

PLANNING FOR OUTDOOR RECREATION FACILITIES AT AZAMGHAR CITY U.P .

A Project Submitted
in Partial Fulfilment of the Requirements
for the Degree of

MASTER
In
Urban and Regional Planning
By

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Under the Guidance of
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BABU BANARASI DAS UNIVERSITY
LUCKNOW
2022-23

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Degree for which the thesis is submitted: **Masters in Urban & Regional Planning**

Faculty of the University to which the thesis is submitted: **School of Architecture and Planning**

Thesis Preparation Guide was referred to for preparing the thesis. ☐ YES ☐ NO

Specifications regarding thesis format have been closely followed ☐ YES ☐ NO

The contents of the thesis have been organized based on the guidelines. ☐ YES ☐ NO

The thesis has been prepared without resorting to plagiarism. ☐ YES ☐ NO

All sources used have been cited appropriately. ☐ YES ☐ NO

The thesis has not been submitted elsewhere for a degree. ☐ YES ☐ NO

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10. All sources used have been cited appropriately. ☐YES ☐NO
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DECLARATION

I hereby declare that the work, which is represented by me in this dissertation, entitled “**PLANNING FOR OUTDOOR RECREATION FACILITIES AZAMGHAR CITY U.P** .: case study of AZAMGHAR”, in partial fulfilment of the requirements for the award of the degree of **Master In Urban And Regional Planning** submitted to the School of Architecture and planning, Babu Banarasi Das University Lucknow, is an authentic record of my own work carried out during the period from **February 2023 to June 2023** under the supervision of **PROF.SHALINI DIWAKAR**, School of Architecture and planning, B.B.D. University Lucknow Uttar Pradesh ,India.

The matter embodied in this thesis has not been submitted by me for the award of any other degree of this or any other institute.

Date - ____/____/2023

Place – Lucknow

Signature

Prakhar Vaibhav Tiwari

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ABSTRACT

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The world is becoming more and more urban with passage of each country. India is no exception to these phenomena and has experienced rapid urbanization during the last five decades. According to the senses 2001 India has a population of 102.86 crores, of which the share of urban population is 28.61 crores, of the total urban population, 38% is accounted in 35 metropolitan centers.

The growth of urban population is a positive feature of economic development particularly as the combined contribution of services and industry to gross domestic product to significantly higher than that of agriculture. The growth has been so rapid and uncontrolled that urban planning and investment in infrastructure has provided to be insufficient; for example of the demand of water and sanitation services is growing faster the urban population of India is growing rapidly and exerting considerable pressure on urban services. It is evident that urban infrastructure has been unable to keep pace with the growing population.

A great challenge for Indian cities is to make cities livable by providing every citizen with basic services of acceptable quality. Urban local governments are the institutions which are enter used with the task of providing these basic services but they are often strapped of funds and unable to discharge their duties satisfactorily. In order to understand what needs to be done to improve the provision of basic services, we need to know the level of provision of these services. It is for this reason the Ministry of Urban Development, Government of India, commissioned a study to assess the Status of Water Supply, Sanitation and Solid Waste Management in Urban Areas of the country.

The main objective of the present study is to assess the status of water supply, sanitation and solid waste management in 300 selected cities and towns and to estimate the requirement of founds for full coverage of population by these services in the urban areas of the country. The study is based on a detailed survey of the agencies responsible for the provision, operations and management of these services in the selected cities and towns including all the metropolitan cities in the country. The study, commissioned in 1999, took about two years to complete. However, due to a number of reasons the study took unusually long to be brought to its final form.

ACKNOWLEDEMENTS

It is my pleasure to write this acknowledgment and give thanks to all those who provided me support to do this work and helped me to understand and study this topic, it gives me great pleasure to express my gratitude and thanks to my guide **PROF.SHALINI DIWAKAR**, Assistant Professor, School of Architecture and planning B.B.D. University Lucknow for their valuable guidance, steady encouragement, and strong support to reach to this stage.

My sincere regard to **The Dean Dr. Mohit Agarwal**, “School of Architecture and planning B.B.D. University Lucknow” to let me appear in the final stage of thesis work and providing me the patronage to avail the facilities of this department, otherwise it would not have been possible to do this work. I am thankful to all the faculty and staff members of this department.

Last but the least, I am obliged to **my parents and my family** for giving me freedom to explore and grow professionally and for supporting me.

PRAKHAR VAIBHAV TIWARI

1210106012

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CHAPTER 1: INTRODUCTION

1.1 Overview

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These facilities are created to provide opportunities for people to engage in physical activities, socialize, and enjoy the natural environment. Some common types of outdoor recreational facilities include:

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2. Trails: These are pathways or routes designed for walking, running, hiking, or cycling. Trails can be found in parks, forests, and nature reserves, and they vary in length and difficulty level.

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10. Wildlife reserves and nature parks: Protected areas that conserve and showcase natural habitats, flora, and fauna. Visitors can engage in activities such as birdwatching, hiking, nature photography, and guided nature tours.

Need of Study

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These facilities, such as parks, trails, and sports fields, offer opportunities for walking, jogging, cycling, team sports, and more, promoting cardiovascular fitness, muscle strength, flexibility, and weight management.

Secondly, they play a crucial role in supporting mental health by offering spaces for relaxation, stress reduction, and connection with nature. Being in natural environments, such as parks or nature reserves, has been proven to enhance mood, reduce stress levels, and provide mental clarity. Moreover, outdoor recreational facilities serve as social gathering places, fostering social interaction, community engagement, and the development of relationships.

Whether it's a park, sports field, or campground, these spaces encourage people of all ages and backgrounds to come together, participate in shared activities, and build a sense of belonging. Additionally, these facilities promote environmental appreciation and education, allowing individuals to experience and learn about nature, ecosystems, and wildlife. Through guided tours, educational programs, and interpretive signage, visitors gain a greater understanding and appreciation for the environment, fostering environmental consciousness and a desire to protect natural resources.

Lastly, outdoor recreational facilities have economic benefits by attracting tourists and stimulating local economies. These facilities draw visitors who seek outdoor activities, contributing to tourism-related businesses, job creation, and overall economic vitality. In summary, outdoor recreational facilities have a profound impact on physical health, mental well-being, social interaction, environmental awareness, and economic growth, making them essential components of thriving communities.

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To Mitigate the lack of recreation spaces & provide recreation facilities to all the citizens of a city and to improve the social and physical environment of cities district head quarter city

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The manual discusses the process for preparing an Installation Outdoor Recreation Plan from the evaluation of existing conditions; to the identification of potential recreation areas; to the determination of outdoor recreation needs; to the selection of appropriate outdoor recreation activities; to implementation through the development of a plan for physical improvements. Included in the manual are general considerations for facilities design as well as design criteria for specific outdoor recreation activities. This guidance applies not only to new outdoor recreation areas, but also to renovation and expansion of existing sites

Limitation of study

- Town area Limit
- Based on opinion survey, personal observations and secondary data sources.
- To explore recreational potential of new open space within the study area

METHODOLOGY

Step 1: Engaging your community

A recreation center can't succeed without a vision and that vision should come from the people who will benefit most. The members of your community must have a central role in the recreation planning process.

Step 2: Assessing Political Will

- Beyond engaging your community, receiving buy-in from local elected officials is a key piece of recreation planning. Plans for optimizing recreation assets may be sound, backed by data, and in the interest of the community, but unless it's supported by key decision makers that can gather the resources necessary to implement it, the plan will likely stall.

Step 3: Examining your Current Recreation Center Assets and Determining Needs

- As communities evolve, so should the facilities that serve them. For example, if there's an influx of families moving to your community, it's critical that your recreation center is built to enhance their lives. While providing programming such as summer camps and fitness classes are important, providing tech amenities such as free Wi-Fi and physical amenities like playgrounds are essential.

Step 4: Creating a Plan

- The synthesis of the input you've received from the community and stakeholders are the goals.

Step 5 Seek Funding

Step 6: Implement Plan

CHAPTER 2: LITERATURE REVIEW

Recreation is described as the activity that people choose to engage in when at leisure, and it may be multifaceted, comprising physical, cognitive, emotional and social components.

Outdoor recreational facility means an establishment that provides facilities or services for recreational uses outside a building. Outdoor recreational facility includes such uses as **outdoor tennis courts, outdoor swimming pools, batting cages, miniature golf courses, golf driving ranges, marinas, boat launches, campgrounds, and RV parks**, Hiking, Horseback Riding, Cycling, etc.

A great deal of expansion and development of outdoor recreational facilities is occurring in response to the rapid increase in demand for outdoor recreation. Much of this expansion is in private facilities, although considerable development of public parks, lakes, and other facilities is underway. Many landowners and other business-oriented citizens have foreseen promising opportunities in this field and are investing in recreational businesses.

Population trends and projections of economic data to future times¹ point to a continuing increase in the use of leisure time for outdoor recreation. Recreation as an industry is becoming more and more important to the economy. Recreation as a means of using increasing leisure time is becoming more and more important to society.

The need for planning in the field of outdoor recreation is readily apparent on an individual enterprise basis, as well as on a national and regional basis. Useful planning can be accomplished only by using accurate and meaningful information.

A previous study in this series² described various outdoor recreation enterprises in terms of costs, returns, capital and labor requirements, profits, and management problems. The purpose of this study is to deal with aspects of demand for outdoor recreation. Analysis of characteristics of recreationists, their willingness to travel, their ability and willingness to pay for facilities, their preferences, and their actual participation will help operators and planners in coping with the myriad problems associated with the development of outdoor recreation facilities.

Purpose of Recreation:

- Enjoyment, usually to refresh the body and mind> Visiting areas such as parks wilderness areas, lakes, rivers, museums
- Engaging in different exercises such as trekking, fishing, hunting, and camping. > Watching movies, television, dramas, dance and other such performances
- Playing games, both indoor and out door
- Hobbies like painting, dancing, gardening, driving for pleasure > Dining out, drinking, parties and other social gatherings...

CHAPTER 3: CASE STUDIES

CASE STUDY 1 - RECREATION SPACE OF CHANDIGARH.

AIMS

Recreation Spaces & Provide Recreation Facilities To All The Citizens Of A City And To Improve The Social And Physical Environment Of Cities District Head Quarter City

OBJECTIVES

The Installation Outdoor Recreation Plan serves a number of objectives including: -Assuring that planning for outdoor recreation is included as part of the Installation Master Plan. -Improving the quality and quantity of leisure experiences for the soldier, his/her family and where possible, members of the DOD work force and the public. -Providing an optimum variety, mix and location of outdoor recreation opportunities. -Preserving and developing outdoor recreation resources to serve their highest and best use. -Evaluating the effectiveness of existing and proposed outdoor recreation. -Relating outdoor recreation plans to other installation plans. -Promoting, at all levels of the installation organization, understanding and support for more effective outdoor recreation planning

STUDY AREA

New Chandigarh is a new planned smart city near Mullanpur in the Mohali district (SAS Nagar) in Punjab, India. It is designed as an extension of already crowded city of Chandigarh. It is developed by Greater Mohali Area Development Authority. New Chandigarh LPA lies in the state of Punjab and was planned within the purview of the overall vision of the Greater Mohali Region Plan 2008-2058.

The total area notified as Local Planning Area (LPA) for New Chandigarh is 6,109 hectares with key land uses as Residential, Mixed Use, Education and Health. Other supporting land uses include, City Centre, Commercial and Green & Recreational areas. There are no manufacturing industries proposed as per the notified master plan and proposed revised land use plan.

The New Chandigarh LPA has been planned to cater to an ultimate population of approximately 10 lakh by the year 2058.



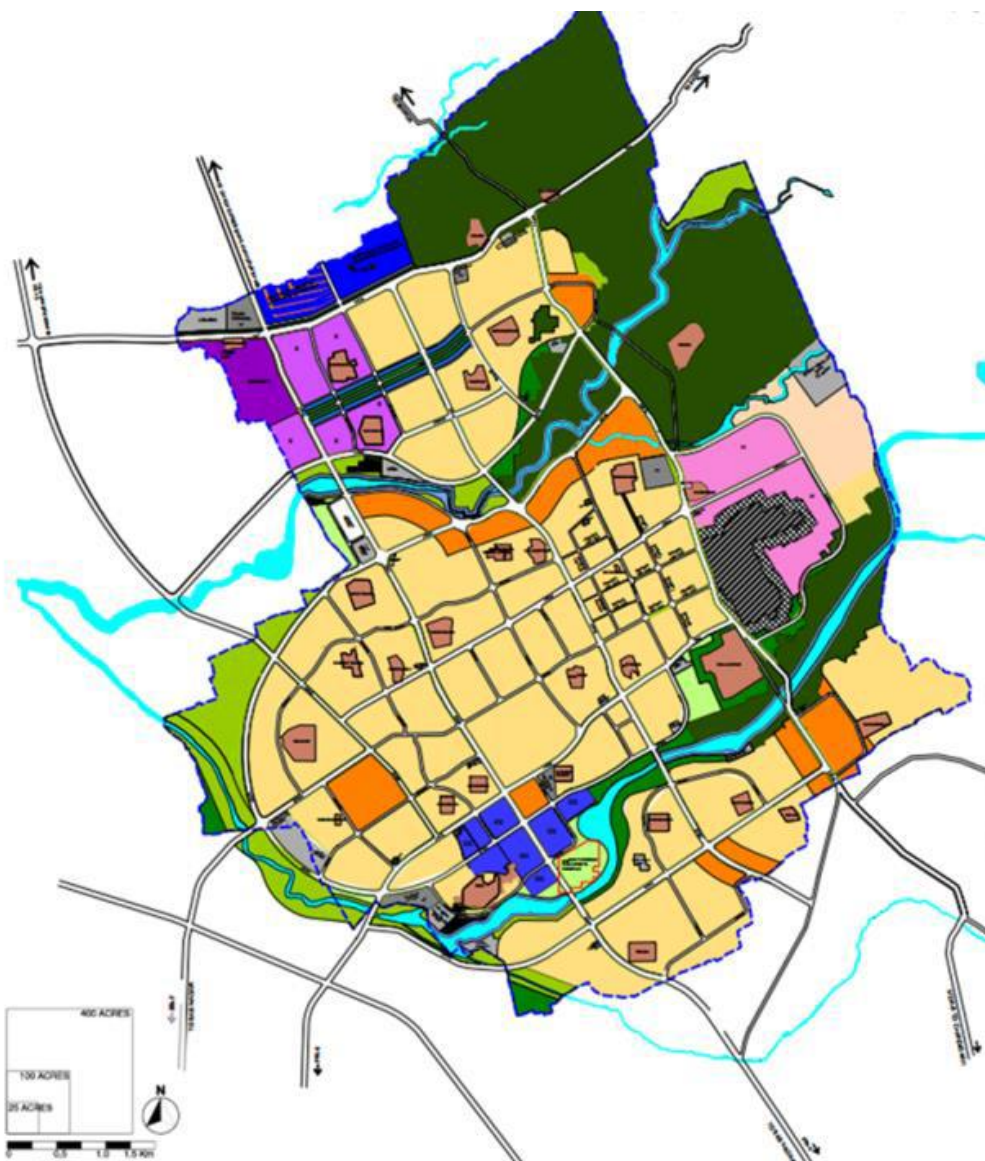
Air Connectivity



in is well connected to its work of National Highways, or District Roads. Four he Greater Mohali region: and further to New Delhi, Shimla, and NH 95 to

itwork builds around the trengthen and improve its ge.

tion is through the digarh, which hosts flights as been proposed to cater



Land Use	Area in Ha	Percentage
Residential	2288.54	37.46%
Mixed Use	280.98	4.60%
Commercial- City Centre	84.16	1.38%
Commercial- Retail	19.94	0.33%
Commercial- Wholesale/ Warehouse	81.22	1.33%
Commercial- Marriage Palace	9.87	0.16%
Institutional- Education City	116.38	1.91%
Institutional- Medi City	140.86	2.31%
Institutional- Research and Development	61.04	1.00%
Institutional- Others (Cremation grounds, Goshala, Animal shelters, Veterinary hospital)	11.82	0.19%
Recreational	157.54	2.58%
Parks	149.79	2.45%
De Notified PLPA- Agriculture	1,185.89	19.41%
Forest and Open Space	197.58	3.23%
Village Settlement Area (Abadi)	207.25	3.39%
Roads	576.89	9.44%
Defence Zone	79.92	1.31%
Transportation	40.51	0.66%
Utilities	91.20	1.49%
Other (River, Riverine buffer, Defence buffer)	327.84	5.37%
Total	6,109.18	100.00%

THE LEISURE VALLEY

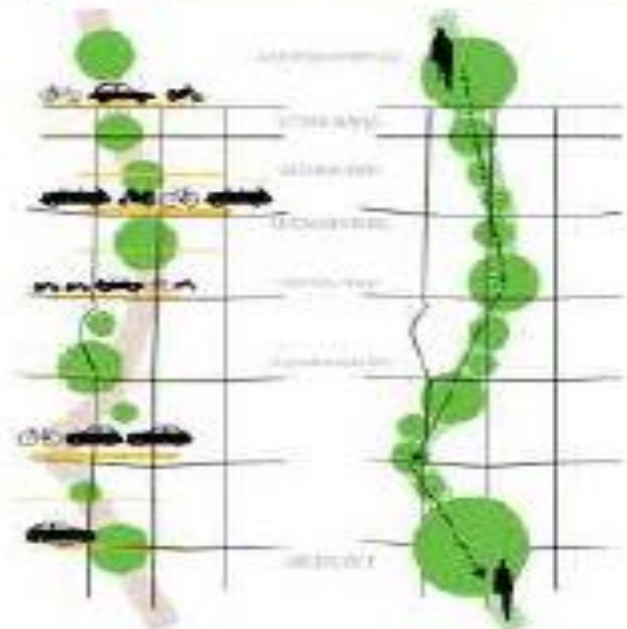
The Leisure Valley is a continuous 8 km parkland with various theme gardens, extending from the northeastern tip of the city to its south-western tip, and further extending to Mohali in the Punjab region. This parkland was developed as one of the original landscape features of the Plan by Le Corbusier converting an existing eroded valley along the seasonal rivulet of N-Choe.

