

CHAPTER-1

INTRODUCTION

1.1 INITIAL STEPS

1.1.1 BACKGROUND

Urban areas in the past have not received much attention in terms of their planning, development and management despite the fact that cities and economic development are inextricably linked. Because of high productivity of urban areas, economic development activities get located in cities. Accordingly, it is desirable that human settlements are provided with necessary planning and development inputs so that their orderly growth and development is ensured. This would also be necessary for ensuring efficient functioning of human settlements, for improving their productivity and for providing desirable quality of life to its residents in order to cater to their economic, physical and metaphysical needs. The urban development strategy for any state thus assumes importance for not only its economic emancipation but also its physical well-being.

Therefore, the challenge for the planning and development of towns/cities is to promote balanced development in all spheres of urban life, physical, social and economic in a comprehensive manner. There is need to make urban transition efficient, equitable and cost effective by making policies and bringing out new projects/schemes. For this Master Plan preparation becomes the guiding principle for wiping out the deficits in urban infrastructures, mining the problems and exploring the potentials as per the town/city people.

“Master Plan (MP)” is identified as a strategic tool to achieve the above objectives.

Considering the role and importance of rational and orderly growth of urban centres, the Government of Punjab intends to streamline the development process in urban settlements, to ensure that these settlements continue to achieve their objectives of improved efficiency and productivity. Accordingly, it is desirable to have a stringent check on haphazard development and have an optimum land-use plan for these cities/ towns. In the process, the state government has taken the decision to prepare Master Plans for all towns and cities for a directed development, and to provide world-class amenities to its people.

Punjab Urban Planning and Development Authority is an apex institution established in July 1995 for promoting the development of balanced urban growth in the State of Punjab. PUDA has undertaken the task providing planned residential, commercial and industrial spaces incorporating the latest state of the art technology and town planning norms. In this process,

PUDA has taken up the preparation of the Master Plan for Kapurthala Local Planning Area with the guidance from Government of Punjab, to address the infrastructure and service delivery gaps in Kapurthala and to make the growth and development of planning area rational. The key objective of the Master Plan is to formulate a long-term vision and strategy to make the Local Planning Area vibrant, livable and creditworthy. Besides rationalizing the land use pattern, the Master Plan will facilitate the identification of sectoral investments and reform areas needed, to transform the Local Planning Area.

1.1.2 OBJECTIVES

The prime objective of the Master Plan is to promote, guide and rationalize the future growth and development of urban centres. It will endorse growth in the desired direction; promote economic development and service delivery and providing amenities to its people. Master plan ensures rational policy choices besides providing a flexible framework based on ground realities for a defined time span.

Master Plan is an appropriate and scientific tool for promoting systematic & planned growth of the city/town.

- (i) Identifying existing gaps in physical infrastructure & to bridge those gaps.
- (ii) Making assessment of the city and to suggest strategies for its economic development.
- (iii) Leveraging economy.
- (iv) Rationalizing of land use and their interrelationships.
- (v) Minimizing haphazard and sustained growth and development of town/cities and to achieve planned growth to create healthy living environment.
- (vi) Promote better urban governance and resource generation for urban and planned development.
- (vii) Rationalizing the orderly movement of traffic and transportation within the town and defines the area for laying down network of various services.
- (viii) Indicating spatial distribution of physical/social infrastructure for optimizing of their use & eliminating overlapping/absence of such facilities.
- (ix) Ensuring systematic, balanced & integrated development.
- (x) Framing mechanism/strategies for solving out the core area problems.

1.1.3 SCOPE OF WORK

The scope of Master Plan to be prepared covers the following aspects:

- Collection of available data and site visits.
- Sector studies in terms of demand, availability and identifying gaps in service delivery.
- Formulating vision and working out manning strategy.
- Formulation of concept plan and policies for the growth centers, growth corridors etc.
- Preparation of Integrated Infrastructure plan for all areas constituting designated local planning areas as per projected requirements.
- Preparation of detailed Zonal Development Plan including approximate location and extent of land uses such as residential, industrial, commercial etc. and development control regulations
- Review of ongoing and proposed projects, and other schemes announced by the govt. under JNNURM, UIDSSMT etc and to incorporate them in the plan.
- Incorporation of all the statutory provisions under the PR & TP, development Act-1995 as amended till date.
- Formulation of framework for implementation of the master plan, zoning plan and development control regulations.
- Prioritizing the projects and formulation of Investment plan.
- Formulate investment plan with appropriate financing strategies.
- Focus on the reforms to be carried out at the State and District level in consonance with the vision and strategic plan outlined to sustain the planned interventions.

1.1.4 LEGAL FRAMEWORK FOR MASTER PLAN

PREPARATION OF MASTER PLANS UNDER, “THE PUNJAB REGIONAL AND TOWN PLANNING AND DEVELOPMENT ACT, 1995 (AMENDED 2006)”

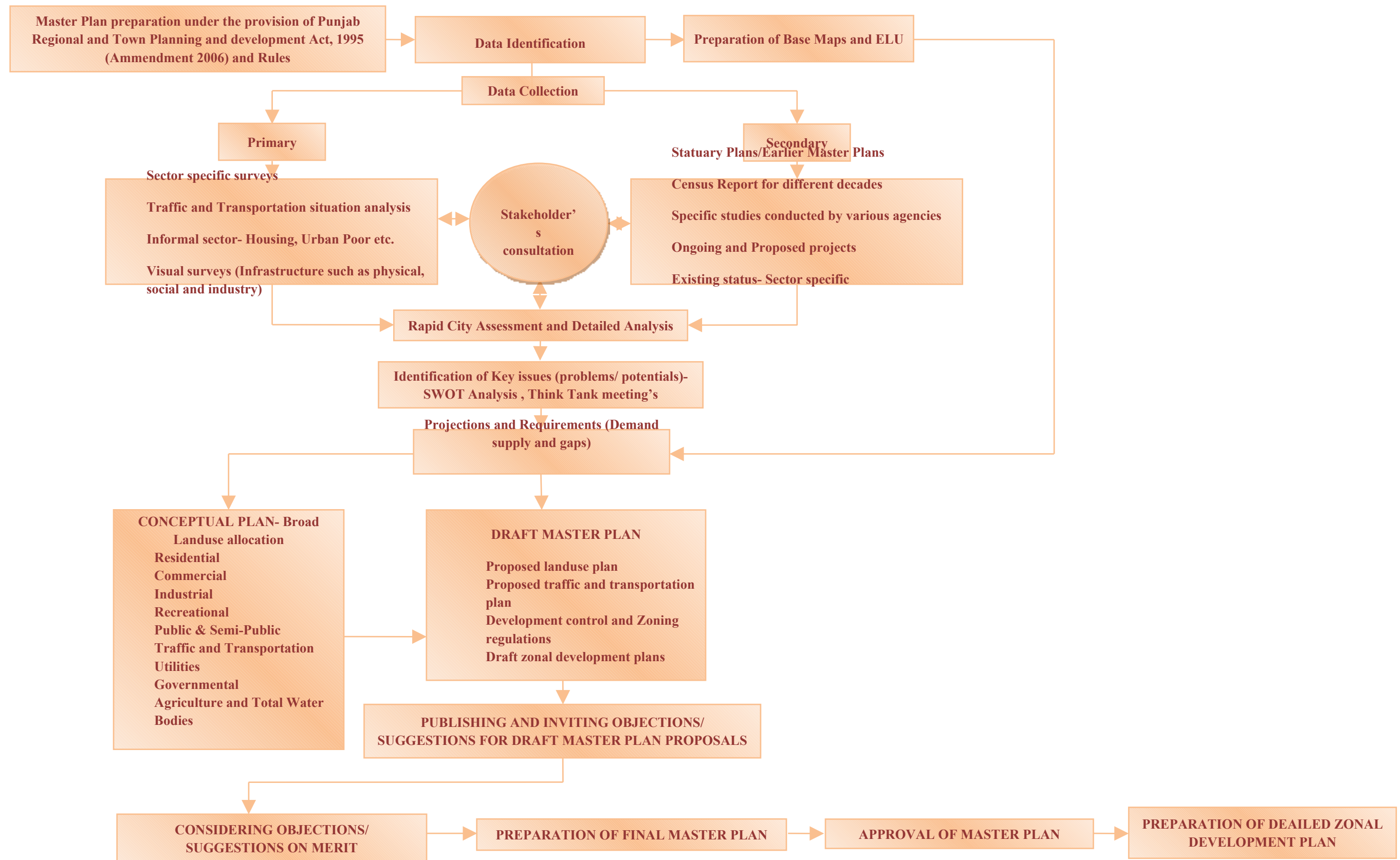
To control and regulate the development of towns and cities in the state of Punjab, the Master Plans are to be prepared as a statutory requirement. Procedure for preparing the Master Plan under the Punjab Regional and Town Planning and Development Act, 1995 (herein after called PRTPAD, Act 1995 as amended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

1.1.5 APPROACH TO THE MASTER PLAN

Approach to the preparation of Master Plan would involve outlining the critical issues of town development, undertaking a demand supply gap analysis and formulating a management framework including outlining strategies and guidelines for future growth and development of Kapurthala. It will also include options for promoting rational development through the introduction of a regulatory mechanism including realistic planning and management interventions within the overall regulatory and institutional framework. A development implementation action plan comprising of implementation schedule, role of stakeholders, regulation and institutional strengthening mechanism will form integral form of the Master Plan. The Master Plan will take into account the current status of municipal services - its fiscal status, operational and management procedures, besides putting in place effective monitoring mechanism. Preparation of the Master Plan will be based on the Development Plans/Schemes of public and private agencies operating in the city and contributing towards its growth and development.

The detailed methodology for the preparation of Master Plan of Kapurthala defining the collection of data, assessment of the town, preparing thematic maps, identifying gaps in service delivery and infrastructure network, identifying strength, weakness, opportunities and threats, preparing existing landuse plan, Development Plans, Zonal Development Plan, etc. has been defined below(refer fig no. 1):

Fig No.1 METHODOLOGY



1.1.6 METHODOLOGY FOR MASTER PLAN

The various stages of preparation of Master Plan include:

1. Identification of Local Planning Area (as per the Government notification under PRTDA- 1995 (amended in 2006).
2. Preparation of Existing Land Use Plan.
 - *Using Satellite imageries*
 - *Using available plans*
 - *Ground surveys*
 - *Revenue Plans*
3. Assessment and analysis of Local Planning Area in terms of
 - *Regional Setting*
 - *Historical evolution*
 - *Demographic studies*
 - *Socio-economic studies*
 - *Physical and Social Infrastructure*
 - *Water Supply, Solid Waste Management, Power & Electricity.*
 - *Educational, Medical, health, Recreational, Miscellaneous facilities.*
 - *Environmental studies*
 - *Heritage and Tourism*
 - *Growth Pattern*
 - *Land Use studies*
 - *Available studies and report*
 - *Ongoing and proposed projects*
4. Involving Stakeholders (through FGD's and personal interviews).
 - *Meeting with experts*
 - *Think Tank meetings*
 - *NGO's/ Private agencies.*
 - *Public representatives*
5. Gaps and Problem Identification through
 - *Comparison with available norms and standards*
 - *Identification of the critical problems*
 - *Identification of the infrastructure gaps*

6. Carrying out SWOT analysis based upon
 - *Studies made and analysis carried on.*
 - *City assessment*
 - *Stakeholder's perception*
 - *Identified Problems and gaps*
 - *Identifying major social and economic drivers*
7. Working out requirements
 - *Population projections*
 - *Norms and Standards.*
 - *Broad Landuse requirements.*
 - *Demand and Supply gap (Infrastructure).*
8. Defining Conceptual Framework through
 - *Defining Vision for future growth and development*
 - *Identifying broad objectives*
 - *Laying down Mission statement for critical areas*
9. Preparation of Concept Plan.
10. Evolving Proposed Land Use Plan and Traffic/ Transportation plan along with Development control and Regulations (DCR's)
 - *Based on existing land use plan*
 - *Studies and assessment made*
 - *Gaps and problem identified*
 - *Stakeholder's perception*
 - *Objectives framed*
 - *Future population growth*
 - *Future infrastructure requirements*
 - *Available land for development*
11. Preparing Phasing and Investment Plan
12. Evolving Zonal plans based on Draft/Final Land Use

1.1.7 LOCAL PLANNING AREA

The Local Planning Area of Kapurthala town comprises of 41 rural, one urban settlement and one census town i.e. Kapurthala Municipal Council and Hussainpur Census Town. Previously, the Local Planning Area of Kapurthala was notified under section U/S56 (i) of the Punjab Regional and Town Planning and Development Act, 1995 (amended 2006) vide notification no. **12/09/2008-4HGI/2693** dated 9 April 2008, comprising of 31 settlements with 8236 ha area and 124450 populations. However, it was felt to alter the limits of the LPA and include 12 more villages. Finally, 43 settlements are notified in the LPA list vide notification no. **12/9/2008-4HGI/2736** dated 16 October 2009. The total area of LPA thus comes out to be 11098 ha having population of 134580. The area and population of Kapurthala town are 1947 ha and 85686, respectively.

