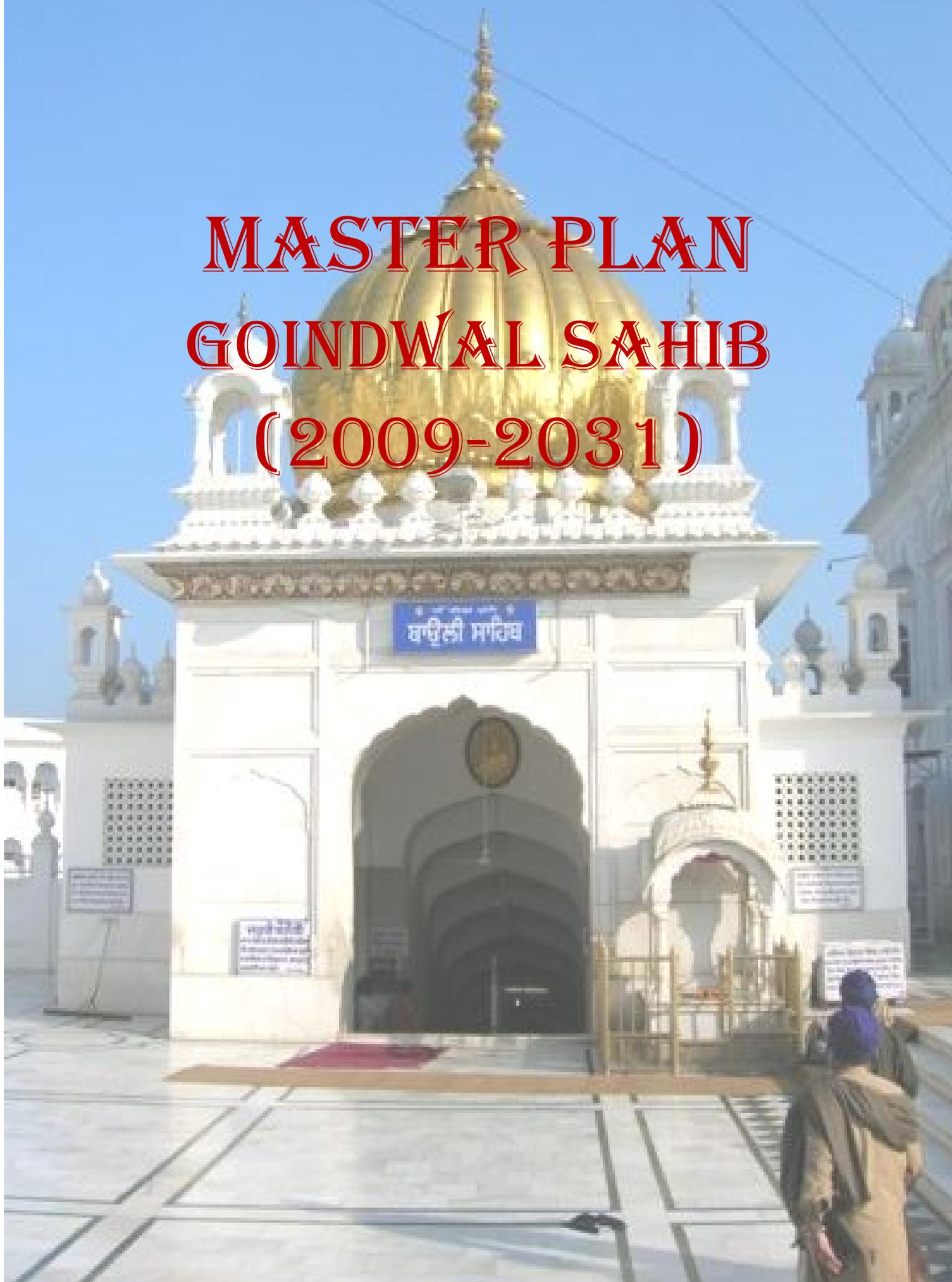


MASTER PLAN GOINDWAL SAHIB (2009-2031)



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PART-1

BRIEF SUMMARY

1.1 Introduction

Local Planning Area, Goindwal is declared vide notification no. 12/5/2009-4HGI/2836 dated 26-10-2009 for the preparation of its Master Plan, is situated along river Beas in North western part of Punjab, in district Tarn Taran and Tehsil and Block as Khadur Sahib. The step was initiated by third Guru Amardas ji to develop human settlements as centres of preaching and social upliftment. In this way, it was developed as first ever pilgrimage for Sikhs. It has many historical/religious places in the form of Gurudwaras, Mandirs, Dargahs etc. It was an important transit point at that time. It is a rural settlement, which reported a population of 6845 persons in 2001. It is facilitated with senior secondary school, a primary school, veterinary hospital, mini primary health centre, sub-post office and telephone/electric networks etc. An industrial complex is established here including the areas of surrounding villages.

1.2 Local Planning Area, Goindwal

1.2.1 Situation & History

The Local Planning Area, Goindwal comprises of 19 villages. It comprises of all rural settlements and its total area is 11880 hec. (as per census 2001). It is situated on right bank of river Beas in South-East of district headquarter Tarn-Taran. Goindwal, Khadur Sahib and Bharowal are the main settlements which had been associated with Sikh history.

1.2.2 Physical, Demographic & Socio-Economic

The physical characteristics including physiography, climate, wind direction and soil characteristics etc have also been studied in chapter IV. Among demographic characteristics of 1991-2001, population growth is 26.15%, population density is 13PPH, sex ratio is 833, literacy level is 56.43% Schedule caste composition is 39.11%, Economy is generally agriculture based. Total percentage of workers is 33.16% and non workers are 66.84%. Major crops are wheat and rice. Orchards are also present in small chunks of lands in 8 villages of Local Planning Area.

1.2.3 Trade & Commerce and industry

Trade and commerce are not much flourished in the Local Planning Area. Among wholesale trade Focal Point at Bharowal is not functioning now. But grain markets at Khadur Sahib and Fatehabad are doing business. Retail activities mainly exists near historical places and in residential areas of LPA in un-planned manner. Industries are mainly part of industrial complex which is a almost in failure position and some industries are dispersed in unplanned manner. Thermal power plant of 2x 300 MW is also coming up near Goindwal.

1.2.4 Traffic and Transportation

Local Planning Area, Goindwal is well connected with district headquarter Tarn-Taran, Kapurthala, Jalandhar, G.T. Road at Jandiala and Khilchian, Amritsar through road network and with Beas through rail network. Extension of this railway line is under construction upto Tarn-Taran. Two bus terminals are present at Khadur Sahib and Goindwal where as railway station is present at village Fatehabad. Nearest airport is at Raja Sansi in district Amritsar.

1.2.5 Infrastructural Facilities

Water supply network and open drainage networks are present in most of the in-habited villages. But sewerage system and solid waste management are not present in the LPA. Again electricity supply is also everywhere in the Local Planning Area. Educational facilities have been provided adequately while health facilities are not sufficient. Parks and open spaces play-grounds etc are also negligible. Local Planning Area is also served with postal and police services.

1.2.6 Tourism

Tourism is mainly religious tourists, inflow ranges from thousands to lakhs during fairs and festivals.

1.2.7 Environment

Local Planning Area is generally air pollution free except during harvesting season. Water pollution in river Beas and other water bodies is there. Noise pollution again in general is absent but it can be generated by construction equipments of Thermal Power Plant intermittently and for short duration. Due to lack of solid waste management land is getting polluted day by day and because of absence of sewerage system under ground water is also getting polluted by septic tanks.

1.2.8 Panchayati Land

Government land owned by village panchayats is available in 10 villages of Local Planning Area but in small but dispersed chunks.

1.2.9 Existing Land use (2009) of LPA, Goindwal

The base map of LPA, Goindwal has been prepared by Punjab Remote Sensing Centre, PAU, Ludhiana in co-ordination with District Town Planner, Amritsar who has provided revenue records of all the villages and has done field surveys and ground truthing for its preparation. The satellite imagery has been procured by PRSC, PAU, Ludhiana from National Remote Sensing Agency, Hyderabad.

The data shown in the base map drawing no DTP (A)/ 4/2009 date 27-8-2009 reveals that among all land use components 4.61% area is under residential use, 0.21% is under commercial use, 0.72% is being used by industrial activity, under utilities it is 0.11%, for public/semi public uses its share is 1.87%, under

transportation networks/terminals the share of total area is 2.19% and for recreational uses the percentage of the area is 0.04%. But major portion of this Local Planning Area comes under agricultural, its allied activities and water bodies which is more than 90% (90.25%). The variation of total area as per census record and as supplied by PRSC, PAU, Ludhiana has also been considered by taking the later for further calculations.

1.2.10 SWOT Analysis

On the basis of the above facts, information and data the SWOT analysis has been done, so that its strengths and opportunities may be taken as potentials and weaknesses and threats may be overcome as far as possible while giving the final proposals.

1.3 Visualizing the future

1.3.1 Population projections

On the basis of growth rate of previous three decades, the population projections have been made upto year 2031 with five yearly slab. The average projected population for the years 2006, 2009 (base year), 2011, 2016, 2021, 2026 and 2031 is respectively 60275, 64019, 66943, 74730, 83426, 9313 and 103981 persons.

1.3.2 Future Requirements

As Local Planning Area, Goindwal has mainly rural characteristics, so the requirements for future periods have been calculated with lower range (meant for small town) of norms of UDPFI guidelines, because norms for rural areas have not been fixed by any organization. Finally, present gaps and additional requirements have been calculated for all types of physical and social facilities. In addition to these, Land use requirements for all land uses have also been calculated using the same norms.

1.3.3 Vision

On the basis of study of information and data received, facility index, calculated requirements and suggestions received in meetings of “*think tank*”, it has been decided to develop three major settlements of LPA, Goindwal for promotion of different activities here, on the basis of their past and present characteristics. In this way, Goindwal has been decided to be promoted as *tourist spot* and *Industrial* centre, Khadur Sahib for *religious, educational* and administrative activities whereas Fatehabad as *rural marketing hub*.

1.4 Proposals of Master Plan, Goindwal

In this part of Master Plan, Goindwal the components, objectives, scope, planning considerations etc have been specified. The description of proposed landuse plan have been given elaborately, as per which, area under Residential use (newly proposed residential zones, village abadis outside and insisted lal lakir) is

1214 hec (10.24%), under *Commercial* use (rural marketing centre, wholesale, godown, warehousing & logistic park) is 208 hec (1.75%), under *Industrial* use (industrial zones & thermal power plant) is 884 hec (7.46%), *Public/semi public* uses (institutional cum residential zone, government/semi government office, public utility sites and socio-cultural and religious) is 313 hec (2.64%), *Transportation & Communication* (road & rail network, bus & rail terminus) is under 212 hec (1.8%) under *Recreational/Tourism* (river front recreation, reserved four tourist facilities) is under 376 hec (3.18%) and under *Agricultural* zone is 8641 hec (72.93%).

During actual implementation of these proposals to achieve the true spirit of these proposals the *Zoning Regulations* have formulated later in its part. In these zoning regulations, land use regulations have been specified to indicate the permissibility of various activities in different land uses/zones. In addition to these, the development controls for the development of the permissible activities within respective land uses/areas have also been specified, so that development of any activities does not take place out of the prescribed extent and form. In the end, the procedure of implementation of the above proposals and development control is also given.

PART- II

INTRODUCTION

2.1 Initial Steps

- Local Planning Area, Goindwal is notified by Punjab Government vide Notification No. 12/5/2009-4 HGI/2836 Dated 26-10-2009. The total area of the Local Planning Area, Goindwal is 11880 hectare and the detail of settlements falling in this Local Planning Area is shown in the Drg No 4/2009 DTP (A) Dated 27-8-09.
- The Local Planning Area, Goindwal constitutes 19 villages, consisting the population of 53818 persons. The Government designated Chief Town Planner, Punjab as planning agency vide notification no-12/5/2009-4HGI/562 dated 13-2-09 to prepare Master Plan of L.P.A., Goindwal.
- Administrative boundaries of villages, geographical, physical, historical and demographic features, accessibility and the trends of development etc. have been kept in view while delineating the L.P.A.

2.2 Goindwal – An Overview

Goindwal is situated along the river Beas in the North Western part of Punjab. It is situated on 75°07'30"E to 75° 10' 55"E longitudes and 31° 21' 35" N to 31°24'40" N latitudes. It falls in administrative boundaries of district Tarn Taran, tehsil Khadur Sahib and block Khadur Sahib. It is a major and one of the popular historic settlement located in the Majha region. It has followed the concept and approaches of Sikh Gurus to develop human settlements as centers of preaching and social upliftment. *Goindwal or Govindwal* as mentioned in the historic literature was conceived to develop as a centre of Sikh preaching by Guru Amar Das, the third Sikh Guru.



Pic. 1 Gurudwara Baoli Sahib at Goindwal –The first ever place of Sikh pilgrimage

Goindwal is a rural settlement, which reported a population of 6,845 persons in 2001 Census against 3,601 persons and 2,498 persons in 1991 and 1981 respectively. Goindwal is facilitated with a *senior secondary school, a primary school, veterinary hospital, mini primary health centre, a sub post office and telephone network etc.* The area including surrounding villages has been declared as Industrial Focal Point for establishment of industries here.

2.2.1 Historical Evolution of Goindwal Sahib

(I) Growth and Development

The historical evolution of Goindwal Sahib has been divided into two parts:

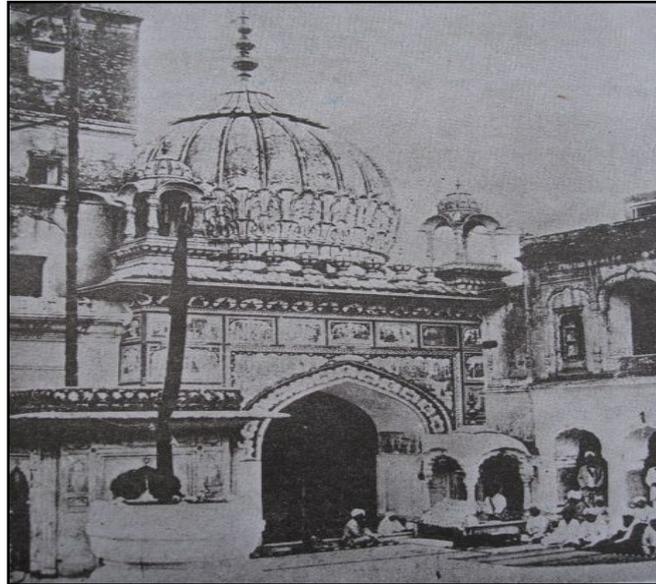
a) Medieval Period

b) Modern Period

a) Medieval Period:

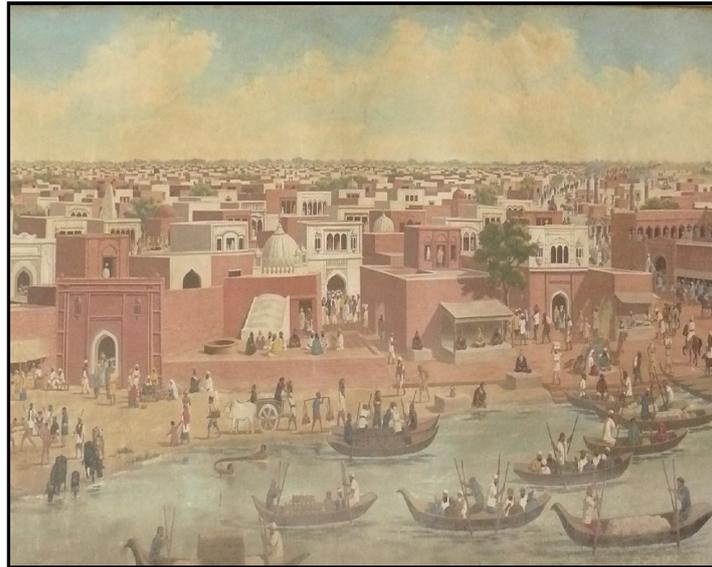
- **Foundation:** Goindwal, the first ever place of Sikh pilgrimage, designated by its founder, Guru Amar Das. This was established along the river Beas on Delhi - Lahore Sher Shah Suri Marg. In fact it was an important junction where east-west highway crossed the River Beas. With the renovation of the highway by Sher Shah Suri, the Afghan ruler of north India 1540-45 AD, this ferry site became an important transit point. This led one “Goinda” or “Gonda”, a Marvaha Khatri trader, to plan a habitation at the western end of the ferry.
- **Growth:** While installing Guru Amar Das as his successor in 1522 A.D., Guru Angad Dev ji advised him to settle at the newly built town. When Guru Amar Das shifted to this town, all his brothers and their families also shifted from Basarke to Goindwal. The Guru’s devotional life attracted people from far and

near leading to scarcity of living accommodation. The Guru encouraged settlers to construct houses through liberal allotment of residential plots of land.



Pic. 2: Baoli at Goindwal

- Construction of Baoli: In the settlements of 16th century, availability of water has played a pivotal role. The location of good quality potable water became the major source of development of the settlement. The construction of Baoli at Goindwal was a multi-purpose project. Guru Amar Das decided to give to the Sikhs a central place for gatherings of the whole founded township. A site for baoli was chosen and excavation work started.
- Pilgrimage: The Goindwal became an important centre for Sikh preachings with the availability of water, rest place and free community kitchen. The settlements were developed in the form of habitation of few houses along the uplands of river Beas. The external linkages were performed by the *shahi marg* (Sher Shah Suri road). It is important to understand and mention here that the establishment of Goindwal was also linked to the inter action settlements established at Khadur Sahib, Kartarpur, and Batala.



Pic. 3: Concept by Goinda for development of Goindwal

- **Concept of Development:** Goindwal is a typical settlement, which demonstrates that a site full of development potentials can remain undeveloped, if the developer like *Goinda* lacks imagination and site planning techniques. The site, which was not growing despite repeated efforts of *Goinda* and considered to be inhabited by '*Ghosts and Evil Spirits*' turned into a sprawling commercial and religious centre, when Guru Amar Das took keen interest in its development.

B) Modern Period

It is observed that not much growth has taken place in the settlement and its surroundings in any manner. The development in terms of spatial growth is not much over the years. Major steps which have been taken to upgrade this settlement and its surroundings are establishment of Industrial complex and Thermal Power Plant here.

ii) Decline of Goindwal Sahib:

After the initial development of the Goindwal, it became slow, even became stagnant at different points of time due to various reasons, few of them are discussed below:

a) Establishment of Harmandir Sahib at Amritsar-

With the establishment of "*Guru Ka Chak*", construction of '*Amrit Srovar*' and installation of the '*Adi Granth*' in Hari Mandir, the Sikh religious masses now

focused their attention towards Amritsar, due to which the socio-cultural importance of Goindwal started declining.

b) Development of the other settlements nearby:

The development of Goindwal was ignored when the development of *Amritsar* and *Tarn Taran* took place. Earlier, it was the centre of pilgrimage and development and now it has just become a peripheral area. As the attention has been shifted to *Amritsar* as well as *Tarn Taran*, the Goindwal was left undeveloped.

c) Shifting the G.T. Road

The decision of the britishers to link Lahore with Ludhiana via Amritsar, Kartarpur, Jalandhar and Phagwara in second half of nineteenth century, by realigning the Grand Trunk Road, was the swear blow to the economic development of the town.

d) Failure of Industrial Complex

Industrial complex was established with the view to promote the development of the whole region which was considered economically backward. But its failure affected the growth not only of Goindwal but of the whole region.

iii) Major Development Events:

The major events include all the important events as shown in the table 2.1 which took place, right from the growth of the town to the development till date.

Table 2.1 Important Events in the Evolution of Goindwal

Year	Events
1539	After the death of Shri Guru Nanak Dev Ji in 1539, Shri Guru Angad Dev Ji left Kartarpur for the village of Khadur Sahib (near Goindwal Sahib).
1541	In the year 1541, Shri Guru Amar Das Ji came to Shri Guru Angad Dev Ji & for around 12 years, with his devotional service.
1552	Guru Angad Dev Ji appointed Sri Guru Amar Das Ji as third Guru.
1559	The Gurudwara Goindwal Sahib came up alongside the Baoli (well) with 84 steps, which was considered to be the first pilgrimage site of Sikhs
1563	Guru Arjan Dev Sahib was born on 15th April 1563 at Goindwal Sahib. He was the youngest son of Guru Ram Das Sahib and Mata Bhani ji.
1574	Succession to Gurgaddi Guru Amar Das selected Bhai Jetha (Ram Das), his son-in-law to be the fourth Guru of the Sikhs. The Guru left for eternal abode on September 1, 1574 at Goindwal Sahib.
1581	Guru Ram Das bestowed Guruship on his youngest son Arjan Dev Ji,

	after whom the Guruship became hereditary. He breathed his last on September 1, 1581 at Goindwal Sahib.
1598	During a famine in 1598, Akbar (a liberal Muslim King) met the Guru at Goindwal, and on request of the Guru, he exempted 50% revenue of the farmers in the Punjab.
1604	The Gurudwara was raised by fifth Sikh Guru, Guru Arjan Dev in 1604.
1973	The Museum was completed on November 30, 1973.
1981	For the development of Goindwal, a Industrial Complex was notified vide Punjab govt's notification No, 8/200/80-41-BI-81/308 dated 20-1-1981.
2008	The foundation stone of Thermal Power Plant was laid at Goindwal.
2009	For the preparation of Master Plan, Goindwal, Local Planning Area, Goindwal has been notified vide Punjab Govt's notification No 12/5/2009-4 HGI/2836 Dated 26-10-2009.

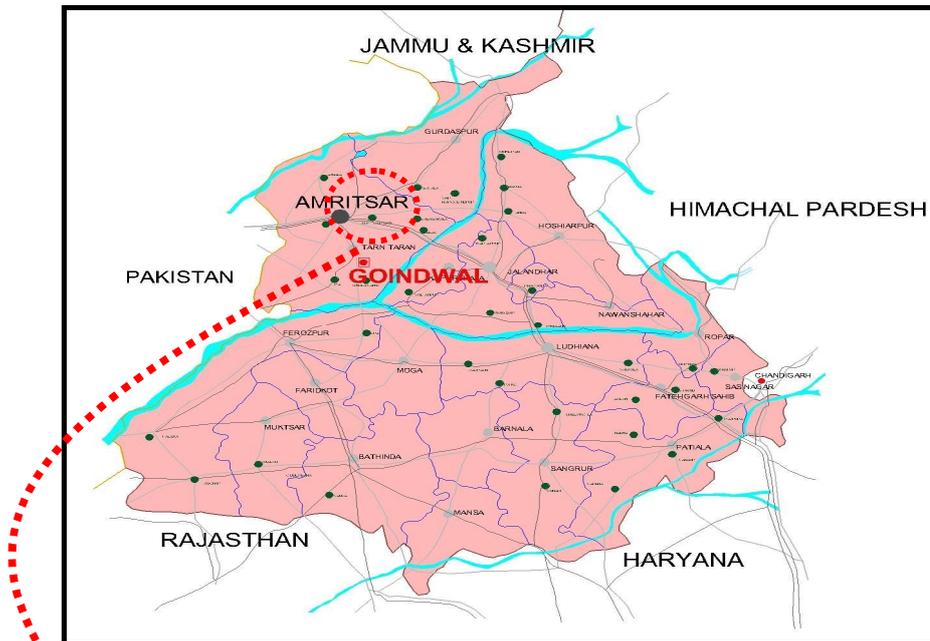
Source: World Wide Webs

2.2.2 Regional Setting

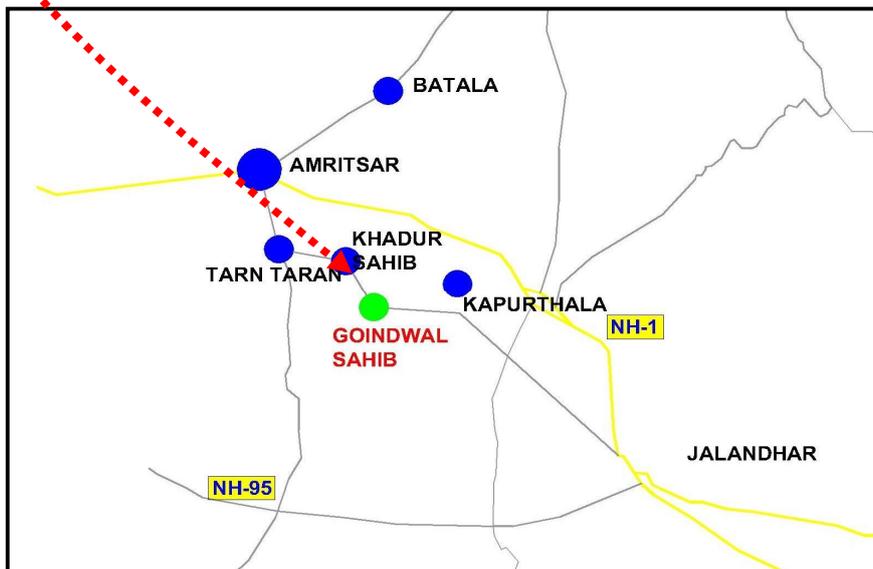
'Regional setting' is the combination of two words '*region*' and '*setting*' in which 'region' means an area and setting means how an area or a region is to be set in context of its surroundings. The development/growth of every settlement is affected by its surroundings and vice versa. Hence, it is very important to study the relative importance of Goindwal with respect to its surroundings. It is to be studied on the basis of some criteria as described below:

i) Location and Situation

Geographically, Goindwal is located 75°07'30"E to 75° 10' 55"E longitudes and 31° 21' 35" N to 31°24'40" N latitudes. It is situated on the right bank of the Beas River, 48 kilometers South East of Amritsar and about 24 kms South East of Tarn Taran district Headquarter.



Map No 1 Showing the Location of Goindwal in Punjab



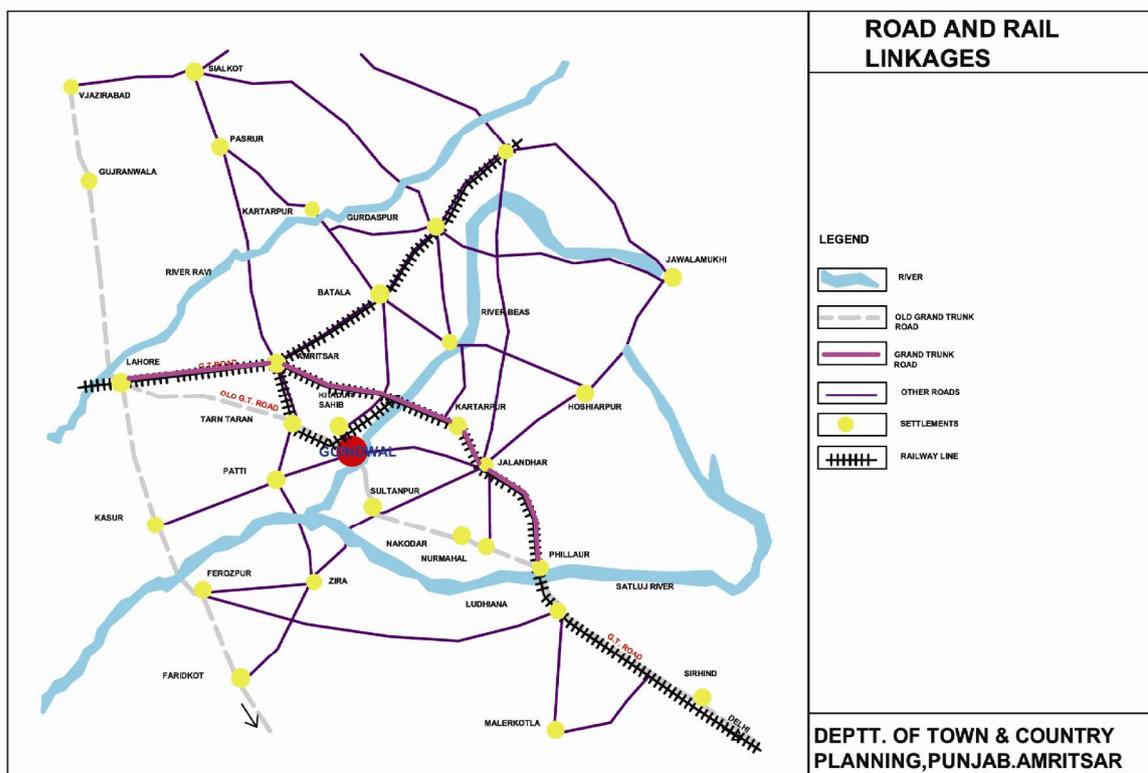
Map 2 Showing the situation of Goindwal w.r.t important surrounding settlements.

Map 1 show the districts of Punjab indicating the district Tarn Taran and Goindwal as settlement while map 2 shows the location of Goindwal with respect to surrounding important settlements like Amritsar, Jalandhar, Kapurthala, Batala etc. with respect to their importance in this region.

ii) Road and Linkages

Goindwal is connected by roads with other important towns like Kapurthala, Jandiala Guru, Tarn Taran, Amritsar and also with other adjacent villages. It is readily accessible by road from Jalandhar via Kapurthala and from Amritsar via Khadur Sahib. It is also well connected with the other important settlements in its vicinity. It is situated 24 Km from Pathankot—Amritsar—Makhu—Faridkot—Malout—Abohar (National Highway No. 15) upto Rajasthan border.

Goindwal is also accessible with rail network; it is connected with Beas railway junction. The following map shows the road and railway linkages towards Goindwal.



Map 3 Road and Railway linkage of Goindwal with important settlement

Map 3 shows the road and railway accessibility from Goindwal to other villages and vice versa which shows that Goindwal has its potential in terms of road and rail linkages, which is the positive point in order to popularize Goindwal as a religious, historical as well as economically important settlement.

2.2.3 Characteristics of Goindwal

Every settlement has its own distinct characteristics, which is important to understand in order to give proposals for future, taking those characteristics as the potential and problems. The potentials need to be encouraged and problems need

to be minimized through planning while preparing the master plan, hence Goindwal is studied under two headings as described under;

i) Physical Characteristics

The village Goindwal lying between the Beas river to the east and district head quarter, Tarn Taran in the west, which forms the lower part of the upper bari-doab, is one of the inter fluvial tracks of the Punjab plain.

ii) Demographic Characteristics:

Goindwal is a rural settlement as per Census of India, 2001. According to the 2001 Census, Goindwal village is populated with 6,845 persons. The growth trend of population of village Goindwal is given in the following table 2.2.

Table 2.2 Population Growth of Goindwal

Year	Population	Growth Rate	Males		Females	
			Persons	%	Persons	%
1991	3,601	-	1,968	55	1,633	45
2001	6,845	90%	3,683	54	3,162	46

Source: Census of India-, 2001

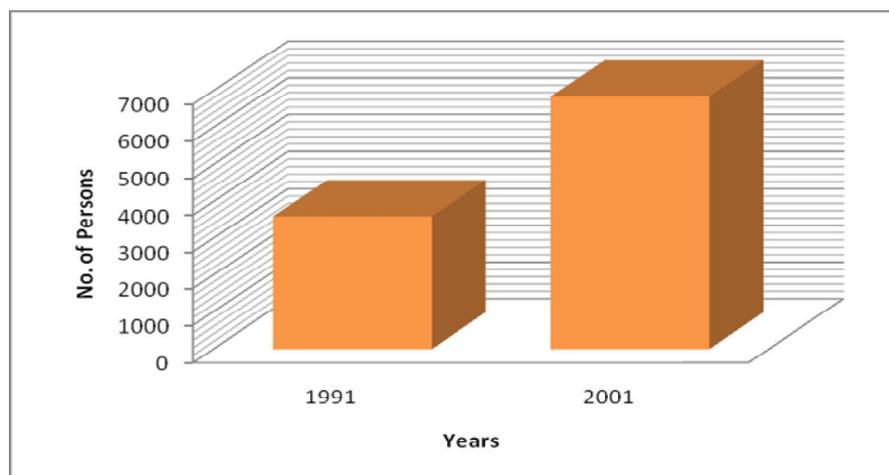


Fig 2.1 Population Growth of Goindwal

The fig 2.1 shows the comparative decadal growth of Goindwal. In the period between 1991-2001, the population of the village has almost been doubled. The reasons for the high growth rate is development of residential area of GIICO complex and establishment of new unapproved colonies. Therefore, the people from the nearby villages have migrated to Goindwal for enjoying better facilities and quality of life. The total number of households is 1247. The population density comes out to be 13 PPH. Out of the total population, 2625 persons belong to SC category which is 38% approximately. In addition, 4231 persons are literate out of the total population, which accounts to 62% of the total population.

iii) Social Characteristics:

Social characteristics comprise the kind of facilities available in the village i.e. education, health facilities etc.

Table 2.3 Educational Facilities in Goindwal

S.No.	Level of Facility	Number	Distance (kms.)
1.	Primary School	2	--
2.	Senior Secondary School	1	--
3.	ITI	--	9
4.	Polytechnic for Boys	--	20
5.	Polytechnic for Girls	--	9
6.	Degree College for Boys	--	9
7.	Degree College for Girls	--	4

Source: Punjab Village Directory, 2007

There are 2 primary schools and 1 senior secondary school in Goindwal. If this number is compared with the standards, it shows that there is adequate no. of educational facilities in the town. In addition, there are equal amount of educational facilities available for girls as well as boys.

Table 2.4 Health Facilities in Goindwal

S.No.	Level of Facility	Number	Distance (kms.)
1.	Mini P.H.C.	1	--
2.	Primary Health Centre	--	3
3.	Community Health Centre	--	14
4.	Hospital (25 bedded)	--	14
5.	Ayurvedic/ Unani	--	12
6.	Homeopathic	--	14
7.	Other Hospitals	--	24
8.	Private Practitioners	22	--
9.	Veterinary Hospital	1	--

Source: Punjab Village Directory, 2007

Although, there are many private practitioners providing medical aid to the needy but it is revealed from the table 2.4 that Goindwal lacks in health facilities from government side. There is only 1 mini PHC so there is need of health facilities as in case of emergency, the distance to be travelled for availing high level of government medical facilities is more than 3 kms. There is also one veterinary hospital for the medical aid of the animals.

iv) Economic Characteristics:

The total working population is 1945 that accounts to be 28.4%, which is very less if compared with the state of Punjab where it is more than 33%. Out of the working population, only 26% are involved in agricultural activities and the remaining workers are engaged in non-agricultural activities.

The total area of Goindwal is 539 hectares. Out of the total area, the net sown area is 406 hectares. The major crops comprise of wheat and rice.

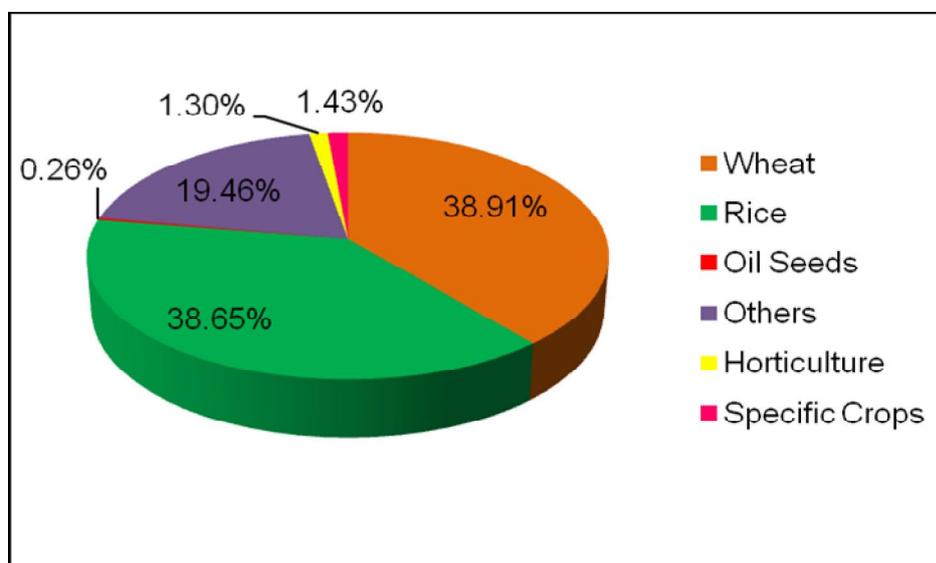


Fig 2.2 Land Utilization Cropwise

Figure 2.2 reveals that the maximum land is utilized for the production of wheat and rice i.e. 77% of the total cultivated land approximately. In addition, the other crops such as oil seeds have a minor range. 1.3% of land is under horticulture and 1.43% of the land is under specific crops such as medicinal plants.

Table 2.5 Types of Industries in Goindwal

S.No.	Type of Industry	No. of Units	Employment generated in persons
1.	Khadi and Village Manufacturing	25	88
2.	Small Scale Industry	4	799
3.	Large Scale Industry	8	8785

Source: Punjab Village Directory, 2007

The data in table 2.5 indicates that there are 25 khadi and village-manufacturing units, which generate the employment for 88 workers. 4 small scale industries generate an employment of 799 persons and 8 large scale industries generate an employment for 8785 persons. This shows that people have started shifting from agriculture and allied activities to the manufacturing sector.

2.2.4 Potentials and Problems of Goindwal Sahib:

i) The potentials of Goindwal Sahib comprises of:

- The presence of historical and religious buildings and landmarks is a big potential for the area, which can be used for promotion of religious tourism by developing its supporting activities and infrastructure.
- River Beas, passing through Local Planning Area, acts as a potential. As it is the major water body, so the recreational tourism can be promoted along the river front. Moreover, water availability for domestic, commercial, industrial as well as agriculture purpose is there in sufficient quantity.
- Goindwal has a great potential of industrial activities. As industrial complex has been proposed/planned here, which can be further exploited properly in such a way that it provides large scale employment and can become a major industrial centre of the region.
- A Thermal Power Plant has been proposed in the Local Planning Area. It can act as a great potential for the region and even surrounding areas by generating electricity, which can be utilized for proposed economic activities as well as upgrading the social status of the people living in the region.
- The existing road network is present in the whole Local Planning Area which can be used as linkages by their improvement and up gradation.
- Social infrastructure in the form of educational facilities has been adequately provided in Local Planning Area, Goindwal. These facilities can be further expanded and hence this area can be promoted as an educational hub to serve the region.

ii) Problems in Goindwal

- Although there are so many religiously and historically important buildings but these are not being maintained and conserved properly.
- The availability of tourist facilities are not of the level that these can attract the tourist spots like Sh. Harminder Sahib and Attari Border at Amritsar and Shri Darbar Sahib at Tarn Taran.
- The industrial complex proposed in the Local Planning Area, Goindwal remained underutilized.
- Goindwal has major share of unplanned residential area. Hence, norms and standards have not been followed while developing these areas, which resulted in the lack of facilities and services.
- The growth of Goindwal is taking place in such a way that there is no relationship between the different elements of the development which ultimately leads to the haphazard growth of the settlement.

- In case of social infrastructure, except educational facilities, no other facility has been adequately provided.
- No hierarchy has been followed for development of commercial areas due to which these activities have come up along streets leading to resulting congestion around the historical places. Moreover, there is no defined space for the informal commercial activities.
- The wholesale godowns and storage facilities are missing because of which the production activities are getting spoiled. Moreover, the marketing centre is also missing as a result of which the production activities are being affected because they are not getting any exposure in the region.
- No hierarchy has been followed in the provision of parks and open spaces. As a result, there are no playgrounds for the children to play. And during the fairs and festivals, these problems are further augmented.
- There are problems of parking and encroachments during the fairs and festivals time. At that time, the effective width of the roads get further reduced when the shopkeepers encroach upon the road. Hence, the need for informal commercial sites arises.
- Goindwal faces many infrastructural inadequacies such as lack of maintenance of water supply and non-provision of sewerage system, drainage system and solid waste management.
- Although water supply system has been provided there, but problem lies on the part of maintenance of water supply network. People are not getting adequate amount of water supply and also the quality of water is getting degraded.
- There is provision of sewerage system in the small planned areas, due to poor maintenance of which, the residents face many problems such as clogging of sewage because of which unhygienic conditions prevail.
- The old water course has got polluted and there is problem of water stagnation because of which the cleanliness and other water bodies are required.

PART-III

LOCAL PLANNING AREA, GOINDWAL

3.1 Planning Efforts so far:

3.1.1 Establishing a Nucleus Industrial Complex

Under the new Industrial policy, the Planning Commission of India recommended the setting up of nucleus industries in backward areas as a part of industrial growth and backward area development policy.

In response to popular demand as a part of industrial growth policy, a work task force of Union and State Government officials examined suitability of Goindwal for locating a nucleus Industrial complex and selected a site of about 194.33 hectares as a beginning towards the creation of a new industrial complex, followed by acquisition of adjoining chunks of land. This industrial complex was proposed to be well planned and self sufficient unit which was proposed to have well planned plots for industrial units, residential area, road network/ hierarchy, parks/open spaces/green belts, social facilities and utilities network. Initially, these proposals were started implementing on ground by establishment of the industrial units, laying down of roads and utility networks as well as construction of houses in the residential area of this complex. After that, land was also acquired for second phase of the industrial complex. But these development works did not continue for long time, as with the closure of industrial units in the complex, development of all other elements stopped. As a result of which, the development of the acquired land for the complex could not take place. Moreover, the laid down road infrastructure and utility network is under-utilized and is in poor condition at present. Hence, there is the wastage of government money.

3.1.2. Controlled Area Around Industrial Complex

To control the development and to restrict haphazard growth around the industrial complex, Goindwal Controlled Area was declared wide notification No 9/7/85-3HB-III/13420 Dated 1/12/1987 under section 4(1) of The Punjab Schedule Roads and Controlled Areas (Restriction of Unregulated Development), Act 1963.

The total area of this Controlled Area was 1064.77 hectares. The development plan for this controlled area was prepared by the department of Town and Country Planning, Punjab (Drg .No. DTP (A) 3168/93 dated 4/11/ 93), which was technically approved by Chief Town Planner, Punjab. But unfortunately, it was

not declared u/s 5(7) of the above said act, hence the proposals were not practically implemented on ground.

3.1.3 Absence of Master Plan

No master plan whether non statutory or statutory has been proposed or prepared for Goindwal till date. Therefore, there is no legal provision of development controls and regulations in the area. As a result of which, but unregulated and haphazard development slowly taking place here.

3.2 Need of Master Plan

It is clear that only small area of the Local Planning Area, Goindwal by establishment of industrial complex and no other effort for planning area belonging to this Local Planning Area is made and if such effort is made by declaration of controlled area, it is not practically implemented on ground. So, it is important to prepare a Master Plan for the religiously important region due to the following reasons:

- Master Plan is needed for the balanced development of the Local Planning Area in every sphere, creating inter relationship between various elements of growth.
- To promote the integrated development of the town by rationalizing the pattern of land use and their interrelationship.
- To develop Goindwal and its surroundings as religiously important settlement in order to maintain its identity and to facilitate the religious tourists.
- To exploit the natural resources for tourism of Goindwal, which are still underutilized.
- To enhance the economic status of the Local Planning Area by reviving its industrial character.
- Taking into consideration the proposal of Thermal Power Plant in the Local Planning Area, to reduce its negative impacts in the surrounding area and to exploit its potential.
- To create the work–place relationship by proposing the residential area at suitable sites in the view of industrial complex and proposed thermal plant
- As most of the area of Local Planning Area, Goindwal, is presently under agriculture use, therefore proper marketing and infrastructural facilities are required here.
- Provision of strong road infrastructure for linking the Local Planning Area and its important settlements with other important surrounding settlements and

linking its various development elements, in the light of future development here.

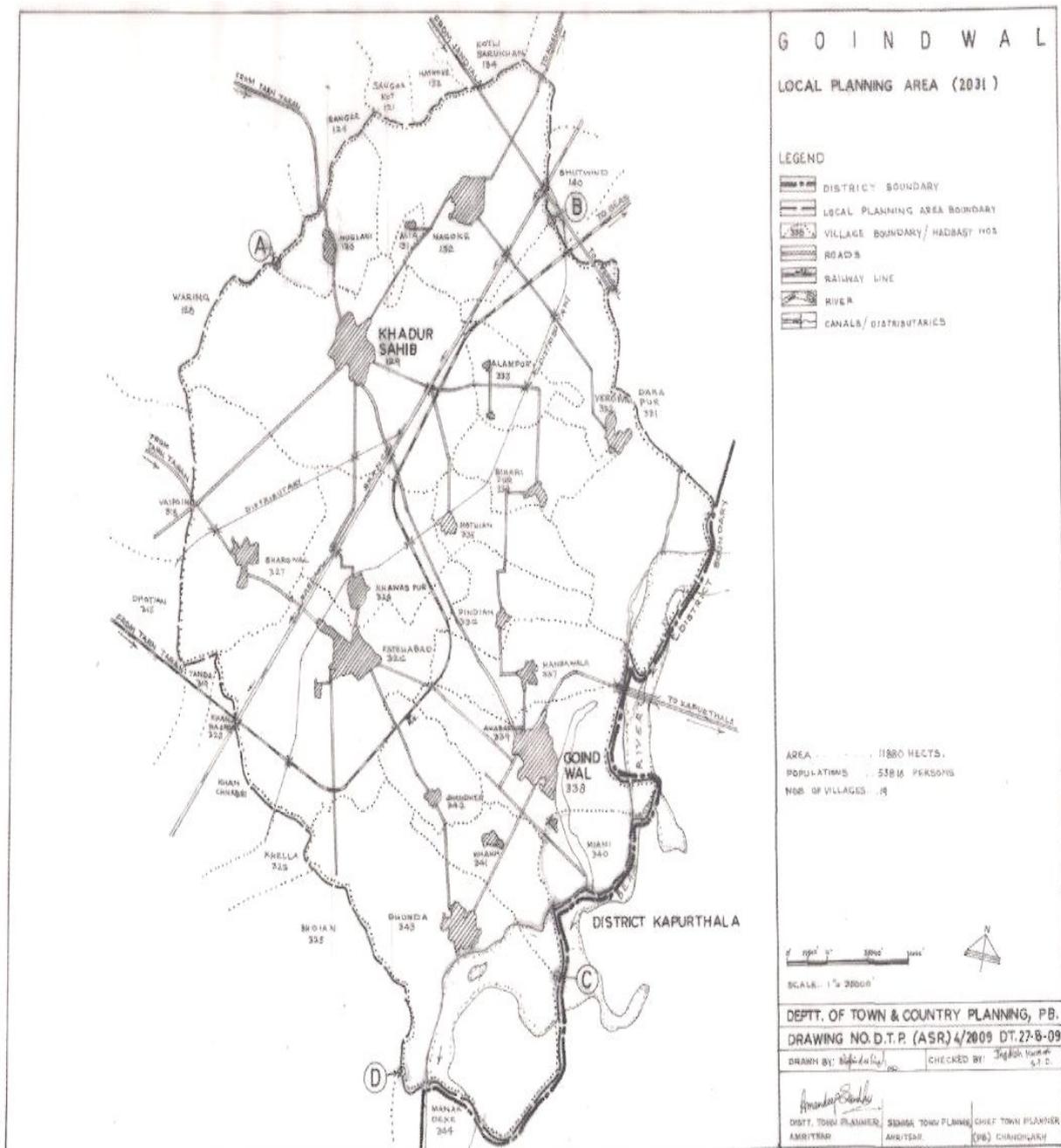
- To make the town rich in infrastructure.
- To provide the optimum infrastructural facilities/services for future population.
- To make Goindwal as a vibrant entity to overcome the existing inadequacies and weaknesses.

At last, it is concluded Goindwal is considered as a historical/religious town and the futuristic economic hub, the need of Master Plan of Goindwal arises for its very important role for integrated and sustainable development of Local Planning Area, Goindwal.

3.3 Delineation of Local Planning Area, Goindwal

As discussed earlier, no Master Plan of Goindwal is prepared so far but now Punjab Government has declared, its Local Planning Area, for preparation of its Master Plan due to its religious and historical as well as locational importance.

As a first step towards the preparation of Master plan Goindwal, Local Planning Area has been delineated and notified u/s 56(i) of “The Punjab Regional and Town Planning and Development (Amendment) Act 2006” in the Official Gazette vide notification no: 12/5/2009-4HGI/2836 dated 26-10-2009. The Local Planning Area, Goindwal includes 19 villages all of which falls in administrative boundaries of district Tarn Taran. The total area of Local Planning Area, Goindwal works out to be 11,880 hectares.



Map . 4 Local Planning Area, Goindwal

Local Planning Area, Goindwal Drawing No. 4/2009 DTP(A) Dated 27-8-09 as notified vide Punjab Govt's notification no 12/5/2009-4HGI/2836 dated 26-10-2009.

The Local Planning Area, Goindwal (2009) comprises of 19 villages including the village Goindwal (refer map. 4). Local Planning Area experienced population

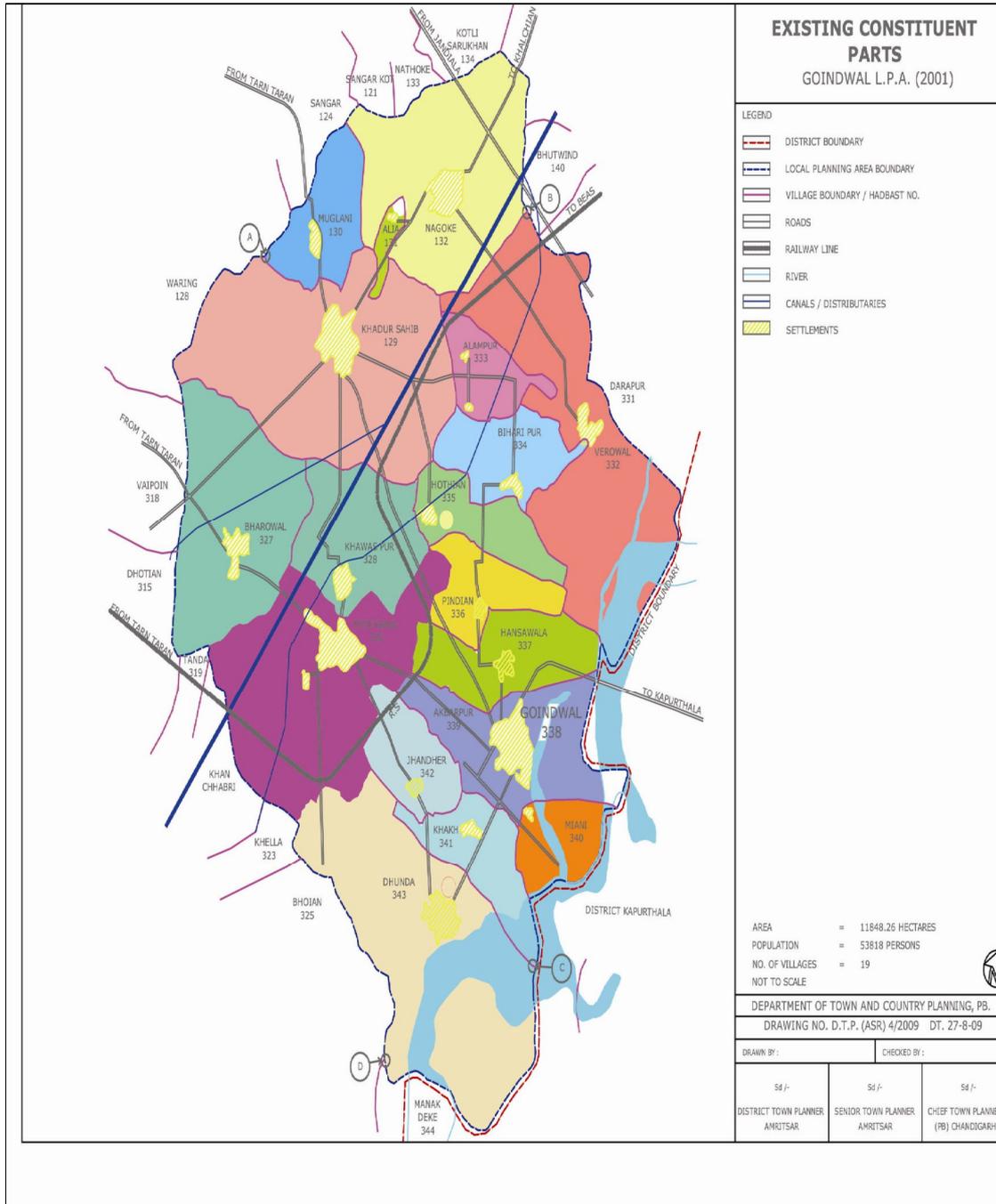
growth rate of 19.68%, 19.65% and 26.15% during the year 1971-1981, 1981-1991 and 1991-2001 respectively. According to the 2001 census, the population of Local Planning Area, Goindwal including Goindwal village is 53,818 persons. The village wise population of Local Planning Area, Goindwal (2009) is given in table 3.1 in para 3.4 of this chapter.

