

Meherpur's rich history reveals its gradual urbanization, deeply intertwined with religion and culture. The city's name likely honors Darvesh Meher Ali Shah, a Yemeni mystic who arrived during the Mughal era. He built his residence in Kalachandpur. Later, he built the second Darbar Sharif in Boro Bazar Mor during 1660-61, which has become the center of the city at present.

In 1750, Goala Chaudhuri became the king of Bagwan Mauza and built significant landmarks, including the Gour pond (a remnant of a fortified residence), residence in Amdah, Atchala Mondir near Meherullah's 2nd Darbar Sharif (letter the Sharaswata Asrom was built there) and possibly the Kali Mondir of Boro Bazar. He also constructed a road connecting Meherpur to Krishnanagar.

Urbanization in Meherpur was further shaped by spiritual influences. In the early 19th century, Balaram Hari, a revered saint, founded the 'Upasath' sect. Following his death in 1850, landlord Jiban Mukherjee built the Balaram Hari Samadhi Temple. A mosque nearby in Jadabpur area reflects the region's religious diversity.

Kumudnath Mallick says in his 'Nadiya Kahini' that Meherpur is an 'ancient village'. 'The village is about 5 miles long from north to south.' The Bhairab River flows to the west of it. The quotation of the writer is proved similar with the above historical resources and it is assumed that the old Meherpur was expanded from Kalachandpur in the north to the Amdah village in the south alongside the Bhairab river.

Meherpur subdivision historically extended to the Bhagirathi River near Palashi, encompassing ancient villages like Saharbati, Kazipur, and Shikarpur. Growing settlements such as Amjhupi, Pirojpur, and Bagowan became populous trade centers, relying on river routes for commerce. After the Mughal era, the region thrived during the Nawabi period, with prominent landlords in Bagowan, Ballabhpur, and Bhabanandapur. In the 19th century, the Mukherjee and Mallick families became influential landlords. The Hindu religion is divided into multiple races and in

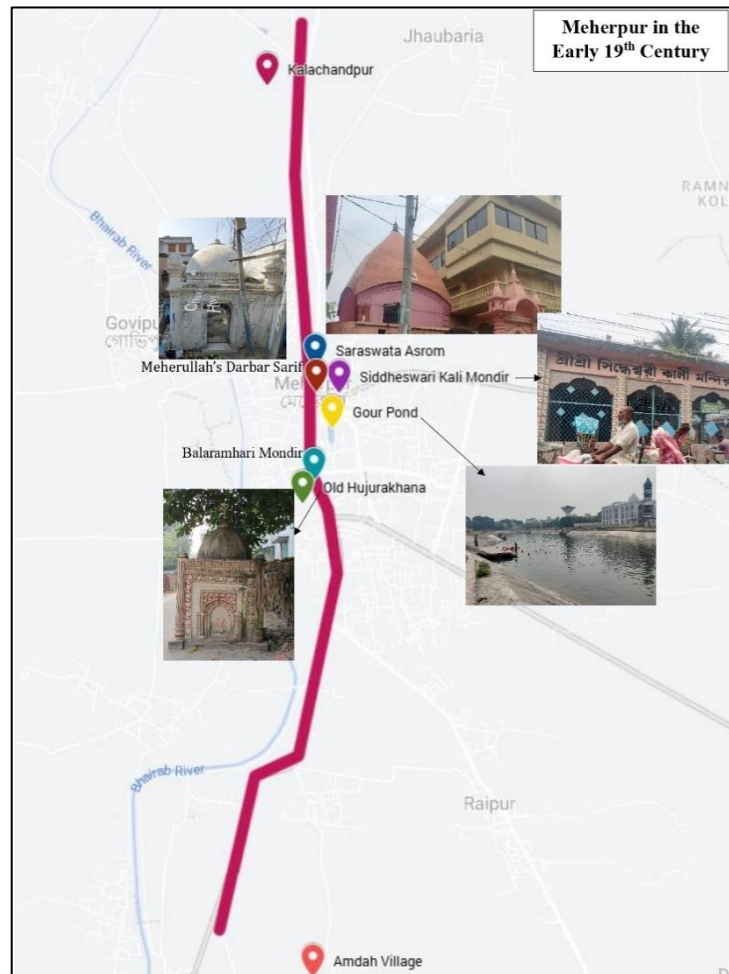


Figure 1: Expansion of Meherpur in the Early 19th Century

the ancient time the occupation also set depending on it. The pattern of para and mahallas of Meherpur urban area seems like following many of those clan's name. From the ancient time these areas are developed and segregate following their occupations.

1.1.2 Indigo Cultivation: Shaping the Urban Landscape of Meherpur

The Battle of Plassey in 1757, which marked the defeat of Nawab Siraj-ud-Daula, signaled the start of British rule in India. Before British dominance, the Dutch and French established early influence in the subcontinent. In the early 1700s, Dutch missionaries, including the Italian Pilgrim Fathers, set up missions in Bhaberpara (now in Meherpur) for trade and religious activities. Later, missions expanded to Kathuli, Bandar, and Bhatpara.

After the Company Act of 1765, Nadia and Meherpur came under East India Company control, alongside the Medinipur Zamindari. High taxation forced large zamindars to sell their lands to smaller landlords, resulting in Meherpur being divided into 81 permanent zamindaris. Instead of investing in agriculture or industry, these landlords spent their wealth on luxury and urban lifestyles. This lack of investment hindered industrial development, leaving Meherpur's economy reliant on traditional agrarian practices. By 1787, the Nadia district administration included Krishnanagar, Ranaghat, Kushtia, and Chuadanga subdivisions. In 1799, Meherpur and Gangni were established as thanas under Nadia district.

From the beginning of British rule, indigo cultivation was introduced in this subcontinent as a result of fertile soil and congenial weather. They established several joint companies or businesses in India for this purpose. At that time, these business entities were called 'Concerns'. A concern is a joint company for indigo cultivation. Each concern had a board of directors to manage the business. Several indigo houses were included

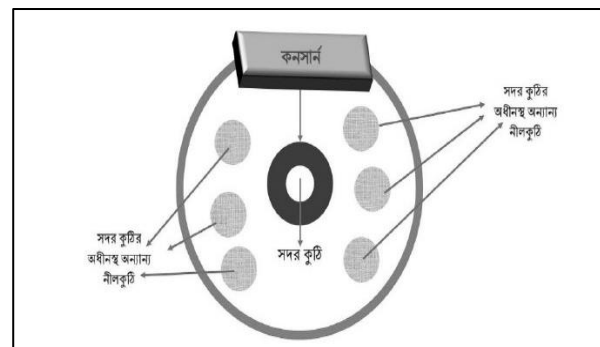


Figure 2: Indigo Cultivation and Concern System
Source: Purbange Nilchash O Nilbidroher Itihash, Md. Mahmud Ali

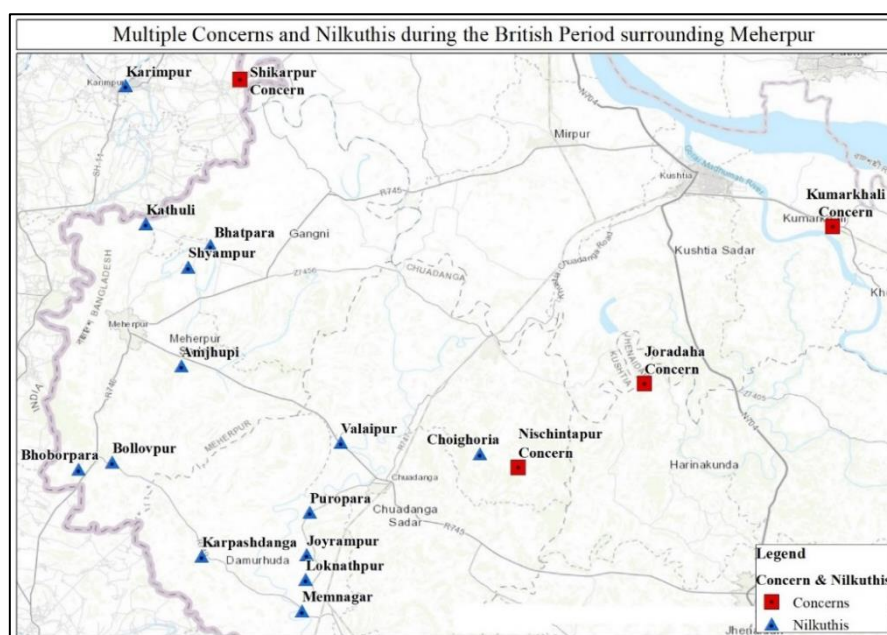


Figure 3: Concerns and Nilkuthis during the British Period surrounding Meherpur

under a concern. The main house under the concern was called the head house. Other indigo houses were branches of the head house.

According to several researches, it is deduced that most of the Nillkuthis in Meherpur district were built from 1815 to 1825. They established several Nillkuthis in Meherpur, prominent to the waterbodies, mainly near Bhairab and Kajla river. Almost 18 Nillkuthis were built at Meherpur region. Among them, Bagowan, Rajapur, Amjhupi, Kathuli, Ujalpur, Bhatpara, Kazipur are

notable. In the context of time, only the structures of Bhatpara and Amjhupi Nillkuthis have been preserved, which is currently being used as DC Eco Park. Bhatpara Nillkuthi was under Shikarpur Concern, which was a village of Karimpur Thana of West Bengla and Amjhupi was under Nischintapur Concern of Chuadanga subdivision.

Amjhupi and Bhatpara kuthis were established during 1815-1820 and 1820-1825 respectively. At that time, the largest 'Indigo Seed Production Farm' in the subcontinent was built on 550 acres of land in Chitla, Gangni Mouza. Which is now the 'Chitla Jute Seed Farm'.

To support indigo cultivation, the British developed the road networks in the region. They traveled by train from Kolkata to Chuadanga and then used the Chuadanga-Jhenaidah and Chuadanga-Meherpur roads, planting karai trees along these routes for shade and protection. These roads were the primary links to Kolkata. Indigo farmers commonly traveled by horse-drawn carts or boats via rivers and canals.

Over time, additional roads were developed, including Meherpur-Tehatta, Meherpur-Karimpur, Meherpur-Kanaidanga, Bandar-Kajipaur, and Bhatpara-Amjhupi roads. After the 1861



Figure 4: Location of Amjhupi and Bhatpara Nillkuthi

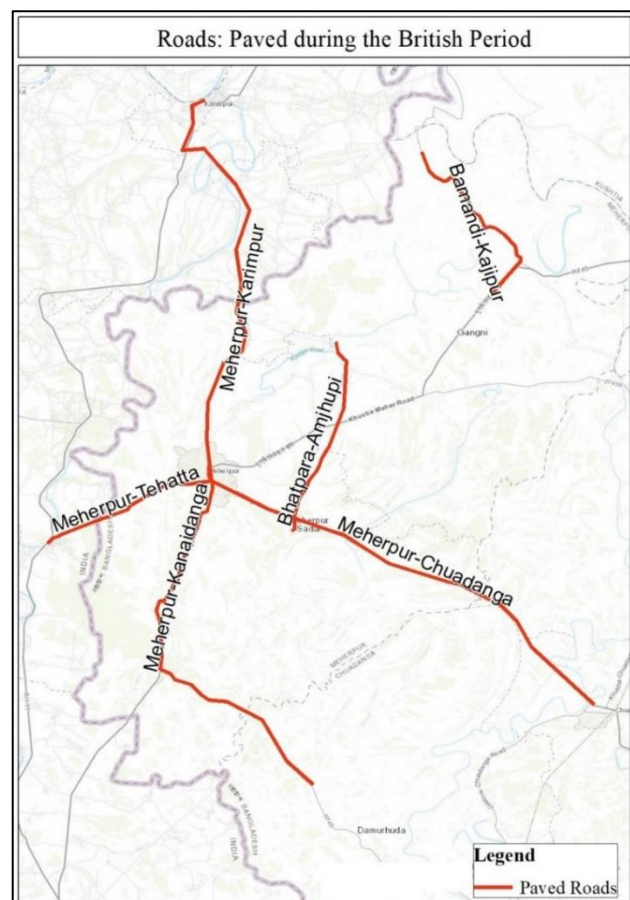


Figure 5: Paved Roads during British Period

law prohibiting forced indigo cultivation, its practice declined in Nadia and Jessore but persisted in parts of Meherpur until 1910. Between 1854 and 1857, Meherpur subdivision was established, comprising Meherpur Sadar, Gangni, Tehatta, Karimpur, and Chapra thanas.

