

# **Draft Land Use and Development Control Plan, 2031**

## **Cooch Behar Municipal Area**

March 2021



*prepared by*

**Cooch Behar Planning Authority & Cooch Behar  
Municipality**



**Inside Front Cover**

# **DRAFT LAND USE AND DEVELOPMENT CONTROL PLAN 2031**

**COOCH BEHAR MUNICIPAL AREA**

**Submitted: March 2021**



**Cooch Behar Planning Authority  
&  
Cooch Behar Municipality**

### **List of Annexures**

<b>Sl.No.</b>	<b>Documents</b>	<b>Reference</b>
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3.	Action area plan -Sagardighi	A3
4.	Action area plan -Bairagidighi	A4
5.	Report on Socio Economic Survey of Cooch Behar Town	A5
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## 1 BACKGROUND

As per a directive by the Honourable Chief Minister of West Bengal, the option for declaration of Cooch Behar as Heritage Town was to be explored, under the Town and Country Planning Branch, Deptt. of Urban Development and Municipal Affairs, Government of West Bengal. The Work is to identified the total scope of work. The Base Line Survey Report, which was the Stage-I deliverable, was submitted on August 2018. The current report presents the Draft Land Use and Development Control Plan (LUDCP), which is a part of the Stage-II deliverables. This is to be read in conjunction with the Draft Land Use Map and Register (LUMR), submitted along with this report.

The Draft LUDCP presented in this report covers parts of five mouzas with a total area of 7.8 sq. km under Cooch Behar Municipality, with the plan period as 2031. The scope of work and the methodology adopted for preparation of the LUDCP are outlined in the following sections.

### 1.1 SCOPE OF WORK

The work order identified two components with respect to the LUDCP, as follows:

1. Conducting Land Use Surveys in detail (land ownership and other relevant surveys)
2. Preparation of LUMR and LUDCP following the necessary provisions under the WB Town and Country (Planning & Development) Act, 1979

Accordingly the scope of work for LUMR and LUDCP, as included in the said act may be outlined as follows:

1. A Planning Authority or Development Authority shall, within two years of the declaration of a Planning Area, prepare a plan called the Land Use and Development Control Plan for the Planning Area and forward a copy thereof to the State Government. Provided that the concerned authority may prepare the plan in respect of any portion of the Planning Area, but the plan in respect of the entire Planning Area shall be completed within a period of three years or within such time as the State Government may from time to time extend.
2. The Land Use and Development Control Plan in any area shall be a written statement:
  - a. Formulating the policy and the general proposals including maps of the Planning Authority or the Development Authority in respect of the development and general use of land in that area including measures for the improvement of the physical environment,
  - b. Stating relationship between these proposals and general proposals for the development and general use of land in neighboring areas which may be expected to affect the area and
  - c. Containing such other matters as may be prescribed or directed by the State Government.
3. A Land Use and Development Control Plan in any area shall contain or be accompanied by such maps, diagrams, illustrations, and descriptive matters as the Planning Authority or the Development Authority thinks appropriate for the purpose of explaining or illustrating the proposals in the plan and such diagrams, illustrations and descriptive matters shall be treated as parts of the plan.
4. The Land Use and Development Control Plan may also:
  - a. (i) Indicate broadly the manner in which the Planning Authority or the Development Authority proposes that land in such area should be used;

- (ii) Indicate areas or buildings requiring preservation and conservation for historical, architectural, environmental and ecological and religious purposes;
- b. Allocate areas or zones of land for use:
  - i. For residential, commercial, industrial, agricultural, natural scenic beauty, forest, wild life, natural resources, fishery and landscaping;
  - ii. For public and semi-public open spaces, parks and playgrounds;
  - iii. For such other purposes as the Planning Authority or the Development Authority may think fit;
- c. Indicate, define or provide for:
  - i. The existing and proposed national highways, arterial roads, ring roads and major streets;
  - ii. The existing and proposed lines of communications, including railways, transports, airports, canals and linkage between towns and villages;
  - iii. The existing and proposed amenities, services and utilities systems for water supply including improvement of lake, rivers, fountains and the like, sewerage, drainage and waste disposal, generation and distribution of electric power and distribution of gas, etc.
- d. Include regulations (here in after called zoning and sub-division regulations) to control within each zone the location, height, number of storeys and size of buildings and other structures, the size of yards, courts and other open spaces and the use of buildings, structures and land and sub-division of land and the street alignments, set back distances, embankment, constructional activities destroying natural scenic beauty and provide for amenities in hill areas and coastal areas and such other issues as may be considered appropriate by the Authority;
- e. Local cluster of villages and huts and designate land for hats, markets, cottage industry, livestock, pasture festivals, fairs, melas, and like community facilities and conservation of trees and forests;
- f. Indicate areas or zones for catchment, soil conservation, plantation, unsafe for any construction, subsidence for any reason including operation of mines, earthquake prone area and control of natural disaster.
- g. Designate land as subject to acquisition for any public purposes.

Thus, this report includes preparation of existing land use maps, analysis of existing status of demographic conditions, socio-economic conditions, housing, social and physical infrastructural services and assessment of their future needs.

## 1.2 VISION STATEMENT

Since this LUDCP is being prepared in the context of 'Declaration of Cooch Behar as a Heritage Town', special consideration is required to the heritage significance of the town while preparing the draft proposals.

Cooch Behar is an example of a well-planned historic town with a recognisable grid-pattern in its road network and a town-wide system of water reservoirs. Some of these water bodies, along with the adjacent historic urban fabric, continue to be the focus of business and religious activities of the town and are invaluable environmental assets for promoting the Sustainable Development Goals. Identifiable neighbourhoods and educational districts, well distributed amenities and facilities, public parks and social infrastructure, landmarks and vistas, are significant features of this town that historically put overall wellbeing of its people as a priority. Moreover, due to indigenous cottage industries of repute, and traditional arts and crafts in the

Greater Cooch Behar Area, there is a potential for development of small-scale industries and associated market centres in this town, which can act as economic boosters.

Considering the significance of the heritage town, its legacies and potentials, the analysis of the existing scenario of urban development and services, projections for the future, and gap analyses, the vision is to promote future development while conserving the rich heritage of the town. Cooch Behar town, in addition to being a district level administrative head quarter, is envisaged as a regional tourism centre with a difference, a centre for promotion of local crafts and small-scale industries, and a higher centre of learning and associated activities.

Reinforcing the significant town planning features that are the legacy of this town, and utilising the potentials identified, the draft land use plan attempts to translate this vision through a coordinated multi-sectoral development approach, zonal regulations, and demonstrative action area plans. Accordingly the objectives of the LUDCP have been articulated in the following section.

### 1.3 OBJECTIVES OF LUDCP

- i. Estimate the growth potential of Cooch Behar Municipal Area for the horizon year 2031 with special consideration of its new status as a heritage town.
- ii. Plan for better quality of life in the town by identifying and proposing economic opportunities for increase in work force participation and development of relevant physical and social infrastructure.
- iii. Identify heritage properties for listing, delineate relevant heritage zones and manage development in a manner sympathetic to the heritage context by formulating Zoning and Development Control Regulations.
- iv. Propose relevant projects under the draft land use plan to integrate the LUDCP with the proposed Heritage Development Management Plan (HDMP).

### 1.4 METHODOLOGY

The methodology adopted (**Fig. 1.1**) includes eight major components, viz. (i) Baseline study, (ii) Archival research, (iii) Survey and data collection, (iv) GIS based mapping, (v) Preparation of LUMR for current status, (vi) Analysis of existing status and projection of requirements, (vii) Stakeholder meetings and interviews at various stages, and (viii) Vision and draft proposals. These may be elaborated as follows:

- i. **Base line study:** Cooch Behar Town and its surrounding areas for the purpose of preliminary reconnaissance surveys and baseline studies during July to November, 2017. During March 2018, the consultants discussed the regulatory and implementation possibilities for declaring Cooch Behar as heritage town with the Secretary of the West Bengal Heritage Commission. A draft baseline study report was submitted in April 2018. The same was presented during a meeting chaired by the Honorable Chief Secretary, Govt. of West Bengal, on August 24, 2018. The Draft LUDCP draws from the findings of the Base Line Survey Report.
- ii. **Archival Research:** Secondary data and information was gathered from library studies, various government websites and reports, and documents received from government officials and private organizations/institutes. These included information on history and heritage of the town, administrative divisions and structure, physical characteristics, demographics, socio-economic profile, availability of physical and social infrastructure. The interaction with all the line departments and various local experts was initiated

through a meeting chaired by the DM, Cooch Behar, during April 30, 2018. The interaction involved the DLLRO, Municipality, PWD, Education, Hotel, Health, Debottar Trust, Police, Electricity Board, NBSTC, and ASI. GIS-based map of the planning area was procured from the Directorate of Land Records and Surveys Office, Alipore.

iii. **Surveys and Primary Data Collection:** A set of detailed surveys were conducted in the Cooch Behar Municipal Area over a period of six months (July 2018 to December 2018) for the purpose of collecting required primary information. A team of 25 students from Cooch Behar Polytechnic College were involved to assist the team in conducting the various surveys. The students were trained for this task through a workshop organised with the help of DM, Cooch Behar, on April 30, 2018, at Landsdowne Hall, Cooch Behar. The different surveys conducted may be outlined as follows:

- *Land Use Survey:* The existing land use of each plot was noted with the help of the mouza sheets available from the L & LR Dept. of Cooch Behar. The formation of new plots by subdivision or amalgamation was noted and their respective uses were marked and updated, following Land Use classes stipulated by Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2015, MoUD.
- *Socio-economic Survey:* The survey was designed to collect information from the field by interviewing the households residing in the study area through a structured questionnaire covering all relevant aspects like demography, socio-economic profile, housing, social and physical infrastructure, mobility, perception and preferences. As per Census 2011, total number of households in the Cooch Behar municipal area is 18,431. Using Cochran's Formula modified for smaller population, with 95% confidence level and 5% margin of error, a sample size of 375 households was calculated for the household survey. The population was stratified as per wards, and the number of samples collected from each ward was proportionate to its population. A list frame of all residential plots was generated, and a random number table was used to determine the exact plot to be included in the sample to avoid any bias. The findings of the study were presented and submitted during a meeting chaired by Honorable Chief Secretary to the Govt. of West Bengal on July 23, 2019.
- *Heritage Inventory Survey:* A physical survey of all identified heritage properties was conducted during May - June 2018 to prepare the Heritage Inventory for listing, grading, heritage zone delineation and guidelines for conservation and preservation. The inventory was submitted along with the Base-line Survey report in April 2018 and subsequently updated based on stakeholder's feedback.
- *Traffic and transportation Survey:* This included peak-hour traffic volume surveys at important road crossings, as well as Origin-Destination surveys conducted at major entry points to the town.
- *Spatial character Survey:* This involved plot-by-plot study of spatial parameters to understand the built-fabric of the town. Data on number of stories, roof type and material, façade character, and age of the building was noted by an exhaustive survey of each plot in the town.
- *Tourism Survey:* This included study of the existing tourism infrastructure, both on-site and off-site, as well as a questionnaire survey to capture data of tourist profile and preference during the peak tourism seasons.

- iv. **GIS-based Mapping:** The updated land use was transferred to a GIS platform, and all relevant data collected was linked as attributes, generating geo-spatial thematic maps.
- v. **Preparation of LUMR for current status:** 18 sheets containing the entire Updated Existing Land Use Maps and a Volume of updated Land Records (LUMR) for Cooch Behar Municipal Area was submitted to the UD&MA deptt. on July 2019, for necessary vetting.
- vi. **Analysis of Existing Status and Projection of Requirements:** Data obtained through the primary and secondary sources for different sectors like socio-economic, physical and social infrastructure, transport, tourism etc. have been analyzed to ascertain the existing status, identify issues, and make forecasts for the plan period. Future demands for various infrastructural facilities have been calculated based on the requirement of the projected population and existing sector wise gaps. URDPFI Guidelines, 2015, have been referred to arrive at the projected requirements.

Listing of heritage properties and delineation of heritage zones were done based on the Heritage Inventory.

- vii. **Stakeholder Meetings and Interviews:** Various stake-holder meetings and in-depth interviews with local experts were conducted at different stages of the plan preparation to comprehensively understand the issues on ground, brainstorm, and get feedback on the ideas and proposals generated.
- viii. **Vision and Draft Proposals:** The proposals include Draft Land Use Plan (including Development Control Regulations, as well as Projects and Schemes) and Draft Land Use Maps and Register. The initial formulation, including all analyses, was presented during a meeting chaired by the Honorable Secretary, UDMA, on January 09, 2020. Subsequently, during a web-meeting chaired by the District Magistrate of Cooch Behar, on January 15, 2020, the same was shared with local stakeholders. The feedback and suggestions received from both the meetings have been duly incorporated in the current report.

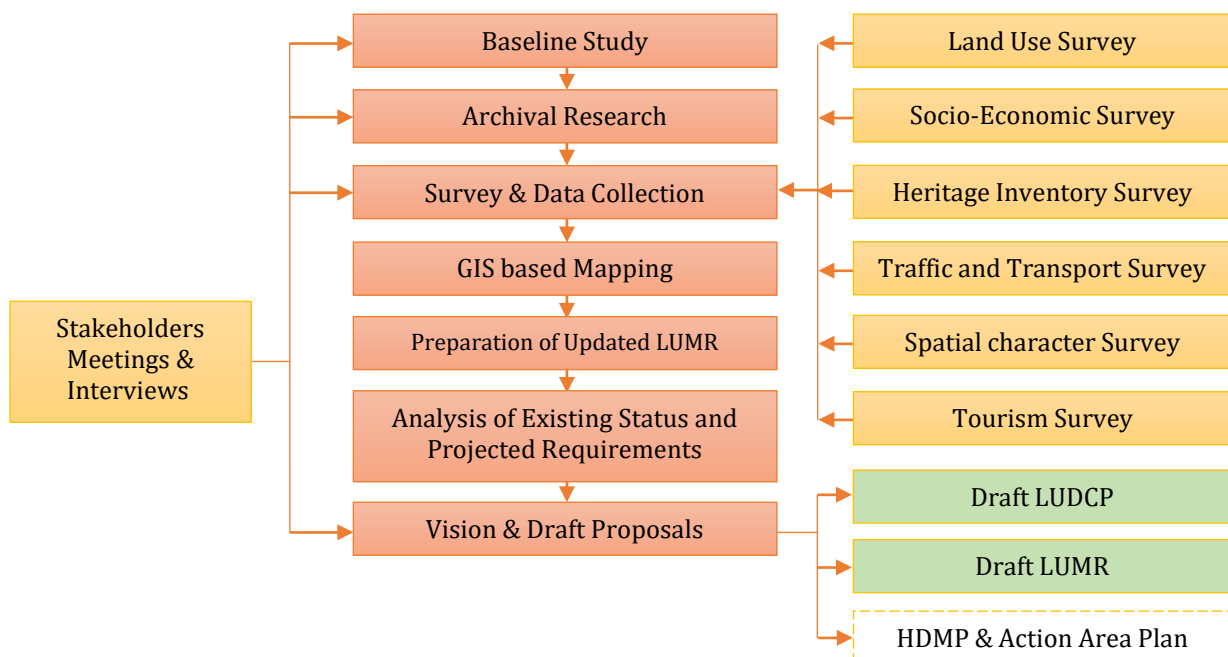


Figure 1.1. Methodology Chart

## 1.5 PLAN IMPLEMENTATION

The draft plan presented in the current report may be accepted and notified by the State Government under the West Bengal Town and Country (Planning and Development) Act 1979, after considering stakeholder's feedback, objections, and suggestions. The statutory procedures regarding this shall be conducted by Cooch Behar Municipality.

Subsequent to the adoption of the LUDCP, all development in Cooch Behar Municipal Area shall have to follow its requirements. Applications for permissions shall be accordingly reviewed and scrutinized by the Cooch Behar Municipality and other competent authorities. Cooch Behar Municipality and other competent authorities shall prepare Detail Project Reports (DPR) for the purpose of implementation of the proposals and recommendations outlined in the LUDCP.

## 1.6 INTRODUCTION TO THE AREA

Cooch Behar town is the headquarters of the Cooch Behar district of West Bengal. The regional setting and geo-climatic features, as well as the municipal town's physiographic features and jurisdictional information are outlined in the following sections.

### 1.6.1 Regional Setting

Located in the northern part of the Eastern Indian State of West Bengal, the district of Cooch Behar shares its boundary with two other districts of the State: Alipurduar in the North, and Jalpaiguri in the north-west. To the east, it shares its boundary with the Kokrajhar & Dhubri districts of the state of Assam. To the south-west, south, and south-east, it is bounded by the International border between India and Bangladesh. Over and above this bounded area, there are enclaves (called Chhits) that are outlying and detached tracts of land situated inside Bangladesh. The area of the district is 3,387km<sup>2</sup>, which constitutes 3.82% of the land mass of the State of West Bengal.

Cooch Behar Town is located in the Jalpaiguri Division of Cooch Behar District. The town is surrounded by the Cooch Behar-II Block towards the north, the MathaBhanga-II Block towards the west, the Dinhata-I Block towards the south, and the Tufangunj-I Block towards the East. The total area of the town is 7.8 km<sup>2</sup>. Cooch Behar Municipal Area is bounded by Takagach Village in the west, Guriahati Village in the south, Chakchaka Village & Bura Torsa in the east, and Khagrabari Village in the North. The administrative jurisdiction is divided in terms of twenty Wards and twelve Blocks. **(Map. 1.1)**

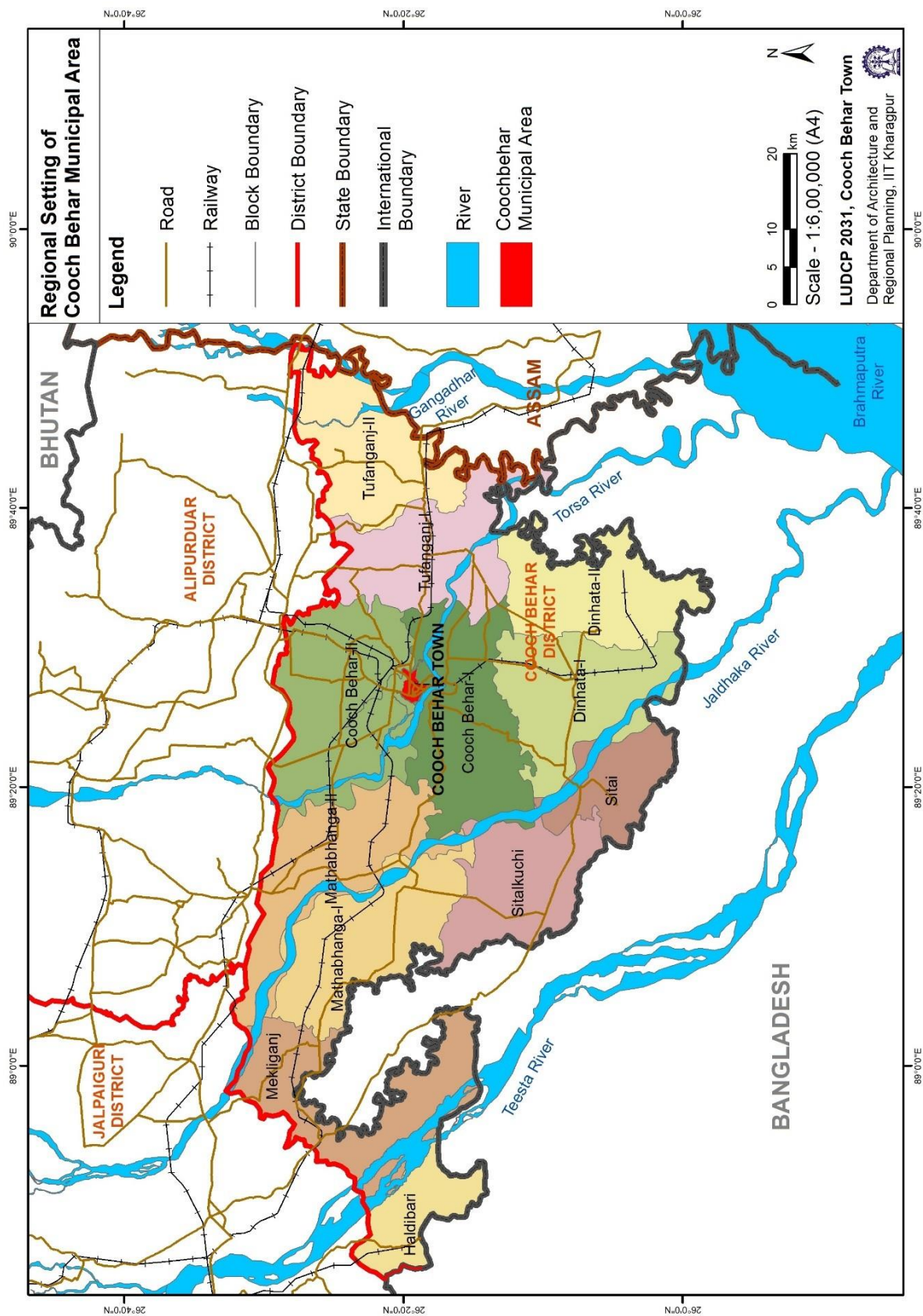
### 1.6.2 Geo-Climatic Features of the Region

The district forms part of the Himalayan Terai region of West Bengal, with most of the highlands in the Sitalkuchi area and most of the lowlands in the Dinhata area. The soil is alluvial, of very recent formation, which is mostly sandy and loose. The climate of the district is characterized by a very high level of humidity, and abundant rainfall, while the temperature is hardly ever extreme. As per Census 2011, Cooch Behar Town received 3,067mm of rain, and the temperature ranged from a maximum of 37°C to a minimum of 6°C.

Cooch Behar district is mainly agricultural in nature, and the economy is dependent on the same. Along with the neighboring Alipurduar district, Cooch Behar district is also home to the Jaldapara Wildlife Sanctuary (now Jaldapara National Park), which has an area of 217 km<sup>2</sup>.

### 1.6.3 Planning Area

The planning area consists of the Cooch Behar Municipal area having an area of 7.8 Sq. Km (1931 acres)(Source: Land Use Survey). The total population of the town is 77,935 with 18,431 households (Census 2011). The planning area consists of five mouzas namely Khagrabari, Kharimala khagrabari, Guriahati, Chhat Guriahati, and Sahar Cooch Behar.



Map 1.1. Regional Setting of Cooch Behar Municipal Area

A list of the mouzas with their JL No. and corresponding sheets with the plot numbers have been given in **Table 1.1**. The town has a total of 20 wards. **Table 1.2** and **Map 1.2** show the list of wards along with their respective areas. Ward number 4 holds the largest area (242.7 acres) followed by ward 10 (223.2 acres) and ward 19 (204 acres). Cooch Behar airport is situated in ward 4. Cooch Behar Railway station and Panchanan Barma University is situated in ward 10. Majority of the buildings with important historical and administrative significance like the Cooch Behar Rajbari, Debi bari, Victor Palace, Landsdown Hall, District Judges Court, Bar Association, SDO Office Treasury Building, Election Office are situated in ward 19. Ward 19 also includes Rajbari stadium, Sagar Dighi and Lamba Dighi. Madan Mohan Temple and Raasmela Ground which are the most prominent sites of religious and cultural significance are located in ward no 17. Chila Rai Barrack, spread across parts of wards 4, 8 and 20 is an area in the heart of the city which is owned and controlled by the armed forces.

**Table 1.1. List of Mouzas with their JL No., Sheet and Plot No. in Cooch Behar Municipal Area**

SL NO.	MOUZA NAME	JL NO.	SHEET NO.	PLOT NUMBER
<b>1</b>	Khagrabari	89	2	4111 to 5671
			3	8045 to 8205
<b>2</b>	Kharimala khagrabari	125	1	64 to 408
			2	501 to 2224
<b>3</b>	Guriahati	126	1	1 to 360 and 2190 to 3633
			2	2812 to 4865 and 5700
<b>4</b>	Chhat Guriahati	129		373 to 387
<b>5</b>	Sahar Cooch Behar	130	1	1 to 514
			2	601 to 1251
			3	1501 to 3005
			4	3201 to 4000
			5	4201 to 6754
			6	7701 to 8432
			7	8596 to 8606
			8	8901 to 11203
			9	11501 to 12628
			10	13001 to 14301
			11	14501 to 14908

*Source: Office of the District Land & Land Reforms Officer, Cooch Behar*

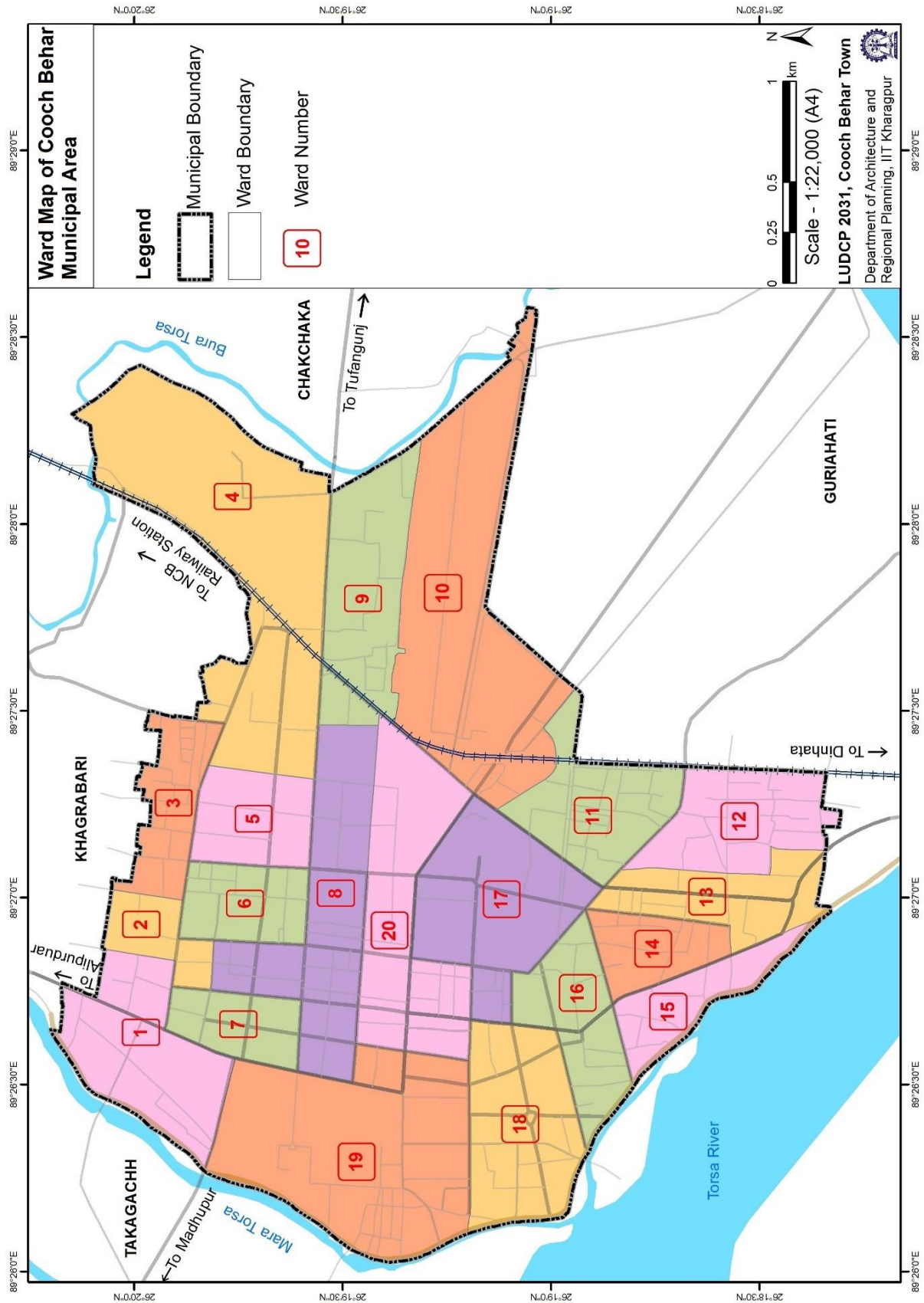
**Table 1.2. List of Wards and their Areas in Cooch Behar Municipal Area**

WARD	AREA (Acres)	WARD	AREA (Acres)	WARD	AREA (Acres)	WARD	AREA (Acres)
<b>1</b>	101.6	<b>6</b>	47.8	<b>11</b>	77.6	<b>16</b>	67
<b>2</b>	31.7	<b>7</b>	40.9	<b>12</b>	77.1	<b>17</b>	115.1
<b>3</b>	51.2	<b>8</b>	123.6	<b>13</b>	65.3	<b>18</b>	99.9
<b>4</b>	242.7	<b>9</b>	98.5	<b>14</b>	41.7	<b>19</b>	204
<b>5</b>	53.8	<b>10</b>	223.2	<b>15</b>	47.9	<b>20</b>	120.4

Source:

Census

2011



Map 1.2. Ward map of Cooch Behar Municipal Area

#### 1.6.4 Important Physiographic Features of the Town

Cooch Behar is essentially a flat country with a slight south-eastern slope, along which the main rivers of the district flow. Cooch Behar Town is surrounded by the Torsa River – with the Bura Torsa towards the north-east, the Mara Torsa towards the west, and the main channel of the river forming the southern boundary of the town.

The town has many water-bodies – natural, or manmade, which are locally termed as Dighi. Some of these water bodies, along with the adjacent historic urban fabric, have become epicenters of business and religious activities of the town. The total area under such Dighis is about 36.4 Ha (90 acre). Such an extensive waterscape of numerous ponds and dighis is unique for an urban centre, and conservation of this waterscape would be important for environmental reasons.

Of these water-bodies, the Sagar Dighi, with an area of about 0.05 km<sup>2</sup> (13.59 acres), may be considered as the heart of Cooch Behar Town. The name ‘Sagar’, meaning an ocean, is an exaggeration that may well be accepted in view of its great cultural significance. Being situated right in the middle of the administrative hub of the town, this is a very happening and important urban public place. Some of the important administrative buildings here include the Office of the District Magistrate, the District Court, the Cooch Behar Municipality Office, The SDO Office, and the DLRO Office. Sagar Dighi is also known for attracting migratory birds during winter.

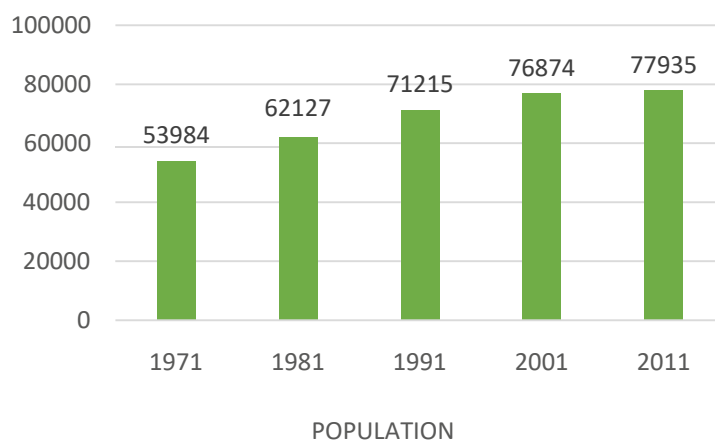
Some other important water-bodies are the Lal Dighi (~0.02km<sup>2</sup> / 6.62 acre), the historic commercial hub of the town, the Bairagi Dighi (~0.02km<sup>2</sup> / 3.77 acre) in front of the Madan Mohan Temple, and the Lamba Dighi (~0.01km<sup>2</sup> / 2.57 acre).

## 2 DEMOGRAPHIC PROFILE

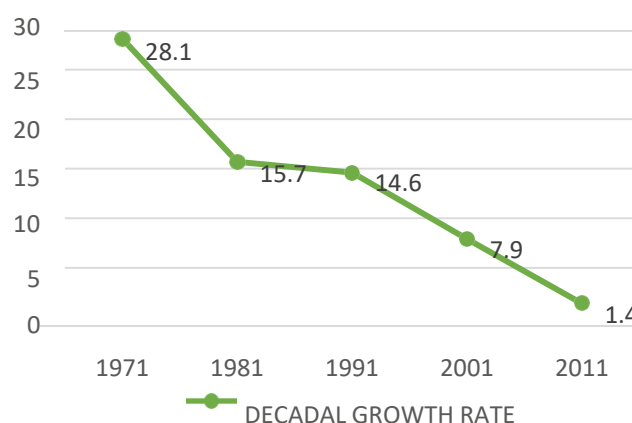
The demographic profile of the town is assessed in this chapter through population growth rates, population density, migration trend, sex ratio etc. Study and assessment of these factors will help to determine the future population trends, which, in turn, will help to determine the required infrastructural provisions for the town. Finally a population projection has been done by the logistic curve method to determine the increase in population till the year 2031.

### 2.1 POPULATION AND GROWTH RATE

**Fig. 2.1** shows the variation in population and growth rate of the Cooch Behar Municipal Area, as per Census 2011. It can be observed that although the total population of Cooch Behar Municipal Area has increased by 44% from 1971 to 2011, there has been a considerable decline in the decadal growth rate during the same period. A drastic decline in the growth rate can be observed from 1991 (14.6%) to 2011 (1.4%).



(a) Decadal Population

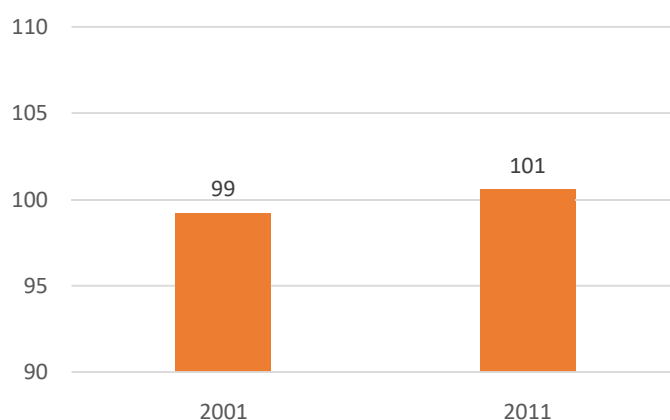


(b) Decadal Growth Rate of Cooch Behar Municipal Area

**Figure 2.1. Population Trends**  
Source: Census 2011

## 2.2 POPULATION DENSITY

**Fig. 2.2** shows the increase in total population density of Cooch Behar municipal area from 9,386 persons per square kilometer in 2001, to 9,516 persons per square kilometer in 2011.



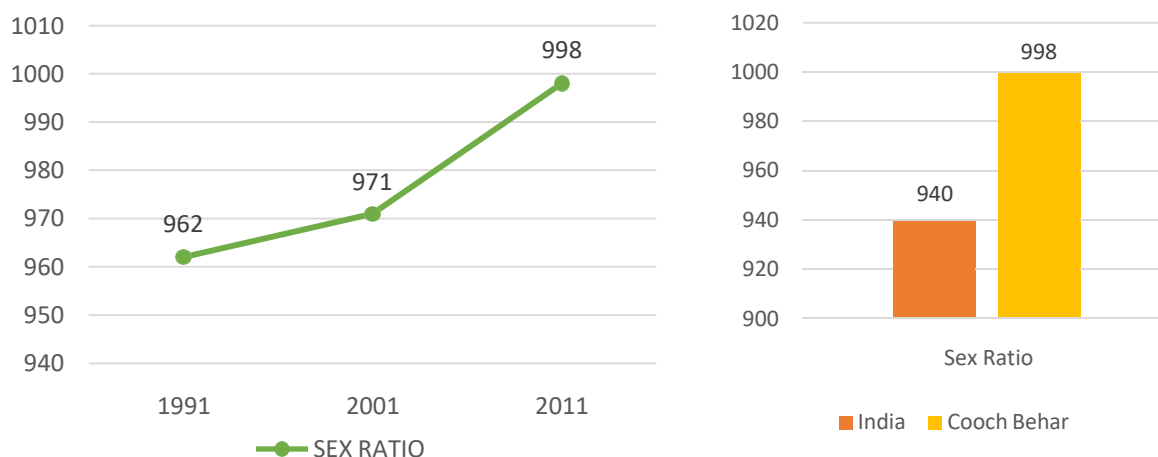
**Figure 2.2. Increase in Population Density (ppH) in Cooch Behar Municipal Area**

*Source: Census 2011*

Although there is an overall increase in population density for the whole town, the increase has not been uniform, with some wards like ward 7 showing increase in density while wards like 8 and 9 showing decrease in density from 2001 to 2011. (**Map. 2.1** and **Map 2.2**)

## 2.3 SEX RATIO

**Fig. 2.3** shows the increase in sex ratio of the Cooch Behar municipal area from 962 females (1991) to 998 females (2011) per 1,000 males. It is observed that the sex ratio of the town has been in a significantly better position along the years as compared to the 2011 national census sex ratio i.e. 940 females per 1,000 males.

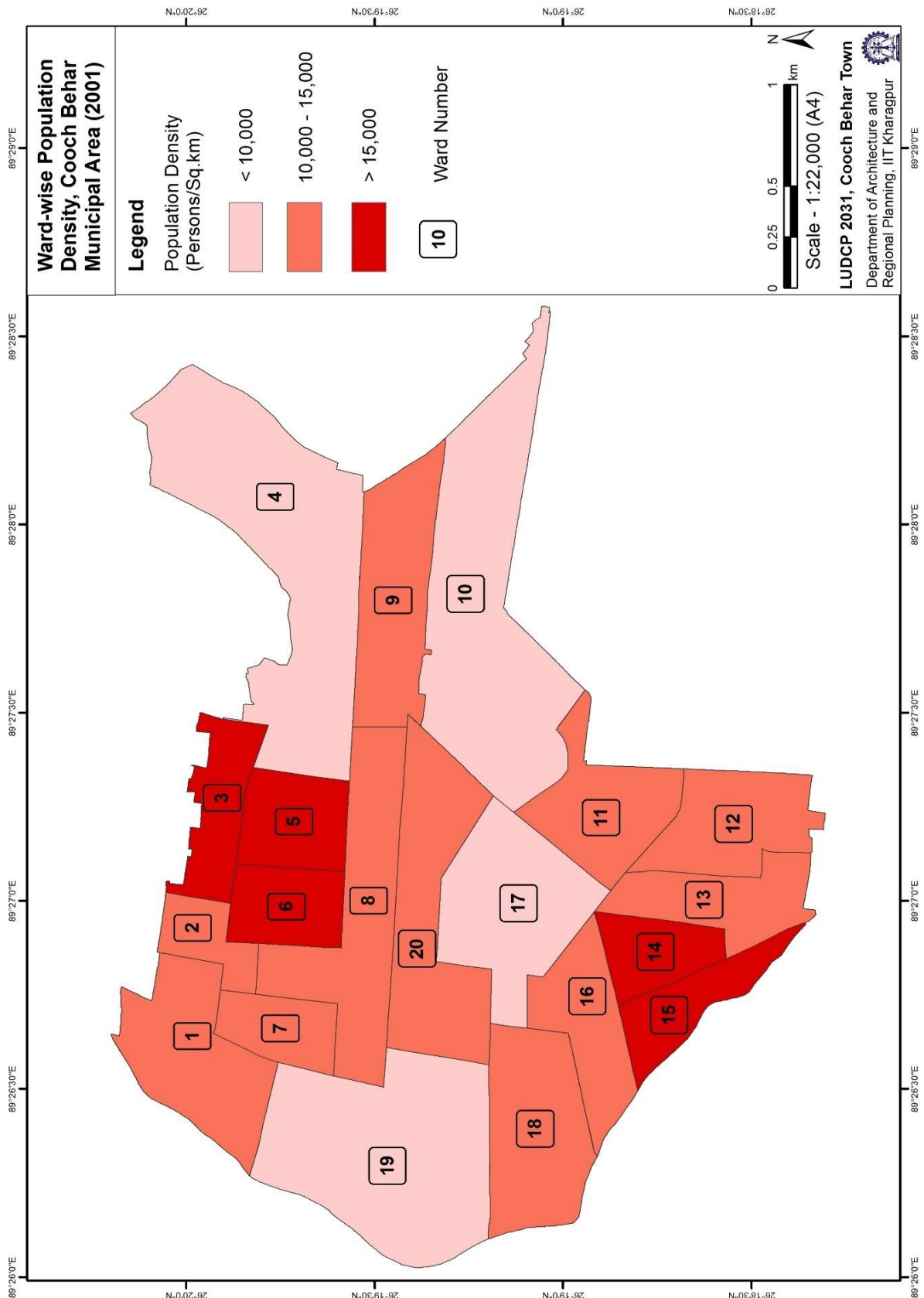


**(a) Sex ratio, Cooch Behar Municipal Area (1991-2011)**

**(b) Comparison with national level**

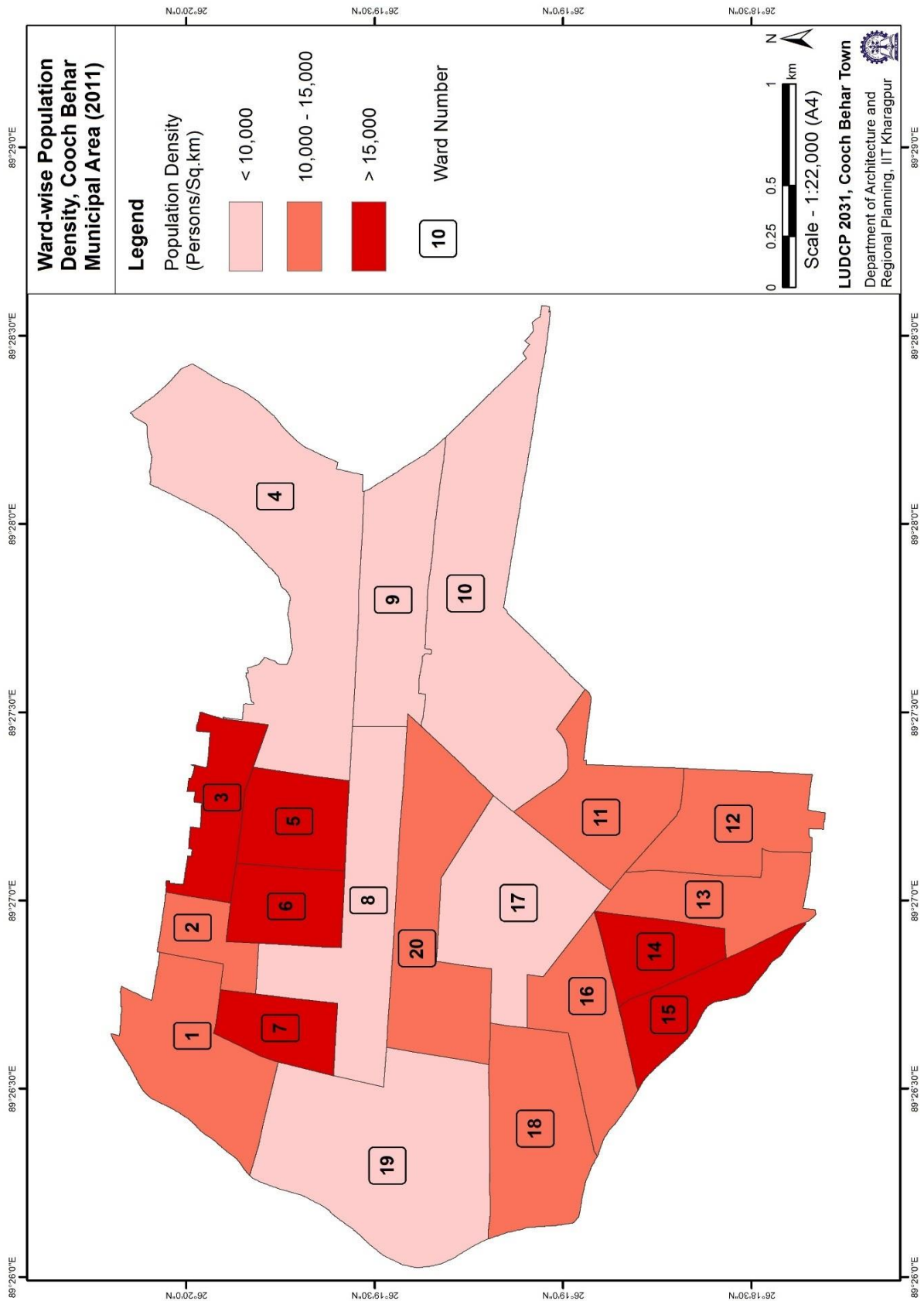
**Figure 2.3. Trends in Sex Ratio**

*Source: DCHB, Koch Bihar, 2011*



Map 2.1. Ward-wise Population Density in Cooch Behar Municipal Area (2001)

Source: Census 2001



**Map 2.2. Ward-wise Population Density in Cooch Behar Municipal Area (2011)**

*Source: Census 2011*

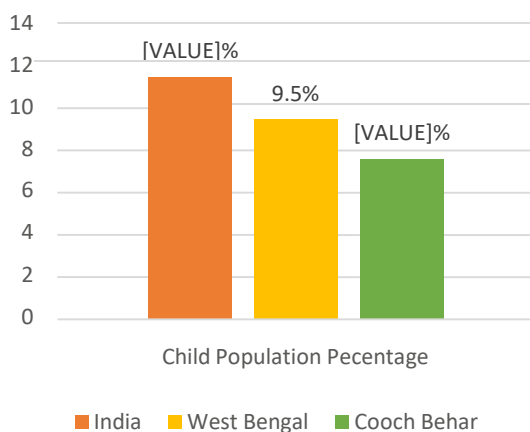
## 2.4 CHILD POPULATION

Cooch Behar has 7.6% of population in the age 0 – 6 years (Census 2011), which is very low when compared to the national urban child population percentage (11.5%) and the state urban child population percentage (9.5%) (**Table 2.1**). Cooch Behar Town's sex ratio in this age group is 974, which is better than the national figure (914) (**Fig. 2.4**).