While delineating Local Planning Area of Kapurthala the following factors mentioned in rule 22 of “The Punjab Regional and Town Planning and Development (General Rules 1995)” have been considered.

- Administrative/Revenue boundaries of the villages/urban centre.
- Geographical features of the area and other physical features like roads and railway lines have been also kept in mind.
- Means of communication and accessibility.
- Present and future growth trends and distribution of the population.
- Industrial location and growth trends.
- Economic base and commercial activities.
- Preservation of historical and cultural heritage of the areas.
- Urban expansion trends and management of peripheral areas.
- Ecological and environmental balance.
- Balanced regional development of the state.
- Dispersal of economic activities to alleviate pressure on the Kapurthala town.

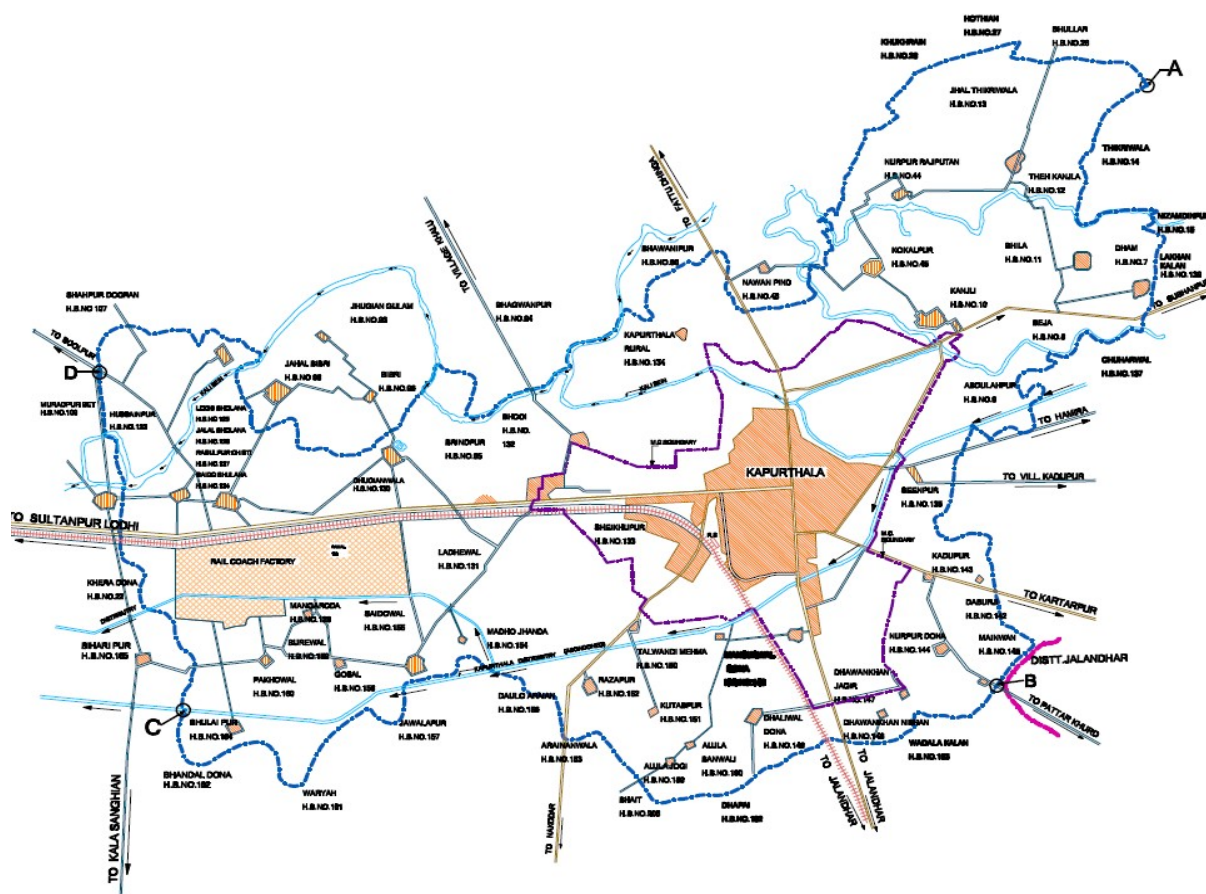
It has been observed that the Planning Area is only 6.6% of the district area and 16.4% of the Kapurthala tehsil area.

Table 1: Area and Population of different Settlements in Kapurthala District

S. No.	Settlement	Area (Ha)	%age of District Area	Population (2001)	%age of District Population
1	Kapurthala M. Cl	1947	1.1 %	85,686	11.4%
2	Hussainpur C. T.	356	0.2%	15337	2.03%
3	LPA Villages	8795	5.2%	33557	4.4%
4	Kapurthala LPA	11098	6.6%	134,580	17.8%
5	Kapurthala District	167900	---	7,54,521	---

Source: Census of India, 2001, Kapurthala District Gazetteer Supplement, 2000 & Computed Values

Fig. No. 2: Local Planning Area of Kapurthala



1.2 REGIONAL SETTING

Kapurthala district has a dubious distinction of being divided into two distinct parts separated by a distance of 32 km, posing numerous administrative and developmental problems. Despite the fact that NH 1 passes through both the segments, major portion of the district remains inaccessible by it. There is no direct link to the major urban settlements of Kapurthala district from NH 1. Further in the regional context, Kapurthala being close to Jalandhar metropolis has adversely affected the overall development of this town. The town has only one direct rail link as Jalandhar – Ferozepur link.

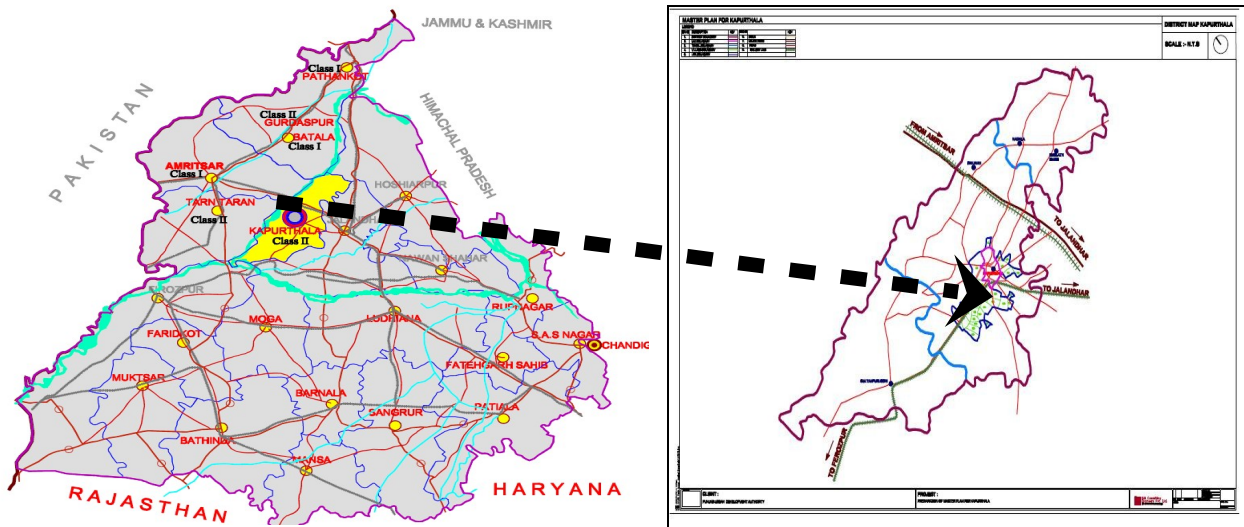
Despite these adversities, Kapurthala is famous in the region for various reasons, for example it being a heritage/historical town, rail coach factory and many important educational institutions like Science City, Non Renewable Energy Resources, etc. in its vicinity.

The town is about 66 kms from Amritsar metropolis and 81 kms from Ludhiana, the largest urban settlement of the state. It is connected to the famous Grand Trunk Road or NH 1 (previously known as Sher Shah Shuri Marg) through a link road meeting at Subhanpur. The nearest airport is Raja Sansi Airport at Amritsar, which is 75 kms from Kapurthala town. The location of Kapurthala from major urban settlements of the state and district is given below in table 2:

Table 2: Distance of Major Urban Settlements from Kapurthala Town

Place	Distance (Kms)
Jalandhar	20
Amritsar	66
Hoshiarpur	60
Gurdaspur	92
Sultanpur Lodhi (Via Dadwandi)	27
Subhanpur (GT Road)	8
Kartarpur	14
Nakodar	44
Phagwara	41
Ludhiana	81
Tarn Taran	43

Source: Kapurthala District Gazetteer Supplement, 2000

Fig No. 3 : Location of Kapurthala District with Reference to Punjab

1.3 PHYSIOGRAPHY AND CLIMATE

1.3.1 TOPOGRAPHY

Kapurthala district consists of two detached pieces of territory, forming integral part of Bist-Doab plain area, enclosed by the Beas and Satluj rivers. Though the district does not display much variation so far as topography is concerned but the portion adjoining Hoshiarpur District depicts distinct variation in terms of land undulation due to close proximity to Sub mountainous area of Kandi in the lap of Shiwalik range of hills. On the basis of local differences in slope, topography, texture and surface material, the district can be divided into two main physiographic units, viz. the Beas lowlands and the plain upland. The Local Planning Area comes under the Beas Lowlands, which is described below:

Tributaries and Canals

Kali Bein, which is a tributary of Beas, flows through the LPA area. Kanjli Lake and Wetland are integral part of Kali Bein. LPA Villages as Kanjli, Sheikhpur, Lodhi Bholana, Jalal Bholana, Rasulpur Chisty and Hussainpur are located adjoining the Kali Bein.

Soil

The entire LPA is composed of alluvial and it's various types at different places consisting of varying degree of clay, loam and sand.

1.3.2 CLIMATE

(i) Seasons and their Durations:

The climate of the Kapurthala District is characterized by dryness (except in the brief monsoon season), and a very hot summer and bracing winter. The year may be divided into four distinct seasons. The cold season starting with November to the early part of March, is followed by the hot season which lasts till the end of June. July, August and the first half of September constitute the wet months due to south-western monsoon. The period from mid-September to about the middle of November may be termed as the post-monsoon or transitional period.

(ii) Temperature:

June is generally the hottest month with the mean daily maximum hovering around 41° C and the mean daily minimum at about 27° C. Hot scorching dust-laden westerly winds blow during the summer and on individual days, the day temperature may reach even about 45° C. With the onset of the south-west monsoon in the beginning of July leads to an appreciable drop in the day temperature. The nights, however, are as warm as they are during summers. On account of the increased moisture in the monsoon air, the weather is often sultry and uncomfortable even during the monsoon season in between the rains. After the monsoon by about the mid-September, there is a rapid drop in the temperature, especially during night. January is usually the coldest month with the mean daily maximum temperature at about 19° C and the mean daily minimum temperature at about 6° C. Cold waves affect the district in the wake of passing western disturbances in winter when the minimum temperature drops down to about a degree or so below freezing point.

