

CONTENTS

Sr. No.		Page No.
1	EXECUTIVE SUMMARY	1
2	INTRODUCTION	7
	Initial Steps	7
	Regional Setting	8
	Physiography and Climate	10
	Historical Background	10
	Legal Framework for Preparation and Implementation of Master Plan	11
3	POPULATION, ECONOMY AND EMPLOYMENT	19
	Population Growth of LPA, Kotkapura	19
	Population Characteristics of Kotkapura Town	20
	Population Density	21
	Population distribution in LPA Kotkapura	24
	Sex Ratio	25
	Religious Composition	26
	Employment LPA Kotkapura	27
4	HOUSING AND SLUMS	30
	Housing Characteristics	31
	Services to Household	32
	Slums in Kotkapura	32
5	EXISTING LAND USE AND TRANSPORT NETWORK	36
	Preparation of base map	36
	Existing Land Use: LPA, Kotkapura	38
	Existing Land Use Kotkapura town	39
	Existing Road – Rail Network	44
	Environmental Status	47
	Heritage & Conservation	47

6	EXISTING INFRASTRUCTURE	51
	Physical Infrastructure	51
	Social Infrastructure	60
7	VISUALIZING THE FUTURE	73
	Population Projections 2031	73
	Workforce Projections	77
	Infrastructure requirements	78
	Constitution of Think Tank	81
	The Strength Weakness Opportunities Threat (SWOT) Analysis	81
	Vision-2031	81
	Strategies' to attain Vision	81
8	THE MASTER PLAN	84
	Components of the Master Plan	84
	Master Planning Objectives	84
	Evaluation of Alternative City Structures	85
	Land Use Requirements	91
9	Zoning Regulations and Development Controls Regulations	123
	Section I : Zoning Regulations	123
	Section II: Development Controls Regulations	138

LIST OF FIGURES

Sr. No.		Page No.
1	Regional Setting	8
2	Stages of Master plan preparation	16
3	Growth trend of Population of LPA Kotkapura: 1981-2001	20
4	Population Growth rate of Kotkapura town 1901 – 2001	21
5	Ward Wise Density Gradient in Kotkapura Town	23
6	Population Growth of Urban and Rural Settlements of LPA Kotkapura (1991-2001)	25
7	Sex Ratio of LPA Kotkapura and Kotkapura Town	26
8	Literacy Rate in LPA Kotkapura and Kotkapura Town	27
9	Occupational Structure of LPA, Kotkapura 1981-2001	28
10	Occupational Structure of Kotkapura Town	29
11	Slum Areas in Kotkapura Town - 2001	34
12	Existing Rail-Road Network Kotkapura Town	46
13	Water Supply Network - Kotkapura Town	52
14	Sewerage Network in Kotkapura Town	55
15	Education and Health Facilities Kotkapura Town	62
16	Other Social Infrastructure in Kotkapura Town	63
17	Terminals at Kotkapura Town	69
18	Work And Living Areas – Kotkapura town.	85
19	Concept Plan Kotkapura Alternative I	87
20	Concept Plan Kotkapura Alternative II	89
21	Concept Plan Kotkapura Alternative III	90

LIST OF DRAWINGS

Drawings	Page No.
Drawing 1 LPA,Kotkapura	9
Drawing 2 Existing Landuse, LPA Kotkapura	37
Drawing 3 Existing Landuse, Kotkapura Town	41
Drawing 4 Proposed Land Use; LPA Kotkapura	110
Drawing 5 Proposed Transport Network Plan;LPA Kotkapura	122

LIST OF TABLES

Tables	Page No.
Table 1 Population Growth Rate of Punjab State and LPA Kotkapura 1981 -2001	19
Table 2 Share of LPA, Kotkapura in Punjab state	20
Table 3 Population Growth Rate of Kotkapura town: 1901 – 2001	21
Table 4 Population Density (Within Municipal Limits)	22
Table 5 Ward wise Population Density of Kotkapura town : 2001	22
Table6 Density Gradient M.C.Kotkapura (Ward Wise): 2001	23
Table 7 Growth Rate of Villages of LPA Kotkapura: 1981-2001	24
Table 8 Sex Ratio of LPA Kotkapura and Kotkapura Town, 1981-2001	25
Table 9 Religious Composition of Kotkapura town	26
Table 10 Literacy rate of Local Planning Area, Kotkapura 1981-2001	27
Table 11 Literacy Rate of Kotkapura Town; 1981-2001	27
Table 12 Workers and Non Workers in LPA, Kotkapura and Kotkapura Town 1981-2001	28
Table 13 Occupational Structure of LPA,Kotkapura	28
Table 14 Occupational Structure of Kotkapura Town, 1981-2001	29
Table 15 Growth of Houses and Households in Kotkapura Town	30
Table 16 Residential Houses by Their Type of Structure in Kotkapura Town: 2001	31
Table 17 Households by Number of Dwelling Rooms in Faridkot District Urban: 2001	32
Table 18 Houses by Source of Drinking Water in Kotkapura town: 2001	32
Table 19 Houses by Source of Lighting in Kotkapura Town: 2001	32
Table 20 Detail of Identified Slum Areas in Kotkapura Town	34
Table 21 Existing Land Use, Local Planning Area, Kotkapura-2009	38
Table 22 Existing Land Use, Kotkapura Town-2009	39
Table 23 Detail of Road Cross Sections and Length of Major Roads	45
Table 24 Capacity of Different Water Treatment Plants	53
Table 25 Detail of Water Supply Connections in Kotkapura from	54

Table 26	Detail of Grid Stations in LPA, Kotkapura and Kotkapura Town.	59
Table 27	Educational Facilities in Local Planning Area and Kotkapura Town	61
Table 28	Medical Facilities in LPA Kotkapura	61
Table 29	Vehicular Composition on Main Roads of Kotkapura Town	65
Table 30	Recommended PCU factors for various Types of Vehicles on Urban Roads	66
Table 31	Volume Capacity Ratio on Main Roads of Kotkapura Town	67
Table 32	Daily Bus traffic Route-Wise in Kotkapura: - 2009	68
Table 33	Year Wise Fatal and Non Fatal Accidents in Kotkapura Town (2005-2007)	70
Table 34	Existing Parking Spaces in Main Commercial Areas in Kotkapura	71
Table 35	Passenger Trains passing through Kotkapura Town	72
Table 36	Growth Rate of Population of Kotkapura LPA, Total, Urban and Rural 1981-200	73
Table 37	Projected Population of Punjab Total, Punjab Urban and Punjab Rural 2001- 2026	74
Table 38	Share of Population of LPA, Kotkapura and Kotkapura Town	74
Table 39	Projected Population and Growth Rate of Kotkapura LPA, Total, Urban and Rural 2006-2031	75
Table 40	Projected Population for Kotkapura Total, Urban and Rural 2011 - 2031	75
Table 41	Comparison of Projected Population by Two Methods for the Year-2031	76
Table 42	Projected Net and Gross water Demand for Kotkapura Town	78
Table 43	Projected Gross Waste Water Flows for Kotkapura Town	78
Table 44	Power Requirement of Kotkapura Town (2011-2031)	79
Table45	List of members included in Think Tank for finalizing 2031	80
Table 46	Calculation of Average Plot Area in Kotkapura	91
Table 47	Stage wise Residential Area Requirements for Urban Area, LPA	92

Kotkapura (2011-2031

Table 48	Area of Commercial Centers	92
Table 49	Commercial Area Requirements for Urban Areas of	93
Table 50	Projected Urbanisable Area Requirements for LPA Kotkapura - 2031	93
Table 51	Projected Traffic Volume on City Roads Kotkapura.	95
Table 52	Land Requirement for Educational Facilities	97
Table 53	Land Requirement for Medical Facilities	97
Table 54	Land Requirement for Police. (For 100,000 persons)	97
Table 55	Land Requirement for Fire Station	97
Table 56	Land Requirements for Main Public Amenities	98
Table 57	Comparative Statement of Norms and Standards for Social Infrastructure	98
Table 58	Norms and Standards of Cycle Tracks	103
Table 59	Strategy for obtaining Land Public Purpose	105
Table 60	Break-up of Major Proposed Land Uses LPA Kotkapura 2010-2031	109
Table 61	Net Residential Density of the Wards falling in High Density Zone	112
Table 62	Net Residential Density of the wards Falling in Medium Density Zone	113
Table 63	Proposed Density Gradient for LPA Kotkapura 2031	113
Table 64	Planning Norms for Informal Sector	116

LIST OF ANNEXURES

Annexures	Page No
Annexure 1 Notification regarding Declaration of LPA Kotkapura	148
Annexure 2 Notification regarding Declaration of LPA Kotkapura	150
Annexure 3 Detail of village/Area falling with in Local Planning Area Kotkapura	152
Annexure 4 Notification regarding designated Planning Agency	153

1. EXECUTIVE SUMMARY

Introduction

- 1.1** Kotkapura with its population of 80785 is the largest town of district Faridkot. The town enjoyed the status of most important commercial centre of the district because of which its growth impulses have led to grow outside the limits of Municipal council on several sides. Recognizing the need for regulating the development of the entire influence area of Kotkapura town, Government of Punjab initially declared the Kotkapura Local Planning Area (LPA Kotkapura) in March,2008 and subsequently further amended the boundaries in May 2010. The Government also designated the Chief Town Planner, Punjab as the Planning agency to prepare the Master Plan of LPA Kotkapura.

The LPA Kotkapura comprises one town Kotkapura and 16 villages. The total area of LPA Kotkapura is 241.37 sq.kms.out of which 24.42 sq.kms is municipal area and the remaining is rural. According to census 2001 the population of LPA Kotkapura was 142767 with 80785 persons living within municipal limits.

Regional Setting

- 1.2** LPA Kotkapura is located in Malwa Region of southern parts of Punjab. It extends from 30°-29'-40" N to 30°-39'-18"N latitude and 74°-44'-30"E to 74°-58'-32"E longitude. Its hinterland is fertile and rich agricultural land. It has a good regional connectivity by railway lines with Bathinda, Ferozepur and Fazilka. The highway network also provides road linkages to important cities of Punjab and adjoining states, however there is no airport close to the town.

Historical Background

- 1.3** The town of Kotkapura does not have deep historical roots and has its origin hardly 350 years back. Kotkapura was founded in the year of 1651 by Chaudhari Kapura (Kapoor Singh for that was his name he had been baptized) one of the fore-fathers of the princely ruling family of Faridkot State. The foundation of this town was made at the suggestion of a famous Hindu ascetic; Bhai Gurdas. This town enjoyed the status of one of the four parganas of Faridkot State and later declared to be tehsil during the reign of Raja Wajir Singh. During British period Bathinda-Ferozpur railway line and Kotkapura-Fazilka railway lines were laid in this town during 1890's and later several cotton industries came up in early 20th century.

In 1948 Kotkapura became a municipal town for the first time, after this, several development activities like establishment of Oil Depot in 1959-60, Industrial Focal Point in 1979 and New Grain Market in 1986 came into existence in Kotkapura.

Legal Frame Work

- 1.4** The Punjab Regional and Town Planning and Development Act, as amended in 2006 provides the legal framework for preparation of Master Plan. The four stage process involves declaration of Local Planning Area, preparation of present land use plan and preparation and approval of Master Plan. The contents of the master Plan as laid down by the Act are;

- a) Broad indication of the manner in which the land in the area should be used.
- b) Allocation of areas or zones of land for uses for different purposes.
- c) Indication, definition and provision of the existing and proposed highways, roads, major streets and other lines of communication.
- d) Indication of areas covered under heritage site and the manner in which protection, preservation and conservation of such site including its regulation and control of development, which is either affecting the heritage site or its vicinity, shall be carried out.
- e) Regulations to regulate within each zone the location, height, number of storeys and size of buildings and other structures, open spaces and the use of buildings and structures.

Population Growth

- 1.5** The population of LPA Kotkapura was 142767 persons in 2001 which recorded a decadal growth rate of 21.30% during 1991-2001. The details are summarized in table below,

Population Growth of LPA, Kotkapura

	Population			Growth Rate in %	
	1981	1991	2001	1981-91	1991-2001
Total	94040	117698	142767	25.15	21.30
Urban	47550	62430	80785	31.29	29.40
Rural	46490	55268	61982	18.79	12.14

Source: Census of India, 1981, 1991, 2001

The average gross population density of Kotkapura town is 32.65(2001) per hectare. However ward wise density varies considerably. The highest and lowest being about 366 persons per hectare and about 15 persons per hectare respectively. The low gross density is due to the large vacant area included in some wards.

Employment and Workforce

- 1.6** The workforce participation rate of LPA Kotkapura is 34.79% and that of Kotkapura town is 32.18%. The main sectors providing employment in Kotkapura town are other services (89.95%), agricultural labourers and cultivators (6.34%) and house hold industries (3.71%).

Housing

- 1.7** According to Census 2001 about 92% of the houses are of permanent nature, 4.8% are semi-permanent and only 1.8% non-serviceable temporary houses. In terms of availability of rooms only 26.5% of the households live in one room dwelling units. Whereas about 73% families live in two rooms or above. As regards access to service, 57% have tap water, and 94.17% electricity. According to Census 2001 about 39.04% of population of Kotkapura town lives in slums. There are 8 slums all located on private land.

Present Land Use and Transport Network

- 1.8** Preparation of Existing land use map was undertaken with the help of Punjab Remote Sensing (PRSC), Ludhiana. For the core built up area Quick Bird data of 0.6m resolution was made used where as for the outer areas Cartosat. I data of 2.5m resolution was used. The maps based on satellite imageries were updated by undertaking field surveys. Out of a total LPA area of 24184 hectare (as calculated by PRSC) maximum proportion is occupied by agricultural use 90.95% followed by residential 5.10%, industrial 0.62%, and transport 2.00%. In case of Kotkapura town out of a total area of 2442 hectare about 19.34% is occupied by residential use, 3.60% industrial use, 3.01% by public & semi public uses and 7.95% by transport and 61.16% by agriculture.

The regional road network of Kotkapura comprises one National Highway i.e. N.H.15 from Bathinda to Faridkot and one State Highway from Moga to Muktsar. The Right of Way (R.O.W.) of these roads outside municipal areas varies between 20 to 40 meters and the effective carriage way ranges between 7 metre to 10 metre. Kotkapura is a railway junction where railway lines from three sides converge.

Physical Infrastructure

- 1.9** The water for Kotkapura town is mainly taken from Abohar branch of Sirhind Canal and very few ground water is taken. The total supply of water is 15 mld which works to 150 lpcd as per 2001 population. Nearly, 77% of developed area is covered by piped water supply. The water supply to all the villages is

handled by the Water Supply and Sanitation Department and almost every village has been covered under piped water supply. As regards sewerage about 65% of the population of Kotkapura town has access to underground sewerage system. However sewage is pumped in an open drain along Deviwala road. The rural areas of the LPA have yet not tasted the experience of sewerage system.

Though the collection and transportation of solid waste is managed by municipal council the disposal is not done in the form of sanitary land fills as required by the Municipal Solid Waste Rules of the Ministry of Environment and Forest. Similarly the disposal of Bio-Medical waste too is not in compliance with relevant rules. The solid waste management is totally missing in rural areas.

Traffic and Transportation

- 1.10** The surveys of traffic volume conducted by DTP office Faridkot indicate that Mukatsar road, Faridkot road beyond railway crossing and road from Grain Market to Main Chowk have volume capacity ratio more than the one (1) thus showing congestion on these roads whereas other roads are not congested. There is acute shortage of parking in the town. In the absence of organized Truck Terminal, the trucks are parked on the roads for loading and servicing. The existing Bus Stand is very small in size which always remains crowded.

Social Infrastructure

- 1.11** There is sufficient number of educational facilities of school level in LPA Kotkapura. However the higher level and Techninical institutions are not up to the mark. The health and medical facilities are not satisfactory. The sports and recreational facilities are almost missing. There is no regional or city level park and no stadium, however some educational institutions have their own stadium. Two cinemas and five clubs are other recreational facilities available in Kotkapura town.

Population and Workforce Forecast

- 1.12** The population of LPA Kotkapura is estimated to be about 255000 out of which the Kotkapura town is estimated to be about 200,000 persons by the year 2031.

Infrastructure Demand

- 1.13** The infrastructure demand of this LPA by 2031 would be as below;

Kotkapura Projected Net and Gross Water Demand for Town (2011-2031)

Year	2011	2021	2031
Net water demand in MLD	13.98	17.26	26.90
Gross water demand in MLD	16.09	19.84	30.93

Projected Gross Waste Water Flows for Kotkapura Town (2011-2031)

Year	2011	2021	2031
Net waste water flows in MLD	12.87	15.87	24.74
Gross Waste Water Flows in MLD	13.67	16.86	26.29

Power Requirement for Kotkapura Town (2011-2031)

Year	2011	2021	2031
Household	21700	26800	40000
Power consumption in MW	43.4	53.6	80.0

Vision 2031

- 1.14** A specially constituted Think Tank comprising official and non-official representatives from all walks of life articulated the vision 2031 for Kotkapura in following terms:

"To project Kotkapura as a hub of agro-based industries and to revive its commercial supremacy by providing high quality physical and social infrastructure to all of its citizens in an inclusive and environmentally sustainable manner."

The strategies to attain this vision would require spatial and land use planning, infrastructure planning and financing, enabling private investment in economic growth, ensuring environmentally sustainable development etc. The role of Master Plan in this regard would be that of facilitating a spatial and land use planning framework conducive to attaining the vision.

Visualizing the future structure of the city involves delicate trade-offs. If urban development is freely permitted anywhere it might lead to sprawl that is difficult to provide services in terms of infrastructure services and may cause loss of fertile agricultural land. On the other hand if the future structure is visualized as compact city that is easier to provide services, it might increase the land price where development is permissible and might cause unauthorized development where it is not. The extent of urbanization visualized is therefore

not narrowly linked to land required for accommodating the projected population and economic activities by 2031. The extent of urbanization is defined based on the land requirement for various activities, transport network that would be desirable and the areas that would acquire development potential on account of such transport network.

Proposed Land Use and Road Network

- 1.15** In light of the above approach proposed land use and road network plans are incorporated in the Master Plan. The land in LPA has been zoned for Residential, Commercial, Industrial, Mixed Land use and Rural and Agricultural purposes. However specific designation for public purposes like schools, hospitals, playground etc has not been earmarked because such facilities will be part of residential use. The proposed Transport Network Plan is shown in DRG No.DTP (FDK) 375/2010 dated 1/12/2010.

The arterial road network proposed comprises four categories roads viz. R1-(200 feet), R2-(150 feet), R3-(100 feet) and R4-(80 feet), R5-(60 feet) which is shown in proposed land use plan. The road network comprises of Ring Roads, radial roads and other roads as explained above.

Zoning Regulations

- 1.16** The Punjab Regional Town Planning & Development (Amendment) Act, 2006 provides for the “Control of Development and Use of Land in Area where Master plan is in Operation.” However for control of development through parameters like sub-division of land, ground coverage, FAR, parking requirements, norms for building construction etc. have already been established on a state wide basis by the Government. The zoning regulations included in the Master Plan are therefore confined to use of land. For this purpose a two-dimensional framework has been used. Land use zones as shown in the Proposed Land Use Plan is one dimension and more detailed use classes patterned after the National Industrial Classification is the second dimension supplemented with the land use provisions as provided in various notifications issued by Punjab Government from time to time. A matrix shows the zones in which each use class is permissible. In addition regulation regarding maximum permissible densities and heritage conservation are also proposed.

2. INTRODUCTION

Initial Steps

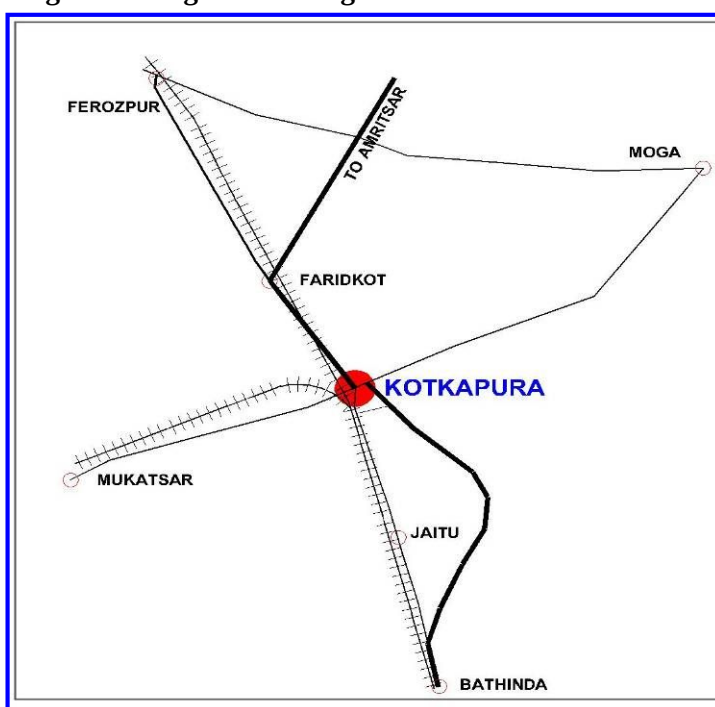
- 2.1** The process of preparation of Master plan of Local Planning Area Kotkapura was started with the delineation of Local Planning Area of Kotkapura. The Local Planning Area (LPA) Kotkapura was first notified under section 56 (1) of “The Punjab Regional and Town Planning and Development (Amendment) Act” 2006 in the official gazette wide notification no. 12 / 7 / 08-4HGI / 2020 dated 14-3-08 (refer Annexure–I) In continuation of the above notification dated 14/03/2008 government has altered the boundaries of LPA Kotkapura within the meaning of Sub Section 7 of section 56 of Punjab Regional and Town Planning and Development (Amendment) Act 2006 wide notification No. 12/7/08 – 4HG – 1/1425 dated 20.5.2010 (refer Annexure – 2). As per this notification LPA Kotkapura includes Kotkapura Municipal Council and 16 (sixteen) villages. All of these villages fall within the administrative boundaries of District Faridkot. The total area of LPA Kotkapura works to be 24137 Hectares as per revenue records where as Punjab Remote Sensing centre PAU Ludhiana provided this figure as 24184 hectares. The details of areas and population etc of LPA Kotkapura are given in Annexure-2.The Government designated the Chief Town Planner, Punjab as the Planning Agency to prepare Master Plan of LPA Kotkapura (Refer Annexure – 3).
- 2.2** While delineating LPA of Kotkapura following factors mentioned in rule 22 of the Punjab Regional and Town Planning and Development (General Rules) 1995 have been considered.
- a) Administrative boundary limits of the villages and the district for better identification and management of the LPA.
 - b) Geographical features Abohar branch of Sirhind canal and other Physical features like roads and railway lines.
 - c) The means of transportation and communication
 - d) The present and future growth trends and distribution of the population.
 - e) Economic base and commercial activities of the city / towns and their surrounding areas.
 - f) Preservation of historical and cultural heritage of the areas.
 - g) Urban expansion trends and management of periphery areas for ecological and environment balance have also been kept in mind.
 - h) Dispersal of economic activities to alleviate pressure on Kotkapura town and balanced development of the area.
- 2.3** Local Planning Area Kotkapura has a population of 142767 persons as per 2001 census out of which 80785 persons are urbanites whereas remaining 61982 persons are ruralties. Local Planning Area Kotkapura spreads over an area of

24137 hectares out of which about 2442 hectares (5540 Acres) is urban area that of Municipal Council Kotkapura which is 10.12% of total LPA Area whereas the remaining is rural and agricultural area which is 89.88% of LPA area. The jurisdiction of LPA Kotkapura extends up to Village Sandhwan in North and Village Romana Albel Singh in South whereas Village Ghanie Wala and Khara are the last Villages in east and west respectively. The Physical extent and boundaries of LPA Kotkapura are shown in Drg.No.Dtp (FDK) 357 / 2010 dated 9-3-2010.

Regional Setting

- 2.4** Kotkapura is the largest town of district Faridkot and is an important commercial centre of this area. It is situated in the south-western part of Punjab in Malwa region of the State which is known as Cotton belt of this State. Kotkapura is located at a distance of about 130 Kms towards south from Amritsar about 44 Kms.towards north of Bathinda. It is an important railway junction on Bathinda- Ferozpur section of railway line. It is connected with Ferozpur, Bathinda, Delhi and Fazilka by broad gauge railway line. It is connected with Moga in east and Muktsar in west by State Highway. The National Highway No.15 passes through the town connecting Bathinda in South, Faridkot and Amritsar in North as shown in Figure 1 below. LPA Kotkapura extends from 30°-29'-37"N to 30°-39'-18"N latitude and 74°-41'-02" E to 74°-57'-19"E longitude. The location of Kotkapura is shown in figure No.1

Figure 1 : Regional Setting



Drawing 1: LPA,Kotkapura



Physiography and Climate

- 2.5** Local Planning Area Kotkapura mostly comprises of sandy and sandy loam soils which is considered very fertile. In some of the villages big sand dunes can still be seen however the topography of area experienced a vast change with various ventures connected with green revolution. A large number of sand dunes have been leveled by the farmers to put more and more land under cultivation. No river flows through the Local Planning Area however Abohar branch of Sirhind Canal passes through the area providing a good irrigation network.
- 2.6** The district of Faridkot as well as LPA Kotkapura lies in the South-Western region of the State and is far away from the SHIVALIK HILL ranges in the North-East. It is nearer to the Thar Desert of Rajasthan, therefore climatically this area has a very hot summer. During the Month of June which is peak of summer season the mercury sometimes touches 47°C and the dust storms are regular feature. There is very short spell of rainy season with scanty rainfall of about 410 mm per annum. The winter season is dry with minimum temperature touching to 0°C. The prevailing wind direction of this region is north – west to south – east.

Historical Background

- 2.7** The town of Kotkapura does not have deep historical roots and has its origin hardly 350 years back. Kotkapura was founded in the year of 1651 by Chaudhari Kapura (Kapoor Singh for that was his name he had been baptized) one of the fore – fathers of the princely ruling family of Faridkot State. The foundation of this town was made at the suggestion of a famous Hindu ascetic; Bhai Gurdas. This town enjoyed the status of one of the four parganas of Faridkot State and later declared to be tehsil during the reign of Raja Wajir Singh. During British period Bathinda – Ferozpur railway line and Kotkapura-Fazilka railway lines were laid in this town during 1890's and later several cotton industries came up in early 20th century.

Major Development Events

- 2.7** Kotkapura initiated its development in the last quarter of 19th century when Old Grain Market, Railway Line and Abohar Branch of Sirhind Canal came up. The first cotton industry near railway station was established in the beginning of 20th century by a Gujarati family which was later on purchased by a

businessman of Jaitu. In the year 1912 the famous sweets brand known as 'Dhodha' was started in this town which got national fame and this sweet was used to be supplied to Delhi, Bombay and Lahore etc.

- 2.8** In 1948, Kotkapura became a Municipal town. After this several development activities took place, the most prominent event was the establishment of oil depot of major oil companies which became operational during 1959-60 this gave a boost to the income of Municipal Council and contributed a lot for strengthening the infrastructure as well as the economic and commercial base of the town. Industrial Focal Point on Faridkot road was established in 1974 and Narayan Agro Foods was established in the year 1988 adjoining to the Focal Point. New Grain market on Moga road was established in 1986. Arvind Nagar on Bathinda road and Gobind Enclave on Muktsar road are the two PUDA approved residential colonies which came in 2008.

Legal Framework for Preparation and Implementation of Master Plan

- 2.10** The principal legislation governing regional and town planning is the "Punjab Regional and Town Planning and Development Act, 1995 (PRTPD Act)" which was enacted in the year 1995 (Punjab Act No. 11 of 1995) and has been amended in the year 2006 and is now known as "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" (Punjab Act No. 11 of 1995). This is an Act to make provision for better planning and regulating the development and use of land in planning areas delineated for that purpose, for preparation of Regional Plans and Master Plans and implementation thereof, for the constitution of a Regional and Town Planning and Development Board, for guiding and directing the planning and development processes in the State, for the constitution of a State Urban Planning and Development Authority, Special Urban Planning and Development Authorities and new Town Planning and Development Authorities, for the effective and planned development of Planning Areas and for undertaking urban development and housing programmes and schemes for establishing new towns and for matters connected therewith or incidental thereto.

- 2.11** Prior to the enactment of this Act the town planning activities within urban areas were governed by different legislations such as 'The Punjab Town Improvement Act 1922', 'The Punjab Municipal Act 1911', 'The Punjab Municipal

Corporation Act 1976', The Punjab Urban Estates (Development and Regulation) Act 1964 etc and for areas falling outside Municipal limits in the periphery of urban centres, there was "The Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act 1963 (Now Repealed) but no comprehensive legislation was available for the overall control and development at local and regional level.

The Punjab Regional and Town Planning and Development (Amendment) Act 2006 (Main Provisions of the Law).

2.12 This Act provides the framework for preparing Master Plans and Regional Plans and provides for the manner in which the use of land in the area of a planning authority is regulated. The act also prescribes specific time period for various steps in the plan preparation process.

The act intends to achieve the following main objectives:

- a) To consolidate, with suitable modifications, in one place laws dealing with the different aspects of urban development.
- b) To set up a high powered board to advise the State government and to guide and direct planning and development agencies, with respect to matters pertaining to the planning, development and use of urban and rural land.
- c) To set up a state level Urban Planning and Development Authority and to provide for the setting up of a Special Urban Planning and Development Authorities to promote and secure better planning and development of different regions, area and cities.
- d) To create a legal and administrative setup for the preparation and enforcement of Master Plans for regions, areas and for existing and new cities.
- e) To make the whole programme of urban development mainly a self - sustaining and self - paying process.
- f) To interlink land development and house construction permitting full exploitation of the urban land resource to provide a boost to the programme of house construction, especially the Economically Weaker Sections of the Society.

- g) To provide a legal, administrative and financial framework for the preparation and execution of Town Development Schemes aimed at filling the gaps in the required civil infrastructure and securing the renewal and redevelopment of congested and decayed areas in the existing towns.

2.13 The main provisions of the Act related to preparation of Master Plan are described below:

- a. Section 56(1) enables declaration of Local Planning Areas (LPA) in the official gazette for preparing Master Plan. Once an area has been declared under section-56 (1), no person can institute or change the use of land for any purpose or carry out any development in respect of any land without the prior permission of competent authority until the Master Plan comes into operation. However, this prohibition does not apply to any area comprised in abadi deh of any village falling inside its lal lakir or phirni.
- b. Section 57 provides for the state Government to designate Planning Agency for area declared as Local Planning Area.
- c. Section 58 defines scope of Planning agency and provides that;
 - The designated Planning Agency will work under the overall directions and control of the State Government.
 - The State Government may assign any or all of the following functions to the Designated Planning Agency, namely the Chief Town Planner.
 - Carry out survey of the regional planning area, local planning area or a site for new town, as the case may be, and prepare reports on the surveys so carried out;
 - Prepare an existing land use map and such other maps as may be necessary for the purpose of preparing regional plan and outline master plan, a new town development plan or a comprehensive master plan, as the case may be;
 - Prepare a regional plan, an outline master plan, a new town development plan or a comprehensive master plan.
 - Subject to and in accordance with the directions of the Govt., the designated planning agency shall exercise all such powers as

may be necessary or expedient for the purposes of carrying out its functions under this act and also perform any other functions which are supplemental, incidental or consequential to any of the functions specified in sub section (2) or as may be prescribed.

- d. Section 59 deals with the preparation of present land use map and fixes six months time for this purpose, which may be extended by the State Govt. from time to time.
- e. Section 70(1) states that the planning agency shall not later than one year after declaration of planning area and after the designation of that agency for that area shall prepare and submit to the state government a master plan for its approval. The Master Plan so prepared shall –
 - Indicate broadly the manner in which the land in the area should be used.
 - Allocate areas or zones of land for use for different purposes.
 - Indicate, define and provide the existing and proposed highways, roads, major streets and other lines of communication.
 - Indicate areas covered under heritage site and the manner in which protection, preservation and conservation of such site including its regulation and control of development, which is either affecting the heritage site or its vicinity, shall be carried out.
 - Include regulations to regulate within each zone the location, height, number of storeys and size of buildings and other structures, open spaces and the use of buildings, structures and land.
- f. Section 70 (3) has the provision for the state government to direct the designated planning agency to publish the existing land use plan and master plan and the information regarding places where copies of the same may be inspected by the public for inviting objections in writing with respect to

existing land use plan and master plan within a period of 30 days from the date of publication.

- g. Under Section 70(4), the state government after considering the objections and in consultation with the Board may direct the designated planning agency to modify the master plan or approve it as such.
- h. Under Section 70 (5), the Designated Planning Agency after approval of the state government shall publish the final master plan in the official gazette after carrying out the modification if any under intimation to the state government within a period of 30 days from the date of according the approval by the state government.
- i. According to Section 75, the Master Plan comes into operation from the date of publication, referred in to sub section 5 of Section 70.

The entire process is shown in the form of flowchart

Figure 2 : Stages of Master plan preparation

- 2.14** Chapter XI of the Act also provides for “Control of Development and Use of Land in the area where the Master Plan is in operation.”
- 2.15** Chapter XII, Section 91 of the Act deals with the preparation of Town Development Schemes that can play a significant role in the implementation of Master Plan by way of planned development and through making land available for the open spaces, recreation, education and health services, transport and communication network, water supply, sewerage, sewage disposal and other public utilities including electricity and gas etc
- 2.16** Chapter XIV deals with “Control and Development along Scheduled Roads”
- 2.17** In addition to the "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" there are a few acts that have no direct bearing on preparation of Master Plan but have a definite role to play in the implementation of the proposals of the Master Plan. These are briefly described below;

(A) Punjab Apartment And Property Regulation Act, 1995

The Punjab Apartment and Property Regulation Act, 1995 has been enacted with a view to regulate the promotion of the construction, transfer and management of apartments on ownership basis, to regulate colonies and property transactions and to provide for registration of promoters and estate agents and enforcement of obligations on promoters and estate agents and for matters connected therewith or incidental thereto.

- It provides planned development by checking, controlling and regulating the activities of the private developers.
- It makes funds available for planned development.
- It provides land for social and physical infrastructure through the mechanism of planned development.
- It also has the provision to make social housing available at low prices for Economically Weaker Section of the society.

(B) Punjab Town Improvement Act, 1922

The Punjab Town Improvement Act, 1922 plays a significant role for the implementation of Master Plans in the following manner:

- It helps to provide planned development through the mechanism of Development Schemes.

- It makes land available for the development of social and physical infrastructure like schools, health, parks and playgrounds, and planned road network etc.
- It also provides social housing to Economical Weaker Sections and thus helps to check the growth of slums.

