

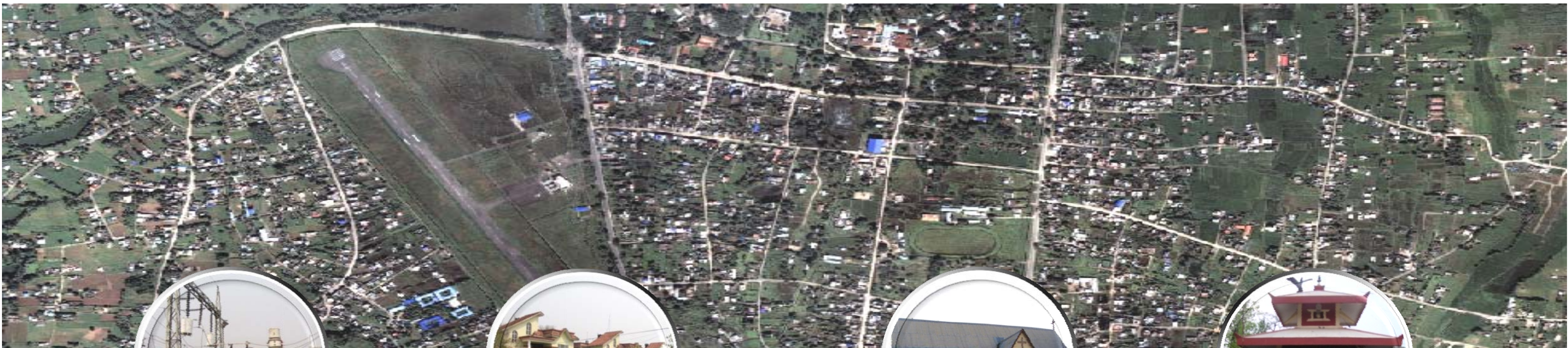


Government of Nepal  
Ministry of Physical Planning and Works  
Dept. of Urban Development and Building Construction  
Urban Environment Improvement Project

## URBAN AND ENVIRONMENTAL IMPROVEMENT PROJECT

Loan No. 1966 NEP (SF)

### Resource Maps and Spatial Profile of Bharatpur Municipality



Report Volume 5

June 2008



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GoN/Department of Urban Development and Building Construction  
Urban Environment Improvement Project

Bharatpur Municipality  
Bharatpur, Chitwan

## **Resource Maps and Spatial Profile of Bharatpur Municipality**

Report Volume 5

June 2008

This document presents the resource maps and spatial profile of Bharatpur Municipality in map book form. This document and maps has been prepared for the project “Preparation of Urban Base Maps and Supply of Computer Hardware for Bharatpur Municipality” undertaken by the Department of Urban Development and Building Construction/Urban Environment Improvement Project under Asian Development Bank’s “Loan No. 1966-NEP (SF)” by Genesis Consultancy (P) Ltd. for DUDBC/UEIP. The opinions and findings expressed herein are those of the authors/Consultant and do not necessarily reflect those of DUDBC/UEIP.

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### **Cover Illustration**

Background: Quickbird satellite imagery of East West Highway along Bharatpur Municipality

Photos: Power Station, Quarters of B.P. Memorial Cancer Hospital, Bharatpur Baptist Church, Ganesh Mandir

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## Section 1

# INTRODUCTION

### 1.1 Introduction

Resource maps literally show the resources of an area portraying the physiography, natural resources, infrastructure, environment, cultural and heritage and others on maps. This provides valuable information to a planner, manager and administrator to plan for the sustainable development and effective management of an area. The Local Self Governance Act 2055, under clause 44 has directed preparation of resource maps<sup>1</sup> and the Local Self Governance Regulation 2056, under clause 64 has provided guidelines for the preparation of the resource maps. Resource maps present the ground situation of the aforementioned bio-physical and infrastructural aspects typically in an individual thematic map for each aspect.

This municipal spatial profile and resource maps present the current situation of Bharatpur Municipality. The resource maps show the general overview of the bio-physical and infrastructure resources of the municipality. The spatial profile shows an overview of the spatial distribution of physical infrastructure, natural resources, environment and others at ward level.

The resource maps and spatial profile has been prepared from the GIS database of the urban base map and socio-economic surveys prepared under the project and other secondary sources.

### 1.2 Outline

This report and map book is presented in three sections viz. the first section with chapter 1 contains the general introduction and outline of this document. The second section presents the resource maps categorized into four themes- administrative, physiography and environment, infrastructure and population in four chapters. The third section presents the ward spatial profiles showing the physiography, environment and infrastructure in each wards of the municipality.

### 1.3 Resource Maps

This map book presents the following resources maps along with their associated data:

- a. Administrative
  - Location map of Bharatpur Municipality
  - Municipal administrative units – ward map
- b. Physiography and Environment
  - Terrain relief map
  - Hydrography map
  - Land cover/land use map
- c. Infrastructure
  - Road network map
  - Electricity network map
  - Telecommunication network map
  - Water supply network map
  - Sewerage Network
  - Infrastructure services map
  - Cultural heritage and tourism map
- d. Population
  - Population distribution map
  - Population density map
  - Population proportion map (male-female ratio)

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<sup>1</sup> At VDC level, which is applicable to the municipalities as well

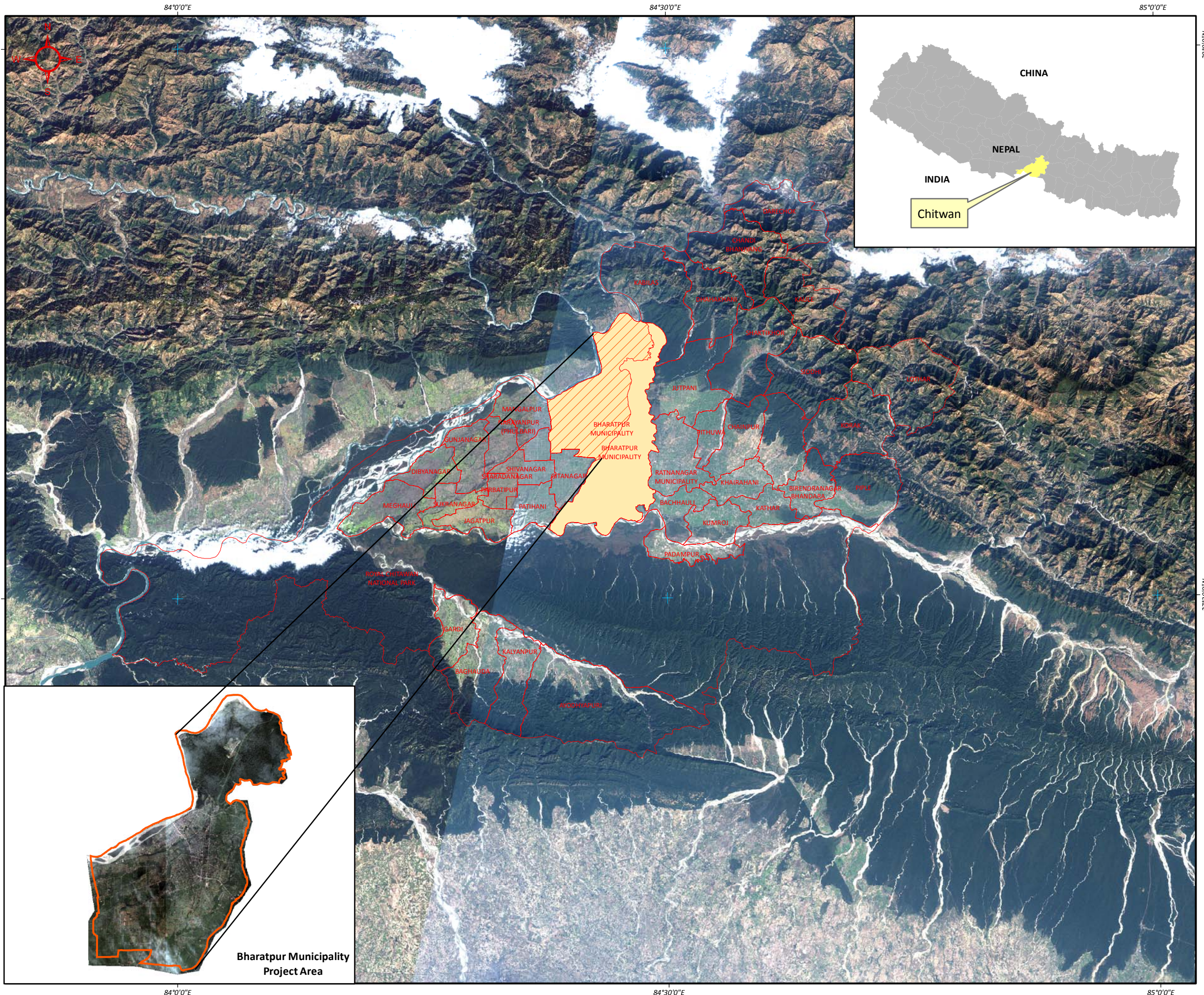
## Section 2

### Resource Maps

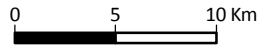
#### 2.1 Location

Bharatpur the largest urban centre among the urban centres of the Inner Tarai districts of Nepal is situated on the left bank of the Narayani River. It is the district headquarters of Chitwan district. It has developed as an important religious and commercial centre. It is located to the south-east of the holy religious place, Devghat, situated at the confluence of the Kali Gandaki and the Trisuli rivers, from where Narayani River originates.

Spatially the municipality is located in between the longitude 84° 22' 31" East to 84° 29' 05" East and latitude 27° 37' 33" North to 27° 45' 35" North. The total area of the municipality is 162.17 sq. km (16217 hectars); project area is 77.89 sq. km (7789hectars) whereas the total urban area (existing and planned) is about 52.70 sq. km (5270 Hectors). Bharatpur lies 146 Km west of Kathmandu, 130 Km east of Bhairahawa, 83 kilometres west of Hetauda and 132 Km west of Birjung along the East-West Highway on the bank of Narayani River. Bharatpur is surrounded by the Narayani River in the north, the Chitwan National Park in the south, Mangalpur VDC, Phubari VDC, Gitanagar VDC and Patihani VDC in the west, Kabilash VDC, Jutpani VDC and Ratnanagar Municipality and Bachhyauli VDC in the east. To the east of Bharatpur municipality exists a narrow strip of the forest of the Chitawan National Park extending from south to the north.  
*[Refer Map 1]*



**Bharatpur Municipality  
Location Map**



**Horizontal Datum**

Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

**Notes**

This map shows the location of Bharatpur Municipality in Chitwan District. The background image is LANDSAT ETM+, 2001 (Bands 3,2,1)

The top-right inset shows the location of Chitwan District in the country map.

The bottom-left inset shows Bharatpur Municipality with QuickBird Satellite Imagery as background.

- Legend**
- Project Area
  - Bharatpur Municipality
  - VDC Boundary





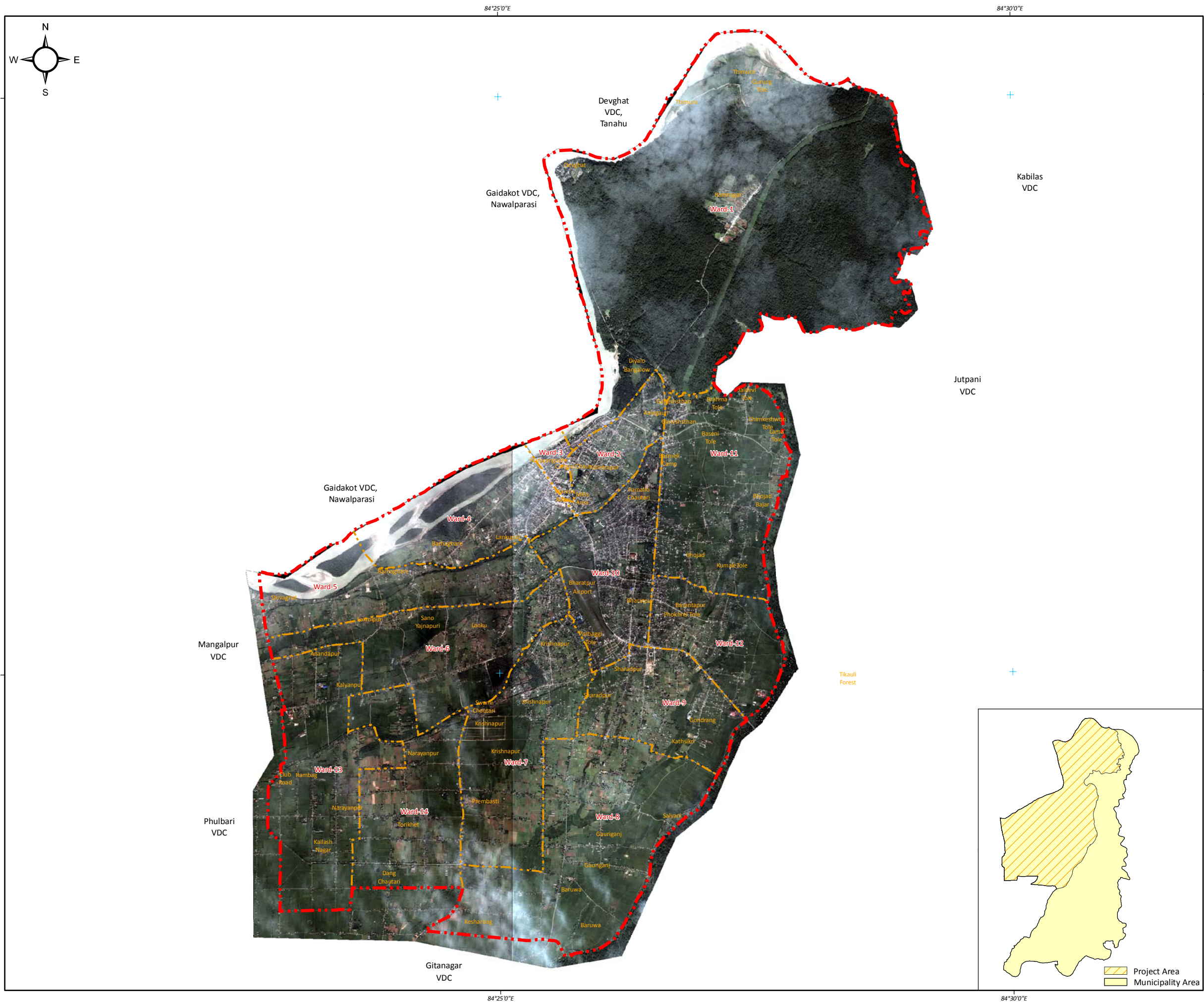
## 2.2 Administrative Units

Bharatpur municipality is divided into fourteen administrative wards. The municipality lies in electoral constituency no. 2 of Chitwan district with total voters of 78,091 according to the Election Commission, 2007.

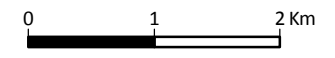
Among the wards, ward 1 is the largest with total area of 23.17 sq. km covering acreage of 29.74%. Wards 8, 11 and 13 are the second, third and fourth largest wards with areas of 8.03 sq. km, 5.90 sq. km and 5.64 sq. km respectively. Ward 3 is the smallest ward with an area of 0.47 sq. km with 2.26 % acreage. [Refer Map 2]

Table 1: Area coverage by wards

Wards	Area (sq.km)	% Acreage
1	23.17	29.74
2	1.76	2.26
3	0.47	0.60
4	3.99	5.12
5	4.03	5.17
6	4.81	6.18
7	5.21	6.68
8	8.03	10.31
9	3.40	4.36
10	3.94	5.05
11	5.90	7.57
12	2.96	3.80
13	5.64	7.24
14	4.60	5.90



# Bharatpur Municipality Administrative Ward Map



**Horizontal Datum**

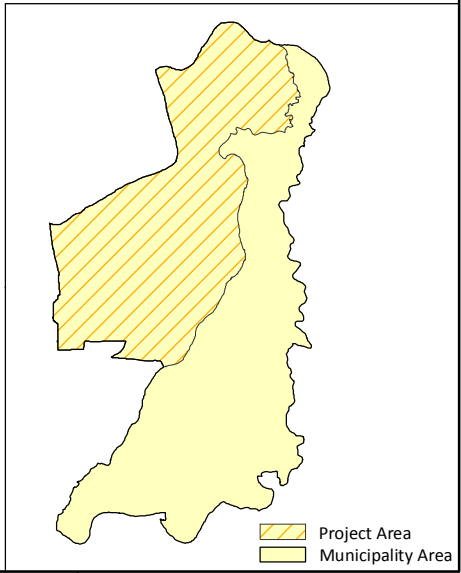
Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

**Notes**

This map shows the administrative wards of Bharatpur Municipality. The municipal and ward boundaries are based on updated information from the municipality personnel and is verified on the ground.

Background Map: QuickBird Satellite Imagery of Bharatpur Municipality (Acquisition Date: September 23, 2007).

- Legend**
- - - Project Boundary
  - - - Ward Boundary
  - Bharatpur Place Name
  - Ward-1 Ward Number





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Project Implementation Unit  
Bharatpur, Chitwan



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### 3.1 Physiography

As Bharatpur is situated on the bank of the Narayani river and the topography is composed of the alluvial soils deposited by the Narayani river, the altitude of Bharatpur municipality ranges from 181 metres above sea level near Shivaghat in the south west to 271 metres above sea level near Ramnagar in the north. As the land of Bharatpur has been formed by fluvial deposits, the land is flat near the river banks and gradually elevated towards the east and north.

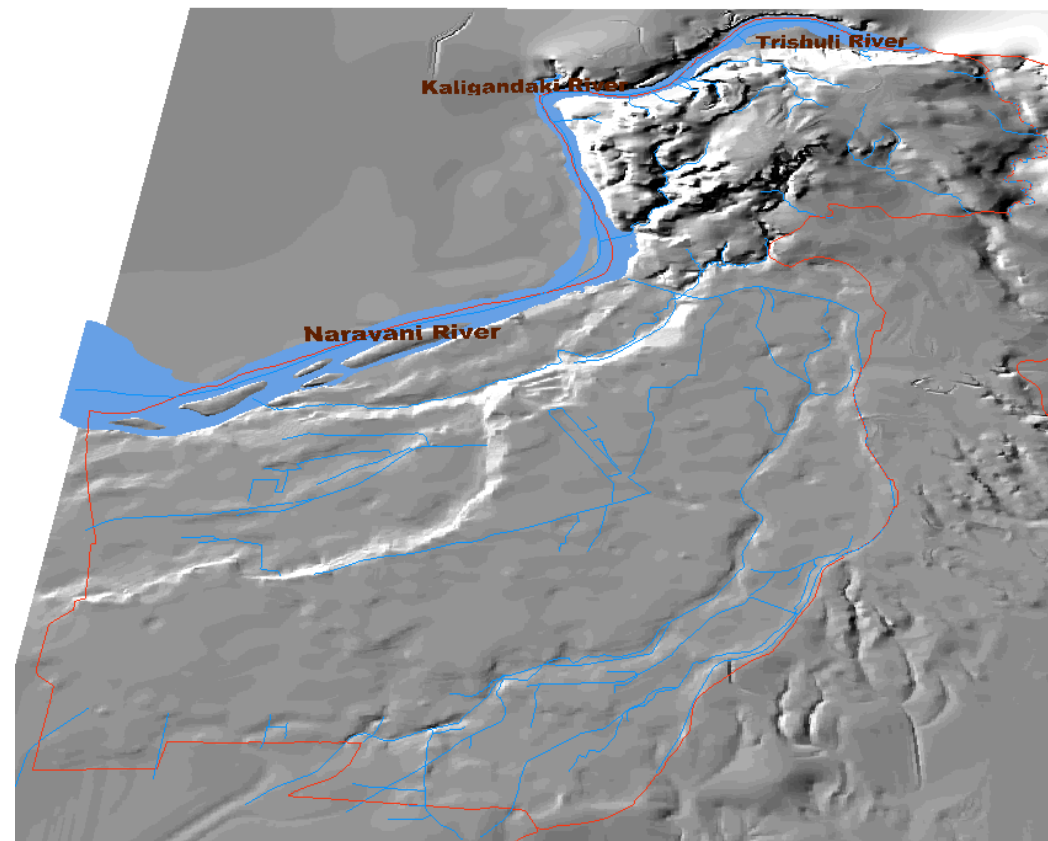
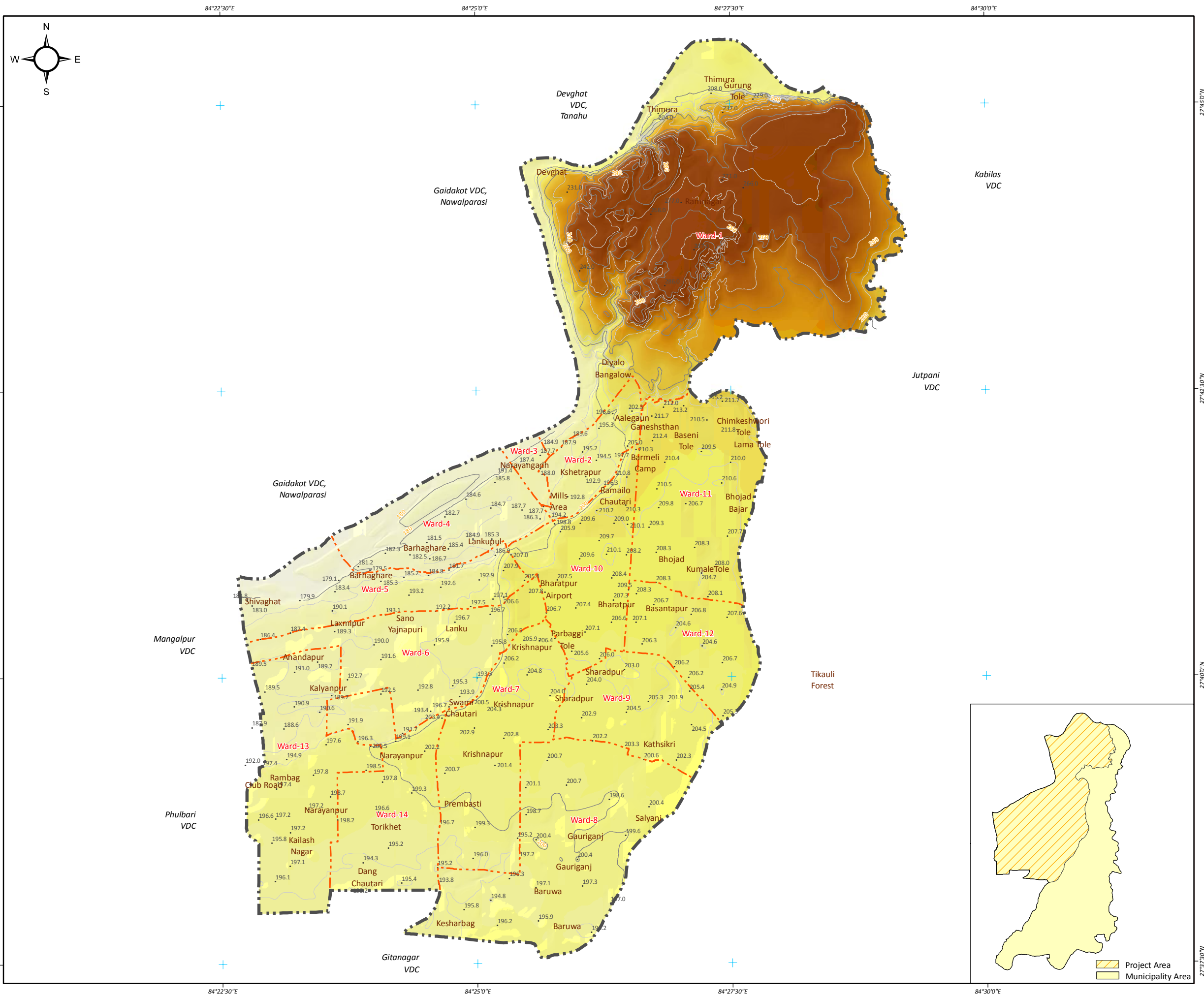
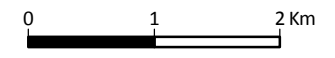


Figure 1: Physiography of Bharatpur Municipality



# Bharatpur Municipality Shaded Relief Map



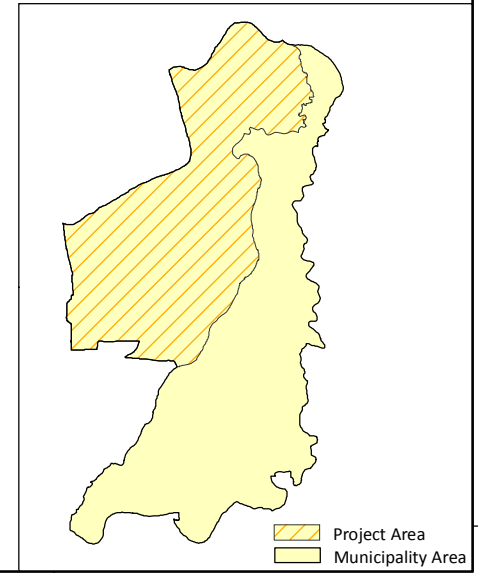
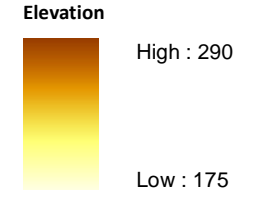
**Horizontal Datum**

Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

**Notes**

This map shows terrain relief in Bharatpur Municipality. This map is prepared using DEM created from 1m contour based on spot level survey for city core area and contours from 1:25,000 Topographic Map or the outer fringe areas.