(iii) Rainfall:

The average annual rainfall in the district is 533.66 mm. The rainfall generally increases from the south-west towards the north-east. About 70 per cent of the annual rainfall received during the monsoon months, i.e. July to September-July being the wettest month. There is also some rainfall during the period from December to March in association with passing western disturbances, and this amounts to about 12 per cent of the annual rainfall.

(iv) Winds:

During the south-west monsoon season, these blows generally from directions between south-east and north-east, but on many days in the afternoons, westerly to north-westerly winds also blow. In the rest of the year, westerly to north-westerly winds predominate except in the latter half of the summer season when easterlies and south-easterlies blow on some days.

1.4 HISTORICAL PERSPECTIVE

Historical Growth

A historical reference shows that Kapurthala was founded in the 11th Century during the period of Mahmood Gaznvi. This town was established by Rana Kapoor of Rajput Gharana, of Jaisalmer. On his name, the place has got its name Kapurthala.

It seems that various factors remained responsible for the overall development of town as well as LPA during different periods (refer table 3). Important events like establishment of sugar mill and distillery in Hamira in 1944-45, Kapurthala town becoming district Head Quarter in 1956, declaration of Kapurthala Sub Division in 1965, etc. remained important catalyst for the development for the development of various activities.

Further, Kapurthala has the distinction of having a local self government as early as 1896, when a municipality was created for the town. However, the development gained momentum in the post independence era. Other important activities which got developed in the surroundings of the town and affected the development are coming up of Improvement Trust Kapurthala in 1974 under the Punjab Improvement Act 1922, Rail Coach Factory at Hussainpur in 1986, etc. Three large institutions namely Pushpa Gujral Science City (1997), Punjab Technical University (PTU) (established in 1997, shifted recently to this area) and Sardar Swaran Singh National Institute of Renewable Energy (SSS-NIRE) on Kapurthala-Jalandhar Road in 1997, which shifted the focus of development towards Jalandhar Road. Setting up of Urban Estate, Kapurthala in 1998 on this road and development by private sector has further accelerated the process of growth and development of the town in this direction. Kapurthala's growth is being overshadowed by the development taking place in Jalandhar city. Presently Punjab govt. has proposed SEZ, IT Park and Site for Transport Department in village Jhal Thikriwal on Kapurthala –Subhanpur road and further a combined jail for Kapurthala and Jalandhar is to be constructed on modern technology (Refer Annexure IV). So with implementation of these projects, this area will also become a potential area for the development. The major events leveraging the growth and development in and around Kapurthala are tabled below:

Table 3: Listing of important Events (yearwise) happened in the history of Kapurthala region

PERIOD	EVENTS
	(a) Ancient Period
3000 BC to 1500 BC	Three important sites of Indus Valley Civilization found in the district are Domeli, Karalan and Bhatnura Kalan.
	(b) Medieval Period
1266	The then Sultanpur Lodhi district became a major military and strategic centre, and Kapurthala town was its part.
1566	Sultanpur was developed under the administration of emperor Akbar.
1707	At the death of Aurangzeb in 1707, the Punjab was divided into six Doabs, of which Jalandhar Doab was the most significant from the military administration point of view and Kapurthala formed its part.
	Rise of the Sikhs
	Guru Nanak Dev (1469-1539), the founder of sikhism entirely transformed the social life of the people inhabiting the district. Guru Nanak Dev spent 14 years of his life in Sultanpur Lodhi. During this period, there was no conflict between the Sikhs and the Mughals. Guru Nanak Dev at Sultanpur Lodhi primarily started the institution of langar (community kitchen) only.
1748	Sardar Jassa Singh (founder of the Kapurthala State) extended his conquest to the edge of the river Beas.
	(c) Modern Period
1763	Jassa Singh made Kapurthala his capital.
1845-1846	Outbreak of the first Anglo-Sikh war on the Satluj.
1870	Amritsar – Jalandhar Rail Line came up joining stations like Hamira, Phagwara, etc.
1896	Municipal Council of Kapurthala was formed.
1912	Ferozepur Jalandhar Railway Line was opened up, joining station of Kapurthala town with these and other stations of the country.
1947	The Kapurthala State opted to remain part of India on the achievement of Independence.
1948	On the formation of Patiala and East Punjab States Union (PEPSU) on 20, August 1948, Kapurthala State becomes one of its constituent. Maharaja Jagatjit Singh of Kapurthala was appointed Up-Rajpramukh of PEPSU.
1956	On the merge of Punjab and PEPSU on 1 November 1956, Kapurthala become one of districts of the Punjab and transferred to the Jalandhar Division.
1958	Phagwara was made Sub Division.
1965	Kapurthala was made Sub Division.
1970	Sultanpur Lodhi was made Sub Division.
1974	Improvement Trust of Kapurthala was formed.
1986	Rail Coach Factory came up at Hussainpur on Sultanpur Lodhi Road.
1995	Bholath was upgraded to Tehsil from Sub-Tehsil.
1997	Pushpa Gujral Science City was established on Kapurthala Jalandhar Road.
1998	Urban Estate was established in Kapurthala town.
2009	Local Planning Area of Kapurthala was defined to make its Master Plan with 1 urban, 1 census town (Hussainpur) and 41 rural settlements; Punjab Technical University was shifted on Kapurthala Jalandhar Road beside Science City.

Source: Kapurthala District Gazetteer Supplement, 2000 and Office of DDTP, Kapurthala

CHAPTER 2

DEMOGRAPHIC PROFILE AND ECONOMIC BASE

2.1 DEMOGRAPHIC CHARACTER

Kapurthala ranks the second most populated town of the district after Phagwara. Kapurthala Municipal Council is the most urbanized settlement with 64% population of the population of total LPA. Hussainpur C.T which is second most populated town with 11.4 % of total population of LPA. The overall settlement pattern in LPA is shown on table 4.

Table 4: Distribution of Urban Population in Major Towns of Kapurthala district

Name of Settlement/Town	Urban Population	%age to District Urban Population
Kapurthala District Urban	246527	---
Phagwara M.CI	102253	42 %
Kapurthala M.CI	85686	35 %
Sultanpur Lodhi M.CI	15571	6.3 %
Hussainpur C.T	15337	6.2 %
Bholath N.P	10091	4.1 %

Source: Census of India, 2001

The 41 settlements of LPA (two settlements namely Ladhewal and Abdulahpur villages are uninhabited as recorded by Census 2001) have been divided into 5 population groups. The highest number of settlements comes under 500-1000 group, followed by the groups of 1000-5000 and less than 5000.

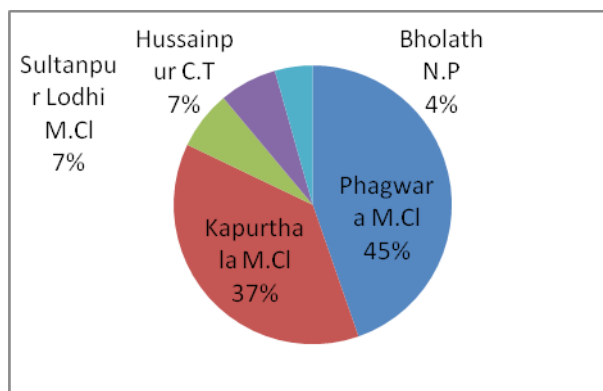


Fig. no.4: percentage Share of Towns in District Urban Population

There is only 1 settlement each in the 5000-20000 and more than 20000, namely Hussainpur and Kapurthala. Both are urban in character.

Table 5: Hierarchy of settlements in Kapurthala LPA

Settlement Group	No. of Settlements	%age of LPA Population
Less than 500	12	2.34
500-1,000	14	7.30
1,000-5,000	13	15.30
5,000-20,000	1	11.40
More than 20,000	1	63.67
Total	41 (excluding uninhabited villages)	---

Source: Computed values

Spatial distribution shows that all the settlements having high degree urban connectivity have been found to be higher in population as well as growth rate. Whereas inadequate and lower order accessibility leads to lower growth rate and lower order of population.

2.1.1 POPULATION GROWTH

The population of Municipal Council is 85686 persons. The decade 1941-51 witnessed communal trouble and mass migration of Muslims to Pakistan as a result of the partition. During 1991-2001 decade the growth rate has increased to 33%. During the last five decades of post independence, the population has grown with growth rate increasing from 3% (1951) to 33% (2001). Considering the present trend of population growth, it is estimated that Kapurthala will easily join the select band of Class I cities of the state by 2011.

Table 6: Growth rate of Kapurthala town

YEARS	POPULATION OF KAPURTHALA (M.Cl)
1951	26,947 (3%)
1961	29,334 (9%)
1971	35,482 (21%)
1981	50,300 (28%)
1991	64,567 (29%)
2001	85,686 (33%)

Source: Census of India, 2001

2.1.2 POPULATION DENSITY

Population density has been analysed at two levels i.e. LPA and further ward level (M.Cl.). The given below table no.7 shows that within LPA, Kapurthala town (District HQ) is most urbanized.

Table 7: Demographic Trend, Growth Rate and Density in Kapurthala LPA

CATEGORY OF SETTLEMENTS	AREA (in SQ. KM)	TOTAL POPULATION			GROWTH RATE		DENSITY (NO.OF PERSONS/SQ. KM)		
		1981	1991	2001	1991	2001	1981	1991	2001
Kapurthala M. Cl.	19.47	50,300	64,567	85,686	29	33	2583	3316	4401
Hussainpur C. T.	3.56	515	9256	15337	1697	66	145	2600	4308
All Villages (LPA)	87.95	26473	26065	33557	-1.5	29	301	296	382
Total LPA	110.98	77,288	99,888	134580	29	35	696	900	1213
District	1679.00	5,45,249	6,46,647	7,54,521	19	17	325	385	449

Source: Census of India, 2001

With density of 4401 persons per square Km, Kapurthala M.Cl. density is higher than the District density of 449 persons per square km, and even higher than LPA villages of 382 persons per square km.

The growth rate of M.Cl is higher than LPA villages in 2001 having higher density.

Fig no.5: Density in Kapurthala LPA

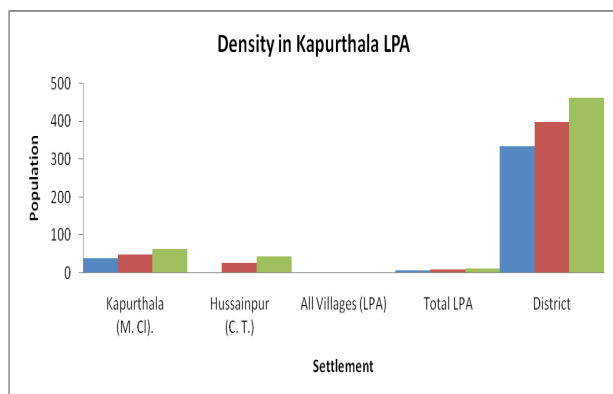
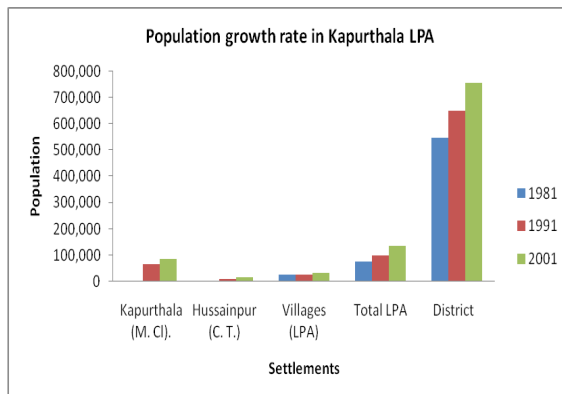


Fig no. 6: Population Growth rate in Kapurthala LPA



Further considerable variation of density has been found while comparing it within the 23 wards of the town existing during 2001 Census. The wards have been divided into high, medium and low density categories with the size figures of more than 180 persons per ha, 60-180 pph and less than 60 pph, respectively.

