



**Development Plan for Mirsharai Upazila, Chattogram District: Risk
Sensitive Land Use Plan (2017-2037)**

VOLUME-III: RURAL AREA PLAN

June 2020

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Gazette Notification

Preface

Urban Development Directorate (UDD) under the Ministry of Housing and Public Works, Government of the People's Republic of Bangladesh prepares Development Plan at the Upazila level. This is a great pleasure for all concerned that the **“Preparation of Development Plan for Mirsharai Upazila, Chattogram District: Risk Sensitive Land Use Plan”** project has been completed by June 2020 under the supervision of Urban Development Directorate (UDD).

This Development Plan for 20 years (2017-2037) will serve as a guideline for the future Infrastructure Development together with risk sensitive land use control, effective development, and management of Mirsharai Upazila. Development plan for the entire Upazila contains Structure Plan, Urban Area Plans and Rural Area Plan. Structure Plan zones guide development covering the whole project area for 20 years. Urban land zones in two Paurashavas and Rural Plan zones in sixteen unions for duration of 10 years indicating spatial distribution of functions.

The objective of this Development Plan is integrating the rural area with the urban area in both physical and socio-economic terms to implement rural-urban development. Therefore, the main purpose of preparing this Development Plan for Mirsharai Upazila is to ensure the rational use of scarce land resources for concentrated development at the rural and urban scale considering disaster risk.

This is the first ever Comprehensive Planning document in Bangladesh. There are Several essential tasks such as Physical Feature Survey; Socio-economic Survey; Transportation Survey; Hydro-Geological Survey; Geological Survey and baseline survey of Flora and Fauna has been conducted. Along these tasks Participatory Rural Appraisal (PRA) and a series of consultation meetings with stakeholders also been conducted. Finally, a formal public hearing has been made to register public complaints and awareness through a participatory planning approach with the Upazila and related stake-holders. During the implementation period if needed any change of the development plan may be allowed with the approval of the appropriate authority.

Urban Development Directorate (UDD) acknowledges the full support and cooperation of honorable Local Member of Parliament (Chattogram-1), The Prime Minister's Office, Ministry of Housing & Public Works, Planning Commission, Upazila Nirbahi Officer, Upazila Chairman, Mayor of Baroarhat Paurashava, Mayor of Mirsharai Paurashava, Chairman of the all Union Parishad, Stakeholders and Member of Civil Societies and the common people of locality with the deepest gratitude.

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Director

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Government of the People's Republic of Bangladesh

Executive Summary

The Rural Area Plan is prepared as a part of the requirement laid out in the Terms of Reference (ToR) of the Project, “Development Plan for Mirsharai Upazila, Chattogram District: Risk Sensitive Land Use Plan (2017-2037)”. The policies, strategies, and planning standards adopted in the Structure Plan have guided the process of preparing the Rural Area Plan for Mirsharai Upazila.

In preparing the Rural Area Plan, sixteen unions of Mirsharai Upazila have been considered. The local authority at Upazila level has no previous experience of implementing such plans which integrates both urban and rural areas. In rural level, there is no such experience of implementing physical plans. The plan prepared through this project will be their first experience of implementing the physical plans in union level of Mirsharai Upazila.

Rural Area Plan aims to guide the physical development of Mirsharai Upazila (except Baroiarhat and Mirsharai Paurashava area) including all the economic and social activities. Considering the local people demand from the PRA and based on the planning standards, about 39.48 acres of land has been proposed for educational facilities purpose, about 10.55 acres of land has been proposed for commercial activities purpose, about 10.09 acres of land has been proposed for health facilities purpose, about 22.72 acres of land has been proposed for open space and recreational facilities purpose, about 29.56 acres of land has been proposed for community facilities purpose, about 7.74 acres of land has been proposed for utility services purpose, about 8.62 acres of land has been proposed for transport facilities purpose.

It should be kept in mind that this development plan is a guideline for the development and control of growth in a systematic manner. The existing Local Government Acts for Upazila Parishad, and Union Parishad have provided authorities, responsibilities, and scope of planned development in their respective areas. The Upazila Parishad has legal responsibilities and opportunities for coordinating development within the Upazila.

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Acronyms

BBS	Bangladesh Bureau of Statistics
BEZA	Bangladesh Economic Zone Authority
BIWTA	Bangladesh Inland Water Transport Authority
BM	Bench Mark
BRTC	Bangladesh Road Transport Corporation
BSCIC	Bangladesh Small and Cottage Industries Corporation
BTCL	Bangladesh Telecommunications Company Limited
BWDB	Bangladesh Water Development Board
CBOs	Community Based Organizations
CFS	Country Freight Service
DFI	Direct Foreign Investment
DoE	Department of Environment
DoF	Department of Forest
DPHE	Department of Public Health Engineering
EPZ	Export Processing Zone
EZ	Economic Zone
FWC	Family Welfare Center
GED	General Economics Division
GDP	Gross Domestic Product
GIS	Geographic Information System
HSC	Higher Secondary Certificate
HQ	Head Quarter
ICD	Inland Container Depot
ICT	Information and Communication Technology
IMTP	Integrated Multimodal Transport Policy
LGED	Local Government and Engineering Department

MoA	Ministry of Agriculture
MoDMR	Ministry of Disaster Management and Relief
MoI	Ministry of Industry
MoHFW	Ministry of Health and Family Welfare
MoHPW	Ministry of Housing and Public Works
MoL	Ministry of Law
MoWR	Ministry of Water Resources
NGO	Non-Government Organization
NHA	National Housing Authority
O-D	Origin - Destination
PDB	Power Development Board
PPP	Public Private Partnership
PRA	Participatory Rural Appraisal
REB	Rural Electrification Board
RHD	Roads and Highways Department
SLR	Sea Level Rise
SSC	Secondary School Certificate
STS	Secondary Transfer Station
TMC	Technical Management Committee
ToR	Terms of Reference
UDD	Urban Development Directorate
UHC	Upazila Health Complex

Glossary of Terms

- Bazaar** : Bazaar is a Market Place almost synonym of hat with some advanced facilities in comparison to hat. Generally, in a hat, there may not be any permanent business/trading house, shops. However, in a bazaar, there are some permanent trading houses, shops, these shops are open every day, and buyers and sellers attend the bazaar from morning till late evening.
- Buffer** : A zone of user-specified distance around a point, line or area.
- Hat** : The term ‘hat’ is very much known to all from time immemorial throughout the country which is a temporary rural market place. In rural area, farmers and other producers used to sit with their surplus products in a suitable place having comparatively better communication system with adjacent villages to exchange these goods. This suitable place is called hat where generally on fixed days sellers and buyers get together and exchange goods and services. This gathering place is developed gradually by the local people at the beginning. The Hat is a rural trading center.
- Katcha** : Temporary in nature
- Khal/Chhara** : Any passage of inflow and outflow of water.
- Mauza** : Mauza is the smallest unit of Land Survey system with a unique number called Jurisdiction List Number (J.L. No.).
- Para** : Smallest identified area in rural area (Union level) with settlements of homogeneous group of people. For operational convenience statistical “*Para*” are delineated within Union Parishad.
- Paurashava** : Paurashava is the local name of Municipality. The incorporated area administered by the government as urban area under the Paurashava Ordinance 2008 is considered as the Paurashava.
- Pucca** : Permanent in nature
- Semi-pucca** : Semi-Permanent in nature
- Tempo** : Human Hauler
- Union** : Smallest local administrative unit of rural area which is composed of Mauzas and Villages.
- Upazila** : Sub-District administrative area.
- Village** : Smallest geographic area of rural area. A village may be same as mauza or there may be more than one village in a mauza.
- Ward** : Smallest local administrative unit of urban area. For the operational convenience, Municipalities are divided into nine or more wards. The Ward boundaries are specified by gazette notifications.
- Zila** : District administrative area

CHAPTER 01: INTRODUCTION

1.1 Introduction

Rural Area Plan is prepared as per the Terms of Reference (TOR) of the project. The policies, strategies, and planning standards adopted in the Structure Plan have guided the process of preparing the Rural Area Plan for Mirsharai Upazila.

1.2 Background of the Rural Area Plan

Rural development is the procedure of improving the quality of life and economic well-being of people living in rural areas. Rural Area Plan provides a long-term strategy for 10 years and covers for the development of rural areas within the project area.

Prime Minister of Peoples' Republic of Bangladesh gives emphasis to ensure all urban facilities for rural people to give them a better life. To implement the "Amar Gram- Amar Shohar" vision, government need to create the civic amenities of urban areas for rural people which would include access to electricity, expansion of trade and business, development of all modes of communication, planned housing and sewerage system, pure drinking water, healthcare facilities and coverage of internet and technology based communication. This chapter describes the existing land use scenario; future required land for Rural Area Plan, major problems list compiled from rural sector PRA, and proposed facilities for rural area.

1.3 Objectives of the Rural Area Plan

Rural Area Plan will be a statutory guide and control for development of the sixteen unions of Mirsharai Upazila. This plan is prepared on mauza map with sectoral development proposals. The Rural Area Plan is aimed to determine the present and future functional structure of the rural area, including land use and provide infrastructure proposals for improving and guiding development of rural area of Mirsharai Upazila. The objectives of the plan will be attained through orderly location of rural land uses and location of different services and facilities.

1.4 Coverage Area of the Rural Area Plan

The sixteen unions of Mirsharai Upazila are considered as the jurisdiction of Rural Area Plan. According to the GIS database, the Rural Area Plan of Mirsharai Upazila covers total an area of 119581.19 acres (483.93 sq.km.) of land. Map 1. 1 shows the administrative boundary of the Rural Area Plan. Table 1. 1 shows the administrative boundary, existing and projected population of the Rural Area Plan.

Map 1. 1: Administrative Boundary of Mirsharai Upazila

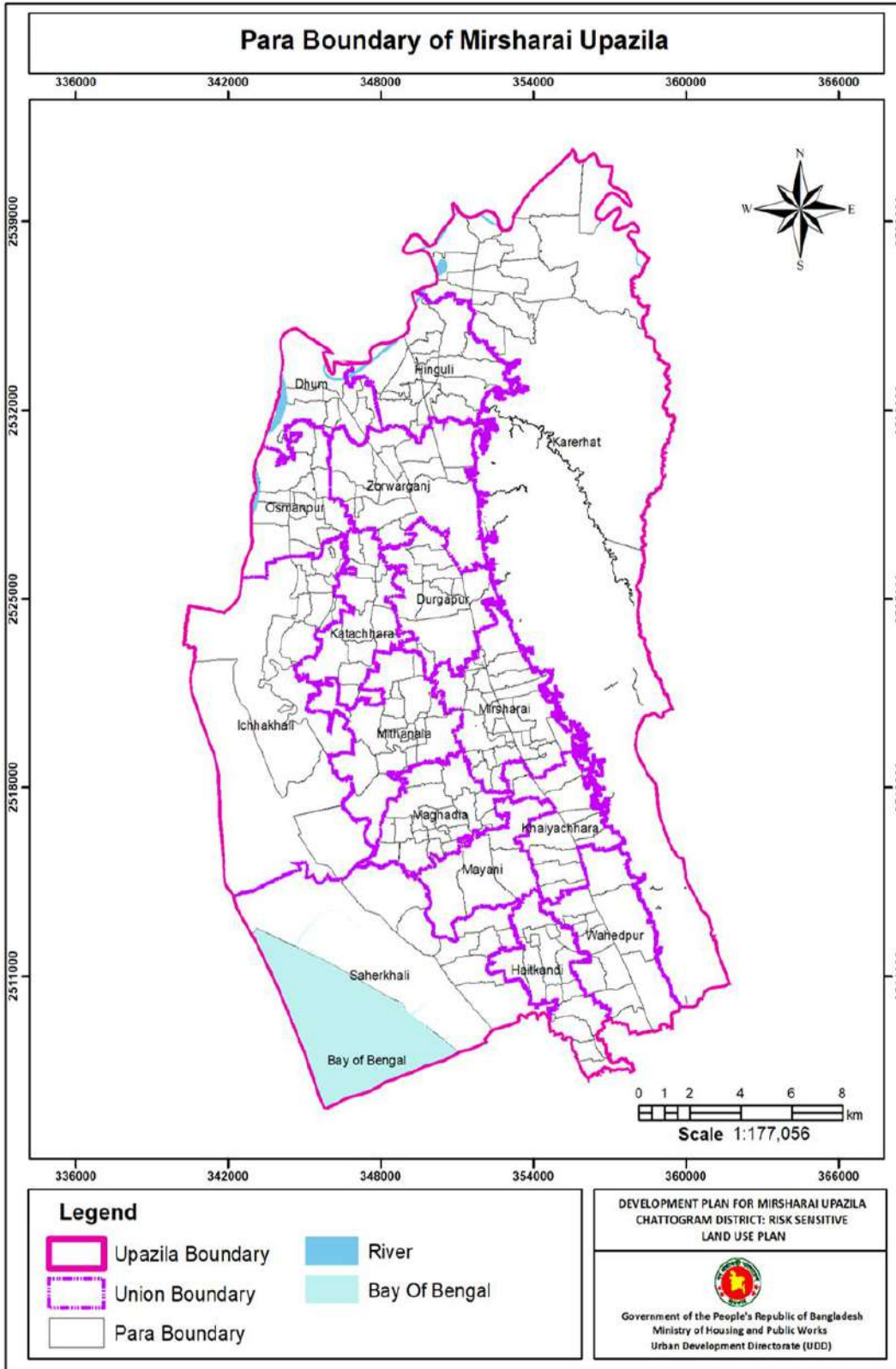


Table 1. 1: Administrative Boundary of the Rural Area of Mirsharai Upazila

Union Name	Area (Acre)	Area (sq.km.)	Existing Population (BBS, 2011)	Projected Population (2037)
Dhum Union	3006.50	12.17	16770	20471
Durgapur Union	3806.43	15.40	21128	25791
Haitkandi Union	3527.04	14.27	19051	23256
Hinguli Union	4382.29	17.73	29133	35563
Ichhakhali Union	14932.22	60.43	27980	34155
Karerhat Union	37896.94	153.36	35467	43295
Katachhara Union	3447.28	13.95	23596	28804
Khaiyachhara Union	3250.44	13.15	23423	28593
Mayani Union	3241.34	13.12	18285	22321
Mirsharai Union	3123.74	12.64	16828	20542
Mithanala Union	4915.97	19.89	23109	28209
Maghadia Union	3503.83	14.18	23406	28572
Osmanpur Union	3737.19	15.12	14645	17877
Saherkhali Union	16122.48	65.25	16912	20645
Wahedpur Union	4877.84	19.74	24981	30495
Zorwarganj Union	5805.44	23.49	36182	44168
Total Area	119576.97	483.91	370896	452756

Source: Physical Feature Survey, 2018

CHAPTER 02: RURAL AREA PLAN

2.1 Introduction

The current chapter of the report is about Rural Area Plan covering its development plan proposals. This chapter also describes the existing land use scenario; list of major problems compiled from rural PRA, functional hierarchy of different unions of rural area, future land requirement for different facilities, and proposed facilities for rural area of Mirsharai Upazila.

2.2 Land Use Categories in the Rural Area Plan

The Rural Area Plan (RAP) is prepared with a number of detailed land use categories to guide the implementation of the Rural Area Plan in a planned manner. Separate land use categories are considered for the rural area of Mirsharai Upazila. The land use categories considered for the Rural Area Plan of Mirsharai Upazila are provided in Table 2. 1.

Table 2. 1: Land Use Categories Considered for the Rural Area Plan of Mirsharai Upazila

Land Use Categories	Description of the Categories
Administrative	Administrative area covers all kinds of government and nongovernment offices in the project area.
Agricultural Area	Agricultural land (also agricultural area) denotes the land suitable for agricultural production, both crops and livestock. It includes land left temporarily fallow; land under permanent crops (e.g., fruit, plantations); areas for natural grasses and grazing of livestock.
Circulation Network	All types of roadways, walkways, railways.
Commercial Area	Commercial areas generally contain one or more of a wide variety of uses that includes business uses, offices, hotels, public houses, and limited forms of retailing. Mainly bazar, shopping agglomerations and areas suitable for commercial development have been placed under this category.
Community Facilities	This land use covers all categories of community facilities and establishments like mosque, temple, church, eidgah, graveyard, community center etc.
Education and Research	Land belonging to educational use includes all categories of educational and training institutions. Educational institute like Medical College, University etc. have been included in this zone.
Forest Area	All kinds of agglomeration of trees and existing forest area
General Industrial Area	Processing and manufacturing industries

Land Use Categories	Description of the Categories
Health Services	The health service zone includes all existing health service establishments and the areas proposed for health facilities
Mixed Use Area	Mixed Use area will allow residential structures together with commercial uses and other services and facilities
Open Space and Recreation	Open space covers the parks, play fields and the existing open space areas like, forest, park, etc.
Residential Area	Different categories of housing areas have been proposed in the development plan under the categories of residential use. These categories have been made for promotion of housing through private and public initiatives. The residential category includes all areas of future residential development, public housing, hotels and lodging and also the existing housing areas.
Restricted Area	Government-controlled areas including Cantonment, Jail, offices of the Law Enforcing Agencies
Transportation and Communication	Transport facilities like, bus and truck terminals have been included in this zone
Utility Services	Public utilities for various services like, fire service, post office, solid waste transfer station, solid waste disposal center, electric substation, filling station, etc. fall under this category
Water bodies	Khal, irrigation canal and river are treated as water bodies.
Miscellaneous	Miscellaneous

2.3 Types and Patterns of Existing Land Use in Rural Area

Existing land use data of the rural area of Mirsharai Upazila has been collected from the field through detailed physical feature survey. The existing land use of the rural area was classified into 17 categories with the provision of further division and sub-division to elaborate each category of use as per requirement of the planning process. The existing land use category of rural area in Mirsharai Upazila is presented in Table 2. 2.

Table 2. 2: Existing Land Use of Rural Area of Mirsharai Upazila

Serial No.	Land Use Category	Area (Acre)	Percentage (%)
1	Administrative	17.46	0.01
2	Agricultural	46146.01	37.49
3	Commercial	325.26	0.26
4	Community Services	125.25	0.10

Serial No.	Land Use Category	Area (Acre)	Percentage (%)
5	Economic Zone	8864.77	7.20
6	Education & Research	137.47	0.11
7	Forest	31856.75	25.88
8	Health Facility	14.03	0.01
9	Industrial	229.88	0.19
10	Miscellaneous	10.45	0.01
11	Mixed Use	14.40	0.01
12	Recreation	7.16	0.01
13	Residential	17444.12	14.17
14	Circular Network	1283.82	1.04
15	Service Activity	323.38	0.26
16	Vacant	248.92	0.20
17	Waterbody	16042.98	13.03
Total		119576.97	100.00

Source: Physical Feature Survey, 2018

Land use of rural area of Mirsharai Upazila is dominated by the agricultural activities. From the Land Use analysis, it is clearly evident that out of the total area an amount of 44966.30 acres (37.26%) of land in the rural area is under agricultural use which includes agricultural land, cattle shed, poultry farm, dairy farm, etc. Agricultural category ranks highest in terms of land use area of the rural area of Mirsharai Upazila. Forest area ranks second in terms of area and occupy 31856.75 acres (26.40%) of land. Rural settlement category ranks third highest in terms of area and occupies an amount of 16648.61 acres (13.80%) of land. Fourth highest land use type is waterbody and under this use 15836.96 acres of land which is 13.12% of the total rural area of Mirsharai Upazila. Map 2. 1 illustration the existing land use distribution of rural area in Mirsharai Upazila.

2.4 Functional Hierarchy of Mirsharai Upazila

In this section, an attempt has been made to identify the hierarchical orders of rural services union wise and find out the functional gaps. The existing pattern of rural services in Mirsharai is the result of economic and political exigencies. In this study, for identifying the functional hierarchy of union wise, several services forming into three orders have been taken consideration (vide Table 2. 3).

Table 2. 3: List of the Rural Services Order wise in Mirsharai Upazila

Order	Rural Services
1 st Order	Primary School, Tea Stall, Grocery Store, Private Doctor's Chamber, Saloon, Carpenter Shop, Tailor Shop, Katcha Road, Mobile Recharge Store
2 nd Order	Association Office, Blacksmith Shop, Cobbler's Shop, Cycle/Rickshaw Repair Store, Drugstore, Dispensary, Dish's Office, Fertilizer Store, Furniture Shop, Hardware Store, Madrasah, Mobile Shop, Post Office, Pucca Road, Retail Clothing Store, Rice Mill, Secondary School, Stationary Store, Weekly Bazar, Welding Store
3 rd Order	Animal Husbandry Center, College, Family Planning Center, Girls Secondary School, Seed Marketing Center, Telephone Exchange Office, Tafsil Bank

Source: Physical Feature Survey, 2018

After identification of order wise rural services, the questionnaire was prepared and detail data of functional rural services has been collected from field survey. The significance of each rural service differs because its status is determined by the level of services. Beside all the services are not equally distributed throughout the union. The value of each service is determined in terms of the level of services. On the basis of weighted value of each rural service, the score value of each union has been calculated order wise and grouped into five categories of hierarchy based on the total score values scored by them (vide Table 2. 4).

Map 2. 1: Existing Land Use Scenario of Rural Area in Mirsharai Upazila

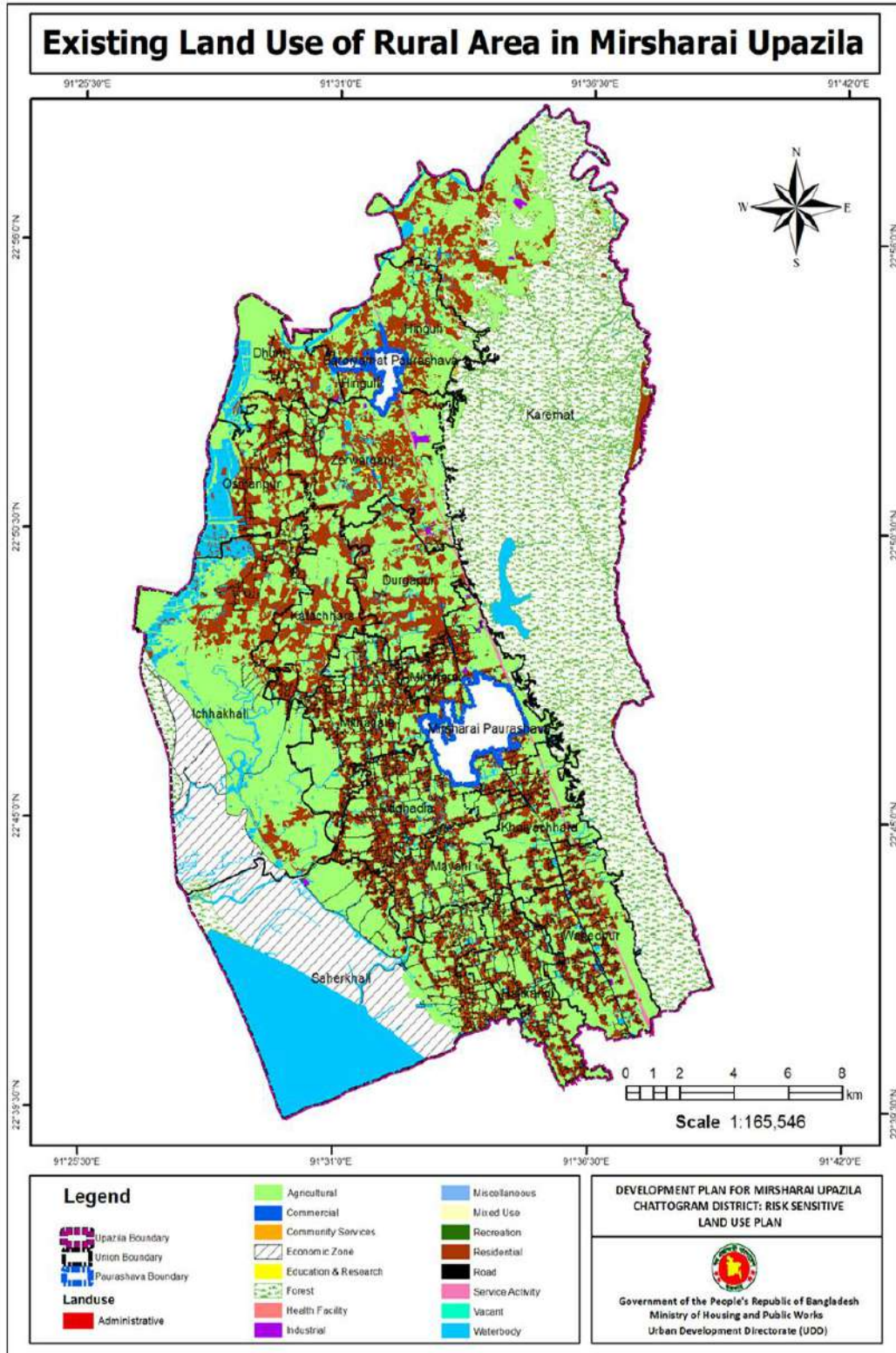


Table 2. 4: Union Wise Functional Hierarchy of Services in Mirsharai Upazila

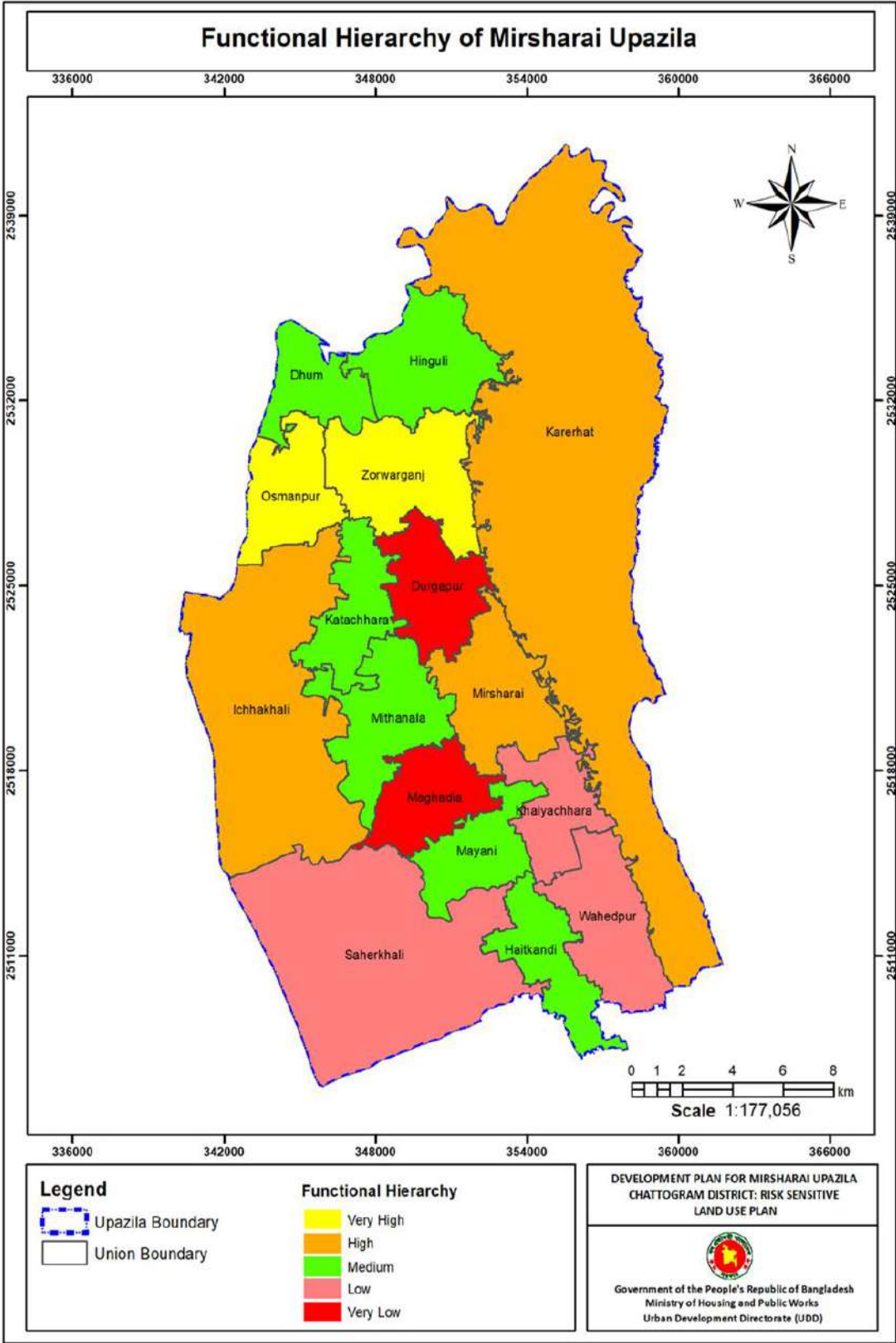
Union Name	Services				Functional Hierarchy
	1 st Order	2 nd Order	3 rd Order	Total	
Dhum Union	300	256	12	568	Medium
Durgapur Union	165	120	0	285	Very Low
Haitkandi Union	258	188	9	455	Medium
Hinguli Union	205	334	18	557	Medium
Ichhakhali Union	370	328	6	704	High
Karerhat Union	335	324	12	671	High
Katachhara Union	317	224	21	562	Medium
Khaiyachhara Union	256	164	12	432	Low
Mayani Union	312	230	27	569	Medium
Mirsharai Union	242	366	24	632	High
Mithanala Union	211	310	18	539	Medium
Maghadia Union	166	108	0	274	Very Low
Osmanpur Union	1102	1840	9	2951	Very High
Saherkhali Union	224	190	6	420	Low
Wahedpur Union	278	152	6	436	Low
Zorwarganj Union	430	352	45	827	Very High

Source: Field Survey, 2018

The spatial distribution of rural services in Mirsharai Upazila is quite uneven. Table 2. 4 shows that Osmanpur Union scored maximum value 2951 (Very High) followed by Ichhakhali Union scored 704 (High), Mayani Union scored 569 (Medium), Wahedpur Union scored 436 (Low) and Maghadia Union scored 274 (Very Low).

It is clear from above discussion that some unions are poor or moderately served in respect of some functions, and it also indicates where and which functions are required. On the basis of functional hierarchy, Maghadia and Durgapur Union are very low category than other union. These unions served less rural services and need services that are more rural. Union wise functional hierarchy of Mirsharai Upazila is presented in Map 2. 2.

Map 2. 2: Union Wise Functional Hierarchy of Mirsharai Upazila



2.5 Critical Problems Identified from PRA

Extensive union wise interaction was conducted at the union level with public representatives and general people who expressed their perception on the problems of rural areas of Mirsharai Upazila. There were open discussions about local problems, potentials, and expectations of the people. Open discussion revealed the union wise problems and issues of Mirsharai Upazila. Table 2. 5 shows the extracts of problems of rural area compiled from PRA.

Table 2. 5: List of Major Union Wise Problems of Mirsharai Upazila Compiled from PRA

Serial No.	Problems	Union Name
01	Narrow road, poor condition and missing link of road	All union
02	Water logging	All union
03	Drainage problem and Khal re-excavation	All union
04	Community clinic	All Union
05	Scarcity of pure drinking water	Dhum, Haitkandi, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai, Mithanala, Osmanpur, Saherkhali, Wahedpur, Zorwarganj (13 Unions)
06	Sanitation problem	Dhum, Haitkandi, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai (8 Unions)
07	Waste management problem	Dhum, Haitkandi, Hinguli, Karerhat, Katachhara, Mirsharai, Saherkhali, Wahedpur, Zorwarganj (9 Unions)
08	Public toilet	Dhum, Hinguli, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai, Saherkhali (9 Unions)
09	CNG stand	Haitkandi, Ichhakhali, Osmanpur, Katachhara, Zorwarganj, Mirsharai, Mithanala, Saherkhali, Dhum, Karerhat (12 Unions)
10	Bus stand	Ichhakhali, Karerhat (2 Unions)
11	Playground and park	Dhum, Durgapur, Haitkandi, Hinguli, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai, Mithanala, Osmanpur, Saherkhali, Wahedpur (14 Unions)
12	Graveyard/Cremation ground	Dhum, Haitkandi, Hinguli, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai, Mithanala, Osmanpur, Wahedpur, Zorwarganj (13 Unions)
13	Eidgah	Dhum, Haitkandi, Hinguli, Ichhakhali, Karerhat, Katachhara, Maghadia, Mayani, Mirsharai, Mithanala, Osmanpur, Wahedpur, Zorwarganj (13 Unions)

Serial No.	Problems	Union Name
14	Union Parishad office	Hinguli, Khaiyachhara, Zorwarganj (3 Unions)
15	Fixed place of kitchen market/super market	Dhum, Durgapur, Ichhakhali, Karerhat, Maghadia, Mirsharai, Mithanala (7 Unions)
16	Cattle market	Hinguli, Mithanala (2 Union)
17	Slaughter house	Hinguli, Ichhakhali, Katachhara, Mirsharai, Mithanala (5 Unions)
18	Cold storage	Katachhara, Saherkhali (2 Unions)
19	Community center	Haitkandi, Ichhakhali, Katachhara, Maghadia, Mirsharai (5 Unions)
20	Cyclone shelter	Haitkandi, Hinguli, Katachhara, Maghadia, Mayani, Osmanpur, Saherkhali (7 Unions)
21	Cluster village	Dhum, Durgapur, Hinguli, Ichhakhali, Karerhat, Katachhara, Mayani, Mirsharai, Saherkhali, Wahedpur, Zorwarganj (11 Unions)
22	Primary school	Durgapur, Karerhat, Haitkandi, Hinguli, Khaiyachhara, Mayani, Mirsharai, Mithanala, Osmanpur, Wahedpur, Saherkhali, Zorwarganj (12 Unions)
23	Secondary school	Haitkandi, Karerhat, Hinguli, Ichhakhali, Katachhara, Maghadia, Mayani, Mithanala, Osmanpur, Saherkhali, Wahedpur, Zorwarganj (12 Unions)
24	College	Haitkandi, Karerhat, Ichhakhali, Katachhara, Mithanala, Saherkhali, Zorwarganj (7 Unions)
25	Vocational Training Center	Haitkandi, Karerhat, Ichhakhali, Katachhara, Maghadia, Mithanala, Osmanpur, Saherkhali, Zorwarganj (9 Unions)
26	Unplanned housing	Durgapur, Haitkandi, Hinguli, Ichhakhali, Katachhara, Maghadia, Mayani, Mirsharai, Mithanala, Wahedpur, Osmanpur, Saherkhali (12 Unions)
27	Handicraft and cottage industry	Haitkandi, Karerhat, Saherkhali, Zorwarganj (4 Unions)

Source: PRA, 2019

2.6 Standards of Land Use Planning and Infrastructure

Planning Standard is a guiding principal that guide the planners and decision makers in providing or allocating required amount of space for different purpose. Present Development Plan intends to provide development guidelines and future land use directions for a period of the whole plan period. The main objective of this plan is not to allocate spaces for all kinds of services for all the areas. Most importantly, the planning team has only proposed those services that have immediate need, possess importance in terms of regional and local context.

As there is no nationally acceptable planning standard, there is always scope for controversy and disagreement. However, the proposed standard should be treated rather flexibly. In doing so, the proposed standard can be used. These standards are adopted from a research conducted by UDD that reviewed the space standards of many planning projects of Bangladesh. Planning standards of the land use planning and infrastructure are shown in Table 2. 6.

Table 2. 6: Recommended Planning Standards of Land Use and Infrastructure

Land Use Components	Recommended Standard Provision	Remarks
Residential		
General Residential	1 acre/100-150 pop.	
Real Estate- Public/ Private	1 acre/200 pop.	
Government Services		
Union Parishad Office	3-5 acres/Union Parishad	
Police station/Police box	3-5 acres/Paurashava	
Post office	0.50 acre/20,000 pop.	
Fire service	1 acre/20,000 pop.	
Telephone exchange	0.25 acre/20,000 pop.	
Commercial		
Wholesale market	3-5 acres/Paurashava	
Retail sale market	0.5 acre/10,000 pop.	
Neighborhood market	1 acre/Neighborhood market	
Cattle Market/Hat	1-1.5 acre/Paurashava	
Industrial		
General/Agro/Cottage Industry	2-5 acre/10,000 pop.	
Educational and Research		
Nursery	0.40 acres/Nursery; 1 Nursery/5000 pop.	
Primary school	1 acre/primary school; 1 primary school/2000 pop.	
Secondary school	2 acres/Secondary School; 1 secondary school/8000 pop.	
College	4 acres/1 college, 1 college/20,000 pop.	
Vocational training center	5-10 acres/Upazila	1 per Upazila
Others	3 acres/20,000 pop.	
Health Facilities		
Upazila health complex	10-20 acres/Upazila HQ	1 per Upazila
General Hospital	5 acres/50 bed hospital/Paurashava	
Specialized Hospital	1 acre/Paurashava	

Land Use Components	Recommended Standard Provision	Remarks
Community/Maternity clinic	0.60 acre/5000 pop., within 2 km. distance of residents.	
Open Space and Recreation Facilities		
Stadium/Sports complex	5-10 acres/Upazila	1 per Upazila
Central Park	5-10 acres/Upazila	1 per Upazila
Community/Neighborhood Park	1 acre/10,000 pop.	
Playground	3 acres/20,000 pop.	
Cinema hall	1 acre/20,000 pop.	
Community and Social Services		
Eidgah	0.5 acre/20,000 pop.	
Graveyard/Cremation Ground	1 acre/20,000 pop.	
Religious (mosque/temple/ church)	0.5 acre/20,000 pop.	
Community center	0.50 acre/20,000 pop.	
Club/Gymnasium	0.10 acre	Optional
Utility Facilities		
Water Supply Treatment Plant	1 acre/20,000 pop.	
Solid Waste Disposal Site	4-10 acres/Upazila	
Sewerage Treatment Plant	As per local requirement	
Waste Transfer Station	0.25 acre/station	
Electric Sub-station	0.50 acre/20,000 pop.	
Transportation Facilities		
Bus terminal	1 acre/Paurashava	1 per Upazila
Bus Stand	0.50 acre/Paurashava	
Truck Terminal	1 acre/Paurashava	1 per Upazila
Launch Ghat	1 acre/Paurashava	
Railway Station	4 acres/station	
CNG/Tempo Stand	0.25 acres/stand	

2.7 Rural Area Development Proposals

Development proposals for the rural area of Mirsharai Upazila have been proposed based on the projected population of 2037. After analyzing the local people demands from PRA, others facilities for the rural area of Mirsharai Upazila have been proposed.

