

Revised Master Plan for Bengaluru-2031 (Draft)

Volume 4 - Planning District Report



Bangalore Development Authority



ಕರ್ನಾಟಕ ರಾಜ್ಯಪತ್ರ

ಅಧಿಕೃತವಾಗಿ ಪ್ರಕಟಿಸಲಾದುದು
ವಿಶೇಷ ರಾಜ್ಯ ಪತ್ರಿಕೆ

ಭಾಗ-I Part-I	ಬೆಂಗಳೂರು, ಗುರುವಾರ, ನವೆಂಬರ್ ೨೩, ೨೦೧೭ (ಮಾರ್ಗಶಿರಾ ೨, ಶಕ ವರ್ಷ ೧೯೩೯) Bengaluru, Thursday, November 23, 2017 (Margashira 2, Shaka Varsha 1939)	ನಂ.೧೦೫೯ No. 1059
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ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ನಡವಳಿಕೆಗಳು

ನಗರಾಭಿವೃದ್ಧಿ ಸಚಿವಾಲಯ

ವಿಷಯ: ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರದ ಸ್ಥಳೀಯ ಯೋಜನಾ ಪ್ರದೇಶಕ್ಕೆ ತಯಾರಿಸಿರುವ ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2031ಕ್ಕೆ ಸರ್ಕಾರದ ತಾತ್ಕಾಲಿಕ ಅನುಮೋದನೆ ನೀಡುವ ಬಗ್ಗೆ.

ಓದಲಾಗಿದೆ: 1. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ನಅಇ 540 ಬೆಂಆಸೇ 2004, ದಿನಾಂಕ: 25-06-2007.

2. ಆಯುಕ್ತರು, ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ, ಬೆಂಗಳೂರು ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ: ಬೆಂಆಪ್ರ/ನಯೋಸ/RMP-2031/1312/2017-18, ದಿನಾಂಕ:12-10-2017.

3. ಮಹಾನಗರ ಆಯುಕ್ತರು, ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪ್ರದೇಶಾಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ ಇವರ ಪತ್ರ ಸಂಖ್ಯೆ: BMRDA/BDA/Master Plan/2006-07(Part-II), ದಿನಾಂಕ:03-11-2017.

ಪ್ರಸ್ತಾವನೆ:-

ಮೇಲೆ ಓದಲಾದ ಕ್ರಮಸಂಖ್ಯೆ (1) ರ ಸರ್ಕಾರದ ಆದೇಶದಲ್ಲಿ ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರದ ಸ್ಥಳೀಯ ಯೋಜನಾ ಪ್ರದೇಶಕ್ಕೆ ತಯಾರಿಸಲಾಗಿದ್ದ ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2015ಕ್ಕೆ ಕರ್ನಾಟಕ ನಗರ ಮತ್ತು ಗ್ರಾಮಾಂತರ ಯೋಜನಾ ಕಾಯ್ದೆ, 1961ರ ಕಲಂ 13(3) ರಡಿಯಲ್ಲಿ ಸರ್ಕಾರದ ಅಂತಿಮ ಅನುಮೋದನೆ ನೀಡಲಾಗಿತ್ತು.

ಮೇಲೆ ಓದಲಾದ ಕ್ರಮಸಂಖ್ಯೆ (2) ರಲ್ಲಿನ ಪತ್ರದಲ್ಲಿ ಆಯುಕ್ತರು, ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ, ಬೆಂಗಳೂರು ಇವರು ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರವು ಬೆಂಗಳೂರು ನಗರ ಸ್ಥಳೀಯ ಯೋಜನಾ ಪ್ರದೇಶಕ್ಕೆ ತಯಾರಿಸಿರುವ ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2031ಕ್ಕೆ ಕರ್ನಾಟಕ ನಗರ ಮತ್ತು ಗ್ರಾಮಾಂತರ ಯೋಜನಾ ಕಾಯ್ದೆ, 1961ರ ಕಲಂ 13(1) ರಡಿಯಲ್ಲಿ ಸರ್ಕಾರದ ತಾತ್ಕಾಲಿಕ ಅನುಮೋದನೆಗಾಗಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಮಹಾನಗರ ಆಯುಕ್ತರು, ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪ್ರದೇಶಾಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ ಇವರಿಗೆ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.

ಮೇಲೆ ಓದಲಾದ ಕ್ರಮಸಂಖ್ಯೆ (3) ರಲ್ಲಿನ ಪತ್ರದಲ್ಲಿ ಮಹಾನಗರ ಆಯುಕ್ತರು, ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪ್ರದೇಶಾಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರ ಇವರು ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರದ ವತಿಯಿಂದ ತಯಾರಿಸಿ ಸಲ್ಲಿಸಿರುವ ಬೆಂಗಳೂರು ನಗರದ ಸ್ಥಳೀಯ ಯೋಜನಾ ಪ್ರದೇಶದ ತಾತ್ಕಾಲಿಕ "ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2031"ನ್ನು ಕರ್ನಾಟಕ ನಗರ ಮತ್ತು ಗ್ರಾಮಾಂತರ ಯೋಜನಾ ಕಾಯ್ದೆ, 1961ರ ಕಲಂ 13(1) ರಡಿಯಲ್ಲಿ ಸರ್ಕಾರದ ತಾತ್ಕಾಲಿಕ ಅನುಮೋದನೆ ಕೋರಿ ಸರ್ಕಾರಕ್ಕೆ ಪ್ರಸ್ತಾವನೆ ಸಲ್ಲಿಸಿರುತ್ತಾರೆ.

ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರವು ಮಹಾಯೋಜನೆಯನ್ನು ತಯಾರಿಸುವ ಉದ್ದೇಶದ ಬಗ್ಗೆ ಕರ್ನಾಟಕ ನಗರ ಮತ್ತು ಗ್ರಾಮಾಂತರ ಯೋಜನಾ ಕಾಯ್ದೆ, 1961ರ ಕಲಂ 10(1) ರಡಿಯಲ್ಲಿ ದಿನಾಂಕ:07-05-2012ರ ರಾಜ್ಯ ಪತ್ರದಲ್ಲಿ ಹಾಗೂ ದಿನಾಂಕ:08-05-2012ರ ದಿನಪತ್ರಿಕೆಯಲ್ಲಿ ಪ್ರಕಟಿಸಿ ಕಾನೂನಿನನ್ವಯ ಎಲ್ಲಾ ಪ್ರಕಾರ್ಯಗಳನ್ನು ಕೈಗೊಂಡು ತಾತ್ಕಾಲಿಕ ಮಹಾಯೋಜನೆಯನ್ನು ತಯಾರಿಸಿರುತ್ತದೆ.

ಸದರಿ ತಾತ್ಕಾಲಿಕ ಮಹಾಯೋಜನೆಯಲ್ಲಿ 2031ನೇ ಇಸವಿಗೆ ಆಗಬಹುದಾದ ಸಂಭವನೀಯ ಜನಸಂಖ್ಯೆಯನ್ನು ಗಮನದಲ್ಲಿಟ್ಟುಕೊಂಡು ಜನಸಾಂದ್ರತೆಗನುಗುಣವಾಗಿ 2015ನೇ ಮಹಾಯೋಜನೆಗಿಂತ ಕೇವಲ 80 ಚದರ ಕಿಲೋ ಮೀಟರ್ ಪ್ರದೇಶವನ್ನು ಮಾತ್ರ ಹೆಚ್ಚುವರಿ ನಗರೀಕರಣ ಪ್ರದೇಶವನ್ನಾಗಿ ಪ್ರಸ್ತಾಪಿಸಲಾಗಿದೆ.

ನಗರೀಕರಣಕ್ಕೆ ಅವಶ್ಯಕವಾಗುವ ವ್ಯವಸ್ಥೆಗಳಾದ ಸಾರಿಗೆ ಮತ್ತು ಸಂಚಾರ ವ್ಯವಸ್ಥೆ, ಸಂಪರ್ಕ ರಸ್ತೆಗಳು, ವಸತಿ ಸೌಲಭ್ಯದ ಬೇಡಿಕೆ, ನೀರು ಸರಬರಾಜು ಬೇಡಿಕೆ, ಘನ ತ್ಯಾಜ್ಯ ನಿರ್ವಹಣೆಗೆ ಬೇಕಾದ ಜಮೀನು, ಪರಿಸರ ಸಂರಕ್ಷಣೆಗೆ ಸಂಬಂಧಿಸಿದ ಬೇಡಿಕೆಗಳು, ದೊಡ್ಡ ಉದ್ಯಾನವನಗಳು(Tree Park), ವಲಯ ನಿಯಮಾವಳಿಗಳು ಮುಂತಾದ ಪ್ರಮುಖ ಅಂಶಗಳನ್ನು ಗಣನೆಗೆ ತೆಗೆದುಕೊಂಡು ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2031ನ್ನು ತಯಾರಿಸಿರುವುದಾಗಿ ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಲಾಗಿದೆ.

ಸದರಿ ಪ್ರಸ್ತಾವನೆಯನ್ನು ಸರ್ಕಾರವು ಪರಿಶೀಲಿಸಿ ಈ ಕೆಳಕಂಡಂತೆ ಆದೇಶಿಸಿದೆ.

ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ನಅಇ 516 ಬೆಂಆಸೇ 2017, ಬೆಂಗಳೂರು ದಿನಾಂಕ: 22-11-2017

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಿರುವ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ಬೆಂಗಳೂರು ಅಭಿವೃದ್ಧಿ ಪ್ರಾಧಿಕಾರವು ತಯಾರಿಸಿ ಸಲ್ಲಿಸಿರುವ ಬೆಂಗಳೂರು ನಗರದ ಸ್ಥಳೀಯ ಯೋಜನಾ ಪ್ರದೇಶದ ಪರಿಷ್ಕೃತ ಮಹಾಯೋಜನೆ-2031ಕ್ಕೆ ಕರ್ನಾಟಕ ನಗರ ಮತ್ತು ಗ್ರಾಮಾಂತರ ಯೋಜನಾ ಕಾಯ್ದೆ, 1961ರ ಕಲಂ 13(1) ರಡಿಯಲ್ಲಿ ಈ ಕೆಳಕಂಡ ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ಸರ್ಕಾರದ ತಾತ್ಕಾಲಿಕ ಅನುಮೋದನೆ ನೀಡಲಾಗಿದೆ.

1. ಪ್ರಸ್ತಾಪಿತ ತಾತ್ಕಾಲಿಕ ಮಹಾಯೋಜನೆಯನ್ನು ಸಾರ್ವಜನಿಕವಾಗಿ ಪ್ರಕಟಿಸಿ 60 ದಿನಗಳ ಕಾಲಾವಕಾಶ ನೀಡಿ, ಮಹಾಯೋಜನೆ ಕುರಿತಂತೆ ಸಾರ್ವಜನಿಕರಿಂದ ಸಲಹೆ ಮತ್ತು ಆಕ್ಷೇಪಣೆಗಳನ್ನು ಸ್ವೀಕರಿಸುವುದು;
2. ಇದುವರೆಗೆ ಸರ್ಕಾರವು ಅನುಮೋದಿಸಿದ ವಲಯ ಬದಲಾವಣೆ ಮತ್ತು ಪ್ರಾಧಿಕಾರವು ಅನುಮೋದಿಸಿದ ವಿನ್ಯಾಸ ಹಾಗೂ ಇತರೆ ಅಭಿವೃದ್ಧಿ ಅನುಮೋದನೆ ಯೋಜನೆಗಳಿಗೆ ನೀಡಲಾದ ಪ್ರಕರಣಗಳನ್ನು ತಪ್ಪದೆ ಅಳವಡಿಸಿಕೊಳ್ಳತಕ್ಕದ್ದು;
3. ಪರಿಸರ ಸೂಕ್ಷ್ಮ ಪ್ರದೇಶಗಳಾದ ಕಣಿವೆಗಳು, ನದಿತೊರೆ ಪಾತ್ರಗಳು, ಕೆರೆಯ ಅಂಗಳಗಳು ಮುಂತಾದವುಗಳನ್ನು ಸೂಕ್ತವಾಗಿ ಅಳವಡಿಸಿಕೊಂಡು ಭೂ ಉಪಯೋಗ ಪ್ರಸ್ತಾಪಿಸಿರುವ ಬಗ್ಗೆ ಖಚಿತಪಡಿಸಿಕೊಳ್ಳತಕ್ಕದ್ದು;
4. ನಕ್ಷೆಗಳಲ್ಲಿ ಅಳವಡಿಸಲಾದ ಕೆಡೆಸ್ಟ್ರಿಯಲ್ ಮಾಹಿತಿಗಳು ಸರಿಯಾಗಿ ಅಳವಡಿಸಿದ ಬಗ್ಗೆ ಖಚಿತಪಡಿಸಿಕೊಳ್ಳತಕ್ಕದ್ದು;
5. ಹಾಲಿ ಅಭಿವೃದ್ಧಿಗೊಂಡ ಮತ್ತು ಅನುಮೋದಿತ ವಿನ್ಯಾಸಗಳ ಉದ್ಯಾನವನ ಮತ್ತು ನಾಗರಿಕ ಸೌಲಭ್ಯ ನಿವೇಶನಗಳನ್ನು ಪ್ರಸ್ತಾವಿತ ಭೂ ಉಪಯೋಗ ನಕ್ಷೆಗಳಲ್ಲಿ ತಪ್ಪದೇ ಅಳವಡಿಸಿಕೊಳ್ಳತಕ್ಕದ್ದು;

ಕರ್ನಾಟಕ ರಾಜ್ಯಪಾಲರ ಆದೇಶಾನುಸಾರ
ಮತ್ತು ಅವರ ಹೆಸರಿನಲ್ಲಿ,

ಎನ್. ನರಸಿಂಹಮೂರ್ತಿ
ಸರ್ಕಾರದ ಉಪ ಕಾರ್ಯದರ್ಶಿ
ನಗರಾಭಿವೃದ್ಧಿ ಇಲಾಖೆ.



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Abbreviations

AAI	Airport Authority of India
ASI	Archaeological Survey of India
BBMP	Bruhat Bengaluru Mahanagara Palike
BDA	Bangalore Development Authority
BESCOM	Bangalore Electricity Supply Company Limited
BHEL	Bharat Heavy Electricals Ltd.
BIA	Bangalore International Airport
BIAL	Bangalore International Airport Limited
BIAPPA	Bangalore International Airport Area Planning Authority
BIEC	Bangalore International Exhibition Centre
BMA	Bangalore Metropolitan Area
BMIC	Bangalore-Mysore Infrastructure Corridor
BMICAPA	Bangalore Mysore Infrastructure Corridor Area Planning Authority
BMR	Bangalore Metropolitan Region
BMRCL	Bangalore Metro Rail Corporation Limited
BMRDA	Bangalore Metropolitan Region Development Authority
BRT	Bus Rapid Transit
BSK	Banashankari
BSNL	Bharat Sanchar Nigam Limited
BTM	Bannerghatta-Taverekere-Madiwala
BWSSB	Bangalore Water Supply and Sewerage Board
C & D Lands	Construction and Demolition Waste Lands
CAGR	Compound Annual Growth Rate
CBD	Central Business District
CDP	Comprehensive Development Plan
CDP (JN)	City Development Plan (JNNRUM)
CONCOR	Container Corporation of India
CPU	Central Processing Unit
CREDAI	Confederation of Real Estate Developers' Associations of India
CRS	Commuter Rail System
DAMH	Department of Archaeology, Museums and Heritage
DC	Deputy Commissioner
DG Sets	Diesel Generation Sets
DTCP	Directorate of Town & Country Planning
DWCC	Dry Waste Collection Centre's
ELCITA	Electronics City Industrial Township Authority
ELU	Existing Land Use
E-Waste	Electronic Waste
GIS	Geographical Information System
GKVK	Gandhi Krishi Vignana Kendra
GLR	Ground Level Reservoir
GLSR	Ground Level Storage Reservoir
GoI	Government of India
GoK	Government of Karnataka



GP	Gram Panchayat
Ha	Hectare
HAL	Hindustan Aeronautics Limited
HH	Household
HHI	House Hold Industries
HMT	Hindustan Machine Tools
HPA	Hosakote Planning Authority
IAF	Indian Air Force
IIM	Indian Institute of Management
IISc	Indian Institute of Science
IMD	Indian Meterological Department
IPT	Intermediate Para Transit
ISPS	Intermediate Sewage Pumping Station
ISRO	Indian Space Research Organization
IT	Information Technology
IT/ ITES	Information Technology / Information Technology Enabled Services
ITI	Industrial Training Institutes
ITIR	Information Technology Investment Regions
ITPL	International Tech Park Limited
ITRR	Intermediate Town Ring Road
IWPU	Integrated Waste Processing Unit
KIA	Kempegowda International Airport
KIADB	Karnataka Industrial Area Development Board
KIAL	Kempagowda International Airport Limited
LPA	Local Planning Area
MG Road	Mahatma Gandhi Road
MoEF	Ministry of Environment and Forest
MoUD	Ministry of Urban Development
MRT	Metro Rail Transit
NH	National Highway
NICE	Nandi Infrastructure Corridor Enterprises
NIFT	National Institute of Fashion Technology
NIMHANS	National Institute of Mental Health and Neuroscience
NMT	Non Motorised Transport
OHT	Over Head Tank
OMR	Old Madras Road
ORR	Outer Ring Road
OWCC	Organic Waste Converter
PD	Planning District
PPH	Persons Per Hectare
PRR	Peripheral Ring Road
RMP	Revised Master Plan
RoW	Right of Way
RSP	Revised Structure Plan
RTO	Regional Transport Office



SEZ	Special Economic Zone
SH	State Highway
STP	Sewage Treatment Plant
STRR	Satellite Township Ring Road
SWD	Storm Water Drain
SWM	Solid Waste Management
SWR	South Western Railway
TG	Thippagondanahalli
TGR	Thippagondanahalli Reservoir
TTMC	Travel and Transit Management Centre
VTU	Vishveshwarya Technological university
WFPR	Work Force Participation Rate
ZR	Zonal Regulations



1. Planning Districts for RMP 2031

1.1 Background

1. BDA has so far prepared four Master Plans (including ODP/CDP) for Bangalore, in the past four decades. It is a constant effort to propose and regulate its development and growth.
2. Following are the Four Plans that Bangalore has witnessed so far:
 - Outline Development Plan (ODP) in 1976 - Date of approval of ODP 1976: 22/05/1976
 - Comprehensive Development Plan 1984 (CDP' 84)- Date of approval of CDP 1995: 12/10/1984
 - Comprehensive Development Plan 1995 (CDP'95) Date of approval of RCDP 2011: 05/01/1994
 - Revised Master Plan 2015 (RMP 2015)- Date of Approval of RMP 2015: 25.06.2007
3. The concept of Planning District was brought for the first time in the CDP 1984. A comprehensive contextual review of three master plans indicates that the purpose of the Planning District is to represent the Proposals of the master plan in greater details.
4. The RMP 2015 is the first document to have systematically defined its criteria for the delineation of Planning Districts, by dividing the Local Planning Area boundaries into three spatial rings based on different issues and stakes in accordance to local body boundaries deliberated for administration and management. Within each ring, proposals are based on existing ground reality, impending issues, and the proposed zonal regulations. The Planning Districts in the RMP 2015 are based on administrative boundaries (wards of erstwhile BMP and Village boundaries, except for the core area). However, the year in which RMP 2015 was notified, in the same year the BMP was extended to create BBMP.
5. The details like administrative boundaries (ward, zone, local body limits), cadastral information (revenue survey numbers), physical features (water bodies, drainage system, forests), Utilities (High Tension Electricity lines, Water Installation, Sewage Installations, etc) can't be visualized at city level. Planning District being subset of larger planning area provides for ease of reading Plan proposals and thereby enforcement – the rationale used so far. This may mean that the Planning Districts are used for enforcement purpose only. It is however noteworthy, that the Planning district boundaries however have no statutory functions.

1.2 The Need

6. The change in administrative boundaries (BMP to BBMP and changes to LPA of BDA), the objective is to use Planning Districts as Planning Tool and the enforcement and implementation of plan proposals are the reasons for change or revision and establishing the jurisdiction of planning districts for the Revised Master Plan 2031.
7. Change in Administrative Boundaries: Just before the publication of Revised Master Plan 2015, the municipal limits were extended and BBMP was formed in 2007 through the G.O .no. UDD 92 MNY 2006, dated 16 January 2007. The final notification on 198 wards was



issued in July 2009. The extent of BBMP is 711.50 sq km¹ which is ~ 54% of BMA making it the single largest stakeholder in Master Plan enforcement and implementation. Hence, there is a need to establish the planning district boundaries based on Ward boundaries. After the publication of Revised Master plan 2015, in 2012, the extent of BMA/ LPA of BDA underwent amendment due to transfer of eight villages from the eastern part of LPA of BDA into the LPA of Hoskote Planning Authority². The above mentioned administrative boundary changes necessitated establishing new planning districts in accordance with the new regime. This is also in the view that funds, either from central or state government under various programmes/ schemes for developmental activities, flows to local authorities in line with their spatial extent.

8. Planning Districts as Planning Tool: There are several characteristics that need attention right from the beginning; for example, negative growth rate in core city area, large patches of defence Land Use, the Namma Metro network, T.G Halli notification reduces the development potential of certain areas in NW of BMA etc. Planning Districts can be used to assess the infrastructure (physical & social) requirement at local area which can help in determining the status of development in different parts of the city. Thereby help in assigning appropriate land uses and other proposals. The population assignment play a vital role in formulating proposals for the RMP 2031. The criteria based delineation of Planning Districts will allow appropriate grouping of similar areas and determine the future population assignment at sub-city level; thereby guiding the sub-city level densities and FARs. The concept to use planning district as planning tool need have been embed right from the beginning while formulating the jurisdiction of Planning Districts for RMP 2031.
9. Enforcement and Implementation Mechanism: The rationale behind the defining Planning Districts of previous plans need to be continued for its benefits in master plan enforcement. Implementation of Plan proposal is equally important for the indented development. It therefore required bringing key stakeholders on board – BBMP, BWSSB, BESOM, Namma Metro, BMTC, Fire Department, Traffic Police and other important stakeholders for the ownership as well as implementation of plan proposals. The key to success lies in stakeholder departments aligning planning districts with the departments zoning and or divisions.

1.3 The Delineation and Planning Districts of RMP 2031

10. The review of previous Plans for Bengaluru, the data gathered and the objective of having planning district has helped in listing potential parameters and then selecting the parameters for defining the jurisdictions of planning districts for RMP 2031.
11. It has been observed that utility and infrastructure agencies or line departments (such as BESCOM, BWSSB, Fire Department, Traffic Police, etc.) functioning in BMA have their own administrative boundaries and service areas and do not converge at all. For example, the wards and municipal Boundaries of the BBMP do not match with the administrative areas/boundaries of the BWSSB or BESCOM or even the Parliamentary Constituencies or

¹ <http://www.vigeyegpms.in/bbmp/>

² Through Notification no. UDD 36N BMR 2009 dated 26 September 2012, the 8 villages deleted from the BDA- LPA are: Anugondanahalli Hobli: Ajagonganahalli, Gullakajipura, Thirumlasettyhalli, Thimmanadahalli; from Kasaba Hobli: Bhattarahalli, Doddagattiganahalli, Koralur, Mallasandra.

Legislative Assembly Constituencies boundaries. So is the case of regulatory authorities like the Police Department or even the Fire Service Department. The service area of the Bangalore Transport Authority transcends Municipal and other local body boundaries. In this context, appropriate decision by the GoK is required so that the extent and jurisdiction of all such agencies is BMA and planning districts forms administrative units of such agencies. This will make the developmental process simple, rational, easily understood and help the respective functional departments or line agency to effectively facilitate and service the areas; thereby the implementation of plan proposal made easier.

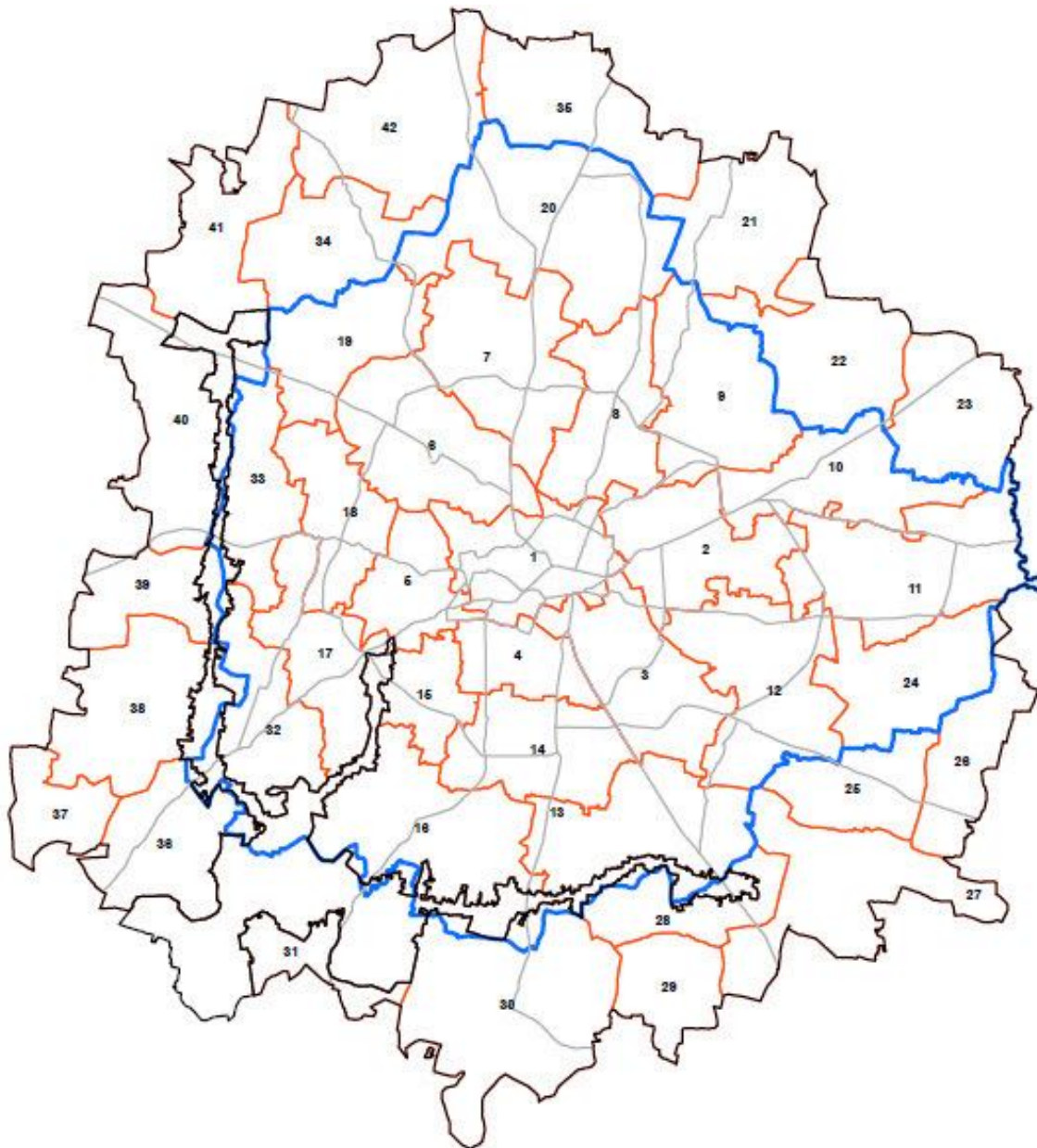
12. The parameters used for delineating the planning district boundaries have been clubbed into six categories; namely- Administrative Boundaries, Democratic Representation, Population Considerations, Physical Features (Man-made) & Other Criteria, Natural & Environmental Features and the Mapping Scale. Each of these parameters discussed and deliberated to arrive at the final list of parameters. **Table 1-1** presents the list of parameters considered for delineation of PD boundaries for RMP 2031.

Table 1-1: Parameters for Delineation of PD boundaries.

Aspect	Parameter
Administrative Boundaries	BBMP Ward Boundary
	Taluk Boundary
	Hobli Boundary
	Gram Panchayat Boundary
Population Considerations	Population Numbers
	Population Growth Rate
	Population Density
Physical Features (Man-made) & Other Criteria	Road Network (Arterial Roads)
	Airport Funnel Zones
	Defence Area Zones
	Metro Rail Network
	Planning District boundaries of RMP 2015
Natural & Environmental Features	Forest Areas
	Hills/ Hillocks
	Lakes
	T.G Halli Notification Area

13. In all, 42 numbers of planning districts have been carved out for RMP 2031. Within BBMP there are 23 Planning Districts while outside BBMP but within LPA there are 19 planning Districts. **Figure 1-1** depicts the jurisdiction of 42 Planning Districts, whereas **Table 1-2** presents list of wards/ villages falling within each delineated Planning District. As mentioned earlier, basis for jurisdiction of each planning district is different. Description hereunder on the formulation of planning district jurisdiction will help to explain further.

Figure 1-1: Planning Districts of RMP 2031



- i. Planning District 1 of Alternative 4 includes the areas within the core ring road, old core area of Bengaluru the Pete areas, along with wards such as Vasanthnagar, Sampigenagar, Rajajinagar, Gandhinagar, Halsoor, Shivajinagar, K R Market etc. It has high intensity of commercial activity, and meeting points of major arterial roads like Old Madras road, KR road, Magadi road and inner ring road. Further, in future, it shall act as a transport interchange, with the Bangalore city railway station, the Majestic bus terminal along with the proposed stations of Metro Rail network. As many as 10-15 stations of the metro rail network are proposed in this area with four 4 routes across the 3 phases of metro rail shall traversing through this area. Due to the complexity of transport and mobility network, differential population densities, negative population growth and high intensity commercial activity, this planning district is earmarked as a single, central entity.



- ii. Planning Districts 2 and 3 are defined based on the location of defence lands (at Jogupalya, Agara & Challaghatta, Byapanahalli) and the presence of the Air Funnel Zone of the HAL Airport. Additionally, decadal growth rate and population densities of the wards encompassing this area are considered.
- iii. Considering the TG reservoir catchment area, which is located in the North West region of the BDA-LPA, the extent of Planning Districts 19, 33, 41, 42 & 43 have been defined in accordance to the zones of TG halli reservoir. The distribution of planning districts within this sensitive zone provides an opportunity for balance approach while formulating Plan proposals for these planning districts.
- iv. In the south and south east, the Challaghatta valley, and Hulimavu lake series and the Varthur Lake series in Koramangala have formed the basis for formulating planning districts 12 and 13 respectively. Likewise the area wherein Bannerghatta National Park is located and has a hillock, have been clubbed together to determine extents of Planning District 30.
- v. In the similar way, the jurisdictions of other planning districts have been determined.

Table 1-2: Planning Districts of RMP 2031

PD NO.	PD Name	Wards and Villages within Planning District	PD within BBMP/ Outside BBMP
1	Central District	Jayamahar, Gayathri Nagar, Pulikeshi Nagar, Ulsoor, Bharathi Nagar, Shivaji Nagar, Vasanth Nagar, Gandhi Nagar, Subhash Nagar, Okalipuram , Dayananda Nagar, Prakash Nagar, Chikpete, Sampangiram Nagar , Shanthala Nagar, Sudam Nagar, Dharmarayaswamy Temple Ward, Cottonpet, K.R.Market.	Within BBMP
2	IndiraNagar - Kagadasapura	Benniganahalli, C.V.Raman Nagar, Hosathippasandra, Maruthiseva Nagar, Sarvagna Nagar, Hoysala Nagar, Vignana Nagar, Jeevanbhima Naga , Jogupalya, Dommalur.	Within BBMP
3	Koramangala	Agaram, Vannarpet, Neelasandra, Shanthi Nagar, Adugodi, Ejipura, Koramangala, Jakkasandra, HSR Layout.	Within BBMP
4	Jayanagar	Sunkenahalli, Visvesvarapuram, Siddapura, Hombegowda Nagar, Lakkasandra, Sudduguntepalya, Jayangar, Basavangudi, Yadiyuru, Byrasandra.	Within BBMP
5	Rajajinagar	Rajaji Nagar, Basaveshwara Nagar, Govindraja Nagara, Agrahara Dasarahalli, Dr.Rajkumar Ward, Shiva Nagar, Sri Rammandira, Binnipet, Kempapura Agrahara, Vijay Nagar, Hosahalli, Marenahalli, Maruthi Mandira Ward, Attiguppe, Hampi Nagar, Bapuji Nagar,	Within BBMP



PD NO.	PD Name	Wards and Villages within Planning District	PD within BBMP/ Outside BBMP
		Padarayanapura, Jagareevanram Nagar, Rayapuram, Chalavadipalya, Chamrajpet, Azad Nagar, Gali Anjaneya Swamy Temple Ward.	
6	Yeshwantpur	Jalahalli, J.P.Park, Aramane Nagar, Mathikere, Yeshwanthpur, H.M.T, Lakshmidevi Nagar, Nandini Layout, Marappana Palya, Malleshwaram, Rajamahall, Kadumalleshwara, Subramanya Nagar, Nagapura, Mahalakshmiapuram, Dattathreya Temple	Within BBMP
7	Hebbal	Byatarayanapura, Kodigehalli, Vidyanarayana, Doddabommasandra, Radhakrishna Temple, Sanjay Nagar, Ganga Nagar, Hebbal, Vishwanathnagenahalli, Manoranayana, Gangenahalli, Jayachamarajendra Nagar.	Within BBMP
8	Nagawara	Thanisandra, Nagavara, HBR Layout, Kammanahalli, Kacharakanaahalli, Kadugondanahalli, Kushal Nagar, Kavalbyrasandra, Devarajeevanahalli, Muneshwara Nagar, Lingarajapura, Sagayapuram, S.K.Garden, Ramaswamy Palya.	Within BBMP
9	Banaswadi	Horamavu, Ramamurthy Nagar, Banasawadi, Hoodi.	Within BBMP
10	Krishnarajapuram	Vijinapura, K.R.Puram, Basavanapura, Devasandra, A.Narayanapura, Hoodi.	Within BBMP
11	Whitefield	Garudacharpalya, Kadugudi, Hagadooru, Doddanekkundi.	Within BBMP
12	Bellandur	Marathalli, Hal Airport, Konena Agrahara, Bellandur.	Within BBMP
13	Arekere	Hongasandra, Mangammanapalya, Singasandra, Begur, Arakere.	Within BBMP
14	J.P.Nagar	Karisandra, Pattabhiram Nagar, Jayanagar East, Gurappanapalya, Madiwala, Bommanahalli, BTM Layout, J.P.Nagar, Sarakki, Shakambari Nagar, Banashankari Temple Ward, Kumaraswamy Layout, Yelachenahalli, Jaraganahalli, Puttenahalli, Bilekahalli.	Within BBMP
15	Kathriguppe	Hanumantha Nagar, Sri Nagar, Hosakerehalli, Giri Nagar, Katriguppe, Vidyapeetha, Ganeshmandira Ward, Padmanabha Nagar, Chikkalasandra, Vasanthapura.	Within BBMP
16	Gottigere	Uttarahalli, Gottigere, Konanakunte,	Within BBMP



PD NO.	PD Name	Wards and Villages within Planning District	PD within BBMP/ Outside BBMP
		Anjanapur, Vasanthapura, Hemmigepura, Uttarahalli Manavarthi Kavalu, Mallasandra.	
17	Nayanadahalli	Nagarabhavi, Jnanabharathi Ward, Nayandanahalli, Deepanjali Nagar, Rajarajeshwari Nagar.	Within BBMP
18	Peenya - Nagarbhavi	Peenya Industrial Area, Laggere, Rajagopala Nagar, Kottigepalya, Shaktighanapathi Nagar, Shankaramata, Kamakshipalya, Vrushabhavathi, Kaveripura, Moodalapalya.	Within BBMP
19	Jalahalli - Jarakabandekaval	Kuvempu Nagar, Shettyhalli, Mallasandra, Bagalagunte, T-Dasarahalli, Chokkasandra.	Within BBMP
20	Yelahanka	Kempegowda, Chowdeshwari, Attur, Yelahanka Satellite, Jakkur.	Within BBMP
21	Marenahalli	Marenahalli, Dasanayakanahalli, Chagalatti, Bagaluru, Yarappanahalli, Nadagowdagollahalli, Mittaganahalli, Kannur, Kadosonappanahalli, Doddenahalli, Chikkagubbi, Bommasandra.	Outside BBMP
22	Hirandahalli	Vaddarahalli, Ramapura, Maragondanahalli, Kithiganur, Kada Agrahara, Huvina Ane, Hirandahalli, Halehalli, Doddagubbi(Srigubbi), Byappanahalli, Bidarahalli, Anagalapura, Adur.	Outside BBMP
23	Cheemasandra	Kumbena Agrahara, Doddabanahalli, Veerenahalli, Shigehalli, Nimbekayapura, Kurudu Sonnenahalli, Konadasapura, Katamanallur, Kannamangala, Kajisonnenahalli, Goravikere, Dommasandra, Chikkabanahalli, Cheemasandra, Bidarena Agrahara, Belathur, Bandapura, Avalahalli.	Outside BBMP
24	Varthur	Varthur, Valepura.	Within BBMP
25	Kodathi	Sulakunte, Mallur, Kodathi, Kachamaranahalli, Halanayakanahalli, Chikkakanneli, Hadosiddapura, Chikkanayakanahalli.	Outside BBMP
26	Ramanayakanahalli	Thigalachavadadenahalli, Ramanayakanahalli, Nekkundi Dommasandra, Kathriguppe, Heggondahalli, Halasahalli Thippasandra, Chikkavaderapura, Chikkanekkundi, Dommasandra.	Outside BBMP
27	Kaggalipura	Thirupalya, Shingena Agrahara, Gulamangala, Shrirampura, Rayasandra, Madivala, Kommasandra, Kaggalipura, Huskuru, Hosahalli, Harohalli, Ghattamaranahalli,	Outside BBMP

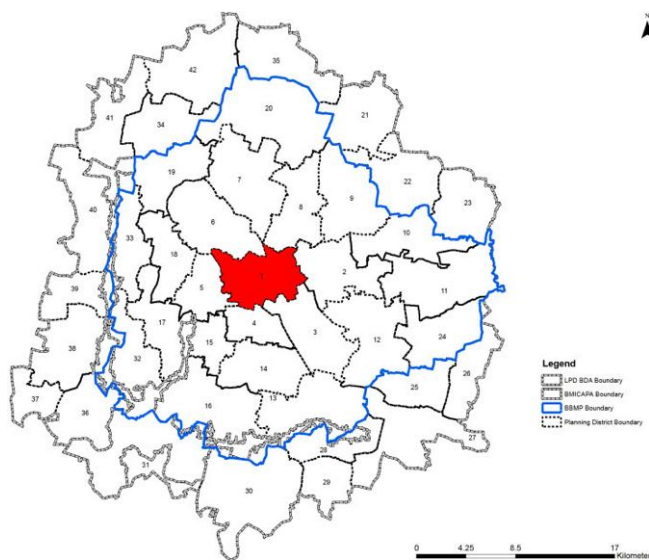


PD NO.	PD Name	Wards and Villages within Planning District	PD within BBMP/ Outside BBMP
		Ghuttihalli, Choodasandra, Chokkasandra, Chikkanagamangala, Avalahalli, Gollahalli, Hebbagodi, Veerasandra.	
28	Doddathoguru - Electronic City	Vittasandra, Mylasandra, Konappana Agrahara, Hommadevanahalli, Doddathoguru, Dodda Nagamangala, Bettadasanapura.	Outside BBMP
29	Hulimangala	Vabasandra, Nanjapura ,Maragondahalli ,Hulimangala ,Sarvamanya Bangipura	Outside BBMP
30	Bannerughatta	Badamanavarthikaval, Hullahalli, Vaderahalli, Sakalavara, Ramasandra, Nallasandra, Mantapa, Lakshmipura ,Kannaikana Agrahara, Kallakere, Hullakasavanahalli, Halesampigehalli, Gollahalli, Bhyrappanahalli, Bhoothanahalli, Bilvaaradahalli, Bhujengadasana Amanikere, Begihalli, Bannerugattada Kavalu, Bannerugatta, Obichudahalli, Mallasandra.	Outside BBMP
31	Agara	Agara.	Outside BBMP
32	Kengeri	Ullalu, Kengeri, Hemmigepura.	Within BBMP
33	Herohalli	Dodda Bidarkallu, Hegganahalli, Herohalli, Thirumalapura, Chikkabidarakallu ,Srikantapura K G.	Within BBMP
34	Chikkabanwara	Ganigerahalli, Chikkabanavara, Somashettahalli, Lakshmipura, Guladahalli, Shamarajapura, Kempnanahalli, Veerasagara, Vaderahalli, Medi Agrahara, Byalakere, Guniagrahara, Kalathammanahalli, Kasaghattapura, Kempapura, Kumbarahalli, Soladevanahalli.	Outside BBMP
35	Hunasamaranahalli	Nagadasanahalli, Muddanahalli, Lakshmisagara, Gantiganahalli, Hunasamaranahalli, Sugatta, Bettahalasuru, Thimmasandra, Sonnappanahalli, Sathanuru, Byappanahalli, Nellukunte.	Outside BBMP
36	Kumbalagodu	Chellagatta, Devageri, Doddabele, Gudimavu, Kambipura, Kanaminake, Kumbalagodu, Tagachiguppe, Venkatapura.	Outside BBMP
37	Dodda Aladamara	Koluru Nanjundapura, Koluru Gurarayanapura, Chikkeluru Rampura, Chikkeluru, Chikkeluru Venkatapura, Kethohalli Narasipura, Kethohalli, Kethohalli Rampura, Koluru, Sheshagiripura.	Outside BBMP
38	Sulikere -	Bhimanakuppe Ramasagar, Bhimanakuppe,	Outside BBMP



PD NO.	PD Name	Wards and Villages within Planning District	PD within BBMP/ Outside BBMP
	Bheenakuppe	Kenchanapura, Kommagatta, Kommagattakrishnapura, Maligondanahalli, Maragondanahalli, Krishnasagar, Maragondanahalli, Ramasandra, Ramohalli, Sulikeri	
39	Sheegehalli	Kodagihalli, Sheegehalli, Kannelli, Manganahalli, Yalachaguppe Rampura, Yalachaguppe, Channenahalli	Outside BBMP
40	Makali - Machohalli	Siddanahosahalli, Dasanapura, Byandahalli, Machohalli, Kachohalli, Bylakonenahalli, Vaddarahalli, Lakkenahalli, Gangondanahalli, Srikantapura, Lakshmipura, Dombarahalli, Adakimaranahalli, Makali, Narayanapalya, Gavipalya, Kadaranahalli, Harokyathanahalli, Madavara.	Outside BBMP
41	Aluru	Bilijaji, Sasiveghatta, Tarabanahalli, Thammarasanahalli, Hurlichikkanahalli, Kodagi Tirumalapura, Hesaraghatta, Thammenahalli, Hanumanthasagara, Kuduragere, Heggadadevanapura, Aluru, Muniyanapalya, Thorenagasandra, Narasipura.	Outside BBMP
42	Rajanakunte	Shinganayakanahalli Amanikere, Shinganayakanahalli, Ramagondanahalli, Krishnasagara, Jarakabandekaval (T4), Honnenahalli, Avalahalli, Addiganhalli, Itagalpura, Kalenahalli, Lingarajasagara, Madappanahalli, Kondashettyhalli, Lingarajapura, Krishnarajapura, Rajakunte, Mavallipura, Linganaahalli, Sheekoti, Madagirihalli, Muttakarahalli, Mylappanahalli, Ivarakandapura.	Outside BBMP

2. PD 1: Central Business District



Population (2011 Census): 5,93,883

Area of PD: 2774.3 ha

Wards in PD: 19

Gross Density: 214PPH

Central District (PD 1) is located in core of the BMA. It houses the Historical Pete, Business & Offices and the Government Administrative Offices. Several heritage sites reflect the heritage and culture of the city. It is extremely well connected with Major radial roads radiating from the centre and has Railway Stations, Bus terminus, Metro Stations etc .

The RMP2031 proposes to guide the development and redevelopment in the area and stabilize the commercialization.

1. The Central District is the CBD and Administrative Centre for the State. The extent admeasures 2774.3 Ha (27.74 sq km) comprising of 19 wards, - Jayamahal (63), Gayathri Nagar (76), Pulkeshi Nagar (78), Ulsoor (90), Bharath Nagar (91), Shivaji Nagar (92), Vasanth Nagar (93), Gandhi Nagar (94), Subash Nagar (95), Okalipuram (96), Dayanand Nagar (97), Prakash nagar (98), Chickpete (109), Sampanigaram (110), Shantala Nagar (111), Sudam Nagar (118), Dharamarayaswamt Temple ward (119), Cottonpet (120) and K.R.Market (139) and covers parts of West, East and South zone of BBMP.
2. Vidhan Soudha, Vikas Soudha, Raj Bhavan, K.R.Market, Pete Area, Cubbon Park, Majestic Bus Stand, Chinnaswamy Stadium, etc. are located within this PD.

A. EXISTING STATUS

Demography

3. As per Census 2011 had 5,93,883 residents and had witnessed negative decadal growth rate (2001-2011) with further increase in commercial activities.. The number of households within PD are 1,32,600 whereas the HH size is 4.48 which is higher than BMA average of 4.01. The workforce participation rate is 40.2%.

Administrative, Industry and Commerce

4. Vidhan Soudha, Vikas Soudha, Raj Bhawan, MS Building, and head offices of many Government departments are located here ,making it the administrative hub for the State and the City.
5. It is the Central Business District (CBD) of Bengaluru and has concentration of trade and commerce activities at Peta (the historic core and market), Shivajinagar (the market and extension of erstwhile cantonment), and the MG road, commercial street, brigade road, etc. housing the commercial hub of the city. A part of Malleshwaram Sampige road market is part

of this PD. There are many informal shops and commercial activities surrounding Majestic Bus Station and Bangalore Railway Station. The important markets are: Frazer Town market, Moore Road market, Ulsoor market, Srirampura Market, Kalasipalya, and KR market. The continuous influx of commercial activities in former residential areas such as Malleshwaram, Rajaram Mohan Roy Extension (Sudama nagar) located at west of Double Road has changed the characteristics of the area.

Existing Land Use

- The predominant land uses is residential and commercial land use covering ~24.9 % and ~21.14 % of area respectively. The Public –semi-public land use zone, admeasuring 16.53% is primarily the Administrative and Governance offices. The area under transportation is ~15.8%. **Figure 2-1** and **Table 2-1** presents the Existing Land Use Map Existing Land Use Area Statement and for PD 1.

Housing and Slums

- Gross density is 214 pph, whereas net residential density is 858 pph. Ward with highest density is Shivajinagar with a density of 872 pph and the ward with lowest density is Shantala Nagar ward (57.6pph) which has many defense areas, commercial areas and Public Semi-Public land uses.
- Residential areas are concentrated in a few wards like Gayatri Nagar, Prakash Nagar, Dayanad Nagar, Subash Nagar, Jayamahar, Halasoor, Pulkeshi Nagar, Vasant nagar and Shivaji Nagar.
- There are 69 slums in this PD, and of which 35 slums are notified. Subhash Nagar Ward (ward no 95) with 14 slums has the highest number of slums. The population residing in these slums is 71689 (12% of the total PD population).

Figure 2-1: PD 1 Existing Land Use Map

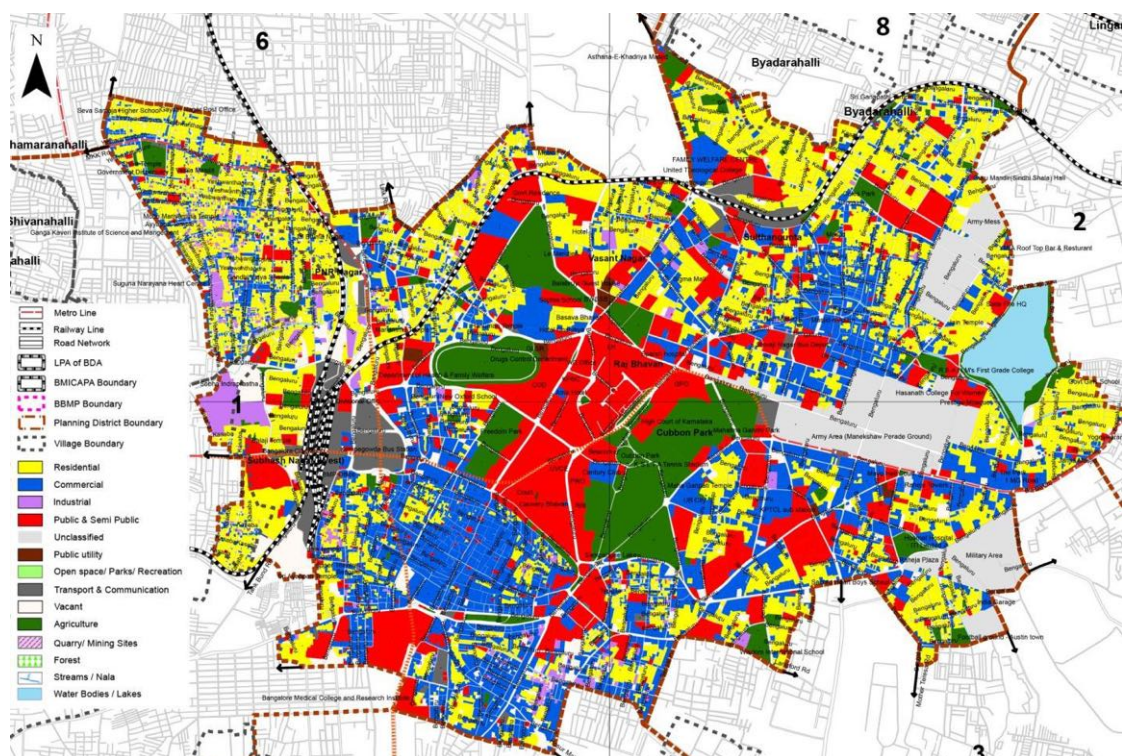




Table 2-1: PD 01 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	702.68	25.33
Commercial	586.52	21.14
Industrial	54.47	1.96
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	458.51	16.53
Unclassified	148.33	5.35
Public Utility	7.72	0.28
Parks & Open Spaces	230.50	8.31
Transport Communication	431.00	15.54
Vacant	101.98	3.68
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	9.40	0.34
Water Bodies	43.04	1.55
Total	2774.28	100.00

Traffic and Transportation

10. In addition to being a Central Business District and Administrative Centre, it is also a major Transport Hub catering to the whole city and the region. Two major Railway Stations - Bangalore City Railway station and Cantonment Railway station, three major bus terminus - Majestic, KR market and Shivajinagar are located within the PD. Kempegowda Bus Stand is the only intermodal interchange hub in the city, integrated with Railways, Metro, KSRTC and BMTC Bus services.
11. Metro services are available and easily accessible, the existing Phase – I coverage including 13 metro stations (8 stations of Purple Line and 5 stations of Green line) and the proposed metro phase II network also possessing through, with MG Road metro station acting as the interchange and 2 metro stations proposed in this PD.
12. Around 494 km is the total road length within the PD. The major arterial roads in this PD are Inner Ring Road, K.R. Road, Kalasipalya Main Road, J.C. Road, Kasturba road, Cottonpette main road, Museum road, Richmond road, Residency Road, Avenue road. The critical junctions that see congestion are Pottery Town circle junction, Shivananda, Upparapet junction, Corporation circle, Queens Statue Circle Junction (Jewels De Paragon) and Lalbagh main gate.

Physical and Social Infrastructure

13. As per BWSSB, the percentage of metered water supply connections in this PD are 51.9% and percentage of metered sewage and sanitation connections are 52.7%.³ As per BBMP, there are 1 Bio-Methanation Units (BMU), 13 Dry Waste Collection Centres (DWCC) located in this PD.⁴ As per KPTCL, there are two 220kv substations.

³ BWSSB, 2014

⁴ BBMP, 2015



14. City level social infrastructure such as sports facilities are present which are the Chinnaswamy Stadium, Sree Kantiveera Stadium, Bangalore Football stadium and Shanthinagar Hockey Stadium. Likewise, the educational Institutions are also present such as the Chitrakala Parishath, Sri Krishnarajendra Silver Jubilee Technological Institute, University Visvesvaraya College of Engineering, Government Arts & Sciences College, City campus of Bangalore University, Central College, Maharani's College, Bishop Cotton School, St. Joseph's College Buildings, Good Shepherd Convent. Additionally, presence of cultural institutions such as NGMA, Chowdiah Hall, Govt. Museum, Visveshvaraya Science & Technology Museum etc. are located within this PD attracting population from across the country, state and city.

Park and Open Spaces

15. City level parks like Cubbon Park, Freedom Park, Indira Gandhi Musical Fountain Park are located here along with open spaces/ lung spaces, such as Ulsoor lake precinct, the Race Course and the Bangalore Golf Club. Ulsoor Lake is the only lake in this PD.

Heritage and Culture

16. It is note-worthy that this planning district forms the Heritage Core for the BMA, as the Archaeology Survey of India (ASI) protected monument of Old Dungeon Fort and Gates, Department of Archaeology, Museums and Heritage, GoK enlisted 2 heritage sites, and RMP2031 identified 321 heritage sites are located here. The Kempegowda Watch Tower at Ulsoor and the Bowring Institute as State protected buildings.
17. Out of 321 heritage sites, 191 are Government or public heritage sites. Some of the Heritage buildings and sites such as the Bangalore Fort, Tippu's Summer Palace, Bangalore Palace, Trinity Church, Hudson Memorial church, Someshwar temple, St. Mary's Basilica, Crescent house. The Annexure 1 presents details of the heritage sites.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: REDEVELOPMENT, DECONGESTION, TRANSIT INTEGRATION AND HERITAGE CONSERVATION

PROPOSALS

1. The governing principal is to stabilize the commercialisation respecting the local economic activities. The RMP2031 proposes to guide the development and redevelopment in this Central Business District such that there is a wholesome approach to infrastructure upgradation and livability. Further, it is proposed to decentralize the intra-city and intra-region traffic movement by developing Inter-state bus terminals along Tumukuru Road, Hosur Road, OMR, Mysuru Road, etc.
2. The Proposed Land Use map for PD 1 is given in **Figure 2-2** and Proposed Land Use area statement is presented in **Table 2-3**.
3. In order to improve the accessibility to public transport systems, it is proposed to have first and last mile connectivity through walkability/ the Non-motorized transport (NMT) around the Metro stations and railways stations.

Figure 2-2: PD 1 Proposed Land Use Map

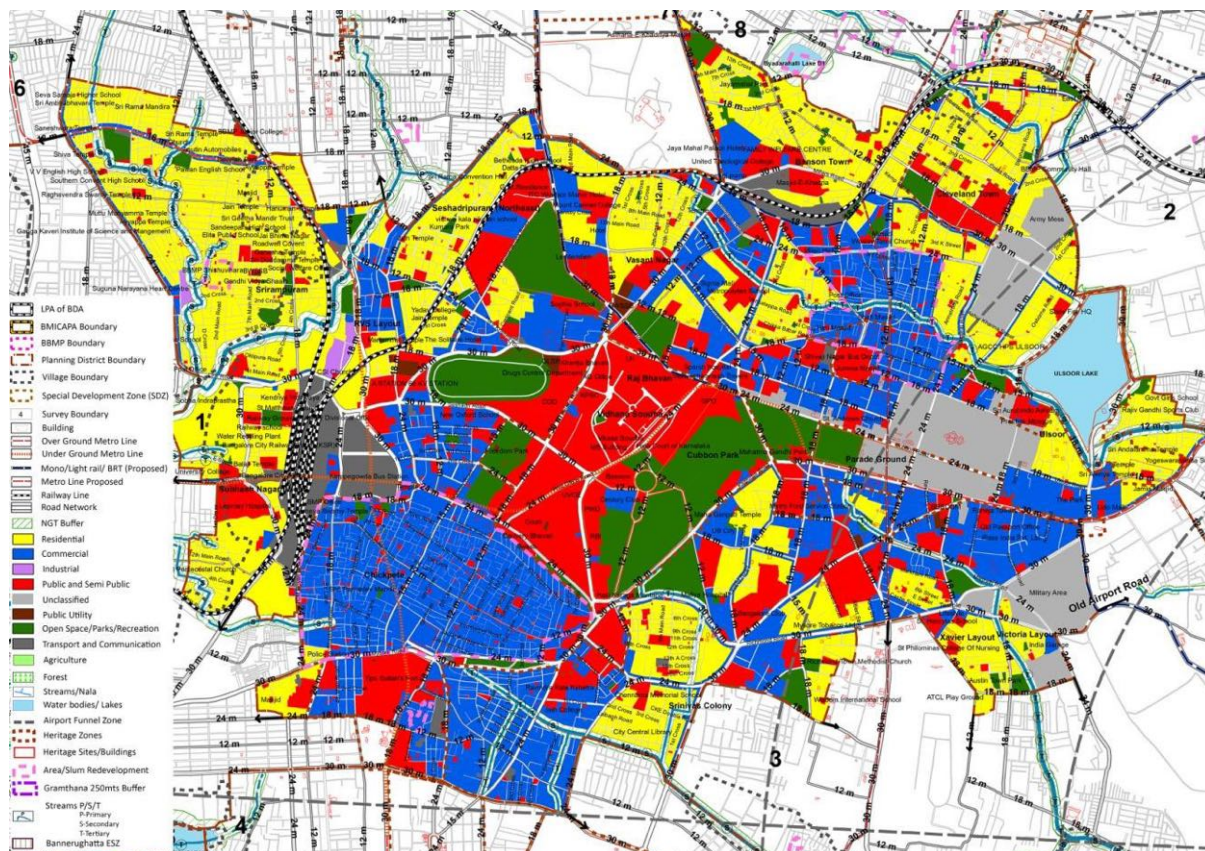


Table 2-2: PD 01 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	674.74	17.20
Commercial	614.64	15.67
Industrial	5.57	0.14
Public & Semi Public	434.22	11.07
Unclassified	132.26	3.37
Public Utility	7.63	0.19
Parks / Open Spaces	213.49	5.44
Transport & Communication	527.00	13.43
Forest	0.00	0.00
Streams	0.16	0.00
Water Bodies	0.80	0.02
NGT Buffer	163.77	4.17
Total Developable Area	2774.28	70.72
Agriculture	0	-
Total PD Area	2774.28	-



4. The RMP2031 acknowledging the historic and heritage value associated in many areas has proposed for their conservation and protection and also by guiding development within and surrounding historic sites. It is proposed that that areas of Pete, Shivajinagar, KR market area, Kalasipalya area to be taken up for redevelopment along with the protection of its heritage. The redevelopments of the areas are to be guided by the Zoning Regulations.
5. The RMP2031 proposes that slum redevelopment be taken up in a phased manner.
6. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.
7. RMP2031 proposes that BBMP, in accordance with the provisions of Street Vending Act, 2015, determines the areas for Informal activities/ Street Vending and detailed upgradation plans for such areas/ roads/ streets are prepared.
8. To improve the public transport share it is proposed to develop a) Light Rail /Mono Rail from Trinity Metro Station to Varthur Kodi, b) Cubbon Park to Jakkur and c) Intermediate Ring Road.
9. Following Light/ Mono Rail stations are proposed within this PD:
 - a) Trinity Interchange, on Trinity to Varthur Kodi link
 - b) Near Coles Park and Cantonment Railway Station (on Intermediate Ring Road Mono Rail Link)
 - c) Cubbon Park Metro Station
10. The RMP2031 proposes to develop 2 Inetrmodal Interchange hubs in PD1 namely at – a) Cantonment and b) Trinity Circle.
11. Towards parking, RMP2031 proposes that a details parking plan need to be prepared for areas/ roads. Vidhan Soudha-Cubban Park-High Court Area, CBD area, Pette Area, Shivaji Nagar, Market Areas like City Market, KR Market, Russel Market, Corporation Circle/ Hudson Circle – Mysore Bank Circle Road Stretch, SP Road Area, etc. A Multi-Level Car Parking (MLCP) by BBMP is proposed at Freedom Park which when completed would accommodate about 556 Light Motor Vehicles (LMVs) and 500 two wheelers.
12. The RMP2031 identifies 9 critical road junctions that require geometric improvements for better and smoother traffic flow.
13. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 42 Dry Waste Collection Centres are proposed to be developed within the Planning District by BBMP.
14. To increase green cover across the city, provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads in the Central Business District be taken up by BBMP.
15. The ASI regulation mandates, 100 m from the boundary of the monument to be a Prohibited area that prohibits for mining or any construction or both. The contiguous 200 m of an ASI protected building falls under the Regulated area mandates that no other person other than an archaeological officer can undertake any construction in this area, except in accordance with the terms and conditions of a license granted by the Director-General of the ASI. Similar restrictions are imposed on the 2 heritage sites namely - the Kempegowda Watch Tower at Ulsoor and Bowring Institute as State protected buildings. Further, it is proposed that 191 Government/ public buildings are proposed to be declared as heritage sites and restrictions as imposed by Zoning Regulations be applicable to these buildings.