While delineating Local Planning Area, Goindwal the following factors as mentioned in rule 22 of The Punjab Regional and Town Planning and Development (General rules 1995) have been taken into consideration;

- While proposing the limits of the above Local Planning Area, the *revenue boundaries* of the villages falling in it as well as the common *administrative boundaries* of the district Tarn Taran and Kapurthala were taken into account.
- To include the *historical places/gurudwaras* situated in villages Khadur Sahib and Bharowal in the Local Planning Area, the revenue areas of their villages have been added within its limits.
- The *location of the river Beas* which acts as a *physical barrier* for the development in eastern direction, also acts as constraint to go beyond the eastern boundaries of the village Dhunda, Miani, Akbarpur, Alampur and Verowal etc.
- The revenue area of the villages Jhander, Dhunda, Khakh, Miani have been included in this Local Planning Area, keeping in view, the industrial units established in the area of these villages under *Goindwal Industrial and investment Corporation*.
- Besides this, the revenue area of villages Verowal, Alampur, Hothian, Pindia and Hansanwala have been added within this Local Planning Area due to the proposal of the *thermal power plant* here.

3.4 Constituent Settlements and its Jurisdiction

Besides the above, population analysis has also been done in light of share of population of Local Planning Area, Goindwal to the state population. The detail of villages falling in the Local Planning Area, Goindwal are given below in the table 3.1 and map 5.



Map-5 Local Planning Area, Goindwal Drg. No. DTP(A)/4/2009 dated 27-8-09

Local Planning Area, Goindwal							
Total	29793	35657	42663	53818	19.68	19.65	26.15
Urban	-	-	-	-	-	-	-
Rural	29793	35657	42663	53818	19.68	19.65	26.15

Source: Census of India 1971,1981,1991,2001.

The above table depicts that the growth rate of total population of Local Planning Area, Goindwal has decreased from 19.68% during 1971-81 to 19.65% in 1981-91 and it increased to 26.15% during 1991-2001 decade which is quite higher in comparison to the state of Punjab.

As far as the share of total population of Local Planning Area to total population of state is concerned, the share has remained constant as it was 0.22% in 1971 and was still same in year 2001 as given in table 3.3

Table 3.3 Share of Population of Local Planning Area, Goindwal in comparison with Punjab.

	1971	1981	1991	2001
Total	0.22%	0.21%	0.21%	0.22%
Urban	-	-	-	-
Rural	0.22%	0.21%	0.21%	0.22%

Source: Census of India 1971,1981,1991,2001.

PART- IV

EXISTING SITUATION OF LOCAL PLANNING AREA, GOINDWAL

4.1 Physical Characteristics

4.1.1 Physiography

The physiography of the settlement under the study consists topography of the settlement, soil characteristics includes its type & load bearing capacity. The Local Planning Area, Goindwal lying between the Beas river to the east and Tarn Taran in the west, in Tarn Taran district, which forms the lower part of the upper bari- doab, is one of the inter fluvial tracks of the Punjab Plain. The physiography of Goindwal is interspersed with mounds and depressions. These mounds and depressions were safe from the fury of floods and were taken into consideration by Guruji while selection of sites of Gurudwara Baoli Sahib and Gurudwara Chubara Sahib. Presence of underground water made it possible to construct the baoli here but the difficulties which were faced during the digging of baoli indicate the presence of hard strata here. The physiography is plain in general except near river beas.

4.1.2 Water Features:-



Picture 4: View of Goindwal along River Beas

Among the water features in Local Planning Area, Goindwal, most important is River Beas, which is the main cause of development of this settlement, due to the environment of solitude and tranquility here. It is one of the five rivers of Punjab. It bounds the Local Planning Area in its east as a big physical barrier.

Besides this, sabhraon branch canal passes through the Local Planning Area mainly from villages Verowal, Alampur, Khadur Sahib, Khawaspur and Fatehabad. Patti distributary, which starts from sabhraon branch where the Sabhraon branch cuts the revenue boundary of village Verowal, flows almost parallel to the Sabhraon branch. A minor splits from this distributary in village Hothian and flows towards village Jhander.

Two drains also pass through Local Planning Area, one Khadur drain flowing parallel to the sabhraon branch upto a point in village Khadur Sahib where it splits towards village Vainpoin.

In addition to above, the ghats along the river Beas were its inseparable part at Guru's period. Tanks have also been constructed in Gurudwara Nihangan near Gurudwara Baoli Sahib and in Mandir Mata Chintpurni whereas among ponds one exists in bus stand in Goindwal. Ponds also exist in each village of LPA Goindwal.

4.1.3. Climate

The climate of Local Planning Area, Goindwal is characterized by general dryness, except during the brief south-west monsoon, a hot summer and a bracing winter. The year may be divided into four seasons. The cold season is from November to March. The period from April to June is the hottest season. The south west monsoon season is from the beginning of July to first week of September. The succeeding period lasting until the beginning of November is the post- monsoon or transition period.

From the end of March, temperature increases steadily until June which is the hottest month when the maximum temperature may reach 45°C. With the onset of the monsoon in the district by about end of June or in the beginning of July, there is appreciable drop in the day temperature. The nights are however, as warm as during the monsoon season as in summer and owing to the increased moisture in the air, the weather is often oppressive. After the withdrawal of the monsoon season, nights become progressively cool. From October, there is rapid drop in temperature. January is generally the coldest month. During the cold season, the district is affected by cold waves due to the western disturbances and minimum temperature occasionally drops by a degree or two below the freezing point of water. Frosts are common during the cold season.

4.1.4 Wind Direction

Wind direction, which is from North-West to South-East for about 9 months in the year and tends to have a reverse flow during 3 months of the monsoon, has determined the basic pattern of the township.

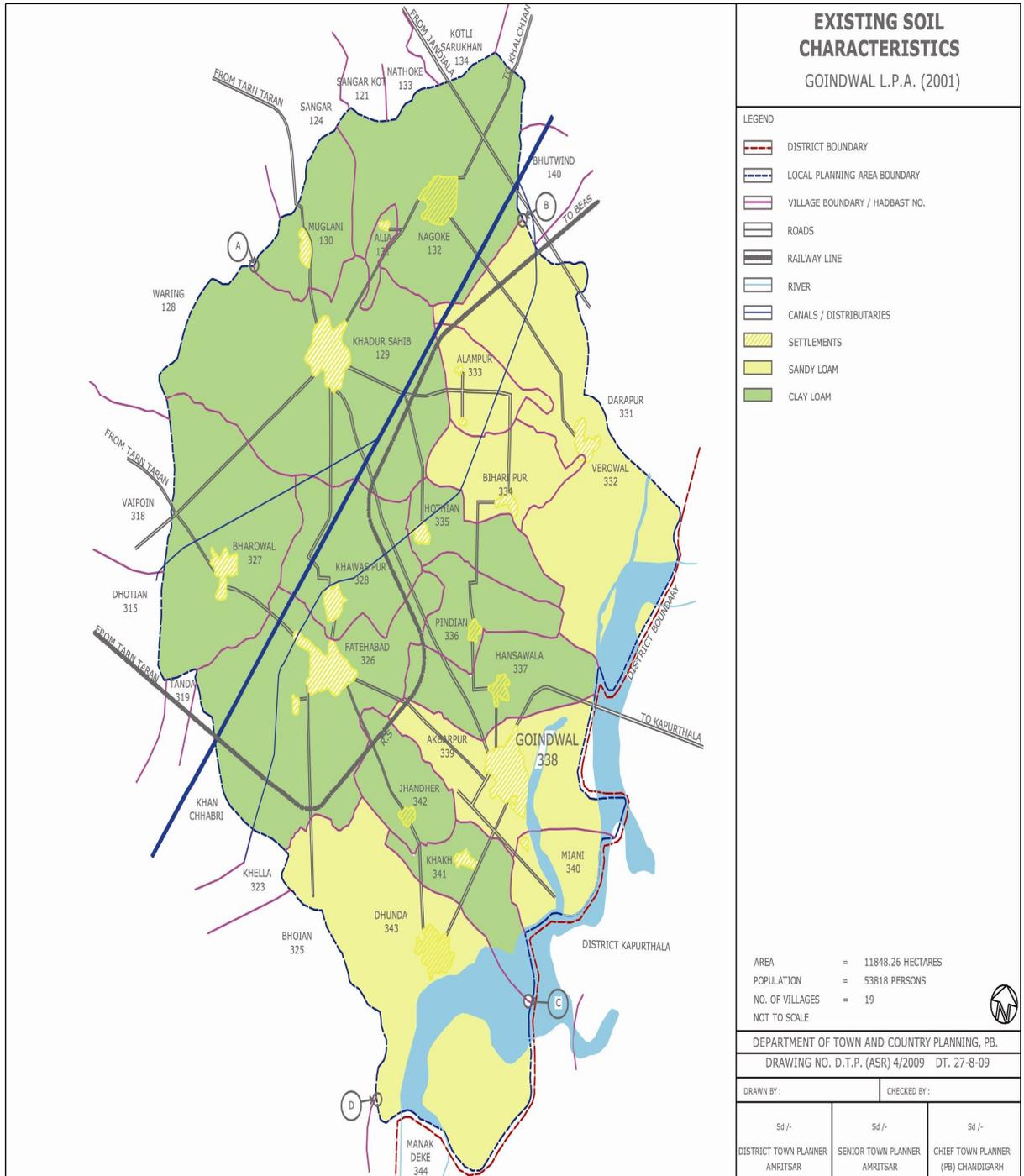
4.1.5 Soil and Its Characteristics

The following table shows the villages of the Local Planning Area, Goindwal with respect to its corresponding soil characteristics.

Table 4.1 - Soil Characteristics of L.P.A., Goindwal

S.No.	Village	Type of Soil	Soil Depth
1.	Goindwal Sahib	Sandy Loam	More than 90 cm. depth
2.	Nagoke	Clay Loam	-Do-
3.	Verowal	Sandy Loam	-Do-
4.	Alampur	-Do-	-Do-
5.	Akbarpur	-Do-	-Do-
6.	Miani	-Do-	-Do-
7.	Dhunda	-Do-	-Do-
8.	Jhander	Clay Loam	-Do-
9.	Hansawala	-Do-	-Do-
10.	Khakh	-Do-	-Do-
11.	Muglani	-Do-	-Do-
12.	Pindian	-Do-	-Do-
13.	Fatehabad	-Do-	-Do-
14.	Hothian	-Do-	-Do-
15.	Biharipur	Sandy Loam	-Do-
16.	Khadur Sahib	Clay Loam	-Do-
17.	Bharowal	-Do-	-Do-
18.	Khawaspur	-Do-	-Do-
19.	Alia	-Do-	-Do-

Source: Soil Conservation Office, Tarn Taran.



Map 6: Village wise Soil Characteristics of Local Planning Area, Goindwal

The soil characteristics shown in the above table depicts that the soil depth is more than 90 cms uniformly throughout the Local Planning Area, Goindwal. It is also revealed from the table 4.1 and map 6 that there are two types of soil in the whole Local Planning Area. In this way, 12 villages Nagoke, Jhander, Hansawala, Khakh, Muglani, Pindian, Fatehabad, Hothian, Khadur Sahib, Bharowal, Khawaspur and Alia have the cover of clay loam as their soil while rest of the 7 villages i.e. Goindwal, Verowal, Alampur, Akbarpur, Miani, Dhunda and Biharipur have sandy loam soil.

4.2 Historically Important Areas

As described earlier, the Local Planning Area, Goindwal is delineated keeping in view the historical and religious importance of different villages. Out of 19 villages of Local Planning Area, Goindwal four have been identified related to history and religion as described below:

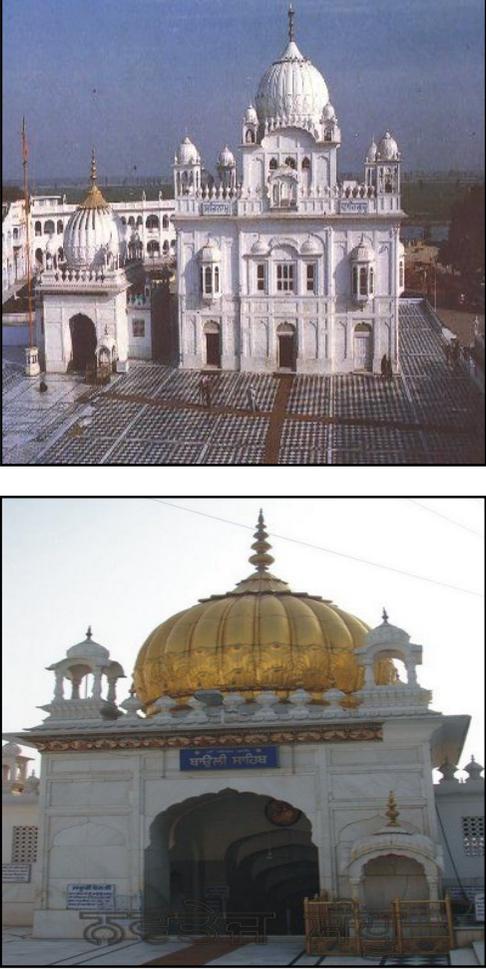
4.2.1 Goindwal: As already discussed in chapter II, the village Goindwal is associated with Guru Angad Dev Ji and Guru Amar Dass Ji. As a result of which, many Gurudwaras, buildings, features etc are present in and around the settlement, where Gurus stayed and performed various religious and social functions and the events in their lives. Besides this, there are many other historically important features in the form of Mandirs and Dargahs.

4.2.2 Khadur Sahib: The settlement is also equally important from historical and religious point of view like Goindwal. The village is associated with Guru Angad Dev Ji. Here many Gurudwaras have been constructed where different events related to the sikh history occurred during the life period of the Guru. Moreover, Dera Kar Sewa, which is also present here, is performing so many activities to serve the religion as well as the society.

4.2.3 Bharowal: Only one historical Gurudwara is present in this village where Guru Angad Dev Ji stayed for some time.

4.2.4 Nagoke: Although village Nagoke is not associated with sikh history of Guru's period except one halting place of Baba Sawan Mal during transportation of wood from Haripur. But it is historically important because of its association with two national freedom fighters.

The details of the landmarks present in the above villages with their photographs are shown as under:

S.No.	Landmark	Description	Picture
1.	Sri Baoli Sahib at Goindwal	<p>It is a large, open well, 8 metres across. Its water level is reached through a covered passage comprising a flight of 84 steps. A wide pointed archway opens on a domed clearance, four steps below the ground level. Its cupola is painted with multicoloured floral designs and portraits of Guru Amar Das, Guru Ram Das, Guru Hargobind and Guru Gobind Singh. The area between the arch and the coping is covered with portraits of the ten Gurus, and those of Baba Mohari, Baba Mohan and Baba Anand. Other paintings depict scenes from the life of Guru Amar Das. Most of the steps are covered with marble slabs donated by different devotees, the earliest of these being dated 1963 BK/AD 1906. The lotus dome above the entrance has a tall gold-plated pinnacle with pinnacled kiosks and solid decorative domes around it.</p>	

<p>2.</p>	<p>Thara Sahib Sri Guru Amar Das Ji near Gurudwara Baoli Sahib at Goindwal</p>	<p>It is a marble lined platform, with a pinnacled canopy of white marble supported on cylindrical columns, at the entrance to Sri Baoli Sahib. It marks the site where Guru Amar Das used to sit supervising the digging of the Baoli.</p>	
<p>3.</p>	<p>Sri Darbar Sahib or Prakash Asthan Sri Guru Granth Sahib Ji, Goindwal</p>	<p>It is adjacent to Sri Baoli Sahib. It is a square hall with a sanctum in the centre where Guru Granth Sahib is seated. Daily congregations take place in this hall.</p>	

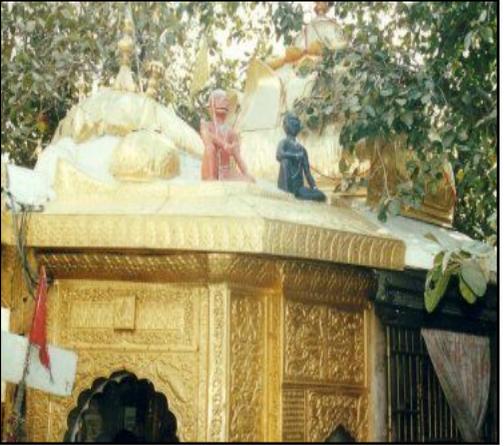
4.	Langar Sri Guru Amar Das Ji, Goindwal	It is in the vicinity of the Darbar Sahib, which has a large sized refectory, with kitchens attached.	
5.	Guru Amar Das Nivas, Goindwal	It is behind Baoli Sahib. It is a two-storeyed building providing lodging for pilgrims.	

6.	<p>Gurdwara Sri Chubara Sahib, Goindwal</p>	<p>It is in a different complex, which was once the residence of Guru Amar Das and his family and is the attic in which the Guru himself lived. It is a small room with a still smaller room entered through it. Guru Granth Sahib is seated in the front room on a silver palki or portable canopied throne. This room has doors covered with silver. The interior is decorated with stonework inset with reflecting glass pieces and intricate designs in many colours.</p>	
7.	<p>Killi Sahib in Gurudwar, Chubara Sahib Goindwal</p>	<p>It is a small wooden peg (killi in Punjabi) now covered with a silver sheath which is fixed in the front wall of Sri Chubara Sahib. It is said that Guru Amar Das, used to meditate in the standing posture holding this peg for support. An embossed design on a brass plate above the Killi Sahib depicts Guru Nanak, flanked by Bhai Bala and Bhai Mardana, sitting under a tree. Another embossed sketch shows Guru Amar Das and his sons, Baba Mohari and Baba Mohan.</p>	

<p>9.</p>	<p>Joti Jot Asthan Guru Amar das ji, In Gurudwara Chubara Sahib Goindwal</p>	<p>It is a small marbled pavilion next to Guriai Asthan, which was built on the site of the room in which Guru Amar Das died on 1 September 1574. Guru Ram Das also died in that room exactly seven years later.</p>	
<p>10.</p>	<p>Janam Asthan Sri Guru Arjan Dev ji, in Gurudwara Chubara Sahib Goindwal</p>	<p>It is a room, in the same compound as Sri Chaubara Sahib, where Guru Arjan was born. The Guru Granth Sahib is seated in this room.</p>	

<p>11.</p>	<p>Chaubara Baba Mohan Ji, in Gurudwara Chubara Sahib Goindwal</p>	<p>It marks the spot where Baba Mohan, the ascetic son of Guru Amar Das, used to live in a room upstairs (chubara, in Punjabi). It was here that Guru Arjan received the pothies containing hymns from Baba Mohan for use in the compilation of the Guru Granth Sahib. The present room in which the Guru Granth Sahib is seated is on the ground floor. Among the relics preserved in the Chubara Sahib complex, is the palanquin which was carried to Amritsar and then brought back to Goindwal.</p>	
<p>12.</p>	<p>Khuh Guru Ram Das Ji At Joti Jot Asthan Bhai Gurdas Ji</p>	<p>It is 3 km from Goindwal, and commemorates Guru Amar Das who, according to tradition, used to halt here briefly during his daily journey from Goindwal to Khadur Sahib carrying river water for Guru Angad's morning bath. The present building was constructed in the 1960's by Sant Bhurivale, whose followers continue to administer it.</p>	

13	<p>Gurdwara Damdama Sahib situated on Goindwal-Khadur Sahib road</p>	<p>Guru Amar Das Ji used to bring water in a pitcher for Guru Angad Dev Ji's bath from River Beas. He used to take rest (dam) under a tree which still exists. That is how the Gurudwara took its name as gurudwara Damdama Sahib.</p>	
14.	<p>Sri Krishna Mandir Ram Gaoshala at Goindwal</p>	<p>This temple was constructed in the memory of Shrimati Dhan Devi. This temple was constructed in 1903 under the eye of Pandit Ram Lal Ji Shouri who was running Sri Ram Gaoshala, Goindwal. After Pandit Ram Lal, his son Pandit Madan Lal Shouri started working as an organizer of the temple. Nowadays, Dr. Kewal Krishna, Sri Raghunath Shouri and Yashpal Shouri are taking care of this temple. In this temple, the idols of Radha Krishna and Ganesha have been kept. The festival of Krishna Janamashtmi is celebrated with great pomp. This temple was constructed with Nanakshahi bricks and mortar of lime, flour of black pulses, water and jaggery. The idols have been brought from Jaipur and Jodhpur for the temple.</p>	

15.	<p>Sri Krishna Mandir Thakar Dwara at Goindwal</p>	<p>This temple is located in Thakar Dware, which is situated in the nearby village of Sri Ram Gaoshala Krishna Mandir. This temple was constructed much earlier than Sri Krishna Mandir Ram Gaoshala. Sri Bihari Lal, Girdhari Lal and Thakar Das were the organizers. This complex comprises of an old marriage hall, which was used for the community purposes of the village. The idols of Radha Krishna are placed here.</p>	
16.	<p>Mandir Mata Chintpurni at Goindwal</p>	<p>It is told that this temple is about 200 years old. This temple is constructed of Nanakshahi bricks. In this temple, the idol of Mata Chintpurni has been made and an idol of a lion is kept near to it. Apart from this, the idols of Bhairon and Hanuman are also placed in the walls in the courtyard of the temple. There is also a Shivala Mandir in the complex and Shivling has also been placed. There is an idol of Nandi Bhail just near to the shivling. The jagrata is held every Tuesday in this temple. The children who are affected by smallpox are brought here to get the blessings and offer Kachi Lassi. People have this belief that this disease can be cured by doing this.</p>	

<p>17.</p>	<p>Darbar Mai Ramki is situated on Goindwal - Fatehbad road at Goindwal</p>	<p>This place is built in the memory of Mai Ramki. In the Darbar Mai Ramki, Sri Guru Granth Sahib has been placed.</p>	
<p>18.</p>	<p>Asthan Baba Bhaori Wala on Goindwal Dhunda road.</p>	<p>This place is built in the memory of Baba Sahib Singh. He spent his maximum time in sewa. He always used to keep a Bhaori, due to which he is called Baba Bhaori Wala. Baba Ji used to cure the patients by touching his bhaori. A big programme is organized in the memory of Baba Ji on the Ekadishi of Phagun-Chet every year. People from far-off come here and pray and they believe that if someone does the prayer with true heart, his wish comes true.</p>	

19.	Sant Pura Dera Theh Sahib, at Village Dhunda	<p>This place was built in the memory of Shriman 108 Sant Swami Sant Baba Bhagat Singh Ji, on the banks of River Beas. Baba Ji did meditation for 13 years and preached the people towards religion. He improved the area named Ghaalna Ghaalke and preached the teachings of Guru Granth Sahib to people. His successor was Shriman 108 Baba Sucha Singh. He gave the duty of this place to Shriman Sant Kirpal Singh. Sant Kirpal Singh cured the people with the Ayurvedic medicines. He taught orphans the Raags and in this way those children became familiar with Guru Granth Sahib. After the death of Sant Kirpal Singh, Shriman Tarlochan Singh Nirmal is his successor and is performing his duties accordingly. There are many caves in the surroundings where Sant Bhagat Singh used to meditate.</p>	
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20.	<p>Majaar Baba Shah Hussain, at Goindwal</p>	<p>This tomb is built in the memory of Baba Shah Hussain. It is located in the south of the town on the banks of the river. Baba Shah Hussain used to live in a hut and was always in the meditation of God. He was a disciple of Guru Amar Das Ji.</p>	
21.	<p>Ghat Baba Kharak Singh at Goindwal</p>	<p>This Ghat is located on the banks of river Beas. This Ghat was constructed by Baba Darshan Singh from Bheer Sahib in the memory of Baba Kharak Singh. This is the place where people used to come to perform the ceremonies after the death of someone. There is one Simrati Bagh to keep the environment clean, where people sow a plant in the memory of their lost one. There are thousands of beautiful plants, which have been grown there. 70-80 families come here daily. There is one very beautiful nursery where very precious plants have been kept. The plants which are present in Simrati Bagh are Arjan, Padam, Kachnar, Gulmohar, Uniparas, Noorpur, Mahua, Satpattian, Mousari etc.</p>	

22.	Gurudwara Tapiana Sahib at Khadur Sahib	At this place Guru Nanak Dev Ji, Bala and Mardana did Gurbani Kirtan. Guru Angad Dev Ji got written the birth sakhi of Guru Nanak Dev Ji from Bai Balaji. This Gurudwaras is associated with 8 Guru's who visited this place on one occasion or another. Bai Bala Ji was cremated here and the smadh of Bai Balaji, a close associate and disciple of Guru Nanak Dev Ji, is also located at this place.	
23.	Gurudwara Tap Asthan at Khadur Sahib	This is the place where Guru Angad Dev Ji meditated for a long period.	

<p>24.</p>	<p>Gurudwara Mal Akhara Sahib, Khadur Sahib</p>	<p>This used to be Guru Angad Dev Ji's home. Mata Khiwi Ji used to prepare langar and kheer (pure ghee) used to be a part of langar. Moreover, at this place <i>Gurmukhi Lipi</i> (script) was introduced by Guru Ji and used to teach Gurmukhi to the children.</p>	
<p>25.</p>	<p>Gurudwara Sh. Darbar Sahib, Sh. Guru Angad Dev ji, Khadur Sahib</p>	<p>It is a historical fact that Guru Angad Dev ji lived at Khadur Sahib for a long period. He left for heavenly abode at Khadur Sahib after performing many great religious, social and cultural activities. The place where Guru's last sacred rites were performed is given the name of Angitha Sahib. It is a historical fact that eight Gurus by their visit to Khadur Sahib made this town of great historical importance.</p>	

<p>26.</p>	<p>Killa Sahib situated in Gurudwara Darbar Sahib, Khadur Sahib.</p>	<p>This place was the house of a weaver which was purchased later on by Guru Ji. Guru Amar Das brought water for sacred bath of Guru Angad Dev Ji for 12 years from the river Beas at Goindwal Sahib. During this service of bringing water, Guru Amar das ji fell striking against the peg of the weaver. The peg turned green and developed into the full tree <i>Kareer</i>. With the passage of time the tree lost its life and till now it is preserved in a frame for the devotees to pay tribute.</p>	
<p>27.</p>	<p>Gurudwara Mai Bharai Ji, at Khadur Sahib</p>	<p>This was actually the home of Mai Bharai Ji. She was paternal aunt of Guru Angad Dev Ji and was married here. With the say of Guru Nanak Dev Ji, Guru Angad Dev Ji came here for meditation and stayed here for 6 months and six days.</p>	

28.	Gurudwara Kar Sewa Nishane Sikhi at Khadur Sahib	Building of Nishane Sikhi is erecting by Baba Sewa Singh Ji in the premises of Dera Kar Sewa at Khadur Sahib which will be used for religious education like training of Kirtan etc and for academic education.	
29.	Gurudwara Amb Sahib Ji, Village Bharowal	After listening to the complaints of Brahmins from Emperor Akbar, Guru Amar Das Ji sent Guru Ram Das Ji in Akbar's darbar in Lahore. Returning from Lahore, Guru ram das ji saw juicy mangoes and thought to take it for Guru Ji. He bought it but because of heat, it started seeping out. So he thought to eat that mango keeping Guru Ji in his mind and he will have the taste of it.	

<p>30.</p>	<p>Gurdwara Ber Sahib at Nagoke</p>	<p>Due to the influx of population in Goindwal, there was need to construct the houses and hence there was need of wood. Baba Sawan Mal was given the responsibility of transporting the wood from the hills of Haripur. While transportation of woods, Baba Sawan Mal Ji halted at this place for rest and tied their horses with the peg made of Beri. After Babaji left this place, all the areas turned into Ber trees. And then Gurudwara was built on that place.</p>	
<p>31.</p>	<p>Bhurj Jathedar Udham Singh, Nagoke and Bhurj Jathedar Mohan Singh, Nagoke</p>	<p>These memorials have been built in remembrance of the freedom fighters i.e. Jathedar Udham Singh and Jathedar Mohan Singh of Nagoke at Village Nagoke.</p>	

32.	Gateway of old Sarai, Fatehabad	This gateway is the part of fort constructed in the mugal period and is declared as protected monument by Agrological Survey of India.	
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4.3 Demographic Profile

Demographic profile helps us in determining the demographic character of the area in terms of the population, growth rate, population density, literacy rate etc. that helps in determining the social as well as the economic character of the area. The study has been done decade wise which helps in bringing out the trends of the growth rate, literacy level, sex ratio etc. of the Local Planning Area, Goindwal. The identity of the town depends upon the character and growth of population, which is an important component for town planning. The following studies related to population growth and characteristics for Local Planning Area, Goindwal have been conducted to know the characteristics of Local Planning Area, Goindwal.

4.3.1. Population Growth of Local Planning Area, Goindwal

Local Planning Area, Goindwal comprises of 19 rural settlements including Goindwal settlement. The growth trend of population of Local Planning Area, Goindwal is given in the following table 4.2.

Table 4.2 – Decadal Population Growth Rate of Local Planning Area, Goindwal

Year/decade	Population in persons				Growth Rate in %		
	1971	1981	1991	2001	1971-81	1981-91	1991-2001
Total	29,793	35,657	42,663	53,818	19.68	19.65	26.15
Urban	-	-	-	-	-	-	-
Rural	29,793	35,657	42,663	53,818	19.68	19.65	26.15

Source: Census of India 1971, 1981, 1991, 2001

The above table shows that the population of the Local Planning Area, Goindwal has increased with the nearly stagnant growth rates of 19.68% and 19.65% during 1971-81 and 1981-91 while it increased to 26.15% during 1991-2001, as depicted in fig. 4.2

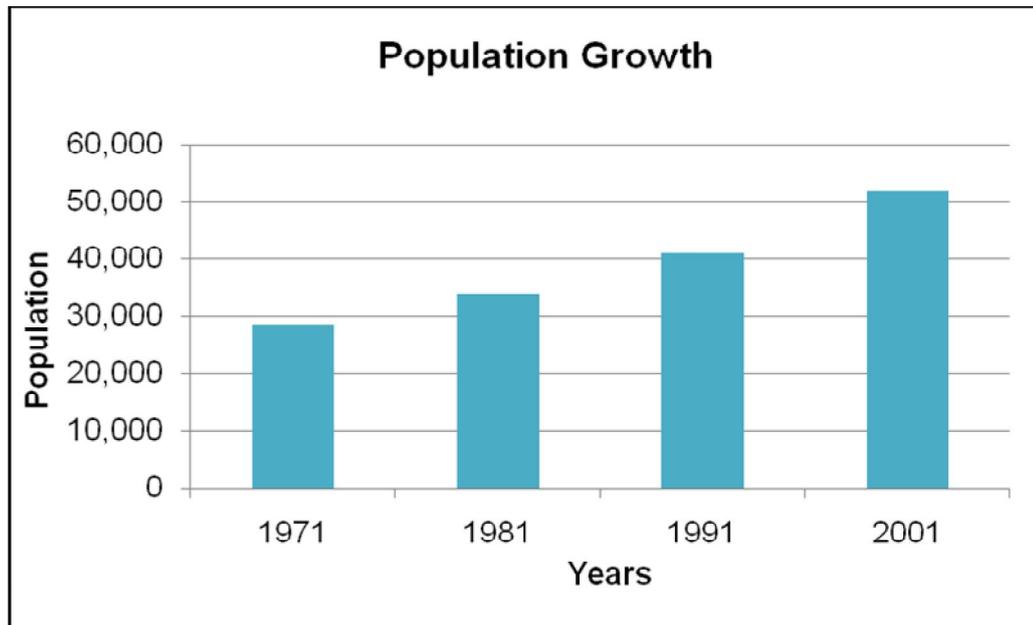


Fig 4.1 Population Growth of Local Planning Area, Goindwal decade wise

The above fig 4.1 shows the population growth of L.P.A from 1971 to 2001 which indicates that the growth of population in the L.P.A. of Goindwal is increasing gradually.

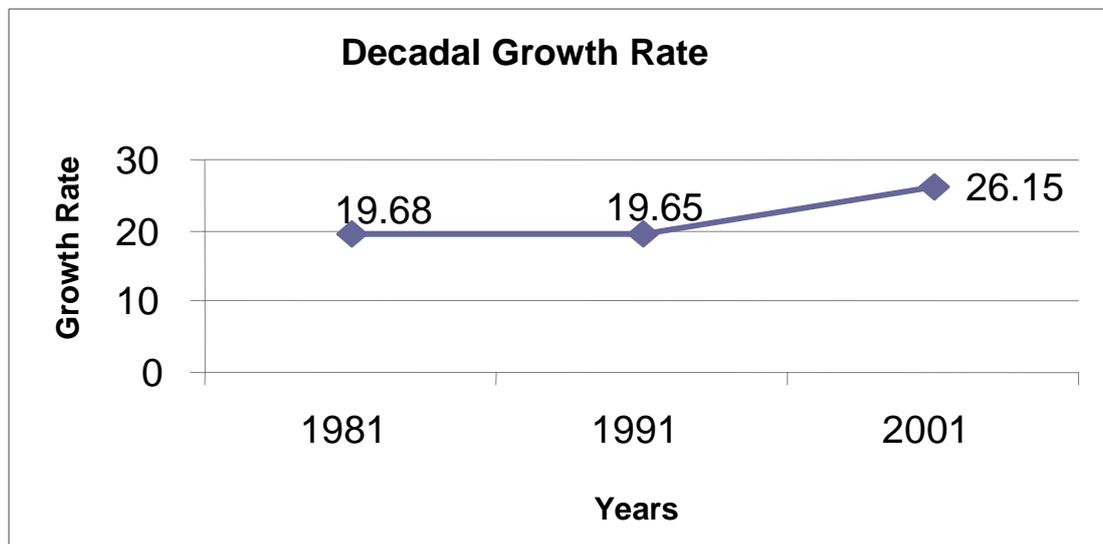


Fig 4.2 Decadal Growth Rate of Local Planning Area, Goindwal

4.3.2 Growth of Constituent Parts of Local Planning Area, Goindwal

The population of all the villages in the Local Planning Area, Goindwal has been tabulated in table 4.3. The decadal trend wise population from 1981-2001 has been mentioned along with their population growth rate and density.

Table 4.3 – Population, Growth and Density of Constituent Parts L.P.A., Goindwal

1.	Goindwal Sahib	539	2498	3,601	6,845	90.1	12.7
2.	Nagoke	1023	4862	5,515	6,269	13.67	6.13
3.	Verowal	1318	1348	1,641	2,062	25.65	1.56
4.	Alampur	277	229	260	286	10	1.03
5.	Akbarpur	110	-	421	641	52.26	5.8
6.	Miani	367	29	42	87	107.14	2.1
7.	Dhunda	1478	2985	2,946	4,335	47.14	2.9
8.	Jhander	289	822	840	1,179	40	4.08
9.	Hansawala	455	938	1,075	1,793	66.8	3.94
10.	Khakh	339	93	167	568	240.12	1.67
11.	Muglani	348	1552	1739	1762	1.32	5
12.	Pindian	292	616	726	911	25.5	3.12
13.	Fatehabad	1216	5851	6,818	7,570	11.03	6.22
14.	Hothian	304	895	1,009	1,303	29.14	4.3
15.	Biharipur	366	791	885	1,006	13.67	2.75
16.	Khadur Sahib	1613	6994	8,067	9,683	20.03	6
17.	Bharowal	901	2334	3,169	3,776	19.15	4.2

	Total	11,880	35657	42,663	53,818	26.15	4.5

Source: Census of India, 1981, 1991, 2001

The above table shows that the villages having the population more than 5,000 persons are Goindwal Sahib, Nagoke, Fatehabad and Khadur Sahib. On the other hand the least populated villages that are having population below 500 persons are 3 in number i.e. Alia, Miani and Alampur. The village with highest population is Khadur Sahib i.e. 9,683 and the village with lowest population is Miani i.e. 87 only.

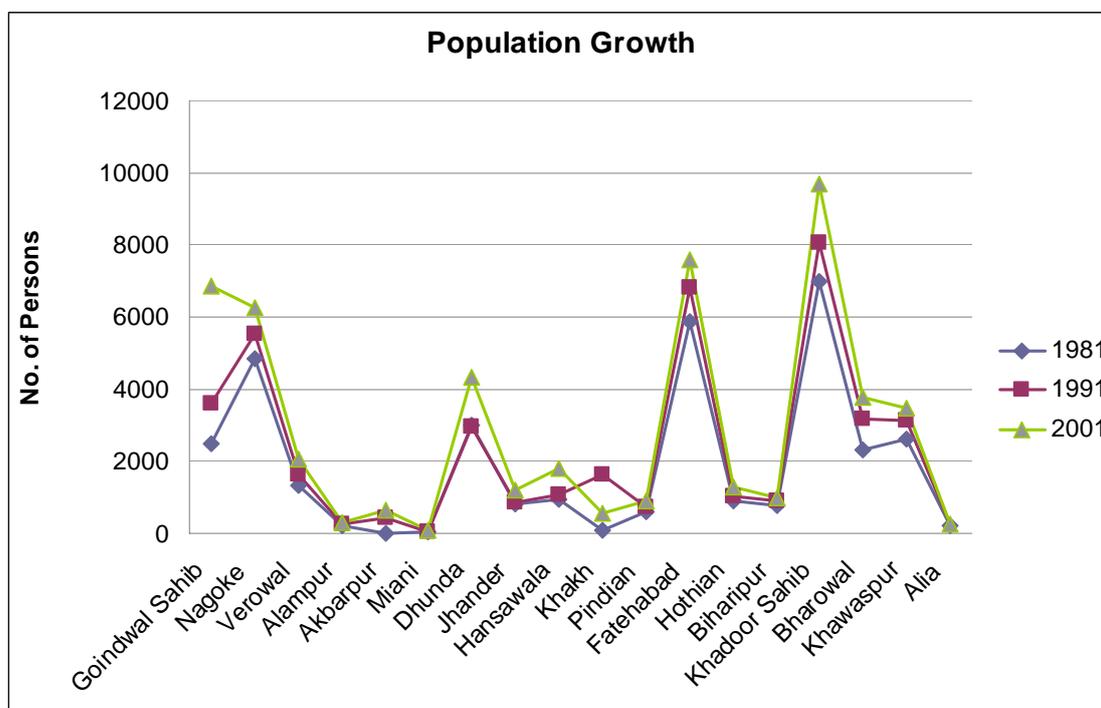
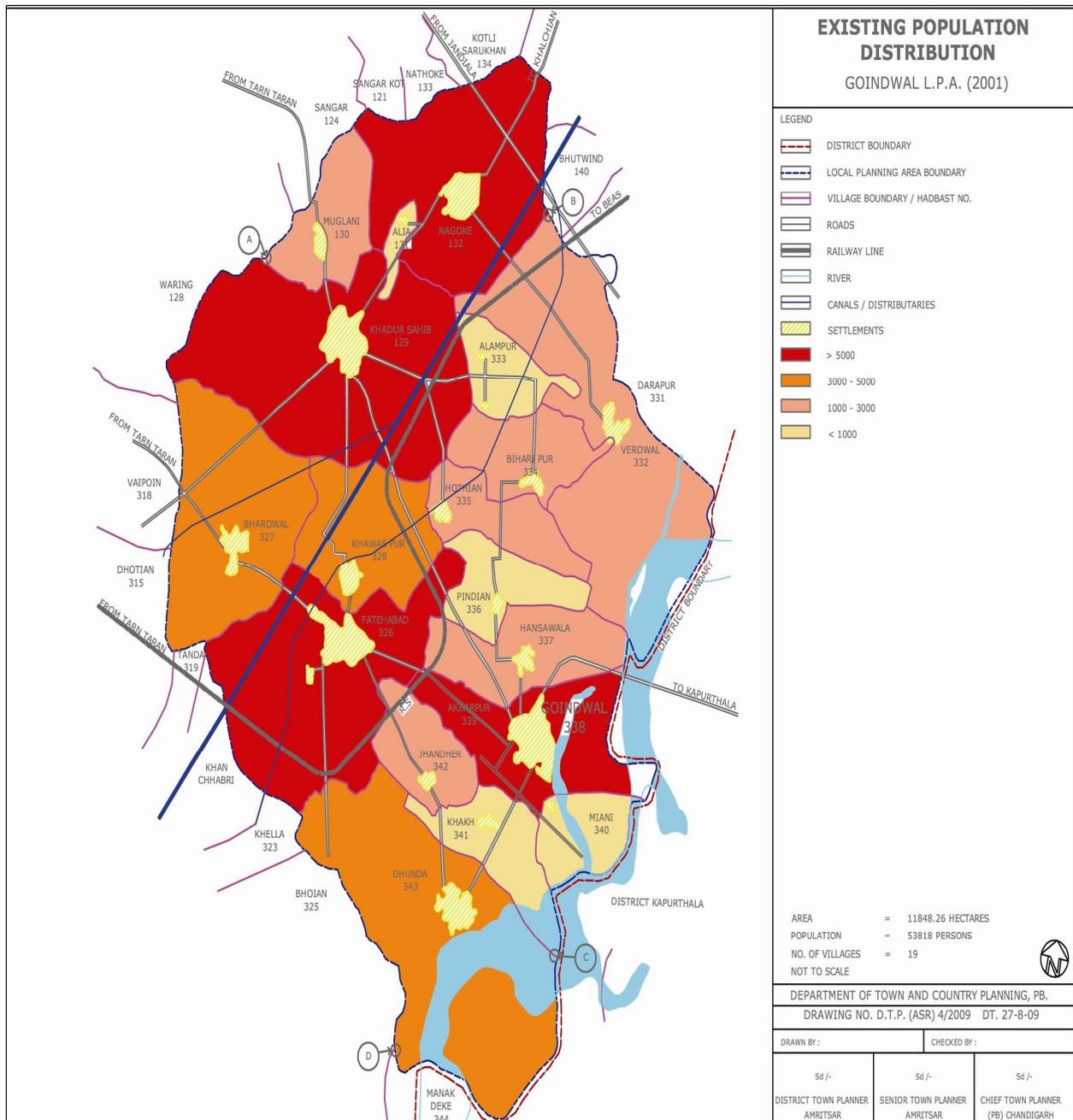


Fig 4.3 Population Growth of Constituent Parts of LPA. Goindwal

The fig. 4.3 shows that, the population of each village is growing throughout the decades right from 1981-2001. The above graph shows that Khadur Sahib, Goindwal, Fatehabad and Nagoke are the villages, which are having highest population i.e. more than 5,000 persons in the Local Planning Area, Goindwal. The distribution of population in the Local Planning Area, Goindwal (is shown in map.7).



Map 7 Village wise population distribution in Local Planning Area, Goindwal

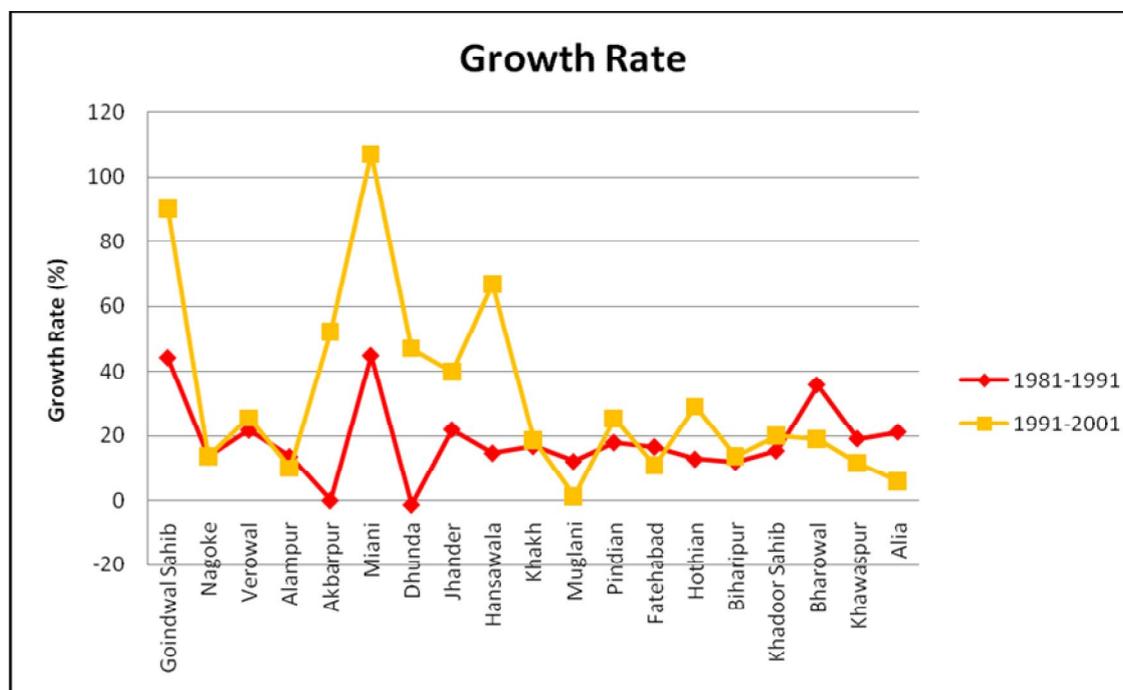


Fig. 4.4 Growth Rate of constituent parts, Local Planning Area, Goindwal

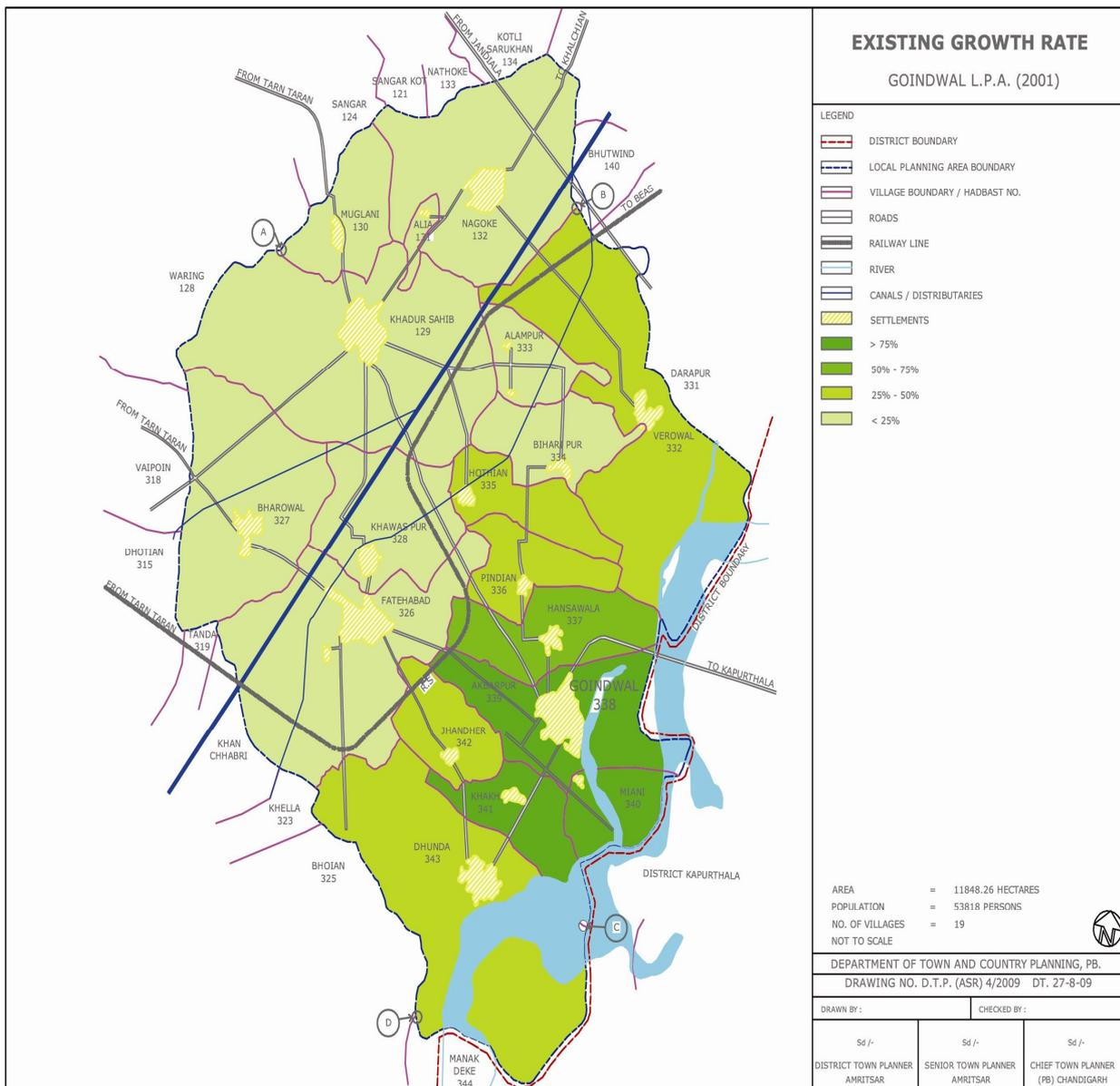
The figure 4.4 shows the growth rate in the constituent parts of Local Planning Area, Goindwal. The graph 4.4 depicts, that the Goindwal, Miani and Hansawala are the villages which are having maximum growth rate. The distribution of villages with respect to the growth rates is shown in map 8.

Table 4.4 - Population Growth of Local Planning Area, Goindwal in the context of Punjab State

1981	16.79	35657	0.21%	23.89	17.52%	19.68
1991	20.28	42663	0.21%	20.81	17.71%	19.65
2001	24.29	53818	0.22%	19.76	12.74%	26.15

Source: Census of India 1971, 1981, 1991, 2001

The table 4.4 indicates that during the decades 1971-1981 and 1981-1991 the growth rate of LPA, Goindwal has been at lower side as compared to that of punjab state while it has been noticed higher during the decade 1991-2001.



Map 8 Village wise Population Growth Rate-- Local Planning Area, Goindwal

4.3.3 Population Density

The population density tells the population per unit area. It helps in determining the areas which are required to be redensified by distribution of population to other areas or by accommodating more people there. In Local Planning Area, Goindwal the population density was 2.51 persons in 1971 which has increased in 1981 to 3.00 persons per hectare. Further, it has increased in the next decade 1991 to 3.59 PPH and 4.53 PPH during 2001. It is also seen that the highest population density is in the village Goindwal i.e.13 persons per hectare whereas the lowest population density is in Alampur i.e. 1.03 persons per hectare (refer map 9). The table 4.5 depicts the population density in Local Planning Area decade wise.

