

# **PLANNING FOR URBAN REGENERATION(CASE OF KANPUR)**

**Master's Thesis**

**By**

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It is certified that the work contained in this thesis entitled “**PLANNING FOR URBAN REGENERATION(CASE OF KANPUR)**”, by **Harsh Chauhan** (1200106008), for the award of **Masters in Urban And Regional Planning** from Babu Banarasi Das University has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

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Harsh Chauhan

## ABSTRACT

Modern ways of life are shaped by cities and rely on and develop around them. The inextricable link between economic development and city growth deterministic direction of progress and therefore the positive or detrimental impact on the context.. The rising concern about the possible obsolescence of the urban fabric of those city centers thanks to unregulated growth patterns has generated a growing interest within the phenomenon of urban regeneration. The aim is to spot degrees of interventions, crucial sites of development, and expose the potential of using the canals as a tool to revive a community. The context has multi faceted potentials and these exist due to the those that have vested interest within the context. Highlighting this humane element, and putting forth a scenario where new interventions revolve around bettering life for residents is that the overall goal of this project. it's basically an idea where urban decay is tackled so on wholly remove or redevelop the particular blighted area or piece of land.

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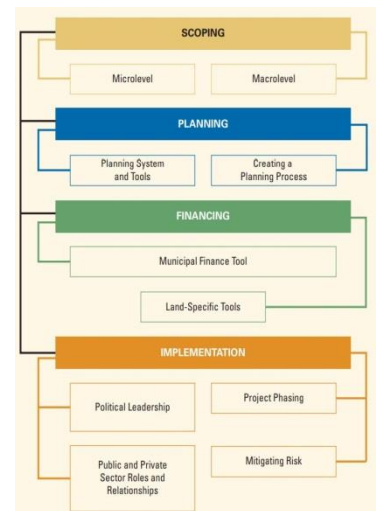
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# INTRODUCTION

## Why Regeneration

- Every city has pockets of underused and underutilized land or distressed and decaying urban areas. These pockets of underused land weaken the city’s image, livability, and productivity. They are usually the result of changes in the urban growth and productivity patterns.
- To tackle the issues of decline and urban decay, these cities and others around the world have designed complex processes of urban regeneration.
- Rarely are urban regeneration projects implemented solely by the public sector. The need for massive financial resources is one factor.
- So basically, Urban regeneration is a program often used to address urban decay in cities and cleaning out blighted areas in inner cities to clear out slums and create opportunities for higher class housing, businesses, and more. A primary purpose of urban regeneration is to restore economic viability to a given area by attracting external private and public investment and by encouraging business start-ups and survival.

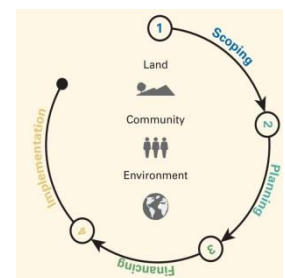


## Aim

The main purpose of urban regeneration is to eliminate blighted areas – turning them into areas that have better built environment quality and values.

## Objective

- Assessment of existing scenario of core area.
  - Identifying the strengths and weaknesses of the area.
  - Understanding requirements of peoples.
  - Understanding the socio economic and demographic profile of the area
- Analysis of ongoing projects and proposals.
  - Study the vision of the project/program.
  - Study the progress of the project.
- Proposal of solution according to identified requirement
  - Urban design solutions that maintain the Architectural characteristics of the city.



## Scoping

- Scoping is a process during which decision makers conduct a strategic assessment to identify and promote regeneration either for the city as a whole or for a specific land parcel, such as a port, downtown, or neighborhood area.
- It involves a process of long-term, transformational change as city leaders develop a “road map” to make difficult choices about the future of their city or for particular areas of the city.
- Through the scoping process, city leaders also develop and utilize analytical tools to confront issues facing the city that are vital to its future. The process helps city leaders make strategic decisions about the direction they want their city to pursue.
- Generating a vision
- Analyzing the economic, social, and physical characteristics of the city or area.
- Analyzing the regional and global position of the city or area .
- Identifying the opportunities for change and interventions to promote regeneration
- Analyzing the capacity for change in the public, private, civic, and community sectors



## **Planning**

- While the scoping phase provides an analytical foundation and an overarching rationale and narrative for the regeneration project, the planning framework establishes the long-term vision and context.
- This step is vital to sustaining the regeneration vision through the inevitable changes and unforeseen challenges of the market and political cycles. However, it is important that the plan not be overly rigid, because it will discourage private investment.
- An effective planning framework will balance vision and planning principles, and it will facilitate negotiation among the public, private, and community sectors.
- There are various ways to start the planning phase. In some cases, planning starts with defining the organizational framework for taking on the regeneration project while in other cases, a master plan is developed to spatially define the process.

## **Financing**

- Whether an urban regeneration initiative is led by the public sector or the private sector can affect the financing tools available to its lead sponsor.
- Large-scale urban regeneration projects are complex and require immense resources to be planned and implemented properly.
- Few cities have the resources to finance the costs of such large initiatives outright. Partnerships with the private sector are necessary not only to share the costs but also the risks and technical capacities.
- Typically, cities deploy a combination of internal and external funding sources, policy and regulatory tools, and strategic partnerships with the private sector to finance their urban regeneration vision.
- In some cases, where public land is owned by the central government, special legislation may be required to transfer the land to the local government.

## **Implementation**

- This phase includes structuring sound institutions and an organizational structure that is viable and sustainable and can exist through multiple political administrations. It also involves developing sound contracts that translate the vision into a tangible partnership between public and private sectors.
- Political leadership may be the most important factor throughout the process, especially in the implementation phase. Because regeneration is a long-term, transformative process, there is disruption and risk, and political leadership is essential to managing the change process so that all stakeholders feel engaged in the process.
- Another major indicator of success in the implementation phase is to clearly map out the life of the project and the expected project cycle and phases, accounting for uncertainties.
- Up next is the phasing and breakdown of a large project into manageable components. The handover process must account for the complex set of interdependencies between the large scale investments and construction projects, such as major infrastructure (utilities, transport, park systems, brownfield cleanup).

