

Appraisal of Land Use and Road Network of Master Plan Bathinda (2009-2031)

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Abstract

A master plan is a dynamic long-term planning document that provides a conceptual layout to guide future growth and development. Master planning is about making the connection between buildings, social settings, and their surrounding environments. A Master Plan includes analysis, recommendations, and proposals for a site's population, economy, housing, transportation, Community Facilities, and land-use. The master plan consists of future directions of development, policy and implantation of the same. It sets out how a particular area can develop and redevelop into the future. A high-level plan intended to set out objectives and strategies to manage development and change over time. A process that defines what is important about a place and how its character and quality can be conserved, improved and enhanced. Master plans can have an important role in determining the shape of the urban environment. Master Plans generally prepared for 20 years of the horizon period. The Master Plans in Punjab are prepared and published by the Government of Punjab and comes into operation under section 75 of the Punjab Regional and Town Planning and Development Act, 1995(Amended 2006). Department of Town & Country Planning Punjab prepared Master Plan Bathinda (2009-2031) for LPA Bathinda in 2009.

Owing to the city's explosive growth, a Master Plan was necessary to direct and regulate the city's future development. Following the implementation of Master Plan Bathinda, it will be necessary to ascertain whether the land uses specified in the Master Plan and the actual ground conditions are compatible or meet URDPFI standards. It's also important to determine whether the Master Plan is guiding development in the LPA Bathinda area in accordance with its guidelines. In order to determine whether the proposals provided in the plan meet standards and requirements, it is also necessary to study the Road Network Plan. Therefore, an assessment study that puts people's needs and current problems in the context of a master plan is necessary. The objective of my research is to analyze the Land Use and Road Network Plan of Master Plan Bathinda (2009-2031) and its ground reality in terms of issues & its future outlook.

Keywords: Master Plan; evaluation; urban morphology; planning methods

Introduction to City and Study Area

One of North India's most significant and ancient towns is Bathinda. It is connected to Razia Sultan's incarceration in the Fort, which dates back more than 1800 years. It was also known as Bitunda and Wahtinda before becoming known as Bhatinda. However, Bathinda was adopted as the new name on the Survey of India's approval in order to match the phonetic expression as it was pronounced locally. In the center of the Malwa Region, in the southern section of Punjab State, lies the Bathinda district. Its

coordinates on a global scale are between 29°-33' and 30°-36' north latitude and between 74°-38' and 75°-46' east longitude. The district consists of one census town (Bhisiana) and eight towns: Bathinda, Rampura Phul, Maur, Raman, Bhuchu, Goniana, Kotfateh, and Sangat. The district is split into eight development blocks, which are named Bathinda, Sangat, Talwandi Sabo, Nathana, Rampura, Phul, Bhagta Bhai Ka, and Maur. These subdivisions are further subdivided into eight subdivisions at Bathinda, Talwandi Sabo, and Phul. There are 305 Gram Panchayats, 9 Market Committees, and 292 villages in the district (including 7 Municipal Councils—Sangat, Raman mandi, Maur, Kotfatta, Rampura, Bhuchu Mandi, Goniana, and 1 Municipal Corporation—as well as 5 uninhabited villages). The district's headquarters are situated in Bathinda.

The entire area covered by the Master Plan Bathinda is 57154 Hectares (571.54 Sq.Kms.), which consists of Bathinda city, two additional urban settlements (Bhuchu Mandi and Goniana Mandi), as well as adjoining 46 nearby villages.

Aim

1. It serves as a guide to the planning body for making any changes desired or recommended by the Public and Public Demand.
2. To achieve balanced infra structure (amenities, convenience, health) and planned development.
3. To manage growth, change, guide and regulate present and future development of towns and cities.

Objectives

1. To study the formulation and implementation process of the master plan in order to identify the various gaps and issues in Bathinda Master Plan.
2. To suggest recommendations for re-aligning the proposals with the ground realities.
3. To give broad recommendations for minimizing/ removing the gaps.

Scope

1. To work out the checklist in terms of components, procedure, stages and techniques for preparation of master plan.
2. Analysis of aspects such as Landuse, Transportation, are considered which further have sub aspects.
3. Recommendations for minimizing / removal of identified gaps. Check in the light of objectives for Assessment of Proposals.