16. The RMP2031 proposes 12 heritage zones in total, out of which 6 heritage zones are proposed within PD 1. Within these heritage zones are the heritage sites that require protection with appropriate regulations for development or redevelopment. The proposed 6 Heritage Zones and precincts therein, in this Central District PD, are as following:

- I. Central Administrative Heritage Zone [Refer Figure 2-3]
 - a. Precinct 1: Administrative Complex of the Vidhan Soudha, Vikas Soudha and High Court
 - b. Precinct 2: Cubbon park and surrounding Buildings Precinct
 - c. Precinct 3: Rest of the area of the Central Administrative Area
- II. Petta Heritage Zone [Refer Figure 2-4]
 - a. Precinct 1: Bangalore Fort and Tippu's Summer Palace Precinct
 - b. Precinct 2: KR Market, jamma Masjid and Puttanachetty Town Hall Precinct
- III. MG Road Heritage Zone [Refer Figure 2-5]
- IV. Shivajinagar Heritage Zone [Refer Figure 2-6]
- V. Cleveland Town Heritage Area [Refer Figure 2-7]
- VI. Ulsoor Heritage Area [Refer Figure 2-8]

Figure 2-3: PD 1 Central Administrative Heritage Zone

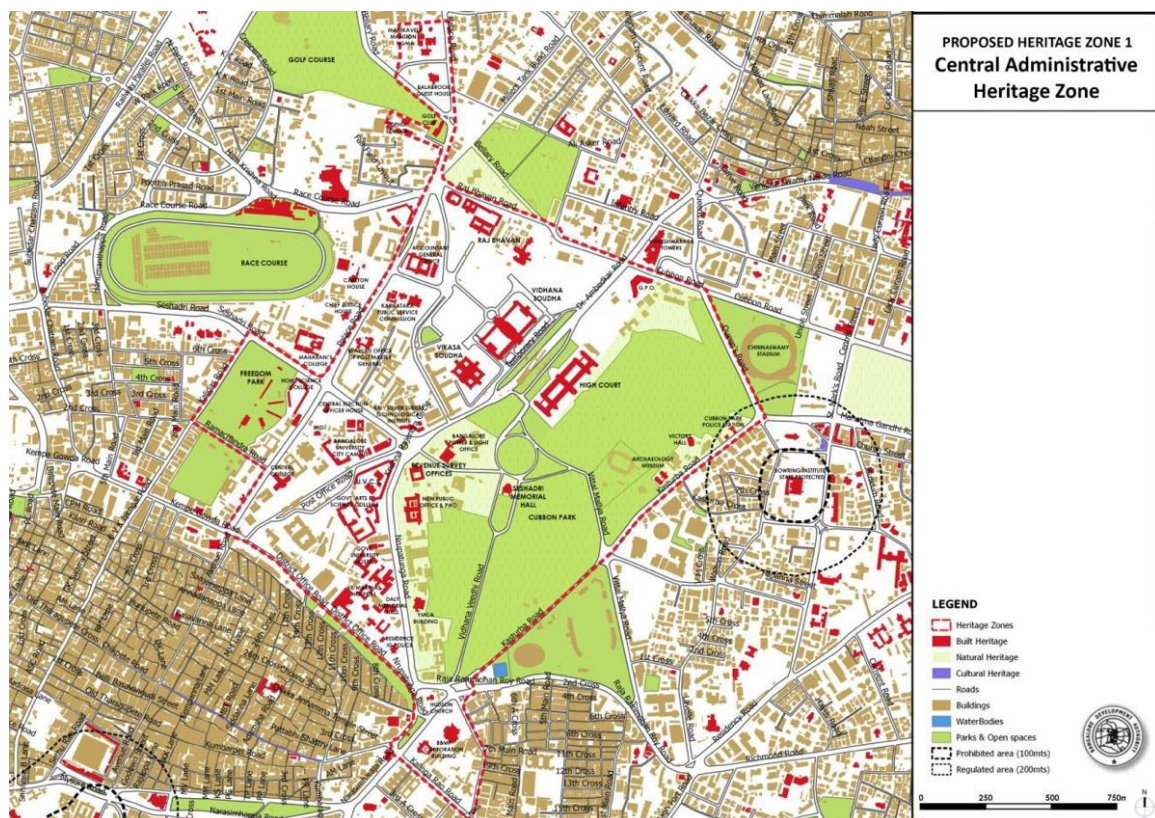


Figure 2-4: PD 1 Pette Heritage Zone

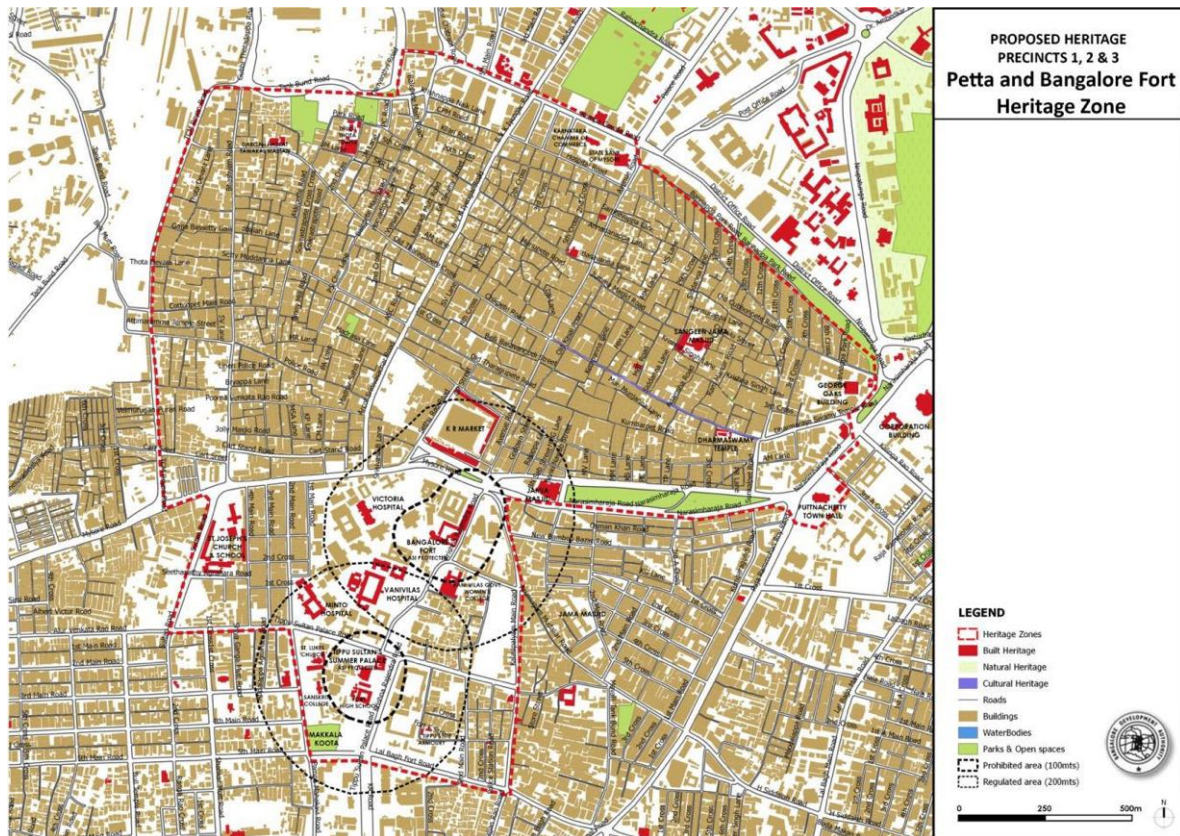


Figure 2-5: PD 1 MG Road Heritage Zone

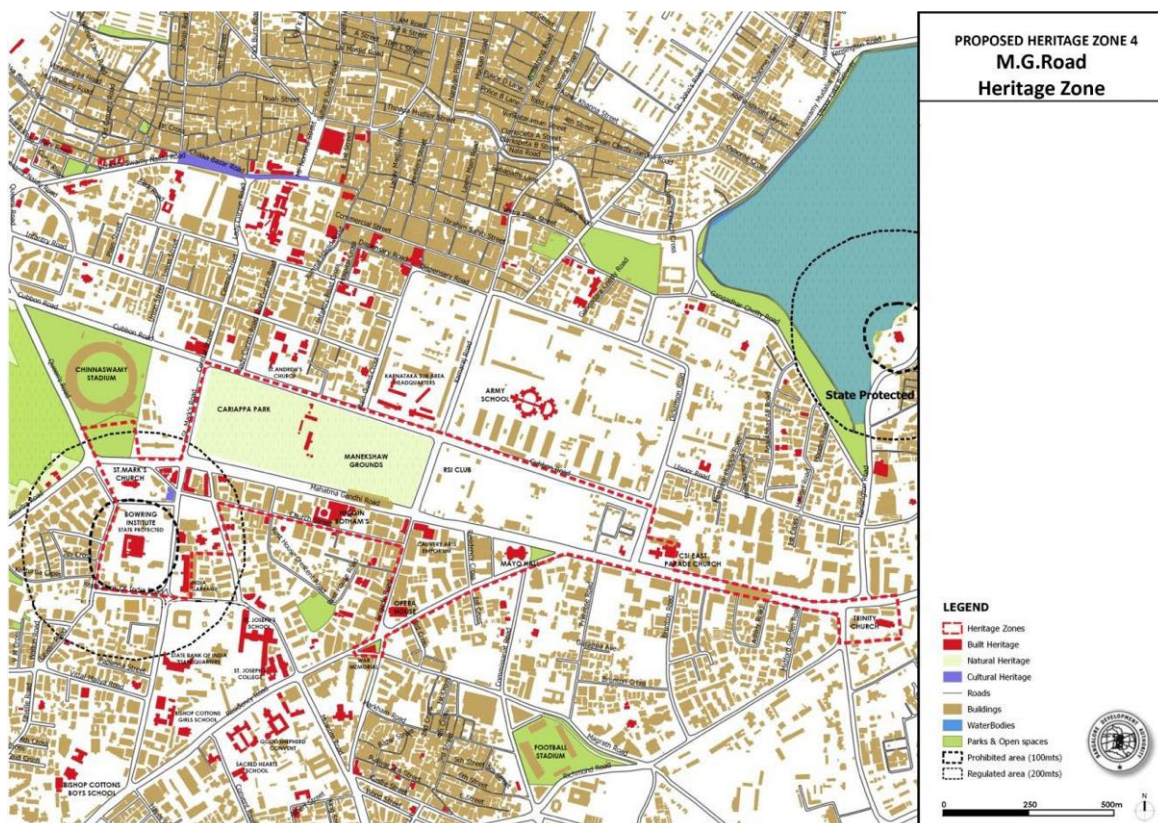


Figure 2-6: PD 1 Shivajinagar Heritage Zone

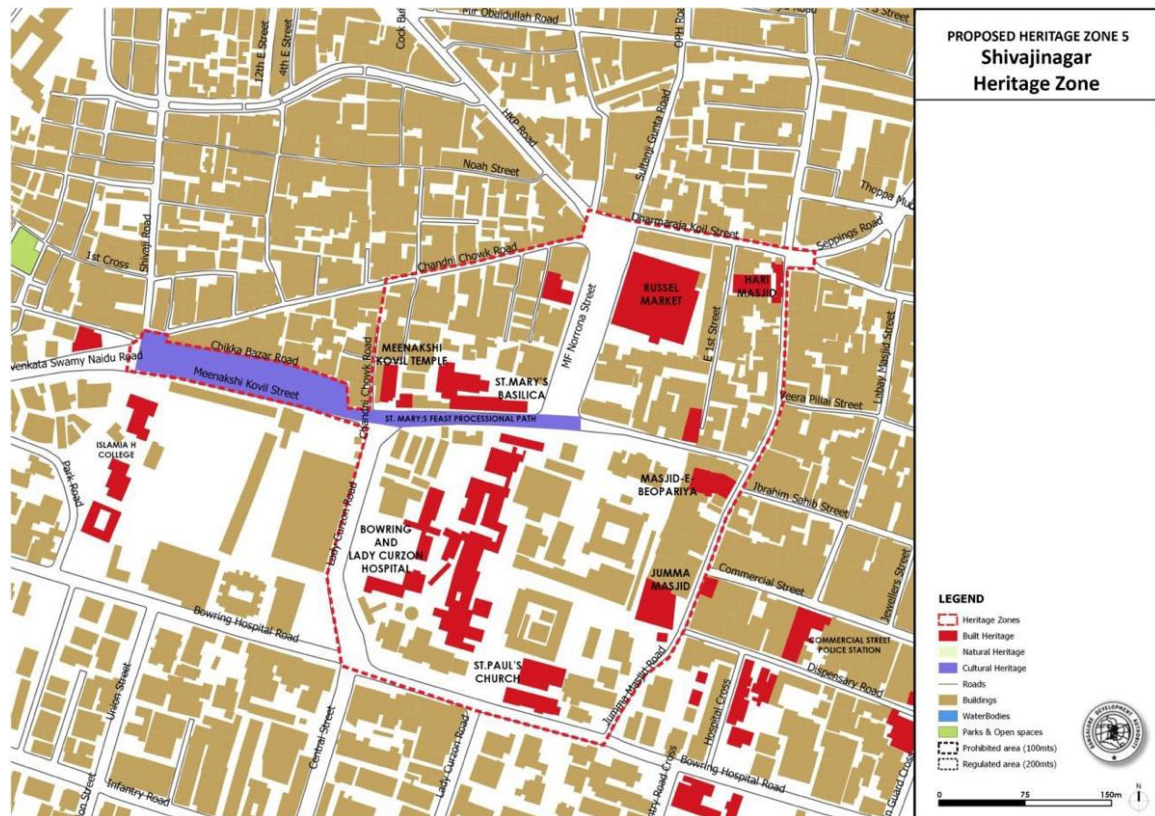


Figure 2-7: PD 1 Cleveland Town Heritage Zone

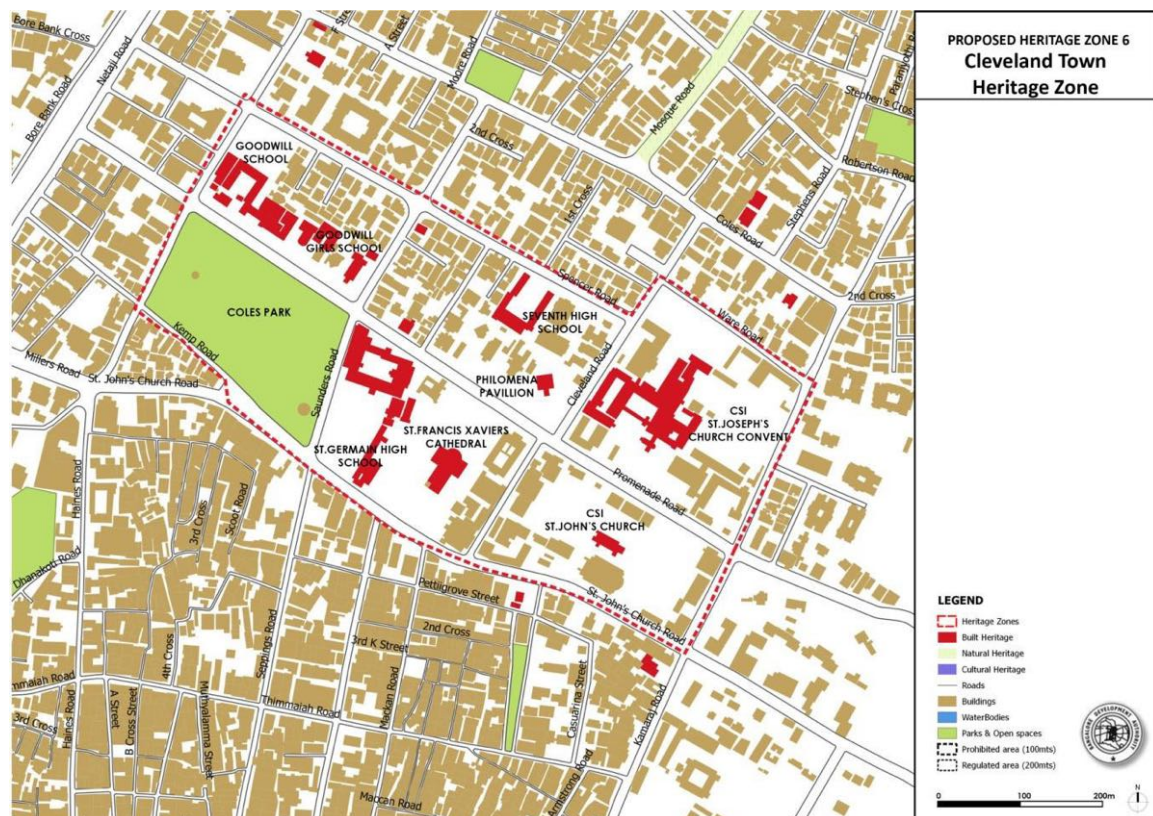
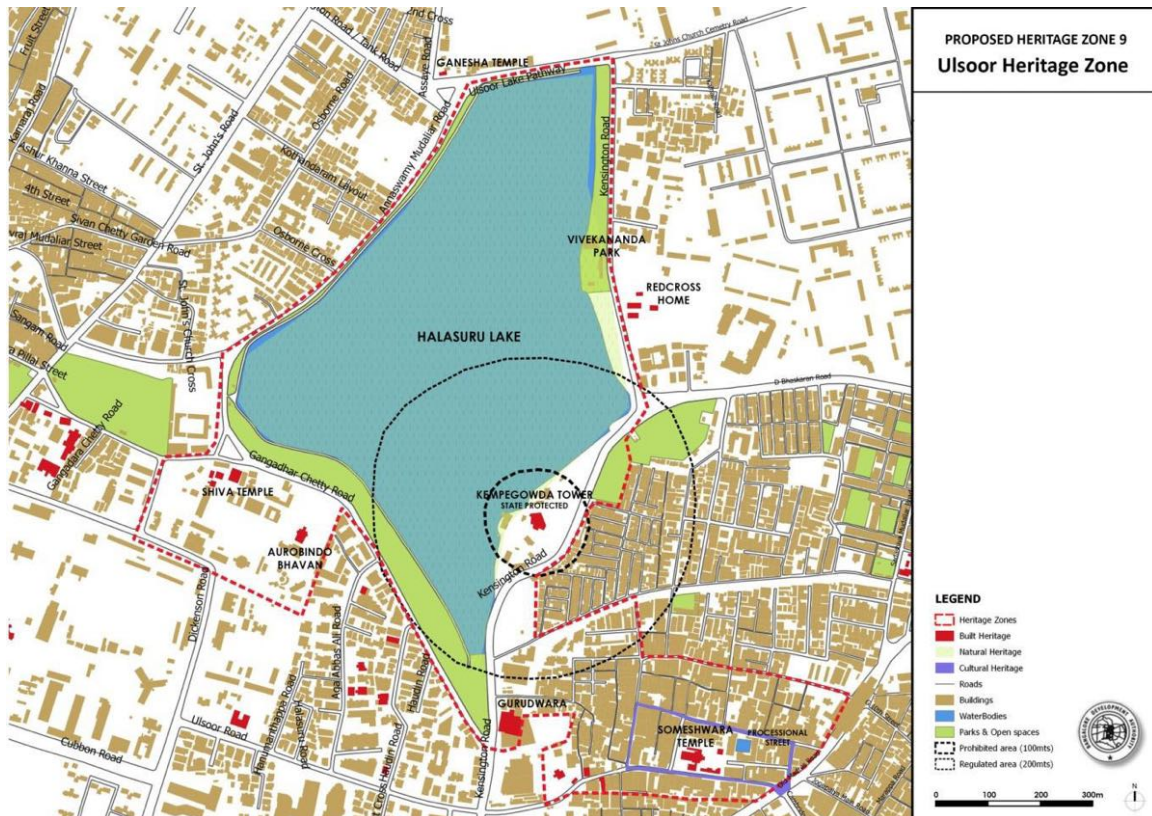


Figure 2-8: PD 1 Ulsoor Heritage Zone



17. **Disaster & Hazard Mitigation Plan for Pette Area:** Pette is highly dense both in terms of population and building density, and is at high risk to Disaster, Fire, & Emergency Situations, posing risk to Human Safety and Economic Losses. It therefore proposed that Disaster & Hazard Mitigation Plan (DHMP) for Pette Area should be prepared. It is proposed that a mini-fire station at Pette Area to be developed. The DHMP may look into but not limited to:

- Providing Means of Access to Emergency Services
- Facilitating Easy Evacuation of Local People (residents and working people)
- Providing Infrastructure/ facilities like Fire Hydrants, Assembly Areas, mini-fire stations, provision for Ambulance, etc
- Imposition of Certain Restricting posing risk to Humans and Economy
- Circulation Pattern/ Defined Movement of Vehicular Traffic and Non-Vehicular Traffic.
- Stations Area/ Accessibility Improvement Plan
- Upgradation of Physical Infrastructure (Development roads, underground cabling of power lines, telecommunication lines, Disc TV/ DTH cables, optic fiber, etc.
- Parking Plan & Development of MLCP
- Time Restrictions on carrying out certain activities and business, etc
- Any other aspect that may be found relevant and require

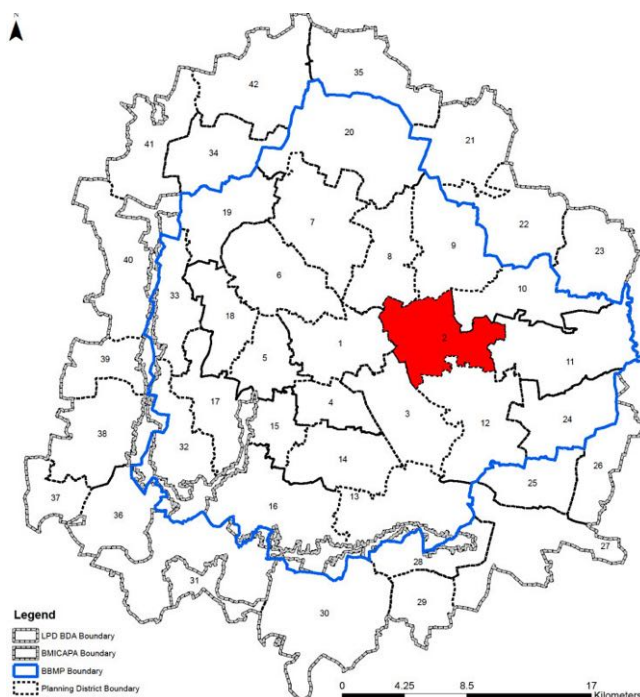
PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD1, Central District:



1. **Development of Public Transport Systems:** In addition to existing (including under implementation projects like Metro (Phase II)), the following are proposed
 - a. Light Rail/ Mono Rail at Varthur,
 - b. Light Rail/ Mono on Old Airport Road
 - c. Light Rail/ Mono on Bellary Road
2. **Development of Intermodal Interchange Stations:**
 - a. Cantonment Railway Station
 - b. Trinity Circle
3. **Accessibility Improvement Plans for stations and educational institutions.**
4. **Junction Improvement Programme (JIP):**
 - a. Trinity circle junction,
 - b. Shoolay circle junction,
 - c. Lalbagh main gate junction,
 - d. Minerva circle junction,
 - e. Pottery circle junction,
 - f. Queen's Statue circle junction,
 - g. Uppalpet police station junction and
 - h. Corporation circle
5. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:**
 - a. Vidhan Soudha-Cubban Park-High Court Area
 - b. CBD area
 - c. Petta Area
 - d. Shivaji Nagar
 - e. Market Areas like City Market, KR Market, Russel Market, and others,
 - f. Corporation Circle/ Hudson Circle – Mysore Bank Circle Road Stretch
 - g. SP Road Area
6. **Area Redevelopment:** Following areas are proposed to be taken up under Area Redevelopment:
 - a. Pette Area
 - b. Kalasipalyam (including Extension) Area
 - c. City Market Area
 - d. Shivaji Nagar
 - e. Shultangunta
 - f. Sampangi Rama Nagar
7. **Preparation of Slum Redevelopment Plans**
8. **Preparation of Heritage Area Protection and Conservation Scheme**

3.PD 02: INDIRANAGAR - KAGADASAPURA



Population (2011 Census): 4,24,517

Area of PD: 3022.62 ha

Wards in PD: 10

Gross Density: 140PPH

Kagadasapura - Indiranagar (PD 2) is located in the core of the BMA. It is characterized by presence of large public sector enterprises, planned residential layouts, DRDO Township and Tech Parks.

The RMP2031 proposes to retain the residential characteristic by restricting further commercialisation of areas such as Indiranagar and Domlur and Transport Integration.

1. The Indiranagar -Kagadasapura comprises of 10 wards, - and covers parts of West, East and South zone of BBMP of 10 wards namely Benniganahalli (50), C.V.Raman Nagar (57), Hosathippasandra (58), Maruthiseva Nagar (59), Sarvagna Nagar (79), Hoysala Nagar (80), Vignana Nagar (81), Jeevanbhima Nagar (88), Jogupalya (89) and Dommalur (112); all falling within the Bangalore East administrative zone of BBMP.
2. Public sector enterprises like BEML, ISRO, NAL, HAL, and Defence area along with Commercial Area of Indira Nagar/ Domluru, and Tech Parks like Bagamane, World Centre, RMZ Infinity Tech Park etc are the major employment centres within this planning district.

A. EXISTING STATUS

Demography

3. As per Census 2011, PD has 4,24,517 inhabitants, which has increased by 27.41% from 2001 (3,33,189) and there are 189,299 (44.59%) resident workers. There are 1,11,146 households (2011), with Avg. Household size being 3.84, which is lower than BMA (4.01). The gross density is 140 pph, whereas the average residential density is 423 pph. The gross density is highest in Jogupalya ward (371 pph) and least in Vignana Nagar ward (99 pph).

Industry and Commerce

4. Many of the colonial-era military bases are now defence owned lands. The fabric of the area post-independence was also shaped by the setting up of Public Sector Units such as BEML, HAL, NAL & now defunct NGEF. The strategic location of the PD between the CBD and Whitefield, and development of metro has transformed it from being defence & residential

area to shopping destination of the city. BEML, HAL & NAL, ADA, ITC Factory, Bagamane Tech- park, RMZ Infinity Tech Park, Bagamane World Technology Centre, etc are the major employment centres within PD.

5. The commercial establishment on CMH road, Indiranagar 100feet road, New Thippasandra Road, Dodda Banasawadi Main road, Gopalan Mall, provides employment in commercial activities. Also, Vegetable Markets in Indira Nagar, HAL, Cox Town, Domluru, Jeevan- Bima Nagar, Kaggadasapura, etc provide employment in unorganised sector.

Land Use

6. Residential land use is predominant use with ~33% total PD area being used for residential purpose. Public-Semi Public Use (mostly Defence), with large scale government and defence establishments, religious buildings, and educational institutions, is the second predominant use accounting for ~26%. Transport and Communication Land Use accounts for around 14% of the PD area. The vacant land use accounts for 8.8% of total area, which indicates the potential infilling of population/ other activities in near future. The commercial land use accounts for 4.58% which is more that Parks and Open spaces accounting for 2.73% of total PD area.
7. **Figure 3-1** and **Table 3-1** present the Existing Land Use Map and Existing Land Use Analysis respectively

Figure 3-1: PD 2 Existing Land Use Map

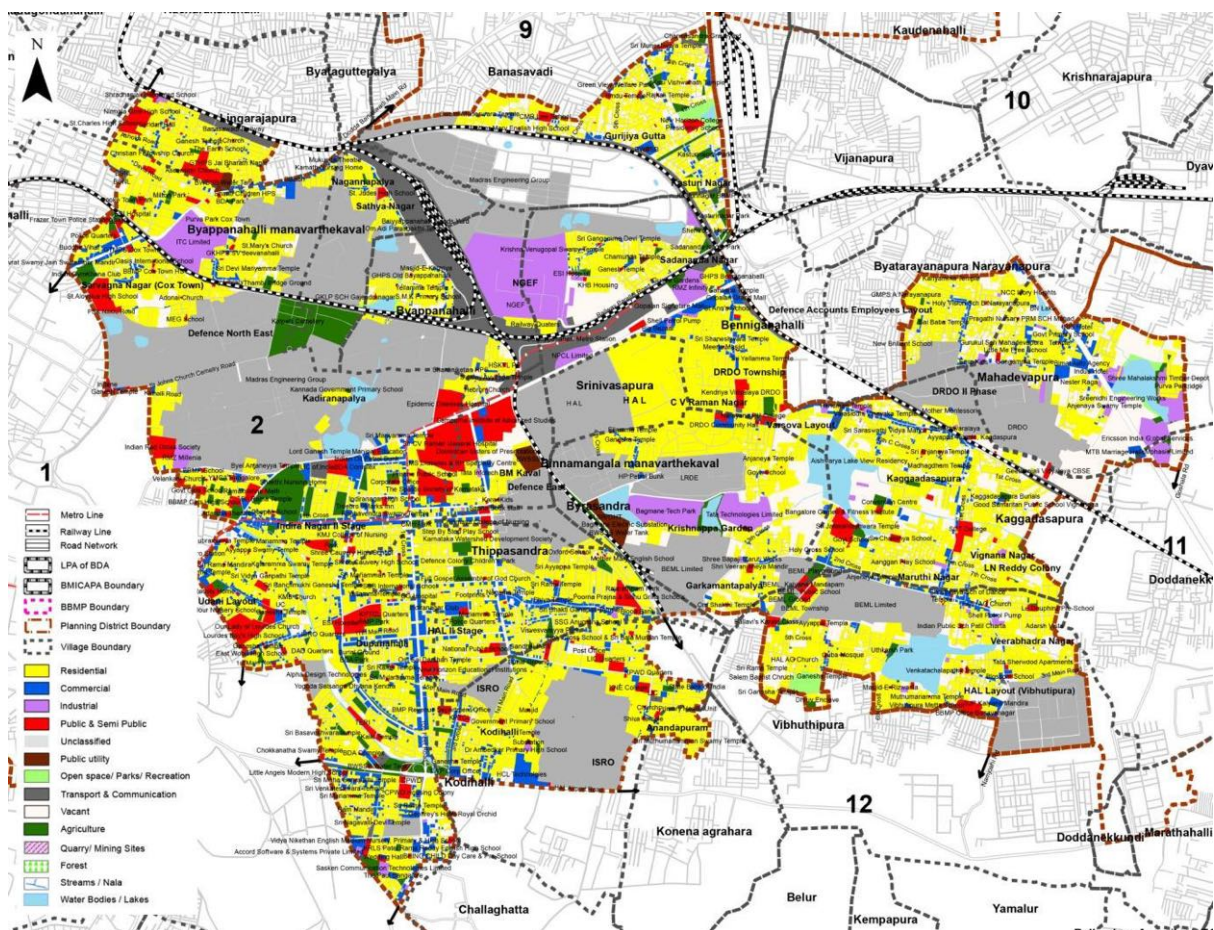




Table 3-1: PD 02 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	1000.62	33.10
Commercial	137.86	4.56
Industrial	106.46	3.52
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	113.66	3.76
Unclassified	789.54	26.12
Public Utility	10.39	0.34
Parks & Open Spaces	79.34	2.62
Transport Communication	422.91	13.99
Vacant	280.22	9.27
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	8.97	0.30
Water Bodies	72.64	2.40
Total	3022.62	100.00

Housing and Slums

8. Residential areas are characterized by planned residential layouts - HAL Layout, Indira Nagar, Jeevan Beema Nagar, Domaluru, Thippasandara, DRDO Township, Kaggadaspura, CV Raman Nagar, etc. The total number of households residing in residential areas of the PD is 111146 (Census 2011), with 424517 inhabitants.
9. There are 42 slums in this PD, and of which 20 slums are notified. Sarvagna Nagar Ward (ward no 79) with 11 slums has the highest number of slums. The population residing in these slums is 44317 (10.4% of the total PD population). Annexure 1 presents the details of the slums.

Traffic and Transportation

10. Old Madras Road, Old Airport Road, Outer Ring Road, Indiranagar 100 ft Road, Suranjan Das Road and Dodda Banasawadi main road are the major arterial roads passing through the PD having heavy traffic movement.
11. Two railway lines passes through the PD. Baiyappanahalli Railway Yard, Baiyappanahalli Railway Station and Banaswadi Railway Station are located on these railway lines. Baiyappanahalli Railway Yard is proposed to be developed as world class railway station to decongest City railway station. Accessibility to it is the major concern due to developments in surrounding is at different levels at which different transit systems are positioned.
12. Metro services are available and easily accessible, the existing Phase – I passes through this PD (with 3 stations of Purple line). The construction of proposed extension to Whitefield and Phase –II the stretch starting from KRPuram to Silk Board, along the Outer ring road; part of which falls inside this PD (2 stations) is ongoing.



13. One BMTC Depot, two BMTC bus stands - Domlur and Jeevan Beema Nagar, one Narayanapalya Bus station and one KSRTC Satellite Bus Stand. The proposed world class railway station needs to be integrated with Mono & BMTC bus service for multi-modal integration for better passenger transport.
14. The major arterial roads in this PD are Swami Viveknanda road/ Old Madras Road, Old Airport Road, Indiranagar 100 ft Road, Suranjan Das Road and Dodda Banasawadi that see heavy traffic movement.
15. Critical junctions are Domlur Flyover, Baiyappanahalli Junction/ NGEF Junction, Swami Vivekanand Junction, BEML Junction, Vignana Nagar Junction (near bus stand), Indian Oil Bridge on Doda Banaswadi Main road, HAL.

Physical and Social Infrastructure

16. As per BWSSB, the percentage of metered water supply connections in this PD are 39.4% and percentage of metered sewage and sanitation connections are 40.2%.⁵ As per BBMP, there are 1 Bio-Methanation Unit (BMU), 9 Dry Waste Collection Centres (DWCC) and 1 leaf litter are located in this PD.⁶ As per KPTCL, there are 5 number of 66kv substations.
17. Social infrastructure in this PD; there are around 155 schools and number of educational and research institutions such as the Dr. Ambedkar Institute for Management Studies, Daphne's International Teachers' Training Institute, SGT Collage, CMR Law School, Jain Collage, New Horizon collage, etc. Further, there are 29 healthcare facilities (Government and private health centres/ hospitals) with a total of 842 beds which includes ESI Hospital Chinmaya Mission Hospital, Isolation Hospital, etc. Though there is no Fire station within the Planning district, there is one graveyard - Laxmipura Graveyard.

Park and Open Spaces

18. There are several Parks and open spaces primarily being neighbourhood parks. The large scale defence & public sector enterprises are acting as lung spaces. Defunct NGEF has large green cover.

Lakes and Drainage

19. Bagmani/ Melina Kere, Kaggadasapura/ Byrasandra Kere, Kelagina Kere, Mahadevpura Kere/ Nakkundi Kere and Vibhutipura Kere (also called L B Sastry Nagar lake) are the existing lakes.
20. There are several areas which are low lying and flood prone. Some of them are - south east of Kaggadasapura, south of Vibhutipura Lake, north of LCA complex, Saraswatipuram, Shirdi Sai Baba Mandir Road, 2nd cross road south west of Baiyappanahalli Goods Yard, west of the Baiyappanahalli metro Station and the Chinnapana Layout (near Mahadevapura Lake).

Heritage and Culture

21. There are 30 sites of heritage value; such as the Red Cross Home, Chokkanathaswamy Temple, Murphy Town Market & Fraser Town Police Station amongst others. Cooke Town & Cox Town area were part of residential areas of British military base which has old-world

⁵ BWSSB, 2014

⁶ BBMP, 2015

character of bungalows, good roads & parks. There are urban extensions centered around on temples & revenue villages, such as Ulsoor, Doddakunte & Binnamangala.

22. Several planned residential layouts were developed after independence which include HAL Layout, Indiranagar, New Thippasandra, Domlur, Konena Agrahara, C V Raman Nagar, DRDO Township, Kasturi Nagar, etc.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: REDEVELOPMENT, STABILISATION, TRANSIT INTEGRATION AND ENVIRONMENT PROTECTION

PROPOSALS

1. The governing principal is to maintain the sanctity of the residential zone by stabilizing the commercialization of the residential areas, Integration of Public Transport Systems and protection of lakes and streams.
2. The Proposed Land Use Map and land use analysis is presented in **Figure 3-2** and **Table 3-2** respectively.

Figure 3-2: PD 2 Proposed Land Use Map

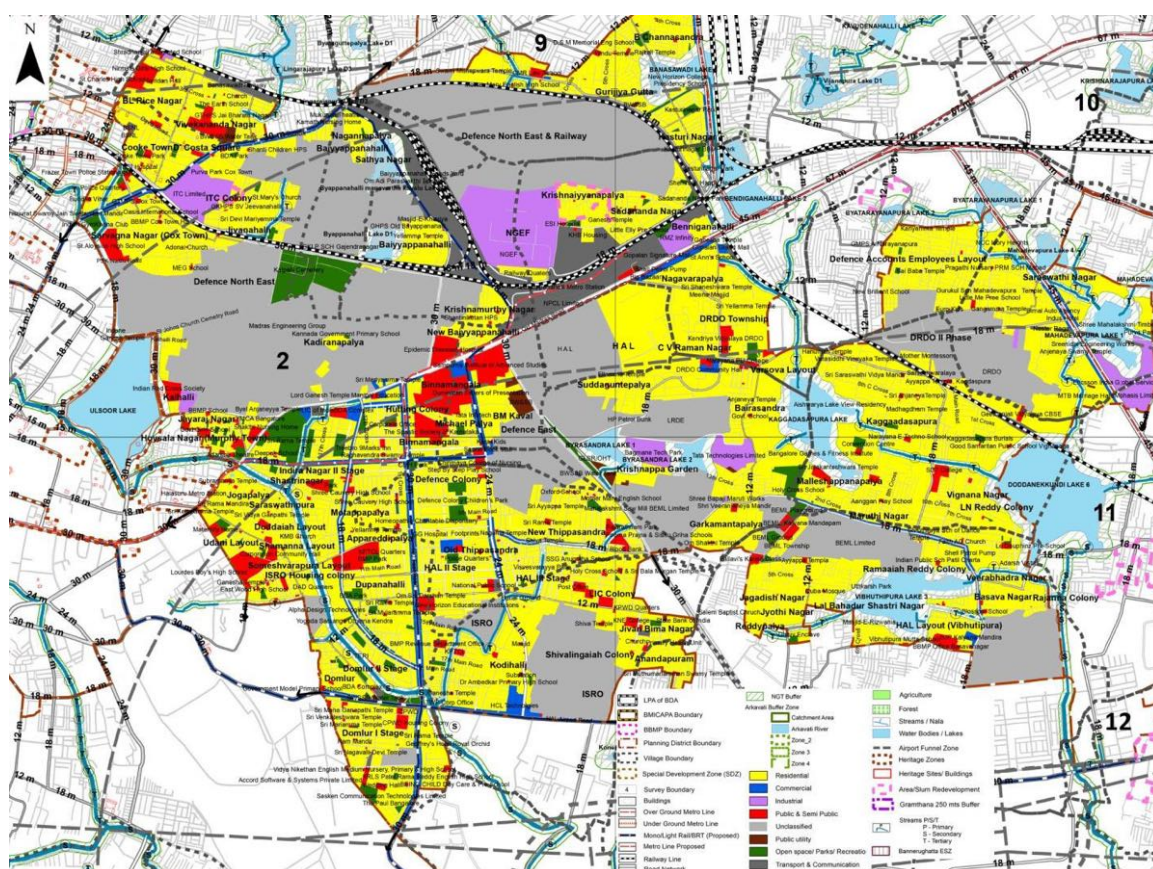




Table 3-2: PD 02 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1181.21	42.21
Commercial	44.22	1.58
Industrial	86.56	3.09
Public & Semi Public	99.38	3.55
Unclassified	914.55	32.68
Public Utility	7.63	0.27
Parks / open spaces	67.92	2.43
Transport & Communication	363.35	12.98
Forest	0.00	0.00
Streams	7.30	0.26
Water Bodies	56.46	2.02
NGT Buffer	194.02	6.93
Total Developable Area	3022.62	108.00
Agriculture	0	-
Total PD Area	3022.62	-

3. In order to improve the accessibility to public transport systems, it is proposed to have first and last mile connectivity through walkability/ the Non-motorized transport (NMT) around the Metro stations and railways stations.
4. The RMP2031 recognizes the present status of slums and the potential for in-situ (to the extent possible). Redevelopment of Slums and is proposed to be taken up.
5. Re-development of areas like Bennigana Halli, Nagayana Palya, Sathiya Nagar, Byrasandra, Kaggadasapura, Virabhadra Nagar, BMK Nagar are proposed to be taken-up on priority.
6. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas for Informal activities/ Street Vending and detailed upgradation plans for such areas/ roads/ streets are prepared.
7. To improve the public transport share it is proposed to develop Mono Rail/ light rail on the intermediate ring road and the stretch within this planning districts includes Intermediate ring road (from EGL Business Park till Domaluru Flyover) Indiranagar 100 ft road, CMH Road, Indiraa Nagar 80ft Road (Kodihalli Main Road), meeting Swami Vivekananda Metro Station, and connecting proposed World Class Station at Baiyapanahalli.Railway Station along Baiyapanahalli road and then running along the Dodda Banaswadi Main Road and pottery road then continues towards Cantonment Railway Station. Stations proposed are near EGL Business Park, Gangarams Bus Stop, Domaluru Flyover Bus, Doopanahalli Main Bus Stop, Indiranagar 6th Main Road, Indira Nagar Bus Stop, Chinmaya Mission Hospital, Swami Vivekananda Metro Interchange Station, Baiyapanahalli Railway Station (Yard), Maruthi Sevanagar, Jai bharaat Nagar, ITC Factory and Indian Gymkhana.
8. The RMP2031 proposes 4 Intermodal Interchanges which includes Swami Vivekananda Metro Station, Domaluru Interchange, Byapannahalli Metro Station and proposed World Class Byapanahalli Railway Station.

9. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed network connectivity enhancement:
- Signal Free & Pedestrian Friendly Old Madras Road: It is proposed to develop Old Madras as a signal free and pedestrian friendly corridor from Ulsoor Lake to KR Puram Flyover so as to provide through and seamless traffic movement and providing pedestrian crossing at critical points – like at RMZ Millenia, Junction of Thamarai Kannan Rd, Indira Nagar Bus Depot Junction, Indiranagar BDA Complex (Double Road Junction), Indiranagar 100ft Rd Junction, Isolation/ TB Hospital, Swami Vivekananda Metro Station, NGEF Junction, Srinivaspura Bus Stop/ Baiyappannahalli Metro Station, Suddaguntepalya Junction, Benniganahalli Bus Stop, etc. This is to be done through segregation of vehicular traffic and pedestrian facilities, provision of elevated road/ vehicular underpasses and geometric improvement of junctions.
 - Connectivity between Kaggadasapura and Outer Ring Road: It is proposed to connect PWD road with ORR by connecting DRDO Phase 2 Township road with Road terminating at DRDO Phase 2 Township Boundary (Ranganatha Layout).
 - Connection between OMR and Proposed World Class Railway Station at Baiyappannahalli Railway Station: It is proposed that a existing NGEF Road be widened and extended to connect Baiyappannahalli Road.
 - Redevelopment of Dadda Banasawadi Flyover/ Cloverleaf: It is proposed that Dodda Banaswadi Flyover/ Cloverleaf be redeveloped to widen and include slip arm connecting Baiyppannahalli Road providing connectivity/ access to proposed world class railway station.
 - Overall Geometric Improvement of Certain Roads: RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads.

Figure 3-3: PD 2 Proposed Road Connection DRDO to ORR

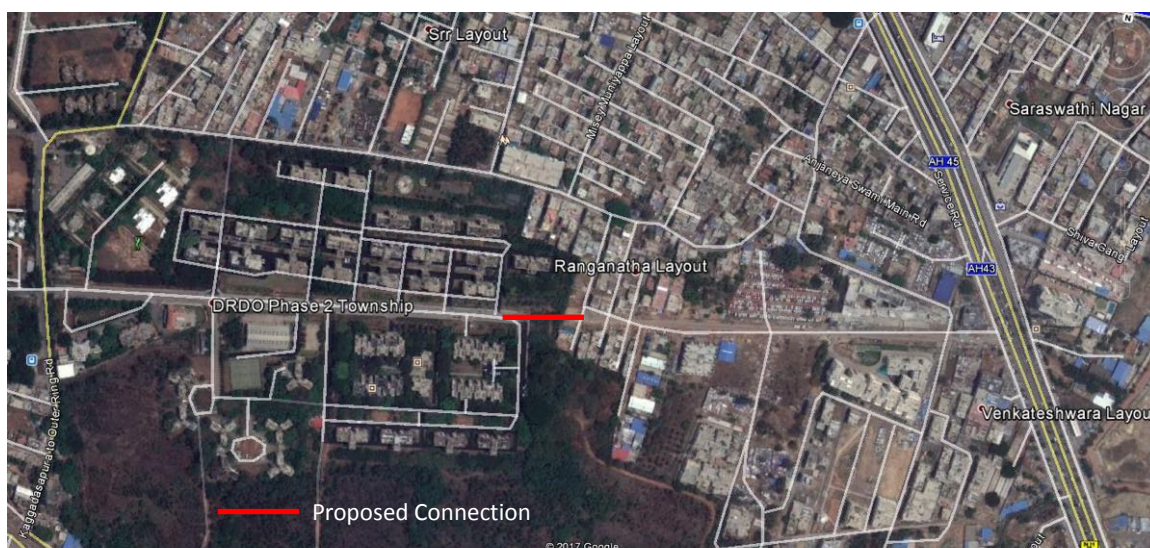


Figure 3-4: PD 2 Proposed ROB for Connecting Kaggadasapura Main Road



Figure 3-5: PD 2 Proposed Road at NGEF junction



Figure 3-6: PD 2 Proposed Redevelopment of Dadda Banasawadi Flyover





10. RMP2031 proposes that a detailed parking plan be prepared for Indiranagar Double Road (and cross roads), Indiranagar 100ft road (including cross/ main road), CMH Road (and cross roads), Kodihalli Main Road (and cross roads), New Thippasandra Road (and cross roads) and Thippasandra Market Area, Dodda Banasawadi Main Road, BEML Main Road/ KH Main Road.
11. The RMP2031 proposes the lake protection and rejuvenation of Bagmani/ Melina Kere, Kaggadasapura/ Byrasandra Kere, Kelagina Kere, Mahadevpura Kere/ Nakkundi Kere and Vibhutipura Kere (also called L B Sastry Nagar lake), and its natural streams by preparing lake and surrounding area development plan.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD2 Indiranagar - Kaggadasapura District:

1. Road Development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Signal Free & Pedestrian Friendly Old Madras Road
- c. Connectivity Improvements Projects:
 - i. Kaggadasapura and Outer Ring Road
 - ii. CV Raman Nagar and Geethanjali Layout/ Indiranagar
- d. Redevelopment of Dadda Banasawadi Flyover/ Cloverleaf
- e. Overall Geometric Improvement of Certain Roads
 - i. Baiyappanhalli Main Road (including completion of flyover over railway line),
 - ii. Kaggadasapura Main Road,
 - iii. Namjoshi Main Road,
 - iv. GM Palya Main Road,
 - v. BEML Main Road,
 - vi. Varthur Road,
 - vii. Nagavarpalya Main Road,
 - viii. PWD Road + 4th Main Road,
 - ix. A Narayanpura Main Road,
 - x. New Thippasandra Main Road,
 - xi. Jogupalya Main Road, and
 - xii. Main Channel Road.

2. Development of Public Transport System:

- a. Metro Phase II: MG Road to Gottigere Link
- b. LRT/ Mono Rail: Trinity to Varthur
- c. LRT/ Mono Rail: Intermediate Ring Road

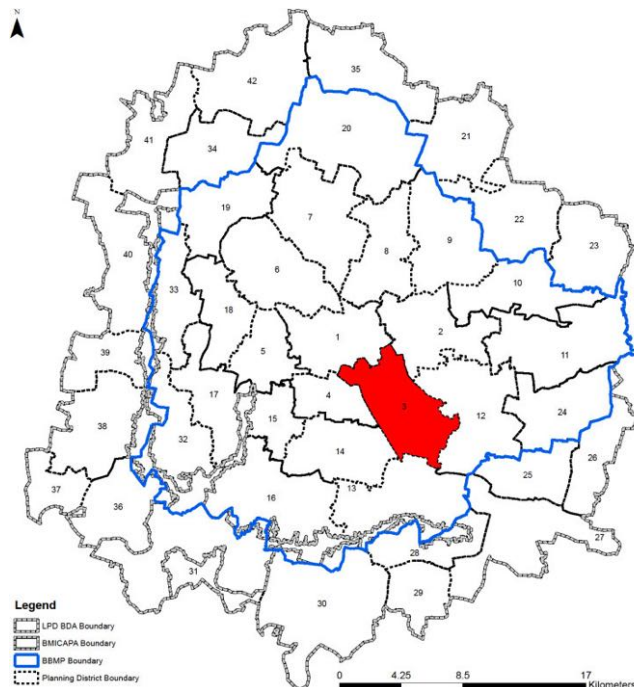
3. Development of Intermodal Interchange Stations: Four integrated Intermodal Passenger Stations are proposed to be developed for easy of passenger movement and improved public transport efficiency.

- a. Swami Vivekananda Metro Station
- b. Domaluru Interchange



- c. Byapannhalli Metro Station
 - d. Proposed World Class Byapanahalli Railway Station
4. **Junction Improvement Programme (JIP):** Domlur junction, CMH junction and Baiyapanahalli Junction are identified for Junction Geometric Improvement for smoother vehicle movements, pedestrian and NMT facilities.
5. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:** It is proposed that a Parking Development and Management Plan be prepared for following commercial areas:
 - 100 ft road, Indiranagar
 - 80 ft road, Indiranagar
 - Thippasandra Market Area
 - New Thippasandra Road (and cross roads)
 - CMH Road
 - Kodihalli Main Road (and cross roads),
 - Dodda Banasawadi Main Road,
 - BEML Main Road/ KH Main Road.
6. **Area Redevelopment:** Following areas are proposed to be taken up under Area Redevelopment:
 - Bennigana Halli,
 - Nagayana Palya,
 - Sathiya Nagar,
 - Byrasandra,
 - Kaggadasapura,
 - Virabhadra Nagar,
 - BMK Nagar
7. **Preparation of Slum Redevelopment Plan**
8. **Lake protection and rejuvenation:** It is proposed to prepare lake and lake area development plan for following lakes:
 - Melina Kere
 - Kaggadasapura/ Byrasandra Kere,
 - Kelagina Kere,
 - Mahadevpura Kere/ Nakkundi Kere and
 - Vibhutipura Kere (also called L B Sastry Nagar lake)

4. PD 03: AUSTIN TOWN-KORAMANGALA-HSR LAYOUT



Population (2011 Census): 3,80,778

Area of PD: 3083.02 ha

Wards in PD: 9

Gross Density: 124PPH

Koramangala planning district (PD 3) is located to the south of the Central business district of Bangalore. This planning district consists predominantly of residential areas like Koramangala layout and HSR layout, and public – semi public / unclassified areas.

The RMP2031 proposes to guide the development and redevelopment in the area and stabilize the commercialization, Environment Protection, Transport Integration and Disaster Mitigation.

1. The Koramangala planning district is located within the inner core of the city. The extent admeasures 3083.02 ha (30.83 sq km) and comprises of 9 BBMP wards – namely Agaram (114), Neelasandra (116), Shanthi Nagar (117), Vannarpet (115) in Bangalore East zone, Aduodi (147), Ejipura (148), Koramangala (151), Jakkasandra (173) wards in Bangalore South Zone of the BBMP and HSR Layout (174) falling within the Bommanahalli Zone of the BBMP.
2. Some major landmarks are in this PD are Holy Trinity Church, Johnson Market, St John's Hospital, Forum Mall and the Air Force Command Hospital.

A. EXISTING STATUS

Demography

3. As per Census 2011, PD 3 has 3,80,778 inhabitants, which has increased by 32.6% from 2001 (2,87,115) and there are 1,70,995 (44.9%) resident workers. There are 92,825 households (2011), with Avg. Household size being 4.10, which is lower than that of the BMA as a whole (4.01).
4. The gross density is 124 persons per hectare (pph), whereas the average residential density is 508 pph. The gross density is highest in Neelasandra (899 pph), and the least in Agaram (33 pph).

Industry and Commerce

5. The major employment in the Planning District is commercial - both retail and office space, and there are some small clusters of industrial areas in Neelasandra, Shanthi Nagar, Aduodi, Ejipura and Koramangala wards.

6. The markets and commercial centres in this PD are Austin Town BDA Complex, Richmond Town, Johnson Market, Koramanagala BDA Complex, Sony World Junction, Madivala Market and HSR Layout BDA Complex. The neighbourhood of Koramangala and its surrounding areas have today become a hub in its own right as the nucleus of Bangalore's start-up community. There are several clusters of IT offices centred on these start-ups, especially owing to its proximity to the CBD and Electronic City. The area also houses a very high number of restaurants and eateries. Commercial development has come up along several roads in this neighbourhood.

Land Use

7. The predominant land uses are Public Semi Public-Unclassified and residential use covering 32.6% and ~23.3 % of area respectively. The Public –semi-public land use zone consisting of 8.6% area mainly consists of government offices. The area under transportation is ~9.5%. The total area under commercial land use is ~5%. The area under water bodies and streams is 6.28 % of the total area. **Figure 4-1** and **Table 4-1** presents the Existing Land Use and Existing Land Use Analysis for PD 3.

Figure 4-1: PD 3 Existing Land Use Map

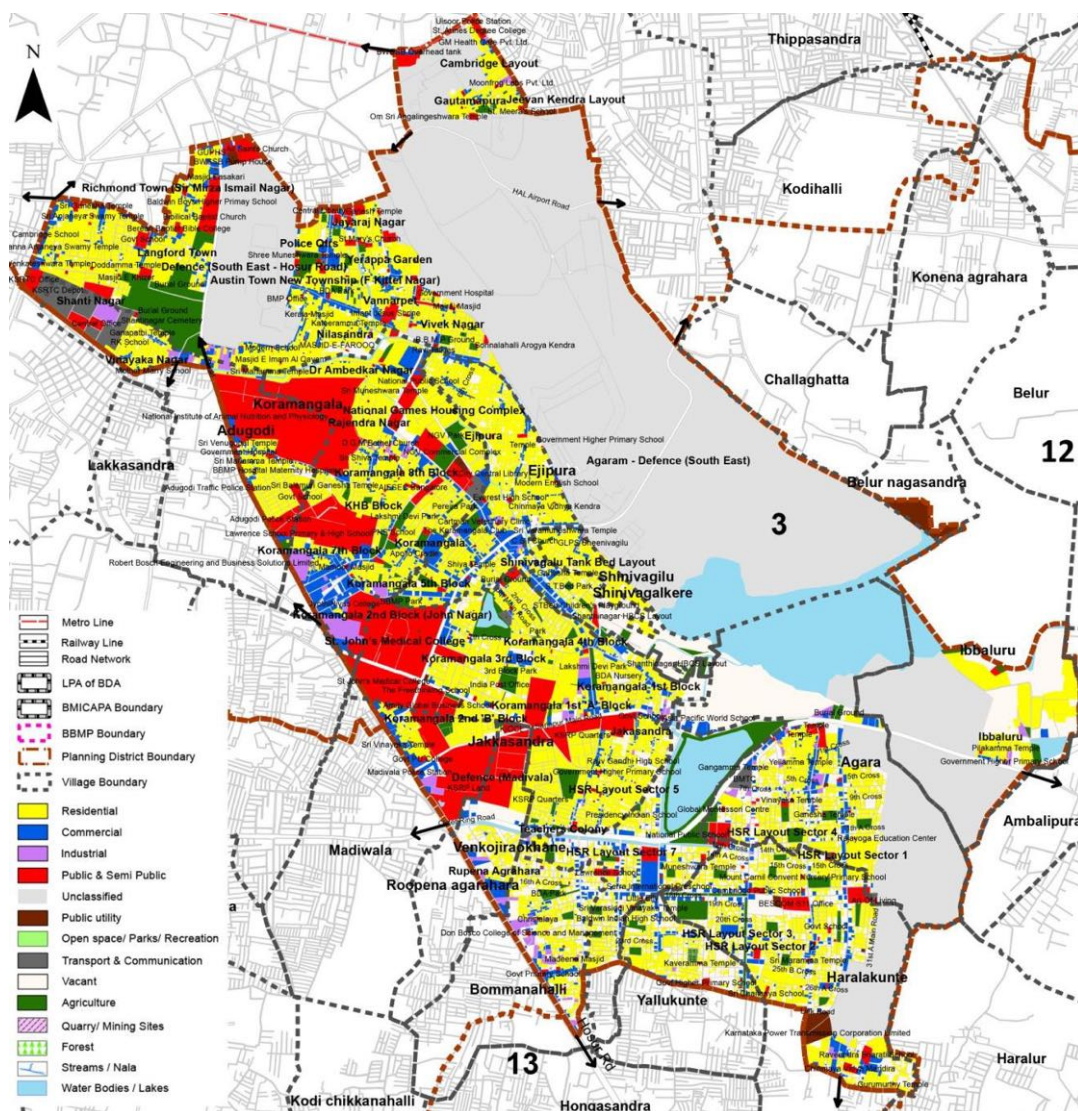


Table 4-1: PD 03 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	720.26	23.36
Commercial	155.09	5.03
Industrial	34.55	1.12
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	267.52	8.68
Unclassified	1005.03	32.60
Public Utility	15.06	0.49
Parks & Open Spaces	102.58	3.33
Transport Communication	294.95	9.57
Vacant	294.32	9.55
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	18.38	0.60
Water Bodies	175.25	5.68
Total	3083.00	100.00

Housing and Slums

8. Residential areas to the north western part of the planning district, including Richmond Town and Xavier layout had been developed adjacent to British military bases. To the south of this PD, Koramangala layout was formed by BDA in the 1960s and consists of a variety of housing types, from dense mixed settlements such as Neelasandra, Ejipura, Adugodi to middle-income localities to high-end residences and apartment complexes. The southernmost part of this planning district, contains a more recent BDA layout – HSR Layout and it's surrounding, as well as dense mixed settlements west of Agara Lake.
9. There are 26 slums in this PD with 57,974 residents (i.e 15% of the total population residing in the PD). Of these slums, 9 slums are notified slums while 17 is a non-notified.

Traffic and Transportation

10. Traffic congestion is one of the pressing issues of this Planning District; Silk Board, Madiwala Check Post, Ejipura, Shoolay Circle and Sony World Junction – some of the major congested junctions, which see traffic congestions.
11. PD is well-connected by BMTC bus services. The Phase 2 metro running along Hosur Road and Outer Ring Road is expected increase public transport network and reduce the congestion on certain roads. Vellara Junction, Longford Town, Silk Board Metro Station, HSR Layout (all on Hosur Metro Link) and HSR Layout Venkatapura, Agara Lake and Ibblur Stations (all on ORR) are the location for proposed metro stations within this planning district.
12. Kengal Hanumanthaiah Road (Double Road), much of the Intermediate Ring Road, Hosur Road (defining western boundary of PD), Old Airport Road and Richmond Road in the north, Sarjapur Road in the south, Madivala Road, Ganapathi Temple Road, Lower Agaram Road, Mother Teresa/ Masjid Road are the major arterial roads that pass through this Planning District.



Physical and Social Infrastructure

13. As per BWSSB, the water supply network is ~ 476 km in length, whereas sewerage network length is about 352 km. About 41.4% of water connections are metered and 41.9% of households have sewerage connections.
14. There are 128 schools and several large institutions such as the National Dairy Research Institute, St John's Medical College, the National Games Village and educational institutions of repute such as Jyoti Nivas College and NIFT present in this PD. The PD has 4 Government Health Centres & Hospitals and 20 private hospitals, with a total of 1678 beds. Prominent hospitals in this PD are the Air Force Command Hospital, St John's Hospital and Narayana Hrudayalaya.

Park and Open Spaces

15. There are several neighborhood parks & open spaces in the planned layouts. Prominent parks and open spaces being the Police Park & Grounds in Venkatapura, St John's Medical College and Grounds, Freedom International School Park, Wipro Park, Adugodi Police Ground & Koramangala Indoor Stadium.

Heritage and Culture

16. There are 45 sites of heritage importance; which includes Holy Trinity Church, Elgin Mills, Baldwin Boys High School with Lincoln Hall Chapel, Johnson Market, All Saints Church, Richmond Town Methodist Church, Frank Anthony Junior School, Wesley Tamil Church, Cathedral High School, St. Philomena's Hospital, St. Anne's Girls School, Command Hospital (Air Force), Infant Jesus Church and Basavesvara Temple.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DECONGESTION, TRANSIT INTEGRATION, REDEVELOPMENT, DISASTER MITIGATION

PROPOSALS

1. The governing principal is to stabilize the rapid commercialization of residential areas in this planning district, transport integration, environment protection, and redevelopment and disaster mitigation. The Proposed Land Use Map and Proposed Land Use Statement are presented in **Figure 4-2** and **Table 4- 2** respectively.
2. The RMP2031, acknowledging the fact that several residential neighborhoods within PD have been completely transformed into a commercial hub and is leading to congestion and difficulties to residential areas, proposes stabilizing and restricting further commercial developments by defining identified roads on which future commercial activities that can be allowed. Importantly, RMP2031 restricts any form of commercial development on residential roads having road width less than 12.2m.
3. To improve the public transport share, it is proposed to develop Mono Rail/ light rail on the intermediate ring road and Old Airport Road. It is proposed to develop stations on Mono/ Light Rail alignments at EGL Business Park, Ejipura Junction, Sony World Junction, Koramangala St John's Auditorium, Koramangala Water Tank, and St. Johns Hospital along Intermediate Ring Road and Command Hospital and Domaluru (Indian Oil Petrol Pump).

4. In order to improve the accessibility to public transport systems (proposed Metro Stations and Mono/ Light Rail Stations), and to have first and last mile connectivity through walk ability/ the Non-motorized transport (NMT) it is proposed to provide NMT/ Pedestrian facilities on existing road network leading to stations along the metro and mono/ light rail.
5. The RMP2031 has identified 6 critical road junctions that require geometric improvements for better and smoother traffic flow. They are Shoolay circle junction, Adugodi junction road, Madivala Checkpost, Silk board junction, Sonyworld junction Koramangala and Ejipura junction.
6. Re-development of areas like Ejipura, Jyoti nivasa, Veerakesari, Shakti Velu Nagar, Maya Bazar, Gajendranagar, Lakshman Rao Nagar, J.K.Pura, Thimmarayappa Garden, S.D.S Syanitorium is proposed to be taken-up.

Figure 4-2: PD 3 Proposed Land Use Map

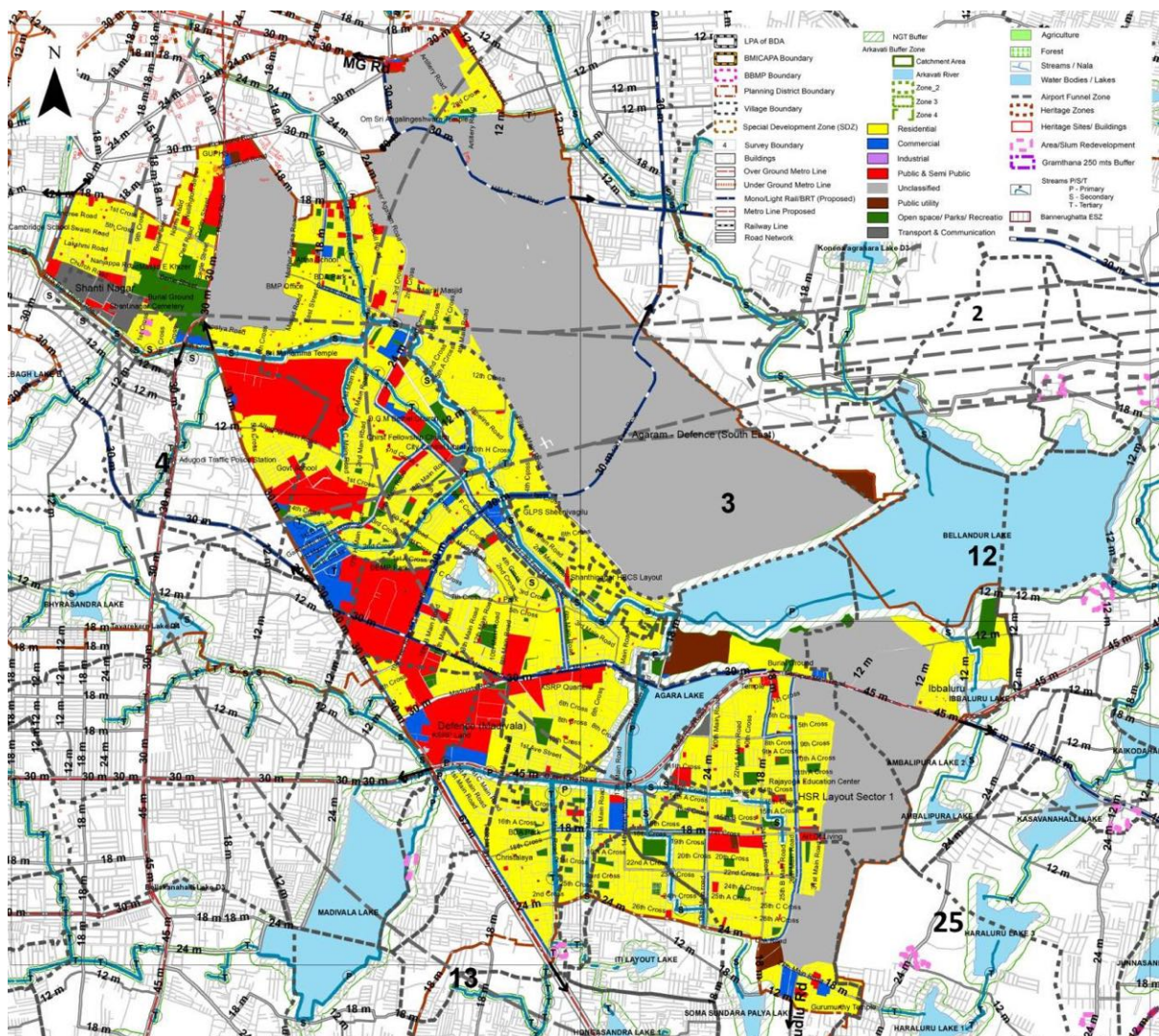




Table 4-2: PD 03 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	912.46	32.60
Commercial	70.99	2.54
Industrial	0.00	0.00
Public & Semi Public	256.54	9.17
Unclassified	1020.62	36.47
Public Utility	29.47	1.05
Parks / open spaces	92.63	3.31
Transport & Communication	351.56	12.56
Forest	0.00	0.00
Streams	17.44	0.62
Water Bodies	140.66	5.03
NGT Buffer	190.63	6.81
Total Developable Area	3083.00	110.16
Agriculture		-
Total PD Area	3083.00	-

7. The RMP2031 recognizes the present status of slums and potential for in-situ (to the extent possible) Redevelopment of Slums to be taken up.
8. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas/ streets for Informal activities/ Street Vending activities and prepares detailed up gradation plans for such areas/ roads/ streets.
9. The RMP2031 proposes the protection of catchment, Bellandur Lake, Agara Lake and their natural streams.
10. To improve green cover and provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
11. Some parts of Planning District 3 are prone to Urban Flooding while some areas are at fire risk. It is proposed that local area disaster and Hazard Mitigation Plan covering aspects related Urban Flooding, Fire, & Emergency Situations be prepared for areas like Koramangala, S.T Bed, Neelasandra, Ejipura, Hosur road, Lower Agaram covered by ward number 115, 116, 149, 151, 173 and 189.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD3: Austin Town - Koramangala - HSR .

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.



- b. Widening of Ejipura Main Road (using defence land), Madiwala Road and Lower Agaram Road.
- c. Connectivity Improvement Projects:
 - i. Development of link from Ejipura Junction (Srinivagilu) to Jakkasandra Cross on Sarjapura Road
- d. Overall Geometric Improvement of Certain Roads
 - i. Ejipura Main Road (including completion of flyover over railway line),
 - ii. Intermediate Ring Road
 - iii. Ganapathi Temple Road and Forum Mall and Surrounding Areas
 - iv. 1A Cross Road and 5th Cross Road (6th Block Koramangala)
 - v. Bazar Street
 - vi. Srinivagulu Main Road
 - vii. Anjepalya Road
 - viii. Lower Agram Road
 - ix. Madivala Road
 - x. Sarjapura Road
 - xi. 27th Main Road HSR Layout
- 2. Development of Public Transport System:**
 - a. Namma Metro:
 - i. Hosur Road Link
 - ii. Outer Ring Road
 - b. LRT / Mono Rail: Intermediate Ring Road
- 3. Development of Intermodal Interchange Stations:**
 - a. Madivala checkpost.
- 4. Preparation of Accessibility Improvement Plans.**
- 5. Junction Improvement Programme (JIP):** Critical junctions identified by RMP2031 for Junction Improvement Programme include:
 - a. Shoolay circle junction,
 - b. Adugodi junction road,
 - c. Madivala Checkpost,
 - d. Silk board junction,
 - e. Sony world junction Koramangala
 - f. Ejipura junction
 - g. Forum Mall Junction
 - h. St. John Junction
 - i. Koramangala Water Tank
 - j. Anepalya Junction
 - k. CMP Junction
 - l. Ejjipura Road and Srinivagulu Main Road T Junction
- 6. Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:** It is proposed that A Parking Development and Management Plan be prepared for following commercial areas:
 - a. Intermediate ring road
 - b. Commercial areas in the HSR Layout.



- c. Ganapathi Temple Road and Forum Mall and Surrounding Areas
- d. 1A Cross Road and 5th Cross Road (6th Block Koramangala)
- e. Bazar Street
- f. 27th Main Road HSR

7. Area/ Slum Redevelopment:

- a. Madivala Market Area Redevelopment
- b. Areas/ slums are proposed to be taken up under Area Redevelopment:
 - i. Ejipura
 - ii. Jyoti nivasa,
 - iii. Veerakesari
 - iv. Shakti Velu Nagar
 - v. Maya Bazar
 - vi. Gajendranagar
 - vii. Lakshman Rao Nagar
 - viii. J.K.Pura
 - ix. Thimmarayappa Garden
 - x. S.D.S Syanitorium

8. Preparation of Slum Redevelopment Plan

9. Physical Infrastructure

- a. Dry Waste Collection Centre: 18 Nos.
- b. Organic Waste Collection Centre: 02 Nos.
- c. Aggregators: 01 Nos.

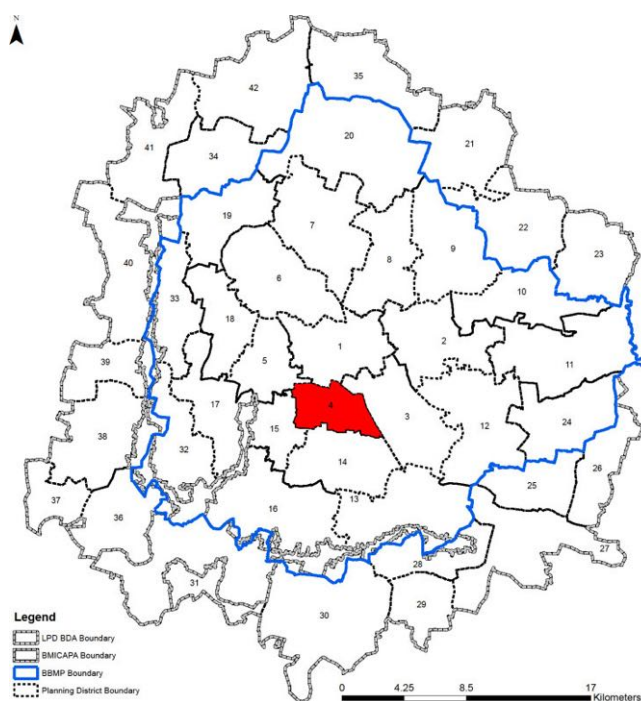
10. Disaster & Hazard Mitigation Plan:

- a. Urban Flooding Mitigation Plan for Koramangala, S.T Bed, Neelasandra, Ejipura, Hosur road, Lower Agaram covered by ward number 115, 116, 149, 151, 173 and 189.
- b. Development of Mini-Fire Station at Ejipura

11. Lake protection and rejuvenation: It is proposed to prepare lake and lake area development plan for following lakes:

- Agara Lake
- Bellandur Lake

5.PD 04: JAYANAGARA



Population (2011 Census): 3,46,593

Area of PD: 1481.9 Ha

Wards in PD: 10

Gross Density: 234PPH

Jayanagara Planning District 4 is located in the core of BMA, to the south of the Pete and Shivajinagar and to the west to Koramangala. It is popularly known to many as the origins of south Bengaluru. The Planning District is characterised by planned residential areas, education and health institutions, some of the city's major markets, industries, water bodies and a hierarchy of large and small open spaces.