1.1.3 Urbanization Trend: Establishment of Meherpur Municipality

Meherpur Municipality, established on April 15, 1869, is among the earliest in Bengal, reflecting the region's urbanization as a center for trade and administration. Initially housed in a thatched building, it gradually developed infrastructure to serve its citizens. By 1921, it had a permanent municipal building, and a free adult education school was established. Street lighting began in 1922 with Kupa lamps, transitioning to electric lights in 1968, signaling modernization.

At its founding, Meherpur Municipality spanned seven and a half square miles, but this reduced to two and a half square miles after partition. The Municipal Administration Ordinance of 1859 formalized urban governance, creating a town committee to manage the municipality, which included equal numbers of elected and official members. The committee oversaw taxation and urban services, including road maintenance, water supply, sanitation, and public lighting.

The municipality's gradual development highlights its role as a hub of trade and administration, with governance and services expanding to meet the needs of a growing urban population. In 1901, the area and population of Meherpur Mohokuma were 632 sq. mile and 348124 respectively. There was only one urban area and 607 villages in that time. The population of the urban area of Meherpur since 1872 are given below:

Table 1: Change of Population in Meherpur Paurashava

Year	Population	Year	Population
1872	5562	1951	7170
1881	5731	1961	8147
1891	5820	1974	15936
1901	5766	1981	23573
1911	5961	1991	26712
1921	5398	2001	34624
1931	6205	2011	43133
1941	7728	2022	47142

From the above table it is seen that, the population growth is balanced maximum of the decades. It highlights the gradual but steady urbanization of the area. Though after the liberation war, the population growth rate has increased more, the annual growth rate has slowed in the past decade, indicating a stabilization of urban migration or limited spatial expansion of the municipality.

At present, Meherpur Municipality is located on the western border of Bangladesh. It is bordered by the Kushtia and Chuadanga roads to the east, the Bhairab River and Jadavpur village of Buripota Union to the west, Ujalpur village of Kutubpur Union to the north, and Bamanpara village of Amdah Union to the south, spans an area of approximately 11.73 square kilometers and serves as the administrative heart of the district. It holds population of about 47 thousand. The literacy rate in Meherpur stands at approximately 70%, reflecting steady progress in education.

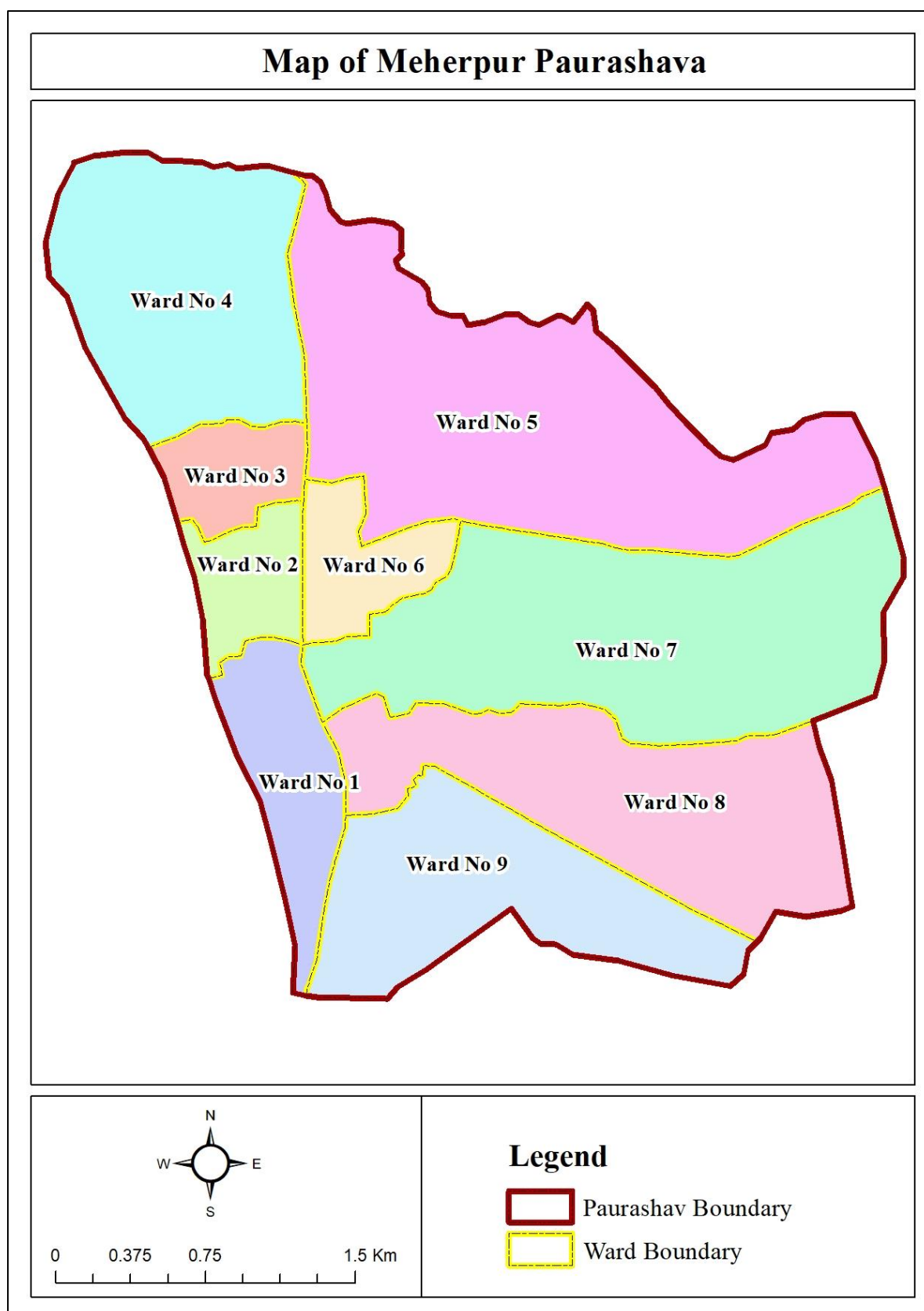


Figure 6: Map of Meherpur Paurashava

1.2 Objectives of the Urban Area Plan

The Urban Area Plan for Meherpur Paurashava is designed to shape the town's future by addressing its unique challenges and opportunities. It emphasizes preserving the town's historical and cultural essence while fostering sustainable development. The plan integrates insights from community participation, demographic analysis, and urban trends to set actionable objectives for achieving inclusive growth and long-term resilience. The objectives are-

1. To analyze and address urbanization trends, demographic shifts and community needs to promote sustainable development in Meherpur Paurashava.
2. To develop a comprehensive land use and zoning strategy that integrates environmental balance, physical and socio-economic development.

1.3 Scope, Approach, and Methodology of the Study

1.3.1 Scope

The study focuses on developing a sustainable and inclusive urban development framework for Meherpur Paurashava. It includes analyzing urbanization trends, demographic shifts, land use, and socio-economic dynamics while emphasizing the emotional connection of residents with their city. The plan seeks to balance growth with cultural preservation, environmental management, and community well-being.

1.3.2 Approach

An interdisciplinary approach guides the study, integrating demographic analysis, spatial assessments, and sustainability principles. A strong emphasis is placed on understanding and incorporating urban emotions—residents' feelings, attachments, and aspirations—to ensure that the development plan resonates with the community. Stakeholder engagement and participatory methods are central to the approach, fostering an inclusive and empathetic planning process.

1.3.3 Methodology

1. **Data Collection:** A blend of primary and secondary data was gathered through surveys, interviews, focus group discussions, and a review of existing urban studies. Emotional mapping was included to capture residents' feelings and connections with urban spaces.
2. **Demographic and Emotional Analysis:** The Cohort Component Method assessed population dynamics, while emotional surveys identified key factors influencing residents' quality of life and urban experiences.
3. **Community Engagement:** Workshops, public consultations, and participatory planning sessions were conducted to align urban priorities with community needs and emotional values.
4. **Spatial Analysis:** GIS tools were employed to study current land use, zoning, and infrastructure layouts, with attention to areas significant to the community's emotional and cultural identity.
5. **Plan Formulation:** The insights were synthesized into a holistic urban plan, prioritizing sustainability, cultural continuity, and an emotionally enriched urban environment.

Chapter 02: City Planning through Community Eyes Needs, Demands and Emotions

2.1 Demographic and Population Analysis

The demographic analysis of Meherpur Paurashava using the Cohort Component Method provides a detailed understanding of its population dynamics. This method involves dividing the population into several age group and analyzing components such as fertility, mortality, survival rate, migration rate etc. By projecting population changes over time, it aids in assessing growth patterns and demographic shifts. This approach is particularly useful for urban planning, resource allocation, and policy-making in Meherpur Paurashava. The projected population based on population census 2011 is given below:

Table 2: Projected Population of Meherpur Paurashava

Ward	Year		
	2024	2028	2033
Ward 1	7599	9004	10409
Ward 2	4678	5249	5819
Ward 3	3256	3186	3115
Ward 4	7988	9863	11737
Ward 5	4683	5533	6382
Ward 6	3883	4278	4674
Ward 7	7390	8682	8724
Ward 8	4331	4576	4618
Ward 9	7855	10107	10149
Total	51663	60478	65629

2.2 Stakeholder Engagement and Community Participation in Meherpur Paurashava

Effective stakeholder engagement and community participation are critical in the urban planning of Meherpur Paurashava. Involving local authorities, community members, business owners, NGOs, and other relevant parties ensures that the diverse needs of the population are represented in the development plan. Engagement can be facilitated through methods such as public consultations, workshops, focus groups, and surveys. These platforms allow stakeholders to share their views and suggestions on urban projects. Early involvement helps identify potential challenges and fosters community ownership and accountability.

2.2.1 Digital Tools for Community Feedback

By involving residents in decision-making, planners can gain insights into local knowledge and cultural values, which are critical for designing solutions that are both practical and acceptable to the community. To enhance community participation, it is vital to adopt inclusive strategies that address the needs of marginalized and vulnerable groups, such as women, the elderly, and people with disabilities. This can be achieved by conducting targeted outreach programs and ensuring that meetings and consultations are accessible to all. Additionally, leveraging digital platforms and social media can broaden the reach of engagement initiatives, allowing for greater participation from different segments of the population. For instance, feedback from

community members can help in the allocation of resources for infrastructure development, public services, and environmental conservation efforts.

In these regards, several apps have been developed to collect information and data from local residents in a more accessible and digital way within the Meherpur Paurashava area. One app focuses on gathering data about the waste disposal system, including details on the proximity of collection points to households and the efficiency of waste management services. This app is particularly aimed at women, encouraging them to participate in improving local sanitation and waste disposal practices by providing their insights and feedback.

Another app is designed for the general population, allowing residents to report issues, express their needs, and propose tentative solutions or comments on various community matters. This platform serves as a valuable tool for collecting real-time feedback from the community, enabling local authorities to address concerns more effectively and tailor urban development initiatives to better meet the needs of residents.

2.2.2 Insights in Local Economic Activities and Livelihoods

From the reconnaissance survey and consultation with the government officers, several outcomes and insights for the development plan have found. Through discussions with local residents, we gained valuable insights into the town's way of life. Most people in Meherpur rely on small businesses, informal activities and mobile vendors for their livelihood beside several formal activities. Activities like food vending, cobbler shops, and blacksmith services are an important part of the local economy.



Figure 7: Consultation with local vendors

2.2.3 Insights in Traffic Congestion and Civic Services

Traffic congestion and limited civic services, such as poor drainage and roads, are major concerns for the community. There is also a strong demand for better recreational facilities, as existing parks and playgrounds do not fully meet the needs of the residents. Local social organizations and NGOs are working hard to support young people, tackling issues like drug abuse and encouraging entrepreneurship. These community engagements show that the people of Meherpur want development that improves their quality of life while preserving their cultural traditions. The feedback gathered will help create a development plan that addresses the real needs of the community, promoting a better and more sustainable future for everyone.