2.7.1 Proposals for Education and Research

Educational and Research zone refers to mainly education and research and other social service facilities. Considering the local people demand from the PRA and based on the planning standards, numbers of 26

educational facilities have been proposed for the rural area of Mirsharai Upazila. Among these proposals, there are 3 nurseries, 10 primary schools, 2 primary cum high schools, 7 high schools, and 4 colleges. Detail lists of proposed educational facilities (including mauza wise plot schedule) for the rural area of Mirsharai Upazila is presented in Table 2. 7. Map 2. 3 illustrate the proposed location of education and research facilities for rural area in Mirsharai Upazila.

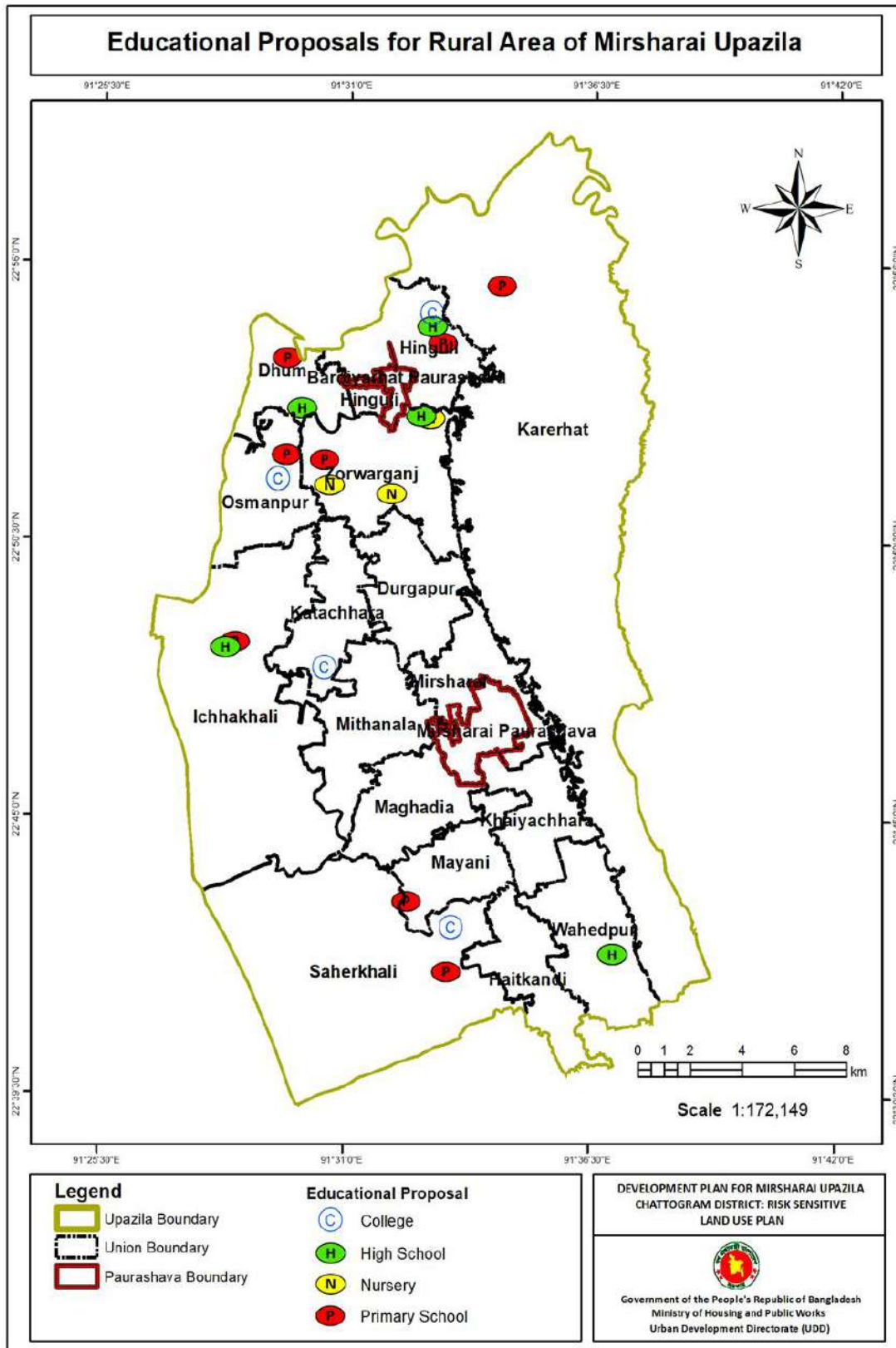
Table 2. 7: List of Proposals for Education and Research

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Nursery	Zorwarganj Union	Khilmurari_012_000	153, 171	0.45
		Sonapahar_013_004	5824, 5823, 5822, 5825, 5828, 5844	0.40
		Bhagabatipur_026_000	197, 198, 195, 194, 207, 184, 183, 185	0.40
Primary School	Dhum Union	Mobarakghona_034_001	295, 770, 771, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 802, 1166, 1167, 1169	1.07
	Karerhat Union	Geramara_008_003	2901, 3134, 3117, 3116, 3114, 3115, 3003, 3113, 3111, 3112	1.43
	Khaiyachhara Union	Duaru_077_000	2229, 2233, 2234, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2288, 2289, 2290, 2291, 2292, 99999	1.45
	Maghadia Union	Madhya Maghadia_071_004	8377, 8494, 8500, 8501, 8504	1.08
	Mayani Union	Paschim Mayani_079_004	8455, 8458, 8459, 8461, 8529, 8531, 8532, 8533, 8534, 8535, 8536, 8539, 8540, 8541	0.72
	Mirsharai Union	Purba Mithanala_051_002	2344, 2346, 2378, 2345	1.64
Primary School cum Cyclone Shelter	Hinguli Union	Purba Hinguli_011_002	3162, 3163, 3164	1.16
		Purba Hinguli_011_003	4035, 4036, 4037, 4038, 4039	
Primary and High School	Osmanpur Union	Morgang_032_002	2193, 2207, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2227, 2228, 2237, 2238, 2239, 2240, 2241, 2264, 2267	1.32
	Durgapur Union	Hariharpur_048_000	337, 338, 339, 347, 351, 352, 353, 354, 355, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386	2.10
	Ichhakhali Union	Paschim Ichhakhali_066_002	2449, 2450, 2451, 2458, 2459, 2460, 2461, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2494, 2495, 2496, 2555, 2462	2.70

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)	
High School	Dhum Union	Dhum_023_003	6725, 6727, 6738, 6739, 6740, 6741, 6731, 6732, 6607, 6729, 6730, 6733, 6734, 6735, 6736, 6737, 6742, 6743	1.93	
	Haitkandi Union	Dakshin Muradpur_083_001			
	Hinguli Union	Purba Hinguli_011_001	1086, 1088, 1089, 1090, 1132	1.59	
	Maghadia Union	Madhya Maghadia_071_006	15060, 15065, 15066, 15068, 15069, 15067, 99999	11139, 11138	1.60
		Madhya Maghadia_071_005			
	Wahedpur Union	Wahedpur_089_004	10662, 10664, 10665, 10666, 10667, 10809, 10839, 10840, 10842, 10843, 10848	1.91	
Zorwarganj Union	Khilmurari_012_000	192, 187, 203, 193, 202, 186, 194, 196, 197, 195, 217	2.02		
College	Hinguli Union	Purba Hinguli_011_001	1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1018, 1019, 1093, 1094, 1606	3.29	
	Katachhara Union	Paschim Mithanala_064_000	614, 615, 616, 617, 618, 619, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 657, 658, 780	2.65	
		Baman Sundar_062_001	920		
	Osmanpur Union	Osmanpur_030_000	1132	758, 761, 767, 768, 770, 771, 772, 773, 774, 775, 778, 779, 785, 786, 787, 788, 789, 790, 792, 798, 798, 799, 799, 800, 801, 803, 803, 815	2.97
		Rokandipur_031_000			
Saherkhali Union	Saherkhali_081_001	788, 787, 801, 794, 786, 789, 762, 785, 784, 763, 796, 764, 790, 791, 795, 783, 813, 798, 800, 799, 814, 749, 812, 797, 808, 761	2.91		

Source: GIS Database, MUDP (2017-2037)

Map 2. 3: Proposed Educational Facilities for Rural Area in Mirsharai Upazila



2.7.2 Proposals for Commercial Facilities

The land used for commercial activities is considered as commercial land use. These activities include the buying and selling of goods and services in retail businesses, wholesale buying and selling, financial establishments, and wide variety of services that are broadly classified as "Business". Commercial land includes established markets and areas earmarked for markets. In Mirsharai Upazila, there already exists in 44 growth centers/hat bazars.

To meet the local peoples, demand from PRA and based on the planning standards, number of 25 commercial facilities have been proposed for the rural area of Mirsharai Upazila. Among these proposals, there are 19 kitchen markets, 3 cold storages, 1 slaughter house, 1 super market, and 1 wholesale market. Detail mauza wise plot schedule of the proposed commercial facilities for the rural area is presented in Table 2. 8. Map 2. 4 show the proposed location of commercial facilities for rural area in Mirsharai Upazila.

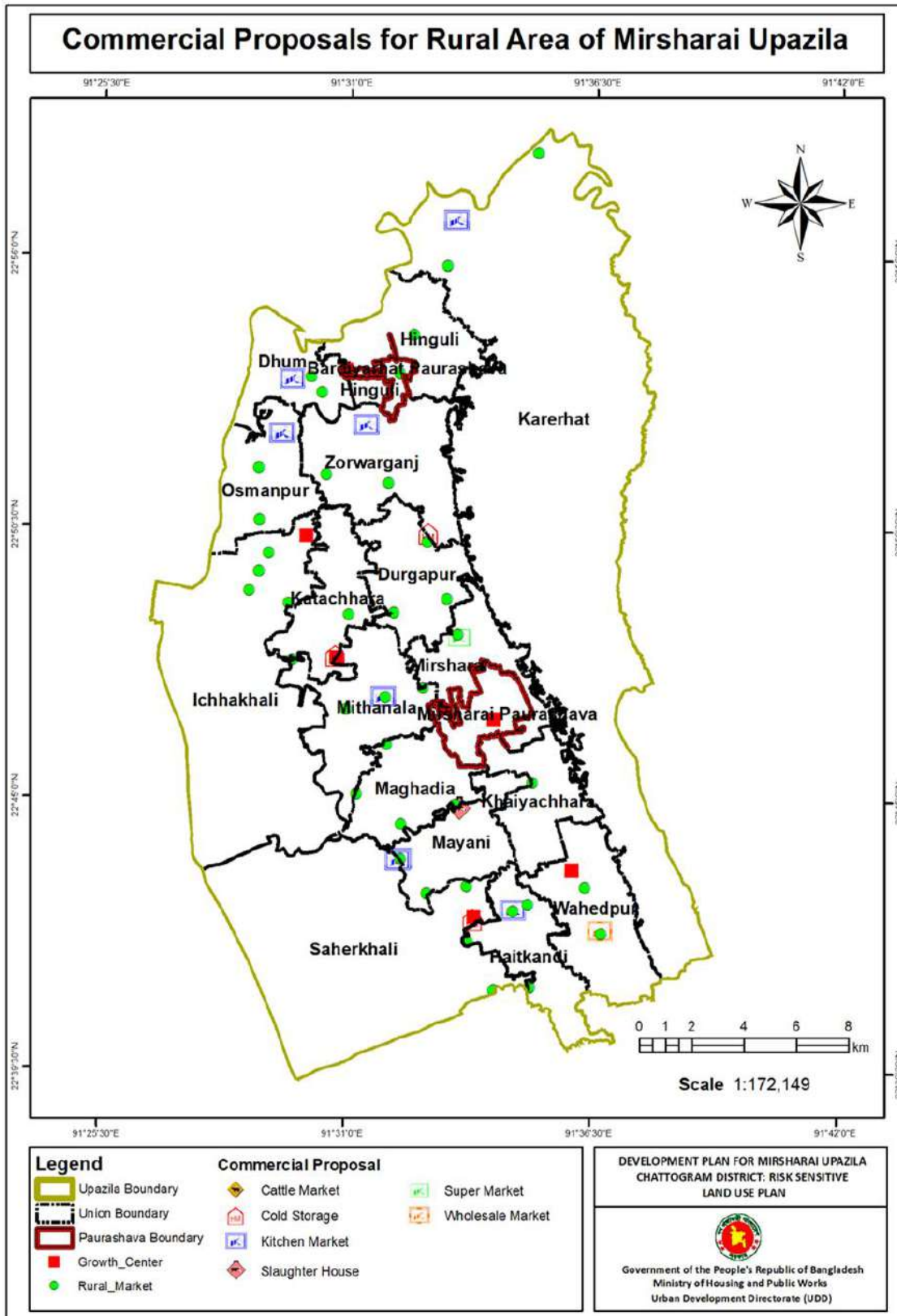
Table 2. 8: List of Proposals for Commercial Facilities

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Kitchen Market	Dhum Union	Mobarakghona_034_002	2300, 2305, 2340, 2348, 2349, 2350, 2351	0.23
		Dhum_023_001	658, 660, 663, 664, 666	
		Dhum_023_003	8140, 8141, 8142, 8143, 8144, 8145, 8147	0.43
		Dhum_023_003	6343, 6344, 6345, 6346	0.15
	Durgapur Union	Durgapur_052_002	4374, 4375, 4376, 4364, 4378	0.32
		Janarddanpur_045_000	210, 211, 252, 255, 256	0.29
	Haitkandi Union	Haitkandi_084_003	3224, 3225, 3226, 3239, 3240, 3241, 3242, 3243, 3252	0.35
		Dakshin Muradpur_083_001	211, 212, 213, 214, 295, 296, 297, 298, 299, 301, 251	0.40
	Hinguli Union	Azamnagar_021_002	3912, 3928, 3929, 3930, 3931, 3932, 3934, 3938, 3933	0.52
	Ichhakhali Union	Uttar Ichhakhali_041_007	14515, 14708, 14510, 14513, 14509, 14564, 14511	0.22
		Uttar Ichhakhali_041_004	5458, 5459	0.48
		Uttar Ichhakhali_041_005	8002, 8003, 8004, 8005, 8006, 8007, 8008, 8014	
	Karerhat Union	Baraia_005_000	36, 30, 915, 31, 330	0.23

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
	Katachhara Union	Baman Sundar_062_002	2019, 2020, 2021, 2030, 2031, 2032, 2033, 2034	0.18
		Paschim Mithanala_064_000	874, 880	
		Bariakhali_065_002	4596, 4597, 4600, 4601	0.47
	Mayani Union	Paschim Mayani_079_004	7180, 7156, 7177, 7245, 7246, 7255, 7031, 7178	0.21
	Mithanala Union	Mithanala Rajapur_061_004	11679, 11680, 11681, 11682, 11683	0.35
	Osmanpur Union	Brindabanpur_033_000	836, 837, 868, 869, 1050	0.34
		Patakot_029_000	273, 274, 275, 276, 297, 298, 299, 300, 309, 310, 313, 314	0.51
	Saherkhali Union	Dakshin Maghadia_080_004	3665, 3667, 3671, 3672, 3678, 3673, 3674, 3675, 3676, 3677, 3679, 3680, 3747, 3708	0.44
	Zorwarganj Union	Paragalpur_018_000	611, 627, 1412, 1413, 1417, 1418, 1419, 1613	0.57
Imampur_019_000		764, 765		
Cold Storage	Katachhara Union	Baman Sundar_062_002	2006, 2007, 2005, 2004	0.13
	Saherkhali Union	Saherkhali_081_003	6470, 6471, 6472, 6507, 6508	0.25
	Zorwarganj Union	Sonapahar_013_007	11246, 11244, 11243, 11242, 11239, 11240, 11237, 11238, 11236, 11338, 11339, 12069	1.60
Slaughter House	Osmanpur Union	Banshkhali_039_000	1130, 1131, 1132, 1135, 1136, 1137, 1138	0.29
Super Market	Mirsharai Union	Purba Mithanala_051_002	1975, 1984, 1978, 1976, 2137, 2136, 3003, 2134, 2135, 2133	0.69
Wholesale Market	Wahedpur Union	Wahedpur_089_004	10435, 10452, 10453, 10454, 10455, 10456, 10457, 10458, 10459, 10460, 10461, 10467	0.90
		Khajuria_090_000	341	

Source: GIS Database, MUDP (2017-2037)

Map 2. 4: Proposed Commercial Facilities for Rural Area in Mirsharai Upazila



2.7.3 Proposals for Health Facilities

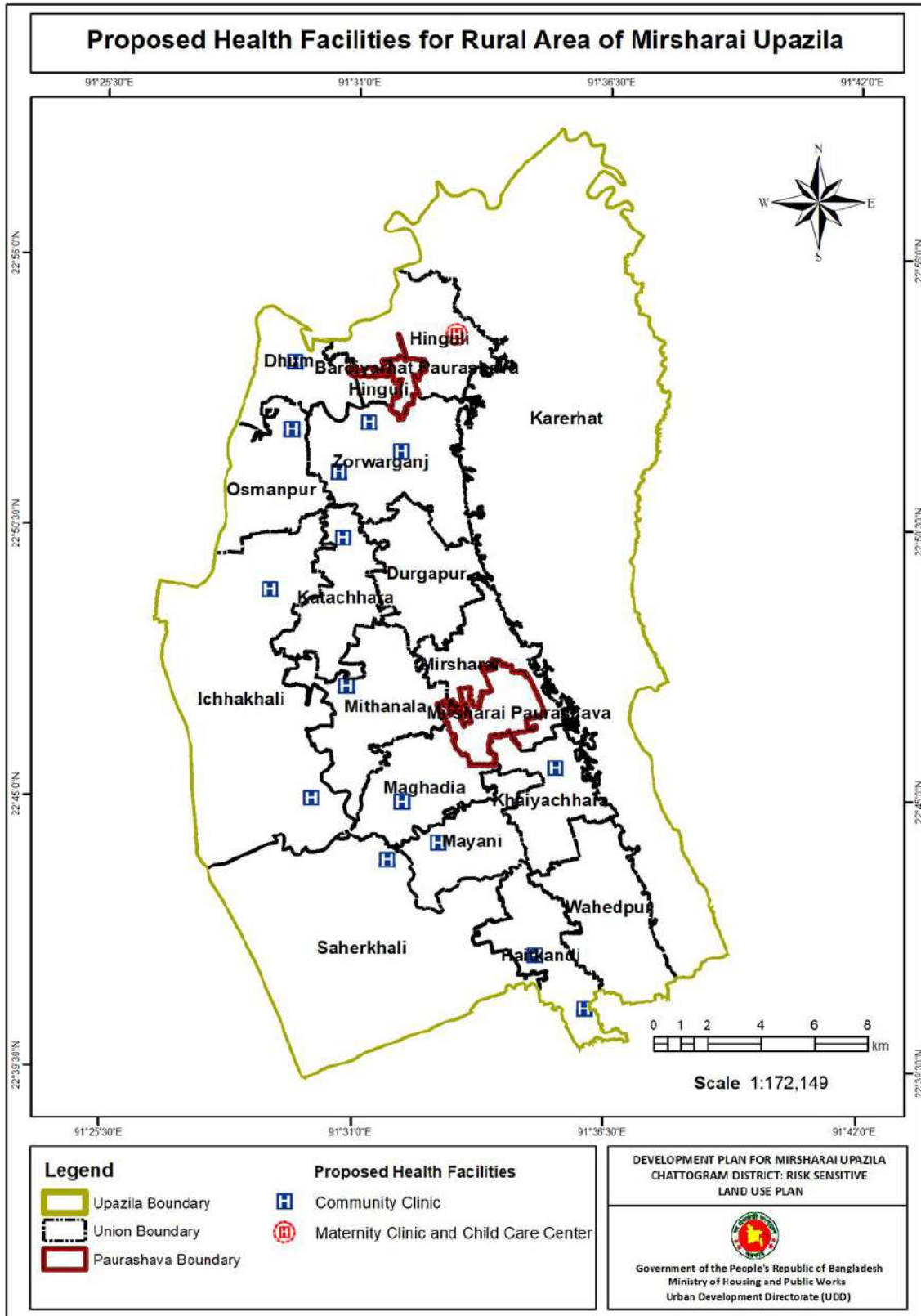
The health facilities are intended to provide locations, where health facilities including Upazila health complex and other maternity clinic can be set up and function. Family welfare centers already exist at all the unions of Mirsharai Upazila. Considering the local people demand, 23 community clinics and one specialized hospital have been proposed for the rural area. Detail lists of proposed health facilities for the rural area is presented in **Error! Not a valid bookmark self-reference..** Map 2. 5 show the proposed location of health facilities for rural area in Mirsharai Upazila.

Table 2. 9: List of Proposed Health Facilities

Proposed Facilities	Union Name	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Community Clinic	Dhum Union	0.16	Mobarakghona_034_001	1, 6, 7, 335, 1344
	Durgapur Union	0.24	Janarddanpur_045_000	246, 247, 250, 251, 258, 259, 715, 717
		0.52	Hajisarai_014_000	926, 927, 928, 929, 849
		0.30	Durgapur_052_002	3197, 3653, 3737, 3740, 3741, 3742, 3743, 3748
	Haitkandi Union	0.30	Kuraa_085_003	10476, 10469, 10465, 10470, 10473, 10472, 10463, 99999, 10464, 10461, 10471
		0.26	Haitkandi_084_003	6642, 6643, 6644, 6654, 6655, 6656, 6687
	Hinguli Union	0.33	Purba Hinguli_011_002	3170, 3171, 3172, 3173, 3174, 3175, 3212, 3293
	Ichhakhali Union	0.42	Purba Ichhakhali_067_011	14754, 14755, 14756
		0.35	Uttar Ichhakhali_041_006	10541, 10542, 10543, 10544, 10545
		0.39	Uttar Ichhakhali_041_005	8099, 8098, 8097, 8096, 8095, 8094, 8092, 8093, 8090, 8279
	Karerhat Union	0.62	Geramara_008_003	2985, 2584, 2585, 2583
	Katachhara Union	0.34	Temuhani Muradpur_043_000	1797, 1801
			Katachhara_044_001	331, 364, 365, 366, 1665
	Khaiyachhara Union	0.37	Purba Khaiyachhara_075_000	114, 146, 153, 152, 147
	Maghadia Union	0.22	Madhya Maghadia_071_006	13012, 13073, 13074, 13075, 13091
	Mayani Union	0.38	Paschim Mayani_076_002	2815, 2816, 2818, 2892, 2893, 2894, 2895
	Mithanala Union	0.33	Mithanala Rajapur_061_003	5723, 5799, 5800, 5807, 5801, 5806, 5724
		0.32	Modhyo Muradpur_069_001	517, 523, 519, 520, 521, 522, 531, 518
	Osmanpur Union	0.22	Brindabanpur_033_000	1029, 1041, 1042, 1043
	Saherkhali Union	0.69	Dakshin Maghadia_080_004	3053, 3123, 3055, 3068, 3122, 3124, 3125, 3126, 3127, 3131, 3054
		0.43	Saherkhali_081_003	5966, 5968, 5969, 5970, 5971, 5972, 5975, 6860, 6861, 7948
	Zorwarganj Union	0.53	Bhagabatipur_026_000	199, 200, 206, 207, 208, 303, 209, 210
		0.36	Paragalpur_018_000	588, 585, 589, 629, 586, 584, 643, 587, 591
0.37		Sonapahar_013_003	3812, 3808, 3809, 3807	
Specialized Hospital	Osmanpur Union	1.64	Osmanpur_030_000	1115, 1118, 1126, 1127, 1130, 1131
			Rokandipur_031_000	803, 807, 810, 811, 812, 813, 814

Source: GIS Database, MUDP (2017-2037)

Map 2. 5: Proposed Health Facilities for Rural Area in Mirsharai Upazila



2.7.4 Proposals for Open Space and Recreation

Recreational and sport facilities without or with minimum building structure i.e. Playground, Park, Botanical Garden, Stadium, Zoo etc. will be listed and proposed under Open Space and Recreational zone. This zone has been provided to meet the active and passive recreational needs of the people and at the same time, conserve the natural resources. Playground is a basic necessity for the youth for building their body and mind. There are some open spaces in rural areas where they usually play. However, these open spaces belong to other people and not formal playground.

Keeping the need for playgrounds, 9 playgrounds have been proposed different unions of the Mirsharai Upazila. Table 2. 10 shows the mauza wise plot schedule of proposed open space and recreations for the rural area in Mirsharai Upazila. Map 2. 6 show the proposed location of open space and recreation facilities for rural area in Mirsharai Upazila.

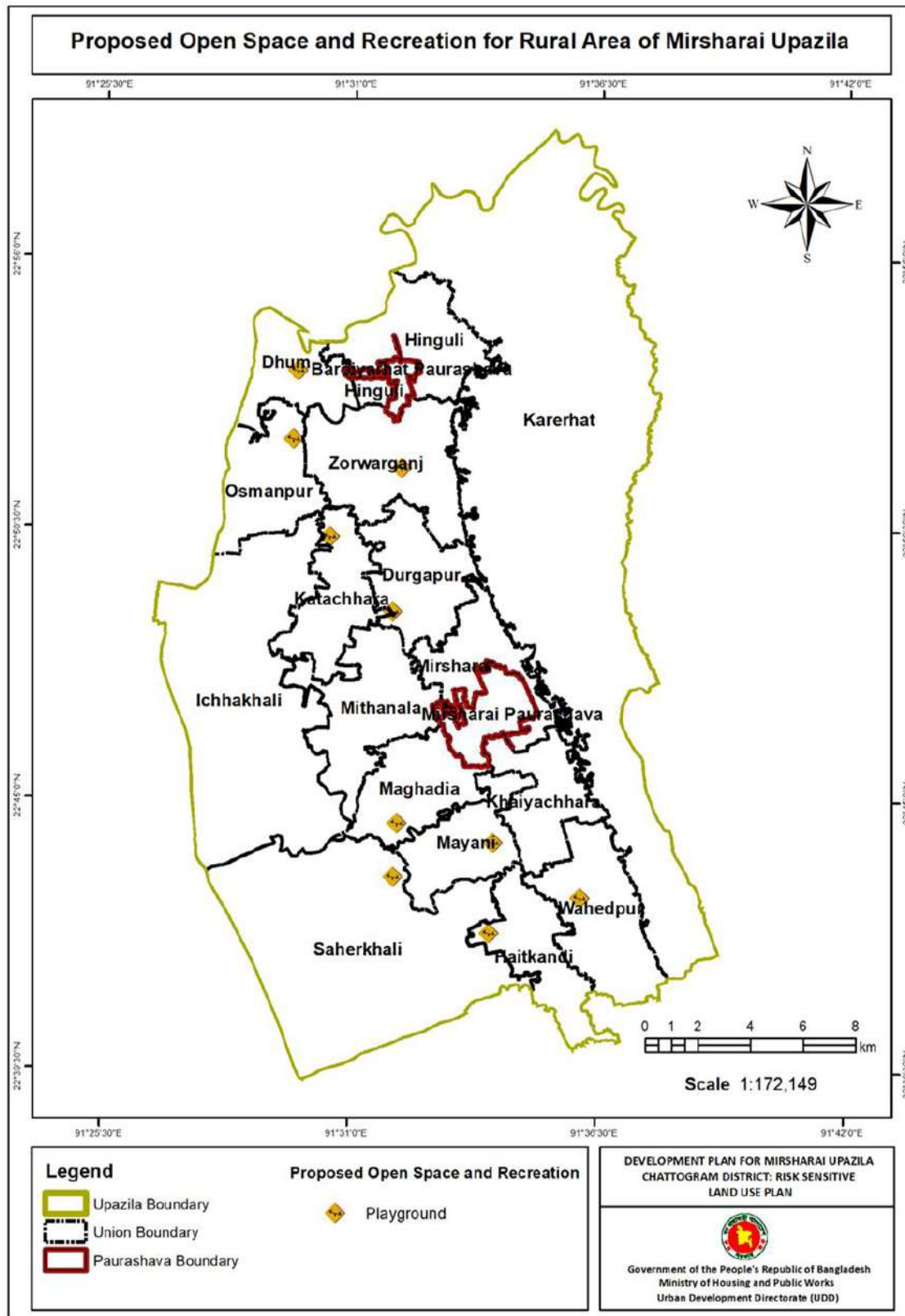
Table 2. 10: List of Proposals for Open Space and Recreation Facilities

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Playground	Dhum Union	Mobarakghona_034_002	2329, 2330, 2331, 2332, 2333	2.55
		Dhum_023_001	339, 344, 346, 349, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 370, 371, 561, 99999	
	Durgapur Union	Durgapur_052_001	1907, 1905, 1884, 1883, 1880, 1908, 1909, 1911	0.96
		Hajisarai_014_000	1266, 1377, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1398, 1399, 1400, 1401, 1402, 1403, 1405, 1406, 1409, 1410, 1413, 1297, 1397	1.06
	Haitkandi Union	Dakshin Muradpur_083_002	3515, 3516, 3523, 3525, 3525, 3526, 3527, 3530, 3532, 3533, 3534, 3535, 3536, 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3541, 3542	1.34
		Haitkandi_084_003	6344	
	Ichhakhali Union	Purba Ichhakhali_067_002	2488, 2491, 2480, 2489, 2490, 2479, 2474, 2477, 2476, 2475, 2469, 2470, 2467, 2465, 2464, 2462, 2468	0.87
	Karerhat Union	Geramara_008_003	2969, 2903, 2908, 2964, 2909, 2965, 2967, 2904, 2968, 2907, 2970, 2905, 2906	1.52
	Katachhara Union	Temuhani Muradpur_043_000	1479, 1480, 1481, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498, 1499, 1500, 1504	0.88
Katachhara_044_001		48, 49, 50, 231, 232, 1663		
Katachhara_044_002		2795, 2794, 2793, 2792, 2791, 2790, 2858, 2841, 2837, 2840, 2842, 2839, 2843, 2844	1.09	

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)	
	Maghadia Union	Madhya Maghadia_071_005	9304, 9290, 9306, 9307, 9280, 9305, 9289, 9308, 9288, 9309, 9287, 9070	1.34	
	Saherkhali Union	Dakshin Maghadia_080_005	4224, 4225	1.38	
	Osmanpur Union	Osmanpur_030_000	445, 446, 447, 448, 449, 450, 451, 456, 459, 545, 547, 549, 551, 452, 453, 454, 455, 457, 458, 462, 468, 470, 542, 543, 544, 546, 550	1.20	
			Morgang_032_001	630, 632, 651	1.03
			Morgang_032_002	2287, 2288, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2302	
	Wahedpur Union	Maijgaon_087_001	645, 646, 648, 649, 650, 651, 652, 654, 655, 656, 658, 709, 1806, 1807, 647, 653	1.68	
	Zorwarganj Union	Sonapahar_013_004	5523, 5338, 5327, 5337, 5330, 5334, 5336, 5332, 5333, 5331, 5335, 5256, 5134	1.25	
Children Park	Dhum Union	Mobarakghona_034_001	822, 823, 836, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 850, 851, 852, 863, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 935, 936, 938, 939	4.57	

Source: GIS Database, MUDP (2017-2037)

Map 2. 6: Proposed Open Space and Recreation Facilities for Rural Area



2.7.5 Proposals for Community Facilities

All community facilities, including funeral places (i.e. graveyards, cremation grounds) and other religious uses denoted as community facilities. Considering the local people demand from PRA, community facilities have been prosed for the rural area of Mirsharai Upazila. Among these proposals, there are 1 community center, 8 eidgahs, 15 graveyards, and 13 cremation grounds. **Error! Not a valid bookmark self-reference.** shows the mauza wise plot schedule of proposed community facilities for rural area of Mirsharai Upazila. Map 2. 7 show the proposed location of community facilities for rural area in Mirsharai Upazila.

Table 2. 11: List of Proposals for Community Facilities

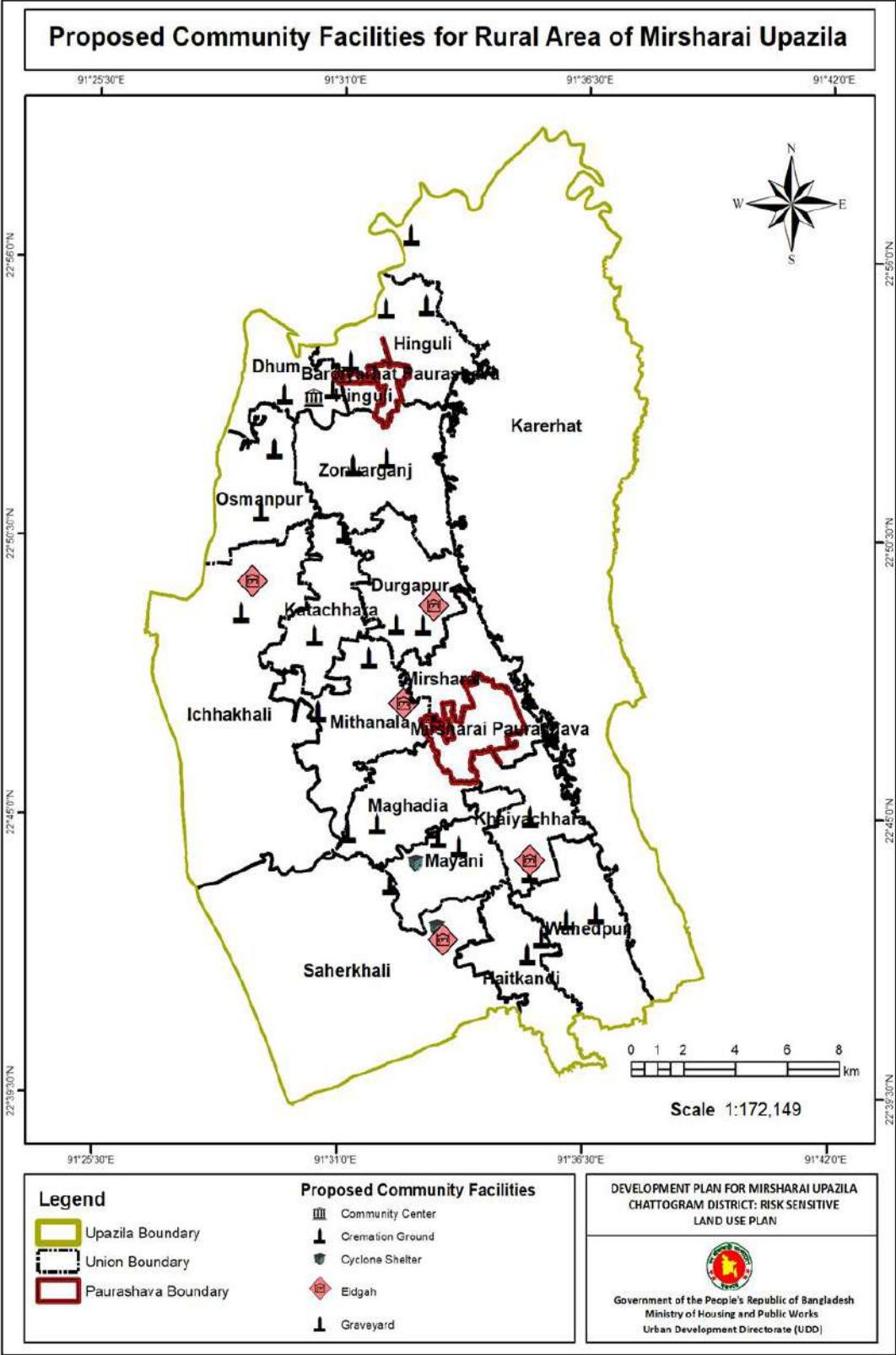
Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Community Center	Dhum Union	Dhum_023_003	7440, 7452, 7453, 7457	0.16
Eidgah	Dhum Union	Mobarakghona_034_002	2267, 2273, 2271, 2272, 2268, 2258, 2270, 2269, 2257, 2396, 2395	1.94
		Dhum_023_001	60, 62, 67, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 98, 99, 100, 252, 254, 262, 263, 264, 64, 66, 65	
	Durgapur Union	Durgapur_052_002	3357, 3365, 3366, 3653	0.35
	Ichhakhali Union	Purba Ichhakhali_067_002	2465, 2464, 2462, 2461, 2463, 2459, 2460, 2458, 2714, 2713	0.67
		Uttar Ichhakhali_041_002	1706, 1707, 1708, 1719	0.61
		Uttar Ichhakhali_041_002	3123, 3124, 3125, 3127, 3132, 3137	
	Uttar Ichhakhali_041_005	8017		
	Karerhat Union	Geramara_008_003	2901, 3134, 3114, 3003, 3002	0.77
	Khaiyachhara Union	Purba Mayani_078_006	15711, 15712, 15761, 15762, 15763, 15764, 15770, 15771	0.60
	Mithanala Union	Mithanala Rajapur_061_006	18222, 18447, 18223, 18224, 18445, 18446, 18258, 18257	0.63
Saherkhali Union	Saherkhali_081_001	2512, 2511, 1314, 2518, 2516, 2514, 2515, 2513, 2510, 2517	0.99	
Graveyard	Dhum Union	Dhum_023_001	137, 138	1.42
	Durgapur Union	Durgapur_052_004	8973, 8974, 8972, 8967, 8689, 8677, 8882	0.71
	Haitkandi Union	Kurua_085_001	1530, 1543, 1544, 1545, 1546, 1547, 1548, 1663, 1664, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1678, 1280, 1677, 99999	1.19
	Hinguli Union	Purba Hinguli_011_001	581, 583, 587, 588, 593, 594, 599, 600, 601, 602, 603, 604, 605, 608, 612, 613, 614	1.54

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
		Paschim Hinguli_022_002	925, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1742, 1743, 1744	0.66
	Ichhakhali Union	Uttar Ichhakhali_041_005	8212, 8209, 8210, 8215, 8208, 8207, 8206, 8223, 8211	0.38
	Katachhara Union	Bariakhali_065_003	6875, 6878, 6879, 6880, 6887, 6888, 6889, 6890, 6891, 6892, 6893, 6894, 6895, 6896, 6897, 6898, 6899, 6901, 6903, 7180	1.66
	Khaiyachhara Union	Polmogra_076_000	480, 482, 486, 487, 498, 499, 500, 501, 502, 504, 506	0.64
	Maghadia Union	Madhya Maghadia_071_006	13274, 13275, 13246, 13276, 13247, 13256, 13258, 13253, 13248, 13245	0.88
	Mayani Union	Paschim Mayani_079_003	6338, 5741, 5744, 5743, 5745, 5746, 5763	0.44
	Mithanala Union	Mithanala Rajapur_061_003	7104, 7103, 7108, 6933, 6907, 6892, 6908, 6909, 6906, 6931, 6932	0.62
	Osmanpur Union	Morgang_032_002	2111, 2112	0.19
		Brindabanpur_033_000	976, 977, 981, 982	
	Saherkhali Union	Dakshin Maghadia_080_004	3711, 3719	0.37
	Wahedpur Union	Maijgaon_087_001	1799, 1800, 709, 1801, 1806, 1808, 1805	0.52
	Zorwarganj Union	Sonapahar_013_003	2997, 2994, 2998, 3822, 2999, 3013, 3002, 3012, 3001, 3000, 3011, 3782, 3004, 3003, 3007	1.61
Cremation Ground	Dhum Union	Dhum_023_002	194, 192, 191, 193, 197, 196, 179, 190, 188, 180, 178, 198, 176	1.66
	Durgapur Union	Durgapur_052_003	7268, 7269, 7267, 7266, 7269, 7266, 7266	0.44
		Durgapur_052_005	20005, 20007, 20004, 20001, 20005, 20005, 20001	
	Haitkandi Union	Kurua_085_002	6714	0.60
		Dakshin Muradpur_083_002	4045, 4049, 4073, 4076, 4077, 4078, 4079, 4081, 4082, 4083, 4080, 4049	
	Hinguli Union	Azamnagar_021_001	576, 577, 578, 579, 580, 581, 582, 583, 584, 586	0.48
	Karerhat Union	Joypur Purba Joar_001_001	116, 1467, 1468, 1482, 1483	0.86
	Katachhara Union	Katachhara_044_001	616, 618, 619	0.45
		Idilpur_042_000	231	
Khaiyachhara Union	Purba Mayani_078_005	11647, 10676, 10674, 10675, 10677, 10839	0.19	

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
	Maghadia Union	Madhya Maghadia_071_004	8153, 8154, 8158, 8159, 8160, 8161, 8162, 7658, 8603, 8601	2.16
	Mayani Union	Paschim Mayani_079_002	1930, 2033, 2034, 2035, 2037, 2038, 2039, 2040, 2043, 1934, 1935, 2036	0.77
	Mithanala Union	Mithanala Rajapur_061_001	458, 460, 459, 485, 480, 481, 487	0.64
	Osmanpur Union	Sahebpur_028_000	2129, 2130, 2131, 2131, 2133, 2134, 2147	0.78
		Sahebpur_028_002	4343, 4367, 4367	
	Wahedpur Union	Wahedpur_089_001	2494, 2496, 2497, 2498, 2500, 2499, 2503	0.26
	Zorwarganj Union	Dewanpur_017_000	147, 152, 190, 156, 153, 189	0.72

Source: GIS Database, MUDP (2017-2037)

Map 2. 7: Proposed Community Facilities for Rural Area in Mirsharai Upazila



2.7.6 Proposals for Utility Services

Utility services are one of the most important components of a planned development area. Utility services include Overhead Tank, Public Toilet, Sewerage Office, Water Pump House, Water Reservoir, Water Treatment Plant, Waste transfer station, Waste Disposal ground, etc. Considering the local people demand and existing conditions, numbers of 72 utility services have been proposed for rural area of Mirsharai Upazila. Among these proposals, there are 32 public toilets, and 40 waste transfer stations. Table 2. 12 show the list of proposed utility services for rural area of Mirsharai Upazila. Map 2. 8 show the proposed location of utility services for rural area in Mirsharai Upazila.