- Legend**
- Project Boundary
  - Ward Boundary
  - Ward-1 Ward Number
  - Contour
  - Spot Heights



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### 3.2 Hydrography

Narayani River the major river of Bharatpur municipality flows on the right side of the municipality which acts as a border river between Gaidakot VDC of Nawalparasi District and the municipality. Trishuli River is the second major river of this municipality. It flows southward on the western side of the municipality and confluences with Kaligandaki river and converges with Narayani river. Trishuli River acts the border between Devghat VDC of Tanahu District and the municipality.

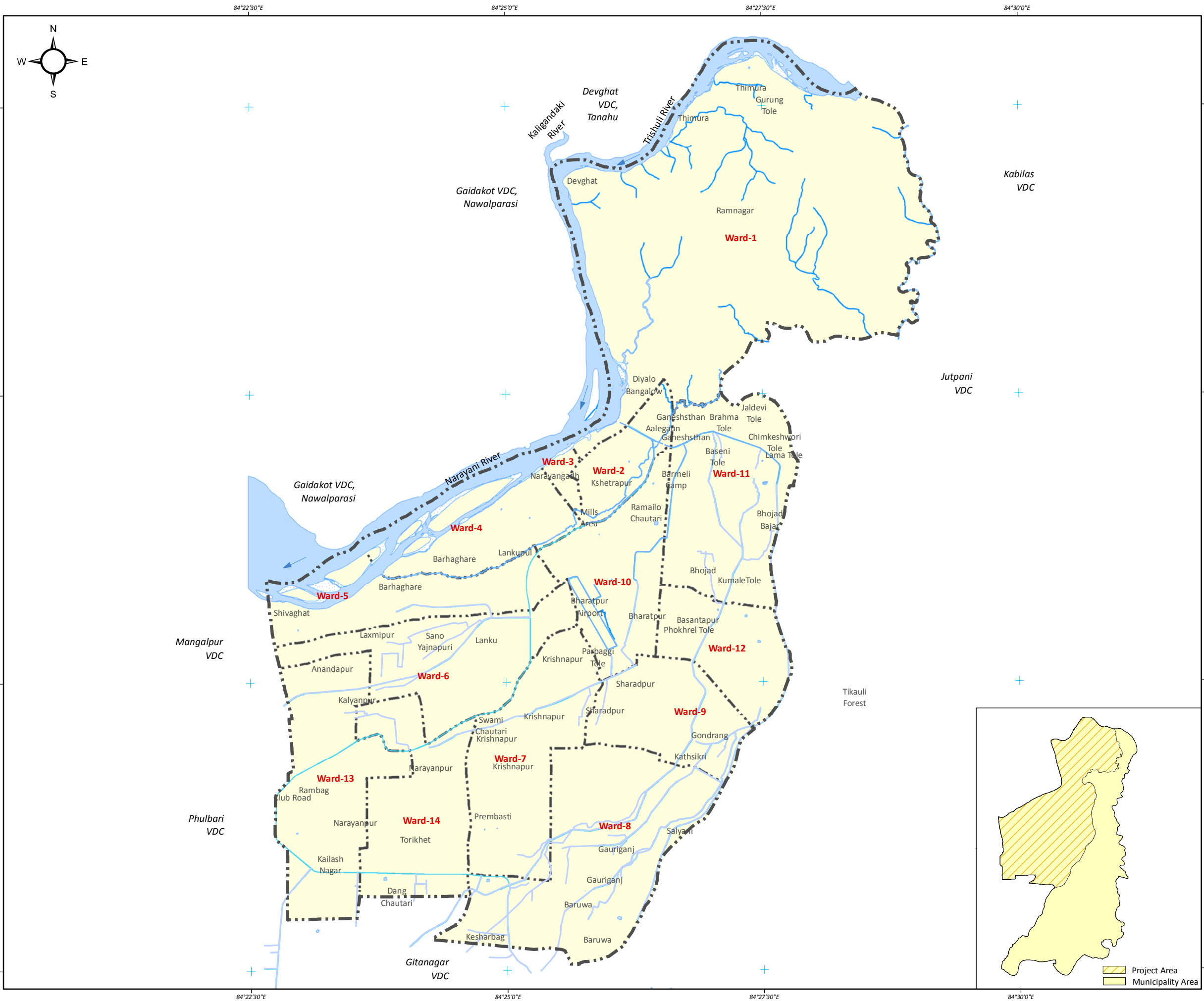
There are many small rivulets flowing within the municipality. These rivulets are seasonal and remain dry during winter and dry summer seasons. The water of the Narayani has been tapped through the lift irrigation system to the north of the bus station to Pokhara. The irrigation canal passes through the municipality and branches out in two directions, one to the south east and another to the south and south west providing irrigation to the agricultural lands in the municipality and adjoining VDCs before joining with the Rapti River and the Narayani River. [Refer Map 4]



Figure 2: Nayarani River



Figure 3: Narayani Lift Irrigation Pump House



### Bharatpur Municipality Hydrography Map



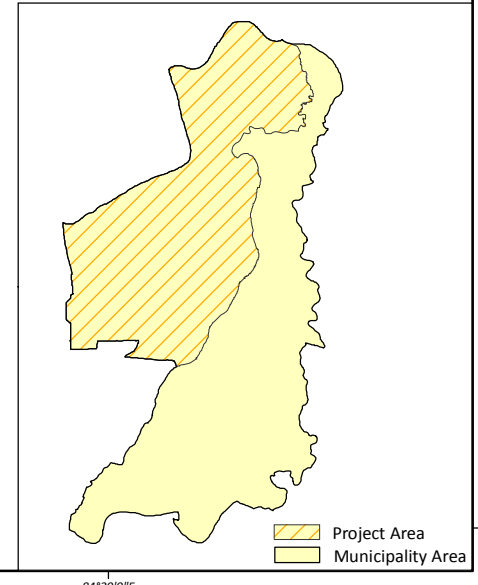
**Horizontal Datum**

Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

**Notes**

This map shows river systems and hydrography in Bharatpur Municipality and is based on Digital Base Map of Bharatpur Municipality, UEIP, 2008.

- Legend**
- Project Boundary
  - Ward Boundary
  - Kshetrapur Location Names
  - Ward-1 Ward Number
  - Sand Area
  - Pond
  - River
  - Stream
- Canal Type**
- Lined
  - Underground
  - Earthen



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### 3.3 Land Cover/ Land Use

Information of land cover/land use is based on the 0.6m QuickBird imagery of March 2007 presented in Map 5. Data reveals that cultivated land constitutes the largest land; covering an area 4424.64 ha i.e. 56.81 % of total project area. Vegetation such as forest, tree clusters, shrubs and bamboo ranks second land cover category with the coverage of 31.23% (2432.54 ha) of total project area. The third land cover category is built up area covers 5.01% (390.41 ha) of total project area. The built up area or the settlements are distributed along the Mahendra Rajmarg (East West Highway). Built up land cover is followed by water body which include rivers, rivulets, ponds and swimming pool with the coverage of 4.24% (330.36 ha) of the total project area.

Other land cover category such as grass area covers 77.83 ha (1%), orchard and nursery covers 65.19 ha (0.84%) and sandy area along the bank of rivers constitute 56.99 ha (0.73%) of total project area. In addition, wetland covers 5.91 ha (0.08%) and unused barren land including rocky outcrops constitute 4.27 ha (0.05%) of total project area. [Refer Map 5]

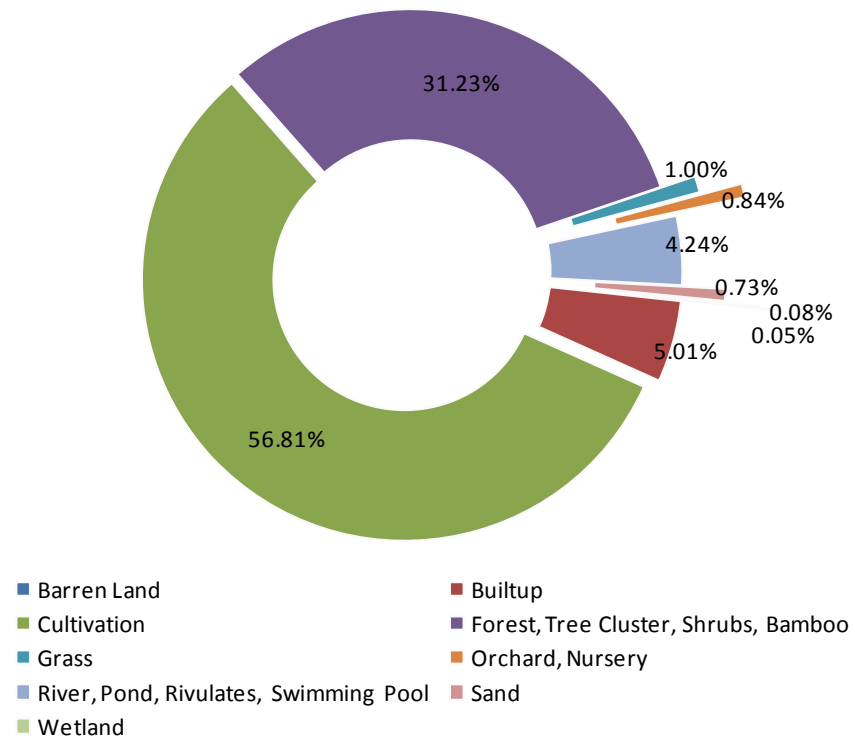


Figure 4: Distribution of Land Cover

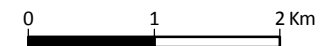


Figure 5: Cultivation is the Predominant Land Use Type



### Bharatpur Municipality

#### Landcover Map



#### Horizontal Datum

Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

#### Notes

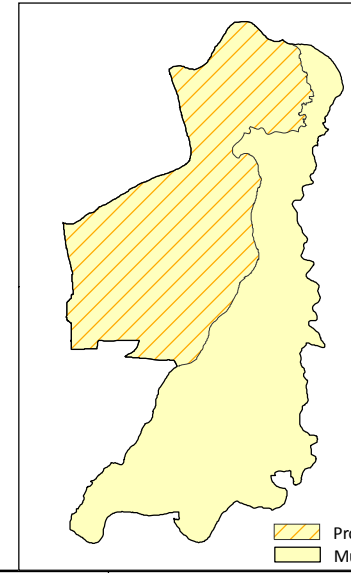
This map shows the land cover in Bharatpur Municipality and is based on 0.6m QuickBird imagery of September 2007.

#### Legend

- Project Boundary
- Ward Boundary
- Ward-1 Ward Number
- Bharatpur Location Names

#### Landcover

- Bamboo
- Barren Land
- Builtup
- Cultivation
- Forest
- Grass
- Nursery
- Orchard
- Plantation
- Pond
- Sand
- Shrubs
- Swimming Pool
- Tree Cluster
- Water Body
- Wetland





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#### 4.1 Road Network

The road network in the municipality is shown in Map 6. Bharatpur is centrally located in relation to the eastern part of Mahendra Rajmarg (East-West Highway). This municipality is well connected with major cities of country including Kathmandu with good road network.

The project area has a total road length of 537.11 km. Out of total road length; most roads are gravelled with 245.27 km (45.66%). Black topped roads comprise 159.83 km (29.76%); motorable earthen road covered 103.01 km (19.18%) and earthen track covered 28.99 km (5.40%) of the total road length.

The existing ward-wise road facilities as per surface type and road category of project area of Bharatpur Municipality are shown in Table 2 and 3. Tables indicate that ward no. 11 has the highest coverage of road length with 74.72 km i.e. 13.91 % of total road length. This is followed by ward no. 8 with 53.23 km or 9.91 % of total road length while ward no. 3 has least road coverage with only 5.42 km or 1.01 % of total road length. In addition, ward-wise number of crossing structure as per road category are presented in Table 4 respectively.

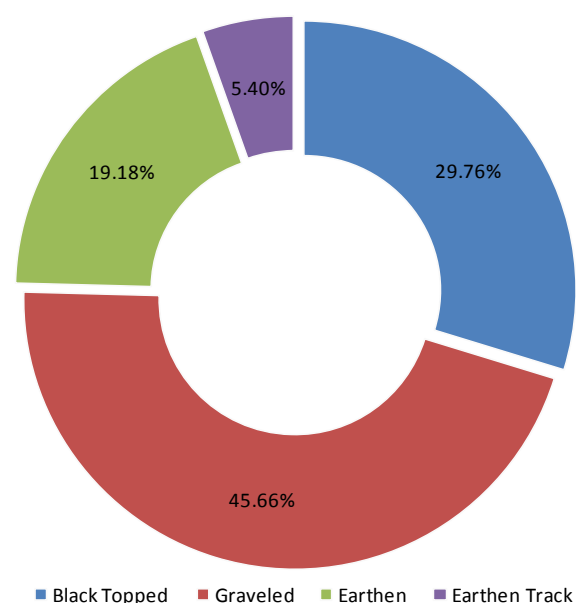


Figure 6: Existing Status of Road Network as per Surface Type

Table 2: Classification of Road by Surface Type (All Lengths in km)

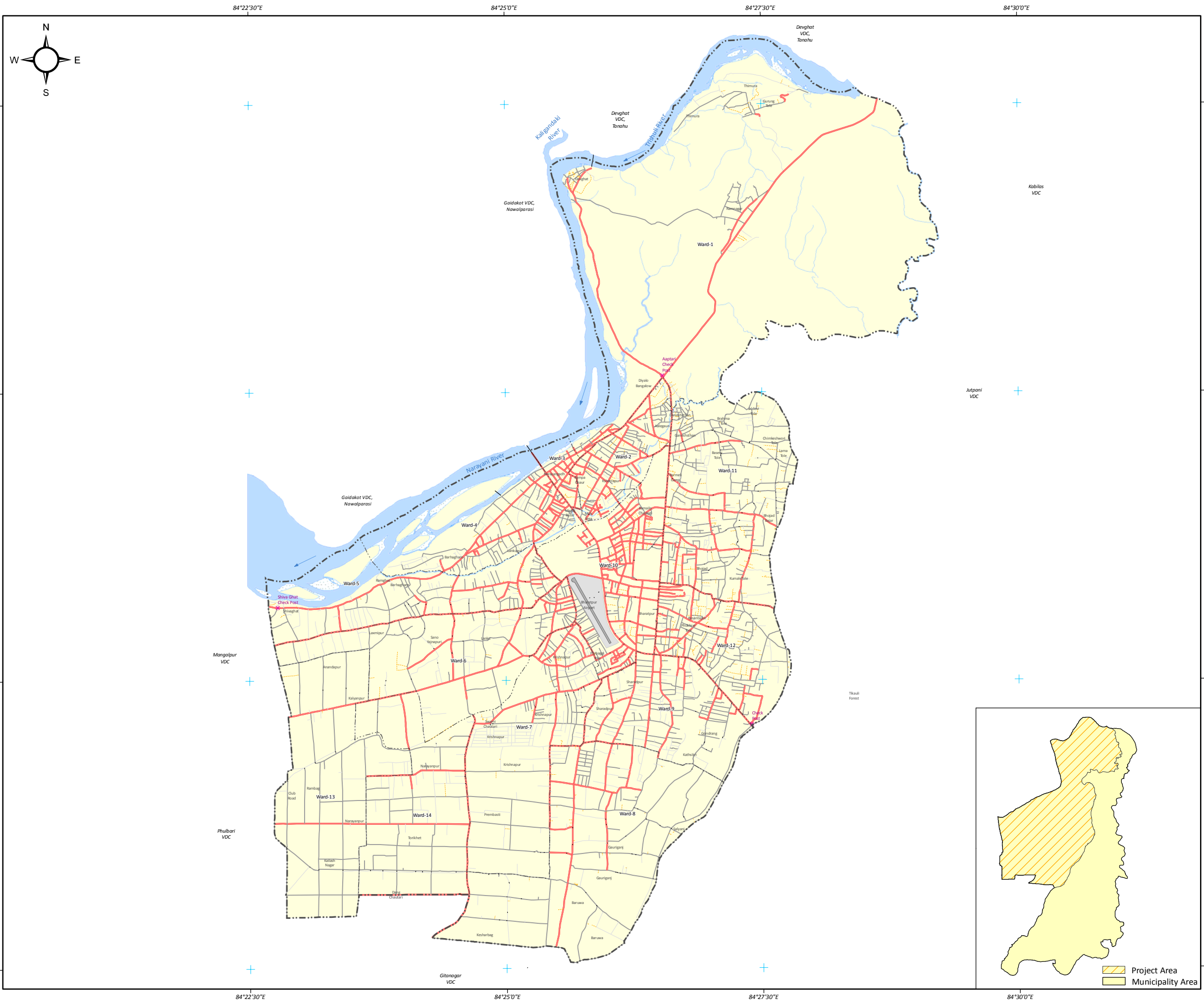
Surface Type	Wards														Total Length
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Black Topped	14.70	12.06	4.28	9.42	13.47	9.42	7.90	9.67	15.53	25.78	16.10	10.18	2.56	8.75	159.83
Gravelled	13.02	11.18	0.62	13.72	13.92	13.99	15.41	32.89	19.94	11.05	41.33	20.98	21.53	15.69	245.27
Earthen	6.07	4.50	-	6.72	6.94	9.33	19.14	9.18	9.58	2.36	10.59	4.53	5.76	8.29	103.01
Earthen Track	3.66	3.05	0.53	0.36	0.92	1.33	1.04	1.50	0.36	3.13	6.69	5.30	0.32	0.81	28.99
<b>Total Length</b>	<b>37.45</b>	<b>30.80</b>	<b>5.42</b>	<b>30.22</b>	<b>35.26</b>	<b>34.06</b>	<b>43.49</b>	<b>53.23</b>	<b>45.42</b>	<b>42.33</b>	<b>74.72</b>	<b>40.99</b>	<b>30.18</b>	<b>33.55</b>	<b>537.11</b>
Length %	6.97	5.73	1.01	5.63	6.56	6.34	8.10	9.91	8.46	7.88	13.91	7.63	5.62	6.25	100.00

Table 3: Classification of Roads by Category (All Lengths in km)

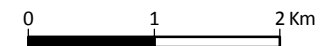
Road Category	Wards														Total Length
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Highway	8.01	0.44	1.41	-	-	-	-	-	2.39	2.33	-	-	-	-	14.57
District Road	-	-	-	-	-	4.08	1.17	4.67	3.93	0.59	-	-	1.10	2.55	18.09
Feeder Road	-	-	-	0.97	1.13	1.03	-	-	-	-	-	-	-	-	3.13
Other Road	25.57	26.98	3.42	28.89	33.21	27.63	41.27	47.07	38.74	36.29	67.55	35.61	28.75	30.18	471.16
Footpath	3.87	3.38	0.60	0.36	0.92	1.33	1.04	1.50	0.36	3.13	7.18	5.37	0.32	0.81	30.15
<b>Total Length</b>	<b>37.45</b>	<b>30.80</b>	<b>5.42</b>	<b>30.22</b>	<b>35.26</b>	<b>34.06</b>	<b>43.49</b>	<b>53.23</b>	<b>45.42</b>	<b>42.33</b>	<b>74.72</b>	<b>40.99</b>	<b>30.18</b>	<b>33.55</b>	<b>537.11</b>
Length %	6.97	5.73	1.01	5.63	6.56	6.34	8.10	9.91	8.46	7.88	13.91	7.63	5.62	6.25	100.00

Table 4: Number of Crossing Structure as per Road Category

Crossing Structure Category	Wards														Total Number
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Highway Bridge	-	-	2	-	-	-	-	-	3	2	-	-	-	-	7
District Road Bridge	-	-	-	-	-	2	-	4	2	-	-	-	-	1	9
Feeder Road Bridge	-	-	-	-	1	1	-	-	-	-	-	-	-	-	2
Other Road Bridge	1	15	-	1	15	16	17	44	24	48	58	28	17	19	303
Footpath Bridge	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
<b>Total Number</b>	<b>1</b>	<b>15</b>	<b>2</b>	<b>1</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>48</b>	<b>29</b>	<b>50</b>	<b>59</b>	<b>28</b>	<b>17</b>	<b>20</b>	<b>322</b>
Number %	0.31	4.66	0.62	0.31	4.97	5.90	5.28	14.91	9.01	15.53	18.32	8.70	5.28	6.21	100.00



# Bharatpur Municipality Street Network Map



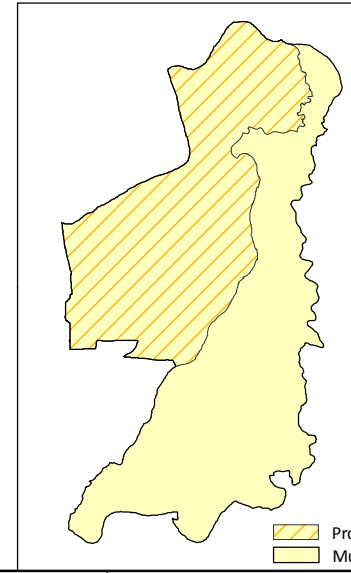
**Horizontal Datum**

Spheroid      Everest 1830  
 Projection    Modified UTM  
 Central Meridian    Longitude 84° East  
                                  Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

**Notes**

This map shows street network in Bharatpur Municipality and is based on Digital Base Map of Bharatpur Municipality, UEIP, 2008.