2.2.4 Stakeholder Meeting with the Govt. officers

The government officials also gave their valuable insights about Meherpur and its development. Despite having fertile soil and some agricultural potential, agricultural development in Meherpur has been limited, and the region faces waterlogging due to poor drainage systems. Urbanization, while possible, requires improved infrastructure and active public involvement, as the community is hesitant to pay taxes, impacting municipal revenue. The local economy faces issues with inadequate transportation for agricultural goods, and youth are increasingly affected by online gambling. Educational and healthcare infrastructure also require attention, with ongoing efforts to enhance schools and the local hospital. Community organizations and government departments are working together on various initiatives, including expanding educational institutions and improving road networks, but these efforts need stronger public support and coordination for meaningful progress.



Figure 8: Consultation with LGED and Polli Unnoyon Corporation

2.2.5 Participatory Rapid Appraisal (PRA) Insights

To effectively address the needs and demands of local people, it is crucial to engage with the community through tools like Participatory Rapid Appraisal (PRA), which provides deep, firsthand insights into their priorities and challenges. PRA empowers community members to actively contribute, ensuring that development initiatives are grounded in local realities. Insights from recent PRA exercises highlight several pressing issues and necessary solutions. Addressing waterlogging and drainage problems is a top priority to improve living conditions and prevent flooding. The lack of dustbins underscores the need for better waste management to maintain cleanliness. Road renovation, particularly in key areas such as Mukherjee para alleys and near the mosque adjacent to Baitul Falah, is essential for improved connectivity and safety. There is also a strong demand for developing playgrounds to provide recreational spaces for the community. Ensuring a clean water supply is critical for health and well-being, while the installation of electric poles and solar-powered lamp posts will enhance street lighting and safety. Additionally, establishing hygienic toilets, clinics, and a library will significantly improve public amenities. Proper traffic management, including organized parking facilities, is necessary to reduce congestion. By blending these PRA insights with continuous community engagement, development initiatives can become more effective, sustainable, and culturally appropriate, fostering a sense of ownership and collaboration within the community.



Figure 9: PRA in Ward no. 2 of Meherpur Paurashava

2.3 Planning Standards for Meherpur Paurashava

The rapid changes in urban areas, driven by increasing needs and shifting social and economic trends, highlight the urgent need for clear and comprehensive planning standards to manage land use effectively. Urban planning covers a wide range of physical issues, many of which are closely tied to existing standards. These standards help ensure that urban growth is organized, sustainable, and meets the needs of the community. To address these challenges in a systematic way, this initiative focuses on developing specific planning standards for key areas of land use. These standards will be both relevant to the local context and broadly applicable, helping to guide urban development in a way that supports balanced growth and improves the quality of life for residents.

2.3.1 Major Field of the Formulation of Standard

The rapid transformation of urban areas, driven by increasing mobility demands, necessitates the development of a variety of planning standards to address key aspects of land use effectively.

Urban planning encompasses a broad spectrum of physical planning issues, many of which are directly or indirectly linked to established standards. While addressing all these issues is beyond the scope of this discussion, the focus has been narrowed to contextual and widely applicable aspects. With this approach, specific fields of land use have been selected to develop targeted planning standards.

a. General Landuses

1. Residential
2. Administrative
3. Commercial
4. Education
5. Industrial
6. Community and Social Services
7. Government Services
8. Open Space and Recreation

b. Utility/Physical Infrastructure Facilities

1. Health
2. Water Supply, Sewerage and Garbage Disposal
3. Electrification
4. Transportation and Communication infrastructure
5. Bus/Truck Terminal
6. Landing Station/Ferry Ghat
7. Launch Ghat

2.3.2 Proposed Standards for Meherpur Paurashava

Urban planning is essential for sustainable development, ensuring optimal land use and the equitable distribution of facilities. Meherpur Paurashava, a vital administrative and commercial hub of the district, requires comprehensive planning standards to address its growing population and diverse needs. These standards aim to guide the development of residential, commercial, industrial, and recreational spaces while ensuring adequate infrastructure for transportation, education, healthcare, and public amenities. The standards are suggested by analyzing the present and future settings with several planning standards of different authorities in Bangladesh.

Table 3: Proposed Standards for Meherpur Paurashava

Landuse Components		Standards for Meherpur Paurashava	Remarks/ Present Status	Time/Distance/ Mode of Transport
General Landuse	Administrative	Upazila Complex 5-10 acres	At present about 3 acres	Public/ Local Vehicle
		Paurashava Office 1.5-3 acres	At present about 1 acre	Public/ Local Vehicle
		Jail/ Sub Jail 10 acres	At present about 5 acres	Public/ Local Vehicle
	Residential	General Residential 70-120 person/ acre	In 2043, the projected population density will be about 75	
		Real State 100-150 person/ acre	According to the standards of UDD for Small Towns of Bangladesh	
Education	Primary/ Kindergarten School	Elementary / Nursery/Kindergarten School 1 Acre /5,000 population	According to the standards of UDD for Small Towns of Bangladesh	In between walking distance/ 0.25-0.5 km/ maximum 15 min
		1 Primary school/5,000 population, Area 2 Acre	At present 12 schools, serving almost 4000 population per school	In between walking distance/ 0.25-0.5 km/ maximum 15 min
	High School/ Intermediate College	High School/Intermediate College 1 school/10,000 population, Area 2-3 Acre	At present 6 high schools	In between walking distance/ 0.5-1.0 km/ 15-30 min
	College/University	College/University 5 acre/20,000 population	At present 5 Colleges	Public/ Local Vehicle
		1 Vocational Training Center, Area 5 acre	At present 1 Vocational Training School	Public/ Local Vehicle
	Park/Open Space	Playfield/ Playground: 0.15 acre/1000 population	According to the standards of UDD for Small Towns of Bangladesh	In between walking distance/ 0.25 km/ maximum 15 min

Landuse Components		Standards for Meherpur Paurashava	Remarks/ Present Status	Time/Distance/ Mode of Transport
Open Space and Recreation		Community/ Neighborhood Park: 1 acre/ 10,000 population	According to the standards of UDD for Small Towns of Bangladesh	In between walking distance/ 0.5-1.0 km/ 15-30 min
		1 Central Park, Area 5 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
		Stadium 5-10 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
		Cinema Hall 0.5 acre/20000 population	According to the standards of LGED Meherpur Paurashava MP	Public/ Local Vehicle
Community Services	Community Center	1 for each ward, Area 0.15 Acre	Analyzing Present and Future Status	In between walking distance
	Graveyard	1 acre/20000 population	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
	Eidgah	1 acre/20000 population	Analyzing Present and Future Status	In between walking distance
	Religious facilities	0.5 acre/10000 population	Analyzing Present and Future Status	In between walking distance
Health Care	Health Facilities	Maternity/ Child Care: 1- 1.5 acre/10,000 population	Analyzing Present and Future Status	Public/ Local Vehicle
		General Hospital 5-10 Acre	At present 1, 250 bed district hospital	Public/ Local Vehicle
		1 Specialized Hospital Area 1.5-2 acre	Analyzing Present and Future Status	Public/ Local Vehicle
Commercial & Industrial	Market	Wholesale market 3-5 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
		Cattle Market/Hat 1-1.5 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
		Katcha Bazar/ Neighborhood Market 0.15 acre/ 5,000 population	At present around 30 acres	In between walking distance/ 0.25-1 km/ 15-30 min
		Shopping Complex 0.5acre/20000 population	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
	Industry	Small Scale/Cottage/Agro based industry 2-5 acre/10,000 pop	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
Govt. Services & Utility	Post Office	0.5 acre/20000 pop	According to the standards of LGED Meherpur Paurashava MP	Public/ Local Vehicle
	Fire Station	1 acre/20000 pop	According to the standards of LGED Meherpur Paurashava MP	Public/ Local Vehicle
	Police Out Post	Police Station 3-5 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle
		Police Box 0.5 acre/box	According to the standards of UDD for Small Towns of Bangladesh	In between walking distance/ 0.25-1 km/ 15-30 min
	Solid Waste	1 Waste Disposal Ground 2-3 acre	Analyzing Present and Future Status	Public/ Local Vehicle
Transport & Communicati	Transport Facilities	1 Bus Terminal 1 acre/20000 population	Analyzing Present and Future Status	Public/ Local Vehicle
		1 Truck Terminal, Area 5 acre	Analyzing Present and Future Status	Public/ Local Vehicle
		Leguna/Rickshaw/Van Stand 0.25 acre/ stand	According to the standards of LGED Meherpur Paurashava MP	In between walking distance/ 0.25-1 km/

Landuse Components		Standards for Meherpur Paurashava	Remarks/ Present Status	Time/Distance/ Mode of Transport
				15-30 min
		Railway Station 4 acre	According to the standards of UDD for Small Towns of Bangladesh	Public/ Local Vehicle

The use of planning standards in land use planning is crucial for densely populated and resource-constrained countries like Bangladesh, particularly for the backward areas such as Meherpur Paurashava. Incorporating authentic and context-specific planning standards can significantly enhance decision-making and ensure efficient land utilization, reducing the risks of resource misallocation. This study emphasizes the critical importance of allocating land appropriately for specific purposes to meet both current and future needs. By adopting these measures, Meherpur Paurashava can establish a sustainable and efficient model for land use planning, contributing to the broader development goals of Bangladesh.

2.4 Emotional Dynamics in Urban Planning

2.4.1 The Role of Emotions in Urban Planning

Urban planning encompasses both the spatial organization of a city as well as the emotional and psychological experience of those living in within the city. In the case of Meherpur Paurashava, there is a strong emotion around the public views towards the planning of the town. The urban development plans become apparently successful and workable or non-workable depending on the level of emotions of people towards the change and how well the community adjusts to the changes.

The community needs to support the efforts and positive emotions of love and happiness can be motivators and can foster the feeling of oneness and joint benefit. However, when there is a societal change and there are strong negative feelings like anger or disgust, it can lead to societal defiance, violence, and in worst cases indifference to the outcome - all of which come in the way of making successful urban plans. Understanding and treating these emotional aspects is one of the basic requirements to build an urban space that is strong and peaceful.

2.4.2 Key Emotional Factors Affecting Urban Area Planning

In urban area planning, emotional factors play a crucial role in shaping the lived experiences of residents and the overall success of urban environments. In Meherpur Paurashava, understanding and integrating these emotional dimensions into planning processes can significantly enhance community well-being and cohesion. Key emotional factors such as community identity, safety, accessibility, environmental quality, and social equity influence how individuals interact with their surroundings and perceive their city. By addressing these elements thoughtfully, urban planners can create more inclusive, resilient, and emotionally supportive urban spaces. Several key emotional factors influence urban area planning in Meherpur Paurashava are given below:

1. Community Identity and Pride

Community identity is a powerful emotional factor that shapes how residents perceive their environment. Preserving historical landmarks, cultural sites, and local traditions fosters a sense of pride and belonging. Urban planning that respects and integrates these elements can enhance community cohesion and satisfaction.

2. Security and Safety

The perception of safety is a fundamental emotional need. Urban planning must address this by ensuring well-lit public spaces, efficient law enforcement, and disaster preparedness. Enhancing security can reduce anxiety and fear, creating a more stable and confident community.

3. Accessibility and Mobility

Ease of movement within the city significantly impacts public emotions. Efficient transportation systems that reduce congestion and improve accessibility evoke positive feelings of convenience and freedom. Conversely, poor mobility can lead to frustration and discontent.

4. Environmental Quality

Clean, green spaces contribute to a sense of well-being and relaxation. Urban planning that prioritizes parks, clean air, and sustainable practices can elicit positive emotional responses, promoting mental and physical health.

5. Social Equity and Inclusivity

Emotions related to fairness and inclusion are critical. Planning that ensures equitable access to resources and opportunities can foster feelings of contentment and trust. Conversely, perceived inequities can lead to resentment and social division.

2.4.3 Emotional Impact of Urban Planning Elements

The emotional impact of specific urban planning elements on the residents of Meherpur Paurashava is profound and multifaceted:

1. Infrastructure Development

Infrastructure projects such as roads, bridges and drainage often evoke mixed emotions. While they can bring excitement and hope for improved living conditions, they may also cause anxiety over potential displacement or disruption. Transparent communication and community involvement are key to managing these emotions.

2. Housing and Residential Areas

The design and availability of housing significantly affect emotional well-being. Affordable, well-designed housing fosters stability and pride, while overcrowded or poorly maintained areas can lead to stress and dissatisfaction. Planners must prioritize quality housing to enhance residents' emotional and physical well-being.

