



THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

নং 380 দিশপুৰ, শুক্ৰবাৰ, 27 মে', 2022, 6 জেঠ 1944 (শক)

No. 380 Dispur, Friday, 27th May, 2022, 6th Jaistha, 1944 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING & URBAN AFFAIRS.

NOTIFICATION

The 7th May, 2022

No. UDD(T)191/2022/6.— In exercise of the powers conferred by the Section 9 (nine) of the Assam Town & Country Planning Act, 1959 (Assam Act II of 1960) read with Sub-Section 1 of Section 10 (Ten) of the Assam Town & Country Planning (as amended), the Governor of Assam is pleased to published the following notice regarding the publication of the draft master plan for Dhing.

Notice for Publication of the Draft Master Plan for Dhing

1. It is notified that the draft master plan for Dhing prepared by the Directorate of Town & Country Planning, Government of Assam, Town & Country Planning Act, 1959 read with Sub-section 1 of Section 10 (Ten) of Assam, Town & Country Planning Act (as amended), for the area described in the schedule below is hereby published.
2. Any person or persons affected by the draft master plan may submit their objections or opinion in writing to the Director of Town & Country Planning, Government of Assam, Dispur, Guwahati-6 within two months from the date of publication.
3. The draft master plan for Dhing with all relevant papers and maps may be inspected free of cost during Office hours at the Office of the Director, Town & Country Planning, Government of Assam, Dispur, Guwahati-6, Office of the Deputy Director, Town & Country Planning, District Office, Nagaon, the Circle Office, Dhing Revenue Circle, Dhing, Office of the Chairman, Dhing Municipal Board, Dhing. Copies of the draft master plan for Dhing are available at the Office of the Deputy Director, Town & Country Planning, Nagaon on payment.

SCHEDULE**A. Situation and area :**

District	:	Nagaon
Subdivision	:	Nagaon.
State	:	Assam.
Master Plan Area	:	38.34 Sq. Km.
Municipality Board Area	:	5.12 Sq. Km.

Apart from the Dhing Municipal Board Area, Dhing Master Plan area covers 10 Nos. of nearby villages. The Revenue villages included in the Draft Master Plan for Dhing with Mouzas are as follows:-

Sl. No.	Revenu Village	Mouza
1	Auni Ati Satra	Batadraba
2	Magur mari	Dhing
3	Dhakaya Basti	Batadraba
4	Salaguri Gaon	Batadraba
5	Dhupaguri Kachari Gaon	Batadraba
6	Saharia Gaon	Batadraba
7	Lahkar Ghat	Dhing
8	Athgaon Chapori	Dhing
9	Barbheti	Dhing
10	Sonari Gaon	Dhing

Description of boundaries :

NORTH	:	Brahmaputra
SOUTH	:	Bordua
EAST	:	Laokhowa Wildlife Sanctuary
WEST	:	Moirabari

KAVITHA PADMANABHAN,
Commissioner & Secretary to the Govt. of Assam,
Department of Housing & Urban Affairs.

CHAPTER 1 : INTRODUCTION TO MASTER PLAN AREA

Dhing is a small town located at the North-West part of Nagaon district in the state of Assam. It is situated at a distance of around 25 kilometres from Nagaon town and 145 Kms east of the State Capital, Dispur, Assam. Dhing is located on the bank of the Brahmaputra River.

Initially Dhing Town Committee was established in 1970 getting permission of Gazette Notification and awarded to Dhing Town by the Government of Assam to establish a Town Committee for providing the basic infrastructure facilities to the inhabitants of the town. The Town Committee was established and run-in accordance with the provisions laid down in the Assam Municipal Act of 1956. Dhing town comes under the Administration of Dhing Town Committee with 10 Nos. of wards in the town and as on 2011 there are 10 Nos. of Municipal wards with a population of 19,235 in the town as per 2011 census. The Town Committee was updated to Dhing Municipality Board in the year of 2012 getting permission from the Govt.

Dhing is connected with Guwahati by a broad-gauge railway track. The road via Baruwati and Morigaon is the shortest road to Guwahati. The historically important place Bardowa is on the way to Dhing from Nagaon town.

The demarcation of the planning area of Dhing has been made considering the present growth of the town, the physical feature of the surrounding areas, communication network, different type of developmental works already come up in nearby villages and potential for future development of the region. The town has been growing towards Dhing-Nagaon Road, Dhing-Moirabari road and Dhing – Tuk Tuki-Jajori Road.

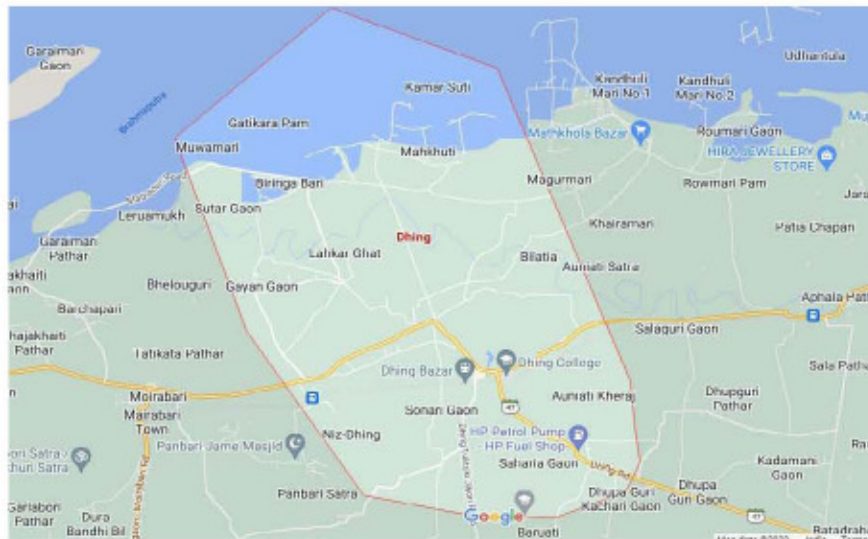
Before finalization of the planning area, discussion were held with district level officers dealing with developmental works headed by Deputy Commissioner, Nagaon and the Some official of Dhing Municipality Board.

The Dhing town area has been growing haphazardly and this has created enormous problems to the habitant of the town. In this context, "Draft Master Plan Dhing 2045 is prepared to guide the physical. Development of the Town with Some Surrounding Village Sin Future. This Plan Is Prepared, Basically A Land Use Plan Considering All The Urban Development Aspects, With Forecasting All The Service Up To 2045. By And Large, This Master Plan Has Been Prepared as Per the Provision of Urban Development Plans, Formulation and Implementation,

Guidelines,1996 Prepared By The Institute of town Planners, India New Delhi Under The Assistance of The Ministry of Urban affairs and employment, Govt. of India, New Delhi and circular issued by u.D.D (T & CP Wing), Govt. of Assam Time To Time. Uniform Zoning Regulations Are Considered As It Is Already Approved For All The Towns Of Assam Including Dhing Town By The Govt. of Assam.

1.1 LOCATION :

Dhing is a part of Nagaon district in the central region of Assam. it is located at 26.47° north latitude and 92.47° east longitude. it is situated at a distance of approximately 25 kms towards northwest from the district headquarter Nagaon town and 145 kms east of the state capital, Dispur, Assam. it is located on the bank of the Brahmaputra river.



1.2 BRIEF HISTORICAL DEVELOPMENT OF DHING :

Dhing is a small town in Nagaon district of central Assam located on the banks of the river Brahmaputra. Dhing is situated 25 km. from the district headquarters at Nagaon. The nearest railway station is at Dhing. Laokhowa Wildlife Sanctuary surrounds Dhing in the east, Bordua in the south, Moirabari in the west and Brahmaputra River in the north. It is located at 26.47° North latitude and 92.47° East longitude. It is situated at a height of 58 metres (190 feet) above mean sea level.

According to the 2001 census report, Dhing had a population of 17,841 inhabitants. 51% of the population consists of males while 49% of the population is females. In Dhing, 12% of the population is less than six years of age.

Dhing has an average literacy rate of 73%, which is higher than the national average of 59.5%. The male literacy rate is 78% and, the female literacy rate is 68%. The Industrial Estate is located on the southern bank of Brahmaputra River in North –West part of Nagaon District. It is within the Dhing urban area connected from district head quarter of Nagaon District at a distance of 26.00 KM via Nagaon-Dhing-Bhuragaon State High Way. It is also connected with Guwahati by a broad gauge railway.

Industrial Estate at IPAL Dhing Dist : Nagaon, Assam, Under the Scheme: Promotion of MSMEs in N.E. Region and Sikkim under Ministry of Micro, Small & Medium Enterprises, Government of India

Dhing Town is an interesting place to visit, given its unique culture, history and character. The great poet saint of Assam, Srimanta Sankardeva, was born in the year 1449 at a small village called Alipukhuri-Patekibori near Dhing, Moirabari in Marigaon district. He was the son of Shri Kusumbar Shiromoni Bhuyan and Smt. Satya Sandhya. This multi-faceted genius remodeled the Assamese society by removing inequalities and untouchability among people and gave the society a new religion, literature, poetry music, drama, etc. On the whole, Sankardeva gave a new concept and culture to the Assamese society. This multi-dimensional personality of Assam left for heavenly abode in the year 1568. However he shifted his Karmabhumi from his birthplace to Bordowa, which is in Nagaon District and about 9 KM from this place.

1.3 History of Batadrava Than :

Srimanta Sankardeva used this indigenous Assamese word 'Than' to indicate the residential religious institution created by him. At that time the word 'Satra' was not used. Srimanta Sankardeva himself used the word 'Than'. It was only later that the word 'Sattra' started to be used. Batadrava Than in Bordowa in the present Nagaon district of Assam is one of the best known Thans founded by Srimanta Sankardeva. It is named as SRI SRI BATADRAVA THAN. Srimanta Sankardeva set up the first ever Kirtanghar here in 1468.

The importance of this place is also derived from the fact that the saint was born at Alipukhuri – Bordowa in 1449. After returning from his 12 year long pilgrimage in 1493, he started preaching his Vaishnavite religious ideas here regularly and systematically. His ideas were based on Bhagavata Purana. Batadrava than is the first than or the first institution set up by Srimanta Sankardeva for propagation of Eka Sarana Nama Dharma founded by him. He also built the 'Monikut' together with Kirtanghar or Namghar and the 'Cari-Hati' (four clusters of quarters) for accommodation of his disciples. This full-fledged Than complex came up in 1509. Simhasana or Guru Asana (altar of God) was placed in the Monikut with the Holy Scripture 'Bhagavata' on it without any idol. Srimanta Sankardeva used to practise Nama Prasanga regularly in the Kirtanghar along with his follower devotees. His religion Eka Sarana Nama Dharma is very simple. There is no unnecessary ritual in his order. Srimanta Sankardeva advocated 'EKA Deva, Eka Seva, Eka Biney Nahi Kewa', which means one should worship none but one God, who is Lord Krishna. Batadrava or Bordowa became the centre of his religious activities. As such, Batadrava has been regarded as the Dvitiya Vaikuntha (second heaven).

The Thans founded by Srimanta Sankardeva are Gangmou, Belaguri, Patbausi, Kumarkuchi, Sunpora, and Madhupur. Later many Sattras were set up by his followers all over the Brahmaputra valley. All these were designed like Batadrava Than. But of all these Thans and Sattras, Batadrava Than is the unique one. Devotees visiting different Thans/Sattras as well as the prominent sacred places and temples in Jaganath Puri, Brindavan, Badarikasram, Gaya, Kashi etc. consider Batadrava as one of the principal places of worship. Visit to this Than

makes one's holy journey complete. Srimanta Sankaradeva used to write scriptures sitting below one Shilikha (Myrobalan) tree near the Kirtanghar. That tree is still alive even after five and half centuries, which is a wonder.

HIMA DAS :

Hima Das was born at Kandhulimari village, near the town of Dhing in her home state of Assam. She belongs to the Assamese family. She changed to sprint running. Conferred with Arjuna Award by the President of India on 25 September 2018

Hima Das Appointed as a civil servant under the post of Deputy Superintendent of Police in Assam Police Service cadre by Assam Public Service Commission without her appearing for the Combined Competitive Examination but through direct entry mode in February 2021.

1.4 CLIMATE :

Climate and Average Weather Year Round in Dhing In Dhing, the wet season is hot, oppressive, and partly cloudy and the dry season is warm and clear. Over the course of the year, the temperature typically varies from 53°F to 89°F and is rarely below 49°F or above 95°F. Based on the beach/pool score, the best times of year to visit Dhing for hot-weather activities are from late March to early May and from mid October to mid November.

Table : Climatic condition of Dhing

SL. No.	Parameter	Description
1.	Topography	Mostly Alluvial Flood Plain
2.	Temperature	38.40 Degree C (Max.) 8.60 Degree C (Min)
3.	Extreme months	July in Summer and December in Winter
4.	Coldest month of the Year	December
5.	Humidity	75% (Max)
6.	Rainfall	1726.05 MM (Annually)
7.	Monsoon Period	53 rainy Days
8.	Winter Season	November to February

1.5 TOPOGRAPHY :

Dhing town is situated on the flat alluvial plain which slopes towards North and northwest where the old beds of the Brahmaputra river are still in existence. Many beels, ponds and marches surrounded the town as well as the Master Plan Area. The Talibor Beel beel lies in the South-East of the town. The beel and marches are teemed with varieties of fishes and birds. The land is alluvial and loamy and consists of clay and sand. The cultivable land is scattered either sides of the beels as well as the surrounding villages nearest to the town. In considering the high land as well as the physical features of the surrounding areas the Town is growing

mainly towards south-east towards the State Highway-47, south-east, towards the state Highway-47. Some developments have also taken place along other major roads connecting in some trading centers in the District.

1.6 TOWN INFLUENCE AND ITS CHARACTERISTICS INCLUDING SETTLEMENT PATTERN, RURAL-URBAN SCENARIO, HISTORY OF THE PHYSICAL GROWTH AND EXPANSION OF DHING TOWN :

Rural-Urban fringe is an important concept in settlement geography. The rural-urban fringe is the boundary zone outside the urban area proper where rural and urban land uses intermix. It is the area where the town meets the countryside. It is an area of transition from agricultural and other rural land uses to urban use. Located well within the urban sphere of influence the fringe is characterized by a wide variety of land use including dormitory settlements housing middle-income commuters who work in the central urban area. Over time the characteristics of the fringe change from largely rural to largely urban. Suburbanization takes place at the municipal boundary of rural-urban fringe. The main economy of the Dhing rural-urban fringe is agriculture base. The surrounding small villages were also influence the main urban centre. The trading of agricultural finished goods produce in the rural-urban fringe area was taking place with the main urban centre. While considering the agro base economy of the rural-urban fringe, secondary and other allied services has to be initiated to boost up the economic growth of the main urban center as well as the whole Dhing planning area. The main reason of low profile economy of the town is that less number of people are engaged in secondary, quaternary and other allied services. Activities related to trade and commerce and transportation alone comprise only 32% of the total employment of the town. It is expected that employment related to transportation and trade & Commerce is going to increase further after the road linkage is established with the town and surrounding villages.. is provided then the town cannot only upgrade its economic base but also act as a centre for industrial activities of the whole Dhing planning region. Lack of infrastructure is also responsible in a substantial manner for economic and industrial development of the Dhing town. If adequate urban infrastructure such as efficient transportation network, well planned market etc. Therefore, the prime objective of the development strategy of Dhing town will be to bring positive development in the town by improving existing physical infrastructure of the town, so as to encourage more and more people to participation in the secondary and tertiary sector or employment. This will generate more employment in the town, strengthen the local bodies as well as improve the socio-economic condition of the people. At present it is observed that different type of developmental works already come up in nearby villages and potential for future development of the region. The town has been growing towards Dhing-Nagaon Road, Dhing-Tuk Tuki Road and Dhing-Moirabari Road. Some major developments also come along the Dhing-Nagaon Road connecting NH-37.

1.7 CONCEPT OF MASTERPLAN :

Master Plan is comprehensive that is it integrates various aspects of planning like housing, transportation, infrastructure etc. All the aspects are considered that affects the quality of life of people and all the interrelationships between various aspects; Multidisciplinary in nature: it encompasses various disciplines of studies like social aspects, economics, environment, engineering, architecture etc.; Master plan is a long term document. It clears out the vision for prospective year for the town and plans out development for future; Master plan focuses on rational use of land that is demarking land for the use most optimal for the activity at a place. It efficiently uses resources to meet the present and future requirements of the citizens; Master plan should consider the environmental and costs related to it.

