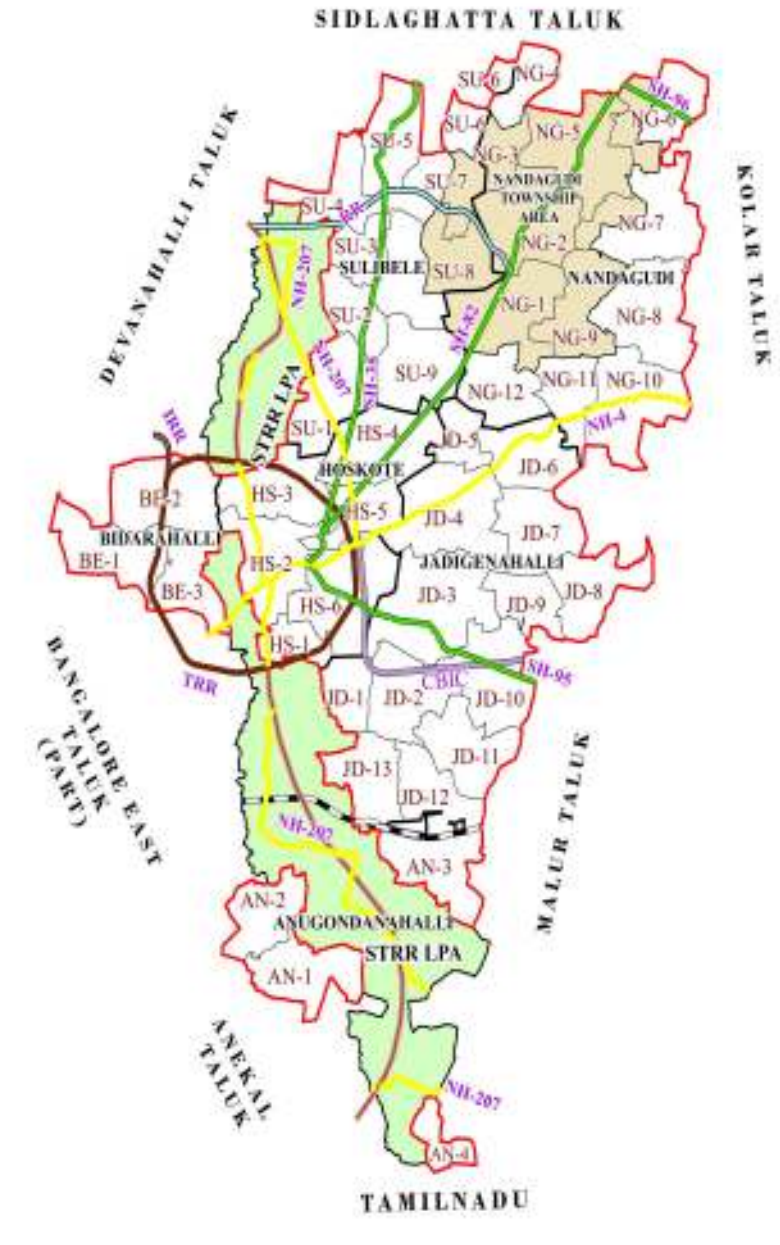
MASTER PLAN - 2031

HOSKOTE LOCAL PLANNING AREA

REPORT - VOL . I











HOSKOTE PLANNING AUTHORITY,

BANGALORE METROPOLITAN REGION DEVELOPMENT AUTHORITY, BANGALORE

Salient Features of Hoskote Local Planning Area		
1	Total Local Planning Area	591.72 sq km (59172 Hectares)
2	LPA Declaration Notification No. and Date	G.O No. UDD 118 Bem Ru Pra 2003 dated 03.03.2006
3	Total Number of Villages in LPA	316 (300 Villages of entire HoskoteTaluk and 16 Villages of Bidarahalli Hobli of Bangalore East Taluk)
4	Total Number of Urban Areas in LPA	1 (Hoskote CMC)
5	Date of IMP Provisional Approval	G.O No. UDD 173 BMR 2006 dated 28-04-2007
6	Date of IMP Final Approval	G.O No. UDD 173 BMR 2006 dated 28-05-2009
7	Total Existing Developed Area, 2009	1109.49 ha
8	Census Population, 2011 (Hoskote LPA)	2,82,393
9	Existing Population, 2011 (Hoskote Urbanisable Area)	1,18,914
10	Date of Master Plan (Provisional approval)	G.O No. UDD 152 BMR 2013 Bangalore dated 16-09-2013
11	Date of Calling Comments from the Public (2-Months)	09-10-2013 to 08-12-2013
12	No. of Comments received from the public	1774
13	Government order directing HPA to scrutinise Public Comments	G.O No. UDD 152 BMR 2013 Bangalore dated 12-01-2016
14	Declaration of STRR LPA	Govt Order UDD 36/BMR/2016 dated.24.06.2016
15	Area withdrawn from Hoskote LPA and included in STRR LPA	51 Villages 116.24 Sq.km
16	STRR Area in Hoskote LPA as per Census data	117.62 Sq.km
17	Revised LPA of Hoskote	474.10 Sq.Km and 265 Villages(249 Villages of entire HoskoteTaluk and 16 Villages of Bidarahalli Hobli of Bangalore East Taluk)
18	Government order directing HPA to prepare Master plan for Nandagudi Township under sec.13(b) of KTCP Act, 1961	G.O No. UDD 25 BMR 2016 dated16-05-2016
19	Area of Nandagudi Township coming within LPA of Hoskote	74.89 Sq.km
20	Area considered for Master plan preparation excluding STRR and Nandagudi Township	399.21 Sq.km

21	Urbanisable area as per approved MP, 2031 (provisional) excluding STRR & Nandagudi Township	83.64 Sq.km (conurbation area 97.66 sq.km)
22	Urbanisable area as per Final MP,2031 after considering Public Comments	95.84 Sq.km (conurbation area 102.96 sq.km)
23	Design Population as per MP,2031 (LPA-excluding Nandagudi Township)	7.20 Lakhs (3.0 + 4.20) (Natural growth + Induced population)
24	Urbanisable area as per Final MP,2031	9584.14 ha
25	Residential area as per Final MP,2031	3791.46 ha
26	Residential density considered for the urbanisable area in MP, 2031	190 pph
27	Density for the design population for the proposed Urbanisable area in MP, 2031	76 pph

PREFACE

Bangalore Metropolitan Region Development Authority prepared the Structure Plan (SP) for Bangalore Metropolitan Region (BMR) with an inductive approach with the prime objective of decentralizing growth away from Bangalore to harness and constrain its increasing primacy in the region, lessen the regional disparities and in the process relieve the developmental pressure within the conurbation. The strategic issues considered to be key determinants to future growth patterns were studied and summed up as follows:

- How effectively the strategic intervention combinations would complement the achievement of the induced population growth targets and developmental interventions of the preferred growth strategy.
- How effectively they would counter anomalies and negative development trends identified in the BMR.

The structure plan was intended to provide a generic model for formulation of such plans for other regions in Karnataka besides providing a strategic policy framework for planning & developments are regulated locally to ensure that provision of development is realistic and complements with national, state & regional policy guidelines and securing consistency between local plans for contiguous or neighbouring areas.

Structure Plan has proposed five Area Planning Zones and Interstitial zones in the entire Bangalore Metropolitan Region. For the purpose of planning and development of important and potential zones, Karnataka Town and Country Planning Act, 1961 has been extended to various Area Planning Zones and Planning Authorities have been constituted for controlling and regulating the developments in these Local Planning Areas. With the increase of Bangalore s population and spatial spread in the last 2 decades owe to its increasing global recognition as a preferred **IT** destination.

With increasing outgrowth of Bangalore and the proposed population influx into the **Hoskote** Local Planning Area, BMRDA has rightly taken up the preparation of **Interim Master Plan (IMP)** to dovetail the regional policies of development to the local requirements of the ever-increasing population to guide & regulate urban growth for a planned & compatible physical development of the region.

The preparation of Interim Master Plan was started during 2006 and the Government has approved the five IMPs provisionally in 2007 and finally approved them during 2009.

The Master Plan (MP) is defined as **"A plan for the development and re-development of the area within the jurisdiction of the planning authority".** The Master Plan has to be prepared not later than 2 years from the date of declaration of the **LPA** as per Section 9 of the Karnataka **Town and Country Planning Act, 1961.** According to the Act, the contents of a Master Plan are defined as follows.

- Zoning of land use
- Street pattern i.e. Circulation pattern
- Area reservation for Parks/Playgrounds/Open Spaces
- Area reservation for future developments
- Reservation of land for the purposes of Central & State Government requirements, etc.
- Declaring and framing regulations for areas of special control
- Phasing of development

BMRDA prepared scientific base maps for the Local Planning Area by acquiring Quick Bird image based on 2009 data, as there were no proper base maps. The Planning Authorities incorporated all approved layouts and were finalised during 2012.

Government constituted a committee vide its G.O.No. dated 28-11-2012 under the chairmanship of Metropolitan Commissioner to finalise the Master Plans for five Local Planning Areas with some guidelines. The following were the members of the committee

1. Metropolitan Commissioner Chairman
2. Commissioner, DULT, Government of Karnataka Member
3. Director of Town & Country Planning Member
4. Additional Director of Town & Country Planning, BMRDA Member
5. Joint Secretary / Deputy Secretary, UDD Member
6. Sri Sitaram, Cistup, IISc., Bangalore Member
7. Member-Secretaries of concerned P.A. Member-Convener

Meanwhile there was a petition in High court of Karnataka for delayed preparation of Master Plans for BMRDA. For which, the BMRDA has submitted an affidavit saying that the

plans would be finalised by June 2012 and subsequently submitted another affidavit stating that it would be finalised on 31-1-2013. But, BMRDA could not finalise the plans within date and immediately the committee met on 24-1-2013 and reviewed the progress made in the preparation of Master Plans. During the discussion, it was also observed that notification under section 10(1) of Karnataka Town and Country Planning Act, 1961 was not declared so far and it would be further delayed if it is notified now (2 months) and therefore, it was decided that if BMRDA is to prepare the Master Plans, then the notification under section 10(1) is not required.

However, it was opined that in one case law, the Government has to delegate/empower the preparation of Master Plans under section 9(2) of Karnataka Town and Country Planning Act, 1961. Accordingly, BMRDA requested the Government and Government have empowered the preparation of Master Plans for five Local Planning Areas to BMRDA under section 9(2) Karnataka Town and Country Planning Act, 1961 on 4-3-2013.

The committee formulated broad guidelines' for the preparation of Master Plans and directed the Authorities to work out the proposals based on:

1. Existing developments
2. Approved IMP
3. Change of land uses approved by the Government and by P.A. under section 14-A (3)
4. Major road alignment (STRR/IRR/ITRR) was incorporated as per the Karnataka Gazette notification dated: 13-09-2007.
5. Concept of zoning and scientific allocation of land uses.
6. All the directions of Government.
7. Trend of development and potential
8. Identification of water bodies and natural drains and their protection
9. Structure Plan directives

Based on the above guidelines BMRDA with full support of all Planning Authorities, Cistup (I.I.Sc.) and DULT (Directorate of Urban Land Transport) finalised the Master Plan of Hoskote Local Planning Area and it was unanimously approved in the committee constituted under the chairmanship of Metropolitan Commissioner for the finalisation of Master Plans. BMRDA submitted the Master Plan for **Hoskote Local Planning Area** with plans & reports for provisional approval as required under section 13 (1) of Karnataka Town and Country

Planning Act, 1961. Government approval, calling for comments from the public and further proceedings of finalization of Master Plan taken place as under:

a) Master Plan (provisional) was prepared by BMRDA and Government vide **G.O. No. UDD 152: BMR 2013 Bangalore, dated 16-09-2013** approved Master Plan (provisional) under section 13(1) of KTCP Act, 1961.

b) Comments were called by the public within a period of 60 days vide letter No. BMRDA/ ADTP-2/ M.P/ HPA/ 04/ 2012-13, dated 03-10-2013 published in the **Official gazette dated: 09-10-2013.**

c) An officers committee (10-members) was constituted by the Government vide order No. **UDD 27: BMR 2014, Bangalore dated: 05-03-2014** to scrutinise comments received by the public in respect of Anekal, Hoskote, Nelamangala, Magadi and Kanakapura Planning Authorities.

d) An Officers committee conducted 10 meetings vide 20-03-2014, 27-03-2014, 10-04-2014, 22-05-2014, 05-06-2014, 07-07-2014, 13-08-2014, 18-08-2014, 22-08-2014 and 26-08-2014 but unable take decisions as per records.

e) Vide letter No. BMRDA/staff/31/2015-16, dated: 26-06-2015, it is directed the Member secretary of Hoskote Planning Authority to place the comments received by the publics once again before the committee meeting in future days.

f) Based on the proposals of BMRDA, the Government directed the Hoskote Planning Authority to scrutinise the comments received by the public at Authority level and submit the Master Plan for final approval to the Government through BMRDA vide G.O No. **UDD 152: BMR 2013, Bangalore dated: 12-01-2016.**

g) In the Honorable High Court of Karnataka vide W.P. No. 4188/2016 (LB RES) one Sri V. Vijay kumar (Authorized Agent cum SPA holder) represented on behalf of 02 petitioners filed a case and challenged the legality of Government order issued **vide G.O. No. UDD 152: BMR 2013, Bangalore dated : 12-01-2016** and the Honorable High court of Karnataka admitted the W.P and passed an **INTERIM ORDER on 28th day of January 2016** to stay the Government order dated : 12-01-2016 for a period of three months from the date of order.

h) The stay order granted on 28-01-2016 was modified on 14-07-2016 as under: **"The Interim Order is modified and the respondents action will remain subject to the decision of this court in the present writ petitions" (W.P.4188/2016 (LB-RES).**

As per G.O No dated: 3.03.2006, the LPA of Hoskote was 591.72 Sq.Km including 300 villlages in Hoskote Taluk and 16 villages of Bidrahalli Hobli in Bangalore East Taluk. Subsequently as per G.O dated: 24.06.2016, 116.24 Sq.Km (51 Villages) of Hoskote LPA was withdrawn and included in the Satellite Town Ring Road Local Planning Area and the remaining LPA of Hoskote is 475.48 Sq.Km including 249 villages in Hoskote Taluk and 16 villages of Bidrahalli Hobli in Bangalore East Taluk. As per census data, the geographical area of Bhaktharahalli is 259.38 ha was wrongly entered as 93.4 ha in the STRR notification. Similarly another village name Yetinavadevarayanapura, geographical area 28.42 Ha was wrongly entered as 85.3 Ha in the STRR notification. Accordingly the area of the STRR LPA within the Hoskote LPA limits comes to 117.62 sq.km instead of 116.24 sq.km as per notification. The difference of 1.38 sq.km is going to be reduced in the Hoskote LPA area of 475.48 sq.km and finally works out to be 474.10 sq.km.

As per approved draft Master Plan the urbanisable area excluding STRR and Nandagudi Township is 83.64 sq.km. This is increased to 87.14 sq.km after updating the Master plan. Again this is increased to 95.84 sq.km after considering the public comments.

Now, the Hoskote Planning Authority is submitting the Master Plan for Hoskote Local Planning Area with plans and final reports including Zonal Regulations (Vol.1 to 3) for final approval as required under section 13 (3) of Karnataka Town and Country Planning Act, 1961.

We take this opportunity to thank each member of the Hoskote Planning Authority, Staff of Hoskote Planning Authority and everyone who directly and indirectly assisted in finalizing this plan

Member Secretary

Hoskote Planning Authority

Hoskote

Chairman

Hoskote Planning Authority

Hoskote

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ನಅಇ/152/ಬಿಎಂಆರ್ 2013,
ಬೆಂಗಳೂರು,
ದಿನಾಂಕ: 30.01.2018 ರಲ್ಲಿನ ನಿಬಂಧನೆಗೊಳಪಟ್ಟು
ಮಹಾ ಯೋಜನೆಗೆ ಅಂತಿಮ ಅನುಮೋದನೆ ನೀಡಲಾಗಿದೆ.

(ಕೆ.ಎಸ್ ಜಗದೀಶರೆಡ್ಡಿ)
ಸರ್ಕಾರದ ಅಧೀನ ಕಾರ್ಯದರ್ಶಿ
ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ
(ಜಿ.ಡಿ.ಎ. ಮತ್ತು ಬೆಂಗಳೂರು-1)

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ABBREVIATIONS

ASI	:	Archeological Survey of India
BMA	:	Bangalore Metropolitan Area
BDA	:	Bangalore Development Authority
BMICAPA	:	Bangalore Mysore Infrastructure Corridor Area Planning Authority
BMTC	:	Bangalore Metropolitan Transport Corporation
BMR	:	Bangalore Metropolitan Region
BMRDA	:	Bangalore Metropolitan Region Development Authority
BPL	:	Below Poverty Line
BBMP	:	Bruhat Bangalore Mahanagara Palike
BWSSB	:	Bangalore Water Supply and Sewerage Board
BESCOM	:	Bangalore Electricity Supply Company
CBD	:	Central Business District
DRDO	:	Department of Research and Development Organisation
Db	:	Decibels
DBC	:	District Business Center
EIA	:	Environmental Impact Assessment
GB	:	Green Belt
GIS	:	Geographical Information System
GLSR	:	Ground Level Service Reservoir
GOI	:	Government of India
GOK	:	Government of Karnataka
GP	:	Grama Panchayats
GKY	:	Ganga Kalyan Yojana
HAWA	:	Hazardous Wastes
ha	:	Hectares
IAY	:	Indira Awas Yojana
IRR	:	Inner Ring Road
IMP	:	Interim Master Plan
IT	:	Information Technology
IMTH	:	Inter Modal Transit Hub
ISRO	:	Indian Space Research Organization
IRDP	:	Integrated Rural Development Programme
KPTCL	:	Karnataka Power Transmission Corporation Limited
KTCP Act	:	Karnataka Town and Country Planning Act, 1961
KUWS&DB	:	Karnataka Urban Water Supply and Drainage Board
KIADB	:	Karnataka Industrial Area Development Board.
KSRSAC	:	Karnataka State Remote Sensing and Application Center
KSRTC	:	Karnataka State Road Transport Corporation
LPA	:	Local Planning Area
MDR	:	Major District Road
MSW	:	Municipal Solid Waste
MLD	:	Million Litres per Day

MP	:	Member of Parliament
HPA	:	Hoskote Planning Authority
HLPA	:	Hoskote Local Planning Area
NH	:	National Highway
OHT	:	Over Head Tank
PA	:	Planning Authority
PD	:	Planning District
P&OS	:	Parks and Open Spaces
P&SP	:	Public and Semi Public
PCB	:	Pollution Control Board
PWD	:	Public Works Department
SH	:	State Highway
SEZ	:	Special Economic Zone
SC/ST	:	Schedule Caste / Schedule Tribe
STP	:	Sewage Treatment Plant
STRR	:	Satellite Towns Ring Road
SGSY	:	Swaranajayanthi Gram Swarozgar Yojana.
TP	:	Town Panchayat
TT	:	Traffic and Transportation
TAPCMS	:	Taluk Agricultural Producers' Co-operative Marketing Society
TMC/CMC	:	Town Municipal Council/City Municipal Council
UGD	:	Under Ground Drainage
ZR	:	Zonal Regulations
WPR	:	Working Poplulation Ratio

CHAPTER-1

INTRODUCTION

CHAPTER-1 INTRODUCTION

1.1 BACK GROUND

Karnataka is the thirteenth (13^{th}) most urbanised state in the India and faces huge challenges of urbanisation while attempting to address the same through the emerging planning and governance framework. Karnataka is the ***eighth largest state in India covering an area of 1,91,791 sq km*** and has a 9^{th} largest by population of about 61 million (61,095,297). Demographically, it is about the size of Britain (58.3 m), France (58.7 m), Italy (57.2 m) and Thailand (59 m). Geographically, it comprises three regions - the plains, the coastal and the hilly and covers seven agro- climatic zones. The people of the state inhabit 27028 villages and 237 towns and cities. It has 30 districts. Almost all the districts have transformed over the years subject to influences of various factors affecting the city-region dynamics.

The **Bangalore (R) District** came into existence on 15th August, 1986. The District occupies 16th place in size. The District is located in the South-Eastern corner of Karnataka State. The District almost surrounds Bangalore (U) District, except having an opening in the South-East, the Anekal Taluk of Bangalore (Urban) District connecting the area between Kanakpura and Hoskote Taluk. The District lies on plateau with average elevation of 600 to 800 m above the mean sea level.

Hoskote Taluk is one amongst four taluks viz., Devanahalli, Doddaballapur, Hoskote and Nelamangala of Bangalore Rural District. Located in close Proximity to Bangalore, of course, the Taluk has Potential for accelerated growth in various sectors viz: Textiles, Information Technology, Tourism, Infrastructure, Agro & Food based industries, etc. Hindus in the Taluk have major population, followed by Muslims and then Christians. In recent times, there has been a great change in the dress, food and drink habits of the rural people due to the influence of the urban life specially that of Bangalore city Agglomeration. The rural life is agro oriented and all the rural crafts are tuned to the needs of the main occupation.

The Taluk is connected with the other urban centers viz., Bangalore, Kolar, Devanahalli, Malur, Chintamani by good roads. The Taluk has improved social facilities for education,

medical aid, drinking water and power supply. Products like milk, eggs, fruits and vegetables have secured a ready market. The demand for milk and milk products by the urban centers and particularly by the Bangalore Urban Agglomeration has made Dairy activity a fast developing and popular activity of the Taluk. Growing vegetables and flowers has been increased considerably in the Taluk.

Hoskote Town is 25 km away from Bangalore City. It is one of the surrounding satellite towns of Bangalore located on old Madras Road, National Highway No-4 connecting Bangalore to Chennai on the North- eastern part of the Bangalore. The developments of Bangalore, which is a large city and fifth largest in the country, and ranked as the second most competitive city in the World after New Delhi which is in the first position, is extending towards East and North at present. The developments in the Metropolitan area of Bangalore have extended beyond the green belt and have created lot of potential for areas in and around Hoskote Town. The Town was not growing according to normal growth in the earlier decades as it was under the shadow of Bangalore having enormous economic, educational, and other facilities. The population of Hoskote area was mainly depending on Bangalore for employment opportunities.

1.2 REGIONAL SETTING

1.2.1 TALUK IN THE CONTEXT OF STATE

Covering an extent of 548 sq.km as per 2011 census on the south-eastern part of the State, the Taluk is in close proximity with neighbouring states of Tamilnadu and Andhra Pradesh with good regional linkages and network of major roads. Hoskote taluk is bounded by Chintamani of Kolar Dist on the North, Kolar District in the East, Malur taluk in the South and Bangalore Urban District in the West.

The Taluk has two National Highways NH-4 connecting Bangalore to Chennai, NH-207 connecting NH-4 to NH-7 (Dobaspet – New Madras(Chennai) Road), three State Highways SH-35 Hoskote – Siddlaghatta Road, SH-82 Hoskote - Chinthamani Road and SH-95bHoskote - Malur Road and seven Major District Roads -Sulibele to Siddlaghatta Road, NH – 4 to Chikkanahalli via Nakkanahalli, Bailanarasapura to Shidlaghatta Road via Korati, Nandagudi to NH- 4 via Bailanarasapura, NH- 4 to Toranahalli, NH-207 to Bellikere via Mutkur, Mutkur to Chikka Tirupathi Road via Tatanur.

Broad guage railway line Bangalore to Chennai passes through the Taluk. Bangalore International Airport is located at a distance of 26 km from the Taluk.

The Location Map and Regional setting of Hoskote LPA is given in ***Figure 1***.

1.2.2 HOSKOTE LOCAL PLANNING AREA IN THE CONTEXT OF BMR REGION

Bangalore Metropolitan Region is the only metropolitan region in the State of Karnataka. It has an area of 8005 sqkm and a population of 10.57 lakhs as per 2011 census. The decadal growth rate of population is 25.68%. Because of the influence of various factors affecting city – region dynamics, Bangalore Metropolitan Region BMR has transformed over the years and still has high potential to transform in future.

- ***BMR-Only metropolitan city in the state***
- ***Area-8005 sq km***
- ***Population-10.57 lakhs (2011 census) comprises of 11 LPAs and one Development Authority.***

The BMR comprises of Ten Local Planning Areas (LPA) and Two Development Authorities namely;

1. Hoskote LPA,
2. Magadi LPA,
3. Nelamangala LPA,
4. Kanakapura LPA,
5. Anekal LPA,
6. Bangalore International Airport Area LPA,
7. Satellite Town Ring Road LPA (STRR),
8. Channapatna LPA,
9. Greater Bengaluru-Bidadi smart City LPA,
10. Bangalore-Mysore Infrastructure Corridor (Area Planning Authority)
    - I. Bangalore Development Authority i.e BDA.
    - II. Ramanagara Urban Development Authority

Bangalore Metropolitan area comprising districts of Bengaluru (Rural), Bengaluru (Urban) and Ramanagara. The Administrative boundaries and Local Planning Area of Hoskote is appended in Map No 4.

Figure 1 shows the regional setting of Hoskote L.P.A. in the context of BMR.

1.3 PHYSIOGRAPHY AND CLIMATE

1.3.1 LOCATION AND SIZE

Bangalore Rural is a part of the Southern Karnataka Plateau, and is located in the South-eastern corner of Karnataka State. It has the greatest extent of 137 km from North to South and 97 km from East to West, covering a total geographical area of 5815 sq km. The district lies between the North latitudes 12 ^{0} 15' to 13 ^{0} 35' and East longitudes between 77 ^{0}1'to 78 ^{0} 00' .Hoskote LPA forms a part of the northern side of the Bangalore Rural District and lies between the North latitude 12^{0} 51' to 13^{0} 15' and East longitudes 77^{0} 41' to 77^{0} 58'.

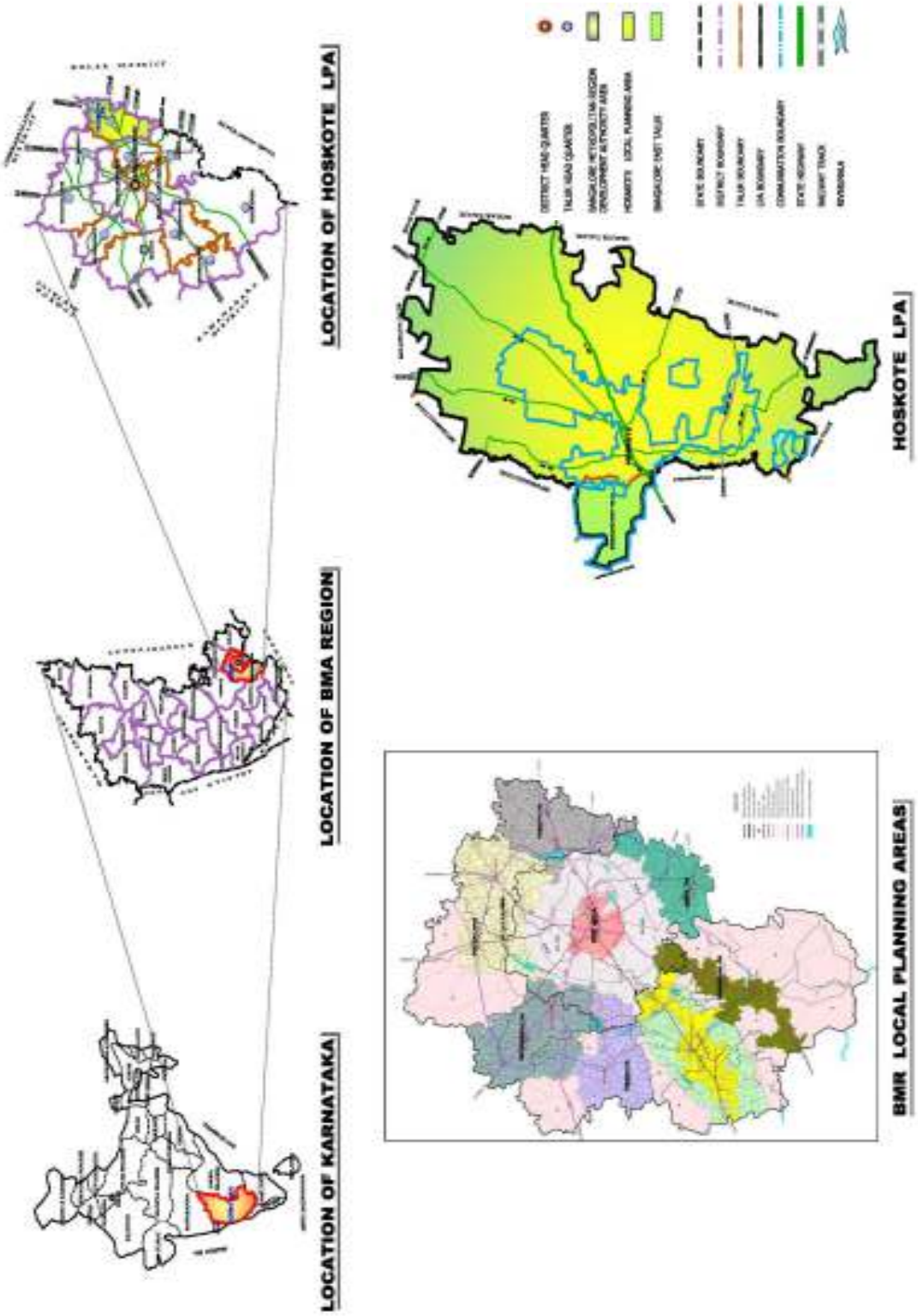


Figure 1: Regional Setting of Hoskote LPA

1.3.2 PHYSIOGRAPHY

Physio-graphically Karnataka state has been formed into well defined Macro region of the Indian Union - the Deccan Plateau and the coastal plains and Islands. Further the state has been divided into 4 micro regions - Northern Karnataka Plateau, the Central Karnataka Plateau, the Southern Karnataka Plateau and the Karnataka Coast considering the physio-graphic characteristics of the regions. Bangalore Rural is a part of the Southern Karnataka Plateau, and located in the South-eastern corner of Karnataka State. The district has an average elevation of 600 to 900 meters from mean sea level.

Hoskote LPA presents an undulating topography with gentle slope towards southwest, in the eastern part of the Taluk, towards south in the northern and southern part and towards north in the central part towards the stream courses in all these areas. The general elevation of the ground is around 870m above MSL. The highest elevation is seen near Nandagudi which rises above 940m above MSL.

1.3.3 DRAINAGE

The main drainage of the district is from north to south. The Arkavati, the Kanva and Dakshina Pinakini also known as Southern Pennar are the important rivers of the district. The Dakshina Pinakini takes its name from Pinaka, the bow of Shiva. Along with its northern counterpart, it rises in the Orange of Nandi Hills at Channakeshava betta. Its course, after entering Bangalore Rural district, is southwards and it passes through the taluks of Devanahalli and Hoskote where it forms the large lakes known as Jangama - Kote Kere and Hoskote - Kere.

In Hoskote LPA, there are no perennial rivers draining the area. But the LPA forms the upper catchment of the Pennar and Palar rivers. Ponnaiyar river originates near Sidlagatta town and flows down south forming the eastern boundary of the taluk for some distance. Number of tanks contribute to the flow whenever they overflow. North eastern part of the taluk forms the Palar river upper catchment. The Ponnaiyar flows further south in to Tamilnadu and joins Bay of Bengal near Chennai. Since the streams are ephemeral and flow only for a few days in a year, the surface water resources are limited and most of the irrigation by surface water is through tanks which tap the surface flows locally constructed across minor streams and rivulets. Hence tank irrigation is the main stay for irrigation. In

recent years, due to low rainfall and continuous drought, the tanks are dry and in order to meet the demand farmers have resorted to drilling of borewells to meet the water demand. There are nearly 212 irrigation tanks existing in the taluk under different agencies catering to the need.

Figure 2 showing the existing tanks, lakes and drainage lines over the topography of LPA

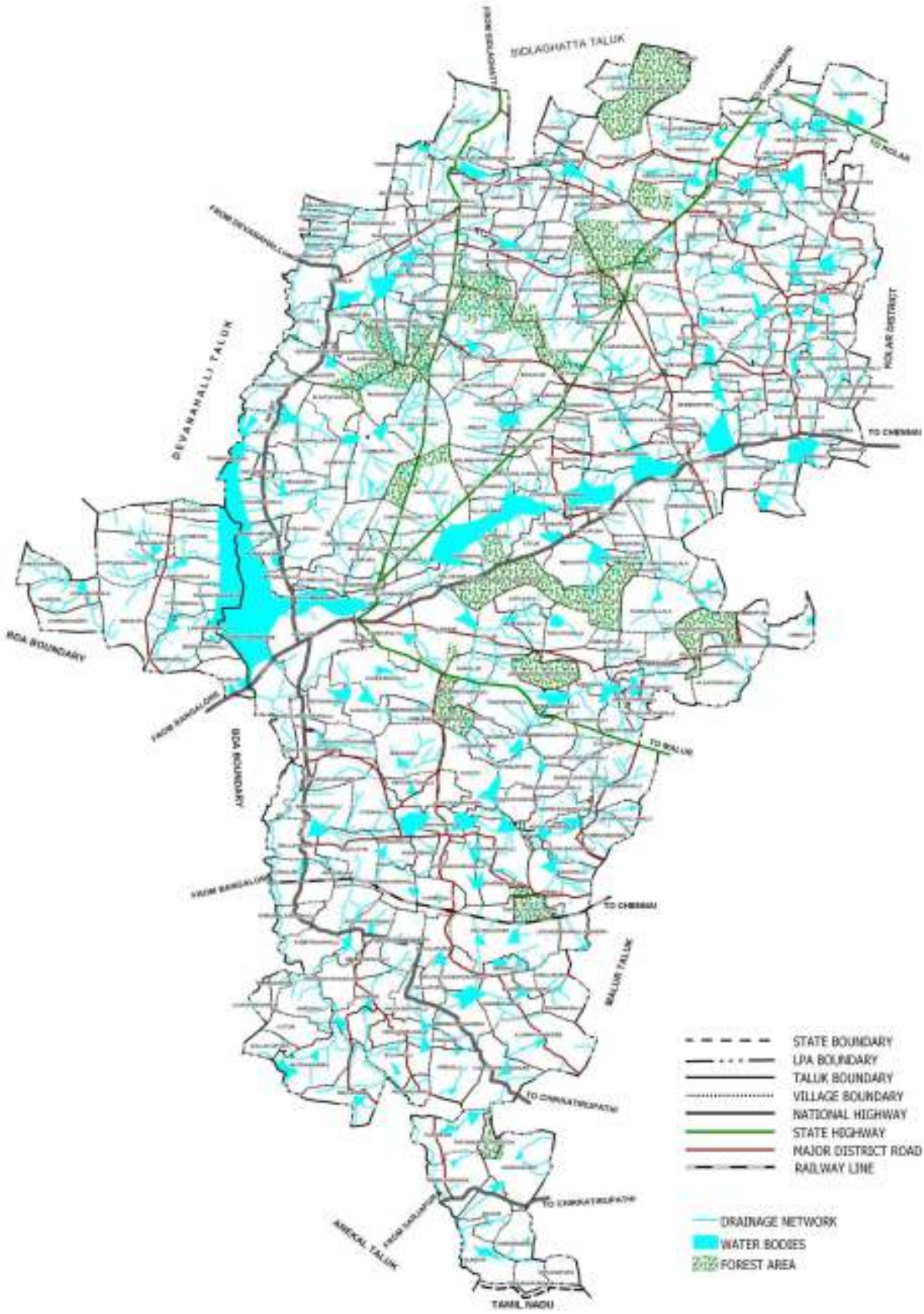
1.3.4 CLIMATE

The climate of the Hoskote Taluk being closer to Bangalore city enjoys pleasant and salubrious climate and free from extremes and is classified as the seasonally dry tropical climate with four seasons. Cold weather from December to February generally free from cloud cover with clear blue skies. Generally no rainfall occurs. The hot weather begins in March and extends up to May end. Considerable rainfall occurs during these two months which will meet the soil moisture deficit. South-west monsoon season starts in June and extends upto September end and it is the main rainfall season. During this period fairly strong winds blow from south-west to west. The North-east monsoon starts from October and is also a moist and rainy period but less cloudy compared to south-west monsoon period. Winds are weaker during this period and blow from east to north-east. The change in wind direction from west-southwest to east-northeast between September and early October is very characteristic and significant. The marked thunder storm activity during April-May and during September-October is also very typical.

1.3.5 WINDS AND WIND SPEED

The surface winds over the district have a fairly clear seasonal character. During the period May to September, the winds are west-south-west to west, while during the period November to March; it blows in the direction of east-north-east to east-south-east. April and October are the transition months when the change over from the easterly to the westerly wind regime and vice-versa takes place. The day time variation in wind direction is not prominent neither during June to September, when the direction is mainly west-south-west nor during November to February. During the rainy periods from April-June and September - October heavy spells associated with thunderstorms are also observed in the district.

Figure 2: Shows existing tanks, lakes and drainage lines over the topography of the LPA (Including STRR).



The surface wind has a fairly seasonal character with easterly winds during northeast monsoon winds and westerly during southwest monsoon period. During the period May to September the winds are west –southwest to west while between November and March they are east-northeast to east-southeast. April and October are the transition months when the change over in the wind directions takes place. The annual variation of the monthly mean wind speed shows two maxima and two minima. The primary maxima is observed in July when the westerly winds are predominant with a mean speed of 17 kmph and the secondary maxima occurs in January when the easterly winds are prominent and has a wind speed of around 10 kmph. The two minima occur during April and October when the wind velocity is around 8 – 9 kmph. The highest wind speed recorded so far is 106 kmph at about 3.20 pm in a squal from northest on 3rd May 1950. The average annual daily wind speed is 14.0 kmph.

1.3.6 RAINFALL

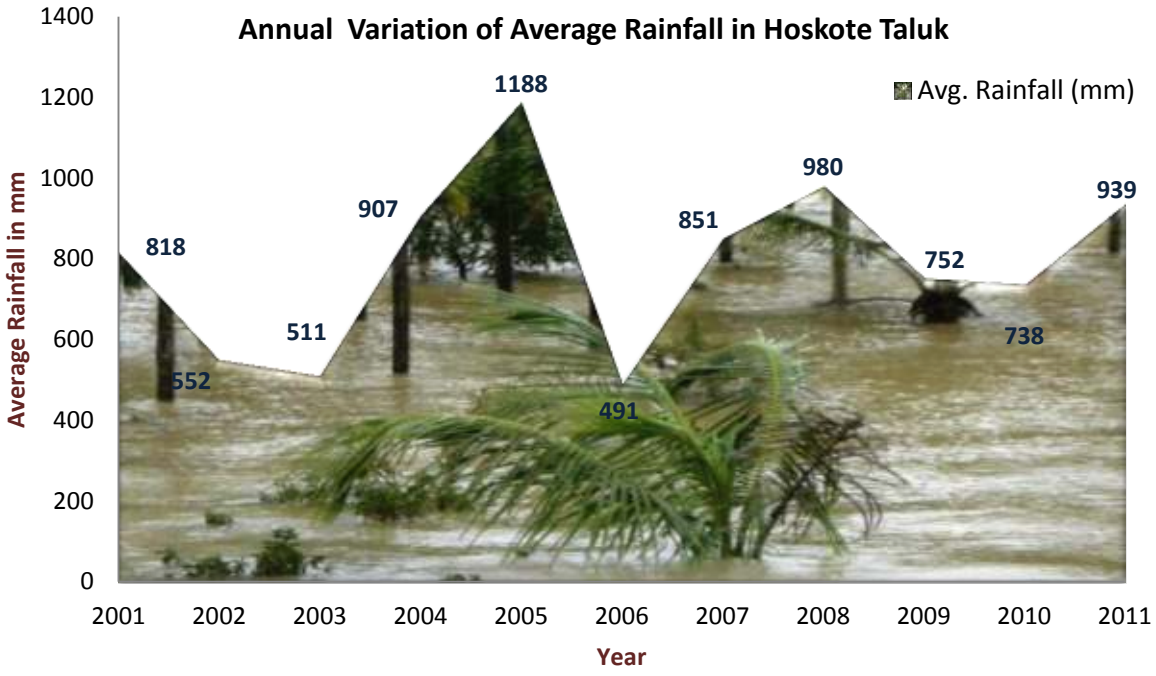
Records of rainfall are available for the Hoskote town for more than 50 years. There are 5 rain gauge stations at Hoskote, Hindiganala, Sulibele, Jadigenahalli and Anugondanahalli. However, Hoskote town has the long term rainfall data and the normal rainfall of the Hoskote Town is 850 mm. The area receives rainfall during the three distinct periods i.e., during hot weather (March to May), Southwest Monsoon (June to September) and Northeast (October to November) closely followed by one after another i.e., for nearly 7 months rainfall occurs.

Coming to the seasonal rainfall southwest Monsoon contributes nearly 54% and North-east Monsoon 34% with pre-monsoon or thunderstorms occurring in April-May contributing nearly 12% to the annual rainfall. In terms of actual rainfall received, the southwest monsoon contributes about 457 mm, the northeast monsoon 274 mm and pre-monsoon. The rainfall increases from June to September with the maximum rainfall occurring during September. Sometimes October forms another wet month during which period considerable rainfall occurs due to cyclonic storms in the Bay of Bengal.

Figure 3 showing annual variation of average rainfall in Hoskote Taluk.

Figure 4 showing annual variation of actual rainfall in Hoskote Taluk.

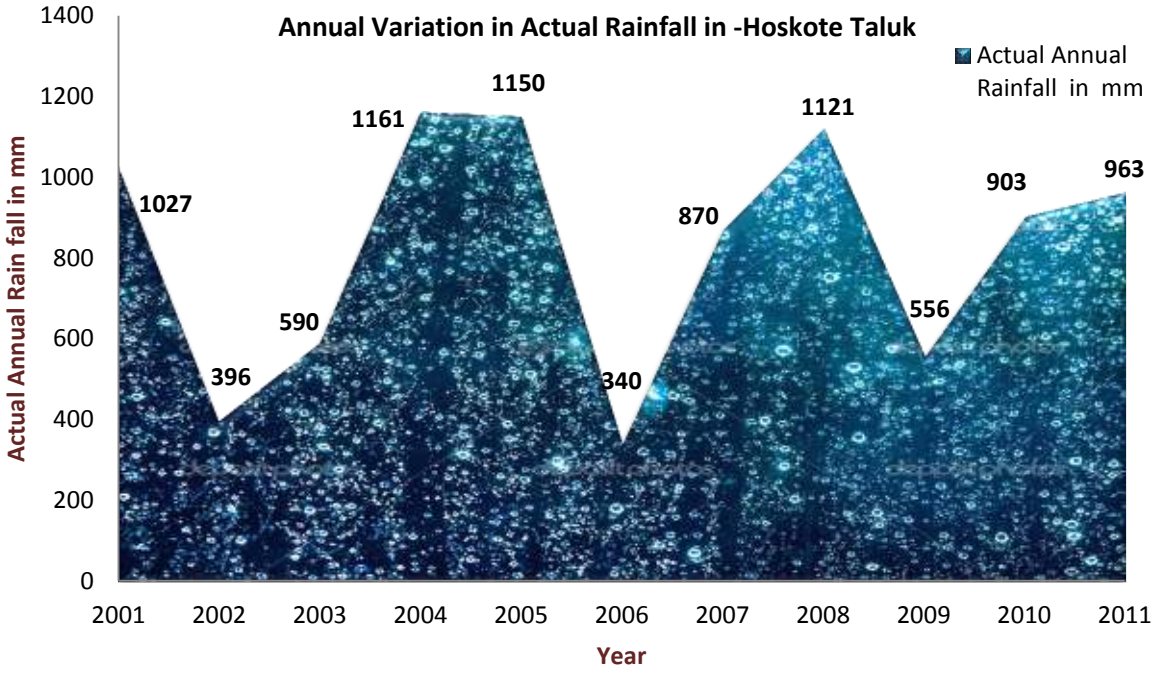
Figure 3: Annual Variation of Average rainfall in Hoskote Taluk



Source: Meteorological department, GOI, 2011

Figure 4 gives the graphical representation of the actual annual rainfall for the period 2001 to 2011.

Figure 4: Annual Variation in Actual rainfall-Hoskote Taluk



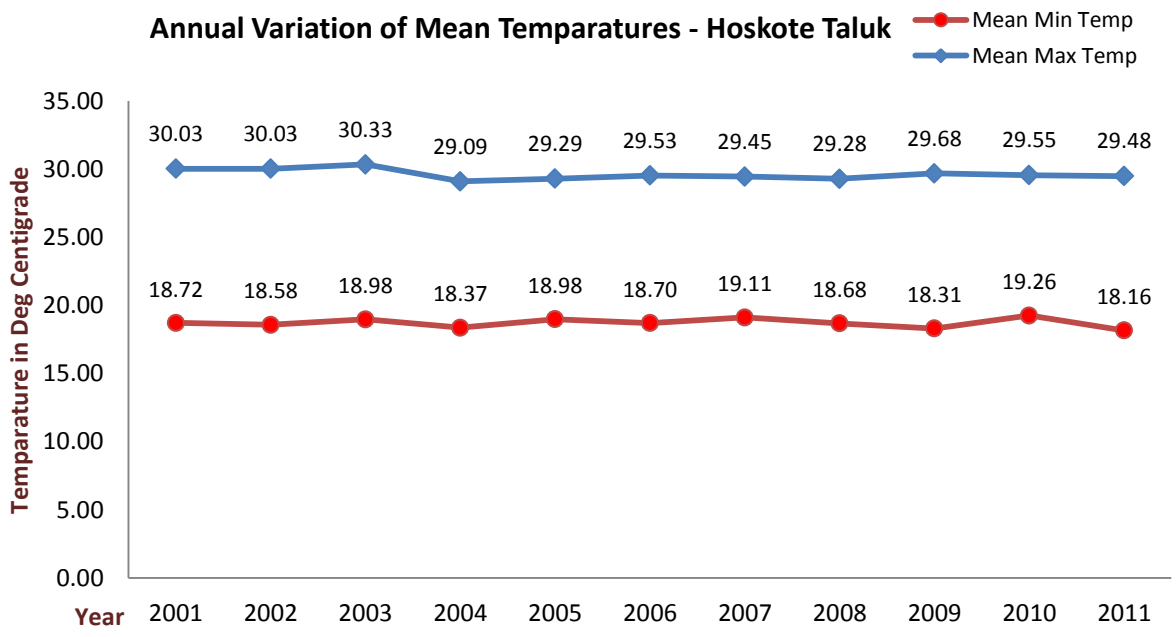
Source: Meteorological department, GOI, 2011

1.3.7 TEMPERATURE

As regards to the recording of temperature, relative humidity and wind speed there are no meteorological stations in the Hoskote Taluk and only the data of the IMD Station at Bangalore city and Airport are to be considered which have long term records. April is the hottest month with the mean daily maximum temperature of 33.4^0 C and the mean daily minimum is 21.2^0 C during the hot season; the days may even go up to 36^0 C and with the onset of monsoon in June temperature drops. December is generally the coolest month with mean daily maximum of 25.7^{0}C and the mean daily minimum at 15.3^{0}C. Nights in the January are cooler than in December.

Figure 5 shows the variation of mean maximum and mean minimum temperature since 2001 in the Taluk. Highest mean maximum temperature recorded was 30.33 ^{0}C in the year 2003 and lowest mean minimum temperature recorded was 18.16 ^{0}C in the year 2011 respectively.

Figure 5: Annual Variation of mean maximum and mean minimum temperature since 2001



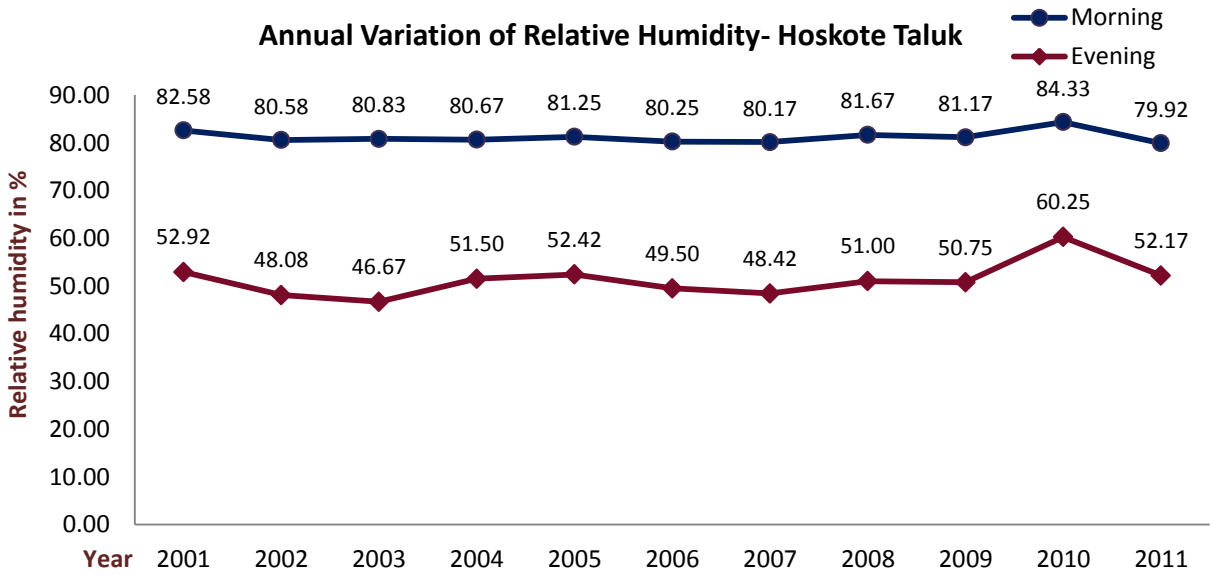
1.3.8 RELATIVE HUMIDITY

Relative humidity is generally high during periods between June and October and varies between 80% and 85% on an average and decreases thereafter and from February to April the air becomes comparatively dry and during this period the afternoon humidity varies

from 25 to 35%. From May onwards the relative humidity increases due to building up of moisture levels and thunder storm activities. The lowest relative humidity in a year (24%) occurs between 3 and 4 p.m. in March and the highest (87%) at 6 a.m. between August and October.

Figure 6 shows annual variation of relative humidity- Hoskote Taluk.

Figure 6: Annual Variation of Relative humidity-Hoskote Taluk



1.3.9 SURFACE WATER

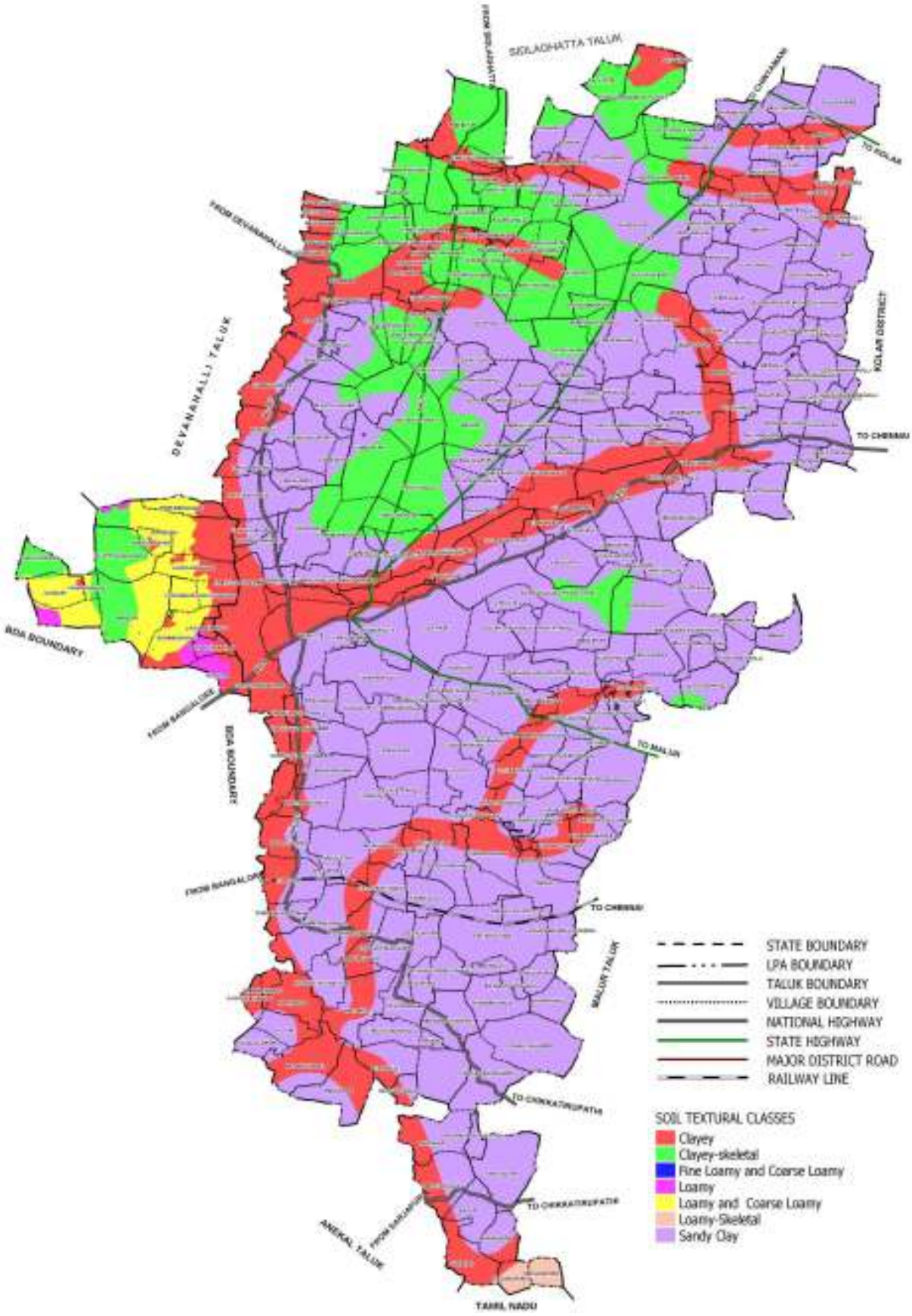
The taluk as such is devoid of any major stream and forms the upper catchment of Palar and Ponnaiyar rivers. Most of the first and second order streams have been harnessed with small and medium tanks which when overflow contribute to the stream flows. They are ephemeral in nature. Hence there are no major irrigation projects in the taluk. All the minor irrigation tanks in the taluk get filled only during monsoon months; thus provide water for Kharif crops. Also most of the tanks being old are silted up and provide little water for irrigation since their live storage capacity has reduced because of silting. Due to vagaries of the monsoon and low rainfall during earlier years most of the tanks are dry. In addition to the above the natural stream courses have been altered due to the encroachment on the natural courses, and reduction of the channel widths. This has also contributed to the non filling of the tanks, which needs to be revived. However, this has benefited to some extent in the sense that it has facilitated for the recharging of ground water. As per the information available there are about 121 tanks under Minor Irrigation Department, 100 tanks under

Gram Panchayats, 77 under other departments and another 14 tanks in the Bangalore East Taluk. The total number of tanks is around 212 with a live capacity of 90 MCM. H-IMP- 06 depicts the drainage and the water bodies (tanks) of the LPA.

1.3.10 SOIL

The soils occurring in the LPA (H-IMP-05) can be grouped under red loamy soil, laterite soil varying from deep red to light brown in colour and the proportion of gravel, silt and clay vary according to the topography. Soils in the higher reaches are more gravelly and silty sand and towards the valley the proportion of silt and clay fractions increase. Laterite soils occupy most of the Hoskote taluk. The laterite soil is a weathered product of laterite and is softer to excavate and at places have considerable clay content. The soil is characterized by 10 to 30cm thick hard surface which softens even after a small rain. Laterite gravelly soil is found to occur in the north-eastern part of the taluk. From the infiltration tests conducted in these soils the average infiltration rates vary from 1.89cm/h for the laterite soil to 9.5 cm/h for the red loamy soil. From these tests it can be inferred that in greater part of the area, the soils have good vertical transmission capacity and low runoff potential and may aid in recharging ground water. ***Figure 7*** shows the variation in soil deposits over the topography of the entire LPA (Including STRR).

Figure 7: Variation in soil deposits over the topography of the entire LPA (Including STRR).



1.3.11 LAND UTILISATION

The ***main occupation*** of the population in the taluk is ***agriculture.*** Several crops are grown depending upon the availability of water. Of the total geographical area of the taluk 54,857 hectares a major part is uncultivable and forest land. ***The arable land is about 13,985 hectares***. The net area sown is 35,348 hectares. The details of land use are given ***Table 1***.

Table 1: Land Use particulars of Hoskote and Bangalore East Taluk

Sl. No.	Particulars	Hoskote Taluk (Area in Ha.)	Bangalore East Taluk (Area in Ha.)
1	Total geographical area	54,587	3186
2	Land not available for cultivation	13,631	113.22
3	Forests	3,444	292
4	Not cultivated	9,492	1036
5	Barren Land	1049	-
6	Reserved pastures	456	-
7	Trees & Groves	4041	-
8	Dry land	4004	-
9	Net sown area	35348	-
10	Area sown more than once	2,081	-
11	Net Irrigated area	7385	324
	a) From Tanks	2702	89.6
	b) From Wells	731	126
	c) From Borewells, others (L.I)	3750	95.14
	d) Number of Tanks	198	4

Data Source: District at a glance, Bangalore Rural District 2004-05)

Figure 8 shows the details of land utilization in the Taluk. The percentage of net sown area is 48%. ***Figure 9*** shows the details of land utilization over the entire LPA including STRR.

Figure 8: Details of land utilization in the Taluk

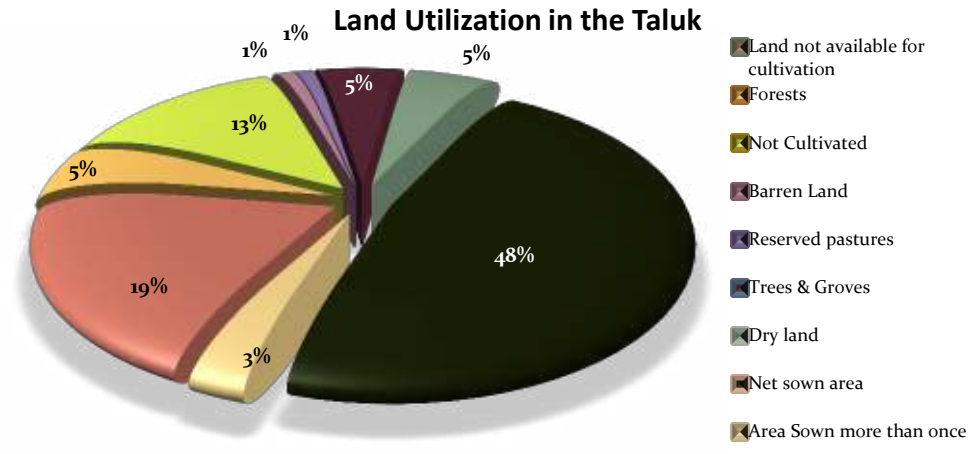


Figure 9: Details of land use over the entire LPA

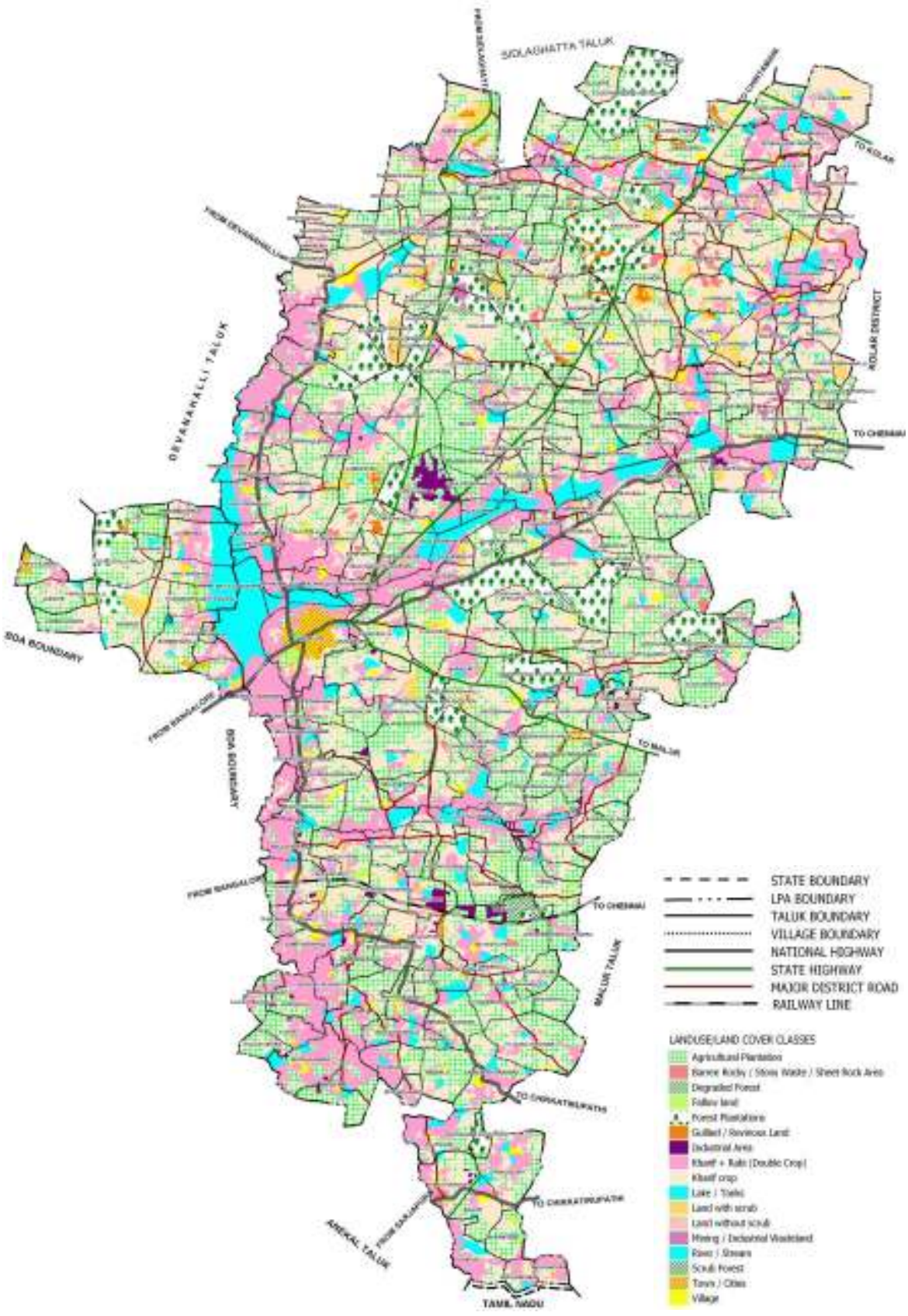


Figure 10 gives the details of Unavailable and uncultivated lands in the Taluk. Out of the total geographical area the land not available for cultivation is only 18% and not cultivated area is 12%.

Figure 10: Details of cultivated/uncultivated land-Hoskote Taluk

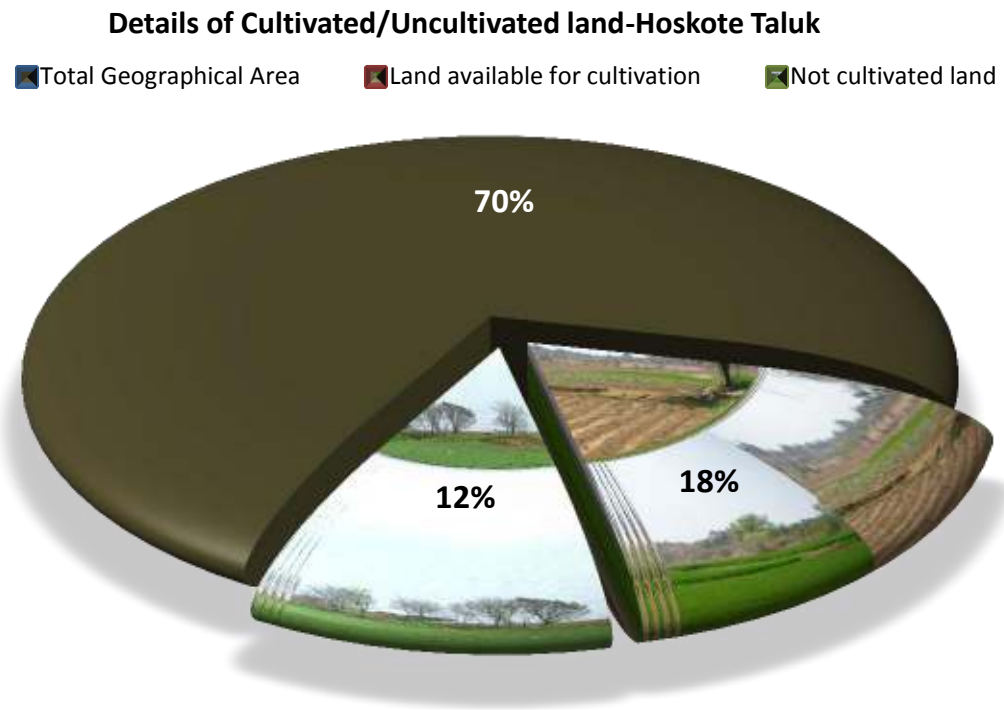
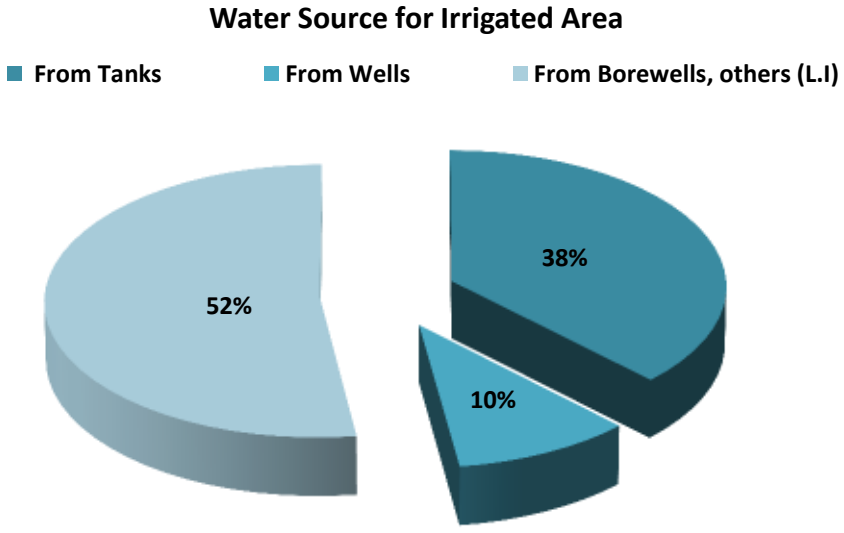


Figure 11 shows details of percentage of irrigated area from different sources.

Figure 11: Percentage of irrigated area from different sources.



1.3.12 GEOMORPHOLOGY

Various geomorphic units have been deciphered based on the visual interpretation of LANDSAT AND IRS imageries interpretation of the Hoskote LPA. ***Fig. 12*** shows H-IMP-04 depicting the various geomorphic units delineated for Hoskote LPA.

A brief description of the various geomorphic units as seen in the area and their ground water potential are given below:

1. **Residual Hills (RH):** The hills and inselbergs of various sizes and heights occur as erosion remnants and mainly composed of granites and peninsular gneisses. A lesser prominent ones are the Mesas and Buttes occur sporadically in the area. They act as zones of surface runoff. The overall groundwater potential is poor.
2. **Pediment inselberg (Complex P1):** These are rocky surfaces occurring at the transitional zone of residual hills and pediments. These are covered with small outcrops surrounded by weathered parent rock. Ground water potential of this zone is poor pediments (P). The undulating plain without crops forms the pediment zone. The depth of weathering is more along the valleys which form the shallow aquifers. Ground water potential is poor to moderate, but good along fractures.
3. **Pedi plains (PP):** Pedi plains are the undulating plains formed because of different pediments occurring together which on maturity gives rise to deep weathered zones. The slope of these plains is very low with significant weathered mantle thickness forming shallow aquifers. The ground water potential of Pedi plains over different rock types in the area is moderate to good and very good along fractures, lineaments and structurally controlled zones.
4. **Upland Laterites (UL):** This laterite occur in the elevated zones of Hoskote taluk, groundwater potential of this zone is poor to moderate, but forms favorable zones for groundwater recharge.
5. **Valley fills (VF):** Valley fills (shallow as well as moderate) occur along the stream courses mostly transported and deposited along the course. They are mostly alluvial material and ground water potential of this unit is good. Groundwater potential of the valley fill occurring along the fracture is very good and yield copious supplies and sustains long durations of pumping.

6. **Fracture fault plane valleys (FF):** Fractures, lineaments, fault planes occurs along valleys and elevated areas. Ground water potential of this fracture fault plane valleys are found to be moderate to good to very good but depend upon the lithologic/geomorphic unit on which these are located.

1.3.13 GEOLOGY

The LPA area is predominantly underlain by peninsular gneissic complex rock formations of Achaean age consisting of granite, gneiss and pegmatite. Laterites as capping are observed at several places. The gneisses are exposed as mounds and hillocks which rise from 20 to 80m above the surrounding ground level. The granites are quarried around K.R. Puram area for road metal and construction purposes. The gneisses are hard, compact and massive and are well foliated at places with the strikes of foliation generally in NNW-SSE direction. The major set of joints strike ENE and dip easterly. The other set of joints is strike ENE-WSW and WNN-ESE dipping steeply to East and West. The gneisses and granites have undergone alteration and decomposition resulting in thick weathered mantle, which range in thickness from 12m to 25m as seen in some of the well sections. The granites are traversed by pegmatite and quartz veins and dolerite dykes at places. H-IMP-03 depicts the geology and lineaments of the LPA.

Laterite outcrop are seen as capping in the northern and northeastern parts as well as East of Hoskote town. The thickness of laterite capping varies from 10 to 20m.

Alluvial soils and deposits are seen along the nala courses consisting of silty and clayey soil. These are essentially wash material (colluviums) from the adjacent hillocks, elevated region and having been deposited in the topographic lows and depressions.

Figure 13 shows geology of Hoskote LPA.

1.3.14 GROUND WATER RESOURCES:

Since the area is predominantly underlain by peninsular gneisses of hard rock, it is devoid of any primary porosity. But due to weathering, chemical action and the tectonic activities for which the area has undergone, the rock mass has developed secondary porosity like joints, fractures and weathering and ground water occurs in these formation in cracks, crevices, fractures, lineaments and in the weathered rock. It occurs under phreatic conditions in the weathered rock and under semi confined condition in the fractures down below. The

thickness of weathering varies from less than a meter to more than 40m in the valleys and low lying areas and tank ayacuts. This zone forms the buffer zone for holding water and transmits water further down to the fractures in depth. Dug wells or open wells tap the weathered zone for meeting irrigation and other requirements where as bore wells are sufficiently deep and tap the water in the fractures at depth.

Figure 12: Geomorphology of the LPA

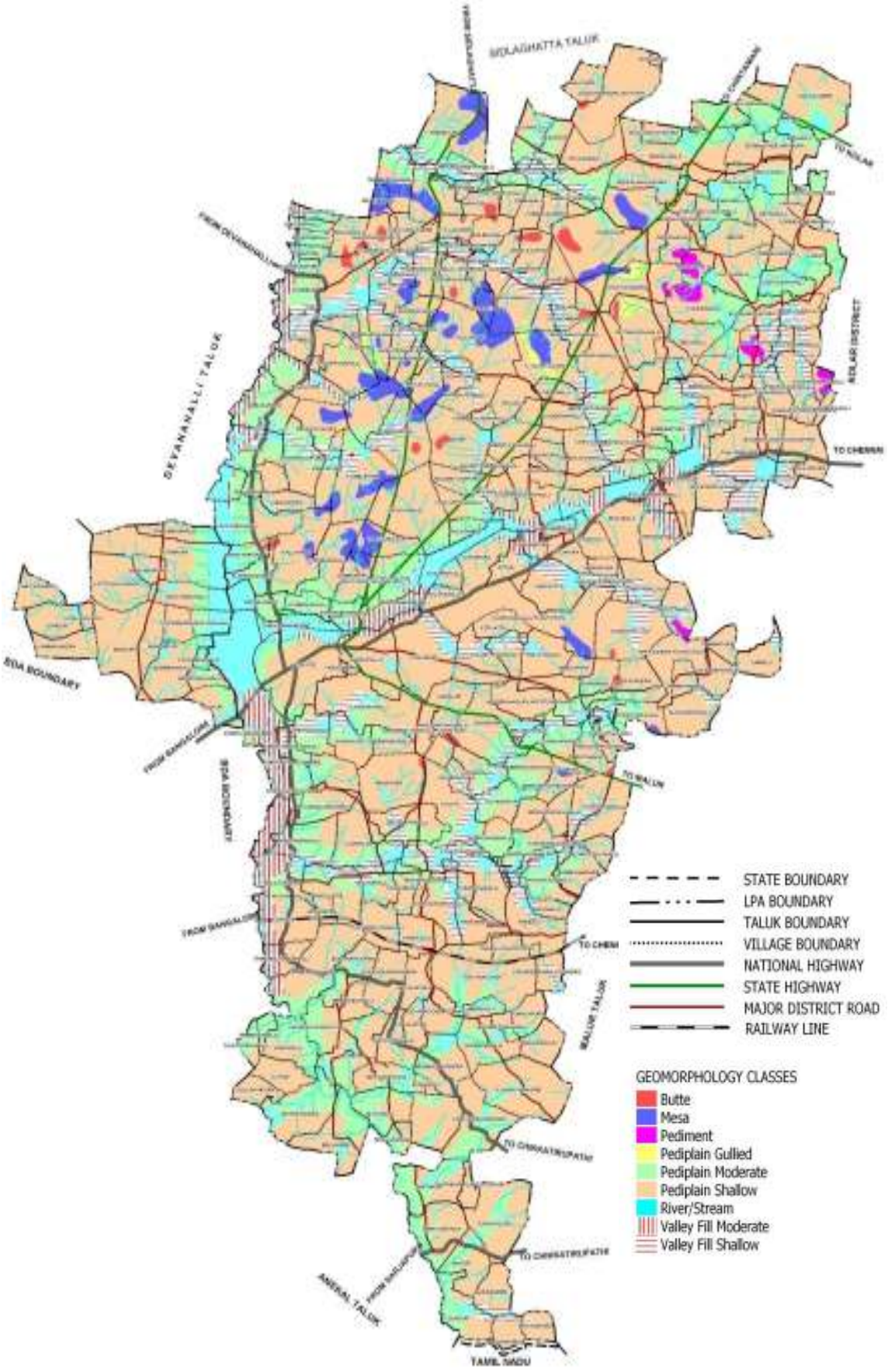
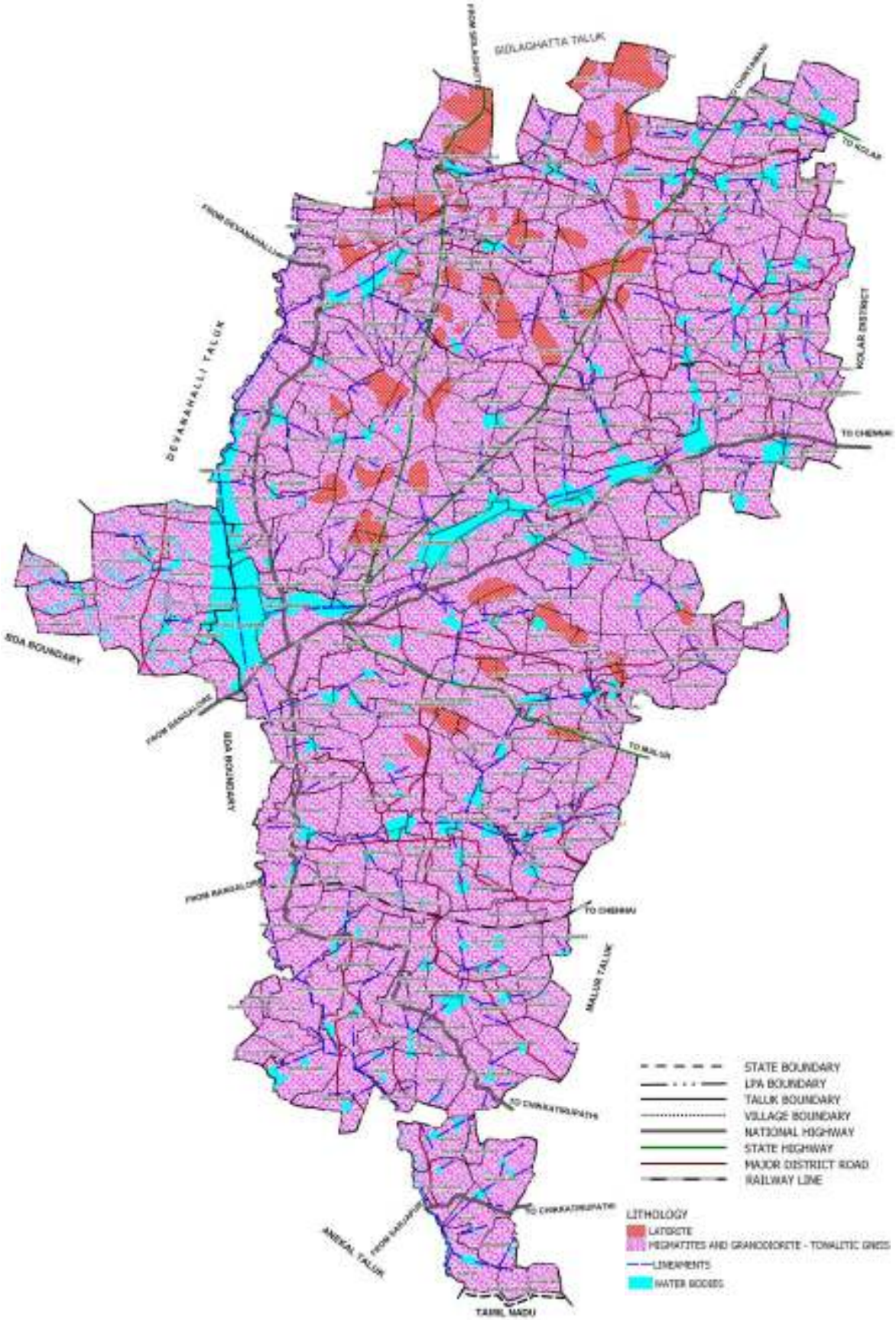


Figure 13: Geology of Hoskote LPA



The general yield of the wells ranges from 30 m^3/day to around 90 m^3/day for a pumping period of 2 to 6 hours daily. Extremely good wells located in the valleys yield better around 150m^3/d. However of late, due to failure of the monsoon frequently, water levels have gone down and in order to meet the demand farmers have resorted to drilling of bore wells. Hence the number of bore wells has gone up, from 736 in 1982-1983 to more than 7400 by 2003-04. The bore well yields which were quite high initially have also come down. The present average yield is around 1.5 to 2 lps and the bore wells located in the depressions, valleys, closer to stream courses, fracture zones yield slightly better around 4 to 5 lps and sustain pumping for a long time. Due to intense cultivation and bore well irrigation the top phreatic zone seems to have been dewatered and the bore wells now tap fractures occurring in depth often as deep as 170 m or even beyond that depth.

Prior to 1983 the main irrigation in the taluk used to be by dug wells and tanks. However, from the last few years, the area irrigated by tanks has dwindled since most of the tanks have little water due to erratic monsoon, simultaneously there has been a tremendous increase in the number of bore wells as farmers resorted to drilling of bore wells to meet the water demand for cultivation as well as for drinking, domestic and industrial needs were also met from bore wells. This has resulted in the lowering of the water table; water table which was around 5-10 m below ground level in 1982-1983 has now reached more than 25-29m below ground level at present, that is decline of almost a meter/year for the last two decades. Farmers are now going deeper and deeper, in order to meet the water demand. Bore wells are being drilled up to 200m and even beyond with the hope of encountering fractures to improve the well yields.

The Climatology, Forest Cover, Drainage Pattern and Water Bodies, Geology, Soil Classification details of Hoskote LPA is appended in Map No 5, 6, 7 and 8 respectively.

1.3.15 WATER LEVEL FLUCTUATIONS

Water Table represents the upper surface of the zones of saturation and generally follows the topography. However it is observed that the water table is deeper in higher elevations or ground surface but shallower in the depressions and valleys it is because of the ground water flow which moves from higher elevations towards valleys and stream courses due to the inherent gradients prevalent. Observations and ground water level monitoring over a

period of more than two decades indicate that changes occur in the levels in response to the changes in ground water regimen due to rainfall and withdrawal from the ground water storage through dug-wells, bore wells for irrigation and other uses.

Also changes have been observed seasonally as well as over a long period of time. Generally, ground water levels rise due to increase in storage because of rainfall, from return flows from applied irrigation waters or from deep percolation from tanks, storage from check dams, etc. Such higher levels have been observed after the monsoon season generally called post monsoon water levels. Similarly lowest water levels have been observed during summer months, the levels falling due to withdrawals of ground water for irrigation, industries, etc. which generally happens in May / June before the onset of monsoon.

- ***In Hoskote Taluk water level is monitored by CGWB & DMG from 1973***
- ***Before 70's the water level was 7-8 m***
- ***In late 70's fall in water level vary from 15-20m***
- ***At present 25-30 m in most part of the Taluk***
- ***Over exploitation of Ground water which needs to be controlled.***

In Hoskote Taluk, water levels are being monitored by Central Ground Water Board (CGWB) as well as by the Department of Mines & Geology (DMG) from 1973 onwards. There were 12 observation wells (dug well) which were monitored monthly. However due to increase in the tempo of ground water development in the late seventy's and eighty's, most of these wells which were dug wells became dry and the monitoring could not be continued uninterruptedly. Subsequently, in the early ninety's monitoring was restarted with the drilling of Piezometers and now there are six Piezometers, 5 are monitored by DMG and one by CGWB. Data collected from these are used to generate Hydrographs.