The PD has undergone transformation in its character, from being predominantly a residential zone to a mixed use zone. This has large number of heritage sites which reflects the deep rooted history and culture existing within the PD.

1. The planning district comprises of 10 wards which include, Sunkenahalli (142), Visvesvarapuram (143), Siddapura (144), Hombegowda Nagar (145), Lakkasandra (146), Sudduguntepalya (152), Jayanagar (153), Basavangudi(154), Yadiyuru (167), and Byrasandra (169) and covers parts of West, East and South zone of BBMP.
2. Some of the important landmarks in the PD are: Lal Bagh, Yadiyur lake, Krishna Rao Park, Bull temple, National College, BMS College, Christ College, Nimhans, Karnataka Milk Federation, Mico Bosch, Shanti Nagar TTMC, Jayanagar 4th Block Market, Food Street at VV Puram, and Gandhi Bazar.

A. EXISTING STATUS

Demography

3. The PD has a population of 3,46,593 as per census 2011 and has a decadal growth rate of only 1.2% between the years 2001 and 2011. The PD has a HH size of 4.15 which is higher than the BMA average of 4.01. The resident workers in the PD total up to 1,46,270 with a workforce participation rate of 42.2% compared to 44.9% within BMA . The ward with the highest density is Siddapura (528 pph) and the ward with lowest density is Visvesvarapuram (131 pph).

Industry and Commerce

4. Commercial land uses account for 11.96% as per Existing Land Use 2015 which is high for an area initially planned as predominantly residential layouts. Commercial development is seen

along major roads, like KR road, DVG road, RV road, Mariayyapa Road as well as traditional areas like Gandhi Bazaar which was historically a market street. Traditional residential neighbourhoods like Basvangudi and Jayanagar have undergone transformation as many of the residential plots have converted their ground floor spaces into offices and shops, thus showing character of a mixed use zone. The major employment in the Planning District is commercial retail and office spaces.

5. Industrial land uses account for 4.73%. There are small clusters of industrial areas in Shanti nagar, Taverekere, Basavangudi, Thyagarajanagar and Yediyur. There are large industrial campuses along Bannerughata and Hosur Roads, housing the offices of Oracle and Mico Bosch and Karnataka Milk Federation. Two of the city's commercial hubs, which attract shoppers from all parts of South Bengaluru: Gandhi Bazaar and Jayanagar 4th Block are located here. Bangalore's oldest full-ledged mall, Forum, is also located in this Planning District. Other markets in this PD are VV Puram Market, Chikka Mavalli Market, Chamrajpet Market, Lakkasandra Market and Yediyur Market. Several Educational and Health facilities are also means of employment with the planning district.

Existing Land Use

6. Residential continues to be predominant land use (37.7%) within the PD, followed by PSP (17.34%) and Commercial (11.96%). The Commercial land use substantially higher when compared to city average. The presence of several educational and health institutions has also lead to higher share of PSP use. **Figure 5-1** and **Table 5-1** present the Existing Land Use Map and Existing Land Use Area statement respectively.

Figure 5-1: PD 4 Existing Land Use Map

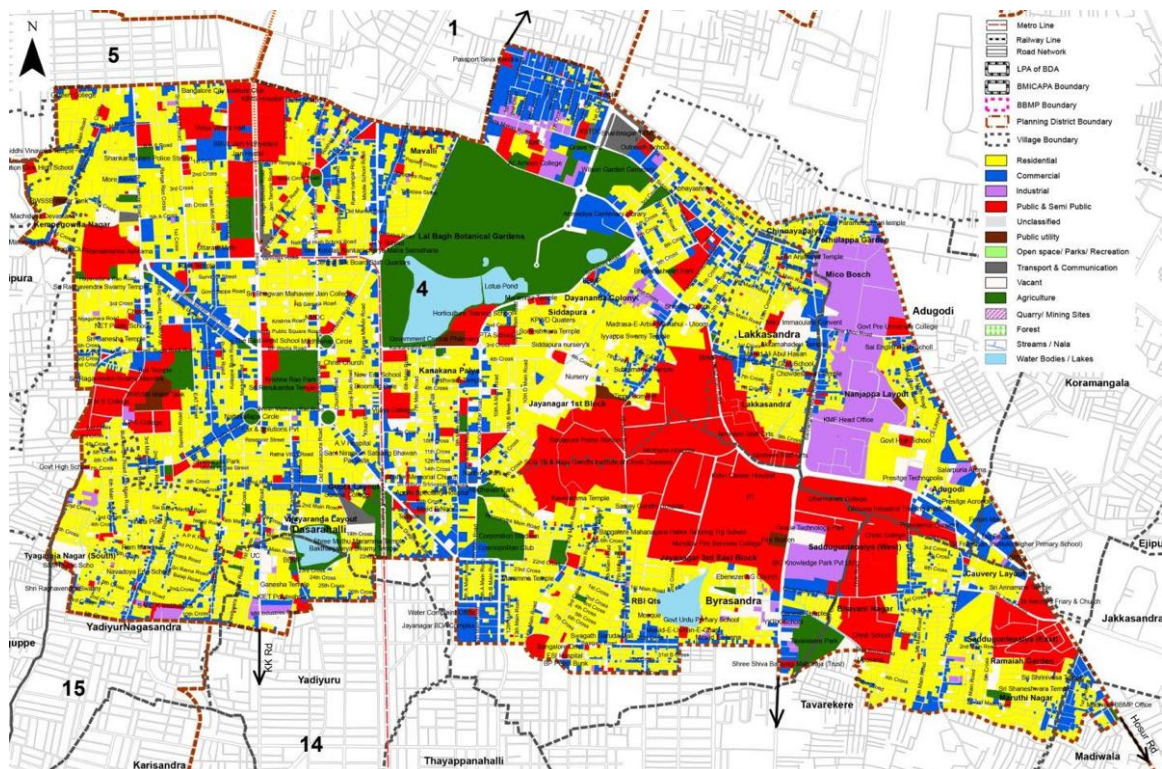


Table 5-1: PD 04 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	558.75	37.71
Commercial	177.14	11.95
Industrial	70.07	4.73
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	257.03	17.34
Unclassified	0.00	0.00
Public Utility	6.62	0.45
Parks & Open Spaces	119.62	8.07
Transport Communication	197.21	13.31
Vacant	65.96	4.45
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	3.24	0.22
Water Bodies	26.24	1.77
Total	1481.88	100.00

Housing and Slums

7. Residential land uses account for 37.71% of total PD area. The Jayanagar PD is famous for its well-planned residential layouts – Basavanagudi, planned in the late 19th century by the Wodeyars of Mysore, as an outcome of the great plague. Jayanagar, one of Asia's largest residential extensions then, was established in 1948 to the south-east of Basavanagudi. Later layouts were planned as extensions of these two layouts, including Thyagaraja Nagar, N R Colony and Wilson Garden. Interspersed with these layouts are urban villages and dense, mixed settlements with narrow roads, such as Sudhama Nagar, Saddugunte Palya, Byrasandra, Lakkasandra, and Adugodi. The Planning District sees typologies ranging from old colonial bungalows to middle-class neighbourhoods to high-end apartments to dense, mixed urban village settlements. Land prices in these areas are high owing to location and high accessibility to physical infrastructure and social infrastructure.
8. There are 34 slums in this PD, located primarily in low-lying areas and adjacent to lake beds. The share of slum population in total population is 13.3% which is residing in 31 notified slums and 3 non-notified slums.

Traffic and Transportation

9. Transport and Communication land uses account for 13.31% of the existing land use survey - 2015 within the PD. The PD is well connected by a grid system of parallel and diagonal roads. The circulation within the PD is well defined through a clear hierarchy of roads. K R Road, Lalbagh Main Road, Kanakapura Road, Bannerughatta Road and Hosur Road are the major arterial roads that pass through this Planning District. The critical junctions in this PD 4 are Lalbagh Main Gate, Minerva Circle, Adugodi, Dairy Circle and Madiwala Check Post. The PD is well-connected by bus services, and the Shantinagar Bus Depot which serves both inter-state and local mobility.

10. Phase 1 of the metro, with stations at National College and South End Circle Metro Station under Phase 1 and NIMHANS Metro Station under Phase 2 passes through this PD.

Physical and Social Infrastructure

11. PD 4 has a water supply line of 420.5 km and a sewerage line of 325.23 km length. 48.1% of households are connected to metered water supply, and 48.5% of households have sewage connections. There are 6 DWCC's and a Bio-Methanation Unit within the PD. There is 1 no. of existing 220kv sub-station while one 220kv sub-station is under implementation.
12. There are several schools (163), colleges and hospitals because of which the total PSP landuse is higher (about 17.34%). This area is home to several well-known institutions such as the Mahila Seva Samaj, National College, Jain College, Vijaya College, R V Teacher's Training College, the Dharmaram College, Christ University, the Government Indus- Trai Training Institute, the National Institute of Animal Nutrition and Physiology and the National Dairy Research Institute. PD 4 also has 9 Government Health Centres & Hospitals and 42 private hospitals, with a total of 3473 beds (third highest among all PDs). Prominent healthcare institutions in this PD are the National Institute of Mental Health and Neurosciences, the Kidwai Memorial Institute of Oncology, St John's Medical College and Hospital and Sanjay Gandhi Hospital.

Park and Open Spaces

13. Parks and Open Spaces account for 10.06% of the existing land use within the PD, which is due to planned residential extensions/ layouts. Lalbagh is a 200-year old lung space and one of the largest city level parks/ open spaces. In addition, there are several parks designed as part of the planned layouts like M N Krishna Rao Park, Tagore Circle, Bugle Rock Park, Madhavan Park and the Lakshman Rao Parks along RV Road, etc. The canopy of trees that overlook RV Road on either side are also an important part of the heritage of this PD, and have been preserved while Metro corridor that runs along road.
14. Many schools contain playing grounds while most of the temples have open spaces within their premises. Other than these, there are some smaller parks and open spaces located as neighborhood parks.

Heritage and Culture

15. This PD has 81 heritage and cultural sites encompassing built, natural and cultural values. The PD is characterised by a number of places of worship. Some of the important temples include Bull Temple or Mandhisvara Temple, Mallikarjuna Temple and Boulder Inscription, Sri Shankaramath Bhoganandeswara Kalyana Mantapa, Sri Subrahmanya Swami Temple, Sri Vasavi Kanyaka Parameshwari Temple, Venkataramaneswami Temple and Ramakrishna Math. Other important places of worship include Christ Church, Jamia Masjid.
16. Important landmarks include Glass House in Lalbagh, Lalbagh Band Stand, Sir Kempegowda Tower, Bugle Rock Park, the East West School and public buildings such as BWSSB Water Works Office and Basavanagudi Police Station etc.
17. There is also non-tangible heritage such as the Kadlekai Parishe (Groundnut Fair), the century-old Gandhi Bazaar and the cluster of temples at Sajjan Rao Circle and the famous restaurants Mavalli Tiffin Rooms (MTR), Vidyarthi Bhavan, the historic Gokhale Institute of

Public Affairs, Indian Institute of World Culture and City Institute etc which is part of the rich cultural history of Basavangudi.

Lakes and Drainage

18. . Yediyuru Lake and Lal Bagh Lake are the important existing lakes.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: STABILISATION, HERITAGE CONSERVATION, TRANSIT INTEGRATION AND REDEVELOPMENT

PROPOSALS

1. The governing principle for planning for this area is to maintain sanctity of the residential area by stabilizing the commercial activities, improvement of circulation through Transit Integration, Heritage Conservation and Redevelopment. The RMP2031 acknowledging the fact that several residential neighborhoods within PD have been getting transformed into a commercial hubs and is leading to congestion and difficulties to residential areas, proposes stabilizing and restricting further commercial developments by defining identified roads on which future commercial use is allowed. The Proposed Land Use Map and Proposed Land Use Statement are presented in **Figure 5-2** and **Figure 5-3** respectively.

Figure 5-2: PD 4 Proposed Land Use Map

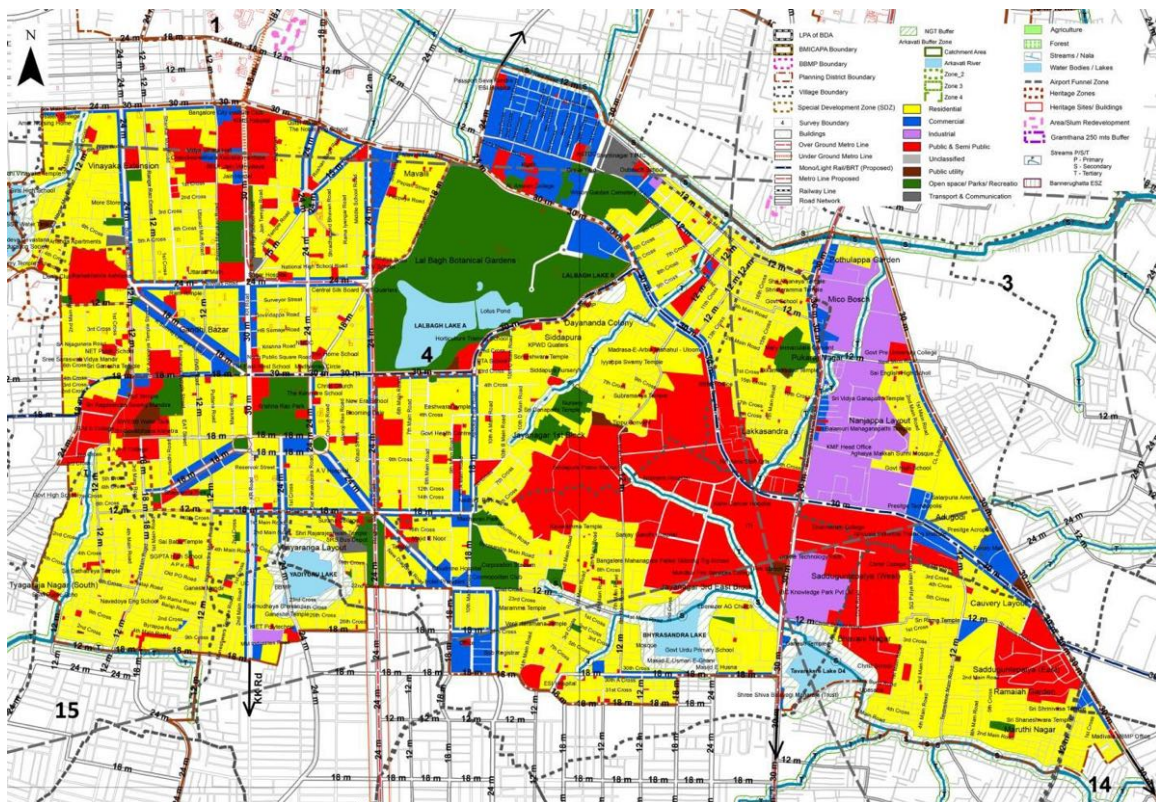
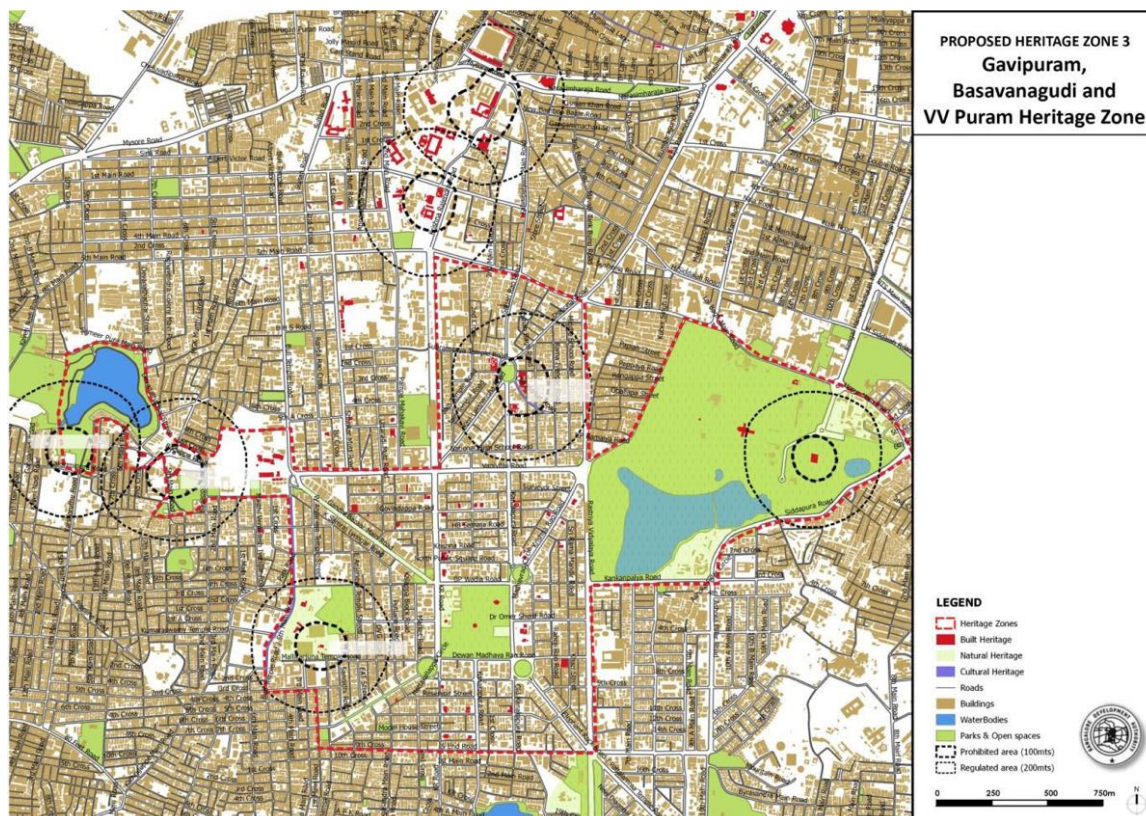


Table 5-2: PD 04 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	603.56	21.82
Commercial	103.54	3.74
Industrial	60.00	2.17
Public & Semi Public	235.14	8.50
Unclassified	0.00	0.00
Public Utility	5.60	0.20
Parks / Open Spaces	119.43	4.32
Transport & Communication	252.65	9.13
Forest	0.00	0.00
Streams	3.19	0.12
Water Bodies	25.47	0.92
NGT Buffer	73.30	2.65
Total Developable Area	1481.88	53.58
Agriculture		-
Total PD Area	1481.88	-

2. To improve the public transport share it is proposed, in addition to already planned, existing Metro Phase 1 (Green Line) and under implementation Phase 2 Yellow Line (RV Road to Bommasandra) and Red Line (Gottigere – Nagavara), an Mono Rail/ light rail on the intermediate ring road is also proposed and is passing through the PD.
3. The RMP2031 proposes multi modal interchange at Diary Circle (Metro+ Mono/ Light Rail + Bus) and Madiwala Check Post (Mono+Bus).
4. It is proposed that Bannerughatta Road and Hosur Main Road are designed as Signal Free Corridors with focus on Pedestrian Safety and development of NMT facilities.
5. The RMP2031 has identified around 17 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow.
6. RMP2031 proposes that a detailed parking plan be prepared for Commercial Areas of Wilson Garden, Gandhi Bazar, DVS Road/ Puttana Road/ (Basavangudi), Jayanagar 1st Block Jayanagar 4th Block, and Jayanagar 5th Block.
7. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 20 Dry Waste Collection Centres, 3 Organic Waste Collection Centres, and 1 waste Aggregator are proposed to be developed within the Planning District by BBMP.
8. Among 12 heritage zones proposed across LPA of BDA, the extents of the third heritage zone, Basavangudi and VV Puram Heritage Zone falls within this PD and has been delineated. Basavangudi includes historic areas such as Basavangudi, Lal Bagh, VV Puram, Gavi Puram and Bull Temple. **Figure 5-3** depicts the extent of Basavangudi Heritage Zone. RMP2031 proposes to conserve Basavangudi's unique morphology, socio-economic and cultural character. Conservation of Basavangudi area is to be guided by zoning regulations and heritage guidelines.

Figure 5-3: PD 4 Gavipuram, Basavangudi and VV Puram Heritage Zone



9. Re-development of areas like Doddamavalli, Sudhama Nagar, Arekempnahalli (Mavalli), Chikku Lakshmaiah Layout, is proposed to be taken-up. RMP2031 proposes redevelopment of slums through in-situ (to the extent possible) to be taken up in phased manner.
10. RMP2031 proposes that BBMP, in accordance with the provisions of Street Vending Act, 2015, BBMP shall determine the areas for Informal activities/ Street Vending and detailed up gradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD4: Jayanagar:

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Signal Free Corridors
 - i. Bannerughatta Road
 - ii. Hosur Main Road

2. Development of Public Transport System

- a. Namma Metro Bannerughatta Link (Red Line)
- b. Mono Rail Link 2: Intermediate Ring Road

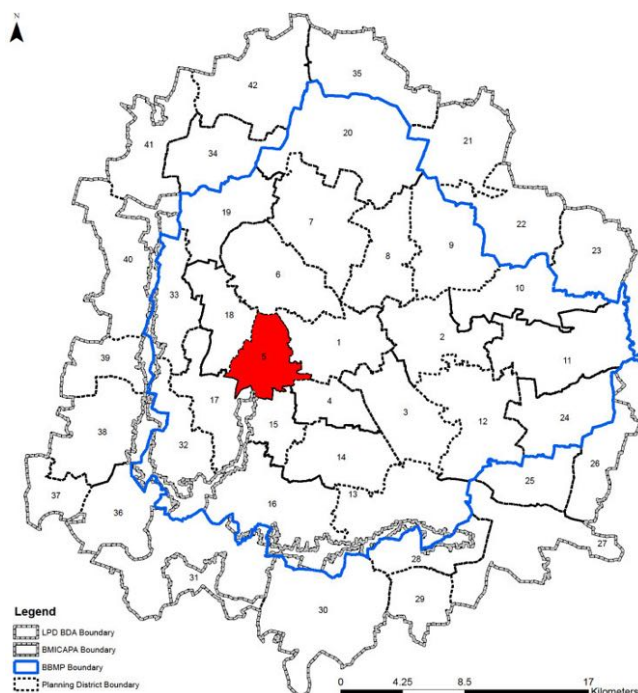
3. Development of Intermodal Stations

- a. Madivala checkpoint



- b. Diary Circle
- 4. **Accessibility Improvement Plan for station and educational institutions**
- 5. **Junction Improvement Programme (JIP)**
 - a) Minerva Circle,
 - b) Bull Temple Junction,
 - c) Sydicate Bank Junction,
 - d) Junction of KH Road and H Siddaiah Rd.,
 - e) Sagar Apollo Hospital Junction,
 - f) Ashram Junction (Bannerughatta Road and Tank Bund Rd Intersection),
 - g) Muri Junction,
 - h) Kallada Travels Junction (Intersection of Hosur Road and Maruthi Nagar Main Road),
 - i) Madiwala Check Post Junction,
 - j) St. Johns Hospital Junction,
 - k) Tavarkere Main Road & Hosur Main Road Intersection,
 - l) Adugodi Junction,
 - m) MICO Signal,
 - n) Lal Bagh Main Gate,
 - o) Urvarshi Talkies Junction,
 - p) Kempegowda Circle,
 - q) Basappa Circle.
- 6. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places**
 - a) Wilson Garden,
 - b) Gandhi Bazar,
 - c) DVS Road/ Puttana Road/ (Basavangudi),
 - d) Jayanagar 1st Block
 - e) Jayanagar 4th Block, and
 - f) Jayanagar 5th Block.
- 7. **Area Redevelopment:** Following areas/ slums are proposed to be taken up under Area Redevelopment:
 - a) Doddamavalli,
 - b) Sudhama Nagar,
 - c) Arekempanahalli (Mavalli),
 - d) Chikku Lakshmaiah Layout
- 8. **Slum Redevelopment Plans**
- 9. **Development of SWM Facilities:**
 - a) Dry Waste Collection Centre: 20 No.
 - b) Organic Waste Collection Centre: 03 No.
 - c) Aggregators: 01 No.
- 10. **Heritage Area Protection and Conservation Scheme:**
 - a. Heritage Master Plan for Basvanguddi Heritage Zone
 - b. Heritage Area Improvement and Development scheme
- 11. **Lake protection and rejuvenation plans:** It is proposed to prepare lake and lake area development plan for Yediur Lake.

6.PD 05: RAJAJI NAGAR-BAPUJI NAGAR-AZAD NAGAR



Population (2011 Census): 7,87,560
Area of PD: 18.06 sq.km (1806.63 ha)
Wards in PD: 23
Gross Density (2011 Census): 436 pph

Rajajinagar Planning District 5 is located in the core of BMA and west of the Central Administrative District (PD1). It is characterised by dense residential areas as well as mixed use settlements and some industrial estates. The PD currently is in transition from being predominantly a residential to a mixed use zone with commercialization seen along major roads.

Master Plan aims at stabilising the transformation by limiting commercial activities to on certain roads and planned redevelopment of Industrial Area.

1. In this PD, there are a total of 23 wards namely - Rajaji Nagar (99), Basaveshwara Nagar (100), Dr.Rajkumar Ward (106), Shiva Nagar (107), Sri Rammandira (108), Binnipet (121), Kempapura Agrahara (122), Maruthi Mandira Ward (126), Padarayanapura (135), Jagareevanram Nagar (136), Rayapuram (137), Chalavadipalya (138), Chamarajpete (140), Azad Nagar (141) in the Bangalore West Zone of the BBMP and Govindraja Nagara (104), Agrahara Dasarahalli (105), Gali Anjaneya Swamy Temple Ward (157), Vijay Nagar (123), Hosahalli (124), Marenahalli (125), Attiguppe (132), Hampi Nagar (133), Bapuji Nagar (134).
2. Mysore Road, Magadi Road, Mahakavi Kuvempu/ Dr. DC Modi Road and Chord Road are the major roads within the PD and define the spatial structure of PD.
3. The PD is fully developed and has limited space for growth, and redevelopment of certain parts is seen inevitable.
4. The Rajajinagar Planning District is defined by the industries that were set up – both pre-independence (such as the Minerva Mills) and the PSUs – in Bangalore. These industrial estates, some of which are defunct today, were originally surrounded by settlements of workers, both formal and informal, and later by BDA-planned layouts.
5. The planning district has a number of dense mixed settlements, layouts with well-planned grid of roads as well as mixed urban villages and colonies. There are several cultural institutions that dot this Planning District, as well as many well-known city-level educational institutions. Major Landmark within the PD includes PG Institute for Medical Sciences and Research, ESI Hospital, Dr. B.R. Ambedkar Sports Complex, Planned Residential Layouts like Rajajinagar, Hosahalli, RPC Layout, Vijaya Nagar, etc.

A. EXISTING STATUS

Demography

6. As per Census 2011, PD has 7,87,560 inhabitants, which has increased by 12.2% from 2001 (7,01,958). There are 1,87,080 households (2011), with an average household size of 4.21, which is higher than BMA (4.01).
7. The resident workers in the PD total up to 3,27,597 with a work force participation of 41.6% which is than lower than the BMA average of 44.5%. Wards namely Rajaji Nagar, Dr.Rajkumar, Chalavadipalya and Chamrajpet has seen decreasing densities between census year 2001 and 2011, this can be attributed to rapid commercialization seen within these wards.
8. The gross density is highest in Padarayanapura Ward (1213 pph) and lowest in Dr.Rajkumar Ward (244 pph).

Existing Land Use

9. Residential is the predominant land use (46% of PD area), followed by Commercial Use (12.4%) and Industrial 6.1%. The Commercial & Industrial Use as employment centres accounts for almost 18.5%. The road network pattern and transport infrastructure already realised accounts for 18% of PD area. The parks and open spaces account for merely 4.1% of total area. **Figure 6-1** and **Table 6-1** presents the existing land use map and existing land use statement respectively.

Figure 6-1: PD 5 Existing Land Use Map

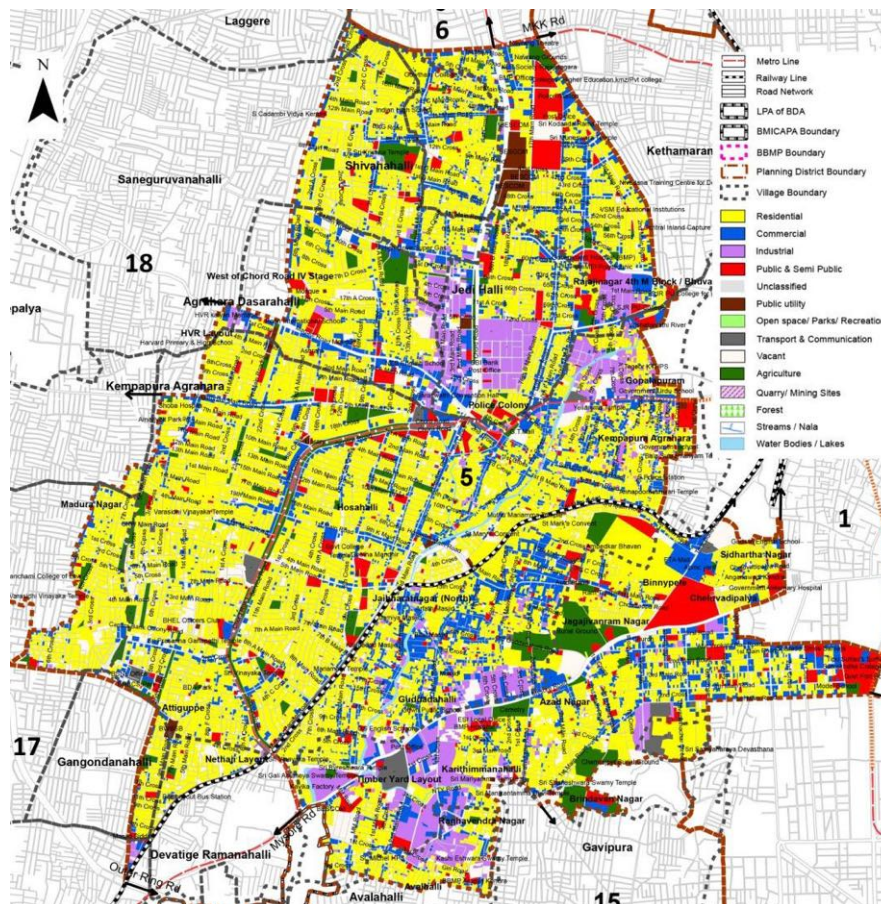


Table 6-1: PD 05 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	827.80	45.82
Commercial	225.16	12.46
Industrial	109.07	6.04
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	99.60	5.51
Unclassified	0.00	0.00
Public Utility	11.06	0.61
Parks & Open Spaces	74.00	4.10
Transport Communication	326.59	18.08
Vacant	120.62	6.68
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	12.72	0.70
Water Bodies	0.00	0.00
Total	1806.63	100.00

Industry and Commerce

10. The eastern part of the Rajajinagar Planning District is located immediately west of the Pete, and has a number of dense mixed settlements that surround the older industrial estates such as KAVIKA, Binny Mills, Minerva Mills and BHEL. To the west of these areas, Rajajinagar Industrial Town and Rajajinagar Industrial Suburb were started in 1960. These gave rise to smaller industrial estates around Chord Road and Magadi Road, and their accompanying settlements of industrial workers. Some of the factories are situated in Basaveshwarnagar, Vijaynagar, Guddahalli and Chamrajpete.
11. Commercial land uses account for 12.82% as per existing land use 2015 which is relatively high for an area whose character was predominantly residential. Commercial activities in the form of both retail and office space is seen mainly along major roads like Magadi Road, Basveshwara Layout 1st Main and 2nd Cross Roads, Dr. RajKumar Road, RajajiNagar 10th and 12th Main Roads. Some markets in this PD are Vijayanagar BDA Complex, Mosque Road market and Chamarajapete Market.

Housing and Slums

12. Residential land uses account for 45.81% as per existing land use 2015. The housing typology is mainly low rise-high density. West of Chord Road Layout, Rajajinagar, Basaveshwarnagar and Vijayanagar are some of the BDA-planned layouts of this planning district, which have a well-planned grid of roads and a large number of parks and playgrounds. Together with these are some notable private layouts that share these facilities, such as Srirampuram, RPC Layout, GKW Layout, and Vinayaka Layout. There are also settlements of urban villages and colonies such as Bapuji Nagar, Kempapura Agrahara, Byatarayanapura, Mariyappana palya Guddadahalli and Rayapuram that have considerable commercial mixed uses.
13. There are 36 slums in the PD out of which only 15 are notified. Chalavadipalya ward, with 6 slums, has the maximum number of slums.



Transportation

14. Transport and Communication land uses account for 18.08 % as per existing land use 2015. Avenue Road, Magadi Road, Chord Road, Police Road (Beli Mut Road) and Bhashyam Road are the major arterial roads passing through this Planning District area. The Bangalore-Mysore Railway line also passes through the planning district.
15. Metro Phase 1 alignment also passes through the PD with five stations: Magadi Road, Hosahalli Metro Station, Vijaynagar Metro Station, Attiguppe Metro Station and Deepanjali Nagar Metro Station. Area is also well-connected by bus services. The Satellite Bus Stand on Mysore Road is located in this PD.

Physical and Social Infrastructure

16. As per BWSSB, 639.1km of piped water supply length and 534.8km of sewerage length has been established. Also, around 42.5% of households are connected by metered water supply, and 24.8% of households have sewerage connections. Two ground level reservoirs exist at Magadi Road and JJR Nagara with capacities of 9 ML and 2.27 ML respectively while Pumping stations exist within the core area at Chamrajpet (60 HP), JJ Nagar (60), Hosahalli (240 HP) and Magadi road (50 HP). A sewage treatment plant exists at N.R. Colony with a capacity of 1 MLD. There are 18 existing dry waste collection centres.
17. There are 370 schools. This area is home to several well-known institutions such as the Government College of Arts and Commerce, the KLE Law College, the Government Ayurvedic Medical College, the Government Homeopathic College, the National Academy for Learning and the National Public School Rajajinagar. PD 5 also has 11 Government Health Centres & Hospitals and 45 private hospitals, with a total of 2113 beds.
18. There are two fire stations, 1 no of 220kv sub-station, 18 DWCCs and 1 Bio-methanation unit.

Lakes and Drainage

19. The river Vrishabhavathy flows through this Planning district and some neighbourhoods are built on gently sloping terrains of the valley. There were 18 lakes/ kere earlier but all of them have been lost breached due to urbanisation.
20. There are numerous low-lying areas, particularly along the Vrishabhavathi River, west of Majestic and north-west of Kempambudhi Lake (area south of Byataranapura and south of Bapujinagar), which is south of this Planning District. Area next to the Netaji Subash Chandra Bose Stadium (west of Rajajinagar), Shankarappa Garden (north of Magadi Road), 2 locations at old Gudadahalli, one at south of Binny Mills and the other south of Hosahalli road and at Kasturba nagar.

Parks and Open Spaces

21. There are several open spaces and playgrounds in this planning district, notably Dr B.R Ambedkar Sports Complex, Rajajinagar Recreation Association and Netaji Subhash Chandra Bose Stadium. In addition to the above, there are also several neighbourhood parks in this PD.

Heritage and Culture

22. There are a total of 13 sites of heritage value, out of which 9 are public buildings. The Tippu Sultan's Summer Palace which is an ASI heritage site and a major landmark in the city is

located in the south-western part of the Planning District. Other important heritage sites include The Bangalore City Cooperative Bank, Sri Chamarajendra Sanskrit College, St. Luke's Church (CSI), Sri Rameshwara Temple and the St. Thomas Church.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: STABILISATION, TRANSIT INTEGRATION, REDEVELOPMENT AND ENVIRONMENT PROTECTION

PROPOSALS

1. The Governing Principals for preparation of proposals for this planning district is to stabilize commercialization of the residential areas, promotion/ integration of public transportation, redevelopment of Industrial Areas and prevention of urban flooding. The Proposed Land Use Map and Proposed Land Use Analysis for PD 5 is shown in Figure 6-2 and Table 6-2

Figure 6-2: PD 5 Proposed Land Use Map

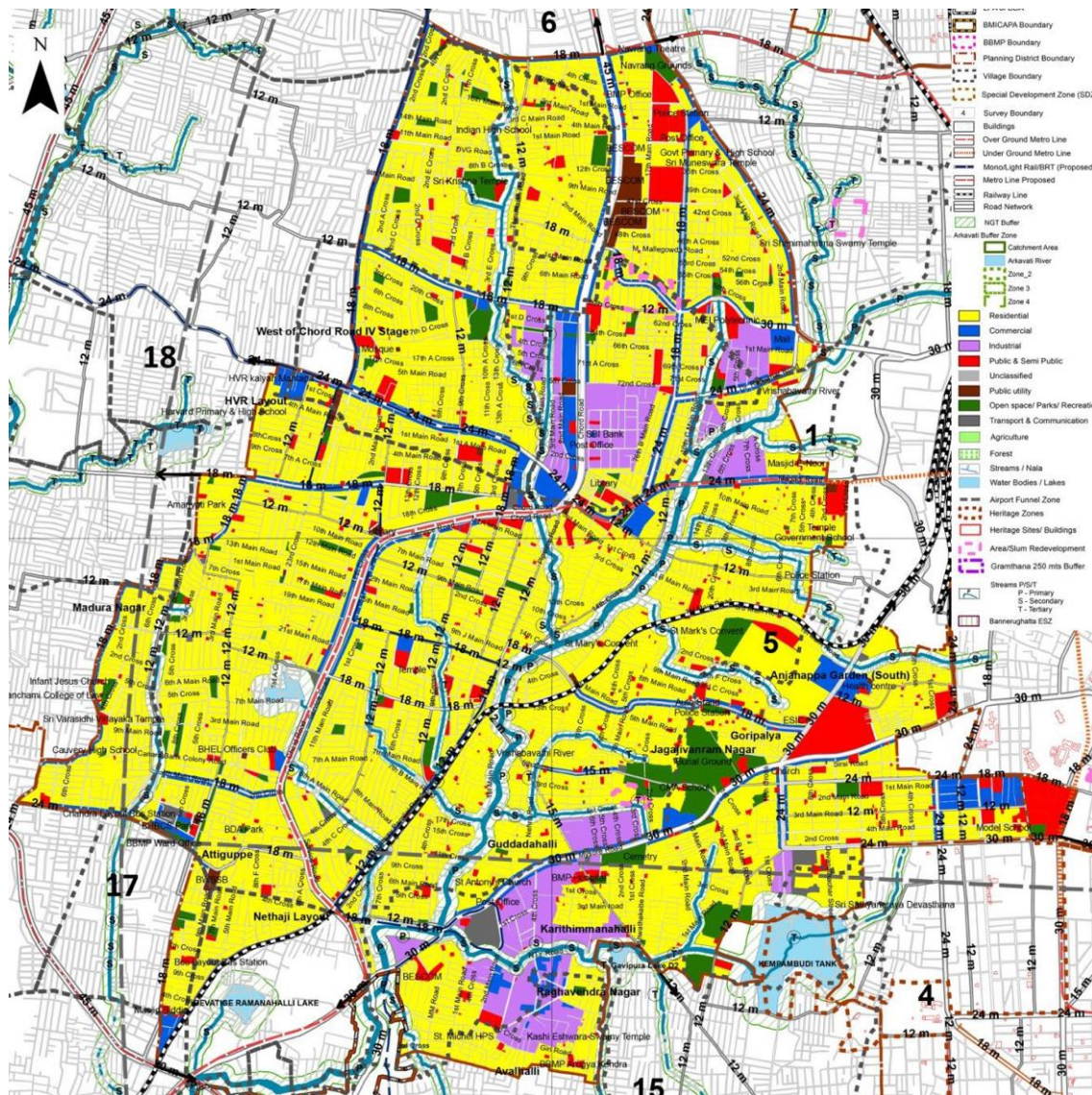


Table 6-2: PD 05 Proposed Land Use Area Statement

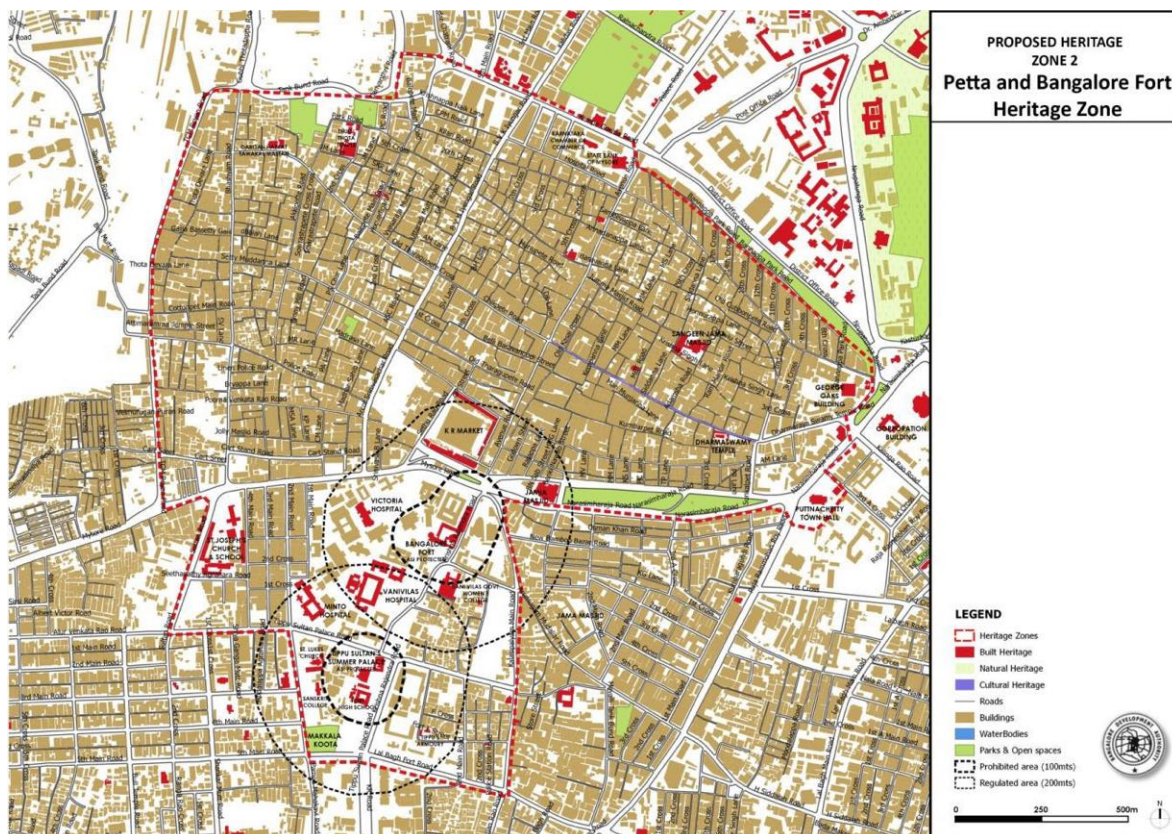
Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	950.20	23.93
Commercial	79.92	2.01
Industrial	80.17	2.02
Public & Semi Public	86.61	2.18
Unclassified	0.00	0.00
Public Utility	10.61	0.27
Parks / open spaces	58.92	1.48
Transport & Communication	362.83	9.14
Forest	0.00	0.00
Streams	0.07	0.00
Water Bodies	0.00	0.00
NGT Buffer	177.31	4.46
Total Developable Area	1806.63	45.49
Agriculture		-
Total PD Area	1806.63	-

2. The City level public transport infrastructure LRT/Mono Rail/ BRT along Magadi Road and Intermediare Riing Road are proposed to be developed:
 - a. Mono/ LRT/ BRT Magadi Road Alignment: The Magadi Road alignment is proposed to be developed starting from Magadi Road Metro Station and run along the Magadi Road till Seegehalli (LPA limit). It is proposed to develop stations at Agrahara Dasarahalli (Jai Muni Gate), KHB Bus Station (to be planned as inter change with Mono Rail at the intersection with 80ft ring road), Traffic Police Station Kamakshipalya.
 - b. Mono/LRT/BRT: intermediate ring road is passing through the PD
3. Intermodal Interchange Stations are proposed to be developed at 2 locations – a) KSRTC Mysore Road Satellite Bus Station, and b) Deepanjali Metro Station or Vijayanagar Metro, KHB Bus Station.
4. It is proposed to develop bus shelters at various locations within the planning district – some of important roads identified include in Vijayanagara Pipe Line, J.P.Park - towards Magadi and J.J.R. Nagar, near Devaraja Urs Nagar.
5. Towards connectivity improvement it is proposed to strengthen the existing network by widening five selected roads in entire PD.
6. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations, Educational Institutes) it is proposed to strengthen the existing road network by providing (wherever feasible) footpaths and cycle tracks.
7. RMP2031 proposes that a detailed parking plan for Commercial Areas of 3rd, and 5th Block, Rajajinagar, Hosahalli Main Road, Chowdappa Main Road, Old Guddadahalli Road (vinayak nagar), Binnepette, Rayapuram - Padarayana Pura, 1st Cross Road and 1st Main Road of Basaveshwar Nagar.



8. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 46 Dry Waste Collection Centres, 7 Organic Waste Collection Centres, and 1 waste Aggregator are proposed to be developed within the Planning District by BBMP.
9. The Vrishvabhavathi River which flows through the PD is in a state of decay and pollution. The RMP2031 proposes the rejuvenation of the Vrishvabhavathi Rive. Towards this it is proposed that Vrushabhavathi Rejuvanation Plan is to be prepared. The basic objective is to stop the indiscriminate sewage/ industrial effluent inflow and disposal of solid waste into the river and establishing STPs enabling clear water flow, treatment of stream/ river bank to enhance aesthetics (by greening/ embankment treatment), desilting, etc.
10. There are several densely congested areas and slums that require upgradation/ redevelopment. The RMP2031 proposes that such areas be taken up for upgradation of infrastructure/ redevelopment. The RMP2031 has identified following areas for redevelopment:
 - Pipeline Road Surrounding Areas: Areas along Pipe Line Road are very densely built and at certain locations existing Nalla has been breached. The buildings along the pipeline road are G+1 to 3 in height with commercial and industrial establishments on the ground floor while residences are seen in the upper floors. The width of Pipeline road varies and is 7mts at certain locations. Further, the area is at risk during fire. It is therefore proposed to prepare a area redevelopment plan for providing/ upgrading the infrastructure and to achieve uniform road width of 12m for pipeline road.
 - Binnipette, Kempapura Agrahara and Vijaynagara (Part) Wards: Historic mills in Binnipette are undergoing transformation from industrial to residential development, while the surrounding densely populated residential areas continue to struggle with infrastructure and facilities. The gross density in Kempapura Agrahara ward is 1112 pph as per Census 2011, which is the highest in BBMP. The ward is facing serious issues related to solid waste management and lack of parking facilities. The RMP2031 therefore proposes preparation of redevelopment plans for Binnipette ward, Kempapura Agrahara ward and the southern portion of Magadi road within Vijaynagara ward. The redevelopment plan is to be prepared.
 - Existing Industrial Areas: The Rajaji Nagar Industrial area and industries along Mysore road are experiencing changes in activity and gentrification with the influence of the metro and higher land prices. It is likely that these areas may evolve into commercial and residential areas. In order to protect facilitate the changeover in the planned manner; the RMP2031 proposes redevelopment of such industrial areas in a guided way. Any industrial area can be taken up for redevelopment as per the provisions of Zoning Regulations.
 - Slum Redevelopment: Chalavadipalya ward has a gross density of 620 pph and Out of 36 slums in PD, 6 slums located within this ward with narrow streets and limited drainage facilities. The RMP2031 proposes redevelopment of slums through in-situ (to the extent possible with provision of infrastructure facilities).
11. There are 13 heritage sites within this PD. Some are part of Pette Heritage Zone while some are independent of any heritage zone. RMP2031 proposes that these buildings be preserved and conserved, while allowing the adaptive uses.

Figure 6-3: PD 5 Extent of Pete Heritage Zone



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD5: Rajaji Nagar – Binny Pete

1. Road development Plan

- Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
- Road Widening Projects
 - Hosahalli Main Road (18m) connecting Tank Bund Road to Pipe Line Road
 - Vatala Nagaraj Road (18m) connecting Okalipuram to Chord Road
 - Pipeline Road (12m)
 - 10th main and 5th main (12m) connecting to Magadi Road
 - 14th cross road (12m) connecting Hosahalli Main Road and Magadi Road
- Junction Improvement Programme: The junctions identified for improvement are:
 - On Mysore Road:
 - Sirsi Circle
 - Jadeedh Eidgah Junction (Old Guddadahalli Road)
 - Ashwathkatte Main Road Junction (Azad Nagar, Near Shell Petrol Pump)
 - Guddadahalli Junction (4th Cross Road)

- Redevelopment of Bapujinagar Junction/ Flyover
 - Deepanjali Nagar Bus Depot Junction (Junction of Chord Road and Mysore Road)
 - On Chord Road
 - Attiguppe Junction (intersection of 13th Main and 4th Cross Road)
 - Income Tax Layout Cross
 - Vijayanagar TTMC (22nd Main & 5th Main Road)
 - Vijayanagar Traffic Signal
 - Manu Vana Vijaya Nagar (Hosahalli Metro Station)
 - Magadi Road Toll Gate Junction
 - Rajaji Nagar Industrial Area (Near National Public School RNR 1st Main Road)
 - Manjunatha Nagar Junction (6th Cross)
 - Star Circle
 - Iskcon Temple Junction
 - On Magadi Road
 - Magadi Road 5th Cross
 - Intersection with Dr. Rajkumar Road
 - Jai Muni Circle
 - KHB Colony Junction (80ft Ring Road)
 - Other Junctions within PD
 - Navarang Circle
 - Modi Hospital Junction (Thimmaiah Road)
 - Pushpanjali Talkies Junction (60ft road)
 - Shankar Mutt Chowk
 - Basaveshwara Nagar Circle
 - Bashyam Circle
 - Havanur Circle
 - Ganapathi Circle
2. **Development of Public Transport System**
 - a. LRT/ Mono Rail on Intermediate Ring Road
 - b. LRT/ Mono Rail on Magadi Road
 3. **Development of Intermodal Stations**
 - a) KSRTC Mysore Road Satellite Bus Station (Bus+Mono+IPT), and
 - b) Deepanjali Metro Station (Metro+Mono+IPT) or Vijayanagar Metro (Metro+Mono+IPT) depending on the feasibility
 4. **Accessibility Improvement Plans for metro and LRT/Mono Rail/ BRT stations**
 5. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places**
 - a) 3rd, and 5th Block, Rajajinagar,
 - b) Hosahalli Main Road,
 - c) Chowdappa Main Road,
 - d) Old Guddadahalli Road (vinayak nagar),
 - e) Binny Pete,
 - f) Rayapuram - Padarayana Pura,
 - g) 1st Cross Road and 1st Main Road of Basaveshwar Nagar.



6. **Lake and Stream Rejuvenation Plan:** Rejuvenation of Vrishvabhavathy River

7. **Area Redevelopment:**

- Pipeline road and adjoining development
- Giripuram area located within Chalavadipalya ward
- Binnipette ward, Kempapura Agarahara ward and the southern portion of Magadi road within Vijaynagara ward

8. **Preparation of Slum Redevelopment**

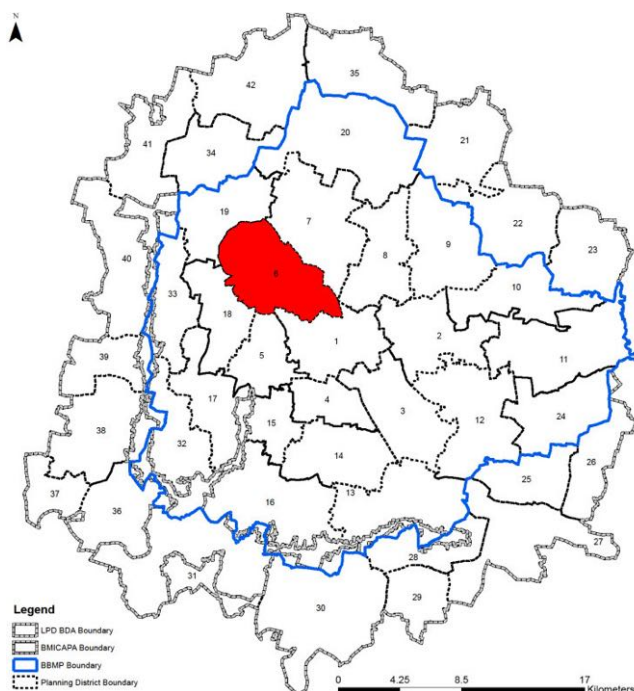
9. **Development of Physical Infrastructure**

- d) Dry Waste Collection Centre: 46 No.
- e) Organic Waste Collection Centre: 07 No.
- f) Aggregators: 01 No.

10. **Heritage Area Protection and Conservation Scheme**

- a. Heritage Master Plan for Pete Heritage Zone
- b. Heritage Area Improvement and Development scheme

7. PD 06: YESHWANTPUR – MALLESWARAM



Population (2011 Census): 621302

Area of PD: 2774.3 ha

Wards in PD: 16

Gross Density (2015): 223PPH

Yeshwantpur – Malleshwaram planning district (PD 6) is located in the core of BMA and predominantly consists of residential areas like Malleshwaram and Nandini layout; public – semi public and areas under transportation/communication including Yeshwantpur Railway Station.

The RMP2031 proposes to guide the development and redevelopment in the area and stabilize the commercialization, Transport Integration, and redevelopment.

1. The Yeshwanthpur Malleshwaram Planning District predominantly is within the core area (Planning Zone A). It extends from Malleshwaram to Yeswantpur/ HMT area and admeasures 2774.3 ha (27.74 sq km). It comprises of 16 BBMP wards – namely Aramane Nagar (35), Mathik- ere (36), Nandini Layout (43), Marappana Palya (44), Malleshwaram(45), Rajamahall (64), Kadumalleshwara (65), Subramanya Nagar(66), Nagapura(67), Mahalakshmpuram(68), Datathreya Temple(77) in the Bangalore West Zone of the BBMP and Jalahalli (16), J.P.Park (17), Yeshwanthpur (37), H.M.T (38), Lakshmidevi Nagar (42) in the Raja- rajeshwari Nagar Zone of the BBMP.
2. Landmark cultural institutions such as the iconic Chowdiah Memorial Hall, the Iskcon Temple, the Bangalore Place, the educational institutions like Indian Institute of Science, Indian Institute of Wood Science; Industrial area of Yeswantpur and Part of Peenya Industrial Area, Sandal Soap factory; traditional Malleshwaram market to modern shopping experience - Orion Mall, Residential areas like Nandini Layout, Jalahalli, Malleshwaram, Ashwath Nagar, and Large open spaces like Place Grounds and JP Park defines the vibrant characteristics of Yeswantpur – Malleshwaram Planning District.

A. EXISTING STATUS

Demography

3. As per Census 2011, PD has 6,21,302 inhabitants, which is has increased by 16.11% from 2001 (5,35,110) and there are 2,71,135 (43.6%) resident workers. There are 1,57,878 households (2011), with Avg. Household size being 3.94, which is lower than BMA (4.01).

4. The gross density is 178 persons per hectare (pph), whereas the average residential density is 596 pph. The gross density is highest in Yeshwanthpur ward (527 pph) and the least in Aramane Nagar ward (49 pph).

Industry and Commerce

5. Large industrial units, including pre-independence units such as the Government Soap Factory & Mysore Breweries; PSUs such as BEL, HMT, BHEL and CMTI and later industrial areas set up by the govt. such as Yeshwanthpur Industrial Suburb and Peenya Industrial Suburb for small & medium scale industries are present in this PD and is major employment Centre.
6. The commercial areas are primarily along the roads, and specifically in Yeshwanthpur Market, Yeshwanthpura APMC Yard, Malleshwaram Market, 18th cross market, Malleshwaram Sampige Road Market and RC Puram. Metro Cash and Carry has been operational here for nearly a decade, and more recently, the first large mall in North Bengaluru, Orion Mall, was opened. Major employment centres like Peenya Industrial Area, Yeshwanthpur Industrial Area, Malleshwaram, several offices & commercial establishments and Educational institutes like IISC, MS Ramaiah College and several educational (primary, secondary & higher secondary) institutes are providing employment in these PD.

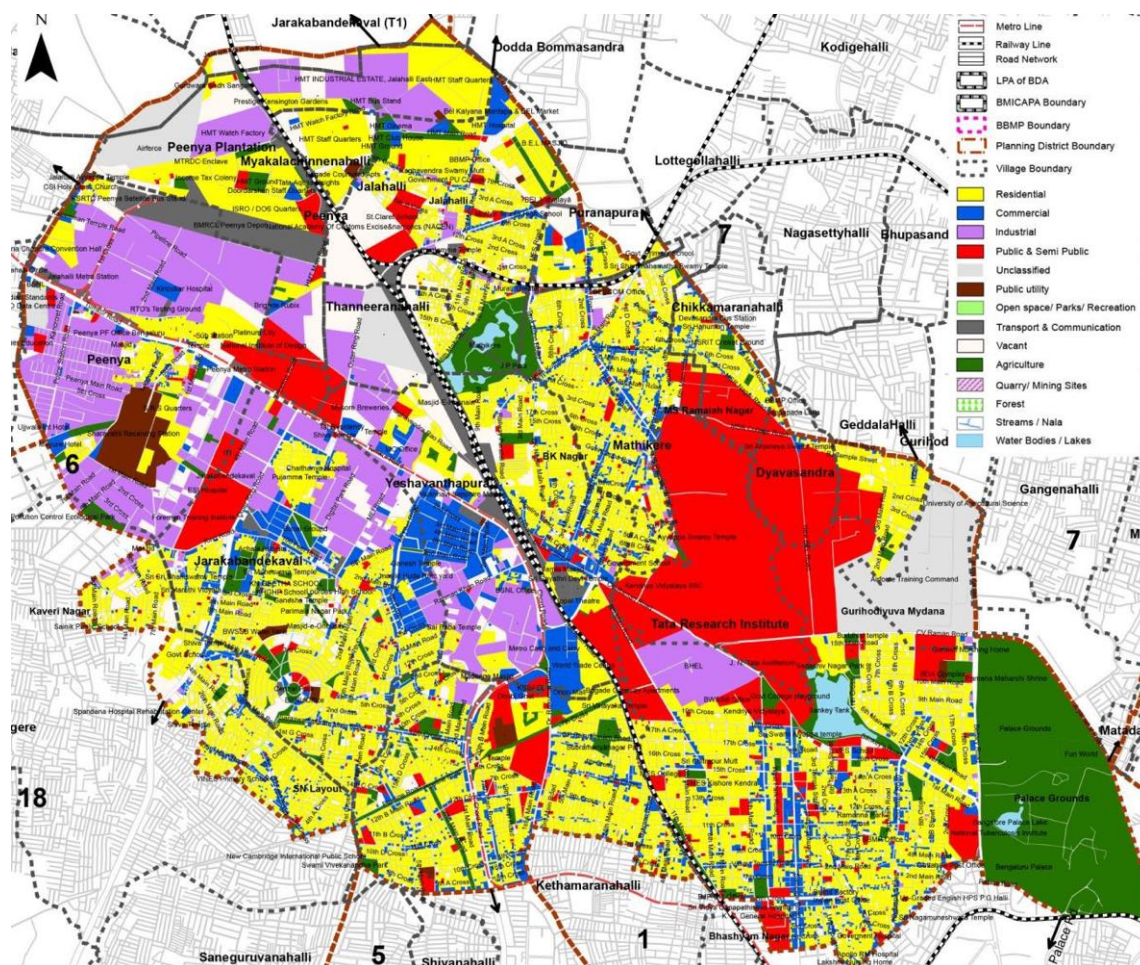
Land Use

7. The predominant land uses are Residential (29.97 %), Public/ Semi Public (14.03 %) and Industrial use with 12.12 % under industries, while the commercial area constitutes around 7.5 % of the total area in this PD. It is important to note here that combined Industrial Use and Commercial use constitute ~20% of the total PD area, which clearly indicates that PD is major employment centre in Bengaluru along with PD 1, PD 3 etc. Figure 7-1 and Table 7-1 presents the existing land use map and existing land use area statement for PD 6.

Table 7-1: PD 06 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	1043.88	29.97
Commercial	261.36	7.50
Industrial	422.28	12.12
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	488.85	14.03
Unclassified	133.84	3.84
Public Utility	35.04	1.01
Parks & Open Spaces	297.12	8.53
Transport Communication	497.95	14.30
Vacant	271.59	7.80
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	7.11	0.20
Water Bodies	24.05	0.69
Total	3483.08	100.00

Figure 7-1: PD 6 Existing Land Use Map



Housing and Slums

8. The Planning District is characterized by planned residential - the oldest being Malleshwaram which – like its counterpart south of the Pete, Basavanagudi – was planned after the great plague in the 19th century. Malleshwaram, named derived from the Kaadu Malleshwara (Shiva) temple, is essence of Bengaluru from history to modernity.
9. Other layouts planned in this planning district are Srirampuram, Mathikere, part of Rajajinagar, part of Basaveshwaranagar, Nandini Layout, Mahalakshmiapuram, Saraswathipuram, RMV Extension, Jalahalli, Yeshwanthpur, Mahalakshmi Layout and Vyalikaval. There are several high rise apartments dotting the skyline in a predominantly low rise development.
10. There are 47 slums in this PD and of which 26 slums are notified slums while rest are non-notified. As per census 2011, Slum Population constitutes 10% of total residents in planning district.

Traffic and Transportation

11. Tumukur Road, 100 Feet Ring Road, CV Raman Road, MS Ramaiah Road, Chord Road, Chowdaiah Road (Sankey Road), Dr.Rajkumar Road, Margosa Road, Watch Factory Road, Subroto Mukerjee Road, Sheshadripuram Main Road and Link Road, are major roads within

the planning district. Some of the major junctions include Mekhri Circle, WM.S. Ramaiah Hospital Junction, Gorguntepalya, Chord road, Tumkuru Road Junction. Bengaluru – Mumbai/ New Delhi railway passes through the planning district with Yeshwanthpur Railway Station and Malleshwaram Railway Station being located on the railway line. With Metro & BMTC bus services available this area offers good public transport options to commuters.

12. Metro Purple line (Majestic/ City Railway Station to Nagasandra on Tumukuru Road) passes through the PD with 8 Metro stations, namely - Jalahalli, Peenya Industrial Area, Peenya, Yeshwanthpur Industrial Area, Yeshwanthpur, Sandal Soap Factory, Mahalaxmi, and Rajajinagar, providing access to mass transport. There are Two Depots, namely the Yeshwanthpur Bus Depot and Basaveswara KSRTC Bus Stop.
13. APMC Yard at Yashwantpur is largest in Karnataka, is the place from where most of cities food requirements are met. APMC yard attracts thousands of trucks/ lorries from across the country and provides employment to thousands of people. There are plans to shift the APMC yard to Dasanapura.

Physical and Social Infrastructure

14. As per BWSSB, the water supply network is ~ 689 km in length, whereas sewerage network length is about 518 km. About 40.5% of water connections are metered and 41% of households have sanitation connections. It is estimated that around 435 MT/day of Solid Waste is generated in this PD based on 2011 population.
15. There are around 263 schools and number of educational and research institutions such as the IISC, the Maharani Lakshmi Ammanni College, the National Tuberculosis Institute, the National Institute of Advanced Studies, National Academy of Customs, Excise and Narcotics and the Central Manufacturing Technology Institute etc. Further, 5 Government Health Centres & Hospitals and 55 private hospitals, with a total of 3156 beds are present, which is more than adequate for the present population.

Lakes & Drainage

16. Sankey Tank, J P Park (Mathikere) Lake and Palace Ground Lake are the lakes present in this PD. However, except for Sankey Tank other tanks have been completely breached. JP Park was earlier Mathikere (falling in four revenue village namely Mathikere, Yeshwanthapura, Jalahalli, Thanneeranahalli) is fully developed as Large Park providing much needed open space in the city.
17. Sampangiram Nagar, Sanjay Gandhi Nagar, Yeshwanthpur Railway Station, KEB Compound Mathikere, Brindavanagar (below Mathikere Tank Market) and Meikri Circle are flood prone areas as per KSNDMC. Other areas like Industrial worker colony, SBM Layout, Sanjeevappa Colony and Slum near Nandini Layout are low lying areas.

Park and Open Spaces

18. Owing to the fact that PD consists of many planned layouts & large educational and defence campuses, it is rich in open spaces & tree cover. There are many charming tree-lined avenues that invoke the iconic old Bengaluru, the Garden City theme. Major parks include JP Park, Nandini Layout Central & Other Parks, Palace Ground Multipurpose Ground, Kempegowda Tower Park, Raman Maharishi Park, Sadashivnagar Park, Sankey Tank Park, Jubilee Park (within IISC), Pollution Control Ecological Park, HMT Park and others.