Need

1. The master plan of Bathinda was prepared in 2010 for next 21 years so to check that whether this very master plan is covering up the gaps or not.
2. To identify whether the Bathinda master plan has mentioned various problems of significant aspects and up to what extent does the proposals meet the solutions.
3. It is possible that administrative structure might have changed and due to that various implementation policies change which ultimately result in failure or even amendment of new policies.
4. In order to overcome the defects of master plan, there is a need for the appraisal of master plan.
5. That is why appropriate recommendations are required for improvement in plan.

Methodological framework

The study's methodology is broken down into three stages: the introduction and theoretical framework, the master plan's appraisal and findings, and recommendations.

A. Introduction-

At this point, a thorough overview of the Master Plan is provided. The scope, purpose, and limitations of the research are also established, as well as the necessity and significance of the master plan and the appraisal study of the master plan.

B. Literature Review-

Understanding the fundamentals of appraisal and master plan appraisal, norms and standards, and case studies is the theoretical framework.

C. Data Identification-

This Data Identification Kit is set up for data collection based on the kind of information we require and the indicators that have been chosen to be used in the subsequent step of the various components' appraisal. The primary and secondary surveys will cover the data collection.

D. Data Collection-

At this stage, data will be gathered from the District Town Planner office and Municipal Corporation based on the data identification data kit. Data will be gathered via direct interviews using both quantitative and qualitative methods, as well as a public survey questionnaire.

E. Appraisal and Findings-

At this point, following the gathering of data from various sources. The Master Plan is appraised, i.e., the land use and transportation network is appraised in accordance with standards and actual conditions.

F. Recommendations-

Subsequently, recommendations are made in the third and final stage based on the issues or findings found during the Master Plan appraisal.

Theoretical Work

Definitions of Master Plan

The Master Plan or Comprehensive Development Plan is a policy document which gives a general framework which includes planning for the development of center city area. The Third Five year Plan defines the term, Master Plan“ as a statutory instrument for controlling, directing and promoting sound and rational development and redevelopment of an urban area with a view to achieving maximum economic, social and aesthetic benefits.

Source- D.S. Meshram / ITPI Journal 3: 2 (2006) 01-09

Master plan for a town or an area means the plan defining the boundaries, character of land use, stages of development, existing and proposed transport, communication and major open spaces including public buildings etc. Master plan for a town is necessary to guide the future expansion of town inn a planned manner so that haphazard growth does not take place.

<http://www.townplanning.up.nic.in>

A master plan is the long term perspective plan for guiding the sustainable planned development of the city. This document lays down the planning guidelines, policies and development code and space requirements for various socio economic activities supporting the city population during the plan period . It also the basis for all infrastructure requirements.

Source- Delhi Master Plan – 2021

A master plan is an evolving, long-term planning document. It establishes the framework and key elements of a site reflecting a clear vision created and adopted in an open process. It synthesizes civic goals and the public's aspirations for a project, gives them form and organization and defines a realistic plan for implementation, including subsequent approvals by public agencies.

Source –New York New Park Land New York City Dept. of City Planning- 2007

A Master Plan, also called a comprehensive plan, provides a long-range vision for the built environment of a community. It guides the appropriate use of lands in order to protect the public health and safety and to promote general welfare.

Source- Trenton Division Of Planning- 2014 City of Trenton, New Jersey

A master plan is a comprehensive long range plan for guiding the sustainable planned development of a town. It lays down the planning guidelines, policies and space requirements for various socio-Economic activities supporting the town population during the plan period, a mid-term comprehensive plan further integrated with budgetary process.

Derived Definition

History Of Master Plan Preparation Process In India

- Process of master plan in India was inspired by erstwhile comprehensive planning system under the Town and Country Planning Act, 1947 in the United Kingdom.
- First annual Town and Country Planning Seminar of the Institute of Town Planners, India held at Hyderabad in 1953, Model town and country planning legislation was discussed.
- During Third Five Year Plan (1961-66) by 100% financial assistance by central govt. to state govt. To set up town planning departments for preparation of comprehensive Master Plan for fast growing cities.
- More than 1000 master plans have been prepared under the State Town Planning Acts, Town Improvement Trust, City Development Acts and other are in process of preparation.