3. Public Spaces and Amenities

Public spaces such as parks, community centers, and recreational facilities are crucial for social interaction and leisure. Their presence promotes happiness, relaxation, and social cohesion. Neglecting these areas can lead to feelings of neglect and alienation.

4. Economic Development

Economic initiatives that create jobs and boost local businesses generate optimism and confidence. However, if growth is perceived as uneven or exclusive, it can result in frustration and a sense of injustice. Balanced economic planning that benefits all community members is essential.

5. Crisis Management and Resilience

The emotional response to crises such as natural disasters or economic downturns is critical. Effective crisis management that includes clear communication, swift action, and community support can transform fear and anxiety into resilience and solidarity. Urban planning must incorporate strategies to enhance community resilience and emotional recovery.

2.5 Adaptive Cycle of Emotion in Meherpur Paurashava

2.5.1 Analysis of Individual Emotion

Roaming through Meherpur Paurashava, I captured scenes from all corners of the cities 500m buffer area from the Boro Bazar Char Rastar Mor which is the center of the city, framing informal activities, the rhythm of daily life, available facilities, social interactions and connections, and the challenges faced by the community. Each photograph reveals distinct reactions, tells a unique story, evoking a range of emotions that together create a layered, rhythmic portrait of the city. Through my lens, I witnessed both the city's strengths and its struggles: the strengths brought feelings of warmth and pride, embodying the happiness and love that define the community. In contrast, the challenges presented a more somber tone, evoking disgust, fear, sadness and anger. Some images revealed moments of surprise, highlighting unexpected circumstances in everyday life. Collectively, these images form a dynamic emotional landscape, reflecting Meherpur's identity in all its richness, complexity and a rhythmic sense.

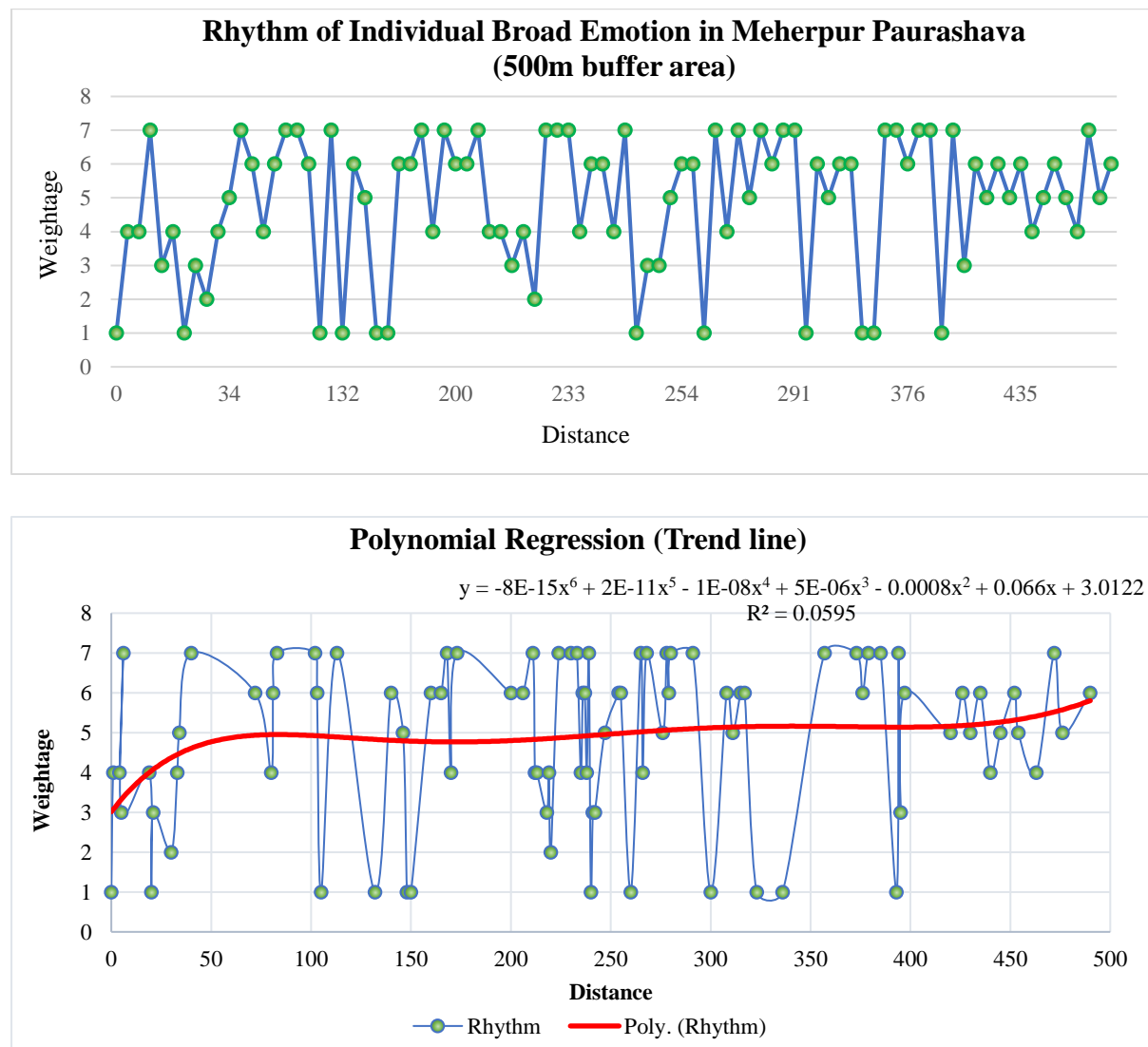


Figure 10: Rhythm of Individual Broad Emotion in Meherpur Paurashava (500m buffer area)

From the trend line, the adaptive cycle of emotion is segmented as Growth, Conservation, Release and Reorganization. The phases may repeat and vary the distance and area. First, the

emotions of individuals are plotted in the geological location and then graphically shows these locations with distance from the center of Meherpur Paurashava. Then the polynomial regression analysis has done and from the regression analysis a trend line is found. The trend

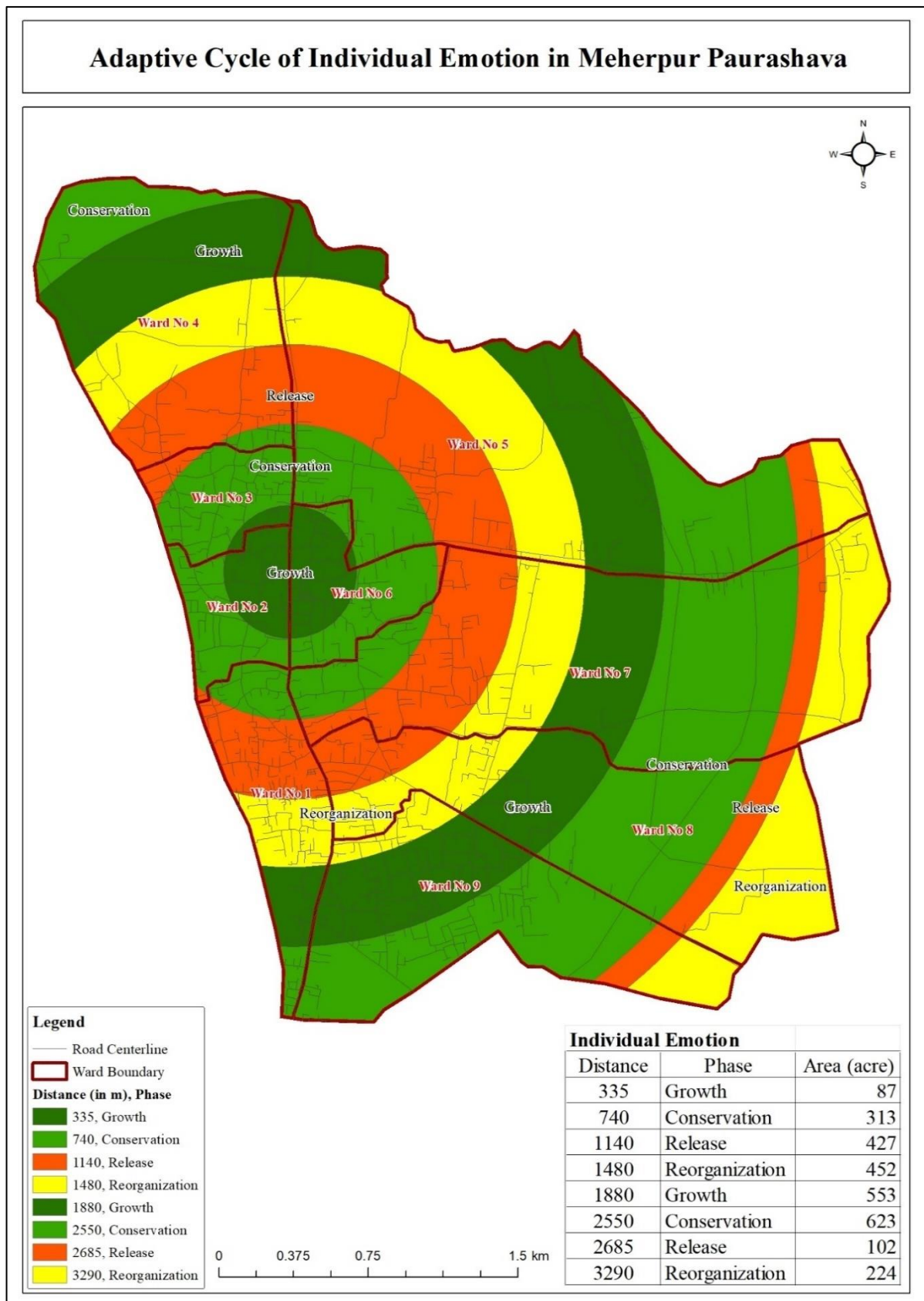


Figure 11: Adaptive Cycle of Individual Emotion in Meherpur Paurashava

line represents the adaptive cycle of emotion for Meherpur Paurashava. The segments first done for the 500m buffer area and the interpolated for the whole Paurashava area. The distance from the center is segmented as 335m, 740m, 1140m, 1480m, 1880m, 2550m, 2685m and 3290m which are showing Growth, Conservation, Release, Reorganization and again Growth, Conservation, Release and Reorganization respectively.

2.5.2 Analysis of Newspaper Emotion

For the analysis of emotions related to newspaper articles, several news from 2018 to 2024 have been collected. There is total 95 news have been collected for Meherpur Paurashava. More than 60% news shows positive impacts with positive emotions. For the analysis of the study, the locations of the incidents are geo-located. Then the distances of the incidents are measured from the center of the Paurashava, Boro Bazar Char Rastar Mor and has done the analysis like the previous one. From the trend line, the distance from the center is segmented as Growth, Conservation, Release, Reorganization, Growth, Conservation and Release with a distance of 200m, 600m, 1300m, 1600m, 1800m, 2000m and 2200m respectively.