Table 2. 12: List of Proposals for Utility Services

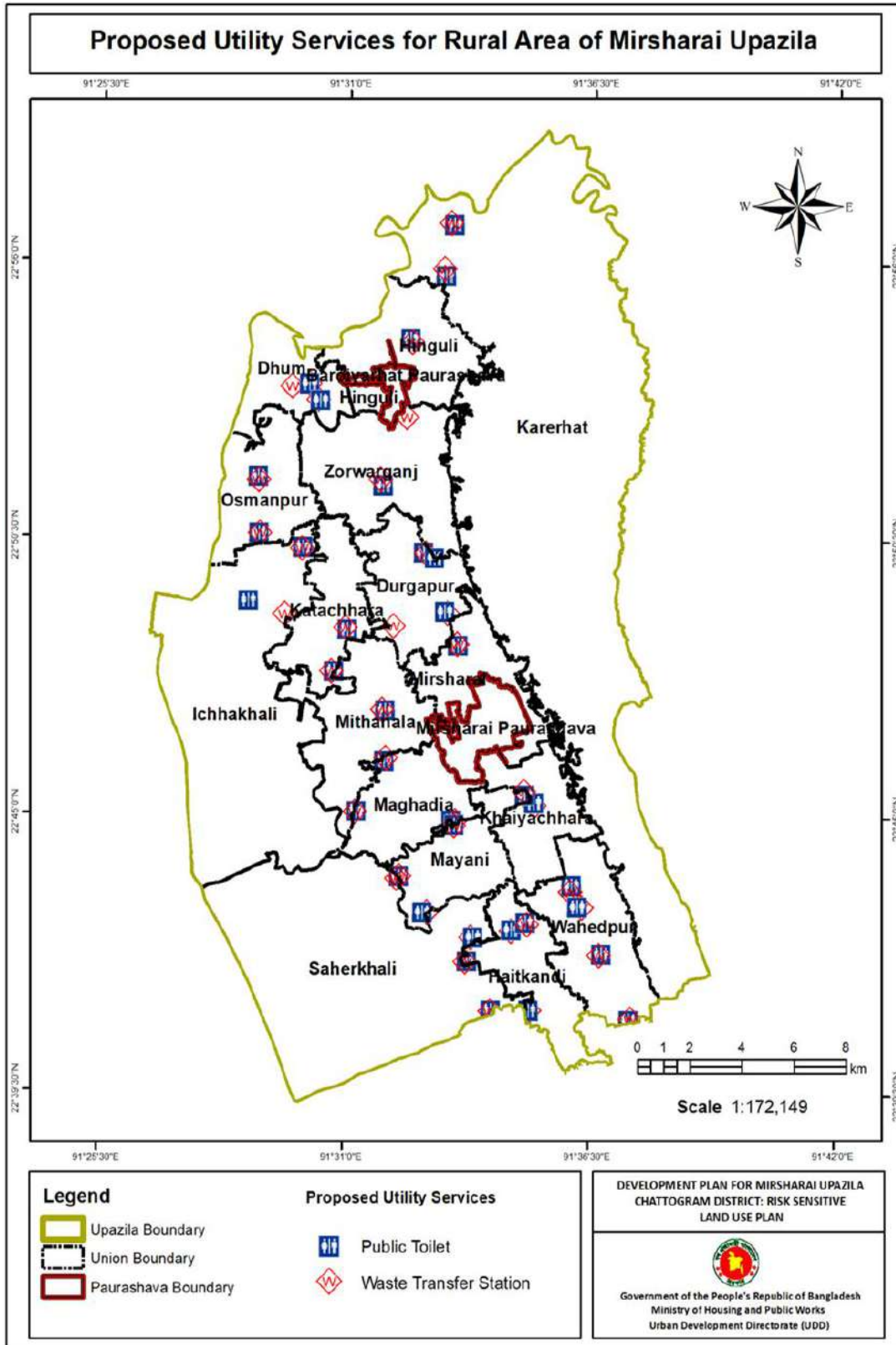
Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Public Toilet	Dhum Union	Dhum_023_001	1002, 1003	0.08
		Dhum_023_003	8144, 8145, 8153, 8154, 8155	0.12
	Durgapur Union	Gopalpur_047_000	828, 833, 822, 1166	0.11
		Durgapur_052_004	8534, 8536, 8366, 8340, 8452	0.10
	Haitkandi Union	Kurua_085_003	8326, 8493, 8490, 8491	0.10
		Dakshin Muradpur_083_001	211, 212, 213, 304, 305, 306, 210, 251	0.12
		Haitkandi_084_001	601, 604, 608	0.11
	Hinguli Union	Purba Hinguli_011_001	1504, 1505	0.05
	Ichhakhali Union	Uttar Ichhakhali_041_008	20103, 19203, 20100, 20104, 19202	0.10
		Uttar Ichhakhali_041_004	5461, 5470, 5440, 5519, 5470, 5440, 5519	0.10
	Karerhat Union	Paschimjoar_002_002	2638, 2651, 2661	0.15
		Baraia_005_000	36, 30, 915, 31, 330	0.11
	Katachhara Union	Katachhara_044_003	8820, 8856, 8859	0.11
		Baman Sundar_062_002	2006, 2007, 2008, 2009, 2010, 2011, 2021	0.10
		Paschim Mithanala_064_000	837	
	Khaiyachhara Union	Polmogra_076_000	337, 339, 340, 351	0.09
	Maghadia Union	Madhya Maghadia_071_004	6851, 6853	0.01
		Madhya Maghadia_071_001	52909, 52910	0.03
		Madhya Maghadia_071_007	337, 423	0.04
	Mayani Union	Paschim Mayani_079_005	12738, 12744	0.02
		Paschim Mayani_079_004	7245, 7255, 7260	0.08
	Mirsharai Union	Purba Mithanala_051_002	1921, 1975	0.03
	Mithanala Union	Mithanala Rajapur_061_004	11666, 11667, 11668, 11670	0.17
Mithanala Rajapur_061_006		17549, 17551		
Osmanpur Union	Morgang_032_002	1751, 1752, 1748	0.15	
	Banskhali_039_000	1123, 1124, 1141, 1143, 1144	0.10	

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
	Saherkhali Union	Domkhali_082_004	8967, 8966, 9060	0.13
		Saherkhali_081_003	6506, 6504, 6505	0.15
	Wahedpur Union	Gachhbaria_088_000	2856	0.12
		Wahedpur_089_004	10456, 10457, 10435	0.12
		Bara Kamaldaha_094_002	2875, 2874, 2950, 2169	0.14
		Bara Kamaldaha_094_002		
	Zorwarganj Union	Sonapahar_013_007	11345, 11361, 11331	0.17
		Sonapahar_013_004	5754	0.07
Waste Transfer Station	Dhum Union	Dhum_023_001	640, 658, 663, 666, 667, 720	0.08
		Dhum_023_003	8139, 8140, 8147	0.07
		Dhum_023_001	1002	0.08
		Dhum_023_003	6345, 6346, 6347, 6348, 6351	0.11
	Durgapur Union	Gopalpur_047_000	828, 830, 832, 833, 1166	0.12
		Durgapur_052_004	1, 2, 409	0.10
		Durgapur_052_002	4364, 4378	0.13
	Haitkandi Union	Kurua_085_003	8012, 8057, 8055, 8056, 8060	0.12
		Dakshin Muradpur_083_001	209, 211, 304, 305, 306, 310, 208, 210, 251	0.11
		Haitkandi_084_003	3242, 3245, 3252	0.11
		Haitkandi_084_003	3433, 3435, 3436, 3426, 3432	0.08
	Hinguli Union	Azamnagar_021_002	3912, 3928, 3934	0.12
	Ichhakhali Union	Uttar Ichhakhali_041_008	19213, 19220, 19429, 19430, 19431, 19432	0.13
		Uttar Ichhakhali_041_006	10540, 10541, 10545, 10546	0.11
	Karerhat Union	Paschimjoar_009_002	2849, 2851, 4042	0.11
		Joypur Purba Joar_001_002	4334, 4357, 4356, 4334	0.11
		Baraia_005_000	12	
	Katachhara Union	Baman Sundar_062_002	2014, 2015, 2016, 2017	0.09
		Paschim Mithanala_064_000	843, 873	
		Paschim Mithanala_064_000	843, 873, 2017, 2016, 2015, 2014, 873, 2017, 873, 2016, 873, 2015, 873, 2014	0.11
		Bariakhali_065_003	8104, 8105, 8106, 8107	0.13
		Bariakhali_065_002	4597, 4600	0.08
	Khaiyachhara Union	Polmogra_076_000	418, 336, 349, 350, 351	0.36
	Maghadia Union	Madhya Maghadia_071_004	6853, 6854, 6855, 6857, 6867	0.05
		Madhya Maghadia_071_007	52933, 99999, 52932, 52941	0.07
		Madhya Maghadia_071_001	457, 458, 481, 477	0.15
	Mayani Union	Paschim Mayani_079_005	13296, 12710, 12711	0.07
Paschim Mayani_079_004		7241, 7242, 7156, 7255, 7260	0.08	

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
	Mirsharai Union	Purba Mithanala_051_002	1975	0.01
	Mithanala Union	Mithanala Rajapur_061_004	11682, 11683	0.14
	Osmanpur Union	Banshkhali_039_000	1120, 1154	0.10
		Patakot_029_000	308, 309, 310, 311, 312, 313, 314, 315	0.10
		Sahebpur_028_002	4014	0.15
	Saherkhali Union	Domkhali_082_004	8971, 9038, 9034, 8968	0.13
		Saherkhali_081_003	6509, 6522	0.10
		Dakshin Maghadia_080_004	3663, 3664, 3665, 3666, 3667, 3676	0.11
	Wahedpur Union	Gachhbaria_088_000	2856	0.14
		Wahedpur_089_002	4694, 4694	0.08
		Maijgaon_087_002	5102	
		Wahedpur_089_004	10447, 10441, 10435, 10440, 10442, 10447, 10440, 10442	0.17
		Maijgaon_087_002	5102	
		Bara Kamaldaha_094_002	2950, 2169	0.13
	Zorwarganj Union	Dewanpur_017_000	1346, 1334	0.19
		Sonapahar_013_002	1894, 1892, 1895, 1897, 1858	0.23

Source: GIS Database, MUDP (2017-2037)

Map 2. 8: Proposed Utility Services for Rural Area in Mirsharai Upazila



2.7.7 Proposals for Transport Facilities

Under transport facilities, both transport and communication services are considered. This category includes, bus terminal/stand, filling station, garage, passenger shed, ticket counter, transport office, etc. Considering the future travel demands of the coming 20 years, different facilities have been proposed to support the transportation system in Mirsharai Upazila.

After analyzing the existing conditions of the transport facilities and local demand as revealed by PRA, number of 31 transport facilities has been proposed in all the unions of the Mirsharai Upazila. Among these proposals, there are 30 CNG stands and one bus stand. Table 2. 13 show the list of proposed transport facilities for the rural area of Mirsharai Upazila. Map 2. 9 show the proposed location of transport facilities for rural area in Mirsharai Upazila.

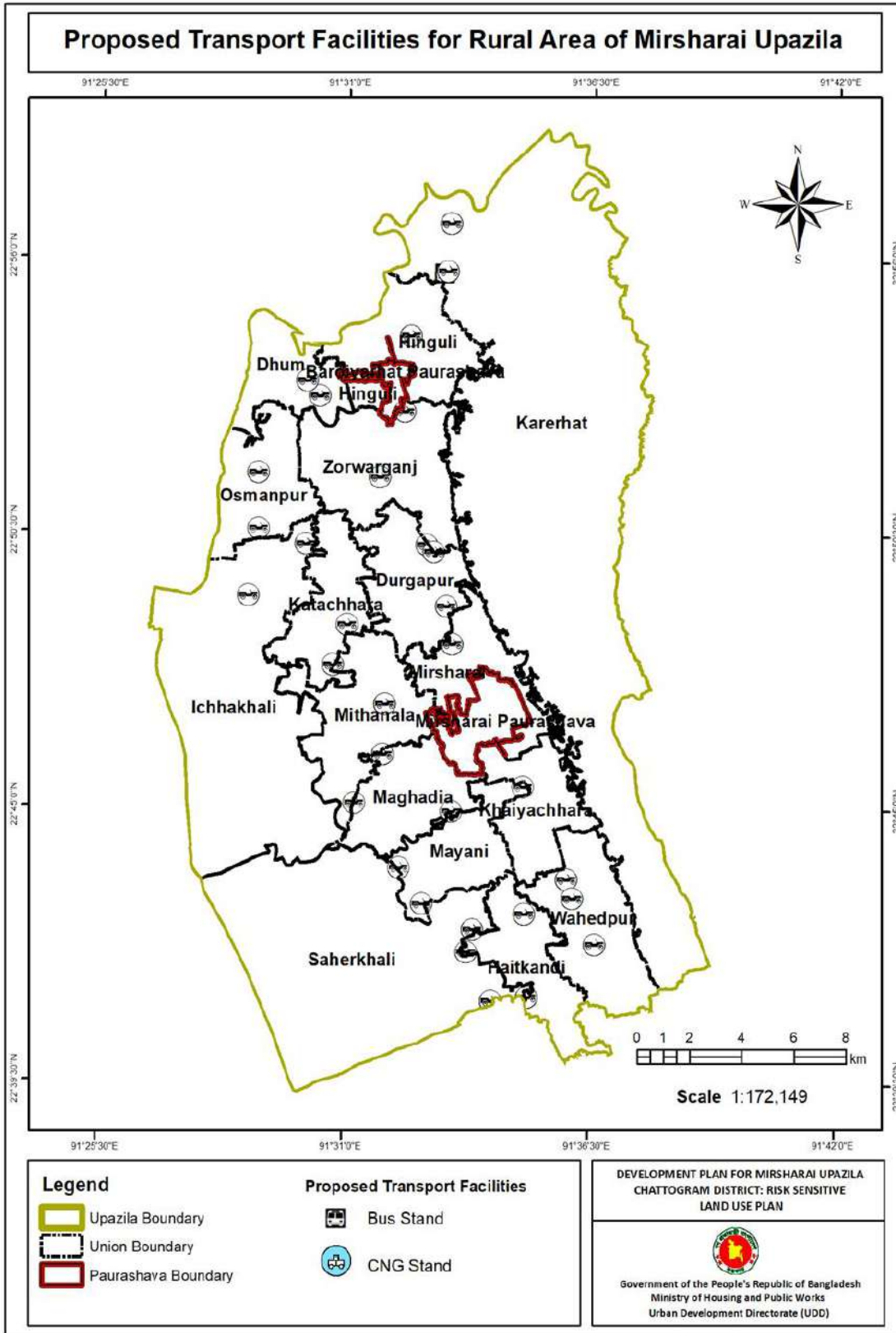
Table 2. 13: List of Proposals for Transport Facilities

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
CNG Stand	Dhum Union	Dhum_023_003	7428, 7429, 7431, 7432, 7440	0.15
		Dhum_023_001	469, 470, 471, 472, 477	0.19
	Durgapur Union	Gopalpur_047_000	766, 1761	0.37
		Durgapur_052_004	8367, 9359	0.25
	Haitkandi Union	Kurua_085_003	8315, 8326, 8318, 8319, 8320, 8493, 8492	0.22
		Haitkandi_084_001	601, 604, 605, 598, 606, 608, 585, 607	0.21
		Dakshin Muradpur_083_001	177, 178, 179, 216, 227, 242, 244, 245, 215, 217, 218	0.21
	Hinguli Union	Purba Hinguli_011_001	1475, 1484, 1487, 1488, 1489, 1490	0.24
	Ichhakhali Union	Uttar Ichhakhali_041_008	20216, 20208, 20207, 20206	0.18
		Uttar Ichhakhali_041_004	5470, 5439, 5440, 5519, 5470, 5440, 5519	0.29
	Karerhat Union	Paschimjoar_009_002	2715	0.35
		Joypur Purba Joar_001_002	309	0.27
	Katachhara Union	Katachhara_044_003	8820, 8847, 8848, 8846, 8851	0.25
		Baman Sundar_062_002	2002, 2004, 2005	0.22
		Paschim Mithanala_064_000	822, 824, 825	
	Maghadia Union	Madhya Maghadia_071_004	6842, 8603, 6840, 6843	0.09
Madhya Maghadia_071_007		52738, 52740, 52739	0.22	

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
		Madhya Maghadia_071_001	427, 469	0.23
	Mayani Union	Paschim Mayani_079_005	12739, 12736, 12742, 12737, 12734, 12743, 12738, 12744, 12733	0.47
		Paschim Mayani_079_004	7259, 7260, 7261, 7267	0.17
	Mirsharai Union	Motbaria_053_002	2702, 2703, 2706, 2707, 2779	0.20
	Mithanala Union	Mithanala Rajapur_061_006	11668, 11669, 11670, 11668, 11669	0.36
		Mithanala Rajapur_061_004	17551	
	Osmanpur Union	Banskhali_039_000	1120, 1121, 1122, 1123, 1154	0.23
		Morgang_032_002		0.19
	Saherkhali Union	Domkhali_082_004	9187, 9188, 9061, 9067, 9063, 9068, 9066, 9070, 9065, 9062, 9064	0.45
		Saherkhali_081_003	6522, 6521, 6509, 6510, 6520	0.33
	Wahedpur Union	Gachhbaria_088_000	2856	0.33
		Wahedpur_089_004	10462, 10462, 10462, 10462, 10463, 10464, 10465, 10467, 10467, 10467, 10467, 10468	0.23
		Khajuria_090_000	341	
	Zorwarganj Union	Dewanpur_017_000	1347, 1346, 1345, 1348, 1344	0.20
		Sonapahar_013_007	11361, 11331	0.28
		Sonapahar_013_002	1907, 1908, 1911, 1910, 1909, 1913	0.21
Bus Stand	Karerhat Union	Paschimjoar_009_002	2638, 2659, 2660, 2661, 2662, 2663, 2664, 2670	1.03

Source: GIS Database, MUDP (2017-2037)

Map 2. 9: Proposed Open Transport Facilities for Rural Area



2.7.8 Proposals for Other Rural Facilities

Considering the local people demand from the PRA, different proposals for rural area of Mirsharai Upazila have been proposed. Detail list of other proposed facilities for rural area are presented in Table 2. 14.

Table 2. 14: List of Other Proposed Rural Facilities

Proposed Facilities	Union Name	Mauza Name, J.L. No., Sheet No.	Plot No.	Area (Acre)
Union Parishad Office	Hinguli Union	Purba Hinguli_011_001	1333, 1458, 1459, 1460, 1461, 1462, 1463, 1465, 1495, 1519, 1520, 1521	0.55
	Zorwarganj Union	Dewanpur_017_000	1228, 1272, 1262, 1273, 1275, 1274, 1278, 1277, 1276, 1282, 1280, 1283, 1279	0.74
Cyclone Shelter	Mayani Union	Paschim Mayani_079_002	2661, 2857, 2860, 2861, 2863, 2927, 2660, 2924, 2925, 2926, 2928, 2929, 2930, 2632, 2862	0.78
	Saherkhali Union	Saherkhali_081_001	678, 776, 777, 780, 1072, 1089, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1103, 1104, 1105, 1120, 1123, 1124	2.03
Housing for Tribal	Wahedpur Union	Wahedpur_089_003	8594, 8595, 8596, 8599, 8600, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8623, 8624, 8640, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8687, 8710, 8711, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8744, 8745, 8746, 8747, 8748, 8749, 8787, 8788, 8601, 8602, 8604, 8680, 8686, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8712	16.94
Cluster Village	Saherkhali Union	Domkhali_082_002	2579, 2580, 2581, 2582, 2583, 2584, 2598, 2600, 2601, 2603, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2636, 2638, 2640, 2821, 3363, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3371, 3372, 3373, 3374, 3375, 3376, 3377, 3378, 3379, 3380, 3381, 3382, 3383, 3384, 3398, 3399, 3400, 3401, 3402, 3517, 3518, 3519, 3520, 3521, 3522, 3523, 3524, 3527, 3528, 3529, 3530, 3531, 3532, 3533, 3534, 3535, 3536, 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547, 3548, 3549, 3550, 3551, 3552, 3553, 3554, 3555, 3556, 3557, 3558, 3559, 3560, 3561, 3562, 3563, 3564, 3565, 3566, 3567, 3568, 3569, 3570, 3571, 3572, 3573, 3574, 3575, 3576, 3577, 3578, 3579, 3580, 3581, 3582, 3583, 3584, 3585, 3586, 3587, 3588, 3589, 3590, 3591, 3592, 3593, 3594, 3595, 3596, 3597, 4585, 4601, 4602, 4603, 4604, 4605, 4606, 4607, 4608	18.45

Source: GIS Database, MUDP (2017-2037)

2.8 Road Network Development Plan

The performance of the transportation system largely influences the economy and social progress of an area. The rural area of Mirsharai Upazila is fairly connected through road network development through physical conditions of the roads in many places are not up to standards.

2.8.1 Existing Condition of Rural Road Network

Mirsharai Upazila is well connected by National and Regional Highway. The rural road network of Mirsharai Upazila consists of some pucca, semi-pucca, and katcha roads. The road network and hierarchy within the rural area is poorly established. The total rural road network length of Mirsharai Upazila is 1681.39 km. Most prominent road category would be the pucca type which comprises about 1635.13 km and the least prominent would be the katcha category existing of 20.03 km. Rest out of total 26.24 km of road is found to be semi-pucca. Figure 2. 1 represents the percentage of existing road type status of rural area in Mirsharai Upazila. The existing road network status of the rural area is shown in Table 2. 15.

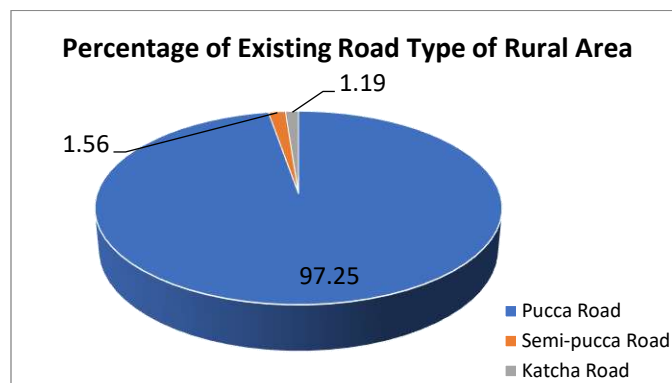


Figure 2. 1: Existing Road Type Status of Rural Area in Mirsharai Upazila

Table 2. 15: Existing Union Wise Road Network of Mirsharai Upazila by Road Type

Union Name	Road Type	Length (km)	Road Width (ft.)		
			Minimum	Maximum	Average
Dhum Union	Pucca	51.13	6.56	14.11	8.69
	Semi-Pucca	1.34	8.20	9.84	9.28
Durgapur Union	Pucca	84.64	3.28	80.02	9.68
	Semi-Pucca	3.99	6.50	9.84	7.87
	Katcha	1.02	6.50	26.25	11.0
Haitkandi Union	Pucca	89.43	1.77	36.09	8.89
Hinguli Union	Pucca	107.04	4.10	98.43	9.22
	Semi-Pucca	1.67	6.56	8.20	8.00
	Katcha	0.85	8.20	13.12	9.28
Ichhakhali Union	Pucca	156.82	4.89	18.37	8.75

Union Name	Road Type	Length (km)	Road Width (ft.)		
			Minimum	Maximum	Average
	Semi-Pucca	0.04	6.56	6.56	6.56
Karerhat Union	Pucca	199.43	3.28	24.28	8.83
	Semi-Pucca	2.03	8.20	8.20	8.20
	Katcha	0.08	5.00	5.00	5.00
Katachhara Union	Pucca	83.33	3.28	18.37	8.45
	Semi-Pucca	1.06	6.56	9.84	8.48
	Katcha	0.50	6.56	6.56	6.56
Khaiyachhara Union	Pucca	76.06	1.57	88.88	16.83
Maghadia Union	Pucca	100.27	1.80	26.25	8.98
	Semi-Pucca	1.52	5.02	10.10	7.87
	Katcha	2.80	2.72	10.24	6.81
Mayani Union	Pucca	87.23	3.83	79.53	8.52
	Semi-Pucca	1.01	7.09	9.91	7.91
	Katcha	1.35	4.69	13.45	7.93
Mirsharai Union	Pucca	72.73	1.97	91.93	12.31
	Semi-Pucca	0.75	5.41	8.27	6.72
Mithanala Union	Pucca	115.83	1.48	22.18	7.95
	Semi-Pucca	3.18	4.13	11.55	7.65
	Katcha	10.12	2.92	13.09	6.59
Osmanpur Union	Pucca	63.73	4.92	20.67	9.17
	Semi-Pucca	3.47	6.56	11.81	8.65
Saherkhali Union	Pucca	105.49	1.44	32.81	8.09
	Katcha	3.18	2.85	7.71	6.47
Wahedpur Union	Pucca	108.77	2.26	94.29	12.57
Zorwarganj Union	Pucca	133.20	3.28	75.46	10.73
	Semi-Pucca	6.18	5.91	13.12	7.89
	Katcha	0.12	9.84	9.84	9.84
Total		1681.39			

Source: Field Survey, 2018-19

2.8.2 Proposed Rural Road Network

The road network has been planned to provide adequate access for vehicles and pedestrians for inter-communication among all parts of the area. Considering the traffic volume and discussion with the authority and local stakeholders, a road hierarchy has been proposed based on the functional area within the Upazila as well as the internal and external linkage. In the road network plan, total 0.00 km of roads have been proposed including new road and widening of existing roads. Summary of the proposed rural road network

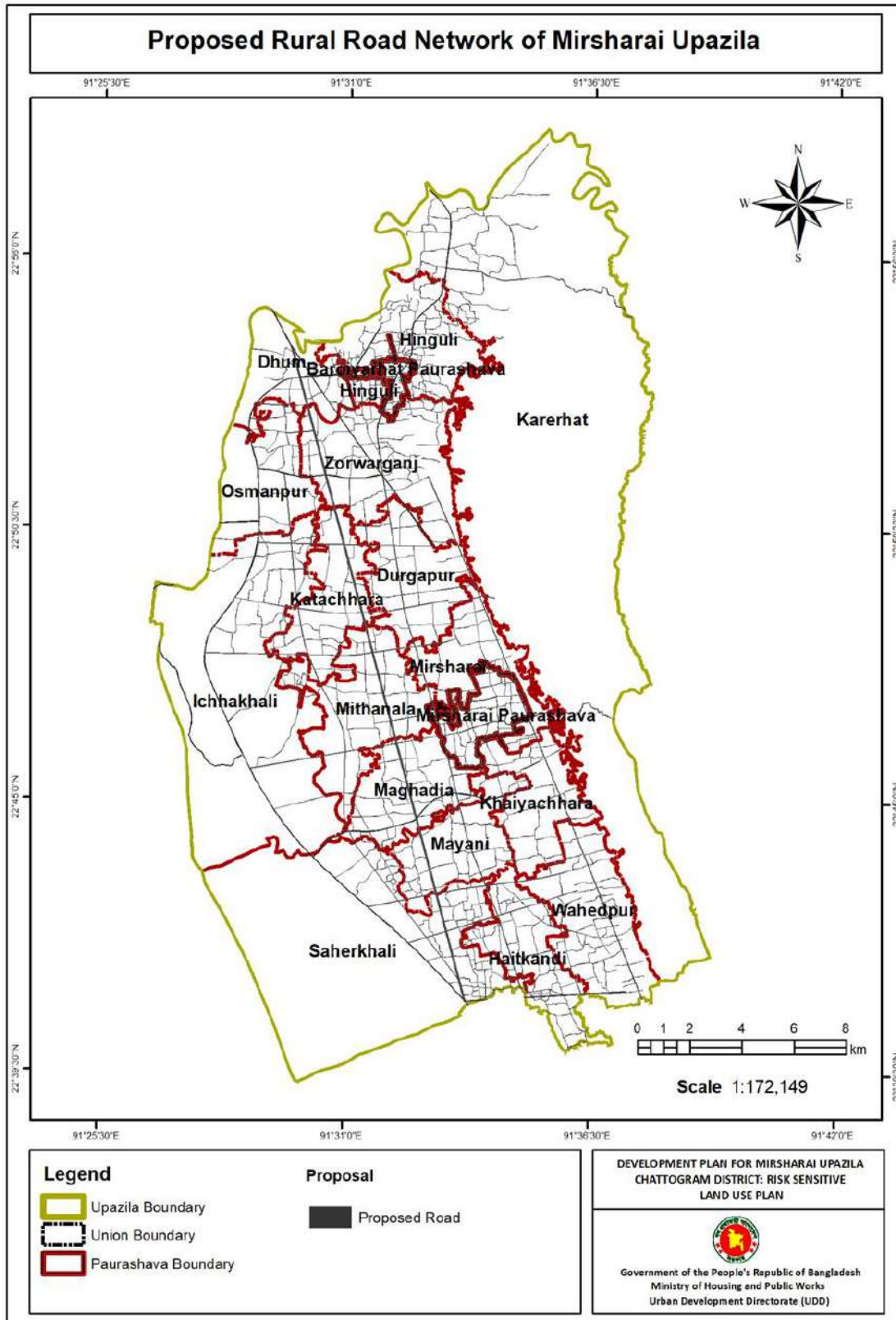
of Mirsharai Upazila is given in Table 2. 16. Map 2. 10 show the proposed rural road network of Mirsharai Upazila.

Table 2. 16: Proposed Rural Road Network of Mirsharai Upazila

Road Category	Proposed Right of Way (RoW)	Proposed Road Status	Length (km)
Regional Road		Widening	
Primary Road		Widening	
		New	
Secondary Road		Widening	
		New	
Tertiary Road		Widening	
		New	

Source: GIS Database, MUDP (2017-2037)

Map 2. 10: Proposed Rural Road Network Plan in Mirsharai Upazila



2.8.3 Affected Structures Due to Road Widening

About 8869 nos. structures are to be affected due to road widening and new road proposals. Among them, 1259 nos. structures are pucca, 1151 nos. structures are semi-pucca, 6454 nos. structures are katcha, and 9 nos. structures are in under construction. The detail statistics of the proposed rural road network and a number of affected structures due to road widening is presented in

Table 2. 17.

Table 2. 17: Number of Affected Structures by Proposed Road in Rural Area

Road Hierarchy	Proposed RoW (ft.)	Length (km)	Number of Affected Structures				
			Pucca	Semi-pucca	Katcha	Under Construction	Total
Primary Road	250	51.14	162	111	943	-	1216
Primary Road	100	164.29	203	234	1180	2	1619
Primary Road	60	247.45	347	240	1655	4	2246
Tertiary Road	20	1190.58	547	562	2676	3	3788
Total		1653.46	1259	1151	6454	9	8869

Source: GIS Database, MUDP (2017-2037)



Source: GIS Database, MUDP (2017-2037)

Figure 2. 2: Affected Structures due to Road Widening (Rural Area)

2.9 Drainage Network Management Plan

2.9.1 Existing Drainage Condition

The Feni River, Muhuri River, Amir Ali Khal, Gobania Khal, Kanamachi Khal, Khaiyachhara Khal, Mohamaya Khal, Muhuri Project Khal, Molihas Khal, Baromashi Khal, and Osi Miah Khal are the main drainage channels in the rural area. This area faces heavy flash flood during the monsoon. At some places, canal or khal are not connected with each other. The Feni River and The Muhuri River passes through Dhum Union, Hinguli Union, Ichhakhali Union, Karerhat Union, and Osmanpur Union. Mohamaya Lake is one of the biggest lakes situated at Karerhat Union and its area about 494.52 acres. Khals are the part of primary drainage network while ponds and lakes act as water retentions ponds which have important implications in overall drainage network design. Total are devoted to water bodies in rural area is 16125.13 acres. Table 2. 18 show the total area covered by existing water bodies in rural area of Mirsharai Upazila.

Table 2. 18: Existing Water Bodies in Rural Area of Mirsharai Upazila

Type of Waterbody	Area in Acre
Ditch	218.29
Pond	7229.89
Khal	1342.01
Lake	524.24
River	897.76
Bay of Bengal	5913.13
Total area covered by Water bodies	16125.35

Source: Field Survey, 2018-19

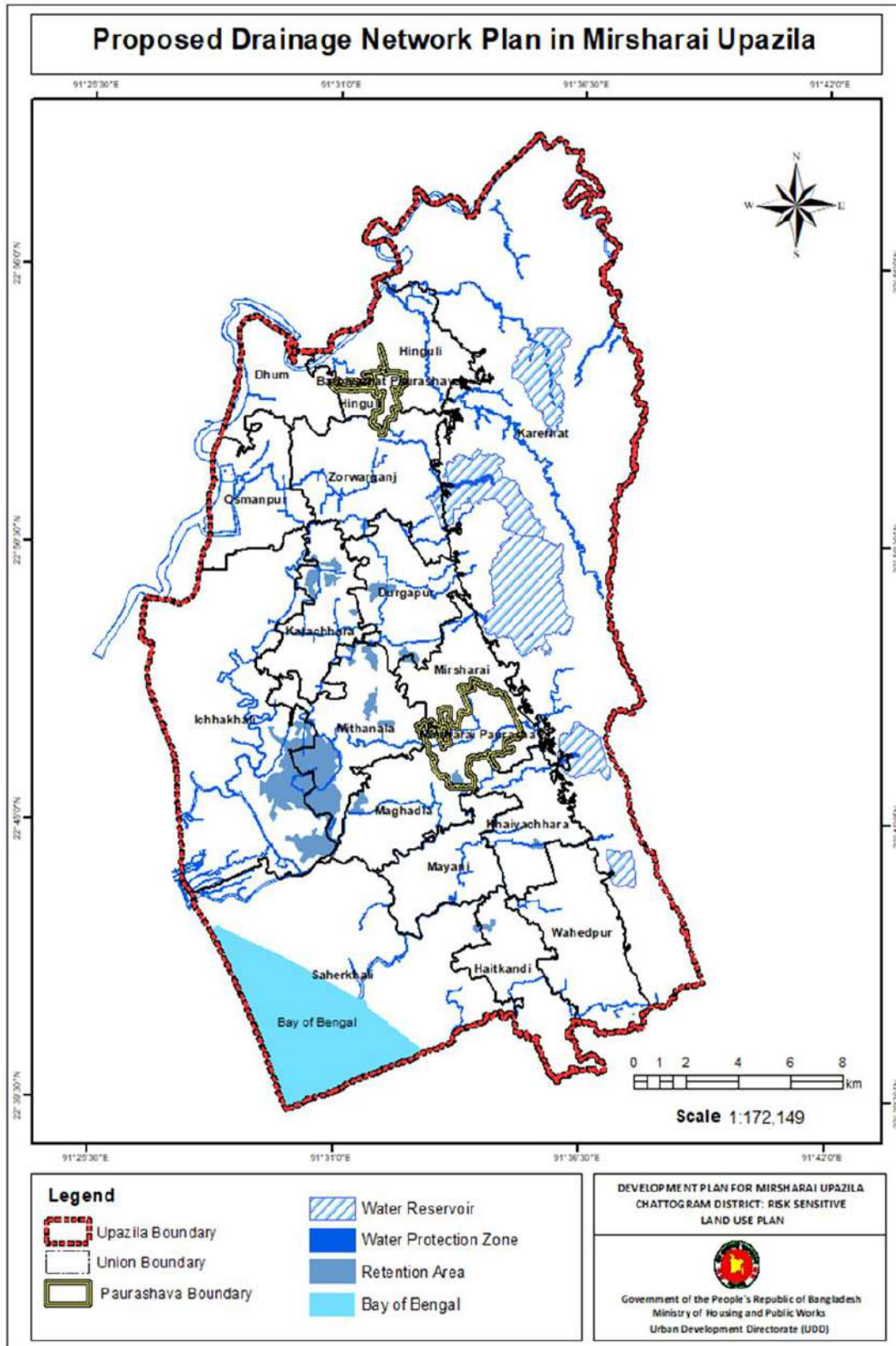
2.9.2 Plan for Drainage Management

To solve the overall drainage problem a Drainage Plan needs to be an integral part of Development Plan. During preparation of Development Plan special emphasis has been given to retain the existing natural water bodies. There are many small and big canal, khal and rivers passes through the Upazila. Those river and Khal are the main drainage channel of the Upazila. At some places canal or khal are not connect with main water channel. New canal has been proposed there. Water bodies area bigger than 0.50 acre has been proposed as water retention pond. It is suggested to open up these filled up khals by excavation. Khal links should be excavated and links reestablished. Map 2. 11 show the proposed drainage network plan of Mirsharai Upazila.