Heritage and Culture

19. There are around 35 sites with heritage value. Some prominent sites are religious centres such as St. Peter's Poniical Seminary, Kadu Malleshwaram Shiva Temple, Kannika Parameshwari Temple, Gangamma Temple and Sri Yadugiri Yathiraja Mut etc.; institutions such as, the building of the Forest Research Laboratory, the office of the Department of Information and Publicity and the Government Women's College as well as sites of historical interest such as the Bangalore Palace, one of the four Kempegowda Towers, Poi Pai House (adaptive re-use of old bungalow to a heritage hotel) & the residence of renowned scientist, the Sir CV Raman.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ECONOMIC GROWTH, MULTIMODAL INTEGRATION & NETWORK IMPROVEMENT, REDEVELOPMENT AND HERITAGE CONSERVATION

PROPOSALS

1. Economic Growth through Redevelopment of Industrial and Slum Areas along with streamlined commercial activities and multimodal integration are the guiding principles for RMP2031 Proposals for this planning district. **Figure 7-2** presents the Proposed Land Use Plan, whereas **Table 7-2** presents the proposed land use distribution.
2. To promote the economic growth and allow for redevelopment, the RMP2031 proposes redevelopment of Yeshwanthpur Industrial Areas, Yeshwanthpur Industrial Suburb, Raja Industrial Estate, APMC Yard and surrounding densely populated areas. The objective of area redevelopment is to employment generation, provision of physical and social infrastructure, provision of affordable housing, Master plan circulation network improvement, and creation of city level facilities (indicative list includes - park, multi-modal passenger transit station, sports complex, exhibition centres, trade & commerce centre, etc). The Redevelopment be done in line with the provisions of zoning regulations.
 - a. Clearly Demarcating the Commercial Use Zone: RMP2031 has defined the extent of commercial use zone wherein the commercial activities would be permitted and restricting the commercialization of rest of residential areas.
 - b. Redevelopment of Streets for provision of Street Vending Activities, Pedestrian Facilities: several streets in Malleshwaram witness street vending activities – which is a major informal/ self-employment centre in the city. It is therefore proposed that BBMP takes up the redevelopment of local streets (main/ cross roads) for provisions of street vending and pedestrian facilities.
 - c. Preparation of Parking Plan for Commercial Areas of Malleshwaram and Traffic Circulation Plan: The RMP2031 proposes that a detailed parking plan covering Margosa Road, Sampige Road, Cross Roads and Main Roads be prepared. Also the possibility of development of underground/ Multi-level parking be explored.
 - d. Heritage Master Plan and Protection and Conservation of Heritage of Malleshwaram: The RMP2031 has delineated the Malleshwaram Heritage Zone, with 2 Heritage precincts within. Figure 7-3 and Figure 7-4 presents the Heritage Zones and precinct.

Figure 7-2: PD 6 Proposed Land Use Map

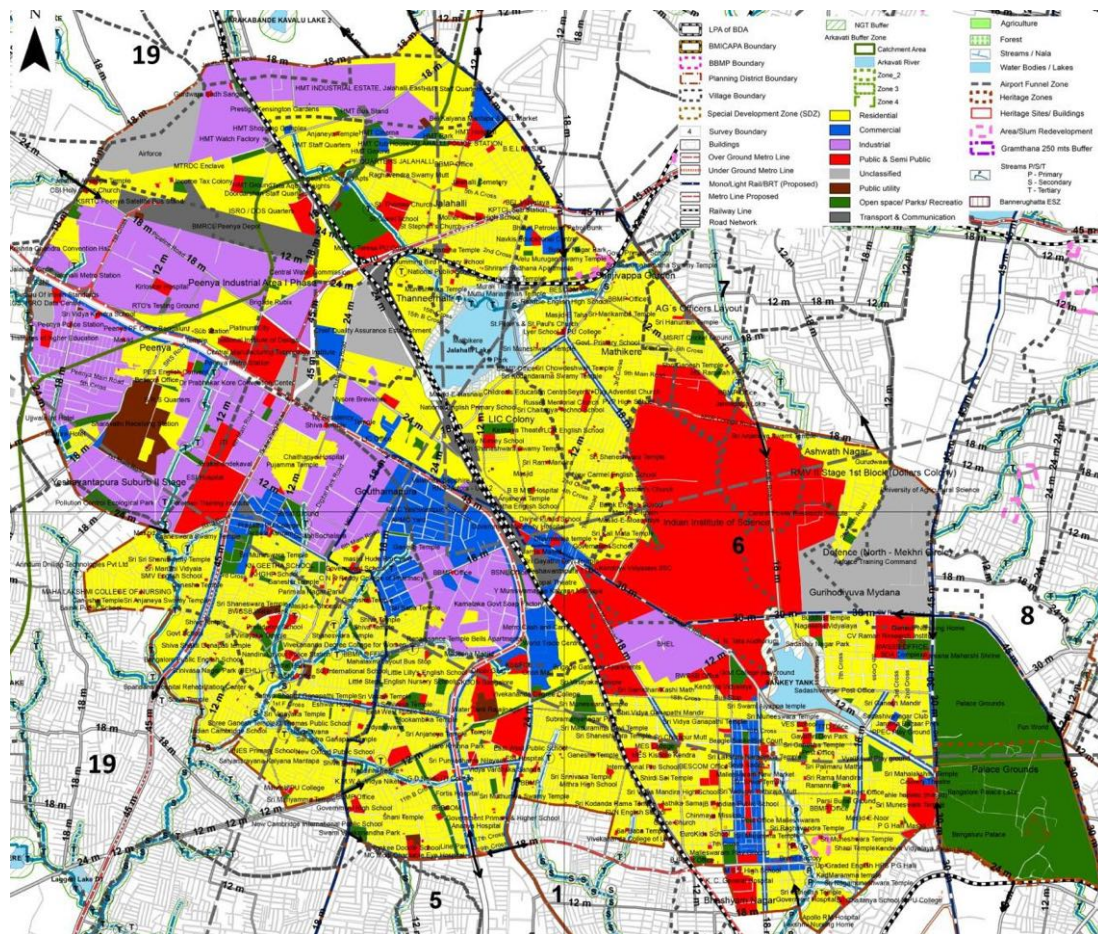


Table 7-2: PD 06 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1225.31	31.68
Commercial	163.93	4.24
Industrial	429.21	11.10
Public & Semi Public	444.97	11.51
Unclassified	143.46	3.71
Public Utility	35.14	0.91
Parks / Open Spaces	260.86	6.75
Transport & Communication	579.47	14.98
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	0.00	0.00
NGT Buffer	200.73	5.19
Total Developable Area	3483.08	90.06
Agriculture		-
Total PD Area	3483.08	-

3. The RMP2031 recognizing the historic, economic and associational value of Malleshwaram, makes following proposals for Malleshwaram area:
4. In addition to Malleshwaram Heritage Zone in this PD, the RMP2031 has identified the Bangalore Palace heritage Zone. Figure 7-5 presents the Bangalore Palace Heritage Zone

Figure 7-3: PD 6 Proposed Malleshwaram Heritage Zone

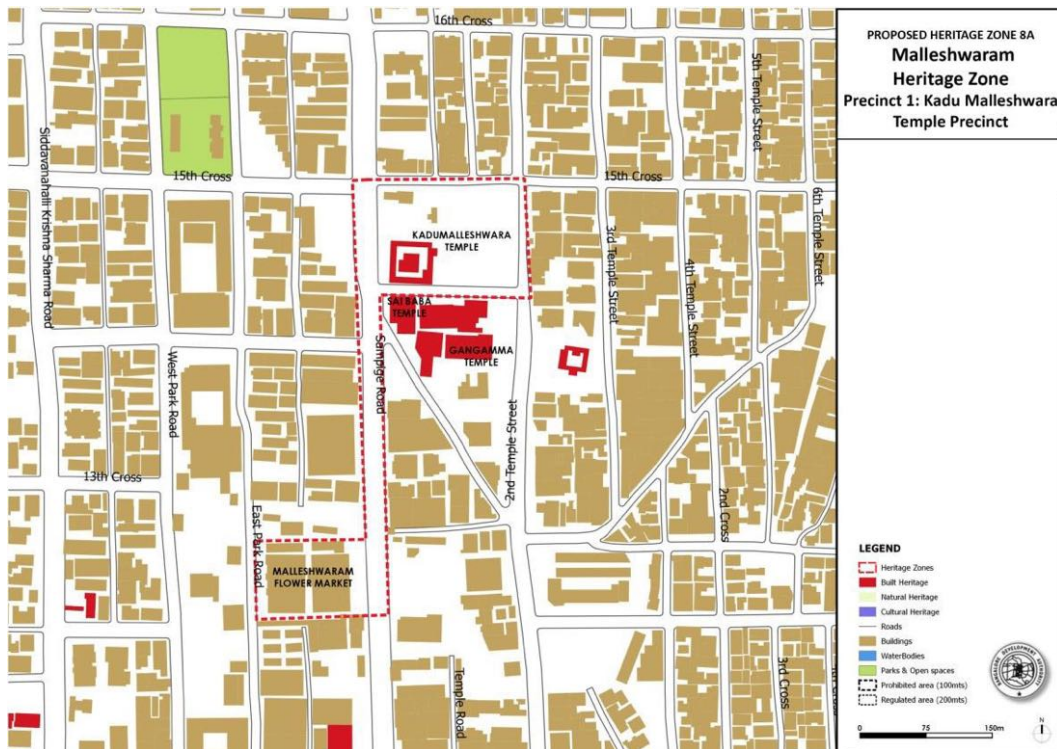


Figure 7-4: PD 6: Proposed CV Raman House Heritage Zone

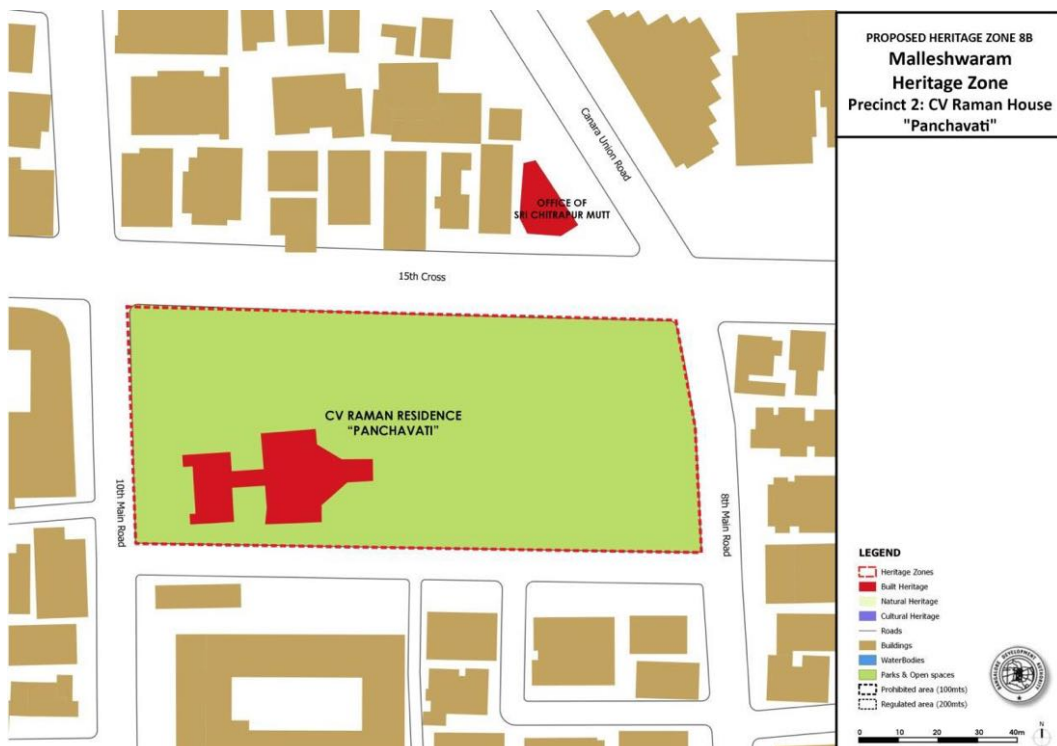
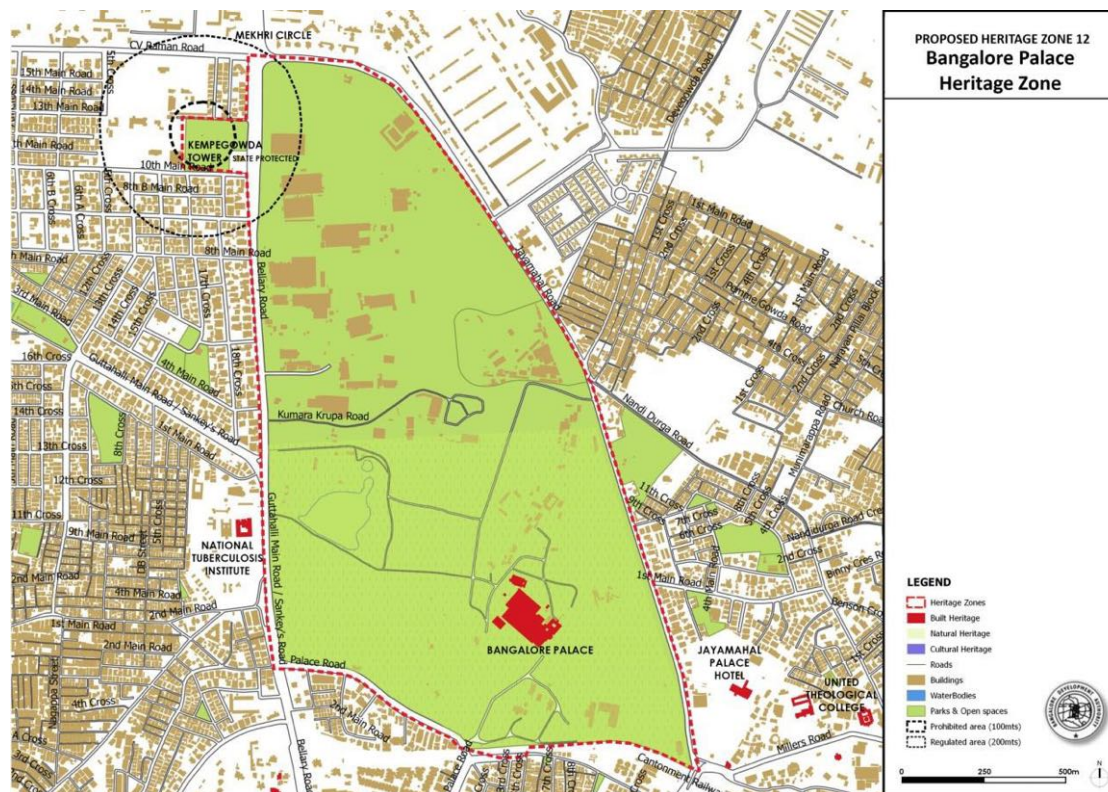


Figure 7-5: PD 6 Bangalore Palace Heritage Zone



5. RMP2031 proposes that BBMP, in accordance with the provisions of Street Vending Act, 2015, determines the areas/ streets within Malleshwaram, Sehsadripuram, Yeshwanthpur, and Mathikere for informal activities/ street vending. Detailed upgradation plans for such areas/ roads/ streets are proposed to be prepared.
6. In addition to the existing Namma Metro System, to augment the public transport share, the RMP2031 proposes the following Public Transport Systems:
 - a. Commuter Rail Service (CRS) from Yashwanthpur: The RMP2031 proposes that CRS at regional level shall start/ terminate at the Yeshwanthpur Railway Station and integrated with city public transport network (Metro/ mono/ Bus).
 - b. Metro Rail ORR Link: It is proposed to develop metro link along Outer Ring Road and with 5 stations within this PD – namely Netaji Subhash Chandra Bose Circle (Kanteerava Studio), Peenya CMIT Metro Station (Interchange), Jalahalli Village Main Road ORR Junction (Sharadhamba Nagar) and BEL Circle. Leading to Lottegollahalli Railway Station in PD 8.
 - c. Mono Rail along Intermediate Ring Road: The Mono Rail on Intermediate Ring Road is proposed to be developed along with stations at Shankar Mutt Bus Stop, Geleyara Balaga AGB Layout, Mahalakshmi Layout Cross, Mahalakshmi Layout, Shankar Nagar, Karnataka Cancer Hospital, MEI Guragunte Palya, Yeshwanthpura Railway Station, Yeshwanthpura Circle, IISC, Sadashiva Nagar, Mekhri Circle (inter change with LRT)
 - d. LRT / Mono Rail/ BRT along Cubban Park to Jakkur: The LRT/ Mono Rail / BRT starts from Cubbon Park Metro stations and runs along Bellary road till Jakkur. Within this



PD it is proposed to develop stations at Palace High Ground, BDA Office, Guttahalli, Cauvery Theatre, and Mekhri Circle.

7. Intermodal Interchang Stations are proposed to be developed at 2 locations – a) Yeshwanthpur Railway Station , and b) Mekhri Circle.
8. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located beyond ORR i.e in Planning Zone B.
9. To improve the accessibility to Public Transport Stations (Metro, LRT/ Mono Rail, BMTC Bus Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing (wherever feasible) footpaths and cycle tracks.
10. The RMP2031 has identified 23 critical junctions for geometric improvements for better and smoother traffic flow and to be taken up on priority.
11. To cater to future management and operations of Solid Waste, it is proposed to develop 31 Dry Waste Collection Centres, 4 Organic Waste Collection Centres, and 1 waste Aggregator in addition to existing SWM facilities within the Planning District by BBMP.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for P.D 6: Yeshwanthpur.

1. Road development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Junction Improvement Plan
 - i. Jalahalli Cross,
 - ii. Jalahalli Police Station Junction,
 - iii. Yeshwanthpur Circle,
 - iv. Yeshwanthapura Market,
 - v. BEL Junction,
 - vi. CS Gorguntepalya junction,
 - vii. MEI Guragunte Palya,
 - viii. Kanteerva Studio,
 - ix. M.S. Ramaiah Hospital Junction,
 - x. Mekheri Circle,
 - xi. Sadasiva Nagar Police Station Junction,
 - xii. Training Command Air Force Gate Junction,
 - xiii. Ashwath Nagar Bhupasandra Junction,
 - xiv. Surana College - Peenya Campus Junction,
 - xv. Gangamma Circle,
 - xvi. BEL Market Junction,
 - xvii. Intersection of BEL Road and Ramachandrapura Road,
 - xviii. Intersection of Mathikere Main Road and Govindappa Road,
 - xix. Intersection of MEI Road and Kanteerava Studio Road,
 - xx. Intersection of BKNagar Main Road and Pipeline Road (Near Yashwanthpur Market),
 - xxi. Intersection of Link Road and 5th Cross Road Malleshwaram,



- xxii. Suguma Travels Junction (Dr. Rajkumar road), and
- xxiii. Dattatreya Temple Junction (Malleshwaram)

2. Development of Public Transport System

- a. Metro along ORR
- b. LRT/ Mono Rail: Intermediate Ring Road
- c. LRT/ Mono Rail: Cubbon Park to Jakkur

3. Development of Intermodal Stations

- a) Yeshwanthpur and
- b) Mekhri Circle

4. Accessibility Improvement Plans for stations and educational insitutions

5. Preparation of Parking Plans for Commercial Areas/ Streets falling within

- a) Malleshwaram
- b) Mathikere
- c) Yeshwanthpur

6. Preparation of Comprehensive Area Redevelopment Plans

- a) Yeshwantpur Industrial Area and Adjoining Densely Populated Areas
- b) Yeshwanthpur Industrial Suburb and Adjoining Densely Populated Areas
- c) Yeswanthpur APMC Market & Yard and Adjoining Densely Populated Areas
- d) Yeswanthpur Fruit Market and Adjoining Densely Populated Areas

7. Preparation of Slum Redevelopment Plans

8. Development of SWM Facilities

- g) Dry Waste Collection Centre: 31 No.
- h) Organic Waste Collection Centre: 04 No.
- i) Aggregators: 01 No.

9. Heritage Area Protection and Conservation Scheme

- a) Heritage Master Plan for Malleshwaram Heritage Zone and Bangalore Palace Heritage
- b) Heritage Area Improvement and Development scheme

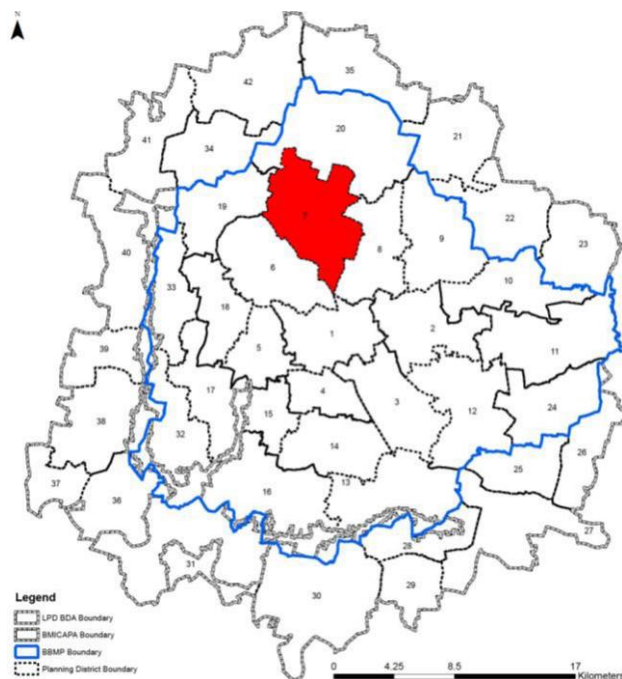
10. Identifying and Declaration of Street Vending Areas/ Zones for following areas

- a) Malleshwaram
- b) Mathikere
- c) Yashwanthpur

11. Preparation of Flood Mitigation Plan for following areas

- a) Yeshwanthpur Railway Station,
- b) KEB Compound Mathikere,
- c) Brindavanagar (below Mathikere Tank Market)

8. PD 07: RT NAGAR - HEBBAL-GKVK



Population (2011 Census): 4,96,056

Area of PD: 3923.02 ha

Wards in PD: 12

Gross Density: 125 pph

Hebbal Planning District is located at Central North of planning area and is within BBMP. The PD is characterised presence of Bellary Road (NH7) connecting International Airport and the Outer Ring Road, GKVK, defence institutions, flying school, and residential development in the form of layouts and high rise apartments. The PD fairly developed with potential for further densification.

Master Plan aims at stabilising the areas within ORR and promoting developments outside ORR with TOD along Metro Corridor.

1. The Hebbal Planning District comprises of 12 wards namely Byatarayanapura (7), Kodigehalli (8), Vidyaranyapura (9), Doddabommasandra (10), Radhakrishna Temple (18), Sanjay Nagar (19), Ganga Nagar (20), Hebbal (21), Vishwa nathnagenahalli (22), Manorayanapalya (33), Gangenahalli (34) and Jayachamarajendra Nagar (46).
2. Bellary Road providing connectivity to Kempegowda International Airport/ Hyderabad, Outer Ring Road, Jayamahar Road, New BEL Road, Sanjay Nagar Main Road, Dasarahalli Main Road, Kodigehalli Main Road, Vidyaranyapura Road, etc define the overall road network of the PD.
3. The PD is fully developed within the outer ring road and has some potential for further densification outside ORR. However, redevelopment of certain parts within ORR is seen required.
4. Government establishment (like Defence, Collages, Departments offices), Specialty Hospitals, Commercial Activities and High Rise High Density Residential developments along the Bellary Road, large public sector institutions like BEL and GKVK, a number of dense mixed settlements, layouts with well-planned grid of roads and high rise residential developments, and presence of seven lakes (including Hebbal, Nagawara, Dodda Bommasandra) define the spatial characteristics of this planning district.
5. It is important to note that the Ghandi Krushi Vignana Kendra (GKVK) Campus, University of Agricultural Sciences, Bengaluru has been declared as Biodiversity Heritage Site under the provisions of Biological Diversity Act 2002.



A. EXISTING STATUS

Demography

6. As per Census 2011, PD has 4,96,056 inhabitants, which has increased by 57.6 % from 2001(3,14,788) and there are 2,06,919 (41.7%) resident workers. There are 1,22,568 households (2011), with an average household size of 4.04, which is slightly higher than BMA (4.01). The gross density is 126 pph due to presence large public –semipublic activities, lakes, BEL, defence areas and Jakkur Flying School. However, at ward level, the gross density is highest in Manorayanapalya Ward (592 pph) and lowest in Vidyanarayapura Ward (58 pph).

Industry and Commerce

7. Various government institutions - like Indian Veterinary Research Institute, Government Veterinary College, National Bureau of Agricultural Insect Resources, NBSS & LUP, GKVK Agriculture University; several other private institutes, Healthcare facilities like - Aster CMI Hospital, Columbia Asia Hospital, Government Homeopathy Hospital; Commercial Activities along Bellary Road (focused on IT/ ITES and Business Offices), Outer Ring Road and certain main roads, and BEL factory, are the major employment/ work centres.
8. The work force participation rate is 41.40% with an estimated employment generation of about 1,50,331. The important work centres are BEL factory, the various public institutions mentioned above and various large hospitals present.

Existing Land Use

9. The predominant land uses are residential and Public Semi Public use covering 32.55% and ~21.57% of area respectively. While, 13.64% of PD area is still vacant. The total area under transport communication is 9.62 %. The area under industrial use is about 5.12%, whereas commercial use accounts for 3.85%.
10. Figure 1 and Table 2 present the existing land use map and existing land use are statement for PD 07.

Housing and Slums

11. The planned government layouts like RT Nagar, Sahakar Nagar, BEL Layout, AECS Layout, etc and several private layouts (both planned and unplanned) with low rise high density dominate the residential landscape. However, residential developments along Bellary Road and ORR are of high rise high density nature. There are several highly dense areas like Hebbala, Dinnur, Ayyappa layout, Manorayana Palya, Chamundeswari Layout, etc within PD.
12. There are a total of 2,06,919 households with 3.63% living in slums. There are 38 slums, of which only 6 are notified. While each ward has slums, Byatarayanpura with 7 slums has most slums among the wards within PD.

Figure 8-1: PD 7 Existing Land Use Map

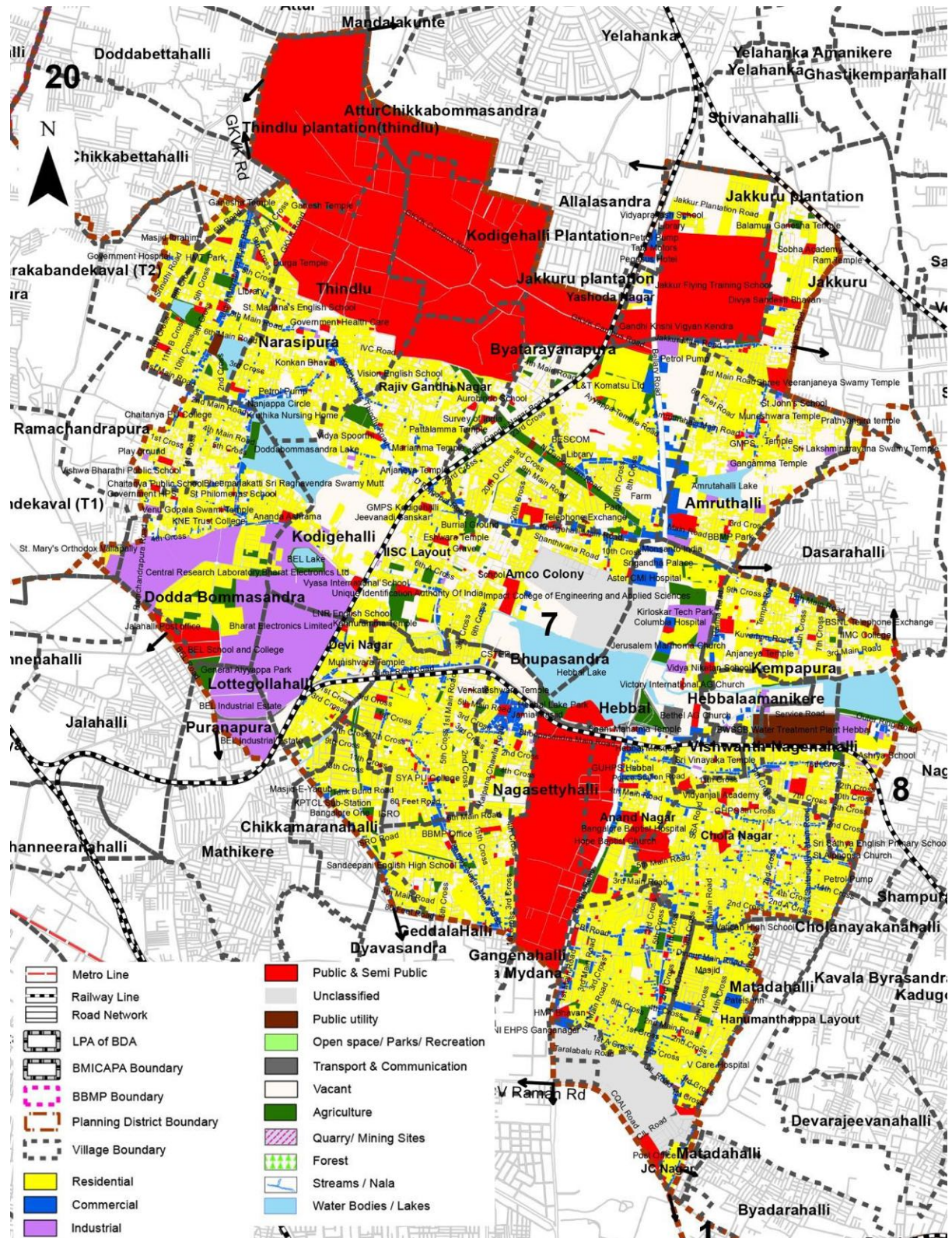


Table 8-1: PD 07 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	1276.80	32.55
Commercial	150.94	3.85
Industrial	200.97	5.12
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	846.10	21.57
Unclassified	125.54	3.20
Public Utility	22.84	0.58
Parks & Open Spaces	101.38	2.58
Transport Communication	377.24	9.62
Vacant	664.49	16.94
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	16.08	0.41
Water Bodies	140.63	3.58
Total	3923.01	100.00

Traffic and Transportation

13. Bellary Road, Outer Ring Road, Jayamahall Road, New BEL Road, 80ft Road, Sanjay Nagar Main Road/ Gundappa Road/ Dr.Rajagapool Road, CBI/ Dinnur Main Road, Sumangali Sevashrama Main Road, Devegowda Road/ JC Nagar Main Road, KHB Colony Main Road, RT Nagar Main Road, Visawanath Nagenhalli Main Road, Dasarahalli Main Road, Kempapura Main Road, Amruthahalli Main Road, Jakkur Main Road, Bhoopasandra Main Road, Kodigehalli Main Road, GKV Road & Vidyaranyapura Road define the overall road network of the PD.
14. NH7 (Bellary road) and ORR are the Major arterial roads and carry maximum traffic in BMA. The major form of public transport is BMTC buses and private buses. Airport taxis travel between the city and BIAL while autos act as local feeder services. BMRL has proposed metro link to International Airport. There are two bus depots, located at Hebbal and RT Nagar. Railway lines to Hyderabad, Devenahalli, and connecting to KR Puram, Yeswanthpur, and Byapannahalli Railway Yard are present in PD. Also, there is a small railway yard at Hebbal.

Physical and Social Infrastructure

15. As per BWSSB, around 40% of the households have metered water supply connections while 25% of the households have metered sewage & sanitation connections. There are 5 Ground Level Reservoir (GLR) and 6 Pumping Stations and Borewells. As per BBMP, there a 7 DWCC for SWM. As per KPTCL, there is one existing 220kv sub-station and one 220kv substation is under implementation. There is no fire station within the planning district and is served by fire stations located in adjoin planning districts.



16. Public institutions of both state and national importance located in this PD, as mentioned earlier. In addition to these, there are 190 schools located in the PD. There are 28 hospitals located in with total bed capacity of 977. The important private hospitals include Baptist, Columbia Asia and Aster CMI hospital.

Park and Open Spaces

17. Parks and Open spaces account for 2.58% of the total PD area. GKVK, a national level institute which undertakes R&D in the field of agriculture, has patches where different species of trees and flowers are cultivated. Further, there are several small neighborhood/ layout level parks.

Lakes and Drainage

18. There are 7 lakes as per revenue village maps, namely Hebbal Kere, Dodda Bommasandra Kere Nagawara Kere, Amrutahalli Kere, Narsipura Kere, one additional lake in Narsipura revenue village and Byatarayapura Kere. Except for Amruthahalli and Byatarayapura kere all other lakes are interlinked cascading lakes which support rich bio diversity of flora and fauna.
19. The Natural Drainage system cover large developed area. Hebbal Kere has the largest catchment areas followed by Nagawara and Dodda Bommasandra.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: MIX OF STABILISATION AND CONSOLIDATION, PROMOTION OF PUBLIC TRANSPORT, TRANSIT ORIENTED DEVELOPMENT, REDEVELOPMENT, FLOOD PROTECTION AND LAKE PROTECTION

PROPOSALS

1. Planning District is falling under two planning zones of RMP2031 – Planning Zone A (Stabilization) and Planning Zone B (Consolidation). Hence the governing principles for the proposals for this PD are derived from both the concepts. The governing principle for this PD are as following:
 - a. Development of Public Transport Infrastructure to increase the share of public transport
 - b. Employment Generation through promotion of defined high density commercial corridors (TOD based) along Bellary Road and Outer Ring Road.
 - c. High Density Commercial and Residential Development along TOD Corridors.
 - d. Defined commercialization along certain roads
 - e. Redevelopment of densely populated and congested areas / slums
 - f. Protection and Conservation of Lake System and Flood Protection
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD is depicted in Figure 8-2 and Table 8- 3 respectively.

Figure 8-2: PD 7 Proposed Land Use Map

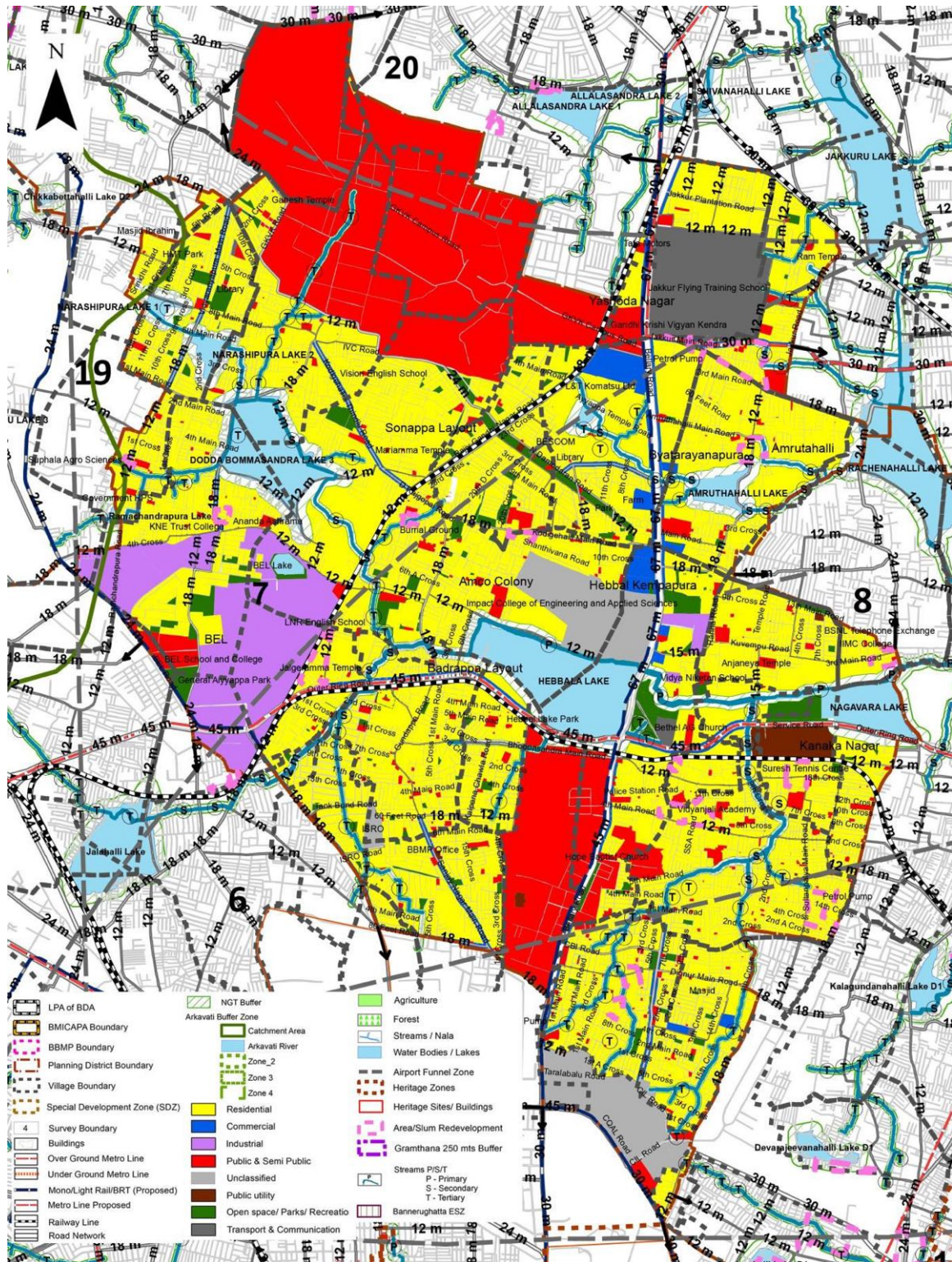




Table 8-2: PD 07 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1713.55	43.68
Commercial	65.31	1.66
Industrial	177.91	4.53
Public & Semi Public	730.63	18.62
Unclassified	118.69	3.03
Public Utility	21.18	0.54
Parks / Open Spaces	97.06	2.47
Transport & Communication	560.01	14.28
Forest	0.00	0.00
Streams	15.53	0.40
Water Bodies	134.97	3.44
NGT Buffer	288.16	7.35
Total Developable Area	3923.01	100.00
Agriculture	0	-
Total PD Area	3923.01	-

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Commuter Rail Service (CRS) from Yashwantpur: The RMP2031 proposes that CRS at regional level will start/ terminate at the Yeshwanthpur Railway Station to Dodaballapur, Devanahalli, Tumukuru, etc and integrated with city public transport network (Metro/ mono/ Bus). It is proposed that Lottegollahalli and Kodigehalli railway station falling within the planning district be developed as CSR Stations.
 - b. Metro Rail ORR Link: It is proposed to develop metro link along Outer Ring Road and with 3 stations within this PD – namely Lottegollahalli Railway Station, Hebbal (interchange with BMTC Bus Depot and Mono Rail), and Kempapura/ Veeranapalya and leading further to Manyata Tech Park.
 - c. LRT/ Mono Rail/ BRT on Bellary Road: The proposed Mono Rail / BRT/LRT along the Bellary road pass through the PD and it is proposed to develop stations near Mekhri Circle, HMT Bhavan, Gangenhalli/ CBI Bus Stop, RT Nagar Traffic Police Station, Hebbal Bus Stop, Hebbal BMTC Bus Depot (interchange with Metro ORR), Columbia Asia Hospital, Kodihalli Gate, Byatarayanapura, GKVK, Allasandra, and then going to NES Bus Station in PD 20.
 - d. Mono Rail /LRT/BRT - Hesaraghatta: The proposed Mono Rail/LRT/BRT to Hesaraghatta starts from Lottegahalli Railway Station (interchange with Metro + Railway) and runs along BEL Road and Hesaraghatta Road till Dodda Bylakere.
4. Intermodal Interchange Stations are proposed to be developed at 3 locations – a) Lottegollahalli Railway Station b) Hebbal c) Mekhri Circle.

5. To improve the access to public transport it is proposed to develop a BMTC Bus Station near Kodigehalli Railway Station. This will be integrated with Kodigehalli Railway Station
6. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B.
7. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
8. The RMP2031 proposes redevelopment/ re-engineering of Hebbal Flyover/ Junction and Allasandra Rail Gate Junction (Intersection of Bellary Road and Doddaballapur (SH 9) Road) as these two are major bottleneck for traffic flow. In addition, the RMP2031 has identified 21 junctions for geometric improvements for better and smoother traffic flow are to be taken up on priority.
9. The natural drainage between Dadda Bommasandra Kere to Yelle Mallappa Shetty Kere and beyond BMA boundary is classified as Primary drainage, hence it is critical to protect and conserve the lake and drainage system for areas which are either at flood risk or low lying. It is therefore proposed that all the drainage and lakes as defined in RMP2031 are kept free of all encumbrances, sludge, SWM, and no sewage allowed to flow into the streams and lakes. It is also proposed that all lakes be properly interconnected and rejuvenated. The RMP2031 proposes that a details lake and stream/ drainage rejuvenation plan and adjoining area improvement plan be prepared.
10. Re-development/ upgradation of infrastructure in areas like Vayunandana Layout, Dodda Bommasandra, and 38 slums is proposed to be taken-up in a phased manner.
11. Some parts of Planning District are prone to Urban Flooding while some areas are at fire risk. It is proposed that local area Disaster and Hazard Mitigation Plan covering aspects related Urban Flooding, Fire, & Emergency Situations be prepared for areas like Sultanpalya, Ananda Nagara, Pilappa Garden, and other areas.
12. To cater to management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 24 Dry Waste Collection Centres, and 3 Organic Waste Collection Centres are proposed to be developed within the Planning District by BBMP.
13. To improve green cover and provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 7: RT Nagar - Hebbal - GKVK

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Widening of Certain Roads:
 - i. Jakkur Main Road,
 - ii. Dasarahalli Main Road
 - iii. Kodigehalli Road road,



- iv. Rajiv Gandhi Nagar Road,
- v. Kodigehalli - Thindlu Main Road
- c. Redevelopment of Hebbal Flyover and Allasandra Railway Gate Flyover
- d. Overall Geometric Improvement of Certain Roads
 - i. 80ft Road,
 - ii. Sanjay Nagar Main Road/ Gundappa Road/ Dr.Rajagapal Road,
 - iii. CBI/ Dinnur Main Road,
 - iv. Sumangali Sevashrama Main Road,
 - v. Devegowda Road/ JC Nagar Main Road,
 - vi. KHB Colony Main Road,
 - vii. RT Nagar Main Road,
 - viii. Visawanath Nagenhalli Main Road,
 - ix. Dasarahalli Main Road,
 - x. Kempapura Main Road,
 - xi. Amruthahalli Main Road,
 - xii. Jakkur Main Road,
 - xiii. Bhoopasandra Main Road,
 - xiv. Kodigehalli Main Road,
 - xv. GKV Road
 - xvi. Vidhyaranyapura Road
- e. Junction Improvement Programme:
 - i. BEL junction,
 - ii. M.S. Ramaiah Hospital Junction,
 - iii. Mekhri circle.
 - iv. Bhadrappa Layout Junction (Intersection of Kodigehalli Main Rd & ORR),
 - v. Devinagar Junction (intersection of Devinagar Main Rd and ORR)
 - vi. Dodda Bommasandra Arch Junction Veeranapalya Junction
 - vii. Jakkur Main Road Junction on Bellary Road
 - viii. Byatarayana Pura Junction on Bellary Road (Amruthahalli Main Road)
 - ix. Yelahanka Kodigehalli Gate (Kodigehalli Main Road)
 - x. Big Market Sahakara Nagar (20th Main Road)
 - xi. Vidhyaranyapura Junction (Bus Station)
 - xii. Nanjappa Circle (including intersection with Temple Road)
 - xiii. Dasarahalli Junction (Intersection of Kempapura Main Rd & Dasarahalli Main Road)
 - xiv. Ganesh Temple Circle (Kodigehalli Main Road)
 - xv. Vidhyaranyapura BEL 1st Block (Intersection of Vidhyaranyapura Main Road & Ramchandrapura Rd)
 - xvi. NTI Ground Junction (Intersection of Vidhyaranyapura Main Road & 12h Main Rd)
 - xvii. Tennis Court Junction
 - xviii. St. John's School Junction (near Coffee Board Layout Park)
 - xix. Jantha Colony Junction (intersection of Kuvempu Road and Jantha Colony Road)



- xx. Intersection of Kuvempu Road and Kempapura Road)
- xxi. Devinagar BEL Junction (Intersection of Jalageramma Temple Rd and Devinagar Main Road)

2. Development of Public Transport System:

- a. Namma Metro: Outer Ring Road.
- b. LRT/ Mono Rail: Cubbon Park to Airport Metro Link on Bellary Road
- c. LRT/ Mono Rail/BRT to Hessarghatta

3. Development of Intermodal Interchange Stations:

- a. Hebbal Integrated Intermodal Passenger Station
- b. Mekhri Circle
- c. Lottegollahalli Railway Station

4. Accessibility Improvement Plans for stations and educational institutions.

5. Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places

- a. Vidyaranyapura Road,
- b. Dr. Rajgopal Road,
- c. Bellary Road,
- d. R.T Nagar main Road, and
- e. Sultanpalya main road.

6. Preparation of Comprehensive Area Redevelopment/ Upgradation Plans:

- a. Vayunandana Layout
- b. Byatarayanpura

7. Preparation of Slum Redevelopment Plans

8. Development of SWM Facilities:

- a) Dry Waste Collection Centre: 24 No.
- b) Organic Waste Collection Centre: 03 No.

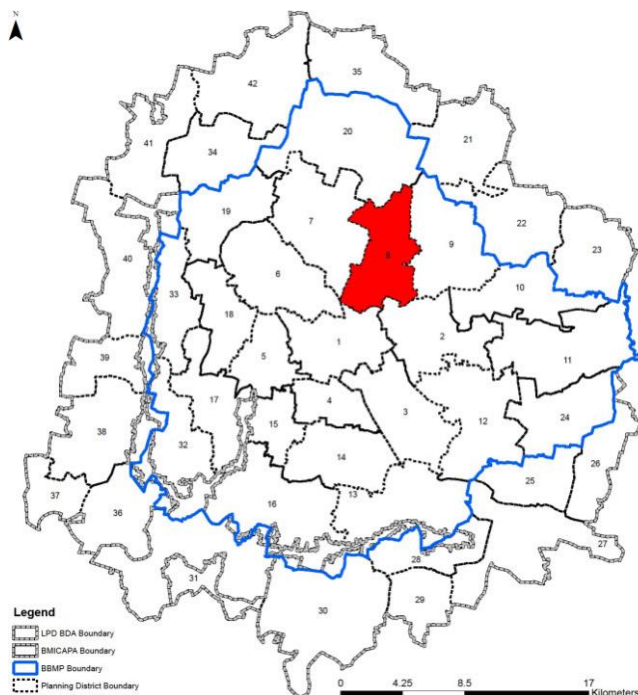
9. Disaster & Hazard Mitigation Plan:

- a. Urban Flooding Mitigation Plan for Flood Prone Areas (to be determined by BBMP)
- b. Development of Mini-Fire Station in RT Nagar

10. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. Hebbal Kere Rejuvenation Plan,
 - b. Doddabommasandra Kere Rejuvenation Plan
 - c. Nagawara Kere Rejuvenation Plan
 - d. Amrutahalli Kere Rejuvenation Plan
 - e. Narsipura Kere, Rejuvenation Plan
 - f. Byatarayanpura Kere Rejuvenation Plan
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

9. PD 08: THANISANDRA-NAGAWARA-RICHARDS TOWN



Population (2011 Census): 6,22,667
 Area of PD: 27.98 sqkm (2798.64 Ha)
 Wards in PD: 14
 Gross Density (2011 Census): 222 pph

The Thanisandra-Nagawara-Richards Town Planning District is located centre - north of BBMP and in between PD 7 and PD 9. The PD is characterised by presence of historical Richards Town, highly dense areas within ORR, defence establishment, an major employment centre – Manyata Tech Park, high rise high density development and has potential for further growth despite having higher densities in certain areas.

Master Plan, while looking at redevelopment/ upgradation of dense areas, proposes further densification of through high rise development outside ORR with TOD along Metro Corridor.

1. PD consists of 14 BBMP wards and namely - Thanisandra(6), Nagawara(23), HBR Layout(24), Kammanahalli(28), Kacharakanahalli(29), Kadugondanahalli(30), Kushal Nagar(31), Kavalbyrasandra(32), Devarajeevanahalli(47), Muneshwara Nagar(48), Lingarajapura(49) and Sagayapuram(60), SK Garden (61) and Ramaswamy Palya (62)
2. Outer Ring Road, Nagawara Main Road, Thanisandra Main Road, Hennur Main Road, are major arterial roads forming the connectivity network within the planning district.
3. Highly Dense areas within the outer ring road, Manyata Tech Park – a major employment centre within city, commercial developments along the roads, high rise developments along Nagawara and Thanisandra main roads, higher order educational institutes like – Dr. BR Ambedkar Medical Collage, Arabic Collage, Karnataka Institute of Leather Technology, etc, flood prone areas, Military Grounds and historical Richards Town define the spatial characteristics of PD.
4. The PD has good potential to accommodate additional population outside Outer Ring Road, at the same time redevelopment/ upgradation of certain dense areas within ORR is seen required.

A. EXISTING STATUS

Demography

5. The PD has a population of 6,22,667 inhabitants as per census 2011, with a decadal growth rate of 40%. There are 2,42,892 resident workers with a work force participation of 39%, which is lower than the BMA average of 44.5%. There are 1,38,067 households (2011), with an average household size of 4.50, which is higher than BMA (4.01).
6. The gross density is highest in Muneshwara Nagar Ward (746 pph) and lowest in Thanisandra Ward (72 pph). Hyper densities are observed in the wards within Outer Ring Road. Wards like Kammanahalli(28), Kacharakanahalli(29), Kadugondanahalli(30), Kushal Nagar(31), Muneshwara Nagar(48), Lingarajapura(49) have gross densities ranging between 450 to 650 pph (as per Census 2011). It is also noteworthy that Thanisandra ward had a growth rate of 252% between 2001 and 2011 mainly due to its close proximity to Manyatha Tech Park and still has potential future growth.

Existing Land Use

7. Residential Use dominate the Existing Land Use with about 40% of PD area under residential activities, however with 26% of vacant use, PD has huge potential for further increase in residential use. The Industrial use and commercial use accounts for 5.8% and 3.8% respectively. **Figure 9-1** and **Table 9-1** presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Table 9-1: PD 08 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	1113.41	39.79
Commercial	160.55	5.74
Industrial	106.04	3.79
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	116.77	4.17
Unclassified	140.53	5.02
Public Utility	5.42	0.19
Parks & Open Spaces	48.17	1.72
Transport Communication	292.47	10.45
Vacant	734.10	26.24
Agriculture	0.00	0.00
Forest	14.44	0.52
Streams	17.80	0.64
Water Bodies	48.30	1.73
Total	2798.00	100.00

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8. Industrial land uses account for 3.62% while commercial land uses account for 5.76% as per the existing land use 2015. Commercialization has taken place along all major arterial roads like Nagawara main road, Hennur main road and Kamanahalli main road. The important work centres are Manyata Tech Park and a few small scale industries related to IT, Clothing and Building Construction (fabricators etc) are also present in the PD. Various activities have come up around Manyatha Tech Park like high rise apartments, paying guest accommodations, hostels, restaurants and cafes.



9. Kammanahalli has experienced major urban transformation from a sleepy outgrowth of Bengaluru to a vibrant commercial area with a large number of restaurants and high end shopping centres. Kammanahalli main road and CMR road has experience maximum commercialization in the last 10 years. Also with a large number of private educational institutions, there is a large amount of expatriate students residing in and around Kammanahalli ward. The most notable shopping malls are Elements malls at Nagawara and newly constructed Phoenix Infocity mall at Jai Bharath Nagar. On the western edge of Kacharkanahalli lake, a weekly market is setup by the local traders.

Housing and Slums

10. The HBR Layout, Richards Town, KBH Colony are some of the planned residential layouts in the predominantly residential area where highly dense private layouts define the residential character. PD has both planned residential layouts and unplanned low income dense neighbourhoods. 7% of the total population lives within slums. Some of the layouts do not have basis facilities.
11. There are a total of 49 slums distributed among all the 12 wards in the PD, out of which only 13 are notified. 18% of the total slums are located within SK Garden ward.

Transportation

12. The major forms of public transport are BMTC buses and a few private buses, while autos, cabs act as feeder services. There is one bus depot at Hennur and one Bus Terminal at Kaval Byrasandra.
13. Two railway lines mark their presence within the PD, namely Yeshwantpur (tumukur line) to Byapannahalli/ KR Puram connecting Whitefield and KR Puram (Salem line) to Doddaballapur. The two important railway stations located here are Bangalore East and Banaswadi.
14. The major arterial roads like Outer Ring Road, Nagawara Main Road, Hennur Main Road, Kammanahalli Main Road are the major arterial roads and take more traffic than other roads within the PD. The important junction includes, Intersections of Pottery Road and Tannery Road- below the rail under bridge, Nagawara Main Road meeting ORR, Hennur Main Road meeting ORR, Intersection of Hall Road and Hennur Main Road, Intersection where Hennur Main Road bifurcates into 80 feet road and Kacharkanahalli Main Road, and Junction of Hennur Cross at Hennur Main Road

Physical and Social Infrastructure

15. As per BWSSB data 34.3% of the households have metered water supply connections while only 19% of the households have metered sewage & sanitation connections. Two ground level reservoirs exist at DJ Halli (2.27 ML) and Kaval Byrasandra (4 ML) while two sewage treatment plants exist at Nagawara lake (60 MLD and 100 MLD). As per BBMP, there are 7 dry waste collection centres located in the PD. As per KPTCL, there is one 220 KV substation.
16. There are 298 schools located in the PD. The major schools are Clarence High School, National Junior School while colleges include Ambedkar Medical College, CMR institutes, Indian Academy, Dr. SR Chandershekar Institute of Speech and Hearing.



17. There are 19 hospitals out of which 3 are Government hospitals while the remaining are private hospitals. The major hospitals are Dr. Ambedkar Medical College Hospital, Sathya Hospital with 923 beds.

Lakes and Drainage

18. As per revenue there are five kere namely – Rachenahalli Kere, Hennuru Kere, Kacharakanahalli Kere, Kadugondanahalli kere, and Lingarajapura Kere. However, except for Rachenahalli Kere, other four lakes have been breached fully or partly. Hennuru Kere is now a park and partly HBR Layout, whereas Kacharakanahalli kere is partly breached.
19. The PD area falls under the larger catchment of Hebbal – Yella Mallappa Chetty Kere. Certain localities like Basavanna Nagara near Kadugodanahalli, Shampura Slum, Govindapura - Near Nagawara, Thammana Layout near Lingarajapura, Munireddy Palya, DJ Halli, etc are vulnerable to flooding.

Parks and Open Spaces

20. Richards Park, Hennuru Lake Park, neighbourhood parks within HBR layout, and other small parks are within the PD. PD lacks open spaces and parks especially in the highly dense neighbourhoods of Nagawara, Hennur and Thanisandra.

Heritage and Culture

21. There are 24 heritage sites out of which 17 are residential buildings. Majority of the heritage sites are located in Sagayapura ward. These are mainly Colonial bungalows.
22. Some of the important heritage sites include Holy Ghost Church, Tree Lined avenues of Richards town and Colonial bungalows on Viviani road, Pottery road etc.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: MIX OF STABILISATION AND CONSOLIDATION, PROMOTION OF PUBLIC TRANSPORT, TRANSIT ORIENTED DEVELOPMENT, REDEVELOPMENT, FLOOD PROTECTION AND LAKE PROTECTION

PROPOSALS

1. Planning District is falling under two planning zones of RMP2031 – Planning Zone A (Stabilization) and Planning Zone B (Consolidation). Hence the governing principles for the proposals for this PD are derived from both the concepts. The governing principle for this PD are as following:
 - a. Development of Public Transport Infrastructure to increase the share of public transport
 - b. High Density Commercial and Residential Development along TOD Corridors.
 - c. Optimal use of potential areas for further densification
 - d. Defined commercialization along certain roads
 - e. Protection and Conservation of Lake System and Flood Protection

- f. Redevelopment/ upgradation of densely populated and congested areas / slums
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 9-2 and Table 9- 2 respectively.

Figure 9-2: PD 08 Proposed Land Use Map

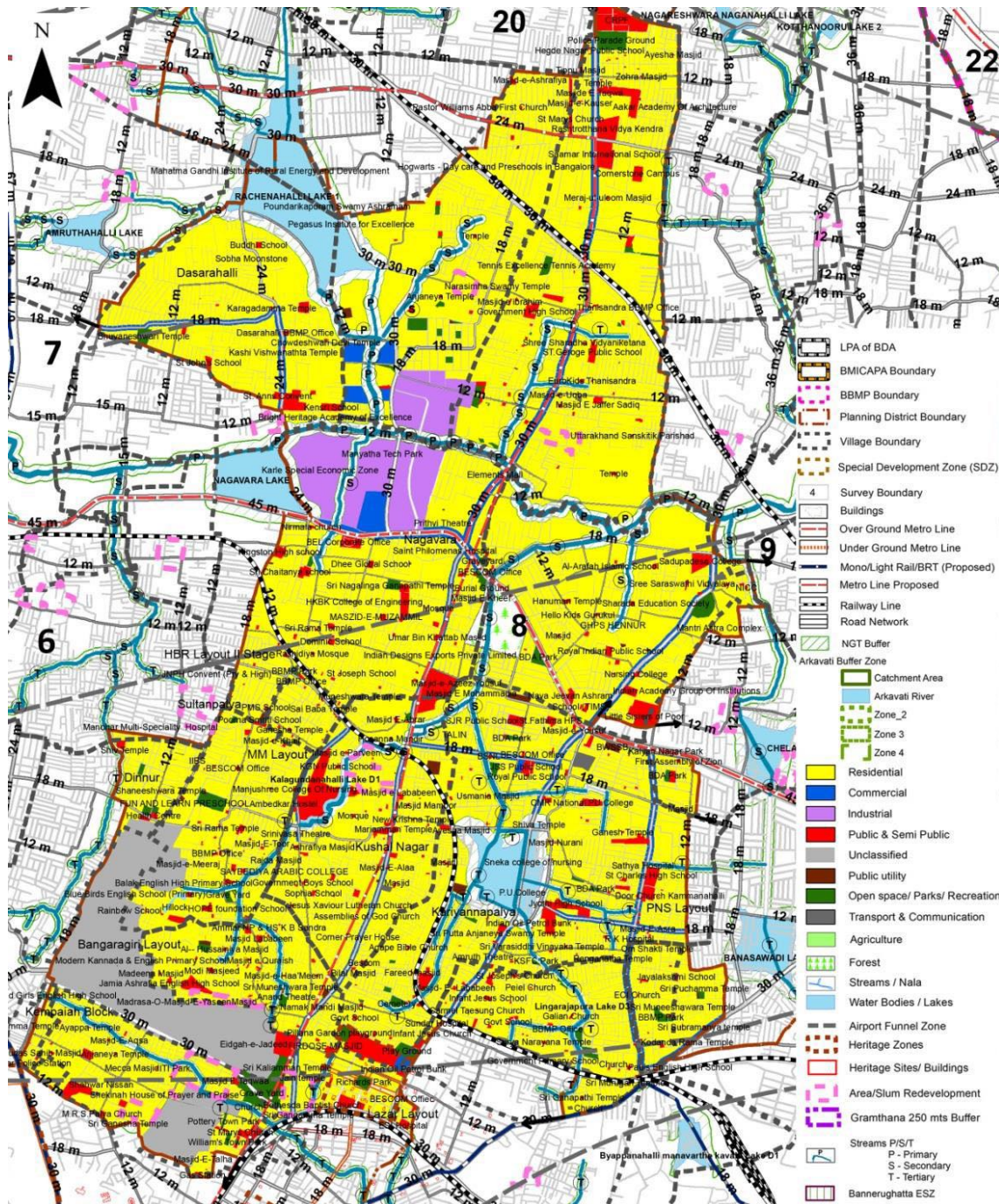


Table 9-2: PD 08 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1701.41	60.79
Commercial	55.88	2.00
Industrial	70.83	2.53
Public & Semi Public	100.28	3.58
Unclassified	135.28	4.83
Public Utility	5.24	0.19
Parks / Open Spaces	35.72	1.28
Transport & Communication	325.58	11.63
Forest	10.37	0.37
Streams	17.81	0.64
Water Bodies	47.47	1.70
NGT Buffer	292.78	10.46
		0.00
Total Developable Area	2798.63	100.00
Agriculture	0	-
Total PD Area	2798.63	-

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Metro Gottigere – Nagawara – International Airport Link (Red Line): Metro Phase II Gottigere Nagawara (mostly underground) is passing through the PD and the same link is being extended to International Airport as part of Phase III. The network designed for Metro Phase II includes 5 stations within planning district, namely – Pottery Town, Tannery Town, Venkateshpura, Arabic Collage, and Nagawara (to be developed as intermodal junction with ORR metro). In addition, depending on the feasibility, it is proposed to develop stations Thanisandra and K Narayanapura Cross along the Nagawara – International Airport link within the planning district.
 - b. Metro ORR Link: It is proposed to develop metro link along Outer Ring Road and with 3 stations within this PD – namely Manyata Tech Park, Nagawara (interchange with Phase II) and HRBR Layout (near Hennur Junction) and leading to Kalyan Nagar BMTC Bus Depot on ORR in PD 9.
 - c. Mono Rail Link – 6: The proposed Mono Rail Link – 6 around Inner Peripheral Ring Road passes through the PD and it is proposed to develop station at Thanisandra and Rachenahalli (Intersection of Rachenahalli Main road and IPRR)
 - d. BRTS: BRTS is proposed along Hennur Bagalur Main Road, from Intermediate Ring Road at Pottery Road towards Bagalur.
4. Intermodal Interchange Stations are proposed to be developed at 3 locations – a) Nagawara b) Thanisandra - Intersection of Thanishadra & IPRR and c) Kalyan Nagar.
5. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B.

6. In order to improve last mile connectivity and extend the public transport system to neighborhood level it is proposed to develop a BMTC Bus Station along Thanisandra Main Road (at the intersection of Thaninsandra Main Road and Intermediate Ring Road).
7. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
8. To improve the road network within the City it is proposed to develop inner peripheral ring road, which passes through the planning district mainly along the railway line. Outer Ring Road, Thanisandra Main Road/ Nagawara Main Road/ Arabic Collage Main Road, Inner PRR, Hennur Main Road, Jakkur Main Road/ 80ft Road/ K Narayanapura Main Road (connecting Bellary Road to Hennuru Main road) have been designated as Arterial Roads.
9. The RMP2031 has identified new link within the Planning district to improve the connectivity within the Planning District for ease of traffic movement.
 - **HBR 2nd Block to Lingarajpuram New Links:** The 3 major radial roads namely Nagawara Main Road, Hennur Main Road and Kammanahalli Main Road are at an average distance of 1.5km between each other and take on them large volumes of daily traffic. The flyovers on Hennur Main Road and Dodda Banaswadi Main Road take thorough traffic via Lingrajpuram and Maruthi Sevanagar towards the ORR. These flyovers are plagued with chronic traffic jams throughout the day. An 18m link is proposed from HBR 2nd block to Lingrajpuram Main Road along the existing railway track and existing drain. This will act like an alternate to already busy Tannery Road and a direct connection onto Lingrajpuram Flyover can be given from this road.

Figure 9-3: PD 8 New Road Link



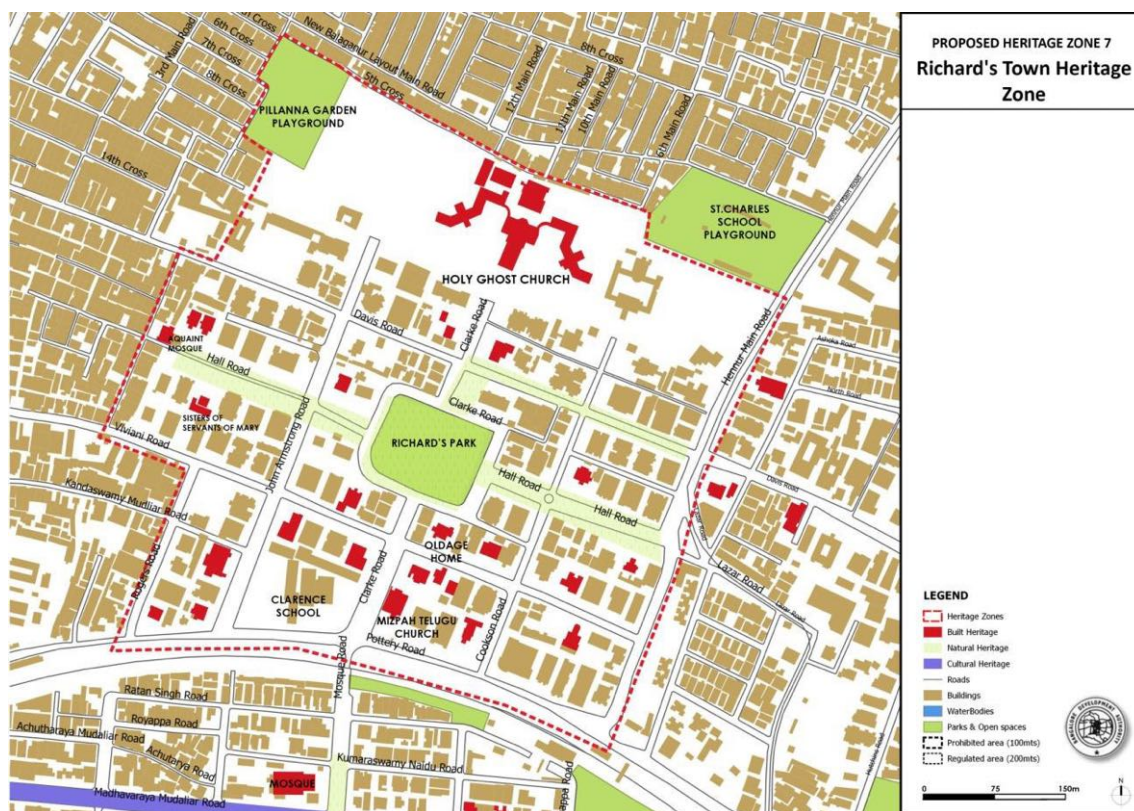
- **Manyatha Tech Park to Kempapura Main Road New Link:** It is proposed to develop a 12m link connecting Manyatha Tech Park with Kempapura Main Road passing along the Rachenahalli Lake.