On one hand it ensured the preservation of an existing ecological feature of the site, and on the other provided an opportunity enabling the city residents to move through the heart of the city in a continuous band of various theme gardens. Also this provided an unobstructed vista of the Shivalik foothills and Kasauli peaks to even the residents of the south-western end of the city.

As such, the significance of this parkland is not only of environmental and ecological values, but of enormous aesthetic value also. It also provides a unique opportunity for a possible pedestrian link to the Capitol Complex of the city from its south-eastern end.

However, this potential has not been fully fulfilled, in the absence of the pedestrian underpasses existing beneath the V4 and V3 road links of various sectors interrupting its continuity on surface level.

Similarly, in the original concept, a canal had been proposed to run along Uttar Marg--extending from the Rajendra Park to the Sukhna Lake, however the same is not viable now, because of the vast changes and intrusions that have been already made there, and that cannot be undone now.





The 8 km long Leisure Valley provides unique opportunity for a possible pedestrian link to the Capitol Complex of the city from its south-eastern end as part of the Green Corridor 5 if the green stretches are interconnected through pedestrian cycle underpasses (see Chapter 10 on Traffic and Transportation)



• RAJENDRA PARK

Spread over a sprawling area of 400 acres, the Rajendra Park adjacent to the Secretariat building is designed by Le Corbusier himself as part of the Capitol ParK. Trees with round canopies and evergreen foliage have been planted here

The plantation has not followed the original plan..

The park is presently being used as a helipad and is an out of bound area for the city residents. This park has been recommended for the heritage status and needs to be completed as per the original plan in consultation with the Chandigarh Heritage Conservation Committee.



CASE STUDY 2 - RECREATION SPACE OF INDORE

AIMS

Recreation Spaces & Provide Recreation Facilities To All The Citizens Of A City And To Improve The Social And Physical Environment Of Cities District Head Quarter City

OBJECTIVES

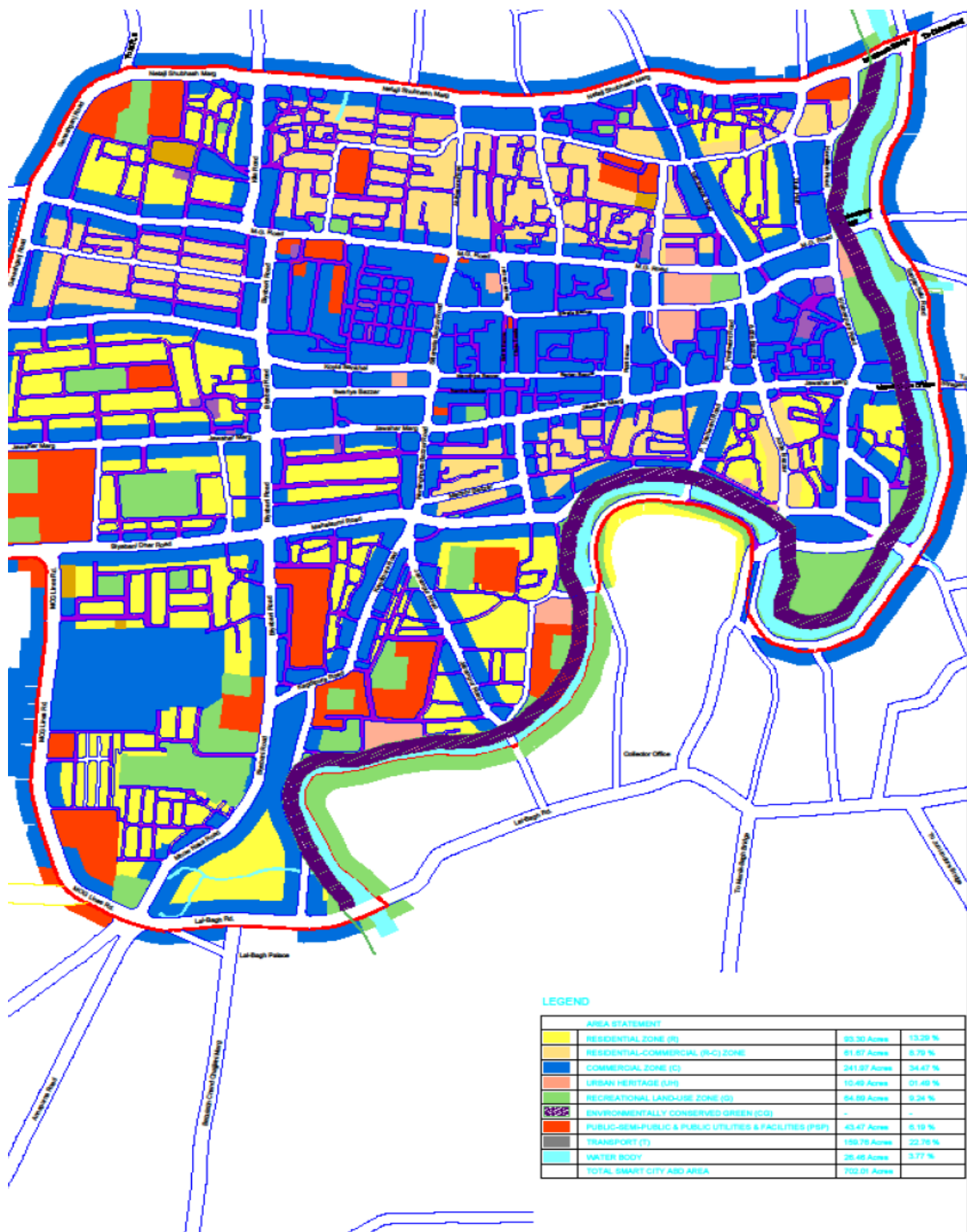
The Installation Outdoor Recreation Plan serves a number of objectives including:

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- Relating outdoor recreation plans to other installation plans.
- Promoting, at all levels of the installation organization, understanding and support for more effective outdoor recreation planning

STUDY AREA

Indore ABD proposal is based on Retrofitting model spreads across a contiguous land parcel, comprising of a total area of 742 Acres.

The choice of Rajwada (CBD/Downtown Area) as ABD area was based on popular, practical and strategic considerations. The Core Area (1845 acres out of 68200 acres of Municipal Area) is inhabited by approximately 9% of the population and provides employment to more than 11% of the work force. Over & above this, the majority of population has indirect links to this area.

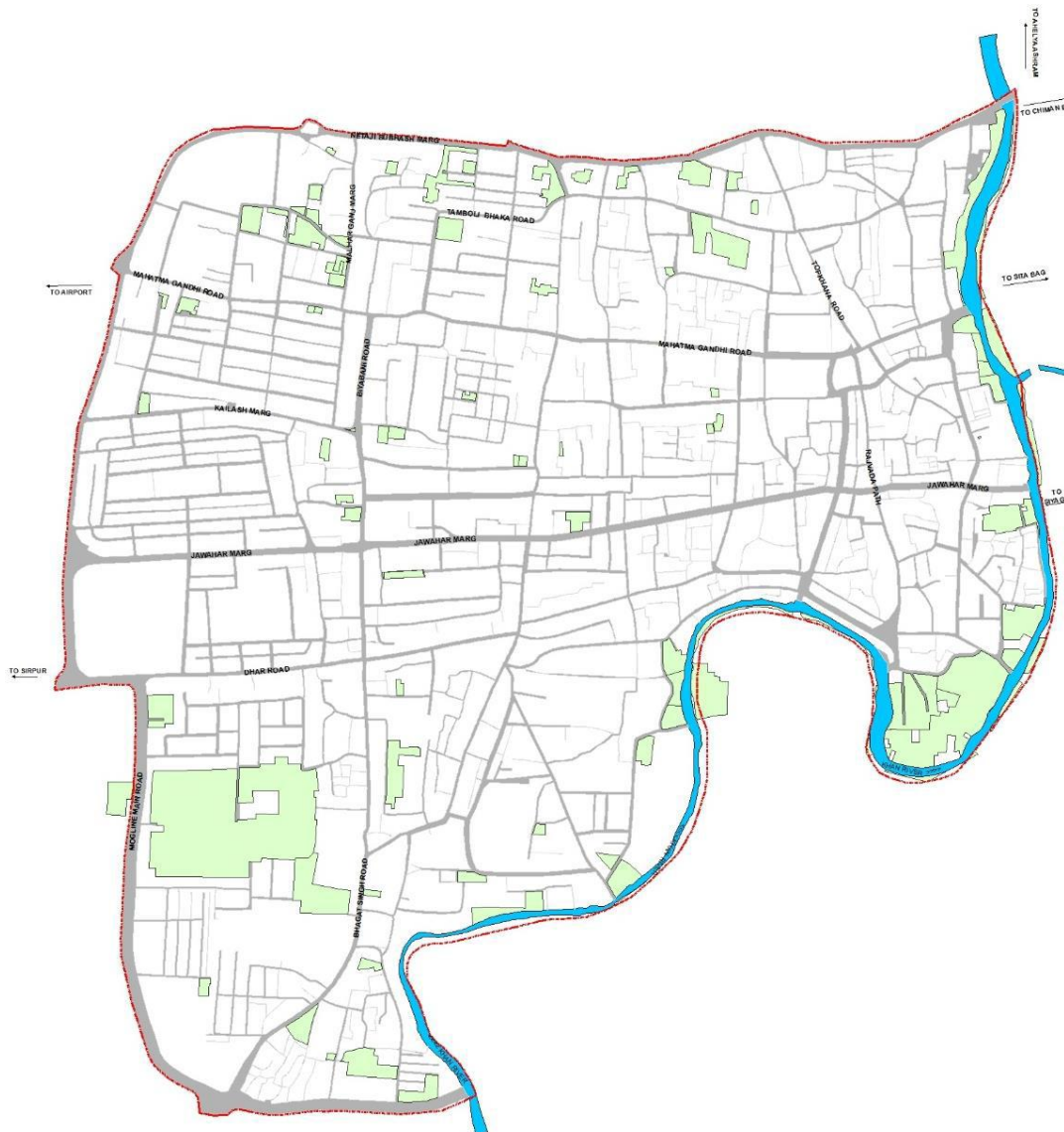


RECREATION:

Distribution of area under recreational land use, covering parks and playgrounds, is skewed in the ABD area. Big parks are present in the planned residential areas in the western part of the ABD area and are non-existent in other areas. Parks and playground occupy only 6 Ha of land which is 4% of the total area. This indicates deficiency in green spaces in the ABD area. The map below shows the distribution of green areas in the ABD area.

There are significant number of heritage sites/ buildings in ABD area. Some of the well-known sites are: Rajwada, Bada Ganapati, Krishnapura Chhatri, Gopal Mandir, Hari Rao Holkar Chhatri, Kanch Mandir, Durga Mata Mandir, Mallhar Rao Holker Chhatri.

As the ABD area is under transformation, many areas have potential for infill. These areas generally lie vacant due to various reasons and end up being locked for development. A map of open areas shown below, shows huge open areas which can be used for providing deficient facilities and services. These open areas cover an area of 16.8 Ha, which is 6% of the total area.



- Protected the quality of water and the environment.
- Waterfronts are the part of the present urban fabric.
- The historic uniqueness gives attractiveness.
- Mixed-use is the priority.
- Public access is a requirement.
- Planning in public-private companies speeds the course.
- Public contribution is an element of sustainability.
- Waterfronts is long term projects.
- Regeneration is a continuing process.
- Waterfronts revenue from global interacting.



Conclusion

This paper aimed to discover the effectiveness of Khan Riverfront in Indore. The analysis part confirmed that the designer level of awareness of the guidelines, which directly or indirectly communicate to the control of riverfront developments. The majority specified that they were somewhat familiar with the guidelines. However, some guidelines were designed specifically for definite areas, and some time not necessary like others. Moreover, the results showed that Indore does not presently have satisfactory regulations and guidelines to control riverfront development.

CHAPTER 4: SITE STUDY

CHAPTER 1: INTRODUCTION

1.1 Overview

Outdoor recreational facilities refer to spaces, venues, or amenities designed and dedicated for various leisure and recreational activities that take place outdoors.

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Need of Study

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To Mitigate the lack of recreation spaces & provide recreation facilities to all the citizens of a city and to improve the social and physical environment of cities district head quarter city

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Outdoor recreational facility means an establishment that provides facilities or services for recreational uses outside a building. Outdoor recreational facility includes such uses as **outdoor tennis courts, outdoor swimming pools, batting cages, miniature golf courses, golf driving ranges, marinas, boat launches, campgrounds, and RV parks**, Hiking, Horseback Riding, Cycling, etc.

A great deal of expansion and development of outdoor recreational facilities is occurring in response to the rapid increase in demand for outdoor recreation. Much of this expansion is in private facilities, although considerable development of public parks, lakes, and other facilities is underway. Many landowners and other business-oriented citizens have foreseen promising opportunities in this field and are investing in recreational businesses.

Population trends and projections of economic data to future times¹ point to a continuing increase in the use of leisure time for outdoor recreation. Recreation as an industry is becoming more and more important to the economy. Recreation as a means of using increasing leisure time is becoming more and more important to society.

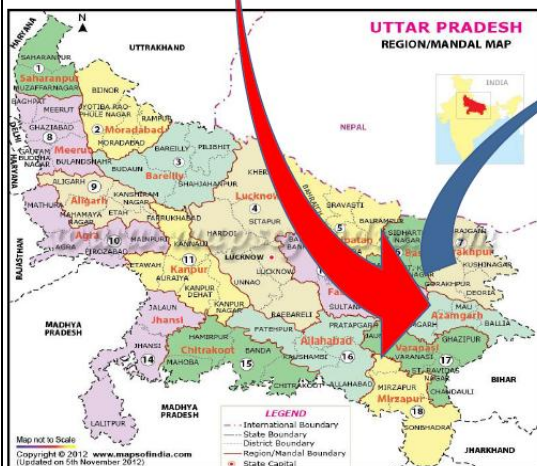
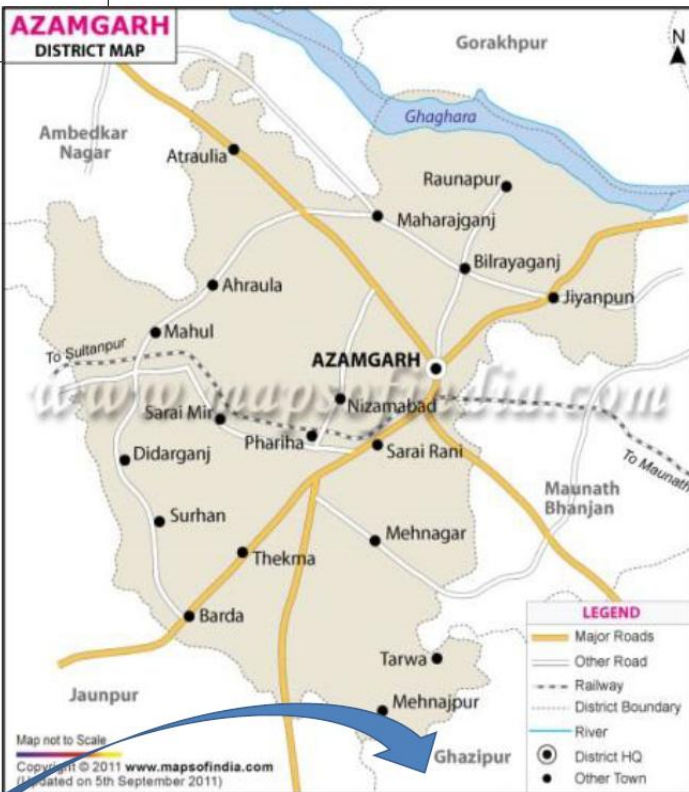
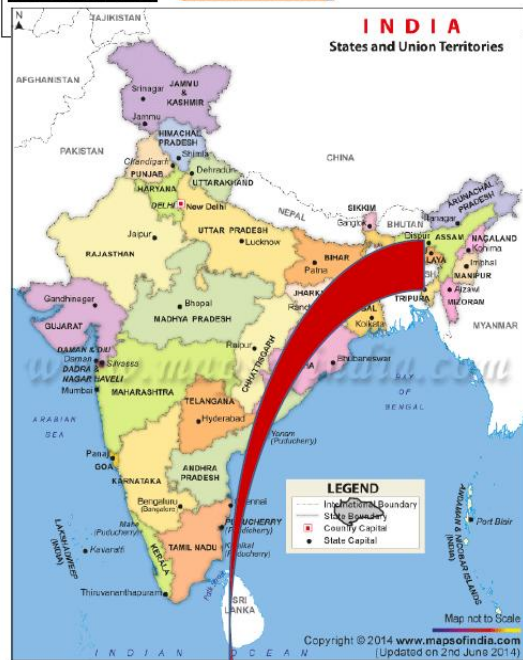
The need for planning in the field of outdoor recreation is readily apparent on an individual enterprise basis, as well as on a national and regional basis. Useful planning can be accomplished only by using accurate and meaningful information.

A previous study in this series² described various outdoor recreation enterprises in terms of costs, returns, capital and labor requirements, profits, and management problems. The purpose of this study is to deal with aspects of demand for outdoor recreation. Analysis of characteristics of recreationists, their willingness to travel, their ability and willingness to pay for facilities, their preferences, and their actual participation will help operators and planners in coping with the myriad problems associated with the development of outdoor recreation facilities.