The proposals for development should be environmentally sustainable. Master Plan is based on inclusive planning. It considers all sections of people in society in development proposals and focuses on affordability. ; Master plan gives restrictions on ecologically sensitive areas, on heritage sites and traditional built up areas and gives special norms for these places. ; Master Plan leads to a balanced growth of the town. It prevents concentration of a particular activity at one place and takes into account efficient distribution of facilities, infrastructure, networks and housing and follows neighborhood concept of development.



1.8 NEED OF A MASTER PLAN FOR DHING TOWN :

A master plan or a development plan or a town plan may be defined as a general plan for the future layout of a town showing both the existing and proposed Land use plan. A master plan is prepared either for improvement of an old town or for a new town to be developed on a virgin soil. A master plan is a blueprint for the future. It is a comprehensive document, long-range in its view; that is intended to guide development in the township for the next 20 to 25years.

It helps in restricting the haphazard and unplanned growth, arranges the pattern of a town in such a way so as to satisfy the present requirements without introduction of future improvements by the coming generations. It also aims at intelligent and economic spending of the public funds for achieving welfare of the inhabitants in respect of amenity, convenience and health.

On the other hand Master Plan also serves as a guide to the planning body for making any recommendations for public improvement. It removes the defects of uncoordinated physical growth of the various components of a town due to the fact that it considers the entire town area or town as planning and development entity.

To offset the evils which have come up due to over-crowding of population such as acute shortage of houses, traffic congestion, inadequate open spaces and insufficiency in public amenities etc, to incorporate the unforeseen development and arranges the pattern of township and in restricting the haphazard and unplanned growth have lead to the thinking of Preparation of GIS based Master Plan for Dhing town.

1.9 DHING AS A URBAN LOCALBODY :

Dhing Municipal Board : Initially Dhing Town Committee was established in 1970 getting permission of Gazette Notification and awarded to Dhing Town by the Government of Assam to establish a Town Committee for providing the basic infrastructure facilities to the inhabitants of the town. The Town Committee was established and run-in accordance with the provisions laid down in the Assam Municipal Act of 1956. Dhing town comes under the Administration of Dhing Town Committee with 10 Nos. of wards in the town and as on 2011 there are 10 Nos. of Municipal wards in the town. The Town Committee was updated to Dhing Municipality Board in the year of 2012 getting permission from the Govt.

At present Dhing Municipal Board consists of 10 Nos. of wards in the town with a population of 19,235 as per 2011 census where 9946 nos. of male population and 9289 nos. of female population. The density of population is 963 persons per sq. km.

Total area of Dhing Municipal is 5.12 sq. km. with total road length of 104 Km and drain length of 6.51 Km. Dhing Municipal Board consists of the Chairman, Vice-Chairman and wards commissioners who are elected representatives of the wards. Dhing Municipal Board also maintains recreational parks, libraries, community halls and municipal markets. It has also maintains solid waste management system. Dhing M.B. also collects about 50% garbage from door to door of the total inhabitants and disposes it in some convenient places. Dhing Municipality Boards has various sources of revenue collection and also receive annual grants from the Government. It levies taxes on holdings, rickshaws, carts, cycles, stalls, open spaces, markets and receives taxes on houses, land, water and sanitation.

Table : Ward Wise Population

Sl.No.	Ward	Population	Literacy	Sex Ratio
1	Ward No - 1	2,018	81.7%	988
2	Ward No - 2	749	84.9%	951
3	Ward No - 3	935	77.6%	912
4	Ward No - 4	3,964	80.9%	911
5	Ward No - 5	1,989	83.8%	987
6	Ward No - 6	2,292	79.8%	899
7	Ward No - 7	1,268	90.9%	1,079
8	Ward No - 8	1,380	85.7%	938
9	Ward No - 9	1,399	90.0%	891
10	Ward No - 10	3,241	54.9%	891
	Total	19,235		

Source : Census of India, 2011

CHAPTER 2 : DEMOGRAPHY

The scientific or more specifically statistical study of population, its size, density, distribution and growth are known as demography. The study of population and its relating characteristics are the basic factor for long range planning works in a town or a town. The study of change in the population and its distribution and composition are also enabling to force the growth of the urban area. The important demographic aspects like housing facilities, urban infrastructure development both for present and future should be thoroughly studied during the preparation of any development plan. An analysis of demographic features like growth of palpation, its distribution & composition etc. is absolutely necessary to assess the various civic needs like housing facilities, urban infrastructure and other basic services and the amenities. These important aspect of demography both present and future have been thoroughly studied at the time of preparation of Dhing Master Plan.

2.1 GROWTH OF POPULATION :

Though the Dhing Town Committee was created in the year 1970, to better understand the growth of population of the planning area had been calculated from 1971 Census. The population of Dhing town as per 1971, then census town was 10,820 and it has increased to 17,844 in 2001 and 19,235 in 2011 as per census of India. The population of Dhing Master Plan area shows a steady growth. Following table shows the growth of population of Dhing Town Area as well as the Rural area.

Table : Trend of Population Growth in Dhing Master Plan Area :

Year	Municipal Area			Rural Area (Excluding Dhing M.B. Area Population)		
	Dhing M.B.Area Population	Total increase	% of Growth rate per decade	Village Area Population	Total Increase	% of Growth rate per decade
1961	6,574			6,574		
1971	10,820	1638	24.91	10,206	3632	55.24
1981 *	-	-		-	-	
1991	11,472	5451	50.37	16,360	6,152	60.27
2001	17,844	6372	55.54	19,360	3000	18.33
2011	19,235	1391	7.79	24,135	4,775	24.66

Source : Census of India, 2011

2.2 Population Characteristics :

Table : Existing population of Dhing Master Plan Area as per 2011 census

Sl. No.	Master Plan Area 2046	Population (2011)	P.C (%)
1	Dhing Municipal Area (10wards)	19,235	44.35
2.	Revenue village (10 Village)	24,135	55.65
	Total Population	43,370	100%

(Source : Census of India, 2011 and T & CP Compilation)

The total population of Dhing is a Town Committee town situated in Dhing circle of Nagaon district. The Dhing town is divided into 10 wards for which elections are held every 5 years. As per the Population Census 2011, there are total 4,383 families residing in the Dhing town. The total population of Dhing is 19,235 out of which 9,946 are males and 9,289 are females thus the Average Sex Ratio of Dhing is 963. The population of Children of age 0-6 years in Dhing town is 1965 which is 10% of the total population. There are 1023 male children and 942 female children between the age 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Dhing is 921 which is less than Average Sex Ratio (934). As per the Census 2011, the literacy rate of Dhing is 87.3%. Thus Dhing has higher literacy rate compared to 72.4% of Nagaon district. The male literacy rate is 90.77% and the female literacy rate is 83.69% in Dhing.

Table : Village Wise Population Census Year "2011"

Sl. No.	Revenue Village Name	Population				
		Total	Male	Female	SC	ST
1	Dhing MB	19,235	9946	9289	2488	55
2	Auni Ati Satra	1150	564	586	-	-
3	Barbheti	3092	1574	1518	-	-
4	Salaguri Gaon	4479	2270	2209	472	12
5	Dhakaya Basti	3252	1686	1566	-	-
6	Dhupaguri Kachari Gaon	1546	795	751	-	443
7	Lakhar Ghat	4997	2544	2453	635	5
8	Athgaon Chapori	427	222	205	210	1
9	Magurmari	914	475	439	-	-
10	Sonari Gaon	3183	1624	1559	-	-
11	Saharia Gaon	1095	541	554	5	539
	Total	43370	22241	21129	3810	1055

Source : Census of India, 2011

2.3 DENSITY OF POPULATION :

The number of population and the size of development of the town or town implies the density of population. Generally, the pressure of population from rural to urban area increases in search of better jobs, educational facilities, source of income, trade and commerce etc. The density of population of Nagaon District as per 2001 was 604 persons per sq. km. and it has increased to 711 persons per sq. km in 2011 census.

The density of population Dhing MB area as per 2011 is 3757 persons per sq. km. Accordingly, as per 2011 census of India and survey records the density of population in Dhing Rural area is 727 persons per sq. km.

Table : Population Density of Dhing Master Plan Area : 2011

Sl. No.	Dhing Master Plan Area	Area	Population	Pop. Density /Sq.km
1	Dhing M.B Area	5.12 Sq km.	19,235	3757
2	Village Area	33.22 Sq Km.	24,135	727

Source : Census of India, 2011

2.4 SEX-RATIO :

The total population of the Dhing M.B area is 19,235 persons (2011). It is seen that per every 1000 men there were 934 females in Dhing as per Census 2011, the Child Sex Ratio was 921 which is less than Average Sex Ratio (934) of Dhing. Child Population Dhing according to Census 2011, there were 1965 children between age 0 to 6 years in Dhing. Out of which 1023 were male while 942 were female. Working Population Dhing in Dhing MB Out of total Population 6252 were engaged in work activities. 86.9% of workers describe their work as main work (Employment or Earning more than 6 Months) while 31.1% were involved in marginal activity providing livelihood for less than 6 months. Of 6252 workers engaged in main work, 785 were cultivators while 203 were Agricultural labourer.

Table : Sex Ratio of Dhing Master Plan Area :

Sl. No.	Dhing Planning Area	Population	Sex Ratio	
			Male	Female
1.	Dhing M.B Area	19,235	9946	9289
2.	33.22 Sq Km.	24,135	12,295	11,840

2.5 LITERACY RATE :

Dhing is a Municipality Board situated in Dhing circle of Nagaon district. The Dhing MB is divided into 10 wards for which elections are held every 5 years. As per the Population Census 2011, there are total 4,383 families residing in the Dhing city. The total population of

Dhing is 19,235 out of which 9,946 are males and 9,289 are females thus the Average Sex Ratio of Dhing is 934.

The population of Children of age 0-6 years in Dhing MB is 1965 which is 10% of the total population. There are 1023 male children and 942 female children between the age 0-6 years. Thus as per the Census 2011 the Child Sex Ratio of Dhing is 921 which is less than Average Sex Ratio (934).

As per the Census 2011, the literacy rate of Dhing is 87.3%. Thus Dhing has higher literacy rate compared to 72.4% of Nagaon district. The male literacy rate is 90.77% and the female literacy rate is 83.69% in Dhing. Dhing MB has total administration over 4,179 houses to which it supplies basic amenities such as water and sewerage. It is also authorize to build roads within Municipality Board limits and impose taxes on properties coming under its jurisdiction.

2.6 SIZE OF THE HOUSEHOLD :

The 2011 Census shown that more than half of the household in the region were medium sized with an average member of 3 to 5. According to census 2011 the medium sized households (3-4) is predominant because of the increasing trends towards nuclear households and rapid urbanization are at higher rate, there will be considerable pressure on housing in coming future. The overall household size of Dhing Master Plan Area is 4.4. Household size is lowest in Dhing Municipal which is 4.4 and highest in rural areas which is 4.8

Table : Area wise household details of Dhing Master Plan Area

Sl. No	Name of Area	Population	No. of Household
1	Dhing MB (10 Wards)	19,235	4,179
2	10 villages	24,135	4,383
Total		43,370	8,563

(Source : Census of India, 2011 and T&CP Compilation)

2.7 POPULATION PROJECTION FOR THE YEAR 2045 :

Population projections are attempts to show how the human population living today will change in the future. These projections are an important input to forecasts of the population's impact on this planet and humanity's future well-being. Models of population growth take trends in human development, and apply projections into the future. These models use trend-based-assumptions about how populations will respond to economic, social and technological forces to understand how they will affect fertility and mortality, and thus population growth.

Population projection is a scientific/mathematical attempt to peep into the future population scenario, conditioned by making certain assumptions using data to the past available at the point of time.

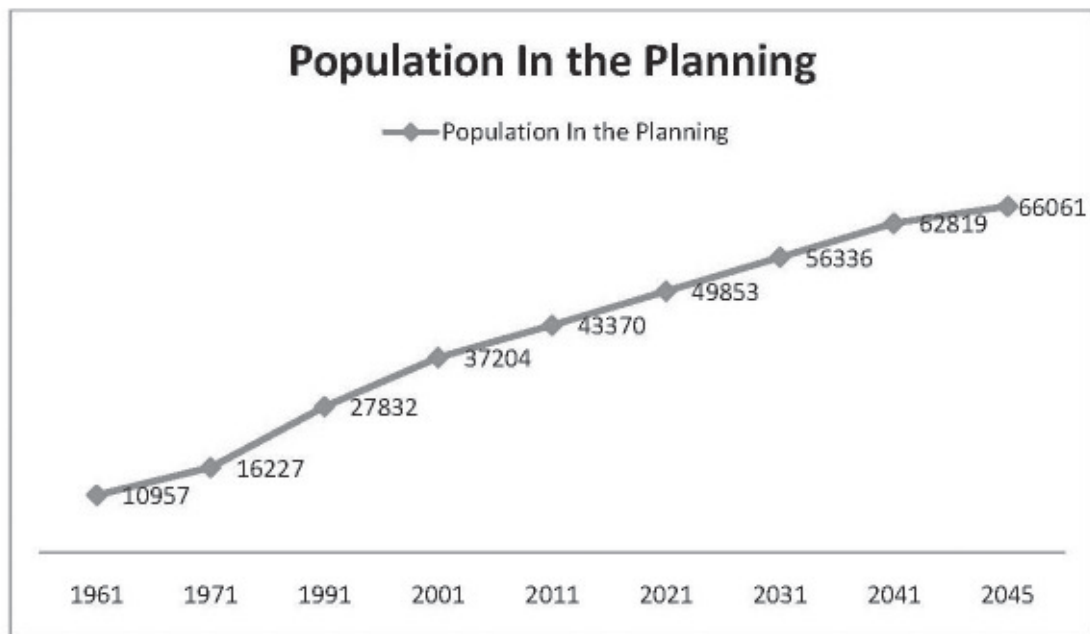
It is mandatory for Government policy makers and planners to determine the future demand for basic human needs such as food, water, education, health, energy, and other services and to forecast future demography characteristics.

The population projection of Dhing Master Plan area separately for Municipal area and rural area has been done by utilizing the maximum possible accuracy

methods like Arithmetic Increase method and Incremental Increase Method to determine the future population which are shown in the table below :

Table : Population Projection of Dhing Master Plan Area

Year	Dhing M.B. Area Population	Total Increase	Village Area population	Total Increase	Population in the Planning Area
1961	4,383		6,574		10,957
1971	6,021	1638	10,206	3632	16,227
1981*	-	-	-	-	-
1991	11,472	5451	16,360	6,152	27,832
2001	17,844	6372	19,360	3000	37,204
2011	19,235	1391	24,135	4,775	43,370
2021	22,207(P)	-	27,646(P)	-	49,853(P)
2031	25,179(P)	-	31,157(P)	-	56,336(P)
2041	28,151(P)	-	34,668(P)	-	62,819(P)
2045	29,637(P)	-	36,424(P)	-	66,061(P)



2.8 WORKING POPULATION AND NON-WORKING :

Working Population: In Dhing Municipal Area, out of total population, 6,252 were engaged in work activities. 86.9% of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 13.1% were involved in Marginal activity providing livelihood for less than 6 months. Of 6,252 workers engaged in Main Work, 785 were cultivators (owner or co-owner) while 203 were Agricultural laborers.

Table : Working and non-working population Dhing MB Area :

Working Population	Total	Male	Female
Main Workers	5,432	4,759	673
Cultivators	785	775	10
Agriculture Labourer	203	191	12
Household Industries	202	169	33
Other Workers	4,242	3,624	618
Marginal Workers	820	658	162
Non Working	12,983	4,529	8,454

(Source: Census of India, 2011)

CHAPTER 3 : ECONOMIC BASE AND EMPLOYMENT

Socio-economic base employment is necessary and important in policy making issues, for the effective development of social policy and for evaluation of the impact of social and economic policies of a town or town.

Dhing as a Municipal Town provides various categories of employment related with both formal and informal sector such as Administrative units, Agriculture, Banks and financial institution, Civil Supply, Consumer affairs, Co-operatives, crime and law, economy, education, Health, Housing, industries, insurance, social welfare schemes, welfare, sports and welfare etc.

Employment comprises all persons of working age who during a specified brief period, such as one week or one day, were in the following categories of paid employment (whether at work or with a job but not at work); or self-employment (whether at work or with an enterprise but not at work).

The working- age population is the population above the legal working age, but for statistical purposes it comprises all persons above a specified minimum age threshold for which an inquiry on economic activity is made.

The classification by economic activity refers to the main activity of the establishment in which a person worked during the reference period. The branch of economic activity of a person does not depend on the specific duties or functions of the person's job, but on the characteristics of the economic.