- **Completing Veeranapalya Main Road to Nagawara Main Road Link:** A road starting from Veeranapalya Main to towards Nagawara Main road mostly exists on ground a small patch ~100 is missing. It is proposed to develop this small patch and complete the link between veernapalya main road and Nagawara Main road. This link runs parallel to ORR.
 - **Connectivity between KHB Colony Main Road and Veeranapalya Road along with Railway Under Pass:** A link is proposed to be developed from KHB Colony Main road (from point opposite to International Institute of Business Studies) then cross railway line (under pass is proposed to be developed) to connect to existing road adjoining to Abodh Valmark Apartments leading to Veeranapalya Main Road.
 - **Byapanahalli Main Road to Kammanahalli Main Road New Link:** An 18m road link connecting Byapanahalli Main Road straight to Kammanahalli Main Road through Indian Oil Dept, below the flyover and crossing the railway track is proposed to be developed as part of redevelopment of Indian Oil Sevanagar Flyover.
 - **Development of Railway Underpass to connect 9th Main and 7th Cross Road:** It is proposed to provide connectivity between Arabic Collage Road and Hennur Main Road (flyover road) by to establishing connectivity between 9th Main Road (with BESCO Office) and 7th Cross Road and constructing a railway underpass between Fareed Masjeed (9th main) and Chamundeswari Temple on 7th Cross.
 - **Development of Connection between Kempapura Main Road to Thanisandra Main Road to Hennur Main Road (via Manyata Tech Park):** Using existing roads alignments which are partly developed, a 15m wide road is proposed to be development from Kempapura Main Road to Hennur Main Road via Manyata Tech Park, using existing road like 2nd Main Road, Bharat Nagar, to meet Thanisandra Main Road then following existing road till railway line – a railway underpass is proposed to be developed to connect to Mar Thimotheus Street meeting Hennur Bagaluru Main Road.
10. The RMP2031 proposes upgradation of certain roads to improve their service through geometric improvements.
 11. The RMP2031 has identified 24 critical junctions for geometric improvements for better and smoother traffic flow and to be taken up on priority.
 12. The natural drainage between Rachenahalli Kere and Kal Kere is classified as Primary whereas an existing stream starting some wherein Kaval Byrasandra leading to primary stream is classified as Secondary Stream by the RMP2031, as these streams caters to large areas. The RMP2031 therefore proposes that streams classified as Primary, Secondary and Tertiary falling within planning district be kept free of all encumbrances, sludge, SWM, and no sewage allowed to flow into the streams and lakes. It is also proposed that all lakes be properly interconnected and rejuvenated. The RMP2031 also proposes rejuvenation of Kacharkanahalli Kere and Rachenahalli Kere.
 13. It is proposed that the existing tanning Industrial area be redeveloped as Park/ Playground to provide recreational space for surrounding localities which are devoid of park/ playground facilities. This should be done keeping the local context and associational values.
 14. The RMP2031 proposes redevelopment of Tanning Industrial Area and Slaughter house for creation of much needed Parks, playground, sports facility, recreational areas, etc. The redevelopment is aimed at providing recreational facilities in highly dense area. It is also

- proposed that land should be earmarked for development of mini-fire station as part of redevelopment.
15. The RMP2031 has delineated Richards Town Heritage Zone within this PD, in the area surrounding Richards Park and including Holy Ghost Church. The urban form is structured around religious architecture and large green open spaces. The bungalow typology can be seen here, with traditional Madras tiles- monkey top roofs with teak rose windows with stain glass. The bungalows were set amidst large green plots showing the social status of the owners. The major architectural style seen is a mixture of Gothic and Colonial architecture. The zone also has beautiful tree lined avenues which must be conserved.
 16. There are 49 slums (both notified and non-notified) within the PD spread across 12 wards. Maximum concentration of slums is in SK Garden and Ramaswamy Palya ward. It is important to provide the existing slums with better infrastructure services and living conditions and hence the RMP2031 proposes redevelopment of the slums. It is proposed that redevelopment and upgradation has to be preferably in-situ with an objective to provide better housing/ living conditions.
 17. In order to cater to present and future infrastructure requirements, the RMP2031 proposes development Sewage Treatment Plant near Hennur Park, one 220kv power sub-station, and additional 33 DWCCs, 4 OWCCs, 1 Aggregator, and 1 CPU for solid waste management within the planning district.

Figure 9-4: PD 8 Richards Town Heritage Zone



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 8: Thanisandra-Nagawara-Richards Town.

1. Road development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
 - i. Outer Ring Road,
 - ii. Thanisandra Main Road/ Nagawara Main Road/ Arabic Collage Main Road
 - iii. Inner Peripheral Ring Road,
 - iv. Hennur Main Road,
 - v. Jakkur Main Road/ 80ft Road/ K Narayanapura Main Road (connecting Bellary Road to Hennuru Main road)
- b. Development of identified new link/ improved connectivity:
 - i. HBR 2nd Block to Lingarajpuram New Link
 - ii. Manyatha Tech Park to Kempapura Main Road New Link
 - iii. Veeranapalya Main Road to Nagawara Main Road Link
 - iv. Connectivity between KHB Colony Main Road and Veeranapalya Road
 - v. Byapanahalli Main Road to Kammanahalli Main Road New Link
 - vi. Development of Railway Underpass to connect 9th Main and 7th Cross Road
 - vii. Development of Connection between Kempapura Main Road to Thanisandra Main Road to Hennur Main Road (via Manyata Tech Park)
- c. Upgradation of Master Plan Roads
 - i. Hennur Main Road/ 80Ft Road/ Hennuru Bagaluru Main Road
 - ii. Tannery Road, Arabic Collage Road, Nagawara Road and Thanisandra Main Road
 - iii. Kammanahalli Main Road
- d. Junction Improvement Programme:
 - i. Doddi Junction (near Slaughter House)
 - ii. Periyar Nagar Circle (intersection of five roads namely – Tannery Road, Arabic Collage Road, Shampura Main Road, Deverjeevanhalli Main Road and 8th Cross Road)
 - iii. Intersection of Arabic Collage Road and 9th Main Road
 - iv. Intersection of Arabic Collage Road and 1st Main Road (Dodanna Layout)
 - v. Intersection of Arabic Collage Road and Dr. Ambedkar Collage Road
 - vi. Govindapura Cross
 - vii. Nagawara Cross
 - viii. Intersection of Three Roads on Jayamahal Road (Nandidurga Road, Jayamahal Road, JC Nagar Main Road)
 - ix. Intersection of JC Nagar Main Road and Dinnur Main Road
 - x. Veeranapalya Junction (ORR)
 - xi. Intersection of Dinnur Main Road and KHB Colony Main road



- xii. Moto Junction
- xiii. LR Bande Bus Stop Junction (Near KPTCL Power Sub-Station)
- xiv. Intersection of Hennur Main Road Flyover Road with 1st Main Road
- xv. Intersection of Hennur Road and Nehru Road
- xvi. Kammanahalli Circle
- xvii. Kullappa Circle
- xviii. Babusapalya Circle
- xix. CMR Circle
- xx. Kalyananagara Circle (ORR)
- xxi. Hennur Cross Circle
- xxii. Intersection of Mar Thimotheus Street and Hennur Bagaluru Main Road
- xxiii. Intersection of 2nd Main Road (Bharat Nagar) and Thanisandra Main Road
- xxiv. Intersection of Oil Mill Road and Hennur Main Road at Lingrajpuram
- xxv. Intersection of Hennur Main Road which bifurcates into 80' Road and Kacharkanahalli Main Road

2. Development of Public Transport System:

- a. Namma Metro:
 - i. Outer Ring Road
 - ii. Gottigere – Nagawara – International Airport Link
- b. Mono Rail Link: Inner Peripheral Ring Road
- c. BRTS
- d. Bus Station: Thanisandra Main Road

3. Development of Intermodal Interchange Stations

- a. Nagawara Interchange,
- b. Thanisandra Interchange ,
- c. Kalyan Nagar

4. Preparation of Traffic Management Plan:

- a. Hennur Main Road
- b. Nagawara Main Road
- c. Arabic Collage Road
- d. CMR Road

5. Accessibility Improvement Plans for stations and educational institutions.

6. Preparation of Comprehensive Area Redevelopment and Creation Recreational Facilities:

- a. Tannery Industrial Area
- b. Slaughter House
- c. SK Garden
- d. Ramaswamy Palya

7. Preparation of Slum Redevelopment Plans

8. Disaster & Hazard Mitigation Plan:

- a. Urban Flooding Mitigation Plan for Flood Prone Areas (to be determined by BBMP)
- b. Development of Mini-Fire Station areas within ORR

9. Protection and Rejuvenation of Lakes and Streams:

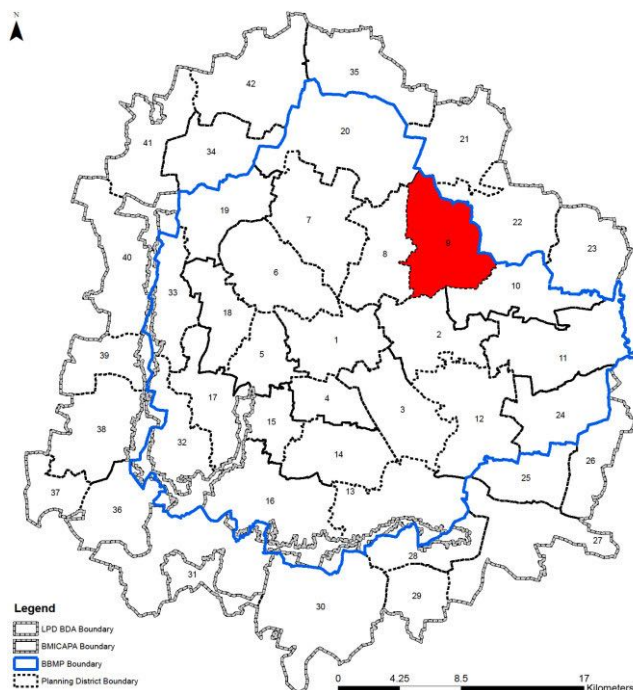


- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan** for all lakes and streams within PD.
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

10. Development of Physical Infrastructure/ Facilities:

- | | |
|---|---------|
| a) SWM Dry Waste Collection Centre: | 33 Nos. |
| b) SWM Organic Waste Collection Centre: | 04 Nos |
| c) SWM Aggregator: | 01 Nos |
| d) SWM Central Processing Unit: | 01 Nos |
| e) Sewage Treatment Plant: | 01 Nos |
| f) 220kV Sub-station: | 01 Nos |

10.PD 09: BANSAWADI – HORAMAVU



Population (2011 Census): 2,31,647
Area of PD: 34.06 sqkm (3406.8 ha)
Wards in PD: 4
Gross Density (2011 Census): 68 pph

Banaswadi – Hormavu Planning District (PD No. 9) is located in the north-eastern side of BBMP. The PD is mainly residential in character with further potential for development due to the availability of large tracks of vacant land. The PD is characterised by planned residential neighbourhoods within the ORR, rapid unplanned developments in extended BBMP areas, and presence of educational institutions and large lakes.

RMP2031 proposes development of defined circulation network, further densification, environment protection and creation of parks and open

1. The PD comprises of 4 wards namely Horamavu (25), Ramamurthy Nagar (26), Banasawadi (27), and parts of Hoodi ward (54) namely Byrathi Hoodi (54), Bileshivale (Hoodi) (54) and Jinkethimmanahalli (Hoodi) (54).
2. Outer Ring Road, Hennur Main Road, Hormavu/ Kalkere Main road, Dodda Bansawadi Main Road, Avalahalli Main Road are some of the major arterial roads forming the connectivity network within the planning district.
3. Planned layouts like HBR Layout, OMBR Layout, dense areas of Ramamurthy Nagar, unplanned residential layouts, commercial developments along the major roads, presence of large lakes and flood prone areas, undetermined internal network, etc define the spatial characteristics of PD.
4. The PD has huge potential to accommodate additional population and at the same time redevelopment/ upgradation of certain areas is seen required.

A. EXISTING STATUS

Demography

5. As per Census 2011, PD has 2,31,647 inhabitants, with a high decadal growth rate of 137.1% from 2001(97,693). There are 1,02,366 (44.2%) resident workers which is slightly lower than the BMA average of 44.5%.
6. There are 48,595 households (2011), with an average household size of 4.77, which is higher than BMA (4.01). The gross density is 68 pph, whereas the average residential density is 276.08 pph. The gross density is highest in Banasawadi Ward (148 pph) and lowest in Byrathi Hoodi and Jinkethimmanahalli Wards (13.6 pph).

Industry and Commerce

- There is no major employment centre or Industrial Area within the PD however, there are several small and medium sized industrial units which are scattered and spread across the PD and they together account for 0.91%. The commercial land uses account for 3.04% which is predominantly commercial bands along the major roads like TC Palya Main Road, Ramamurthy Nagar Main Road, Kalkere Main Road, etc.

Existing Land Use

- This PD offers huge potential for future densification as 52% of PD area is vacant, while residential accounts for 25%. It is important to that the vacant use is not contiguous to plan for Greenfield developments, however do offer and opportunity for improved circulation network and planned developments. The Industrial use and commercial use accounts for 5.8% and 3.8% respectively. **Figure 10-1** and **Table 10-1** presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Figure 10-1: PD 09 Existing Land Use Map

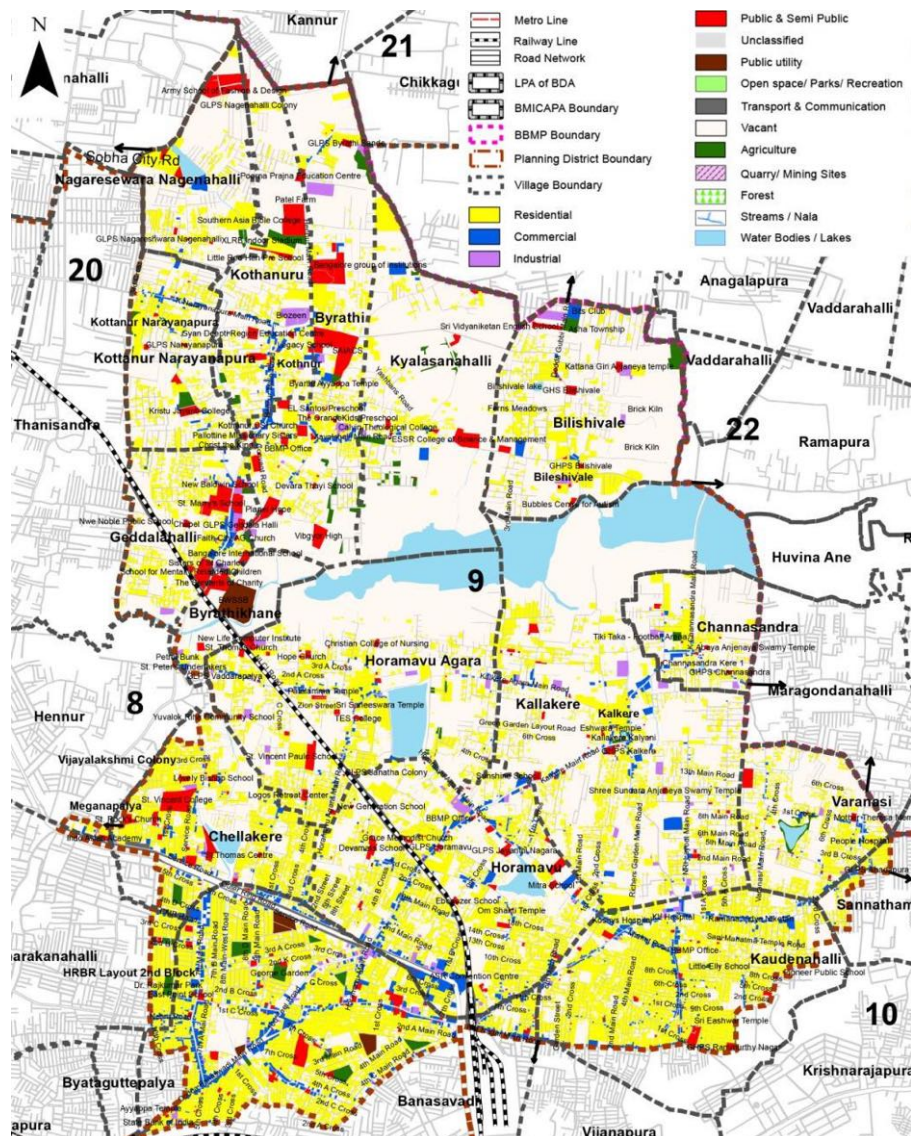




Table 10-1: PD 09 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	845.84	24.83
Commercial	103.00	3.02
Industrial	31.08	0.91
Quarry/ Mining Sites	2.05	0.06
Public Semi Public	97.85	2.87
Unclassified	0.00	0.00
Public Utility	11.91	0.35
Parks & Open Spaces	26.28	0.77
Transport Communication	344.87	10.12
Vacant	1774.30	52.08
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	10.04	0.29
Water Bodies	159.71	4.69
Total	3406.94	100.00

Housing and Slums

9. Residential land uses account for 24.81% as per the existing land use 2015. The PD has both planned and unplanned layouts as well as large residential apartments. The built character is mainly low rise-low dense. Most of the layouts are gated communities while everything outside of these large enclaves have developed organically.
10. There are 23 slums located within 4 wards of the PD, out of which 2 notified. Maximum slums are seen within Horamavu Ward.

Traffic and Transportation

11. BMTC buses are the only major forms of public transport available within PD, while autos, cabs act as feeder services. There is two Bus Stands – one at Kalyanagar on Outer ring Road and other in Hormavu on Kalkere Main Road. The Outer Ring Road Metro link is scheduled to be implemented by BMRCL.
12. Outer Ring Road, Hennur Main Road, Hormavu/ Kalkere Main road/ Channasandra Main Road, Dodda Bansawadi Main Road, Avalahalli Main Road, ELU's Road, Ramamurthy Nagar Main Road, K Narayanapura Main Roads, Hormavu Agara Main Road, Jayanti Nagar Main Road, Market Road, TC Palya Main Road form the connectivity network within the planning district. However, the internal network is highly fragmented and undetermined.
13. A Railway Line (Yelahanka to KR Puram) within City is passing through the PD, however there is no railway station on this line within PD.

Physical and Social Infrastructure

14. As per BWSSB, about 30% of the households have metered water supply connections while 15% of the households have metered sewage & sanitation connections and the work on



extending water supply network and sewage network is being implemented. The Existing BWSSB infrastructure located in the PD are:

- a. Ground Level Reservoirs at OMBR Layout-1 (15.91 ML), OMBR Layout-2 (13.64 ML), HRBR Layout (4.55 ML) and RM Nagar (2.75 ML).
 - b. Sewage Treatment Plants at Raja Canal Bhairathi Amanikhane (40 MLD)
 - c. Pumping Stations at HBR, Kalyan Nagar (75 HP), HRBR (125 HP) and OMBR Bhuvanagiri (100 HP).
 - d. Also a 20 MLD STP is under construction between Kalkere Lake and Horamavu Agara Lake.
15. There are 3 DWCCs for waste management. There is one 66 KV Sub Station is located within the PD. There is one fire station located in Banaswadi.
16. There are 80 schools located in the PD. The main schools include Bangalore International school, St. Mary's High school, St. Michael's, Legacy High school to name a few. Health facilities within PD include 13 hospitals with a total of 296 beds in the PD, out of which 12 are private hospitals and 1 is a government hospital.

Lakes and Drainage

17. The PD area falls under the larger catchment of Hebbal – Yella Mallappa Chetty Kere and Kalkere and Rampura Kere are the large lakes falling in this catchment within PD. As per revenue village maps there are 7 lakes/ kere fully within PD, namely – Kalkere (the biggest one), Hormavu Agara Kere, Hormavu Kere, Chelakere, Banaswadi Kere, Nagareshwara Naganahalli Lake, and Varanashi Lake and 2 lakes/ kere partly with PD, namely – Rampura Kere and Gangadhar Kere.
18. Chala kere, Bansawadi Kere and Gangadhar Kere have been partly breached. While Banaswadi Kere is developed as park and has developments within, whereas Chala Kere and Gangadhar kere are partly breached due to developments.
19. There are several areas/ localities that are low lying and prone to flooding. Vaddara Palya near Hennur Bande, Hennur Main Road, Rail Over Bridge (on Hennur Main Road) at Geddalahalli, Banaswadi, Hoysalanagara, are some of the areas prone to flooding.

Park and Open Spaces

20. There are few layout level parks and open spaces within the PD, which account for 0.77% of total area of planning district. Thus there is a need to plan for more neighbourhood level and regional level parks.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: CIRCULATION NETWORK DEVELOPMENT FOR PLANNED DEVELOPMENT, DENSIFICATION, ENVIRONMENTAL PROTECTION AND CREATION OF CITY LEVEL PARKS & OPEN SPACES

PROPOSALS

1. The availability of large amount of vacant spaces in the PD provides an opportunity for planned development leading to further densification while integrating the existing

development and provide for required infrastructure and facilities. Thus, the guiding principles for this planning district are as following:

- a. Development of Circulation Network while integrating existing developments
 - b. Development of Public Transport Infrastructure to increase the share of public transport and Transit Oriented Development.
 - c. Optimal use of potential areas for further densification
 - d. Protection and Conservation of Lake System and Flood Protection
 - e. Development of Large Park and Open Spaces
 - f. Redevelopment/ upgradation of congested areas/ slums
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 10-2** and **Table 10-2** respectively.

Figure 10-2 PD 09 Proposed Land Use Map

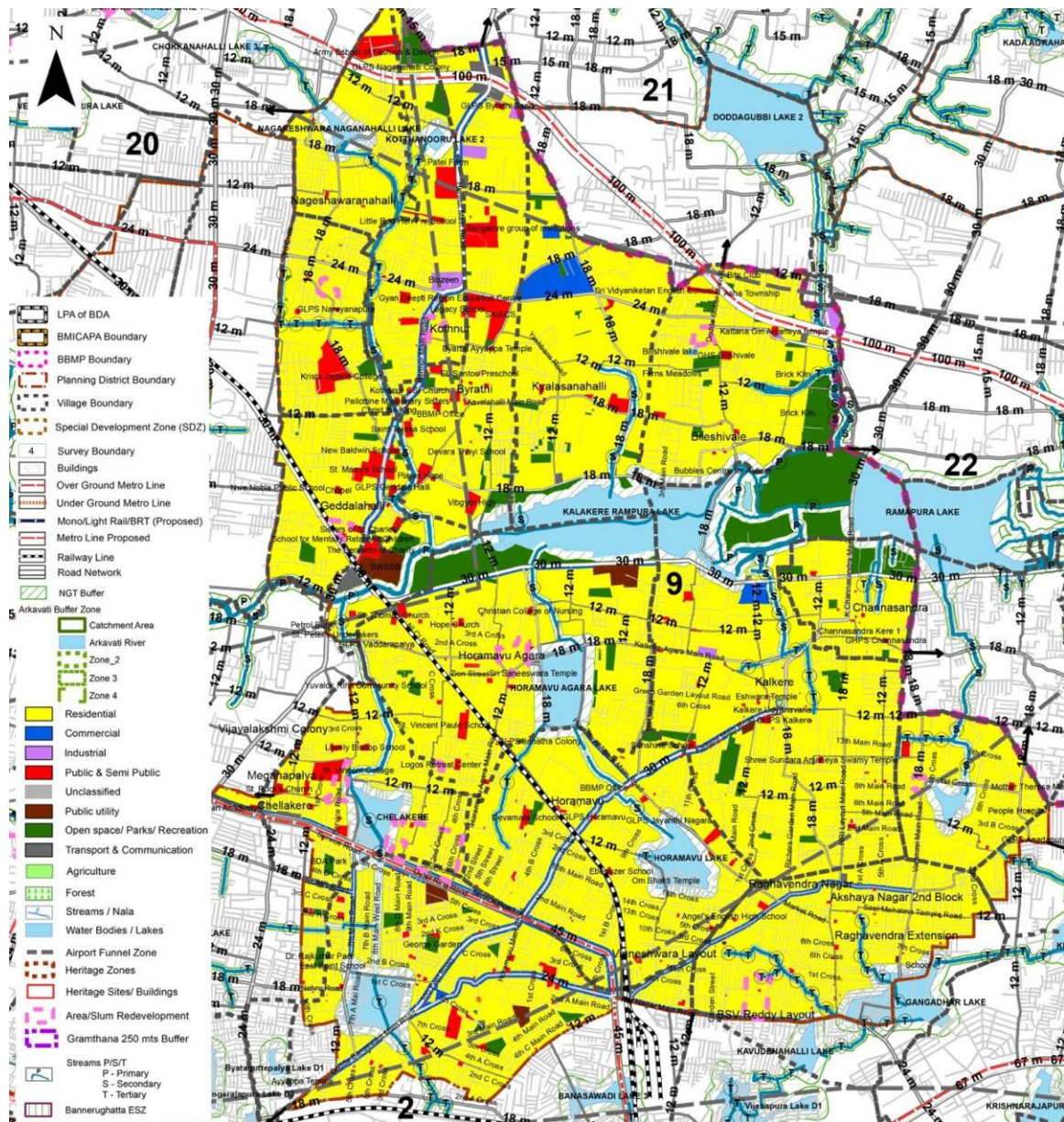


Table 10-2: PD 09 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	2103.92	75.18
Commercial	59.45	2.12
Industrial	8.39	0.30
Public & Semi Public	85.71	3.06
Unclassified	0.00	0.00
Public Utility	16.18	0.58
Parks / Open Spaces	152.75	5.46
Transport & Communication	495.15	17.69
Forest	0.00	0.00
Streams	10.44	0.37
Water Bodies	126.33	4.51
NGT Buffer	348.61	12.46
Total Developable Area	3406.94	121.74
Agriculture		-
Total PD Area	3406.94	-

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Metro ORR Link: It is proposed to develop metro link along Outer Ring Road and with 2 stations within this PD – namely a) Kalyan Nagar BMTC Bus Depot, and b) Near Hormavu Signal, then leading to Ramamurthy Junction (Integration with Channasandra Railway Station) in PD 10.
 - b. Metro PRR Link: It is proposed to develop metro link along proposed PRR at city level and one station at Byrathi Bande is falling within the PD.
 - c. LRT/ MONO RAIL/ BRT : The LRT/ MONO RAIL/ BRT around Inner Peripheral Ring Road passes through the PD and it is proposed to develop station at Thanisandra and Rachenahalli (Intersection of Rachenahalli Main road and IPRR)
 - d. BRT on Intermediate Ring Road : BRT is proposed along Hennur Main Road, from Intermediate Ring Road at Pottery Road towards Bagalur.
4. Intermodal Interchange Stations are proposed to be developed at 3 locations – a) Kalyan Nagar b) Geddalahalli and c) Byrathi Bande
5. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B.
6. In order to improve last mile connectivity and extend the public transport system to neighborhood level it is proposed to develop two BMTC Bus Terminal and 4 Bus Stations across PD.
7. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
8. To improve the road network within the City it is proposed to develop Peripheral Ring Road, Inner Peripheral Ring Road, both passing through the planning district. The RMP2031 has



developed a grid pattern based road network within the PD integrating existing development and assigned the hierarchy to the Master Plan road network. Peripheral Ring Road, Outer Ring Road, Inner PRR, Hennur Main Road, K Narayanapura Main Road (connecting Bellary Road to Hennuru Main road), Hormavu/ Kalkere Main road/ Channasandra Main Road, Dodda Bansawadi Main Road, Avalahalli Main Road, ELU's Road, Ramamurthy Nagar Main Road, Hormavu Agara Main Road, Jayanti Nagar Main Road, Market Road, TC Palya Main Road have been designated as Major Roads within the PD and are proposed to developed/ upgraded on priority.

9. The RMP2031 has identified few existing roads for augmentation within the Planning district for ease of traffic movement.
10. The RMP2031 has identified 19 critical junctions for geometric improvements for better and smooth traffic flow and to be taken up on priority.
11. The natural drainage between Rachenahalli Kere and Kal Kere and Rampura Lake is classified as Primary whereas an existing stream from Horamavu Lake and existing stream from Nagareshwara Naganahalli Lake meeting Kal Kere Lake are classified as Secondary Stream by the RMP2031, as these streams caters to large areas. The RMP2031 proposes that these streams have to be kept free of all encumbrances, sludge, SWM, and no sewage allowed to flow into the streams and lakes. It is also proposed that all lakes be properly interconnected and rejuvenated. The RMP2031 also proposes rejuvenation of all lakes within the planning district.
12. The valley system between Kal Kere and Rampura Kere is proposed to be developed as a **Regional Park**. The land use therefore assigned is for open spaces in the Propose Land Use Plan 2031. This will help to retain the natural flow between Kal Kere and Rampura Lake while providing open space for the entire city. The roads adjoining the regional park mandatorily to be designed considering the water flows and with the provision of pedestrian and non-motorised transport. Further, afforestation is proposed be done within the Regional Park, this will help improve green cover within the city.
13. There are 23 slums (both notified and non-notified) within the PD. The maximum numbers of slums (13 out of 23) are in Hormavur ward. It is important to provide the existing slums with better infrastructure services and living conditions and hence the RMP2031 proposes redevelopment of the slums.
14. In order to cater to present and future infrastructure requirements, the RMP2031 proposes development STP at Kalkere, and KR Puram-2, one 220kv power sub-station, and additional 6 DWCCs, 1 OWCCs, and 1 Aggregator, for solid waste management within the planning district. Also one Fire Station is proposed to be developed within the Planning District.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 9: Banswadi -Hormavu.

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads and other roads in phased manner.
 - i. Peripheral Ring Road
 - ii. Inner Peripheral Ring Road



- iii. Hennur – Bagaluru Main Road,
- iv. K Narayanapura Main Road (connecting Bellary Road to Hennuru Main road)
- v. Hormavu Main Road/ Kalkere Main Road/ Channasandra Main Road.
- b. Upgradation of Master Plan Roads
 - i. Avalahalli Main Road
 - ii. Ramamurthy Nagar Main Road,
 - iii. Hormavu Agara Main Road,
 - iv. Jayanti Nagar Main Road,
 - v. Market Road,
 - vi. TC Palya Main Road
 - vii. Hennur Main Road/ 80Ft Road/ Hennuru Bagaluru Main Road
- c. Junction Improvement Programme:
 - i. Hormavu Junction (Intersection of ORR and Horamavu Main Road),
 - ii. Redevelopment of Ramamurthy Nagar Junction by construction of sleep road/ flyover (Intersection of ORR and RamamurthyNagar Main Road)
 - iii. Chikka Gubbi Cross (Intersection of Hennur Road with K Narayanapura Road),
 - iv. K Narayanapura Cross
 - v. Geddalalahalli
 - vi. Byrathi Cross
 - vii. Byrathi Bande Junction
 - viii. Ramamurthy Nagar Police Station Junction
 - ix. Yaranapalya
 - x. Intersection of Old UCO bank road and Ramamurthy Nagar Main road
 - xi. Alada Mara Ramamurthy Nagar
 - xii. Holy Family Church Junction
 - xiii. Raghavendra Circle
 - xiv. Intersection of Thambu Chetty Palya Main road and 3rd Main Road
 - xv. Kalkere Cross
 - xvi. Koudenahalli Cross
 - xvii. Kyalasanahalli Junction
 - xviii. Bileshivale Junction
 - xix. Channasandra Junction (Intersection of Avalahalli Main Road and Channasandra Main Road)

2. Development of Public Transport System:

- a. Namma Metro:
 - i. Outer Ring Road
 - ii. Periheral Ring Road
- b. Mono Rail Link Inner Peripheral Ring Road
- c. Bus Terminal
 - i. Hennur Main Road (near Geddalalahalli Railway Line) and
 - ii. Peripheral Ring Road (as demarcated)
- d. Bus Stations – As demarcated in PLU Map

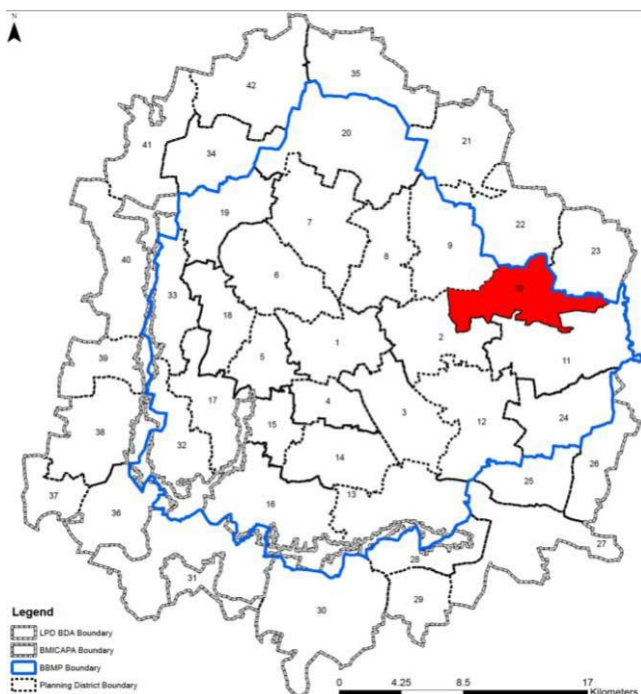
3. Development of Multimodal Interchange Stations

- d. Kalyan Nagar (Metro + BMTCT+ IPT).



- e. Geddalahalli (to developed as Interchange with Mono Rail on Inner PRR and BMTC bus terminal),
- f. Byrathi Bande (interchange with PRR Metro)
- 4. Development of Regional Park**
 - a. Development of Ramamurthy Nagar Ward between Kal Kere and Rampura Kere (as demarcated in PLU Map)
- 5. Protection and Rejuvenation of Lakes and Streams:**
 - d. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - e. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. Master Plan Streams Rejuvenation Plan
 - b. Kal Kere Rejuvenation Plan
 - c. Rampura Lake Rejuvenation Plan
 - d. Hormavu Agara Kere Rejuvenation Plan
 - e. Chelakere Rejuvenation Plan
 - f. Banaswadi Kere
 - g. Nagareshwara Naganahalli Lake
 - h. Varanashi Lake
 - f. **Preparation of Rehabilitation and Resettlement Plans for Lake Rejuvnication**
 - a. Hormavu Kere Rejuvenation and Rehabilitation/ Resettlement Plan
 - b. Gangadhar Kere Rejuvenation and Rehabilitation/ Resettlement Plan
 - g. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
- 6. Preparation of Slum Redevelopment Plans.**
- 7. Disaster & Hazard Mitigation Plan**
 - c. Development of Fire Station in Hormavu Ward.
- 8. Development of Physical Infrastructure/ Facilities:**
 - g) SWM Dry Waste Collection Centre: 06 Nos.
 - h) SWM Organic Waste Collection Centre: 04 Nos
 - i) SWM Aggregator: 01 No.
 - j) Sewage Treatment Plant: 02 Nos
 - k) 220kV Sub-station: 01 No.
 - l) Fire Station 01 No.

11.PD 10: KR PURAM - HOODI



Population (2011 Census): 2,19,837
Area of PD: 27.65 sqkm (2765.94 ha)
Wards in PD: 6
Gross Density (2011 Census): 79.5 pph

KR Puram - Hoodi Planning District is located on eastern side of BBMP next to existing Employment Centre – EPIP (PD11) and Proposed Special Development Zone along Old Madras Road (PD 23). The PD is characterised by presence of Public Sector Enterprise, IT Companies, Industrial Areas, Markets, High Rise Developments, several unplanned residential areas and several lakes. PD has potential for development due to the availability of large tracks of vacant land (approximately 25%).

RMP2031 proposes development of defined circulation network, further densification, and environment protection.

1. There are a total of 6 wards within the PD which are, Vijinapura (51), K.R Puram (52), Basavanapura (53), Hoodi (54), Devasandra(55) and A Narayanapura(56). Hoodi ward has four different spatial locations and only the main hoodi ward has been included in these PD. Rest three parts of Hoodi ward are adjacent to Ramamurthy Nagar (Ward 25) and Horamavu (Ward 26) falling in Planning District 9.
2. Old Madras Road, SH 35, Outer Ring Road, ITPL Main Road, Kodigehalli Main Road, Kodigehalli – Sadarmangala Road are some of the major arterial roads forming the connectivity network within the planning district. The metro phase 1 extension to Whitefield is currently under implementation.
3. PD is characterised by the presence of Indian Telephone Industry (ITI), ITI Ancillary Industrial Estate, SAIL, ITPL, Phoenix Mall, Hoodi 400/220kV receiving station, Sri Sathya Sai Institute of Higher Learning, KR Puram Railway Station, several unplanned residential areas, High Rise Developments along ITPL Road, presence of several lakes.
4. The PD has huge potential to accommodate additional population and at the same time redevelopment/ upgradation of certain areas is seen required.

A. EXISTING STATUS

Demography

5. As per Census 2011, PD has 2,19,837 inhabitants, which has increased by 56.77% from 2001 (140231). There are 92,774 (42.20%) resident workers which is lower than the BMA average

of 44.5%. There are 64240 households (2011), with Avg. Household size being 3.42, which is much lower than BMA (4.01).

6. Gross Density is 79.5 pph while the Net Residential Density is 329 pph. The gross density is highest in Vijinapura, which is 225 pph (followed by A.Nrayanapura) ward and least in Hoodi ward (~14 pph).

Industry and Commerce

7. Industrial land uses account for 6.91% of total PD area. Government of India established the first PSU Indian Telecom Industries Limited, also known as ITI, in 1948, at Bengaluru near KR Puram railway station, which lead to development of ITI Industrial Estate at Mahadevapura. This was followed by series of developments by Government in Diesel Loco shed, SAIL godown, FCI godown, Silk factory, ITI Industrial estate, KIADB industrial estates (outside PD but in adjoining PD), Indian Oil depot, etc. With the development of Tin Factory, ITPB, EPIP (in adjoining PD), IT parks/ IT company offices, within the PD were developed, and in parallel, the developments grew along the OMR. There are couple of defence establishments also within the PD. Also KR Puram houses a large number of small scale industries creating a large number of jobs for unskilled labourers.
8. Commercial land uses account for 4.65% as per the existing land use 2015. Modern Commercial establishment like malls and traditional vegetable market as well as Fish market co exists in the PD. Kodigehalli main road is fully commercialised road within the PD with several establishments and shops. In addition, several educational and research institutes are employing several people. PD is thus among the major employer in the city.

Existing Land Use

9. This PD offers good potential for future densification as 25% of PD area is still vacant, while residential accounts for 25%. It is important to that the vacant use is not contiguous to plan for Greenfield developments. The Industrial use and commercial use accounts for 6.9% and 4.6% respectively. Figure 11- 1 and Table 11-1 presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Figure 11-1: PD 10 Existing Land Use Map

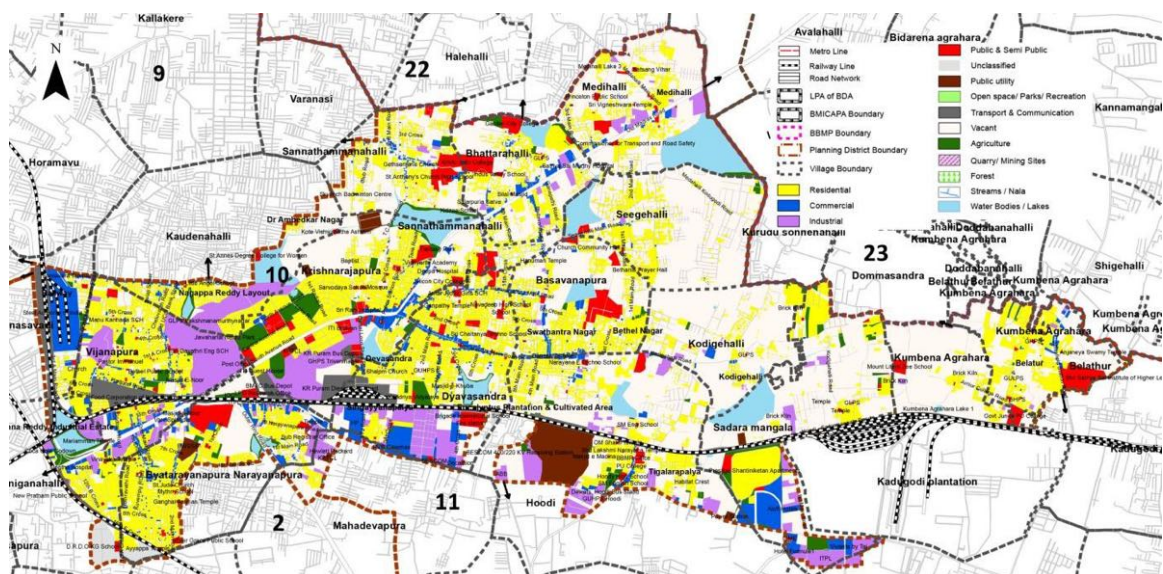




Table 11-1: PD 10 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	668.12	24.16
Commercial	128.60	4.65
Industrial	191.06	6.91
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	102.40	3.70
Unclassified	14.59	0.53
Public Utility	39.65	1.43
Parks & Open Spaces	61.69	2.23
Transport Communication	319.25	11.54
Vacant	1109.21	40.10
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	5.75	0.21
Water Bodies	125.60	4.54
Total	2765.93	100.00

Housing and Slums

10. Residential land uses account for 24.16% as per the existing land use 2015. The Planning District is characterised by planned public sector residential layout and highly unorganised private residential layouts. ITI Township is well planned residential layouts, while most of the layouts are highly un-organised and disconnected to each other. The residential development in part of the city has plotted developments, single building apartments and multi-storey apartments. Some of the important localities being Vijnapura, Basavanapura, Dyavasandra, Ayyappa Nagar, Hoodi, Manjunath Layout, etc.
11. Around 13% of the resident population within the PD are living within slums, which is almost 3 times the BMA average of 4.7%. There are 27 slums out of which 5 slums are notified. KR Pura ward has the maximum slums within it with 6 slums.

Traffic and Transportation

12. Transport and Communication land uses account for 11.54% of PD area. Major arterial roads within the PD are Old Madras Road, ITPL Main Road, Outer Ring Road, and SH 35 while other roads include Ramamurthy Nagar Road, A Narayanapura road, Kodigehalli Road, Hoodi Main Road, Basavanapura Road, Sadaramangala Road, etc.
13. Krishnarajapuram is one of the important railway stations on the Bengaluru Chennai railway line. KR Puram Bridge & Tin Factory Junction is one of the most critical junctions in the city that attract heavy traffic congestion in the form of regional as well as local traffic. There is a need of integration of transport functions (Metro, Railways, Bus and vehicular movement) as well as junction design to ease the traffic movement.
14. Namma metro has proposed Baiyappanahalli to ITPL – Whitefield (Phase 1 EW extension line) connecting Whitefield, with 13 stations. Two stations – Jyothipuram and KR Puram stations



are closely located at are within the KR Puram/Tin Factory Junction. This offers an opportunity to integrate Krishnarajapuram railway station, with Namma Metro, BMTC Bus and Intermediate public transport. Also extension of Metro to Hoskote in future, if required. There are two BMTC depots in Durvani Nagar.

Physical and Social Infrastructure

15. As per BWSSB, the water supply network is ~ 393 km in length, whereas sewerage network length is about 93 km. About 21% of water connections to households are metered and 21% of households have sanitation connections. The Existing BWSSB infrastructure located in the PD are:
 - ✓ There are existing Ground Level Reservoirs Existing at Hoodi and A. Narayanpura (4 ML).
 - ✓ There are existing sewage treatment plants at Yellamallappachetty, Medahalli village, Hobli-Bidarhalli (15 MLD), near Geddahalli (40 MLD) and near Tambuchetti Palya Road (20 MLD).
 - ✓ An Intermediate Sewage Pumping Station exists at Sadaramangala, K.R. Puram Hobli with a capacity of 5 MLD Existing.
16. As per BBMP there are 2 DWCC's for management of solid waste. As per KPTCL, Hoodi 400/220kv sub-station is major receiving station that supplies power to Bangalore. In addition there are 3 no of 220 KV power stations and 2 of 66 KV power stations located within the PD.
17. There are around 108 schools and number of educational and research institutions such as the Centre for Artificial Intelligence and Robotics, Lowry Advenist College, Shriram Institute for Industrial Research, Sri Satya Sai Institute for Higher Learning, SJES Collage, Kritsu Jyoti College, etc. Further, there are 3 Government Health Centres & Hospitals and 11 private hospitals/ health centres, with a total of 362 beds are present in PD, which seems to be inadequate for the present population.
18. There is one fire station at Mahadevapura, one police station, one traffic police station and Regional Transport Commissioner Office. There is no burial ground in the PD.

Lakes and Drainage

19. The PD area falls under the larger catchment of Hebbal – Yella Mallappa Chetty Kere. K R Puram Kere (also known as Vengaiiah Kere), Dyavasandra Kere, Yellammappa Chetty kere (part), Kodigehalli Lake, Beniganahalli Lake, B.Narayanapura kere, Kalu Kunta, Mahadevapura kere (Part), Chikkabasavanapura kere, Hoodi Lake, Sadarmangala kere, Bhatarahalli kere, Basavanapura kere, Koudenahalli kere, and Seegehalli Kere are located in this PD. Some of the lakes have been lost (in part or fully) to developments, which include Koudenahalli kere (part), Ramamurthy nagara kere (part), Bhatarahalli (part) and Vijanapura (fully).
20. There are several low lying areas within the planning districts which includes Ramamurthy Nagar, Vijanapura, south of Dyavasandra kere at K.R. Puram, east of ITI colony next to the K R Puram kere, Vinayaka Nagar, Krishna Nagar (both to the south of Old Madras Road), Bhadarappa layout, etc.

Park and Open Spaces

21. Within the ITI there is Jawaharlal Nehru Park, ITI Park, Dr. Ambedkar Stadium, ITI Ground, and one multipurpose ground near EPFO office. However, there are no public spaces within the plotted residential developments.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: CIRCULATION NETWORK DEVELOPMENT FOR PLANNED DEVELOPMENT, DENSIFICATION, ENVIRONMENTAL PROTECTION AND CREATION OF CITY LEVEL PARKS

PROPOSALS

15. As majority of the PD is already developed in a rather haphazard manner, the RMP2031 aims at directing the growth towards planned development while integrating the existing developments through planned circulation network. The RMP2031 also aims at redevelopment of existing dense/ unplanned areas and environmental protection. Thus, the guiding principles for this planning district are as following:
- Development of Circulation Network while integrating existing developments
 - Development of Public Transport Infrastructure to increase the share of public transport and Transit Oriented Development.
 - Optimal use of potential areas for further densification
 - Protection and Conservation of Lake System and Flood Protection
 - Development of Large Park and Open Spaces
 - Redevelopment/ upgradation of congested areas/ slums
16. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 11-2 and Table 11-2 respectively.

Figure 11-2: PD 10 Proposed Land Use Map

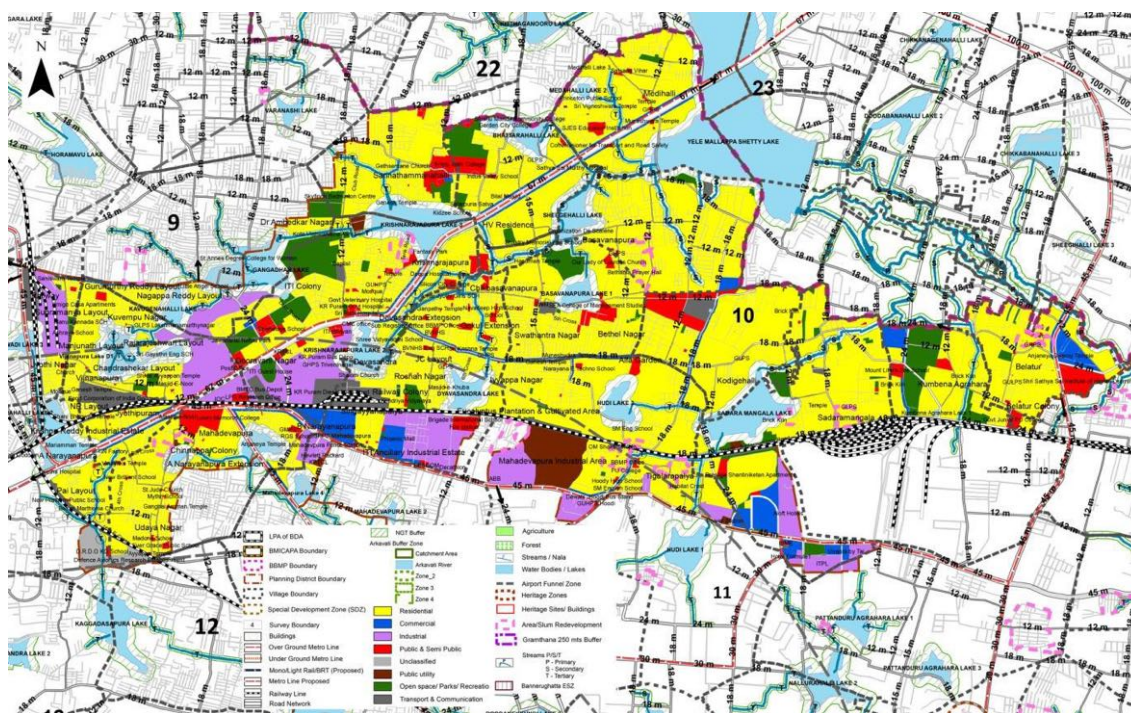


Table 11-2: PD 10 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1328.62	48.04
Commercial	81.70	2.95
Industrial	178.92	6.47
Public & Semi Public	97.07	3.51
Unclassified	13.97	0.51
Public Utility	34.64	1.25
Parks / Open Spaces	121.23	4.38
Transport & Communication	405.45	14.66
Forest	0.00	0.00
Streams	5.72	0.21
Water Bodies	123.80	4.48
NGT Buffer	374.79	13.55
Total Developable Area	2765.92	100.00
Agriculture		-
Total PD Area	2765.93	-

17. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
- Commuter Rail Service (CRS): The RMP2031 proposes that CRS at regional level shall start/ terminate at the KR Puram Railway Station and integrated with city public transport network (Metro/ mono/ Bus). It is proposed that Channasandra Railway Station (near SAIL along ORR), Hoodi Halt, and Whitefield Stations are developed for CRS.
 - Metro ORR Link: It is proposed to develop metro link along Outer Ring Road and with 4 stations within this PD – namely a) Ramamurthy Junction (Integration with Channasandra Railway Station), b) Joytipura (interchange with ORR and Phase 1 Extension to Whitefield), c) KR Puram Interchange (integration with KR Puram Railway Station), and d) Mahadevapura ORR leading to DRDO complex.
 - MONO RAIL / LRT/ BRTS: RMP2031 envisages Mono Rail / LRT / BRTS till Hoskote along OMR in the long term. However, within plan period it is proposed to develop Metro link till Budigere cross (junction of Budigere Main road & OMR) where an ISBT (Kondasapura) is proposed to be developed. Thereby shifting the KR Puram bus station (presently on KR Puram Bridge) to Budigere Cross (Kondasapura) on OMR
18. Intermodal Interchange Stations are proposed to be developed at 3 locations – a) Channasandra b) Joytipura c) KR Puram), d) Medahalli, e) PRR Interchange and f) ISBT Kondasapura.
19. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B.
20. In order to improve last mile connectivity and extend the public transport system to neighborhood level it is proposed to develop two BMTC Bus Stations are proposed to be

developed within the PD. Both are in Hoodi Ward located at Kodigehalli and Kumbena Agrahara.

21. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
22. The RMP2031 has identified new links roads for network augmentation within the Planning district and some of the important links are:
 - a) Extension of Ramamurthy Nagar Main Road to ITPL Main Road: This is a critical link as it will divert traffic coming from Banaswadi/ Ramamurthy Nagar straight to Whitefield without entering KR Puram junction. The proposed Right of Way for this link 24 m.
 - b) Development of Railway Vehicular Underpass: It is proposed to develop two vehicular underpass at following locations:
 - i. Masjid Road (adjoining Kendriya Vidyalaya) to connecting Devasandra Industrial Estate (ITI Ancillary Estate)
 - ii. 1st Main Road Sadaramangala Industrial Estate (adjoining Prestige Shantiniketan) to Sadaramangala Road
 - c) Widening of Hoodi Railway Overbridge: It is proposed to widen Hoodi Flyover on Hoodi Main Road.

Figure 11-3: PD 10 New Link Ramamurthy Nagar Main Road to ITPL Main Road



23. The RMP2031 has identified 20 critical junctions to be taken up on priority for geometric improvements for better and smoother traffic flow

Protection of Lakes and Drainage

24. All lakes within PD except Benniganahalli kere falls under the larger catchment of Hebbal – Yella Mallappa Chetty Kere, whereas Benniganahalli Kere falls under the larger catchment of Bellanduru – Varthuru Kere. The Natural Drainage within PD is classified as following:



- a. Drainage connecting Gangadhar Kere – KR Puram Kere – Seegihalli Kere = Tertiary
 - b. Drainage connecting Devasandra Kere – Seegihalli Kere = Tertiary
 - c. Drainage connecting Chikka Devasandra – Seegihalli Kere = Tertiary
 - d. Drainage connecting Seegihalli Kere to Yella Mallappa Chetty Kere = Secondary
 - e. Drainage connecting Hoodi Lake – Sadaramangala Kere = Tertiary
 - f. Drainage connecting Sadaramangala Kere to Primary Drainage = Secondary
 - g. Drainage connecting Benniganahalli Kere to Dodda Nekundi Kere = Tertiary
 - h. Other drains leading to lakes within this PD are classified as tertiary.
25. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is also proposed that all lakes have to be properly interconnected and rejuvenated. The RMP2031 also proposes rejuvenation of all lakes within the planning district.
26. **Provision of Open Spaces:** In order to provide the parks and open spaces for Planning District, the RMP2031 proposes development of two large parks within the Planning District at following locations:
- a. Basavanapura Ward between Seegihalli Kere and Basavanapura Kere (as demarcated in PLU Map)
 - b. Hoodi Ward (near Mount Litera Zee School – as demarcated in PLU Map)

Area Redevelopment

27. Redevelopment of KR Puram Market Area and surrounding slums within KR Pura Ward: The KR Puram market historically has been a farmers market or Santhe- which attracted farmers from the surrounding hinterland. The KR Puram market area has a lot of vending activity spilling out onto the road. The idea of redevelopment of the market shall include providing and upgrading all necessary facilities for proper functioning of the market and establishing appropriate access connections with its surrounding.
28. Traffic and Transportation based Redevelopment of Tin-Factory – KR Puram Bridge Junction and ORR Junction: KR Puram Junction which is an extremely critical junction and witness the most congestion when compared with other junctions in the City, as several transport related activities are occurring – like Bus Stop, traffic merging, movement of regional and city traffic, railway station, cable bridge, and now Metro. The RMP2031 therefore proposes for traffic and transportation base redevelopment of Tin Factory – KR Puram Junction.
29. Redevelopment of A. Narayanapura Ward: Majority of A. Narayanapura Ward has developed very organically without any clear structure and has low accessibility. The entire ward is proposed for redevelopment
30. Slum Redevelopment: There are 27 slums (both notified and non-notified) within the PD. The maximum numbers of slums (6 out of 27) are in KR Puram ward. It is important to provide the existing slums with better infrastructure services and hence the RMP2031 proposes redevelopment of the slums.

Provision Infrastructure and Utilities

31. In order to cater to present and future infrastructure requirements, the RMP2031 proposes development STP at TC Palay Road, additional 10 DWCCs, 2 OWCCs, and 1 Aggregator, for

solid waste management within the planning district. Also one Fire Station is proposed to be developed within the Planning District.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 10:

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Important New Links
 - i. Extension of Ramamurthy Nagar Main road till ITPL Main Road (via ITI)
 - ii. Extension of Basavanapura Main road to connect Medihalli – Kadugodi Main Road
 - iii. New Link from Kodigehalli to Jr. Collage Road (passing adjacent to Mount Litera Zee School))
- c. Upgradation/ Widening of Master Plan Roads
 - i. Ramamurthy Nagar Main Road,
 - ii. TC Palya Main Road
 - iii. Basavanapura Main Road
 - iv. Kodigehalli Main Road
 - v. Medihalli – Kodigehalli Main Road
 - vi. Ayyapanagar Batterahalli Main Road
 - vii. Devasandra Main Road
 - viii. Seegihalli Main Road
 - ix. Hoodi Main Road
 - x. Hoodi Sadarmangala Road
- d. Junction Improvement Programme:
 - i. Anandapura Junction
 - ii. Intersection of TC Palya Main Road and Scared Heart Road
 - iii. Intersection of TC Palya Main Road and KR Puram – TC Palya Bypass Road
 - iv. Tambuchettipalya (Intersection of TC Palya Main Road and Kithanagur Main Road)
 - v. Tambuchettipalya Gate- Hoskote Road Junction (Intersection of TC Palya Main Road and Old Madras Road)
 - vi. Bhattarahalli Junction
 - vii. Medahalli Junction
 - viii. KR Puram Junction (Intersection of OMR and Devasandra Main Road)
 - ix. Ayyappa Nagar Junction
 - x. T-Junction of Kodigehalli Main road and Ayyappa Main Road (SEA Collage Arch)
 - xi. Mahadevapura Junction (T Junction of ITPL Main road and Mahadevapura Main Road)
 - xii. Hoodi Junction
 - xiii. Intersection of Medihalli – Kadugodi Main Road and Seegihalli Main Road



- xiv. Seegihalli Junction
- xv. Basavanapura T Junction (Intersection of Ayyapanagar Batterahalli Main Road and Seegihalli Main Road)
- xvi. Intersection of Ayyapanagar Batterahalli Main Road and Basavanapura Main Road
- xvii. Intersection of Devasandra Main Road and Shani Mahatma Temple Road
- xviii. Intersection of Basavanapura Main Road and Shani Mahatma Temple Road
- xix. Intersection of Devasandra Main Road and Krishna Nagar Main Road
- xx. Intersection of Basavanapura Main Road and Krishna Nagar Main Road

2. Development of Public Transport System:

- a. CRS Railway Stations
 - i. Channasandra Railway Station
 - ii. Hoodi Halt
- b. Namma Metro:
 - i. Outer Ring Road
 - ii. Peripheral Ring Road
- c. Mono Rail / LRT / BRTS : Inner Peripheral Ring Road
- d. Bus Stations
 - i. Kodigehalli (As demarcated in PLU Map)
 - ii. Kumbena Agrahara

3. Development of Multimodal Interchange Stations

- a. Channasandra
- b. KR Puram
- c. Medahalli
- d. PRR Interchange
- e. ISBT Kondasapura

4. Development of Regional Park

- a. Development of Large Park in Basavanapura Ward between Seegihalli Kere and Basavanapura Kere
- b. Development of Park in Hoodi Ward

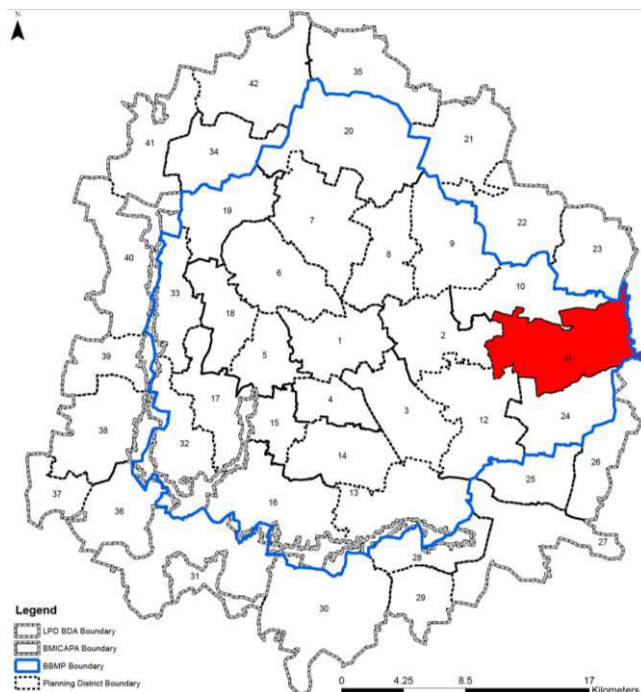
5. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that missing links of lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. Master Plan Streams Rejuvenation Plan
 - b. Yella Mallappa Chetty Kere Rejuvenation Plan
 - c. Gangadhar Kere Rejuvenation Plan
 - d. KR Puram Kere Rejuvenation Plan
 - e. Seegihalli Kere Rejuvenation Plan
 - f. Devasandra Kere Rejuvenation Plan
 - g. Chikka Devasandra Rejuvenation Plan
 - h. Hoodi Lake Rejuvenation Plan
 - i. Sadaramangala Kere Rejuvenation Plan



- j. Benniganahalli Kere Rejuvenation Plan
 - c. **Preparation of Rehabilitation and Resettlement Plans for Lake Rejuvenication**
 - a. Gangadhar Kere Rejuvenation and Rehabilitation/ Resettlement Plan
 - b. Byatarayanapura Lake Rejuvenation and Rehabilitation/ Resettlement Plan
 - c. Kavudenahalli Lake Rejuvenation and Rehabilitation/ Resettlement Plan
 - d. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
- 6. Preparation of Slum Redevelopment Plans**
- 7. Development of Physical and Social Infrastructure/ Facilities:**
- a) SWM Dry Waste Collection Centre: 10 Nos.
 - b) SWM Organic Waste Collection Centre: 02 Nos
 - c) Sewage Treatment Plant: 01 Nos
 - d) Fire Station 01 Nos.

12.PD 11: DODDA NEKKUNDI – WHITEFIELD



Population (2011 Census): 2,07,212
Area of PD: 42.38 sqkm (4238.4 ha)
Wards in PD: 4
Gross Density (2011 Census): 49 pph

Dodda Nekkundi – Whitefield Planning District (PD No.11) is a major employment centre of Bengaluru city and located on the eastern edge of BMA. It is characterised by the presence of several IT/ITES/ Aerospace companies, Industrial Areas, Defence Areas, Malls and Commercial Places, Haphazard/ Unplanned Residential Areas, lack of public spaces and draws heavy traffic from all directions to PD.

Master Plan aims at targeted growth the employment generation while promoting public transport and high density residential developments.

1. Planning District comprises of four large BBMP wards, namely Gurudacharpalya (82), Kadugodi (83). Hagadooru (84) and Doddanekkundi (85).
2. It houses number of IT/ ITES/ Aerospace Companies in ITPB, KIADB Export Promotion Industrial Area, Bagamane Tech Park and other IT premises and has Dodde Nakundi Industrial Areas, Vishweshwarya Industrial Estates. The residential developments are mostly of high density and unplanned in nature. The PD has potential to accommodate additional population and at the same time redevelopment/ upgradation of certain areas is seen required.
3. Outer Ring Road, ITPL Main Road, Old Airport Road/ Varthur Road, Road No. 2, Channasandra Main Road, SH35, Graphite India Main Road, Borewell Road, Nalluruhalli Main Road are some of the major arterial roads forming the connectivity network within the planning district. The metro phase 1 extension to Whitefield is currently under implementation.

A. EXISTING STATUS

Demography

4. The population has more than doubled to 207212 (2011 census) with the 127.57% increase over 2001 population (91056). There are 96091 resident workers with a work force participation of 46.37%, whereas total employment generated in the area is about 4 to 5 times the workers.
5. There are 56050 households (2011), with Avg. Household size being 3.70, which is lower than BMA (4.01). The gross density is 49 persons per hectare (pph), whereas the average

residential density is 226pph. The gross density is highest in Garudacharpalya ward (73 pph) and the least in Kadugudi ward (37 pph).

Industry and Commerce

6. Industrial land uses account for 9.04% of total area of planning district. The large IT/ ITES Companies and Business Houses in ITPB, KIADB Export Promotion Industrial Area, Bagmane Tech Park, Office Space along outer ring road, Brigade Metropolis and Presige Shaniniketan, on ITPL Main Road, Industrial Areas like Doddanakundi, Sadarmangala, Devasandra, Kadugudi KSIIDC Industrial and Aerospace companies provide employment in both the IT/ITES, Manufacturing, Establishments and retails shops.
7. Commercial land uses account for 2.76% of total area of planning district. Commercial activity is seen along Old Airport Main Road/ Varthur Road, Graphite India Main Road, AECS Layout, SH 35, Borewell Main Road and Immadihalli Main Road. There are 6 Malls and several small establishments which also provide employment with PD. Also, a small vegetable & fruit market is located along Sri Krishna Temple Road providing daily needs to local residents.

Existing Land Use

8. **Figure 12-1** and **Table 12-1** presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Figure 12-1: PD 11 Existing Land Use Map

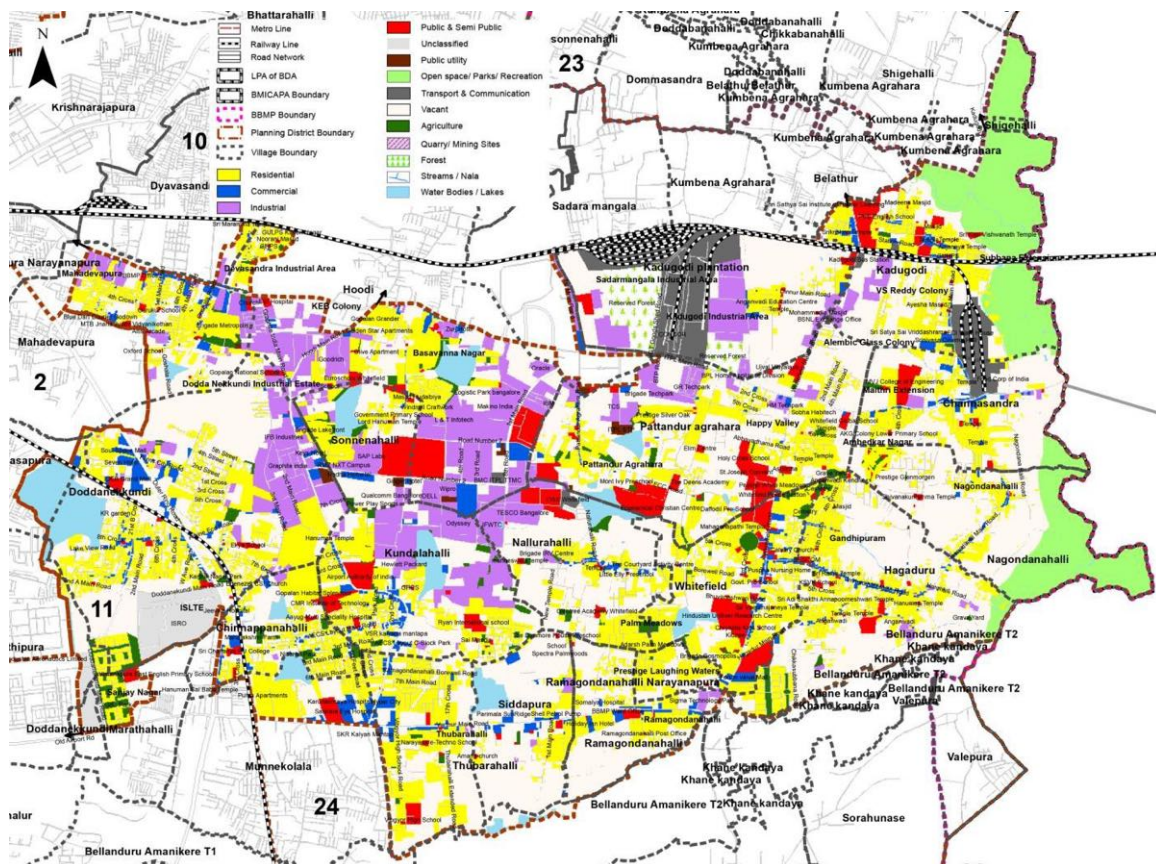




Table 12-1: PD 11 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	955.06	22.53
Commercial	116.80	2.76
Industrial	381.08	8.99
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	177.00	4.18
Unclassified	51.24	1.21
Public Utility	7.19	0.17
Parks & Open Spaces	64.71	1.53
Transport Communication	366.17	8.64
Vacant	1938.37	45.73
Agriculture	0.00	0.00
Forest	44.36	1.05
Streams	8.44	0.20
Water Bodies	127.93	3.02
Total	4238.35	100.00

Housing and Slums

9. Residential land uses account for 21.55% of the existing land use 2015. The Planning District is characterised by haphazard residential areas, though there are few planned layouts like AECS Layout, BEML Layout and Jawahar Nagar Layout, rest of the residential area are haphazard and are either isolated. The total number of households residing in residential areas of the PD are 56050 (Census 2011), with 207212 inhabitants.
10. There are 20 slums in this PD covering 257 ha and having 24743 persons (11.94% to total population) residing in them. Out of 20 slums, 2 slums are notified slums while 18 are non-notified.