Table 8: Wardwise Density variation in Kapurthala Town (2001)

Ward No.	Area (ha)	Population	Density (Persons/ha)
High Density			
2	12	2758	236
3	19	3552	187
12	19	3662	193
17	10	3212	314
18	7	2385	327
19	6	1833	314
22	7	2339	321
Medium Density			
4	77	5503	71
7	39	3311	84
9	58	3666	63
13	19	3008	159
14	77	4791	62
15	58	3719	64
16	42	2955	70
20	16	2193	137
21	23	2781	119
23	12	2070	177
Low density			
1	448	5274	12
5	293	8059	27
6	177	5510	31
8	350	5148	15
10	98	5567	57
11	77	2390	31
Total (Kapurthala M.Cl)	1947	85686	44

Source: Municipal Council, Kapurthala and Census of India, 2001

It is analysed that 23% of the population resides in only 4.2% of the town area contained in high-density wards includes Jatpura Mohalla, Adarsh Nagar, old area, Seenpur, Surrounding

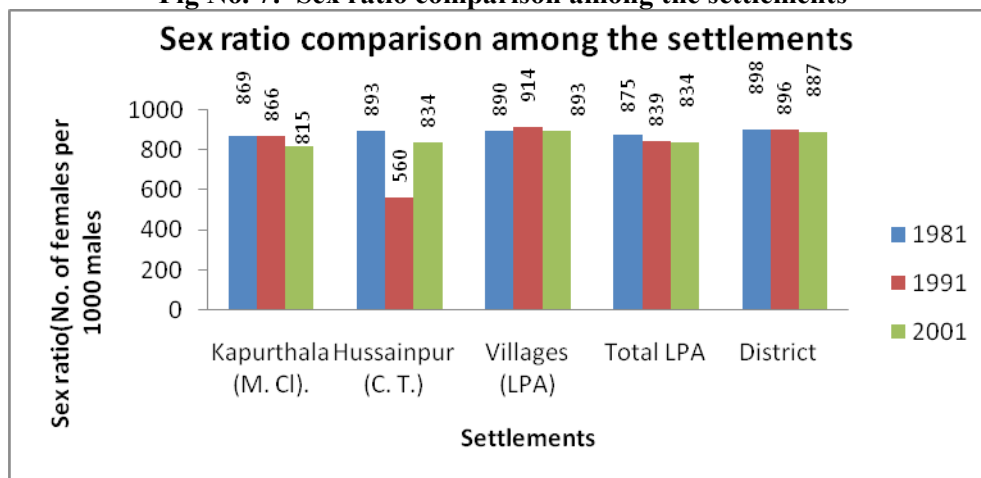
of Kottu chowk and Surrounding of Devi Talab. There are 7 wards under this category with density as high as 277 PPH in ward no. 18.

On the other hand, 37% of the population lies within the 74% of the town area comprised of 6 low density wards. The low density area comprises of surroundings of Circular Road and Patel Nagar, Urban Estate, Abadi Churwal, Sunder Avenue's surrounding, Guru Nanak Nagar, Model Town, Surrounding of D.C residence, Ucha Dora, Mehatab Garh, Jail road, Green Avenue, Gopal park, Windsor Park, Jammu Walia, Preet Nagar, Sant pura, Surrounding of F.C.I godown & New Grain Market, Ashok Vihar, Village Sheikhpura, railway station area. There are 6 wards under this category with density as low as 10 PPH in ward no. 1.

2.1.3 SEX RATIO

Sex ratio in Kapurthala town is as per as census 2001(i.e. 815 famels per 1000 males) and that of village (LPA) is 836. This reveals that sex ratio in rural area is high in comparison to sex ratio in town. This is due to the fact that male population of rural area moves towards town in search of employment.

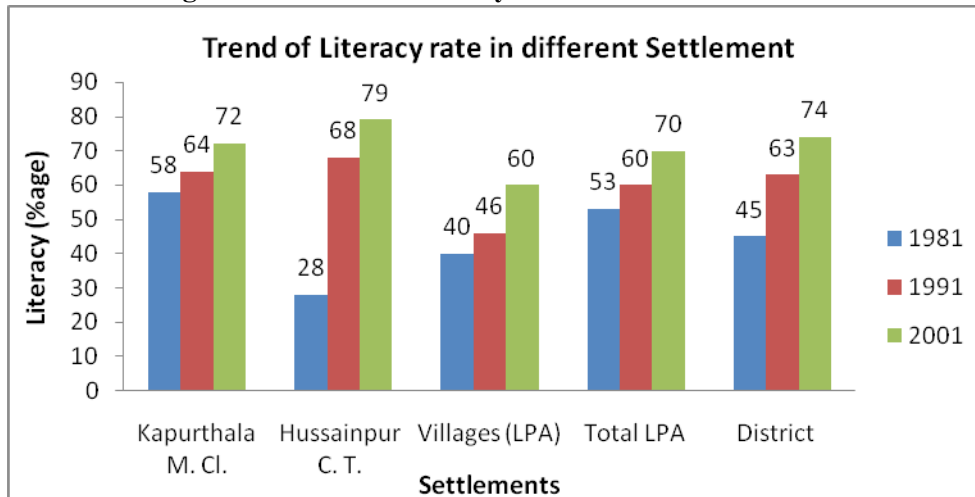
Fig No. 7: Sex ratio comparison among the settlements



The sex ratio of town is less in comparison to district and both town as well as district shows a decrease in sex ratio in last two decades.

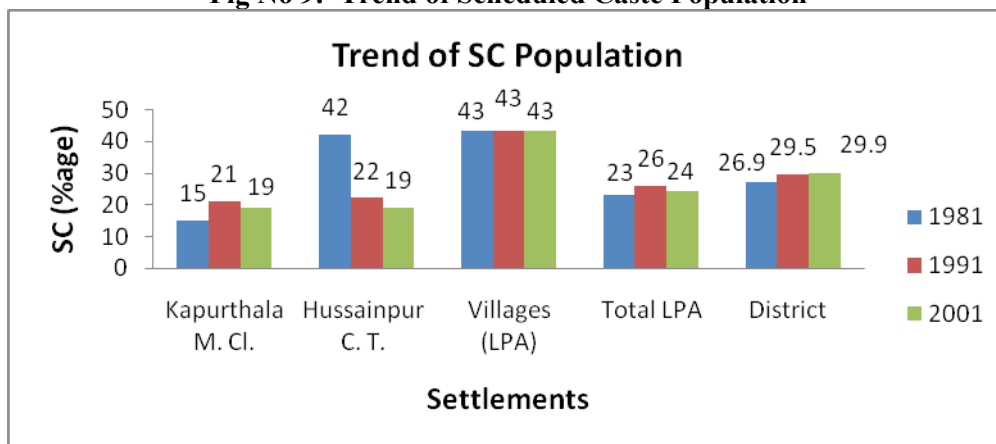
2.1.4 LITERACY RATE

The literacy rate in Kapurthala town increased from 58% in 1981 to 72% in 2001. However, the literacy rate of town is lower in comparison to district, which is 74% in 2001. Further comparing with villages of LPA, literacy rate is lower i.e. only 61% as per census 2001. (Refer Fig. No. 8).

Fig No 8: Trend of Literacy rate in different Settlements

2.1.5 SC/ ST COMPOSITION

Villages within LPA have high degree of Scheduled Caste (SC) population where 43% of the population belongs to this category. In case of Kapurthala Municipal council, the SC population is 19.8%. Even the Kapurthala district has 29.9% of population as SC. This shows that special housing/ Infrastructure policies must be framed for this category.

Fig No 9: Trend of Scheduled Caste Population

The Kapurthala town is having lowest percentage of SC population in comparison to district and rural villages.

2.2 ECONOMY AND EMPLOYMENT

2.2.1 OCCUPATIONAL STRUCTURE

Occupational Structure helps to determine the economic status of town. It is observed from the table below that work force participation ratio in LPA of Kapurthala is 34 %, which is less than Kapurthala district with 35% and for state of Punjab is 37.5 % (refer table 9). This shows that there is burden on working population as well as economy. It seen in Kapurthala LPA from 1981-2001, percentage of non-workers is decreasing i.e.70 percentage in 1981 to 66 % in 2001 except the Hussainpur C.T is increasing i.e.68 percentage in 1981 to 70 % in 2001 .

Table 9: Workers and Non-Workers in Towns and Villages of Kapurthala LPA (2001)

Level		Total Population	Total Workers	Total Workers (% of Total Population)	Non-Workers (% of Total Population)	Main Workers (% of Total Workers)	Marginal Workers (% of Total Workers)
Kapurthala District	1981	5,45,249	163575	163575 (30)	381674 (70)	158122(97)	5453 (3)
	1991	6,46,647	200461	200461 (31)	446186 (69)	187932 (94)	12529(6)
	2001	7,54,521	262741	262741 (35)	491780 (65)	231222 (88)	31519 (12)
Kapurthala M.Cl.	1981	50,300	15090	15090 (30)	35210 (70)	14782 (98)	308 (2)
	1991	64,567	19370	19370 (30)	45197 (70)	19268 (99)	102 (1)
	2001	85,686	29638	29638 (35)	56048 (65)	27709 (93)	1929 (7)
Hussainpur C.T	1981	515	175	175 (34)	350 (68)	173 (99)	2 (1)
	1991	9256	4535	4535 (49)	4721 (51)	4463 (98)	72(2)
	2001	15337	4582	4582 (30)	10736 (70)	4469 (97)	113 (3)
All Villages	1981	26473	7901	7901 (30)	18572 (70)	7697 (97)	204 (3)
	1991	26065	8893	8893 (34)	17172 (66)	8255 (93)	635 (7)
	2001	33557	10838	10838 (32)	22,719 (68)	8,457 (78)	2,381 (22)
Total LPA	1981	77288	23116	23116 (30)	54172 (70)	22652 (98)	464 (2)
	1991	99888	33080	33080 (33)	66809 (67)	32307 (98)	770 (2)
	2001	134580	45058	45058 (33)	89522 (67)	40635 (90)	4423 (10)

Source: Census of India, 2001

The share of Marginal Workers in the Total Workers is increasing in all level of settlements. This will create extra pressure on town infrastructure.

2.2.2 WORK FORCE PARTICIPATION

The four categories of main workers include: i) Cultivators, ii) Agricultural Labourers, iii) Household Workers, and iv) Other Workers. Looking at the work force participation ratio in Kapurthala LPA, it is observed that within M.Cl. the percentage of other workers is dominant. On the other hand, the share of Other Workers has shown considerable increase in Hussainpur (from 17% in 1981 to 99% in 2001). This can be attributed to the setting up of Rail Coach Factory, which has changed the economic scenario of the workers employed in

that area. Kapurthala is the district head quarter hence, percentage in service sector is on a higher side. In case of villages of LPA, almost 50% of the population is engaged in agriculture and allied activities (refer table 10).

Table 10: Trend of distribution of main workers in Kapurthala, LPA

Level of settlement		Cultivators (%)	Agriculture Laborers (%)	Household Workers (%)	Others workers (%)
Kapurthala M.Cl.	1981	3	3	2.5	91.5
	1991	5	7	1	87
	2001	2	3	3	92
Hussainpur	1981	39	31	13	17
	1991	2	2	0	96
	2001	1	0	0	99
All villages	1981	37	32	1	30
	1991	33	40	1	26
	2001	28	17	2	53
Total LPA	1981	15	13	2	70
	1991	12	15	1	73
	2001	7	6	2	85

Source: Census of India, 2001

2.2.3 DEPENDENCY RATIO

Dependency ratio refers to the number of non-workers dependent upon workers and is calculated in per 100 persons. Hussainpur has the highest dependency ratio of 234 in comparison to all the settlements. The Overall, LPA has the dependency ratio of 194, which is higher than the state of Punjab, Kapurthalar district as well as Kapurthalar M.Cl. This shows that there is more burden on the existing progressive economy.