Concept Of Master Plan

Master Plan is comprehensive that is it integrates various aspects of planning like housing, transportation, infrastructure etc. All the aspects are considered that affects the quality of life of people and all the interrelationships between various aspects; Multidisciplinary in nature: it encompasses various disciplines of studies like social aspects, economics, environment, engineering, architecture.

Master plan is a long term document. It clears out the vision for prospective year for the city and plans out development for future. It efficiently uses resources to meet the present and future requirements of the citizens; Master plan should consider the environmental and costs related to it. The proposals for development should be environmentally sustainable.

Legal Framework For Master Plan

Preparation Of Master Plans Under, “The Punjab Regional And Town Planning And Development Act, 1995 (Amended 2006)”

To control and regulate the development of towns and cities in the state of Punjab, the Master Plans are to be prepared as a statutory requirement. Procedure for preparing the Master Plan under the Punjab Regional and Town Planning and Development Act, 1995 (hereinafter called PRTPAD, Act 1995 as amended 2006).

Features

- Comprehensive Planning law.
- To make provision for better planning.
- Preparation & implementation of regional and master plans.
- Guiding & directing development process in state.
- Undertaking urban development & housing programs and schemes for establishing new towns.

Master Plan Bathinda

In order to develop the Bathinda city and its surroundings in an orderly manner and to prepare the Master Plan under “*The Punjab Regional and Town Planning and Development (Amendment) Act, 2006*”. Exercise of power is conferred *under section 70(5) of the above said act.*

Meaning Of Appraisal, Evaluation And Review

Oxford dictionary gives meaning of „Appraisal“ as “an act of appraising, to fix a worth, setting up a price, fixing a value”. This is mainly used in case of Master Plan. Another word is „Evaluation“ which according to oxford dictionary means “the action of appraising of valuing goods, a calculation or statement of value”. It is mainly used in case of projects to determine rate and returns. Thus both, „Appraisal“ and „Evaluation“ are synonyms and can be used to convey same meaning but of varying degrees. Appraisal denotes a higher level while evaluation consists of lower level. Another term used in this context is, „Review“ which is generally used by government agencies. It is done after specific time.

Criteria For Appraisal Of Master Plan

There are many criteria's for appraisal of a master plan because it is a policy document which itself is a very vast topic. So Master Plan for Bathinda city will be appraised on the basis of following criteria's

- Component, Aspects, planning procedure and stages.
- Proposals adopted in the Bathinda Master Plan
- Techniques adopted for analysis and projections.
- Implementation strategies in Bathinda Master Plan.

Preparation Of Check List

Aspects, Studies and Data consider in Bathinda Master plan

- Regional Settings
- Local Planning Area
- Municipal Area
- Physical Growth
- Physiographic Characteristics
- Economic Characteristics
- Land Use Trends
- Housing Trends
- Trade and Commerce
- Industries
- Facilities and Services
- Utilities
- Park and Open Spaces
- Traffic and Transportation
- Legal, Administrative and financial set up

Identification of problems and potentials related to :-

Regional Setting, Local Planning area and municipal area, Land use characteristics, residential, commercial, infrastructure, utilities, parks and open spaces, traffic and transportation, legal, administrative and financial set up.

Projections Related To

1. *Extent of local planning area*
2. *Economic base and employment*
3. *Housing and Commercial*
4. *Industries*
5. *Transportation*
6. *Physical infrastructure and Social infrastructure.*