3.1 INFORMAL SECTOR EMPLOYMENT :

Observed encroachments on the footpath by vendors, which acutely rise the traffic congestion between include intersection Dhing Tuk Tuki Road, Dhing Main bazar road, Dhing Rail crossing Area have this illegal vending and parking on both sides of the road and the resultant traffic need to resolve

3.2 OCCUPATIONAL PATTERN :

In census survey, worker is defined as person who does business, job, service, and cultivator and labor activity. The cap town of an urban area to provide variety of jobs, absorb its working population in various sectors of economy is an indicator of the economic viability of the urban area. The participation rate also gives us an idea of the share of gainfully employed persons against the dependent and non- working population. Generally the participation rate in the urban area is high compared to the rural area.

As per census, 2011 the total population of Master Plan area is 43,370, out of which about 12,296 persons are employed in various sectors.

In Dhing Municipal Area, out of total population, 19,235 were engaged in work activities. 6,252 of workers describe their work as Main Work (Employment or Earning more than 6 Months) while 820 were involved in Marginal activity providing livelihood for less than 6 months. Out of 5,432 workers engaged in Main Work, 785 were cultivators while 203 were Agricultural laborers.

CHAPTER 4 : HOUSING AND SHELTER

The word "Housing" means dwelling units in terms of quality and quantity alone. Housing or quality of life is more dependent on some elements of housing areas such as disposition of various working areas, layouts development of land, provision of roads, water supply system, sewerage, drainage and provision of basic amenities like shops, schools, parks and play grounds etc. The urban form and character emerges from the quality of housing areas and inter relationship of housing areas with work centre and other non- residential areas.

The urban housing is mainly restricted to within the Municipal boundaries. The residential areas outside the municipal areas are rural housing. Normally the rate of housing spread of town should range between 6-7 hectare per 1000 persons and the rate of housing spread within The Master Plan Area is around 22 Hectare per 1000 persons.

Table : Ward wise population distribution and Nos. of households of Dhing Municipal Area

Ward No.	Population as per 2011	No. of household	Housing size
1	2,018	617	3.3
2	749	205	3.7
3	935	317	2.9
4	3,964	606	6.5
5	1,989	458	4.3
6	2,292	612	3.8
7	1,268	329	3.9
8	1,380	329	4.2
9	1,399	336	4.2
10	3,241	574	5.7
Total	19,235	4383	-

Table : Village wise population distribution and occupied residential houses of Dhing M.P. Area

Sl. No.	Dhin MB area / Revenue Villages	Population	No. of Household	Housing size
1	Dhing MB Area	19,235	4,179	4.7
2	Auni Ati Satra	1150	224	5.2
3	Magurmari	914	161	5.7
4	Barbheti	3092	612	5.05
5	Saharia Gaon	1095	857	1.2
6	Salaguri Gaon	4479	857	5.2
7	Dhakaya Basti	3252	666	4.9
8	Dhupaguri Kachari Gaon	1546	275	5.7
9	Lakhar Ghat	4997	1006	5.0
10	Athgaon chapori	427	87	4.9
11	Sonari Gaon	3183	645	5.0
		43,370	9,569	

4.1 HOUSING CONDITION :

Housing is a major element of people's material living standards. It is essential to meet basic needs, such as for shelter from weather conditions, and to offer a sense of personal security, privacy and personal space. Good housing conditions are also essential for people's health and affect childhood development.

Housing condition includes the study of housing base on type of structure i.e., permanent/ semi- permanent, physical infrastructure, mass space relationship, condition of the material use for walls and floors etc. It is important to be studied because it indicates the efficiency and sustainability of the housing stocks, whether the houses are livable or not. Based on the above said parameters, the condition of houses has been segregated and the analysis is done as good, livable and dilapidated houses of Dhing Municipal Area comparing with Nagaon District.

Table : Housing condition

Residence (%)				
Area	Total	Good	Livable	Dilapidated
Assam	62,72,151	33%	56%	11%
Nagaon District	5,53,106	30%	57%	13%
DMB	4,383	37.2%	52.1%	10.3%

Source : Census of India, 2011 and T&CP, Nagaon Compilation

4.2 CONSTRUCTION MATERIAL OF HOUSE :

The survey carried out by Town and Country Planning, Nagaon in 2020-21 and as per Census of India, 2011, it is found that the overall housing condition in the Dhing Master Plan area is quite satisfactory. Though the percentage of R.C.C structure is less in the planning area, the semi pucca structure occupies more than 70% of the total houses. The following table shows the condition of existing housing stocks of Dhing Master Plan Area.

Table : Materials used for roof

Area Name	Total Number of HHs	Grass/ Thatch / Wood/ Mud	Plastic Poly-thene	Handmade Tiles	Machine made Tiles	Burnt Brick	Stone / State	G.I./ Metal/ Asbestos / sheets	Concrete	Any other Material
State	62,72,151	18.60%	2.10%	0.70%	0.3%	0.1%	0.80 %	74.20%	2.90 %	0.20%
District	5,60,857	26%	3%	0.00%	0.0%	0.0%	1.00%	69%	1%W	0.00%
DMB	4,179	6.8%	0.8%	0.9%	0%	0.1%	0.6%	89.1%	1.6%	0%

Source : Census of India, 2011

Table : Materials used for walls

Area Name	Grass/ Thatch/ Bamboo etc.	Plastic/ Polythene	Mud/ Unburnt Brick	Wood	Stone not packed with mortar	Stone packed with mortar	G.I./Metal / Asbestos sheets	Burnt Brick	Concrete	Any other Material
State	66.4%	0.60%	3.60%	1.60%	0.70%	1.40%	1.10%	21.20%	2.90%	0.50%
District	67%	0%	4%	2%	1%	2%	0%	19%	3%	1%
DMB	47.4%	0.2%	5.3%	4%	0.8%	5.1%	1%	24.2%	11.8%	0.3%

Source : Census of India, 2011

Table : Materials used for floor

Area Name	Mud	Wood/ Bamboo	Burnt Brick	Stone	Cement	Mosaic/Floor Tiles	Any other material
State	78.60	2.10	1.20	0.40	16.60	1.00	0.10
District	83%	0%	1%	0%	15%	0%	0%
DMB	59.1%	0.6%	1.8%	0.1%	37.3%	1.2%	0.1%

Availability of Latrine and Bathroom :

As per 2011 Census about 83.9% of households have sanitary latrine and Bathroom and 46 % of the households have other type of latrine in the Dhing Master Plan Area.

4.3 HOUSING STOCK AND FUTURE REQUIREMENT :

The housing requirement is more in the urban area than that in the rural areas. Almost all people in rural area have got their own house. The total housing stock and future requirement of houses up to 2045 in the Dhing Master Plan Area were calculated based on the town/ town level data on the houseless population and pavement dwellers, the houseless population is derived from the data published as part of Census of India, 2011. The total requirement of dwelling unit in the planning area as per the planning norms is as follows:-

Housing Requirement for future Population of Town Area till 2045 :

29637-19235 =10402 Nos.

Assuming family size of 5 persons, new houses will be required

$10402/5 = 2080$ Nos.

Housing Requirement for future Population of Rural Area till 2045.

36424-24135 = 12289 Nos.

Assuming family size of 5 persons, new houses will be required $12289/5$

= **2458** Nos.

Housing Requirement for future Population of Dhing Master Plan Area till 2045 66061-

43370 =22691 Nos.

Assuming family size of 5 persons, new houses will be required $22691/5$

= **4538** Nos.

Table : Total housing stock and future requirement of houses :

Sl. No.	Area	Total no. of housing stock as per 2011	Housing requirement up to 2045
1	Dhing M.B Area	4,383	2080
2	Rural Area	6,071	2458
	Total	10,454	4538

CHAPTER 5 : TRANSPORTATION

Transportation plays a major role in the daily life of human beings. It is necessary for things to be moved around and as transportation systems have developed over time, the speed and efficiency of these systems have improved drastically.

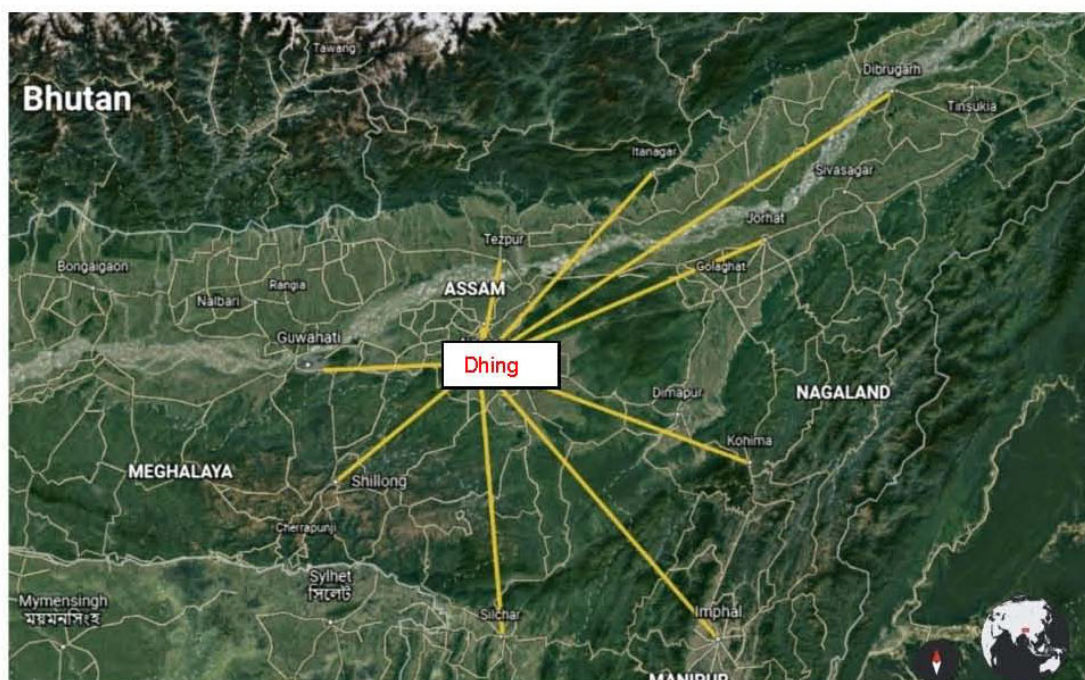
The importance of transportation is showcased in how individuals, businesses, and governments rely on it to access resources. A society cannot function optimally if it does not have measures in place to facilitate transport. From movement to work to travel around the world, being able to arrive at various places or deliver different items on time is vital for overall productivity and sustainable development.

In consideration of healthy growth, economic prosperity and improved living standards of a town or a town, a high- quality transportation network is essential. In addition, transportation and land use are to be integrated to achieve reduction in trip length, increase in public transports usage etc.

5.1 TRANSPORTATION NETWORK :

Regional Connectivity of Dhing : Dhing is well connected to Assam major cities like Nagaon, Guwahati, Morigaon through PWD roads to State highways via National highways which further connects to rest part of Assam in particular and India as a whole.

Interstate Connectivity from Dhing: Dhing is connected to major cities of Assam and other state of India by road and Rail. Table manifest the time taken (in hrs) and distance (in km) from Dhing to important cities of Assam and other state by different modes of transportation.



Nagaon is the nearest major town and district headquarters, from Dhing which covers minimum distance i.e. 25 km. From state capital Guwahati to Dhing it covers a distance of 145 km. Other, important cities of different states capital like Kohima, Imphal, Shillong, Silchar, Dibrugarh, Jorhat, Tezpur, Itanagar etc, which takes approx. minimum 12 hrs by road. Imphal is far away from Dhing that take 9 hrs 41 mins to reach by road journey, however other modes of transportation is not available in this case

Table : Connectivity from Dhing to other state regions.

Connectivity from Dhing	Distance (KM)	Time (hrs.)	
		By Road	By Rail
Nagaon	25	42 mins	1 hrs
Guwahati	112	2 hrs 57 mins	5 hrs
Kohima	262	6 hrs 48 mins	
Imphal	397	10 hrs 49 min	
Shillong	192	4 hrs 26 min	
Silchar	324	10hrs 24 min	14 hrs
Dibrugarh	346	9 hrs21 min	14 hrs
Jorhat	208	5hrs24 min	9 hrs
Tezpur	75	2 hrs 17min	
Itanagar	225	6 hrs 7 min	

5.2 NETWORK OF ROAD :

Roads are part of urban and rural infrastructure. These roads are required for both intra-town and intertown movement and render much higher level of service compared to Regional Roads, State Highways and National Highways. Quality of life is depends on efficient and effective road system, of course, with the support of other infrastructural services such as water supply, sewerage, drainage, electritown, telephones etc. in order to perform social, economical & cultural activities.' Urban transportation network is required to facilitate movement of people and goods and therefore efficient network is necessary for their efficient movement.

Importance of Urban roads is increasing on account of the fact that urban areas are increasing in their size and number.

INTERTOWN CONNECTIVITY (From Dhing):

Dhing has the intertown connectivity by road as well as by rail. The table below shows to various modes of transportation and its connectivity with the nearest cities like Morigaon, Moirabari, Borduwa. The minimum connecting distance is 24.5 km from Gorajan, Laokhuwa and Tezpur maximum is 86.4 km is well connected by roads. The district headquarter Nagaon town is connected with Dhing via Borduwa, the State Road connecting point distance of 25 km, and Dhing to Nagaon town via Jajori by the intertown road at a distance of 35 kms. Dhing town also well connected with Morigaon town, the State Road connecting point.

Table : Road Length (in Km) of Dhing M. B. Area

Total Length	Surfaced				Unsurfaced		
	Water bound macadam	Black top/Cement concrete	Paver Block Road	Total	Motorable	Non Motorable	Total
104 km							

Table : Road connectivity and Distance :

Sl. No.	Road type	Connectivity	Distance
1	State Highway-47	Nagaon to Dhing via Borduwa	25 Km
2	State Highway-47	Borduwa to Dhing	8.7 km
3	State Highway-15	Dhing to Morigaon	24.5 km
4	State Highway-15	Dhing Town to Morigaon via Moirabari	12.5 km
5	State Highway -47	Dhing to Moirabari via Lahorighat	28.8 km
6	PWD Road	Bebejia to Tuk Tuki via Jajori	18 km

5.3 OVERVIEW OF CRITICAL ROADS :

The identification of critical road links is greatly important to the management and control of the transportation system. Existing works fail to fully consider the influence of the distribution of traffic flow and its dynamic characteristics on critical road link identification.

The study of critical roads mainly depends upon several factors like traffic conditions, road geometry characteristics, environmental factors etc. Field traffic surveys were carried out to capture the classified volume count for major arterial, sub-arterial and collector roads spread across Dhing Town. Based on the field survey data and traffic volume survey conducted by the T&CP, Nagaon at some major points were ascertained during peak hours. The critical roads in Dhing town as well as the Dhing Master Plan Area is identified the State Highway-47 Dhing to Nagaon, Dhing to Borduwa, State High way-47 Dhing Laharighat, Dhing to Kadamoni town (Rural Road), Dhing to Bebejia via Tuk Tuki (PWD road) which are urgently need to decongest and future plan for widening and improvement to ensure free flow of traffic movement in Dhing Master Plan Area.

5.4 ANALYSIS OF TRAFFICNODES :

The major traffic nodes in Dhing town are identified which are detailed as below:-

Area	Location of point	Description
Dhing Town Area	(i) Dhing Road	This is a commercial place consist of some shops, daily vegetable market and link with some educational centers through higher secondary road & entry to Dhing FRU hospital, Dhing College , Offices, fire station etc.
	(ii) Dhing Bazar	It is also a business center consist of variety of major shops, Market area, Pubic gathering Place entry Gramin Bikash Bank.etc also way to Bebejia through Tuk Tuki.
	(iii) Dhing Chariali	It is a fully busiest daily Market area with entry to Dhing Circle Offie, Nagaon Dhing Bhuragaon Road, Dhing Municipality Board, Dhing Police Station, way to also way to Morigaon through Moirabari.