Table 2. 19: Water Protection Zone

Water Protection Zone	Buffer
River Protection Zone	50-meter buffer from river edge
Khal Protection Zone	10-meter buffer from khal edge

Map 2. 11: Proposed Drainage Network Plan for Mirsharai Upazila



2.10 Environmental Management Plan

2.10.1 Existing Environment Condition

Physical environment of Mirsharai Upazila include its overall climatic condition along with the topographical and geological condition. With the increase of housing along with population will produce impact on the environment. Rapid urbanization and numerous human activities will deteriorate the environment, if the infrastructure is not developed as per requirement. Therefore, before planning of any development, possible adverse environmental impact should be studied.

2.10.2 Existing Ecological Condition

Mirsharai Upazila is very rich in biodiversity. The wildlife habitats of this Upazila consist of hill forests, water streams, freshwater lakes, canals, ponds, ditches, coastal mangroves, homestead vegetation and so on. The diverse habitats of this Upazila have developed a complex ecosystem, which supports a diverse group of flora and fauna; many of them are threatened nationally as well as globally. The surrounding hill forests of this Upazila are very dense and hold diverse group of wild animals. The hill streams and lake serve as a feeding and breeding ground for many threatened species. The forest area supports at least 26 species of nationally threated wild animals of which 4 species of amphibians, 10 reptiles, 1 bird and 11 species of mammals. Any degradation or alteration in the habitats of these threatened species may cause the decline of their population, which will ultimately create threat to their extinction.

2.10.3 Plans for Environmental Management

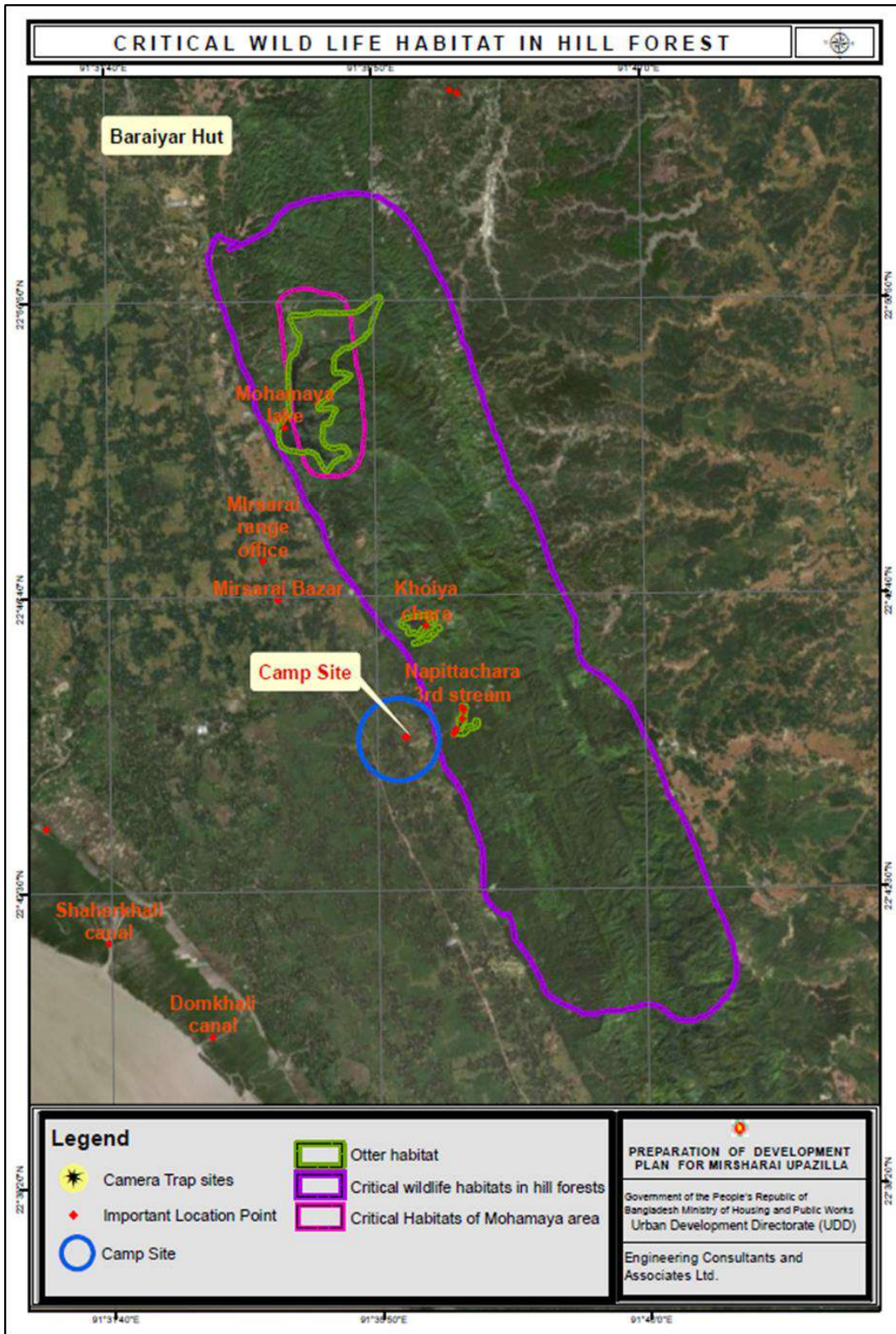
Critical Habitats of Terrestrial Forest Mammals: The forest habitat must be protected and should be kept as it is to support natural regeneration. Tourist activities must be restricted to only assigned areas. Tourists should not be allowed everywhere in the forest.

Critical Otter Habitats: Tourist activities should be restricted in hill streams. None of the activities should be allowed in core areas of otter habitats. Pollution in hill streams must be prevented to conserve fish diversity in hill streams.

Critical Amphibian and Reptile Habitats: Tourists should not be allowed to take bath or doing any other activities in hill streams (particular portion of the stream). Access of tourists must be sized before sun set. Awareness building is needed among the local inhabitants to conserve threatened amphibians and reptiles and their habitats.

Development of Ecotourism: Water based entertainment should be encouraged in Mohamaya Lake rather than hiking in hill forests. In Mohamaya Lake, infrastructure development (if necessary) must be restricted to the western side of the lake. It should not be allowed in the eastern side-which is continuous with the hill forest. In hill streams, like Khaiyachhara and Napittachhara, controlled ecotourism should be practiced. Visitors and their activities must be restricted to the first portion of the stream; should not allow any activities in the upper portion of the streams.

Map 2. 12: Ecologically Critical Hill Forest Area in Mirsharai Upazila



2.11 Union Wise Proposed Land Use

2.11.1 Dhum Union

Out of the total 3006.50 acres of land of Dhum union, the area of 1105.36 acres (36.77%) land has been proposed for water retention area purpose. Besides, 25.71% land has been proposed for agricultural purpose. Followed by residential use 12.22%, khal catchment area 11.82%, waterbody 7.72%, circulation network 5.18%, industrial 0.15%, community facilities 0.11%, and educational facilities 0.09% land has been proposed. Table 2. 20 show the proposed land use of Dhum Union.

Table 2. 20: Proposed Land Use of Dhum Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Agricultural	772.86	25.71
2	Circulation Network	155.80	5.18
3	Commercial	0.80	0.03
4	Community Facilities	3.23	0.11
5	Education and Research	2.67	0.09
6	Health Facilities	0.28	0.01
7	Industrial	4.52	0.15
8	Khal Catchment Area	355.51	11.82
9	Open Space and Recreation	5.08	0.17
10	Residential	367.37	12.22
11	Transport Facilities	0.35	0.01
12	Utility Facilities	0.55	0.02
13	Water Retention Area	1105.36	36.77
14	Waterbody	232.10	7.72
	Total	3006.50	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, 21 development proposals have been recommended for Dhum Union. About 17.45 acres area has been covered with these proposals. Among those proposals, one eidgah, one cremation ground and one graveyard has been proposed for community facilities purpose. Besides, three kitchen market for commercial purpose, one primary school and one high school for educational facilities purpose, two playgrounds and one children park for open space and recreational purpose, two community clinics for health facilities purpose, two CNG stands for transport facilities purpose, two public toilets and four waste transfer stations for utility services have also been proposed for this union. Detail list of proposed facilities for Dhum Union is presented in Table 2. 21.

Table 2. 21: List of Proposed Facilities for Dhum Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.23	Mobarakghona_034_002	Overlap 520, 2340, Overlap 526, 2340, Overlap 555, 2305, Overlap 568 2300, Overlap 580, 2349, Overlap 581 2349, Overlap 582, 2349, Overlap 589 2350, Overlap 590,2351, Overlap 592 2351, Overlap 914, 2348, Overlap 915 2348, Overlap 917, 2348
			Dhum_023_001	663, 664, 666, 658, 660
		0.43	Dhum_023_003	8140, 8141, 8142, 8143, 8144, 8145, 8147
		0.15	Dhum_023_003	6343, 6344, 6345, 6346, Overlap 1241 6343, Overlap 1242, 6343, Overlap 1243, 6344, Overlap 1244, 6344
Community Facilities	Community Center	0.16	Dhum_023_003	7440, 7452, 7453, 7457
	Cremation Ground	1.66	Char Kalidas_096_000	176, 178, 179, 180, 188, 190, 191, 192, 193, 194, 196, 197, 198,
	Graveyard	1.42	Dhum_023_001	137, 138
Mobarakghona_034_002			2267, 2273, 2271, 2272, 2268, 2258, 2270, 2269, 2257, 2396, 2395	
Education and Research	High School	2.67	Mobarakghona_034_002	2428, 2429, 2411, 2412, 2407, 2413, 2414, 2415, 2404, 2427, 2432, 2431, 2424, 2433, 2426, 2425
Health Facilities	Community Clinic	0.16	Dhum_023_001	1, 6, 7, 335
			Mobarakghona_034_001	1344
Open Space and Recreation	Playground	0.51	Dhum_023_001	696, 697, 698, 699, 700, 705, 706, 707, 708, 709, 710, 711, 712, 713
	Children Park	4.57	Mobarakghona_034_001	822, 823, 836, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 850, 851, 852, 863, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 935, 936, 938, 939
		0.15	Dhum_023_003	7428, 7429, 7431, 7432, 7440

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Transport Facilities	CNG Station	0.19	Dhum_023_001	469, 470, 471, 472, 477
Utility Services	Waste Transfer Station	0.08	Dhum_023_001	640, 658, 663, 666, 667, 720
		0.07	Dhum_023_003	8139, 8140, 8147
		0.08	Dhum_023_001	1002
		0.11	Dhum_023_003	6345, 6346, 6347, 6348, 6351
	Public Toilet	0.08	Dhum_023_001	1002, 1003
		0.12	Dhum_023_003	8144, 8145, 8153, 8154, 8155

Source: GIS Database, MUDP (2017-2037)

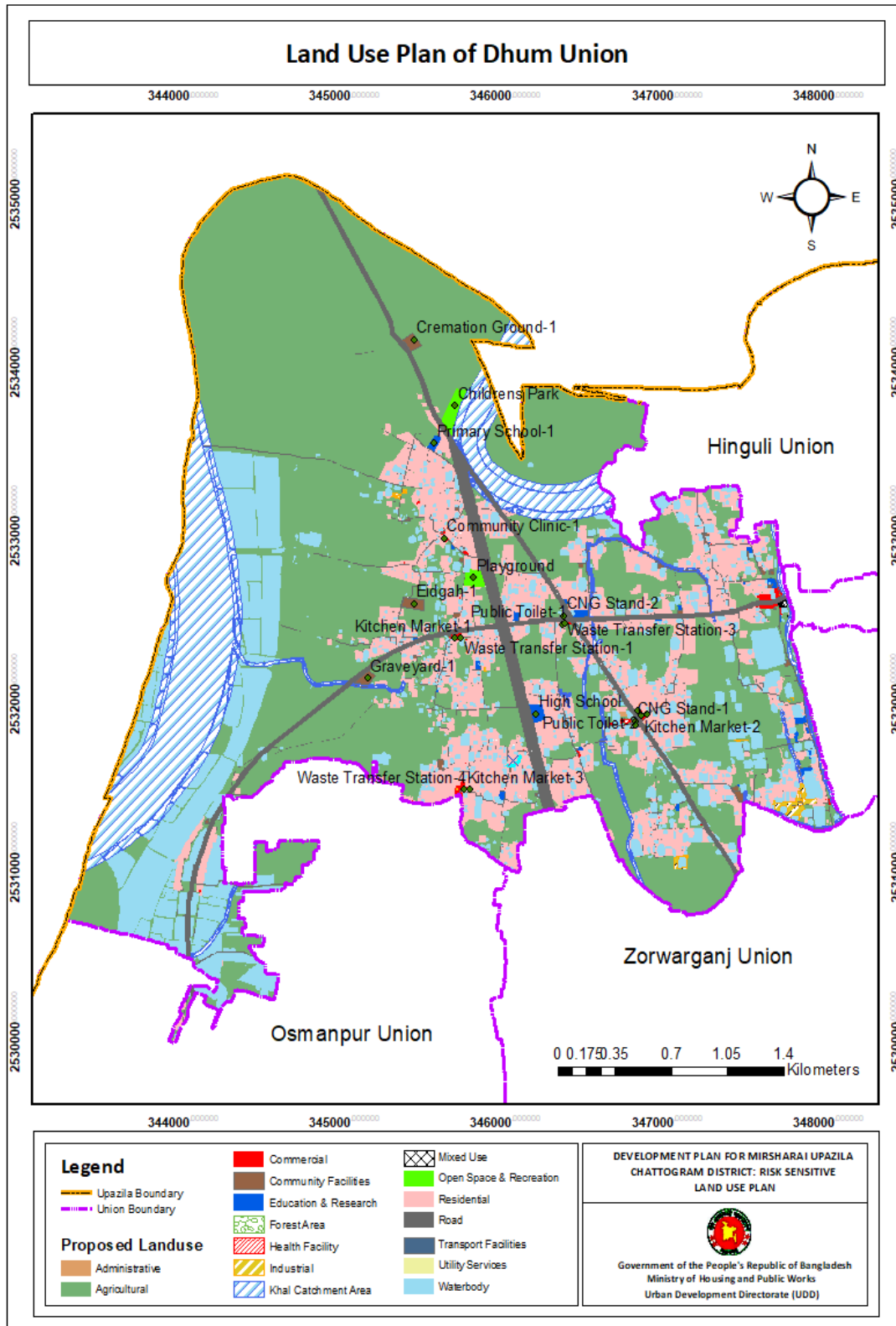
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 26.07 km road has been proposed in Dhum Union. About 2.23 km of new roads has been proposed and about 23.84 km roads have been proposed for widening. The proposed road network status of Dhum Union has been shown in Table 2. 22.

Table 2. 22: Type Wise Proposed Road Network in Dhum Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	2.23	-	2.23
Regional Highway	-	4.86	4.86
Union Road	-	2.52	2.52
Upazila Road	-	0.48	0.48
Village Road	-	15.98	15.98
Total	2.23	23.84	26.07

Source: GIS Database, MUDP (2017-2037)

Map 2. 13: Proposed Land Use of Dhum Union



2.11.2 Durgapur Union

Durgapur Union is agro-based union. Agricultural land has been given the highest priority while preparing the proposed land use plan of Durgapur Union. Out of total 3806.43 acres of land of this union, 1944.40 acres (51.08%) of land of this union has been proposed for agricultural purpose. Residential area has been proposed which area is 923.34 acres (24.26%) of land. Followed by waterbody 10.27%, circulation network 4.75%, water retention area 3.27%, industrial 1.23%, forest 0.65%, commercial 0.43%, educational facilities 0.31%, community facilities 0.30% has been proposed. Table 2. 23 show the proposed land use of Durgapur Union.

Table 2. 23: Proposed Land Use of Durgapur Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.42	0.04
2	Agriculture	1944.40	51.08
3	Circulation Network	180.92	4.75
4	Commercial	16.20	0.43
5	Community Facilities	11.59	0.30
6	Education and Research	11.76	0.31
7	Forest	24.86	0.65
8	Health Facilities	2.72	0.07
9	Industrial	46.64	1.23
10	Khal Catchment Area	123.55	3.25
11	Mixed Use	0.49	0.01
12	Open Space and Recreational Facilities	2.02	0.05
13	Residential	923.34	24.26
14	Transport Facilities	0.62	0.02
15	Utility Facilities	0.56	0.01
16	Water Retention Area	124.62	3.27
17	Waterbody	391.07	10.27
	Total	3806.43	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, number of 23 development proposals have been recommended for Durgapur Union. About 12.05 acres area has been covered with these proposals. Among those proposals, three eidgah, one cremation ground and one graveyard has been proposed for community facilities purpose. Besides, one kitchen market for commercial

purpose, one primary school and high school and one high school for educational facilities purpose, two playgrounds for open space and recreational purpose, two CNG stands for transport facilities purpose, two public toilets and three waste transfer stations for utility services have also been proposed for this union. Detail mauza wise plot schedule of proposed development facilities for Durgapur Union is presented in Table 2. 24. Map 2. 14 shows proposed land use of Durgapur Union.

Table 2. 24: List of Proposed Facilities for Durgapur Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.32	Durgapur_052_002	4374, 4375, 4376, 4364, 4378
		0.29	Janarddanpur_045_000	210, 211, 252, 255, 256
Community Facilities	Eidgah	0.35	Durgapur_052_002	3357, 3365, 3366, 3653
		0.43	Hajisarai_014_000	424, 425, 426, 429, 430, 431, 623, 625
		0.79	Gopalpur_047_000	1547, 1548, 1549, 1649, 1650, 1651, 1652, 1653, 1655, 1677
	Cremation Ground	0.44	Durgapur_052_003	7268, 7269, 7267, 7266
			Durgapur_052_005	20005, 20007, 20004, 20001
Graveyard	0.71	Durgapur_052_004	8973, 8974, 8972, 8967, 8689, 8677, 8882	
Education & Research	Primary School and High School	2.10	Hariharpur_048_000	337, 338, 339, 347, 351, 352, 353, 354, 355, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386
	Primary School	1.05	Hariharpur_048_000	27, 106, 111, 112, 114, 15, 16, 17, 113, 115, 116
Open Space and Recreation	Playground	0.96	Durgapur_052_001	1907, 1905, 1884, 1883, 1880, 1908, 1909, 1911
		1.06	Hajisarai_014_000	1266, 1377, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1398, 1399, 1400, 1401, 1402, 1403, 1405, 1406, 1409, 1410, 1413, 1297, 1397
Transport Facilities	CNG Stand	0.37	Gopalpur_047_000	766, 1761
		0.25	Durgapur_052_004	8367, 9359
Health Facilities	Community Clinic	0.24	Janarddanpur_045_000	246, 247, 250, 251, 258, 259, 715, 717
		0.52	Hajisarai_014_000	926, 927, 928, 929, 849
		0.30	Durgapur_052_002	3197, 3653, 3737, 3740, 3741, 3742, 3743, 3748
		0.65	Durgapur_052_001	1301, 1302, 1303, 1288, 1287, 2450
		0.66	Raghunathpur_050_000	403, 404, 416, 460, 462, 465

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Utility Services	Waste Transfer Station	0.12	Gopalpur_047_000	828, 830, 832, 833, 1166
		0.10	Durgapur_052_004	1, 2, 409
		0.13	Durgapur_052_002	4364, 4378
	Public Toilet	0.11	Gopalpur_047_000	828, 833, 822, 1166
		0.10	Durgapur_052_004	8534, 8536, 8366, 8340, 8452

Source: GIS Database, MUDP (2017-2037)

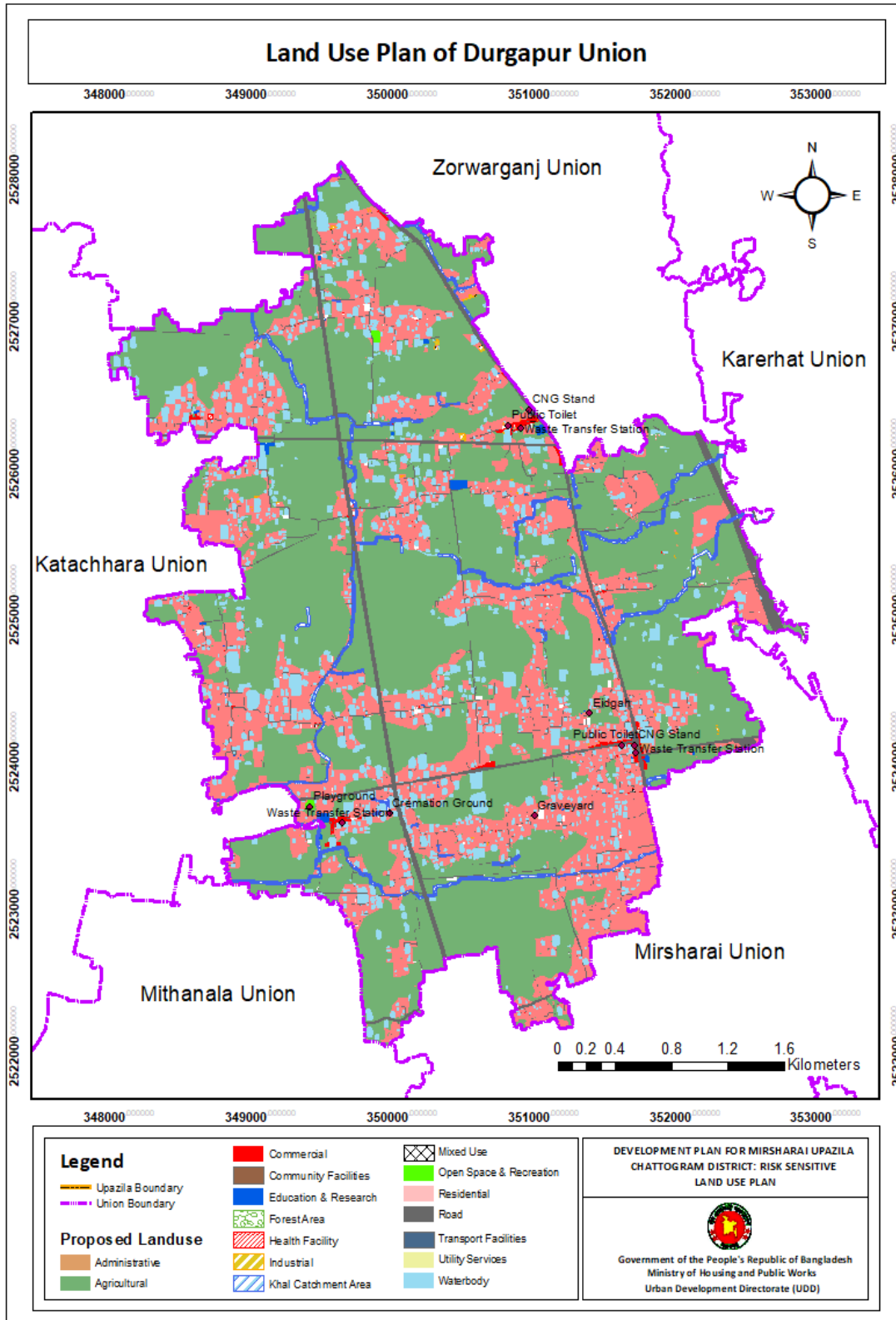
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 31.18 km road has been proposed in Durgapur Union. About 10.89 km of new roads has been proposed and about 20.30 km roads have been proposed for widening. The proposed road network status of Durgapur Union has been shown in Table 2. 25.

Table 2. 25: Type Wise Proposed Road Network in Durgapur Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway		2.35	2.35
Regional Highway	5.31		5.31
Union Road	2.48	1.05	3.53
Village Road	3.10	16.90	20.00
Total	10.89	20.30	31.18

Source: GIS Database, MUDP (2017-2037)

Map 2. 14: Proposed Land Use of Durgapur Union



2.11.3 Haitkandi Union

Out of total 3527.04 acres of land in Haitkandi Union, around 2161.94 acres (61.26%) of land has been proposed for agricultural purpose. Proposed land use in this union followed by residential 25.63%, waterbody 6.91%, circulation network 4.31%, education and research 0.48%, commercial 0.44%, community facilities 0.19% and health facilities 0.05%. Table 2. 26 shows proposed land use of Haitkandi Union.

Table 2. 26: Proposed Land Uses of Haitkandi Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.58	0.02
2	Agricultural	2161.07	61.26
3	Circulation Network	152.06	4.31
4	Commercial	15.62	0.44
5	Community Facilities	6.79	0.19
6	Education and Research	16.98	0.48
7	Health Facilities	1.77	0.05
8	Industrial	0.22	0.01
9	Khal Catchment Area	21.21	0.60
10	Open Space and Recreation	2.07	0.06
11	Residential	904.16	25.63
12	Transport Facilities	0.68	0.02
13	Utility Services	0.75	0.02
14	Waterbody	243.89	6.91
	Total	3527.04	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan about 20 proposed facilities has been incorporated for Haitkandi Union according to the PRA demand and based on the planning standards. About 15.20 acres area has been covered with these proposals. Among those proposals, two kitchen markets, one cremation ground and one graveyard, one vocational training institute, four community clinics, one playground, three CNG stands, three public toilets, and four waste transfer stations have also been proposed for this union. Detail mauza wise plot schedule of proposed development facilities for Haitkandi Union is presented in Table 2. 27. Map 2. 15 shows proposed land use of Haitkandi Union.

Table 2. 27: List of Proposed Facilities for Haitkandi Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.35	Haitkandi_084_003	3224, 3225, 3226, 3239, 3240, 3241, 3242, 3243, 3252
		0.40	Dakshin Muradpur_083_001	211, 212, 213, 214, 295, 296, 297, 298, 299, 301, 251
Community Facilities	Cremation Ground	0.60	Kurua_085_002	6714
			Dakshin Muradpur_083_002	4045, 4049, 4073, 4076, 4077, 4078, 4079, 4081, 4082, 4083, 4080
	Graveyard	1.19	Kurua_085_001	1530, 1543, 1544, 1545, 1546, 1547, 1548, 1663, 1664, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 99999, 1678, 1280, 1677
Education and Research	Vocational Training Institute	7.72	Kurua_085_003	8368, 8369, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8388, 8389, 8390, 8391, 8392, 8393, 8394, 8395, 8396, 8397, 8398, 8399, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8415, 8416, 8418, 8419, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8429, 8431, 8432, 8433, 8430, 8442, 8443, 8444, 8445, 8446, 8447, 8453, 8454, 8455, 11139,
Health Facilities	Community Clinic	0.30	Kurua_085_003	10476, 10469, 10465, 10470, 10473, 10472, 10463, 10464, 10461, 10471, 99999
		0.26	Haitkandi_084_003	6642, 6643, 6644, 6654, 6655, 6656, 6687
		0.36	Haitkandi_084_001	643, 644, 645, 646, 647
		0.51	Dakshin Muradpur_083_001	1286, 1288, 1289, 1291, 1292, 1289, 4934
Open Space & Recreation	Playground	2.07	Kurua_085_003	8365, 8368, 8369, 8385, 8383, 8384, 8387, 8386, 8382, 8381, 8388, 8389
Transport Facilities	CNG Stand	0.22	Kurua_085_003	8315, 8326, 8318, 8319, 8320, 8493, 8492
		0.26	Haitkandi_084_001	675, 677, 678, 671
		0.21	Dakshin Muradpur_083_001	177, 178, 179, 216, 227, 242, 244, 245, 215, 217, 218
Utility Services	Waste Transfer Station	0.12	Kurua_085_003	8012, 8057, 8055, 8056, 8060
		0.11	Dakshin Muradpur_083_001	209, 211, 304, 305, 306, 310, 208, 210, 251
		0.11	Haitkandi_084_003	3242, 3245, 3252
		0.08	Haitkandi_084_003	3433, 3435, 3436, 3426, 3432
	Public Toilet	0.10	Kurua_085_003	8326, 8493, 8490, 8491
		0.12	Dakshin Muradpur_083_001	211, 212, 213, 304, 305, 306, 210, 251
		0.11	Haitkandi_084_001	601, 604, 608

Source: GIS Database, MUDP (2017-2037)

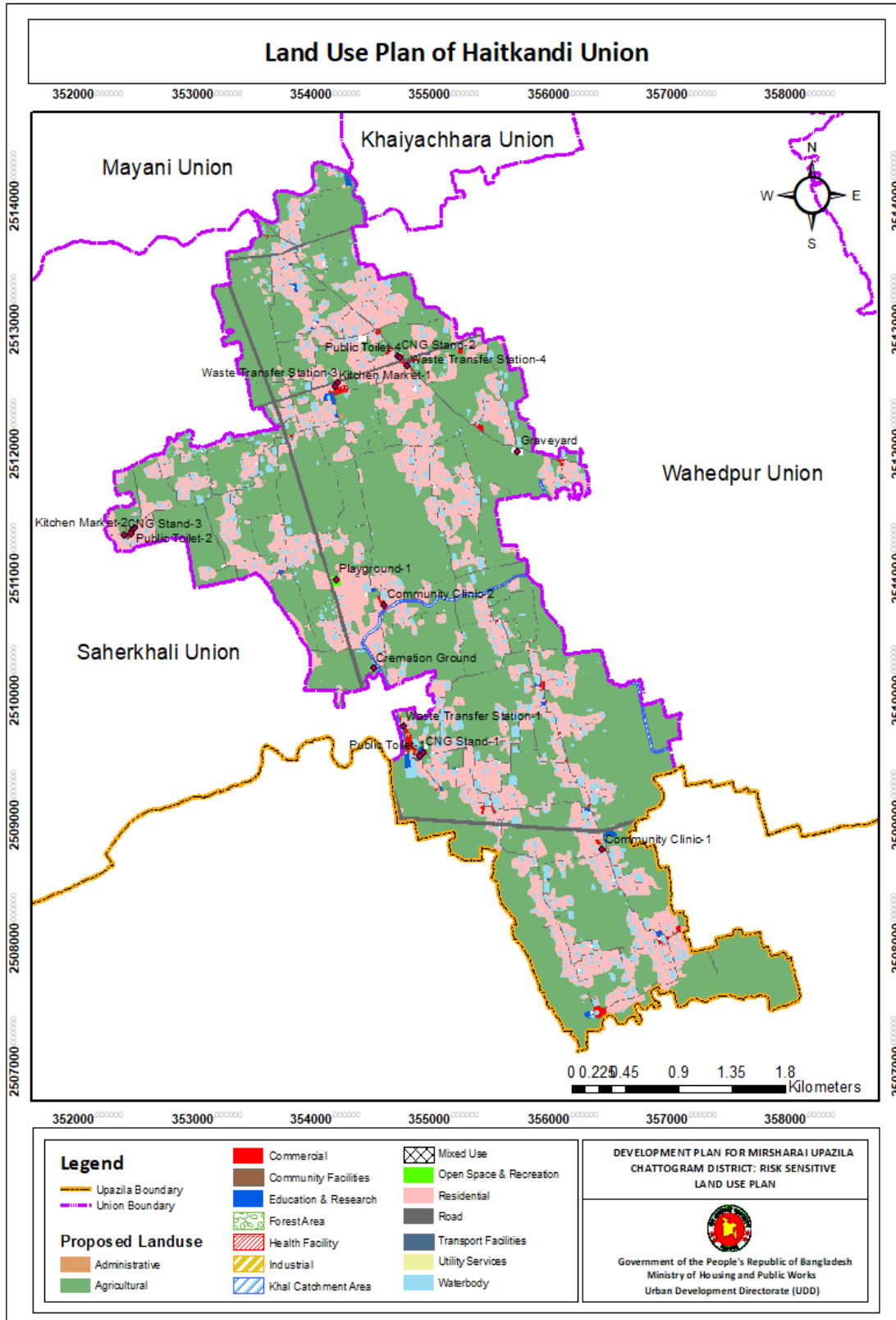
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 49.42 km roads has been proposed in Haitkandi Union. About 9.04 kilometer of new roads has been proposed and about 40.37 km roads have been proposed for widening. The proposed road network status of Haitkandi Union has been shown in Table 2. 28.

Table 2. 28: Proposed Road Network in Haitkandi Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	5.86	-	5.86
Union Road	-	0.34	0.34
Upazila Road	-	8.32	8.32
Village Road	3.18	31.72	34.90
Total	9.04	40.37	49.42

Source: GIS Database, MUDP (2017-2037)

Map 2. 15: Proposed Land Use of Haitkandi Union



2.11.4 Hinguli Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Hinguli Union. Out of the total 4382.29 acres of land of this union, the area of 2452.84 acres (55.84%) has been proposed for agricultural purpose. Followed by residential 22.22%, waterbody 6.32%, forest 4.44%, circulation network 3.89%, community facilities 0.31%, educational facilities 0.29%, industrial 0.12%, and commercial 0.16% has been proposed. Table 2. 29 show the proposed land use of Hinguli Union.

Table 2. 29: Proposed Land Use of Hinguli Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	2.21	0.05
2	Agriculture	2452.73	55.84
3	Circulation Network	170.84	3.89
4	Commercial	7.07	0.16
5	Community Facilities	13.47	0.31
6	Education and Research	12.75	0.29
7	Forest	194.98	4.44
8	Health Facility	0.70	0.02
9	Industrial	5.34	0.12
10	Khal Catchment Area	274.98	6.26
11	Mixed Use	0.61	0.01
12	Open Space and Recreation Facilities	1.49	0.03
13	Residential	976.15	22.22
14	Transport Facilities	0.24	0.01
15	Utility Services	1.32	0.03
16	Waterbody	277.62	6.32
	Total	4382.29	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, 12 development proposals have been recommended for Hinguli Union. About 15.11 acres of land has been covered with these proposals. On the basis of demand as revealed from PRA, one cremation ground and two graveyards has been proposed for community facilities purpose. One primary school cum cyclone shelter, one high school, and one college has been proposed for education and research use purpose. To provide health facilities to the local people one community clinic have been proposed. Besides, one Union Parishad Office, one maternity clinic and child care center, one CNG stand, one public toilet, and one waste transfer stations

have also been proposed for this union. Detail mauza wise plot schedule of proposed development facilities for Hinguli Union is presented in Table 2. 30. Map 2. 16 shows proposed land use of Hinguli Union.

Table 2. 30: List of Proposed Facilities for Hinguli Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Administrative Use	Union Parishad Office	0.48	Purba Hinguli_011_004	8070, 8072, 8073, 8081, 8082, 8083, 8084
Commercial	Kitchen Market	0.52	Azamnagar_021_002	3912, 3928, 3929, 3930, 3931, 3932, 3934, 3938, 3933
Community Facilities	Cremation Ground	0.25	Purba Hinguli_011_003	3680, 3684, 3685, 4993, 3654
	Graveyard	1.54	Purba Hinguli_011_001	581, 583, 587, 588, 593, 594, 599, 600, 601, 602, 603, 604, 605, 608, 612, 613, 614
		0.66	Paschim Hinguli_022_002	925, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1742, 1743, 1744
		0.82	Jamalpur_020_002	3570, 3573, 3574, 3576, 3577, 3578, 3579, 3580, 3583, 3630, 3633, 3634, 3635, 3595, 3629, 3572, 3575
Education and Research	Primary School	1.16	Purba Hinguli_011_002	3162, 3163, 3164
			Purba Hinguli_011_003	4035, 4036, 4037, 4038, 4039
	1.12	Jamalpur_020_002	3305, 3519, 3520, 3521, 3522, 3523, 3524, 3525, 3527, 3528, 3529, 3530, 3531, 3532, 3533, 3534	
	1.08	Purba Hinguli_011_004	7700, 7701, 7715, 7716, 7717, 7718, 7719, 7738, 8050, 8054, 8055, 8056, 8057, 7699	
	High School	2.24	Purba Hinguli_011_001	923, 924, 925, 926, 927, 928, 933, 934, 950, 1364, 1365, 1366, 1367, 1368, 1369, 1370, 930
College	2.77	Purba Hinguli_011_002	2816, 2817, 2818, 2820, 2821, 2842, 2843, 2844, 2846, 2847, 2852, 2672, 2673, 2674, 2687, 2819, 2822, 2823, 2824, 2825, 2826	
Open Space and Recreation Facilities	Playground	0.47	Paschim Hinguli_022_002	1592, 1596, 1597, 1598, 1599, 1600, 1601, 1591
		1.02	Purba Hinguli_011_004	7698, 7738, 8056, 8057, 8059, 8060, 8061, 8062, 7697, 7699, 8063, 9177
Health Facilities	Community Clinic	0.57	Purba Hinguli_011_002	3015, 3019, 3130, 3138

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Transport Facilities	CNG Stand	0.24	Purba Hinguli_011_001	1475, 1484, 1487, 1488, 1489, 1490
Utility Services	Waste Transfer Station	0.12	Azamnagar_021_002	3912, 3928, 3934
	Public Toilet	0.05	Purba Hinguli_011_001	1504, 1505

Source: GIS Database, MUDP (2017-2037)

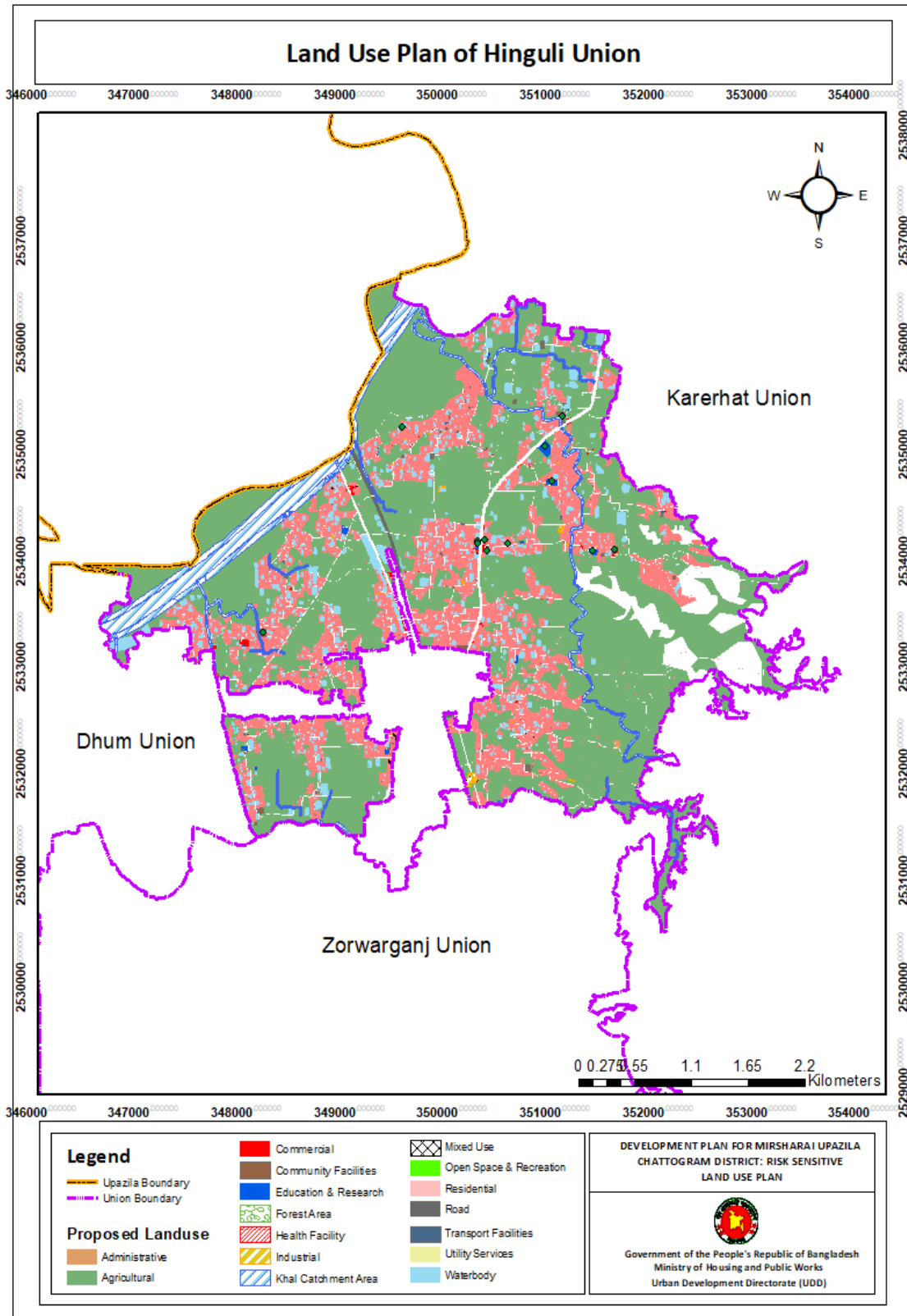
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 56.74 km road has been proposed in Hinguli Union. About 2.05 kilometer of new roads has been proposed and about 54.69 km roads have been proposed for widening. The proposed road network status of Hinguli Union has been shown in Table 2. 31.