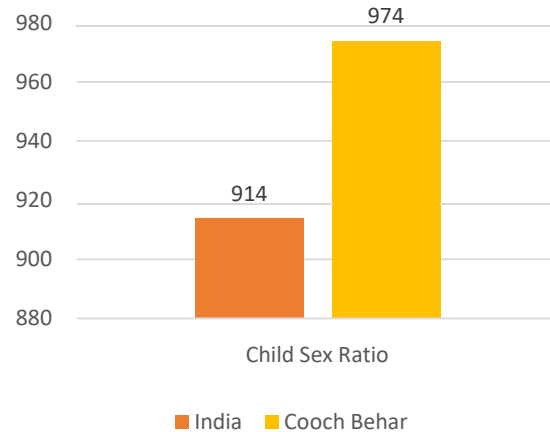
**Table 2.1. Percentage of Child Population**

	TOTAL POPULATION (2011)	CHILD POPULATION (0 TO 6 yrs) (2011)	PRCENTAGE OF CHILD POPULATION (0 TO 6 yrs) (2011)
INDIA URBAN	377106125	43192388	11.5
W.B. URBAN	29093002	2760756	9.5
C.B. DISTRICT URBAN	289434	25420	8.8
C.B. TOWN	77935	5917	7.6

Source: Census, 2011



(a) Comparison of % Child Population



(b) Comparison of child sex ratio

**Figure 2.4. Child Population**

Source: DCHB, Koch Bihar, 2011

## 2.5 EDUCATIONAL ATTAINMENT

Census 2011 reports 85.2% literacy, with male literacy at 87.3% and female literacy at 83.1%. It was estimated from the socio-economic survey that 29% of the population have completed their education till graduation, while 27% have completed post-graduation or its equivalent.

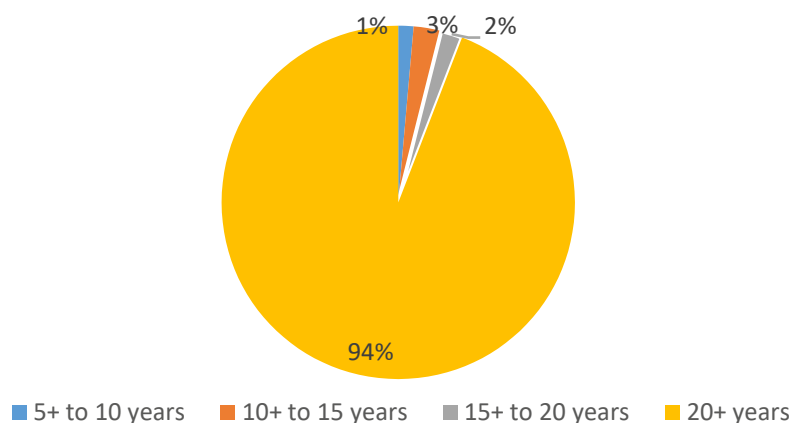
## 2.6 SOCIAL STRUCTURE

As per Census 2011, majority of the population are in the General Category (GE = 85.99%) followed by Schedule Caste (SC = 13.49%). Very few people fall in the category of Schedule Tribe (ST = 0.52%).

It was estimated from the socio-economic survey that a majority of the people speak Bengali (91%). The 'Rajbanshis' and others constitute the native tongue of only a small portion of the population (1%). Current population is majorly Hindu (96%) with a small Muslim population (4%). Presence of the Brahmos, who were historically important for the town's culture, have not been observed in the survey.

## 2.7 MIGRATION TREND

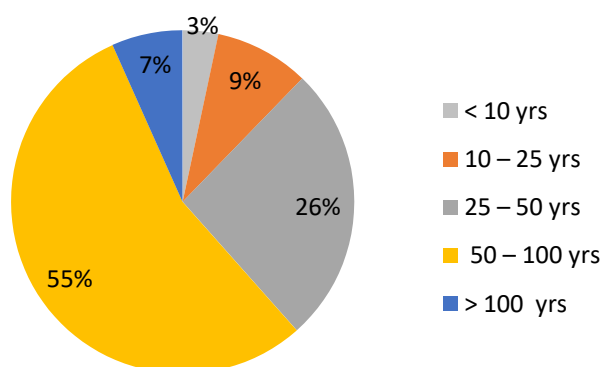
The migration trend of the town can be accessed through household survey documentation which measures the duration of stay of the people in Cooch Behar and their respective places of origin.



**Figure 2.5. Duration of Stay in Cooch Behar**

*Source: Socio-economic survey, 2018*

It is observed from **Fig 2.5** that majority of the people (94%) have stayed in Cooch Behar for more than 20 years while only 1% has stayed here for 5 – 10 years. This shows low in-migration trend for the city. The socio-economic study also showed that only 8% of the households have migrated from other places while majority (92%) are native residents and while majority of the people (62%) have been continuing to dwell in their ancestral plots for more than 50 years, very few people (3%) have been staying at the same dwelling area for less than 10 years (**Fig 2.6**). This confirms the fact that in-migration is low for the city.



**Figure 2.6. Duration of Stay at Present Dwelling Unit**

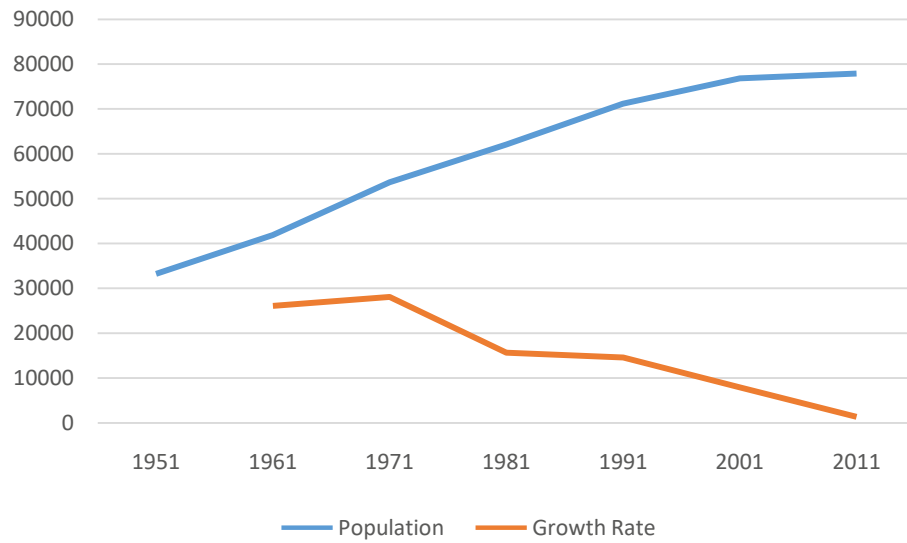
*Source: Socio-economic survey, 2018*

## 2.8 POPULATION PROJECTION

Forecasting the future population is important for proper planning, provision, and allocation of infrastructure and resources.

Comparing the population and the growth rates from **Fig 2.7**, it can be observed that the population of Cooch Behar shows a steady rise from the year 1951 to 2001, after which it appears to stabilize, while the growth rate of the town decreases gradually from the year 1971. It also observed from **Table 2.1** that the percentage of child population (0-6 yrs.) for the town is much less than the national and the state percentage which is indicative of low natural growth

in the town. This, along with very low migration trends, as established from the socio-economic household survey, can be an important reason for the declining population growth rate.



**Figure 2.7. Population Projection and Growth Rate**  
Source: Census, 2011

Given this growth trend, the Logistic Curve method of population projection is most appropriate and has been adopted as the relevant approach for the population projection of the Cooch Behar Municipal Area for 2021 and 2031 (**Table 2.2**), considering the census population figures of the last three decades.

The population is calculated as,

$$P = \frac{S}{1 + m \cdot e^{c \cdot \Delta t}}$$

Where,  $S$  is the saturation population and  $m$  and  $c$  are constants, and  $\Delta t = t_1 - t_0$

The saturation population ( $S$ ) is calculated as,

$$S = \frac{2 \cdot P_0 P_1 P_2 - P_1^2 (P_0 + P_2)}{P_0 P_2 - P_1^2}$$

Where,  $P_2(77,935)$  is the population at  $t_2$  (2011),  $P_1(76,874)$  is the population at  $t_1$  (2001), and  $P_0(71,215)$  is the population at  $t_0$  (1991)

$$m = \frac{S - P_0}{P_0}$$

$$c = \ln \frac{P_0 (S - P_1)}{P_1 (S - P_0)}$$

Where  $n = t_2 - t_1$  (10 years)

**Table 2.2. Population Projection**

2011 (EXISTING)		2021 (PROJECTED)		2031 (PROJECTED)	
POPULATION	GROWTH RATE	POPULATION	GROWTH RATE	POPULATION	GROWTH RATE
77,935	1.4	78,119	0.2	78,151	0.04

## 2.9 INFERENCES

The demographic characteristics indicate some issues important for developing the LUDCP. Firstly, the evidences and artefacts related to the historic presence of a Brahmo culture needs to be carefully conserved, as they may not be expected to sustain naturally in the absence of a Brahmo population. This needs to be addressed partially through development control regulations, and partially through the Heritage Development and Management Plan. Secondly, the general educational attainment of the population indicates a high regard for education and scholarship, and this could be an important thrust area for boosting economic activities. Additionally, there is a scope of addressing the imbalance in residential density amongst different wards through zoning regulations. And lastly, though the Logistic Curve method usually gives slight over-estimates of population growth, it may be suitable in the context of an expected boost in development following the recognition of Cooch Behar as Heritage Town.

### 3 ECONOMY

The economy of the town may be assessed by the economic status of the populace, occupational scenario, sector-wise employment, and status of industries as outlined in the following sections. Also, the condition of tourism related economic activities is inspected since that is expected to be important for a heritage town.

#### 3.1 ECONOMIC STATUS

**Map 3.1** shows the percentage of population under BPL in different wards of the town. It is observed that ward 5 has the highest percentage of BPL population followed by wards 4 and 20 (*Source: Cooch Behar Municipality*).

Further, in the socio-economic study, it can be observed that only 23% people earn between INR 25,000-50,000 while majority (33%) of the households had reported monthly income in the range of INR 10,000 - 25,000 which indicates they are in the lower income group category. However, almost every household (99%) had reported as having a bank account, which is an indicator of a reasonably stable economic condition.

#### 3.2 DISTRIBUTION OF WORKERS

In both the census years of 2001 and 2011, the percentage of non-workers (68% in 2001 and 65% in 2011 respectively) is significantly higher than the total number of workers (32% in 2001 and 35% in 2011 respectively) [**Fig. 3.1(a)**]. Specifically considering the working age group (aged between 15-64), the socio-economic study further revealed that majority of the town population (74%) are in this age cohort, out of which 40% of the people are unemployed.

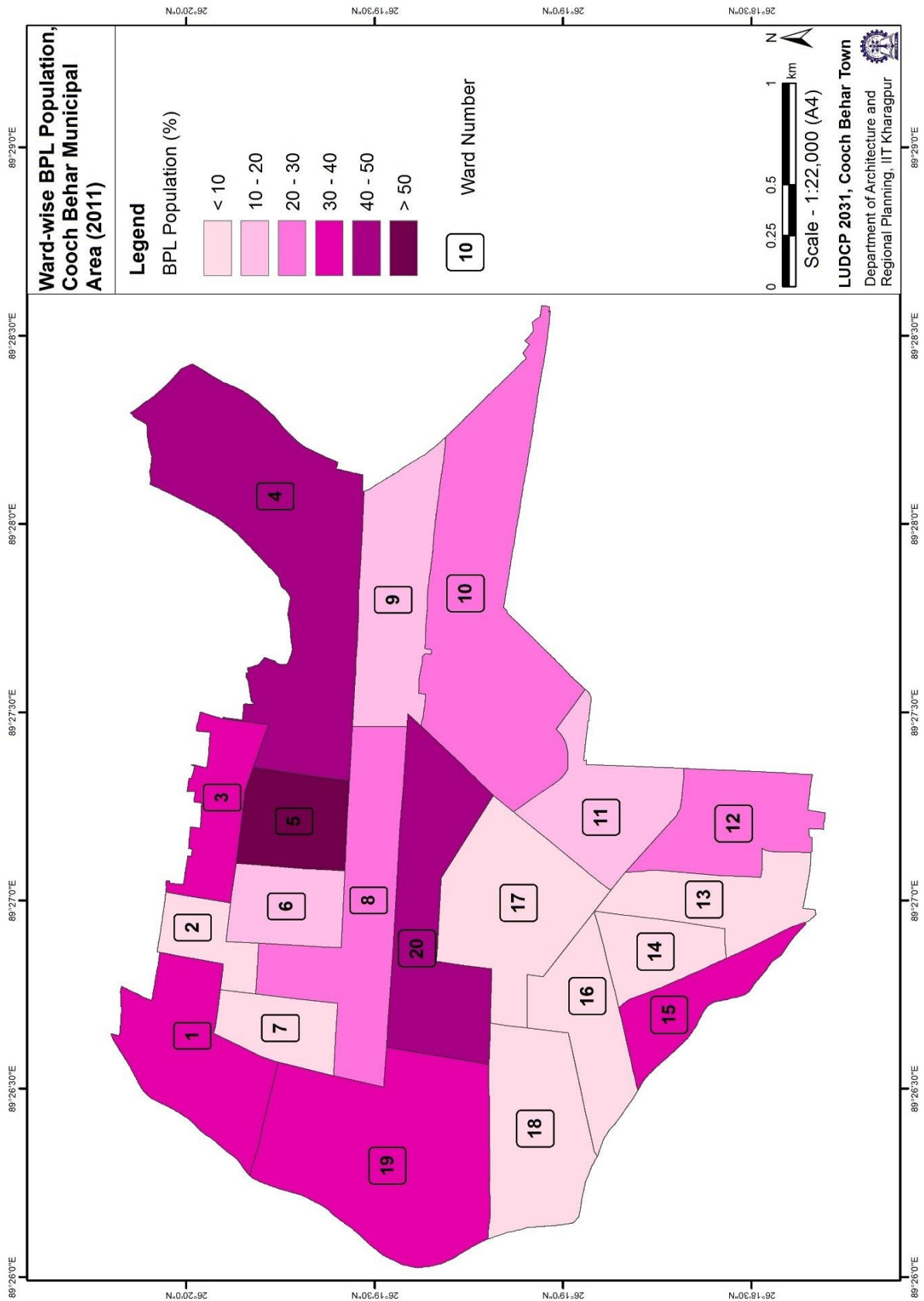
Within the workers, 89% are reported as main workers as per Census 2011, but this is a decrease in comparison to the corresponding value of 97% in 2001 [**Fig. 3.1 (b)**]. Men compose 73% of the main workforce, and 54% of the marginal workforce, indicating less than desirable participation of the women, who constitute 49.94% of the population.

The involvement of the main workforce with in various categories is given in **Table 3.1**. The analysis shows that the lion's share of the work force is involved in the tertiary sector. As per the socio-economic survey, 34% of households have reported having family member with government jobs.

**Table 3.1. Percentage Share of Workforce Involvement**

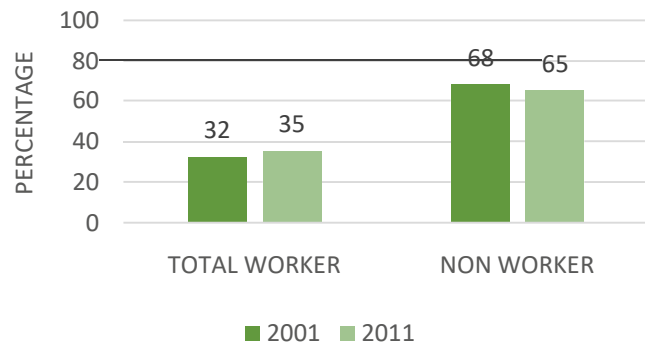
TYPE	CULTIVATORS	AGRICULTURAL LABOURERS	HOUSEHOLD INDUSTRY	OTHERS
MAIN WORKER	0.48%	0.79%	1.74%	96.98%
MARGINAL WORKER	4.42%	1.12%	3.57%	90.88%

*Source: Census 2011*

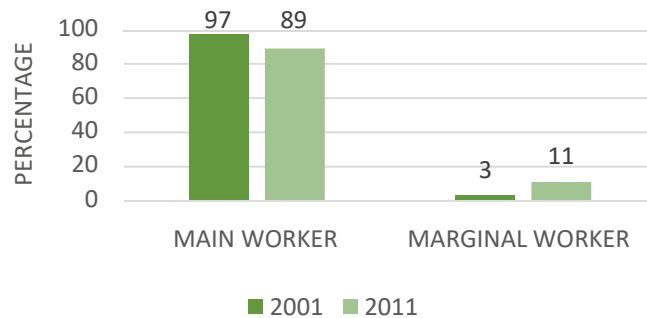


**Map 3.1. Wardwise BPL Population**

*Source: Cooch Behar Municipality*



(a) Percentage of total worker and non-worker



(b) Percentage of main and marginal worker in Cooch Behar Municipal area

**Figure 3.1. Workforce Characteristics***Source: Census 2011*

### 3.3 INDUSTRIES

Cooch Behar does not have any large-scale industries in its municipal area. As per the District Industries Centre (DIC), Cooch Behar, there are 86 units in the town that are registered as micro, small, or medium enterprises (MSME). A total of 429 persons are employed in these units. The household perception survey reported that in the recent past there has been a substantial increase in employment opportunities in the construction and industry sectors (21% and 20% respectively), while the craft sector has seen the least opportunities (1%). Also, it was reported from the socio-economic study that majority of the population (90%) wants an increase in the number of industries.

West Bengal Industrial Infrastructure Development Corporation (WBIIDC) has acquired 131.0315 acres of land at Chakchaka village, 4 Km north-east of the town, to be developed as the Cooch Behar industrial growth center. Phase I (**Map 3.2**) of this center is spread over 98 acres of land and has 75 industrial units, mainly consisting of food processing, jute, and other agro-based units (source: WBIIDC).

### 3.4 COMMERCE

There are four major markets in town (**Table 3.2**), selling all kinds of products, from garments to groceries. These are located strategically so that they are accessible from all parts of the town (**Map 3.2**). Apart from these, according to municipal reports, Cooch Behar Municipal Area has 931 shops. Modernization of the Bhabaniganj Bazaar and Kalika Das Bazaar are already being considered by the Cooch Behar Municipality.

The household perception survey reported that, in the recent past, the maximum increase in

employment opportunities has been in the retail sector (31%), and also that most people (74%) opined to be satisfied or very satisfied with shopping facilities in town. Though there was a demand placed by a portion of the population (56%), for having convention centres, people did not express a need for an increase in the number of restaurants (54%), hotels (53%) and retails services (43%).



Map 3.2. Cooch Behar Industrial Growth Centre, Phase -1

Source: WBIIDC

Based on the URDPFI guidelines and population projections, the markets in town are adequate for commercial activities.

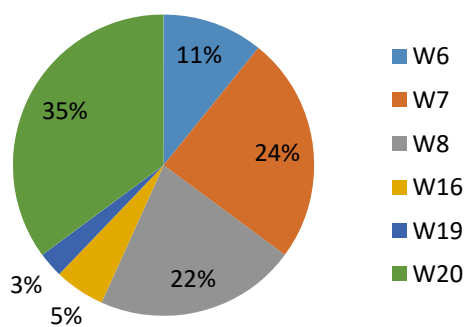
**Table 3.2. List of Wholesale Markets/ Retail Places in Cooch Behar Municipal Area**

SL. NO.	NAME	WARD	URDPFI GUIDELINES	GAP
1	Bhabaniganj Bazaar	8	1 wholesale market serving a population of 10 lakhs.	Nil
2	Kalika Das Bazaar	16		
3	Desh Bandhu Market	17		
4	Jamai Bazaar	10		

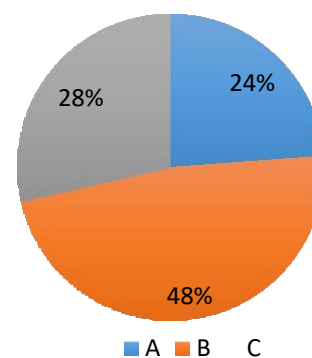
Source: Cooch Behar Municipality

### 3.5 TOURISM

In the context of Cooch Behar being declared as a Heritage Town, the tourism sector has immense potential to contribute for the betterment of the economic condition of the town. The peak tourists' season spans the months of October to December during the celebration of festivals like Durga Puja, Raas Mela and Diwali/Kali Puja. A second influx happens during the monsoons on the occasion of Rath Yatra. At present the hotels generate the major economic activity for tourism. Cooch Behar has a total of 43 hotels in its municipal area, out of which 14 have provision for both food and accommodation and 29 have provision for only accommodation. Total capacity of all the hotels is 829 beds. The ward wise location of hotels in the town [Fig 3.2(a)] indicate that a majority of the hotels are located in the central commercial zone of the town mainly in ward 20 (35%) followed by ward 7 (24%) and 8 (22%). Main attractions and tourist points of the city like the Rajbari, Sagar Dighi and Madan Mohan temple are also nearby to these areas and are easily accessible from the location of these hotels. Majority of the hotels are of category 'B' (48%) whose tariff ranges from approximately INR 300 to 800, followed by category 'C' (28%), tariff ranging from approximately INR 300 to 600 and category 'A' (24%) tariff ranging from approximately INR 600 to 1000 with some hotels in this category charging as high as 3,500 to 4,000 per day[Fig 3.2(b)].



(a) Ward wise location of hotels



(b) Category of hotels (as per tariff)

**Figure 3.2. Hotels in Cooch Behar Municipal Area**

Source: Cooch Behar Municipality

### 3.6 INFERENCE

It is observed that Cooch Behar has a comparatively high rate of unemployed population (refer section 3.2). The household perception study revealed that 73% think the employment situation has decreased or has become stagnant over the last three years. Hence, there is a need for identifying possible sectors for generating employment. According to the perception study, the

tourism and allied sector (39%) would be the most promising source of employment for Cooch Behar town, followed by the micro, small and medium scale industries (31%), and the education sector (19%).

Some sporadic presence of primary sector activities in the town has been observed which may continue. However, in view of urbanism suitable for a district head quarter, further promotion of primary sector activities is not recommended.

Also, historically the town has not proven to have any significant potential for large-scale industries. The existing small and micro enterprise need to be considered for systemic support with existing governmental mechanisms, arranging markets and boosting demand. Further, local arts and crafts, which are significant intangible heritage (refer Base line Survey report, August, 2018), need to be promoted as a potential employment sector at both town and regional level.

Considering the tertiary sector, Cooch Behar being the district head quarter, already provides large number of government jobs. The government shall continue to be a prominent employer in this sector.

It is recognized that the town has notable heritage significance and has always attracted a certain amount of tourists. With the declaration of Cooch Behar as a heritage town and associated promotion and management, a reasonable increase in tourist footfall is expected. Accordingly, the service sector should be a focus for generating employment opportunities. These could be in terms of hotels and hospitality, tourist assistance services, local transport, shopping and recreational facilities. Proposals for the tourism sector may be integrated into the Heritage Development and Management Plan (HDMP).

Education is another promising tertiary sector activity that has historically garnered prominence to the town and continues to do so even in recent times, particularly at the school level. To build up on this, Cooch Behar should function as a melting pot for state level inter-school activities and conventions. The socio-economic study indicated a demand for higher order educational institutes in the town, which are already coming up. These institutes are expected to generate a significant demand for allied services that need to be promoted to boost employment in tertiary sector.

To support the above vision for economic self-sustenance, relevant schemes, projects, events, action area plans and branding strategies are to be proposed as a part of LUDCP and the Heritage Development and Management Plan.

## 4 HOUSING

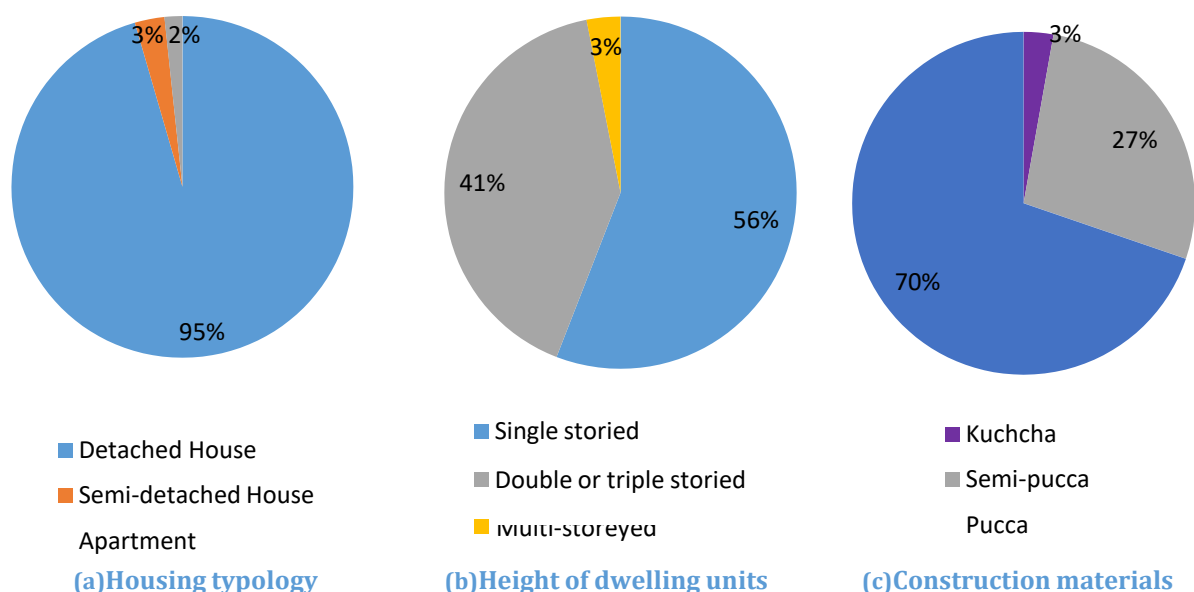
As per census 2011, Cooch Behar municipality has 18,431 households. As per the updated land use register, residential land use, comprising of both formal and informal settlements, is the predominant (38%) land use. The following sections outline the condition of housing, and status of slums in the town.

### 4.1 EXISTING HOUSING CONDITION

It was observed from the household survey that more than 90% of people possess property ownership or tax documents indicating a high level of regularization in the housing sector. Majority of the population of the town live in Detached Houses (95%). Most of the people stay in their own dwelling units (97%), of which, only 21% have given their houses partially on rent. Thus, the rental market is not of much prominence.

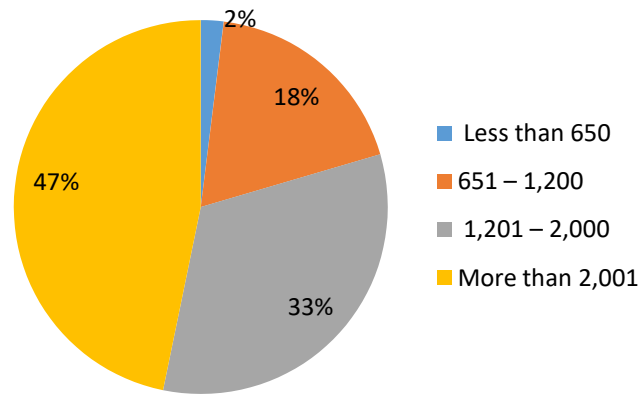
The study also indicated that detached, single-storeyed, pucca houses form the most prominent house typology in this area (**Fig 4.1**). With almost half of the population (47%) living in dwelling units having built up more than 2,001 sqft. (**Fig 4.2**), and only 2% of the population living in units having area less than 650 sqft, while the average household size in Cooch Behar town is 4.23, overcrowding does not seem to be an important concern in this area.

It has been reported that only about 2.5% of the citizens have plans for buying new property within the Cooch Behar Municipal area in the next 12 months. It can be inferred that the town exhibits slow growth in real estate. The survey reported a split in opinion regarding preference for low-rise low-density plotted developments (41%), and multi-storey apartments (42%). 42 % of respondents felt the necessity for more public housing.



**Figure 4.1. Housing Classification in Cooch Behar Municipal Area**

*Source: Socio-economic survey, 2018*



**Figure 4.2. House Built-up Area (sqft.)**

*Source: Socio-economic survey, 2018*

## 4.2 EXISTING SLUM

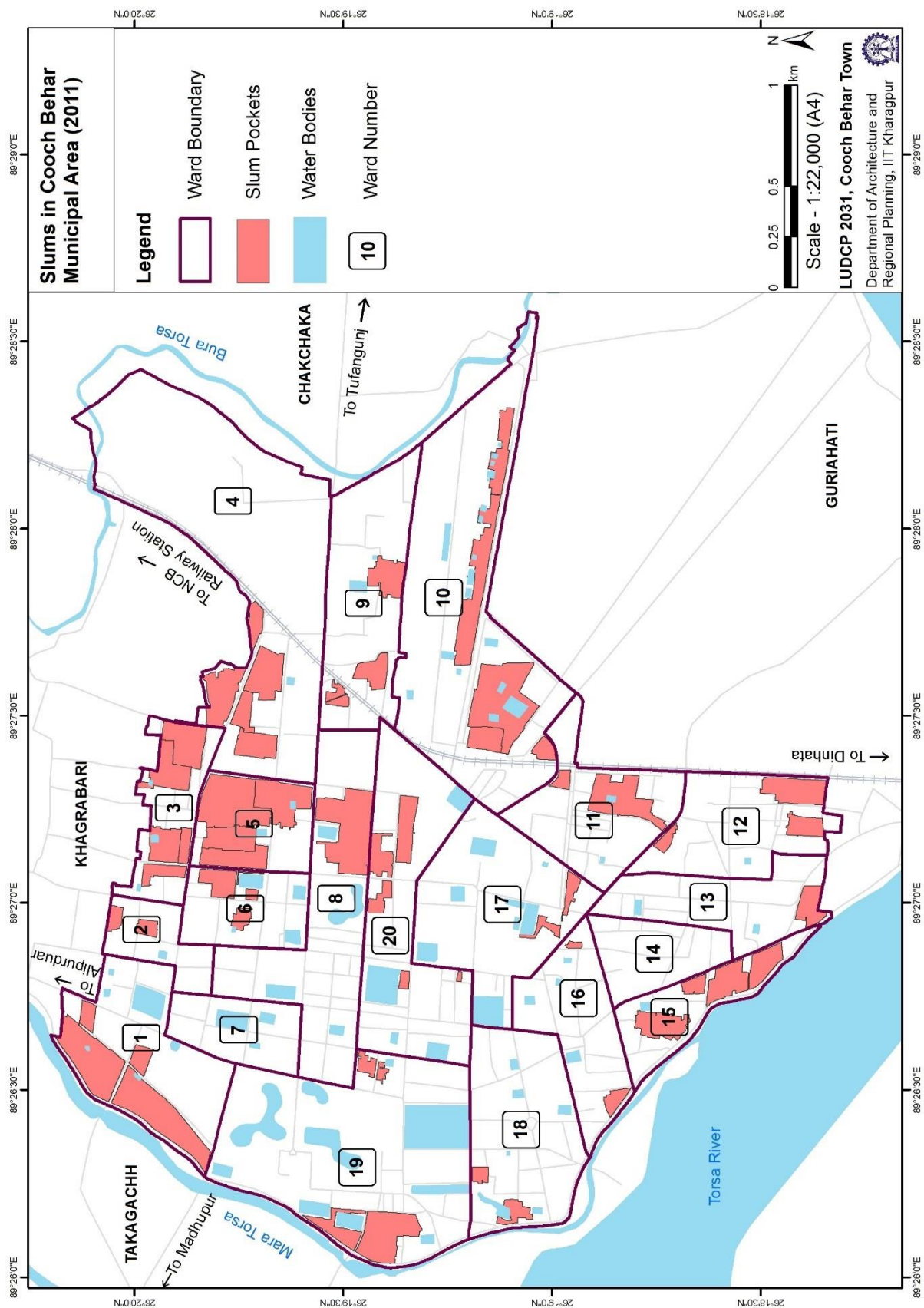
There are 71 identified slums and colonies present in the Cooch Behar Municipal Area. These have been assessed under the scheme of Integrated Housing and Slum Development Programme (IHSDP) under JNNURM and necessary infrastructural provisions have been proposed for development under it.

### 4.2.1 Slum Population and Density

Not only has the total slum population in the town increased by 38% from 2001 (24,270 persons) to 2011 (33,489 persons) [Fig 4.3 (a)], but the percentage of town residents living in slums has also increased [Fig 4.3(b)].

An analysis of the existing slum pockets in the city (**Map. 4.1**) and the percentage of slum population with respect to total ward population (**Fig 4.4**) indicates that majority of the slum population is located in Ward 4 (Goalapara area), Ward 5 (Subhash Palli area), Ward 15 (Rabindra Nagar area), Ward 19 (Debi Bari area), and Ward 20 (beside N. N. Park). There is also a notable presence of slum population in Ward 1 (East of Bund Road), Ward 3, Ward 4 (South of Sal Bagan), Ward 6, Ward 8 (beside N. N. Park), Ward 9, Ward 10, and Ward 11.

Given the location of the slum pockets, they need to be considered in terms of two different types of development approaches: one promoting intensified redevelopment, like in the north and east of the town, and another restricting densification, like in the immediate east of the Bund Road. Suitable development control regulations need to be formulated so that the future development in slums is well integrated with the growth dynamics of the overall urban fabric.

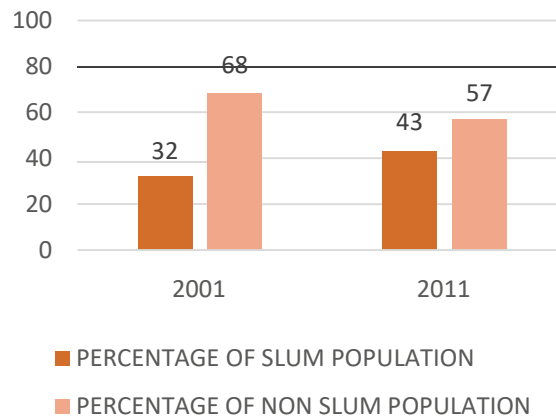


**Map 4.1. Slums in the Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*



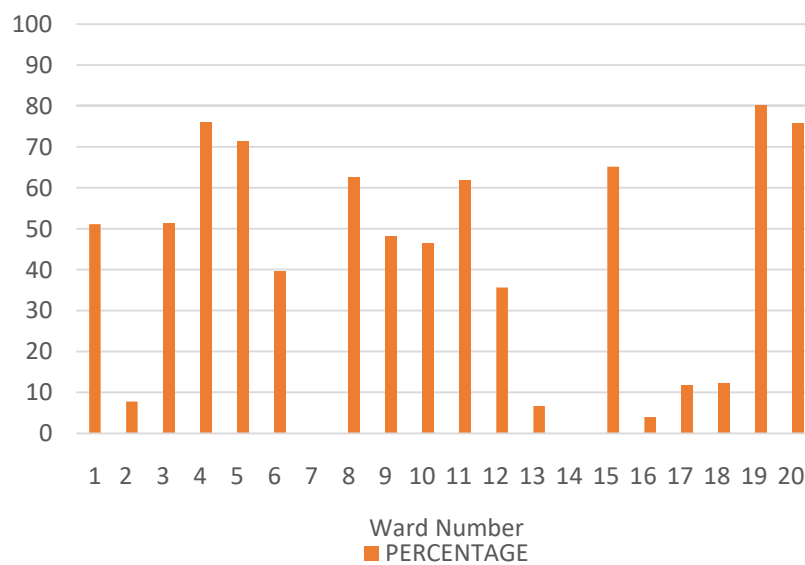
(a) Total population



(b) Percentage population

**Figure 4.3. Slum Population in Cooch Behar Municipal Area, 2001 and 2011**

*Source: Cooch Behar Municipality and Census 2011*



**Figure 4.4. Slum Population as Percentage of Ward Population**

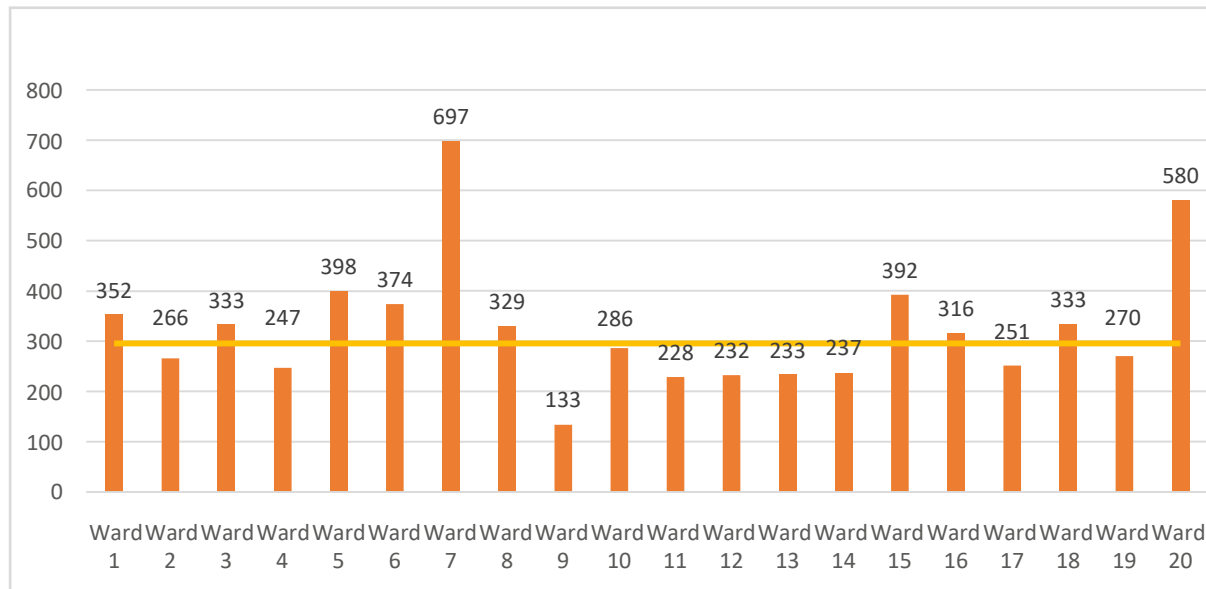
*Source: Cooch Behar Municipality and Census 2001 and Census 2011*

### 4.3 DEMAND ASSESSMENT FOR RESIDENTIAL LAND

The demand assessment of land for residential activity has followed the steps listed below.