5.5 BUSTERMINUS :

Public and Private Bus stands are most temporarily located at some busy road sides of Dhing town which causes the traffic congestion and traffic hindrance. The bus stands located at different places of the town and their characteristics are as given below:-

Terminal Centre	Location	Observation
A. Inter-Town	Bus Station	
1. Passenger	i) Dhing – Bazar Bus Stand	Located near Dhing Bazar area. Parking space is not sufficient. Waiting shed, toilet facilities should be extended. Passenger's guest house facilities should be provided.
	ii) Dhing – Tuk Tukio Bus Stand	Very congested. Parking space is very narrow. Waiting shed and toilet facilities are nil. Immediately this bus station should be shifted.
	iii) Dhing – Dumdumia Bus stand	Located at Dhing Main Bazar area. Campus of the Bus station is very narrow, so all the necessary facilities should be improved providing modern technology through proper planning. Waiting shed and toilet facilities are nil. Road side parking.
	iv) Dhing – Moirabari – Lahorighat Bus stand	Very congested. Unplanned. always overcrowded. No waiting shed. Toilet facilities are very negligible. Road side parking.
	v) Dhing – ASTC Office	Very congested. Unplanned. always overcrowded. No waiting shed and no toilet facilities.

5.6 Railway :

There are 2 trains that pass through the Dhing Bazar Railway station. Some of the major trains passing through DBZ are - (MAIRABARI - GUWAHATI Passenger, GUWAHATI - MAIRABARI Passenger, etc.) The station code for Dhing Bazar Railway Station is 'DBZ'. Being the largest railway network in the world, Indian Railways announced station code names to all train routes giving railways its language) Indian Railway has a total of 17 railway zone. Dhing Bazar Railway station falls under the North Frontier Railway zone.

i) There are a total of 1 well-built platforms at DBZ. Book you IRCTC ticket on Rail Yatri app and Rail Yatri Website. Get easy access to correct Train Time Table (offline), Trains between stations, Live updates on IRCTC train arrival time, and train departure time.

ii) Dhing Bazar Railway station has many trains scheduled in a day! The first train that arrives at Dhing Bazar is at MAIRABARI - GUWAHATI Passenger at 04:14 hours. Download the RailYatri app to get accurate information and details for the Dhing Bazar station trains time table) The last train to depart Dhing Bazar station is the GUWAHATI - MAIRABARI Passenger at 22:42

RAILWAY STATIONS		
Passenger	i) Dhing Railway station	The existing platform should be upgraded and waiting shed should be extended. Guest house facilities should be established. Toilet and sanitation facilities are not sufficient to the need of the people. Booking and Reservation Counters should be opened. The platform is required to be upgraded providing all modern facilities. Guest house facilities should be established.

5.7 TRAFFIC VOLUME SURVEY :

The traffic volume survey conducted by the T&CP, Nagaon only at some main points and it is restricted only to peak hour survey from 08:00 a.m to 10:00 a.m, 11:00 A.M to 12:00 P.M, 12:00 P.M. to 01:00 P.M. identify better and efficient traffic operation plan. The following table shows the traffic volume of the main points within Dhing Master Plan.

1. MAIN BAZAR POLICEPOINT :

Sl. No.	Vehicle	Number	Time/Date
1	Bus	07	11:00 A.M
2	Tempo	15	
3	Rickshaw	04	
4	Thela	07	
5	Bicycle	45	
6	Truck	06	
7	J.C.B	01	
8	Bike	74	
9	Tractor	01	
10	Car	38	
11	E- Rickshaw	33	
12	Magic	13	
13	Tata Mobile	22	
14	Soil Truck	03	

2. DHING TOWN MARKET POINT :

Sl. No.	Vehicle	Number	Time/Date
1	E- Rickshaw	23	12:00 P.M
2	Tempo	16	
3	Rickshaw	07	
4	Thela	08	
5	Bicycle	41	
6	Truck	02	
7	J.C.B	01	
8	Bike	67	
9	Car	34	
10	Magic	11	
11	Tata Mobile	26	

DHING CHARIALI POINT :

Sl. No.	Vehicle	Number	Time/Date
1	E- Rickshaw	22	01:00 P.M.
2	Tempo	16	
3	Rickshaw	08	
4	Thela	09	
5	Bicycle	38	
6	Truck	06	
7	J.C.B	01	
8	Bike	70	
9	Car	25	
10	Magic	10	
11	Tata Mobile	14	
12	Soil Truck	05	
13	Tractor	02	
14	Dumper	04	
15	Bus	02	

3. DHING FRU HOSPITAL POINT :

Sl. No.	Vehicle	Number	Time/Date
1	E- Rickshaw	24	01:00 P.M.
2	Tempo	18	
3	Rickshaw	08	
4	Thela	07	
5	Bicycle	17	
6	Truck	04	
7	J.C.B	01	
8	Bike	66	
9	Car	28	
10	Magic	12	

11	Tata Mobile	13
12	Soil Truck	04
13	Tractor	01
14	Dumper	02
15	Bus	02

4. DHING RAIL GATE POINT :

Sl. No.	Vehicle	Number	Time/Date
1	E- Rickshaw	40	01:00 P.M.
2	Rickshaw	09	
3	Thela	03	
4	Bicycle	21	
5	Truck	04	
6	Bike	33	
7	Car	25	
8	Magic	04	
9	Tata Mobile	04	
10	Tractor	01	
11	Dumper	01	

5.8 PARKING :

Vehicle parking is a major problem in urban areas. With rapid growth of the urban area, the parking generation rate goes on increasing very quickly which creates major problems of parking in most of the urban areas. In the recent years, with the rapid development of economy and exorbitant increase in the motor-vehicles, parking problems in urban area have become increasingly prominent.

On street parking is found all over Dhing Town, parking usually spills over to other use areas like road carriageway and footpaths, open spaces. In turn they affect safety and environmental quality. Parking characteristics within the town vary by areas, by land use activities and by time period. In residential areas it is by time period.

At present there is no municipal identified parking area designated for public and private parking within Dhing town as well as Planning Area.. As per parking survey conducted by the Town and Country Planning, Nagaon it is observed that on street parking is found all over Dhing town. On- Street parking is observed to be high on Dhing Bazar Road, both side of the Mainroad of Dhing Town.

5.9 MAJOR ACCIDENT PRONE AREA :

As per records available from the Dhing Municipal Board ,there are frequent accidents are being happened in Dhing Town due to non traffic signal points and uncontrolled speed of the vehicles. Major accident prone areas of Dhing town are mentioned as below :

1. Dhing cendigrade.
2. Bibah vaban chariali
3. Bhetapukhuri Turning point.

5.10 TRANSPORTATION ISSUES AND REQUIREMENTS :

5.10.1 ILLEGAL VENDING ZONE :

- One of the major issues is of illegal vending on walking shoulders on the main streets.
- Due to illegal vending sometimes the actual accessible patch of road decrease to half lane only.
- If proper spaces are being allocated to street vendors in every zone the issue can be eliminated.
- Due to illegal possession of shoulders the pedestrian come down to road for their local trip and some time proves unsafe on congested area.
- Narrow road network with restricted cap town, particularly due to the illegal vending, resulting in congestion and loss of productivity.
- The problematic areas include intersection Dhing Thana Road, Dhing Main bazaar road, Dhing Rail crossing Area have this illegal endings.

The photographs below depict the current scenario of the illegal vending zones which restricted the cap town of road resulting lead to congestion.

5.10.2 TRAFFIC CONGESTION :

- Traffic congestion is quite common in Dhing Town and it takes a lot of time to commute for the commuters.
- At many places geometry of the town is very less as they have not followed any norms and standards for the road pattern as well as for other related things like road cross sections and railway level crossing etc.
- Observed encroachments on the footpath by vendors, which acutely rise the traffic congestion between include intersection Dhing Thana Road, Dhing Main bazar road, Dhing Rail crossing Area have this illegal vending and parking on both sides of the road and the resultant traffic need to resolve.
- Many vehicles, due to lack of adequate parking facilities, were parked on the Dhing Town bazaar road, causing inconvenience to people who use the field for recreational purpose like walking and playing and people had to face inconvenience as that road leads to many importance place like Dhing Higher Secondary School, Police Thana.

The highlighted light green dots on map within town area shows the frequent congested road patches.

5.11 ROAD ENCROACHMENTS :

- Many factors can be listed out for such happenings, but few observations are mentioned below, which are
- Unauthorized parking of vehicle on pavement only.
- Many spots with exposed electric poles on pavement sides which leads to make space dead and potential for parking wheels.
- The town suffers from parking problems due to encroachment by vendors on road and off-street parking. As a result, the road width decreases and there is no space remaining to pass the vehicles or to give space to other vehicles.
- There is no designated space for parking in whole town,
- There are encroachment issues in areas namely both sides Dhing Thana Road, Dhing Main bazaar road, Dhing Rail crossing road.
- Due to lack of space, it is difficult for vehicles to pass on.
- Also, Proper facilities are needed for loading, uplifting, and downloading.
- Encroachment on both sides of the road decreases the effective width which may cause road accidents and disturbs the smooth flow of traffic.

5.12 TRAFFIC SIGNAL POINTS :

There is no organized traffic signal points in Dhing town. Various junctions without traffic signals are there in the town area like-Dhing centigrade, Bibah vaban chariali point, Bhetapukhuri Turning point Dhing chariali, etc. resulting in unnecessary traffic jams and more requirement of traffic brigade occurs.

CHAPTER 6 : INFRASTRUCTURE, PUBLIC UTILITIES & SERVICES

The development pressure on towns and cities is increasing with the rising urban population and growth of urban areas. The development of cities in itself is dependent upon the public infrastructure services. The creation of urban infrastructure is expensive and time consuming. Therefore it requires the Government to play a major role in making lumpy investments.

A country's economic and social development is directly dependent on a country's infrastructure. Many developed countries make a lot of progress because of the enormous growth of economic and social infrastructures. A good infrastructure makes the work process easier, resulting in a positive and high productivity.

Urban infrastructure development is the foundation of every town and remains the key to ensuring basic services like water, sanitation, drainage, energy, and transport. With proper and planned urban infrastructure development, residents can enjoy better living conditions & live healthier lifestyles while benefiting from enhanced environmental sustainability.

Social Infrastructure is a subset of the infrastructure sector and typically includes assets that accommodate social services like Health, Education, Housing, Civic and utilities, Transports etc.

6.1 SOCIAL INFRASTRUCTURE :

Social infrastructure plays an important role to provide quality of life to the residents of the town. The effectiveness of social infrastructure in achieving the objective of town development plan would depend upon its capacity to contribute to improvement in the quality of life, enhanced self-dependency and town's sustainability. The level of social infrastructure shall aim the creation of livable town through reducing the sense of alienation among the residents with less dependence on other settlements for basic infrastructure.

Social infrastructure refers to the facilities and mechanisms that ensure education, health care, community development, and social security, recreational and social welfare. The development cannot be looked at in isolation without considering the basic needs of the people, and a significant level of investment is needed in this sector. Usually this development referred to as the commitment towards realizing the vision of the town.

6.2 EDUCATION

Education is an important factor influencing the quality of life of the people and future development of an area. It empowers them with skills and knowledge and helps them to better lead their life and access best of the employment opportunities available in the market. This in turn will impact the work force participation rate and economy of the area. There are many government and private schools, colleges in Dhing town. The existing scenario of Primary, Middle school and Higher secondary school and Govt. and private Colleges in Dhing area is shown in the table given below:

Table : Educational Facilities available in Dhing Master Plan Area

Sl. No.	Category of Educational Institutions	Institutions in DMB Area	Institutions in Village Area	Enrolment	Teachers
1	Lower Primary Schools	7	31	4111	143
2	Middle School	5	13	2091	110
3	High School	7	5	1681	95
4	Higher Secondary School	1	1	1512	64
5	i) Dhing College	2	-	2156	72

6.3 HEALTH :

The medical facilities in Dhing town is not sufficient to the needs of the demand of the peoples. Dhing F.R.U. 30 beds civil hospital including maternity section have been providing the medical facilities to the peoples of Dhing area. In addition to the Dhing F.R.U. there are 7(Seven) Health Sub Centre within area at Saharia, Salaguri, Sonarigaon, Borbheti, Niz-Dhing, Lahkhar Ghat, Auniati Satra. There is also a Private Nursing Home namely Awhak Hospital at Ward no. 10. Therefore Dhing F.R.U. Hospital is always over crowded with patient and needs its immediate expansion.

6.4 WATER SUPPLY :

In Dhing town, piped water is supplied to a section of the people by PHE Deptt, Nagaon and rest of the population depends upon individual source of water like ponds, ring wells and tube wells. The underground water reserve of the town is in a satisfactory condition hence it is felt that there will not be shortage of water for distribution in the town. Besides this Brahmaputra river is passes near the town from which water can be trapped for distribution if required in future for the projected population.

6.5 POLICE STATIONS :

The whole Dhing Master plan Area is controlled by Dhing police station which is located in the heart of the Dhing town.

6.6 TRADE AND COMMERCE :

The Commercial activities in Dhing Town has not been growing like other towns of Nagaon District. As per data available from the Dhing Municipal Board the total No. of retail shops in the Town Area is 710 units and 19 No. of wholesale units.

There are 2 (Two) daily markets in the town and 1 (One) is weekly market on Wednesday in the Dhing main bazar area. Following table depicts the commercial activities in Dhing Town.

Table : Data regarding Trade and Commerce within Dhing Municipal Board Area:

Sl. No	Type of business Units	Nos. of business Units	
		Wholesale	Retail sale
1	Grocery	6	108
2	Cloth		91
3	Medicine	8	31
4	Cycle Repairing/seller		6
5	Hardware(cement dealer)		30
6	Electrical shop		15
7	Radio & T.V		4
8	Fruit shops		5
9	Wholesale potato/onion/garlic/dry chilly	2	
10	GYM center		1
11	Petrol/Diesel pump		1
12	Rice		9
13	YOGA center		1
14	Fertilizer		5
15	Optical shop		1
16	Meat shop		22
17	Timbers		3
18	Gift Item		2
19	Diary		1
20	Cotton shop		1
21	Book stall		8
22	Biscuit & Bakery		7
23	ICE Factory		2
24	Tailor		21
25	Hotel		49
26	Gas Agency		2
27	Computer Service		8

28	Computer Training center		4
29	Sports Goods		1
30	PCO		1
31	Home Delivery Service		1
32	Generetor current supply		1
33	Ayurveda Food supplements		1
34	Disposable Dish/Plate/Glass		4
35	Glass House		2
36	Patanjali Goods sales		1
37	Photo Studio & Photo state		8
38	Murgi dana/Fish food		1
39	Vegetable seller		9
40	Dry fish		6
41	Kamarsala		3
42	Furniture Product		24
43	Agricultural		7
44	Bank & Financial Service		5
45	Garage		19
46	Oil mill		1
47	Beauty Parlor		6
48	News Paper Agency		1
49	Wine shop		4
50	Khaaini Retail		3
51	Pan Tamul Gumti		9
52	Bag		1
54	Cycle Repairing/saler		6
55	Cool Drinks		2
56	Handicraft Industries		2
57	Handicraft Industries		2
58	Information Tecnology service		2
59	Cheera Methoi		2
60	Mobile service		17
61	Shoes & chappl		18
62	Pan wholesale	2	
63	Pottery		1
64	Welding		4
65	Corier service		3
66	Barbar shop		4
67	Drinking Water Agency		6
68	Vehicle sels/Service/washing center		2
69	Watch		1
70	Cinematography still& video photography		1
72	E- Commerce		1
73	Potato	1	

74	Tea leaves saller		1
75	Kerosin Hawer		1
76	Thread Retailer		2
77	Foods/ Beverrages whole sale		2
78	Small industry		4
79	Vehicle show room		1
80	Kabari		1
81	Bar & Resturent		1
82	Tax Consultancy		1
83	Agency Distributorship		1
84			

6.7 CREMATION /BURIALGROUND :

There are 4 (Four) cremation grounds and 1 (One) burial grounds within Dhing Master Plan Area- which are shown in the table below:

Sl. No.	Location	Number of Cremation Ground	Number of Burial Ground
1	Ward No. 3	1	1
2	Ward No. 9	1	-
3	Ward No. 8	1	-
4	Chamuagaon	1	-

Source:- Dhing Municipal Board

The existing cremation and burial grounds should be developed with the basic facilities like roads, waiting shed, water supply, electritown and drainage etc.

6.8 FIRE STATION :

The entire Dhing Master Plan Area is covered by one fire station located Ward No. 3 to take care of fire hazards.

6.9 POST OFFICE :

As per record available it is seen that there is only 1 (One) post office within Dhing Master Plan area which is not sufficient to meet the need of the demand of the peoples of Master plan area.