All the hydrographs show fall in water levels over the last decade. The fall in water levels vary from 15m to 20 m. The earlier observations indicate the general ground water level was around 7 m to 8 m below ground level. In the seventy's (CGWB observations, 1973) and the present water level in most part of the Taluk is around 25 to 30 m below ground level. That means there is a fall of about one meter every year. This can be attributed to the increase in the tempo of ground water development, erratic monsoons (Rainfall was below

normal in 11 years out of 35 years i.e., during the period from 1971 to 2005) and most of the tanks became dry and they could have contributed to the recharge of ground water if they had storage. Hence there is over exploitation of ground water which needs to be controlled. Simultaneously there is need for massive investment to improve the situation in the form of water harvesting adopting ground water recharge methods and techniques.

1.3.16 GROUND WATER RESOURCES AVAILABILITY

The main source of recharge to ground water in the area is from rainfall and as seepage from minor irrigation tanks, which are in good number in the taluk. Considering all the aspects of recharge draft and the balance available for development, Central Ground Water Board, South western region (CGWB) and the Department of Mines & Geology (DMG) of Government of Karnataka have calculated the dynamic ground water resources of Karnataka as on March 2004.(Report issued - June 2005) adopting Ground Water Resources Estimation Methodology 1997 (GEM-1997). As per the report the LPA is over exploited. The details are given below.

Table 2: Ground Water Resources, Draft and Balance available for development for Hoskote.

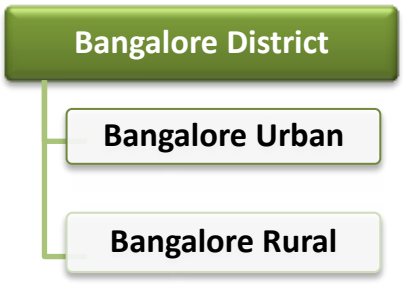
S. No	Particulars	Hoskote Taluk
1	Total Annual Ground Water Recharge	6081.62 ha m
2	Net Annual Ground Water Availability	5777.54 ha m
3	Existing Gross Ground Water Draft for irrigation	12521.32 ha m
4	Existing Gross Ground Water Draft for Domestic & Industries	390.98 ha m
5	Existing Gross Ground Water Draft for all uses	12912.31 ha m
6	Allocation for domestic and industrial use for next 25 years	554.16 ha m
7	Net Ground Water Availability for future use	0
8	Category	Over exploited (225%)

Data Source: Source: Report on Dynamic Ground Water Resources of Karnataka as on March – 2004 - DMG, CGWB, Bangalore -2005)

From the above, it is clear that there is over exploitation of ground water resources in Hoskote and Bangalore South (Bangalore East Taluk covering 16 villages) Taluks. Actually ground water mining is going on which needs to be regulated, so that the area should not face severe water shortage conditions in the near future.

1.4 HISTORICAL PERSPECTIVE

1.4.1 BRIEF HISTORY OF THE DISTRICT AND THE HOSKOTE TOWN



The Bangalore (Rural) district came into existence in August 15, 1986 with the division of the erstwhile (District Census Handbook - Bangalore rural) Bangalore district into *Bangalore Rural and Bangalore (Urban) districts.*

The district as well as the town Hoskote located in the Bangalore Rural District has no history of their own, however, history of the erstwhile Bangalore district, from which the present Bangalore Rural district is carved out, and the town Hoskote is presented here.

1.4.2 THE DISTRICT

1. KEMPE GOWDA

The founding of modern Bangalore is attributed to ***Kempe Gowda***, a scion of the Yelahanka line of chiefs, who finally established himself at Magadi. He founded the town of Bangalore in 1537 A.D. The important constructions such as Gavi Gangadhareshvara cave temple, Dodde Basavanna temple, Kempambudi tank etc., are attributed to this chief. Among the places included in the district there are several others which are much more ancient than Bangalore proper and of such places **Nandagudi of Hoskote taluk** and Mankunda of Channapatna taluk, deserve a special mention in view of the ancient remains discovered therein and the historcial legends associated therewith.

2. NANDAS

Nandagudi, is said to have been the capital of Uttunga Bhuja, whose nephews, the Nanda princes, who were imprisoned by him secured their release and seized the kingdom. This account exhibits a close resemblance to that connected with the rise of the Kakatiyas. This family is deduced from the Pandava in general and the line from Janamejaya to Kshemaka and his two sons. Their sons, Vishnuvardhana and Uttunga Bhuja did not agree with each other and the latter left Upper India and settled to the south of Godavari. His son, Nanda, founded Nandagiri. He married a Chola princess from whom he begot a son named Vijayapala, who later on founded

the city of Mankunda or Makunda. History assigns the date of about 400 A.D. to Vijayapala, the founder of Mankunda.

3. GANGAS

Historically, the earliest dynasty which established its way over this part of the country including Bangalore district is that of the Gangas. In about the second century A.D., theGangas established themselves at Kolar (a place which is at a distance of 75 km from Bangalore City) from which they took the title Kuvalalapuravaradhishvara. The territory comprised in Bangalore district formed part of Gandavadi ninety-six-thousand and Honganur of Channapatna taluk was the chief town of a subdivision, called Chikkagangavadi, which occupied the Shimsha valley. During the seventh century, Makunda was a place of great importance and was the royal residence of Bhuvikrama and also of Pasivamara.

The earliest Ganga grant found in this district is dated in 430 A.D. and relates to king Avinita. In the eighth century, Shripurusha made Manyapura (Manne of Nelamangala taluk) his royal residence. During the reign of Satyavakya II, in about 870 A.D., a Nagattara chief is said to have fixed sluices to two tanks at Agara (near Bangalore East) and in about 890 A.D. Ereyappa who killed Nolamba king Mahendra and earned the title Mahendrantaka, is referred to as ruling over the country. Obviously, though the Gangas were reigning supreme, certain parts of this district, expecially in the east, were held by the Pallavas and the Nolambas for varying periods of time.

4. CHOLAS

Inscriptions belonging to the region of Rajendra Chola and Kulottunga Chola II discovered in different parts of this district amply testify to the fact that Bangalore district too was annexed by the Cholas who overran the Gangas and established their unquestioned supremacy in this part of the country by early eleventh century. After their conquests, among other things, the Cholas renamed Malurpatna of Channapatna taluk as Nikarili cholapuram and the area around Manne of Nelamangala taluk as Vikrama Chola-mandalam. Magadi town is said to have been founded by one of the Chola kings and the renowned king Cholanganga was born in Hejjaji-Twelve of Doddaballapur taluk.

5. HOYSALAS

The next important dynasty to hold sway over the district is that of the Hoysalas. Inscriptions of the Hoysala Kings, including those belonging to Vira Ballala (1172 to 1219 A.D.) are found all over the district. Shantala Devi, the queen of King Vishnuvardhana, it is said, breathed her last at Shivaganga of Nelamangala Taluk. When the Hoysala Kingdom was divided between the brothers Narasimha III and Ramanatha, the northern parts of Bangalore district came to be included in the possessions of Ramanatha who used to hold his court in Kundana of Devanahalli taluk. Honganur of Channapatna taluk was the provincial capital and the residence of the Hoysala governor. Yelahanka and its neighbourhood have yielded several inscriptions relating to the last days of the Hoysala rule and the reign of Ballala III.

6. VIJAYA NAGARA

Shortly after the fall of Hoysala rule, Bangalore district too became a part and parcel of the great Vijayanagara empire. An inscription discovered in Magadi taluk is dated in 1368 A.D. and belongs to the reign of Bukka I. It records the reconciliation effected by Bukka between the Jains and Vaishnavs of his kingdom and thus indicates that Bangalore district too formed part of his empire. Under the patronage of the Vijayanagara sovereigns, as in other parts of the empire, in Bangalore district too, local rulers flourished and attained glorious positions. Avati Nad Prabhus have a unique place in the modern annals of Bangalore district. The following story is current about the origin of this line of chiefs.

7. GOWDAS

About the end of the 14th century, a party of travellers consisting of seven farmers and their families halted at the foot of Ramasvami-betta to the east of Nandi Hill (Presenetly in Chikballapur Taluk, Kolar District). They were of Telugu origin. They worshipped Bairadeva and had the strange custom of amputating the ring and little fingers of the right hand of their daughters before marriage. The leader of this group was Rana Baire Gowda who had been forced to abandon his home at Alur near Conjeevaram in order to save his daughter from a powerful suitor. On the night of their encampment, Rana Baire Gowda was directed in a dream to settle in that neighbourhood and in accordance thereof, huts were built and the village Ahuti (now called Avati) came to be established.

Sometime later, they resolved to separate and while Rana Baire Gowda remained at Avati, his son moved out and founded Devanahalli, Dodballapur and Chikballapur. **Sanna Baire Gowda** went to Sugatur and later became the Chief of Kolar and Punganur and also the founder of **Hoskote**, and Jaya Gowda established himself at Yelahanka. The destination of the other three is not known. Jaya Gowda, who ruled for 15 years, acquired the title Yelanhanka Nadu Prabhu (Lord of Yelahankanad) and was succeeded by his son Gidde Gowda. It is only after the goddess, Kempamma, the consort of Baire Deva, was appeased by prayers and austerities that this Gidde Gowda was rewarded with a son whom he named Kempa Nanja Gowda.

This chief Governed the territory with benevolence for about 70 years (1443-1513 A.D.). His son Kempe Gowda distinguished himself as the most illustrious ruler of the family. In 1537, he founded Bangalore and its present location, duly fortified it and made it his capital. In appreciation of his good deeds, zeal and devotion to the Vijayanagara throne, King Achuta Raya granted him the right to administer a territory of twelve hoblies, around Bangalore which together yielded revenue of 30,000 pagodas. Kempe Gowda cherished a greater ambition, not being content with the feudal honours which he had achieved, Kempe Gowda established a mint, issued Baire Deva coins tried to appropriate the prerogatives of royalty for himself.

It was at this juncture that his patron Achuta Raya dies and Sadashiva Raya ascend the throne under the guardianship of Rama Raya. Sensing the danger posed by Kempe Gowda, Rama Raya summoned him to Vijayanagar court in a routine manner. On reaching the court, Kempe Gowda was seized and cast into a prison to suffer for his misdemeanours. Kempe Gowda secured his release and reinstatement after he suffered imprisonment for 5 years and also paid a heavy fine. Five years later, he was succeeded by Immadi Kempe Gowda - the chief who is known to have built a large number of tanks in various parts of the district and also the temple of Someshvara at Ulsoor and at Magadi. He extended his territory westwards and took over Savandurga as well as Magadi.

While the chiefs belonging to the main line of the Avati family flourished in the immediate neighbourhood of Bangalore, the chiefs of Devanahalli and Dodballapur branches too administrated the territories assigned to them from time to time, in what may be termed as a mediocre manner. The **Sugatur Cheifs** usually had the name **Tamme Gowda** and their possessions included part of the present Kolar district. One of these chiefs founded the **town of Hoskote** and extended his territory from Anekal to Punganur. He earned the title Chikka Raya from the Vijayanagara King in recognition of the able manner in which he repelled the aggressors. The western parts of the district were, during this period, under the control of Jagadeva Raya who had his capital at Channapatna and administered a large territory. Chamaraja Wodeyar annexed Channapatna and its neighbourhood in about 1630 A.D.

8. BAHAMANIS OF BIJAPUR

In 1938 A.D. Randulla Khan, the Bijapur general captured Bangalore, forced Kempe Gowda to retire to Savandurga and made Bangalore his chief residence for a brief period. After his return to Bijapur, Shahji was appointed governor of the southern Carnatic districts subdued by the Bijapur forces. Bangalore, **Hoskote**, Dodballapur, Kolar and Sira were granted as a Jagir to Shahji and he too stayed at Bangalore for some time and then shifted his residence to Doddaballapur and Kolar. On the death of Shahji in 1664 A.D. the administration of the Jagir developed on his eldest son Venkoji. Later with a view to establish his claims over his parental estate, Shivaji overran these territories in about 1677. Thereupon the brothers came to an amicable settlement according to which Bangalore and its neighbourhood remained in the possession of Venkoji.

9. WODEYARS

In the meantime, with their capital at Shrirangapattana, the Wodeyars of Mysore had established themselves as an important and rising power in the south. In 1654 A.D. Kantheerava Narasa Raja Wodeyar attacked and defeated Kempe Gowda of Magadi and forced the latter to pay heavy contribution. A couple of decades later, Bangalore itself were annexed to Mysore under the following circumstances. Shivaji died in 1680 A.D. and by 1687 Venkoji, who had established himself on the throne of Tanjore found his distance dominion of Bangalore to be an expensive

possession. Therefore he wanted to sell it away to the highest bidder, namely Chikka Deva Raja Wodeyar of Mysore for Rupees three lakhs.

The latter sent a detachment to occupy the estate and pay the money. But, at this stage the negotiation became protracted and became a matter of notoriety. Hari Raja, the Maratha Commander-in-Chief at Ganjee and Aurangzeb who had just raised the siege of Golkonda simultanelously turned their attention to the transactions pertaining to Bangalore and both of them sent a detachment each. Khasim Khan, the general of Aurangzeb, arrived first and occupied the place with relative ease. The detachment off Hari Raja, finding itself forestalled, matched back to the base. Then, Khasim Khan accepted the large sum money and handed over the possession of Bangalore which thenceforth became a part of Mysore Kingdom.

According to an inscription it was in the year 1695 that the Venkateshvara temple near the fort of Bangalore was erected by Chikka Deva Raja Wodeyar and endowed by his son, Kanthirava Narasa Raja. In 1689, Khasim Khan captured Dodballapur. Two years later, in 1691, Dobdallapur came to be bestowed upon Sheikh Abdulla Faruk - a descendant of one of the courtiers at Delhi. In 1728, Deva Raja, the Dalavayi of Dodda Krishna Raja Wodeyar, attacked Magadi and forced Kempe Gowda to surrender his territories which included the then impregnable Savandurga hill fort and the wealth accumulated therein over a period of nearly two hundred years. Kempe Gowda was taken to Shrirangapattana as a State Prisoner. In 1749, Devanahalli was annexed to Mysore Kingdom.

10. HAIDAR ALI & TIPPU SULTAN

It was during the siege of Devanahalli that Haidar Ali distinguished himself as a Volunteer horseman. In 1758, the fort and the neighbourhood of Bangalore were conferred on Haidar Ali as a Jagir in recognition of his services to the State. In 1761, Haidar Ali secured **Hoskote** and Dodballapur to the Jagir of Abbas Kuli Khan, from Basalat Jang. It was during this year that Haider Ali Virtually took over the administration of the entire Mysore kingdom of which his own personal estate in and around Bangalore was only a small part. In 1791, Lord Cornwalla captured Bangalore, from Tippu Sultan on behalf of the British. Soon Devanahlli and other

places were also annexed and the hill-forts like Savandurga, Ramagiri, Sivanagiri etc., too were captured.

On the death of Tippu Sultan in 1799, Bangalore district came to be included in the treaty of Shrirangapattana as the territory of the Wodeyars of Mysore. Under the restored government which followed, the districts of Bangalore and Kolar constituted the Bangalore Faujdari, which was afterwards called the Bangalore Division. This position continued until the formation of Nandidurg Division in 1863 whereafter the name Bangalore Division came to be confined to the area included in Bangalore district only. During the past hundred years and more, the boundaries of the district have remained almost unchanged though along with the other parts of the State, this district too has witnessed several administrative and political changes.

1.4.3 HOSKOTE TOWN

Hoskote, 12 km from Bangalore was a pre-historic centre. According to a copper plate grant dated 1494, given to a Veerashiva Matha the place was founded by Thamme Gowda, the chief of Sugatur. The place is also noted for a large tank with an embankment which is two miles long, and when full, forms a sheet of water not less than 12 km in circumference. Thamme Gowda is said to have constructed this tank and by raising an armed force, he annexed places like Anekal, Mulbagal, and Punganur (A.P.). His successors ruled till 1638 A.D. Shortly after, the territory was conquered by the Bijapur army and subsequently conferred as a Jahagir on Shahji, who resided at Bangalore. He had an officer called Yeshwantrao posted here. On the capture of these districts by the Mughal army under Khasim in 1687, they became part of the Sira Province. In 1756**, Hoskote** was taken by the Mysore army, but was subdued by the Marathas (Peshwa). It changed hands several times until it was finally annexed by Haider Ali in 1760 A.D.

The old fort area has the Avimukteshwara, Varadaraja and the Vithala temples. The Avimukteshwara is a very large Dravidian structure ascribed to Thamme Gowda, the chief of Sugatur. It has three cells in a line, the middle cell enshrining a Figure of Virabhadra, the one to the right Shivalinga and other to the left Parvathi. There is an oblong Ardhamantapa with its entrance having Dwara palakas. There is a spacious Navaranga with rows and rows of

Vijayanagar pillars having very interesting reliefs' sculptures depicting Shiva episodes. Inside the Navaranga is placed impressive sculpture of Ganapati (two handed) and Subhramanya (with two hands) having early Vijayanagara features. In front of the temple is a fine Deepa sthambha, about 7.5 metres tall with a circular pedestal. It is in the Maratha style. On a pillar to the left of the Mukhamantapa is carved a standing Figure of a Bhakta, described as representing the chief Thamme Gowda. A similar Figure is also seen on one of the pillars of the Kalyana Mantapa. Behind the temple (outside) was an ashmound and many stone tools had been located. Other temples of the place are Varadaraja, Anjaneya (two), Vithala (Panduranga), Kashi Vishveshwara, Sri Rama etc.

The Varadaraja temple has two Garbhagrihas, with the central one having a standing image of late Vijayanagara workmanship and the left cell has the seated image of Devi. The pillars of the Navaranga are in Vijayanagar style (renovated) and have many relief sculptures. It has been said that the temple was renovated around 1830 by the then Tahsildar Biligiri Rao. He is also said to have built the Anjaneya temple (also called Agrahara Anjaneya) near the tank sluice. Another Anjaneya temple in the fort area has a tall image in profile, about one meter height. An unpublished Tamil record is seen near this (Pete Anjaneya) temple. This temple which appears to have been renovated recently has a Navaranga having four beautifully carved black stone pillars. It is said that they originally belong to an old Shiva temple of Dravidian style. Some of the relief sculptures here depicting Shiva Purana episodes are of fine quality. Among the interesting are a huntress armed with bow and arrow removing a thorn from one of the legs, Tandaveshvara with Vishnu as a drummer and Brahma and Subramanya as attendant musicians, Narasimha as a drummer, Bedara Kannappa, Yama seizing Markandeya, Bhikshatana Shiva resting his right hand on a basket borne on the head of a dwarf and receiving alms from a woman etc.

The Vithala (Panduranga) temple also has three cells in a row and the central cell has a good image of Vithala about one metre tall, flanked by consorts. Two pillars in the temple are in Vijayanagara style. The deity stands with his two hands placed on the waist. The right cell has Figures of Garuda and Ganapathi and the left a Figure of Hanuman. The main gate of the fort itself appears to have been used as entrance to the temple, and touching this entrance are remains of fortification. From the records in the possession of the priest of the Vithalaswamy temple, we learn that it was built around the middle of the 17th century by

Raghunath Bhavji, Subedar of Hoskote and Paragana at the instance of the Peshwa. The village Turugalur (Malurtq) has been granted to the (also called Chilume Matha) and Virattayya Matha. The last mentioned is about 1.5km outside the town. The former is called 'Chilume' as it has a perennial spring in the form of well which supplies good drinking water to a portion of the town. The Virattayya Matha is a large building with several sculptured pillars and it is also said to have been constructed by Tamme Gowda.

Behind the Matha is a fine well faced with dressed stone slabs on all sides. In a private garden area few Masti-stones which differ in some respects from all other such stones in other parts of the old Mysore area. One of them shows a male Figure armed with daggers in hands, the right hand being raised; while a female holds in her left hand a water vessel and the right hand placed on the belly. In the municipal garden is a small building, where many sculptures like a number of Nandis, images of Vishnu, Virabhadra, Ganapati, Saptamatrika panel, one Masti stone, etc, are preserved. The town also has shrines of Nagareshwara, Maravva, Venugopala, Kalamma (old) etc. The annul Karaga and the Avimukteshwara Jatra are held in April-May (Chaitra-Poornima) when more than 10,000 people gather.

There are four mosques in the town. In a private garden near the fort is a Dargah ascribed to Saballi Sab Ali Sab, who is said to have lived about 200 years ago. The Urus here is held during Ramzan. Near this, across the field is a small Hanuman temple with Vijayanagara pillars and names of many devotees are engraved on them such as Appaji, Muddamma, Gopali, Chikkamuddappa, Nagisetti, Ballappa, etc. There is also an old temple tank here. Another Dargah situated near the old mosque in the town is ascribed to Sailab Ali Shah and the Urus is held in the month of Bakrid.

1.4.4 BRIEF NOTE ON PLACES OF TOURIST INTEREST IN HOSKOTE TALUK

A. DASARAHALLI:

Near the Channaraya temple at this place there is a fine four-pillared mantapa surmounted by a sculptured pavilion resembling a small gopura (tower) with entrances from four sides. The entrances are flanked by Dwarapalakas, the sculptures above them being those of Vishnu on the east, Venugopala on the south and Venugopala with consorts on the west and a standing male Figure with folded

hands on the north representing perhaps the donor devotee. The mantapa is locally known as Uttala Kamba.

B. HASIGALA:

The Someshvara temple of this village belongs to the Chola period (11th century A.D.) and contains several beautiful sculptures of which a few are very peculiar. For instance there is the Figure of a peacock with the head of a cobra and, facing it, there is another with the body of a cobra and the head of a peacock.

C. NANDAGUDI:

According to local legend, on this site stood an ancient city which was the capital of Uttunga Bhuja. His nephews, the Nanda Princes, whom he had wrongfully put behind the bars secured their release and later seized the kingdom. In the Kannada and Tamil inscriptions found here, this village has been referred to as Nanjuguli and Nondaguli.

D. HINDIGANAL:

The Rama temple of this village is a trikutachala, that is, has three cells. The main cell facing north has the idol of Keshava, the eastern cell has the idol of Hanuman and the western cell has the idol of Rama flanked by Lakshmana and Sita. In a grove to the north of the village site there is a mastikal depicting the Figure of a warrior and his two wives of whom one is holding a flask and the other lotus.

E. BANAHALLI:

A ruined temple at this place has a seated Figure of Dakshinamurthy, endowed with four hands, and saptamatrikas. In addition, there is a curious seated Figure holding what looks like a noose and a whip. An old Nolamba inscription is also found near the village.

F. KONDRAHALLI:



In a field to the east of the village site there is an old Tamil epigraph. The Dharmeshvara temple which is a small but neat Dravidian structure has several interesting sculptures on its pillars. There is also an inscription relating to the Chola King Raja Mahendra (about 1065 A.D.).

G. CHIKKATHAGGALI:

The village has a mastikal which depicts a warrior and his two wives. While the warrior is shown as holding a sword and a dagger, each of his wives holds a flask in her right hand and a lotus in her left hand.

H. VAGATA:



In the ancient Tamil and Kannada inscriptions found here the village is referred to as Ovattam and Bhagirathipura respectively. Later it seems to have been known as Yogavatipura. The Varadaraja temple here deserves notice. The ***Thoranagamba*** in front of the Chowdeshwari temple has an inscription dated in 1020 A.D. and belonging to Rajendra Chola's reign.

I. KHAJI HOSAHALLI:

A seventh century inscription referring to the rule of a chief named Binayaditya is found here. The village has a Lingayat matha containing the tomb shrine of Nijaguna Sujnanamurthy who was the preceptor of Sugatur Chief Tamme Gowda. A copper plate inscription, dated in 1494 A.D., recording the grant of a village by the chief, is preserved in this matha.

J. HOSAHALLI:

The village has two well sculptured mastikals or memorial stones.

1.5 ADMINISTRATIVE SETUP AND ADMINISTRATIVE DIVISIONS

Bangalore Rural district is located in the South Eastern corner of Karnataka State. The district comes under Bangalore Revenue Division, one of the four revenue divisions into which the state is being re-organised for the purpose of general administration. The district is further divided into 8 taluks namely Nelamangala, Dodballapur, Devanahalli, Hoskote, Magadi, Ramanagaram, Channapatna and Kanakapura. For administrative purposes the taluks are further sub-divided into two revenue subdivisions namely Dodballapur and Ramanagaram. The Dodballapur revenue sub-division covers Dodballapur, Devenahalli, Hoskote and Nelamangala taluks while Ramanagaram revenue sub-division covers Ramanagaram, Magadi, Kanakapura and Channapatna taluks. The district covers an area of 5815 Sq. km. As per 2001 Census, the district has 1873 villages and 10 towns. According to 1991 census, there were 1883 villages and 9 towns. The district has undergone several

jurisdictional changes during the decade 1991-2001. Zilla Panchayat has been constituted for Bangalore Rural district and its jurisdiction extends over the Taluk Panchayats of the entire district.

In Hoskote taluk, three villages namely Hoskote (R), Dandu palya and Varadapura have been fully merged with Hoskote TMC vide Govt. notification no. HUD 334, MLR 95, dated 11.10.95/1.8.95. Hence the total number of villages in the taluk has declined from 299 in 1991 census to 296 in 2001 census due to merger of these villages in the extended boundary limits of Hoskote town. Thus now, Hoskote taluk has one town (Hoskote) and 296 villages with an extent of 246.95 sq km distributed within 5 Hoblis and 26 Gram Panchayats.

- *Hoskote Town (Taluk headquarters)-25 km from Bangalore City*
- *TMC was constituted in 1906*
- *Total no of Wards-23(2001)*
- *NH 7 & NH 207 passes through*

Government of Karnataka has also implemented the provisions of 73rd Constitutional Amendment Act, 1993 and has established "Three tier systems of Panchayat Raj Institutions". Accordingly Administrative set up consists of in the lower tier, there are 26 Gram Panchayats headed by Secretary and one Town Municipal Council headed by Chief Officer in Hoskote Taluk, in the intermediate tier, Taluk Panchayat headed by Tahasildar for the Hoskote Taluk and in the upper tier of the structure, Zilla/ District(Rural) Panchayat headed by Deputy Commissioner.

1.5.1 LOCAL ADMINISTRATION

Hoskote Town is the only urban area in the Taluk. The Town Municipal Council was constituted in the year 1906.The area within the Municipal Jurisdiction is ***18.25 sq km.*** Total number of wards in the Municipal Area is 23 and as per 2001 and 2011 census. The population of Hoskote Town is 36,323 persons and 56,613 persons according to 2001 and 2011 Census respectively.

1.6 INTRODUCTION TO LPA

Hoskote Town is 25 km away from Bangalore City and is one of the surrounding satellite towns of Bangalore acting as a counter magnet to Bangalore metropolis and is attracting industries, ancillary developments and investments. Hoskote being a taluk headquarter and situated on major transport corridors of Kolar – Bangalore Road NH 4, Dobaspet – New

Madras(Chennai) Road NH 7, three State Highways Hoskote – Siddlaghatta Road SH – 35, Hoskote - Chinthamani Road SH – 82 and Hoskote - Malur Road SH – 95 has the potential to develop into more urbanized centre in future. The developments in the Metropolitan area of Bangalore extending beyond the green belt have created lot of potential for areas in and around Hoskote Town. The Town was not growing according to normal growth in the earlier decades as it was under the shadow of Bangalore having enormous economic, educational, and other facilities. Hence it is necessary to regulate development in a planned manner in and around Hoskote town by enacting Karnataka Town and Country Planning Act, 1961 and by preparing Master Plan for Hoskote and its environs under the provisions of the said Act.

- ***LPA - Declaration on 03-03-2006***
- ***LPA includes 316 Villages out of which 300 villages are of Hoskote taluk and 16 villages in Bidarahalli hobli are of Bangalore East taluk***

Earlier the developments in the Hoskote area were controlled directly under the BMRDA Act as per the State Government approved structure plan. In the structure plan, Hoskote Local Planning Area comes under Zones of APZ 4 & in IZ 5, 6.

In view of recent potential that has been created in Hoskote and environs, Bangalore Metropolitan Region Development Authority has taken a decision to prepare a Master Plan for Hoskote Town under the Karnataka Town and Country Planning Act, 1961.

Before Master Plan of any town is prepared, a Local Planning Area is to be notified by Government under the Act, including the municipal area of the Town and potential areas under the influence of the Town.

Local Planning Area (LPA) of Hoskote comprising of 316 villages is declared by Government of Karnataka in a Gazette Notification No. UDD 118 Bem Ru Pra 2003 dated 03.03.2006. It comprises of 300 villages (Hoskote town and 299 villages) of all 5 Hoblis namely Sulibele, Nandagudi, Anugondanahalli, Jadigenahalli, and Kasaba Hobli of Hoskote Taluk and 16 villages of Bidarahalli Hobli of Bangalore East Taluk. Total extent of the LPA is 591.72 sq km (59,172 hectares). Planning Authority for the Hoskote LPA is constituted vide Govt. Notification No. UDD 31 Bem Ru Pra 2006, dated: 19.07.2006.

However eight villages namely Bhaktarahalli, Doddagattiganabbe, Koraluru & Mallasandra of Hoskote Kasaba hobli and Ajjagondanahalli, Gulakayipura, Timmandahalli and Tirumalashetty halli of Anugondana hobli were overlapping in both HLPA limits and BDA limits. Government in its Notification No. UDD 364 BMR 2009, dated: 26.09.2012 deleted these eight overlapping villages from BDA limits and thereby retaining them in HLPA limits.

An area of 116.24 Sq.Km comprising of 51 villages of Hoskote LPA was withdrawn and included in the STRR LPA as per Government order UDD 36/BMR/2016, Bangalore, dated: 24.06.2016. Thus the revised LPA area of Hoskote 475.48 Sq.km comprising of 249 villages of Hoskote Taluk and 16 villages of Bidarahalli Hobli in Bangalore East Taluk, Totalling 265 villages. As per census data, the geographical area of Bhaktarahalli is 259.38 ha was wrongly entered as 93.4 ha in the STRR notification.

Similarly another village name Yetinavadevarayanapura, geographical area 28.42 Ha was wrongly entered as 85.3 Ha in the STRR notification. Accordingly the area of the STRR LPA within the Hoskote LPA limits comes to 117.62sqkm instead of 116.24 sq.km as per notification. The difference of 1.38 sq.km is going to be reduced in the Hoskote LPA area of 475.48 sq.km and finally works out to be 474.10 sq.km.

In the Government Order No UDD 25 BMR 2016, Bangalore dated: 16.05.2016 the government approval was given to prepare comprehensive land use Map and Road Circulation Map for the Nandagudi Township area and to include it in the Master Plan Prepared for the Local Planning Area and to take approval separately for the area under Section 13(b) of KTCP Act, 1961 and then to send the proposal for cancellation of approval given Vide Government Order No: UDD/97/BMR/2016, dated: 18.10.2006.

The subject was placed before the 66th Authority Meeting vide Subject No.10 for declaration of intention to prepare Master Plan for Nandagudi Township Area under Section 10 of KTCP Act, 1961. Accordingly it was published in Prajavani and Udayavani daily newspaper on 03-02-2017 and also it was published in Karnataka gazette dated: 23.02.2017 for calling suggestions from Public for a period of two months from the date of notification.

In the 70th Authority meeting held on 22-07-2017 the subject of preparation of master Plan for Nandagudi Township was placed vide sub. No.2 of part-II of agenda. Decision was taken to entrust the work of preparation of Master Plan for Nandagudi Township to infrastructure

development corporation (Karnataka)Ltd (iDeck) at a cost of Rs.36,00,000 (Thirty Six lakhs) under 4G exemption. Accordingly the proposal was sent to Govt. seeking administrative approval through BMRDA

1.7 SCOPE AND LIMITATIONS

Master plan, 2031 of Hoskote Local Planning Area mainly is a land use plan indicating different land use zones and regulations for population projections of 2031. It gives broad framework for the provision of infrastructure.

However the study is limited to mainly land use and development for the population projections of 2031. Studies are to be conducted comprehensively for traffic and transportation, Non-motorised traffic, industrial development. Studies are also to be conducted for any of the development schemes/projects taken up by Government/ Quasi Government, local authorities or private sectors.

Copies of details of hobliwise villages in LPA, decadal population of LPA, Census Population of villages in LPA of 2001 and 2011, population projection, date of events and changes made from provisional master plan to Final Master Plan are given in Annexure 1 to 8 respectively. ***Figure 14*** and ***15*** show Hobliwise map and Local Planning Area of Hoskote.

Figure 14: Hoskote Hobliwise Map

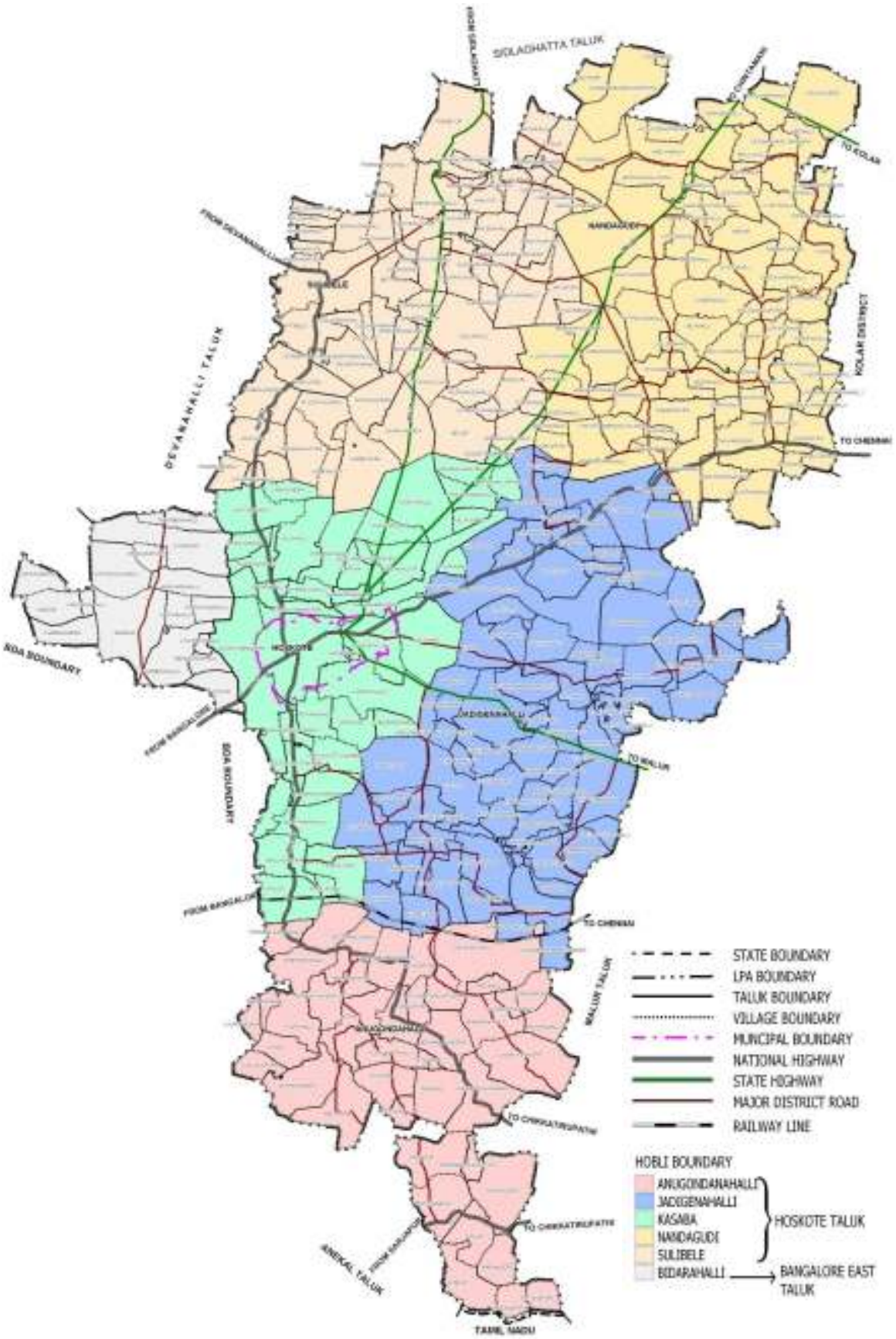


Figure 15: Hoskote Local planning Area

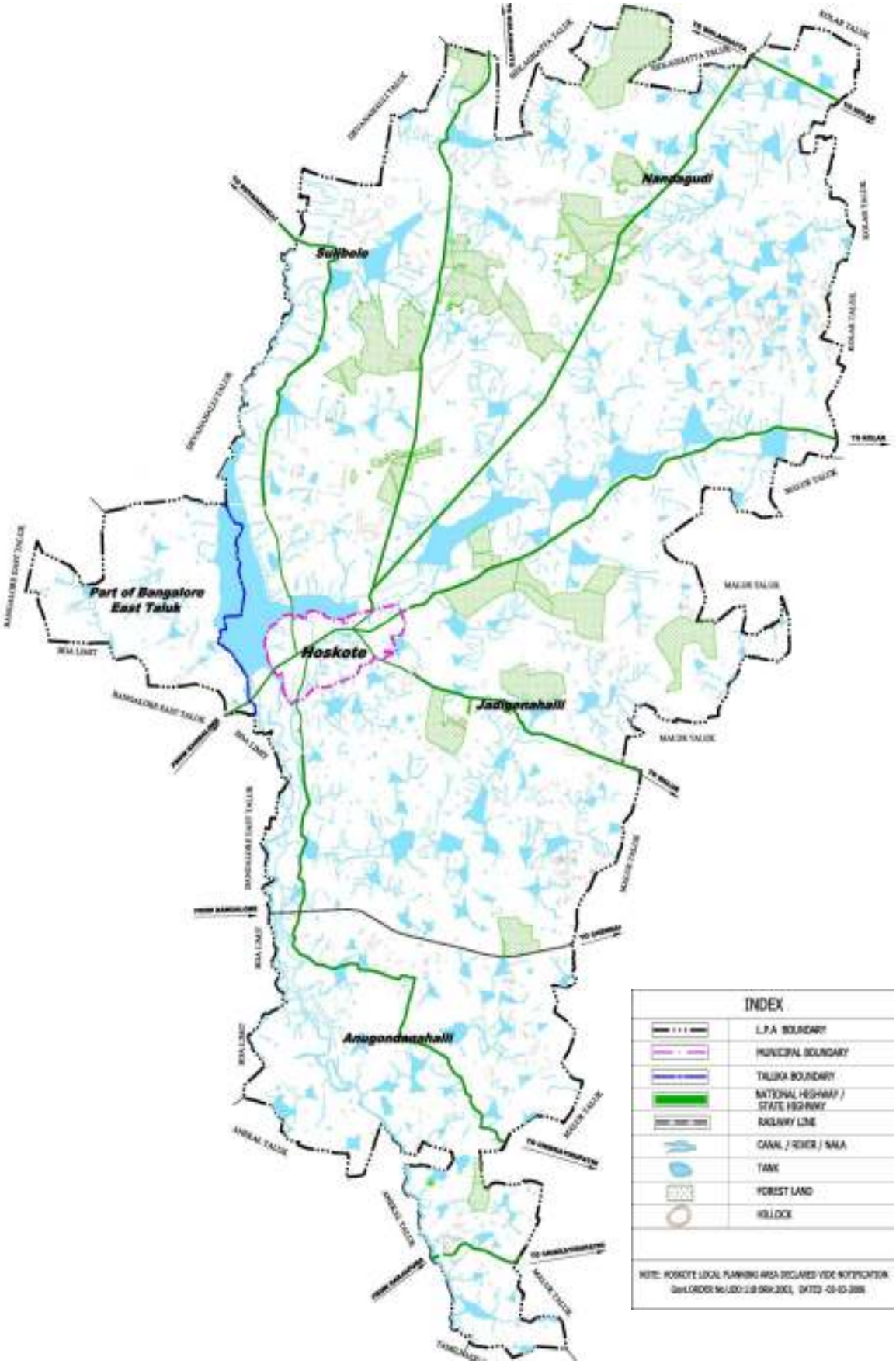
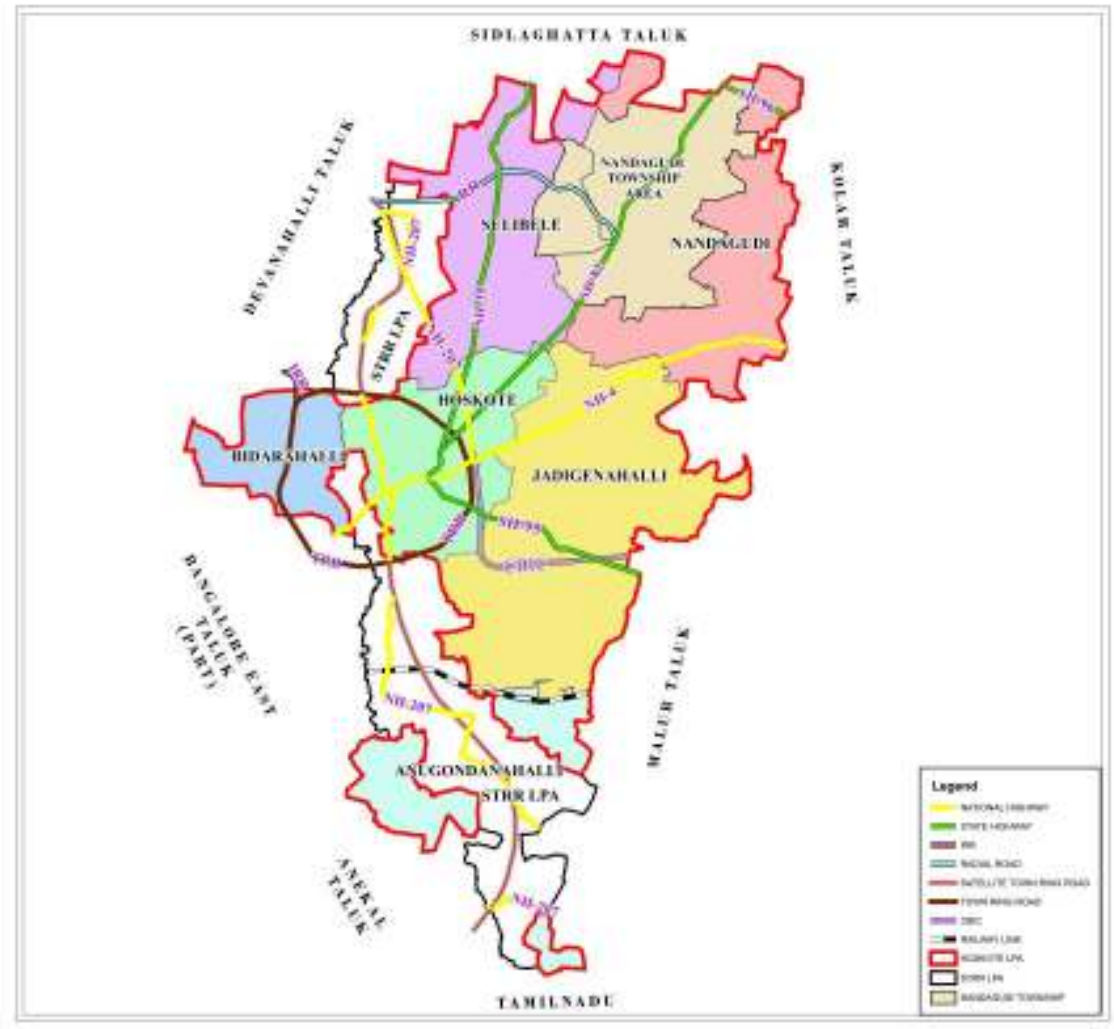


Figure 16: Hoskote LPA with Nandagudi Township and STRR



CHAPTER-2

DEMOGRAPHIC PROFILE AND ECONOMIC BASE

CHAPTER-2 – DEMOGRAPHIC PROFILE AND ECONOMIC BASE

2.1 INTRODUCTION

The purpose of a master plan is to organise the available space for a dedicated population without compromising the inherited cultural and socio-economic values. Future growth, infrastructure requirements and utilization of human resource for different sectors depending on the population of an area. Hence the size, composition and distribution of population are invariably important in Planning.

Size of the population gives an overall dimension of the physical environment and supplies a basic yardstick for the estimation of space requirements for various categories of land use. Studies on population composition extend this analysis to qualitative considerations like age groups, household sizes, income levels, and needs of each segment of the life cycle. They can be used to assist in determining the space required for facilities for all segments of the population. Analysis of population distribution provides clues as to how these various land uses and facilities should be located in the urban area.

This chapter gives a fair idea about the population statistics which in turn help us to determine the demand for infrastructure facilities and services required for the Local Planning Area of Hoskote.

2.2 DEMOGRAPHIC CHARACTERISTICS

2.2.1 KARNATAKA AND BMR: FACTS AND FIGURES

In order to understand how to apply the statistical parameters for planning of LPA population, there is a need to study and draw inferences, on how the higher order spatial units i.e. State and BMR population were conceived. The BMRDA area includes Bangalore Urban and Rural Districts. As per census 2011, the population is around 105,76,167 (105 lakhs).

The following ***Table 3*** and the ***Figure 17*** gives the highlight of information drawn for the above said requirement.

Table 3: Decadal Population of State and BMR

S.No	Place	Years(Population in Numbers)				
		1971	1981	1991	2001	2011
I	KARNATAKA (Area 1,91,791 sq km)					
1	Karnataka	2,92,99,014	3,71,35,714	4,49,77,201	5,28,50,562	6,11,30,704
2	Rural	2,21,76,921	2,64,06,108	3,10,69,413	3,48,89,033	3,75,52,529
3	Urban	71,22,093	1,07,29,606	1,39,07,788	1,79,61,529	2,35,78,175
II	BMR (Area 8,005 sq km)					
1	Total	33,65,515	49,47,610	65,12,356	84,14,540	1,05,76,167
2	Rural	14,99,761	17,54,394	20,39,317	22,47,679	15,88,535
3	Urban	18,65,754	31,93,216	44,72,539	61,66,861	89,87,632

Data Source: Census data 1971-2011(Govt of India)

Figure 17: Decadal Population of State and BMR

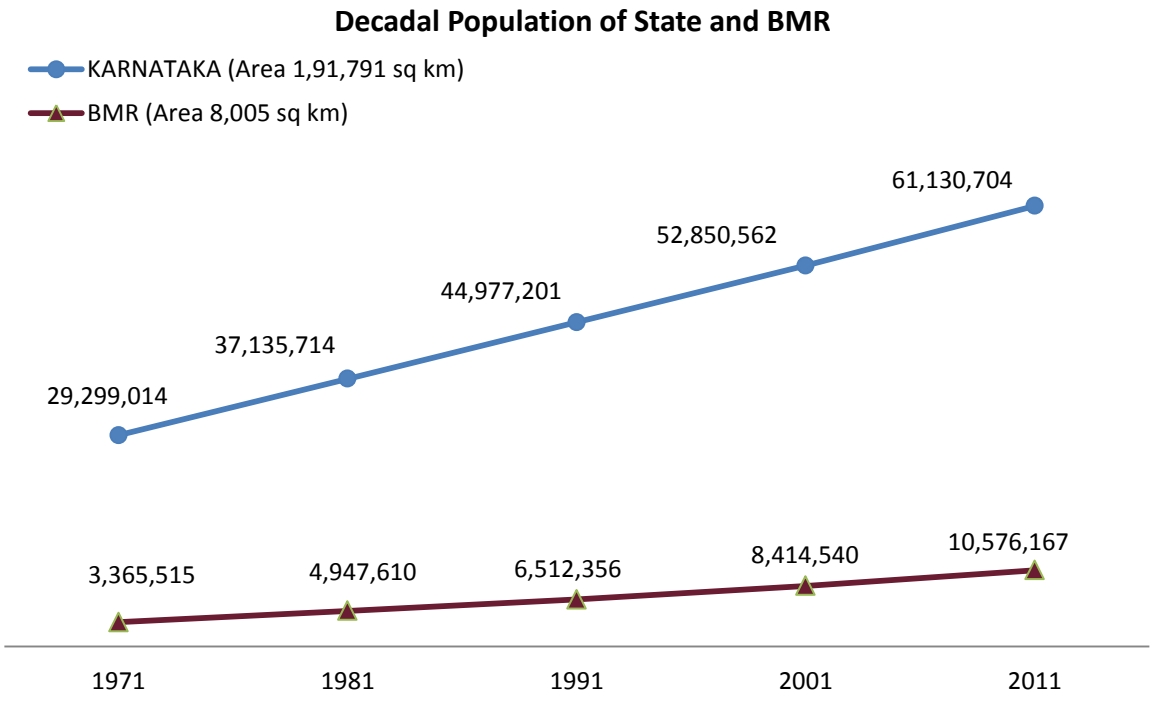


Table 3 gives the inference that could be drawn based on population statistics of Karnataka state and Bangalore is as follows:

- State's population according to 2011 Census is 6.11 crores.

- The percentage of rural population of the state is decreasing (from 75.69 % in 1971 to 61.43% in 2011) where as that of the percentage of population is increasing considerably from 32.19 in 1971 to 61.43 % in 2011.
- The percentage of rural population in BMR region is decreasing drastically from 44.56% in 1971 to 15.02% in 2011, where as the percentage of Urban population is increasing from ***55.44 % in 1971 to 84.98% in 2011***.
- **Hence both the state and BMR has undergone a great deal of Urbanisation.**

2.2.2 DEMOGRAPHIC STRUCTURE OF LOCAL PLANNING AREA OF HOSKOTE

The LPA of Hoskote covers 316 villages out of which 300 villages and one TMC of Hoskote are in Hoskote Taluk and 16 villages in Bangalore East Taluk. Population of LPA according to 2001 Census is given in the following ***Table 4***.

Table 4: Population of LPA -2001

S. No.	Hoskote LPA	Total Population
1	**Hoskote Taluk**	
a	Hoskote TMC – (Urban)	36323
b	Hoskote Taluk -- (Rural)	185741
Total		**222064**
2	**Bangalore East – (Rural)**	9140
Total Population of LPA (2001)		**231204**

Data source:Calculations derived from 1991,2001,2011 Census-Govt of India

(NOTE:Data result derived may be subject to rounding)

2.2.3 DECADAL POPULATION OF THE LPA SINCE 1981

Table 5 shows the decadal population from the year 1981 to 2011 for the Local planning area of Hoskote.Population of wards during 2001 and 2011 in Hoskote TMC is enclosed in ***Annexure 2***.

Details of village wise Decadal Population of LPA area from 1981 to 2011 are enclosed in ***Annexure 2***.

Table 5: Decadal Population of LPA from 1981-2011

S.No	Hoskote LPA	Total Population in Numbers			
	Year	1981	1991	2001	2011
A	Hoskote TMC	17538	25533	36323	56613
B	Hoskote Taluk (Rural) (47 Villages of Bidarahalli Hobli excluded)	-	162966	185741	213697
C	Bangalore East Taluk (Rural- 16 villages of Bidarahalli Hobli included)	-	7499	9140	11683
	TOTAL (A+B+C)	**203594**	**195998**	**231204**	**281993**

Data source: 1981 to 2011 Census-Govt of India,Taluk Web Site,Chief officer, Hoskote TMC

(NOTE:Data result derived may be subject to rounding)

Figure 18 shows the decadal population of Hoskote LPA. The projected population till 2031 is also marked in the graph in order to find the trend change in population growth.

The population growth of the LPA gradullay increases from 1981 to 2011.

The percentage increase in population of Hoskote taluk (Rural) as well as that of Hoskote town is increasing considerably showing that, because of proximity to Bangalore both Hoskote town and taluk are attracting Bangalore's population seeking shelter and employment oppurtunities because of the strong economic base of the town.

Figure 18: Decadal Population of LPA from 1981-2011

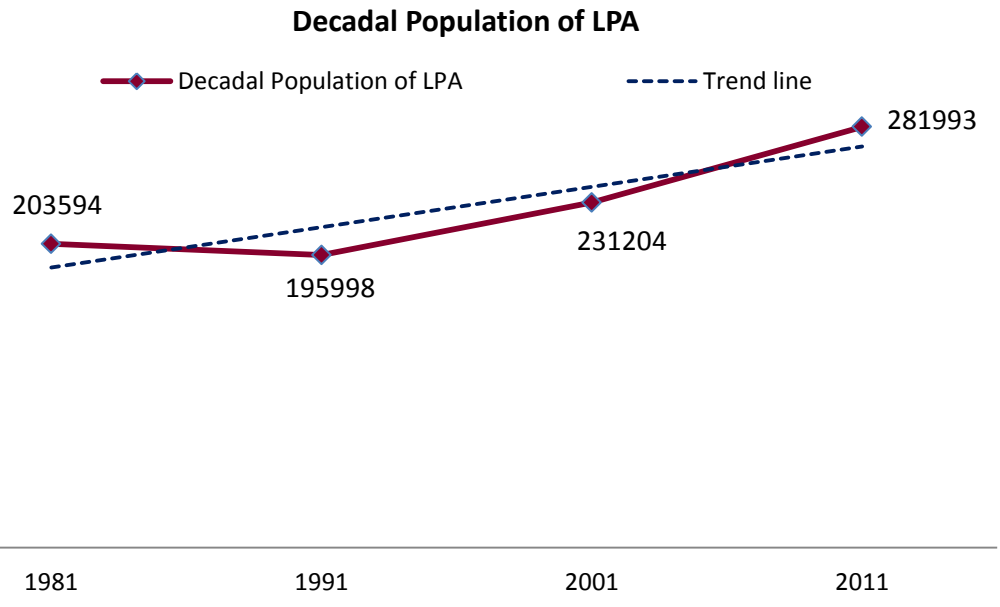
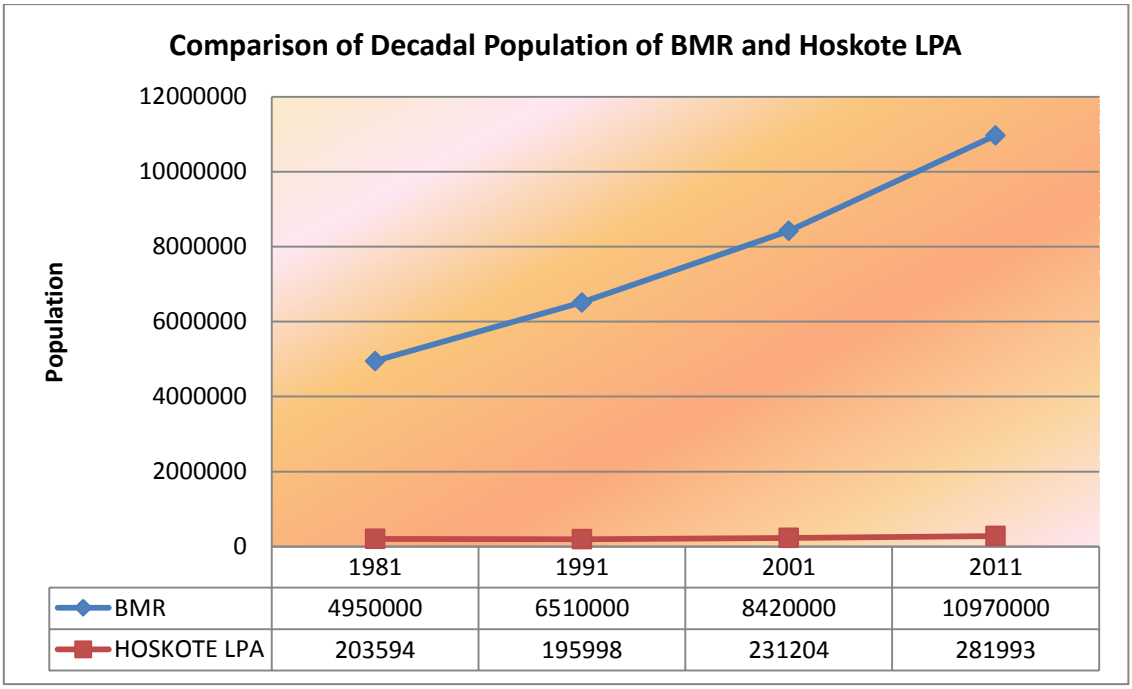


Figure 19 shows the comparison of population between Hoskote LPA and the BMR region. It is observed that increase in population of Hoskote Town as well as other settlements in the LPA is increasing from 2001 to 2011 at the rate of 19.96% on an average, whereas the increase in population of Hoskote Town alone from 2001 to 2011 is 55.85%.

Figure 19: Decadal Population of BMR and Hoskote LPA from 1981 to 2011



2.2.4 HOSKOTE TMC - POPULATION GROWTH

Table 6 gives the decadal population of Hoskote Taluk and TMC Area in numbers as follows.

Table 6: Decadal Population of Hoskote Taluk and LPA from 1971-2011

Total Population in numbers						
S.No	**Year**	**1971**	**1981**	**1991**	**2001**	**2011**
1	Hoskote Taluk	153741	203594	188499	222430	270311
2	Hoskote TMC	12163	17538	25533	36323	56613

Data source: 1971 to 2011 Census-Govt of India
(NOTE:Data result derived may be subject to rounding)

Figure 20 shows variation of decadal population of Hoskote TMC from 1971 to 2011 depicting significant growth of population and **Figure 21** shows the comparison of decadal population growth of the Taluk and TMC since 1971-2011.

It is seen from the below Figure the variation of decadal population of Hoskote Taluk and TMC from 1971 to 2011 depicting continuous increase in growth of population in TMC compared to Taluk which shows decrease in growth of population in 1991 due to Taluk jurisdictional change and then continuous increase in growth of population in Hoskote Taluk from 1991.

Figure 20: Decadal Population of Hoskote TMC from 1971-2011

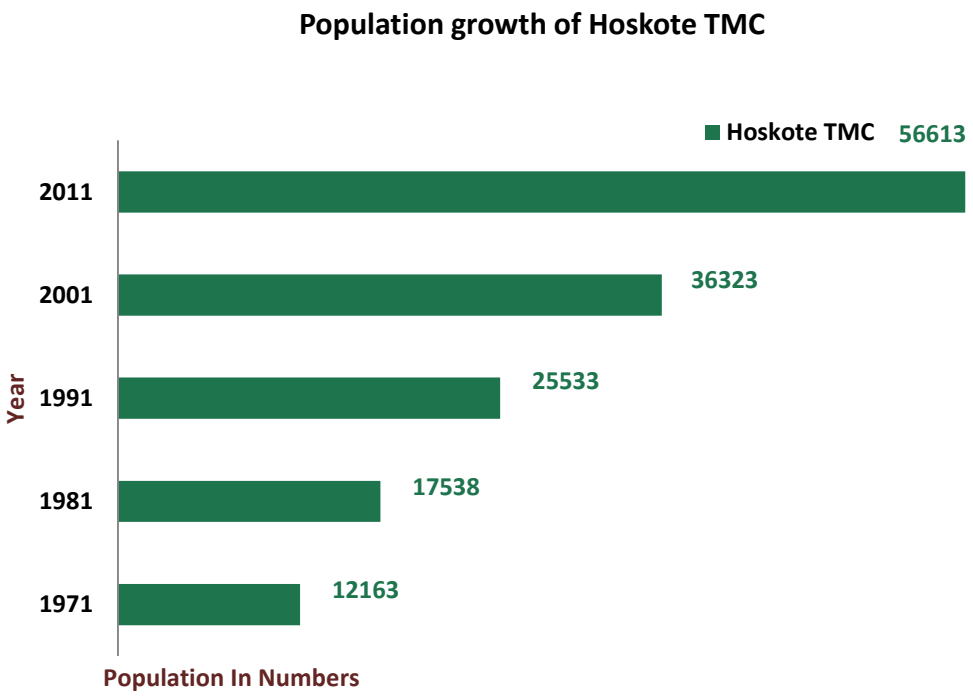
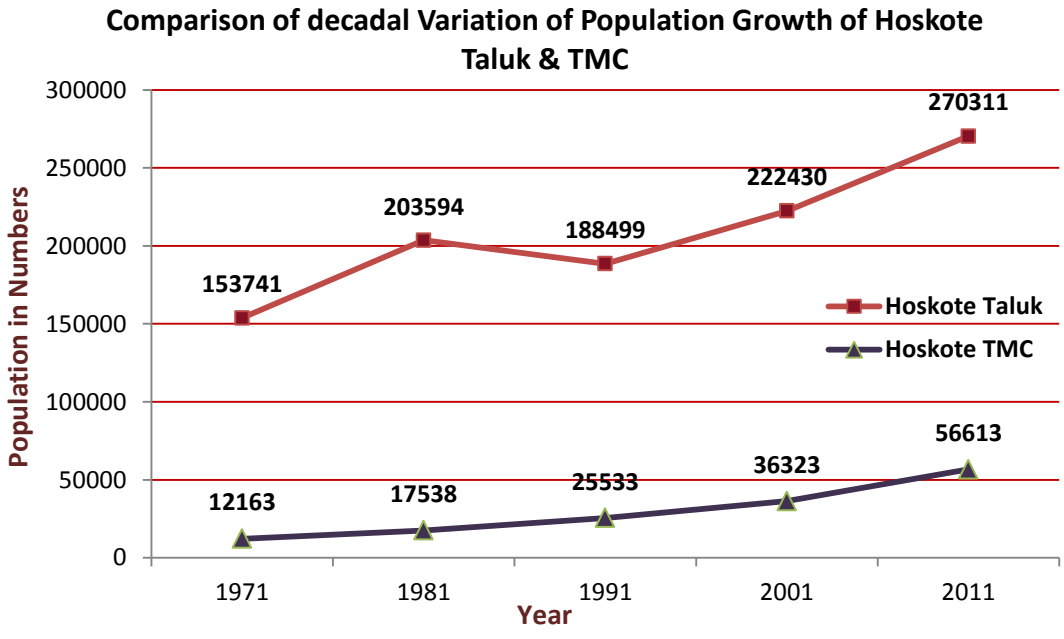


Figure 21: Comparison of Decadal Population Growth of the Taluk and TMC since 1971-2011



2.2.5 FACTORS FACILITATING POPULATION GROWTH

The main factors contributing to the growth of population in the LPA area are:

i. Proximity to Bangalore City and consequent inducement from the BMR

ii. Commercial and Industrial Developments along major roads near and passing through the LPA

- **2 National Highways** viz., National Highway No-4 connecting Bangalore to Chennai passes through Hoskote Town and the LPA from west to east and NH-207 passes through Hoskote Town on the western side of the LPA connecting New Madras Road to Dobaspet.
- **3 State Highways** Hoskote- Siddlaghatta Road (SH- 35) passes through the LPA to the north of NH-4 from north to south; Hoskote- Chinthamani (SH-82) crosses the LPA from Hoskote diagonally from south west to north-east; Hoskote-Malur Road (SH- 95) connects Hoskote to Malur and is from west to east.
- **Seven major district roads** Sulibele to Siddlaghatta Road connecting Sulibele to SH -35 leading to Siddlaghatta; NH – 4 to Chikkanahalli via Nakkanahalli (This Road is within the Taluk and connects NH – 4 at two points on northern side) ; Bailanarasapura to Shidlaghatta Road via Korati – 21.00 km on the northern side of the LPA beyond Nandagudi and connecting both Chinthamani Road and Shidlaghatta Road; Nandagudi to NH- 4 via Bailanarasapura on the north - eastern side of the LPA; NH- 4 to Toranahalli; NH-207 to Bellikere via Mutkur to the South of Bangalore-Chennai Railway line from north to south; Mutkur to Chikka Tirupathi Road via Tatanur on the Southern side of the LPA running north to south.
- **Two NABARD roads** BRF Road to Bailarasarapura via Obalahalli and NH-207 to Cheemanahalli via Ganagal
- **Satellite Towns Ring Road (STRR)** connecting Hoskote to the 9 other satellite towns (Devanahalli, Doddaballapur, Dabaspet, Ramanagaram, Kanakapura, Anekal, Attibele and Sarjapura)

- **Intermediate Ring Road (IRR)** is proposed within the STRR for connecting Hoskote and the other towns around Bangalore (Devanahalli, Nelamangala, Bidadi, Ramanagaram, Anekal, Attibele)

iii. **Industrial developments** by KIADB, public and private sectors.

2.2.6 SEX RATIO

Sex ratio is defined as number of females per 1000 males. The sex ratio of the Hoskote Taluk and TMC from 1971 to 2011 is shown in ***Table 7*** below.

Table 7: Decadal Sex Ratio of Hoskote Taluk and LPA from 1971-2011

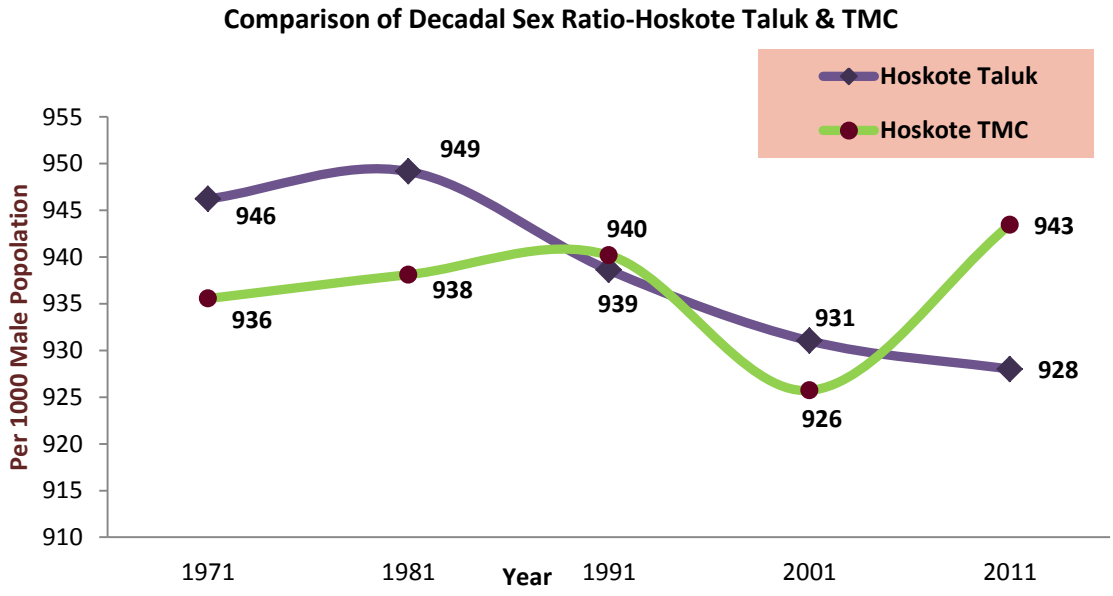
Decadal Sex Ratio						
S.No	**Year**	**1971**	**1981**	**1991**	**2001**	**2011**
1	Hoskote Taluk	946	949	939	931	928
2	Hoskote TMC	936	938	940	926	943

Data source: 1971 to 2011 Census-Govt of India

(NOTE:Data result derived may be subject to rounding)

The decadal variation in Sex Ratio of the Taluk and TMC from 1971 to 2011 is shown in ***Figure 22***. Taluk is showing a decline in female population since 1981 whereas TMC is showing a declining trend from 1991 to 2001 which again is showing an increasing trend up to 2011.

Figure 22: Comparison of Decadal Sex Ratio –Hoskote Taluk & TMC from 1971-2011



2.2.7 CHILD POPULATION (0-6 YRS)

The proportion of child population in an area determines the educational infrastructure demand. Details of child population of Hoskote taluk and TMC are presented in ***Table 8***.

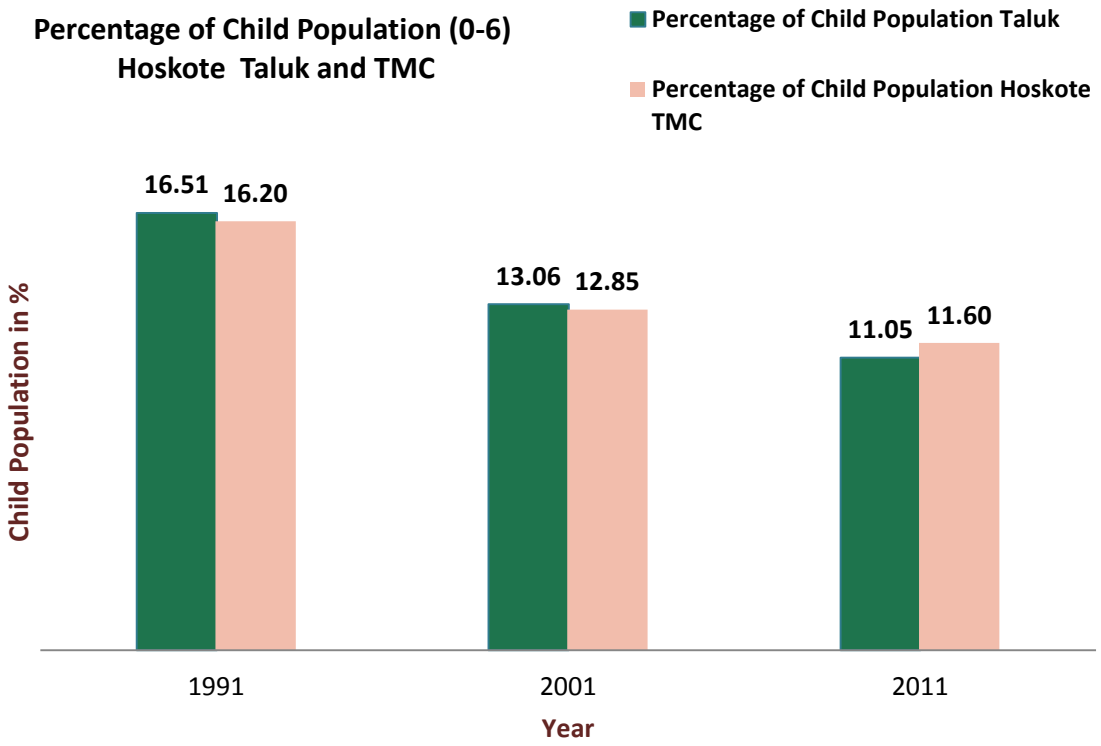
Table 8: Child Population of Hoskote Taluk and LPA from 1991-2011

Total 0-6 population in Numbers				
S.No	**Year**	**1991**	**2001**	**2011**
1	Hoskote Taluk	31117	29047	29862
2	Child Population Hoskote TMC	4136	4669	6567
3	Percentage of Child Population Taluk	16.51	13.06	11.05
4	**Percentage of Child Population TMC**	**16.20**	**12.85**	**11.60**

Data source: 1991 to 2011 Census-Govt of India
NOTE:Data result derived may be subject to rounding

The decadal variation in percentage of child population of the Taluk and TMC from 1991 to 2011 is shown in ***Figure 23***. Both Taluk and TMC are showing a declining trend from 1991 to 2011.

Figure 23: Decadal Variation in Percentage of Child population (0-6) for Hoskote Taluk and TMC (1991-2001)



2.2.8 LITERACY RATE

Details of literate population and percentage literacy rate of Hoskote taluk and TMC from 1971 to 2011 are shown in ***Table 9*** below and decadal variation of literate population of Hoskote taluk and town are depicted in ***Figure 24*** *and* ***25*** *respectively.*

Table 9: Literate Population and Percentage Literacy Rate of Hoskote Taluk and TMC from 1971-2011

Total Literates in Numbers						
Sl.No	**Year**	**1971**	**1981**	**1991**	**2001**	**2011**
1	Hoskote Taluk	42569	74854	85841	133790	188885
2	Hoskote TMC	5679	9659	15591	24915	43884
Literacy Rate						
3	Hoskote Taluk	27.69	36.77	45.54	60.15	69.88
4	Hoskote TMC	46.69	55.07	61.06	68.59	77.52

Data source: 1971 to 2011 Census-Govt of India

(NOTE:Data result derived may be subject to rounding)

Figure 24: Decadal Variation of Literate Population -Hoskote Taluk

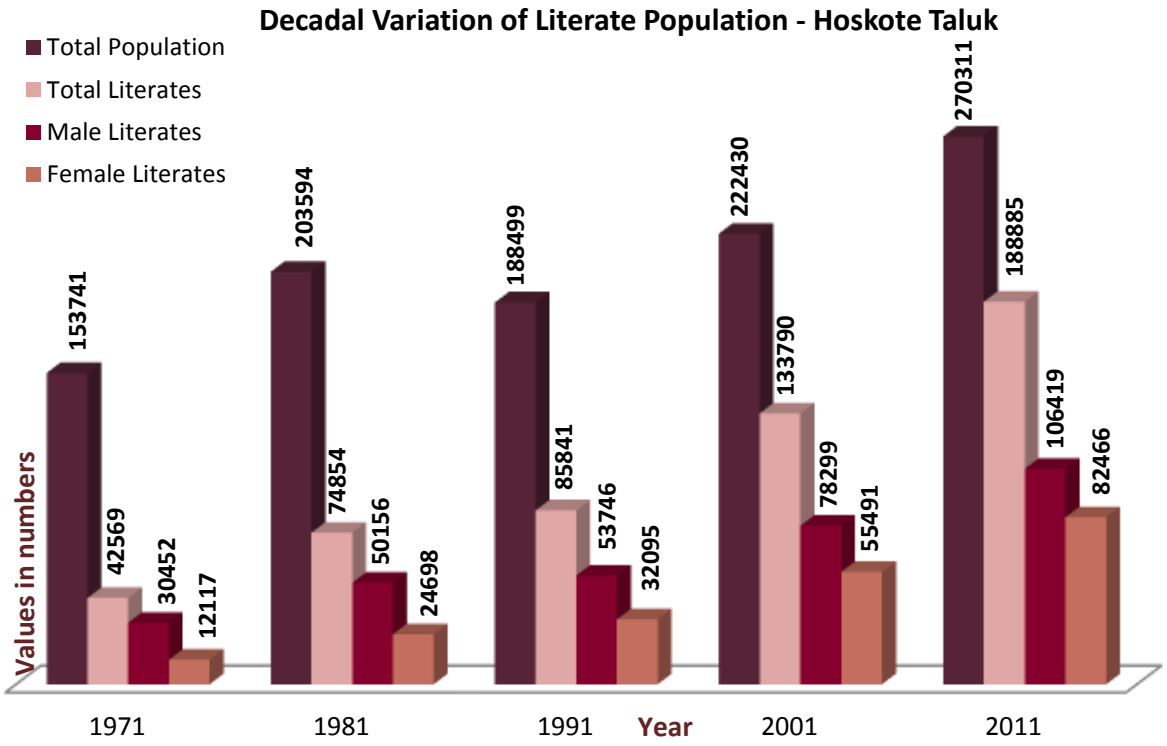
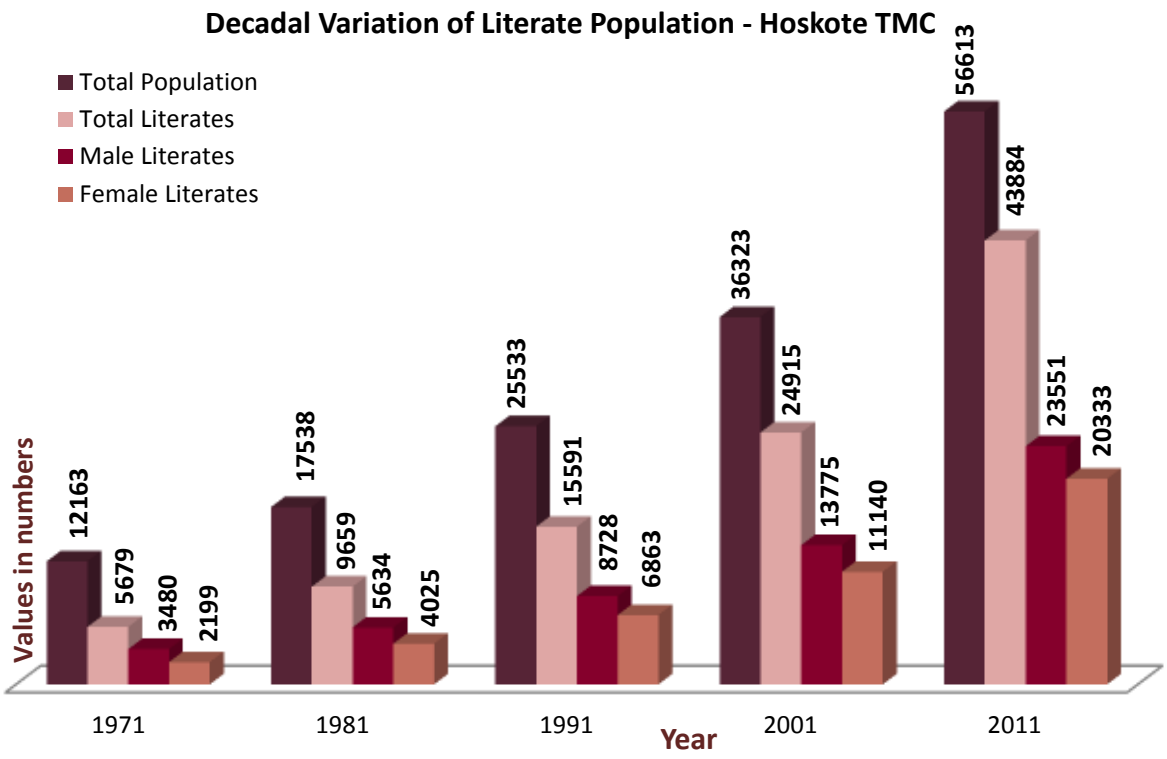
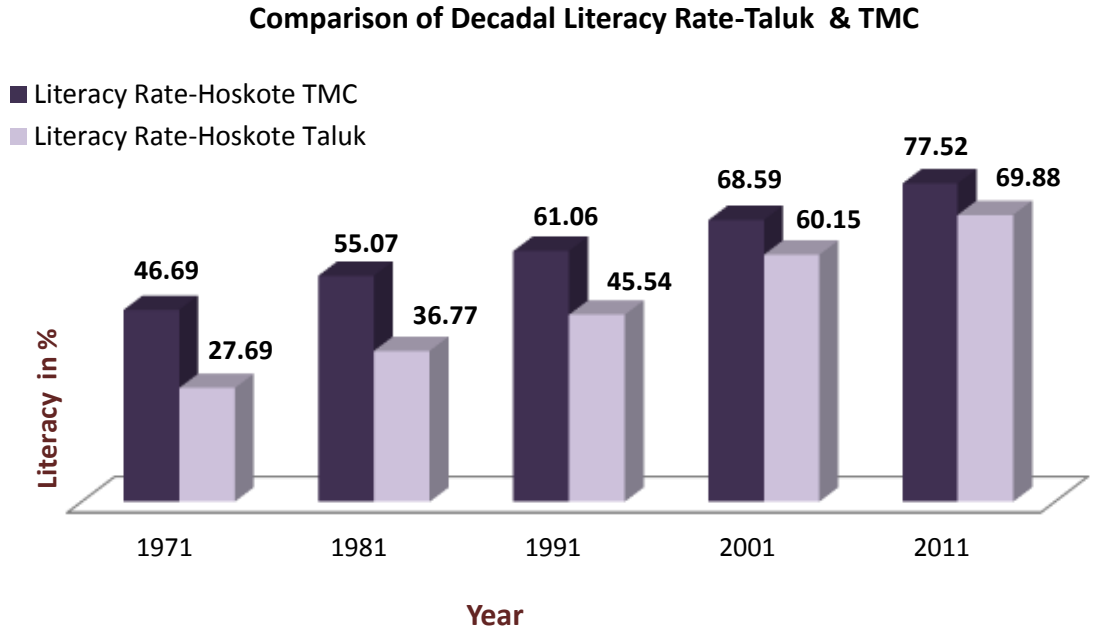


Figure 25: Decadal Variation of Literate Population -Hoskote TMC



Both Taluk and TMC are showing considerable increasing trend in literate population as depicted in ***Figure 26***. Literacy rate of ***Taluk (69.88 %) is lower*** that of State and Nation's *Figure* i.e., 74.04 % & 75.6 % respectively. And Literacy rate of TMC 77.52% is respectively higher compared to State & Nation according to 2011 census.

Figure 26: Comparison of Decadal Literacy Rate for Hoskote Taluk &TMC (1971-2011)



2.2.9 POPULATION DENSITY

The population density of the Hoskote Taluk and TMC from 1971 to 2011 is tabulated in the following ***Table 10*** and variation of population density from 1971 to 2011 is depicted in ***Figure 27*** and ***28*** respectively.

The population density is increasing considerably from 1971 to 2011 for Taluk as depicted in ***Figure 27***.