Considering the projected population for 2031 (78,151 persons), and the 700 ha land of Cooch Behar town (excluding airport and Chilarai Barracks), the gross residential density would be 112pph. This is well within the range recommended for a medium sized town (100 to 150pph, following URDPFI Guidelines), and additional land is not suggested to house the projected growth. The approach of development should involve densification.

The existing area under residential land use is 652.4 acres (264 ha), with a net residential density of 295 pph. The projected net residential density would be 296 pph. And inspection of the net residential density of individual wards (**Fig 4.5& Map. 4.2**) indicates a skewed distribution, with certain wards displaying densities much higher than the net density, while others are relatively sparsely populated. This indicates scope for densification in Wards 2, 4, 10, 11, 12, 13, and 14, to be supported by suitable zoning regulations. Though Wards 19 and 17 also show a relatively lower density, they fall under core heritage zone, and are not recommended for further residential densification. Similarly, Ward 9, being the focus of development involving educational and allied activities, is also not recommended for residential densification.



**Figure 4.5. Ward-wise Residential Density in Cooch Behar Municipal Area**

*(The yellow line indicates projected net density of 296 pph)*



## 5 PHYSICAL INFRASTRUCTURE

The physical infrastructure of the town is assessed by evaluating the condition of water supply, sanitation, solid waste management, power supply, and drainage, discussed as follows. Transportation is discussed separately in the next chapter.

## 5.1 WATER SUPPLY

### 5.1.1 Existing Status

There are two main formal sources of water supply for the town of Cooch Behar – ground water extracted with the help of deep tube-wells and submersibles, and surface water extracted from the Torsa River near Lankabar in Guriahati G.P. However, water from the many dighis is informally used for various purposes.

A total of 7 OHT, 24 deep tube wells and 3 submersible pumps serve water to the 20 wards. **Map 5.1** and **Table 5.1** show the location of these sources. **Table 5.2** gives the source of water and capacity of the OHTs. Out of the 7 OHTs, the ones in ward no 17 and 18 are the only functioning OHTs serviced by ground water while newly constructed OHTs of ward 3, 12 and 10 are serviced by surface water from the river. OHTs in ward 13 and 8 are presently non-functional.

According to information received from Cooch Behar Municipality, quantity of surface water extracted is 9.80 MLD, which is treated at Santiban Water Treatment Plant (WTP) in Ward No. 10. Distance from the source to the treatment plant is 2,000 m. There are several overhead tanks for supply of domestic and non-domestic water with a distribution system based on gravitational force.

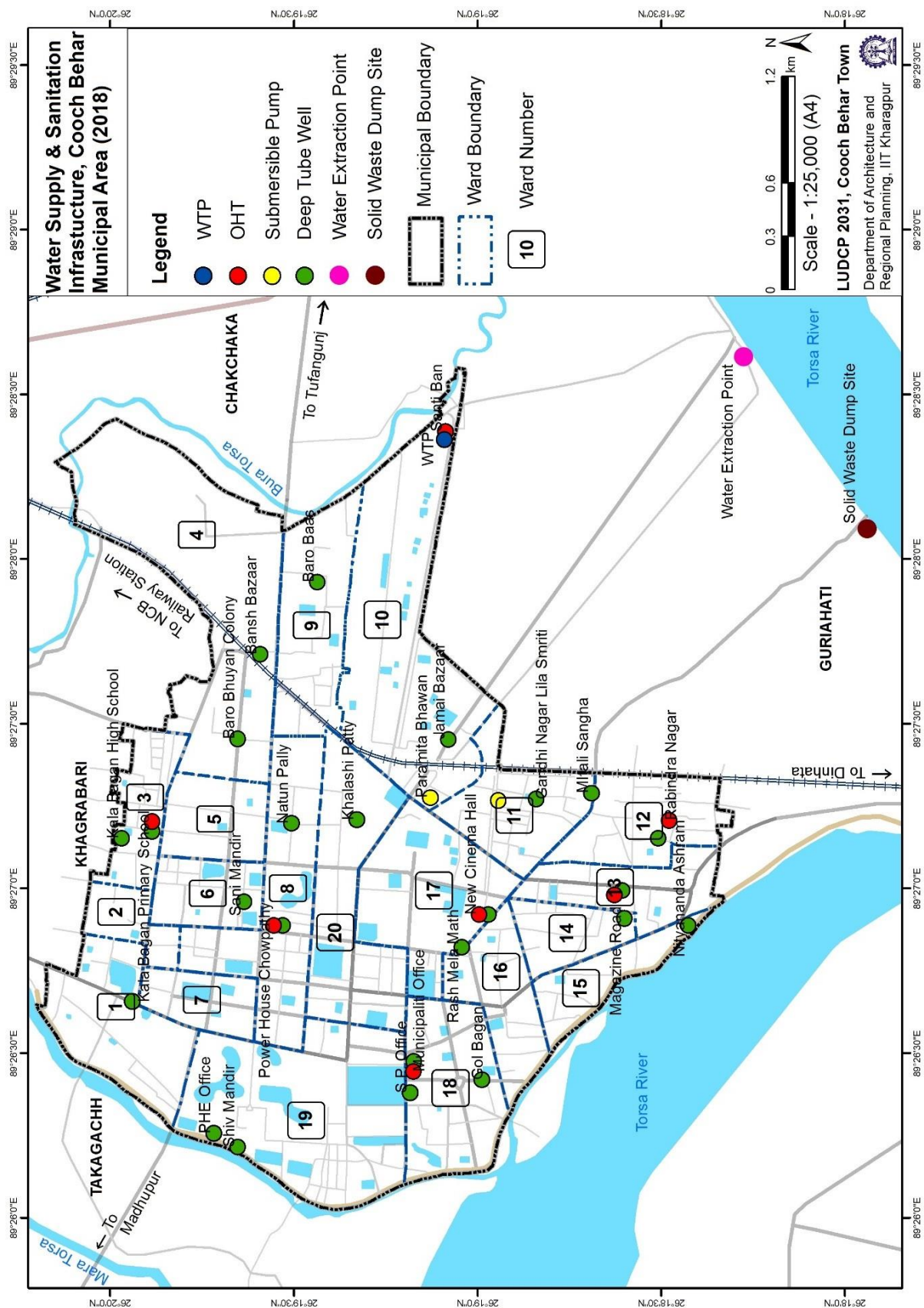
Currently 18,000 households receive domestic ground water supply with 6,000 households also receiving surface water supply. Ground water is supplied for 7 hours (6 A.M.-10 A.M., 12 P.M.-2 P.M., 4 P.M. – 5 P.M.) whereas the surface water supply system is operational from 11am to 12 noon.

It was also observed from the socio-economic survey that at the household level, private tube wells act as a source of water supply for a significant part of the households (68%). This indicates high level of groundwater extraction in the town.

### 5.1.2 Analysis and Recommendation

The recommended standard for supply of piped water is 135 lpcd in urban areas (URDPFI, 2015), whereas at present the water is supplied at 117 lpcd in Cooch Behar Municipality. This probably accounts for the practice of private ground water extraction.

The quantity of water supply needs to be increased from the present supply of 9.09 MLD to 10.55 MLD for catering to the population of 78,151 for the horizon year 2031 (**Table 5.3**). According to information received from Cooch Behar Municipality, the surface water supply system is designed to cater to 20,000 households at full capacity. This can take care of the projected number of households (18,500 for the horizon year 2031).



**Map 5.1. Water Supply and Sanitation Infrastructure in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*

**Table 5.1. Location of Water Supply Sources in Cooch Behar Municipal Area**

SL. NO.	TYPE	LOCATION	
		PLACE	WARD
1	Deep tube well	Gunja Bari	1
2	Deep tube well	Kala Bagan High School	3
3	Deep tube well	Kala Bagan Primary School	3
4	Deep tube well	Baro bhaiya colony	4
5	Deep tube well	Sani Mandir	6
6	Deep tube well	Power House Chowpathy	8
7	Deep tube well	Natun Pall	8
8	Deep tube well	Baro Bash	9
9	Deep tube well	Bash Bazaar	4
10	Deep tube well	Jamai Bazaar	10
11	Deep tube well	Gandhi Nagar Lila Smriti	11
12	Deep tube well	Mitali Sangha	11
13	Deep tube well	Bazaar Math	12
14	Deep tube well	Hari Shava	13
15	Deep tube well	Magazine Road	14
16	Deep tube well	Nityananada Ashram	15
17	Deep tube well	Rash Mela Math	17
18	Deep tube well	New Cinema Hall	17
19	Deep tube well	S.P. Office	18
20	Deep tube well	Gol Bagan	18
21	Deep tube well	Municipality Office	18
22	Deep tube well	PHE Office	19
23	Deep tube well	Shiv Mandir	19
24	Deep tube well	Khalashi Patty	20
25	Submersible Pump	Prabash Aabashan	8
26	Submersible Pump	Paramita Bhawan	10
27	Submersible Pump	Harijan Mohalla	11
28	OHT	Municipal Office	18
29	OHT	Power House	8
30	OHT	PHE Mechanical Office	17
31	OHT	Hari Sava	13
32	OHT	Kala Bagan	3
33	OHT	Rabindra Nagar	12
34	OHT	Santi Ban	10

*Source: Cooch Behar Municipality***Table 5.2. Present Condition of the OHTs in Cooch Behar Municipal Area**

SL. NO.	OHT LOCATIONS	PRESENT CONDITION	WATER SOURCE
1	Municipal Office, Ward No- 18	Old, Functional	Ground water (Deep Tubewell)
2	Power House, Ward No- 8	Old, Non-Functional	Ground water (Deep Tubewell)
3	PHE Mechanical Office, Ward No- 17	Old, Functional	Ground water (Deep Tubewell)
4	Hari Sava, Ward No- 13	Non-Functional	Ground water (Deep Tubewell)
5	Kala Bagan, Ward No- 03	New, Functional	Surface water (Torsa River)
6	Rabindra Nagar, Ward No- 12	New, Functional	Surface water (Torsa River)
7	Santi Ban, Ward No-10	New, Functional	Surface water (Torsa River)

*Source: Cooch Behar Municipality*

**Table 5.3. Water Supply Requirement for 2031**

YEAR	POPULATION	URDPFI STANDARDS (LPCD)	PRESENT WATER SUPPLY (MLD)	REQUIRED WATER SUPPLY (MLD)	SUPPLY GAP (MLD)
2011	77,935	135	9.09	10.52	1.43
2021	78,119			10.55	1.46
2031	78,151			10.55	1.46

Even though Cooch Behar district has a high water table – minimum depth of water level at 0.88 MBGL and maximum depth at 5.08 MBGL during the pre-monsoon period of 2018 (CGWB, 2018), ground water extraction should be strongly discouraged, as this may lead to ground water depletion in the long run as well as geomorphologic instabilities.

## 5.2 DRAINAGE

### 5.2.1 Existing Status

Cooch Behar Town can boast of having a historic drainage network installed under royal patronage. However, most of that heritage system is now derelict and defunct. At present, the town has a poor drainage system with open type drains, as is evident from both the household survey and the information collected from municipal sources.

### 5.2.2 Analysis and Recommendation

Majority (88%) of the drains in the town are kuccha. Pucca drains are mainly present in wards 19 and 20 – in the Cooch Behar Rajbari area, the Lal Dighi area, and along Sunity Road, as well as some parts of wards 10, 11 and 16 (**Map 5.2**).

From the household survey, it was inferred that wards 19, 18, 6 and 7 experience instances of severe water-logging. To improve the current drainage situation in the town, all kutchra drains need to be upgraded to covered, pucca drains. In the water-logged areas of wards 6, 7, 18, and 19, existing water bodies can be used as drainage sinks. A DPR is recommended, including detail contour analysis of the town, which is presently lacking.

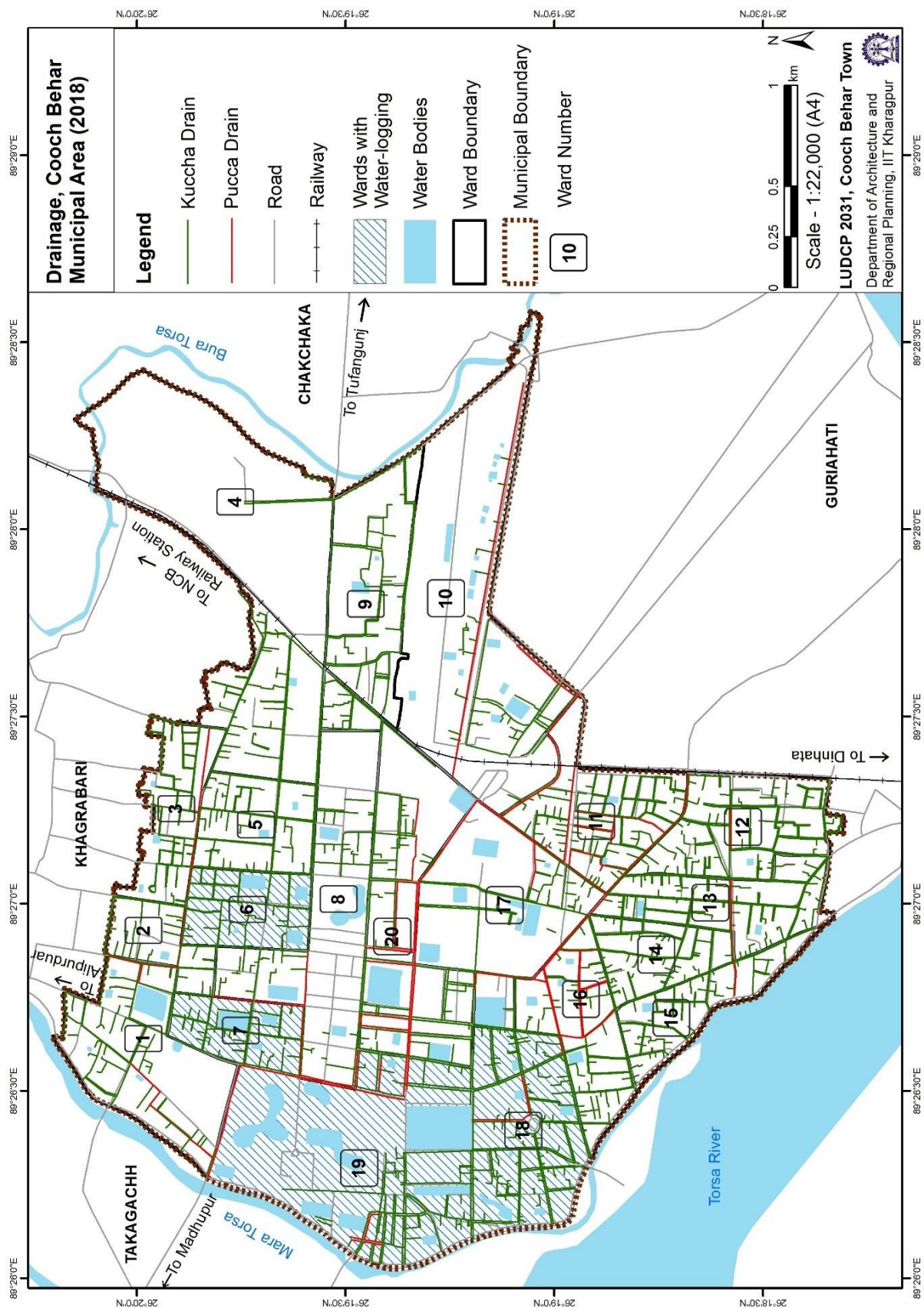
## 5.3 SEWAGE

### 5.3.1 Existing Status

There is no underground municipal sewerage system in Cooch Behar Municipal Area. It was observed from the socio-economic survey that 98% of the households in Cooch Behar have their individual septic tanks with soak-pits, while only 2% of the households have pour flush toilets. As per Census 2011, there are 4,608 latrines with pit system and 2,304 latrines of ‘other’ type. The septic tanks are cleaned by the municipality in exchange for a tariff from the owners. The collected sludge is then dumped on an open solid waste dumping site at Guriahati G.P. (**Map 5.1**), 6 km away from the town, and right next to the Torsa River, rather close and upstream to the surface water extraction point at Lankabar. The sludge is disinfected from time to time with bleaching powder, but there is an absence of any treatment facility, and the dumping of untreated sludge poses a threat to health and environment. A networked municipal sewerage collection system is eventually recommended.

### 5.3.2 Analysis and Recommendation

According to CPHEEO standards, 80% of the water supply is considered to reach the sewers. So, for the estimated water supply of 10.55 MLD for the horizon year, 8.4 MLD of sewage would be generated. This can be recycled by setting up an Activated Sludge Process (ASP) Sewage Treatment Plant. ASP is the most common type of treatment option used for treatment of domestic sewage in medium to large towns where land is scarce.



According to URDPFI guidelines, the land required for setting up an Activated Sludge Process (ASP) treatment plant is 0.15 to 0.25 hectares per MLD. Based on this, a suitable parcel of land in the order of 1.4 to 2.4 Hectares is to be identified beyond the municipal limits, preferably downstream from the water extraction point.

## 5.4 SOLID WASTE MANAGEMENT

### 5.4.1 Existing Status

According to municipal sources, the total per diem waste generated in Cooch Behar is 45,691 kg. **Table 5.4** shows the share of per diem waste generated by different sources.

**Table 5.4. Sources of Waste Generation in Cooch Behar Municipal Area**

RESIDENTIAL (Kg)	COMMERCIAL (Kg)		BIO-MEDICAL (Kg)	STREET SWEEPING (Kg)	OTHER WASTE (Kg) Bus stand/ station/ drain
21,432	Markets	Hotel & shop	1,076	500	2,000
	20,000	683			

*Source: Cooch Behar Municipality*

Out of the total per diem waste generated, 22,223 kg of waste is degradable and 23,458 kg of waste is non-degradable. The total waste generated is transported to the open dumping site at Guriahati G.P. (**Map 5.1**), on a daily basis. This is the same dumping ground that is used for sewage disposal. The site has an area of 6.75 acres.

The household survey reported 97% receive daily, door-to-door, municipal solid waste collection service. Motorized tricycles are used by the municipality for the primary waste collection, and the loading and unloading of the waste is done manually. A total of 50 male supervisors are employed by the municipality for this purpose.

### 5.4.2 Analysis and Recommendation

URDPFI recommends estimates of waste generation from different sectors like residential (0.3 to 0.6 kg/cap/day), commercial (0.1 to 0.2 kg/cap/day), street sweepings (0.05 to 0.2 kg/cap/day) and institutional sector (0.05 to 0.2 kg/cap/day). Considering the aggregate of mean values from each of these sectors, Cooch Behar Municipal Area is estimated to generate waste at the rate 0.75 kg/cap/day. Following the present composition of waste in the town, approximately 48% is biodegradable and the rest is non-biodegradable. **Table 5.5** shows estimated per diem quantum of the two types of waste for the horizon year. The biodegradable waste can be treated using various decentralized composting systems, while the non-biodegradable waste can be safely disposed by properly constructed sanitary landfills.

**Table 5.5. Projection of Waste Generation for 2031**

POPULATION	AVERAGE WASTE GENERATED (kg/cap/day)	FUTURE WASTE GENERATION (kg)	DEGRADABLE (Kg)	NON DEGRADABLE (Kg)
78,151	0.75	58,613	28,486	30,069

Although the municipality has a regular waste collection system, the city lacks in terms of proper disposal of the same. The waste is partially segregated as biodegradable and non-biodegradable, but these are all brought to the same site and dumped at nearby locations without any scope of recycling. As already noted, the location of the present dumping site also risks contamination of water. Considering the hazard the present system poses to health and environment, there is an urgent requirement of a sanitary landfill.

Considering a design period of 20 years, 3.4 acres of land is required for sanitary landfill of 20 m height. Thus such a landfill may be accommodated with the present site of 6.75 acres. However, the site being right on the Torsa, such landfill would obstruct the views of the river and become a visual blight. Therefore a reduced height of 10m is recommended, which would require 7.5 acres of land i.e. 0.75 acres of additional land.

For processing of biodegradable waste, 14 decentralized composting machines (each of capacity 2 tonnes) would be required, which are recommended to be suitably placed in different wards.

## 5.5 POWER SUPPLY

### 5.5.1 Existing Status

Electricity in Cooch Behar Municipal Area is supplied by the West Bengal State Electricity Distribution Company Limited (WBSEDCL). Total power consumed is 12MW per day, and a total monthly revenue of 3.2 Cr is collected from the consumers. **Table 5.6** shows number of connections and breakup of the consumption under different sectors. There are 211 points in town for road lighting.

The electricity is distributed with the help of two existing substations:

- i. Cooch Behar 33/11kV Substation near Khagrabri Chowpathy, with capacity of 28.9 MVA
- ii. Power House 33/11kV Substation at Power House Campus near N. N. Park, with capacity 20.0 MVA

The distribution system involves overhead cables, which require higher maintenance, pose accident risks, and is a significant visual blight for the heritage town.

**Table 5.6. Power Consumption in Cooch Behar Municipal Area**

SL NO.	SECTOR	NO. OF CONNECTIONS	POWER CONSUMPTION (MW/DAY)
1	Domestic	16,481	6.00
2	Commercial	3,186	3.00
3	Industrial	91	1.50
4	Institutional/Other	315	1.50

*Source: Cooch Behar Municipality*

### 5.5.2 Analysis and Recommendation

It has been observed from the household survey that almost every household has metered electricity connection, and majority of the households (73%) face power cuts for an average of 30 mins per day. However, based on the URDPFI guidelines (2.74 kWh per capita per day), it is observed that there is sufficient amount of power supply (12MW/day) in Cooch Behar Municipal Area.

No specific interventions are recommended for power generation. However, the overhead distribution system should be converted to an underground cable network. This has been already initiated for one of the core heritage zones, by the State Government. A similar exercise should extend to all other parts of the heritage town.

## 6 TRANSPORT AND TRAFFIC MANAGEMENT

Cooch Behar Municipality has a total area of 295.7 acres (119 Ha) under roads and transport networks, which constitutes 15% of the total land. Evaluation of existing transport infrastructure focuses on the regional connectivity and intra-town traffic flow characteristics.

### 6.1 EXISTING STATUS

#### 6.1.1 Regional Linkages and Connectivity

Cooch Behar is reasonably connected with other parts of the state of West Bengal, as also with the neighboring state of Assam through both road and rail networks (**Map 6.1**). In terms of reasons for out-of-city travel, it was observed from the household survey that availing health facilities is the major reason (54%). Business and Higher Education also account for 14% of trips to other cities. Railways act as the main mode (82%) of transport for visiting other cities to access higher order services. The town also has a fully equipped airport spreading over 144 acres which is presently not operating. The relevant details of all the modes of connectivity are outlined as follows:

##### 6.1.1.1 Airport

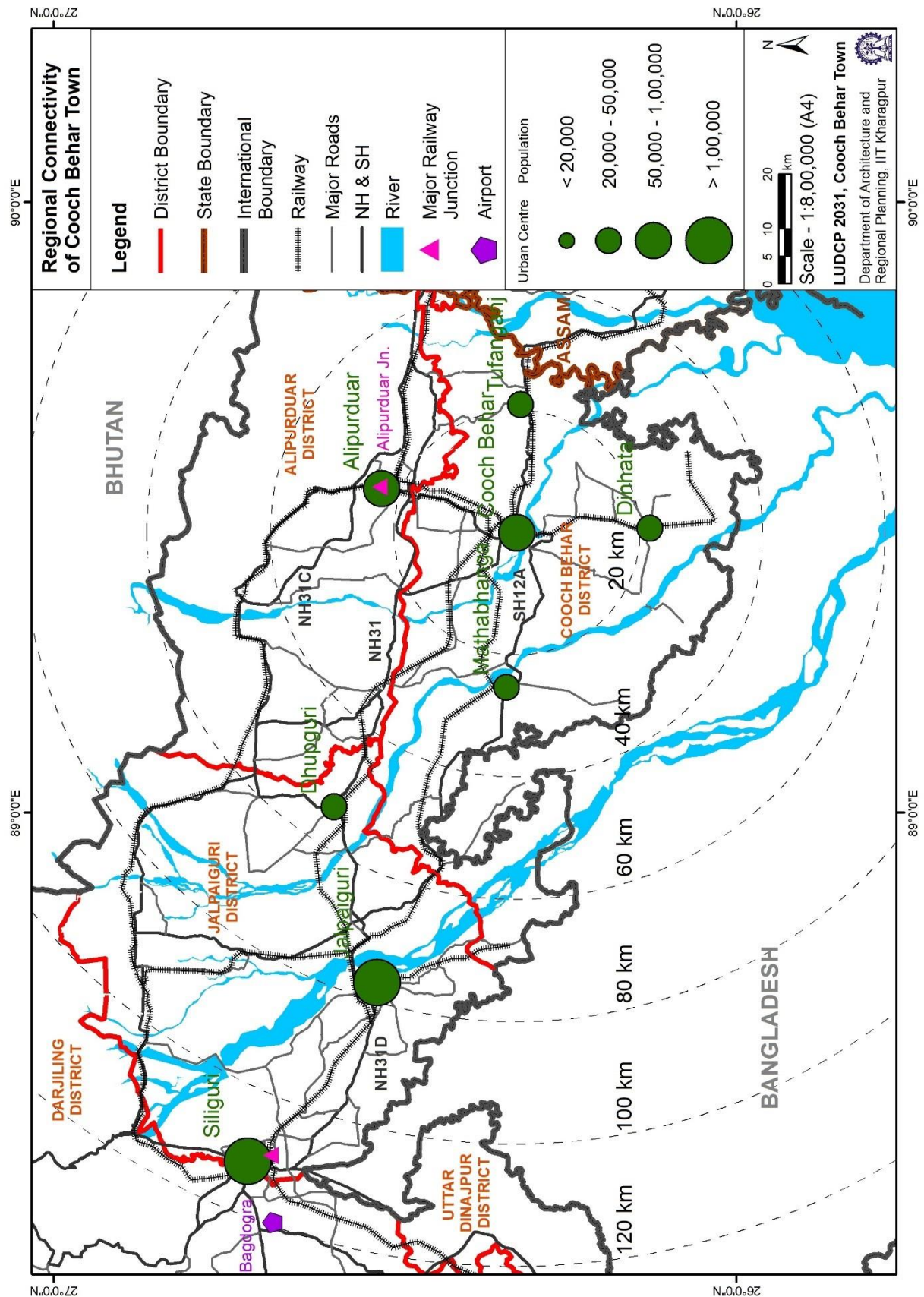
The Cooch Behar Airport, covering an area of about 144 acres (58 Ha), is present on the North Eastern part of the town. Presently no airlines operate from here. However, Air Deccan has got the rights to fly the Kolkata – Cooch Behar route under the UDAN scheme. Bagdogra is the nearest operational airport at a distance of 151 km from Cooch Behar town and is connected to the major airports in the country.

##### 6.1.1.2 Railways

The introduction of the railways in the eastern part of the town was a significant event that impacted the growth and development pattern of the town. The old Cooch Behar Railway Station, or Cooch Behar Town Station, that was built in 1901, is now a listed heritage building and continues to be operational, with 6 trains offering daily connections to Alipurduar, Bamanhaat, Dinhata, Malda, and Siliguri. The New Cooch Behar Railway Station, located at a distance of 5 km from the town, is the primary station well-connected to almost all major Indian cities including Kolkata (701 km), New Delhi (1,664 km), Chennai (2,391 km), Bangalore (2,702 km), and Mumbai (2,441 km). This station has a total number of 108 trains passing through it. Alipurduar Junction station is the nearest junction station from Cooch Behar (25.9 km from New Cooch Behar station) with connecting trains to Kolkata and other major cities of India.

##### 6.1.1.3 Road

Cooch Behar is well connected with its hinterland and the neighbouring towns through major intercity roads. State Highway 12A passes through the centre of the town connecting nearby urban centres like Alipurduar (22km from Cooch Behar) and Mathabhanga (24km from Cooch Behar). Other nearby urban centres like Tufanganj and Dinhata are connected by Assam Access Road and Ashram Road respectively. Assam Access Road further connects the neighbouring state of Assam with Cooch Behar. Major urban centres like Siliguri and Jalpaiguri are connected through SH12A and NH 27. The Cancer Centre Road also connects the town to NH 31, towards the north. The Bandh Road, which is only accessible to light vehicles, partially acts as a western by-pass for intercity traffic (**Map 6.2**). The intercity roads are serviced by regular intercity buses of North Bengal State Transport Corporation (NBSTC) with a terminal in ward 19. **Table 6.1** gives a list of intercity buses running from Cooch Behar to other urban centres and towns. It is observed that Cooch Behar has 355 connecting bus routes to 17 nearby towns and cities, of which the highest number of busses (65) run on the Cooch Behar – Siliguri route, followed by buses to Dinhata (48) and Boxirhat, Tufanganj (46).



Map 6.1. Regional Connectivity of Cooch Behar Town

**Table 6.1. List of Inter-city Buses Connecting Cooch Behar to Other Urban Centres**

ROUTE NO.	FROM COOCH BEHAR TOWN TO	INTERVAL (MINUTES)	FARE (RS.)	ROUTE LENGTH (KM)	NO. OF BUSES ON ROUTE	DAILY TICKETS SOLD
1	Mathabhanga	5	35	45	41	7,380
2	Boxirhat, Tufanganj	2	33	42	46	8,230
3	Rampur	8	48	67	32	6,382
4	Balarampur	10	20	24	20	5,632
5	Dinhata	6	21	26	48	8,262
6	Sonapur	10	21	25	22	6,733
7	Nazirhat	15	33	37	10	4,270
8	Gosanimari	20	24	27	10	3,237
9	Chandamari	30	26	33	7	4,730
10	Alipur	25	20	25	7	8,733
11	Kaljani	120	13	12	4	4,345
12	Haldibari	36	93	136	6	5,970
13	Malbazar	30	108	157	5	2,730
14	Siliguri	10	102	158	65	6,874
15	Jaigaon	10	52	73	26	4,360
16	Mekhliganj	25	61	95	6	2,731
<b>TOTAL</b>					355	90,599

Source: Cooch Behar Municipality

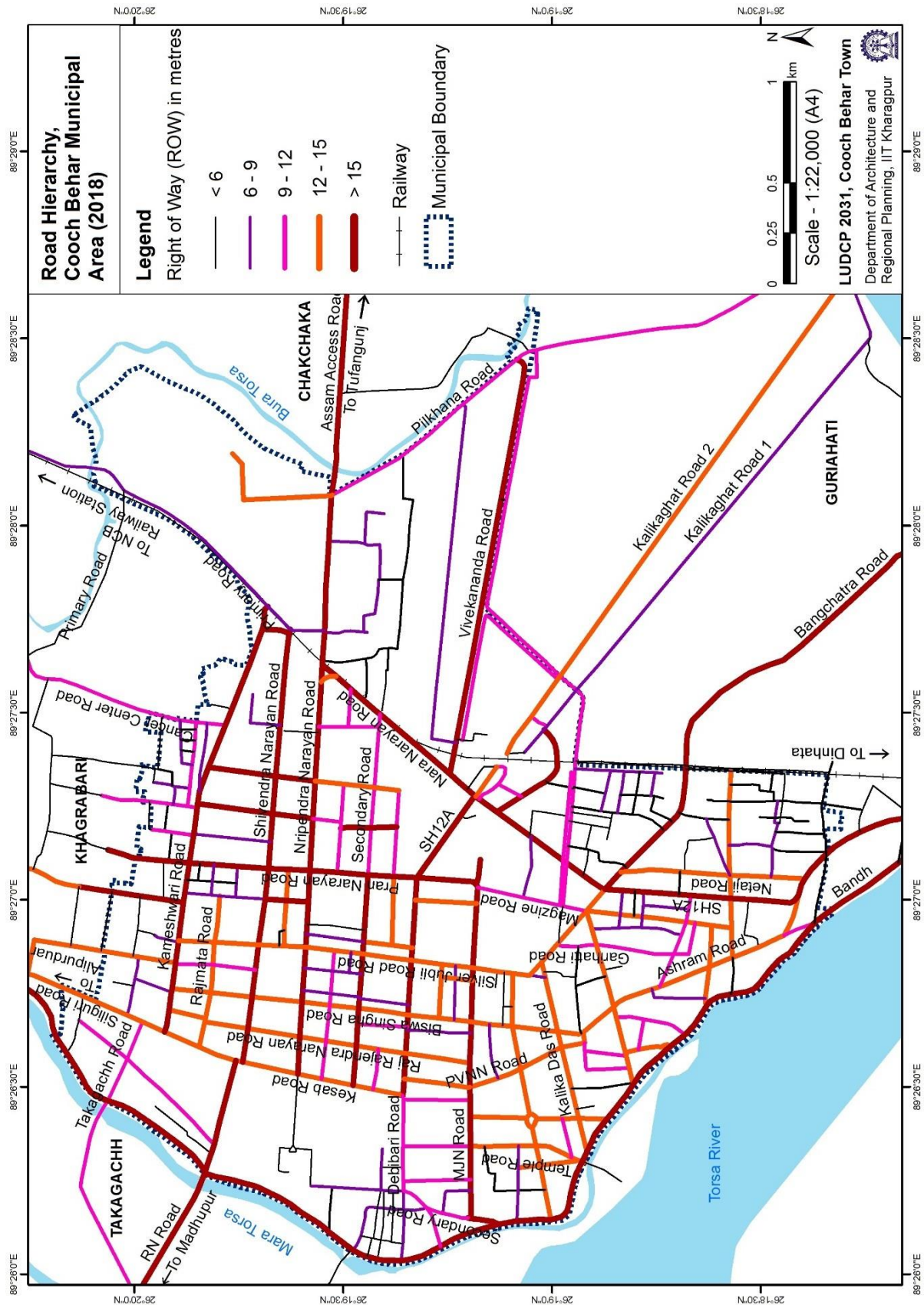
### 6.1.2 Internal Roads and Connectivity

Cooch Behar Town has a well laid-out road network with a recognizable grid of north-south and east-west connections that is a legacy of the historic town planning under royal patronage. All major roads were developed as wide, tree-lined avenues. The present-day roads may be categorized on the basis of their Right of Way (ROW) as follows: roads with ROW less than 9m are local roads; those having ROW between 9-12m are collector roads; those having ROW between 12-15m are secondary roads; and those having ROW more than 15m are primary roads. The road hierarchy and network of the town is shown in **Map 6.2**.

SH 12A functions as an important intra-city route coming from the north, twisting and turning through the heart of the town and continuing southward. Within the town it is known by different names—Siliguri Road at Khagrabari Chowpathi, Kesab Road near the Rajbari Complex, Sunity Road at the north-east side of Sagar Dighi Chowpathi, and again as SH12A near the Circuit House. On turning southward, the road has once more acquired a different name, as Nara Narayan Road, which is connected to the Ashram Road at Rabindranagar. The north-south Bandh Road forms the western edge of the municipality, but it is not easily accessible from the town roads due to difference in elevation. Other major intra-city north-south connections are Raj Rajendra Narayan Road, Biswa Singha Road, Silver Jubilee Road, and Naranarayan Road.

Of the important east-west connections, the Kameshwari Road passes by the Gunjabari and northern residential areas of the town. The Nripendra Narayan Road, originates near the Rajbari Complex, passes through the commercial hub of the city, and extends towards Tufanganj as the Assam Access Road. The Rup Narayan road passes by the Lal Dighi and N. N. Park. The Sunity Road connects prominent places like Sagar Dighi, Chandan Dighi, and Head Post Office. The Maharaja Jagadipendra Narayan Road starts south of Debi Bari, and, passing by the Sagar Dighi, Bairagi Dighi, Madan Mohan Temple, and Raas Mela Ground, ends at the Jail. The Hitendra Narayan Road, Kalikadas Road, and Harendra Narayan Road form the east-west connections in the south-western part of the town.

**Table 6.2** and **Map 6.2** shows the details of existing major roads in the town.



Map 6.2. Road Hierarchy and Network, Cooch Behar Municipal Area

Source: Cooch Behar Municipality; PWD (Roads)

**Table 6.2. Road Inventory, Cooch Behar Municipal Area**

Sl. No.	Name	Length (km)	ROW (m)	Lanes*	Lanes assumed**	Capacity (IRC-106-1990)
1	Ashram Road	0.99	6.5	2	1.5	965
2	Assam Access Road	2.4	16	2	4	2570
3	Bandh Road	-	7.5	2	2	1285
4	Bangchatra Road	4	12	2	3	1930
5	Biswa Singha Road	2.37	10	2	2	1285
6	Cancer Center Road	-	6	2	1.5	965
7	Debibari Road	1.2	9	2	2	1285
8	Doctor's Lane	0.7	5.5	1	1.5	965
9	Garihatti Road	0.72	8	1	2	1285
10	Harendra Narayan Road	0.65	9	2	2	1285
11	Hitendra Narayan Road	1	7	2	2	1285
12	Kalika Das Road	0.84	6.5	2	1.5	965
13	Kalikaghat Road 1	2.2	6	1	1.5	965
14	Kalikaghat Road 2	2.2	7.5	2	2	1285
15	Kameshwari Road	1.82	9	2	2	1285
16	Kesab Road	2.85	10	2	2	1285
17	Magzine Road	0.5	9	2	2	1285
18	Magzine Road Extention	0.62	7	2	2	1285
19	Maharaja Jitendra Narayan Road	1.26	12	2	3	1930
20	Nara Narayan Road	0.6	10	2	2	1285
21	Netaji Road	0.82	7	2	2	1285
22	Nripendra Narayan Road	1.81	14	2	3	1930
23	Pilkhana Road	2.65	7.5	2	2	1285
24	Pran Narayan Road	1.04	11	2	3	1930
25	Punalaxmi Debi Road	0.7	6	2	1.5	965
26	PVNN Road	0.45	9	2	2	1285
27	Raj Rajendra Narayan Road	1.4	9	2	2	1285
28	Rajmata Street	0.81	7.5	1	2	1285
29	Rup Narayan Road	1.15	10	2	2	1285
30	Sahitya Sabha Ln	0.35	6	1	1.5	965
31	SH12A	-	10	2	2	1285
32	Shivendra Narayan Road	2.4	12	2	3	1930
33	Siliguri Road	-	10	2	2	1285
34	Silver Jubli Road Road	1.78	12	2	3	1930
35	Sunity Road	1.62	14	2	3	1930
36	Takagachh Road	3.2	5	1	1.5	965
37	Temple Road	0.7	10	2	2	1285
38	Vivekananda Road	2	10	1	2	1285

Source: Cooch Behar Municipality; PWD (Roads)

\* Number of Lanes as provided by PWD

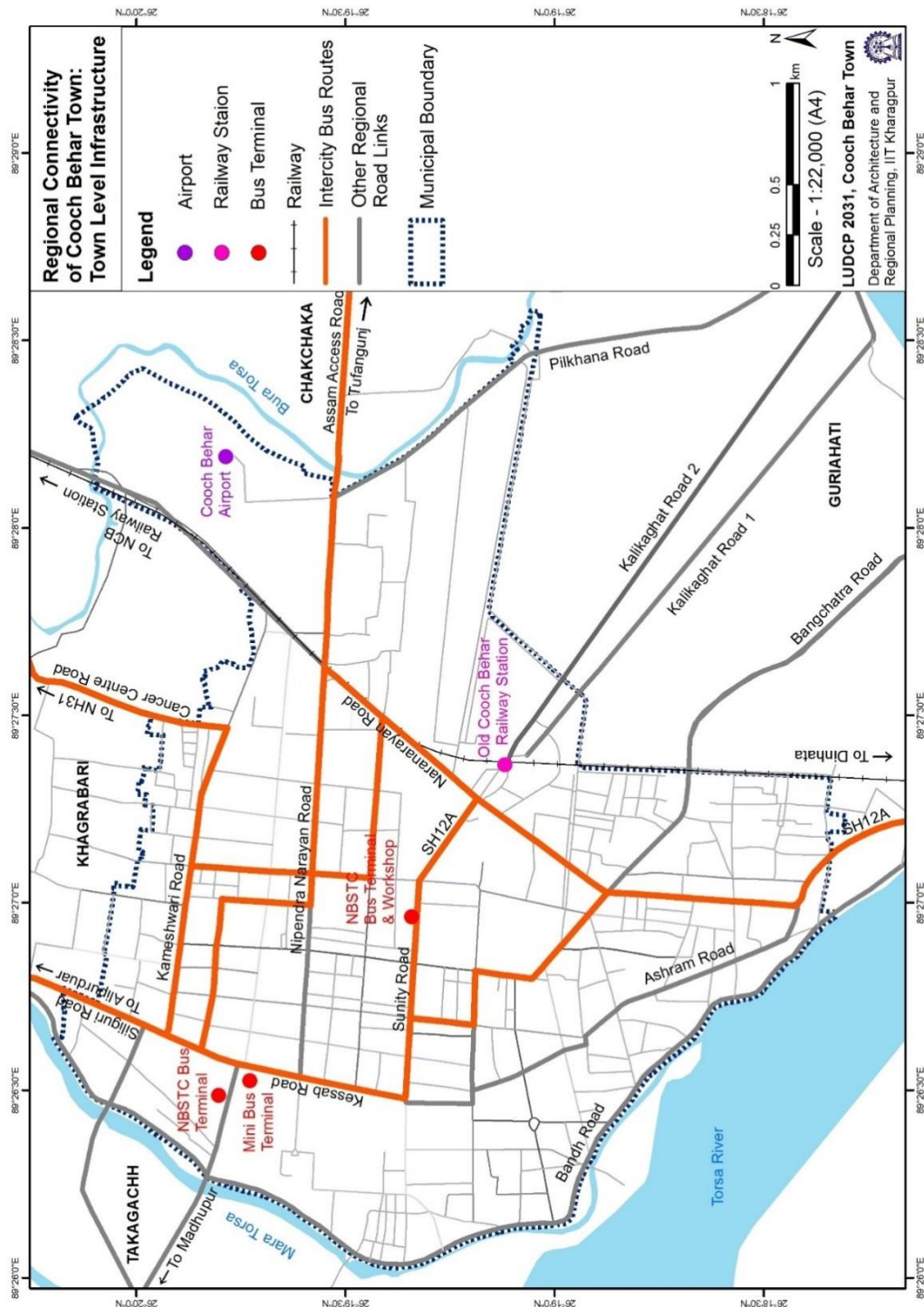
\*\* Number of Lanes assumed for analyses (as per ROW provided by PWD)

Based on the ROW of the roads, and following lane width guidelines as per IRC-106-1990 (single lane 3.5m; intermediate lane 5m; double lane 7m, or 7.5m with kerbs), the number of lanes assumed for each road is also indicated in Table 6.2. The capacities of the roads have been computed considering the 'Design Service Volumes' given in IRC-106-1990 as 70% of total capacity.