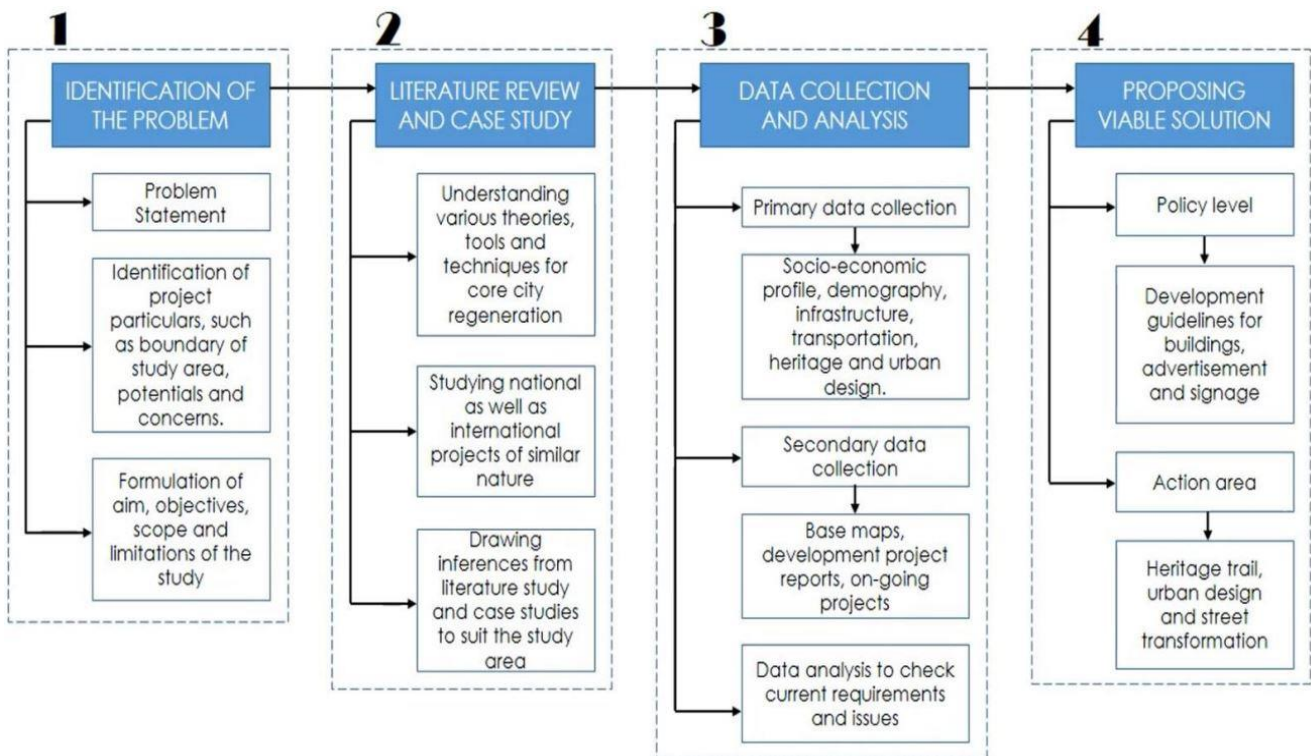
## **Problems & Need for the Study**

- The state of architectural decay of the cities has always been a classic case in most urban centers of Asian cities. Many urban places have experienced unprecedented development, urban growth and radical changes in recent years. In this process, much of the traditional urban areas have been either damaged, destroyed or badly mutilated.
- The place, strong in its character and historical background offer great opportunities if being regenerated into becoming a more livable place to live, work and play.

## Scope and Limitations

- The study is focused only on physical nature of built environment that can influence or increase the liveability of a place.
- As per the time and study limitation, a particular area in the city is selected for the study based on need and importance of development of that area.
- Study incorporates various aspect of built environment like road connectivity, walkability, open and green space etc. but other associated aspects and concern like impact on micro climate, pollution is beyond the preview of the study.

## Research Methodology



## CASE STUDY

### 1. Ahmedabad

- Ahmedabad has always had a strong connection with the Sabarmati River. However, growing industrialization resulted in environmental degradation of the river. Since Sabarmati was a seasonal river, it ran dry for 9 months of the year and carried water mostly during the monsoon season. The dry riverbed and riverbanks were used for farming and a regular weekly market, Ravivaari. A number of informal settlements arose along the riverbanks, reducing direct access to the river.

#### Scoping

- The Sabarmati Riverfront Development Corporation Limited (SRFDCL), was established as a wholly-owned company by the AMC and a few other minority shareholders and was initiated in mid 1990s.



#### Planning

At the outset, the project was envisioned as a multidimensional environmental improvement, social uplifting, and urban rejuvenation project.

Key objectives were to:

- Make the riverfront accessible to the public.
- Stop the flow of sewage, and keep the river clean and pollution free.
- Provide a site for the permanent re-housing of informal settlements along the riverbed.
- Create riverfront parks, promenades and ghats to enjoy the water.
- Provide Ahmedabad with new cultural, trade and social amenities.
- Generate resources for paying project costs.
- Create a stronger identity for Ahmedabad.
- Loans from HUDCO and the Ahmedabad Municipal Corporation, using land as collateral. Twenty percent of the reclaimed land was to be sold to finance the entire cost of the project.

#### Inferences

- The importance of an experienced and able city resource team.
- The existence of a strong, diverse and vocal Board of Directors:- A bipartisan board of governors encompassing diverse technical and professional capacities contributed to the success of the project.
- The decision to take external managerial support along with other technical and professional inputs

## CASE STUDY

### 2. Shanghai

- The city of Shanghai, one of the major economic and population centers of China, has undergone a dramatic urban expansion and redevelopment of its downtown precinct since the 1990s. This profit-driven redevelopment model proved easy to implement, but had little regard for the preservation of the urban fabric or the historically significant identity of the city.

#### Scoping

- Beginning in the 1990s, the Shanghai Municipal Government announced a series of policies to redevelop dilapidated neighborhoods. In 1992, the Shanghai Municipal Government initiated the Program 365, which aimed to redevelop 365 hectares of dilapidated and shanty housing units. As part of the government's regeneration initiative, each District Government in the central city of Shanghai was asked to propose sites for regeneration to the Municipal Government. Once a site was approved, the Municipal Government would include it in the regeneration program. To speed implementation, a deduction of fees and a shortening of the approval process were granted. This process led to the redevelopment



#### Planning

- The master plan of this Project was finished in 1996, and approved by the Shanghai Municipal Government in 1997. The District Government started to prepare a DCP to define the specific Floor-Area Ratios (FAR), green space ratio, height limits and other parameters and specifications for each block.

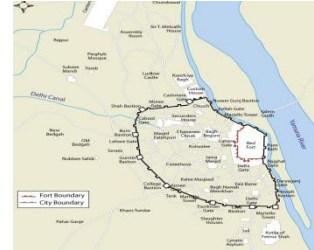
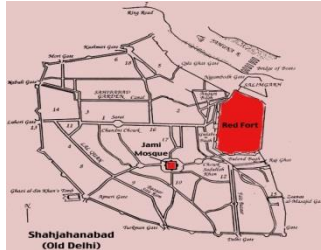
#### Inferences

- An initial draft master plan or urban design framework can provide an appropriate discussion tool for the developer to reach a consensus with local public officials, as well as other stakeholders from the outset.
- Ongoing implementation of the plan
- Cultural heritage should be considered an asset and a form of capital that can enhance the identity of a place, generating and even raising property values.
- Consistency in local government ideas and priorities for the project is important, especially in longer-term redevelopment efforts.