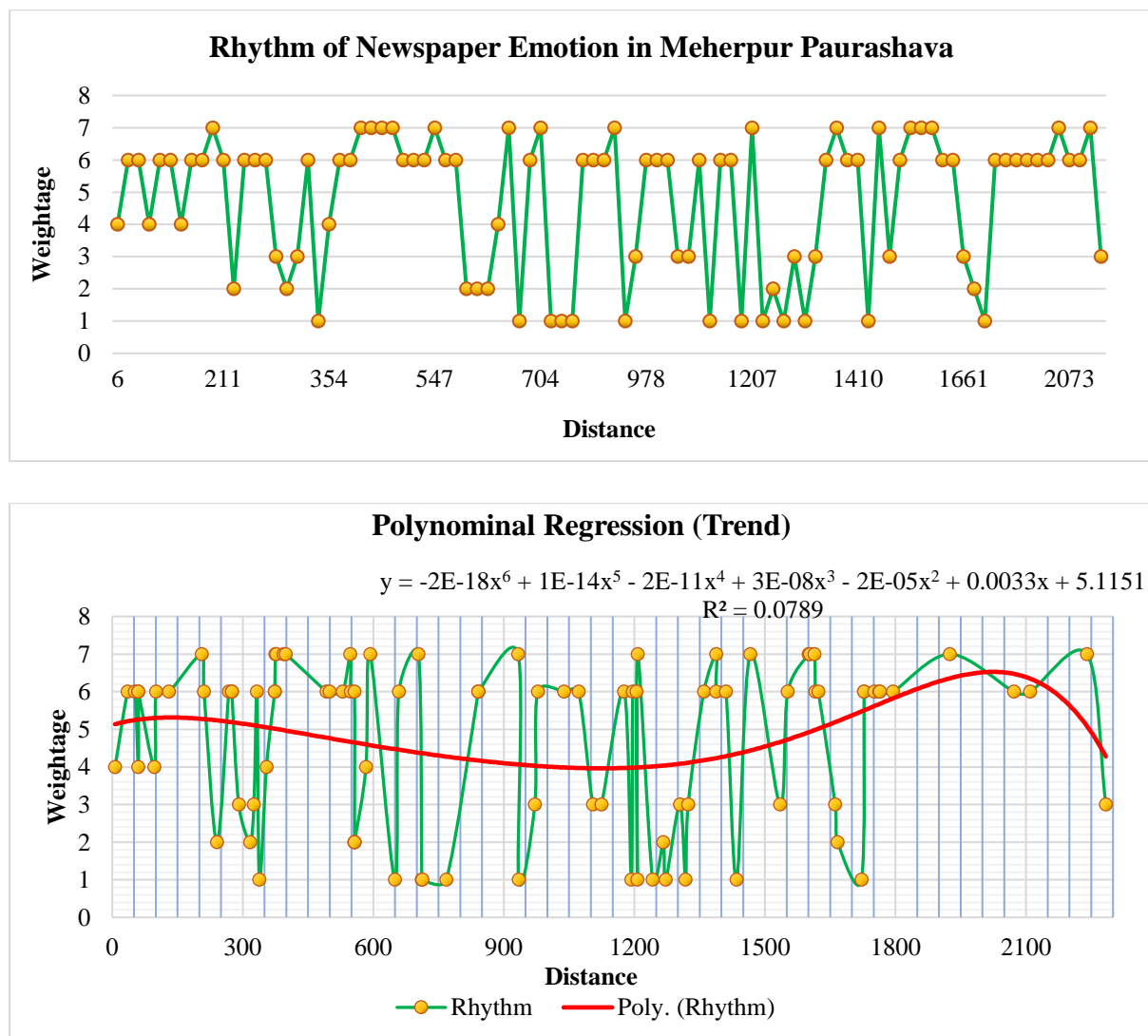


Figure 12: Rhythm of Newspaper Broad Emotion in Meherpur Paurashava

The map of the adaptive cycle has prepared from with the calculated distances from the above regression analysis and trend line following some interpolation analysis to covert it for the whole Paurashava.

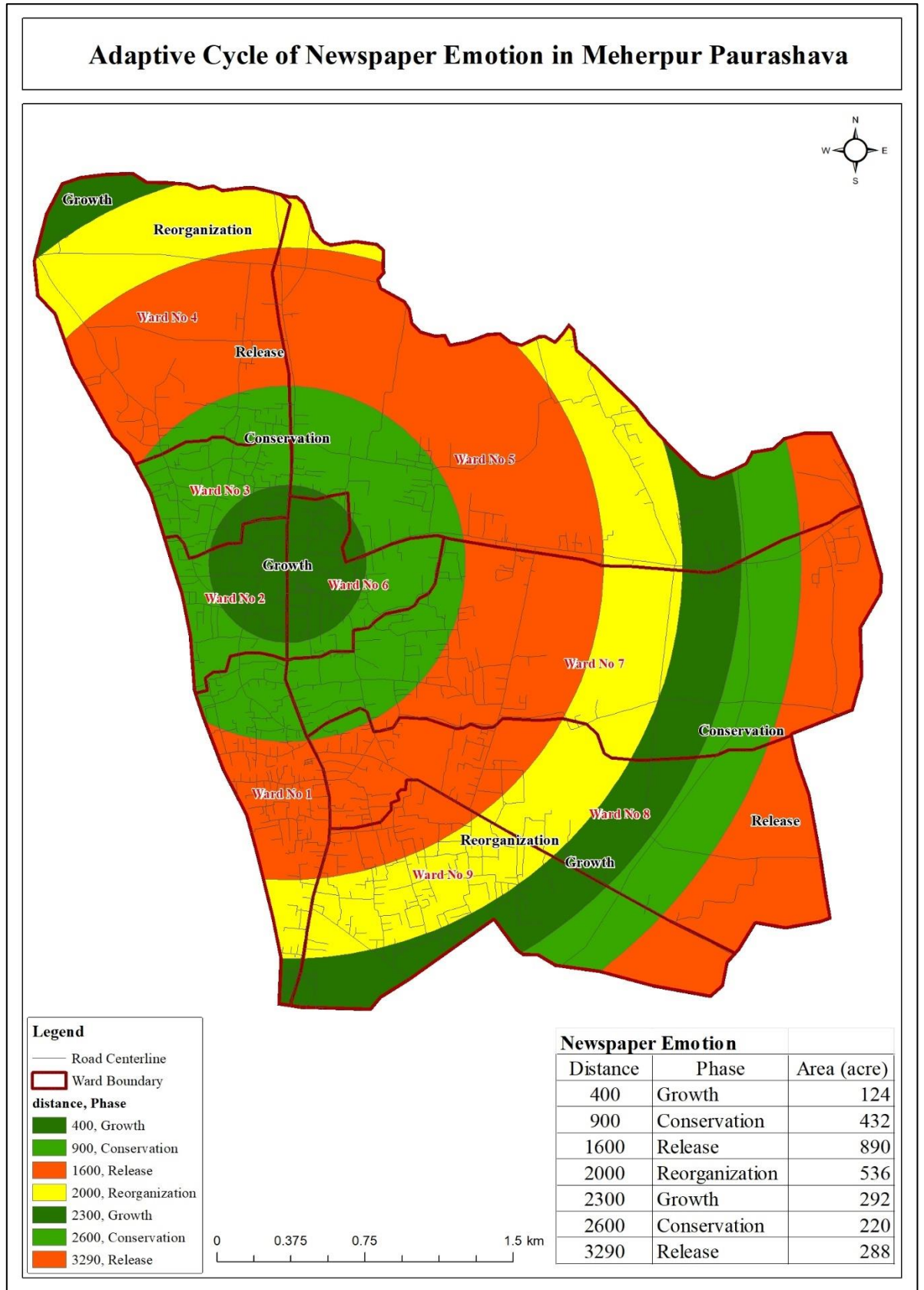


Figure 13: Adaptive Cycle of Newspaper Emotion in Meherpur Paurashava

In conclusion, the integration of emotional factors into urban planning in Meherpur Paurashava is vital for creating a resilient, inclusive, and harmonious urban environment. Planners must consider the emotional needs and responses of the community to ensure that development initiatives are not only physically sustainable but also emotionally supportive and enriching.

2.6 Expression of Emotion in Meherpur Paurashava

2.6.1 Expression of Individual Emotion

With the eye lens, the city has observed in a more planning sense-it's traffic and transportation system, drainage condition, waste management condition, residential and bazar areas etc. were observed thoroughly. There is a blend of positive and negative feelings created after perceiving

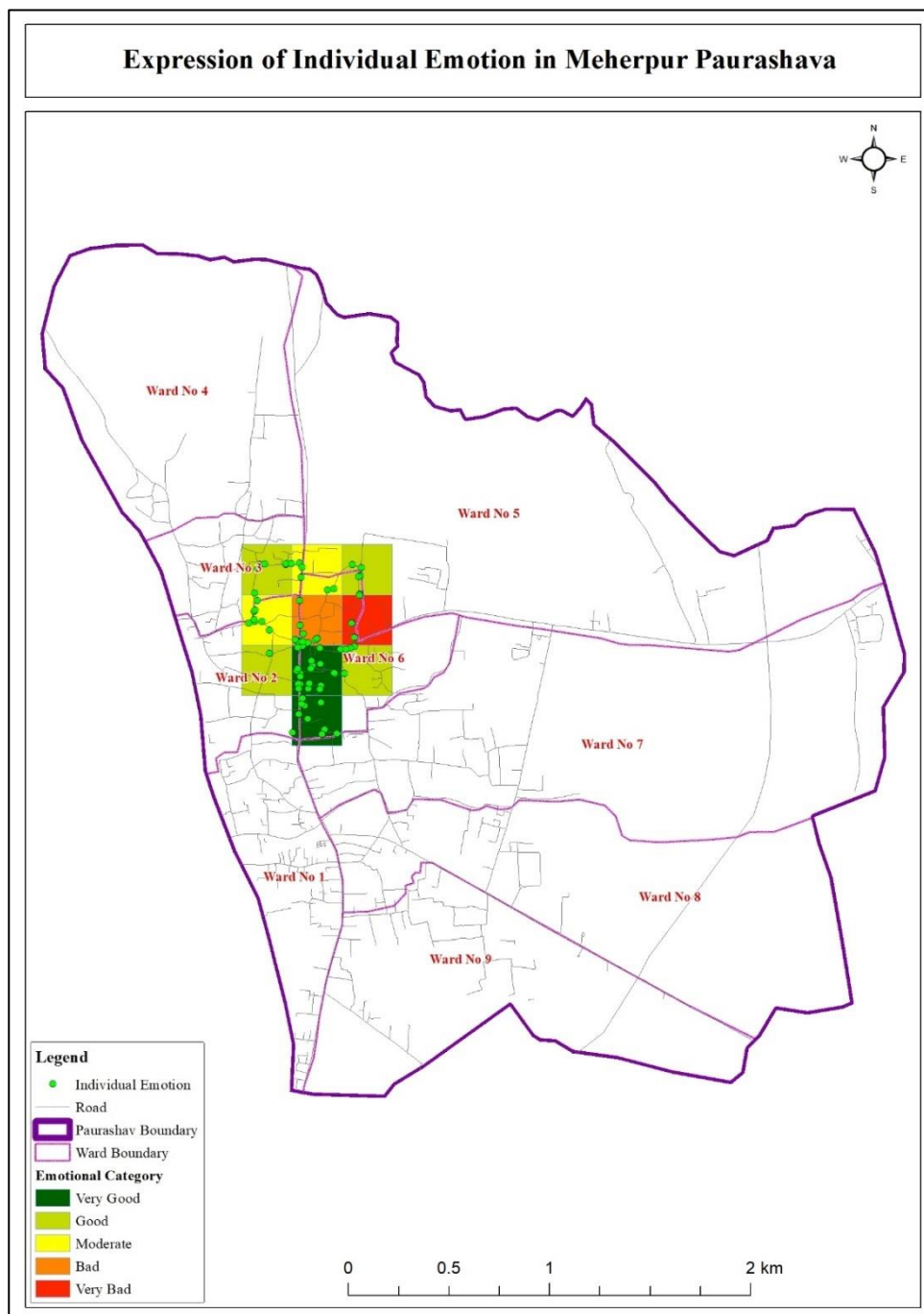


Figure 14: Expression of Individual Emotion in Meherpur Paurashava

the cities footprint, both good and bad. Outside of the busy bazaar areas, the town felt surprisingly open and not too crowded. The residential neighborhoods were calm and peaceful, giving off a really pleasant vibe. But when visiting the bazaar areas at peak hours, it's a different story—crowded and a bit overwhelming. The way motorcycles are parked haphazardly in front of shops adds to the frustration. The open trash dumps and overflowing bins also make the town feel less clean with each passing day.