Table 11: Dependency Ratio at Various Levels

State/District/Town/Village	Dependency Ratio (per 100 persons)
Punjab State	167
Kapurthala District	187
Kapurthala MCI	189
Hussainpur C.T	234
All Villages	210
Total LPA	199

Source: Census of India, 2001

2.2.4 INDUSTRIAL GROWTH

In the post independence period, Rail Coach Factory, the second Coach Factory owned by Indian Railways and third in the country was set up in 1986 at Kapurthala. It is the largest industrial establishment in the district employing thousands of workers besides promoting large number of ancillary units. The total area of RCF is 540 ha and approximately 6,980 workers are engaged in this.

Table 12: Large and Medium Scale Industries falling under LPA area

Sl No.	Name of the Factory	Year of Starting	Numbers of the workers	Products
1	Markfed Refined Oil and Allied Industries, Kapurthala	1976	138	Refined Groundnut Oil, Mustard Oil, Rice- Bran Oil and Cattle Feed
2	Jain Solvex and Export Industries, Kapurthala	1980	29	Rice-Bran oil and Deoiled Rice-Bran
3	Rail Coach Factory, Hussainpur (Kapurthala)	1988	6,980	Railway Coaches
4	Anand Aggarwal Oil Pvt. Ltd., (Unit-I) Village Sheikhpur, Tehsil Kapurthala	1978	41	Edible Oils and Non-edible Oils Solvex Oil Extraction and Rice-Bran Oil
5	Anand Aggarwal Oil Pvt. Ltd., (Unit-II) Village Dhudianwala, Tehsil Kapurthala	1980	35	Dehydration of Non-edible Oils

Source: General Manager, District Industries Centre & PSIEC, Kapurthala

The information regarding large and medium -scale industrial units is depicted in table 12. It is observed that except RCF at Hussainpur all industries fall in the category of Agro based and some oil extraction units are also operating.

Apart from these industries, the LPA villages too have industries like Khadi and Village Industries. There are also some Small Scale Industries at Kapurthala village. Overall RCF is the major industrial unit caters to the other supporting activities for the whole staff.

2.3 TRADE AND COMMERCE

Agriculture is the mainstay of the people of the district and the majority of the population depends directly or indirectly on it for livelihood. Kapurthala being District headquarter is primarily a trade centre for the region's agricultural products; wheat, corn (maize), rice, and other crops are grown in the surrounding area. The main items exported from the district are sugar, khandsari, wheat, maize, gram, cotton, paddy, rice, and textiles. As the economy of the district is primarily agrarian, the course of trade is mostly carried out in agricultural produced markets.

2.3.1 COMMERCIAL AREAS OF TOWN

The main areas in Kapurthala town which are known for their commercial character located within old town area such as Sadar Bazar road, Sat Narayan Bazar, Shastri Bazar and Mall road. These are retail in nature (refer table 13) and for wholesale the town depends upon Jalandhar.

Table 13: Commercial Areas of Kapurthala town

S.No.	Location of commercial stretch/area	Area/stretch length	Type of goods available
1	Sadar Bazar	400mt	Retail of all kind of mkt. goods
2	Sat Narayan Bazar	300mt	All type of retail mkt goods.
3	Mall road	150mt	All type of retail mkt goods.
4	Shastri Bazar	260 mt	Jewellers shops
5	Banian Bazar	126 mt	All type of retail mkt goods.

Source: Primary survey

Commercial activities on one side boost the economy of the town and on other side their extensions, informal sector and on street parking have encroached the major areas of the town, thereby creating traffic congestion/jams.

**Fig.No. 10: Sadar Bazar****Fig.No.11: The Mall Road**

2.3.2 INFORMAL SECTOR

The informal sector, which is an important part of the town, has been neglected while formulating development schemes for town. These activities are located near terminal points and important offices like Octroi Post (Kanjli road), Court, Shalimar Bagh and Railway station road.

Table 14: Informal sectors in Kapurthala town

Market Location	Area/stretch length
Bus Stand Stretch	237 mts
District Court Stretch	251 mts.
Railway station road	425 mts.
Octroi Post Stretch	329 mts
Shalimar Bagh Stretch	228 mts.

Source: Primary Survey, SAI Team, August 2009.

These markets are temporary in nature and majority of them deals with fruits and vegetables (refer table 14) only issue is that there is no proper space allocated for these markets, thereby leading to traffic issues.

The district has a well-defined marketing network of agricultural produce considering the large agricultural production in the area. The network comprises of five principal markets in

the district at Kapurthala, Sultanpur Lodhi, Phagwara, Bholath and Dhilwan, 13 sub yards, besides the purchase centre numbers of villages served per regulated market are 124, whereas the area served is 326 sq. km. Out of the 5 regulated markets in the district, LPA has only one principal yard at Kapurthala town. The details of marketing network in the district are given below in table 15:

Table 15: Information regarding Regulated Markets in District (2006-07)

No. of Regulated Markets	No. of Sub Yards attached with Regulated Markets	Average No. of Villages served per Regulated Market	Average Area served per Regulated Market (Sq. Km.)
5	13	124	326

Source: Statistical Abstract of Punjab, 2006-07

2.3.3 DANA MANDI KAPURTHALA

Dana/Grain mandi covering an area of 13 hectares exists along Sultanpur Lodhi (MDR) road and in south direction of the town. The components of Grain market include grain shops, shops cum flats, godowns and housing in between. Main problems of Dana Mandi are drainage of Mandi is not proper, diameter of sewerage pipe is insufficient and it should be drained out to STP near Kusht Ashram. In Kapurthala vegetable market is located separately covering an area of 4 hectares along Sultanpur Lodhi (MDR) road and is just 20-30 meter away from Dana Mandi.

The export value of industrial goods from the district though has increased form 1980-81 to 2006-07; but sharing to the state has shown a declining trend (3.2% to 1.7%). This is because of less production of export-oriented goods in the district. There is also huge increased in Kapurthala District from 1990-91 to 2000-01 i.e. Rs. 6141.21 to Rs. 16514 Lakhs. (Ref. table 16).

Table 16: Yearwise Comparison of Value of Export of Industrial Goods from Kapurthala District (in Lakh Rs.)

Name of Settlement	1980-81	1990-91	2000-01	2006-07
Punjab	16212.63	76920.24	401496	1179768
Kapurthala District	528.93	6141.21	16514	20161
Kapurthala District Sharing percentage to State	3.2%	7.9%	4.1%	1.7%

Source: Statistical Abstract of Punjab, 2006-07

2.4 HERITAGE AND TOURISM IN KAPURTHALA LPA

Kapurthala town is famous for its cultural heritage. There are varieties of buildings and monuments of cultural and tourist importance. That is why it called the Town of Palaces. Apart from the town, there are several monuments and sites in the LPA area outside M.Cl limit as well as outside LPA area but in the surrounding areas. These buildings, monuments and sites can be grouped into following categories:

Table 17: Heritage and Tourism in Kapurthala LPA

Sl. No	Name of Heritage	Sl. No	Name of Heritage
Within M.Cl.		22	Mata Bhaderkali Temple, Sheikhpura.
Built Heritage Tourism		23	Hanuman Mandir (Amritsar Road).
1	Jagatjit Singh Palace (Sainik School), the Mall Road.	24	Mandir Janki Dass (Near Jallowkhana Chowk).
2	Jagatjit Club.	25	Jain Mandir (Amritsar Road).
3	Durbar Hall.	26	Sheetla Mata Mandir (Jallowkhana Chowk).
4	Jallowkhana Fort (Nihal Palace).	Recreational/Eco-Tourism	
5	War Memorial (Opp. Moorish Mosque).	27	Kamra Bagh
6	Ghanta Ghar (Clock Tower).	28	Shalimar Garden.
7	Circuit House	Cultural Fairs and Festivals	
8	Elysee Palace (MGN School).	29	Heritage Mela at Pir Choudhary - Jalandhar Road.
9	Jubilee Hall (Randhir College).	30	Baba Jassa Singh Kapurthala Heritage Festival organised every year in Oct month, under the aegis of Kapurthala Heritage Trust, in collaboration with INTACH and Govt. of Punjab.
10	Bagghi Khana.	31	Lohri, Basant, Holi/Hola, Baisakhi, Raksha Bandhan, Dussehra and Diwali.
11	Irwin Jubilee Memorial Hospital.	Old Markets	
12	Kamra Kothi.	32	Sadar Bazar (Main Kapurthala Market).
13	Bhoot Bangla (Lal Kothi)	33	Banian Bazar.
Religious Tourism		34	Sat Narain Bazar.
14	State Gurudwara.	Within LPA	
15	Moorish Mosque.	35	Kanjli Wetlands
16	Mazar of Baba Pir Chowdhary (Jalandhar Road).	36	The Villa Buona Vista
17	Panj Mandir.	37	Baisakhi Fair at Kanjli Wetland Park.
18	Sri Sat Narain Mandir (Sri Sat Narain Bazar).	In Surroundings of LPA	
19	Prachin Shiv Mandir (Mall Road).	38	Pushpa Gujral Science City.
20	Sri Laxmi Narain Mandir (Laxmi Nagar).	39	Gurudwara Ber Sahib, Sultanpur Lodhi.
21	Brahm Kund Mandir (Behind Shalimar Garden).	40	Monthly Cattle Fair at Subhanpur, except April.

Source: Primary Survey, SAI Team August 2009

2.4.1 HOTELS AND RESTAURANTS

Though Kapurthala town has many places of tourist interest in and around it, the number of available hotels and restaurants in the town to cater them are neither adequate nor of appropriate quality. Due to the proximity of the town to Jalandhar, most of the tourists prefer

staying at Jalandhar city where large number of budget and star hotels are available. Absence of adequate quality accommodation for various categories is largely responsible for hampering the growth of tourism in the LPA.

Few of the existing hotels in the town are:

- i) Gardenia Hotel & Restaurant, Shalimar Road.
- ii) Ishan Hotel, Jalandhar Road.
- iii) Kapil Hotel, Sat Narain Bazar.
- iv) Natraj Hotel, Sat Narain Bazar.
- v) Shiven Hotel, Jalandhar Road.
- vi) Surya Classic, Near Jama Masjid.

In addition there are few restaurants in the town including:

- i) Dawat-e-Ishan, Jalandhar Road.
- ii) Dream Restaurant, Sultanpur Road.
- iii) Gulmarg Bar & Restaurant, Sultanpur Road.
- iv) Natraj Beer Bar, Sat Narain Bazar.
- v) Ramneek Bar & Restaurant, Sultanpur Road.
- vi) Oberoi Fast Food, the Mall Road, Kapurthala.
- vii) Pankaj Fast Food, Sadar Bazar, Main Market, Kapurthala.
- viii) Golden Juice and Fast Food, Sadar Bazar, Main Market, Kapurthala.
- ix) Pals Pizza and Burger Hut, Opp. Shiv Mandir, Kapurthala.

Govt. Accommodation:

- i) Civil Rest House Kapurthala.
- ii) Sainik Rest House Sainik Welfare Office, S. Lodhi Road.

CHAPTER 3

HOUSING AND URBAN POOR

3.1 KAPURTHALA HOUSING SCENARIO

3.1.1 SCHEMES

Improvement Trust Schemes: The Improvement Trust Schemes in the town of Kapurthala covers an area of 75.31 acres. During its more than 34 years of existence, only five Development Schemes have been framed. Out of these, two schemes have been implemented by the trust i.e, Model town & Central town and rest three are in progress.

Table 18: Details of Improvement Trust Schemes

Schemes	No.	Area (In Acre)	Remarks
Prepared/Developed	5	75.31	5 Improvement trust scheme was sanctioned out of which 2 schemes developed and rest three is going on.

Source: Municipal Council and Improvement Trust, Kapurthala.

Town Planning Schemes: In addition Municipal Council Kapurthala has also framed one Town Planning Scheme, covering an area of 48.65 acres in the year 1967 and this entire scheme was for residential purpose only. Since then no such scheme has been taken up by the Municipal Council.