- Legend**
- Project Boundary
  - Ward Boundary
  - Bharatpur Location Names
  - Ward-1 Ward Number
  - Road Types**
  - Black Topped
  - Gravel
  - Earthen
  - Earthen Track
  - Bridges
  - River
  - Check Post
  - Airport Runway
  - Airport Area
  - Water Body
  - Sand Area



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#### 4.2 Electricity Network

Information on the electricity network was obtained from the Nepal Electricity Authority, Bharatpur in the form of a single line diagram and integrated into the GIS database. The high tension transmission lines, transmission network including locations of substation, transformers and pylons is shown in Map 7.

Electricity is supply by Nepal Electricity Authority through Bharatpur Feeder, Bhrikuti Feeder, Gaidakot Feeder, Hospital Feeder, Irrigation Feeder and Narayanghat Feeder of Bharatpur Substation. Electricity is served to bharatpur southern sector by bharatpur feeder. Bharatpur northern sector is served by gaidakot and bhrikuti feeders, while central part of bharatpur is served by all feeders except bhrikuti feeder. Likewise, electricity to bharatpur western sector is served by bharatpur and narayanghat feeder and bharatpur western is served by bharatpur, gaidakot and bhrikuti feeders. In addition, narayanghat central sector is served by narayanghat, gaidakot and irrigation feeders. [Refer Map 7]

The national grid high tension transmission line with capacity of 132 KVA and 33 KV are passes through the municipality. There are 182 transformers with varying capacities from a minimum of 15 KVA to a maximum of 2800 KVA. Electricity is distributed to the users through 11 KVA transmission line of total length 102.87 km.

Household census survey conducted in 2007, shows that the existing distribution system covers the entire project area of municipality covering 96.3 % of total households or 16,842 households. Only 3.7% of total households do not have power connection. Among the wards, households in ward 3 have highest percent electricity connection. Wards having relatively lower proportion of households without electricity are wards 14, 13and 1 respectively. In these wards only about 88% households have electricity connection while other wards have more than 90% households have electricity connection. [Refer Table 5]



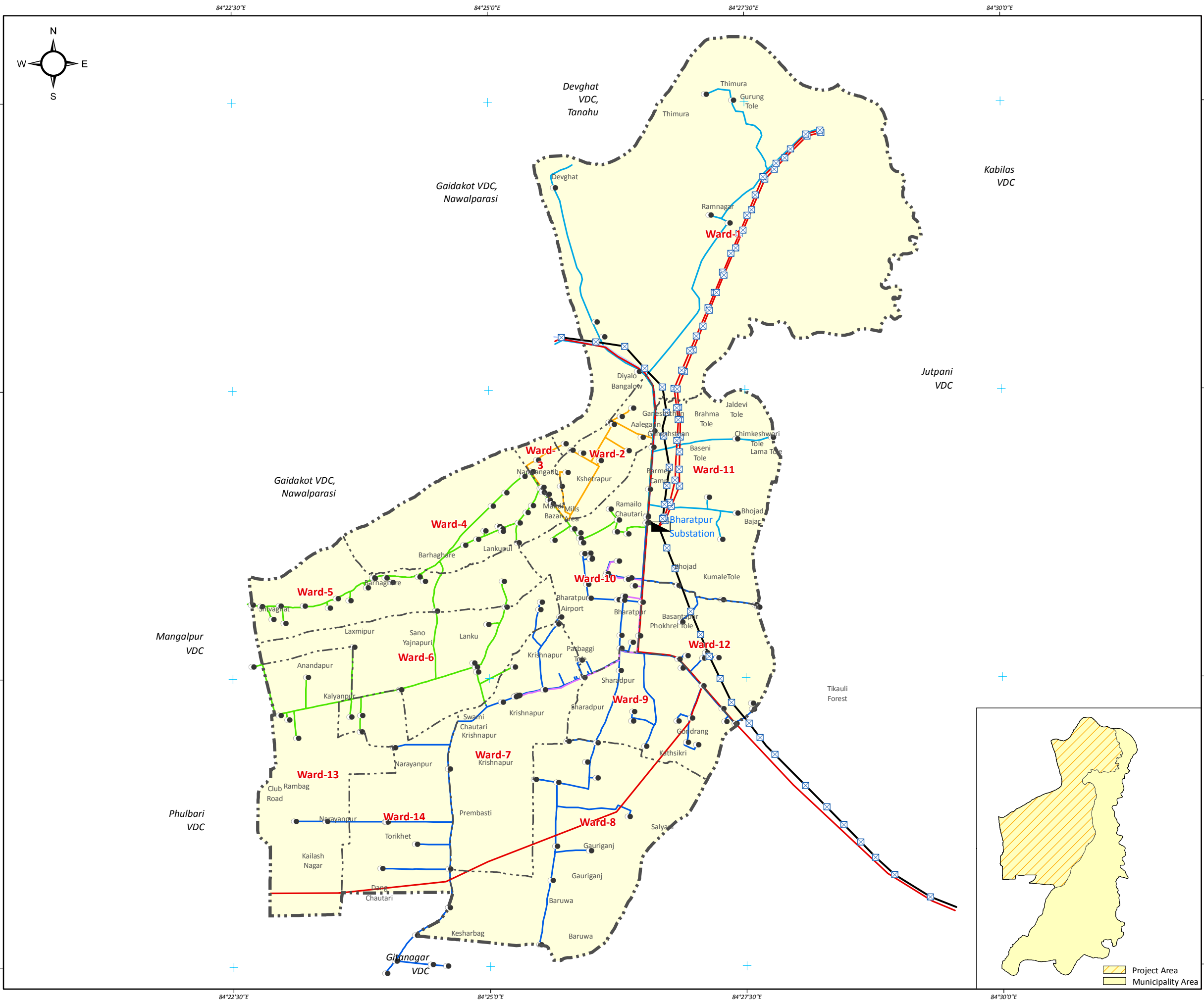
Figure 7: Nepal Electricity Authority Office, Bharatpur



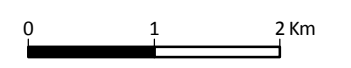
Figure 8: Power Station, Bharatpur

Table 5: Ward -wise Household Distribution by Electricity Facility

Ward	Total Household	Household	
		Number	percent
1	935	818	87.5
2	1,636	1,615	98.7
3	408	408	100
4	1,088	1,080	99.3
5	1,039	1,012	97.4
6	1,071	1,046	97.7
7	1,289	1,280	99.3
8	1,148	1,127	98.2
9	1,180	1,170	99.2
10	2,126	2,120	99.7
11	2,894	2,657	91.8
12	1,437	1,415	98.5
13	626	558	89.1
14	619	536	86.6
<b>Total</b>	<b>17,496</b>	<b>16,842</b>	<b>96.3</b>



### Bharatpur Municipality Electricity Network Map



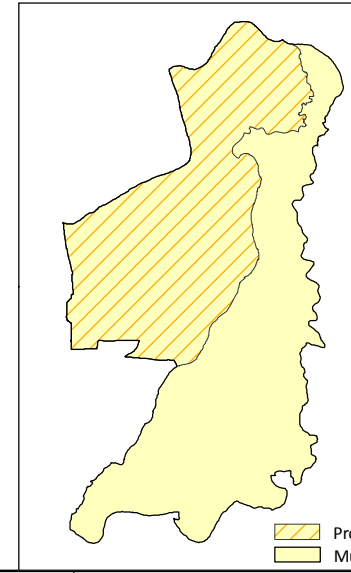
**Horizontal Datum**

Spheroid      Everst 1830  
 Projection    Modified UTM  
 Central Meridian   Longitude 84° East  
                          Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

**Notes**

This map shows electricity network and is based on electricity single line diagram from Nepal Electricity Authority, Chitwan.

- Legend**
- Project Boundary
  - - - Ward Boundary
  - Ward-1 Ward Number
  - Bharatpur Location Names
  - ▣ Sub Station
  - ▣ Pylon
  - Transformer
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder



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### 4.3 Telecommunication Network

Information on the telephone network was obtained from the Nepal Telecommunication Corporation in Kathmandu and from household survey conducted in 2007. The field verification was done during March 2008. The main telephone distribution line, transmission line, optical fibre, location of telephone exchange, manholes and cabinets are shown in Map 8. There are all together 49 numbers of telephone cabinets with varying capacities of minimum 300 to maximum 650. Bharatpur telephone exchange is located at Dursanchar Marg Ka, ward 10 and proposed Belchowk exchange is located at Shanti Marg Mandi Bazaar, ward 4. At presence one government and two private telephone companies provide both local and international facilities. The municipality also has access of mobile phone, CDMA phone and UTL phone

Nepal Telecommunication Authority provides telecommunication services to almost 7729 household i.e. 44.2% of total households of entire project area of the municipality.

According to ward- wise line distribution [See Table 6], ward 3 has the highest line connection (81.4 % of total households) followed by ward 10 with 71.1 % of total households; ward 13 has least line connection (15.8 % of total households).



Figure 9: Nepal Telecom Building, Bharatpur

Table 6: Ward -wise Household Distribution by Telephone Facility

Ward	Total Household	Household	
		Number	Percent
1	935	252	27
2	1636	945	57.8
3	408	332	81.4
4	1088	643	59.1
5	1039	445	42.8
6	1071	529	49.4
7	1289	563	43.7
8	1148	318	27.7
9	1180	546	46.3
10	2126	1512	71.1
11	2894	695	24
12	1437	735	51.1
13	626	99	15.8
14	619	115	18.6
<b>Total</b>	<b>17496</b>	<b>7729</b>	<b>44.2</b>

# Bharatpur Municipality Telecommunication Network Map



### Horizontal Datum

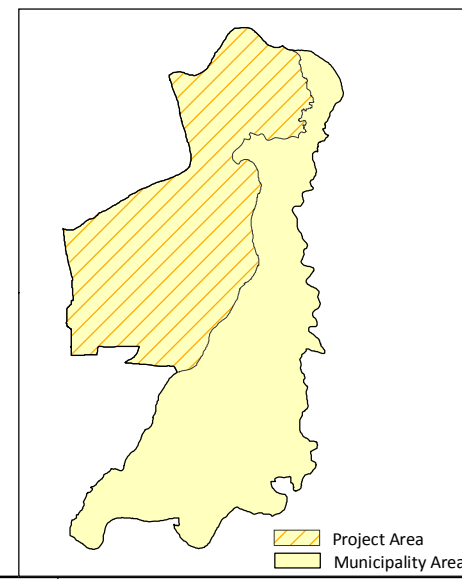
Spheroid      Everst 1830  
 Projection    Modified UTM  
 Central Meridian    Longitude 84° East  
                                  Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

### Notes

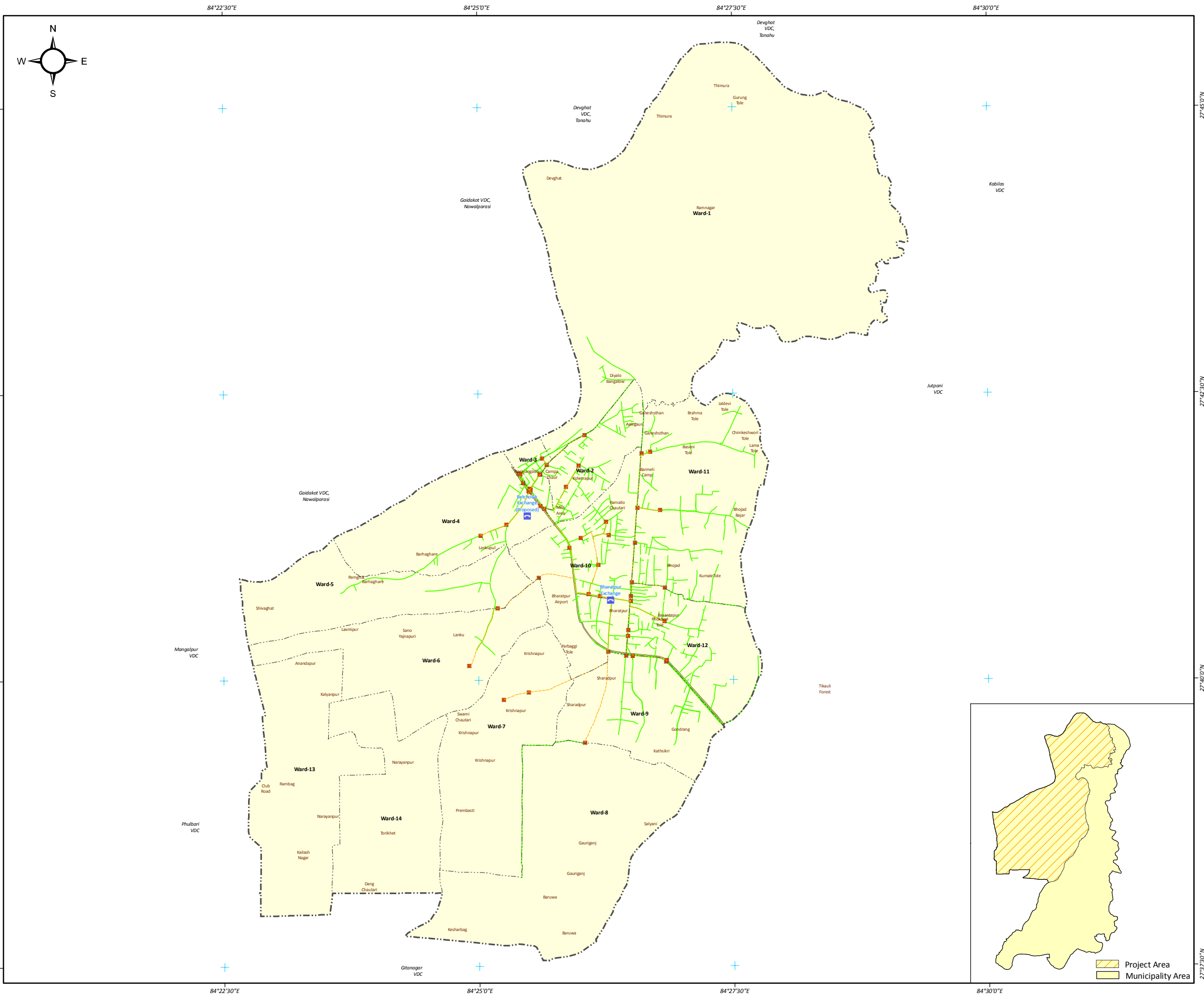
This map shows telecommunication network and is based on network drawings from Nepal Telecommunication Corporation, Kathmandu.

### Legend

- Project Boundary
- Ward Boundary
- Bharatpur Location Names
- Ward-1 Ward Number
- Nepal Telecom Exchange
- Telephone Cabinet
- Transmission Line
- Distribution Line
- Optical Fibre



Project Area  
 Municipality Area



#### 4.4 Water Supply Network

Information on water supply lines were collected from Welink Consultant, Kathmandu and update was carried out with close cooperation with PISU. Underground water is the main sources for drinking water. There are four sources located within the project area. Water from two deep tube wells is collected in two tanks of 400 cubic meter capacity elevated FRP tank and 1200 cubic meter ground tank. Drinking water is distributed by CI, Di, Gi and HDPE pipe with vary diameter of minimum 32mm to maximum 250 mm to the consumers.

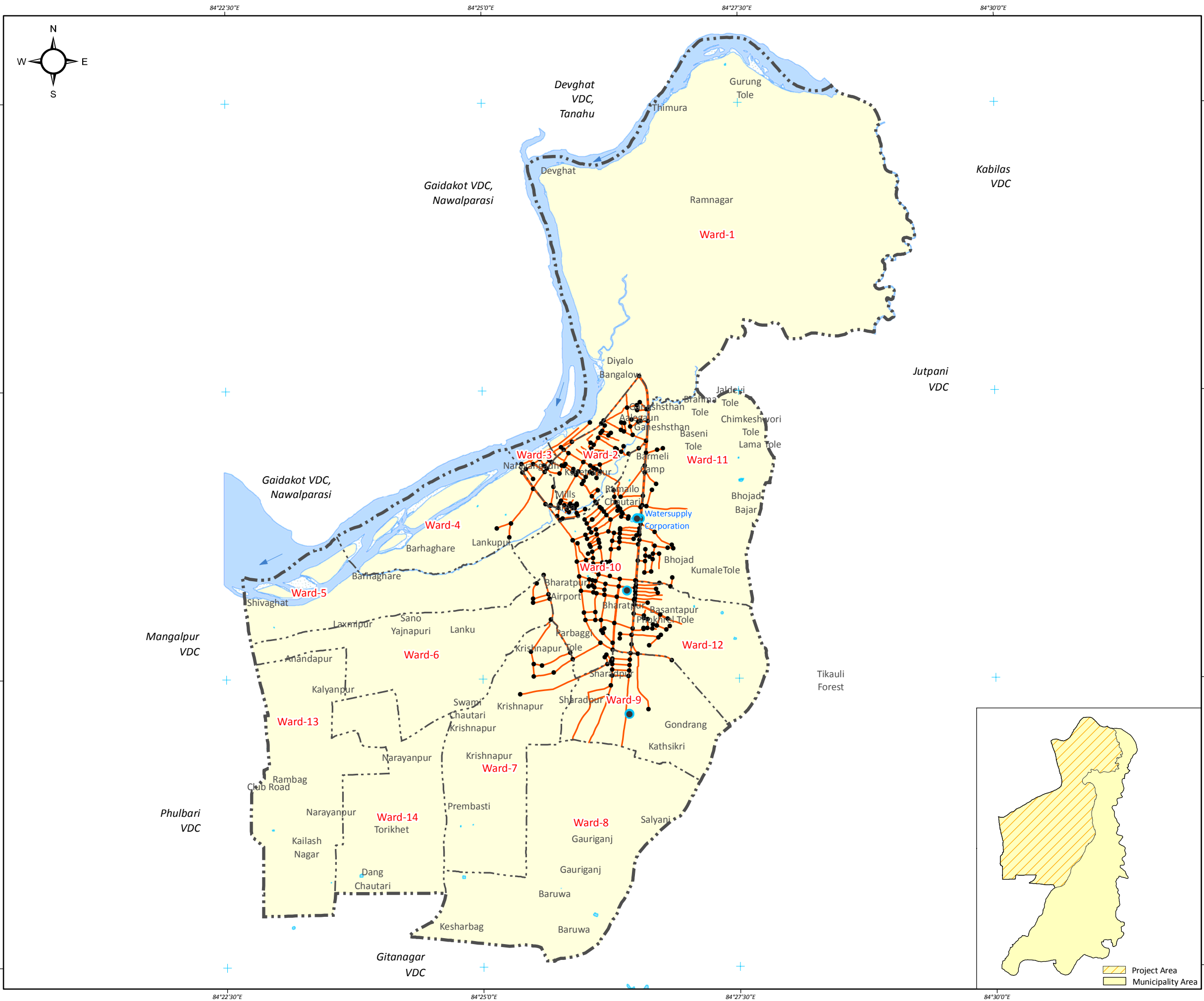
The main water supply system is operated and maintained by the NWSC Branch Office which is situated in ward 10. The total length of distribution line is 86.82 km. The existing water supply system is serving ward no 2, 3, and 10 and some area of 1, 9, 11 and 12 as shown in Map 9.



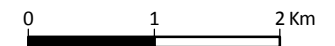
Figure 10: Nepal Water Supply Cooperation Office, Bharatpur



Figure 11: Water Supply Overhead Tank, Bharatpur



## Bharatpur Municipality Water Supply Network Map



### Horizontal Datum

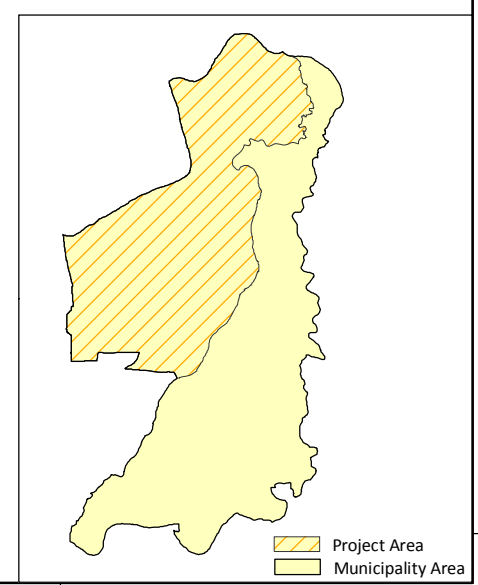
Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

### Notes

This map shows water supply service areas and network and is based on design drawings of Water Supply Sub-Project (UEIP), Welink Consultants, Bharatpur.

### Legend

- Project Boundary
- Ward Boundary
- Kshetrapur Location Names
- Ward-1 Ward Number
- Source
- Junction
- Water Pipe Line
- River
- Stream
- Pond
- Sand Area



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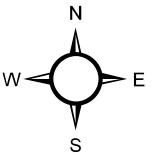
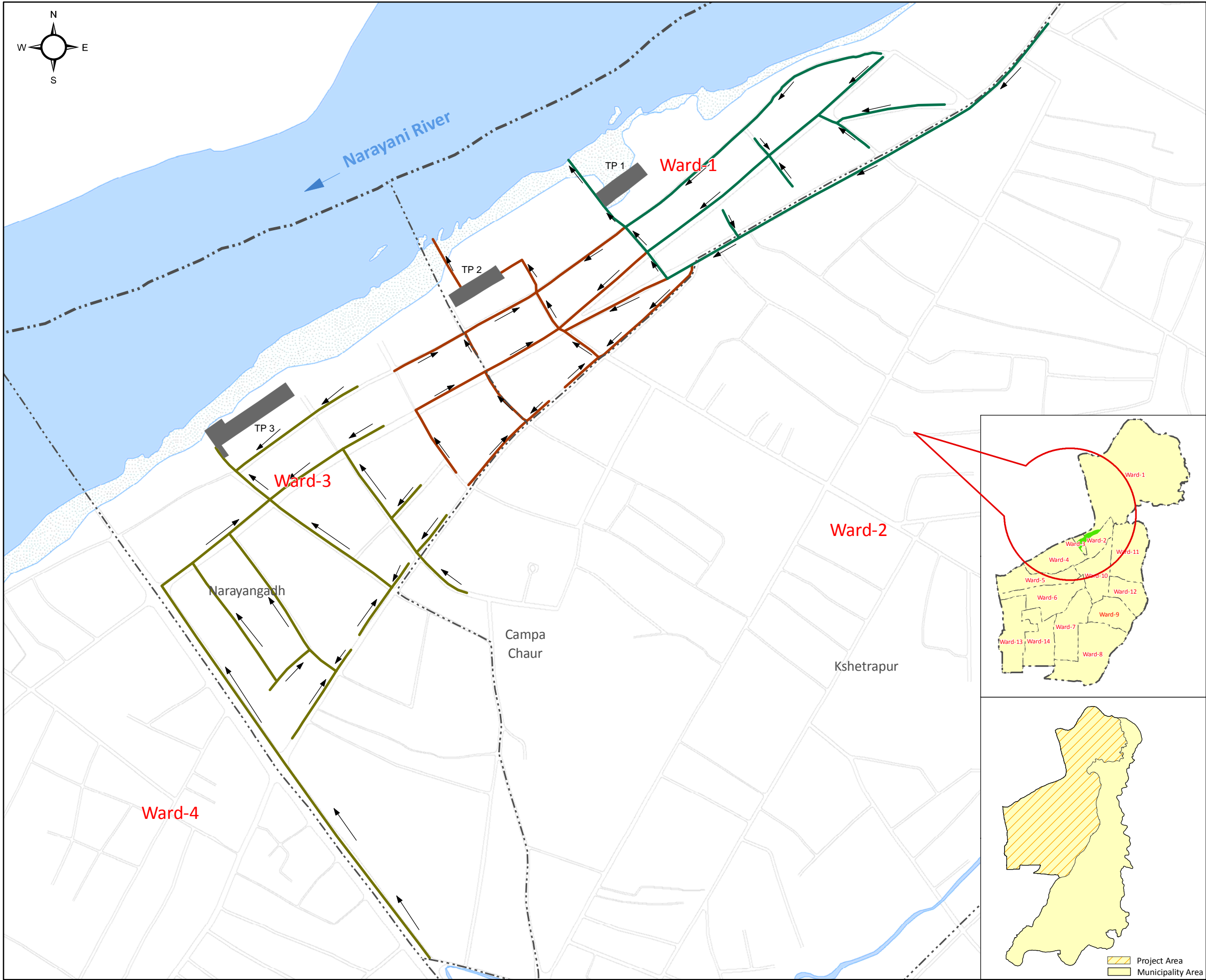
#### 4.5 Sewerage and Drainage Network

Information on sewerage system was obtained from UEIP, Bharatpur municipality and update was carrying out during field visits in March 2008. There are three sewerage systems namely C1, C2 and C3 with three reed bed treatment plants which are under construction phase located at the bank of Narayani River. The total length of system is 7.03 km, covering an area of ward no 1 only.