(C) Punjab Municipal Act 1911 and Punjab Municipal Corporation Act 1976.

The Punjab Municipal Act, 1911 and Punjab Municipal Corporation Act 1976 likewise' The Punjab Town Improvement'Act1922 also play an important role to execute the master plan proposals. Under these Acts the regulatory schemes known as Town Planning Schemes (T.P.Schemes) are framed in which planned circulation pattern and spaces for parks are evolved. Since the local bodies are the main agencies to monitor the development activities within the Municipal areas the role of Town Planning Schemes becomes very important. The contribution of Town Planning Schemes for the implementation of Master Plan can be elaborated as follows.

- The T.P. Schemes provide smooth circulation pattern having different width.
- T.P.Schemes helps to reserve the areas for parks and open spaces within the provisions of respective Acts.
- T.P.Schemes also regulates the development in a planned manner in which the residential plots of various sizes are planned.

3. POPULATION, ECONOMY AND EMPLOYMENT

3.1 This chapter covers the details on the population characteristics, demographic details, the economy and the employment characteristics of LPA

Population Growth of LPA, Kotkapura

3.2 LPA, Kotkapura includes only one urban settlement i.e.Kotkapura and 16 villages.LPA Kotkapura experienced growth rate of 25.15% and 21.30% during the year 1981-91 and 1991-2001 respectively, thus showing a decline in the population growth rate during the last decade which might be due to the weakening of the economic base of this area. Kotkapura is an important town of Faridkot district and is only urban settlement of its LPA with population of 80785 persons in 2001. Out of total population of LPA, Kotkapura town has 80785 persons whereas the population of rural areas of is 61982 persons as per census 2001.The growth trend of population of LPA, Kotkapura and Punjab State is given in **Table 1** below;

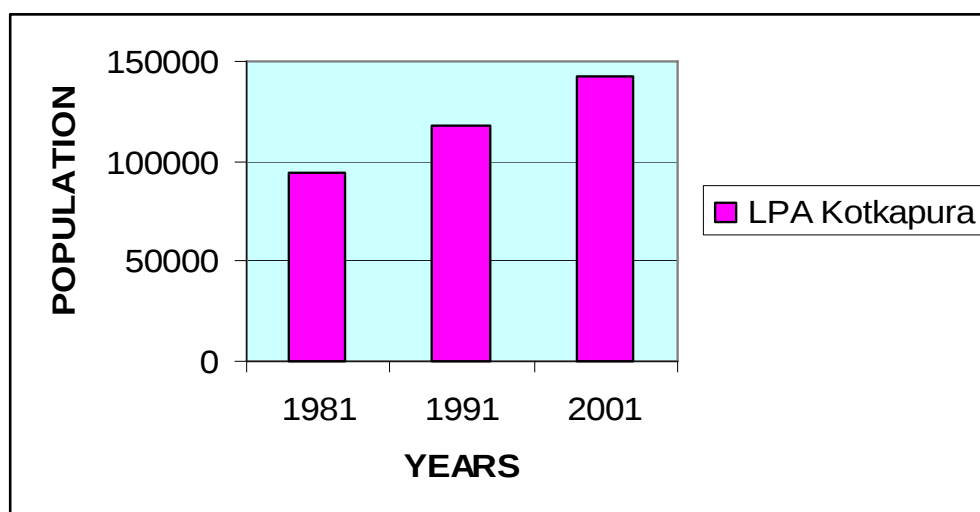
Table 1 : Population Growth Rate of Punjab State and LPA Kotkapura 1981 -2001

	POPULATION			GROWTH RATE%	
	1981	1991	2001	1981 – 91	1991 – 2001
PUNJAB STATE					
*POPULATION IN MILLIONS					
TOTAL	16.79	20.28	24.36	20.79	20.12
URBAN	4.65	5.99	8.25	28.82	37.73
RURAL	12.14	14.29	16.11	17.71	12.74
LPA KOTKAPURA					
TOTAL	94040	117698	142767	25.15	21.30
URBAN	47550	62430	80785	31.29	29.40
RURAL	46490	55268	61982	18.79	12.14

Source: Census of India, Punjab

3.3 The above Table No.1 depicts that the growth rate of population of LPA Kotkapura had shown a decreasing trend during 1981-2001, with the growth rate of 25.15% during 1981-91 and 21.30% during 1991-2001 which is still higher in comparison to the growth rate of Punjab State during the respective decades. the growth rate of urban population of LPA Kotkapura was more the State urban during 1981-91 whereas it was lower than state urban growth rate during 1991-2001, similar was the case of rural population. The growth trend of population of LPA Kotkapura is shown in figure 3 below:

Figure 3 Growth trend of Population of LPA Kotkapura: 1981-2001



3.4 Besides above, growth trends have also been analyzed in terms of share of population of LPA, Kotkapura to the state population. As far as the share of total population of LPA Kotkapura to total population of state is concerned it has increased from 0.52% in 1981 to 0.58% in 1991 and 0.58% in 2001. The share of urban population of LPA, Kotkapura showed a variable trend with the increasing trend from 1.02% in 1981 to 1.04% in 1991 but has declined to 0.97% in 2001 whereas the share of rural population was 0.33% in 1981 which increased in 1991 to 0.38% and remained the same in 2001 as shown in Table No.2.

Table 2 : Share of LPA, Kotkapura in Punjab state

YEAR	1981	1991	2001
TOTAL	0.52%	0.58%	0.58%
URBAN	1.02%	1.04%	0.97%
RURAL	0.33%	0.38%	0.38%

Source: Census of India, Punjab 1981, 1991, 2001

Population Characteristics of Kotkapura Town

3.5 As already stated Kotkapura is a major urban settlement of District Faridkot and is the only urban area of LPA, Kotkapura. As per the table given below regarding the population growth of Kotkapura town over the decades from 1901 to 2001, it can be said that growth of population is not uniform. Kotkapura town recorded a lowest growth rate of -4.38% during 1941–1951, the negative growth rate during this period can be attributed to out migration from the town due to partition. However, the town registered high growth rates of 62.68% during the decade of 1951–1961. The high growth rate during this period perhaps may be because of resettlement process after the partition. The

population profile of Kotkapura town indicates that during the decade of 1981–91 a growth rate of 31.29% was recorded whereas in 1991–2001, the growth rate of population decreased to 29.40%. The growth rate of the town was very low as compared to Punjab urban growth rate which was about 37.73% during 1991-2001. The detail of population growth of Kotkapura town from 1901 to 2001 is given in Table No.3 .

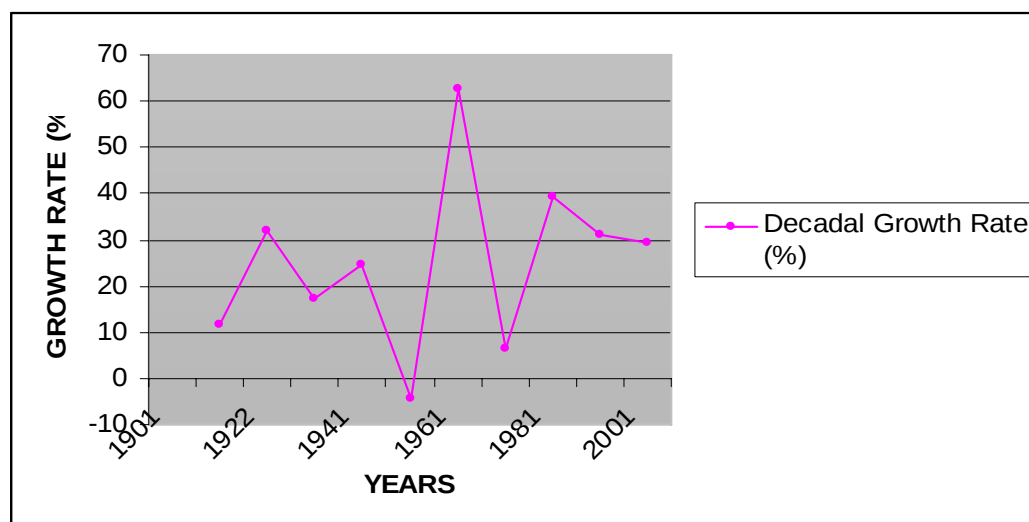
Table 3 : Population Growth Rate of Kotkapura town: 1901 – 2001

Years	Population	Decadal Growth Rate (%)
1901	9519	--
1911	10644	11.82
1921	14063	32.12
1931	16502	17.34
1941	20584	24.74
1951	19683	-4.38
1961	32021	62.68
1971	34116	6.54
1981	47550	39.38
1991	62430	31.29
2001	80785	29.40

Source: Census of India, Punjab, 2001

While reflecting the figures of above table into a diagrammatical way gives an immediate impression of variation of growth rate as shown in Figure No.4

Figure 4 : Population Growth rate of Kotkapura town 1901 – 2001



Population Density

- 3.6** The gross population density of Kotkapura town was about 33 persons per hectare in 1981 as given in Table 4 which increased to 43 persons per hectare as per the population figures of 1991. The Municipal limits of Kotkapura town were extended in 1999 from 1450 hectare to 2442 hectare, as a result gross population density decreased from 43 persons per hectare to 32.65 persons per

hectare inspite of increase in population during this period. The area of present municipal limits (which was extended in 1999) has got calculated from PRSC, PAU Ludhiana and the same has been taken into account for various studies of the town. Population density of Kotkapura town during various years is given in Table No.4 below:

Table 4 : Population Density (Within Municipal Limits)

Year	Population	Area (in hectares)	Population Density in Persons / hectare
1981	47550	1450	32.80
1991	62430	1450	43.05
2001	80785	2442	32.65

Source: Census of India, 1981, 1991, 2001 and Municipal Council Kotkapura

The population density is not the same all over the town. It varies to a large extent when discussed at ward level. The ward wise detail of population density is given in Table No.5.

Table 5 : Ward wise Population Density of Kotkapura town : 2001

Sr.No.	Ward No.	Area in Hect.	Population	Density / Persons per hect.
1	Ward No – 1	211.2703	2940	13.92
2	Ward No – 2	148.6256	5528	37.19
3	Ward No – 3	40.3942	3625	89.74
4	Ward No – 4	143.6224	4228	29.44
5	Ward No – 5	180.2030	2997	16.63
6	Ward No – 6	263.3647	4292	16.29
7	Ward No – 7	242.0963	4123	17.03
8	Ward No – 8	14.2111	2727	191.89
9	Ward No – 9	202.1290	3702	18.31
10	Ward No – 10	13.3906	3137	234.27
11	Ward No – 11	9.3553	3071	328.26
12	Ward No – 12	18.1082	2788	153.96
13	Ward No – 13	101.0871	2648	26.19
14	Ward No – 14	10.0587	3686	366.45
15	Ward no – 15	18.7687	3169	168.85
16	Ward No – 16	12.1834	2389	196.08
17	Ward No – 17	85.8752	2386	27.78
18	Ward No – 18	13.9467	3659	262.35
19	Ward No – 19	10.7685	2496	231.78
20	Ward No – 20	22.0716	3475	157.44
21	Ward No – 21	224.0746	3301	14.73
22	Ward No – 22	350.5999	4898	13.97
23	Ward No – 23	104.7641	5420	51.73
	TOTAL	2442	80685	33.06

Source: Census of India, Punjab, M.C.Kotkapura 1901–2001

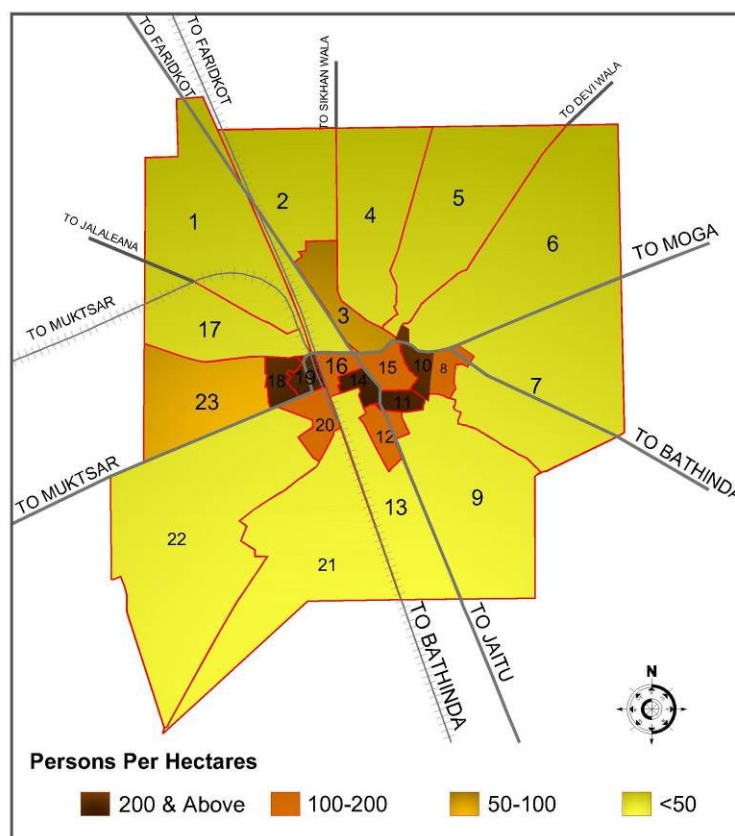
- 3.7** The census wise comparison of ward density is however not possible as ward boundaries and number of wards have been changing over the years. The density gradient as per 2001 census shows that ward no.11 and 14 are having a gross density of more than 300 persons per hectare with the distinction of highest density of 366.45 persons per hectare in ward no.14. The lowest density is only 13.92 persons per hectare in ward no.1. Five wards numbering

10,11,14,18 and 19 have density more than 200 persons per hectare, ward number 8,12,15,16 and 20 have population density 100-200 persons per hectare whereas ward number 1,2,4,5,6,7,9,13,17,21 and 22 have density less than 50 persons per hectare and ward no.3 and 23 have a density between 50 to 100 persons per hectare. The density has been classified into four groups as shown in Table No.6.

Table 6 : Density Gradient M.C. Kotkapura (Ward Wise): 2001

Sr. No.	Density Slab (Persons/hectare)	Ward Numbers
1.	More than 200	10,11,14,18,19
2.	100 to 200	8,12,15, 16,20
3.	50-100	3,23
4.	50 and below	1,2,4,5,6,7,9,13,17,21,22

Figure 5 : Ward Wise Density Gradient in Kotkapura Town



3.8 The inner part of the town falls in high density zone as this part is thickly built up area with narrow streets. As per above table ward no.11 and ward no.14 are only two wards which have gross density of more than 300 persons per hectare however the developed parts of ward no.1, 2,5,6,7,9,21 and 22 may have gross density more than the calculated as the boundary of these wards has been delineated in such a way that the vast open areas at outskirts of the town have

been included in these wards clubbing with the thickly built up areas of inner part of the town. Because of such character of ward boundaries the exact picture of density gradient of the town has not been depicted in the thematic map of Kotkapura town. However the ward wise density as per data available has been shown in Figure 5.

Population Distribution in LPA Kotkapura

3.9 Kotkapura is the only one urban settlement of LPA having a population of 80785 persons, as per census 2001. Pangraian Kalan is the largest village having a population of 10200 persons whereas the smallest village is Bir Sikhanwala having a population of 609 persons only. The size of rural settlements is closely related to the hierarchy and importance of the roads. The larger villages like Panjgarian Kalan with a population of more than 10,000 lies on State highway connecting Moga town, village Dhilwan Kalan with population of 8327 persons on Bathinda road (N.H.15) and village Sandhwan with a population of 5288 persons fall on Faridkot road (N.H.15). The other villages which are situated on link roads are smaller in size. The detail of population growth of these village is given in Table No.7 below;

Table 7 : Growth Rate of Villages of LPA Kotkapura: 1981-2001

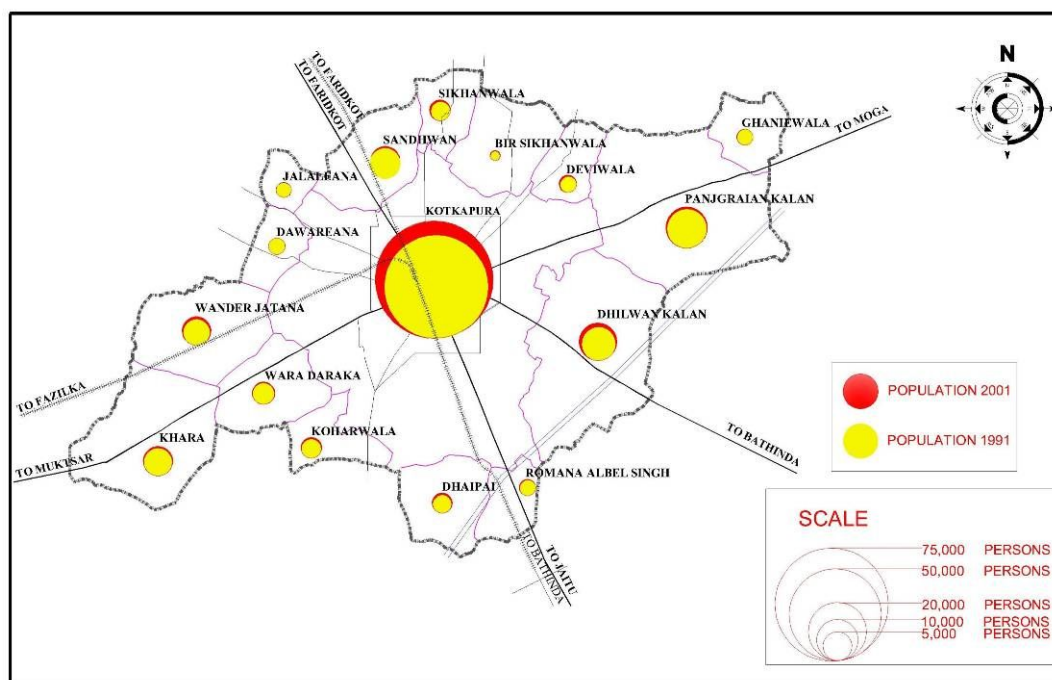
Sr.No. Villages		Population Year wise			Growth Rate of Villages%	
		1981	1991	2001	1981 – 1991	1991 – 2001
1	Kotkapura Rural	6214	8311	8167	33.75	-1.73
2	Sandhwan	3919	5470	5288	39.57	-3.32
3	Panjgarian Kalan	8115	9009	10200	11.01	13.22
4	Jalaleana	1074	1348	1447	25.51	7.35
5	Dewareana	1335	1646	1716	23.30	4.25
6	Waradaraka	2306	2721	3113	17.99	14.40
7	Koharwala	1968	2247	2601	39.59	-5.32
8	Romana Albel Singh	1263	1441	1708	14.09	18.53
9	Dhilwan Kalan	5949	6503	8327	9.31	28.05
10	Sikhanwala	1775	2193	2609	23.55	18.96
11	Bir Sikhanwala	544	522	609	-4	16.66
12	Deviwala	1210	1549	1890	28	22.01
13	Ghaniewala	1393	1596	1642	14.57	2.88
14	Khara	4099	4572	5221	11.54	14.19
15	Dhaipai	1920	2105	2495	9.63	18.52
16	Wander Jatana	3392	4035	4949	18.95	22.65

Source: District Census handbook 1981, 1991, 2001

The above Table depicts that the growth rate of the villages falling in LPA, Kotkapura varies considerably. The growth rate of population of village Koharwala during 1991-2001 periods has been recorded as low as -5.32 %(negative) which is lowest in LPA and that of village Dhilwan Kalan

was 28.05% during the same period which is highest. The size and growth trend of all the settlements falling in LPA Kotkapura is shown in Figure No.6

Figure 6 : Population Growth of Settlements of LPA Kotkapura



Sex Ratio

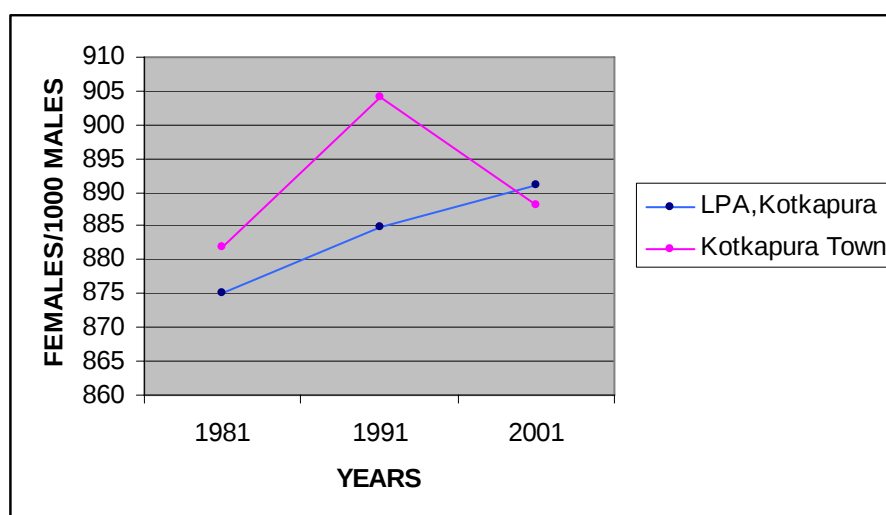
3.10 According to 1981 census, the sex ratio was 875 females per 1000 males in LPA Kotkapura which improved to 885 and in 1991 and it further improved to 891 by the year 2001. In case of Kotkapura town also, the sex ratio increased from 882 in 1981 to 904 in 1991 but declined to 888 in 2001. The sex ratio of LPA Kotkapura when compared with the state figure of 876 females per 1000 males seems to be quite positive with the figure of 891 in 2001. The details of sex ratio in LPA Kotkapura is given in Table no.8

Table 8 : Sex Ratio of LPA Kotkapura and Kotkapura Town, 1981-2001

Year	LPA KOTKAPURA				KOTKAPURA TOWN			
	Total Population	Males	Females	Sex ratio	Total Population	Males	Females	Sex ratio
1981	94040	50143	43897	875	47550	25272	22278	882
1991	117698	62439	55259	885	62430	32790	29640	904
2001	142767	75490	67277	891	80785	42789	37996	888

Source: District Census handbook, Faridkot 1981, 1991, 2001

Figure 7: Sex Ratio of LPA Kotkapura and Kotkapura Town



Religious Composition

- 3.11** Hindus constitute major part of 51.25 % of population of Kotkapura town, while 48.06 % are Sikhs and 0.27 % is Muslims and rest of the population belongs to other religions as per 2001 census. This religious composition decides the probable number, location and area under various religious places like Temples, Gurudwaras, Mosques and Churches etc. The religious composition of Kotkapura town is given in Table No.9 below:

Table 9 : Religious Composition of Kotkapura town

Religion	Total	Hindu	Sikh	Muslim	Christian	Jain	Buddhist	Others
No. of Persons	80785	41402	38815	221	124	142	42	39
%age	100	51.25	48.06	0.27	0.15	0.18	0.05	0.04

Source: District Census Handbook, Faridkot

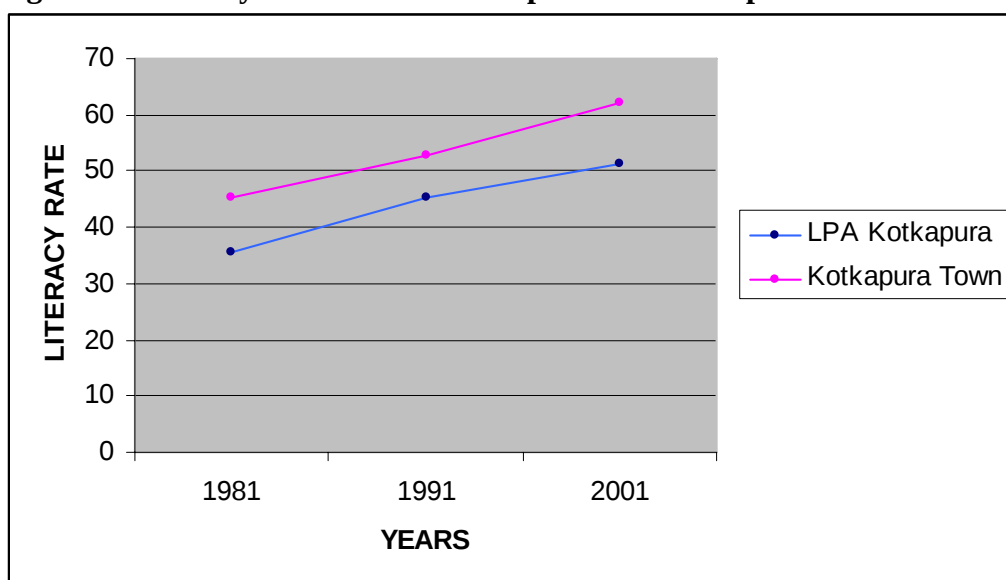
Literacy

- 3.12** Table No.10 depicts that the literacy rate is increasing in Local Planning Area, Kotkapura. The literacy rate in 1981 was 35.40%, which increased to 45.14% in 1991 and further rose to 51.16% in 2001. The percentage of male literates has been recorded 60.81% whereas in case of females it was 50.93% in 2001. As per trend, literacy rate of female increased from 28.60% in 1981 to 50.93% in 2001 in Local Planning Area, Kotkapura, which shows that more and more girls are coming to schools. Similarly, literacy rate of Kotkapura town also substantially increased from 45.44% in 1981 to 61.99 % in 2001 as shown in Table No.11.

Table 10 : Literacy rate of Local Planning Area, Kotkapura 1981-2001

Sr. No.	Year	Total	Total literates	Males Literacy		Females Literacy		Total Literacy rate (%)
				Number	%age	Number	%age	
1.	1981	94040	33298	20743	41.36	12555	28.60	35.40
2.	1991	117698	53131	31920	50.64	21211	38.38	45.14
3.	2001	142767	80181	45911	60.81	34270	50.93	51.16

Source: District Census Handbook 1981, 1991, 2001, Faridkot

Figure 8 : Literacy Rate in LPA Kotkapura and Kotkapura Town**Table 11 : Literacy Rate of Kotkapura Town; 1981-2001**

Sr. No.	Year	Total	Total literates	Males		Females		Literacy rate (%)
				Number	%age	Number	%age	
1.	1981	47550	21609	12971	51.32	8638	38.77	45.44
2.	1991	62430	32980	19123	58.31	13857	46.75	52.83
3.	2001	80785	50077	28285	66.10	21792	57.35	61.99

Employment LPA Kotkapura

- 3.13** Economic data as available for the state is not available for district or the town. The trends of economic growth have therefore to be judged on the basis of employment data as discussed ahead. The data depicts that the number of workers has increased in LPA, Kotkapura as the percentage of workers to the total population increased from 31.87 % in 1981 to 34.79% in 2001. The workforce participation rate has also increased from 29.48% in 1981 to 32.18 % in 2001 in case of Kotkapura Town. There are 65.20% non-workers in LPA and 67.82 % non-workers in Kotkapura town as per census 2001. The detail of workers and non-workers is given Table No.12.

Table 12: Workers and Non Workers in LPA, Kotkapura and Kotkapura Town 1981-2001

Year	LPA Kotkapura			Kotkapura Town		
	Total workers	%age	Non workers	Total workers	%age	Non workers
1981	29975	31.87	63886	14020	29.48	33530
1991	35639	30.28	80808	17883	28.64	44547
2001	49678	34.79	93089	26000	32.18	54785

Source: District Census Handbook 1981, 1991, 2001

Occupational structure

3.14 The change in occupational structure has been noticed as the persons engaged in primary activities i.e. cultivators and agricultural laborers decreased from 44.81 % in 1981 to 31.16 % in 2001 in LPA, Kotkapura whereas an increase is recorded in percentage of workers in household industries from 2.00% to 2.43% in 1981 and 2001 respectively. The most notable change during 1991-2001 is seen in the percentage of workers engaged in other activities, which jumped from 46.76 % to 51.88% during this period. The detail of occupational structure is given in Table No.13 below:

Figure 9 : Occupational Structure of LPA, Kotkapura 1981-2001

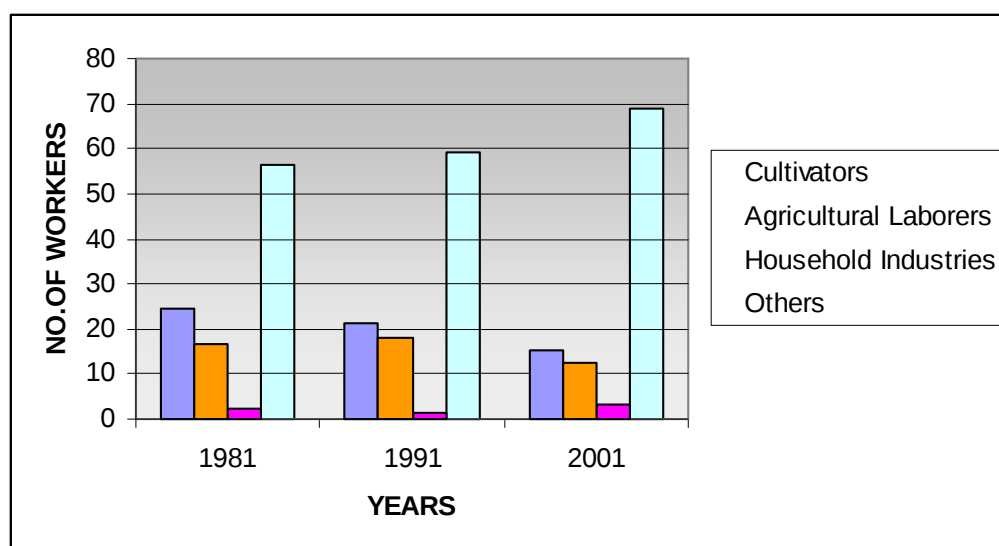


Table 13 : Occupational Structure of LPA, Kotkapura

Year	Total workers	Cultivators		Agricultural laborers		Household industries		Others	
		No	%age	No	%age	No	%age	No	%age
1981	29975	7961	26.56	5352	17.85	601	2.00	14016	46.76
1991	35679	9045	25.35	7317	20.51	487	1.36	18179	50.95
2001	49678	9269	18.66	6209	12.50	1210	2.43	25773	51.88

Source: District Census Handbook 1981, 1991, 2001, Faridkot

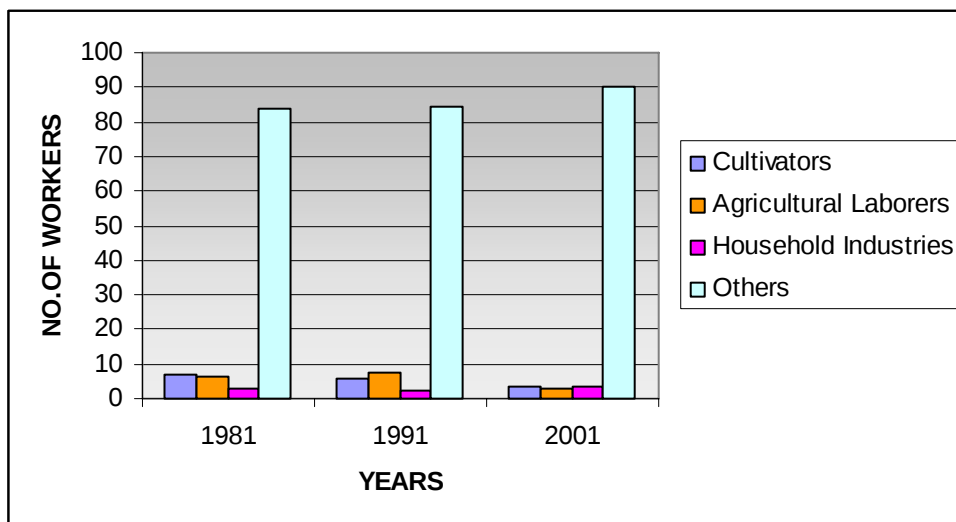
3.15 In case of Kotkapura town the workers engaged in primary activities i.e. cultivators and agricultural laborers decreased from 13.34 % to 6.34 % in 1981 and 2001 respectively as given in Table No.14 and shown in figure no.10 The house hold industry after showing a decreasing trend during 1981 to 1991 again recorded an increase from 2.24 % to 3.71 % during 1991 to 2001. Similarly the share of workers engaged in other activities recorded an increase from 83.58 % to 89.95 % in the year 1981 to 2001. These figures show that the scenario of development of Kotkapura has changed; the upcoming of a number of institutions attracted a large number of workers and profusely of different fields.

Table 14 : Occupational Structure of Kotkapura Town, 1981-2001

Year	Total workers	Cultivators		Agricultural laborers		Household industries		Others	
		Nos.	%age	Nos.	%age	Nos.	%age	No.	%age
1981	13868	937	6.76	912	6.58	428	3.09	11591	83.58
1991	17618	1030	5.85	1331	7.55	395	2.24	14832	84.19
2001	23530	750	3.19	742	3.15	873	3.71	21165	89.95

Source: District Census Handbook 1981, 1991, 2001, Faridkot

Figure 10 : Occupational Structure of Kotkapura Town



4. HOUSING AND SLUMS

4.1 Housing is one of the basic needs and it ranks after food and clothing in terms of priority. Housing constitutes one of the most important parts of the social environment where an individual is nurtured, grows and matures as a human being, part of the society and as a citizen. Housing, in addition to making contribution to the quality of living, also plays a significant role in improving the national economy and generation of employment. Housing has multiplier effect on the economy and industry of the country. It does not provide merely a shelter but gives an identity to the human being besides making him better human being. Poor quality of housing or absence of appropriate shelter has considerable impact on the economy and productivity of human beings besides health and social environment. Housing is not merely confined to the four walls which make a house but also all supporting infrastructure which is required to sustain the human beings in terms of physical and social infrastructure. Accordingly, National Housing Urban Policy laid emphasis not only on providing affordable shelter but also creation of appropriate quantity and quality of essential services etc.

Growth of Housing in Kotkapura

4.1 Housing is an activity, which is mainly driven by individuals to provide them with an appropriate shelter. With the rapid increase in population, number of houses has also recorded an increase. PUDA has framed many residential schemes in case of major cities of Punjab but in case of Kotkapura not much work in this sector is done. The other Govt, agency like Town Improvement Trust, Municipal Council has not done any job towards this sector. Most of the residential area has taken place at its own with the efforts of individuals. However in the recent past two private colonies measuring about 31 hectares of land have been approved by PUDA. These colonies floated 680 developed residential plots and 91 commercial sites.