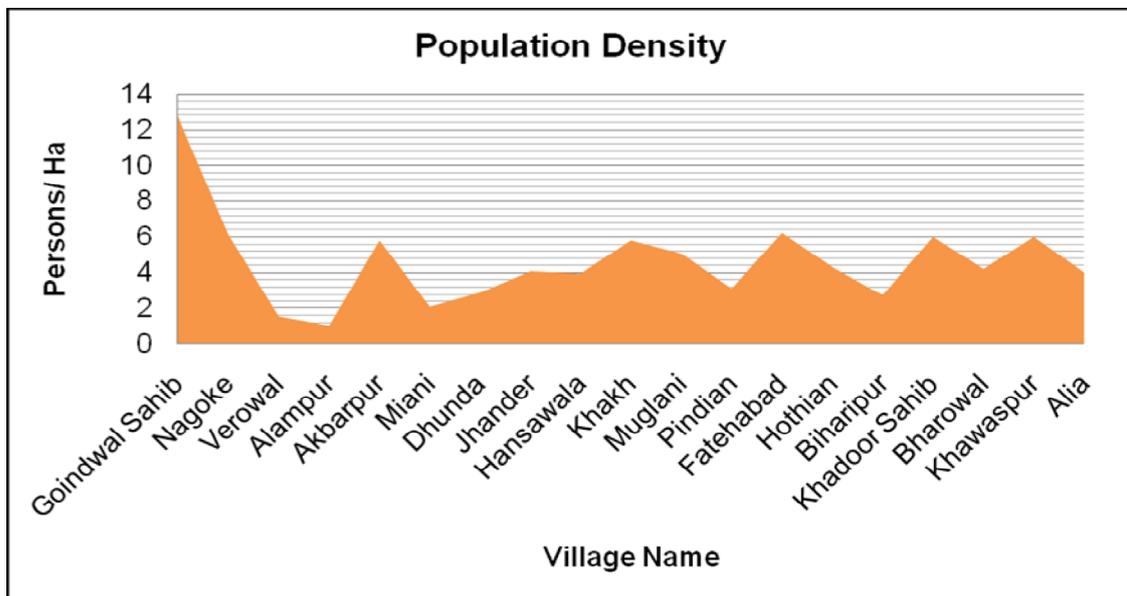


Fig. 4.5 Population Density of Constituent Parts, Local Planning Area Goindwal

The fig 4.5 shows the population density of each village in Local Planning Area, Goindwal. The above graph shows that Goindwal has the maximum population density as compared to the other villages. The maps shows the distribution of villages according to their population density.

Table 4.5 Decaded Comparison of Population Density of Local Planning Area, Goindwal 1971-2001

	Area (in Ha)	Population	PPH
1971	11880	29793	2.51
1981	11880	35657	3.00
1991	11880	42663	3.59
2001	11880	53818	4.53

Source: Census of India 1971,1981,1991,2001

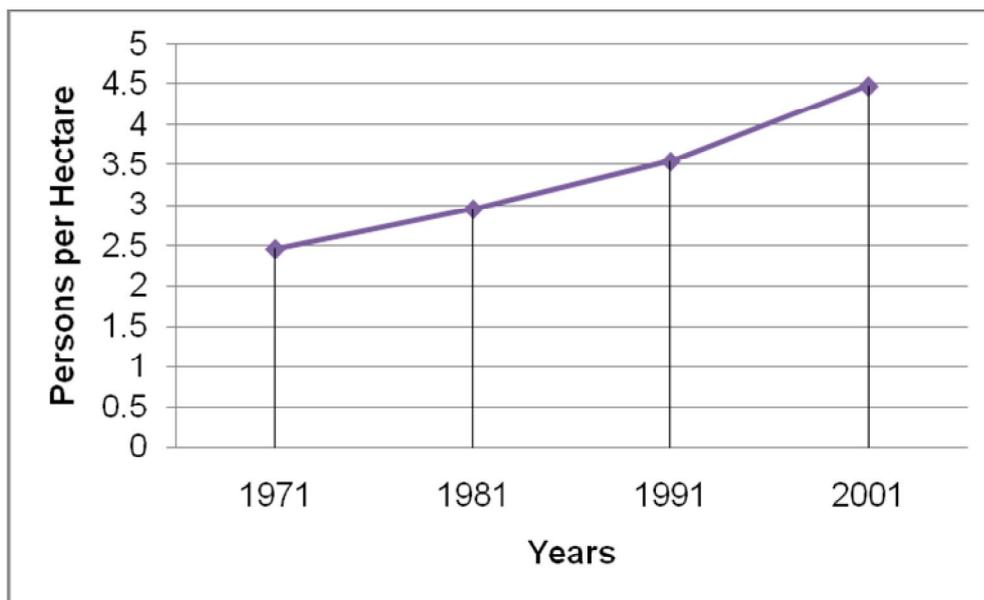
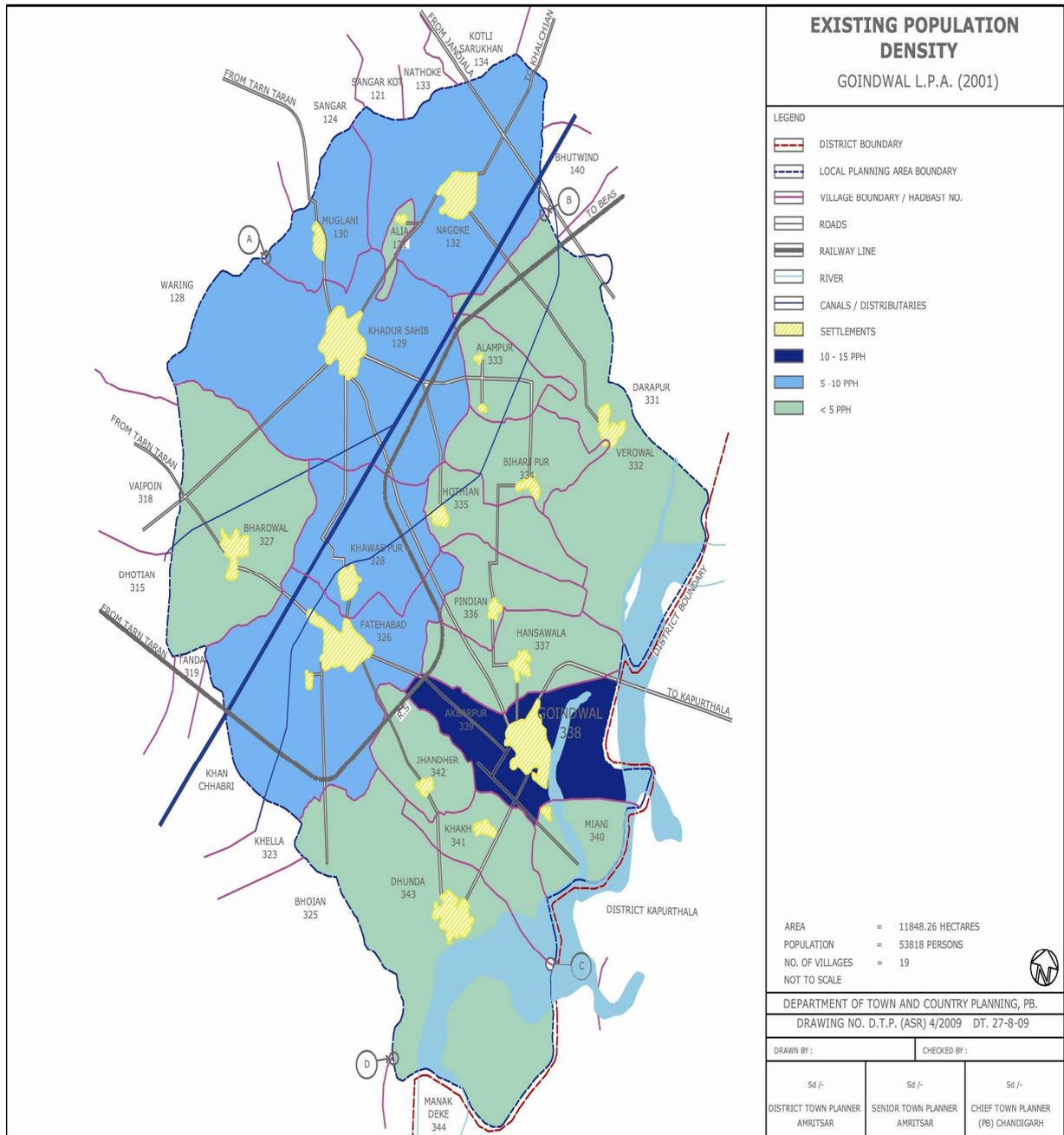


Fig 4.6 Population Density Local Planning Area, Goindwal

Fig 4.6 shows that from 1971 to 2001, the population of Local Planning Area, Goindwal grew almost 2 times (from 29793 to 53818) persons due to which the population density has increased during this period.



Map 9 Village wise Population Density-Local Planning Area, Goindwal

4.3.4 Sex Ratio

Sex ratio is the number of females per thousand males. The numerical measurement of sex composition is often expressed in terms of sex ratio as shown in the following table:

Table 4.6 Sex Ratio of Local Planning Area, Goindwal

Year	Total	Males	Females	Sex Ratio
1971	29,793	15,862	13,931	878
1981	35657	18777	16880	899
1991	42663	23270	19393	833
2001	53818	28182	25636	910

Source: Census of India 1971, 1981, 1991, 2001

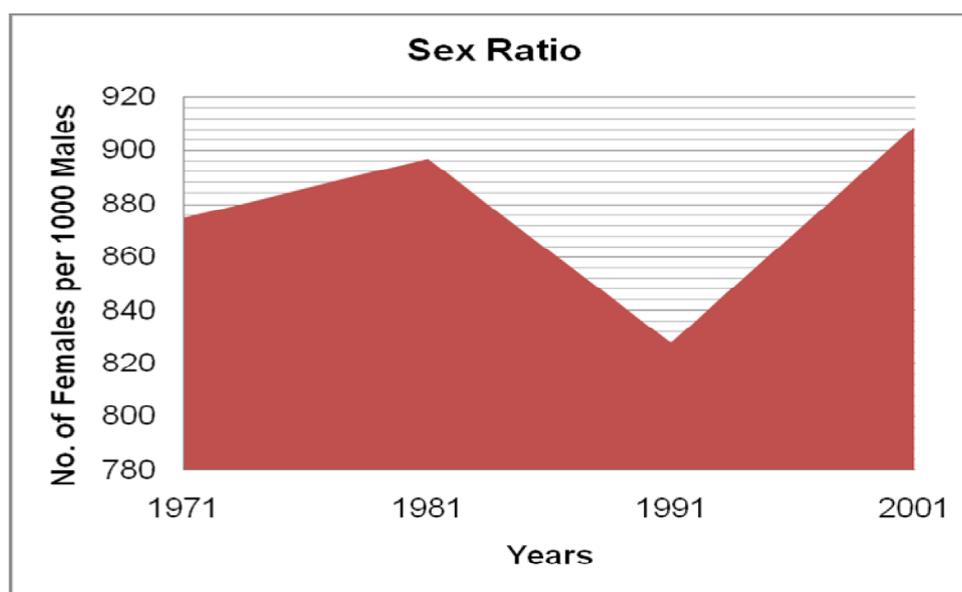
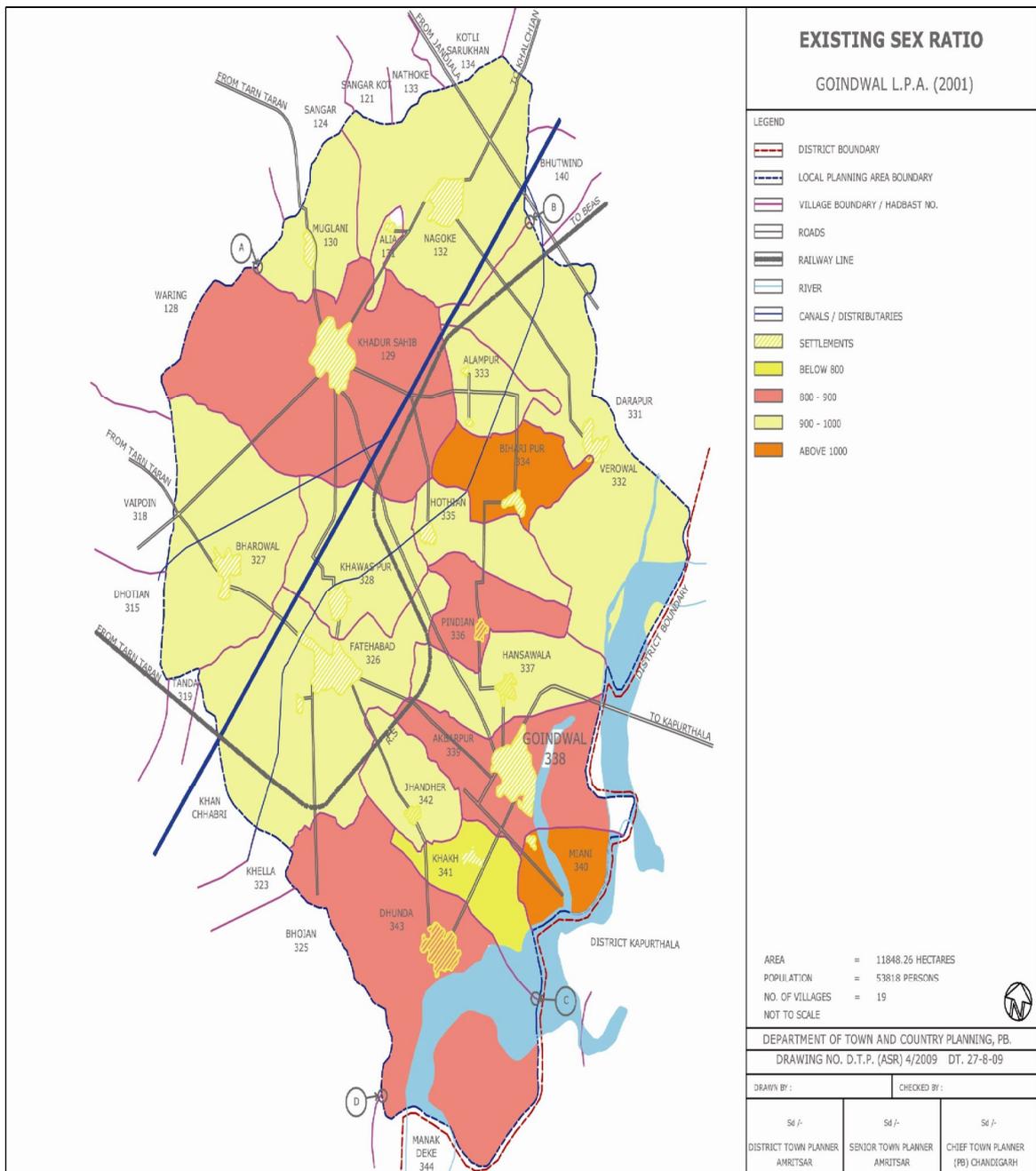


Fig. 4.7 Sex Ratio (Trend wise) of Local Planning Area, Goindwal

As shown in table 4.6 and fig 4.7, as per census 1971 it was 878, in 1981 there were 899 females for every 1000 males in Local Planning Area Goindwal, in 1991, the sex ratio decreased to 833, which showed a decreasing trend in sex ratio but in 2001 the sex ratio again increased to 910. The village wise distribution of sex- ratio in LPA, Goindwal is shown in map 10



Map 10 Village wise Sex Ratio- Local Planning Area, Goindwal

In the table no 4.7 sex ratio of all the villages falling under the Local Planning Area is shown:

Table No: 4.7 Village wise sex ratio of villages falling in Local Planning Area Goindwal

Sr. No.	Village Name	H. B. No.	Total Population in persons	Males in persons	Female in persons	Sex Ratio
1.	Goindwal	338	6845	3683	3162	858
2.	Nagoke	132	6269	3168	3101	979
3.	Verowal	332	2062	1076	986	916
4.	Alampur	333	286	149	137	919
5.	Akbarpur	339	641	328	313	954
6.	Miani	340	87	43	44	1023
7.	Dhunda	343	4335	2287	2048	895
8.	Jhander	342	1779	616	563	914
9.	Hansawala	337	1793	922	871	945
10.	Khak	341	568	316	252	797
11.	Muglani	130	1762	917	845	921
12.	Pindian	336	911	491	420	855
13.	Fatehbad	326	7570	3983	3587	900
14.	Hothian	335	1303	674	629	933
15.	Biharipur	334	1006	500	506	1012
16.	Khadur Sahib	129	9683	5135	4548	886
17.	Bharowal	327	3776	1974	1802	913
18.	Khawaspur	328	3475	1786	1689	946
19.	Alia	131	267	134	133	993

Source: Census of India, 2001

4.3.5 Literacy Level:

The table 4.8 depicts that the literacy rate is increasing in Local Planning Area, Goindwal. The literacy rate in 1971 was 29.95%, which increased to 38.92% in 1981 and further rose to 46.8% and 56.43% respectively in 1991 and 2001. As per the trend of literacy rate of females it increased from 10.95% in 1971 to 24.61% in 2001 in Local Planning Area, Goindwal. The village wise distribution of literacy level in Local Planning Area, Goindwal is given in table 4.9 and map 11.

Table 4.8 Literacy Rate of Local Planning Area, Goindwal

Year	Total population in persons	Total Literates in persons		Males Literacy in persons		Females Literacy in persons	
		No.	Total Literacy Rate (%)	Number	%age	Number	%age
1971	29793	8924	29.95	5661	19.00	3263	10.95
1981	35657	13877	38.92	8578	24.06	5299	14.86
1991	42663	19653	46.07	12439	29.16	7214	16.91
2001	53818	30371	56.43	17127	31.82	13244	24.61

Source: Census of India, 1971, 1981, 1991, 2001

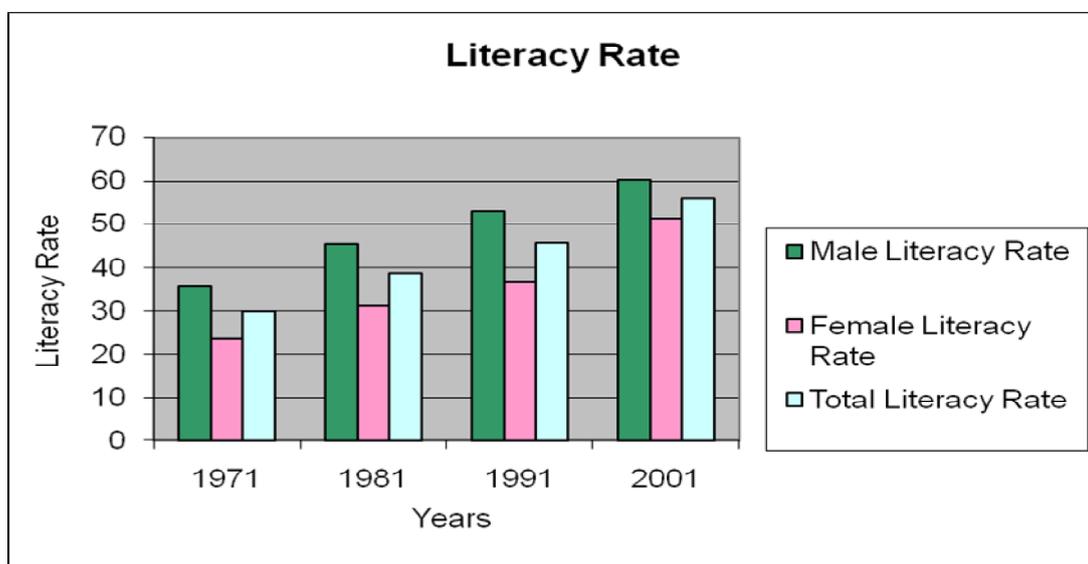
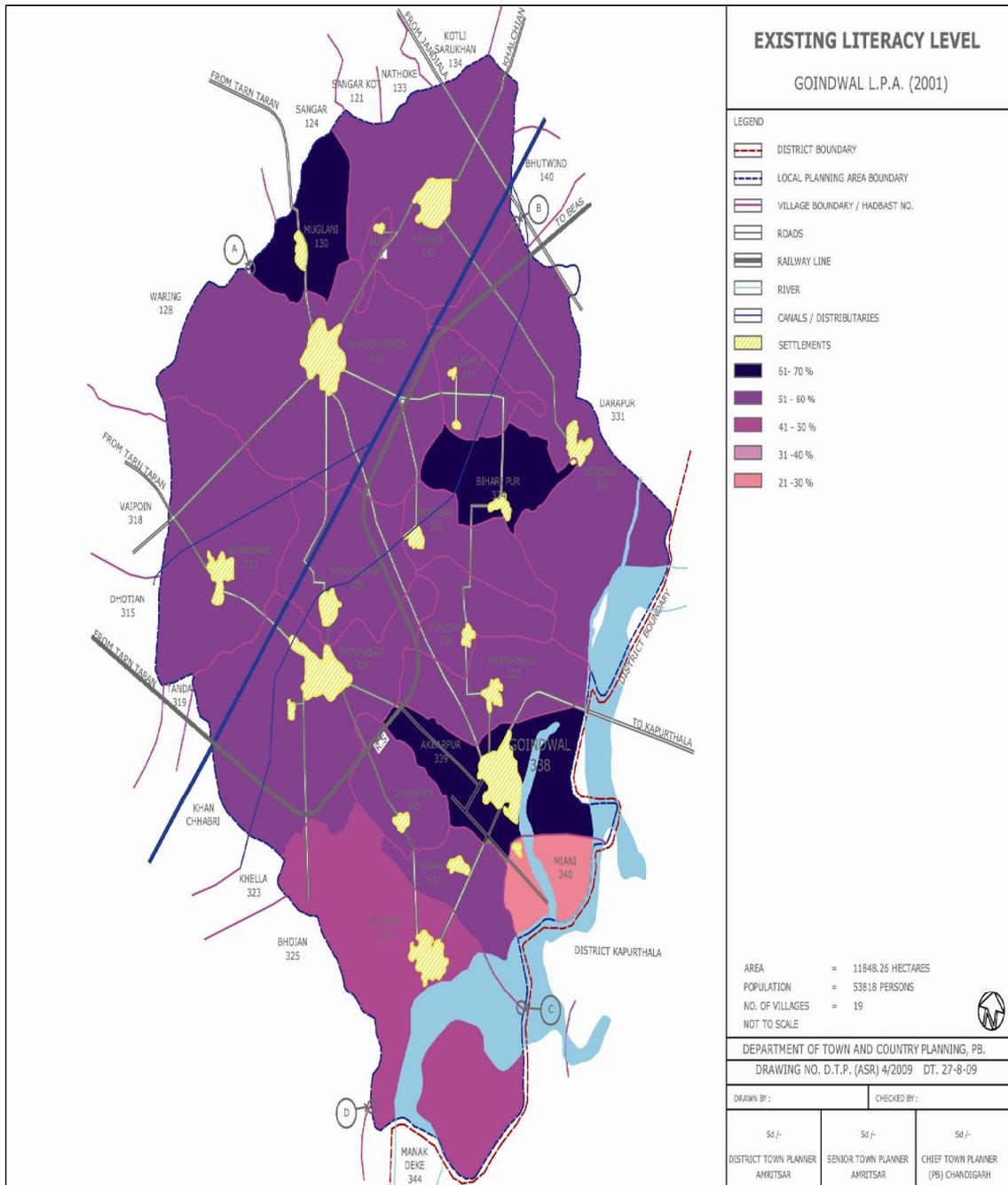


Fig. 4.8 Literacy Level in settlements of Local Planning Area, Goindwal



Map 11 Village wise Literacy Level in Local Planning Area, Goindwal

Table: 4.9 Village wise literacy rate of villages falling in Local Planning Area, Goindwal

Sr. No.	Village Name	H. B. No.	Total Population in persons	Total literates		Males		Female	
				persons	%	persons	%	persons	%
1.	Goindwal	338	6845	4231	62%	2461	36	1770	26
2.	Nagoke	132	6269	3654	58%	1985	31	1669	27
3.	Verowal	332	2062	1057	51%	617	30	440	21
4.	Alampur	333	286	168	59%	92	32	76	27
5.	Akbarpur	339	641	382	60%	208	33	174	27
6.	Miani	340	87	25	29%	17	20	8	9
7.	Dhunda	343	4335	2118	49%	1221	28	897	21
8.	Jhander	342	1779	707	40%	392	22	315	18
9.	Hansawala	337	1793	911	51%	507	28	407	23
10.	Khakh	341	568	324	57%	202	36	122	21
11.	Muglani	130	1762	1099	62%	639	36	460	26
12.	Pindian	336	911	482	53%	284	31	198	22
13.	Fatehbad	326	7570	4487	59%	2483	33	2004	26
14.	Hothian	335	1303	710	54%	407	31	303	23
15.	Biharipur	334	1006	624	62%	349	35	275	27
16.	Khadur Sahib	129	9683	5201	54%	2945	31	2256	23
17.	Bharowal	327	3776	2004	53%	1116	29	888	24
18.	Khawaspur	328	3475	2002	58%	1132	33	870	25
19.	Alia	131	267	146	55%	70	26	76	29

Source: Census of India, 2001

4.3.6 Caste Composition

The total scheduled caste population in Local Planning Area, Goindwal is 21051 persons, which is 39.11% of the total population as per 2001 Census. Schedule caste population of Local Planning Area, Goindwal has increased from 31.37% in 1971 to 39.11% in 2001. The average SC population in Punjab state is 28.85%, which shows that percentage of SC population in Local Planning Area, Goindwal is more than that of Punjab. The detail of scheduled caste population from 1971 to 2001 is given in table 4.10

Table 4.10 Schedule Caste Population L.P.A. Goindwal

		No. in persons	%
1971	29793	9345	31.37
1981	35657	12881	36.12
1991	42663	16223	38.02
2001	53818	21051	39.11

Source: Census of India 1971, 1981, 1991, 2001

4.3.7 Housing:-

The housing aspect is studied to know the number of houses provided to the people. Their adequacy or shortage can be worked out on the basis of the population. As per census, 2001 the number of houses are 9,115 units.

Table 4.11 Housing Statistics in year 2001 L.P.A. Goindwal

Total Population	53,818
Average Household Size	5.5
Total Required Houses	9,785
Existing No. of Houses	9,115
Housing Shortage	670

Source: Census of India 2001

From the above table 4.11, it is clear that there is housing shortage in year 2001 in the Local Planning Area, Goindwal and the shortage is of 670 units.

4.4 Economic Characteristics

The economic factors are supreme as nothing can impede the human occupancy of an area than its economic incompetence. Development of various economic sectors i.e. primary, secondary and tertiary form the economic base of the city. Modernization/up-gradation of existing industries and special provisions for services and repair centers are pivots. This aspect is important to study in order to make the settlement economically sustainable. Economic characteristics are studied under the following sub headings:

4.4.1. Economy and employment:-

As Goindwal is a rural settlement, so people living here do small works or jobs to earn their living. But the economy of Local Planning Area, Goindwal is based mainly on agricultural activity. Government provided many facilities to develop industry in Goindwal but the industry could not be developed in this area. Units of industries, which are working here, are not providing sufficient employment to the residents of the area.

4.4.2 Agriculture

The major crops, which are cultivated in Local Planning Area, Goindwal, are wheat and rice. The area under cultivated land is 10121 hec. and the Panchayat land is around 35 hec. Moreover, around 15.4 hec. of land is considered to be waste land, which can be developed in future. Only 1 hec. of area is under barren land. The major sources of irrigation are tubewells and canals. Only 4 out of 19 villages are served by the canal as the source of irrigation and the rest of the villages are served by the tubewells as the major source of irrigation. The total wheat production in these villages is 2, 58,520 tonnes and total rice production is 88,702 tonnes. Apart from this, the basmati production is 7584 tonnes and the production of potatoes account to be 510 tonnes whereas production of peas is only 55 tonnes.

The major point to be noted here is that although the villages like Dhunda, Fatehabad etc. have huge area under cultivated land i.e. 1310 hec. and 1200 hec. respectively, but still their production of wheat and rice is very less as compared to other villages.

4.4.3 Fishiculture

In the rural area, 1.80 hec. area is under the fish catchment area. The total production is of 10 tonnes. However, there is no space demarcated for fishing market. But there is an ongoing project of constructing 3 fish ponds, in the rural area.

4.4.4 Business

Due to the construction of Beas bridge, the movement of people increased due to which new shops were opened. The kiriyana and daily needs shops are maximum in number here. There are few shops around Gurudwara, where religious books, utensils are sold. Some people opened up sweets shops and few of them are involved in P.C.O.s and photography shops.

4.4.5 Service

Many people go out of the town in search of jobs. Many production centers have been established here and people have got the employment. At present, B.H.E.L. and many more companies have done good business here due to which many people have been employed here.

4.4.6 Carpentry and Blacksmith

Many carpenters and blacksmiths have their houses here. Many people do the job of masonry and some have opened their own shops.

4.4.7 Work Force Participation

The work force refers to the workers and non workers who are engaged in different sectors of economy which is important to study in order to know the dependency ratio.

The table 4.12 depicts that the workers have increased in Local Planning Area, Goindwal as the workers' percentage to the total population increased from 27.02% in 1971 to 33.16% in 2001. The table 4.13 shows the trends of employment in the different decades.

Table 4.12- Workers and Non-Workers in Local Planning Area Goindwal

Year	Total Population in persons	Total Workers		Non-Workers	
		Persons	% age	Persons	%age
1971	29793	8049	27.02	21744	72.98
1981	35657	10642	29.85	25015	70.15
1991	42663	13998	32.82	28665	67.18
2001	53818	17844	33.16	35974	66.84

Source: Census of India 1971,1981,1991,2001

The percentage share of the workers population complies with the census as it is 33.16% approximately in 2001. The majority of the population is engaged in agriculture and allied activities.

4.4.8 Occupational Structure

Occupational structure refers to the workers engaged in different sectors of economy. It helps to know the changing pattern of occupation of people in settlement area. It is important to study the changing pattern of occupation in Local Planning Area, Goindwal. The following table 4.13 shows the workers in different sectors of the economy.

Table 4.13 - Distribution of Workers in LPA, Goindwal

Category of workers	No. (persons)	%
Cultivator	4647	(29.65%)
Agriculture Labour	3007	(19.18%)
Household Industries	271	(1.73%)
Others	7749	(49.44%)
Total Main Workers	15674	100
Cultivation	258	(11.89%)
Agriculture Labour	974	(44.88%)
Household Industries	36	(1.66%)
Others	902	(46.57%)
Total Marginal Workers	2170	100

Source: Census of India, 2001

4.4.9 Land Utilisation in Local Planning Area, Goindwal

Fig. 4.9 shows the land utilization in different crops in Goindwal under the total agricultural area.

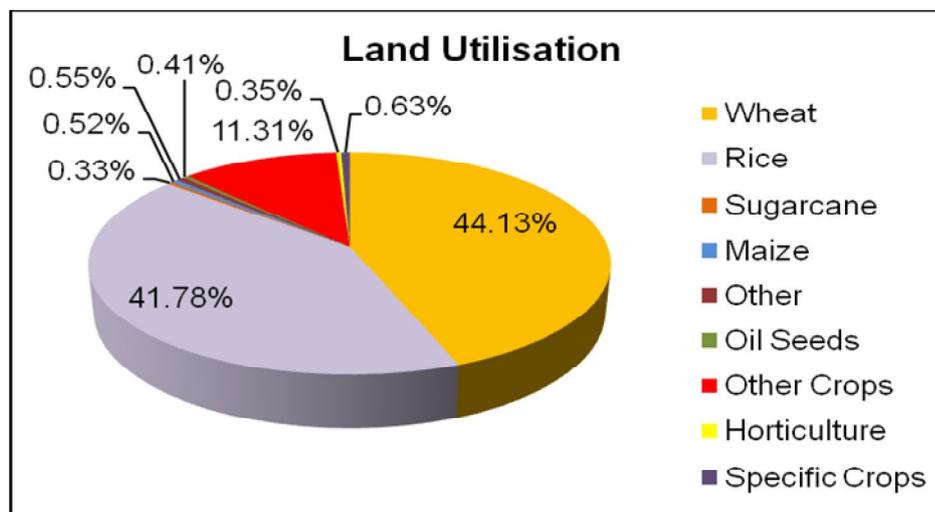


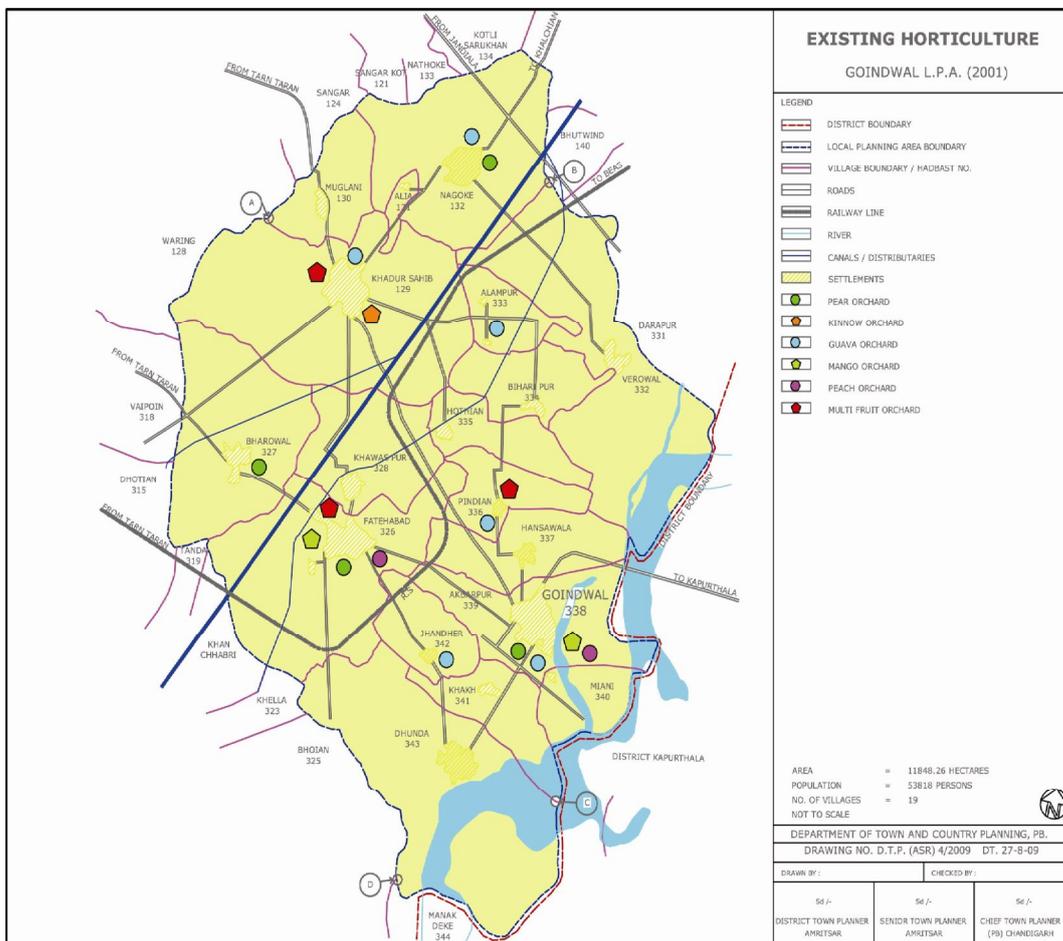
Fig. 4.9 Distribution of Area under Crops

It reveals that the maximum part of the sown area is under wheat i.e. 44.13% approximately. Moreover, 41.78% of the area comes under rice cultivation. A very small share is under the sugarcane, maize, oil seeds, horticulture and specific crops (includes medicinal plants) as shown in the figure. Whereas 11.31% of the area is under other crops, which includes vegetables, non-vegetables, fodder etc.

				(Pear, Mango, Peach, Plum, Ber, Grapes, Kinnow Phalsa, Loquat etc.)	
17.	Bharowal	3	8.8	Pear Orchard	-
18.	Khawaspur	-	-	-	-
19.	Alia	-	-	-	-

Source: Deputy Director Horticulture, Tarn Taran

It is clear that total area under horticulture is 75.2 hec. Moreover, the total number of orchards is 34, which comprise of 10 pear orchards, 2 kinnow orchards, 15 guava orchards, 2 peach orchards, 2 mango orchards and 3 multi fruit orchards.



Map 12 Horticulture in Local Planning Area, Goindwal

4.5 Trade and Commerce

4.5.1 Traditional Trade and Commerce:

Goindwal developed as an important trading centre with significant grain and fodder market and traders from surrounding areas settled here. Slowly and steadily, it attained the reputation of an important halting place in between Sirhind and Lahore where adequate facilities for stay and rest were available.

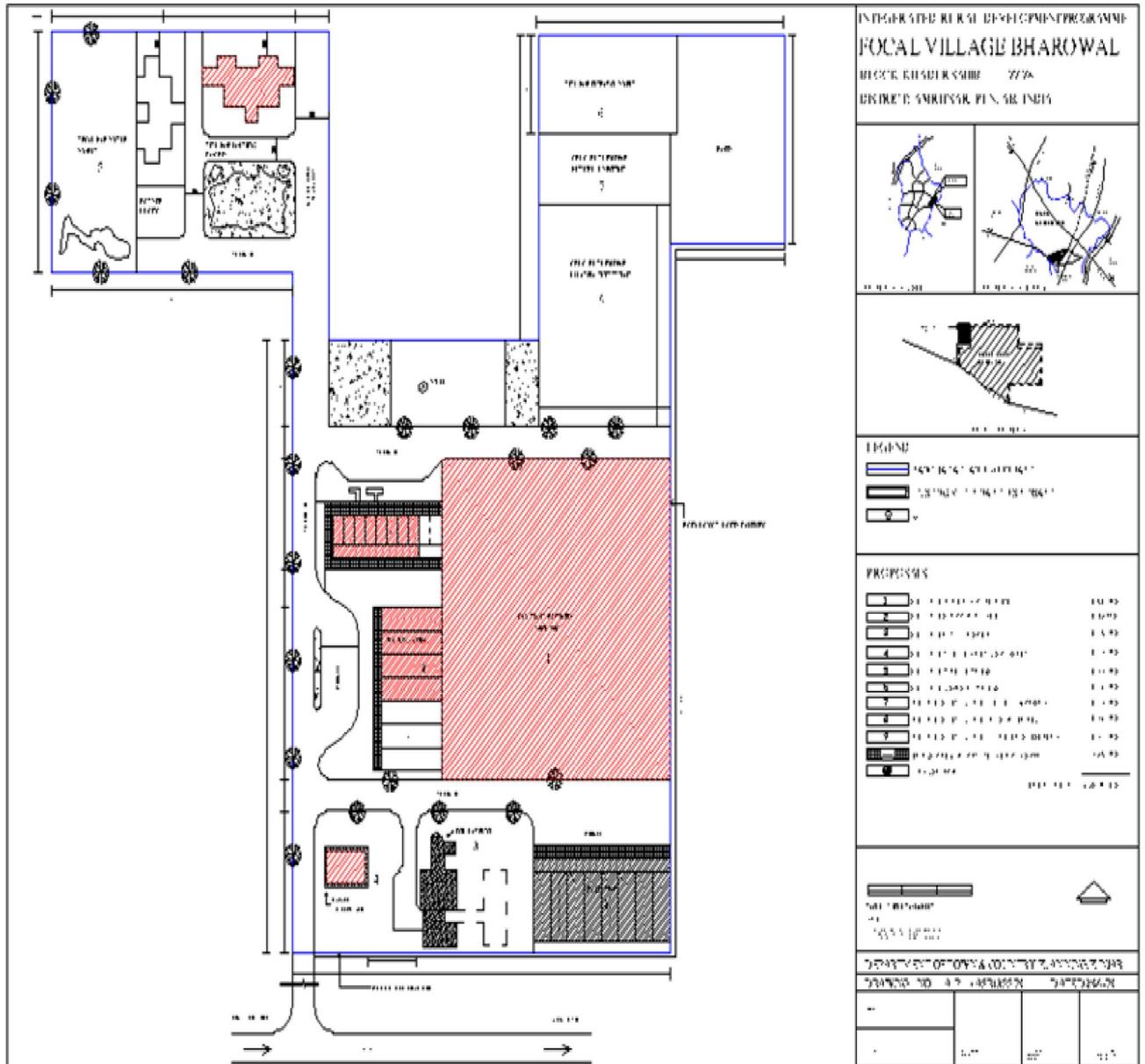
It was remunerative to sell eatables at this centre where travellers and pilgrims used to halt. Sikh history introduces Bhai Jetha (later Guru Ram Das) selling boiled wheat and grams here. A number of specialized shops dealing in cloth and eatables more particularly, 'Boondi of Moti Chur Laddoos' developed in Guru Ka Bazaar. It is said that the potters of nearby village Khawaspur supplied the Kujas (earthen pitchers) to pack these laddoos.

4.5.2 Modern Trade and Commerce:

Whatever trade and commerce used to exist in the traditional period is no more continuing in the modern period. So the activities with respect to the places have changed with the period of time. Presently, the Local Planning Area, Goindwal lacks any type of trade and commerce which gives it importance at regional level. There are some wholesale activities like Focal Point and purchase centre which serve only their surrounding areas. Hierarchy of the commercial areas whether wholesale or retail is missing here. Category wise description of the commercial activities in the Local Planning Areas is as below:

1) Wholesale/ Godowns/ Warehousing:

- a. Focal Point:** There is only one Focal Point, present in the whole Local Planning Area at village Bharowal. This focal point was established way back in the year 1978. Initially, it was used for the trade of crops seasonally. But the construction of, the components as per its proposed layout plan Drg No. 355/78 DTP(ASR) dated 28.09.78 stopped due to some reasons. Few construction could be completed as shown *red* in the map.13 before it stopped functioning. Presently, only bank and veterinary hospital are working here but building condition of the veterinary hospital is in poor condition. Whereas only four constructed shops are also lying abundant. The auction platform used for business at some point of time is also in poor condition. The construction of shed is incomplete. Trade is no more a part of this site. Area of patwarkhana and its surroundings is not constructed as per layout plan. So it is clear that this Focal Point is no more serving its purpose, for what it was notified.



Map 13 Underdeveloped Focal Point at Village Bharowal

- b. Grain/ Fruit and Vegetable Market:** There are only two grain markets, one is at Khadur Sahib and other is at Fatehabad and an open yard in Fatehabad. Two seasonal purchase centres also function during harvesting period at villages Verowal and Khawaspur. But there is complete absence of the wholesale markets for fruits and vegetables.
- c. Godowns:** Only one site for FCI godown in village Fatehabad exists for the storage of grains, which is not sufficient as compared to the wholesale marketing activity and the extent of crop yield in the region.

2. Retail Shopping Zone:

It is observed that there is complete absence of hierarchy and designated zones for the retail commercial activity. The retail shopping zones in the Local Planning Area, Goindwal are few but still play a very considerable role in the growth and development of Local Planning Area, Goindwal because of the religious places here. And the need for commercial areas further increase in the form of informal sector during the fairs and festivals. This includes the area around the religious places and the core areas, which are the major commercial hubs of Local Planning Area, Goindwal. Besides above, marriage palaces and other commercial activities also exist in the Local Planning Area, Goindwal.

Although, all the villages of Local Planning Area, Goindwal have retail shops to serve their population but the settlements Goindwal, Khadur Sahib and Fatehabad have more number of shops to serve the population of surrounding villages for their regional commercial needs of higher level. The shops established around historical places at Goindwal and Khadur Sahib accommodate the needs of tourists along with those of local population.

4.6 Industries

As mentioned in chapter II & III in the Local Planning Area, Goindwal industrial complex is the major industrial area. In addition to this, there are some service and light industrial units and medium, large and heavy industrial units in the Local Planning Area, Goindwal, in the form of brick kilns, chilling centres and other factories. The number of khadi and village manufacturing units in the Local Planning Area, Goindwal is 94 while small scale industrial units count upto 18 and only 8 units fall in the category of large scale industry here. Out of 197 industrial units, 152 units have been shut down because of the failure of industrial complex and these units majorly include engineering works, fabrication, plastic, textile etc. There are only 45 units which are left and that mainly includes fabrication, job work, thread etc.

Table 4.15 Type of Industries in LPA, Goindwal

Source: Punjab Village Directory, 2007

Above table show that there are three types of industries in the Local Planning Area, Goindwal that are khadi and village, manufacturing, small-scale industries and large-scale industries. The maximum no. of units are of khadi and village i.e. 94, which employ 202 workers. Whereas there are 18 small-scale industries in total, which employ 4,004 workers and there are only 8 large-scale industries which are present in Goindwal and this type of industry is employing the maximum workers i.e. 8,785.

4.6.1 Industrial Complex:

i) Establishment:

As described earlier that the industrial complex at Goindwal was established by Goindwal industrial and investment Corporation of Punjab Ltd. Chandigarh. The complex was proposed to be developed in two phases. The total area of the complex is 192.34 hec. It was notified by Punjab Government vide Notification no. 8/200/80—41-B1—81/308 dated 20th Jan 1981. After that, the land for its establishment has been acquired which spreads in three villages i.e. Goindwal, Khakh and Miani as shown in the table 4.16.

Table 4.16 List of Villages falling under Industrial Complex

			192.34

Source: Chief Engineer, GIICO Chandigarh.

A part of phase I comprises of industrial units, residential, public facilities, organized open space and well planned road network. The utility network was also laid down in the developed portion of the phase I. At the same time large chunk of this phase although acquired by Government, is lying vacant.

In phase II of the complex, the proposal is for residential plots for the people associated with the industries in the complex, but now these have been occupied

by the private owners. Besides this, implementing the proposals of layout plan of this phase bus stand 1.92 hec. has also been established and some area is lying vacant in the land acquired for this phase of industrial complex. It is pertinent to mention here that the industrial complex now is being controlled by Punjab Small Industries and Export Corporation Ltd.

ii) Failure of the Complex

Later, due to some factors not only the development of the complex or opening the new industrial units stopped but also the established units started closing which resulted in the failure of industrial complex.

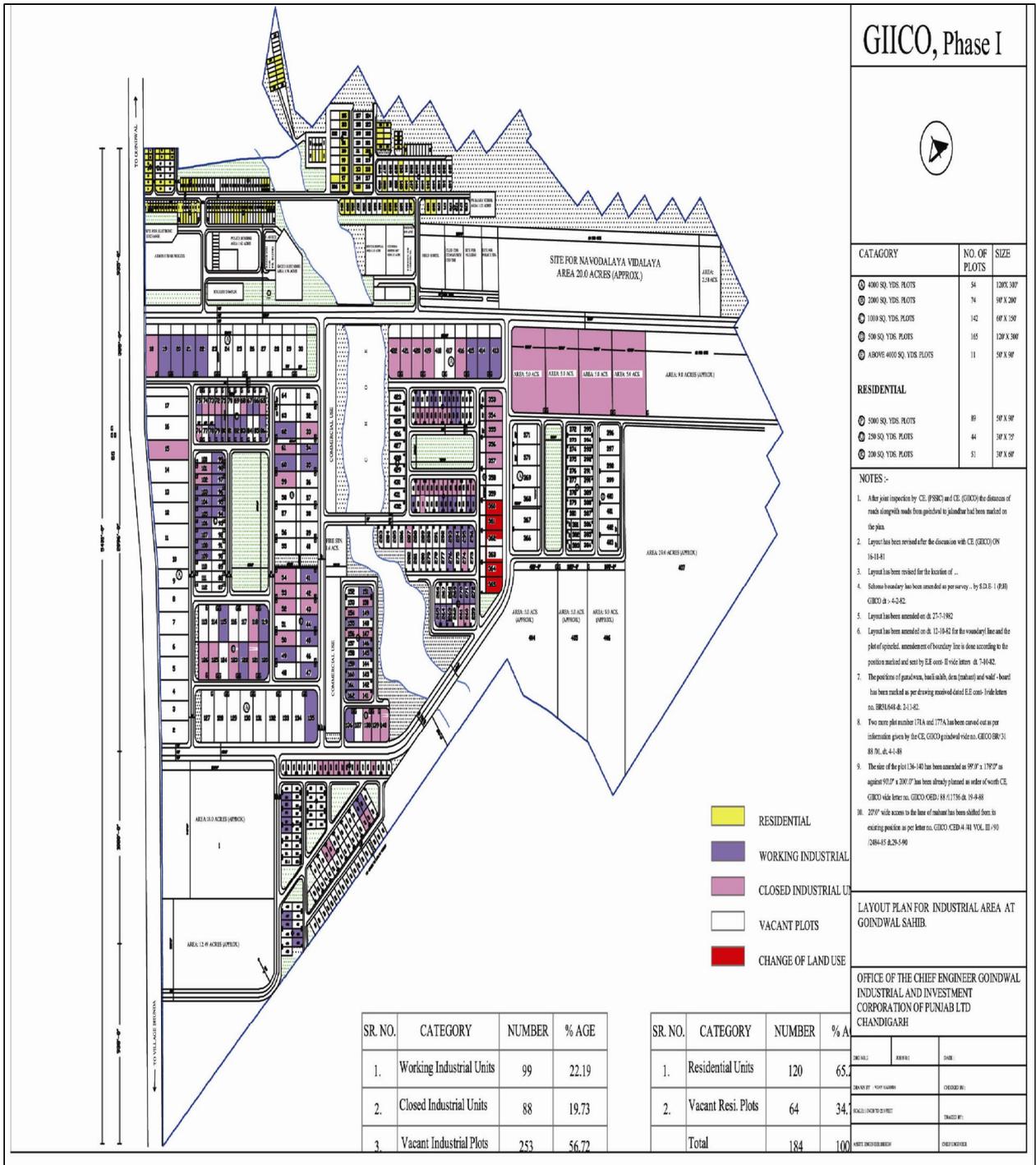
From the discussions held with the persons associated with GIICO, industries department and association of the owners with District Town Planner, Amritsar. The following reasons have been evolved for the closure of established units;

- Non availability of Local raw material which costed them high for the production by transporting from far away places.
- Non availability of marketing facilities nearby also compelled them to sell their finished products by transporting at far off places, again resulting in the high production cost.
- As informed by the owners, the incentives and subsidies ensured to them was withdrawn. Then owners also regretted that the power supply was not regular which affected the quantity of production.
- Backwardness of the region and location in border area did not support this activity to flourish due to non availability of supporting infrastructure in the nearby areas.
- Terrorism in Punjab, especially, in this area is one of the biggest reasons which discouraged the people to run or open the industrial unit.

iii) Present Situation

Due to the adverse affects on the growth of the industrial units, the overall development of the industrial complex not only stopped but also declined. Phase wise analysis for decline of the complex is as given below:

a) Phase I

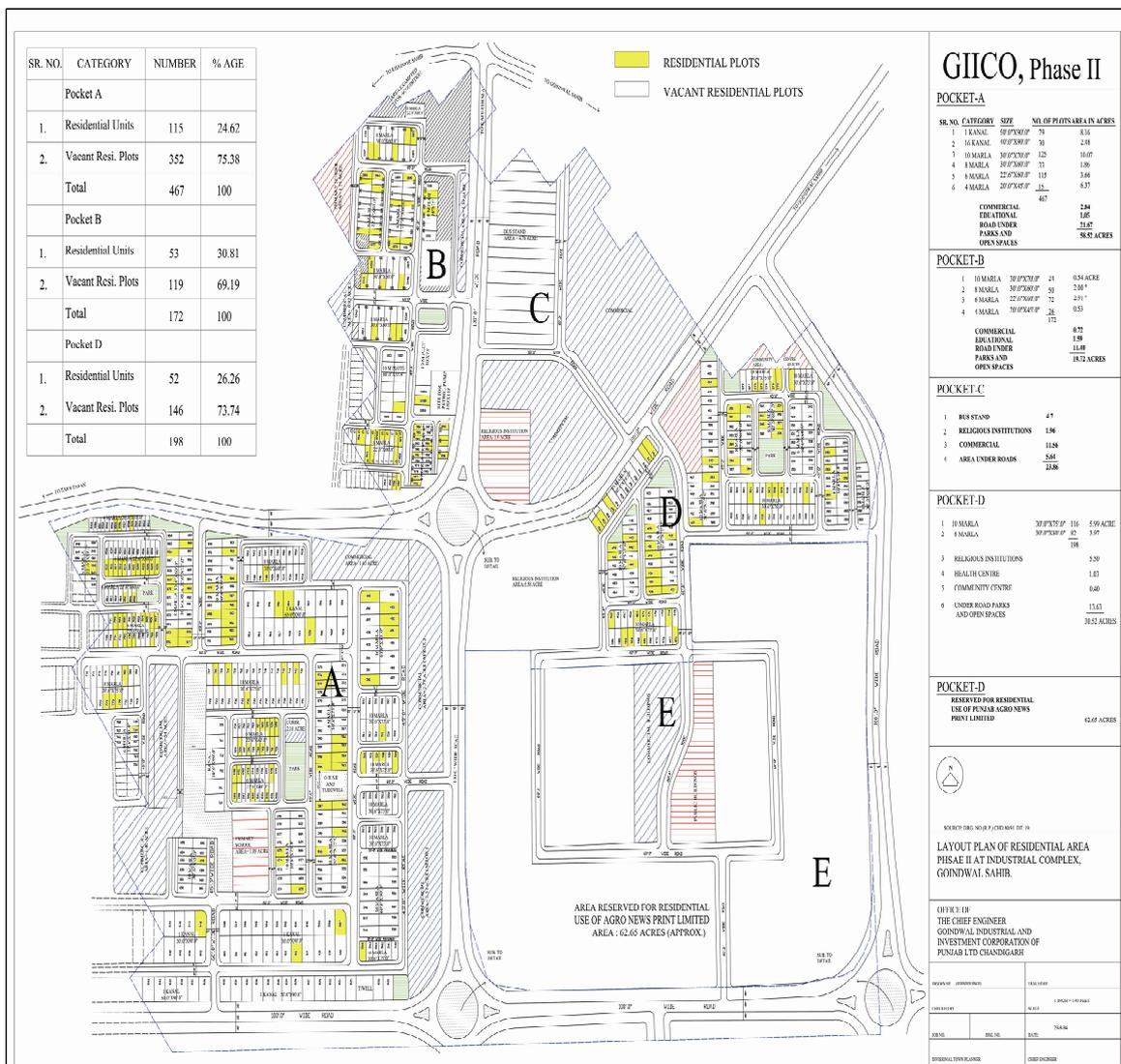


Map 14 Layout plan of Industrial Complex Phase I

As shown in the above layout plan of the phase I of the complex prepared by the chief engg GIICO, Chandigarh, the total number of the industrial units proposed was 446 while the number of proposed residential plots were 184, out of which, only 173(43%) industrial units were established. Further, out of these established industrial units, 88 units were shut down and only 99 (22%) units are working here at present. Where as, out of 184 proposed residential plots, 64(35%) are vacant and rest have been occupied by private owners.

b) Phase II

This phase of the industrial complex comprises of residential area of the complex. Pocket wise detail of the area, proposed residential plots, occupied and vacant out of them, has been given in table 4.17.