6.10 BANKS/FINANCIAL INSTITUTIONS :

The entire planning area is served by 6 nos. of Banks and these are all located at Dhing Master Plan Area. The banks located within the planning area are shown in the table below:

Table : Banks in Dhing Municipal Area :

Sl. No.	Name of Banks	No. of banks
1	UNITED BAK OF INDIA	1
2	STATE BANK OF INDIA	1
3	LICI DHING	1
4	BANDHAN BANK	1
5	ASSAM GRAMIN VIKASH BANK	1
6	CO. APPEX BANK	1

6.11 RECREATIONAL FACILITIES :

The Recreational facilities in Dhing Master plan area is not sufficient which is shown in the following table depicts the available of recreational facilities in the Dhing Municipal Area as well as the Planning Area.

Table : Recreational facilities within Dhing Master Plan Area :

Sl. No.	Recreational facilities	Nos. along with Name and Location
	Parks	Keshabanda Borkakoti sishu Uddyan
	Stadium	Dhing Town stadium
	Library	1
	Public Auditorium	1
	Cremation Ground	5
	Burial Ground	1

Source : Dhing Municipality Board

6.12 DRAINAGE SYSTEM :

With the rapid urbanization as well as the expansion of the area of Dhing town, the existing drainage facilities are not sufficient to the needs of the demand of the people. Most of the new residential areas have grown without having drainage facilities. The existing drains both side of the road do not have proper slopes or not properly linked up with the main drains and the

alignments of the natural drains are also not properly defined, resulting in water logging at different areas of the town, mainly during the heavy rainy season (June to October) most of the busy roads in the residential area of Dhing town is inundate with the stagnation of rain water.

As the Brahmaputra River passes near the Dhing town, a major part of the storm water generated in the town flowed out to the Brahmaputra River. During the rainy season when the Brahmaputra river is increase in volume than it is not in a position to discharge the rain water and consequently all the low-lying areas within the town causing flood. As per record available it is found that the total drain length of Dhing MB area is 6.51 km. out of which RCC drain is 1.9 km and remaining 4.61 km is covering by kacha drain.

Table : Storm water Drain

	Total Length	Pucca Drain	Kutchra Drain
Storm water Drain	6.51	1.9	4.61

Source : Dhing Municipal Board

6.13 SEWERAGE SYSTEM :

At present there is no sewerage system in Dhing town as well as in the planning area. The mode of disposal is through the septic tanks with soak pits arrangement. Most of the families day to day washables dirty water and the bathroom water is disposes in own soak pits. Some of the families washable water discharge is into the open municipal drains. Almost all the holdings in the town have individual septic tank. There are no dry latrines.

6.14 SOLID-WASTE MANAGEMENT :

The collecting, treating, and disposing of solid material that is discarded because it has served its purpose or is no longer useful. Improper disposal of municipal solid waste can create unsanitary conditions, and these conditions in turn can lead to pollution of the environment and to outbreaks of vector-borne disease—that is, diseases spread by rodents and insects. The tasks of solid-waste management present complex technical challenges. They also pose a wide variety of administrative, economic, and social problems that must be managed and solved.

The management of municipal solid waste is one of the main functions of all Urban Local Bodies (ULBs) in the country. All ULBs are required to meticulously plan, implement and monitor all systems of urban service delivery especially that of municipal solid waste. With limited financial resources, technical capacities and land availability, urban local bodies are constantly striving to meet this challenge.

As per data received from Dhing Municipality Board total waste generated per day in Dhing town is approximately 1.5 metric tons and collects about 1.00 tons from various source like households, commercial establishments, hotel, marketplace, drain cleaning and street sweeping, construction waste etc. Presently, following table depicts the nos. of vehicles and other equipments used for solid waste management system by the Dhing Municipality Board.

Table : Vehicles and other equipments used for solid waste management system.

Sl. No.	ITEM	NUMBER
1	Tricycle	16 Nos.
2	Tractor	2 Nos.
3	Poller	10 Nos.
4	Thela	5 Nos.
5	Trippler	2 Nos.
6	Mini JCB	2 Nos.
7	Composting Machine	1 Nos.
8	Safai Kormosari	13 Nos.

Source : Dhing Municipal Board

CHAPTER 7 : ENVIRONMENT AND TOWN BEUTIFICATION PLAN

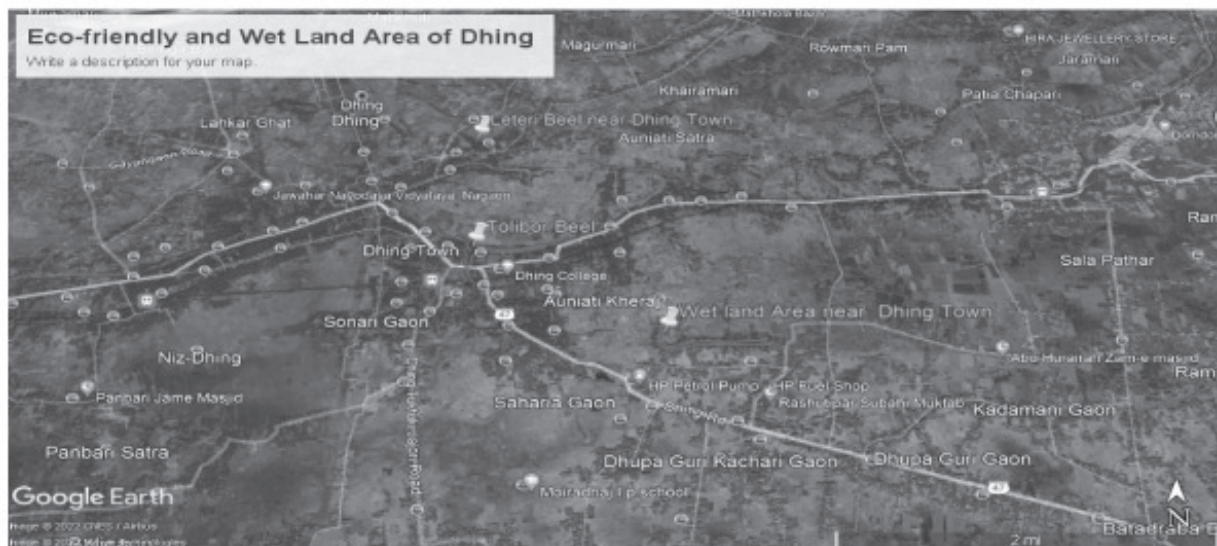
Description of eco-friendly areas like water bodies; beels; forests; and also heritage areas

Eco-friendly literally means earth-friendly or not harmful to the environment (see References 1). This term most commonly refers to products that contribute to green living or practices that help conserve resources like water and energy. Eco-friendly products also prevent contributions to air, water and land pollution.

7.1 ECO-FRIENDLY AREAS OF DHING :-

Leteri Beel :-

Leteri Beel flows in the Northern side of the Dhing Master Plan Area. This is mainly a tributary which connects with the mighty River Brahmaputra. This river plays an important role for the entire Dhing region. This River has immense contribution to the agricultural sector as water of this beel is used in the irrigation for Agriculture. This river is perennial and depends on the water of the river, different types of Kharif and Rabi crops have been cultivated in different season. Dhing region is famous for vegetables cultivation and Aquaculture of Ornamental fish which contributes to the economic Development of the region



This Beel is rich in aquatic living organism. Therefore is a ground of fishing centre for the common people. Water of the River is used in irrigation for the cultivation different crops specially Paddy cultivation surrounding the drainage basin. Local fish found in the river are Sal, Barali, Bahu, Kuchia, Rahu, Bhakua etc. There are so many temporary are as well as permanent Fish market were found on the ghats of the River, which provides livelihood to the people of the Area.

Tolibor Beel :-

Tolibor Beel is located in the Dhing Town Area. It covers an area of 3 Sq. Km (approx.) The Beel is very rich in aquatic living organism and a rich bio-diversity. The beel is endowed with rich floral and faunal diversity. In addition to these, huge congregation of residential water birds, seasonal migratory Birds, etc.

The water body is perennial. In recent time, some portion of land use changes takes place due to illegal encroachment of land for housing and agricultural purpose. The fringe area of the Beel is used for paddy and other crop production.

Biodiversity of the Tolibor Beel

Flora :- Various types of flora and fauna are found in Tolibor Beel. Beel is rich in floral diversity. Some of the flora found were Bih Mateka, Dal Ghah, Boss, Jora, Kola kochu, Mati Kanduri, kalmou, sorupani, Pani meteka, Pani lokosi, Bhet, Bihlongoni etc.

Fauna :- Tolibor Beel is rich in faunal diversity include various types of aquatic birds and fishes. But due to several anthropogenic activities create threat to reduce these diversities. Dominant aquatic birds found were Sarali hah, Samukvanga, Bogoli, Dolghora, Pani Kauri, Dawk, Dolmoura, Dhak and seasonal migratory birds. Common fishes found in the beel were puthi, Mao, Daikana, Singi, Sal, Soul, cuchia, Borali, Dhekera etc.

Issues

Loss in aquatic Biodiversity :- Basically the beel is the home of various fauna and flora. Due to more human encroachment mainly for agricultural purpose using fertilizers, the quality of the water body starts to degrade which leads to decrease aquatic floras and faunas.

Extraction of fishes and Birds :- Extraction of fishes and illegal poaching of birds from it also increasing in present day. It harms the local fish species and extinction of some local species. In recent days due to illegal poaching of birds hamper the attraction of the water body for the migratory birds which are now decreasing day by day due to human presence and loss of natural vegetation. There is no doubt that Tolibor beel has every possibility to develop a site of recreation where people can enjoy the natural beauties and refresh themselves.

Requirements :-

For wise use of water body resources, it is very important to assess the impact of socio-economic factors upon the water body environment in regards of management plan. For proper management resources several steps should be taken to protect the water body from encroachment and strict law should be implemented for their protection to illegal encroachment. Alternative means of livelihood should be generated for the people who depend upon water body resources for their survival. It will reduce the exploitation of water body resources and killing of fish and fauna. Efforts should be made to educate the local people and create awareness about the importance of management and conservation of this

water body. Successful management of water body resources depends upon how properly concern authorities adopt appropriate plan and in what way it should be implemented.



Moreover there are several water bodies and wetland rich in Aquatic Living beings within the Dhing planning area which are to Manage, conserve and preserve.

Proposal :-

As the Beel is rich in Biodiversity and have a unique ecosystem, it should be conserve, preserve and manage. So for the purpose of its conservation, some portion of this Beel may be declared as eco-sensitive Area or Zone. For Management and recreational activities, eco-tourism Park may be developed and riverfront development project can be taken up for its conservation and preservation.

7.2 HISTORICAL SITES OR A PLACE :-

A historic site or heritage site is an official location where pieces of political, military, cultural, or social history have been preserved due to their cultural heritage value. Historic sites are usually protected by law, and many have been recognized with the official national historic site status. A historic site may be any building, landscape, site or structure that is of local, regional, or national significance. Usually this also means the site must be at least 50 years or older.

Batadrava Than :-

It is located at distance of 12.5 Km from Dhing Town and takes 25 minutes only. Batadrava Than is the first Than or the first institution set up by Srimanta Sankaradeva for propagation of eka sarana nama dharma founded by him. He also built the 'Monikut' together with Kirtanghar or Namghar and the 'Cari-Hati' (four clusters of quarters) for accommodation of

his disciples. This full-fledged Than complex came up in 1509. Simhasana or Guru Asana (altar of God) was placed in the Monikut with the Holy Scripture 'Bhagavata' on it without any idol. Srimanta Sankaradeva used to practise Nama Prasanga regularly in the Kirtanghar along with his follower devotees. His religion EKA SARANA NAMA DHARMA is very simple. There is no unnecessary ritual in his order. Srimanta Sankaradeva advocated 'EKA DEVA, EKA SEVA, EKA BINEY NAHI KEWA', which means one should worship none but one God, who is Lord Krishna. Batadrava or Bordowa became the centre of his religious activities. As such, Batadrava has been regarded as the Dvitiya Vaikuntha.



PROPOSED STRATEGIES

Heritage sites Management and organizational structure

There is a need to setup a Heritage Committee for Dhing Planning Area. The concerned Development authorities/municipalities as well as local stakeholders, NGO,s have significant role to play in successful implementation of strategies proposed for Dhing Areas. Formulations of special regulations to control or mediate development within the available heritage areas are a prerequisite for effective implementation of the proposed recommendations. Special regulations for all development within heritage areas, including new construction, demolition or modification to existing buildings around historic structures or within historic precincts must be formulated by the concerned authority with the advice of Heritage Committee. Detailed plans must be prepared by respective Municipalities. It is necessary to prepare an inventory of build, cultural and natural heritage resources of the special areas. The inventory must include both protected and unprotected resources. The cost for most of the new developments in special heritage areas in already covered in budget allocation for "Tourism, Recreation and Culture" and hence not included in this table. Estimates for projects those are specific for preservation of heritage resources are only included. River Front Development is treated as a separate item of budgetary allocation.

The relevant policy guidelines and management of culture and natural heritage can rejuvenate and revitalize the Dhing region and support the existing cultural identity. It can also promote tourism, boost local economy and contribute a great sense of pride amongst the residents and became a touchstone for future development.

7.3 STRATEGIES FOR DEVELOPMENT OF RECREATIONAL AREAS :

Recreation is any physical or psychological revitalization through the voluntary pursuit of leisure time. It is an activity which is relaxing to people and provide diversions from their normal routine. Generally there are four types of Recreational activities:

Revitalization : Restoration and enhancement of mental and physical health.

Play : relaxation and exercise

Adventure : Excitement and challenge

Education : organized and incidental

Indoor Facilities consist of library, clubs, cinema hall, auditorium, multiplex, art and craft centre, shopping mall, food courts, cyber, gymnasium etc.

Outdoor recreation facilities consist of gardens, parks, play ground, golf courses, zoo, and botanical garden, race course, stadium, exhibition ground, water sports complex, green ways etc.

Proposal for augmentation and development of Recreational Facilities

- Development of green belts, plantation, parks, ghats, plazas, along the riverfront abreast the urban set up and invite nature harsh environment through myriad ways.

- Amusement parks to be developed along with horticulture, pisi culture, herbal arks, etc

- Development of eco-tourism with provision of water theme parks, lagoon resorts, weekend resorts, clubs, etc at Planning area level

Proposed strategies to boost tourism

As a service industry, tourism has numerous tangibla and intangible elements. Major tangible elements include transportation, accommodation, and other components of a hospitality industry. Most intangible elements relate to the purpose or motivation for becoming a tourist, such as rest, relaxation, the opportunity to meet new people and experience other cultures, or simply to do something different or have an adventure.

Tourism is vital for every place, due to the income generated by the consumption of goods and services by tourist, the taxes levied on business in the tourism industry, and the opportunity for employment and economic advancement by working in the industry. For these reasons government and private agencies sometimes promote a specific region as tourist destination, and support the development of advancement by working in the industry. For these reasons government and some private agencies sometimes promote a specific region as tourist destination, and support the development of a tourism industry in that area. The contemporary phenomenon of mass tourism may result in overdevelopment; however alternative forms of tourism such as ecotourism seek to avoid such outcomes by pursuing tourism in a sustainable way.

Dhing Region offer substantial potential for tourism development. Batadrava Than which is 12.5 Km away from Dhing Town is the centre for cultural and Historical sites for the entire state and also for the whole country. Moreover, Lowkhowa Wildlife Sanctuary is situated at a distance of 33 Km from the Dhing Town. This wildlife sanctuary covers 70.13 km², on the south bank of the Brahmaputra River in Nagaon district, It is situated 40 km downstream of the Kaziranga National Park and 30 km northwest of the Orang National Park on the other side of the river Brahmaputra.

It is a part of the Laokhowa-Burachapori eco-system. The sanctuary is an ideal habitat for Indian rhinoceros and Asiatic water buffaloes. Other animals found here are the royal Bengal tiger, Indian leopard, Indian boar, civet, leopard cat, hog deer, etc. Over 200 species of birds have been recorded in the sanctuary, including migratory birds.

Laokhowa had more than 70 Indian rhinos in early 1980s which were all killed by poachers. In 2016, two rhinos were reintroduced to the sanctuary from Kaziranga National Park as part of the Indian Rhino Vision 2020 (IRV 2020).



7.4 CITY BEAUTIFICATION PLAN/ PROPOSALS

Roadside plantation

Roadside plantation acts as a buffer between the people and government- owned forests, and it will help to reduce the extensive indiscriminate destruction of forests. Roadside tree planting can make significant improvements to the quality of roads and the environment and can protect key natural resources, especially in ASAL regions where vegetation is essential in binding the soil with organic matter that aids in enhanced infiltration and water retention in the soil.

Planting trees along the road sides, highways and pathway is known as avenue plantation. Avenue plantation is generally practiced for the aesthetic value, Beautification, shade purpose, control of soil erosion and for its economic use of timber, flowers & fruits. Best trees for roadside plantation are Neem, Krishna Chura, Radha Chura, Sonaru etc. Trees also gives us fresh air as they produce oxygen. Trees are planted along the roadside as they provide shade to the travelers during summers.