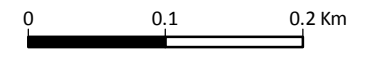
In Bharatpur municipality, there is a proper storm water drainage system covering wards 2 and 3 and partially wards 1 and 4. The total length of the drain is 12.6 km and the drainage outfall is located in the Narayani River and Punge Khola. (UEIP, 2002)



Figure 12: Under Construction Reed Bed Treatment Plant



**Bharatpur Municipality  
Sewerage Network Map**



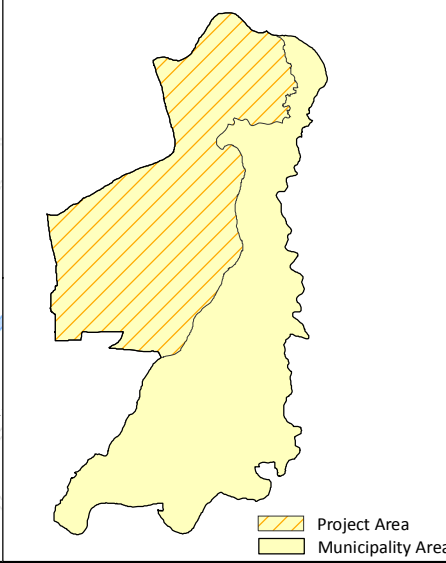
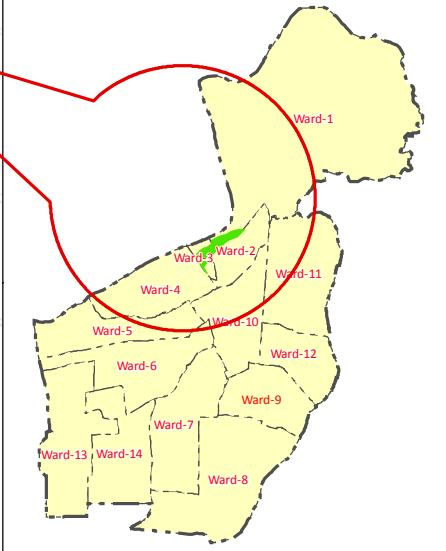
**Horizontal Datum**

Spheroid	Everst 1830
Projection	Modified UTM
Central Meridian	Longitude 84° East
	Latitude 0° North
False Easting	500,000 meters
Scale Factor	0.9999

**Notes**

This map shows sewerage service areas and network and is based on design drawings from Bharatpur.

- Legend**
- Project Boundary
  - - - Ward Boundary
  - Ward-1 Ward Number
  - Bharatpur Location Names
  - Flow Direction
  - Green line Scheme 1
  - Brown line Scheme 2
  - Olive line Scheme 3
  - TP Treatment Plant
  - Blue line River
  - Blue line Stream
  - Stippled area Sand Area



#### 4.6 Infrastructure Services

##### 4.6.1 Commercial

There are 416 existing shops and commercial establishment spread around the municipality, in which 310 are shops/commercial, 42 hotels/lodges/guest house, 34 restaurants, 13 numbers of petrol pumps and other services, and 4 printing press as presented in Table 7. Table also indicates that majority of commercial activities are take place at ward 10 (117 numbers) and 3 (116 numbers) where East West Highway passes through.

The highest numbers of commercial shops i.e. about 92 numbers of shops are situated in ward 3. This is followed by ward 10 and 4 with 76 and 53 commercial shops respectively. Remaining commercial shops are located in wards 4, 2, 1, 12, 9, 7, 6, 11, 13 and 5.

Majority of hotels/lodges/guest houses i.e. about 14 numbers are situated in ward 10. This is followed by ward 3 with 13 hotels/lodges/guest houses. Remaining hotels/lodges/guest houses are spreads in wards 4, 1, 7 2 and 12. Likewise, 20 restaurants are situated in ward 10 which is followed by ward 3 by 7 restaurants and then by ward 12 with 3 restaurants. Similarly, ward no 1, 4, 9 and 11 have one restaurant each.

In addition, five petrol pump/ service station are available in ward 1; three in ward 10, two in ward 3 and in wards 4, 9 and 12 one petrol pump/service station each is available. Besides these services, in ward 4 and 10 two printing presses each are available. Other commercial activities such as Kawadi shops and junk yards are spread around the project area in ward no 2, 3, 4, 7 and 10.

Table 7: Ward -wise Distribution of Commercial Activities

Commercial	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Commercial	20	26	92	53	1	5	6	-	12	76	4	13	2	-	310
Hotel / Lodge / Guest House	4	1	13	5	-	-	4	-	-	14	-	1	-	-	42
Restaurants	1	-	7	1	-	-	-	-	1	20	1	3	-	-	34
Petrol Pump/ Service Station	5	-	2	1	-	-	-	-	1	3	-	1	-	-	13
Printing Press	-	-	-	2	-	-	-	-	-	2	-	-	-	-	4
Others	-	2	2	6	-	-	1	-	-	2	-	-	-	-	13
<b>Total</b>	<b>30</b>	<b>29</b>	<b>116</b>	<b>68</b>	<b>1</b>	<b>5</b>	<b>11</b>	<b>-</b>	<b>14</b>	<b>117</b>	<b>5</b>	<b>18</b>	<b>2</b>	<b>-</b>	<b>416</b>



Figure 13: Narayanghat Bazaar, Narayanghat



Figure 15: Suva Petroland Pvt. Ltd, Narayanghat



Figure 14: Royal Century Hotel, Bharatpur

#### 4.6.2 Industries

Bharatpur municipality has 159 numbers of diverse existing industries as presented in Table 8. These industries are spread around the municipality. However, maximum factories are concentrated in ward 4, 10, 2, 11 and 14. Such factories consist of khadya udhyog, plastic factory, jute bag factory, pipe industries, engineering and metal workshops, copy industries, rice and saw mills, etc. Similarly, two industries Mount Everest Brewery Company and Bottler's Nepal Pvt. Ltd are located in ward 12 and 9 respectively.

Table 8 indicates that ward 4 consists of 31 industries which is the highest and wards 3, 7 and 8 have five industries each. In addition, there are seven dairy industries spreads in ward no 1, 4, 6, 7, 8, 9, and 14 as shown in Map 11.

#### 4.6.3 Livestock

Livestock or farming is another important infrastructure in Bharatpur municipality, where a total of 1137 structures are available for livestock. Out of total 838 structures are for pig farming and for cow and buffalo shed. The remaining 299 are used for poultry and bee farming and also as fish hatchery. The ward wise distribution is shown in Table 9.

Table 8: Ward -wise Distribution of Industries and factories

Industrial	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Industrial	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2
Factory	7	18	5	31	8	6	5	5	6	22	11	9	6	10	149
Dairy	1	-	-	1	-	1	1	1	1	-	-	-	-	1	7
Quarter	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
<b>Total</b>	<b>8</b>	<b>18</b>	<b>5</b>	<b>32</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>8</b>	<b>22</b>	<b>12</b>	<b>10</b>	<b>6</b>	<b>11</b>	<b>159</b>

Table 9: Ward-wise Distribution of Livestock

Livestock	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Poultry Farm / Bee Farm / Fish Hatchery	33	4	-	9	20	21	45	30	37	4	31	9	19	37	299
Cowshed/BuffaloShed/Pig Farm	34	14	-	5	140	61	96	74	204	11	141	34	10	14	838
<b>Total</b>	<b>67</b>	<b>18</b>	<b>-</b>	<b>14</b>	<b>160</b>	<b>82</b>	<b>141</b>	<b>104</b>	<b>241</b>	<b>15</b>	<b>172</b>	<b>43</b>	<b>29</b>	<b>51</b>	<b>1137</b>

#### 4.6.4 Institution

Institutions are broadly categories into public institutions and financial institutions. Administrative buildings, government, semi government, nongovernment, ward offices, public services and community based organizations were categorized as public institutions. In addition; banks, insurances company, finance company and cooperatives are categories as financial institutions. Information on these was collected during household census survey in 2007 and final verification was done during field visit in March 2008 which is presented in Map 11.

There are 187 existing institutions spread around the municipality, in which 113 are government, non government and international government organizations. Out of which 59 organizations are exist in ward 10 which is the highest compare with others wards. The major government offices like municipal office, district administrative office, district agricultural development office, district court, district education office, district forest office, land revenue office are located at ward 10.

In addition, there is 65 other institution such as youth clubs, woman and children welfare society, consumer groups etc exist in the municipality. Out of which 21 institutions are situated in ward 10. [Refer Table 10]

Institutions for public services likes' electricity office, telephone office, water supply office and fire station are situated in ward 10 respectively whereas post offices are located in ward 2 and in ward 10. [Refer Table 11]

Likewise, a total of 16 private and government banks are available in this municipality. Out of total banks, seven banks are situated in ward 4; six banks are in ward 10 and three banks in ward 3 as shown in Map 11. [Refer Table 12]

Table 10: Ward -wise Distribution of Institutions

Institutions	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
GO/NGO/INGO	3	9	4	5	1	4	3	1	4	59	5	10	2	3	113
Others Institute	7	4	4	2	2	1	3	4	4	21	1	7	4	1	65
Quarter	-	-	-	-	-	-	-	-	1	8	-	-	-	-	9
<b>Total</b>	<b>10</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>88</b>	<b>6</b>	<b>17</b>	<b>6</b>	<b>4</b>	<b>187</b>

Table 11: Ward -wise Distribution of Public Services

Public Services	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Electricity Office	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Telephone Office	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Water Supply Office	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Post Office	-	1	-	-	-	-	-	-	-	1	-	-	-	-	2
Fire Station	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Quarter	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Others	5	-	-	-	1	-	1	-	-	-	3	-	-	-	10
<b>Total</b>	<b>5</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17</b>

Table 12: Ward -wise Distribution of Financial Institutions

Financial	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Bank/Finance	-	-	3	7	-	-	-	-	-	6	-	-	-	-	16
<b>Total</b>	<b>-</b>	<b>-</b>	<b>3</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>16</b>



Figure 16: Bharatpur Municipal Office, Bharatpur



Figure 17: Laxmi Bank, Narayanghat

#### 4.6.5 Educational

Information on education services was obtained from District Education Office, Bharatpur (2005/06) and from household census survey conducted in 2007. According to household census survey, currently a total of 85 school facilities provide educational services to the municipality as shown in Table 14. Public facilities comprise 21 primary and elementary schools, 11 lower secondary schools, 39 secondary schools and 9 higher secondary schools [Refer Table 13].

From Figure 18, it shows that in entire municipality numbers of primary level student is higher (22.85%) compare with other. This is follows by SLC level (21.59%) and then by Intermediate level of education (16.08%). While master and above master level comprises 3.41% of total which is recorded as least compare with others.

In addition; the municipality is facilitated with 35 private and government colleges at wards 2, 4, 9, 10, 11 and 12 as presented in Map 11. The municipality is also facilitated with three libraries at wards 2, 10 and 12 respectively. Likewise, other services like hostels, education centres, etc is located in all wards except in ward no 3, 5, 11 and 13.

Table 13: Number of School in Bharatpur Municipality

School	Government	private	total
Primary	13	8	21
Lower Secondary	5	6	11
Secondary	9	30	39
Higher secondary	5	4	9
<b>Total</b>	<b>32</b>	<b>48</b>	<b>80</b>

Source: District Education Office, Bharatpur Municipality, 2005/06

Table 14: Ward -wise Distribution of Education Services

Education Services	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
School	6	8	1	8	3	6	4	4	5	16	9	6	5	4	85
College	-	4	-	1	-	-	-	-	3	25	1	1	-	-	35
Library	-	1	-	-	-	-	-	-	-	1	-	1	-	-	3
Others	1	5	-	3	-	2	2	1	1	12	-	1	-	1	29
<b>Total</b>	<b>7</b>	<b>18</b>	<b>1</b>	<b>12</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>54</b>	<b>10</b>	<b>9</b>	<b>5</b>	<b>5</b>	<b>152</b>

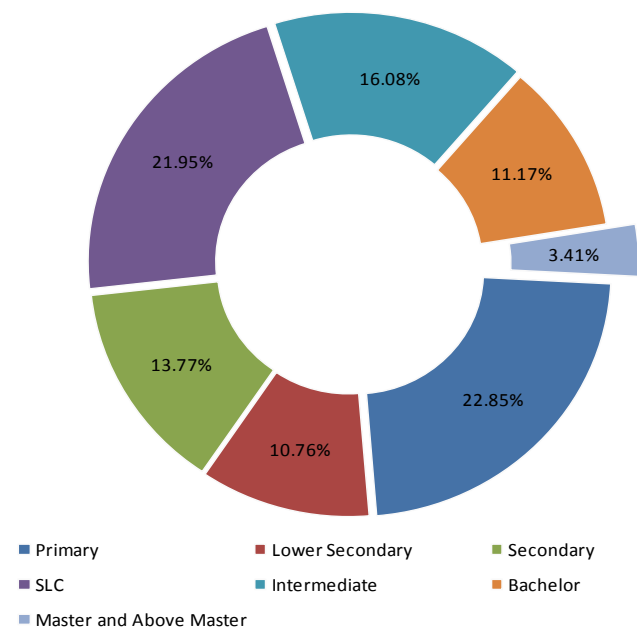


Figure 18: Education level in Bharatpur Municipality

#### 4.6.6 Health Service

Local health services are provided through 19 private, government and semi government health centres. Out of which 15 hospitals are located at ward 10 and in ward 1, 6, 7 and 11 have one hospital each. Hospitals like bharatpur medical college, bharatpur hospital, chitwan hospital, etc are situated in ward 10. One health posts are located at ward 8 and 17 clinic/pathology/labs are situated in wards 1, 2, 3, 5, 7, 8 and 10. In addition, 23 pharmacies are spread around the project area. [Refer Table 15]

#### 4.6.7 Security Service

The project area is facilitated with one army barrack at ward 10, three police stations at ward no 1, 4 and 10. District police station is located at ward 10. In addition one traffic police office and one check post is situated in ward 10 and 1 respectively. [Refer Table 16]

#### 4.6.8 Recreation Centre

For pleasure and relaxation the project area is facilities with a total of ten different centres at different places within the project area. The area has four cinema halls located at ward 2 and 3. Six other recreation areas like physical fitness centre, leisure centre, snooker and pool houses etc are situated in ward 2, 4 and 10. [Refer Table 17]



Figure 19: B.P. Memorial Cancer Hospital, Bharatpur

Table 15: Ward -wise Distribution of Health services

Health Services	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Hospital	1	-	-	-	-	1	1	-	-	15	1	-	-	-	19
Health Post	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
Clinic/Pathology/Labs	2	1	5	-	1	-	1	1	-	6	-	-	-	-	17
Pharmacy	2	1	1	1	-	-	1	-	-	15	-	1	-	1	23
Quarter	-	-	-	-	-	-	1	-	-	3	-	-	-	-	4
<b>Total</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>39</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>64</b>

Table 16: Ward -wise Distribution of Security Services

Security Services	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Army Barrack	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Police Station	1	-	-	1	-	-	-	-	-	1	-	-	-	-	3
Traffic Police Office	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Quarter	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Others	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
<b>Total</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7</b>

Table 17: Ward -wise Distribution of Recreation Centre

Recreational	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Cinema Halls	-	1	3	-	-	-	-	-	-	-	-	-	-	-	4
Others	-	3	-	1	-	-	-	-	-	2	-	-	-	-	6
<b>Total</b>	<b>-</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>



Figure 20: Eye Hospital, Bharatpur



Figure 21: Ganesh Cinema Hall, Narayanghat

4.6.9 Media

Sources of news and information are made possible by television, radio and daily newspaper. At present, the municipality has one printing press and four FM stations. Printing press and three FM stations are located at ward 10 while one FM station is in ward 11. [Refer Table 18]

4.6.10 Others

Bharatpur municipality is also facilitated with other infrastructure such as airport, power station, covered hall and bus terminal. Bharatpur airport is situated in ward 10 while bus terminal in ward 9. Likewise the power station and stadium/covered hall are situated in ward 11 and 10 respectively. [Refer Table 19]

Table 18: Ward wise distribution of Media

Media	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Printing Press	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
FM Station	-	-	-	-	-	-	-	-	-	3	1	-	-	-	4
<b>Total</b>	-	-	-	-	-	-	-	-	-	4	1	-	-	-	5

Table 19: Ward wise distribution of other infrastructure

Others	Wards														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Airport Terminal Building	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Bus Terminal	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1
Power Station	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
Stadium/Covered Hall	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
Warehouse/Store/Godown	1	3	1	5	1	-	-	1	1	2	2	1	-	-	18
Others	1	3	-	11	1	-	-	2	1	5	1	-	-	1	26
<b>Total</b>	<b>2</b>	<b>6</b>	<b>1</b>	<b>16</b>	<b>2</b>	-	-	<b>3</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>1</b>	-	<b>1</b>	<b>44</b>

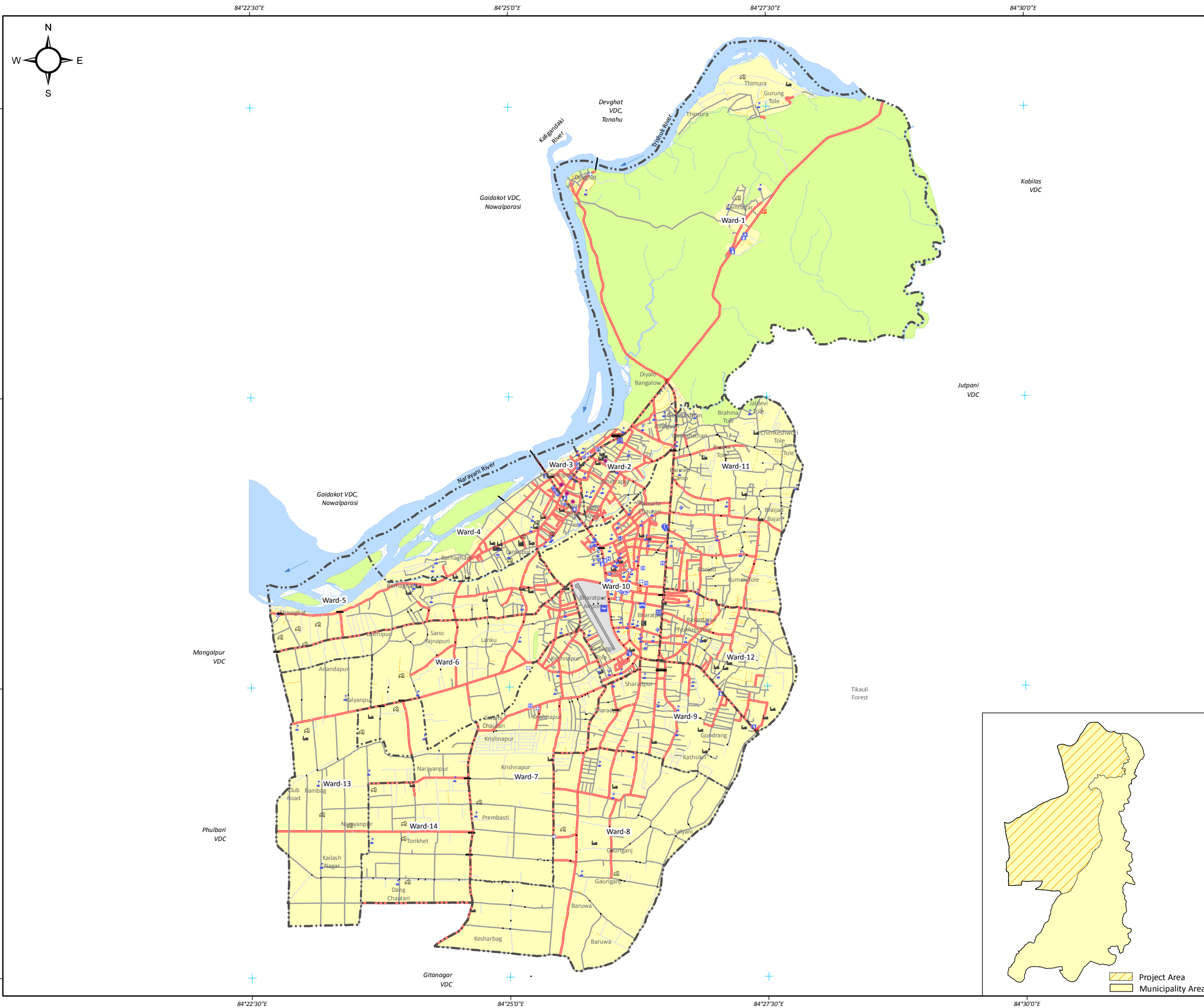


Figure 22: Hamro FM, Bharatpur

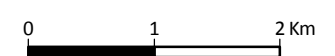


Figure 23: Pokhara Bus Park





# Bharatpur Municipality Infrastructure/Services Map



**Horizontal Datum**

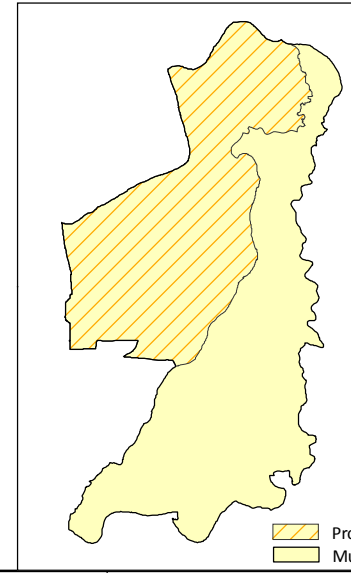
Spheroid      Everest 1830  
 Projection    Modified UTM  
 Central Meridian    Longitude 84° East  
    Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

**Notes**

This map shows emergency services, commercial, educational and health institutions and other services and physical infrastructures. This map is based on Digital Base Map of Bharatpur Municipality, UEIP, 2008.