2.6.2 Expression of Newspaper Emotion

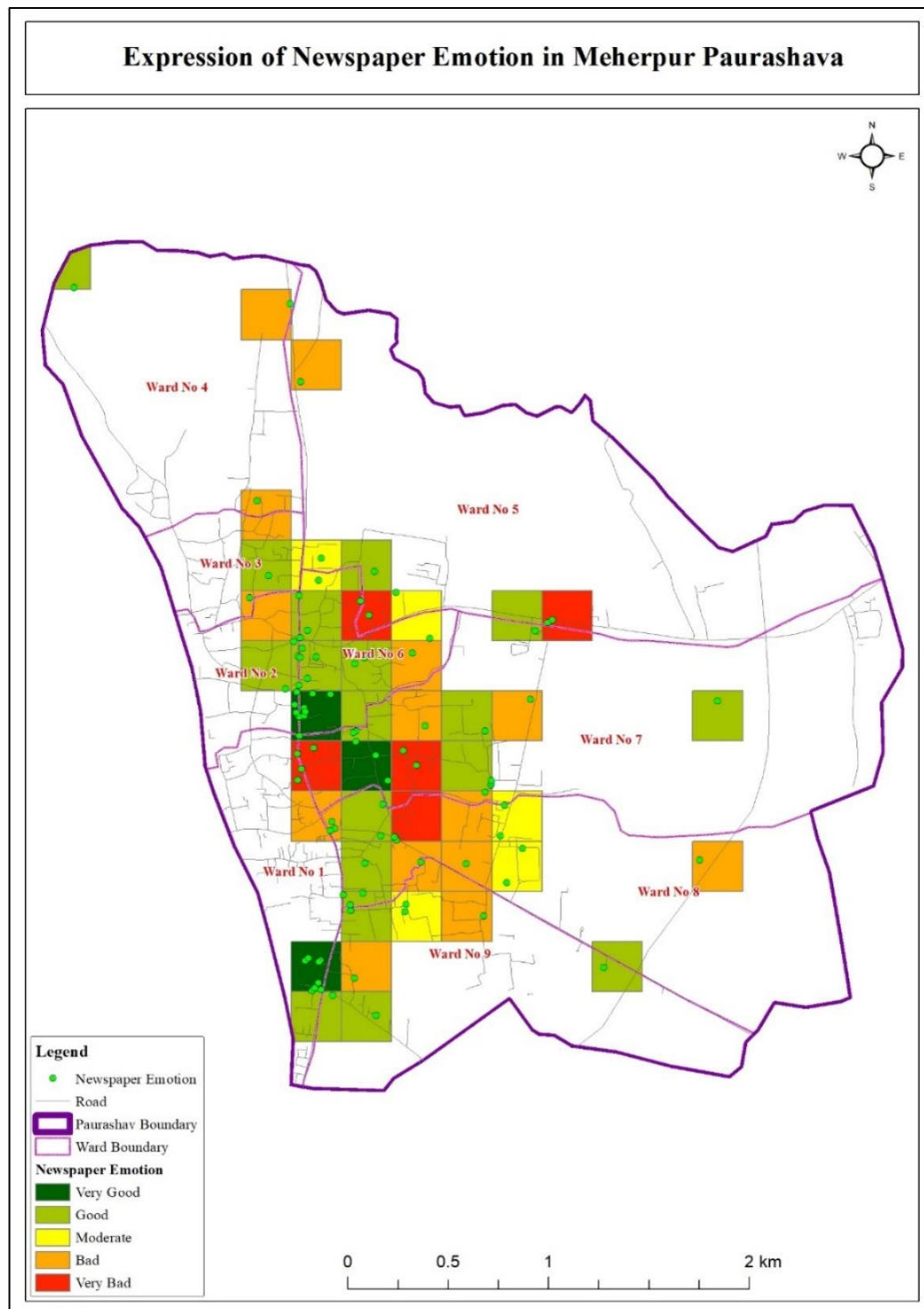


Figure 15: Expression of Newspaper Emotion in Meherpur Paurashava

The newspaper articles are maximum about agricultural productivity, environment and ecology, social services, accident incidents, drug and illegal activities etc. In Meherpur Paurashava area, more than 60% news creates good impacts. The above map shows the grid-wise distribution of emotions. The news locations are mainly in the populated areas by nature, while it is covering 42% bad impact area, 47% good impact area and remaining area is containing both good and bad impacts equally.

Chapter 03: Land Use of Meherpur Paurashava

Meherpur Paurashava, the administrative and commercial hub of Meherpur district, features a diverse land use pattern that balances residential, commercial, mixed use and other activities. The urban area is characterized by a mix of planned and unplanned settlements, with commercial zones concentrated in the town center. Agricultural land surrounds the municipality, supporting local livelihoods. Infrastructure development and urban expansion are gradually reshaping the land use dynamics.

3.1 Existing Land Use of Meherpur Paurashava

The existing land use of Meherpur Paurashava is primarily dominated by residential and mixed-use areas, with agriculture being the most extensive category. The rapid growth of urban settlements has led to an increasing demand for housing, commercial spaces, and public facilities, gradually reshaping the land use pattern. While the core of the Paurashava consists of dense residential and mixed-use zones, the outskirts remain largely agricultural, supporting both economic activities and food production. Infrastructure development, road networks, and public services are also influencing the transformation of land use. The broad classification of present land use is outlined in the table below:

Table 4: Existing Land Use of Meherpur Paurashava

Land Use	Area (Acre)
Residential	851.14
Mixed Use	542.06
Agriculture	1198.13
Commercial	5.28
Transportation	75.57
Waterbody	72.73
Government Services	36.85
Total	2781.76

Source: Areas are calculated based on Meherpur Paurashava Master Plan of LGED

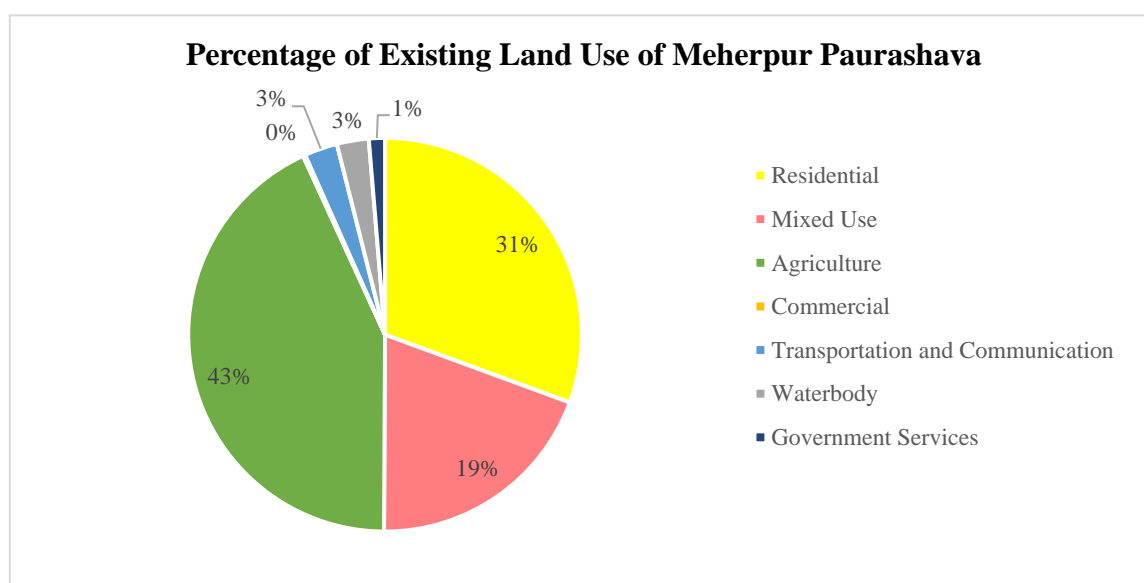
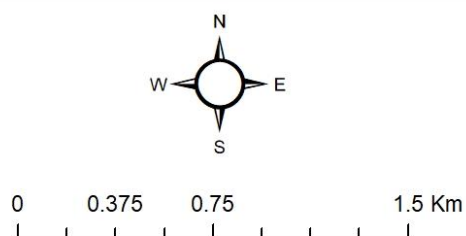
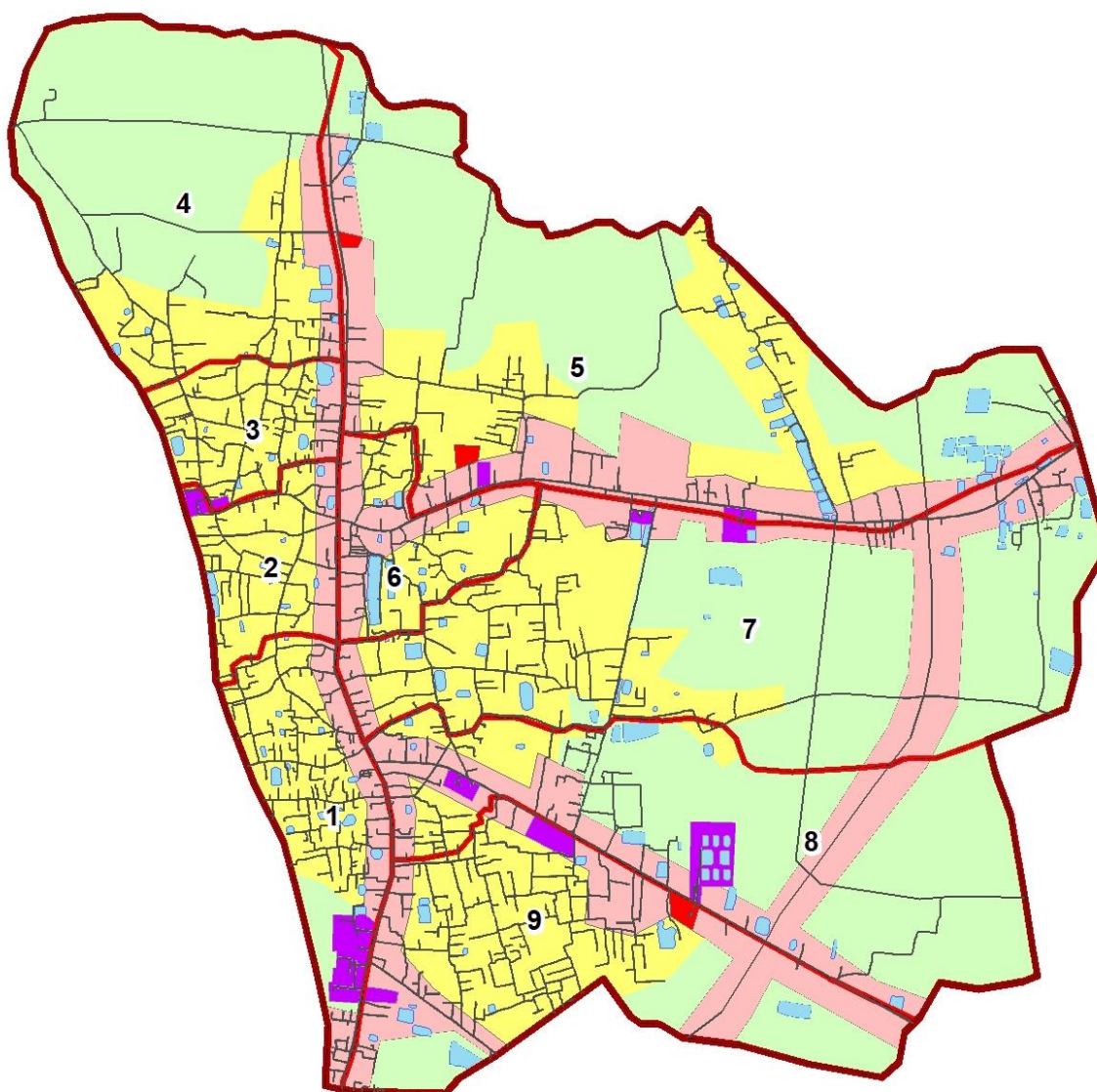


Figure 16: Percentage of Existing Land Use of Meherpur Paurashava

Existing Landuse Map of Meherpur Paurashava



Legend

Paurashav Boundary	Government Services
Ward Boundary	Mixed Use
Existing Landuse	Residential
Agriculture	Transportation
Commercial	Waterbody

Figure 17: Existing Land Use Map of Meherpur Paurashava
 Source: Areas are calculated based on Meherpur Paurashava Master Plan of LGED

3.2 Population Density of Meherpur Paurashava

The population density of Meherpur Paurashava is relatively not too high, with a concentrated settlement pattern in the central areas. The increasing urban population has led to a rise in residential and mixed-use developments, while the outskirts remain less densely populated. Urban expansion and infrastructural growth continue to influence population distribution within the Paurashava.