4. Proposals Given in Master Plan

5. Planning Considerations.

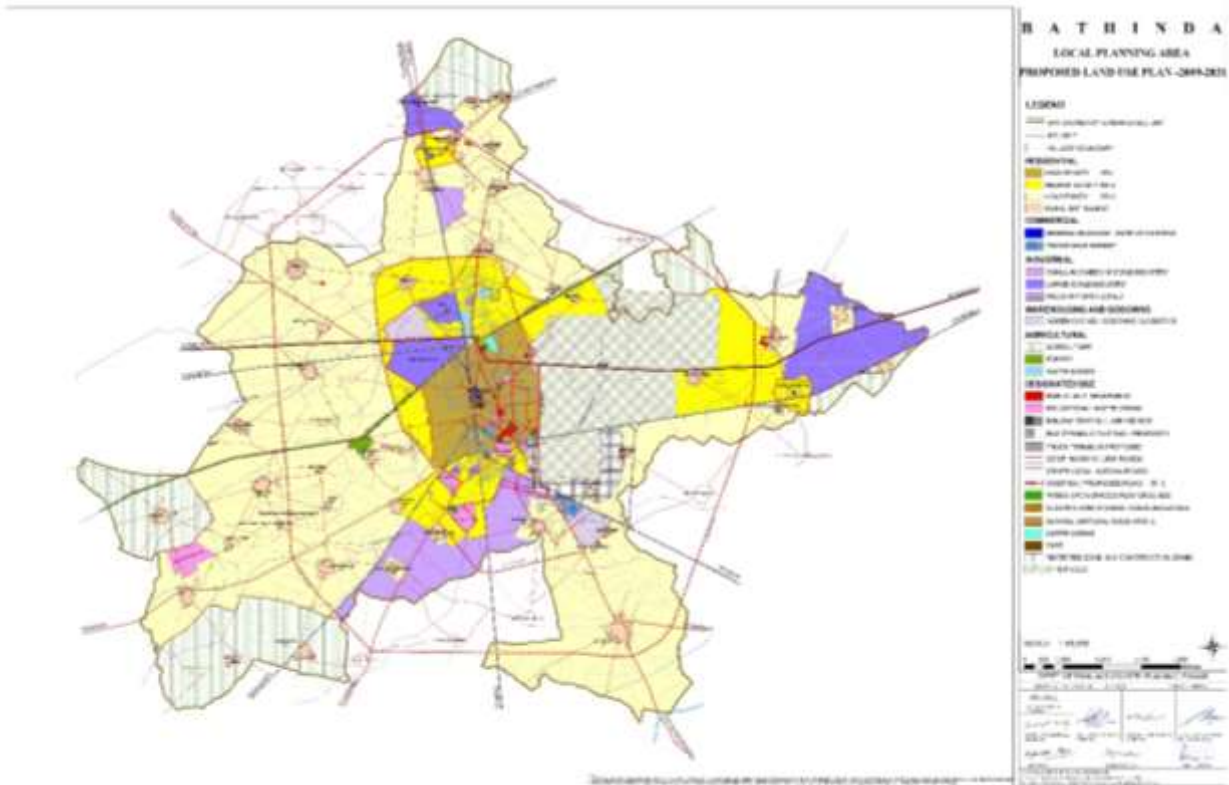
Data Identification Kit

ASPECTS	DATA TO BE COLLECTED	TECHNIQUES OF DATA ANALYSIS	SOURCE OF DATA	RELEVANCE
Proposals in Master Plan Bathinda	Proposals regarding all land uses, and environment Consideration.	Tabular Form. Pie Chart Proposals to be shown on Digitized Proposed land use Plan.	Master Plan Bathinda 2009-31 Primary Survey	Future proposals would meet the demand of development till 2031 and suitable with the existing environment. Comparison with URPDFI Guidelines
Existing scenario of development under Master Plan Bathinda	Details of new developments after the Master Plan 2009-31 implemented.	Tabular Form	Master Plan Bathinda 2009-31. Municipal Corporation Bathinda DTP Office Bathinda Primary Survey	Existing scenario of Development of the City to analyze growth level of the city
Proposed Traffic & Transportation in Master Plan Bathinda	New Hierarchy of roads proposed, Bus terminals, Linkages with other cities.	Tabular Form Proposed network to be shown digitized traffic& transportation plan	Master Plan Bathinda 2009-31 Primary Survey	New hierarchy proposed to carry out volume of traffic till 2031 connectivity with

				neighbors cities.. Comparison with URPDFI Guidelines
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Analysis

Proposed Land Use Plan Bathinda(2009-2031)



Source- Master Plan Bathinda(2009-2031)

Observations

1. The Map showing the Proposed Landuse Plan Bathinda.
2. This Master Plan consists of M.Corp. Bathinda, M.Cl. Bhucho and Goniana and 46 Villages.
3. No planning has been done for core city area.