Table 2. 31: Proposed Road Network in Hinguli Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	0.23	3.44	3.67
Union Road		0.78	0.78
Village Road	1.81	50.48	52.28
Zila Road	0.01		0.01
Total	2.05	54.69	56.74

Source: GIS Database, MUDP (2017-2037)

Map 2. 16: Proposed Land Use of Hinguli Union



2.11.5 Ichhakhali Union

Ichhakhali Union is agro-based union. Out of total 14932.22 acres of land of this union, 7309.79 acres (48.68%) of land of this union has been proposed for agricultural purpose. Residential area has been proposed which covers 1457.40 acres (9.71%) of land. Followed by waterbody 9.51%, circulation network 2.75%, commercial 0.09%, community facilities 0.03%, educational facilities 0.08% and health facilities 0.01% has been proposed. Table 2. 32 show the proposed land use of Ichhakhali Union.

Table 2. 32: Proposed Land Use of Ichhakhali Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.43	0.003
2	Agriculture	7309.79	48.68
3	Circulation Network	412.77	2.75
4	Commercial	13.93	0.09
5	Community Facilities	5.07	0.03
6	Economic Zone	3134.98	20.88
7	Education and Research	11.44	0.08
8	Forest	738.11	4.92
9	Health Facilities	1.85	0.01
10	Industrial	1.62	0.01
11	Khal Catchment Area	498.24	3.32
12	Mixed Use	0.13	0.001
13	Open Space and Recreational Facilities	1.82	0.01
14	Residential	1457.40	9.71
15	Transport Facilities	0.29	0.002
16	Utility Facilities	0.45	0.003
17	Waterbody	1428.44	9.51
	Total	14932.22	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 19 proposed facilities has been incorporated for Ichhakhali Union. About 10.51 acres area has been covered with these proposals. Among those proposals there are 2 eidgah, 1 graveyard, 1 primary and high school, 1 playground, 2 kitchen markets, 3 community clinics, 2 CNG stands, 2 public toilets, and 2 waste transfer station. Detail mauza wise plot schedule of proposed development facilities for Ichhakhali Union is presented in Table 2. 33. Map 2. 17 shows proposed land use of Ichhakhali Union.

Table 2. 33: List of Proposed Facilities for Ichhakhali Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.22	Uttar Ichhakhali_041_007	14515, 14708, 14510, 14513, 14509, 14564, 14511
		0.48	Uttar Ichhakhali_041_004	5458, 5459
			Uttar Ichhakhali_041_005	8002, 8003, 8004, 8005, 8006, 8007, 8008, 8014
Community Facilities	Eidgah	0.67	Purba Ichhakhali_067_002	2465, 2464, 2462, 2461, 2463, 2459, 2460, 2458, 2714, 2713
		0.61	Uttar Ichhakhali_041_002	1706, 1707, 1708, 1719
			Uttar Ichhakhali_041_002	3123, 3124, 3125, 3127, 3132, 3137
			Uttar Ichhakhali_041_005	8017
	Graveyard	0.38	Uttar Ichhakhali_041_005	8212, 8209, 8210, 8215, 8208, 8207, 8206, 8223, 8211
		0.87	Uttar Ichhakhali_041_002	1601, 1602
Education and Research	Primary and High School	2.70	Paschim Ichhakhali_066_002	2449, 2450, 2451, 2458, 2459, 2460, 2461, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2494, 2495, 2496, 2555, 2462
Health Facilities	Community Clinic	0.35	Uttar Ichhakhali_041_006	10541, 10542, 10543, 10544, 10545
		0.64	Purba Ichhakhali_067_010	13321, 13322
		0.39	Uttar Ichhakhali_041_005	8099, 8098, 8097, 8096, 8095, 8094, 8092, 8093, 8090, 8279
		0.47	Paschim Ichhakhali_066_003	4602, 4604, 4724
Open Space and Recreation	Playground	0.87	Purba Ichhakhali_067_002	2488, 2491, 2480, 2489, 2490, 2479, 2474, 2477, 2476, 2475, 2469, 2470, 2467, 2465, 2464, 2462, 2468
		0.95	Uttar Ichhakhali_041_006	10148, 10181, 10182, 10183
Transport Facilities	CNG Stand	0.18	Uttar Ichhakhali_041_008	20216, 20208, 20207, 20206
		0.29	Uttar Ichhakhali_041_004	5470, 5439, 5440, 5519, 5470, 5440, 5519
Utility Services	Waste Transfer Station	0.13	Uttar Ichhakhali_041_008	19213, 19220, 19429, 19430, 19431, 19432
	Public Toilet	0.10	Uttar Ichhakhali_041_008	20103, 19203, 20100, 20104, 19202
		0.10	Uttar Ichhakhali_041_004	5461, 5470, 5440, 5519, 5470, 5440, 5519

Source: GIS Database, MUDP (2017-2037)

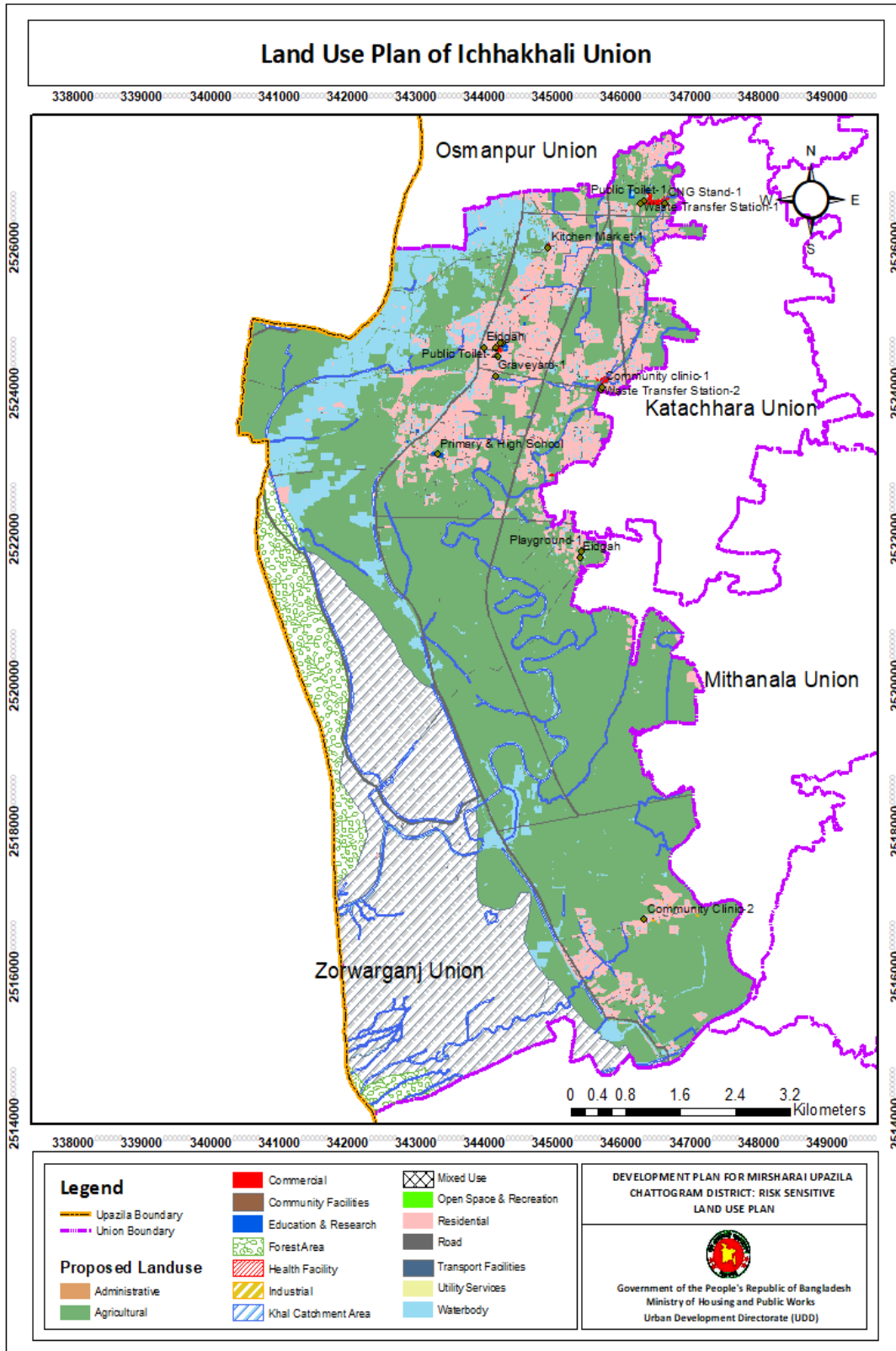
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 66.28 km road has been proposed in Ichhakhali Union. About 21.12 kilometer of new roads has been proposed and about 33.94 km roads have been proposed for widening. The proposed road network status of Ichhakhali Union has been shown in Table 2. 34.

Table 2. 34: Proposed Road Network in Ichhakhali Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	11.27		11.27
Union Road		5.37	5.37
Upazila Road	2.01	5.85	7.85
Village Road	7.84	33.94	41.78
Total	21.12	45.16	66.28

Source: GIS Database, MUDP (2017-2037)

Map 2. 17: Proposed Land Use of Ichhakhali Union



2.11.6 Karerhat Union

Karerhat Union is mainly hilly area. Out of total 37896.94 acres of land of this union, 29753.92 acres (78.44%) of land of this union has been proposed for forest purpose. Agricultural area has been proposed which covers 4363.21 acres (11.50%) of land. Followed by residential 3.53%, waterbody 2.39%, circulation network 0.72%, commercial 0.04%, community facilities 0.06%, educational facilities 0.02% and health facilities 0.002% has been proposed. Table 2. 35 show the proposed land use of Karerhat Union.

Table 2. 35: Proposed Land Use of Karerhat Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.63	0.002
2	Agriculture	4363.21	11.50
3	Circulation Network	271.28	0.72
4	Commercial	13.87	0.04
5	Community Facilities	23.19	0.06
6	Education and Research	6.07	0.02
7	Forest	29753.92	78.44
8	Health Facilities	0.79	0.002
9	Industrial	35.30	0.09
10	Khal Catchment Area	1212.66	3.20
11	Mixed Use	0.78	0.002
12	Open Space and Recreational Facilities	1.52	0.004
13	Residential	1340.90	3.53
14	Service Activity	0.06	0.000
15	Transport Facilities	1.65	0.004
16	Utility Facilities	0.48	0.001
17	Waterbody	906.31	2.39
	Total	37896.94	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local people demand, number of 13 development proposals have been recommended for Karerhat Union. About 7.56 acres area has been covered with these proposals. Among those proposals there are 1 kitchen market, 1 primary school, 1 cremation ground, 1 eidgah, 1 community clinic, 1 playground, 2 public toilets, 2 waste transfer stations, 2 CNG stands and 1 bus stand. Detail mauza wise plot schedule of proposed development facilities for Karerhat Union is presented in Table 2. 36 . Map 2. 18 show the proposed land use of Karerhat Union.

Table 2. 36: List of Proposed Facilities for Karerhat Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.23	Baraia_005_000	36, 30, 915, 31, 330
Education and Research	Primary School	1.43	Geramara_008_003	2901, 3134, 3117, 3116, 3114, 3115, 3003, 3113, 3111, 3112
Community Facilities	Cremation Ground	0.86	Joypur Purba Joar_001_001	116, 1467, 1468, 1482, 1483
	Eidgah	0.77	Geramara_008_003	2901, 3134, 3114, 3003, 3002
Health Facilities	Community Clinic	0.62	Geramara_008_003	2985, 2584, 2585, 2583
Open Space and Recreation	Playground	1.52	Geramara_008_003	2969, 2903, 2908, 2964, 2909, 2965, 2967, 2904, 2968, 2907, 2970, 2905, 2906
Utility Services	Public Toilet	0.15	Paschimjoar_002_002	2638, 2651, 2661
		0.11	Baraia_005_000	36, 30, 915, 31, 330
	0.11	Paschimjoar_009_002	2849, 2851, 4042	
	Waste Transfer Station	0.11	Joypur Purba Joar_001_002	4334, 4357, 4356, 4334
			Baraia_005_000	12
Transport Facilities	CNG Stand	0.35	Paschimjoar_009_002	2715
		0.27	Joypur Purba Joar_001_002	309
	Bus Stand	1.03	Paschimjoar_009_002	2638, 2659, 2660, 2661, 2662, 2663, 2664, 2670

Source: GIS Database, MUDP (2017-2037)

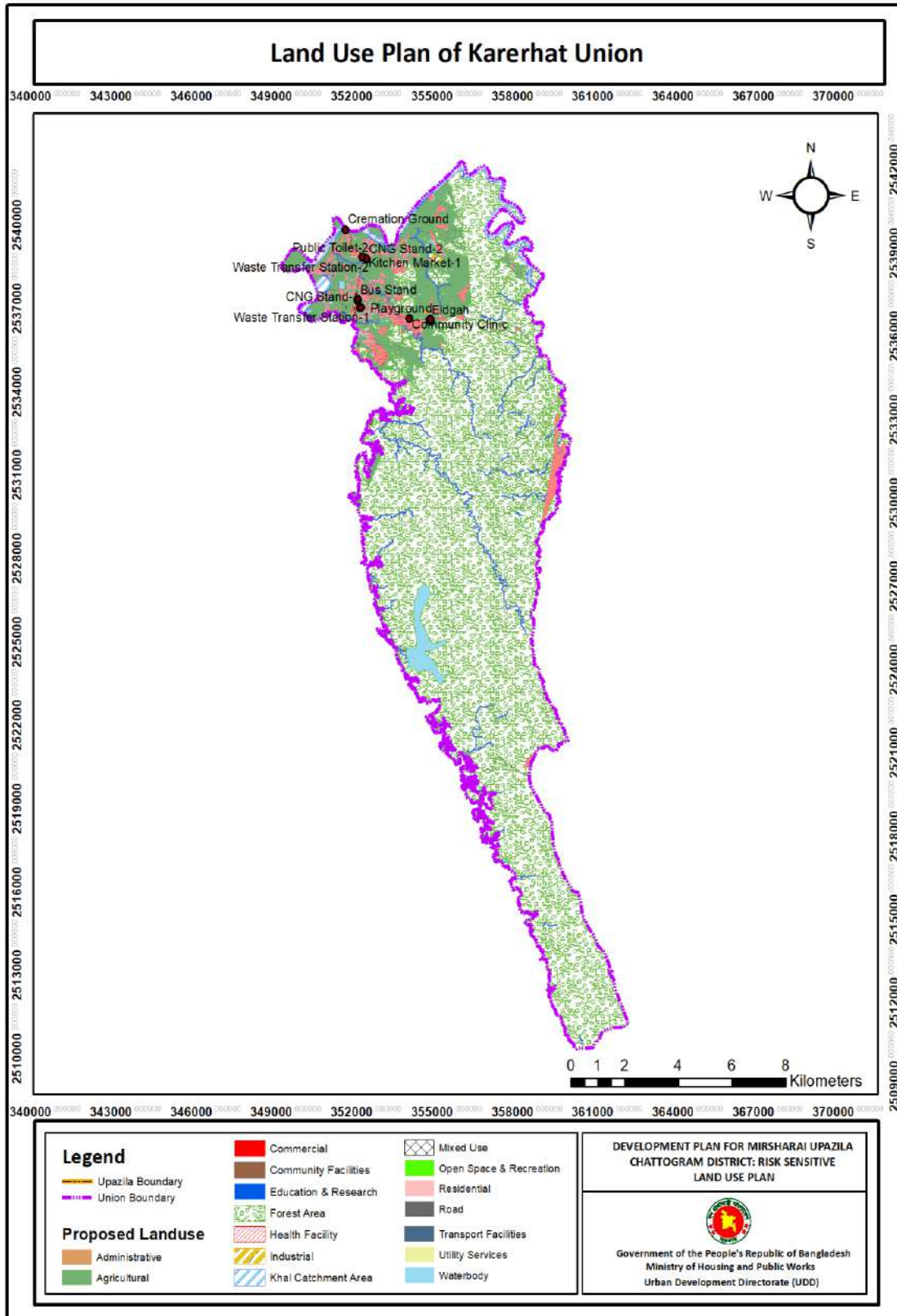
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total 58.31 kilometer length of road has been proposed in Karerhat Union. About 2.43 kilometer of new roads has been proposed and about 55.88 kilometer roads have been proposed for widening. The proposed road network status of Karerhat Union has been shown in Table 2. 37.

Table 2. 37: Proposed Road Network in Karerhat Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway		12.24	12.24
Village Road	2.43	40.21	42.63
Zila Road		3.44	3.44
Total	2.43	55.88	58.31

Source: GIS Database, MUDP (2017-2037)

Map 2. 18: Proposed Land Use of Karerhat Union



2.11.7 Katachhara Union

Katachhara Union is mainly is agro-based union. Out of total 3447.28 acres of land of this union, 1867.20 acres (53.66%) of land of this union has been proposed for agricultural purpose. Residential area has been proposed which covers 1013.73 acres (29.13%) of land. Followed by waterbody 7.21%, circulation network 6.16%, commercial 0.14%, community facilities 0.25%, educational facilities 0.36% and health facilities 0.08% has been proposed. Table 2. 38 show the proposed land use of Katachhara Union.

Table 2. 38: Proposed Land Use of Katachhara Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.80	0.05
2	Agriculture	1867.20	53.66
3	Circulation Network	214.44	6.16
4	Commercial	4.96	0.14
5	Community Facilities	8.70	0.25
6	Education and Research	12.47	0.36
7	Forest	0.36	0.01
8	Health Facilities	2.80	0.08
9	Industrial	5.01	0.14
10	Khal Catchment Area	93.36	2.68
11	Mixed Use	0.05	0.001
12	Open Space and Recreational Facilities	1.94	0.06
13	Residential	1013.73	29.13
14	Transport Facilities	0.59	0.02
15	Utility Services	1.22	0.04
16	Waterbody	251.02	7.21
	Total	3447.28	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 24 proposed facilities has been incorporated for Katachhara Union. About 19.58 acres area has been covered with these proposals. Among those proposals there are 1 graveyard, 1 primary school, 1 high school, 1 college, 2 playgrounds, 1 union parishad office, 2 kitchen markets, 3 community clinics, 3 CNG stands, 2 public toilets, and 4 waste transfer station. Detail mauza wise plot schedule of proposed development facilities for Katachhara Union is presented in Table 2. 39. Map 2. 19 shows proposed land use of Katachhara Union.

Table 2. 39: List of Proposed Facilities for Katachhara Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Administrative	Union Parishad Office	1.31	Katachhara_044_003	8478, 8466, 8465, 8463, 8464, 8460, 8458, 8457, 8462, 8459, 8456, 8461, 8446, 8455, 8444, 8454, 8443, 8442, 8452, 8447, 8448
Commercial	Kitchen Market	0.18	Baman Sundar_062_002	2019, 2020, 2021, 2030, 2031, 2032, 2033, 2034
			Paschim Mithanala_064_000	874, 880
		0.47	Bariakhali_065_002	4596, 4597, 4600, 4601
Community Facilities	Cremation Ground	1.97	Temuhani Muradpur_043_000	586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 602, 603, 920, 921, 922, 316
	Graveyard	1.66	Bariakhali_065_003	6875, 6878, 6879, 6880, 6887, 6888, 6889, 6890, 6891, 6892, 6893, 6894, 6895, 6896, 6897, 6898, 6899, 6901, 6903, 7180
Education and Research	Primary School	1.63	Katachhara_044_004	10547, 10806, 10548, 10546, 10550, 10549, 10807, 10494, 10539, 10808, 10540, 10545, 10809, 10537, 10810, 10538, 10544, 10542, 10543, 10811, 10541
	High School	2.335	Bariakhali_065_002	3487, 3495, 3499, 4001, 3485, 3494, 3493, 3492, 3488, 4052, 3489, 4002, 3491, 3490, 4271, 4011, 4003, 4004, 4010, 4005, 4006
	College	3.85	Bariakhali_065_003	8067, 8062, 8081, 8072, 8071, 8066, 8069, 8068, 8070, 8003, 8002, 8005, 8000, 8001, 8006, 7997, 7996, 8007, 7995, 8008, 7993, 7994, 8010
Health Facilities	Community Clinic	0.34	Temuhani Muradpur_043_000	1797, 1801
			Katachhara_044_001	331, 364, 365, 366, 1665
		0.92	Bariakhali_065_003	6853, 6852, 6851, 6847, 6850, 6997, 6848, 6849, 6846, 6845, 6844, 6826, 6827, 6843, 7002, 6998
		1.05	Katachhara_044_003	6405, 6406, 6407, 6409, 6410, 6408
Katachhara_044_004	10025, 10026, 10028, 10032, 10027, 10029, 10030, 10034, 10296			
Open Space and Recreation	Playground	0.85	Idilpur_042_000	502, 525, 526, 527, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540
		1.09	Katachhara_044_002	2795, 2794, 2793, 2792, 2791, 2790, 2858, 2841, 2837, 2840, 2842, 2839, 2843, 2844
Transport Facilities	CNG Stand	0.25	Katachhara_044_003	8820, 8847, 8848, 8846, 8851
		0.22	Baman Sundar_062_002	2002, 2004, 2005

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
			Paschim Mithanala_064_000	822, 824, 825
		0.11	Bariakhali_065_003	7614, 7599, 7600, 7601, 7612, 7613, 7611
Utility Services	Electric Sub-Station	0.59	Katachhara_044_003	8785, 8416, 8414, 8783, 8412, 8413, 8374, 8375, 8387
	Public Toilet	0.11	Katachhara_044_003	8820, 8856, 8859
		0.10	Baman Sundar_062_002	2006, 2007, 2008, 2009, 2010, 2011, 2021
			Paschim Mithanala_064_000	837
	Waste Transfer Station	0.11	Baman Sundar_062_002	2014, 2015, 2016, 2017
			Paschim Mithanala_064_000	843, 873
		0.10	Katachhara_044_003	8820, 8822, 8821, 8832, 8838
		0.13	Bariakhali_065_003	8104, 8105, 8106, 8107
0.08	Bariakhali_065_002	4597, 4600		

Source: GIS Database, MUDP (2017-2037)

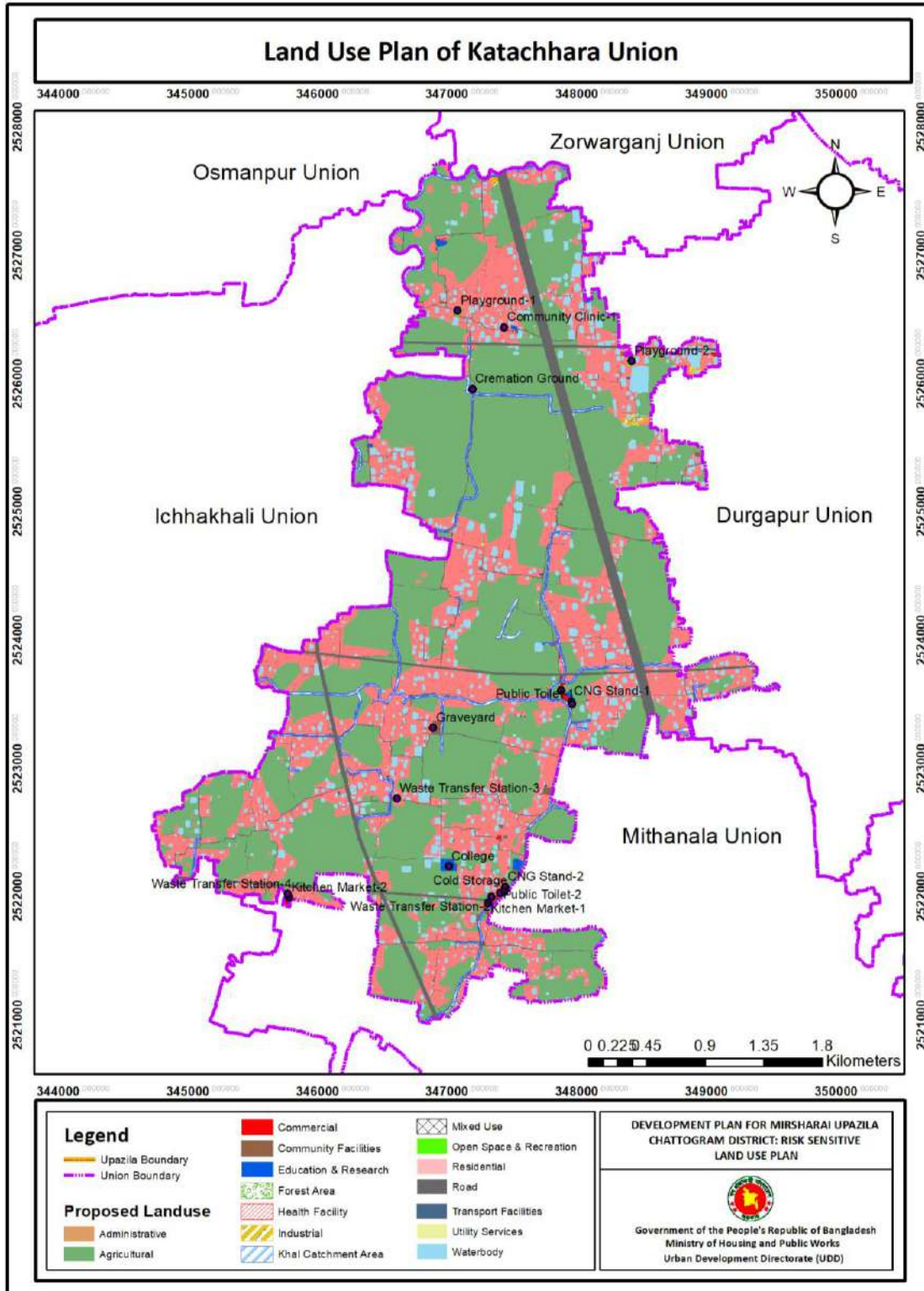
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total 43.64 kilometer length of road has been proposed in Katachhara Union. About 15.95 kilometer of new roads has been proposed and about 27.69 kilometer roads have been proposed for widening. The proposed road network status of Katachhara Union has been shown in Table 2. 40.

Table 2. 40: Proposed Road Network in Katachhara Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	4.38	-	4.38
Regional Highway	3.10	-	3.10
Union Road	1.46	8.05	9.52
Upazila Road	2.08	-	2.08
Village Road	4.93	19.64	24.57
Total	15.95	27.69	43.64

Source: GIS Database, MUDP (2017-2037)

Map 2. 19: Proposed Land Use of Katachhara Union



2.11.8 Khaiyachhara Union

Khaiyachhara Union is mainly agriculture-based union. Out of total 3250.44 acres of land in Khaiyachhara Union, around 2153.25 acres (58.32%) of land has been proposed for agricultural purpose. Proposed land use in this union followed by residential 22.20%, waterbody 7.35%, circulation network 4.63%, commercial 0.35%, education and research 0.16%, community facilities 0.16%, industrial 0.41% and health facilities 0.03%. Table 2. 41 show the proposed land use of Khaiyachhara Union.

Table 2. 41: Proposed Land Uses of Khaiyachhara Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.25	0.03
2	Agricultural	2153.25	58.32
3	Circulation Network	170.82	4.63
4	Commercial	12.89	0.35
5	Community Facilities	5.74	0.16
6	Education and Research	6.05	0.16
7	Forest	86.68	2.35
8	Health Facilities	1.28	0.03
9	Industrial	14.97	0.41
10	Khal Catchment Area	133.92	3.63
11	Mixed Use	3.49	0.09
12	Residential	819.69	22.20
13	Utility Services	0.10	0.00
14	Water Reservoir	10.75	0.29
15	Waterbody	271.31	7.35
Total		3250.44	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, 9 development proposals have been recommended for Khaiyachhara Union. About 4.58 acres area has been covered with these proposals. Among those proposals, there are one union parishad office, one eidgah, one cremation ground, one graveyard, one primary school, two community clinic, one public toilet, and one waste transfer station. These proposals provide community facilities, education and research, health facilities and utility service in the union. Detail mauza wise plot schedule of proposed development facilities for Khaiyachhara Union is presented in Table 2. 42. Map 2. 20 show the proposed land use of Khaiyachhara Union.

Table 2. 42: List of Proposed Facilities for Khaiyachhara Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Administrative	Union Parishad Office	0.57	Purba Maghadia_073_007	13075, 12474, 12475, 12476, 12477, 12478, 13225
Community Facilities	Eidgah	0.60	Purba Mayani_078_006	15711, 15712, 15761, 15762, 15763, 15764, 15770, 15771
	Cremation Ground	0.19	Purba Mayani_078_005	11647, 10676, 10674, 10675, 10677, 10839
	Graveyard	0.64	Polmogra_076_000	480, 482, 486, 487, 498, 499, 500, 501, 502, 504, 506
Education and Research	Primary School	1.43	Madhya Maghadia_071_010	59091, 59086, 59085, 59084, 59073, 59072, 59071, 59070, 59097, 59096, 59095, 59094, 59093, 59092, 59067
Health Facilities	Community Clinic	0.37	Purba Khaiyachhara_075_000	114, 146, 153, 152, 147
		0.32	Paschim Khaiyachhara_072_000	553, 557, 558, 545, 552, 556
Utility Services	Waste Transfer Station	0.36	Polmogra_076_000	418, 336, 349, 350, 351
	Public Toilet	0.10	Purba Maghadia_073_007	13174, 13173
			Polmogra_076_000	337, 339, 340, 351

Source: GIS Database, MUDP (2017-2037)

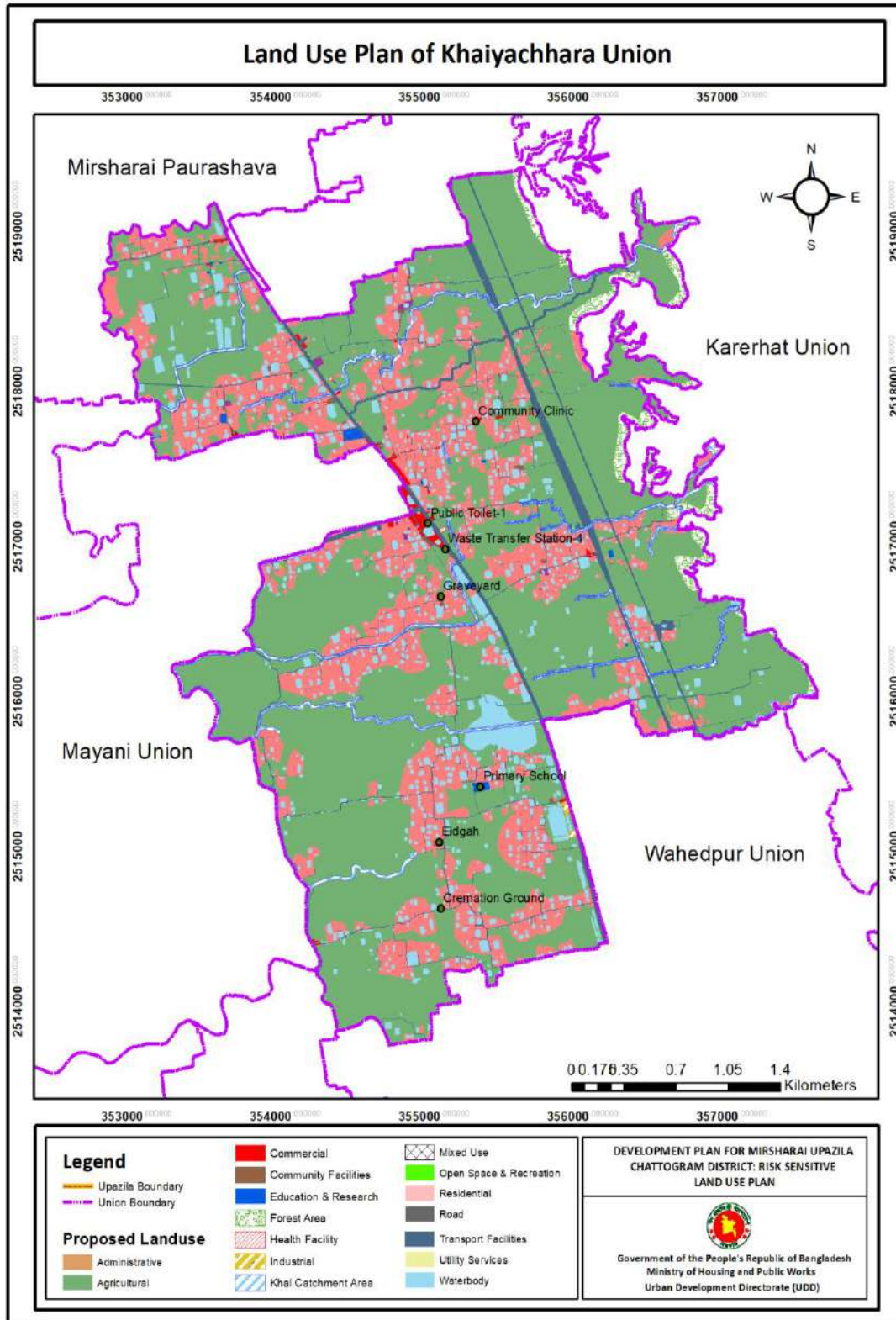
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total 25.47 kilometer length of road has been proposed in Khaiyachhara Union. About 0.74 kilometer of new roads has been proposed and about 24.73 kilometer roads have been proposed for widening. The proposed road network status of Khaiyachhara Union has been shown in Table 2. 43.

Table 2. 43: Proposed Road Network in Khaiyachhara Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Village Road	0.74	24.73	25.47
Total	0.74	24.73	25.47

Source: GIS Database, MUDP (2017-2037)

Map 2. 20: Proposed Land Use of Khaiyachhara Union



2.11.9 Maghadia Union

Maghadia Union is mainly agriculture based. Out of total 3250.44 acres of land in Maghadia Union, around 1876.68 acres (53.93%) of land has been proposed for agricultural purpose. Proposed land use in this union followed by residential 29.17%, waterbody 7.21%, circulation network 6.16%, commercial 0.14%, education and research 0.21%, community facilities 0.21%, industrial 0.14% and health facilities 0.02%. Table 2. 44 show the proposed land use of Maghadia Union.

Table 2. 44: Proposed Land Use of Maghadia Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.50	0.01
2	Agriculture	1876.68	53.93
3	Circulation Network	214.44	6.16
4	Commercial	4.96	0.14
5	Community Facilities	7.20	0.21
6	Education and Research	7.28	0.21
7	Forest	0.36	0.01
8	Health Facilities	0.82	0.02
9	Industrial	5.01	0.14
10	Khal Catchment Area	93.36	2.68
11	Mixed Use	0.05	0.00
12	Open Space and Recreational Facilities	1.97	0.06
13	Residential	1015.04	29.17
14	Transport Facilities	0.48	0.01
15	Utility Services	0.63	0.02
16	Waterbody	251.02	7.21
	Total	3503.83	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 15 proposed facilities has been incorporated for Maghadia Union. About 8.17 acres area has been covered with these proposals. Among those proposals there are 1 cremation ground, 1 graveyard, 1 community clinic, 1 primary school, 1 high school, 1 playground, 3 CNG stands, 3 public toilets, and 3 waste transfer station. These proposals provide community facilities, health facilities, education and research, open space and recreation, transport facilities and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Maghadia Union is presented in Table 2. 45.