Table 15 : Growth of Houses and Households in Kotkapura Town

Year	No. of Residential House	Change in the number of Residential houses (%)	No. of occupied Households	Rate of increase of Households	No. of Residential House	Household Size
1981	7372	-	7698	-	47550	6.1
1991	10265	39.24	10312	34	62430	6.0
2001	14164	38	14461	40.23	80785	5.5

Sources: Census of India, 2001

Table 15 depicts that the number of occupied residential houses was more than the growth rate of households but during latest decade of 1991-2001 the position of housing stock became little bit tight which was comparatively better during 1981-1991. During this time it has been found that the household size has recorded a decrease as it was 6.1 persons per family in 1981 which has been recorded as 5.5 persons per family in 2001.

Housing Characteristics

Type of Housing Structure

- 4.2 As per figures of 2001 census a major portion of town population was living in permanent houses which constitute 92% of the total population and 4.8% shares semi permanent structures. Only 3.2% population was living in temporary structures. The figures of Table No.16 express that a majority of population of Kotkapura live in permanent structure.

Table 16 : Residential Houses by Their Type of Structure in Kotkapura Town: 2001

Type of Structure	Permanent	Semi-Permanent	Temporary			
			Total	Serviceable	Non-Serviceable	Unidentified
No. of houses	13023	679	462	202	260	0
%age of total	92	4.8	3.2	1.4	1.8	0

Source: Census of India, 2001

Households by number of dwelling rooms

- 4.3 There is no separate data available regarding households by number of dwelling room for Kotkapura town, therefore the data relating to Faridkot district Urban has been taken for the purpose of making an assessment of housing stock available by type of rooms. The figures of 2001 census indicated that out of the total households of the Faridkot district urban about 26.5 % live in the houses having one room, about 30% live in two room set and 20.38% in three room accommodation there are only a few households who live in no exclusive room. Thus maximum number of households i.e. 99.43% has at least minimum one dwelling room and this number when compared to all India urban proportion of only 35 % households living in one room or more, shows that the town has relatively better housing condition and the houseless households are 198 which is 0.57% only. This data shows the overall assessment of housing stock in Faridkot District urban and the median works to 2 rooms per households. The detail of households by number of rooms is given in Table No.17 below;

Table 17 : Households by Number of Dwelling Rooms in Faridkot District Urban: 2001

Number of rooms	No exclusive Room	One Room	Two Room	Three Room	Four Room	Five Room	Six Rooms and above	Total
Households	198	9065	10178	6964	4435	1792	1534	34166
%age	0.57	26.5	30	20.38	13	5.2	4.4	

Source: Census of India, 2001

Services to households

Households by Source of Drinking Water

- 4.4** As per the census 2001 about 57% of the total households have source of the drinking water from tap and 41.73% are dependent on hand pump in case of Kotkapura town. In category other than tap and hand pump about 0.54% of the total households are dependent on tube well and only 0.90% are dependent upon other water sources.

Table 18 : Houses by Source of Drinking Water in Kotkapura town: 2001

Source of Drinking water	Tap	Hand Pump	Tube Well	Any Other	Total
Households	8216	6036	78	131	14461
%Age of the total	57	41.73	0.54	0.90	100

Source: Census of India 2001

The figures of Table No.18 depicts that still a number of households of Kotkapura town are using water from other than piped supply system.

Households by Source of Lighting

- 4.5** As per the data of census 2001 Kotkapura town had a good electricity facility because about 94.17% of the total households of the Kotkapura town get light from the electricity, while 4.25% are dependent on Kerosene oil and only 0.58% of the total households are having light from other sources whereas only 0.082% houses are recorded as having other lighting system.

Table 19 : Houses by Source of Lighting in Kotkapura Town: 2001

Source of Lighting	Electricity	Kerosene	Any other	No Lighting	Solar Energy	Other Oil	Total
Households	13619	616	84	119	11	12	14461
%Age of the total	94.17	4.25	0.58	0.82	0.076	0.082	100

Source: Census of India 2001

Slums in Kotkapura

- 4.1** Slums represent multiple human deprivations in urban settlements and majority of urban poor seems to reside in the slums and squatter settlements. With the industrialization, slums and slum population have multiplied, as cities have been unable to support the large number of migrants who cannot buy a

house or a plot of land for their own shelter. This has been putting strain on urban resources as poor unskilled migrants with negligible income find it convenient to create a temporary shelter on government or private land without security of tenure. Generally these settlements do not have any basic civic amenities, and people live under unhygienic and unsanitary conditions. The Census of India (2001) defines slums as, “all areas notified as slums by the state/local government under any Act; and all areas recognized as slums by state/local government, which have not been formally notified as slum under any Act and a compact area of about 300 population or about 60-70 households or poorly-built congested tenements in unhygienic environment, usually with inadequate and lack of any proper sanitary and drinking water facilities.”

As intimated by Municipal Council there are eight notified slum areas in Kotkapura spreading over an area of about 134 acres. Besides this there are other slum areas also but it is difficult to identify a slum as it is a subjective approach. Therefore only the slum areas declared by Municipal Council Kotkapura have been taken for study purpose.

General Characteristics of Slums in Kotkapura

- 4.6** The total population of Kotkapura town as per 2001 census was 80785 persons. As per information supplied by Municipal Council Kotkapura 31540 persons were living in different slum areas which is 39.04% of total population. The emergence of slums in this town is largely due to migration of poor people from rural areas of the state and from other states for employment purpose and to avail higher level of facilities. The other reason for emergence of slums is ever increasing population with a higher growth rate, inadequate supply of housing stock from the Government agencies and existing very high land prices. The slum wise detail of general characteristics is given in Table No.20 .

Sr. No.	Name of Slum Area	Location	Area in Acres	Total households	Population
1	Sweeper Colony		32.5	1001	7169
2	Prem Nagar		45.2	802	6772
3	Bazigar Basti		12.5	N.A.	3341
4	Chhajghade Basti		8	200	4576
5	Kothe Waring		10	650	3300
6	Kothe Sainia		6.5	500	2730
7	Sahibzada Fateh Singh Nagar		12	N.A.	2210
8	Aman Nagar		8	742	1442
		Total	134.7	3895	31540

4.7 Out of the total eight notified slums four slum areas fall towards west of railway line and other four falls towards eastern side. The most of the slums are located on the outskirts of the town like Kothe Waring, Kothe Sainia, Sahibzada Fateh Singh Nagar, Aman Nagar but Prem Nagar and Bazigar Basti are situated in the inner part of the town. The location of slums in the town is shown in Figure no.11 below:

A map of Jalandhar, Punjab, India, illustrating the distribution of slum areas. The map features a central urban area with several orange-shaded regions indicating slums. Major roads radiate from the center, with labels such as 'FROM FARIDKOT', 'TO SIKHANWALA', 'JAGAN BATH BHATHA ROAD', 'TO BIR SIKHANWALA', 'TO DERWALA', 'TO MOGA', 'TO BATHINDA', 'TO BATHINDA', 'KASIM BHATTI', 'FROM HARNAU', 'TO MUKTSAR', 'TO FAZILKA', 'FROM DAWAREAH', 'FROM HALALWALA', and 'FROM FARIDKOT'. A dashed line outlines a specific area of interest. A legend at the bottom left shows an orange square labeled 'SLUM AREAS'. A compass rose at the bottom right indicates North (N) and South (S).

Level of facilities Available in Slum Areas – Kotkapura town

- 4.8** The information regarding level of facilities in slum areas supplied by municipal council shows that about all the slum areas have both water supply and sewerage facility and have pucca streets. Almost 70% area of 8 slum areas is being served both water supply and sewerage and 80% of that are having street lights and pucca streets. This information reveals that, most parts of the slum areas are having basic infrastructure.

Ownership Pattern

- 4.9** All slum areas are on the private land and no slum area in the town occupies the government land.

5 EXISTING LAND USE AND TRANSPORT NETWORK

Preparation of base map

- 5.1** The work of preparation of base map for the Local Planning Area, Kotkapura was assigned to Punjab Remote Sensing Centre, P.A.U., Ludhiana vide memo no.4827 CTP (Pb)/SP 480 dated 22-10-2007 of Chief town Planner, Punjab. The base map of LPA Kotkapura is generated on 1:10,000 scale using Cartosat I data of 2.5 mtr spatial resolutions. The Cadastral maps of the villages falling in LPA were procured from the state Revenue department by the office of District town Planner, Faridkot and these maps have been scanned in the office of PRSC, Ludhiana and registered with Cartosat I data to demarcate village boundaries. The features like roads, rails, high and low lands, drains etc. have also been delineated from Cartosat I data, by the concerned agency and shown on the draft base map prepared on basis of satellite imagery. After editing the map details, the attributes to different features were assigned. After the preparation of base map of LPA on 1:10,000 scale using Cartosat I data, the draft base map for densely populated built up areas of Kotkapura town (core area) was prepared on 1:2000 scale using quick bird satellite data of 0.5 mtr. spatial resolution. The quick bird data (satellite imagery) has been received by the PRSC, Ludhiana from National Remote Sensing Agency, Hyderabad.

Enhancement through field surveys – Land use and Road network

The draft base map for the LPA, Kotkapura and Kotkapura town and the densely built up areas (i.e. core areas) received from Punjab Remote Sensing Centre, P.A.U., Ludhiana were updated through ground truthing by conducting field survey by the office of DTP Faridkot. The various land uses were 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 the updated base map was prepared by P.R.S.C, P.A.U Ludhiana. The office of DTP Faridkot again conducted second round of field verifications (ground truthing) and the updated (corrected) plans were then supplied to P.R.S.C, this exercise was repeated several times and the field staff of DTP office, Faridkot personally assisted the concerned staff of PRSC and a final Existing Land Use map thus was prepared.

Drawing 2: Existing Land use, LPA Kotkapura



Existing Land Use: LPA, Kotkapura

- 5.2 The LPA Kotkapura comprises 24137 hectares (241.37 sq.mt) of area as per revenue record and as per calculations of P.R.S.C. Ludhiana it works out to 24184 hectares with a variation of 0.20% only which is very negligible thus ignored. Similarly the area of municipal council Kotkapura town as per the calculation of PRSC works out to be 2442 hectares (24.42sq.km.).The areas of LPA Kotkapura and M.C. Kotkapura as worked out by PRSC Ludhiana have been used for analysis of existing land use. The existing land use pattern has been divided into eight broad categories prominent of these are residential, commercial, industrial, public & semi public, utilities, transportation & communication, agricultural etc. The detail of Existing Land Use of LPA Kotkapura is given in table No.21 below;

Table 21 : Existing Land Use, Local Planning Area, Kotkapura-2009

Sr.No.	LAND USE	Area in hect.	Percentage of total area
1	RESIDENTIAL	1233.00	5.10
	Residential (Urban) Built up	325.40	1.34
	Residential Plotted	147.00	0.60
	Rural Residential	760.60	3.14
2	COMMERCIAL	133.24	0.55
	Retail Shopping	38.85	0.16
	General bussiness and Commercial District centre.	2.32	0.009
	Whole Sale,Godown, Ware Housing Regulated Market	92.07	0.38
3	INDUSTRIAL	149.06	0.62
	Service light Industry	113.42	0.46
	Planned	15.64	0.06
	Heavy	20.00	0.08
4	PUBLIC & SEMI PUBLIC	145.23	0.60
	Govt / Semi Govt / Public Offices	13.54	0.05
	Educational & research	64.25	0.26
	Medical & Health	10.52	0.04
	Social, Cultural & Religious	44.57	0.18
	Cremation & Burial Grounds	12.35	0.05
5	UTILITIES	37.52	0.16
	Water works	31.73	0.13
	Electric Grid Station	5.27	0.02
	Solid Waste Disposal	0.52	0.002
6	RECREATION	5.22	0.02
	Parks & Gardens,Playground (Public Open Spaces)		
7	TRANSPORTATON & COMMUNICATION	483.57	2.00
	Main Roads \$ Parking	377.77	1.56

	LAND USE	Area in hect.	Percentage of total area
	Railway Line	103.51	0.42
	Bus & Truck Stand	2.29	0.009
8	AGRICULTURE & RURAL	21997.16	90.95
	Agriculture	21094.78	87.22
	Water Bodies	310.26	1.28
	Plantation & Orchards	387.69	1.60
	Forest	115.70	0.47
	Dairy & Poultry Farm	11.09	0.04
	Vacant Land	77.64	0.32
	TOTAL	24184.00	100.00%

5.3 LPA Kotkapura covers the revenue estates of 16 villages which also includes the areas of one urban centre i.e. Kotkapura, as given in Annexure II. Out of the total area of LPA Kotkapura about 21997.16 hectares is under agricultural use which is 90.95% of the total area. The second largest share goes to residential use which occupies 1233 hectares in various settlements such as Kotkapura town and 16 rural settlements. The detail of breakup of major existing land uses is given in Table 21 above. The spatial distribution of existing Land Use of LPA Kotkapura is shown in Drg.No.DTP (FDK) 365/2010 dated 27.5.2010.

Existing Land Use Kotkapura town

5.4 The total area of Municipal Council of Kotkapura is 2442 hectares as per PRSC which includes residential, industrial, commercial, public amenities and agricultural etc. The detail of major existing land uses within the M.C. Limits is given in Table No.22 below.

Table 22 : Existing Land Use, Kotkapura Town-2009

Sr.No.	LAND USE	Area in hect.	Percentage of total area
1	RESIDENTIAL	472.40	19.34
	Residential (Urban) Built up	325.40	13.32
	Residential Plotted	147.00	6.02
2	COMMERCIAL	104.50	4.28
	Retail Shopping	26.04	1.07
	Whole Sales, Godowns, Warehousing	78.46	3.21
3	INDUSTRIAL	88.00	3.60
	Service light Industry	65.30	2.67
	Planned Industries	15.64	0.64
	Heavy Industry	7.06	0.29
4	PUBLIC & SEMI PUBLIC	73.54	3.01
	Govt / Semi Govt / Public Offices	9.52	0.39

	LAND USE	Area in hect.	Percentage of total area
	Educational & research	33.54	1.37
	Medical & Health	6.17	0.25
	Social, Cultural & Religious	19.33	0.80
	Cremation & Burial Grounds	4.98	0.20
5	UTILITIES	12.75	0.52
	Water works	10.68	0.44
	Electric Grid Station	1.55	0.06
	Solid Waste Disposal	0.52	0.02
6	RECREATION	3.48	0.14
	Parks & Gardens (Public Open Spaces)	3.48	0.14
7	TRANSPORTATION & COMMUNICATION	194.03	7.95
	Main Roads & Parking	146.35	6.00
	Railway Line	45.38	1.86
	Bus & Truck Stand	2.30	0.09
8	AGRICULTURE & RURAL	1493.35	61.16
	Agriculture	1413.14	57.88
	Water Bodies	14.12	0.58
	Plantation & Orchards	11.77	0.48
	Dairy & Poultry Farm	1.70	0.07
	Vacant Land	52.57	2.15
	TOTAL	2442.00	100.00

Residential

Residential use covers a large share of total area of our towns and cities; same is the case with Kotkapura town. Out of total Municipal area of 2442 hectares about 472.40 hectares are under residential use which is 19.34% of total area. Besides the internal parts of the town like Old Mandi area, Harnam pura, Dibi Pura, Agwar Thara, Mohalla Kashmirian, Jaurian Chakkian etc. and both sides of Muktsar road, Moga road, Dawareana road, Sikhan Wala road have more concentration of residential areas. There is no planned residential colony in Kotkapura developed by any Govt. or Semi-Govt. agency. Recently two planned colonies in private sector one each on Bathinda and Muktsar road have been approved by PUDA. In these two private colonies 680 residential and 91 commercial sites have been carved out. Since both of these colonies are yet under the process of development, almost whole of the town can be said to be developed in an unplanned manner having zigzag street pattern. In addition to this some outgrowth in form of Kothe Waring and Kothe Sainia has taken place within municipal limits. The spotted individual or grouped single story residential houses are also found scattered here and there in outer municipal area of Kotkapura as clearly shown in Existing Land use Plan Drg.No.DTP (Fdk) 364/2010 dated 26/5/2010.

Drawing 3: Existing Landuse, Kotkapura Town



Commercial

- 5.5** The Kotkapura has been enjoying the status of an important commercial centre of Faridkot district. The total area covered under commercial use is 104.50 hectares which is 4.28% of the total developed area. Out of total commercial area about 78.46 hectares are under wholesale trade and remaining is under retail trade. The main commercial areas in Kotkapura are New and Old Grain markets as whole sale trade and Railway road bazaar, Shastri Market, Gurudwara bazaar, Satta bazaar, Purana bazaar, Jhaman bazaar and commercial concentration on Faridkot road, Muktsar road, Jaitu road and Moga road are worth mentioning in the form of semi-organised bazaars along streets and roads. Apart from formal bazaars, there are informal bazaars in the form of temporary shops like Rehri walas, Farhi walas and kiosks located in the existing commercial areas and near the bus stand, railway station, grain market and near other important economic activities. There are more than 350 numbers of rehri / informal shops existing in the various parts of the town. These activities are not of permanent nature and are using the roads therefore areas covered under this use are not shown separately.
- The new wholesale Grain Market covering an area of about 60 hectares is located in the eastern part of the town along the Moga road which also abutts on Bathinda road on other side. Both the New and Old Grain Markets serve the region beyond the LPA in handling the agricultural produce particularly Wheat, Paddy, Cotton etc.

Industry

- 5.6** As table depicts that the total area under industrial use is about 88.00 hectare which is 3.60% of the total municipal area. The town of Kotkapura does not have good number of industries. The growth of industries is slow and limited to Agro based industries. Earlier there were several cotton industries out of which many have been converted into rice mills. As per information collected from the field about 34 units of rice mills are now working in and around Kotkapura. There is One Industrial Focal Point on Faridkot road covering an area of about 21 hectares where different types of industrial units have come up. Adjoining to the Focal Point Narayan Agro Food Ltd. mostly dealing with milk products is an important industry. Besides this there is one Aara Market (Saw Mills) on Bir Sikhan wala road where about 20-25 saw mills are concentrated at one place. The location

different industrial areas/sites are shown on Existing Land use plan of Kotkapura town Drg No.364/2010 dated 26/5/2010.

Traffic & Transportation

- 5.7 The total area under traffic and transportation is 194.03 hectares which is 7.95% of the total municipal area. However the percentage of area under this use is low as compared to norms and standards required for this size of town. The major problems related to this aspect is the existence of narrow width of roads missing road hierarchy, lack of parking places, traffic bottlenecks, encroachment of roads, lack of traffic signals etc. The detailed study of traffic & transportation is also covered in the part related to Physical infrastructure in Chapter 6. However, Table 22 depicts that out of this use major share of 146.35 hectares is covered under main roads followed by railways which cover an area of 45.38 hectares. A small bus stand on Moga road measuring an area of 0.8 hectares is in operation in the town where 1384 buses operate per day. There is no organized Truck Stand; a small piece of about 1.5 hectares on Moga road is presently used by the truck union. The spatial distribution of existing road network and other uses relating to traffic transportation are shown in Existing Land Use Plan, Kotkapura town Drg.No.DTP (Fdk) 364/2010 dated 26.5.2010.

Public & Semi-Public

- 5.8 This Use comprises the areas covered under Govt. / Semi Govt. offices, Govt.Lands, Education, Health, Socio-Cultural, cremation grounds etc. The total area covered by this use is about 73.54 hectares which is 3.01% of total municipal area. The most Public and Semi-Public uses are concentrated in the central part of the town whereas few uses of this category are seen in the outer parts of the town.

Utilities

- 5.9 Utilities include uses like Water Works, Electric Grid station, (E.G.S.) Sewage Disposal, Solid Waste Dumping site etc. Area under this use measures to about 12.75 hectares which is only 0.52% of total municipal area. Main water works of the town is located on Kothe Waring road and one each of Punjab Mandi Board in new Grain Market and of PSIEC in Industrial Focal Point are maintained independently by the concerned agency for their own use. Two Electric Grid Stations one on Muktsar road and other on Deviwala road, one disposal site on Deviwala road are existing in town. Solid waste of the town is disposed in three different ponds on Deviwala road, near Jaitu road and on Dawareana road.

Agricultural / Rural

- 5.10** There are some large chunks of agricultural / rural areas within the municipal limits of Kotkapura. The north-eastern part starting from Moga road up to village Shikhanwala road within M.C. limits and in south-western part between Kotkapura distributary and Muktsar road are main agricultural areas, whereas some parts on outer parts of town limits are also found under agricultural use. About 1493.30 hectares of land is under agricultural use within municipal limits which is 61.16% of total town area out of this about 52.57 hectares and 14.12 hectares of land is under vacant area and water bodies respectively. The existing Land Use Plan Drg.No.DTP (Fdk) 364/2010 dated 26-5-2010 shows the spatial distribution of all these uses within the municipal limits of Kotkapura.

Existing Road – Rail Network

- 5.11** The road network of towns and cities plays an important role in the growth of urban areas. Urban transport has also been considered as an integral part of urban planning. The objective of studying the transport sector is to analyze and understand the role of transport in the present scenario of the town and the surroundings and to understand the existing potentials, strengths, weakness and constraints of the transport sector and consequently arrive at strategies and projects which will form an integral part of the town development strategy. The road network is studied in terms of classification of roads, length of roads, cross section of roads (divided and undivided carriageway, footpath, shoulders etc.), area of road network and major road intersections. Similar data regarding rail network is also studied.

Road Network

- 5.12** Local Planning area of Kotkapura has significant road network. National Highway No.15 passes through it providing connectivity with Bathinda on one side and Faridkot on other side which further connects the town with Amritsar. State highway No.16 provides the linkages with Moga in east and Muktsar in west. As per table given below the length of major roads is 36.88 km within LPA boundaries out of which about 11.26 kilometers fall within the limits of Municipal Council of Kotkapura. There is good network of rural roads in LPA, Kotkapura. The detail of width of Right of way, carriage way and length of major roads falling in LPA, Kotkapura is given in Table No.23.
- 5.13** The existence of main roads in LPA, Kotkapura shows that this area is well served by the regional roads as well as link roads which provide high level of

connectivity with the various towns and cities and other parts of the state. The total length of these roads has been measured to 74.40 kms within LPA boundaries of which about 29.13 kms fall within the limits of municipal council of Kotkapura. All these roads have black top as material of construction. Besides this there is very good road network of other rural link roads in LPA Kotkapura. The location and alignment of these roads is shown in Drg.No. DTP (Fdk) 364/2010 dated 26.5.2010 and Drg.No.DTP (Fdk) 365/2010 dated 27.5.2010.

Table 23 : Detail of Road Cross Sections and Length of Major Roads

Name of Road	Total Length in Kms	Within MC			M.C.to LPA		
		Road Length in Kms	Right way (mts)	Carriage way(mts)	Road Length in Kms	Right of Way(mts)	Carriage Way (mts)
National Highways							
Kotkapura-Bathinda (NH-15)	9.66	3.46	33.5 & 22	7	6.20	33.50	7
Kotkapura – Faridkot (NH-15)	6.18	3.00	40 & 23	10,7	3.18	40.00	10
State Highways							
Kotkapura – Moga	11.78	2.00	20	10	9.78	20.00	10
Kotkapura – Muktsar	9.27	2.80	25 & 18.44	7	6.47	18.30	7
Other Roads							
Kotkapura – Sikhanwala	4.94	2.63	16.76 & 8.38	5.5 & 3.65 & 3	2.31	8.38	3
Kotkapura – Deviwala	4.40	3.25	15.24 & 8.38	7,4,5,3	1.15	8.38	3
Kotkapura – Harinau	6.43	3.81	20,10	5.5	2.62	20.00	5.5
Kotkapura – Duareana	2.75	1.75	20,1,3,4	5.5	2.00	20.00	5.5
Kotkapura – Jalaleana	6.43	2.00	13.4,10, 8.38	7,5,5,3	4.43	8.38	3
Kotkapura – Bir Sikhanwala	3.05	1.90	8.38	5.5	1.150	8.38	5.5
Kotkapura-Jaito	9.93	2.93	16.761	7	7.0	16.76	7

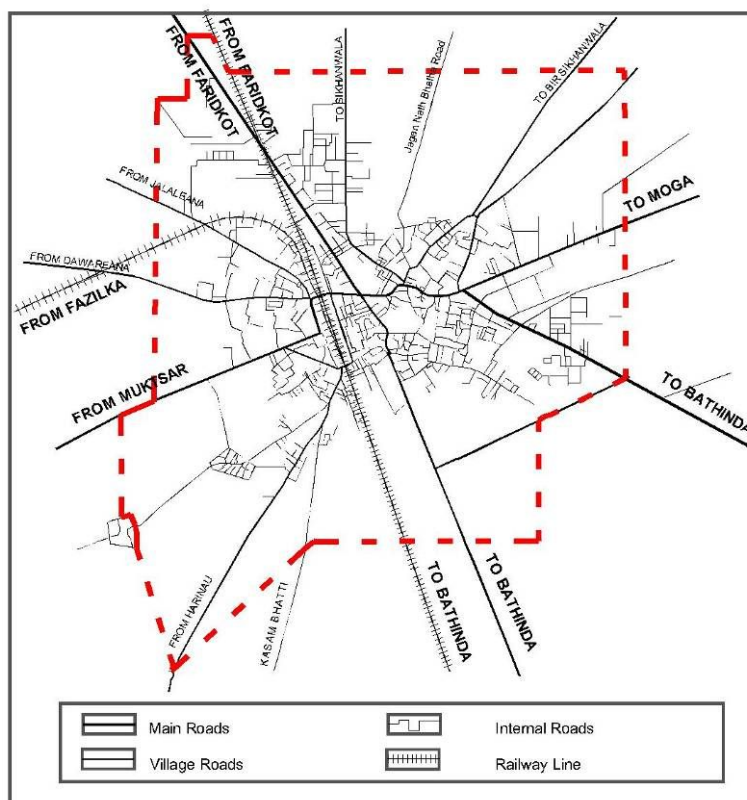
Source: PWD central works, Ferozpur, P.W.D, B&R Plan Roads Faridkot and Field Survey by DTP office Faridkot

Road Network at Town Level

- 5.14** The existing road network in the town is radial in pattern. The main roads leading towards Bathinda, Jaitu, Muktsar, Faridkot and Moga originate from central part of the town before taking its respective route. Similarly other link roads leading towards surrounding villages like Sikhanwala road, Bir Sikhanwala road, Deviwala road, Harinau road, Dawarena road, Jalaleana road, Jagan Nath

Bhattha road, Kothe Bahaman wala road, and Kothe Waring road etc. form a radial pattern. All these roads play an important role in providing the shape to town's morphology. These roads provide access to various localities of the town. Besides this there are some internal roads like Purana Bazar, Factory road, Jaitu road and Jaurian Chakkian road etc. which can be considered for analysis. The road network of Kotkapura town has been shown in Figure No.12.

Figure 12 : Existing Rail-Road Network Kotkapura Town



- 5.15** The existing width of N.H.15 varies from 30 meter to 40 meter and that of state highway is about 18-20 meter whereas other roads are found to be between 10-20 feet wide. The internal roads of the town are mostly less than (20 feet) wide some of which are even less than 10 feet wide. The main roads such as National Highways and State Highways are wider in outer parts of the town and are narrow in internal part of the town. The inner road network of Kotkapura town has irregular alignments, inadequate width and frequent intersections. There is only a small stretch of Faridkot road (about 1.5 kms long) in Kotkapura which has central divider, all other roads are undivided. The construction of footpaths along the roads is almost missing in the town. There is no planned or organized

parking place in the town except railway station. The vehicles are seen parked along road sides every where in bazars.

Rail - Network

- 5.16** Kotkapura is an important railway junction on Bathinda-Ferozepur section of northern railway. Kotkapura is connected with Ferozepur in north, Bathinda in south and Fazilka in west through broad gauge railway lines. There is only one railway over bridge in the town which provides connectivity between eastern and western parts of the town besides this, it also serves for uninterrupted regional traffic. There are three main level crossings on these railway lines out of which level crossing on Faridkot road experiences large number of vehicles passing over there whereas other two crossings are on link / local roads which do not have much traffic.

Environmental Status

- 5.17** The intensity of the pollution in terms of air, water and noise is evaluated in order to clearly understand the level and causes of pollution existing within the town so that appropriate strategies are put in place to tackle the problem of pollution. There is no observatory installed in the town to check the air pollution, but on the whole the problem of air pollution in Kotkapura is not so serious to be taken care of, however the air pollution created by vehicles can not be ignored.

Water Pollution

- 5.18** The Ground water in this area contains high quantity of fluorides and Chlorides which make the ground water unfit for human consumption and also plant life. The unsafe ground water therefore forces the residents of town to have the risk of water borne diseases. The use of brackish ground water for agricultural purposes has also led to the degradation of the soil and presence of heavy metals into soil and vegetable crops grown in the area. Besides this the existence of dirty water ponds existing in the town pose a threat to the environment of the town. The solid waste disposal in these ponds further aggravates environment problem.

Heritage & Conservation

- 5.19** The basic objectives of urban and regional planning are very clearly related to those of conservation of historic towns, area and monuments. Land use plans, Master Plan, Zoning Regulations and building bye-laws etc. help in achieving these objectives. The existing old areas in cities need care of the architectural fabric in urban areas. Therefore conservation needs to be an integral part of the town planning process, i.e. land use plans, building regulations and development

policies. The perspective plan of a city must be reviewed to assess its effect on the conservation needs of the city. It must reflect and respect the form of all areas and buildings and precincts must recognize the social needs of community in old days. So far as Kotkapura town is concerned there is no heritage or historical building declared under any relevant Act.

Acts/laws

- 5.20** A few of the Central and State Government Acts which mention conservation of built heritage monuments and natural and environmental protection are enumerated as under:-

Central Level Acts

- 5.21** Ancient Monuments and Archaeological Sites and Remains Act, 1958 is the principal Act.

State Level Acts

- 5.22** The Punjab Ancient Monuments and Historical Remains Act, 1964 Provisions contained in "The Punjab Regional and Town Planning and Development Act, (Amended) 2006.

Heritage & Conservation in Kotkapura

- 5.23** As per the records and information collected from various departments there is no building of archeological, historical, or artistic importance in Kotkapura LPA which has been declared as heritage building under any Act, however there are some old buildings existing in the town which do have some historical importance and can be considered for conservation after conducting requisite studies. The only building known as Rani Bagh wali Kothi can be considered for conservation.

5.24 Places of interest

Besides the above there are some other places of interest in LPA Kotkapura which do have some specific character. On the basis of studies conducted by the office of DTP Faridkot following places have been identified which reflect the activities and specific character of LPA Kotkapura. These are listed as below:

1. Gurudwara Godawari Sar at village Dhillwan
2. Gurudwara in Kotkapura
3. Brar Swimming and recreational centre on Moga road.
4. Giani Zial Singh memorial at village Sandhwan.
5. Stud Farm at village Wander Jatana.

1. Gurudwara Godawarisar at village Dhillwan

This Gurudwara has been built in memory of visit of Shri Guru Gobind Singh to village Dhillwan. Some clothes (Vaster) of Guru Sahib are still lying in this village. On the occasion of Baisakhi huge mela is celebrated every year besides this people from surrounding areas visit this gurudwara every Sunday.



2. Gurudwara in Kotkapura:

This Gurudwara was built in 1937 by Raja Harinder Singh Brar of Faridkot; This Gurudwara is situated in the centre of town and people of all sects visit this Gurudwara. This Gurudwara is being maintained by Nihang Singh sect.



3. Brar Swimming and Recreational Centre:

LPA Kotkapura is accredited with a privately managed small recreational centre where two swimming pools, boating for Children and a restaurant is available. This site lies on Moga road about 4 kms. from Kotkapura, a large number of regional traffic passes on this road and the people use to stay here for a while to get relaxed. Besides this the people from Kotkapura town and from various villages of this area use to come to this place for recreation purpose



every day.



3. Stud Farm at village Wander Jatana:

There are some stud farms in LPA Kotkapura, out of which one located in village Wander Jatana is quite famous. Horses of national or international level are kept in this stud farm and are for the people of this area and also source of inspiration to adopt other occupation related to agriculture.



4. GIANI ZAIL SINGH MEMORIAL

The Memorial constructed in memory of Giani Zail Singh former president of India at village Sandhwan is another place of interest of this LPA. It is situated in the centre of village Sandhwan at the site of ancestral house of Giani Zail Singh. This monument induces a deep spirit of nationalism and patriotism among the children who ever visit this place at week ends.

6. EXISTING INFRASTRUCTURE

Physical Infrastructure

Water Supply

- 6.1** Public water supply in Kotkapura was started for the first time in the year of 1955 when a number of tube wells were dug in the inner part of the town and later on during the period of 1960-1965 the canal based water works was constructed at Kothe Waring road. The raw water for this water works is taken from Kotkapura distributory which takes water from Abohar branch of Sirhind canal. This water works is based on slow sand filters and this was originally constructed to ensure the water supply to civil Hospital, Govt.offices besides the general town dwellers.

Sources of water supply

- 6.2** The Water supply system of Kotkapura town is dependent on surface water. In Kotkapura, ground water is available 20 meter below the ground level, but the quality of ground water is not suitable for drinking purpose due to presence of excessive chlorides and fluorides and high degree of TDS. River Sutlej is the nearest river to Kotkapura, which is about 50 km towards north. Abohar branch of Sirhind canal system passes in the southern side of the town at a distance of about 5 kms and it is a perennial canal, one of its distributaries known as Kotkapura distributory passes along the south side of the town. The raw water is easily available to water works site.

The canal is operated and maintained by irrigation Department. Normally closure period of canal is about 12 to 15 days annually. The quality of water is reasonably good. The turbidity varies from clean in winter and summer to muddy in rainy season. Irrigation Department sells raw water to bulk consumers at the rate of Rs. 8 per 170 cubic meters for domestic purpose and Rs. 12 per 170 cubic meters for commercial purpose. At present, canal water is supplied to consumers through public distribution network.