## CASE STUDY

### 3. Shahjahanabad, Delhi

- Shahjahanabad is also known as "Walled City" or "Old City" of Delhi.
- Once filled with mansions of the nobility and members of the royal court, along with elegant mosques and gardens.
- Symbolic heart of metropolitan Delhi.
- Extremely crowded and dilapidated.
- It is getting degenerated and its rich heritage is dying.
- Population goes on decreasing.
- The Walled City has continued to become increasingly congested with trade and commerce



The walled city has major wholesale and specialized markets of regional importance:-

1. **Fatehpuri, Khari Baoli, and Naya Bazaar** : Spices, grains and food products
2. **Katra Neel and Malliwada** : Fabric and cloths.
3. **Chandni Chowk and Daryaganj** : High-end retail and eateries
4. **Kinari Bazaar and Dariba Kalan** : Jewellery and sequin products
5. **Sitaram Bazaar and Churiwalan** : Accessories
6. **Matia Mahal** : Eateries
7. **Lal Kuan** : Kites
8. **Ballimaran** : Optical s, wooden and leather goods



Spice market at Khari Baoli



Cloth market at Katra Neel



Book browsing at Nai Sarak



Ribbon shops in Kinari Bazaar



Jewellery shops in Dariba Kalan



Food shops at Matia Mahal

#### MASTER PLAN: HIGHLIGHTS

- The first Master Plan of Delhi, 1962 proposed for decongesting the area by shifting 45% of the population out.
- In MPD 2001, it was identified as a "Special Area" and the need was felt to
- formulate appropriate planning standards for the area.
- In MPD 2021, Shahjahanabad was identified as a "Conservation Zone".

## CASE STUDY

SPECIAL AREA REGULATIONS	<ul style="list-style-type: none"> <li>• Redevelopment scheme to be prepared by concerned municipal body within three years.</li> <li>• Special area building regulations will be prepared by the authority in consultation with the local body within a period of three years and notified with the approval of the central government</li> </ul>
MIXED USE REGULATIONS (PROHIBITED ACTIVITIES)	<ul style="list-style-type: none"> <li>• Hazardous material handling trade (retail/wholesale).</li> <li>• Repair/workshops of automobiles and battery Charging.</li> <li>• Warehousing/storage..</li> <li>• Junk shops (except paper and glass waste).</li> <li>• Liquor shops.</li> <li>• Printing, dyeing and varnishing.</li> </ul>
PERMISSIBLE USE	<ul style="list-style-type: none"> <li>• Public/semi -public uses will be retained in their present locations and additional sites could be indicated in the scheme.</li> <li>• Owners can register with the local body within six months and submit a certificate of structural safety by qualified engineers.</li> <li>• Special area should be prepared by the local body with in three years of approval of the Master Plan Delhi, 2021.</li> </ul>

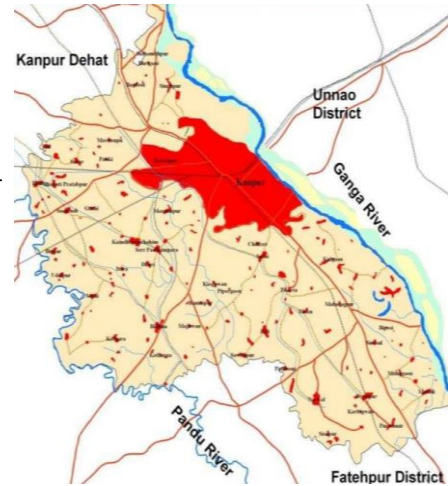
### Inferences

- Infrastructure Upgradation:- Innovative reinstallation of utilities (such as electric wires, transformers, drains, lighting fixtures etc.), without damaging the existing elevation or visual harmony
- Development of Public Amenities:- Propose a waste management plan to increase capacity, collection and disposal of garbage and locating strategic community collection points ( CCP),
- Congestion Management & Improved Access :- Filtered vehicular and pedestrian movement based on street width and its carrying capacity. Park and ride facilities in the form of a-rickshaw stands at drop-off /pick-up points and parking zones. Park and walk continuous walkways connectivity linking to tourist circuits and landmarks.

# CITY PROFILE

## Introduction

- Kanpur is a metropolitan city, sprawling over an area of 267 sq. km. Kanpur is the biggest city of the State of Uttar Pradesh and is main centre of commercial, industrial and educational activities. It is administratively divided into 6 zones and 110 wards with an average ward population range of 19,000 to 26,000.
- Kanpur is divided into two districts namely Kanpur-Nagar and Kanpur-Dehat. Kanpur comprises of 3 tehsil, 2 Municipal Board, 2 Nagar Panchayats and 10 statutory Towns. Kanpur is also divisional headquarters of Kanpur commissioner consisting of Kanpur Nagar, Kanpur-Dehat, Etawah, Auraiya, Farrukhabad and Kannauj districts. The town's population is nearly 2.5 million
- It is also known as the industrial capital of the state. Formerly known as Manchester of the country and owing to its industrial importance then, a branch of the Reserve Bank of India was established in the city. However, its industrial base is in the process of decline as most of the textile base have now been closed. Kanpur today is more of a commercial hub rather than a major industrial centre. Kanpur is home to several most prestigious educational institutions of the country including one of the foremost IITs.



International centre



CSJM University



IIT Kanpur



CSA Agriculture University

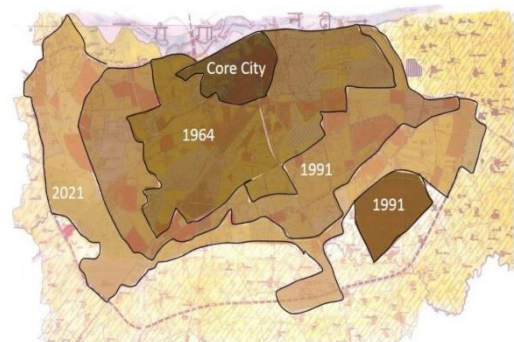
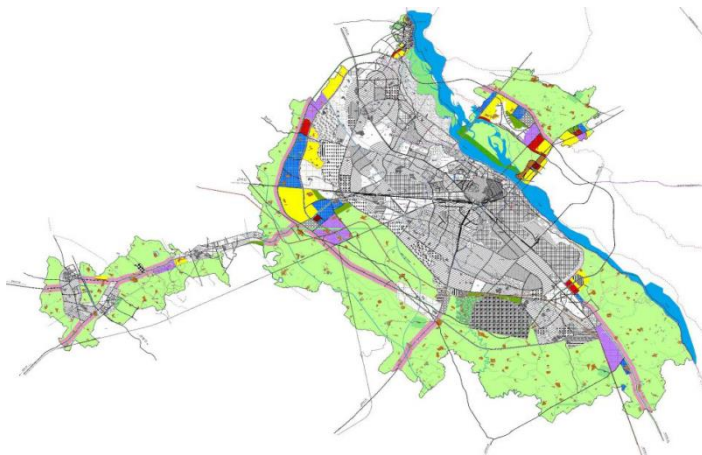
## Location and Connectivity

- Kanpur is connected by road with all the major cities of the country. It is situated on National Highway No. 2 on the Delhi-Agra -Allahabad-Calcutta route and on National Highway No. 25 on the Lucknow-Jhansi-Shivpuri route. It is located at the distance of 79 km from Lucknow, 193 km from Allahabad, 329 km from Varanasi, 398 km. Khajuraho, 269 km Agra and 222 kms from Jhansi.



## Evolution

- The city started growing southwards along the banks of Ganga in the early 18th century. Colonization resulted in the setting up of industrial estates, mills and defence establishments which came up in linear pattern along the river. Major activity centre (CBD) is still located in the centre of the city.