Table 2. 45: List of Proposed Facilities for Maghadia Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Community Facilities	Cremation Ground	2.04	Madhya Maghadia_071_004	8153, 8154, 8158, 8159, 8160, 8161, 8162, 7658, 8603, 8601
	Graveyard	0.88	Madhya Maghadia_071_006	13274, 13275, 13246, 13276, 13247, 13256, 13258, 13253, 13248, 13245
	Eidgah	0.57	Madhya Maghadia_071_007	52756, 52762, 52763, 52757, 52768, 52786
Health Facilities	Community Clinic	0.23	Madhya Maghadia_071_006	8214, 8216, 8217, 8506, 8212
		0.36	Madhya Maghadia	12924, 12925, 14219
Education and Research	Primary School	0.47	Madhya Maghadia_071_004	8377, 8494, 8500, 8501, 8504
	High School	1.89	Madhya Maghadia_071_006	12921, 12813, 12827, 12826, 12824, 12825, 12916, 12818, 12817, 12823, 12918, 12819, 12820, 12821, 12919, 12822, 14219, 12920, 14308, 14306, 14305, 14228, 14225
		2.17	Madhya Maghadia_071_007	50445, 50429
Open Space and Recreation	Playground	1.97	Madhya Maghadia_071_005	9304, 9290, 9306, 9307, 9280, 9305, 9289, 9308, 9288, 9309, 9287, 9070
Transport Facilities	CNG Stand	0.07	Madhya Maghadia_071_004	6842, 8603, 6840, 6843
		0.22	Madhya Maghadia_071_007	52738, 52740, 52739
		0.23	Madhya Maghadia_071_001	427, 469
		0.19	Madhya Maghadia_071_001	14219, 14221, 14220
Utility Services	Waste Transfer Station	0.05	Madhya Maghadia_071_004	6853, 6854, 6855, 6857, 6867
		0.07	Madhya Maghadia_071_007	52933, 99999, 52932, 52941
		0.15	Madhya Maghadia_071_001	457, 458, 481, 477
	Public Toilet	0.01	Madhya Maghadia_071_004	6851, 6853
		0.03	Madhya Maghadia_071_001	52909, 52910
		0.04	Madhya Maghadia_071_007	337, 423
		0.09	Madhya Maghadia_057_00	929, 850
0.12	Madhya Maghadia_071_006	14224, 14222, 14221		

Source: GIS Database, MUDP (2017-2037)

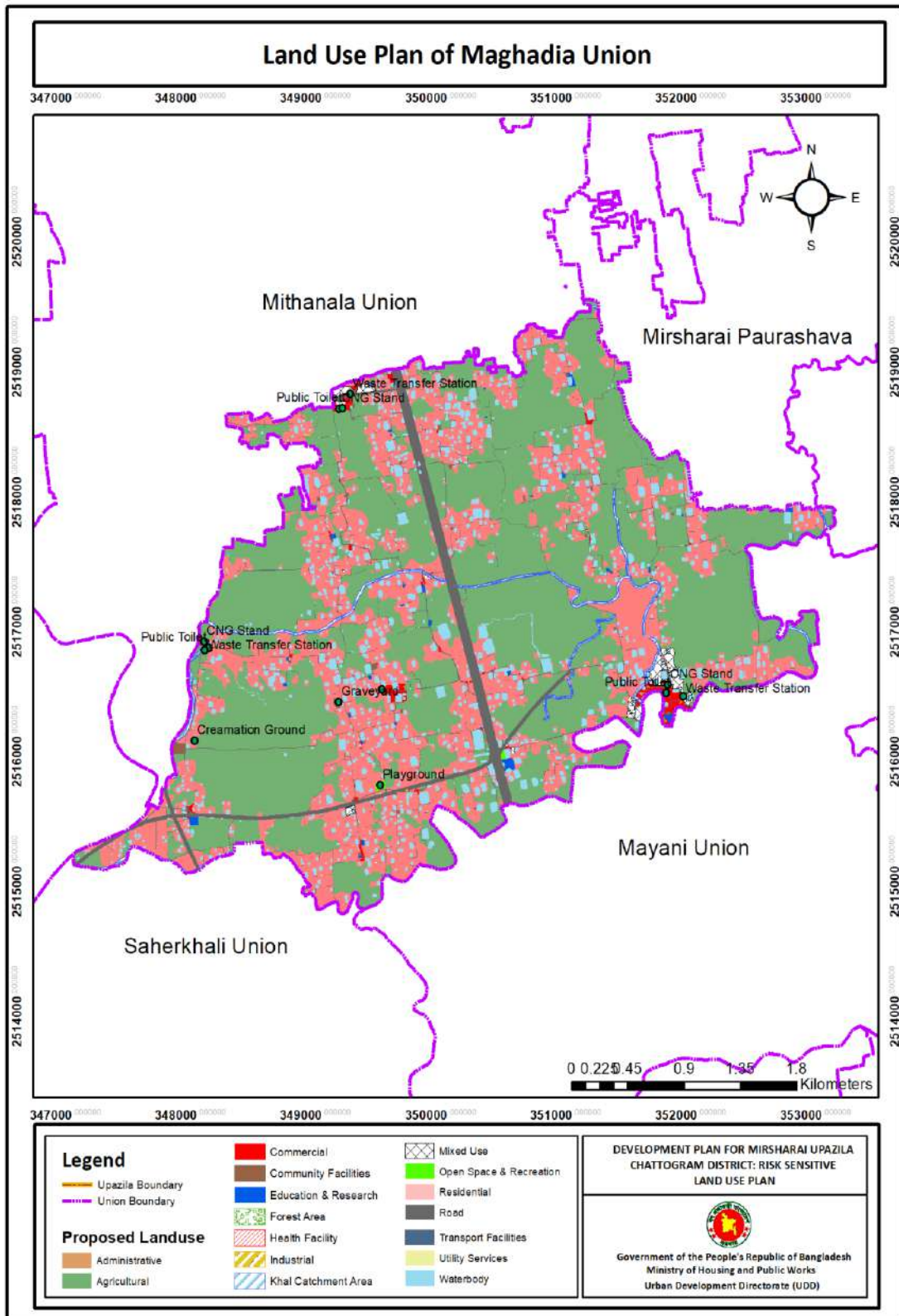
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total 39.41 kilometer length of road has been proposed in Maghadia Union. About 8.97 kilometer of new roads has been proposed and about 30.44 kilometer roads have been proposed for widening. The proposed road network status of Maghadia Union has been shown in Table 2. 46.

Table 2. 46: Proposed Road Network in Maghadia Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	3.47	-	3.47
Regional Highway	2.87	-	2.87
Union Road	-	3.88	3.88
Upazila Road	2.16	6.99	9.15
Village Road	0.47	19.57	20.04
Total	8.97	30.44	39.41

Source: GIS Database, MUDP (2017-2037)

Map 2. 21: Proposed Land Use of Maghadia Union



2.11.10 Mayani Union

Out of total 3241.34 acres of land in Mayani Union, around 1947.55 acres (60.06%) of land has been proposed for agricultural purpose. Agricultural land has been given the highest priority while preparing the proposed land use plan. Proposed land use in this union followed by residential 24.44%, waterbody 5.77%, circulation network 4.25%, open space and recreation 0.16%, education and research 0.37%, commercial 0.74%, community facilities 0.21% and health facilities 0.09%. Table 2. 47 shows the proposed land use of Mayani Union.

Table 2. 47: Proposed Land Uses of Mayani Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.07	0.03
2	Agricultural	1947.55	60.06
3	Circulation Network	137.86	4.25
4	Commercial	24.09	0.74
5	Community Facilities	6.92	0.21
6	Education and Research	11.91	0.37
7	Health Facilities	2.84	0.09
8	Industrial	0.25	0.01
9	Khal Catchment Area	66.22	2.04
10	Open Space and Recreation	5.07	0.16
11	Residential	792.53	24.44
12	Retention Area	56.99	1.76
13	Transport Facilities	1.07	0.03
14	Utility Services	1.50	0.05
15	Waterbody	187.06	5.77
	Total	3241.34	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, 41 development proposals have been recommended for Mayani Union. About 55.27 acres area has been covered with these proposals. Among those proposals, there are one cattle market, two kitchen market, one slaughter house, one cyclone shelter, two cremation ground, one graveyard, one primary school, five community clinic, three playground, three planned housing area, six CNG stands, four waste transfer stations, and ten public toilets. These proposals provide commercial facilities, community facilities, health facilities, educational facilities, recreational facilities, residential, transport facilities and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Mayani Union is presented in Table 2. 48. Map 2. 22 shows proposed land use of Mayani Union.

Table 2. 48: List of Proposed Facilities for Mayani Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Cattle Market & slaughter House	1.51	Purba Mayani_078_003	5047, 5139, 5140, 5148, 5149, 5150, 5154, 5155, 5156, 5048, 5049, 5052, 5053, 5054, 5055, 5058, 5059, 5060, 5141, 5142, 5144, 5145, 5146, 5147, 5151, 5143, 5060, 5063, 5066, 5134, 5142, 5144, 5145, 5065, 5143, 5064
	Kitchen Market	0.21	Paschim Mayani_079_004	7180, 7156, 7177, 7245, 7246, 7255, 7031, 7178
		0.67	Purba Mayani_078_004	7378, 7871, 7873, 7872, 7874
Community Facilities	Cyclone Shelter	0.78	Paschim Mayani_079_002	2661, 2857, 2860, 2861, 2863, 2927, 2660, 2924, 2925, 2926, 2928, 2929, 2930, 2632, 2862
	Cremation Ground	0.77	Paschim Mayani_079_002	1930, 2033, 2034, 2035, 2037, 2038, 2039, 2040, 2043, 1934, 1935, 2036
		1.02	Purba Mayani_078_004	8989, 7904, 7895, 7901, 7896, 7900, 7899, 7908, 7897, 7910, 7911, 7898, 7912, 7913, 7914
	Graveyard	0.44	Paschim Mayani_079_003	6338, 5741, 5744, 5743, 5745, 5746, 5763, 5908, 6327, 6279
Education and Research	Primary School	0.72	Paschim Mayani_079_004	8455, 8458, 8459, 8461, 8529, 8531, 8532, 8533, 8534, 8535, 8536, 8539, 8540, 8541
Health Facilities	Community Clinic	0.54	Paschim Mayani_079_006	14154, 14153, 14575, 14155, 14156
		0.52	Paschim Mayani_079_006	12291, 12693, 12696, 12740, 12739, 12695, 12741, 12736, 12742, 12737
		0.40	Paschim Mayani_079_002	1875, 1877, 2182, 2183, 1876, 2564
		0.38	Paschim Mayani_079_002	2815, 2816, 2818, 2892, 2893, 2894, 2895
		0.47	Purba Mayani_078_001	647, 649, 650, 651, 652, 653, 654
Open Space and Recreation	Central Playground	1.52	Paschim Mayani_079_002	3354, 3356, 3357, 2124, 3353, 3356, 2124
			Paschim Mayani_079_003	5417, 5419, 5418, 5441, 5442, 5443, 5446, 5445, 5444, 5509, 5508, 5447, 5507, 5510, 5511, 5509, 5418
	Playground	1.25	Purba Mayani_078_002	3605, 3604, 3359, 3358, 3606, 3612, 3659, 3607, 3609, 3658, 3610, 3608, 3619
		1.16	Purba Mayani_078_004	7622, 7623, 7629, 7630, 7631, 7624, 7628, 7627, 7625, 7626
		1.14	Paschim Mayani_079_005	12912, 12914

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Residential	Planned Housing Area	16.40	Paschim Mayani_079_005	12001, 12903, 12898, 12899, 12902, 12901, 12885, 12900, 12886, 12881, 12884, 12871, 12883, 12882, 12942, 12947, 12948, 12949, 12959, 12961, 12950, 12946, 12963, 12960, 12964, 12958, 12945, 12967, 12951, 12966, 12965, 12957, 12952, 12968, 12956, 12969
	Housing for Low Income People-1	17.64	Purba Mayani_078_004	7197, 7198, 7199, 7200, 7201, 7316, 7320, 7319, 7318, 7317, 7321, 7323, 7322, 7315, 7306, 7305, 7304, 7397, 7311, 7324, 7335, 7396, 7310, 7325, 7307, 7326, 7327, 7302, 7334, 7395, 7336, 7308, 7309, 7330, 7338, 7298, 7329, 7393, 7328, 7299, 7300, 7394, 7337, 7365, 7292, 7331, 7339, 7297, 7332, 7363, 7391, 7333, 7389, 7296, 7364, 7368, 7390, 7366, 7340, 7362, 7295, 7358, 7357, 7386, 7387, 7367, 7388, 7371, 7359, 7356, 7361, 7378, 7384, 7341, 7369, 7342, 7360, 7370, 7343, 7385, 7344, 7383, 7382, 7379, 7377, 7372, 7373, 7355, 7353, 7350, 7376, 7381, 7380, 7348, 7375, 7374, 7345, 7354, 7352, 7351, 7346, 7349, 7347
		4.49	Paschim Mayani_079_004	8185, 9213, 7753, 7754, 7758, 7759, 7760, 7757, 7761, 7762, 7763, 7764, 7871, 7872, 7873, 7874, 7875, 7876, 7877, 7878, 7879, 7880, 7883, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908, 7909, 7910, 7911, 7912, 7914, 7915, 7916, 7917, 7922, 7924, 7925, 7926, 7927, 7928, 7929, 7930, 7933, 8181, 8167, 8168, 8169, 8171, 8172, 8182, 9212, 9209, 9215, 9216, 7730, 7731, 7732, 7742, 7744, 7745, 7746, 7747, 7749, 7750, 7748, 7752, 7755, 7756, 7881, 7882, 7870, 7751, 7913
Transport Facilities	CNG Stand	0.47	Paschim Mayani_079_005	12739, 12736, 12742, 12737, 12734, 12743, 12738, 12744, 12733
		0.17	Paschim Mayani_079_004	7259, 7260, 7261, 7267
		0.18	Purba Mayani_078_001	261, 262, 263, 265, 266, 267, 269, 270
		0.35	Purba Mayani_078_004	7604, 7605
			Purba Mayani_078_005	10436, 10026, 10025, 12081
		0.29	Paschim Mayani_079_001	899, 915, 916, 914, 913
0.26	Purba Mayani_078_001	373, 374, 835		

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Utility Services	Waste Transfer Station	0.07	Paschim Mayani_079_005	13296, 12710, 12711
		0.08	Paschim Mayani_079_004	7241, 7242, 7156, 7255, 7260
		0.04	Purba Mayani_078_003	5028, 5031, 5032, 5042
		0.09	Purba Mayani_078_001	273, 274, 282
	Public Toilet	0.02	Paschim Mayani_079_005	12738, 12744
		0.08	Paschim Mayani_079_004	7245, 7255, 7260
		0.04	Purba Mayani_078_003	5028, 5042, 5043
		0.08	Purba Mayani_078_001	314, 323
		0.16	Paschim Mayani_079_005	10026
			Paschim Mayani_079_004	7605
		0.19	Purba Mayani_078_004	7378, 7871
		0.14	Paschim Mayani_079_006	16101, 16019, 16020, 16021
			Purba Mayani_078_004	8989
		0.28	Paschim Mayani_079_006	14533, 14153, 14575, 14152, 14151 14156, 14157
		0.10	Paschim Mayani_079_004	8644, 8732, 8733
		0.13	Paschim Mayani_079_001	915, 918, 917, 916

Source: GIS Database, MUDP (2017-2037)

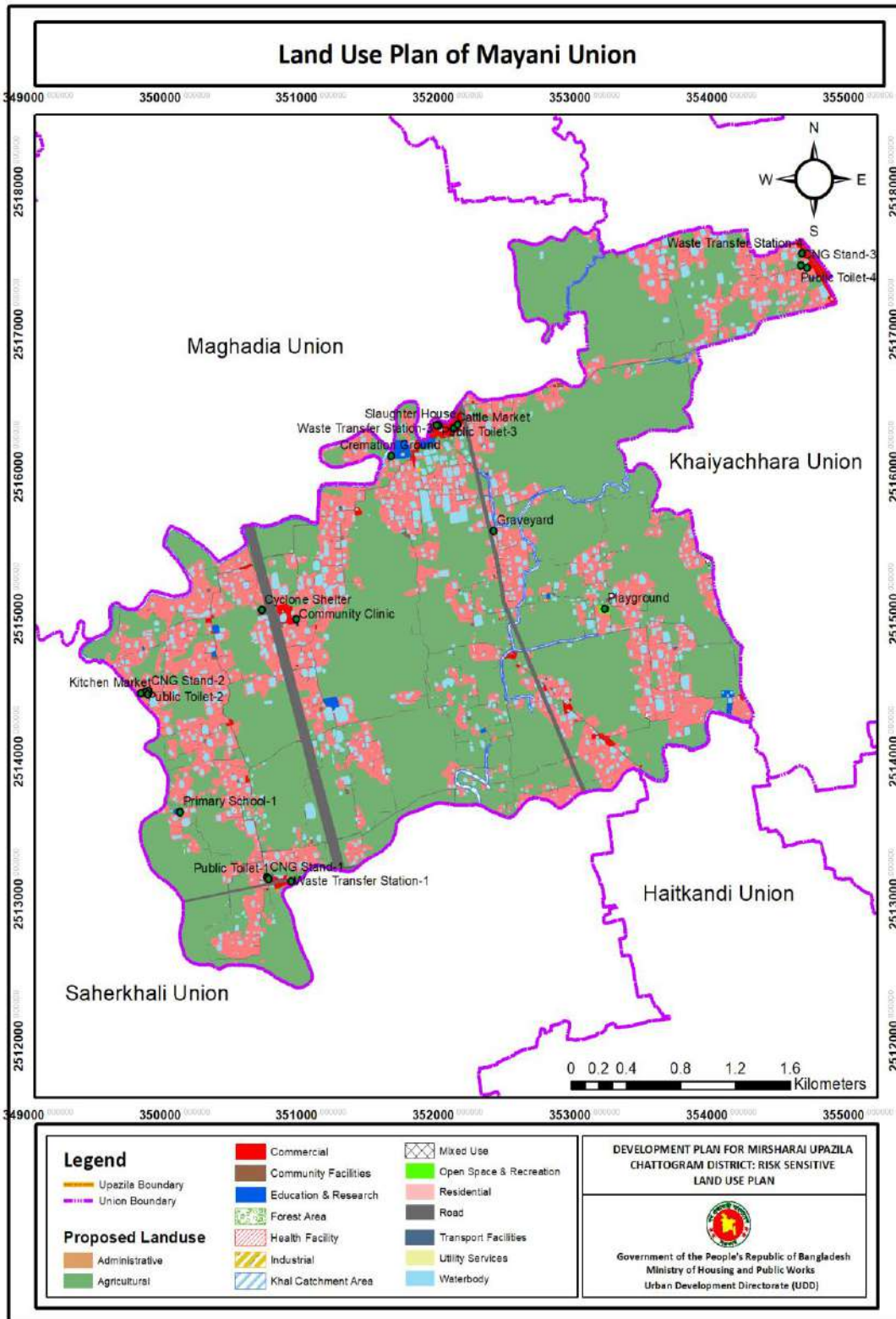
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 44.39 km road has been proposed in Mayani Union. About 7.37 km of new roads has been proposed and about 37.02 km roads have been proposed for widening. The proposed road network status of Mayani Union has been shown in Table 2.49.

Table 2. 49: Proposed Road Network in Mayani Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	2.52	-	2.52
Regional Highway	2.90	-	2.90
Union Road	-	3.87	3.87
Upazila Road	0.02	0.44	0.46
Village Road	1.94	32.70	34.64
Total	7.37	37.02	44.39

Source: GIS Database, MUDP (2017-2037)

Map 2. 22: Proposed Land Use of Mayani Union



2.11.11 Mirsharai Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Mirsharai Union. The area of 1689.49 acre of land (53.40%) has been proposed for agricultural use purpose. Proposed land use in this union followed by residential 23.74%, waterbody 5.97%, circulation network 6.11%, forest 5.38%, commercial 0.96%, industrial 1.64% and health facilities 0.04%. Table 2. 50 show the proposed land use of Mirsharai Union.

Table 2. 50: Proposed Land Use of Mirsharai Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.22	0.04
2	Agricultural	1689.49	53.40
3	Circulation Network	193.34	6.11
4	Commercial	30.23	0.96
5	Community Facilities	4.66	0.15
6	Education and Research	8.22	0.26
7	Forest	170.22	5.38
8	Health Facilities	1.30	0.04
9	Industrial	51.96	1.64
10	Khal Catchment Area	42.54	1.34
11	Mixed Use	19.83	0.63
12	Residential	751.13	23.74
13	Transport Facilities	0.20	0.01
14	Utility Services	0.04	0.00
15	Water Reservoir	10.75	0.34
16	Waterbody	188.83	5.97
	Total	3123.74	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about nine proposed facilities has been incorporated for Mirsharai Union. About 4.80 acres of land has been covered with these proposals. Among those proposals, there are one super market, two agro-based industry, one primary school, two community clinics, one CNG stand, one public toilet, and one waste transfer station. These proposals provide commercial facilities, educational facilities, health facilities, industrial facilities, transport facilities, and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Mirsharai Union is presented in Table 2. 51. Map 2. 23 shows proposed land use of Mirsharai Union.

Table 2. 51: List of Proposed Facilities for Mirsharai Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Super Market	0.69	Purba Mithanala_051_002	1975, 1984, 1978, 1976, 2137, 2136, 3003, 2134, 2135, 2133
Education and Research	Primary School	1.64	Purba Mithanala_051_002	2344, 2346, 2378, 2345
Health Facilities	Community Clinic	0.61	Purba Maghadia_073_001	860, 861, 862, 863, 867, 890, 891
		0.60		853, 1131, 1130, 838, 1127, 1128, 1129, 854, 1126, 1121
Industrial	Agro Industry	0.27	Purba Mithanala_051_002	1228, 1227, 1229, 1226, 1225, 1224
		0.75	Purba Mithanala_051_002	1950, 1562, 1572, 1563, 1561, 1571, 1570, 1569
Transport Facilities	CNG Stand	0.20	Motbaria_053_002	2702, 2703, 2706, 2707, 2779
Utility Services	Public Toilet	0.03	Purba Mithanala_051_002	1921, 1975
	Waste Transfer Station	0.01	Purba Mithanala_051_002	1975

Source: GIS Database, MUDP (2017-2037)

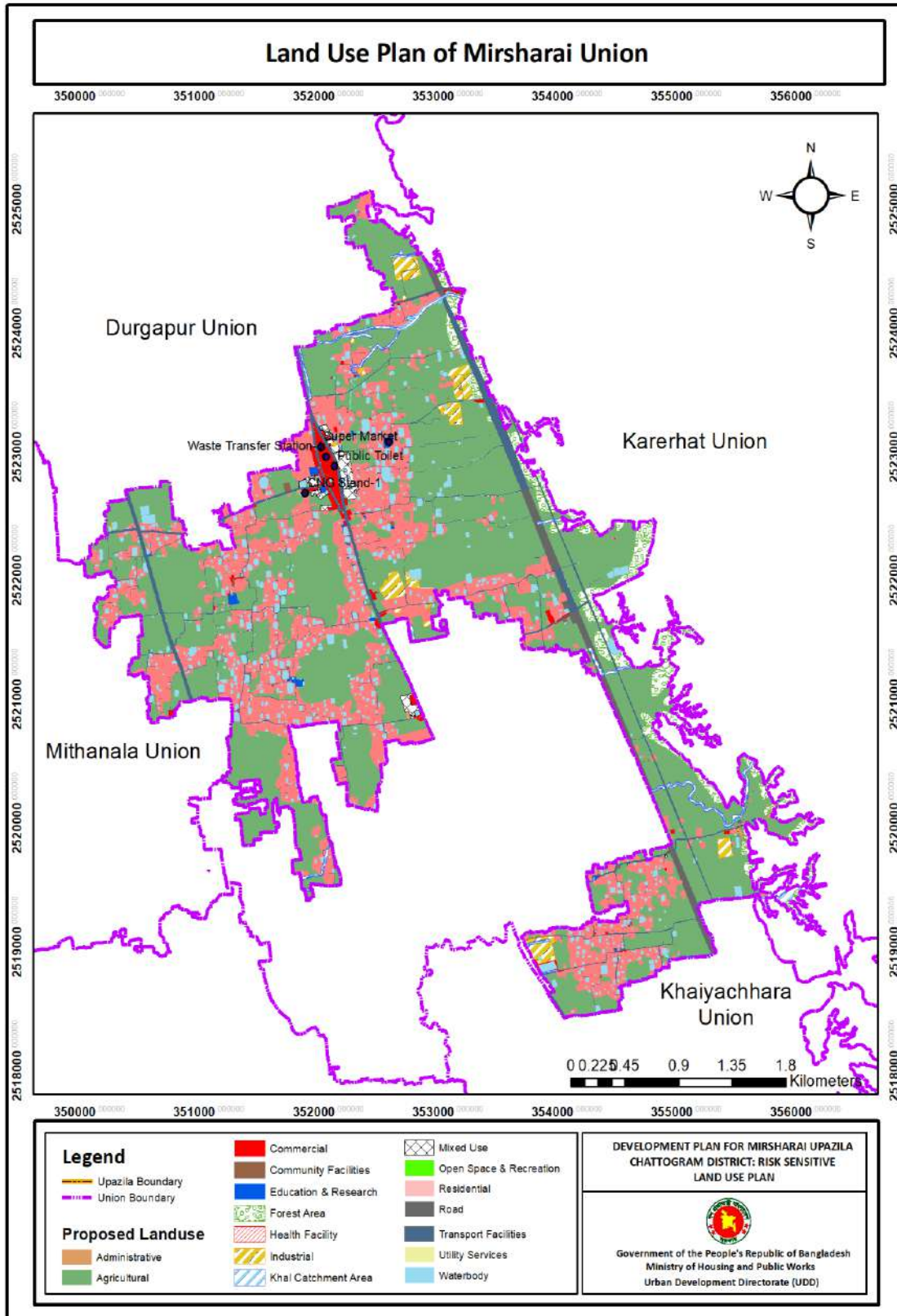
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 26.47 km road has been proposed in Mirsharai Union. About 2.38 km of new roads has been proposed and about 24.09 km roads have been proposed for widening. The proposed road network status of Mirsharai Union has been shown in Table 2. 52.

Table 2. 52: Proposed Road Network in Mirsharai Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	1.79		1.79
Union Road		1.62	1.62
Upazila Road		2.05	2.05
Village Road	0.58	18.74	19.32
Zila Road		1.69	1.69
Total	2.38	24.09	26.47

Source: GIS Database, MUDP (2017-2037)

Map 2. 23: Proposed Land Use of Mirsharai Union



2.11.12 Mithanala Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Mithanala Union. The area of 2888.18 acre of land (58.62%) has been proposed for agricultural use purpose. Proposed land use in this union followed by residential 27.04%, waterbody 6.37%, circulation network 5.24%, commercial 0.33% and health facilities 0.04%. Table 2. 53 show the proposed land use of Mithanala Union.

Table 2. 53: Proposed Land Use of Mithanala Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.49	0.01
2	Agricultural	2888.18	58.62
3	Circulation Network	258.21	5.24
4	Commercial	16.10	0.33
5	Community Facilities	10.46	0.21
6	Education and Research	10.43	0.21
7	Forest	0.01	0.0002
8	Health Facilities	2.07	0.04
9	Industrial	0.25	0.01
10	Khal Catchment Area	90.77	1.84
11	Mixed Use	0.35	0.01
12	Open Space and recreation Facilities	1.71	0.03
13	Residential	1332.17	27.04
14	Transport Facilities	0.36	0.01
15	Utility Services	0.32	0.01
16	Waterbody	313.78	6.37
	Total	4915.97	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 12 proposed facilities has been incorporated for Mithanala Union. About 8.20 acres area has been covered with these proposals. Among those proposals, there are 1 kitchen market, 1 eidgah, 2 cremation grounds, 1 graveyard, 3 community clinics, 1 playground, 1 CNG stand, 1 public toilet, and 1 waste transfer station. These proposals provide commercial facilities, community facilities, health facilities, transport facilities, and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Mithanala Union is presented in Table 2. 54. Map 2. 24 shows proposed land use of Mithanala Union.

Table 2. 54: List of Proposed Facilities for Mithanala Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.35	Mithanala Rajapur_061_004	11679, 11680, 11681, 11682, 11683
Community Facilities	Eidgah	0.49	Mithanala Rajapur_061_006	17623, 17617, 17625, 17627, 17616, 17626
	Cremation Ground	0.64	Mithanala Rajapur_061_001	458, 460, 459, 485, 480, 481, 487
		0.96	Mithanala Rajapur_061_004	12194, 12195, 12196
	Mithanala Rajapur_061_005		14771, 14772, 14773, 14774, 14775, 14776	
Graveyard	1.86	Ghinal_060_000	142, 143, 147, 148, 140, 138, 141, 139, 28, 3, 4, 27, 5	
Health Facilities	Community Clinic	0.29	Rahamatabad_063_000	1037, 1038, 1039, 1040, 1041
		0.51	Mithanala Rajapur_061_003	8314, 8315, 8300, 8316, 8299, 8301, 8298, 8297, 8294, 8296, 8322, 8293, 8313, 8314, 8315, 8300, 8316, 8299
			Paschim Maliais_070_001	1
0.71	Saidpur_059_000	364, 366, 842, 843, 365, 367, 368, 840, 841		
Open Space & Recreation Facilities	Playground	1.71	Mithanala Rajapur_061_003	7381, 7382, 7379, 7383, 7384, 7395, 7385, 7378, 7428, 7402, 7394, 7401, 7387, 7386, 7377, 7396, 7388, 7393, 7376, 7389, 7375, 7392, 7390, 7391
Transport Facilities	CNG Stand	0.36	Mithanala Rajapur_061_006	11668, 11669, 11670
			Mithanala Rajapur_061_004	17551
Utility Services	Public Toilet	0.17	Mithanala Rajapur_061_004	11666, 11667, 11668, 11670
			Mithanala Rajapur_061_006	17549, 17551
	Waste Transfer Station	0.15	Mithanala Rajapur_061_004	11682, 11683

Source: GIS Database, MUDP (2017-2037)

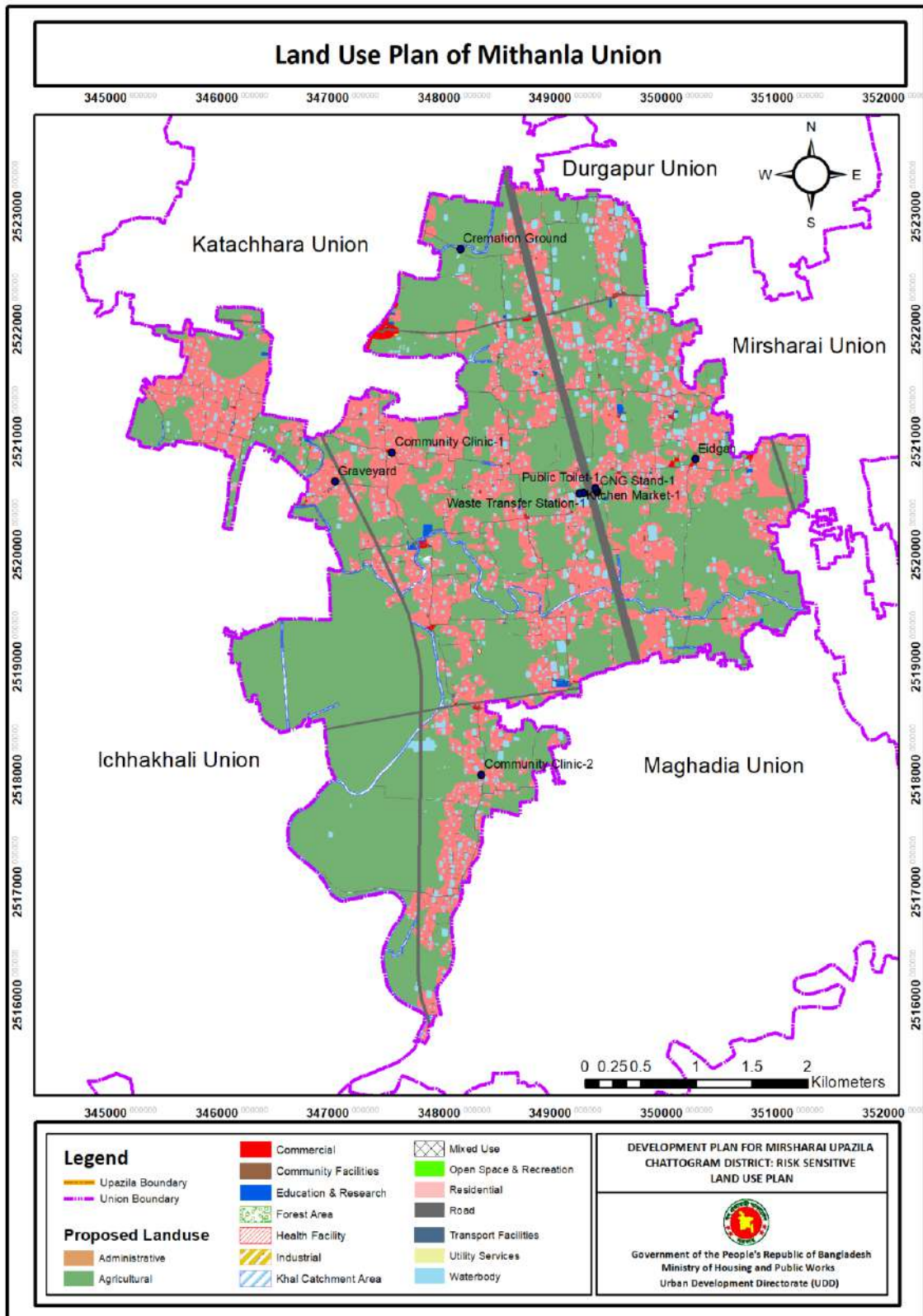
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 50.74 km road has been proposed in Mithanala Union. About 14.19 km of new roads has been proposed and about 36.54 km roads have been proposed for widening. The proposed road network status of Mithanala Union has been shown in Table 2. 55.

Table 2. 55: Proposed Road Network in Mithanala Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	4.56	--	4.56
Regional Highway	6.16	--	6.16
Union Road	--	6.36	6.36
Upazila Road	1.25	5.13	6.38
Village Road	2.22	25.05	27.27
Total	14.19	36.54	50.74

Source: GIS Database, MUDP (2017-2037)

Map 2. 24: Proposed Land Use of Mithanala Union



2.11.13 Osmanpur Union

Agricultural land has been given the highest priority while preparing the proposed land use plan. The area of 1449.18 acre of land (38.32%) has been proposed for agricultural use purpose. Proposed land use in this union followed by waterbody 30.84%, residential 20.91%, circulation network 3.36%, educational facilities 0.23%, commercial 0.20%, community facilities 0.19%, industrial 0.05% and health facilities 0.04%. Table 2. 56 show the proposed land use of Osmanpur Union.

Table 2. 56: Proposed Land Use of Osmanpur Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.27	0.01
2	Agricultural	1449.18	38.32
3	Circulation Network	127.08	3.36
4	Commercial	7.71	0.20
5	Community Facilities	7.28	0.19
6	Education and Research	8.88	0.23
7	Health Facilities	2.14	0.06
8	Industrial	1.97	0.05
9	Khal Catchment Area	216.76	5.73
10	Open Space and Recreation	2.22	0.06
11	Residential	790.83	20.91
12	Transport Facilities	0.42	0.01
13	Utility Services	0.61	0.02
14	Waterbody	1166.42	30.84
	Total	3737.19	100.00

Source: GIS Database, MUDP (2017-2037)

Considering the local peoples demand from the PRA and based on the planning standards, 20 development proposals have been recommended for Osmanpur Union. About 14.47 acres area has been covered with these proposals. These proposals provide commercial facilities, educational facilities, community facilities, health facilities, open space and recreational facilities, transport facilities and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Osmanpur Union is presented in Table 2. 57. Map 2. 25 shows proposed land use of Osmanpur Union.