## Legend

- Project Boundary
- Ward Boundary
- Bharatpur Location Names
- Ward-1 Ward Number
- Road Types**
- Black Topped
- Gravel
- Earthen
- Earthen Track
- Bridges
- Airport Runway
- Airport Area
- Water Body
- Sand Area
- Cultivation
- Forest
- River
- Bus Stop
- Bus Terminal
- Police Station
- Check Post
- Bank/Finance
- Hospital
- Health Center/Clinic
- Educational Center
- NEA Office
- NTC Office
- Watersupply Office
- Post Office
- Church
- Hotel
- Monastery
- Mosque
- Restaurant
- Temple
- Cinema Hall
- Petrol Pump
- Factory
- Poultry Farm
- Tower
- FM Station



#### 4.7 Cultural Heritage and Tourism

Natural, socio-cultural heritage, associated religious-cultural landscape and supportive mythology play important role for the development of tourism in the municipality. Bharatpur Municipality has several places of interest that tourists and visitors can see while in the municipality. These include recreation facilities, government institutions and religious places as shown in Map 12. The municipality is proximity to Royal Chitwan National Park.

Devighat, Diyalo Banglaw, Chitwan Kalika Temple (Figure 25), Rameshwor Mahadev Temple (Figure 27), and others religiously important structures are situated in all wards of the municipality. Diyalo Banglaw is situated in ward no 1, Chitwan Kalika temples is in ward 10. Other religiously important sites such as Sari Putra gumba is situated in ward 2 and Bharatpur Baptist Church is situated in ward 10. Besides these, there are number of temples, churches, mosques and Buddhist monasteries scattered around the municipality.

Likewise, other religious places like Bharma Kumari Raj Yog Kendra, Bol Bom Dharma Kata, Om Santi, Shyama Shyama Dham, etc are situated in the municipality. [Refer Table 20]

Table 20: Ward -wise Distribution by Religious Sites

Cultural, Heritage and Tourism		Wards														Total
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Religious	Temple	10	4	5	2	4	3	3	8	7	11	11	3	6	7	84
	Monastery	2	2	1				2		1						8
	Church		2					1			2	3	1			9
	Mosque		1		1											2
	Others	2	4		1	1	1			1	4	2	1		1	18
Cultural	Others	1														1
<b>Total</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>9</b>	<b>17</b>	<b>16</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>122</b>



Figure 24: Chitwan Kalika Temple



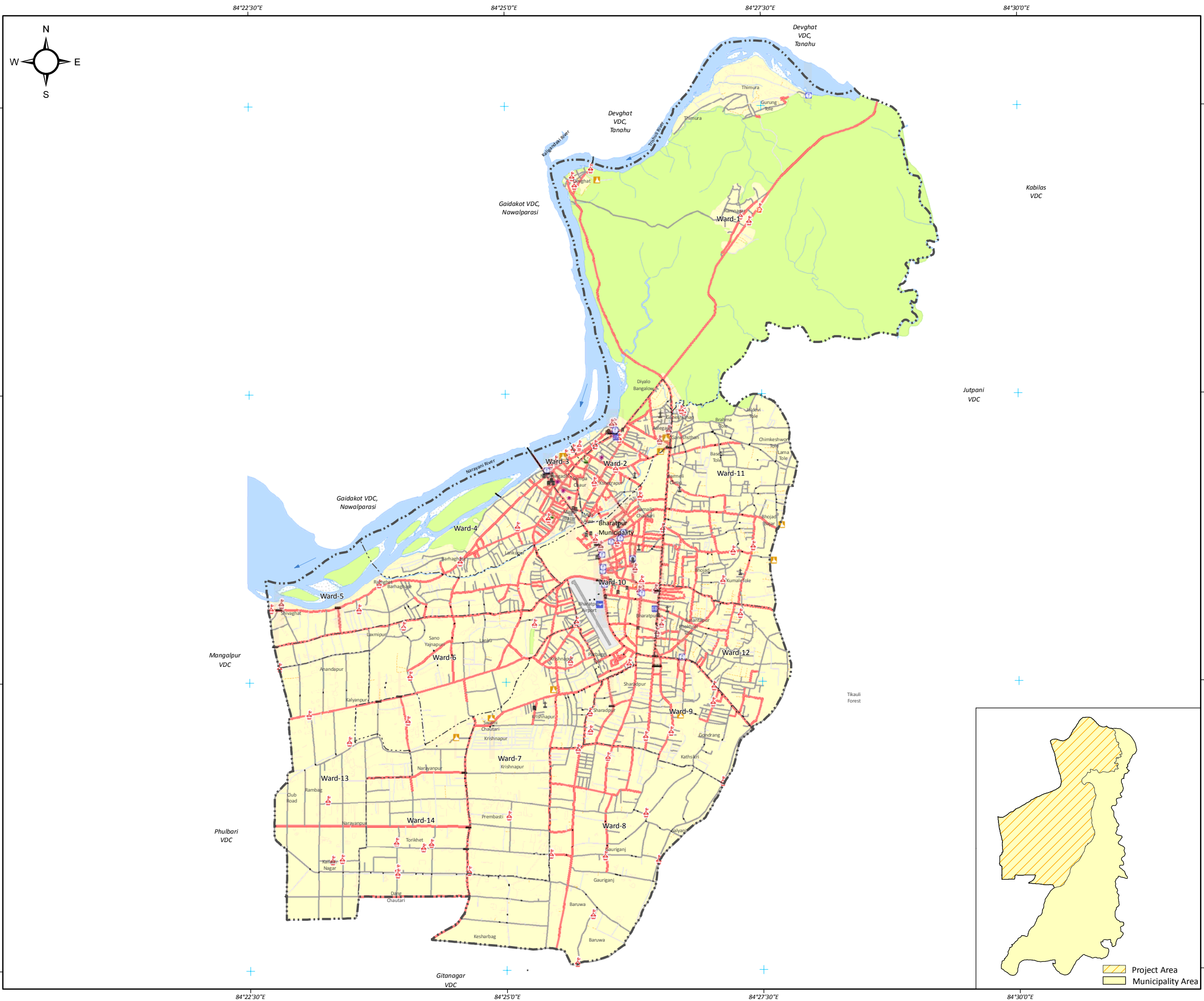
Figure 25: Rameshwor Mandir



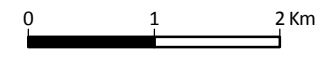
Figure 26: Shree Sharada Panchayatan Mandir



Figure 27: Sari Putra Gumba



# Bharatpur Municipality Culture/Heritage/Tourism Map



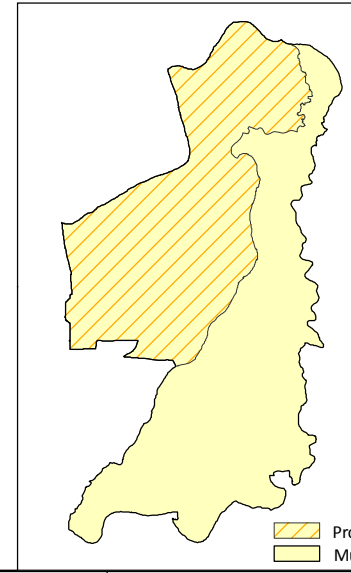
**Horizontal Datum**

Spheroid      Everst 1830  
 Projection    Modified UTM  
 Central Meridian   Longitude 84° East  
                                  Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

**Notes**

This map shows areas and spots with cultural, heritage and touristic importance. This map is based on Digital Base Map of Bharatpur Municipality, UEIP, 2008.

- Legend**
- Project Boundary
  - - - - - Ward Boundary
  - Bharatpur Location Names
  - Ward-1 Ward Number
- Road Types**
- Black Topped
  - Gravel
  - Earthen
  - - - - - Earthen Track
  - Bridges
  - Airport Runway
  - Airport Area
  - Water Body
  - Sand Area
  - Cultivation
  - Forest
  - River
- Bus Stop
  - Bus Terminal
  - Police Station
  - Post Office
  - Tower
  - FM Station
  - Church
  - Hotel
  - Monastery
  - Mosque
  - Restaurant
  - Temple
  - Cinema Hall



### 5.1 Population Distribution

The total population of project area of Bharatpur Municipality is 86,208 in which 44,123 are male and 42,085 are female resided in 17,496 household, i.e. average household size is 4.93 persons per household.

Map 13 of Municipal Spatial Profile and Resource Maps illustrate the ward-wise population distribution of Bharatpur Municipality. Map 13 shows that the highest number of population i.e. about 13,810 population is resided in ward 11 which is followed by ward 10 with 10,521 population. In addition, ward 6 has lowest population i.e. about 1,777. The map clearly shows that the concentration of population is in urban area where the basic infrastructure facilities are easily available.

### 5.2 Population Density

Population density is an effective index to measure the pressure of population on land. The population per square kilometre of total area measures the population density. Ward-wise population density is present in the Map 14.

Household census survey conducted in 2007 shows that the population density of Bharatpur is 1,107 persons per square kilometre. At ward level, ward 2 and 3 have highest population density i.e. 4,678 and 4,661 persons/sq. km respectively and ward 1 has lowest population density (177 persons/sq. km).

Table 21: Population, Household Number by wards, Sex and Population Density

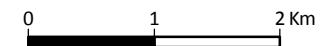
Wards	Area (Sq. Km)	Household (Nos.)	Total Population (Nos.)	Male Population (Nos.)	Female Population (Nos.)	Population Density (Per Sq. Km)
1	23.17	935	4,112	2,097	2,015	177
2	1.76	1,636	8,251	4,211	4,040	4,678
3	0.45	408	2,185	1,117	1,068	4,661
4	3.98	1,088	5,247	2,710	2,537	1,317
5	4.03	1,039	4,948	2,540	2,408	1,228
6	4.81	1,071	5,635	2,889	2,746	1,171
7	5.21	1,289	6,219	3,159	3,060	1,195
8	8.03	1,148	5,753	2,954	2,799	716
9	3.40	1,180	5,977	3,105	2,872	1,759
10	3.94	2,126	10,521	5,373	5,148	2,673
11	5.90	2,894	13,810	7,032	6,778	2,343
12	2.96	1,437	6,977	3,585	3,392	2,360
13	5.64	626	3,286	1,666	1,620	582
14	4.60	619	3,287	1,685	1,602	715
<b>Total</b>	<b>77.89</b>	<b>17,496</b>	<b>86,208</b>	<b>44,123</b>	<b>42,085</b>	<b>1,107</b>

### 5.3 Population proportion map (male-female ratio)

Map 15 of municipal spatial profile show ward-wise male female ratio of Bharatpur Municipality based on the household census survey data conducted in 2007.

Household census survey shows that the overall sex ratio of population is 95, i.e. there are 95 females for 100 males (i.e. 953 females per 1000 males). In ward-wise male female ratio, ward 13 has the highest sex ratio of population (97.24) and ward 9 has the lowest sex ratio (92.50).

# Bharatpur Municipality Population Distribution Map



### Horizontal Datum

Spheroid Everst 1830  
 Projection Modified UTM  
 Central Meridian Longitude 84° East  
 Latitude 0° North  
 False Easting 500,000 meters  
 Scale Factor 0.9999

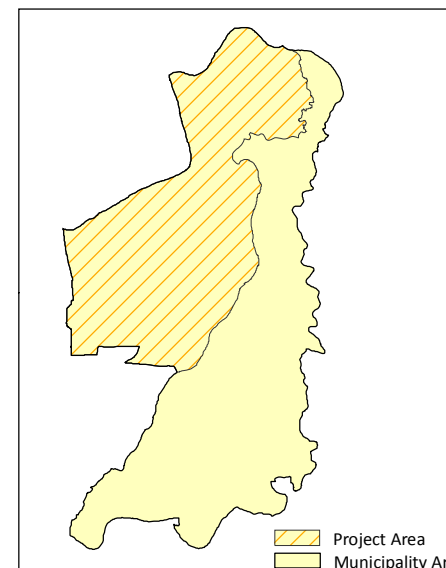
### Notes

This population distribution map is based on household survey data conducted by Bharatpur Municipality, 2007.

Ward	Total Population
1	4,112
2	8,251
3	2,185
4	5,247
5	4,948
6	5,635
7	6,219
8	5,753
9	5,977
10	10,521
11	13,810
12	6,977
13	3,286
14	3,287

### Legend

- Project Boundary
- Ward Boundary
- Ward-1 Ward Number
- One Dot represents 20 Inhabitants



Project Area  
 Municipality Area



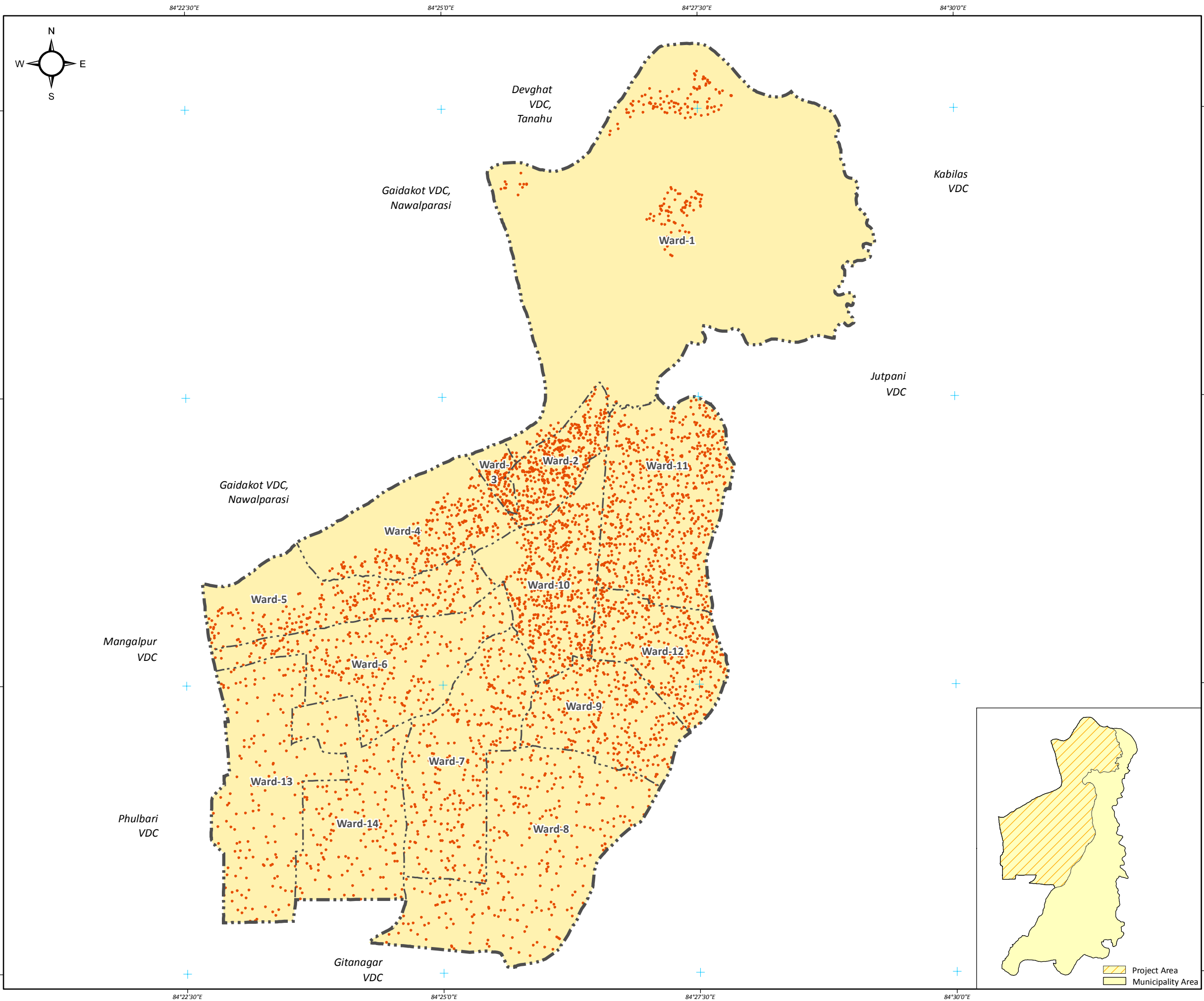
GoN/DUDBC  
 Urban and Environmental  
 Improvement Project



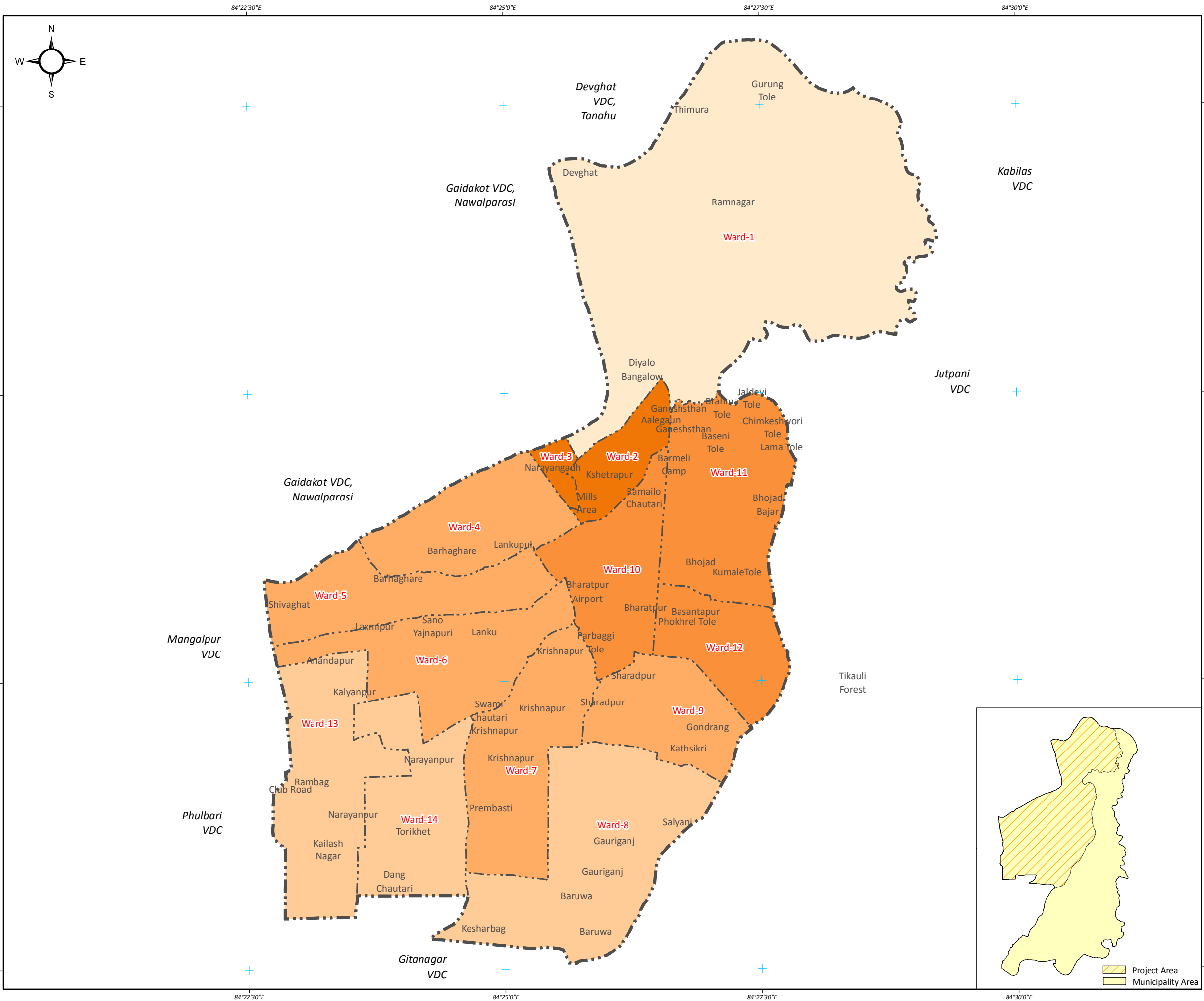
Bharatpur Municipality  
 Project Implementation Unit  
 Bharatpur, Chitawan



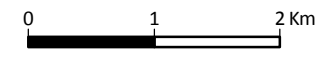
GENESIS  
 GIS & Digital Programming Specialist  
 Genesis Consultancy (P) Ltd



Population Distribution Map, Bharatpur Municipality 2008



### Bharatpur Municipality Population Density Map



**Horizontal Datum**

Spheroid      Everest 1830  
 Projection    Modified UTM  
 Central Meridian    Longitude 84° East  
                                  Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

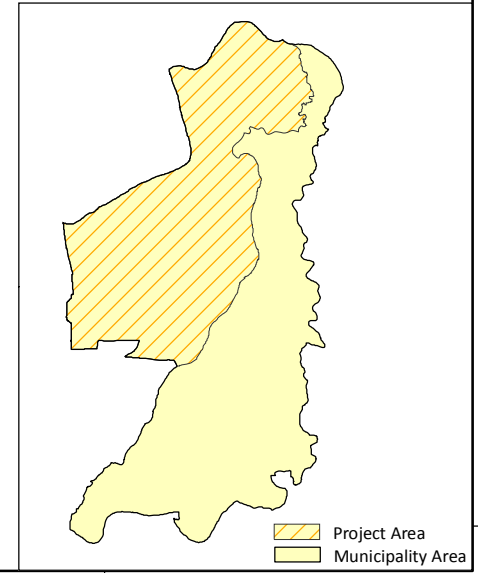
**Notes**

This population density map is based on household survey data conducted by Bharatpur Municipality, 2007.