Map 15 Layout plan of Industrial Complex Phase II

Table 4.17 Details of the Pockets in Industrial Complex

	Total	79.02

Source: Chief Engineer, GIICO, Chandigarh

It shows that even out of residential area, although plotting has been done for most of the area, only 27% are actually occupied by the residents, whereas some of the public facilities like bus stand, schools, religious place are present here. Well planned roads have been laid down with their proper hierarchy along with other infrastructure. Commercial activity has not come on ground as per the proposal.

4.6.2 Thermal Power Plant:

The proposed 2x300 MW coal based thermal power plant near Goindwal has been proposed and construction works, thereof, have been started. The approved site of thermal power plant was of 445.76 hectare. But the total land acquired for thermal power plant is 435 hectare at present.

The proposed plant site is located near village Goindwal. The site falls in 75°07'30" E to 75°10'55" E longitudes and 31°21'35" N to 31°24'40" N latitudes at an elevation of 220 m above mean sea level.

Table 4.18 Salient Features of the Proposed Thermal Power Plant

Feature	Details
Location	Part of revenue areas of villages Verowal, Pindian, Hothian, Alampur, Hansawala .
Cost of the Project	Rs 2987.86 crores
Total Land	435 hec. *
Plant Capacity	2X300 MW

Source: EIA Report of Proposed Thermal Power Plant

* Source: Manager Thermal Power Plant, Goindwal

The Goindwal is at a distance of 1.0 km in southern direction and the district headquarters of Tarn Taran is located at a distance of 20 km from the proposed plant site. River Beas flows at a distance of 0.75 km E from the proposed plant site in N to S direction, which finally joins Satluj River in down course.

The proposed plant site is well connected through road network and northern railway line. Major roadway connecting Tarn Taran—Goindwal—Kapurthala passes adjacent to the proposed plant site in southern direction. However, the nearest railway station on broad gauge railway line is Fatehabad, located at a distance of 6.0km W from the proposed power plant site. A railway line is under construction between Tarn Taran and Goindwal Sahib. The Gurudwara Baoli Sahib Gurudwara is situated in Goindwal Sahib village at a distance of 1.0 km from the site. The major industries situated in 10 km radius are BHEL valve unit, spinning mills, flourmills etc.

4.7 Traffic and Transportation

Transport is one of the most important creations of man's creative urges. Its role in towns and cities of varying sizes cannot be ignored. Among different systems of transport, the contribution of road transport is significantly high. Traffic & transportation has been considered as a function of land use planning. Roads and streets in a city have been equated with arteries in the human being and any obstruction in the system can create numerous complications. In this context, traffic and transportation has emerged as the most critical issue in the effective operation and efficient functioning of any urban centre.

While preparing the master plan of any area, it is important that a detailed study and analysis of the existing transportation network is made, pattern of traffic clearly identified, capacity of the network is quantified and user behavior is clearly brought out for understanding the existing problems and bottlenecks in the system which create road blocks in the efficient transportation of men and material. For the Local Planning Area, Goindwal study for this aspect has been done as described below:

4.7.1. Transport Linkages in the Medieval Period

During the 16th century, the shortest route from Lahore to Delhi was via Lahore, Patti, Sultanpur, Noormahal, Ludhiana, Doraha, Sirhind and Delhi. During the rainy days, this route becomes marshy and flood prone and hence it becomes difficult to travel. But it was very famous during the remaining parts of the year because firstly, this route was the shortest, and secondly the hay for the animals, which were used for loading and unloading, was easily available.

The trade and commerce from Lahore to Hoshiarpur and then to Shivalik mountainous area was done, especially the salt and the jaggery from Hoshiarpur was transported through this route.

The Hindus whose main pilgrim centre was Haridwar, used to travel by foot in groups or on horses/mules through this shortest route. Similarly, the people from west and south Punjab used to follow this route to visit Chintpurni, Mansa Devi and Naina Devi. There was a highland area in this area to cross the river. But there was no halting place or obstacle from Patti to Sultanpur. This place was especially very dangerous because of wild grass in the low lying area where the robbers used to come and rob.

By this route, the production from agriculture could have been transported through tribes and boats on this way. This could have boosted the development of the settlement and could have become economic generator because of which there would have been many employment opportunities and the town could have further developed.

By conceiving all the important commercial and administrative centres of medieval Punjab and their inter-connecting routes in a radius of sixty miles from Goindwal, the centrality and accessibility of the site can be well marked. Some of the most important routes used to converge at the site since the Grand Trunk Road laid by Sher Shah Suri was originally in close proximity of Goindwal as it used to link it with Lahore, Sarai Amanat Khan, Sarai Nuruddin in the Bari Doab, and further of Sirhind, Kurukshetra, Delhi and upto Calcutta. Because of high accessibility the ideas, philosophies and hymns of Sikhism could reach far-off places with moving pilgrims, caravans and conveys.

4.7.2. Existing Transportation Linkages

(i) Road Linkages:-

Local Planning Area, Goindwal is connected by roads with other important towns like Kapurthala, Jandiala Guru, Tarn Taran and adjacent villages. It is also connected by rail with Beas junction. It is situated 24km from National Highway No-15 (the Pathankot—Amritsar—Makhu—Faridkot—Malout—Abohar upto Rajasthan border road).

Table 4.19 Detail of important Existing roads falling within Local Planning Area, Goindwal

Sr. no.	Name of the Road	Average road width (meters)	Carriageway length (metres) within LPA, Goindwal
1.	Tarn Taran-Goindwal	16.76	9808
2.	Goindwal-Kapurthala	16.76	2964
3.	Khadur Sahib-Tarn Taran road	16.76	5247
4.	Khadur Sahib-Goindwal	15	7688
5.	Nagoke Mod to Khadur	16.76	4812

	Sahib		
6.	Jandiala-Rayya (within L.P.A. Goindwal)	10.06	2258
7.	Fatehbad-Chohla Sahib road along canal	7	2661
8.	Fatehbad-Dhunda	13.41	5071
9.	Goindwal-Dhunda	11	3628

Source: PRSC, PAU, Ludhiana

The above table indicates the strong linkages of Local Planning Area, Goindwal with important outside settlements and good connectivity of various settlements of LPA. The roads under serial no 1 and 3 of the table connect the LPA well with the district headquarter Tarn-Taran. The data in serial no 2 shows its connectivity through bridge over river Beas with the towns Kapurthala, Sultanpur Lodhi, Jalandhar and other important towns of the region which exist on this side. The road (serial no. 4) provides the important link between the two important settlements of the Local Planning Area i.e. Khadur Sahib and Goindwal, which also acts as tourist circuit here. The roads (no 5 & 6) link the LPA with G.T. road (NH1), to give it access to all the settlements of the state as well as the country, which it is connected with. The road under serial no. 7 gives the LPA linkages to the other settlements of surroundings and district. Serial no 8 & 9, gives access to the industrial complex in addition to its access from Goindwal.

The respective widths and road lengths (within LPA, Goindwal) have been mentioned in the above table.

(ii) Existing Rail Linkages

The rail linkages comprise of only one line that is from Goindwal to Beas, which is generally known as *railway bus*. Moreover, there is only one trip of this bus. Extension of this railway line is under construction between Tarn Taran and Goindwal.



Pic. 5 Road Leading at Goindwal Sahib

(iii) Terminals

a) Bus Terminal

There are two bus terminals in Local Planning Area, Goindwal. The bus stand at Goindwal Sahib has an area of 1.92 hectare approximately. It is located on the Kapurthala Road and is part of phase-II industrial complex. It has approximately 8 counters and there are only 5 shops in the bus stand located at Goindwal Sahib. The bus stand located at Khadur Sahib is having an area of 0.40 hec. approximately and has 8 counters and 6 shops.

b) Railway Station

There is only one railway station in the Local Planning Area, Goindwal and that is located in the village Fatehabad.



Pict. 6 Rail Terminus

c) Airport

Local Planning Area, Goindwal is not having any facility of Airport in Local Planning Area and even in the district Tarn Taran there is absence of any airport. The air transportation facility can only be availed from Raja Sansi Airport, Amritsar district, which is 58 km away from Goindwal.

4.7.3 Registered Vehicles

The vehicles such as heavy vehicles, light vehicles and non- motorized vehicles, which have been registered with District Transport Office, Tarn Taran.

Table 4.20 Registered Vehicles

Type of Vehicle	Year 2004-05	Year 2005-06	Year 2006-07	Year 2007-08	Year 2008-09
Heavy Vehicles					
Trucks	-	-	109	123	75
Buses	-	-	6	12	4
Light Vehicles					
Two Wheelers	4786	4966	6208	6457	6679
3-Wheelers	-	-	3	23	42
4-Wheelers	30	38	73	621	692
Taxis	-	-	-	-	-
Non-Motorised Vehicles					
Rickshaw	-	-	-	-	-

Source: District Transport Office, Tarn Taran

The table 4.20 shows that the registration of heavy vehicles is getting reduced as is seen in case of trucks which has decreased from 109 in 2006-07 to 75 in 2008-09 and the number of buses decreased from 12 to 4 from 2007-08 to 2008-09. On the contrary, the registration of light vehicles has increased, which is seen in case of two-wheelers, has increased from 4786 to 6679 from 2004-05 to 2008-09, three wheelers increased from 3 to 42 in 2006-07 to 2008-09, which is a great boost in the public transport and four wheelers increased from 30 in 2004-05 to 692 in 2008-09. Moreover, there is no private taxi service available in the Local Planning Area, Goindwal as it is a small town. Although there are rickshaws in the Local Planning Area, Goindwal, but there are no registered rickshaws as it is indicated in the above data.

4.7.4 Parking

Parking is also a problem but it is generally occasional especially during the festival seasons. Although the parking sites are available near Gurudwaras, but these are not sufficient enough to accommodate the parking need during festivals and special occasions, due to which the roads leading to the historical gurdwaras are encroached by the informally parked vehicles as well as activities, which create bottlenecks here during the special events.

4.7.5 Bridges and Railway Crossings

i) The main bridge which connects not only the Local Planning Area, but the whole district with the other important settlements, towns, and districts and reduces the distances, thereof, is constructed on river Beas on Goindwal – Kapurthala road.

ii) The culverts are built on all the flowing water bodies i.e. on sabhraon branch canal, Khadur drain, patti distributory and minor. These shorten the distances between different settlements of the Local Planning Area.

iii) Among railway crossings, crossings on Tarn Taran–Goindwal road and Khadur Sahib–Goindwal are manned and rest all of them are unmanned. Moreover, the crossing point of railway line with sabhraon branch is under construction.

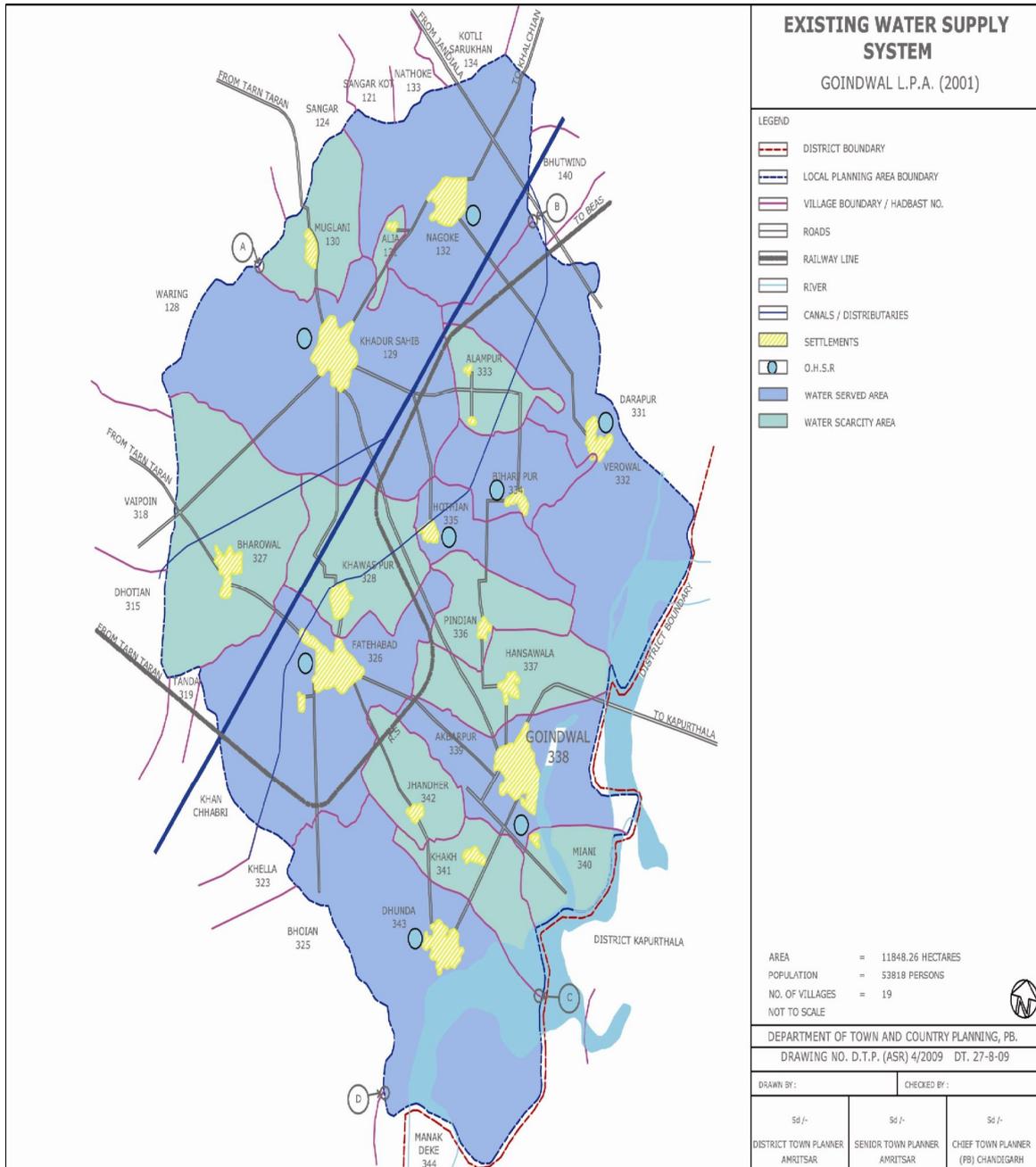
4.8 Infrastructural Facilities

Infrastructure is the basic requirement for better quality of life and its adequacy and accessibility are two important ingredients and key contributors in the upgradation and enrichment of quality of urban life, which is the primary objective of any planned development effort. The extent and the nature of problems faced by different towns vary by size, geographical conditions, local natural resources, state/ regional differentials and several such factors directly or indirectly affecting the population of cities/ towns.

4.8.1 Physical Infrastructure

i) Water Supply

Water supply has been provided to all the in-habited villages but overhead reservoirs are not available in all the villages of Local Planning Area. The table 4.21 shows the list of villages having the water connections and number of OHRs and their capacity respectively (refer map 16). The people, who do not have the water connections, use ground water for drinking purposes through electric or hand pumps.



Map 16: Village having Water Supply network in Local Planning Area, Goindwal

ii) Sewerage System

It has been observed that there is no availability of sewerage system in the Local Planning Area. Some planned colonies have been provided with the sewerage system, but that is negligible.

iii) Drainage System

The drainage system is present in almost all the villages. The drainage pattern is as per the slope of the area.

iv) Solid Waste Management:

There has been no facility available for the solid waste management from any organization.

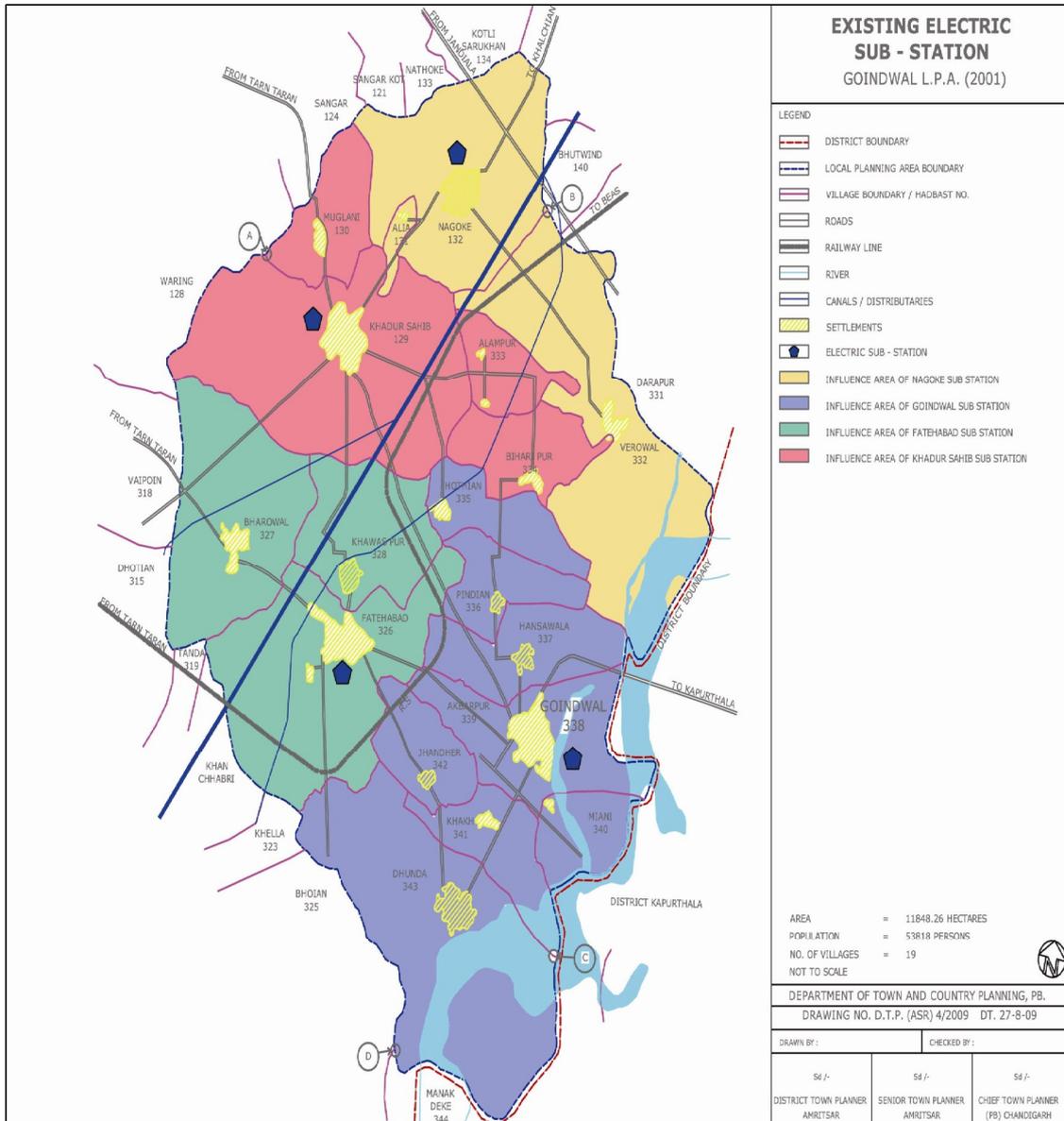
v) Electricity

The electricity has been provided within the whole Local Planning Area, Goindwal including all the villages. There are 4 substations having capacity of 66 KV each. These sub-stations are present in Goindwal, Nagoke, Fatehabad and Khadur Sahib and these serve the whole Local Planning Area, Goindwal and surrounding settlements as given in table 4.22. The distribution of electric substations in the Local Planning Area, Goindwal is shown in the table below and also refer map 17.

Table 4.22 Distribution of Electric sub-station in the Local Planning Area, Goindwal

S.No.	Name of the Village	Capacity of Electric Substation
1.	Goindwal (including Akbarpur, Miani, Dhunda, Jhander, Hansawala, Khakh, Pindian, Hothian)	66 KV
2.	Nagoke (including Verowal, Alia)	66 KV
3.	Fatehabad (including Bharowal, Khawaspur)	66 KV
4.	Khadur Sahib (including Alampur, Biharipur)	66 KV

Source: Divisional Office State Electricity Board, Tarn Taran



Map 17: Distribution of electric sub stations in Local Planning Area, Goindwal

4.8.2 Social Infrastructure

Social amenities and infrastructure fall under the social welfare objectives of the urban development programme, as distinct from economic development objectives and especially in context of the rapidly developing liberalized economic scenario. Social infrastructure comprises of the kind of facilities available in the village i.e. education, health facilities etc.

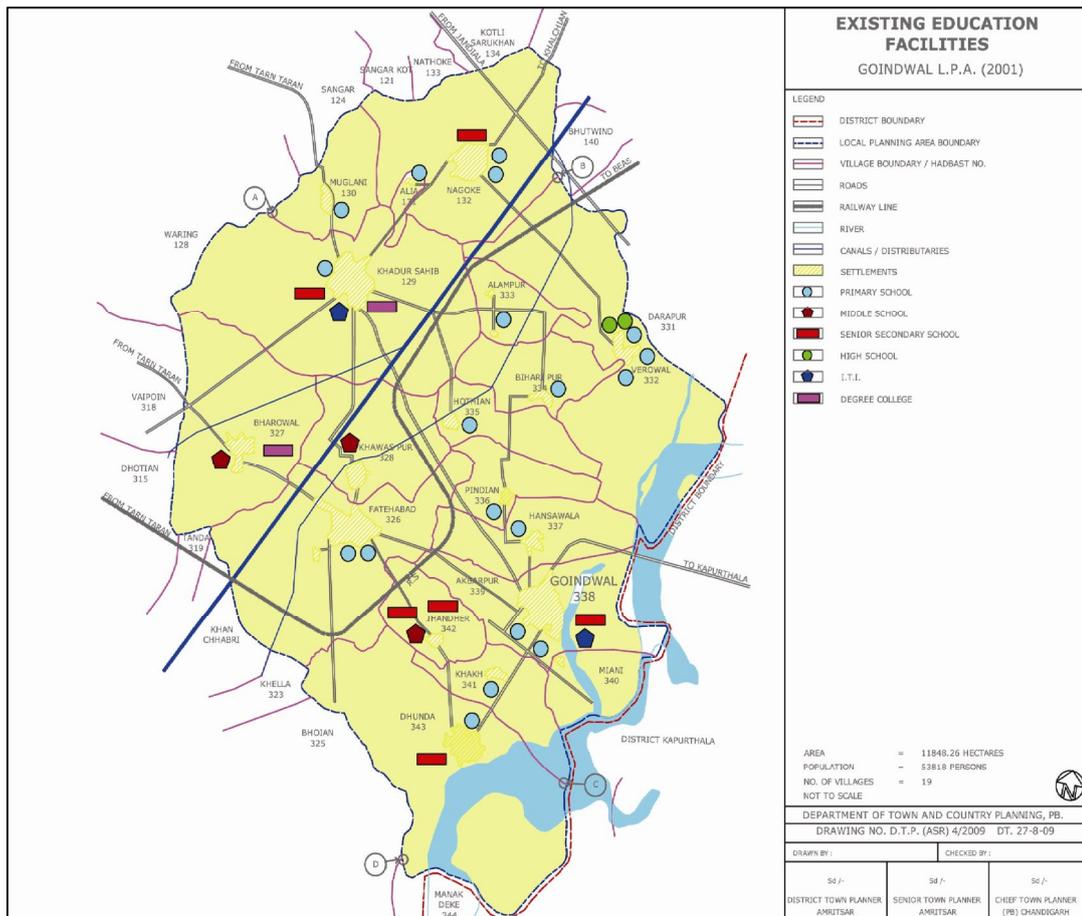
i) Educational Facilities

The educational facilities include the primary schools, high schools, senior secondary schools, colleges etc. For village wise distribution of education facilities refer table 4.23 and map 18, given as under:

Table 4.23 Educational Facilities in Local Planning Area, Goindwal

S.No.	Level of Facility	Number
1.	Primary School	19
2.	Middle School	3
3.	High School	3
4.	Sen .Sec. School	6
5.	I.T.I.	3
6.	Degree College	1
7.	Degree College for Girls	1

Source: District Education Officer, Tarn Taran



Map 18 Village wise distribution educational facilities in Local Planning Area, Goindwal

There are 19 primary schools, only 3 middle and 3 high schools, 6 senior secondary schools, 3 ITI and 2 degree colleges in Local Planning Area, Goindwal.

ii) Health Facilities

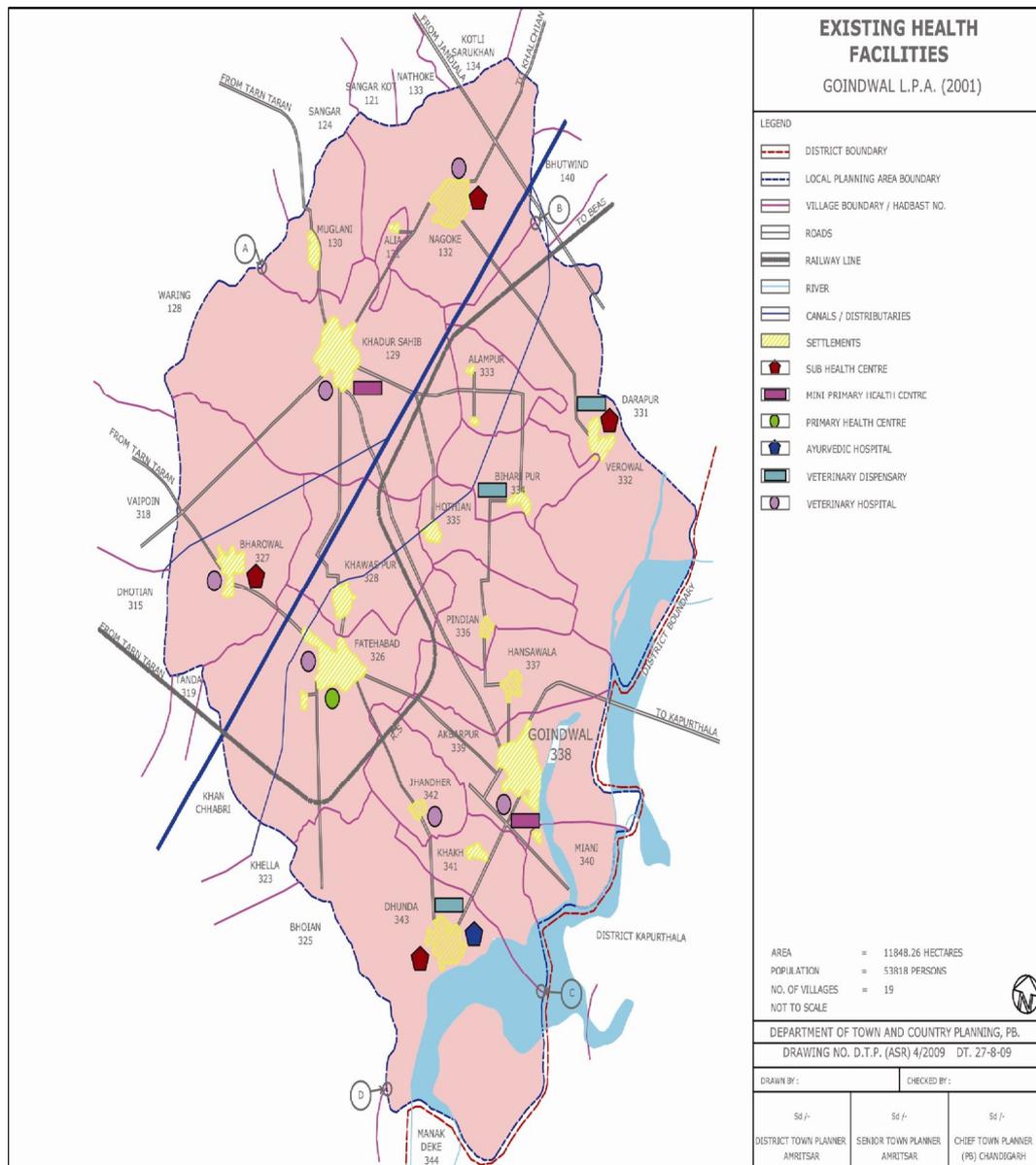
The health facilities are present in the Local Planning Area, Goindwal i.e. dispensary, primary health centre, hospital, private practitioners etc. The following table 4.24 and map 19 shows the health facilities and their distribution in Local Planning Area, Goindwal.

Table 4.24 - Health Facilities in L.P.A. Goindwal

S.No.	Level of Facility	Number
1.	Sub Centre	4
2.	Dispensary	0
3.	Primary Health Centre	1
4.	Mini Primary Health Centre	2
5.	Ayurvedic Hospital	1
6.	Veterinary Dispensary	3
7.	Veterinary Hospital	6

Source: Chief Medical Officer, Tarn Taran, 2001

There are only 4 sub centers, 1 primary health centre, 2 mini primary health centre and 1 ayurvedic hospital. There are also 3 veterinary dispensaries and 6 veterinary hospitals in the Local Planning Area, Goindwal.



Map 19 Health Facilities in Local Planning Area, Goindwal

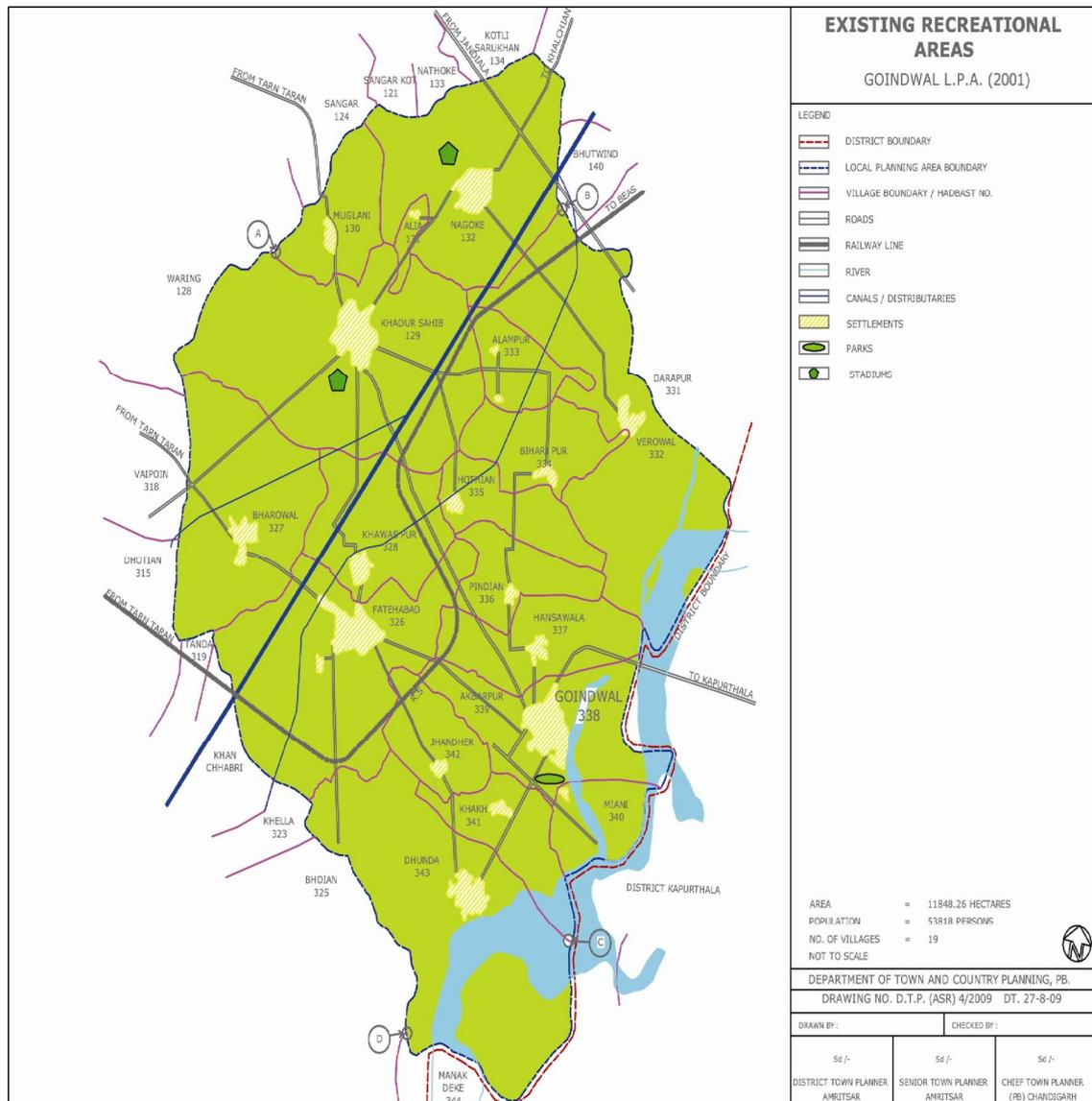
iii) Recreational Facilities:

Parks and open spaces include the tot lots, parks, stadiums, playgrounds etc. There are 2 stadiums in the villages of Nagoke and Khadur Sahib (Refer map 20). Moreover, table 4.25 shows that there is only 1 park in the village of Goindwal.

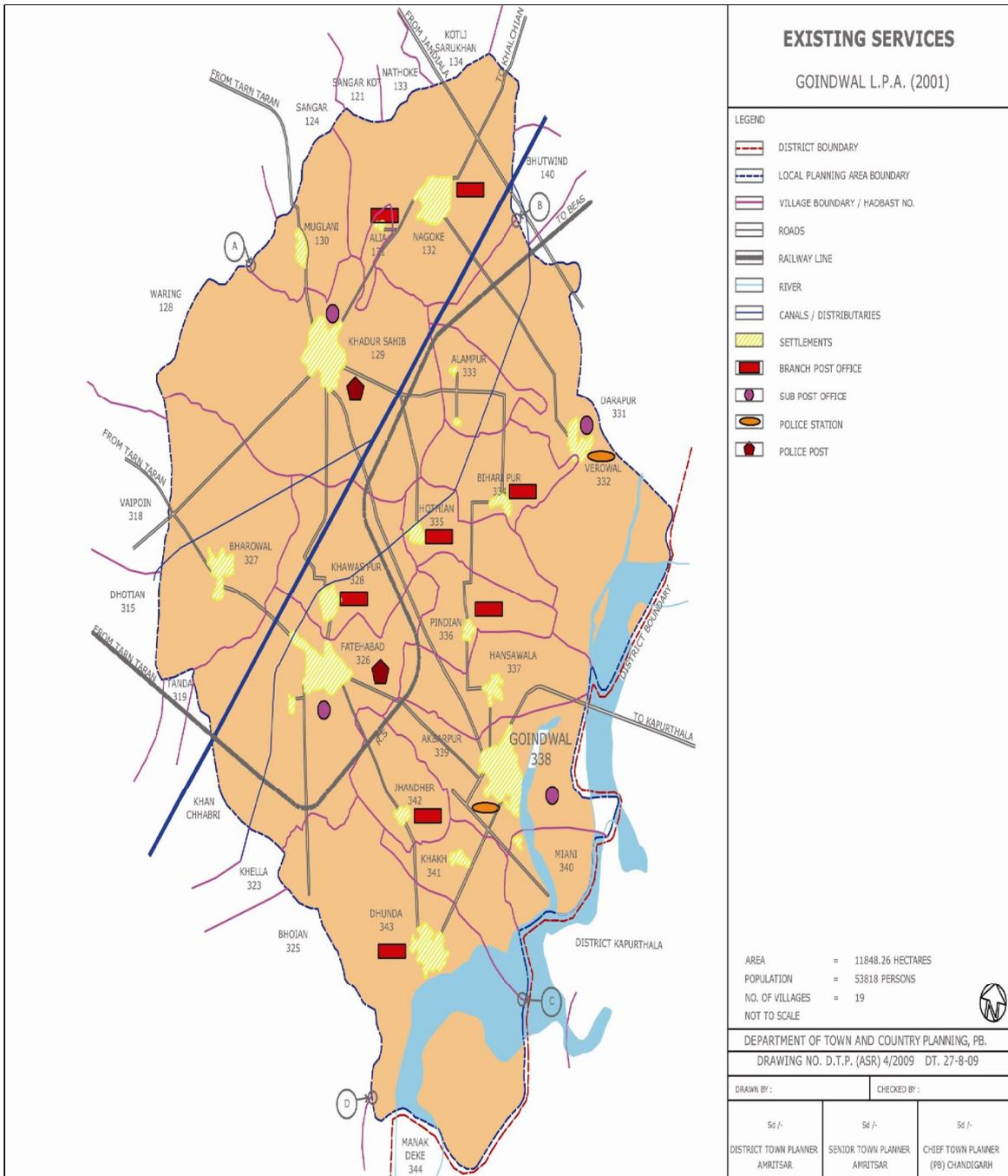
Table 4.25 - Distribution of Open Spaces in L.P.A., Goindwal

	Total	1	2

Source: BDPO, Khadur Sahib



Map 20: Distribution of recreational Facilities in Local Planning Area, Goindwal



Map 21 Available Services in Local Planning Area, Goindwal

The table 4.27 and map 21 reveals that there are only 4 villages having the facility of police services. The village Goindwal has 1.62 hec. land under police department, where the building of police station has been constructed on an area of 0.20 hec. The remaining land is lying vacant. There are no residential quarters in the premises of police station.

In the village of Verowal, 0.28 hec. of land is under police department, where the building of police station has been constructed in the area of 0.20 hec. Apart from this, 12 residential quarters have been constructed in the area of 400 sq.mts. The rest of the land is lying vacant.

In the village of Fatehabad and Khadur Sahib, there is one police post (in each village (refer map. 18). The buildings of police post are private. There is no land of police department. So there is need of land to build the building for police post in both these villages.

vi) Facility Index:

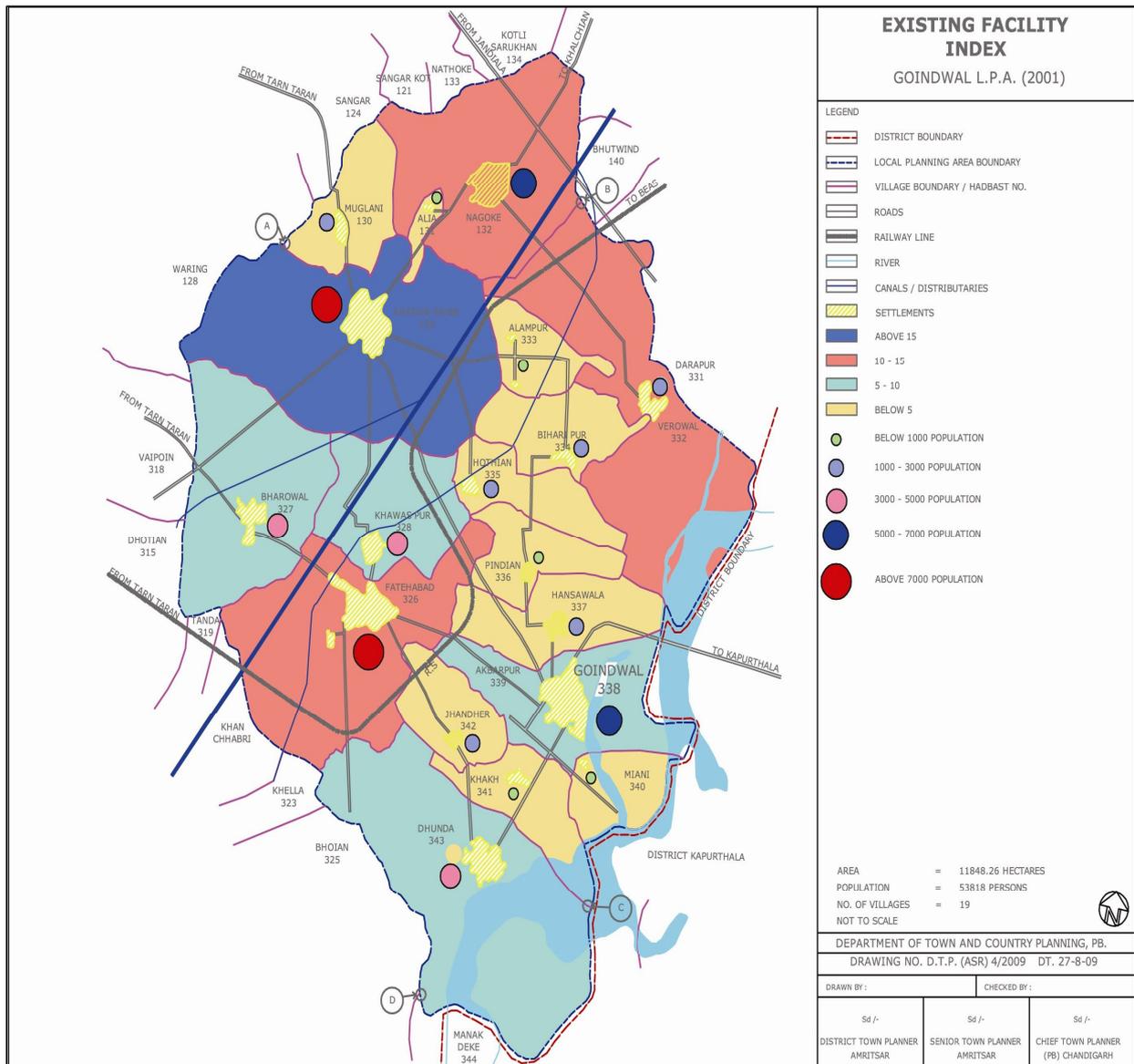
The facility index for the Local Planning Area, Goindwal has been prepared based on the number of facilities and services enjoyed by each village (refer table No 4.28) These facilities are in terms of educational facilities, health, postal and police services, recreational areas, water supply etc. in addition to the economic activities in each village. The weightage was given to all these facilities and accordingly marks were calculated for all the villages. The village having maximum marks has been recorded as the livable area.

Table No. 4.28 Facility Index for L.P.A Goindwal

Village	Educational Facilities						Health Facilities					Vet. Facility		Milk Collection Centre	Postal Services		Self Employment			Water Supply		Police Services		Recreational Areas	Total Marks
	P	Middle	High	Sen. Sec.	ITI	Degree College	Sub Center	Disp.	MPHC	PHC	Ayur Hosp	V. Disp.	V. Hosp.		Sub P.O.	Branch P.O.	Dairy	Poultry	Bee Keeping	Served	Scarcity	Police Station	Police Post	Parks	
Goindwal	2			1	1			1				1		1		1			1	-1	1		1		10
Nagoke	2		1	1			1					1	1		1	1		1	1	-1				1	11
Verowal	3		2				1				1		1	1				1	1	-1	1				11
Alampur	1												1							-1					1
Akbarpur	-																			-1					-
Miani	-																			-1					-
Dhunda	1			1			1			1	1		1		1				1	-1					7
Jhander	-	1										1			1					-1					2
Hansawala	1												1							-1					1
Khakh	1												1							-1					0
Muglani	1												1							-1					0
Pindian	1												1		1					-1					2
Fatehabad	2			2					1			1	1	1		1	1	1	1	-1		1			12
Hothian	1												1		1				1	-1					3
Biharipur	1										1		1		1				1	-1					4
Khadur Sahib	2			1	2	1		1				1	1	1		5			1	-1		1		1	17
Bharowal	-	1				1	1					1	1		1	1		1		-1					7
Khawaspu r	-	1											1		1			1	1	-1					4
Alia	-												1			1									2
TOTAL	19	3	3	6	3	2	4		2	1		3	6	13	4	8	10	1	5	9		2	2	1	2

It is analysed from the table 4.28 that besides Khadur Sahib and Goindwal, the villages Nagoke and Fatehabad are emerging as important settlement in terms of availability of the infrastructural facilities.

From the map 22, it can be seen that Khadur Sahib has the maximum number of facilities such as educational facilities, health facilities and others, and maximum population then comes the village Fatehabad while Nagoke and Verowal are next to it and Goindwal comes after all these if its historical, religious, industrial or locational attributes are not added.



Map 22 : Facility Index Local Planning Area, Goindwal

4.9 Tourism

The tourist spots involve all the landmarks in Local Planning Area, Goindwal where the tourists like to visit. There are potentials for other tourism such as religious tourism and eco tourism. Many fairs and festivals conducted in historical gurudwaras located in Goindwal, which attracts the religious tourists. The table 4.29 shows the list of occasions in different places including the tourist inflow of each place.

Table 4.29 List of Occasions and Tourists inflow in L.P.A. Goindwal

Place	Occasion	Tourist Inflow(persons)
Goindwal Sahib	15-16 September Salana Mela (Guru Amar Das Ji)	30,000-35,000
	Bhado di Punian da Mela	40,000-50,000
	Sunday	20,000
	Punian	10,000
Khadur Sahib	Salana Mela	2 lakh
	28 Feb	1 lakh
	Sangrad	20,000
	Masya	10,000
	Sunday	40,000-50,000

Source: Meetings with Management Committees of Gurudwaras of Goindwal and Khadur Sahib

From the above table, it is clear that on different occasions, there is huge gathering of people in Goindwal and Khadur Sahib as the major fairs and festivals are held in Goindwal and Khadur Sahib. So the inflow of population, which gathers on the occasions, is mentioned as shown in the table.

4.10 Environment

The overall environment of the Local Planning Area, Goindwal is good as there is ample of agriculture land. Also the water bodies are passing through the Local Planning Area. River Beas is passing through western parts of Local Planning Area. But for future, it is studied in terms of the impact of proposed thermal plant and industrial as well as other economic activities.

4.10.1 Air Environment:

In general air quality of the Local Planning Area, is good. Because of low density and vast area under agriculture absence of large number of industrial units as well as absence of high traffic volume. But harvesting season the air pollution reaches to the extreme.

But seeing the future, the quality of air pollution is seen degraded if proper measures are not taken in the light of establishment of thermal power plant & proposal of industries.

Environment Impact Assessment report of proposed thermal power plant shows that the expected emission of pollutants is well within the limits of standards laid down by National Ambient Air Quality (NAAQ) for residential and rural areas. A belt of 80- 100 M wide buffer is already proposed whole along the limits of the complex.

4.10.2 Water Environment

It is observed that water in the water bodies falling in the Local Planning Area, Goindwal is getting polluted. Because of mixing of pollutants before entering the river into Local Planning Area, Goindwal. Other water bodies are also being polluted. Solid waste is also being thrown in the water bodies. Maintenance and cleanliness is not proper and regular.

The surface water sample thus showed conformation with IS-10500 limits both chemically and bacteriological, except for higher turbidity.

4.10.3 Noise Environment

It is ensured in the above report that, during the installation of the power plant, no significant impact is envisaged as most of the construction equipments produce noise level below 90 dB. The noise generated is expected to be intermittent and of short duration.

During operation, the major noise generating sources are steam turbine with an inter source distances of about 50 m these turbines are likely to generate noise levels of about 100 dB each.