Below table shows the Proposal of Roadside tree Plantation alongside the major Road of Dhing Town Area.

Table:-

Sl. No.	Name of the Road	Length
1	Pujabari Road (Both side)	0.61 Km (approx)
2	Dhing TuKtuki Jajori Road (Both Side)	0.91 Km (approx)
3	Nagaon-Dhing-Bhuragaon Road (Both side)	2.00 Km (approx)
4	Dhing Road (Both side)	1.00 Km (approx)
5	Bhakatgaon Road (Both side)	0.40 Km (approx)

Infrastructure Proposal

Automatic Traffic Signal at Dhing Bazar Tiniali

Automatic Traffic Siglal at connecting point between pujabari and Dhing-Jajari Road

Clock Tower at Dhing Chariali

Entrance Gate Chamuagaon near Sub-Post Office and Dhing Chariali

Eco-Tourism Park at Tolibor Lake

3 Nos. of Footbridge over Tolibor Beel

Requirements and strategies:-

One Kind of Flowering Trees on Both Sides

Two Kinds of Flowering Trees Blooming at one Time on both Sides of Road

3. Two Kinds of Flowering Trees Blooming at Different Time on both Sides of the Roads

4. Shady Trees Only on both Sides of Roads.

The trees should be planted at least 12 m apart from the centre of the carriageway.

If the road is constructed on the embankment, the trees should be planted as possible as high on the sides of the embankment.

7.5 URBAN AGRICULTURE AND URBAN FORESTRY :

Urban agriculture, urban farming, or urban gardening is the practice of cultivating, processing, and distributing food in or around urban areas. Urban agriculture is also the term used for animal husbandry, aquaculture, urban beekeeping, and horticulture. These activities occur in peri-urban areas as well. Peri-urban agriculture may have different characteristics.

Urban agriculture can reflect varying levels of economic and social development. It may be a social movement for sustainable communities, where organic growers, "foodies", and "locavores" form social networks founded on a shared ethos of nature and community holism. These networks can evolve when receiving formal institutional support, becoming integrated into local town planning as a "transition town" movement for sustainable urban development. For others, food security, nutrition, and income generation are key motivations for the practice. In both scenarios, more direct access to fresh vegetables, fruits, and meat products through urban agriculture can improve food security and food safety.

Types of Urban Farming

Backyard Gardens. This is the growing of food on home property. ...

Tactical Gardens. This involves using the limited space available to practice agriculture without having to incur hefty expenses.

Street landscaping.

Forest gardening.

Greenhouses.

Rooftop gardens.

Green walls

Vertical farms.

Strategies

Allotment gardens: An allotment garden is a plot or parcel of urban or suburban land made available for individual, non-commercial gardening or food growing and recreation.

Community gardens : Community gardens are an emerging form of urban farming.

7.6 INVENTORY OF YOUR TOWN LAND (AND ROOFTOPS) :

Partnerships and Cultivate market access

Urban forestry is the care and management of single trees and tree populations in urban settings for the purpose of improving the urban environment. Urban forestry involves both planning and management, including the programming of care and maintenance operations of the urban forest. Urban forestry advocates the role of trees as a

critical part of the urban infrastructure. Urban foresters plant and maintain trees, support appropriate tree and forest preservation, conduct research and promote the many benefits trees provide. Urban forestry is practiced by municipal and commercial arborists, municipal and utility foresters, environmental policymakers, city planners, consultants, educators, researchers and community activists. The urban forestry comprises all green elements under urban influence such as, Street trees and road plantations, Public green areas, such as parks, gardens, cemeteries, Semi-private space, such as green space in residential areas and in industrial or specially designated parks.

Strategies

Increase tree planting in neighbor hoods with low urban forest cover.

Increase Street and park tree diversity.

Plant trees to support green infrastructure and reduce climate change

Enhance biodiversity through tree planting.

Update inventory and data management for public trees.

Manage public trees for public safety and support tree health.

Work together with local people and the urban NGO related to forestry.

Raise awareness of the importance of the urban forest.

Support volunteers, NGOs, schools, and neighborhood groups in urban forest stewardship.

7.7 PUBLIC RAIN WATER HARVESTING SCHEME :

Rainwater harvesting (RWH) is the collection and storage of rain, rather than allowing it to run off. Rainwater is collected from a roof-like surface and redirected to a tank, cistern, deep pit (well, shaft, or borehole), aquifer, or a reservoir with percolation, so that it seeps down and restores the ground water.

Harvesting rainwater allows the collection of large amounts of water and mitigates the effects of drought. Most rooftops provide the necessary platform for collecting water. Rainwater is mostly free from harmful chemicals, which makes it suitable for irrigation purposes. There are two ways of harvesting rainwater, namely; surface runoff harvesting and rooftop rainwater harvesting.

There are two major techniques of rain water harvesting.

Surface runoff harvesting:- In this method, rainwater flows away as surface runoff and can be stored for future use. Surface water can be stored by diverting the flow of small creeks and streams into reservoirs on the surface or underground. It can provide water for farming, for cattle and also for general domestic use. Surface runoff harvesting is most suitable in urban areas.

Rooftop rainwater/storm runoff can be harvested in urban areas through :

- Recharge Pit
- Recharge Trench
- Tube well
- Recharge Well

Ground water recharge

Groundwater recharge is a hydrologic process where water moves downward from surface water to groundwater. Recharge is the primary method through which water enters an aquifer. The aquifer also serves as a distribution system. The surplus rainwater can then be used to recharge groundwater aquifer through artificial recharge techniques.

Rainwater in rural areas can be harvested through:

- Gully Plug
- Contour Bund
- Dugwell Recharge
- Percolation Tank
- Check Dam/Cement Plug/Nala Bund
- Recharge Shaft

Although rainwater harvesting measure is deemed to be a desirable concept since the last few years, it is rarely being implemented in rural India. Different regions of the country practiced a variety of rainwater harvesting and artificial recharge methods. Some ancient rainwater harvesting methods which includes Madakas, Ahar Pynes, Surangas, Taankas, etc.

Water Harvesting Schemes in India

Steps taken by the Central Government to control water depletion and promote rain water harvesting / conservation are as under :

1. Government of India launched Jal Shakti Abhiyan (JSA) in 2019, a time bound campaign with a mission mode approach intended to improve water availability including ground water conditions in the water stressed blocks in India. Ministry of Jal Shakti visited water stressed districts and to work in close collaboration with district level officials to undertake suitable interventions. In addition, 'Jal Shakti Abhiyan – Catch the Rain' campaign has been launched by Hon'ble Prime Minister of India on 22 March 2021.

2. National Water Policy (2012) has been formulated by Department of Water Resources, RD & GR, inter-alia advocates rainwater harvesting and conservation of water and highlights the need for augmenting the availability of water through direct use of rainfall. It also inter-alia, advocates conservation of river, river bodies and infrastructure should be undertaken in a scientifically planned manner through community participation. Further, encroachment and diversion of water bodies and drainage channels must not be allowed and wherever, it has taken place, it should be restored to the extent feasible and maintained properly.
3. In compliance to the decision taken by the Committee of Secretaries, an 'Inter Ministerial Committee' under the Chairmanship of Secretary (WR, RD & GR) has been constituted to take forward the subject of 'Push on Water Conservation Related Activities for Optimum Utilization of Monsoon Rainfall'.
4. Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable ground water legislation for regulation of its development, which also includes provision of rain water harvesting.
5. Master Plan for Artificial Recharge to Groundwater- 2020 has been prepared by CGWB in consultation with States/UTs which is a macro level plan indicating various structures for the different terrain conditions of the country including estimated cost. The Master Plan envisages construction of about 1.42 crore Rain water harvesting and artificial recharge structures in the Country to harness 185 Billion Cubic Metre (BCM) of monsoon rainfall.
6. CGWB has taken up Aquifer Mapping and Management Programme during XII Plan, under the scheme of Ground Water Management and Regulation. The Aquifer Mapping is aimed to delineate aquifer disposition and their characterization for preparation of aquifer/area specific ground water management plans with community participation. The management plans are shared with the respective State governments for taking appropriate measures / implementation.
7. Best practices of water conservation by various entities including private persons, NGOs, PSUs etc have been compiled and put on the web site of the Ministry for the benefit of general public. An interactive link on best practices has also been created for receiving inputs from public, which, after necessary evaluation/validation are put on the website for the benefit of the public.
8. Department of Water Resources, RD& GR has instituted National Water awards to incentivize good practices in water conservation and ground water recharge.
9. Mass awareness programmes (Trainings, Seminars, Workshops, Exhibitions, Trade Fares and Painting Competitions etc.) are conducted from time to time each year under the information, Education & Communication (IEC) Scheme of DoWR, RD & GR in various parts of the Country to promote rain water harvesting and artificial recharge to ground water.
10. The Ministry of Rural Development in consultation and agreement with the Department of Water Resources, RD & GR and the Ministry of Agriculture & Farmers' Welfare has

developed an actionable framework for Natural Resources Management (NRM), titled ‘Mission Water Conservation’ to ensure gainful utilization of funds. The Framework strives to ensure synergies in Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), erstwhile integrated Watershed Management Programme (IWMP) now PMKSY Watershed Development Component and Command Area Development & Water Management (CADWM), given their common objectives. Types of common works undertaken under these programmes/ schemes are water conservation and management, water harvesting, soil and moisture conservation, groundwater recharge, flood protection, land development, Command Area Development & Watershed Management.

11. Central Government supports construction of water harvesting and conservation works primarily through Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) and Pradhan Mantri Krishi Sinchayee Yojana – Watershed Development Component (PMKSY-WDC).

12. Atal Bhujal Yojana (ABHY), a Rs.6000 crore scheme with World Bank funding, for sustainable management of ground water with community participation is being taken up in the identified over-exploited and water stressed areas fall in the States of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. This scheme is expected to contribute significantly towards water and food security of the participating states.

7.8 STRATEGIES AT LOCAL LEVEL :

At local level, Urban Local Body/Municipal Board in compliance with Rain water Harvesting should strictly follow the Government Guidelines, Circulars, Manual, model circulated time to time. In different Structural construction, Planning, Drawing, there should be the provision of Rain water harvesting system. In this regards, authority related to the permission of construction of Houses, Building, Structure should follow the rules, Byelaws of Building rules. Regarding rain water harvesting in the Dhing Planning Area, Dhing Municipal Board should strictly follow the Building Rules-2014 Govt. of Assam in issuing Building construction permission and also to create Public awareness among people of the locality in rain water harvesting techniques.

Development of parks and recreational spaces with Identification and demarcation of Open Space for sports, Cultural function, fairs etc in Dhing Planning Area:-

Due to rapid growth of population, the present recreational facilities are not sufficient to fulfill the needs of the people of the Dhing Town. In Dhing Town there is only one organized Parks that is Dhing Children Parks for the Children is to developed with all Modern facilities

Proposal for Construction of Playground Infrastructure and Parks & other recreational Facilities in Dhing Planning Area:-

Sl. No	Name of the Open space/ site	Proposal
1	Jaganath playground	Development of a Mini stadium with spectators galleries and modern facilities
2	Suitable Plot of land within Dhing Municipality Area	Construction of Public Auditorium with all modern facilities.
3	Suitable Plot of land within Dhing Municipality Area	Construction of Open theater with all modern facilities
4	Suitable Plot of land within Dhing M.P.A	Proposal of construction of 3 Nos. of Modern Marks within the Dhing Municipal Board.
5	Suitable Plot of land within the each Revenue Village.	Proposal for construction of 1 Children Parks and 1 Community centre at each Revenue village of the Dhing Planning Area.

CHAPTER 8 : LAND USE PLAN

8.1 EXISTING LAND USE OF DHING MASTER PLAN AREA-2021 :

The study of land use holds a very significant place where a particular settlement can be recognized as a town depends on its functional structure. The functional activity can be regarded as the main regions for the growth of urban centre. The main purpose of land use study is to provide framework for the development of a particular area. It gives us an idea about the proportion of various types of land.

Land use gives an accurate picture of an urban area which is having great significance for future planning. The main purpose of land use classification is to provide framework for the development of a particular area. The need for studying the land use aspect is elaborated as follows: To know the arrangement of various parts of town put to different uses suchn as residential, commercial, industrial etc.

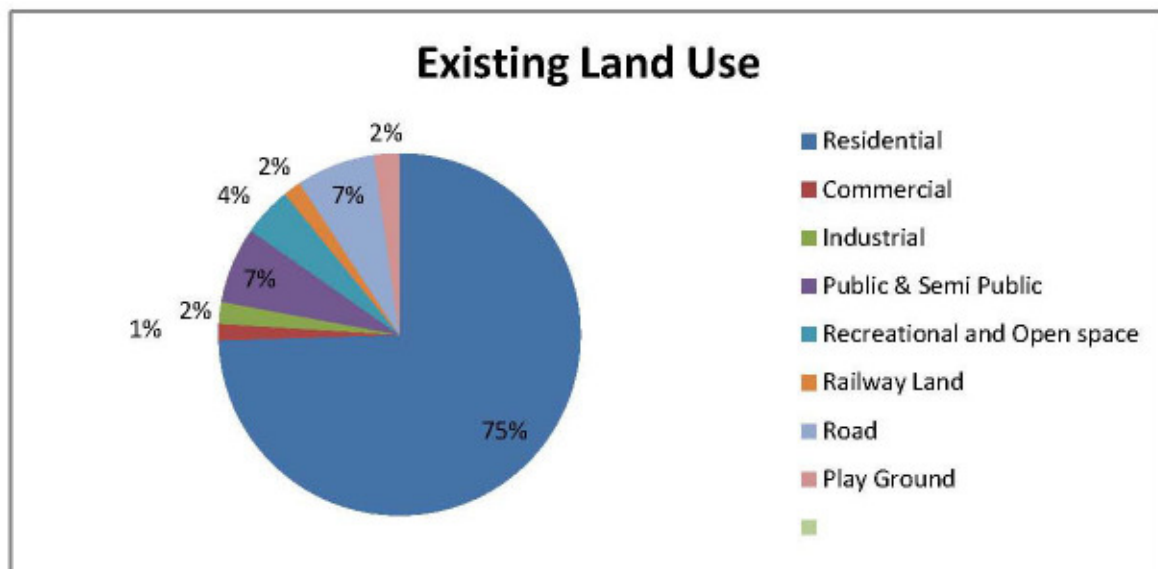
The Existing Land Use pattern of Dhing Master Plan Area was updated based on ground reality on the scientific base map prepared with the help of Satellite Image and Revenue records like village level cadastral sheets, Field Measurement Book sheets and Town Survey Sheets. The Dhing Planning Area is administratively divided into two entities, Urban and Rural. Urban area comprises of Dhing Municipal Board area of 5.12 Sq.Km and Rural area of 33.22 Sq. Km including 10 Villages. This chapter presents the existing land use analysis, 2021 for the planning area.

As a part of the preparation of GIS Based Master Plan- 2045, the study of the existing Land use pattern of Dhing Master plan area was carried out by a survey conducted by T&CP, District Office, Nagaon in order to formulate future policies so that a balaced approach can be made in allocating the future land uses. The existing landuse in Dhing Master plan area has been grouped into the following 10 (Ten) categories.

Table : Existing Land use of Dhing Master Plan Area

Sl. No.	Land use category	Area(Sq Km)	% of Total Planning Area
1	Residential	10.64	74.50
2.	Commercial	0.21	1.47
3	Industrial	0.28	1.96
4.	Public & Semi public	0.97	6.80

5	Recreational and Open space	0.63	4.41
6	Railway land	0.23	1.61
7	Road	1.00	7.00
8	Play Ground	0.32	2.25
Total Developed Area		14.28	100%
9	Agriculture	21.63	89.94
10	Water Bodies	2.42	10.06
11	Green Belt	-	
Total Undeveloped Area		24.05	100%
Grand Total		38.34	



The detailed land use analysis of the Dhing Master Plan Area-2021, gives the picture of the shape of the Urban and Rural land for various activities. From the above table it is seen that out of the total land, Agriculture land use being the predominant land use which occupies 21.63 Sq. Km.(89.94 %) of the total planning area, residential land use is spread over 10.64 Sq. Km.(74.50 %). Out of the undeveloped land area about 2.42 Sq km (10.06%) occupies by water bodies covered by Leteri Beel, some ponds and wetlands like Tolibor Beels etc.. It is

also observed that about 1.00 Sq. Km (7.00%) area occupies by Railway 0.23 sq.km (1.61%) occupies by Road. Public and semi public occupies 0.97 sq km.(6.80%) for various Physical and social infrastructure like Educational institutes, Government Offices, Hospitals, District and Special jails, Circuit House, Govt. Residential Buildings etc. Km. 0.21 sq.km. (1.47%) occupies by commercial use.