System of water supply and Area coverage

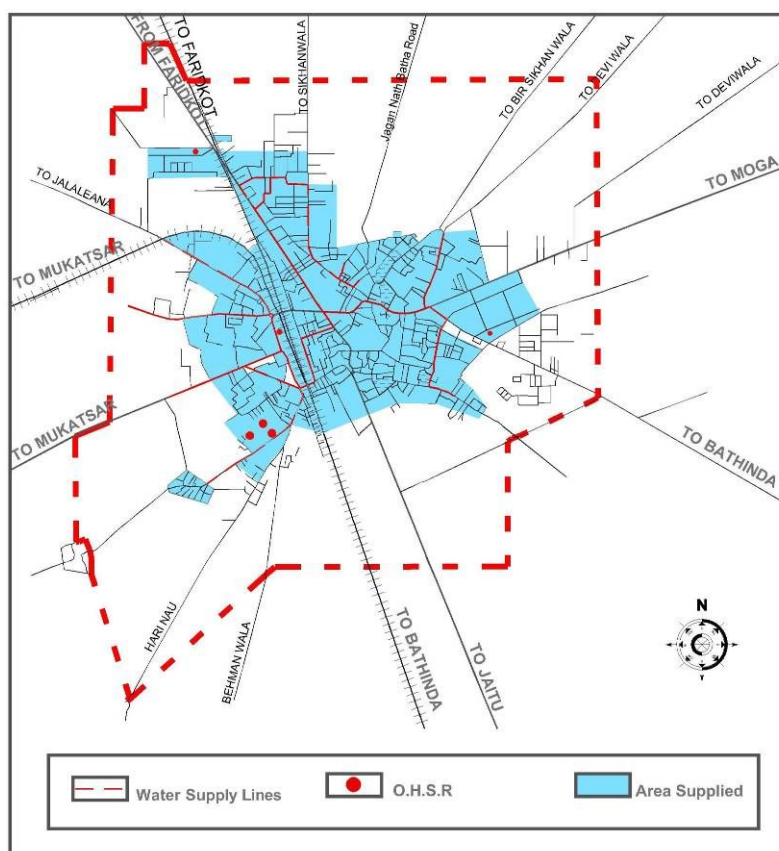
- 6.3** Supply, operation and maintenance of water is one of the prime and basic services provided by Municipal Council of Kotkapura. However, the role of Municipal Council is limited to funding the entire cost of the project for maintenance and making the system operational, besides collecting the revenue from the end users. The entire process of planning, construction and laying the major network and construction of water works and tube-wells & OHRS is

handled by the state level agency i.e. Punjab Water Supply and Sewerage Board (PWSSB). The Board undertakes this work for and on behalf of the Municipal Council and after completing the system it is handed over to Municipal Council.

Area of supply

- 6.4** Municipal Council supplies water to most parts of Kotkapura town, which covers an area of about 700 hectares. The total coverage is about 77% of developed area of the town. Present Coverage area is shown in the Figure 13. Bulk consumers like Railway Colony, Industrial Focal Point and Punjab Mandi Board have their own water supply arrangements and they are responsible for the distribution of water within their own territories. The water supply infrastructure in these areas is owned by them and consequently is not the responsibility of the Municipal Council. Broadly speaking there is only one operational agency for water supply to the residents of Kotkapura and that is Municipal Council Kotkapura.

Figure 13 : Water Supply Network - Kotkapura Town



As mentioned above the supply of water to the residents of Kotkapura Council is provided by Municipal Council. The localities like Harnam Pura, Jaurian Chakkian, Guru Ram Das Nagar, Dibi Pura, Agwar Thara, Jiwan Nagar, Prem

Nagar, Lajpat Nagar, Green Enclave, Hira Singh Nagar, Old Grain Market Area, Mohalla Chhaj Ghad etc. on east of Bathinda-Ferozpur railway line and Nirwan Pura, Ram Saran Colony, Gobind Puri, Dhannu Basti, Swarga Puri, Gandhi Basti etc. on west of railway line. The area covered by water supply is shown in Figure 13.

Source and distribution of Water

- 6.5** As explained earlier the ground water at Kotkapura is not potable, thus surface water is the only source of water supply in this town. The Kotkapura distributory coming from Abohar branch of Sirhind canal is the main source of surface water for this town. This source is dependable and there is more than adequate water available for future requirement.

Water demand & Supply

- 6.6** The present total production from different sources (Kothe waring road water works, Focal Point water works and Punjab Mandi Board water works) is approximately 15 MLD. The estimated population for the year 2009 is 1 lacs out of which 76 thousands population is served by the piped water supply system. This gives a gross per capita supply of 150 lpcd. The detail of capacity of different water works is given in Table 24.

Table 24 : Capacity of Different Water Treatment Plants

Sr. No	Water Works	Treatment Capacity		Operation & Maintenance
		MGD	MLD	
1	Kothe waring road	4.0	15.12	PWSSB (For M.C.)
2	Industrial Focal Point	0.03	0.11	PSIEC
3	Punjab Mandi Board	0.03	0.11	PMB
4	Railway Colony	NA	NA	Railway Deptt.

Source: PWSSB, PSIEC, PMB and Railway Deptt.

Water Connections

- 6.7** The town at present has 10508 registered water connections of different category of users Table No.25 shows total number of water connections from year 2002 to 2009. The Table 25 indicates that during the year 2002-2009, a growth of 10.87% has been recorded in number of water connections. Detailed analysis has been made with regard to number of connections registered in the domestic and commercial segments of the town. It has been observed that larger proportions of the connections fall under the category of domestic use which constitute about 96.5% whereas commercial water connections constitute

only 3.5% of the total water connections. Number of connections has been growing very fast with the increase in population. The increased number of dwelling units and commercial establishment resulted to more water demand in the town. Moreover, the affordability level of people has also lead to increase in the number of connections during the past seven years. It is worth mentioning that besides this number of registered connections there are many unregistered illegal water connections which avail the facility of getting water from the existing network putting burden on the supply network.

Table 25: Detail of Water Supply Connections in Kotkapura

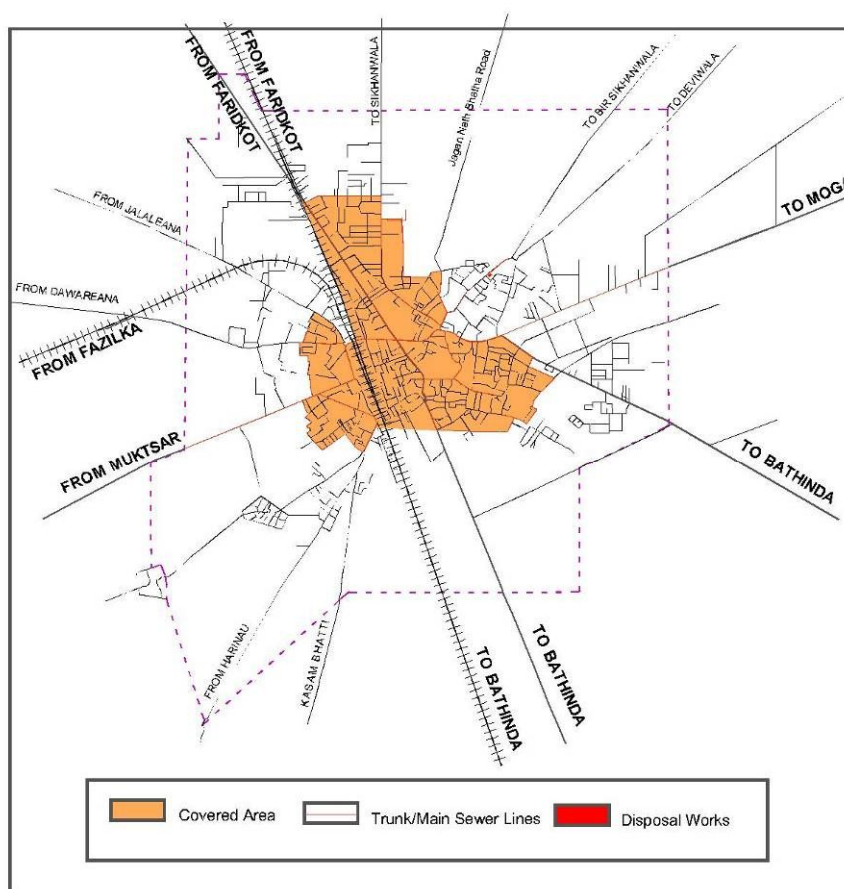
Years	Water supply connections		
	Domestic	Commercial	Total
2002	9045	320	9365
2003	9230	327	9557
2004	9374	336	9710
2005	9462	346	9808
2006	9581	352	9933
2007	9707	356	10063
2008	9909	360	10269
2009	10140	368	10508

Source: M.C.Kotkapura

Sewerage

- 6.8** Municipal Council Kotkapura with association of Punjab Water Supply & Sewerage Board (PWSSB) provides the facility of sewerage net work to the areas falling within the municipal limits. The sewerage includes the waste generated from domestic, industrial, commercial, institutional units etc. The work of laying underground sewerage in the city was first taken up in the year 1964-65. During the period of last 43 years only 65% of the population could be provided the sewerage facility. The unplanned colonies falling in outer areas like Jiwan Nagar, Vijay Nagar, Anmol Nagar, Kothe Waring, Jaitu road, Bhagat Singh Nagar, Guru Teg Bahadur Nagar, Nandu Nagar, Balwant Nagar, Dhillon Colony, Guru Amardass Nagar, Indira Colony, Bengali Basti etc. do not still have facility of sewerage. Waste water is being disposed off in open surface drains. The area covered by sewerage network is shown in Figure 14.

Figure 14 : Sewerage Network in Kotkapura Town



Existing Situation

- 6.9** The wastewater of the town is disposed off through one permanent pumping station located on Deviwala road towards north of the town. Unfortunately, sewerage treatment facility does not exist in Kotkapura. The raw sewage is being discharged into a manmade drain. This 3.5 km. long drain ultimately meets the natural drain known as Langeana Drain. Present disposal practice is highly undesirable from environmental consideration and poses a great threat to the health of the people residing in nearby localities.

Existing Sewerage System

- 6.10** The existing sewerage system primarily covers the old part of town which is about 160 hectares. and includes the localities like Shastri Market, Railway road, Satta bazaar, Fauji road, Dibipura Mohalla, Harnampura, Jaurian Chakkian, Mohalla Mistran, Mohalla Kashmirian Prem Nagar, Green Enclave, Gandhi Basti and Factory road etc. As it has already been mentioned that the waste water of the town is disposed off through one permanent

pumping station installed on the Deviwala road. The untreated sewage is finally discharged into the ganda nala constructed along Deviwala road. The total length of the existing sewerage network is around 37.25 kms. The entire system of sewerage network has been analyzed and discussed with the concerned offices of Punjab Water Supply and Sewerage Boards as per their views the sewerage system in Kotkapura is sufficient for the present time. The slope of trunk sewer line has been given towards north-east in case of Kotkapura which is against the natural gradient of this area which is from north-east to south-west. Because of this factor the slope provided to the trunk and main lines is found to increase progressively from about two meters in Nirman Nagar on Harinau road to more than 10 meters at disposal point on Bir Sikhan Wala road. The Industrial Focal Point on Faridkot road has its own independent sewer network with the disposal point of its own inside its territory.

Collection System

- 6.11** The sewage from houses is collected through the branch sewer lines which are connected with main lines. The main lines are further connected with trunk lines. The trunk lines after passing through various roads are connected to the main trunk line on Bir Sikhan Wala road which is about 0.75 kms long and is connected to disposal works, on this road. The collection system of sewage is all through natural gradient provided to various types of sewer lines.

Disposal System

- 6.12** The domestic sewage thus collected through the sewer network is stored in under ground wells at disposal works on Bir Sikhan Wala road. The whole sullage collected there is lifted through pumps and disposed into an open channel (Ganda Nala) running along Bir Sikhan Wala road up to certain extent and then along Deviwala road and ultimately dropped into drain near village Deviwala. The unfortunate aspect of sewerage system of Kotkapura like other towns is that sewage is discharged untreated in absence of Sewage Treatment Plant.

Capacity of Existing Net work

- 6.13** The existing net work of sewerage in Kotkapura as reported by P.W.S.S.B in terms of sewage carrying capacity based on existing flow areas with existing sewerage network, within the municipal boundary is found to be sufficient. It

has been observed that the existing trunk main which is about 1.3 kms long in the eastern side of the town from railway over bridge to disposal works is sufficient for next 20 years

Key Issues

- The most challenging issue relating to sewerage system of the city is the disposal of untreated wastewater into the sullage carriers and ultimately into the natural drain called Langeana drain.
- In the absence of sewage treatment plant the water bodies which are being used to pump the waste water is a severe environmental threat considering the possibility of ground water pollution, unhygienic surroundings, health hazard etc.
- The other challenging problem is the unserved areas falling within municipal limits, which has been counted to be 35% of developed area of the town.

Storm Water Drainage

- 6.14** Following the analogy of sewerage network, the town has high degree of deficiency in the storm water drainage. Considering the existing status, it has been found that creating an effective and efficient system of storm water drainage has never been on the agenda of the Municipal Council. Kotkapura town has been facing problem of flooding in certain parts during the rainy season due to the absence of an effective system of storm water disposal.

At present Kotkapura does not have any storm water network and the rain water sometimes cause havoc in the town. The rainwater is mostly discharged into the sewer network and in the ponds existing in the town, this result to heavy loading of the sewerage network ultimately leads to choking of the pipes, overflow of the sullage and backflow of the sewage water. During rainy season many parts of the town are flooded. As per the information collected from municipal council, some of the areas face very serious problem of floodability. These areas are Jaurian Chakkian, Pheruman Chowk, Chhatriwala Chowk, Surga Puri Mohalla, Gandhi Basti and Neeraj Basti.

Solid Waste Management

- 6.15** Solid waste is a combination of unwanted and discarded materials from households, commercial and industrial operations besides street sweeping. Increase in urban population coupled with change in life style and economic prosperity has lead to generation of considerable solid waste. Solid waste

arising from human activity has emerged as one of the major environmental issue leading to extensive pollution and threat to human health. Limited disposal facilities coupled with dumping of the solid waste in a haphazard manner in various parts of town have lead to not only creating environmental problems but also serious health hazards. The national Conservation Strategy and Policy Statement on Environment and Development has laid stress on adopting stringent measures for prevention and control of pollution due to indiscriminate disposal of solid waste on land and into water resources. Hence, immediate steps are required for proper management of urban solid waste.

- 6.16** The solid waste management is the prime responsibility of Kotkapura Municipal Council within its boundaries. Municipal Council discharges this duty through the infrastructure created for collection, storage, segregation, transportation, processing and disposal. The Health department of the Committee is vested with the responsibility of day to day solid waste collection and disposal. The municipality organizes the collection and transportation through its own conservancy workers and a fleet of vehicles and dumper-placers. Municipal Council collects solid waste from all the residential areas within its limits. Collection facility is provided in 100% area occupied by people.

Type & Quantity of Waste Generated

- 6.17** There has been no formal study estimating the amount of solid waste generated in the Kotkapura Municipal Council. However, it is estimated that waste generated per capita per day is of the order of 350 gms. Thus a total quantity of about 35 tons of garbage is supposed to be generated per day, however the figures given by municipality stands at 10 tons per day. This gives the indication that the domestic waste in the town is not properly collected as many of the vacant plots are seen full of domestic waste. There is no practice of segregation of bio-medical solid waste in the town rather every type of solid waste is put into same container and disposed at the same place.

Disposal of solid waste

- 6.18** The method adopted by the Kotkapura Municipal Council for disposal of the solid waste is through the mechanism of landfills. As per information collected from M.C. Kotkapura, there are three garbage disposal sites in the town and these sites are mostly low lying area or deep ponds. The biggest one having

maximum depth is the pond on Jaitu road and one such site near Lakkar Kanda on Bir Sikhan Wala road and third one is on Dawareana road.

The landfill sites are not lined and properly defined. Moreover land filling is being done in an unscientific manner. The waste is directly dumped, without any segregation. There is no compaction of the waste undertaken. In the absence of scientific disposal of the waste lot of valuable waste is lost due to absence of recycling. Municipal Council Kotkapura does not involve rag pickers in recovering the valuable recyclable waste.

- 6.19** Further, in the absence of defined boundaries, animals like pigs etc. vegetate on the waste. Due to unscientific disposal of the waste, lot of foul smell is generated because of presence of organic waste and polluting the environment. No treatment of the solid waste is undertaken during the dumping process as required in the system of sanitary landfills. The site does not have any kind of fencing or compound wall around the site which poses a danger for children or cattle in these areas.

Power Supply

- 6.20** The power supply to Kotkapura town and Local Planning Area is provided by Punjab State Electricity Board. There are five Electric Grid Stations installed in Local Planning Area, Kotkapura out of which two Grid Stations are situated within the municipal limits and three located out side municipal limits as shown in the plan Drg. No.DTP (Fdk) 365/2010 Dated 27-05-2010 The detail of Grid Stations is given in Table 26.

Table 26 : Detail of Grid Stations in LPA, Kotkapura and

Sr. No.	Location	Capacity	Remarks
1	Muktsar Road	132 K.V.	City Area
2	Devi wala road	132 K.V.	"
3	Village Panjgraian	132 K.V.	LPA
4	Village Sandhwan	66 K.V.	"
5	Dhiwan Kalan	66 K.V.	"

Source: Punjab State Electricity Board

The table shows that there are three electric Grid stations of 132 K.V.capacity each in LPA Kotkapura. One Grid Stations is falling outside the limits of Municipal Council at village Panjgraian and other two are within M.C.limits i.e. on Muktsar road and Deviwala road. The 66 K.V. Grid Stations are located at village Sandhwan on Faridkot road and village Dhilwan Kalan on Bathinda road.

Social Infrastructure

Education

- 6.21** Educational facilities certainly improve the quality of manpower available in urban area. In addition, these facilities have been found to be leverage the economic development and employment. There are some education institutions located in LPA, Kotkapura out of which many are located in Kotkapura town like SBS Govt. College, on Bathinda Road, Baba Farid College of Education on Sikhanwala Road, are working here. But there is totally absence of Technical institutions like Engineering Colleges, Industrial Training Institutes and law Colleges in LPA, Kotkapura.
- 6.22** Besides the availability of institutions in the field of higher education, Kotkapura town and its LPA has a sufficient number of institutions imparting education at the school level. At present there are 30 Primary and Elementary schools and 16 high/higher/secondary level schools in LPA, Kotkapura, out of which 21 primary and 7 High/Higher secondary schools are working in Kotkapura town. Considering the existing population and norms defined for educational institutions, quantitatively the number of lower level educational institutions is adequate to cater the needs of the people of the LPA but qualitatively most of the institutions have been found to be deficient in the basic amenities and facilities. The condition of buildings of these institutions in a number of cases has been found to be poor. The classrooms are inadequate to provide appropriate space to the students and accordingly remain crowded. Number of classrooms is also on the lower side. Number of schools does not have adequate open spaces in the vicinity of such institutions. Space occupied by these institutions is also on the lower side when compared with the norms prescribed by various agencies. Further a number of institutions and academies has been found to be operating from residential houses and commercial buildings indicating shortage of space for educational institutions
- The availability of educational institutions at various levels both in the area of technical and non-technical education have been detailed below in Table No.27.

Table 27 : Educational Facilities in Local Planning Area and Town

Sr. No.	Name of Facility	Existing in Numbers	
		Kotkapura Town	LPA Kotkapura
1	Primary and Elementary Schools	21	30
2	High / Secondary Schools and Senior Secondary Schools	7	16
3	Colleges (Degree)	1	1
4	B.Ed. College	1	1
5	Nursing Colleges	2	2
	Total	32	50

Source: DEO, Faridkot, Authorities of Different Colleges

Besides the above there is one of the oldest Girls Hostel in Govt. Girls School which was established before 1947. The poor students from rural areas are staying in this hostel on subsidized expenses. This hostel is functioning in an old building known as Kothi of major Gaff.

Health

- 6.23** As per information supplied by civil surgeon Faridkot there are 13 units of medical facilities of different types providing health services to the residents of LPA as well to the persons from outside the LPA. Out of these units there is one hospital with a total bed capacity of 50 beds available in Kotkapura town and one Primary Health Center in village Panj Graian Kalan. Total number of Sub Health Centre and Dispensaries has been counted to be 4 in LPA of Kotkapura. In addition to this there is 1 Ayurvedic dispensary in the Local Planning Area Kotkapura. In order to take care of animals and pets there are 5 Veterinary hospitals functioning in Local Planning Area Kotkapura. Besides this there are two prominent Eye Hospitals being run in private sector. The detail of medical facilities available in Local Planning Area Kotkapura is given in Table 28 below.

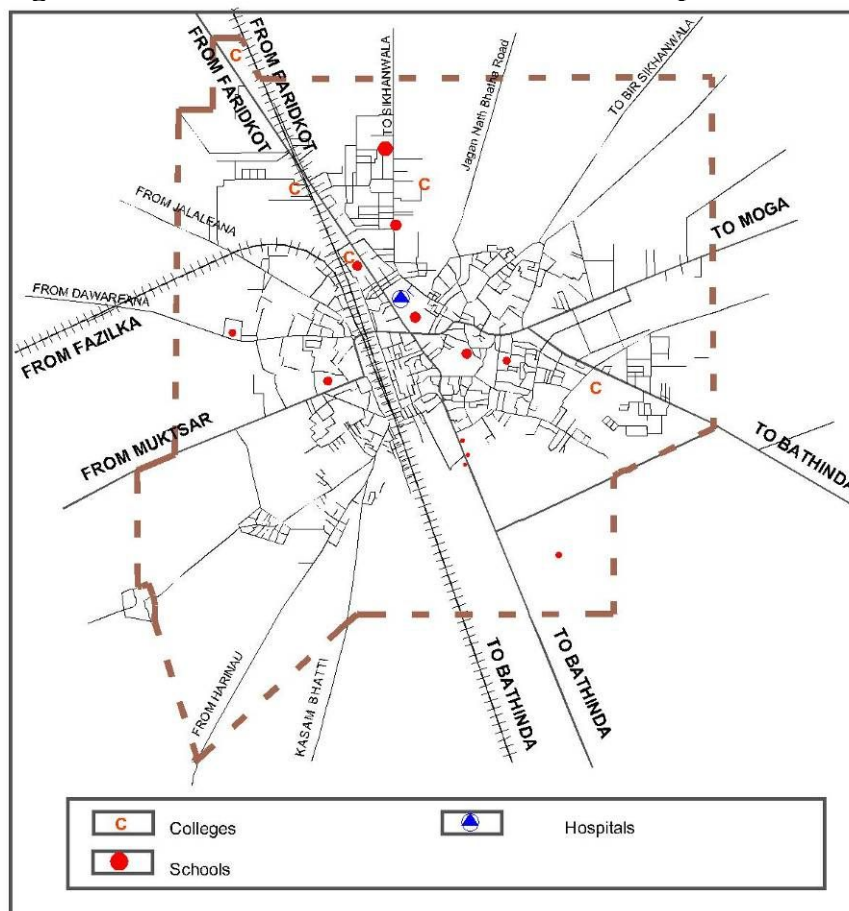
Table 28: Medical Facilities in LPA Kotkapura

Sr. No.	Name of Facility	Existing number
1.	Hospital	1(50 beds)
2.	Primary Health Center	1
3.	Dispensary/Sub Center	4
4.	Veterinary Hospital	5
5.	Eye Hospital(Private)	2

Source: Census 2001 & CMO, Kotkapura, Deputy Director Animal Husbandry.

The spatial distribution of education and Health facilities available in Kotkapura town is shown in Figure 15.

Figure 15: Education and Health Facilities Kotkapura Town



Fire Prevention and Protection

- 6.24** There is only one fire station in Local Planning Area Kotkapura to take care of fire safety. This fire station is located within Municipal Limits of Kotkapura which takes care of whole of the district of Faridkot and is being maintained by all the municipal councils of the district i.e. Kotkapura, Faridkot and Jaitu. As per information supplied by M.C. Kotkapura there are only 3 fire tenders and 15 employees of all categories posted in this fire station.

Police stations

- 6.25** In order to maintain law and order in Kotkapura town and surrounding villages there are two police stations in Kotkapura. Thana Kotwali normally looks after the law and order situation in Kotkapura town whereas Thana Sadar deals with the rural area around Kotkapura. The higher order offices like S.S.P. office and Police line etc. are situated in Faridkot which is just 12 kilometers from here.

Post and Telegraph

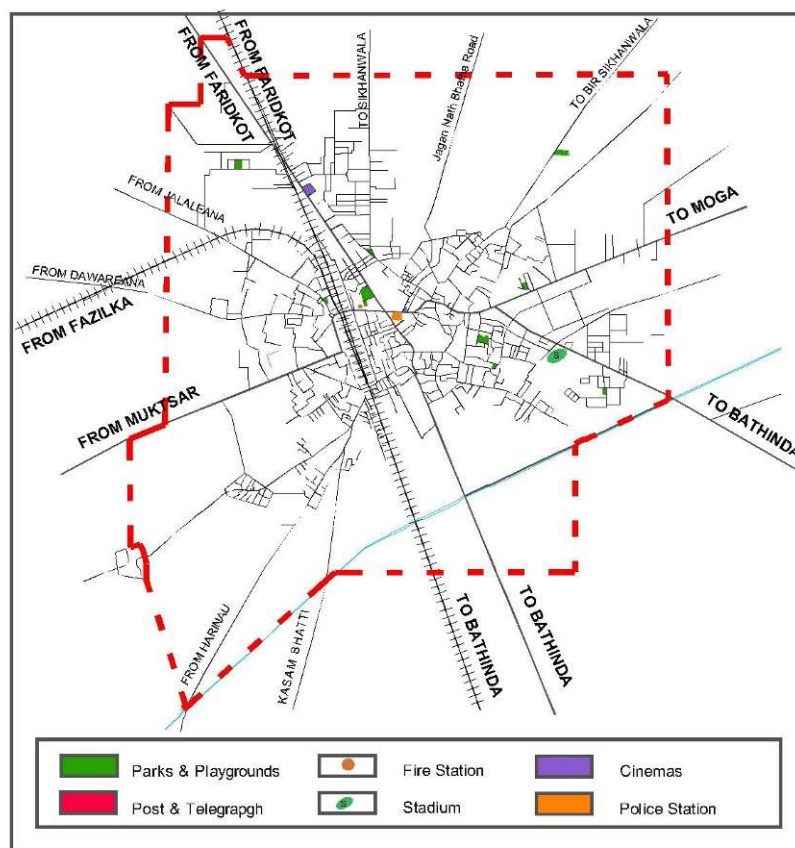
- 6.26** In spite of rapid advancement in technology relating to telecommunication during recent past, the post and telegraph department has still maintained its

leading role in this field. At present there are only two sub-post offices in LPA Kotkapura, one in Kotkapura town and another in village Sandhwan. There is no Head Post Office or general post office in LPA Kotkapura.

Recreation and Sports

- 6.27** Recreational facilities constitute an important element of physical and social development of an individual and for that reason, their provision and balanced spatial distribution at the local; sub-city and city level assumes importance. Accordingly, it would be important that city is divided into compact and sustainable communities and recreational facilities of appropriate order are made available to these communities to serve the population residing therein. Recreational facilities have been found to exist in the shape of parks and open spaces, cinemas, multiplexes, stadiums, museums, sports related activities, clubs, library and amusement parks etc. Recreational facilities have also been divided into active and passive recreational facilities. Provision of both these facilities has to make in order to cater to the essential needs of the individuals and communities.

Figure 16 : Other Social Infrastructure in Kotkapura Town



Parks and Open Spaces

- 6.28** As per the field studies conducted by the office of District Town Planner Faridkot and information supplied by M.C. Kotkapura there are 9 parks of different sizes in Kotkapura town. There is no regional level park in the town; Lala Lajpat Rai Park near municipal office is the only town level park the others are of smaller size.

Other Recreational Facilities

- 6.29** There are only two cinemas one near main chowk of the town and other on Faridkot road. There are 3 clubs operating in Kotkapura however there is no well organized drama club in L.P.A.Kotkapura. Besides this, there is one privately run swimming pool known as Chacha Nachhattar Singh Swimming pool on Moga road where the people of town and surrounding villages come for recreation.

Sports

- 6.30** There is no town level or regional level sports complex or stadium in LPA Kotkapura however one stadium in S.B.S. Govt. College on Bathinda road in Kotkapura town and one rural stadium in village Panj Graian Kalan are available. A basket ball wing of Punjab State for boys is available in Govt. Senior Secondary school for boys in Kotkapura where 25 players are trained on Govt. expenses every year. Other social infrastructure available in Kotkapura town is shown in Figure 16.

Traffic and Transportation

The transport infrastructure in the form of road and rail network is described earlier. In this section nature and traffic on the existing road network is described

Vehicle composition on main road network

- 6.31** It has been noticed that there is mixed traffic running on the main road network such as heavy vehicles (Trucks, Tralas, Buses etc), medium vehicles, light vehicles, three wheelers, two wheelers, cycles, carts etc. As per survey of traffic volume on main city roads conducted by this department there is a great variation in the composition of vehicles. The outer roads of the city have a comparatively larger number of heavy vehicles whereas the main roads falling in the inner part of the city normally have large number of light vehicles and

two wheelers. On Bathinda road the heavy vehicles share about 18% of total no. of vehicles two wheeler vehicles have a share of 54% of total vehicles followed by light vehicles, which constitute to 26%.Both heavy and light vehicles comprise 44% of total number. Same is the case of other regional roads too. But in cases of road connecting bus stand and main chowk of the town comprises the situation is different where the share of two wheelers is about 60% and heavy vehicles have a share of 14% only. The detail of composition of vehicles on different roads of the city is given in Table No.29.

Table 29 : Vehicular Composition on Main Roads of Kotkapura Town

Name of Roads	Bus,Truck, Mini Bus,Cantor, Tractor,Trolleys and Oil Tanker	Big Trolleys	Car/Jeep/ Van	Ricksaw/ Auto-Ricksaw	Scooter ,Motor-Cycle, Bycycle	Low speed Rehris
Road from Bus stand to Faridkot Chowk	299	20	414	143	1313	30
Jaitu Road	68	1	167	16	370	5
Faridkot Road	254	14	597	63	873	13
Bathinda Road	174	16	335	18	508	8
Muktsar Road	133	5	285	17	446	2
Moga Road	146	7	282	45	627	21

Source: Field Survey by DTP Office Faridkot

Volume capacity ratio of main roads

- 6.32** The study of traffic is essential to know the local traffic that comes in direct contact with the regional traffic. In the absence of any bye pass the regional traffic is passing through the town, hence disturbing the whole population of the town, leading to the problems of traffic conflicts, delays and degradation of road environment.

The office of the District Town Planner, Faridkot has conducted the traffic volume survey in the month of November-2009 for several days from 8a.m to 6 p.m. and the peak hours have been identified observing the extent of problems like congestion, journey speed, pollution, load etc. It helped in calculating the (congestion index) degree of congestion that reflects the extent of conflicts, jamming conditions etc. on the roads of the town. In order to assess the capacity utilization of roads, a detailed analysis of the existing road network has been made in terms of volume & capacity of important roads.

The volume capacity ratio (VC Ratio) is one of the most important factors for evaluating the level of services of road network. The peak hour volume of different categories of major road network in Kotkapura has been assessed to calculate volume capacity ratio. While the capacity is measured in PCU's per lane of road width, the V/C ratio up to 1 is considered as the optimum condition. If ratio exceeds 1 it indicates higher level of congestion whereas figure below 1 indicates under utilization of the road capacity. As per the UDPFI guidelines the table of equivalent PCU factors is given in Table No.30.

Table 30: Recommended PCU factors for various Types of Vehicles on Urban Roads

Sr. No	Type of vehicle	Equivalent PCU factors
1	Two wheeler motor cycle	0.5
2	Car, Jeep, Van	1
3	Rickshaw, Auto-Rickshaw	1.5
4	Bus, Truck, minibus	2.2
5	Agricultural Tractor Trailor	4
6	Tonga, Hand-Cart etc.	2

Source: UDPFI Guidelines

The various roads that are taken into consideration have been classified under three categories on pattern given in UDPFI guidelines however the conditions mentioned in this classification are not fulfilled by the roads of Kotkapura even then for study purpose the categories of roads is taken as below:

Arterial Road- Roads for intra-urban through traffic, with no frontage access, no standing vehicle and very little cross traffic and minimum roadway intersection spacing 500 m.

Sub Arterial Road- Roads for intra-urban through traffic with frontage access but no standing vehicles having high cross traffic, high capacity intersections and minimum roadway intersection spacing 300 m.

Collector Street- Streets for collecting and distributing traffic from arterial roads to local streets and also for providing access to arterial and sub-arterial roads, having free frontage access but no parked vehicle and having heavy cross traffic and minimum road way intersection spacing 150m

- 6.33** As per the standards quoted in Table No.30 the volume capacity ratio on the main roads of Kotkapura has been calculated and is summarized in Table 31. According to the data given in the table, four roads namely, Bathinda Road, Muktsar Road, Faridkot Road and road from main chowk to Bus stand in Kotkapura suffer from the problem of traffic congestion. The V/C ratio ranges

from 1 to 2 on these roads, which indicates condition of traffic congestion, the figures are given in Table 31.

Table 31: Volume Capacity Ratio on Main Roads of Kotkapura Town

S.No.	Name of Road	Type of Carriageway	Peak hour Volume	Capacity (PCU)	V/C Ratio
1	Kotkapura to Bathinda	Two-lane (Two-way)	1079	750	1.438
2	Kotkapura-Faridkot a) (Main chowk to level crossing) ▪ Left ▪ Right b) Level crossing to Faridkot	Two lane (One-way) Two lane (One way) Three lane (Two way)	952 835 1787	1200 1200 1250	0.793 0.695 1.429
3	Bus Stand to Main chowk	Two lane (Two way)	2096	750	2.794
4	Kotkapura-Moga	Three lane (Two way)	1054	1250	0.843
5	Kotkapura-Muktsar	Two lane (Two way)	850	750	1.133
6	Kotkapura-Jaitu	Two lane (Two way)	540	750	0.72

Source: Field survey by DTP Office 2008

Accordingly it becomes critical that either the existing capacity of the roads is increased or volume of traffic on these roads be reduced to the level of available capacity. In fact no single strategy would be useful. A firm strategy, which not only enhances the available road capacity but also rationalizes the flow of traffic on these roads, should be adopted to minimize congestion.

Bus Transport

Bus Terminal and Frequency of Bus Service

- 6.34** There is one Bus Stand in Kotkapura, which is situated near Moga-Bathinda T-Junction. The total area of Bus stand is only 0.8 hectares. The area of bus stand is not sufficient to accommodate all the components as per the norms given in UDPFI Guidelines. The buses for all the routes touching at this bus stand pass through the internal main road leading to the congestion in central areas of the town. This bus stand caters to large number of daily commuters who come to work and business places and in process also attracts large number of informal commercial activities. There is a provision of Rickshaw stand for 20 Rickshaws only within Bus Stand area, which is inadequate but there is no parking space for taxis, cars, two wheelers, auto- rickshaws etc. which is an important

component of bus stand. The space for idle parking is also not sufficient the buses normally are parked one behind the other.