Traffic and Transportation

11. Traffic and Communication land uses account for 8.69% of total extent of PD. At present, Buses operated by BMTC and private companies (for their employees), cabs are the only modes that are available in this planning district, though proposed Metro Phase 1 extension to Whitefield is expected to improve public transport options further. There is only one BMTC TTMC/ Depot in the planning district area. Whitefield station on Indian railways is the potential commuter station. The lack of public transport options has increased the pressure existing road network, which also cater to heavy vehicle traffic from CONCOR ICD and regional traffic. Concor ICD, Sadarmangala goods terminal and FCI Godown all are the major logistic infrastructure of the city.
12. The critical arteries are ITPL Main Road, Old airport road/ Varthur Road, Graphite India Main Road, Kundanhalli gate main road, Hoddi Main Road, Outer Ring Road. Whereas critical junctions being Doddanakundi (near Bagamane Tech Park), Kundanahlli Gate, Hoody



Junction, Graphite India Junction, ITPL Main gate, Hope Farm Junction, Varthur Kodi Junction, Chanasandra FCI Road Junction.

13. Whitefield TTMC/ Bus Station and Kadugodi Bus Station are two bus stations located within PD.

Physical and Social Infrastructure

14. As per BWSSB, only 8.5% of the households have metered water connection and 7% of the household has access to sewage connections. The under implementation water supply and sewage project is expected to improve the water supply network coverage and sewerage network coverage in this area. There are 2 GLRs located at Graphite India with capacities of 9ML and 12ML and a 60 MLD STP is located at Kadugodi.
15. As per BBMP, there are 2 DWCCs and 1 OWC located in the PD, whereas as per KPTCL there are 3 no. of 66KV substations located in the PD.
16. There are around 81 schools and various educational and research institutions such as the CMRIT, Shri Satyasai Institute for Higher Medical Studies, Forest Technical and Administrative Training Institute, etc. Further, there are 5 Government health centres & hospitals and 10 private hospitals, with a total of capacity of 683 beds, which is more than adequate for the present population. Some of the major hospitals are Vydehi Hospital, Satya Sai Hospital and Shankara Eye Hospital.
17. There is one Cremation Ground at Nalluruhalli.

Lakes and Drainage

18. Seetharampalya Lake, Mahadevpura (Nakkundi) Lake, Shiddapura Lake (Thubarahalli Lake), Kundalahalli Lake, Nallurahalli Lake, Doddanakundi Lake, Chinapanahalli lake, Hoodi Lake, Munekolala Lake (Achhana Lake), Patandur Agrahara lake, Sheelavanthakere Lake, Yelkgata Lake, and four dried lakes are present in Whitefield planning district. Out of four dried lakes - two lakes are in Mahadevpura Revenue Village, while one each in Chinnappanahalli and Dodda Nekkundi Revenue Village. All these lakes fall under Bellanduru Varthur catchment area.
19. There are several locations on ITPL main road, Patandur Agrahara, areas adjoining FCI Godown Road, Sadarmangala which are the low-lying areas and are flood prone.

Park and Open Spaces

20. Parks and Open Spaces account for 1.58% of the existing land use 2015. Kadugodi Plantation and Reserved Forest are two major open spaces available. Small parks within layouts are the only parks and open spaces available in this area.

Heritage and Culture

21. CSI memorial church and Whitefield club are the two built heritage in this part of the city, whereas Wetland-Valley system from Yella Mallappa Chetty Kere and Varthur Kere leading to Kelavarapelli Reservoir is the environmental heritage of the city present in planning district, which needs to be preserved.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: TARGETED GROWTH, TOD, PUBLIC TRANSPORT INTEGRATION DENSIFICATION, REDEVELOPMENT, ENVIRONMENT PROTECTION, AND HERITAGE CONSERVATION

PROPOSALS

1. PD is a major employment centre and is expected to offer additional employment going forward. With the future expansion of economic activities within PD, it is expected to attract more traffic. Also, the PD is witnessing a haphazard and unplanned high density growth. The RMP2031 aims at targeted growth and facilitating planned development while integrating the existing developments through planned circulation network. The RMP2031 also aims at redevelopment of existing dense/ unplanned areas and environmental protection. Thus, the guiding principles for this planning district are as following:
 - a. Target Growth through strategic allocation of Industrial and Commercial Use
 - b. Development of Public Transport Infrastructure to increase the share of public transport
 - c. Promote Transit Oriented Development around Metro Stations
 - d. further densification by utilizing vacant lands
 - e. Protection and Conservation of Lake System and Flood Protection
 - f. Redevelopment/ upgradation of congested areas/ slums
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 12-2 and Table 12-2 respectively.

Figure 12-2: PD 11 Proposed Land Use Map

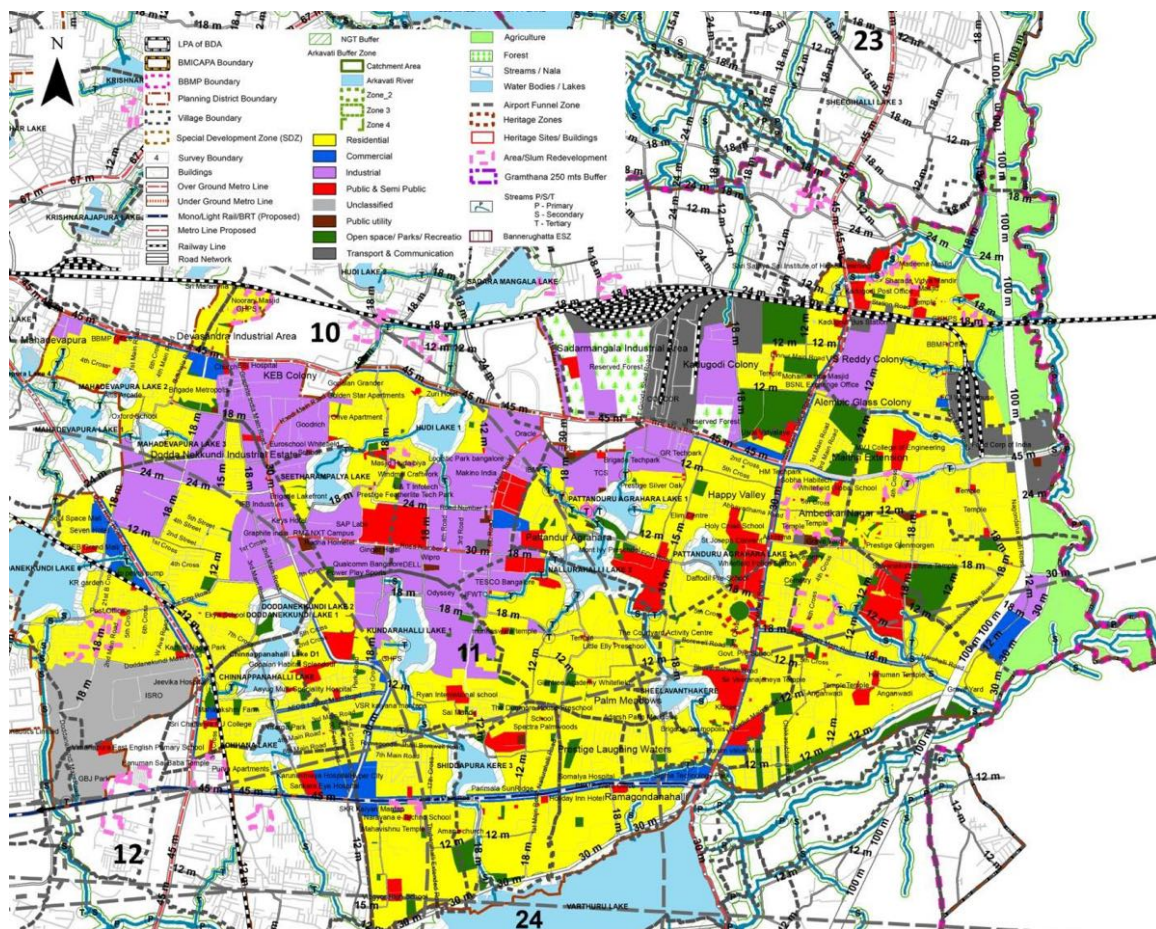


Table 12-2: PD 10 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1752.55	44.13
Commercial	93.20	2.35
Industrial	511.03	12.87
Public & Semi Public	193.01	4.86
Unclassified	103.90	2.62
Public Utility	9.55	0.24
Parks / Open Spaces	163.00	4.10
Transport & Communication	594.10	14.96
Forest	57.93	1.46
Streams	5.09	0.13
Water Bodies	126.56	3.19
NGT Buffer	361.60	9.10
		0.00
Total Developable Area	3971.50	100.00
Agriculture	266.84	-
Total PD Area	4238.35	-

Traffic and Transportation

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Commuter Rail Service (CRS): The RMP2031 proposes that CRS at regional level will start/ terminate at the KR Puram Railway Station and integrated with city public transport network (Metro/ mono/ Bus). It is proposed that Whitefield Station is developed for CRS.
 - b. Metro ORR Link: It is proposed to develop metro link along Outer Ring Road and with 2 stations within this PD – namely a) Dodda Nekkundi, and b) ISRO leading to Marathahalli.
 - c. Mono Rail / LRT/ BRTS Link 1: Trinity to Varthur: The proposed Trinity to Varthur Mono Rail/ LRT / BRTS along Old Airport/ Varthur Road pass through the Planning District and it is proposed to develop stations at Kundalahalli Gate, Siddhapura, Ramagondanahalli, Varthur Kodi
 - d. Mono Rail/ LRT/ BRTS Link: The proposed Mono Rail/ LRTS/ BRTS around Inner Peripheral Ring Road passes through the PD and it is proposed to develop stations at a) Kadugodi (interchange with CRS, BMTC Kadugodi Bus Station & Whitefield Metro), b) Hope Farm, c) Whitefield Police Station, d) Whitefield, (Borewell Road Junction), d) Hagadur, and e) Varthur Kodi then leading to Varthur Village.
4. Intermodal Interchange Stations are proposed to be developed at 2 locations – a) Kadugodi and b) Varthur Kodi



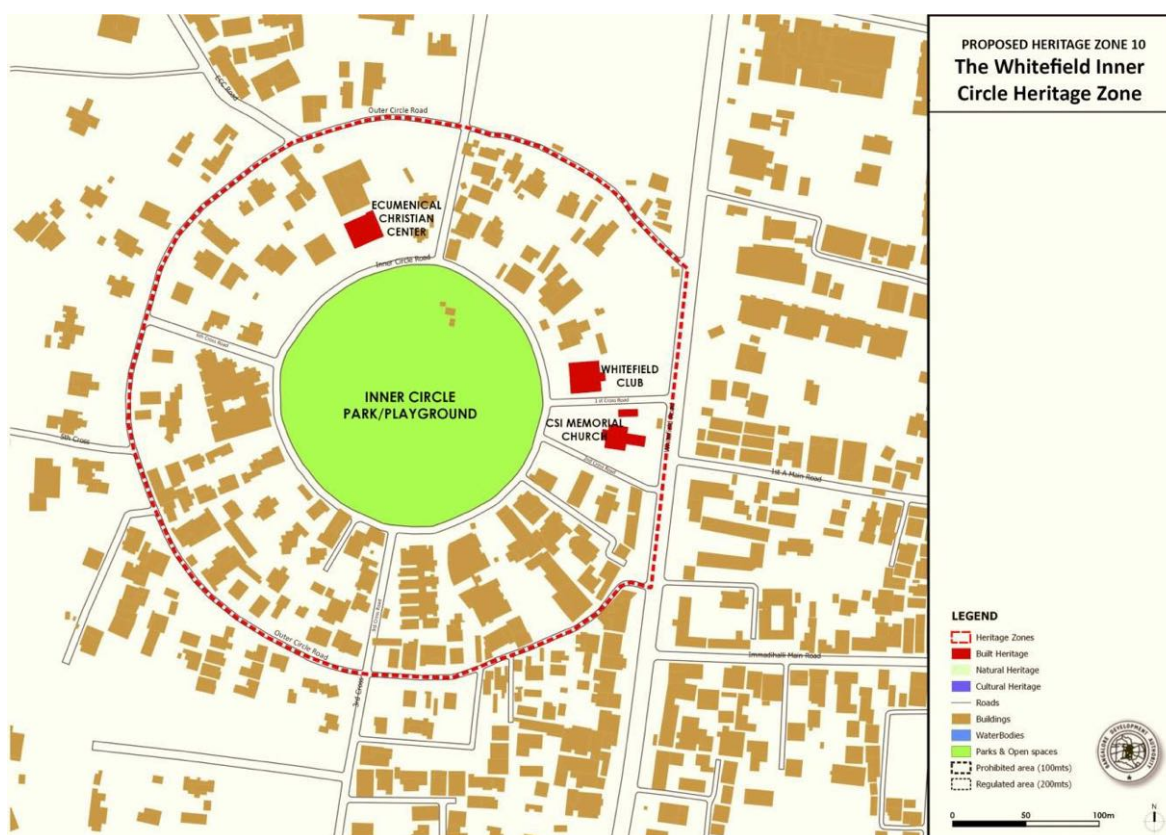
5. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B.
6. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible). It is proposed that that area accessibility plans are prepared.
7. The RMP2031 has identified new links roads and widening of certain road for network augmentation within the Planning district.

Protection of Lakes and Drainage

8. All lakes fall under the larger catchment of Bellanduru – Varthuru Kere. The important Natural Drainage within PD is classified as following and its details are presented in PLU Map:
 - a. Drainage connecting Dodda Nekkundi Kere with Varthur Kere= Secondary
 - b. Drainage connecting Chinnapanahalli Kere with Varthur Kere = Secondary
 - c. Drainage connecting Kundalahalli Kere with Varthur Kere = Secondary
 - d. Drainage connecting Sheelavanthakere Kere with Primary Drainage = Secondary
 - e. Tertiary drains/ streams within PD and applicable buffers are shown in PLU Map.
9. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is also proposed that all lakes be properly interconnected and rejuvenated. The RMP2031 also proposes rejuvenation of all lakes within the planning district.
10. **Provision of Open Spaces:** In order to provide the parks and open spaces for Planning District, the RMP2031 proposes development of two large parks within the Planning District at following locations:
 - b. In Kadugodi ward near Kadugodi Colony in Kadugodi Plantation revenue village as demarcated in PLU Map.
 - c. In Hagadur ward near Vijay Nagar in Nagondanahalli revenue village as demarcated in PLU Map.
11. **Area Redevelopment:**
 - **Redevelopment Existing Industrial Estates:** The RMP2031 proposes that existing industrial areas within PD are taken up for redevelopment to accommodate the changing economy of Whitefield. Densification of these plots can happen to support the animation industry, tech start-ups, incubation centres, 3D printing and co-working spaces, IT/ITES/ etc.
 - **Redevelopment of Garudacharpalya Vegetable Market:** The RMP2031 proposes that Redevelopment of Garudacharpalya Vegetable Market and adjoin areas are taken up for redevelopment for provision of better infrastructure for Market Area and supply of additional EWS housing.
 - **Redevelopment / Development of certain areas:** The RMP2031 proposes that redevelopment/ upgradation of gramthan's of the villages included to create BBMP is undertaken in time bound manner to provide necessary infrastructure and facilities .
12. **Slum Redevelopment:** There are 20 slums (both notified and non-notified) within the PD and are devoid certain infrastructure and facilities. The RMP2031 proposes to provide the existing slums with better infrastructure services.

13. **Heritage Conservation of Whitefield Inner Circle:** Whitefield developed as an Anglo-Indian village outside the city core. On 27 April 1882, His Highness, Chamaraja Wodeyar IX, the Maharaja of Mysore, granted 3,900 acres (16 km²) of land to the Eurasian and Anglo Indian Association, Mysore and Coorg (E&AI) for the establishment of agricultural Settlements at Whitefield (then Mysore state). Many of the inhabitants were working at KGF at that time. The origin of the settlement was around the inner circle, a circular urban form- a self-sufficient community built in between two circular roads. The architectural style seen here is mostly Colonial. Some of the important buildings are the CSI church and the Whitefield club. The RMP2031 proposes the conservation of Inner Circle and therefore has delineated Inner Circle Heritage Zone for protection and conservation as per the provisions of Zoning Regulations.

Figure 12-3: PD 11 Whitefield Inner Circle Heritage Zone



Disaster and Hazard Management

14. PD being major employment centre within Bengaluru, lakhs of people work in the small space. The city economy is dependent on safe working conditions. It is therefore important to have emergency plan prepared and executed for swift reactions during emergency situation. The RMP2031 therefore proposes that a Disaster and Hazard Mitigation Plan be prepared.
15. The RMP2031 proposes development of additional 8 DWCCs, 1 OWCCs, 1 Aggregator, and 1 Bio – Methanation Unit for solid waste management within the planning district.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 11: Dodda Nekkundi - Whitefield

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 (above 18 m) Roads
- b. Important New Links
 - Graphite India Road to Outer Ring Road
 - Varthur Kodi to ORR
 - Development of Flyover Near Rainbow Hospital on ORRv
 - Development of Railway Under Bridge at Chennapanhalli Main Roadv
- c. Widening/ Upgradation of Certain Roads:
 - Mahadevapura Main Road
 - Ghosala Road
 - Maheswaramma Temple Road
 - SriKrishna Temple Road
 - Alpine Eco Road
 - Nallurhalli Main Road
 - Borewell Road
 - Immedahalli Main Road
 - Pattandur Agrahara Road
 - ECC Road
 - SGR Dental collage road
 - Munnekollal Main road
- d. Junction Improvement Programme:
 - Mahadevapura Junction (T Junction of ITPL Main road and Mahadevapura Main Road)
 - Garudacharpalya Junction
 - ESI Junction (intersection of Graphite India Road & ITPL Main road)
 - Hoodi Junction
 - Rajapalya Junction
 - Big Bazar Junction
 - Pattandur Agrahara Gate Junction
 - BPL Junction
 - Hope Farm Junction
 - Channasadrna Junction
 - Intersection of SH 35 and Immadahalli Main Road
 - Intersection of SH 35 and Borewell Road
 - Intersection of SH 35 and Hagadur Main Road
 - Varthur Kodi Junction



- Siddhapura Junction (Intersection of Varthur Main Road and Nallurhalli Main road)
- Kundalahalli Gate Junction
- Intersection of Graphite India main Road and 4th Main Road BEML Layout
- AECS Layout Junction
- Intersection of Graphite India main Road and Ryan School Road
- Intersection of Graphite India main Road and 2nd Main Road Dodda Nekkundi Industrial Estate
- Graphite India Junction (near RxDx Hospital)
- Intersection of Nallurhalli Main Road and 2nd Main Road
- Nallurhalli Junction (Intersection of Nallurhalli Main Road and Borewell Road)
- Intersection of SGR Dental Collage Road and Munnekollal Main Road

2. Development of Public Transport System:

- a. CRS Railway Stations
 - i. Whitefield
- b. Namma Metro
 - i. Outer Ring Road
 - ii. Peripheral Ring Road
- c. Mono Rail Link – 1: Trinity to Varthur
- d. Mono Rail Link – 6: Inner Peripheral Ring Road

3. Development of Multimodal Interchange Stations

- a. Kadugodi , and
- b. Varthur Kodi

4. Development of Parks and Open Spaces

- a. In Kadugodi ward near Kadugodi Colony in Kadugodi Plantation revenue village as demarcated in PLU Map.
- b. In Hagadur ward near Vijay Nagar in Nagondanahalli revenue village as demarcated in PLU Map.

5. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan
 - b. Dodda Nekkundi Kere Rejuvenation Plan
 - c. Seetharampalya Lake Rejuvenation Plan,
 - d. Mahadevpura (Nakkundi) Lake Rejuvenation Plan,
 - e. Shiddapura Lake (Thubarahalli Lake) Rejuvenation Plan,
 - f. Kundalahalli Lake Rejuvenation Plan,



- g. Nallurahalli Lake Rejuvenation Plan,
 - h. Chinapanahalli lake Rejuvenation Plan,
 - i. Hoodi Lake Rejuvenation Plan,
 - j. Munekolala Lake (Achhana Lake) Rejuvenation Plan,
 - k. Patandur Agrahara lake Rejuvenation Plan,
 - l. Sheelavanthakere Lake Rejuvenation Plan,
 - m. Yelkgata Lake Rejuvenation Plan,
 - n. Four Unnamed Dried lakes Rejuvenation Plan
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

6. Area Redevelopment:

- Preparation of Redevelopment Plans for Existing Industrial Estates
- Preparation of Redevelopment Plans for Garudacharpalya Vegetable Market
- Preparation of Redevelopment Plans for Nallurhalli,
- Preparation of Redevelopment Plans for Immadahalli,
- Preparation of Redevelopment Plans for Channasandra,
- Preparation of Redevelopment Plans for Kadugodi,
- Preparation of Redevelopment Plans for Garudacharpalya,
- Preparation of Redevelopment Plans for Sadarmangala,
- Preparation of Redevelopment Plans for Kaveri Nagar

7. Heritage Area Protection and Conservation Scheme:

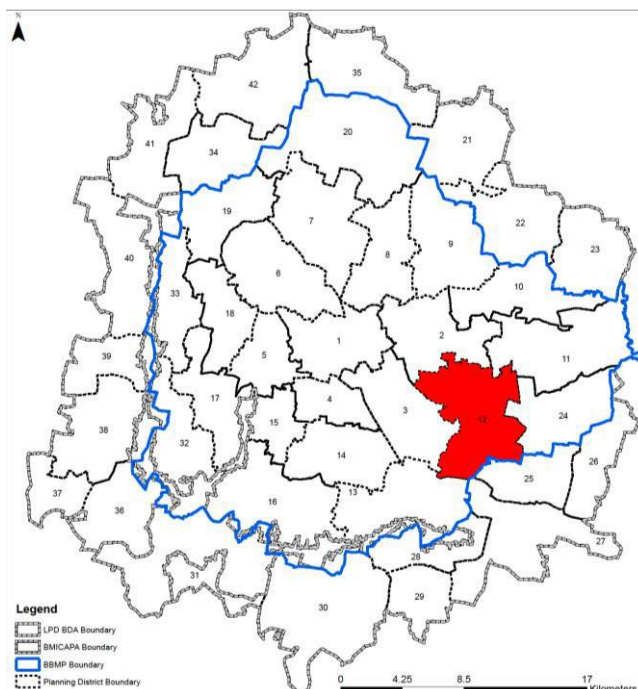
- a) Heritage Master Plan for Whitefield Heritage Zone
- b) Grading of Heritage Buildings within PD
- c) Heritage Area Improvement and Development scheme

8. Development of Physical Infrastructure/ Facilities:

- a) SWM Dry Waste Collection Centre: 10 Nos.
- b) SWM Organic Waste Collection Centre: 02 Nos
- c) SWM Aggregator: 01 Nos
- d) SWM Bio-Methanation Unit: 01 Nos

9. Preparation of Disaster Mitigation Plan for EPIP & Industrial Estates

13.PD 12: BELANDURU - HARALURU



Population (2011 Census): 1,97,982

Area of PD: 3867.3ha

Wards in PD: 5

Gross Density (2011 Census): 52 pph

Bellanduru - Haralur Planning District (PD No.12) is a major employment centre of Bengaluru city and located Central East - South East side in BMA. Bellandur Lake and its valley, HAL Airport, Defence Establishment, IT/ ITES & Business Offices/ Tech Parks along ORR, Malls and Commercial Places KGA Golf Course, high strained arterial road network and haphazard residential areas defines the characteristics of Bellandur Planning District.

Master Plan aims at targeted growth, promoting public transport, network improvements, and environmental protection.

1. Planning District consists of the wards four BBMP wards, namely - Bellandur (150), Marathalli (86), Konena Agrahara (113) and Hal Airport (87) and admeasures 3867.3 Ha.
2. It houses several defence establishments – like HAL, NAL, ISRO, and number of IT/ ITES/ Aerospace Companies in number tech parks like Embassy Tech Village, RMZ Eco Space, Prestige Tech Park, Embassy Golf Link Bussiness Park, Divyashree Technopolis, Cessna Business Park and standalone large campuses – like that of Intel and Wipro as well as Independent Office Buildings where lakhs of people are employed. The residential developments are mostly of high density and unplanned in nature with the dense pockets, plotted developments and high rise buildings. However, there are under served settlement pockets as well. Bellandur kere and series of lake define the drainage pattern of planning district; however the valley system has been disturbed due to urbanisation making ORR tech zone highly vulnerable to flooding. At the same time, PD still has potential for futher growth to accommodate additional employment and population, which may further compound the local level problems.
3. Outer Ring Road, Intermediate Ring Road, Old Airport Road, and Sarjapura Road are some three major arterial roads passing through the PD, and highly haphazard local network defines the connectivity network within the planning district. The Metro ORR (Phase 3- Hebbala to Silk Board) is scheduled to be implemented.

A. EXISTING STATUS

Demography

4. PD- 12 has 1,97,982 inhabitants as per Census 2011, which is an increase by 87.79% from Census 2001 (1,05,425). The workforce participation is 49% with 97,054 resident workers, whereas the total employment is three to four times the workers. There are 54,188 households (2011), with average household size being 3.65, which is lower than BMA (4.01). The gross density is 51.2 pph, whereas the average residential density is 245 pph. The gross density is highest in Konena Agrahara ward (180 pph) and the least in Bellandur ward (30 PPH).

Industry and Commerce

5. Industrial and Commercial land uses together account for a considerable total area of planning district, this is due to the presence of large IT/ ITES Companies, Business/ office complexes and commercial establishments, as mentioned earlier. The public establishments like HAL, NAL, Aerospace Division, ISRO, Helicopter Division, etc are also major employment centres and account for ~ 18% of total PD area. The Public sector is concentrated along Old Airport Road while private establishment are concentrated on ORR and then Old Airport and Intermediate road.
6. In addition, to major commercial establishment like malls and shopping complexes, several internal roads have retail establishments. More importantly, HAL vegetable market is located in this PD.

Existing Land Use

7. Vacant land Use accounts for almost third of PD area, clearly indicating huge potential for future growth within the PD. Vacant use is followed by residential land use which accounts for 20.33% total PD. The defence and combined industry and commerce use accounts for 18% and 8.4% respectively. While lakes and streams constitute 10.38% of total PD area, park and open spaces have meager 2.34%. Similarly, transportation and communication use also have lesser share at 4.88% of total PD area.
8. Figure 13-1 and Table 13-1 presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Housing and Slums

9. Bellandur PD has seen a spate of development over last decade, and residential areas have developed as per the requirements. Earlier it was defence that led to public sector housing which is planned plotted layouts/ quarters like HAL and NAL, HAL 3rd stage, HAL GB Quarters, Sudam Nagar, and parallel developed were private layouts Vinayak Nagar, KR Garden, Murugeshpalaya, Jeevan Beema Nagar, Marathahalli, Anand Nagar, KPC Layout, Amblipura. Then came the IT/ ITES led development, which is now witnessing supply of high rise apartment complexes and gated communities. At the same time, developed several unservice settlements and slums. There are 22 slums in this PD out of which 2 slums are notified.

Traffic and Transportation

10. Traffic and Communication land uses account for mere 4.88% of total extent of PD. At present, Buses operated by BMTC and private companies (for their employees), cabs are the only modes that are available for public transport, though proposed Metro Phase 3 ORR (Hebbala to Silk Board) expected to improve public transport options further. There is no

BMTC Bus Station or Terminal / Depot in the planning district. Carmelaram Station is within the PD while Bellandur station is adjacent to PD is the potential commuter station. The lack of public transport options has increased the pressure existing road network, which also cater to heavy vehicle traffic leading to employment center and regional traffic (ORR caters to large amount of goods traffic).

11. The critical arteries are Outer Ring Road, Intermediate Ring Road, Old airport road and Sarjapura Road. These roads are followed by Wind Tunnel Road, Yemalur Road, Kempapur Road, Bellandur Ker Bund Road, Harluru Road, Doddakannelli - Kadubeesanahalli Road, and Central Jail Road providing connectivity within and outside PD. The road network within PD is haphazard and at certain location is disconnected.

Figure 13-1: PD 12 Existing Land Use Map

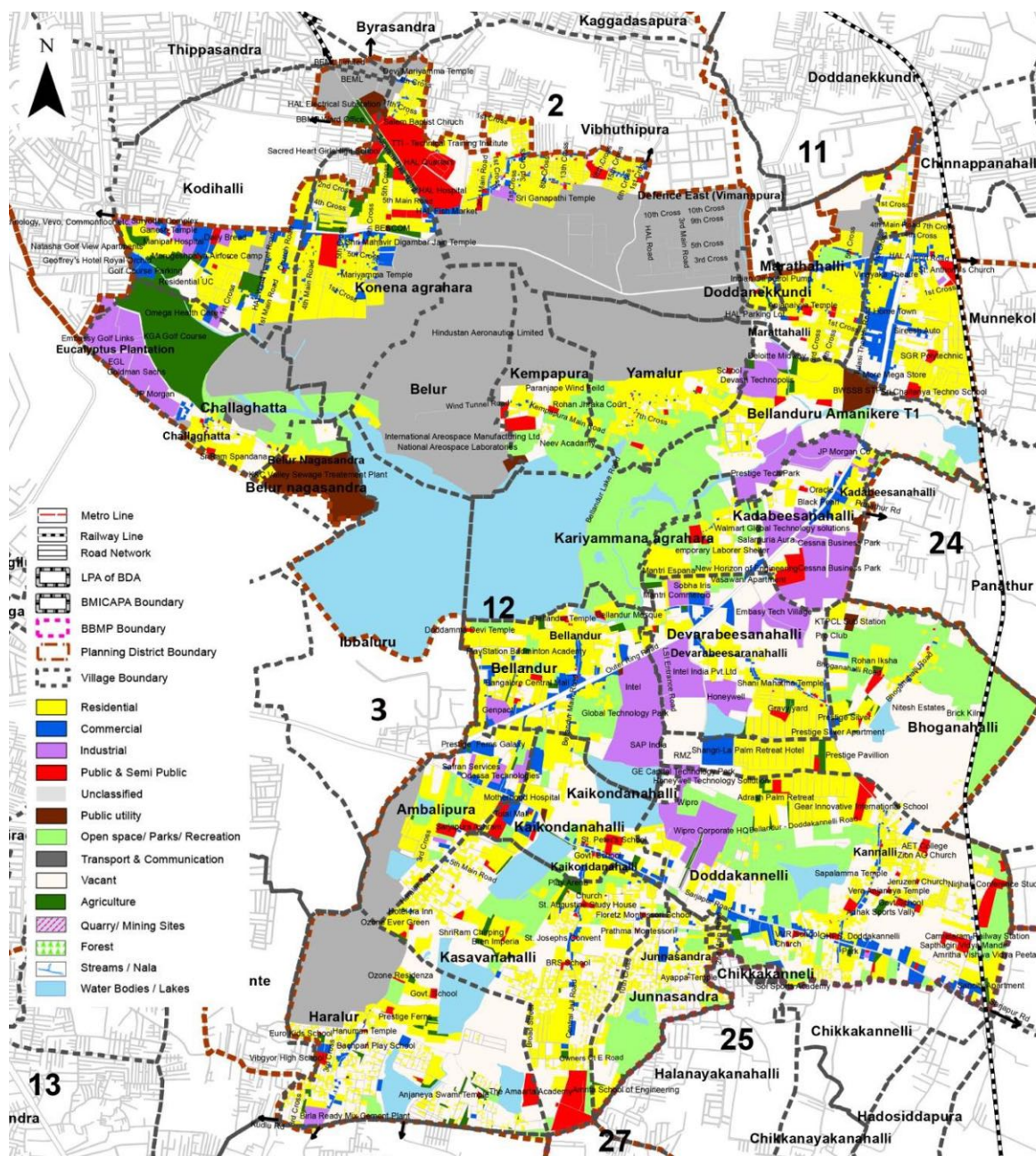


Table 13-1: PD 12 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	786.08	20.33
Commercial	119.99	3.10
Industrial	206.27	5.33
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	101.79	2.63
Unclassified	682.80	17.66
Public Utility	43.22	1.12
Parks & Open Spaces	90.69	2.34
Transport Communication	188.58	4.88
Vacant	1246.56	32.23
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	17.44	0.45
Water Bodies	383.89	9.93
Total	3867.30	100.00

Physical and Social Infrastructure

12. As per BWSSB, about 14.62% of households have metered water connections, whereas 8.5 % of households have sanitation connections. The under implementation water supply and sewage project is expected to improve the water supply network coverage and sewerage network coverage in this area.
13. There are around 73 schools and number of higher educational institutes such as New Horizon College of Engineering, Pharmacy Collage, HAL Management Academy, Manipal University (Distance Education) etc. Further, 4 Government Health Centres & Hospitals and 12 private hospitals, with a total of 974 beds are present in PD. Major Hospitals present in PD include Manipal Hospital, Institute of Aerospace medicine, Sakra World Hospital. The HAL heritage and Aerospace museum is also situated in this planning district. There are 2 police stations in this PD. There is 1 fire station in this Planning district which is located along the Sarjapur Road. There is no crematorium within the PD, and is served by Panathur Electric Crematorium.

Lakes and Drainage

14. Bellanduru Lake, Saul Kere, Kaikondrahalli kere, Kasavanahalli kere, and Haraluru Kere are present in this PD. All these lakes fall under Bellanduru catchment area. The valley system between Bellandur Kere and Varthur kere has been distrubed due to urbanisation.
15. Murugeshpalya, Old Airport Road, Intermediate Ring Road, Sarjapur Road, Outer Ring Road (points where secondry and tertiary drains crosses ORR) are prone to flooding whereas Dental Collage Road, Marathahalli, and sevarl other areas are low-lying areas. The

Park and Open Spaces



16. KGA Golf Course is the biggest open space available in the PD and part of Firing Range also falls within PD. Though there are several small parks/ open spaces in the layouts/ planned residential areas, no large park or playground is available for general public.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: TARGETED GROWTH, TOD, PUBLIC TRANSPORT INTEGRATION, NETWORK DEVELOPMENT DENSIFICATION, REDEVELOPMENT, ENVIRONMENT PROTECTION,

PROPOSALS

1. PD is a major employment centre and still has potential to accommodate addition employment and residents, yet falls under two planning zones – Planning Zone A and B of RMP 2031. With the future expansion of economic activities within PD, it is expected to attract more traffic, while it is witnessing a haphazard and unplanned high density growth. The RMP2031 aims at targeted growth and facilitating planned development while integrating the existing developments through planned circulation network. At the same time, areas within Planning Zone A are proposed to be stabilised. The RMP2031 also aims at environmental protection, redevelopment of existing dense/ unplanned areas and disaster management. Thus, the guiding principles for this planning district are as following:
 - a. Target Growth through strategic allocation of Industrial and Commercial Use
 - b. Stabilisation of areas of PD within Outer Ring Road
 - c. Further densification by utilizing vacant lands of areas of PD falling outside ORR
 - d. Development of Public Transport Infrastructure to increase the share of public transport
 - e. Promote Transit Oriented Development around Metro Stations
 - f. Protection and Conservation of Lake System and Flood Protection
 - g. Redevelopment/ upgradation of congested areas/ slums
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 13-1 and Table 13-1.

Traffic and Transportation

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Commuter Rail Service (CRS): The RMP2031 proposes that CRS at regional level shall start/ terminate at the KR Puram Railway Station and integrated with city public transport network (Metro/ mono/ Bus). It is proposed that Carmelaram Station is developed for CRS.
 - b. Metro ORR Link: It is proposed to develop metro link along Outer Ring Road and with 4 stations within this PD – namely a) Marathahalli (interchange with Mono Rail Link-1), b) Kadubeesanahalli, c) Devarabeesanahalli and c) Bellandur and then leading to Ibballuru (interchange with Sarjapura Mono Rail Link).
4. Mono Rail/ BRTS/ LRT - Trinity to Varthur: The proposed Trinity to Varthur Mono Rail along Old Airport/ Varthur Road pass through the Planning District and it is proposed to develop stations at a) Manipal Hospital, b) Murugesh Palya, c) HAL Bus Station (interchange with

- BMTC), d) HAL Museum, e) Jawahar Nagar (next to Marathahalli Market) and f) Marathahalli (Interchange with Metro).
5. Mono Rail / LRTS/ BRTS on Sarjapura Road: It is proposed to develop a Mono Rail link along the Sarjapura Road from Ibbalur Metro Station till Tchuddadenahalli on Sarjapura Main Road near BMA boundary. The proposed Mono Rail link passes through this Special Development Zone providing much needed connectivity with Metro ORR as well as Metro PRR. The first station within PD is an Interchange with Mono Rail along Inner Peripheral Ring Road and followed by stations along Sarjapura road at a) Wipro SEZ, b) Kodathi Gate, c) Gouthamagara, d) Interchange with Metro at PRR, e) Muthanallur Cross, f) Dommasandra Circle, and g) the terminal station at Tchuddadenahalli.
 6. Bus Transport: It is proposed that a Bus station needs to be developed in Bellandur Ward and located along proposed 45m wide road near railway line.

Figure 13-2: PD 12 Proposed Land Use Map

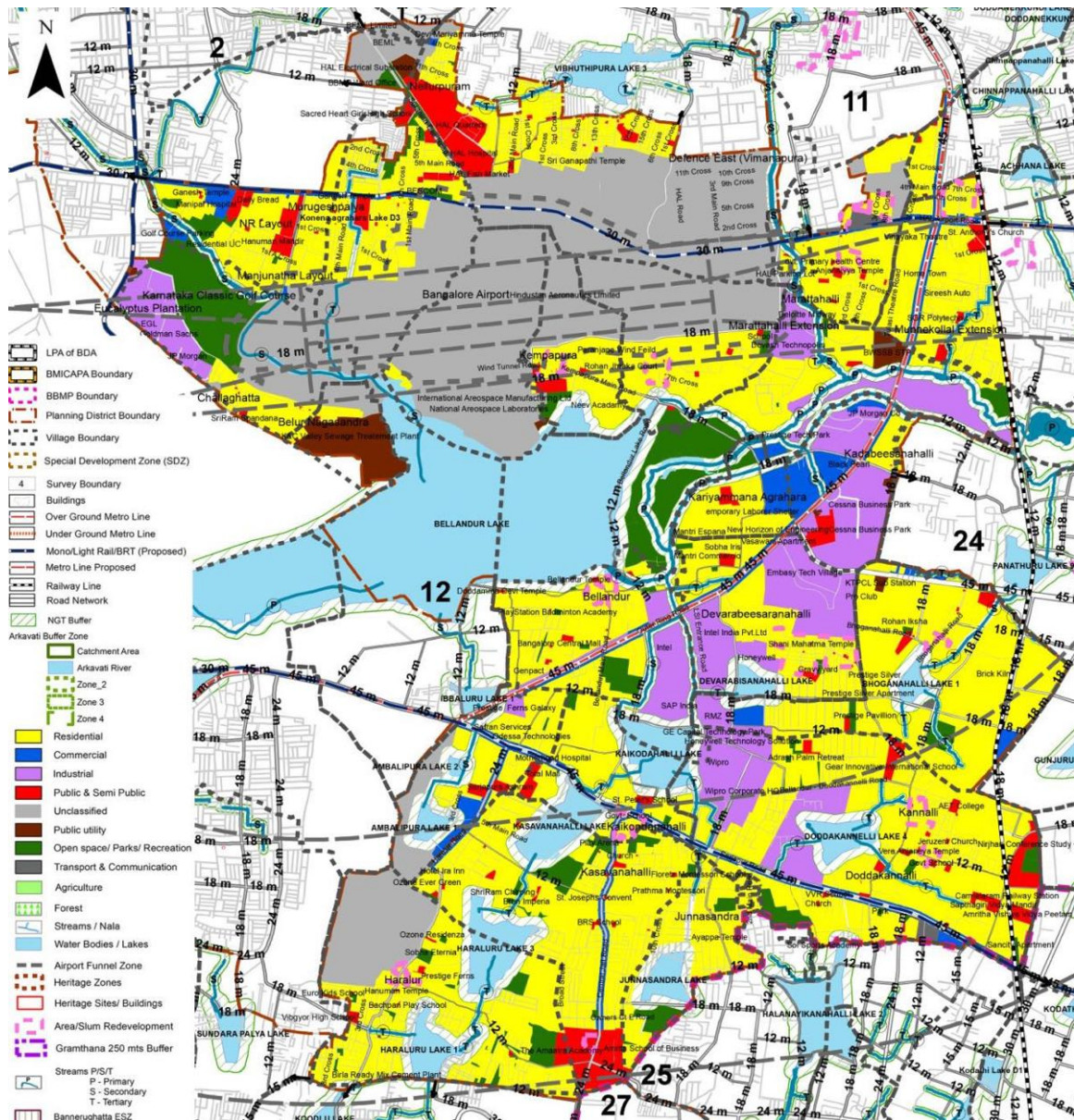




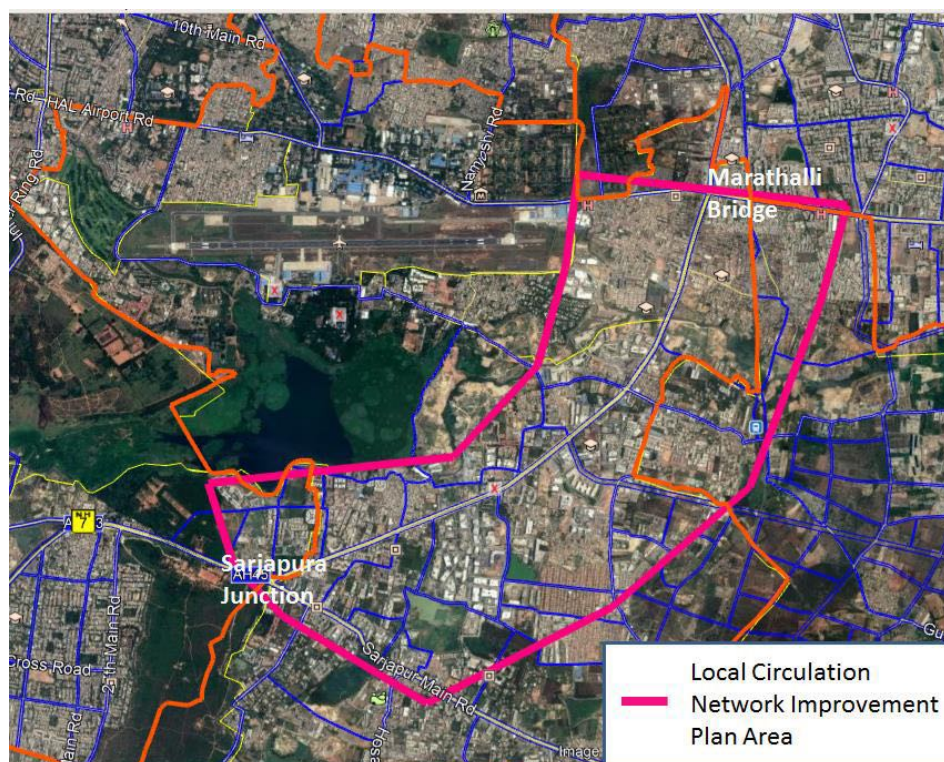
Table 13-2: PD 12 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1461.31	37.79
Commercial	75.68	1.96
Industrial	269.76	6.98
Public & Semi Public	117.50	3.04
Unclassified	693.07	17.92
Public Utility	40.65	1.05
Parks / Open Spaces	175.08	4.53
Transport & Communication	230.70	5.97
Forest	0.00	0.00
Streams	17.62	0.46
Water Bodies	368.04	9.52
NGT Buffer	417.89	10.81
Total Developable Area	3867.30	100.00
Agriculture		-
Total PD Area	3867.30	-

7. Intermodal Interchange Stations are proposed to be developed at Marathahalli
8. Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges located outside ORR i.e in Planning Zone B. I.e. The higher FAR would be applicable to properties on outer side of ORR and not for Inner side of ORR.
9. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
10. The RMP2031 has identified new links roads and widening of certain road for network augmentation within the Planning district.
 - a) Kariammana Agrahara Main Road: A 12 m wide road is proposed to be developed from Junction of Yemaluru Road and Bellandur Main Road to ORR (meeting at intersection of New Horizon collage road) using existing Karaiammana Agrahara Main Road. This road is expected to reduce the traffic on Marathahalli Bridge.
 - b) Road Connecting ORR and Sarjapura Main Road via Saul Kere Bund Road: An 18m wide road is proposed to be developed from ORR (next to RMZ Ecospace) to Sarjapura Road (meeting Sarjapura Road next to Petrol Bunk via Saul Kere Bund Road. It is expected that this road would reduce traffic on ORR.
 - c) Widening of Certain Roads: The RMP2031 proposes upgradation/ widening of certain roads to be taken up on priority:
 - d) Development of Railway Crossings: It is proposed to upgrade/ widen a railway crossing at Carmelaram Railway Gate Crossing and SGR Dental Collage Road Railway crossing depending upon the feasibility of the development.

- e) Preparation of Local Area Network Circulation Improvement Plan: The RMP2031 proposes that a detailed local area circulation plan be prepared covering entire Bellandur Ward and parts of Marathalli Ward. Refer Figure 13-4 for tentative extent of ORR Zone for which local area circulation network improvement plan is to be prepared. The extent of ORR Zone can be defined at the time of preparation of LANCIP. The objective of the LANCIP is to identify and provide for missing links those are not identified by RMP 2031, junction improvements, integration with proposed Metro Stations, traffic movement regulation, inter connect tech park network, provide for pedestrian and NMT facilities, providing traffic signals, footover bridges/ underpasses, removing all impediments (like utilities, etc).

Figure 13-3: PD 12 Local Area Circulation Network Improvement Plan for ORR Zone



11. The RMP2031 has identified critical junctions for geometric improvements for better and smoother traffic flow and to be taken up on priority.

Protection of Lakes and Drainage

12. All lakes fall under the larger catchment of Bellanduru – Varthuru Kere. The important Natural Drainage within PD is classified as following and its details are presented in PLU Map:
- Drainage connecting Bellanduru Kere and Varthuru Kere = Primary
 - Drainage connecting Ibbaluru Kere with Bellanduru Kere = Secondary
 - Drainage connecting Saul Kere with Bellanduru Kere = Secondary
 - Drainage leading up to Saul Kere and Secondary Drainage = Tertiary
 - Tertiary drains/ streams within PD and applicable buffers are shown in PLU Map.
13. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is also proposed that all lakes



be properly interconnected and rejuvenated. The RMP2031 also proposes rejuvenation of all lakes within the planning district.

14. **Provision of Open Spaces:** In order to provide the parks and open spaces for Planning District, the RMP2031 proposes development of two large parks within the Planning District at following locations:
 - a. In Bellanduru ward – valley system between natural drains as earned in PLU Map and falling in Bellandur Amanikane revenue village.
 - b. In Marathahalli ward near railway line and in Bellandur Amanikere revenue village as demarcated in PLU Map.
 - c. Other Park and Open spaces as earmarked in PLU Map.
15. **Area Redevelopment:**
 - **Redevelopment of Marathahalli Market:** The RMP2031 proposes that Redevelopment of Marathahalli Market and adjoin areas are taken up for redevelopment for provision of better infrastructure for Market Area and easing traffic movement on Old Airport Road.
 - **Redevelopment of Dense Settlements/ Villages:** The RMP2031 proposes that redevelopment/ upgration of dense settlements/ villages is undertaken to provide necessary infrastructure and facilities. Dodda Kannelli, Bellandur, Yemaluru, Marathahalli, Sanjaya Nagar and Konena Agrahara are proposed to be taken up for redevelopment.
16. **Slum Redevelopment:** There are 20 slums (both notified and non-notified) within the PD and are devoid certain infrastructure and facilities. The RMP2031, in order to provide the existing slums with better infrastructure services, proposes in-situ redevelopment of the slums in a phased manner.. The Redevelopment can also be limited to upgradation of infrastructure and provisions of basic services.
17. **Street Vending Zone/ Road:** The RMP2031 proposes that BBMP after following due process as prescribed in the Street Vending Act 2014 determines the areas/ streets for Informal activities/ Street Vending activitis where are allowed and not allowed.

Disaster and Hazard Management

18. PD being major employment centre within Bengaluru, lakhs of people work in the techparks/ business parks along ORR. The city economy is dependent on safe working conditions. It is therefore important to have emergency plan prepared and executed for swift reactions during emergency situation. The RMP2031 therefore proposes that a Disaster and Hazard Mitigation Plan be prepared It is also proposed to develop a fire station in Bellandur Ward.
19. The RMP2031 proposes development additional 10 DWCCs, 1 OWCCs, and 1 Bio – Methanation Unit for solid waste management within the planning district.
20. It is proposed to develop a crematorium in park and open space near Bellandur Kere.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for this planning district.



1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Important New Links
 - 45 m wide road connecting ORR to SH35
 - Kariammana Agrahara Main Road
 - Road Connecting ORR and Sarjapura Main Road via Saul Kere Bund Road
- c. Widening/ Upgradation of Certain Roads:
 - Belandur Lake Road
 - Panathur Road
 - Haraluru Road
 - Hosa Road
 - Dodda Kannelli – Kadu Beesanahalli Road
 - Yemaluru Road
 - SGR Dental Collage Road including widening of Railway Crossing
 - Railway Gate Sarjapura Crossing
- d. Junction Improvement Programme:
 - Sarjapura Road Junction (near Ibbalur lake)
 - Bellandur Junction
 - Devarabeesanahalli
 - New Horizon Collage junction
 - Kada Bisanahalli Junction
 - Intersection of ORR and Panathur Main Road
 - Intersection of ORR and SGR Dental Collage Road
 - Marathahalli Bridge Junction
 - Manipal Hospital Junction
 - ISRO Junction (Intersection of Old Airport Road and Wind Tunnel Road)
 - HAL Junction (Intersection of Old Airport Road and Suranjandas Road)
 - Yamalur Junction
 - Doddanekundi Cross (Intersection of Old Airport Road and Doddanekkundi Road)
 - Marathahalli Market Junction (near Ganesh Temple – intersection with Chowdeshwari Temple Street)
 - BEML Junction (Intersection of Suranjan Das Road and New Thippasandra Main Road)
 - Intersection of Suranjan Das Road and Jeevan Beema Nagar 10th Main Road)
 - Intersection of SGR Dental Collage Road and Munnekollal Main Road
 - Intersection of Yemalur Road and Kariammana Agrahara Road (including development of Culvert/ Road on drain.
 - Haralur Cross
 - Haralur Junction (intersection of Haralur Road and Dinne Anjaneya Swamy Temple Road)
 - Intersection of Haralur Road and Kudulu Road
 - Amruthanandamayi College Junction



- Kaikodrahalli Junction
- Intersection of Sarjapura Road and Wipro Road
- Junnasandra Gate
- Dodda Kannalli Junction
- Carmelaram Junction
- Intersection of Dodda Kannelli – Kadubeesanahalli Road and New Horizon Collage Road

2. Development of Public Transport System:

- a. CRS Railway Stations
 - i. Carmelaram
- b. Namma Metro
 - i. Outer Ring Road
- c. Mono Rail/ LRT/BRTS: Trinity to Varthur
- d. Mono Rail/ LRT/BRTS: Ibbalur to Tchuddadenahalli
- e. Bus Stand in Bellandur Ward

3. Development of Intermodal Interchange Stations

- a. Marathahalli and
- b. HAL Bus Station

4. Development of Parks and Open Spaces

- a. In Bellanduru ward – valley system between natural drains as earned in PLU Map and falling in Bellandur Amanikane revenue village.
- b. In Marathahalli ward near railway line and in Bellandur Amanikere revenue village as demarcated in PLU Map.
- c. Other Park and Open spaces as earmarked in PLU Map.

5. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. Master Plan Streams Rejuvenation Plan
 - b. Bellandur Kere Rejuvenation Plan
 - c. Saul Kere Rejuvenation Plan,
 - d. Kaikondrahalli Lake Rejuvenation Plan,
 - e. Kasavanahalli Lake Rejuvenation Plan,
 - f. Haraluru Lake Rejuvenation Plan,
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.



6. Area Redevelopment:

- Preparation of Local Area Network Circulation Improvement Plan for Bellandur Area
- Preparation of Redevelopment Plans for Marathahalli Market Area
- Preparation of Redevelopment Plans for Dodda Kannelli
- Preparation of Redevelopment Plans for Bellandur,
- Preparation of Redevelopment Plans for Yemaluru,
- Preparation of Redevelopment Plans for Marathahalli,
- Preparation of Redevelopment Plans for Sanjaya Nagar, Marathalli
- Preparation of Redevelopment Plans for Konena Agrahara,

7. Preparation of Slum Redevelopment Plans

8. Declaration of Street Vending Zones/ Areas/ Streets

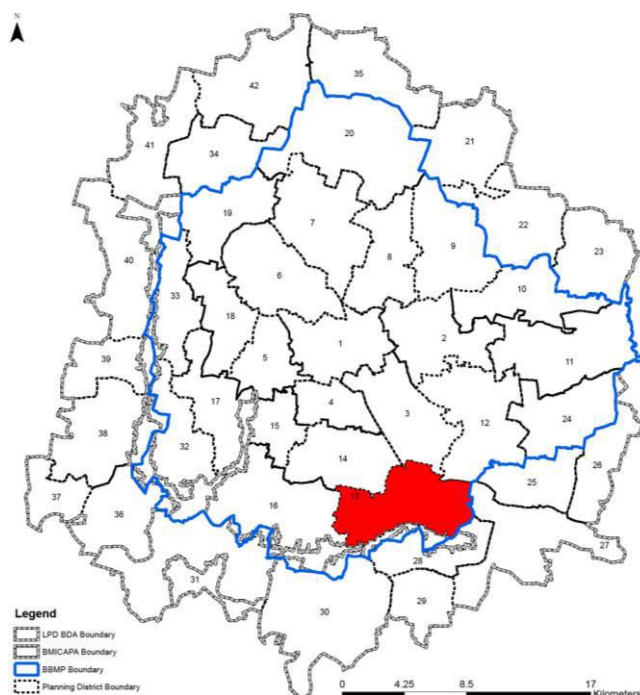
9. Development of Physical Infrastructure/ Facilities:

- | | |
|---|---------|
| a) Fire Station: | 01 Nos |
| b) Crematorium: | 01 Nos |
| c) SWM Dry Waste Collection Centre: | 08 Nos. |
| d) SWM Organic Waste Collection Centre: | 01 Nos |
| e) SWM Aggregator: | 01 Nos |
| f) SWM Coconut Processing Unit: | 01 Nos |

10. Preparation of Disaster Mitigation Plan

- a) Bellandur ORR Employment & Tech Areas (from Marathahalli to Sarjapura Road)
- b) Drainage Improvement Plan
- c) Provision of Fire Station

14.PD 13: PARAPPANA AGRAHARA – HULIMAVU



Population (2011 Census): 3,43,840

Area of PD: 3356 ha

Wards in PD: 5

Gross Density (2011 Census): 103 pph

Parappana Agrahara – Hulimavur Planning District (PD No.13) is located in the South East of BBMP. It spatially stretches from Central Jail (Hosur Road) till Bannerughatta Road, and houses several types of industries - garment factories, IT/ITES, Commercial establishments, and higher order educational institutes like IIM. The presence of 21 lakes, highly strained arterial road network and combination of planned as well as haphazard residential areas define the characteristics of PD.

The Master Plan aims at further densification of existing vacant lands, promoting public transport, network improvements, redevelopment and environmental protection.

1. The Parappana Agrahara – Hulimavur Planning District comprises of 5 wards, - Hongasandra (189), Managammanapalya (190), Singasandra (191), Begur (192) and Arakere (193) and falls within the Bommanahalli zone of BBMP. The total extent of PD is approximately 3356 ha.
2. Parappana Agrahara – Hulimavur Planning District (PD No.12) is located South - South East in BBMP and shares its southern boundary with LPA of BMICAPA. It is spatially stretched from Central Jail (Hosur Road) till IIM (Bannerughatta Road), and houses several industries, garment factories, IT Companies commercial establishments, and higher order educational institutes like IIM. The presence of 21 Lakes, fully commercialized radial roads, highly strained arterial road network and combination of planned as well as haphazard residential areas defines the characteristics of PD. Major Landmarks within the PD are Meenakshi temple, Meenakshi Mall, Oxford College, Kudlu gate and Bangalore Central jail.
3. Hosur Road, Bannerughatta Road, NICE Road, Begur Main Road, Central Jail Road/ Hosa Road, Begur – Hulimavu Road, Yelanahalli Road, Nyanappanahalli Road, Dodda Kammanahalli Main Road, Sir M Vishweshwaraya Road, etc are the existing roads defining the circulation pattern

A. Existing Situation

Demography

- ## Industry and Commerce

6. As mentioned, different types of industrial and commercial activities are located across the PD, which includes manufacturing, IT/ ITES, Ready Made Garment Factories, and commercial establishments. Spatially most of these are located along the Hosur road, Bannerughatta Road, and Begur Road and in Hongasandra, Singasandra, Begur, and Hulimavu. Garment Factories are located in Hongasandra (Arvind Mills is located at Kudlu gate), Mico Naganathpura Plant (Bosch) is singhasandra ward, IT/ ITES companies like BPL, Tata, Honeywell industry are located in Arekere Ward along Bennarughatta Road.
7. The hosur road, Begur Road and Bennarughatta road are fully commercialized and hosts major commercial centres - the Royal Meenakshi Mall on Banerghatta Road and retail chain of Metro cash and carry on the Hosur road among others

Existing Land Use

8. Around 44% of total area is under vacant use, a clear indication that there is a huge potential for further densification. The vacan lands are mostly located towards the LPA of BDA boundary with BMICAPA (southern side), adjoining the Hulimavu lake, Dodda Begur lake and areas around Central Jail and Kudlu Lake. The residential use account for ~27%, whereas combined of industrial and commercial use account for ~8%. The public-semi public use accounts for 5.2%. **Figure 14-1** and **Table 14-1** presents the Existing Land Use map 2015 and Existing Land Use area statement for PD.

Figure 14-1: PD 13 Existing Land Use Map

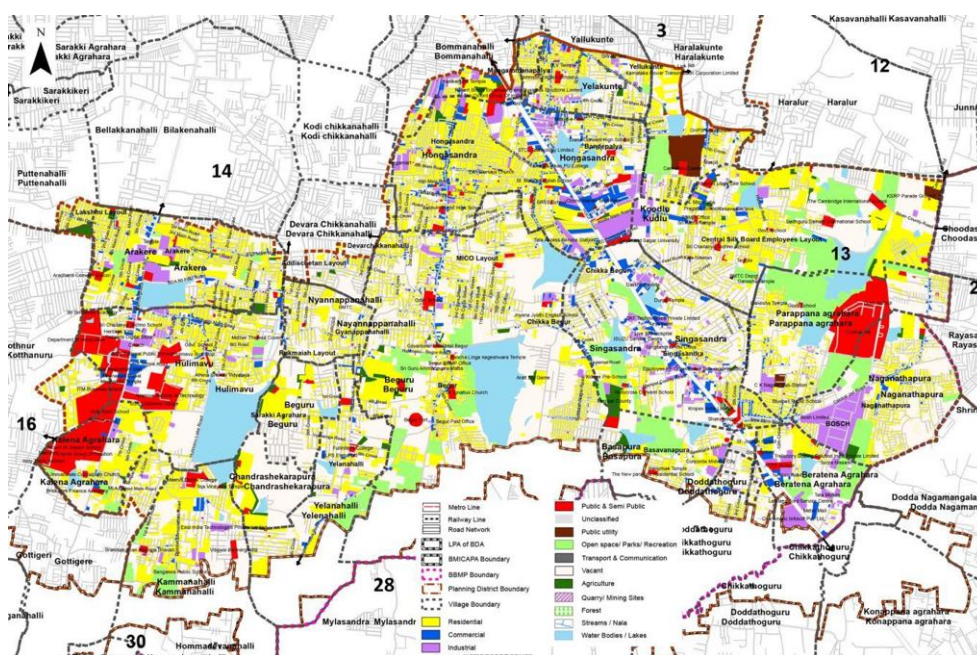




Table 14-1: PD 13 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	895.87	26.69
Commercial	132.14	3.94
Industrial	139.79	4.16
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	174.14	5.19
Unclassified	0.03	0.00
Public Utility	17.43	0.52
Parks & Open Spaces	35.75	1.07
Transport Communication	283.03	8.43
Vacant	1481.14	44.13
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	3.17	0.09
Water Bodies	193.87	5.78
Total	3356.36	100.00

Housing and Slums

9. The residential areas are of mostly of layout type with several high rise residential complexes. Some of the planned residential layouts include MICO layout, Pai Layout, Venkateshwara layout, AECS layout and Akshaynagar etc. It is noteworthy that the layout type development in wards of Begur and Singasandra are getting amalgamated to develop group housing schemes and high rise apartment typology.
10. There are 5 slums in this PD, and of which 2 slums are notified. Arekere Ward (ward no 193) with 2 slums has the highest number of slums. The population residing in these slums is 4739 (1.38% of the total PD population).

Traffic and Transportation

11. Hosur Road, Bannerghatta Road, NICE Road, Begur Main Road, Central Jail Road/ Hosa Road, Begur – Hulimavu Road, Yelanahalli Road, Nyanappanahalli Road, Dodda Kammanahalli Main Road, Sir M Vishweshwaraya Road, etc are the existing roads defining the circulation pattern. It mostly haphazard and road widths are not uniform.
12. The main access arterial radial roads of BMA, the Hosur road at its east and Bannerghatta Road at its west and both connect to the NICE corridor. The Hosur road connects further to the Electronic city through the Electronic City Flyover, an important and major elevated road link.
13. It is noteworthy that Bannerghatta road and Hosur road connect the IT/BT and other industrial areas along the Bannerghatta road and the Electronic city through the NICE corridor. Most of roads within the PD are severely strained due to heavy traffic movement. Also, there are several intersections where congestion is regular phenomenon – which includes junctions like Arakere Gate junction, Meenakshi Mall Junction, Jail Road Junction, Kudlu Gate junction, Begur Junction, etc.,



14. Namma Metro is extending its services to these areas through two lines under phase II, namely - Nagawara- Gottigere Red Line (2 stations) and Yellow Line RV road and Bommasandra line (6 stations). There is one Bus Station at Hosapalya is located in this PD. It is expected that these would help reduce congestion on major radial roads.

Physical and Social Infrastructure

15. As per BWSSB, there are 13.3% of metered water supply connections and 8.5% of metered sewage and sanitation connections along the total households within the PD⁷, and there are 2 GLSR. As per BBMP, there are 1 Bio-Methanation Unit (BMU), 10 Dry Waste Collection Centres (DWCC) and 1 Central Processing Unit located in this PD.⁸ As per KPTCL, there are 1 220 Kv substations.
16. As for Social infrastructure, there are 132 schools. Educational Institutions such as the Department of Horticulture, Coconut Development Board, Loyola PU College and other collagers are located in this PD. The famous Bangalore Central Jail is located in Parappan Agraha. There are 3 government healthcare centres, and 7 private nursing homes/ hospitals with total bed capacity of 318. Also, there is 1 Fire station within the Planning district located near the Hulimavu lake.

Lakes and Drainage

17. There are 21 lakes within the PD, and major ones being Hulimavu Kere, Dodda Begur Kere, Are kere, Hosa Kere, Chikka Begur Kere, Kudlu Dodda Kere, Garvebhavipalya Kere, Parapana Agrahara kere, Singasandra kere. All these lakes are within the Kormangala – Challaghatta Watershed and drains into Bellandur Kere.
18. There are several areas which are low lying and flood prone with in the PD, which includes Arekere, Kalen Agrahara, Hulimavu, areas along drains from Begur and Chikka Begur lake and leading to Madivala Kere, Hongasandra, Kudlu Gate, sections of Hosur Road and Bannerughatta Road, etc.

Heritage and Culture

19. There are 29 heritage buildings/ sites within the planning district, including the 8 th century (890 AD) Pancha Linga Nageshwara Temple complex, which was established by the Ganga dynasty period and locates the (1100 years old) stone inscription having reference to a 'Bengaluru War' that is the earliest reference to Bengaluru as a settlement. The temple complex is a State Protected monument. The temple houses 5 Lingaas (the symbol of Lord Shiva) – Nagareshwara, Parvathi Nageshwara, Choleshwara, Karneshwara, Kaalikamateshwara and hence the name Pancha Lingeshwara temple.
20. The Begur fort is a circular fort with a small temple within the fort walls. There are references stating Begur was initially a Jain settlement with centre of Sanskrit and Vedic studies.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PUBLIC TRANSPORT INTEGRATION, CIRCULATION NETWORK DEVELOPMENT, DENSIFICATION, ENVIRONMENT PROTECTION AND REDEVELOPMENT,

⁷ BWSSB, 2014

⁸ BBMP, 2015

PROPOSALS

PD offers varied employment opportunities when compared to electronic city or whitefield, ranging from household to manufacturing to service sector and is highly compact. Yet has huge potential to accommodate addition employment and residents. With the future expansion of economic activities within PD, it is expected to attract more traffic, while it is witnessing a haphazard and unplanned high density growth. The RMP2031 aims at targeted growth and facilitating development of public transport while integrating the existing developments through planned circulation network. This is for the fact the existing developments provides very limited scope for improvement of circulation network. Thus the thrust is more on public transport. The RMP2031 also aims at environmental protection of 21 lakes and drainage systems, redevelopment of existing dense/ unplanned areas and disaster management. Thus, the guiding principles for this planning district are as following:

- a. Development of Public Transport Infrastructure to increase the share of public transport
 - b. Improvement of Circulation Network
 - c. Further densification by utilizing vacant lands
 - d. Growth through strategic allocation of Industrial and Commercial Use
 - e. Protection and Conservation of Lake System and Flood Protection
 - f. Redevelopment/ upgradation of congested areas/ slums
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 14-2** and **Table 14-2** respectively.