Purpose of Recreation:

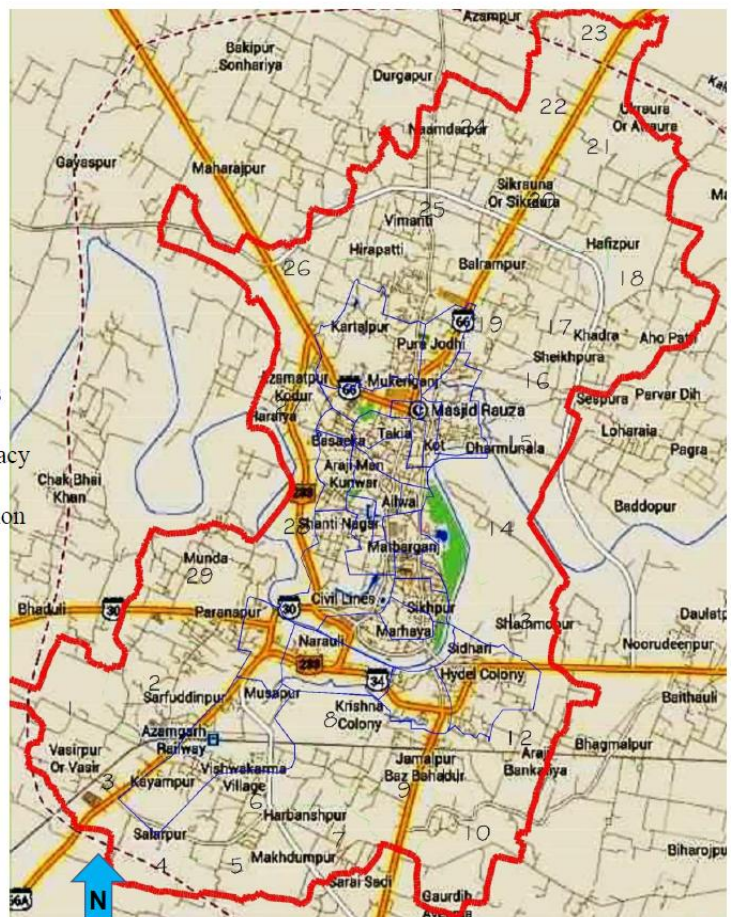
- Enjoyment, usually to refresh the body and mind> Visiting areas such as parks wilderness areas, lakes, rivers, museums
- Engaging in different exercises such as trekking, fishing, hunting, and camping. > Watching movies, television, dramas, dance and other such performances
- Playing games, both indoor and out door
- Hobbies like painting, dancing, gardening, driving for pleasure > Dining out, drinking, parties and other social gatherings...

LOCATION STUDY AREA -

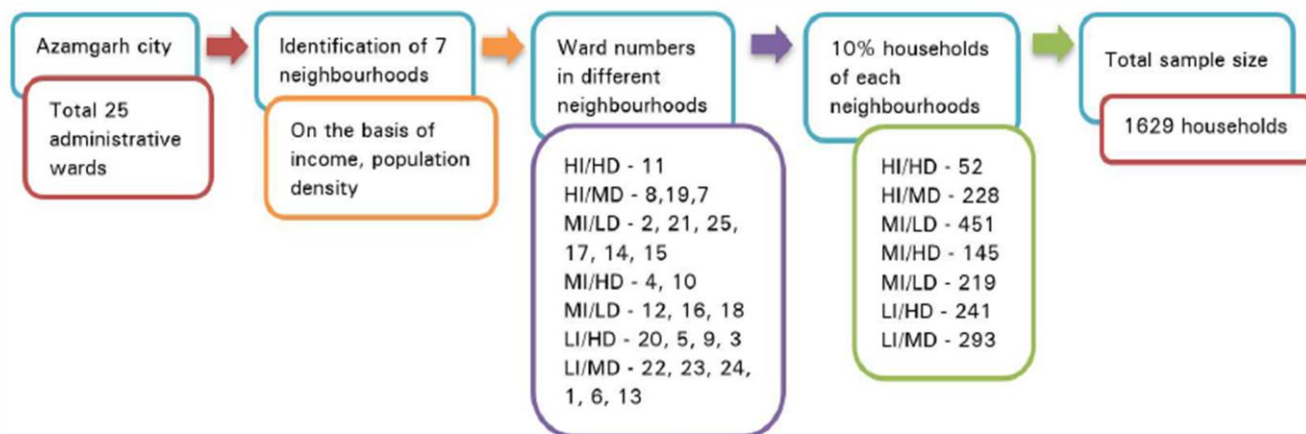
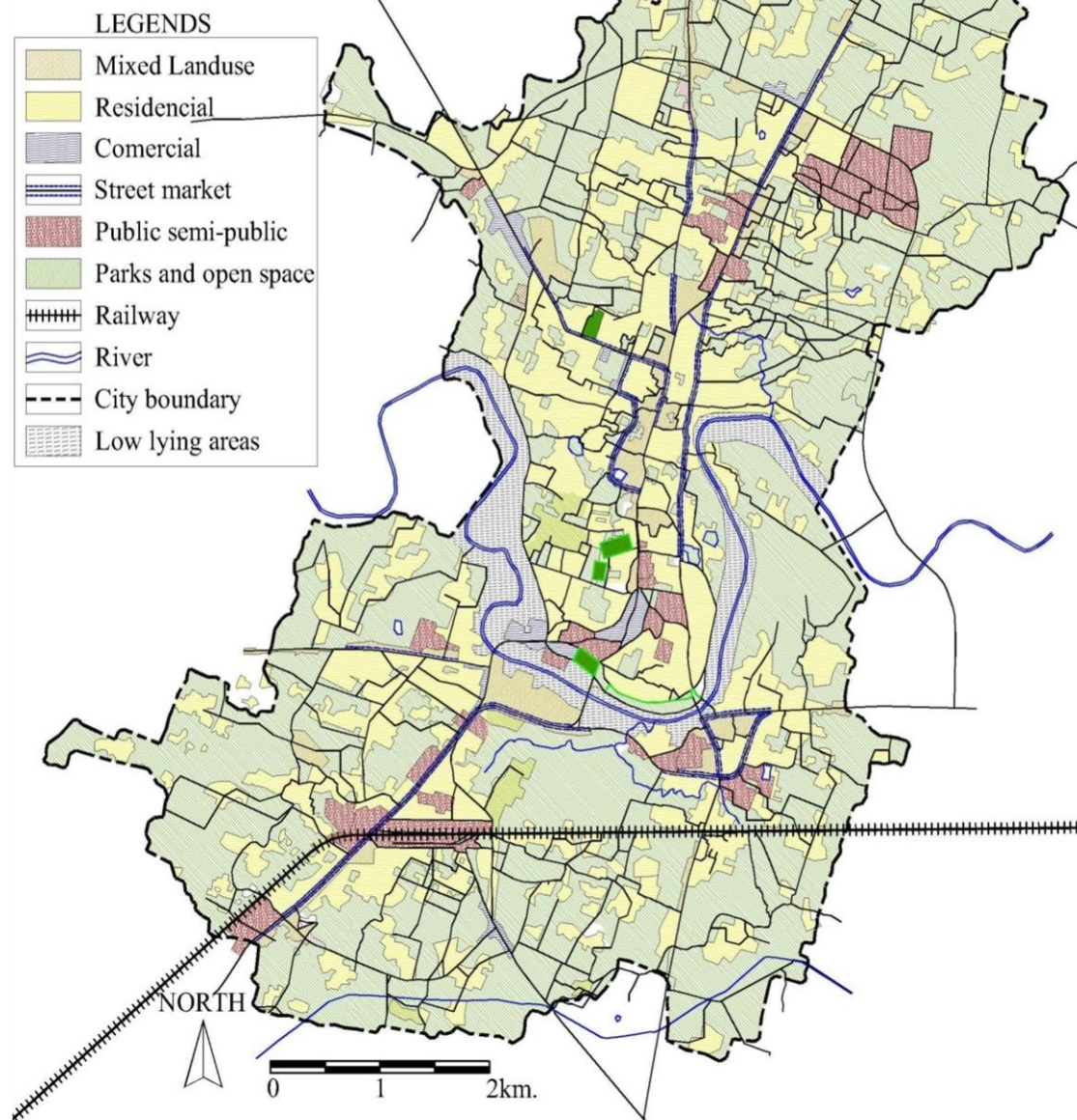


AZAMGARH CITY AREA AND THE REGIONAL SETTING-

- As per provisional data of 2011 census, Azamgarh urban agglomeration had a population of 178,923 out of which males were 92772 and females were 86151.
- The literacy rate was 77.31 % per cent, male and female literacy were 82.60 % and 71.74 % respectively.
- Area of the city comes under the Azamgarh urban agglomeration is 46.70 sq. km.
- Coordinates- 26.06°N 83.19°E
- Elevation-64m. (210 ft)
- District – Azamgarh
- State – Uttar Pradesh
- Nearest cities- Varanasi, Ghazipur, Gorakhpur, Mau, Faizabad, Jaunpur, Ambedkar Nagar
- Density- 972/ sq. km & 3100/sq. km urban area
- Distances from-
 - Lucknow- 270 km.
 - Varanasi- 89 km.
 - Manduri airport- 9 km.



EXISTING LAND USE MAP-



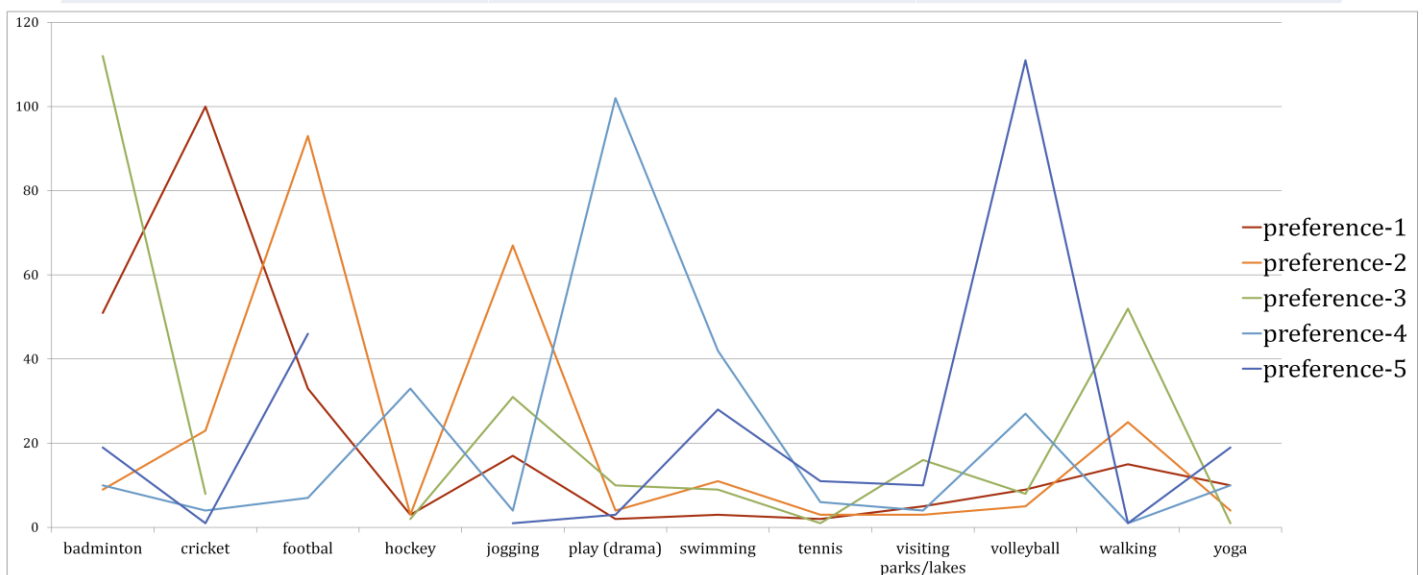
Design for survey for the selection of wards and households/respondents for sampling in Azamgarh city (2016-17)

Ranking Of Recreational Activities-

	badminton	cricket	football	hockey	jogging	play (drama)	swimming	tennis	visiting parks/lakes	volleyball	walking	yoga
preference-1	51	100	33	3	17	2	3	2	5	9	15	10
preference-2	9	23	93	3	67	4	11	3	3	5	25	4
preference-3	112	8		2	31	10	9	1	16	8	52	1
preference-4	10	4	7	33	4	102	42	6	4	27	1	10
preference-5	19	1	46		1	3	28	11	10	111	1	19

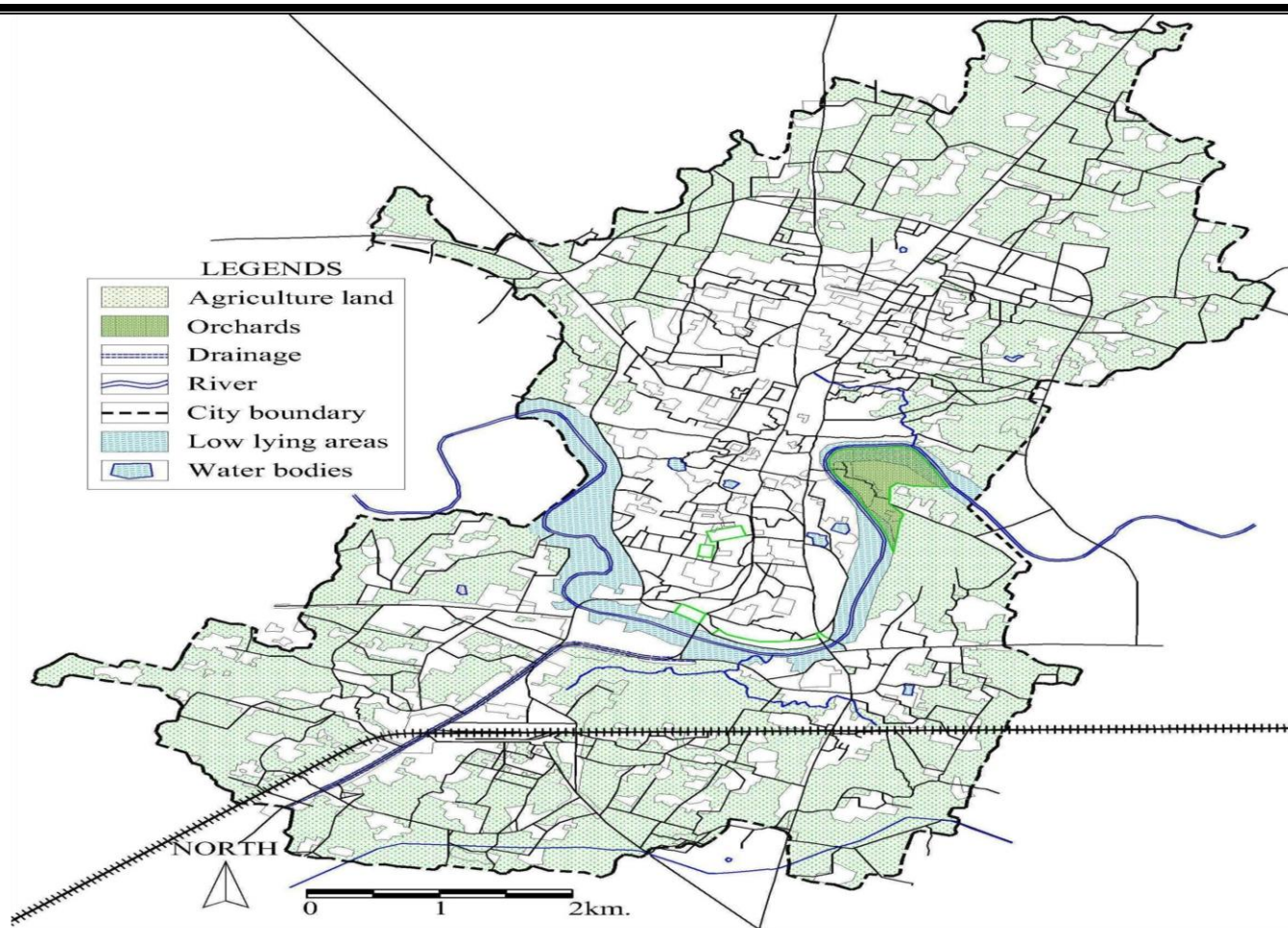
By giving weightage to the preferences from 5 to 1, and by normalizing the table of counts and by adding them normalized score for each activity has been calculated.

activity	rank
cricket	613
football	597
jogging	455
badminton	360
walking	334
play (drama)	263
volleyball	254
swimming	198
yoga	108
visiting parks/lakes	103
hockey	99
tennis	48



POPULATION PROJECTION

No.	Level	Name	Total Population (projected)			No.	Level	Name	2011	2021	2031
			2011	2021	2031						
1	WARD	Farashtola Sidhari	1991	2632	3480	28	VILLAGE	Naamdarpur Sikrauna Or	1425	1884	2490
2	WARD	west	3544	4685	6194	29	VILLAGE	Sikraura	2527	3341	4416
3	WARD	Sitaram	4968	6568	8682	30	VILLAGE	Balrampur	4556	6023	7962
4	WARD	Badarka	6405	8467	11194	31	VILLAGE	Kartarpur	979	1294	1711
5	WARD	Jalandhari	3289	4348	5748	32	VILLAGE	Patkhauli	2730	3609	4771
6	WARD	Gurutola Sidhari	3361	4443	5874	33	VILLAGE	Sheikhupur	2430	3212	4247
7	WARD	east	5907	7809	10324	34	VILLAGE	Salempur	4401	5818	7692
8	WARD	Aarazibagh Bazbahaddur	4465	5903	7803	35	VILLAGE	Kishundaspur	3297	4359	5762
9	WARD	Katra	7411	9797	12952	36	VILLAGE	Bijaura	1725	2280	3015
10	WARD	Aashifganj Harbanshpur	3395	4488	5933	37	VILLAGE	Bag Lakhram	1486	1964	2597
11	WARD	Gulami ka pura	3727	4927	6514	38	VILLAGE	Kol Pandey	2605	3444	4553
12	WARD	Mukeriganj	6383	8438	11155	39	VILLAGE	Ahiyayee	463	612	809
13	WARD	Hirapatti Sarfuddinpur	5914	7818	10336	40	VILLAGE	Hathiya	1625	2148	2840
14	WARD	Raidopur	3764	4976	6578	41	VILLAGE	Sammopur Katghar	597	789	1043
15	WARD	Narauli	4254	5624	7435	42	VILLAGE	Sadar	1850	2446	3233
16	WARD	Matvarganj Chakla	3872	5119	6767	43	VILLAGE	Dugdugwa	2776	3670	4852
17	WARD	Pahadpur	2676	3538	4677	44	VILLAGE	Belnadih	1977	2614	3455
18	WARD	Civilline Pandey bazar	4067	5377	7108	45	VILLAGE	Jamalpur Baz Bahadur	2979	3938	5206
19	WARD	Ailwal	5020	6636	8773	46	VILLAGE	Rampur Japti Mafi	832	1100	1454
20	WARD	Sadavarti	2967	3922	5185	47	VILLAGE	Girdharpur	1572	2078	2747
21	WARD	Madaya Ukraura Or	9039	11950	15797	48	VILLAGE	Pakadi	453	599	792
22	WARD	Atraura	2974	3932	5198	49	VILLAGE	Sarai Sadi	3861	5104	6748
23	WARD	Daraura	3670	4852	6414	50	VILLAGE	Salarpur	5111	6757	8932
24	WARD		2873	3798	5021	51	VILLAGE	Nibi	4077	5390	7125
25	WARD		5047	6672	8821	52	VILLAGE	Vasirpur Or Vasir	935	1236	1634
26	VILLAGE		4049	5353	7076	53	VILLAGE	Gelwara	2907	3843	5081
27	VILLAGE		271	358	474	54	VILLAGE	Munda/ ghorath	3444	4553	6019