- The CBD area is heavily built up and characterized by mixed commercial and transport related activities. The public, semi-public, residential and other land use activities have been mostly concentrated in the west.
- Due to physical constraints of river in the north and cantonment in the east, industrial concentration followed western/ southern expansion.
- HIG/MIG residential development originally towards the west of core CBD, now moving towards IIT along GT road. LIG/EWS type residential development is across bypass road towards South Kanpur. Growth constraints towards South West due to Cantonment area.

## Climate

- The climate is of a tropical nature and shade temperature varies from 2°C to 48°C. Rainy season extends from June to September, with the period of maximum rainfall normally occurring during the months of July and August. About 89 percent of the annual rainfall is received during the monsoon months (June to September). The total rainfall in the town varies from between 2 mm to 277 mm.

The district lies in the Ganga basin which is formed of alluvium of the early quaternary period. In the district, no hard or consolidated rock exposures are encountered. The main constituents (sand, silt and clay) of alluvium occur in variable proportions in different sections. The mineral products

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	15 °C (59) °F	18.6 °C (65.5) °F	24.3 °C (75.8) °F	30.4 °C (86.7) °F	33.3 °C (91.9) °F	32.8 °C (91.1) °F	29.2 °C (84.6) °F	28.4 °C (83.2) °F	27.8 °C (82) °F	25.8 °C (78.4) °F	21.4 °C (70.6) °F	16.5 °C (61.8) °F
Min. Temperature °C (°F)	9 °C (48.2) °F	12.2 °C (53.9) °F	16.8 °C (62.3) °F	22.5 °C (72.4) °F	26.3 °C (79.4) °F	28 °C (82.3) °F	26.4 °C (79.6) °F	25.9 °C (78.5) °F	24.6 °C (76.2) °F	20.2 °C (68.3) °F	15.2 °C (59.3) °F	10.4 °C (50.8) °F
Max. Temperature °C (°F)	21.4 °C (70.5) °F	25.3 °C (77.5) °F	31.7 °C (89) °F	37.9 °C (100.3) °F	39.8 °C (103.7) °F	37.7 °C (99.9) °F	32.7 °C (90.8) °F	31.8 °C (89.2) °F	31.7 °C (89) °F	31.5 °C (88.6) °F	27.9 °C (82.3) °F	23.2 °C (73.7) °F
Precipitation / Rainfall mm (in)	16 (0.6)	25 (1)	11 (0.4)	8 (0.3)	12 (0.5)	108 (4.3)	299 (11.8)	266 (10.1)	160 (6.3)	31 (1.2)	4 (0.2)	9 (0.4)
Humidity(%)	67%	60%	44%	30%	35%	50%	77%	81%	79%	64%	58%	64%
Rainy days (d)	2	2	2	2	3	8	18	17	12	2	1	1
avg. Sun hours (hours)	8.4	9.6	10.6	11.5	12.0	11.0	8.5	8.1	8.5	9.7	9.6	8.9

of the district of saline earth from which salt petre and salt are derived and limestone conglomerates (U.P. District Gazetteers Kanpur). The relative humidity varies from 15% to 85%. The relative humidity in Kanpur ranges from less than 30 percent in the summer season to 70 percent in monsoon season.

## Flora and Fauna

- Kanpur is home to many residential and migratory birds. Most of them can be spotted at Bithoor, IIT Kanpur campus and areas alongside the Ganges Canal. In the IIT campus large number of peacocks and neelgae can be seen.
- The city has Asia's biggest (area wise) zoological garden. Exotic species of flora are present at the CSA campus also. The Kanpur zoo is famous for its cages designed to provide a natural habitat for the animals and has a vast variety of animals. The Zoo is a part of a lush green area - The Allen Forest Zoo, Nawabganj.

## Demography

- The main characteristics which are to be taken into consideration are; distribution of population, growth rate, density, age structure, sex ratio, literacy rate, work force participation, migration etc. Population characteristics play a pivotal role for past and future trends of growth as well as the formulation of the future projections based on past trends, which become basis for the allotment of resources for the preparation of master plan.

### Population Growth Trends:

S.No.	Verticals	Population	Households	Growth Rate	Population	Households	Growth Rate	Population	Households
		2011			2001			1991	
Kanpur									
1	Kanpur MC	2768057	522805	8%	2554354	440490	36%	1879420	325310
2	Urban Areas other than Kanpur MC	194,475	38,861	- 0.34 %	195146	35,337	11%	175,599	32831
3	Rural Area	587997	110,874	21%	486076	81,728	16%	418431	69,105
	Total Area	<b>3550529</b>	<b>672540</b>	10%	<b>3235576</b>	<b>557555</b>	31%	<b>2473450</b>	<b>427,246</b>

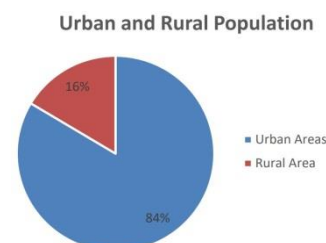


- In Kanpur Area, the decadal population growth rate for 2001-2011 is 10% the growth rate of Kanpur Municipal Corporation is 8% which is lower than the state average of 20% and also lower than the national average of 17.64%. Kanpur MC has the highest decadal growth in 2001 i.e. 36% in last 3 decades. The population of Kanpur Planning Area in 1991 was 24.95 lakh which rose to 32.63 lakh in 2001 and to 35.82 lakh in 2011 with the decadal growth rate of 31% and 10% respectively. Maximum population growth rate in 2001 can be result of growth in urban area and merging of surrounding towns in Planning Area.
- As per Census 2011, total population of Kanpur Area is 35,82,274. Out of which, the population in urban areas is 29,94,277 persons whereas, rural population is 5,87,997.
- The population distribution in Kanpur area shows that the majority of population in the Kanpur area is concentrated in urban region i.e. 84% and only 16% population reside in rural regions as per 2011 census.

#### Population Projection:-

- The population of Kanpur as per census of 2001 is 32,35,576 and 35,505,29 as per census 2011. For the present study, we are taking the projected figure of 48 lakh for 2031 by simple graphical method.

S. No.	Methods	Population Assessed			
		2001	2011	2021	2031
1	Arithmetic Method	23.53	25.94	28.35	30.78
2	Simple Graph Method	25.75	31.9	40.58	48.00
3	Geometric Increase Method	29.16	31.5	63.07	76.79
4	Semi Log Growth Method	29.00	40.57	56.77	70.00



#### Sex Ratio

As per 2011 census data, in Kanpur Area, the ratio is 861. In context of gender comparison, the

S.No	Vertical	Male Population	Female Population	Overall Sex Ratio	Male (0-6yrs)	Female (0-6yrs)	Sex Ratio (0-6yrs)
<b>Kanpur Area</b>							
1	Urban Areas	1611307	1382970	858	156838	135517	864
2	Rural Areas	313373	274624	876	43261	38582	892
<b>Total</b>		<b>1924680</b>	<b>1657594</b>	<b>861</b>	<b>200099</b>	<b>174099</b>	<b>870</b>

sex ratio in rural area is higher as compared to Urban limits. In urban area, the sex ratio is 858 whereas, it is 876 in rural areas.