Other Schemes: Under PAPRA Acts, P.U.D.A has developed one Urban Estate at Kapurthala of 208 acres area with 94.17% of residential area and another scheme of 8.57 acres of Sainik School is under progress.

Rural Development Schemes: Numbers of Villages panchayat are covered under such schemes are 23.

Ongoing Projects /Proposed:

- Development scheme Jama Masjid, Development scheme pocket “C” (Rajiv Gandhi Enclave) and Development scheme pocket “D” (Rajiv Gandhi Enclave) covering an area of 20.98 acres (work is in progress).
- Rural Development Fund Phase- I centrally sponsored schemes for Kapurthala LPA Villages work is in progress.

3.1.2 HOUSING STOCK

The trend of housing stock in Kapurthala town and other settlements of LPA from 1981 to 2001 are given in table no.19. The total housing stock available in the LPA area has increased from 11, 429 to 28951 during 1981-2001 periods. Majority of housing stock belongs to

Kapurthala town. All settlements, have recorded higher rate of growth in the housing stock during last two decades.

Maximum growth in number of houses has been found to be in Hussainpur during 1981-1991 decade, which was of the order of 3367%, because of immigration of a large no. of people in the newly built Rail Coach Factory. This large-scale migration from different areas led to construction of new houses in the area. The rise in housing stock continued in the next decade, but with lower growth rate. High growth has not only been recorded in the urban centres but rural settlements have also continued to make substantial contribution to the housing stock.

Table 19: Growth in Households Vs Growth in Occupied Residential Houses

Category of settlements	Year	Occupied Residential Houses	%age growth rate of Residential Houses	No. of Households	%age Growth of Households	Household Size
Municipal Council, Kapurthala	1981	7827	-	8678	-	5.8
	1991	11038	41%	11601	34%	5.6
	2001	19452	76%	15488	34%	5.5
Hussainpur C.T	1981	70	-	80	-	6.4
	1991	2427	3367%	2596	3145%	3.6
	2001	4009	65%	3799	46%	4.0
All Villages in LPA	1981	3532	-	3999	-	6.6
	1991	4300	22%	4365	9.2%	6.0
	2001	5490	35.2%	5900	35.2%	5.7
Total LPA	1981	11429	-	12757	-	6.1
	1991	17765	55.4%	18562	46%	5.4
	2001	28951	63%	25187	36%	5.3

Source: Census of India-1981, 1991, 2001

3.1.3 PATTERN OF HOUSING

Mixed use of houses that is for both residential cum commercial use has been observed in large number of areas like Sadar Bazar, Railway road, Distrcit court Chowk to Char Batti Chowk, Sat Narayan Bazar, Mall road, Jalandhar Road (Bus Stand to Bhagat Singh Avenue), Kanjli Road (Shenai Palce to Aman Nagar Area), Jatpura road, Shastri Bazar, Jallowkhana Road, Amrit Bazar Road and Circular Road.

Housing Condition

Besides looking at the housing stock in terms of growth of number of residential houses, the condition of the housing stock has also been looked upon to qualitatively ascertain the condition of the available houses in the town. The housing condition has been assessed based on the type of structure of housing in the town and based on the visual survey of the town which is explained below.

Residential Density

Based on the reconnaissance survey of the town, it has been observed that there exists both High, medium and low-density areas in Kapurthala town. High-density areas is existing near and around old town area such as Jallowkhana, City Thana, Lahori gate, commercial market areas (Sadar Bazaar, Shastri Bazaar, and Amrit Bazaar) have bad housing conditions. Surrounding of Model town, Golden Avenue, Green Avenue and Bus stand areas have been observed to have medium density, which has moderate to good housing condition as new developments in form of the improvement trust schemes have been implemented in this area. The periphery of town and all public housing has low-density areas such as area around abadi churwal, along Kartarpur road, Kapurthala-Jalandhar road and new subzi mandi or new Dhana mandi on Sulthanpur Lodhi road that has poor to moderate housing condition.

3.2 URBAN POOR AND SLUMS

Urban poverty is a multidimensional problem of contemporary India. Poverty and the living condition have far away consequence with the habitat and the habitable housing conditions. The situation of slums has been analysis in the Kapurthala and the overall scenario become clear from table.

Table 20: Demographic characteristics of slum areas of Kapurthala town

Year	Town population	Slum population	%age to town population
2001	85686	18187	21.2
Category	Urban	Slum	%age slum population to total population
Total households	15488	3359	21.6
Total Population (including institutional and houseless population)	85686	18187	21.22
Population in the age group 0-6	9782	2340	23.9
Schedule caste population	16451	6305	38.3
Literates	61396	11811	19.2
Total workers	29638	5872	19.8
Main workers-	27709	5284	19.1
(i) Cultivators	526	129	
(ii) Agricultural Labourers	919	496	
(iii) Household industry workers	836	151	
(iv) Other workers	25428	4508	
Marginal workers -	1929	588	30.5
(i) Cultivators	12	1	
(ii) Agricultural Labourers	270	147	
(iii) Household Industry workers	109	19	
(iv) Other workers	1538	421	
Non workers	56048	12315	21.9

Source: Town Primary Census Abstract for Slum and Total Urban Areas-2001

The total numbers of slums existing in the Kapurthala town are 22 in numbers. The total population in slum area is 18187 (as per 2001 census) thereby constituting 21.2% of the town population. The numbers of household units in the slum area are 3359. Out of total slum population 19.1% are the main workers and majority of them are engaged in agriculture and household industries.

3.2.1 INFRASTRUCTURAL STATUS OF SLUM AREAS:

The infrastructure services provided in the slum areas are necessary to slum dwellers. The level of these facilities will help in analyzing the living condition and development scenario of these slum dwellers. The entire infrastructure has been developed with needed utilities, where all the houses are provided with average 100% of sanitation, water supply, street-lights, sewerage facilities and majority are provided with the 100% electricity. Besides there are few drawbacks, where majority of the slums have open drains leading to the poor hygienic condition. In addition, there are no proper parking facilities, vehicular access, proper solid waste disposal system, community spaces, recreational facilities; children's play area and the social infrastructure. Hence, the slum pockets need upgradation in terms of development of the hygienic conditions and the facilities for the intellectual development of the slum dwellers.

CHAPTER 4

EXISTING LAND USE AND TRANSPORTATION NETWORK

4.1 PREPARATION OF BASE MAP

The work of preparation of base map for the Local Planning Area, Kapurthala was assigned to Punjab Remote Sensing Centre, P.A.U., Ludhiana. The base map of whole Planning Area Kapurthala is generated on 1:20,000 scale using Worldview data of .5m spatial resolutions. The Cadastral maps of the villages falling in Local Planning Area were procured from the State Revenue department by the office of Deputy District Town Planner, Kapurthala and these maps have been scanned in the office of PRSC, Ludhiana and registered with Worldview data to demarcate village and musteel boundaries. The features like roads, rails, high and low lands, drains and settlements etc. have been captured from satellite imagery data, by the concerned agency and shown on the draft base map. After editing the map details, the attributes to different features were assigned. The data captured from satellite image was verified by the officials of DDTP office & a non-spatial data was attached to it. The quickbird data (satellite imagery) has been received by the PRSC, Ludhiana from National Remote Sensing Agency, Hyderabad.

4.2 ENHANCEMENT THROUGH FIELD SURVEYS-LANDUSE AND ROAD NETWORK

The draft base map for the Local Planning Area, Kapurthala received from Punjab Remote Sensing Centre, P.A.U., Ludhiana were updated through ground truthing filed survey by the office of DDTP, Kapurthala. The various landuse have been identified at the site and earmarked, accordingly. Similarly, the road network, drains, distributaries and other communication zones have been verified and checked at site, after conducting field surveys the necessary feedback was supplied to P.R.S.C, Ludhiana, which were ultimately incorporated and an updated base map was prepared by P.R.S.C, P.A.U.Ludhiana. The office of DDTP, Kapurthala again conducted second round of filed verification (Ground Truthing) and the updates (corrected) plans were then supplied to P.R.S.C, this exercise was repeated several times and the field staff of DDTP office personally assisted the concerned staff of PRSC and a final Land Use map thus was prepared.

4.3 EXISTING LANDUSE PLAN

In order to understand the breakup of the developed urban area of the Kapurthala town and area under various uses including residential, commercial, industrial, traffic and transportation, recreational, utilities, public and semi-public uses, detailed analysis of the town structure has been made based on the existing land use plan prepared by the Punjab Remote Sensing Centre, Ludhiana as detailed out in the Kapurthala Local Planning Area, Existing Landuse Plan- 2009, in drawing no. DDTP (K) 13/2009, dated: 09-11-2009 of the Department of the Town and Country Planning, Punjab. The detailed analysis is shown in the table given below.

Table 21: Existing Landuse Plan for Kapurthala LPA, 2009

Landuse	Gross M. Cl (Ha)	% of Developed Area	% of M. Cl Area	% of Total LPA Area
RESIDENTIAL	424	37.41	22.29	7.4
COMMERCIAL	103	8.88	5.29	1.4
INDUSTRIAL	60	5.17	3.08	5.2
RECREATIONAL	25	2.16	1.28	0.3
GOVT LAND	158	13.62	8.12	2.9
Utilities and Services	10	0.86	0.51	0.09
PUBLIC\SEMIPUBLIC	198	17.07	10.17	2.1
TRAFFIC AND TRANSPORTATION	182	15.69	9.35	3.0
Developed Area	1160	100.00		
AGRICULTURE & VACANT	787		40.42	77.7
Total M.Cl. Area (Ha)	1947		100.00	
AGRICULTURE, WATER BODIES AND ABADI AREA OF VILLAGES OF LPA				
Total LPA Area				11098

Source: PRSC, PAU Ludhiana

As per Existing Land use Plan, out of the 1947 ha of the municipal area, only 60% is developed, whereas remaining 40% is under agriculture/ vacant. Thus, more than one third of the area has been found to be under uses other than the developed landuses. The largest component of the developed area is residential which constitute 37% of the developed area. Besides it, a considerable portion (17%) is also devoted to Public and Semi Public use. Next in the ranking comes Traffic and Transporation with 15.69% of the developed area of the town. Being the district head quarter, it also has 13.6% of the developed area under the government (defence) use. Town also has a fair degree of commercial and industrial area amounting to 8.9% and 5.2%. The lack of recreational area with just 2% share in Municipal land indicates poor quality of life in the town. A brief description of different landuses is as follows:

Residential

Residential sector is the biggest component of any town. Here in case of Developed Area of Kapurthala town too, residential area

shares 37.4% of the developed area of the town. The residential areas of town are spread in all directions of the town, specially in western part. The old part of the town also is located in western part comprising of residential areas like Kasaran Mohalla, Banian Mohalla, Sadiq Ali Mohalla, Araf Wala Mohalla, Neecha Banda Mohalla, Malkana Mohalla, Qila Wala Mohalla, Mehtab Garh, Kesari Bagh, Sher Garh, etc. The old areas continue on the other side of Fattu DHINGA Road too in the form of Seenpura, Jatpura Mohalla, etc. New colonies have come up on the outer side of these old areas as well as along the major roads. Some of them are Model Town, Central Town, Adarsh Nagar, Ranjit Avenue, Aman Nagar, Ajit Nagar, Golden Avenue, Baba Deep Singh Nagar, Guru Teg Bahadur Nagar, Punjabi Bagh, Moti Bagh, Ashok Vihar, Mohabbat Nagar, Gopal Park, Preet Nagar, Sant Pura, Green Avenue, Sawan Colony, etc.

Most of the new development in the town has come up or are coming up in the form of schemes. For example, Improvement Trust has developed 2 development schemes, while 3 schemes are in progress. One Town Planning Scheme was implemented in 1967 by Municipal Council. Urban Estate too has framed some schemes for the town. One prominent among them is Urban Estate on Jalandhar Road in an area of 208 acres. PUDA has also developed one scheme near Sainik School as well as three schemes under OUVGL near DIET, at Nawab Jassa Singh Ahluwalia Boys Hostel and near Cantt.