4.10.4 Land Pollution

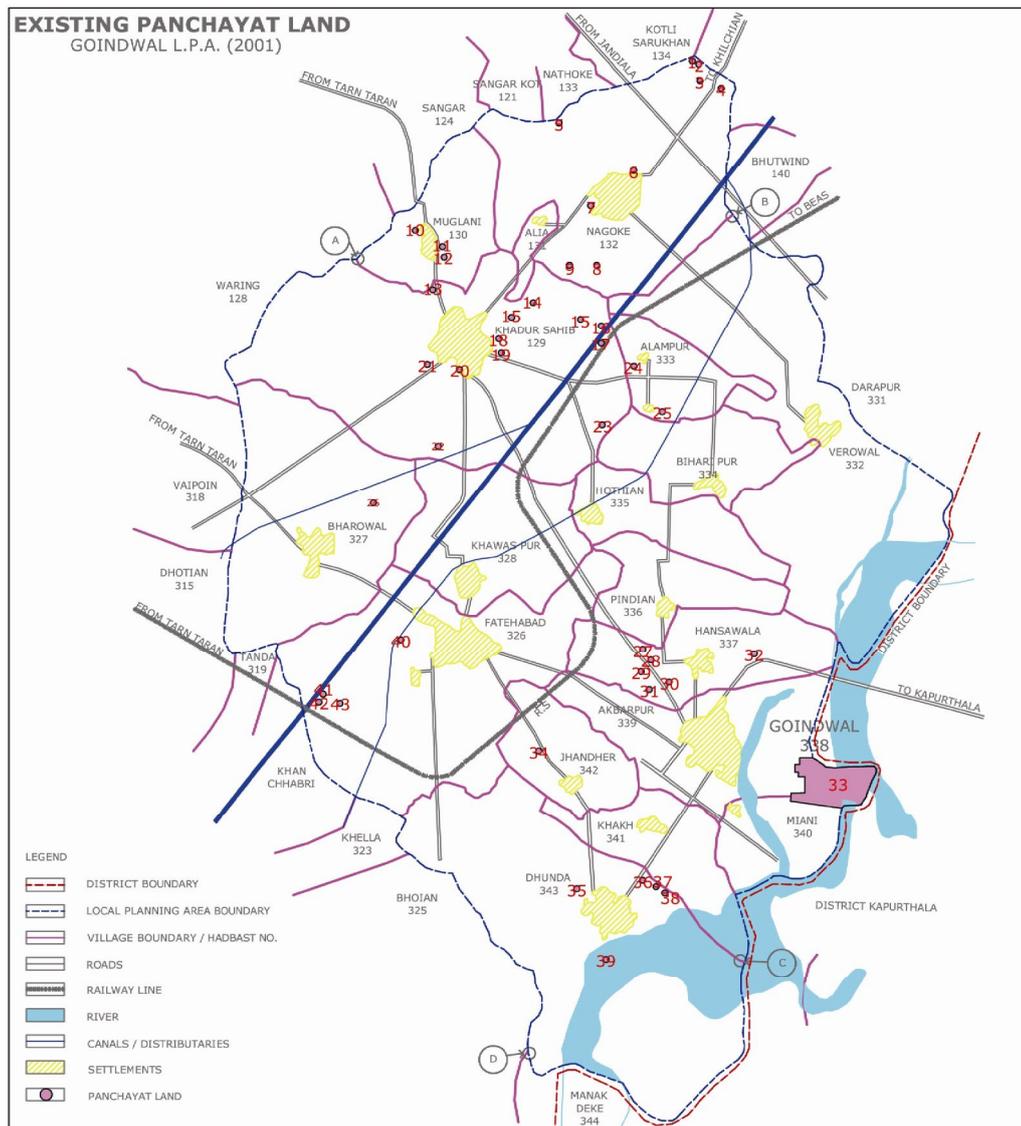
Due to lack of solid waste management system, the land is getting polluted. Because the people are unnecessarily throwing the garbage here and there. However, due to absence of latrines in the whole Local Planning Area, the land gets polluted.

4.10.5 Soil Pollution

The soil is getting polluted in the area, as there is no sewage system existing in the settlements. Hence, people are using septic tanks due to which sewage water is getting percolated into the soil and therefore soil contamination is taking place.

4.11 Panchayati Land in L.P.A., Goindwal:-

Availability of govt lands makes it easy to implement the proposals of public facilities and public utility buildings etc by minimizing the complications and cost of acquisition process as well as legal disputes. Such land in Local Planning Area is owned by panchayats of different villages. The detail of availability of such land in the LPA is given below:



Map-23 Existing Panchyati Land

Table 4.30 Village wise Data of Panchayati Land in LPA, Goindwal

S.No.	Name of the village	Site No.	Area (hec.)
1.	Nagoke H.B. No. 132	1	0.05
		2	0.47
		3	0.16
		4	0.19
			0.25
		6	0.20
		7	0.16
		8	0.10
		9	0.05
2.	Muglani H.B. No. 130		0.06
		11	0.07
		12	0.08
3.	Khadur Sahib H.B. No. 129	13	0.05
		14	0.06
			0.08
		16	0.06
		17	0.15
		18	0.42
		19	0.06
			0.71
		21	0.08
		22	0.07
4.	Alampur H.B. No. 333	24	0.24
			0.40
5.	Bharowal H.B. No. 327	26	0.09
6.	Hansawala H.B. No. 337	27	3.18
		28	0.05
		29	1.19
			1.78
		31	0.18
		32	0.44
7.	Goindwal	33	21.23

	H.B. No. 338		
8.	Jhander H.B. No. 342	34	0.78
9.	Dhunda	35	1.21
	H.B. No. 343	36	1.35
		37	0.25
		38	0.12
		39	0.80
10.	Fatehabad	40	0.60
	H.B. No. 326	41	0.44
		42	1.66
		43	0.33
	Total		39.98

Source: Revenue Department

It is clear from the map 23 and table 4.30 that panchayati land is available in 10 villages of the Local Planning Area but except site no 33 (area 21.23 hec.) in village Goindwal-Akbarpur, no other site among 43 sites is of the reasonable size, as area of most of these sites is below 1 hectare. It is also observed that in most of these 10 villages such land is available in small but dispersed chunks only, which are not of sufficient size to be proposed for public uses.

4.12 Existing Land use (2009) of Local Planning Area, Goindwal

4.12.1 Preparation of Base Map

The job of preparation of base map for the Local Planning Area, Goindwal was assigned to Punjab Remote Sensing Centre, P.A.U., Ludhiana. The base map of Local Planning Area, Goindwal is generated using world view data. The cadastral maps of the villages falling in Local Planning Area, Goindwal were procured from the state revenue department by the office of District Town Planner, Amritsar and these maps have been scanned in the office of PRSC, PAU, Ludhiana and registered with world view data to demarcate the existing features of all villages. The features like village settlements, under other land uses, roads, rails, high and low lands, drains etc. have also been delineated from world view 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. The world view data (satellite imagery) is procured by the P.R.S.C., P.A.U., Ludhiana from National Remote Sensing Agency, Hyderabad.

4.12.2 Enhancement Through Field Surveys – Landuse And Road Network

The draft base map for the Local Planning Area, Goindwal village received from Punjab Remote Sensing Centre, P.A.U., Ludhiana were updated through ground truthing/field surveys by the office of D.T.P, Amritsar. The various land uses have been identified at the site and earmarked accordingly. Similarly, the road network, drains, distributaries and other communication zones have been verified and checked at site. After conducting field surveys, the necessary feedback was supplied to P.R.S.C, PAU, Ludhiana, which had ultimately been incorporated and an updated base map was prepared by P.R.S.C, P.A.U, Ludhiana. The office of D.T.P, Amritsar again conducted many rounds 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 D.T.P, Amritsar office personally assisted the concerned staff of PRSC and thus a final Existing Land Use Map Drg No: DTP (A)5/2009 dated 20.10.09 was prepared, which gives detail of revenue upto musteel boundaries of different villages falling within in Local Planning Area, Goindwal.

4.12.3 Existing Landuse: Local Planning Area, Goindwal

In the base map, got prepared by the office of District Town Planner, Amritsar from PRSC, various landuses and their sub-categories have been depicted with different indications. Their areas occupied by various activities landuses on ground in Local Planning Area have also been supplied by the PRSC, PAU, Ludhiana after calculating these by using GIS techniques. The split up of these areas has been given in table 4.31.

Table 4.31- Land use breakup of L.P.A., Goindwal

Land use Components	Area (in hec.)	Percentage (%)
Residential	545.74	4.61
Commercial	25.33	0.21
Industrial	84.98	0.72
Public/ Semi Public	221.02	1.87
Utilities	12.7	0.11
Transportation	259.29	2.19

Recreational	4.69	0.04
Agricultural and allied	10694.5	90.25
Total	11848.26	100.00

Note: The total area of Local Planning Area, Goindwal as mentioned in the above table varies from the Revenue Records. Because area of the Local Planning Area, Goindwal as per census of India 2001 was 11880 hec. where as this area as calculated by PRSC PAU, Ludhiana, it comes out to be 11848.26 hec. For calculations regarding area of LPA, Goindwal in coming stages of Master Plan, Goindwal the latter area shall be considered true.

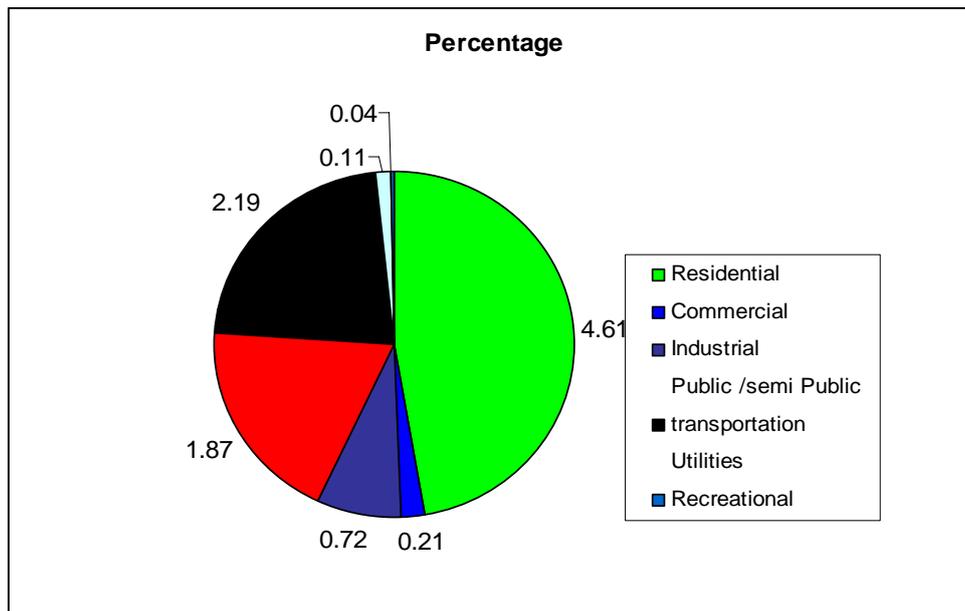


Fig. 4.10 Existing land use distribution, of Local Planning Area, Goindwal 2009

Table 4.32- Area under residential use L.P.A. Goindwal

Type of development	Area (in hec.)	Percentage (%)
Unplanned Residential	477.51	87.50
Planned Residential	68.23	12.50
Total	545.74	100

Source: PRSC, Ludhiana

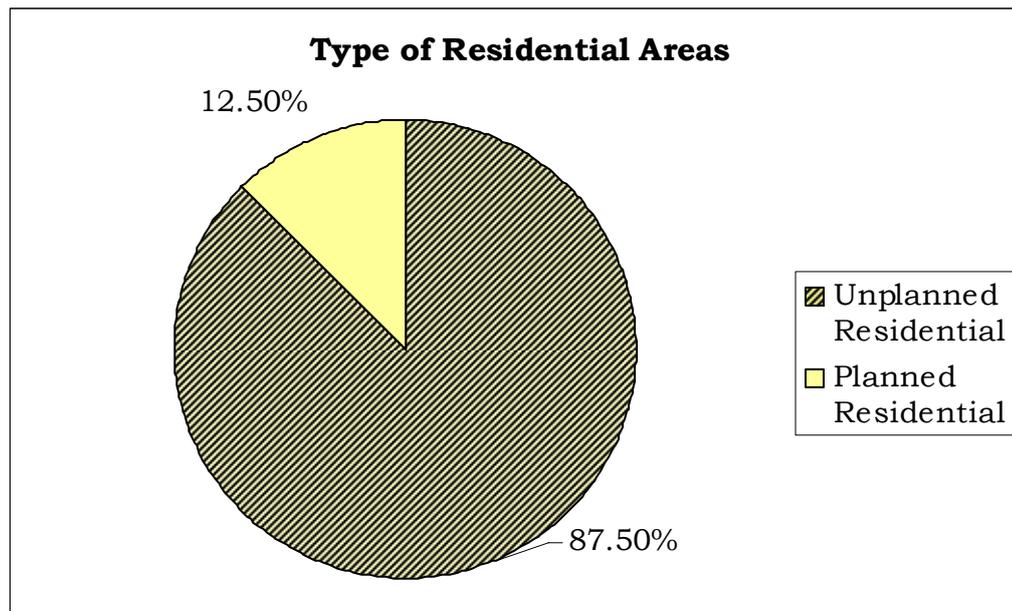


Fig. 4.11 Existing Residential land use, of Local Planning Area, Goindwal 2009

It is also clear from above table 4.31 that the residential area comprising of 545.74 hec. and this constitutes about 4.73% of the total Local Planning Area, Goindwal. The table 4.32 shows that residential area predominantly includes the unplanned or haphazard growth whereas there is a very meagre part which comprises of the planned development (12.5% of total residential area). This planned residential area includes mainly the plotted residential area in the industrial complex and some unauthorized colonies. Rest of the residential area i.e. 87.50% is developed in unplanned manner in rural settlements.

ii) Commercial:

On analyzing, the spatial distribution of the commercial activity in the Local Planning Area, it is observed that the *retail commercial activity* exists mainly in the inner part of Goindwal & Khadur Sahib especially along streets leading to the Gurudwara. Village Fatehabad also consists of hundreds of retail commercial shops as it acts as nodal village or the surrounding settlements in terms of this activity. For *whole sale commercial activity*, it is analyzed that village Khadur Sahib has a grain market along Nagoke-Khadur Sahib road opposite to Guru Arjan Dev College, village Bharowal has a focal point adjoining

its settlement area. Besides this the village Fatehabad has a mandi and an open yard. A few godowns are also present in the Local Planning Area.

The table 4.31 show total commercial area comprises of 0.21% of the total area of Local Planning Area, Goindwal. The share of commercial area in the Local Planning Area, Goindwal is very less but still it plays a very significant role in the growth and development of Local Planning Area, Goindwal especially in case of religious tourism. And the commercial areas further increase in the form of informal sector during the fairs and festivals, in unorganized and unplanned manners.

Table 4.33- Area under Commercial use, L.P.A., Goindwal

Type of development	Area (in Ha)	Percentage (%)
Retail Shopping	7.98	31.50
General Business & Commercial District Centres	0.58	2.29
Wholesale, Godowns, Warehousing regulated Markets	16.77	66.21
Total	25.33	100

Source: PRSC, Ludhiana

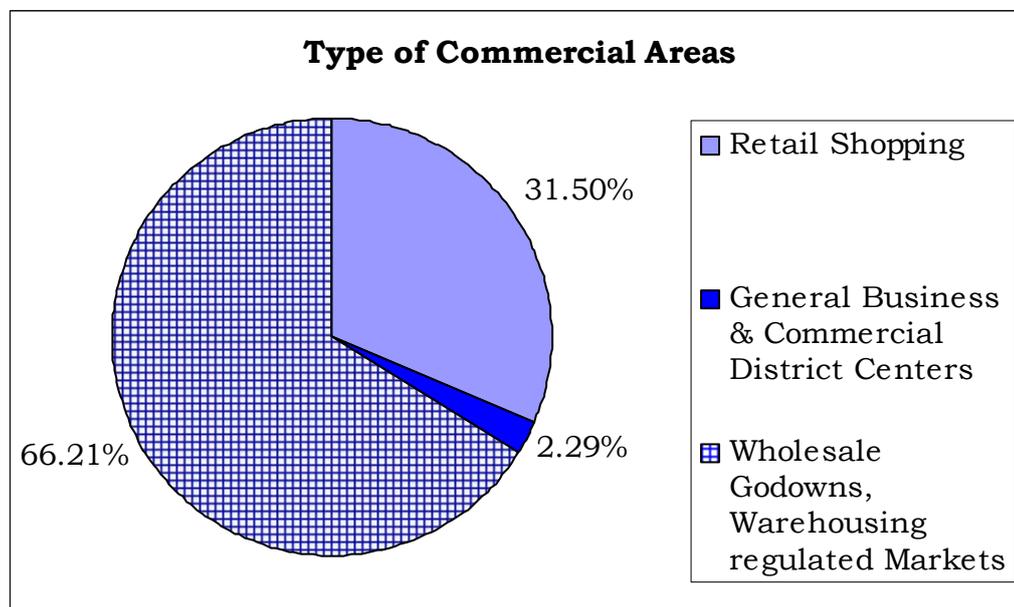


Fig. 4.12 Existing Commercial land use, of Local Planning Area, Goindwal 2009

Out of the total commercial area, 31.50% comprises of retail shopping and 2.29 % of the commercial comprises of general business. The first category includes mainly the area around the religious places and the core areas, which act as commercial hubs of Local Planning Area, Goindwal. In addition to this

66.21 % of the total commercial area comprises of wholesale, godowns, warehousing etc. But still this area is very less i.e. 16.77 hec. because in proportion to agriculture production, more area is required.

iii) Industrial:

As per map 24 Industrial area of Local Planning Area mainly comprises of industrial complex at Goindwal, Jhander, Khakh and Miani villages. In addition to this, the various industrial units like brick kilns, chilling centers and other factories are present in unplanned way in the whole Local Planning Area.

The table No. 4.31 indicates that 0.72% of the total area comprises of industrial area. These industries include khadi and village industries, small scale and large scale industries.

Table 4.34- Area under Industrial use, L.P.A., Goindwal

Type of development	Area (in hec.)	Percentage (%)
Service & Light Industry	23.30	27.42
Planned Industrial Areas	59.52	70.04
Medium, Large & Heavy	2.16	2.54
Total	84.98	100

Source: PRSC, PAU, Ludhiana

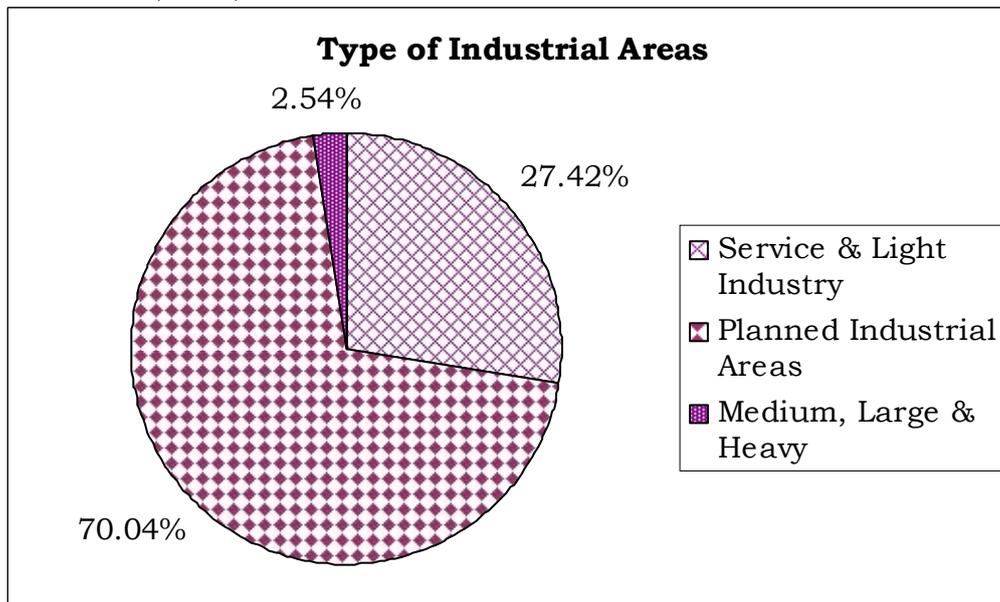


Fig. 4.13 Existing Industrial land use, of Local Planning Area, Goindwal 2009

The service and light industries constitute 27.42% of the total industrial area in L.P.A., Goindwal. The 70.04% of the industrial area comes under the

planned industrial area which includes industries established in developed part of phase-I of *industrial complex* developed by GIICO. Rest of 2.54% is under medium large and heavy.

iv) Public/Semi Public

The public/semi-public area comprises of all the educational facilities, health facilities, religious facilities and other government services. The spatial distribution as indicates in map 24 of all the categories of public and semi public, its administrative units, educational facilities, medical facilities, religious or any other, is not in the planned manner, neither these are located in any designated areas. Share public & semi-public use in L.P.A., Goindwal is 1.87%.

Table 4.35- Area under Public/ Semi Public use L.P.A., Goindwal

Type of development	Area (in Ha)	Percentage (%)
Govt./ Semi Govt./ Public Offices	1.17	0.53
Govt. Land (use undetermined)	116.82	52.85
Education & Research	41.08	18.59
Medical & Health	6.92	3.13
Social, Cultural & Religious	44.25	20.02
Cremation & Burial Grounds	7.00	3.17
Rest House	3.78	1.71
Total	221.02	100

Source: PRSC,PAU, Ludhiana

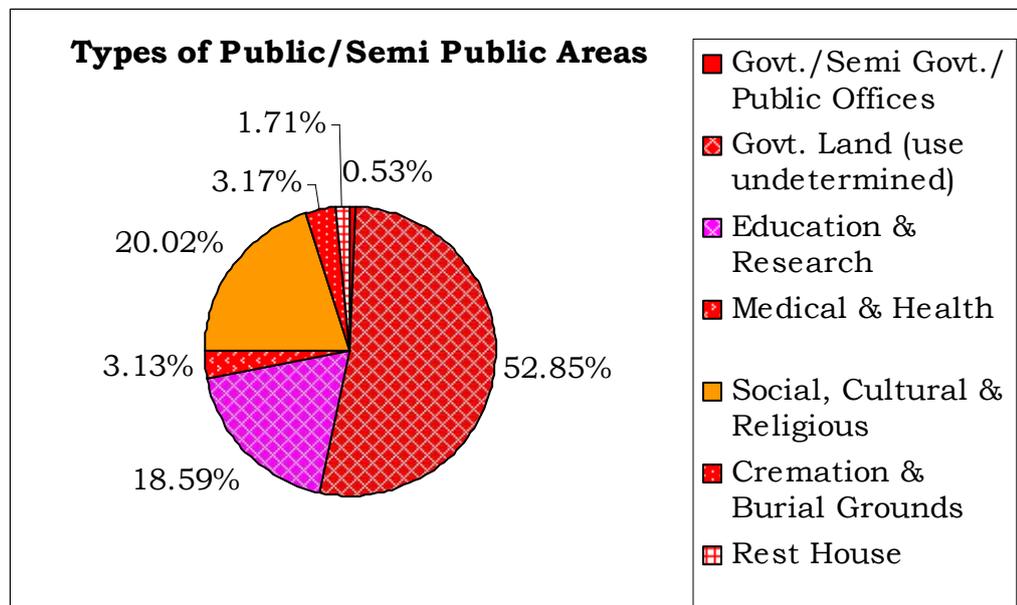


Fig 4.14 Existing Public/Semi Public land use, of Local Planning Area, Goindwal 2009

According to table no. 4.31 area under government offices, public/semi-public is around 0.53% whereas the major share (52.85%) of public/semi public area is under the government land which has been acquired by government for

the development of phase-I of industrial complex but is lying vacant after acquisition. Almost 20.02% of the public/semi public area comes under the socio cultural and religious land use, which is the major component of the Local Planning Area, Goindwal. This includes all the gurudwaras, temples, mosques etc.

Almost 18.59% of the public/semi public area comes under the educational facilities which comprises of the primary schools, senior secondary schools, I.T.I.s and Degree Colleges. The major educational facilities exist in Khadur Sahib in the form of I.T.I.s, Senior Secondary Schools, and Degree College. Moreover elementary, middle, high and senior secondary schools are existing in different villages of Local Planning Area.

Only 3.13% of the public/semi- public area constitutes the health facilities, which is very less. It includes the primary health centres, dispensary, ayurvedic hospital and also the veterinary facilities. But these facilities are not adequately provided and distributed. So people face inconvenience to have access to the health facilities

v) Utilities:

As per table 4.31 area under utilities is 0.11% of the total area of LPA, Goindwal.

Table 4.36- Area under Utilities use L.P.A. Goindwal

Type of development	Area (in hec.)	Percentage (%)
Water works	4.36	34.33
Electric Grid	5.51	43.39
Communication	2.83	22.28
Total	12.7	100

Source: PRSC,PAU, Ludhiana

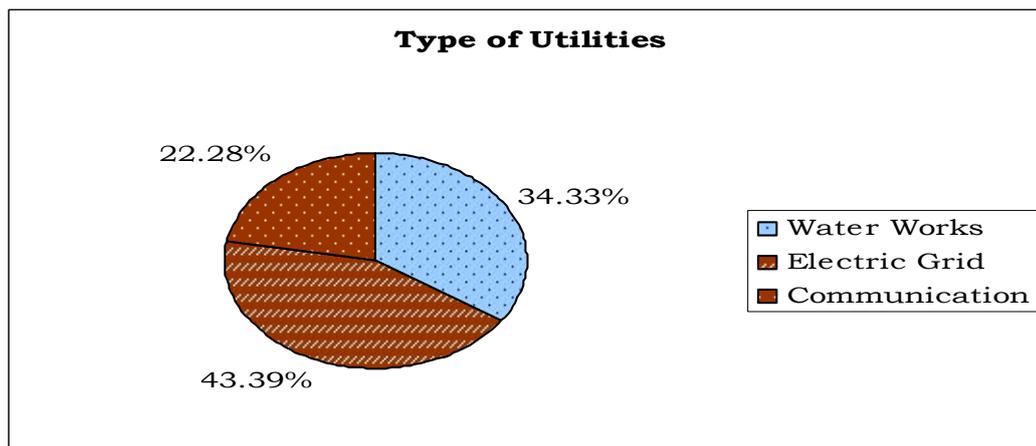


Fig. 4.15 Existing Utilities land use, of Local Planning Area, Goindwal 2009

As per data in table 4.36 the utilities include the different type of works relating to the utility network such as water supply, electricity 34.33% of the total utility area comprises of water works, and 43.39% of the total utility area

comprises of electric grid i.e. electric substation. The electric substations exist in Goindwal, Khadur Sahib, Nagoke and Fatehabad. And the remaining 22.28% falls under the area of communication.

vi) Traffic and Transportation:

As described earlier, the picture of the land use map no. 24 reveals that there is absence of any geometric pattern of the transportation network. However, there seems to be not much problems related to the connectivity as per present situation.

Table 4.37- Area under Traffic & Transportation use in L.P.A., Goindwal

Type of development	Area (in hec.)	Percentage (%)
Roads	235.66	90.89
Bridges/ Flyovers	1.03	0.40
Railway Line & Siding	19.24	7.42
Railway Station	1.38	0.53
Bus Terminus	1.98	0.76
Total	259.29	100

Source: PRSC,PAU, Ludhiana

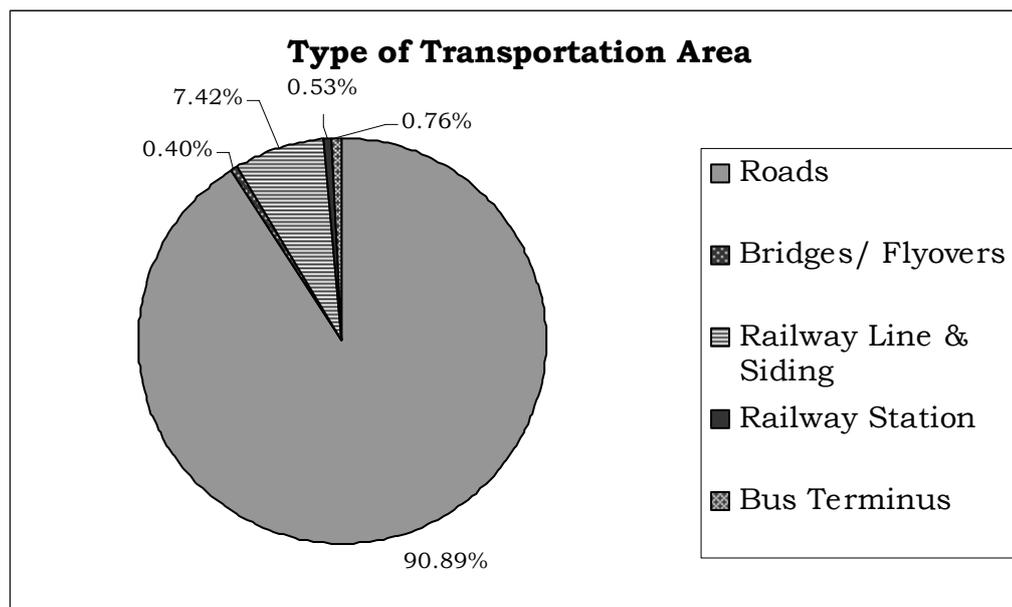


Fig. 4.16 Existing Transportation land use, of Local Planning Area, Goindwal 2009

The transportation includes all traffic networks like roads, rails etc. and the terminals related to those networks i.e. bus terminal, rail terminal. Mainly, the transportation area comprises of roads i.e. 90.89% wherein the village roads, Major District Roads (MDR) and Other District Roads (ODR) become the part. Approximately, 7.42% of the area comes under the railway line. At present, there is only one railway link between Goindwal and Beas. Less than 1% of the transportation area comprises of the terminals such as bus and rail terminals. There are 2 bus terminals in Local Planning Area, Goindwal which exist in Goindwal and Khadur Sahib and only one rail terminal in village Fatehabad.

vii) Recreational:

As indicated in table no 4.31 total area under recreational is of 0.04% of the total Local Planning Area comes under the recreational purposes. This recreational use includes the area under parks and organized open spaces on one side and playgrounds, stadiums etc.

Table 4.38- Area under Recreational use L.P.A. Goindwal

Type of development	Area (in Ha)	Percentage (%)
Playgrounds, Stadiums	4.03	85.93
Parks & Gardens	0.65	14.07
Total	4.69	100

Source: PRSC,PAU, Ludhiana

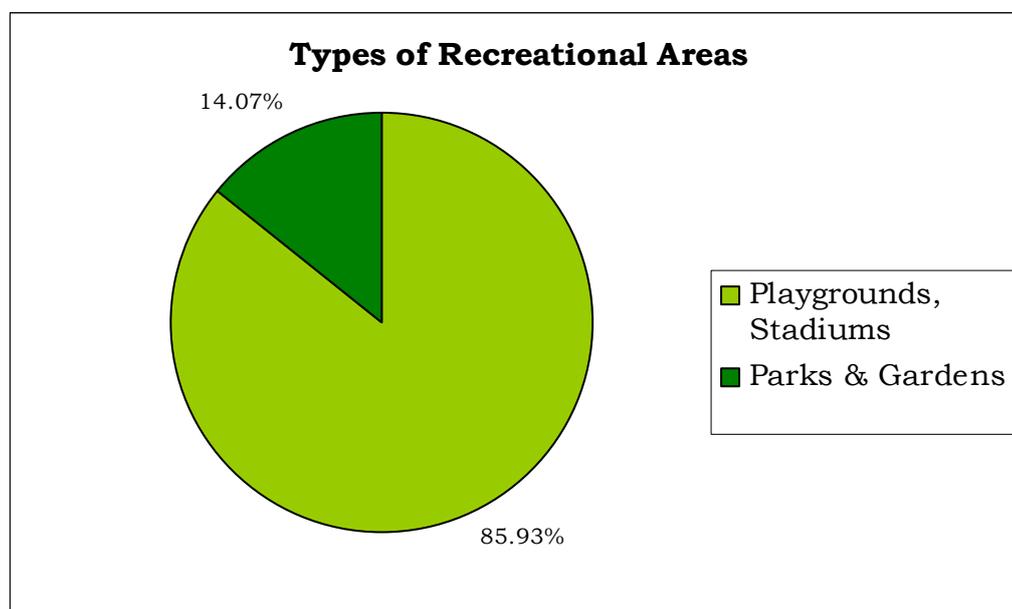


Fig. 4.17 Existing Recreational land use, of Local Planning Area, Goindwal 2009

As shown in table 4.38 and map 24, 85.93% of the recreational area is under playgrounds and stadiums, which are present in Khadur Sahib and Nagoke. The rest of the recreational area constitutes of the parks which are in Goindwal.

viii) Agricultural:

More than 90% of the total area of Local Planning Area, Goindwal (refer table no 4.31) comes under agriculture land use and its allied activities. As the major proportion of Local Planning Area, Goindwal comprises of the rural settlements, so the majority of people living there are belong to agrarian economy. Some of the area also fall under agricultural revenue rasta land. This land use includes the area under agriculture, kachha roads, water bodies plantation orchards, dairy and poultry farms and the vacant land.

Table 4.39- Area under Agricultural use L.P.A. Goindwal

Type of development	Area (in hec.)	Percentage (%)
Agriculture	9679.72	90.512
Kachha Road	65.26	0.610
Water Bodies	720.93	6.742
Plantation & Orchards	140.07	1.309
Dairy & Poultry Farms	0.37	0.003
Vacant Land	77.21	0.722
Tube well sheds	10.94	0.102
Total	10694.5	100

Source: PRSC, Ludhiana

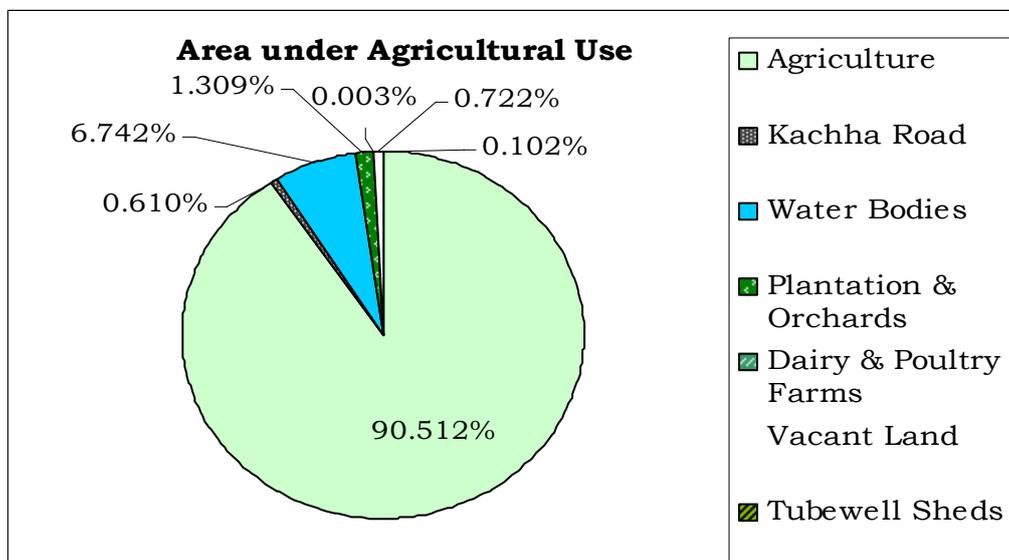


Fig. 4.18 Existing Agriculture land use, of Local Planning Area, Goindwal 2009

4.13 Strengths, Weaknesses, Opportunities, Threats (Swot)

From the study and analysis, which has been done till now in context of Local Planning Area, Goindwal, the present strengths and weaknesses as well as the future opportunities and threats have been worked out so that these can be considered while finalizing the proposals for the Local Planning Area, Goindwal. The following Strengths, Weaknesses, Opportunities and Threats for Local Planning Area, Goindwal have been identified on the basis of study of the existing conditions prevailing in the Local Planning Area, Goindwal.

Table 4.40 SWOT Analysis

Aspects	Strengths	Weaknesses	Opportunities	Threats
Physiography	It is suitable for agriculture as well as physical development.		River Beas acts as opportunity for the promotion of recreational tourism.	
Residential		Maximum residential areas come under unplanned growth.	Planned areas can be developed to accommodate the future population.	Lack of infrastructure in qualitative and quantitative terms.
Trade and Commerce		No hierarchy of commercial areas has been followed.	With the growth in the agriculture production, the rural marketing centre can be established to promote the economic level of the Local Planning Area, Goindwal and the inhabitants thereof.	Lack of designated space for informal activities during fairs and festivals creating traffic congestion in these areas.
Industrial	A big chunk of area is available for the purpose as large area has been already acquired for the development of Industrial Complex.	Various units of industrial complex have been shut down due to various reasons.	The industrial complex can be revived under the Industrial Policy of India, 1991.	
Physical Infrastructure		<ul style="list-style-type: none"> • Water supply is not adequately provided in all the settlements. • There is no sewerage 	Thermal Power Plant is being set up for the generation of electricity.	

		<p>system in the L.P.A. Goindwal.</p> <ul style="list-style-type: none"> • Solid waste management is not there. 		
Social Infrastructure	<p>Educational facilities have been adequately provided in Khadur Sahib.</p>	<p>Inadequacy in the provision of health facilities and recreational facilities.</p>	<p>The educational facilities can be further strengthened.</p>	<p>No fire station exists in the L.P.A. Goindwal or in the vicinity of the area.</p>
Traffic and Transportation	<p>The existing roads are in good condition of local and regional roads. No missing linkages are there.</p>	<p>There is only 1 rail link with Beas junction.</p>	<p>Land availability in there for creating new links and widening the roads.</p>	<p>Lack of parking spaces lead to bottlenecks during fairs and festivals.</p>
Tourism	<p>The existing religious landmarks are there for attracting the religious tourism.</p>	<p>Inadequate infrastructure for the tourists especially during fairs and festivals.</p>	<ul style="list-style-type: none"> • Lot of land is available in vicinity of regional places and potential tourist sites in Local Planning Area. • The presence of river Beas can be exploited for the promotion of eco-tourism in the Local Planning Area, Goindwal. 	<p>With the influx of tourist population, inadequacy of infrastructure and related facilities exists.</p>
Social and Economic Characteristics	<p>Sex ratio is balanced which shows that out migration is taking place.</p>	<p>The males of working age group are out migrating for employment.</p>	<p>The economic characteristics can be strengthened by upcoming industries.</p>	

	Literacy level is satisfactory.			
Environment	Buffer has proposed along the thermal plant to control air and noise pollution.	Land and soil pollution is taking place because of non-availability of solid waste management and sewerage system.		

PART- V.

VISUALISING THE FUTURE

As Master Plan, Goindwal is being prepared for the year 2031, so all the calculations regarding population projections and future requirements have been done for the year 2031. The latest existing census data regarding, demographic, social, economic etc aspects is available for the year 2001, as census surveys are done decade wise. Other data especially which has been procured from different government offices is mainly current i.e. of the year 2009. Keeping in view, both the limitations, the population projections have been made from the year 2001 whereas the year 2009 has been considered as base year for calculating the future requirements.

5.1 Population Projections

As mentioned above, the population projections of Local Planning Area, Goindwal have been for the year 2031, but five yearly. For projecting the future population for the above said periods, the average growth rate of previous three decades has been considered as future growth rate.

Table 5.1 Past Population Growth of Local Planning Area, Goindwal

S. No.	Year	Population in persons	Growth Rate (%)
1.	1971	29793	-
2.	1981	35,657	19.68
3.	1991	42,663	19.65
4.	2001	53,818	26.15

Source: Census of India 1981, 1991, 2001

The average decadal growth rate of above three decades =

$$\frac{19.63+19.65+26.15}{3} = 21.83\% \text{ (say 22\%)}$$

3

By Arithmetic Method:

The average five yearly growth rate of the above the three decades is = $\frac{22}{2} = 11\%$

By Geometric Method:-

Similarly for the geometric method the growth rate 26% is considered for the decades and for the projection of population for every five year 13% is taken.

Table 5.2 Five yearly population projections of LPA, Goindwal

S.No.	Year	Population projection (persons)		
		By Arithmetic method	By Geometric Method	Average
1.	2006	59,737	60,813	60275
2.	2009	63,290	64,748	64,019
3.	2011	66075	67,811	66,943
4.	2016	73,343	76,117	74,730
5.	2021	81,411	85,441	83,426
6.	2026	90,366	95,908	93,137
7.	2031	1,00,306	1,07,656	1,03,981

Source: Census of India 2001

Taking the average of both the methods, It is clear from the above table that the projected population of the years 2006, 2009, 2016, 2021, 2026 and 2031 comes out to be 60275, 64019, 66943, 74730, 83426, 93137 and 103981 persons respectively.

Note:-

1. The population for the year 2009 has been projected because all the data for other aspects received from various departments is for this particular year. So to interrelate both these aspects projections of population for this particular year have been made considering it as the base year.
2. The above projections are only based on assumptions that the future population of Local Planning Area shall be increased at the previous natural growth rate. But actually, it may vary due to the upcoming potentials because of Master Plan proposals regarding various land uses and economic activities and also due to some unforeseen conditions.

5.2 Requirements of Local Planning Area, Goindwal

The requirement for housing, infrastructural facilities, amenities, land uses etc, have been calculated on the basis of five yearly slabs of projected population. It is pertinent to mention here that the requirements calculated below are again based on the assumption of natural population growth of the Local Planning Area. *But these may vary from time to time as per the actual growth of population during these periods, proposals of Master Plan and actual development on ground based on these proposals.*

5.2.1 Requirements for Housing

The housing requirements of the Local Planning Area have been calculated for the base year of 2009, coming census year 2011 and subsequent 5 yearly periods, for their respective projected populations. Average family size has been assumed to be of 5.5 persons, equal to that of Punjab state.

Table 5.3 Requirement of Housing in L.P.A. Goindwal

Year 2001	Projected Population 2031 (persons)	No. of Houses Required
2009	64,019	11,640
2011	66,943	12,171
2016	74,730	13,587
2021	83,426	15,168
2026	93,137	16,934
2031	1,03,981	18,906

As per census 2001, the existing no of houses is 9115 units. The above table shows the houses required according to the projected population five yearly, which is 11640 units, 12171 units, 13587 unit, 15168 units, and 18906 units in years 2009, 2011, 2016, 2021, 2026 and 2031 respectively.

5.2.2 Physical infrastructure

A key issue related to the sustainable development of Local Planning Area, Goindwal is availability of minimum quality and quantity of physical infrastructure as per norms and standards. The projected or expected growth of population may indicate the inadequacies, deficiencies and severe pressure on existing infrastructure. So it is mandatory to work out the infrastructural requirements for the future projected population.

Although, Goindwal whose Master Plan is being prepared is a rural settlement but the norms of UDPFI which are being adopted are for urban settlement. Therefore the lowest ranges of these norms are being adopted for calculations of the projected infrastructural requirements. Because some settlements in the Local Planning Area if studied by the demographic and economic character, may emerge as urban settlements in future, if they are proposed with urban land uses or economic activities.

(i) Water Supply Requirements

Local Planning Area, Goindwal depends largely on ground water and river Beas, and other running water bodies for its share of raw water for domestic, industrial, agricultural and other purposes. For sufficient and sustainable supply of water for all purposes, it is essential to estimate its requirement at different points of time.

As per UDPFI guidelines, the water supply requirement is 70 liter per capita per day. (excluding the requirement of agricultural purposes). The following projections have been made to estimate the water to be supplied through water supply network.

Table 5.4 Requirements for Water Supply and Sewerage in L.P.A., Goindwal

S.No.	Year	Projected Population (persons)	Water Requirements (litres) [70 lpcd]	Water required for Sewerage System (litres) [80% of total water supply]
1.	2009	64019	44,81,310	35,85,064
2.	2011	66943	46,86,010	37,48,808
3.	2016	74730	52,31,100	41,84,880
4.	2021	83426	58,39,820	46,71,856
5.	2026	93137	65,19,590	52,15,672
6.	2031	103981	72,78,670	58,22,936

The above table reveals the requirements of water for domestic purposes, out of which 80% shall be used for sewerage system only.

(ii) Quantum of Projected Solid Waste:

As per above norms, on an average 0.45 kg solid waste is generated per person per day, But since the area is rural in character the standard has been reduced to 0.3 kg solid waste produced per person per day and hence projections for solid waste are as under:

Table 5.5 Quantum of Solid Waste

S.No.	Year	Population persons	Solid Waste (kgs per day) [0.3 kg/person]
1.	2009	64019	19,206
2.	2011	66943	20,083
3.	2016	74730	22,419
4.	2021	83426	25,028
5.	2026	93137	27,941
6.	2031	103981	31,194

The projected data in above table indicates that management of solid waste is required at huge scale not only in future but at present also. This process involves stages of waste i.e. generation, segregation and storage, waste collection, waste transfer/transportation, treatment, recycle, reuse, recovery and disposal. Major parts of solid waste, which are not recyclable especially silt has to be disposed off in sanitary landfills.

5.2.3. Social Infrastructure

The quality of life in an area depends upon the availability and accessibility to quality social infrastructure/community facilities in terms of health, education, sports, recreational, socio-cultural, communication, security and safety etc.

(i) Educational Facilities

Following the UDPFI guidelines, the requirements for educational facilities have been calculated in the following way for the projected population of 1,03,981 persons in year 2031;

Table 5.6 Requirements for Educational Facilities in Local Planning Area, Goindwal

Level of Facility	Norms	Requirement	Area per unit (Hec.)	Total Area (Hec.)
Primary School	(1 for 2500) for 500 students	40	0.08	3.2
Senior Secondary	(1 for 7500) for 1000 students	14	1.6	22.4
Integrated School (with hostel)	(1 for 1 Lac) for 1500 students	1	3.5	3.5
School for handicaps	(1 for 45000) for 400 students	2	0.5	1
College	(1 for 1 Lakh) for 1500 students	1	4	4

Source: UDPFI Guidelines

The above table shows the requirements of educational facilities of different hierarchical levels in Local Planning Area, Goindwal till year 2031 in terms of their respective numbers and required areas. In the LPA, 41 primary/elementary schools (3.2 hec. total area) 14 senior secondary schools (22.4 hec. total area), 1 integrated school with hostel facility (3.5 hec. Area) and 1 degree college (4 hec. area) required till the above said period.

(ii) Health Facilities

Based on the same norms, the health facilities of four levels have been calculated as requirement for the projected population of 1,03,981 persons in year 2031 as follows;

Table 5.7 Requirements for Health Facilities in L.P.A. Goindwal

Level of Facility	Norms	Area per unit (Hec.)	Required No.	Total Area (Hec.)
Dispensary	1 for 0.15	0.08 -0.12	6	7
Nursing Home	1 for 0.45	0.2-0.3 (25-30 beds)	1-2	0.5
Poly Clinic	1 for 1 Lakh	0.2-0.3	1	0.25
Intermediate Hospital	1 for 1 Lakh	1	1(having 80 beds)	1

Source: UDPFI Guidelines

It means till year 2031, total 7 hec. area is required for the establishment of 6 required dispensaries, 0.5 hec. area for 2 nursing homes, 0.25 hec. for 1 poly clinic and 1 hec. area for one 80 bedded hospitals.

(iii) Socio-Cultural Facilities

Requirements of various socio-cultural facilities have calculated the basis of UDPFI guidelines and norms followed in Delhi Master Plan, the result comes out to be as given below:

Table 5.8 Requirements for socio-cultural facilities in LPA, Goindwal (2031)

Type of Facilities	Norms UDPFI guidelines populations (persons)	Area per unit (hec.)	Required no	Total area required (hec.)
Community Room	1 for 5000	0.06	20	1.32
Community Hall and Library	1 for 15000	0.2	7	1.4
Recreational club	1 for 1 Lakh	1	1	1
Police Station	1 for 90,000	1.5	1	1.5
Police Post	1 for 40,000 to 50,000	0.16	2	0.32
Fire station	5 to 7 km radius Delhi Master Plan	1		1
	1 fire or sub station within 1 to 3 km to be provided for 2 lakh population		1	Area of in fire station with essential residential accommodation= 1 ha Area for sub fire station with essential residential accommodation= 0.6 hec.

The above table indicates the no's and area required for various socio-cultural facilities for upto the year 2031 according to which, 20 community rooms (1.32 hec. total area), 7 community halls/libraries (1.4 hec.), 1 recreational club (1 hec.), 1 police station (1.5 hec.), 2 police posts (0.32 hec.) and 1 fire stations have been projected to serve the excepted population of the above period.

5.2.4 Gaps and additional requirements of infrastructure

As the infrastructural requirements calculated above are the year 2031, many of the infrastructured facilities are available at present as described in chapter IV. Thus, only part of the total required no has to be provided to fulfill

the norms as their additional units. The calculations there of have been made as below;

Table 5.9 Gaps and future requirements of infrastructure

Type of Facility	Existing (2001)	Standard	Required	Total Requirement (2031)
Primary School	19	(1 for 2500) for 500 students	20	40
Middle School	3	(1 for 7500) for 1000 students— Secondary School	7	13
High School	3			
Senior Secondary	6			
Integrated School (with hostel)		(1 for 1 Lac) for 1500 students		1
School for Handicaps		(1 for 45000) for 400 students	1	1
ITI	3			
Polytechnic				
Degree College	1	(1 for 1 Lakh) for 1500 students		
For Girls	1			
Sub Centre	4			
Dispensary	0	1 for 0.15 lakh	3	
Primary Health Centre	1			
Mini Primary Health Centre	2			
Nursing Home		1 for 0.45	1	
Polyclinic		1 for 1 lakh		
Intermediate Hospital		1 for 1 lakh		
Ayurvedic Hospital	1			
Veterinary Dispensary	3			
Veterinary Hospital	6			
Parks	1			
Stadiums	2			

Sub Post Office	4			
Branch Post Office	8			
Police Post	2	1 for 0.4-0.5 Lakh	1	
Police Station	2	1 for 90,000		

In nut shell, it is concluded that most of the existing infrastructural facilities are inadequate and all the facilities are to be provided according to the respective calculated values, to fulfill the present gaps and future requirements.

5.3 Land use requirements

Before proceeding for preparation of proposed land use plan of Local Planning Area, Goindwal areas required for different purposes are worked out on the basis of projected population made in previous paras. For this purpose also, UDPFI guidelines have been considered as base for the calculation of projected areas of different land uses, as no norms have been prescribed by any organization for rural areas. Although, UDPFI guidelines are meant for urban areas, but the projected population of Local Planning Area, Goindwal is above 1 lakh persons. So, it can be considered equal to a town for this purpose and lower side norms of UDPFI can be applicable here, considering the rural character of the Local Planning Area.

(i) Residential use:

For calculating the housing requirements, following assumptions have been kept in view:

Table 5.10 Calculation of average plot area in Local Planning Area, Goindwal

Sr.No.	Description	Area in sq.yds.
1	Carpet area of average dwelling unit. 1 Living Room, 2 Bed Rooms, 1 Kitchen and other sub units etc.	156
2	Built up area inclusive of walls, verandahs etc	195
3	Plot area @ footprint to plot ratio of 0.65	263 sq.mts. say 300 sqm

Table 5.11 Five yearly residential area requirements for Local Planning Area, Goindwal (2009-2031)

Year	Projected Population in persons	No. of Families	Net Land Required in Hectares (Assuming 1 family per plot)	Gross Land Required (in Hectares)
2009	64,019	11,640	307	614

2011	66,943	12,171	321	642
2016	74,730	13,587	357	714
2021	83,426	15,168	399	798
2026	93,137	16,934	445	890
2031	1,03,981	18,906	495	990

The above table indicates the area requirements for residential purposes from now to year 2031 with 5 year slab on the basis of projected populations.

Note:

- *The number of households in the above table has been calculated based on the assumed family size of 5.5 members per family. Further assumption is made to accommodate one family per plot. The area of residential use has been calculated by the multiplying the area of one plot with the number of families.*
- *Keeping in view the present and future characters of the area, it is assumed that most of the residential development will be in the shape of plotted development.*
- *The gross residential area has been calculated by adding 50% more area to net residential area for provision of roads, parks, convenient shopping area, health, educational and utilities etc.*
- *The proposed residential area includes the requirements of all the sections of the society on average.*

(ii) Commercial Use

As mentioned in UDPFI guidelines (page 147), the area under commercial use should be 2-3% of the area keeping this in mind, the requirements for commercial area in Local Planning Area, Goindwal have been calculated as 11880 hec. Taking into consideration, the tourist potential in the Local Planning Area, the upper range of the above norm shall be taken to calculate the requirements for commercial area here.

So requirement of commercial area comes out to be = $\frac{3}{100} \times 11880 = 356.40$ hec.

Due to absence of designated commercial areas/zones in Local Planning Area, share of existing commercial area is only 0.21 % so 331.07 hec. additional commercial area is required to fulfill the requirements of local population and tourists.