#### Population Density

- Kanpur has a population density of 9756 per square kilometer. It is less as compared to the density of other major towns such as Ahmedabad (18424 sq. km.), Bangalore (19027 sq. km.), Chennai (24,231 sq. km.) and Hyderabad (21,207 sq. km.).
- The population density also varies from area to area. For example, old city area, which is identified as core area by KNN and is comprised of 67 wards, is very densely populated. The population density in core area is 30401 persons per sq. km. whereas it is 5617 persons per sq. km. in outer city area.

#### Literacy Rate

- Literacy rate is one of the key parameters for demographic analysis. The literacy rate in the planning in 2011 was 72%. The overall literacy rate is more than the state average, i.e., 56.4% (2011). The urban areas, having more infrastructure, has a better literacy rate, i.e 74%. For rural areas, it is 64% providing adequate primary educational facility in the rural and urban areas is required.

S. No	Particulars	Census, 2011					
		Total Literates	Male Literates	Female Literates	Over All Literacy Rate	Male Literacy Rate	Female literacy rate
<b>Kanpur Area</b>							
1	Urban	2220536	1227905	992631	75%	76%	72%
2	Rural	374979	218547	156432	64%	70%	57%
3	Total	2595515	1446452	1149063	89%	75%	69%

## Workforce Participation

- As per census 2011, the WFPR of the Kanpur area is 33.7%. Within the Kanpur area, rural area and urban area 33.6% and 34.2% has WFPR respectively. As per Census 2011, the working population of Kanpur area stands at 12,04,135; out of which 9,60,259 (79.6%) are main workers.

S. No.	Particulars	2011			2001		
		Total Planning Area (Urban +Rural)	Urban Area	Rural Area	Total Planning Area (Urban +Rural)	Urban Area	Rural Area
1	<b>Total Population</b>	3582274	2994277	587997	3,262,596	2,777,988	486076
2	<b>Total Workers</b>	1204135	1003300	200835	934731.5	771600.5	163131
3	<b>Main Workers</b>	960259	812177.5	148081	816744	696023	120721
4	<b>Marginal Workers</b>	243877	191122.5	52754	117987.5	75577.5	42410
5	<b>Non-Workers</b>	2378139	1990977	387162	2329332	2,006,387	322,945
6	<b>WFPR (in %)</b>	<b>33.61%</b>	<b>33.51%</b>	<b>34.16%</b>	<b>28.65%</b>	<b>27.78%</b>	<b>33.56%</b>

- As per the census 2011, total workers constitute approximately 34% of the total population with a total of 12,04,135 workers. The workforce participation rate of the planning area is comparatively higher than the State average i.e., 33%. Out of the total Workers, main workers constitute 80% while, marginal workers accounts for 20%. In total, 66% of the total population is non-workers. From the above table, it is observed that total WFPR got increased from 2001 to 2011

S.No.	Worker Type		No. of Persons			Percentage (%)		
			Total	Male	Female	Total	Male	Female
1	Main	Urban	812177.5	711482	100,696	85%	88%	12%
		Rural	148081	126374	21,707	15%	85%	15%
		<b>Total</b>	<b>960258.5</b>	<b>837856</b>	<b>122402.5</b>	<b>80%</b>	<b>87%</b>	<b>13%</b>
2	Marginal	Urban	191122.5	139,476	51,647	78%	73%	27%
		Rural	52754	36,115	16,639	23%	68%	32%
		<b>Total</b>	<b>243876.5</b>	<b>175590.5</b>	<b>68286</b>	<b>20%</b>	<b>72%</b>	<b>28%</b>
	<b>Total workers</b>		<b>1204135</b>	<b>1013447</b>	<b>190688.5</b>	<b>34%</b>	<b>84%</b>	<b>16%</b>
3	Non-Workers	Urban	1990977	760349.5	1230628	84%	38%	62%
		Rural	387162	150884	236278	17%	39%	61%
		<b>Total</b>	<b>2378139</b>	<b>911233.5</b>	<b>1466906</b>	<b>66%</b>	<b>38%</b>	<b>62%</b>
	<b>Total</b>		<b>3582274</b>	<b>1924680</b>	<b>1657594</b>			

## Birth rate and Death rate

- Kanpur Nagar has a birth rate of 17.3% and mortality rate of 5.6% whereas, in Kanpur Dehat, the birth rate is 19.7% and Mortality rate is 8.8%.

## **Key Issues**

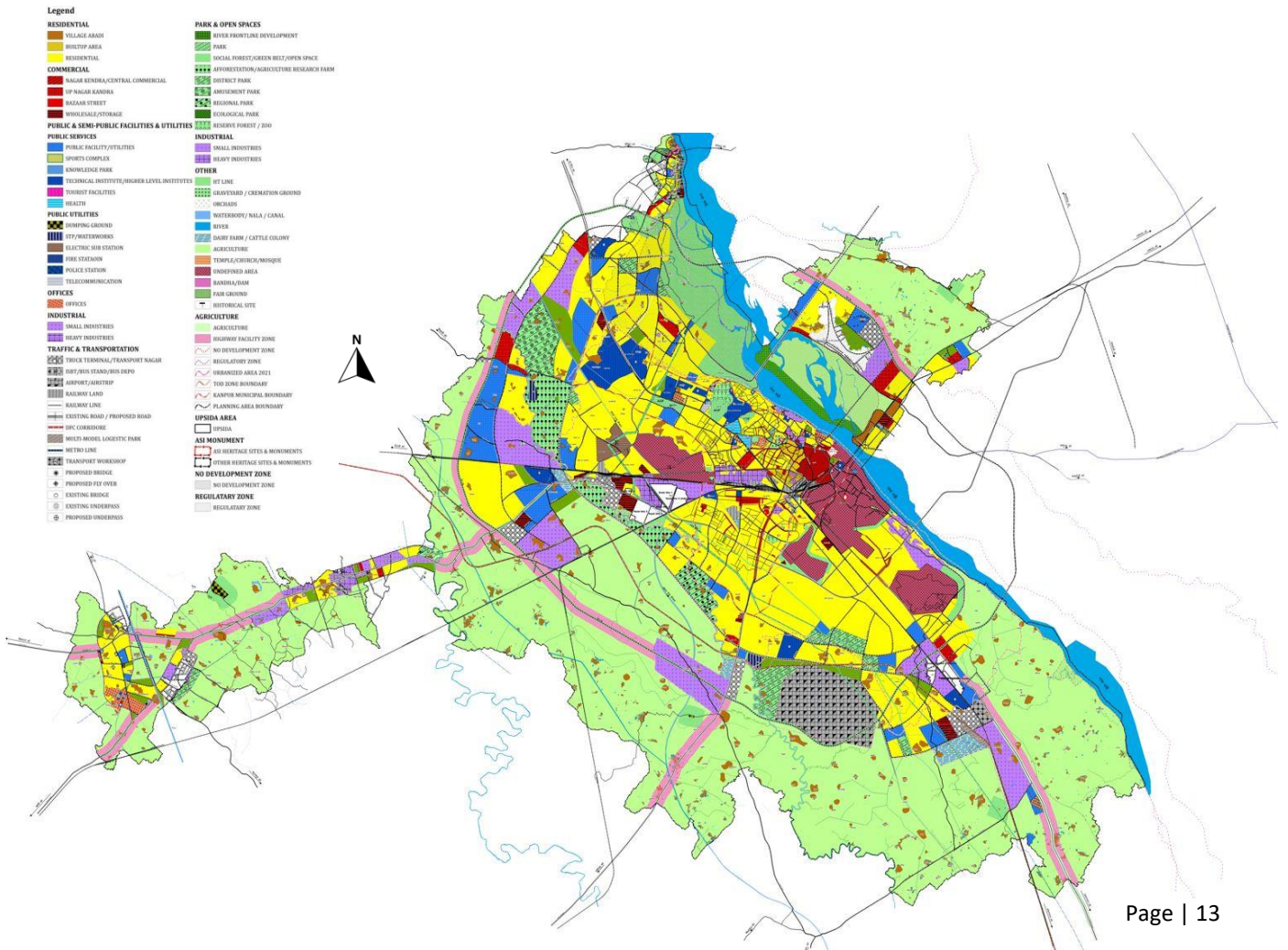
- Power shortage and roistering being observed for 10-12 hours per day on average.
- Poor law and order situation in the city.
- Poor infrastructure in the state as well as city.
- No air connectivity between major stations.
- Government Schemes for providing incentives to entrepreneurs are not implemented sincerely and seriously.
- Ethical and transparent functioning of financial institutions.
- The state government has to come out with aggressive and promotional industrial policy and ensure its implementation.
- Non-confirming industries (approx. 1000) should be shifted to confirming areas on priority basis.