### 6.1.3 Bus Route

Inter-city buses get in and out of Cooch Behar town through Siliguri road, Assam Access Road, SH12A and Cancer center road. Within the town, the buses ply along Kesab Road, Kameshwari

Road, Rajmata Road, Sunity Road, Nripendra Narayan Road, MJN Road, Naranarayan Road, Rup Narayan Road, Pran Narayan Road, Biswa Singha Road, and Silver Jubli Road (**Map 6.3**).The town has three bus depots – the N.B.S.T.C Bus Depot and the Mini Bus Stand are located beside the Rajbari complex, and the Old Bus Stand and workshop is situated beside the Lal Dighi. Most of the buses start from the N.B.S.T.C. Bus Depot and travel towards either Siliguri through the Siliguri Road, or towards Tufanganj through Assam Access Road or towards Dinhata through the SH12A, while having intermediate stops throughout the town.



**Map 6.3. Existing Inter-city Bus Routes of Cooch Behar Municipal Area**

*Source: Cooch Behar Police (Traffic)*

#### 6.1.4 Household Mobility

The household mobility has been analysed from the socio-economic study. A significant number of the population own 2-wheelers (42%), followed by cycles (30%). Only 11% households own 4-wheelers while 16% households do not own any kind of vehicles. A small portion of the population (1%) own 3-wheelers like auto-rickshaw.

Maximum trip distance to workplace or educational institutions fall in the range of 1-2 km (54%) followed by the range of 2-5 km (24%). Maximum trip distance to markets and shopping areas fall in the range of 1-2 km (66%) followed by the distance of <1 km (26%). Maximum trip distance to health centres is in the range of 1-2 km (66%) followed by the distance of <1 km (22%). Maximum trip distance to public facilities and recreational centres is in the range of 1-2 km (66%) followed by the distance of <1 and range of 2 – 5 km (17% for both the cases). Thus almost all the necessary urban facilities are available within a range of 1-2 km.

Preferred modes of travel for work and education are two-wheelers and cycles (63%) followed by bus and auto (24%). Preferred modes of travel for market and shopping are two-wheelers and cycles (73%). 15% of people walk for this purpose. Preferred modes of travel for health centre are three-wheelers and two-wheelers (65%). 28% of people either walk or take a cycle to health centres. Preferred modes of travel for recreation are three wheelers (49%). 37% of people either walk or take a cycle for this purpose. There is not much car dependency but controlling the number of two-wheelers would be a challenge.

#### 6.1.5 Important Road Junctions and Cordon Points

The more important road junctions in town are at the intersection of the major roads like SH 12A, Biswa Singha Road, Kameshwari Road, Keshab Road, Nara Narayan Road, Nripendra Narayan Road, Siliguri Road, Silver Jubli Road, and Sunity Road. Several of the intersections are busy activity nodes and have heavy traffic. Traffic volume surveys for morning and evening peak hours were conducted on eight of the busiest intersections identified by Cooch Behar Police. Also, similar traffic volume surveys were conducted at cordon points on Siligiuri Road, Cancer Center Road, Assam Access Road, Takagachh Road, Ashram Road, and Bangachatra Road, all of which act as entry/exit for the town. The details of the survey are included in Appendix.

### 6.2 ANALYSIS AND RECOMMENDATION

#### 6.2.1 Level of Service

Following the IRC-106-1990 standards, the existing Levels of Service (LOS) have been calculated for the major roads of the town. LOS is defined as a qualitative measure describing operational conditions within a traffic stream, and its perception by drivers/passengers. For calculation of the LOS, the traffic volume (PCUs/hr) on a road, i.e. the number of vehicles passing through a designated point on the road during a time interval of 1 hour has been calculated for both morning and evening peak hours. However, objective parameters like V/C ratios for different LOS of urban roads in the Indian context are not well defined. Adopting the recommendations of the Highway Capacity Manual (1994), the levels of service have been considered as follows:

$V/C \leq 0.2$  : LOS A

$0.2 < V/C \leq 0.4$  : LOS B

$0.4 < V/C \leq 0.7$  : LOS C

$0.7 < V/C \leq 0.8$  : LOS D

$0.8 < V/C \leq 1.0$  : LOS E

$1.0 < V/C$  : LOS F

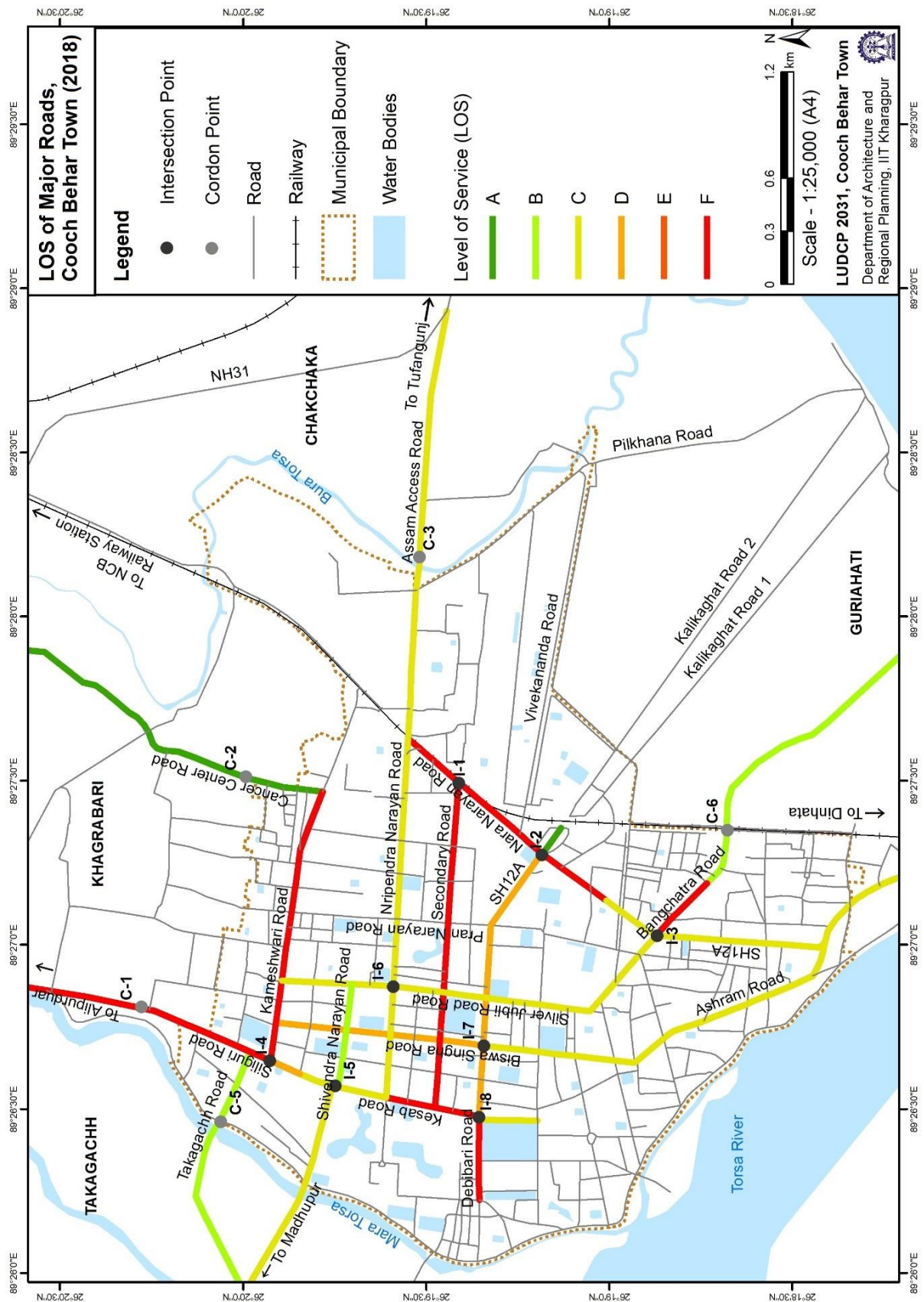
**Table 6.3** gives a summary of the vehicular volumes and LOS for the different arms of the intersections and the cordon points surveyed.

**Table 6.3. Vehicular Volume and LOS for all the Surveyed Road Intersections and Points**

INTERSECTION	ROAD ARM/ POINT	TOTAL VOLUME (V)	CAPACITY (C)	V/C	VEHICULAR LOS
Intersection I 1: Rail Goomty Chowpathi	P(Nara Narayan Road)	1694.4	1285	1.3	F
	Q(Nara Narayan Road)	1776.2	1285	1.4	F
	R(Rup Narayan Road)	1370.4	1285	1.1	F
Intersection I 2: Station Chowpathi	P(Sunity Road)	1576.3	1930	0.8	D
	Q(Nara Narayan Road)	1718.1	1285	1.3	F
	R(Sunity Road)	259.9	1930	0.1	A
	S(Nara Narayan Road)	2077.5	1285	1.6	F
Intersection I 3: Morapora Chowpathi	P(Nara Narayan Road)	1262.8	1285	0.6	C
	Q(Bangchatra Road)	2176.5	1930	1.7	F
	R(SH-12A)	1143.1	1285	0.6	C
	S(Bangchatra Road)	2160	1930	1.7	F
Intersection I 4: Gunjabari More	P(Siliguri Road)	1947.1	1285	1.5	F
	Q(Kameshwari Road)	1396.9	1285	1.1	F
	R(Siliguri Road)	995.6	1285	0.8	D
Intersection I 5: NBSTC More	P(Siliguri Road)	812.25	1285	0.6	C
	Q(Shivendra Narayan Road)	566.25	1930	0.3	B
	R(Keshab Road)	910.3	1285	0.7	C
	S(Takagachi Road)	625	965	0.6	C
Intersection I 6: NN Road and Silver Jubli crossing	P(Nripendra Narayan Road)	1363.5	1930	0.7	C
	Q(Silver Jubli Road)	1310.9	1930	0.7	C
	R(Nripendra Narayan)	1307.2	1930	0.7	C
	S(Silver Jubli Road)	1273.7	1930	0.6	C
Intersection I 7: Harishpal Chowpathi	P(Biswa Singha Road)	1000.8	1285	0.8	D
	Q(Sunity Road)	1561.9	1930	0.8	D
	R(Biswa Singha Road)	936.75	1285	0.7	C
	S(Sunity Road)	1608.9	1930	0.8	D
Intersection I 8: Kachari More	P(Keshab Road)	2285.5	1285	1.8	F
	Q(Sunity Road)	1555.2	1930	0.8	D
	R(Sagar Dighi Road)	896.2	1285	0.7	C
	S(Debibari Road)	1485.2	1285	1.1	F
C1	C1(Siliguri Road)	2049.3	1285	1.6	F
C2	C2(Cancer Centre Road)	129.8	965	0.1	A
C3	C3(Assam Access Road)	1927.5	2570	0.7	C
C4	C4(Ashram Road)	556.8	965	0.6	C
C5	C5(Takagachi Road)	309.65	965	0.3	B
C6	C6(Bangchatra Road)	702.2	1930	0.3	B

It is thus observed that majority of the road sections surveyed in the intersections have a vehicular LOS of C or better. However, a few road sections have undesirable LOS of D or worse. **Map 6.4** indicates the LOS of the various major roads (and sections of roads) of Cooch Behar town.

Roads in Cooch Behar also require pedestrian facilities like pedestrian walkways and footpaths since most of the major roads surveyed have no or limited pedestrian space, which restricts their normal walking speed.



Map 6.4. Vehicular LOS of Cooch Behar Town

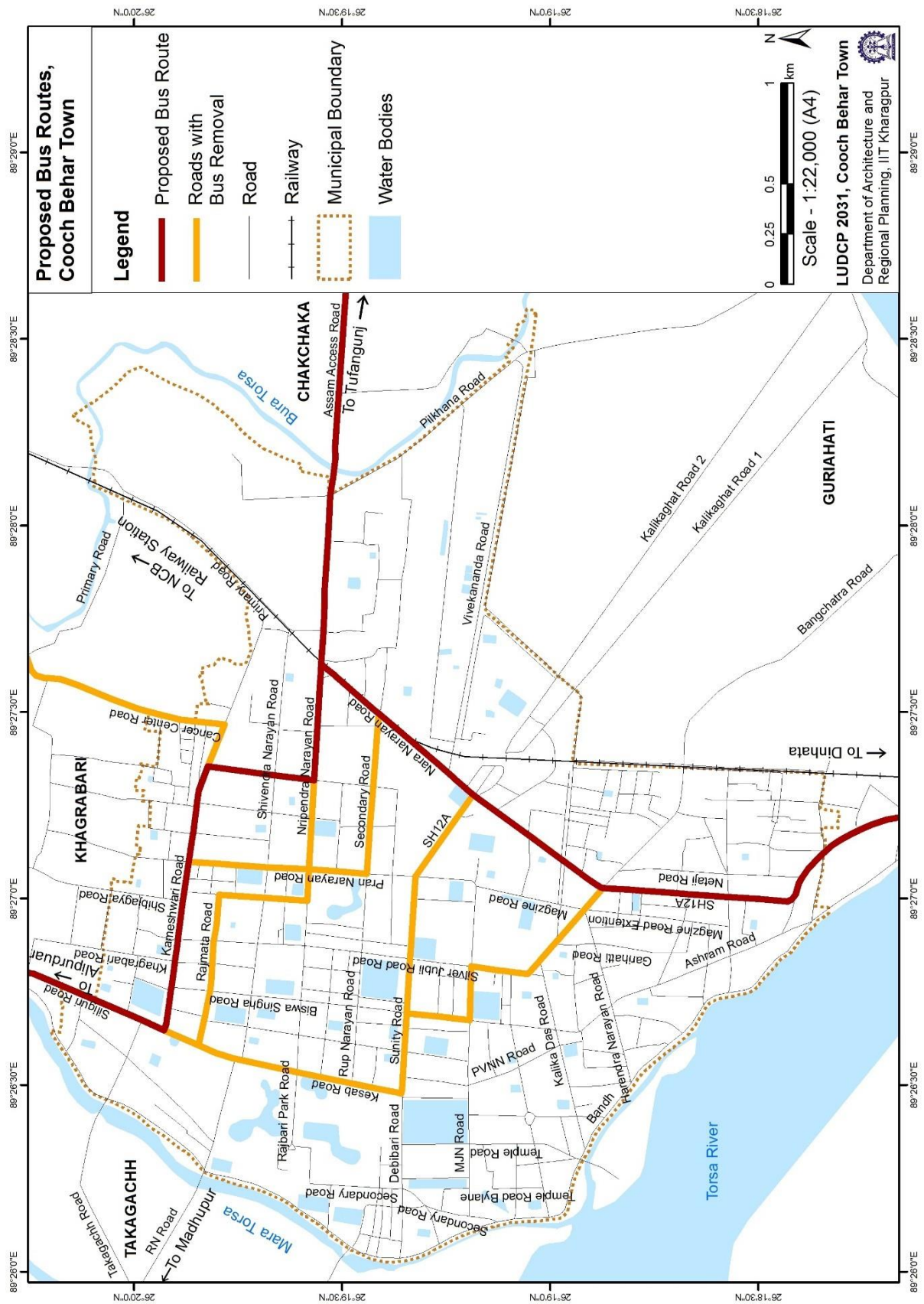
### 6.2.2 Road Design

Correction of road design following IRC for the entire town is recommended. This should include correction of road geometry and intersections, provision of pedestrian facilities, road marking and signage, accommodation of utilities and facilities, traffic safety measures, and landscaping.

### 6.2.3 Proposed Bus Route

Positions of the existing N.B.ST.C Bus Depot and Mini Bus Stand result in major traffic congestion on the Siliguri Road and the adjacent commercial areas. It creates an unseemly environment right at the northern gateway of Cooch Behar Town. The Old Bus Stand and workshop are located in the heart of the town in prime real estate along Sunity Road, and is unsympathetic to the character of this core heritage zone. Considering the traffic situation and implications on heritage character of the town, the existing bus depots should be re-located outside the municipal limits (to the north, east and south).

The existing inter-city bus routes running along major town roads contribute significantly to the traffic congestion which is reflected in the very poor vehicular LOS of Kesab Road, Kameshwari Road, Nripendra Narayan Road, Naranarayan Road, Rup Narayan Road, Biswa Singha Road, and Silver Jubilee Road. It also affects Sunity Road, bringing down its LOS to less than an acceptable level. A new proposal for routing the buses has been formulated to manage the vehicular congestion in the core heritage area of the town, as shown in **Map 6.5**. This re-routing compliments the proposed shifting of the bus depots.



## 7 SOCIAL INFRASTRUCTURE

The assessment of existing social infrastructure considers the availability of facilities related to health, education, recreation, religion, and public amenities (**Map 7.6**). Each of these aspects are analysed as follows.

### 7.1 HEALTH

#### 7.1.1 Existing Status

The Maharaja Jitendra Narayan (MJN) District Hospital, situated along Sunity Road, in ward No 20, is the main government hospital in Cooch Behar. Established in 1918, this hospital complex hosts a number of historic structures because of which it has been listed as a heritage property. It has a capacity of 500 beds. **Table 7.1** shows the list of all hospitals and nursing homes in Cooch Behar Municipal Area with capacity of beds while **Map 7.1** shows their locations. Official information on registered primary health care centres is not available for the town.

**Table 7.1. List of Healthcare Facilities in Cooch Behar Municipal Area**

SL. NO	NAME	TYPE	CAPACITY (Beds)	WARD
1	Maharaja Jitendra Narayan (MJN) Hospital	District General hospital	500	20
2	Dr. P.K.Saha Hospital Pvt. Ltd.	Private Intermediate Hospital	100	18
3	Subham Hospital & Diagnostic Centre Pvt. Ltd.	Private Intermediate Hospital	60	11
4	Podder SevaSadan Pvt. Ltd.	Private Nursing Home	45	19
5	Joy Lakshmi Nursing Home	Private Nursing Home	40	8
6	Dr. D.B. Sarkar Eye Hospital Pvt. Ltd.	Private Speciality Hospital	30	20
7	Ritari Healthcare Pvt. Ltd.	Private Nursing Home	30	18
8	Jeebandeep Nursing Home	Private Nursing Home	20	17
9	Metropolitan Nursing Home	Private Nursing Home	14	20

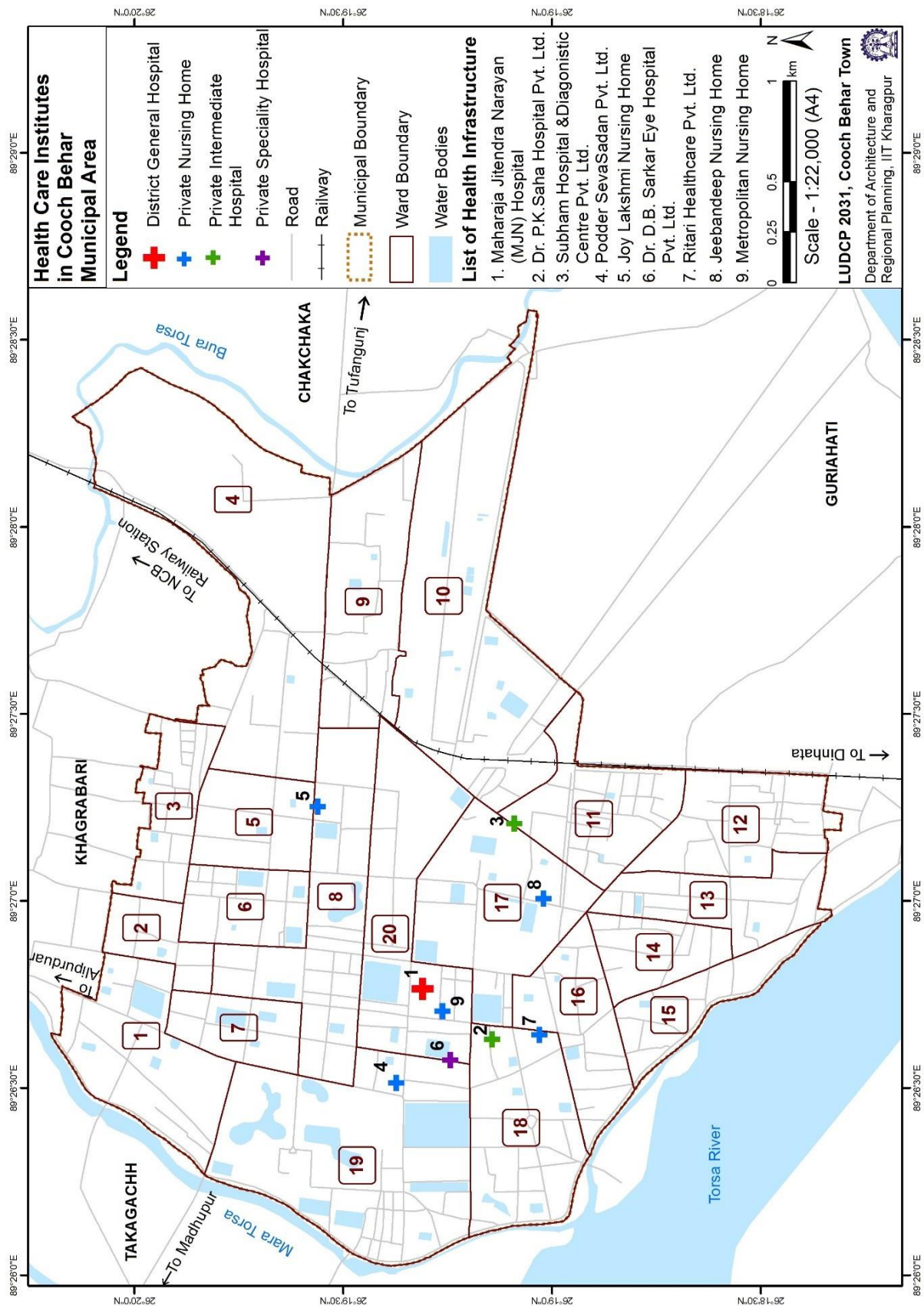
Source: Cooch Behar Municipality

#### 7.1.2 Analysis and Recommendation

Based on the projected population (78,151 for 2031) and URDPFI guidelines, the requirement of the number of different healthcare services is analysed to be sufficient (**Table 7.2**). The identified health facilities are centrally located and are easily accessible from all parts of the town. According to the household survey, many people opined to be satisfied or very satisfied with Health facilities (67%), however, the survey also noted that a high number of people (54%) travel to urban centres like Kolkata (705 Km) and Siliguri (172 Km) for availing higher order health services. Thus, there is a demand in Cooch Behar for higher order health care services and improvement of infrastructure in the existing facilities.

**Table 7.2. Gap Analysis for Capacity of Healthcare Facilities in Cooch Behar Municipal Area**

SL. NO	TYPE	BEDS/POPULATION (URDPFI)	EXISTING BEDS	REQUIRED BEDS	GAP
1	District General Hospital	500 beds/2.5 lakhs	500	156	Nil
2	Private Intermediate Hospital	25-30 beds/45,000 to 1 lakh	160	30	Nil
3	Private Nursing Home	200 beds/1 lakh	149	156	7



**Map 7.1. Health Care Institutes in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*

## 7.2 EDUCATION

### 7.2.1 Existing Status

Education is one of the strong points of Cooch Behar. The city is host to historically important schools and colleges like Sunity Academy, Jenkins School, and Victoria College (now Acharya Brojendra Nath Seal College), which were patronized by the members of the royal family of Cooch Behar, and have been listed as heritage properties. For higher education, Cooch Behar has 1 university, 4 colleges (offering arts, science, and commerce), 3 technical institutes, and 1 professional college. Total student capacity is 11,124 for university, 1,458 for colleges, 1,600 for technical institutes, and 100 for the professional college (*Source: Cooch Behar Municipality*). **Table 7.3** shows a detailed list of the higher educational institutes in Cooch Behar. A total number of 59 schools (both private and government) is present in the town, out of which 41 provide only primary education and 11 provide only senior secondary education, while 7 are integrated schools (*Source: Cooch Behar Municipality*). The total student capacity is 5,137 for the primary schools, 10,147 for the senior secondary schools, and 4,412 for the integrated school. These schools are owned by West Bengal School Education Department (WBSED), District Primary School Council (DPSC, Cooch Behar), as well as private owners and various educational welfare departments. **Tables 7.4 to 7.6**, present the list of the various categories of schools with relevant details. As per Census 2011, there are 26 non-formal education centres in town. **Map 7.2** shows the locations of the different educational facilities in the town.

**Table 7.3. Higher Educational Institutions in Cooch Behar Municipal Area**

SLNO.	NAME	CATEGORY	INTAKE	WARD
<b>WB Govt.</b>				
<b>C1</b>	University BT and evening College	College	3500	1
<b>C2</b>	Cooch Behar Medical College	College	3500	10
<b>C3</b>	Thakur Panchanan Mahila Mahavidyalaya	College	3000	17
<b>C4</b>	Cooch Behar Panchanan Burma University	University	1600	10
<b>C5</b>	ABN Seal College	College	1124	17
<b>C6</b>	Cooch Behar Polytechnic College	Technical Institute	900	1
<b>C7</b>	ITI College	Technical Institute	458	9
<b>C8</b>	Cooch Behar D-Ed Training Institute	Professional College	100	4
<b>Private</b>				
<b>C9</b>	The George Telegraph Training Institute	Technical Institute	100	19
<b>TOTAL</b>			<b>9</b>	

*Source: Cooch Behar Municipality*

**Table 7.4. Senior Secondary Educational Institutions in Cooch Behar Municipal Area (WBSED)**

Sl.No.	SCHOOL NAME	TYPE	INTAKE	LOWEST	HIGHEST	WARD
<b>S1</b>	Cooch Behar Rambhola High School	Boys	1852	5	12	1
<b>S2</b>	Cooch Behar Uccha Balika Vidyalaya	Girls	1568	5	12	1
<b>S3</b>	Newtown Girls High School	Girls	1414	5	12	13
<b>S4</b>	M.N. Narayan High School	Boys	1350	5	12	17
<b>S5</b>	Kalabagan High School	Co-ed	1132	5	12	3
<b>S6</b>	Vivekananda Vidyapith	Boys	1117	5	12	13
<b>S7</b>	Cooch Behar Shree Hindi Vidyalaya	Co-ed	706	5	12	8
<b>S8</b>	Sri Sri Karunamoyee High	Co-ed	301	5	12	15
<b>S9</b>	Cooch Behar Town High School	Boy's	271	5	12	9
<b>S10</b>	Nilkuthi S. Nivedita Girls High School	Girls	247	5	12	4
<b>S11</b>	Cooch Behar M.G. Girls High School	Girls	189	5	12	11
<b>TOTAL</b>			<b>11</b>			

*Source: Cooch Behar Municipality*

**Table 7.5. Primary Educational Institutions in Cooch Behar Municipal Area**

SL NO	SCHOOL NAME	TYPE	CAPACITY	LOWEST CLASS	HIGHEST CLASS	WARD
<b>DPSC, Cooch Behar</b>						
P1	Rambhola G.S.F Primary School	Co-ed	376	1	4	1
P2	Newtown Girls JR. Basics	Co-ed	189	1	4	14
P3	Netaji V. Pith (Boy's) GSFP	Co-ed	179	1	4	3
P4	Sri Hindi Primary School	Co-ed	163	1	4	14
P5	Sahitya Sava Primary School	Co-ed	158	1	4	18
P6	Thakur Panchanan Primary School	Co-ed	152	1	5	19
P7	Vidyasagar Primary School	Co-ed	146	1	5	4
P8	Netaji Subhash Primary School(Day)	Co-ed	135	1	5	6
P9	Arabinda Primary School	Co-ed	130	1	4	10
P10	Patakura Primary School	Co-ed	118	1	4	18
P11	Sadar Nagar Hindi Primary School	Co-ed	115	1	4	8
P12	Saraswati Hindi Primary School	Co-ed	99	1	4	18
P13	Anjuman E-I Primary School	Co-ed	96	1	4	8
P14	Rabindra Nagar Primary School	Co-ed	95	1	4	12
P15	Sunil Smriti Primary School	Co-ed	93	1	4	17
P16	Indranath Hindi Primary School	Co-ed	90	1	4	5
P17	Swidish Mission Primary School	Co-ed	87	1	4	4
P18	Cooch Behar Prathamik	Co-ed	84	1	4	1
P19	Tarasankar Primary Sachool	Co-ed	72	1	4	5
P20	Gunjabari Primary School	Co-ed	70	1	4	1
P21	Police Line Primary School	Co-ed	65	1	4	17
P22	Umeshananda Smriti Primary School	Co-ed	65	1	4	3
P23	Harijan Vidyapith Primary School	Co-ed	64	1	4	20
P24	Shyama Prasad Primary School	Co-ed	62	1	4	10
P25	Sashinath Bidyamandir	Co-ed	58	1	4	3
P26	Netaji Subhash Primary School (Morning)	Co-ed	56	1	4	6
P27	New Saradamani Primary School	Co-ed	55	1	4	9
P28	Bhulaising Aided Primay School	Co-ed	54	1	4	20
P29	Gandhi Nagar Poura Primary School	Co-ed	41	1	4	11
P30	Hazra Para Primary School	Co-ed	38	1	4	15
P31	Deshbandhu Chittaranjan Primary School	Co-ed	38	1	4	9
P32	Saradamani Primary School	Co-ed	36	1	4	15
<b>Private</b>						
P33	Sri Arabinda Path Bhaban	Co-ed	991	1	4	14
P34	Sarada Sishu Tirtha (Tapaban)	Co-ed	247	1	4	18
P35	Deshbandhu Path Bhaban	Co-ed	152	1	4	9
P36	Pranab Bharati Kindergarten	Co-ed	129	1	4	10
P37	Sarada Sishu Tirtha Anadi Bha	Co-ed	125	1	4	18
P38	Nivedita Academy English Medium	Co-ed	110	1	4	19
P39	Ideal Kinder Garten	Co-ed	45	1	4	17
P40	Pranabananda Shishu Niketan	Co-ed	36	1	4	20
P41	Ananda Marg Primary School	Co-ed	23	1	4	12
<b>TOTAL</b>			<b>41</b>			

Source: Cooch Behar Municipality

**Table 7.6. Integrated Educational Institutions in Cooch Behar Municipal Area**

SL NO	SCHOOL NAME	TYPE	CAPACITY	LOWEST CLASS	HIGHEST CLASS	WARD
<b>WBSED</b>						
I1	Jenkins School	Boys	1256	3	12	17
I2	Sunity Academy	Girls	1087	3	12	18
I3	Maharani Indira Debi Balika VI	Girls	981	1	12	19
I4	Sadar Govt. High School	Boys	822	1	12	18
<b>Mass education dept.</b>						
I5	N.E.L.C. School For The Blind	Co-ed	37	1	12	4
<b>Social welfare dept.</b>						
I6	Govt. School For The Blind	Boy's	28	1	10	9
<b>MA&amp;ME dept.</b>						
I7	Cooch Behar Govt. Model Madrasah	Co-ed	201	1	12	11
<b>TOTAL</b>				<b>7</b>		

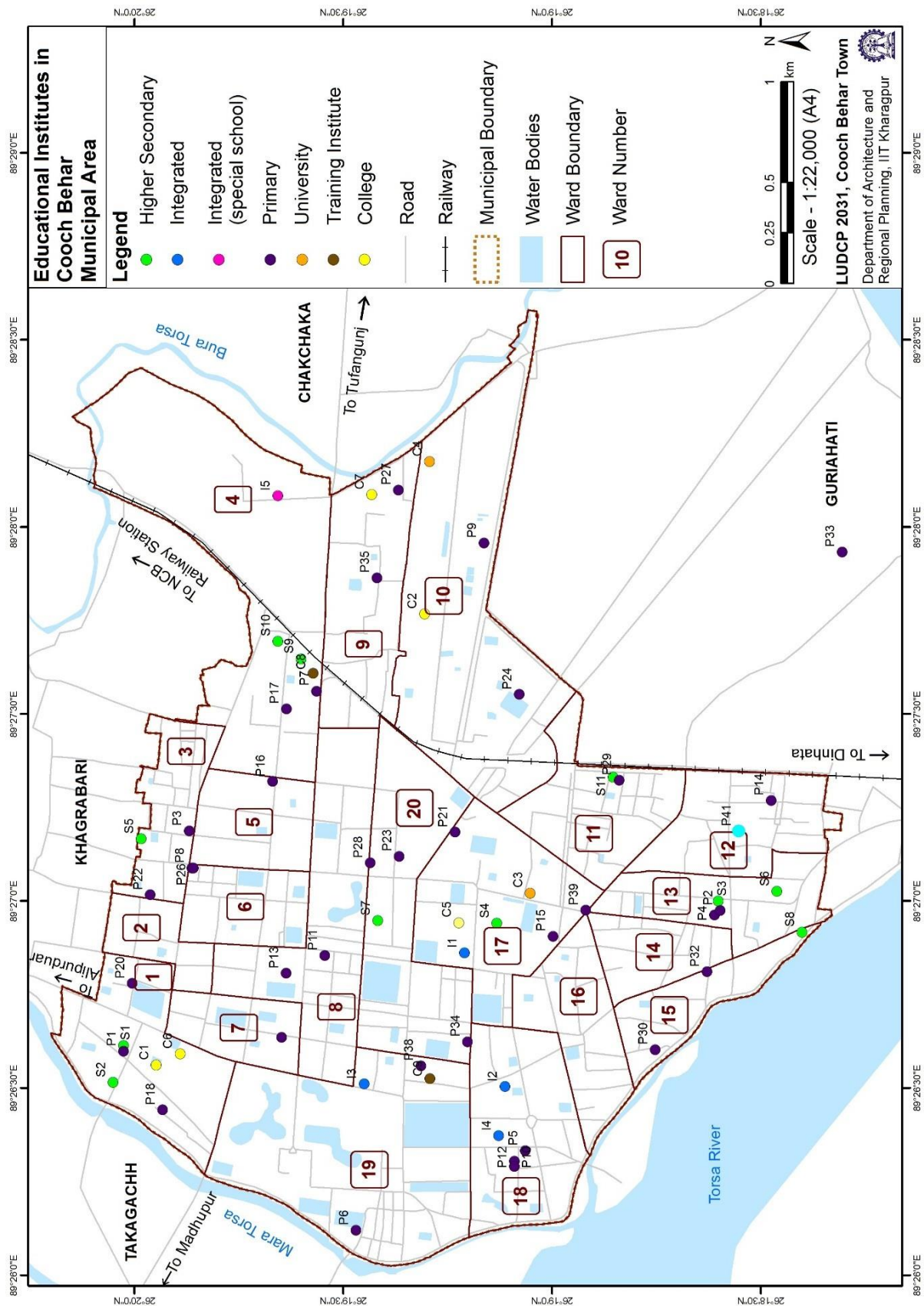
Source: Cooch Behar Municipality

### 7.2.2 Analysis and Recommendation

The gap analysis for capacity of the schools has been calculated by considering the capacity of the existing integrated schools under primary and secondary capacities. It is observed from **Table 7.7** that, based on the URDPFI guidelines, there is a gap of 840 primary school seats for the horizon year 2031. This can be fulfilled by an augmentation of capacity of the existing primary schools (requiring up to 12% augmentation), or providing new primary schools, or a combination of these strategies. There is no gap observed for senior secondary or higher education. According to the household perception study, most people (79%) opined to be satisfied or very satisfied with educational facilities in town. However a demand was raised for majority of people (81%) for higher educational facilities.

**Table 7.7. Gap Analysis of Capacity of Educational Institutions in Cooch Behar Municipal Area**

SL. NO.	TYPE	SEAT CAPACITY/POPULATION (URDPFI)	EXISTING CAPACITY	REQUIRED CAPACITY	GAP
1	Primary	500 / 5,000	6,975	7,815	840
2	Senior Secondary	1000 / 7,500	12,721	10,420	Nil
4	College	1,000 to 1,500 / 1.25 lakh	11,124	938	Nil
5	Professional College	250 to 1,500 / 10 lakh	100	19 to 117	Nil
6	Technical institute	400 to 500 / 10 lakh	1,458	39	Nil



**Map 7.2. Educational Institutes in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*

## 7.3 RECREATION

### 7.3.1 Existing Status

Cooch Behar has a number of open spaces in the form of parks and playgrounds, which cater to the recreational activities of the town populace. Of these, the Raas Mela Ground, the N. N. Park, the Debi Bari ground, and the Keshav Ashram gardens are significant as heritage sites. The town is also well known for a large number of water bodies (dighis and ponds) which act as places for social interaction and recreation. A majority of the larger water bodies are historical evidences of the planning and development of the town under the Cooch Behar royal family, and some have significant socio-cultural associations.

#### 7.3.1.1 Playgrounds and multipurpose ground

As per Census 2011, there are 4 stadiums in town. The Rajbari Stadium and MJN Stadium are the two more important stadiums that host various types of sporting events and activities. The Raas Mela ground annually hosts the famous Raas festival of Cooch Behar, which is a significant intangible heritage, as well as other fairs and events round the year. Debi Bari is also a significant cultural node, hosting one of the more notable Durga Pujas in the town. Apart from these, other open grounds are also present under the administration of different schools, colleges, and clubs. **Table 7.8** shows the list of major playgrounds and multipurpose open grounds. **Map 7.3** shows the location of these.

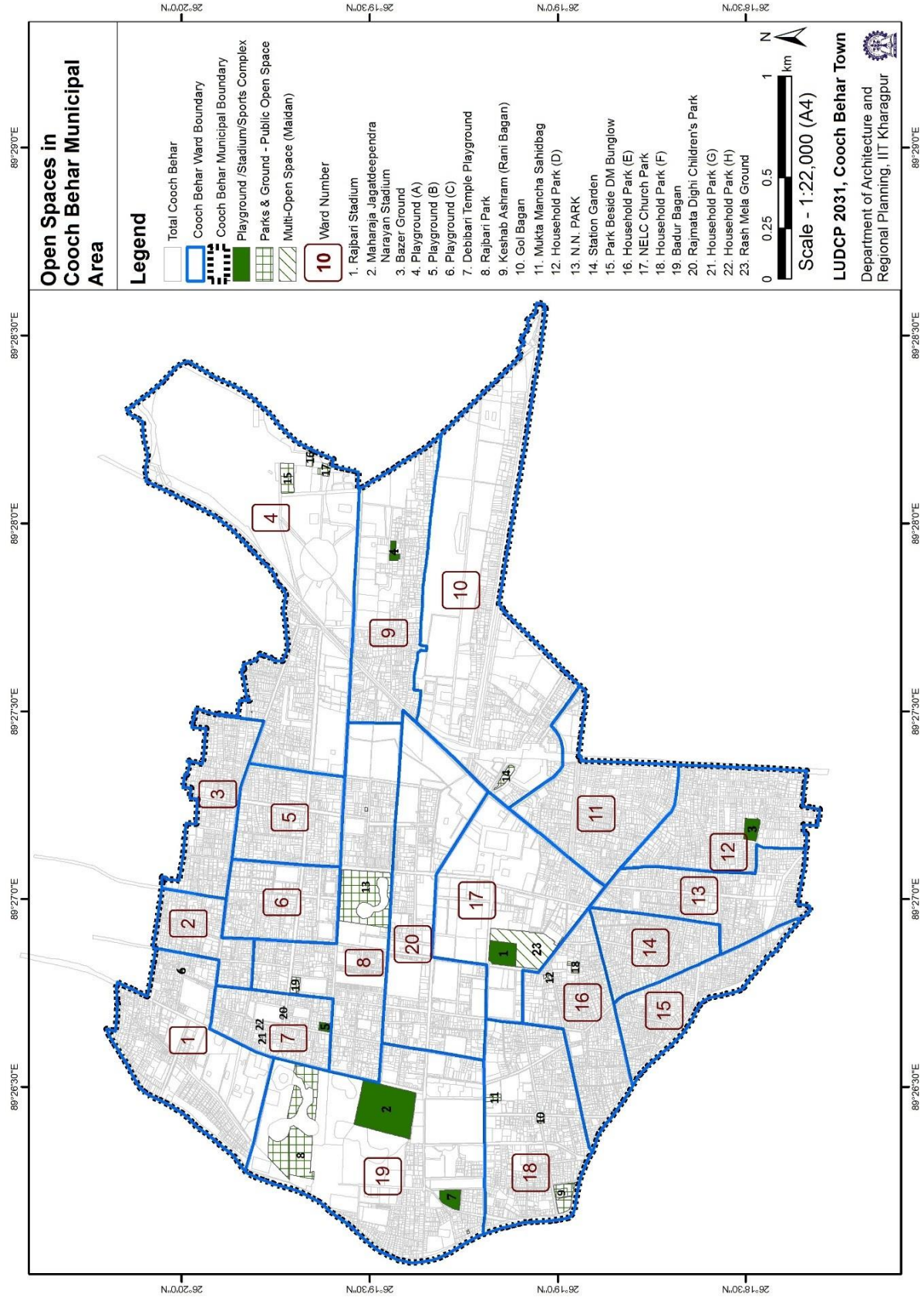
#### 7.3.1.2 Public recreational park

There are a total of 15 public recreational parks present in Cooch Behar town. Out of these, N.N Park, with an area of 4.5 Ha, is the largest, and acts as a major green space for the town. The Rajbari Park, adjoining the Cooch Behar Palace, and Keshab Ashram/ Rani Bagan on the banks of the Torsa are other important public recreational parks present in the town (**Table 7.9**).