Figure 14-2: PD 13 Proposed Land Use Map

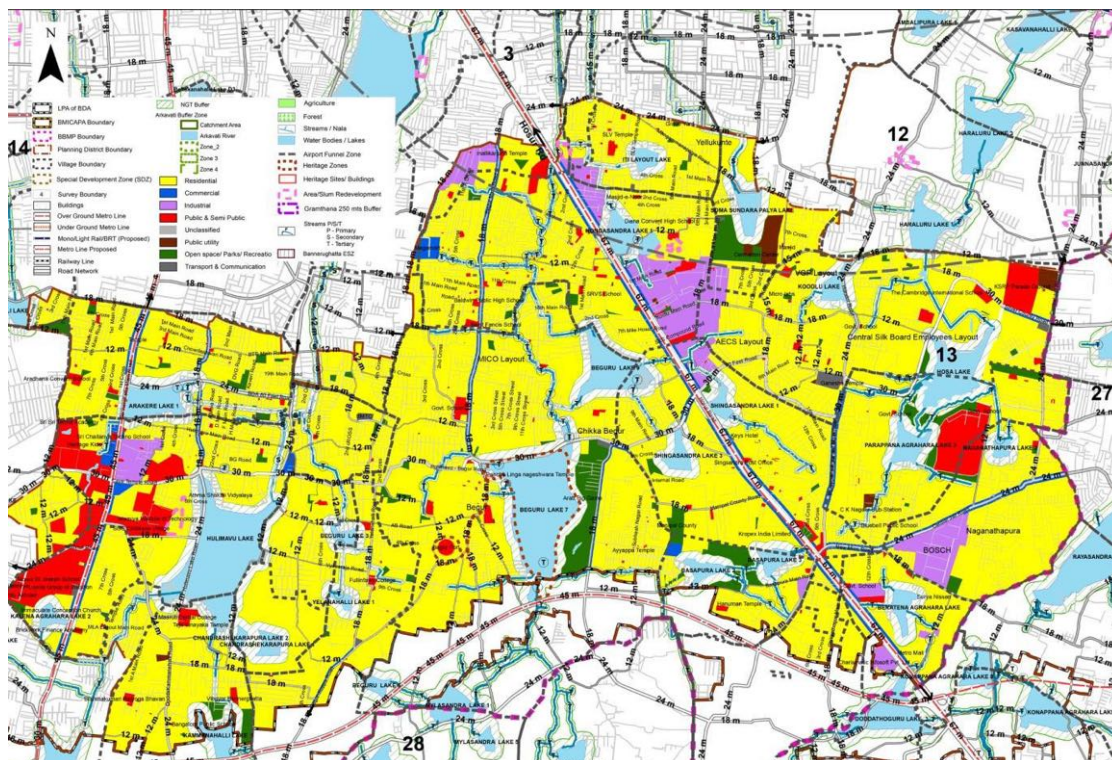


Table 14-2: PD 13 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1913.85	57.02
Commercial	51.56	1.54
Industrial	103.51	3.08
Public & Semi Public	145.50	4.34
Unclassified	0.03	0.00
Public Utility	13.40	0.40
Parks / Open Spaces	87.21	2.60
Transport & Communication	417.45	12.44
Forest	0.00	0.00
Streams	3.00	0.09
Water Bodies	188.24	5.61
NGT Buffer	432.60	12.89
Total Developable Area	3356.36	100.00
Agriculture		-
Total PD Area	3356.36	-

Traffic and Transportation

3. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail/LRT/BRTS are running along roads within the Planning District.
 - a. Metro Electronic City Link: As per BMRCL, the Metro Phase 2 (R V Road Interchange to Bommasandra) along Hosur Road is under construction. It is observed that this PD is likely to have 5 stations. The RMP2031 proposes that the line be extended further till Chandapura.
 - b. Metro Gottigere – Nagawara – International Airport Link (Red Line): Metro Phase II Gottigere Nagawara is passing through the PD. The network designed for Metro Phase II includes 2 stations within planning district, namely – Gottigere, and Hulimavu. In addition, depending on the feasibility, it is proposed to extend the Metro Link till Basavanapura which further south of Gottigere.
 - c. Metro PRR Link: The RMP2031, with a long term view, has proposed to develop metro link along proposed PRR alignment and NICE corridor in future depending upon feasibility. Though the NICE corridor is outside PD, it is expected to provide connectivity to PD, and therefore it is proposed that stations along NICE corridor be developed at the intersection of the cross roads.
 - d. Mono Rail/ LRT/ BRTS: The proposed LRTS/ BRTS around Inner Peripheral Ring Road passes through the PD. The alignment within the PD - coming from Choodasandra Road and runs along the proposed Inner PRR alignment. It is proposed to develop stations at 9 different locations including ones near Chikka Begur Metro Station (interchange), Begur Kere, Askhayanagara, Arekere, Hulimavu, and Coconut Development Board depending on feasibility.



- e. **Bus Transport:** It is proposed to identify suitable locations for Bus stations at a) Gottigere b) along Begur Koppa Road c) Arali Mara and d) Hulimavu Metro Station.
4. Transit Oriented Development Zone is proposed to be applicable around all metro rail stations/ terminals/ interchanges located in the Planning District.
5. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).
6. The RMP2031 proposes that all existing road crossovers (bridge/ Vehicular Under Pass) on NICE road be widened to four lanes irrespective of existing road widths.
7. The road network within the PD is highly haphazard and nature of improvements would include widening of certain roads and more importantly junction design improvement. Therefore the RMP2031 has identified 34 junctions for geometric improvements for better and smoother traffic flow that are to be taken up for development.

Protection of Lakes and Drainage

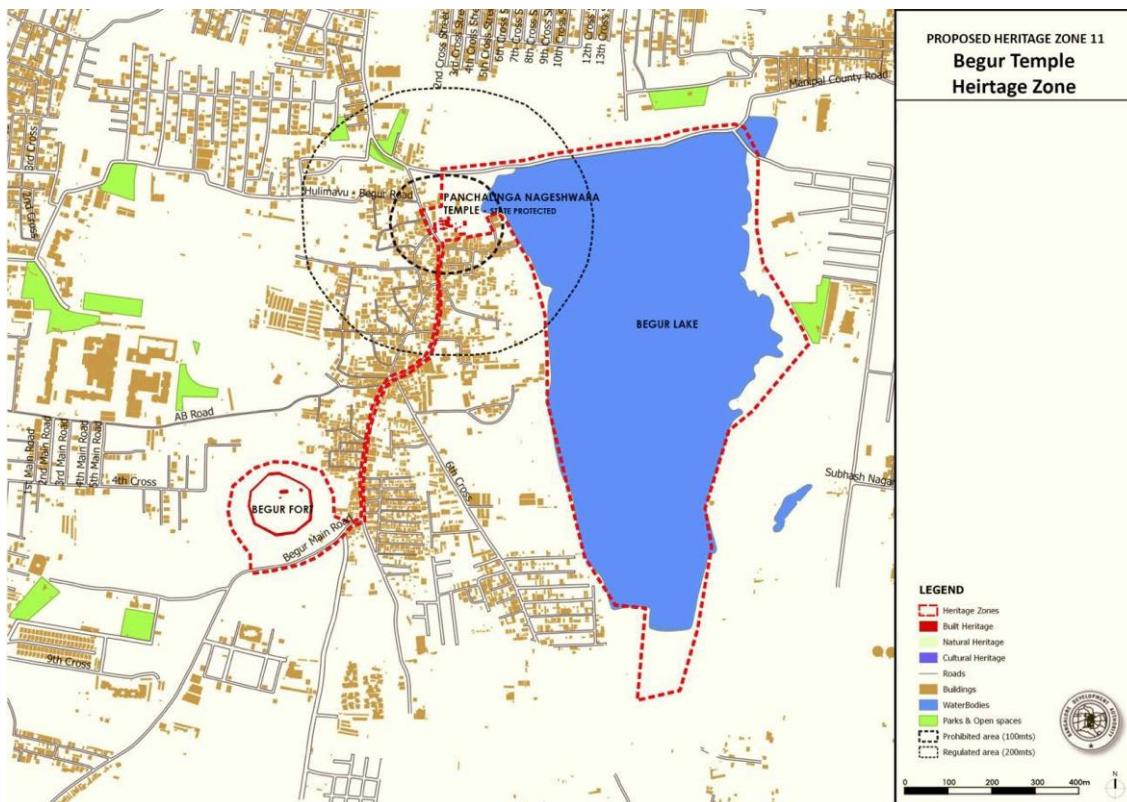
8. All lakes fall under the larger catchment of Bellanduru – Varthuru Kere. The important Natural Drainage within PD is classified as following and details are presented in PLU Map:
 - a. Drainage connecting Hulimavu Kere and Madivala Kere= Secondary
 - b. Drainage connecting Begur Kere with Agara Kere = Secondary
 - c. Drainage leading to Hulimavu Kere and Begur Kere = Tertiary
 - d. Drainage leading upto and downstream of Parappan Agrahara Kere = Tertiary
 - e. Tertiary drains/ streams within PD and applicable buffers are shown in PLU Map.
9. The RMP2031 proposes that these streams have to be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
10. The RMP2031 proposes the lake protection and rejuvenation of all lakes within this PD and its natural streams by preparing lake and surrounding area development plan.
11. **Area Redevelopment:**
 - a. Redevelopment of Market Areas/ Streets: The RMP2031 proposes that redevelopment plan all existing daily market areas (like those in Kudlu, Begur, Hulimavu) be prepared so as to provide better facilities for vendors, improve pedestrian facilities, shifting of utilities (if required), provide/ manage parking and easy of traffic movements.
 - b. The RMP2031 proposes that redevelopment/ upgradation of dense settlements/ villages is undertaken to provide necessary infrastructure and facilities. Hongasandra, Begur and Chikka Begur are proposed to be taken up for redevelopment.
12. **Slum Redevelopment:** There are 5 slums (both notified and non-notified) within the PD and are devoid of certain infrastructure and facilities. The RMP2031, in order to provide the existing slums with better infrastructure services, proposes redevelopment of the slums.
13. **Street Vending Zone/ Road:** The RMP2031 proposes that BBMP after following due process as prescribed in the Street Vending Act 2014 determines the areas/ streets for Informal activities/ Street Vending activities where are allowed and not allowed.
14. **Disaster and Hazard Management**

The RMP2031 proposes that a comprehensive Disaster and Hazard Mitigation Plan be prepared for Hongasandra, Mangammanapalya, Hosur Road, and Bennarughatta Road towards traffic emergencies, urban flooding and fire.

15. Heritage and Culture:

RMP2031 has identified Begur Temple Heritage Zone for preservation and protection of Begur Fort and Pancha Linga Nageshwara Temple. Figure 14-3 presents the Bangalore Palace Heritage Zone

Figure 14-3: PD 13: Proposed Begur Temple Heritage Zone



16. The RMP2031 proposes development additional 10 DWCCs, and 2 OWCCs, for solid waste management and one crematorium in Begur ward within the planning district.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 11: Dodda Nekkundi - Whitefield

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Upgradation of Existing Roads
 - Kariammana Agrahara Main Road



- Road Connecting ORR and Sarjapura Main Road via Saul Kere Bund Road
- c. Widening/ Upgradation of Certain Roads:
 - Begur Road
 - Begur Koppa Road
 - Hosa Road
 - Kudlu Road
 - Harapanahalli – Begur Road
 - Nyanappanahalli Road
 - Hulimavu Main Road
- d. Junction Improvement Programme:
 - Swamy Vivekanand Junction
 - Arekere Gate Junction
 - BPL Junction
 - Intersection of Bannerughatta Road and BDA 80ft Road
 - Hulimavu Gate Junction
 - Meenakshi Mall Junction
 - Meenakshi Temple Junction
 - Intersection of Bannerughatta Road and Dodda Kammanahalli Road
 - Loyala School Junction
 - BBMP Office Gottigere Junction
 - Intersection of Bannerughatta Road and Shankar Nag Road
 - Hulimavu Traffic Police Station Junction
 - Gottigere Junction
 - Doddakammanahalli Junction
 - Intersection of Yelahalli Road and Begur Koppa Road
 - Hulimavu Junction
 - Intersection of Hulimavu Road and Balmuri Main Road
 - Intersection of Hulimavu Road and Sir M Vishweshwariah Road
 - Intersection of Begur - Hulimavu Road and Sir M Vishweshwariah Road
 - Intersection of Begur - Hulimavu Road and Nyannapanahalli Road
 - Intersection of Begur - Hulimavu Road and Yelahalli Road
 - Intersection of Begur Road and Harapanahalli Main Road
 - Kudlu Junction (intersection of Kudlu Road and Haralur Road)
 - Nyanappanahalli Cross
 - Intersection of Begur Cross Road and Nyannapanahalli Road
 - Beguru Junction
 - Intersection of Sir M Vishweshwariah Road and 5th Main Road (near KPTCL Sub-station)
 - Intersection of Chikka Begur Road and Manipal County Road
 - Intersection of Hosur Road and Basapura Village Road
 - Channakeshvanagar Junction (on Central Jail Road)
 - MICO Factory Junction
 - Kudlu Panchayath Office Junction
 - Rayasandra Circle



- AECS Dental College Junction

2. Development of Public Transport System:

- a. Namma Metro
 - i. Metro Electronic City Link between R V Road Interchange and Bommasandra (Yellow Line)
 - ii. Metro Gottigere – Nagawara – International Airport Link (Red Line)
 - iii. Metro PRR
- b. Mono Rail/ LRT/BRTS: Inner Peripheral Ring Road
- c. Bus Stations/ Stand:
 - i. Gottigere
 - ii. Along Begur Koppa Road
 - iii. Arali Mara and
 - iv. Hulimavu Metro Station

3. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Hulimavu Kere Rejuvenation Plan
 - iii. Begur Kere Rejuvenation Plan,
 - iv. Chikka Begur Rejuvenation Plan,
 - v. Are Kere Lake Rejuvenation Plan,
 - vi. Yelenahalli Kere Lake Rejuvenation Plan
 - vii. Hosa Kere Lake Rejuvenation Plan
 - viii. Parappan Agrahara Kere Lake Rejuvenation Plan
 - ix. Akshayanagara Kere Lake Rejuvenation Plan
 - x. Kalena Agrahara Kere Lake Rejuvenation Plan
 - xi. Garvebhavipalya (Hongasandra) Kere Lake Rejuvenation Plan
 - xii. Revenue Lake in Hongasandra Lake Rejuvenation Plan
 - xiii. Singasandra Kere Lake Rejuvenation Plan
 - xiv. AECS Layout Singasandra Kere Lake Rejuvenation Plan
 - xv. Yelakunte Kere (ITI Layout) Lake Rejuvenation Plan
 - xvi. Soma Sundara Palya Kere Lake Rejuvenation Plan
 - xvii. Koodlu Kere Lake Rejuvenation Plan
 - xviii. Basapura Kere Lake Rejuvenation Plan
 - xix. Basapura Kere (2nd Lake) Lake Rejuvenation Plan
 - xx. Beratena Agrahara Kere Lake Rejuvenation Plan
 - xxi. Lake Rejuvenation Plan for Two Lakes in Chandrashekharpura Revenue Village (in Begur Ward)
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and

sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

4. Area Redevelopment:

- Preparation of Local Area Network Circulation Improvement Plan for Chikka Begur and Begur ward.
- Preparation of Redevelopment Plans for Kudlu Market Area
- Preparation of Redevelopment Plans for Begur Market Area
- Preparation of Redevelopment Plans for dense areas of Chikka Begur
- Preparation of Redevelopment Plans for dense areas of Begur Ward

5. Preparation of Slum Redevelopment Plans:

6. Declaration of Street Vending Zones/ Areas/ Streets

7. Development of Physical Infrastructure/ Facilities:

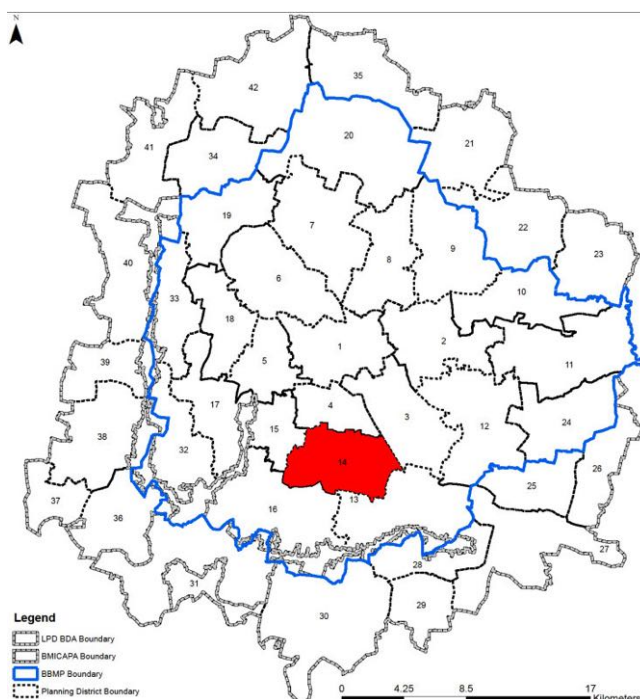
- | | |
|---|------------------------|
| a) Crematorium: | 01 Nos (in Begur Ward) |
| b) SWM Dry Waste Collection Centre: | 10 Nos. |
| c) SWM Organic Waste Collection Centre: | 02 Nos |

8. Preparation of Disaster Mitigation Plan

9. Heritage Area Protection and Conservation Scheme:

- a) Heritage Master Plan for Begur Temple Heritage Zone
- b) Grading of Heritage Buildings within PD
- c) Heritage Area Improvement and Development scheme

15.PD 14: BANASHANKARI – BTM - MADIVALA



Population (2011 Census): 6,36,202

Area of PD: 2721 ha

Wards in PD: 16

Gross Density: 234PPH

Planning District Banashankari – BTM – Madivala is located at south central quadrant in BBMP. It is characterised with residential areas of Jayanagar, J.P.nagar, Banashankari I Stage, BTM Layout Stage I, Kumaraswamy layout etc. yet which is undergoing constant commercialisation along the main access roads. This is resulting in change of urban form, in residential character and additionally increasing traffic congestion

The RMP2031 proposes to guide the development by stabilising the commercial activities in planned manner, yet retaining the residential nature of the neighbourhoods. It also proposes improved connectivity and better access to public transport.

1. The Banashankari – BTM – Madivala PD comprises of 16 wards, - comprises of 16 BBMP wards – namely Karisandra (166), Pattabhiram Nagar (168), Jayanagar East (170), Gurappanapalya (171), Madiwala (172), BTM Layout (176), J.P.Nagar (177), Sarakki (178), Shakambari Nagar(179), Banashankari Temple Ward (180), Kumaraswamy Layout (181) falling within the South Zone of the BBMP and Bommanahalli (175), Yelachenahalli(185), Jaraganahalli (186), Puttenahalli (187), Bilekahalli (188) falling within the Bommanahalli zone of BBMP and admeasures 2721 ha (27.21 sqkm). It stretches from Hosur Road to Kanakapura Road (east and west), and Jayanagar 7th Block (on North) and IIM (on southern side).
2. The planned large residential BDA schemes like Jayanagar, BTM Layout, JP Nagar, Kumaraswamy Layout, Banashankari, highly dense areas of Bommanahalli, Illiyas Nagar, Kadarenahalli, higher education institutes like - Indian Institute of Management (IIM), Jayadeva Institute of Cardiovascular Sciences and Research, Dayanand Sagar College, Power Training Institute, the availability of quality healthcare and social facilities like – playgrounds, parks, auditoriums, etc, rapid commercialisation of planned residential areas, private industrial estates, and IT/ ITES as well as Garment Industries, the 7th century old Banashankari temple and two important lakes – Madivala and Sarakee Kere define the characteristics of this vibrant PD.
3. Hosur Road, Bannerughatta Main Road, Kanakapura Road, Outer Ring Road, Marenahalli Road, Jayanagar 4th Main Road, Devarachekkanahalli Main Road, Begur Main Road, 29th Main Road BTM, Puttenahalli Main Road/ Kothur Village Main Road, Vyasaraaya Ballal Rd, Tavarakere Main road, and other internal road of planned layouts and Metro Phase 1 (Green Line) define the circulation pattern for the PD.



A. EXISTING STATUS

Demography

4. As per Census 2011, PD 14 has a population of 6,36,202, with a decadal growth rate (2001-2011) of 37%. The work force participation rate is 44.28%. There are 1,60,556 households in this PD, with average household size 3.96 which is very similar to the average household size in BMA (4.01).

Industry and Commerce

5. There are several individual and scattered factories and industries at Jayanagar, J. P. Nagar, Madivala and BTM layout. Also, industrial land use is located at Bikasipura NS Palya, Vasanthapura and Bommanahalli at the south west of the PD. Further, there is Industrial mix (high tech industry) along the Bannerghatta road, with offices of HSBC, Infosys BPO and at JP nagar 4th Phase, along the 3rd main road which locates the office –IT complex of Kalyani Magnum and offices of Oracle and other IT offices such as VMware and Practo. Some industrial units are located in the Bommanahalli ward as well. There are two prime industrial areas namely – Jayachamarajendra Industrial Estate and Pratibha Industrial Estate located along Kanakapura Road.
6. The retail commercial activities are primarily located along Marenahalli road, 7th main, 16th main of the BTM layout Stage I & II, along the Outer Ring Road in J.P.Nagar, 24th main J.P.Nagar 5th Phase. Shopping malls such as Gopalan Mall, Central and Shoppers Stop are located along the Bannerghatta road. It is important to note that the commercial activities are rapidly proliferating into residential areas of Jayanagar, J.P. Nagar, and BTM Layout.
7. Government offices under public and semi land use are the Geological Survey of India (GSI), BSNL that are located in this PD.

Housing and Slums

8. As mentioned earlier, BDA promoted residential layouts define the low rise but high density residential character. This includes ISRO layout, Kumaraswamy layout, BSK II stage, BTM Layout I stage, BTM Layout II stage, Vijay bank layout, Arakere MICO layout, etc. In addition to BDA layouts there are several government quarters such as BSNL, LIC, GSI quarters are located in PD. Other residential areas present are Ilyas Nagar, Maruti Nagar etc.
9. There are 32 slums spread across 13 wards with about 7.5% of the PD population reside in these slums. Of total slums only 9 slums are notified. Banashankari Temple Ward has maximum number of slums (9 no.s).

Land Use

10. The predominant land use is residential land use covering ~45.67% of the total land area in this PD. Commercial land use is ~8.53%, industrial land use makes up ~2.98% and public- semi public land use is ~6.18%. The area under transportation is ~14.55% of the land use. The

parks and open spaces in this PD is ~3.12% and ~1.5 % of the land use in this PD is also under forest.

11. **Figure 15-1** and Table 15-1 presents the existing land use map 2015 and existing land use area statement respectively.

Figure 15-1: PD 14 Existing Land Use Map

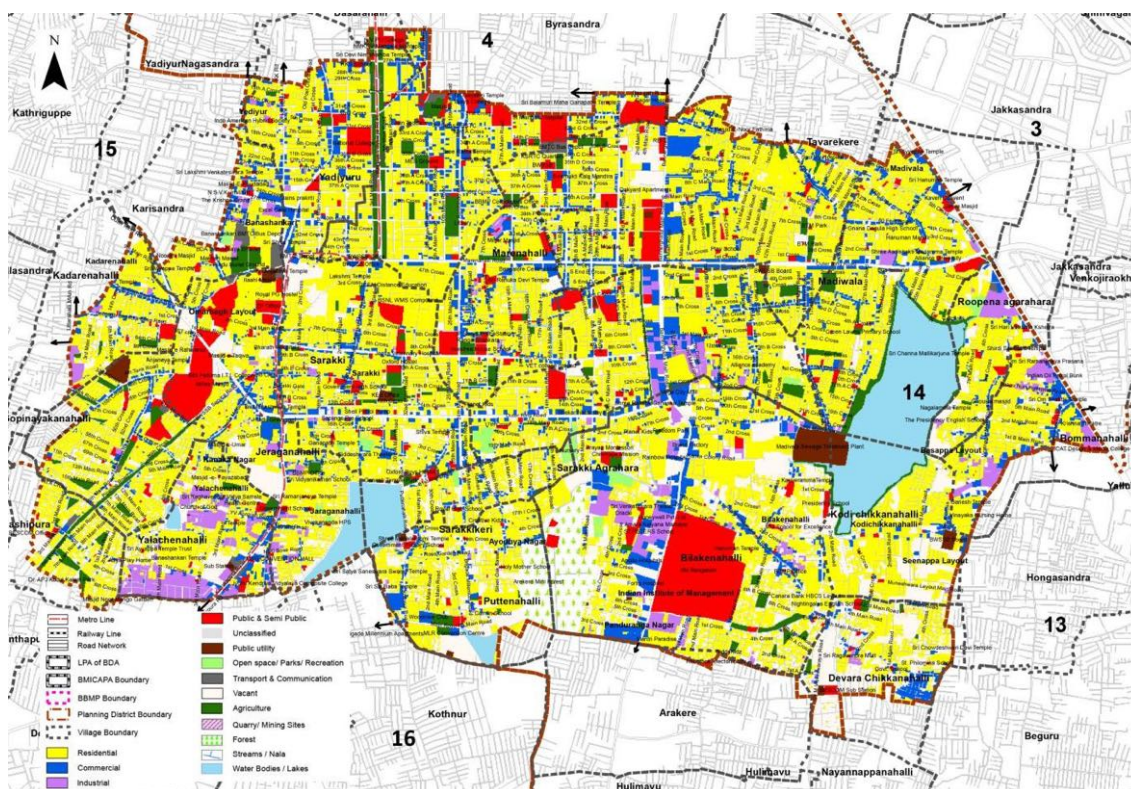


Table 15-1: PD 14 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	1242.63	45.67
Commercial	231.98	8.53
Industrial	81.18	2.98
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	169.62	6.23
Unclassified	0.00	0.00
Public Utility	19.03	0.70
Parks & Open Spaces	86.49	3.18
Transport Communication	396.05	14.55
Vacant	327.81	12.05
Agriculture	0.00	0.00
Forest	41.63	1.53
Streams	8.93	0.33
Water Bodies	115.78	4.25
Total	2721.12	100.00

Traffic and Transportation

12. The circulation network being based on a grid network system is better than most of areas in Bengaluru. With the presence of North – South Namma Metro Corridors (operation and being extended), 2 BMTC Bus Stations/ TTMCs (located at Banashankari and Jayanagar 4th block) and 2 BMTC bus depots (at Banashankari and Kevempu Nagar), has provided the much needed public transport option to the residents. A truck terminal is present at Yelachanahalli along the Kanakpura road.
13. Metro services are available and accessible, the existing Phase – I coverage including 5 metro stations (Green Line) with interchange at the RV Road metro station and the proposed metro Phase II network also passing through this PD with 4 proposed stations (Yellow Line) with proposed interchanges at Jayadeva metro station and Silk Board metro station and 3 proposed metro stations (Red Line).
14. The major arterial roads and sub-arterial roads in this PD are Banashankari and Kanakpura Road, Bannerghatta road, KR Road ,ORR (100 ft wide), Marenahalli Road, R V road and 9th Cross Jayanagar road, Gubalala Road (Pipeline road), Subramanyapura main road. Several critical junctions like Silk Board junction, Jayadeva hospital junction and Jedimara junction on Bannerghatta Road, Banashankari TTMC junction, Udupi Garden junction, junctions along Marenahalli road, Sarakki junction in Kumarswamy layout, Bommanahalli junction can be located in this PD.

Physical and Social Infrastructure

15. As per BWSSB, about 44.2% of households are having metered water connections whereas only 26.67% of households have sewage connections. Also there are 4 number of GSLR, 1 STP (Maidwala STP), 1 Intermediate Sewage Pumping Stations, and 5 Pumping stations and borewells located in this PD. As per BBMP, there are 1 Bio Methanation Unit and 9 Dry Waste Collection Centres in this PD. As per KPTCL, there are 6 number of 66kV substations located in this PD.
16. This PD has several city level health and educational infrastructure. There are around 250 schools, and several colleges in this PD. The major educational institutions located here are IIM, Dayanand Sagar group of Institutions, National College, R. V. Dental College along with other schools. There are 59 number of private and government hospitals including the renowned hospital, Jayadeva Institute of Cardiovascular Sciences and Research having total bed capacity of 3675. There is on Crematorium in Banashankari.

Park and Open Spaces

17. The forest areas located in this PD are the Doresanipalya Reserved forest at Arekere, mini forest in JP Nagar 3rd Phase. Parks and open spaces are located as neighbourhood parks, parks along the RV road and lake front parks of Madiwala Lake. About 3% of the land area in this PD is under parks and open space use.

Lakes and Drainage

18. The major lakes in this PD are the Madiwala Lake, Sarakki lake, Puttenhalli lake and Yelachanahalli lake. Yelachanahalli Kere is connected to Sarakee Kere and Sarakee Kere to Madivala kere. Madivala Kere is connected to Agara Kere and then to Bellandur Kere. The



drains from Madivala Kere to Bellandur Kere are classified as Primary. The natural drains connecting to Madivala Kere from Sarakee Kere and Hulimavu Kere have been designated as secondary, whereas drains connecting to secondary drains and sarakee kere have been classified as Tertiary Drainage.

19. There are several low lying areas in this PD which are flood prone areas or water logging areas according to the Storm Water Drainage Master Plan by BBMP. They are north and south east to Madiwala lake i.e. Kuvempu nagar and Kodichekkenahalli, east of Sarakki lake at J.P. Nagar 6th Stage and Yelachanahalli.

Heritage and Culture

20. This PD comprises of many cultural places of temples and masjids such as the Banashankari Temple, Kumargiri Ganesh temple, Ragiguda temple, Bilal masjid on Bannerghatta road, Jamia Masjid at Madiwala amongst others. The heritage monument of the Banashankari Temple witnesses much of cultural events and festivals that see much pilgrim footfalls.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: STABILISING THE GROWTH WITHIN ORR, TRANSIT INTEGRATION, REDEVELOPMENT, DISASTER & HAZARD MITIGATION AND ENVIRONMENT PROTECTION.

PROPOSALS

1. Vibrant PD is rapidly getting transformed wherein more and more economic/ commercial activities are coming up in well planned areas for availability wider roads and other social infrastructure, yet this PD falls under two planning zones – Planning Zone A and B of RMP 2031. With the future expansion of economic activities within PD, it is expected to attract more traffic, while it is change in population density. The existing and proposed metro network is likely to make this PD a major transportation centre. The RMP2031 therefore aims at stabilisation in areas within Planning Zone A (within Outer Ring Road and target growth in Planning Zone B. The RMP2031 also aims at environmental protection, redevelopment of existing dense/ unplanned areas and disaster management. Thus, the guiding principles for this planning district are as following:
 - a. Target Growth through strategic allocation of Industrial and Commercial Use
 - b. Stabilisation of areas of PD within Outer Ring Road
 - c. Development of Public Transport Infrastructure to increase the share of public transport
 - d. Promote Transit Oriented Development around Metro Stations
 - e. Protection and Conservation of Lake System and Flood Protection
 - f. Redevelopment/ upgradation of congested areas/ slums
2. The Proposed Land Use Map and the proposed land use area statement are presented in **Figure 15-2** and **Table 15-2**.

Figure 15-2: PD 14 Proposed Land Map

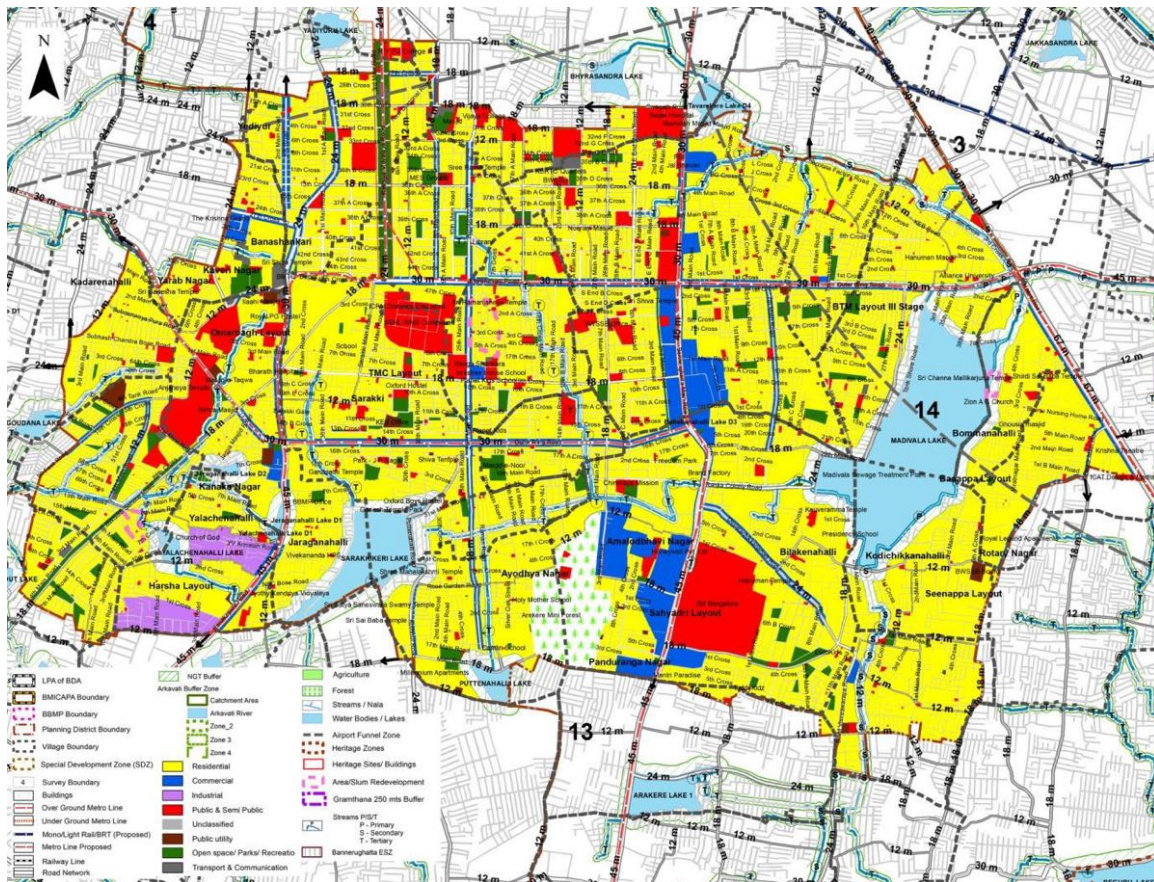


Table 15-2: PD 14 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1471.31	54.07
Commercial	126.25	4.64
Industrial	24.50	0.90
Public & Semi Public	173.51	6.38
Unclassified	0.00	0.00
Public Utility	10.98	0.40
Parks / Open Spaces	73.95	2.72
Transport & Communication	438.77	16.12
Forest	41.21	1.51
Streams	8.75	0.32
Water Bodies	115.20	4.23
NGT Buffer	236.68	8.70
Total Developable Area	2721.12	99.93
Agriculture		-
Total PD Area	2721.12	-



3. In addition existing Metro Phase 1 (Green Line), BMRCL has also planned Phase 2 Yellow Line (RV Road to Bommasandra) which starts at RV Road (interchange) and Red Line (Gottigere – Nagavara) with Interchange at Silk Board. The RMP2031 has also proposed to develop a Metro link along Outer Ring Road. All these planned metro links are passing through the PD, thereby providing multiple options for public transport. The RMP2031 therefore proposes that multimodal interchange be developed at RV Road and Silk Board wherein BMTC and IPT are also seamlessly integrated with Metro.
4. To improve the accessibility to Public Transport Stations (Metro, and BMTC Bus Stations) and Educational Institutes, the RMP2031 proposes strengthening of the existing road network by providing footpaths and cycle tracks (wherever feasible). It is proposed that area accessibility plans are prepared.
5. The RMP2031 proposes that Outer Ring Road Section from Silk Board to Nayandana Halli be planned for Signal Free Movement is designed as Signal Free Corridors with focus on Pedestrian Safety and development of NMT facilities. This is proposed to be done in consideration of proposed Metro along Outer Ring Road.
6. The Hosur Road stretch between Silk Board and Oxford College witness heavy traffic congestion, the RMP 2031 therefore along with the Junction Improvements proposes that a detailed traffic movement/ circulation plan be prepared for ease of traffic movement and also providing emergency services during emergency situation. This may also include providing additional Ramps to existing Electronic city flyover, underpasses, parking restricts, etc.
7. The RMP2031 has identified around 23 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow. Some of the important junctions include
8. RMP2031 proposes that a detailed parking plan be prepared by BBMP in for Commercial Areas/ Roads of Jayanagar 4th Block, Jayanagar 5th Block, Jayanagar 9th Block, JP Nagar 2nd Phase, JP Nagar 6th Phase, Outer Ring Road, Kanakapura Road, Bannerughatta Road, Hosur Road and Gubalala Road.
9. Area Redevelopment :
 - a. Redevelopment of Market Areas/ Streets: The RMP2031 proposes that redevelopment plan for all existing daily market areas (like those in Sarakee Market, Bansahankari Market, Bommanahalli, JP Nagar, etc) be prepared so as to provide better facilities for vendors, improve pedestrian facilities, shifting of utilities (if required), provide/ manage parking and easy of traffic movements.
 - b. Redevelopment of Private Industrial Areas: The RMP2031 proposes redevelopment of existing Industrial areas like JC Industrial Area, Prathibha Industrial Estate for upgradation of infrastructure. These areas can also be taken up for complete redevelopment as per the provisions of Zoning Regulations.
 - c. Area Redevelopment: The RMP2031 proposes that redevelopment/ upgradation of dense settlements like Hunase Mara Banashankari, Illiyas Nagar, Bommanahalli, etc are taken up for redevelopment so as to provide all infrastructure facilities and services.
10. Slum Redevelopment: There are 32 slums (both notified and non-notified) within the PD and are devoid of certain infrastructure and facilities. The RMP2031, in order to provide the existing slums with better infrastructure services, proposes redevelopment of these slums



11. Street Vending Zone/ Road: The RMP2031 proposes that BBMP after following due process as prescribed in the Street Vending Act 2014 determines the areas/ streets for Informal activities/ Street Vending activities where are allowed and not allowed.
12. All lakes fall under the larger catchment of Bellanduru – Varthuru Kere. The drains from Madivala Kere to Bellandur Kere are classified as Primary. The natural drains connecting to Madivala Kere from Sarakee Kere and Hulimavu Kere have been designated as secondary, whereas drains connecting to secondary drains and sarakee kere have been classified as Tertiary Drainage.
17. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
18. The RMP2031 proposes the lake protection and rejuvenation of Madivala Lake, Sarakee Kere, Puttenahalli Kere and Yelachanahalli Kere, and its natural streams by preparing lake and surrounding area development plan.
13. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for all RMP2031 designated arterial roads, sub-arterial and important roads.
14. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 17 Dry Waste Collection Centres, 4 Organic Waste Collection Centres and 1 Aggregator are proposed to be developed within the Planning District by BBMP. Further, the RMP2031 proposes for a development of additional 220kV Substation to cater to the future power demand.
15. To augment social facilities, it is proposed to develop 1 additional cremation ground near Madivala Kere in Bilekahalli Ward.
16. Disaster & Hazard Mitigation Plan for J P Nagar/ Madivala: This PD has low lying and flood prone areas which are, north and south east to Madivala lake i.e. Kuvempu nagar and Kodichikkanahalli, east of Sarakki lake at J.P. Nagar 6th Stage and Yelachanahalli has seen water logging. This poses risk to urban flooding and emergency situations, posing risk to human safety and economic losses. It is therefore proposed that Disaster & Hazard Mitigation Plan (DHMP) for these areas that needs to be prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 14 Banashankari – BTM - Madivala:

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Signal Free Corridor Silk Board to Nayanadahalli
- c. Traffic Circulation Plan for Silk Board to Oxford Collage
- d. Junction Improvement Programme:
 - i. Silk Board Junction
 - ii. Bommanahalli Junction (Swamy Vivekananda Circle)



- iii. Sagar Hospital Junction
- iv. Jayadeva Circle
- v. BTM Circle
- vi. Madivala Check Post Junction
- vii. Jedimara Signal
- viii. Illiyas Nagar Junction on ORR (near JP Nagar metro Station)
- ix. Sarakki Market Junction
- x. IIM/ HSBC Junction
- xi. Arekere Junction
- xii. Udupi Garden Junction
- xiii. Banashanakari Bus Station Junction
- xiv. Kadirenahalli Cross (ORR)
- xv. Intersection of RV Road and Marenahalli Main Road
- xvi. Jayanagar 5th Block Bus Stand Junction
- xvii. Ragigudda Junction (Intersection of Marenahalli Road and 28th Main Road).
- xviii. Intersection of ORR and BTM 29th Main Road
- xix. Intersection of Hosur Road and Hosapalya Main Road
- xx. Intersection of Bannerughatta Road and Devarachikkanahalli Road
- xxi. Bilekahalli Junction (Next to Bus Stop)
- xxii. Guruappanapalya Junction
- e. Accessibility Improvement Plans
 - i. Metro Stations (existing and future)
 - ii. Higher Order educational Institutes

2. Development of Public Transport System

- a. Namma Metro
 - i. Metro Electronic City Link between R V Road Interchange and Bommasandra (Yellow Line)
 - ii. Metro Gottigere – Nagawara – International Airport Link
 - iii. Metro ORR Link

3. Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places

- a. Jayanagar 4th Block,
- b. Jayanagar 5th Block,
- c. Jayanagar 9th Block,
- d. JP Nagar 2nd Phase,
- e. JP Nagar 6th Phase,
- f. Outer Ring Road,
- g. Kanakapura Road,
- h. Bannerughatta Road,
- i. Hosur Road
- j. Gubalala Road
- k. Marenahalli Road
- l. BTM 16th main road and 7th main road



4. Protection and Rejuvenation of Lakes and Streams

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Madivala Kere Rejuvenation Plan
 - iii. Sarakki Kere Rejuvenation Plan,
 - iv. Puttenahalli kere Rejuvenation Plan, and
 - v. Yelachanahalli Kere Rejuvenation Plan
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

5. Area Redevelopment

- Preparation of Local Area Network Circulation Improvement Plan for Bommanahalli Ward.
- Preparation of Redevelopment Plans for Sarakki Market Area
- Preparation of Redevelopment Plans for Banashankari Market Area
- Preparation of Redevelopment Plans for JP Nagar Market Area
- Preparation of Redevelopment Plans for Illiyas Nagar
- Preparation of Redevelopment Plans for Hounse Mara Banasahnakri

6. Preparation of Slum Redevelopment Plans

7. Declaration of Street Vending Zones/ Areas/ Streets

8. Development of Physical Infrastructure/ Facilities:

- | | |
|---|---|
| a) Crematorium: | 01 Nos (in BilekhaliWard) |
| b) SWM Dry Waste Collection Centre: | 29 Nos |
| c) SWM Organic Waste Collection Centre: | 06 Nos |
| d) SWM Aggregators: | 01 Nos |
| e) 220Kv Sub-station: | 01 Nos (Eshwarinagar next to Department of Space) |

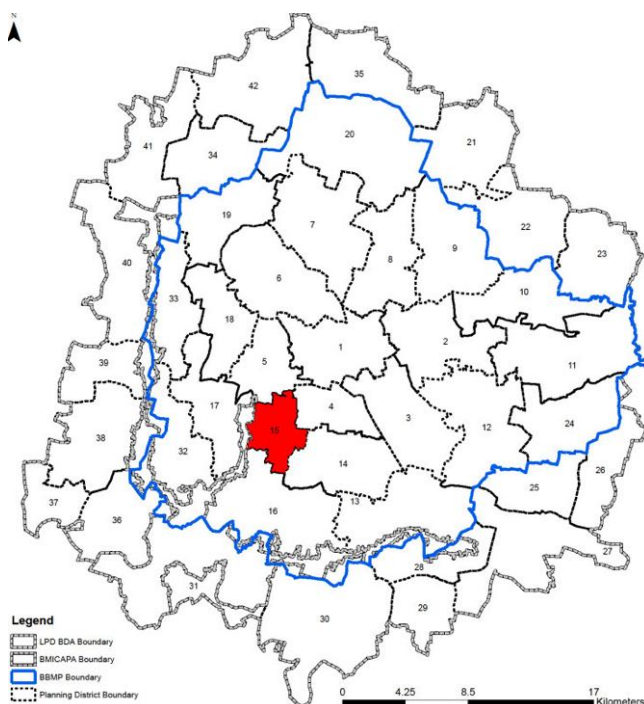
9. Preparation of Disaster and Hazard Mitigation Plans

- a) Major Arterial Roads (Outer Ring Road, Kanakapura Road, Hosur Road and Bannerughatta Road)
- b) Flood Protection for identified areas

10. Heritage Area Protection and Conservation Scheme:

- a) Grading of Heritage Buildings within PD
- b) Heritage Area Improvement and Development scheme

16.PD 15: KATHRIGUPPE



Population (2011 Census): 4,21,179

Area of PD: 1324.46 Ha

Wards in PD: 9

Gross Density (2011 Census): 320 pph

Kathriguppe Planning District (PD No15) is located in the Central South West in BBMP and shares its western boundary with LPA of BMICAPA. It is characterised by dense residential areas as well commercialised road network. The PD currently is in transition from being predominantly a residential to a mixed use zone with commercialization seen along all major roads.

RMP2031 aims at stabilising the transformation by limiting commercial activities to on certain roads and planned redevelopment of certain areas.

1. The Kathriguppe planning district comprises of 9 wards and a part of Vasanthpura ward (ward is partly under jurisdiction of LPA of BMICAPA). The 9 wards of BBMP include Hosakerehalli (161), Chikkalasandra (183), Padmanabha Nagar (182), Katriguppe (163), Vidyapeetha (164), Giri Nagar (162), Sri Nagar (156), Ganeshmandira Ward (165), Hanumantha Nagar (155). PD admeasures around 1324 ha.
2. The planned yet low rise high density residential BDA schemes like Kumarsawamy Layout, Banashankari, highly dense areas of Banashakari, Dattaterya Nagar, Gavipuram, commercialized streets, educational institutes like BNM PU Collage, PES Collage of Pharmacy, Poornaprajna Vidyapeetha, Kempegowda Medical Collage, small neighbourhood parks, Kempabudhi Kere, define the character of PD.
3. Outer Ring Road, Ittamadu Main Road, Kathriguppe Main Road, 80ft Road, 50ft Road, Uttarahalli Main Road/ Puttalingaih Road, Subramanyapura Main Road, are the major roads within PD.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 15 has a population of 421179, which has increased by 44.34 % from the year 2001 (291797). The workforce participation rate is ~ 43% of the population. The Gross density is 318 pph and the residential density is 586.7pph.
5. There are 95427 households in this PD, with average household size 4.4, which is higher than the average household size in BMA (4.01).

Industry and Commerce

- The PD is characterized with commercial land use along the roads and few industrial plots towards the southern part of the PD in Padmanabha Nagar and Chikkalasandra. The predominant commercial areas are along Outer Ring Road, Katriguppe (mainly near Katriguppe Junction), 80 feet road, and 50 feet road, and Banashankari BDA complex.

Land Use

- The predominant land use is residential landuse with 54.73 % of the land area followed by the area under transportation which is 16.48 %. The total area under commercial land use is 7.58 %. The area under public- semi public is 4.51 %. **Figure 16-1** and **Table 16-1** presents the existing land use map and existing land use area statement for PD 15.

Figure 16-1: PD 15 Existing Land Use Map

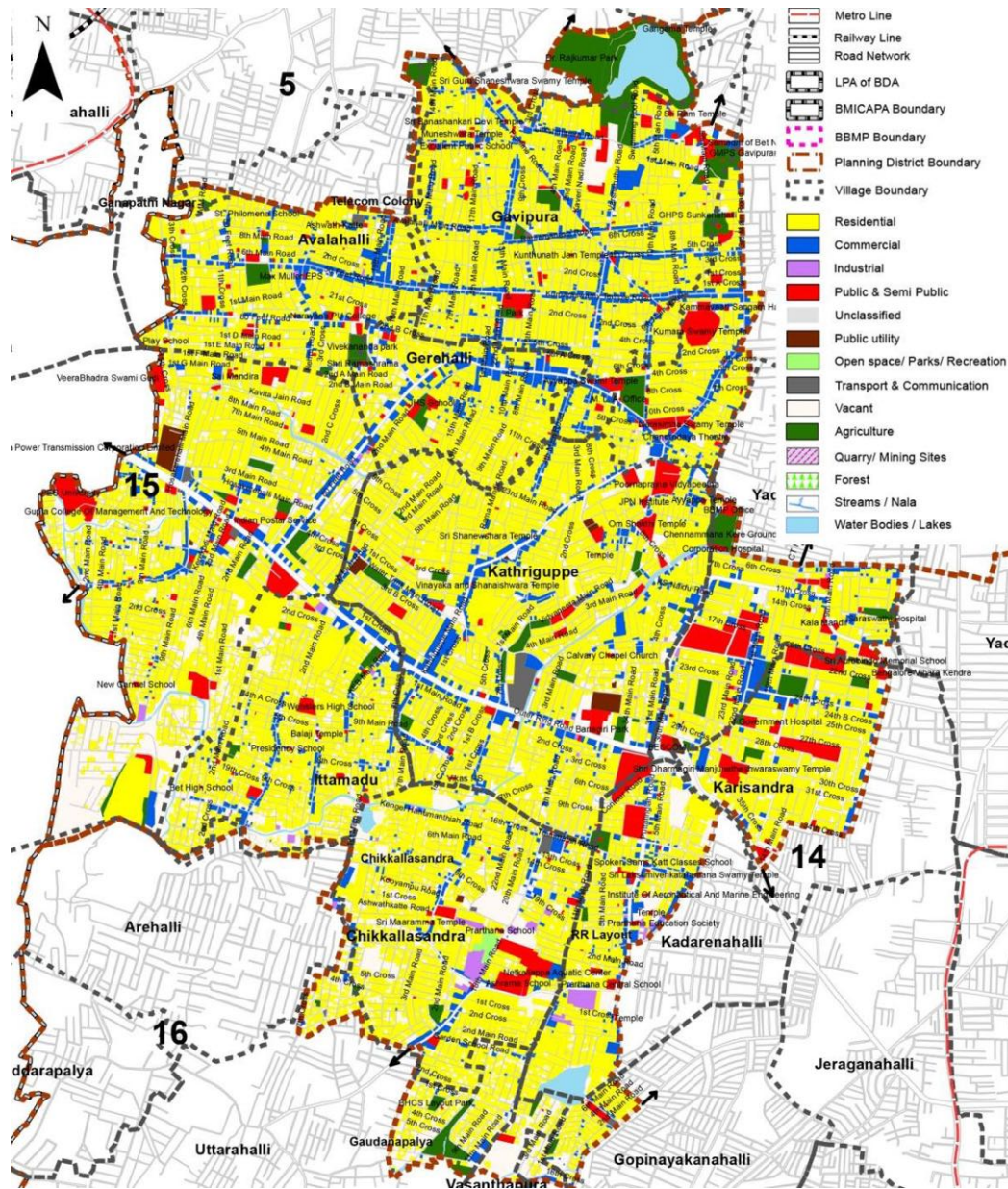




Table 16-1: PD 15 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	724.84	54.73
Commercial	100.43	7.58
Industrial	6.72	0.51
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	59.68	4.51
Unclassified	0.00	0.00
Public Utility	4.58	0.35
Parks & Open Spaces	44.04	3.32
Transport Communication	218.26	16.48
Vacant	144.30	10.89
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	9.17	0.69
Water Bodies	12.44	0.94
Total	1324.46	100.00

Housing and Slums

8. Residential land use is characterised by dense low rise residential buildings and apartments, dotted with a few apartments. Some of the residential areas that are present in the PD are: Banashankari 1st and 3rd stage and part of Banashankari 2nd stage, Katriguppe, Padbanabhnagar, Girinagar, Hanumanthnagar. There are about 95,000
9. There are 18 slums in this planning district out of which 6 are notified slums. Wards with most number of slums are Hosakerahalli and Deepanjali Nagar. There is a risk of fire hazard in the highly dense wards and slums.

Traffic and Transportation

10. The Outer Ring Road (ORR) passes across the PD and some of the important junctions in the PD are Katriguppe Junction, Devegowda Signal (Kitur Rani Chanamma Circle), and Vidyapetha Junction.
11. Sri Vidyanagar Bus Stop (in Hoskerahalli) and Kamakhya Bus Depot are two of the transport infrastructure present in the PD. There are no metro lines passing through the PD; the nearest metro (phase 1) stations are Banashankari Metro Station , JP Nagar metro station on the north – south line and the Mysore Road Metro Station on East – West line.

Park and Open Spaces

12. The Open spaces and parks account for more than 3 % of the landuse but are not distributed equally in the area. There are several small neighbourhood parks in this planning district.

Lakes and Natural Features

13. The Vrushabhavati River passess through west of PD and some drains within the PD drain in Vrushabhavati River.

14. Lakes in this planning district include Kempambudhi Kere, Gowdana Playa Kere. According to the SWD master plan, there are very few low lying points which are located in the far north and south of the PD.

Physical and Social Infrastructure

15. As per BWSSB, about 50% and 26.9% of households have water connection and sanitation connections respectively. Also there are 12 no of DWCCs and 1 no of OWCC within PD for SWM.
16. There are 114 schools and 24 health centres and hospitals in this PD. Kempegowda Institute of Medical Sciences, PES Degree College, Institute of business management and technology and Shirdi Sai College are some of the higher educational facilities present in this PD. This PD also has other social facilities like government library, swimming pool, playgrounds, crematorium, etc. There is one fire station in Banashankari BDA Complex

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: STABILISATION, PUBLIC TRANSIT INTEGRATION, REDEVELOPMENT AND ENVIRONMENT PROTECTION

PROPOSALS

1. The PD extent falls under two planning zones, Planning Zone A and Planning Zone B, however since the PD is already fully developed, and highly commercialized, the RMP2031 proposes to regulate the commercial developments in both the zones through designated commercial use. Further, RMP2031 aims at providing public transport and its integration with local network. At the same time, redevelopment and environment protection is also proposed. TOD be applicable to all development around metro stations but within Planning Zone B.
2. The Proposed Land use Map and Proposed land use area statement is given in Figure 16-2 and Table 16-2.
3. RMP2031 proposed city level public transport infrastructure like Metro and Mono Rail are running along roads within the Planning District. They Include the following:
 - a. Metro ORR: It is proposed to develop Metro all along Outer Ring Road and the stretch within the PD .
 - b. Mono Rail/ LRT/ BRTS – Intermediate Ring Road: Mono Rail/ LRT/ BRTS is proposed to be developed at city level passes through the PD and runs along 50ft (Kumaraswamy temple) road and Hosakerehalli to meet Mysuru road then leading to KSRTC Satellite Bus Stand on Mysuru Road.
4. The RMP2031 proposes multi modal interchange at Kamakhya BMTC Depot and Sri Vidhya Nagar Bus Station
5. Transit Oriented Development Zone is proposed to be applicable around all metro rail stations/ terminals/ interchanges located in the Planning District.
6. To improve the accessibility to Public Transport Stations (Metro, Mono, BMTC Bus Stations and CRS Railway Stations) and Educational Institutes, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks (wherever feasible).

Figure 16-2: PD 15 Proposed Land Use Map

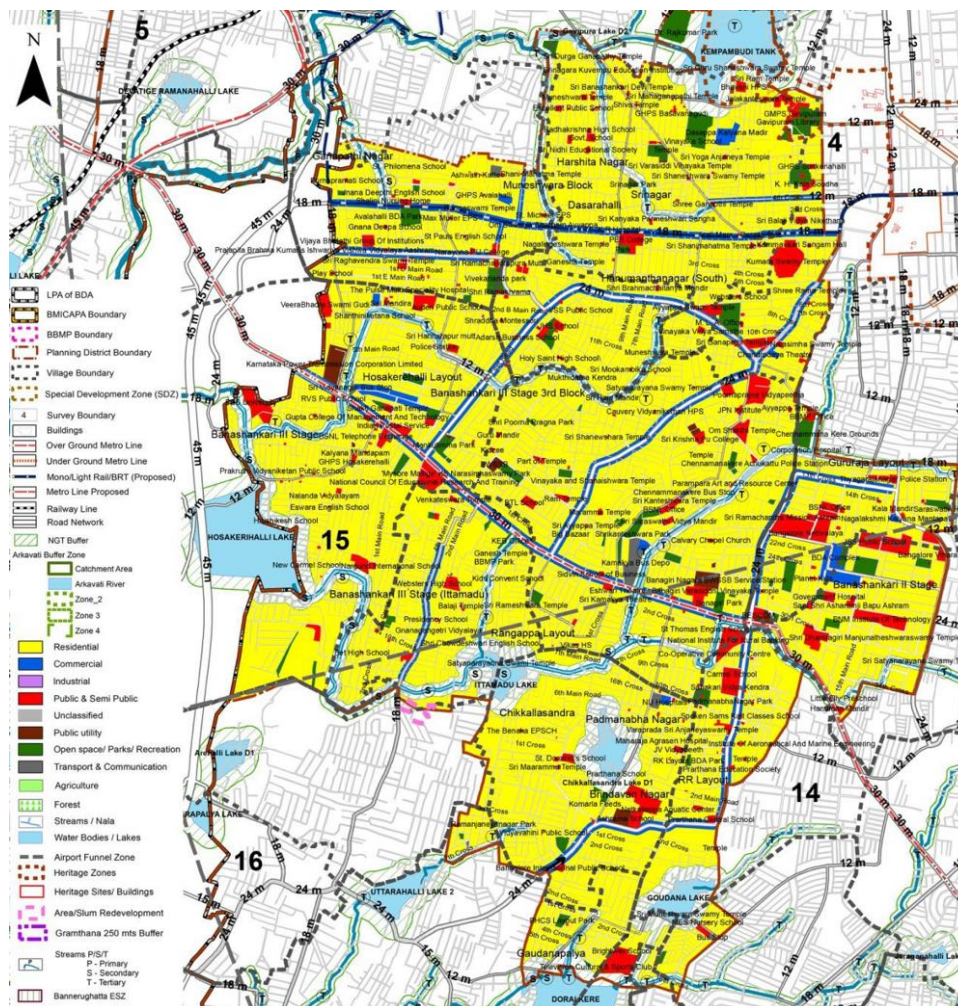


Table 16-2: PD 15 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	796.96	60.17
Commercial	44.36	3.35
Industrial	0.00	0.00
Public & Semi Public	52.78	3.98
Unclassified	0.00	0.00
Public Utility	5.42	0.41
Parks / Open Spaces	29.96	2.26
Transport & Communication	237.12	17.90
Forest	0.00	0.00
Streams	8.51	0.64
Water Bodies	12.41	0.94
NGT Buffer	136.95	10.34
Total Developable Area	1324.46	100.00
Agriculture	0	-
Total PD Area	1324.46	-



7. The RMP2031 has identified around 13 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow.
8. RMP2031 proposes that a detailed parking plan be prepared for Commercial Areas of Kathriguppe, Outer Ring Road, Kathriguppe Main Road, 80ft Road, 50ft Road, Subramanyapura Main road and Ittamadu Main Road.
9. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
10. As mentioned earlier, entire PD drains into Vrushabhavati River. The natural drainage within the PD have been classified as following:
 - a. Drainage downstream of Kamakhay Bus Depot (ORR) leading to Vrushabhavati River via Ittamadu Kere and Hosakerehalli = Secondary
 - b. Drainage downstream of Kempabudhi Kere leading to Vrushabhavati River = Secondary
 - c. Other drainage/ streams leading to secondary streams (as marked in PLU) = Tertiary
11. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage will be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
12. The RMP2031 proposes the lake protection and rejuvenation of Kempabudhi Kere, Ittamadu Kere, and Hosakere and its natural streams by preparing lake and surrounding area development plan.
13. There are 18 slums (both notified and non-notified) within the PD and are devoid of certain infrastructure and facilities. The RMP2031, in order to provide the existing slums with better infrastructure services, proposes redevelopment of the slums
14. The RMP2031 proposes that BBMP after following due process as prescribed in the Street Vending Act 2014 determines the areas/ streets for Informal activities/ Street Vending activities where are allowed and not allowed.
15. The RMP2031 proposes a comprehensive Disaster and Hazard Mitigation Plan be prepared for Outer Ring Road, Srinivaspura, and areas around secondary streams towards traffic emergencies, urban flooding and fire emergencies
16. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 16 Dry Waste Collection Centres, and 1 Organic Waste Collection Centres, are proposed to be developed within the Planning District by BBMP.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD15: Kathriguppe.

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads and other categories in phased manner.
- b. Upgradation of Master Plan Roads
 - i. Outer Ring Road
 - ii. Hosakerahalli Main Road



- iii. 80 feet Main road (Banashnakari 3rd Stage)
- iv. Kathriguppe Main Road
- v. Ittamadu Main Road
- vi. 50ft Main Road
- vii. Uttarahalli Main Road/ Puttalingaih Road,
- viii. Subramanyapura Main Road
- ix. Kerekoti Main Road
- c. Junction Improvement Programme
 - i. Devegowda Circle
 - ii. Hosakerehalli Junction
 - iii. Ittamadu Traffic Signal
 - iv. Kathriguppe Circle
 - v. Kamakhya Talkies Junction
 - vi. Kittur Rani Chinnamma Circle
 - vii. Kadirenahalli Junction
 - viii. Vidhyapeeth Circle
 - ix. KEB Colony Circle
 - x. Maruthi Circle
 - xi. Intersection of Kumaraswamy Temple Road and 14th Main Road (BSK –I)
 - xii. Intersection of Kumaraswamy Temple Road and 17th Main Road (Munneshwara Block)
 - xiii. Muneshwara Nagar Kerekodi Junction

2. Development of Public Transport System

- d. Namma Metro
 - i. Metro ORR
- e. Mono Rail
 - i. Mono Rail Link – Intermediate Ring Road

3. Development of Intermodal Station on Metro ORR

- f. Srividhya Nagar Bus Station (Metro + BMTC)
- g. Kamakhya Bus Depot Station (Metro + BMTC)

4. Accessibility Improvement Plans:

- a. For Planned Station (Metro & Mono Rail)
- b. For Educational Institutes

5. Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:

- a. ORR
- b. Kathriguppe Main road
- c. 80ft road.
- d. 50ft Road
- e. Ittamadu Main Road



6. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan
 - b. Kempabudhi Kere Rejuvenation Plan
 - c. Gowdana Playa Kere Rejuvenation Plan,
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

7. Area Redevelopment: Following areas/ slums are proposed to be taken up under Area Redevelopment:

- a. Swagath Nagar
- b. Chamundi Nagar
- c. 100 feet road Ambedkar nagar
- d. Maruti Nagar

8. Preparation of Slum Redevelopment Plans:

9. Declaration of Street Vending Zones/ Areas/ Streets

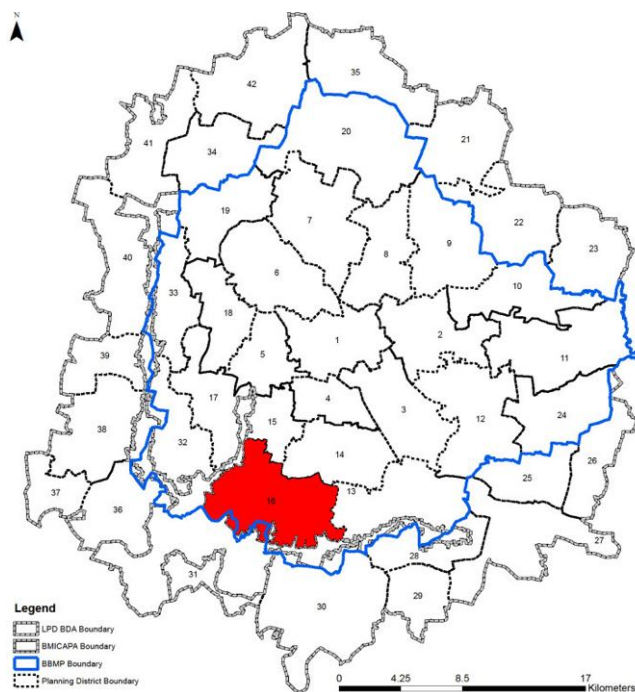
10. Development of Physical Infrastructure/ Facilities:

- | | |
|---|---------|
| a) SWM Dry Waste Collection Centre: | 16 Nos. |
| b) SWM Organic Waste Collection Centre: | 01 Nos |
| c) 220kv Sub-station: | 01 Nos |

11. Preparation of Disaster and Harzard Mitigation Plan

- a) Outer Ring Road
- b) Srinivas Nagar
- c) Areas along Secondary Streams

17. PD 16: GOTTIGERE – ANJANAPURA



Population (2011 Census): 2,72,629

Area of PD: 4022 ha

Wards in PD: 6

Gross Density: 68PPH

The Planning District 16 is located at southern quadrant of the BMA planning area. It is characterised with residential areas of Gottigere, Uttarhalli, J.P.nagar 7th phase, Anjanapura Layout, Banashankari 6th stage etc. It is characterised by the Turahalli Reserved Forest.

The RMP2031 proposes densification of the residential areas in a planned manner along with increased public transport share and other transit integration and infrastructure upgradation

1. The Gottigere – Anjanapura PD extent measures 4022 ha (40.22 sq.km.) and comprises of 6 wards,- namely Uttarhalli (184), Gottigere (part with BMICAPA) (194), Konanakunte (195), Anjanapura (part BMICAPA) (196), Vasanthapura (197), Hemmigeppura (part BMICAPA) (198) and covers the Bommanahalli Zone and Rajarajeshwari Zone of BBMP. Additionally only a small part of the ward Rajarajeshwari (160) falls under this PD.
2. The J.P. Nagara Layout, 7th and 8th phase and Uttarhalli are low rise - medium dense that is currently undergoing fast transformation with upcoming high rises. The other layouts of Anjanapura Layout, Banashankari Layout 6th Stage at the southern part of the PD are well planned are low rise and low dense, that the RMP2031 proposes densification to cater to the future population.
3. Nice Expressway and NICE ring road can be accessed from the west and south of the PD, while the Kankapura road, Ittamadu main road, Subramanyapura-Vasanthapura main road and Uttarhalli main road, Amruthanagar main road, Gottigere-Kengeri road are the major roads within the PD.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 16 has a population of 2,72,629, with a decadal growth of 141.75 % (2001-2011). The work force participation rate is 43.33 % of the population. The Gross density is 67.7 pph and the residential density is 348.3pph.