Table 2. 57: List of Proposed Facilities for Osmanpur Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Fish Market	0.53	Banskhali_039_000	939, 943, 944, 945, 946, 951, 952, 953, 954
	Kitchen Market	0.34	Brindabanpur_033_000	836, 837, 868, 869, 1050
		0.68	Patakot_029_000	95, 103, 108, 109, 120, 121, 122, 123, 92, 94, 110, 111, 118, 119
	Slaughter House	0.29	Banskhali_039_000	1130, 1131, 1132, 1135, 1136, 1137, 1138

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Education and Research	Primary School cum Cyclone Shelter	1.32	Morgang_032_002	2237, 2239, 2238, 2215, 2240, 2216, 2212, 2217, 2241, 2214, 2264, 2213, 2227, 2218, 2219, 2210, 2220, 2209, 2207, 2193, 2267, 2211, 2228
	College	3.00	Osmanpur_030_000	1132
			Rokandipur_031_000	815, 774, 775, 792, 790, 773, 771, 788, 798, 789, 799, 758, 787, 800, 768, 770, 761, 786, 785, 778, 767, 772, 779, 803, 801, 798, 799, 803, 815
Community Facilities	Eidgah	0.63	Osmanpur_030_000	1086, 1087, 1088, 1089, 1090, 1091, 1095, 1096, 1097, 1098, 1103, 1104, 1105, 1118
	Graveyard	0.19	Morgang_032_002	5310, 5311, 5312, 5313, 5314, 5315, 5316, 5317, 5318, 5319, 5320, 5321, 5322
Open Space and Recreation	Playground	1.20	Osmanpur_030_000	445, 446, 447, 448, 449, 450, 451, 456, 459, 545, 547, 549, 551, 452, 453, 454, 455, 457, 458, 462, 468, 470, 542, 543, 544, 546, 550
		1.03	Morgang_032_001	630, 632, 651
			Morgang_032_002	2287, 2288, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2302
Health Facilities	Community Clinic	0.34	Brindabanpur_033_000	188
	Specialized Hospital	1.69	Osmanpur_030_000	1115, 1118, 1126, 1127, 1130, 1131
			Rokandipur_031_000	812, 813, 814, 811, 810, 807, 803, 807, 803, 815
Transport Facilities	CNG Stand	0.23	Banskhali_039_000	1120, 1121, 1122, 1123, 1154
		0.19	Morgang_032_002	1754, 1755, 1757, 1763
Utility Services	Public Toilet	0.15	Morgang_032_002	1751, 1752, 1748
		0.10	Banskhali_039_000	1123, 1124, 1141, 1143, 1144
	Waste Transfer Station	0.10	Banskhali_039_000	1120, 1154
		0.10	Patakot_029_000	308, 309, 310, 311, 312, 313, 314, 315
		0.15	Sahebpur_028_002	4014

Source: GIS Database, MUDP (2017-2037)

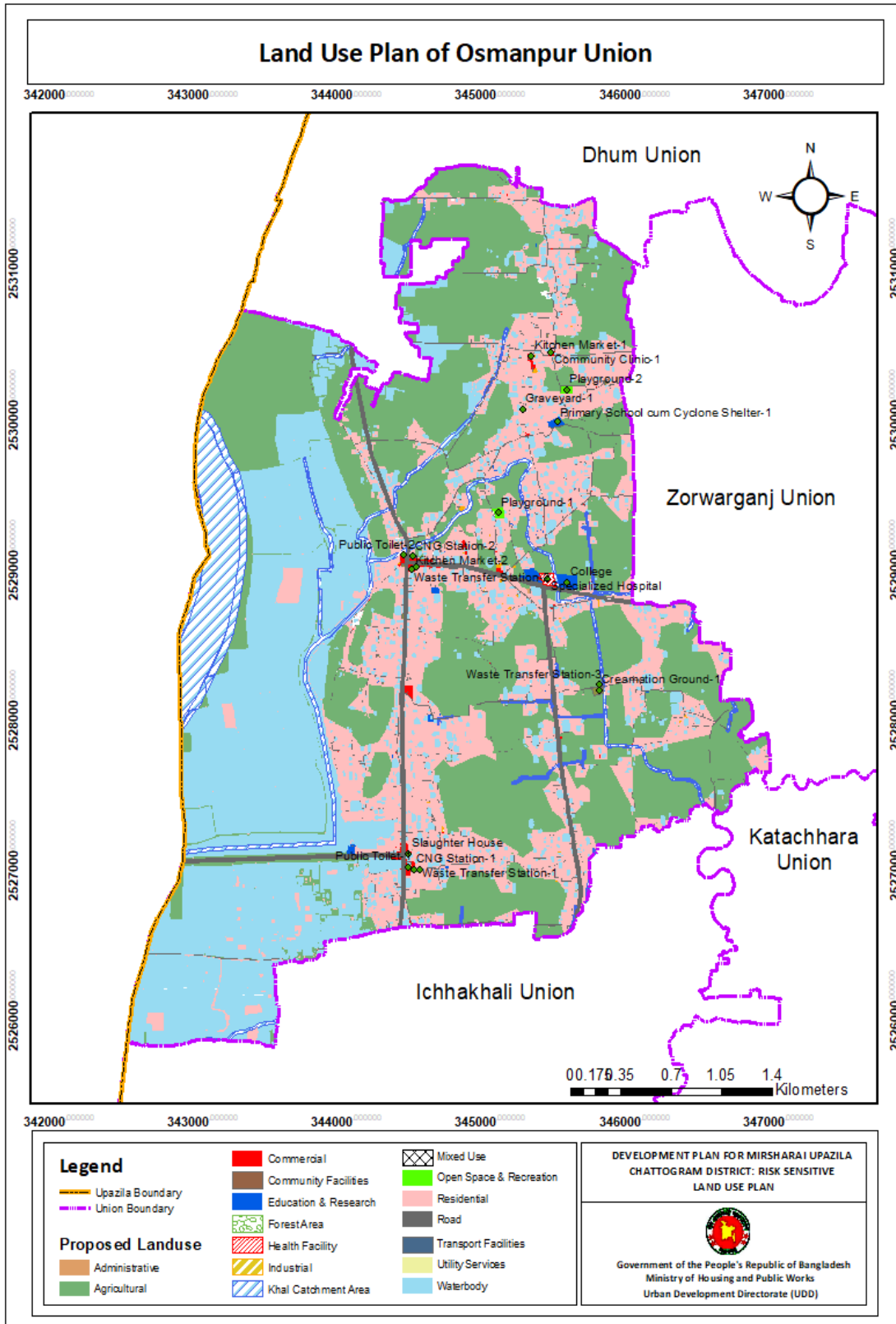
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 24.48 km road has been proposed in Osmanpur Union. About 2.25 km of new roads has been proposed and about 22.23 km roads have been proposed for widening. The proposed road network status of Osmanpur Union has been shown in Table 2. 58.

Table 2. 58: Proposed Road Network in Osmanpur Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	2.25	--	2.25
Union Road	--	6.40	6.40
Upazila Road	--	2.15	2.15
Village Road	--	13.68	13.68
Total	2.25	22.23	24.48

Source: GIS Database, MUDP (2017-2037)

Map 2. 25: Proposed Land Use of Osmanpur Union



2.11.14 Saherkhali Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Saherkhali Union. The area of 1449.18 acre of land (38.32%) has been proposed for agricultural use purpose. Proposed land use in this union followed by waterbody 30.84%, residential 20.91%, circulation network 3.36%, educational facilities 0.23%, commercial 0.20%, community facilities 0.19%, industrial 0.05% and health facilities 0.04%. Table 2. 59 show the proposed land use of Saherkhali Union.

Table 2. 59: Proposed Land Use of Saherkhali Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.27	0.01
2	Agricultural	1449.18	38.32
3	Circulation Network	127.08	3.36
4	Commercial	7.71	0.20
5	Community Facilities	7.28	0.19
6	Education and Research	8.88	0.23
7	Health Facilities	2.14	0.06
8	Industrial	1.97	0.05
9	Khal Catchment Area	216.76	5.73
10	Open Space and Recreation	2.22	0.06
11	Residential	790.83	20.91
12	Transport Facilities	0.42	0.01
13	Utility Services	0.61	0.02
14	Waterbody	1166.42	30.84
	Total	3737.19	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 18 proposed facilities has been incorporated for Saherkhali Union. About 31.12 acres area has been covered with these proposals. Among those proposals there are 1 kitchen market, 1 cold storage, 1 cyclone shelter, 1 eidgah, 1 graveyard, 1 primary school, 1 college, 2 community clinics, 1 playground, 1 low income people housing area, 2 CNG stands, 3 public toilets, and 3 waste transfer stations. These proposals provide commercial facilities, community facilities, education and research, health facilities, open space and recreational facilities, residential, transport facilities and utility services in the union. Detail mauza wise plot schedule of proposed development facilities for Saherkhali Union is presented in Table 2. 60. Map 2. 26 shows proposed land use of Saherkhali Union.

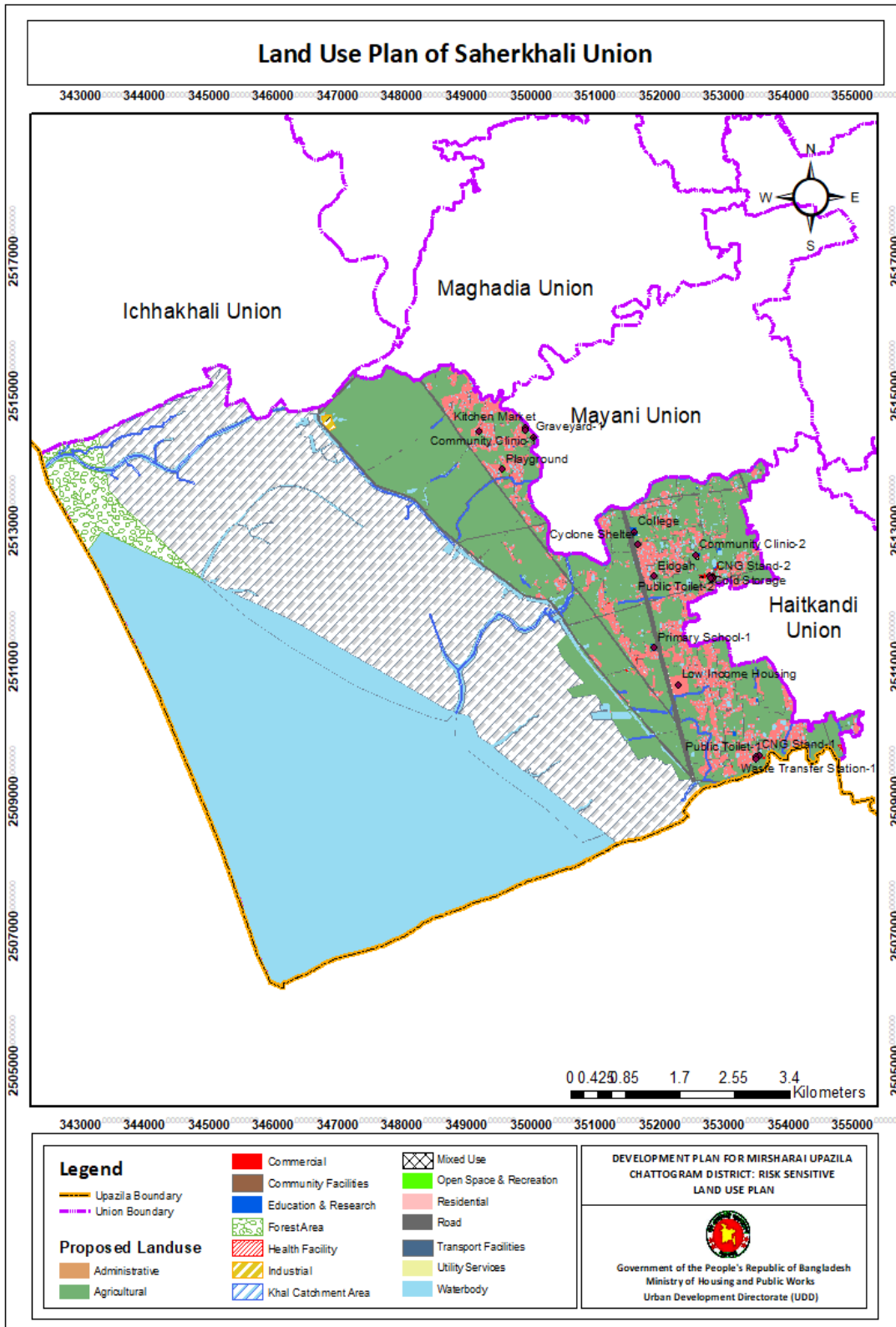
Table 2. 60: List of Proposed Facilities for Saherkhali Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Kitchen Market	0.44	Dakshin Maghadia_080_004	3665, 3667, 3671, 3672, 3678, 3673, 3674, 3675, 3676, 3677, 3679, 3680, 3747, 3708
	Cold Storage	0.25	Saherkhali_081_003	6470, 6471, 6472, 6507, 6508
Community Facilities	Cyclone Shelter	2.03	Saherkhali_081_001	678, 776, 777, 780, 1072, 1089, 1092, 1093, 1094, 1095, 1096, 1097, 1098, 1099, 1100, 1101, 1103, 1104, 1105, 1120, 1123, 1124
	Eidgah	0.99	Saherkhali_081_001	2512, 2511, 1314, 2518, 2516, 2514, 2515, 2513, 2510, 2517
	Graveyard	0.37	Dakshin Maghadia_080_004	3711, 3719
Education and Research	Primary School	1.78	Domkhali_082_002	2152, 2143, 2140, 2149, 2153, 2150, 2139, 2146, 2137, 2144, 2147, 2138, 2154, 2148
	College	2.91	Saherkhali_081_001	788, 787, 801, 794, 786, 789, 762, 785, 784, 763, 796, 764, 790, 791, 795, 783, 813, 798, 800, 799, 814, 749, 812, 797, 808, 761
Health Facilities	Community Clinic	0.69	Dakshin Maghadia_080_004	3053, 3123, 3055, 3068, 3122, 3124, 3125, 3126, 3127, 3131, 3054
		0.43	Saherkhali_081_003	5966, 5968, 5969, 5970, 5971, 5972, 5975, 6860, 6861, 7948
Open Space & Recreation	Playground	1.38	Dakshin Maghadia_080_005	4224, 4225
Residential	Low Income People Housing Area	18.45	Domkhali_082_002	2579, 2580, 2581, 2582, 2583, 2584, 2598, 2600, 2601, 2603, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2636, 2638, 2640, 2821, 3363, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3371, 3372, 3373, 3374, 3375, 3376, 3377, 3378, 3379, 3380, 3381, 3382, 3383, 3384, 3398, 3399, 3400, 3401, 3402, 3517, 3518, 3519, 3520, 3521, 3522, 3523, 3524, 3527, 3528, 3529, 3530, 3531, 3532, 3533, 3534, 3535, 3536, 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547, 3548, 3549, 3550, 3551, 3552, 3553, 3554, 3555, 3556, 3557, 3558, 3559, 3560, 3561, 3562, 3563, 3564, 3565, 3566, 3567, 3568, 3569, 3570, 3571, 3572, 3573, 3574, 3575, 3576, 3577, 3578, 3579, 3580, 3581, 3582, 3583, 3584, 3585, 3586, 3587, 3588, 3589, 3590, 3591, 3592, 3593, 3594, 3595, 3596, 3597, 4585, 4601, 4602, 4603, 4604, 4605, 4606, 4607, 4608

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Transport Facilities	CNG Stand	0.45	Domkhali_082_004	9187, 9188, 9061, 9067, 9063, 9068, 9066, 9070, 9065, 9062, 9064
		0.33	Saherkhali_081_003	6522, 6521, 6509, 6510, 6520
Utility Services	Public Toilet	0.13	Domkhali_082_004	8967, 8966, 9060
		0.15	Saherkhali_081_003	6506, 6504, 6505
	Waste Transfer Station	0.13	Domkhali_082_004	8971, 9038, 9034, 8968
		0.10	Saherkhali_081_003	6509, 6522
		0.11	Dakshin Maghadia_080_004	3663, 3664, 3665, 3666, 3667, 3676

Source: GIS Database, MUDP (2017-2037)

Map 2. 26: Proposed Land Use of Saherkhali Union



In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 58.99 km road has been proposed in Saherkhali Union. About 18.78 km of new roads has been proposed and about 40.20 km roads have been proposed for widening. The proposed road network status of Saherkhali Union has been shown in Table 2. 61.

Table 2. 61: Proposed Road Network in Saherkhali Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	4.18	--	4.18
Regional Highway	7.44	--	7.44
Union Road	--	2.16	2.16
Upazila Road	--	4.03	4.03
Village Road	7.16	34.01	41.18
Total	18.78	40.20	58.99

Source: GIS Database, MUDP (2017-2037)

2.11.15 Wahedpur Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Wahedpur Union. The area of 2937.34 acre of land (60.12%) has been proposed for agricultural use purpose. Proposed land use in this union followed by residential 24.66%, waterbody 5.97%, circulation network 4.32%, educational facilities 0.32%, commercial 0.93%, community facilities 0.16%, industrial 0.19% and health facilities 0.04%. Table 2. 62 show the proposed land use of Wahedpur Union.

Table 2. 62: Proposed Land Use of Wahedpur Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	0.36	0.01
2	Agriculture	2937.34	60.12
3	Circulation Network	210.97	4.32
4	Commercial	45.68	0.93
5	Community Facilities	7.98	0.16
6	Education and Research	15.85	0.32
7	Forest	73.77	1.51
8	Health Facilities	1.82	0.04
9	Industrial	9.38	0.19
10	Khal Catchment Area	81.62	1.67
11	Mixed Use	1.33	0.03
12	Open Space and Recreation	1.68	0.03
13	Residential	1204.98	24.66
14	Transport Facilities	0.67	0.01
15	Utility Services	0.91	0.02
16	Waterbody	291.50	5.97
	Total	4877.84	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 15 proposed facilities has been incorporated for Wahedpur Union. About 23.67 acres area has been covered with these proposals. Among those proposals, there are 1 wholesale market, 1 high school, 1 playground, 1 housing area for tribal, 1 graveyard, 1 cremation ground, 2 CNG stands, 3 public toilets, and 4 waste transfer stations. These proposals provide commercial, community facilities, education and research, health facilities, open space and recreation, residential, transport facilities and utility services in the union. Detail list of proposed development facilities for Wahedpur Union is presented in Table 2. 63. Map 2. 27 shows proposed land use of Wahedpur Union.

Table 2. 63: List of Proposed Facilities for Wahedpur Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Commercial	Wholesale Market	0.90	Wahedpur_089_004	10435, 10452, 10453, 10454, 10455, 10456, 10457, 10458, 10459, 10460, 10461, 10467
			Khajuria_090_000	341
Education and Research	High School	1.91	Wahedpur_089_004	10662, 10664, 10665, 10666, 10667, 10809, 10839, 10840, 10842, 10843, 10848
Open Space & Recreation	Playground	1.68	Maijgaon_087_001	645, 646, 648, 649, 650, 651, 652, 654, 655, 656, 658, 709, 1806, 1807, 647, 653
Residential	Housing for ethnic group	16.94	Wahedpur_089_003	8594, 8595, 8596, 8599, 8600, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8623, 8624, 8640, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8687, 8710, 8711, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8744, 8745, 8746, 8747, 8748, 8749, 8787, 8788, 8601, 8602, 8604, 8680, 8686, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8712
Community Facilities	Graveyard	0.52	Maijgaon_087_001	1799, 1800, 709, 1801, 1806, 1808, 1805
		0.54	Wahedpur_089_001	13645, 13973, 13974, 13975, 13976, 13981, 13982
	Cremation Ground	0.26	Wahedpur_089_001	2494, 2496, 2497, 2498, 2500, 2499, 2503
	Community Clinic	.44	Wahedpur_089_001	262, 253, 252, 251, 250
		.45	Khajuria_090_000	1347, 1204, 1200, 1202, 1203, 1201, 1248
	10-Bed Hospital	1.00	Wahedpur_089_004	5074, 5077, 5078, 5079, 5080, 5081, 5082, 5091, 5099, 5108, Overlap 19294, 10467, Overlap 19295 10467, Overlap 19296, 10467, Overlap 19298 10467, Overlap 19299, 10467, Overlap 19306, 10467
Utility Services	Public Toilet	0.12	Gachhbaria_088_000	2856
		0.12	Wahedpur_089_004	10456, 10457, 10435
		0.14	Bara Kamaldaha_094_002	2875, 2874, 2950, 2169
	Waste Transfer Station	0.14	Gachhbaria_088_000	2856
		0.08	Wahedpur_089_002	4694, 4694
			Maijgaon_087_002	5102
		0.17	Wahedpur_089_004	10447, 10441, 10435, 10440, 10442, 10447, 10440, 10442
			Maijgaon_087_002	5102
0.13	Bara Kamaldaha_094_002	2950, 2169		
Transport Facilities	CNG Stand	0.33	Gachhbaria_088_000	2856
		0.23	Wahedpur_089_004	10462, 10462, 10462, 10462, 10463, 10464, 10465, 10467, 10467, 10467, 10467, 10468
			Khajuria_090_000	341

Source: GIS Database, MUDP (2017-2037)

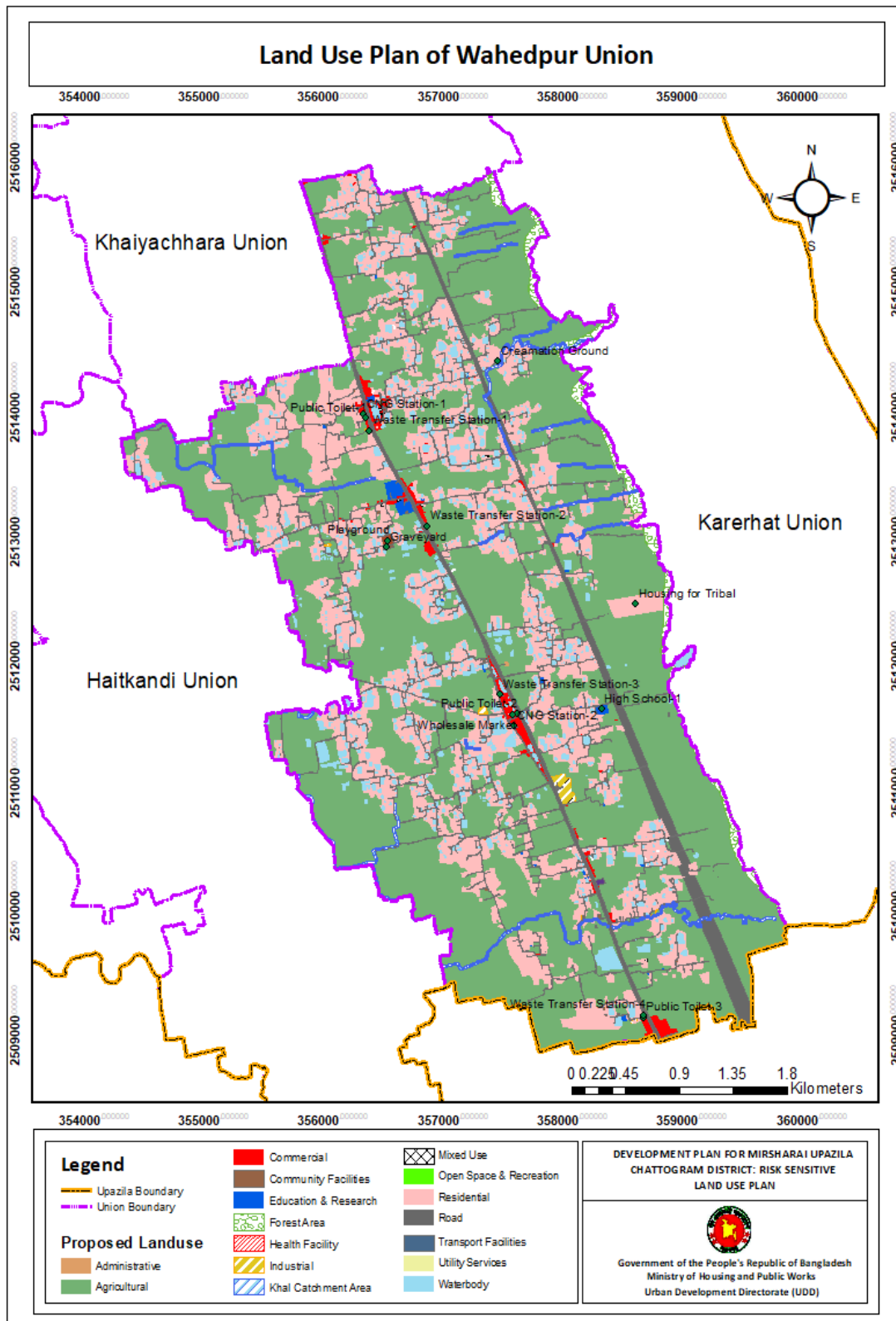
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 36.44 km road has been proposed in Wahedpur Union. About 3.71 km of new roads has been proposed and about 32.74 km roads have been proposed for widening. The proposed road network status of Wahedpur Union has been shown in Table 2. 64.

Table 2. 64: Proposed Road Network in Wahedpur Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
Regional Highway	0.46	0.64	1.09
Upazila Road		2.65	2.65
Village Road	3.25	29.46	32.71
Total	3.71	32.74	36.44

Source: GIS Database, MUDP (2017-2037)

Map 2. 27: Proposed Land Use of Wahedpur Union



2.11.16 Zorwarganj Union

Agricultural land has been given the highest priority while preparing the proposed land use plan of Zorwarganj Union. The area of 3111.95 acre of land (53.49%) has been proposed for agricultural use purpose. Proposed land use in this union followed by residential 23.49%, waterbody 9.18%, circulation network 6.53%, educational facilities 0.46%, commercial 0.41%, community facilities 0.33%, industrial 1.29% and health facilities 0.17%. Table 2. 65 show the proposed land use of Zorwarganj Union.

Table 2. 65: Proposed Land Use of Zorwarganj Union

Serial No.	Proposed Land Use	Area (Acre)	Percentage (%)
1	Administrative	1.88	0.03
2	Agriculture	3111.95	53.49
3	Circulation Network	379.63	6.53
4	Commercial	23.66	0.41
5	Community Facilities	19.18	0.33
6	Education and Research	26.63	0.46
7	Forest	114.95	1.98
8	Health Facilities	10.11	0.17
9	Industrial	75.48	1.29
10	Khal Catchment Area	147.34	2.53
11	Mixed Use	0.52	0.01
12	Open Space and Recreation	4.89	0.08
13	Residential	1366.51	23.49
14	Transport Facilities	0.69	0.01
15	Utility Services	0.67	0.01
16	Waterbody	534.23	9.18
	Total	5805.44	100.00

Source: GIS Database, MUDP (2017-2037)

In the Rural Area Plan, according to the PRA demand and based on the planning standards about 21 proposed facilities has been incorporated for Zorwarganj Union. About 13.28 acres area has been covered with these proposals. Among those proposals there are 1 union councilor office, 1 kitchen market, 1 cold storage, 3 nursery, 1 primary school, 1 high school, 3 community clinics, 1 graveyard, 1 cremation ground, 1 playground, 3 CNG stands, 2 public toilets, and 2 waste transfer stations. These proposals provide administrative use, commercial facilities, community facilities, education and research, health facilities, open space and recreational facilities, transport facilities and utility services in the union. Detail list of proposed development facilities for Zorwarganj Union is presented in Table 2. 66. Map 2. 28 shows proposed land use of Zorwarganj Union.

Table 2. 66: List of Proposed Facilities for Zorwarganj Union

Proposed Land Use	Proposed Facilities	Area (Acre)	Mauza Name, J.L. No., Sheet No.	Plot No.
Administrative Use	Union Councilor Office	0.74	Dewanpur_017_000	1228, 1272, 1262, 1273, 1275, 1274, 1278, 1277, 1276, 1282, 1280, 1283, 1279
Commercial	Kitchen Market	0.57	Paragalpur_018_000	611, 627, 1412, 1413, 1417, 1418, 1419, 1613
			Imampur_019_000	764, 765
Commercial	Cold Storage	1.60	Sonapahar_013_007	11246, 11244, 11243, 11242, 11239, 11240, 11237, 11238, 11236, 11338, 11339, 12069
Education and Research	Nursery	0.45	Khilmurari_012_000	153, 171
		0.40	Sonapahar_013_004	5824, 5823, 5822, 5825, 5828, 5844
		0.40	Bhagabatipur_026_000	197, 198, 195, 194, 207, 184, 183, 185
	Primary School	0.91	Naherpur_024_000	1871, 1873, 1870, 1888, 1869, 1868, 1867, 1857, 1858, 1856, 1855, 1854, 1887, 1853, 1938, 1939
	High School	2.02	Khilmurari_012_000	192, 187, 203, 193, 202, 186, 194, 196, 197, 195, 217
Health Facilities	Community Clinic	0.53	Bhagabatipur_026_000	199, 200, 206, 207, 208, 303, 209, 210
		0.36	Paragalpur_018_000	588, 585, 589, 629, 586, 584, 643, 587, 591
		0.37	Sonapahar_013_003	3812, 3808, 3809, 3807
Community Facilities	Cremation Ground	0.72	Dewanpur_017_000	147, 152, 190, 156, 153, 189
	Graveyard	1.61	Sonapahar_013_003	2997, 2994, 2998, 3822, 2999, 3013, 3002, 3012, 3001, 3000, 3011, 3782, 3004, 3003, 3007
Open Space & Recreation	Playground	1.25	Sonapahar_013_004	5523, 5338, 5327, 5337, 5330, 5334, 5336, 5332, 5333, 5331, 5335, 5256, 5134
Transport Facilities	CNG Stand	0.20	Dewanpur_017_000	1347, 1346, 1345, 1348, 1344
		0.28	Sonapahar_013_007	11361, 11331
		0.21	Sonapahar_013_002	1907, 1908, 1911, 1910, 1909, 1913
Utility Service	Public Toilet	0.17	Sonapahar_013_007	11345, 11361, 11331
		0.07	Sonapahar_013_004	5754
	Waste Transfer Station	0.19	Dewanpur_017_000	1346, 1334
		0.23	Sonapahar_013_002	1894, 1892, 1895, 1897, 1858

Source: GIS Database, MUDP (2017-2037)

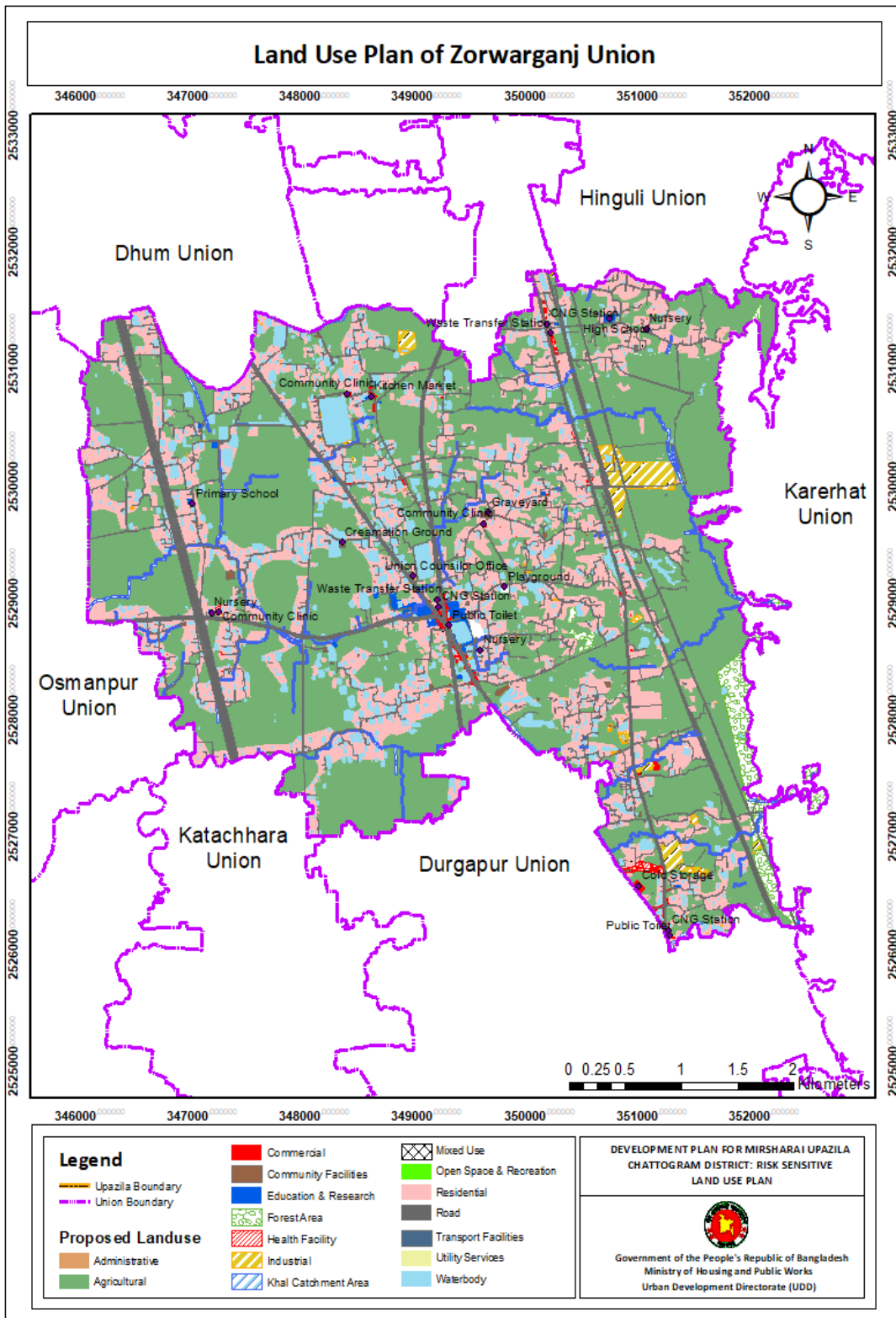
In the road network plan, proper road channelization and widening of narrow roads has been making sure. Total length of 66.11 km road has been proposed in Zorwarganj Union. About 10.88 km of new roads has been proposed and about 55.23 km roads have been proposed for widening. The proposed road network status of Zorwarganj Union has been shown in Table 2. 67.

Table 2. 67: Proposed Road Network in Zorwarganj Union

Road Type	Proposed Status		Total
	New (Length in km)	Widening (Length in km)	
National Highway	3.93	3.05	6.98
Regional Highway	3.36	2.82	6.17
Union Road	2.95	7.01	9.96
Upazila Road		0.37	0.37
Village Road	0.65	41.98	42.63
Total	10.88	55.23	66.11

Source: GIS Database, MUDP (2017-2037)

Map 2. 28: Proposed Land Use of Zorwarganj Union



CHAPTER 03: PERMITTED AND CONDITIONAL USE

3.1 Introduction

In the current chapter general definition, permitted and conditionally permitted uses under each Land use zone is furnished one by one. The uses not listed here in any of the category shall be treated as Restricted Use for the land zone category and shall not be permitted only except decision by the Planning Authority. In such situations, the use shall get permission in the category of new use.

3.2 Development Control in Rural Area

Development control is an essential part for the development process. For development control, certain procedures have to be followed for approval of designs of various categories of structures, establishments, and land uses. Development control process consists of some individual tasks. The first condition is to secure land use permit according to approved zoning plan followed by approval of the design of proposed building/structure. Land Use permit is given on the basis of Land Use Zoning. Land Use zoning is the base on which development control process is performed. The development control process is performed under some government Act and Rules. These are: Building Construction Rules, 1996 under Building Construction Act, 1952; Bangladesh National Building Code, 1993, Jaladhar Ain and other relevant laws related to development control of Upazila area.

3.3 Land Use Zoning

Land Use Zoning is a form of legal power which is delegated to development authorities/municipalities/upazilas through enabling legislation to ensure the welfare of the community by regulating the most appropriate use of the land. Zoning is a classification of land uses that limits what activities can or cannot take place and what will be prohibited on a parcel of land by establishing a range of development options. To get a Land Use permit from development authorities/municipalities/upazilas, a citizen's prospective use of structure must be compatible with the approved land use zones of an area.

Zoning has been defined as an action through legislation provided to a development authority/municipality to control

- The heights to which buildings/structures may be erected,
- The area of a land parcel that must be kept vacant, and
- The uses to which buildings and land parcels may be put.

Land Use zoning is mainly of three types, area zoning, density zoning and height zoning.

❖ **Area Zoning**

Area zoning is to specify which types of Land Use are considered appropriate for different areas or 'zones' and it, therefore, indicates the planning control objectives of the authority or municipality or Upazilas for its administrative area. The main objectives of such zoning are done mainly from the environmental point of view that accrues other social benefits.

❖ **Density Zoning**

The aim of the density zoning is to limit the size of the population in any particular area using density control methods so that the designed facilities and amenities can support the existing size of the population. The size of the population has to bear on the capacity of designed utility facilities and amenities and traffic volume and crowding, especially in the residential areas. Such zoning is practiced to ensure a healthy and enjoyable community living.

❖ **Height Zoning**

Height zoning restricts the height of buildings and structures in any particular area. This zoning is aimed to promote natural growth of an area to be a proper and sound development of areas. Height zoning has a particular importance in-flight safety around airport areas and another similar purpose.

Considering the existing level of development and development prospects of the Upazila, the consultant recommends following the area zoning and height zoning among the above three. Zoning is only a part of development control regulations. A prospective developer in a Paurashava has to comply with other rules and regulations, like, Building Construction Rules, 1996 under Building Construction Act 1952, Bangladesh National Building Code 1993 and other conditions of construction method, building safety and associated issues.

3.4 Classification of Land Use Zoning

Characteristics of local towns like Upazilas have a clear difference with the traditional large towns of our country. After a detailed consultation between the client and consultants of the project, the consultant recommends following Land Use Zoning classification under current Development Plan of Mirsharai Upazila.

- a) Administrative Zone
- b) Agricultural Zone
- c) Commercial Zone
- d) Flood Flow Zone
- e) Growth Center
- f) General Industrial Zone

- g) Heavy Industrial Zone
- h) Mixed Use Zone
- i) Open Space
- j) Rural Settlement
- k) Urban Residential Zone
- l) Waterbody
- m) Water Retention Area

The following sections deal with the general definition of the use and description of associated permitted and conditionally permitted uses under each Land Use zone one by one. The uses not listed here in any of the categories shall be treated as Restricted Use for the corresponding Land Use category and shall not be permitted only except unanimously decided otherwise by the Nagar Unnayan Committee. In such situations, the use shall get permission in the category of New Use.

3.4.1 Administrative Zone

The administrative zone will allow agglomeration of administrative structures to make a convenient communication among them. This zone houses important government machinery such as the All types of Government Office, Ansar Camp, Bank, BWDB Office, Civil Surgeon Office, DoE Office, Deputy Commissioner's Office, Commercial Group Office, LGED Office, DPHE Office, Jailkhana, Labor Union, Law Chamber, Mercantile & Cooperatives, Money Exchange Center, Paurashava Office, PDB Office, Police Station, Political Party Office, Post office, Private company/Different types of NGO/ CBO/Club, Professional's Association, R&H Office, Private Bank/Insurance Company, Public Works Department Office, Security Service Office, Settlement Office, Statistical Bureau Office, SP Office/ Police Headquarter, Trading Corporation Office, Union Parishad Office, Upazila Headquarter, Zila Parishad Office, etc.

Purpose

The main purpose of this zone is to agglomerate the administrative structures within a certain boundary for the convenience of people.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 1: Permitted Land Use for Administrative Zone

Permitted Administrative Uses	Permitted Administrative Uses
Accounting, Auditing or Bookkeeping Services	Newspaper Stand
ATM Booth	Outdoor Religious Events
Bus Passenger Shelter	Photocopying and Duplicating Services
Civic Administration	Post Office
Communication Service Facilities	Professional Office

Permitted Administrative Uses	Permitted Administrative Uses
Communication Tower within Permitted Height	Project Office
Confectionery Shop	Public Transport Facility
Construction, Survey, Soil Testing Firms	Satellite Dish Antenna
Cultural Exhibits and Libraries	Scientific Research Establishment
Cyber Café	Shelter (Passers By)
Emergency Shelter	Social Forestry
Freight Transport Facility	Training Centre
General Store	Transmission Lines
Government Office	Utility Lines
Grocery Store	Water Pump \ Reservoir
Guest House	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 2: Conditionally Permitted Land Use for Administrative Zone

Conditionally Permitted Administrative Uses	Conditionally Permitted Administrative Uses
Amusement and Recreation (Indoors)	Flowers, Nursery Stock and Florist Supplies
Postal Facilities	Freight Handling, Storage & Distribution
Bank & Financial Institution	Freight Yard
Boarding and Rooming House	Gallery \ Museum
Book or Stationery Store or Newsstand	Garages
Coffee Shop \ Tea Stall	Lithographic or Print Shop
Conference Center	Mosque, Place of Worship
Courier Service	Outdoor Café
Daycare Center (Commercial or Nonprofit)	Parking Lot
Detention Facilities	Parking Lot (Commercial)
Doctor \ Dentist Chamber	Pipelines and Utility Lines
Energy Installation	Plantation (Except Narcotic Plant)
Fast Food Establishment \ Food Kiosk	Police Box \ Barrack
Fire \ Rescue Station	Auditorium, Coliseum, Meeting Halls, and Conference Facilities, Convention

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.2 Agriculture Zone

The agricultural zone is the zone of ‘food production’ where predominantly agricultural production will be encouraged. All types of agricultural activity such as crop production; aquaculture etc. will be dominant and will be permitted to ensure food security. The agricultural zone is intended to prevent the scattered indiscriminate conversion of cropland into settlements.