Table 10: Population Density of Taluk and TMC (1971-2011)

S.No	Year	1971	1981	1991	2001	2011
1	Hoskote Taluk	666.9	676.8	547.74	547	-
2	Hoskote TMC	1.3	3.1	3.12	14.3	14.3
Taluk-Population Density Per Sqkm		**231**	**301**	**344**	**407**	**494**
TMC -Population Density Per Hec		**94**	**57**	**82**	**25**	**40**
TMC- Population Density Per sq km		**9356**	**5657**	**8184**	**2540**	**3959**

Figure 27: Variation of Decadal Population Density (per sq km) - Hoskote Taluk

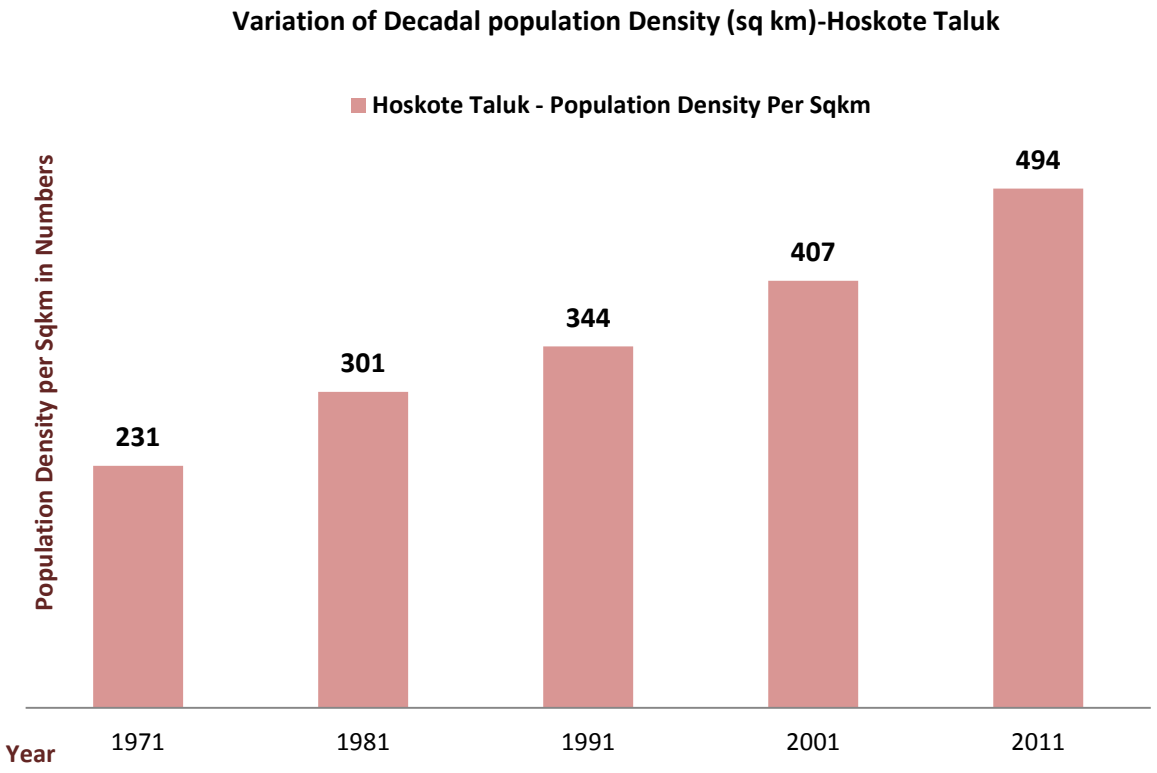
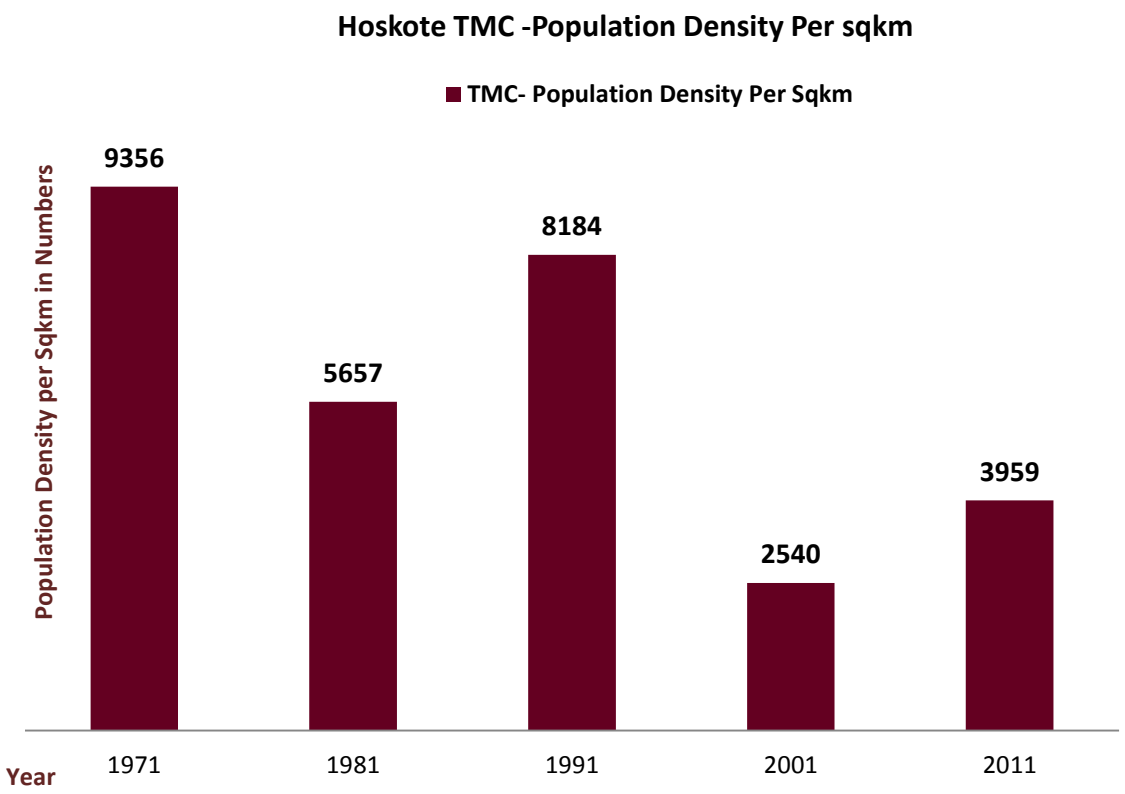


Figure 28: Variation of Decadal population Density (per sq km)-Hoskote TMC



2.3 ECONOMIC BASE

2.3.1 ECONOMIC SECTOR ANALYSIS

An economic sector defines the proportion of a population that is engaged in various economic activities. Economic sector is categorized into primary, secondary and tertiary sector for analysis. Details of percentage of workers in various economic sectors from 1971 to 2001 for Hoskote Taluk and TMC are presented in ***Table 11*** and in ***Figure 29*** pictorially.

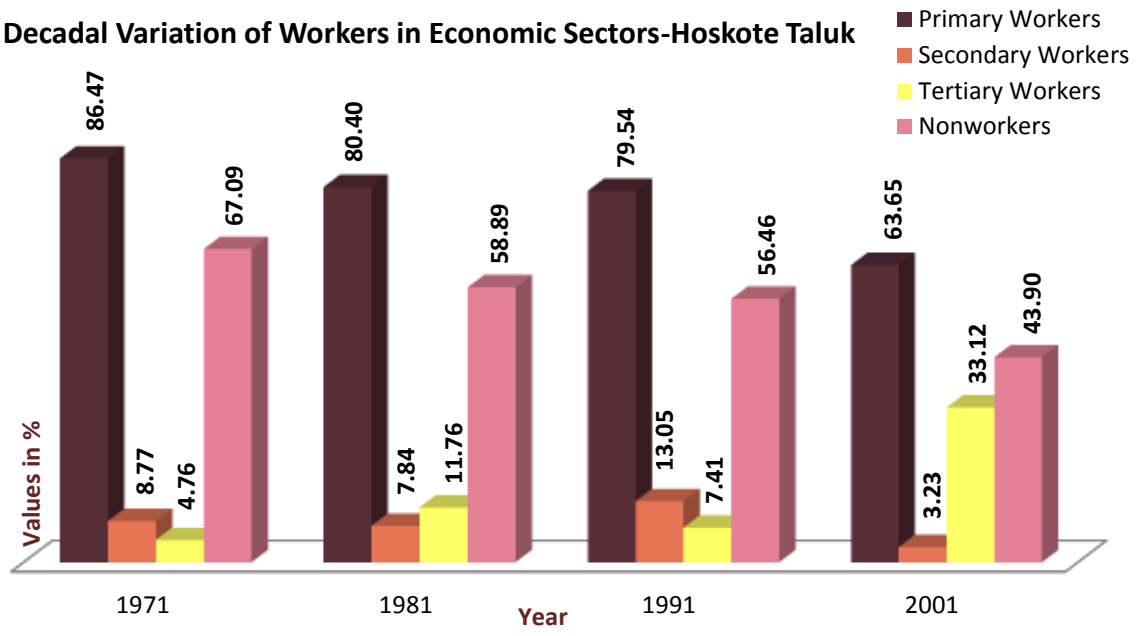
Table 11: Workers Classification for Taluk & TMC 1971-2001(Primary, Secondary, Tertiary workers)

Sl. No	Year	Description	Primary Workers	Secondary Workers	Tertiary Workers	Non workers
1	1971	Hoskote Taluk	86.47	8.77	4.76	67.09
2	1981	Hoskote Taluk	80.40	7.84	11.76	58.89
3	1991	Hoskote Taluk	79.54	13.05	7.41	56.46
4	2001	Hoskote Taluk	63.65	3.23	33.12	43.90
1	1971	Hoskote TMC	43.72	35.28	21.00	70.29
2	1981	Hoskote TMC	53.01	28.18	18.82	68.69
3	1991	Hoskote TMC	35.46	41.64	22.90	66.64
4	2001	Hoskote TMC	21.61	5.40	72.98	63.00

Data source: 1991 to 2001 Census-Govt of India

Even though percentage of primary workers in Hoskote taluk is more in all the previous four decades, trend is decreasing slowly. Percentage of tertiary workers is showing gradual increasing trend till 1991 and higher jump in 2001 showing gradual shifting of workers to tertiary sector. Percentage of non-workers is gradually decreasing from 67.09 in 1971 to 43.9 in 2001 respectively.

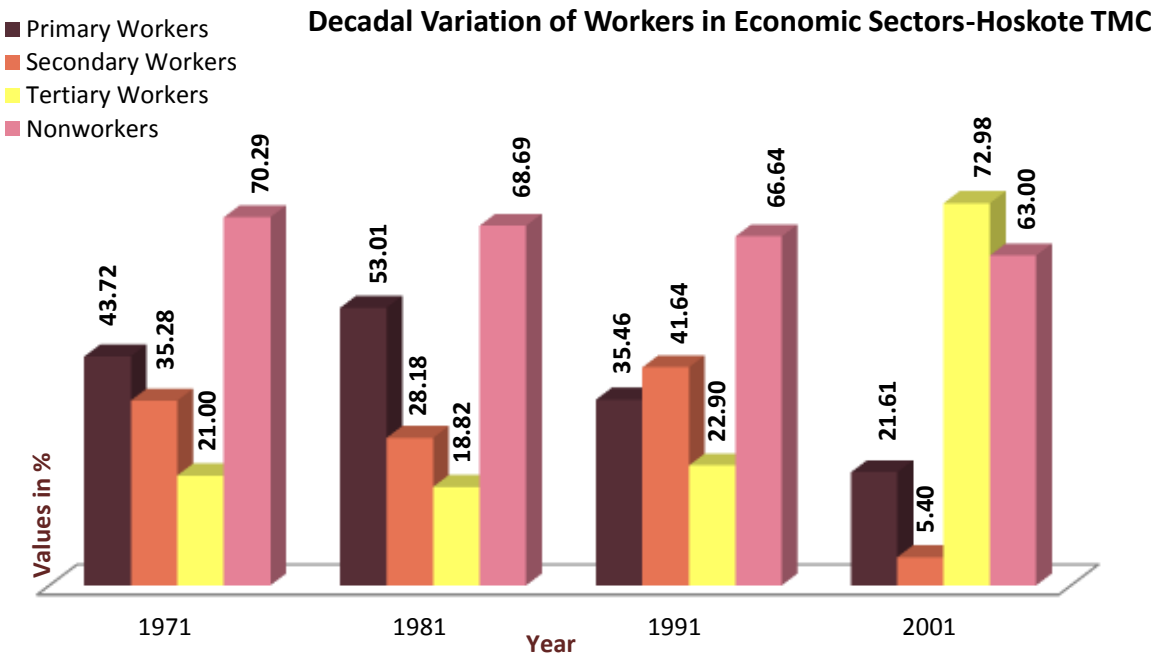
Figure 29: Decadal Variation of workers in Economic Sectors-Hoskote Taluk



Data source: 1991 to 2001 Census-Govt of India

Percentage of primary workers in TMC is decreasing gradually in all four decades, whereas percentage of tertiary workers is showing gradual increasing trend till 1991 and higher jump in 2001 showing gradual shifting of workers to tertiary sector. Variation in percentage of non-workers is less from1971 to 2001 as seen in ***Figure 30***.

Figure 30: Decadal Variation of workers in Economic Sectors-Hoskote TMC



Data source: 1991 to 2001 Census-Govt of India

Table 12 shows the total workers in different sectors of the economy in the Hoskote Taluk and TMC as per 2001 census.

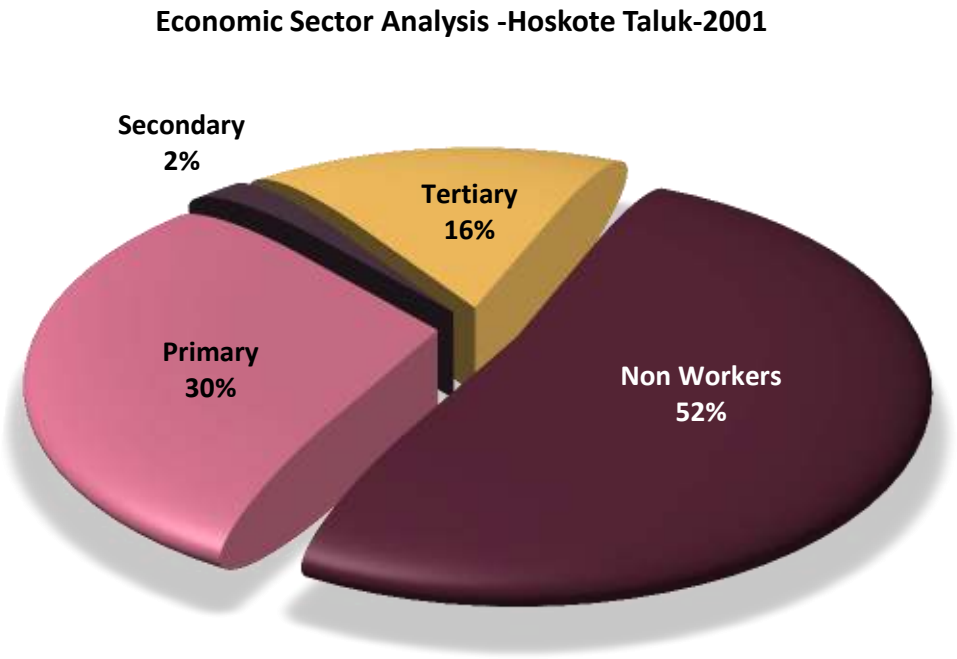
Table 12: Shows the total workers in different sectors of the economy

ECONOMIC SECTOR	2001	
	Hoskote Taluk	Hoskote TMC
Total Workers	88,457	13,440
Primary	56306	2905
Secondary	2856	726
Tertiary	29295	9809
Non-Workers	97650	22883

Data Source: Census of India, 2001, GOI

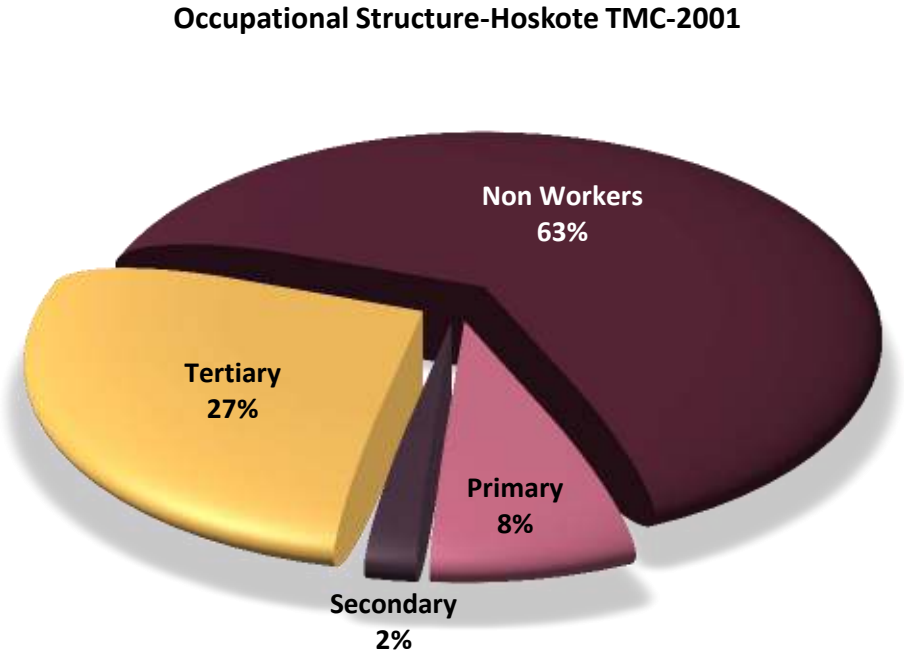
Figure 31 and ***32*** shows the percentage of workers engaged in different sectors of the economy in Hoskote taluk and TMC respectively.

Figure 31: Economic Sector Analysis-Hoskote Taluk-2001



Data Source: Census of India, 2001, GOI

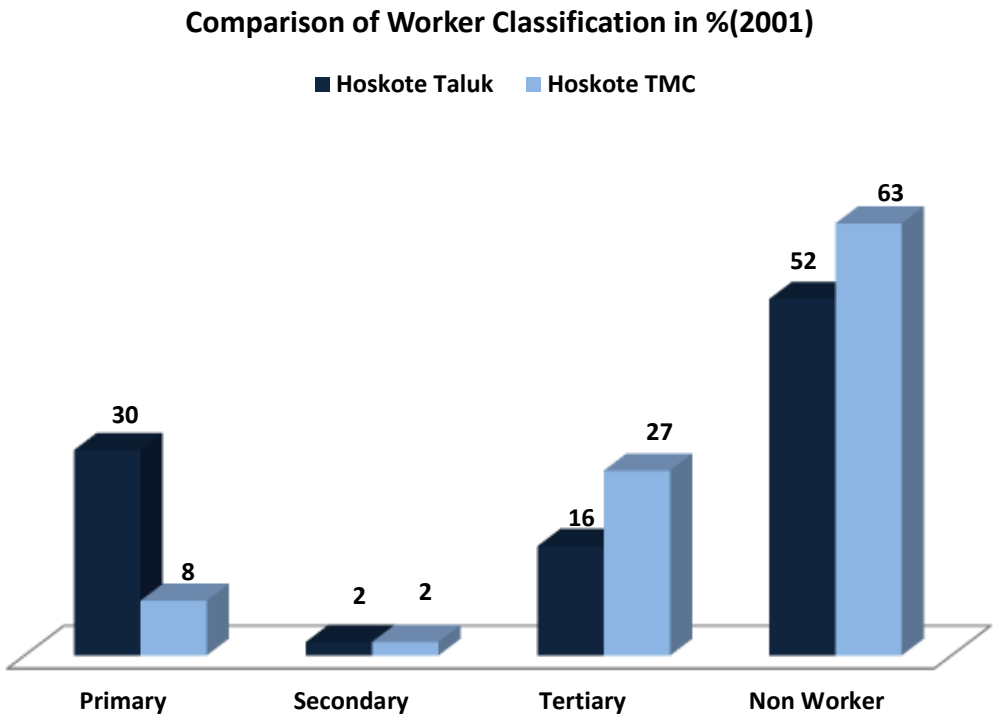
Figure 32: Economic Sector Analysis-Hoskote TMC-2001



Data Source: Census of India, 2001, GOI

As per 2001 census, percentage of workers engaged in primary sector is more in Taluk compared to TMC whereas those engaged in tertiary sector is more in TMC compared to Taluk. However percentage of workers in secondary sector remains the same in both. ***Figure 33*** shows comparison of workers classification of taluk and TMC.

Figure 33: Comparison of Worker Classification in % (2001)

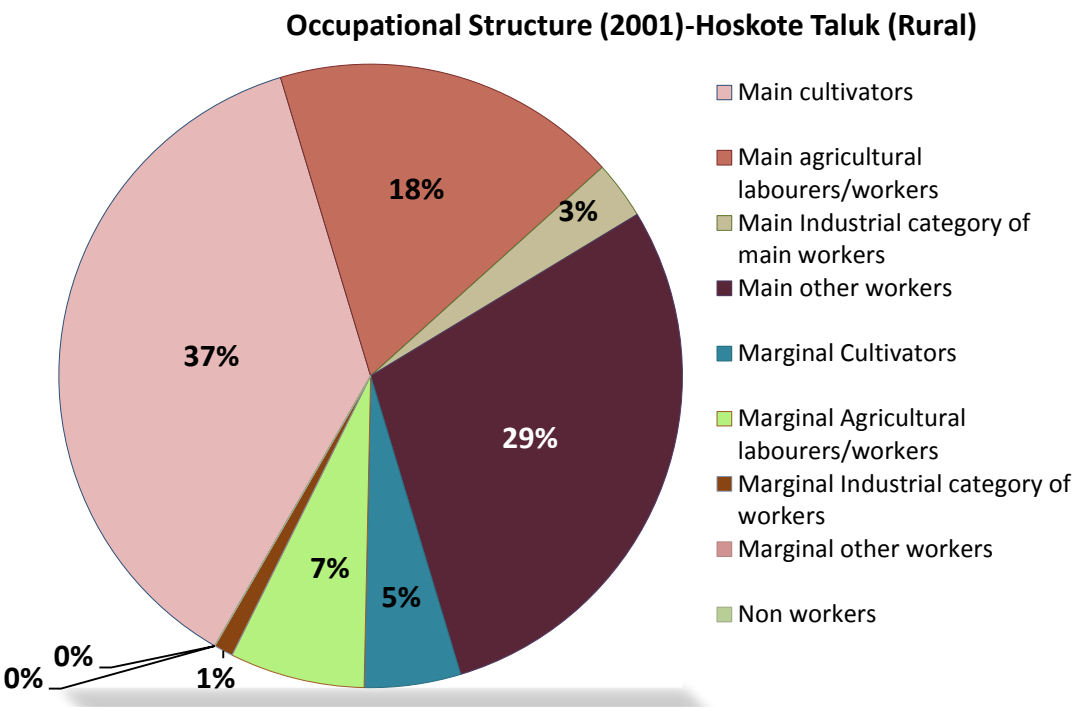


Data Source: Census of India, 2001, GOI

2.3.2 WORK FORCE DISTRIBUTION

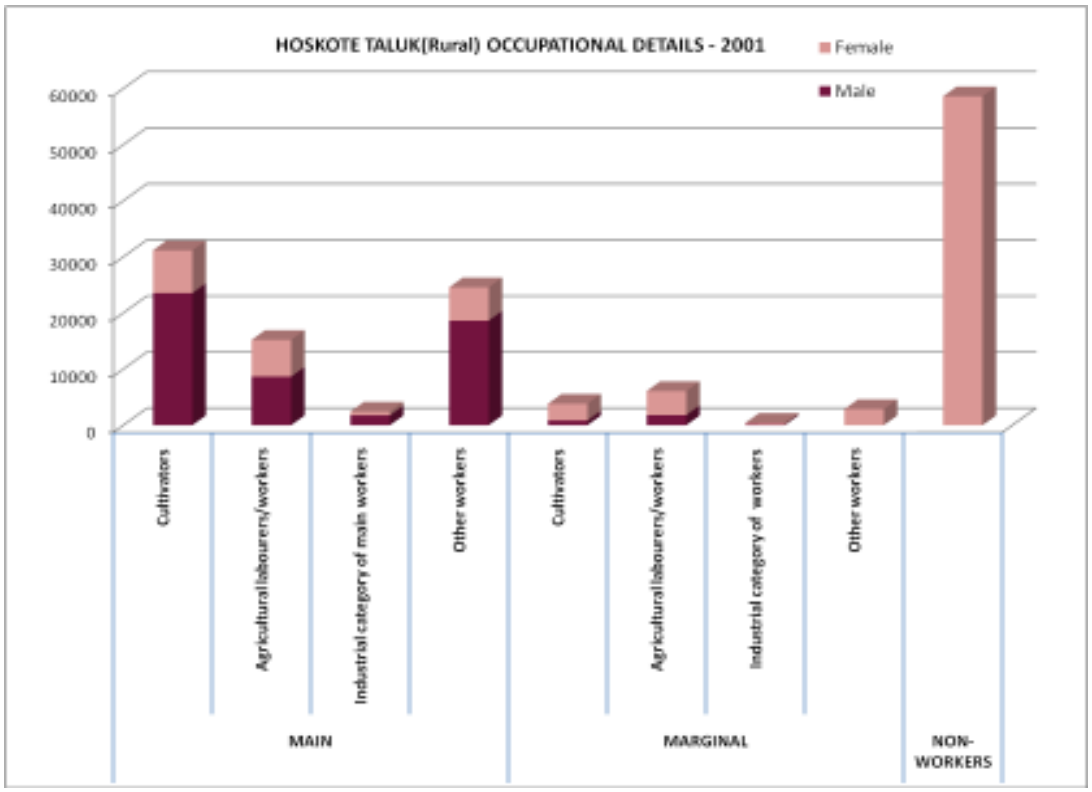
The total Work Force in Hoskote Taluk is 47% out of which main workers are 39% and marginal workers are 8% as per 2001 census. ***Figure 34*** shows distribution of workers in different activities whereas ***Figure 35*** shows gender wise distribution of workers in different activities in Hoskote Taluk as per 2001 census respectively.

Figure 34: Occupational Structure of workers in Hoskote Taluk (Rural)



Data Source: Census of India, 2001, GOI

Figure 35: Hoskote Taluk (Rural) Genderwise Occupational Details-2001



The total Work Force in TMC is 37% out of which main workers are 35% and marginal workers are 2% as per 2001 census. ***Figure 36*** shows distribution of workers in different activities whereas ***Figure 37*** shows gender wise distribution of workers in different activities in Hoskote Taluk as per 2001 census respectively.

Figure 36: Occupational Distribution of workers in Hoskote TMC

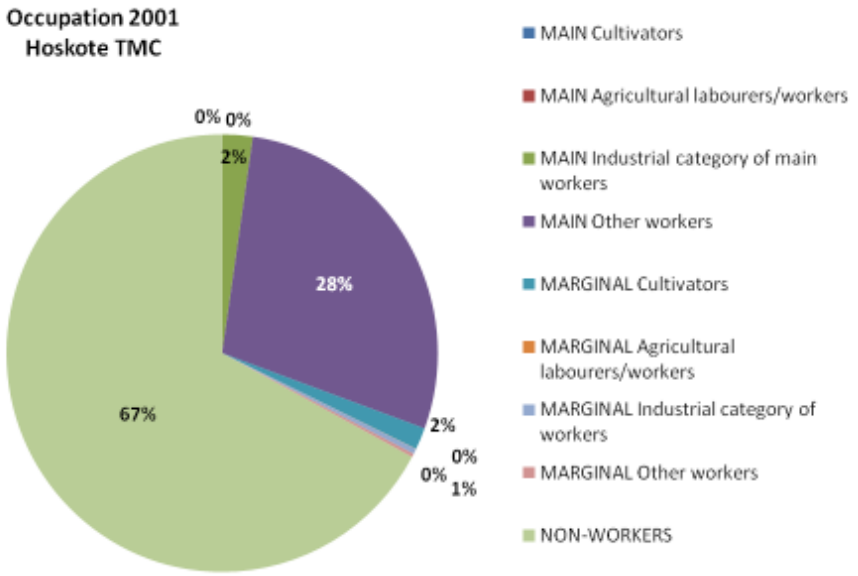
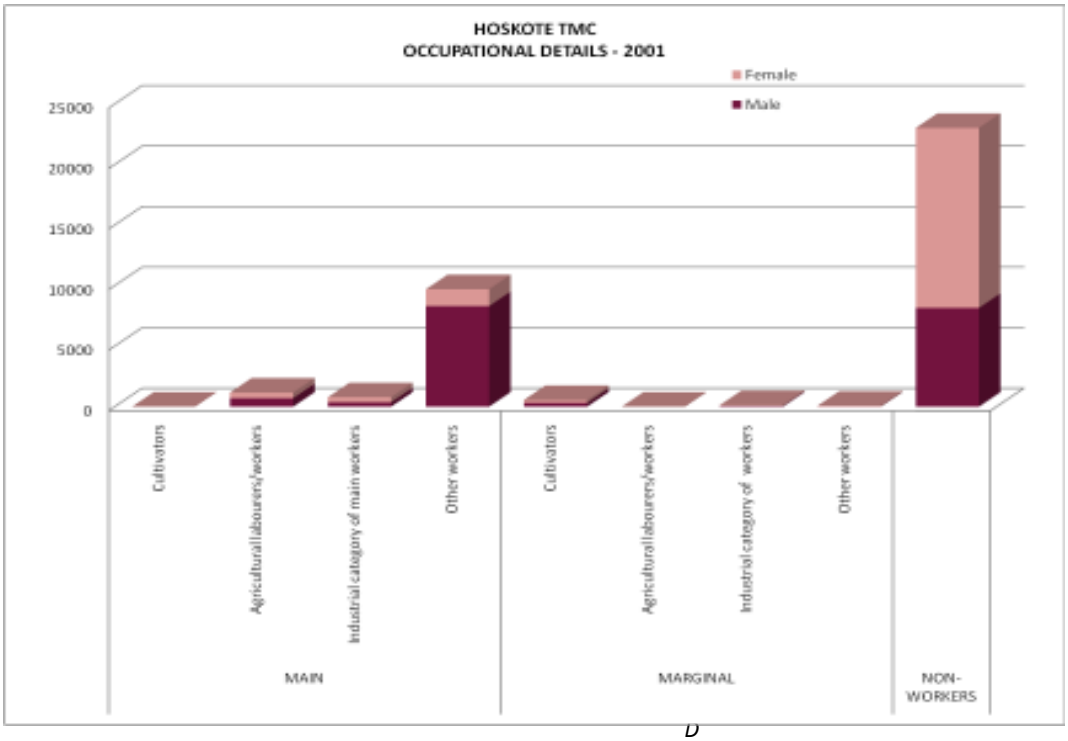


Figure 37: Hoskote TMC Genderwise Occupational Details-2001



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Data Source: Census of India, 2001, GOI

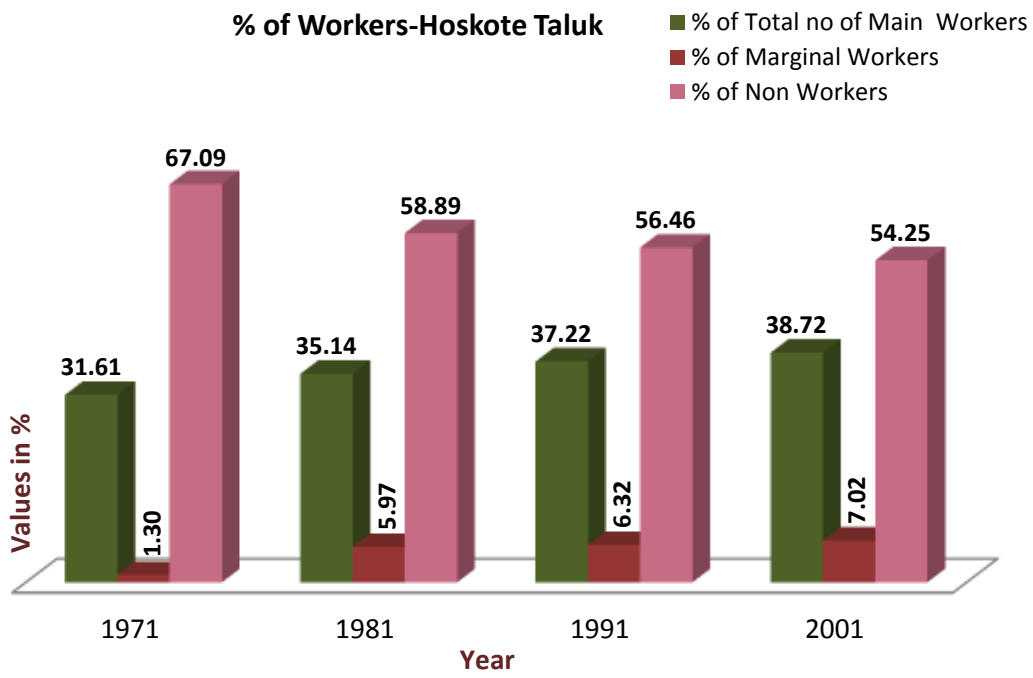
Details of workers classification for the Taluk and TMC from 1971 to 2001 are presented in ***Table 13*** below.

Table 13: Workers Classification for Taluk & TMC 1971-2001

S.No	Area	Year	Total Population	Total no of Main Workers	Marginal Workers	Non Workers
1	**Taluk**	1971	153741	48593	2003	103145
2	**TMC**	1971	12163	3614	560	8549
3	**Taluk**	1981	203594	71543	12151	119900
4	**TMC**	1981	17538	5373	118	12047
5	**Taluk**	1991	188499	70168	11911	106420
6	**TMC**	1991	25533	8290	229	10714
7	**Taluk**	2001	222430	86136	15618	120676
8	**TMC**	2001	36323	12744	553	23026

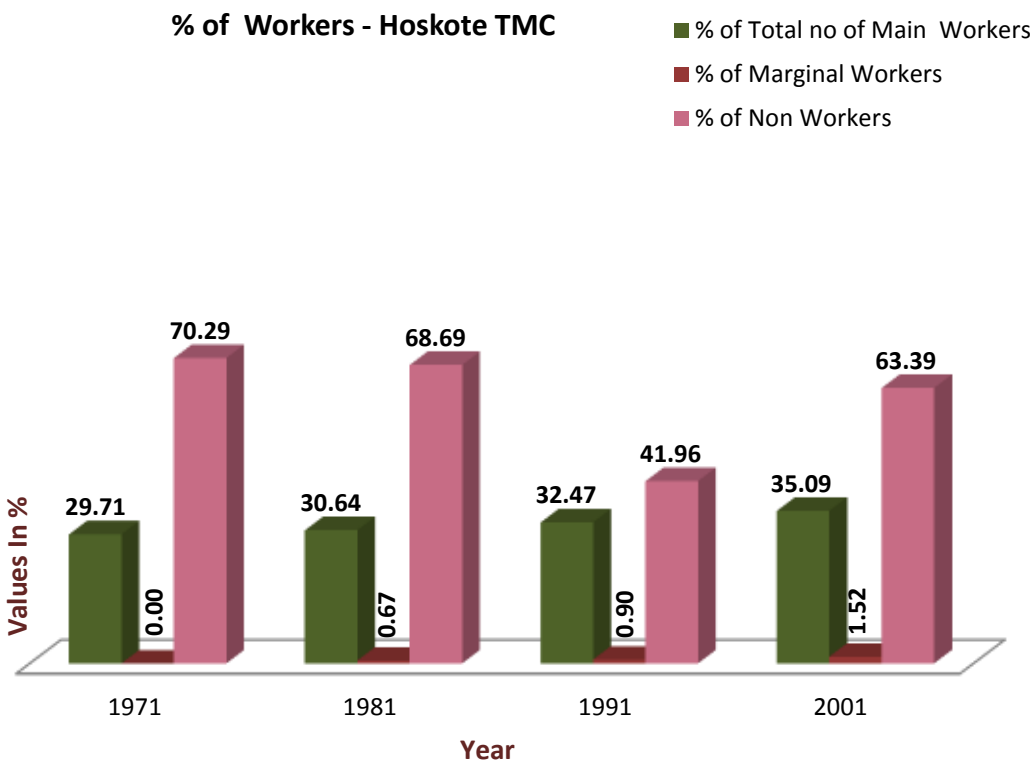
Data source: 1991 to 2001 Census-Govt of India

Figure 38: Percentage of Workers-Hoskote Taluk



Data source: 1991 to 2001 Census-Govt of India

Figure 39: Percentage of Workers-Hoskote TMC



Data source: 1991 to 2001 Census-Govt of India

2.3.3 OCCUPATIONAL STRUCTURE

2.3.3.1 Hoskote Taluk

A. AGRICULTURE

About 30% of the people of this taluk are mainly depending on primary sector. The main occupation of the population in the taluk is agriculture. Horticulture and Bee keeping are also followed. Several crops are grown depending upon the availability of water. The major crops grown in the area are Ragi, Paddy, Jowar, Pulses, Oil seeds, during southwest monsoon period and vegetables are cultivated during pre-monsoon period. The low lying valleys and depressions are intensely cultivated, cultivating mostly irrigated dry Crops, Vegetables, Paddy cultivation is seen in the tank ayacuts but not extensive. Now a - days grape cultivation is being taken up which perhaps financially more remunerative.

In view of the low rain fall during earlier years and there being little water available for cultivation of late farmers are resorting to drilling of bore wells to meet the

demand for water for irrigation. Hence bore well irrigation is on an advanced stage. Another reason for bore wells in use for irrigation is drying up of most of the dug wells, which were in use earlier.

B.HORTICULTURE

There is continuous demand for vegetables and fruits in Bangalore city. As a result, production of vegetables and fruits in the land irrigated by tanks and wells has now become a characteristic feature of the Taluk. The contribution of horticulture to the economy of the Taluk is quite substantial. The soil conditions are suited for growing horticulture crops. The major vegetable crops are tomato, cabbage, beetroot, beans, green chillies, carrot etc.The major commercial flowers are chrysanthemum, rose, aster and marigold.

C. BEE KEEPING

Bee keeping is based on agriculture, Horticulture and Forest. There is a good source and potential for Bee keeping in this Taluk. The Bee keeping is also considered as rural industry. The Bee keeping industry has covered 49 villages and there are 226 Bee keepers, who are maintaining 358 Bee colonies i.e., Apiaries cerena indica. The state government is providing training programmes and issuing Bee inputs under 50% subsidy to lift up the bee keeping in large scale.

D. OTHER ACTIVITIES

Only 2% of the people are depending on secondary sector. They are mainly engaged in manufacturing and processing units. About 16% of the people of this Taluk are depending on tertiary sector. They are engaged in service, transportation, financial oriented and other allied activities.

E. HOSKOTE TMC

Within TMC limits, about 8% of the people are depending on primary sector who are mainly engaged in agriculture and floriculture. About 27% of the people are depending on tertiary sector. Only 2% of the people are depending on secondary sector.

DEMOGRAPHY STUDIES: FINAL MASTER PLAN STAGE

2.4 HOSKOTE LOCAL PLANNING AREA: CONSTITUENT VILLAGES AND CMCS

In view of declaration of LPA of STRR, 51 villages of Hoskote LPA was withdrawn and included in STRR LPA. Thus the Hoskote Local Planning Area consists of 265 villages and one CMC as per government notification No. UDD 231 MLR 2013, Bangalore, dated: 11.09.2014. The area of villages spread over Bangalore Urban district and Bangalore Rural District. The following is the list of villages categorized under 4 zones:

- **STRR villages**: 51 Villages which were a part of the Hoskote LPA notification but have been there after categorized under STRR LPA as per govt notification UDD 36/BMR/2016, Bangalore, Dated: 24.06.2016 STRR LPA declared.
- **Nandagudi Villages**: 36 Villages which were a part of the Hoskote LPA notification but have been there after categorized under Nandagudi Township as per G.O. No. UDD 97: BMR 2006 Bangalore dated: 18-10-2006**.**
- **Conurbation area villages**: 80 Villages which are a part of the urbanisable area as per Final Master Plan 2031.
- **Rest of the Villages**: 147 Villages in the Hoskote LPA which are not a part of any of the above categories

2.5 POPULATION IN HOSKOTE LPA EXCLUDING NANDAGUDI TOWNSHIP AND STRR

The total population of the erstwhile Hoskote LPA limit including STRR and Nandagudi Township is 2.82 lakhs as per the census 2011. However the STRR LPA has been carved out of the LPA limits and a separate master plan has been planned for the Nandagudi Township. Hence the population of the LPA deducting the above two areas is 1.94 lakhs as per census 2011.

The Population LPA of Hoskote excluding STRR and Nadagudi Township is 1.56 lakhs in 2001 and 1.94 lakhs in 2011 as per census of India. The population of conurbation area is 1.18 lakhs in 2011 and 0.86 lakhs in 2001. Population details from 1991 to 2011 of Hoskote LPA excluding STRR and Nandagudi Township given in the following ***Table 14***.

Table 14: Hoskote LPA population Excluding STRR and Nandagudi Township (1991-2011)

Area	Population-1991	Population-2001	Population-2011
Conurbation Area	66699	86278	118914
Rest of LPA	59126	69823	74689
LPA Population excluding STRR and Nandagudi Township	**125825**	**156101**	**193603**

Data source: 1991 to 2011 Census-Govt of India

2.6 POPULATION PROJECTION EXCLUDING NANDAGUDI TOWNSHIP

The projection of the population has been done to arrive at the design population of the horizon year 2031. There are two components of the projection – natural growth and in migration. Natural growth of population is the kind of growth scenario which will take place even in absence of any kind of growth impetus in the LPA due to the historical growth trends. In-migration is the component that takes care of the population inflow into the LPA due to planned growth nodes, economic activities that are planned in and around the LPA.

The population of Hoskote LPA is 1.94 lakhs in 2011 excluding Nandagudi Township and STRR as per census. For the purpose of deriving the design population (natural growth) till 2031, we have considered 50% of the STRR LPA population. Hence we have considered STRR population i.e 0.52 lakhs in 2001 and 0.62 lakhs in 2011 as per census in all the calculation of Population projection of Hoskote LPA. Now, the population of Hoskote LPA excluding Nandagudi Township and including STRR is 2.55 lakhs in 2011 as per census. The details of Population from 1991 to 2011 of Hoskote LPA, Conurbation area and STRR are presented below in ***Table 15***.

The decadal growth rate of Hoskote LPA excluding Nandagudi Township During 1991 to 2001 has increased to 1.79% and during 2001 to 2011 increased to 1.85%. Hence the average decadal growth rate of Hoskote LPA is 1.82%. By rounding off these growth rates, the average decadal growth rate of Hoskote LPA is 2%. The details of decadal growth rate of Hoskote LPA, Conurbation area and STRR are presented below in ***Table 16***.

Table 15: Decadal growth of Hoksote LPA Excluding Nandagudi township

Areas	1991 (lakhs)	2001 (lakhs)	2011 (lakhs)	Growth rate 1991-2001	Growth Rate 2001-2011	Average Decadal Growth Rate
Conurbation Area	0.67	0.86	1.19	2%	3%	3%
Rest of LPA	0.59	0.70	0.75	2%	1%	1%
STRR	0.45	0.52	0.62	1%	2%	2%
Total	**1.71**	**2.09**	**2.55**	2%	2%	2%

Data Source: Census data 1991-2011(Govt of India)

Note: Derived numbers may be subjected to rounding

Total population of Hoskote local planning area consisting of Hoskote City and entire Hoskote taluk excluding Nandagudi Township and part of Bidarahalli hobli of Bangalore East taluk is 2.09 lakhs in 2001 and 2.55 lakhs in 2011 as per Census. This population is to be projected for the plan periods of 2021 and 2031.

Population of the Hoskote LPA excluding Nandagudi Township at the end of plan period 2031 is projected using different natural growth methods and the details are given in ***Annexure 4.*** The projected population for the year 2021 and 2031 by different methods are given in ***Table 16*** below:

Table 16: Population Projection of Hoskote LPA excluding Nandagudi Township

Sl.No	Methods	Conurbation Area		Rest of LPA		STRR	
		2021	2031	2021	2031	2021	2031
1	Arithmetical Projection Method	154588	190262	82905	91121	74852	87328
2	Geometric Projection Method	158539	211367	83076	92404	76640	72759
3	Incremental Increase Method	158079	210300	76640	72759	73717	87889

In Arithmetic Projection method, the rate of growth of population per decade increase averagely and this method gives low an estimate compared to Geometric projection method

and Incremental increase method. Arithmetic projection method is suitable for old or new city with considerable development. Whereas, In Geometrical projection method the percentage in crease from decade to decade is assumed to be constant and Geometric mean is used to find out the future increment which gives higher in values and hence it is suitable to be applied for Population projection of new industrial devlopments than for the cities or towns.

After examining the above population projection methods outcomes and examining the existing scenario of economic development, the projection based on Arithmetical projection Method is perceived to be the acceptable.

The rational being that the existing growth trend has been seen when there was no master plan or planned developments in the LPA. With a master plan in place the zones are expected to see a higher growth momentum.

2.6.1 NATURAL GROWTH POPULATION

The natural growth of the LPA has been studied using standard population projection techniques namely the arithmetic progression, the geometric progression and the incremental progression. However for the purpose of arriving at the design population arithmetic progression has been considered as a realistic projection of the growth trends.

The various village groups of the LPA namely the conurbation limit, the rest of the LPA, the STRR villages and the Nandagudi villages. For the purpose of projection the population of the Nandagudi Township has been completely excluded. A part of the population growth of the STRR villages has been considered with the rationale that the time taken for the STRR LPA to develop would push a part of the population to the Hoskot LPA as infrastructure and services are already developed here. The total population of the conurbation area and rest of the LPA villages have been considered for projection.

After examining the existing scenario of economic development and population projection methods the average growth rate and arithematic projection method is considered as shown in ***Table 17.***

The growth of the villages in the three zones as delineated in the table below is as follows:

Table 17: Natural growth Population of Hoksote LPA Excluding Nandagudi Township with growth rate

Areas	2001 (lakhs)	2011 (lakhs)	Growth Rate	AP-2021 (lakhs)	AP-2031 (lakhs)
Conurbation Area	0.86	1.19	3%	154588	190262
Rest of LPA	0.70	0.75	1%	82905	91121
STRR	0.52	0.62	2%	74852	87328

Data Source: Census data 2001-2011 (Govt of India)

Note: Derived numbers may be subjected to rounding

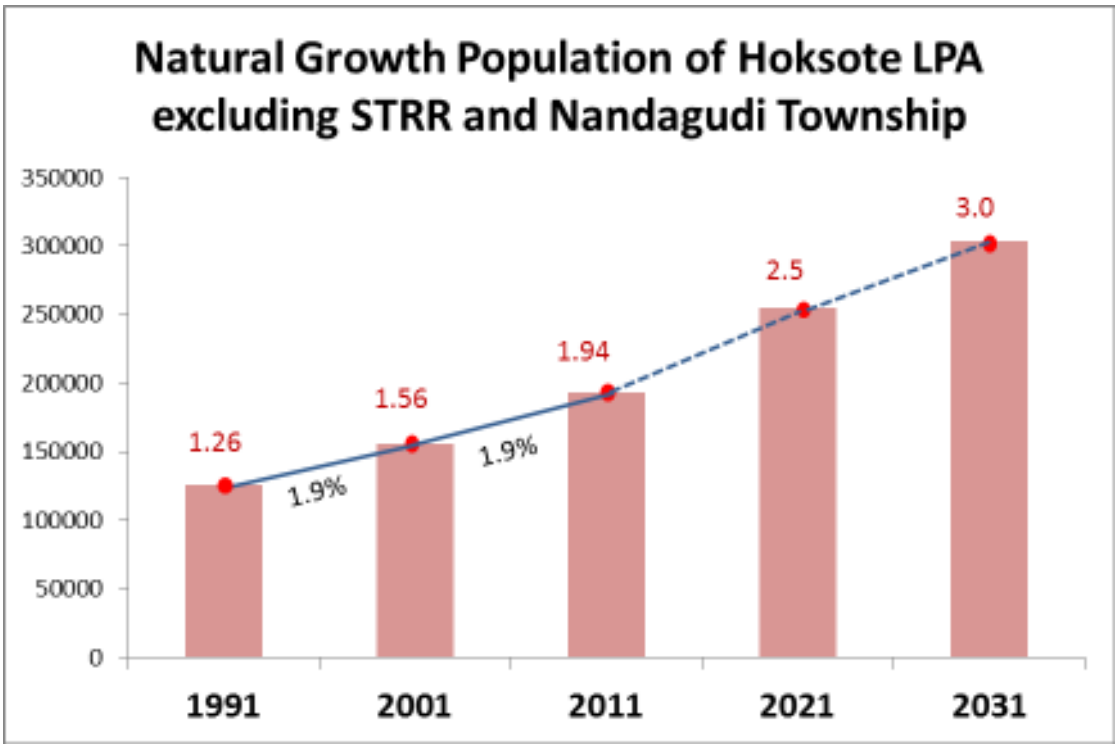
For the purpose of deriving the design population (natural growth) till 2031, 100% of the conurbation area population has considered, only 75% of rest of the LPA population and 50% of the STRR LPA population. Hence natural growth population in the LPA is 2.54 lakhs in the year 2021 and 3.02 lakhs in the year 2031.

Table 18:Natural Growth Population of Hoksote LPA excluding Nandagudi Township of 2021 and 2031

PROJECTED NATURAL GROWTH	2021 population (lakhs)	2031 population (lakhs)
100% of urbanisable	1.55	1.90
75% of rest of HPA	0.62	0.68
50% of STRR LPA	0.37	0.44
NATURAL GROWTH POPULATION	**2.54**	**3.02**

By rounding off these population values, natural growth population of Hoskote LPA excluding Nandagudi Township for the year **2021 will be 2,50,000** and for **2031 will be 3,00,000.** ***Figure 40*** represents the Natural growth of population of Hoskote LPA excluding Nandagudi Township from 2001 to 2031.

Figure 40: Natural Growth Population of Hoksote LPA



2.6.2 IN-MIGRATION POPULATION

In migration is seen as major factor in population growth where there is new provision of economic activities attracting population from outside. For the present case, there are multiple projects and plans that have been commissioned or planned at the state and national level that would induce such impact.

There are industrial estate areas by the KIADB inside the H-LPA to the tune of 1700 acres planned for commissioning of manufacturing units.

The Chennai –Bengaluru Industrial Corridor (CBIC), a part of the national industrial corridor grid, passes through the LPA. There are industrial lands to the tune of 1000 acres that fall within the H-LPA jurisdiction proposed as a part of the CBIC. There are also industrial lands in Vemagal, Narsapura and Malur amounting to 1898 acres that would have an impact on the in migration within the LPA.

In order to derive the design in-migrating population, URDPFI guidelines have been considered and job generation has been assumed at 55 jobs/acre. The household size of Karnataka State as per census is 4.5. By rounding off the household size, we have considered

4 as household size for the calculation of total population generated due to job generation. Hence the induced population as a result of these jobs has been tabulated in the table 19.

In-migrating population in CBIC area in Hoskote LPA is 2.2 lakhs and around the LPA is 4.17 lakhs. In-migrating population in KIADB area within Hoskote LPA is 3.78 lakhs.

For the purpose of deriving design in-migrating population, Conidering 100% of CBIC area(Category B) in-migrating population within the LPA. Considering 30% of CBIC area (category C) in-migrating population around the LPA as living in the LPA for housing facilities and Considering 20% of KIADB area (Category A) population as majority of KIADB areas are also developed and some of the potential have already been captured in the natural growth of LPA. The total in-migrating population till 2031 is 4.21 lakhs. By rounding off in-migrating population, we consider **4.20 lakhs** as in-migrating population for designing the Hoskote LPA population till 2031.

Table 19: In-Migration Population

Sl. No	Particular	KIADB in LPA (CATEGORY A)	CBIC in side of LPA (CATEGORY B)	CBIC out side of LPA* (CATEGORY C)
1	Industrial Area in Acre	1721.31	1000	1898
2	Jobs Generation (Sl.No.1*55)	94,672	55000	104390
3	Total population generated due to job generation in lakhs (Sl.No.2*4)	3.78	2.20	4.17
4	Induced population due to jobs created in lakhs	**0.75 (20%)**	**2.20 (100%)**	**1.25 (30%)**
In Migration Population		**= 0.75+2.20+1.25 = 4.21**		

Note: * Job generation rate = 55 jobs/acre as per URDPFI guidelines.
** Household size 4 is considered by referring census 2011.
***STUDY ON THE BANGALORE – CHENNAI EXPRESSWAY CONSTRUCTION PROJECT IN THE REPUBLIC OF INDIA, Nippon Koei Co., Ltd. East Nippon Expressway Company Ltd. Padeco Co., Ltd.

2.6.3 DESIGN POPULATION

Summarizing the above sections, we arrive at the following design population or projected population for the LPA excluding Nandagudi Township till the year 2031.

The population expected in the LPA excluding Nandagudi Township by 2021 is 4.60 lakhs, while that by the year 2031 is 7.20 lakhs**. For all purpose of calculation of density, infrastructure requirement and the projected population to be considered is 7.20 lakhs till the year 2031.**

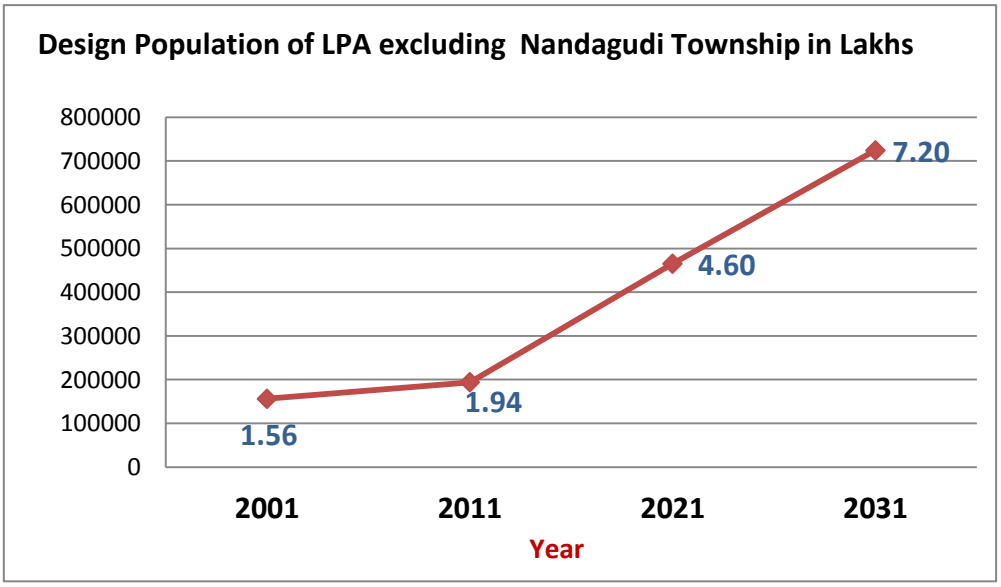
Table 20: Projected Population 2031 excluding Nandagudi Township

ITEM	2021 (lakhs)	2031(lakhs)
NATURAL GROWTH POPULATION	2.50	3.00
IN MIGRATION POPULATION	2.10	4.20
PROJECTED POPULATION 2031	**4.60**	**7.20**

Note: Derived numbers may be subjected to rounding

The below graph shows the design population of Hoskote LPA excluding Nandagudi Township. The population of Hoskote LPA excluding Nandagudi Township and STRR is 1.56 lakhs in 2001 and 1.94 lakhs in 2011 as per census. The design population of 2021 is 4.60 lakhs and 2031 is 7.20 lakhs

Figure 41: Projected population 2031 excluding Nandagudi Township



2.7 ESTIMATION OF URBANISABLE AREA REQUIREMENT

The density of towns as per standards given by the URDPFI is as follows

- Small town : 75-125 persons per hectare
- Medium Town: 100-150 persons per hectare

Table 21: Dveloped Area Average Density

Settlement Type	Persona per Hectare	
	Plain Areas	Hilly Areas
Small towns	75-125	45-75
Medium Towns	100-150	60-90
Large Cities	100-150	60-90
Metropolitan Cities	125-175	100-150
Megapolis	More than 200	

Source: URDPFI Guidelines

As per population statistics, Hoskote CMC comes under the medium term category. However, the urbanisable area or conurbation area consists of both village areas and the Hoskote CMC area. Hence the assumed density for estimation of urbanisable land required is 75-80 persons per hectare.

Hence the urbanisable land requirement is about 9250 hectares.

2.8 ACHIEVED DENSITY IN MASTER PLAN

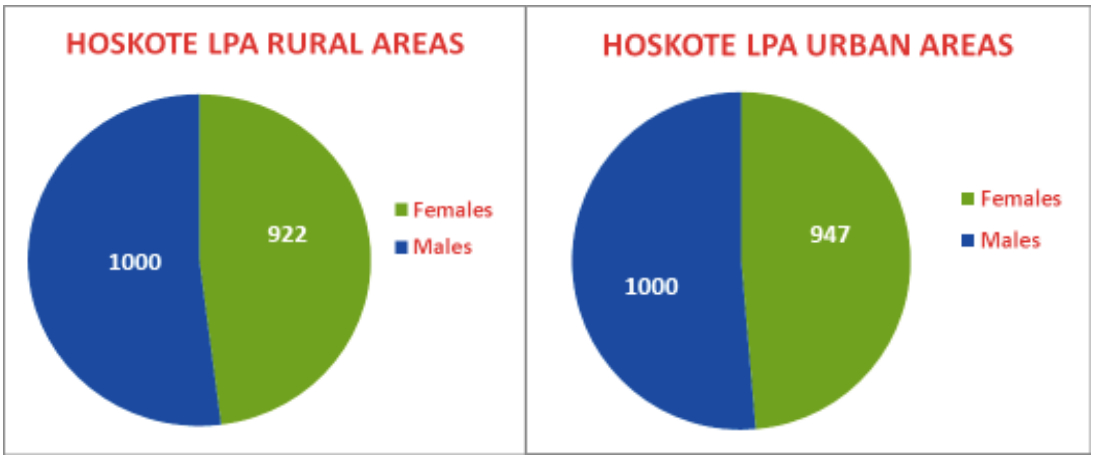
The proposed urbanisable area as per the final master plan is 9565 hectare. Hence the density achieved is 76 persons per ha.

2.9 DEMOGRAPHIC INDICATORS

2.9.1 SEX RATIO OF HOSKOTE URBAN AND RURAL AREAS

Sex ratio is defined as number of females per 1000 males. The sex ratio of the Hoskote Rural is 922 females out of 1000 males and Hoskote Urban is 947 females out of 1000 males in 2011. Details of sex ratio are shown in below table.

Figure 42: Comparison of Sex Ratio –Hoskote Rural Areas & Urban Areas of 2011

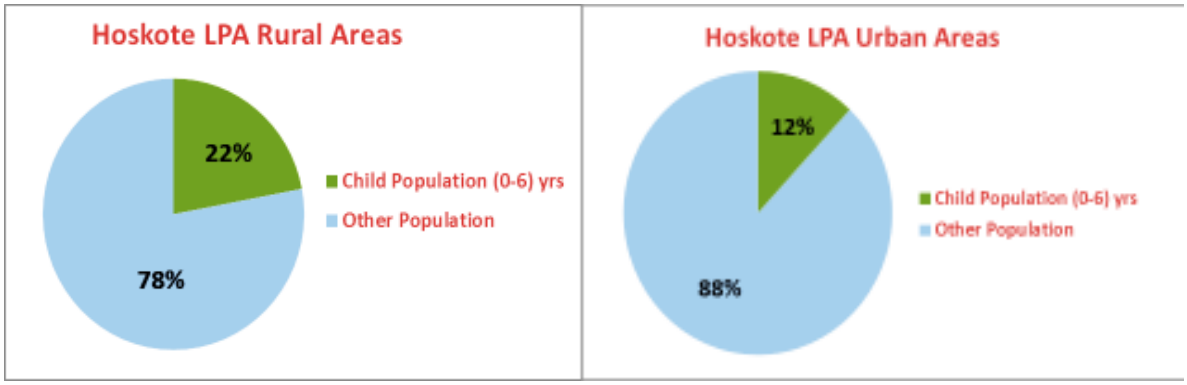


Data Source: Census data 1991-2011(Govt of India)

2.9.2 CHILD POPULATION (0-6 YRS) OF HOSKOTE URBAN AND RURAL AREAS

The proportion of child population in an area determines the educational infrastructure demand. The child population of Hoskote Rural area is 22% and Hoskote Urban area is 12% in 2011. Details are presented in below table.

Figure 43: Comparison of percentage of Child Population (0-6 Yrs) –Hoskote Rural Areas & Urban Areas of 2011



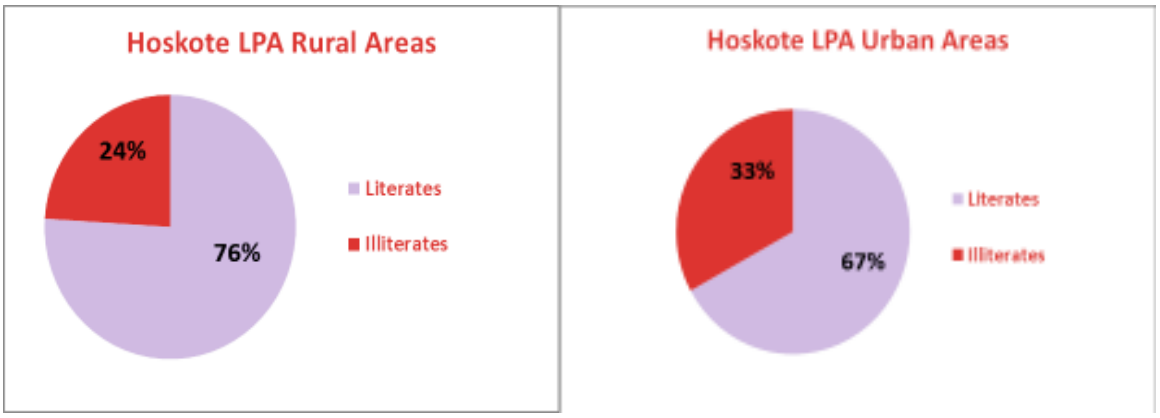
Data Source: Census data 1991-2011(Govt of India)

2.9.3 LITERACY RATE OF HOSKOTE URBAN AND RURAL AREAS

Literacy rate is measured by the total percentage of the population of an area at a particular time aged seven years or above who can read and write with understanding.

The literacy rate of Hoskote Rural is 76% and Hoskote Urban is 67% in 2011, details are shown in below table.

Figure 44: Comparison of Literacy Rate for Hoskote Rural Areas & Urban Areas of 2011

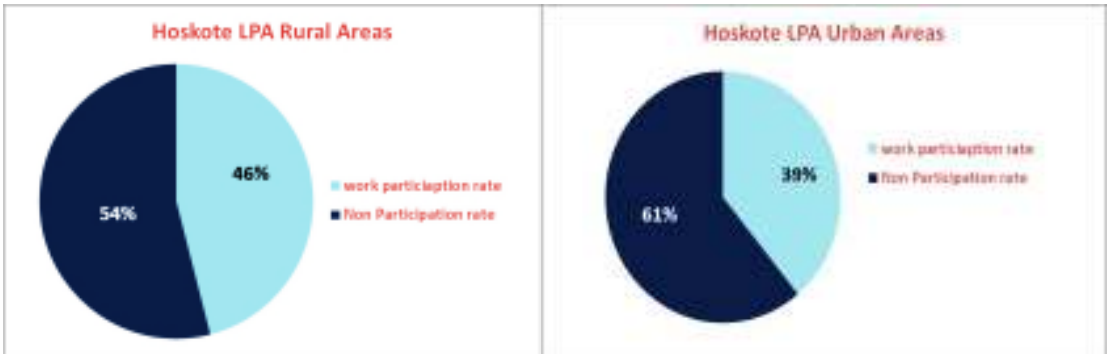


Data Source: Census data 1991-2011(Govt of India)

2.9.4 WORK PARTICIPATION RATE OF HOSKOTE URBAN AND RURAL AREAS

The Work participation rate is a measure of the active portion of an economic labor force. It refers to the number of people who are either employed or are actively looking for work. The work participation rate of Hoskote LPA rural areas is 46% and Hoskote LPA urban areas is 39% in 2011.

Figure 45: Comparison of Work participation Rate for Hoskote Rural Areas & Urban Areas of 2011



Data Source: Census data 1991-2011(Govt of India)

CHAPTER-3

HOUSING, URBAN POOR & INFRASTRUCTURE

CHAPTER-3 – HOUSING, URBAN POOR & INFRASTRUCTURE

3.1 INTRODUCTION

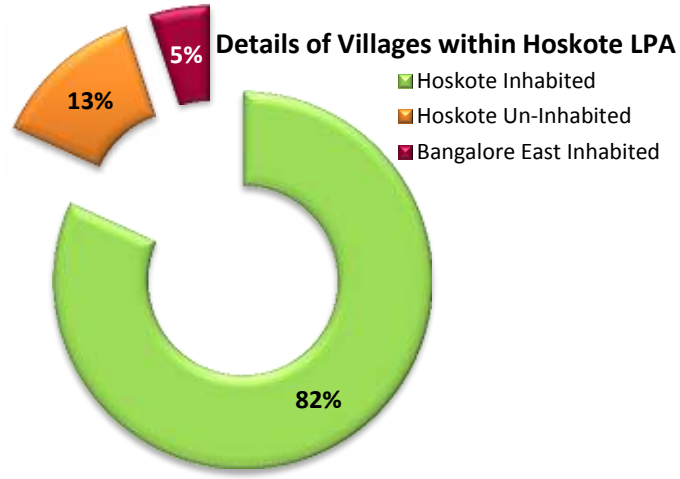
Housing is a basic need of human being.Providing housing is not limited to provision of a built structure. The Karnataka Housing and Habitatpolicy, 2009 therefore advocates a 'Habitat' approach to housing, which translates into access tobasic services such as water, sanitation, clean fuel, electricity, healthcare, education and livelihood.Hence the aspects of water supply, sanitation and waste disposal should be taken into accountduring spatial planning of residential areas.

Housing is also an essential requirement for development of industries. Housing facilities are required for employees working in industrial units. Industrialists intending to make large investment in any particular place make a preliminary assessment of social and commercial infrastructure facilities available in that place. Therefore, the availability of sufficient housing facilities is an essential pre-requisite for attracting investments.

3.2 RESIDENTIAL LANDUSE IN HOSKOTE LPA

The LPA comprises of 314 villages out of which Hoskote Taluk has 254 inhabited and 41 un-inhabited villages and Bangalore East taluk ,Bidarahalli hobli has 16 inhabited villages as per 2011 census and is depicted in ***Figure 46*****.**

Figure 46: Details of Villages within LPA



The area under residential land use in the Hoskote TMC is 416.67 ha which is approximately 37.55% of the total developed area.

3.3 HOUSEHOLD CHARACTERISTICS AND DETAILS

3.3.1 HOUSEHOLD DETAILS

Household detail is significant for an estimation of the city services. Details of households in Taluk and TMC are presented in ***Table 22*** *and* ***Figure 47*** shows the comparison of number of households in Taluk and TMC. Number of households in TMC has increased 1.70 times whereas that in Taluk is 1.39 times from 2001 to 2011 showing more demand for houses in TMC.

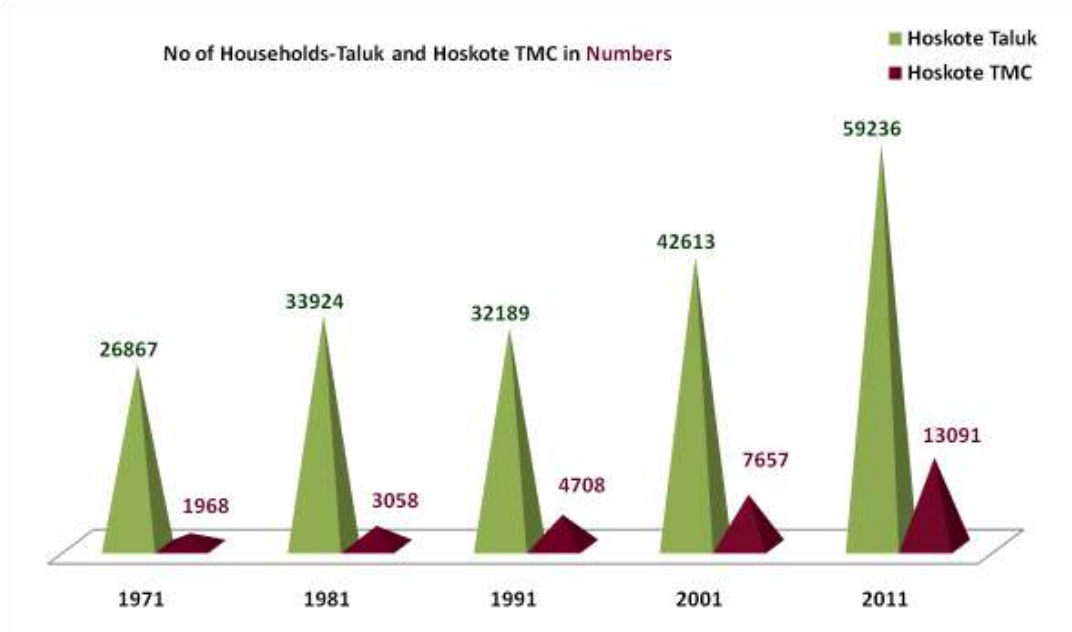
Table 22:Total Number of House holds in Hoskote Taluk and TMC from 1971-2011

Total No of households in numbers						
S.No	**Year**	**1971**	**1981**	**1991**	**2001**	**2011**
1	Hoskote Taluk	26867	33924	32189	42613	59236
2	Hoskote TMC	1968	3058	4708	7657	13091

Data source: 1971 to 2011 Census-Govt of India

(NOTE:Data result derived may be subject to rounding)

Figure 47: Comparison of Total Number of Households in Taluk and TMC

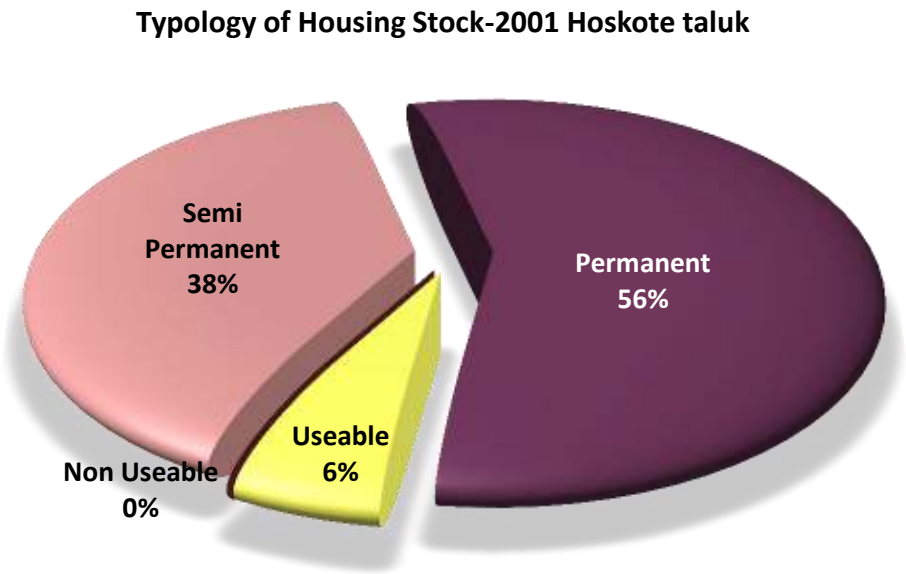


Data source: 1971 to 2011 Census-Govt of India

3.3.2 TYPOLOGY OF HOUSING STOCK – TALUK

The following ***Figure*** indicates the distribution of census houses (Taluk wise) used as residence and residence cum other use by their type of structure.

Figure 48: Typology of Housing Stock – Hoskote Taluk (2001)



Data source: District Census Hand Book

3.3.3 HOUSEHOLD CHARACTERISTICS

As per 2001 census, 56% of houses are having permanent structure, 38% are of semi-permanent and remaining 6% are of tiled, thatched or useable types in Taluk. Houses with toilet facilities majority of which are soak pit type are 62% and without toilet facilities are 38%. 60% of the houses are provided with piped water supply from tube wells/bore wells, by treating the water. Most of the houses within TMC are RCC with a small percentage of Tiled roof houses. Remaining details regarding condition of dwelling units is unaccounted for.

3.4 HOUSING SHORTAGE

Table 23 below depicts the housing shortage in Taluk and TMC from 1971 to 2011

Table 23: Housing Shortage

S.No	Description	1971		1981		1991		2001		2011	
		Taluk	TMC	Taluk	TMC	Taluk	TMC	Taluk	TMC	Taluk	TMC
A	No.of households	26867	1968	33924	3058	32189	4708	42613	7657	59236	13091
B	No of occupied dwelling houses	24774	1938	33709	3021	31549	4151	38760	6578	44520	11794
C	Shortage (A-B)	**2093**	**30**	**215**	**37**	**640**	**557**	**3853**	**1079**	**14716**	**1297**

Data Source:1971 - 2011 Census -Govt of India

During the discussions with the local residents in Hoskote town, it was revealed that sufficient residential buildings are available for renting out. The houses are available for rent in the range of Rs.2,000 to over Rs. 3,000 per month depending on the localities. The commercial area (about 250 to 300 sq ft built up area) is also available for rent ranging between Rs. 3,000 to Rs. 4,000 per month depending on the locality and the space. The residential and commercial sites are available for purchase at price ranging between Rs. 900 to Rs. 1,600 per sq ft and Rs.1,200 to 1,800 per sq ft depending on the locality.

3.5 URBAN POOR PROFILE

Taluk has 30% B.P.L. families as per 2001 census. There are 5 slums – 2 declared and 3 undeclared within Hoskote municipal limits spread over 5 wards, with a population of 10251 (24.11%). Most of slum dwellers live in Ambedkar colony Bhovi colony & Khazi Mohalla slums are notified slums in the town with the population of 3117. Gowtham colony & Ambedkar colony is located across the NH 4. Slums are mainly located in eastern part of the town. BPL households is 1877 (18.31%).

Table 24:Details of Slums in Hoskote TMC

Name of the Slum	Ward No.	Status	BPL Households	Population
Bovi colony	1	Declared	253	1264
Khazi Mohalla	22	Declared	340	1853
Gowtham colony	19	Undeclared	286	1120
Ambedkar colony	21	Undeclared	598	2754
Dandu palya	23	Undeclared	400	1996
Total			**1877**	**8987**

(Data Source : Secondary Source- Town Municipal Council, Hoskote, 2012)

Housing condition in slums of Hoskote TMC could be described as combination of Pucca houses & RCC houses. The majority of houses are found to be tiled Pucca houses. The built up area varies between 200 Sq. ft to 250 Sq. ft. Most of the slums dwellers stay in own houses. Housing condition in slums is satisfactory.

3.5.1 SLUM HOUSEHOLDS IN TMC (2001)

According to 2001 census the percentage of Slum Household to the total no of Households is given below.

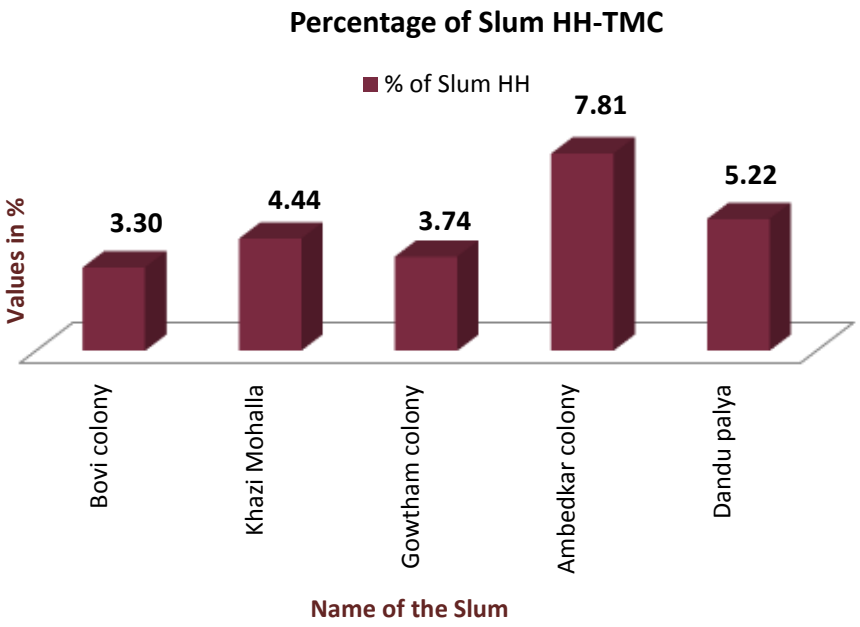




One of the Existing Slum- Ambedkar Colony

The officially released census data for Slums (Taluk wise) is only for the period 1991-2001, which is taken for the present analysis. The data for the next decade 2001-2011 has not yet been released officially and hence has not been tapped which sets in a limitation to this.

Figure 49: Percentage of Slum HH - TMC



3.6 HOUSING SCHEMES IN HOSKOTE LPA

The principal housing supplier in Karnataka is the Department of Housing which consists of threedepartments through which the various schemes are implemented. They are

Karnataka Housing Board, Karnataka Slum development Board and Rajiv Gandhi Rural Housing Corporation Limited. The details of housing schemes taken up by these departments in Hoskote LPA are presented below:

- Karnataka Housing Board Residential Scheme
- Karnataka Housing Board has taken up and formed a residential layout in Hoskote LPA to cater to the needs of middle class and low class people in subsidised rates. Sites as well as houses are distributed by the Board in this layout.

3.6.1 ASHRAYA SITES SCHEME AND ASHRAYA HOUSING SCHEME

The Ashraya scheme is a housing scheme introduced by the Govt. of Karnataka to aid people ineconomically weaker section, in both urban and rural areas to avail improved housing throughfinancial assistance in the form of loans and subsidies. The maximum value for financial assistanceincluding both loan and subsidy is 20,000 in rural areas and 25,000 inurban areas. Under the Master Pl Ashraya rural housing sites scheme free house sites may be distributed to the houselessbeneficiaries of the EWS in rural areas.

1. **INDIRA AWAS YOJANA**

   Indira Awaas Yojana (IAY) is a flagship scheme of the Ministry of Rural Development to provide houses to the poor in the rural areas. The objective of the Indira Awaas Yojana is primarily to help construction/up gradation of dwelling units of members of Scheduled Castes/Scheduled Tribes, free bonded labourers, minorities in the below poverty line category and other below poverty line non-SC/ST rural households by providing them a lump sum financial assistance.

2. **DR. B. R. AMBEDKAR SCHEME**

   Ambedkar Housing scheme is an initiative for providing housing to the economically weaker sectionand the scheduled castes and scheduled tribes in rural areas. Under this scheme a maximumfinancial assistance of 20,000 may be provided for construction of houses.

3. **SPECIAL HOUSING SCHEME FOR FISHERMEN**

   Houses have also been constructed under ‘Special Housing Scheme for Fishermen’ in the LPA. Atotal of 4 units have been constructed according to government data,

hence it can be assumed thatthe impact of the scheme in the LPA is considerably low.Details of sites and houses distributed under above schemes are given in table ***Table 25*** below.

Table 25: Details of Sites and House distributed under schemes

S.No	Type of Scheme	Allotment/Distribution of Sites /Houses		Beneficiaries				
		Sites	Houses	SC	ST	OBC	Others	Total
1	Karnataka Housing Board Residential Scheme	560	248	-	-	-	-	808
2	Ashraya Housing Scheme							
	a.2010-2011		118	48	7	-	63	118
	b.Cumulative		5191	1924	168	-	3099	5191
3	Indira Niwas Yojana							
	a.2010-2011			235	20	-	271	526
	b.Cumulative			1082	193	-	1258	2533
4	Special housing Scheme for Fisher men							
	a.2010-2011		1	-	1			1
	b.Cumulative		1	-	1			1

Source:District Census Handbook 2010-11

3.7 INFRASTRUCTURE

Infrastructure plays a vitol role in socio-economic development of the Town. Adequate provisions of infrastructure both physical and social and service delivery attract investments contributing to the economy. Detailed analysis of existing physical infrastructure like road, water supply, underground drainage, solid waste management and power and social infrastructure like education, health and other facilities are presented in this chapter.

3.8 PHYSICAL INFRASTRUCTURE

Details of road network, circulation and other modes of transportation available in the LPA are already discussed under Sub-Chapter 4.2 Traffic and Transportation of Chapter 4.

3.9 WATER

Water is required for any economic activity including industrial development. Water supply to the Hoskote Taluk is augmented through borewell sources for industrial and domestic purposes. Abundant water sources are absent in the Taluk. Majority of villages access potable water through borewells. Ground water level is very low and continuously decreasing every year.

KIADB has implemented industrial area at Hoskote. The water supply system is augmented through bore wells by KIADB to the candidate industries in the project area. KSSIDC has also dug bore wells in its Industrial Estate to meet the requirement of water for the units.

3.9.1 DRINKING WATER

3.9.1.1 Existing system of water supply

The subsurface water is directly pumped from bore wells. The water from these wells is treated with alum for reducing the turbidity and chlorine, before it gets pumped into overhead tanks (OHTs) for distribution.

Hoskote has no surface water source and hence depends on ground water (borewells) as the main source of water supply. Present level of service of water supply is 50 LPCD on an average. Hoskote TMC supplies water for 1-2 hours. Population depends on the water supply through private tankers to meet their daily requirement.

3.9.1.2 Existing system of water supply within the TMC

The subsurface water is directly pumped from bore wells. The water from these wells is treatewith alum for reducing the turbidity and chlorine, before it gets pumped into overhead tanks (OHTs) for distribution.



Existing Water Supply

Hoskote has no surface water source and hence depends

on ground water (borewells) as the main source of water supply. Present level of service of water supply is 50 lpcd on an average. Hoskote TMC supplies water for 1-2 hours. Population depends on the water supply through private tankers to meet their daily requirement.

- **Existing water supply:**

The population of the town as per 2001 and 2011 census is 36333 and 56613 respectively. The town is provided with water supply scheme with bore wells as source. There are around 60 bore wells with the average yield of 1500 gph fitted with power pumps. The present water supply level is about 50 lpcd.

- **Water Abstraction**

At present there are 64 bore wells within the periphery of the TMC, which yield about 2.91 MLD of water the daily demand of water is about 7.66 MLD.



Existing OHT

- **Water Treatment**

The subsurface water is directly pumped from bore wells. The water from these wells is treated with alum for reducing the turbidity and chlorine, before it gets pumped into overhead tanks (OHTs) for distribution.

- **Water Storage**

Hoskote TMC has a storage capacity of 0.884 MLD comprising 4 elevated service reservoirs and 2 ground level reservoirs, which supplies water to all the 23 wards.

Table 26: Water Storage Capacity

S.No	Location	Storage Type	Nos	Capacity in Lakh Litres
1	**T G Block**	OHT	2	4.54
2	**Parvathi Pura**	OHT	1	2.27
3	**V V Block**	OHT	1	1.13
4	**Chintamani Road**	GLSR	1	0.45
5	**Ghattigana Road**	GLSR	1	0.45
Total			6	8.84

Data source:Town Municipal Council, Hoskote, 2012

(NOTE:Data result derived may be subject to rounding)

Distribution System

The total length of distribution mains is 57 km. The existing network covers 80 % of TMC area.

3.9.2 PRESENT WATER SUPPLY SITUATION

- Presently Water supply is affected through rural water supply (RWS) schemes in the villages through drilling of borewells and fitting of hand pumps and also through mini water supply (MWS) schemes and piped water supply (PWS) schemes. For the Urban area like Hoskote, there are schemes to meet the water demand. Hoskote town has a population of 36,323 (2001) and the demand at 80 lpcd has been worked out at 29,05,840 litres per day. There are 43 energized borewells and 46 hand pumps. At present the town is getting 15,75,000 litres per day. That is almost 50% of the demand. There is a large gap which needs to be bridged with additional resources or cut the demand by efficient management of the available resources. The projected population by 2031 is 1,00,000 with a projected demand of 1,00,000,00 lpcd at 100 lpcd. The present rural population of Hoskote LPA is 1,95,533 and the demand at 55 lpcd works out 107,54,315 lpcd or 10.75 MLD. The projected rural population by 2031 of the LPA is 4,00,000 and the projected demand is 4,00,00,000 or 40 MLD. It is seen that it is impossible to meet the demand as there are no surface sources in the area and to meet the

demand ground water is the only source. Since the ground water is already over exploited the other alternative is to adopt the water conservation techniques, to carryout rainwater harvesting to harness whatever surface flows are there and store them properly in tanks and other surface features for use and resort to artificial recharging of ground water to improve the situation.