Table 5: Population Density of Meherpur Paurashava

Ward No	Gross Density			Net Density		
	Area	Density 2024	Density 2033	Area	Density 2024	Density 2033
1	146.52	52	71	132.77	57	78
2	87.13	54	67	87.13	54	67
3	82.87	39	38	82.87	39	38
4	371.33	22	32	112.36	71	104
5	660.05	7	10	324.98	14	20
6	99.91	39	47	99.91	39	47
7	592.05	12	15	307.58	24	28
8	416.91	10	11	176.16	25	26
9	324.99	24	31	259.88	30	39
Total	2781.76	259	321	1583.63	353	447

Source: Densities are calculated based on Population Projection of Meherpur Paurashava

3.3 Land Requirement for Meherpur Paurashava in 2033

The proposed land use plan for Meherpur Paurashava has been formulated based on projected population growth, existing land use patterns and future land use needs. Residential and commercial areas will be expanded to accommodate urban development, while essential public services and infrastructure will be improved for a better living environment. Special emphasis has been placed on preserving waterbodies to address water scarcity and drought issues during the dry season. These reserved waterbodies will play a crucial role in maintaining ecological balance and ensuring sustainable water resource management for the future as well as will help to improve the water logging problem of the wards.

Table 6: Land Requirement for Meherpur Paurashava in 2033

Ward No	Land use	Area (Acre)		Ward No	Land use	Area (Acre)	
		2024	2033			2024	2033
1	Agriculture	13.7	0.0	5	Transportation and Communication	13.7	19.5
	Government Services	10.5	10.5		Waterbody	18.8	18.8
	Mixed Use	31.4	39.8	Total		660.1	660.0
	Residential	78.9	81.1	6	Mixed Use	34.8	35.8
	Transportation and Communication	8.5	11.7		Residential	54.4	52.3
	Waterbody	3.4	3.4		Transportation and Communication	5.2	6.3
Total		146.5	146.5		Waterbody	5.5	5.5

Ward No	Land use	Area (Acre)		Ward No	Land use	Area (Acre)	
		2024	2033			2024	2033
2	Government Services	2.0	2.1	7	Agriculture	284.5	235.7
	Mixed Use	13.5	16.7		Government Services	3.5	4.1
	Residential	62.7	58.2		Mixed Use	107.3	125.2
	Transportation and Communication	5.4	6.8		Residential	170.4	198.8
	Waterbody	3.4	3.4		Transportation and Communication	11.2	13.0
Total		87.1	87.1	8	Waterbody	15.2	15.2
3	Government Services	0.9	0.9		Total	592.0	592.1
	Mixed Use	8.1	10.9		Agriculture	240.8	234.2
	Residential	65.5	62.8		Government Services	11.2	11.7
	Transportation and Communication	5.1	5.1		Mixed Use	102.1	106.2
	Waterbody	3.2	3.2		Residential	41.8	43.5
Total		82.9	82.9	9	Transportation and Communication	9.8	10.2
4	Agriculture	259.0	208.3		Waterbody	11.2	11.2
	Mixed Use	18.1	26.5		Total	416.9	416.9
	Residential	85.5	125.3		Agriculture	65.1	20.8
	Transportation and Communication	5.4	8.0		Commercial	2.5	3.2
	Waterbody	3.3	3.3		Government Services	6.0	7.8
Total		371.3	371.3	5	Mixed Use	103.5	134.5
5	Agriculture	335.1	203.8		Residential	128.1	135.5
	Commercial	2.8	4.0		Transportation and Communication	11.1	14.5
	Government Services	2.7	3.8		Waterbody	8.7	8.7
	Mixed Use	123.4	176.2		Total	325.0	325.0
	Residential	163.7	233.9				

3.4 Proposed Educational Facilities of Meherpur Paurashava

Meherpur Paurashava lags behind in educational facilities, with limited institutions and inadequate access to quality education. To address this gap, the proposed educational facilities have been planned based on the required standards for the projected population. New schools and colleges will be allocated in underserved areas to ensure a balanced distribution of educational institutions and ensure accessibility to education for all residents. Land has been designated for primary, secondary, higher secondary and college education to meet future demands. These proposals aim to bridge the existing educational shortcomings and provide necessary facilities for the growing population. The primary schools and high schools are proposed based on the projected threshold population with maintaining the standards of minimum walking distance for a child. The minimum walking distance for primary and elementary school is 500m or 0.5km and for high school is 1km. The proposals are shown in the table below:

Table 7: Proposed Primary Schools in Meherpur Paurashava

Facility	Standard	Ward No								
		1	2	3	4	5	6	7	8	9
Primary/ Kindergarten School	Elementary / Nursery/Kindergarten School	2.08 Acre	1.16 Acre	0.62 Acre	2.34 Acre	1.27 Acre	0.93 Acre	1.74 Acre	0.92 Acre	2.02 Acre
	1 Acre /5,000 population	Total: 13.08 Acre								
	1 Primary school/5,000 population, Area 2 Acre	2 nos Area: 4 acre	1 nos Area: 2 acre	1 nos Area: 2 acre	2 nos Area: 4 acre	1 nos Area: 2 acre	1 nos Area: 2 acre	2 nos Area: 4 acre	1 nos Area: 2 acre	2 nos Area: 4 acre
		Total: 13 nos, Area: 26 Acre								

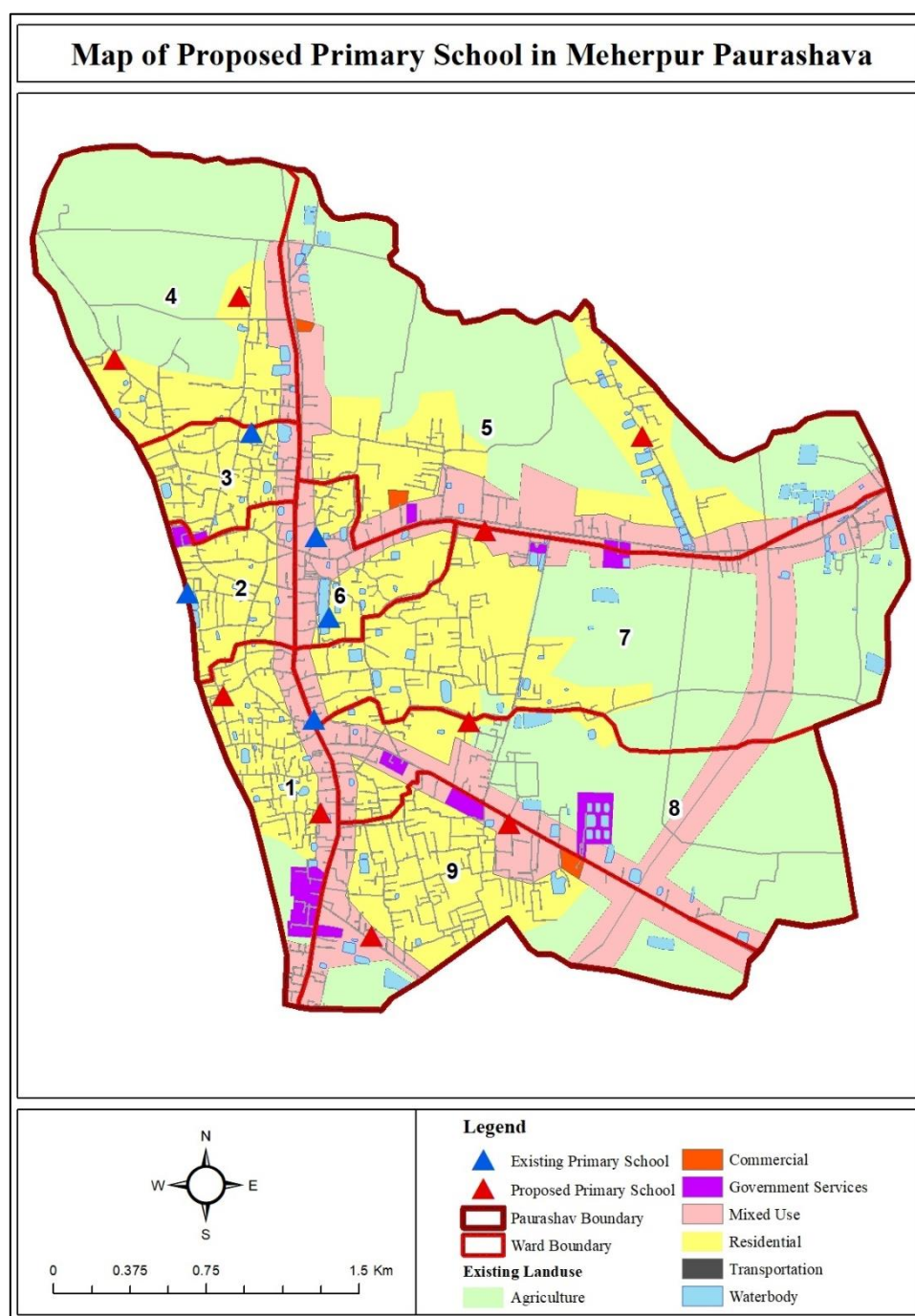


Figure 18: Map of Proposed Primary Schools in Meherpur Paurashava

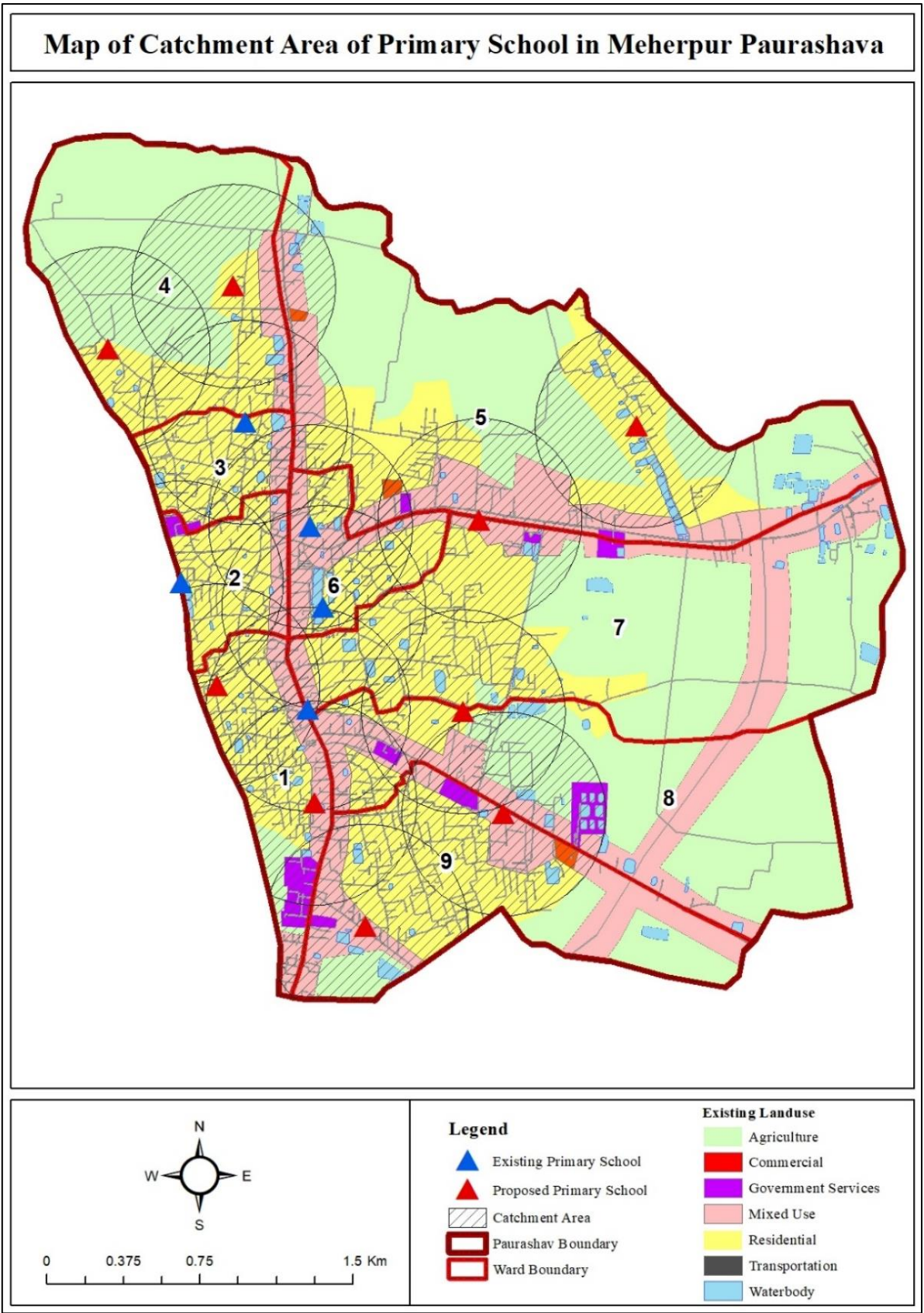


Figure 19: Map of Catchment Area of Primary Schools in Meherpur Paurashava

Table 8: Proposed High Schools in Meherpur Paurashava

Facility	Standard	Amount and Area
High School/ Intermediate College	High School/Intermediate College 1 school/10,000 population, Area 2-3 Acre	7 nos, Area: 14-21 Acre