LANDUSE DISTRIBUTION AS PER URPDFI STANDARD

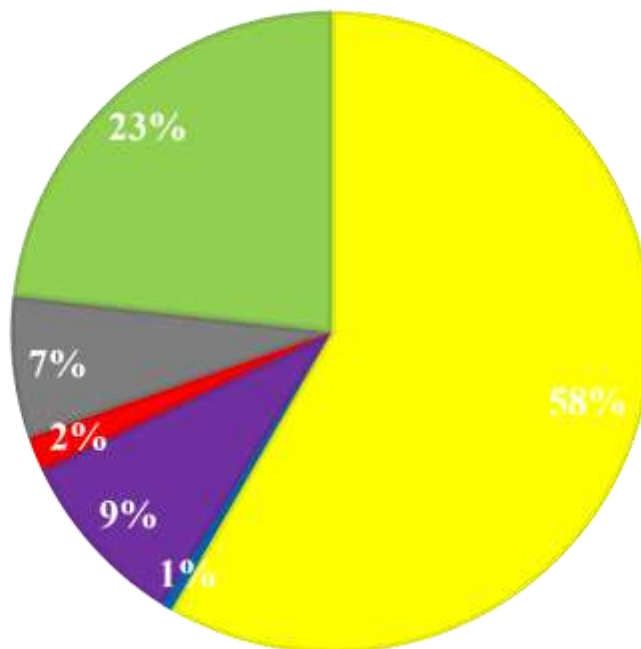
S.No	Land use Category	Percentage of Developed Area Metropolitan			
		Small	Medium	Large Cities (Bathinda)	Metropolitan Cities & Megapolis
1	Residential	45-50	43-48	36-39	36-38
2	Commercial	2-3	4-6	5-6	5-6
3	Industrial	8-10	7-9	7-8	7-8
4	Pub. & Semi Public	6-8	6-8	10-12	10-12

5	Recreational	<u>12-14</u>	12-14	14-16	14-16
6	Transport & Communication	<u>10-12</u>	10-12	12-14	12-14
7	Agriculture, Water bodies and Special areas	<u>Balance</u>	Balance	Balance	Balance
	Total Developed Area	<u>100</u>	100	100	100

Proposed Land use distribution in Master plan Bathinda 2009-31

S.no	Proposed Landuse	Urbanisable Area*		Total LPA	
1	Residential	33108	74.4	33358	58.3
2	Commercial	309	0.69	309	0.54
3	Industrial	5185	11.68	5185	9.07
4	Public, Semi-Public	984	2.21	993	1.73
5	Traffic & Transportation	4024	9.04	4084	7.14
6	Rural and Agricultural + Forest Areas	892	2	12484	23.18
	Total	44502	100	57198	100

■ Residential ■ Commercial ■ Industrial ■ Public, Semi-Public ■ Transportation ■ Agricultural