- There are nearly 228 tanks in the area with a live storage capacity of 90.45 MCM. All these tanks are silted up. Hence considering the 50% of the capacity, the total water availability from the tanks will be around 45.0 MCM. However most of the tanks are dry or with little storage. So, it may be necessary to go in for desilting of these tanks which improves the storage condition and enhances the scope for deep percolation to ground water.

3.9.3 WATER SUPPLY DEMAND NORMS PRESCRIBED BY CPHEEO

The per capita domestic requirements as per norms prescribed by Central Public Health and Environmental Engineering Organization (CPHEEO), Ministry of Urban Development, and Govt. of India are as under:

Table 27: Water Supply demand Norms by CPHEEO

S.No	Category	Norms for w/s lpcd
1	Towns provided with piped supply but without sewerage system	70
2	Cities provided with piped supply for which sewerage system is existing/ contemplated	135
3	Metropolitan and Mega cities provided with piped water supply where sewerage system is existing / contemplated	150

According to CPHEEO Norms,

- The present supply of water in Hoskote town is 1.29 MLD while the present demand calculated according to CPHEEO norms is 6.08 MLD. As such there is a deficit in supply.

- The projected demand of water in 2031 is 10.95 MLD computing only domestic needs.

3.9.4 DOMESTIC WATER DEMAND IN HOSKOTE LPA

As per the UDPFI guidelines, the water demand in the Hoskote LPA has been calculated as follows:

Table 28: Standards for Domestic W/S as per UDPFI

Sl.No	Aspect	Small (<50000)	Medium (>50000)	Large and Metro (> 10 lakh)
1	Absolute Minimum	70 lpcd	70-100 Upper limit above 100000	135 lpcd it can be reduced upto 70 lpcd
2	Desirable	100 lpcd	135-150 lpcd	150-200 lpcd (Upper limits for metro cities income areas the standards to lpcd

Data Source:UDPFI Guidelines

3.9.5 GAP IN DOMESTIC WATER SUPPLY: HOSKOTE TMC

S.No	Hoskote TMC	Existing W/S	Standards	For Future population 100000	Demand
1	Domestic	1.5 MLD	100 lpcd	10	8.5 MLD

3.9.6 GAP IN DOMESTIC WATER SUPPLY: LPA

S.No	Hoskote LPA	Existing W/S	Standards	For Future population 400000	Demand
1	Domestic	10.75 MLD	100 lpcd	40	29.25

3.9.7 INDUSTRIAL WATER DEMAND

8000 Ha of industrial area have been proposed in the Landuse Plan of the LPA. According tothe Industrial Perspective Plan, 6956 Tiny and SSI Units have been proposed and 337

Largeand Medium Industries and 44 mega projects have been planned. The water requirement iscalculated to be 68 MLD for the industrial area.

3.9.8 WATER QUALITY

With increasing industrialization, urbanization and deforestation, the quality of water resources available to mankind is deteriorating day by day. The supply of drinking water in terms of both quality and quantity is a major concern now. Out of many chemical and biological contaminants in drinking water, excess Fluoride and arsenic are of the utmost concern due to their serious health impacts. The study conducted by Rajiv Gandhi National Drinking Water Mission during 1990-1992 has reported 15 States (including Karnataka) endemic for the Fluorosis. Therefore, effective surveillance and monitoring of water quality becomes very important in the state of Karnataka. Survey has revealed pollution of ground water in the Jigani area due to chemical industries in the region.

The quality of drinking water affects health of the consumers because certain bacteria and microbial diseases, toxic chemical compounds etc. can be transmitted to the human body through water. Experience has shown that community health and water quality is directly related to each other and that an improvement in the quality of drinking water supply is followed by an improvement in community's health.

3.9.9 ISSUES

1. **Low Water Supply level in the LPA:** The present water supply level in the LPA is far below the stipulated standards of CPHEEO (135 lpcd). As such there is water scarcity in the LPA. The gap between supply and demand would increase in future as shown.
2. **Water Quality:** The ground water quality in the LPA is poor. Care has to be taken to prevent pollution of ground water.
3. 13% of the households avail water from a source away from their dwelling unit.
4. Water supply system should be designed in consideration with the natural topography of the land, to assure adequate water pressure in all areas.

3.10 SEWERAGE AND SANITATION SYSTEM

Efficient sewerage and sanitation system is a pre requisite for maintaining health and hygiene in society. Diseases, especially water borne diseases spread due to unsanitary conditions. Due to rapid growth of population in LPA, additional pressure would be created in the existing network. Hence, upgradation and extension of the system is necessary.



Existing Drainage Sytem - TMC

3.10.1 UNDER GROUND DRAINAGE

There is no underground drainage system in the taluk.

3.10.2 EXISTING SITUATION WITHIN TMC

Hoskote TMC does not have an underground drainage (UGD system), Majority of the individual households have septic tanks for sewerage disposal as there exists no UGD system in the town. About 8178 households are provided with individual sanitation facility i.e with septic tank and rest of the town residents uses the existing 2 public toilets/ conveniences or resort to open air defecation. In some cases the sewer out let is directly let into the drain. Most of the night soil is washed out through the existing drains causing nuisance and health hazard to the entire TMC area. The current sanitation Facilities are given in the ***Table 29***.

Table 29: Current status of Sanitation facilities.

S.No	Components	Details
1	Households in the Town	8419
2	Households with water supply connection	4271
3	Households with sewer connection	Nil
4	Households with septic Tank	8178
5	Public Conveniences	2

Data source: TMC, Hoskote.

3.10.3 ISSUES

A. **Absence of safe disposal system:** Hoskote TMC is not covered by UGD system. In addition there are only 2 public conveniences Absence of basic facilities has resulted in disposal of sullage and night soil related health and hygiene hazards.100 Percent UGD coverage is considered for Hoskote TMC.

B. **Service Levels:** The development is very dense and household area small: there is no space for providing LCS unit in individual houses in city centre. In such case the people do not prefer to have LCS units. Thus the densely developed urban areas of the town continue to be neglected due to the fact that there is no space for providing public conveniences. Further the septic tank needs to be desilted/ cleaned every two to three years and disposal of night soil is difficult.

C. **Inadequate public conveniences:** Majority of households either use the existing public toilets or resort to open air defecation. The existing public toilets are inadequate and they are poorly maintained. Water scarcity has affected its use and functioning.

3.11 SOLID WASTE MANAGEMENT

At present, there is no door to door collection of solid waste by the Municipality. The Garbage from households is dumped in waste bins located in each street. At present, Total waste generated from Hoskote Town is of approximately about 18 T. This solid waste is disposed off by the Municipality and is dumped at Solid waste dump yard with an extent of 12 acres of land which is located at Kallahalli (Survey No.1) of Hoskote Kasaba Hobli. There are two tractors with trailers utilized with manpower of 35 sweepers and 5 loaders for collecting the garbage.



Existing Solid waste Disposal-TMC

About 60 tons of solid waste may be generated according to the population projection. The disposal site needs to be considered without affecting environment in the LPA.

3.11.1 ISSUES





Existing Solid Waste Disposal – (Inside the lake)- TMC

- **Inadequate Landfill Sites For Future Scenario**

  Landfill site of 58 acres is required in the LPA in 2031. Sites need to be located for landfilling.

- **Inadequate Resource**

  There is inadequacy of resource in terms of municipal workers, solid waste management tools and equipment in the municipality.

- **No Waste Segregation**

  Concept of segregation of waste is largely absent and people are totally ignorant about the significance and necessity of segregation of Solid waste

- **Absence of proper collection and transport**

  The process of collection, which requires substantial man and logistics management, is very poor. This coupled with lack of proper transportation has resulted in a situation wherein 50- 70% of the waste is not collected at all.

- **Lack Of Awareness In General Public**

  There is no awareness among the general public about the solid waste management. Peopleare not aware of the way to dispose the waste. Careless disposal of waste on streets hasresulted in littering of waste.

3.12 POWER SUPPLY

The power supply is an important component of physical infrastructure for any city or town to work efficiently. Efficient supply of power ensures proper working of all other infrastructure facilities like water supply, sanitation etc. Based on the estimated requirements of power supply in urban area as per the new master plan of Delhi, the consumption works out to be about 2kw per household/day. The allocation of electric sub-stations is to be done as per the population that is one 11 kV of sub-station for every 15000 population. (UDPFI guidelines) It is the general standard for all categories of towns/ cities.

Electric Power is essential for industries in any region. Bangalore (R) district in general and taluk in particular receives power from the supply system provided by the Karnataka Power Transmission Corporation Limited (KPTCL). It was reported that there is power shortage and fluctuations in power supply in the Taluk. The details of power grid are given in ***Table 30***.

Table 30*: Power Grid facility*

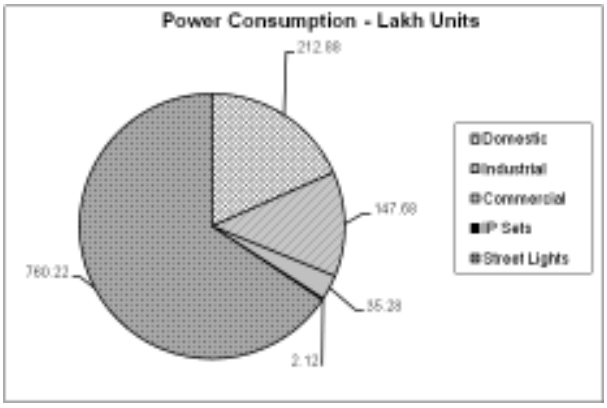
Location	***Voltage Class***	***Capacity Transformers (in MVA.)***	***Peak load in MW for the year 2005-06***	***Loading factor***
Hoskote	*66/11*	*20*	*20.2*	*1.19*
	66/11	*20*	*17*	*1*
Pillaguppa	*66/11*	*20*	*13*	*0.76*
	66/11	*12.5*	*9.9*	*0.93*
Volvo	*66/11*	*6.3*	*6.67*	*1.24*
	66/11	*6.3*	*3.5*	*0.65*
Nandagudi	*66/11*	*6.3*	*3.2*	*0.6*
	66/11	*6.3*	*5.6*	*1.05*
Sulibele	*66/11*	*6.3*	*4.4*	*0.82*
	66/11	*6.3*	*5.44*	*1.02*
Total		***110.3***		

There are four master unit sub stations (MUSS) in the LPA located in Hoskote, Nandagudi, Sulibele and Pilgumpe for supply of power. The total capacity of the sub station at Hoskote is 2 x 20 MVA. There is one power station in TMC.

The total power consumption in the taluk constitutes 1158.18 lakh units. The power consumption for domestic purposes - 212.88 lakh units, industrial consumption - 147.68 lakh units, commercial consumption- 35.28 lakh units, IP sets consumption with 2.12 lakh units and 760.22 lakh units consumed for street lighting. The break-up of power consumption for the Taluk is represented graphically.. It can be observed that, industrial consumption accounts for 13% of the total consumption and also it is less than domestic

consumption of 18%.Total consumption of power in Hoskote Town is 1,41,30,000 kwh. The total power consumption by Hoskote TMC is as follows.

Domestic	**(LT 2A) 2448841 Units**
Commercial	(LT 3) 439252 Units
Small scale industrial	(LT5) 1485868 Units
Above (99 HP)	8141175 Units



The capacity of Nandagudi sub station is 6.3 MVA. The total consumption in Nandagudi town is 24,62,840 kwh from 6 feeders.The capacity of existing sub- station at Sulibele is proposed to be increased to 2 x 12.5 MVA and at Nandagudi 2 x 12.5 MVA. It is proposed to have another unit at Nandagudi of capacity of 2 x 22 MVA with 15 feeders and also to locate a sub station at Devanagundi near Indian Oil Corporation with a capacity of 1 x 8 MVA to meet the power demand. There is a proposal of 1 x 100 MVA sub - station at Ekarajapura and a sub-station of capacity of 1 x 20 MVA at Kondaspura. There is a proposal for a sub-station of capacity 1 x 8 MVA at Mandur.

The above proposals of BESCOM to increase power supply are based on projected demand for power according to the present trend. In view of the proposal to develop two industrial areas by KIADB to the total extent of 4301 hectares (11,000 acres), to locate number of IT units, educational institutions, commercial complexes and industrial developments by private sector, additional power supply may have to be provided depending on the progress of the developments as proposed in the MP.

3.13 TELE-COMMUNICATION

The Taluk has good telecommunication facilities such as post offices, telephone exchange and telephone. The number of telephones per 1000 persons is 43. The details of tele-communication facilities are furnished in the ***Table 31***.

Table 31: Post and Telecom facilities in the Taluk

Sl.No	Category	Numbers	
1	Post offices	42	5
2	Telephone Exchanges	20	1
3	Telephones connected	9654	-
4	Telegraph Offices	7	1

Data Source:District Statistics 2004-2005

In addition to above posts & telecommunication facilities, there are other private operators who are offering courier and telecommunication services, STD / ISD & Internet facility in the Taluk. The Taluk has good coverage of mobile and cellular phone facilities. Most of the service providers in the state along with BSNL are providing mobile phone facilities in the Taluk.New telecommunication facilities required for the projected population of 5.15 lakhs by the year 2031 may be located in the public and semi-public zones proposed in the Master Plan as well as in the civic amenity areas proposed in the conurbation area of the Town.







Primary, High School & Private School

3.14 SOCIAL INFRASTRUCTURE

The details of existing social infrastructure facilities available in the taluk and town are given below.

3.14.1 EDUCATIONAL FACILITIES

Education is recognised as a fundamental human right, along with other necessities, such as food, shelter and water in The Universal Declaration on Human Rights (1948). The advantages it confers on individuals and nations are multi-

dimensional and multi-faceted. It sustains economic growth by providing basic as well as specialised skills that ensure increased productivity and higher per capita incomes. Achievements in education in Karnataka have been quite remarkable, and the state is moving towards universal literacy at a steady pace. The literacy rate increased from 56.04 per cent in 1991 to 66.64 per cent in 2001

The Town Municipal Council is not maintaining any school or college. Details of Government schools, aided schools, boys and girls schools, Urdu medium schools and other educational institutions in TMC are given in detail in the following table. For higher education, there is one private medical college (M.V.J. Medical College) on NH-4 beyond the TMC limits located towards Kolar. There is no Engineering college at present in the LPA, in view of the expanding IT and related activities in Bangalore East area, it is expected that engineering college and other technical institutions may come up. For such and other higher educational institutions a large area is proposed in the Bangalore East portion of the LPA.

Table 32: Details of Educational institutions in Hoskote LPA

SL.No	Different types of Educational Institutions	Total No in Taluk	Total No in TMC	Remarks
1	Anganwadi	289	19	
2	Lower Primary school	267	18	8- Govt. (3 Urdu),
				1-Aided, 25-Unaided.
				1-Residential School
3	Higher Primary / Middle school	166	35	(266 Govt.)
4	Higher Secondary school	56	9	
				2- Govt. (1 Boys, 1 Girls)
				1 – Aided. (Girls)
5	Pre University College	9	3	--
6	Degree College	5	2	
7	I.T.I	2		unaided

SL.No	Different types of Educational Institutions	Total No in Taluk	Total No in TMC	Remarks
8	Vocational Training Institutes	0	3	--
9	Adult Literacy Class/Center	1	1	--
	Nursing College	1		
10	Medical College	1		--

Data source: District at a Glance 2005-06

Schools may be located in the civic amenity areas shown in the areas proposed for expansion of the town within the conurbation as well as in the other areas proposed for development in the LPA.

3.14.2 HEALTH FACILITIES:



Existing Govt hospital - Hoskote

Health status is an important indicator of the socio economic conditions of a society since it has far reaching effects across all socio economic strata. Hence commitment to improvement of health status especially among women, children and vulnerable population such as schedule casts and scheduled tribes, is an important goal of any planning process. Efficient planning requires an appraisal of the current infrastructure and policies, assessment of progress, identification of gaps and proposals to mitigate the condition.

The health facilities in Hoskote LPA are given in the following table.There are no higher order health facilities at present and the residents are depending on Bangalore City for higher order health facilities. To some extent the hospital attached to MVJ medical college is being utilized.

Table 33: Details of Hospitals & Health Centers in Hoskote LPA

S.No	Different types of Hospitals & Health Centers	Total No. in Taluk	Total No. in TMC
1	Allopathic Hospital	1	1
2	Ayurvedic Hospital	0	
3	Unani Dispensary	0	1
4	Homeopathic Hospital	0	
5	Allopathic Dispensary	0	
6	Ayurvedic Dispensary	3	
7	Unani Dispensary	0	
8	Homeopatic Dispensary	0	
9	Maternity & child Welfare Center	12	
10	Maternity Home	2	
11	Child Welfare Center	0	
12	Health Center	1	1
13	Primary Health Center	12	
14	Primary Health Sub Center	49	
15	Family Welfare Center	13	1
16	T.B. Clinic	1	1
17	Nursing Home	14	
18	Reg. Pvt. Medical Facilities	9	
19	Subsidized Medical Facilities	0	
20	Community Health Workers	14	
21	Other Medical Facilities	2	
22	Other Private Ones	1	1
22	Animal husbandry hospital	1	
	Medical institutions per 1000 population - 1.37 No. of beds in Medical institutions per 1000 population - 1.3		

Data source: District at a Glance 2005-06

It is likely that couple of new medical colleges may come up, in the LPA in view of the IT and industrial developments proposed in the IMP and the population to be attracted. Smaller health units may be located in the civic amenity areas proposed in the Master Plan.



Medical College Cum Hospital



Private Clinic

3.14.3 HERITAGE BUILDINGS:

There are 3 Mujarai temples in Hoskote and 18 other temples. There are 2 Churches and 11 Mosques in Hoskote.





Some of the Existing Temples in the Town

3.14.4 RECREATIONAL AND CULTURAL FACILITIES:

There are 3 Cinema theatres, 2 Auditoriams/ Drama/ Community Halls, 2 Public Libraries and 2 Reading Rooms in Hoskote TMC.

3.14.5 POLICE STATIONS

There are two police stations in Hoskote TMC.



Police Station-Hoskote

3.14.6 FIRE STATIONS

There is one fire station in Hoskote TMC.



One among Existing theatre & Existing Community hall in Hoskote Town

The existing civic amenities are appended in *Map no 17*.

3.14.7 PARKS/ OPEN SPACES/ PLAY GROUNDS

There is a lack of overall development of parks and playgrounds, provision of street furniture, sports complex.



Park near Bus stop



Park – Work under progress

3.14.8 INDUSTRIAL AREAS & SHEDS

3.14.8.1 Industrial Areas

Karnataka Industrial Areas Development Board (KIADB) has developed an Industrial Area in Hoskote taluk.The Industrial Area is situated about 35 kms from Bangalore city and 3 kms from Hoskote town on Bangalore-Chinthamani road. A total of 402.15 acres has been

acquired and developed by KIADB. A tota of 325 acres has been allotted to 159 candidate industries in this area.

3.14.8.2 Industrial Sheds and Plots

KSSIDC has developed an industrial estate in Hoskote taluk. There are 69 sheds of different sizes have been constructed. Out of these 69 sheds, 63 are allotted & 6 are vacant.

In addition to the above, KSSIDC has also developed industrial plots in 21.85 acres of land. Totally 38 plots have been developed and 36 plots have been allotted to industrial units and remaining 2 plots are vacant.

3.14.8.3 Vishwa Sheds

There are 4 sheds constructed under VISHWA scheme and 3 sheds have been allotted and one is vacant.

3.14.9 FINANCIAL INSTITUTIONS



Some of the Commercial banks- Hoskote Town

Hoskote Taluk has fairly good banking network details of which are given in ***Table 34*** below:

Table 34: Financial Institutions -Taluk

Name of the Bank	No in Taluk	No in TMC
Commercial Banks	19	6
Rural Banks	4	
Primary Land Development Banks	1	
DCC Banks	1	
KSCARD Banks	1	
Agricultural Credit Societies		2
Non-Agricultural Credit Societies		3
Total	**26**	

(Source: District at a Glance 2004-05)

CHAPTER-4

EXISTING LAND USE AND TRANSPORTATION

CHAPTER-4 – EXISTING LAND USE AND TRANSPORTATION

ThisChapter presents the existing land use distribution and transportation scenario in Hoskote Local Planning Area. Analysis of existing developments and land use distribution and existing traffic and transportation scenario like road network and its characteristics, enhanced regional connectivity due to STRR, TRR etc are discussed in detail below.

4.1 STUDY OF EXISTING DEVELOPMENTS AND IDENTIFICATION OF PROBLEMS

4.1.1 EXISTING LAND USE SURVEY

Base map was prepared using 0.6m Quick bird satellite image. The existing land use was updated into the database using field survey. IMP land use was integrated into the database using the new base map as reference. Existing land use and major developments within the LPA are ground verified by field survey. Deviations on ground with the IMP data were checked, verified and updated. It was then validated by Karnataka Remote Sensing Agency Corporation during May, 2012.

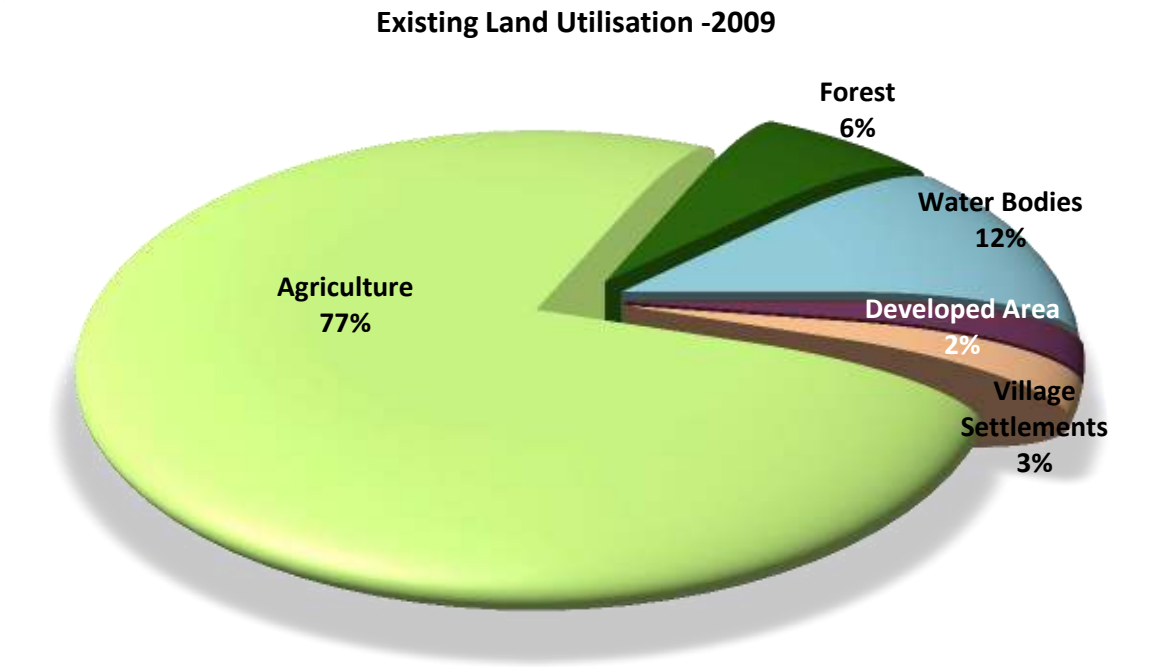
4.1.2 EXISTNG LAND UTILIZATION OF LPA

The total extent of geographical area of LPA is 5,91,72 hectares. Large area is under agriculture which constitutes 45456.39 ha and includes both non-cultivable and cultivable area. Forest land is 3769.27 ha in extent. Water bodies constitute about 7111.48 ha, developed area and rural settlements constitute about 1355.31 ha and 1479.55 ha respectively. Table 35 shows the details of land utilization in the LPA and ***Figure 50*** below shows the distribution of land utilization in the LPA.

Table 35: Existing Land Utilization Area Analysis(2009)

S.No	LAND UTILIZATION	AREA	
		In Hectares	In Percentage
1	Developed Area	1355.31	2.29
2	Village Settlements	1479.55	2.50
3	Agriculture	45456.39	76.82
4	Forest	3769.27	6.37
5	Water Bodies	7111.48	12.02
Grand Total		**59172.00**	100.00

Figure 50: Existing land Utilisation - 2009



The Existing Land utilization map is appended in *Map no 9*.

4.1.3 EXISTING DEVELOPMENTS AND LAND USE DISTRIBUTION

Study of existing developments is the first and foremost job before stepping into the process of planning and development of any area as the present trend, socio-economic nature of the area, available natural and manmade resources, environmental condition, infrastructure facilities available, problems faced by the people etc. are the fundamental requirements for the future planning of realistic settlements.

Major developments that have come up within LPA are Hoskote town and its surroundings, Dodda Amanikere, Samethanahalli, Tirumalashettyhalli, Doddadunnasandra, Kanekallu and Chokkahalli of Hoskote taluk and in Huskur, Mandur, Bommenahalli and Bendiganahalli

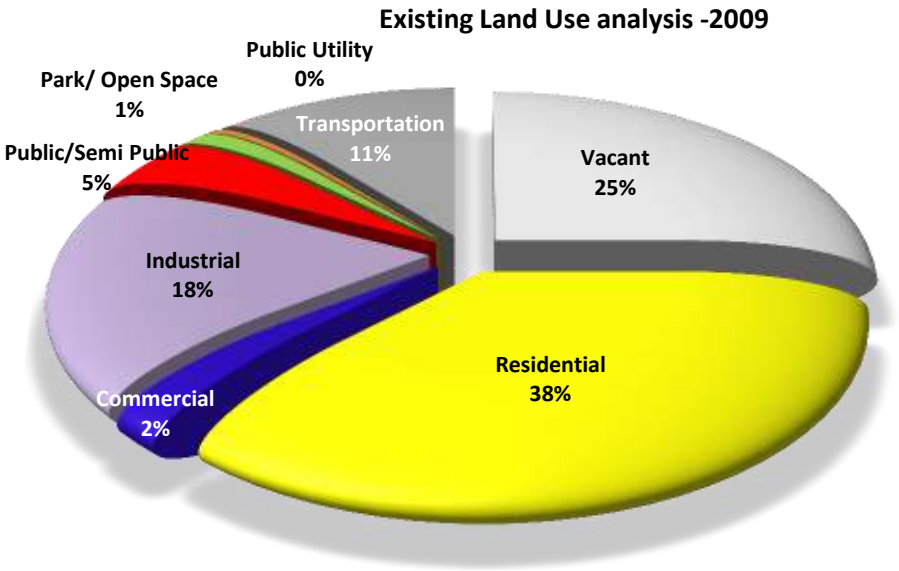
villages of Bangalore East Taluk. The overall analysis of the existing land use (2009) in the built-up area of Hoskote Town and remaining portion of LPA is given in ***Table 36*** and the percentage distribution of land use of LPA as on 2009 is shown in ***Figure 51.*** Developed area within LPA is 1153.88 hectares.

The overall analysis of the existing land use (2009) in the built-up area of Hoskote Town and remaining portion of LPA is given in ***Table 36.*** Developed area within LPA is 1109.49 hectares.

Table 36: Existing Land use Analysis (2009)

S.No	LAND USE	AREA	
		In Hectares	In Percentage
1	Residential	416.67	37.55
2	Commercial	25.8	2.33
3	Industrial	194.49	17.53
4	Public/Semi Public	50.34	4.54
5	Park/ Open Space	15	1.35
6	Public Utility	5.74	0.52
7	Transportation	123.79	11.16
9	Vacant	277.66	25.03
Total		**1109.49**	**100**
Water Sheet		44.38	
Grand Total		**1153.87**	

Figure 51: Existing land Use Analysis-2009



The Existing Land Use map Hobli wise is appended in Map no 10 to 16.

Details of existing features/developments within the LPA are described briefly below:

1. **RESIDENTIAL**

The total area covered by residential units in the built up area is 416.67 ha, constituting 37.55% of the built up area. Entire Town is completely within the limits of Town Municipal Council. It includes both old petta area comprising of Hoskote Grama thana and new extensions/layouts. Southern part of the Town is predominantly residential and the Northern portion which is the older part of the Town has old residential units and mixed land uses. The layout developed by Karnataka Housing Board is along the National Highway-4 near the entrance of the Town. New residential buildings are coming up along Sarjapur Road and other parts in the southern portion of the Town. The layout developed by Karnataka Housing Board is along the National Highway 4 in Huskur. Residential developments have also come up in Dodda Amanikere, Samethanahalli and Thirumalashettyhalli.

ISSUES:

- There is no orderly and healthy development of the town as most of the roads are narrow and congested within the core area of the town as well as in villages.
- There is no contiguity in the development process which is responsible for the sparse development covering more area accommodating very small population, thereby making the entire development uneconomical and unplanned.
- The layouts are approved in the entire planning area without any contiguity.
- This was mainly due to the absence of any regulatory measures as there was no statutory Master plan for the town. Only in new extensions roads are well planned and residential houses have come up well.

2. **COMMERCIAL**

The total area under commercial use is 25.80 ha, constituting 2.33 % of the built up area. National Highway 4 passing through the LPA is the main access along which major commercial and public/semi public uses have come up. It is normal to see such pattern in almost all towns through which National Highway, State Highway, or other major roads pass through. Commercial land uses have come up along roads on which the traffic is more. Whenever a new extension is developed, along the main access road, commercial uses come up. Also, at the junction of important roads,

commercial establishments are located to attract public for marketing the articles and other service activities.

The same type of land use development has taken place in Hoskote also. The road leading from NH–4 to the Bus Stand opposite to the Municipal Office has become commercial. The road from Bus Stand to NH4 on the eastern side, the same road connecting Bus Stand to Siddlaghatta Road is also having commercial activities. Sarjapur Road right from NH4 has commercial activities in the built up area. On Malur Road where the petroleum carrying trucks are parked, commercial activities have come up.Major commercial buildings have come up on NH–4, Malur Road as well on Chinthamani Road (SH-82). Commercial activities are not well distributed in the developed area. Along the RW nesr Samethanahalli, Koraluru and Devanagundi many private and govt Ware housing corporations have come up.

The Hoskote town is having a sandy maidan next to Telephone exchange along NH 207. There is no existing TAPMC yard within the town. The weekly market is being conducted on every Wednesiday in a most unorganized manner. But there is no infrastructure provided in this sandy maidan. There is no regulated market in Hoskote LPA.

There are 4 cinema theatres in Hoskote Town. There are of banks, details of which are given in Chapter Infrastructure. The Hoskote town has in total 6 Petrol pumps, two along the NH 4, 2 within the town and two along NH-207.

ISSUES

- The Sandy Maidan lacks basic amenities like raised platforms, proper circulation space for people and goods, drinking water, parking space and storage facilities.
- No parking facility is there near Taluk Office and adjoining major commercial roads and near Bus stand. The vehicles are parked haphazardly creating traffic bottleneck and obstructing the main regular flow of traffic along the roads near bus stand. The effective width of the road is reduced causing traffic problems. Future expansion of the road will be difficult and costly.
- Commercial activities will generate more traffic resulting in traffic problems, criss-crossing and accidents.

3. INDUSTRIAL USE

The total area covered by industrial area within the built up area is 194.49 ha, constituting 17.53% of the built up area. Industrial buildings have come up along IRR inthe Bangalore East portion, along Malur Road, along Sarjapur Road to the West of IOC area, and along Siddalaghatta Road. An industrial area/estate is developed by KIADB along Chinthamani Road in Chokkahalli village. The Volvo factory, a major industrial activity is on NH4 away from the Town limit but within LPA. Major industries located in Hoskote LPA are Oil Corporations (Hindustan Petroleum Corporation Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Godrej Tyson Pvt. Ltd, BELL Ceramics and Suguna Poultry Feeding Industry.

ISSUES

The major problems of industrial activities of Hoskote LPA are:

- No compact development of industrial activities except KIADB industrial area.
- Ribbon development along the highways.
- No proper parking and other required facilities to compliment the industrial areas.
- No waste management plan has been taken up in the existing industrial areas till date, thereby neglecting the environmental aspect of planning totally.

4. PUBLIC & SEMIPUBLIC USE

The total area covered by public and semi public uses is 50.34 ha constituting 4.54% the built up area. The civic amenities are the indicators of standard of living in any area. They reflect the socio-economic situation of that region and to some extent the quality of the society as a whole. Public and semi public uses are concentrated on the Northern side of the Town as well as along NH – 4. The public buildings in Hoskote Town are as follows:

- PWD offices
- Taluk Education Office
- JMFC Court
- Panchayath Office
- Social Welfare Office
- Panchayath Raj Engineering Sub-division

- Taluk Office
- Other Offices

PWD Offices, BESCOM office, Town Police Station, Fire Station and JMFC Court are situated along the NH4. Transmission Towers of All India Radio cover a large area on the Western side of the NH4. The other major public buildings are Govt. Hospitals, Veterinary Hospital, Agr and hort.MVJ Medical College has come up on NH4 beyond the town towards Kolar.

ISSUES

The major problems of Public and Semi Public buildings of Hoskote LPA are:

- No adequate parking facility
- Basic services like drinking water, public conveniences are not provided properly.
- The Hoskote LPA as a whole is not having much entertainment facilities such as cinema theatres, community centres, recreational facilities/clubs etc.
- Only Hoskote town has one library and the rest of the settlements in the Hoskote LPA are not having any library.
- There is no jail in the whole of Hoskote LPA.

5. PARKS/OPEN SPACES/PLAY GROUNDS

The area covered by parks and playgrounds in the built up area is 15.00 ha, constituting 1.35% of the built up area. There are only a few parks and playgrounds in the Town. A play ground is existing in the primary school area. Other play grounds are in the Church area, Govt. PU College and in the Housing Board layout. One Stadium is located adjoining Govt. School abutting NH4. There is no systematic crematorium in the town as well as in any of the settlements and religion wise burial ground.

ISSUES

- There are no major parks and open spaces within the town and remaining parts of LPA.
- Suitable places are to be identified for BG and basic amenities. The town needs substantial space for the development of parks, play grounds, and open spaces to meet the recreational and environmental needs.

6. PUBLIC UTILITIES

The area covered by public utilities is 15.00 ha, constituting 1.35% of the built up area. The KPTCL sub stations and water supply units/ OHTs come under this category.

ISSUES

- There is no solid waste disposal site. There is no system collection, segregation and disposal of solid waste.
- There is only one dhobi ghat in the town and because of drying up of tank its not being used at present.

7. TRAFFIC & TRANSPORTATION

The total area covered by traffic and transportation use in the built up area is 123.79 ha, constituting 11.16% of the built up area. Existing national highways, state highways and other roads in the Town as well as LPA are described in the Sub Chapter 4.2 below. Existing uses under this category include truck terminal, bus stand/ depot, and petroleum truck parking area.

ISSUES

By and large the inter town traffic movement is convenient. But due to very narrow road network in the town area, there are many intra town traffic problems and some of the major issues are listed below:

- Many roads need to be widened to ease out the traffic movement vide., Road leading to Taluk Office from KEB Circle.
- On congested roads, economic speed cannot be achieved and therefore mileage is very less.
- Waste of time due to obstruction for the movement of vehicles which of course reduces the income in case of commercial vehicles.
- Increased wear and tear due to the roughness of the roads, which calls for more operating cost.
- Parking is the major problem along commercial roads and bus-stand areas. Almost all the roads are congested and narrow roads on which no parking is possible. A separate parking lot has to be necessarily identified near bus-stand and KEB Circle.

- KEB junction is always congested and traffic jam occurs daily and hence needs to be improved. Some important junctions like Taluk office, Flower Mandi are to be improved.

8. VACANT LAND

There exist **277.66 ha** of vacant land within the built up area of Hoskote LPA.

9. WATER BODIES

The area covered by water bodies in the built up area is 44.38 ha. There are many medium and small tanks distributed throughout the LPA. Town consists of two big tanks Amani Dodda Kere and Amani Chikka Kere with small tanks. However most of the tanks are dried up, silted or polluted.

ISSUES

- Sewerage water let into most of the tanks/lakes/ponds/open hallas leading health hazards
- Almost all the tanks/lakes/ponds are to be desilted, cleared of weeds and maintained.
- Encroachments at many tanks/ponds
- No usage of water bodies for recreational facilities

4.2 TRAFFIC AND TRANSPORTATION

Traffic and transportation plays a major role in the development of the region /state/country as the case may be. The economy of the area/region depends on the traffic and transportation facility available. That means the development of any area/region and traffic and transportation are concomitant.

4.2.1 REGIONAL LINKAGES

4.2.1.1 Roads

The taluk is well connected to surrounding urban centres of the region. It has 2 national highways, 4 state highways and 15 major district roads spread across LPA to provide

connectivity to various urban centres. In addition it has STRR and IRR to connect it to other planning areas of BMR.

4.2.1.2 Railways

The Taluk has railway network. Broad gauge line (12 km) connecting Bangalore and Chennai city passes through the Taluk.There are two Railway Stations in the Taluk.

4.2.1.3 Seaports

The nearest seaport is at Chennai, which is about 330 km and Mangalore Seaport is around 360 km from Hoskote. The existing Mangalore Port is an all weather port-providing gateway for exports & import trade throughout the year.

4.2.1.4 Airports

The nearest airport at present is the HAL, Bangalore at a distance of about 30 km. This was providing gateway to major cities of the country and many countries but however it is now used for defence purpose.

In addition to above, the Taluk has locational advantage, and nearness to existing Bangalore International Airport at Devanahalli. This provides a vital link for domestic and international destinations.

4.2.2 ROAD NETWORK

The Taluk has a reasonable road network of all weathered pucca roads. It has 65.70 km length National highway, 42 km State highway and 172.15 km of Major District roads and other roads. Overall, the Taluk has a total road length of 852.54 km which is about 144 km / 100 sq km of its area. Similarly district road length is 184 km / 100 sq km of its geographical area. The details are furnished in the ***Table 37*** and ***Figure 52*** below:

Table 37:Comparison of Road Length of Taluk and District as on (31.3.2010)

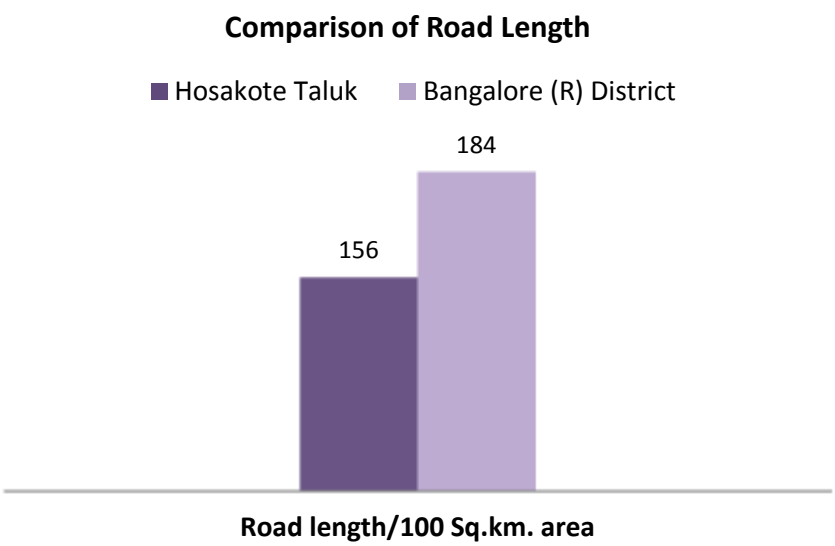
S.No	Description	Hoskote Taluk	Bangalore (R) District
1	National Highway	65.70	276.00
2	State Highway	55.75	374.00
3	Major District Roads	172.15	1202.00
4	Other District Roads	-	47.60
5	Village Roads	438.94	6964.40
6	T.D.B Roads	0	550.00
		732.54	
7	Municipality Roads	120.00	627.25
8	Irrigation Roads	0	647
9	Panchayat Roads	0	10812.25
	Total Roads	**852.54**	**21500.5**
Road Length -Taluk as % to District :			
Road length/100 Sq.km. area		156 km	184 km

Data source : P.W.D., Highways, 2010 HandBook
(NOTE:Data result derived may be subject to rounding)

All National, State, District roads and village roads are provided with bituminous top surface. In case of municipality roads, 21 % are of concrete, 68% are of bituminous top and remaining WBM/mud roads.

The existing Bangalore–Chennai highway (old Madras road) facilitates smooth and fast movement of vehicles between Bangalore, Chennai and Tirupati etc.

Figure 52: Comparison of Road Length



There is heavy traffic on this road as it connects Bangalore city to major cities of Tamil Nadu and Andhra Pradesh. Due to the improved road conditions the travel time has reduced considerably between the urban centres.

Major roads passing through the LPA are given below:

1. ***National Highway***

- **National Highway No. - 4** (NH-4) connecting Bangalore to Chennai passes through Hoskote Town and the LPA from west to east. This NH-4 between Bangalore and Hoskote is proposed to be upgraded to four lanes in view of the heavy traffic on this Highway. Length of this road is 24 km.
- **National Highway No. - 207**passes through Hoskote Town on the western side of the LPA connecting New Madras Road to Dobaspet. Length of this road is 41.70 km.

The total length of *National Highways* in the LPA is 65.70 km.

2. ***State Highways***

- **State Highway No. - 35** (SH-35) Hoskote- Siddlaghatta Road

This road of length 18.26 km passes through the LPA to the north of NH-4 from north to south.

- **State Highway No. - 82** (SH-82) Hoskote- Chinthamani Road

This Road of length 23.30 km crosses the LPA diagonally from south-west to north-east of Hoskote.

- **State Highway No. - 95** (SH-95) Hoskote-Malur Road

This Road of length 10.80 km connects Hoskote to Malur and is from west to east.

- **State Highway No. - 96** (SH-96) Devanahalli-Kolar Road

This Road of length 3.39 km connects Devanahalli to Kolar and is passing through north-eastern side of LPA from west to east.

The total length of *State Highways* in the LPA is 55.75 km.

3. ***Major District Roads***

- **Bailanarasapura to Shidlaghatta Road** via Korati

  This Road of length 21 km is on the northern side of the LPA beyond Nandagudi and connects both Chinthamani Road and Shidlaghatta Road.

- **Nandagudi to NH- 4 Road** via Bailanarasapura and Banamakanahalli

This Road of length 10.20 km is on the north - eastern side of the LPA.

- **Shivana Pura to Nandagudi Road** via Motakadahalli and Chakkasandra

  This Road of length 8 km is on the northern side of the LPA.

- **NH- 4 to ToranahalliRoad**

  This Road of length 4 km is on the eastern side of the LPA and is towards the south of NH 4.

- **NH – 4 to ChikkanahalliRoad** via Nakkanahalli

  This Road is of length 8.1 km and connects NH – 4 at two points on northern side.

  NH-4 to Ummalu Road via Kolathur, Solur and Inchanahalli

  This Road of length 13 km passes through the central part of the LPA towards eastern side.

- **SH 95 to S. Narayani kere Road** via Makanahalli, Devalapura, Devanagundi

  This Road of length 22 km leading to Chikka Tirupathi passes through the central part of the LPA towards southern side crossing railway track at Devanagundi.

- **Mutkur to Chikka Tirupathi Road** via Thathanur

  This Road of length 8.10 km is on the southern side of the LPA running north to south.

- **NH-207 to Bellikere Road** via Hemmandanahalli and Mutkur

  This Road of length 7.70 km is to the South of Bangalore - Chennai Railway line from north to south.

- **NH 207 to SH 95 Road** via Naduvatti, Bisanahalli, Thindlu and Kattigenahalli

  This Road of length 18.5 km is in the southern part of LPA passing from west to east.

- **NH 207 to NH 207 Road** via Bisanahalli, Kodihalli and Doddagattiganabbe

  This Road is of length 6.6 km and is in the central part of LPA.

- **SH 35 to Hethakki Road** via Dodda koliga, D. Shettihalli and Shivanapura

  This road of length 18 km is on the northern part of LPA connecting SH-35 and SH 82.

- **Siddlaghatta Road to** Chikkanahalli via Thammarasanahalli, T. Agrahara, Bavapura, Shivanapura – 14.25 km

  This road of length 14.25 km is on the northern part of LPA running west to east and passes through SH-35 and SH-82.

- **Sulibele to Siddlaghatta Road** via Chhikkaralagere, Siddanahalli

  This road is on the northern part of LPA and is of length 4.5 km. This Road connects Sulibele to SH -35 leading to Siddlaghatta.

- **Nandagudi to S H 35Road** via Rama Govinda pura, Anupa halli, Bendiganahalli

  This road is on the northern part of LPA and is of length 8.2 km and connects SH 35 and SH 82.

The total length of *major district roads* in the LPA is 172.35 km.

In addition to the 2 national highways, 4 state highways, and 15 major district roads, there are 2 NABARD roads as follows:

1. BRF Road to Bailarasarapura via Obalahalli
2. NH-207 to Cheemanahalli via Ganagal

In the Town Municipal area, the total length of municipal roads is ***120 km out of which water bound macadam roads are of 55 km in length, 41 km is of bituminous and 15 km is of concreted roads.***

4.2.2.1 Satellite Towns Ring Road (STRR)

It is proposed to develop a Satellite Towns Ring Road connecting the towns surrounding the Bangalore City for better connectivity within the Bangalore Metropolitan Region and to bypass the traffic. The overall width of this Ring Road is 90 m with 6 lanes. This road connects Hoskote to the following towns:

- Devanahalli
- Doddaballapur
- Dabaspet
- Magadi
- Ramanagaram
- Kanakapura
- Anekal
- Attibele and
- Sarjapura

4.2.2.2 Intermediate Ring Road (IRR)

An Intermediate Ring Road is proposed within the STRR for connecting Hoskote and the following other towns around Bangalore. The overall width of this road is 90 m.

- Devanahalli
- Nelamangala
- Bidadi
- Anekal
- Ramanagaram
- Attibele and
- Sarjapura

STRR and IRR together will interconnect these towns around Bangalore City and will reduce the pressure of traffic in the City.

4.2.2.3 Town Ring Road around Hoskote Town

A Ring Road is proposed around Hoskote Town by the Public Works Department, which also connects Satellite Towns Ring Road, Intermediate Ring Road, NH-4, NH-207, Nandagudi Road, Siddalaghatta Road, Malur Road and Sarjapura Road. The length of the proposed Ring Road is 27.42 km. Though this Ring Road is beyond the conurbation area required for Hoskote Town, it was decided in several review meetings to incorporate this Ring Road in the IMP of Hoksote LPA as it will improve the road connectivity in the LPA. A separate Ring Road around the conurbation of Hoskote Town is also being proposed in the IMP.

4.2.3 TRANSPORT VEHICLES

There is high demand for transport and goods vehicles in the Taluk. This is due to its proximity to State capital and also availability of good road network including State highways, District roads, etc. The favorable financial assistance by the banks may be attributed to the increase and demand in the Small Road Transport Operators (SRTO) sector.

In the Taluk number of vehicles registered as on 2004 are 32,882 constituting 147 vehicles / 1000 persons, as against district's vehicle population of 49 / 1000 persons. This indicates that the Talk has more demand for vehicles as it is nearer to Bangalore. The details are furnished in the ***Table no 38***.

Table 38: Vehicles Registered Taluk / District (As on March, 2004)

S.No	Description	Hoskote Taluk	Bangalore (R) District
1	Motorcycles	20002	57310
2	Cars	5256	10897
3	Auto rickshaws	1265	5529
4	Goods Carriages	2876	7171
5	Others	3483	11849
Total Vehicles		**32882**	**92756**
Vehicles - Taluk as % to Dist: 35			
No. of vehicles /1000 persons		147	49

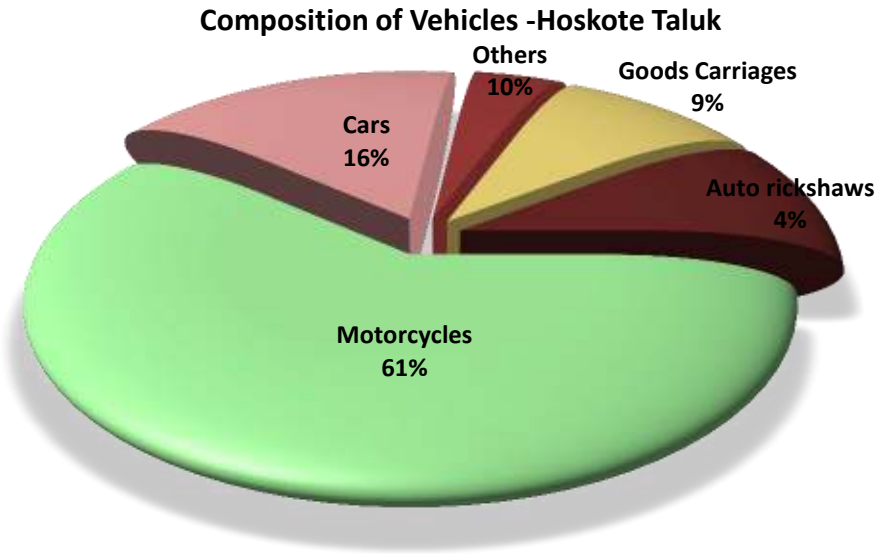
Data source:…Regional Transport office, Hoskote, 2010

(NOTE:Data result derived may be subject to rounding)

4.2.4 FREIGHT MOVEMENT

There is a major freight movement from Bangalore to the LPA and from the LPA to Tamil Nadu. Through movement of traffic from Bangalore to Chennai along NH 4 and from Dobaspet or Devanahalli to New Madras road along NH 207 also takes place. These major roads take up majority of the freight traffic.There also exist major industrial areas in the LPA. Freight movement also exists from major roads to these areas. There is one truck terminal in LPA located along NH 4 near to Hoskote town.

Figure 46: Percentage of composition of Vehicles for Hoskote Taluk



4.2.5 BUS TRANSPORT SERVICE

Hoskote town is 28 km from Bangalore and 12 km from K R Puram on NH 4. The town is well serviced by BMTC buses from Bangalore. Both ordinary and Volvo buses ply from Bangalore and Whitefield at frequent intervals. In addition many KSRTC buses plying via stop at Hoskote. Many private buses/vehicles ply on this route. There are twelve bus depot/standss spread across the LPA.

4.2.6 ACCESSIBILITY

The World Bank report for Rural accessibility index says ***Rural access is measured in terms of no of people within 2kms*** (walking distance of 20-25 min) of an all-weather road as a percentage of the total rural population. An “all-weather road” is a road that is accessible all year round by the prevailing means of rural transport (typically a pick-up or a truck which does not have four-wheel-drive). Occasional interruptions of short duration during

inclement weather (e.g., heavy rainfall) are accepted, particularly on lightly trafficked roads.

All the inhabited villages have access by all weather roads in Hoskote LPA.

In general some major traffic and transportation problems faced by Hoskote town at present are illustrated below:



Traffic Congestion without Signal in a road leading to Hoskote



More no of Vehicles parked under the Flyover



On Street Parking



Vendors on the Road side

CHAPTER-5

VISUALISING THE FUTURE

CHAPTER-5 – VISUALISING THE FUTURE

5.1 INTRODUCTION

Based on various studies and analysis made, population for the plan period of Master Plan, 2031 is projected and accordingly area requirement for various land uses and infrastructures are calculated. Proposals made in the IMP are taken into account. Then SWOT analysis is made and vision and mission of the Master Plan are drawn. Objectives of the Master Plan are set out and approach and methodology are framed to achieve the objectives.

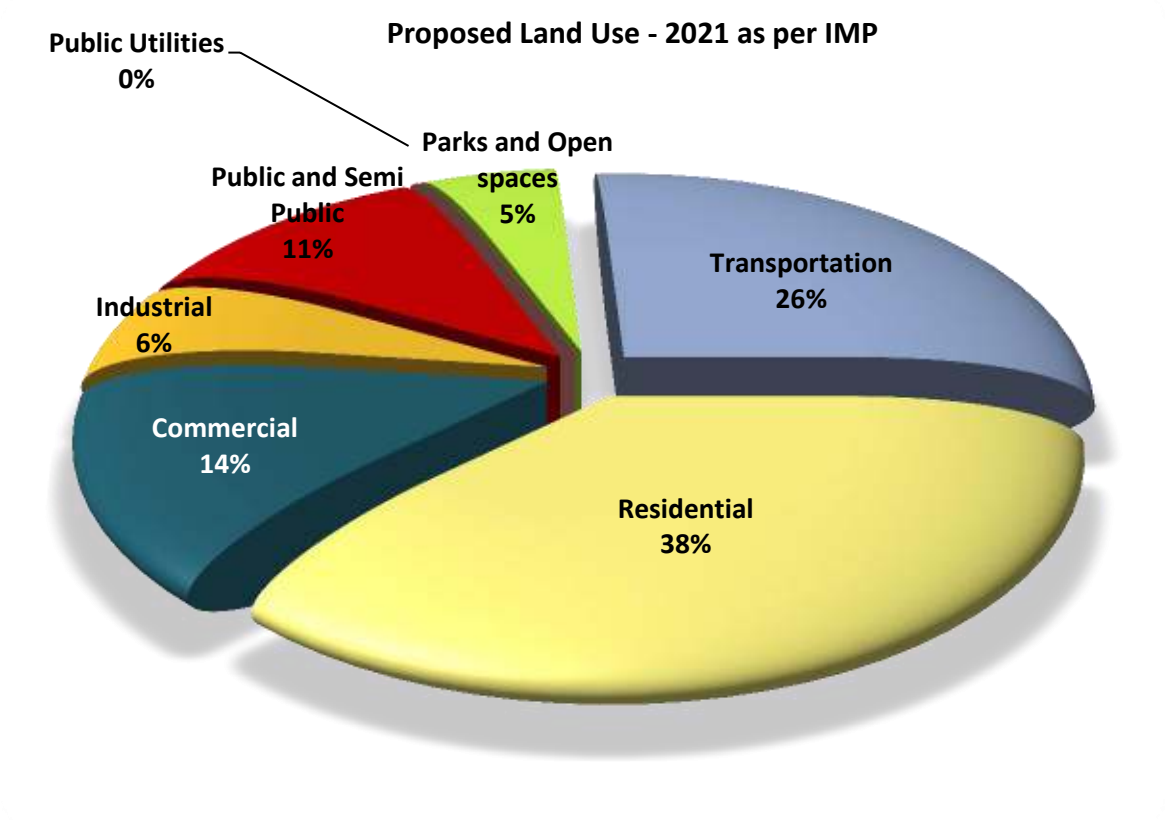
5.2 IMP PROJECTIONS - 2021

Interim Master Plan for Hoskote LPA was prepared for the design period of 2021 with the projected population of 3,50,000, out of which about 1,00,000 was to be accommodated in Hoskote town and about 2,50,000 population in the remaining area i.e. outside the town limits in the other villages and settlements of the LPA.Detailed land use proposals were made for conurbation proposed to Hoskote Town. Only outline land use proposals were made for residential areas, outside the conurbation area reserved for IT activities, industrial areas, areas reserved for educational institutions, etc.Considering population density of 100 persons per hatare, the conurbation area required for Hoskote Town was 10.00 sq km. Out of this area, 9.23 sq km was provided within the Ring Road proposed around the town and the remaining area was proposed outside the Ring Road. ***Table 39*** shows the analysis of proposed land use by 2021 of the conurbation area of Hoskote town.

Table 39: Proposed Land Use, 2021 of the conurbation area of Hoskote town as per IMP

Sl.No	Land Use	Area in ha	Percentage	Remarks
1	Residential	363	38	Large extent of area has proposed outside the conurbation for Urban Forestry
2	Commercial	126	14	
3	Industrial	54	6	
4	Public/ Semi Public and Public Utilities	98	11	
5	Parks and Open spaces	48	5	
6	Transportation	234	26	
Total (A)		**923**	**100**	

Figure 53: Proposed Land Use, 2021 of the conurbation area of Hoskote town as per IMP



Major proposals within the conurbation area of Hoskote town as per IMP were as follows:

Residential areas were proposed within the conurbation area in the extension of Hoskote Town, to the south of National Highway – 4, in Hullur Amanikere to the north of NH-4 and to the West of Hoskote Town towards Whitefield, in Hoskote Dodda Amanikere to accommodate residential area requirements for the activities proposed in Bangalore East Taluk and for other activities in the LPA, in Poojena Agrahara, Jinnagara and Kodihalli areas and for the industrial area proposed by KIADB near Whitefield Railway Station, IOC and for other activities proposed along STRR on the southern side of NH –4. The ***area covered under residential uses was 363 ha or 38% of the conurbation area of the town.***

Commercial areas were proposed to the North of NH-4 considering the existing commercial activities, along the NH-4, along Sarjapur Road, Malur Road and Chinthamani Road, all along the Ring Road covering the conurbation area, in addition to existing commercial activities along the road leading to Municipal office and along other roads. IT sector complexes in the Bangalore East Taluk portion as the trend for IT sector development is extending from Whitefield area towards east and north, shopping malls and other commercial activities on

the other side of IRR, restaurants and other commercial activities opposite to the area reserved for educational institutions. For APMC an area on the eastern side along Malur Road was proposed to the extent of 17.38 ha. The total ***area covered by commercial uses was 126 ha or 14% of the conurbation area of the town.***

The area covered under ***Industrial use is 54 ha*** constituting 6% of the conurbation area. Major industrial zones are proposed outside the conurbation area adjoining the existing industries.

Parks and playgrounds cover an area of 48 ha, constituting 5% of conurbation areacovering existing plantation areas, tank areas, parks /open spaces proposed in the new residential areas.

In addition to the existing public uses, additional areas to existing where feasible and new public uses are proposed in the extensions proposed for residential development along with parks and play grounds for providing civic amenities covering all parts of the conurbation area. As number of engineering and medical colleges are coming up in Bangalore and surrounding areas, a vast area is proposed for educational institutions, in the Bangalore East Taluk area and to the north of IT sector. The extent provided for this purpose is 340 ha.

Transportation and communication uses covered 244 ha which is 26% of the built up area of the Town which included the proposed bus stand covering an extent of 7.31 ha, Truck Terminal covering an extent of 34.21 ha to be located on the eastern side of the conurbation area on either side of NH-4 in between Malur road, Nandagudi Road, and the Town Ring Road. For effective transportation road network within the conurbation area of Hoskote Town, a Ring Road was proposed in the conurbation area of 45 m width. Another infrastructure corridor was proposed connecting IOC area to NH-4 from Devanagundi-Sarjapur Road to NH-4 to provide a direct access from industrial area proposed by KIADB and other industrial zones to NH-4. Major and minor roads of 24 m and 18 m wide were proposed in the conurbation area for convenient movement within the conurbation area.

Table 33 below shows the analysis of proposed land use by 2031 in the remaining LPA.

About 614 ha of lands were proposed in Bangalore East Taluk portion to the west of IRR to accommodate IT sector activities in continuation to the developments in Whitefield area and extending towards NH- 4.

To attract educational institutions/professional institutions and research activities form Bangalore City, about 340 ha of land was reserved to the north of the proposed IT sector area in the Bangalore East portion and to the west of IRR.

Table 40: Proposed land use in the remaining LPA as per IMP

Activity	**Area in ha**
IT activity (related)	614
Educational Institutions	340
Industrial area: a. KIADB b. Other Industrial Zones	 4453 2836
Commercial	260
Residential	4402
Public and semi public	230
Parks and open spaces	536
Plantation	4105
Transportation	3234
Water bodies	4039
Agriculture	26481
Total of B	51530
Total of A + B	52453
C. Nandagudi Township area	6719
LPA area (Total of A+B+C)	**59172**
Or	591.72 sq km

As per proposals of KIADB for development of industrial areas, in Hoskote LPA an extent of 6000 acres to the north of NH-4 and an extent of 5000 acres near IOC Area are reserved. For these projects is 4453 ha, and additional lands for private industrial developments, the total extent earmarked for industrial uses is 2836 ha.

To meet the large scale commercial developments that might likely to come up due to proposed IT sector, industrial areas, educational institutions, Nandagudi Township, and development of IRR, STRR, and PWD Ring Road, an extent of 260 ha was proposed.

To attract population to Hoskote in order to curb population growth in Bangalore City, and for the provision of residential requirements for the benefit of large number of employees in the economic and other activities proposed and the service personnel, residential areas to an extent of 4402 ha, is proposed at suitable locations nearer to the activity areas for proper work – home relationships.

An area of 486 ha for public and semi public use was proposed to provide space for administrative and other financial purposes, medical facilities such as multi speciality hospitals, offices of multinational companies etc.

For recreational needs of the population, parks and open spaces to an extent of 490 ha was proposed including the water bodies within those areas.

An infrastructure corridor of 45 m wide was proposed connecting IRR, STRR, PWD Ring Road, NH- 207, Shiddalaghatta Road, Nandagudi Road, and NH-4 to provide convenient approach to IT sector area, educational/ institutional area, KIADB area covering 6000 ha and Nandagudi Township area.

Within the boundary of Nandagudi Township area, land use proposals were not planned as it is proposed to be developed by BMRDA as a joint venture.

5.3 POPULATION PROJECTIONS

5.3.1 LOCAL PLANNING AREA

Total population of Hoskote local planning area consisting of Hoskote town and 315 villages of entire Hoskote taluk and part of Bidarahalli hobli of Bangalore East taluk is 2,81,993 as per 2011 Census. This population is to be projected for the plan periods of 2021 and 2031.

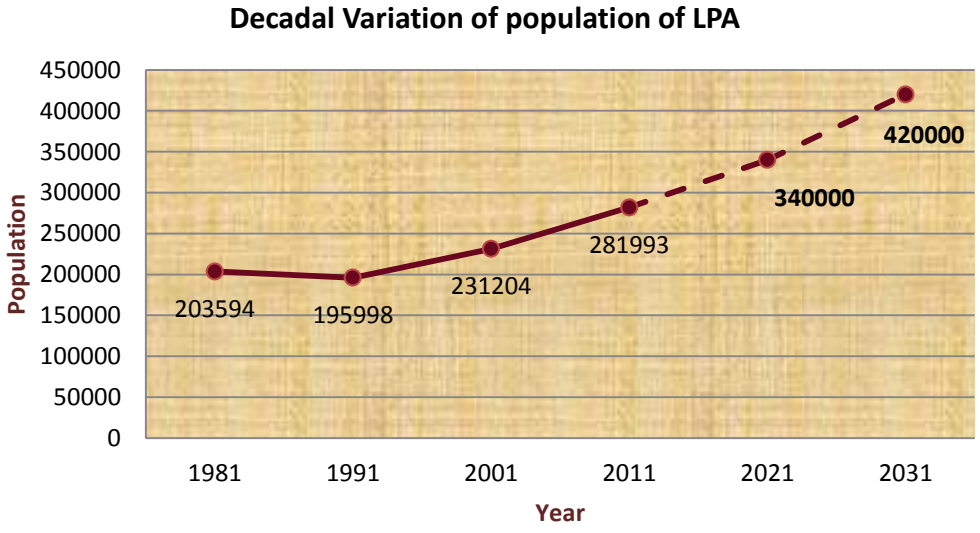
Population of the entire LPA at the end of plan period 2031 is projected using different natural growth methods and the details are given in ***Annexure 4.*** The projected population for the year 2021 and 2031 by different methods are given in ***Table 41*** below:-

Table 41: Population Projection for LPA

Sl.No.	METHODS	YEAR	
		2021	2031
1	Arithmetical Increase Method	343947	419512
2	Geometric Method	343883	419356
3	Trend Method	280414	336357
4	Percentage of Increase Method	316030	354175
5	Incremental Increase Method	337319	392645

After examining the above population projection methods outcomes and examining the existing scenario of economic development, the projection based on Arithmetical Increase Method is perceived to be the acceptable.Hence the projected population considered for the year **2021 will be 343947**and for the year **2031 will be 419512.**By rounding of these population values, population for the year **2021 will be 3,40,000** and for **2031 will be 4,20,000.** ***Figure 52*** depicts the decadal variation of population of LPA from 1981 to 2031.

Figure 54: Decadal Population of LPA from 1981-2031



5.4 HOSKOTE URBANISABLE AREA

Out of 316 villages of LPA, only those villages surrounding the Hoskote town and those surrounding villages of Bangalore east taluk are urbanisable and have greater potentiality of development. The list of those urbanisable villages along with Hoskote town is given in Schedule I below:

SCHEDULE I

Table 42 List of Villages and Town in Hoskote Urbanisable Area

SL. NO	VILLAGE NAME	HOBLI	SL. No.	VILLAGE NAME	HOBLI
1	Alappanahalli	KASABA (HOSKOTE)	41	Malimakanapura	KASABA (HOSKOTE)
2	Appajipura	KASABA (HOSKOTE)	42	Mallasandra	KASABA (HOSKOTE)
3	Bagalur	SULIBELE	43	Muthakadahalli	SULIBELE
4	Begur	SULIBELE	44	Muthasandra	SULIBELE
5	Bhaktharahalli	KASABA (HOSKOTE)	45	Naduvathi	KASABA (HOSKOTE)
6	Bhemakkanahalli	SULIBELE	46	Nagarenahalli	SULIBELE
7	Bodanahosahalli	ANUGONDAHALLI	47	Pethanahalli	KASABA (HOSKOTE)
8	Chandrapura	JADEGENAHALLI	48	Poojena Agrahara	KASABA (HOSKOTE)
9	Cheemandahalli	KASABA (HOSKOTE)	49	Samethanahalli	ANUGONDAHALLI
10	Chikka Amanikere	KASABA (HOSKOTE)	50	Sarakariguttahalli	KASABA (HOSKOTE)
11	Chikkagattiganabbe	KASABA (HOSKOTE)	51	Shankanipura	KASABA (HOSKOTE)
12	Chikkahullur	KASABA (HOSKOTE)	52	Shivadenahalli	SULIBELE
13	Chikkakoliga	SULIBELE	53	Sompura	KASABA (HOSKOTE)
14	Chikkanallurahalli	KASABA (HOSKOTE)	54	Sonnadenahalli	KASABA (HOSKOTE)
15	Chokkahalli	KASABA (HOSKOTE)	55	Sonnebychanahalli	SULIBELE
16	Cholappanahalli	KASABA (HOSKOTE)	56	Thimmasandra	SULIBELE
17	Dandupalya	KASABA (HOSKOTE)	57	Thirumalasettihalli	ANUGONDAHALLI
18	Dasarathimmanahalli	KASABA	58	Vagata	JADEGENAHALLI
19	Devalapura	ANUGONDAHALLI	59	Vagata Agrahara	JADEGENAHALLI
20	Devanagondi	ANUGONDAHALLI	60	Varadapura	KASABA (HOSKOTE)
21	Dodda Amanikere	KASABA (HOSKOTE)	61	Yelachanayakanapura	KASABA (HOSKOTE)
22	Doddadunnasandra	ANUGONDAHALLI	62	Bendiganahalli	BIDARAHALLI
23	Doddagattiganabbe	KASABA (HOSKOTE)	63	Bommenahalli	BIDARAHALLI
24	Doddahullur	KASABA (HOSKOTE)	64	Chikkasandra	BIDARAHALLI
25	Doddakoliga	SULIBELE	65	Gundur	BIDARAHALLI
26	Ekarajapura	SULIBELE	66	Hancharahalli	BIDARAHALLI
27	Ganagalu	KASABA (HOSKOTE)	67	Huskur	BIDARAHALLI
28	Gullahalli	SULIBELE	68	Jothipura	BIDARAHALLI
29	Gundrahalli	SULIBELE	69	Kammasandra	BIDARAHALLI

SL. NO	VILLAGE NAME	HOBLI	SL. No.	VILLAGE NAME	HOBLI
30	Harohalli	ANUGONDAHALLI	70	Kattugollahalli	BIDARAHALLI
31	Hoskote TMC	HOSKOTE - TMC	71	Kodigehalli	BIDARAHALLI
32	Hullur Amanikeri		72	Lagumenahalli	BIDARAHALLI
33	Jinnagara	JADEGENAHALLI	73	Mandur	BIDARAHALLI
34	Kacharakanahalli	JADEGENAHALLI	74	Raghuvanahalli	BIDARAHALLI
35	Kamblipura	SULIBELE	75	Shringaripura	BIDARAHALLI
36	Kanekallu	JADEGENAHALLI	76	Thirumenahalli	BIDARAHALLI
37	Kannurahalli	KASABA (HOSKOTE)	77	Vanajanahalli (B)	BIDARAHALLI
38	Kolathur	KASABA (HOSKOTE)			
39	Koralur	KASABA (HOSKOTE)			
40	Lakkondahalli	KASABA (HOSKOTE)			

Hoskote town and these 76 villages constitute Hoskote Urbanisable Area. The decadal population of these 77 villages including Hoskote town from the year 1981 to 2011 for the Hoskote Urbanisable Area are given in ***Table 43*** below.

Table 43: Decadal Population of Hoskote Urbanisable Area from 1981-2011

Sl. No.	Hoskote Urbanisable Area	Total Population in Numbers			
	Year	1981	1991	2001	2011
A	Hoskote TMC	17538	25533	36323	56613
B	Surrounding Villages of the Hoskote Town and Bangalore East Taluk	40637	57425	80316	114792
C	Villages in Bangalore East Taluk	5949	7499	9140	11683
	TOTAL (A+B+C)	**46586**	**64924**	**89456**	**126475**

Data source: 1981 to 2011 Census-Govt of India

Population of the Hoskote urbanisable area at the end of plan period 2031 is projected using different natural growth methods and the details are given in ***Annexure 4.*** The projected population of the Hoskote urbanisable area for the year 2021 and 2031 by different methods are presented in ***Table 44*** below.

Table 44: Urbanisable Area Population Projection

Sl.No	METHODS	YEAR	
		2021	2031
1	Arithmetical Increase Method	178810	252802
2	Geometric Method	178802	252778
3	Trend Method	125919	175745
4	Percentage of Increase Method	143131	161981
5	Incremental Increase Method	162446	198417

Data Source:Census data 1971-2011(Govt of India)

After examining the above population projection methods outcomes and examining the existing scenario of economic development, the projection based on Arithmetical Increase Method is perceived to be the acceptable. Hence the projected population considered for the year **2021 will be 178810** and for the year **2031 will be 252802.** By rounding off these populations, population for the year **2021** will be **1,80,000** and for the year **2031** will be **2,50,000.**

ASSUMPTIONS:

- The population projections are not based mainly on conventional methods, as it involves induced population in addition to its natural growth of population.
- With the completion of proposed STRR, IRR, Bangalore-Chennai Express Corridor, there will be large influx of population into Hoskote urbanisable area which will develop as a counter magnet to Bangalore city.
- The main reason for concentration of population in Hoskote is due to its proximity to Bangalore and better connectivity.
- In the structure plan of BMR, four growth nodes have been identified, out of which Hoskote is one of them and is proposed for manufacturing of hardware and agro-based products.
- In addition to the population projection estimations, the induced population for the Hoskote town has been suitably assumed and included in view of development potentials as explained above.
- The induced population is taken for population projection estimation as a population redistribution strategy in order to deflect the concentration of population from the over developed areas of Bangalore to the smaller urban centres like Hoskote so as to spread over in the region. The main intention was to relieve population pressure from the Bangalore city and overburden on infrastructure. The induced development

strategies will also provide an opportunity to improve the economy and infrastructure of smaller urban centres like Hoskote outside the Bangalore city.

OBSERVATIONS:

1. Population of the LPA as projected by different natural methods for the year **2021** will be **3,40,000** and for the year **2031** will be **4,20,000.** Population of the Hoskote urbanisable area as projected by different natural methods for the year 2021 will be **1,80,000** and for the year 2031 will be **2,50,000**.
2. Above observations indicate that out of 3,40,000 population of LPA, 1,80,000 will be accommodated in Hoskote urbanisable area by 2021. Similarly, out of 4,20,000 population of LPA, 2,50,000 will be accommodated in Hoskote urbanisable area by 2031. Remaining population will be distributed in different village settlements of LPA.
3. **Factors facilitating the growth of population:**
   i. Development of Industries: The additional population may be expected due to the impact of IT and related activities on the eastern side of Bangalore from Hosur Road to Bellary Road, the STRR and IRR proposed and due to the International Airport nearby. It is proposed to attract population to Hoskote area as Bangalore City is overcrowded and is facing serious problems like traffic congestion, inadequate infrastructure including shortage of water source, etc. The activities proposed to attract population are IT sector and related activities, automobile and hardware park and logistics in the LPA covering Bangalore East Taluk and along highways, the proposal of KIADB to develop about 4301 hectares (11,000 acres) for industrial purpose in two areas one on the North of Hoskote Town and the other to the West of IOC near Whitefield Railway Station. These industrial areas will attract industries for which housing facilities will be extended to accommodate the employees and the service sector.
   ii. Growth of educational institutions such as colleges, professional colleges.
   iii. Continuity of conurbation limit with the BDA limit will attract more population because of proximity to city, land availability and lower standard of living compared to city.

iv. All these activities are expected to attract/induce more population in addition to the natural increase of population in the LPA. Hence the induced population because of various future activities is assumed as 2,30,000 and 3,00,000 respectively for the 2021 and 2031.

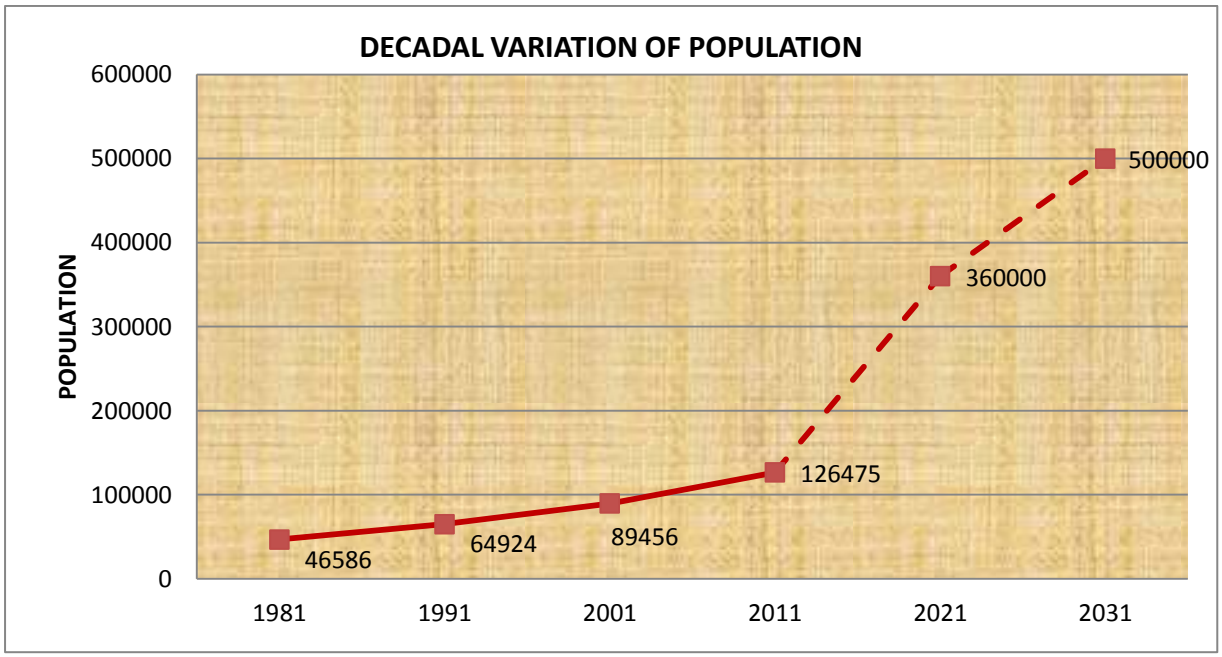
Considering all these potentials for development, the future population in the Hoskote urbanisable area will be as follows:

Table 45: Future population in Hoskote urbanisable Area

Sl. No.	DETAILS	POPULATION	
		2021	2031
1	Population Projected using different Methods (Rounded Off)	1,80,000	2,50,000
2	Induced Population (Assumptions)	1,80,000	2,50,000
	TOTAL	**3,60,000**	**5,00,000**

Hence the future Population of Hoskote Urbanisable Area considered for the planning periods, 2021 and 2031 are 3,60,000 and 5,00,000 respectively.

Figure 55: Decadal Variation of Population of Hoskote Urbanisable Area from 1981-2031



5.5 ANTICIPATED WORK FORCE

Total Population for the year 2031 will be 500000. The total Work Force is 48% and 37% in Hoskote Taluk and Hoskote TMC respectively as per 2001 census.

Considering anticipated work force as 45 % with the increase in economic developments in Hoskote urbanisable area, Total workers in 2031 will be 225000.

5.6 PROJECTED LAND REQUIREMENT

Land is a scarce commodity, the area of which is constant. Land utilization has to be done judiciously taking all aspects of urbanization, economic conditions, social and cultural aspects of the society as a whole.

Total land requirement to accommodate the projected population of 5,00,000 by 2031 and to provide facilities/infrastructure within the urbanisable area of LPA are worked out**.** The following ***Table 46*** shows the details of land area requirement for the projected population in the Master Plan.

Table 46: Land Area Requirement

Sl. No	LAND USE	Extent of Land in Approved Interim Master Plan,2021		Extent of Land Requirement for Projected Population		Additional Land Requirement for Projected Population		Remarks
		ha	%	ha	%	ha	%	
1	**Residential**	4765.00	26.70	5000.0	51.89	NIL*	NIL	*231.23 ha COL to Residential
2	**Commercial**	386.00	2.16	200.0	2.07	NIL	NIL	
3	**Industrial**	7957.00	44.60	265.25	2.75	NIL	NIL	
4	**Public/ Semi Public and Public Utilities**	668.00	3.76	500.0	5.19	NIL	NIL	
5	**Parks & Open spaces**	584.00	3.28	201.6	2.09	NIL	NIL	
6	**Transportation**	3468.00	19.50	3468	36.01	NIL	NIL	
Total		**17828.00**	**100**	**9634.85**	**100**	**NIL**	**NIL**	
Other Uses (Agriculture, Plantation, Water bodies, Forest)		**41344.00**						
LPA Extent		**59172.00**						

Note:

- Existing Area within Conurbation limit is sufficient to meet the needs of projected population, 2031.

- Large extent of area is proposed outside the conurbation for Urban Forestry.

As per the above Table, additional area required for projected population is nil as conurbation area of the IMP itself is vast and areas reserved for various land uses are also more. Hence the conurbation limits are to be rationally re-fixed in the Master Plan for the provision of infrastructure and governance of local administration keeping in mind the statutory changes to be incorporated in the Master Plan.

5.7 ECONOMIC CONSIDERATIONS OF THE LPA

5.7.1 GENERAL ECONOMY

The Bangalore city has witnessed economic boom in IT and ITES sector during the last decades. Industrial based development is gradually being replaced by tertiary sector based development in Bangalore. Within the territory sector, informal sector will be dominating. Most of these IT and ITES are expected to be located in the BMR area, BMR area will also attract technology related industries such as biotechnology, nanotechnology and light engineering industry. Also BMR will become strong base for education and research institutions.

However, cluster growth and agglomerations economies that enable the growth of the city worked negatively for the poor of the Bangalore. High land prices and high cost of infrastructure resulted increasing informality in housing as well as work force. At present there is a special split of economic activities with strong clusters emerging in terms of industrial clustering even among the towns surrounding Bangalore city which has potential to emerge as strong economies.

As per BMR RSP 2031, 43% of working participation rate and a high employment rate about 30% of the total population has enhanced investment climate in BMR. Higher working force is anticipated in coming years as a result of population growth both natural and due to migration in BMR. With higher WPR, it is assumed that most of that will be in tertiary sector occupation which will be propelling the economy of the region and the city.

Hoskote is lying in the cone of manufacturing and service sector based development as emerged from the spacio-economic dynamics of BMR RSP 2031. And concentration of investment is more on these sectors in and around Hoskote and Anekal. According to BMR

RSP 2031, Hoskote is proposed for Hardware park. With good regional linkages, proximity to international airport and clusters of manufacturing, industrial and textile base has prompted several regional level facilities to be planned by various departments such as the world trade centre and an integrated food park. Logistics and transport hub with inter modal interchange hub could also be proposed.

5.7.2 HIGHLIGHTS OF THE KARNATAKA INDUSTRIAL POLICY 2009-14

The Policy envisions to make Karnataka prosperous through development of human and natural resources in a systematic, scientific and sustainable manner, targets to provide additional employment for about 10 lakh people in the next five years, efforts to increase the share of industry to the State GDP to 20 percent by the year 2014, to double the State's exports from the present Rs 1,30,000 crores Focus on providing quality infrastructure across the State, thrusts on skill development and entrepreneurship promotion, added focus on development of small and medium industries and Performance and employment linked incentives and concessions. With the Karnataka Industrial Policy 2009-14 the State Government's objective was to make the policy more attractive to entrepreneurs as well as investors irrespective of the size of investments.

According to the Karnataka Udyog Mitra (KUM) officials, in the industrial policy, impetus is given to the manufacturing sector and to export promotion, creating potential for storage, clearing and forwarding operations and other ancillary operations around the city. Classification of taluks into zones was introduced for the purpose of administering graded scale of incentives and concessions.

Accordingly, Hoskote has been classified under Zone 4 which comes under 'industrially developed taluk'. The target of the industrial policy is to provide additional employment for about 10 lakh persons by 2014. Hoskote industrial area houses auto spare parts industries, auto body and chassis works, as well as logistics and warehousing units for petroleum products. Three major oil companies have their storage and marketing outlets at Devangondi village. An IT and hardware park too has been planned.

IT SEZ - an exclusively-designed special economic zone (SEZ) for electronics hardware and IT has been notified at Bagur village. It is proposed to be a 108-acre park-like campus for IT companies and is under implementation. Once it becomes operational, the SEZ will create

employment for nearly 98,000 people. Automobile and spare parts with a multinational automobile major starting a manufacturing unit in Hoskote, a number of small industriesmanufacturing auto spare parts, spark plugs, suspensions, and leaf springs came up in the vicinity. Manufacture of earthmoving equipment too is a major industry here.