Bus Routes and Intercity Bus Service

- 6.35** As per data supplied/collected from the various sources, the total number of 2768 buses passes through the bus stand daily. In addition to this about 400 mini buses also operate from this bus stand, which have their destinations in villages or small towns. The town is well connected by bus service with the important towns and cities of the state like Ludhiana, Bathinda, Muktsar, Malout, Faridkot, Ferozpur Amritsar, Abohar and Jalandhar. As per information given by Adda Incharge of Kotkapura Bus Stand about 1384 buses run towards various direction from this bus stand and the same number comes back thus a total of about 2768 buses operate in this bus stand per day. Out of the total routes Kotkapura-Faridkot route is the busiest one having 459 buses towards Faridkot followed by Kotkapura- Muktsar route which has 449 buses. About 217 bus times are towards Moga and 259 buses towards Bathinda. Besides this about 400 mini buses also operate from this bus stand towards various rural routes. The route wise detail of bus timings is given in Table 32.

Table 32: Daily Bus traffic Route-Wise in Kotkapura: - 2009

Name of Route	2009
Kotkapura-Moga	217
Kotkapura-Bathinda via Bajakhana	150
Kotkapura-Faridkot	459
Kotkapura- Muktsar	449
Kotkapura-Bathinda via Jaitu	109
Grand Total	1384

Source: PRTC, Faridkot & Adda Incharge Kotkapura.

Other Terminals

- 6.36** Terminals are the nodal points of transportation network. Description about truck terminal and taxi stand is elaborated below:

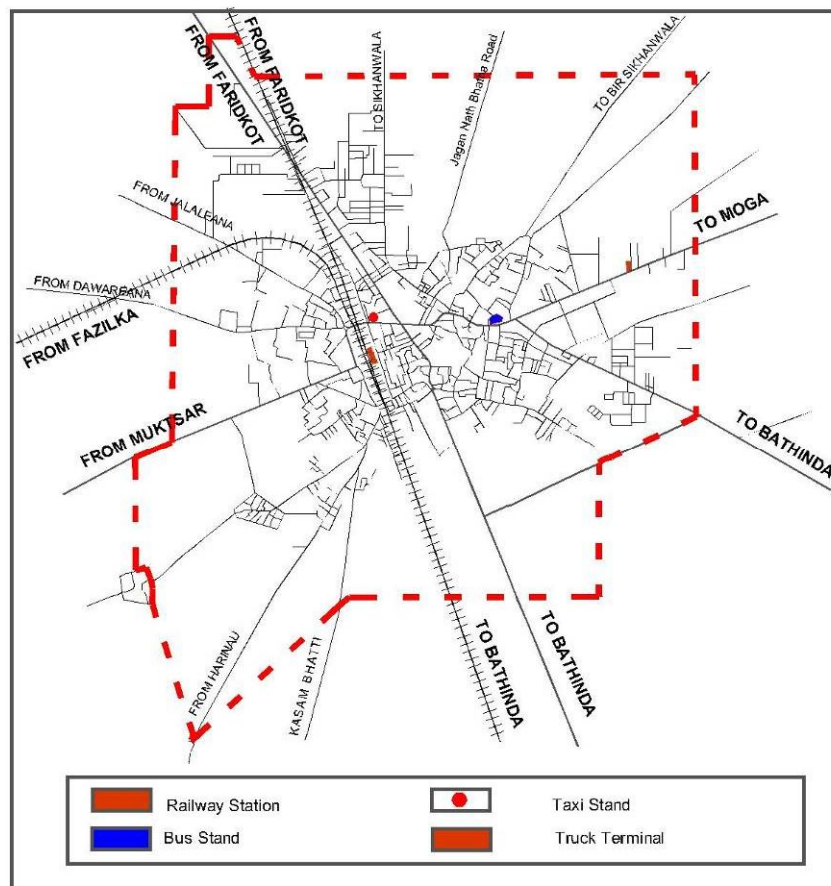
Truck Terminal

- 6.37** In spite of development of Kotkapura as main commercial centre of district, there is no properly planned or organized truck terminal (Truck Stand) in the town. A small site of about 3 acres on Moga road is presently used by truck operators of Kotkapura. The trucks are normally seen parked on Moga road, Bathinda road and other roads of the town. There are about 800 trucks in the town being operated by three different truck unions.

Taxi Stand

- 6.38** Intermediate modes of transportation are significant in all the urban settlements for the movement of passengers. At present there is no authorized or organized taxi stand in the town. But two unauthorized taxi stands have been identified in the town located in the bus stand and other under the railway over bridge. The taxis belonging to these taxi stands normally use the road sides for parking which create lot of inconvenience to the general public. The different terminals existing in Kotkapura Town are shown in figure 17.

Figure 17 : Terminals at Kotkapura Town



Goods Vehicle Movement

- 6.39** Roads are significant mode of transportation within the settlement and also in the regional context, in case of Kotkapura the five main roads entering the town are Faridkot road, Moga road, Jaitu road, Muktsar road and Bathinda Road. In addition to the flow of passengers by various vehicles there is a flow of inward & outward goods on these roads. The main incoming goods in Kotkapura are marble from Rajasthan, cloth from Amritsar/Ludhiana, Milk & vegetables from

nearby rural areas, timber from Jammu & Rajasthan, sand & pebbles from Chandigarh, cycle goods & other machinery from Ludhiana, electric goods from Delhi etc. Though all these goods used to come to Kotkapura even before, but their quantity has greatly increased recently. It indicates that Kotkapura has gained much significance in this activity. Kotkapura itself is also the source of many outgoing goods. Some of major commodities involved in trade are agricultural produce, agricultural implements, wooden furniture, electric transformers; Milk products etc. Trading of all these commodities is also done through these five main roads entering the town.

- 6.40** As per the information collected by the field staff of the office of District Town Planner Faridkot, a total number of 6 goods booking agencies have been counted in the town. All these agencies are situated in the different parts of the town. The vehicles of these agencies are mostly parked unauthorized on roads and streets hindering the free flow of traffic. Besides the parking facilities other facilities such as rest rooms etc. are also not provided for the drivers in these goods booking agencies.

Road Accidents

- 6.41** With a view to assess the safety of the road users in Kotkapura it is important to study the road accidents in the city. As per the figures made available by the Police department the total number of accidents increased from 13 in 2005 to 25 in 2006 and then decreased to 16 in 2007. So despite the rapid increase in vehicular population, the numbers of accidents have by and large remained at the same level. The number of fatal accidents increased from 3 in 2005 to 12 in 2007. There is a reduction in non-fatal accidents in the city. This may be due to large congestion and slowing the speed over the period of time. Because of increase in fatal accidents, there is a need of strict regulations and enforcement mechanism. This clearly brings out the case for enhanced traffic safety and reduced number of accidents on the roads of Kotkapura. The detail of fatal and non-fatal accidents is given in Table 33.

Table 33: Year Wise Fatal and Non Fatal Accidents in Kotkapura Town (2005-2007)

Year	Total No. of accidents	Fatal	Non Fatal
2005	13	3	10
2006	25	13	12
2007 Up to November	16	12	4

Source: Senior Supdt. Police, Faridkot

Parking demand and availability

- 6.42** Parking remains another critical area for the Kotkapura town. Increasing number of vehicles, narrow road network, small old houses in the core areas, and absence of parking space within majority of built up spaces, parking blues are on the rise in the town. Absence of public transport, higher use of personalized vehicles and rapid growth of intermediate public transport has led to more and more vehicles using road for the parking. Poor norms of parking provided in the commercial and institutional buildings have led to shift of vehicles from these buildings to the roads. In case of Kotkapura town the main Bazaars and roads of the city i.e. Shastri Market, Railway road bazaar, Old Mandi, Muktsar road, Moga road, Jaitu road, Railway Road do not have parking spaces. The study of these bazaars and commercial roads/streets of Kotkapura reveal that no parking sites are available anywhere in the town except one near bus stand. On the basis of studies conducted by this office, the parking space required for various bazaars has been calculated the detail of which is given in Table 34.

Table 34 : Existing Parking Spaces in Main Commercial Areas in Kotkapura

Sr.No.	Name of Commercial Area	Estimated total Floor Area in sq.	Required parking in E.C.S.	Existing Parking(in sq.mt.)	Required Parking (in sq.mt.)
1	Railway Road	5000	100	Nil	2350
2	Gurudwara Road	4100	82	Nil	1927
3	Shashtari Market	3120	62.4	Nil	1466
4	Satta Bazar	2100	42	Nil	987
5	Old Grain market	2730	54.6	2850	1283
6	Jhaman Bazar	1560	31.2	Nil	733
7	Dhoda Chowk to Old Grain market	1274	25.48	Nil	599
8	Narinder Palace to Bathinda road (up to takoni)	10725	214.5	Nil	5041
9	Mukatsar road (Gaushala to PSEB office)	4590	91	Nil	2139
10	Bathinda road tinkoni to SBS College	3867	77.34	Nil	1817

Source : Field Survey-2008

Management of Urban Transport

- 6.43** Existing scenario of urban transport management is marked by existence of multiplicity of agencies with overlapping areas of operation. The worst part of the existing scenario is that urban transport is considered as secondary responsibility by the concerned agencies. For example it is the primary responsibility of Municipal Council, Kotkapura to provide civic services, police

to maintain law and order, transport department to issue licenses, again Municipal Council to plan for the growth of city, Railways to take care of rail traffic etc. But in the given context urban transport remains secondary on the agenda of these agencies. In certain cases, traffic engineering and management is left to the traffic police, an area in which they have no expertise.

Rail Based Transport

6.44 In addition to road traffic, railway also handles very large volume of goods and passenger traffic into Kotkapura town. In all 14 pairs of passenger trains pass through the town on daily basis which caters to the traffic on Bathinda-Ferozpur, and Kotkapura-Fazilka route. Railway being the economical and efficient mode of transportation, largely catering to the intercity long distance traffic it would continue to attract large volume of passenger traffic. Table 35 below shows the train frequency on different routes:

Table 35: Passenger Trains passing through Kotkapura Town

Name of Route	Incoming	Outgoing
Bathinda-Ferozpur	12	12
Kotkapura-Fazilka	2	2

Source: Station Supdt. Railway, Kotkapura

In addition to 14 pairs of Passenger trains about 100 goods trains pass through the town every month for bringing and taking out raw material and finished goods. Railway plays an important role in the movement of goods.

7. VISUALIZING THE FUTURE

Population Projections 2031

7.1 The population is the basic human factor for which planning is done. The requirements of different types of infrastructure for Kotkapura town and for villages of LPA, Kotkapura for the year 2031 would be based on the projected population for that year and also migration of population that seeks livelihood in the town. For the purpose of population projections following two methods have been applied:

- Ratio method or sharing pattern method.
- Extrapolation method: Extrapolation of the past trends and assuming that the trend will continue in future.

7.2 In addition to this, the government policies and the opportunities affecting the growth of Kotkapura town and rural areas of LPA, Kotkapura has also been kept in mind.

The following table gives the detail of decadal growth rate of population of Kotkapura town, population of rural areas and total population of LPA, Kotkapura.

Table 36 : Growth Rate of Population of Kotkapura LPA, Total, Urban and Rural 1981-2001

Year	LPA Total		Urban		Rural	
	Population Growth Rate (in percent)		Population Growth Rate (in percent)		Population Growth Rate (in percent)	
1981	94040	-	47550	-	46490	-
1991	117698	25.16	62430	31.29	55268	18.88
2001	142767	21.30	80785	29.4	61982	12.15

Source: Census of India, 1981, 1991, 2001

Method I: Ratio Method or Sharing Pattern Method

7.3 In order to achieve more realistic picture of projected population it has been decided to follow the share of Urban and Rural population of LPA, Kotkapura to the total Urban and Rural population of Punjab state. Report of the technical group on Population projections constituted by the National Commission on Population entitled “ POPULATION PROJECTIONS FOR INDIA AND STATES 2026” has provided projection of Punjab Urban, Punjab rural and their share in the total population of the state up to year 2026 as represented in Table 37.

Table 37: Projected Population of Punjab Total, Punjab Urban and Punjab Rural 2001- 2026

Year	2001	2006	20011	2016	2021	2026
Punjab Total	24359	26059	27678	29112	30323	31345
Punjab Urban	8263	9439	10681	11940	13185	16456
Percentage Urban	33.92	36.22	38.59	41.01	43.48	52.50
Growth rate of Punjab Urban in %	-	14.23	13.16	11.79	10.43	24.81
Punjab Rural	16096	16620	16997	17172	17138	14889
Percentage Rural	66.08	63.78	61.41	58.99	56.52	47.50
Growth rate of Punjab rural in %	-	3.28	2.26	1.03	-0.20	-13.14

Source: National Commission on population (Population in Thousands)

The percentage share of Kotkapura town and rural population of LPA, Kotkapura to total urban and rural population respectively of Punjab is calculated and is given Table 38.

Table 38 : Share of Population of LPA, Kotkapura and Kotkapura Town

Percentage share of Kotkapura town to the Total Urban Population of Punjab			Percentage share of Rural Population of LPA, Kotkapura to Total Rural Population of Punjab		
1981	1991	2001	1981	1991	2001
1.02	1.04	0.97	0.33	0.38	0.38

(Source: Census of India 1981, 1991, 2001)

7.4 For projecting the urban population i.e. of Kotkapura town, the percentage of urban population (Kotkapura town) is derived from the total urban population of Punjab in year 2001 which comes out as 0.97%. This figure of 0.97% has been used constantly for projecting the urban population for Kotkapura town for the year 2006, 2011, 2016, 2021, and 2026. For calculating the projected population of 2031, the growth rate of previous five years is taken. Besides this, the floating population of about 5% has also been added to the projected population.

Similarly, for projecting the rural population of LPA, Kotkapura, the percentage share of rural population of LPA, Kotkapura of has been derived from total rural population of Punjab in the year 2001 which comes out as 0.38% and the same has been used constantly for projecting rural population upto the year 2016. Thereafter growth rate of 2011-16 i.e. 1.03% has been taken for calculating the projected population of LPA, Kotkapura rural for the year 2021, 2026 and 2031 because the growth rate of Punjab rural during the year 2016 - 2021 and 2021 - 2026 is given negative. The Projected population of Kotkapura town and LPA, Kotkapura rural is given in the Table 39.

Table 39 : Projected Population and Growth Rate of Kotkapura LPA (2006-2031)

Year	Total		Urban			Rural	
	Projected Population (in persons)	Growth rate (in percent)	Projected Population in persons	Total Projected Population including 5% of total as floating Population (in persons)	Growth Rate (in persons)	Projected Population in persons	Growth Rate (in persons)
2006	154717	8.37	91558	96136	14.37	63156	3.26
2011	168194	8.71	103606	108786	13.16	64588	2.27
2016	181072	7.65	115818	121609	11.79	65254	1.03
2021	193821	7.04	127895	134290	10.43	65926	1.03
2026	226228	16.72	159623	167604	24.81	66605	1.03
2031	266517	17.80	199226	209187	24.81	67291	1.03

METHOD II: Population Projection by Extrapolation Method:

- 7.5 Apart from above method, another method adopted for population projection is based on the trend of growth rate of population of urban and rural areas. Taking into account the assumptions given below, the average growth rate of 30% is assumed for calculating the projected population of town. The rural area growth rate of population for the decade 1991-2001 is around 12.14% .The average growth rate of rural population is assumed as 16% average of latest two decades because in future rural areas around Kotkapura town will maintain the same growth rate but will not grow at growth rate in comparison to Kotkapura town. The projected population of LPA Kotkapura total urban and rural for year 2011 – 2031 is given in Table 40.

Table 40 : Projected Population for Kotkapura LPA (2011-2031)

Year	LPA Kotkapura	Kotkapura town		Rural Areas	
		Population (in persons)	Growth Rate in %age	Population (in persons)	Growth rate in %age
2001	142767	80785		61982	
2011	176920	105021	30	71899	16
2021	219930	136527	30	83403	16
2031	274232	177485	30	96747	16

Assumptions for Population Projection

- 7.6 Kotkapura is an important commercial town of Distt Faridkot. Kotkapura town has a rich agricultural hinterland and its present trend is towards trade and commerce which will further boost the growth of the town. The town would grow faster in the next 20 years due to its improved connectivity. Because of its nodal location, trade and commerce, and fertile agriculture land, the town will

continue to perform commercial, industrial, and educational, function in the region. Thus it is anticipated that there would be an increase in the population due to improved linkages & connectivity.

The following table gives the comparative picture of projected population for Kotkapura town, rural areas, and LPA, Kotkapura for 2031 by two methods:

Table 41: Comparison of Projected Population by Two Methods for the Year-2031

Method	LPA, Kotkapura Projected Population	Kotkapura town Projected Population	Rural Areas Projected Population
Method 1	266517	209187	67291
Method 2	274232	177485	96747

- 7.7 Out of the above two methods, Population Projected by Method No.1 is adopted for the plan formulation, taking into account the assumptions given above, population characteristics, economy of the town, also taking into account the strength weaknesses opportunities and threats (SWOT), the population projected by method no 1 is more realistic. Despite general trend of reduced population growth rate, Kotkapura town is likely to retain its share of urban population. The Projected Population of Kotkapura town therefore has been taken as 1,99,226 (say 2,00,000 persons) for the year 2031. After including 5% floating population this figure becomes 209187.

Workforce Projections

The category wise employment data is not available in detail for Kotkapura town. The classification of workforce is available for agriculture labourers, cultivators, household industry and others. Therefore the estimate of employment for the year 2031 will not be meaningful however the projected workforce has been worked out. It has been assumed that the workforce participation rate will almost remain the same as it was in 2001 with a slight upward trend, thus 34% participation rate in case of Kotkapura town and 33% in case of LPA as a whole has been taken. The workforce of Kotkapura town for the year 2031 works to 71123 workers and LPA Kotkapura will be 90615 workers.

Infrastructure requirements

Water Requirements

- 7.8 General:** In true sense the term water demand refer to the estimated quantity of water required for a city to fulfill water needs of the people residing in the city. The estimated water demand includes per capita consumption, system losses, industrial and commercial consumption, fire fighting demand etc. The water demand is broadly classified as domestic and non-domestic water demand.

Rate of water supply

Domestic water demand:

- 7.9** The Indian codal precisions recommended a minimum water supply of 135 lpcd for cities and Kotkapura adopts the same. The residential area in Kotkapura is expected to have a much higher demand due to better life style adopted by the residents. However considering the availability of water and the norms followed by the PWSSB, a rate of supply of 135 lpcd for domestic purpose will be adopted for requirement purpose.

Industrial water demand

- 7.10** Bulk supply of water to large to industrial establishments will be considered as per specific requirement of each industry. However the figures of 135 lpcd include water requirements for commercial, institutional and minor industries.

Unaccounted for water (UFW):

- 7.11** As per Central Public Health and Environmental Engineering Organization (CPHEEO) manual a maximum provision of 15% towards losses, unaccounted for water shall be made.

Fire Demand:

- 7.12** As per CPHEEO recommendations a provision of 100 kilo liter per day based on formula of $100 p$ where P = population in thousands shall be kept in mind.

Estimation of Water Demand:

- 7.13** The water demand has been projected based on water requirements calculated on the basis of above norms adopted by Punjab Water Supply and Sewerage Board. The net water demand for Kotkapura Town thus works to 30.93MLD by the year 2031. This demand comprises consumption of domestic and non domestic purposes. Non domestic user includes consumption by Institutions (Colleges, School and Hospital), Commercial Establishment, Industries, Public Parks, Hotels, Tourist places etc. Gross water demand comprises network demand and physical & non-physical losses. Estimated net water demand and

Gross water demand as calculated by this office based on above norms is given in the Table 42.

Table 42: Projected water Demand for Kotkapura Town (2011-2031)

Year	2011	2021	2031
Net water demand in MLD	13.98	17.26	26.90
Gross water demand in MLD	16.09	19.84	30.93

The water requirements for the rural settlements (village abadis) have not been projected since this aspect is independently handled by the Department of Water Supply and Sanitation.

Sewerage requirements

Per capita wastewater flow

- 7.14** The rate of wastewater flow depends upon the rate of water supply to community and the rate of ground water infiltration.

The entire spent water of community should normally contribute to the total flow in a sewer. However, the actual dry weather flow quantities usually are slightly less than the per capita water consumption. Since some water is lost in evaporation, seepage into ground, leakage etc. Generally, 80% of the water supply may be expected to reach the sewers unless there is data available to the contrary.

As per the norms adopted by Punjab Water Supply and Sewerage Board (PWSSB) practical wastewater flow has been estimated to be 85% of water supplied to the consumers.

Projected waste water flows

- 7.15** Considering 85% of the water supplied to the consumption reaching the sewer and adopting the recommended norms for infiltration the projected waste water flows has been calculated.

Combining the projected net waste water flows and infiltration gives the value of gross waste water flows as shown in Table 43

Table 43: Projected Waste Water Flows for Kotkapura Town (2011-2031)

Year	2011	2021	2031
Net waste water flows in MLD	12.87	15.87	24.74
Gross Waste Water Flows in MLD	13.67	16.86	26.29

Drainage requirement

- 7.16** As it is evident from existing studies there is no natural gradient towards a particular direction available in the areas falling within the limits of Municipal Council Kotkapura. The rain water usually accumulates in the depressions formed by virtue of natural topography in forms of the ponds existing in the Towns. So far as collection of storm water is concerned the town can be divided into three different parts i.e. area across the Bathinda-Ferozpur railway lines, area towards south of Kotkapura-Moga road and areas falling on north side of Kotkapura-Moga road. The Storm Water Collection system is required to be evolved in such a manner that above mentioned areas should be covered.

Solid waste disposal

- 7.17** The production of solid waste in an urban area is a function of the socio economic profile of the population and activities in the area. As per UDPFI guidelines the generating of waste varies from about over a quarter of a kilogram in small towns to about half a kilogram per capita in large and metro cities. For Kotkapura town which is medium sized city the waste generation will be 3/8 of kilogram per capita i.e. $3/8 \times 200000 = 75000 \text{ kg} = 75 \text{ metric ton}$ per day.

Power

- 7.18** As per the standards given in UDPFI guidelines the power consumption works out to be 2 KW per household at city level. Based on above the power consumption for Kotkapura town on five yearly basis is calculated in the Table 44 .

Table 44: Power Requirement of Kotkapura Town (2011-2031)

Year	2011	2021	2031
Household Number	21700	26800	40000
Power consumption in MW	43.4	53.6	80.0

As per UDPFI guidelines one electric sub station of 11 KV is required for the population of 15000 persons. Thus for the projected population of 2 lacs, a total number of about 4 electric sub stations of the capacity of 33 KV or 2 electric sub-station of the capacity of 66 KV are required.

Constitution of Think Tank

- 7.19** As per the D O letter dated 2-12-2008 of Honorable Chief Secretary addressed to all the Deputy Commissions of the Punjab state, circulated vide Endst.No.9526-45 CTP (Pb)/sp 135 dated 10-12-08 of Chief Town Planner, Punjab, there is a proposal to set up a think tank under the chairmanship of Deputy Commissioner concerned for each city/town to envisage a vision 2031 for that city/town.

Based on the instructions contained in the above referred letter, the think tank for visualizing the future of the Kotkapura town (vision 2031) was constituted by Deputy Commissioner Faridkot on 22-12-09 with the following members.

Table 45 : List of members included in Think Tank for finalizing 2031

Mayor Municipal C		
Public Sector	Private Economic Sector	Social Sector
Senior Supt.Police, Faridkot	Sh.Rattan Singh (Industrial)	Dr.Manjit Singh Dhillon, M.D., Baba Farid Nursing College
Additional Deputy Commissioner, Faridkot	Sh. Ajaypal Singh, Promoter, Gobind Estate, Kotkapura.	Sh.Subash Kataria, Social Worker, Kotkapura
Sub Divl. Magistrate, Faridkot	Sh. S.S. Gll, Manager Lead Bank, Farkdiot	Sh. Rupender Ahuja Architect, Kotkapura
Additional Chief Administrator, PUDA, Bathinda..	Sh. Mohan Singh Matta, President Commisoion, Agent Association	Prof. Subash Parihar, Head of History Deptt.
President, M.C., Kotkapura.	Sh. Ram Kumar Garg, Retd. Municipal Engineer	
Other Govt. Officers		
Civil Surgeon, Faridkot		
Distt. Transport Officer, Faridkot.		
Executive Officer, M.C. Kotkapura		
General Manager, District Industry Centre, Faridkot.		
Executive Engineer, P.W.D., (B & R), Construction Division, Faridkot.		
Executive Engineer, PWD (B & R), Central Works, Firozpur.		
Executive Engineer, Punjab State Electricity (Distribution) Kotkapura.		
Executive Engineer, Water Supply & Sanitation Deptt. Faridkot.		
Environmental Engineer, Punjab Pollution Control Board, Faridkot.		
Executive Engineer, Punjab Water Supply & Sewerage Board, Bathinda.		

The Strength Weakness Opportunities Threat (SWOT) Analysis

- 7.20** For the preparation of master plan of LPA, Kotkapura. it is necessary to develop a long term vision (2031) of the town that takes into account the present strengths and weaknesses of the town and the opportunities and threats likely to be presented by the surrounding region. Based on the above parameters, the issue paper (SWOT Analysis) was prepared by the office of District Town Planner, Faridkot, which was discussed and finalized in the meeting of Think Tank as given below;

Strengths;

- Strategic location in terms of road and rail linkages.
- Important Urban centre of district Faridkot.
- Existence of small and medium scale industries.
- An important commercial centre of the district.

Weakness

- Away from the developed belt of the state i.e. N.H.1 corridor.
- Low growth rate of industries.
- Shortage of affordable and qualitative housing stock.
- Unplanned and haphazard development.
- Ground water not fit for drinking purposes.
- About 40% population unserved by sewerage facility.
- No sewage treatment plant.
- No storm water drainage.

Opportunities

- Expected establishment of Govt.polytechnical.
- New PUDA approved residential colonies.
- Widening and strengthening of main roads of LPA.

Threats

- Nearness of Faridkot town as counter magnet.
- Present scenario of commercial development along major roads will create more parking problems.
- Through traffic will put huge burden on city roads.

Vision-2031

7.21 Developing a vision for the city is control for the preparation of a master plan.

A vision is a statement explaining that where the city wishes to go, within a given time frame and is often expressed in terms of clear expectations. Based on the outcome of discussions held in the various meetings of 'Think Tank' the vision Kotkapura 2031 is articulated as follow:

"To project Kotkapura as a hub of agro-based industries and to revive its commercial supremacy by providing high quality physical and social infrastructure to all of its citizens in an inclusive and environmentally sustainable manner."

Strategies' to attain Vision

In order to achieve the objectives and goals enshrined in the vision statement, mission statements for various focused areas have been detailed below:

Growth management

- Promoting planned development through effective city planning.
- Rationalizing land use pattern for effective traffic management and provision of basic services and amenities.
- Making effective plan implementation and enforcement as integral part of city planning and development process.
- Conserving the cultural fabric.

- Making growth management process participatory.
- Review of master plan on regular basis.
- Improving system of approvals of building plan through use of IT and GIS.
- Making urban development self sustaining.

Urban Environment

- Urban environment to be made integral and essential part of city development process.
- Environment to be made integral part of planning and decision making process.
- Effective treatment of all sewage generated within the city.
- Improving solid waste management.
- Creating / developing new and improving existing parks and open spaces.
- Promoting better water management.
- Making city free from air, water and noise pollution.
- Discouraging the growth of slums and improving existing slums.

Urban Services:

Water supply

- To ensure safe, equitable, reliable, adequate and quality water supply
- To ensure 100% coverage of the city
- To promote rain water harvesting and recycling of water.

Sewerage and Drainage

- Total coverage of the city with sewerage and drainage system including slums.
- To promote eco-friendly decentralized treatment system.
- To minimize sewage generation through water saving appliances.
- To promote recycling of sewage
- To promote protection of natural water bodies
- To promote optimum use of storm water as an alternate source of water supply.

Solid waste management

- To improve the solid waste management in the city using best practices.
- To use PPP model for Solid waste management.
- To promote “Recycling” system of SWM.
- To make solid waste management people centric

Storm water disposal

- To introduce the storm water disposal system in the entire city
- To improve the capacity of the water bodies existing within the city
- To improve the natural water drainage channels by de silting and stopping the sewage water from entering the channels.

Traffic and Transportation

- To improve safety, mobility and efficiency of traffic within and out side the city.
- To segregate and rationalize the inter and intra city traffic
- To improve road geometry and road capacity of existing network
- To minimize pollution caused by traffic and transportation and improve environment.

- To create new road network and to improve the existing network to promote operational efficiency of traffic.
- To provide adequate parking spaces to remove traffic bottlenecks.
- To plan and provide effective public transport services
- Social Infrastructure
- To provide adequate sites based on norms, for creating / developing various social infrastructures.
- To involve private and corporate sectors for providing / developing and maintenance of social infrastructure.
- To make optimum use of mechanism of planned development for developing adequate and quality infrastructure.
- To promote community participation in maintenance and upkeep of social infrastructure.

8. THE MASTER PLAN

Components of the Master Plan

8.1 The scope of a master plan is limited to the broad proposals and allocation of land for various uses such as residential, industrial, commercial, recreational, public, and semi-public etc. It will propose a network of roads and pattern of streets and traffic circulation systems for the present and the future. It will identify areas required to be preserved and conserved and development of areas of natural scenery and landscape together with preservation of features, structures, or places of historical, architectural interest and environmental value. It will include zoning regulations for regulating development within each zone. Therefore, the Master Plan is an important instrument for guiding and regulating development of a city over a period of time and contributing to planned development both conceptually and operationally. The proposal part of Master Plan of LPA Kotkapura comprises four main components as follows:

- Proposed land use
- Transport network
- Heritage Conservation
- Zoning Regulations

Master Planning Objectives

8.2 The long term vision and the mission statements would require spatial land use planning, infrastructure planning, financing and implementation, effective management and operation of infrastructure services, and regulating and enforcing plan proposals. The objective of the Master Plan is to create enabling spatial and Land Use Planning framework to achieve the Vision of LPA Kotkapura. More specifically following are the objectives.

- To make Kotkapura town as the most vibrant economic centre to promote the balanced regional growth.
- To make land allocation in an environmentally benign fashion.
- To minimize haphazard, unplanned, and sub-standard growth and development of the city and to achieve planned growth to create healthy environment.
- To effectively manage the traffic and transportation within the city through the mechanism of rationalizing the land use pattern defined in the Master Plan.
- To make land available for public purposes.
- To minimize travel within the city by creating self contained and self sufficient communities
- Adequate parking spaces to be created in the city as an integral part of commercial, industrial, and institutional planning and development process.
- To strengthen the basic infrastructure favorable for agro based Industries.
- To rationalize the distribution of physical and social infrastructure in order to ensure appropriate quality of life to all the residents of the city.

- To identify man-made and natural heritage and to make heritage conservation as integral part of the city planning and development process.

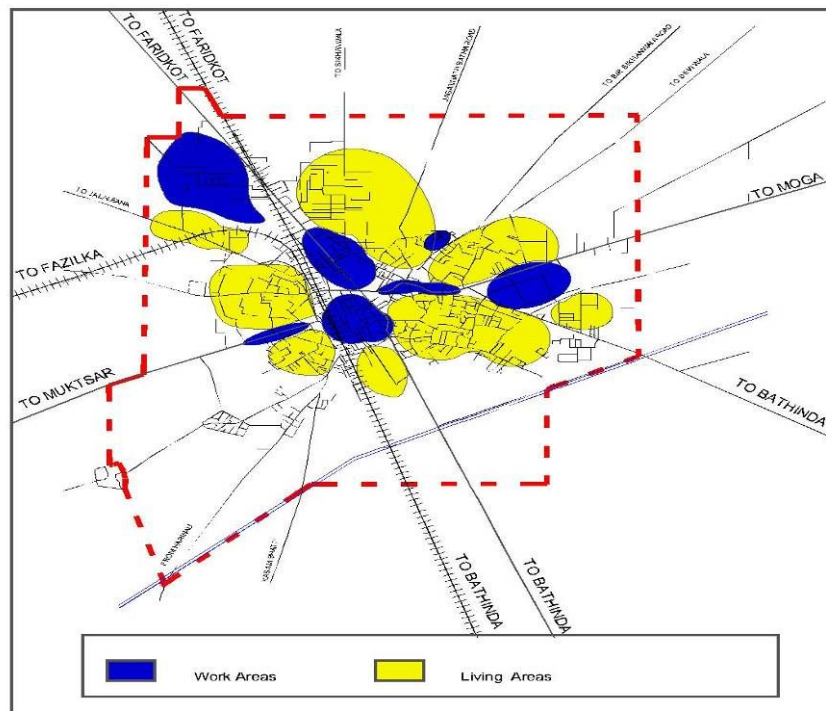
Evaluation of Alternative City Structures

Evaluation of Existing Structure

8.3 Understanding of existing city structure is prerequisite to visualize future structure for accommodating projected growth. The structure of the city can be appreciated by noting the relationship between living and work areas in terms of their connectivity with each other. A thematic map of Kotkapura given at Figure 18 shows the city structure as it exists at present. A careful study of above map is given below:

- * The central part of the town where main bazaar(CBD) known as Station Road, Gurudwara Road, Shastri Market, Satta Bazaar, Jaitu Road etc. are the main work areas of the town where most of the people are engaged in trade and commerce. The other main work area is Industrial Focal point on Faridkot road where a large number of industrial units are functioning and some other industrial units near focal point, the wholesale grain market on Moga road is other work areas where different type of activities are concentrated and the economic activities along main roads is another section of work areas which is spread all over the town.

Figure 18: Work And Living Areas – Kotkapura town.



- The living areas of Kotkapura are unplanned and developed in a haphazard manner. These living areas are developed into two

categories such as old part of the town comprising areas between railway line on one side, Moga road and Bathinda road on other side the second category of residential areas are found along out going roads such as Sikhanwala Road, Deviwala Road, Moga road, Dawareana road, Jalaleelana road and Muktsar road, etc. The western and eastern parts of the town are linked by one railway over bridge (ROB) and two level crossings which provide connectivity to eastern and western parts of the town.

- The town is growing towards all directions, the establishment of PUDA approved new residential colonies one on Bathinda road and other on Muktsar road, the concentration of commercial activities along Moga road and Faridkot road are providing the shape to future city of Kotkapura.
- The existing city structure of Kotkapura shows that different types of economic activities are intermingled with each other. The industrial activities are found within residential areas and commercial activities, industrial activities and residential areas are found together with no segregation of land use which reflects a hotch potch scenario of the town activities and at the same time the residential areas are found at far off places increasing the distance between work and residential areas.

Alternative city structures -2031.