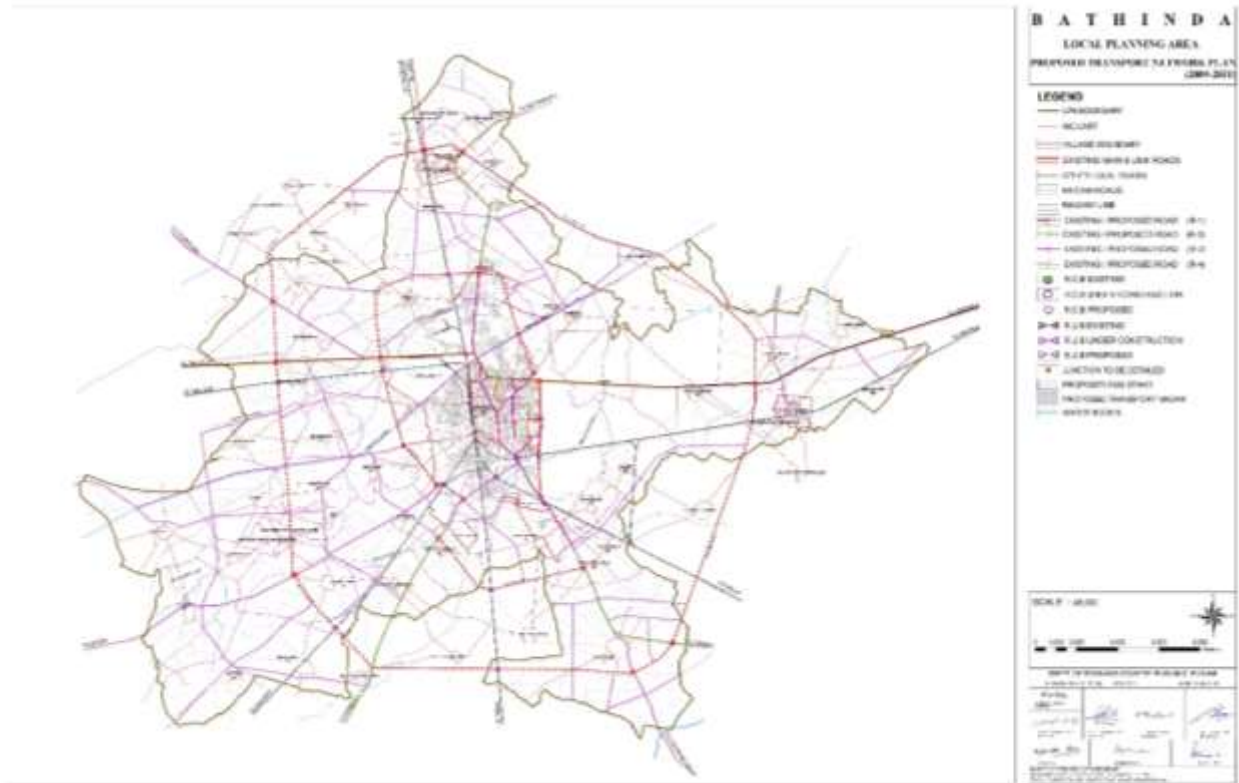


Remarks:

- According to population, LPA Bathinda (Projected Population of 2031 is 767887) is considered as large category city (As per classification of urban settlements).
- 58.3 % Area of Total area of LPA Bathinda proposed as Residential zone, which is more than the URPDFI Standards.
- 0.54 % Area of Total area of LPA Bathinda proposed as Commercial landuse zone, which is less as per the URPDFI Standards.

- 1.73 % Area of Total area of LPA Bathinda proposed as Public-semi public area, which is very less as per the URDPFI Standards.
- Other landuse zones are almost as per URDPFI Standards.

Transport Network Plan Bathinda(2009-2031)



Source- Master Plan Bathinda(2009-2031)

Observations

1. The Map depicts the Prop. Transport Network of Master Plan.
2. Inner and Outer ring roads of 200 feet width are proposed in this plan.
3. Existing roads are proposed for widening as R1, R2, R3 and R4 as width of 200, 150, 100 and 80 feet respectively.
4. No sector road has been proposed.
5. Bathinda- Dabwali road has been proposed as 150 feet only. It should be minimum 250 feet wide as it connects three states Punjab, Haryana and Rajasthan and heavy traffic flows on this road.
6. Bathinda- Chandigarh road has been proposed as 200 feet only. It should be minimum 250 feet wide as heavy traffic flows on this road.
7. Even 50% of inner ring road has not been developed till now (almost after 15 years of Notification of Master Plan).
8. Outer ring road has not started yet.

Conclusions

The percentage of land use distribution planned in Master Plan Bathinda (2009-2031) is totally wrong as per URDPFI guidelines. As discussed above 58.3 % Area of Total area of LPA Bathinda proposed as

Residential zone, which is more than the URPDFI Standards. 0.54 % Area of Total area of LPA Bathinda proposed as Commercial landuse zone, which is less as per the URPDFI Standards. 1.73 % Area of Total area of LPA Bathinda proposed as Public-semi public area, which is very less as per the URPDFI Standards. Other landuse zones are almost as per URDPFI Standards.

The major industries like Thermal Plant and NFL have been honored and marked as existing industries in Proposed Land Use Plan. Industrial land use proposal in the North direction of Goniana Mandi is not given as per wind direction and as per environmental consideration. All other Land use proposals are however given as per wind direction and environmental consideration. Width of roads proposed in Transport Network Plan is not up to mark as heavy traffic flows on Bathinda-Dabwali (NH-54) and Bathinda-Chandigarh(NH-7) roads. No sector road has been proposed. However development is going on as per proposals and provisions of Master Plan. Revision of Master Plan is needed regarding percentage of land uses and Transport Network Plan.

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