**Table 7.8. Major Playgrounds and Multipurpose Grounds in Cooch Behar Municipal Area**

SL NO.	NAME	CATEGORY	AREA (Ha)	WARD	OWNER
G1	Rajbari Stadium	Community level Multipurpose Ground	5.6	19	Government
G2	Rash Mela Ground	Community level Multipurpose Ground	3.3	17	Government
G3	Maharaja Jagatdeependra Narayan Stadium	Community level Multipurpose Ground	1.3	17	D.S.S.A.
G4	Debibari Temple ground	Neighbourhood Playground	0.8	19	Debutor Trust Board
G5	Bazar Ground	Neighbourhood Playground	0.7	12	Market Administration
G6	Playground A	Household unit Playground	0.3	7	
G7	Playground B	Household unit Playground	0.2	9	
G8	Playground C	Household unit Playground	0.01	1	
<b>TOTAL</b>			<b>8</b>		

Source: Cooch Behar Municipality



**Map 7.3. Open Spaces in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*

**Table 7.9. Parks in Cooch Behar Municipal Area**

SL No.	NAME	CATEGORY	AREA (Ha)	WARD
P1	Rajbari Park	Community Park	5.0	19
P2	N.N. PARK	Community Park	4.5	8
P3	Keshab Ashram (Rani Bagan)	Community Park	1.0	18
P4	Badur Bagan	Community Park	0.3	8
P5	Park beside DM Bunglow	Neighbourhood Park	0.8	4
P6	Station Garden	Neighbourhood Park	0.3	10
P7	NELC Church Park	Neighbourhood Park	0.3	4
P8	Mukta Mancha Sahidbag	Neighbourhood Park	0.2	18
P9	Gol Bagan	Neighbourhood Park	0.1	18
P10	Rajmata Dighi Children's park	Neighbourhood Park	0.01	7
P11	Park D	Household park	0.3	4
P12	Park E	Household park	0.2	16
P13	Park F	Household park	0.1	18
P14	Park G	Household park	0.01	7
P15	Park H	Household park	0.004	7
<b>TOTAL</b>		<b>15</b>		

Source: Cooch Behar Municipality

### 7.3.1.1 Water bodies

There are 98 identified surface water bodies in the form of ponds and dighis, with a total covered area of 90 acres. Out of these, 57 water bodies are perennial and culturable. **Table 7.10** gives a list of the existing water bodies with relevant details. **Map 7.4** shows the location of these in Cooch Behar Municipal Area. A majority of the water bodies are located in the eastern and central part of the town, with wards 19, 17 and 20 having 36%, 13%, and 12% of the total surface water area respectively. The river Torsa skirts the western and southern boundary of the town and is intrinsically related with its history and identity. Though the parcels of land corresponding to the river are beyond the jurisdiction of the Cooch Behar Municipal Area, it does offer a significant scope and potential for town recreation.

**Table 7.10. Water Bodies in Cooch Behar Municipal Area**

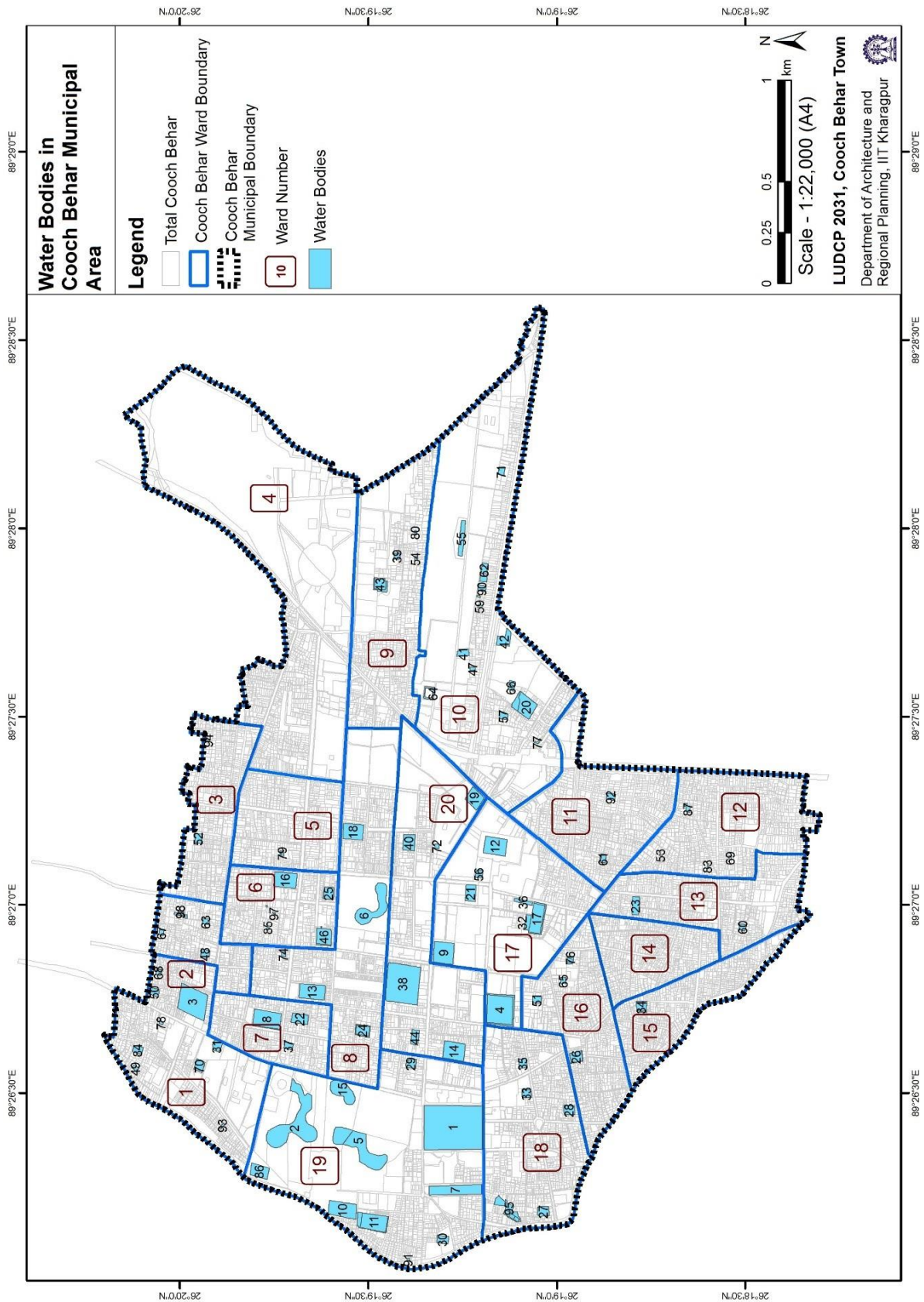
SL NO	DIGHI / PLOT NO.	SEASONAL BILITY	FISHERY (Yes/No)	CULTURAL BLE(Y/N)	ISSUE	OWNERSHIP	AREA (Ha)
1	Lal Dighi	Perennial	No	Yes	*	Public	5.50
2	Rajbari heritage Udyan dighi	Perennial	No	Yes	*	Public	2.68
3	Paddo Dighi	Perennial	No	Yes	*	Private	2.67
4	Bairaghi Dighi	Perennial	No	Yes	*	Private	1.57
5	Rajbari Jhill	Perennial	No	Yes	*	Public	1.52
6	N.N park Dighi	Perennial	No	Yes	*	Public	1.47
7	Lamba Dighi	Perennial	No	Yes	*	Public	1.17
8	Raj Mata Dighi	Perennial	No	Yes	*	Public	1.04
9	Chandan Dighi	*	No	*	Weed	Public	0.95
10	Maharani Dighi	Perennial	No	Yes	*	Public	0.90
11	Dhopi Dighi	Perennial	No	Yes	*	Public	0.87
12	Jail Khana Dighi	Perennial	No	Yes	*	Public	0.86
13	Kaiya Dighi	Perennial	No	Yes	*	Public	0.80
14	Narsingh Dighi	Perennial	No	Yes	*	Public	0.79
15	Serpentine Dighi 2	Perennial	No	Yes	*	Public	0.78
16	Priyagunj Dhopa Dighi	Perennial	No	Yes	*	Public	0.76

SL NO	DIGHI / PLOT NO.	SEASONALITY	FISHERY (Yes/No)	CULTURAL BLE(Y/N)	ISSUE	OWNERSHIP	AREA (Ha)
17	Cooch Behar Fish Seed Firm Dighi 2	Perennial	No	Yes	*	Public	0.72
18	Kameswari dighi	Seasonal	No	No	*	Public	0.72
19	Chila Rai Military Barrack Dighi	Perennial	No	Yes	*	Public	0.66
20	Shiv Bari Dighi	Seasonal	No	No	*	Public	0.51
21	Police Line Dighi	Perennial	No	Yes	*	Public	0.50
22	Bou dighi/Banik dighi	*	No	*	Weed	Private	0.35
23	Mali Dighi	Perennial	No	Yes	*	Public	0.34
24	Dutta Poddar Dighi	Perennial	No	Yes	*	Private	0.28
25	Santal Dighi	Perennial	No	Yes	*	Public	0.27
26	Natun Bazar Dighi	Perennial	No	Yes	*	Private	0.26
27	Chandra Badi Dighi	Perennial	No	Yes	*	Private	0.26
28	Mustafy Dighi	*	No	*	Weed	Private	0.21
29	Irrigation Office Dighi	Perennial	Yes	Yes	*	Public	0.18
30	BT evening college pond	Seasonal	No	No	*	Public	0.18
31	Cooch Behar Fish Seed Firm Dighi 3	*	No	*	Weed	Public	0.17
32	Sunity Academy Dighi	Perennial	No	Yes	*	Public	0.17
33	Rupsi Dighi	*	No	*	Weed	Private	0.15
34	Tarafder Dighi	Perennial	No	Yes	*	Private	0.15
35	Cooch Behar Fish Seed Firm Dighi 1	*	No	*	Weed	Public	0.15
36	Sipaipara dighi/ Bhattacharya dighi	Perennial	No	Yes	*	Private	0.13
37	Lal Dighi	Perennial	No	Yes	*	Public	0.13
<b>Unnamed Water bodies</b>							
SL NO	DIGHI / PLOT NO.	SEASONALITY	FISHERY (Yes/No)	CULTURAL BLE(Y/N)	ISSUE	OWNERSHIP	AREA (Ha)
38	1109	Seasonal	No	No	*	Public	0.46
39	3589	*	No	*	*	Public	0.40
40	1337	Perennial	Yes	Yes	*	Public	0.34
41	12301	Perennial	No	Yes	*	Public	0.33
42	1097	Perennial	Yes	Yes	*	Private	0.27
43	6414	*	No	*	Weed	Public	0.23
44	343	Perennial	No	Yes	*	Public	0.21
45	12271	Perennial	Yes	Yes	*	Private	0.17
46	1562	Perennial	No	Yes	*	Public	0.15
47	900	Seasonal	No	No	*	Private	0.15
48	64	Perennial	No	Yes	*	Public	0.15
49	4427	Perennial	No	Yes	*	Private	0.14
50	10621	Perennial	No	Yes	*	Private	0.13
51	1512	Seasonal	No	No	*	Public	0.13
52	2390	Perennial	No	Yes	*	Public	0.12
53	1234	Perennial	No	Yes	*	Private	0.11
54	2169	Perennial	Yes	Yes	*	Public	0.11
55	11888	*	No	*	*	Public	0.11
56	1645	Perennial	No	Yes	*	Private	0.10
57	1420	Perennial	No	Yes	*	Private	0.10
58	1484	Perennial	No	Yes	*	Private	0.09
59	14045	Seasonal	No	Yes	*	Private	0.09
60	13594	*	No	*	*	Private	0.09
61	1437	Perennial	No	Yes	*	Private	0.08
62	945	*	No	*	*	Public	0.08

SL NO	DIGHI / PLOT NO.	SEASONALITY	FISHERY (Yes/No)	CULTURAL BLE(Y/N)	ISSUE	OWNERSHIP	AREA (Ha)
63	1312	Perennial	No	Yes	*	Private	0.08
64	10771	*	No	*	*	Private	0.07
65	12284	Perennial	No	Yes	*	Public	0.06
66	4575	*	No	*	*	Private	0.06
67	4465	Perennial	No	Yes	*	Private	0.05
68	2508	Perennial	No	Yes	*	Private	0.05
69	471	*	No	*	*	Private	0.05
70	2155	Perennial	No	Yes	*	Private	0.04
71	3892	*	No	*	*	Public	0.04
72	1471	Perennial	No	Yes	*	Private	0.04
73	4424	*	No	*	*	Private	0.04
74	4629	*	No	*	*	Private	0.03
75	10809	*	No	*	Weed	Private	0.03
76	12471	*	No	*	*	Public	0.03
77	662	*	No	*	*	Private	0.02
78	1987	Seasonal	No	No	*	Private	0.02
79	1198	Perennial	No	Yes	*	Private	0.02
80	1440	Perennial	No	Yes	*	Private	0.02
81	956	*	No	*	*	Private	0.02
82	13802	*	No	*	*	Private	0.02
83	86	Seasonal	No	No	*	Private	0.02
84	4653	Seasonal	No	No	*	Private	0.02
85	504	*	No	*	*	Public	0.02
86	2259	Perennial	No	Yes	*	Private	0.02
87	4624	*	No	*	*	Private	0.02
88	1983	*	No	*	*	Private	0.02
89	1453	Perennial	No	Yes	*	Private	0.01
90	7934	*	No	*	*	Public	0.01
91	174	Perennial	No	Yes	*	Private	0.01
92	339	*	No	*	*	Public	0.01
93	8184	*	No	*	*	Private	0.01
94	8934	Seasonal	No	No	*	Public	0.01
95	2258	Perennial	No	Yes	*	Private	0.01
96	4643	*	No	*	*	Private	0.01
97	4624	*	No	*	*	Private	0.001
<b>TOTAL</b>		<b>98</b>					

Source: Cooch Behar Municipality

\*No information available



**Map 7.4. Water Bodies in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*

### 7.3.2 Analysis and Recommendation

Three community level multipurpose grounds (10.4 Ha total), two neighbourhood playgrounds (1.4 Ha total), and three residential unit playgrounds (0.52 Ha total) constitute the major open grounds in the town. Four community parks (14.90 Ha total), six neighbourhood parks (2.68 Ha total), and five household parks (0.53 Ha total) constitute the parks in town. The gap analysis, following the URDPFI Guidelines is presented in **Table 7.11**.

**Table 7.11. Gap Analysis of Different Open Spaces in Cooch Behar Municipality**

SL NO	CATEGORY	URDPFI GUIDELINES	EXISTING (HA)	REQUIRED (HA)	DIFFERENCE (HA)
<b>Playgrounds</b>					
1	Community level Multipurpose Ground	2 Ha for 1,00,000 population	10.4	1.6	8.8 excess
2	Neighbourhood Playground	1.5 Ha for 15000 population	1.4	7.8	6.3 less
3	Household unit Playground	0.5 Ha for 5000 population	0.52	7.8	7.3 less
<b>Parks</b>					
4	Community Park	5 Ha for 1 lakh population	14.9	3.9	11 excess
5	Neighbourhood Park	1 Ha for 15000 population	2.68	5.2	2.52 less
6	Household park	0.50 Ha for 5000 population	0.534	7.8	7.26 less

Based on the URDPFI standards, it can be inferred that there is an excess of community level multipurpose grounds and community parks (excess of 8.8Ha and 11Ha, respectively). A shortfall is observed in neighbourhood level playgrounds and parks (6.3Ha and 2.52Ha less, respectively), as well as in household level playgrounds and parks (7.3Ha and 7.26Ha, respectively). Travel distances in Cooch Behar being very low, the higher order recreational places are also very easily accessible by all residents. Thus, some of the demand at the smaller scale may be adequately met by the higher order facilities that are much in excess. However, there needs to be some additional provisions for small scale recreational areas, and a total of 6.7Ha of new neighbourhood and household level playgrounds and parks have been proposed in different public vacant plots throughout the town. There is also a proposal for opening of the school and college playgrounds for public use.

The waterscape of Cooch Behar contributes to its heritage significance, and 45 waterbodies are recommended to be listed as heritage properties. Specific Action Area Plans should be developed and implemented for the culturally significant waterbody precincts of Sagar Dighi and Bairagi Dighi. All water bodies/ dighis should be regularly maintained and environmentally harmful activities like washing and bathing should be prohibited, unless specifically allowed for selected sites by competent authorities. The present laundry-related activities from the heritage areas of Shiv Bari Dighi and Priyagunj Dighi (Ward 6) are to be relocated outside the municipal area.

## 7.4 RELIGION

### 7.4.1 Existing Status

There are a total of 32 notable religious facilities in the Cooch Behar Municipal Area which includes 6 temples, a dharamshala, a prayer hall, and a religious garden – all managed by the Cooch Behar Debottar Trust Board (CDTB), as well as 13 mosques and 10 churches. The household survey indicated that 96% of the population of Cooch Behar is Hindu. The temples observe a large amount of footfall during the festivals. Madan Mohan Temple, one of the

important temples of the town has the highest number of annual footfall i.e. 3 lakhs, which increases to 15 lakhs during the festival of Rath Yatra. **Table 7.12** presents the list of all these religious facilities with relevant details.

**Table 7.12. Religious Institutions in Cooch Behar Municipal Area**

Cooch Behar Debutter Trust Board						
Sl. No.	NAME	VISITOR FOOTFALL	TYPE	EST.	SIZE (ACRE)	WARD
1	Madan Mohan Temple	3 lacs p.a., 15 lacs (Raas)	Temple	1889	2.19	20
2	Anandamoyee Dharamsala	9,231(2017-2018)	Guest house	1889	0.69	20
3	Baro Debi Bari	1lac (Debipuja)	Temple	c.1915	0.23	19
4	Dangorayee Temple	25,000 p.a,	Temple	1883	1.57	1
5	Rajmata Temple	15,000 p.a,	Temple	1884	0.54	7
6	Hiranyagarva Shiva Temple	35,000 p.a,	Temple	1822	0.13	19
7	Anathnath Shiva Temple	5,000 p.a,	Temple	1865	0.23	6
8	Brahma Samaj Temple	-	Prayer hall	1886	1.82	19
9	Keshab Ashram	30,000 p.a,	Samadhi mandir	1889	2.4	18
Private						
Sl. No.	NAME		TYPE	EST.	SIZE (ACRE)	WARD
10	Chhatguriahat Masjid		Sunni mosque		0.04	15
11	Coochbehar Gorasthan Masjid		Sunni mosque		0.03	4
12	Nutan Masjid		Sunni mosque	1885	0.07	20
13	Coochbehar District Correctional Home Masjid		Sunni mosque		0.03	17
14	Kalabagan Masjid		Sunni mosque		0.12	3
15	Rail Ghumti Masjid		Sunni mosque		0.04	9
16	Puratan Military Line Masjid		Sunni mosque		0.04	17
17	Subhashpally Masjid		Sunni mosque		0.01	2
18	Puratan Masjid		Sunni mosque	1860	0.1	8
19	South Khagrabari Masjid		Sunni mosque	1983	0.008	1
20	Pilkhana Masjid		Sunni mosque		0.12	Guriahati
21	Khagrabari Masjid		Sunni mosque		0.15	Khagrabari
22	Dakshin Chhatguriahat Masjid		Sunni mosque		0.02	Guriahati
23	Northern Lutheran Evangelical Church		Protestant church	1881	0.06	4
24	Church of God		Protestant church	1987	0.02	17
25	Bethel Church		Protestant church	2004	0.003	18
26	Presbyterian Independent Church		Protestant church	2004	0.005	4
27	United Church of North India		Protestant church	2005	0.004	Khagrabari
28	Sanatan KhristoUpasonalay		Protestant church	2004	0.006	Khagrabari
29	Coochbehar Light to the World Church		Protestant church	2006	0.004	Khagrabari
30	Bethel Prayer House		Protestant church	2005	0.003	Khagrabari
31	Lady of Grace Church		Roman catholic church	1985	0.05	Khagrabari
State govt.						
Sl. No.	NAME		TYPE	EST.	SIZE (ACRE)	WARD
32	City Church Little Flock Fellowship		Protestant church	1998	0.009	6

Source: Cooch Behar Municipality

### 7.4.2 Analysis and Recommendation

The URDPFI Guidelines recommend only 1 unit of religious facility for 5,000 population at neighbourhood/ housing cluster level. Based on this, there is an abundance of religious facilities already existing in the Cooch Behar Municipal Area.

## 7.5 PUBLIC AMENITIES

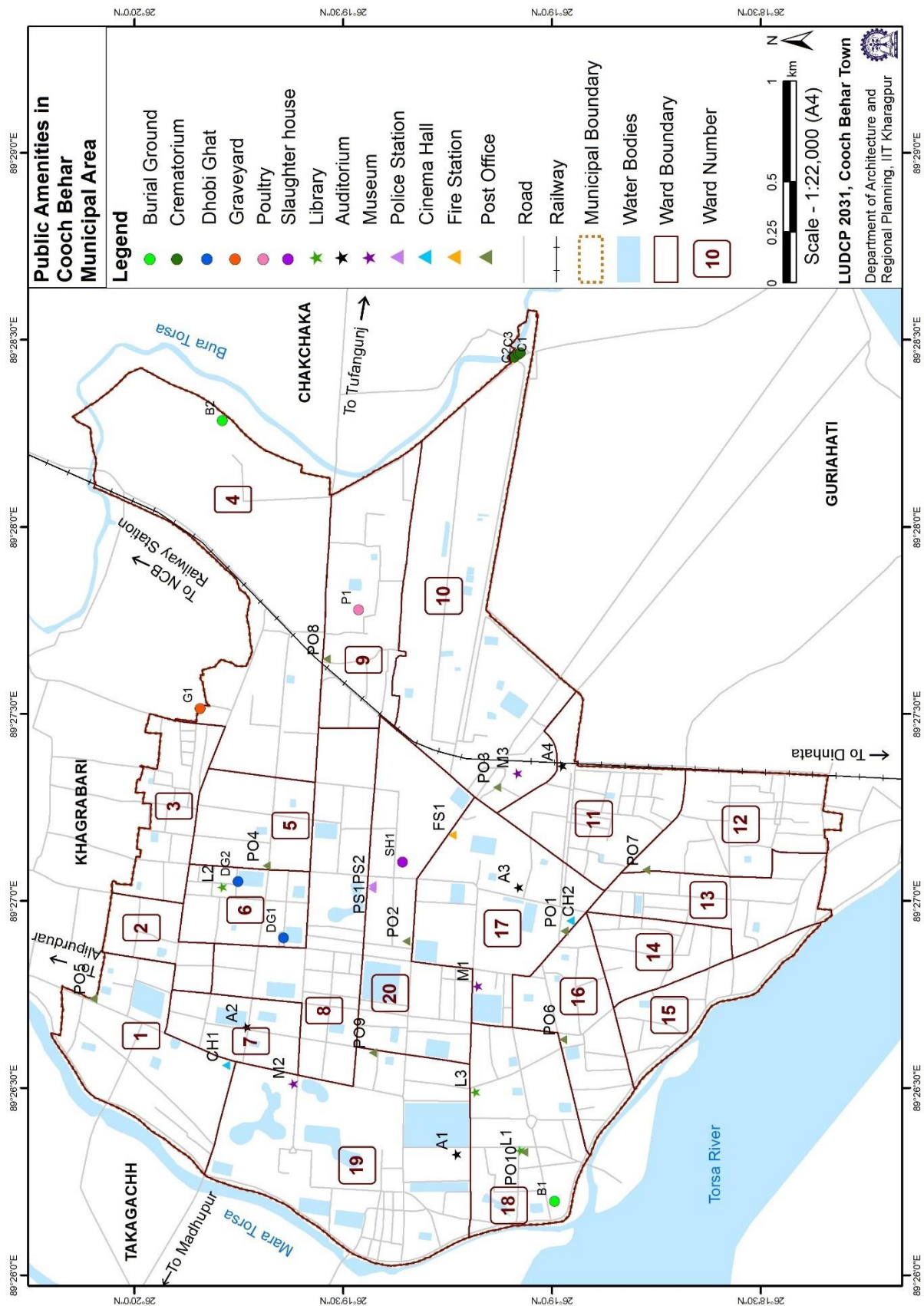
### 7.5.1 Existing Status

This category of social infrastructures includes libraries, auditoriums, museums, cinema halls, police stations, post offices, fire stations, wholesale markets, poultries, dhobi ghats, crematoriums, graveyards, and burial grounds. **Table 7.13** shows the list of the major facilities in Cooch Behar Municipal Area.

**Table 7.13. Social Infrastructures in Cooch Behar Municipal Area**

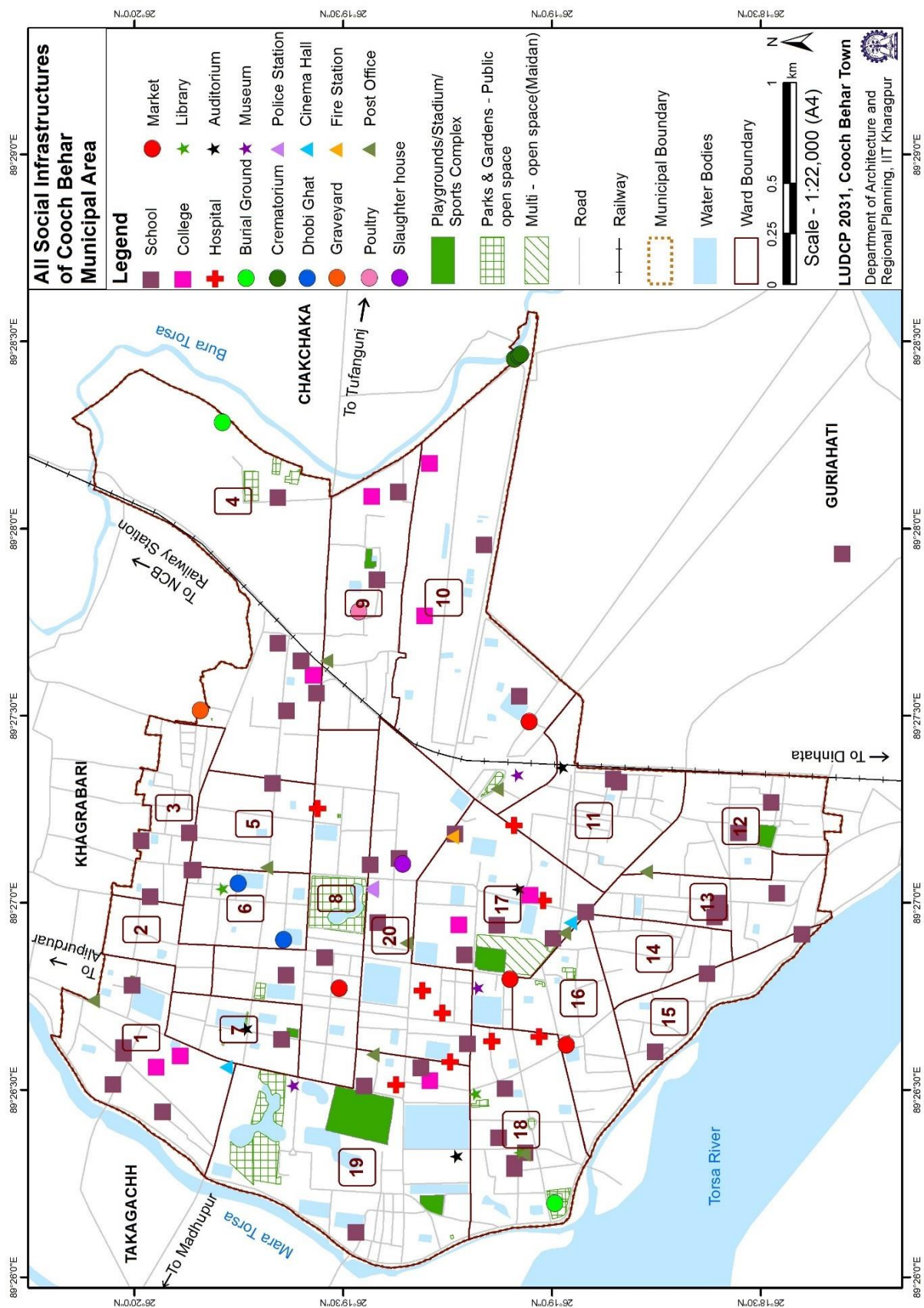
Sl. No.	NAME	CATEGORY	NUMBER	WARD	OWNERSHIP
L1	Cooch Behar Sahitya Sabha	Library	3	6	Sahitya Sabha
L2	Cooch Behar Town Library			18	Govt. of W.B.
L3	North Bengal State Library			18	
A1	Lansdowne Hall	Auditorium	4	19	Govt. of W.B.
A2	Mukta Mancha			-	
A3	Rabindra Bhawan			17	
A4	Sukanta Mancha	Museum	3	-	PWD
M1	PWD Road Museum			19	ASI
M2	Rajbari Museum			10	Railway
M3	Railway Museum				
PS1	Kotwali P.S. Cooch Behar	Police Station	2	20	Supdt. of Police, Cooch Behar
PS2	Sadar Women P.S. Cooch Behar			20	
CH1	Bhabani Cinema Hall	Cinema Hall	2	19	Private
CH2	New Cinema Hall			17	Private
FS1	Cooch Behar Fire Station	Fire Station	1	17	
P01	Banga Chatra Road Post Office	Post Office	10	17	Ministry of Communications
P02	Cooch Behar Head Post Office			20	G.O.I.
P03	Cooch Behar Station Post Office			10	
P04	Durgabari Post Office			-	
P05	Gunjabari Post Office			1	
P06	Natun Bazar Post Office			16	
P07	New Town Post Office			12	
P08	Nilkuthi Railghumti Post Office			-	
P09	R.R.N. Road Post Office			-	
P010	Sahitya Sabha Post Office			18	
C1	Burning Chully	Crematorium	3	Pilkhana	Govt. of W.B.
C2	Electric Chully				
C3	Rabindra Nath Roy Crematorium				
G1	Gorosthan Road	Graveyard	1	4	-
B1	Keshab Ashram	Burial ground	2	18	Debuttor Trust Board
B2	North-East of D.M.Bungalow			4	-
SH1	Behind Veterinary Hospital	Slaughter house	1	20	-
P1	State Poultry Firm	Poultry	1	9	Govt. of W.B.
DG1	Beside Dhobi Ghat	Dhobi Ghat	2	6	-
DG2	Beside Shani Mandir Dighi Ghat			6	-

Source: Cooch Behar Municipality



**Map 7.5. Public Amenities in Cooch Behar Municipal Area**

*Source: Cooch Behar Municipality*



Map 7.6. Social Infrastructures of Cooch Behar Municipal Area

Source: Cooch Behar Municipality

### 7.5.2 Analysis and Recommendation

Considering the projected population of 2031, and following the URDPFI Guidelines, all relevant social amenities are analysed to be sufficient in numbers (**Table 7.13**). The location of the facilities (**Map 7.5**) are also appropriate – while police and fire stations are located in the town center, ensuring ease of accessibility from different parts, facilities like crematorium, graveyard and burial ground are located on the edge of the town, away from the main settlement. However, the two Dhobi ghats, which are located in ward 6 in the heritage areas of Shiv Bari Dighi and Priyagunj Dighi, need to be shifted away from the heritage properties

**Table 7.14. Police Stations, Fire Stations and Post Offices in Cooch Behar Municipal Area**

SL NO.	CATEGORY	UDPRFI GUIDELINES	EXISTING UNITS	REQUIRED UNITS	GAP
1	Police Station	1 unit for 90,000 population	2	1	Nil
2	Fire Station	1 unit for 2 lakh population	1	1	Nil
3	Head Post Office	1 unit for 2.5 lakh population	1	1	Nil
4	Post Office	1 unit for 15,000 population	9	5	Nil
5	Crematorium	1 / 5 lakh population	2	1	Nil
6	Graveyard	1 / 5 lakh population	1	1	Nil
7	Burial ground	1 / 5 lakh population	2	1	Nil
8	Dhobi Ghat	1 / 1 lakh population	2	1	Nil

















## 8 LAND USE



















The LUDCP aims to guide development in the town to meet the projected requirements, in a manner befitting to its heritage character, through proposed land use plan, zoning and development control regulations. This chapter presents an analysis of the existing land use leading to the proposals for the LUDCP.

### 8.1 LAND USE CLASSIFICATION EMPLOYED


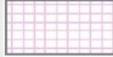








Following URDPFI Guidelines, 2015, **Table 8.1** outlines the details of land use categories used for the existing and proposed land use maps of Cooch Behar Municipal Area. Further, considering the 155 properties being designated as heritage properties, special land use categories under S-2 have been employed for these (**Table 8.2**).

**Table 8.1. Urban Land Use Classification used for LUDCP of Cooch Behar Municipal Area.**

LEVEL I			LEVEL II			
CODE (NUMERIC)	CODE (ALPHA-NUMERIC)	USE CATEGORY	CODE (NUMERIC)	CODE (ALPHA-NUMERIC)	USE ZONE	COLOUR
1	R	Residential	11	R-1	Primary Residential Zone	
			12	R-2	Unplanned/ Informal Residential Zone	
			13	R-3	Institutional Residential zone	
2	C	Commercial	21	C-1	Retail Shopping Zone	
			22	C-2	General Business and Commercial District/ Centres	
			23	C-3	Wholesale, Godowns, Warehousing/ Regulated Markets	
			24	C-4	Service Sector	
			25	C-5	Regulated/ Informal/ Weekly Markets	
3	I	Industry	31	I-1	Service and Light Industry	
4	PS	Public and Semi-public	41	PS-1	Govt./ Semi Govt./ Public Offices	
			42	PS-2	Govt. Land (use undetermined)	
			43	PS-3	Police Headquarter/ Station, Police Line	
			44	PS-4	Educational and Research	
			45	PS-5	Medical and Health	
			46	PS-6	Social Cultural and Religious (including Cremation & Burial Grounds)	
			47	PS-7	Utilities and Services	

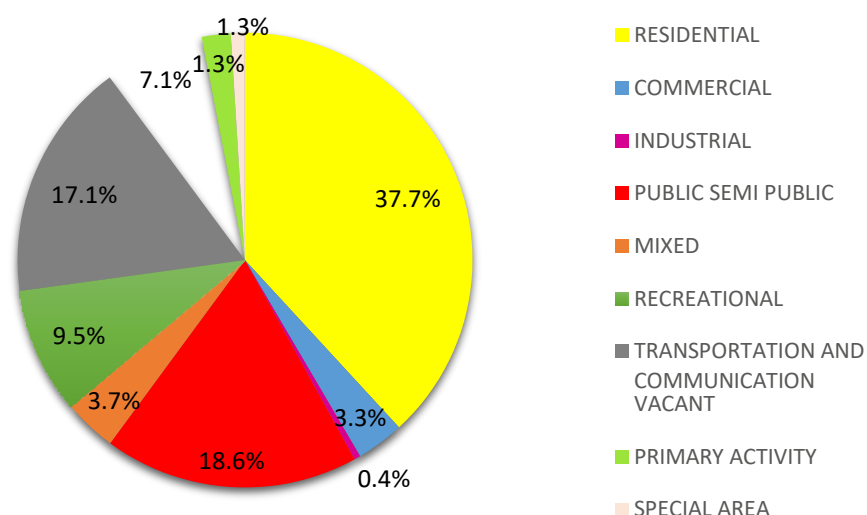
LEVEL I			LEVEL II			
CODE (NUMERIC)	CODE (ALPHA- NUMERIC)	USE CATEGORY	CODE (NUMERIC)	CODE (ALPHA- NUMERIC)	USE ZONE	COLOUR
5	M	Mixed use	51	M-1	Mixed Industrial use Zone	
			52	M-2	Mixed Residential Zone	
			53	M-3	Mixed Commercial Zone	
			54	M-4	Mixed Public and Semi-Public Zone	
6	P	Recreational	61	P-1	Playgrounds/ Stadium/ Sports Complex	
			62	P-2	Parks & Gardens – Public open spaces	
			63	P-3	Multi-open space (Maidan)	
7	T	Transportation and Communication	71	T-1	Roads/ BRTS	
			72	T-2	Railways/ MRTS	
			73	T-3	Airport	
			75	T-5	Bus Depots/ Truck Terminals and freight Complexes	
			76	T-6	Transmission and Communication	
8	A	Primary Activity	81	PA-1	Agriculture	
9	E	Protective and Undevelopable Use Zones	83	PA-3	Poultry and Dairy Farming	
			91	E-1	Water Bodies	
10	S	Special area	102	S-2	Heritage and Conservation Areas	
			104	S-4	Government Restricted Area (such as Defense)	
11	V	Vacant	111	V-1	Vacant lands/Plots	

**Table 8.2. Land Use Classification used for Heritage Properties, Cooch Behar Municipal Area**

LEVEL I			LEVEL II			
CODE (NUMERIC)	CODE (ALPHA- NUMERIC)	USE CATEGORY	CODE (NUMERIC)	CODE (ALPHA- NUMERIC)	USE ZONE	COLOUR
10	S	Special area	102	S-2	Heritage and Conservation Areas	
				S-2T2	Heritage and Conservation Areas(Railway)	
				S-2T3	Heritage and Conservation Areas(Airport)	
				S-2R	Heritage and Conservation Areas(Residential)	
				S-2C	Heritage and Conservation Areas(Commercial)	
				S-2I	Heritage and Conservation Areas(Industry)	
				S-2PS	Heritage and Conservation Areas(Public and Semi-public)	
				S-2M	Heritage and Conservation Areas(Mixed Use)	
				S-2P	Heritage and Conservation Areas(Recreational)	
				S-2E	Heritage and Conservation Areas(Protective and Undevelopable use Zone)	

## 8.2 ANALYSIS OF EXISTING LAND USE AND RECOMMENDATIONS

The existing distribution of land in Cooch Behar Municipal Area, under the eleven land use categories, is presented in **Map. 8.1**. Now, Cooch Behar falls in the category of Medium Town I (population 50,000 to 1,00,000, URDPFI 2015). The Cooch Behar Airport (144 Acres; 58 Ha) and the Chila Rai Barracks (57 Acres; 23 Ha) occupy significant stretches of land within the municipal boundaries. These are atypical uses for a 'Medium Town I', and the land is not available for development of town settlements or infrastructure. Inclusion of these for the purpose of analysis of land use shares would have presented a distorted picture, which would not be suitable for comparison with standards for gap analysis. Hence, the land use shares may be calculated only for the 1,730 Acres (700 Ha) of the Municipal Area, excluding the land under these two uses. Also, though the tanks of Cooch Behar have been categorized as E-1 for the Land Use Maps (Level II classification: 'Water bodies': / Level I classification: 'Protective and Undevelopable Use Zone'), they have been considered under 'Recreational' (Level I classification) for computing percentage share because of the nature of use they support. Accordingly, the percentage share analysis presents only ten categories (**Fig 8.1** and **Table 8.3**). The various heritage properties identified for listing have been indicated as 'Special Areas' (category S-2) in the proposed land use map. However for analysis of land use share, these have been included under other categories, considering the use they are being put to and only the Cooch Behar Rajbari, a nationally recognized monument protected by ASI, is presented as category S-2.