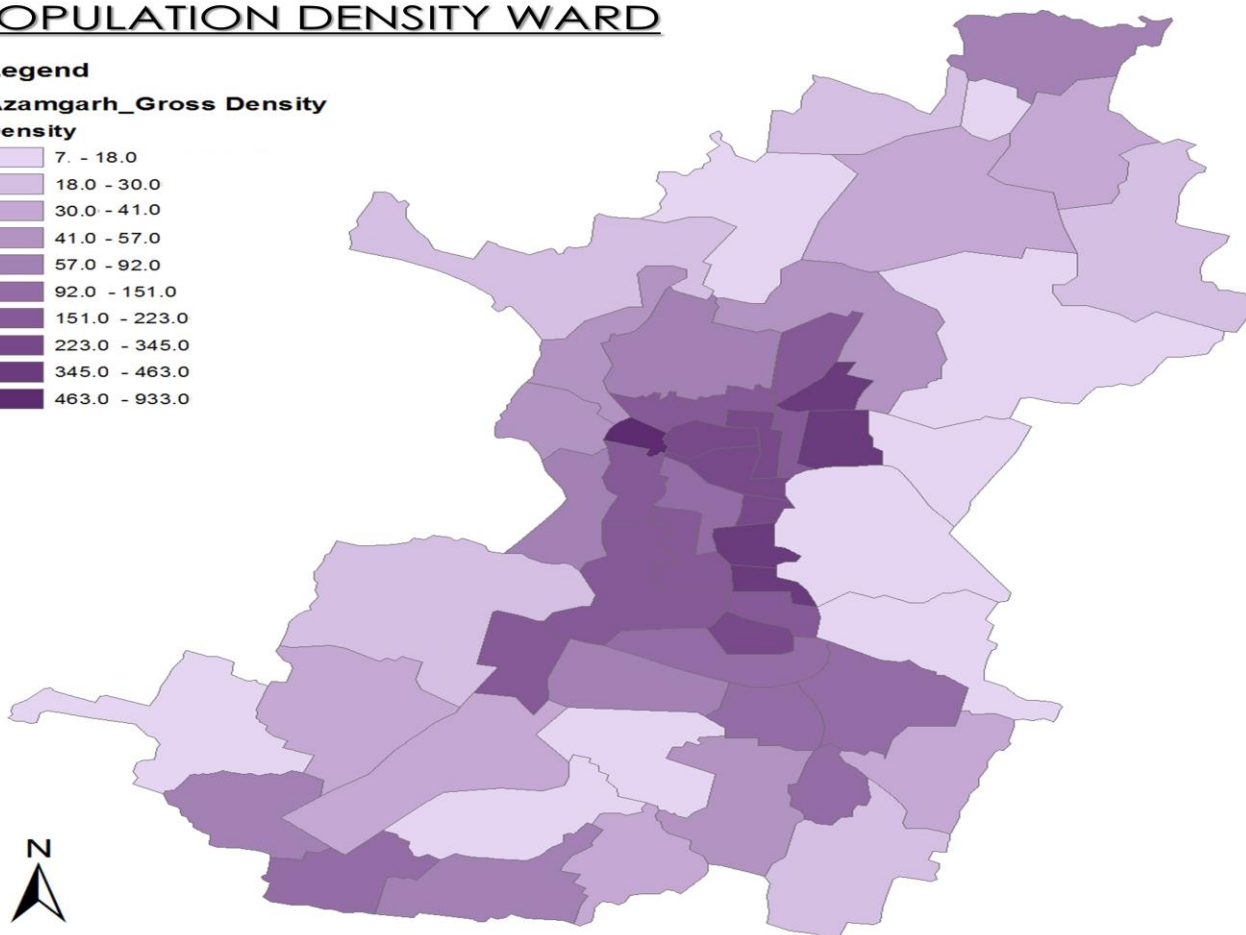
POPULATION DENSITY WARD

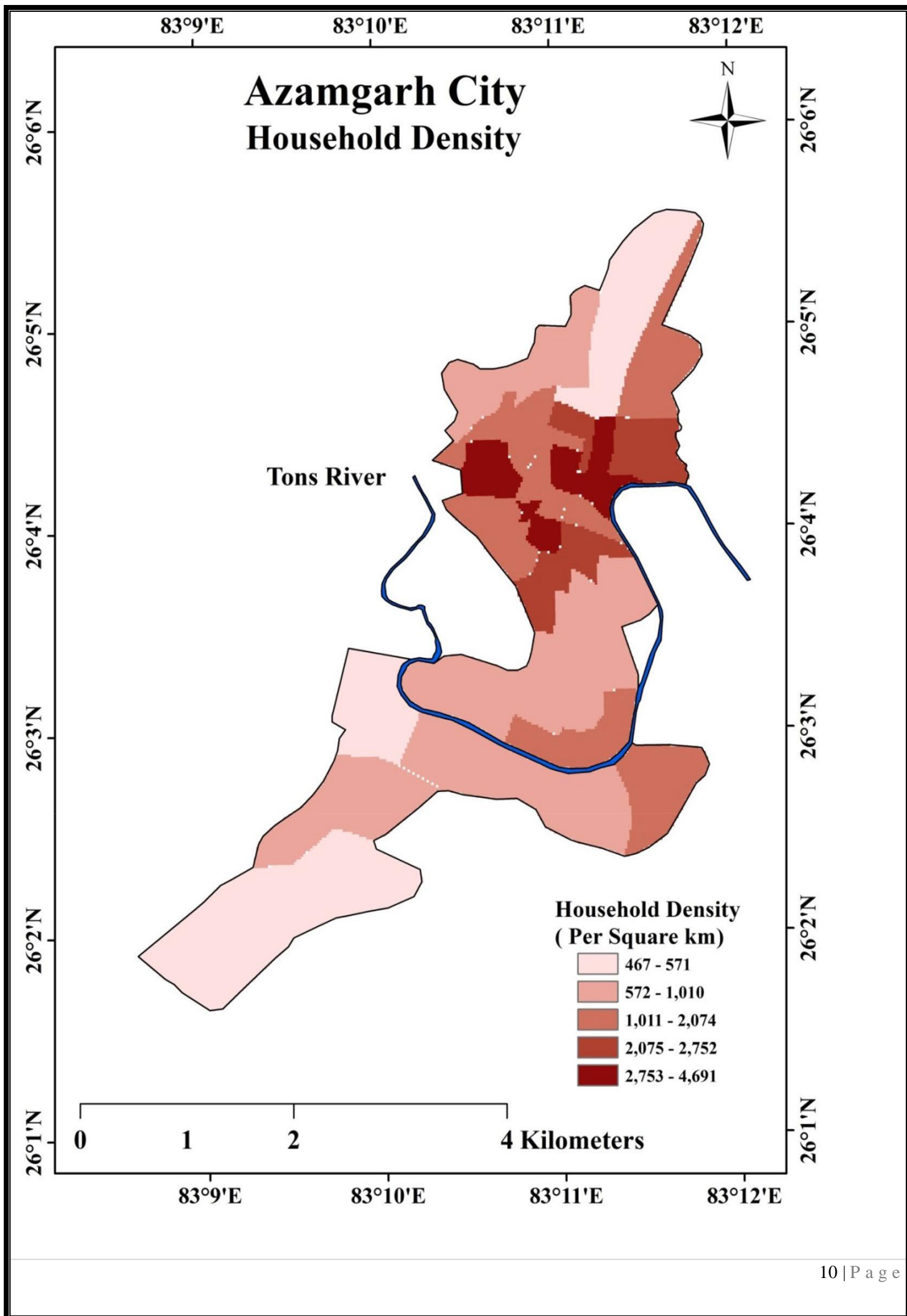
Legend

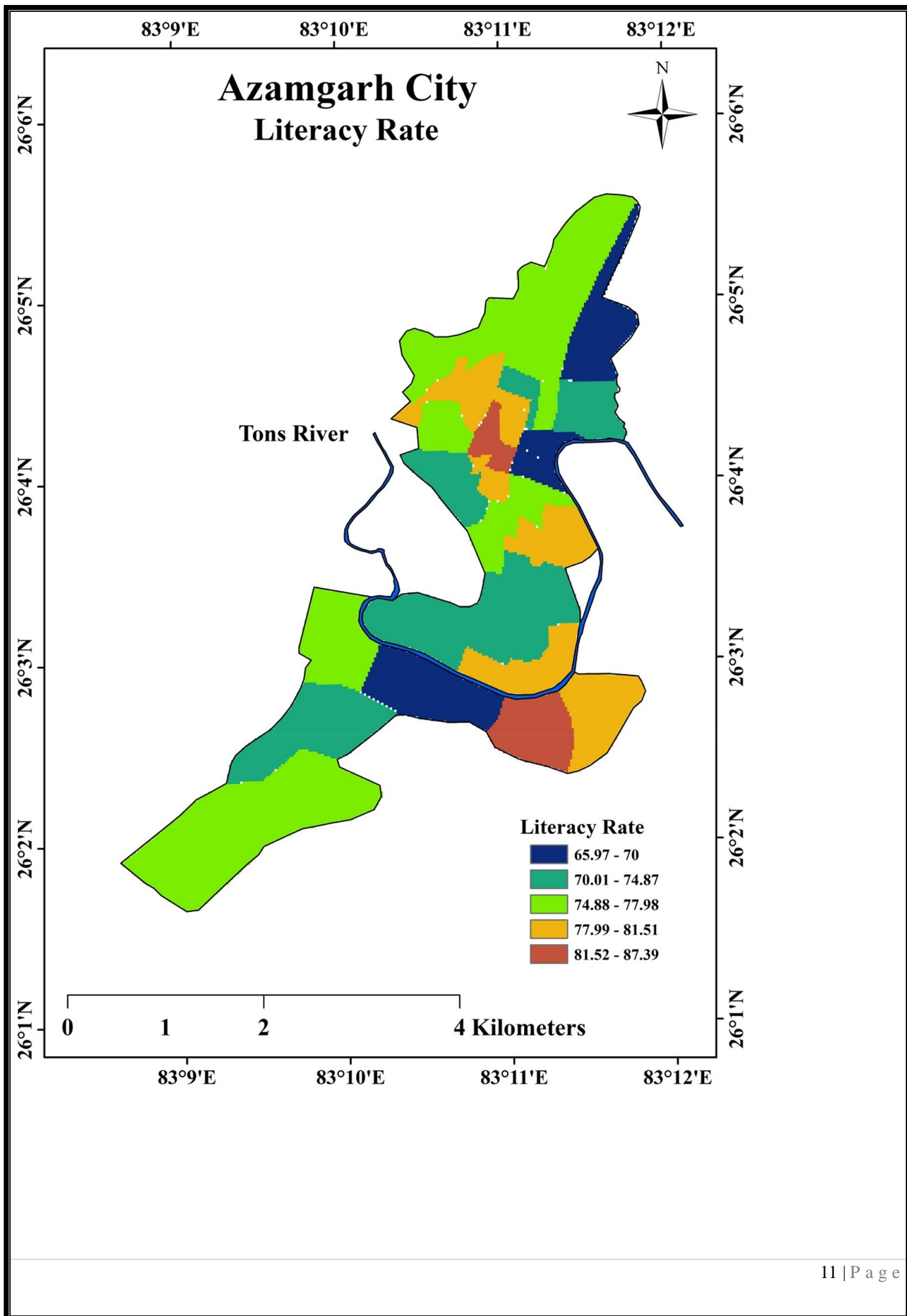
Azamgarh_Gross Density

Density

7. - 18.0
18.0 - 30.0
30.0 - 41.0
41.0 - 57.0
57.0 - 92.0
92.0 - 151.0
151.0 - 223.0
223.0 - 345.0
345.0 - 463.0
463.0 - 933.0







Distribution of housing status of respondents in Azamgarh city, 2014

Status of House		Type of House		Use of House	
status	Percentage	Type of House	Percentage	Use of House	Percentage
Own	82	Bricks/Concretes	53	Residential	69.7
Rented	14	Semi-Bricks	28	Res. + Com.	26.3
Government	2	Semi-wood/Jhuggi	11	Res. + Industrial	1
Other	2	Wood/Jhuggi	8	Res. + Com.+ Ind.	3
Total	100	Total	100	Total	100
Number of rooms in the House			Number of Floors		
No. of rooms	Percentage	No. of Floors		Percentage	
1	10	Single		57	
2--3	42.7				
3--5	33	Multiple		43	
>5	14.3				
Total	100	Total		100	

Source: Based on Field Survey by the Researcher (2014).

Distribution of economic condition of respondents in Azamgarh city, 2014

Occupational Structure		Income Status	
Occupation	Percentage	Monthly Income (Rupees in thousands)	Percentage
Doctor	5.7	< 5	6
Teacher	7.7	5--10	24
Engineer	3	10--30	43
Business	47	30--50	20
Lawyer	1.3	> 50	7
Agriculture	17	Total	100
Abroad	8.3	Possession of Durable goods	
Other	10	Durable goods	Percentage
Total	Total	TV/Radio	19
Nature of Service		Computer	3.7
Nature of Service	Percentage	Fridge	15
Government Service	10	Cycle	20
Private	26	Byke	13
Self employment	56	Mobile	24
Unemployment	8	Car	2.7
Total	100	A.C	2.6
		Total	100

Source: Based on Field Survey by the Researcher, 2014

Decision factors	Decision criteria	Sub-criteria	Intensity of importance	Risk category
Socio-economic Factors	Population density (persons/km ²)	2992–6202	1	Very low
		6203–12,405	2	Low
		12,406–15,062	3	Medium
		15,062–23,114	4	High
		23,115–33,426	5	Very high
	Household density (households/km ²)	467–571	1	Very low
		572–1010	2	Low
		1011–2074	3	Medium
		2075–2752	4	High
		2753–4691	5	Very high
	Literacy (percentages)	65.97–70	5	Very high
		70.01–74.87	4	High
		74.88–77.98	3	Medium
		77.99–81.51	2	Low
		81.52–87.93	1	Very low
	Improper sanitation in houses (percentages)	0–6.05	1	Very low
		6.06–11.36	2	Low
		11.37–20.07	3	Medium
		20.08–22.98	4	High
		22.99–26.93	5	Very high
	Irregular water supply in houses (percentages)	10.63–16.89	1	Very low
		16.90–28.66	2	Low
		28.67–50.02	3	Medium
		50.03–62.32	4	High
		62.33–71.32	5	Very high
Quality of drinking water	Water quality index	95–109	1	Very low
		110–118	2	Low
		119–125	3	Medium
		126–134	4	High
		135–147	5	Very high
Environmental factors	LULC	Water bodies	2	Low
		Vegetation	1	Very low
		Open green spaces	1	Very low
		Agricultural fields	3	Medium
		Built-up	5	Very high
	Built-up index	– 0.26 to – 0.11	1	Very low
		– 0.1 to – 0.07	2	Low
		– 0.06 to – 0.03	3	Medium
		– 0.02 to 0.01	4	High
		0.02–0.13	5	Very high

(i) Income Wise of Dominance

Income Group Category	Income Range (Rs/month)	Ward Number	No of wards
High	Above 25,000	2,21,25,17,14,15,11,8,9,17	10
Medium	15000-25000	10,4,12,16	4
Low	Below 5000	3,9,5,20,22,13,24,1,6,13,18	11

NEIGHBOURHOOD ENVIRONMENT: ASSESSING AND MAPPING

(ii) Population Density

Population Density Category	Range (persons per sq. km)	Ward Number	No of Wards
High	Above 20,000	12,14,18,21,25,16,15,2,17	9
Medium	10,000-20,000	13,8,7,24,1,22,6,19,23	9
Low	Below 10,000	20,10,4,5,3,11,9	7