- 8.4** The cities and towns grow organically depending upon the availability of land to expand and potentially for growth, sometimes leap frogging the natural as well as manmade barriers. On the basis of studies conducted by the office of District Town Planner, Faridkot it is observed that the development activities around Kotkapura are concentrated along main roads passing through the city besides this the areas falling in the vicinity of existing developed areas of the town are also experiencing the development activities. Keeping in view the present growth trend three Alternatives structures could be envisaged for the future city of Kotkapura. The different alternatives are as follows;

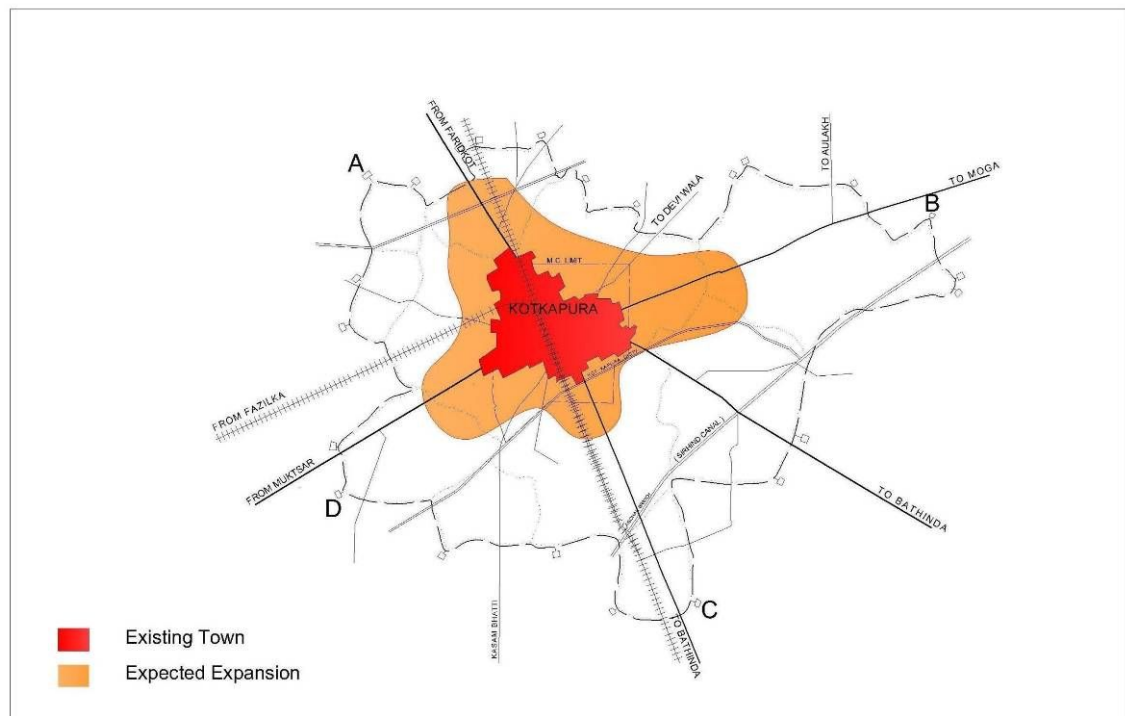
1. Development along main highways.
2. Development along highly potential roads.
3. All around development.

These alternatives have to be seen in the context of the fact that in 2001 the LPA Kotkapura had a population of 142767 out of which 80785 persons were living within Kotkapura Municipal limits. By 2031 the population is likely to be approximately doubled reaching LPA total of about 266517 persons.

Alternative I: Development along main highways

8.5 The past trend of growth of Kotkapura town remained on higher side along Moga road, Muktsar road and Faridkot road whereas development along Bathinda road and Jaitu road was comparatively at lower rate. This type of development may provide a star like shape to the town .The coming of residential colonies on Bathinda road and Muktsar road, commercial and industrial activities towards Faridkot and Moga road attract the future development of the town towards these potential roads as shown in expected city structure at alternative I as below:

Figure 19: Concept Plan Kotkapura Alternative I



Merits:

- Maximum utilization of existing infrastructure specifically the accessibility by major highways.
- Provides new avenues of development on basis of the existing trend of growth of the town.

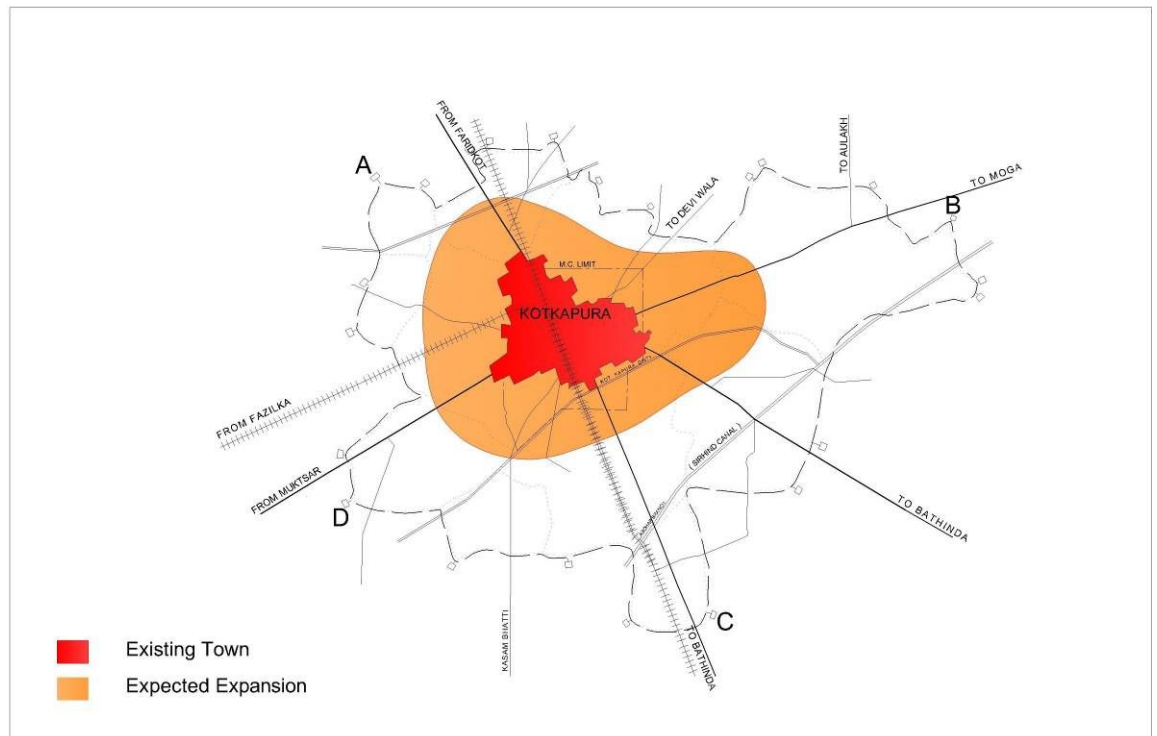
Demerits:

- May invade upon large areas of fertile land
- The ribbon development may block the maximum front of main roads thus creating traffic problems.
- May be difficult to provide infrastructure up to long distances.

8.6 Alternative II: Development along Highly Potential Roads

The development along highly potential roads is another alternative of future city of Kotkapura. This town has very close proximity to Faridkot in terms of social, cultural, economic and administrative terms because of the fact that Faridkot is only at a distance of about 10 kilometers and is the district headquarter. The existence of industrial focal point on Faridkot road and a big industrial unit in the adjoining village of Sandhwan are other potential points towards this direction. The commercial activities like marriage palaces, petrol pumps Haryali Kisan Seva Kender and some agro based industries on Moga road and new approved colony named Gobind Estate and some other commercial activities on Muktsar road are attraction points along these roads. This alternative may provide a different shape to the future city of Kotkapura as shown in Figure 20 as given below;

Figure 20: Concept Plan Kotkapura Alternative II



Merits:

- This alternative provides the maximum opportunities to high potential areas.
- May provide close relationship of work place and residential areas.

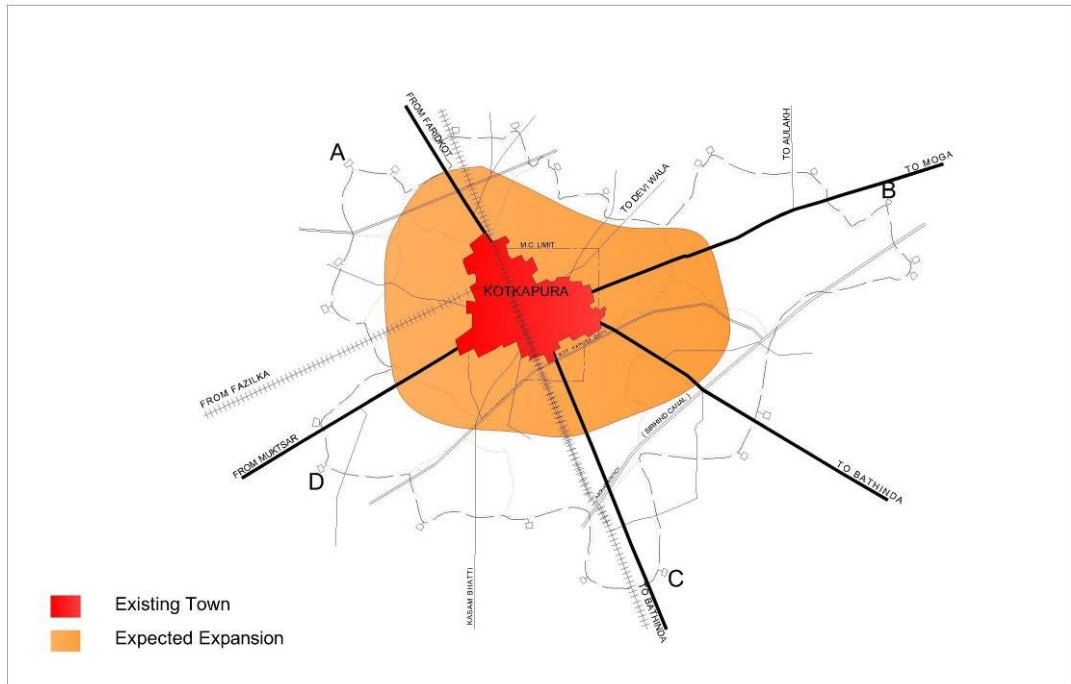
Demerits:

- Only selective approach of development may take place.
- The expected growth up to long distance towards a particular direction may create problems in providing the adequate infrastructure.

Alternative III: All around development:

- 8.7 While studying the existing road pattern of LPA Kotkapura, there are several rural link roads which have been found quite potential for the growth of Kotkapura town. The existence of saw mills on Bir Sikhan wala road, electric grid station on Deviwala road, waterworks on Kothe Waring road, the residential growth on Dawareana road, Harinau road, Jalaleana road and Sikhanwala road proved much potential for future development. The development on all these roads along with main roads may provide opportunities to the town to grow towards all sides in a balanced manner. This alternative may provide a shape to the future city of Kotkapura like an organism. The thematic concept may look like the Figure 21 as given below;

Figure 21: Concept Plan Kotkapura Alternative III



Merits:

- Optimum utilization of land in the vicinity of the town which may avoid a large scale invasion of fertile agricultural land.
- The infrastructure development may be easy and efficient.
- May provide opportunities to all sides of town to develop.

Demerits:

- May encourage unplanned and unauthorized development on less potential left out areas.

It would be useful to consider all the above alternatives and select the optimal before proceeding with the detailed Master Plan. The merits and demerits of the alternatives are brought out from the basic spatial planning objectives like preventing sprawl, promoting compact cities to protect fertile farmlands. However the land and real estate market in Punjab seems to be operating in a different direction, usually developers assemble farmland where ever it is available at relatively low price but with accessibility by road, then provide basic local infrastructure like access roads, water supply and local sewerage and create gated communities of people having relatively high car ownership. The actual building activities and occupation of such colonies may be spread over a longer period of time. The legal practice ensures land for public purposes and finances for external development. Notwithstanding the demerits of this pattern of land development it cannot be reversed. Restrictive zoning to ensure compact city may increase the

land prices of developable land whereas permitting development of all lands having potential may lead to sprawl in short run.

After discussing all the above explained alternatives with senior officers of this department and Advisor Town Planner, it has been concluded that alternative III with development along all roads may be most suitable for the future growth of Kotkapura town and ultimately becoming Kotkapura City. As the proposed roads would open up new areas for development the scope of potential areas extends up to the proposed ring road around the town.

Land Use Requirements

- 8.8** Before proceeding to prepare proposed land use plan and transport network the areas required for different purposes is to be worked out on the basis of norms and standards of various organizations.

Land required for main land uses:

- 8.9** The land requirements for different uses for the projected population of Kotkapura town have been worked out on the basis of norms given in UDPFI. The assessment of the urbanisable area is normally based on the proposed residential area, which is considered to be 40% of total proposed urbanisable area of cities like Kotkapura as per the norms given in UDPFI guidelines. Though the residential area requirements for urban areas of LPA as per UDPFI guidelines works to 1776 Hectare the proposed road network would open up many new areas for urban uses because of increased accessibility. Therefore keeping in view the proposed road network particularly the Ring Road, the big chunks of accessible land would be put under different uses out of which major share is to be covered by residential use.

Residential use:

- 8.10** It is evident from Table 19 given at head no. 4.4 that maximum number of house holds (30%) have two rooms accommodation and 26.5% have one room whereas 20% have three rooms, thus for the purpose of working out the requirements the dwelling unit having average of 2 bed rooms has been taken for working the future requirements as shown in Table 47.

Table 46: Calculation of Average Plot Area in Kotkapura

Sr. No.	Description	Area in sq.m.
1	Carpet area of average dwelling unit. 1 Living Room, 2 Bed Rooms, 1 Kitchen and other	120
2	Built up area inclusive of walls, verandahs etc	144
3	Plot area @ footprint to plot ratio of 0.65	222

Table 47 : Stage wise Residential Area Requirements for Urban Area, LPA Kotkapura (2011-2031)

Sr.No.	Year	No. of Families	Net Land Required in hectare (Assumed 1 family plot)	Gross Residential Land in hectares
1	2011	20720	460	920
2	2021	25980	570	1040
3	2031	40000	888	1776

Note:

Assumed family size = 5

Plot size of 222 sq.meters

Assumed family per one plot.

50%area is assumed under other uses like convenient shopping, roads, parks & open spaces and public buildings etc.

Commercial Use

- 8.11** As given on page 152 of UDPFI guidelines the area requirements for commercial activities have been calculated. As per the classification of towns given at page 7 of UDFPI guidelines which indicate that towns having the population up to 5, 00,000 persons qualify in category of medium town. By the year 2031 Kotkapura will fall in the category of medium town. The projected population of Kotkapura town for 2031 has been worked out to be 2, 00,000 persons which falls within the range of 50,000-5, 00,000 persons. Therefore the norms of medium towns have been taken for calculating area requirements for commercial use as per Table 49.

Table 48 : Area of Commercial Centers

Name of Commercial Centre	Area per 1000 persons sq.mt.	Number of shops
Cluster Centre	220	1 for 110 persons
Sector Centre	300	1 for 200 persons
Community Centre	500	1 for 200 persons
District Centre	880	1 for 300 persons
Total	1900	

As per the figures given in the table above 1900 sq mts area for different categories of commercial areas has been proposed for 1000 persons thus 1.9 sq mts (say 2 Sq. M.) area is required per person.

Table 49: Commercial Area Requirements for Urban Areas of LPA, Kotkapura

Sr.No.	Name of Town	Projected population	Commercial Area Required@2 sq.m.per person
1	Kotkapura urban	2,00,000	40 hectares

Industrial

8.12 The detailed data regarding various categories of workers in census 2001 pertaining to Kotkapura town is not available. The data of industrial workers available in census 2001 is limited to the household industry only. The no. of workers engaged in other industries is not available. The projections of industrial workforce can not be made accurately, therefore, for calculating the industrial use requirements the proposed land use structure standards cited in UDPFI guidelines on page no 143 are adopted as given below.

- Total existing industrial area of Kotkapura town 88 hect.
- Existing industrial use as a percentage
Of town area 3.60%
- Norms and standards for percentage of
Industrial use (as per UDPFI standards) 10-12 %

As per existing land use plan, the industrial use is only 3.60% of the town area. The industrial workers in LPA Kotkapura and Kotkapura town may increase abnormally; therefore, the area projected to be required on the basis of the figures of 2001 census may not be sufficient. The scope of agro based industries is foreseen in future around Kotkapura; therefore in order to accommodate such uncertainty more areas are required for industrial use. As per above narration, 10-12% of the total urbanisable area is assumed to be required for industrial use in LPA Kotkapura which needs bigger chunks of industrial areas at potential sites. Irrespective of above facts the efforts have been made to work out the actual requirements of industrial area for urban settlements falling in LPA Kotkapura as follows:

Table 50: Projected Urbanisable Area Requirements for LPA Kotkapura - 2031

Sr. No.	City/Town	Year	Gross Residential Land required	Urbanisable area required*	Industrial use requirement **
1	Kotkapura	2011	920	2300	230
		2021	1040	2600	260
		2031	1776	4440	444

Note:

- * For calculating the Urbanisable area the residential use is assumed as 40% of the total urbanisable area.
- ** Assumed percentage of industrial use is 10% for Kotkapura town of total urbanisable area as per UDPFI standards.

Recreational facilities

- 8.13** As per PAPR Act 1995, about 45 % of the area of a colony is to be left for non saleable purposes out of which 10 % is to be left for public buildings. As per the provisions of this Act normally 25-30% area is provided for circulation i.e. roads, pavements etc. Assuming the figure at 27% for roads, the remaining 8% has been considered for recreational, park, open spaces, sports etc. By this formula if we have one hectare area of a colony then 800 sq.mt. are supposed to be provided for this category. Keeping in view the average size of plots as 200 sq.mts., about 28 plots can be adjusted in one hectare area (assuming 55% saleable area), which would accommodate about 40 families taking average size of one family as five members a total of 200 persons are estimated to live in one hectare. Therefore, by this calculation about 4 sq.mt. Recreational area works as share of each person. However at city level approx. 2 sq.mt. per capita area is to be added for city level open spaces. Thus total 6 sq.mt. Per capita area is required at city level for recreational facilities.

As per the above narration 120 hectares are required for parks, open spaces and play grounds etc.but keeping in view the sentiments of the people and the pressure on urban land it is not advisable to block one's land for such non-remunerative activities. It is assumed that as and when the land is developed under PAPR Act, the areas for recreation would be ensured to be allocated as per above.

Road Network and Termini Required:

Network required at city level

- 8.14** As it has already been discussed in detail, there are several roads merging at Kotkapura town putting a huge traffic load on internal city roads causing traffic congestion and accidents. As per the traffic volume survey conducted by this office some of the city roads are already having the traffic volume more than the carrying capacity of these roads. In absence of detailed traffic studies

regarding growth of traffic during past years, the IRC standards for calculating the vehicular traffic have been taken into account according to which if reliable data is not available 7.5% growth per annum should be taken for national highways. In case of urban roads growth ratio of 7.5% is assumed whereas in case of other rural roads (out of urban area) rate of 6% per annum has been assumed. Since there are many factors which govern the growth of traffic volume thus the long term projections of traffic volume may not be factual therefore projections have only been made for the coming five years up to 2014. The projected vehicular growth on main city roads projected for the year of 2014 is given in Table 51.

Table 51: Projected Traffic Volume on City Roads Kotkapura.

Sr. No.	Name of the Road	Type of carriageway	Capacity (PCU)*	Peak hour Volume (PCU) 2009	Project ed Peak Volume (PCU) 2014	V/C ratio 2009	Projec ted V/C ratio 2014
1.	Kotkapura-Bathinda	Two lane Two way	750	1079	1483	1.44	1.97
2.	Kotkapura-Faridkot a.(Main chowk to level crossing)	Two lane one way Left					
			1200	952	1309	0.79	1.09
		Right	1200	1787	2485	0.78	1.07
			1250	1787	2457	1.4	1.96
3.	Bus stand-Main chowk	Two lane Two way	750	2096	2882	2.79	3.84
4.	Kotkapura-Moga	Three lane Two way	1250	1051	1449	0.84	1.15
5.	Kotkapura-Muktsar	Two lane Two way	750	850	1168	1.13	1.55
6.	Kotkapura-Jaitu	Two lane Two way	750	540	742	0.72	0.98

* Traffic Engineering and Transport Planning by L.R. Kadyali.

Source: Field survey-2008

The table given above shows that there are several roads which would have higher V/C ratio by the year 2014. The Projected traffic volume shows that during a short period of only five years, many roads will become congested if the present condition and status remains the same of these roads. The roads like Kotkapura-Bathinda, Kotkapura-Faridkot, Kotkapura-Moga, and Kotkapura-Muktsar require immediate attention and the road from Bus stand to Main

chowk needs special attention as it would have V/C ratio of 3.84 by 2014. The detailed traffic studies are required separately for mass transit system and road improvement plan. However on the basis of broad studies conducted, there is an ardent need to propose Ring Road around the city connecting various radial roads for efficient and free flow of traffic. During the discussions with prominent citizens through the members of Think Tank it was general consensus that the regional traffic passing through the town may be diverted through the proposed bye-pass roads thus the concept of Ring Road around the town is also the choice of most of the town dwellers. Besides this, the roads of lower hierarchy are required to be proposed for inter connection of Ring Road and existing main city roads.

Road Network at LPA Level:

- 8.15** Besides the road network required at city level, there would be an ardent necessity to connect the regional roads with each other so that the regional traffic may be diverted out of city. In addition to the city road network the widening of existing village roads has also been proposed.

In addition to the Ring Road many other lower hierarchy roads are required for better connectivity between proposed ring road and existing regional roads. Besides interlinking ring and radial roads, these lower hierarchy links provide access to interior areas and increase the scope of potentialities of the left out pockets.

Termini Required:

- 8.16** For the city like Kotkapura in which about 2 lacs population has been projected for the year 2031, only one Bus Stand of adequate size and one Truck Terminus would be sufficient. Since no space norms have been given in UDPFI guidelines area requirement have not been worked out. However an area of 5-10 hectares for Bus Stand and 10-12 hectare for Truck Terminus would be sufficient.

Land required for social infrastructure:-

- 8.17** The land requirement of social infrastructure for Education, Health Care, Police, Fire facilities etc. for Kotkapura urban is calculated as below:

**Table 52: Land Requirement for Educational Facilities
(For 100000 populations)**

Category	Norms	No. of units	Area/unit (in ha.)	Total area (in ha)
College	100000	1	4	4
Secondary School	7500	13	1.6	21
Primary School	5000	20	0.4	8
Pre-primary school	2500	40	0.08	3.2
Total				37

- Area per person required in sq.mts. =3.7
- Total area required $3.7 \times 2 \text{ lacs} = 74 \text{ hectare}$

**Table 53: Land Requirement for Medical Facilities
(For 250,000 persons)**

Category	Norms	No. of units	Area/unit (in hec.)	Total area (in hec.)
Hospital	250000	1	4	4
Intermediate (Category-A)	100000	2.50	2.7	6.75
Intermediate (Category-B)	100000	2.50	0.6	1.50
Dispensary	15000	17	0.1	1.7
Total				13.92

- Area per person required in sq.mt. 0.56 or Say 0.6
- Total area required under medical facilities $0.6 \times 2 \text{ Lacs} = 12 \text{ Ha}$

Table 54: Land Requirement for Police. (For 100,000 persons)

Category	Number of persons	No. of units	Area/unit (in ha.)	Total area (in hec.)
Police station	100000	1	1.5	1.5
Police Post	50000	2	0.16	0.32
Total				1.82 (or 18200 sq. mtrs.)

- Area per person required in sq.mt 0.18. Say 0.2
- Total area required for police $= 2 \text{ lacs} \times 0.2 = 4 \text{ hect.}$

Table 55: Land Requirement for Fire Station

Category	Number of persons	No. of units	Area/unit (in ha.)	Total area (in hec.)
Fire/Sub Fire station	200000	1	1	1

- Area per person required $= 0.05 \text{ sq.mt}$
- Total area required $= 2 \text{ lacs} \times 0.05 = 1 \text{ hectares.}$

Table 56 : Land Requirements for Main Public Amenities

Sr. No.	Name of facility/Amenities	Land required (in hectare)
1	Educational	74
2.	Medical & Health care	12
3.	Police & Security	4
4.	Fire Prevention	10
	Total	100

Space Norms and Standards**Social Infrastructure and Public Utilities:**

- 8.18** Basically UDPFI norms and standards have been followed for calculating the area requirements for different social infrastructure and public utilities however the Punjab State Govt. policies issued time to time have also been adopted where it was applicable. There are three different sets of norms and standards taken into consideration the comparative chart of these is given in Table 57 below:

Table 57: Comparative Statement of Norms and Standards for Social Infrastructure

Aspect	As per zoning regulations and sub-division clauses for Master Plan in Punjab/Govt. Policies	UDPFI Guidelines	Delhi Master Plan
Primary school	Population:3,000-4,000 No. of students: 600 Area Old city (over 650 ppha) : 0.2 ha Outer areas (less than 650ppha):0.5 ha	Population: 5,000 Number of students :500 Area per school:0.4 ha Covered area:0.20 ha Minimum play field area: 0.20 ha	Population: 10,000 Area:2000-4000 sq m
Senior Secondary School	Population:12,000-20,000 No. of students: 1000 Area Old city (over 650 ppha) : 1.00 ha Outer areas (less than 650 ppha):2.5 ha	Population: 7,500 Number of students :1000 Area per school:1.60 ha Covered area:0.60 ha Minimum play field area: 1.00 ha	Population: 10,000 Area:6000-8000 sq m
College	Population:30,000 No. of students: 800 Area	Population: 1,25,000 Number of students :1000-1500 Area per college:4.00 ha	Population: 5,00,000 Area: As per UGC Norms

	Old city (over 650 ppha) : 2.50 ha Outer areas (less than 650 ppha):5.00 ha	Covered area:1.80 ha Play field area:1.80ha Residential/hostel area: 0.40 ha	
University	N.A.	New University Area:60.00ha	4 sites in urban extension to be provided at city level Area: up to 20.00 ha
Technical Education Centre	N.A.	Population :10,00,00 Area per centre 4.00 ha Area per technical centre:2.10 ha Area per ITI:1.40 ha Area per coaching centre:0.30 ha	Population :5,00,000 Area : 4000 sq m
New Engineering College	Number of students :300 Area Old city:(over 650 ppha): 1.00 ha Outer areas (less than 650ppha):2.50 ha	2 Number to be provided in urban extension Strength of college : 1500 -1700 Students Area per college:60.00ha	Population :5,00,000 Area: As per AICTE norms
Medical/Pharmacy College	Area :5 acres(Rural)	2 site of 15 ha each in urban extension including space for specialized general hospital.	Population: 10,00,00
	Area: 2.5 acres (Distt. Headquarter Corporation Limit)		Area :As per Medical Council of India /Regulatory body
Dispensary	Population :5,000 Area: 0.1ha	Population:15,000 Area :0.08 to 0.12 ha	Population:10,000 Area :800-2000 sq m
Nursing Home	N.A.	Population :45,000-1,00,000 Capacity:25 to 30 beds Area:0.20 to 0.30 ha	Population :50,000 Area:1000-2000sq m
General Hospital	Population :50,000 Area:2.5 ha	Population:2,50,000 Capacity:500 beds Area for hospital :400 ha Area for resi accommodation :2.00ha Total area :6.00ha	Population:5,00,000 Capacity :501 beds and above Area :25,000-45,000sq m

Veterinary Hospital	N.A.	N.A.	Population :5,00,000 Area:2,000sq m
Community Hall and Library	N.A.	Population :15,000 Area: 2,000 sq m	N.A.
Club	N.A.	Population :1,00,000 Area :10,000sq m	Population:5,00,000 Area:5000sq m
Amusement park	N.A.	N.A.	Up to 10 ha
City level park	N.A.	N.A.	Population :5,00,000 Area 10acres
Neighborhood level park	N.A.	N.A.	Population 10,000 Area:10,000 sq m
Golf Course	N.A.	N.A.	Population :10,00,000 Area :10-30 ha
Sports Centre/Stadium	N.A.	N.A.	Population :5,00,000 Area :3-10 ha
Post and Telegraph Office	Population :10,000 Area :0.1 ha	N.A.	Population :10,00,000 Area :2,500 sq m
Religious Building	Population :15,000 Area :0.1 ha	N.A.	Population :10,00,000 Area :40,000 sq m
Old Age Home	N.A.	N.A.	Population :5,00,000 Area :1,000 sq m
Orphanage/ Children Centre	N.A.	N.A.	Population :5,00,000 Area :1,000 sq m
Multipurpose Ground (Exhibition cum fair Ground)	N.A.	N.A.	Population :1,00,000 Area :20,000 sq m
Burial/ Cremation Centre	N.A.	N.A.	Population :10,00,000 Area :10,000 sq m
Electric sub-station	Population :50,000 Area : 0.4 ha	N.A.	Population :5,00,000 Area :29,600 sq m
Police Post	N.A.	Population :40,000-50,000	Population :1,00,000
		Area :0.16 ha (area inclusive of essential residential accommodation)	Area :1000 sq m
Police station/police Division	Population:50,000 Area:0.8 ha	Population:90,000 Area:15 ha	Population :2,50,000 Area :10,000 sq m

		Area inclusive of essential residential accommodation 0.05 ha additional to be provided for civil Defense and home guards	
Police Line	N.A.	Population:20,00,000 Area:4.00 to 6.00 ha	1 for each administrative zone to be provided at city level Area:2.0 ha
District jail	N.A.	Population :10,00,000 Area :10.00 ha	Population :25,00,000 Area :5.0 ha
Fire Station	N.A.	1 fire or sub-station within 1 to 3 km to be provided for 2 lakh population Area for fire station with essential residential accommodation :1.00 ha Area for sub-fire station with essential residential accommodation :0.60 ha	Fire Station for 5,00,000 population within radius of 5 to 7 km Area: 10,000 sq m

From the comparative table of norms and space standards as given above, the norms suggested by UDPFI Guidelines have been found more suitable for the preparation of Master Plan Kotkapura because of the following reasons:

- The norms and standards suggested by UDPFI Guidelines are more detailed and cover almost each physical and social infrastructure as compared to Master Plan Zoning Regulation /Govt. policies
- Norms and standards suggested by UDPFI Guidelines are more realistic and suit to local conditions such as prevailing development controls, availability of land and land prices etc.
- UDPFI Guidelines suggest different norms and standards for different category of towns like small and medium towns, large cities and hill areas which is not available in other guidelines.
- The Norms and standards of Master Plan Zoning regulation in Punjab/ Govt.Policies are not detailed and do not cover the whole of activities, hence are not being adopted.

- Norms and standards suggested by Delhi Master Plan have not been found suitable for local planning area Kotkapura because these norms are of higher level, formed especially for Mega city like Delhi, where development controls are very tight, population is more than 1.25 crores and the land is scarce and costly.

Note:

- The norms space standards as suggested by Punjab Govt. policies from time to time shall have the over riding effect on the norms and standards of UDPFI Guidelines adopted for the preparation of Master Plan, Kotkapura .
- For the aspects which are not covered under UDPFI Guidelines, the norms and standards as suggested by Master Plan zoning Regulation in Punjab shall be adopted and where these Zoning regulation are also silent, only in that case, the norms and standards suggested by Delhi Master Plan shall be followed.

Traffic and Transportation

8.19 After due considerations the norms and standards for Traffic and transportation as given in UDPFI Guidelines were discussed with the Advisor Town Planner and following roads hierarchy has been adopted;

Road hierarchy

R1: 200 feet (R.O.W.)

R2:150 Feet

R3: 100 feet

R4: 80 feet

R5: 60 feet

Within the above ROW, width of footpaths and cycle tracks given may be provided as follows if required.

Footpath

The width of footpaths is listed as below:

Minimum width	1.5 m
Adjoining shopping frontage	At least 3.5 m
Longer shopping Frontage	Minimum 4.5 m
Width should be increased by 1m in business/ shopping areas	

Cycle Track

The minimum width of cycle tracks should be 2m. Each additional lane, where required, should be one meter. The capacity of cycle tracks recommended is as below:

Table 58: Norms and Standards of Cycle Tracks

Width of Cycle Tracks	Width in meters	Capacity (Cycle /hr)	
		One way	Two way
Two lanes	3	250-600	50-250
Three lanes	4	>600	250-600
Four lanes	5		>600

Strategy for obtaining Land for public purposes

- 8.20** A city typically requires 40% to 50% of its area for variety of public purposes. Where land is owned by the state as in Delhi, Chandigarh or Navi Mumbai it is easier to allocate land of public purposes. However where private land market is active, how to ensure land for public purpose is a major challenge in preparing Master Plans. Conventional master planning relied on the powers of compulsory acquisition of land designated in the master plan for public purposes. However limitations of this approach have been painfully exposed. At the same time not addressing the question of land for public purposes may limit the utility of the master plan itself.

With this background a wide menu of strategies to obtain land for public purposes is examined in this chapter. The land required for public purpose can be divided into four-fold classification as illustrated in diagram below.

	A Specific Location	B Flexible Location
A. Positive impact on land prices	AA Arterial Road network	AB Parks, play grounds, schools etc.
B. Negative price or environmental impact invoking NIMBY response.	BA Sewage Pumping Stations and treatment plants	BB Solid waste disposal sites

(In many cases necessity of a particular activity at the city scale is recognized e.g. solid waste disposal site or a slaughterhouse. But they are locally undesirable and invoke “Not in My Backyard” response.)

No single alternative needs to be used throughout the city. It may vary for example, in core areas v/s outlying areas. Similarly different alternatives may be suitable for different types of public purposes. The possible alternatives for

obtaining land for public purposes such as roads, educational, health, parks, water supply, sewerage, social and religious institutes, old age homes, community centers etc with their limitations are listed as below.

Through O.U.V.G.L. Scheme:

- 8.21** Identifying vacant government land (including municipal land) and using it as source for providing land for public purposes. However given the need for using government land for generating financial resources, entire stock of government land need not be assigned to non-remunerative public purposes. In fact government land would offer many opportunities for PPP where part of the land could be used for public purpose. For example a plot of government land could be allocated for an intercity bus terminal with a budget hotel.

Rationalizing obsolete uses of public lands could be another way of putting public land to more relevant public purpose. Old jail or an agricultural produce market in the congested part of the city is common examples. But this requires public land at other location.

Make specific designations on the master plan and then proceed with compulsory acquisition of land. Impracticability of this is too well known to be recounted here. But this may be unavoidable in certain cases – particularly 'A' category public purpose.