Warehousing and logistics - According to a Jones Lang LaSalle Meghraj report on Indian Warehousing, Bangalore features fourth on the list of primary warehousing hubs led by New Delhi, Mumbai and Chennai. A multinational logistics company has planned a logistics park at Kambalipura village in Hoskote. With international companies coming here, warehousing is set to change from old-fashioned storage sheds to planned hubs that are designed to serve as inventory management and storage spaces for retail chains and manufacturing units.

Small industries - The warehousing and auto industries have spawned a number of small engineering units along old Madras Road. Small manufacturers of precision tools, medical equipment, plating and surface coating units have mushroomed in the vicinity enhancing scope for employment from the surrounding villages.

Hence the development framework for the Hoskote LPA should address these areas so as tend to be mono-functional and act as exclusive enclaves that detract from the region'sliveability. In order to strengthen their forward and backward regional economies, regional level facilities are to be developed.

5.7.3 EXISTING INDUSTRIAL SCENARIO

Existing industrial areas and proposed industrial areas are located in and around Hoskote town. BPL, Bengal lamps and several other manufacturing industries are dispersed along the NH-7 linking it to the industrial area in K.R.Puram, which includes the ITI and the Tin factory. United motors and Heavy Equipment Pvt. Ltd located at KIADB industrial area is one of the major hi-tech engineering industry manufacturing spares of heavy earth moving machineries. Bell Ceramics Ltd. Located at Chokkalli village and the manufacturing unit of Volvoare also located in this area. The economy is product based manufacturing with a concentration of heavy engineering industries in the KIADB estate at Hoskote, and textile and tobacco products. Oil refineries and silk manufacturing also dominate the economy of this area.

5.8 HOUSING REQUIREMENTS

For the future population of plan period, assuming 4.8 as family size, number of houses required at the end of plan period 2021 and 2031 will be 75,000 and 1,04,170. Hence additional houses are required to be provided to accommodate additional population of 373525in the Hoskote urbanisable area. This population is to be accommodated in the Hoskote urbanisable area based on work-home relationship. However because of non-availability of housing statistics in Hoskote urbanisable area for the year 2011, housing requirements could not be accounted

5.9 PHYSICAL INFRA STRUCTURE REQUIREMENTS

Physical infrastructure requirements especially road connectivity and accessibility, water supply, underground drainage system and solid waste management are most important to be addressed.

5.9.1 ROAD CONNECTIVITY AND ACCESSIBILITY

Transportation plays a pivotal role in overall development for the economic development of any region. It contributes to the economic, industrial, social and cultural development of the region. The adequacy of transportation system indicates its economic and social development.

Entire LPA as well as the town have good connectivity, accessibility and road network. All the villages should be connected by all weather roads and overall density of the roads should be 100 km per 100 sq km area as per National IV 20-year Road development Plan. All the villages within the LPA are accessible and connected by all weather pucca roads. Road density / 100 sq km of area in the LPA is 156 which is higher than the target to be achieved. Only the existing width of some of the villages needs to be widened for better movement and safe operation of vehicles.

5.9.2 WATER SUPPLY

FUTURE DEMAND FOR WATER

- As per the population projection by 2031 the Hoskote urbanisable area will have a population of 5,00,000 and the demand is likely to be around 50,000,000 lpd or 50.0 MLD at 100 lpcd. Presently water is supplied from energised borewells and

hand pumps and is inadequate. Hence additional demand needs to be met either by sinking additional borewells or from Cauvery IV Phase which is being extended to KR Puram and which is about 13 km from Hoskote Town.

- KIADB has proposed two Industrial areas one near the existing industrial area (413 Acres or 167 ha) and the extent is about 2429 ha (6000 Acres) west of the proposed township covering 2024 ha (5000 Acres). The other industrial area near IOC near the village Naduvathi covering 1383 ha (3418 Acres). A small triangular area falling between Chintamani Road and Shidlaghatta Road covering 489 ha is also proposed for inclusion for compact development. Thus a total of 4301 ha (approx. 11000 Acres) is proposed for Industrial development in the LPA. Though exact water requirements cannot be spelt out at this stage as it depends upon the type of industry likely to be setup. However, in view of the scarce water availability and the existing ground water conditions it is imminent that only industries requiring less water are recommended to be set up. The anticipated requirement is around 13 MLD (130,00,000 lpd). This quantity considering about 40 kl per day (which is the average yield in the area) can support about 325 industries including the human consumption working in the various industries.
- Similarly, IT Sector and Educational Institutions are anticipated in the urbanisable area. The IT Sector consumes more water in view of higher standards required to be observed, however, for the educational institutions it can be less. A demand of 5.0 MLD (5000000 lpd) is anticipated and can be expected to employ around 50000 at 100 lpcd. The educational sector will also have institutions where the student –teacher population likely to be around 20000 with a consumption of 100 lpcd to maintain better international standards. The water required will be around 2.0 MLD (2000000 lpd) the total demand will be around 7.0 MLD.
- Apart from the above, for the industrial housing and other activities to house the workers, labourers who will work in the industrial, IT and educational sectors, the demand is expected to be around 5.0 MLD. Thus the total water demand will be :

Table 47: Water Demand -2031 for Hoskote LPA based on Projected Pop

S.No	Sector	Demand
1	For projected population of 500000 at 100 lpcd for Hoskote urbanisable area	50.0 MLD
2	For Industrial Area	13.0 MLD
3	For IT Sector	5.0 MLD
4	For Educational Institutions	2.0 MLD
5	For Industrial Housing and other activities	5.0 MLD
Total requirement		**75.0 MLD**

NOTE:Data result derived may be subject to rounding)

Part of the water requirement can be met from the Cauvery –IV phase as the pipelines are only to be extended from the KR Puram to Hoskote town a distance of 13 km. However in view of uncertainty of supply from Cauvery –IV Phase, this possibility can be considered at a later stage but immediately in order to meet the demand, there need to be massive investment to improve the ground water availability and resort to drilling of bore wells to the extent to meet the demand locally. In this scheme of things, the demand for industries is not considered at present as the agricultural land which is being converted to the industrial use is already having a bore well in most of the cases, as only such land is being sold along with the borewell for industrial/ housing / educational purposes and the draft from such borewells are accounted for under draft from irrigation wells.

Depending up on the actual requirements of housing and other activites, additional bore wells can be planned, in future. Borewells which yield around 3 – 4 lps for a pumping period of 10 hours per day are required to be drilled to meet the demand.

The number of bore wells can be reduced if recycling of waste water is resorted for industrial housing and other activities and for other uses of the urbanisable area. The location for these bore wells needs to be investigated by following proper investigations and prospecting methods, so that drilling of dry borewells can be avoided. However before embarking on drilling of bore wells, it is essential that ground water recharging methods and measures are taken up immediately so that further decline in water levels and other deleterious effects due to overexploitation can be avoided.

5.9.3 POWER REQUIREMENTS IN HOSKOTE URBANISABLE AREA BY 2031

1. Population projected for urbanisable area by the year 2031 is 5 lakhs. The No. of households expected by that time will be about 1,04,170. The total requirement of power for residential is (5 x 104170) – 5,20,850 KW or 520 MW. The demand for industries that will come up may be calculated later after the development of the industrial areas and industrial activities.
2. The requirement of the power for IT sector, educational institutions, public and semi public uses etc., may have to be considered by BESCOM as and when substantial developments takes place.

5.10 SOCIAL INFRA STRUCTURE REQUIREMENTS

5.10.1 HEALTH

The pivotal role of social infrastructure in development has been recognized in the various national and statelevel planning policies. In conformation with the national and state agenda, health care has been given prime importance during the planning process. A stock of existing facilities has been taken and thedeficiencies and requirements for year 2031 have been calculated. The existing indicators of the health havebeen analysed and targets have been set till the year 2031.

5.10.2 INCREASING HEALTHCARE INSTITUTIONS

The table below shows the requirement of health facilities and the area required in Hoskote town.

Table 48: Health facility Requirement

SL. No	Facility	Range of population	Units required	Unit Area required in ha	Existing Units	Additional Units Required	Total Area Required in ha
1	Dispensary + Private clinics	10,000-15,000	50	0.5	49	1	0.5
2	Polyclinics	1,00,000	5	0.1	12	Adequate	Adequate
3	General Hospital	1,00,000	5	8	1	4	32
4	Nursing Home, Child welfare and Maternity Centre(25-30 beds)	1,00,000	5	0.3	2	3	0.9
TOTAL						**8**	**33.4**

It can be seen that 33.4 ha of land are required for health facilities in Hoskote urbanisable area for the year 2031. Health facilities can be located suitably to ensure proper accessibility and connectivity from all urbanisable areas.of the Hoskote.

5.10.3 INCREASING ACCESSIBILITY TO HEALTHCARE

Healthcare facilities should be set up in every village and clusters so that basic healthcare isaccessible to all people. Regulatory and administrative framework should be strengthened to ensure availabilityof medical professionals in all healthcare institutions.

Mobile health clinics can be introduced to improve accessibility in remote areas. Healthcare should also bemade a part of corporate social responsibility (CSR) for the industries that would be set up in the region.Technology like telemedicine should be used to make healthcare accessible even in remote corners of the LPA.

5.10.4 HEALTHCARE MONITORING

Regular monitoring of health statistics should be undertaken in the LPA to prepare a database and monitor increase or decrease in health status. Monitoring should be specially undertaken in and around industrial areas to analyse the impact of industries on public health.

5.10.5 INSTITUTIONAL FRAMEWORK

Institutional and administrative framework should be strengthened and organized to ensure swift service delivery and strict monitoring and operation of healthcare services. Decentralization of healthcare service should also be accomplished at LPA level, wherein monitoring can be done through Panchayats and Civil Societies.

5.10.6 EDUCATION

Education is recognised as fundamental human right along with other necessities such as food, shelter and water. It offers multi dimensional and multi faceted advantages on both individuals and nation/region. It sustains economic growth by providing basic as well as specialised skills that ensure increased productivity and higher per capita income. Hence adequate facility and infrastructure for education is to be provided within the LPA.

5.10.7 EDUCATIONAL FACILITY REQUIREMENT

The following table shows the requirement of educational facilities in the urbanisable area of Hoskote. Basic education would be strengthened by providing primary and secondary schools at settlement level ensuring proper accessibility and connectivity from all areas of the LPA. Colleges would be provided at the major settlements. Technical Institutions, Engineering colleges and Medical colleges would be planned across the LPA to increase technical capacity in the workforce to match the employment potential of the region.

5.10.8 INCREASE LITERACY RATE

The overall literacy of the Taluk is 69.88 % as against that of State of Karnataka is 75% and the national literacy rate is 74.5%. Basic education facilities need to be strengthened to increase the literacy rate. Education programmes such as mid-day meals, free bicycles, free uniforms and bags should be promoted in order to achieve the goal.

Table 49: Educational facility Requirement

S .No	Facility	Range of population	Units required	Unit Area required, ha	Existing Units	Additional Units Required	Total Area Required
1	Creche	10,000-15,000	33	0.08	19	14	1.15
2	Nursery School/ Primary	5,000	100	0.4	18	82	32.80
3	Secondary/High School	10,000-15,000	33	2	9	24	48.00
4	College (Degree + pre-university)	50,000	10	6	3	7	42.00
5	ITI Institutes	50,000	10	4	0	10	40.00
6	Engineering college	1,00,000	5	10	1	4	40.00
7	Medical College + Hospital	2,50,000	2	12	1	1	12.00
				TOTAL	**51**	**142**	**215.95**

5.10.9 INCREASE ENROLMENT RATIO IN THE LPA AND DECREASE DROP-OUT RATE

Efforts should be made to increase enrolment rates in secondary schools. Schools should be set up within communicable distances from villages so that education is accessible to everyone. Incentives should be provided so that students do not have to leave education to support their families economically.

5.10.10 STUDENT TEACHER RATIO

Student teacher ratio should meet the standards prescribed by the 'Right of Children to Free and Compulsory Education Act 2009. A ratio of 1:30 should be maintained in primary schools and 1:35 should be maintained in secondary schools.

5.10.11 INFRASTRUCTURE FACILITIES IN SCHOOLS

Infrastructure facilities should be improved in schools across the LPA. Separate girls' toilet should be provided in every unit. Drinking water facility and play grounds should be made compulsory in all schools. Universally accessible design of structures should be followed for all units.

5.10.12 OTHER INFRASTRUCTURE AND CIVIC AMENITY REQUIREMENTS

In addition to health and education facilities, urbanisable area needs other civic amenities like kalyanamantapa, community centre, police station, fire station, post office/sub post office, religious building etc, for recreation, safety and convenience of the residents. Additional units required and areas required are calculated as per the standards and are given in ***Table-50***

Table 50: Other Infrastructure and Civic Amenities Requirements

Sl .No	Facility	Range of population	Units required	Unit Area required, ha	Existing Units	Additional Units Required	Total Area Required
1	Kalyana mantapa / Community Centre	10,000-15,000	33	0.8	5	28	22.67
2	Police Station	1,00,000	5	0.8	2	3	2.40
3	Fire Station	1,00,000	5	0.8	1	4	3.20
4	Sub Post Office*	10,000-15,000	33	0.004	0	33	0.13
5	Post Office	50,000	10	0.4	42	Sufficient	-
6	Telephone Exchange	1,00,000	5	0.4	20	Sufficient	-
7	Religious Building	10,000-15,000	33	0.8	18	15	12.00
8	Electric Substation	30,000	17	0.5	4	13	6.33
9	Grid Sub Station	1,00,000	5	0.5	4	1	0.50
					Total	**97**	**47.23**

*to be provided within shopping centre

The proposed land use plan delineates 315.55 ha of land for Public and Semi-public and public utility purposes. In addition, 5 % of the area in newly formed layouts will be reserved for Civic amenities during approval. Hence according to the requirements, suitable areas will be reserved for the provision of infrastructure.

5.11 PARTICIPATORY APPROACH

Successful implementation of plan is possible through participatory approach. All stakeholders consultation and public involvement is necessary to make the plan more effective and acceptable. Hence all stakeholders were consulted to get information/

details/requirements/ proposals necessary for the preparation of Master Plan. Accordingly they are utilised/ incorporated in the Master Plan. List of stakeholders consulted are given in ***Annexure 5.***

FINAL MASTER PLAN STAGE

5.12 HOSKOTE URBANISABLE AREA AS PER REVISED CONURBATION LIMIT

Hoskote LPA has 316 villages out of which 51 STRR villages and 36 villages of Nandagudi Township is excluded and those villages surrounding the Hoskote town and those surrounding villages of Bangalore east taluk are urbanisable and have greater potentiality of development. Hence after revision of Conurbation limit, Hoskote urbanisable area consists of 80 villages the list of those urbanisable villages along with Hoskote town is given in Schedule II below:

SCHEDULE II

Table 51: List of Villages and Town in Hoskote Urbanisable Area as per revised conurbation limit

Sl.No	Villages	Hobli	Population 2001	Population 2011
1	AJJAGONDAHALLI	ANUGONDANAHALLI	340	406
2	DEVANAGONDI	ANUGONDANAHALLI	1721	2004
3	GULLAKAIPURA	ANUGONDANAHALLI	8	99
4	HAROHALLI	ANUGONDANAHALLI	1047	1117
5	KOTUR	ANUGONDANAHALLI	704	961
6	MUTHASANDRA	ANUGONDANAHALLI	516	1615
7	THIMMADAHALLI	ANUGONDANAHALLI	141	203
8	BENDIGANAHALLI	BIDARAHALLI		
9	BOMMENAHALLI	BIDARAHALLI		
10	CHIKKASANDRA	BIDARAHALLI		
11	GUNDUR	BIDARAHALLI		
12	HANCHARAHALLI	BIDARAHALLI		
13	HUSKUR	BIDARAHALLI		
14	JOTHIPURA	BIDARAHALLI		
15	KAMMASANDRA	BIDARAHALLI		
16	KATTUGOLLAHALLI	BIDARAHALLI	9140	11690
17	KODIGEHALLI	BIDARAHALLI		
18	LAGUMENAHALLI	BIDARAHALLI		
19	MANDUR	BIDARAHALLI		
20	RAGHUVANAHALLI	BIDARAHALLI		
21	SRINGARAPURA	BIDARAHALLI		
22	THIRUMENAHALLI	BIDARAHALLI		
23	VANAJANAHALLI	BIDARAHALLI		
24	ALAPPANAHALLI	HOSKOTE	1032	1103
25	CHEEMANDAHALLI	HOSKOTE	524	606

Sl.No	Villages	Hobli	Population 2001	Population 2011
26	CHIKKAHULLUR	HOSKOTE	932	1615
27	CHIKKANALLURAHALLI	HOSKOTE	437	674
28	CHOKKAHALLI	HOSKOTE	1182	2242
29	CHOLAPPANAHALLI	HOSKOTE	607	1279
30	DASARATHIMMANAHALLI	HOSKOTE	0	0
31	DODDAHULLUR	HOSKOTE	1278	1701
32	GANGALU	HOSKOTE	473	470
33	HALASAHALLI	HOSKOTE	666	713
34	KANNURAHALLI	HOSKOTE	1561	2644
35	KOLATHUR	HOSKOTE	1299	1568
36	PETHANAHALLI	HOSKOTE	502	577
37	PILLAGUMPE	HOSKOTE	702	1272
38	SARAKARIGUTTAHALLI	HOSKOTE	969	1095
39	SOMPURA	HOSKOTE	484	521
40	SONNADENAHALLI	HOSKOTE	450	499
41	YELACHANAYAKANAPURA	HOSKOTE	50	86
42	MALIMAKANAPURA	HOSKOTE	650	1042
43	CHIKKA AMANIKERE	HOSKOTE	60	174
44	HOSKOTE CMC	HOSKOTE	36323	56980
45	HULLURAMANIKERI	HOSKOTE	0	0
46	SHANKANIPURA	HOSKOTE	896	1046
47	THARABAHALLI	JADIGENAHALLI	752	851
48	DODDADASARAHALLI	JADIGENAHALLI	458	442
49	DODDANALLURAHALLI	JADIGENAHALLI	1084	1250
50	JINNAGARA	JADIGENAHALLI	665	783
51	JADIGENAHALLI	JADIGENAHALLI	1877	1977
52	CHANDRAPURA	JADIGENAHALLI	0	0
53	SOLUR	JADIGENAHALLI	716	873
54	VAGATA	JADIGENAHALLI	1021	1098
55	VAGATAAGRAHARA	JADIGENAHALLI	736	751
56	HARALUR	JADIGENAHALLI	692	832
57	KANEKALLU	JADIGENAHALLI	410	404
58	ANKONAHALLI	NANDAGUDI	2	0
59	BANAMAKANAHALLI	NANDAGUDI	321	420
60	MANCHAPPANAHALLI	NANDAGUDI	613	625
61	THAVAREKERE	NANDAGUDI	2059	2481
62	YELACHAHALLI	NANDAGUDI	1183	1251
63	GORAVIHALLI	NANDAGUDI	0	0
64	LINGAPURA	NANDAGUDI	363	392
65	DODDENAHALLI	NANDAGUDI	520	616
66	BEGUR	SULIBELE	1339	1436
67	BHEMAKKANAHALLI	SULIBELE	594	691
68	CHIKKAKOLIGA	SULIBELE	197	229
69	CHOWDASANDRA	SULIBELE	0	0
70	EKARAJAPURA	SULIBELE	401	715
71	GUNDRAHALLI	SULIBELE	72	9
72	KAMBLIPURA	SULIBELE	1125	1272
73	KEMPAPURA	SULIBELE	272	316

Sl.No	Villages	Hobli	Population 2001	Population 2011
74	MUTHAKADAHALLI	SULIBELE	419	339
75	MUTHASANDRA	SULIBELE	1564	676
76	NAGARENAHALLI	SULIBELE	336	330
77	SONNEBYCHANAHALLI	SULIBELE	192	175
78	DODDAKOLIGA	SULIBELE	378	388
79	BAGALUR	SULIBELE	193	231
80	GULLAHALLI	SULIBELE	1030	1059

The decadal population of these 80 villages including Hoskote city from the year 1991 to 2011 for the Hoskote Urbanisable Area are given in ***Table 52*** below.

Table 52: Decadal Population of Hoskote Urbanisable Area from 1991-2011

Sl.No.	Hoskote Urbanisable Area	Total Population in Numbers		
	Year	1991	2001	2011
A	Hoskote CMC	25533	36323	56980
B	Surrounding Villages of the Hoskote Town	33667	40815	50244
C	Villages in Bangalore East Taluk	7499	9140	11690
TOTAL (A+B+C)		**66699**	**86278**	**118914**

Data source: 1991 to 2011 Census-Govt of India

Population of the Hoskote urbanisable area at the end of plan period 2031 is projected using different natural growth methods and the details are given in ***Annexure 4.*** The natural growth projected population of the Hoskote urbanisable area for the year 2021 and 2031 by different methods are presented in ***Table 53*** below.

Table 53: Urbanisable Area Natural growth Population Projection Excluding Nandagudi Township and STRR

Sl.No	METHODS	YEAR	
		2021	2031
1	Arithmetical Increase Method	154588	190262
2	Geometric Method	158539	211367
5	Incremental Increase Method	158079	210300

After examining the above population projection methods outcomes and examining the existing scenario of economic development, the projection based on Arithmetical Increase Method is perceived to be the acceptable.Hence the projected population of Hoskote urbanisable area considered for the year **2021 will be 154588** and for the year **2031 will be 190262.** (For details Refer 2.6 section-Demography chapters).

The Hoskote Urbanisable area consists of 80 villages including one Hoksote CMC. The population of Hoskote CMC as per **2011 census is 56980** and population of other urbanised villages excluding Hoksote CMC is **61934 as per 2011 census** as in ***Table 52***. The natural growth projected population of Hoskote CMC and other urbanised villages area presented in below ***Table 54***.

Table 54: Urbanisable Area (Hoskote CMC and other Urbanised Villages) Natural Growth Population Projection

Sl.No	METHODS	Urbanised Villages		Hoskote CMC	
		2021	2031	2021	2031
1	Arithmetical Increase Method	80514	99094	74074	91168

ASSUMPTIONS:

- The population projections are not based mainly on conventional methods, as it involves induced population in addition to its natural growth of population.
- With the completion of proposed STRR, IRR, Bangalore-Chennai Express Corridor, there will be large influx of population into Hoskote urbanisable area which will develop as a counter magnet to Bangalore city. CBIC industrial area in Hoskote LPA is 1000 Acres*55 jobs/Acres as per URDPFI guidelines and considering 4 as

household size, the in migrating population will be 2.2 lakhs. CBIC industrial area around the Hoskote LPA is 1898 Acres*55 jobs/acres as per URDPFI guidelines and considering 4 as household size, the in migration population is 4.17 lakhs.

- The KIADB industrial area in Hoksote LPA is 1721 Acres*55 jobs/Acres as per URDPFI guidelines and considering 4 as household size, the in migrating population will be 3.78 lakhs.
- The main reason for concentration of population in Hoskote is due to its proximity to Bangalore and better connectivity.
- The induced population is taken for population projection estimation as a population redistribution strategy in order to deflect the concentration of population from the over developed areas of Bangalore to the smaller urban centres like Hoskote so as to spread over in the region. The induced development strategies will also provide an opportunity to improve the economy and infrastructure of smaller urban centres like Hoskote outside the Bangalore city.

OBSERVATIONS:

1. The population of Hoskote LPA excluding Nandagudi Township and STRR is 1.56 lakhs in 2001 and 1.94 lakhs in 2011 as per census. The natural growth projected population of 2021 is 2.50 lakhs and 2031 is 3.0 lakhs.
2. Above observations indicate that out of 2.50 lakhs population of LPA, 1.54 will be accommodated in Hoskote urbanisable area by 2021. Similarly, out of 3.0 lakhs population of LPA, 1.9 lakhs will be accommodated in Hoskote urbanisable area by 2031. Remaining population will be distributed in different village settlements of LPA.
3. The KIADB industrial development and proposed Bangalore-Chennai Express Corridor, is expected to induce more population in addition to the natural increase of population in the LPA. Hence the induced population because of various future activities is assumed as 4.20 lakhs 2031. (For details Refer 2.6.2 section-Demography chapters).

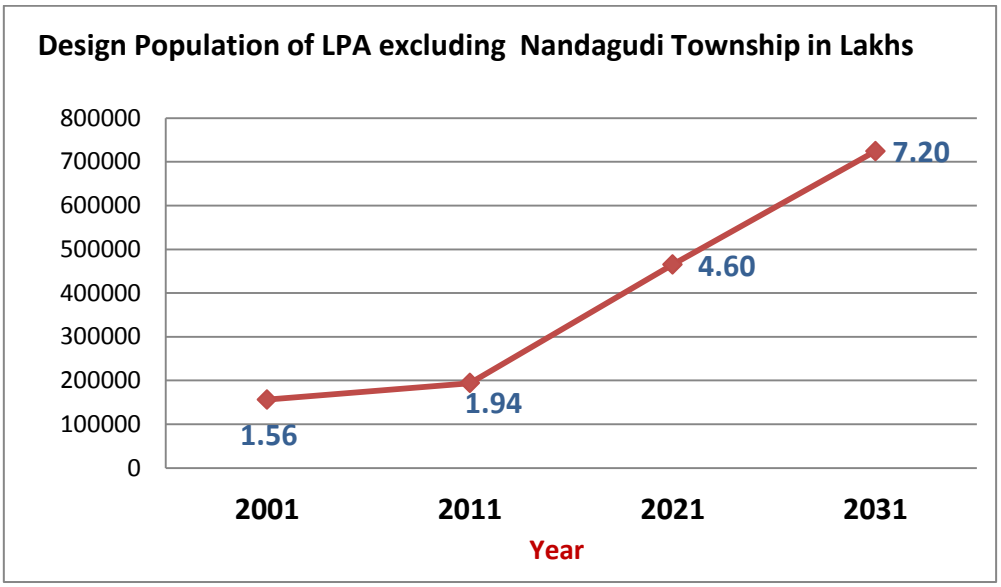
   Considering all these potentials for development, the future population in the Hoskote urbanisable area will be as follows:

Table 55: Future Population in the Hoksote Urbanisable Area excluding Nandagudi Township

ITEM	2021 (lakhs)	2031(lakhs)
NATURAL GROWTH POPULATION	2.50	3.00
IN MIGRATION POPULATION	2.10	4.20
PROJECTED POPULATION 2031	**4.60**	**7.20**

Hence the future Population of Hoskote Urbanisable Area considered for the planning periods, 2021 and 2031 are 4.60 Lakhs and 7.20 lakhs respectively.

Figure 56: Decadal Variation of Population of Hoskote Urbanisable Area from 2001-2031



5.13 PROJECTED LAND REQUIREMENT

Land is a scarce commodity, the area of which is constant. Land utilization has to be done judiciously taking all aspects of urbanization, economic conditions, social and cultural aspects of the society as a whole. The land requirement for 2031 is calculated by considering the landuse structure of medium towns category as listed in URDPFI guidelines.

Table 56: Landuse structure for Urban centres

Sl.No	Landuse Category	Small in %	Medium in %	Large Cities in %	Metropolitan Cities & Megapolis in %
1	Residential	45-50	40-45	35-40	35-40
2	Commercial	2-3	3-4	4-5	4-5
3	Industrial	8-10	8-10	10-12	12-14
4	Pub.& Semi Public	6-8	10-12	12-14	14-16
5	Recreational	12-14	18-20	18-20	20-25
6	Transport & Communication	10-12	12-14	12-14	15-18
7	Agriculture and Water Bodies	Balance	Balance	Balance	Balance
	Total Developed Area	**100**	**100**	**100**	**100**

SOURCE: URDPFI GUIDELINES

Total land requirement to accommodate the projected population of 7.20 lakhs by 2031 and to provide facilities/infrastructure within the urbanisable area of LPA are worked out**.** Land requirement for each landuse when compared with URDPFI guidelines and the Master plan provisional landuse for 2031 for Hoskote LPA including STRR and Nandagudi Township is detailed out in the below ***Table 57***.

Table 57: Land Area Requirement as per provisional Master Plan

SL.No	LANDUSE	As per MP Provisional LPA excluding STRR and Nandagudi Township for Conurbation		Urdpfi guidelines for medium towns	Area under different uses as per urdpfi	Required land in Sq.Km
		AREA (Sq.Km)	Percentage (%)	Percentage (%)	AREA (Sq.Km)	
		A	B	C	D	(A-D)
1	Residential	29.23	34.95	43.00	35.97	-6.74
2	Commercial	3.96	4.73	4.00	3.35	0.61
3	Industrial	26.37	31.53	9.00	7.53	18.84
4	Public/Semi public	2.17	2.59	19.00	8.36	-6.19
5	Park/Open space	9.70	11.60	10.00	15.89	-6.19
6	Public Utility	0.69	0.82	2.00	1.67	-0.98
7	Transportation	11.52	13.77	13	10.87	0.65
	Sub total	**83.64**	**100.00**	**100.00**	**83.64**	
	Forest land	1.56				
	Unclassified	2.55				
	Water Bodies	9.91				
	GRAND TOTAL	**97.66**				

Note:

- 6.74 sq.km additional residential area is required as per URDPFI guideline to accommodate the anticipated population of 2031.
- Existing commercial area is more than sufficient to accomodate the 2031 population.
- Industrial area in excess to accommodate the anticipated population of 2031. Due to the upcoming industrial activities in and around the Hoskote LPA such as KIADB, CBIC, VOLVO factory, etc.
- 6.19 sq.km additional public/ semipublic and Park/open space area is required as per URDPFI guideline to accommodate the anticipated population of 2031
- After updating and considering public comments each landuse area is revised in Final Master Plan 2031 as in ***Table 66*** of Chapter 7.

5.14 STRENGTH, WEAKNESS, OPPURTUNITIES AND THREATS (SWOT) ANALYSIS

In the foregoing chapters, the demographic and geographic characteristics of the taluk, natural resource endowment, existing industrial, commercial and social infrastructure, prevailing industrial base, etc., have been discussed. Taking all these aspects and overall development into consideration, SWOT analysis of the taluk is presented below:

5.14.1 STRENGTHS AND OPPORTUNITIES

- Major strength of Bangalore Rural District in general and Hoskote taluk in particular, is derived from the reputation of Bangalore as a preferred global destination, particularly for hi-tech, knowledge industries and land-intensive industrial projects.
- houses a substantial percentage of public / private sector Companies and other MNCs in diverse sectors such as apparel, automobile, food processing, machine tools, precision engineering, software, IT enabled services, etc.
- Some industry groups are expected to be re-located from Bangalore (Urban) to Bangalore (Rural) as per the Mega Plan envisaged by Bangalore Metropolitan Regional Development Authority (BMRDA) for infrastructure development of Bangalore Urban and Rural Districts.

- A network of 8-lane / 6-lane roads comprising Satellite Towns Ring Road (STRR) and Intermediate Ring Road (IRR) to improve connectivity to all the taluks of Bangalore Rural District.
- Under the Mega Plan, an integrated township at Nandagudi, spread over 18507 acres comprising of 36 villages of Nandagudi Hobli with the cost of Rs.6600 crores have been envisaged. This project promises industrial growth and employment generation in the region.
- Destination for manufacturing sector, as evidenced by the presence of multinational automobile giants including Volvo in the taluk.
- An emerging investment destination for industrial segments such as pharmaceuticals, automobiles and auto components, aerospace, apparel, food processing, machine tools, floriculture, precision components, tooling, etc., because of proximity to Bangalore and due to the constraint on the availability of land in Bangalore Urban District.
- The Bangalore International Airport is about 25 km from Hoskote which provides a vital link to international destinations enhancing the overall economic development.
- Taluk including Bangalore Rural District ranks third in milk production in the State. Continuous market availability for milk products in Bangalore.
- Good livestock population, as the taluk has salubrious climate conducive for rearing Cross Breed Cows (CBC), ram and sheep fattening, piggery and poultry.
- The climatic conditions of the taluk are suitable for cultivation of horticulture crops especially vegetables, exotic flowers etc.
- Nearer to International Flower Auction Centre (IFAC) located at Hebbal, Bangalore (about 30 km). The facilities created here can handle around one million flowers a day.
- Creation of logistic for Information Technology / Floriculture.
- Opportunity for attracting investment in good holiday resorts, recreation clubs, hotels, ethnic food courts, convention centers, nursing homes etc.
- Scope for commercial exploitation of biotechnology.
- The Bangalore Rural District including Hoskote taluk is one of the top ranking district, as for as industrial activities are concerned. It ranks fourth in terms of investment, sixth in terms of number of units and seventh in terms of employment respectively.

- The existing Bangalore–Chennai Highway passes through the taluk which connects the taluk to other districts of Tamil Nadu and Andhra Pradesh.
- Presence of 22 medium and large scale projects.
- In Bangalore, there are about 79 milk routes and 6 chilling centers and processing plant of 4.80 lakh litres per day (llpd) capacity are operating. In addition, Mother Dairy at Yealahanka has processing capacity of 3 llpd and 5 processing units with an aggregate capacity of 3.85 llpd in the private sectors.
- Creation of logistic for information technology / Floriculture sector.
- Establishment of farms on modern techniques and cultivation of horticultural crops in a large scale has created opportunities for agro processing, extraction of juice, pulp and other products.
- The Bangalore Rural District is covered under Agri Export Zone (AEZ) for Gherkins and Flowers. The climate of Hoskote Taluk has the intrinsic advantage to derive benefit in this area.

5.14.2 WEAKNESSES AND CONSTRAINTS:

- Inadequate power infrastructure.
- Lack of local entrepreneurship.
- Absence of perennial source of water and depleting groundwater sources.
- Mediocre socio-economic infrastructure.
- Poor maintenance of arterial and interior roads.

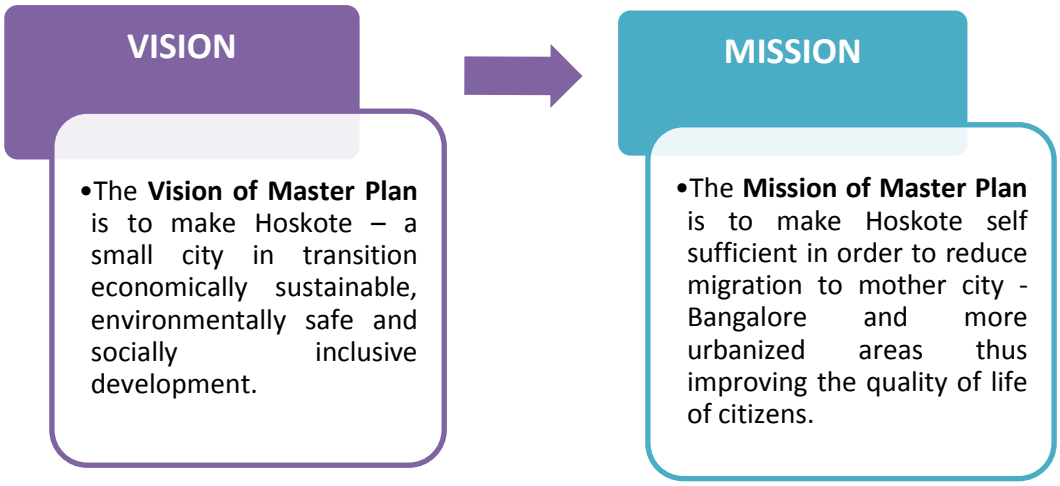
5.15 VISION -2031

The Structure Plan, 2011 which is more or less a Regional Perspective Plan formulated for BMR to provide sectoral and spatial synergy to the BMR, provides a frame-work for the Master Plan of Hoskote Local Planning Area. In the structure plan, Hoskote Local Planning Area comes under Zones of APZ 4 and in IZ 5, 6.

Structure Plan, 2011 had an inductive approach to planning which is governed by decentralization policy in the BMR. Accordingly Structure Plan, 2011 proposed a population distribution of 0.48% in the North East region (Cluster - 7) to be accommodated by 2011. Hence Interim Master Plan for Hoskote LPA was prepared for a plan period of 2021 envisaging a population of 3.5 lakhs in the LPA which is also based on inductive approach.

The vision and growth directions stated in the Structure Plan, 2011 had been able to live up to the pace of growth in the BMR.

However Structure Plan was revised and the Revised Structure Plan, 2031 was provisionally approved by Government. Master Plan for Hoskote LPA is to be prepared based on policy framework and sectoral concepts set in SP and RSP of BMR. The vision and mission of Master Plan for Hoskote LPA is as follows:



5.16 MASTER PLAN OBJECTIVES

The objectives of Hoskote Master Plan 2031 can be summarised as below:

- To prepare the physical development plan for Hoskote town and major settlements of Hoskote Planning area.
- To prepare the Master Plan within frame work of Structure Plan directives.
- To prepare the Master Plan as per the provisions of Karnataka Town and Country Planning Act,1961 and guide and regulate the developments within Hoskote LPA.
- Scientific allocation of various land uses for different economic activities and achieve sustainable development and efficient utilisation of resources.
- To work out detailed street pattern and achieve overall connectivity for efficient and smooth movement of vehicles
- To provide quality infrastructure in the LPA.

5.17 APPROACH AND METHODOLOGY

5.17.1 APPROACH

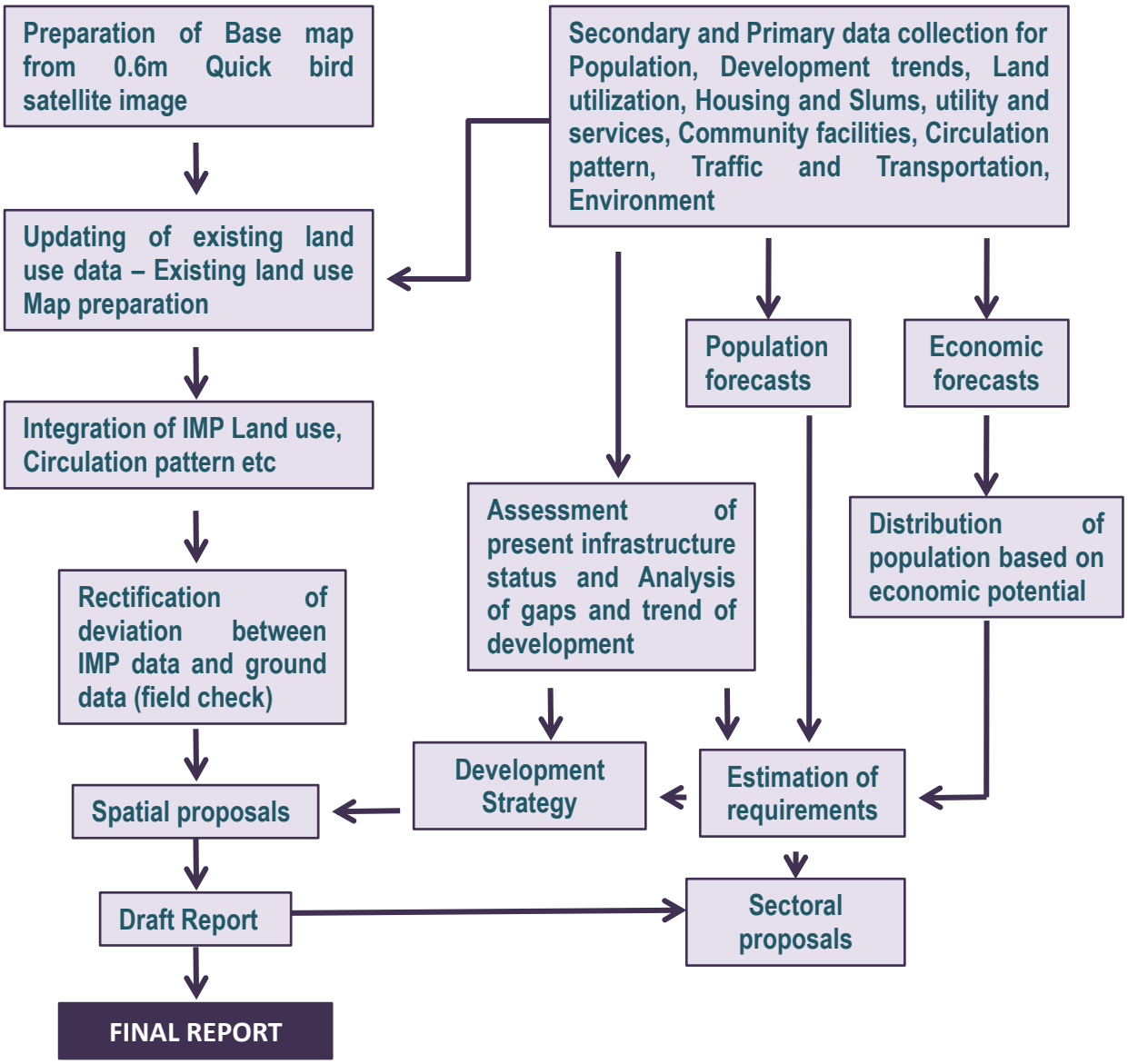
Master Plan for Hoskote LPA is prepared within the framework of the SP and RSP of BMR. The growth potentials and issues of urbanisation have been analysed to arrive at development strategies. Nevertheless, a deductive approach has been adopted for framing the sectoral policies after due analysis of their potential, development trends and environmental sustainability.

5.17.2 WORKFLOW

The workflow ensued for the finalisation of the Master Plan for Hoskote Local Planning Area is as follows:

- Base map was prepared using 0.6m Quick bird image
- The existing land use was updated into the database using field survey.
- IMP land use was integrated into the database using the new base map as reference.
- Deviations on ground with the IMP data were checked, verified and updated.
- Secondary and Primary data for population, development trends, land utilisation, housing, utility and services were collected and analysed.
- Population forecast was made for the horizon year 2031 calculating natural increase and increase in population due to employment opportunities.
- Economic potential was assessed and industrial forecasts for the LPA were made.
- Assessment of infrastructure status for physical infrastructure like water supply, drainage and sanitation and social infrastructure like education and health were done for an appraisal of the features.
- Gaps in the service delivery were assessed and trend of development was studied.
- Strategy of development was developed considering the development trends, potentials and constraints in the LPA.
- Spatial and sectoral proposals were then formulated.
- The approved draft Master Plan updated by incorporating proposals of statutory Authorities, Commitments of Authority and public comments as per the resolutions of the Authority.

5.17.3 METHODOLOGY FOR PREPARATION OF MASTER PLAN



5.18 PLANNING FRAMEWORK

Land Capability Analysis carried out in the RSP, 2031 shows that potential for economic investmentlie in the North – South East arc and the North-West to South-West arc of the BMR. The vision portrayed in the SP 2011 of redirecting the growth trend of the North-North East to other regions had failed since growth continue to happen in these directions. Since water extraction in these regions are high, water scarcity was thought to be a constraint for development. The vision in the RSP 2031 idealises, growth clusters and growth nodes in the BMR region, with a higher concentration in the North, North-East and South-East. The document does not propose growth away from the north-north east region since it assumes that water availability does not acts a determinant of the direction of

growth, merely of the kind and the extent of growth. The population share between the core and the outside of the BMR had also been worked out. A 70% - 30% growth scenario has been arrived at for the target year 2031. It can be seen that the broad framework for the Master Plan has been clearly marked out. Hence an inductive planning process would be adopted for determining the growth scenario in the region in terms of population and spatial distribution to keep it in tandem with the RSP 2031 vision. However, since potential for economic investment is present in the region, a deductive approach would be applied to promote dynamic sectoral growth.

CHAPTER-6

MASTER PLAN PROPOSALS BEFORE CONSTITUTION OF STRR PLANNING AUTHORITY

CHAPTER-6 – MASTER PLAN PROPOSALS BEFORE CONSTITUTION OF STRR PLANNING AUTHORITY

6.1 INTRODUCTION

Master Planof Hoskote LPA articulates 20-year vision and plan for future growth and development of Hoskote, driven by institutions that reflect its citizens' values. The master plan provides the contours of shared vision and identification of infrastructure gaps and deficiencies, key issues facing the town and LPA in total and then proposes development patterns and growth perspectives. The Master Plan, 2031 of Hoskote LPA is a statutory document prepared for the plan period which identifies growth potentialities, develops land use plans addressing the urban agglomeration's growth and lays out Zonal/Development Regulations to regulate the development of Local Planning Area.

6.2 CONTENTS OF THE MASTER PLAN

Master Plan, 2031 of Hoskote Local Planning Area is prepared as per the provisions of Karnataka Town and Country Planning Act, 1961 under section 12 and by following all the procedures from Section 9 to 12. It comprises of the following:

- Zoning of land use for residential, commercial, industrial, agricultural, recreational, educational and other purposes together with Zoning Regulations
- A complete street pattern, indicating major and minor roads, national and state highways and traffic circulation pattern for meeting immediate and future requirements with proposals for improvements
- Areas reserved for parks, play grounds and other recreational uses, and public and semi public uses and institutions
- Area reserved for future development and expansion
- Declaring certain areas as areas of special control and development with regulations for such areas
- Phasing by which the plan is to be carried out

Master Plan, 2031 of Hoskote Local Planning Area describes in detail introduction to LPA; studies on Demography, Economic base, Housing and Infrastructure; studies on existing land use, land utilization, and transportation; proposals and proposed land use and transportation; Zonal Regulations and phasing of development.

6.3 BASIC CONSIDERATIONS FOR PROPOSALS

The various proposals in the Master Plan are worked out on the basis of the following considerations:

- Concept of Zoning of various land uses based on connectivity and hierarchy of roads, provision of infrastructure, health, safety and environmental conditions
- Conservation of agricultural land and green spaces
- Protection and conservation of natural sites and water bodies, nalas, drainage lines and linking of drainage lines
- Protection and conservation of sensitive areas, natural sites, forest land
- Major road alignments
- Existing developments and land use as per approved IMP
- Approved change of land uses by Government and Planning Authorities as per the provisions of KTCP Act, 1961 and approved layouts within LPA
- Encouragement of compact development with densification
- Encouragement of Social mixing of all classes of society by group housing
- Government directions from time to time
- Structure Plan directives
- Planning principles and norms
- Protection and conservation of sensitive areas, natural sites, forest land

6.4 STRATEGY FOR OBTAINING LAND FOR PUBLIC PURPOSES

Land required for the provision of parks/open spaces, civic amenities and infrastructure facilities are to be identified to suit the ground requirements and realities. Government lands, gomalas, revenue kharab lands are identified in consultation with Local Authorities and Revenue Department. Accordingly they are earmarked for parks/open spaces; public/semi public uses such as land fill sites, water storage and treatment units, market

yards and burial ground, transportation and communication viz. Truck terminal, bus depot etc.

6.5 PROPOSALS

Land is the scarce commodity in general and particularly very precious in Bangalore Metropolitan Region. At the same time, conducive atmosphere is essential for human habitation. Conurbation limit of LPA was divided into 27 planning districts in earlier IMP. For convenience of planning and orderly development of land, conurbation area in the Master Plan is delineated and re-fixed rationally by maintaining by and large IMP conurbation limits and various land uses are earmarked suitably within conurbation limit.

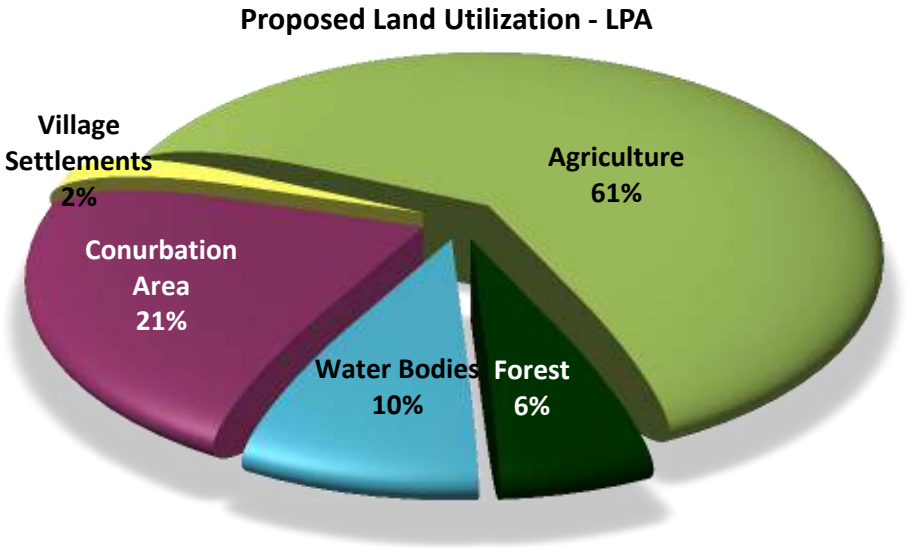
6.6 PROPOSED LAND UTILIZATION

Out of the total extent of geographical area of LPA i.e., 59,172 hectares, the conurbation/urbanisable area is 12603.85 ha and remaining areas constitute 46568.15 ha. Land under Agriculture, Forest, Water bodies are 36248.61 ha, 3602.15 ha and 5552.74 ha respectively. The percentage of developed area has gone up from 2.29 to 21.30 whereas the percentage of Agricultural area has reduced from 76.82 to 61.26 respectively. ***Table 58*** shows the details of proposed land utilization in the LPA and ***Figure 57*** below depicts the distribution of proposed land utilization in the LPA.

Table 58: Proposed Land Utilization Area Analysis (2031)

Sl.No.	LAND UTILIZATION	AREA	
		In Hec	In Percentage
1	Conurbation/ Urbanisable Area	12603.85	21.30
2	Village Settlements	1164.65	1.97
3	Agriculture	36248.61	61.26
4	Forest	3602.15	6.09
5	Water Bodies	5552.74	9.38
Grand Total		**59172.00**	**100.00**

Figure 57: Proposed Land Utilization Area Analysis (2031)



6.7 PROPOSED LAND USE PLAN -2031

Hoskote is the Taluk headquarter of Hoskote Taluk as well as the only TMC in the LPA. As such it is a node of prime importance owing to already superior administrative stature. It has enormous economic potential in terms of agriculture, floriculture, sericulture and major and small scale industrial activities. Hence the land use has been proposed scientifically so as to boost its economic potential and supplement its hierarchy in the region.

Conurbation limit proposed for the urbanisable area within the LPA of Hoskote is 12603.85 ha and proposed land use analysis is given in ***Table 59***.

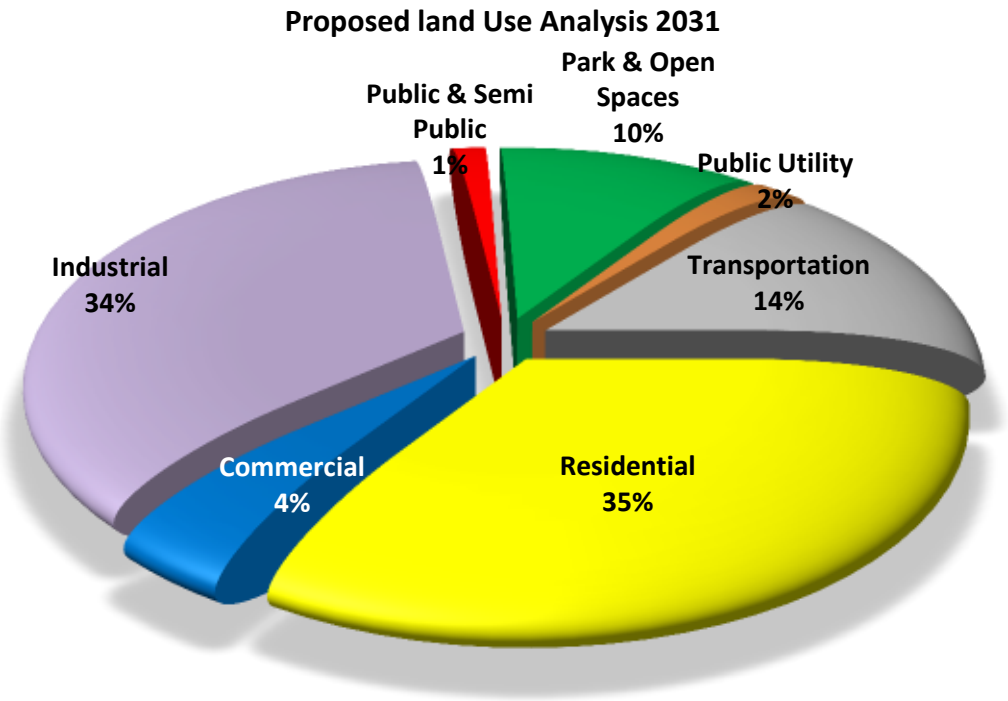
Table 59: Proposed land Use Analysis as per Provisional MP 2031

Sl.No	Land Use	Area in ha	Percentage
1	Residential	3650.62	34.47
2	Commercial	466.99	4.41
3	Industrial	3614	34.12
4	Public & Semi Public	141.9	1.34
5	Park & Open Spaces	1087.12	10.26
6	Public Utility	173.65	1.64
7	Transportation	1457.43	13.76
TOTAL		**10591.71**	**100.00**
a	Agriculture	40.47	
b	Forest Land	167.12	
c	DRDO Area	245.81	
d	Water Bodies	1558.74	
Grand Total		**12603.85**	

The conurbation area proposed to accommodate the projected population of 5,00,000 is 12603.85 ha with the developable area of 10591.71 ha. Hence the Gross Density of urbanisable/ developable area of LPA works out to be 48 pph whereas the residential density works out to be 134 pph with the residential area proposed within conurbation limit being 3650.62 ha respectively.

Within the conurbation area, 34.47 % of the area has been reserved for residential use, 4.41 % of the area is earmarked for commercial use to serve future population and 34.12% of the area is dedicated for industrial uses as it is the main economic generation of the LPA.

Figure 58: ProposedLand use Analysis -2031



Area earmarked for park and open spaces is 10.26 % while 1.34% and 1.64 % of the total area are reserved for public/ semi-public and public utility purposes respectively. Remaining 13.76 % of the area is devoted to transportation and communication use. The rest of the land use is under water bodies, forest, notified area (DRDO premises and solid waste management site) and agriculture.

Proposed Land use map is appended in Map No 19-77.

6.7.1 DETAILS OF PROPOSED LAND USES AND PROPOSALS

Details of various land use proposals within the LPA are described briefly below:

1. RESIDENTIAL

The society needs peaceful living with all the required facilities for its comforts in an area where there are least pollution hazards. As per planning standards the land under residential purpose generally is 50-60 percent depending on the nature and economicactivities of the town/city. Keeping this in view, the residential areas are earmarked with utmost care in an extent of 3650.62 hectares, which constitutes 34.47 % of the total conurbation including an existing residential area of 416.67 hectares. The residential density works out to be 134 pph.

Proposals

- An Area of 3650.62 hectares is proposed for residential developments in appropriate places within conurbation area keeping in view the work-home relationship.
- Vacant lands left out within the municipal limits of Town Municipal Council and area being vacant between Hoskote Grama thana and new extensions/layoutsand other parts in the southern portion of the town are earmarked for proposed residential zone to make densification with suitable zoning for accommodating projected population.
- Area adjacent to KHB layout in Huskur, along Sarjapur Road in Poojena Agrahara, Samethanahalli, Sarkar Guttahalli, Chikka Gattiganabbe, Dodda Dunnasandraare earmarked for accommodating projected population.
- To preserve the precious agricultural land and prevent meaningless urban sprawl, the concept of compact density is recommended.
- Development below the HT lines,areas surrounding the tanks/lakes/ponds/major nalas/drains, DRDO premises and SWM site is restricted from safety and pollution point of view as per the norms and concerned notifications.
- Plotted developments are discouraged by insisting the minimum area of 1 hectares for development and the group housing projects are encouraged with a little higher F.A.R.

Economically weaker section (E.W.S)

Due to the rapid rise in the land value, the economically weaker section of the society is unable to afford for sites/ buildings. This situation forces them to settle down in the remote fringe areas travelling large distance to their work place there by wasting their time, energy and money. Further, this is the root cause for the creation of the slums in the urban areas. These urban slums are the origin of the outbreak of epidemics on the one hand and they reduce the living standards there by creating a social disparity on the other hand. This type of situation is going to spoil the environment and create imbalance in the eco system. Hence measures are to be taken to curb such developments.

Hence it is recommended to reserve at least 20% of the residential development for the EWS.

It is also suggested that the Government, should acquire lands through Housing Boards, Slum Boards, Urban local bodies, etc. and construct economic buildings and allot them to economically weaker section of the society. A special cess may be levied for generating required resources for constructing EWS houses while permitting other developments in the LPA. This will provide life security to the socially and economically down trodden class.

2. COMMERCIAL

The commercial activities are not well distributed in the developed area. The main aim of planning is to provide these commercial facilities in various orders of hierarchy at convenient places. The commercial facilities are proposed at two levels, i.e. at town level and neighbourhood levels to facilitate the general public to avail these facilities at reasonable distances. Convenient parking places, pedestrian zones are also proposed.

An extent of 466.99 hectares, which constitutes 4.41 % of the conurbation including the existing 25.80 hectares, has been earmarked for commercial activities. This is slightly more than the required percent as per planning standards of about 3.5 %. This is to create additional economic base in order to develop this urbanisable area as a counter magnet to Bangalore.

PROPOSALS

- Adjacent to existing commercial activities facing more than 12 m, commercial activites are extended where ever feasible within the town limits.
- Within the town, the existing commercial and other activities along Taluk office road, areas adjacent to KEB circle, road from Bus Stand to NH-4 on the eastern side, the same road connecting Bus Stand to Sidlaghatta Road are extended further with proper parking, footpath and other required facilities to serve the needs of the CBD of the Town.
- The commercial activities are proposed at the Junction of major roads and all along other roads having width of 30 meters above in all the grids in a compact manner.
- Along National Highway-4, Sarjapur Road right from NH-4, Nandagudi Road, Malur road are earmarked for commercial activities.

- The Sandy Maidan located near KPTCL Sub-station lacks basic amenities like raised platforms, proper circulation space for people and goods, drinking water, parking space and storage facilities. Hence infrastructure facilities are proposed near sandy maidan.
- The existing commercial activities in the old Pete areaand market area looks gloomy as the roads are very narrow with 3-6 m and without any footpaths. Parking facility is totally absent. It requires rejuvenation.
- Hence, the Pete Area, which is full of commercial activities, is proposed as 'pedestrian precinct'.
- The vehicles are proposed to be prohibited between 10 am to 8 pm in this area and parking facility required is proposed near to this place.
- All the roads in the old market area are proposed for concreting for better and durable surface.

3. INDUSTRIAL

The industrial activity enhances the economic base of the settlement and improves socio-economic condition of the town. It attracts more & more people towards the town/city and some additional infrastructure. It is more so in this case as this urbanisable area has to be developed as a counter magnet to none other than Bangalore.

Hoskote urbanisable area is suitable for the industrial activity for the following reasons:

- Salubrious climate similar to Bangalore.
- multi-mode transport system being at the junction of two National Highways (NH-4 and NH-207), 4 State highways BMR-STRR and IRR and one Broad Gauge railway line
- Suitable and vast land without irrigation facility
- availability of power, being the centre of 400/200 KV Receiving Stations
- Availability of man power and skilled labour due to few already established institutes of industrial training and technology.

An extent of 3614 ha with 34.12 percent of the conurbation including an existing area of 194.49 hectares, is proposed based on the wind direction to fulfil the environmental requirements, Work –Home-Play relationship, road connectivity and width and linkages with different modes of transport. Since there is No compact development of industrial activities except KIADB industrial area, such areas are reserved for proposed industrial activities based on suitability and connectivity.

The following locations for manufacturing, IT and BT industries are proposed within the conurbation of LPA:

- At the entrance of Hoskote from Bangalore towards north-east and north-west of conurbation area of the town.
- KIADB proposals near Chokkalli and Devanagundi
- Ribbon development along the highways especially along NH-4 & NH-207 are discouraged as far as possible and focus on compact development of Hoskote town.
- Proper parking and other required facilities are insisted.
- No Objection Certificate and Approval from KSPCB for Effluent treatment and waste management plan is insisted both for existing industrial buildings and proposed activities considering the environmental aspects of planning of entire LPA totally.

Care has been taken to provide sufficient buffer/green cover between the industrial and residential developments to avoid ill effects on residential areas. It is also necessary to discourage ribbon development along major roads and highways.

4. PUBLIC AND SEMI-PUBLIC

Public and semi-public buildings and civic amenities are indicators of the standard of living, socio-economic condition of the settlementand to some extent the quality of the

society as a whole. The urbanisable areais already having higher order facilities but less in number to satisfy the needs of the projected population. Public and semi public uses are suitably reserved as per the proposals received form stakeholders and requirements according to Guidelines and Standards. The town is expected to be planned for the population of 1.0 lakh by 2031, which requires additional facilities. Hence proposals for the provision of civic amenities are made at appropriate locations in public and semi public zones.

The total area reserved for public and semi public uses is 141.90 ha constituting 1.34 % of the conurbation area. An additional 5 percent of the area earmarked for residential purpose will also be available for this use at the time of according approvals to layouts.

PROPOSALS FOR PUBLIC AND SEMI-PUBLIC BUILDINGS:

- The major proposals of Public and Semi Public use of Hoskote LPA are:
- Jail building in the outskirts of Town limits
- Public Libraries are proposed at suitable locations.
- Parking facility, Areas for provision of Basic services like drinking water, public conveniences etc at existing public/semi public facilities are proposed.

5. PUBLIC UTILITIES

The area covered by public utilities or civic amenities is 173.65 ha, constituting 1.64 % of the built up area.

PROPOSALS FOR PROVISION OF CIVIC AMENITIES

The civic amenities such as a few more primary and high schools, a poly technique, an ITI institute, a few dispensaries/ private clinics, a polyclinic, a 100 bedded hospital, a community centre, a fire station, a post office and sub post offices and a telephone exchange as calculated and presented under sub chapter 5.6 and 5.7 are proposed to be provided at appropriate locations in the area under public and semi public zone.

- It is intended to facilitate the establishment of higher order amenities such as a sports complex, and a General Hospital in addition to required number of schools and nursing homes.

- Community cum Cultural Centre and Library and number of Public Offices are proposed at appropriate locations.
- Neighbourhood civic amenity areas are proposed in suitable places to make them available at reasonable distance to the residents.

6. TRAFFIC AND TRANSPORTATION

Progress follows the lines of transportation. Transportation Corridors are generally considered as lifelines of any town / city. An efficient Traffic and Transportation system promotes socio - economic activities. Hoskote is having two National Highways (NH-4 &207), four State Highways, seven Major Districts with good network of roads and one broad gauge Railway line connecting two metropolis. One of the major objectives of MP is to provide broader roads within Hoskote conurbation with good hierarchy of roads. Its aim is to provide an efficient and feasible circulation plan for the entire LPA.

The total area covered by traffic and transportation use in the conurbation area is 1457.43 ha, constituting 13.76 %. By and large the inter town traffic movement isconvenient. But due to very narrow road network in the town area, there are many intra town traffic problems and proposals for the same are to be made.

PROPOSALS:

Some proposals for better connectivity are addressed:

- All village roads within LPA having width less than 18 m are proposed for widening to 18 m Right of Way (ROW).
- Within the Town limits, Major roads are proposed for widening to ease out the traffic movement vide
  - K. R. Road leading to Taluk Office from KEB Circle
  - Market road
  - from Sulibele road to Taluk Office
  - Kannurhalli road, Gangamma Gudi Temple road etc.
- Parking space is proposed along commercial access roads and around bus-stand areas.
- A separate parking lot is identified near bus-stand and KEB Circle.
- Improvements to junctions like Taluk office, Flower Mandi, KEB Circle and other major intersections. Sufficient space for pedestrians, signals and utilities will be taken

separately with wide footpath and cycle tracks are provided along main market, shopping/commercial street.

- Wherever feasible cycle tracks are separately provided.
- Buffer zones/green spaces are proposed for NMT.
- Pedestrian Refugee islands are proposed for road width above 18 m ROW.
- Any road development/ redevelopment/ widening proposal shall be done only if the road sections annexed (volume 3: Annexure-1) are implemented.

7. Parks/Open Spaces/Play Grounds

Parks and open spaces are required for recreation and to keep the environment healthy and balanced ecosystems. The area reserved for parks and playgrounds in the conurbation is 1087.12 ha, constituting 10.26 %. The urbanisable area needs substantial space for the development of parks, play grounds, and open spaces to meet the recreational and environmental needs. Since the urbanisable area does not have enough lung space and not environmentally balanced, a few parks and playgrounds are reserved within the urbanisable area where there are government lands in the urbanisable area of Hoskote.

PROPOSALS

a) Contiguous Parks & Open spaces.

In an innovative manner, a contiguous open space covering the natural drains leading to tanks is proposed to a width of about 75-100 m. It helps in:

- From NH 207 to SH 35 along Dodda Amanikere and Chikka Amanikere, Along the edge of Amanikere (Huskur, Bendiganahalli and Lagumenahalli)
- Easy accessibility to the public since it runs in the midst of the conurbation area proposed for development.
- Enhancing the environmental quality and making the town green.
- Preventing the flooding of the town permanently.
- Recharging the ground water table and improving the water storage.
- Balancing the microclimate in the area.
- Avoiding the hardship to the land owners as block wise bulk reservation of land for parks and open spaces are dispensed with.

In addition to the above, the land under plantations and forests are proposed for parks and open spaces. Further while approving the lay-outs, 10 % of the residential area is going to be reserved for parks and open spaces.

b) STADIUM & PLAY GROUNDS:

Hoskote doesn't have much play areas. Hence play grounds are also proposed to facilitate the availability of sports ground at every planning district level.

8. WATER BODIES

The area covered by water bodies in the conurbation area is 1558.74 ha. There are two big tanks Amani Dodda Kere and Amani Chikka Kere with many medium and small tanks distributed throughout the LPA. They are protected with adequate buffers, linking of drainage lines and

PROPOSALS

- Tanks/lakes/ponds/open hallas are protected from sewerage and polluted water being let into them
- Desilting, clearing and maintenance of the tanks/lakes/ponds
- Removing of encroachments at tanks/ponds
- Usage of Amani Dodda Kere and Amani Chikka Kere for recreational facilities in consultation with Lake Development Authority.

6.7.2 PROPOSALS FOR HOUSING & INFRASTRUCTURE

6.7.2.1 Housing

The availability of sufficient housing facilities is an essential pre-requisite for attracting people and investments.

1. AUGMENTATION OF HOUSING SUPPLY

Housing Stock for both affordable and other categories has to be augmented to support the induced population in the LPA. Private real estate development should be encouraged and properly planned along with other models of housing for viability and utilization of common delivery chains. Composite and Joint venture housing schemes of the Governmentalong with private sector should be encouraged. 30-40%

of proposed industrial area should be used for housing the workers and model of housing should be subsidized by the industrial authority.

Housing Schemes such as Indira Awas Yojna, Dr.Ambedkar Housing Scheme, Ashraya Schemes should be promoted to increase its reach among people.

2. SLUM IMPROVEMENT

Detail exercise of slum identification should be carried out in the LPA.Slum development should be brought under National Programmes such as the Rajiv Awas Yojna.Internal earmarking of local body funds should be carried out for provision of basic services to the poor. Security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery of other already existing universal services of the government for education, health and social security should be planned for. Earmarking at least 20-25% of developed land in all housing projects (both public and private agencies) for EWS/LIG category with a system of cross-subsidization should be carried out in order to allow social mixing.

Development programmes for Slums should also be carried out under the programmesfunded by The Karnataka Slum Development Board.

6.7.2.2 Physical infrastructure

a) WATER SUPPLY

Any plan on water supply must be preceded by a land use plan. New water treatment should be planned to serve principally first to serve new development areas and then toserve the deficit areas. Dead end system of distribution of water supply should be adopted as the network system due to its cost advantage. Minimum capacity for water purification system must be for 1MGD from economic point of view, below which it is not recommended.

It is proposed to continue the utilisation of ground water to meet the required water demand of the conurbation area. The bore wells are to be established mostly in valley zones and close to existing tanks as they are potential for recharging naturally. The present availability of water from ground water is also less and the balance quantity required is to be supplied by augmentation. Intensive ground water

recharging is planned to prevent the depletion of water table and to have sustainability.

However, the urbanisable area of this magnitude depending solely on ground water may not be desirable. An alternative source to supplement the supply of water either from Cauvery or Manchanabele Reservoir has to be explored at least during the second phase of development. Both BWSSB and KUWS&DB are also thinking on these lines.

b) UGD AND SEWAGE MANAGEMENT

At present there is no UGD system in Hoskote Town. There are only septic tanks and soak pits in most of the areas. The sewage is flowing only through the surface drains. It is creating a great health hazard and environmental deterioration. Introducing UGD system to the town is to be tackled on top priority. Augmentation of water to be supplied and implementation of UGD work are proposed to be taken up simultaneously. KUWSDB hasalready submitted the estimate for providing UGD system with STP at Arashinakunte for present Hoskote town for a population of 50,000.

The quantity of sewage assessed as 90% of the water supply i.e. 0.9 X 45 = 40.5 MLD or say 40 MLD. It is proposed to treat the sewage in five treatment plants (STP), at the lowest points in valleys and sub-valleys to minimise pumping of the sewage, which is not desirable. The zones have to be de-lineated in accordance with thetopographyof the conurbation area. However, to minimise number of STPs, minimum pumping is required, details of STPs are shown in ***Table-60***.

Table 60: Details of Sewage treatment plants

Zones for STPs	Location	Capacity in MLD
Zone A	At the tank near Chokkahalli forest	8 MLD
Zone B	At Chikka Amanikere tank	8 MLD
Zone C	At Kanekallu tank	12 MLD
Zone D	Near Gottipura tank	5 MLD
Zone E	Near Mandur tank	7 MLD

In each zone sewage will be treated up to tertiary level for recycling and will be distributed for horticulture, industrial, non-domestic such as construction activity and ground water recharge. The sludge, free from grit and sand, obtained from the treatment of sewage can be used as organic manure.

Storm Water Drains

The main storm water drains are to follow the existing main natural streams and the secondary /feeder drains and sub drains are proposed to be aligned along the proposed and existing circulation system. It is proposed to retain all the natural water bodies / tanks and natural streams intact with buffer zones to prevent encroachment. The entire run-off will be taken along the natural streams and in the above said drainage system and will be stored in the existing water bodies/tanks and proposed pickups across natural streams. Water Lake development schemes are to be implemented for proper protection and maintenance and also to make them to serve as recreational centres.

SOLID WASTE MANAGEMENT

Types of Solid waste

The quantity of solid waste is estimated as 250-300 metric ton / day for the projectedpopulation of 5 lakh. This solid waste consists of:

- Non bio-degradable waste consisting of construction waste materials, which are proposed for dumping in pits. Glass, plastics & metals are proposed for recycling in the respective industries.
- Bio-degradable waste is proposed to produce organic manure by composting method.
- Hazardous waste consisting of electronic waste, medical waste and other hazardous waste for safe disposal.

Solid waste disposal points:

It is intended to propose for a proper healthy and environmental friendly disposal system. It is suggested to segregate the solid waste into the above three categories at the source itself and also introduce the “door to door” collection system in the

interest of the better solid waste management. Collection, transportation, treatment and disposal of solid waste to be entrusted on contract system for better and efficient management.

- Hazardous waste and e-wastes are proposed to be transported to Hazardous Waste Treatment Plant
- Construction waste materials are proposed to be transported and dumped in a quarry pit identified for dumping of non Bio-degradable building material waste.
- The bio-degradable waste is proposed to produce organic manure by composting method. This can in turn promote employment generation, if manure is produced in considerable quantity.
- The composting is proposed at nearby agricultural lands at Government lands.
- The treatment of the solid waste, other than non-bio-degradable waste, is proposed to an extent of zero residues so that 100% utilization of the treated materials can be achieved and used for various purposes depending upon the quantity and quality of the same.

6.7.3 PROPOSALS FOR RURAL INFRASTRUCTURE

Rural infrastructure development has five-fold impacts on the regional economy i.e.

1. Creating better access to employment and proving further earning opportunities.
2. Increasing production efficiency.
3. Creating access to previously inaccessible commodities and services.
4. Saving time, which can be better utilized in productive activities.
5. Better health and physical condition of the rural population.

The proposals are made based on the above objectives to mitigate the problems and to improve the living conditions of rural poor. The salient features are as stated below:

1. Health facilities like dispensaries and at least one veterinary hospital is proposed at all the GP head quarters to serve the village settlements around them with reasonable distance.
2. Toilet facilities have been provided only to 10-15% of the total households. The situation is very discouraging from health and hygiene point of view. It is proposed to extend this facility to all the households of all the villages.

3. Primary education is the basic necessity for the overall up-liftment of the rural people. So it is proposed to construct at least one primary school in each village. It is also proposed to construct one mini library in each GP head quarter.
4. Presently, all the villages are surviving on hand pumps only. It is proposed to extend the provision of mini water supply to all the villages by the end of the first phase of development. To supplement this, construction of OHTs and laying of water supply lines in all the villages can be taken up in the second phase of development.

6.7.4 PROPOSALS FOR ENHANCING ECONOMY

A. INCREASING WORK PARTICIPATION IN THE LPA

The work participation rate of entire Hoskote Taluk is 36.61% and that of Hoskote TMC area is 38% within the LPA whereas that in Karnataka State is 41% and at the national level it is 39%. An increased work participation rate of 40% should be targeted for the entire LPA till the end of plan period 2031.

Government employment programmes such as Prime Minister Rozgar Yojana (PMRY), Swarna Jayanthi Shahari Rozgar Yojna, Mahatma Gandhi National Rural Employment Guarantee Act should be enforced efficiently to increase work participation. The industrial potential of the area should also be used to generate employment for local people. Industrial estates and large investment destinations should be so developed as to integrate with the local economy. Open settlements should be preferred over closed or gated communities.

B. INDUSTRIES

1. Promoting Small Scale, Tiny and Cottage Industries

Small scale, tiny and cottage industries should be promoted through proper financial, marketing and distribution schemes. Small scale and cottage industries requires less start-up capital, labour intensive, offer better employment opportunities to women and are often better platforms for local craftsmanship. Hence promotion of such industries serves the purposes of employment generation, preserving local craft and empowering women.

2. Impact of Industries on Ground Water

The industrial perspective plan for Hoskote Taluk lists a range of industries in small scale and medium scale sector as potential investment options. However, the LPA along with the entire BMR region is under a threat of water scarcity. Hence proper water management plan should be prepared before commencement of industrial activities to address issues like ground water depletion, ground water recharge through water treatment, ground water pollution etc.

3. Relocation of Industries From Bangalore

The RSP 2031 specifies relocation of industries from BBMP limits to outer BMR as one of the economic strategies. Viability of relocating these industries in the LPA may be looked into, to introduce industries with established markets into the area.

4. Development Of Local Economy

Local economy should be strengthened in the entire LPA. Planned commercial centers should be introduced at the major growth nodes in the LPA – viz., Sulibele. The influx of population in the LPA would demand a proper commercial network within the LPA for basic service delivery. Regularization of Delivery chains and markets should be taken up as a major project. There is an absence of commercial centers in the LPA. Since Hoskote is the Taluk headquarter, a regional commercial level should be planned in the town. The proposed land use plan hence shows a large area dedicated for commercialactivities.

5. Integration Of Large Industrial Estates With Local Economy & Livelihood

Large industrial units have been planned in the LPA. Machine Tools, Textiles, Agro and Food based Industries, Hardware park have been proposed in the Taluk Industrial development Plan.These are some of the sectors with highest backward and forward linkages. Forward and backward linkage of these units should be analyzed in detail to boost the local economy. Art silk, Synthetic textile manufacturing, Land based Transport, Petroleum products, retail, rubber tyre manufacturing, recycling industries, Real estate should be used as key industries for

boosting the local economy. Detail studies should be carried out for estimating the quantum of forward and backward linkage and the investments required.

C. AGRICULTURE

Agro and Food Industries have been proposed as primary industries in the Taluk Industrial Plan. The Taluk is also an AEZ for Gerkins and Rose onions. Processing industries should be promoted for value addition. Capacity building of the farmers in terms of knowledge development and awareness of latest technologies, soil health improvement (by crop rotation etc.), water conservation and micro irrigation, integrated post-harvest processing, crop insurance and credit facilities should be undertaken. Soil moisture conservation and soil fertility improvement program through watershed approach. Composting/green manuring/ tank silt recycling should be promoted. Promoting alternate land use systems like Agri-horti system for arable lands (mango, sapota, tamarind, jack fruit etc.) and Horti-silvi system (mango, sapota + silver oak, casurina, teak), Silvipasture (block plantation of acacia, silver oak, casurina, D.Sisso, Melia azardicta, cassia and muthuga + S.hamata, S.scabra, calaproimum, anjan, Guinea macuaena, etc.) for non-arable lands. Dry land vegetables (chilli, beans, brinjal, tomato, cluster bean, gourds etc.), Floriculture (chrysanthemum, jasmine, crossandra marigold, roses etc.) fruits (guava, papaya, banana), sericulture and coconut plantations should be promoted. Livestock component (local draught animals, dairy, sheep, piggery, rabbit, apiculture) should be developed. Major food crops grown in the Taluk are paddy, maize and ragi. The major horticultural crops of the Taluk are Papaya, Grapes, Guava, Potato, Tomato, Beans, Cabbage and Carrot etc.

6. Sericulture To Be Given A Boost

The provisions of the “Suvarna Vastra Neethi 2008-1013” should be utilised to develop sericulture as the prime activity in the LPA. The centrally sponsored scheme like “Catalytic Development Programme" should be implemented with the assistance of Central Silk Board. Schemes under Catalytic Development Programme like Drip irrigation, construction of rearing houses, Raising of mulberry saplings, Installation of multi end reeling machines, Incentive for Bivoltine Silk etc. are very popular. In order to ensure production of better quality cocoons and silk with increased productivity,

these programmes under Catalytic Development Programme should be stepped up for which adequate funds will be made available under the State and Central sector.

The initiatives of The National Research and Development Corporation (NRDC) should be supported and expanded to establish Chawki Rearing Centre (CRC) and for capacity building and skill development of the local farmers.

Detailed study should be undertaken to investigate the cause of slow development of sericulture despite high potential and necessary investment plan for the sector. Hoskote Town should be used as the focal centre for the LPA for development of capacity building, processing and marketing facilities subject to its viability during the detailed study.

With a view to taking advantage of the new international trade environment, Government of India (GOI) through Agricultural and Processed Food Products Export Development Authority (APEDA) had established 60 Agri Export Zones (AEZ's) spread over 230 districts in 20 States covering 35 crops. In Karnataka, GoI has approved and notified four AEZs, viz., gherkins (8 districts), flowers (6 districts) and vanilla (6 districts).

To promote Agri-Exports, NABARD extended refinance facility at soft interest rates to client institutions and for activities covered under AEZs. NABARD developed a special refinance package for the entire contract farming arrangements (within & outside AEZs), thus enabling increased production of commercial crops and creating marketing awareness for farmers.

Bangalore Rural District is covered under AEZ for gherkins and flowers and the climate of Hoskote taluk suits the cultivation of these commodities.

The NDDB has set up a Safal Fruit and Vegetable Auction Market (SFVAL) for the horticultural produce in the district near Whitefield.

The air cargo complex at Bangalore Airport facilitates export of goods, including flowers. The existing international airport at Devanahalli, supplements the existing facilities and provides the much-needed fillip to exports. The Flower Auction Centre functioning in Hebbal is rendering quality service to the flower growers in Bangalore (Rural) district. The Horticulture Department is implementing the cold

storage subvention scheme which envisages providing subsidy of Re.1/- per unit of power to the existing cold storages storing horticultural commodities with the object of reducing post-harvestlosses.

Contract farming of medicinal and aromatic crops like Aleovera, Ashwagandha, Pacholi and Coleus Forskolli have scope, in view of presence of pharmaceutical units in Bangalore. Government of India has announced various programmes in the State under National Horticulture Mission (NHM) to increase the production of horticulture crops. The effective implementation of the NHM scheme will further boost the production of horticulture crops in the Taluk.

6.7.5 PROPOSALS RELATED TO ENVIRONMENT

6.7.5.1 LAND RELATED

a) Conservation of Productive Agricultural Lands

The Hoskote LPA has some of the most fertile agricultural land in the BMR. Hence all new developments and land uses have been planned protecting the productive agricultural lands in the LPA.

b) Promoting Sustainable Agricultural Practices

Sustainable agricultural practices should be followed in the LPA. Soil health should be continuously monitored and programmes such as "Bhumi-Tayiya Arogya" should be promoted to recover soil quality and fertility. Drip Irrigation should be introduced for crops which do not require flooded fields.

Crop rotation practices should be introduced into the cropping practice to ensure soil fertility and productivity.

c) Integrated Management of Water Resources

Integrated Water management programmes should be adopted by the TMC and urban local bodies to ensure sustained supply of water to the LPA. Incessant digging of bore well should be controlled and water loss during transmission and distribution should be minimized. Waste water treatment should be introduced to recycle and

reuse waste water. All surface water bodies should be protected, maintained and enhanced for long term ecological well-being and water supply.

d) Protection Of Forest Lands

The LPA has a forest cover of about 6 % in the spread across LPA. All forest lands need to be protected. Control has to be exercised over approval of development in the forest lands. Urban forestry has to be encouraged through social schemes.

6.7.5.2 WATER RELATED:

1. Water Resources & Irrigation

The Taluk is traditionally rainfed and tank irrigation has been the norm here. However, over the years these tanks have reduced their storage capacity due to silting. There are no permanent or perennial water sources. Majority of the villages, access potable water through hand pumps and tube wells. Raining is average in the region. The ground water level is low and it is continually decreasing every year. Tube wells need to be drilled to depths greater than 800 to 850 feet and sometimes up to 1000 feet.

The net irrigated area in the Taluk is 7385 hectares of which 2702 other sources is irrigated by tanks 730 hectares by tanks, 3750 hectares by tube wells and 203 hectares by bore wells. Out of the total irrigated area of 7385 hectares, net area irrigated by surface water viz., tanks and other sources forms 37% and balance irrigated area (63%) by ground water sources.

Based on the norms suggested by the Ground water Estimation Committee- 1997 Government of India, the Dept. of Mines and Geology, Government of Karnataka along with the Central Ground Water Board, the Taluk is over exploited. Thus, no fresh Minor Irrigation (MI) structures are feasible.