# LANDUSE PATTERN

- The process of planned development for Kanpur city was started way back in 1943 when Kanpur Development Board has prepared the first development plan.
- Kanpur city has grown from an area of 8236 hectare in 1946 to 29670 hectare in 1962 which includes the cantonment area too. In 1962, it was spread from Beri Akbarpur in west to Ruma in east and from Ganga River in north to Pandu River in south. As per Master plan 1991, in 1962 out of total 29,670 hectare, 8863.5 hectare (29.9%) was developed land and rest 18235.7 hectare (61.5%) was agricultural land, 2570.8 hectare (8.6%) was open land. In 1997- 98, total metropolitan region area has increased to 89131.15 hectare out of which 4,743.9 hectare (5.31 %) was non-defined (prohibited area) and rest 29,683 hectare and 54,704 hectare (61.39%) was urban and rural area respectively.
- Over a period of time, Kanpur has developed linearly from east to west along Ganga River and G.T road. The Central Business District (inner city) is located in the north central part. It is heavily built up and characterized by mixed commercial and transport related activities. The public, semi-public, residential and other land use activities have been mostly concentrated in the west. Due to physical constraints of river in the north and cantonment in the east, industrial concentration followed western/ southern expansion.

## LAND USE STRUCTURE

- The land use structure has been explained on the basis of Master Plan. From 1961 to 1998, area covered under residential and commercial land use has almost doubled from 31.77 to 62.93 and 1.86 to 3.28 respectively. The area under industries has increased marginally (6.42% to 6.93%). This is due to closure of many large scale industries in recent times. The area under public utilities has increased marginally from 6.59% to 6.90%. It has been observed that there has been enormous increase in the mixed-landuse and marginal increase in the industrial and public utility land-use. This is only indicative and to know the actual extent detailed field survey is required. The spatial growth pattern reveals that high growth has taken place in the core area and steps to decongest the inner core are required.



- Draft Master Plan of 2021 Due to lack of desire to implement the proposed land use, changes in land use, unauthorised construction and encroachment of land, lack of importance to commercial places, offices and recreation places, master plan of 1991 could not be fully implemented. The planned development has not taken place as per Master Plan of 1991 and targets kept under the plan have not been met. Due to growth in economic and industrial activities and physical spread, problems such as residence, transport, lack of community facilities, environment pollution, number of slum etc. has increased manifolds.

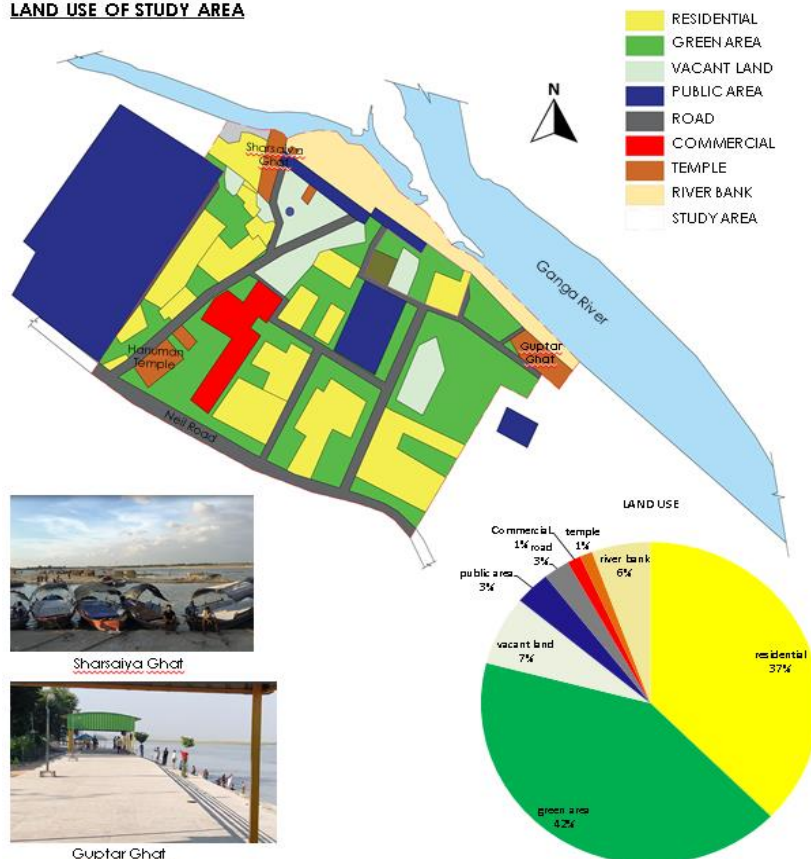
Sl. No.	Land Use	1961		1998	
		Area (hectare)	%	Area (Hectare)	%
1	Residential	2815.9	31.77	8813.38	62.93
2	Commercial	164.6	1.86	460.35	3.28
3	Industrial	569.4	6.42	970.42	6.93
4	Parks and Playground/Recreational	105.1	1.19	959.08	6.84
5	Public Utilities and Services	584.0	6.59	966.55	6.90
6	Government	148.4	1.67	298.62	2.13
7	Traffic and Transportation	771.7	8.71	1452.85	10.37
8	Railway Land	817.4	9.22	-	
9	Defence Establishments	2689.2	30.34	-	
10	Water bodies/ River & Drains	197.8	2.23	82.60	0.60
	<b>Total</b>	<b>8863.5</b>	<b>100%</b>	<b>14003.85</b>	<b>100%</b>
11	Open Area	2570.8	-		
12	Agriculture Green belt	18235.7		15679.15	
				29683.00	
13	Rural Area		-	54704.25	
14	Non-defined area			4743.90	5.31
	<b>Grand Total</b>	<b>29670.0</b>		<b>89131.00</b>	

Source: Kanpur Master Plan 1970, Draft Master Plan 2021

In order to correct the imbalances of the past development and to promote systematic and planned development of the city, it becomes imperative to revise the Master plan and the work was assigned to Town and Country Planning Department (TCPD).