Wards	Total Population	Density/sq km
1	4,112	178
2	8,251	4,677
3	2,185	4,899
4	5,247	1,403
5	4,948	1,246
6	5,635	1,171
7	6,219	1,195
8	5,753	716
9	5,977	1,759
10	10,521	2,673
11	13,810	2,343
12	6,977	2,359
13	3,286	582
14	3,287	715

- Legend**
- Project Boundary
  - - - Ward Boundary
  - Ward-1 Ward Number
  - Bharatpur Location Names

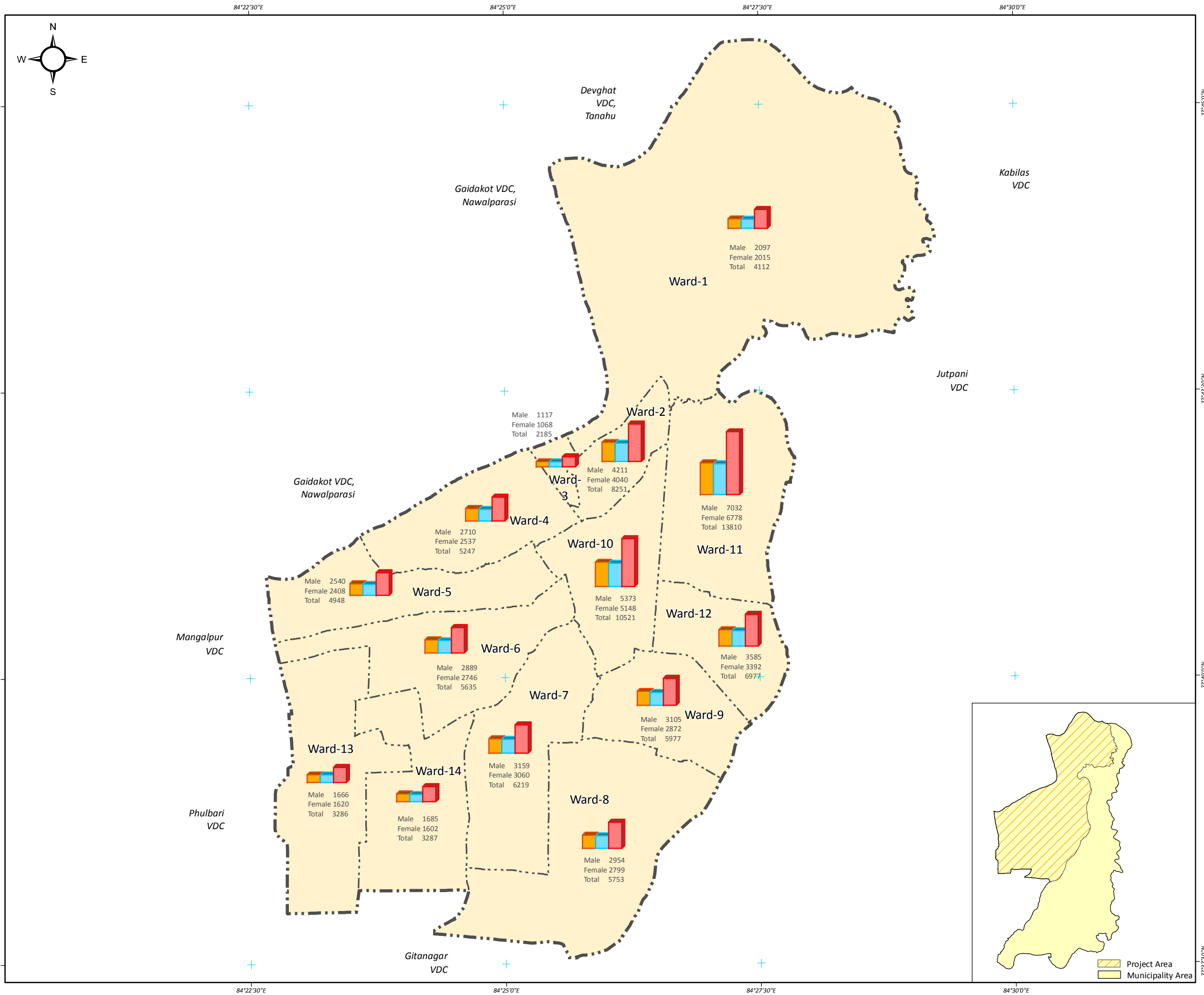
- Population Density**
- Very Low
  - Low
  - Medium
  - High
  - Very High



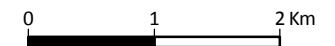
GoN/DUDBC  
 Urban and Environmental  
 Improvement Project

Bharatpur Municipality  
 Bharatpur, Chitawan

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 GIS & Digital Programming Specialist  
 Genesis Consultancy (P) Ltd



### Bharatpur Municipality Population Proportion Map



**Horizontal Datum**

Spheroid      Everst 1830  
 Projection    Modified UTM  
 Central Meridian    Longitude 84° East  
                                  Latitude 0° North  
 False Easting    500,000 meters  
 Scale Factor      0.9999

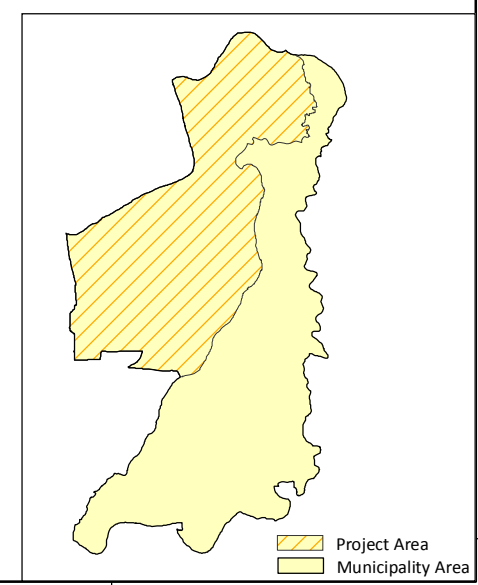
**Notes**

This population distribution map is based on household survey data conducted by Bharatpur Municipality, 2007.

Ward	Male	Female	Total
1	2,097	2,015	4,112
2	4,211	4,040	8,251
3	1,117	1,068	2,185
4	2,710	2,537	5,247
5	2,540	2,408	4,948
6	2,889	2,746	5,635
7	3,159	3,060	6,219
8	2,954	2,799	5,753
9	3,105	2,872	5,977
10	5,373	5,148	10,521
11	7,032	6,778	13,810
12	3,585	3,392	6,977
13	1,666	1,620	3,286
14	1,685	1,602	3,287

**Legend**

- Project Boundary
- - - Ward Boundary
- Ward-1    Ward Number
- Male  
Female  
Total



GoN/DUDBC  
Urban and Environmental  
Improvement Project

Bharatpur Municipality  
Government Improvement Unit  
Bharatpur, Chitawan

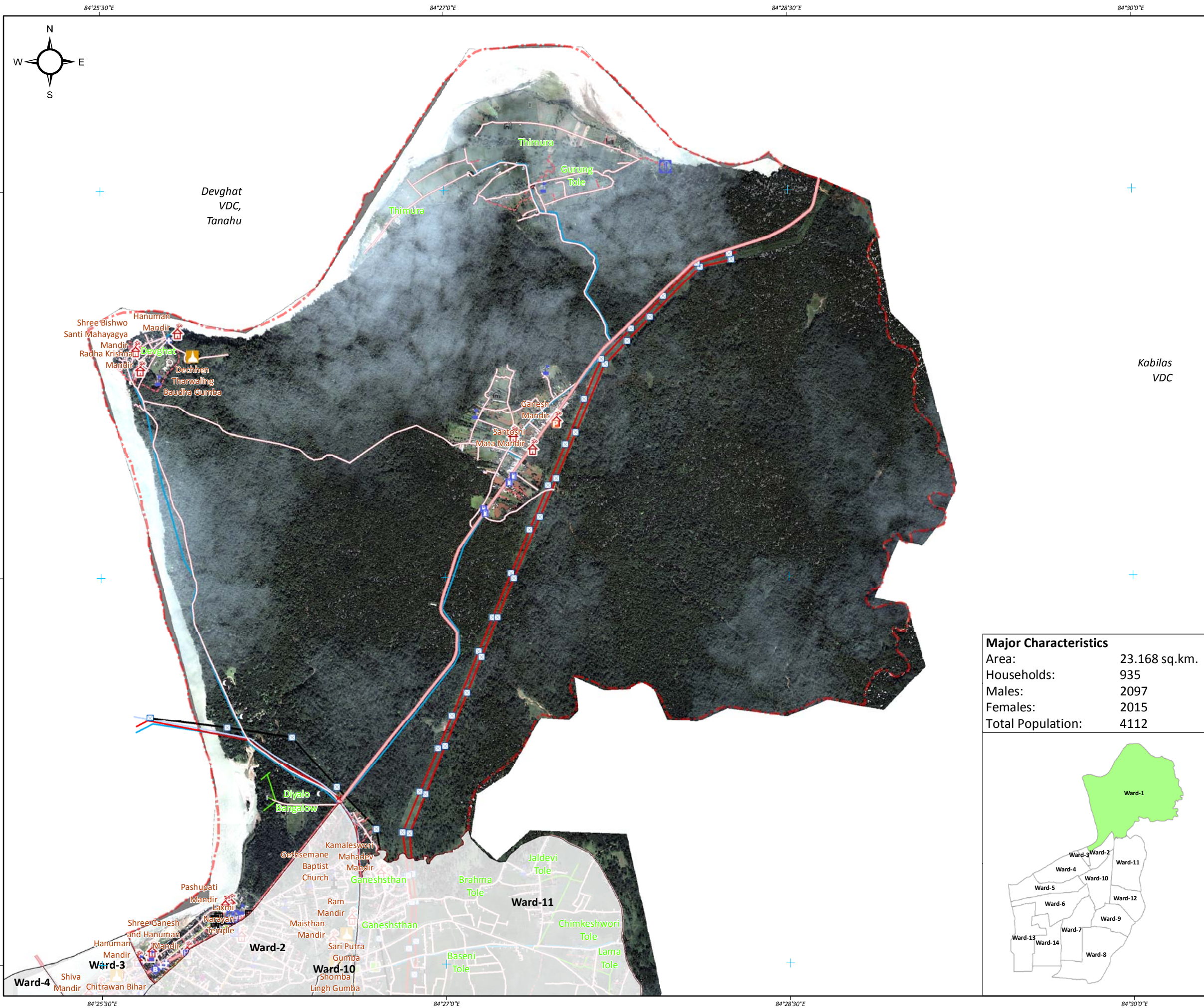
GENESIS  
GIS & Digital Programming Specialist  
Genesis Consultancy (P) Ltd

### Section 3

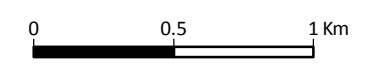
## Ward Spatial Profile

The spatial profile of each of the 14 wards is presented in following maps 16 to 29 to show in more detail the location of infrastructure, facilities and services. The education services, factories and industries, institutions / organizations, security services, public utilities and cultural/heritages sites are shown on the maps and statistics of the wards such as area, number of households and male and female populations are given in a box for easy reference. Satellite orthophoto image is used as a background to the maps.





# Bharatpur Municipality Spatial Profile - Ward 1



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

- Electricity Network**
- Sub Station
  - Pylon
  - Transformer

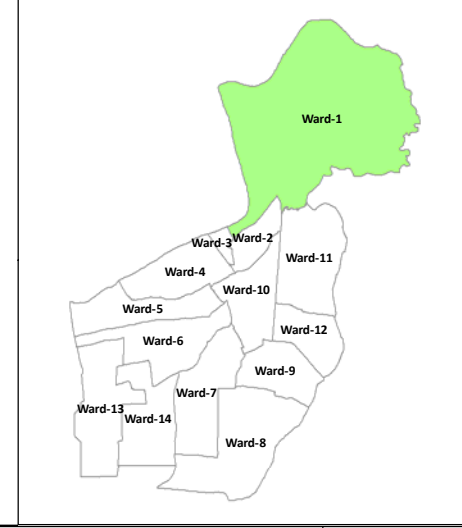
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder

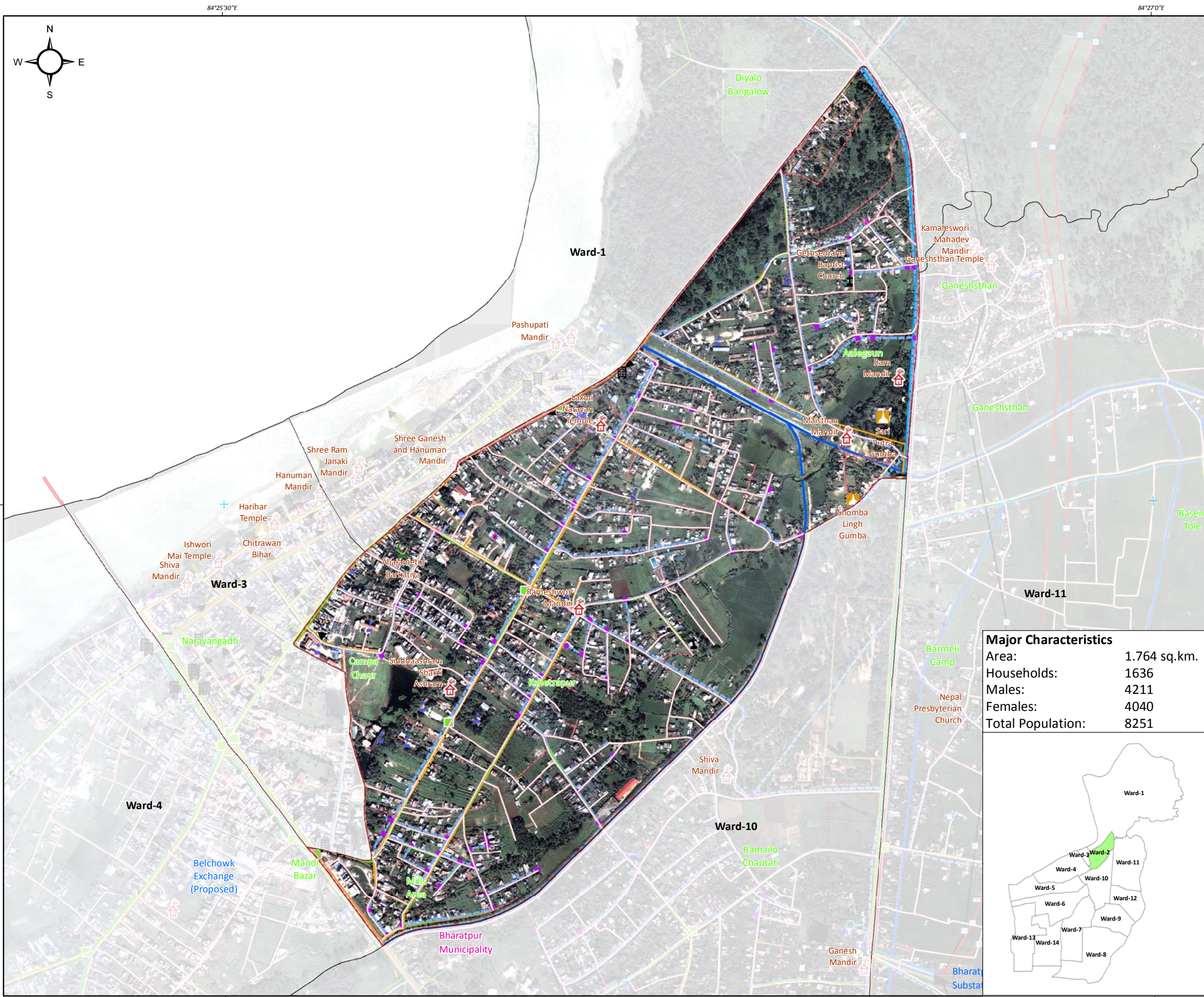
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
  - Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction

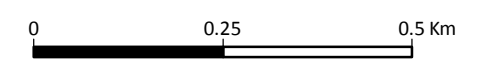
**Major Characteristics**

Area:	23.168 sq.km.
Households:	935
Males:	2097
Females:	2015
Total Population:	4112





## Bharatpur Municipality Spatial Profile - Ward 2



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

- Electricity Network**
- Sub Station
  - Pylon
  - Transformer

- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath

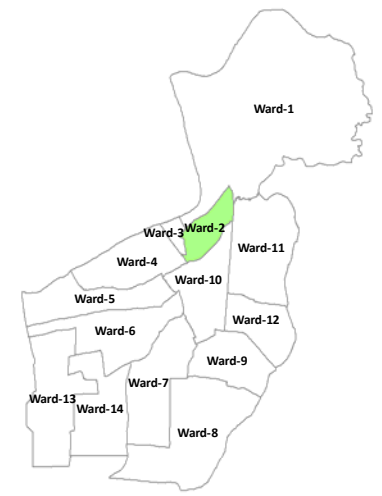
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder

- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
  - Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction

**Major Characteristics**

Area:	1.764 sq.km.
Households:	1636
Males:	4211
Females:	4040
Total Population:	8251

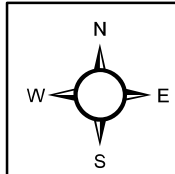


84°25'30"E

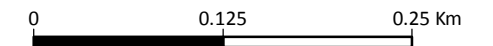
84°25'30"E

27°42'0"N

27°42'0"N



# Bharatpur Municipality Spatial Profile - Ward 3



### Horizontal Datum

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

### Notes

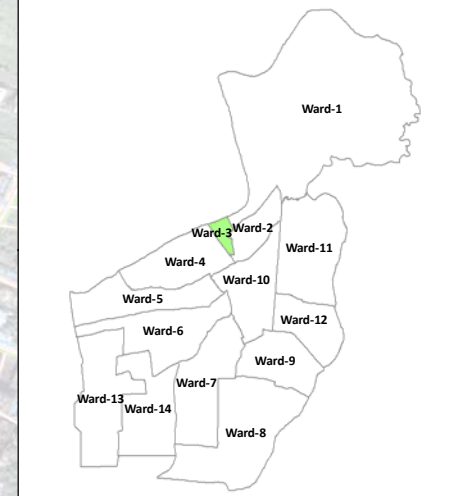
This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

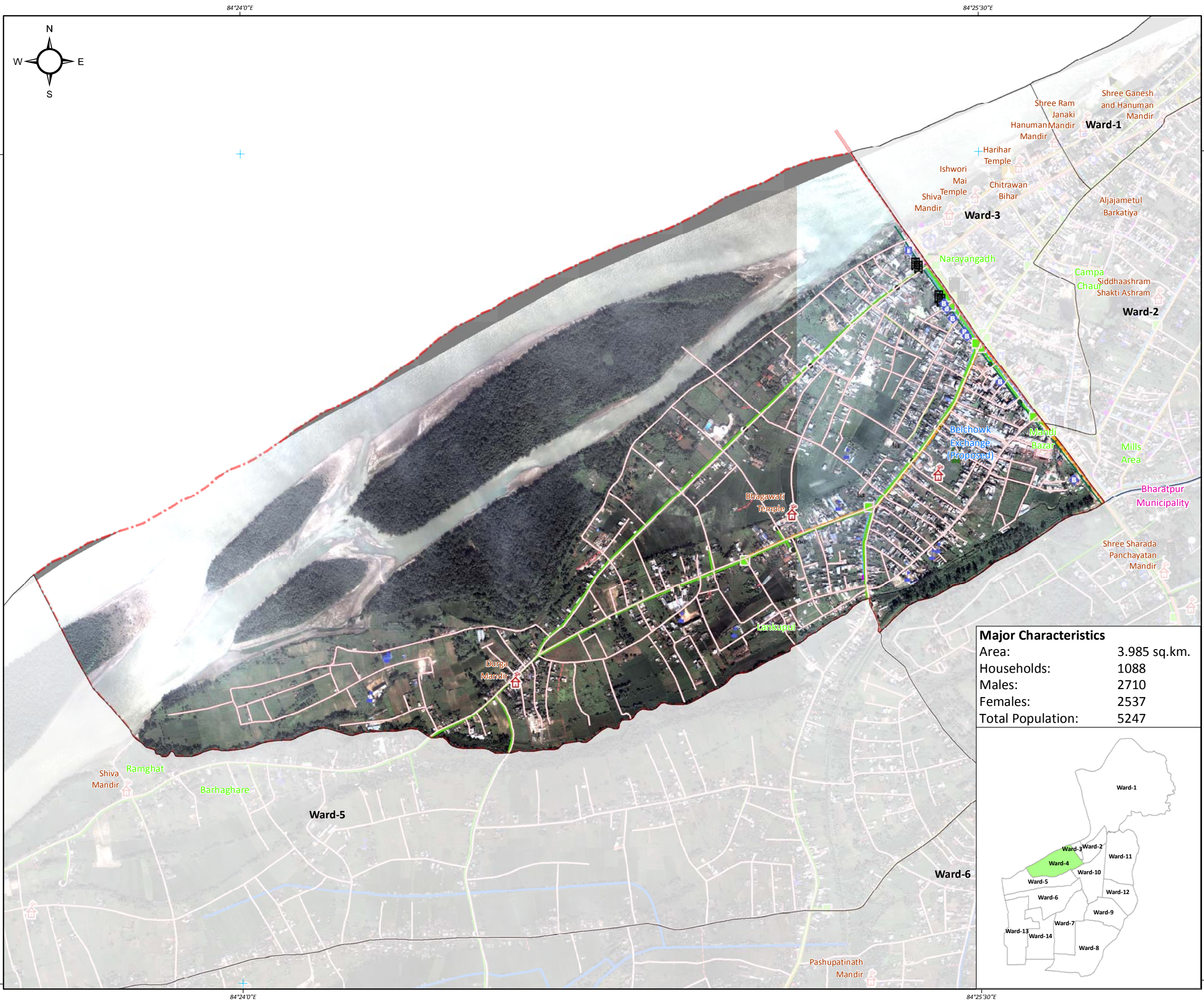
### Legend

- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

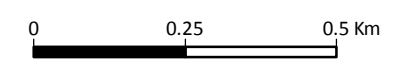
### Major Characteristics

Area:	0.469 sq.km.
Households:	408
Males:	1117
Females:	1068
Total Population:	2185





# Bharatpur Municipality Spatial Profile - Ward 4



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

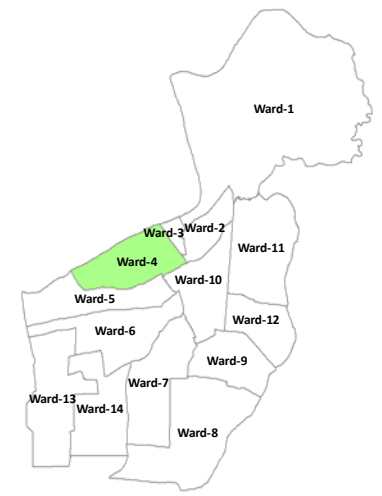
**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

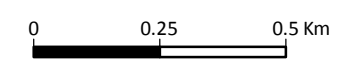
**Major Characteristics**

Area:	3.985 sq.km.
Households:	1088
Males:	2710
Females:	2537
Total Population:	5247





### Bharatpur Municipality Spatial Profile - Ward 5



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

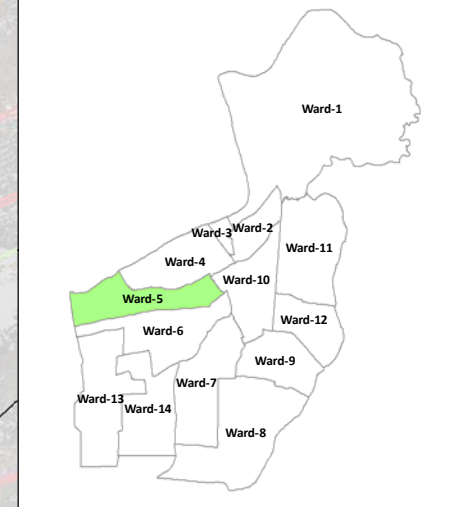
This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