2. Strategies to be Adopted to Improve the Water Resources Availability of the LPA:

Several strategies are available to improve the Water Resources availability in the LPA Area. Since ground water is already over developed there is a need to recharge ground water by adopting certain techniques to improve the situation. Some of the methods or techniques available are given below;

a) Rain water Harvesting: Rain water Harvesting can be taken up on a big scale so that drinking and domestic needs, can be met at the village level/ individual level

by harnessing the roof water, storing it in PVC or other tanks, filtering it and using it whenever required by the villager. At the urban or town level it can be used apart from domestic for flushing, washing toilets in the offices, schools and other establishments.

b) **Construction of Nalabunds and Checkdams:** Nalabunds and checkdams can be constructed across stream courses in the rural areas, that in times of storms, the surface runoff is harvested which will also arrest soil erosion, as well as create minor storage ponds (percolation ponds) which will facilitate as a source of drinking water for cattle and as well a means of recharging ground water. However before it is taken up on a large scale, investigation needs to be carried out as to the location of suitable sites, for construction, catchment and local soil and other geological conditions.

c) **Desilting of Tanks:** Most of the irrigation tanks are old and are silted up and do not have the original live storage capacity. These tanks need to be revived and desilting of these tanks need to be taken up in phases. The priority, the extent and the volume of desilting to be taken up along with the cost has to be worked out in detail. In periods of heavy rainfall, these tanks once desilted will have enough space to store the excess water which will meet the irrigation and other demands and also once desilted it will facilitate deep percolation and recharge ground water in the Ayacut which might help revive openwells downstream and enhance the yield of bore wells.

d) **Construction of Recharge Pits:** Recharge pits construction especially in the sandy soil help retain water in the agricultural farm of the farmer and help retain moisture for a long time as well as facilitate recharge groundwater locally. Recharge pits constructed over a large area mighty aid in retaining moisture over larger period and help in recharging ground water.

e) **Recharging of Ground Water:** Recharging of ground water in the LPA is very much needed since the area is over exploited. Recharge wells at suitable locations, trenching across the hill slopes and construction of percolation ponds, recharge wiers, and water shed development will have to be taken up to augment the resources and arrest decline of water levels.

f) **Conservation of Water:** Conservation of water is the need of the day. Farmers and general public need to be educated about the usage and conservation of water and wherever possible wastage needs to be avoided. In order to educate them, mass awareness and 'Jala Jagriti' programmes, seminars can be arranged through audio and video programs which will help generate interest among the public. As far as farmers are concerned, they are to be made aware to cultivate only dry crops and discourage them from cultivating water intensive crops like paddy, sugar cane.

g) **Waste Water Treatment & Recycling:** With the awareness created among rural public, who are health conscious, and more number of industries coming up and due to urbanization, the generation of waste water is also going up. Recycling of waste water can be taken up by settling up waste treatment plant at Hoskote town, and the recycled water can be utilized for meeting, domestic, gardening and even industrial needs. The industries, hospital complex, (The MVJ Medical College at Hoskote is already having a waste treatment plant) can be encouraged to go in for such plants which will meet their water requirement partially.

h) **Regulation of Ground Water Development:** Though the area is over exploited there is no control still on ground water development and farmers and ground water consumers are drilling borewells and going deeper in search of water every year. This needs to be regulated. Barring drilling for meeting the domestic and drinking water needs, a control need to be exercised either by State Ground Water Authority or by Central Ground Water Authority (CGWA), permission need to be obtained from the Authority for drilling of borewells where there is large scale construction, like apartments, small scale industries, educational establishments like Institutional complex etc.

6.7.5.3 Project Proposals for Rainwater Harvesting and Artificial Recharge of Ground Water:

As already indicated in order to improve the situation in the area certain measures need to be carried out like rain water harvesting, construction of check dams nalla bunds recharge pits, desilting of tanks and construction of recharge bore wells which will build up the resources in course of time, as well as reduce the demand, so that the over exploitation

situation now observed can be arrested, simultaneously decline in water levels now seen can slowdown.

In order to carry out these projects, proposals has been drafted and given below. However, this gives only a cursory approach and an approximate estimate of the costs involved. Detailed Project proposals for each of the activity proposed needs to be repaired based on detailed field investigations, spot examinations and carrying out necessary hydrological and hydro-geological studies required thereon. The Detailed Project Report can be prepared in consultation with Central Ground Water Board, State Department of Mines and Geology, Water Shed Development Cell, Karnataka State Council for Science and Technology and other State and Central Organisations who are active in the field.

A. Roof Top Rain Water Harvesting:

Rain water harvesting is a simple method of collecting the rain water falling on a catchment or surface and storing in a suitable place like in a container or a sump for future use. In the present context, it becomes very important in the sense, with rapid urbanisation and water scarcity conditions observed and during dry periods. There is need to catch the rain water and store it for future use to tied over the crisis. Due to rapid urbanisation infiltration of rain water to sub soil has decreased and in conditions like over exploitation of ground water and decline in water levels the need for rain water harvesting becomes all the more important. Rainwater harvesting can also be resorted to recharge the ground water and to rise the ground water levels as well as to improve the ground water quality in the aquifers.

Hoskote LPA devoid of any major river or irrigation project has to depend mainly on rain water for recharging ground water and storage in tanks. Thus rain water becomes one of the important sources of water. There are two types of rainwater harvesting. One is Roof Top Rainwater Harvesting and the other is harvest the rainwater falling on the open surface areas. In the urban and built up areas like Hoskote Town villages with residential households, offices, schools, colleges and public buildings are suitable where it is possible to harvest and utilize for domestic / office use for washing, flushing and cleaning. Such roof top harvesting will reduce the runoff, which choke the storm drains, flooding of roads, etc. Leaving the

residential households, private buildings which need private investment, schools, colleges, public building can be considered for roof top harvesting. The rain falling on the open surface will go as surface run-off might be useful in washing off urban waste seen on the roadside and may ultimately reach the tank nearby. The rain falling on the open surface in the rural areas can be harvested through recharge pits, check dams, nalla bunds and other water harvesting structures to recharge the ground water. Any excess water falling on the ground will ultimately will be harvested by tanks and will aid in utilization for irrigation and as well as recharge ground water through deep percolation.

B. Construction of Checkdams:

A Check Dam is a water harvesting structure with a low weir constructed on small nalas and streams and long gullies to harvest the run-off or flash floods and facilitate create storage locally and facilitate deep percolation to ground water. It will also serve to reduce the soil erosion. When a series of check dams are constructed along a long stream course the spacing between check dams should be beyond their water spread. The height of the checkdam depends upon the bund height. In the Hoskote area, the Watershed Development Cell has already constructed nearly 100 Checkdams (including the no. constructed prior to 2003). The LPA with an area of nearly 600 sqkm and excluding the town and the village areas, barren land and already constructed checkdams, there is scope for constructing another 400 Checkdams. The average length of a checkdam nearly 15m, height of 2m (out of which the height above ground is 1m) and width of 1 m will have a storage capacity of 250 cum and each checkdam with an annual three fillings the total water harnessed is about 750 cum out of which nearly 600 cum (80%) can be expected to percolate to recharge ground water annually. The total water harnessed will be 500 x 600 = 300,000 cum/year or 0.3 MCM. This water can sustain pumping of 30 bore wells for irrigation or 30 industries consuming 1 ha.m/year.

C. Nalla Bunds:

Nalla Bunds also known as Cement plugs are similar to checkdams but will have widerbase of 14 to 15mtr with a width of one meter and height 1.5m. They are constructed where the stream course or gully is quite deep and extend over longer distances. Hence have larger storage capacities of nearly 600 to 700cum though better suited for harvesting run off but ideal sites are difficult to get. In the Hoskote area the water shed development cell has already constructed nearly 75 such structures. There are possibilities constructing another 75 such structures, the cost of which is around 1.5 lakhs. So the total water harvested with the approximate of three fillings annually will be nearly 1800 cum with 80% percolation, the total water harnessed will be 1440 cum per year. So for the 150 structures the total quantity harnessed is 150x1440 = 216000cum per year or 0.21 MCM.

D. Recharge Pits:

Recharge pits are constructed in the farmer's land or the agricultural land to arrest the overland flows generated due to rain falling on the land and can aid locally to build up water levels in the wells in the vicinity over a period of time. They are very effective especially in recharging the water table aquifer. Such recharge pits constructed over a large area can build up water levels considerably in a region in course of time and can reverse the trend of declining water levels now observed in the area. As per the statistics (District Statistics, Bangalore Rural District for the year 2004-2005) there are nearly 34189 land holdings which includes marginal, small, small medium, medium and large holdings which means 34189 recharge pits and considering another 1800 land holdings for the Bangalore East area, there will be around 36000 land holdings or 36000 recharge pits with a cost of Rs. 10000 per pit (4 x 4 x 3 m).

E. Desilting of Tanks:

Karnataka State has nearly 36000 tanks and tanks are the main sources of irrigation where anal irrigation is not possible where there are no major irrigation projects or perennial rivers. Most of the tanks are more than one or two century old and they

are silted up reducing their capacity almost by 50%. There are nearly 212 tanks in the LPA with a storage capacity of 90.3 MCM. However in the present situation their capacity might be around 45.0 MCM. In recent years due to vagaries of monsoon, encroachment of catchment areas, stream courses feeding the tanks, there has not been any considerable inflows into the tanks, hence most of the tanks are dry or contain very little water in them. With the non-availability of tank waters for irrigation, farmers have resorted to drilling of bore wells in the ayacut areas to meet the water requirements.

With the launching of various schemes by the Government to revive these tanks, desilting, repairing of tank bunds, canals, etc have been taken up. The Department of Minor Irrigation of the Govt. of Karnataka under a centrally sponsored scheme has taken up desilting and repairing of 26 tanks in the Hoskote Taluk at a cost of Rs.410.58 Lakhs. In this scheme, desilting has been taken up at a cost of Rs.215.30 Lakhs, by desilting 0.521 MCM, which is supposed to create an additional storage of 4.57 MCM and increase the water availability by 5.85 MCM. Desilting of tanks in addition to creating additional storage will also facilitate deep percolation to ground water. Experiments have indicated that by desilting that is by removing the silt from the tank bed there is increase in the rate of infiltration. At 80% percolation, the total quantity expected to recharge ground water will be around 4.70 MCM annually.

Similarly, nearly 125 tanks the data of which are available falling in the Hoskote LPA (including 4 tanks from Bangalore East Taluk) which are under the control of Gram Panchayaths can be considered for desilting. The total volume that can be desilted will be around 5.085 MCM and the probable percolation to ground water at 80% will be 4.0 MCM. Hence the total additional ground water available will be 8.80 MCM.

The 26 tanks now taken up for desilting under centrally sponsored schemes by the Minor Irrigation Department are big tanks the volume proposed for desilting is very small some times even less than 10% and cannot be expected to improve the storage substantially. For example, in case of Hoskote Doddakere, the total live storage is 22.64 MCM and the water spread area is 1300 ha (13000000 sqm) whereas the volume proposed for desilting is only 115986 cum (115986 sqm considering one

meter depth) which is less than 10%. As such it is worthwhile considering desilting of all these 26 tanks at a later date (say after five years) which will also considerably increase in storage and facilitate improve the situation. Hence an additional volume of 2.18 MCM is suggested for desilting. It can be added, here that the additional storage created by desilting should not be utilized for irrigation as far as possible and may be retained to facilitate infiltration and recharging ground water. In a year of excess rainfall, when the tanks are full, they can as well be utilized for irrigation also.

F. Recharging of Bore wells:

There are nearly 1150 borewells at present being utilized for drinking water in the LPA. In view of the situation existing in the area, it may be necessary that these borewells are recharged directly, so that people may not suffer from lack of drinking and domestic water. A technique available where the aquifers tapped by these borewells are recharged directly by tapping the surface flows around the bore hole and water made to ercolate through a filter constructed around the existing borewell or nearby drilling another borewell and recharging the zone / fractures tapped by the bore well. This has been successfully carried out at several locations and the borewells have improved in their yield and sustain pumping for longer periods.

G. Recycling of Waste Water:

As the demand goes up, there is a need to give thought to the recycling of waste water generated due to different uses as there is a limit to meet the demand for fresh water as the source of fresh water either from ground water or surface water sources is limited .With the projected demand for water for the town and industries, IT Sector is likely to be around 35 MLD out of which the water supply for a projected population of 1,00,000 is likely to be around 10 MLD at 100 lpcd. Presently this much water is not available and the additional resources mobilized can meet to the extent of 8 MLD. Thus there is need for recycling of atleast 50% of the water utilized, so that the treated water can be supplied to meet the demand of industries or for other domestic needs. Hence a Sewage Treatment Plant (STP) is also proposed to be installed. The water treatment will also include tertiary treatment and the treated

water can be utilized for domestic (not for drinking) / industrial use or simply let into the tank or used for recharging ground water through spreading ponds, recharge basins in the tank bed or along the stream course.

H. Water Supply from Cauvery IV Phase:

Cauvery IV Phase has been taken up by BWSSB and the Cauvery Water Supply is being implemented to cover KR Puram, which is about 13 km from Hoskote town. Even though presently it may not be feasible to extend the supply to Hoskoteurbanisable area ultimately when the city expands and the Greater Bangalore may include the Hoskoteurbanisable area in another two decades time. Hence it may worthwhile to consider the extension of the facilities through piped water supply creating additional facilities of storage at KR Puram and Hoskoteurbanisable area.

I. Drilling of Additional Bore Wells:

As already indicated in order to meet the demand for drinking and domestic needs of the urbanisable area there is a need to drill atleast 80 bore wells, which can yield at 3 to 4 lps. In order to locate such high yielding borewells it may be necessary to carryout detailed investigations, hydro-geological and geo-physical surveys based on remote sensing maps available for the area. The proposed borewells will be required to be drilled to a depth of 200 m (maximum depth suggested but it can be less depending upon the encountering of productive fractures in depth).

6.7.6 SCOPE FOR RAINWATER HARVESTING AND RECYCLING OF WATER IN THE INDUSTRIAL AREAS:

There are number of industries in operation in the existing 194.49 ha of land. Most of the industries do not have the facility to carry out rain water harvesting or recycling of water or recharging of ground water. There is wide scope for carrying out these activities. Both surface and roof top harvesting can be done in these areas. With the introduction of recycling at least 50% of the water requirement can be met. Hence it may be imperative that rainwater harvesting and recycling of water is made mandatory for all the industries in future.

6.7.7 REGULATION OF GROUND WATER DEVELOPMENT:

At present there is no agency which can regulate the development of ground water in the Hoskote Taluk. There is need for such a control as there is indiscriminate drilling of borewells for various purposes which has resulted in over exploitation and decline of water levels Permitting wells for meeting drinking and domestic needs, a control needs to be exercised either by State Ground Water Authority / State Mines & Geology Department or by Central Ground Water Authority / Central Ground Water Board or by the District Administration. Obtaining permission need to be made mandatory for withdrawing ground water for large and medium industries, big educational institutions and apartment complexes.

6.8 PROPOSED TRAFFIC AND TRANSPORTATION PLAN-2031

City Traffic and Transportation Studies (CTTS) have been made for BMR, 2031. This CTTS is referred for provision of Traffic Management proposals in the Hoskote town. However road circulation plan for the entire LPA is prepared showing the alignment and pattern of all existing and proposed roads in the LPA.

PROPOSALS:

1. **Widening of Village Roads:**

   All village roads within LPA which are less than 18 m are proposed for widening to 18 m.

2. **Segregation Of Regional And Intra-Settlement Traffic**

   Town Ring road has been proposed around Hoskote town which is the major growth node of the LPA. It would act as a conurbation boundary as well as serve the purpose of diverting traffic from the centre of the town.

3. **Segregation Of Freight Traffic**

   Since major industrial areas have been proposed in the LPA a separate freight corridor is required separating the intra settlement traffic and freight traffic. Presently the NH 4 and NH 209 form the routes for both freight as well as normal traffic. TRR (town ring road) has been proposed so serve the purpose by diverting heavy traffic away from the town Centre.

4. **Proposal Of New Roads To Increase Connectivity**

New roads have been proposed to increase the connectivity to developed areas in the LPA. New roads are also proposed for better zoning and guide future developments.

5. **Planning For Non Motorised Traffic (NMT) And Pedestrian Facilities**

Hoskote urbanisable area and all the major settlements in the LPA have to be planned for NMT and easy pedestrian movement. Studies should be taken up at the town level to arrive at detailed planning proposals for NMT mainly for cycling and pedestrian friendly circulation pattern. Old market area is proposed for Pedestrian Zone by restricting the traffic movement during specified hours. This can be achieved besides other measures that will be adopted Buffer zones/green spaces under HT lines, along major drainage lines and area surrounding lakes/ponds/tanks will be explored for NMT infrastructure for better NMT accessibility as per DULT recommendations.

6. **Planning For Parking Facilities**

Parking facilities is completely absent in the LPA. With the growth of the population in the LPA and the consequent vehicular growth, proper planned parking facilities are indispensible part of the development. Studies will be taken up at LPA level to recognize inherent problems and to arrive at detailed proposals for parking in the district/town level.

7. **Planning for Public Mass Transit**

The public mass transit is meant to take on maximum number of repeat trips hence major terminals of passenger transit should be located at high density work place and high density residential areas.

8. **Planning for Multimodal Transit**

To encourage multimodal transit integration, it is desirable to have the terminals located wherever more than one mode like rail and road are present and they can be integrated e.g. Bangalore City railway station and the Kempegowda bus terminal. The bus terminal is being redeveloped to accommodate the metro station and intra city bus terminal as well as few intercity bus terminal, thereby ensuring seamless physical multimodal integration.

9. **Location of Bus Stands, Bus depots and Bus Bays**

Within the town limits, bus stands/stops are proposed for every 250-300 m with suitable shelter facility. In all layouts with more than 10 ha extent, bus bays shall be indicated as a part of the layout within the property boundary of the layout. The existing properties of BMTC are reserved for traffic and transport use.

8. Truck Terminals/ freight complex/ logistics hub and Provision of Infrastructure near Truck Terminals/ freight complex/ logistics hub

As far as possible the traffic and transportation use should be located as per the envisaged activity. It is desirable to have truck terminal/ freight complex/ logistics hub next to or along the side of the industrial use/ KIADB industrial areas.

Along NH 4, another truck terminal is proposed and industrial corridor infrastructure and basic infrastructure facilities like drinking water, public conveniences and restaurant may be proposed for convenience of freight personnel.

6.9 ROAD WIDENING AND BUILDING LINES

Building lines are proposed for important roads passing through the LPA and are presented in Volume III Zonal Regulations.

In addition, some of the existing roads within the town are also proposed for widening, the list of which is given below:

Table 61: Roads proposed for widening

Sl. No	Present ROW	Name of the road	Jurisdiction
1	12	K. R. Road leading to Taluk Office from KEB Circle	TMC
2	9	From Sulibele road to Taluk Office	TMC
3	9	Kannurhalli road	TMC
4	9	Gangamma gudi Temple road	TMC

6.10 CHANGES MADE FROM APPROVED IMP TO MASTER PLAN

Following changes have been made from approved IMP to Master Plan of Hoskote LPA:

- Incorporation/Updation of Approved layouts and development plans, KHB layouts
- Change of Land Use under section 14-A of KTCP Act, 1961 which are approved by Government and under 14-A(3)of KTCP Act, 1961 and conversions under Protection

Class (honouring earlier conversions prior to Date:28.04.2007) and permission awarded by BMRDA

- The Land Use changed due to change in alignment of IMP Road and due to zoning by adjacent land use
- Changes in Alignment of NH 207 as per the Notification of Govt.
- changes in Alignment of STRR, and IRR as per SECON Pvt. Ltd
- Proposal of new roads and widening to increase connectivity and to maintain zoning
- Inclusion of KIADB new proposals
- Correction of cadastral defects
- Affected legend changes
- Inclusion of buffer zone/no development zone/sensitive zone as per regulations around solid waste management site, DRDO premises, lakes and tanks.
- Incorporation/inclusion of information from and proposals ofCentral and State Government Departments/Agencies, KIADB and local Authorities.
- Some of the isolated developments included within conurbation limits of IMP are deleted rationally.
- Scientific allocation of new proposals based on planning principles.

The map showing the incorporation/updation of approved layouts and development plans, KHB layouts and change of land use under section 14-A of KTCP Act, 1961 which are approved by Government and under 14-A (3) of KTCP Act, 1961 and conversions under protection class (honouring earlier conversions prior to Date:28.04.2007) and permission awarded by BMRDA within Hoskote conurbation area.

CHAPTER-7

MASTER PLAN PROPOSALS AFTER CONSTITUTION OF STRR PLANNING AUTHORITY

CHAPTER-7 – MASTER PLAN PROPOSALS AFTER CONSTITUTION OF STRR PLANNING AUTHORITY

7.1 CONSTITUTION OF STRR PLANNING AUTHORITY

7.1.1 LOCAL PLANNING AREA BEFORE CONSTITUTION OF STRR PLANNING AUTHORITY

Local Planning Area (LPA) of Hoskote comprising of 316 villages is declared by Government of Karnataka in a Gazette Notification No. UDD 118 Bem Ru Pra 2003 dated 03.03.2006. It comprises of 300 villages (Hoskote town and 299 villages) of all 5 Hoblis namely Sulibele, Nandagudi, Anugondanahalli, Jadigenahalli, and Kasaba Hobli of Hoskote Taluk and 16 villages of Bidarahalli Hobli of Bangalore East Taluk. Total extent of the LPA is 591.72 sq km (59,172 hectares). Planning Authority for the Hoskote LPA is constituted vide Govt. Notification No. UDD 31 Bem Ru Pra 2006, dated: 19.07.2006.

The Provisional Master Plan for Hoskote Local Planning Area was approved by the Government vide order no UDD152:BMR2013, Bangalore dated 16.9.2013. The landuse analayis for the conurbation area was worked out as per table below.

Table 62 Proposed Landuse Analysis as per Provisonal Master Plan

SL.no	LANDUSE	As per Provisional MP LPA	
		AREA (Sq.Km)	Percentage (%)
1	Residential	3650.62	34.47
2	Commercial	466.99	4.41
3	Industrial	3614	34.12
4	Public/Semi public	141.9	1.34
5	Park/Open space	1087.12	10.26
6	Public Utility	173.65	1.64
7	Transportation	1457.43	13.76
	Sub total	**10591.71**	**100**
	Agriculture	40.47	
	Forest land	167.12	
	Unclassified	245.81	
	Water Bodies	1558.74	
	GRAND TOTAL	**12603.85**	

7.1.2 LOCAL PLANNING AREA AFTER CONSTITUTION OF STRR PLANNING AUTHORITY

STRR Local Planning Area has been declared vide Govt Notification no UDD36:BMR2016, Bangalore dated 24.6.2016 and the planning authority for the STRR Local Planing Area has been constituted vide notification no UDD36:BMR2016, Bangalore dated 21.10.2016. An area of 116.24 sqkm comprising of 51 villages of Hoskote Local Planning Area were withdrawn and included in the STRR Local Planning Area. Thus the Local Planning area of Hoskote reduced from 591.72 sqkm to 475.48sqkm. When we look into the census data, the village name Bhaktarahalli, geographical area is 259.38 Ha was wrongly entered as 93.4 ha in the STRR LPA notification. Similarly another village name Yetinavadevarayanapura, geographical area 28.42 Ha was wrongly entered as 85.3 Ha in the STRR notification. Accordingly the area of the STRR LPA within the Hoskote LPA limits comes to 117.62sqkm instead of 116.24 sq.km as per notification. The difference of 1.38 sq.km is going to be reduced in the Hoskote LPA area of 475.48 sq.km and finally works out to be 474.10 sq.km. Hence for all calculation purposes an area of 474.10 sq.km has been taken as LPA of Hoskote after declaration of the STRR LPA. AS per approved draft master plan, after deducting the STRR LPA area coming within HPA limits, and deducting an area of 74.89 sq.km of Nandagudi Township area coming within LPA of Hoskote for which separate Master plan is to be prepared as per direction of Governmnet order No.UDD:25: BMR 2016, Bangalore dated: 16.05.2016 the landuse analysis for the conurbation area is as per the table below.

Table 63 Landuse Analysis for Conurbation area as per Provisional Master Plan

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	2923	34.95
2	Commercial	396	4.73
3	Industrial	2637	31.53
4	Public & Semipublic	217	2.59
5	Park & Open Space	970	11.60
6	Public Utility	69	0.82
7	Transportation	1152	13.77
Total		**8364**	**100**
8	Forest	156	
9	Unclassified	255	
10	Water Bodies	991	
Grand Total		**9766**	

7.1.3 CHANGES MADE FROM PROVISIONAL (DRAFT) MASTER PLAN TO FINAL (DRAFT) MASTER PLAN

The provisional Master plan was approved by government. Vide order No. UDD152: BMR 2013, Bangalore dated: 19.09.2013. The Hoskote planning Authority is finalising the public comments as per Government G.O. No. UDD 152: BMR 2013, Bangalore dated: 12.01.2016. The delay in finalising the public comments due to various reasons has been recorded along with dates of events vide ***Annexure 6.*** Changes made till finalisation of public comments are as under;

- The Land Use changed due to change in alignment of IMP Road and due to zoning by adjacent land use
- Changes in Alignment of NH 207 as per the Notification of Govt.
- changes in Alignment of STRR, and IRR as per SECON Pvt. Ltd
- Proposal of new roads and widening to increase connectivity and to maintain zoning
- Inclusion of KIADB new proposals
- Correction of cadastral defects
- Affected legend changes
- Inclusion of buffer zone/no development zone/sensitive zone as per regulations around solid waste management site, DRDO premises, lakes and tanks.
- Incorporation/inclusion of information from and proposals ofCentral and State Government Departments/Agencies, KIADB and local Authorities.
- Some of the isolated developments included within conurbation limits of IMP are deleted rationally.
- Scientific allocation of new proposals based on planning principles.

Provisional Master Plan (updated) landuse analysis within the conurbation area excluding STRR and Nandagudi Township from the date of provisional approval till finalisation of public comments is as per table below.

Table 64: Provisional Master Plan (updated) Landuse Analysis within the Conurbation Area excluding STRR and Nandagudi Township

Sl.No	Landuse	Area in Hectare	Percentage
1	Residential	2955	33.91
2	Commercial	401	4.60
3	Industrial	2937	33.71
4	Public & Semipublic	220	2.53
5	Park & Open Space	917	10.52
6	Public Utility	70	0.80
7	Transportation	1214	13.93
Total		**8714**	**100.00**
8	Agriculture	665	
9	Forest	16	
10	Unclassified	245	
11	Water Bodies	445	
Grand Total		**10084**	

7.2 GRID MAP TO PLANNING DISTRICTS MAP

Base Map Preparation was undertaken by BMRDA by entrusting the work to Pixel Company and the same was supplied to all Planning Authorities coming under BMRDA jurisdiction.

In Master Plan Provsional the maps were in Auto Cad grid format for conurbation limit only. It consists of 9 existing landuse grid maps and 13 proposed landuse grid maps.

In the preparation of Final Master Plan, the Auto Cad grid maps were converted to GIS format and Hoskote LPA was divided into 42 planning distrct maps and 6 Hobli maps based on planning principles by considering the areas inside the grids and outside the grids.

7.3 NANDAGUDI TOWNSHIP

Nandagudi Township having an area of 74.89 Sq.km comprises of 36 villages which is included in the Hoskote LPA.

In the Government Order No UDD 25 BMR 2016, Bangalore dated: 16.05.2016 the government approval was given to prepare comprehensive land use Map and Road Circulation Map for the Nandagudi Township area and to include it in the Master Plan Prepared for the Local Planning Area and to take approval separately for the area under Section 13(b) of KTCP Act, 1961 and then to send the proposal for cancellation of approval given Vide Government Order No: UDD/97/BMR/2016, dated: 18.10.2006.

The subject was placed before the 66th Authority Meeting vide Subject No.10 for declaration of intention to prepare Master Plan for Nandagudi Township Area under Section 10 of KTCP Act, 1961. Accordingly it was published in Prajavani and Udayavani daily newspaper on 03-02-2017 and also it was published in Karnataka gazette dated: 23.02.2017 for calling suggestions from Public for a period of two months from the date of notification.

In the 70th Authority meeting held on 22-07-2017 the subject of preparation of master Plan for Nandagudi Township was placed vide sub. No.2 of part-II of agenda. Decision was taken to entrust the work of preparation of Master Plan for Nandagudi Township to infrastructure development corporation (Karnataka)Ltd (IDeck) at a cost of Rs.36,00,000 (Thirty Six lakhs) under 4G exemption. Accordingly the proposal was sent to Govt. seeking administrative approval through BMRDA. Hence this area is not taken into consideration for finalisation of Master Plan and also the population for projection.

7.4 PUBLIC COMMENTS AND OBSERVATIONS

The dates of events took place as under;

a) Master Plan (provisional) was prepared by BMRDA and Government vide **G.O. No. UDD 152: BMR 2013 Bangalore, dated 16-09-2013** approved Master Plan (provisional) under section 13(1) of KTCP Act, 1961.

b) Comments were called by the public within a period of 60 days vide letter No. BMRDA/ ADTP-2/ M.P/ HPA/ 04/ 2012-13, dated 03-10-2013 published in the **Official gazette dated: 09-10-2013.**

c) An officers committee (10-members) was constituted by the Government vide order No. **UDD 27: BMR 2014, Bangalore dated: 05-03-2014** to scrutinise comments received by the public in respect of Anekal, Hoskote, Nelamangala, Magadi & Kanakapura Planning Authorities.

d) An Officers committee conducted 10 meetings vide 20-03-2014, 27-03-2014, 10-04-2014, 22-05-2014, 05-06-2014, 07-07-2014, 13-08-2014, 18-08-2014, 22-08-2014 and 26-08-2014 but unable take decisions as per records.

e) Vide letter No. BMRDA/staff/31/2015-16, dated: 26-06-2015, it is directed the Member secretary of Hoskote Planning Authority to place the comments received by the public once again before the committee meeting in future days.

f) Based on the proposals of BMRDA, the Government directed the Hoskote Planning Authority to scrutinise the comments received by the public at Authority level and submit the Master Plan for final approval to the Government through BMRDA vide G.O No. **UDD 152: BMR 2013, Bangalore dated: 12-01-2016.**

g) In the Honorable High Court of Karnataka vide W.P. No. 4188/2016 (LB RES) one Sri V. Vijay kumar (Authorized Agent cum SPA holder) represented on behalf of 02 petitioners filed a case and challenged the legality of Government order issued **vide G.O. No. UDD 152: BMR 2013, Bangalore dated : 12-01-2016** and the Honorable High court of Karnataka admitted the W.P and passed an **INTERIM ORDER on 28th day of January 2016** to stay the Government order dated : 12-01-2016 for a period of three months from the date of order.

h) The stay order granted on 28-01-2016 was modified on 14-07-2016 as under: **"The Interim Order is modified and the respondents action will remain subject to the decision of this court in the present writ petitions" (W.P.4188/2016 (LB-RES).**

i) Sri Ramanjini was nominated as Chairman of Hoskote Planning Authority for a period of 18 months vide notification No. NAE 66 BMR 2016, Bangalore Date: 28-02-2015. Three (03) meetings were conducted on 06-08-2016, 19-08-2016 and on 26-08-2016 to scrutinise the suggestions / comments received by the publics in response to notification dated: 09-10-2013. The term of Chairman was ended on 27-08-2016.

j) Vide Govt. notification No. UDD 152 BMR 2016, Bangalore dated: 03-09-2016, the commissioner of BMRDA was nominated as Chairman of Hoskote Planning Authority till the Govt. nominates the new non official chairman.

k) In the BMRDA meeting held on 7-10-2016 chaired by Hon. Minister for Bangalore Development and Town Planning, the decision was taken to scrutinize the comments of publics received in response to provisional approval of Master Plan only after the Govt. nominate the full time Chariman to the Hoskote Planning Authority. This was

communicated to HPA vide BMRDA letter No. BMRDA/TP/Meeting/30/2015-16 dated: 24-11-2016.

l) Sri Krishna Reddy was nominated as chairman of Hoskote Planning Authority vide notification No. NRE 192 BMR 2016, Bangalore, dated: 08-12-2016. Three (03) more meetings were conducted on 21-01-2017, 28-01-2017 and 09-02-2017 to scrutinize the suggestions / comments received by the publics in response to notification dated: 09-10-2013.

m) As per the direction of BMRDA, vide letter No. dated.25.04.2017 the road network in between Conurbation boundary and local planning area boundary was worked out and included in the Master Plan (Final) to be submitted to Govt. accordingly it was intimated to BMRDA vide HPA letter dated: 4-05-2017

n) As per the decision of 69th committee meeting held on 26.05.2017 vide subject No.11, the HPA wrote letter to the local body (CMC, Hoskote) on 06.06.2017 to give comments on the Master plan of Hoskote pertaining to CMC area. The time limit of 45 days was ended on 20.07.2017 and we are not received any comments/suggestions by the CMC, hence the decision was taken in the 70th committee meeting held on 22.07.2017 to assume that there were no comments of local body on the Master Plan prepared by HPA and decided to submit the same to Government.

Total numbers of public comments received were reviewed hobli wise as per dates of events given as above by the Hoskote planning Authority and the decision of committee are recorded as ***Annexure 8*** separately appended to this report. Accordingly Final Master Plan landuse analysis within conurbation area excluding STRR and Nandagudi Township are tablulated as below.

Table 65: Hoskote LPA as per Provisional Master Plan

Sl.No	Places	Area in Hectare
1	Hoskote LPA (A)	59172
2	STRR (B)	11762
3	Nandagudi Township (C)	7489
	Sub Total (B+C)=D	19251
4	**LPA excluding STRR & Nandagudi Township (A-D)=E**	**39921**

Table 66: Final Master Plan Landuse Analysis within the Conurbation Area excluding STRR and Nandagudi Township

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	3791.46	39.56
2	Commercial	452.52	4.72
3	Industrial	2670.90	27.87
4	Public & Semipublic	291.43	3.04
5	Park & Open Space	921.84	9.62
6	Public Utility	67.87	0.71
7	Transportation	1388.12	14.48
Total (A)		**9584.14**	**100.00**
8	Forest	15.99	
9	Unclassified	245.09	
10	Water Bodies	451.19	
Total (B)		**712.26**	
Grand Total (A+B)		**10277.65**	

Table 67: Final Master Plan Landuse Analysis outside the Conurbation Area excluding STRR and Nandagudi Township

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	637.55	2.15
2	Commercial	20.72	0.07
3	Industrial	13.37	0.05
4	Public & Semipublic	0.97	0.00
5	Park & Open Space	50.70	0.17
6	Transportation	1340.90	4.53
7	Agriculture	21350.00	72.07
8	Forest	2862.73	9.66
9	Water Bodies	3348.00	11.30
Grand Total		**29624.94**	**100.00**

7.5 PLANNING DISTRICT MAPS FOR ENTIRE LPA

Entire Hoskote LPA was carved into 42 planning district maps and 6 Hobli maps based on the planning principles excluding Nandagudi Township Planning district maps. Hoskote taluk has 5 Hoblis namely Sulibele, Nandagudi, Anugondanahalli, Jadigenahalli, and Kasaba Hobli of Hoskote Taluk and 16 villages of Bidarahalli Hobli of Bangalore East Taluk.

7.5.1 ANUGONDNAHALLI HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

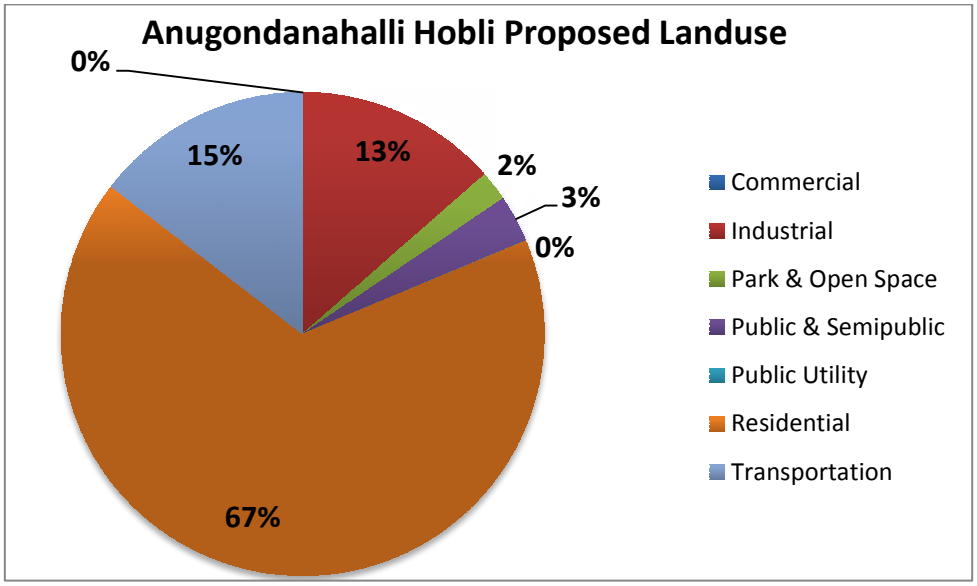
The conurbation area of 498.35 ha is proposed for Anugondanahalli hobli in Hoskote Taluk to accommodate the population of 2031 with the developable area of 493.33 ha. The area under Anugondanahalli hobli is bifurcated into 3 pieces by the STRR LPA. Major portion of the area abutting to BDA LPA boundary and hence this area attracts developments faster compared to the other area. The percentage of parks and open spaces, commercial, public and semi pubic needs to be improved during revision of master plan. The proposed landuse analysis is as per the table below.

Table 68: Anugondanahalli Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	330.08	66.91
2	Commercial	0.31	0.06
3	Industrial	66.22	13.42
4	Public & Semi public	15.48	3.14
5	Park & Open Space	9.80	1.99
6	Public Utility	0.05	0.01
7	Transportation	71.40	14.47
	Total	**493.33**	**100.00**
8	Water Bodies	5.02	
	Grand Total	**498.35**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Anugondanahalli hobli for 2031.

Figure 59: Anugondanhalli hobli proposed landuse for conurbation area



7.5.2 HOSKOTE HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

The conurbation area of 3162.72 ha is proposed for Hoskote hobli in Hoskote Taluk to accommodate the population of 2031 with the developable area of 2993.05 ha. Hosote CMC area comes under Hoskote hobli. Major portion of the LPA population area residing in the Hoskote kasaba. Looking at the proposed landuse analysis in the table below, the percentage of public and semi public area, parks and open spaces and public utility needs to be improved during the revision of Master Plan. Transportation required junction

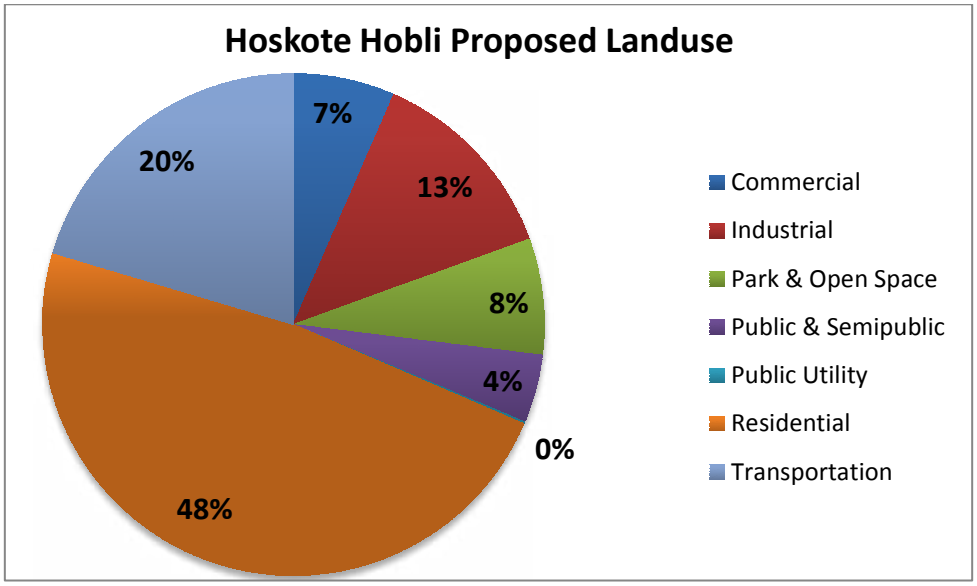
improvement, widening of existing roads, and improvement of infrastructure facilities as per proposed maps.

Table 69: Hoskote Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	1440.98	48.14
2	Commercial	195.89	6.54
3	Industrial	386.91	12.93
4	Public & Semi public	131.27	4.39
5	Park & Open Space	223.87	7.48
6	Public Utility	3.95	0.13
7	Transportation	610.18	20.39
	Total	**2993.05**	**100.00**
8	Water Bodies	169.67	
	Grand Total	**3162.72**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Hoskote hobli for 2031.

Figure 60: Hoskote hobli proposed landuse for conurbation area



7.5.3 NANDAGUDI HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

The conurbation area of 654.00 ha is proposed for Nandagudi hobli in Hoskote Taluk to accommodate the population of 2031 with the developable area of 636.89 ha. Excluding the area of Nandagudi Township the area for residential works out to be 18.11%, this needs to be improved. Majority of KIADB proposals for industrial development fall within this hobli,

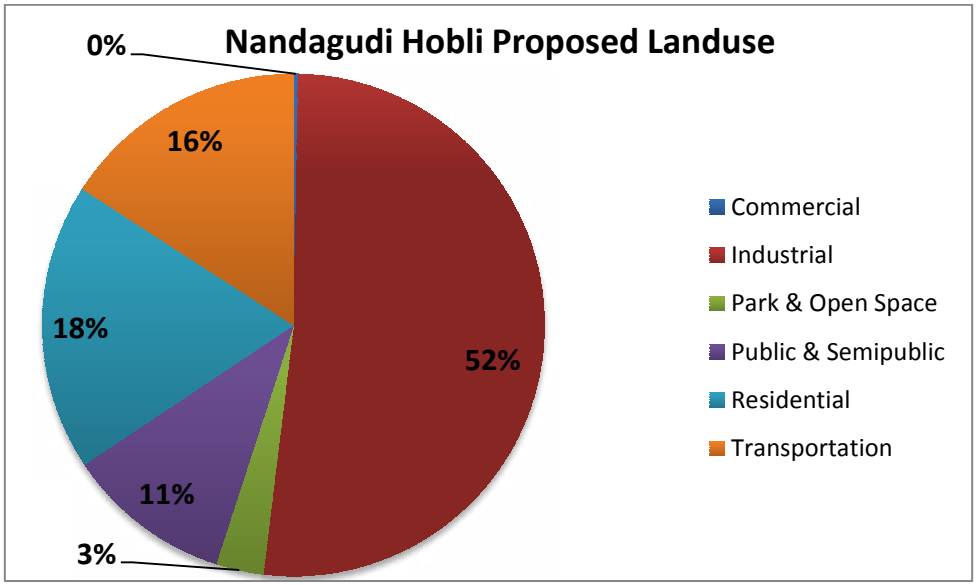
increasing the area under industrial use to more than 50% as against the standard requirement of about 9% as per URDPFI guidelines. Hence the landuse planning of this area has been done on work-home concept and accordingly mixed landuse proposed by zoning of landuse. Looking at the table below, percentage of parks and commercial areas needs to be improved during revision of master plan.

Table 70: Nandagudi Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	115.34	18.11
2	Commercial	1.95	0.31
3	Industrial	333.00	52.28
4	Public & Semi public	69.62	10.93
5	Park & Open Space	19.12	3.00
6	Transportation	97.86	15.37
	Total	**636.89**	**100.00**
7	Water Bodies	17.11	
	Grand Total	**654.00**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Nandagudi hobli for 2031.

Figure 61: Nandagudi hobli proposed landuse for conurbation area



7.5.4 SULIBELE HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

The conurbation area of 2450.62 ha is proposed for Sulibele hobli in Hoskote Taluk to accommodate the population of 2031 with the developable area of 2312.33 ha.

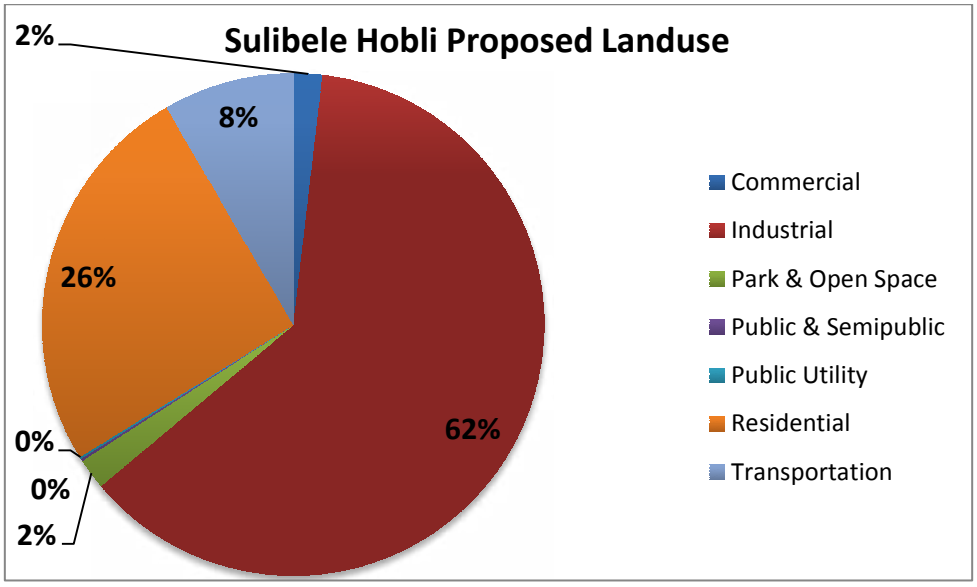
The different uses proposed within the conurbation limit needs to be improved during revision of Master plan. The Percentage of industrial is very high due to the lands proposed for industrial activities by KIADB.

Table 71: Sulibele Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	587.59	25.41
2	Commercial	43.12	1.86
3	Industrial	1434.65	62.04
4	Public & Semi public	3.61	0.16
5	Park & Open Space	45.98	1.99
6	Public Utility	3.09	0.14
7	Transportation	194.30	8.40
	Total	**2312.33**	**100.00**
8	Forest	15.96	
9	Water Bodies	122.32	
	Grand Total	**2450.62**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Sulibele hobli for 2031.

Figure 62: Sulibele hobli proposed landuse for conurbation area



7.5.5 JADAGENAHALLI HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

The conurbation area of 854.01 ha is proposed for Jadagenahalli hobli in Hoskote Taluk to accommodate the population of 2031 with the developable area of 820.70 ha.

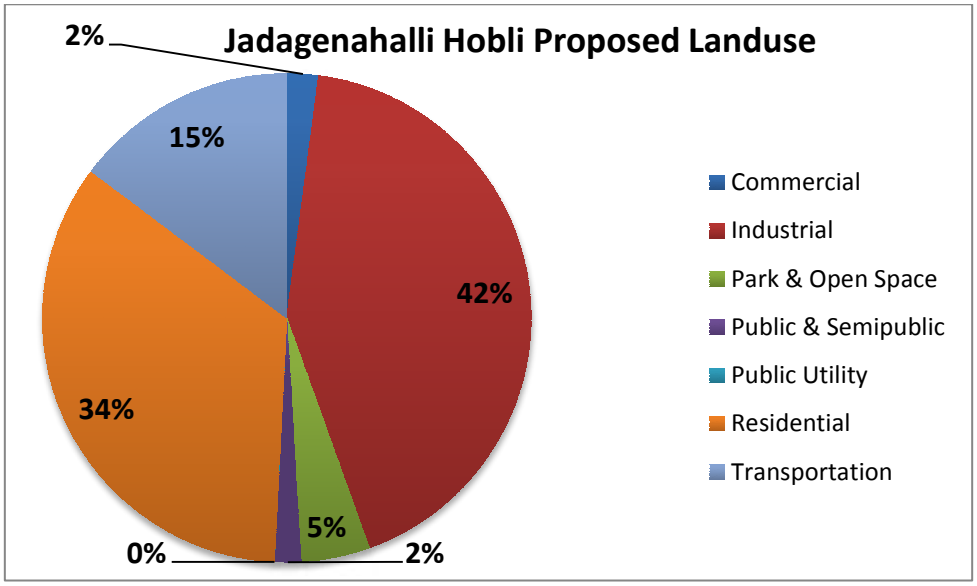
The percentage of industrial area is high and that of parks and open spaces, public and semi public needs to be improved during revision of Master Plan.

Table 72: Jadagenahalli Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	281.83	34.34
2	Commercial	17.14	2.09
3	Industrial	347.51	42.34
4	Public & Semipublic	15.59	1.90
5	Park & Open Space	37.27	4.54
6	Public Utility	0.02	0.01
7	Transportation	121.34	14.78
	Total	**820.70**	**100.00**
8	Water Bodies	33.31	
	Grand Total	**854.01**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Jadagenahalli hobli for 2031.

Figure 63: Jadagenahalli hobli proposed landuse for conurbation area



7.5.6 BIDARAHALLI HOBLI PROPOSED LANDUSE ANALYSIS FOR CONURBATION LIMIT

The conurbation area of 2676.70 ha is proposed for Bidarahalli hobli in Bangalore East Taluk to accommodate the population of 2031 with the developable area of 2327.84 ha. Mandur SWM site and DRDO premises comes under Biderahalli hobli. AS per govt order 500m buffer

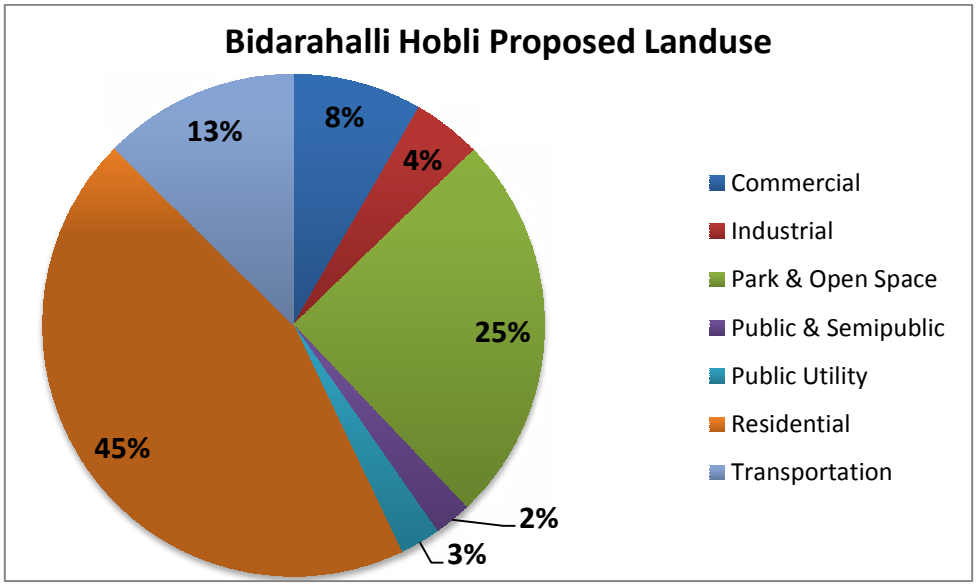
kept from Land fill sites and 500 yards buffer left from, DRDO premises, as no development zone. The percentage of commercial is higher in this hobli compared to others.

Table 73: Bidarahalli Hobli Proposed Landuse Analysis

Sl.No	Landuse	Area in Hectares	Percentage
1	Residential	1035.64	44.49
2	Commercial	194.12	8.34
3	Industrial	102.62	4.41
4	Public & Semipublic	55.86	2.40
5	Park & Open Space	585.80	25.16
6	Public Utility	60.76	2.61
7	Transportation	293.04	12.59
	Total	**2327.84**	**100.00**
8	Unclassified	245.09	
9	Water Bodies	103.77	
	Grand Total	**2676.70**	

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area of Bidarahalli hobli for 2031.

Figure 64: Bidarahalli hobli proposed landuse for conurbation area



7.6 PROPOSED LANDUSE ANALYSIS WITHIN CONURBATION AREA

The urbanisable area as per draft approved Master Plan exclusing STRR and nandagudi Township area is tabulated to 83.64 sq.km. After updating the Master Plan by incorporating

all commitments of the authority and proposals of various government department incuding corrections of cartographical errors, the urbanisable area of the LPA comes to 87.14 sq.km and this as increased to 95.84 sq.km after scrutiny of the public comments received by the authority. This was further analysed hobli wise as detailed in the previous sections. The table below shows the landuse analysis compare with the land requirement as per URDPFI guidelines.

Table 74: Land requiremnet as per URDPFI guidelines

Sl.No	LANDUSE	As per MP LPA (Draft) excluding STRR - GIS data for conurbation		As per MP LPA (final) excluding STRR, Nandagudi Township for conurbation		URDPFI GUIDELINES FOR MEDIUM TOWNS	
		AREA (Sq.Km)	Percentage	AREA (Sq.Km)	Percentage	Percentage	AREA (Sq.Km)
		A	B	C	D	E	F
1	Residential	29.23	34.95	37.91	39.56	43.00	41.21
2	Commercial	3.96	4.73	4.53	4.73	4.00	3.83
3	Industrial	26.37	31.53	26.71	27.87	9.00	8.63
4	Public/Semi public	2.17	2.59	2.91	3.04	10.00	9.58
5	Park/Open space	9.70	11.60	9.22	9.62	19.00	18.21
6	Public Utility	0.69	0.82	0.68	0.71	2.00	1.92
7	Transportation	11.52	13.77	13.88	14.48	13	12.46
	Sub total	**83.64**	**100.00**	**95.84**	**100.00**	**100.0**	**95.84**
8	Agriculture						
9	Forest land	1.56		0.16			
10	Unclassified	2.55		2.45			
11	Water Bodies	9.91		4.51			
	GRAND TOTAL	**97.66**		**102.96**			

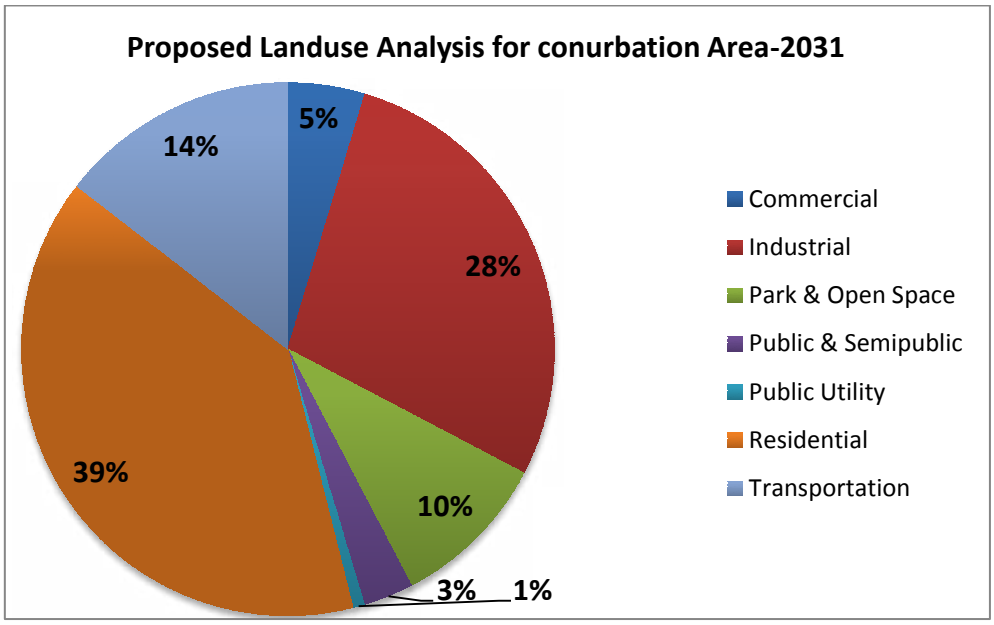
Conurbation limit proposed for the urbanisable area within the LPA of Hoskote is 10296.40 ha and proposed land use analysis is given in Table 66.

The conurbation area proposed to accommodate the projected population of 7.20 lakhs is 10296.40 ha with the developable area of 9584.14 ha. Hence the Gross Density of urbanisable/ developable area of LPA works out to be 76 pph whereas the residential density works out to be 190 pph with the residential area proposed within conurbation limit being 3791.46 ha respectively.

Within the conurbation area, 39.56 % of the area has been reserved for residential use, 4.73 % of the area is earmarked for commercial use to serve future population and 27.87% of the area is dedicated for industrial uses as it is the main economic generation of the LPA.

The graph represented below shows the percentage achieved for the proposed landuse within the conurbation area os Hoskote LPA for 2031.

Figure 65: Landuse Analysis within the Conurbation Area Excluding STRR and Nandagudi Township



7.7 INCORPORATION OF VARIOUS PROPOSALS

7.7.1 DETAILS OF PROPOSED LANDUSES AND PROPOSALS

Details of various land use proposals within the LPA are described briefly below:

1. RESIDENTIAL

The society needs peaceful living with all the required facilities for its comforts in an area where there are least pollution hazards. As per URDPFI guidelines the land under residential purpose in medium cities generally is 40-45 percent of entire land of conurbation area of LPA. The population of Hoskote city comes under the medium city, hence the percentage of medium cities is considered from URDPFI guidelines (Refer Table: 56). Keeping this in view, the residential areas are earmarked with utmost care in an extent of 3791.46 hectares, which constitutes 39.56 % of the total conurbation. The residential density works out to be 190 pph.

Proposals

- An Area of 3791.46 hectares is proposed for residential developments in appropriate places within conurbation area keeping in view the work-home relationship.
- Vacant lands left out within the municipal limits of City Municipal Council and area being vacant between Hoskote Grama thana and new extensions/ layouts and other parts in the southern portion of the town are earmarked for proposed residential zone to make densification with suitable zoning for accommodating projected population.
- To preserve the precious agricultural land and prevent meaningless urban sprawl, the concept of compact density is recommended.
- Development below the HT lines, areas surrounding the tanks/lakes/ponds/major nalas/drains, DRDO premises and SWM site is restricted from safety and pollution point of view as per the norms and concerned notifications.

Economically weaker section (E.W.S)

Due to the rapid rise in the land value, the economically weaker section of the society is unable to afford for sites/ buildings. This situation forces them to settle down in the remote fringe areas travelling large distance to their work place there by wasting their time, energy and money. Further, this is the root cause for the creation of the slums in the urban areas. These urban slums are the origin of the outbreak of epidemics on the one hand and they reduce the living standards there by creating a social disparity on the other hand. This type of situation is going to spoil the environment and create imbalance in the eco system. Hence measures are to be taken to curb such developments.

It is also suggested that the Government, should acquire lands through Housing Boards, Slum Boards, Urban local bodies, etc. and construct economic buildings and allot them to economically weaker section of the society. A special cess may be levied for generating required resources for constructing EWS houses while permitting other developments in the LPA. This will provide life security to the socially and economically down trodden class.

2. COMMERCIAL

The commercial activities are not well distributed in the developed area. The main aim of planning is to provide these commercial facilities in various orders of hierarchy at convenient places. The commercial facilities are proposed at two levels, i.e. at city level and neighbourhood levels to facilitate the general public to avail these facilities at reasonable distances. Convenient parking places, pedestrian zones are also proposed.

An extent of 452.52 hectares, which constitutes 4.72 % of the conurbation, has been earmarked for commercial activities. As per URDPFI guidelines the land under commercial purpose in medium cities generally is 3-4 percent of entire land of conurbation area of LPA (*Refer Table: 74*). This is to create additional economic base in order to develop this urbanisable area as a counter magnet to Bangalore.

PROPOSALS

- Adjacent to existing commercial activities facing more than 12 m, commercial activites are extended where ever feasible within the town limits.
- Within the town, the existing commercial and other activities along Taluk office road, areas adjacent to KEB circle, road from Bus Stand to NH-4 on the eastern side, the same road connecting Bus Stand to Sidlaghatta Road are extended further with proper parking, footpath and other required facilities to serve the needs of the CBD of the Town.
- The commercial activities are proposed at the Junction of major roads and all along other roads having width of 30 meters and above in all the grids in a compact manner.
- Along National Highway-4, Sarjapur Road right from NH-4, Nandagudi Road, Malur road are earmarked for commercial activities.
- The Sandy Maidan located near KPTCL Sub-station lacks basic amenities like raised platforms, proper circulation space for people and goods, drinking water, parking space and storage facilities. Hence infrastructure facilities are proposed near sandy maidan.
- The existing commercial activities in the old Pete area and market area looks gloomy as the roads are very narrow with 3-6 m and without any footpaths. Parking facility is totally absent. It requires rejuvenation.

- Hence, the Pete Area, which is full of commercial activities, is proposed as 'pedestrian precinct'.
- The vehicles are proposed to be prohibited between 10 am to 8 pm in this area and parking facility required is proposed near to this place.
- All the roads in the old market area are proposed for concreting for better and durable surface.

3. INDUSTRIAL

The industrial activity enhances the economic base of the settlement and improves socio-economic condition of the town. It attracts more & more people towards the town/city and some additional infrastructure. It is more as in this case as this urbanisable area has to be developed as a counter magnet to none other than Bangalore. CBIC industrial area within the LPA and around Hoskote LPA one of the major reason for induced population in Hoskote LPA and KIADB industrial area also the reason for the induced population in LPA.

Hoskote urbanisable area is suitable for the industrial activity for the following reasons:

- Salubrious climate similar to Bangalore.
- multi-mode transport system being at the junction of two National Highways (NH-4 and NH-207), 4 State highways, CBIC-STRR and IRR and one Broad Gauge railway line
- Suitable and vast land without irrigation facility
- availability of power, being the centre of 400/200 KV Receiving Stations
- Availability of man power and skilled labour due to few already established institutes of industrial training and technology.
- An extent of 2670.90 ha with 27.87 percent of the conurbation, is proposed based on the wind direction to fulfil the environmental requirements, Work –Home-Play relationship, road connectivity and width and linkages with different modes of transport. Since there is No compact development of industrial activities except KIADB industrial area, such areas are reserved for proposed industrial activities based on suitability and connectivity.

The following locations for manufacturing, IT and BT industries are proposed within the conurbation of LPA:

- At the entrance of Hoskote from Bangalore towards north-east and north-west of conurbation area of the town.
- KIADB proposals near Chokkalli and Devanagundi
- Ribbon development along the highways especially along NH-4 & NH-207 are discouraged as far as possible and focus on compact development of Hoskote town.
- Proper parking and other required facilities are insisted.
- No Objection Certificate and Approval from KSPCB for Effluent treatment and waste management plan is insisted both for existing industrial buildings and proposed activities considering the environmental aspects of planning of entire LPA totally.

Care has been taken to provide sufficient buffer/green cover between the industrial and residential developments to avoid ill effects on residential areas. It is also necessary to discourage ribbon development along major roads and highways.

4. PUBLIC AND SEMI-PUBLIC

Public and semi-public buildings and civic amenities are indicators of the standard of living, socio-economic condition of the settlement and to some extent the quality of the society as a whole. The urbanisable area is already having higher order facilities but less in number to satisfy the needs of the projected population. Public and semi public uses are suitably reserved as per the proposals received form stakeholders and requirements according to Guidelines and Standards. The Hoskote Conurbation area is expected to be planned for the population of 1.87 lakhs by 2031, which requires additional facilities. Hence proposals for the provision of civic amenities are made at appropriate locations in public and semi public zones.

The total area reserved for public and semi public uses is 291.43 ha constituting 3.04 % of the conurbation area. An additional 5 percent of the area earmarked for residential purpose will also be available for this use at the time of according approvals to layouts.

PROPOSALS FOR PUBLIC AND SEMI-PUBLIC BUILDINGS:

- The major proposals of Public and Semi Public use of Hoskote LPA are:
- Jail building in the outskirts of Town limits
- Public Libraries are proposed at suitable locations.

- Parking facility, Areas for provision of Basic services like drinking water, public conveniences etc at existing public/semi public facilities are proposed.

5. PUBLIC UTILITIES

The area covered by public utilities or civic amenities is 67.87 ha, constituting 0.71 % of the of conurbation area.

PROPOSALS FOR PROVISION OF CIVIC AMENITIES

The civic amenities such as a few more primary and high schools, a poly technique, an ITI institute, a few dispensaries/ private clinics, a polyclinic, a 100 bedded hospital, a community centre, a fire station, a post office and sub post offices and a telephone exchange are proposed to be provided at appropriate locations in the area under public and semi public zone.

- It is intended to facilitate the establishment of higher order amenities such as a sports complex, and a General Hospital in addition to required number of schools and nursing homes.
- Community cum Cultural Centre and Library and number of Public Offices are proposed at appropriate locations.
- Neighbourhood civic amenity areas are proposed in suitable places to make them available at reasonable distance to the residents.

6. TRAFFIC AND TRANSPORTATION

Progress follows the lines of transportation. Transportation Corridors are generally considered as lifelines of any town / city. An efficient Traffic and Transportation system promotes socio - economic activities. Hoskote is having two National Highways (NH-4 &207), four State Highways, seven Major Districts Roads with good network of roads and one broad gauge Railway line connecting two metropolis. One of the major objectives of MP is to provide broader roads within Hoskote conurbation with good hierarchy of roads. Its aim is to provide an efficient and feasible circulation plan for the entire LPA. Accordingly network system has been proposed outside conurbation limit for better connectivity within LPA based on planning principles.

The total area covered by traffic and transportation use in the conurbation area is 1388.12 ha, constituting 14.48 %. By and large the inter town traffic movement is convenient. But due to very narrow road network in the town area, there are many intra town traffic problems and proposals for the same are to be made.

PROPOSALS:

Some proposals for better connectivity are addressed:

- All village roads within LPA having width less than 18 m are proposed for widening to 18 m to 30 m Right of Way (ROW).
- Within the Town limits, Major roads are proposed for widening to ease out the traffic movement vide;
  - K. R. Road leading to Taluk Office from KEB Circle
  - Market road
  - from Sulibele road to Taluk Office
  - Kannurhalli road, Gangamma Gudi Temple road etc.
- Parking space is proposed along commercial access roads and around bus-stand areas.
- A separate parking lot is identified near bus-stand and KEB Circle.
- Improvements to junctions like Taluk office, Flower Mandi, KEB Circle and other major intersections. Sufficient space for pedestrians, signals and utilities will be taken separately with wide footpath and cycle tracks are provided along main market, shopping/commercial street.
- Wherever feasible cycle tracks are separately provided.
- Buffer zones/green spaces are proposed for NMT.
- Pedestrian Refugee islands are proposed for road width above 18 m ROW.
- Any road development/ redevelopment/ widening proposal shall be done only if the road sections annexed (Volume-III: Zonal Regulation, Annexure 1) are implemented.

7. PARKS/OPEN SPACES/PLAY GROUNDS

Parks and open spaces are required for recreation and to keep the environment healthy and balanced ecosystems. The area reserved for parks and playgrounds in the conurbation is 921.84 ha, constituting 9.62 %. The urbanisable area needs substantial space for the development of parks, play grounds, and open spaces to meet the recreational and environmental needs. Since the urbanisable area does not have enough lung space and not

environmentally balanced, a few parks and playgrounds are reserved within the urbanisable area where there are government lands in the urbanisable area of Hoskote.

PROPOSALS

CONTIGUOUS PARKS & OPEN SPACES

In an innovative manner, a contiguous open space covering the natural drains leading to tanks is proposed to a width of about 75-100 m. It helps in:

- From NH 207 to SH 35 along Dodda Amanikere and Chikka Amanikere, Along the edge of Amanikere (Huskur, Bendiganahalli and Lagumenahalli)
- Easy accessibility to the public since it runs in the midst of the conurbation area proposed for development.
- Enhancing the environmental quality and making the town green.
- Preventing the flooding of the town permanently.
- Recharging the ground water table and improving the water storage.
- Balancing the microclimate in the area.
- Avoiding the hardship to the land owners as block wise bulk reservation of land for parks and open spaces are dispensed with.

In addition to the above, the land under plantations and forests are proposed for parks and open spaces. Further while approving the lay-outs, 10 % of the residential area is going to be reserved for parks and open spaces.

STADIUM & PLAY GROUNDS:

Hoskote doesn't have much play areas. Hence play grounds are also proposed to facilitate the availability of sports ground at every planning district level.

8. WATER BODIES

The area covered by water bodies in the conurbation area is 451.19 ha. There are two big tanks Amani Dodda Kere and Amani Chikka Kere with many medium and small tanks distributed throughout the LPA. They are protected with adequate buffers, linking of drainage lines.

PROPOSALS

- Tanks/lakes/ponds/open hallas are protected from sewerage and polluted water being let into them.
- Desilting, clearing and maintenance of the tanks/lakes/ponds
- Removing of encroachments at tanks/ponds
- Usage of Amani Dodda Kere and Amani Chikka Kere for recreational facilities in consultation with Lake Development Authority.
- Consultation with the Lake Conservation and Development Authority helps to restore the lakes in quality and importatnce to their pristine status as reflected in the pages of history of the State.
- Separate lake development plans can be proposed for the suitable lakes within the Hoskote LPA.
- Improvement to rajakaluves which are connecting between tanks can be taken up with the lake cess collected within LPA of Hoskote in consultation with statutory Authorities.

7.8 PROPOSALS FOR HOUSING & INFRASTRUCTURE

All previous proposals as per in Chapter 6 would be followed for Housng and physical infrastructure such as water supply, UGD and Sewage management, storm water drains and even rural infrastructures.

7.8.1 HOUSING

The availability of sufficient housing facilities is an essential pre-requisite for attracting people and investments.

1. AUGMENTATION OF HOUSING SUPPLY

The continuity of conurbation with BDA, Hoskote LPA open up to the housing demand. Housing Stock for both affordable and other categories has to be augmented to support the induced population in the LPA. Private real estate development should be encouraged and properly planned along with other models of housing for viability and utilization of common delivery chains. Composite and Joint venture housing schemes of the Governmen talong

with private sector should be encouraged. 30-40% of proposed industrial area should be used for housing the workers and model of housing should be subsidized by the industrial authority.

Housing Schemes such as Indira Awas Yojna, Dr.Ambedkar Housing Scheme, Ashraya Schemes should be promoted to increase its reach among people.

2. SLUM IMPROVEMENT

Detail exercise of slum identification should be carried out in the LPA.Slum development should be brought under National Programmes such as the Rajiv Awas Yojna.Internal earmarking of local body funds should be carried out for provision of basic services to the poor. Security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery of other already existing universal services of the government for education, health and social security should be planned for. Earmarking at least 20-25% of developed land in all housing projects (both public and private agencies) for EWS/LIG category with a system of cross-subsidization should be carried out in order to allow social mixing.

Development programmes for Slums should also be carried out under the programmes funded by The Karnataka Slum Development Board.

7.8.2 PHYSICAL INFRASTRUCTURE

a) WATER SUPPLY

Any plan on water supply must be preceded by a land use plan. New water treatment should be planned to serve principally first to serve new development areas and then toserve the deficit areas. Dead end system of distribution of water supply should be adopted as the network system due to its cost advantage. Minimum capacity for water purification system must be for 1MGD from economic point of view, below which it is not recommended.

The extension of water line in the continuous conurbation araes, new line should be propososed to continue the the conurbation areas. New line should be proposed under

consultation of KWSSB Authority and funding under AMRUT scheme can also be availed for the extended water lines.

It is proposed to continue the utilisation of ground water to meet the required water demand of the conurbation area. The bore wells are to be established mostly in valley zones and close to existing tanks as they are potential for recharging naturally.

However, the urbanisable area of this magnitude depending solely on ground water may not be desirable. An alternative source to supplement the supply of water either from Cauvery or Manchanabele Reservoir has to be explored at least during the second phase of development. Both BWSSB and KUWS&DB are also thinking on these lines.

b) UGD AND SEWAGE MANAGEMENT

At present there is no UGD system in Hoskote City. There are only septic tanks and soak pits in most of the areas. The sewage is flowing only through the surface drains. It is creating a great health hazard and environmental deterioration. Introducing UGD system to the town is to be tackled on top priority. Augmentation of water to be supplied and implementation of UGD work are proposed to be taken up simultaneously. KUWSDB has already submitted the estimate for providing UGD system with STP at Arashinakunte for present Hoskote City for a population of 50,000.

The quantity of sewage assessed as 90% of the water supply i.e. 0.9 X 45 = 40.5 MLD or say 40 MLD. It is proposed to treat the sewage in five treatment plants (STP), at the lowest points in valleys and sub-valleys to minimise pumping of the sewage, which is not desirable. The zones have to be de-lineated in accordance with thetopography of the conurbation area. However, to minimise number of STPs, minimum pumping is required, details of STPs are shown in *Table-60.*

In each zone sewage will be treated up to tertiary level for recycling and will be distributed for horticulture, industrial, non-domestic such as construction activity and ground water recharge. The sludge, free from grit and sand, obtained from the treatment of sewage can be used as organic manure.

c) STORM WATER DRAINS

The main storm water drains are to follow the existing main natural streams and the secondary /feeder drains and sub drains are proposed to be aligned along the proposed and existing circulation system. It is proposed to retain all the natural water bodies / tanks and natural streams intact with buffer zones to prevent encroachment. The entire run-off will be taken along the natural streams and in the above said drainage system and will be stored in the existing water bodies/tanks and proposed pickups across natural streams. Water Lake development schemes are to be implemented for proper protection and maintenance and also to make them to serve as recreational centres.

7.8.3 SOLID WASTE MANAGEMENT

Types of Solid waste

The quantity of solid waste is estimated as 250-300 metric ton / day for the projected population of 5 lakh. This solid waste consists of:

- Non bio-degradable waste consisting of construction waste materials, which are proposed for dumping in pits. Glass, plastics & metals are proposed for recycling in the respective industries.
- Bio-degradable waste is proposed to produce organic manure by composting method.
- Hazardous waste consisting of electronic waste, medical waste and other hazardous waste for safe disposal.

Solid waste disposal points:

It is intended to propose for a proper healthy and environmental friendly disposal system. It is suggested to segregate the solid waste into the above three categories at the source itself and also introduce the “door to door” collection system in the interest of the better solid waste management. Collection, transportation, treatment and disposal of solid waste to be entrusted on contract system for better and efficient management.

- Hazardous waste and e-wastes are proposed to be transported to Hazardous Waste Treatment Plant

- Construction waste materials are proposed to be transported and dumped in a quarry pit identified for dumping of non Bio-degradable building material waste.
- The bio-degradable waste is proposed to produce organic manure by composting method. This can in turn promote employment generation, if manure is produced in considerable quantity.
- The composting is proposed at nearby agricultural lands at Government lands.
- The treatment of the solid waste, other than non-bio-degradable waste, is proposed to an extent of zero residues so that 100% utilization of the treated materials can be achieved and used for various purposes depending upon the quantity and quality of the same.

7.9 PROPOSALS FOR RURAL INFRASTRUCTURE

Rural infrastructure development has five-fold impacts on the regional economy i.e.

1. Creating better access to employment and proving further earning opportunities.
2. Increasing production efficiency.
3. Creating access to previously inaccessible commodities and services.
4. Saving time, which can be better utilized in productive activities.
5. Better health and physical condition of the rural population.

The proposals are made based on the above objectives to mitigate the problems and to improve the living conditions of rural poor. The salient features are as stated below:

1. Health facilities like dispensaries and at least one veterinary hospital is proposed at all the GP head quarters to serve the village settlements around them with reasonable distance.
2. Toilet facilities have been provided only to 10-15% of the total households. The situation is very discouraging from health and hygiene point of view. It is proposed to extend this facility to all the households of all the villages.
3. Primary education is the basic necessity for the overall up-liftment of the rural people. So it is proposed to construct at least one primary school in each village. It is also proposed to construct one mini library in each GP head quarter.
4. Presently, all the villages are surviving on hand pumps only. It is proposed to extend the provision of mini water supply to all the villages by the end of the first phase of

development. To supplement this, construction of OHTs and laying of water supply lines in all the villages can be taken up in the second phase of development.

7.10 PROPOSALS FOR ENHANCING ECONOMY

A. INCREASING WORK PARTICIPATION IN THE LPA

The work participation rate of entire Hoskote Taluk is 36.61% and that of Hoskote TMC area is 38% within the LPA whereas that in Karnataka State is 41% and at the national level it is 39%. An increased work participation rate of 40% should be targeted for the entire LPA till the end of plan period 2031.

Government employment programmes such as Prime Minister Rozgar Yojana (PMRY), Swarna Jayanthi Shahari Rozgar Yojna, Mahatma Gandhi National Rural Employment Guarantee Act should be enforced efficiently to increase work participation. The industrial potential of the area should also be used to generate employment for local people. Industrial estates and large investment destinations should be so developed as to integrate with the local economy. Open settlements should be preferred over closed or gated communities.

B. INDUSTRIES

1. Promoting Small Scale, Tiny and Cottage Industries

Small scale, tiny and cottage industries should be promoted through proper financial, marketing and distribution schemes. Small scale and cottage industries requires less start-up capital, labour intensive, offer better employment opportunities to women and are often better platforms for local craftsmanship. Hence promotion of such industries serves the purposes of employment generation, preserving local craft and empowering women.

2. Impact of Industries on Ground Water

The industrial perspective plan for Hoskote Taluk lists a range of industries in small scale and medium scale sector as potential investment options. However, the LPA along with the entire BMR region is under a threat of water scarcity. Hence proper water management plan should be prepared before commencement of industrial activities to address issues like ground water depletion, ground water recharge through water treatment, ground water pollution etc.

3. Relocation of Industries From Bangalore

The RSP 2031 specifies relocation of industries from BBMP limits to outer BMR as one of the economic strategies. Viability of relocating these industries in the LPA may be looked into, to introduce industries with established markets into the area.

4. Development Of Local Economy

Local economy should be strengthened in the entire LPA. Planned commercial centers should be introduced at the major growth nodes in the LPA – viz., Sulibele. The influx of population in the LPA would demand a proper commercial network within the LPA for basic service delivery. Regularization of Delivery chains and markets should be taken up as a major project. There is an absence of commercial centers in the LPA. Since Hoskote is the Taluk headquarter, a regional commercial level should be planned in the town. The proposed land use plan hence shows a large area dedicated for commercialactivities.

5. Integration Of Large Industrial Estates With Local Economy & Livelihood

Large industrial units have been planned in the LPA. Machine Tools, Textiles, Agro and Food based Industries, Hardware park have been proposed in the Taluk Industrial development Plan.These are some of the sectors with highest backward and forward linkages. Forward and backward linkage of these units should be analyzed in detail to boost the local economy. Art silk, Synthetic textile manufacturing, Land based Transport, Petroleum products, retail, rubber tyre manufacturing, recycling industries, Real estate should be used as key industries for boosting the local economy. Detail studies should be carried out for estimating the quantum of forward and backward linkage and the investments required.

C. AGRICULTURE

Agro and Food Industries have been proposed as primary industries in the Taluk Industrial Plan. The Taluk is also an AEZ for Gerkins and Rose onions. Processing industries should be promoted for value addition. Capacity building of the farmers in terms of knowledge development and awareness of latest technologies, soil health improvement (by crop rotation etc.), water conservation and micro irrigation, integrated post-harvest processing, crop insurance and credit facilities should be undertaken. Soil moisture conservation and soil fertility improvement program

through watershed approach. Composting/green manuring/ tank silt recycling should be promoted. Promoting alternate land use systems like Agri-horti system for arable lands (mango, sapota, tamarind, jack fruit etc.) and Horti-silvi system (mango, sapota + silver oak, casurina, teak), Silvipasture (block plantation of acacia, silver oak, casurina, D.Sisso, Melia azardicta, cassia and muthuga + S.hamata, S.scabra, calaproimum, anjan, Guinea macuaena, etc.) for non-arable lands. Dry land vegetables (chilli, beans, brinjal, tomato, cluster bean, gourds etc.), Floriculture (chrysanthemum, jasmine, crossandra marigold, roses etc.) fruits (guava, papaya, banana), sericulture and coconut plantations should be promoted. Livestock component (local draught animals, dairy, sheep, piggery, rabbit, apiculture) should be developed. Major food crops grown in the Taluk are paddy, maize and ragi. The major horticultural crops of the Taluk are Papaya, Grapes, Guava, Potato, Tomato, Beans, Cabbage and Carrot etc.

6. Sericulture To Be Given A Boost

The provisions of the “Suvarna Vastra Neethi 2008-1013” should be utilised to develop sericulture as the prime activity in the LPA. The centrally sponsored scheme like “Catalytic Development Programme" should be implemented with the assistance of Central Silk Board. Schemes under Catalytic Development Programme like Drip irrigation, construction of rearing houses, Raising of mulberry saplings, Installation of multi end reeling machines, Incentive for Bivoltine Silk etc. are very popular. In order to ensure production of better quality cocoons and silk with increased productivity, these programmes under Catalytic Development Programme should be stepped up for which adequate funds will be made available under the State and Central sector.

The initiatives of The National Research and Development Corporation (NRDC) should be supported and expanded to establish Chawki Rearing Centre (CRC) and for capacity building and skill development of the local farmers.

Detailed study should be undertaken to investigate the cause of slow development of sericulture despite high potential and necessary investment plan for the sector. Hoskote Town should be used as the focal centre for the LPA for development of capacity building, processing and marketing facilities subject to its viability during the detailed study.

With a view to taking advantage of the new international trade environment, Government of India (GOI) through Agricultural and Processed Food Products Export Development Authority (APEDA) had established 60 Agri Export Zones (AEZ's) spread over 230 districts in 20 States covering 35 crops. In Karnataka, GoI has approved and notified four AEZs, viz., gherkins (8 districts), flowers (6 districts) and vanilla (6 districts).

To promote Agri-Exports, NABARD extended refinance facility at soft interest rates to client institutions and for activities covered under AEZs. NABARD developed a special refinance package for the entire contract farming arrangements (within & outside AEZs), thus enabling increased production of commercial crops and creating marketing awareness for farmers.

Bangalore Rural District is covered under AEZ for gherkins and flowers and the climate of Hoskote taluk suits the cultivation of these commodities.

The NDDB has set up a Safal Fruit and Vegetable Auction Market (SFVAL) for the horticultural produce in the district near Whitefield.