Table 5.12 Area of Commercial Centers

Name of Centre	Area in sq. mts per 1000 persons	Number of shops
Cluster Centre	200	1 for 110 persons
Sector Centre	300	1 for 200 persons
Community Centre	500	1 for 200 persons
District Centre	-	1 for 300 persons
Total	1000	

Source: UDPFI Guidelines

(iii) Requirements for Industrial Land use:-

As per UDPFI guidelines, 10-12% area is required for industrial land use. Keeping in view the past character of Goindwal, again upper range of the norms has been considered.

Thus 12% of the total area of LPA shall be proposed for industrial use

$$= \frac{12}{100} \times 11880 \text{ hec.} = 1425.60 \text{ hec.}$$

But 84.98 hec. area is already under Industrial land use, so 1340.62 hec. additional area for this use is required.

IV) Recreational facilities

As per UDPFI, norms, area requirement for recreational land use is proposed to be from 12-15% for small towns. Taking into consideration the rural character of the local planning area, calculation is being done by taking its lower large i.e. 12% of total area. In this way, required area for recreational land use comes out to be 1425.60 hectare.

(V) Requirement for Traffic and Transportation

As it has already been discussed in detail in earlier there are three main roads merging at Local Planning Area, Goindwal town at different points. At present the traffic problem of Local Planning Area is not acute as compared to other major cities of Punjab but in future with the increase in population and economic activities of the area and when the area will be developed as tourist spot, from religious point of view, the main roads of the town will be over loaded. On the basis of broad studies conducted and for long term planning

there is need for providing various link and upgradation of existing where the potential of residential and industrial development is more. Following the UDPMI norms, the area requirements for this land use comes out to be 1188 hectare (10% of total area of LPA).

(vi) Land required for Social Infrastructure:-

The land requirement of social infrastructure for Health, Police, Fire, Education and Recreational facilities for Local Planning Area, Goindwal has been already calculated in para 5.2.3.

5.4 Constitution of Think Tank

Following the instructions of Chief Secretary, Punjab issued by D.O. Letter Dated 2-12-2008 received vide Chief Town Planner, Punjab's endst No. 9526-45 CTP(Pb)/SP 135 Dated 10-12-08, the *Think Tank* committee was formulated under the chairmanship of Deputy Commissioner, Tarn Taran and the convening of District Town Planner, Amritsar. Its first meeting was held at the office of Deputy Commissioner, Tarn Taran on Dated 04.06.2009. Besides various officials of the district administration, Tarn Taran, the representatives of gurdwaras at Goindwal Sahib and Khadur as well as kar sewa, Khadur Sahib participated in this meeting and contributed with their valuable officials and personal views and suggestions related with the preparation of Master Plan, Goindwal. Deputy Commissioner, Tarn Taran also instructed to formulate the sub-groups to discuss the various aspects elaborately. So, the District Town Planner, Amritsar contacted various members of the Think Tank personally or through her representative for any additional information and clarification regarding the data supplied and the views/suggestions given by them.

5.5 Vision

Keeping in view the requirements calculated for different elements of developments and facility index, the proposed settlement hierarchy of Local Planning Area, Goindwal has been worked out for the establishment of different land uses and activities in different settlements. For selection of settlements for promotion of different activities in them has also been made taking into consideration their past and present characteristics. Three settlements i.e.

Goindwal, Khadur Sahib and Fatehabad have been selected for these purposes (refer map 25) detail is given below;

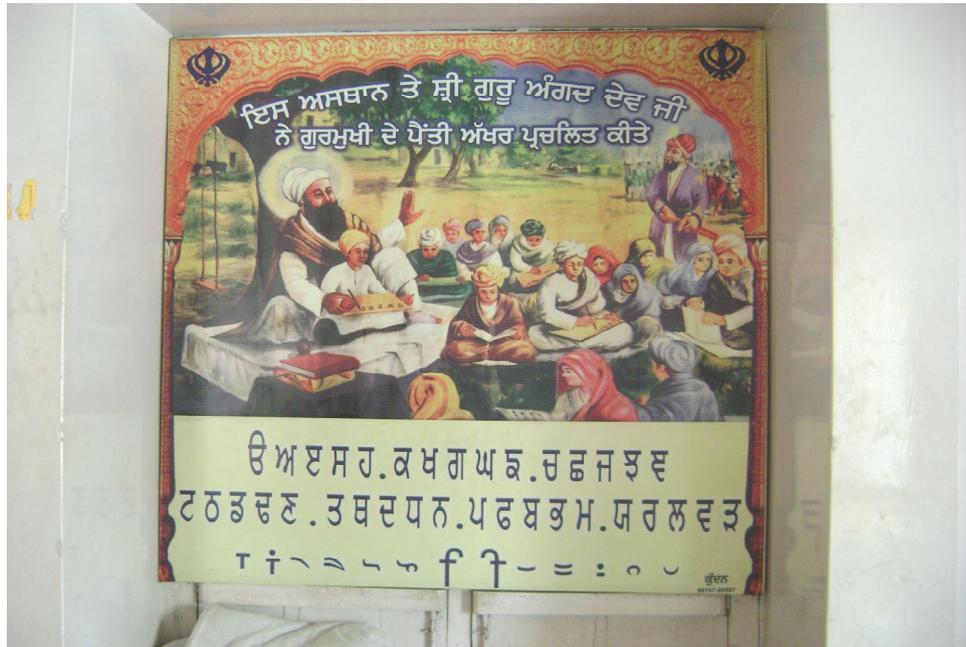
- Goindwal : Religious & Recreational, Tourism, Industrial
- Khadur Sahib : Religious, Educational and Administrative
- Fatehabad : Rural Marketing hub.

(i) Goindwal

- (a) Keeping in view the historical/religious as well as physiographic potential Goindwal is decided to develop as religious as well as recreational tourism hub in the Local Planning Area.
- (b) Presence of Industrial complex with its developed area and un-developed land acquired for the development of industries here, Goindwal finds a strong base to be chosen for the promotion of *industrial* activity in the Local Planning Area.

(ii) Khadur Sahib:

- (a) In the same way, considering the presence of historical/religious importance places in Khadur Sahib, it is also considered to be promoted parallelly as tourist spot for religious tourism.
- (b) 'Gurmukhi Lipi' has its roots in Khadur Sahib as it was its birth place. Guru Ajgad Dev Ji used to teach Gurmukhi to the children in Khadur Sahib. So its historical significance reflects it as an educational centre. Presently also, it has important educational institutes which are serving the whole region. So, this settlement is proposed to be developed as an institutional hub.

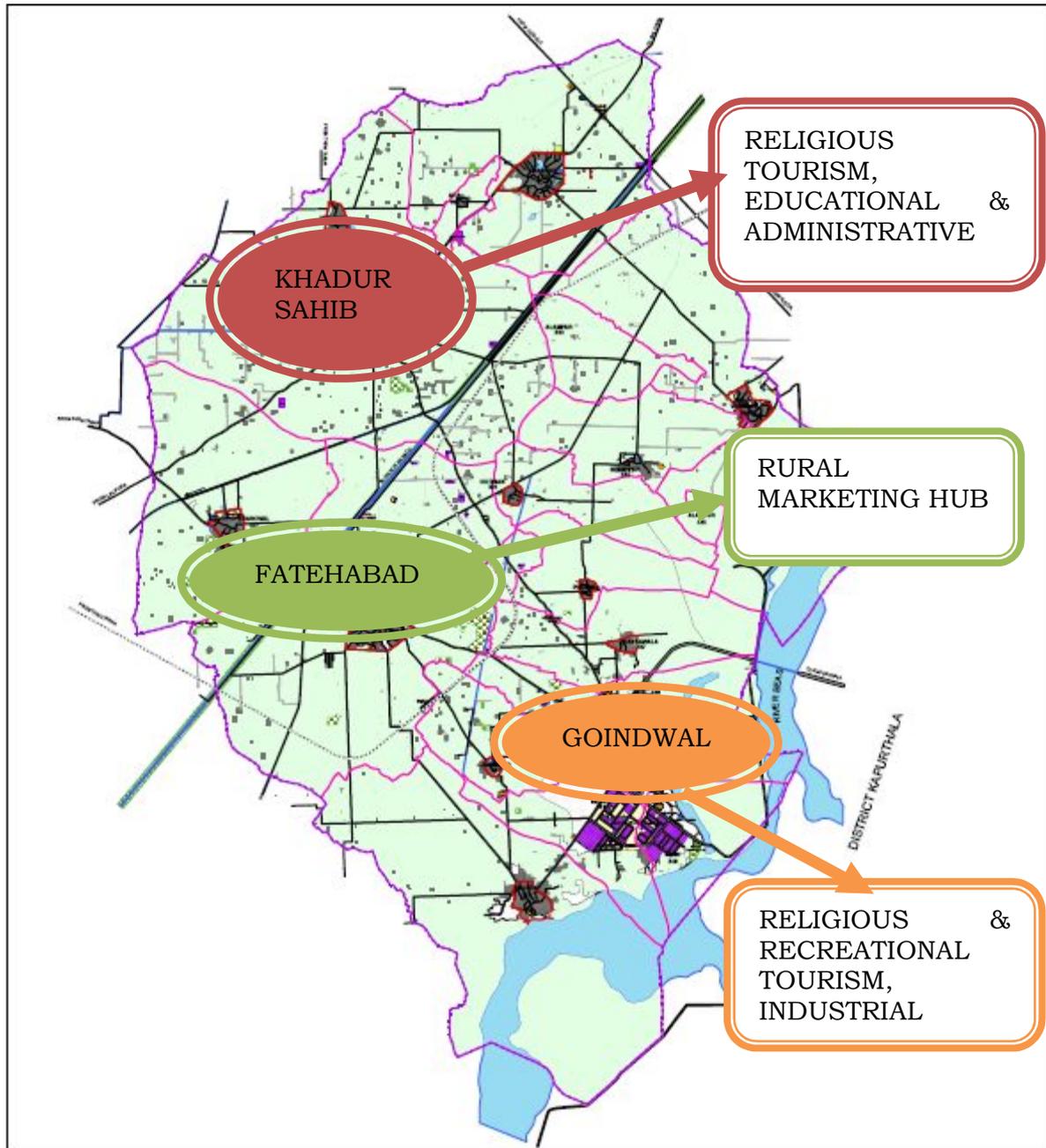


Guru Angad Dev Ji Introduced Punjabi Lipi at Khadur Sahib

- (c) On the same time, Khadur Sahib is tehsil as well as block level headquarter and other important government offices are also present here. So, Khadur Sahib is decided to be proposed as *administratively* important settlement in the Local Planning Area, Goindwal.

(iii) Fatehabad

Watching the market commercial character of the settlements, which serves not only the adjoining villages but region at large, it is proposed to be developed as rural trade centre, which will act as the marketing centre for the rural population in its surroundings.



Map-25 VISION 2031

PART VI

THE MASTER PLAN, GOINDWAL

6.1 Components of the Master Plan, Goindwal

The Master Plan is an important instrument for guiding and regulating development of a area over a period of time, contributing to planned development both conceptually and operationally, it covers the following components;

- i. The master plan shall contain proposals and allocation of land for various uses such as residential, commercial, industrial, recreational, public/semi-public, traffic and transportation etc.
- ii. It proposes a network of major roads to have better traffic/circulation system for the present and the future.
- iii. It also identifies 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.
- iv. It shall include zoning regulations and development controls for regulating development within each zone.

6.2 Objectives of Master Plan, Goindwal

The long-term vision and the mission statements would require spatial land use planning, infrastructural planning, financing and implementation, effective management and operation of infrastructure services, and regulating and enforcing plan proposals. The main goal of the Master Plan is to create spatial landuse planning framework to achieve the vision of LPA, Goindwal. Following objectives have been framed for preparing the Master Plan, Goindwal:

1. To promote the tourism and to develop the related infrastructural facilities to promote the area as a tourist attraction.
2. To identify the man made and natural heritage and to exploit the natural potential for the recreational activities to promote the recreational tourism.
3. To effectively plan and manage the traffic and transportation routes mainly during fairs and festivals by creating tourist circuit between the important historical and religious places within Local Planning Area, Goindwal.
4. To minimize haphazard, unplanned and sub standard growth and development of the LPA and to achieve planned growth to create healthy environment by making land allocation in environment friendly manner.
5. To promote the multi-nodal development through planned dispersal of employment-generating activities.

6. To strengthen the basic infrastructure and to provide the allied activities favourable for the revival of industries which will help in the development of economic base of the Local Planning Area.
7. To make the lands available for public purposes and to provide adequate physical as well as social infrastructure and distribute it uniformly and rationally to ensure better livability and healthy living environment.
8. To minimize travels within the Local Planning Area by creating self-contained and self-sufficient communities and by maintaining the work-place relationship.
9. To plan L.P.A. Goindwal as an integral and prime unit with strong forward as well as backward linkages and to provide efficient transportation network, so as to ensure safety and mobility of traffic within and outside Local Planning Area and intra city traffic and to upgrade the road network of L.P.A., by proposing a well defined system of the road hierarchy.
10. To provide the adequate parking spaces in terms of their location and space as an integral part of the religious, historical, recreational, commercial, industrial and institution planning and development process.
11. Imposition of zoning and other regulatory measures to control the unregulated and haphazard development in the various landuse zones.
12. To provide eco-friendly environment in the light of proposed thermal power plant and industries in Local Planning Area.

6.3 Scope of the Master Plan, Goindwal

Master Plan, Goindwal comprises of the following main components:

- (i) Proposed Land Use Plan and Transport Network.
- (ii) Zoning Regulations

The component (i) shall include the different areas and proposed land uses/zones, hierarchical proposals for road and rail network, whereas component (ii) covers permissibility and non-permissibility of compatible and non-compatible uses respectively and development controls for various activities/land uses.

Since the proposals given in the Master Plan are very detailed and down to zonal level, separate zonal development plan shall not be prepared for Local Planning Area, Goindwal.

6.4 Planning Considerations for Master Plan, Goindwal:

In the light of above objectives, the proposals for various land uses and activities in the Local Planning Area, Goindwal have been given with the following considerations:

- (i) Existing Landuse plan drawing no DTP (A) 5/2009 Dated 29-10-2009 (see map No 26) has been taken as the base for the preparation of Master

Plan and its analysis given in chapter IV has also been taken into consideration while proposing the future land uses and activities.

- (ii) The past and present status and characteristics of the settlements in the Local Planning Area have been considered to propose the land uses in and around these settlements.
- (iii) The existing land built up areas mainly have been kept as such and new proposals have been made in the light of existing set up and physical features existing in the Local Planning Area.
- (iv) As per section 80 of The Punjab Regional and Town Planning Development Act (amended) 2006, the act is not applicable in the *lal lakir* areas of the rural settlement so they have not been touched with and no physical change and new proposal is given in the areas falling within the limits of *lal lakir* boundaries of the villages falling in Local Planning Area, Goindwal.
- (v) As most of the historical places/land marks fall in the *lal lakir* areas of their respective villages, so no physical proposals or development controls are given for such places but only tourist facilities are being provided for them as near to them as possible.
- (vi) Land allocation for various land uses has been made in such a way that residential areas are given in proximity of the work areas like industrial area, thermal plant, institutional area and rural marketing centre.
- (vii) Well-defined zones are earmarked for various land uses to control the haphazard and unregulated development in the Local Planning Area.
- (viii) Taking into consideration the nature of present traffic, its expected future inflow and the status of the settlements to which these are connected, the hierarchical status is given to each road and their road widths and cross-sections are proposed in proportion to their respective hierarchy.
- (ix) Road linkages and traffic routes are proposed taking into consideration the religious areas, other activity areas and the halting areas for the vehicles.
- (x) As the maximum inflow of the tourists is more during fairs and festivals, which are held in the religious gurudwaras at Khadur Sahib and Goindwal, the parking facilities are required maximum during these days only. So to avoid the under utilization, misuse and encroachment of the proposed parking areas, these are further allowed to be used by the recreational tourists and the administrative/political/social gatherings as well.
- (xi) The site for recreational tourism is selected in such a way that the underutilized but potential areas falling between the river Beas and stagnant water body near Goindwal shall be used for this purpose.

- (xii) To make each component of the Local Planning Area environment friendly, the land use components have been provided in such a way that they are compatible to each other, where compatibility factor reduces, the consideration of green belt proposed within thermal power plant site is taken and green buffer has been provided to separate industries and logistic park from village settlements, existing built up area and proposed residential areas.
- (xiii) The existing physical features, roads, revenue rastas and the musteel boundary have been taken in consideration while earmarking various land use zones so that it is easy to implement the proposal on ground.
- (xiv) In the same way, for the upgradation of the roads and to generate the links where these are missing, the existing road infrastructure and revenue rastas have been preferably utilized to minimize the complications and cost of the acquisition process for this purpose.
- (xv) Permissibility and non-permissibility of various activities in different land use zones shall be clearly indicated through the zoning regulations.

6.5 Proposed Landuse Plan, Goindwal

After going through the detailed studies, pertaining to Local Planning Area, conducted by the office of District Town Planner, Amritsar and discussions held at different levels within Department of Town and Country Planning, Punjab as well as *Think Tank* and also based on analysis, assumptions and projected population of L.P.A., Goindwal, the proposed land use plan 2031 has been prepared, in which different land use zones have been earmarked such as residential, commercial, industrial, institutional, recreational, public uses and agricultural etc.

After examining the various possibilities, the aforesaid land use categories have been adopted for the proposed land use plan. The other concerned aspects of these different land uses have been detailed out in the following sub-heads. The proposals & landuses mentioned below may be read with *Zoning Regulations*, specified later in the chapter. *Since the proposals of master plan are very detailed and down to the zonal level, separate Zonal Development Plans shall not be prepared for the Local Planning Area, Goindwal.*

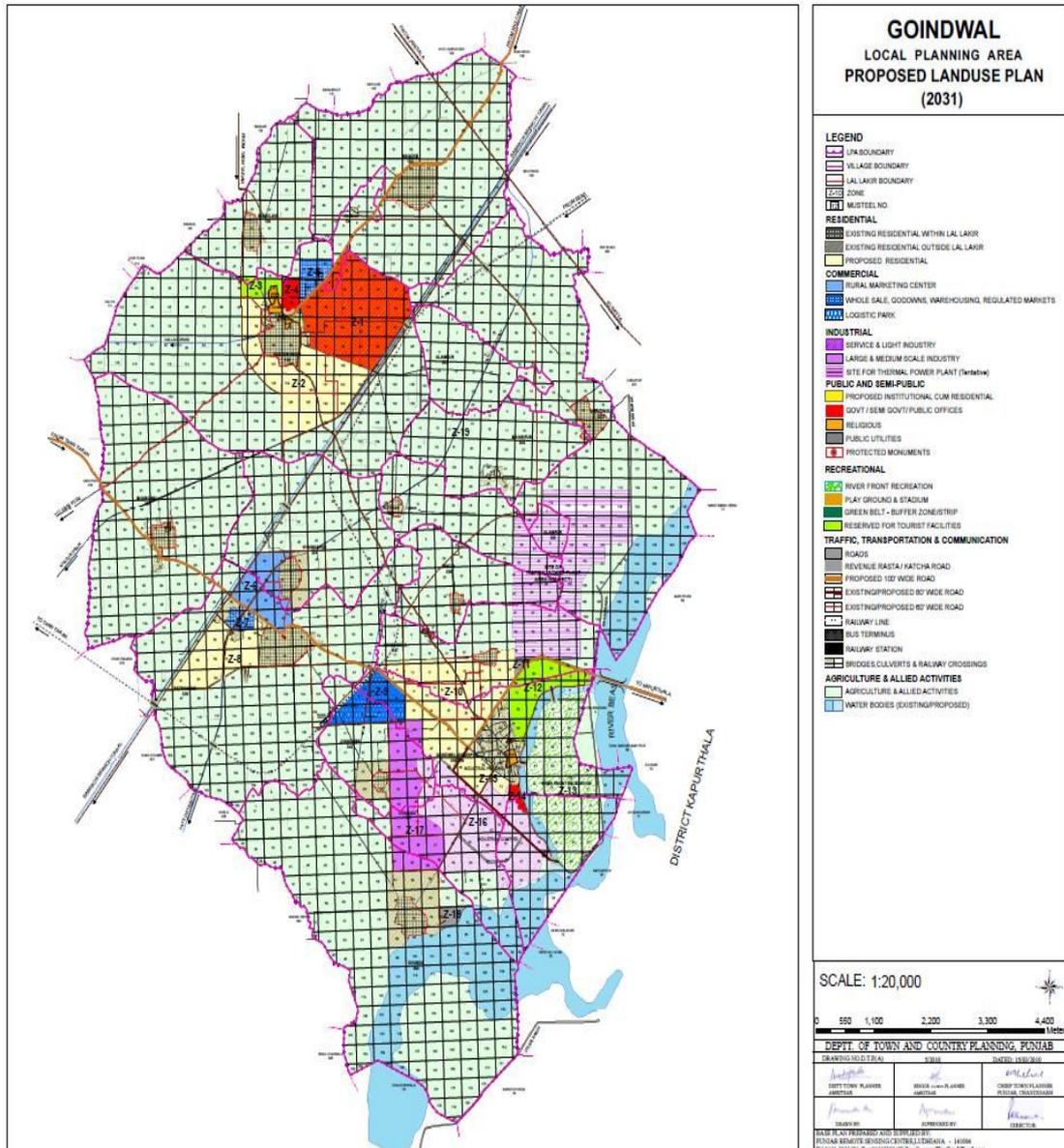
It is pertinent to mention here that land use proposals are based on requirements but the exact area calculated for requirements has not been followed while proposing each land use, i.e. the proposed area for each land use varies actually from requirements due to some factors, which are given below:

- (i) The requirements of various land uses of LPA, Goindwal have been calculated based on the norms of Urban Development Plan Formulation and Implementation (UDPFI) Guidelines for small towns. But in Local Planning Area, Goindwal no settlement is of the level of even small town

- i.e. all the settlements falling in LPA are rural. Therefore, the areas under proposals may vary from calculated requirements.
- (ii) The concept given in the vision part of the chapter also affects the actual requirements of different activities, as in this part it has been decided to promote prominent settlements of Local Planning Area for different activities. This factor is also responsible for the variation of actually proposed areas from their calculated requirements.
 - (iii) As mentioned in planning considerations part, while earmarking various land uses the revenue rastas or physical features have been kept into mind, so the areas designated for various land uses may vary while giving the practical shape to these zones.
 - (iv) Although, the land uses could have been earmarked in smaller areas for calculated requirements, which are taken as base but actually these have been earmarked in comparatively larger areas. This approach has been adopted to cover all the potential sites, where any type of development can take place in later stage under the influence of landuses in its vicinity. In this way, the effort has been made to check the un-regulated and haphazard growth.

6.5.1. Distribution of Proposed Landuses:-

As discussed earlier in the chapter, the existing pattern of settlement structure has been broadly adopted while preparing proposed landuse plan of LPA, Goindwal, in which pattern of continuous growth of Goindwal and other important settlements spreading over adjoining areas has been kept in view, while formulating proposed landuse plan and proposed road network of Local Planning Area, Goindwal as shown in proposed landuse plan of Local Planning Area, Goindwal Drg. No. DTP (A) 5/2010 Dated 15-3-2010.



Map. 26 Proposed Land use Plan of L.P.A. Goindwal

The details of the proposed areas is given in the table 6.1 below:

Table 6.1 Proposed Landuse distribution in, L.P.A., Goindwal 2031

S.No.	Landuse Components	Area (hec appro)	%age
1	Residential	1214	10.24
2	Commercial	208	1.75
3	Industrial	884	7.46
4	Public/ Semi-Public uses	313	2.64
5.	Transportation & Communication	212	1.80
6	Recreational/Tourism	376	3.18
7.	Agriculture/allied activities	8641	72.93
	Total	11848	100

Note: The figures of areas under various land uses proposed in Master Plan, Goindwal have been calculated by **Punjab Remote Sensing Centre**, Punjab Agriculture University, Ludhiana and may vary from actual ground situations due to technical factors.

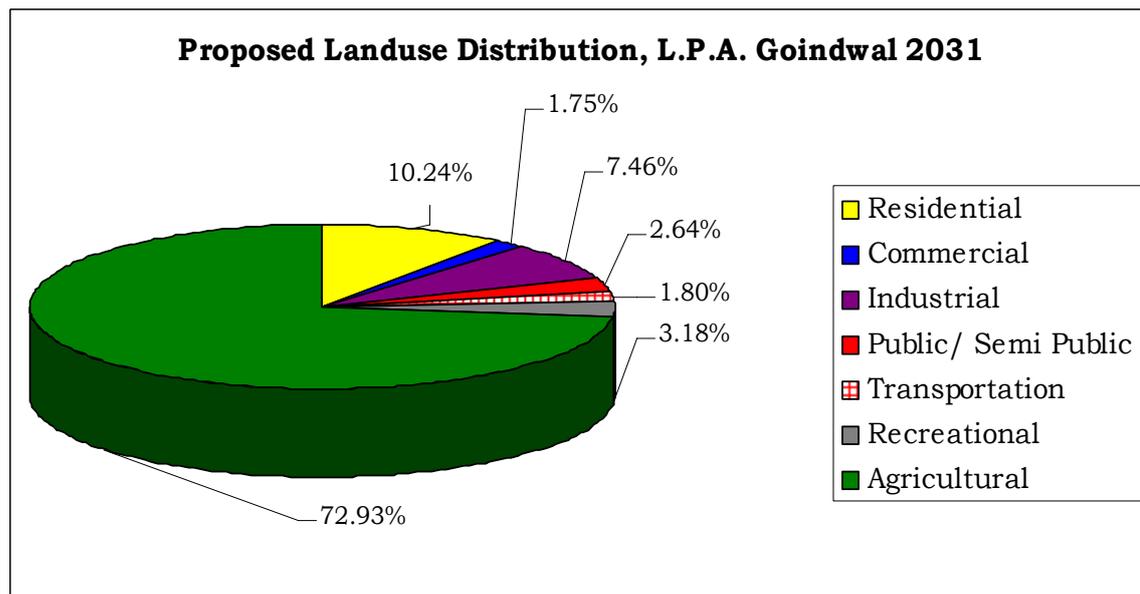


Figure 6.1 Proposed Land use Distribution 2031

It is clear from the table 6.1 and fig 6.1, that more than 70% of the total area of Local Planning Area has been proposed for agriculture and allied activities, whereas the share of each proposed urban land use is less than 30%. In addition to this, map 26 shows that the urban land uses as well as tourist and economic activities are mainly proposed to be distributed in and around three settlements i.e. Goindwal, Khadur Sahib and Fatehabad.

It is also important to mention here that the landuses proposed as above have been divided into various zones from Z-1 to Z-19, for their better

identification even by the non-technical persons and non-professionals. The detail of the proposed land uses and their zones is given below:

6.5.2 Residential:-

Residential area is a major component of any developed area, so in Local Planning Area, Goindwal also, proposals for residential areas have been given the prime priority as no other use is complete without residential use in or around it. The proposals for residential from have been given basically in three forms i.e. *Newly proposed residential areas, zones, existing/expanded village abadis outside Lal Lakir and village abadis within lal lakir*. The proportion of each of these types of residential land use is mentioned in table 6.2. In proposal part of Local Planning Area, Goindwal Drg No. DTP(A) 5/2010 dated 15-3-2010, (map 26) the residential areas/ zones have been proposed in the following ways and the other uses compatible with these and their respective permissible zones have been mentioned in the Zoning Regulations part.

Table 6.2 Proposed Area under Residential use in L.P.A. Goindwal

S.No.	Components	Area (hec)	Percentage
1.	Proposed Residential Area	627	51.65
2.	Existing/Expanded viallge Abadis (outside Lal Lakir)	273	22.49
3.	Existing Village abadis (within Lal Lakir)	314	25.86
	Total	1214	100.00

Source: PRSC, PAU, Ludhiana.

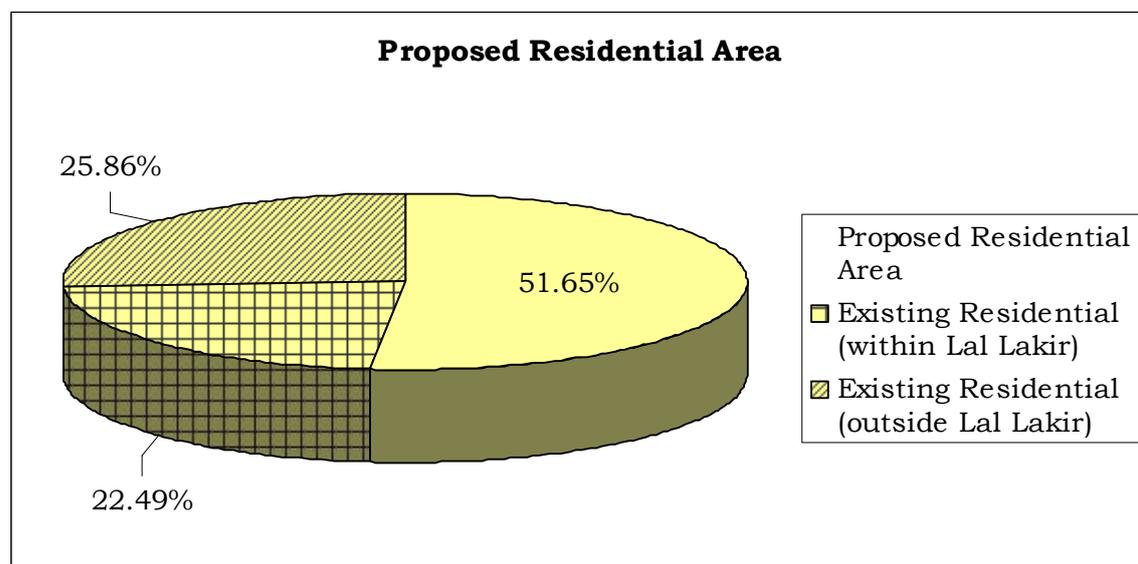


Fig 6.2 Proposed Residential Area

- (i) **Proposed Residential Areas/zones (Z-2, Z-8, Z-10 & Z-15):-** The prime areas in terms of their proximity to important routes and activity areas, the above zones have been proposed to be developed as residential

zones with population density of 100 PPH. The description of each such zone is given below:-

- a) **Z-2** : - This zone falls in the revenue boundaries of the village Khadur Sahib and is physically bounded in north by Z-3 by settlement of village Khadur Sahib and existing Khadur Sahib-Alampur road in east and south with proposed 80' wide road along Khadur drain and in west along existing revenue rastas from musteel no 34 downward upto musteel no. 175.

This zone has been chosen for such proposal due to its proximity to the proposed *institutional cum residential zone* (Z-1), to maintain the work place relationship. Moreover, this zone falls on both sides of Tarn-Taran-Khadur Sahib-Goindwal road, so this area has a natural tendency of development. As per table 6.2 area of this zone as 220hec.

- b) **Z-8**:- This zone falls within the revenue boundaries of village Fatehabad. It is bounded by existing revenue rastas from three sides and Sabhraon branch canal in its west, which constitutes an area of 109 hec. The criteria for earmarking this zone is to maintain work place relationship in the light of proposed rural marketing centre and existing and proposed wholesale activity nearby.

- c) **Z-10**:- This zone has been earmarked within the revenue boundaries of village Goindwal-Akbarpur and Hansawala and is bounded by existing approach road to village Hansawala in its northern direction, by Goindwal-Kapurthala road in its south-east side, by part of Z-16 in South and Z-17 & Z-9 in west.

This site has been earmarked for such proposal again taking into consideration the workplace relationship with thermal power plant as well as existing and proposed industrial areas. This site has a great potential of development in future due to its locational advantage with above features and the existing settlements and abutting on the important Goindwal-Kapurthala and Tarn-Taran-Goindwal roads. Area of this pocket is 260 hec.

- d) **Z-15**:- This zone covers the proposed industrial housing and area lying vacant in existing built up area of Goindwal adjoining it. This area has potential to be developed for residential purposes due to its locational potential and proximity to industrial area. In the industrial housing part of this zones, plotted development is already existing to some extent. This zone falls in the revenue limits of village Goindwal-Akbarpur and its area is 38 hec.

(ii) Existing village abadis outside Lal Laker.

For the compact and organized growth of villages falling in Local Planning Area, Goindwal, the extended belts around these settlements are proposed. This proposal has been given in two forms i.e. physical and regulatory, the detail is given below:

- (a) **Physical extension:** - In the light of proximity of the villages Jhander and Dhunda with the proposed industrial areas (Z-16) and (Z-17), and village Khawaspur with the proposed Rural Marketing zone (Z-6), the extended belts around these villages have been shown on the proposed landuse plan of LPA, Goindwal. This provision has been made with the vision of catering the housing needs of people belonging to economically weaker sections, working in industrial and rural marketing areas. The activities permissible within these extended areas shall be discussed in zoning regulations part of this chapter.

The detail of these proposed expansions is given as below:-

- *Village Khawaspur* :- Expansion of this village is proposed to be developed in areas of musteel no 55, 66, 72 and 80 of village Khawaspur and musteel no 24 of village Fatehabad.
- *Village Jhander*:- Expansion of their village is proposed in areas of musteel no 30, 31, 35, 36 of village Jhander and musteel no 1 of village Khakh.
- *Village Dhunda*:- Expansion of this village is proposed in the areas of musteel no 57, 58, 59, 63, 64, 65, 77, 79, 87, 88 and 89 of village Dhunda. Besides these the existing built up extended beyond these musteels have been retained as such.

The ancillary or allied activities which are permissible within these areas shall be discussed in zoning regulations part of this chapter. Area under this land uses calculated as 273 hec.

- (b) **Extension of villages under regulatory measures:** - The extension of villages which are not covered under the physical proposals of various land uses in proposed land use plan has been proposed under regulatory measures. This extension is permissible within their surrounding areas of agriculture zone. The extent upto which these areas can be developed for residential and its ancillary uses as an extension of their existing settlement, is finalized on the basis of the projected population for year 2031. The villages with projected population (2031) upto 2000 persons are proposed to be developed upto 50 m around its phirni or lal lakir. This distance is kept 100 m and 200 m for the settlements of villages having projected population (2031) from 2000-5000 persons and more than 5000 persons respectively. Any compatible development can take place in such areas with the previous permission of competent authority. The description of controls and regulations in such areas is given in zoning regulations part. The village wise description of this proposal is given in the table below:-

Table 6.3 Proposed Extension of village in Local Planning Area, Goindwal.

S. No.	Name of Village	Projected population (2031) (persons)	Area extension permissible in m
1.	Fatehabad	14,626	200
2.	Nagoke	12,112	200
3.	Bharowal	7296	200
4.	Verowal	3984	100
5.	Hansawala	3464	100
6.	Muglani	3404	100
7.	Hothian	2517	100
8.	Biharipur	1944	50
9.	Pindian	1760	50
10.	Khakh	1097	50
11.	Alampur	553	50
12.	Alia	516	50
13.	Miani	168	50

Notes: The Villages covered under above table excludes the villages which have been covered under para 6.5.2 (ii) (a) as well as the villages which have been surrounded by the proposed landuse zone from all their four sides i.e. Goindwal-Akbarpur & Khadur Sahib.

(ii) Existing Village abadis within Lal Lakir:-

In LPA, Goindwal total area proposed under such use comes out to be 314 hec, (refer table 6.3) which is same as its existing quantum. Lal Lakir exists in 11 out of total 19 villages of the Local Planning Area. In this part of residential areas, no physical proposals or development control regulations have been proposed in Master Plan, Goindwal rather *special zoning regulations* shall be prepared for the development and regulation of the areas falling within lal lakir or phirni of the villages falling in LPA, Goindwal, because of the reason mentioned in para 6.4 (iv).

6.5.3 Commercial:-

The major commercial activity which is proposed in land use plan of the Local Planning Area, Goindwal is of the nature of whole sale activities like rural marketing centre, wholesale markets (mandis), godowns & warehousing and Logistic park etc. As per table 6.1, the total area under this use is 208 hec. The distribution of the wholesale commercial activities proposed in the Local Planning Area are as given below:

Table 6.4 Proposed Area under Commercial uses in L.P.A. Goindwal

S.No.	Components	Area (Hec)	Percentage
1.	Rural Marketing Centre	86	41.35
2.	Wholesale, Godowns, Warehousing & Regulated Markets	42	20.19
3.	Logistic Park	80	38.46
	Total	208	100.00

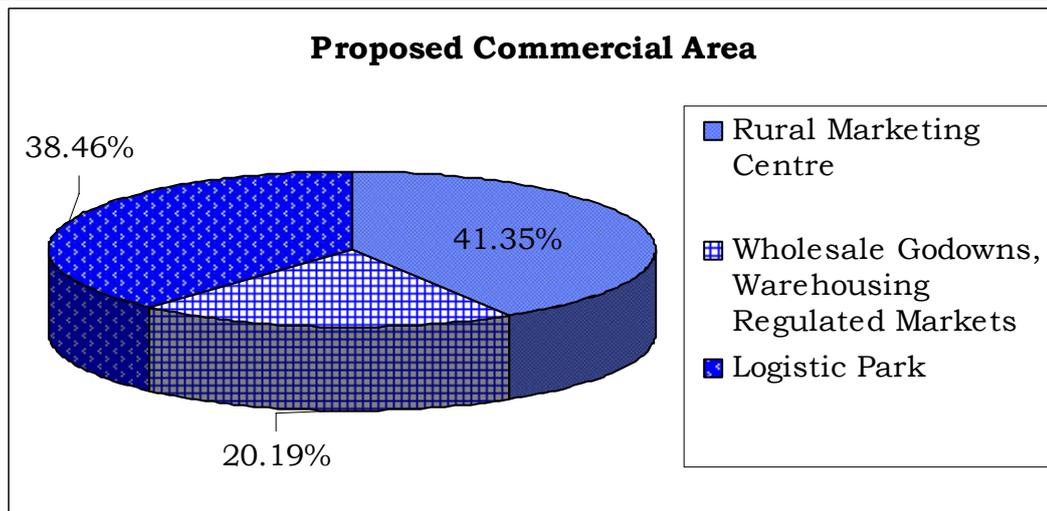


Fig 6.3 Proposed Commercial Area

- i) **Rural Marketing Centre (Z-6):-** As conceived in the vision part of the Chapter V, a Rural Marketing Centre has been proposed in the revenue boundaries of village Fatehabad and Khawaspur. It is bounded by Sabhraon branch canal in its west, upper edge of musteel 53 & 54, in north eastern edge of musteel 54 and 71 of village Khawaspur and its settlement, then along musteel 40 of village Fatehabad and in South it touches the Tarntaran-Goindwal road. Existing godown of FCI has been accommodated in it. Elements of this rural marketing centre, which are proposed to come here for the development of this village as rural nodal village are given in table 6.13
- ii) **Wholesale/Godowns/warehousing:-** In proposal part of Master Plan, Goindwal, the existing Mandi at Khadur Sahib, as well as existing mandi, open yard and FCI godowns at Fatehabad have been accommodated as such. But as mentioned in para 4.5.2 (1) the under developed and non-functioning Focal Point at village Bharowal is proposed to be closed. The land acquired for it can be used for other permissible public uses/activities. The detail of the newly proposed sites is given below.
 - a) **Z-5:-** This site falls in Khadur Sahib village and covers areas of musteel no 18, 19 and 20 musteel no 29, 30 and 53 upto existing Khadur Sahib-Nagoke road and constitutes an area of 28 hec.
 - b) **Z-7 :-** This zone falls in revenue boundaries of village Fatehabad and is bounded by existing built up in west, proposed 80' wide road in South-west,

Southern parts of musteel 37 and 38 in South, boundary of proposed residential in east and existing built up and Tarntaran-Goindwal road in its north. It includes areas of existing Mandi and sub-yard and constitutes an area of 14 hec. This proposal has been given to accommodate and expand the present activity at this site and due to nearness to the site of Rural Marketing Centre.

iii) Logistic Park (Z-9):-

The major motive of proposing this zone at the particular site is to facilitate the warehousing and transportation activity, which is the inseparable part of industrial land use. The zone is also easily accessible from the site of Rural Marketing centre (Z-6) at Fatehabad through newly proposed 80' wide road and then through Tarn-Taran-Goindwal Road. As the logistic activities generate allot of traffic, so it is proposed to be develop near the railway station, so that fast turn over storage and transportation and distribution of goods can be done efficiently.

The zone is bounded by existing railway line in north-western side, by Tarntaran-Goindwal road in north-east, by eastern edge of musteel no 18 and 22 of village Goindwal-Akbarpur in its east and Southern edge of musteel no 22 of Goindwal. Akbarpur as well as musteel Southern edge of musteel no 12, 11, 10, 9 & 8 of village Jhander. This site is proposed to have warehousing and truck terminal along with their allied activities, in the light of which following activities or functions are proposed or permitted in this zones have indicated in table 6.13.

iv) Retail Shopping:- The sites for the retail shopping centre/areas have not been earmarked in the proposal part, rather these shall be covered in the zoning regulations as per their permissible zones.

v) Informal Commercial Activity:- Sites for the informal commercial activity have also not been proposed in proposal part of the Master Plan, Goindwal, as these are not much needed in this area, rather its requirement arises mainly at the time of fairs & festivals only. The permissible areas/sites and zones for these activities shall be described in zoning regulations part.

6.5.4 Industrial:-

As concluded in the Part-IV that the industrial complex established in Goindwal could not run successfully for a long span of time. Its development not only stopped, but declined due to various factors mentioned in the above part. But in the proposal part of the Master Plan, Goindwal, the development of industry has been given major priority after the religious tourism. Because development of any region or area is directly proportional to the economic activities present and expected here. Mere earmarking of the land uses cannot help in developing the areas, rather these should be encouraged to develop as per given proposals by inviting the economic activities. With this view, revival of industrial complex and proposal of additional area for industry have been proposed along with proposing the policy matter to make it successful.

According to data in table 6.5, the total area proposed under this use is 884 hec. The detail of areas proposed for industry is given below:

Table 6.5 Proposed Area under Industrial use in L.P.A. Goindwal

S.No.	Components	Area (Hec)	Percentage
1.	Service & Light Industry	286	32.36
2.	Large & Medium Scale Industry	171	19.34
3.	Proposed Site for Thermal Power Plant	427	48.30
	Total	884	100.00

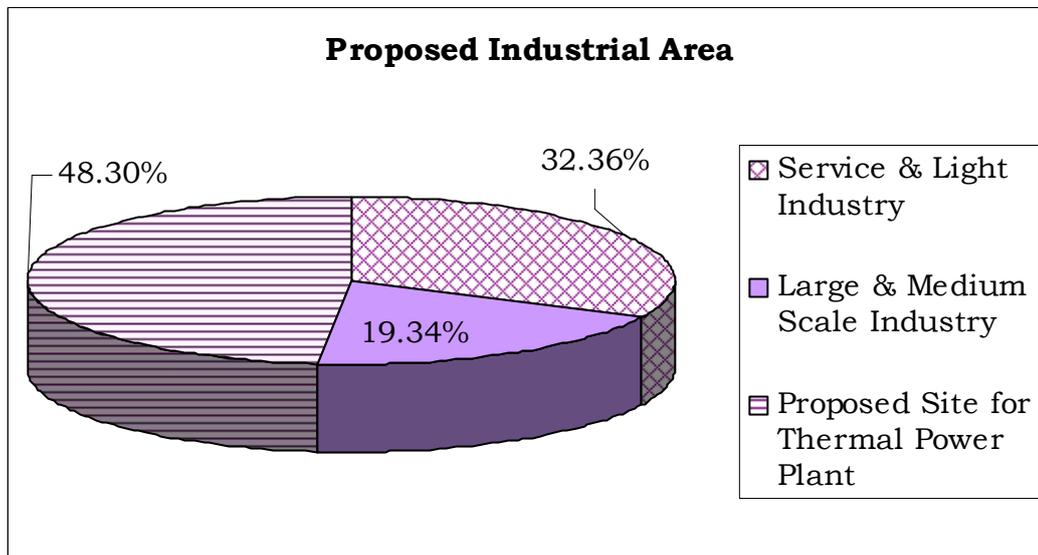


Fig 6.4 Proposed Industrial Areas

(i) Service and light industry (Z-16):-

This zone has been proposed mainly in already acquired land for industrial complex with expansion of area in Southern direction upto lower edge of musteel no 32, 33, 34, 35, 36 & 37 of village Khakh. The total area of this zone is 286 hec (refer table 6.5) The zone falls in the revenue areas of villages Goindwal, Akbarpur, Miani, Khakh and Jhander. The industries already established constructed residential units and other public & semi public buildings have been retained in this zone as a part of industrial complex and permissible uses have been covered in zoning regulation as a part of this chapter.

ii) Large and Medium Scale Industry (Z-17):-

It has been proposed in west to the Z-16. It is bounded by part of Logistic park (Z-9) and proposed residential zone (Z-10) in north, again by part of Z-10 and Z-16 in east and proposed 80' wide round in South & West. Its area 171 hec, falls in the revenue boundaries of villages Goindwal-Akbarpur, Jhander, Khakh and Dhunda.

iii) Proposed Thermal Power Plant

The proposal for the development of proposed thermal power plant is retained as such as it is proposed by the concerned department and no new physical alteration or change is being proposed within its site. Its site has been tentatively earmarked on Proposed Land Use Plan, Goindwal. (maps26) The exact site is not possible to earmark here as the Existing Land use Plan Drawing No DTP (A) 5/2009 Dated 20-10-2009 is not on khasra numbers. It is proposed to be planned as self sufficient unit. The environmental considerations, while proposing other sites and features in the Master Plan have been taken care of. The additional infrastructure in the form road providing better transportation facilities for loading/unloading and working people, has been proposed in the Master Plan.

(iv) Industrial Policy: As this area is economically backward due to its proximity to border and locational disadvantages, with the successful revival/establishment of these zones, the economy of not only the Local Planning Area but of the whole region can be enhanced. But as already discussed, the establishment of the industry is not only a physical phenomenon but it cannot be successfully run without some good economic support. Besides the above physical proposals for industries, the *Government Policy* has also recommended for industrial zones, which can be as given below:

- The kind of industry to be promoted here which can use the locally available agriculture products as raw material in the form of crop yields especially wheat, rice and oil to some extent.
- Low cost marketing facilities should be provided for the sale of their finished products.
- Economic incentives should be given to the owners.
- Power supply and other infrastructural facilities should be provided to the maximum required extent.

v) Other Industrial Units:- The permissibility/non permissibility for other industrial units in their respective zones shall be covered in zoning regulation part.

6.5.5 Public/Semi-Public:-

As already discussed, many of the public/semi-public facilities are available in the Local Planning Area, Goindwal but these are not sited as per planning techniques. So, to propose and distribute these as per their nature and characteristics and provide the additional facilities in this Local Planning Area, various zones have been earmarked for this purpose as discussed below:

Table 6.6 Proposed Area under Public/ Semi Public use in L.P.A. Goindwal

S.No.	Components	Area (hec)	Percentage
1.	Proposed Institutional cum Residential	252	80.51
2.	Govt./ Semi Govt./ Public Offices	25	7.99
3.	Public utility site	19	6.07
4.	Social Cultural & Religious	17	5.43
	Total	313	100.00

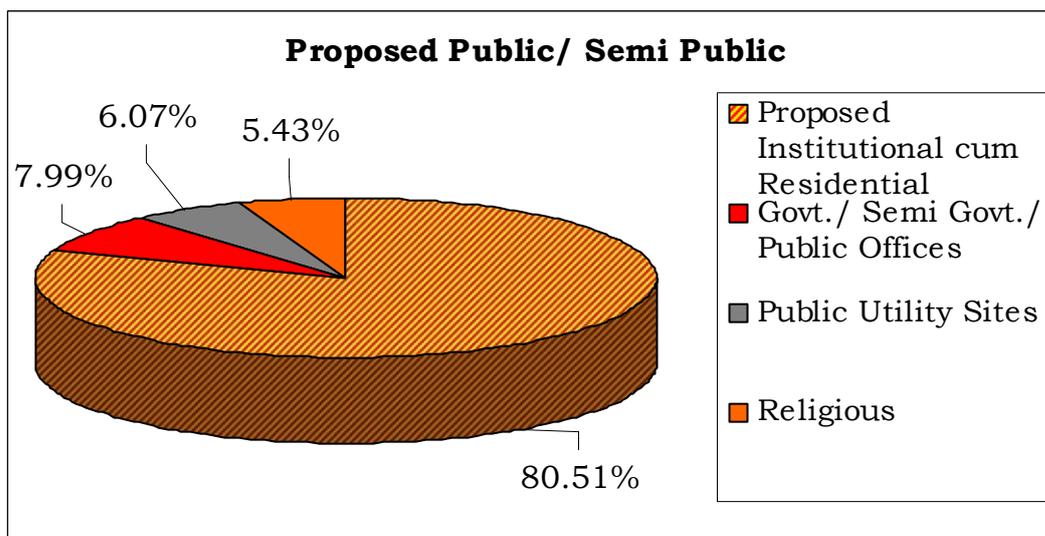


Fig 6.5 Proposed Public/ Semi- Public Area

i) Proposed Institutional cum Residential zone (Z-1):-

Keeping in view the inherent characteristics of the settlement, this zone has been proposed to promote the technical and higher educational facilities in the Local Planning Area. Area of this zone is 252 hec as mentioned in table 6.6 and it partly covers revenue areas of villages Khadur Sahib and Alia. It is physically bounded by common revenue limits of villages Khadur Sahib and Nagoke in north-east, proposed 80’ wide road along Khadur drain in east, Khadur Sahib-Alampur road in south and existing settlement of Khadur Sahib in west while Nagoke-Khadur Sahib road in north-western sides. It includes the areas of existing Guru Angad Dev College and ITI.

The basic purpose of proposing this zone with mix land uses of institutional and residential is to promote the higher and technical educational facilities but without the risk of underdevelopment of this zone. Moreover, if institutes of the above level practically do not come here for establishment, due to any unforeseen reason, it can be developed otherwise. The other uses, which shall be permissible in this zone, shall be discussed in zoning regulations in detail.

(ii) Public & Semi Public Landuse:-

This kind of activities are proposed in two pre-dominant settlements of Local Planning Area i.e. Goindwal & Khadur Sahib. The description of each of these two proposed sites is given as below:

(a) Administrative cum Public/Semi-Public (Z-4) :-

In the light of the administrative (tehsils & block headquarter) status of the Khadur Sahib, this zone has been earmarked for the development of administrative and other similar public/semi-public activities. This area falls in part of musteel 51 of Mughlani, musteel 31 and part of musteel 52 of Khadur Sahib lying vacant behind the existing built up. The site is suitable to be developed as per given proposal as it is situated exactly opposite to the existing Bus stand and has approach from Goindwal-Khadur Sahib and Khadur Sahib-Khilchian road. The activities permissible in this zone are discussed in zoning regulation part. It partly falls in villages Khadur Sahib and Mughlani. Its area is 17 hec as per the table 6.6.

(b) Govt./Semi- Govt./Public offices (Z-14):-

This zone measuring area of 8 hec as per table 6.6 is bounded by existing built up, service and light industry and water body on all its three sides. It is proposed to provide the public/semi-public facilities for Goindwal and falls in village Goindwal-Akbarpur and Miani. Goindwal being an important settlement in the region requires public facility buildings to serve its surrounding influence area. The activities permissible in this zone shall be described in the zoning regulations.