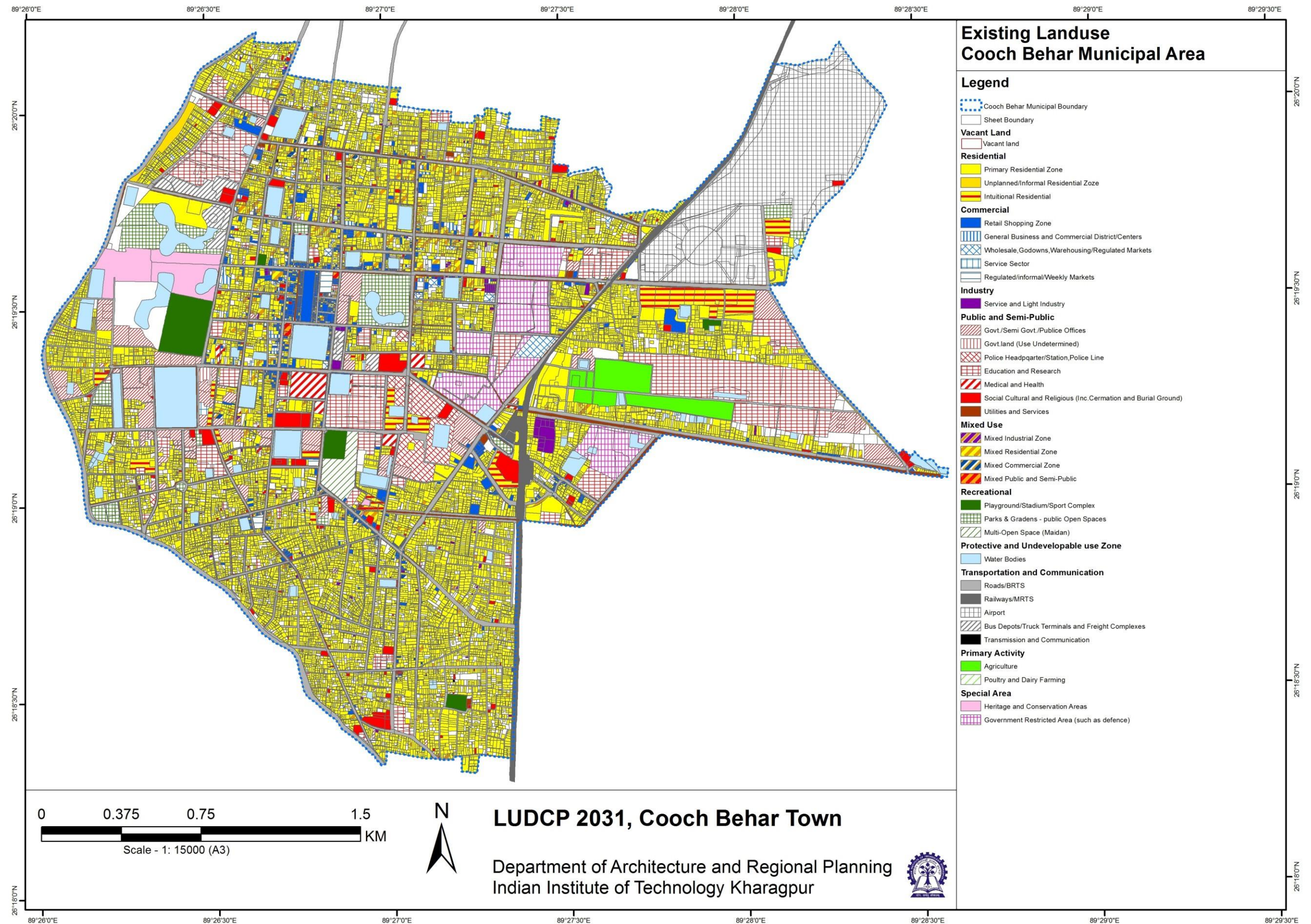
**Figure 8.1. Existing Land Use Shares of Cooch Behar Municipal Area**

*Source: Land Use survey*

**Table 8.3. Existing Land Use Break-up of Cooch Behar Municipal Area**

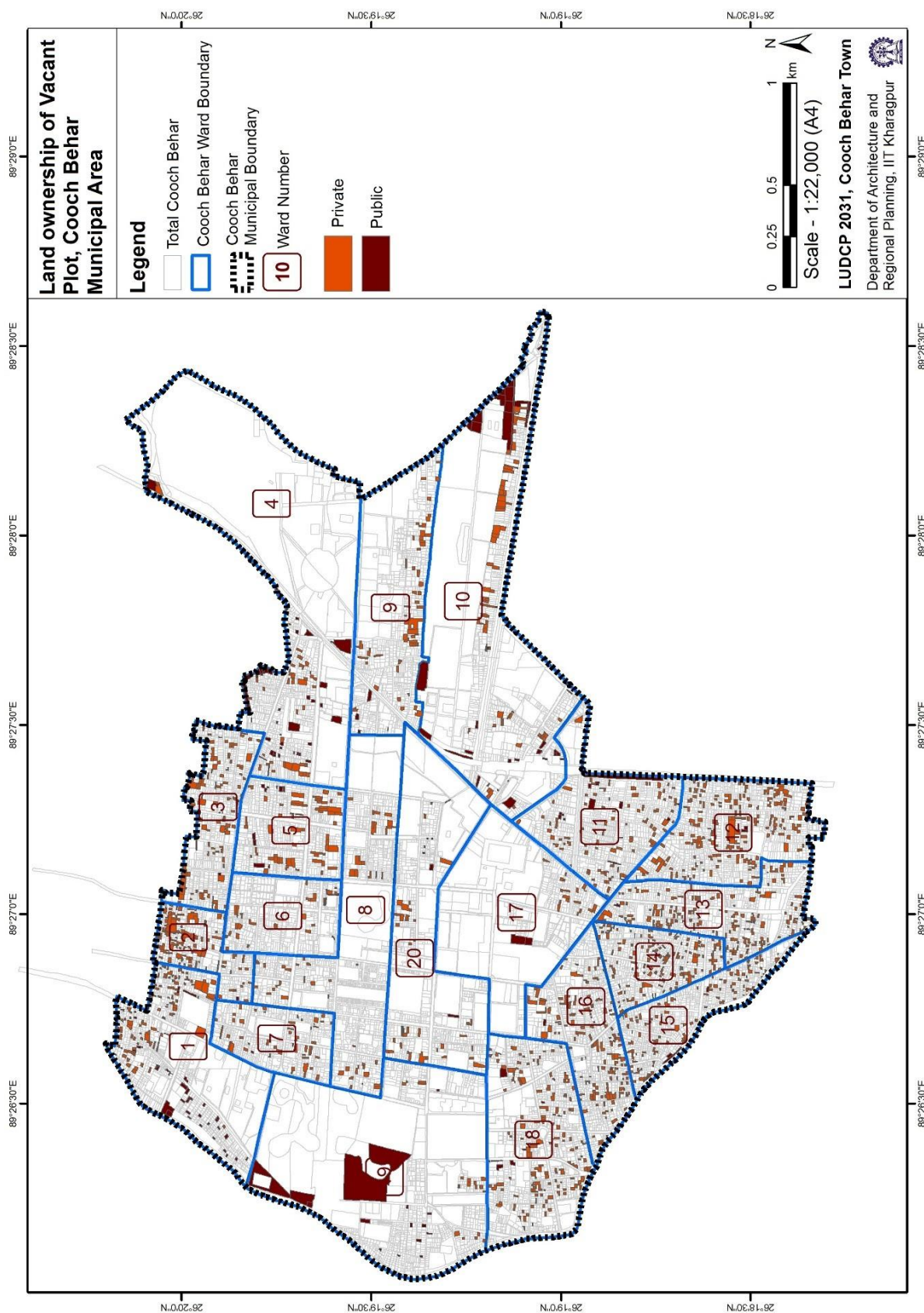
SL NO.	LAND USE CATEGORY	EXISTING AREA (ACRES)	EXISTING SHARE (%)	RECOMMENDED SHARE (URDPFI GUIDELINES)
1	Residential	652.4	37.7	43-48
2	Commercial	56.3	3.3	4-6
3	Industry	7.6	0.4	7-9
4	Public & Semi-public	321.9	18.6	6-8
5	Mixed	64.1	3.7	-
6	Recreational (including Water Bodies)	164.7	9.5	12-14
7	Transportation & Communication (excluding Airport)	295.7	17.1	10-12
8	Vacant	122.7	7.1	-
9	Primary Activity	22.8	1.3	-
10	Heritage and Conservation Area (Special Area)	21.8	1.3	-
	<b>Total Area excluding Airport and Special Area S-4</b>	<b>1730.0</b>	<b>100</b>	
11	Airport	144.0	-	-
12	Special Area (Defence)	57.0	-	-
	<b>Total Municipal Area</b>	<b>1931.0</b>		

7.1% of the land in town is currently vacant, and this vacant land would play a key role in accommodating the future development. However, 77% of these vacant plots are privately owned while only 23% is under public ownership. **Map 8.2** shows the location of all private/public parcels of vacant land in Cooch Behar Municipal Area.



Map 8.1. Existing Land Use, Cooch Behar Municipal Area (2019)





**Map 8.2. Land Ownership of Vacant Properties, Cooch Behar Municipal Area**

*Source: Land and Land Reforms Department, Cooch Behar; Land Use Survey, 2018*

The Municipal Area is characterized by a predominant residential land use which comprises 37.7% of the total area. Though this is somewhat less than the 43 to 48% share usually recommended (URDPFI), this does not necessarily indicate a dearth of land under residential use for the case of Cooch Behar. The percentage shares are skewed because of (i) a noticeable presence of Public and Semipublic use (18.6%, as against the usually recommended 6-8%), as Cooch Behar is the District Headquarters, and (ii) an excess of transportation and communication use (17.1% as against 10 to 12% usually recommended) due to the elaborate historic road layout and large bus depots and railway stations. The density-based analysis for estimating the requirement of residential land to accommodate the projected population for the horizon year (presented in section 5.3) indicates that there is no real gap under this land use category and projected future growth may be suitably accommodated through densification. However, the vacant private plots have been designated as residential land use in the proposed LUDCP.

The commercial land use in town comprises 3.3% as against the usually recommended 4-6%. However, there is also 3.7% of land under mixed use, which accommodates further commercial activities. The household survey reported that a significant part of the population does not feel the necessity for an increase in commercial opportunities as reported in section 4.4. The proposed LUDCP includes a small increase in the commercial land use under public ownership to develop higher order commercial facilities.

There is a meagre 0.4% of land under industrial use housing micro and small scale industries. Though these may be retained, no additional industrial use is recommended within the municipal areas identified in section 4.6.

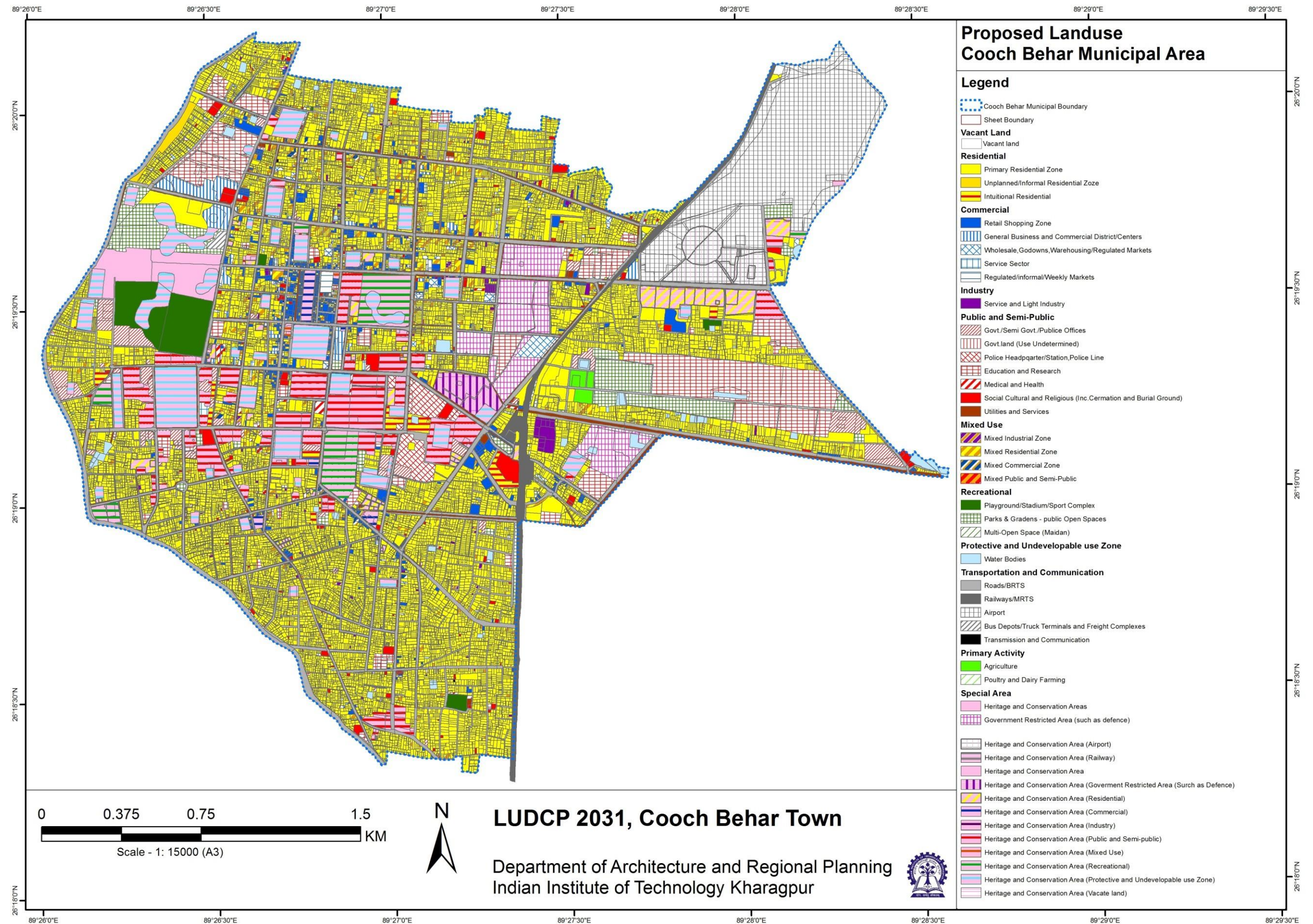
The 3.7% mixed use has been retained to maintain the character and vitality of the town.

There is a shortfall of total land under recreational use as well as specific shortfall under certain categories as identified under section 8.3.2. Considering that the tanks are supporting recreational activities, the present total share comes to 9.5% as against recommended 12-14%. The proposed plan has designated public land of various scales for accommodating parks and playgrounds bringing the total share of land under recreational use to 12.3%.

1.3% of land presently accommodates primary land use, with poultry/dairy or agriculture. The agricultural activities are not recommended to be retained as argued under section 8.3.2. The proposed plan reduces land under primary land use to 0.2%. However, the greenery of the agricultural fields has been conserved in the form of parks and gardens.

The Cooch Behar Rajbari property, under ASI, constitutes the existing heritage and conservation area, amounting to 1.3% of the land, which has been retained as such. The other heritage properties identified for listing comprise 279.6 acres (113 Ha) i.e. 16.1% of the land.

The proposed plot-level land use for the entire Cooch Behar Municipal Area is presented in **Map 8.3**. The resultant land use shares are indicated in **Table 8.3** and **Fig. 8.2**.



Map 8.3. Proposed Land Use, Cooch Behar Municipal Area (2031)



### 8.2.1 Key Features of the Proposed Land Use Plan

The salient features of the proposed land use plan may be outlined as follows:

- Recommended share of various land uses (URDPFI guidelines) have been met largely through assigning uses to vacant public land, and minimal changes in land use of publicly owned land. No drastic alterations in existing use have been proposed, with a view to retain the character of the town.
- Consideration of the heritage properties has been duly integrated in the planning for future land use. Care has been taken to not propose any function or use in the vicinity of these properties that might threaten the character and significance of the heritage.
- Within the proposed distribution of land use, the new DCR would enable optimum intensive growth for future development.

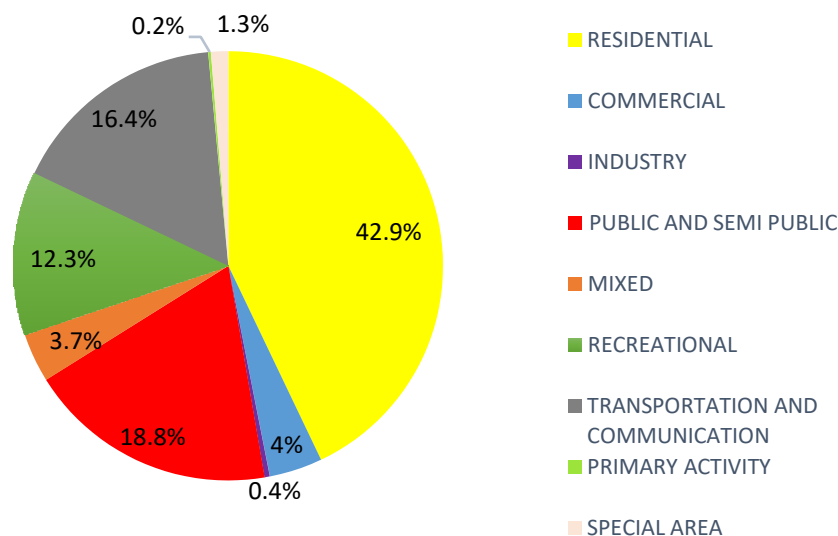


Figure 8.2. Proposed Land Use Percentage of Cooch Behar Municipal Area

Table 8.4. Proposed Land Use Shares of Cooch Behar Municipal Area

SL NO.	LAND USE CATEGORY	EXISTING SHARE (%)	PROPOSED AREA (ACRES)	PROPOSED SHARE (%)	RECOMMENDED SHARE (URDPFI GUIDELINES)
1	Residential	37.7	743.0	42.9	43-48
2	Commercial	3.3	70.0	4.0	4-6
3	Industry	0.4	6.9	0.4	7-9
4	Public & Semi-public	18.6	325.5	18.8	6-8
5	Mixed	3.7	64.1	3.7	-
6	Recreational (including Water Bodies)	9.5	212.1	12.3	12-14
7	Transportation & Communication (excluding Airport)	17.1	283.1	16.4	10-12
8	Vacant	7.1	0.0	0.0	-
9	Primary Activity	1.3	3.5	0.2	-
10	Heritage and Conservation Area	1.3	21.8	1.3	-
	<b>Total Area excluding Airport and Special Area S-4</b>		<b>1730.0</b>	<b>100</b>	
11	Airport	-	144.0	-	-
12	Special Area (Defence)	-	57.0	-	-
	<b>Total Municipal Area</b>		<b>1931.0</b>		

## 9 ZONING AND DEVELOPMENT CONTROL REGULATIONS

The aim of this section is to enable the implementation of the Land Use Plan by providing specific regulations regarding the allowable uses of land under the purview of this plan. In the context of Cooch Behar being declared as a Heritage Town, the zoning regulations have been framed to foster development that would be sympathetic to the heritage significance of the town.

### 9.1 DEVELOPMENT CONTROL ZONES

Cooch Behar has been divided into five zones based on requirements of AMASR Act, 2010, systematic evaluation of information and data, preliminary inventory, archival research, and discussions with local experts. It takes into consideration protections necessary for monuments of national importance, social, economic, cultural, and physical configurations and structures, and the wider urban and regional context.

The delineation derives considerably from the analysis of heritage resources in the town, and categorises all immovable, tangible heritage resources as (i) 'heritage properties' – having natural or man-made heritage elements that are indivisible from their immediate setting, which extends up to the plot boundaries of such properties, or as (ii) 'sites' – having the archaeological potential of heritage resources, or being the location of an erstwhile heritage property. Certain properties may have more than one heritage element, and may thus be regarded as a 'complex'. The delineation also recognises certain ensembles of properties that together define heritage 'precincts' – including all of those properties as well as abutting common areas.

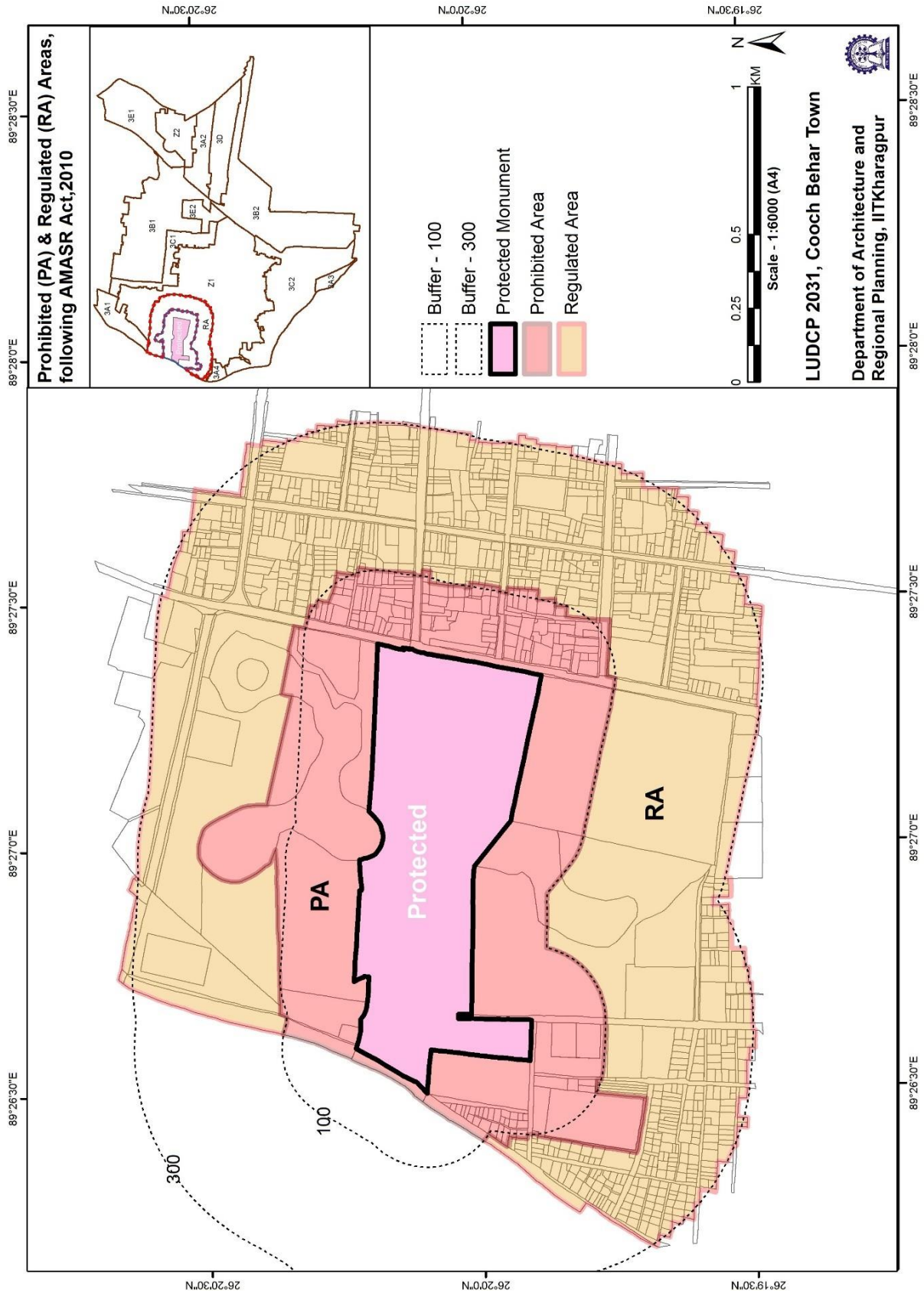
Considering the Cooch Behar Rajbari – an ASI-protected monument of national importance – the two zones of 'Prohibited Area' or PA (100 metres buffer from the protected area of the Rajbari) and 'Regulated Area' or RA (200 metres buffer from the prohibited area or PA) have been delineated through rationalised inclusion of each plot (**Map 9.1**). Further to this, the zone delineation essentially considers the concentration of heritage properties and sites and identifies two core areas, viz. Zone 1 and Zone 2, while the dispersed instances of heritage properties in rest of the town is included under Zone 3. The exact boundaries of the cores are based on the principle of maintaining harmony and contiguity of the streetscape at the edges. Accordingly, the zones extend to a depth of one abutting plot across a peripheral road. The delineation of each of these zones is indicated in **Map 9.2**. The proposed draft LUMR includes the zone information against each plot. The characteristics and extents of the zones may be described as follows:

#### 9.1.1 Prohibited Area (PA)

In principle, this zone extends on all directions around the protected monument property to include a buffer area of 100 metres. However, such an offset often results in part inclusion of properties at the edge. The actual delineation of the boundary has been derived through a process of rationalisation whereby properties with significant part falling within the theoretical buffer have been entirely included, while properties with an insignificant part falling within the theoretical buffer has been excluded. PA includes 6 identified heritage properties.

#### 9.1.2 Regulated Area (RA)

In principle, this zone extends on all directions around PA to include an additional buffer area of 200 metres. Again, to avoid part inclusion of properties at the edge, the actual delineation of the boundary has been derived through a process of rationalisation whereby properties with significant part falling within the theoretical buffer have been entirely included, while properties with an insignificant part falling within the theoretical buffer has been excluded. RA includes 12 identified heritage properties.



### Map 9.1. Rationalised Buffer Zones: Prohibited & Regulated Area

### 9.1.3 Zone1 (Z1)

This zone is at the heart of the town – cartographically comparable to the old capital of around 1911 – and is comprised of highly significant ensembles of heritage properties, whereby the historic layering of cultural and natural values and attributes, and physical remains are still evident. Functionally, and culturally, the value of Cooch Behar as a social and cultural habitat is best expressed in this zone.

Beyond the western extremity of the Zone is the Rajbari complex – a nationally protected property situated between the Bund and the Keshab Road, and the delineation extends upto the regulated area (RA).

South of this are two important precincts. The first is the Debi Bari Precinct – with the heritage property of Bara Debi Bari and the Lamba Dighi at its focus, surrounded by walk-up residential development. To the east of this is the second one: the Sagar Dighi Precinct – with an ensemble of heritage properties surrounding the great water reservoir, mostly housing government services and administrative functions, and arguably the most significant heritage precinct of the Town. Further South is the Brahmo Para area – historically housing residences of Cooch Behar’s Brahmo community, with several picturesque Bungalows of townscape value, as well as structures like the Sabitri Lodge, and Sunity Academy, which are of historic and cultural significance. The zone extends southwards up to Gol Bagan and the Kalikaganj Bazar and Dighi.

The northern part of Zone 1 is marked by the Dangar Aye Temple and Gunjabari Precinct, which is also the site for Cooch Behar’s ‘Rather Mela’ fair – a notable intangible heritage.

Extending southwards up to Nripendra Narayan Road, the zone includes the Rajmata Temple Precinct – with the Rajmata Dighi, the Kaiya Dighi and Kabiraj Bagan – a significant tangible evidence of traditional knowledge.

South of the Nripendra Narayan Road and north of the Sunity Road lies the Bhabaniganj Bazar and Lal Dighi area corresponding to the historic site of Toha Bazaar – this commercial and mixed-use area is roughly the centroid of Zone 1.

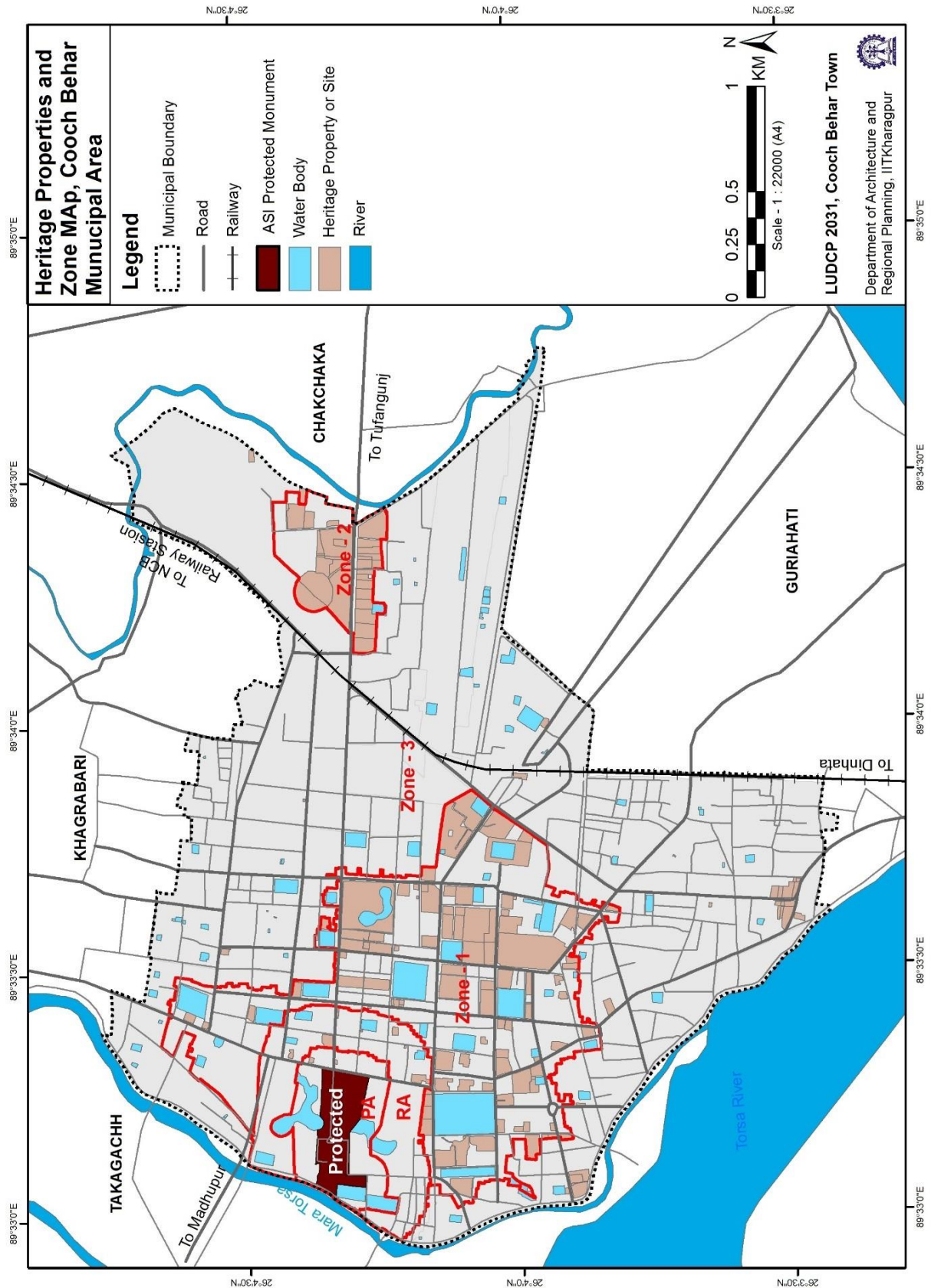
East of this, the Zone extends to include the historic ensemble of urban services such as the Rajakiya Jaladhar, the Royal Press, and the Power House, finally including Nara Narayan park– a significant example of a well-designed historic garden.

The eastern end of Sunity Road corresponds to the eastern extremities of Zone 1, which is marked by the Circuit House, the Dak Bungalow, the Jail, the Police Lines, and the Police Club – a noticeable ensemble of law-enforcement agencies. A part of the military campus of Chila Rai Barracks, housing significant heritage structures, is also included.

West of this is an ensemble of educational properties including Victoria College, Jenkins School, and their hostels, and other social infrastructure like the MJN Hospital and the MJN Club. From here, the Zone extends southwards to include the Raas Mela Ground – the site of the most significant cultural event of the town, and a variety of heritage properties along Bangchatra Road and Magazine Road, culminating at the five-way crossing of Pancharangi.

West of the Raas Mela ground is an ensemble of heritage properties – which may well compete with the Sagar Dighi precinct, if not in terms of concentration of heritage resources, then in its extreme cultural significance – including the Madan Mohan Temple, the Bairagi Dighi, the Anandamoyee Dharmashala, and the Sanskriti Sangha.

Zone 1 includes 97 identified heritage properties and sites as per initial listing.



Map 9.2. Heritage Properties and Proposed Heritage-cum-Development Control Zones

#### 9.1.4 Zone 2 (Z2)

This zone corresponds to the European quarters of the town, as documented by Campbell (1907). He describes picturesque avenues lined with palm, sisoo, and mango trees, leading to the Old Circuit House, and the residence of the European Superintendent of State, together with several substantial bungalows for European officers. Even at present, the development is characterised by scenic beauty mixed with low-key development. This area is also the site of the erstwhile royal race course and polo ground (now part of the airport), and the site of Nilkuthi – the old indigo factory. The Airport is an important addition in this zone and any development in the area is additionally governed by special regulations of the Airport Authority of India.

The Old Circuit House that is presently the Bungalow of the District Magistrate of Cooch Behar, together with the historic King's Hanger, marks the north-eastern corner of Zone 2. From here, the Zone extends southwards to include the Swedish Mission, and the Blind School properties, and, across the Assam Access Road, the series of Officer Bungalows that render the area with its unique townscape. North of the Assam Access Road, only an essential part of the Nilkuthi Palace site– the residence of the Superintendents of the State, has been included in Zone 2, considering the implications of the airport.

Zone 2 includes 19 identified heritage properties and sites as per initial listing.

### 9.1.5 Zone 3 (Z3)

This zone includes the remaining parts of the municipal area, and has dispersed presence of heritage properties and sites. Notable amongst these would be the Rani Bagan or Keshab Ashram near the Bund at south-west, the Old Cooch Behar Railway Station, the European Cemetery near Bura Torsa towards the north-east, the Harisabha, Ramkrishna Mission, and Nityananda Ashram towards the south, and the Gangabisun Thakurbari precinct across the Railway line, to the east. Some significant reservoirs in this zone are Debibari Dighi, Rupsi House Dighi, Mali Dighi, Shiv Dighi, Kameshwari Dighi, and Priyagunj Dighi.

In totality, Zone 3 includes 20 identified heritage properties as per initial listing.

Further, within zone 3, several urban districts have been recognized based on the distinct qualities of the development therein. These districts are the portions of the town in which the observers can be conscious of their entry/exit – mentally and physically, due to some common defining character of the urban fabric. A full assessment of a number of following characteristic features was done through primary intensive survey:

- **Building Age Profile:** This includes mapping the age of buildings to show the age distribution and concentrations of buildings and periods of urban development. A building age profile can identify the patterns of urban development through the age of the building stock. It can inform and help delineate 'character areas' through providing evidence of historical urban development patterns and growth.
- **Building height:** The purpose was to note the intensity of development. For this, the survey team was asked to count the number of storeys, rather than height in metres, for a more authentic recording of information.
- **Roofing type:** The purpose was to identify the nature of houses in different zones (pakka/ kuchha/ semi-pukka). The roofing type and material is an important indicator of this. The houses of the town have either pukka concrete roof or metal sheets and the predominance of a roof types helped in classifying neighborhoods.

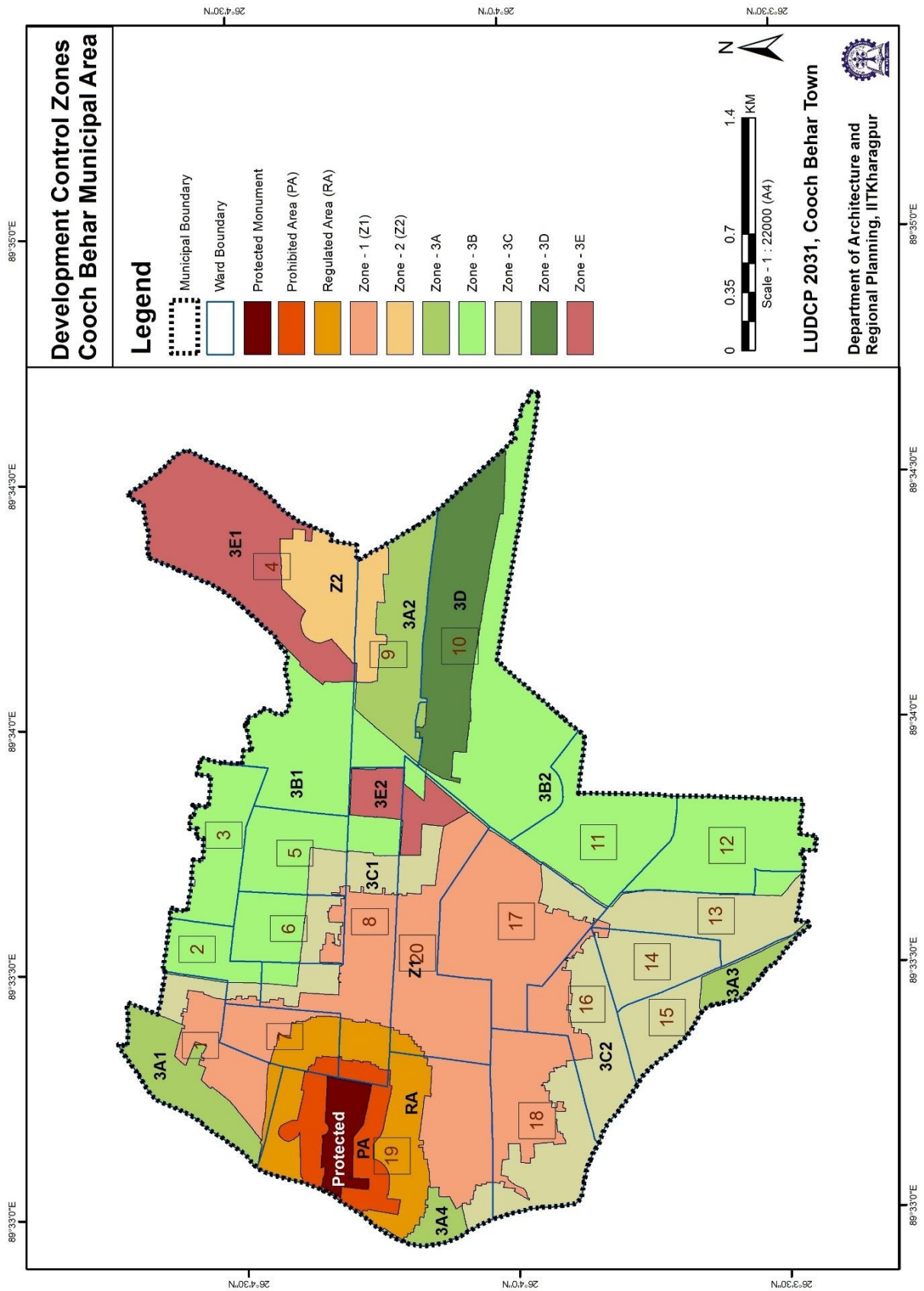
- Some other relevant visual characteristics like type of material in façade and color of the building were also recorded. Additionally, the plot wise updated land use map and land ownership maps were already prepared as part of LUDCP exercise.

Finally, combining these assessments with a windshield survey and study of secondary documents like maps and satellite imageries helped identify five sub-zones in the town with distinct urban character **(Map 9.3)**, as articulated below. Details of the survey procedure and delineation method are presented in Heritage Development and Management Plan.

- **Zone 3A:** This zone has been subdivided into four parts- zone 3A1 (settlement near Bund Road beside Mora Torsa), zone 3A2 (south of Nilkuthi government residential bungalows), zone 3A3 (south of the town along the Ashram road), and zone 3A4 (Debibari and surrounding area). These patches are located towards the periphery of the town having mostly informal settlements and narrow roads.
- **Zone 3B:** This has been subdivided into two parts- zone 3B1 and 3B2. The settlement zone of 3B1 is situated to the North of the town in areas of Subhashpalli and Goalapara. Important roads passing through this zone are the Kameshwari road and the Silver Jubilee Road. This zone also constitutes parts of Chiilarai Army barracks. Zone 3B2 is situated in the south-eastern part of the town and is constituted of the Gandhi Colony and parts of Rupsi Colony.
- **Zone 3C:** There are two parts in zone 3C- zone 3C1 and zone 3C2. Zone 3C1 is located above the N. N. Park and has a cluster of commercial units. Zone 3C2 mainly constitute Patakura and Newtown area of the town and is primarily a residential area.
- **Zone 3D:** This is located in the Eastern part of the Cooch Behar town. Some of the higher educational institutions like the Cooch Behar Panchanan Barma University, Cooch Behar Medical College are located in this zone.
- **Zone 3E:** This zone is constituted of land under institutional ownership like the Chila Rai Barrack and the Cooch Behar Airport where no planning interventions have been proposed in the current plan.

#### 9.1.6 Airport Authority

For any proposed development within Airport Funnel Area and Critical Area, NOC shall be required from the Airport Authority.



**Map 9.3. Proposed Zones and Sub-zones of Cooch Behar Municipal Area**

## 9.2 DEVELOPMENT CONTROL REGULATIONS

The development shall be controlled in zones PA and RA as per the requirements and provisions of The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act 2010, and The Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017.

Further to that, the regulations presented under this section are drafted to preserve the characteristics of the other zones, while resolving compatibility issues of the various activities and enabling future development. These would promote public health, safety, convenience, general welfare, and protect natural environment and heritage significance of the planning area. Within this broad common framework, Z1, Z2 and some sub-zones in Z3, would have some specific regulations as outlined in the relevant sections. A balanced approach including conservation as well as redevelopment and regeneration is the prime planning strategy for these zones of Cooch Behar.

### 9.2.1 General Guidelines

- Amalgamation and/or Sub-division of plots shall not be permitted in the PA, RA, Z1 & Z2.
- No building(s)/structure(s) or its parts within the PA & RA shall be allowed to be demolished/reconstructed/repared without the prior permission of the Competent Authority as per AMSAR, 2010. Application for such permissions shall be routed through the Heritage Conservation Committee.
- No building(s)/structure(s) or its parts within the Z1 & Z2 shall be allowed to be demolished/reconstructed/repared without the prior permission of the Heritage Conservation Committee.
- Widening of the existing roads/paths/small lanes/gullies would be permitted only after approval of the Heritage Conservation Committee.
- Position and placement of landmarks, statues, and installations of heritage significance within PA, RA, Z1 & Z2 are to be retained. However, in case of exigencies these can be shifted to a suitable location within the zones with prior permission of the Heritage Conservation Committee. Additional landmarks, statues, installations shall be permitted in the PA, RA, Z1 & Z2 only after approval of the Heritage Conservation Committee.