Apart from the housing of the town, there are village abadies too which form a major constituent of residential area at LPA level. Moreover, there has considerable development occurred on the opposite side of RCF on Sultanpur Lodhi Road, resulting to Census Town of Hussainpur, which earlier was a village.

Commercial

Commercial activities constitute 8.9% of the developed landuse. Their areas in the town are widely scattered. The old area of the town, with Sadar Bazar, Banian Bazar, Sat Narayan Bazar, etc., is the most important commercial locations for the wholesale and retail needs. These areas have actually mixed landuse, with shops on the ground floor and residential rooms on first floor. Apart from these, there are commercial areas along the major roads within the town area, specially on the Sultanpur Lodhi Road, Fattu DHINGA Road, Jalandhar Road, etc. All these areas witness informal commercial activities too. Apart from these, two bulk commercial activities located in the town are Grain Market (Dana Mandi) and Vegetable

Market (Sabji Mandi) on Sultanpur Lodhi Road. Then there are some godowns around railway stations.

Industry

Though the LPA has the biggest industrial unit of the district, i.e. RCF, within it, but it is out of the developed area of Kapurthala town. Some of the industrial units are located on Sultanpur Lodhi Road and Nakodar Road as Rice Shellers and other industries. The total area under industrial landuse is 60 ha, i.e. 5.2% of the total developed area.

Recreation

The total area under this landuse comes out to be 2.2% (25 ha). The two most important recreational landuse are Kamra Bagh and Shalimar Bagh. Apart from these two, there are parks and playgrounds scattered within the residential colonies of the town.

Traffic and Transportation

Almost 15.7% of Developed Area is under this landuse. It comprises of roads and railway and their terminals in case of Kapurthala town. The major roads of the town are Jalandhar Road, Fattu Dying Road, Sultanpur Lodhi Road, Subhanpur Road, Kartarpur Road, Kanjli Road, Nakodar Road, Hamira Road, etc. which connects the town to various cities and towns located around the town. Apart from these inter city roads, there are intra town roads too, prominent among which are Circular Road, Markfed Road, Rail Road, Mall Road, etc. These roads bisect the town into different parts and thus form major medium for intratown connectivity.

Then there are Village Roads leading to Village Khalu, Boolpur, Pattar Khurd, etc. from the town and major roads. There are link roads too to connect villages with each other.

Govt. Land

Govt. Land referred in Landuse Plan basically refers to the Defence Land located within the town in general. It has huge chunk within the town on Kartarpur Road and Jalandhar Road. Within the Developed Area, its share is 13.6%. Govt. Land is also spread outside developed area in the northern side on Hamira Road.

Public and Semi Public

It consists of the entire physical and social infrastructure as well as the govt. offices and heritage areas. Being the administrative headquarter as well as a major heritage centre, this is one of the important landuse for the town. It is spread over 198 ha (17.1%) of the developed area. The eastern part of the town between Sultanpur Lodhi Road, Circular Road and Jalandhar Road is mostly institutional in nature. The major constituents of it are Sainik School, State Gurudwara, Randhir College, Durbar Hall, Agricultural Research Centre,

District Jail, Rice Research Centre, Jallow Khana, Bagghi Khana, Moorish Mosque, Police Lines, PAP Training Centre, etc.

Agriculture

The whole area outside Developed Area consists of Agriculture. In other words, more than 77% of the LPA is under agricultural, forests and other related activities category. Agricultural area is situated within the Municipal limit too. Almost 787 ha area of Council consists of this use.

The existing land use pattern requires rationalization in order to bring it to the prescribed norms. Considering the high density in the town the developed area needs to be increased keeping in view the requirement of the existing and projected population to be accommodated in the town. Large number of open spaces needs to be created in the town in order to improve the quality of life. Industrial component also needs to be increased in order to improve the economy of the town.

4.4 TRAFFIC AND TRANSPORTATION

For most inhabitants of the towns/cities of India, traffic hazards and the difficulties in commuting from one place to any other, occupy some of the prime concerns. No city in the world, even through in rich countries, can make room for an unlimited influx of automobile on its roads. Accordingly, it is important to plan and rationalize traffic and transportation system within any town/city. For rationalization, it is important to have a



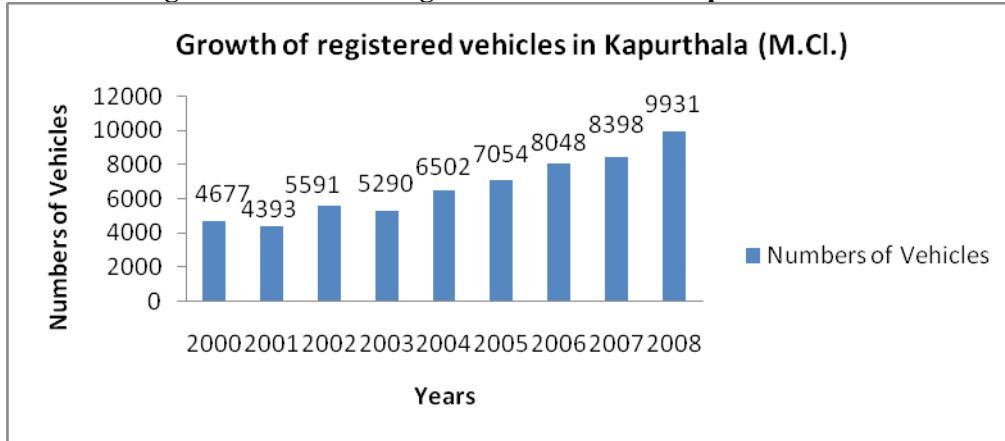
Fig.No.12: Scheduled Roads of Punjab

detailed study and analysis of existing transportation network, pattern of traffic is clearly identified, analysis of existing transportation network is made, understanding the existing problems, and bottlenecks in the system. So this part of the study focuses on understanding the existing traffic and transportation system which would become basis for formulating a realistic policy for resolving the issues. Coming to Kapurthala first, it is analysed with respect to road network in state of Punjab. It is analysed that the NH-1 which connects Kapurthala through Sultanpur Lodhi and Kartarpur road as well.

4.4.1 VEHICULAR GROWTH

Vehicles in the town are increasing as per the increase in population of the town. The vehicular data for previous nine years indicates that there are two fold increases in vehicular growth. It has registered tremendous increase since Year 2000 to 2008 from 4677 to 9931 respectively.

Fig No.13: Trend of registered Vehicles in Kapurthala town



4.4.2 ROAD ACCIDENTS

To know the safety scenario of town in relation with increasing vehicular growth, road accident statistics needs to be studied.

Table 22: Trend of accident cases in Kapurthala town

S.No	Details	2001	2002	2003	2004	2005	2006	2007	2008
1	Total cases Registered	15	17	18	16	22	14	17	17
2	Total Fatal Cases	4	8	11	8	10	7	5	11
3	Total Non-Fatal Cases	11	9	7	8	12	7	12	6
4	Total Person Killed	4	8	13	9	12	8	5	11
5	Total Person Injured	23	17	18	17	26	13	15	12

Source: Senior Superintendent of Police Kapurthala

The statistics shows however that the number of accidents in the town is increasing as recorded by the Police department. The number of accidents was 14 in 2006 however; 50% of them were fatal accidents, which have increased to 64% in 2008 out of 17 total registered cases. Toll of death in accidents has also increased from 8 to 11 in 2006 to 2008 respectively. The black spots identified in Kapurthala are Sat Narain Chowk, Shiv Mandir Chowk, Kachahri Chowk, D.C. Chowk, Samadh Baba Jhote Shah (Jalandhar Road), Chahal Chowk, Masit Chowk and Subhash Chowk. Near Bypass and New Grain Market, etc. these have probable reasons like absence of traffic lights, Sharp curves, lack of visibility at night, no proper dividers, absence of traffic islands and Lack of traffic sense which act as a accident prone areas.

4.4.3 EXISTING ROAD NETWORK

Kapurthala town is well connected with adjoining region through NH-1 via Subhanpur, which connects it to Amritsar, Beas, Batala, Tanda, Hoshiarpur, etc. A network of 10 roads passing through the town connects Kapurthala with adjoining urban and rural settlements including Subhanpur, Hamira, Kartarpur, Jalandhar, Aujla, Saidowal, Sultanpur Lodhi, Fattu Dyinga and Theh Kanjla. In addition, feeder routes of Kapurthala town connect the places where frequency of bus service is very less so mostly the autos are running in these routes. It is one of the means of communication for rural commuter in Kapurthala LPA. Feeder routes in Kapurthala LPA are- Kapurthala to RCF, Kapurthala to Patar Village, Kapurthala to Subanpur, Kapurthala to Kartarpur, Kapurthala to Parvash nagar, Kapurthala to Hamira. Other major road is Jalandhar-Sultanpur Lodhi- Ferozpur road, which connect it Northeastern region.

Network & Hierarchy

The road network of any town is defined as lifeline of the town. For development, the road network system must be well maintained. The major road network of the town is as follows:

Table 23: Urban Road Hierarchy of Kapurthala

Category of Road	Road descriptions.	Name of the road
Arterial road	These are the major roads that Carries maximum traffic of the town.	Sultanpur Lodhi road, Jalandhar road, Kartarpur road, Fattu Dyinga Road, Amritsar Bypass road, Kanjli road and Kala Sanghian road, etc.
Sub- Arterial road	These roads carry town traffic to Arterial road.	The Mall road, Circular road, Markfed road, Amrit Bazaar road, Jallow Khana road, Sadar Bazar road, Satnarayan Bazar road, Railway road, Mandi road, Shanti Sarup Khosla road, Hamira road, Kothi road, Baba Pir Chowdhary road villa, etc.
Collector road	These roads carry town traffic to Sub- Arterial road	Model town road, Shamshan Ghat road, Jail road, Kusht Ashram road, Mehtab Garh road, Shiv Colony road, Shastri Bazar road, College road, etc.
Local road	Rest of the roads within the town.	

Source: Primary Survey, SAI Team, August 2009.

The MDR's, which almost bisects the town, can be considered as the major spine. These all are the radial routes. There exists Bypass in the town, which runs from eastern to Southern direction.

As far as inner town road network is concerned the irregular alignment, in adequate widths and frequent intersections has serious capacity constraints. The overall major network of the town (within M.CI) is spread over 19.47 sq km area. The town has roads ranging from 7mts to 10mts width. Total road network is 128kms length within M.CI.

The NH1 which although falling out of the Kapurthala LPA can be considered as the major spine which connects Kapurthala to rest of major towns / Cities of the Punjab. Kapurthala – Kapurthala -Sultanpur Lodhi road, Kapurthala -Jalandhar road, Kapurthala -Hamira road and Kapurthala - Nakodar road are four scheduled roads, which are passing through the town. Kapurthala –Subanpur, Kapurthala- Kartarpur and Kapurthala- Hamira road are the Major District Roads, which connect the Kapurthala with NH-1. There exists Bypass in the town, which runs from western to northern direction that connect Fattu Dzinga road with Kanjli road. Two semi-ring radial pattern roads also exist in the town, first one in the southeastern part called marked road that connect Sultanpur Lodhi road with Fattu Dzinga road. Second one, which is called as circular road in south-western part which connect Jalandhar road with Sultanpur Lodhi road in the town. However, in the northern part of the town no such major ring road exists.

Road network within the town is having irregular alignment, in adequate widths and frequent intersections, which further leads serious capacity constraints. Even the acute angle junctions in the town are not ideal conditions for the traffic movement pattern.