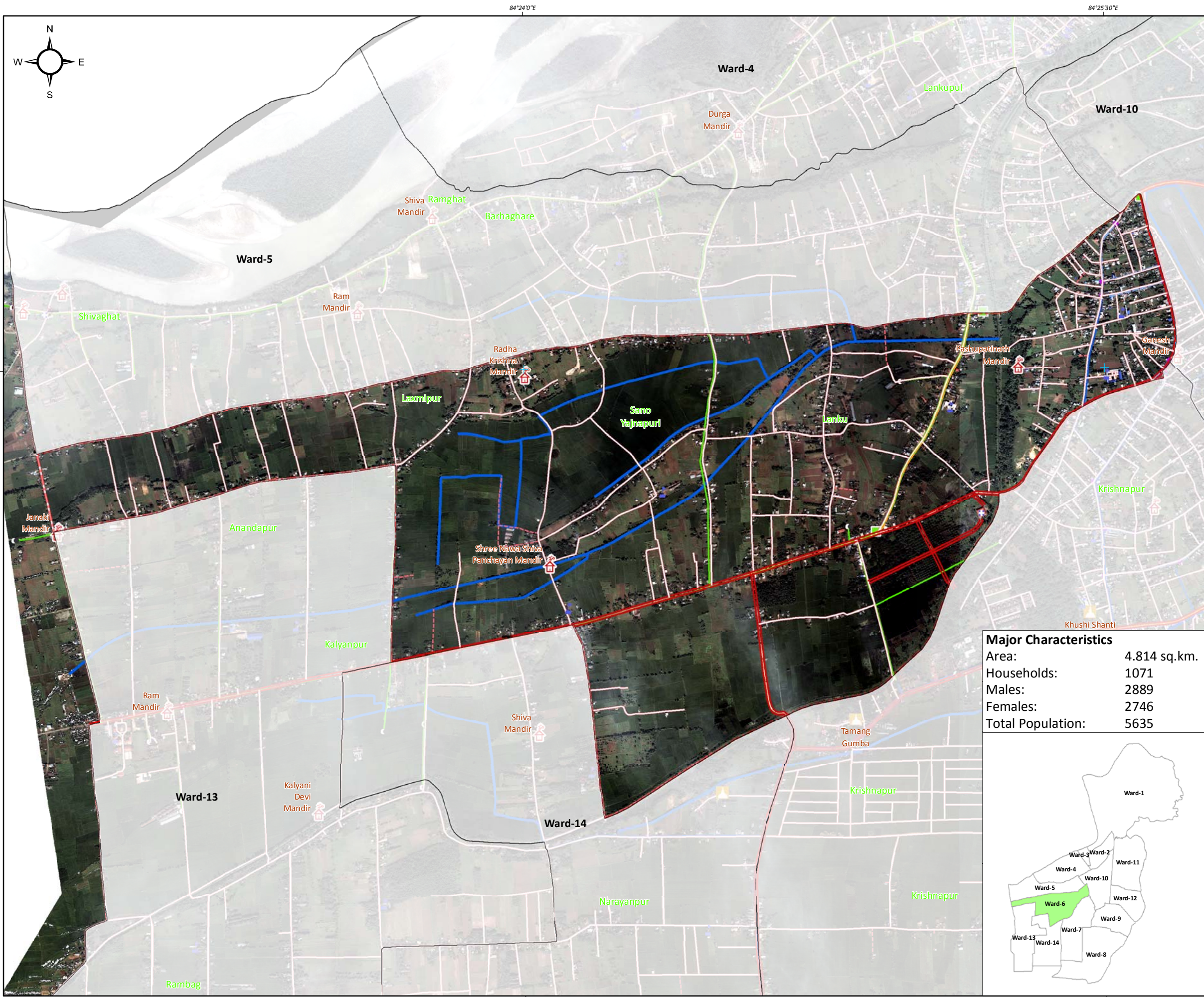
- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

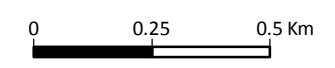
**Major Characteristics**

Area:	4.028 sq.km.
Households:	1039
Males:	2540
Females:	2408
Total Population:	4948





### Bharatpur Municipality Spatial Profile - Ward 6



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

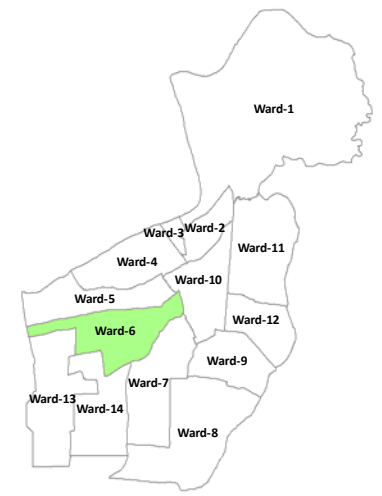
**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

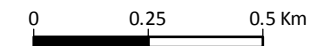
- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

**Major Characteristics**

Area:	4.814 sq.km.
Households:	1071
Males:	2889
Females:	2746
Total Population:	5635



# Bharatpur Municipality Spatial Profile - Ward 7



### Horizontal Datum

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

### Notes

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

### Legend

- Bank/Finance
- Bus Stop
- Bus Terminal
- Check Post
- Church
- Cinema Hall
- Educational Center
- FM Station
- Factory
- Health Center
- Hospital
- Hotel
- Monastery
- Mosque
- NEA Office
- NTC Office
- Petrol Pump
- Police Station
- Post Office
- Poultry Farm
- Restaurant
- Temple
- Tower
- Traffic Police
- Watersupply Office

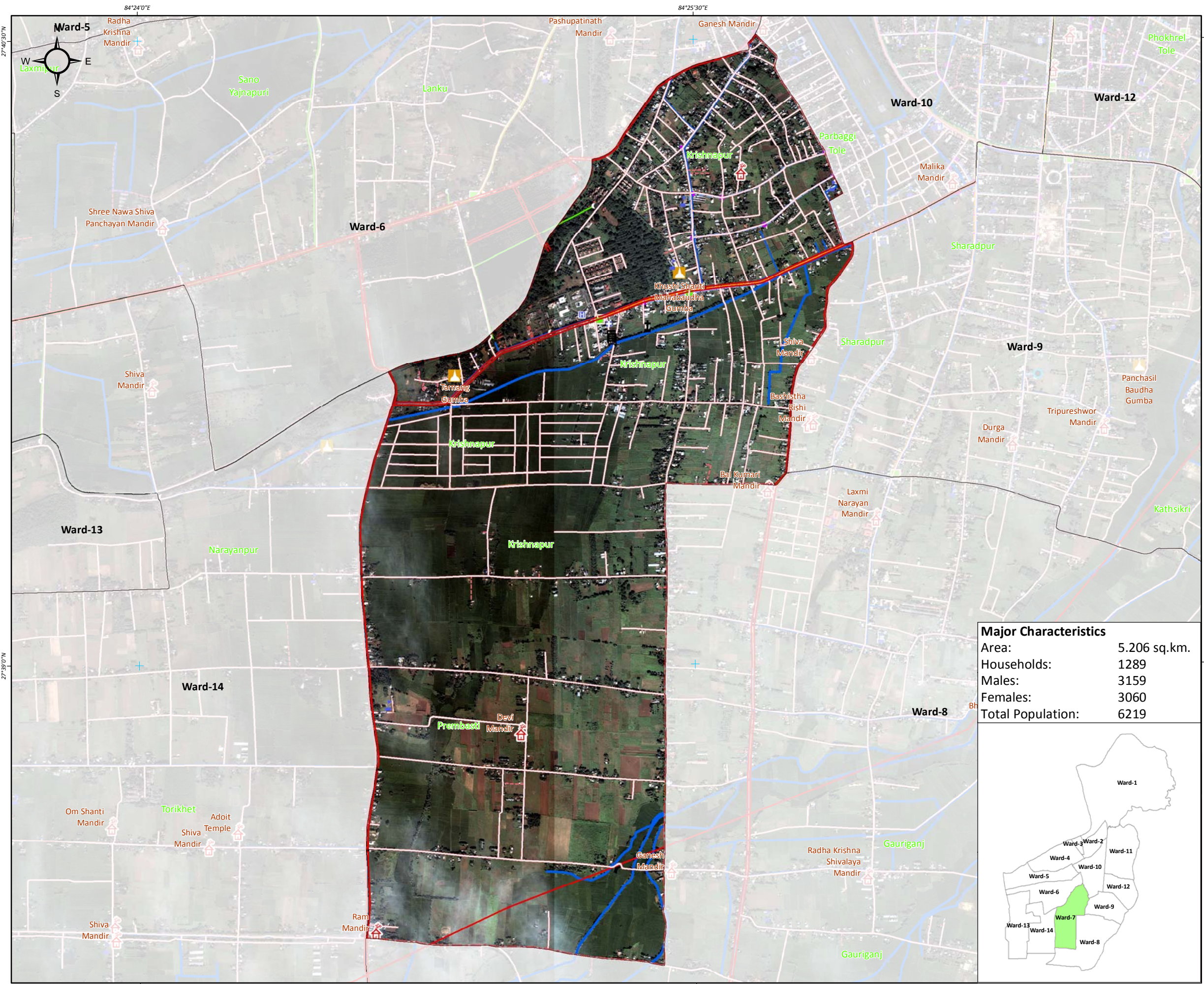
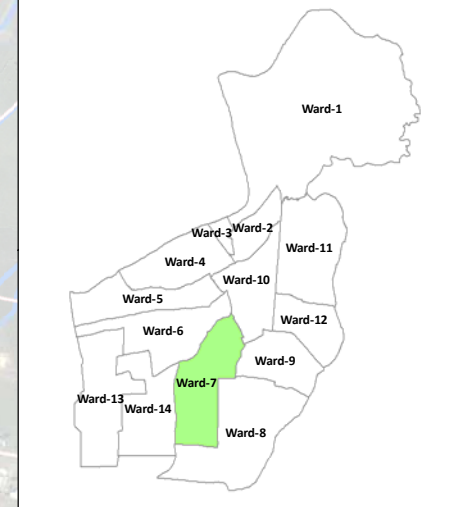
- Ward Boundary
- Canal
- Highway
- Feeder Road
- District Road
- Other Road
- Footpath
- Junction
- Source
- Water Pipe Line
- Treatment Plant
- Sewerage Line
- Flow direction
- Sub Station
- Pylon
- Transformer

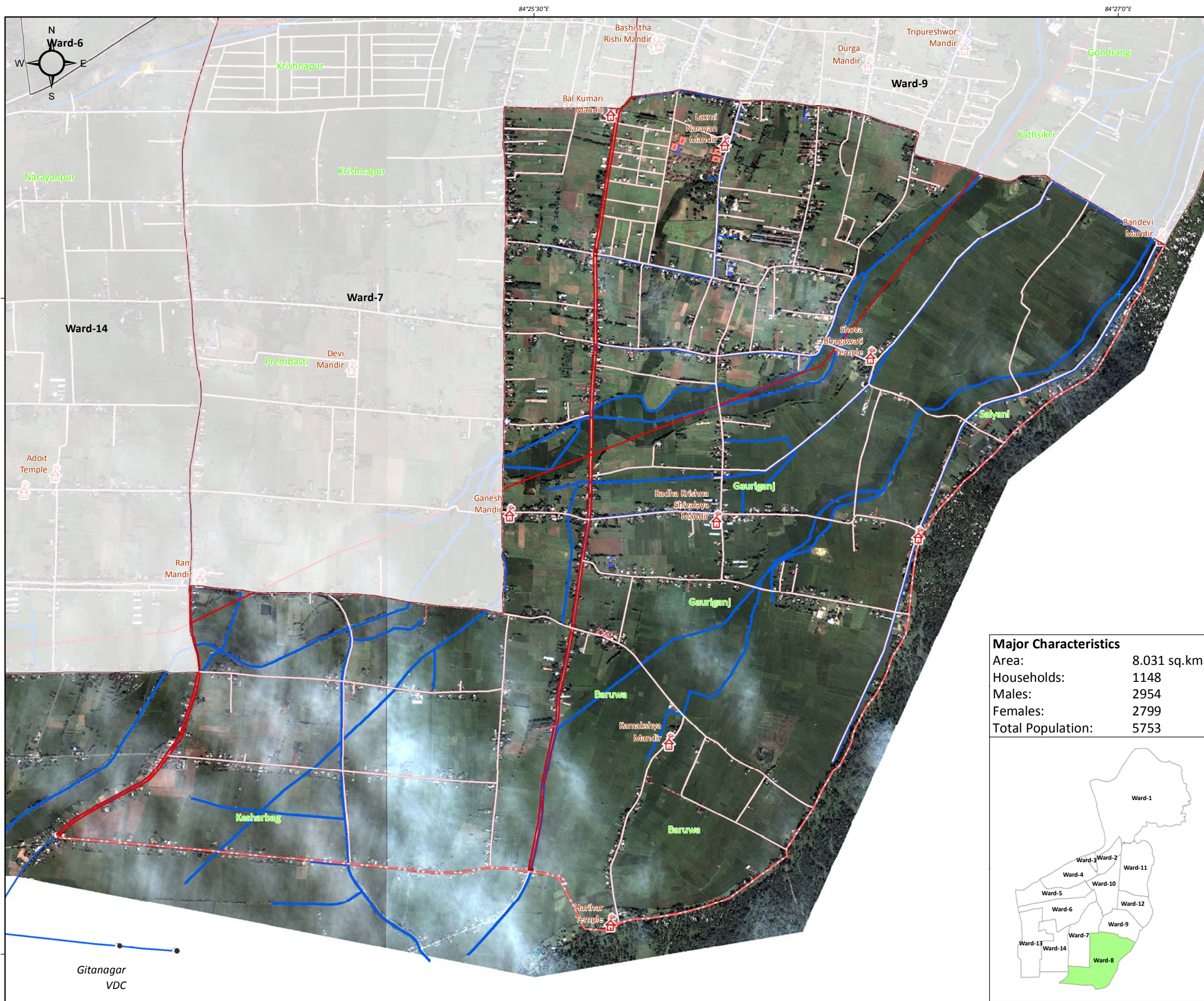
- 132 KV Transmission Line
- 33 KV Transmission Line
- Bharatpur Feeder
- Bhrikuti Feeder
- Gaidakot Feeder
- Hospital Feeder
- Irrigation Feeder
- Narayanghat Feeder

- Exchange
- Telephone Cabinet
- Transmission Line
- Distribution Line
- Optical Fibre

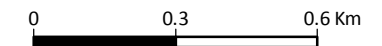
**Major Characteristics**

Area:	5.206 sq.km.
Households:	1289
Males:	3159
Females:	3060
Total Population:	6219





# Bharatpur Municipality Spatial Profile - Ward 8



### Horizontal Datum

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

### Notes

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

### Legend

- |  |                    |  |                    |
|--|--------------------|--|--------------------|
|  | Bank/Finance       |  | Mosque             |
|  | Bus Stop           |  | NEA Office         |
|  | Bus Terminal       |  | NTC Office         |
|  | Check Post         |  | Petrol Pump        |
|  | Church             |  | Police Station     |
|  | Cinema Hall        |  | Post Office        |
|  | Educational Center |  | Poultry Farm       |
|  | FM Station         |  | Restaurant         |
|  | Factory            |  | Temple             |
|  | Health Center      |  | Tower              |
|  | Hospital           |  | Traffic Police     |
|  | Hotel              |  | Watersupply Office |
|  | Monastery          |  |                    |

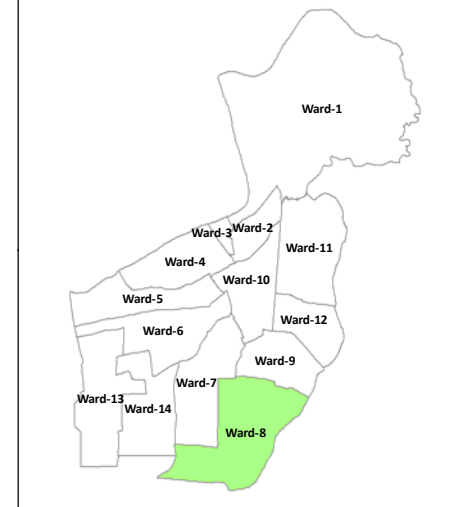
- |  |               |  |             |
|--|---------------|--|-------------|
|  | Ward Boundary |  | Sub Station |
|  | Canal         |  | Pylon       |
|  |               |  | Transformer |

- |  |               |  |                          |
|--|---------------|--|--------------------------|
|  | Highway       |  | 132 KV Transmission Line |
|  | Feeder Road   |  | 33 KV Transmission Line  |
|  | District Road |  | Bharatpur Feeder         |
|  | Other Road    |  | Bhrikuti Feeder          |
|  | Footpath      |  | Gaidakot Feeder          |

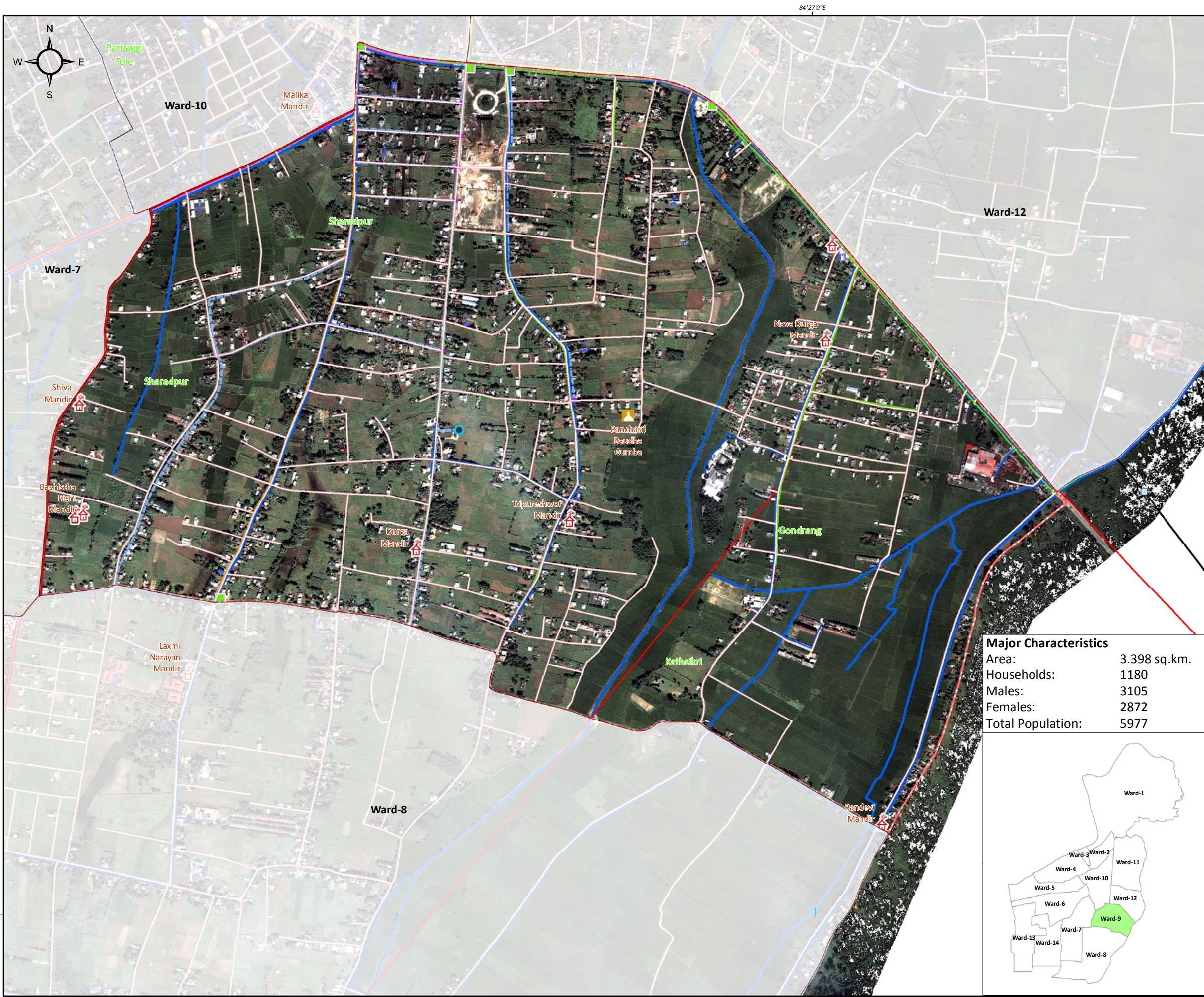
- |  |                 |  |                    |
|--|-----------------|--|--------------------|
|  | Junction        |  | Hospital Feeder    |
|  | Source          |  | Irrigation Feeder  |
|  | Water Pipe Line |  | Narayanghat Feeder |

- |  |                 |  |                   |
|--|-----------------|--|-------------------|
|  | Treatment Plant |  | Exchange          |
|  | Sewerage Line   |  | Telephone Cabinet |
|  | Flow direction  |  | Transmission Line |
|  |                 |  | Distribution Line |
|  |                 |  | Optical Fibre     |

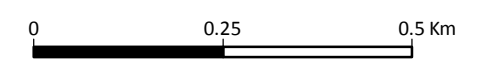
Major Characteristics	
Area:	8.031 sq.km.
Households:	1148
Males:	2954
Females:	2799
Total Population:	5753







# Bharatpur Municipality Spatial Profile - Ward 9



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

- Electricity Network**
- Sub Station
  - Pylon
  - Transformer

- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath

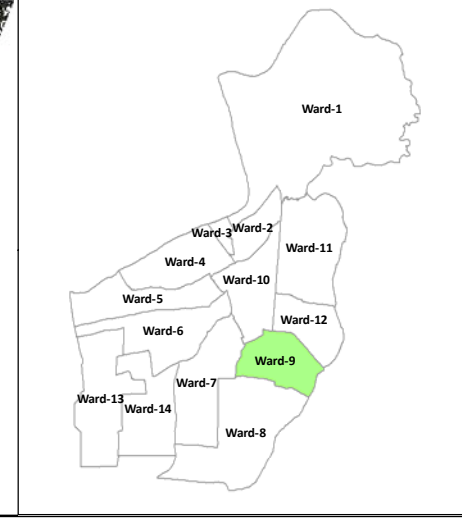
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder

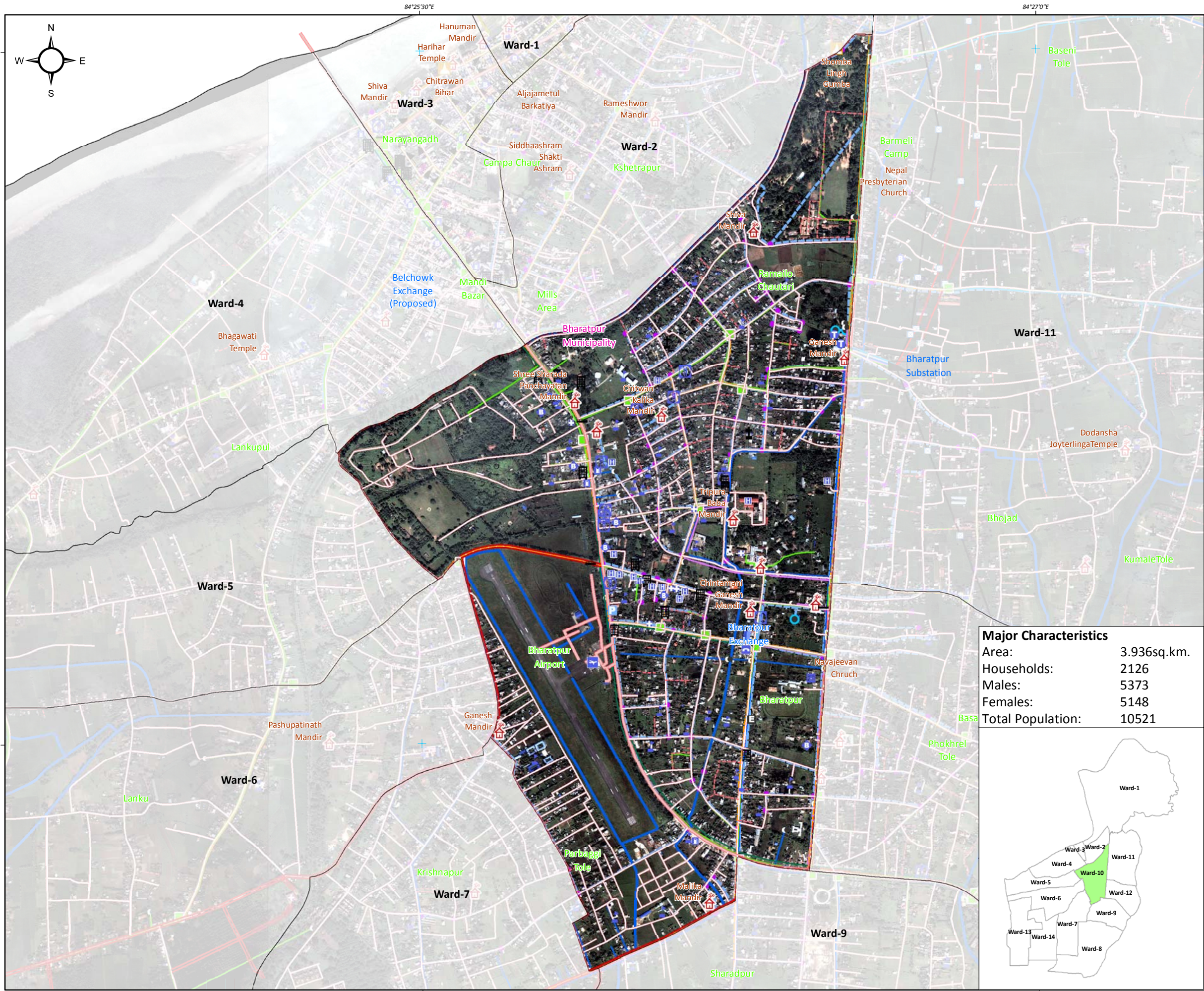
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
  - Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction

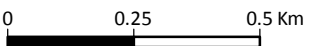
**Major Characteristics**

Area:	3.398 sq.km.
Households:	1180
Males:	3105
Females:	2872
Total Population:	5977





# Bharatpur Municipality Spatial Profile - Ward 10



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

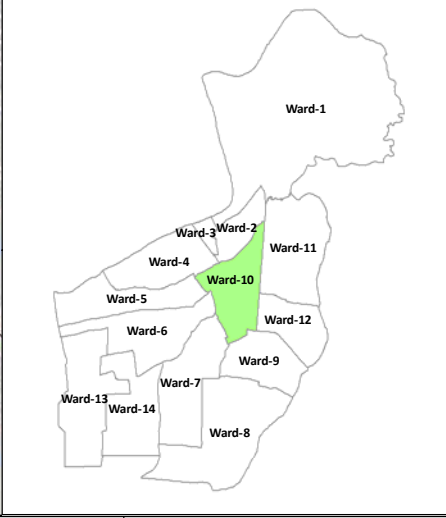
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer

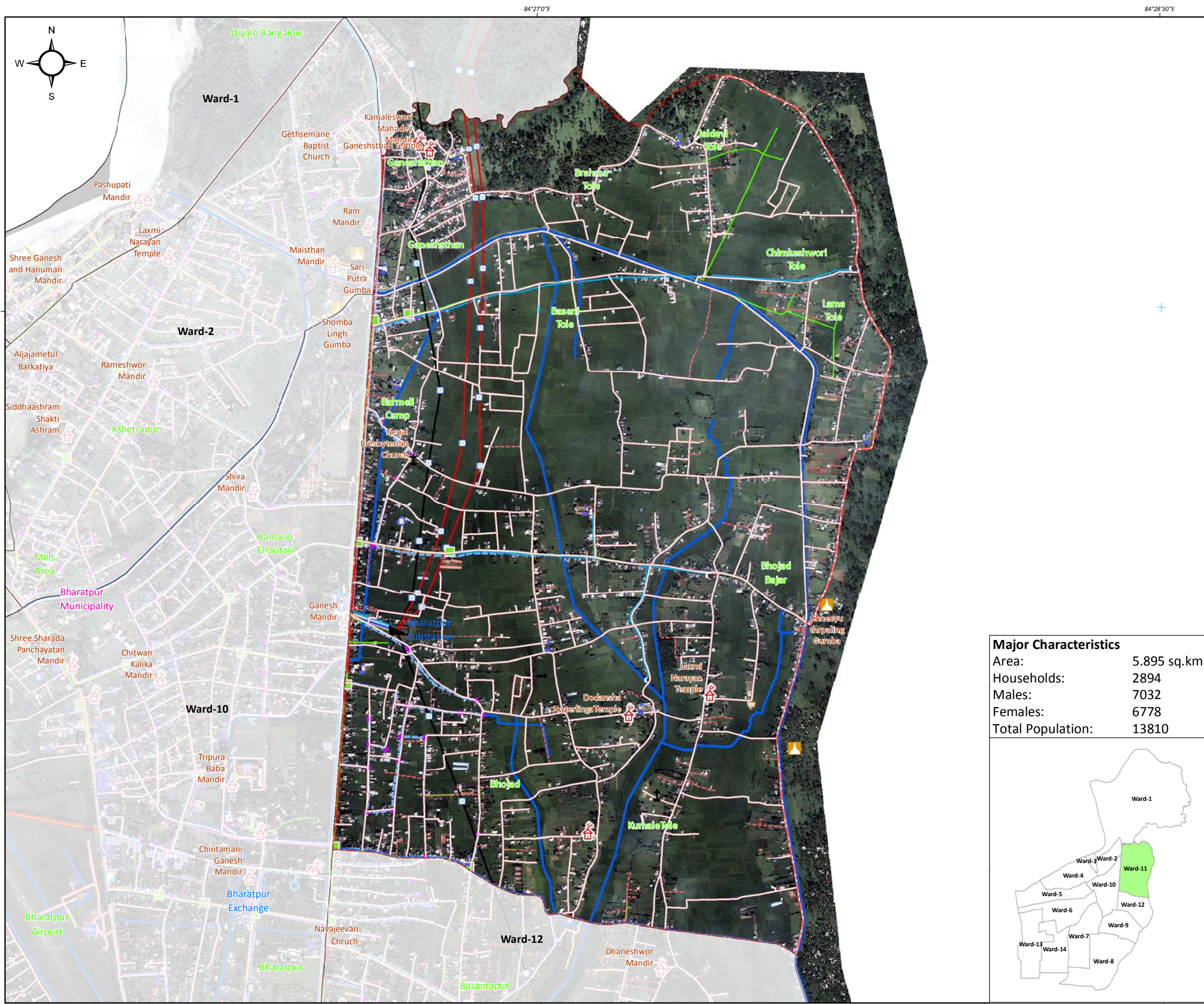
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder

- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

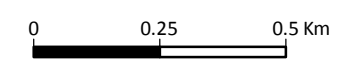
**Major Characteristics**

Area:	3.936sq.km.
Households:	2126
Males:	5373
Females:	5148
Total Population:	10521





# Bharatpur Municipality Spatial Profile - Ward 11



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office

- Electricity Network**
- Sub Station
  - Pylon
  - Transformer

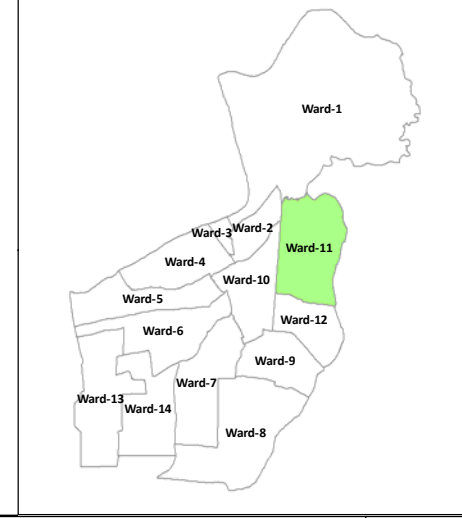
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Transmission and Feeder Line**
- 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder

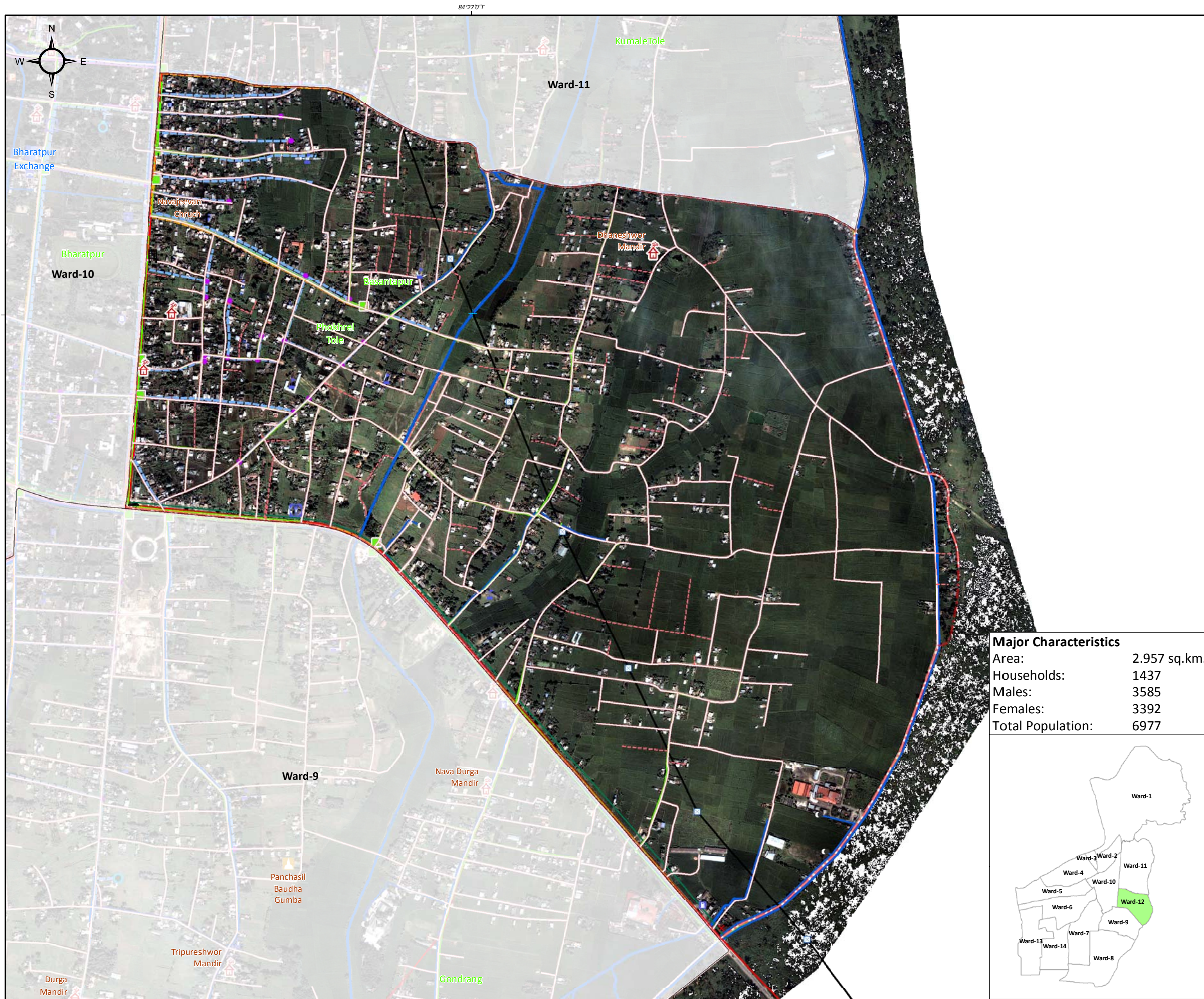
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
- Telecommunication Network**
- Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction

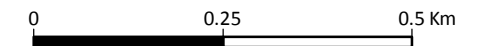
**Major Characteristics**

Area:	5.895 sq.km.
Households:	2894
Males:	7032
Females:	6778
Total Population:	13810





# Bharatpur Municipality Spatial Profile - Ward 12



### Horizontal Datum

Spheroid Everst 1830  
 Projection Modified UTM  
 Central Meridian Longitude 84° East  
 Latitude 0° North  
 False Easting 500,000 meters  
 Scale Factor 0.9999

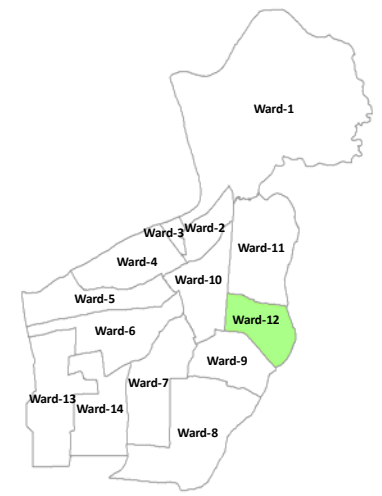
### Notes

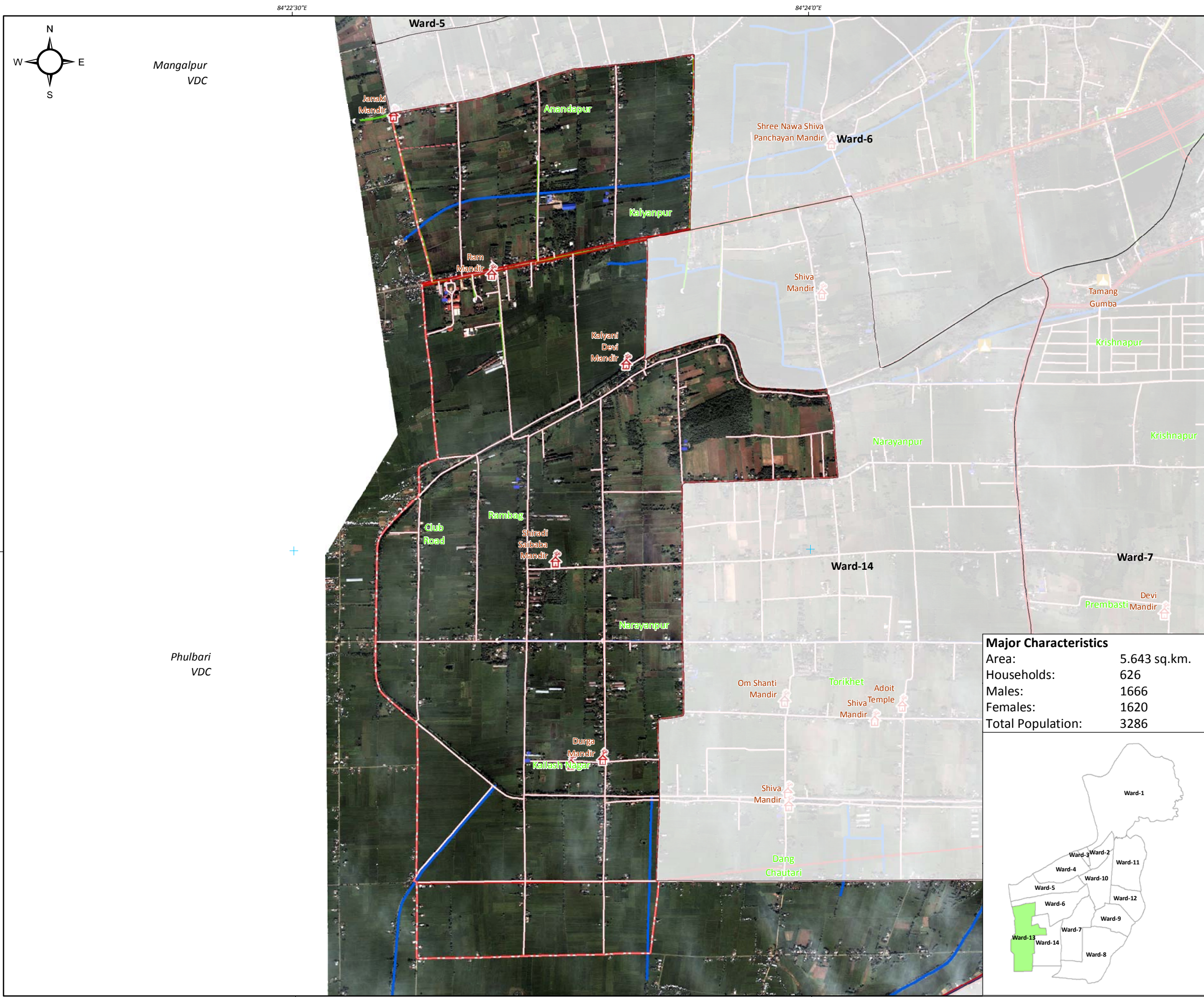
This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

### Legend

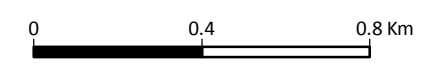
- |  |                    |  |                    |
|--|--------------------|--|--------------------|
|  | Bank/Finance       |  | Mosque             |
|  | Bus Stop           |  | NEA Office         |
|  | Bus Terminal       |  | NTC Office         |
|  | Check Post         |  | Petrol Pump        |
|  | Church             |  | Police Station     |
|  | Cinema Hall        |  | Post Office        |
|  | Educational Center |  | Poultry Farm       |
|  | FM Station         |  | Restaurant         |
|  | Factory            |  | Temple             |
|  | Health Center      |  | Tower              |
|  | Hospital           |  | Traffic Police     |
|  | Hotel              |  | Watersupply Office |
|  | Monastery          |  |                    |
- 
- |  |               |                            |             |
|--|---------------|----------------------------|-------------|
|  | Ward Boundary | <b>Electricity Network</b> |             |
|  | Canal         |                            | Sub Station |
|  |               |                            | Pylon       |
|  |               |                            | Transformer |
- 
- |                   |               |                                     |                          |
|-------------------|---------------|-------------------------------------|--------------------------|
| <b>Road Types</b> |               | <b>Transmission and Feeder Line</b> |                          |
|                   | Highway       |                                     | 132 KV Transmission Line |
|                   | Feeder Road   |                                     | 33 KV Transmission Line  |
|                   | District Road |                                     | Bharatpur Feeder         |
|                   | Other Road    |                                     | Bhrikuti Feeder          |
|                   | Footpath      |                                     | Gaidakot Feeder          |
|                   |               |                                     | Hospital Feeder          |
|                   |               |                                     | Irrigation Feeder        |
|                   |               |                                     | Narayanghat Feeder       |
- 
- |                             |                 |                                  |                   |
|-----------------------------|-----------------|----------------------------------|-------------------|
| <b>Water Supply Network</b> |                 | <b>Telecommunication Network</b> |                   |
|                             | Junction        |                                  | Exchange          |
|                             | Source          |                                  | Telephone Cabinet |
|                             | Water Pipe Line |                                  | Transmission Line |
|                             |                 |                                  | Distribution Line |
|                             |                 |                                  | Optical Fibre     |
- 
- |                         |                 |  |  |
|-------------------------|-----------------|--|--|
| <b>Sewerage Network</b> |                 |  |  |
|                         | Treatment Plant |  |  |
|                         | Sewerage Line   |  |  |
|                         | Flow direction  |  |  |

Major Characteristics	
Area:	2.957 sq.km.
Households:	1437
Males:	3585
Females:	3392
Total Population:	6977





# Bharatpur Municipality Spatial Profile - Ward 13



**Horizontal Datum**

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

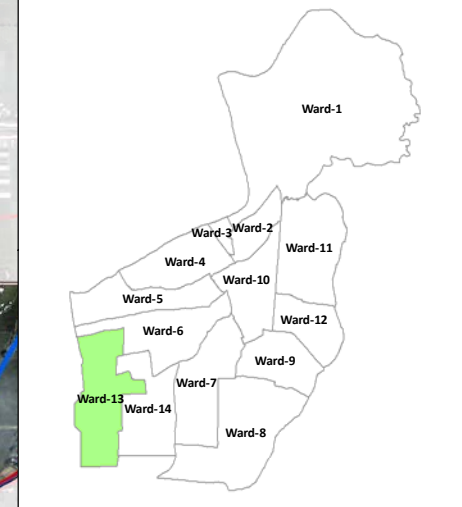
**Notes**

This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

- Legend**
- Bank/Finance
  - Bus Stop
  - Bus Terminal
  - Check Post
  - Church
  - Cinema Hall
  - Educational Center
  - FM Station
  - Factory
  - Health Center
  - Hospital
  - Hotel
  - Monastery
  - Mosque
  - NEA Office
  - NTC Office
  - Petrol Pump
  - Police Station
  - Post Office
  - Poultry Farm
  - Restaurant
  - Temple
  - Tower
  - Traffic Police
  - Watersupply Office
- Electricity Network**
- Sub Station
  - Pylon
  - Transformer
- Road Types**
- Highway
  - Feeder Road
  - District Road
  - Other Road
  - Footpath
- Water Supply Network**
- Junction
  - Source
  - Water Pipe Line
  - 132 KV Transmission Line
  - 33 KV Transmission Line
  - Bharatpur Feeder
  - Bhrikuti Feeder
  - Gaidakot Feeder
  - Hospital Feeder
  - Irrigation Feeder
  - Narayanghat Feeder
- Sewerage Network**
- Treatment Plant
  - Sewerage Line
  - Flow direction
  - Exchange
  - Telephone Cabinet
  - Transmission Line
  - Distribution Line
  - Optical Fibre

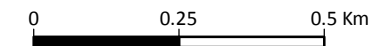
**Major Characteristics**

Area:	5.643 sq.km.
Households:	626
Males:	1666
Females:	1620
Total Population:	3286





# Bharatpur Municipality Spatial Profile - Ward 14



### Horizontal Datum

Spheroid: Everest 1830  
 Projection: Modified UTM  
 Central Meridian: Longitude 84° East  
 Latitude 0° North  
 False Easting: 500,000 meters  
 Scale Factor: 0.9999

### Notes

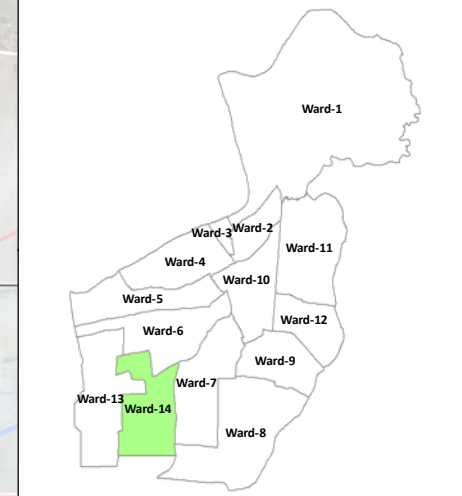
This ward spatial profile shows infrastructures, utilities and services in the ward. The map is based on municipal GIS developed for the project. Quickbird image of 0.6m resolution (acquisition September, 2007) is shown in the background.

### Legend

- Bank/Finance
- Bus Stop
- Bus Terminal
- Check Post
- Church
- Cinema Hall
- Educational Center
- FM Station
- Factory
- Health Center
- Hospital
- Hotel
- Monastery
- Mosque
- NEA Office
- NTC Office
- Petrol Pump
- Police Station
- Post Office
- Poultry Farm
- Restaurant
- Temple
- Tower
- Traffic Police
- Watersupply Office

- Ward Boundary
- Canal
- Highway
- Feeder Road
- District Road
- Other Road
- Footpath
- Junction
- Source
- Water Pipe Line
- Treatment Plant
- Sewerage Line
- Flow direction
- Sub Station
- Pylon
- Transformer
- 132 KV Transmission Line
- 33 KV Transmission Line
- Bharatpur Feeder
- Bhrikuti Feeder
- Gaidakot Feeder
- Hospital Feeder
- Irrigation Feeder
- Narayanghat Feeder
- Exchange
- Telephone Cabinet
- Transmission Line
- Distribution Line
- Optical Fibre

Major Characteristics	
Area:	4.598 sq.km.
Households:	619
Males:	1685
Females:	1602
Total Population:	3287





## Resource Maps and Spatial Profile of Bharatpur Municipality