### 9.2.2 Permissible Uses

For 'Protected and Undevelopable Use', there shall be no change allowed. For 'Special Areas', the uses identified in this LUDCP shall continue. Any change is subject to additional approval from competent heritage authority. For all other land use, the various uses that are permitted / permissible / prohibited have been detailed out in **Table 9.1-9.9**, following the provisions in section 9.2 of Urban and Regional Plan Formulation and Implementation Guidelines, 2015.

For PA, RA, Z1 & Z2, permissible use will be decided by the Competent Authority on case to case basis, supported by heritage and townscape impact assessment.

**Table 9.1. Development Control Zoning Regulations: Residential Use**

<b>I</b>		
<b>RESIDENTIAL USE</b>		
Sl.	USE	ACTIVITIES
1	PERMITTED	Residence – plotted (detached, semi-detached and row housing), group housing houses, residential flat, residential-cum-work, hostels, boarding and lodging (accommodation for transit employees of Govt./ Local Bodies) houses, barat ghar/marriage hall, community hall, old age home, police post, guest houses, crèches, day care centre, convenience shopping centres, local (retail shopping), medical clinic, dispensaries, nursing home and health centres (20 bed), dispensary for pets and animals, professional offices, educational buildings: (nursery, primary, high school, college), school for mentally/ physically challenged, research institutes, community centres, religious premises, library, gymnasium, park/tot-lots, plant nursery, technical training centre, yoga centres/health clinics, exhibition and art gallery, clubs, banks/ ATM, police stations, taxi stand/three wheeler stands, bus stops, electrical distribution depot, water pumping station, post offices, hostels of non-commercial nature, kindergartens, public utilities and buildings except service and storage yards.
2	RESTRICTED	Dharamshala, foreign missions, night shelters, petrol pumps, motor vehicle repairing workshop/garages, household industry, bakeries and confectionaries, storage of LPG gas cylinders, burial-grounds, restaurants and hotels, printing press, godowns/warehousing, bus depots without workshop, cinema hall, auditoriums, markets for retail goods, weekly markets (if not obstructing traffic circulation and open during non-working hours), informal markets, multipurpose or junior technical shops, transient visitors camp, municipal, state and central government offices.
3	PROHIBITED	Heavy, large and extensive industries : noxious, obnoxious and hazardous industries, warehousing, storage go-downs of perishables, hazardous, inflammable goods, workshops for buses etc., slaughter-housing wholesale mandis, hospitals treating contagious diseases, sewage treatment plant/disposal work, water treatment plant, solid waste dumping yards, outdoor games stadium, indoor games stadium, shooting range, zoological garden, botanical garden, bird sanctuary, picnic hut, international conference centre, courts, sports training centre, reformatory, district battalion office, forensic science laboratory.

**Table 9.2. Development Control Zoning Regulations: Commercial Use**

<b>II</b>		
<b>COMMERCIAL USE</b>		
Sl.	USE	ACTIVITIES
1	PERMITTED	Shops, convenience/neighbourhood shopping centre, local shopping centres, professional offices, work places/offices, banks, stock exchange/financial institution, bakeries and confectionaries, cinema hall/theatre, malls, banquet halls, guest houses, restaurants, hotels, weekly market, petrol pumps, go-downs and warehousing, general business, wholesale, residential plot-group housing, hostel/boarding housing, hostel, banks/ ATM, restaurants, auditoriums, colleges, nursing homes/medical clinics, pet clinics, religious places, offices/work places, commercial centres, research/training institute, commercial service centres/garages/workshop, baratghar/night shelter, weekly/formal markets, library, parks/open space, museum, police stations/post, taxi stand/three wheeler stands, parking site, post offices, government/ institutional offices, telephone exchange/centres, warehousing and covered storage, research institutions.
2	RESTRICTED	Non-pollution, non-obnoxious light industries, warehousing/storage go-downs of perishable, inflammable goods, coal, wood, timber yards, bus and truck depots, gas installation and gas works, poly-techniques and higher technical institutes, junk yards, water treatment plant, railway yards/stations, sports/stadium and public utility installation, hotel and transient visitor's homes, religious buildings, hospitals and nursing homes.

II COMMERCIAL USE (contd.)		
3	PROHIBITED	Dwellings except those of service apartment, essential operational, watch and ward personnel, heavy, extensive, noxious, obnoxious, hazardous and extractive industrial units, hospitals/research laboratories treating contagious diseases, poultry farms/dairy farms, slaughter-houses, sewage treatment/disposal sites, agricultural uses, storage of perishable and inflammable commodities, quarrying of gravel, sand, clay and stone, zoological garden, botanical garden, bird sanctuary, picnic hut, international conference centre, courts, sports training centre, reformatory, district battalion office, forensic science laboratory and all other activities which may cause nuisance and are noxious and obnoxious in nature.

Table 9.3. Development Control Zoning Regulations: Industrial Use

III INDUSTRIAL USE		
Sl.	USE	ACTIVITIES
1	PERMITTED	Residential building for essential staff and for watch and ward personnel, all kind of industries, public utilities, parking, loading, unloading spaces, warehousing, storage and depot of non-perishable and non-inflammable commodities and incidental use, cold storage and ice factory, gas go-downs, cinema, bus terminal, bus depot and workshop, wholesale business establishments, petrol filling stations with garage and service stations, parks and playgrounds, medical centres, restaurants.
2	RESTRICTED	Noxious, obnoxious and hazardous industries except storage of perishable and inflammable goods, junkyards, sports/stadium/playgrounds, sewage disposal works, electric power plants, service stations, cemeteries, government/semi-government/private business offices, bank and financial institutions, helipads, hospitals/medical centres, religious buildings, taxi stands, gas installations and gas works, animal racing or riding stables, workshops/garages, dairy and farming, quarrying of gravel, sand, clay or stone.
3	PROHIBITED	Residential dwellings other than those essential operational, service and watch and ward staff, schools and colleges, hotels, motels and caravan parks, recreational sports or centres, other non-industrial related activities, religious buildings, irrigated and sewage farms, major oil depot and LPG refilling plants, commercial office, educational institutions, social buildings.

Table 9.4. Development Control Zoning Regulations: Public and Semi-public Use

IV PUBLIC AND SEMI-PUBLIC USE		
Sl.	USE	ACTIVITIES
1	PERMITTED	Government offices, central, state, local and semi government, public undertaking offices, defence court, universities and specialized educational institute, polytechnic, colleges, schools, nursery and kindergarten (not to be located near hospital or health care facility), research and development centres, social and welfare centres, libraries, social and cultural institutes, religious buildings/centres, conference halls, community halls, barat ghar, dharamshala, guest house, museum/art galleries, exhibition centres, auditoriums, open air theatre, recreational club, playground, banks, police station/police posts, police lines, police headquarters, jails, fire stations/fire posts, post and telegraph, public utilities and buildings, solid waste dumping grounds/sites, post offices, local state and central government offices and use for defence purposes, bus and railway passenger terminals, public utility and buildings, local municipal facilities, uses incidental to government offices and for their use, monuments, radio transmitter and wireless stations, telecommunication centre, telephone exchange, hospitals, health centres, nursing homes, dispensaries and clinic.

IV PUBLIC AND SEMI-PUBLIC USE (contd.)		
2	RESTRICTED	Residential flat and residential plot for group housing for staff employees, hostels, water supply installations, sewage disposal works, service stations, railway stations/yards, bus/truck terminals, burial grounds, cremation grounds and cemeteries/graveyards, warehouse/storage godowns, helipads, commercial uses/centres, other uses/ activities.
3	PROHIBITED	Heavy, extensive and other obnoxious, hazardous industries, slaughter-houses, junk yards, wholesale mandis, dairy and poultry farms, farm-houses, workshop for servicing and repairs, processing and sale of farm product and uses not specifically permitted herein.

**Table 9.5. Development Control Zoning Regulations: Mixed Use**

V MIXED USE		
Sl.	USE	ACTIVITIES
	PERMITTED	For M1, activities falling within non-polluting industry/ service industry (dominant landuse) categories can coexist with maximum up to 20-30% of commercial, institutional, recreational, and residential land use. For M2, all activities falling within permitted residential land use (dominant landuse) shall be minimum 60% and to coexist with commercial, institutional, recreational. For M3, all activities falling within permitted commercial land use (dominant landuse) shall be minimum 60% and to coexist with residential, recreational, institutional and non-polluting and household industry. For M4, all activities falling within permitted public and semi-public land use (dominant landuse) shall be minimum 60% and to coexist with residential, recreational, commercial and non-polluting and household industry.
2	RESTRICTED	Activities related to commercial, institutional and residential landuse in M1 and non-polluting industrial landuse in M2, M3, M4 can be increased to up to 50% depending on the contextual and locational feasibility of the area.
3	PROHIBITED	All other activities, especially industrial which are polluting in nature and which will have an adverse impact on the overall activities of this zone

**Table 9.6. Development Control Zoning Regulations: Recreational Use**

VI RECREATIONAL USE		
Sl.	USE	ACTIVITIES
1	PERMITTED	Regional parks, district parks, playgrounds, children traffic parks, botanical/zoological garden, bird sanctuary, clubs, stadiums (indoor), outdoor stadiums with/ without health centre for players and staff, picnic huts, holiday resorts, shooting range, sports training centres, specialized parks/maidans for multiuse, swimming pool, special recreation and special educational areas, , library, public utilities.
2	RESTRICTED	Building and structures ancillary to use permitted in open spaces and parks such as stand for vehicles on hire, taxis and scooters, bus and railway passenger terminals, facilities such as police post, fire post, post and telegraph office, commercial use of transit nature like cinema, circus and other shows, public assembly halls, restaurants and caravan parks, sports stadium, open air cinemas.
3	PROHIBITED	Any building or structure which is not required for open-air recreation, dwelling unit except for watch and ward personnel, and uses not specifically permitted therein

**Table 9.7. Development Control Zoning Regulations: Transport and Communication Use**

<b>VII TRANSPORTATION AND COMMUNICATION USE</b>		
Sl.	USE	ACTIVITIES
1	PERMITTED	Road transport terminals (bus terminals and depots), goods terminals, parking areas, circulations, airports-building and infrastructure, truck terminal, motor garage, workshop, repair and repair shop and facilities such as night shelter, boarding house, banks, restaurants, booking offices, transmission centre, wireless station, radio and television station, observatory and weather office.
2	RESTRICTED	Any other use/activity incidental to transport and communication, residential dwelling units for essential staff and watch and ward personnel.
3	PROHIBITED	Use/activity not specifically permitted herein. In vicinity of airports: butcheries, tanneries and solid waste disposal sites shall be prohibited within 10 km from the Aerodrome Reference Point (ARP)

**Table 9.8. Development Control Zoning Regulations: Primary Activity**

<b>VIII PRIMARY ACTIVITY</b>		
Sl.	USE	ACTIVITIES
1	PERMITTED	Dwelling for the people engaged in the farm (rural settlement), farm-houses and accessory buildings, agriculture, horticulture and forestry, poultry, piggeries and dairy farm, cottage industries, storage, processing and sale of farm produce, petrol and other fuel filling stations, fishing, public utility and facility buildings.
2	RESTRICTED	Farm houses, extensive industry, brick kilns, sewage disposal works, electric power plant, quarrying of gravel, sand, clay or stone, service industries accessory to obnoxious and hazardous industries, school and library, temple, churches, mosques and other religious buildings, milk chilling stations and pasteurization plants.
3	PROHIBITED	Residential use except those ancillary uses permitted in agricultural use zone, heavy extensive, noxious, obnoxious and hazardous industries, any activity which is creating nuisance and is obnoxious in nature.

**9.2.3 Permissible FAR**

Permissible FAR allowed to be consumed as on-site development (or TDR in PA, RA, Z1 & Z2), and all associated requirements, shall be as per the clause 48A of the West Bengal Municipal (Building) Rules 2007, (Amended 2016).

**9.2.4 Permissible Height**

The permissible height will be as specified by the West Bengal Municipal (Building) Rules 2007, (Amended 2016), except for PA, RA, Z1, Z2, and Sub-zone 3A and 3C of Z3, where maximum allowable height is 14.5m. Here, "height of a building" shall mean vertical distance measured from the ground level, to the highest point of the building, in case of flat roofs and in the case of sloped roofs, the mid-point between the eave's level and the ridge. The following appurtenant structures however shall not be included in the height of the building unless the aggregate area of such structures, including pent- houses, exceeds one-third of the area of the roof of building upon which they are erected: a) Roof tanks and their supports (with support height not exceeding 1 m); b) Ventilating, air conditioning, lift rooms and similar service equipment; c) Stair cover (mumty) not exceeding 3 m in height; and d) Chimneys, parapet walls and architectural features not exceeding 1.2 m in height (NBC, 2016).

### 9.2.5 Permissible Ground Coverage

The maximum permissible ground coverage for plots will be as per clause 46 of West Bengal Municipal (Building) Rules 2007, (Amended 2016).

### 9.2.6 Transfer of Development Right (TDR)

Transfer of Development Rights (TDR) is a voluntary, incentive-based program that allows landowners to sell development rights from their land to a developer or other interested party who then can use these rights to increase the density of development at another designated location. TDR is a technique of land development, which separates the development potential of a particular parcel of land from it and allows its use elsewhere within the defined zones of the city. It allows the owner to sell the development rights of a particular parcel of land to another. This entitlement is over and above the usual FAR available for receiving plot in accordance with the prevailing laws and regulations, which entitles a land-owner to construct additional built-up area on his existing building or vacant land. A transparent mechanism based on e-governance shall be prepared by the Competent Authority for monitoring the trading of DRC.

#### 9.2.6.1 Issuance of Transferable Development Right Certificate

TDR certificate shall be issued by Cooch Behar Municipality in lieu of:

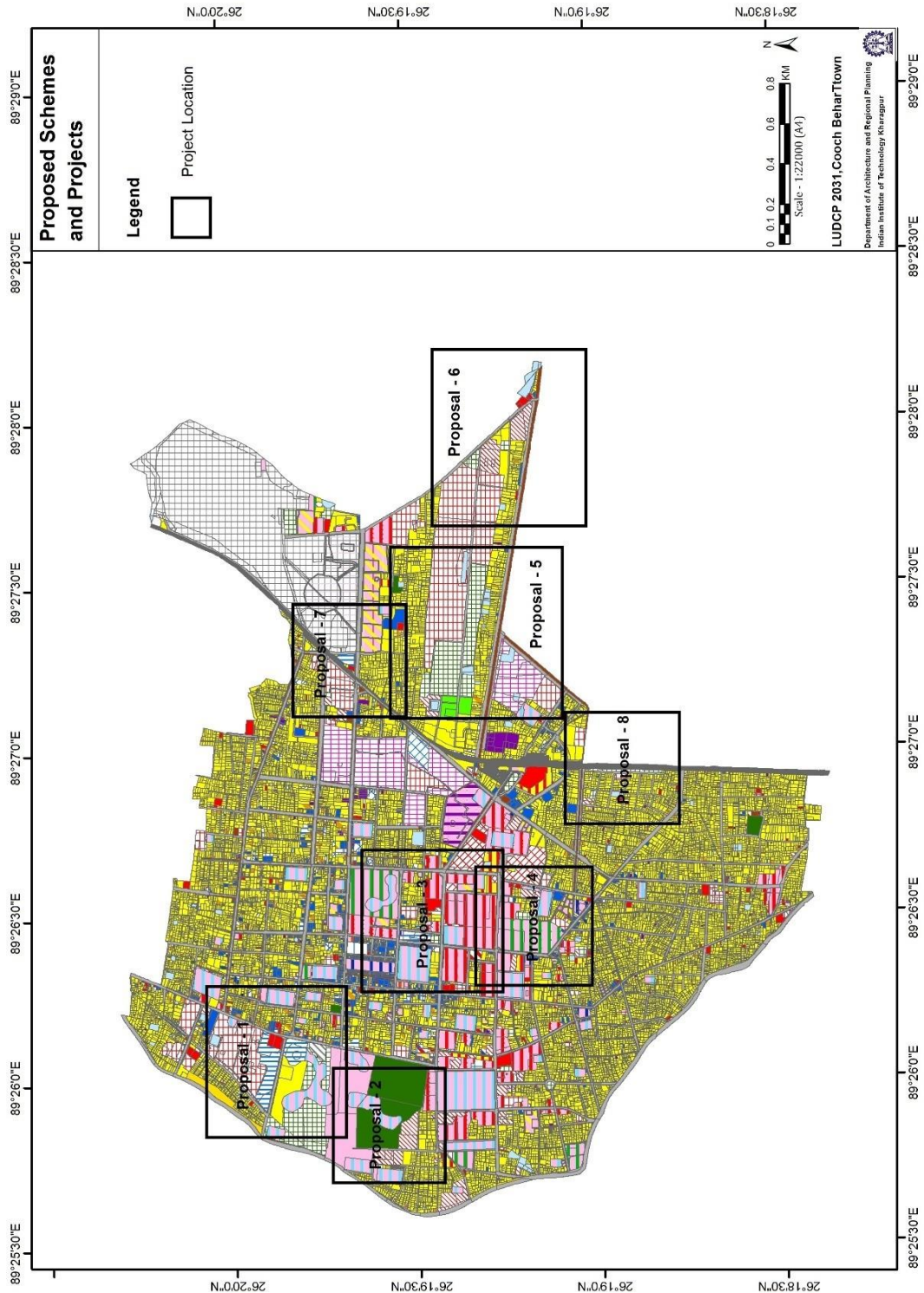
- a) land surrendered by the owner / lessee for public purpose, on request by the Government, free of cost and free from all encumbrances, or by way of declared incentives by State Government for
  - Development of Green spaces- Parks/ Open Spaces/Playgrounds /Water Bodies etc. as per the provision of Master Plan/ Sector Plan
  - Development of Public Parking lots
- b) If any application for development is refused under this Development Control Regulation, or conditions are imposed while permitting such development which deprive the owner/lessee of any unconsumed FAR, the said owner/lessee shall be compensated by grant of Development Rights Certificate (hereinafter referred to as "DRC") as may be prescribed by Government from time to time. The Tradable Floor Space shall be provided on the basis of the respective unconsumed FAR, as an incentive for conservation of heritage building/site/precinct.

#### 9.2.6.2 Utilization of Transferable Development Right Certificate

- TDR generated in an urban area can be utilized within the same urban area only.
- The TDR shall be utilized in various receiving zones (3A, 3B and 3C) over and above the prescribed standard FAR as specified in this DCR or per the directions issued by the Government from time to time.
- Any utilization of TDR shall be charged at the rate of Rs. 10/- per sq. mts. subject to minimum of Rs. 1000/- as utilization fees.
- The receiving plot can utilize a maximum of 0.6 times the eligible FAR for that plot.
- In case of partial surrender of plot/ land in the donor zone, DRC so generated may be utilized at the remaining portion of the plot/ land after surrender which will be limited to a maximum of 0.6 times eligible floor area ratio as additional floor area ratio in lieu of transfer of DRC, irrespective of road width.

## 10 PROPOSED SCHEMES AND PROJECTS

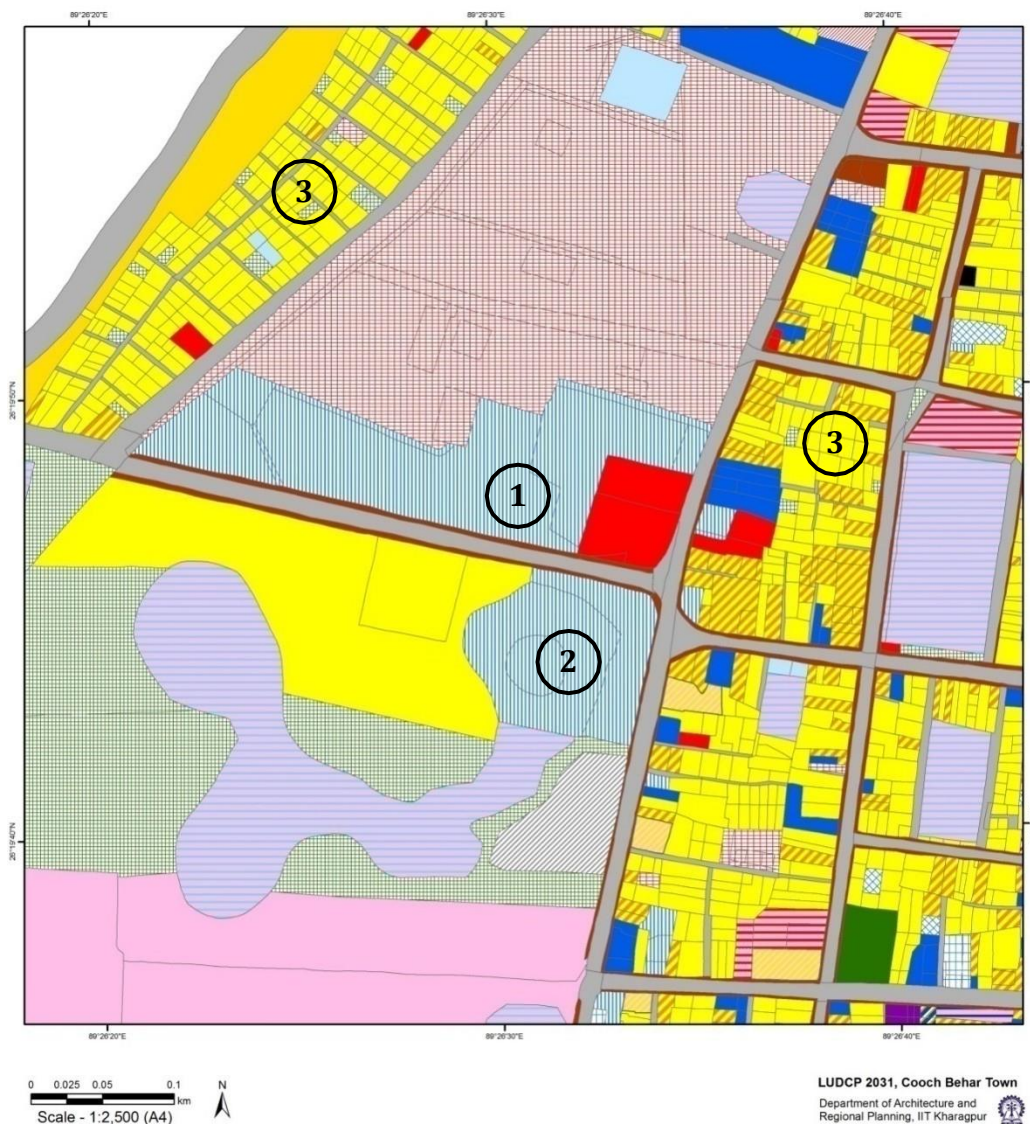
In addition to the overall land use proposal for the town, some specific schemes and projects may be outlined as follows (Proposal 1 to 8). These are proposed either on existing vacant plots, or with desirable changes to the existing land use to maintain a sympathetic relationship with the surrounding development. The locations of the projects in the context of Cooch Behar Municipal Area have been shown in **Map 10.9**.



Map 10.1. Proposed Schemes and Projects in Cooch Behar Municipal Area

## 10.86 PROPOSAL 1

The existing N.B.S.T.C. Bus Depot and Mini Bus Depot beside the Rajbari complex shall be relocated from their present sites to minimize the traffic congestion along the Siliguri road and in front of the Rajbari. The N.B.S.T.C. Depot shall be replaced by an open-air 'Heritage Plaza', having an area of 6.16 acres, hosting food kiosks and local handicraft shops, which would be an added attraction for the tourists coming to the nearby Rajbari. There will also be provision of off-street parking facility. The Mini Bus Depot shall be replaced by a boutique hotel/resort on a land area of 3 acres, providing the guests with a unique experience of royal hospitality. These changes would improve the aesthetic quality of the Rajbari complex and its surroundings. Also, in this area, small vacant plots beside the Bandh road are proposed to be converted to household parks and gardens (0.02 acres to 0.05 acres) to increase the household level green spaces (**Map 10.2**).

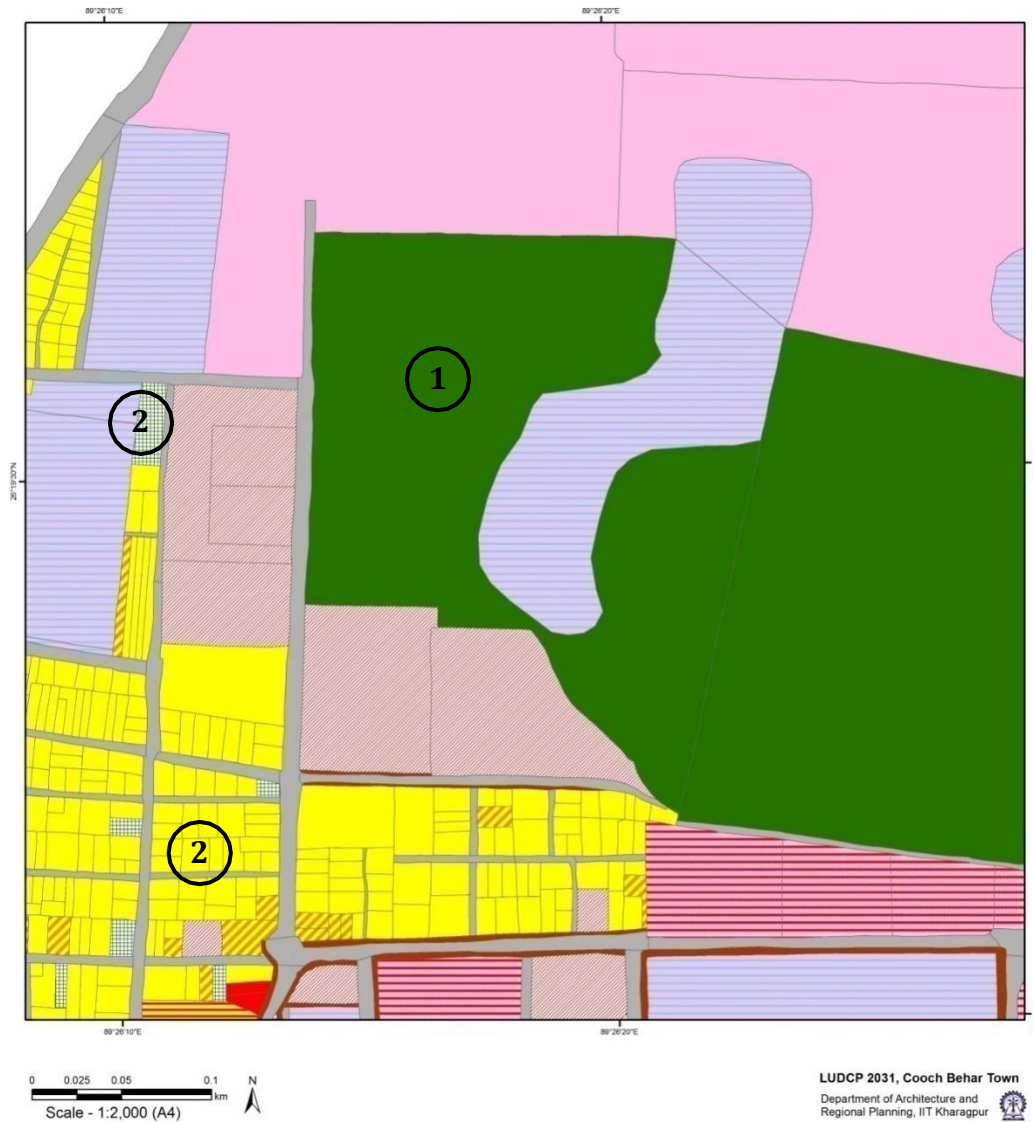


**Map 10.2. Proposal 1**

1. Open-air Heritage Plaza
2. Boutique hotel/resort
3. Household parks/gardens

## 10.2 PROPOSAL 2

A neighbourhood level playground of 10.86 acres is proposed in the in the landlocked vacant parcel of land beside the Rajbari Complex and stadium. This can also be used as an ancillary space for the adjoining Rajbari stadium. Small vacant plots in the residential neighbourhood, west of the stadium will also be converted to household parks and gardens (0.03 acres to 0.17 acres) (**Map 10.3**).



**Map 10.3. Proposal 2**

1. Neighbourhood level playground
2. Household parks/gardens

### 10.88 PROPOSAL 1

'Cooch Behar House', a tourism and hospitality centre, has been proposed on 1 acre of land, in place of the Old Bus Depot on Sunity Road. This will include an information cell, banquet hall, guest rooms, and restaurant. It should be developed with a royal theme, serving a unique culinary experience, and would be a destination during the proposed heritage walk and heritage drive. In place of the present bus workshop, a recreational green space of 1.43 acres is proposed in the front portion of the workshop property, abutting the Sunity Road. In the rear 1.71 acres of the property, a shopping complex is proposed for gainful utilization of the prime land. The relocation of the transport land use would reduce the existing traffic congestion while both the proposed projects will improve the imageability of Sunity Road, being sympathetic to the surrounding heritage structures like the Cooch Behar Post Office, Cooch Behar Club, M.N.N. Hostel etc. **(Map 10.4).**

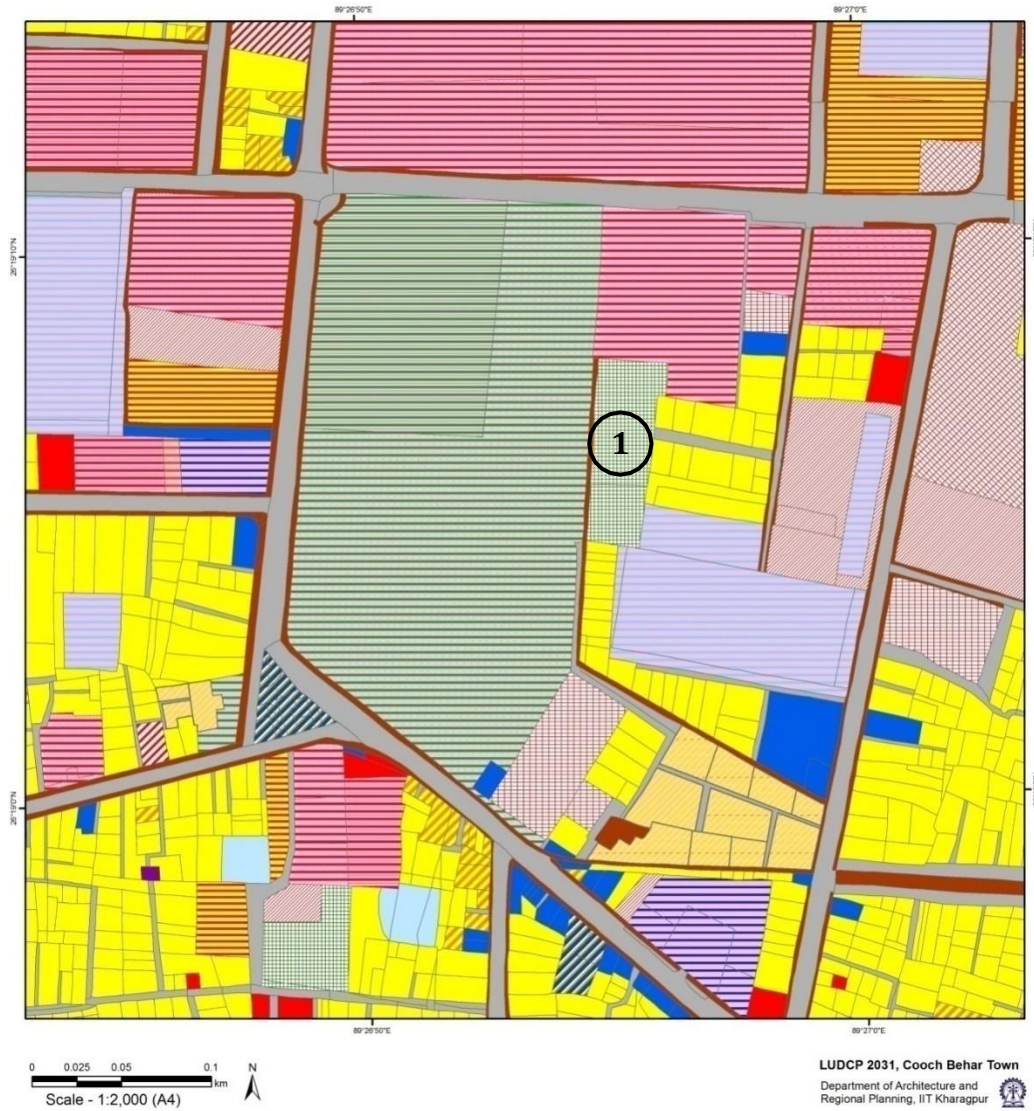


**Map 10.4. Proposal 3**

1. Cooch Behar House
2. Shopping complex with adjoining green space

## 10.4 PROPOSAL 4

A green space has been proposed on vacant land with an area of 0.85 acres adjoining the Rash Mela Ground. This would serve to host supportive public amenities and facilities especially required during the Raas festival (**Map 10.5**).

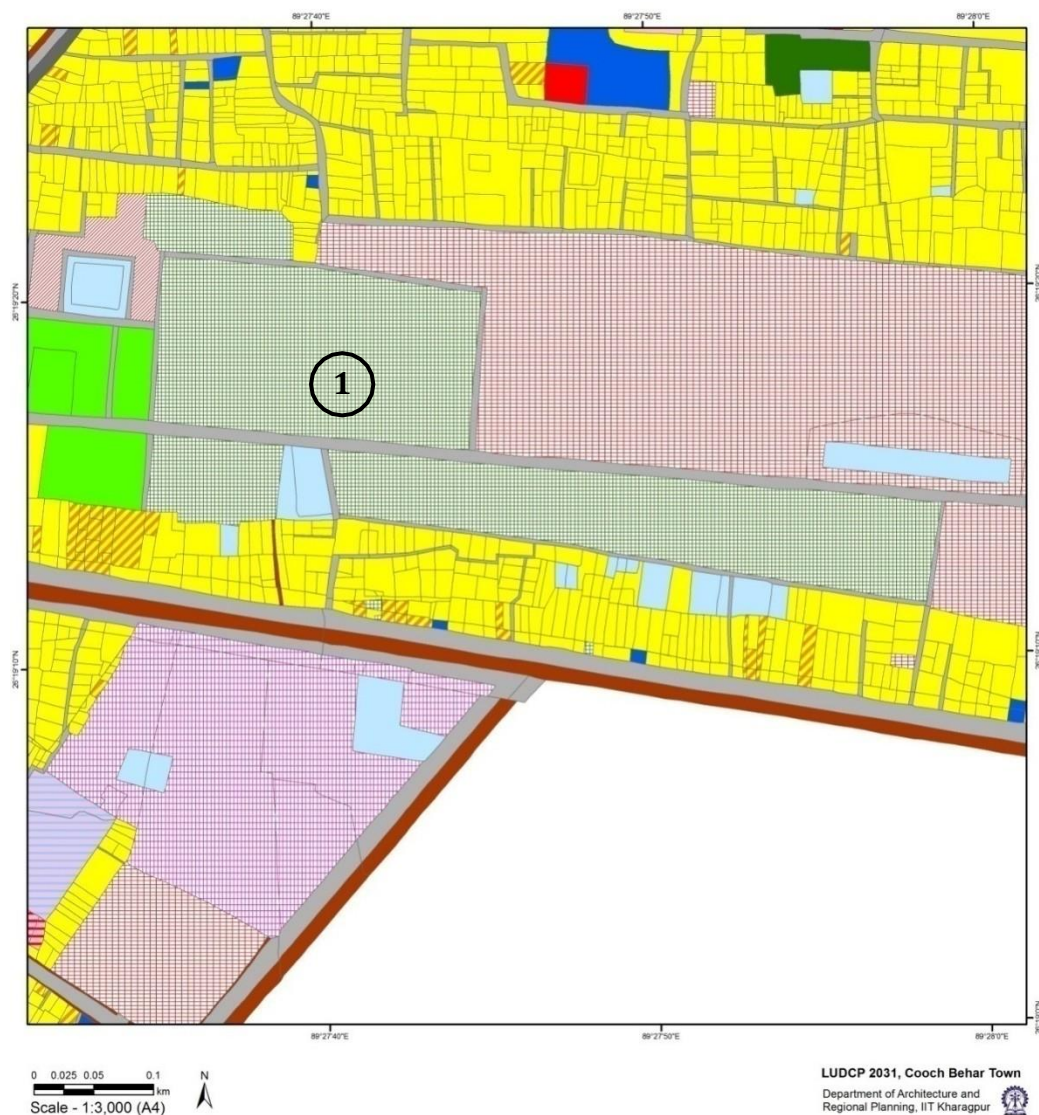


**Map 10.5. Proposal 4**

1. Green space: Extension of Raas Mela Ground activities and public facilities

## 10.90 PROPOSAL 1

An 'Eco-Park' with a convention centre is proposed on the agricultural land (2.29 acres) west of the Cooch Behar Panchanan Barma University. This will effectively preserve an important green lung space of the town, simultaneously promoting recreational and business activities generating revenues (**Map 10.6**).

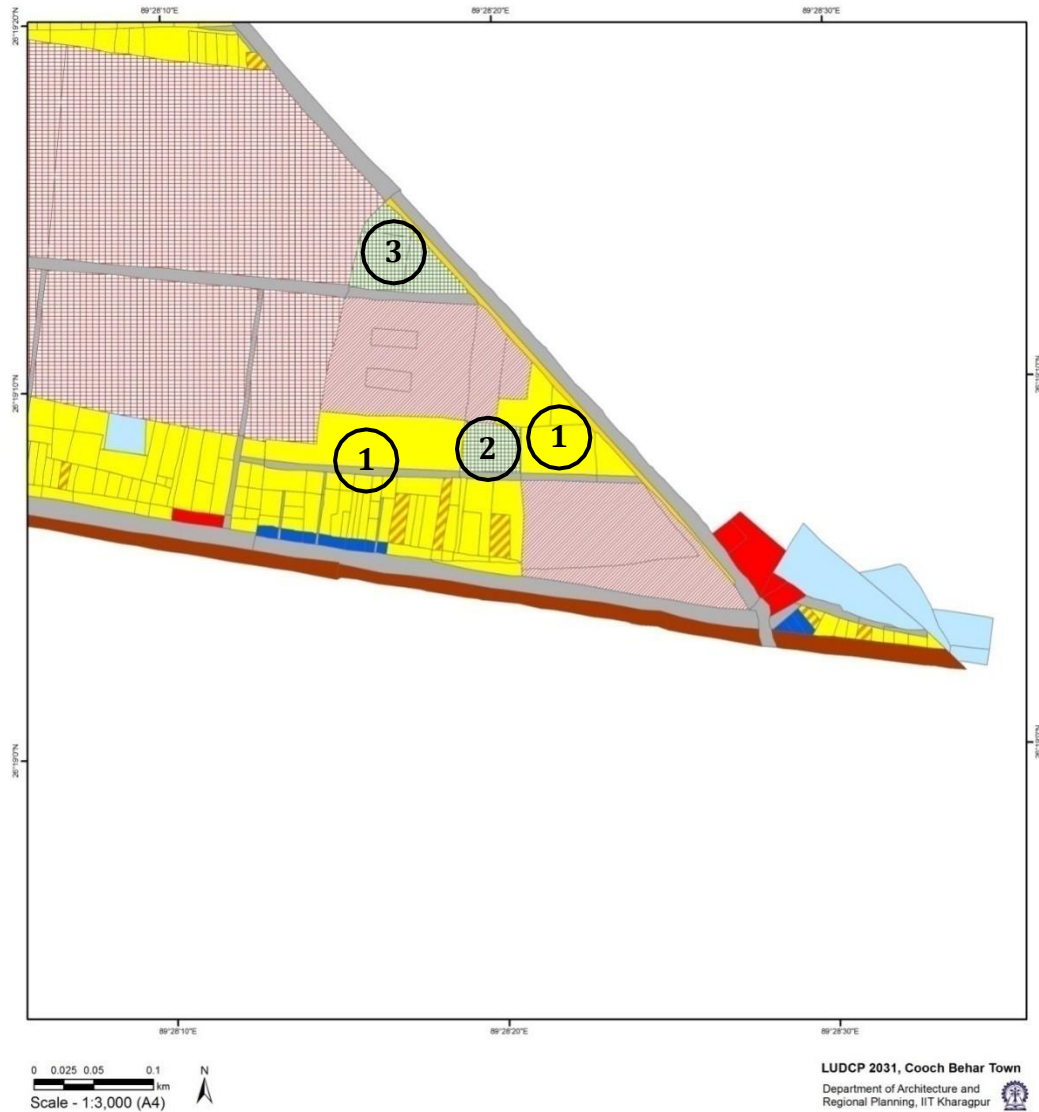


**Map 10.6. Proposal 5**

*1. Eco-Park*

## 10.6 PROPOSAL 6

A public housing is proposed on 3.8 acres of vacant public land that will rehabilitate the existing residential squatters along the Pilkhana Road. 6.5 m wide roads have been proposed to provide access to these land locked plots, while a green space (0.57 acres) has been proposed as household level playground. A multipurpose green space of 1.06 acres has been proposed adjoining the Cooch Behar University (**Map 10.7**).