It is also seen that about 0.28 Sq. Km (1.96 %) of land occupies by industrial use. Water Bodies occupies a large portion land which is about 2.42 Sq. Km (10.06%). From the table it is seen that there is huge scope of future development of the planning area. The rural area has concentration of good amount of Agricultural land, open space and water bodies and urban area also has large amount of vacant land and open spaces. Thus the Planning area has a good scope of development of existing residential buildings and construction of new residential buildings or redevelopment in conformity with the heritage importance and special regulations for the Planning Period up to 2045.

CHAPTER 9 : PROPOSED LAND USE PLANE

On the basis of planning policies, techniques, principles and projections, various recommendations and proposals for the future growth of Dhing Master Plan Area have been formulated. As such recommendation and proposals have been translated into land use plan to give them spatial dimension. The land use shown in the map indicates the functional relationship between various urban activities visualized up to 2045 and aims at to provide the most economics use of urban land.

The land requirement for various urban activities have also been proposed on the basis of projected population of 66,061 by 2045. The distribution of land into various broad categories of land use have been made keeping in view the minimum desirable standards of development and functional linkages between them. The following table shows the land proposed for various major uses.

9.1 PROPOSED LAND USE IN DHING MASTER PLAN AREA :

The Proposed Land use in Dhing Master Plan Area for 2045, considering all the above analysis can be summarized as below:

Table : Existing and Proposed Land Use classifications for different uses of Dhing Master Plan, 2045

Sl. No	Land use Category	Area (in Sq. Km.)	% of Total Planning Area
1	Residential	16.22	42.30
2	Commercial	0.96	2.50
3	Industrial	0.35	0.93
4	Public & Semi-Public	1.01	2.63
5	Road	1.04	2.76
6	Recreational & Open Spaces	0.67	1.76
7	Railways	0.23	0.60
8	Play Ground	0.30	0.79
9	Bus/ Truck Terminus	0.01	0.03
10	Agricultural	15.03	39.21
11	Water Bodies	2.42	6.32
12	Green belt	0.08	0.22
	Total area	38.34	100.00

9.2 PROPOSED RESIDENTIAL USE :

To accommodate the projected population of about 66,061 an area of about ... sq. km. are earmarked for residential use in Dhing Master Plan Area. The plan provides the following pattern of residential density.

High Density Zone : Dhing Municipal area has been proposed as high density residential zone with a population of 75 to 100 persons per acre.

Medium Density Zone : Within the residential areas of the villages just adjacent to the Municipal boundary have been proposed as Medium Density residential zone with a population of 50 to 75 persons per acre.

Low Density Zone : The residential areas of the other villages have been proposed as low density residential zone with a population of 20 to 50 persons per acre.

9.3 PROPOSED COMMERCIAL LANDUSE :

With the rapid population growth in Dhing the existing commercial area concentrated along the SH-17 and SH-18 and surrounding the town area will not be sufficient to meet the need of future projected population.

Therefore, an additional area of about **0.75 sq. km.** is proposed for commercial purposes in the Dhing Master Plan area.

9.4 PROPOSED INDUSTRIAL LANDUSE :

There are good prospects for setting up of forest and agricultural based small and medium industries in Dhing Master Plan area. There are also good scopes for setting up of service and light consumer goods producing industries like agriculture implements, readymade garments, soap making, brick making, bakery, plastic goods, power loom etc. In addition to the existing industrial area, an area of about **0.08 sq. km.** of land has been earmarked for setting up of medium and light industries in the Dhing Master Plan Area.

9.5 PROPOSED PUBLIC AND SEMI-PUBLIC USE :

In the Dhing Master plan area land proposed for public and semi-public use is **1.01 sq. km.** which is required for proposed as public and semi-public use. The public and semipublic uses have been proposed on Govt. land of Dhing Master Plan Area.

9.6 PROPOSED CIRCULATION PLAN :

The land is proposed under transportation will be **0.03 sq.km.** of Dhing Master Plan - 2045. The proposals for improvement and widening of roads within Dhing Master Plan Area.

All the major junction points should be developed in a planned manner. Modern traffic signaling system is to be proposed within the Dhing Master Plan Area.

9.7 HIERARCHY OF ROAD PROPOSED WITH WIDTH:

- 1) Primary road - 75"width
- 2) Secondary road - 50"width
- 3) Tertiary road - 20"width

9.8 PROPOSE RECREATIONAL FACILITY :

A quite no. of parks and playgrounds are not available within the Raha Master Plan area to meet the demand of the people and the condition of the existing parks and playgrounds are deplorable condition which are urgently need to be improved. Thus an area of 0.67 sq.km. including has been proposed for recreational facilities (park and playground) for Dhing Master Plan 2045.

9.9 PROPOSED GREEN BELT :

An area of 0.08 sq.km. has been proposed for Green Belt within Dhing Master Plan Area. The green belt will act as buffer zone between residential use and other uses with the Master Plan.

9.10 INFRASTRUCTURE PROPOSALS :

The availability of existing social / physical facilities and their services of Dhing Master Plan area have been studied. The existing deficits and future requirements are calculated as below:-

Education :

To accomplish the social and economic upliftment of the society is not possible without the modern and up to date educational system capable of eradicating illiteracy and ignorance and providing skilled and trained up man power required by changing economic condition. The educational requirement for Dhing

Master Plan area up to the year 2045 have been estimated considering a higher standard as mentioned in the table below:-

Sl. No.	Type of Educational Institute	Norms	Existing Numbers	Deficit	Total Requirement
EDUCATION					
1	Primary school	1 in 2500 population	38	-	-
2	Middle school	1 in 5000 population	15	-	-
3	High school	1 in 7500 population	7	2	2
4	Higher Secondary school	1 in 90,000 population	1	-	-
5	General college	1 in 1,25,000 population	1	-	-
Health					
6	Intermediate Hospital	1 in 1,00,000 population	1	-	-
7	Nursing Home, Maternityhome	1 in 45,000 population	1	-	-
8	Sub-Dispensary	1 in 15,000 population	7	-	-
Socio-Cultural Facilities:					
9	Community Room	1 in 5000 population	2	4	4
10	Community Hall/ Library	1 in 15,000 population	1	3	3
11	Music Dance & Drama etc.	1 in 1,00,000 population	-	1	1
Communication					
13	Post Office	1 for 15,000 population	1	4	4
14	Police Station	1 for 90,000 population	1	-	
15	Fire Station	1 for 2,00,000 population	1	-	

9.11 SECTOR-WISE INVESTMENT PROPOSAL :

The sector wise requirement of implementation of various projects of Dhing Master Plan Area is detailed as table below:

Table-

Sl. NO.	Location	Project Name
Solid Waste management		
1	Dhing Planning Area	Improvement and Modernization of Solid Waste Collection, Transportation and Disposal System of Dhing.
2	Ward No-10, Niz-Dhing Kissam, Dag No-830 (new)	Development of Solid Waste Engineering land fill site on 20 bigha of Land
Drainage System		
3	Dhing Planning Area	Preparation of DPR for Drainage System for Dhing M.P Area
4	Dhing Town	Construction and Improvement of Existing Storm Water Drains
5	Dhing Town	Cleaning and Maintenance of existing Drains
Water Bodies		
6	Tolibor Beel	Rejuvenation and recycle of Water Bodies in Planning Area.
7	Dhing Planning Area	Development of Green Belt around all water Bodies
8	Tolibor Lake Dhing Planning	Development of Jamuna River front as recreational zone
Traffic and Transportation		
9	Dhing M.P Area	Bus Terminus, Truck Terminus
10	Chamugaon near sub post office.	Construction of Entry Gate
11	Dhing Town Area	Construction of Cycle Parking
12	Dhing Town Area	Construction of street Parking
13	Dhing Tiniali and Rajabari and Dhing-Tuktuki-Jajori Road connecting road point	Construction of Automatic Traffic Signals Point.
Recreational Facility		
14	Tolibor Beel	Eco-tourism Park
Industrial Area		
15	Dhing Planning Area,	Industrial state
Fly over		
16	Dhing Town Rail Gate	Construction of Fly over

Improvement and widening of Road		
17	Dhing Tuk tuki Road	5 km
18	Ath gaon Road	3 km
19	Bilotia No.2 Road	4 km
20	Thana Road	3 km
21	Gayangaon Gaon	7 km
22	Dhing Bhuragaon Road	3 km
23	NCB To Samabae Rd.	550 m
24	NCB Rd.	950 m
25	Colloney Path	500m
26	Subway of ward no. 1	300 m
27	Singimari Rd.	450 m
28	Chamua panbari Rd.	1330 m
29	Erabari Rd.	220 m
30	Burhanamghar Rd.	1230 m
31	Subway from Sankarnagar to Jyotinagar	560m
32	Bidyanagar Rd.	220 m
33	Subway of RKB Rd.	200 m
34	Muslimpatty Rd.	405 m
35	Subway from I. barphukan l	150 m
36	Kushal kunwar Rd.	350 m
37	Lakhidhar Hazarika Rd.	300 m
38	Kanaklata Rd. subway4	100 m
39	Sibmandir Rd.	570 m
40	Smassan Rd. 2	200 m
41	Niz dhing Smassan Rd. 2	280 m
42	Musipatty Rd.	220 m
43	Road by the side of Dumping Ground	1000 m
45	Road Opposite to HAMM Hospital	550 m
Construction of Drain within Dhing Master Plan Area		
46	Construction of drain both side of the Dhing Tuk Tuki Road Via Nam doomdoomia	3 km
47	Construction of Drain both side of Dhing Pujabari Road	500 m
48	Construction of Drain both side from Dhing Chariali Bhokotgaon Rd.	700 m
49	Construction of Drain within Dhing Municipal Area	30 km
50	Construction of Drain both side of Dhing Thana Road	2 km
51	Construction of Drain both side of Dhing State Highway-47	7 km

CHAPTER 10 : DISASTER PLAN

Disaster is an undesired calamities event that seriously disrupts the functioning of a community or society and causes human, material and economic or environment losses that exceed the community's or society's ability to cope using its own resources. Disasters are usually caused by nature but in some cases, it can be caused by human actions as well. Disaster can be broadly classified into water and climate related geology related and accidental related. Assam has been traditionally vulnerable to natural disasters on account of its unique geo-climatic conditions. Flood, drought, cyclones, earth quakes and landslides have been recurrent phenomena.

At national level, the ministry of Home affairs is the nodal Ministry for all matters concerning disaster management and at state level State Disaster Response force under Ministry of Home, Govt. of Assam is the responsible agency to tackle any disasters within the State.

Dhing Town is one of the important town of Nagaon district which is only 8 km from the mighty river Brahmutra. Therefore the entire region is the composition of the Alluvial Flood Plain.

10.1 MITIGATION PLAN :

Any disaster management plan or emergency management plan consists of four phases, namely: Mitigation, Preparedness, Response and Recovery. The Mitigation component in an emergency management plan is aimed at reducing the risk, impact, effects of a disaster. Hence careful planning eliminate the phase is important to reduce or eliminate the long-term risk to human life, property from natural and manmade calamities. It's important to have mitigation plans led by local community, working together to identify, plan for in the event of a disaster and reduce vulnerabilities and promote long term personal and community resilience and sustainability. Mitigation Plans can concentrate on both pre-disaster and post disaster efforts to reduce the impact of the disaster.

Pres-disaster Mitigation should focus on projects and interventions to address natural and man-made disaster to reduce risk to the population and property. This is mainly achieved by strengthening the resilience of National/state infrastructure. Post- disaster Mitigation efforts are primarily designed to reduce future damage in an affected area and decrease the loss of life and property and life due to the incidents following the disaster. The essential steps of hazard mitigation are:

Hazards identification

Vulnerability Analysis

Defining a Hazard Mitigation Strategy.**Implementation of Hazard Mitigation Activities and projects**

Dhing region is prone to floods than any other natural disasters hence the disaster vulnerable area mitigation plan focuses on flood related eventualities and how can it be mitigated and have better preparedness. It is important to note that disaster management is an integrated task involving various government departments of region and the plan should focus on prevention, preparedness, mitigation, response, and measures.

10.2 PREVENTION :

As part of the said natural disasters the following measures can be adopted by concerned govt. departments to avoid and minimize the impacts of natural disasters.

= The public work department should monitor the major water bodies like river, streams lakes for constant flow of water, rising level and identify potential areas along the water bodies which need additional embankment or revetments, and these works should be implemented on priority before the onset of the season.

= Power and communication should carry out through inspection of power lines, communication lines for defects and rectify them. Trees and branches which may damage power and communication lines should be trimmed or removed.

= Health department should ensure the primary and community health centers are equipped with medicines and medical staff. Preventive vaccines for epidemics should be stocked in adequate quantity. Chlorination of drinking water should be ensured to avoid the outbreak of epidemics in the event of cyclones and floods.

= The department of disaster management is the nodal agency in the Nagaon region and has already handled several flood and cyclone situation in the region. From this experience, it should be able to identify the low lying and vulnerable areas and the population of such places must be warned to be alert and to be ready to safer areas or to the relief camps in case of warning disaster.

= The department of civil supplies & consumer affairs should decide for creation of buffer stock of food grains by making required withdrawal from the food corporation of India. Also, adequate quantities of kerosene and diesel should be procured and made available through the fair price shops.

= Department of Agriculture should take steps to publicize precautionary measures to be taken to save the standing crops in the vulnerable areas. Farmers should be encouraged to have platforms in their fields to stock the crops. De-silting of the public and private irrigation canals should be ensured for quick drainage of paddy fields.

= Fisheries Department shall alert all the people residing on river bank villages and hamlets about the impending natural calamities and advise the fisherman not to venture into sea till normalcy is restored.

= Department of School education shall keep all schools ready for accommodating the evacuees and keep the central kitchens to function around the clock with in charge of the centers. NCC and NSS students shall also be grouped to send them for relief works.

= Department of Animal Husbandry should store fodder, cattle feed, and poultry food etc. and also carries out the inoculation of animals against epidemics. The Key village units should harbor stray cattle with shelters.

= Transport Department should keep ready the list of sufficient numbers of earthmoving vehicles, transportation vehicles such as trucks, tractors, tippers, proclams, mini buses etc. Further, all the listed vehicle allocated in connection with calamity has to be kept in roadworthy condition for using them in emergency.

= Local Urban Bodies/Municipal Board shall make rearrangement for availability of Generators and pump sets at short notice. For areas with water logging and artificial flood local bodies should clear the L & U type drained which normally clog due to plastic materials and silt.

= Police department shall set up a Search & Rescue Team which shall contain at least 20 police personal for each jurisdiction of the superintendent of police.

= Similarly, the fire services department shall set up search & Rescue Team consisting of at least 6 members of each fire station.

10.3 MITIGATION AND PREPAREDNESS :

Pre-disaster planning consists of activities such as disaster mitigation and disaster preparedness. Disaster mitigation focuses on the hazard that causes the disaster and tries to eliminate or drastically reduce its effects. The best example of mitigation is the construction of embankments and construction of proper drainage system in flood prone areas to avoid floods. The other example includes retrofitting of weak buildings to make them earthquake resistant. And preparedness focuses on plans to respond to a disaster threat or occurrence. It takes into account estimation of emergency needs and identifies the resources to meet the needs.

The first objective of the preparedness is to reduce the disaster impact through appropriate actions and improve the capacity of those who are likely to be improving the capacity of those who are likely to be affected most. The second is to ensure that ongoing development continues to improve the capacities and capabilities of the system to strengthen preparedness efforts at community level. Finally, it guides reconstruction so as to ensure reduction in vulnerability. The best example of preparedness activities are the development of community awareness and sanitization system through community education and administrative preparedness by way of stockpiling of supplies, developing emergency plans for rescue and relief. For successful mitigation plan it is necessary to identify short- medium-long term mitigation measures risks and damages.

The following steps can be taken to reduce the risk in the unfortunate event of the said natural disasters.

= Restore communication networks

= The task force in association with reach and rescue teams of police and fire should thoroughly search the affected area for survivors and injured.

= In case of heavy flooding and inundation, vehicular access may be restricted and hence suitable rafts/boats should be used to rescue and evacuate the people affected by the floods

= Water logging in low lying residential areas should be pumped out and the pump out water could be let out through the nearest natural drain or canal. Also fire engines can be deployed to pump out water from affected areas during emergencies.