(iii) Household Density

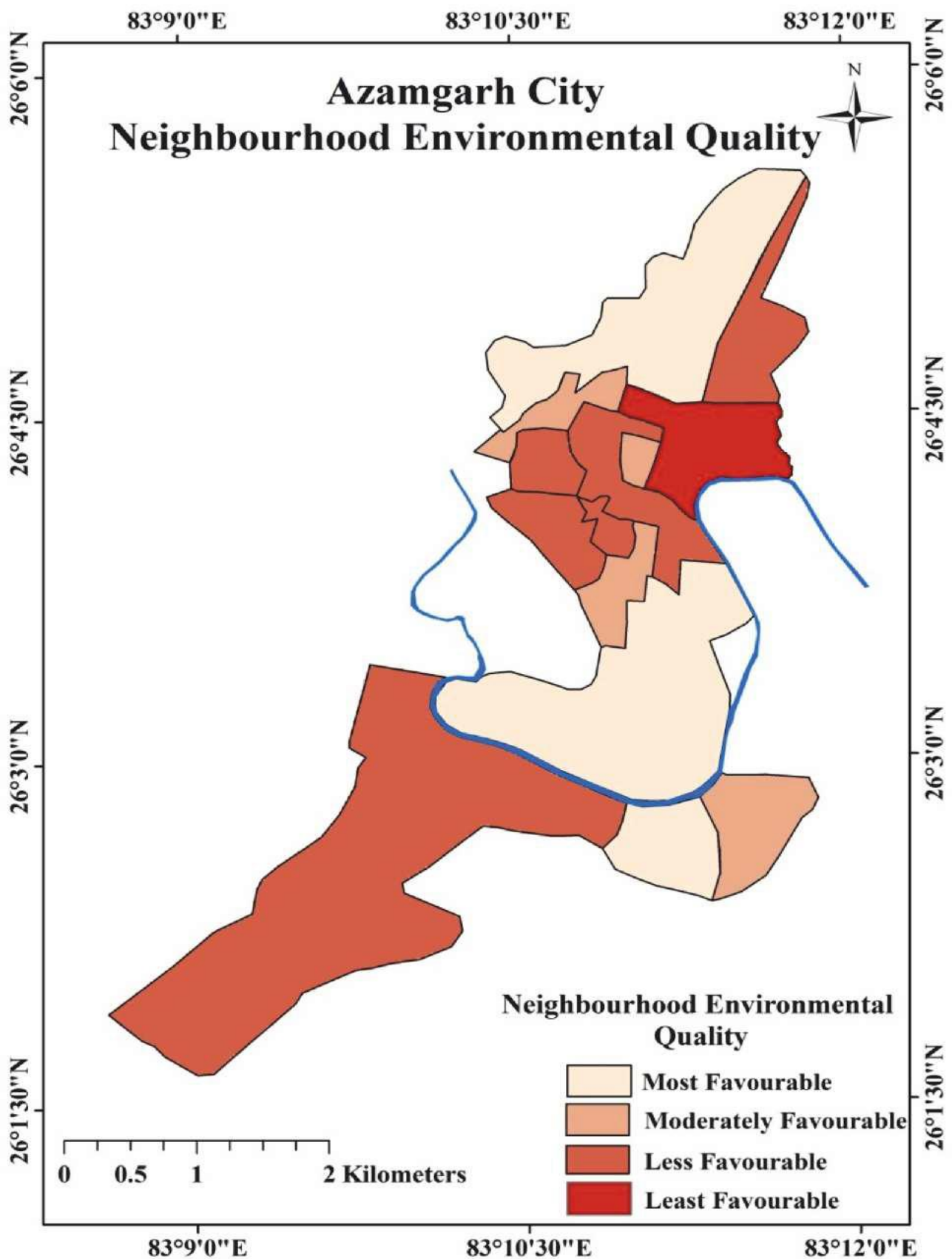
Household Density Category	Range (households per sq.km)	Ward Number	No of Wards
High	Above 2700	12,14,18,21,16,15,2,17	8
Medium	1400-2700	13,8,7,24,1,22,6,19,23,25,20	11
Low	Below 1400	10,4,5,3,11,9	6

Source: (i) Census of India, 2011
(ii) Municipal Office Azamgarh (2015-16)

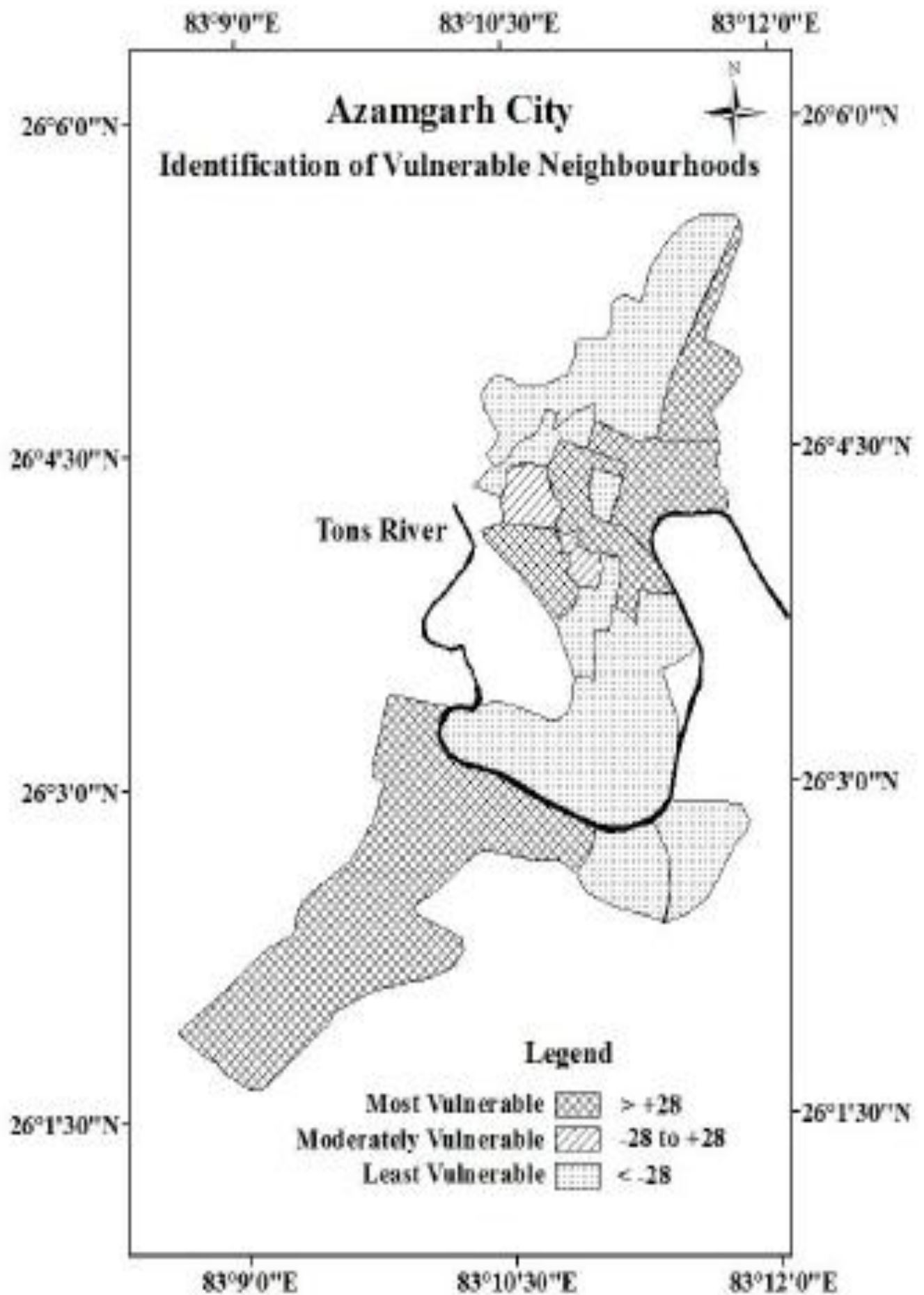
Distribution of indoor housing environment in Azamgarh city, 2014

Place of Cooking food		Drinking Water facilities	
Kitchen Type	Percentage	Type of water availability	Percentage
Separate Kitchen	46	Well	0.5
Varandah	39	Handpump	33.4
Open Space	15	Municipal Tap	66.1
Total	100	Total	100
Type of Toilet		Proper Ventilation	
Type of Toilet	Percentage	Proper Ventilation	Percentage
Flush	19	Yes	43
Field	5	No	57
Public	4	Total	100
Private	72		
Total	100		

Source: Based on Field Survey by the Researcher, 2014.



Source (i) Census of India, 2011
(ii) Azamgarh Municipal Council (2015-16)
(iii) Based on city survey (2015-16)



Source: Based on the field Survey (2016-17)

Neighbourhood environmental quality factors for Azamgarh city

Neighbourhoods	Built-up area	Open green spaces	Tree cover	HH density	Air pollution	Noise pollution	Solid waste management	Wastewater management
HI/HD	82.5	8.85	8.55	4689	56.67	56.67	80	57.5
HI/MD	50.25	28.97	18.28	1955	27.89	32.22	54.44	46.11
HI/LD	37.28	35.5	24.21	976	26.39	33.06	55.83	51.81
MI/HD	77.39	11.96	8.83	3369	15	15	40	50
MI/LD	25.87	43.8	26.4	677	68.33	73.33	21.67	37.5
LI/HD	66.64	24.79	8.07	3125	22.5	22.5	34.06	27.15
LI/MD	47.1	32.11	18.64	1997	10	26	25	23.33
Total	55.29	26.57	16.14	1128	32.4	36.97	44.43	41.91

Source: Based on field survey 2017-18 , Sentinel 2A 2018 , Census of India [52]

Source: Based on field survey by the researcher, 2014.

PROPOSAL

PROPOSALS

- Broad Proposals based on zonal characteristics.
- Recommendations for specific strategies, methods and techniques for conserving and managing the open spaces.

STANDARDS FOR OUTDOOR RECREATION-

PLANNING UNIT	AREA (sq.m/person)	TYPE OF OUTDOOR RECREATION
HOUSING CLUSTER	3-4	LOCAL PARKS, PLAYGROUNDS
SECTOR	3-4	LOCAL PARKS, PLAYGROUNDS
COMMUNITY	2-3	COMMUNITY PARKS, OPEN SPACES
DISTRICT	1.0	DISTRICT LEVEL PARKS, SPORTS CENTER, MAIDAN, EXHIBITIONS
SUB-CITY CENTER	1.0	CITY LEVEL PARKS, SPORTS COMPLEX, ZOOS, CINEMAS, CONVENTION CENTER

OVERALL CITY/TOWN LEVEL= 10-12 sq.m/person

As per URDPFI, **Variations** in area for recreation/person is decided considering the **size** of settlement.

- **Small town-** 1 to 1.2 Ha per 1000 persons.
- **Medium town-** 1.4-1.6 Ha per 1000 person.
- **Large towns/ metro-** 1.2-1.4 Ha per 1000 person.
- Multifunctional recreational space is preferred.
- Priority to develop open space in economically backward areas of the town.

Depending on the **area served** by the recreational facility and its **sphere of influence**, out-door recreation can be divided into:

- 1) Neighborhood level (25,000-60,000)-** community parks, tot lots, playground etc.
- 2) District level (1 lakh and above)-** district parks, stadiums, clubs etc.

ZONING OF STUDY AREA-

	POPULATION (projected)			REQUIRED RECREATIONAL AREA (ha)				
	2011	2021	2031	TOTAL AREA (ha)	OPEN LAND (ha)	CITY lvl.	ZONE lvl.	CLUSTER lvl.
<u>PART-1</u>	52895	78017	115069	1951	1181	12	23	46
<u>PART-2</u>	44940	66283	97762	672	325	10	20	39
<u>PART-3</u>	45908	67712	99870	2039	1269	10	20	40



Existing outdoor recreational spaces-

Parks-

A-Kunvar Singh Udyan (Mehta Park)- 1.5 Hectare

B-Ambedkar Park- 0.5 Hectare

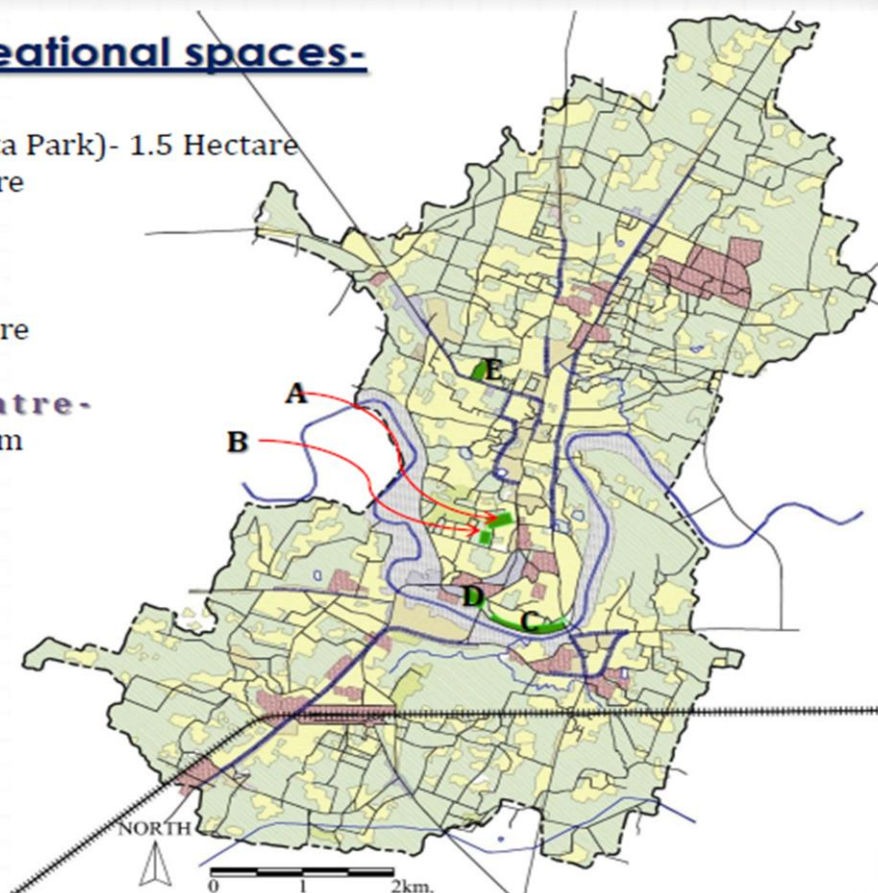
C-Thandi Sadak- 3 Hectares

Open spaces (maidan)-

D- Jajji Ka Maidan- 1.0 Hectare

Stadium or sports Centre-

E- Sukhdev Pehlawan stadium
Azamgarh- 1.0 hectare



Location of Proposed City level recreational parks-

Connectivity Of City Parks

PART-1-Potential For Development

(CITY Level.)- **SPORTS COMPLEX**

Govt. Polytechnic

I.T.I.

Shibli National College

Engineering Colleges

Medical Colleges

PART-2-Potential For Development

(CITY Level.)- **MULTIPURPOSE MAIDAN**

Near to C.B.D.

Maximum dense population.

Substantial demand for Recreational space and multipurpose open space.

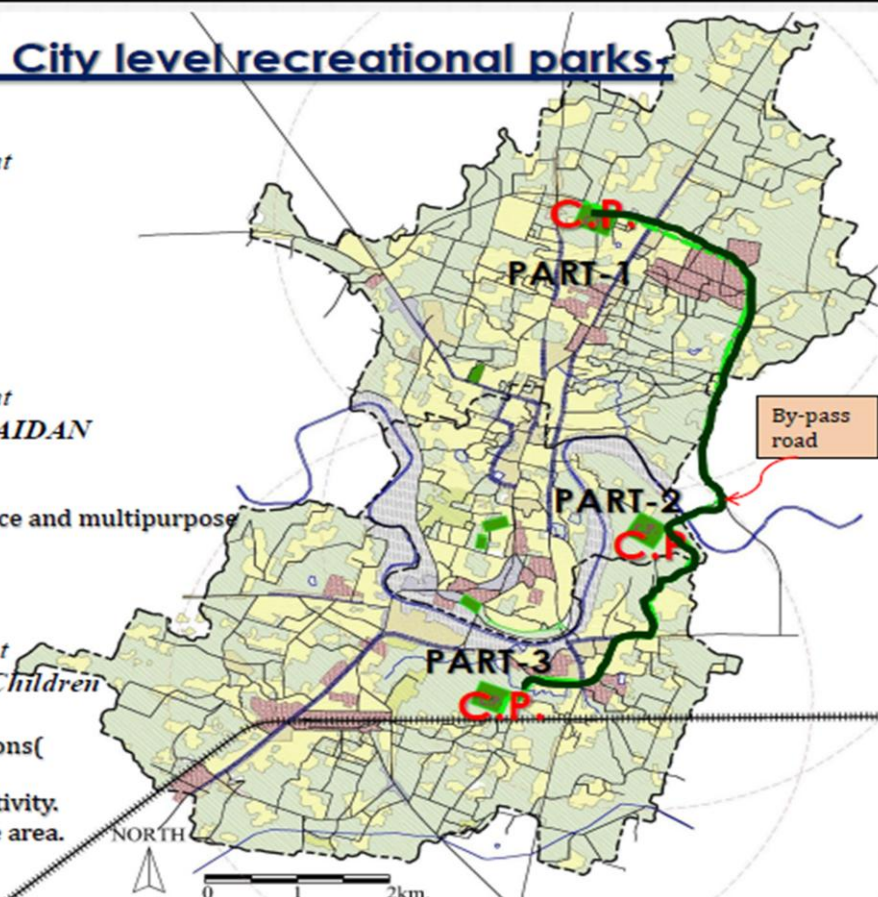
PART-3-Potential For Development

(CITY Level.)- **AMUSMENT PARK(Children and Family park)**

Proximity to Schools and Tourist attractions(Durvasa ashram and other temples.)

Gateway to the city with regional connectivity.

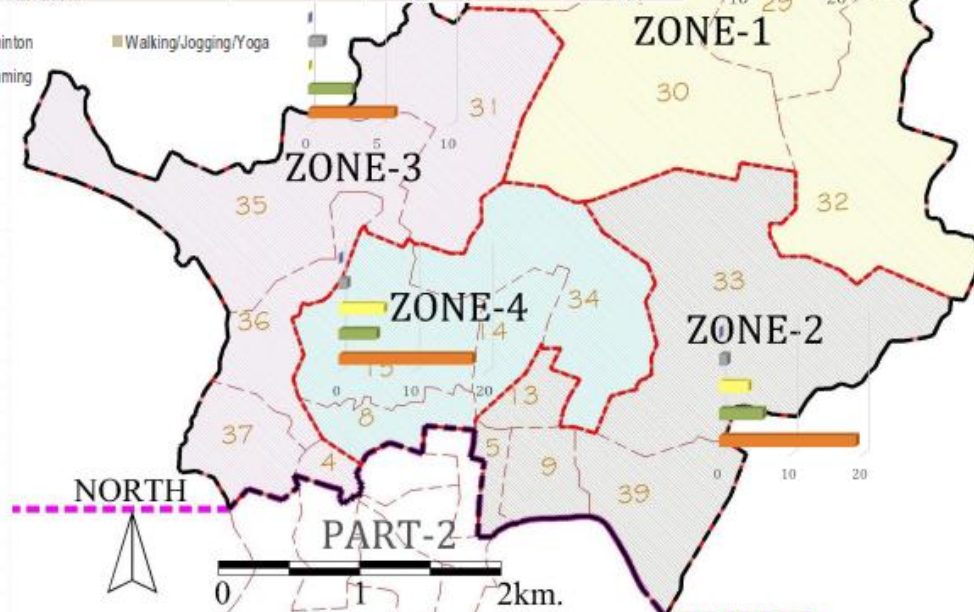
Maximum residential development in the area.