Through T.D.R.:

- 8.22** Alternative to monetary compensation there could be award of Transfer of Development Rights either to remainder of the land or to a distant location. This could be in three generic cases viz.

Roads and Road widening: Development rights calculated at the FAR permissible in adjoining area may be allowed to be used in the remainder of the plot up to a limit. Development rights that cannot be so consumed can be transferred elsewhere in receiving areas. If FAR is related to width of the road, resistance to widening may get reduced.

Public purposes on open land or exclusive plots: Lands required for parks and playgrounds or exclusive uses like secondary school, fire station etc. can receive TDRs in lieu of compensation. Weight related to price differentials in originating and receiving zones could be considered as an incentive.

Public purposes that require built-up space but not necessarily exclusive plot:
Examples of this could be municipal vegetable market, library etc. In such cases landowner may be allowed to fully use his development rights provided that he offers the built up space required for the public purpose.

Through PAPR Act 1995

- 8.23** Layout and Sub-division Regulations: These regulations depending upon the total area of layout can provide for some reservation for general public purpose in addition to local requirements. This is currently being used under the colonization rules operated under the PAPR Act 1995.

Through Land Pooling or Town Planning (Development) Schemes:

- 8.24** As per the provisions of section 91 (Chapter XII) of Punjab Regional and Town Planning & Development (Amendment) Act, 2006, the concerned Authority may for the purpose of implementation of the provision of the Master Plan or for providing amenities where the same are not available or are inadequate, frame the Town Development Scheme and land for various amenities can be earmarked as per the provisions of sub section 2(g) of section 91.

The strategic approach would relate to geographically depicting the sites required for public purpose and proposing regulatory framework for obtaining the land for public purpose whether shown on the plan or not. For this, master plan has to consider a wide menu. Described below is a possible menu. Admittedly all items on the menu may not be available for every city.

Table 59 : Strategy for obtaining Land Public Purpose

Alternative	Land Acquisition through 1894 Act	TDR	Development of land through PAPR Act 1995, TDS under PRTPD Act 2006 and Development Schemes under PTI Act, 1922	Land Pooling	Govt / Panchayat / Waqf Board lands
Plan Proposal	Land designated for public purposes	Land designated for public purposes	Land designated for public purposes	Land designated for public purposes	Land designated for public purposes

Regulation	No separate regulatory provision necessary	Regulation about use of TDR on receiving plots is necessary	Certain proportion (about 45%) of land is dedicated for public purposes.	This requires a separate legal process to be followed of reconstitution of plots along with evaluation of compensation and betterment as provided in Chapter XII of the 1995 Act.	No separate regulatory provision necessary
Means of securing land	Compulsory acquisition by paying monetary compensation	Monetary compensation substituted by Transfer of Development Rights (TDR)	Availability of land through layout plan provisions	Creating land bank out of pooled land	Land can be made available through transfer of ownership from one department to another. No monetary compensation is involved.
Limitations	Lack of finances for compensation	People may not co-operate at initial stage	This is the method currently relied upon where minimum area for colony is set at 10 acres, as in case of PAPRA.	Comprehensive Land Pooling Policy is required to be framed.	Locational disadvantages in certain cases.
	Landowners' resistance	Landowners' resistance	This is to be market driven and present response is said to be not so encouraging.	Difficulty in pooling of land of large number of owners.	Minimum area requirement may not be fulfilled
	Iniquitous distribution of costs and benefits. Cost borne by those who lose land and benefits enjoyed by surrounding landowners	Iniquitous distribution of costs and benefits. Cost borne by those who lose land and benefits enjoyed by surrounding landowners		Time consuming and complicated process	Source of revenue for Panchayat Bodies / Waqf Board gets depleted.

		But where real estate prices are high particularly where land price is several times the construction cost, chances of success are high.		Equitable distribution of costs and benefits to different share holders.	
		Could also be used for heritage conservation.		New concept difficult to be implemented.	
		New concept difficult to be implemented.			

Given the details included in the Master Plan, it is not possible to specify which of the above techniques will be used for obtaining land for public purpose. However the options are left open for any of the technique which ever fits at a particular time and suitable for a specific area.

Proposed Land Use Plan

8.25 After going through the detailed studies conducted by the office of DTP Kotkapura pertaining to LPA Kotkapura and discussions held at different levels i.e. with S.H.U.D, Adviser, Town Planner, Chief Town Planner, Senior Town Planner and Think Tank and further based on analysis, assumptions and projected population of LPA Kotkapura, the Proposed Land Use Plan 2031 has been prepared, in which different land use zones have been earmarked such as residential, commercial, industrial, rural and agricultural etc.

After examining the various possibilities and taking into account the pattern suggested in Urban Development Plans Formulation & Implementation (UDPFI) Guidelines published by Ministry of Urban Affairs & Employment, Government of India, New Delhi, the aforesaid land use categories have been adopted for the proposed landuse plan. The other concerned aspects of these different landuses have been detailed out in the following sub-heads. The issues, guidelines and controls mentioned below may be read with Zoning Regulation Specified later in the chapter.

However, the lands which come under the optimum utilization of vacant Govt. Lands (OUVGL) scheme of the state Govt., the use of such lands/sites shall be

determined by the Govt. later on at any appropriate time, irrespective of their existing / proposed land use.

The sites on which various projects have been approved or whose change of land use has already been permitted by competent authority/govt., such sites shall be deemed to be adjusted as sanctioned/permitted.

As discussed earlier in the chapter the alternative –III has been broadly adopted while preparing proposed land use plan of LPA Kotkapura, in which pattern of continuous growth of Kotkapura Town spreading over adjoining area has been kept in mind. As observed by the office of DTP Faridkot the growth realities depict that present development trends of Kotkapura are predominantly found along Moga road and Faridkot road therefore proposals along these roads have been made up to larger extent in comparison to other roads. While finalizing the Proposed Land use Plan and Proposed road network of LPA Kotkapura all the factors discussed above have been kept in view and proposals are shown in proposed Land Use Plan of LPA Kotkapura Drg.No.DTP (Fdk)366/2010dated 10/6/2010 and the detail of proposed areas is given in Table No.60 .

**Table 60 : Break-up of Major Proposed Land Uses LPA Kotkapura
2010-2031**

Sr. No.	Proposed Land use	Urbanisable Area*		Total LPA	
		Area in Hect.	%age	Area in Hect.	%age
1	Residential	5442.49	68.65	6047.36	25
2	Commercial	69.16	0.88	74.17	0.31
3	Industrial	673.35	8.49	691.08	2.86
4	Mixed Landuse	1117.00	14.08	1117.18	4.62
5	Rural And Agriculture				
i)	Agriculture	-	-	15468.24	63.96
ii)	Forest	-	-	115.67	0.48
iii)	Water bodies	14.00	0.17	137.74	0.57
vi)	Plantation and Orchard	27.00	0.35	202.43	0.84
6	Designated Areas				
i)	Traffic & Transportation	492.00	6.20	184.23	0.76
ii)	Utilities	13.00	0.16	31.84	0.13
iii)	Public & Semi-Public & Religious	75.00	0.95	84.45	0.35
vi)	Parks and Play Ground	6.00	0.07	29.61	0.12
	Total	7929	100	24184	100

* Urbanisable Area excludes the area proposed to be retained as predominantly 'Rural and Agricultural'

It would be observed that the area requirements calculated earlier are considerably less than the areas allocated in the proposed land use plan. It needs to be appreciated that farmland incrementally acquires potential for growth as the road network and other infrastructure develops. Consequently all the fringe areas are neither converted to urban use nor are they developed at the same density at any given point in time. The proposed land use plan apart from the area requirement based on the norms, takes cognizance of this fact. As a result some of the fringe areas may not be converted to urban use till 2031.

Drawing 4: Proposed Land Use;LPA Kotkapura



The total area proposed for different uses other than rural is termed as proposed urbanisable area which includes all the use zones such as residential, industrial, commercial etc. The total urbanisable area of Kotkapura for the year 2031 works to about 7929 hectares. The spatial extent of different use zones has been shown in the Proposed Land Use Plan Drg.No.(Fdk) 366/2010 dated 10/6/2010.

Residential

- 8.26** The projected population of Kotkapura town for the year 2031 works to be about 2,00,000 persons which is almost double the present population therefore the demand for residential areas would be much more. As per the norms the land required for residential use to accommodate 2 lacs projected population works to 1776 hectares and by the time the population of village Sandhwan will also be part of proposed urbanisable area. Therefore in order to accommodate the growing population within the limits of proposed urbanisable area of Kotkapura and integrating the future development pattern, proposals on much more areas have been made on the pockets which have been identified as most potential and suitable for residential purpose which will also include commercial, public amenities and parks etc. Besides this the rural settlements falling in LPA Kotkapura are proposed to expand around its existing built up areas.(Abadies)

Keeping in view the trend of growth of residential areas and accessibility etc some potential pockets have been identified absolutely fit for residential purposes such as areas along Moga road, Bathinda road, Faridkot road and Muktsar road as well as along other link roads like Dawareana road, Jalaleana road, Sikhanwala road, Jagan Nath Bhatha road, Harinau road and Kothe Waring road. Besides this the areas likely to be connected by Ring road and other sector roads are also proposed for residential use.

In order to maintain continuity of urban development the third alternative of city structure found to be most suitable for Kotkapura town thus the residential areas are proposed towards each direction of the town. The total residential area proposed works to about 5442.49 hectares which is 68.65% of total urbanisable area, this also includes the areas required for amenities, parks, local roads etc. which may cover some area of residential use zone thus bringing the actual

percentage of residential use down to about 50% of the proposed urbanisable area in addition to this 5% area is to be reserved for commercial purpose. The total residential area in LPA is proposed to be about 6047.36 hectares which is 25% of total LPA area and it includes the rural residential areas also. The detail of areas is given in Table No.60 and the geographical extent is shown in Drg no. DTP (Fdk) 366/2010 dated 10/6/2010.

Proposed Density Gradient LPA Kotkapura-2031

- 8.27** Before proposing density gradient for different density zones, it is essential to study or examine the existing density gradient of Kotkapura town. For this purpose three wards each from high density zone and medium density zone have been selected and average net residential density has been calculated as follows;

High Density Zone

The existing ward wise density gradient of Kotkapura town based on population figures of 2001 census as given in Table No.5 earlier shows the gross densities of various wards. As per table there are 5 wards having gross density more than 200 persons per hectare with the highest figure of 366 persons per hectare in ward No. 14. Deducting the areas under roads and other public uses @ of about 30% from the total area of the ward, average net residential density of wards falling in internal part of the town (high density zone) exceeds 300 persons per hectare as given in Table No.61.

Table 61 : Net Residential Density of the Wards falling in High Density Zone

Ward Number	11	10	19
Total Population	3071	3137	2496
Total Area (in hectares)	9.35	13.39	10.77
Gross Density (persons per hectares)	328	234	231
Area in Non-Residential uses (in hectares)	2.80	4.07	3.23
Net Residential area (in hectares)	6.55	9.32	7.54
Net Residential Density (person/hectare)	468	334	330
Average Net residential density (person per hectare)	377		

Medium Density Zone

The wards surrounding the internal part of town (medium density zone) have gross residential density between 101-300 persons per hectare the residential density of three wards of this category is detailed as below;

Table 62: Net Residential Density of the wards Falling in Medium Density Zone

Ward Number	8	12	20
Total Population	2727	2788	3475
Total area (in hectare)	14.21	18.11	12.07
Gross Density (persons per hectares)	192	154	157
Net residential area (in hectares)	4.26	5.43	6.62
Net residential density (persons per hectare)	274	220	225
Average residential density (persons per hectare)	240		

Low Density Zone

As it is evident from above calculations the inner areas of the town have an average net residential density of more than 300 persons per hectare and surrounding wards have an average net residential density ranging from 101-300 persons per hectare and the remaining wards have low density of 100 persons per hectare or below.

Proposed Density

In order to keep the density pattern of LPA Kotkapura simplified the proposed density gradient of urbanisable area has been classified in two density slabs only i.e.High density zone having a density of 200 persons and above per hectare and Low density zone having a density of up to 200 persons per hectare.The proposed density gradient for LPA Kotkapura is given in Table 63.

Table 63: Proposed Density Gradient for LPA Kotkapura 2031

Density zone	Proposed density	Proposed Areas
High density (RD-1)	Above 200 persons per hectare	Area falling within present municipal limits
Low Density (RD-2)	Up to 200 persons per hectare	Area outside the municipal limits up to proposed urbanisable area boundry

The areas zoned for residential uses are not derived from affordable densities but are based on potential for growth. A large proportion of areas of these density zones particularly on the periphery may remain undeveloped by 2031.

Besides the above village Panjgraian Kalan on Moga road has been identified as sub growth centre because of its nodal location and present character.Since many commercial activities like wholesale grain market,concentration of various shops on Moga road and some other institutions have come up in this village,thus the village has all the potentials to become an urban area of future (by the year 2031) Keeping in view the above facts a low density residential

zone has been proposed around this village in order to meet the future requirements as per potentiality of this village.

Commercial

- 8.28** As discussed in earlier chapter the separate data for commercial workers is not available however major share of workers goes to other category comprising 89.95% of total workers which also includes commercial workers. The studies reveal that the present commercial areas are concentrated along Railway road, Gurudwara bazar and Shastri Market which can be termed Central Business District (CBD) of Kotkapura. The CBD area is very congested having no parking facility and no proper approach road. Besides this some general business activities are also found on Moga, Faridkot, Muktsar and Jaitu roads. While preparing proposed land use plan the existing commercial areas are retained as such with the proposal to create parking facilities over there. In light of the vision 2031 of Kotkapura the efforts have been made to maintain the commercial supremacy of the town in this area. As per discussions held with Adviser Town Planner and Secretary Housing and Urban Development specific areas for commercial use have not been earmarked at this stage however provision has been made in zoning regulations that commercial use can come at any place within residential area. As per the provisions of PAPR Act 1995 about 5% of residential colony can be provided for commercial use, therefore as and when the new residential areas would be developed in future the commercial areas will be earmarked at the suitable place however the independent commercial projects can come up within proposed residential zone fulfilling the required parameters.

The existing Whole Sale Grain Market situated between Kotkapura Moga road and Kotkapura-Bathinda road has been proposed to be retained as such which is sufficient for coming atleast twenty years. However as per the provisions of zoning regulations such type of activities can be established in various land use zones if need arises any time in future.

Informal Sector

- 8.29** A survey of unorganized trading activities in Kotkapura was conducted by the office of DTP Faridkot and identified 5 points in the town where concentration of rehries, is found and at one place roadside sellers (Farhi walas) are found.

The unorganized sector needs attention and planned places for their functioning at potential sites, such as hospitals, railway station, bus stand and institutional areas etc. It is suggested that the organized well planned sites for rehri markets shall be proposed in new planned colonies and the existing rehri may be taken care by municipal council Kotkapura.

Existing Policy for Informal sectors

- 8.30** With a view to make informal sector, an integral part of the planning process and keeping in view the National Policy on Urban Street vendors, the following provisions are proposed to be made for the informal sector:

The location/concentration of present stationary informal units shall be taken into account. It should be ensured that such activities do not spill over on the road network in the right of way. The Govt. / concerned local agency would coordinate to achieve the objective.

The areas of informal sector shall have suitable public convenience and arrangement of solid waste disposal.

Formulation of guidelines for schemes would include 'Hawking' and 'No hawking' zones. Specific areas would be earmarked for stationary and mobile street vendors by the concerned local authority.

The local authorities would take up new design of stalls, push-carts and mobile vans of various sizes and with cleaning facilities, giving due consideration to urban design requirement of specific area, where informal shopping is being permitted.

No informal unit should be permitted along/near the intersection in order to avoid traffic congestion and accidents.

Planning Norms for Informal Trade

- 8.31** As stated informal sector is proposed to be made an integral part of planning process. Accordingly the informal sector would be incorporated in the planned development in various use zones. The provision of informal sector should be ensured at the time of sanction of building plans/layout plans as per the norms given in the Table No.64.

Table 64: Planning Norms for Informal Sector

Sr. no.	Use zones/use premises	No. of informal shops/units
i)	Retail trade:	
	Metropolitan city centre, district centre, community centre, convenience	3 to 4 units per 10 formal shops(to be provided in informal bazaar/service market components)
ii)	Government and commercial offices	5 to 6 units per 1000 employees
iii)	Wholesale trade and freight complexes	3 to 4 units per 10 formal shops
iv)	Hospital	3 to 4 units per 100 beds
v)	Bus terminal	1unit for 2 bus bay
vi)	Schools	
	Primary Secondary/	3 to 4 units
	Senior secondary/ integrated	5 to 6 units
vii)	Parks	
	District parks	8 to 10 units at each major entry
	Neighborhood parks	2 to 3 units at each major entry
viii)	Residential	1 unit/1000 population
ix)	Industrial	5 to 6 units per 1000 employees

Industrial

- 8.32** The studies reveal that Kotkapura is not an industrial town but the number of operating units in Industrial Focal Point and other agro-based industries particularly Rice shellers indicate that there is a good potential for agro based industrial development. Keeping in view the existing trend of industrial activities two new areas one on Moga road and other on Jaitu road have been proposed for industrial use. Besides that the area around the existing Industrial Focal point has been proposed for industrial use. The area proposed for industrial use has been measured to be 673.35 hectares within urbanisable area which is 8.49% of urbanisable area and 691.08 hectares total in LPA Kotkapura which is 2.86% of LPA as given in Table No.60 and the spatial extent is shown in Proposed Land Use Plan Drg. No. DTP (Fdk) 366/2010 dated 10/6/2010. A 15 meter wide green belt (buffer) of broad leaf trees has been proposed to be developed within industrial zone where it coincides with residential zone. The industries (small,medium or large scale) except highly abnoxious, hazardous,inflammable and polluting industries as defined by Punjab Pollution Control Board have been proposed to be located in general industry area whereas special industry area would accommodate all type of industry subject to clearance from PPCB

Industry Spot Zoned

- 8.33** After evaluating the existing status of the 'Tayal Energy Limited' at village Sandhwan, it is proposed that this industry will function as such and has been

spot zoned with the condition that a 15 meter green buffer of broad leaf trees shall be left within the industry premises. However, if the spot zoned industry decides to shift from here, the land so vacated shall be used for residential purpose.

The industries which have not been spot zoned and are not in conformity with the proposed land use shall be treated as per the provisions of section 79 of Punjab Regional and Town Planning and Development (Amendment) Act 2006.

Mixed Land Use

8.34 The need for creating mixed land use zone in Master Plan of LPA Kotkapura arises from the fact that Kotkapura town being an important economic and commercial centre of district Faridkot has a large potentiality of mixed land use along main transport corridors passing through LPA. The existing trend of mixed land use on road fronts, where residential, commercial (retail and wholesale), industrial and institutional are common also testify the requirement of mixed land use along these roads. The main roads which have been identified for mixed land use in Master Plan are listed below;

- Kotkapura – Bathinda road (N.H.15)
- Kotkapura – Moga road (S.H.)
- Kotkapura – Muktsar road (S.H.)
- Kotkapura – Jaitu road
- Kotkapura – Faridkot road (N.H.15)

- i) The mixed land use along road fronts shall be permissible maximum depth upto 200mt. subject to the condition that the frontage of the plot/property to be considered for mixed land use must abut the main road. The depth of 200mts. shall be measured from the outer boundary of the proposed width of said road.
- ii) In case of Scheduled roads and Bye passes the distance upon which mixed land use along the road is permitted, excludes the distances within which building activity is prohibited as per the Punjab Regional and Town Planning And Development (Amendment) Act 2006.
- iii) The mixed land use has been proposed along above roads only outside the urbanisable area.
- iv) The other development controls along roads where mixed land development has been proposed shall be as per zoning regulations of Master Plan of LPA, Kotkapura.

Rural and Agricultural Zone

- 8.35** With the motive to preserve the basic agriculture character of the state the land outside the proposed urbanisable area falling within the LPA Kotkapura has been proposed to be retained as agricultural. Out of total area of LPA about 15438.10 hectares have be proposed for this purpose which is about 63.84% of LPA area.In light of the present use of the land,most of the area,has been proposed for agricultural use in this zone.However some compatible uses like forest,water bodies,orchards,etc.have been retained as per existing landuse.Such areas will be part of agricultural zone where the regulations of agricultural zone shall apply

This agricultural zone covers whole of the areas of village Jalaleana,Dawareana,Wara Daraka,Koharwala,Romana Albel Singh,Dhilwan Kalan, Khara,Bir Sikhanwala,Sikhanwala,Deviwala,Ghaniewala,Dhaipai and part of Panj Garian Kalan and part of Kotkapura and Sandhwan as shown in proposed Land Use Plan Drg.No.DTP (Fdk) 366/2010 dated 10/6/2010.

Designated Areas:

Traffic and Transportation

- 8.36** Transport network and proposed land use need to be considered in an integrated manner. For Master Plan of LPA Kotkapura, exclusive road network has been proposed taking into account the connectivity requirements. The entire network may develop in phases as the traffic demand builds. However, it is emphasized that landuse proposals of Master Plan may be reviewed as the road network actually develops.

The concurrent planning of urban and rural growth in Kotkapura Local Planning Area and the Transportation system is required to provide an integrated, safe and efficient system for transportation of people and goods. The system is intended to meet the projected travel demands in that area. The road and rail sector occupy the significant roles in the transport sector in Kotkapura Local Planning Area.

- 8.37** Entire Local Planning Area and Kotkapura Town will be served by well structured and well defined road hierarchy in order to cater the traffic needs of the city population arising from living areas to work areas. This would include redefining of existing road network and the network to be created in the areas proposed to be brought under urbanization.Keeping in view the future shape

and size of Kotkapura urban area there is need to create/propose a high-speed network in the shape of ring and radial roads.

Proposed Road Network

- 8.38** The proposed road network for LPA Kotkapura has been developed in concurrently with the Proposed Transport Network Plan use pattern as shown in the plan Drg.No.DTP (Fdk) 375/2010 dated 1/12/2010. In order to provide relief to the city roads and keeping in view the increased volume of traffic in future the concept of ring-radial road pattern has been followed. One ring road around the Kotkapura town has been proposed which will work as bye pass and connect the main roads such as Moga road, Bathinda road, Jaitu road, Muktsar road and Faridkot road. Besides this the proposed ring road will also provide the connectivity to other rural link roads like Harinau road, Dawareana road, Jalaleana road, Sikhanwala road and Deviwalla road etc. The vast areas falling within the proposed ring road has been provided the accessibility through the radial roads and other lower order hierarchy of roads as shown in Drawing no.DTP (Fdk) 375/2010 dated 1/12/2010. The following hierarchy of roads has been proposed:

R-1	200 feet wide (RoW)
R-2	150 feet wide (RoW)
R-3	100 feet wide (RoW)
R-4	80 feet wide (RoW)
R-5	60 feet wide (RoW)

Ring Road

- 8.39** The proposed ring road will encircle the future city of Kotkapura taking its start little bit forwards Moga from Haryali Kissan Sewa Kender on Moga road and intersecting Bathinda road near marriage palace and crossing Jaitu road between Kothe Nanaksar and Kothe Laleana then further moves towards Muktsar road encircling Kothe Waring then crosses Muktsar road and goes straight up to Faridkot distributory then it follows the distributory crossing Faridkot road and railway line after crossing Sikhanwala roads then turns, towards Moga road and joins at starting point. The total length of Ring Road thus proposed measures to about 28 kilometers.

8.40 Dovetailing proposed road alignment of NH-15 with the proposal of ICT

The Proposed alignment of NH-15 outside proposed ring road towards Faridkot in Master Plan of LPA, Kotkapura has been dovetailed with the tentative proposed road alignment as provided by Intercontinental Consultants and Technocrats (ICT). This road connecting Ring road and Chahal road has been tentatively shown in Drawing no.DTP (Fdk) 375/2010 dated 1/12/2010. The Proposed alignment of NH-15 has not been shown in the rest of the part of LPA which will be finalized by ICT Keeping in view the ground realities and feasibility at site.

Other Roads

- 8.41** The existing Kotkapura-Bathinda (NH-15) is proposed as first order hierarchy road, R-1 with 200 (RoW). Existing roads like Faridkot, Moga and Muktsar roads are proposed as second hierarchy roads (R-2). Jaitu road are proposed as third hierarchy roads (R-3) with the recommendation of widening up to a minimum width of 100 feet. Besides this some more roads of this hierarchy are proposed to provide accessibility to the new potential areas and R-4 roads are proposed to interlink these roads. Besides this the existing roads connecting various villages falling in LPA Kotkapura have been proposed to be widened to 80 feet and 60 feet (R-4 & 5). These roads will provide direct connectivity amongst the villages and linkages between main road passing through the LPA. The detail of road network is shown in drg.No.DTP (Fdk) 375/2010 dated 1/12/2010.

The other existing roads which have not been covered within proposed hierarchy and whether falls within or outside M.C. Limits shall be minimum 40 feet wide. Widening of such roads shall be done proportionality on both sides of existing road.

ROB and RUB

- 8.42** Presently there is only one Railway Over Bridge (ROB) in Kotkapura. In order to ensure the smooth flow of regional and local traffic over the proposed road network of LPA Kotkapura more ROB's and RUB's are proposed. The list of proposed ROB's and RUB's in order of priority is given below;

ROB	Faridkot road over Ferozpur railway line	Proposed
ROB	Ring Road over Fazilka railway line	Proposed
ROB	Ring road over Ferozpur railway line	Proposed

ROB	Ring Road over Bathinda railway line	Proposed
ROB	Sector Road over Fazilka railway line	Proposed
ROB	Sector Road over Bathinda railway line	Proposed
RUB	Sector Road under Ferozpur railway line	Proposed

Bus Stand

- 9 The site of existing Bus stand though is very limited but this bus stand simply serves as a halt for buses of longer routes. There is no bus depot in this town therefore large size bus stand may not be required in near future however the proposal for bus stand as and when required can be made in industrial use zone.

Truck Stand

- 10 The present site of truck stand at Kotkapura is not sufficient for the present number of trucks operating from truck union of Kotkapura. The proposed site of truck stand as and when required can be selected within the proposed industrial zone.

Utilities

- 11 The existing utilities like Water Works, Electric Grid Station, Garbage Disposal Site, Sewage etc. which are functioning within LPA Kotkapura are proposed to be retained as such with required environmental measures. So far as the proposals are concerned the care be taken at the time of approval of residential colonies however independent site for the city as per future requirements can be selected as per the provisions of zoning regulations of Master Plan Kotkapura and fulfilling the requirements of other departments.

Public and Semi-Public Uses

- 12 The existing Public and Semi-Public uses are proposed to be retained as such. At this stage no new specific areas are proposed for this purpose however the suitable sites will be earmarked as per the provisions of PAPR Act 1995 as and when residential areas are developed.

Parks and Play Grounds

- 13 There are very few parks in Kotkapura which have retained as such in proposed land use plan of LPA Kotkapura. For future requirements the green areas would be carved out as per the provisions of PAPR Act 1995 at the time of approval of industrial and residential/estate or Private colonies.

Proposed Transportation network

ZONING REGULATIONS AND DEVELOPMENT CONTROL REGULATIONS

SECTION-I

9.1 ZONING REGULATIONS

The zoning regulations proposed for adoption in L.P.A, Kotkapura are as below:-

Chief Town Planner, Punjab being the planning agency designated under section 57 of "The Punjab Regional and Town Planning and Development (Amendment) Act, 2006" for the Local Planning Area, Kotkapura hereby makes the following zoning regulations as per the requirement under clause (d) of sub section 1 of section 70 of "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" relating to the Master Plan prepared for Local Planning Area, Kotkapura.

9.2 SHORT TITLE, SCOPE, EXTENT, & COMMENCEMENT

Title

These regulations shall be called the Zoning Regulations and development control regulations for Local Planning Area, Kotkapura 2010 (hereinafter referred to as “these Regulations”).

Scope of the Regulations

The scope of these regulations is limited to defining permissible land uses in various land use zones depicted in the proposed land use plan forming part of the Master Plan. Other aspects of “development” such as sub-division and layout of land or intensity of development measured through FAR, ground coverage, parking requirements, building design and construction etc. will be governed by other Acts and regulations promulgated by Government from time to time. Competent Authorities under such regulations shall ensure that the developments permitted by them are in conformity with these regulations.

Jurisdiction

These regulations shall apply to all “development” in the Local Planning Area, Kotkapura declared under section 56(i) of "The Punjab Regional and Town Planning and Development (Amendment) Act, 2006" *vide* notification no 12 / 7 / 08-4HGI / 2020 dated 14-3-08

Date of Coming into Force

These regulations shall come into force on the day on which the designated Planning Agency publishes the final Master Plan along with these regulations in the **Official Gazette** after obtaining the approval of the State Government under sub section (5) of section 70 of "The Punjab Regional and Town Planning and Development (Amendment) Act 2006".

Till such approval, the authorities in considering the applications for permission for development shall have due regard to the draft proposals including these regulations.

10 DEFINITIONS

For the purpose of these zoning regulations, the following definitions, unless the context otherwise requires, shall apply:-

- (i) **“Act”** means "The Punjab Regional and Town Planning and Development (Amendment) Act, 2006" (Punjab Act No. 11 of 1995).
- (ii) **“Government”** means the Government of the State of Punjab.
- (iii) **“Chief Town Planner”** means the Chief Town Planner of The Department of Town & Country Planning, Punjab or any other officer to whom his powers are delegated.
- (iv) **“Planning Agency ”** means the Chief Town Planner Punjab designated as such under Section 57 of "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" for Local Planning Area, Kotkapura.
- (v) **“Local Planning Area”** means the Local Planning Area declared under section 56(1) of "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" vide notification No 12 / 7 / 08-4HGI / 2020 dated 14-3-08
- (vi) **“Existing Landuse Plan”** means the Plan showing the different landuses existing at the time of preparation of the Existing Landuse Plan of Local Planning Area, Kotkapura as indicated on Drawing No. DTP (FDK) 365/2010 dated 27/5/2010.

- (vii) **“Proposed Landuse Plan”** means the plan showing the proposed admissible uses of different areas and landuse zones covered in the Local Planning Area, Kotkapura and as indicated on Drg. No. 366/2010 dated 10-06-2010.
- (viii) **“Non- Conforming Building or use”** means use in respect of any land or building in the Local Planning Area, the existing use of which land or building is contrary to the prescribed land use.
- (ix) **“Zonal Plan”** means the detail plan of a part of Master Plan as delineated in the plan showing different zones and this zonal plan will show all or any of the following:-
- a) Areas earmarked for various land uses as per approved Proposed Land Use Plan.
 - b) Existing and proposed road network, water bodies etc.
 - c) Area temporarily or permanently prohibited for the building operation.
 - d) Any other detail required to be provided in the zonal plan.
- (x) **“Zoning Plan”** means the plan of area or part there of or supplementary layout plan approved by the Chief Town Planner, Punjab and maintained in the office of Competent Authority showing the permitted use of land and such other restrictions on the development of land as may be prescribed in the zoning regulations, for any part or whole of the area such as sub-division of plots, open spaces, streets, position of protected trees and other features in respect of each plot, permitted land use, building height, coverage and restrictions with regard to the use and development of each plot in addition to such other conditions as laid down in these regulations hereafter.
- (xi) **“Mixed Land use”**: Means the area where multiple use of land comprising residential, commercial, institutional, recreational uses and industries other than Red category as listed by Punjab Pollution Control Board (PPCB) or as amended from time to time shall be permissible subject to environmental safeguards in a regulated manner.

- (xii) **“I.T. Park”**: An IT Park is a cluster of separate buildings together with a technical infrastructure, created with the aim of attracting an indulgence of knowledge and technology for science bodies and business."
- (xiii) **“Fashion Technology Park**: " Means where knowledge based infrastructure to inspire the global fashion community catching all segments of Designing, Manufacturing, Marketing, R & D, Logistics, Broad forecasting, all are under one roof."
- (xiv) **“Knowledge Park**: "A platform for interaction and provider clustering opportunities to all the Organizations, Institutions, Hotels, Restaurants, Hospitals. Real Estate Agency clubs, Business Parks with main objective of facilitation of technology better to public and private sector."
- (xv) **“Logistic Park”**: "A logistic park is an area within which all activities related to transport, logistics and the distribution of goods for both national and international transits, are carried out by various operators on a commercial basis."
- (xvi) **“Farm House**: Farm house means a building allowed on a holding of agricultural land for residential and agricultural activity of the land holder. The total floor area of such farm house shall not exceed 2 per cent of the area of holding or 200sq.m.whichever is less.
- (xvii) **“Industry”**: Means the place or site where processing and reprocessing of raw materials into consumer goods, or further processes goods from other industries or builds capital good used to manufacture consumer and non consumer goods it also includes energy-producing industries and the construction industries.
- (xviii) **“House Hold Industry”**: Means house hold occupation/ Industry conducted only by family members/persons residing in the dwelling with or without power and not contrary to the provisions of the Water Pollution (Prevention and Control) Act 1974 Air pollution (Prevention and Control) Act 1981 and Environment (Protection) Act 1986.

(xix) **“Public and Semi Public activities”**: Means the uses relating to governmental/semi governmental offices, educational, medical institutions, recreational and entertainment facilities, cultural and religious institutions etc.

Terms and phrases used, but not defined in these regulations, shall have the same meaning as assigned to them in Act.