The air cargo complex at Bangalore Airport facilitates export of goods, including flowers. The existing international airport at Devanahalli, supplements the existing facilities and provide the much-needed fillip to exports. The Flower Auction Centre functioning in Hebbal is rendering quality service to the flower growers in Bangalore (Rural) district. The Horticulture Department is implementing the cold storage subvention scheme which envisages providing subsidy of Re.1/- per unit of power to the existing cold storages storing horticultural commodities with the object of reducing post-harvestlosses.

Contract farming of medicinal and aromatic crops like Aleovera, Ashwagandha, Pacholi and Coleus Forskolli have scope, in view of presence of pharmaceutical units in Bangalore. Government of India has announced various programmes in the State under National Horticulture Mission (NHM) to increase the production of horticulture crops. The effective implementation of the NHM scheme will further boost the production of horticulture crops in the Taluk.

7.11 PROPOSALS RELATED TO ENVIRONMENT

7.11.1 LAND RELATED

a) Conservation of Productive Agricultural Lands

The Hoskote LPA has some of the most fertile agricultural land in the BMR. Hence all new developments and land uses have been planned protecting the productive agricultural lands in the LPA.

b) Promoting Sustainable Agricultural Practices

Sustainable agricultural practices should be followed in the LPA. Soil health should be continuously monitored and programmes such as "Bhumi-Tayiya Arogya" should be promoted to recover soil quality and fertility. Drip Irrigation should be introduced for crops which do not require flooded fields.

Crop rotation practices should be introduced into the cropping practice to ensure soil fertility and productivity.

c) Integrated Management of Water Resources

Integrated Water management programmes should be adopted by the TMC and urban local bodies to ensure sustained supply of water to the LPA. Incessant digging of bore well should be controlled and water loss during transmission and distribution should be minimized. Waste water treatment should be introduced to recycle and reuse waste water. All surface water bodies should be protected, maintained and enhanced for long term ecological well-being and water supply.

d) Protection Of Forest Lands

The LPA has a forest cover of about 9.66% in the spread across LPA. All forest lands need to be protected. Control has to be exercised over approval of development in the forest lands. Urban forestry has to be encouraged through social schemes.

7.11.2 WATER RELATED:

1. Water Resources & Irrigation

The Taluk is traditionally rainfed and tank irrigation has been the norm here. However, over the years these tanks have reduced their storage capacity due to silting. There are no permanent or perennial water sources. Majority of the villages, access potable water through hand pumps and tube wells. Raining is average in the region. The ground water level is low and it is continually decreasing every year. Tube wells need to be drilled to depths greater than 800 to 850 feet and sometimes up to 1000 feet.

The net irrigated area in the Taluk is 7385 hectares of which 2702 other sources is irrigated by tanks 730 hectares by tanks, 3750 hectares by tube wells and 203 hectares by bore wells. Out of the total irrigated area of 7385 hectares, net area irrigated by surface water viz., tanks and other sources forms 37% and balance irrigated area (63%) by ground water sources.

Based on the norms suggested by the Ground water Estimation Committee- 1997 Government of India, the Dept. of Mines and Geology, Government of Karnataka along with the Central Ground Water Board, the Taluk is over exploited. Thus, no fresh Minor Irrigation (MI) structures are feasible.

2. Strategies to be Adopted to Improve the Water Resources Availability of the LPA:

Several strategies are available to improve the Water Resources availability in the LPA Area. Since ground water is already over developed there is a need to recharge ground water by adopting certain techniques to improve the situation. Some of the methods or techniques available are given below;

i) **Rain water Harvesting:** Rain water Harvesting can be taken up on a big scale so that drinking and domestic needs, can be met at the village level/ individual level by harnessing the roof water, storing it in PVC or other tanks, filtering it and using it whenever required by the villager. At the urban or town level it can be used apart from domestic for flushing, washing toilets in the offices, schools and other establishments.

j) **Construction of Nalabunds and Checkdams:** Nalabunds and checkdams can be constructed across stream courses in the rural areas, that in times of storms, the

surface runoff is harvested which will also arrest soil erosion, as well as create minor storage ponds (percolation ponds) which will facilitate as a source of drinking water for cattle and as well a means of recharging ground water. However before it is taken up on a large scale, investigation needs to be carried out as to the location of suitable sites, for construction, catchment and local soil and other geological conditions.

k) **Desilting of Tanks:** Most of the irrigation tanks are old and are silted up and do not have the original live storage capacity. These tanks need to be revived and desilting of these tanks need to be taken up in phases. The priority, the extent and the volume of desilting to be taken up along with the cost has to be worked out in detail. In periods of heavy rainfall, these tanks once desilted will have enough space to store the excess water which will meet the irrigation and other demands and also once desilted it will facilitate deep percolation and recharge ground water in the Ayacut which might help revive openwells downstream and enhance the yield of bore wells.

l) **Construction of Recharge Pits:** Recharge pits construction especially in the sandy soil help retain water in the agricultural farm of the farmer and help retain moisture for a long time as well as facilitate recharge groundwater locally. Recharge pits constructed over a large area mighty aid in retaining moisture over larger period and help in recharging ground water.

m) **Recharging of Ground Water:** Recharging of ground water in the LPA is very much needed since the area is over exploited. Recharge wells at suitable locations, trenching across the hill slopes and construction of percolation ponds, recharge wiers, and water shed development will have to be taken up to augment the resources and arrest decline of water levels.

n) **Conservation of Water:** Conservation of water is the need of the day. Farmers and general public need to be educated about the usage and conservation of water and wherever possible wastage needs to be avoided. In order to educate them, mass awareness and 'Jala Jagriti' programmes, seminars can be arranged through audio and video programs which will help generate interest among the public. As far as farmers are concerned, they are to be made aware to cultivate

only dry crops and discourage them from cultivating water intensive crops like paddy, sugar cane.

o) **Waste Water Treatment & Recycling:** With the awareness created among rural public, who are health conscious, and more number of industries coming up and due to urbanization, the generation of waste water is also going up. Recycling of waste water can be taken up by settling up waste treatment plant at Hoskote town, and the recycled water can be utilized for meeting, domestic, gardening and even industrial needs. The industries, hospital complex, (The MVJ Medical College at Hoskote is already having a waste treatment plant) can be encouraged to go in for such plants which will meet their water requirement partially.

p) **Regulation of Ground Water Development:** Though the area is over exploited there is no control still on ground water development and farmers and ground water consumers are drilling borewells and going deeper in search of water every year. This needs to be regulated. Barring drilling for meeting the domestic and drinking water needs, a control need to be exercised either by State Ground Water Authority or by Central Ground Water Authority (CGWA), permission need to be obtained from the Authority for drilling of borewells where there is large scale construction, like apartments, small scale industries, educational establishments like Institutional complex etc.

7.11.3 PROJECT PROPOSALS FOR RAINWATER HARVESTING AND ARTIFICIAL RECHARGE OF GROUND WATER:

As already indicated in order to improve the situation in the area certain measures need to be carried out like rain water harvesting, construction of check dams nalla bunds recharge pits, desilting of tanks and construction of recharge bore wells which will build up the resources in course of time, as well as reduce the demand, so that the over exploitation situation now observed can be arrested, simultaneously decline in water levels now seen can slowdown.

In order to carry out these projects, proposals has been drafted and given below. However, this gives only a cursory approach and an approximate estimate of the costs involved. Detailed Project proposals for each of the activity proposed needs to be repaired based on detailed field investigations, spot examinations and carrying out necessary hydrological and

hydro-geological studies required thereon. The Detailed Project Report can be prepared in consultation with Central Ground Water Board, State Department of Mines and Geology, Water Shed Development Cell, Karnataka State Council for Science and Technology and other State and Central Organisations who are active in the field.

A. Roof Top Rain Water Harvesting:

Rain water harvesting is a simple method of collecting the rain water falling on a catchment or surface and storing in a suitable place like in a container or a sump for future use. In the present context, it becomes very important in the sense, with rapid urbanisation and water scarcity conditions observed and during dry periods. There is need to catch the rain water and store it for future use to tied over the crisis. Due to rapid urbanisation infiltration of rain water to sub soil has decreased and in conditions like over exploitation of ground water and decline in water levels the need for rain water harvesting becomes all the more important. Rainwater harvesting can also be resorted to recharge the ground water and to rise the ground water levels as well as to improve the ground water quality in the aquifers.

Hoskote LPA devoid of any major river or irrigation project has to depend mainly on rain water for recharging ground water and storage in tanks. Thus rain water becomes one of the important sources of water. There are two types of rainwater harvesting. One is Roof Top Rainwater Harvesting and the other is harvest the rainwater falling on the open surface areas. In the urban and built up areas like Hoskote Town villages with residential households, offices, schools, colleges and public buildings are suitable where it is possible to harvest and utilize for domestic / office use for washing, flushing and cleaning. Such roof top harvesting will reduce the runoff, which choke the storm drains, flooding of roads, etc. Leaving the residential households, private buildings which need private investment, schools, colleges, public building can be considered for roof top harvesting. The rain falling on the open surface will go as surface run-off might be useful in washing off urban waste seen on the roadside and may ultimately reach the tank nearby. The rain falling on the open surface in the rural areas can be harvested through recharge pits, check dams, nalla bunds and other water harvesting structures to recharge the

ground water. Any excess water falling on the ground will ultimately will be harvested by tanks and will aid in utilization for irrigation and as well as recharge ground water through deep percolation.

B. Construction of Checkdams:

A Check Dam is a water harvesting structure with a low weir constructed on small nalas and streams and long gullies to harvest the run-off or flash floods and facilitate create storage locally and facilitate deep percolation to ground water. It will also serve to reduce the soil erosion. When a series of check dams are constructed along a long stream course the spacing between check dams should be beyond their water spread. The height of the checkdam depends upon the bund height. In the Hoskote area, the Watershed Development Cell has already constructed nearly 100 Checkdams (including the no. constructed prior to 2003). The LPA with an area of nearly 600 sqkm and excluding the town and the village areas, barren land and already constructed checkdams, there is scope for constructing another 400 Checkdams. The average length of a checkdam nearly 15m, height of 2m (out of which the height above ground is 1m) and width of 1 m will have a storage capacity of 250 cum and each checkdam with an annual three fillings the total water harnessed is about 750 cum out of which nearly 600 cum (80%) can be expected to percolate to recharge ground water annually. The total water harnessed will be 500 x 600 = 300,000 cum/year or 0.3 MCM. This water can sustain pumping of 30 bore wells for irrigation or 30 industries consuming 1 ha.m/year.

C. Nalla Bunds:

Nalla Bunds also known as Cement plugs are similar to checkdams but will have widerbase of 14 to 15mtr with a width of one meter and height 1.5m. They are constructed where the stream course or gully is quite deep and extend over longer distances. Hence have larger storage capacities of nearly 600 to 700cum though better suited for harvesting run off but ideal sites are difficult to get. In the Hoskote area the water shed development cell has already constructed nearly 75 such structures. There are possibilities constructing another 75 such structures, the cost of which is around 1.5 lakhs. So the total water harvested with the approximate of

three fillings annually will be nearly 1800 cum with 80% percolation, the total water harnessed will be 1440 cum per year. So for the 150 structures the total quantity harnessed is 150x1440 = 216000cum per year or 0.21 MCM.

D. Recharge Pits:

Recharge pits are constructed in the farmer's land or the agricultural land to arrest the overland flows generated due to rain falling on the land and can aid locally to build up water levels in the wells in the vicinity over a period of time. They are very effective especially in recharging the water table aquifer. Such recharge pits constructed over a large area can build up water levels considerably in a region in course of time and can reverse the trend of declining water levels now observed in the area. As per the statistics (District Statistics, Bangalore Rural District for the year 2004-2005) there are nearly 34189 land holdings which includes marginal, small, small medium, medium and large holdings which means 34189 recharge pits and considering another 1800 land holdings for the Bangalore East area, there will be around 36000 land holdings or 36000 recharge pits with a cost of Rs. 10000 per pit (4 x 4 x 3 m).

E. Desilting of Tanks:

Karnataka State has nearly 36000 tanks and tanks are the main sources of irrigation where anal irrigation is not possible where there are no major irrigation projects or perennial rivers. Most of the tanks are more than one or two century old and they are silted up reducing their capacity almost by 50%. There are nearly 212 tanks in the LPA with a storage capacity of 90.3 MCM. However in the present situation their capacity might be around 45.0 MCM. In recent years due to vagaries of monsoon, encroachment of catchment areas, stream courses feeding the tanks, there has not been any considerable inflows into the tanks, hence most of the tanks are dry or contain very little water in them. With the non-availability of tank waters for irrigation, farmers have resorted to drilling of bore wells in the ayacut areas to meet the water requirements.

With the launching of various schemes by the Government to revive these tanks, desilting, repairing of tank bunds, canals, etc have been taken up. The Department of Minor Irrigation of the Govt. of Karnataka under a centrally sponsored scheme has taken up desilting and repairing of 26 tanks in the Hoskote Taluk at a cost of Rs.410.58 Lakhs. In this scheme, desilting has been taken up at a cost of Rs.215.30 Lakhs, by desilting 0.521 MCM, which is supposed to create an additional storage of 4.57 MCM and increase the water availability by 5.85 MCM. Desilting of tanks in addition to creating additional storage will also facilitate deep percolation to ground water. Experiments have indicated that by desilting that is by removing the silt from the tank bed there is increase in the rate of infiltration. At 80% percolation, the total quantity expected to recharge ground water will be around 4.70 MCM annually.

Similarly, nearly 125 tanks the data of which are available falling in the Hoskote LPA (including 4 tanks from Bangalore East Taluk) which are under the control of Gram Panchayaths can be considered for desilting. The total volume that can be desilted will be around 5.085 MCM and the probable percolation to ground water at 80% will be 4.0 MCM. Hence the total additional ground water available will be 8.80 MCM.

The 26 tanks now taken up for desilting under centrally sponsored schemes by the Minor Irrigation Department are big tanks the volume proposed for desilting is very small some times even less than 10% and cannot be expected to improve the storage substantially. For example, in case of Hoskote Doddakere, the total live storage is 22.64 MCM and the water spread area is 1300 ha (13000000 sqm) whereas the volume proposed for desilting is only 115986 cum (115986 sqm considering one meter depth) which is less than 10%. As such it is worthwhile considering desilting of all these 26 tanks at a later date (say after five years) which will also considerably increase in storage and facilitate improve the situation. Hence an additional volume of 2.18 MCM is suggested for desilting. It can be added, here that the additional storage created by desilting should not be utilized for irrigation as far as possible and may be retained to facilitate infiltration and recharging ground water. In a year of excess rainfall, when the tanks are full, they can as well be utilized for irrigation also.

F. Recharging of Bore wells:

There are nearly 1150 borewells at present being utilized for drinking water in the LPA. In view of the situation existing in the area, it may be necessary that these borewells are recharged directly, so that people may not suffer from lack of drinking and domestic water. A technique available where the aquifers tapped by these borewells are recharged directly by tapping the surface flows around the bore hole and water made to ercolate through a filter constructed around the existing borewell or nearby drilling another borewell and recharging the zone / fractures tapped by the bore well. This has been successfully carried out at several locations and the borewells have improved in their yield and sustain pumping for longer periods.

G. Recycling of Waste Water:

As the demand goes up, there is a need to give thought to the recycling of waste water generated due to different uses as there is a limit to meet the demand for fresh water as the source of fresh water either from ground water or surface water sources is limited .With the projected demand for water for the town and industries, IT Sector is likely to be around 35 MLD out of which the water supply for a projected population of 1,00,000 is likely to be around 10 MLD at 100 lpcd. Presently this much water is not available and the additional resources mobilized can meet to the extent of 8 MLD. Thus there is need for recycling of atleast 50% of the water utilized, so that the treated water can be supplied to meet the demand of industries or for other domestic needs. Hence a Sewage Treatment Plant (STP) is also proposed to be installed. The water treatment will also include tertiary treatment and the treated water can be utilized for domestic (not for drinking) / industrial use or simply let into the tank or used for recharging ground water through spreading ponds, recharge basins in the tank bed or along the stream course.

H. Water Supply from Cauvery IV Phase:

Cauvery IV Phase has been taken up by BWSSB and the Cauvery Water Supply is being implemented to cover KR Puram, which is about 13 km from Hoskote town.

Even though presently it may not be feasible to extend the supply to Hoskoteurbanisable area ultimately when the city expands and the Greater Bangalore may include the Hoskoteurbanisable area in another two decades time. Hence it may worthwhile to consider the extension of the facilities through piped water supply creating additional facilities of storage at KR Puram and Hoskoteurbanisable area.

I. Drilling of Additional Bore Wells:

As already indicated in order to meet the demand for drinking and domestic needs of the urbanisable area there is a need to drill atleast 80 bore wells, which can yield at 3 to 4 lps. In order to locate such high yielding borewells it may be necessary to carryout detailed investigations, hydro-geological and geo-physical surveys based on remote sensing maps available for the area. The proposed borewells will be required to be drilled to a depth of 200 m (maximum depth suggested but it can be less depending upon the encountering of productive fractures in depth).

7.12 SCOPE FOR RAINWATER HARVESTING AND RECYCLING OF WATER IN THE INDUSTRIAL AREAS:

There are number of industries in operation in the existing 194.49 ha of land. Most of the industries do not have the facility to carry out rain water harvesting or recycling of water or recharging of ground water. There is wide scope for carrying out these activities. Both surface and roof top harvesting can be done in these areas. With the introduction of recycling at least 50% of the water requirement can be met. Hence it may be imperative that rainwater harvesting and recycling of water is made mandatory for all the industries in future.

7.13 REGULATION OF GROUND WATER DEVELOPMENT:

At present there is no agency which can regulate the development of ground water in the Hoskote Taluk. There is need for such a control as there is indiscriminate drilling of borewells for various purposes which has resulted in over exploitation and decline of water levels Permitting wells for meeting drinking and domestic needs, a control needs to be exercised either by State Ground Water Authority / State Mines & Geology Department or

by Central Ground Water Authority / Central Ground Water Board or by the District Administration. Obtaining permission need to be made mandatory for withdrawing ground water for large and medium industries, big educational institutions and apartment complexes.

7.14 PROPOSED TRAFFIC AND TRANSPORTATION PLAN-2031

City Traffic and Transportation Studies (CTTS) have been made for BMR, 2031. This CTTS is referred for provision of Traffic Management proposals in the Hoskote town. However road circulation plan for the entire LPA is prepared showing the alignment and pattern of all existing and proposed roads in the LPA.

PROPOSALS:

1. **Widening of Village Roads:**

   All village roads within LPA which are less than 18 m are proposed for widening to 18 m to 30m.

2. **Segregation Of Regional And Intra-Settlement Traffic**

   Town Ring road has been proposed around Hoskote town which is the major growth node of the LPA. It would act as a conurbation boundary as well as serve the purpose of diverting traffic from the centre of the town.

3. **Segregation Of Freight Traffic**

   Since major industrial areas have been proposed in the LPA a separate freight corridor is required separating the intra settlement traffic and freight traffic. Presently the NH 4 and NH 209 form the routes for both freight as well as normal traffic. TRR (town ring road) has been proposed so serve the purpose by diverting heavy traffic away from the town Centre.

4. **Proposal Of New Roads To Increase Connectivity**

   New roads have been proposed to increase the connectivity to developed areas in the LPA. New roads are also proposed for better zoning and guide future developments.

5. Planning For Non Motorised Traffic (NMT) And Pedestrian Facilities

Hoskote urbanisable area and all the major settlements in the LPA have to be planned for NMT and easy pedestrian movement. Studies should be taken up at the town level to arrive at detailed planning proposals for NMT mainly for cycling and pedestrian friendly circulation pattern. Old market area is proposed for Pedestrian Zone by restricting the traffic movement during specified hours. This can be achieved besides other measures that will be adopted Buffer zones/green spaces under HT lines, along major drainage lines and area surrounding lakes/ponds/tanks will be explored for NMT infrastructure for better NMT accessibility as per DULT recommendations.

6. Planning For Parking Facilities

Parking facilities is completely absent in the LPA. With the growth of the population in the LPA and the consequent vehicular growth, proper planned parking facilities are indispensible part of the development. Studies will be taken up at LPA level to recognize inherent problems and to arrive at detailed proposals for parking in the district/town level.

7. Planning for Public Mass Transit

The public mass transit is meant to take on maximum number of repeat trips hence major terminals of passenger transit should be located at high density work place and high density residential areas.

8. Planning for Multimodal Transit

To encourage multimodal transit integration, it is desirable to have the terminals located wherever more than one mode like rail and road are present and they can be integrated e.g. Bangalore City railway station and the Kempegowda bus terminal. The bus terminal is being redeveloped to accommodate the metro station and intra city bus terminal as well as few intercity bus terminal, thereby ensuring seamless physical multimodal integration.

9. Location of Bus Stands, Bus depots and Bus Bays

Within the town limits, bus stands/stops are proposed for every 250-300 m with suitable shelter facility. In all layouts with more than 10 ha extent, bus bays shall be

indicated as a part of the layout within the property boundary of the layout. The existing properties of BMTC are reserved for traffic and transport use.

10. Truck Terminals/ freight complex/ logistics hub and Provision of Infrastructure near Truck Terminals/ freight complex/ logistics hub

As far as possible the traffic and transportation use should be located as per the envisaged activity. It is desirable to have truck terminal/ freight complex/ logistics hub next to or along the side of the industrial use/ KIADB industrial areas.

Along NH 4, another truck terminal is proposed and industrial corridor infrastructure and basic infrastructure facilities like drinking water, public conveniences and restaurant may be proposed for convenience of freight personnel.

CHAPTER-8

FINANCIAL IMPLICATIONS OF DEVELOPMENT WORKS AND PROGRAMMES

CHAPTER-8 FINANCIAL IMPLICATIONS OF DEVELOPMENT WORKS AND PROGRAMMES

8.1 FINANCIAL IMPLICATIONS

Master plans always suffer from timely implementation. According to the study conducted by Town & Country Planning Organization, Govt. of India, hardly 30 percent of master plan proposals are implemented. It is mainly due to lack of sufficient allocation of funds for different sectors of development. Finding resources by Govt. alone for implementation is too much to expect especially when Govt. suffers from availability of sufficient funds. The only way to mobilize resources required is through public - private partnership. The Authority should act more as facilitator by investing in the basic infrastructure like development of roads, augmentation of water supply providing of proper UGD, efficient solid waste disposal management and other infrastructure facilities like bus stops, bus bays, parking facilities etc. This induces the private developers to come forward to take up development in various other sectors like industries, commercial activities, public and semi - public uses and residential activities. The authority may collect the expenditure incurred for providing basic and external services said above at the time of granting permission for development. Timely implementation of plan proposals becomes all the more serious and urgent in view of the recent amendments made to Section 69 of KTCP Act. As per this section, Master Plan proposals other than those under traffic and transportation will be deemed to have been lapsed, if they are not implemented by the period of five years from the date of the final approval of the plan by the Government.

Keeping these in view, a rough cost estimate is made to assess the total amount required for basic infrastructure and other amenities. The Authority may work out the financial strategy to raise the resources through borrowing from external agencies or by internal arrangements.

8.2 PRIORITIZATION FOR THE IMPLEMENTATION OF MP PROPOSALS

Table 75: Major roads and their implementing agencies.

Sl. No	Name of the works	Implementing agency
1	Major road network system and missing links	PWD,NHAI, BMRDA & KIADB,RDPR, CMC, Hoskote
2	Water supply, UGD system and solid waste management	KUWS&DB, CMC, Hoskote, KIADB, BMRDA.
3	Development of parks and playground on hierarchical basis, Networking of green spaces, Tree plantation	Horticulture Department and Forest Department
4	Shifting of Sandy maidan	APMC
5	Improvement and expansion of bus stand and construction of bus depots/ bus stops/ bus bays	KSRTC/BMTC/CMC, Hoskote
6	Shifting of TAPMC go-downs and office and construction of mega whole sale market.	TAPCMS and APMC
7	Creation and development of quality footpaths, cycle tracks etc.	ZP,CMC, Hoskote, PWD
8	Construction of Parking lots/ parking spaces/ Truck terminals/ logistic hubs and provision of infrastructure	ZP,CMC, Hoskote, PWD
9	Construction of Jail and exhibition ground.	PWD and KIADB,RDPR

8.2.1 COST ESTIMATION

Cost estimates are worked for some of the important major roads and development of some of the basic Infrastructure facilities and amenities and are given below:

8.2.2 MAJOR ROAD NETWORK SYSTEM

Table 76: Cost of Major Road Network Development

SL.No	Particulars of works	Length in Kms	Unit Cost in Lakhs	Total Cost in Lakhs
1	TRR (90 m wide)	17.42	1200	20904
2	IRR (90 m wide)	0.71	1200	852
3	CBIC (90 m wide)	11.57	1200	13884
4	State Highway (90 m wide)	36.80	1200	44160
5	National Highway (80 m wide)	16.76	1200	20112
6	RR (60 m wide)	5.26	1200	6312
7	National Highway (60 m wide)	6.19	1200	7428
8	60 m Road	3.94	1200	4728
9	State Highway (45 m wide)	6.22	1200	7464
10	National Highway (45 m wide)	14.26	1200	17112
11	45 m Road	25.28	1200	30336
12	30 m Road	84.92	50	4246
13	24 m Road	205.17	50	10258.5
14	18 m Road	217.53	50	10876.5
15	15 m Road	6.25	50	312.5
16	12 m Road	76.49	50	3824.5
17	9 m Road	0.98	50	49
Total (A)				284914
Say				**2849.14 crores**

8.2.3 COST ESTIMATION FOR PROVIDING OTHER MAJOR AMENITIES

SL. No	Particulars	Cost,Rs in Lakhs/sq.m	Area in sq.m.	Total cost in Lakhs
1	Development of proposed parks including tree plantation	300	6912122	20736
2	Development of proposed Civic Amenities	300	1566311	4699
3	Shifting of TAPMC and Develoment of Wholesale Market	300	597310	1791
4	Truck terminal.	600	104312	626
5	Lake improvement with Tourism Department (Dodda Amanikere Lake)	900	9712	87
6	Sandy maidan	600	90000	540
7	Bus- Depots	1200	90000	1080
8	Water supply, UGD and storm water drains.	Approximate line estimate		200
Total (B)				**29759**
Say				**297.59 crores**
Grand total (A+B)				**3146.73 crores.**

The total cost of the road network development is Rs. 2849.14 crores and that of other facilities will be around Rs.297.59 crores. The cost of overall development for providing essential facilities is roughly estimated at Rs. 3146.73 crores.

CHAPTER-9

ENFORCEMENT, IMPLEMENTATION, MONITORING AND EVALUATION

CHAPTER-9 – ENFORCEMENT, IMPLEMENTATION, MONITORING AND EVALUATION

As per Karnataka Town and Country Planning Act, 1961, Master plan is prepared to guide and regulate the growth of dynamic urban areas;Master Plan is a physical development plan or land use plan and is prepared taking into account the land requirement for various uses for a growing community.

In many ways, Master plan lays down the blue print for the development of a region and direction in which growth of the region must be shaped. The proposals of Master Plan have to be implemented by all concerned stakeholders for it to be an effective instrument for urban planning. The implementation of Master plan proposals must be reviewed on a periodic basis and a mechanism must be in place for evaluation of the extent to which identified actions are successfully accomplished.

9.1 ACTIONS

The identified actions for monitoring can be summarized broadly as follows:

1) To develop compact and complete urban communities

Compact community is a high density urban settlement and is the most sustainable urban form. Compactness has many advantages, less cost of providing services, less carbon footprint, forging strong community links being the foremost. A complete urban form has a well-defined and developed street network with equitable allocation of road space for all modes; mixed land use that reduces the need and length of a trip; focus on public transport and walking and cycling.

Parameters for review:

Density of development; Completeness of street network with specific focus on completion of missing links; width and quality of footpaths; creation of bus-bays; development of bus terminals; priority to public transport by providing dedicated lanes for buses; development of cycle tracks etc.

2) **To enhance the character and quality of public realm to suit the varied requirements of the community.**

What makes an urban community liveable?

Historically, many towns/cities always had a main market streets, public plazas etc. where people could congregate and interact. The public realm comprises of the places where the children could play; the old could meet and chat and the young could hang-out, and the people in other age-groups could catch up with their friends after work or exercise in the mornings or do their shopping without the threat of being run over by a passing vehicle. Public realm must have something for every age group. Well-developed Parks, play grounds, pedestrianized areas etc. enhance the quality of public realm.

Parameters for review:

Development of parks on hierarchical basis(neighbourhood/ city /town level); Networking of green spaces along nalas, lakes, rivers etc./ buffer spaces to form a network of green links for walking/cycling; Pedestrianization of market streets, temple streets, heritage areas etc.

3) **To proactively encourage the development of a sustainable community by discouraging use of personal vehicles and thereby, reduce the carbon footprint of the community.**

Unbridled growth of personal vehicles adds to congestion, air-pollution and increase in unproductive time spent in commuting for the community. Many indirect costs like parking costs are not considered when people make a choice to buy a two-wheeler or a car as parking is free in many of our cities/towns. Parking on streets also reduces the road width available for movement of people/vehicles and further causes congestion problems. Like good habits that need to be inculcated from childhood, paid parking has to be implemented irrespective of the fact that the city/town has manageable traffic.

Parameters for review: Implementation of parking policy with parking pricing; demarcation of areas where vehicles can be parked and where they cannot be parked; enforcement measures; Provision of cycle parking etc.

4) **To facilitate seamless freight movement while ensuring that the ambience of the city is not affected due to movement of trucks etc. through the city.**

   Parameters for review:

   Development of designated parking areas for heavy goods vehicles/logistic hubs.

5) **To preserve historically and culturally important landmarks, and to ensure that public infrastructure and facilities within the city/town are aesthetically designed and constructed from architectural and functional point of view, and contribute to enhancing the ethos of the city/town.**

   Parameters for review:

   Identification of historically and culturally important buildings and development of plans for their preservation; developing design guidelines for new public buildings.

6) **To enhance the per-capita green space in the city/town with attention to protection of local bio-diversity.**

   Parameters for review:

   Development of guidelines for city plantation; extent of plantation proposed during the year etc.

9.2 MONITORING AND EVALUATION

Master plan for the plan period 2031 will be successful only if the objectives listed above are implemented in co-ordination with all implementing agencies. It is necessary to put in a mechanism to ensure that implementation of master plan proposals are periodically reviewed.

A master plan review committee is set up under the Deputy Commissioner of the district as follows, for this purpose.

Sl.No	Members	Designations
1	Deputy Commissioner of concerned District	Chairman
2	Representative of B.M.R.D.A not below the rank of Deputy Director	Member
3	Executive engineer, P.W.D.	Member
4	Representative of Zilla Panchayat	Member
5	Commissioner/ Chief Officer of respective Municipality	Member
6	Member Secretary of Local Planning Authority	Member-Convener
7	Representative of BWSSB,BESCOM ,KAIDB & KHB(invitees as and when required)	Member

The committee is expected to meet every quarter to review the performance with respect to specific targets that must be identified in the first meeting of the committee. All the proposals/ projects/ schemes identified for implementation or enforcement are prioritised to be developed in phases over the plan period of 20 years depending on the mode of development and funding.

An independent evaluation of master plan will be done by BMRDA every five years to gauge the effectiveness of the implementation of the Master plan proposals.

ANNEXURES

ANNEXURE-1

Details of Hobli wise Villages of Hoskote LPA area

Villages coming under Hoskote LPA, (Hoskote Taluk & Bangalore East Taluk) - (Spilt up-Hobliwise, Gram Panchayat wise, villages)

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
HOSKOTE TALUK				
Nandagudi	1	Ittisandra	1	Anupanahalli
			2	Cheemasandra
			3	Dimbahalli
			4	Doddaharadi Plantation
			5	Estur
			6	Estur Amanikere
			7	Geddalahallipura
			8	Hindiganala
			9	Hosavenkatapura
			10	Ittisandra
			11	Ralkunte
			12	Shivapura
			13	Ramagondapura
			14	Srinivasapura
			15	Hosaharadi
Nandagudi	2	Nelavagilu	1	Sarakanuru
			2	Nelavagilu
			3	Yethinavaderayanapura
			4	Arehalli
			5	Chikkondahalli
			6	Dalasalere
			7	Tharabahalli
			8	Siddanahalli
			9	Muddanahalli
			10	K.Sheetyhalli
			11	Karahalli
			12	Yeshwanthapura
			13	Sannekemapanahalli
Nandagudi	3	Nandagudi	1	Nandagudi
			2	Giddanahalli
			3	Sarakari vaddahalli
			4	Agraharavaddahalli
			5	Medur
			6	Kondrahalli

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
Nandagudi	3	Nandagudi	7	Chokkasandra
			8	N.Hosahalli
			9	Banahalli
Nandagudi	4	Shivanapura	1	Shivanapura
			2	Bisanahalli
			3	Beemapura
			4	Mothakadahalli
			5	D.Sheetihalli
			6	Malayappanahalli
			7	Doddenahalli
			8	(C.D.Halli)
			9	Karapanahalli
			10	M.Hosahalli
			11	K.Sathyavara
			12	Gullenahalli
			13	Gundrahalli
Nandagudi	5	Bylanarasapura	1	Bylanarasapura
			2	Dommasandra
			3	Hedakanahalli
			4	Korati
			5	Gundrahalli
			6	Sathigenhalli
			7	Doddaganahalli
			8	Marasandrahalli
			9	Agasarahalli
			10	Huluvanahalli
			11	Obalahalli
Nandagudi	6	Thavarekere	1	Thavarekere
			2	Yelachahalli
			3	Manchappanahalli
			4	Kalappanahalli
			5	Gerahalli
			6	Gangapura
			7	Banamakanahalli
			8	Lingapura
			9	Hethokki
			10	Beerahalli
			11	Bandehalli
			12	Venkatapura
			13	Gorvehalli
			14	Kolalachannehalli
			15	Guddada Channenahalli
Sulibele	1	Doddaralegere	1	Doddaralagere

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
			2	Bendiganahalli
			3	(KK Beedu)
			4	Shanthanapura
			5	Theneyur
			6	Thimmappanahalli
			7	Chikkaralagere
			8	Dyavasandra
			9	Balenahalli
			10	Thammarasanahalli
			11	Shashimakanahalli
			12	Agrahara (T.Agrahara)
			13	Bhuvanahalli
			14	Bavapura
			15	Gullahalli
			16	Hosadimbahalli
			17	Nagarenahalli
			18	Pulamanche (B)
			19	Aralagereamanikere (B)
			20	Mattabaralu (B)
			21	Haniyur (B)
			22	Chikkakurubarahalli (B)
			23	Imanahalli (B)
Sulibele	2	Sulibele	1	Sulibele
			2	Rampura
			3	Kadiranapura
			4	Kodipura
Sulibele	3	Giddappanahalli	1	Giddappanahalli
			2	Sadappanahalli
			3	Yettinavaderayapura
			4	Bettahalli
			5	Siddenahalli
			6	Yenagunte
			7	Attibele
			8	Arasanahalli
			9	Ankonahalli
			10	Nallaganahalli
			11	Valagerepura
			12	Vanamanahalli (B)
			13	Chowdasandra (B)
			14	Bathiganahalli (B)
Sulibele	4	Kambalipura	1	Kambalipura
			2	Kemapura
			3	Begur

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
			4	Ekarajapura
			5	Doddakoliga
			6	Chikkakoliga
			7	Muthukadohalli
			8	Sonnebychanahalli
			9	Mallimakanapura
			10	M.Sathyawara
			11	Beemakanahalli
			12	Bagaluru
			13	Dasarathimmanahalli (B)
Jadigenahalli	1	Mugabala	1	Mugabala
			2	(M.Hosahalli)
			3	Atturu
			4	Chennapura
			5	Halasahalli
			6	Nidaghatta
			7	Gottipura
			8	Nakkanahalli
			9	Chikkanahalli
			10	Kembaliganahalli
			11	Siddapura
			12	Ankonahalli (B)
			13	Veerapura (B)
Jadigenahalli	2	Doddanallala	1	Doddanallala
			2	Chikkanallala
			3	Dabbagunte
			4	Halasakaipura
			5	Mylapura
			6	Valagerepura
			7	Poojaramanahalli
			8	Chinnandahalli
			9	Guguttahalli
			10	Ummalu
			11	Doddadellanohalli
			12	Alagondanahalli
			13	Appasandra
			14	Yelachanamanahalli
			15	Dodanallala Plantation (B)
			16	Vijayapura (B)
			17	Timmapura
			18	Appasandra Plantation (B)

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
Jadigenahalli	3	Orahalli	1	Oralahalli
			2	Injanahalli
			3	Doddathaggali
			4	Thavatahalli
			5	Solur
			6	Attivatta
			7	Gonakanahalli
			8	Thaggalihosahalli
			9	Belalmangala
			10	Chikkathaggali
			11	Ambalipura
			12	Mattanahalli(B)
			13	Thiratahalli (B)
Jadigenahalli	4	Jadigenahalli	1	Jadigenahalli
			2	Vadigehalli
			3	Kanbeenarahosahalli
			4	Govindapura
			5	Kurubara Gollahalli
			6	Haraluru
			7	Kolatturu
			8	(B)
			9	Bhathagondanahalli (B)
			10	Banahalli (B)
			11	Aralemakkanahalli (B)
			12	Plantation (B)
			13	Plantation (B)
			14	Devaragollahalli
Jadigenahalli	5	Vagata	1	Vagata
			2	Vagata Agrahara
			3	Kodihalli
			4	Makanahalli
			5	Hunasehalli
			6	Doddasarahalli
			7	Bisanahalli
			8	Kanikallu
			9	Kacharakanahalli
			10	Honachanahalli
			11	Chandrapura (B)
			12	Maragondanahalli
Jadigenehalli	6	Khajihosahalli	1	Khajihosahalli
			2	Bommanabande
			3	Kattigenahalli
			4	Kanarasanahalli

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
			5	Paramanahalli
			6	Tharabahalli
			7	Thindlu
			8	Thindlu Plantation (B)
Kasaba Hoskote	1	Doddahulluru	1	Doddahulluru
			2	Chikkahulluru
			3	Chokkahalli
			4	Piligumpe
			5	Cholappanahalli
			6	Chikkanallurahalli
			7	Donnadenahalli
			8	Dasarahalli
			9	Sonnadenahalli
			10	Somapura
			11	Hulluru Amanikere (B)
			12	Yelachanayakanapura
Kasaba Hoskote	2	Lakkondanahalli	1	Lakkondanahalli
			2	Vabasandra
			3	Thimmasandra
			4	Shivadenahalli
			5	Hasigala
			6	Sonnahallipura
			7	Kammasandra
			8	Venkateshapura
Kasaba Hoskote	3	Kumbalahalli	1	Kumbalahalli
			2	Upparahalli
			3	Alappanahalli
			4	Shankanipura
			5	Kallahalli
			6	Kurubarahalli
			7	Chikka Amanikere (B)
Kasaba Hoskote	4	Doddagattiganabbe	1	Doddagattiganabbe
			2	Chikkagattiganabbe
			3	Poojena Agrahara
			4	Sarakari guttehalli
			5	Pettanahalli
			6	Ganagalu
			7	Cheemandahalli
			8	Kannurahalli
			9	Jinnagara
			10	Bhaktarahalli
			11	Dodda Amanikere
Anugondanahalli	1	Samethanahalli	1	Samethanahalli

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
			2	Thirumalashettihalli
			3	Koraluru
			4	Mallasandra
			5	Nadavatti
			6	Appajipura (B)
Anugondanahalli	2	Muthsandra	1	Muthusandra
			2	Belikere
			3	Koturu
			4	Harohalli
			5	Bodhanahosahalli
			6	Hemanandahalli
			7	Naganayakanakote
			8	Ajagondanahalli
			9	Thimandahalli
			10	Gulakaipura
Anugondanahalli	3	Devanagundi	1	Devanagundi
			2	Doddadunnasandra
			3	Devalapura
			4	Devanagondi Hosahalli
			5	Oblapura
			6	Medahalli
			7	Handenahalli
			8	Banarahalli
			9	Somalapura
			10	Lingadeeramallasandra
			11	Basabathanahalli (B)
Anugondanahalli	4	Anugondanahalli	1	Anugondanahalli
			2	Yedagondanahalli
			3	Muthkuru
			5	Meedimallasandra
			6	Bylahalli (B)
Anugondanahalli	5	Ganagalur	1	Ganagalur
			2	Thathanuru
			3	Thiruvaranga
			4	Baguru
			5	Maramagere
			6	Gunduru
			7	Siddanapura
			8	Shivanapura
			9	Thathanuru Plantation (B)
Anugondanahalli	6	Kalkute Agrahara	1	Kalkute Agrahara

Name of the Hobli	Sl.No.	Name of the Gram Panchayat	Sl.No.	Name of the Village
			2	S.Narayanakere
			3	Arehalli
			4	Muthukadahalli
			5	Bylahalli
BANGALORE EAST TALUK				
Bidarahalli	1	Mandur	1	Bendiganahalli
			2	Bommenahalli
			3	Chikkasandra
			4	Gundur
			5	Hancharahalli
			6	Huskur
			7	Jothipura
			8	Kammasandra
			9	Kattugollahalli
			10	Kodigehalli
			11	Lagumenahalli
			12	Mandur
			13	Raghuvanahalli
			14	Shringaripura
			15	Thirumenahalli
			16	Vanajanahalli (B)

ANNEXURE-2

Details of village wise Decadal Population of LPA area

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
I	**Hoskote Taluk**				
A.	**Anugondanahalli Hobli**				
1.	Ajjagondahalli	265	259	340	406
2.	Anugondahalli	544	717	878	1020
3.	Arehalli	485	741	773	794
4.	Bagur	622	799	892	874
5.	Banarahalli	152	200	194	213
6.	Bellikere	776	903	947	1028
7.	Bhodanahosahalli	1066	1489	1269	2336
8.	Bylahalli	308	435	471	503
9.	Byrahalli	90	13	0	0
10.	Devalapura	1362	151	446	867
11.	Devanagondi	735	1859	1721	2001
12.	Devanagondi Hosahalli	0	684	824	917
13.	Doddadunnasandra	279	1143	1677	2401
14.	Ganagalur	274	926	1028	1015
15.	Gullakaipura	135	7	8	99
16.	Gundur	179	629	679	746
17.	Gundur	706	0	0	0
18.	Handenahalli	921	782	872	1111
19.	Harohalli	628	779	1047	1121
20.	Hemmandahalli	621	129	156	311
21.	Kalkunte Agrahara	1035	1261	1528	1624
22.	Kotur	416	617	704	961
23.	Lingadeeramallasandra	174	200	271	311
24.	Maramgere	480	527	544	708
25.	Medihalli	362	384	464	507
26.	Medimallasandra	1802	1981	2446	2768
27.	Muthakadahalli	277	389	321	339
28.	Muthasandra	857	433	516	1620
29.	Muthkur	1280	1621	1769	2111
30.	Naganayakanakote	494	532	679	888
31.	Obalapura	301	337	361	377
32.	S.Narayanakere	993	1307	1521	1647
33.	Samethanahalli	1368	1762	2425	4056
34.	Shivanapura	236	225	299	347
35.	Siddanapura	173	329	396	400

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
36.	Somalapura	171	210	217	188
37.	Thathnur	770	804	864	921
38.	Thathnur Plantation		0	0	18
39.	Thimmadahalli	107	140	141	203
40.	Thiruvaranga	448	557	735	731
41.	Yedagondahalli	471	541	572	596
B	**Jadigenahalli Hobli**				
1.	Arlemakanahalli	4	0	0	15
2.	Banahalli	574	741	779	770
3.	Belamangala	293	339	381	401
4.	Bisanahalli	462	516	637	551
5.	Bisanahalli	890	938	921	473
6.	Bommanabande	786	444	545	617
7.	Chikkathaggali	557	344	320	364
8.	Devara Gollahalli	332	10	45	5
9.	Devasettihalli	72	460	534	637
10.	Doddadasarahalli	1010	365	458	441
11.	Doddanallurahalli	330	927	1084	1250
12.	Doddathaggali	220	352	398	450
13.	Ganagalu	611	436	473	470
14.	Gonakanahalli	308	562	828	815
15.	Govindapura	6	602	810	726
16.	Haralur	109	553	692	833
17.	Honachanahalli		591	571	601
18.	Hunasehalli	388	457	509	495
19.	Jadigenahalli	1573	1707	1877	1951
20.	Jinnagara	588	702	665	780
21.	Kacharakanahalli	293	388	437	549
22.	Kamarasanahalli	587	515	597	623
23.	Kanekallu	329	410	410	404
24.	Karibeeranahosahalli	410	419	532	584
25.	Kattigenahalli	1853	2349	2616	3058
26.	Khajihosahalli	785	942	957	1108
27.	Kodihalli	611	694	736	823
28.	Kurubara Gollahalli	52	33	35	32
29.	Makanahalli	1141	1313	1465	1627
30.	Mylapura	350	475	539	594
31.	Nakkanahalli	238	249	321	344
32.	Orohalli	419	472	532	518
33.	Paramanahalli	455	647	550	616
34.	Thaggali Hosahalli	494	578	643	660
35.	Tharabahalli	650	418	752	459

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
36.	Thindlu	410	484	477	513
37.	Vadigehalli	97	101	120	98
38.	Vagata	959	950	1021	1066
39.	Vagata Agrahara	581	585	736	752
40.	Vijayapura	0	0	0	11
C	**Kasaba Hobli**				
1.	Alagondahalli	349	370	410	486
2.	Alappanahalli	974	945	1032	1106
3.	Ambalipura	52	74	87	91
4.	Ankonahalli	0	0	2	0
5.	Appajipura	0	18	55	89
6.	Appasandra	377	485	555	591
7.	Attivatta	681	838	991	1007
8.	Attur	236	267	268	347
9.	Bhaktharahalli	655	816	1004	1109
10.	Channapura	328	93	97	107
11.	Cheemandahalli	436	418	524	605
12.	Chikka Amanikere	608	0	60	174
13.	Chikkagattiganabbe	651	729	729	837
14.	Chikkahullur	133	757	932	1573
15.	Chikkanallala	297	349	483	561
16.	Chikkanallurahalli	255	387	437	577
17.	Chinnandahalli	449	282	363	383
18.	Chokkahalli	517	746	1182	2543
19.	Cholappanahalli	336	412	607	1282
20.	Dabbagunte	843	222	252	213
21.	Dandupalya	1215	1091	0	0
22.	Dasarahalli	182	1441	1539	1686
23.	Dodda Amanikere	420	90	59	11
24.	Doddadenahalli	202	373	630	673
25.	Doddagattiganabbe	318	340	369	336
26.	Doddahullur	596	1073	1278	1702
27.	Doddanallala	614	716	806	787
28.	Gottipura	717	508	615	642
29.	Guguttahalli	81	322	353	570
30.	Halasahalli	718	561	666	716
31.	Halasakaipura	467	185	244	266
32.	Injanahalli	413	439	498	440
33.	Kallahalli	670	868	761	770
34.	Kannurahalli	762	1066	1561	2652
35.	Kembaliganahalli	1246	1474	1647	1735
36.	Kolathur	958	1082	1299	1567

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
37.	Koralur	774	969	1263	2146
38.	Kumbalahalli	1883	1274	2973	3262
39.	Kurubarahalli	1076	0	1405	1819
40.	Lakkondahalli	1232	1454	1579	1664
41.	Malimakanapura	373	513	650	1045
42.	Mallasandra	1107	1349	1706	2184
43.	Mugabala	1294	1427	1612	1740
44.	Naduvathi	1446	1629	1818	2196
45.	Nidagatta	901	1111	1221	1302
46.	Pethanahalli	383	509	502	578
47.	Pillagumpe	153	298	702	1272
48.	Poojaramanahalli	255	290	373	413
49.	Poojena Agrahara	820	997	1118	1395
50.	Sarakariguttahalli	640	786	969	1096
51.	Shankanipura	610	750	896	1046
52.	Siddapura	278	205	216	196
53.	Solur	726	738	716	871
54.	Sompura	312	344	484	523
55.	Sonnadenahalli	233	400	450	501
56.	Thavatahalli	433	530	661	671
57.	Thimmapura	0	14	27	27
58.	Thirumalasettihalli	566	624	785	1601
59.	Ummalu	719	822	849	908
60.	Upparahalli	526	707	822	981
61.	Vabasandra	577	606	642	722
62.	Valagerepura	393	434	449	536
63.	Varadapura	272	247	0	0
64.	Yelachammanahalli	97	120	186	233
65.	Yelachanayakanapura	29	25	50	86
D	**Nandagudi Hobli**				
1.	Agasarahalli	173	205	213	217
2.	Agrahara Vaddahalli	250	280	239	203
3.	Arehalli	741	480	539	498
4.	Banamakanahalli	197	243	321	421
5.	Bandahalli	120	173	363	434
6.	Beerahalli	270	270	497	599
7.	Bheemapura	637	685	783	889
8.	Bisanahalli	357	0	0	1005
9.	Bylanarasapura	0	3169	3863	3838
10.	Chikkanahalli	315	573	626	687
11.	Chikkondahalli	235	752	864	856
12.	Chinnathimmanagolla	335	567	664	671

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
	Halli				
13.	Chokkasandra	306	581	593	606
14.	D.Settihalli	174	261	461	520
15.	Dalasagere	768	1066	1154	1225
16.	Doddaganahalli	814	214	194	211
17.	Doddenahalli	259	545	520	615
18.	Gangapura	67	668	896	960
19.	Geddalahallipura	216	255	248	269
20.	Gerahalli	1046	59	54	85
21.	Giddanahalli	507	253	321	357
22.	Gullenahalli	510	25	16	29
23.	Hedakanahalli	1871	563	598	537
24.	Hethakki	48	703	736	821
25.	Hindiganala	470	2021	2407	2731
26.	Hindiganala	0	0	0	0
27.	Hosahalli	0	0	0	0
28.	Hosavenkatapura	69	99	93	106
29.	Huluvanahalli	159	205	224	251
30.	Ittasandra	1057	1167	1281	1394
31.	K.Sathyawara	525	709	741	799
32.	K.Settihalli	208	223	228	209
33.	Kalappanahalli	545	626	698	844
34.	Karapanahalli	545	0	0	0
35.	Karahalli	276	327	378	381
36.	Karapanahalli	447	561	684	700
37.	Kondrahalli	815	873	1057	1122
38.	Korati	1155	1322	1502	1546
39.	Lingapura	253	238	363	389
40.	Mallyappanahalli	362	451	519	557
41.	Manchappanahalli	461	527	613	613
42.	Marasandahalli	361	442	508	485
43.	Medur	71	96	109	115
44.	Mothakadahalli	586	636	751	769
45.	Muddenahalli	148	220	300	283
46.	Mugabala Hosahalli	235	246	304	356
47.	Mumynahosahalli	71	90	114	157
48.	N.Hosahalli	1152	1351	1462	1451
49.	Nandagudi	2290	2626	3185	3765
50.	Nelavagilu	1291	1516	1574	1541
51.	Oblahalli	480	583	674	713
52.	Ramagovindapura	292	340	328	370
53.	Sarakanur	245	256	250	227

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
54.	Sarakar Vaddahalli	217	252	271	334
55.	Sathigenahalli	143	76	84	75
56.	Shivanapura	1844	2042	2335	2278
57.	Siddanahalli	685	253	415	439
58.	Sonnekempanahalli	0	0	0	8
59.	Tharabahalli	456	709	807	904
60.	Thavarekere	1301	1833	2059	2487
61.	Thimmapura	0	0		100
62.	Yelachahalli	890	906	1183	1251
63.	Yeshvanthapura	337	395	437	411
64.	Yethinavadeyarapura	219	266	120	159
E.	**Sulibele Hobli**				
1.	Ankonahalli	263	284	303	285
2.	Anupahalli	775	864	878	938
3.	Arasanahalli	562	657	695	857
4.	Attibele	1323	1511	1542	1660
5.	Bagalur	115	154	193	232
6.	Balenahalli	233	236	243	229
7.	Bathiganahalli	0	0	35	4
8.	Bavapura	407	509	534	627
9.	Begur	928	1207	1339	1436
10.	Bendiganahalli	170	0	0	0
11.	Bendiganahalli	715	638	626	596
12.	Bettahalli	460	501	633	563
13.	Bheemakkanahalli	354	495	594	695
14.	Bhuvanahalli	367	493	555	592
15.	Cheemasandra	0	510	565	561
16.	Chikkakoliga	0	159	197	229
17.	Chikkaralagere	20	288	325	308
18.	Chikkakurubarahalli	565	0	8	36
19.	Dimbahalli	337	0	0	32
20.	Doddakoliga	813	392	378	387
21.	Doddaralagere	318	735	764	803
22.	Dyavasandra	571	240	249	320
23.	Ekarajapura	0	320	401	715
24.	Esthur	354	617	673	669
25.	Esthur Hosahalli	867	0	613	686
26.	Giddappanahalli	392	1215	1324	752
27.	Giddappanahalli	567	0	0	667
28.	Gullahalli	8	873	1030	1059
29.	Gundrahalli	689	17	72	9
30.	Gundrahalli	443	165	179	194

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
31.	Haniyur	506	0	0	15
32.	Hasigala	1871	1112	1178	1215
33.	Hosadimbahalli		55	91	125
34.	Imanahalli	0	0	0	10
35.	Kachipuradakambada Beedu	6	2	3	16
36.	Kadaranapura	173	214	259	266
37.	Kamblipura	857	1023	1125	1271
38.	Kammasandra	985	1216	1301	1291
39.	Kempapura	95	166	272	316
40.	Kodipura	0	0	4	0
41.	M.Sathyawara	601	639	772	802
42.	Muthasandra	1275	1392	1564	676
43.	Muthukadahalli	224	290	419	418
44.	Nagarenahalli	211	283	336	330
45.	Nallaganahalli	148	173	186	176
46.	Ralkunte	402	416	429	491
47.	Ramapura	140	145	133	133
48.	Sadappanahalli	532	536	549	500
49.	Sashimakanahalli	107	130	164	190
50.	Shantanapura	12	8	9	27
51.	Shivadenahalli	91	175	217	268
52.	Siddanahalli	288	796	741	790
53.	Sonnahallipura	804	942	989	1061
54.	Sonnebychanahalli	144	168	192	175
55.	Srinivasapura	0	0	0	11
56.	Sulibele	5343	6624	8205	9605
57.	Thammarasanahalli	410	402	473	522
58.	Theneyur	369	496	565	587
59.	Thimmappanahalli	446	465	501	540
60.	Thimmasandra		539	555	669
61.	Valagerepura	344	385	461	533
62.	Yenagunte	1154	1313	1279	1387
63.	Yethinavadeyarapura	17	87	303	325
64.		**1473311**	**159727**	**186107**	**213697**
F	**Bidarahalli Hobli**				

Sl.No	Taluk/Hobli/Village Name	1981	1991	2001	2011 (Provisional)
16 Villages of Bidarahalli Hobli	Bommenahalli, Chikkasandra,Hancharahalli,Huskur,Jyothipura Kammasandra,Kattugollahalli,Kodigehalli,Lagumenahalli,Thirumalenahalli,Mandur,Shringarapura,Naguvanahalli,Thammarayasandra Agrahara	**5949**	**7499**	**9140**	**11683**

ANNEXURE-3

Details of 2001 and 2011 population of Hoskote LPA Villages – Conurbation limit, Nandagudi Township, STRR and Rest of the Villages

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
Villages Under Conurbation Limit				
1	Ajjagondahalli	Anugondanahalli	340	406
2	Devanagondi	Anugondanahalli	1721	2004
3	Gullakaipura	Anugondanahalli	8	99
4	Harohalli	Anugondanahalli	1047	1117
5	Kotur	Anugondanahalli	704	961
6	Muthasandra	Anugondanahalli	516	1615
7	Thimmadahalli	Anugondanahalli	141	203
8	Bendiganahalli	Bidarahalli	9140	11690
9	Bommenahalli	Bidarahalli		
10	Chikkasandra	Bidarahalli		
11	Gundur	Bidarahalli		
12	Hancharahalli	Bidarahalli		
13	Huskur	Bidarahalli		
14	Jothipura	Bidarahalli		
15	Kammasandra	Bidarahalli		
16	Kattugollahalli	Bidarahalli		
17	Kodigehalli	Bidarahalli		
18	Lagumenahalli	Bidarahalli		
19	Mandur	Bidarahalli		
20	Raghuvanahalli	Bidarahalli		
21	Sringarapura	Bidarahalli		
22	Thirumenahalli	Bidarahalli		
23	Vanajanahalli	Bidarahalli		
24	Alappanahalli	Hoskote	1032	1103

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
25	Cheemandahalli	Hoskote	524	606
26	Chikkahullur	Hoskote	932	1615
27	Chikkanallurahalli	Hoskote	437	674
28	Chokkahalli	Hoskote	1182	2242
29	Cholappanahalli	Hoskote	607	1279
30	Dasarathimmanahalli	Hoskote	0	0
31	Doddahullur	Hoskote	1278	1701
32	Gangalu	Hoskote	473	470
33	Halasahalli	Hoskote	666	713
34	Kannurahalli	Hoskote	1561	2644
35	Kolathur	Hoskote	1299	1568
36	Pethanahalli	Hoskote	502	577
37	Pillagumpe	Hoskote	702	1272
38	Sarakariguttahalli	Hoskote	969	1095
39	Sompura	Hoskote	484	521
40	Sonnadenahalli	Hoskote	450	499
41	Yelachanayakanapura	Hoskote	50	86
42	Malimakanapura	Hoskote	650	1042
43	Chikka Amanikere	Hoskote	60	174
44	Hoskote	Hoskote	36323	56980
45	Hulluramanikeri	Hoskote	0	0
46	Shankanipura	Hoskote	896	1046
47	Tharabahalli	Jadigenahalli	752	851
48	Doddadasarahalli	Jadigenahalli	458	442
49	Doddanallurahalli	Jadigenahalli	1084	1250
50	Jinnagara	Jadigenahalli	665	783
51	Jadigenahalli	Jadigenahalli	1877	1977
52	Chandrapura	Jadigenahalli	0	0

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
53	Solur	Jadigenahalli	716	873
54	Vagata	Jadigenahalli	1021	1098
55	Vagataagrahara	Jadigenahalli	736	751
56	Haralur	Jadigenahalli	692	832
57	Kanekallu	Jadigenahalli	410	404
58	Ankonahalli	Nandagudi	2	0
59	Banamakanahalli	Nandagudi	321	420
60	Manchappanahalli	Nandagudi	613	625
61	Thavarekere	Nandagudi	2059	2481
62	Yelachahalli	Nandagudi	1183	1251
63	Goravihalli	Nandagudi	0	0
64	Lingapura	Nandagudi	363	392
65	Doddenahalli	Nandagudi	520	616
66	Begur	Sulibele	1339	1436
67	Bhemakkanahalli	Sulibele	594	691
68	Chikkakoliga	Sulibele	197	229
69	Chowdasandra	Sulibele	0	0
70	Ekarajapura	Sulibele	401	715
71	Gundrahalli	Sulibele	72	9
72	Kamblipura	Sulibele	1125	1272
73	Kempapura	Sulibele	272	316
74	Muthakadahalli	Sulibele	419	339
75	Muthasandra	Sulibele	1564	676
76	Nagarenahalli	Sulibele	336	330
77	Sonnebychanahalli	Sulibele	192	175
78	Doddakoliga	Sulibele	378	388
79	Bagalur	Sulibele	193	231
80	Gullahalli	Sulibele	1030	1059

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
Villages Under Nandagudi Township				
81	Agraharavaddahalli	Nandagudi	239	203
82	Banahalli	Nandagudi	779	771
83	Beerahalli	Nandagudi	497	598
84	Bisanahalli	Nandagudi	0	1004
85	Chikkondahalli	Nandagudi	864	856
86	Chokkasandra	Nandagudi	593	606
87	D.Settihalli	Nandagudi	461	519
88	Geddalahallipura	Nandagudi	248	266
89	Giddanahalli	Nandagudi	321	356
90	Gullenahalli	Nandagudi	16	29
91	Hindiganala	Nandagudi	2407	2728
92	Hosavenkatapura	Nandagudi	93	111
93	Ittasandra	Nandagudi	1281	1394
94	K_Sathyawara	Nandagudi	741	799
95	Karapanahalli	Nandagudi	684	680
96	Kondrahalli	Nandagudi	1057	1121
97	Medur	Nandagudi	109	115
98	Mothakadahalli	Nandagudi	751	772
99	Mudenahalli	Nandagudi	300	283
100	Mumynahosahalli	Nandagudi	114	158
101	Nandagudi	Nandagudi	3185	3718
102	Nelavagilu	Nandagudi	1574	1540
103	Oblahalli	Nandagudi	674	713
104	Ramagovindapura	Nandagudi	328	367
105	Sarakanur	Nandagudi	250	264
106	Sarakarivaddahalli	Nandagudi	271	334
107	Shivanapura	Nandagudi	2335	2278

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
108	Siddanahalli	Nandagudi	415	438
109	Tharabahalli	Nandagudi	807	904
110	Bhuvanahalli	Sulibele	555	592
111	Cheemasandra	Sulibele	565	561
112	Dimbahalli	Sulibele	0	32
113	Srinivasapura	Sulibele	0	8
114	Thammarayasandraagrahara	Sulibele	0	526
115	Hosadimbahalli	Sulibele	91	125
116	Bavapura	Sulibele	534	644
Villages Under STRR LPA				
117	Anugondahalli	Anugondanahalli	878	1027
118	Arehalli	Anugondanahalli	773	792
119	Bagur	Anugondanahalli	892	890
120	Bodanahosahalli	Anugondanahalli	1269	2338
121	Byrahalli	Anugondanahalli	0	0
122	Devalapura	Anugondanahalli	446	867
123	Devanagondihosahalli	Anugondanahalli	824	916
124	Doddadunnasandra	Anugondanahalli	1677	2400
125	Ganagaluru	Anugondanahalli	1028	1015
126	Gundur	Anugondanahalli	679	747
127	Handenahalli	Anugondanahalli	872	1112
128	Hemmandahalli	Anugondanahalli	156	309
129	Kalkunteagrahara	Anugondanahalli	1528	1629
130	Medimallasandra	Anugondanahalli	2446	2763
131	Muthkur	Anugondanahalli	1769	2107
132	Obalapura	Anugondanahalli	361	378
133	S_Narayanakere	Anugondanahalli	1521	1644

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
134	Samethanahalli	Anugondanahalli	2425	4102
135	Thathnur Plantation	Anugondanahalli	864	920
136	Thathnur	Anugondanahalli	0	18
137	Thirumalasettihalli	Anugondanahalli	785	1603
138	Thiruvaranga	Anugondanahalli	735	731
139	Yedagondahalli	Anugondanahalli	572	596
140	Bhaktharahalli	Hoskote	1004	0
141	Chikkagattiganabbe	Hoskote	729	777
142	Dodda Amanikere	Hoskote	59	11
143	Doddagattiganabbe	Hoskote	369	335
144	Koralur	Hoskote	1263	2182
145	Lakkondahalli	Hoskote	1579	1703
146	Mallasandra	Hoskote	1706	2191
147	Naduvathi	Hoskote	1818	2197
148	Vabasandra	Hoskote	642	722
149	Poojenaagrahara	Hoskote	1118	1399
150	Appajipura	Hoskote	55	89
151	Kacharakanahalli	Jadigenahalli	437	549
152	Kodihalli	Jadigenahalli	736	823
153	Attibele	Sulibele	1542	1564
154	Hasigala	Sulibele	1178	1317
155	Kadaranapura	Sulibele	259	265
156	Kammasandra	Sulibele	1301	1349
157	M.Sathyawara	Sulibele	772	806
158	Ramapura	Sulibele	133	133
159	Shivadenahalli	Sulibele	217	269
160	Sonnahallipura	Sulibele	989	1066
161	Sulibele	Sulibele	8205	9587

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
162	Thimmasandra	Sulibele	555	533
163	Volageripura	Sulibele	461	536
164	Yenagunte	Sulibele	1279	1388
165	Arasanahalli	Sulibele	695	857
166	Yethinavadeyarapura	Sulibele	303	325
167	Sadappanahalli	Sulibele	549	500
Rest Of The LPA Villages				
168	Basabathanahalli	Anugondanahalli	0	0
169	Bellikere	Anugondanahalli	947	1028
170	Lingadeeramallasandra	Anugondanahalli	271	311
171	Maramgere	Anugondanahalli	544	708
172	Medihalli	Anugondanahalli	464	507
173	Mutgadahalli	Anugondanahalli	321	418
174	Shivanapura	Anugondanahalli	299	345
175	Siddanapura	Anugondanahalli	396	394
176	Somalapura	Anugondanahalli	217	188
177	Banarahalli	Anugondanahalli	194	214
178	Bylahalli	Anugondanahalli	471	503
179	Naganayakanakote	Anugondanahalli	679	889
180	Dasarahalli	Hoskote	1539	1692
181	Kumbalahalli	Hoskote	2973	3258
182	Kurubarahalli	Hoskote	1405	1823
183	Upparahalli	Hoskote	822	978
184	Kallahalli	Hoskote	761	773
185	Bommanabande	Jadigenahalli	545	615
186	Devaragollahalli	Jadigenahalli	45	5
187	Doddadenahalli	Jadigenahalli	630	673
188	Gonakanahalli	Jadigenahalli	828	805

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
189	Govindapura	Jadigenahalli	810	724
190	Paramanahalli	Jadigenahalli	550	616
191	Thindlu	Jadigenahalli	477	513
192	Arelemakanahalli Plantation	Jadigenahalli	0	0
193	Doddanallala Plantation	Jadigenahalli	0	0
194	Appasandra Plantation	Jadigenahalli	0	0
195	Orohalli	Jadigenahalli	532	518
196	Valagerepura	Jadigenahalli	449	464
197	Yelachammanahalli	Jadigenahalli	186	232
198	Aralemakanahalli	Jadigenahalli	0	15
199	Arelemakanahalli Plantation	Jadigenahalli	0	0
200	Attivatta	Jadigenahalli	991	1008
201	Attur	Jadigenahalli	268	347
202	Chikkanallala	Jadigenahalli	0	560
203	Devasettihalli	Jadigenahalli	534	637
204	Doddanallala	Jadigenahalli	806	788
205	Hunasehalli	Jadigenahalli	509	495
206	Mugabala	Jadigenahalli	1612	1740
207	Mylapura	Jadigenahalli	539	592
208	Nakkanahalli	Jadigenahalli	321	344
209	Poojaramanahalli	Jadigenahalli	373	412
210	Nidagatta	Jadigenahalli	1221	1301
211	Guguttahalli	Jadigenahalli	353	571
212	Halasakaipura	Jadigenahalli	244	266
213	Hosahalli	Jadigenahalli	304	356
214	Thavatahalli	Jadigenahalli	661	671
215	Thimmapura	Jadigenahalli	27	27
216	Appasandra	Jadigenahalli	555	590

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
217	Ambalipura	Jadigenahalli	87	91
218	Belamangala	Jadigenahalli	381	401
219	Channapura	Jadigenahalli	97	107
220	Dabbagunte	Jadigenahalli	252	213
221	Doddathaggali	Jadigenahalli	398	450
222	Bhakthagondanahalli	Jadigenahalli	1004	0
223	Chikkathaggali	Jadigenahalli	320	365
224	Chinnandahalli	Jadigenahalli	363	382
225	Jadigenahalliplantation	Jadigenahalli	6	2
226	Karibeeranahosahalli	Jadigenahalli	532	583
227	Kattigenahalli	Jadigenahalli	2616	3047
228	Khajihosahalli	Jadigenahalli	957	1105
229	Maragondanahalli	Jadigenahalli	0	0
230	Mattanahalli	Jadigenahalli	0	0
231	Thaggalihosahalli	Jadigenahalli	643	662
232	Thindlu Plantation	Jadigenahalli	0	0
233	Thiratahalli	Jadigenahalli	0	0
234	Veerapura	Jadigenahalli	0	0
235	Vijayapura	Jadigenahalli	0	11
236	Alagondahalli	Jadigenahalli	410	486
237	Banahalli	Jadigenahalli	779	0
238	Gottipura	Jadigenahalli	615	642
239	Injanahalli	Jadigenahalli	498	440
240	Kurubaragollahalli	Jadigenahalli	35	32
241	Makanahalli	Jadigenahalli	1465	1630
242	Ummalu	Jadigenahalli	849	907
243	Vadigehalli	Jadigenahalli	120	103
244	Kamarasanahalli	Jadigenahalli	597	623

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
245	Honachanahalli	Jadigenahalli	571	601
246	Bisanahalli	Jadigenahalli	921	1020
247	Agasarahalli	Nandagudi	213	218
248	Bandahalli	Nandagudi	363	433
249	Bisanahalli	Nandagudi	0	1004
250	Chikkanahalli	Nandagudi	626	686
251	Gangapura	Nandagudi	896	960
252	Gerahalli	Nandagudi	54	85
253	Goddaramanahalli	Nandagudi	0	0
254	Guddadachannenahalli	Nandagudi	0	0
255	Hedakanahalli	Nandagudi	598	537
256	Hosahardi	Nandagudi	0	0
257	Kalappanahalli	Nandagudi	698	845
258	Kembaliganahalli	Nandagudi	1647	1737
259	Kolalachannenahalli	Nandagudi	0	0
260	Marasandahalli	Nandagudi	508	483
261	Sathigenahalli	Nandagudi	84	75
262	Siddapura	Nandagudi	216	196
263	Sonnekempanahalli	Nandagudi	0	8
264	Venkatapura	Nandagudi	0	0
265	Yeshvanthapura	Nandagudi	437	411
266	Korati	Nandagudi	1502	1548
267	Gundrahalli	Nandagudi	179	194
268	Doddaganahalli	Nandagudi	194	211
269	Bheemapura	Nandagudi	783	888
270	Bylanarasapura	Nandagudi	3863	3837
271	Chikkathimmanagollahalli	Nandagudi	664	671
272	Dalasagere	Nandagudi	1154	1224

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
273	Doddaharadiplantation	Nandagudi	0	0
274	Hethakki	Nandagudi	736	822
275	Huluvanahalli	Nandagudi	224	250
276	K.Settihalli	Nandagudi	228	209
277	Karahalli	Nandagudi	378	380
278	Mallyappanahalli	Nandagudi	519	555
279	N.Hosahalli	Nandagudi	1462	1450
280	Thimmasandra	Nandagudi	0	100
281	Yethinavadeyarapura	Nandagudi	120	159
282	Arehalli	Nandagudi	539	498
283	Aralagereamanikere	Sulibele	0	0
284	Bathiganahalli	Sulibele	35	4
285	Bettahalli	Sulibele	633	563
286	Chikkakurabarahalli	Sulibele	8	36
287	Chikkaralagere	Sulibele	325	308
288	Doddaralagere	Sulibele	764	800
289	Dyavasandra	Sulibele	249	314
290	Giddappanahalli	Sulibele	1324	1420
291	Haniyur	Sulibele	0	15
292	Hosahalli	Sulibele	613	686
293	Immanahalli	Sulibele	0	0
294	Kasipuradakambadabeedu	Sulibele	3	16
295	Kodipura	Sulibele	4	0
296	Mattabarlu	Sulibele	0	0
297	Nallaganahalli	Sulibele	186	176
298	Pulamunche	Sulibele		
299	Ralkunte	Sulibele	429	488
300	Sashimakanahalli	Sulibele	164	190

Sl.No	Villages	Hobli	Population 2001	Population 2011 (Final Mp)
301	Shanthanapura	Sulibele	9	27
302	Shivapura	Sulibele	0	0
303	Siddenahalli	Sulibele	741	791
304	Thammarasanahalli	Sulibele	473	522
305	Theneyur	Sulibele	565	588
306	Thimmappanahalli	Sulibele	501	540
307	Vanamanahalli	Sulibele	0	0
308	Venkateshapura	Sulibele	0	0
309	Ankonahalli	Sulibele	303	285
310	Bendiganahalli	Sulibele	626	596
311	Anupahalli	Sulibele	878	939
312	Balenahalli	Sulibele	243	225
313	Esthur	Sulibele	673	669
314	Esthur Amanikere	Sulibele	0	0

ANNEXURE-4

Population Projections

Area	1991	2001	2011
Conurbation Area	66699	86278	118914
Rest of LPA	59126	69823	74689
STRR	45361	52453	62377
LPA excluding STRR & Nandagudi	**125825**	**156101**	**193603**

Data Source: Census data 1991-2011(Govt of India)

Population Projection of LPA

1. **Arithmetical Method**

The Population for the Period 'n' is given by the equation,

Pn = Po (1+rt) ---------- (1)

Where Po = Present population

r = Average rate of decadal increase in population

t = Period in decade

r_1 = (Po – P/ Po *t),

r_2 = (Po – P/ Po *t)

P = Past population

r = (r_{1+} r_2/2) ---------- (2)

r_1, r_2 = Rate of decadal increase in population

Substituting the value in equation (2), average rate of decadal increase in population for the year (2001-1991) and (2001-2011) will be

Area	Growth rate 1991-2011(r_1)	Growth Rate 2001-2011 (r_1)	AVG Growth rate (r)
Conurbation Area	0.02	0.03	0.03
Rest of LPA	0.02	0.01	0.01
STRR	0.01	0.02	0.02

Note: Derived numbers may be subjected to rounding

Substituting the value of r in equation (1), expected population for the year 2021 conurbation area will be

P_{2021} = 118914 (1 + (0.03* 10))

= (118914 + (118914*0.03*10))

= 154588 (Conurbation area)

P_{2021} = 154588

And for the year 2031 will be

P_{2031} = 118914 (1 + (0.03* 20))

= (118914 + (118914*0.03*20))

= 190262 (Conurbation area)

P_{2031} = 190262

Substituting the value of r in equation (1), expected population for the year 2021 Rest of LPA area will be

P_{2021} = 74689 (1 + (0.01* 10))

= (74689 + (74689*0.01*10))

= 82905 (rest of LPA)

P_{2021} = 82905

And for the year 2031 will be

P_{2031} = 74689 (1 + (0.01* 20))

= (74689 + (74689*0.01*20))

= 91121 (rest of LPA)

P_{2031} = 91121

III^{ly}

STRR also calculated for 2021 and 2031 for the design population purpose.

Area	Arithemetic Method-2021	Arithemetic Method-2021
Conurbation Area	154588	190262
Rest of LPA	82905	91121
STRR	74852	87328

2. Geometric Progression Method

The Population for the Period't' is given by the equation,

$P_n = P_o (1+ I_G/100)^n$ ---------- (3)

Where, I_G = geometric mean (%)

Po = Present population

N = no. of decades

Increment= Po-P---------- (4)

Geometric Increase rate of growth= (Po-P)/P---------- (5)

P = Past population

Considering data given in equation (3) project the population for the year 2021 and 2031 using geometrical progression method.

Considering data given in equation (4) and equation (5), calculate the increment and geometric increase rate of growth respectively.

Year	Conurbation Area			Rest of LPA		
	Population	**Increment** (4)	**Geometric increase rate of growth** (5)	**Population**	**Increment** (4)	**Geometric increase rate of growth** (5)
1991	66699	-	-	59126	-	-
2001	86278	19579	0.29	69823	10697	0.18
2011	118914	32636	0.38	74689	4866	0.07

Data Source: Census data 1991-2011(Govt of India)

Geometric mean I_G (Conurbation area) = $(0.29 \times 0.38)^{1/2}$

= 0.33 i.e., 33.3% for (Conurbation area)

Geometric mean I_G (Rest of LPA) = $(0.18 \times 0.07)^{1/2}$

= 0.11 i.e., 11.2% for (Rest of LPA area)

III^{ly}

Geometric mean I_G calculated for STRR also for the design population purpose.

Area	Geometric mean (I_G)
Conurbation Area	33.3%
Rest of LPA	11.2%
STRR	17.2%

Note: Derived numbers may be subjected to rounding

Substituting the value of I_G in equation (3), expected population for the year 2021 and 2031 Conurbation area will be

Population in year 2021 is,
$P_{2021} = 118914 \times (1+ 0.33)^1 = 158539$ (Conurbation Area)

P_{2021} =158539

And for the year 2031 will be

$P_{2031} = 118914 \times (1+ 0.33)^2 = 211367$ (Conurbation Area))

P_{2031} =211367

Substituting the value of I_G in equation (3), expected population for the year 2021 and 2031 Rest of LPA area will be

Population in year 2021 is,
$P_{2021} = 74689 \times (1+ 0.11)^1 = 83076$ (Rest of LPA Area)

P_{2021} =83076

And for the year 2031 will be

$P_{2031} = 74689 \times (1+ 0.11)^2 = 92404$ (Rest of LPA Area)

P_{2031} =92404

III[ly]

STRR also calculated for 2021 and 2031 for the design population purpose.

Area	Geometric progression Method -2021	Geometric progression Method -2031
Conurbation Area	158539	211367
Rest of LPA	83076	92404
STRR	73105	85678

3. Incremental Increase Method

The incremental increase is determined for each decade from the past population and the average value is added to the present population along with the average rate of increase.

Hence, population after n_{th} decade is $P_n = Po+ n.X + \{n (n+1)/2\}.Y$ ---------- (6)

Where, P_n = Population after n_{th} decade

X = Average increase

$X= (X_1+X_2/2)$ ---------- (7)

X_1, X_2=Po-P ---------- (8)

P = Past population

Y = Incremental increase

Y= X_2-X_1---------- (9)

Considering data given in equation (7), (8) and equation (9), calculate the Average increase and Incremnetal increase respectively.

Area	Increment 1991-2001 (X_1)	Increment 2001-2011 (X_2)	Average Increase (X)	Incremental Increase (Y)
Conurbation Area	19579	32636	26108	13057
Rest of LPA	10697	4866	7782	-5831
STRR	7092	9924	8508	2832

Data Source: Census data 1991-2011(Govt of India)

Substituting the value of Average Increase and Incremental Increase in equation (6), expected population for the year 2021 and 2031 Conurbation area will be

P_{2021} = 118914 + (26108 x 1) + {(1 (1+1))/2} x 13057

= 158079 (Conurbation area)

P_{2021} =158079

And for the year 2031 will be

P_{2031} = 118914 + (26108 x 2) + {(2 (2+1)/2)} x 13057

= 210300 (conurbation area)

P_{2031} =210300

P_{2021} = 74689 + (7782 x 1) + {(1 (1+1))/2} x 5831

= 76640 (Rest of LPA area)

P_{2021} =76640

And for the year 2031 will be

P_{2031} = 74689 + (7782 x 2) + {(2 (2+1)/2)} x (-5831)

= 72759 (Rest of LPA area)

P_{2031} =72759

III^{ly}

STRR also calculated for 2021 and 2031 for the design population purpose.

Area	Increment Increase Method -2021	Increment Increase Method - 2031
Conurbation Area	158079	210300
Rest of LPA	76640	72759
STRR	73717	87889

The projected population for the year 2021 and 2031 by different methods are given below

Sl.No	Methods	Conurbation Area		Rest of LPA		STRR	
		2021	2031	2021	2031	2021	2031
1	Arithmetical Projection Method	154588	190262	82905	91121	74852	87328
2	Geometric Projection Method	158539	211367	83076	92404	76640	72759
3	Incremental Increase Method	158079	210300	76640	72759	73717	87889

Design population of Hoskote LPA excluding STRR and Nandagudi Township

After examining the existing scenario of economic development and population projection methods the growth rate is assumed to be as shown below:

1. **Arithmetical Method**

The Population for the Period 'n' is given by the equation,

Pn = Po (1+rt) ---------- (1)

Where Po = Present population

r = Average rate of decadal increase in population

t = Period in decade

Substituting the value in equation r, average rate of decadal increase in population for the year (2001-1991) and (2001-2011) will be

Area	Growth rate (r)
Conurbation Area	0.03
Rest of LPA	0.01
STRR	0.02

Note: Derived numbers may be subjected to rounding

Substituting the value of r in equation (1), expected population for the year 2021 conurbation area will be

P_{2021} = 118914 (1 + (0.03* 10))

= (118914 + (118914*0.03*10))

= 154588 (Conurbation area)

P_{2021} = 154588

And for the year 2031 will be

P_{2031} = 118914 (1 + (0.03* 20))

= (118914 + (118914*0.03*20))

= 190262 (Conurbation area)

P_{2031} = 190262

Substituting the value of r in equation (1), expected population for the year 2021 Rest of LPA area will be

P_{2021} = 74689 (1 + (0.01* 10))

= (74689 + (74689*0.01*10))

= 82905 (rest of LPA)

P_{2021} = 82905

And for the year 2031 will be

P_{2031} = 74689 (1 + (0.01* 20))

= (74689 + (74689*0.01*20))

= 91121 (rest of LPA)

P_{2031} =91121

III^{ly}

STRR also calculated for 2021 and 2031 for the design population purpose.

The growth of the villages in the three zones as delineated in the table below is as follows:

Natural growth Population of Hoksote LPA Excluding Nandagudi Township with growth rate

Areas	2001 (lakhs)	2011 (lakhs)	Growth Rate	AP-2021 (lakhs)	AP-2031 (lakhs)
Conurbation Area	0.86	1.19	3%	1.55	1.90
Rest of LPA	0.70	0.75	1%	0.83	0.91
STRR	0.52	0.62	2%	0.75	0.87

Data Source: Census data 1991-2011(Govt of India)

Note: Derived numbers may be subjected to rounding

For the purpose of deriving the design population (natural growth) till 2031, 100% of the conurbation area population has considered, only 75% of rest of the LPA population and 50% of the STRR LPA population.

1. Design population for conurbation area:

Conurbation (2021) = 1.55*100% = 1.55

Conurbation (2031) = 1.90*100% = 1.90

2. Design population for Rest of LPA:

Rest of LPA (2021) = 0.83*75% = 0.62

Rest of LPA (2031) = 0.91*75% = 0.68

3. Design population for STRR LPA:

STRR (2021) = 0.75*50% = 0.37

STRR (2031) = 0.87*50% = 0.44

Natural Growth Population of Hoksote LPA excluding Nandagudi Township of 2021 and 2031

PROJECTED NATURAL GROWTH	2021 population (lakhs)	2031 population (lakhs)
100% of urbanisable	1.55	1.90
75% of rest of HPA	0.62	0.68
50% of STRR LPA	0.37	0.44
NATURAL GROWTH POPULATION	**2.54**	**3.02**

Note: Derived numbers may be subjected to rounding

By rounding off these population values, natural growth population of Hoskote LPA excluding Nandagudi Township for the year **2021 will be 2,50,000** and for **2031 will be 3,00,000.**

In-Migration Population

For the purpose of deriving design in-migrating population, Conidering 100% of CBIC area(Category B) in-migrating population within the LPA. Considering 30% of CBIC area (category C) in-migrating population around the LPA as living in the LPA for housing facilities and Considering 20% of KIADB area (Category A) population as majority of KIADB areas are also developed and some of the potential have already been captured in the natural growth of LPA. The total in-migrating population till 2031 is 4.21 lakhs. By rounding off in-migrating population, we consider **4.20 lakhs** as in-migrating population for designing the Hoskote LPA population till 2031.