- TCPD has prepared a revised Master Plan for 2021 taking into consideration the requirements of revised population of 45.0 Lac projected for 2021.
- The master plan added 33700 hectare land for future growth of the city. It proposed to reserve 14043 hectares of land, which is 41.67 percentage of proposed area, for accommodating about 45.0 lakh population projected for 2021.
- A gross residential density of 300 persons per hectares is prescribed in the master plan.
- The Master Plan proposed integration of all the schemes under the housing board with the schemes already under the KDA.
- New colonies proposed in close proximity to commercial hub to decongest the inner core city.

**LAND USE OF STUDY AREA**



- The Study area comes in ward no. 64 with total area of approx. 11.39 hectares.
- District Magistrate Residence lies in the same area. IN this ward Residential area is approx 4.2 hectare.
- This ward is basically contains the Heritage Ghats and temples That are visited with very high amount of foot fall on regular basis.
- It also contains Food Safety and Administration Office that regulates the safety of food in kanpur.
- Adjacent to site area Central jail and IG residence is also there.

S.no.	Land use	Area(Hectare)
1	Residential	4.2
2	Green area	4.7
3	Vacant Land	0.7
4	Public area	0.3
5	Road	0.4
6	Commercial	0.1
7	Temple	0.1
8	River Bank	0.6

## Key Issues

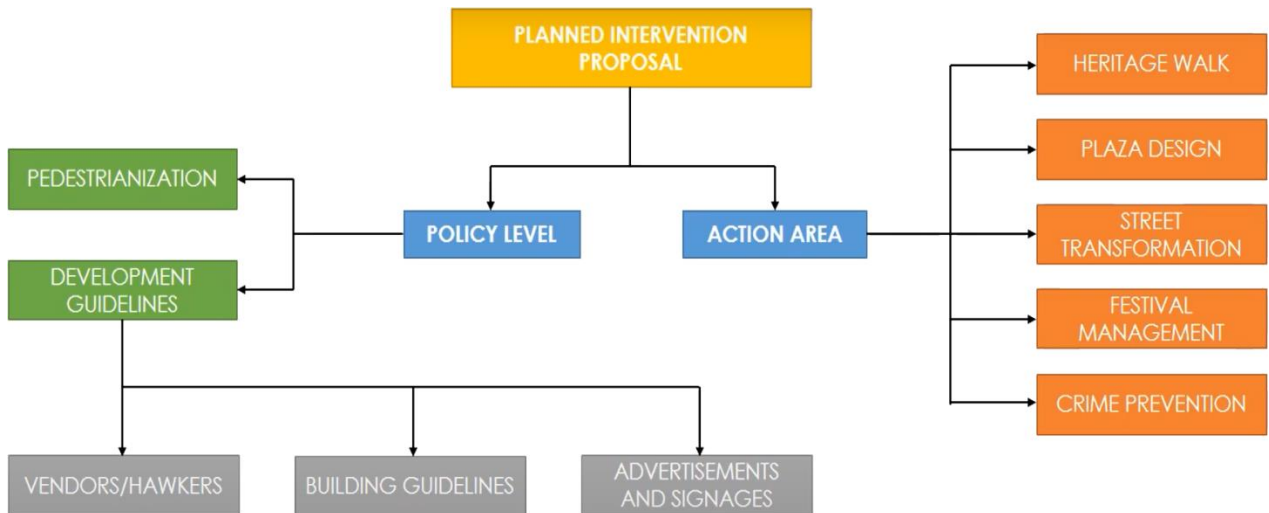
### EMERGING CONCERNS

- Increase in population has induced a great pressure on existing services and facilities like schools, colleges, health centre, etc.
- There is a shortage of opens spaces, parking areas, loading and unloading platforms in most of the commercial and industrial areas.
- There is an acute shortage of open spaces in high density built up areas, especially inner city.
- Small-scale industries, nursing homes, commercial offices are functioning in the area allocated for residential land use.
- Encroachments on road lead to chaos and reduce the effective road area.
- Reduction in area under traffic and transportation in proposed master plan will further increase the traffic load on the existing over strained transport network.
- Need is felt to proportionately increase the area covered under road traffic volume so that it will be commensurate with the increased traffic Volume.
- Steps should be taken to speed up the shifting of industries from non confirming area to confirming area.
- Need is to speedily approve the master plan which has gone for state government approval and implement it.
- The time taken in the preparation of master plans should be reduced. In the present case, the master plan preparation has taken more than 7 years and still it has not been notified.
- There should be good connectivity to new markets and terminals to ensure its success.
- Making affordable houses available for urban poor.
- The road connectivity to south city is currently in bad state and it need to be four lane.
- Steps should be taken to identify the existing cattle rearing areas and in the outskirts land should be identified and developed for shifting of cattle colonies.
- Sites in different wards/zones, where organised weekly markets can be put up, needs to be identified and provisions for different facilities such as parking, community toilets etc. should be made.

# PROPOSAL

## Framework

The chart shows framework of proposals in the core area on both policy level and action area levels.



### Heritage Walk

1. Guptar Ghat
2. Narayan Ghat
3. Sharsaiya ghat
4. Radha Krishna Mandir
5. Ram Janki Mandir
6. Sankat Mochan Hanuman Mandir.

Two heritage structure in the study area are protected by the ASI. A heritage walk is proposed which will cover all the heritage structure in the core city.