(iii) Public Facilities/Utilities:-

In indicated in para 4.11 of part IV, there are no big chunks of government land available in the whole LPA except one site of 12.22 hec in village Goindwal-Akbarpur, which falls in proposed river front recreational zone (Z-13) and locationally, it is not suitable for the proposal of public utility sites. Hence, land under private ownerships have been proposed for this purposes.

Two sites for establishment of public utilities have been earmarked in the Local Planning Area, Goindwal as follows:

- a) **Z-11:-** The another one is Z-11, which falls in between proposed site of thermal power plant, residential zone Z-10 and Goindwal-Kapurthala road. This site is proposed mainly for electric-substation with the view of requirement of additional electric supply for development works of thermal power plant. Area of the site is 5 hec. Other activities permissible in this zone shall be discussed in table 6.13
- b) **Z-18:-** This site is proposed to be developed as disposal treatment/recycling site for solid waste and sewage etc. From the discussions of DTP, Amritsar with the officers of PSEB, Tarn Taran it is concluded that there is additional load of electricity at present in village Dhunda side. So in the light of proposals of industries on this side in Master Plan, Goindwal, this requirement further increases because of its increased demand for industrial

area. Therefore, to meet the future requirements of electricity demand, the electric sub-station is also proposed in this side. Besides this, as required in future, any other similar activity is also permitted to come in this site. The activities permissible in this zone in table 6.13 and area under this zone 14 hec.

(iv) Protected monuments:-

In Local Planning Area, Goindwal there exists one historical monument in village Fatehabad which has been declared as protected monument by Archeological Survey of India. As per guidelines of this department, there are instruction regarding prohibiting constructions/ mining operations upto a distance of 100m in prohibited area and 200m further beyond it in regulated area from the protection limits of the monuments. But this protected monuments as well as 100 m prohibited and 200m regulated area fall in the lal lakir area of village Fatehabad. So no regulatory or prohibitory measures have been proposed in Master Plan, Goindwal at this stage rather such proposal shall be descriptively given in zoning regulations of lal lakir areas which are proposed to prepared separately.

(v) Others Public/Semi-Public facilities:-

No special zones have been earmarked for other public/semi public uses rather the journal educational facilities, medical facilities, community facilities, social cultural & religious facilities and public services facilities & utilities are covered in zoning regulations part and detail of these is given there w.r.t. permissibility or non-permissibility of these facilities in various zones.

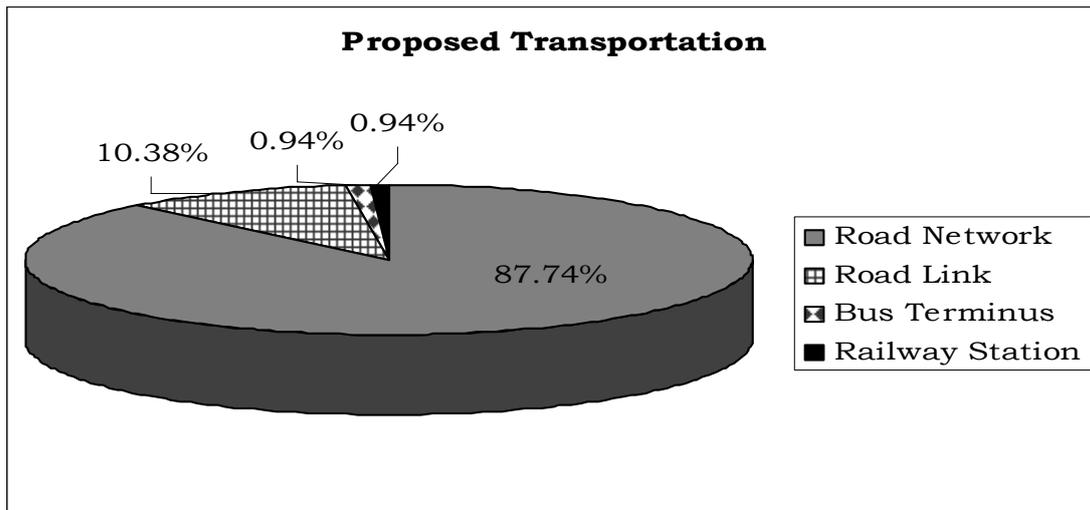
6.5.6 Traffic and Transportation:-

As already discussed in detail in study part that in Local Planning Area, Goindwal the existing traffic and transportation network is not geometric in pattern but is serving the region well as per its present requirements upto the satisfactory level. But taking into consideration the future population projections, proposed land uses and expected no of religious as well as recreational tourism in future, the traffic and transportation network has to be strengthened to cope up the future requirements.

Transportation system is proposed in such a way 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 networks occupy the significant roles in the transport sector in LPA, Goindwal. The LPA, Goindwal already has good access through roads. The condition of the existing roads is also good. But the upgradation and widening of roads is required to meet the future requirements. The maximum use of existing roads and revenue rastas is made while proposing the road network to avoid or minimize the land acquisition cost and process. The table 6.7 shows the distribution of breakup of various elements of traffic and transportation.

Table 6.7 Distribution of proposed Area under Transportation use in L.P.A. Goindwal

S.No.	Components	Area (hec)	Percentage
1.	Road network	186	87.74
2.	Road Link	22	10.38
3.	Bus Terminus	2	0.94
4.	Railway Station	2	0.94
	Total	212	100.00

*Fig 6.6 Proposed Transportation Area***(i) Road Network**

Entire Local Planning Area, Goindwal is proposed to be served by well defined road hierarchy in order to cater the traffic needs of the Local Planning Area population especially to visit them from living areas to work areas and vice versa as well as to facilitate the tourists. This would include redefining of existing road network and creating the new network, wherever necessary.

The proposed road network for Local Planning Area, Goindwal has been developed in concurrently with its proposed land use pattern. The proposals are mainly of following four types:

- a) **Upgradation of Existing Roads:** - Upgradation of various existing roads has been proposed to fulfill the future requirements of the LPA in terms of its traffic and transportation needs. The proposal of upgradation of existing roads avoids the acquisition process and cost to some extent, although this proposal does not provide a geometric shape to the road network in the LPA, Goindwal.

Table 6.8 Detail of roads to be upgraded and their hierarchy

Sr No.	Name of the Road	Road Type	R.O.W. (ft)	Remarks
1.	Khilchian to Khadur Sahib	R1	100' (30m)	To provide a strong link to the Local Planning area from G.T. Road (N.H.1) so that it can be connected to other important cities like Amritsar, Jalandhar, Ludhiana, Chandigarh and even outside Punjab.
2.	Tarn Taran—Fatehabad—Goindwal	R1	100' (30m)	To provide an efficient road network between important settlements of Local Planning Area, Goindwal, Khadur Sahib and Fatehabad as well as the whole L.P.A. with the district headquarter Tarn Taran.
3.	Goindwal—Kapurthala	R1	100' (30m)	To link Goindwal and other settlements of L.P.A. with other regional settlements in its east such as Sultanpur Lodhi, Kapurthala, Jalandhar etc.
4.	Khadur Sahib—Goindwal	R2	80' (24m)	To provide for the tourist circuit for the tourists visiting both to Khadur Sahib and Goindwal.
5.	Road along Sabraon Branch from Fatehabad leading to Chohla Sahib (within LPA Goindwal)	R2	80' (24m)	To provide an efficient network of the tehsil headquarter (Khadur Sahib) with its jurisdiction area and L.P.A.
6.	Jandiala—Rayya road (passing through L.P.A.)	R2	80' (24m)	To provide the regional link of LPA, through G.T. road NH-1 on both ends.
7.	Khadur Sahib—Vain-poin	R3	80' (24m)	To provide link of Khadur Sahib, a tehsil level headquarter with the district headquarter Tarn Taran with jurisdiction area

(b) Creating New links: Mere upgradation of the existing roads does not fulfill the purpose completely. So the new links as shown in table 6.8 have been provided to connect/inter link various regional roads, important settlements of LPA as well as the proposed activity areas.

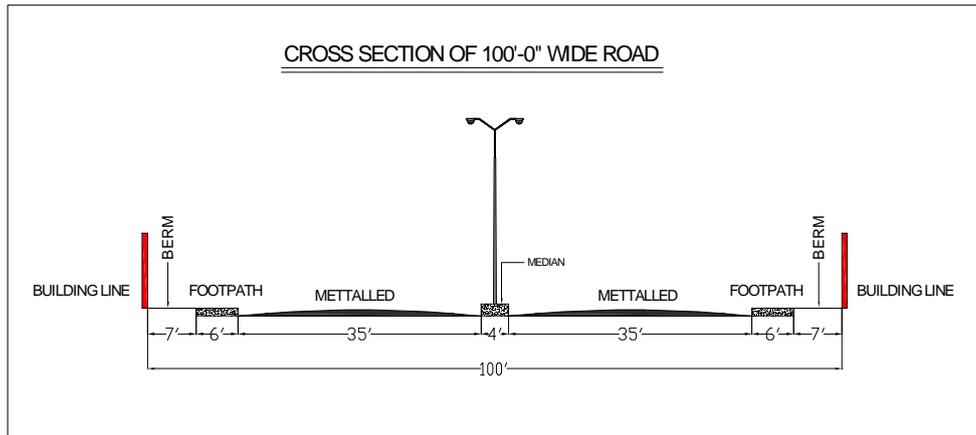
Table 6.9 Detail of Proposed New Links and Hierarchy wise

Sr No.	Name of the Road	Road Type	R.O.W. (ft)	Remarks
1.	From Tarn Taran-Khadur Sahib road near village Muglani crossing Sabraon Branch upto thermal plant and then passing along industrial area near Goindwal upto public utility site (Z-18)	R2	80' (24m)	This new link shall facilitate the Thermal Power Plant for loading and unloading of materials as well as transportation of people working here. It also acts as the ring road for the residential area proposed around Goindwal. Besides this, it provides the link to the proposed Logistic Park and the industrial areas.
2.	From Tarn Taran Khadur Sahib road near village Muglani upto Sabraon Branch near village Khawaspur	R2	80' (24m)	To provide new link to connect Tourist facility area residential area (Z-2) and major activity area of Local Planning Areas.
3.	Road along Sabhraon Branch from Jandiala-Rayya road.	R2	80' (24m)	To provide the major arterial link to the whole Local Planning Area especially to Khadur Sahib and Fatehabad from district H.Q. Tarntaran and G.T. Road (NH.1)
4.	From Sabhraon branch canal to railway station logistic park crossing Tarantaran-Goindwal road.	R2	80' (24m)	To interlink the important economic activities of Local Planning Area i.e. Rural Marketing centre, Logistic Park and Industrial zones for providing for transportation links to these activities from major settlements outside Local Planning Area.
5.	From Railway station Goindwal to Tarn Taran Goindwal road	R2	80' (24m)	To create link between railway station and other routes of transportation in Local Planning Area.

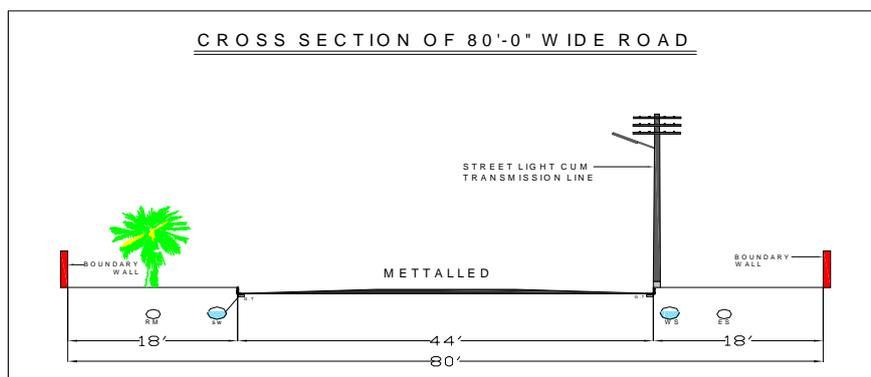
(c) Sector Roads: - Sector roads within each zone have been proposed in the proposed land use map as no zonal development plans are being prepared for this Master Plan. Roads of 80' (24m) and 60' (18m) width have been earmarked in proposed land use plan, while earmarking 80' or 60' wide sector roads, the

formation of closed circuits/loops, existence of road network and revenue rastas have been taken into consideration.

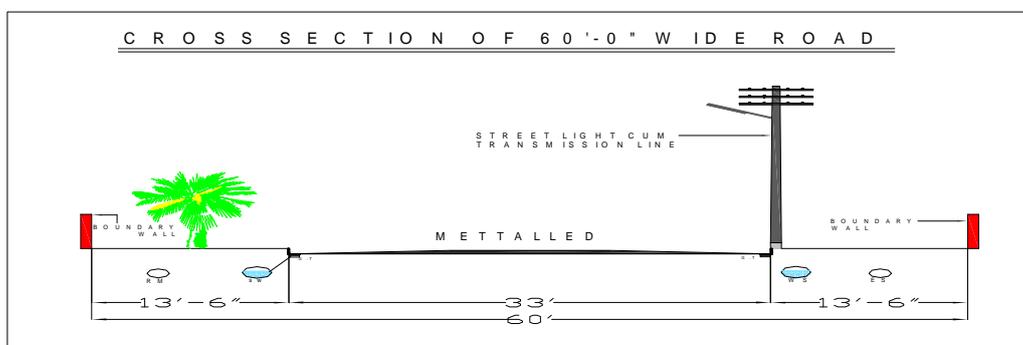
(d) Cross-sections:- As discussed above, roads with road width of 100', 80' & 60' respectively have been proposed. Besides this, minimum 40' wide roads have been made permissible in various landuse zones designated in Local Planning Area, Goindwal. These roads are proposed to be developed with well designated cross-sections to give them good aseptic look. The cross sections of roads proposed or permissible as mentioned in above are given below:



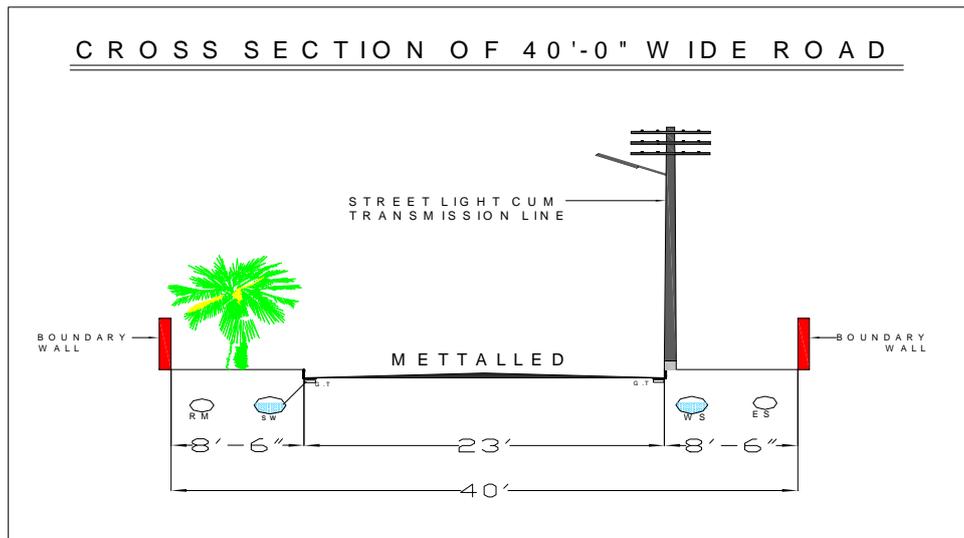
Map 27 Showing the cross-section of proposed 100' wide road



Map 28 Showing the cross-section of proposed 80' wide road



Map 29 Showing the cross-section of proposed 60' wide road



Map 30 Showing the cross-section of proposed 40' wide road

(ii) Railway Network:-

The existing railway Goindwal-Beas railway has been retained as such in Master Plan, Goindwal. Its extended part upto Tarntaran, which is under construction is also kept as such. In addition to it, in future, if any railway link including link to thermal power plant permissible to development in agriculture zone.

(iii) Terminals:-

a) Bus Terminals: - As the Existing Landuse Plan-Goindwal (2009) (map 24) shows that, there are two bus terminals in the Local Planning Area. i.e. one is at Goindwal and other in Khadur Sahib. Both the terminals are proposed to be kept on the same site with the same size, as there is no proposal of shifting of these bus stands given due to the following reasons;

- Both these bus terminals are located at central locations of the respective settlements.
- Both are having good approach on main roads leading to their respective settlements and other important settlements outside the LPA.
- If required in futures the bus terminus at Khadur Sahib is allowed to be expanded within area of Z-1 and bus terminus at Goindwal can be expanded within the available space in existing built up around it as indicated in zoning regulations part.

c) Railway Station:-

The existing railway station which falls in village Fatehabad mainly and its small part is in village Jhander, is also proposed to be kept as such in terms of location and area. As due to the upcoming activities in various zones, no of passengers and frequency of goods as well as passengers is likely to increase, so if required, it can be expanded in agricultural zone nearby.

(iv) Bridges/ Culverts/ Railway Crossing

All the existing bridges/culverts or railway crossings where any road crosses Sabhraon branch canal, Khadur Sahib, Patti distributory, minor, railway line or any other linear elements have been kept as such in new proposals of Master Plan, Goindwal. The new bridges and culverts are proposed as under:

- a) **Bridges:** - Three new bridges over the water body to connect the Z-13 with the Local Planning Area have been proposed. The first one is from Z-12, other near gurdwara Baoli Sahib and third in Miani village over Dhussi bandh.
- b) **Culverts:** - Culverts have been proposed on all the newly proposed roads where these cross any water body especially Sabhraon branch canal as earmarked on proposed land use plan of LPA, Goindwal.
- c) **Railway Crossings:** - The railway crossings shown in the existing land use plan have been retained as such and no new crossing has been proposed as no such proposal is required on the proposed railway line.

Note:-

Any bridge, culvert or rail crossing is required to be developed in future, it shall be permissible transportation landuse areas.

6.5.7. Tourism/Recreational activities:-

As already concluded in the existing situation part, the Local Planning Area has a great potential for tourism. Till now, in this area, tourists visit to the historical gurudwaras, they spend a short time here and go back. The tourists, who come from far away places like to stay/halt at nearby cities such as Amritsar or Jalandhar because supporting infrastructural facilities are not available in the Local Planning Area, which can encourage them to stay for long time or spend the nights here. In this way, presently tourism activity leaves only a little impact on the economy of Local Planning Area.

However, in Master Plan, Goindwal (2031), the enhancement of tourist activity is the priority after the revival of industry. Therefore, there is effort to

propose other activities of the interest of tourists and facilitate them with supporting infrastructure. Besides these the recreational facilities for local population are also proposed in Master Plan, Goindwal. In the light of this, the proposals for tourism have been given in following two parts:

Table 6.10 Proposed Area under Tourism activities use in L.P.A. Goindwal

S.No.		Area (Ha)	Percentage
1.	River Front Recreation	266	70.74
2.	Reserved for tourist facilities	107	28.46
3.	Stadium/playground	3	0.80
	Total	376	100.00

Source: PRSC, PAU, Ludhiana

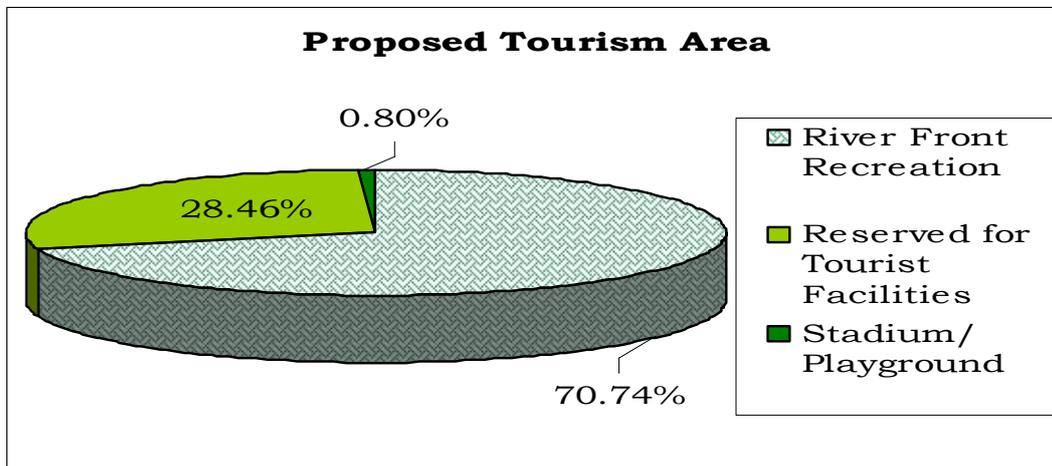


Fig 6.7 Proposed Area under Tourist activities

(i) Recreational Tourism: - (Z-13)

Besides the religious tourism as mentioned above, Goindwal has a great potential for tourism due to its physiography. The existence of river Beas on its sides gives a great opportunity to develop the river front from tourism point of views. The area for River Front Recreation measuring approx 266 hec, as mentioned in table 6.10 has been earmarked at the best available site for this purpose, falling in the revenue boundaries of villages Goindwal-Akbarpur and Miani to get maximum out of natural resources present here. The site is bounded by river Beas, on right and another stagnant water body on left. From top and bottom, this water body is connected with River Beas to ensure the flow of water in this water body, which can be utilized for water activities like boating etc. The area of this zone is proposed to develop as natural recreational activities like forest camping area, safari, lush green ground, artificial lake etc. Only few and restricted commercial activities shall be permissible in terms of refreshment centres/coffee shops/food plaza along with public toilets. This area

also includes the provision of stay for the tourists by providing small huts or tents etc, the description thereof is given in zoning regulation part.

(ii) Religious Tourism:-

Study part of this topic concludes that most of the historical places in Local Planning Area, Goindwal are situated in viallges Khadur Sahib, Goindwal and Bharowal. However, table No. 4.29 reveals that the number of tourists visiting daily and on special occasion to the historical places is maximum in Khadur Sahib and Goindwal. But as already mentioned, most of the historical gurudwaras and other religious places fall in the lal lakir area of their respective villages, so the physical proposals and development controls cannot be enforced around them. As per section 56 of the Punjab Regional and Urban Planning and Development Act (Amended) 2006, the act is not applicable in these areas. But still while preparing the master plan, the comfort and convenience of the tourists visiting to these religious places cannot be compromised with. Therefore, provisions for the tourists have been made by proposing the zones reserved for tourist facilities. The description is given below:

(a) Site reserved for tourist facilities at Khadur Sahib (Z-3):-

The zone includes the areas of musteel 52 and part of musteel no 53 (upto proposed 80' wide road) of village Mughlani as well as areas of musteel no 33, 32 (excluding area under Gurdwara Tapiana Sahib) and part of musteel 34 (upto proposed 80' wide road) of village Khadur Sahib.

The site for this particular purpose has been selected here to facilitate the visitors to the historical Gurudwaras at Khadur Sahib, especially on special occasions. However, to avoid the underutilization of this area, it is also proposed be used for public, administrative, religious, social, political and others events and functions also. The detail of major activities, which are permissible, is given in zoning regulations. Area under this zone is 21 hec.

(b) Site reserved for Tourist facilities at Goindwal (Z-12):-

This zone is bounded by Goindwal-Kapurthala road in its north, ITI college in east, 80' wide proposed road along water body in south and existing built up in its west. Total area of the zone is 86 hec. The site partly falls in the revenue areas of village Hansawala and Goindwal-Akbarpur.

The selection of this particular site for such activity is made due to its nearness to the historical gurudwaras and proposed site for river front recreation (Z-13). Like Z-3, this site is also proposed to be used for other public, administrative, religious, social, political and other events, but without its defacement. The detail of permissible activities is given in zoning regulations.

(iii) Sports activities

The existing stadium at Khadur Sahib has been retained as such. But this is not sufficient to serve the projected population (2031). So, keeping in view the future requirements of sports and other recreational facilities of Local population various activities have been made permissible in various landuse zones. The description thereof is given in zoning regulations part.

(iv) Buffer zone/green belts

It is proposed to segregate the incompatible land use proposed in Master Plan, Goindwal to regulate the development along transportation network and for proper maintenance/preservation of water bodies the green buffers are proposed to be developed along all these linear elements. The description of such proposals is given in zoning regulations.

No green buffer has been proposed around the site of thermal power plant in the light of the proposed 100' wide green buffer proposed inside its own side as per the Environmental Assessment Report prepared by GVK, Hyderabad, agency which is establishing this thermal plant.

6.5.8. Agriculture and Allied Activities (Z-19):-

Table 6.11 Proposed Area under Agriculture use in L.P.A. Goindwal

S.No.	Components	Area (Ha)	Percentage
1.	Agriculture	7946	91.96
2.	Water Bodies (Existing/ Proposed)	695	8.04
	Total	8641	100.00

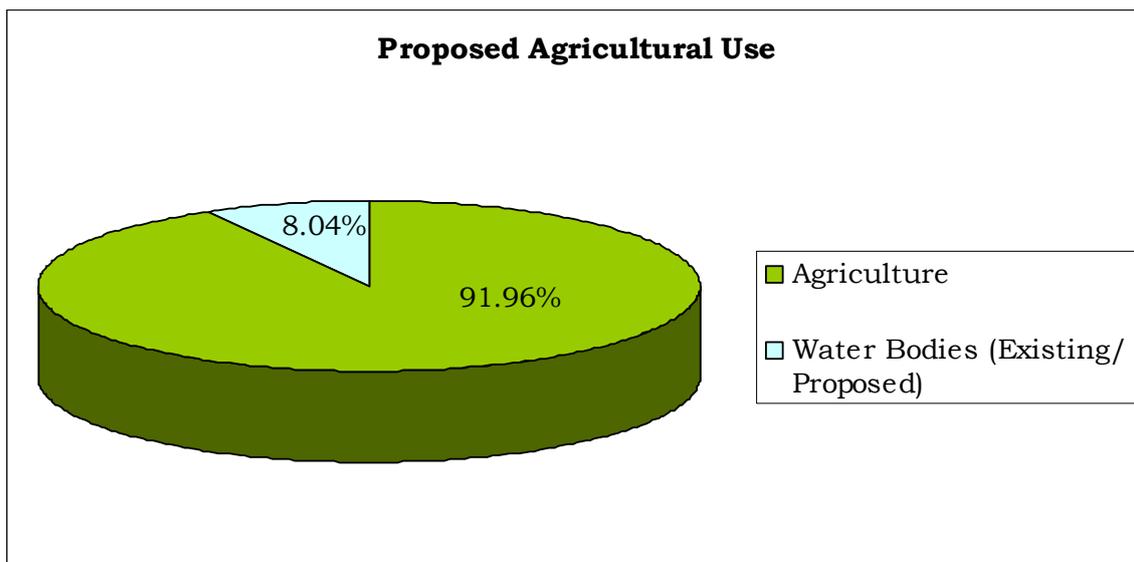


Fig. 6.8 Proposed agriculture use

Excluding the area of all the above zones and existing settlements, the area left behind is earmarked as Z-19, measuring 7946 hec as mentioned in table 6.11. Permissible activities in this zone are covered in zoning regulations.

6.6 Zoning Regulations

Chapter IX of the Punjab Regional and Town Planning and Development Act, (Amended) 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 operations 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.

It would have normally been expected that a Master Plan includes regulations dealing with all facets of “development”. However, since statutory Master Plans were not available, government has instituted many regulations/development control on state-wide basis to govern key facets of development such as sub-division and layout of land under PAPRA, FAR, ground coverage, parking, building design and construction etc. It is therefore, proposed to retain these regulations along with their enforcement authorities and practices in this Master Plan.

The proposed activities/uses, which have not been mentioned in proposal part of this chapter, shall be covered in this part. The compatible land uses shall be made permitted/permmissible in their respective zones/land uses but the uses which are not shown on the land use map or not made permitted/permmissible in the zoning regulations, shall be liable to be shifted within time period and conditions mentioned in section 79 of the Punjab Regional and Town Planning and Development Act-1995.

For implementation of Master Plan, Goindwal in its true spirit, the development controls and zoning regulations shall be applicable in three parts. First, is general introduction of these zoning regulations and development controls in terms of their *title, scope, jurisdiction, date of enforcement and definitions* of relevant terms being used in these regulations to avoid the misinterpretation of any of these at later stage. The second one is *land use regulations*, which shall cover the permissibility or non-permissibility of the activities or land uses in various designated zones/land uses earmarked in proposed land use plan of Master Plan, Goindwal. The third part shall cover the *extent and method of development* of these activities in their permitted zones/land uses. The description is given below:

6.6.1 Short Title, Scope, Extent & Commencement

(i) Title

These Regulations shall be called the *Zoning Regulations for Local Planning Area, Goindwal 2009* (hereinafter referred to as “these Regulations”).

(ii) Scope of the Regulations

The scope of these regulations is limited to defining permitted/permmissible land uses in various designated land use zones depicted in the proposed land use plan forming part of the Master Plan as well as the development controls applicable while developing these permmissible activities. 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.

(iii) Jurisdiction

These Regulations shall apply to all “developments” in the Local Planning Area, Goindwal declared vide notification no. 12/5/2009-4HGI/2836 dated 26-10-2009 under section 56 of the Punjab Regional and Town Planning and Development Act, 1995 (Amended Act, 2006).

(iv) 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 (Amended) Act, 2006.

(v) Definitions

For the purpose of these Zoning Regulations, the following definitions, unless the context otherwise requires, shall apply:

- (a) **“Act”** means the Punjab Regional and Town Planning and Development (Amended) Act, 2006 (Punjab Act No. 11 of 1995).
- (b) **“Agriculture”** means farming, horticulture, nursery, floriculture in open or covered area, with or without power, forestation, branding and keeping of live-stock, farm houses, sericulture, fishery, poultry, pigri, bee-keeping, stores for grains including cold storage and repair of agriculture implements.
- (c) **“Atta Chakki”**: Atta Chakki is categorized as service industry where:
 - Grinding of only food grains is carried out through the process of crushing under the load rotational movement of two plates or blocks.
 - The maximum electric load does not exceed 20 kW.
 - The Atta Chakki shall be used for grinding food grains supplied by the consumers only and no sale/ purchase of food grains/ flour be carried out by the Atta Chakki owner at commercial level.
 - The Atta Chakki shall only be permitted on roads having minimum 13.5 m ROW.
- (d) **“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.
- (e) **“Competent Authority”** means the person or any officer who is authorized by the State Government to exercise the statutory powers of the Act.
- (f) **“Commercial use”** includes the use of any land or building or part thereof for purposes of commerce or for storage of goods, or as an office, whether attached to any industry or otherwise.
- (g) **“Cottage Industry”**: Industrial units employing less than 10 workers not involving use of or installation of any machinery driven by power of any kind and not creating excessive traffic and not omitting fumes, noise and effluents

injurious to the existing sewers and not contrary to the provisions of the Water Pollution (Prevention and Control) Act 1974, Air Pollution (Prevention and Control) Act 1981 and Environments (Protection Act 1986).

- (h) **“Existing Land Use Plan”** means the Plan showing the different land uses existing at the time of preparation of the Existing Land Use Plan of Local Planning Area, Goindwal and as indicated on drawing no. DTP (A) 5/2009 Dated 20/10/09.
- (i) **“Farm House”** means a building allowed on a holding of agricultural land for residential and agricultural activity of the land holder.
- (j) **“Floor Area Ratio”** means ratio of areas of all the floors of the building to the total plot areas.
- (k) **“Government”** means the government of the State of Punjab.
- (l) **“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.
- (m) **“Knowledge Park”** Such parks in residential land use zones can have only such activities which are absolutely non-polluting, non hazardous, environment friendly, free from noise and vibrations, having no polluting effects on air and water and causing no nuisance whatsoever. Uses in such parks will be determined by Chief Town Planner, Punjab.
- (n) **“Large Industries”**: Large Industries are the industries in which the investment in fixed assets in plant and machinery is more than rupees 10 crores.
- (o) **“Local Planning Area”** means the Local Planning Area, Goindwal declared under section 56(1) of The Punjab Regional and Town Planning and Development Act, 1995 (Amended Act, 2006) vide Punjab government notifications no 12/5/2009-4HGI/2836 dated 26-10-2009.
- (p) **“Logistic Park”** is an integrated facility to serve as a business hub for storage, insurance and distribution purposes for the trading of manufactured products.
- (q) **“Master Plan”** means a Master Plan, Goindwal prepared under The Punjab Regional & Town Planning and Development Act, 1995. (Amended Act, 2006),.
- (r) **“Medium Industry and Small Scale Industry”** have the meaning assigned to them in clause (a) of sub-section (1) of section 7 of Micro, Small and Medium Enterprises Development Act-2006 of Government of India.
- (s) **“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.

- (t) **“Obnoxious and Hazardous Industry”** means industry which will create nuisance to the surrounding development in the form of smell, smoke, gas, dust, air pollution, water pollution and other unhygienic conditions.
- (u) **“Planning Agency ”** means the Chief Town Planner, Punjab designated as under section 57 of The Punjab Regional and Town Planning and Development Act, (Amended Act, 2006) for Local Planning Area Goindwal, vide Punjab government notification no 12/5/2009-4HGI/562 dated 13-2-2009.
- (v) **“Proposed Land use Plan”** means the plan showing the proposed or admissible uses of different areas and Land use zones covered in the Local Planning Area, Goindwal and as indicating on Drawing No. DTP (A) 5/2010 Dated 15/3/2010.
- (w) **“Public and Semi Public activities”**: Public and semi public activities means governmental/ semi governmental offices, educational, medical institutions, recreational and entertainment facilities, cultural and religious institutions etc.
- (x) **“Regulations”** means zoning regulations made by the authority for The Master Plan, Goindwal under the Punjab Regional and Town Planning and Development Act 1995 (amended Act 2006).
- (y) **“Sector Plan” (Zonal Plan)** means the detailed plan of a part of Master Plan as delineated in the master plan and approved by the Chief Town Planner, Punjab showing all or any of the following:-
- a. Layout of plots, streets, roads, public open spaces, parking areas.
 - b. Area temporarily or permanently prohibited for the building operation.
 - c. Uses permitted in respect of each or a group of plots into which the land may be shown to be divided.
 - d. Any other detail provided in the Lay-pout Plan.
- (z) **“Workshop”** is a place wherein work done or machinery installed for rendering service to the local business people and would satisfy their day to day commercial needs and is not governed under Indian Factories Act.
- (za) **“Zoning Plan”** means the plan of area or part thereof or supplementary layout plan approved by the Chief Town Planner 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 respects of each plot, permitted land use, building lands, height, coverage and restrictions with regard to the use and development of each plot in addition to such other condition as laid down in these regulations hereafter.

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

6.6.2 Land use Regulations

i) Land use zones

In the proposed land use plan of Master Plan, Goindwal drg No. 5/2010 dated 15-3-2010 mainly Residential, Commercial, Industrial, Public/Semi Public, Recreational, Traffic and Transportation/ Communication and Rural/Agriculture land uses have been proposed. While proposing these land uses, various land zones/areas have been earmarked on this plan, the description thereof is given below:

(a) Residential :-

Under residential land use, three categories have been proposed, as given below:

- **Proposed Residential:** For development of new residential areas, residential zones Z-2, Z-8, Z-10 & Z-15 have been earmarked on proposed land use plan.
- **Existing Residential outside Lal Lakir:** Existing built up of the village settlements outside the *Lal Lakir* has been retained as such and expansion of three villages namely *Khawaspur, Jhander and Dhunda* and permission areas for expansion are also covered under this sub-category.
- **Existing Residential within lal lakir:** Special zoning regulations shall be formulated for this particular part.

(b) Commercial:-

For commercial land use, following zones have been earmarked in land use plan of Master Plan, Goindwal:

- Rural marketing centre (Z-6)
- Logistic Park (Z- 9)
- Wholesale, godowns, warehousing,
- Regulated markets:- (Z-5, Z-7), existing mandis open yard and godowns.
- Other commercial activities shall be permitted under different land uses as described in table 6.12.

(c) Industrial:

In the Master Plan, Goindwal following four types of industrial zones have been earmarked

- Service & light industry – (Z-16)
- Large & Medium scale industry (Z-17)
- Proposed site for thermal power plant

Thermal power plant is a proposed to be planned as self sufficient unit. It has being developed as per sanctioned plan. So, no DCR's are being proposed for this site.

The permissibility of industrial units of types other than above four categories is indicated in table 6.13

(d) Public & Semi-Public:

The main four types of Public & Semi Public uses have been indicated on Master Plan, Goindwal:

- Proposed institutional cum residential (Z-1)
- Socio-cultural and religious
- Government/Semi-Government/Public officers - (Z-4, Z-14)
- Public utility sites (Z-11, Z-18)

(e) Recreational:

The following four types of sites/zones have been earmarked while proposing recreational land use for Master Plan, Goindwal

- River front recreation (Z-13)
- Reserved for tourist facilities (Z-3, Z-12)
- Existing stadium/playground.
- Green belts/buffer zones/strips.

(f) Traffic and Transportation:-

This aspect covers:

- Existing and proposed road network.
- Rail network
- Bus terminus
- Railway station
- Bridges, Culverts and railway crossings.

(g) Agriculture & Allied Activities (Z-22):-

This zone includes:

- Agriculture & Allied activities
- Water bodies

(ii) Activity classes:-

In the land use zones/sites/areas mentioned above, the development shall take place with the establishment of various activities. But all the activities may not be compatible to every land use earmarked on proposed land use plan. For the purpose of indicating the permitted/permissible activities in their compatible land uses and to prohibit the non-permissible activities in the non-compatible land uses, these activities have been classified and have been allotted particular codes/sub codes as follows:

Table 6.12 Activity class coding

S. No.	Activity Class	Activity class code
1.	Housing	A
2.	Trade and Commerce	B
3.	Storage & warehousing	C
4.	Manufacturing	D
5.	Public & Semi Public offices/uses	E
6.	Educational training and research institutions	F
7.	Health care facilities	G
8.	Community, Cultural & Religious Institutions	H
9.	Public services and Facilities	I
10.	Public utility buildings & Network	J
11.	Sports, Entertainment/ Recreational & Tourist activities	K
12.	Transportation and Communication	L
13.	Rural, Agriculture & Allied activities	M

Note: The above classes include a no of activities each, which have been further grouped together, as per their nature and characteristics as well as impacts and are given sub codes, which have been mentioned in first column of the table 6.12

(iii) Use provisions in land use zones/areas

The following table describe the land use classes and their sub-classes as permitted in various land use zones.

TABLE NO. 6.13
LAND USE ZONES AND PERMISSIBLE LAND USES

Activity Code/ Sub Code	DESCRIPTION OF THE ACTIVITIES	LAND USE CLAUSES													
		Residential Existing Abadies outside Lal Lakir & Expansion thereof	Z-2, Z-8, Z-10, & Z-15 other proposed residential zones	Commercial		Industrial		Public & Semi Public			Recreational		Transportation & Communication	Agriculture, Rural & allied activities Z-19	
				Rural Marketing Centre Z-6,	Wholesales Godowns, Warehousing, Regulated market Z-5, Z-7	Service and Light Industry Z-16,	Large and Medium Scale Industry Z-17	Proposed Institutional cum-low residential Z-1	Government/Semi government/public offices Z-4, Z-14.	Public utilities Z-11 & Z-18	River front recreation Z-13	Tourist Facilities Z-3, Z-12			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	HOUSING														
A1	Residential houses in the form of plotted development, Bunglouw's and Villas and the likes.														
A2	Residential Houses in the form of Group Housing, Flatted development and Apartments etc														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A3	Welfare homes like Old age homes/retirement housing, Hostels for students/Youth hostels, Working women hostel, Orphanages, Asylums, Home for disabled, Labour hostel/workers dormitories.														
A4	Abadi deh, Existing village abadi and Expansion of existing village contiguous to Abadi deh/existing village.														
A5	Farm Houses														
B	TRADE AND COMMERCE														
B1	Personal and community services like Laundry, Hair dressing, Beauty parlours, Tailoring/Boutiques, Tuition centre/ Coaching classes, Atta Chakki, Repair of household appliances/Cycle and scooter,														
B2	Retail trade including retail markets for fruit and vegetables, Local shopping centre/convenience store, Departmental Store/mini-mart.														
B3	Milk bars, Ice cream parlours & drink kiosks, Pan shop, New stands, Fresh flower stands.														
B4	Commercial offices, Service uses, Offices of professionals, Consultancy services.														
B5	Shopping Malls/Mega-Marts, Multiplexes/ Cinema halls, Super Markets/Hyper Markets.														
B6	Exhibition show rooms, Factory retail outlets.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B7	Restaurant, Dhabhas, Refreshments centres, Food courts, Eatable shops, Food Plaza, Fast food outlets, Coffee shops and the likes.														
B8	Hotels, Guest Houses, Lodging Houses														
B9	Motels/Tourist houses														
B10	Marriage Palaces/Resorts, Party halls.														
B11	Wholesale markets like, Grain markets, yards/sub yards, Focal points, Fruit and Vegetable markets, Timber market and Rural purchase centre.														
B12	Regulated markets like Meat & Fish markets and slaughter houses.														
B13	Booking agencies and good stores.														
B14	Workshops/spare part shops/repair shops														
B15	Gasoline/Petrol/Diesel & LPG Filling service stations, Retail outlets, Kerosene storage/Gas distribution.														
B16	Temporary but planned and regulated informal shops/markets only on special occasions.														
C	Storage and Warehousing														
C1	Warehousing and storage activities i.e. warehousing, Storage, Godowns, Cold storage.														
C2	Loading & Unloading yard, Container yards/Freight Complex.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C3	Storage of Fire works/crackers or Fire hazardous/ inflammable substances, including Petroleum products, LPG etc.														
D	Manufacturing														
D1	Manufacture of food products (NIC Division 10)														
D2	Manufacture of beverages (NIC Division 11)														
D3	Manufacture of textiles (NIC Division 13)														
D4	Manufacture of wearing apparel (NIC Division 14)														
D5	Manufacture of leather and related products (NIC Division 15)														
D6	Manufacture of wood and products of wood and cork, except furniture; (NIC Division 16)														
D7	Manufacture of paper and paper products (NIC Division 17)														
D8	Printing and reproduction of recorded media (NIC Division 18)														
D9	Manufacture of coke and refined petroleum products (NIC Division 19)														
D10	Manufacture of chemicals and chemicals products (NIC Division 20)														
D11	Manufacture of pharmaceuticals, Medicinal chemical and botanical products (NIC Division 21)														
D12	Manufacture of rubber and plastics products (NIC Division 22)														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D13	Manufacture of other non-metallic mineral products (NIC Division 23)														
D14	Manufacture of basic metal (NIC Division 24)														
D15	Manufacture of fabricated metal products, Except machinery and equipment (NIC Division 25)														
D16	Manufacture of computer, Electronic and optical products (NIC Division 26)														
D17	Manufacture of electrical equipment (NIC Division 27)														
D18	Manufacture of machinery and equipment n.e.c. (NIC Division 28)														
D19	Manufacture of motor vehicles, Trailers and semi-trailers (NIC Division 29)														
D20	Manufacture of other transport equipment (NIC Division 30)														
D21	Manufacture of furniture (NIC Division 31)														
D22	Other Manufacturing (NIC Division 32)														
D23	Repair of machinery and equipment (NIC Division 33)														
D24	Cottage Industry/Household Industry														
D25	Milk collection/Chilling centre, Pasteurization plant, Dairy industry, Ice Factory.														
D26	Computer software development, Assembling & repair of computer hardware and electronic equipments.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
D27	High Technology/IT Park, Business Park, Knowledge Park, Science park.														
D28	Manufacturing of Fire works/Crackers and Inflammable substances.														
D29	Cement, Sand and concrete mixing plant, Bitumen, Hot mix plants.														
D30	Rice mill/Shellers/Sela plants, Processing of farm products.														
D31	Stone Crusher, Brick kiln, Lime Kiln, Charcoal Kiln.														
D32	Power generation plants and Expansion of proposed Thermal Power Plant.														
E	Public and Semi Public Offices/Uses														
E 1	Administrative centre/complex, Courts, Foreign Mission/Chancery, Central and state Government offices and Social welfare institutions.														
E2	Government rest houses														
E3	Government Land, Defense Land, Defense Grounds, Panchayts Lands and Lands belonging to other Government/Semi Government authorities.														
F	Educational, Training and Research Institutions														
F1	Kindergarten, Play schools, Pre-nursery/Primary school, Primary/Elementary School.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F2	High/Higher Secondary/Senior Secondary school, Foreign school, International school, Special Education school.														
F3	College, Vocational Training Institutes, Polytechnic college.														
F4	Technical college, Medical college, Veterninal college, University, Research & Training centre, Centers of advances education and training like IIM or IIT, Research institutions.														
F5	Educational, Training and Research Institutions not classified above.														
G	Health Care Facilities														
G1	Medical, Dental or Veterinary clinics, Polyclinics and dispensaries, Family welfare centers.														
G2	Hospitals/Multimedia (NIC group 861) and Health centre, Nursing care facilities (NIC group 871), Nursing Home, Maternity Home.														
G3	X-ray/Radiology centre, Diagnostic centre, Blood bank, Pathology laboratories.														
G4	Residential care activities for Mentally retarded, Mental health and substance abuse (NIC group 872), Residential care activities for elderly and disabled (NIC group 873)														
G5	Health care facilities not classified above.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
H	Community, Cultural and Religious institutions														
H1	Community centre/hall, Community club, Child care centre, Facility Centre, Panchayat Ghar, Dharmsala, Association premises.														
H2	Public Assembly halls, Open air theatres, Art and Cultural centre/Socio-cultural complex, Theatre/ open air theatre, Concert halls, Library, Museum, Television/Filming studio complex.														
H3	Religious building including Gurdwara, Mandir/temple, Mosque & Church, Place of worship, Satsang Bhawan														
I	Public Services and Facilities														
I 1	Banks, Financial & Insurance institutions.														
I 2	ATM booths, Public telephone/STD booths, Cyber-café, Letter box.														
I 3	Post & telegraph office, Telephone exchange & Courier activity (NIC Division 53)														
I 4	Police station/Police Post/Chowki														
I 5	Fire station/Fire bridges station, Disaster Management centre.														
I 6	Prison, Reformatory centre.														
I 7	Cemeteries, Graveyards, Burial Grounds, Cremation grounds and the likes.														
I 8	Public Toilets/convenience/urinals.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
J	Public Utility Buildings and Network														
J 1	Electric Sub-station/grid station and electricity, Supply network, Steam and Air Conditioning supply network (NIC-section D)														
J 2	Water collection, Treatment or purification/water works and supply network (NIC division 36)														
J 3	Disposed water collection, Treatment and disposal activities/Sewerage Treatment Plant, Sewerage station, Sewerage disposal works.														
J 4	Landfill sites/transfer stations, treatment & disposal facility, Garbage disposal sites, Material recovery (NIC Division 38), Carcass disposal sites, Incineration plants.														
K	Sports, Entertainment/Recreational and Tourist activities														
K1	Totlots, Small playgrounds, Neighbourhood park, Community Park, Organized open spaces.														
K2	Green belts, Buffer zone/strips														
K3	Sports grounds/Stadium/Complex, Play grounds, Swimming aquarium/pools, Gymnasium, Indoor games/stadium and related facilities.														
K4	Golf course														
K5	National Park, Regional Park, Zoological Garden, Theme Parks, Ecological Tourism.														
K6	Camp sites/Camping grounds, Water sport centre, Adventure camp/sports, Artificial Lake, Boating activity, Nature camps, Trekking and Natural walks, Shooting range, Lush green grounds and the likes.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K7	Temporary residential activities in the form of huts, tents and shelter from rain														
K8	Fair & Festival grounds, Multipurpose grounds, Handicraft and thematic fares.														
K9	Tourist information kiosks-centre, Tourist complex.														
L	Transportation and Communication														
L 1	Roads, Streets, Service lane, Katchi road, Revenue rastas, Cycle trackers, Footpaths, Walkways, Pedestrian connectors/Linkages.														
L 2	Bridges, Culverts, Road interchanger flyover and the likes.														
L3	Road side furniture/arboriculture, Storm water channel.														
L4	Check Barriers, Toll Plazas/Octrai post, weigh bridges.														
L5	Bus que shelter, Taxi stand, Parking stand for tonga, rickshaw, scooter, taxies, Auto rickshaw.														
L6	Bus stops, Bus terminals & their ancillary uses and expansion thereof.														
L7	Truck stand/terminal, Transport Nagar, Loading and Un-loading yards.														
L8	Railway line, Railway yard, Railway crossings etc.														
L9	Railway station and expansion thereof.														
L10	Airport and ancillary buildings, Helipads.														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L11	Wireless, Radio/Television station, Broad-casting station, Telecommunication centre.														
L12	Telecommunication towers														
M	Rural, Agriculture and Allied Activities														
M1	Agriculture, Crop production.														
M2	Horticulture, Orchards, Plant Nursery, Green house related to nursery, Floriculture.														
M3	Animal production keeping of live stock/dairy farm, sericulture, fishery, poultry, pigri, bee-keeping etc.														
M4	Wells, Tube wells and Tubewell sheds.														
M5	Agriculture research/Experimental station, Seed centre, Agro-technology park.														
M6	Cattle fair ground														
M7	River, Canal, Distributaries, Major/minor drains, Water channels, Reservoirs, Water catchments and other flowing water bodies and allied activities.														
M8	Ponds and Talavs														
M9	Quarrying of stone, sand and clay (NIC Group 081)														
M10	Land conservation and Preservation areas etc.														

Note:-

- 1) Shaded areas indicate that use class is permissible in the zone.
- 2) Any use not listed above under a specific zone shall not be permissible in the respective zone.
- 3) Any use not specified above, but found compatible with any use by Chief Town Planner, Punjab, shall be allowed in respective zones.

6.6.3 Development Controls for Land uses and activities

(A) Development controls applicable for Residential Development

(i) For residential activities mentioned as **sub-codes A1 and A2**, the development controls shall be applicable as follows:

(a) **Minimum area for Development site** for the above mentioned activities are given in table 6.14

**Table 6.14 Minimum area requirements for Residential development
(A 1 & A 2 activities)**

Category		Minimum area of colony
Residential Plotted		10 acre (4 hec.)
Group Housing	<i>For General</i>	5 acre (2.02 hec.)
	<i>For EWS</i>	2.5 acre (1.01 hec.)

(b) Residential density:-

The proposed residential density in proposed residential zones mentioned in column 4 of table 6.13 is 100 PPH. The promoter or developer has to take into consideration this proposed density in these zones. Assuming the average family size of 5.5 persons and considering average plot size of 300 sqm, he is allowed to develop maximum 18 dwelling units of various sizes in 1 hectare of land parcel.

In case of existing built up, the gross residential density again comes out to be nearly 105 PPH, which is proposed to be retained as such.

(c) **The land use distribution** for the activities permissible in development sites of activities A1 and A2 are as follows:

Table 6.15 Land distribution in Residential development site

S. No.	Type of activity	Share of area w.r.t. to total area of development site
1.	Maximum saleable area	55%
2.	Maximum area for commercial use	5%
3.	Minimum area for institutional	10%
4.	Minimum area under parks/open spaces/roads and parking lots.	35%

(d) **Minimum road width** in residential areas shall not be less than 40' (12m). If existing road is less than 40' (12m), the proposed land on both sides shall be safe guarded for widening to comply with the minimum requirements. The building heights on these roads shall not exceed ground+2 storeys (G+2).

(e) Parking requirements for plotted development

The parking requirements for plotted developments i.e. for development sites under activity code A1 are set out below:-

Table 6.16 Parking requirements for plotted developments

S. No.	Plot Size	Parking Requirement
1.	Less than 100 Sq yds	2 Scooter Parking space
2.	101-200 sq yds	1.5 car parking spaces within plot area
3.	201-500 Sq yds	2 car parking spaces within plot area
4.	More than 500 sq yds	3 car parking spaces within plot areas.