11 LAND USE ZONES

The proposed land use plan incorporated in the Master Plan of LPA Kotkapura depicts the following land use zones:-

- (i) Residential
- (ii) Commercial
- (iii) Industrial
- (iv) Mixed Landuse
- (v) Rural and Agricultural

12 USE PROVISIONS IN LANDUSE ZONES

Permissible uses in the above land use zones shall be as given below:-

13 RESIDENTIAL: Permissible Uses

Housing

- Plotted housing, Group housing, Farm houses
- Old age homes, Orphanages, Homes for mentally/physically challenged children, leprosy ashram, hostels
- Service apartments, Hotels, Motels, Guest houses, Dharamshalas, Lodging houses, Serai, Rayan Baseras.
- Jails, Asylums, Reformatories

Trade & Commerce

- Retail trade and service shops, restaurants.
- Professional services such as those provided by lawyers, accountants, town planners, architects and others, A.T.M., Cyber Cafes.
- Rehri markets
- Departmental stores, shopping malls

- Filling stations*
- Gas distribution (without storage of cylinders)
- Milk chilling plant (in low density residential only)
- Gas godown / kerosene oil storage/fire cracker storage (in low density residential zone on independent plot only which shall be permissible till that time the residential or any other activity compatible to residential comes within a radius of 100 mts from the site)
- Household industry, Cottage industry, Atta chakki, Biogas plants & Solar Energy
- Repairs of household articles, cycles & scooters
- I.T.Park, Knowledge Park, Fashion Technology Park

Public & Semi-Public

- Education- schools, coaching classes, I.T.I., polytechnic, engineering college, medical college and other degree colleges, universities, professional research and training Institutions, advanced education and training like IIM or IIT.
- Health care- Clinics, health centers, dispensaries, nursing homes / nursing care facilities, health clubs, hospitals(including super specialty hospitals) (subject to notification no.17/7/5-Hg2-311/11.1.08), veterinary dispensaries and hospitals
- Art, entertainment, cultural and religious activities such as libraries, museums, clubs, marriage palaces, bhawans, sports activities including parks, gardens, play grounds, swimming pools, gymnasia, stadia, golf courses etc ., amusement parks, cinemas, auditoriums, theatres, places of worship.
- Public utilities and Services- Fire station, Police stations, Post office, Dhobi Ghat etc., Bus Stand, Auto Rickshaw/Taxi Stand, and Telecom & Transmission Towers.
- Plant, nurseries and green houses related to nurseries, floriculture

- Cemeteries/ Cremation ground/ Graveyard/ existing Caracus sites
 - Water harvesting measures.
 - * The siting of filling stations petrol pumps shall be subject to instructions / guide lines of MORTH / TCPO / Punjab Govt. issued from time to time.
- Any other use not mentioned above but sub-servient to residential use shall be allowed with special permission from Chief Town Planner, Punjab.*

14 COMMERCIAL: Permissible uses

Trade & Commerce

- Retail trade, business showrooms & service shops, restaurants.
- Rehri markets, Informal markets
- A.T.M., Cyber Cafes
- Super markets, Departmental stores, shopping malls, multiplexes.
- Milk collection centre, chilling station, Pasteurization Plants, fruit ripping plants etc only in whole sale market.
- Trade fairs, Exhibition & Convention centres
- Filling stations
- Gas distribution (without storage of cylinders)
- Printing presses, Atta chakki
- Automobile showrooms & motor market (Garages)

Housing

- Service apartments, Hotels, Motels, Guest Houses, Dharamshalas, Lodging House
- Residences on upper floors only

Offices

- Offices of all types

Public Semi - Public

- Education- coaching classes, distant education, I.T. enabled services, schools, colleges, Vocational Training Institute, Veterinary Services.
- Health care- Clinics, health centres, dispensaries, nursing homes, hospitals
- Art, entertainment, cultural and religious activities such as libraries, museums, marriage palaces, sports activities including parks, gardens, play grounds, swimming pools, gymnasia, stadia, golf courses etc ., amusement parks, cinemas, auditoriums, theatre, betting & gambling, pubs & bars, night clubs, night food streets, discotheques
- Plant, nurseries and green houses related to nurseries, floriculture
- All Public utilities and Services- Fire station, police stations, post office etc., Bus Stand, Auto Rickshaw/Taxi Stand, Telecom & Transmission Towers.
- Water harvesting measures

Any other use not mentioned above but sub-servient to commercial use shall be allowed with special permission from Chief Town Planner, Punjab.

14 INDUSTRIAL GENERAL: Permissible uses

- All types of industries as classified by the department of industries and commerce further categorized by PPCB (Punjab Pollution Control Board) and following uses are permissible in the industrial zone:
- Junk yards, disposal works, gas works, power plant, hot mix plant.
- I.T.Parks, Knowledge Parks, Industrial Parks, Fashion & Technology Park, Film City.
- Warehouses, godown & covered storage, cold stores, logistic parks, freight complex, container yards, dry port, weigh bridges

- Loading & unloading yards, truck terminals, bus terminals, railway station and siding, railway yards, helipads, metro stations
- Tempo / Taxi stand, Bus stops, Tonga stand
- *Petrol filling / service stations, fuel storage, LPG storage, storage of fire crackers
- Education- Schools, coaching classes, I.T.I., polytechnic, engineering college, medical college and other degree colleges, universities, professional research and training Institutions, advanced education and training like IIM or IIT.
- Health care- Clinics, health centres, dispensaries, nursing homes, health clubs, hospitals, including super specialty hospitals (subject to notification no.17/7/5-Hg2-311/11.1.08), veterinary dispensaries and hospitals
- Entertainment centre, multimedia centre, hotel, restaurant, showroom of mills, marriage palaces, places of worships, automobile showrooms
- Govt., Semi – Govt. / Private business offices, financial institutions
- Residences for watch & ward staffs, residences for industrial workers / management
- All public utilities, police station police beat box, fire station, cemeteries / graveyard, caracuse site (existing only), slaughter house
- Farming, quarrying

Any other use not mentioned above but sub-servient to industrial use shall be allowed with special permission from Chief Town Planner, Punjab.

15 MIXED LAND USE ZONE: Permissible uses

- All types of uses permissible in residential use zone.
- All types of uses permissible in commercial use zone.
- All industrial uses except those of red category with permission of PPCD shall be permissible in this zone.

Any other use not mentioned above but sub-servient to mixed land use zone shall be allowed with special permission from Chief Town Planner, Punjab.

16 RURAL & AGRICULTURAL ZONE: Permissible Uses

This zone is sub divided into two sub zones as following:

- (i) Village Abadis and 200 mts around phirni
- (ii) Agricultural/Rest of area

(i) VILLAGE ABADIS AND AREA UPTO 200MTS OF PHIRNI : Permissible Uses

- Residential development in the form of plotted and group housing.
- Educational, Medical, Cultural, Religious and Recreational uses which commensurate with the scale of village population
- Local commercial, service industry, dhobi ghat
- Public utilities & Services including communication towers

(ii) AGRICULTURAL ZONE : Permissible uses in the rest of the area

- Farm houses, hostels for students, working women
- Oldage homes, orphanages, jails, asylums
- Agriculture, Horticulture, Dairy, Piggery, Fishing, Poultry Farming, Mushroom growing centre, Slaughter house
- Milk collection centres, Chilling Stations and Pasteurization plants, Cold storage, Rice Shellers, Processing of farm (grains, fruits and vegetables) products, Brick Kiln, Lime Kiln, Charcoal Kiln
- Storage of Fuel Oils, LPG Storage Godowns, storage of Fire Crackers, Wholesale trade of agricultural products only Warehousing, Godowns, Logistic park, ice factory, Cement / Sand and Concrete mixing plant, hot mix plant.
- Railway station, sidings, bus stop, truck terminal, container yard, air freight and parking area
- Public buildings and utilities including Electric sub-stations, sewage treatment plant (STP) solid waste dump site, carcass disposal site

- Transmission and telephone lines and poles, telecommunication towers, surface drainage, water bodies including irrigation canals
- Aforestation including orchards, gardens and commercial timber, Land preservation and conservation measures such as storage, check dams, Water harvesting measures
- I.T.Park, Knowledge Park, Fashion Technology Park
- Education- schools, coaching classes, I.T.I., polytechnic, engineering college, medical college and other degree colleges, universities, professional research and training Institutions, advanced education and training like IIM or IIT.
- Health care- clinics, health centres, dispensaries, nursing homes / nursing care facilities health clubs, hospitals(including super specialty hospitals) (subject to notification no.17/7/5-Hg2-311/11.1.08), veterinary dispensaries and hospitals
- Art, entertainment, cultural and religious activities such as libraries, museums, clubs, trade fairs, exhibition, mela grounds, camping grounds, marriage palaces, bhawans, sports activities including parks, gardens, play grounds, swimming pools, gymnasias, stadia, golf courses etc ., amusement parks, places of worship.
- Panchayat ghars, dharamshalas and any other project of Central and State Govt. agencies / Deptt. / Undertaking / Local Bodies.
- Any other use not mentioned above but sub-servient to rural & agricultural zone shall be allowed with special permission from Chief Town Planner, Punjab.

17 DESIGNATED AREAS

Following areas have been specifically designated in the proposed land use plan.

- (i) Traffic and Transportation
- (ii) Utilities
- (iii) Public & semi public

USE PROVISIONS IN DESIGNATED AREAS

Following uses are permissible in the designated areas

(i) TRAFFIC & TRANSPORTATION: Permissible uses

All types of roads, Railway lines, Rail yards, Railway station & sidings, Transport Nagar (including, Post & Telegraph offices & Telephone exchange, dhabas, labour yards, areas for loading and unloading, stores, depots, and offices of goods booking agencies, Petrol Filling station & service garages, parking spaces public utilities and buildings, broadcasting station) Bus Terminus & depot, bus stop shelter, taxi/ tonga/ rickshaw/scooter stands, parking space as shown in Drg.375/2010 dated 01-12-2010

(ii) UTILITIES: Permissible uses

Water supply, Sewerage system (including main pumping station and Sewage Treatment Plant {STP}), drainage, storm water, waste processing and disposal, electricity, communication systems and related installations etc.

(iii) PUBLIC AND SEMI-PUBLIC ACTIVITIES : Permissible uses

Government and Semi-Government offices, Governmental Administrative Centres, (Secretariat) Educational, Cultural and Religious institutions including theaters, auditoriums etc. Medical Health Institutions, Community Centres, Club, Orphanage, Old Age Home, Banks, Police Stations etc.

18 SPECIAL CONDITIONS

- The sitting of Petrol Pump / Filling Stations shall be subject to fulfillment of instructions/guidelines of IRC/MORTH/TCPO /Punjab Govt. issued from time to time.
- Minimum width of access road for warehousing uses shall be 80'.
- All public and semi-public uses in residential zone shall be located on independent plots with minimum access of 80'.
- All types of industries permitted in the designated land use zone are subject to the fulfillment of conditions issued by industries department / Punjab Pollution Control Board from time to time.

19 EXCEPTIONS

- As provided under Section 79 of the Punjab Regional and Town Planning and Development (Amendment) Act 2006, after coming into operation of this Master Plan, no person shall use or permit to be used any land or carry out any development in any area otherwise than in conformity with this Master Plan.
- Provided that the competent authority may allow the continuance of any use of any land, for a period not exceeding ten years, upon such terms and conditions as may be provided by regulations made in this behalf, for the purpose and to the extent, for and to which it was being used on the date on which this Master Plan came into operation.
- Notwithstanding the above, the uses specifically provided for in the Sector / Zonal Plans shall be permissible or as may be allowed by the Chief Town Planner, Punjab after special appeal where Sector / Zonal Plan is not prepared.
- Uses determined by the Chief Town Planner, Punjab as compatible with uses permissible shall be allowed in respective zones.
- Developments approved prior to coming into force of these Regulations shall be deemed to be in compliance with these regulations.
- The site on which various projects have been approved or whose change of landuse has already been permitted by competent authority/Govt. such sites shall be deemed to be adjusted.
- Uses of Land covered under Optimum Utilization of Vacant Govt. Land (OUVGL) Scheme of the State Government shall be determined by the Government at any appropriate time notwithstanding the provisions of these regulations subject to the fulfillment of other requisites like minimum area, road width and frontage etc. of the respective landuse.
- In the event of conflict in interpretation of data within the study area the information in the GIS format will be deemed as the accurate version and shall prevail.

- In case the area of a project falls partially under no construction zone along a water body, relaxation of maximum upto 5% on the total area of the project shall be allowed towards calculation of saleable area in lieu of the area falling under the no construction zone. In case, the area falling under no construction zone is less than 5% of the total area of the project then the relaxation shall be proportionately less.
- The buildings / premises for which the existing (present) land use has been retained as such in the Master Plan may continue to operate without time limit. However, in case the present use of the buildings / premises is discontinued (partially or wholly) these buildings / premises or part thereof may be put to any compatible use (except industry) with the surrounding use zone in the Master Plan provided it fulfills the other development regulations / controls as laid down in the Master Plan or as prescribed by the Govt. / Local Body from time to time.

20 RESIDENTIAL DENSITIES

Residential zone is divided into two sub zones viz. High Density Zone and Low Density Zone and are shown on the Proposed Land Plan Drg no. DTP (FDK) 366/2010 dated 10/06/2010. The maximum permissible density in these zones shall be as shown in table below:

Sr. No.	Zone	Density
1	High Density Residential Zone (RD-1)	Above 200 persons/acre
2	Low Density Residential Zone (RD-2)	Below 200 persons/Acre

Note: However to encourage group housing and save agricultural land, 60 dwelling units/acre shall be permissible in standalone group housing projects irrespective of the density of particular zone.

21 IMPLEMENTATION OF THESE REGULATIONS

- All authorities competent to grant permission for layout or sub-division of land or construction of building or development of land in any other form shall ensure that the permitted development is in compliance with these regulations.

- Land owners desirous of developing their land can obtain by applying to the designated authority in writing and giving details of their land along with necessary maps, a list of permissible uses.
- Similarly land owners proposing development of certain uses on their land can obtain a certificate of “Compliance with Master Plan” from a designated authority.
- In the extended M.C limits after the notification of Master Plan the stimulations in the Master Plan for area shall continue to be applicable in the extended M.C limits.

SECTION-II

22 DEVELOPMENT CONTROL REGULATIONS

The purpose of the Development Control Regulations (DCR) is to assist developers and end users within the Local Planning Area, Kotkapura to strive for a more quality and environment –friendly development.

These Development Control Regulations are applicable to new and future developments. The developers are requested to abide by the zoning and planning intentions of the Master Plan. However, development proposals/projects that have been granted approval (including CLU) by the Competent Authority before coming of these into operation will continue to be honoured subject to the terms and conditions of approval and shall not be affected by these controls.

Chapter XI of "The Punjab Regional and Town Planning and Development (Amendment) Act 2006" provides for 'Control of Development and Use of Land where Master Plan is in Operation.' The chapter lays down the procedural framework for exercising the development control. "Development" as defined by the Act means the carrying out of building, engineering, mining, quarrying or other operation in, on, over or under land or making of any structural or material changes in any building or land including that which affects the appearance of any heritage site and includes demolition of any part or whole of the building or change in use of any building or land and also includes reclamation, redevelopment, a layout or sub-division of land.

The F.A.R., hieght, groud coverage, parking, set backs, width of road & frontage of site etc. regarding residential, commercial, institutional, industrial or any other use for areas falling with in mucipal limits shall be governed by muncipal bye laws.

Some of the key regulations currently in force are reproduced below.

23 Residential

Category	Minimum area of colony		
	Low Potential Zone II	Low Potential Zone III	Low Potential Zone IV
Residential Plotted	Outside M.C. limits 10 Acres Within M.C. limits any area	Outside M.C. limits 10 Acres Within M.C. limits any area	Outside M.C. limits 10 Acres Within M.C. limits any area

In case of left out pocket i.e. where on all sides the construction has already taken place, that left out area without any minimum stipulation can be developed as a residential colony.

Note:

- (i) The above potential zones falling in L.P.A.Kotkapura are as per notification no. 17/17/2001-5Hg2/PF.1 dated 20.06.2010 or as amended from time to time.
- (ii) The minimum area of colony is as per Memo No.18/182/06-6HG2/5598 dated 17.07.2007, Memo No. 17/17/01-5HG2/7655 dated 19.09.2007 and Memo No. 17/17/01-5HG2/1640 dated 18.06.09 or as amended from time to time.
- (iii) F.A.R, height and ground coverage for individual residential plots within municipal areas, the municipal building byelaws shall be applicable and outside Municipal limit the building bye-laws of respective Development Authority shall apply. However, saleable area of any plotted residential colony (residential and commercial) shall not exceed 55%.
- (iv) Any change in area or any other norms at latter stage by the state Govt. shall be applicable

24 Parking requirements for plotted developments

Plot size*	Parking requirements
85 sq m and less (100 sq yd and less)	2 scooter parking spaces
86-168 sq m (101-200 sq yd)	1.5 car parking space within plot area
169-425 sq m (201-500 sq yd)	2 car parking space within plot area
425 sq m and more (500 sq yd and more)	3 car parking space within plot area

Note:

- (i) Deviation of up to 10% of this control is allowed, if it is arising from site conditions / constraints.
- (ii) The minimum width of roads within residential areas shall not be less than 12 m, if the existing road is less than 12 m, the proportionate land on both sides shall be safeguarded for widening to comply with the minimum requirement. The height of buildings on these roads shall not exceed ground plus two (G+2) storeys.
- (iii) Size of the front gate on boundary wall and construction of front boundary wall is optional to meet the parking requirements.
- (iv) Any change in area or any other norms at latter stage by the state Govt. shall be applicable

25 Group Housing

1	Minimum Plot size	
	Outside MC limits a)For General Category b)For EWS	5 acres 2.5acres
2	Minimum road width	Group housing stand alone projects, shall be permissible on minimum existing 60' wide road with condition that the promoter shall be required to leave space from his own land for widening it to 80' and the space so left shall be public space. In the planned colony, group housing shall not be permissible on a road less than 60' wide.
3	Minimum Frontage	outside M.C limits 20 meters
4	Permissible FAR	outside M.C limits 1:1.75
5	Permissible Height	There shall be no restriction on the height of building subject to clearance from Air Force Authority and fulfilment of other rules such as set backs, distance between buildings etc. However structural safety and fire safety requirements as per National Building Code shall be compulsory.
6	Parking Provisions	For group housing developments, the requisite parking provision is 1.5 ECS per 100 sq m of covered area. The maximum provision allowable for group housing projects is 3ECS per dwelling unit.

Note: 1) Construction of residential houses sold by promoters on floor basis shall also be considered as group/flatted housing development & parking requirement shall be as per the norms applicable to Group Housing.

2) Any change in area or any other norms at latter stage by the state Govt. shall be applicable

26 Farm House

Minimum area	2.5 acres
FAR	0.04
Ground Coverage	2% (maximum 200 sq mts.)
Number of storeys	2
Height	Single Storey 18'-0" Double Storey 28'-0"
Hard Surface	10%

Note: Farm House shall only be allowed to upkeep the farm operations and it shall not be used for independent residential or any other purpose.

27 Commercial

Commercial use in residential zone located within the municipal limits shall be allowable as per municipal bye laws. The area requirements for such commercial developments shall be as per the Municipal rules and regulations.

For stand alone commercial complexes with height greater than three storeys within as well as outside the Municipal limits, the additional criteria listed in following table shall apply.

Additional criteria for stand-alone commercial complexes (more than three storeys)

1	Minimum area required	As per M.C norms (within M.C. limits) 1000 sq m (outside M.C.limit)
2	Minimum frontage	As per M.C. norms (within M.C. limits) 20 meters (Outside M.C. limits)
3	Maximum F.A.R	As per MC norms (within M.C. limits) 1:1.75 (Outside M.C. limits)
4	Maximum height	There shall be no restrictions on the height of building subject to clearance from Air Force Authority and fulfillment of other rules such as setbacks, distance between buildings etc. However, structural safety and fire safety requirements as per N.B.C shall be compulsory.
5	Maximum groundcoverage	As per MC norms (within M.C. limits) 40% (outside M.C. limits)
6	Parking	For projects with no multiplexes, the minimum parking shall be 2ECS per 100 sq m of covered area (including circulation area). For projects with multiplexes/cinemas/ theatres, the minimum parking shall be: a) 3 ECS per 100 sq m of covered area in respect of the covered area by the multiplex

component +30% of the total covered area by that component and

ECS per 100 sq m of covered area, in respect of balance commercial component and circulation area.

Parking norms within the municipal limits shall be the same as that notified by the Department of Local Government.

Total parking requirement shall be provided in the compulsory front set back and within the development site boundary or in the basement.

7 Basement

Multi level basement will be allowed behind the building in zoned area except in setbacks provided it is proposed for parking purposes only and satisfy the public health and structural requirements.

8 Minimum width of approach road 80 feet

9 If the site area is 1 acre or more minimum 15% area is to be reserved for landscaping.

10 For the movement of fire tender the minimum set back distance to comply with the existing norms and standards.

Note : The E.C.S shall be counted as below:

- 23 square meters for open parking.
- 28 square meters for parking under stilts on ground floor.
- 32 square meters for parking in the basement

28 Commercial at Local Level

The provision for small scale, single storey commercial facilities at the local level within Municipal limits shall be as per municipal bye laws, however outside the

municipal limits such activities shall be on roads with a minimum width of 18 m (60') & with minimum 6 mts front setback for parking.

These commercial facilities are intended to serve the needs of local residents only and will not be shown separately on the Master Plan. Instead, they shall be subsumed under the predominant residential land use.

29 Development Controls along Roads

The development controls along major roads beyond the Right of Way (RoW) shall be as per table below, however the access to all properties within and outside the municipal limits that about R-1 and R-2 hierarchy of roads shall be through service road. The cross-section of these roads shall be detailed at latter stage whenever required. The minimum ROW and no construction zone along the major roads shall be followed as given below:-

Sr. No.	Name of the road	Hierarchy	Right Of Way (in mts & feet)	No construction zone on both sides of ROW (in mts)
1	Ring Road around Kotkapura	R-1	60 (200')	5
	Kotkapura-Bathinda road (NH-15)	R-1	60 (200')	5
2	Kotkapura- Faridkot	R-2	45 (150')	5
3	Kotkapura-Moga road (SH-16)	R-2	45 (150')	5
4	Kotkapura-Muktsar road (SH-16)	R-2	45 (150')	5
5	Kotkapura-Jaitu road	R-3	30 (100')	5

Note: - (i) Front set back shall be over and above the proposed widening width of road, if any.

(ii) Where widening of existing road is proposed the land shall be taken proportionately equally from both the sides of existing road.

(iii) If there is extension of Municipal limits of any local body falling in LPA, after final notification of Master Plan, the development controls / zoning regulations as applicable to the area outside M.C. limits shall apply to the area so covered under extended M.C. limits.

30

Institutional:

Components

Norms/Standards

Minimum Plot size	As prescribed by affiliating authority.
Minimum frontage	200 feet
Minimum width of approach road	40 feet (12m) or as ammended by Government from time to time
Maximum F.A.R	1:1
Maximum ground coverage	40%
Parking	1 ECS per 100 square meters of the covered area if the project is covered under notification no.17/171/5-Hg2/311 dated 11.01.08.

Note: Other building regulations shall be governed by Zoning Plan as approved by the competent authority.

31

Industrial

Size of Plot	Site Coverage
For the first 2420 sq yds	50% of the site
For the next 2420 sq yds	33% of the site
In excess of 4840 sq yds	25 % of the site
FAR	1:1.0
Parking	I ECS per 100 square meters of the covered area.
Road width	The minimum road width for industrial unit shall be 12 mts.

Note: Residential component: Residential component in the industrial plot/premises shall not exceed 5% of the area of the site and shall be within the maximum permissible covered area.

- The minimum road width for each land use shall be as specified in the Master Plan or by the Government policy / guidelines issued from time to time. However, in case the existing road width is less than the minimum specified width in the Master Plan / Government policy the proportionate land on both sides shall be safeguarded for

widening to comply with the minimum requirement. In case, where habitation / settlement comes in the alignment, the widening shall be on other side of habitation / settlement.

- In case the site of any project is situated within Municipal limits and the project is submitted to Local Body for approval the building byelaws of the concerned local body shall be applicable provided the land use is in conformity to Master Plan.
- Industrial / IT Park shall have minimum 10 acres area. In IT Park, IT component shall have FAR 2. In industrial park, for an industry component FAR shall be 1 and other components shall have FAR as mentioned under different uses in the Master Plan.

32 Environment Considerations:

- Minimum buffer of 15 meters green belt of broad leaf trees should be provided around the boundary of village abadies falling in the industrial zone of Master Plan. This should also be provided between residential areas and red category industries falling in industrial zone of Master Plan, boundaries of which are located within 100 m from the boundary of such areas. However, for special type of industries such as Rice Shellers / Sailsa Plant, Stone Crushers, Hot Mix Plant, the standards prescribed by the Punjab Pollution Control Board or any other agency shall apply.
- All residential colonies, commercial establishments like shopping malls, multiplexes etc shall maintain a minimum distance of 250 meters from the most hazardous (maximum accident hazardous) industries notified by Director General, Factory Adviser Service Labour Institute. The distance should be measured from source of pollution/hazard in the industrial premises to the building lines as per Zoning Plan of the colony/complex.

33 Other Development Controls and Guidelines Required

- (i) Expansion of village abadies: Contiguous expansion of village abadies in non residential zones of Master Plan is permissible up to 200 mts in the Master Plan. However, for the village abadies falling in residential zone of Master Plan no

such limit has been earmarked as the area around them is already earmarked as residential.

- (ii) The contiguous expansion of village abadies falling under agricultural zone of Local Planning Area is also permissible to accommodate the natural growth of village abadies.
- (iii) Regulation for village abadi: Special building regulation shall be prepared for the development and regulation of an area falling within the *lal dora* or *phirni* of the villages falling in the Local Planning Area.
- (iv) The existing high tension lines shall be shifted along the road but outside the right of way to ensure unhindered ROW for traffic and other services for all times.
- (v) Minimum 5 meters wide green strips on each side of minor, drain, canals, underground pipelines shall be maintained. Realignment of water bodies shall be permissible wherever feasible, subject to the certification by the Drainage / Engineering Department to ensure free flow of storm water. After any such realignment, the river mouth, the river bed, and the green strip on either side shall be maintained at least to the minimum prescribed level.

Note: The Development controls/Guidelines/Norms & Standards revised from time to time by the Government shall have overriding effect on the Development controls mentioned in the master plan.

34 Transferable Development Rights

To facilitate development, it is necessary to accord top priority to the implementation of public utilities and infrastructure (such as roads, parks, green belts etc,) which will in turn encourage urbanization.

However, the respective technical agency or authority will not be able to proceed with its implementation programmers until the ownership of private land affected by these public utilities and infrastructure has been transferred to the state or to the relevant authority(s).

Acquisition of private land for this purpose can be carried out through one of the following options:

- Cash compensation can be made to affected land owners whose land is to be acquired.
- A government – approved land pooling scheme can be implemented.
- Transferable Development Rights (TDR).

Under the TDR scheme, the affected land owner(s) shall be entitled to additional FAR for the development of his balance land parcel at a rate of 1:1. The additional FAR will not be subjected to any CLU, EDC or license / permission fees. The land owner(s) also has the option to sell it in total or in parts to a third party.

All the records of transactions administered under the TDR scheme shall be maintained by the state and / or relevant authority(s), based on the precedence set in Mumbai. The TDR scheme shall be restricted to development projects for public infrastructure and facilities which shall be announced from time to time. The additional FAR shall not be transferable from one L.P.A to another. The detailed policy guidelines on the operation and implementation of TDR Scheme shall be prepared and announced by the competent authority in due course of time.

Annexure 1: Notification Regarding Declaration of LPA Kotkapura

GOVERNMENT OF PUNJAB DEVELOPMENT OF HOUSING & DEVELOPMENT (HOUSING BRANCH – I)

Notification

Dated 14-3-08

No 12/7/08 – 4H98/2020 Whereas it appears to the Government Punjab that to meet the challenge of rapid growth of Kotkapura and to provide for a workable framework for comprehensive planned and regulated development, preparation of statutory Master plan of Kotkapura is very essential. Hence in order to develop Kotkapura and its surrounding in orderly manner and to prepare its Master Plan under “ The Punjab Regional and Town Planning and Development act, 1995”, the Government of Punjab is pleased to declare the Local Planning Area of Kotkapura within the meaning of sub section (1) of section 56 of the Punjab Regional and Town Planning and Development (Amendment) Act, 2006. The total area proposed for Local Planning Area is 17463 hectares including Kotkapura Municipal Council, and adjoining 9 villages as shown in Annexure – 1. The s=Schedule of boundry of Local Planning Area is given below: :-

Schedule of Boundary :-

- North : Starting from point ‘A’ which is common Sarhada of village Machaki Mal Singh (H.B.No.97), village Vire wala Khurd (H.B.No.96) and Jalaleana (H.B.No.110) towards east along the northern boundaries of village Jalaleana (H.B.No.110) village Sandhwan (H.B.No.111), Kotkapura (H.B.No.129) and Panj graian kalan (H.B.No.126) upto point ‘B’ which is common sarhada of village Ghaniewala (H.B.No.125), Panj Graian Khurd (H.B.No.118) and Panj graian kalan (H.B.No.126)
- East : Thence from point ‘B’ towards south along the eastern boundaries of village Panj graian kalan (H.B.No.126), Dhilwan kalan (H.B.No.127), Kotkapura (H.B.No.129) and romana Albel Singh (H.B.No.128) upto point ‘C’ which is common sarhada of village Sarawan (H.B.No.140), village Matta (H.B.No.132) and village Romana Albel Singh (H.B.No.128)
- South : Thence was point ‘C’ towards west along the southern boundaries of village Romana Albel Singh (H.B.No.128), Kotkapura (H.B.No.129), Koharwala (H.B.No.130) and Wara Daraka (H.B.No.107) upto point ‘D’ which is common

Sarhada of village Khara (H.B.No.102),village Thara (H.B.No.106) and Wara Daraka (H.B.No.107)

West : Thence from point 'D' towards north along the western boundaries of village Wara Daraka (H.B.No.110) Kotakpura (H.B.No.129) Dewareana (H.B.No.109) and Jalaleana (H.B.No.110) upto point 'A' which is the point of start.

The boundaries of Local Planning Area, Kotkapura are specially shown on the Drawing No.DTP (Fdk) 335/2007,Dt. 6-11-07.All the provisions laid down u/s 56 (2) of 'The Punjab Regional and Town Planning and Development Act,1995' (Amendment 2006) and all the concerned rules framed under the Act have been taken into consideration.

Chandigarh

(Arun Goel, I.A.S.)

Dated 7/3/08

Secretary to Govt.of Punjab

Housing & Urban Dev.Deptt.

Annexure 2: Notification regarding declaration of LPA Kotkapura

GOVERNMENT OF PUNJAB DEVELOPMENT OF HOUSING & DEVELOPMENT (HOUSING BRANCH – 1)

Notification

20 May, 2010

No.12/7/2008 – 4HGI/1425. In continuation of Notification No. 12/7/08-4HGI/2020 Dated: 14-03-08 the Governor of Punjab is pleased to alter the boundaries of Local Planning Area Kotkapura within the meaning of sub – section 7 of section 56 read with the sub-section (1) of section 56 of Punjab Regional and Town Planning and Development (Amendment) Act.2006.The total area proposed for Local Planning Area.Kotkapura is 24137 hectares,which includes Kotkapura Town and adjoining 15 villages as listed in Annexure-1.The Scheduled of boundaries of Local Planning Area Kotkapura is as under :-

Scheduled of Boundary

- NORTH :** Starting from point ‘A’ which is the common Sarhada of village Jalaleana (H.B.No.-110),village Vire Wala Khurd (H.B.No.-96)and village Machaki Mal Singh (H.B.No.-97) then towardseast along the north boundary of village Jalaleana (H.B.No.- 110) village Sandhwan (H.B.No.–111),village Sikhanwala (H.B.No.-113),village Bir Sikhanwala (H.B.No.-114),village Deviwala (H.B.No.-115),village Panj graian Kalan (H.B.No.- 126) and village Ghanie Wala (H.B.No.- 125) upto point ‘B’ which is the common sarhada of village Aulakh (H.B.No.- 123),village Jeon Wala (H.B.N0.- 124) and village Ghanie Wala (H.B.No.- 125)
- EAST :** Thence from point ‘B’ moving towards south along the eastern boundary of village Ghanie Wala (H.B.No.- 125),village Panjgrtaian Kalan (H.B.No.- 126) and village Dhilwan Kalan (H.B.No.- 127) upto point ‘C’ which is the common sarhada of village behbal Kalan (H.B.No.142) village Dhilwan Kalan (H.B.No.- 127) and village Sarawan (H.B.No.- 140).
- SOUTH :** Thence from point ‘C’ towards west along the southern boundary of village Dhilwan Kalan (H.B.No.-127),village Kotkapura (H.B.No.-129),village Romana Albel Singh (H.B.No.-128),village Dhaipai (H.B.No.-131),village Kohar Wala (H.B.No.-130),village Wara Daraka (H.B.No.-107) and village Khara (H.B.No.-102) upto point ‘D’which is the common sarhada of village Khara (H.B.No.-102),village Bara Hari (Distt.Muktsar) (H.B.No.-89) and village Maur (H.B.No.-103).

WEST : Thence moving from point 'D' towards North along the Western boundary of village Khara (H.B.No.-102),village Wander Jatana (H.B.No.-108),village Dawareana (H.B.No.- 109) and village Jalaleana (H.B.No.-110) upto the starting point 'A'.

The boundaries of Local Planning Area,Kotkapura are shownon the Drawing No.DTP (FDK)357/2010,Dated 09-03-2010.All the provisions laid down u/s 56 (2) of the Punjab Regional and Town Planning and Development (Amendment) Act,2006”and all the concerned rules framed under the Act heve been taken into consideration.

Chandigarh
Dated : 12/5/2010

Dr.S.S.Sandhu
Secretary to Govt.of Punjab
Department of Housing & Urban Development

Annexure 3: Detail of Village/Area falling with in Local Planning Area - Kotkapura

Sr.No.	Name of Settlement	Headbast Number	Area in Hectares	Remarks
1.	Kotkapura	129	8273	Total Area of Kotkapura Revenue Estate including M.C.Kotkapura
2.	Sandhwan	111	994	--
3.	Panj Graian Kalan	126	2913	--
4.	Jalaleana	110	301	--
5.	Dawareana	109	462	--
6.	Waradaraka	107	933	--
7.	Koharwala	130	541	--
8.	Romana Albel Singh	128	481	--
9.	Dhilwan Kalan	127	2565	--
10.	Sikhanwala	113	522	--
11.	Bir Sikhanwala	114	1021	--
12.	Deviwala	115	511	--
13.	Ghanie Wala	125	567	--
14.	Khara	102	1798	--
15.	Dhaipai	131	869	--
16.	Wander Jatana	108	1386	--
	Total	---	24137	--

District Town Planner
Faridkot

Annexure 4: Notification regarding designated Planning Agency

GOVERNMENT OF PUNJAB
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
(HOUSING BRANCH –I)

Notification

The 14th March, 2008

No. 12/7/2008-4 HGI/2026-Whereas the Governor of Punjab was pleased to declare the Local Planning Area of Kotkapura and its surrounding areas under section 56(1) of “ The Punjab Regional and Town Planning and Development Act, 1995” , - vide Notification No.12-7-2008-4 HG1/2020, dated the 14th March, 2008.

Further the Governor of Punjab is pleased to designate the Chief Town Planner, Punjab as Planning Agency for the above Local Planning Area under section 57 of “The Punjab Regional and Town Planning and Development Act, 1995”

ARUN GOEL

Chandigarh:
The 7th March, 2008

Secretary to Government of Punjab,
Department of Housing and Urban
Development