Purpose

- To safeguard food security by protecting agricultural land from indiscriminate conversion in the name of development.
- To promote farming activity and farming operation in the land especially suitable for the purpose.
- To conserve agricultural lands within urban areas and encourage the long-term viability of agricultural operations and the supporting agricultural industry.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 3: Permitted Land Use for Agricultural Zone

Permitted Agriculture Uses	Permitted Agriculture Uses
Animal Shelter	Social Forestry
Aquaculture	Shallow Tube Well
Aquatic Recreation Facility (Without Structure)	Horticulture
Arboriculture	Static Transformer Stations
Cash Crop Cultivation	Temporary Structure (Agricultural)
Dairy Farming	Transmission Lines
Deep Tube Well	Tree Plantation (Except Narcotic Plant)
Ducker	Utility Lines
Food Grain Cultivation	Vegetable Cultivation
Irrigation Facilities (Irrigation canal, Culvert, Flood wall)	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 4: Conditionally Permitted Land Use for Agricultural Zone

Conditionally Permitted Agriculture Uses	Conditionally Permitted Agriculture Uses
Communication Tower Within Permitted Height	Graveyard \ Cemetery
Crematorium	

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.3 Commercial Zone

Commercial areas generally contain one or more of a wide variety of uses that include business uses, offices, hotel, public houses, and limited forms of retailing. Uses that are particularly appropriate to these areas include wholesale, business service uses, the sale of motor vehicles and limited forms of retailing that involve the sale of bulky goods unsuitable to be carried away by pedestrians. This would allow users that are compatible with or reinforce the commercial function of the area. As a whole, Commercial Zone is intended to provide all the facilities and services with the commercial Land Use that are designed for basic trade and business.

Commercial zones are classified into two types: office and business predominated zones. Commercial Business Zone is a business pre-dominated commercial zone that mainly supports business. This zone is intended to support large commercial developments in major incorporated areas such as retail distribution, retail warehouse, retail storage and retail logistics facilities. The Commercial Business Zone is intended to provide areas for logistical and retail warehousing activities, including storage, distribution, and packaging of goods and products as well as activities which require a large site and space. The Commercial Zone (Office) is intended to provide all the facilities and services with the commercial Land Use. Commercial Office Zone is an office pre-dominated commercial zone that mainly supports the official works. It supports other types of commercial activities, too. Proposals for these areas involve large-scale buildings and require a high degree of accessibility and parking space for car users and delivery vehicles.

Purpose

- The intent of this zone is to provide commercial nodes inconvenient and strategic locations of the area to meet urban needs and to encourage clustering commercial development as opposed to stripping commercial development and commercial sprawl.
- The main objective for designating this zone is to promote trade and commerce compactly associated with all other facilities.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 5: Permitted Land Use for Commercial Zone

Permitted Commercial Uses	Permitted Commercial Uses
Accounting, Auditing or Bookkeeping Services	Fruit and Vegetable Markets
Agri-Business	Fitness Centre
Agricultural Sales and Services	General Store
Ambulance Service	Government Office
Antique Store	Grocery Store
Appliance Store	Guest House
Art Gallery, Art Studio \ Workshop	Health Office
ATM Booth	Hotel or Motel
Auction Market	Indoor Amusement Centers, Game Arcades
Auditorium, Coliseum, Meeting Halls, and Conference Facilities, Convention	Television, Radio or Electronics Repair (No Outside Storage)
Auto Leasing or Rental Office	Jewelry and Silverware Sales
Automobile Driving Academy	Market (Bazar) Place
Auto Paint Shop	Mosque, Place of Worship
Auto Parts and Accessory Sales (Indoors)	Motorcycle Sales Outlet
Auto Repair Shop (With Garage)	Multi-Storied Car Park
Automobile Wash	Newspaper Stand
Billboards, advertisements & advertising structure	Outdoor\commercial outdoor recreation
Bakery or Confectionery-Retail	Parking Lot (Commercial)
Bank & Financial Institution	Orphanage
Barber Shop	Pathological Lab
Beauty and Body Service	Pet Store
Bicycle Shop	Photocopying and Duplicating Services
Automobile Sales	Photofinishing Laboratory & Studio
Billiard Parlor \ Pool Hall	Pipelines and Utility Lines
Boarding and Rooming House	Post Office
Inter-City Bus Terminal	Preserved fruits & vegetables facility
Book Stall	Printing, Publishing, and Distributing
Building Material Sales or Storage (Indoors)	Professional Office
Bulk Mail and Packaging	Project Identification Signs
Bus Passenger Shelter	Project Office
Catering Service	Property Management Signs
Chinese Restaurant	Public Transport Facility
Cinema Hall	Real Estate Office
Clinic	Refrigerator or Large Appliance Repair

Permitted Commercial Uses	Permitted Commercial Uses
Coffee Shop \ Tea Stall	Resort
Commercial Office	Restaurant
Communication Service Facilities	Retail Shops \ Facilities
Communication Tower Within Permitted Height	Sales Office of Industries
Computer Maintenance and Repair Shop	Satellite Dish Antenna
Computer Sales & Services Shops	Shelter (Passers By)
Confectionery Shop	Shopping Mall \ Plaza
Conference Center	Slaughter House
Community Center	Social Forestry
Construction Company	Software Development Firm
Construction, Survey, Soil Testing Firms	Stationery Store
Courier Service	Sporting Goods and Toys Sales
Cyber Café	Super Store
Daycare Center (Commercial or Nonprofit)	Taxi Stand
Dental Laboratory	Telephone Exchanges
Department Stores, Furniture & Variety Stores	Book or Stationery Store
Diagnostic Center	Theater (Indoor)
Doctor \ Dentist Chamber	Toys and Hobby Goods Processing and Supplies
Department Stores	Training Centre
Drug Store or Pharmacy	Transmission Lines
Electrical and Electronic Equipment and Instruments Sales	Veterinarian Clinics, Animal Hospitals, Kennels and Boarding Facilities
Fast Food Establishment \ Food Kiosk	Vehicle Sales & Service, Leasing or Rental
Flowers, Nursery Stock and Florist Supplies	Utility Lines
Food Court	Warehousing
Freight Handling, Storage & Distribution	Water Pump \ Reservoir
Freight Transport Facility	Wood Products
Freight Yard	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 6: Conditionally Permitted Land Use for Commercial Zone

Conditionally Permitted Commercial Uses	Conditionally Permitted Commercial Uses
Agricultural chemicals, pesticides\ fertilizers shop	Broadcast studio\ recording studio (no audience)
Amusement and Recreation (Indoors)	Indoor Amusement Centers, Game Arcades
Bicycle Assembly, Parts and Accessories	Indoor Theatre
Incineration Facility	Lithographic or Print Shop
Craft Workshop	Motor Vehicle Fueling Station \ Gas Station
Coffee Shop \ Tea Stall	Musical Instrument Sales or Repair
Concert Hall, Stage Shows	Optical Goods Sales
Construction, Survey, Soil Testing Firms	Painting and Wallpaper Sales
Container Yard	Paints and Varnishes
Energy Installation	Parking Lot
Fire \ Rescue Station	Patio Homes
Firm Equipment Sales & Service	Plantation (Except Narcotic Plant)
Fitness Centre	Postal Facilities
Flowers, Nursery Stock and Florist Supplies	Poultry
Forest Products Sales	Police Box \ Barrack
Fuel and Ice Dealers	Private Garages
Garages	Professional Office
Garden Center or Retail Nursery	Retail Shops Ancillary to Studio\ workshop
Grain & Feed Mills	Stone \ Cut Stone Products Sales
Household appliance\ furniture repair service	Trade Shows

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.4 Flood Flow Zone

The area over which the flow of floodwater during monsoon passes through is termed here as flood flow zone.

Purpose

The intent of the Flood Flow Zone is to protect adverse hydrological impact, human life, and health, minimize property damage, encourage appropriate construction practices, and minimize public and private losses due to the overflow of water. Additionally, this zone is intended to maintain the sound use and development of flood-prone areas and to restrict potential home buyers by notifying that property is in a flood area. The provisions of this zone are intended to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, and sewer lines, street, and bridges located in the

floodplain, and prolonged business interruptions; and to minimize expenditures of public money for costly flood control projects and rescue and relief efforts associated with flooding.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 7: Permitted Land Use for Flood Flow Zone

Permitted Uses	Permitted Uses
Aquatic Recreation Facility (Without Structure)	Plantation (Except Narcotic Plant)
Dry Season Play Field	Static Transformer Stations
Marina \ Boating Facility	Transmission Lines
Pipelines and Utility Lines	Utility Lines

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 8: Conditionally Permitted Land Use for Flood Flow Zone

Conditionally Permitted Uses	Conditionally Permitted Uses
Communication Tower Within Permitted Height	Poultry

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.4 Growth Center

According to the location theorists, “Such settlements which are nuclear or central to their influence area are called growth centers”. In the context Bangladesh, Growth Centers are rural marketplaces that have been identified by the Planning Commission on the basis of socio-economic and administrative criteria for making development investment. There are about 8,000 rural marketplaces throughout Bangladesh that are popularly known as 'hat' or 'bazaar'. Realizing their importance in the rural sector, the government felt the need to upgrade them with some infrastructure facilities in order to enhance their efficiency. However, due to fund constraint, it was not possible to include all the 'hats' or 'bazaars' for development investment. Thus, initially 1,400 of them were selected in 1984 and later in 1993; another 700 'hats' or 'bazaars' were added to this list to take the final number to 2,100. In our planning area, there are some growth centers that contain substantially the following characteristics.

Purpose

- It incorporates a mix of uses that typically include or have the potential to include the following: retail, office, services, and another commercial, civic, recreational, industrial, and residential uses, within a densely developed, compact area;
- It incorporates existing or planned public spaces that promote social interaction, such as public parks, civic buildings (e.g., post office, municipal offices), community gardens, and other formal and informal places to gather;
- It is organized around one or more central places or focal points, such as prominent buildings of civic, cultural, or spiritual significance or a square;
- It results in compact concentrated areas of land development that are served by existing or planned infrastructure and are separated by rural countryside or working landscape

Land Use Permitted

Rural commercial center in the “Growth center” form is one of an important feature for rural economic sustainability. In a growth center, people can find their necessary service activity in an easily accessible distance apart from the urban area. In this sense, the permitted uses for growth center are the following:

Table 3. 9: Permitted Land Use for Growth Center

Permitted Uses	Permitted Uses
Accounting, Auditing or Bookkeeping Services	Garages
Addiction Treatment Center	Garden Center or Retail Nursery
Agricultural chemicals, pesticides\ fertilizers shop	General Store
Agricultural Dwellings	Grain & Feed Mills
Agricultural Product Sales	Grocery Store
Dormitory	High School
Furniture Stores	Hotel or Motel
Ambulance Service	Household appliance and furniture repair service
Amusement and Recreation (Indoors)	Housing for Seasonal Firm Labor
Ancillary Dwelling	Indoor Amusement Centers
Animal Husbandry	Indoor Theatre
Antique Store	Jewelry and Silverware Sales
Appliance Store	Katcha Bazar
Auction Market	Loom (Cottage Industry)
Auto Repair Shop (With Garage)	Mosque, Place of Worship
Bank & Financial Office	Newspaper Stand
Barber Shop	NGO \ CBO Office
Barber Shop	Nursery School
Billboards, advertisements & advertising structure	Communication tower within the permitted height
Blacksmith	Optical Goods Sales
Boarding and Rooming House	Orphanage
Book or Stationery Store or Newsstand	Outdoor Fruit and Vegetable Markets

Permitted Uses	Permitted Uses
Bus Passenger Shelter	Outdoor Religious Facility (Eidgah)
Cinema Hall	Paints and Varnishes Shop
Cleaning \ Laundry Shop	Photo Studio
Coffee Shop \ Tea Stall	Photocopying and Duplicating Services
Cold Storage	Postal Facilities
College\Technical Training School \ Centers \ Agro Based Trading	Electrical and Electronic Equipment and Instruments Sales
Communication Service Facilities	Public Utility Stations & Substations
Open Theater	Research organization (Agriculture \ Fisheries)
Community Center	Restaurant
Computer Maintenance and Repair	Retail Shops \ Facilities
Computer Sales & Services	Rickshaw \ Auto Rickshaw Stand
Confectionery	Satellite Dish Antenna
Courier Service	Sawmill
Craft Workshop	Shoe Repair or Shoeshine Shop (Small)
Cyber Café	Signboard \ Billboard
Dairy Farming	Slaughter House
Daycare Center (Commercial or Nonprofit)	Small Workshop
Department Stores	Social Forestry
Doctor \ Dentist Chamber	Specialized School: Dance, Art, Music & Others
Agro-based industry (rice mill, sawmill, cold storage)	Specialized School: Dance, Art, Music, Physically Challenged & Others
Drug Store or Pharmacy	Static Transformer Stations
Primary School	Storage & Warehousing
Emergency Shelter	Taxi Stand
Energy Installation	Television, Radio or Electronics Repair
Fabric Store	Theater (Indoor)
Family Welfare Center	Transmission Lines
Fast Food Establishment \ Food Kiosk	Truck Stand & Freight Terminal
Firm Equipment Sales & Service	Utility Lines
Fish Hatchery	Variety Stores
Fitness Centre	Vehicle, Leasing or Rental Service
Flowers, Nursery Stock	Veterinary Centre
Freight Transport Facility	Veterinary Clinic \ Center
Fuel and Ice Dealers	Wood Products
Funeral Services	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 10: Conditionally Permitted Land Use for Growth Center

Conditionally Permitted Uses	Conditionally Permitted Uses
Artisan’s Shop	Library
Auto Leasing or Rental Office	Motor Vehicle Fueling Station \ Gas Station
Beauty Parlor	Musical Instrument Sales or Repair
Building Maintenance\Cleaning Services (No Outside Storage)	Preserved Fruits and Vegetables Facility \ Cold Storage
Building Material Sales or Storage (Indoors)	Plantation (Except Narcotic Plant)
Carnivals and Fairs	Police Station
Circus	Poultry
Correctional Institution	Pet Store
Fire Brigade Station	Sports and Recreation Club
Freight Handling, Storage & Distribution	Stage Shows
Freight Yard	Temporary Rescue Shed
Guest House	Trade Shows

Source: Compiled by the MUDP Project Team

* All of the commercial activities shall be located at growth center.

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.5 General Industrial Zone

Promoting the development of industrial areas as the primary locations for uses including manufacturing, repairs, warehousing, distribution, open-storage, waste materials treatment and recovery, and transport operating centers, the industrial zone has been earmarked. The development of inappropriate mixes of uses, such as office-based industry and retailing will not normally be encouraged here.

It is an objective to ensure that, normally, new buildings in primarily industrial areas are a single story with high ceilings to provide versatility and adaptability to accommodate a broad range of types of plant, machinery, and delivery vehicles throughout their design life. It is an objective to ensure that the likely demand for car parking and delivery vehicle facilities are fully met within the site, to apply the highest standards of design, hard and soft landscaping and to ensure that pedestrian access is provided and that provision is made for public transport.

Purpose

The intent of this zone is to accommodate certain industrial uses which, based on their operational characteristics, is incompatible with residential, social, medical, and commercial environs. As a result, the establishment of such zones shall be restricted to areas geographically buffered from such environs, and the operations of such uses monitored by performance standards to ensure environmental compatibility.

- The purpose and intent of industrial zone are to provide areas in appropriate locations where various light and heavy industrial operations can be conducted without creating hazards to surrounding land uses. Industrial zones are cohesive, planned tracts, with all elements sharing the same or compatible architectural and landscaping themes within a parcel.
- Areas intended to accommodate a variety of industrial establishments which: 1) employ high environmental quality standards; 2) may function as an integral part of an overall development area; and, 3) have minimal impacts on adjacent uses.
- The purpose and intent of General industrial zone is to provide areas in appropriate locations for certain types of light manufacturing, processing or fabrication, warehousing establishments of non-objectionable products or adjacent uses because they are characterized by a minimum of material, processes, or machinery likely to cause undesirable effects upon nearby or adjacent residential or commercial property.

General Industrial Zone is to accommodate Green, Orange A, Orange B types of industries of Department of Environment (DOE) prepared categories, and Urban Area Plan designated light industries and general industries along with some other new types. Here the industries will not be noxious and heavy.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 11: Permitted Land Use for General Industrial Zone

Permitted General Industrial Uses	Permitted General Industrial Uses
Aluminum products	Perfumes, cosmetics
Artificial Fiber Production	Pharmaceutical Industry
Assembling and manufacturing of clocks and watches	Assembling and manufacturing of electrical and Electronic home products etc.
Photocopying and Duplicating Services	Photographic Film Factory
Plastic & rubber goods (excluding PVC)	Pipelines and Utility Lines
Assembling and manufacturing of toys (except plastic items)	Production of utensils and souvenirs of brass and bronze
Assembling of motor vehicles	Police Box \ Barrack
Assembling of telephones	Power Loom
ATM Booth	Printing and writing ink manufacturing Industry
Automatic rice mill.	Printing Press
Bakery	Printing, Publishing, and Distributing
Bank & Financial Institution	Processing: fish, meat, and food
Manufacture of industrial tools, equipment, and machinery	Processing and bottling of drinking water and carbonated drinks
Blacksmith	Production of artificial leather goods
Bus Passenger Shelter	Production of Comb, hair band, hair clip etc.
Chocolate and lozenge Factory	Production of gold ornaments
Cinema Hall	Production of Pin, board pin, U Pin etc.

Permitted General Industrial Uses	Permitted General Industrial Uses
Clinic and Pathological lab	Production of powder milk/condensed milk/dairy
Cold storage	Production of shoes and leather goods
Communication Tower within Permitted Height	Production of spectacles frames
Confectionery Shop	Public Transport Facility
Dry-cleaning	Repairing of refrigerators
Edible oil	Restaurant
Effluent Treatment Plant	Retail Shops \ Facilities
Electric cable	Salt Industry
Engineering works	Salt production
Fabric washing Plant	Salvage Processing
Factory for production of chocolate and lozenges	Salvage Yards
Fire \ Rescue Station	Satellite Dish Antenna
Flour (large) Mill	Sawmill, Chipping, and Pallet Mill
Freight Transport Facility	Shelter (Passers By)
Bicycle Assembly, Parts and Accessories	Shoes and leather goods production
Galvanizing	Soap
Garments and sweater Factory	Social Forestry
Glass factory	Sodium silicate Factory
Glue (excluding animal glue)	Spinning mill
Grinding/husking wheat, rice, turmeric, chilly, pulses – machine above 0 Horse Power	Television, Radio or Electronics Repair (No Outside Storage)
Grocery Store	Starch and glucose factory
Hotel, multi-storied commercial building.	Stone grinding, cutting, and polishing
Household appliance and furniture repair service	Sports goods Production
Ice-cream	Tea processing
Jute mill	Tire re-treading
Lime	Transmission Lines
Machine Sheds	Truck Stop & Washing or Freight Terminal
Manufacture of Agricultural tools, equipments and small machinery.	Utensils made of clay and china clay/sanitary wares (ceramics)
Furniture Manufacture of wood/iron/aluminum	Utility Lines
Manufacturing of wooden vessel	Water Pump \ Reservoir
Match Factory	Water Purification Plant
Meat and Poultry (Packing & Processing)	Weaving and handloom
Metal utensils/spoons etc.	Wood Products
Mosque, Place of Worship	Wood treatment
Motor vehicles repairing works	Wood/iron/aluminum Furniture production
Newspaper Stand	Woodlot
Packaging Industries	

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 12: Conditionally Permitted Land Use for General Industrial Zone

Conditionally Permitted General Industrial Uses	Conditionally Permitted General Industrial Uses
Amusement and Recreation (Indoors)	Lithographic or Print Shop
Appliance Store	Manufacturing of Artificial flower
Assembling and manufacturing of clocks and watches	Assembling and manufacturing of electrical and Electronic home products etc.
Medical and surgical instrument production	Motor Vehicle Fueling Station \ Gas Station
Outside Bulk Storage	Motorcycle Sales Outlet
Assembling and manufacturing of toys (except plastic items)	Assembling of motorcycles, bicycles, and toy cycles
Musical instruments	Outdoor Fruit and Vegetable Markets
Assembling of scientific and mathematical instruments	Photographic lab (except ultraviolet and infra-red)
Assembling of telephones	Overhead Water Storage Tanks
Bamboo and cane goods	Painting and Wallpaper Sales
Book-binding	Paints and Varnishes
Candle Production	Parking Lot
Carpet and mat production	Parking Lot (Commercial)
Cork items Production	Pen and ball-pen Factory
Cyber Café	Production of artificial leather goods
Daycare Center (Commercial or Nonprofit)	Plantation (Except Narcotic Plant)
Doctor \ Dentist Chamber	Private Garages
Electrical and electronic equipment and instruments sales	Re-packing of milk powder (excluding production)
Employee Housing	Laundry
Energy Installation	Retail Shops Ancillary to Studio \ Workshop
Fast Food Establishment \ Food Kiosk	Rope and coir mat production
Garages	Sports goods (excluding plastic made items)
Gold ornaments Production	Super Store
Grain & Feed Mills	Tea packing (excluding processing)
Incineration Facility	Washing Plant

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.6 Heavy Industrial Zone

The purpose and intent of Heavy Industrial Zone are to provide areas in appropriate locations where various heavy industrial operations can be conducted without creating hazards to surrounding land uses. Areas are intended to accommodate manufacturing and fabricating establishments that are generally characterized as producing noise, vibration, heavy freight traffic, fumes, and other forms of pollution which may be objectionable to adjacent uses is characterized as Heavy Industrial Zone. Heavy industries are those industries listed as red industries in the DOE Industry type list and industries listed in the Urban Area Plan as noxious industries including mining/quarrying.

Purpose

- To confine heavy, noisy, and vibrating industries as they harm human living in the surrounding area.
- To ensure that industrial development achieves high environmental standards of cleaner production, waste disposal, noise, and air quality
- To encourage the design and construction of energy efficient, functional, and flexible industrial and commercial facilities.
- To restrict heavy and noxious industrial developments along major approach routes and major roads.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 13: Permitted Land Use for Heavy Industrial Zone

Permitted Heavy Industrial Uses	Permitted Heavy Industrial Uses
Acids and their salts (organic or inorganic) Industry	Phosphorus and its Compounds/Derivatives Industry
Animal Glue	Other Chemicals Industry
Artificial Rubber Industry	Outside Bulk Storage
Asbestos Factory	Paper and Pulp Mill
ATM Booth	Pesticides, Fungicides and Herbicides Industry
Bank & Financial Institution	Ordnance Factory
Basic Industrial Chemicals Industry	Photo Films,
Battery Industry	Photo papers and Photo Chemicals Industry
Bicycle Assembly, Parts and Accessories	Bus Passenger Shelter
Bitumen Industry	Pipelines and Utility Lines
Chemical Industry	Board Mills
Chlorine, Fluorine, Bromine, Iodine, and their Compounds/Derivatives Industry	Plastic Raw Materials (PVC, PP/Iron, Polyester in etc.) Factory
Carbon rod Industry	Police Box \ Barrack
Cement Industry	Power plant

Permitted Heavy Industrial Uses	Permitted Heavy Industrial Uses
Chemical dyes, Polish, Varnish, Enamel Paint Factory	Public Transport Facility
Refrigerator/Air-conditioner/Air-cooler manufacturing	Raw materials of Medicines and Basic Drugs Industry
Communication Tower Within Permitted Height	Refractory
Detergent Factory	Re-rolling Mills
Distillery	Road Network
Effluent Treatment Plant	Rodenticide Industry
Electroplating	Satellite Dish Antenna
Explosive Industry	Saw Mills
Fabric Dyeing & Chemical Processing Industry	Scrap industry
Fiber-glass Factory	Sewage Treatment Plant
Fire \ Rescue Station	Shelter (Passers By)
Flood Control Structures	Ship Manufacturing
Formaldehyde Industry	Social Forestry
Fuel Oil Refinery	Sugar Mill
Grocery Store	Tannery
Heavy Engineering Workshop	Tire and Tubes
Heavy Repairing of Motor Vehicles	Tobacco Processing, Cigarette/Bidi Factory
Hospital	Transmission Lines
Incineration Facility	Truck Stop & Washing
Industrial Estate	TSP Fertilizer Factory
Industrial Gas (Oxygen, Nitrogen & Carbon-dioxide) Industry	Various Products made from Petroleum and Coal Industry
Iron and Steel Mill	Non-iron Basic Metals Industry
Jute Mill	Utility Lines
Life-Saving Drugs Industry	Urea Fertilizer Factory
Lumber and building supply	Waste Incinerator
Metallic Boat Manufacturing	Water Pump \ Reservoir
Mosque, Place of Worship	Water Treatment Plant
Murat of Potash Manufacturing	Wooden Boat Manufacturing
Newspaper Stand	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 14: Conditionally Permitted Land Use for Heavy Industrial Zone

Conditionally Permitted Heavy Industrial Uses	Conditionally Permitted Heavy Industrial Uses
Amusement and Recreation (Indoors)	Machine Sheds
Cyber Café	Motor Vehicle Fueling Station \ Gas Station
Daycare Center (Commercial or Nonprofit)	Nitrogen Compound Industry
Doctor \ Dentist Chamber	Parking Lot
Employee Housing	Parking Lot (Commercial)
Energy Installation	Plantation (Except Narcotic Plant)
Freight Transport Facility	Private Garages
Garages	Retail Shops Ancillary to Studio \ Workshop

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.7 Mixed Use Zone

The Residential- Commercial- General Industrial zone is intended to achieve cohabitation of uses while ensuring that negative impacts on residents are minimized. The spaces created in this zone are intended to encourage a diminished need for motorized travel and shall possess characteristics of all of the three- Residential, Commercial, and Industrial.

Purpose

The main purpose of this zone is to support the diversification and expansion of the area’s industrial base and employment growth as well as to facilitate investment in a wide range of industrial and related activities, with efficient land utilization and provision of infrastructure. To make provision for small-scale services that support surrounding industrial activities, or which meet the needs of the local workforce is a primary aim of this type of Land Use. Provide convenient access for the area and regional residents to industrial goods, services, and employment opportunities, too, is an important purpose of this zone.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 15: Permitted Land Use for Mixed Use Zone

Permitted Mixed Uses	Permitted Mixed Uses
Accounting, Auditing or Bookkeeping Services	Fire \ Rescue Station
Antique Store	General Store
Appliance Store	Grocery Store
ATM Booth	Guest House
Auditorium, Coliseum, Meeting Halls, and Conference Facilities, Convention	Service stations, full service (with minor repair)

Permitted Mixed Uses	Permitted Mixed Uses
Auto Leasing or Rental Office	Landscape and Horticultural Services
Auto Paint Shop	Mosque, Place of Worship
Auto Parts and Accessory Sales (Indoors)	Newspaper Stand
Auto Repair Shop (With Garage)	Nursery School
Automobile Driving Academy	Photocopying and Duplicating Services
Automobile Sales	Pipelines and Utility Lines
Automobile Wash	Police Box \ Barrack
Bakery or Confectionery-Retail	Primary School
Bank & Financial Institution	Project Identification Signs
Barber Shop	Property Management Signs
Bicycle Assembly, Parts and Accessories	Public Transport Facility
Bicycle Shop	Rickshaw \ Auto Rickshaw Stand
Billboards, Advertisements, and Advertising Structure	Satellite Dish Antenna
Billiard Parlor \ Pool Hall	Service Garage
Blacksmith	Hospital
Boarding and Rooming House	Sewage Treatment Plant
Book or Stationery Store or Newsstand	Shelter (Passers By)
Bulk Mail and Packaging	Shoe Repair or Shoeshine Shop (Small)
Bus Passenger Shelter	Social Forestry
Children's Park	Social organization
Cleaning \ Laundry Shop	Solid Waste Recycling Plant
Commercial Recreational Buildings	Special Dwelling
Communication Service Facilities	Transmission Lines
Communication Tower within Permitted Height	Utility Lines
Confectionery Shop	Water Pump \ Reservoir
Construction, Survey, Soil Testing Firms	Woodlot
Courier Service	

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 16: Conditionally Permitted Land Use for Mixed Use Zone

Conditionally Permitted Mixed Uses	Conditionally Permitted Mixed Uses
Agricultural chemicals, pesticides\ fertilizers shop	Freight Transport Facility
Amusement and Recreation (Indoors)	Garages
Auction Market	Garden Center or Retail Nursery
Beauty and Body Service	Government Office
Gaming Clubs	Grain & Feed Mills
Building Material Sales or Storage (Indoors)	Health Office, Dental Laboratory, Clinic or Lab

Conditionally Permitted Mixed Uses	Conditionally Permitted Mixed Uses
Bulk Fuel Sales Depot	Hotel or Motel
Coffee Shop \ Tea Stall	Household Appliance & Furniture repair service
Computer Maintenance and Repair	Incineration Facility
Computer Sales & Services	Indoor Theatre
Concert Hall, Stage Shows	Jewelry and Silverware Sales
Condominium or Apartment	Lithographic or Print Shop
Conference Center	Market (Bazar)
Construction Company	Musical Instrument Sales or Repair
Correctional Institution	Outdoor Fruit and Vegetable Markets
Counseling Services	Painting and Wallpaper Sales
Craft Workshop	Paints and Varnishes
Cyber Café	Pet Store
Daycare Center (Commercial or Nonprofit)	Photofinishing Laboratory & Studio
Department Stores, Furniture & Variety Stores	Plantation
Drug Store or Pharmacy	Project Office
Employee Housing	Psychiatric Hospital
Energy Installation	Refrigerator or Large Appliance Repair
Fabric Store	Restaurant
Fast Food Establishment \ Food Kiosk	Retail Shops \ Facilities
Firm Equipment Sales & Service	Retail Shops Ancillary to Studio \ Workshop
Fitness Centre	Sporting Goods and Toys Sales
Flowers, Nursery Stock and Florist Supplies	Sports & Recreation Club, Firing Range: Indoor
Forest Products Sales	Telephone Exchanges
Building Maintenance \ Cleaning Services, No Outside Storage	Television, Radio or Electronics Repair (No Outside Storage)

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.8 Open Space

The primary uses in these areas include playgrounds, parks, and other areas for outdoor activities, sports centers, sports pitches, outdoor recreation, and landscaped areas. High standards of accessibility are essential in this zone. Accessibility standard is related to the use of that particular open space. For example, local amenity areas and playgrounds may require emphasis on access for pedestrians and cyclists. Sports Centers serving a wider catchments area will require accessibility by public transport and car users.

Purpose

To provide for the active and passive recreational needs of the city and the protection of its bountiful natural resources as well as to protect the natural and aesthetic qualities of the area for the general welfare of the community. The purpose of this zone is:

- To provide for, protect and improve the provision, attractiveness, accessibility, and amenity value of public open space and amenity areas.
- To provide for, protect, and improve the provision, attractiveness, and accessibility of public open space intended for use of recreational or amenity purposes. The only development that is incidental to, or contributes to the enjoyment of open space, amenity, or recreational facilities will be permitted within this zone.
- To preserve and provide for open space and recreational amenities. The zoning objective seeks to provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 17: Permitted Land Use for Open Space

Permitted Open Space Uses	Permitted Open Space Uses
Botanical Garden & Arboretum	Playing Field
Bus Passenger Shelter	Social Forestry
Carnivals and Fairs	Special Function Tent
Circus	Tennis Club
Landscape and Horticultural Services	Transmission Lines
Memorial Structure	Urban-Nature Reserve
Open Theater	Utility Lines
Park and Recreation Facilities (General)	Woodlot
Pipelines and Utility Lines	Zoo
Plantation (Except Narcotic Plant)	

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 18: Conditionally Permitted Land Use for Open Space

Conditionally Permitted Open Space Uses	Conditionally Permitted Open Space Uses
Communication Tower Within Permitted Height	Motorized Recreation
Fitness Centre	Trade Shows
Flowers, Nursery Stock and Florist Supplies	

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.9 Rural Settlement

Rural Settlement Zones are the island like isolated clusters of rural homesteads that preserve country's traditional agrarian community beside agricultural zones within development jurisdiction from indiscriminate and insane conversion into urban use so as to safeguard food security; preserve appropriate opening in between mounds that are essential to allow uninterrupted flow of annual flood water and safeguard our complex hydrological system.

The intent of this classification is to preserve, sustain, and protect rural areas and resources, particularly forest and agricultural land from suburban encroachment and maintain a balanced rural-urban environment. The retention of open lands, woodlands, plantations, and farmlands, which make up a large part of this area, are essential to clean air, water, wildlife, many natural cycles, and a balanced environment, among other things. Even more essential from an economic perspective are the agricultural lands and farming operations in this area.

Purpose

The purpose of this zone is to protect the natural environment; promote appropriate compact development and to promote creative developments that provide a range of housing styles and prices that suit the needs of local people. Isolated Rural Homestead will preserve the rural and traditional Character of the area. Isolated Rural Homestead zone will be composed of dwelling, small shops, some special uses, and pure landscaping elements. The cluster uses that are compatible with and complementary to existing facilities, particularly with regard to food processing and warehousing and the markets, including some small-scale food retailing are permitted here.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 19: Permitted Land Use for Rural Settlement Zone

Permitted Rural Settlement Uses	Permitted Rural Settlement Uses
Agricultural Dwellings	NGO \ CBO Facilities
Animal Husbandry	Nursery School
Animal Shelter	Orphanage
Child Daycare \ Preschool	Outdoor Religious Events (Eidgah)
Communication Tower Within Permitted Height	Plantation (Except Narcotic Plant)
Cottage	Playing Field
Crematorium	Primary School
Dairy Farming	Satellite Dish Antenna
General Store	Social Forestry
Specialized School: Dance, Art, Music, Physically Challenged & Others	Special Dwelling (E.G. Dorm for Physically Challenged Etc.)
Grocery Store	Graveyard \ Cemetery
Handloom (Cottage Industry)	Static Electrical Sub Stations
Housing for Seasonal Firm Labor	Temporary Shed \ Tent
Memorial Structure	Transmission Lines
Mosque, Place of Worship	Utility Lines
Newspaper Stand	Woodlot

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee following appropriate procedure while the application meets the criteria mentioned in the requirement.

Table 3. 20: Conditionally Permitted Land Use for Rural Settlement Zone

Conditionally Permitted Rural Settlement Uses	Conditionally Permitted Rural Settlement Uses
Artisan's workshop (Potter, Blacksmith, Goldsmith Etc.)	Garden Center or Retail Nursery
Emergency Shelter	Research organization (Agriculture \ Fisheries)
Energy Installation	Sports and recreation club, Firing range: Indoor
Fish Hatchery	

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.10 Waterbody

Waterbody serves the natural flow of water along their alignment.

Purpose

This zone tends to preserve the flow and level of water across all seasons along with their natural alignment. Upazila area is covered by a network of natural water body including river, canal, and pond. To promote and provide environmentally safe and sound living for the people of the area and for the future generation, water body has an immensely importance. Waterbody should be preserved not only for environmental concern but also for active and passive recreation purposes.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 21: Permitted Land Use for Waterbody

Permitted Administrative Uses	Permitted Administrative Uses
Aquatic Recreation Facility (Without Structure)	Utility Lines
Fishing Club (Non-structural)	Water Parks

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 22: Conditionally Permitted Land Use for Waterbody

Conditionally Permitted Administrative Uses	Conditionally Permitted Administrative Uses
Marina \ Boating Facility	Water-based Recreation

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

3.4.11 Water Retention Area

Retaining water is the main purpose of this type of Land Use.

Land Use Permitted

The following uses in the tables are proposed to be applicable for this zone only.

Table 3. 23: Permitted Land Use for Water Retention Area

Permitted Uses	Permitted Uses
Aquatic Recreation Facility (Without Structure)	Utility Lines
Fishing Club (non-structural)	Water Parks

Source: Compiled by the MUDP Project Team

Land Use Conditionally Permitted

The following uses may be permitted or disallowed in this zone after review and approval by the authority/committee.

Table 3. 24: Conditionally Permitted Land Use for Water Retention Area

Conditionally Permitted Uses	Conditionally Permitted Uses
Marina \ Boating Facility	Water-based Recreation

Source: Compiled by the MUDP Project Team

Restricted Uses

All use except permitted and conditionally permitted uses.

CHAPTER 04: CONCLUSION

4.1 Concluding Remarks

The Rural Area Plan of Mirsharai Upazila consists of the plans for Union level as identified in the Structure Plan for the Upazila. Since the Rural Area Plan is mainly indicative further measures should be taken during implementation.

In the development process of the Upazila, coordination among all local authorities within Mirsharai Upazila will be necessary for integrated development encompassing the potentials of both urban and rural areas. There is scope for local government authorities for cooperation and collaboration among themselves for local development in a comprehensive manner. It is expected that the Rural Area Plans prepared under the current project will provide essential tools for integrated development at Mirsharai Upazila.

ANNEXURE-A: PROJECT TEAM

A. Key Professionals

Serial No.	Name	Position Assigned
01	Ahmed Akhtaruzzaman	Project Director
02	Md. Ahshan Habib	Project Manager
03	Yearunnessa Khanam	Assistant Planner
04	Zakia Sultana	Planner
05	Md. Saifur Rahman	Planner

B. Supporting Staff

Serial No.	Name	Position Assigned
01	Md. Monir Hossain	Draftsman (Grade-1)
02	S. M. Saydul Islam	Draftsman (Grade-2)
03	Md. Shahinur Rahman Sarkar	Draftsman (Grade-3)
04	Md. Nazrul Islam	Draftsman (Grade-4)
05	Md. Raju Ahamed	Tracer
06	Renu Mia	Tracer

ANNEXURE-B: PHOTOGRAPHS



Photograph-1 & 2: “Art Competition, 2018- Children Thought About Mirsharai Upazila” at Zila Parishad Auditorium in Mirsharai Upazila under Development Plan for Mirsharai Upazila, Chattogram District: Risk Sensitive Land Use Plan (2017-2037) Project



Photograph-3 & 4: Seminar on MUDP Project at Zila Parishad Auditorium in Mirsharai Upazila



Photograph-5 & 6: PIC Meeting was held on May, 2018 under MUDP Project



Photograph-7 & 8: Conducting Urban PRA at Ward No. 07 in Mirsharai Paurashava and Ward No. 05 in Baroiarhat Paurashava



Photograph-9 & 10: Conducting Rural PRA at 01 No. Karehat Union and 12 No. Khaiyachhara Union in Mirsharai Upazila



Photograph-11 & 12: Participation of Young Generation Group named “University Student Association of Mirsharai (USAM)”