# PROPOSAL

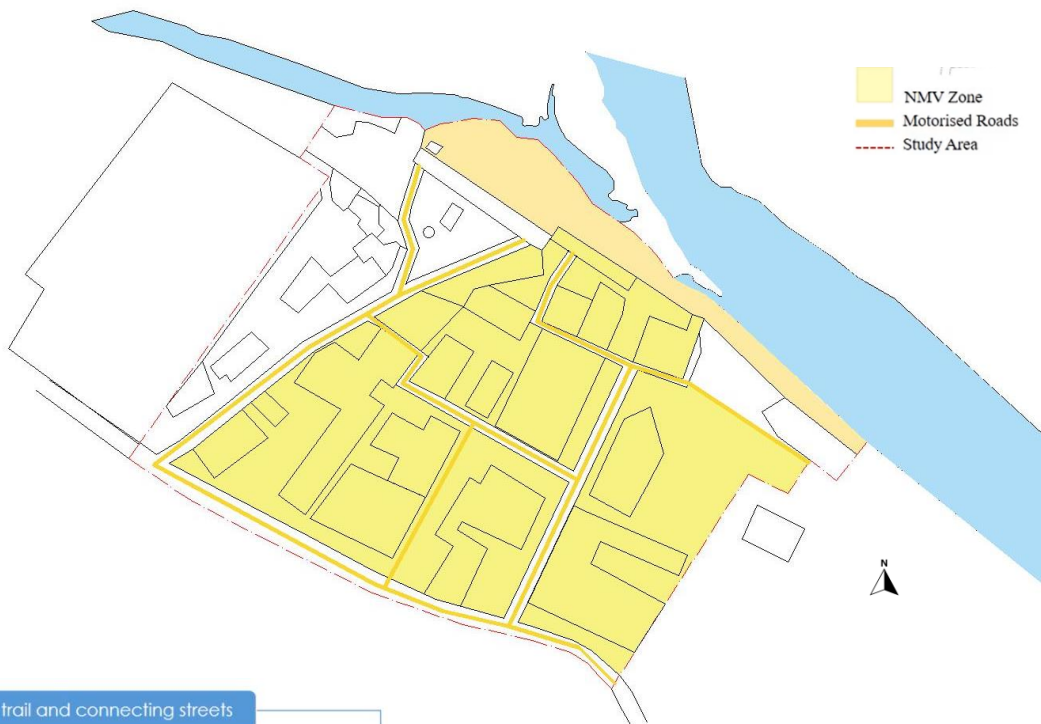
## Ganga Riverfront Development

- An ambitious plan to completely make over the riverfront next to Ganges at Kanpur has been taken up by Special Cell of Ganga Action Plan with the effort to convert the space into a Major City Level Park and Recreational hub for the region. Inspired by Gardens by the Bay Singapore, this Urban Park will also include watch tower facilities– The Flames of Life with panoramic views of the river expanse serving as the focal point of the riverbank.
- The basic zoning of the area comprises of a river facing land strip holding the vibrant riverfront promenade, the Ghats, the food street and the Flame of Life towers. The inner face of the land strip holds on one side the water park and on the other, an amphitheater, both of which look inwardly towards a lake, created out of a natural depression.



## NMV Zone

To solve the problem of traffic Congestion in the core city some of the Narrow streets have to be pedestrianized. Only electric vehicles and pedestrians will be allowed on these streets.



- Heritage trail and connecting streets
- Solar charging points for e-vehicles
- Parking facilities in proximity



# PROPOSAL

## Enclosed Walkways

Revamping the narrow passages into pedestrian malls for shoppers. This would let us control the fire hazard management of shops and markets. It would be designed in a proper and systematic order which would reduce congestion and improve mass movement easily.

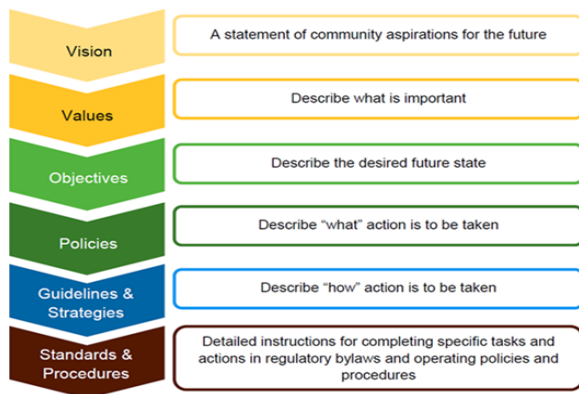


**ENCLOSED WALKWAYS:** The Connecting Walkway Bridge Premises, which consists of an estimated 455 rentable square feet of space, is shown as the “New Enclosed Walkway Connecting East and West Building is known as Enclosed Walkways. Enclosed area means all space between a floor and ceiling that is contained on all sides by solid walls or windows, exclusive of doorways, which extend from the floor to the ceiling.

## Development Guidelines

UDPFI Guidelines, 1996 provided a framework for plan preparation and implementation process. Since 1996, many developments have taken place in the field of urban planning, especially in view of emerging needs and requirements of urban settlements due to rapid population growth, globalization of economy and phenomenal advances in information and communication technologies. The towns and cities have become more dynamic in nature and are subject to unprecedented changes in terms of requirements of infrastructure and other basic services/amenities. Besides, new emerging aspects like regional development, inclusive planning, sustainable habitat, land use and transport integration at planning stage, Service Level Benchmarks, disaster management concepts, and governance reforms have given a new dimension to the planning process.

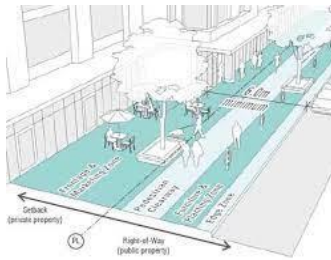
### **GUIDELINES FOR NEW STRUCTURES AS WELL AS REDEVELOPMENTS OR RESTORATIONS**



## Urban Design Guidelines

- The purpose of the Urban Design Guidelines is to guide development to have high-quality design and be compatible with surrounding areas that reinforces a healthy, vibrant and complete community. The Urban Design Guidelines will address a range of building typologies including low-rise/density, mid-rise/density, and high-rise/density. The Urban Design Guidelines will also provide clarity to the development community by illustrating the Town's expectations for new development.
- The Guidelines will help the Town reflect and promote local opportunities, and unique characteristics that define New market, such as the Historic Main Street area and the Urban Centers.

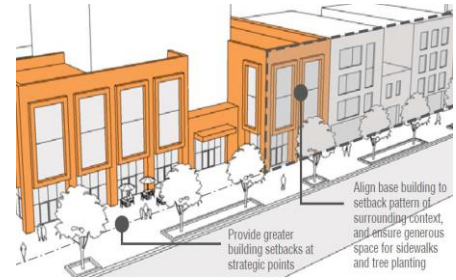
- The Guidelines will also address privately-owned public spaces (POPS) for New market's Urban Centers and ensure objectives of the Official Plan are achieved, while building on new development trends and ensuring an accessible New market.



Strategic setbacks can support active street frontages and vibrant pedestrian environments.



Transition space between the sidewalk and building should respond to the differing needs for access and privacy for residential and commercial frontages.



Strengthen desirable form, public spaces, and development patterns. Consider solar alignment for open spaces, and respond to established street walls.

## Festival Management

- **Principles of Festival Management** is a complete guide to developing and running a festival from inception to evaluation, covering all aspects of festival management and key central issues and contemporary debates.
- It focuses on the practical skills and knowledge needed for successful festival management, with a step by step approach to the planning, managing and staging processes.
- Principles of Festival Management provides the reader with a single port of call for developing and running a festival from inception to evaluation, covering all aspects of festivals management and discussing the key central issues and contemporary debates (such as financing, volunteering, security and much more).
- It is a vital resource for undergraduate and postgraduate students and academics in the fields of events, festivals, arts, music industry and cultural management and leisure and tourism studies, as well as early career festivals managers and employees.



## CONCLUSION

- The historic centre is alive because of its multi use structures that weave together functions to create a self sustainable environment.
- Solutions to complex problems are simple. A happy city can built by connecting the citizens with each other as well as the surroundings.
- Regeneration is about preserving and reviving the inner city without causing disturbance in the lives of the residents and workers.
- Making cities smart does not mean erasing its identity in the name of development and technological advancement.
- Techniques need to be applied keeping in mind the context and requirements rather than trying to make an entirely different entity

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