Part-1 - Requirement For Outdoor Recreational Spaces-

PART-1	POPULATION (projected)			REQUIRED RECREATIONAL AREA (ha)				
	2011	2021	2031	TOTAL AREA (ha)	OPEN LAND (ha)	CITY lvl.	ZONE lvl.	CLUSTER lvl.
ZONE-1	12499	18435	27190	720	551		5	
ZONE-2	15672	23114	34092	440	231		7	
ZONE-3	11161	16461	24279	470	283		5	
ZONE-4	13564	20006	29508	321	116		6	
TOTAL			115062			12	23	46

■ ball games ■ badminton ■ Walking/Jogging/Yoga
■ Leisure Park/OAT ■ Swimming



Location As Per Open Space Availability And Connectivity-

1 city level park-sports complex
Area – 12 hectares.

Facilities – organized sporting recreational space (stadium) clubbed with compatible sports activities and other passive recreational activities.

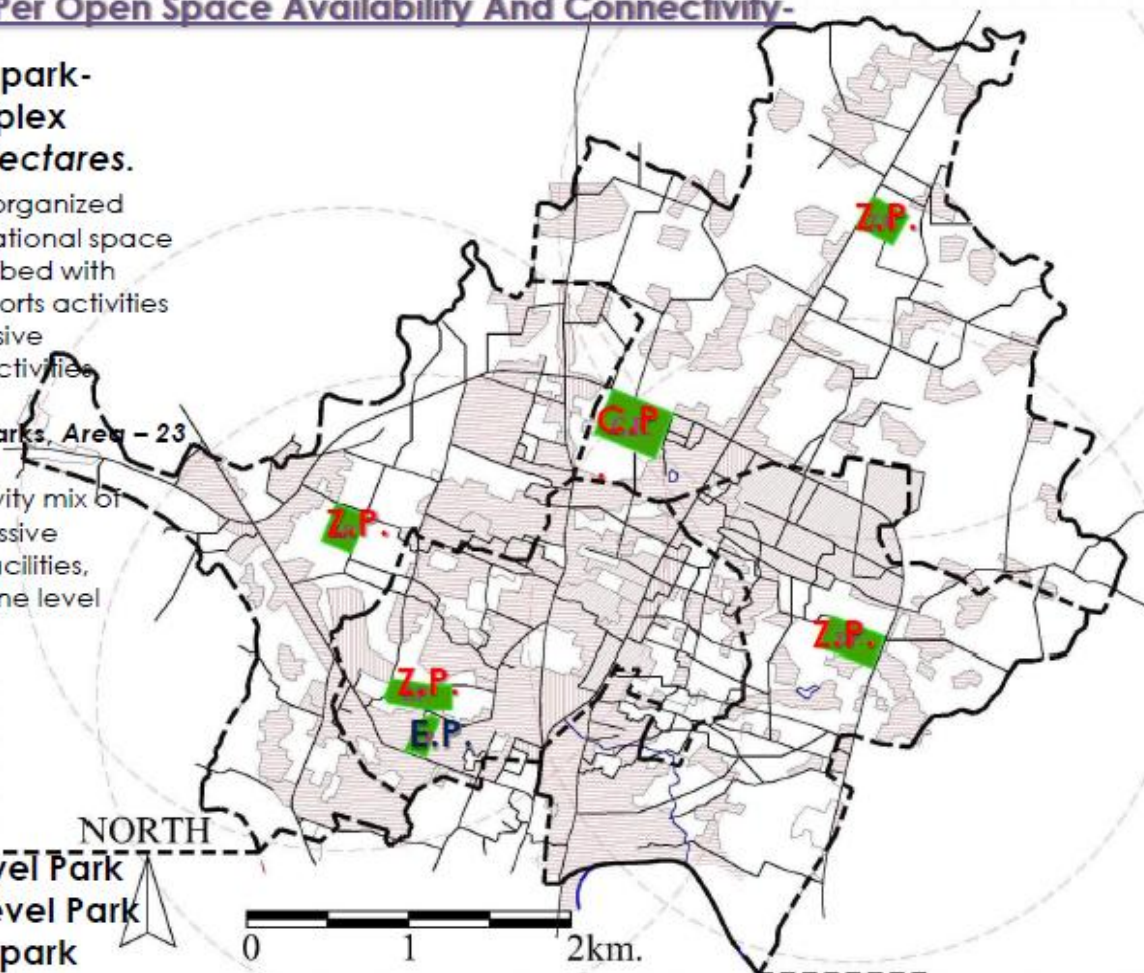
4 zone level parks, Area – 23 hectares.

Facilities- activity mix of active and passive recreational facilities, Catering to zone level population.

C.P.-1 City Level Park
Z.P. -4 Zone Level Park
E.P.-1 Existing park

NORTH

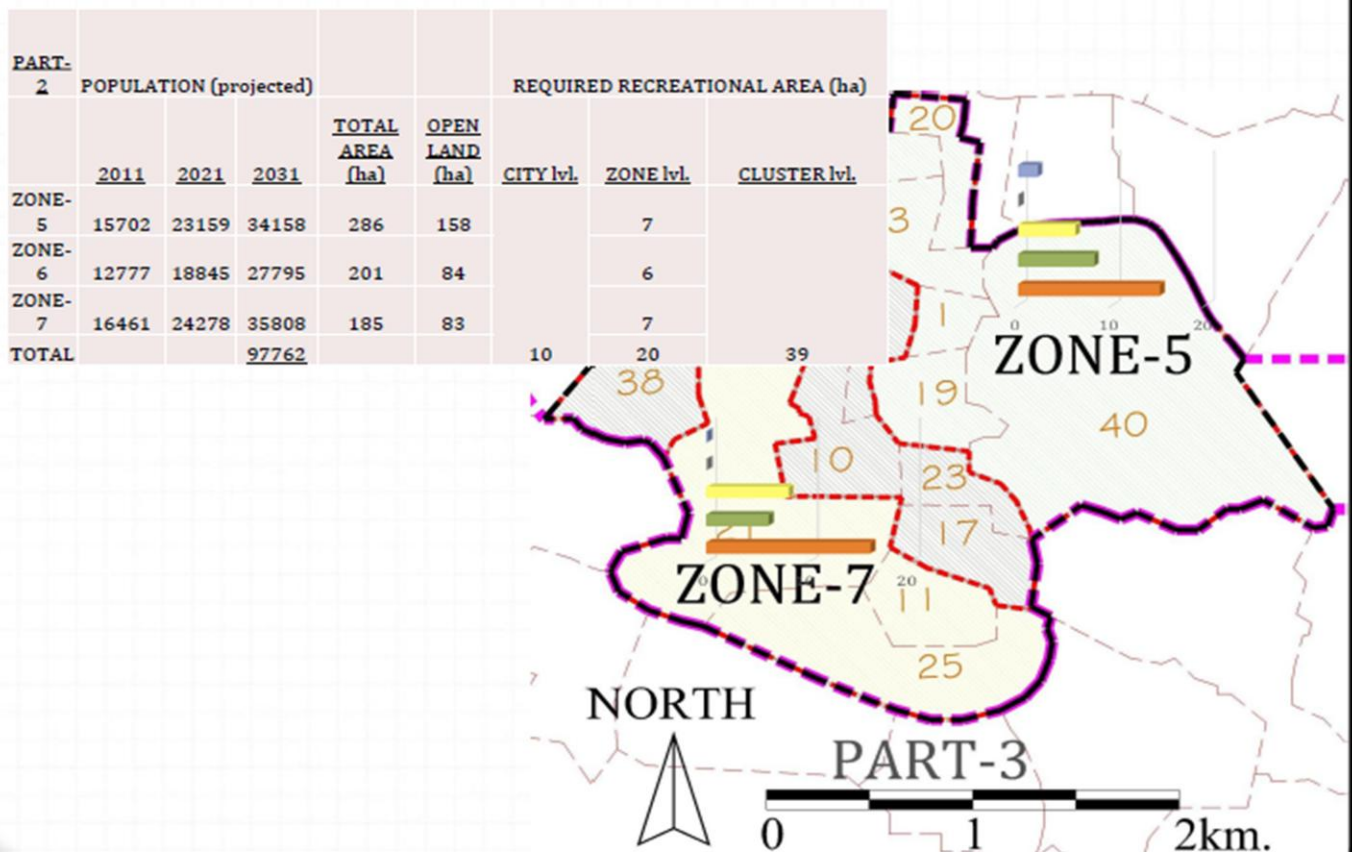
0 1 2km.



Example of Zonal Level Park- (Scheme)- zone- 8



Part-2- Requirement For Outdoor Recreational Spaces-



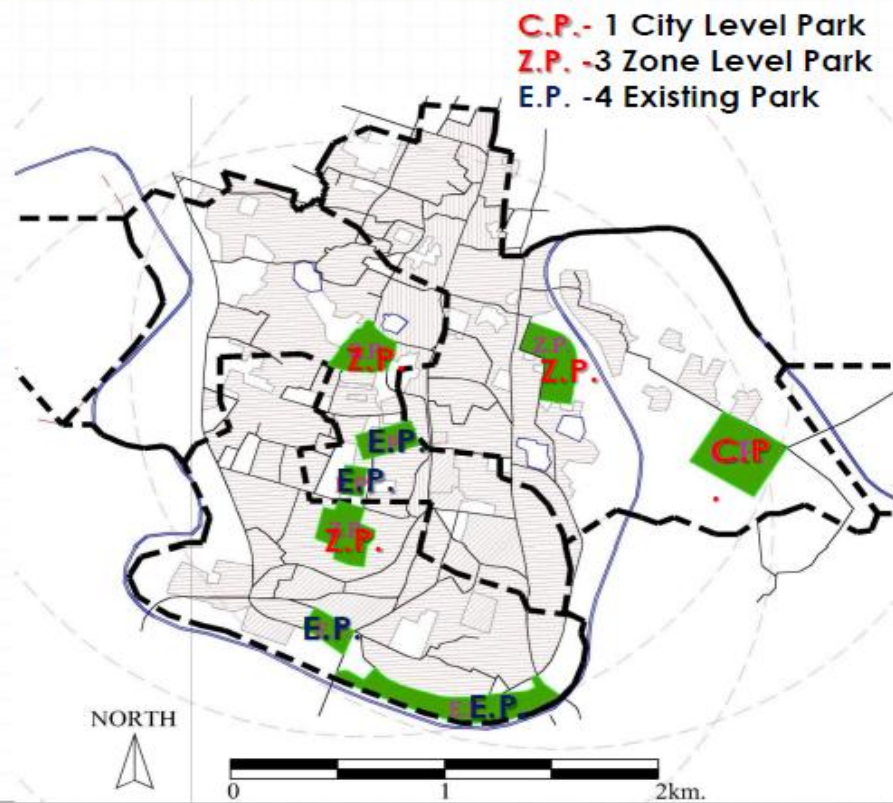
Location As Per Open Space Availability And Connectivity-

1 city level park-
Multipurpose maidan
Area – 10 hectares.

Facilities – organized recreational space for public gatherings, social events, exhibitions, and other crowd pulling occasions

3 zone level parks, Area – 20 hectares.

Facilities- activity mix of active and passive recreational facilities, Catering to zone level population.

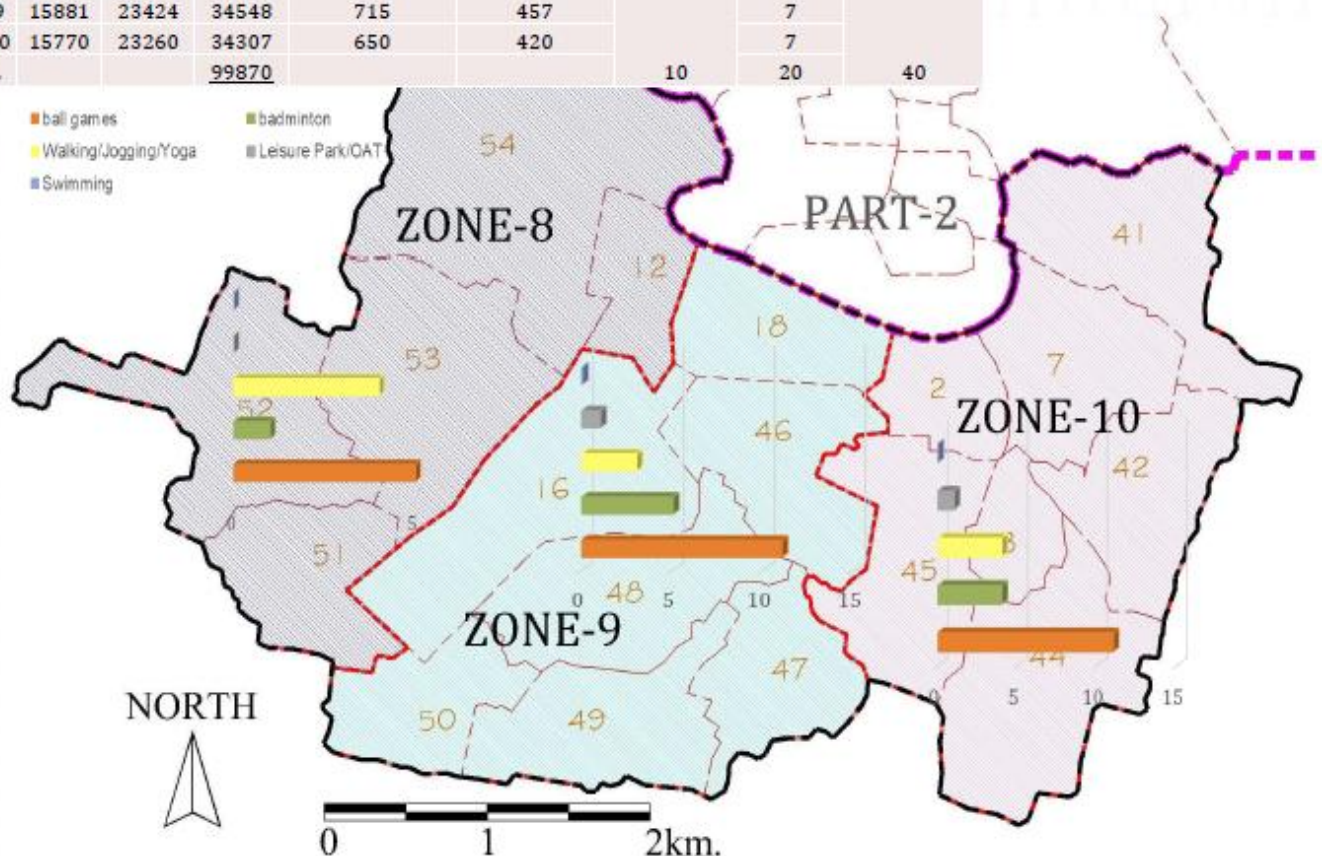


Part-3- Requirement For Outdoor Recreational Spaces-

PART-3	POPULATION (projected)			TOTAL AREA (ha)	OPEN LAND (ha)	REQUIRED RECREATIONAL AREA (ha)		
	2011	2021	2031			CITY lvl.	ZONE lvl.	CLUSTER lvl.
ZONE-8	14257	21028	31014	674	392		6	
ZONE-9	15881	23424	34548	715	457		7	
ZONE-10	15770	23260	34307	650	420		7	
TOTAL			99870			10	20	40