Road Cross-sections of all major roads and inner town roads

The transport network coverage in the Kapurthala town is operated by PWD (B& R) and Municipal council office. The village links roads and their up gradation or maintenance comes under the preview of Mandi board Kapurthala. The detailed cross section elements are shown below:

Table 24: Statement showing the details of major roads of Kapurthala LPA

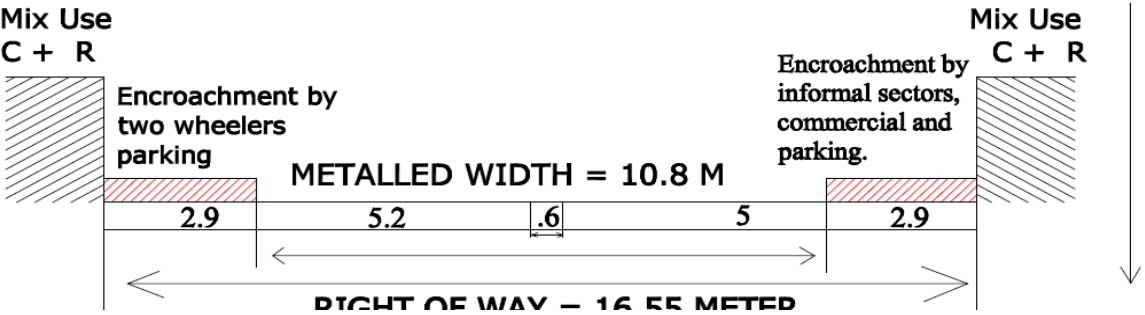

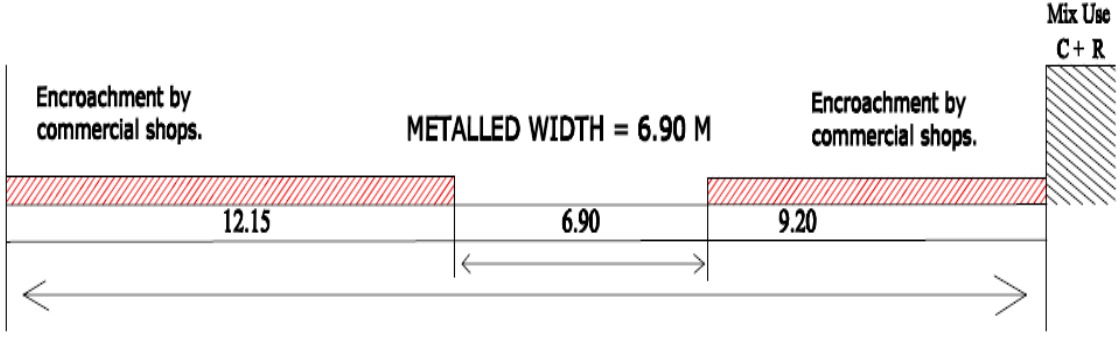

Type of Road	Category of road	Length in Km	Metalled width (Meter)	R.O.W. (Meter)
Kapurthala - Subhanpur Road	MDR47	11.40	7	16/35
Kapurthala - Kartarpur Road	MDR48	14	5/7	15/33
Kapurthala - Kala Sanghian	MDR48	17.71		
Kapurthala - Jalandhar Road	MDR52	9.20	10	14/97
Kapurthala - Sultanpur Lodhi Road	MDR52	27		
Kapurthala- Fattu Dzinga Road	MDR49	17.40	7	33/36
Kapurthala - Kanjli Road	ODR2	4.47	7	15/33
Hussainpur - Vill. Boolpur – Saidpur – Mangupur Road	ODR14	13.35	5/7/10	10/13

Source: PWD B&R Dept Kapurthala

Table 25: Cross-sectional details of major roads in LPA

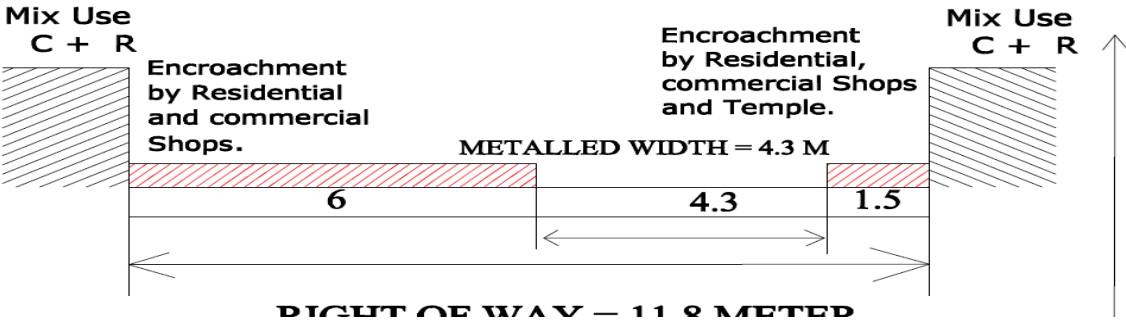

Type of Road	Length in Km	Metalled width (Meter)	R.O.W. (Meter)	Category of road
Kapurthala - Subhanpur Road (MDR 47)	11.40	7	16/35	MDR
Kapurthala - Kartarpur Road (MDR 48)	14	5/7	15/33	MDR
Kapurthala - Kala Sanghian (MDR 48)	17.71			
Kapurthala - Jalandhar Road (MDR 52)	9.20	10	14/97	MDR
Kapurthala - Sultanpur Lodhi Road (MDR 52)	27			
Kapurthala- Fattu DHINGA Road (MDR 49)	17.40	7	33/36	MDR
Kapurthala - Kanjli Road (ODR 2)	4.47	7	15/33	ODR
Hussainpur - Vill. Boolpur – Saidpur – Mangupur Road (ODR 14)	13.35	5/7/10	10/13	ODR

Table 26: Cross-sectional details of M.C.I. roads

Sr.No.	Name of the section	Status	Section	Photograph	Observations
1	District Court, Sultanpur Lodhi road	Arterial road	<p>DISTRICT COURT, SULTANPUR LODHI ROAD</p> 	 <p>Encroachment near D.C office</p>	<ul style="list-style-type: none">• Encroachment on its sides by parking of two & three wheelers, rickshaw, rehris, khokas.• Encroachment by commercial shops and informal sectors.• Often traffic jams and congestion take place at peak hours.• Average Road condition
2	Kapurthala-Kartarpur road	Arterial road	<p>KARTARPUR ROAD</p> 	 <p>Encroachment at Kartarpur road</p>	<ul style="list-style-type: none">• Encroachment by commercial shops and informal sectors.• Often traffic jams by three wheelers and school buses.• Road condition ranges from moderate to bad.

3	Kapurthala- Amritsar road, Shalimar Bagh Section	Arterial road	<p>AMRITSAR ROAD, SHALIMAR BAGH.</p> <p>Mix Use C + R</p> <p>Encroachment by two and four wheelers parking</p> <p>METALLED WIDTH = 7 M</p> <p>3.4 7 3.3</p> <p>RIGHT OF WAY = 13.7 METER</p>	<p>Encroachment at Amritsar road</p>	<ul style="list-style-type: none"> • Encroachment on its sides by parking of two & three wheelers, rickshaw, rehris, khokas. • Temporary as well as pucca encroachment on berm in forms of shops and informal sectors. • Mixing of both slow moving and fast moving vehicle creates often traffic jams and congestion • Road condition ranges from moderate to bad.
4	Kanjli road, Octroi post	Arterial road	<p>KANJLI ROAD, OCTROI POST.</p> <p>Residential</p> <p>Encroachment by informal sectors, and commercial</p> <p>METALLED WIDTH = 7 M</p> <p>5 7 8.3</p> <p>RIGHT OF WAY = 20.3 METER</p>	<p>Encroachment at Kanjali road</p>	<ul style="list-style-type: none"> • Encroachment by commercial shops and informal sectors. • Mixing of both slow moving and fast moving vehicle creates often traffic jams and congestion • Road condition ranges from moderate to bad.
5	Bus Stand road	Arterial road	<p>BUS STAND</p> <p>Mix Use C + R</p> <p>Encroachment by informal sectors, commercial and parking.</p> <p>METALLED WIDTH = 6.8 M</p> <p>4.8 6.8 6</p> <p>RIGHT OF WAY = 17.6 METER</p>	<p>Encroachment near Bus Stand</p>	<ul style="list-style-type: none"> • Encroachment on its sides by parking of two & three wheelers, rickshaw, rehris, khokas. • Encroachment by commercial shops and informal sectors. • Mixing of both slow moving and fast moving vehicle creates often traffic jams in the exit & enter points of Bus stand • Road condition ranges from moderate to bad.

6	Markfedv road, Preet Nagar	Sub-Arterial road	<p>MARKFED ROAD, PREET NAGAR</p> <p>Mix Use C + R</p> <p>Encroachment by commercial shops</p> <p>METALLED WIDTH = 5.8 M</p> <p>2.7 5.8 6.20</p> <p>RIGHT OF WAY = 14.7 METER</p> <p>Mix Use C + R</p> <p>TO SULTANPUR LODHI ROAD</p>	<p>Encroachment at Markfed road</p>	<ul style="list-style-type: none"> • Encroachment by commercial shops and informal sectors. • Bad Road condition.
7	Mall road	Sub-Arterial road	<p>THE MALL ROAD, M.G.N SCHOOL.</p> <p>Mix Use C + R</p> <p>Encroachment by informal sectors, commercial and parking.</p> <p>METALLED WIDTH = 7.8 M</p> <p>5.2 7.8 5.7</p> <p>RIGHT OF WAY = 12.7 METER</p> <p>Mix Use C + R</p>	<p>Encroachment at Mall road</p>	<ul style="list-style-type: none"> • Encroachment on its sides by parking of two & three wheelers, rickshaw, rehri, khokas. • Encroachment by commercial shops and informal sectors. • Mixing of both slow moving and fast moving vehicle creates traffic jams • Road condition ranges from moderate to bad.
8	Model town road, Jattपुरa	Collector road	<p>MODEL TOWN ROAD, JATTPURA</p> <p>Mix Use C + R</p> <p>Encroachment by commercial Shops and parking.</p> <p>METALLED WIDTH = 6 M</p> <p>.6 6 2.1</p> <p>RIGHT OF WAY = 8.7 METER</p> <p>Mix Use C + R</p>	<p>Encroachment at Model town road, Jattpur.</p>	<ul style="list-style-type: none"> • Encroachment on its sides by parking of two & three wheelers, rickshaw, rehri, khokas. • Encroachment by commercial shops and informal sectors. • Road condition ranges from moderate to bad.

9	Telu Kusth road	Chowk, Ashram	Collector road	<div><p>TELU CHOWK, KUSHT ASHRAM ROAD.</p></div>	 <p>Road encroachment by Temple</p>	<ul style="list-style-type: none">• Encroachment by commercial shops, residential and Temple.• Road condition ranges from moderate to bad.
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4.4.4 PARKING

The congested areas carrying maximum traffic includes Bus Stand, Shiv Mandir Chowk, Kachahri Chowk, Fountain Chowk, Mall Road, Old Vegetable Mandi and Sat Narain Chowk to Shalimar Bagh. The traffic comprises of both motorized and non-motorized modes of transportation. Large number of rickshaws plying on the same stretch of roads. Roads are also used for on street parking, considerably reducing the effective road widths and capacity. Encroachments by the informal sector also creates problem in traffic and transportation. There are seven parking lots designated by M.CI, which are present in the town, six lots are for two wheelers and one lot for four-wheeler & two wheelers, which is being operated by the private parties and 15 % of the rent from the lots is being paid to M.CI by the operated. Six parking lots of 0.06 acre each opposite to bus stand and 0.30Ha near D.C. office are present but still the frequent on street parking is seen on the roads in major areas such as Mall road, Bus stand, Kachahri to Sultanpur lodhi and Amritsar road. There is no separate stand for truck and goods carrier agencies though there is one private stand for tempo, three wheelers and taxi owned by private party near Bus Stand. Congested areas where parking is required as per District Transport Office: -

- Near Bus Stand
- Near Natraj Hotel
- Five Temple Chowk
- Jallow Khana Chowk
- Mall road near Post Office
- Rehri (Hawkers) market near Telephone Exchange
- Office of Punjab Home Guards and
- Shalimar Bagh.



Fig no. 14: Private Parking lots opp. Bus Stand



Fig no. 15: Parking Problems near Kachahri chowk