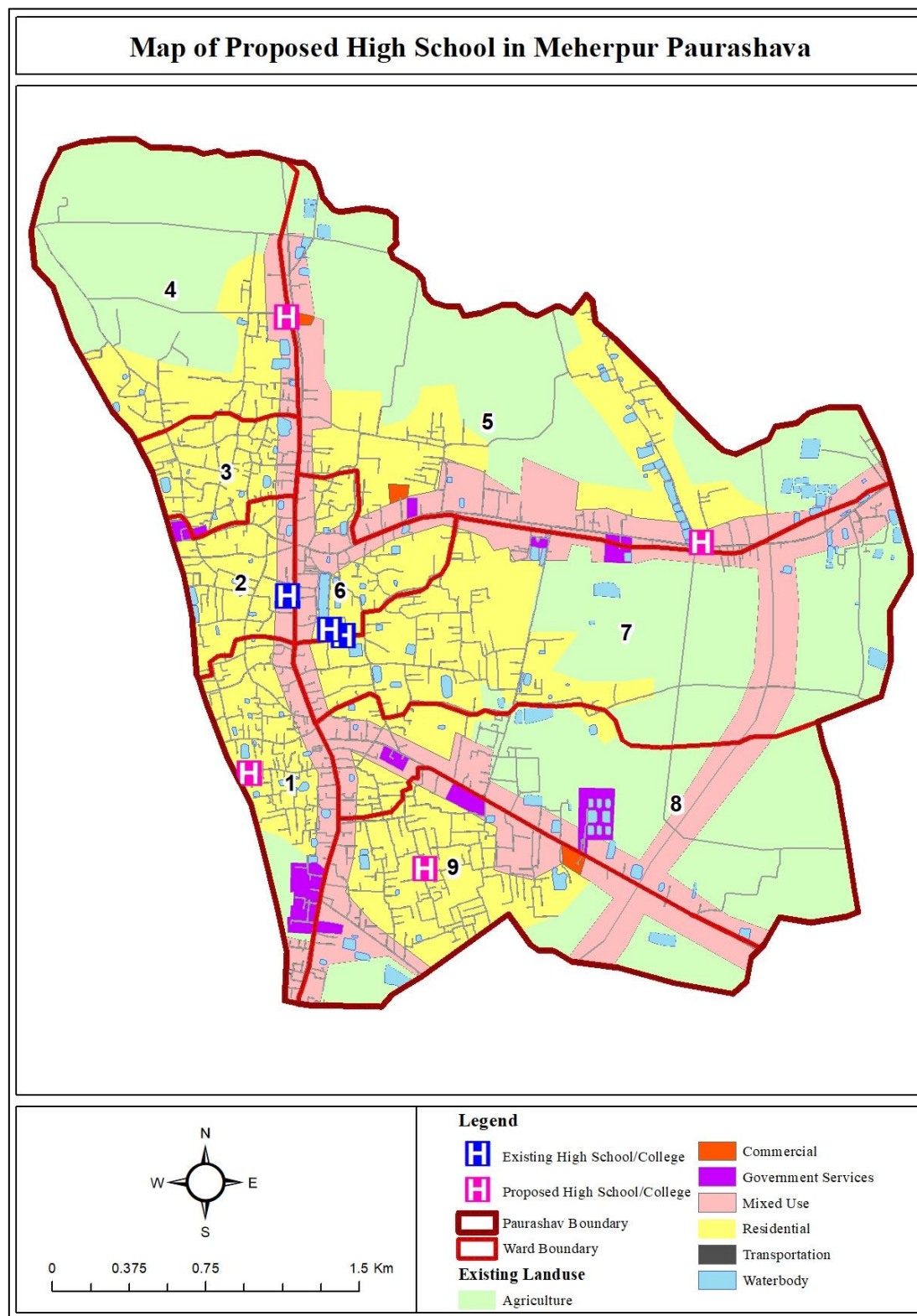


Figure 20: Map of Proposed High Schools in Meherpur Paurashava

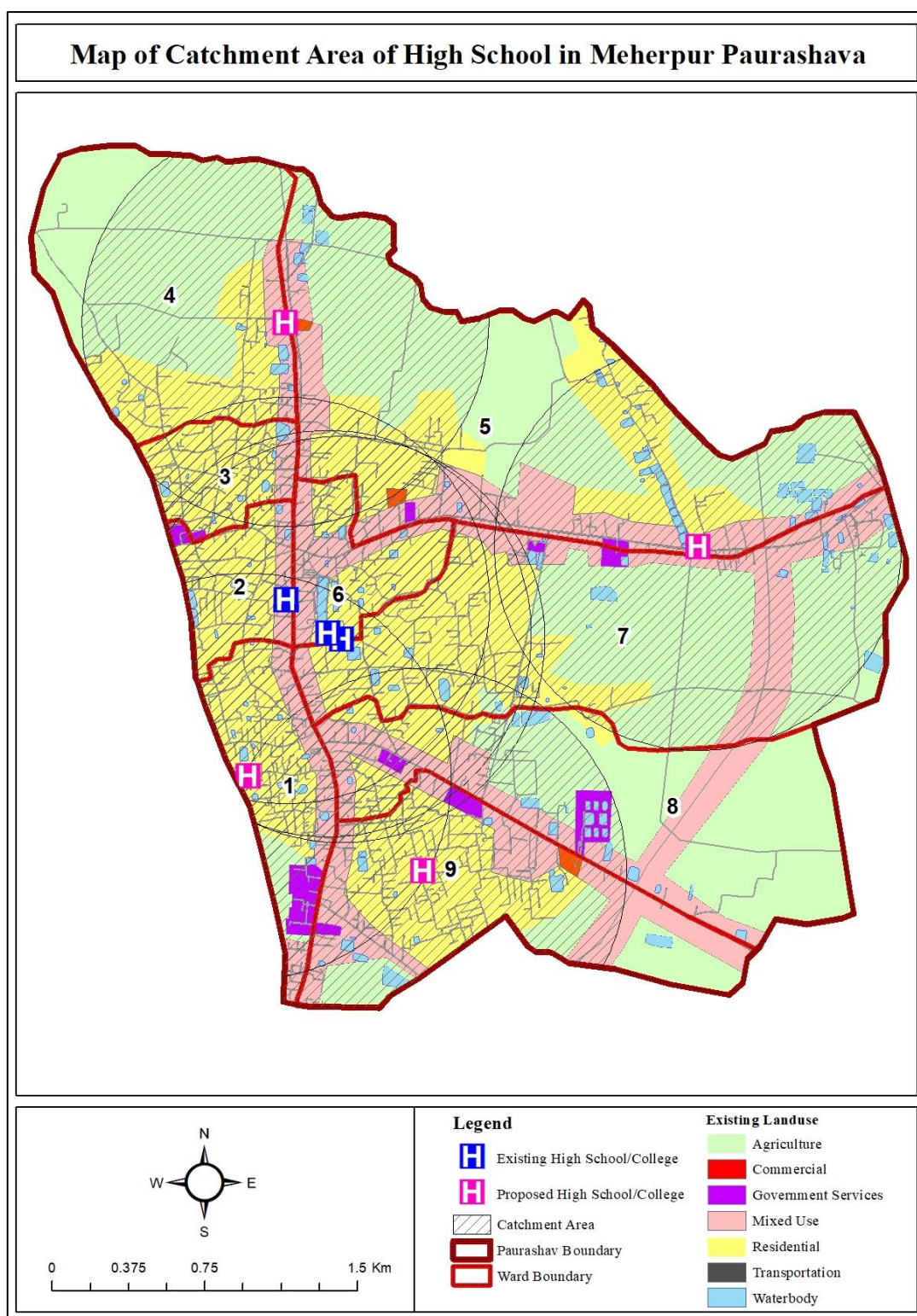


Figure 21: Map of Catchment Area of High Schools in Meherpur Paurashava

Table 9: Proposed Colleges in Meherpur Paurashava

Facility	Standard	Amount and Area
College/ University	College/University 5 acre/20,000 population	3 nos, Area: 16.41 Acre
	1 Vocational Training Center, Area 5 acre	5 Acre

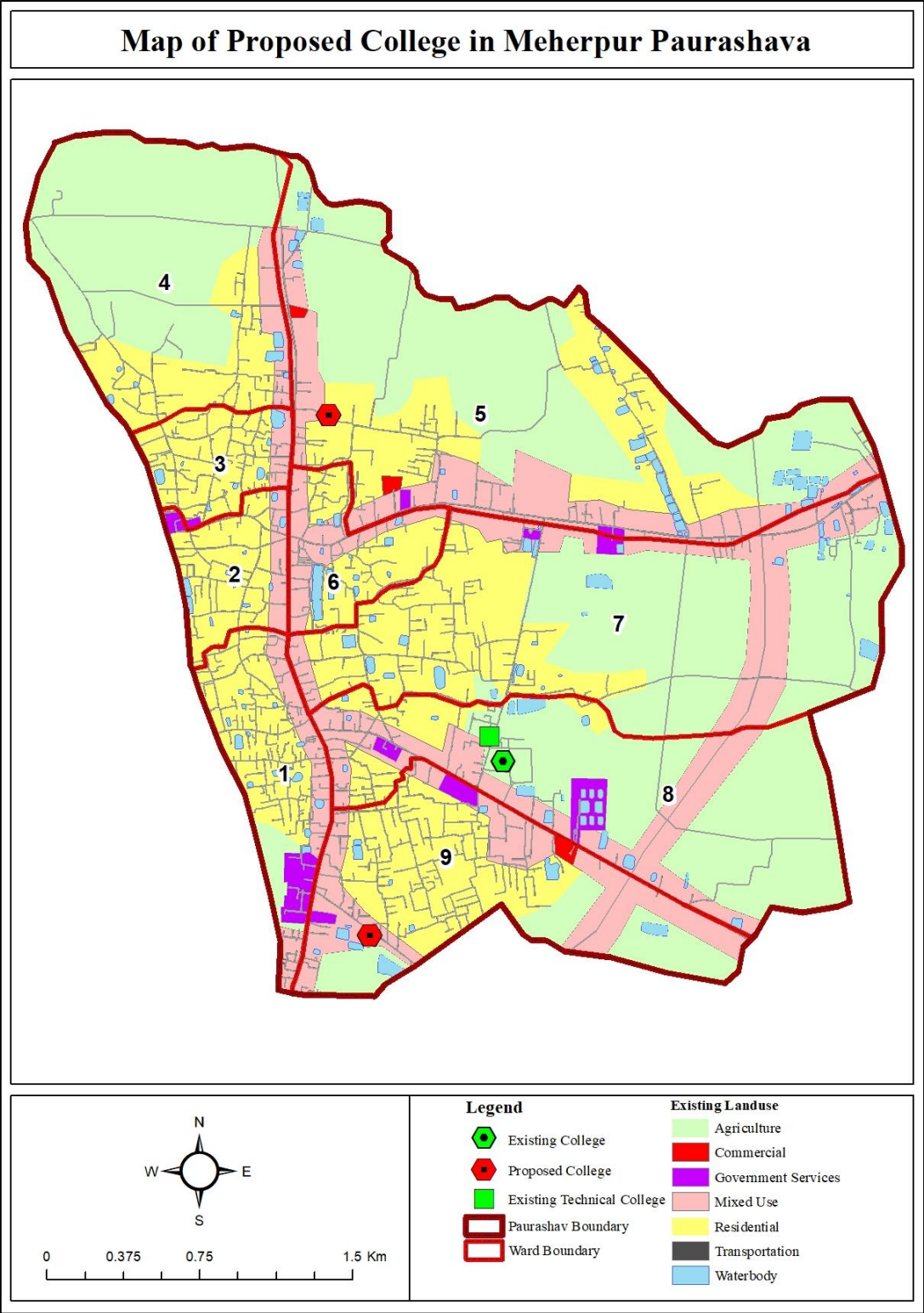


Figure 22: Map of Proposed Colleges in Meherpur Paurashava