- ball games
- Walking/Jogging/Yoga
- Swimming

- badminton
- Leisure Park/OAT

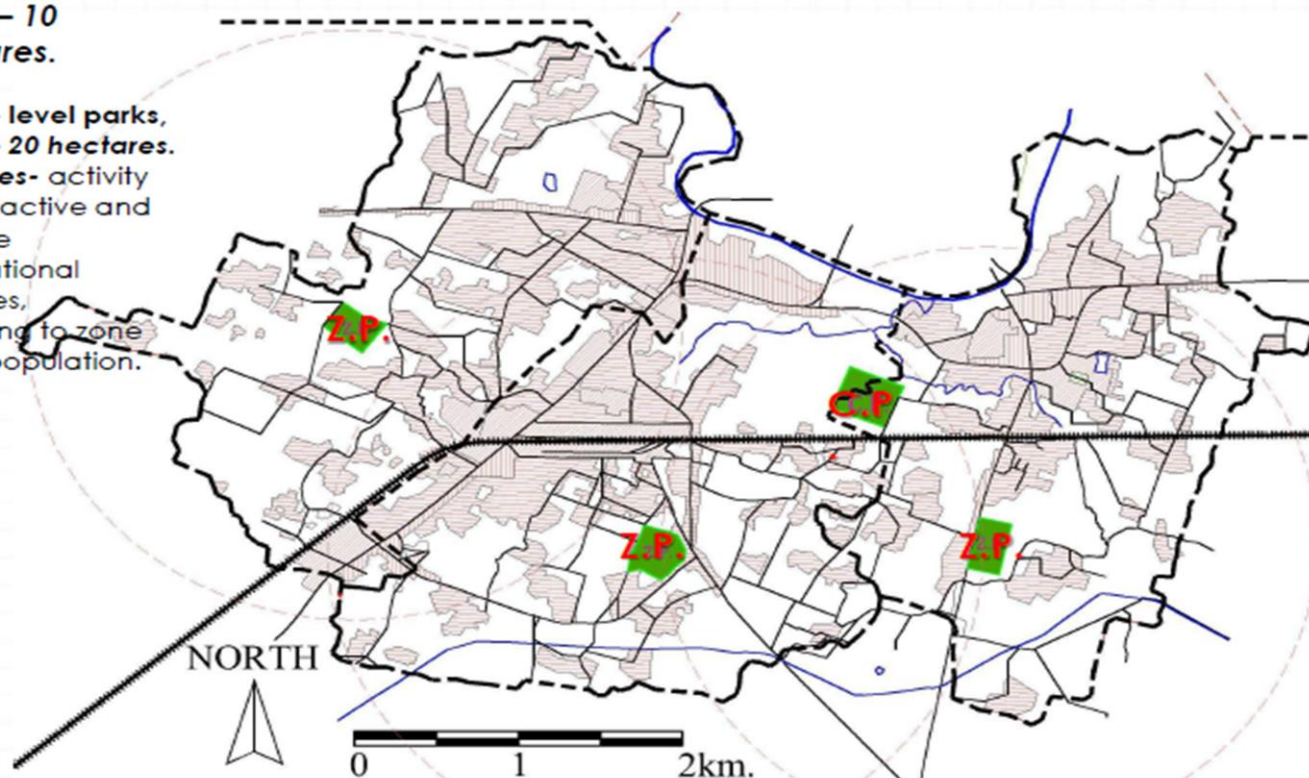


Location As Per Open Space Availability And Connectivity-

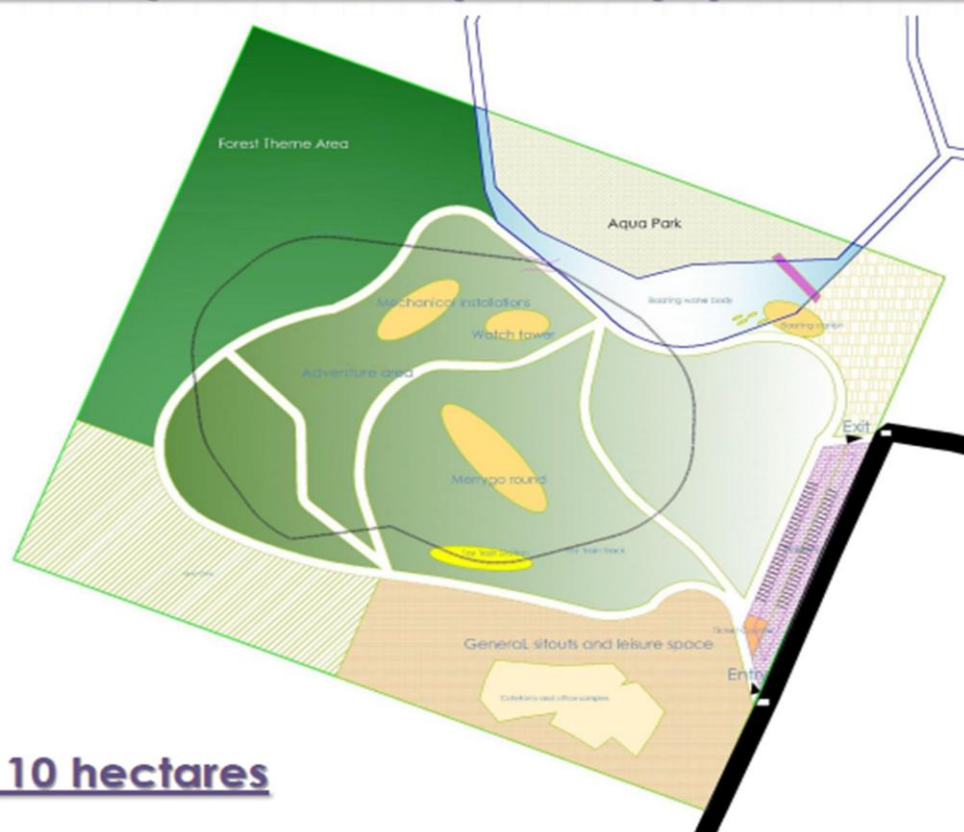
1 city level park-
Amusement park
Area – 10
hectares.

3 zone level parks,
Area – 20 hectares.
Facilities- activity
mix of active and
passive
recreational
facilities,
Catering to zone
level population.

C.P.- 1 City Level Park
Z.P. – 3 Zone Level Park



Example of City Level Park- (Scheme)- (Amusement park)



Area- 10 hectares

GUIDELINES AND RECOMENDATIONS



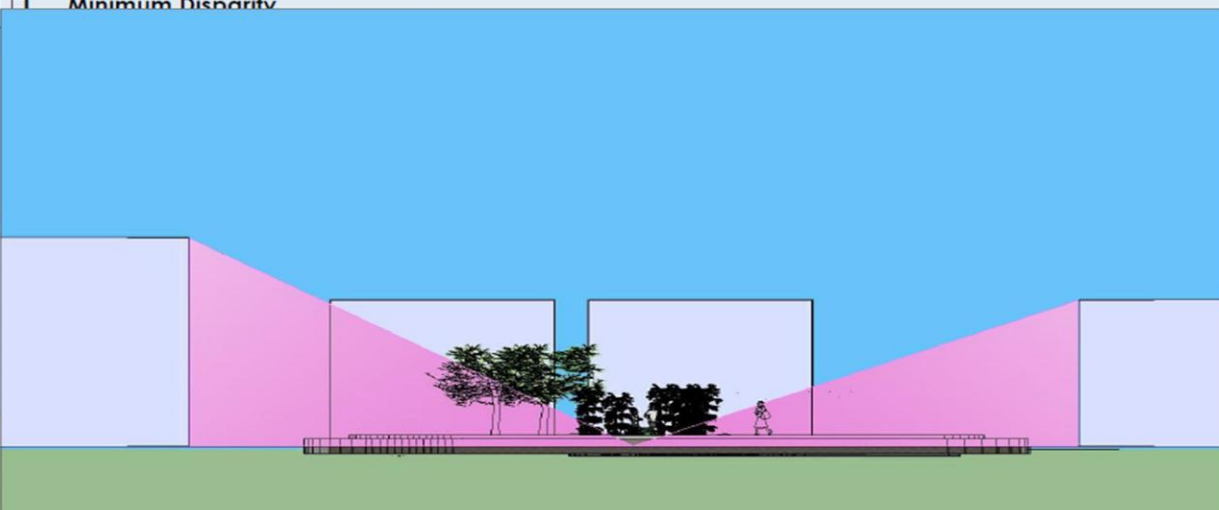
RECREATIONAL OPEN SPACE HIERARCHY & THEIR ATTRIBUTES				
OPEN SPACE CATEGORY AND DISTANCE FROM HOME	FREQUENCY OF VISIT &	CHARECTERSTIC FEATURES OF THE OPEN SPACE	NATURE OF RECREATIONAL ACTIVITIES	RECOMMENDATIONS & LEVEL OF INTERVENTIONS
CITY LEVEL PARKS AND OPENSACES Dist.= 3-8 km	<ul style="list-style-type: none"> Weekends/occasio nal visits Cars/bikes/public transport 	<ul style="list-style-type: none"> Natural Backdrops and Features, Manmade Naturescapes like Riverfronts, lakefronts etc. Clubbed with Active recreational facilities 	<ul style="list-style-type: none"> Passive and Non-Active Picnics and Sightseeing 	<ul style="list-style-type: none"> Access, Facility management Parking Facilities.
STADIUMS AND ORGANIZED PLAYFIELDS AND MAIDANS Dist=12-15 km	<ul style="list-style-type: none"> Occasional visits Cars/bikes/public transport 	<ul style="list-style-type: none"> Organized Sports Formal Recreational Spaces. Public Gatherings and exhibitions 	<ul style="list-style-type: none"> Active and Formal recreational Activities. 	<ul style="list-style-type: none"> Parking and Crowd management. Decentralized maintenance.
COMMUNITY LEVEL OPENSACES Dist=1.2 - 3.2 km	<ul style="list-style-type: none"> Weekends/occasio nal visits By foot/cycle/car/bike/short bus trips 	<ul style="list-style-type: none"> Orchards and formal parks, gardens. Outdoor play facilities and Children parks Fountains, open public spaces, squares. 	<ul style="list-style-type: none"> Active and passive activities. Focal point for community Interactions 	<ul style="list-style-type: none"> Parking and Maintenance facilities. Universal design principles. Community participation.
LOCAL PARKS AND PLAYGROUNDS Dist=0.4km	Daily/ > 3 times a week Pedestrian visits, especially by children	<ul style="list-style-type: none"> Spill outs for Residential Areas Play Fields, tot lots, Courts Sit outs and Jogging Tracks and Open Spaces. 	<ul style="list-style-type: none"> Active as well as passive activities. necessary part of Daily Activities. 	<ul style="list-style-type: none"> Universal Design Principles and Crime preventive design. Maximum provision in high density areas.

Aspects of Open spaces

EQUITY-

Equity refers to :

- ☐ **needs of all sections** of the community and
- ☐ specific needs of the particular group
- ☐ **Minimum Disparity**



- C. **Restricted Entry** and prevention of Encroachments
- D. Proper and well maintained **lighting in every nook and corner** of the facility to eradicate dark spaces
- E. **Timing of recreational Spaces** to be maintained avoiding the risk of Misuse.
- F. Community Participation in **prevention of Vandalism**.

LOCATION AND ACCESSIBILITY-

- ☐ **Location** and setting of the Recreational Space
- ☐ Surrounding Land Use determining the Character of Recreational Space and Nature of Recreational Activities.
- ☐ Accessibility of Recreational space for the level of population, i.e., City , Zone, Neighborhood Level being served by the space.
- ☐ Subsequently Parking Spaces and other Facilities to be provided.

Recommendations

- A. Maximum possible Accessibility.
- B. Conformity with Surrounding Land uses.
- C. **See through demarcations** for the open space.
- D. Accessible to Public Transport and other transport modes.
- E. Parking Facilities adequate according to the capacity, frequency of usage and type of activity.
- F. Crowd Management.

Vitality and Viability

- ☐ **Blending** into the Urban Character of the location area.
- ☐ **Balance** between the Level of activity in surrounding area and the recreational Spaces.
- ☐ Viability of creation of open space.

Recommendations

- A. Urban Design Guidelines in harmony with Urban Character.
- B. Maintaining a balance between Noise levels and the passiveness of recreational area.
- C. Access through a busy street would significantly increase the vitality of the recreational area.
- D. **Mixed Land Uses** around the recreational space **would increase** the usage of the space.
- E. Informal commercial Activities like **organized Vending** and **Hawking** could vitalize the recreational Spaces.

Public Participation

ASPECTS FEASIBLE FOR PUBLIC PARTICIPATION

- ☐ **FINANCE AND MANAGEMENT**
 - Provision of land
 - Creation of funds
 - Management of development
- ☐ **MAINTENANCE**
 - Maintenance of recreational spaces.
 - Improvement of existing recreational spaces
- ☐ **CPTED**
 - Crime prevention through surveillance.
 - Prevention of vandalism and irresponsible civic behavior.

Recommendations

- A. Instruments like **land pooling** and leasing of land for recreational spaces.
- B. Creation of funds through **PPP and BOT model**.
- C. **Stakeholder consultations** and participations for development and management of recreational spaces
- D. **Maintenance** of Recreational Decentralized to **Cooperative societies or Trusts** formed by Citizens.
- E. Improvements of open spaces through participatory programs like **Swachh Bharat Abhiyan**, creating a sense of Belongingness.
- F. Maintaining overall **visibility** of public spaces, preventing anti social activities.
- G. Creating awareness towards prevention and **destruction of public property**.
- H. **Volunteers** for such awareness programs be recognized and encouraged.
- I. Public events like Product launches, Amateur sporting events could be organized to increase community interaction.