Sl. No	Particular	KIADB in LPA (CATEGORY A)	CBIC in side of LPA (CATEGORY B)	CBIC out side of LPA* (CATEGORY C)
1	Industrial Area in Acre	1721.31	1000	1898
2	Jobs Generation (Sl.No.1*55)	94,672	55000	104390
3	Total population generated due to job generation in lakhs (Sl.No.2*4)	3.78	2.20	4.17
4	Induced population due to jobs created in lakhs	**0.75 (20%)**	**2.20 (100%)**	**1.25 (30%)**
In Migration Population		**= 0.75+2.20+1.25 = 4.21**		

Population Projection of Hoskote urbanisable Area

The population projection of urbanisable area is the same as population projection of conurbation area as illustrated above in all 3 different methods for conurbation area.

Hence, the population projection of Hoksote CMC will be projected by using 3 different methods of population projection.

Decadal Population of Hoskote Urbanisable Area from 1991-2011

Sl.No.	Hoskote Urbanisable Area	Total Population in Numbers		
	Year	1991	2001	2011
A	Hoskote CMC	25533	36323	56980
B	Surrounding Villages of the Hoskote Town	33667	40815	50244
C	Villages in Bangalore East Taluk	7499	9140	11690
TOTAL (A+B+C)		**66699**	**86278**	**118914**

Data source: 1991 to 2011 Census-Govt of India

Population Projection of LPA

1. Arithmetical Method

The Population for the Period 'n' is given by the equation,

Pn = Po (1+rt) ---------- (1)

Where Po = Present population

r = Average rate of decadal increase in population

t = Period in decade

Substituting the value in equation r, average rate of decadal increase in population for the year (2001-1991) and (2001-2011) will be 0.03, since conurbation area growth rate is 0.03 as in above calculation.

Substituting the value of r in equation (1), expected population for the year 2021 Hoskote CMC will be

P_{2021} = 56980 (1 + (0.03* 10))

= (56980 + (56980*0.03*10))

= 74074 (Hoskote CMC)

P_{2021} = 74074

And for the year 2031 will be

P_{2031} = 56980 (1 + (0.03* 20))

= (56980 + (56980*0.03*20))

= 91168 (Hoskote CMC)

P_{2031} = 91168

Substituting the value of r in equation (1), expected population for the year 2021 Other urbanized villages will be

P_{2021} = 61934 (1 + (0.03* 10))

= (61934 + (61934*0.03*10))

= 80514 (Hoskote CMC)

P_{2021} = 80514

And for the year 2031 will be

P_{2031} = 61934 (1 + (0.03* 20))

= (61934 + (61934*0.03*20))

= 99094 (Hoskote CMC)

P_{2031} =99094

Area	Arithemetic Method-2021	Arithemetic Method-2031
Conurbation Area (A)	154588	190262
Hoskote CMC (B)	74074	91168
Other Urbanised villages (A-B)	80514	99094

Note: Derived numbers may be subjected to rounding

ANNEXURE-5

DETAILS OF DEPARTMENTS/ ORGANISATIONS/ BOARDS OF STATE/ CENTRAL GOVERNMENT FROM WHICH INFORMATIONS/ DETAILS ARE SOUGHT:

SL.NO	DEPARTMENTS/ORGANISATIONS/BOARDS OF STATE/ CENTRAL GOVERNMENT
	STATE GOVERNMENT
1.	Tahasildar, Bangalore East, Bangalore, K.R.Puram, Bangalore
2.	Commissioner, KHB, Cauvery, K.G.Road, Bangalore
3.	Commissioner, KSCB, Shashadri puram, Bangalore
4.	Managing Director,KSRTC, Shanthinagar, Bangalore
5.	AEE, PW,H & In WT Dept., Hoskote Sub-Div., Hoskote
6.	Chief Officer, TMC, Hoskote
7.	Block Education Officer, Education Dept., K.R.Road, Hoskote
8.	Tahasildar, Hoskote Taluk, Hoskote
9.	EE, BESCOM, Hoskote Sub-Div., Hoskote
10.	Sub Range Forest Officer, Bangalore Rural Div., Malleshwaram, Bangalore /Range Officer
11.	Managing Director, BMTC, Shanti Nagar, Bangalore
12.	EO, KIADB, Nrupathunga Road, Bangalore
13.	EE, Minor Irrigation Dept., Bangalore Rural, Jayanagar, Bangalore
14.	Chairman/EO, APMC, Hoskote Taluk, Hoskote
15.	DE, Office of the DE, Survey & Access Network, Jayanagar, Bangalore
16.	Circle Inspector, Hoskote Police Station, Hoskote
17.	AD, Horticulture Dept., Hoskote
18.	Namma Metro, BMRCL, Bangalore
19.	Bangalore Development Authority, Bangalore
20.	KUIDFC, Bangalore
21.	Statistical Dept, Bangalore
22.	Asst. Director of Agriculture, Agriculture Dept, Hoskote.
23.	Deputy Commissioner, Bangalore (Rural)

24.	Archeological Dept, (State), Bangalore
25.	Taluk Health Officer, Hoskote
26.	Dist., Health Officer, Bangalore
27.	Mines & Geology Dept., Bangalore
28.	Grama Panchayath, Hoskote Taluk & Bangalore Rural Taluk
30.	Taluk Panchayath Office, Hoskote & Bangalore Rural

SL.NO	DEPARTMENTS/ORGANISATIONS/BOARDS OF STATE/CENTRAL GOVERNMENT
Central Government	
1	Railways, Bangalore
2	Director General, Fire Dept., Bangalore
3	CPWD
4	Archeological Dept, Central
5	Defence, DRDO
6	National Highway Authority of India, Bangalore
7	Meteorological Dept., Bangalore

ANNEXURE-6

Preparation of Master Plan

For Hoskote Local Planning Area

(Dates of events)

Sl.No.	Particulars
1.	**Local Planning Area (LPA)** I. Declaration under section 4(A) of KTCP Act 1961. **G.O. No. UDD 118: Bem Ru Pra 2003 Bangalore, dated: 03-03-2006**. II. LPA: 591.72 sq.km (59172 Ha) III. Total No. of villages : 316 300 villages – Hoskote Taluk 16 villages – Bidarahalli Hobli of Bangalore East Taluk IV. Hoblies in Hoskote Taluk. a) Hoskote Kasaba b) Nandagudi c) Sulibele d) Jadigenahalli e) Anugondanahalli **V.** The following 08 villages coming under BDA jurisdiction was included in LPA of Hoskote Planning Authority vide **G.O. No. UDD 364: BMR 2009: Bangalore, dated: 26-09-2012.** a) Hoskote Kasaba Hobli: 1. Baktarahally 2. Doddagattiganabbe 3. Koraluru

	4. Mallasandra b) Anugondanahalli Hobli: 5. Ajjagondanahally 6. Gulikaipura 7. Thimmandahalli 8. Tirumalashetty hally VI. As per Government order UDD 36/BMR/2016, Bangalore,Dated:24.06.2016 STRR LPA declared. Accordingly 116.24 Sq. KM. area of Hoskote LPA was withdrawn and included in STRR LAP. New area of Hoskote LPA is 475.48 Sq.Km. total number of villages are: 249+16=265.
2.	Base Map Preparation was undertaken by BMRDA by entrusting the work to pixel company and the same was supplied to all Planning Authorities coming under BMRDA jurisdiction.
3.	**Constitution of Planning Authority.** I. Planning Authority was constituted under section 4(c) of KTCP Act, 1961 vide **G.O. No. UDD 31 Bem Ru Pra 2003, dated: 19-07-2006.** II. Non official Chairman was nominated for Hoskote Planning Authority vide **G.O. No. UDD 66: Bem Ru Pra 2015, dated: 28-02-2015.**
4.	**Interim Master Plan (IMP)** **I.** Imp was prepared by BMRDA under section 13-A of KTCP Act, 1961 and provisionally approved by Government vide **G.O. No. UDD 173: BMR 2006, dated: 28-04-2007.**

	II. IMP was finally approved by Government vide **G.O. No. UDD 173: BMR 2006, dated : 28-05-2009**
5.	**Delegation of Powers** The Powers have been delegated to BMRDA under section 9(2) of KTCP Act, 1961 to prepare Master Plan for LPA of Hoskote Including the other Planning authorities namely Anekal, Nelamangala, Magadi and kanakapura vide Governmemnt letter No. **UDD 53: BMR 2013, Bangalore dated: 04-03-2013**
6.	**Master Plan (Provisional)** a) Master Plan (provisional) was prepared by BMRDA and Government vide **G.O. No. UDD 152: BMR 2013 Bangalore, dated 16-09-2013** approved Master Plan (provisional) under section 13(1) of KTCP Act, 1961. b) Comments were called by the public within a period of 60 days vide letter No. BMRDA/ ADTP-2/ M.P/ HPA/ 04/ 2012-13, dated 03-10-2013 published in the **Official gazette dated: 09-10-2013.** c) An officers committee (10-members) was constituted by the Government vide order No. **UDD 27: BMR 2014, Bangalore dated: 05-03-2014** to scrutinise comments received by the public in respect of Anekal, Hoskote, Nelamangala, Magadi & Kanakapura Planning Authorities. d) An Officers committee conducted 10 meetings vide 20-03-2014, 27-03-2014, 10-04-2014, 22-05-2014, 05-06-2014, 07-07-2014, 13-08-2014, 18-08-2014, 22-08-2014 and 26-08-2014 but unable take decisions as per records. e) Vide letter No. BMRDA/staff/31/2015-16, dated: 26-06-2015, it is directed the Member secretary of Hoskote Planning Authority to place the comments received by the public once again before the committee meeting in future days. f) Based on the proposals of BMRDA, the Government directed the Hoskote Planning Authority to scrutinise the comments received by the public at

Authority level and submit the Master Plan for final approval to the Government through BMRDA vide G.O No. **UDD 152: BMR 2013, Bangalore dated: 12-01-2016.**

g) In the Honorable High Court of Karnataka vide W.P. No. 4188/2016 (LB RES) one Sri V. Vijay kumar (Authorized Agent cum SPA holder) represented on behalf of 02 petitioners filed a case and challenged the legality of Government order issued **vide G.O. No. UDD 152: BMR 2013, Bangalore dated : 12-01-2016** and the Honorable High court of Karnataka admitted the W.P and passed an **INTERIM ORDER on 28th day of January 2016** to stay the Government order dated : 12-01-2016 for a period of three months from the date of order.

h) The stay order granted on 28-01-2016 was modified on 14-07-2016 as under: **"The Interim Order is modified and the respondents action will remain subject to the decision of this court in the present writ petitions" (W.P.4188/2016 (LB-RES).**

i) Sri Ramanjini was nominated as Chairman of Hoskote Planning Authority for a period of 18 months vide notification No. NAE 66 BMR 2016, Bangalore Date: 28-02-2015. Three (03) meetings were conducted on 06-08-2016, 19-08-2016 and on 26-08-2016 to scrutinise the suggestions / comments received by the publics in response to notification dated: 09-10-2013. The term of Chairman was ended on 27-08-2016.

j) Vide Govt. notification No. UDD 152 BMR 2016, Bangalore dated: 03-09-2016, the commissioner of BMRDA was nominated as Chairman of Hoskote Planning Authority till the Govt. nominates the new non official chairman.

k) In the BMRDA meeting held on 7-10-2016 chaired by Hon. Minister for Bangalore Development and Town Planning, the decision was taken to scrutinize the comments of publics received in response to provisional approval of Master Plan only after the Govt. nominate the full time Chariman to the Hoskote Planning Authority. This was communicated to HPA vide BMRDA letter No. BMRDA/TP/Meeting/30/2015-16 dated: 24-11-2016.

l) Sri Krishna Reddy was nominated as chairman of Hoskote Planning Authority vide notification No. NRE 192 BMR 2016, Bangalore, dated: 08-12-2016. Three (03) more meetings were conducted on 21-01-2017, 28-01-2017 and 09-02-2017 to scrutinize the suggestions / comments received by the publics in response to notification dated: 09-10-2013.

m) As per the direction of BMRDA, vide letter No. dated.25.04.2017 the road network in between Conurbation boundary and local planning area boundary was worked out and included in the Master Plan (Final) to be submitted to Govt. accordingly it was intimated to BMRDA vide HPA letter dated: 4-05-2017

n) As per the decision of 69th committee meeting held on 26.05.2017 vide subject No.11, the HPA wrote letter to the local body (CMC, Hoskote) on 06.06.2017 to give comments on the Master plan of Hoskote pertaining to CMC area. The time limit of 45 days was ended on 20.07.2017 and we are not received any comments/suggestions by the CMC, hence the decision was taken in the 70th committee meeting held on 22.07.2017 to assume that there were no comments of local body on the Master Plan prepared by HPA and decided to submit the same to Government.

o) The work of finalizing the Master Plan of Hoskote Planning Authority by incorporating the decisions taken in the meetings, Report Corrections, Zonal Regulations, Finalisation of resolutions, Printing of Maps / reports are in final stage and draft set has been presented to Authority members in the 70th meeting of Planning Authority held on 22-07-2017.

ANNEXURE-7

Preparation of Master Plan

For Nandagudi Township

(Dates of events)

Sl.No.	Particulars
1)	**Nandagudi Township**

As per **G.O. No. UDD 97: BMR 2006 Bangalore, dated: 18-10-2006**, the area of Nandagudi Township is

Private land (Acres)	Government land (Acres)	Total (Acres)
13762	4745	18507

Total No. of villages : 36

(Nandagudi Hobli: 29, Sulibele hobli: 07)

Sl No	Village Name	Hobli
1	Agraharavaddahalli	Nandagudi
2	Banahalli	Nandagudi
3	Beerahalli	Nandagudi
4	Bisanahalli	Nandagudi
5	Chikkondahalli	Nandagudi
6	Chokkasandra	Nandagudi
7	D.Settihalli	Nandagudi
8	Geddalahallipura	Nandagudi
9	Giddanahalli	Nandagudi
10	Gullenahalli	Nandagudi
11	Hindiganala	Nandagudi
12	Hosavenkatapura	Nandagudi
13	Ittasandra	Nandagudi
14	K_Sathyawara	Nandagudi
15	Karapanahalli	Nandagudi
16	Kondrahalli	Nandagudi
17	Medur	Nandagudi
18	Mothakadahalli	Nandagudi
19	Mudenahalli	Nandagudi

	20	Mumynahosahalli	Nandagudi
	21	Nandagudi	Nandagudi
	22	Nelavagilu	Nandagudi
	23	Oblahalli	Nandagudi
	24	Ramagovindapura	Nandagudi
	25	Sarakanur	Nandagudi
	26	Sarakarivaddahalli	Nandagudi
	27	Shivanapura	Nandagudi
	28	Siddanahalli	Nandagudi
	29	Tharabahalli	Nandagudi
	30	Bhuvanahalli	Sulibele
	31	Cheemasandra	Sulibele
	32	Dimbahalli	Sulibele
	33	Srinivasapura	Sulibele
	34	Thammarayasandraagrahara	Sulibele
	35	Hosadimbahalli	Sulibele
	36	Bavapura	Sulibele
2)	In the Government Order No. UDD 25 BMR 2016, Bangalore dated: 16.05.2016 the government approval was given to prepare comprehensive land use Map and Road Circulation Map for the Nandagudi Township area and to include it in the Master Plan Prepared for the Local Planning Area and to take approval separately for the area under Section 13(b) of KTCP Act, 1961 and then to send the proposal for cancellation of approval given Vide Government Order No: UDD/97/BMR/2016, dated: 18.10.2006.		
3)	The subject was placed before the 66th Authority Meeting vide Subject No.10 for declaration of intention to prepare Master Plan for Nandagudi Township Area under Section 10 of KTCP Act, 1961. Accordingly it was published in Prajavani and Udayavani daily newspaper on 03-02-2017 and also it was published in Karnataka gazette dated: 23.02.2017 for calling suggestions from Public for a period of two months from the date of notification.		
4)	In the 70th Authority meeting held on 22-07-2017 the subject of preparation of master Plan for Nandagudi Township was placed vide sub. No.2 of part-II of agenda. Decision was taken to entrust the work of preparation of Master Plan for Nandagudi Township to infrastructure development corporation (Karnataka)Ltd (iDeck) at a cost of Rs.36,00,000 (Thirty Six lakhs) under 4G exemption. Accordingly the proposal was sent to Govt. seeking administrative approval through BMRDA.		

ANNEXURE-8

CHANGES MADE FROM PROVIONAL MASTER PLAN TO FINAL MASTER PLAN

1. Cartographical errors/commitments of the Authority

GIS code	Village	Hobli	Landuse From	Landuse To	Survey Number	Area Extent in Acres -Guntas	Map Reference
AC-1	Bendiganahalli	Sulibele	Agriculture	Commercial	17,42	12.10	SU-1
AC-2	Chikkanallurahalli, Doddanallurahalli	Hoskote	Agriculture	Residential	6,7,8	10.10	HS-1
AC-3	Bommenahalli	Bidarahalli	Industrial	Residential	120,158,159	11.70	BE-1
AC-4	Dandupalya	HOSKOTE	Transportation	Commercial	88	1.00	HS-2
PS1	Mugabala,Chinnandahalli	Jadigenahalli	Agriculture	Public & Semi Public	8,9,10,17,193&194	20.37	JD-1
PS2	Yelachahalli & Chinnandahalli	Jadigenahalli	Agriculture	Public & Semi Public	63,64,74,73 etc..,	53.07	JD-1
F-1	Bagalur	Sulibele	Residential	Forest	30	67.0	SU-2
F-2	Muthakadahalli	Sulibele	Industrial	Forest	18	110.0	SU-2
F-3	Chokkahalli	Hoskote	Industrial	Forest	84	23.50	HS-1

2. Cadastral Changes

GIS code	Village	Hobli	Landuse From	Landuse To	Survey Number	Map Reference
T1	Bylahalli	Anugondanahalli	Residential	Tank (waterbody)	151	AN-1
T14	Gundur	Bidarahalli	Commercial	Tank (waterbody)	92	BE-1
T15	Chikkasandra	Bidarahalli	Commercial	Tank (waterbody)	14 (P)	BE-1
T16	Hancharahalli	Bidarahalli	Residential	Tank (waterbody)	4	BE-1
T20	Sringarapura	Bidarahalli	Unclassified	Tank (waterbody)	37,21	BE-1
T53	Chikkasandra	Bidarahalli	Commercial	Tank (waterbody)	18	BE-1
T62	Mandur	Bidarahalli	Residential	Tank (waterbody)	123	BE-1
T63	Mandur	Bidarahalli	Industrial	Tank (waterbody)	131	BE-1
T13	Kolathur	Hoskote	Residential	Tank (waterbody)	1 (P)	HS-2
T17	Doddahullur	Hoskote	Residential	Tank (waterbody)	84 (P)	HS-1
T18	Doddahullur	Hoskote	Residential	Tank (waterbody)	84 (P)	HS-1
T19	Alappanahalli	Hoskote	Residential	Tank (waterbody)	99	HS-1
T22	Pillagumpe	Hoskote	Residential	Tank (waterbody)	35 (P)	HS-1
T23	Chokkahalli	Hoskote	Industrial	Tank (waterbody)	45	HS-1
T24	Cholappanahalli	Hoskote	Residential	Tank (waterbody)	70	HS-1
T25	Chokkahalli	Hoskote	Industrial	Tank (waterbody)	86 (P)	HS-1
T26	Chokkahalli	Hoskote	Industrial	Tank (waterbody)	81 (P)	HS-1
T27	Malimakanapura	Hoskote	Residential	Tank (waterbody)	37 (P)	HS-1
T28	Malimakanapura	Hoskote	Residential	Tank (waterbody)	37 (P)	HS-1
T57	Sompura	Hoskote	Residential	Tank (waterbody)	26	HS-1
T21	Chokkahalli	Hoskote	Residential	Tank (waterbody)	18	HS-1
T67	Hoskote	Hoskote	Residential	Tank (waterbody)	218 old (190new)	HS-2
T10	Vagata	Jadagenahalli	Industrial	Tank (waterbody)	107 (P)	JD-2
T11	Vagata	Jadagenahalli	Industrial	Tank (waterbody)	107 (P)	JD-2
T12	Vagata	Jadagenahalli	Industrial	Tank (waterbody)	107 (P)	JD-2

GIS code	Village	Hobli	Landuse From	Landuse To	Survey Number	Map Reference
T56	Nidagatta	Jadagenahalli	Agriculture	Tank (waterbody)	18	JD-1
T58	Haralur	Jadagenahalli	Agriculture	Tank (waterbody)	9 (P)	JD-1
T59	Jinnagara	Jadagenahalli	Agriculture	Tank (waterbody)	25	JD-2
T60	Kanekallu	Jadagenahalli	Industrial	Tank (waterbody)	111	JD-2
T66	Khajihosahalli	Jadagenahalli	Residential	Tank (waterbody)	1	JD-2
T61	Chikkathimmanagollahalli	Nandagudi	Agriculture	Tank (waterbody)	88	NG-2
T29	Begur	Sulibele	Industrial	Tank (waterbody)	141 (P)	SU-2
T30	Bhemakkanahalli	Sulibele	Industrial	Tank (waterbody)	73 (P)	SU-2
T31	Kamblipura	Sulibele	Industrial	Tank (waterbody)	39	SU-2
T32	Bhemakkanahalli	Sulibele	Industrial	Tank (waterbody)	126 (P)	SU-2
T33	Bhemakkanahalli	Sulibele	Industrial	Tank (waterbody)	117 (P)/123 (P)	SU-2
T34	Begur	Sulibele	Industrial	Tank (waterbody)	28	SU-2
T35	Begur	Sulibele	Industrial	Tank (waterbody)	30	SU-2
T36	Gundrahalli	Sulibele	Residential	Tank (waterbody)	17 (P)	SU-2
T37	Gundrahalli	Sulibele	Residential	Tank (waterbody)	18 (P)	SU-2
T38	Muthakadahalli	Sulibele	Industrial	Tank (waterbody)	20 (P)	SU-2
T39	Gundrahalli	Sulibele	Residential	Tank (waterbody)	5	SU-2
T40	Bagalur	Sulibele	Residential	Tank (waterbody)	33	SU-2
T41	Bagalur	Sulibele	Residential	Tank (waterbody)	30 (P)	SU-2
T42	Chikkakoliga	Sulibele	Residential	Tank (waterbody)	2	SU-2
T43	Doddakoliga	Sulibele	Industrial	Tank (waterbody)	66	SU-2
T44	Doddakoliga	Sulibele	Industrial	Tank (waterbody)	83 (P)	SU-2
T45	Gullahalli	Sulibele	Industrial	Tank (waterbody)	14 (P)	SU-1
T46	Chikkakoliga	Sulibele	Industrial	Tank (waterbody)	41 (P)	SU-2
T47	Doddakoliga	Sulibele	Industrial	Tank (waterbody)	7 (P)	SU-2
T48	Chikkakoliga	Sulibele	Industrial	Tank (waterbody)	23 (P)	SU-2

GIS code	Village	Hobli	Landuse From	Landuse To	Survey Number	Map Reference
T49	Gullahalli	Sulibele	Industrial	Tank (waterbody)	73 (P)	SU-1
T50	Nagarenahalli	Sulibele	Industrial	Tank (waterbody)	42	SU-2
T51	Gullahalli	Sulibele	Industrial	Tank (waterbody)	29 (P)	SU-1
T52	Gullahalli	Sulibele	Industrial	Tank (waterbody)	1 (P)	SU-1
T54	Kamblipura	Sulibele	Industrial	Tank (waterbody)	9	SU-2
T55	Muthakadahalli	Sulibele	Industrial	Tank (waterbody)	3	SU-2
T65	K_Sathyawara	Sulibele	Residential	Tank (waterbody)	8	NG-2
R2	Ankonahalli	Sulibele	Agriculture	River (Waterbody)		SU-2
R1	Nallaganahalli	Sulibele	Agriculture	River (Waterbody)		SU-2

3. KIADB Proposals

GIS code	Village	Hobli	Survey Number	Area Extent in Acres -Guntas	Map Reference
K1	Chikkahullur	Hoskote	25	176.4	HS-1
K2	Banamakanahalli	Nandagudi	2,3,4,5,6,7,8,9,16,17,18,19,20,21,22,40,41,42,43,44,45,46,47,48,49	108.2	NG-2
K4	Lingapura	Nandagudi	4,5,6,7,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,35,36,37,38,39,41,42,43,44,45,46,49,50,51,52,53,54,57,58,59,60,61,62,63,64,65,66,67,68,69	191.2	NG-2
K5	Thavarekere	Nandagudi	4,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,212,213,214,215,216,217,219,220,221,222	337.1	NG-2
K3	Goravihalli	Nandagudi	1,2,3,4,5,6,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,2728,29,30,31,32,33,34,35,36,37,38,39,40,41,42	0.0	NG-2

4. Change of Landuse

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
1	Kotur	Anugondanahalli	HPA/CLU/147/2007-08	Industrial	Residential	65/1	00-30	AN-1
2	Kotur	Anugondanahalli	HPA/CLU/148/2007-08	Industrial	Residential	66	02-10	AN-1
69	Thimmadahalli	Anugondanahalli	HPA/CLU/400/2012-13	Industrial	Residential	8/2	02-13	AN-1
109	Thimmadahalli	Anugondanahalli	HPA/CLU/483/2012-13	Industrial	Residential	8/1	02-11	AN-1
130	Ajjagondahalli	Anugondanahalli	HPA/CLU/06/2013-14	Industrial	Residential	50/1	02-00	AN-1
8	Harohalli	Anugondanahalli	HPA/CLU/150/2009-10	Industrial	Residential	162	02-06	AN-1
66	Muthasandra	Anugondanahalli	HPA/CLU/03/2011-12	Agriculture	Residential	13/1, & Others	42-04	AN-1
27	Bommenahalli	Bidarahalli	HPA/CLU/69/2010-11	Industrial	Residential	93/1	01-01	BE-1
57	Mandur	Bidarahalli	HPA/CLU/241/2012-13	Industrial	Residential	194	07-23	BE-1
98	Mandur	Bidarahalli	HPA/CLU/443/2012-13	Commercial	Residential	146	01-30	BE-1
203	Gundur	Bidarahalli	HPA/CLU/364/2014-15	Commercial	Residential	93/P	01-20	BE-1
161	Kammasandra	Bidarahalli	HPA/CLU/94/2014-15	Commercial	Residential	67	03-20	BE-1
204	Gundur	Bidarahalli	HPA/CLU/365/2014-15	Commercial	Residential	91	02-15	BE-1
205	Gundur	Bidarahalli	HPA/CLU/08/2014-15	Commercial	Residential	93/P	00-15	BE-1
208	Gundur	Bidarahalli	HPA/CLU/10/2014-15	Commercial	Residential	62/1,63	05-34	BE-1
219	Mandur	Bidarahalli	HPA/CLU/394/2014-15, HPA/CLU/394/2014-15	Industrial	Residential	225	04-00	BE-1
220	Mandur	Bidarahalli	HPA/CLU/292/2014-15	Industrial	Residential	222	04-00	BE-1
221	Bommenahalli	Bidarahalli	HPA/CLU/32/2015-16	Industrial	Residential	169	03-39	BE-1
223	Bommenahalli	Bidarahalli	HPA/CLU/03/2015-16	Industria	Residential	145	09-38	BE-1

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
236	Huskur	Bidarahalli	HPA/CLU/21/2015-16	Commercial	Residential	45/2	03-00	BE-1
50	Mandur	Bidarahalli	HPA/CLU/216/2011-12	Industrial	Residential	186/1,186/2	14-31	BE-1
121	Gundur	Bidarahalli	HPA/CLU/01/2014-15	Industrial	Residential	62	01-01	BE-1
207	Chikkasandra	Bidarahalli	HPA/CLU/325/2014-15	Commercial	Residential	12/1,3,13/2A,2B	05-25	BE-1
3	Dandupalya	Hoskote	HPA/CLU/01/2008-09	Industrial	Residential	34/2	01-00	HS-2
9	Dandupalya	Hoskote	HPA/CLU/152/2009-10	Industrial	Residential	67	02-20	HS-2
10	Dandupalya	Hoskote	HPA/CLU/153/2009-10	Industrial	Residential	67	00-20	HS-2
16	Kannurahalli	Hoskote	HPA/CLU/26/2010-11	Industrial	Residential	148/2	02-05	HS-2
17	Kannurahalli	Hoskote	HPA/CLU/51/2010-11	Industrial	Residential	148/3	04-10	HS-2
18	Kannurahalli	Hoskote	HPA/CLU/52/2010-11	Industrial	Residential	148/1	00-30	HS-2
63	Dandupalya	Hoskote	HPA/CLU/288/2012-13	Commercial	Residential	68/1	01-30	HS-2
67	Sompura	Hoskote	HPA/CLU/333/2012-13	Commercial	Residential	15/1	00-36	HS-1
70	Dandupalya	Hoskote	HPA/CLU/329/2012-13	Commercial	Residential	153 Block-1, Block-2	02-13	HS-2
71	Dandupalya	Hoskote	HPA/CLU/326/2012-13	Commercial	Residential	155/2	01-05	HS-2
72	Dandupalya	Hoskote	HPA/CLU/327/2012-13	Commercial	Residential	155/1	00-28	HS-2
73	Dandupalya	Hoskote	HPA/CLU/324/2012-13	Commercial	Residential	155/4	01-00	HS-2
93	Dandupalya	Hoskote	HPA/CLU/523/2012-13	Commercial	Residential	144	02-15	HS-2
95	Kannurahalli	Hoskote	HPA/CLU/515/2012-13	Industrial	Commercial	11/8	00-14	HS-2
96	Kannurahalli	Hoskote	HPA/CLU/518/2012-13	Industrial	Commercial	11/9	00-19	HS-2
99	Dandupalya	Hoskote	HPA/CLU/522/2012-13	Industrial	Commercial	34/1	02-28	HS-2
128	Kannurahalli	Hoskote	HPA/CLU/305/2013-14	Commercial	Residential	129/7	00-02 1/2	HS-2
129	Kannurahalli	Hoskote	HPA/CLU/307/2013-14	Commercial	Residential	129/1	00-07	HS-2
131	Kannurahalli	Hoskote	HPA/CLU/306/2013-14	Commercial	Residential	129/3	00-04 1/2	HS-2
132	Kannurahalli	Hoskote	HPA/CLU/304/2013-14	Commercial	Residential	129/6	00-04 1/2	HS-2

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
145	Chokkahalli	Hoskote	HPA/CLU/56/2013-14	Industrial	Residential	51/1	01-00	HS-1
146	Chokkahalli	Hoskote	HPA/CLU/47/2013-14	Industrial	Residential	52/1	01-00	HS-1
147	Chokkahalli	Hoskote	HPA/CLU/46/2013-14	Industrial	Residential	62/3	00-12	HS-1
148	Chokkahalli	Hoskote	HPA/CLU/57/2013-14	Industrial	Residential	62/1	04-15	HS-1
150	Chokkahalli	Hoskote	HPA/CLU/156/2013-14	Industrial	Residential	62/2,63/3, 63/4	00-29 1/4	HS-1
152	Dandupalya	Hoskote	HPA/CLU/161/2010-11	Industrial	commercial	129/2	00-25	HS-2
151	Chokkahalli	Hoskote	HPA/CLU/78/2014-15	Industrial	Residential	52/2,62/4	02-36 3/4	HS-1
156	Kolathur	Hoskote	HPA/CLU/06/2014-15	Commercial	Residential	159/1A2	00-05	HS-2
157	Kolathur	Hoskote	HPA/CLU/10/2014-15	Commercial	Residential	152/6	00-14	HS-2
158	Kolathur	Hoskote	HPA/CLU/09/2014-15	Commercial	Residential	152/1	00-14	HS-2
159	Kolathur	Hoskote	HPA/CLU/08/2014-15	Commercial	Residential	151	02-27 1/4	HS-2
160	Kolathur	Hoskote	HPA/CLU/07/2014-15	Commercial	Residential	152/5	01-02	HS-2
164	Cholappanahalli	Hoskote	HPA/CLU/03/2014-15	Commercial	Residential	86	01-27	HS-1
167	Dandupalya	Hoskote	HPA/CLU/182/2014-15	Industrial	Residential	122/3	00-19 1/2	HS-2
174	Kannurahalli	Hoskote	HPA/CLU/102/2014-15	Industrial	Residential	146/2	01-27	HS-2
180	Cholappanahalli	Hoskote	HPA/CLU/319/2014-15	Commercial	Residential	90/2	02-18	HS-1
186	Dasarathimmanahalli	Hoskote	HPA/CLU/294/2014-15	Industrial	Residential	8/3	02-23	HS-1
194	Kannurahalli	Hoskote	HPA/CLU/319/2013-14	Commercial	Residential	97/3	00-30	HS-2
195	Kannurahalli	Hoskote	HPA/CLU/320/2013-14	Commercial	Residential	97/4	00-30	HS-2
200	Kannurahalli	Hoskote	HPA/CLU/415/2014-15	Commercial	Residential	128/13	00-08	HS-2
201	Dasarathimmanahalli	Hoskote	HPA/CLU/433/2014-15	Industrial	Residential	20/2	02-20	HS-1
240	Hoskote	Hoskote	HPA/CLU/39/2015-16	Commercial	Residential	215/2	00-09 1/2	HS-2
239	Hoskote	Hoskote	HPA/CLU/38/2015-16	Commercial	Residential	215/3	00-08	HS-2
39	Kannurahalli	Hoskote	HPA/CLU/141/2011-12	Industrial	Commercial	11/1,11/7	03-25	HS-2

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
41	Dandupalya	Hoskote	HPA/CLU/161/2011-12	Industrial	Residential	129/2	42764	HS-2
15	Kannurahalli	Hoskote	HPA/CLU/03/2009-10	Industrial	Residential	168/1	02-00	HS-2
179	Kannurahalli	Hoskote	HPA/CLU/46/2014-15	Industrial	Residential	11/2	02-20	HS-2
176	Kolathur	Hoskote	HPA/CLU/89/2014-15	Industrial	Residential	217/1,2,3	04-15	HS-2
183	Hoskote	Hoskote	HPA/CLU/148/2014-15	Commercial	Residential	115/21	00-19	HS-2
184	Hoskote	Hoskote	HPA/CLU/147/2014-15	Commercial	Residential	115/20	00-19	HS-2
182	Hoskote	Hoskote	HPA/CLU/145/2014-15	Commercial	Residential	115/19	00-19	HS-2
181	Hoskote	Hoskote	HPA/CLU/148/2014-15	Commercial	Residential	115/18	00-19	HS-2
74	Dandupalya	Hoskote	HPA/CLU/332/2012-13	Commercial	Residential	155/3	03-23	HS-2
177	Hoskote	Hoskote	HPA/CLU/04/2014-15	Commercial	Residential	105	14-33	HS-2
28	Vagata	Jadigenahalli	HPA/CLU/61/2011-12	Industrial	Residential	154	05-11	JD-2
29	Vagata	Jadigenahalli	HPA/CLU/62/2011-12	Industrial	Residential	98	00-39	JD-2
30	Vagata	Jadigenahalli	HPA/CLU/63/2011-12	Industrial	Residential	100	03-32	JD-2
31	Vagata	Jadigenahalli	HPA/CLU/65/2011-12	Industrial	Residential	204	03-00	JD-2
32	Vagata	Jadigenahalli	HPA/CLU/66/2011-12	Industrial	Residential	153	05-08	JD-2
33	Vagata	Jadigenahalli	HPA/CLU/67/2011-12	Industrial	Residential	97/2	00-32	JD-2
34	Chandrapura	Jadigenahalli	HPA/CLU/70/2011-12	Industrial	Residential	2	04-05	JD-2
35	Kanekallu	Jadigenahalli	HPA/CLU/86/2011-12	Industrial	Commercial	15/4,17/1,18/2	04-12	JD-2
199	Kanekallu	Jadigenahalli	HPA/CLU/384/2014-15	Industrial	Commercial	128/22	05-14	JD-2
100	Kanekallu	Jadigenahalli	HPA/CLU/236/2012-13	Industrial	Residential	210	02-00	JD-2
76	Poojaramanahalli	Jadigenahalli	HPA/CLU/05/2011-12	Agriculture	Industrial	11,12,13,14,15	09-18	JD-1
7	Kamblipura	Sulibele	HPA/CLU/111/2009-10	Industrial	Residential	130/3	01-25	SU-2
25	Gullahalli	Sulibele	HPA/CLU/99/2010-11	Industrial	Residential	73/3	00-26	SU-1
26	Chikkakoliga	Sulibele	HPA/CLU/100/2010-11	Industrial	Residential	38/2	00-14	SU-2

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
24	Gullahalli	Sulibele	HPA/CLU/98/2010-11	Industrial	Residential	73/2	01-02	SU-1
42	Bhemakkanahalli	Sulibele	HPA/CLU/168/2011-12	Industrial	Commercial	122	01-20	SU-2
43	Bhemakkanahalli	Sulibele	HPA/CLU/169/2011-12	Industrial	Commercial	68/2	03-02	SU-2
44	Bhemakkanahalli	Sulibele	HPA/CLU/170/2011-12	Industrial	Commercial	117	01-00	SU-2
46	Bhemakkanahalli	Sulibele	HPA/CLU/172/2011-12	Industrial	Commercial	127	02-00	SU-2
47	Bhemakkanahalli	Sulibele	HPA/CLU/174/2011-12	Industrial	Commercial	123	01-00	SU-2
48	Bhemakkanahalli	Sulibele	HPA/CLU/175/2011-12	Industrial	Commercial	121	02-10	SU-2
49	Bhemakkanahalli	Sulibele	HPA/CLU/176/2011-12	Industrial	Commercial	119	01-20	SU-2
56	Bhemakkanahalli	Sulibele	HPA/CLU/232/2012-13	Industrial	Commercial	71/2	03-05	SU-2
60	Ekarajapura	Sulibele	HPA/CLU/105/2012-13	Industrial	Residential	37/2A	05-00	SU-2
64	Ekarajapura	Sulibele	HPA/CLU/235/2012-13	Industrial	Commercial	46/2	02-34	SU-2
91	Bhemakkanahalli	Sulibele	HPA/CLU/486/2012-13	Industrial	Residential	34/5	01-01	SU-2
92	Bhemakkanahalli	Sulibele	HPA/CLU/487/2012-13	Industrial	Residential	35/2	03-07	SU-2
101	Kamblipura	Sulibele	HPA/CLU/07/2009-10	Industrial	Residential	140/1, 140/2, 140/3, 141/1, 141/2, 142, 143 , 151 ,152 , 153/1 , 153/2 ,154/1,154/2 ,155/1 ,155/2 ,200,	26-30 1/2	SU-2
102	Ekarajapura	Sulibele	HPA/CLU/252/2012-13	Industrial	Residential	115/4	01-20	SU-2
103	Ekarajapura	Sulibele	HPA/CLU/251/2012-13	Industrial	Residential	115/5	01-20	SU-2
104	Ekarajapura	Sulibele	HPA/CLU/253/2012-13	Industrial	Residential	115/3	01-20	SU-2
105	Ekarajapura	Sulibele	HPA/CLU/250/2012-13	Industrial	Residential	115/6	01-20	SU-2
106	Ekarajapura	Sulibele	HPA/CLU/249/2012-13	Industrial	Residential	115/1	03-00	SU-2
107	Ekarajapura	Sulibele	HPA/CLU/254/2012-13	Industrial	Residential	115/2	00-30	SU-2
114	Ekarajapura	Sulibele	HPA/CLU/04/2012-13	Agriculture	Commercial	14, 16/2	11-03 1/4	SU-2

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
116	Ekarajapura	Sulibele	HPA/CLU/255/2013-14	Industrial	Residential	58/2	00-16	SU-2
117	Ekarajapura	Sulibele	HPA/CLU/254/2013-14	Industrial	Residential	56/1	02-03	SU-2
118	Ekarajapura	Sulibele	HPA/CLU/257/2013-14	Industrial	Residential	57	00-25	SU-2
149	Kamblipura	Sulibele	HPA/CLU/337/2012-13	Industrial	Residential	138/2,133/1,133/5,133/7 ,112/4	03-02	SU-2
153	Ekarajapura	Sulibele	HPA/CLU/236/2013-14	Industrial	Residential	39/2	02-26	SU-2
154	Ekarajapura	Sulibele	HPA/CLU/233/2013-14	Industrial	Residential	116/1	02.29	SU-2
155	Ekarajapura	Sulibele	HPA/CLU/239/2013-14	Industrial	Residential	116/8	01-00	SU-2
162	Ekarajapura	Sulibele	HPA/CLU/16/2013-14	Industrial	Commercial	12,13,17,18	18-03	SU-2
165	Ekarajapura	Sulibele	HPA/CLU/02/2014-15	Industrial	Residential	25/1,25/3,26/2,26/3,27/ 2,28/3,30/2,31/1,31/3,31 /4,31/5,31/6	48-06	SU-2
166	Ekarajapura	Sulibele	HPA/CLU/330/2013-14	Industrial	Commercial	19/2	02-22	SU-2
170	Bhemakkanahalli	Sulibele	HPA/CLU/111/2014-15	Industrial	Commercial	100/4	01-00	SU-2
171	Bhemakkanahalli	Sulibele	HPA/CLU/110/2014-15	Industrial	Commercial	100/2	01-00	SU-2
172	Bhemakkanahalli	Sulibele	HPA/CLU/112/2014-15	Industrial	Commercial	100/3	01-00	SU-2
191	Ekarajapura	Sulibele	HPA/CLU/308/2014-15	Industrial	Residential	36/1	01-15 3/4	SU-2
197	Kamblipura	Sulibele	HPA/CLU/307/2014-15	Industrial	Residential	173	05-00	SU-2
198	Kamblipura	Sulibele	HPA/CLU/306/2014-15	Industrial	Residential	157	03-18	SU-2
213	Ekarajapura	Sulibele	HPA/CLU/368/2014-15	Industrial	Commercial	34/4	06-00	SU-2
226	Muthakadahalli & Doddakoliga	Sulibele	HPA/CLU/11/2015-16	Industrial	Residential	54,47/4,47/5, 47/4,49/4, 50/1, 50/2, 52/3, 52/4, 52/5,	13-14 1/2	SU-2
234	Ekarajapura	Sulibele	HPA/CLU/19/2015-16	Industrial	Residential	96/1,95/1,95/3	05-00 1/4	SU-2
235	Kamblipura	Sulibele	HPA/CLU/22/2015-16	Industrial	Commercial	171/2,158/2,172/2	07-21	SU-2

GIS Code	Village	Hobli	CLU Code	Landuse From	Landuse To	Survey number	Area Extent in Acres - Guntas	Map Reference
237	Bhemakkanahalli	Sulibele	HPA/CLU/10/2015-16	Industrial	Commercial	104,96/1,96/2,102/2C2	11-34	SU-2
241	Gullahalli	Sulibele	HPA/CLU/41/2015-16	Industrial	Residential	14/B2,114,115,116,117,118,119,120,122,123,121,131,143,144,145/1,151	180-31 1/4	SU-1
21	Chikkakoliga	Sulibele	HPA/CLU/84/2010-11	Industrial	Residential	26/2	00-27	SU-2
22	Chikkakoliga	Sulibele	HPA/CLU/86/2010-11	Industrial	Residential	38/1	00-14	SU-2
23	Chikkakoliga	Sulibele	HPA/CLU/87/2010-11	Industrial	Residential	38/3	00-12	SU-2
45	Bhemakkanahalli	Sulibele	HPA/CLU/171/2011-12	Industrial	Commercial	68/1	02-14	SU-2
61	Ekarajapura	Sulibele	HPA/CLU/107/2012-13	Industrial	Residential	37/B2,116/3,36/1	05-00 1/4	SU-2
55	Bhemakkanahalli	Sulibele	HPA/CLU/39/2011-12	Industrial	Commercial	43/1	00-18	SU-2
58	Ekarajapura	Sulibele	HPA/CLU/104/2012-13	Industrial	Residential	116/1	01-00	SU-2
59	Ekarajapura	Sulibele	HPA/CLU/106/2012-13	Industrial	Residential	116/4, 116/5	02-20	SU-2

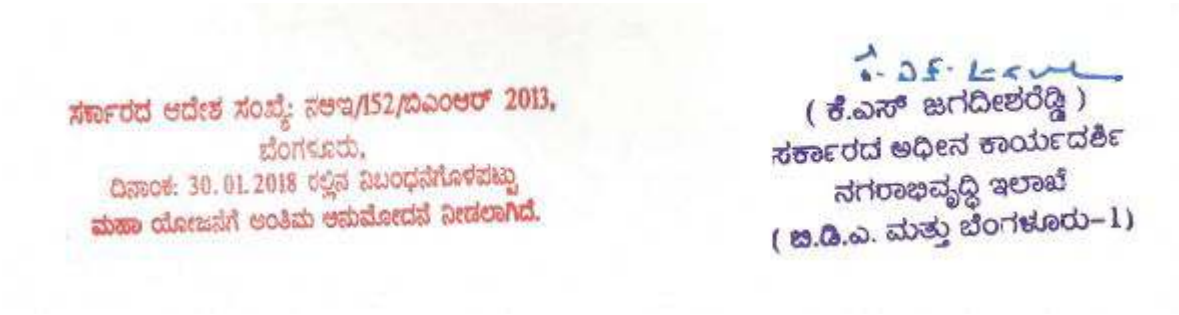
5. Approved layout

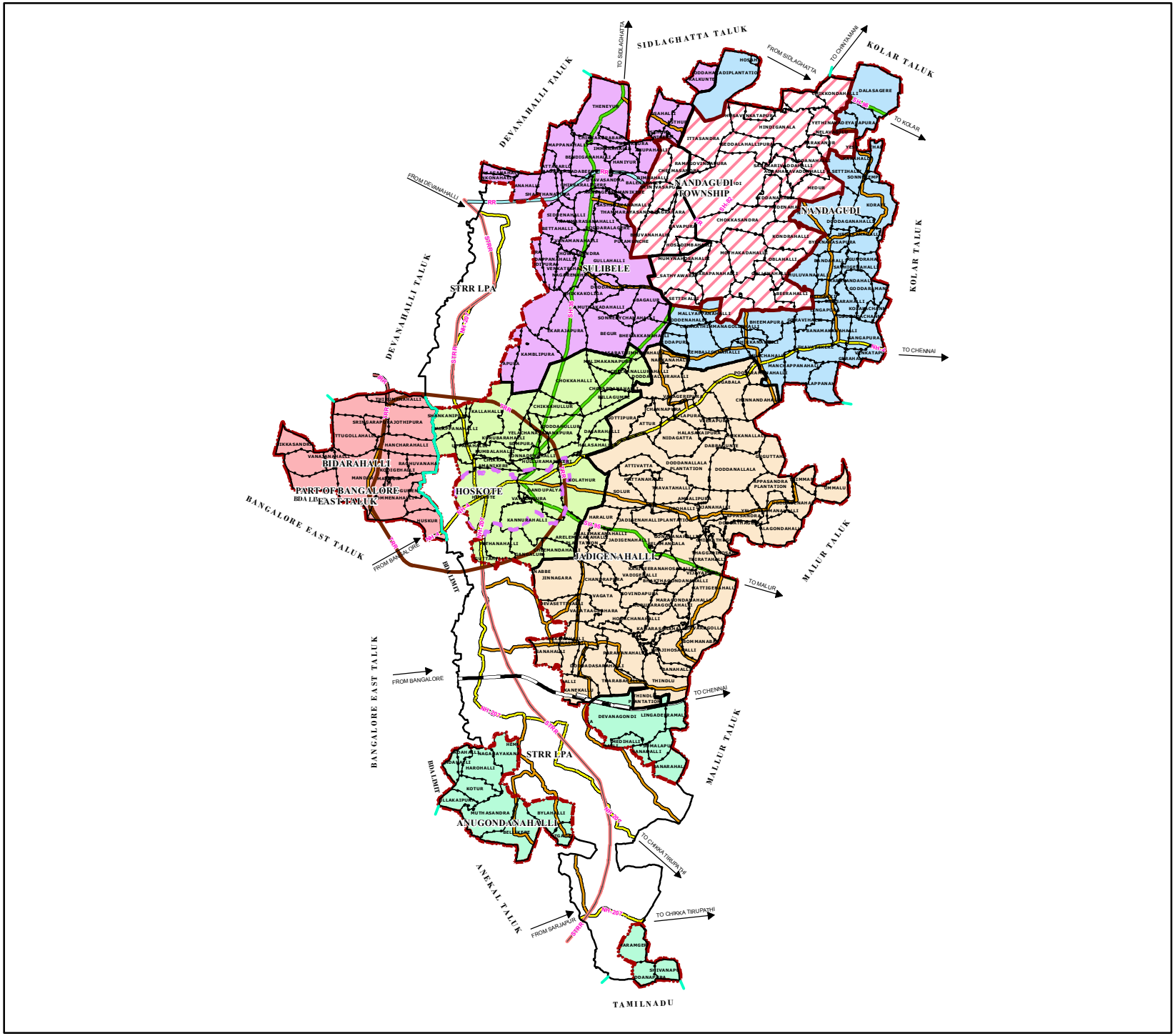
GIS Code	Layout No	Village	Hobli	Survey Number	Area Extent in Acres -Guntas	Map Reference
AL20	44-2012-13	Muthsandra	Anugondanahalli	13,14,15,16,19,20,21,22,23,24,26,27,28,29,30, 31,33,34,35,36,37,38,39,40,235	49-0.5	AN-1
AL28	LAO/19/2011-12	Kotur	Anugondanahalli	61/1	3-04	AN-1
AL27	LAO/02/2013-14	Harohalli	Anugondanahalli	155	1-36	AN-1
AL22	19-2012-13	Chikkasandra	Bidarahalli	21/1,41/1.2.3,42/2.3,43/2.3,44/1.2	11-10	BE-1
AL24	36-2012-13	Kattugollahalli	Bidarahalli	46/3,51/3P,51/4P,51/5,51/6P,51/7,58/P	12-28	BE-1
AL23	31-2012-13	Mandur	Bidraahalli	8/1,2. 9/1,2,3,4,5	09-37	BE-1
AL17	32-2003-04	Kolthur	Hoskote	120,121/1	05-30	HS-2
AL11	18-2012-13	Sompura	Hoskote	11/2,/3,/5, 12/1,/2,/3, 13/1,/2,14/(P)	09-38	HS-1
AL18	33-2012-13	Kolathur	Hoskote	215/4,5,6(P), 238/1,2,3, 240, 263	09-37.75	HS-2
AL3	11-2013-14	Dandupalya	Hoskote	68/1,92,93/1,93/5,95/3,94/2(P)	09-39	HS-2
AL6	15-2012-13	Hoskote	Hoskote	197/3,197/6,198/1,198/2,198/3,198/4,198/5,199/,201,203/1A1,203/1A6,203/1A7,203/1A8,203/1A10,203/1A11,203/1A12,203/1A13,& 97/5	10-36.75	HS-2
AL7	16-2012-13	Dasarathimmanahalli & Chikkanallurahalli	Hoskote	3,5,6, & 50(P)	09-38	HS-1
AL1	08-2014-15	Hoskote	Hoskote	226/3	00-36	HS-2
AL4	12-2007-08	Hoskote	Hoskote	167/2	01-31	HS-2
AL8	17-2011-12	Dandupalya	Hoskote	142,143,145	11-23.5	HS-2
AL2	11-2011-12	Hoskote	Hoskote	225/3,226/4	00-36	HS-2
AL9	17-2012-13	Shankanipura & Alappanahalli	Hoskote	19 & 7/1,7/2	03-18.5	HS-1
AL12	24-2007-08	Dandupalya	Hoskote	177,180,181,181/1,`181/2,182/1	10-16	HS-2
AL5	12-2010-11	Dandupalya &	Hoskote	70/2,70/3,70/4,125/18,19,127/5,149/3,151/2,	09-39.5	HS-2

GIS Code	Layout No	Village	Hobli	Survey Number	Area Extent in Acres -Guntas	Map Reference
		Kannurahalli		3D		
AL30	LAO/11/2008-09	Dandupalya	Hoskote	160/2 etc..,	14-10	HS-2
AL31	LAO/34/2013-14	Doddahullur	Hoskote	74,76,84	9-38.75	HS-1
AL33	LAO/15/2011-12	Kannurahalli	Hoskote	124 etc..,	9-36	HS-2
AL34	LAO/15/2011-12	Kannurahalli	Hoskote	149/1	9-36	HS-2
AL35	LAO/29/2015-16	Kannurahalli	Hoskote	96,118,119	13-39.5	HS-2
AL36	LAO/01/2007-8	Mallimakanapura	Hoskote	59,60,61,62& 64	15-38.5	HS-1
AL37	LAO/19/2008-9	Mallimakanapura	Hoskote	67,68,&71	11-27	HS-1
AL39	LAO/04/2012-13	Varadapura & Kannurahalli	Hoskote	1&2, 125&127	9-36.5	HS-2
AL29	10/2002-2003	Chimmundahalli, Jinnagara	Hoskote & Jadigenahalli	47/2,77,132,145	10-38	JD-2
AL38	LAO/047/1999-2000	Vagata	Jadigenahalli	158,159,161,162&166	10-7	JD-2
AL25	6-2012-13	Mallimakanapura	Hoskote	57/2,59/2,3,4,5,6,7 64/1	13-13	HS-1
AL26	21-2012-13	Hoskote & Kannurakalli	Hoskote	138/2,3, 148/1 149/1a,1b1 & 149/2	10-15	HS-2
AL15	30-2013-14	Ekarajapura	Sulibele	29/3,30/1B,30/1C1,30/1C2,30/1C3	17-33	SU-2
AL19	34-2012-13	Gullahalli & Doddakuliga	Sulibele	15/4,15/5,16/2,16/3,42/3	10-14.5	SU-1
AL13	27-2013-14	Bagalur	Sulibele	31/12,/13,/14,/4,/15,/16, 36,37/1,/2,38/1, old-38/2,38/3,39/2,39/1,40/2,40/3,40/5,40/4	23-23.5	SU-2
AL14	28-2012-13	Kambalipura & Yekarajapura	Sulibele	125/1,2,3,4 & 34/3,41,42,43/1,2,3, 44(p),45(p),46/1,47/1,2,48(p),49/1,2,51	76-11	SU-2
AL10	18-2011-12	Bagalur	Sulibele	31/10-1,10-2,10-3	13-13	SU-2
AL32	LAO/08/2011-12	Ekarajapura	Sulibele	32	25-0	SU-2

6. Development Plan

GIS Code	Development plan No	Village	Hobli	Survey Number	Area Extent in Acres -Guntas	Map Reference
DP 6	LAO/09/2013-14	Gullakaipura	Anugondanahalli	51	2-8	AN-1
DP 1	LAO/27/2015-16	Bommenahalli	Bidarahalli	145 & 146	9-38	BE-1
DP 10	LAO/06/2009-10	Kammasandra	Bidarahalli	22,23 & 24	10-8	BE-1
DP 2	LAO/12/2014-15	Bommenahalli	Bidarahalli	153	3-32	BE-1
DP 3	LAO/35/2013-14	Bommenahalli	Bidarahalli	73, 74 & 81	19-27.75	BE-1
DP 7	LAO/14-2012-13	Huskur	Bidarahalli	51	9-38	BE-1
DP 8	LAO/09/2011-12	Huskur	Bidarahalli	68	5-31	BE-1
DP 11	LAO/10/2011-12	Mandur	Bidarahalli	126	13-31	BE-1
DP 4	LAO/33/2007-08	Dandupalya	Hoskote	90	2-37	HS-2
DP 5	LAO/01/2015-16	Dasarathimmanahalli	Hoskote	8	2-23	HS-1
DP 12	LAO/02/2015-16	Shankanipura	Hoskote	26,27,29,30 & 31	7-16.5	HS-1
DP 9	LAO/17/2015-16	Kamblipura	Sulibele	157 & 173	8-18	SU-2

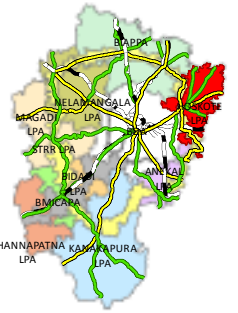




MASTER PLAN -2031
FOR
HOSKOTE LOCAL PLANNING AREA

KEY MAP

BMR



Not To Scale

INDEX

- L.P.A. Boundary
- Village Boundary
- Nandagudi Township Boundary
- CMC Boundary
- Taluk Boundary
- National Highway
- State Highway
- Major District Road
- Railway
- STRR
- IRR
- TRR
- RR

Hobli

- ANUGONDANAHALLI — HOSKOTE TALUK
- SULIBELE — HOSKOTE TALUK
- HOSKOTE — HOSKOTE TALUK
- JADIGENAHALLI — HOSKOTE TALUK
- NANDAGUDI — HOSKOTE TALUK
- BIDARAHALLI — BANGALORE EAST TALUK

N W E S

Government of Karnataka
BANGALORE METROPOLITAN REGION DEVELOPMENT AUTHORITY

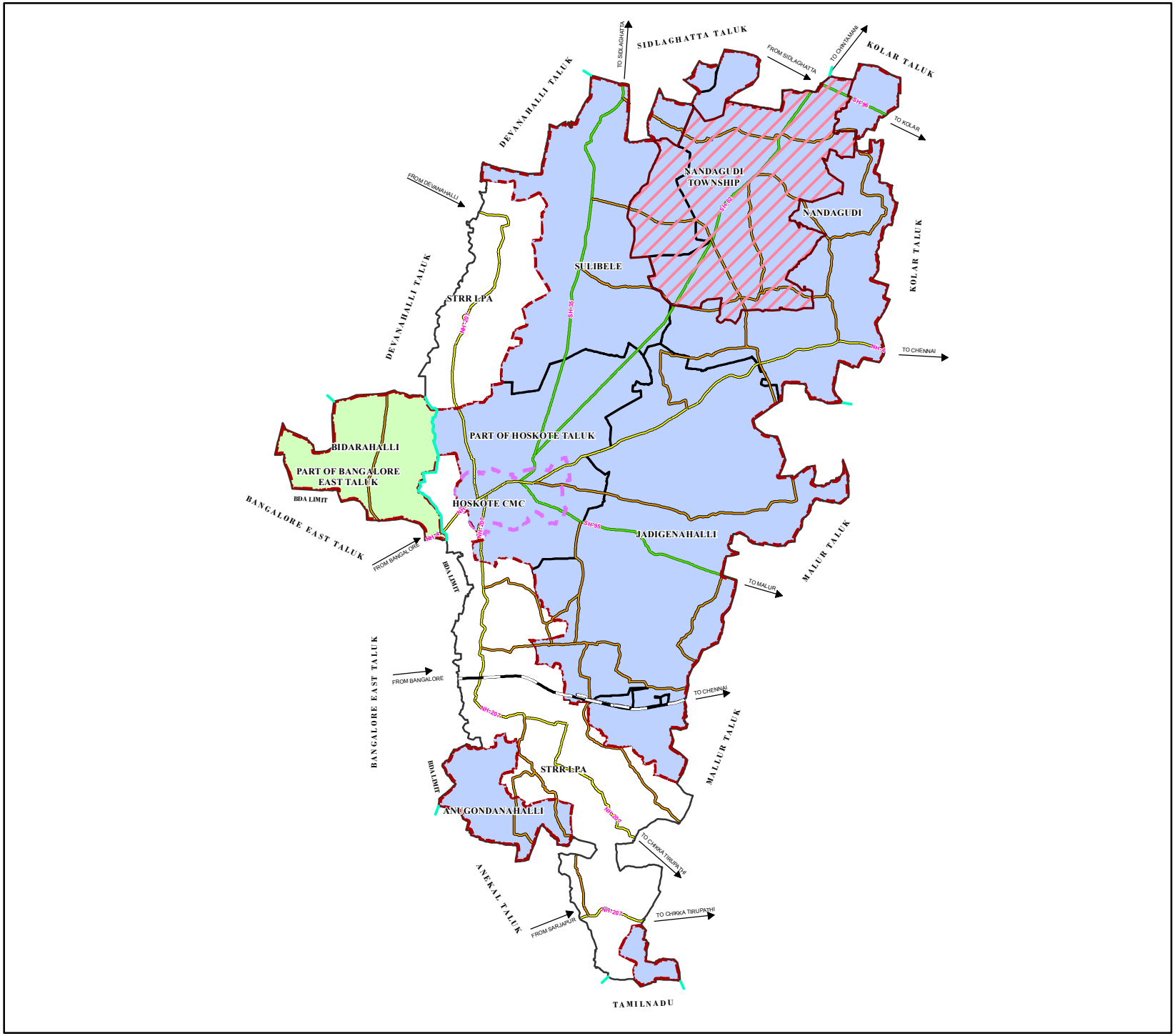
MEMBER SECRETARY
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HOSKOTE

CHAIRMAN
HOSKOTE PLANNING AUTHORITY
HOSKOTE

Map Title: ***ADMINISTRATIVE BOUNDARIES***

Scale : 1:250,000

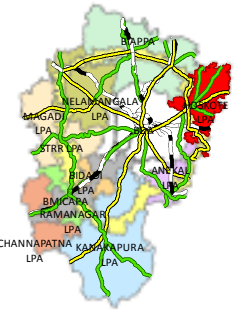
Map No: 04



MASTER PLAN -2031
FOR
HOSKOTE LOCAL PLANNING AREA

KEY MAP

BMR



Not To Scale

INDEX

- L.P.A. Boundary
- Hobli Boundary
- Nandagudi Township Boundary
- CMC Boundary
- Taluk Boundary
- National Highway
- State Highway
- Major District Road
- Railway

LPA Details	Area in Sq Km
Hoskote Local Planning Area Including Nandagudi Township	471.10
Nandagudi Township Area	74.89
Area Consider For Master Plan - 2031	399.21

Index	Taluk	No of Villages
	Bangalore East (Part)	16
	Hoskote (Part)	213
	Nandagudi Township Area	36
Total Villages		265

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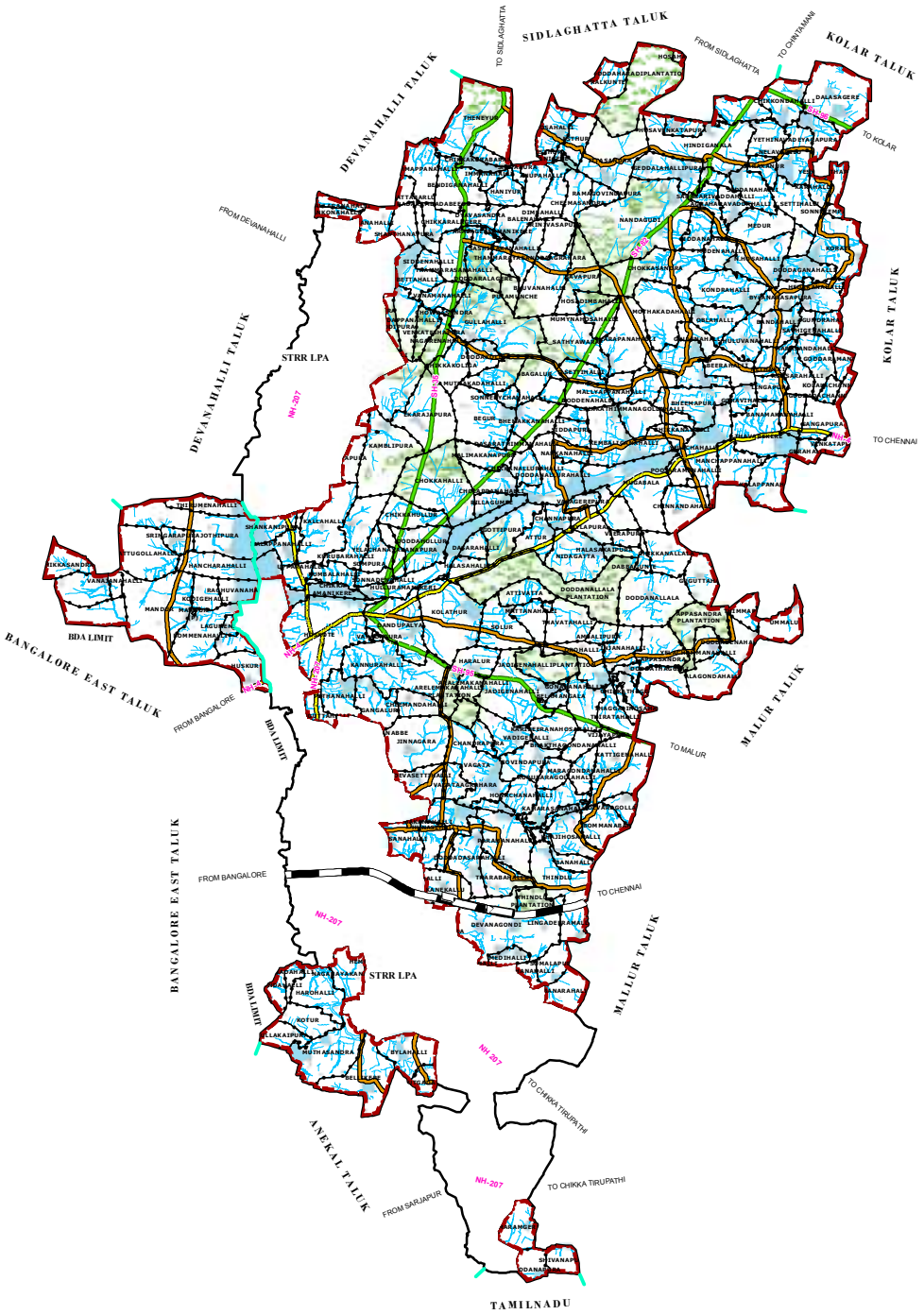
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HOSKOTE

Map Title: *LOCAL PLANNING AREA*

Scale : 1:250,000

Map No: 03

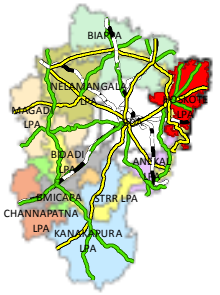


SOURCE : KSRSAC

MASTER PLAN -2031
FOR
HOSKOTE LOCAL PLANNING AREA

KEY MAP

BMR



Not To Scale

INDEX

- L.P.A. Boundary
- Village Boundary
- Taluk Boundary
- National Highway
- State Highway
- Major District Road
- Railway
- Drainage
- Water bodies
- Forest

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0 900 1,800 3,600 5,400 7,200 9,000 Meters

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HOSKOTE

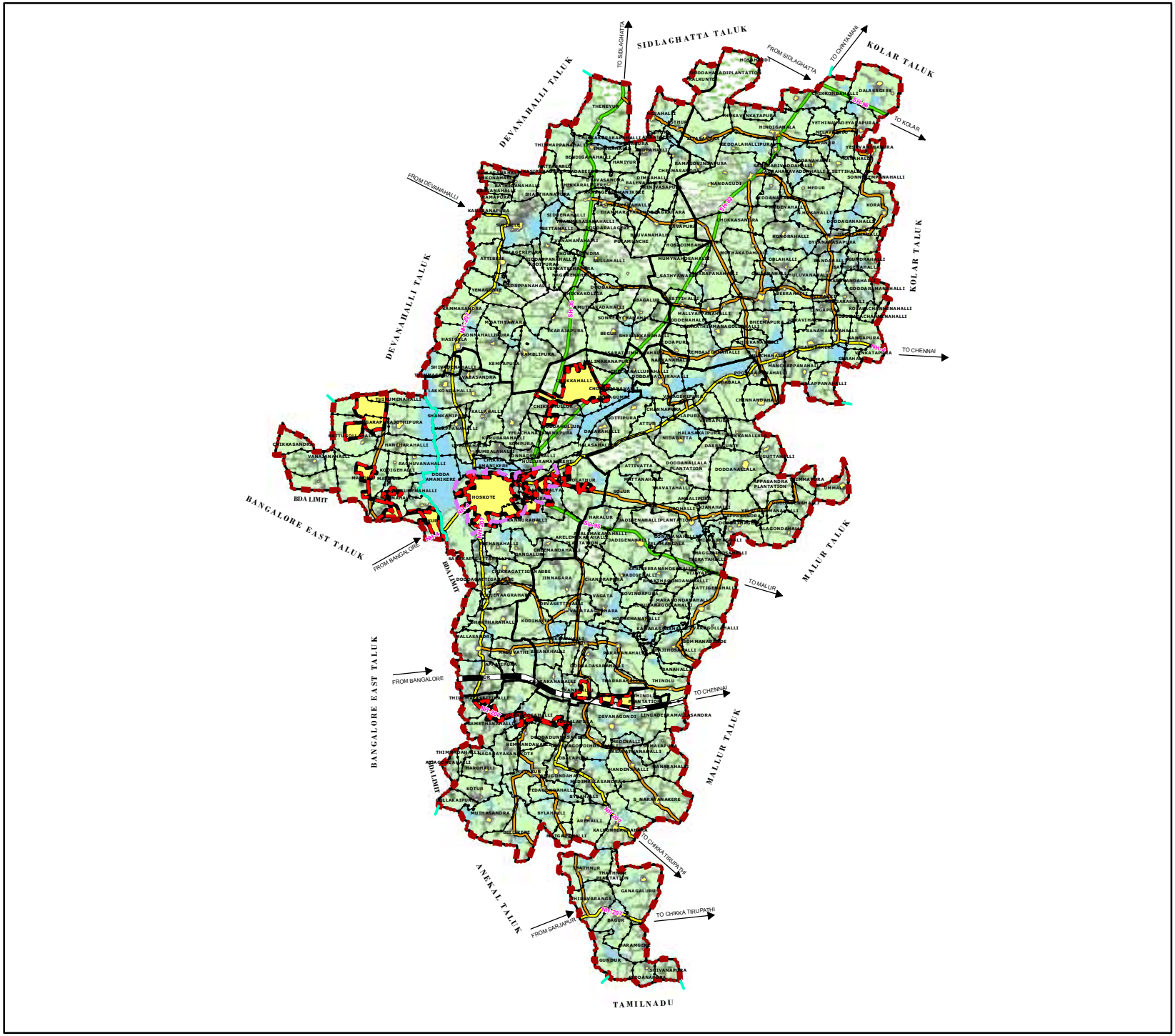
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Map Title

FOREST COVER, DRAINAGE NETWORK & WATERBODIES

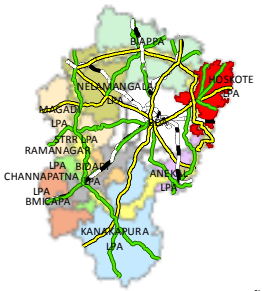
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Map No: 06



MASTER PLAN -2031
FOR
HOSKOTE LOCAL PLANNING AREA

KEY MAP



INDEX

- L.P.A. Boundary
- Taluk Boundary
- Hobli Boundary
- Municipal Boundary
- Village Boundary
- National Highway
- State Highway
- Major District Road
- Railway
- Hillock
- Village Settlements
- Nala/Canal/River
- Tank
- Forest
- Developed Area

EXISTING LAND UTILIZATION AREA ANALYSIS INCLUDING STRR LPA - 2012

INDEX	LANDUSE	AREA (Hectares)	PERCENTAGE (%)
	DEVELOPED AREA	1355.31	2.29
	VILLAGE SETTLEMENTS	1479.55	2.50
	AGRICULTURE LAND	45456.39	76.82
	FOREST LAND	3769.27	6.37
	WATER BODIES	7111.48	12.02
	TOTAL LPA AREA	59172.00	100.00

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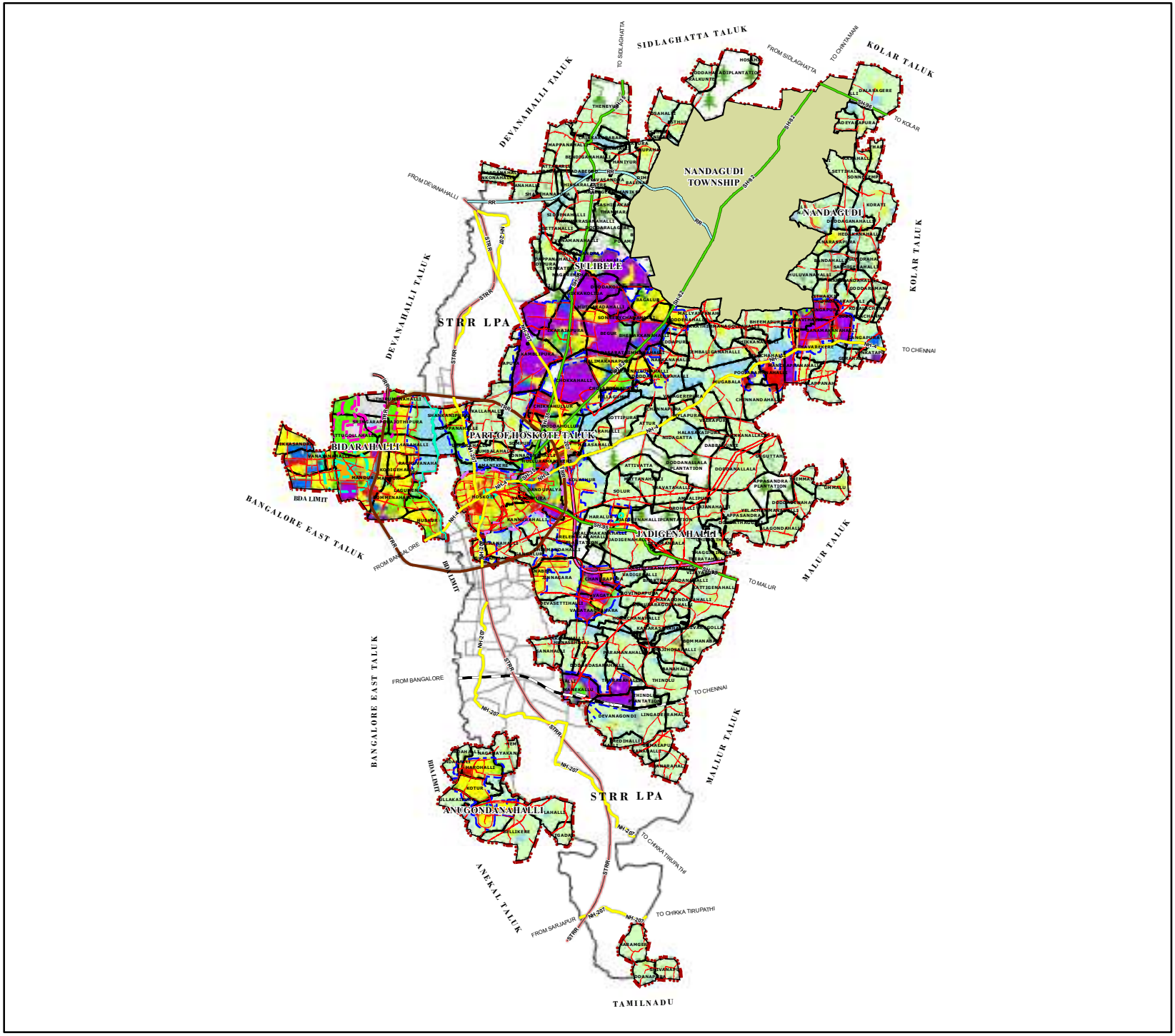
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Map Title: ***EXISTING LAND UTILIZATION IN LPA***

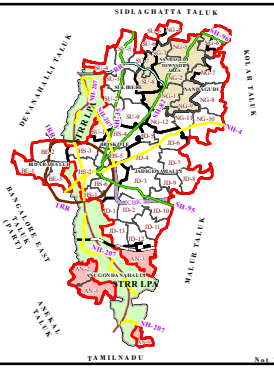
Scale : 1:250,000

Map No: 09



MASTER PLAN -2031
FOR
HOSKOTE LOCAL PLANNING AREA

KEY MAP



INDEX

- L.P.A. Boundary
- Taluk Boundary
- Hobli Boundary
- CMC Boundary
- Conurbation Boundary
- Village Boundary
- PD Boundary
- Survey No Boundary
- Building
- Electric power lines
- Nala/Canal/River
- Tank
- Hillock
- SWM
- DRDO
- National Highway
- State Highway
- Major District Road
- Railway Line
- Railway Station
- Existing Roads
- Existing Roads To Be Widened
- Proposed Roads
- Radial Road
- Satellite Town Ring Road
- Town Ring Road
- IRR
- CBIC

Proposed Landuse Analysis
Hoskote Local Planning Area

Index	Landuse	Area in Hectares	Percentage (%)
	Residential	3791.46	39.56
	Commercial	452.52	4.72
	Industrial	2670.90	27.87
	Park & Open Space	921.84	9.62
	Public & Semipublic	291.43	3.04
	Public Utility	67.87	0.71
	Transportation	1388.12	14.48
	Sub Total	**9584.14**	100.00
	Unclassified	245.09	—
	Forest	15.99	—
	Agriculture	—	—
	Water Bodies	451.19	—
	Grand Total	**10296.40**	

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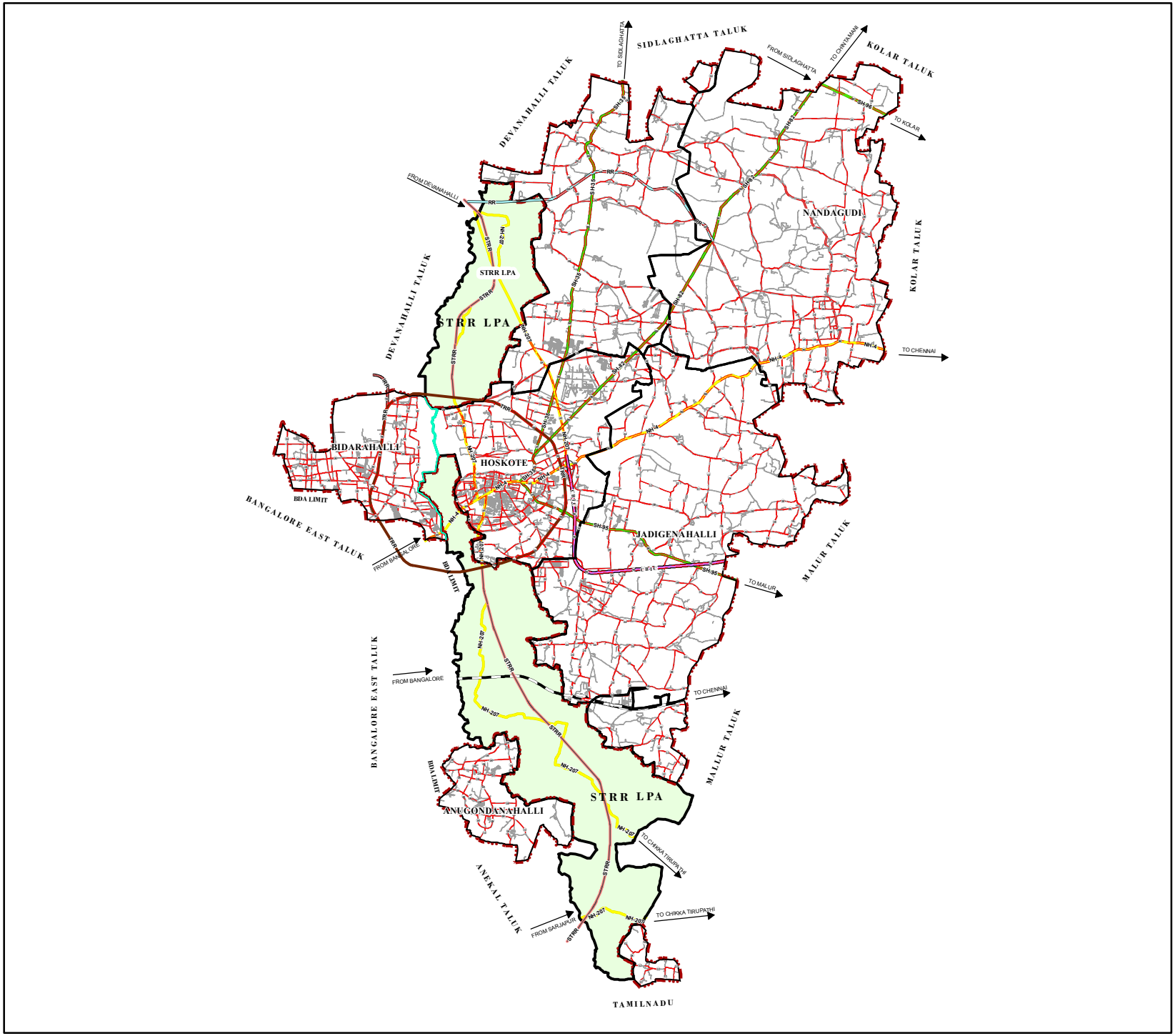
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HOSKOTE

Map Title

Proposed Landuse Map
Hoskote Local Planning Area

Scale :1:250,000

Map No: 19

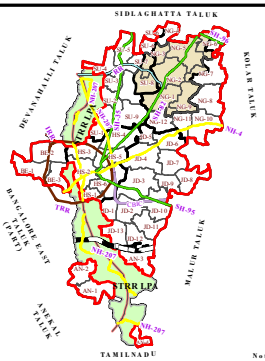


MASTER PLAN -2031

FOR

HOSKOTE LOCAL PLANNING AREA

KEY MAP



Not To Scale

INDEX

- L.P.A. Boundary
- Taluk Boundary
- Hobli Boundary
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- Railway Station
- Existing Roads
- Existing Roads To Be Widened
- Proposed Roads
- Radial Road
- Satellite Town Ring Road
- Town Ring Road
- IRR
- CBIC

Proposed Circulation of Hoskote Local Planning Area

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HOSKOTE

Map Title: ***Proposed Circulation Map***

Scale : 1:250,000

Map No: 78

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