Notes:-

- Deviation upto 10% of this control is allowed if it is arising from site conditions.
- Size of front gate on boundary wall and construction of front boundary wall is optional to meet parking requirements.

(f) Group Housing Norms:- The norms applicable for the development sites given under activity code A2 are given below:

Table No. 6. 17 Group Housing Norms

S. No.	Item	Prescribed norms
1.	Minimum Plot size	
	a) For General Category	5 acres
	b) For EWS	2.5 acres
2.	Minimum Road width	For group housing stand alone projects, minimum width of approach road is 60' but the promoter is 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	20 meters
4.	Maximum ground coverage	40%
5.	Maximum Permissible FAR	1:1.75
6.	Maximum Permissible Height	There shall be no restriction on the height of building subject to clearance from Air force Authorities and fulfillment of other rules such as set backs, distance between buildings etc, if applicable However, structural safety and fire safety

		requirements as per National Building Code shall be compulsory.
7.	Open spaces and organized parks	Minimum 30% of the area of the site shall be used for landscaping. The organized park area shall be 15%.
8.	Community facilities	Area for community facilities such as community centre, reception hall, crèche, library, maintenance store etc shall not be less than 2.5%.
9.	Parking provisions	For group housing residential 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 3 ECS per dwelling unit.
10.	Basement	Multi level basement will be allowed behind the building in the zoned area except in set backs provided it is proposed for parking purposes only and satisfy the public health and structural requirements.
11.	Stilts	Stilts under the building will be allowed to enhance up to 3 meters beyond the building block except in the setbacks, provided it is used for parking only. No construction shall be allowed on the extended portion of the stilts. Stilts used for parking shall not be counted towards F.A.R.
12.	Structural stability	Building shall be made structurally safe to withstand any natural disaster and shall be designed by a qualified structural engineer as per the provision of N.B.C.
13.	Fire Safety	As per BIS norms.
14.	Lift and Stair cases	As per the rules of Development Authority.

Note:

- Construction of residential houses sold by promoters on floor basis shall also be considered as group/flatted housing development and parking requirements shall be as per the norms applicable to group housing.
- Dwelling density shall be as per government instruction,

(ii) For activities quoted under **sub code A3**, the development controls of public/semi public institutes shall be applicable.

(iii) Area of **Abadi Deh** does not fall under the jurisdiction of Punjab Urban Development Authority Act, so no development control are proposed for such areas rather separate development controls are proposed to be prepared separately for existing village abadi outside *Abadi deh and expansion* of these villages.

(iv) **Farm Houses:-** The developments controls for the development of farm houses (activity sub code A5) shall be as given in table 6.18.

Table 6.18 Development controls for Farm Houses

S. No.	Parameter	Criteria
1.	Minimum area of development site	2.5 acres
2.	FAR	0.04
3.	Ground Coverage	2%
4.	Number of storeys	2
5.	Height	Single Storey 18'-0" Double Storey 28'-0"
6.	Hard Surface	10%

(v) **Other development controls applicable for activities of code sub A1 & A2**

- For the activities under sub code A1 & A2, the provisions of relevant sections of *Punjab Apartment and Property Regulation Act, 1995 and Rules thereof* as well as *notifications* issued by government of Punjab or concerned departments in this regard shall be applicable.
- The development plot should be compact and regularly shaped.
- There should be proper and adequate access to social infrastructure and services for any residential colony.

(B) Development Controls for Commercial Development

For the retail and wholesale commercial activities proposed in Master Plan, Goindwal and made permissible as sub code B1 to B 16 and C1 to C3, the development on ground shall take place with following norms,

(i) **Criteria for development in Rural Marketing Centre:-** For development of area designated as Rural Marketing Centre (Z-6) shall be based on the following norms:

Table 6.19 Criteria for development in Rural Marketing Centre

S. No.	Parameter	Criteria
1.	Minimum Area requirement	10 Acre
2.	Maximum Commercial	40%
	Site Coverage Industrial	

		<p><i>For the first 2420 Sq. yds</i> <i>For the next 2420 Sq. yds</i> <i>For the excess of 4840 Sq. yds</i></p>	<p>50% of the site 33% of the site 25% of the site</p>
		Residential (flatted)	40%
		Institutional	40%
		Others	As mentioned in byelaws or zoning regulations.
3.	Maximum FAR	Commercial	1:1.75
		Industrial	1:1
		Residential (flatted)	1:1.75
		Institutional	1:1
		Others	As mentioned in byelaws or zoning regulations.
4.	Height	There shall be no restrictions on height of building subject to clearance from Air Force Authority, if applicable in future and fulfillment of other rules such as set backs, distance between building etc. However, structural safety and fire safety requirements as per N.B.C. shall be compulsory.	
5.	Road width	The minimum road width for commercial unit shall be 40'.	
6.	Residential components	<ul style="list-style-type: none"> • Maximum 5% of the site is to be developed as group housing only. • If SCF, then maximum 5% of the permissible FAR in development site. 	

(ii) Criteria for development of general commercial activity:

For the commercial activities covered under sub codes B1, B2, B4, B5, B6, B13 & B14, the development can take place in three forms, the firstly, is in the form of *commercial sites*, secondly can be in the form of *stand alone commercial complexes* and thirdly as *local commercial markets*. The development of these activities is proposed to take place as below:

(a) Development of Commercial sites

For development of such sites the establishment of activities of sub code B1, B2, B4, B6, B13 and B14, the following criteria shall be adhered to:

Table 6.20 Criteria for development of commercial sites

S. No.	Items	Prescribed Norms
1.	Minimum size of development site	2 acre
2.	Minimum frontage	66 ft (20m)
3.	Minimum width of approach road	80ft (24m)
4.	Maximum Ground Coverage	40%
5.	Maximum Height	There shall be no restrictions on the height of building subject to clearance from Air Force Authority, if applicable in future and fulfillment of other rules such as setbacks, distance between buildings etc, if applicable. However, structural safety and fire safety requirements as per N.B.C. shall be compulsory.
6.	Maximum F.A.R.	1:1.75

Note:

The statutory provisions of Punjab Apartment Property Regulated Act-1995 and Rules thereof as well as the regulatory measure of Government of Punjab and the concerned departments issued in this regard, shall be applicable for such development.

(b) Additional criteria for stand alone projects:- covered under activity sub code B5, in addition to the parameters covered under table 6.21 (except minimum area requirement) shall be as given in table 6.20.

Table 6.21 Additional criteria for stand alone projects

S. No.	Parameter	Criteria
1.	Minimum area requirement	<ul style="list-style-type: none"> • 1000 sqm for Malls, Mega marts, Super Markets & Hyper marketing. • 4000 sqm for Multiplex
2.	Landscaping	If the site area is one acre or more minimum 15% of the total area is to be reserved for landscaping purposes.
3.	Parking	<ul style="list-style-type: none"> • For projects with no multiplexes, the minimum parking shall be 2 ECS per 100 sq m of covered area (including circulation area) • For projects with multiplexes/ cinemas/ theatres, the minimum parking shall be align these points under the multiplex point. <ul style="list-style-type: none"> a) 3 ECS per 100 sq m of covered area, in respect of the covered area of the multiplex component + 30% of the total covered area of that component and b) 2 ECS per 100 sq m of covered area, in respect of balance commercial component and circulation area
4.	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.
5.	Movement of fire tender	The minimum setback distance is to comply with the existing norms and standards.

Note:

- For the parameters not covered above, norms/guidelines regarding these activities of concerned departments shall have to be comply with.
- Total parking requirements shall be provided in the compulsory front set back and within the development site boundary or in the basement.

(c) Commercial at Local Level:-

These commercial facilities are intended to serve the needs of local residents only. So, there will be provision for small scale, single storey commercial facilities at local level. Only activities covered under sub code B1, B2 & B3 shall be permissible in these markets.

- Minimum road width for development of this of commercial activity is 60' (18m).
- Minimum 20' (6m) set back from road shall be left for parking.
- For other parameters, the byelaws of concerned activities shall be applicable.

(iii) For development of all the activities covered under **sub codes B3, B7, B8, B9, B10, B11, B12, B13, B14, B15**, the statutory and regulatory measures of various central/state government shall have to be comply with.

(iv) Informal commercial activity is made permissible only in Tourist facilities zone (Z-3,12) and that too on fairs & festivals and special occasions. But as these zones are proposed mainly for fairs and parking purposes, so as supporting activity to these events the informal markets/shops/rehri's are allowed to come here on events only, at maximum of 10% of the area. This activity shall be regulated so that it does not obstruct the movement of vehicles and persons during these events.

(v) Logistic Park Development Regulations

The development of activities given sub code C1 & C2 in the area proposed for logistic park shall be take place under following regulations.

(a) Zoning regulation

(a.a) Minimum area for the use is 1 acre

(a.b) The following Overall design considerations are to be kept while developing the side.

- Efficient movement of goods and traffic flow
- Ample storage space in clean environment
- Fire protected safe and secured
- Efficient module sizes
- Sufficient amenities and open spaces
- Land scaped open spaces
- Well ventilated and generous internal space.

(b) Usage:- main usage is warehouse space for both fast turnover storage and distribution as well as for bulk and long term storage centre. There can be business centre located at main entrance to each of the logistic block to serve as a business hub with offices and adequate amenities catering to the logistic industry.

(c) FAR:- FAR for logistic park is 0.6, calculation of which shall exclude the land set aside for future extension.

(d) Building coverage and Height Control:- Building coverage for logistic park shall not exceed 50%. Floor to ceiling height for a single storey logistic use is 7m.

(e) Minimum road width:- The recommended minimum carriage way for local road within an area is 10m (30') with a 3m (10') of side walk on either side of carriageway.

(f) Loading Facilities:- Loading facilities for the terrace form of warehouses could be located at either front or rear of building but not the sides to avoid traffic congestion between buildings.

- Individual warehouses on plots which are customized to suit will have the loading facilities at the side and rear.
- Loading facilities shall be offset from driveway opening.

(g) Buffers and Building Setbacks:-

- Buffer separation is recommended to separate the business centre and pure logistic areas.
- Buffer separation do not necessarily be green i.e. vegetation, landscaping rather the main purpose is to keep minimum set back from the plot boundary of the front, rear and sides of buildings in this zones is 5m.

(h) Open Space and Landscaping:-

For Logistic Park, Landscaping need not be luxurious but within each plot there shall be mandatory minimal green landscape at the front of plot fronting the road. Landscaping shall be used to define areas by provided transition between the neighboring properties.

- Land scaping shall be in scale with adjacent buildings and be of appropriate size at maturity to accomplish its intended goals.
- Trees shall be planted to provide shade to the parking lots and not only at the ends of parking aisles.

(vi) Other Development Controls for commercial activity:

- a) Minimum width of **access road for warehousing** uses shall be 80' (24.m).
- b) The activity C-1 is made permissible in agriculture (Z-19) but it shall be used only for storage of raw agriculture products.
- c) For **storage of fire works/crackers**, all the statutory or regulatory measures issued by the Centre/State government or concerned departments shall have to be adhered to.
- d) Minimum **green coverage area** in development site of commercial area shall be 10%.

(C) Development Controls applicable for Industrial Development

The actual implementation of the activities under sub code D1 to D32 within the zones, in which these have been made permissible, shall take place in the following way:

(i) Criteria for Industrial Development

Within the permissible zones, the industrial activities D1 to D32, shall be developed under the following controls.

Table No. 6.22 Controls for the development of Industrial activity

S. No.	Item	Prescribed norms	
1.	Area Requirement	10 acres	
2.	Site coverage	<i>For the first 2420 sq yds</i>	50% of the site
		<i>For the next 2420 sq yds</i>	33% of the site
		<i>In excess of 4840 sq yds</i>	25% of the site
3.	FAR	For IT component	1:2
		Industry	1:1.0
		Institutional	1:1
		Residential	As per building byelaws
		Group	1:1.75
4.	Height:	There shall be no restrictions on height of building subject to clearance from Air Force Authority, if applicable if future and fulfillment of other rules such as set backs, distance between building etc. However, structural safety and fire safety requirements as per N.B.C. shall be compulsory.	
5.	Floor to floor Height	In industrial development should not exceed 20' (6m).	
		However, this control can be varied due to operational needs of industrial machinery.	
		1 st storey of industrial development can be raised by 40' (12m) for loading	

		and un loading purpose.
6.	Road width	The minimum road width for industrial unit shall be 40' (12m).
7.	Parking Guidelines	For parking guidelines under industrial use 1 car parking lot is to be provided per 100 sqm of gross floor area, 1 lorry lot is to be provided per 1000 sqm and minimum car lot is to be provided per factory.
8.	Maximum 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.
9.	Quantum of use	Predominant industrial use quantum shall be at least 60% of FAR and ancillary use within entire development must not exceed 40%. The ancillary uses can be <ul style="list-style-type: none"> a. Show rooms <ul style="list-style-type: none"> • Meeting rooms • Toilets • Mechanical and electrical services • Sick bay rooms/1st aid room • Child care centre • Independent media activities.

Note:

The statutory provisions of Punjab Apartment Property Regulated Act-1995 and Rules thereof, wherever applicable as well as the regulatory measure of Government of Punjab and the concerned departments issued in this regard, shall be applicable for such development.

(ii) Environmental considerations:

There is crucial need to enforce vital environmental provisions around industrial developments so as to preserve the quality of life for the surroundings land uses such as existing villages, designated residential areas, Logistic park and agricultural lands. The adverse Environmental impacts can be minimized by taking minimized environmental considerations.

- a) The distance between a light industrial building and nearest residential building shall be prescribed by the Department of Environment, Punjab or Punjab Pollution Control Board.
- b) Developments within large and medium industry (Z-17) generally produce odour, fumes, noise and may generate considerable quantities of solid wastes. These may require treatments plants for liquid wastes. These industries shall keep minimum distance of 250m between the boundaries of factory and nearest residential unit or any residential colony or commercial establishment being developed near by shall also maintain such distance from the source of pollution/hazard in industrial promises. These distances may act as buffer and may contain:
 - Clean industry where it imposes no buffer constraint such as only packing or assembling for re-distribution.
 - Roads and utilities.
 - Park and green and light recreational activities.
 - Infrastructure facility uses such as police post, civil defence, post office where there is no residential use.
 - Petrol kiosk.
 - General warehousing and distribution centres.
- c) Industrial developments shall be designed and incorporated with pollution control facilities as per Punjab Pollution Control Board norms to reduce and control pollution so as to minimize any adverse pollution impact on surrounding developments.
- d) Companies that import, store, use or manufacture hazardous substances are required to obtain licenses/permits from the concerned Competent Authorities to ensure that preventive measures are taken to minimize accidental release of hazards substance into environment.
- e) Factories involved in manufacturing of chemicals will be required to install in-house treatment facilities to recycle and reuse their toxic waste before they can be safely disposed.
- f) For use of fly ashes of Industry & Thermal Power Plant, the guidelines of concerned departments of centre/state governments shall be adhered to.

(iii) Other Development Control for industrial zones

- a) All the industrial activities given sub-code D23, D24, D25, D26, D27, D28, D29, D30 and D31, shall be developed as per statutory and regulatory provisions of central or state government.
- b) In the designated industrial zone Z-16 & Z-17, the share of permissible commercial and public activities shall be limited as per the following table.

Table 6.23 The extend of public/semi public activities in industrial zones (Z7, Z8)

S. No.	Area of Industrial Development sites	Maximum share of above activities
1.	50 Acre and above	50%
2.	100 Acre and above	15%
3.	150 Acre and above	20%
4.	200 Acre and above	25%

- c) The activities under sub code D-9, D27 & D32 have been made permissible in agriculture zone Z-19 but these activities shall be allowed to develop in this zone only if the area requirement of such activities is to large to be fulfill the designated industrial zone (Z-16 & Z-17)

(D) Development Controls applicable for Public/Semi Public zones/activities

The development within institutional-cum-residential zone has to be based on some norms and under some limitations. Besides this, the department of various activities, which have been made permissible in different proposed land use zones also have to follow the prescribed criteria as given below:

- a) For the **residential development** within this zone, all the development controls indicated in para 6.6.3 (i) of the zoning regulations shall be applicable.
- b) For **institutional development** within this zone, for the development of activities given sub code F-3, F-4 & F-5 the specifications mentioned in table 6.25 shall be applicable:

Table No. 6.24 Criteria for development of Institutional sites

S. No.	Parameter	Criteria
1.	Minimum plot size.	5000 square meters
2.	Minimum frontage	200 feet
3.	Minimum width of Approach road	18m (60')
4.	Maximum F.A.R.	1:1

5.	Maximum Ground Covered	40%
6.	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, otherwise the parking norms meant for commercial uses i.e., 3 ECS / 100 square meters covered area shall apply.

Note:

- For the parameters which are not covered in the above table, the norms specified by department of Housing and Urban Development, Punjab and Chief Town Planner, Punjab shall be applicable.
- If these norms are still silent in term of certain parameters then the norms specified by concerned affiliated authority shall be applicable. The activities under sub code F-4 & F-5 have been made permissible in agriculture zone Z-19 but these activities shall be allowed to develop in this zone only if the area requirement of such activities is to large to be fulfilled in the designated institutional cum residential zone (Z-1)
- Even if criteria regarding some issues is missing or not clear in the above said norms then the criteria mentioned in table no. 6.27 shall be applicable.

Table No. 6.25 Norms space standard of various organization for higher level education institutes.

Aspect	As per zoning regulations and sub-division clauses for Master Plan in Punjab/Govt. Policies	UDPFI Guidelines	Delhi Master Plan
University	N.A.	New University Area:60.00ha	sites in urban extension to be provided at town 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 a) Built up area :(over 650 ppha): 1.00 ha b) New proposal areas (less than 650ppha):2.50 ha	2 Number to be provided in urban extension Number of students:1500-1700 Area per college:60.00ha	Population :5,00,000 Area: As per AICTE norms
Medical/Pharmacy College	Area :5 acres(Rural) Area: 2.5 acres (Distt. Headquarter Corporation Limit)	2 site of 15 ha each in urban extension including space for specialized general hospital.	Population: 10,00,00 Area :As per Medical Council of India /Regulatory body

Note:

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

- *The norms and standards suggested by UDPMFI Guidelines are more detailed and cover almost each physical and social infrastructure as compared to Present Master Plan Zoning Regulation / Govt. policies*
- *Norms and standards suggested by UDPMFI Guidelines are more realistic and suit to local conditions such as prevailing development controls, availability of land, land prices etc.*

- Norms and standards suggested by Delhi Master Plan have not been found suitable for LPA, Goindwal because these norms are of higher level, formed especially for Mega town like Delhi, where development controls are very tight, population is more than 1.25 crores and the land is scarce and costly.
- But the norms of concerned centre/state governments shall have overriding effects on all the above norms.

(ii) For Public building/public utility buildings For the development of public buildings/public utility buildings, the byelaws/norms of concerned government departments shall be applicable.

(iii) For social infrastructure permissible in various land use zones proposed in Master Plan, Goindwal (2031):-

The comparative statement of Norms and standard for social infrastructure is given in the table below:-

Table 6.26 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	<p>Population:3,000-4,000 No. of students: 600 Area a) Built up area (over 650 ppha): 0.2 ha b) New Proposed Areas (less than 650ppha):0.5 ha</p>	<p>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</p>	<p>Population: 10,000 Area:2000-4000 sq m</p>

Senior Secondary School	Population:12,000-20,000 No.of students: 1000 Area a) Built up area (over 650 ppha) : 1.00 ha b) New proposed 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 a) Built up area (over 650 ppha) : 2.50 ha b) Outer areas (less than 650 ppha):5.00 ha	Population: 1,25,000 Number of students :1000-1500 Area per college:4.00 ha Covered area:1.80 ha Play field area:1.80ha Residential/hostel area: 0.40 ha	Population: 5,00,000 Area: As per UGC Norms
Medical/Pharmacy College	Area :5 acres(Rural) Area: 2.5 acres (Distt. Headquarter Corporation Limit)	2 site of 15 ha each in urban extension including space for specialized general hospital.	Population: 10,00,00 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
Primary Health Center			

Nursing Home	N.A.	Population :45,000-1,00,000 Capa town: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 Capa town:500 beds Area for hospital :400 ha Area for resi accommodation :2.00ha Total area :6.00ha	Population:5,00,000 Capa town :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
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
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 Area :0.16 ha (area inclusive of essential residential accommodation)	Population :1,00,000 Area :1000 sq m
Police station/police Division	Population:50,000 Area:0.8 ha	Population:90,000 Area:15 ha Area inclusive of essential residential accommodation 0.05 ha additional to be provided for civil Defence and home guards	Population :2,50,000 Area :10,000 sq m
Police Line	N.A.	Population:20,00,000 Area:4.00 to 6.00 ha	1 for each administrative zone to be provided at town 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	3 Fire Station for 5,00,000 population within radius of 5 to 7 km Area: 10,000 sq m
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Note:

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

- *The norms and standards suggested by UDPMFI Guidelines are more detailed and cover almost each physical and social infrastructure as compared to Present Master Plan Zoning Regulation / Govt. policies*
- *Norms and standards suggested by UDPMFI Guidelines are more realistic and suit to local conditions such as prevailing development controls, availability of land, land prices etc.*
- *Norms and standards suggested by Delhi Master Plan have not been found suitable for LPA, Goindwal because these norms are of higher level, formed especially for Mega town like Delhi, where development controls are very tight, population is more than 1.25 crores and the land is scarce and costly.*

(iv) Strategy for obtaining land for public purposes

The strategy shall be applicable for the building developed by government/semi government or public/semi public undertakings. Various options for obtaining such land are given below table 6.28

Table 6.27 Strategy for Obtaining Land for 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 40%) 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		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	Lack of finances for compensation	This is to be market driven and present response is said to be not so encouraging.	Comprehensive Land Pooling Policy is required to be framed.	Locational disadvantages in certain cases.
	Landowners' resistance	Landowners' resistance		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.	
		New concept difficult to be implemented.		New concept difficult to be implemented.	
		Could also be used for heritage conservation.			

(v) Other norms applicable for development of Public/semi public land uses/activities:

- a) **No institute or public buildings** shall be allowed **on road** less than 60 feet (18m) wide except in case of nursery and primary school.
- b) For development around **protected monuments**, necessary permissions/ approvals to be obtained from Archeological Department of India/Punjab for development within the area restricted around protected monuments. Description thereof shall be given while preparing the zoning regulations and development controls for lal lakir areas for villages in Local Planning Area, Goindwal as protected monument (gateway of Fatehabad fort) declared by concerned authority falls within such area.
- c) For development around **Defense installations or Air force arodrum**, if any comes within Local Planning Area boundaries in future, the guidelines issued

by ministry of Defense, Government of India shall be followed and necessary permissions to be obtained.

- d) **Hospitals and polyclinics** are required to segregate pathogenic waste and put in closed coded plastic bags. These wastes shall then stored in special contains for collection by licensed toxic industrial waste collector for disposal in high temperature incinerators.
- e) All public facility buildings established by center/state governments are retained as such and these shall be permissible activities in this particular land use.

(E) Development Controls applicable for Recreational Zones/ sports activities:

For the reactional areas and sports facilities proposed or made permissible in Master Plan, Goindwal, for the provision of Local population as well as tourists, the development controls shall be applicable.

(i) Proposed development parameters for the River Front Recreational zone (Z-13):- The River front recreational zone, which is proposed to facilitate the tourists, by providing them with recreational and its ancillary commercial as well as residential facilities. The norms are given below:

Table No. 6.28 Development Controls for River front Recreational zone

Sr. No.	Parameter	Criteria
1.	Minimum size of development site	10 Acres
2.	Maximum hard surface area	10%
3.	Maximum area under temporary residential component.	2% of hard surface
4.	Maximum commercial area permissible	5% of hard surface
5.	Maximum ground coverage	3% of hard surface
6.	Maximum FAR	5%
7.	Maximum number of storeys	2
8.	Maximum height	28' (8.53m)

Note:

Norms of the concerned departments of central/ State Government shall be applicable for development of such activities.

(ii) Tourist Facility Areas: (Z-3 & Z-12)

- a) The commercial activities given sub codes B3, B6, B7, B8 and B9 are made permissible in Tourist facility areas as per table 6.13. But this activity is not allowed to cover except as following norms.

Table No. 6.29 Development Controls for Tourist facility areas

Sr. No.	Parameter	Criteria
1.	Maximum commercial area permissible	10%
2.	Maximum ground coverage	40%
3.	Maximum FAR	1:1.75
4.	Maximum number of storeys	2
5.	Maximum height	28' (8.53m)

Note:

Norms of the concerned departments of central/ State Government shall be applicable for development of such activities.

- b) Besides this, the **informal activity** in regulated form only on special occasion is allowed to develop as indicated in Para B (iv)
- c) Strategic for **obtaining land** for such purpose shall be same as mentioned in para D (iii)

(iii) **Criteria for development of other recreational facilities:** For other recreational facilities following norms/space standard shall be applicable

Table No. 6.30 Norms/Space standards for recreational facilities

Aspect	Criteria
Amusement park	Up to 10 ha
town level park	Population :5,00,000 Area 10acres
Neighborhood level park	Population 10,000 Area:10,000 sq m
Golf Course	Population :10,00,000 Area :10-30 ha
Sports Centre/Stadium	Population :5,00,000 Area :3-10 ha

Note:

- The norms of Centre/state government or the concerned departments shall have overriding effect on the above norms.*
- Strategies for obtaining land for these facilities shall be same as mentioned in Para D (iv)*

- 3) *No organized park/open space shall have any dimension less than 15' and area of any open space having dimension less than 15' shall be not be counted towards the area of organized park/open space.*

(iv) Green belts/buffer zone:

- a) As proposed in para 6.5.7 (iv) green buffer have been proposed and shall be developed as follow:
- To segregate the Industrial activities from the surrounding incompatible land uses, the owner/promoter/developer shall develop green buffer of 15' width within his development sites/plot. This clause shall be applicable for areas of zones Z-16 & Z-17 to segregate these from Z-10, Z-14, Z-15 expanded village abadis of village Jhander and Dhunda.
 - Similarly the developer/promoter/owner of any development sites within logistic park touching the residential zone Z-10 shall develop 15' wide buffer strip within his development sites.
 - In the same way the developer/promoter/owner of the development sites following within in rural marketing zone Z-6 shall develop 15' wide buffer strip within his site adjoining the abadi of village Khawaspur.
 - 15' wide buffer strip shall be develop along either side of all railway lines, 100' and 80' wide roads.
 - 15' wide buffer strip shall be develop along either side of all the running water bodies except minors where this width shall be 10'.
- b) The development within these green belts, buffer zone/strips given shall take place under the following controls:
- Walkways, promenades & lands scaping is permitted.
 - Car parking is allowed with Green Belt but should not exceed 50% of site.
 - Ample tree plantation is to be made.
 - No high fencing to enclose the green belts is permissible.
 - Small quantum of commercial (activity code B-3), shelters, toilets can be allowed within these green connectors but not more than 0.5% of the development site.
 - No building or developments are allowed to encroach into the buffer zone.

(F) Development Controls applicable for Transportation and communication sites/networks:

- (i)** The development of roads and the activities covered under sub code L-1 shall take place as per their proposed cross-sections according to their given hierarchy.

(ii) Dhaba and Restaurants and others permissible activities along road side to be developed with the guidelines issued by Department of Public works B & R, Punjab.

(iii) **Railway Track:-** These shall be no development with 100' (30m) on either side of railway tracks and required approvals are to be obtained from the concerned authorities for the developments along railway tracks.

(iv) **For Parking norms:-**

- The E.C.S. shall be counted as below:
 - 23 square meters per open parking
 - 28 square meters for parking under stilts on ground floor
 - 32 square meters for parking in the basement

(v) For the activities covered under sub codes L-2 to L-12 the norms of the concerned departments shall have to be complied with.

(vi) Strategies for obtaining land for development of transportation and communication sites/networks shall be same as mentioned in para D (iv)

(vii) Applicant shall not make any construction under H.T./L.T. electric lines passing through the site, if any, or shall get these lines shifted along road but outside ROW by applying to the concerned authority, otherwise he shall be bound to comply with the instructions of concerned authority to leave the prescribed set backs/no construction zones on either side of these lines.

(G) Development controls applicable for Agriculture rural & Allied land use zones/activities:-

- a) No development shall be permitted in area designated for any water body, natural drainage and other bodies, prescribed in landuse Plan of Master Plan, Goindwal.
- b) Through revenue rastas and Khalas passing through the site of development if any, shall be kept unobstructed.
- c) For development of activities given sub code M-1 to M-9 the norms of concerned center/state government department shall be applicable.

(H) General Development Controls applicable within Local Planning Area, Goindwal.

- i. All projects for which CLU has been approved prior to the approval of this Master Plan shall stand adjusted in the master plan irrespective of the proposed land use in master plan subject to necessary environmental safe guards, road networks etc. proposed in the master plan.
- ii. In case the owner of premises/sites/area which is made permissible in some particular land use wishes to discontinue that land use and wants to develop

- some other activity on that site which is also permissible in that land use zone, there shall be no need to get the master plan amended.
- iii. In case of conflict in interpretation of data within the study area, the information in GIS format shall be deemed as the accurate version and shall prevail.
 - iv. All the development shall be subject to environmental clearance wherever required.
 - v. The provisions of all the relevant laws/acts/rules and regulations of Government of India and Government of Punjab shall be applicable for any type of development within Local Planning Area, Goindwal. The provisions of the Master Plan shall not provide any immunity from the above mentioned laws/acts/rules or regulations and norms.
 - vi. The guidelines/norms of all the concerned departments of Government of India and Government of Punjab have to be followed in any type of development within Local Planning Area, Goindwal and all necessary approval/permission/NOC are to be obtained from the concerned departments.
 - vii. Any 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 complies with these regulations.
 - viii. Owner/developer/promoter of any development site shall make provisions for the disposal of rain/storm water of the proposed project and shall not obstruct the flow of rain/storm water of the surrounding area.
 - ix. In case of the height of any building, necessary clearance from Air force Authorities, if applicable.
 - x. For structural safety building shall be made structurally safe to withstand any natural disaster and shall be designed by a qualified structural engineer as per the provision of N.B.C.
 - xi. The fire safety requirements as per National Building Code shall be compulsory.
 - xii. Stair cases and lifts: No and size of lifts and stair cases to be provided, shall be as per BIS standards.

6.6.4 Regulations/Development controls

- i. Landowners desirous of developing their land can obtain, NOC/approval by applying to the designated authority in writing and giving details of their land along with necessary maps, a list of permissible uses and other relevant documents.
- ii. Similarly, landowners proposing development of certain uses on their land can obtain a certificate of *Compliance with Master Plan* from a designated authority.

Annexure-1

**GOVERNMENT OF PUNJAB
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
(HOUSING BRANCH)**

Notification

Date: 12/9/06

No. 1245/09-4447/2006 Whereas it appears to the government of Punjab that in the light of historical/religious importance of Village Goindwal and to provide the proper infrastructure for workable tourism and pilgrims as well as for comprehensive planned and regulated development, preparation of statutory Master Plan of Goindwal Village is very essential. Hence in order to develop Goindwal Village and its surroundings in an orderly manner and to prepare its master plan under "The Punjab Regional and Town Planning and Development Act- 1995". The Governor of Punjab is pleased to declare that Local Planning Area of Goindwal within the meaning of sub-section 1 of section 56 of the Punjab Regional and Town Planning and Development Act, 1995 (Amended Act, 2006). Total area proposed for Local Planning Area-Goindwal (2030) is 11598 hectare including Goindwal Village and adjoining 18 villages. The schedule of boundary of proposed local Planning Area -Goindwal 2030 is given below:-

SCHEDULE OF BOUNDARIES OF VILLAGE GOINDWAL LOCAL PLANNING AREA-

North:- Starting from Point 'A' which is meeting point of revenue boundary of village Bharowal (H.B. No. 327), Northern revenue boundary of Village Khadur Sahib (H.B. No. 129) and Southern revenue boundary of Village Waring (H. B. No. 128), moving clockwise towards East along the Northern revenue boundaries of Village Khadur Sahib (H.B. No. 129), Village Nagoke (H.B. No. 132), then crossing Jandiala-Verowal Road and Sabhrao branch up to point 'B' which is the meeting point of Southern revenue boundary of Village Nagoke (H.B. No. 132), and Northern and Eastern revenue boundary of Village Verowal (H.B.No. 332).

East: Thence from point 'B' moving towards south along the Eastern revenue boundaries of Village Verowal (H.B.No. 332), Village Alampur (H.B.No. 333), Village Akbarpur (H.B.No.339), Village Miani (H.B.No.340), then crossing the Tarn Taran-Kapurthala road along the Eastern boundary of Village Dhunda (H.B.No. 343) up to point 'C' which is the common meeting point of the Southern boundary of Village Dhunda (H.B.No. 343) and the Northern boundary of Village Manak Deke (H.B.No.344)

- 2 -

South:- Thence from point 'C' moving towards west along the Southern revenue boundaries of Village Lunda (H.B.No. 343), Village Jhandher (H.B.No. 342) and Village Bharowal (H.B.No. 324), crossing sabhrao branch and then along the Southern revenue boundary of Village Bharowal (H.B.No. 327), up to point 'D' which is the meeting point of outer boundary of village Bharowal (H.B.No. 327) and common revenue boundaries of Village Tanda (H.B.No. 319) and Village Tur (H.B.No. 320).

West:- Thence from point 'D' along the western boundary of village Bharowal (H.B.No. 327) up to the point 'A', which is the starting point.
Boundaries of Local Planning Area Goindwal-2030 are specially shown on drawing no. DTP (A) 1/2009 dated 20-1-09. All the provisions laid down u/s 56 (2) of the Punjab Regional and Town Planning and Development Act, 1955 amended in 2006 and all the concerned rules framed under this Act have been taken into consideration.

CHANDIGARH
Dated: 11-02-2009

(Arun Goel, I.A.S.)
Secretary to Government Punjab,
Housing and Urban Development Deptt.

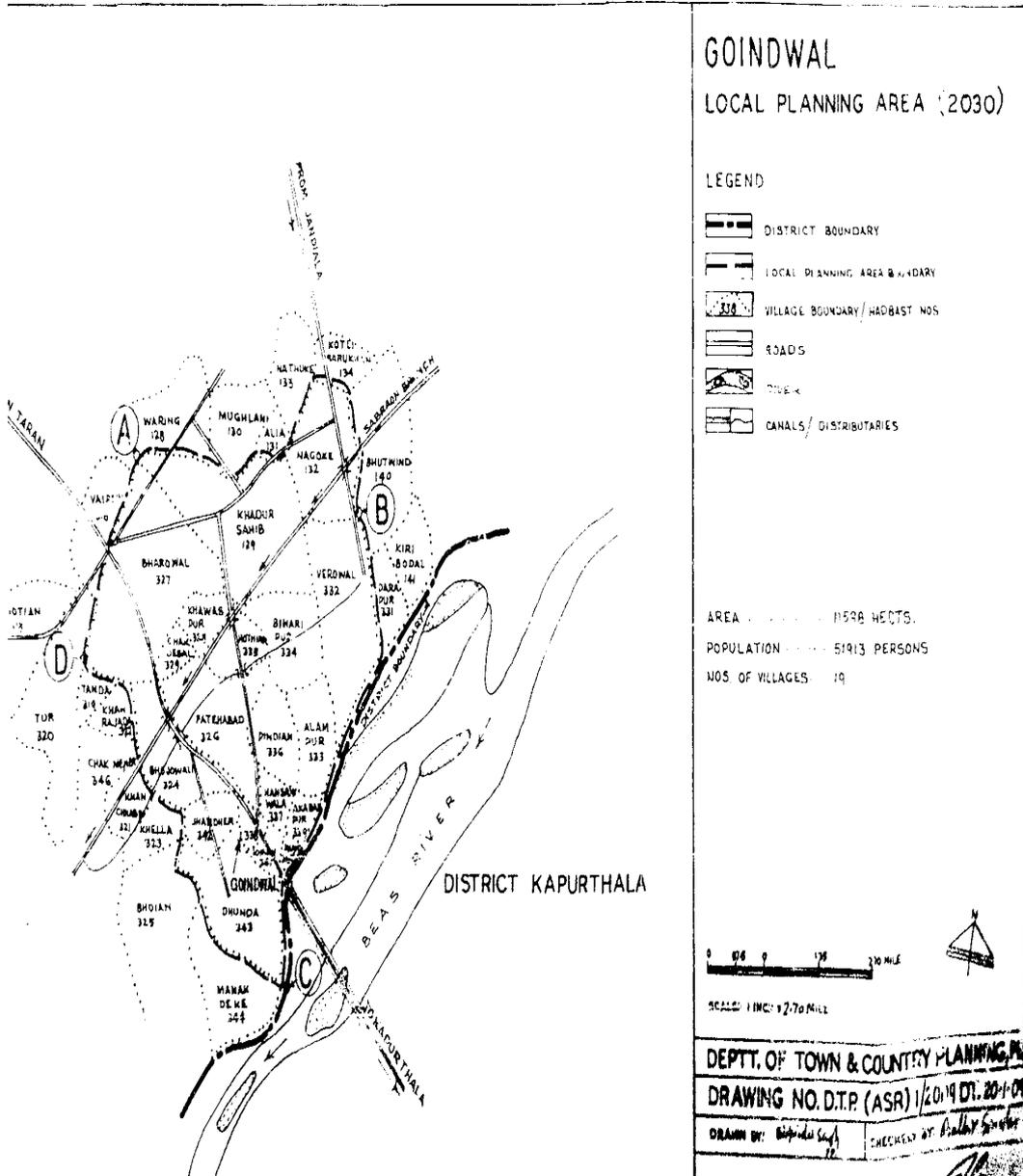
(A)

DETAILS OF VILLAGES/TOWN FALLING IN THE LOCAL PLANNING AREA
VILLAGE GOINDWAL

Sr. No.	Name of Villages	H. B. No.	Area in Hect.	Population as per census	2001	Remarks
1.	Goindwal	338	539	6845		
2.	Nagoke	132	1023	6269		
3.	Verowal	332	1318	2062		
4.	Alampur	333	277	286		
5.	Akbarpur	339	110	641		
6.	Miani	340	367	87		
7.	Dhunda	343	1478	4335		
8.	Jhandber	342	289	1179		
9.	Hansawala	337	455	1793		
10.	Khakh	341	339	568		
11.	Pindia	336	292	911		
12.	Faiebad	326	1216	7570		
13.	Hothian	335	304	1303		
14.	Biharwal	334	366	1006		
15.	Khaddu Sahib	129	1618	9683		
16.	Bharewal	327	901	3776		
17.	Khawaspur	328	577	3475		
18.	Chak Desal	329	45	-----		Un-inhabited
19.	Bhojewali	324	84	124		
			11598	51913		


 District Town planner
 Amritsar.





Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the:

A copy along with spare copy is forwarded to the Controller Printing & Stationary, Punjab, Chandigarh with the request that this notification may be published in the official gazette (Extra ordinary) and 100 copies of the printed notification may be sent to the Government for record.


Secretary

Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the:

A copy is forwarded to the Chief Town Planner, Punjab, Chandigarh w.r.t. his letter No. 788-CTP(PB)/SG-34 dated 28-01-2009 for information & necessary action.


Superintendent

Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the:

A copy is forwarded to the Chief Administrator, PUDA, Mohali for information & necessary action.


Superintendent

Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/ 55^{SI}

Dated, Chandigarh, the: 13/2/09

A copy is forwarded to the Deputy Commissioner, Amritsar for information & necessary action.


Superintendent

Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the:

A copy is forwarded to the Director Information Technology, Punjab with a request that this notification may kindly be published on the web site of Government of Punjab.


Superintendent

Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the:

A copy is forwarded to the Additional Chief Administrator, PUDA, Jalandhar for information & necessary action.


Superintendent

Department of Housing & Urban Development

Annexure-2



PUNJAB GOVERNMENT
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
(HOUSING BRANCH-1)

NOTIFICATION

DATED.....13/2/09

No. 12/5/2009-4HG1/ 562 Whereas the Governor of Punjab was pleased to declare the Local Planning Area of Goindwal and its surrounding area u/s 56(1) of "The Punjab Regional and Town Planning and Development Act, 1995" vide notification No. 12/5/2009-4HG1/ 555 dated 13-2-2009.

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".

Dated, Chandigarh
11-02-2009

Arun Goel
Secretary to Government of Punjab
Department of Housing & Urban Development

Annexure-3

**GOVERNMENT OF PUNJAB
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
(HOUSING-1 BRANCH)**

Notification

Dated, Chd, the: 20/10/2009

No. 12/5/2009-4HGI/ 555 Whereas it appears to the Governor of Punjab that in the light of historical/religious importance of Village Goindwal and to provide the proper infrastructure for tourism and pilgrims as well as for comprehensive planned and regulated development, preparation of Master Plan of Goindwal Village is very essential. Hence in order to develop Goindwal Village and its surroundings in an orderly manner and to prepare its Master Plan under "The Punjab Regional and Town Planning and Development Act- 1995". The Governor of Punjab is pleased to declare Local Planning Area of Goindwal within the meaning of sub-section 1 of section 56 of the Punjab Regional and Town Planning and Development Act, 1995 (Amended Act, 2006), superseding the Punjab Government Notification No. 12/5/2009-4HGI/555 dated 13-2-2009. Total area proposed for Local Planning Area-Goindwal is 11880 hectare including Goindwal and adjoining 18 villages. The schedule of boundary of proposed Local Planning Area - Goindwal is given below:-

**SCHEDULE OF BOUNDARIES OF LOCAL PLANNING AREA
GOINDWAL:-**

- North:-** Starting from Point 'A' which is meeting point of revenue boundaries of Village Waring (H.B. No. 128), Khadur Sahib (H.B. No. 129) and Muglani (H. B. No. 130). Moving clock wise along the Western revenue boundaries of Village Muglani (H.B. No. 130), crossing Tarn Taran-Khadur Sahib road then along the Northern boundary of Village Nagoke (H.B. No. 132), crossing Jandiala-Verowal Road, Khilchian-Nagoke road and then along Eastern boundary of Village Nagoke (H. B. No. 132) crossing Sabhraon branch up to point 'B' which is the meeting point of Eastern revenue boundary of Village Nagoke (H.B. No. 132), and Northern revenue boundary of Village Verowal (H.B.No. 332).
- East:** Thence from point 'B' moving along the Eastern revenue boundaries of Village Verowal (H.B.No. 332), crossing Tarn Taran-Beas railway line and Jandiala Verowal road twice, then along Eastern boundary of Verowal crossing river Beas then along the Eastern boundary of Hansawala (H. B. No. 337), crossing Goindwal-Kapurthala road then moving along Eastern boundary of Village Goindwal (H.B.No. 338), crossing river Beas twice then along Eastern and Southern

Boundaries of Village Miani (H.B.No.340), then along Eastern boundary of Village Khakh (H.B.No.341), crossing river Beas upto point 'C' which is the common meeting point of Eastern and Southern boundaries of Village Khakh (H.B.No. 341) and Eastern boundary of Village Dhunda (H.B.No.343).

South:- Thence starting from point 'C' crossing river Beas then moving along Eastern and Southern boundaries of Village Dhunda (H.B.No. 343), again crossing river Beas upto Point 'D' which is common meeting point of Southern boundary of Dhunda (H.B.No. 343) and Eastern boundary of Village Bhoian (H.B.No. 325) and Northern boundary of Village Manak Deke (H.B.No. 344).

West:- Thence from point 'D' moving along the western boundary of village Dhunda (H.B.No. 343) and Western boundary of Village Fatchabad (H. B. No. 326), crossing Sabhraon branch and Tarn Taran-Beas railway line, then along Southern and Western boundaries of Village Bharowal (H. B. No. 327), then crossing Tarn Taran-Goindwal road then again along western boundary of village Bharowal (H. B. No. 327) and then along Western boundary of village Khadur Sahib (H. B. No. 129) upto Point 'A' which is the starting point.
Boundaries of Local Planning Area Goindwal-2031 are specially shown on drawing no. DTP (A) 4/2009 dated 27-8-09. All the provisions laid down u/s 56 (2) of the Punjab Regional and Town Planning and Development Act, 1995 amended in 2006 and all the concerned rules framed under this Act have been taken into consideration.

Arjun Goel
Secretary to Government Punjab,
Department of Housing and Urban Development
PLACE: CHANDIGARH
DATED: 21-10-09

DETAILS OF VILLAGES/TOWN FALLING IN THE LOCAL PLANNING AREA

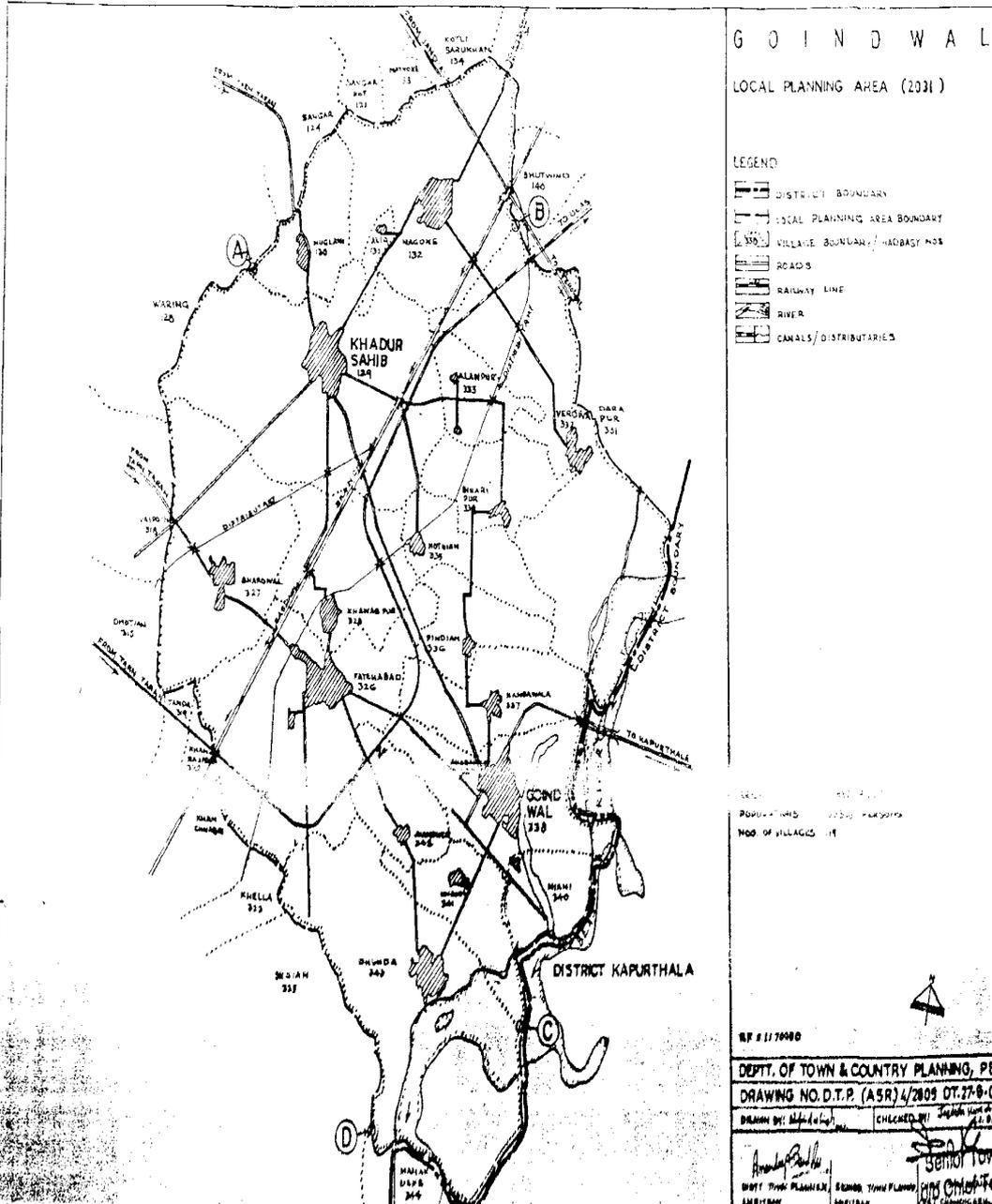
VILLAGE GOINDWAL

Sr. No.	Name of Villages	H. B. No.	Area in Hect.	Population per census	Remarks
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3.	Miani	340	367	87	
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5.	Dhunda	343	1478	4335	
6.	Jhandher	342	289	1179	
7.	Fatehabad	326	1216	7570	
8.	Khawaspur	328	577	3475	
9.	Bharowal	327	901	3776	
10.	Khadur Sahib	129	1613	9683	
11.	Muglani	130	348	1762	
12.	Alia	131	68	267	
13.	Nagoke	132	1023	6269	
14.	Verowal	332	1318	2062	
15.	Alampur	333	277	286	
16.	Biharipur	334	366	1006	
17.	Hothian	335	304	1303	
18.	Pindian	336	292	911	
19.	Hansawala	337	455	1793	
			11880	53818	

Arindhu

District Town planner
Amritsar.

Seela
Senior Town Planner,
o/o Chief Town Planner
Punjab, Chandigarh.



Endst. No. 12/5/2009-4HG1/

Dated Chandigarh, the

A copy along with spare copy is forwarded to the Controller Printing & Stationary, Punjab Chandigarh with the request that this notification may be published in the official gazette (Extra ordinary) and 100 copies of the printed notification may be sent to the Government for record.

Joint Secretary
Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the

A copy is forwarded to the Chief Town Planner, Punjab, Chandigarh w.r.t. his letter No. 7/83-CTP (PB)/SG-34 dated 09-10-2009 for information & necessary action.

Joint Secretary
Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the

A copy is forwarded to the Chief Administrator, PUDA, Mohali for information & necessary action.

Joint Secretary
Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the

A copy is forwarded to the Deputy Commissioner, Amritsar for information & necessary action.

Joint Secretary
Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the

A copy is forwarded to the Director Information Technology, Punjab with a request that this notification may kindly be published on the website of Government of Punjab.

Joint Secretary
Department of Housing & Urban Development

Endst. No. 12/5/2009-4HG1/

Dated, Chandigarh, the

A copy is forwarded to the Additional Chief Administrator, PUDA, Jalandhar for information & necessary action.

Joint Secretary
Department of Housing & Urban Development

ਨਗਰ ਅਤੇ ਗਰਾਮ ਯੋਜਨਾਬੰਦੀ ਵਿਭਾਗ, ਪੰਜਾਬ।

ਪਿਠ ਅੰਕਣ ਨੰ: 8162-63 ਸੀਟੀਪੀ(ਪਬ)SG-34 ਮਿਤੀ 29/10/09

ਇਸ ਦਾ ਇਕ ਉਤਾਰਾ ਜ਼ਿਲਾ ਨਗਰ ਯੋਜਨਾਕਾਰ, ਅੰਮ੍ਰਿਤਸਰ/ ਸੀਨੀਅਰ ਨਗਰ ਯੋਜਨਾਕਾਰ, ਅੰਮ੍ਰਿਤਸਰ ਨੂੰ ਸੂਚਨਾ ਅਤੇ ਲੋੜੀਂਦੀ ਕਾਰਵਾਈ ਹਿਤ ਭੇਜਿਆ ਜਾਂਦਾ ਹੈ।

ਜ਼ਿਲਾ ਨਗਰ ਯੋਜਨਾਕਾਰ,
ਵਾ: ਮੁੱਖ ਨਗਰ ਯੋਜਨਾਕਾਰ,
ਪੰਜਾਬ, ਚੰਡੀਗੜ੍ਹ।