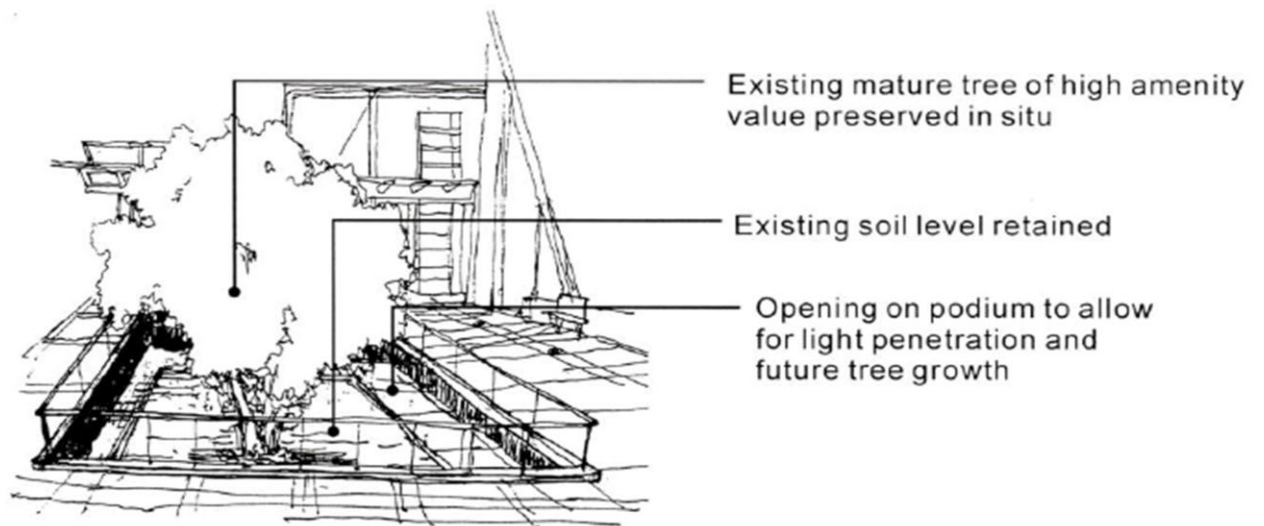


Figure 5 Preservation of Existing Trees on Developments Site

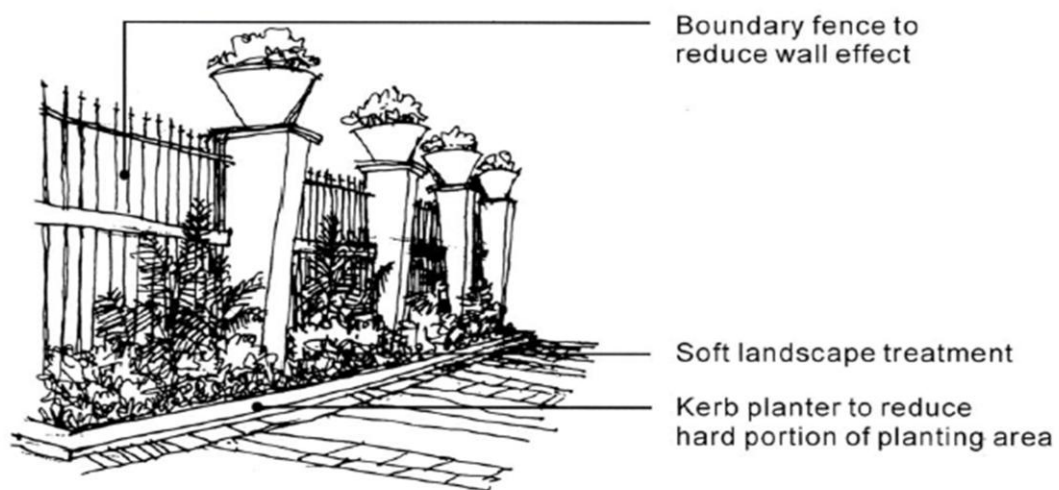


Figure 6 Greening Treatment at Periphery of a Development

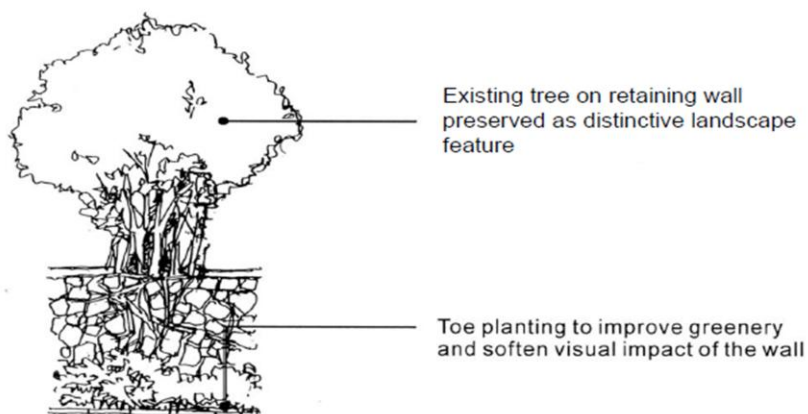


Figure 7 Greening Opportunities on Retaining Wall

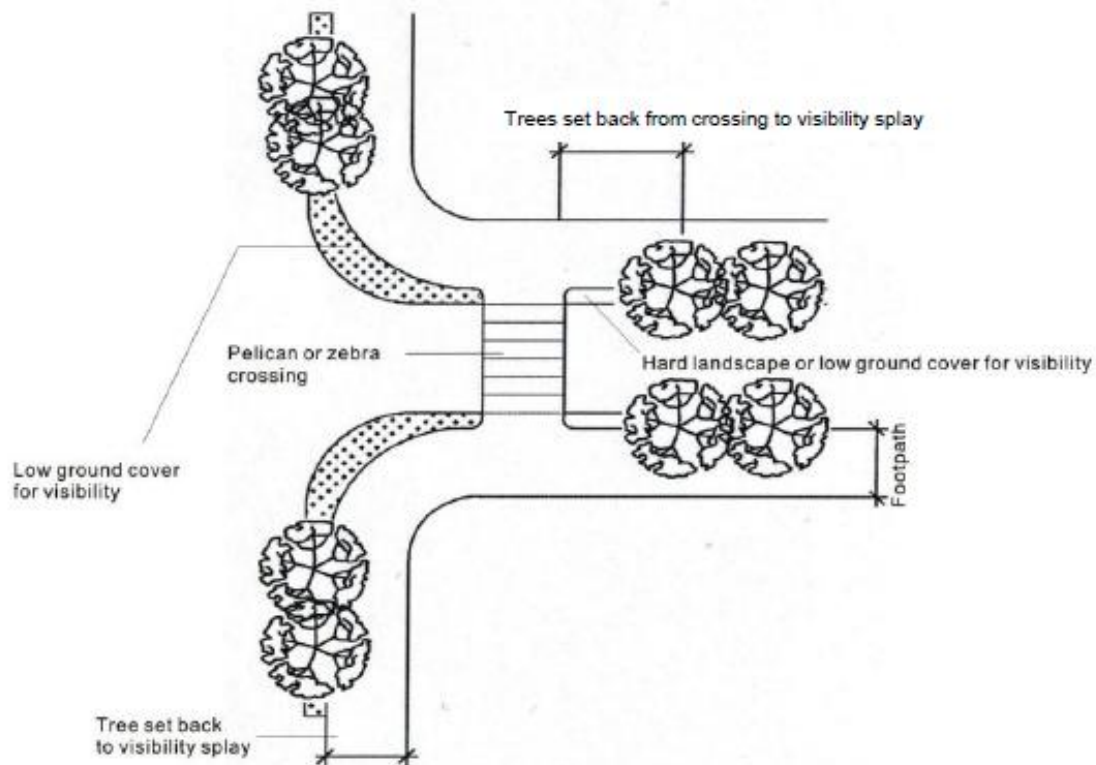


Figure 9 Planting at Road Junction

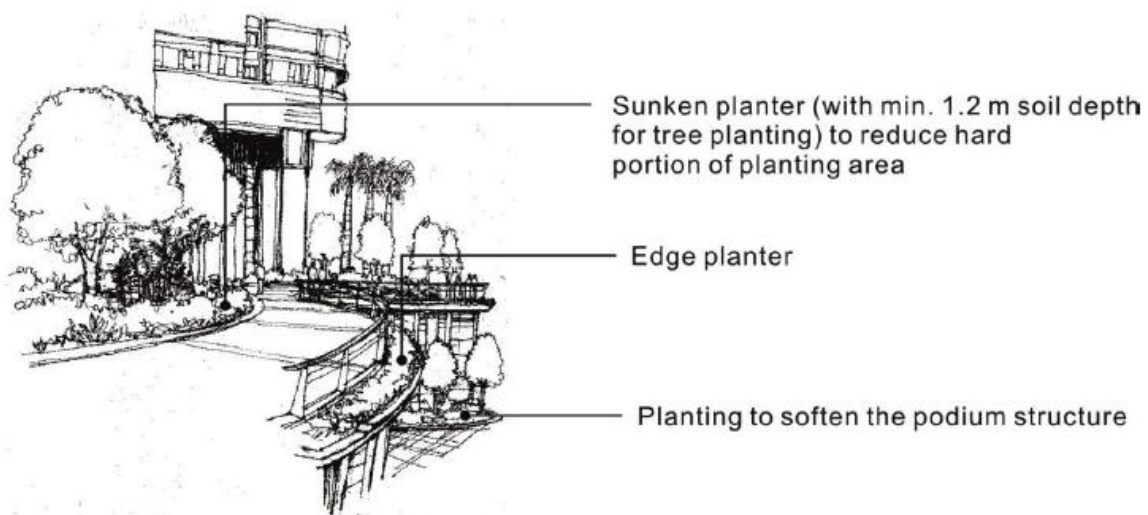
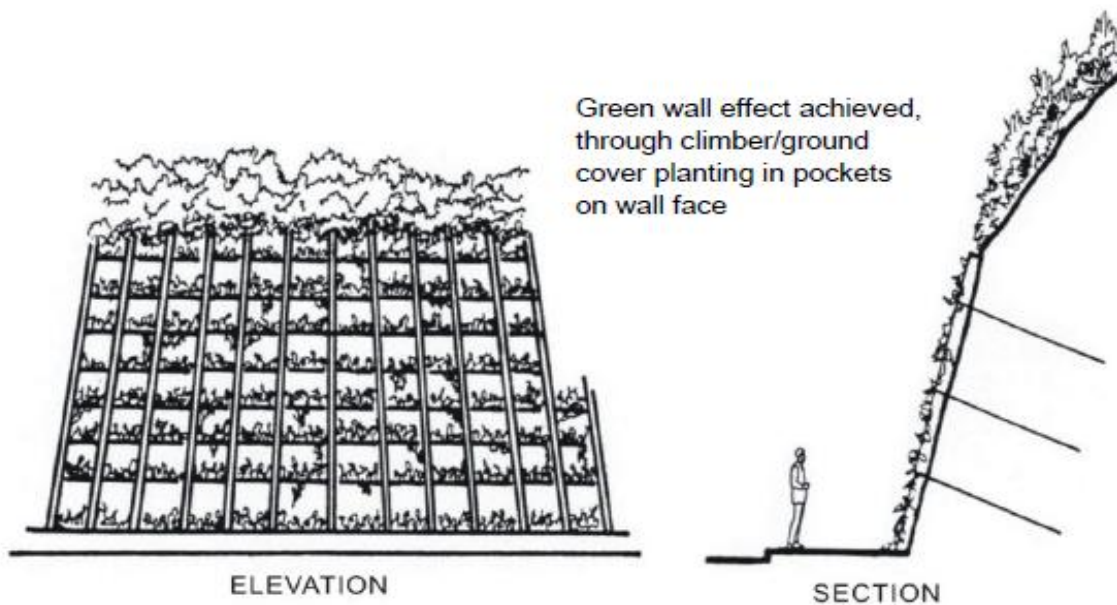
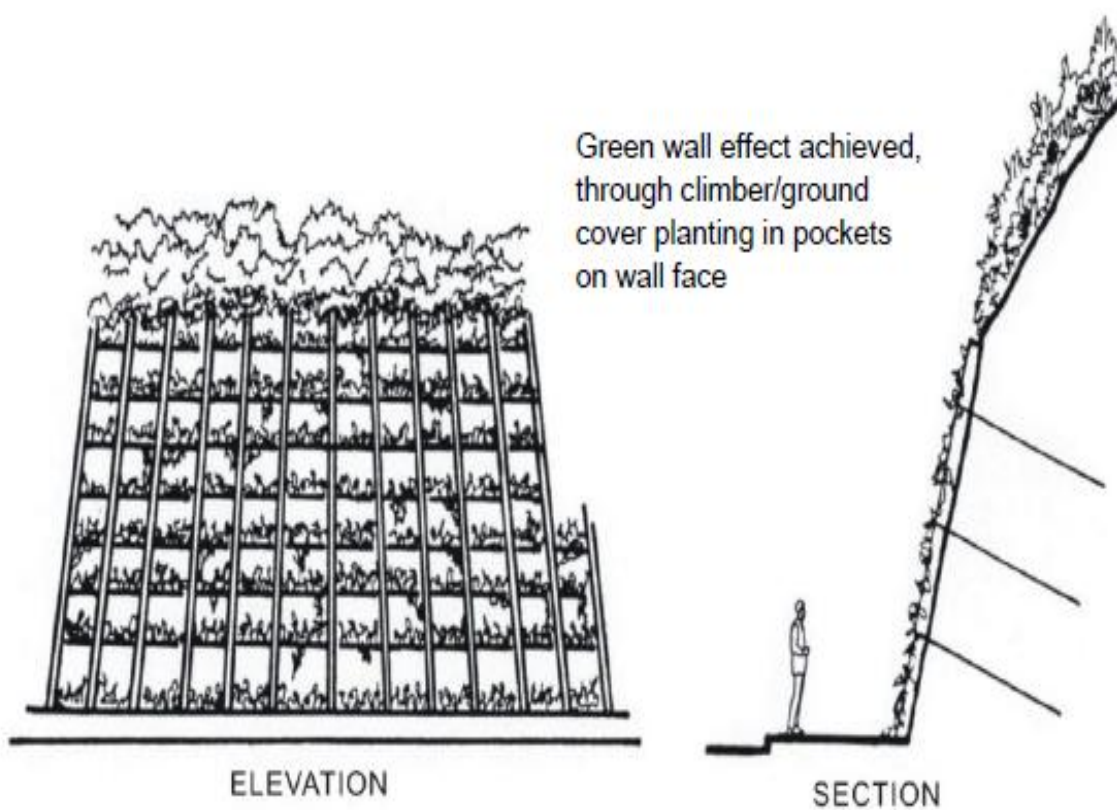


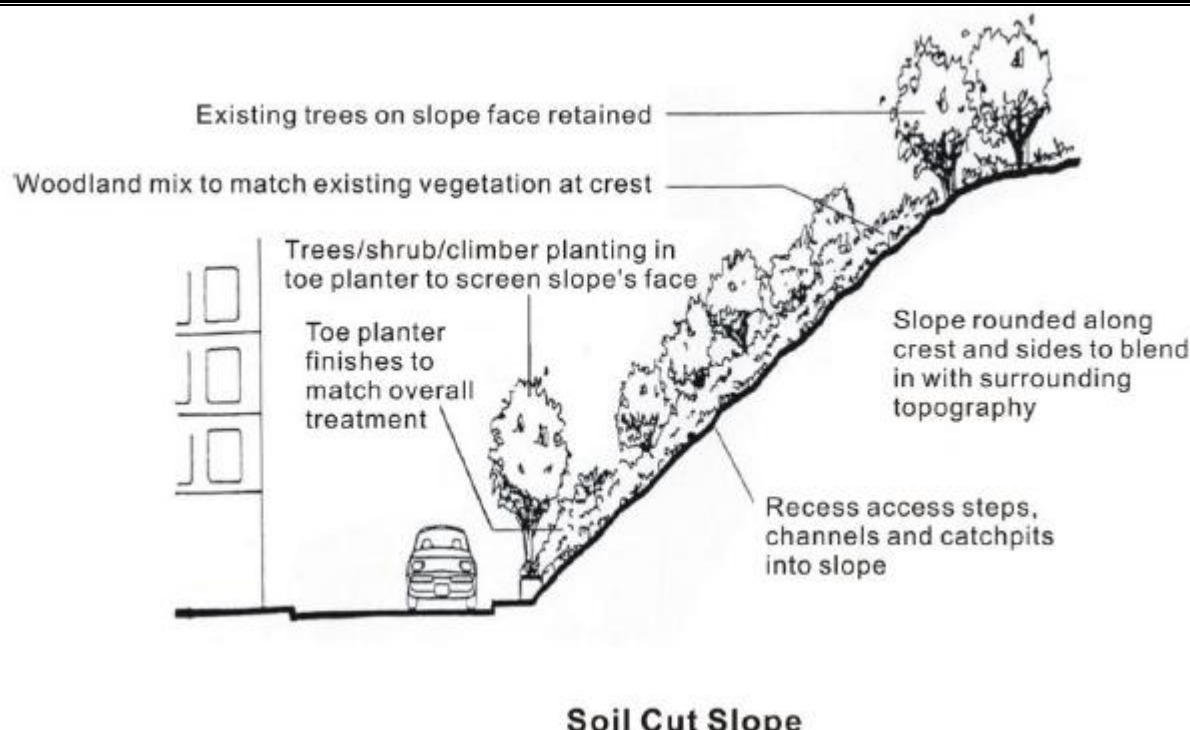
Figure 8 Greening Opportunities on Podium Garden



Retaining Structure



Retaining Structure



Management & Finance

Finance and Project management

❑ FINANCE

- Financing and funding for new recreational Spaces. Along with up gradation of old ones.
- Efficient finance management with optimum use of available resources.

❑ MANAGEMENT

- Efficient management of Project development and execution with public participation and optimum use of ULB machinery.
- Timely Execution of Project avoiding unnecessary costly delays.

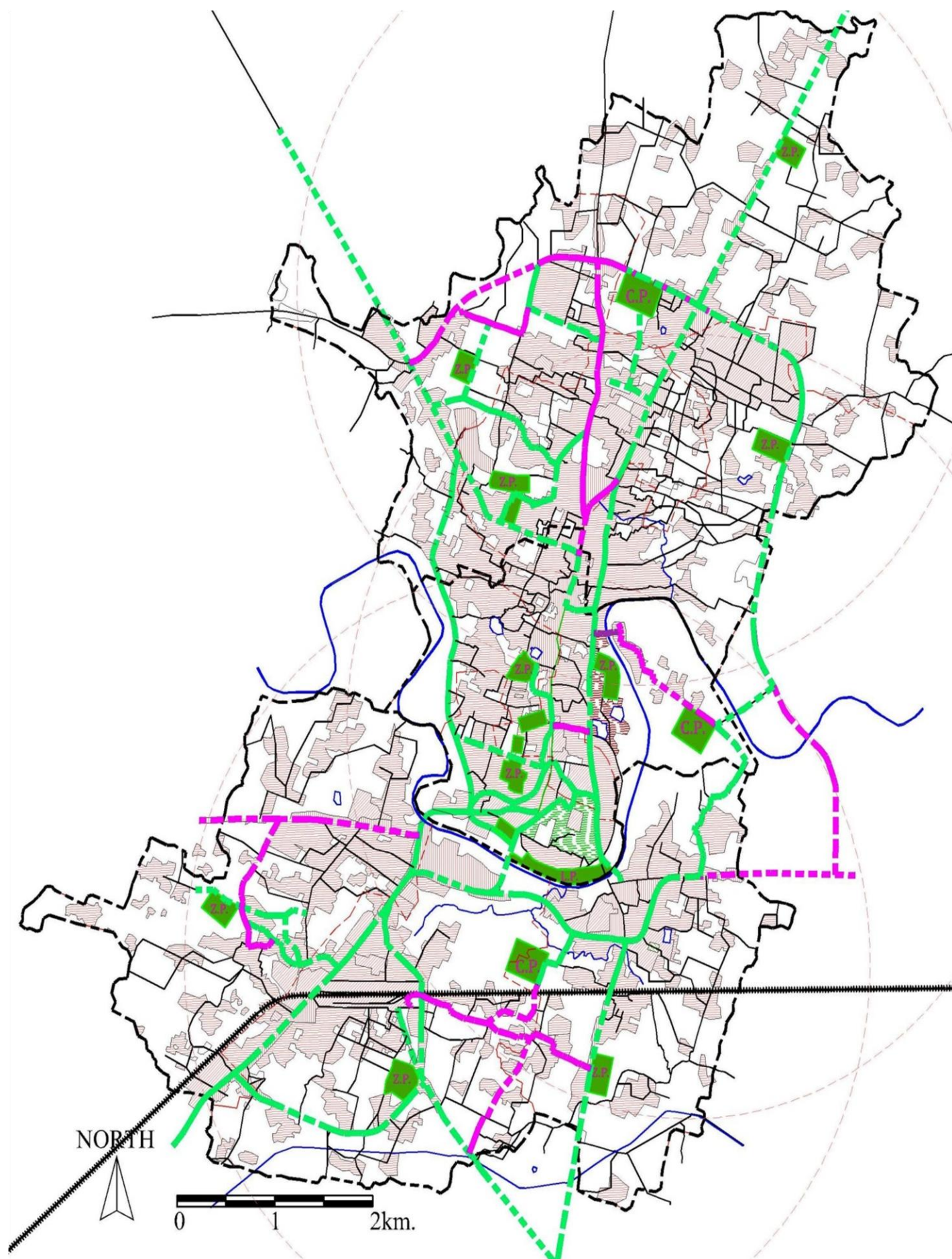
❑ MAINTENANCE

- Self Sustainable maintenance mechanism generating finance with usage of spaces for up keep and maintenance of recreational space.

Recommendations

- A. **Money lending** from Financial institutions and government authorities for Finance and Funding of development of recreational Spaces at a **lower rates of return**.
- B. Models of **PPP** and **BOT** to be adopted for the development of the Recreational Infrastructure.
- C. Incentivizing the participation in the PPP and BOT through subsidies in other sectors like Urban Utilities or **FAR relaxation** for participating neighborhoods.
- D. **Natural Resources** to be conserved while developing the Recreational Spaces.
- E. With the ULBs already Stressed, Project management teams may constitute important stake holders as well as **volunteering societies** and persons with apt **remuneration**.
- F. Inclusion **Of local Level labor and private machinery** in the projects relieving the Municipality workers and generating Employment.
- G. Special emphasis on **timely Execution** of Projects.
- H. Maintenance of each recreational space under **local level body** comprising of citizens as well as stakeholders.
- I. Organized and limited **Commercial Use of Recreational Spaces** to remunerate the maintaining body and BOT operators.

ALTERNATE ROUTE OPTION-



City Level Parks

Major Points

❑ ACCESSIBILITY

- Accessible to public transport and major transport modes.
- Minimum disturbance to the surrounding land use zones.

❑ MANAGEMENT

- Efficient management of Activities.
- Mix of activities according to the demographic character of the city.

❑ MAINTENANCE

- Self sufficient Maintenance mechanism.

Recommendations

- A. City level open Spaces proposed along Major **connecting network** forming their own network and **system of Recreational Spaces**.
- B. **Adequate Parking** Spaces to be provided for the city level Parks.
- C. Crowd Management and **alternate routing** for the easy dispersion of occasional crowd.
- D. Access positioned to allow **minimum disturbance** to the land uses.
- E. Activities arranged according to the **preferences** obtained through primary Survey and land use character of the adjacent areas discerning the **potential of the Zones**.
- F. **Active and Passive** Activities positioned to have **harmonious interaction**.
- G. Formal **Sporting Activities** are to be **decentralized** under various sporting **authorities** comprising of Veteran **athletes and citizens**.
- H. Sporting activities to be encouraged through organizing **Intra state level sporting events** and amateur events like **marathon and sporting Camps**.
- I. **Fund Raiser Events** and activities to be organized.
- J. **Commercial potential** of multi purpose **Maidans** to be realized through **Exhibition** and fairs.
- K. Efficient organization of **public Gatherings** like republic Day parade and Ramleela Plays etc.
- L. Semi Restricted entry through introduction of **Entry Fees** also generating funds for Maintenance.
- M. Maintenance of open spaces to be on contractual basis and BOT basis.