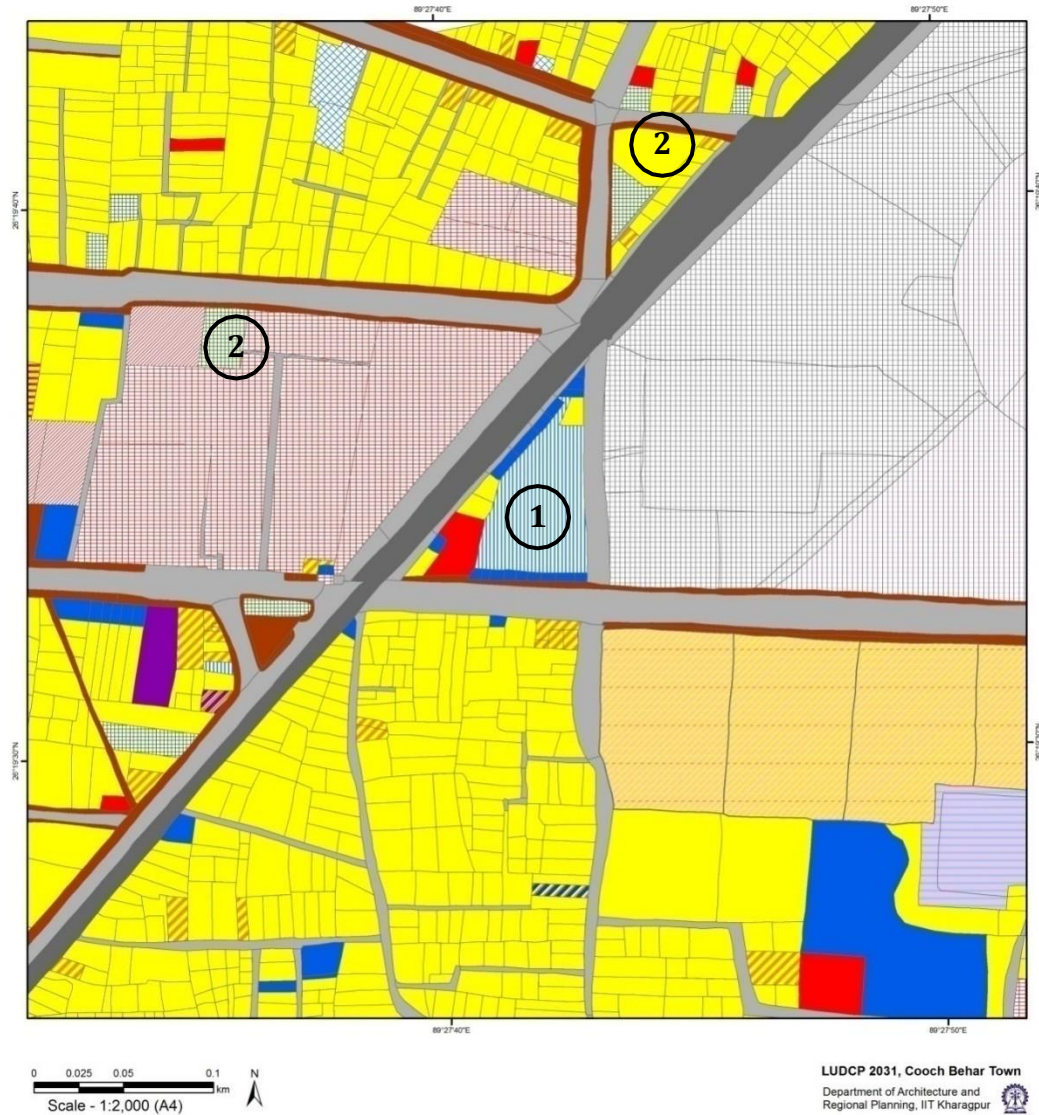


**Map 10.7. Proposal 6**

1. Public housing and Road
2. Household level playground
3. Multipurpose green space

## 10.92 PROPOSAL 1

A shopping complex with adjoining para-transit parking facilities is proposed on a public vacant land of 0.98 acres near the proposed fly over, west of the airport. This node will serve as a busy activity node in the future due to the adjoining inter-city bus route and flyover. The para-transit parking facilities will serve the passengers alighting from the intercity buses running on Assam road and Nara Narayan road. In the residential zone north-west of this plot, small vacant plots are converted to household parks and gardens (0.03 acres to 0.19 acres)(Map 10.8).



**Map 10.8. Proposal 7**

1. Shopping complex
2. Household level Parks/ gardens

## 10.8 PROPOSAL 8

A green strip has been proposed in public vacant land of 1.05 acres along the railway line, east of Gandhi Colony. Household parks and gardens have also been proposed (0.02 acres to 0.29 acres) in the Gandhi Colony residential areas (**Map 10.9**).



**Map 10.9. Proposal 8**

1. Green space
2. Household level parks/gardens



## APPENDIX: TRAFFIC SURVEY

### 1. Intersection I1: Rail Goomty Chowpathi

This intersection connects the Rup Narayan Road with the Nara Narayan Road near Rail Goomty. Nearby important landmarks include Cooch Behar Panchanan Barma University.

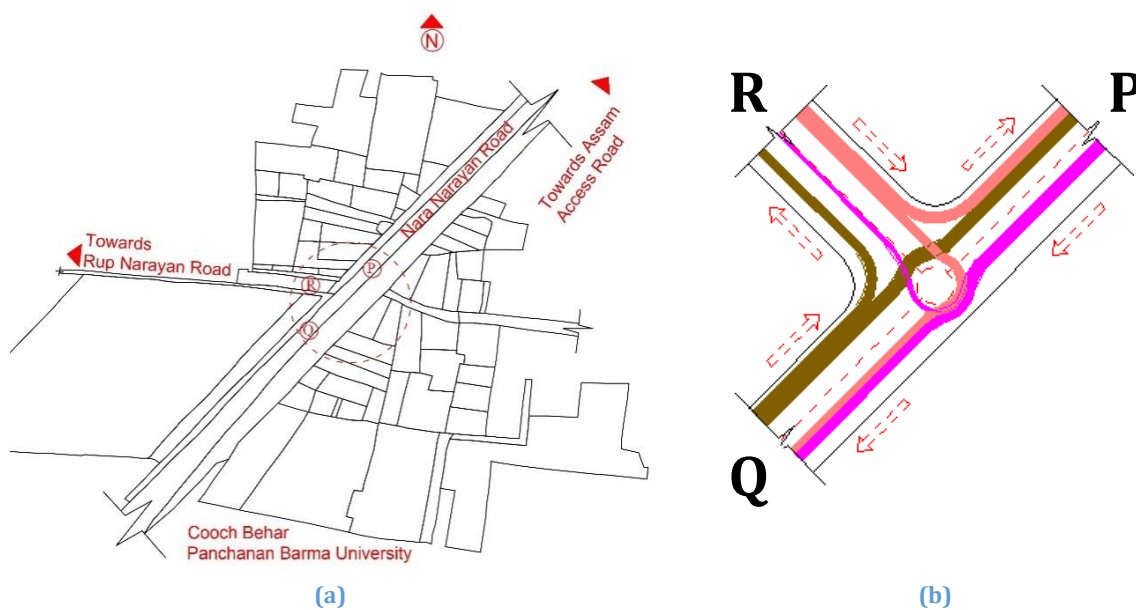


Figure 0.1.(a) Intersection I1: Rail Goomty Chowpathi, (b) Flow diagram of I1

Table 0.1. Vehicular volume and LOS of roads of intersection I1

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	572.85	1121.6	1694.4	35	1285	1.3	F
Q	989.5	786.65	1776.2	37	1285	1.4	F
R	858.1	512.25	1370.4	28	1285	1.1	F

## 2. Intersection I2: Station Chowpathi

This intersection connects Sunity Road with Nara Narayan Road. Nearby important landmarks include Station Chowpathi Bus Stop, Chilarai Barrack Dighi, Old Cooch Behar Station and Circuit House.

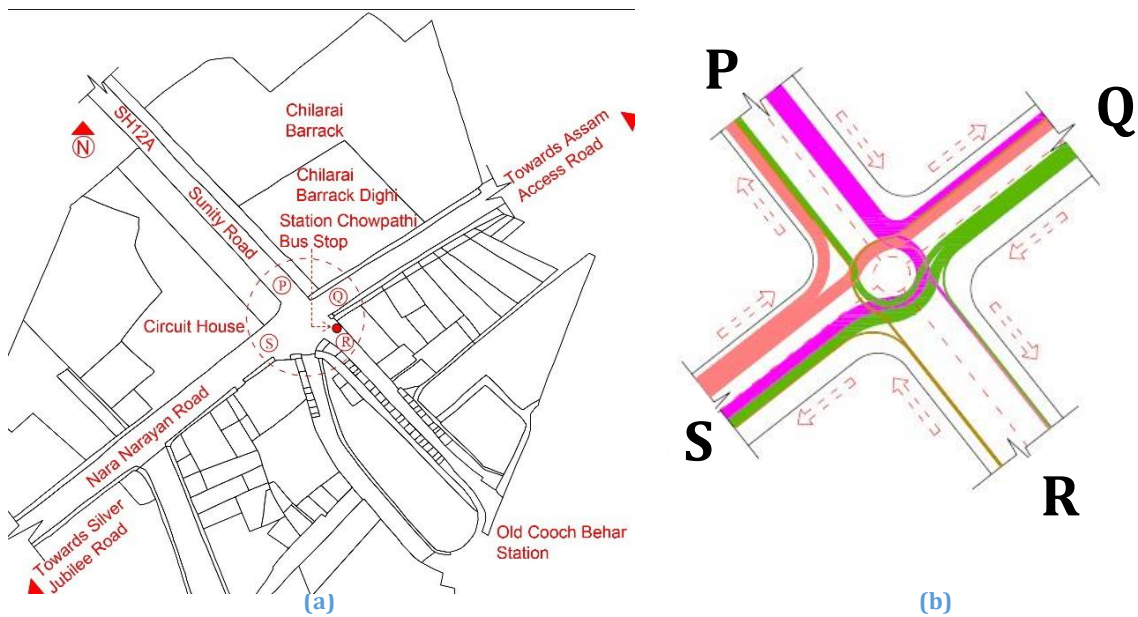


Figure 0.2.(a) Intersection I2: Station Chowpathi, (b) Flow diagram of I2

Table 0.2. Vehicular volume and LOS of roads of intersection I2

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	813.6	762.65	1576.3	28	1930	0.8	D
Q	834.8	883.3	1718.1	30	1285	1.3	F
R	100.8	159.1	259.9	5	1930	0.1	A
S	1066.65	1010.8	2077.5	37	1285	1.6	F

### 3. Intersection I3: Morapora Chowpathi

This intersection connects Nara Narayan Road and Bangachatra Road. Nearby important landmarks include Morapora Bus stop.

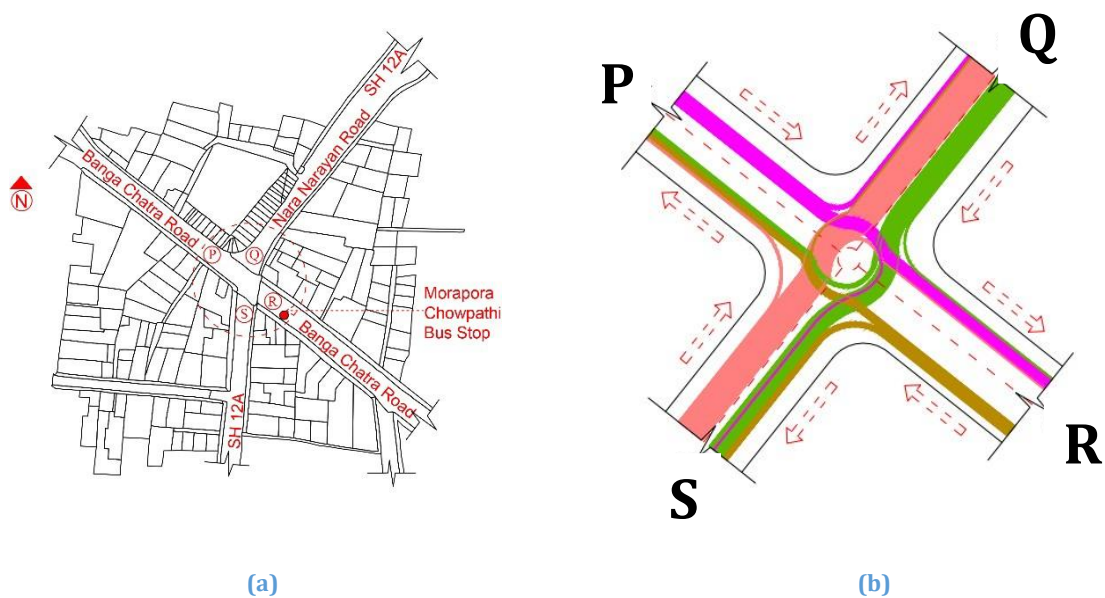


Figure 0.3.(a) Intersection I3: Morapora Chowpathi, (b) Flow diagram of I3

Table 0.3. Vehicular volume and LOS of roads of intersection I3

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	679.15	583.6	1262.8	19	1930	0.6	C
Q	928.3	1248.2	2176.5	32	1285	1.7	F
R	544.75	598.35	1143.1	17	1930	0.6	C
S	1218.95	941.05	2160	32	1285	1.7	F

#### 4. Intersection I4: Gunjabari More

This intersection connects Siliguri Road and Kameshwari Road. Nearby important landmarks are Cooch Behar Polytechnic and Dangar Aye Dighi.

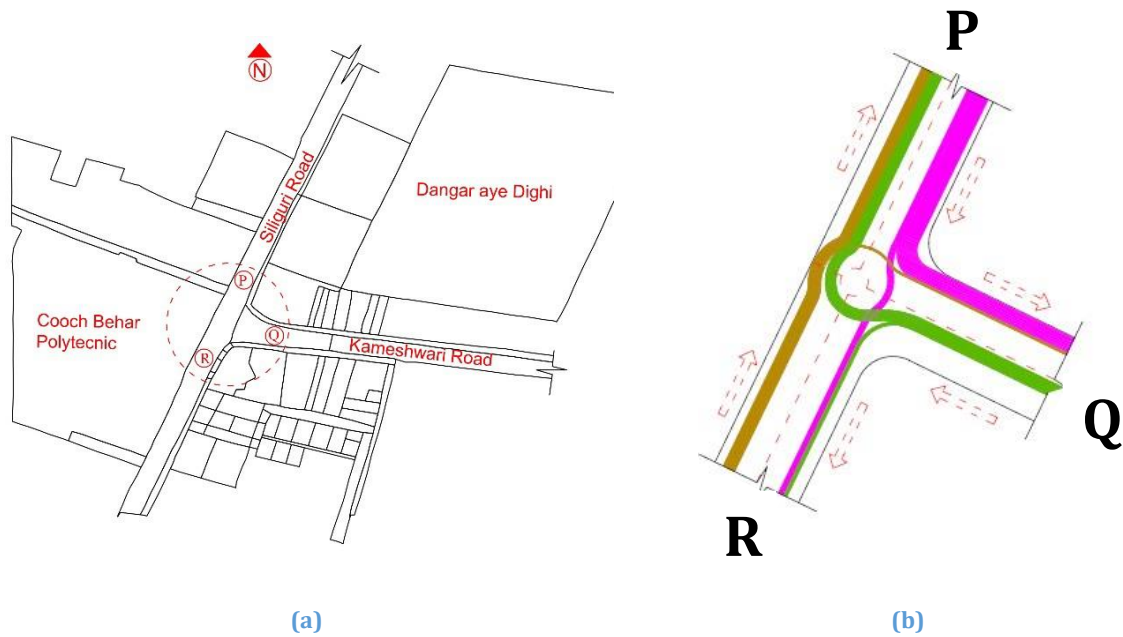


Figure 0.4.(a) Intersection I4: Gunjabari More, (b) Flow diagram of I4

Table 0.4. Vehicular volume and LOS of roads of intersection I4

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	1023.8	923.25	1947.1	45	1285	1.5	F
Q	579.25	817.6	1396.9	32	1285	1.1	F
R	566.7	428.9	995.6	23	1285	0.8	D

### 5. Intersection I5: NBSTC More

This intersection connects Siliguri Road and Shivendra Narayan Road and RN Road. Nearby important landmarks are NBSTC Bus Stand and Mini Bus Stand.

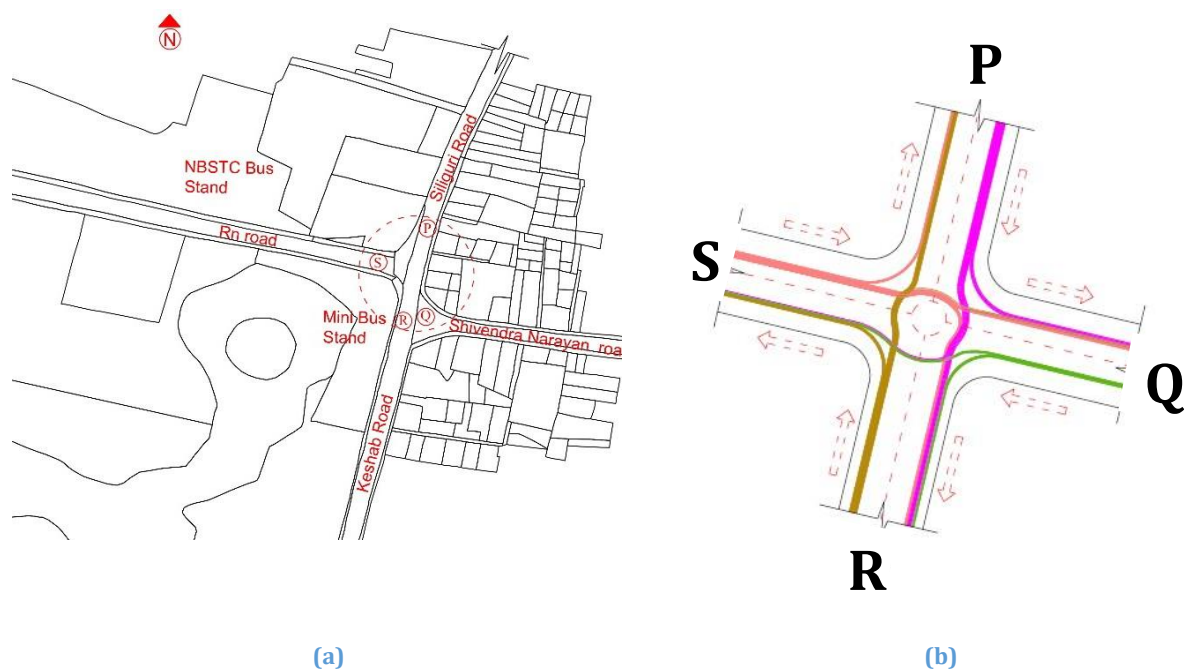


Figure 0.5.(a) Intersection I5: NBSTC More, (b) Flow diagram of I5

Table 0.5. Vehicular volume and LOS of roads of intersection I5

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	483.8	328.45	812.25	28	1285	0.6	C
Q	210.05	356.2	566.25	19	1930	0.3	B
R	402.35	507.95	910.3	31	1285	0.7	C
S	360.7	264.3	625	22	965	0.6	C

## 6. Intersection I6: NN Road and Silver Jubli Crossing

This intersection connects Nipendra Narayan Road and Silver Jubli Road. Nearby important landmarks are Shiv Dighi, Old Water Reservoir and NN Park.

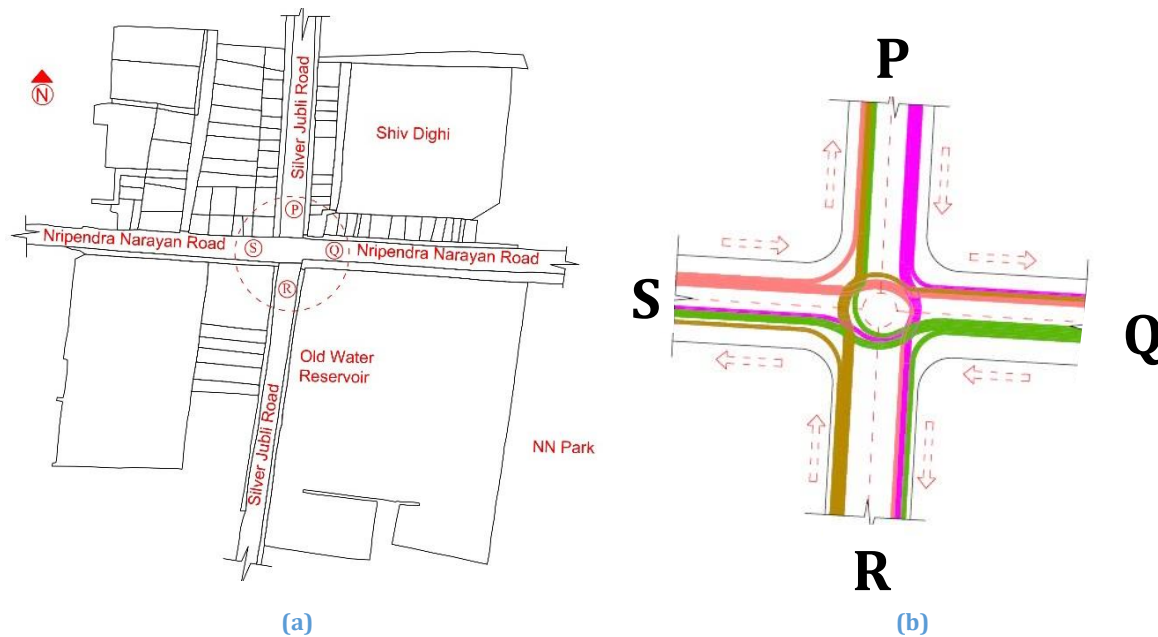


Figure 0.6.(a) Intersection I6: NN Road and Silver Jubli Crossing, (b) Flow diagram of I6

Table 0.6. Vehicular volume and LOS of roads of intersection I6

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	675.3	688.2	1363.5	26	1930	0.7	C
Q	742.95	567.95	1310.9	25	1930	0.7	C
R	613.65	693.55	1307.2	25	1930	0.7	C
S	595.75	677.95	1273.7	24	1930	0.6	C

## 7. Intersection I7: Harishpal Chowpathi

This intersection connects Sunity Road and BiswaSingha Road. Nearby important landmarks are HasishpalChowpathi Bus stop, LalDighi, MJN Hospital and KoyediKhora Dighi.

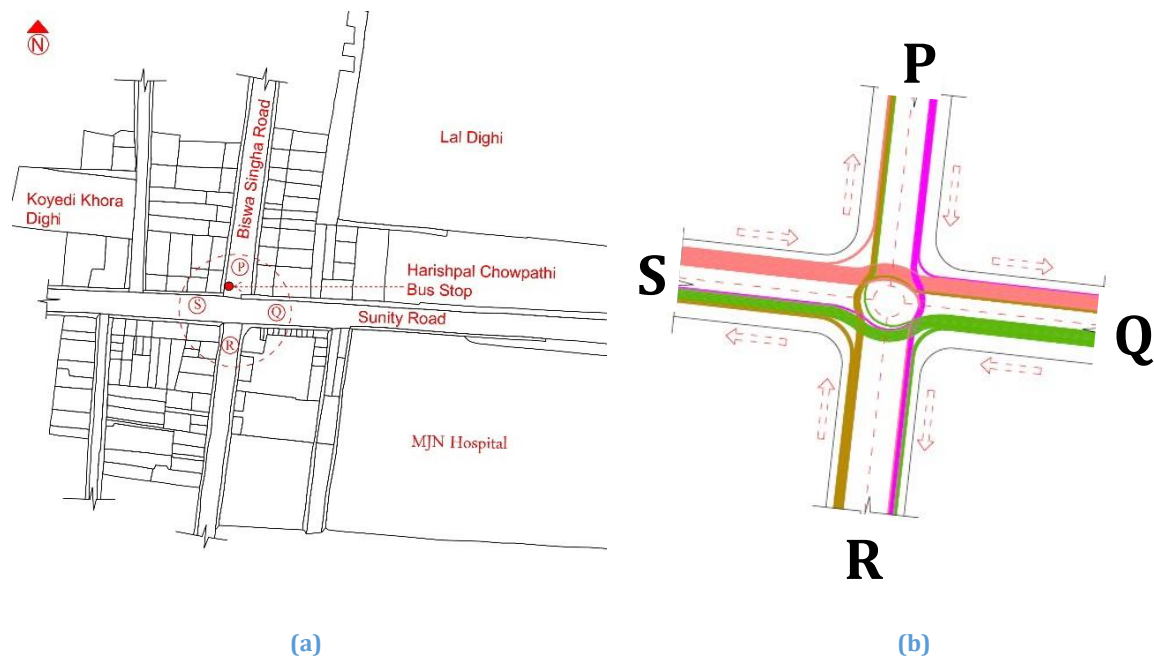


Figure 0.7.(a) Intersection I7: HarishpalChowpathi, (b) Flow diagram of I7

Table 0.7. Vehicular volume and LOS of roads of intersection I7

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	381.2	619.55	1000.8	20	1285	0.8	D
Q	720.05	841.85	1561.9	31	1930	0.8	D
R	507.15	429.6	936.75	18	1285	0.7	C
S	864.55	744.3	1608.9	31	1930	0.8	D

## 8. Intersection I8: Kachari More

This intersection connects Sunity Road with Keshab Road, the two major roads running through the town. Nearby important landmarks are the Kachari More Bus Stop, SagarDighi, Cooch Behar Stadium, SDO Office, Mustofi House 2.

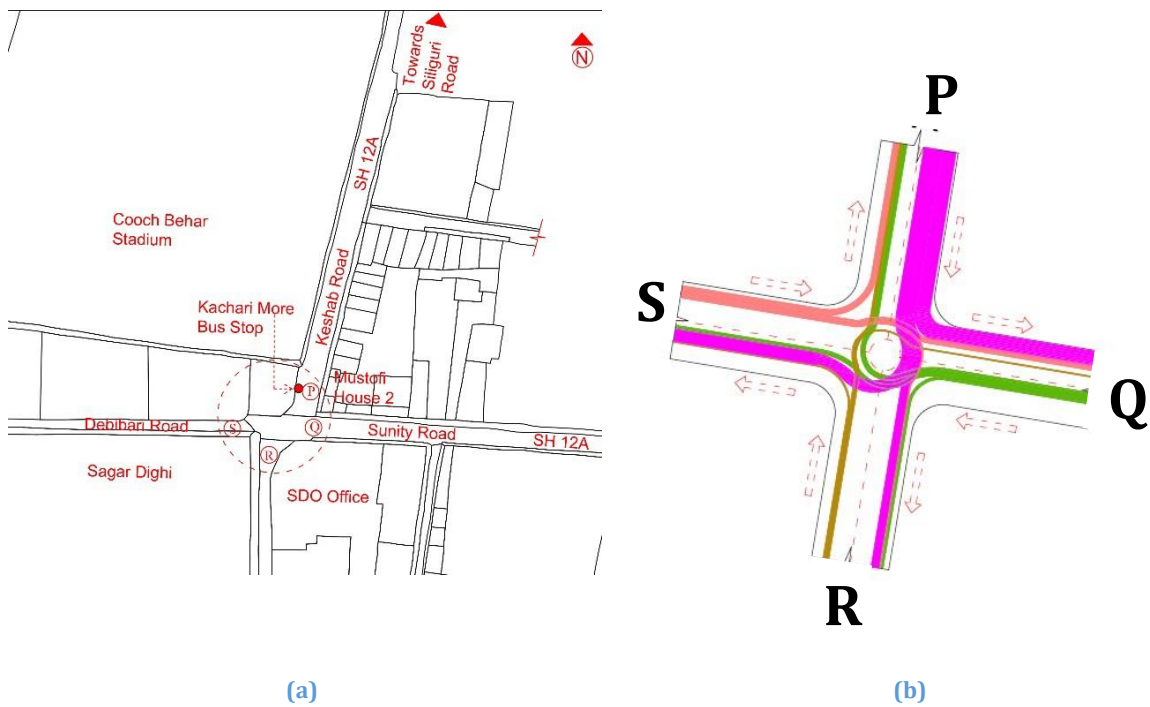


Figure 0.8.(a) Intersection I8: Kachari More, (b) Flow diagram of I8

Table 0.8. Vehicular volume and LOS of roads of intersection I8

ROAD ARM	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	PERCENTAGE	CAPACITY (C)	V/C	LOS
P	1611.5	674	2285.5	37	1285	1.8	F
Q	553.55	1001.7	1555.2	25	1930	0.8	D
R	305.2	591	896.2	14	1285	0.7	C
S	640	844.4	1485.2	24	1285	1.1	F

### 9. Cordon point: C1

This point is taken on Siliguri Road in front of Maharaja Nursing Home.

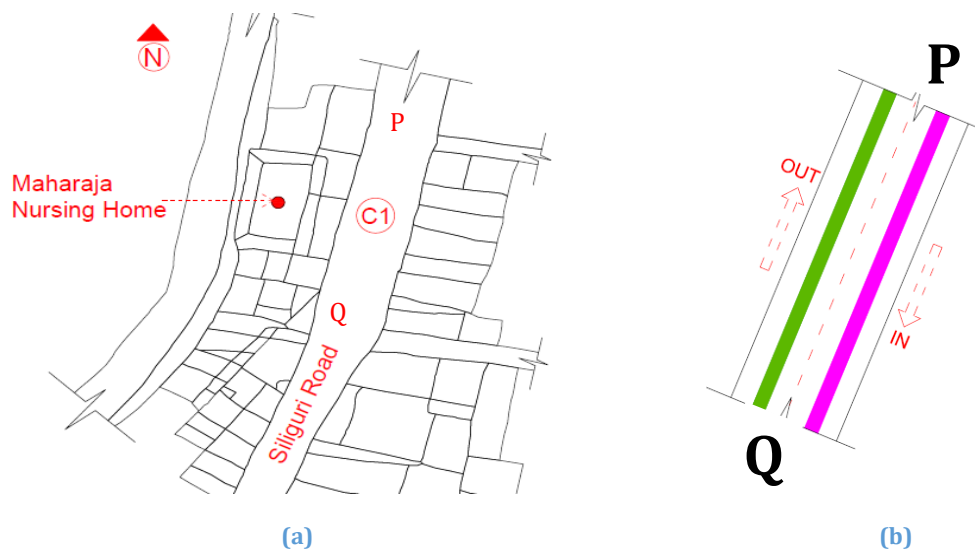


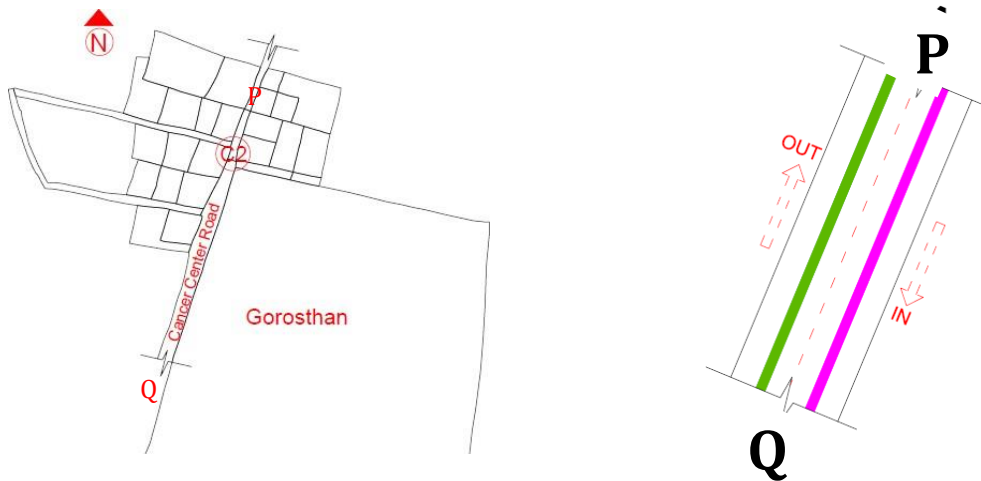
Figure 0.9.(a) Cordon Point C1, (b) Flow diagram of C1

Table 0.9. Vehicular volume and LOS of road with Cordon Point C1

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C1	926.15	1123.2	2049.3	1285	1.6	F

#### 104. Cordon point:

This point is taken on Cancer Centre Road in front of Gorosthan Boundary Wall.



(a) (b)  
Figure 0.10.(a) Cordon Point C2, (b) Flow diagram of C2

Table 0.10. Vehicular volume and LOS of road with Cordon Point C2

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C2	67.9	61.9	129.8	965	0.1	A

### 11. Cordon point: C3

This point is taken on Assam Access Road in front of the bridge on BuraTorsa.

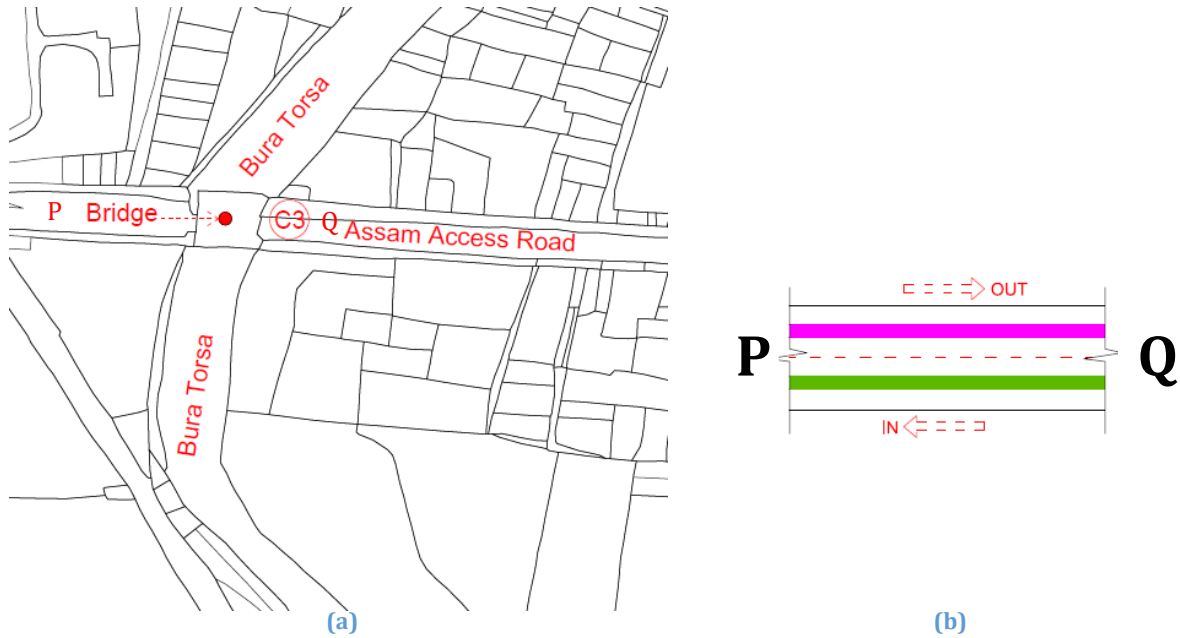


Figure 0.11.(a) Cordon Point C3, (b) Flow diagram of C3

Table 0.11. Vehicular volume and LOS of road with Cordon Point C3

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C3	966.8	960.65	1927.5	2570	0.7	C

### 106. Cordon point:

This point is taken on Ashram Road near Chakir Bazar.

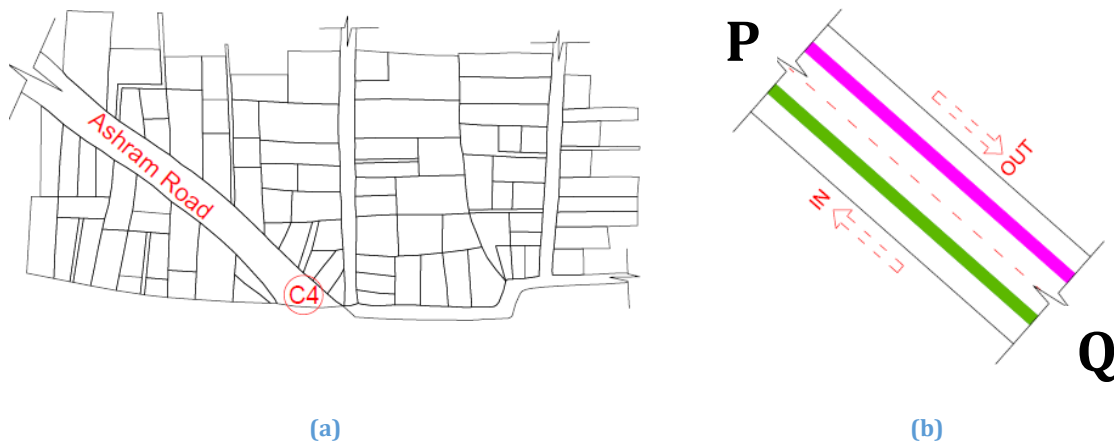


Figure 0.12.(a) Cordon Point C4, (b) Flow diagram of C4

Table 0.12. Vehicular volume and LOS of road with Cordon Point C4

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C4	262.05	294.75	556.8	965	0.6	C

### 13. Cordon point: C5

This point is taken on Bandh Road in front of the bridge on Mora Torsa.

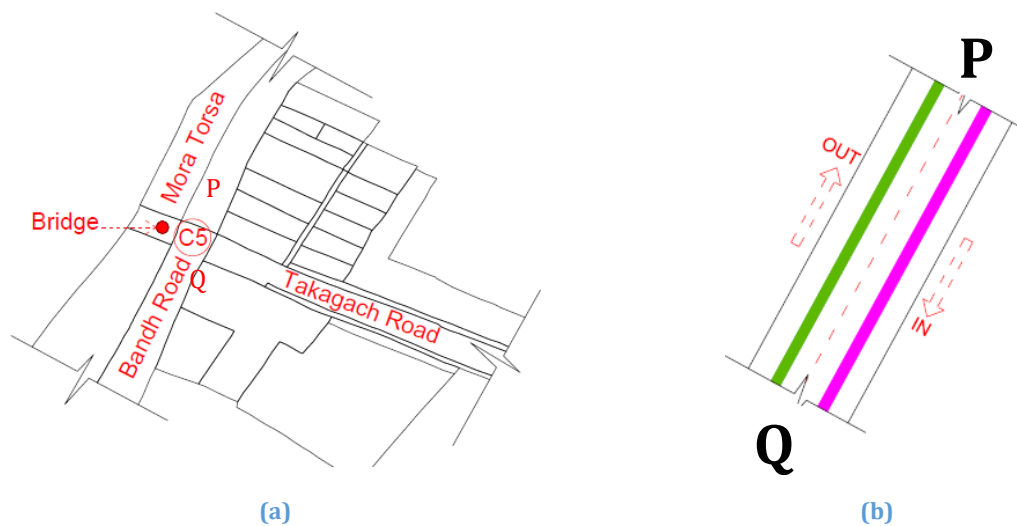


Figure 0.13.(a) Cordon Point C5, (b) Flow diagram of C5

Table 0.13. Vehicular volume and LOS of road with Cordon Point C5

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C5	111	198.65	309.65	965	0.3	B

#### 14. Cordon point: C6

This point is taken on Bangachitra Road in front of the Rail Gate crossing.

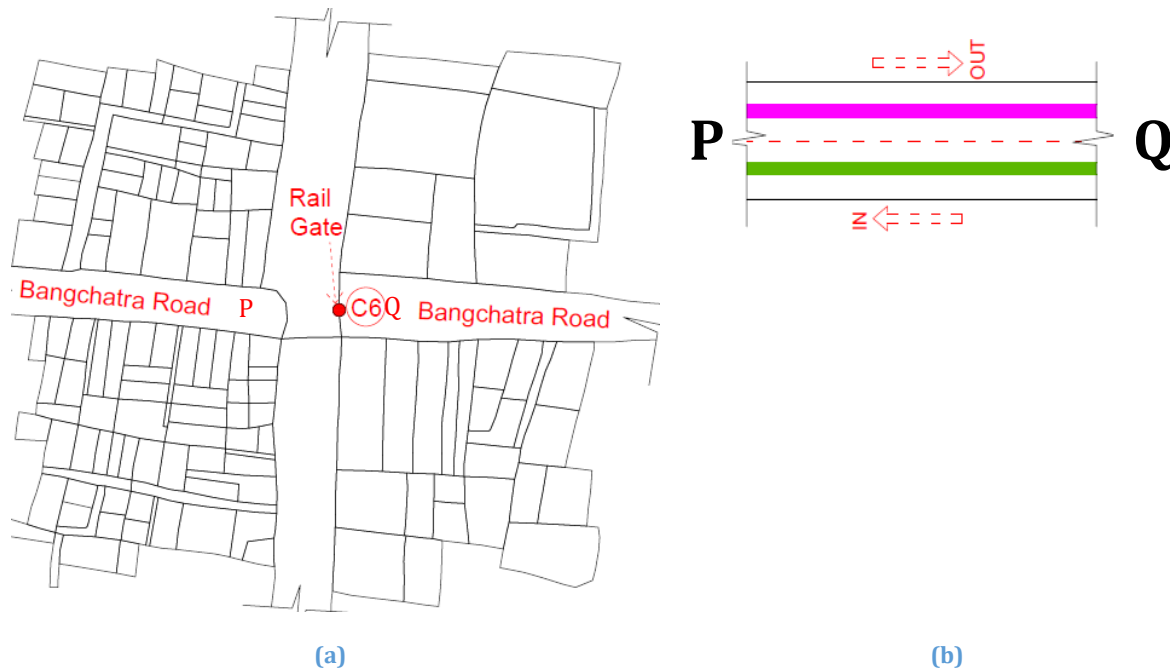


Figure 0.14.(a) Cordon Point C6, (b) Flow diagram of C6

Table 0.14. Vehicular volume and LOS of road with Cordon Point C6

POINT	PCU / hr (OUT)	PCU / hr (IN)	TOTAL (V) VOLUME/hr	CAPACITY (C)	V/C	LOS
C6	296.8	405.4	702.2	1930	0.3	B



**Inside Back Cover**

# Draft Land Use and Development Control Plan, 2031 Cooch Behar Municipal Area

*prepared by*



**Cooch Behar Planning Authority & Cooch Behar  
Municipality**