= Any breach in rivers, streams or natural drains should be protected with adequate sand bags or creation of temporary embankments to avoid further damage to property and human life

= In case of heavy storms, power supply to areas which are in the primary path of the storm can be disconnected to avoid hazards due to breakage of power lines. Provisions should be made to provide generators for temporary power supply to storm affected areas.

= Relief camps should be opened in appropriate location where a large number of people are affected.

Table :- Mitigation

Type of Sector	Sub-sector	Mitigation Measures	Responsible Dept.	Time frame
Infrastructure Development	Road	Repair, Restoration of vulnerable points on roads before onset of monsoon	PWD/DRDA	During Normal time and immediately
	Embankments	Repair of vulnerable points in river/canal embankment during free flood period	Water Resources/Irrigation	During Normal time and immediately
	Bridge	Repair, restoration of vulnerable points on bridge before onset of flood	PWD, NH	During Normal time
	Communication	Ensure maintenance and proper functioning of electronic communication system	BSNL	Round the year
	Drinking water	Replacement of tube well/pipe water	PHE/ Health Deptt.	During Normal time and immediately
	Power	Immediate response for repair of electric line and supply	PWD, ASEB	Round the year
Health	Vaccination	Adequate stock piling of vaccines should be ensured	CMO, DVO, NGO,s	During Normal time and immediately

	Training	Training Programme of common people should be programmed for Health care, sanitation and first aid from village level to district	CMO, DVO, NGO,s	During Normal period
Livelihood	Awareness	Creating awareness among general public during normal time to insured human life	Leading NGO,s	During Normal time
	Agriculture	Alternant cropping pattern/flood resistance crops/crops insurance etc	Dy. Director Agriculture	During normal time and immediately after disaster.
Planning and Response	Relief/Rehabilitation	Regular updation of departmental contingency plan, Community awareness and involvement of NGO,s Regular conduct of mock drill	Line Departments	During Normal time

10.4 RESPONSE PLAN :

Response measures are those taken immediately prior to and following disaster impact. It is important to have clear organizational chart structures with established line of authority within the Government mechanism to handle the response plan in case of natural calamities. Response plans include formation of functional teams and providing plans for the transportation, evacuation, search and rescue and rehabilitation. Survey and assessment part should be the part of response activity. Coordinated IEC activities should be initiated well in advance

- = Mock Drill should carry out twice a year.
- = Make separate plan of operation and list of required materials, tools, machineries for each kind of disaster.
- = Train the rescue team with equipments
- = Train the panchayat leaders, Municipal leaders, Volunteers etc.
- = Approach to NDMA and SDMA for any kind of assistance.
- = Incident Command Officer shall organize regular coordination meeting with all DM committee members, Head of Offices, Public leaders, NGO,s and Senior citizen in consultation with the chairman
- = The RRT,s (Medical & Police) will be alerted by the incident Command Officer.

10.5 AIM OF DISASTER RESPONSE :

- = To ensure the survival of the maximum possible number of victims, keeping them in the best possible Health in the circumstances.
- = To re-established self sufficiency and essential services as quickly as possible for all population group.
- = To repair or replace damaged infrastructure and regenerate viable economic activities.
- = In situation of civil conflict the aim is to protect and assist the civilian population.
- = In case involving population displacement the aim is to find durable solutions as quickly as possible.

10.6 RELIEF :

During the disaster

- = Disseminate the warning of disaster from DDR & IC to all concerned destination in single attempt by using mass sms, announcement through radio, social media, print media and ask the people who are likely to be affected, to take shelter in safer places.
- = Immediate deploy the forces to clear the route of search & rescue and also to clear the traffic from the route of rescue
- = Command to the forces, NGO,s. SHG,s & volunteers to rush immediately to the affected area for search and rescue with all pre listed tools, equipment for disaster.

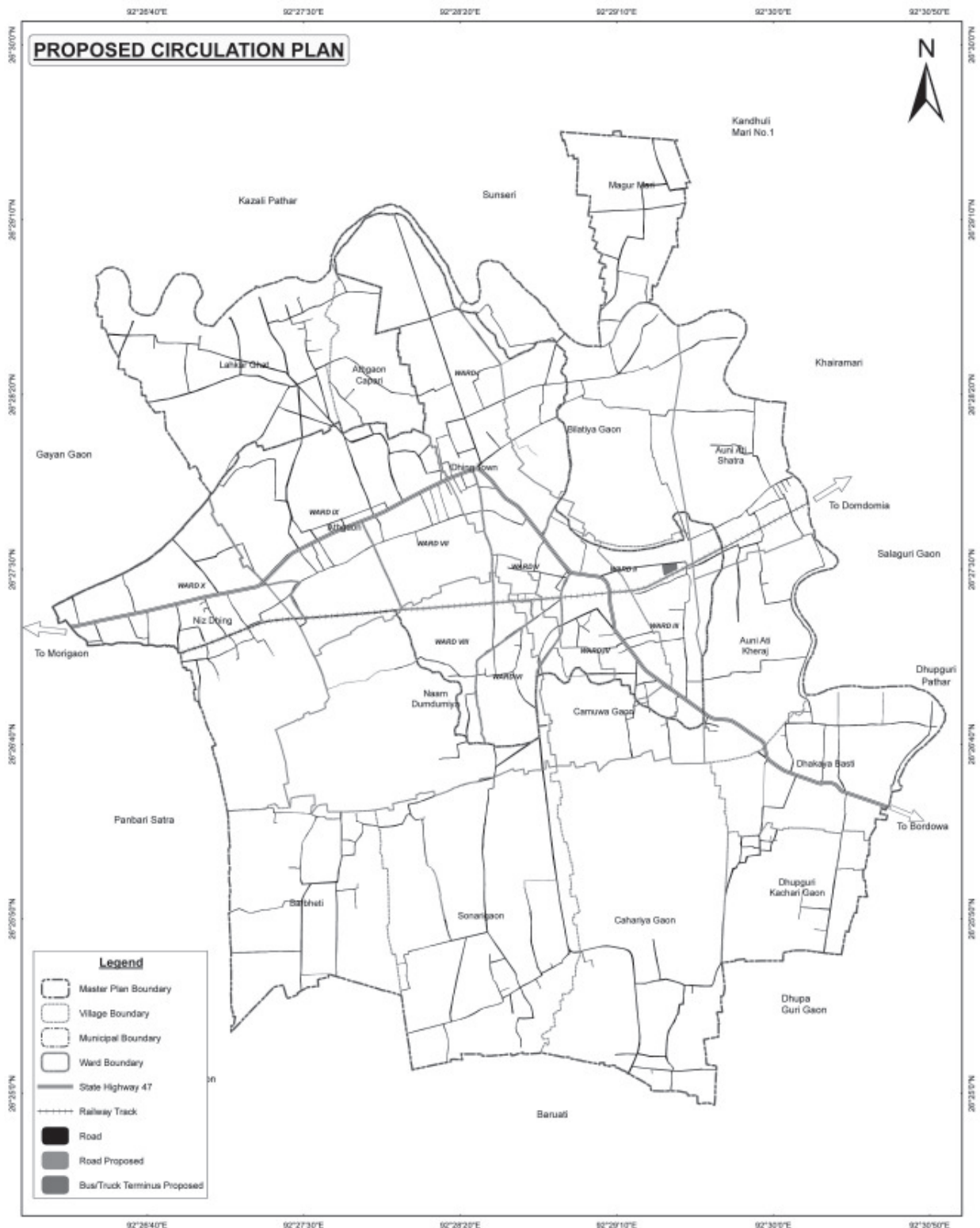
10.7 CITY DISASTER MANAGEMENT PLAN :

The points mentioned above should be part of a city or region level disaster management Plan. The Disaster Management Act, 2005 has brought a change from response & relief oriented approach. This has encouraged many cities to formulate a city disaster management plan, the same should be worked for Dhing MPA as well to enable it to be better prepared in case of natural disasters in the future. As part of Master Plan 2045 the authority feels there is a need for a CDMP for the Planning area covering the following general principles-

- = Risk & Hazard Assessment
- = Planning
- = Organization
- = Resource Utilization
- = Need for Specialist
- = Training

Generally, the CDMP prepared for the planning area should include sectoral plans covering the following aspects of disaster & emergency management:-


- = Overall Preparedness
- = Emergency Response
- = Prevention
- = Mitigation
- = Recovery
- = Reconstruction
- = Capacity Building Plans

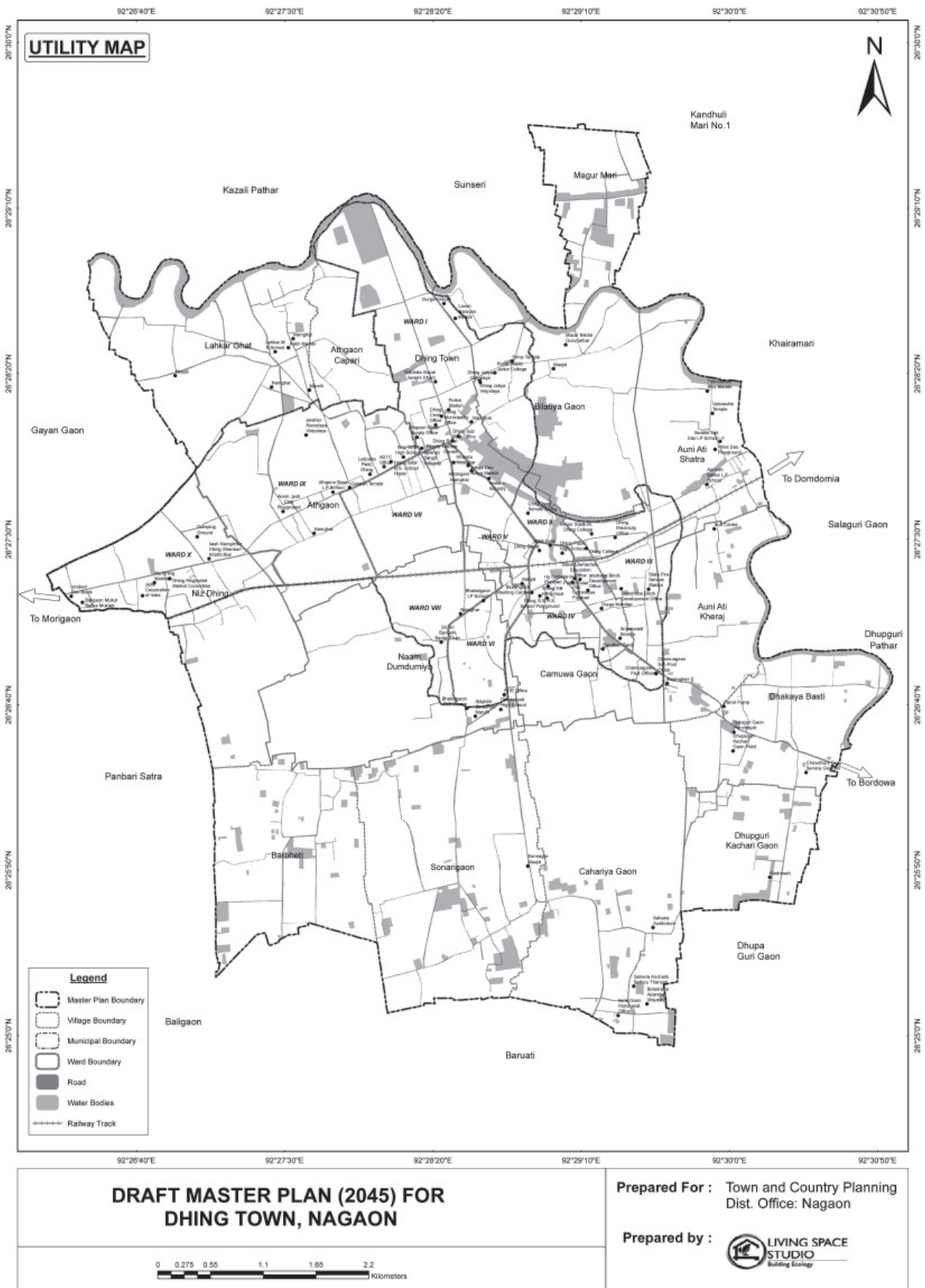


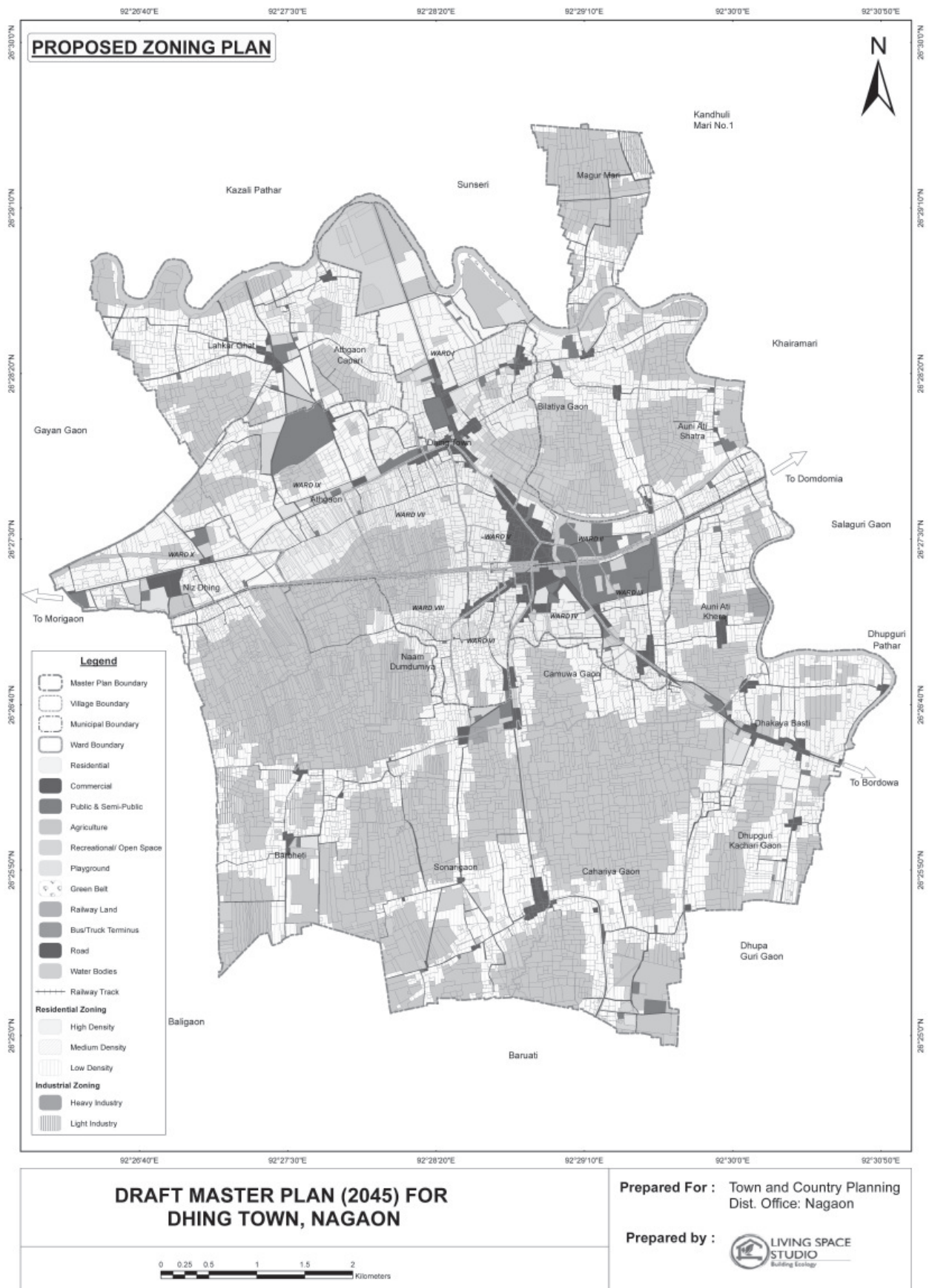
**DRAFT MASTER PLAN (2045) FOR
DHING TOWN, NAGAON**

0 0.25 0.5 1 1.5 2 Kilometers

Prepared For : Town and Country Planning
Dist. Office: Nagaon

Prepared by :  **LIVING SPACE
STUDIO**
Building Ecology







**DRAFT MASTER PLAN (2045) FOR
DHING TOWN, NAGAON**

Prepared For : Town and Country Planning
Dist. Office: Nagaon

Prepared by :  **LIVING SPACE
STUDIO**
Building Ecology