5. There are 82,998 households in this PD, with average household size 3.28 which is substantially lesser than the average household size in BMA (4.01).

Industry and Commerce

6. There are few industrial units along the Kanakpura road in sectors of automation, breweries and distilleries, garment manufacturing. Industrial units are located such as glass factory, textile mills and agro-based industry located Amruthnagar main road, Subramnayapura road has textile mill and north of Turahalli forest respectively.
7. Commercial activities are intermittent in this PD such as the retail of Metro Cash and Carry located at ISRO layout. Further some commercial establishments are along the Kanakpura road. Small retail commercial and informal markets are located along the Kothnur road.

Land Use

8. The predominant land use is under vacant land use with ~46.76% of the PD land area. Residential land use comprises ~19 % of the total land area in this PD. It is noteworthy that though the PD is under the BBMP jurisdiction, approximately 46.51% of the land is still vacant and correspondingly land under agricultural land use is ~7.16 %. 2.52 % of the land use is under industrial land use and ~2.38 % of the land is under commercial land use.

Figure 17-1 and Table 17-1 presents the existing land use and existing land use area statement for PD 16.

Figure 17-1: PD 16 Existing Land Use Map

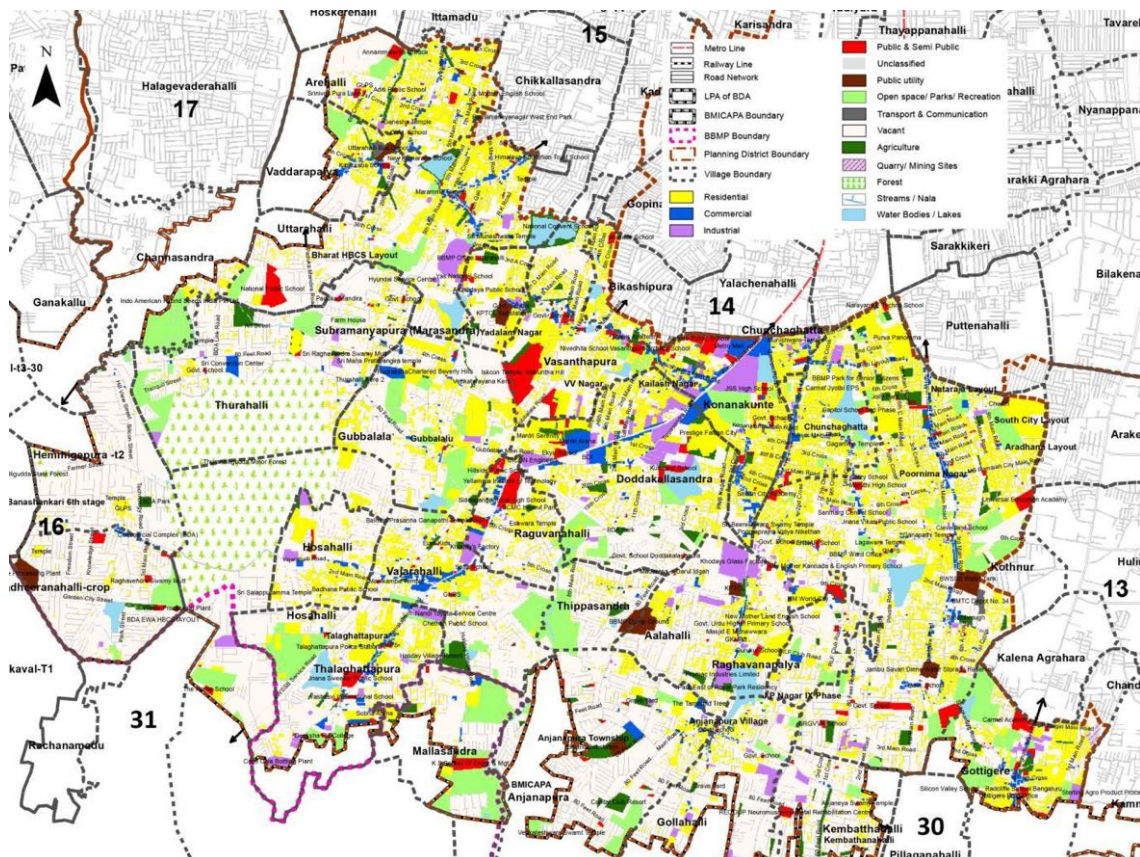




Table 17-1: PD 16 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	782.62	19.45
Commercial	99.56	2.47
Industrial	101.31	2.52
Quarry/ Mining Sites	2.66	0.07
Public Semi Public	84.71	2.11
Unclassified	0.00	0.00
Public Utility	26.31	0.65
Parks & Open Spaces	74.90	1.86
Transport and Communication	368.05	9.15
Vacant	2157.66	53.63
Agriculture	0.00	0.00
Forest	244.23	6.07
Streams	10.06	0.25
Water Bodies	70.86	1.76
Total	4022.93	100.00

Housing and Slums

9. Residential land use (54.73%) has the character of low rise with layouts such as ISRO layout (part), Arekere Mico Layout (part), Banashankari 6th Stage (1st block, 4th block, 5th block, 6th block), Anjanapura BDA layout (LB Shastri Nagar, Narayan nagar), J.P.Nagar 7th, 8th and 9th Phase. Much of the residential typology is the layout type. The PD is seeing emergence of high rises for residential with high rises at different stages of construction.
10. The Average Gross density is 67.76 pph and the residential density is 358.34 pph.
11. There are 9 slums located in 4 wards out of which 1 notified. The ward with most number of slums is Vasanthapura (ward no. 197) with 3 slums locate within it. The population residing in the slums is 20,242 (7.4% of total PD population)

Traffic and Transportation

12. The Transport infrastructure in this PD includes 2 BMTC Depots; Depot 33 located at Poorna Pragyan Layout and Depot No. 34 located at Kothnur Dinne.
13. As proposed by the BMRCL, metro alignment of Phase II has coverage within this PD which is extension of the Green Line on the Mysore road. The 5 metro stations in this alignment are Anjanapura cross road metro station, Krishna Leela Park metro station, Vajrahalli metro station, Thalghattapura metro station, Anjanapura metro station.
14. 762 km is the approximate road length in this PD. It is bounded by the arterial roads of NICE Expressway just outside its west side, NICE road to its south and by Bannerghatta road to its east, cutting through the PD at its south east. The other arterial road of Kanakpura road runs along its centre almost diagonally, which meets the NICE corridor just outside the PD at its south side. Other arterial roads are Ittamadu main road, Subramanyapura-Vasanthapura main road and Uttarahalli main road. Subarterial roads in the PD are Amruthnagar main road,

80 ft road along Banshankari 6th Stage, Kothnur road that runs along the east of the PD. Additionally the subarterial road of Gottigere – Kengeri road runs between the Kothnur road and the Amruthnagar road at the southside of the PD. The Collector roads in the PD are Vajrahalli road that cuts through Turahalli Reserved Forest, BWSSB service road that runs diagonally along centre of the PD.

Physical and Social Infrastructure

15. As per BWSSB the percentage of households having metered water connections is 16.61% and the percentage of households have sewage connections is 11.85%, 3 number of GSLR and 1 Pumping station and borewell located in this PD. The BWSSB pipeline runs diagonally (south west to north east) at the centre of the PD along the Gubalala road that is from beyond NICE corridor, and across through ISRO layout. As per BBMP, there are 1 Central Processing Unit and 4 Dry Waste Collection Centres in this PD. As per KPTCL, there are 2 220 kV substation, 6 66kV substations located in this PD.
16. Social infrastructure in this PD is: 183 schools and several colleges in this PD, and the major educational institutions located here are DPS School; and colleges such as KSIT Engineering College, City engineering college etc. There are 15 number of private and government hospitals, and 1 Fire Station located in this PD.

Park and Open Spaces

17. This PD has Turahalli Reserved forest admeasuring 4.46 sq.km. located at the west of the PD. The presence of the reserved forest of Turahalli ensures large green lung space in this PD. Several layouts have the neighbourhood level parks, BBMP parks or CA sites.

Lakes and Drainage

18. The lakes in this PD are Konankunte lake, Dodda kalasandra kere Chunchaghatta lake, Kothnur lake, Subbarayana kere, Anjanapura lake, Kembathanahalli kere on the eastern half of PD and Dorai kere lake, Subramanyapura kere, Gubabalalu kere and Thalaghattapura kere in the western part of the PD.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DENSIFICATION OF RESIDENTIAL AREAS IN A PLANNED MANNER, IMPROVED TRANSPORT CONNECTIVITY AND INFRASTRUCTURE, TRANSIT INTEGRATION AND ENVIRONMENT PROTECTION.

PROPOSALS

1. The RMP2031 proposes densification of the residential areas in a planned manner along with increased public transport share and other transit integration and infrastructure upgradation.
2. The Proposed Land Use Map and proposed land use area statement analysis is presented in Figure 17- 2 and Table 17-2 respectively.
3. The RMP2031 proposes city level public transport infrastructure such as Metro/MRT and LRT/Mono Rail/ BRT along roads within the Planning District. They are the following:
 - a. Metro/MRT: Phase II Metro services proposed by BMRCL along the Kanakapura Road and Bannerghatta Road. The Phase II stations of Green Line are a) Anjanapura cross road metro station, b) Krishna Leela Park metro station, c) Vajrahalli metro station, d) Thalghattapura metro station, e) Anjanapura metro station.

- b. LRT/Mono Rail/ BRT: proposed at city level along the Inner PRR road. It is proposed to extend Bannerghatta metro line till Basavanapura.
4. The RMP2031 also proposes 1 BMTC Bus Terminus/ TTMC on the Inner PRR in Narayan Nagar, Doodakalisandra Village.
5. The RMP2031 proposes 1 intermodal interchange at junction of Kanakpura Road and Inner PRR at Raghuvanahalli village.
6. Transit Oriented Development Zone is proposed to be applicable around all Metro rail / LRT/Mono Rail stations/terminals located in the Planning District.
7. In order to improve the accessibility to Public Transport Stations (Metro, LRT/Mono Rail/ BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks.
8. RMP2031 proposes that a detailed parking plan be prepared for Kanakpura Road, Inner PRR area.

Figure 17-2: PD 16 Proposed Land Map

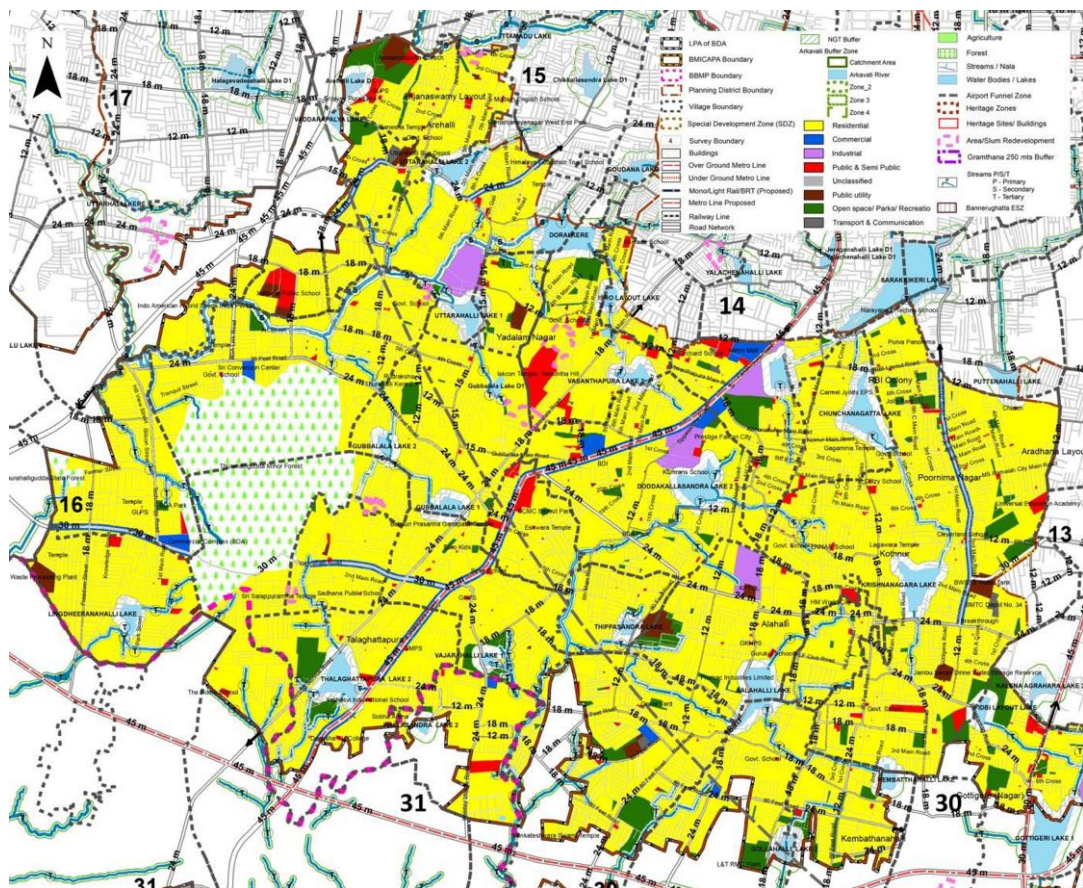


Table 17-2: PD 16 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	2450.71	60.92
Commercial	50.44	1.25
Industrial	46.05	1.14
Public & Semi Public	73.87	1.84
Unclassified		0.00
Public Utility	33.74	0.84
Parks / Open Spaces	140.98	3.50
Transport & Communication	499.84	12.42
Forest	235.54	5.85
Streams	9.82	0.24
Water Bodies	71.57	1.78
NGT Buffer	410.37	10.20
Total Developable Area	4022.93	100.00
Agriculture		-
Total PD Area	4022.93	-

9. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed for network connectivity enhancement:
 - a. Inner Peripheral Ring Road: It is proposed to develop the 30m RoW Inner Peripheral Ring Road that is concentric and runs between the two rings of Outer Ring Road and Peripheral Ring Road.
 - b. Overall Geometric Improvement of Certain Roads: RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads.
10. The RMP2031 has identified 8 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow.
11. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
12. The RMP2031 recognizes the present status of slums and potential for in-situ (to the extent possible) Redevelopment of Slums and proposes that slum redevelopment be taken up in in phased manner.
13. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determine the areas for informal activities/ street vending.
14. As mentioned earlier, entire PD drains into Vrushabhavati River. The natural drainage within the PD have been classified as following:
 - a. Drainage downstream from Aalahalli Lake meeting Chudahalli Reservoir in BMICAPA area – Tertiary



15. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
16. The RMP2031 proposes the lake protection and rejuvenation of all lakes and its natural streams by preparing lake and surrounding area development plan.
17. To cater to future management and operations of Solid Waste, it is proposed that in addition to existing facilities, 10 Dry Waste Collection Centres, 1 Bio-Methanation Unit, 1 Organic Waste Collection Centres, 1 Aggregator and 1 coconut Waste Processing Plant and 1 Integrated Waste Processing Plants are proposed to be developed within the Planning District by BBMP.
18. The RMP2031 proposes for an additional of 220kV Substation to cater to the future power demand and 1 Fire Station.
19. It is proposed to have 2 additional hospitals, 4 burial and cremation ground.
20. The RMP2031 proposes 1 Regional Park / Large Scale City Park and 1 Sports Complex within this PD.

PROGRAMS AND PROJECTS

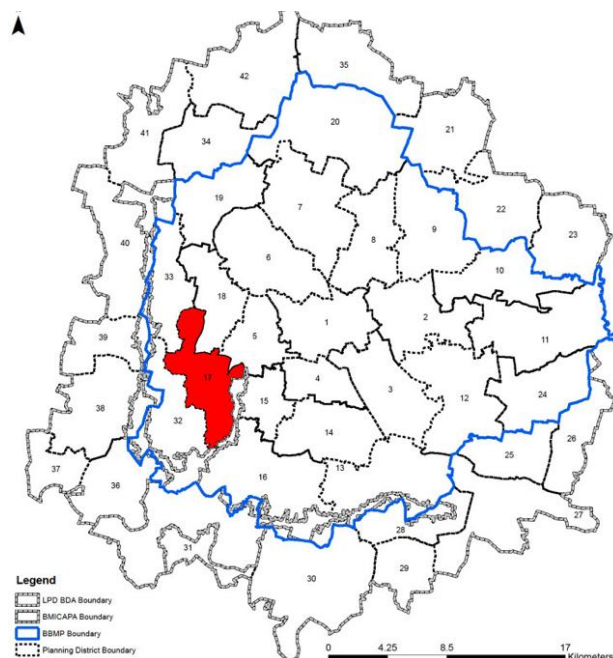
RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 16 Gottigere – Anjanapura:

1. **Road Development Plan:**
 - a. RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads.
 - b. Upgradation of Master Plan Roads
 - i. Kankapura road,
 - ii. Uttarahalli main road,
 - iii. Amruthanagar main road,
 - iv. Ittamadu main road,
 - v. Subramanyapura-Vasanthapura main road
 - vi. Gottigere-Kengeri road
 - c. Junction Improvement Programme
 - i. Gottigere junction at Bannerghatta road.
 - ii. Raghuvanahalli Bus stop; Intersection at Kanakpura road and Inner PRR.
 - iii. Intersection at Kanakpura road and Vajrahalli road.
 - iv. Konanakunte Cross bus stop junction
 - v. Intersection at Gubbhalu road and Vasanthapura road.
 - vi. Intersection at Subramanyapura road and Vasanthapura road
 - vii. Uttarahalli bus stop junction
 - viii. Arehalli bus stop junction
2. **Development of Public Transport System:**
 - a. Namma Metro
 - i. Metro Phase II: Extension along Kanakpura road and Bannerghatta Road
 - b. LRT/Mono Rail/ BRT
 - i. Inner PRR



3. **Development of Intermodal Station**
 - a. Intersection of Kanakpura Road and Inner PRR at Raghuvanahalli village
4. **Accessibility Improvement Plans**
5. **Preparation of Parking Plans for Commercial Areas/ Places:**
 - a. Kanakpura Road
 - b. Inner PRR
6. **Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Konanakunte Kere Rejuvenation Plan
 - iii. Avalahalli Kere Rejuvenation Plan
 - iv. Krishna Nagar Kere Rejuvenation Plan
 - v. Chunchugatta Kere Rejuvenation Plan,
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
7. **Preparation of Slum Redevelopment Plans**
8. **Declaration of Street Vending Zones / Areas / Streets**
9. **Development of Physical Infrastructure / Facilities:**
 - a. SWM Dry Waste Collection Centres: 10 No.s
 - b. SWM Bio-Methanation Unit: 1 No.
 - c. SWM Organic Waste Collection Centres: 1 No.
 - d. SWM Aggregator: 1 No.
 - e. SWM Coconut Waste Processing Plant : 1 No.
 - f. SWM Integrated Waste Processing Plants: 1 No.
 - g. 22kv Sub-Station: 1 No.
 - h. Fire Station: 1No.
 - i. Regional or Large Scale Park: 1 No.
 - j. Sports Complex: 1 no.

18.PD 17: NAYANADAHALLI



Population (2011 Census): 2,49,522

Area of PD: 2423.7 ha

Wards in PD: 3 Wards (full) 2 Wards (part)

Gross Density: 102 pph

The Nayanadahalli (PD number 17) is located in South Western part of BMA and falls within the BBMP limits. It is bounded by the NICE Expressway at its South side.

This PD is predominantly Public Semi-Public and Residential areas.

The RMP2031 proposes densification of the residential areas in a regulated manner with better access to parks and

open spaces.

1. The Nayanadahalli PD comprises of 5 wards in total; with 3 full wards of Nagarabhavi (128), Jnanabharathi Ward (129), Nayandanahalli (131), and 4 part wards of Deepanjali Nagar (158) and Rajarajeshwari Nagar (160). Some major landmarks are in this PD are Bangalore University and Rajarajeshwari Arch.
2. The urban character of this PD, is low rise, high density in the residential areas in the north and south of the PD, while the central part is of Publi-Semi-Public areas.
3. Educational institutions such as Bangalore University, Institute of Social and Economic Change, National Law School etc. are the major landmarks in this PD.
4. Mysore road cuts across the centre of the PD, while the Outer Ring Road (partly) and University road (old outer ring road) are the other major roads in this PD. Tumkuru road and NICE Expressway also can be accessed from this PD.

A. EXISTING STATUS

Demography

1. As per Census 2011, PD 17 has a population of 249522, which has increased by 102 % from the year 2001 (123242). The total resident workers in this PD are 1,10,100, which makes up 44% of the population.

- There are 62,034 households in this PD, with average household size 4.02 which is very similar to the average household size in BMA (4.01). The Gross density is 102 pph and the Residential density is 398 pph.

Industry and Commerce

- There are industrial areas along Mysore road including BHEL (PSU), Gopalan Mall, and scattered industrial and commercial areas. There are about 1 lakh workers residing in the PD.

Existing Land Use

- The predominant land uses are Residential and Public & Semi Public use covering 24.59% and 22.48% of area respectively. The Public –semi-public land use zone consisting of 8.6% area mainly consists of government offices. The area under transportation is ~9.5%. The total area under commercial land use is ~5%. The area under water bodies and streams is 6.28 % of the total area. Figure 18-1 and Table 18-1 presents the Existing land Use Map and Existing land Use Analysis respectively.

Figure 18-1: PD 17 Existing Land Use Map

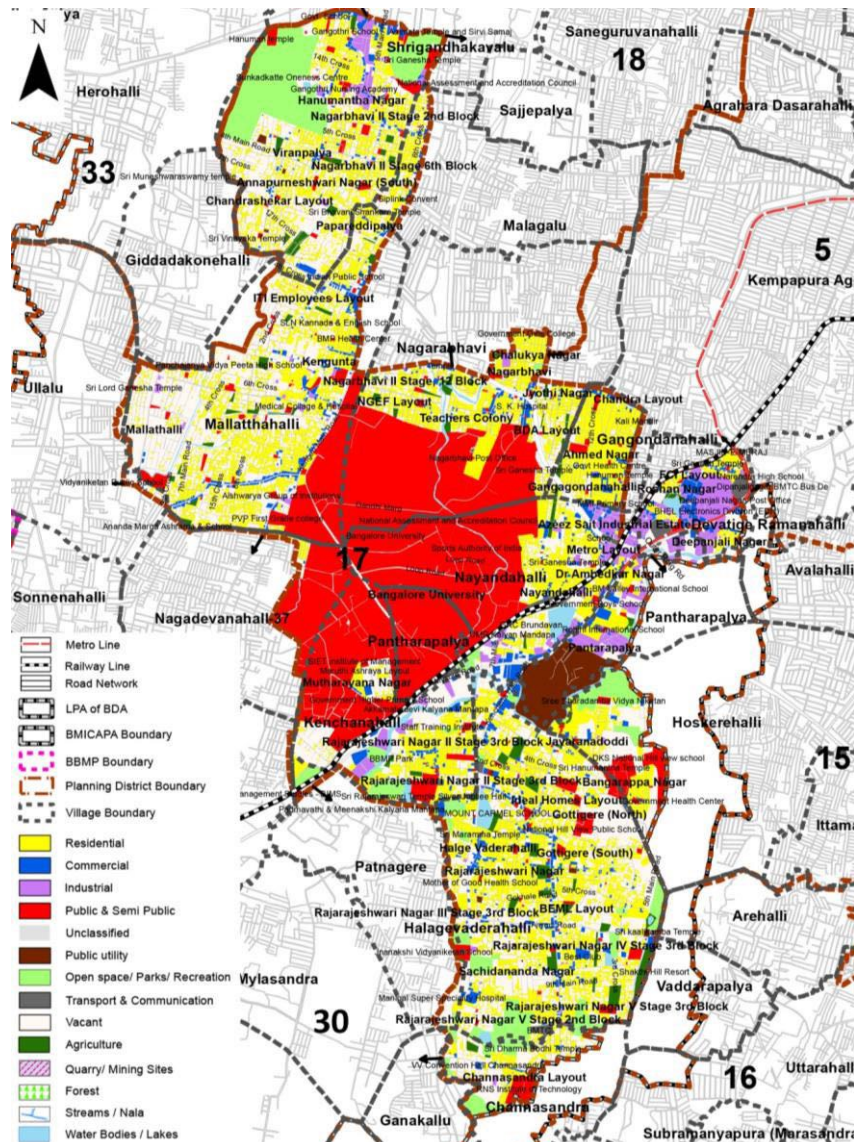




Table 18-1: PD 17 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	596.08	24.59
Commercial	88.41	3.65
Industrial	72.54	2.99
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	544.93	22.48
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	39.02	1.61
Parks & Open Spaces	41.07	1.69
Transport and Communication	267.61	11.04
Vacant	731.09	30.16
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	26.80	1.11
Water Bodies	16.16	0.67
Total	2423.71	100.00

Housing and Slums

- The residential character is low rise and high dense in areas such as Channappa layout, Chandana layout, Annapoorneshwari nagar, Arunachalam layout, Vishveshwariah layout, Benachakallupalya, ITI Employees layout, Chandra layout, Chandra layout extension, Vinayaka Extension, and low rise but medium dense in Railway layout, Mueshwaranagar, Remco Bhel layout, BEML layout, Janakshi layout, There are several housing layouts such as ITI layouts, Arunachalam layout, NGEF layout, etc.
- There are 15 slums located in the PD out of which 3 are notified and 3 are non-notified. The share of slum population to the total population is 12.63%.

Traffic and Transportation

- The PD is accessible by Mysore Road, which is one of the major arterial roads connecting the core city and leading out towards Kengeri, part of Outer Ring Road, University road (old outer ring road) The PD is bound by Magadi road on the north and NICE road (BMIC) on the east and south east.
- Nayanadahalli Railway Station and two Phase I Metro Stations of Mysore road metro station and Nayandahalli metro station.

Physical and Social Infrastructure

- As per BWSSB the percentage of households having metered water supply connections is 48.1% and the percentage of households having metered sewage connections is 27.2%, 6 number of GSLR and 2 Sewage Treatment Plants, and 5 number of Pumping station and

borewells located in this PD. There are 3 Dry Waste Collection Centres and 1 220kV substation.

10. Social Infrastructure in this PD is: 107 schools and colleges and institutions such as the Bangalore University. There are 18 hospitals and public health centres (government and private) such as Gangothri Nursing Home. There are 2 police stations and 1 fire station in this PD.

Park and Open Spaces

11. 1.68% of the land area is under parks and open spaces. More parks and open spaces are required in this PD. There are several neighborhood level parks but there are no major city level parks in this PD.

Lakes and Drainage

12. Vrishabhavathi River cuts across the PD and there are five lakes (as part of the Byramangala lake series): Halgevaddarahalli Kere, Nayanadahalli Kere, Deepanjali Kere and Srigandhakavalu (Rajiv Gandhi Nagara) Kere, and Utarahalli Lake in the PD.
13. There are a few low-lying points identified by the SWD Master Plan (prepared by Storm Water Department, BBMP), along the Vrishabhavathi river and in the valleys near the lakes, which are vulnerable to flooding.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ENVIRONMENTAL PROTECTION, DECONGESTION, TRANSIT INTEGRATION PROPOSALS

1. The PD falls under the Planning Zone B which is proposed to be a Consolidation Zone. The governing principal in this PD is to streamline traffic flow, stabilize commercialization of residential areas and preserve the existing natural features.
2. Figure 18-2 and Table 18-2 presents the Proposed Land Use Map and the Proposed Land Use Area Analysis respectively.
3. The RMP2031 proposes city level public transport infrastructure such as Metro / MRT along Outer Ring Road passing within this PD.
4. The RMP2031 proposes 1 Intermodal Interchange hub at Nyandanahalli – Mysore road junction
5. Transit Oriented Development Zone is proposed to be applicable around all Metro rail / LRT/Mono Rail stations/terminals located in the Planning District.
6. Towards parking, RMP2031 proposes that a detailed parking plan be prepared by BBMP.
7. In order to improve the accessibility to Public Transport Stations (Metro, BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks. This shall greatly enhance first and last mile connectivity to the Public Transport Stations.
8. RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads. These roads are a) Mysore Road b) Outer Ring Road.

9. The RMP2031 has identified 1 road junction that are to be taken up for geometric improvements for better and smoother traffic flow at the Nayandahalli junction.
10. RMP2031 proposes that a detailed parking plan be for Mysore Road.
11. The RMP2031 recognizes the present status of slums and potential for Redevelopment of Slums to be taken up.
12. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.

Figure 18-2: PD 17 Proposed Land Use Map

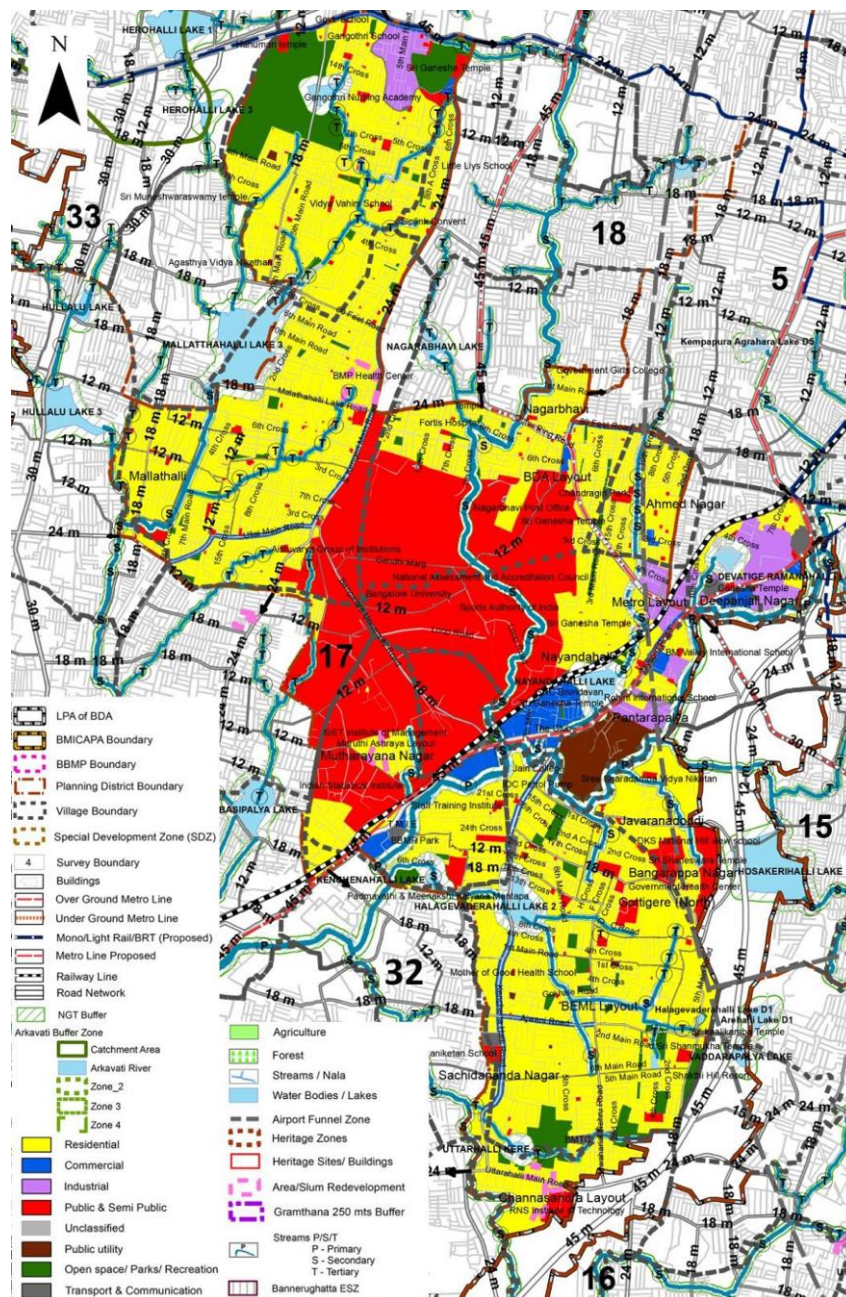




Table 18-2: PD 17 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1032.73	42.61
Commercial	54.05	2.23
Industrial	60.14	2.48
Public & Semi Public	504.92	20.83
Unclassified	0.00	0.00
Public Utility	30.17	1.24
Parks / Open Spaces	113.87	4.70
Transport & Communication	307.41	12.68
Forest	0.00	0.00
Streams	26.60	1.10
Water Bodies	15.71	0.65
NGT Buffer	278.09	11.47
Total Developable Area	2423.71	100.00
Agriculture	0	-
Total PD Area	2423.71	-

13. As mentioned earlier, entire PD drains into Vrushabhavati River. The natural drainage within the PD have been classified as following:
- Drainage downstream from multiple lakes namely Nayandahalli kere, Halagevaderahalli kere and Hoskerehalli kere - Secondary
 - Other drainage/ streams leading to secondary streams (as marked in PLU) - Tertiary
14. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
15. The RMP2031 proposes the lake protection and rejuvenation of Halgevaddarahalli Kere, Nayanadahalli Kere, Deepanjali Kere and Srigandhakavalu (Rajiv Gandhi Nagara) Kere, and Utarahalli Lake its natural streams by preparing lake and surrounding area development plan.
16. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
17. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determine the areas for informal activities/ street vending and detailed upgradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD17: Nayanadahalli

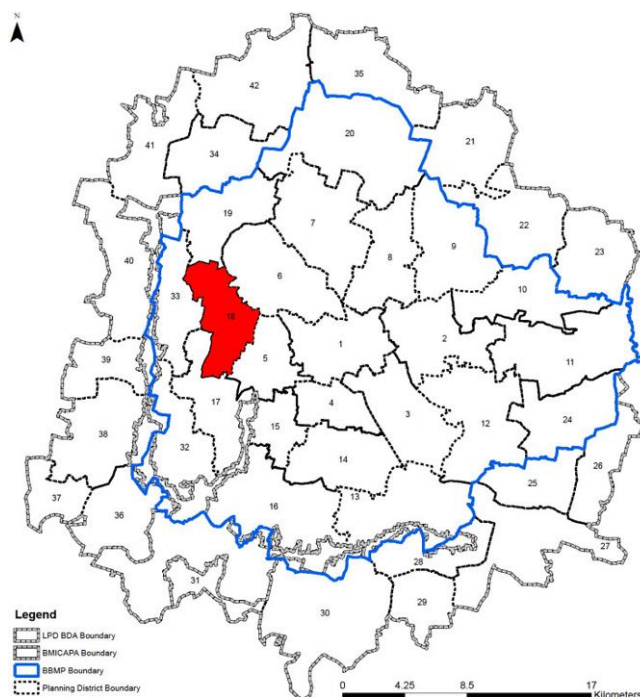
1. Road Development Plan

- RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads and other categories in phased manner.
- Upgradation of Master Plan Roads



- i. Outer ring road,
 - ii. Mysuru road,
 - iii. University road (old outer ring road)
 - iv. ITI Layout main road
 - v. Malathahalli lake road
 - c. Junction Improvement Programme
 - i. Nayandahalli junction at Mysuru road.
- 2. Development of Public Transport System:**
 - a. Namma Metro
 - i. Metro Phase II: Extension along Mysuru Road; with 2 proposed metro stations of RR Nagar metro station and Bangalore University Cross metro station.
 - ii. Metro Phase II: along Outer Ring Road
- 3. Development of Intermodal Stations:**
 - a. Intersection at Nyandanahalli – Mysore road junction
- 4. Accessibility Improvement Plans:**
 - a. For Planned Metro Stations
- 5. Preparation of Parking Plans for Commercial Areas/ Places:**
 - a. Outer Ring Road
 - b. Mysuru Road
- 6. Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Halgevaddarahalli Kere Rejuvenation Plan,
 - c. Nayanadahalli Kere Rejuvenation Plan,
 - d. Deepanjali Kere Rejuvenation Plan,
 - e. Srigandhakavalu Rejuvenation Plan,
 - f. Utarahalli Lake Rejuvenation Plan
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
- 7. Preparation of Slum Redevelopment Plans.**
- 8. Declaration of Street Vending Zones / Areas / Streets.**
- 9. Development of Physical Infrastructure / Facilities:**
 - a. SWM Dry Waste Collection Centres: 08No.s
 - b. SWM Organic Waste Collection Centres: 2 No.s
 - c. SWM Aggregator: 1 No.

19.PD 18: PEENYA - NAGARBHAVI



Population (2011 Census): 5,16,075

Area of PD: 2144.90 ha

Wards in PD: 10

Gross Density: 240.6 pph

Peenya – Nagarbhavi Planning District (PD 18) is located in the western parts of BMA between Tumukuru Road and Mysore Road. It characterised by presence of large Industrial Areas such as Peenya, dense residential areas, commercial activities along the roads, educational institutes and Vrishabhavathi River.

The RMP2031 proposes to consolidate the development in the area and

streamline transportation and infrastructure and increase public transport share in this Planning District.

1. The Peenya - Nagarbhavi PD is spread across the either side of the western reach of the Outer Ring Road and it comprises of 10 BBMP wards – namely Kamakshipalya (101), Kaveripura (103), Shakthiganapathi Nagar (74), Shankaramata (75), Vrushabhavathi (102), Koigepalya (73), Laggere (69), Peenya Industrial Area (41), Rajagopala Nagar (70) and Moodalapalya (127).
2. The urban character of this PD is low rise with high density in the industrial areas (Peenya & Doddanna industrial area) located in the northern part of PD and high density residential areas in the rest of the PD (Nagarbhavi.) The National Institute of Unani Medicine is the educational institution that is located here.
3. Outer Ring Road, Magadi Road are the major arterial roads in this PD.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 18 has population of 5,16,075 with a decadal growth of 71.1% (2001-2011). The workforce participation rate is 48.45% of the population. The gross density has increased to 240.6 persons per hectare (in 2011) from 140 pph (in 2001), whereas the residential density is 698 pph. The gross density is highest in Shakthiganapathi ward (no 74) (626 pph) and the least in Peenya Industrial Area ward (103 pph).



5. There are 1,35,709 households (2011), with average household size of 3.8, which is lower than average household size of BMA (4.01).

Industry and Commerce

6. The Peenya Industrial Area established by the GoK in the 1960s and agglomerated as private industrial estate is the hub for Machine Tools in India. It is one of the major employment centres in the city. Peenya (Phase 3 & 4), Kamashipalya and Doddana Industrial Area and other private industrial estates provide employment mainly in small and medium enterprises/ industries. Magadi Road is an industrial axis, which also houses workers involved in industrial and manufacturing activities - especially of textile and garments. Some of hazardous industries are located in Peenya Industrial Area.
7. Workplaces like retail and office spaces are present along major roads. The major commercial nodes in this PD are Magadi Road Market and Sanjeevinagar Market. The Industrial areas are slowly going in transition mode from Industrial/ manufacturing to services/ office spaces due to demand for office spaces. An opportunity lies for redevelopment of small industrial estates with full involvement of stakeholders.

Existing Land Use

8. The predominant land uses is residential use covering 34.83 \%. The Industrial land use zone consists of 17.94 % area followed by the area under transportation and vacant land which are 14.59 % and 14.22 % respectively. The total area under commercial land use is 4.8%. The area under water bodies and streams is 6.28 % of the total area.

Figure 19-1 and Table 19-1 presents the Existing Land Use Map and Existing Land Use Analysis for PD 18.

Housing and Slums

9. PD 18 is primarily residential, containing parts of BDA layouts such as Vijayanagar, Rajajinagar, Basaveshwaranagar West of Chord Road and Nagarabhavi. The residential urban fabrics are diverse: the BDA Layouts have a well planned grid of streets and parks and playgrounds, while other neighborhoods, for example, Indira Nagar Colony or NGO Colony, are dense and disorganized mostly due to the topography and the presence of the old street pattern in urban villages. Kurubarahalli and Kamakshypalya in the east of the PD include some vacant lands and slums.
10. The total number of households residing in residential areas is 1,35,709 (Census 2011), with 5,16,075 inhabitants. The residential density is 698 pph. The gross density is highest in Shakthiganapathi Ward (74) with 626 pph.
11. There are 22 slums locate din this PD out of which 9 slums are notified slums. The population residing in the slums is 47,195 (9.14% of the total PD population)

Traffic and Transportation

12. The Transport Infrastructure include BMTC Bus services at Kamashipalya, Nagarbhavi Stage II (Sumana- halli Juncion), and 1 Bus Depot at Kamala Nagar on ORR and / or KHB Colony. Sumanahalli junction on ORR and Havanur junction require improvements.
13. The area is well connected by BMTC bus services from Shankar Nag Bus Terminal, Sharda Colony Bus Terminal, Bande Marramma Bus Stand, Peenya 2nd Stage Bus Stand, Peenya

Industrial Area and Kamala Nagar Bus Depots, Laggere Bus Station, Anubhavanagara Bus Stations and several bus stops.

There are only two major arterial roads – Outer Ring Road and Magadi Road, which are followed by local roads. Heganhalli-Andrali Main Road, Pateghar Palya Main Road and other road continuous road are functioning as second order roads that have impediments for free traffic movement within the PD.

Figure 19-1: PD 18 Existing Land Use Map

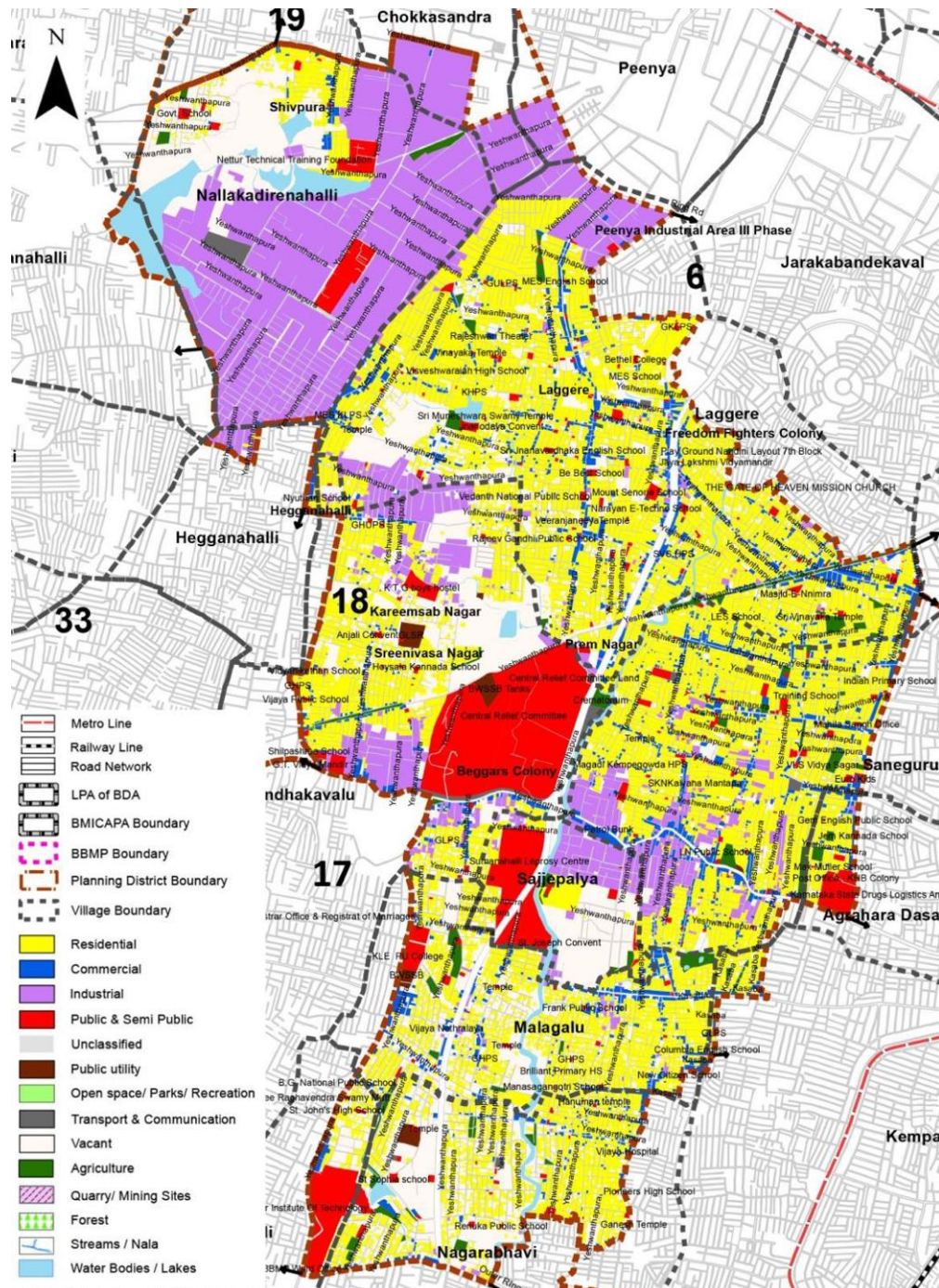


Table 19-1: PD 18 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	746.98	34.83
Commercial	103.32	4.82
Industrial	384.71	17.94
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	150.70	7.03
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	7.03	0.33
Parks & Open Spaces	29.28	1.36
Transport and Communication	312.89	14.59
Vacant	353.13	16.46
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	21.61	1.01
Water Bodies	35.26	1.64
Total	2144.90	100.00

Physical and Social Infrastructure

14. As per BWSSB the percentage of households having metered water supply connections is 37.64% and the percentage of households having sewage connections is 21.83%, 7 number of GSLR and 3 Pumping station and borewells located in this PD. As per BBMP, there are 9 Dry Waste Collection Centres. As per KPTCL, there is 1 220kV substation located in this PD.
15. Social infrastructure in this PD is: 221 schools and colleges and educational institutes such as MS Ramaiah School of Advanced Studies, the Hosmat College of Physiotherapy, the National Institute of Unani Medicine, the Dr Ambedkar Institute of Technology and Indian Institute of Plantation Management, are present in PD area. Further, there are 3 Government Health Centres & Hospitals and 22 private hospitals and 3 numbers of police stations in this PD.

Park and Open Spaces

16. There are several small parks and open spaces located in the planned layouts but no Major Park/ play- ground for general public. The land under Central Relief Committee, National Institute of Unani Medicine and other vacant lands and land with plantations are relief points in highly dense urban development.

Lakes and Drainage

17. The Vrishabhavathii River flows through contoured terrain and the PD drains into the river. Nallakadirenahalli Lake, Narasappanahalli Lake, Basappana Katte Lake, Shivapura Lake, Pilappanahalli lake, Balayyana Katte lake and Nagarabhavi Lake are the major lakes in this Planning District. These lakes are highly polluted and some of them have developments.



B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DECONGESTION AND CONSOLIDATION, TRANSIT INTEGRATION

PROPOSALS

1. The Proposed Land Use Map and the Proposed Land Use Area Statement are presented in Figure 19-2 and Table 19-2.
2. The RMP2031 proposes city level public transport infrastructure such as Metro/MRT and LRT/Mono Rail/BRT along roads within the Planning District. They are the following:
 - a. Metro/MRT: Phase II Metro services proposed by BMRCL along the Outer Ring Road.
 - b. LRT/ Mono Rail/ BRT: is proposed along the Magadi Road.
3. The RMP2031 proposes 1 Intermodal Interchange at junction of Magadi Road and Outer Ring Road at at Summanahalli.
4. Transit Oriented Development Zone is proposed to be applicable around all Metro rail stations/terminals located in the Planning District.
5. In order to improve the accessibility to Public Transport Stations (Metro, BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks. This shall greatly enhance first and last mile connectivity to the Public Transport Stations.
6. RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads. This roads are a) Magadi Road b) Outer Ring Road
7. The RMP2031 has identified 2 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow.
8. RMP2031 proposes that a detailed parking plan be for Magadi road and Sumanahalli near junction.
9. The RMP2031 recognizes the present status of slums and potential for Redevelopment of Slums that needs to be taken up.
10. A Regional Park / large scale park is proposed to be developed in the PD. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.
11. As mentioned earlier, entire PD drains into Vrushabhavati River. The natural drainage within the PD have been classified as following:
 - a. Drainage downstream from Nandini layout leading towards Vrishabhavathi river - Secondary
 - b. Other drainage/ streams leading to secondary streams (as marked in PLU) – Tertiary
 - c. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
 - d. The RMP2031 proposes the lake protection and rejuvenation of Nallakadirenahalli Lake, Narasappanahalli Lake, Basappana Katte Lake, Shivapura Lake, Pilappanahalli

lake, Balayyana Katte lake and Nagarabhavi Lake and its natural streams by preparing lake and surrounding area development plan.

Figure 19-2: PD 18 Proposed Land Use Map

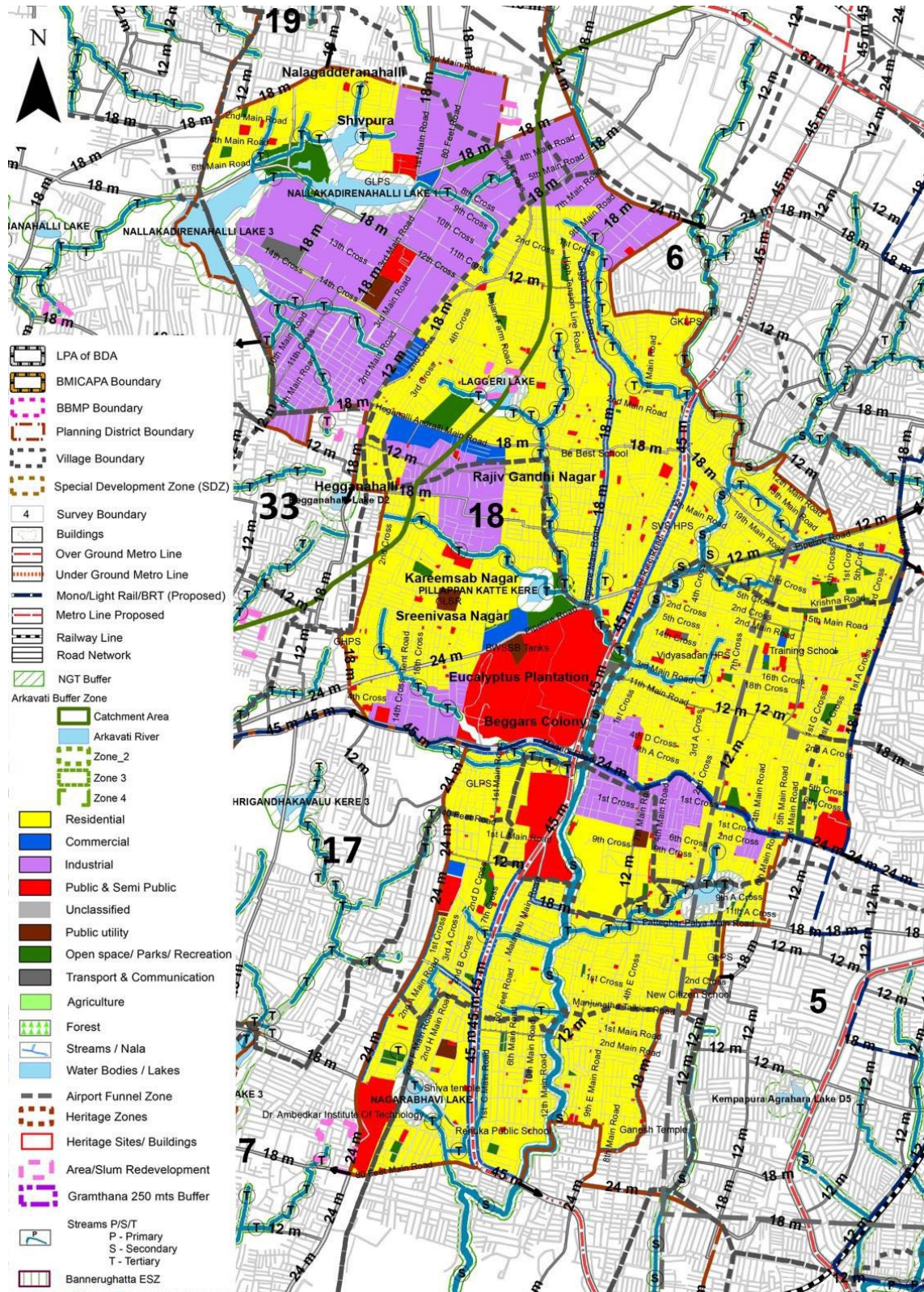




Table 19-2: PD 18 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	972.23	45.33
Commercial	52.17	2.43
Industrial	329.65	15.37
Public & Semi Public	133.79	6.24
Unclassified	0.00	0.00
Public Utility	25.68	1.20
Parks / Open Spaces	39.19	1.83
Transport & Communication	335.65	15.65
Forest	0.00	0.00
Streams	21.22	0.99
Water Bodies	35.23	1.64
NGT Buffer	200.10	9.33
Total Developable Area	2144.90	100.00
Agriculture	0	-
Total PD Area	2144.90	-

12. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
13. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determine the areas for informal activities/ street vending and detailed upgradation plans for such areas/ roads/ streets are prepared.
14. RMP2031 proposes Disaster & Hazard Mitigation Plan for low lying areas of Koigepalya, Moodalpalya, Kullegowda Industrial Area, Area near Mount Senoria School, Muniswara Nagar, and Nagarbhavi to urban flooding, fire, & emergency situations, posing risk to Human Safety and Economic Losses. It therefore proposed that Disaster & Hazard Mitigation Plan (DHMP) may look into but not limited to:
 - a. Providing Means of Access to Emergency Services
 - b. Facilitating Easy Evacuation of Local People (residents and working people)
 - c. Providing Infrastructure/ facilities like Fire Hydrants, Assembly Areas, mini-fire stations, provision for Ambulance, etc
 - d. Imposition of Certain Restricting posing risk to Humans and Economy
 - e. Circulation Pattern/ Defined Movement of Vehicular Traffic and Non-Vehicular Traffic.
 - f. Stations Area/ Accessibility Improvement Plan
 - g. Upgradation of Physical Infrastructure (Development roads, underground cabling of power lines, telecommunication lines, Disc TV/ DTH cables, optic fiber, etc.
 - h. Parking Plan & Development of MLCP
 - i. Time Restrictions on carrying out certain activities and business, etc



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD18: Peenya - Nagarbhavi

1. Road Development Plan

- a. RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads and other categories in phased manner.
- b. Upgradation of Master Plan Roads
 - i. Outer ring road,
 - ii. Magadi road,
 - iii. Heganhalli-Andralli Main Road,
 - iv. Pateghar Palya Main Road
- c. Junction Improvement Programme
 - i. Sumanahalli junction,
 - ii. Havanur junction in Basaveshwarnagar

2. Development of Public Transport System:

- a. Namma Metro
 - i. Metro Phase II: along Outer Ring Road with stations on Summanahalli junction, Laggegere bridge junction.
- b. LRT / Mono Rail/ BRT
 - i. Along Magadi Road

3. Development of Intermodal Stations:

- a. 1 station at junction of Magadi Road and Outer Ring Road at Summanahalli.

4. Accessibility Improvement Plans:

- a. For Planned Metro Stations

5. Preparation of Parking Plans for Commercial Areas/ Places:

- a. Outer Ring Road
- b. Mysuru Road

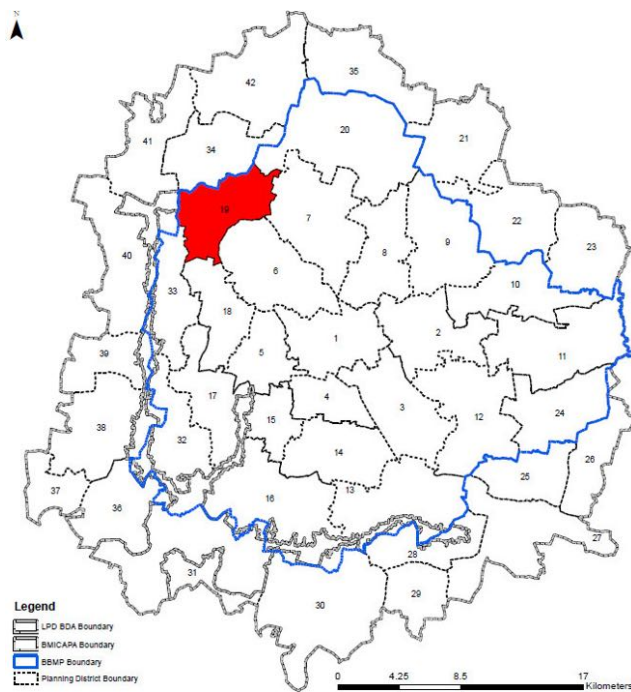
6. Protection and Rejuvenation of Lakes and Streams:

- d. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- e. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Nallakadirenahalli Lake Rejuvenation Plan,
 - c. Narasappanahalli Lake Rejuvenation Plan,
 - d. Basappana Katte Rejuvenation Plan,
 - e. Shivapura Lake Rejuvenation Plan,



- f. Pilappanahalli lake Rejuvenation Plan.
 - g. Balayyana Katte lake Rejuvenation Plan and
 - h. Nagarabhavi Lake Rejuvenation Plan
- f. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
7. **Preparation of Slum Redevelopment Plans.**
8. **Declaration of Street Vending Zones / Areas / Streets.**
9. **Development of Physical Infrastructure / Facilities:**
 - a. SWM Dry Waste Collection Centres: 20 No.s
 - b. SWM Organic Waste Collection Centres: 03 No.
 - c. 220 kV Substation: 01 No.
10. **Preparation of Disaster and Hazard Mitigation Plan**

20.PD 19- JALAHALLI – JARAKABANDEKAVAL



Population (2011 Census): 2,97,125

Area of PD: 2555.76 ha

Wards in PD: 6 No.s

Gross Density: 116 pph

Jalahalli – Jarakabandekaval (Planning District No.19) lies in the North Western periphery of BBMP, within BMA. This PD is characterised by the presence of Airforce Station at Jalahalli, Jarakabandekaval State Forest, Peenya Industrial Area (part), PSUs, educational institution, and some residential layouts.

The RMP2031 proposes network development, densification in few areas, transit integration and environment protection.

1. The Planning District Jalahalli – Jarakabandekaval consists of six wards Kuvempunagar (11), Sheihalli (12) Mallasandra (13), Bagalakunte (14), T Dasarahalli (15), and Chokkasandra (39) and covers the Dasarahalli and Yelahanka Zones of BBMP.
2. The urban character is low rise and high density in the residential areas.
3. Tumkur Road (NH 4), Hessarghata Main Road (SH 39) Subroto Mukerjee Road are the major arterial roads passes through this planning district.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 19 a population of 2,97,125 with a decadal growth rate 80.81% (2001- 2011). The workforce participation rate is 45.65% of the population. The gross density is 116 persons per hectare (pph), whereas the average residential density is 495 pph. The gross density is highest in T. Dasarahalli ward (375 pph) while the least is in Kuvempu Nagar (49 pph).
5. There are 1,57,878 households (2011), with average household size of 3.82, which is lower than BMA average (4.01).

Industry and Commerce

6. The presence of airforce station, Peenya Industrial Phase 2 (part), private industrial areas/ Industries like Gurunanjundaiah Industrial Area and Kenna- metal India, Commercial Units along main roads and educational institutes are the major employment centres in this PD.

Existing LandUse

7. The predominant land uses are vacant landuse and residential landuse with 24.98 % and 23.66 % of land area respectively. The Public and semi public - unclassified use consists of 16.87 % area followed by the area under transportation which is 8.45 %. The total area under industrial land use is 5.15 %/ The area under agriculture and forest is 5.19 % and 5.89 % respectively. Figure 20-1 and Table 20-2 present the Existing Land Use Map and Existing Land Use area statement respectively.

Figure 20-1: PD 19 Existing Land Use Map

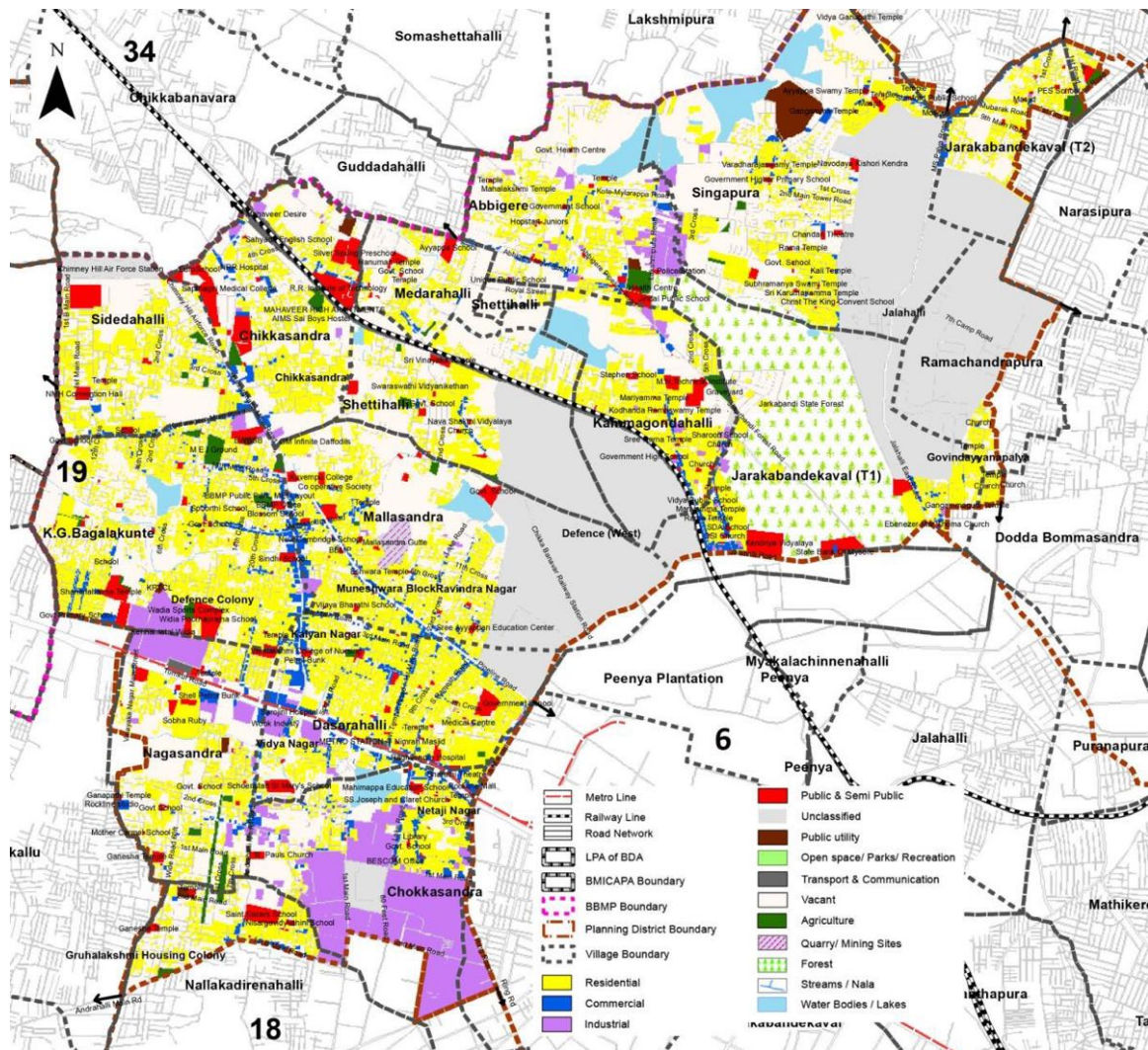




Table 20-1: PD 19 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	604.69	23.66
Commercial	70.32	2.75
Industrial	131.52	5.15
Quarry/ Mining Sites	5.41	0.21
Public Semi Public	75.48	2.95
Pubic & Semi Public - Unclassified	431.26	16.87
Public Utility	12.39	0.48
Parks & Open Spaces	21.98	0.86
Transport and Communication	215.92	8.45
Vacant	771.22	30.18
Agriculture	0.00	0.00
Forest	150.56	5.89
Streams	5.36	0.21
Water Bodies	59.65	2.33
Total	2555.76	100.00

Housing and Slums

8. Residential land use (23.66 %) and layouts dominate the housing pattern with high densities, however, high rise residential buildings are also present. HMT Layout, MEI Layout, Nagasandra, Mallasandra, Chikkasandra, Sidedahalli, Dasarahalli, Abbigere, shetyhalli, K.G.Bagalakunte, etc are predominantly residential in nature.
9. There are 16 slums located in this PD out of which 4 are notified slums. The ward with most number of slums is Kuvempu Nagar (11) with 5 slums located within it. The population residing in the slums is 18416 (6.2% of total PD population). There is a risk of fire hazard in the highly dense wards and slums.

Traffic and Transportation

10. The transport infrastructure in this PD includes Chikabanavara Railway station. As proposed by BMRCL, the metro alignment of Phase II of Namma Metro has coverage within this PD which is extension of Purple line on Tumukuru road.
11. The NH4 Tumkur Road, Hessarghata Main Road (SH 39), pipeline road, Subroto Mukerjee Road (SH39) are the major arterial roads passes through this planning district.

Physical and Social Infrastructure

12. As per BWSSB, the percentage of households having metered water supply connections 14.2% and percentage of households having metered sewage connections is 9.3%, 2 GSLR and 1 Sewahe Treatment Plant. As per BBMP, there are 4 DWCC and 1 Bio-methanation Unit.
13. Social Infrasrtucture in this PD is: 104 schools and number of educational and research institutions such as the Electronic Training Institute of Indian Air Force, Varalakshmi College of Nursing, Sapthagiri Collage of Engineering, Soundarya Institute of Management & Science,

RR Polytechnic, etc are present. Further, 16 private and Government hospitals, 1 fire station and 4 burial grounds located in this PD.

Parks and Open Spaces

- The reserved forest of Jarkabande Kaval sandal reserve of the Bangalore Forest Range lies in this planning district, adding to its green open space. There are neighbourhood parks in the residential layouts and playgrounds like MEI & HMT Layout ground.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: NETWORK DEVELOPMENT, TRANSIT INTEGRATION, DENSIFICATION, REDEVELOPEMENT, AND ENVIRONMENT PROTECTION.

PROPOSALS

- The governing principal for planning this PD is to consolidate the existing vacant land for densification, road network development. While doing so, the RMP2031 also focuses on road network development, transit integration and environment protection. Figure 20-2 and Table 20-2 presents the Proposed Land Use Map and Proposed Land Use Area Statement respectively.

Figure 20-2: PD 19 Proposed Land Use Map

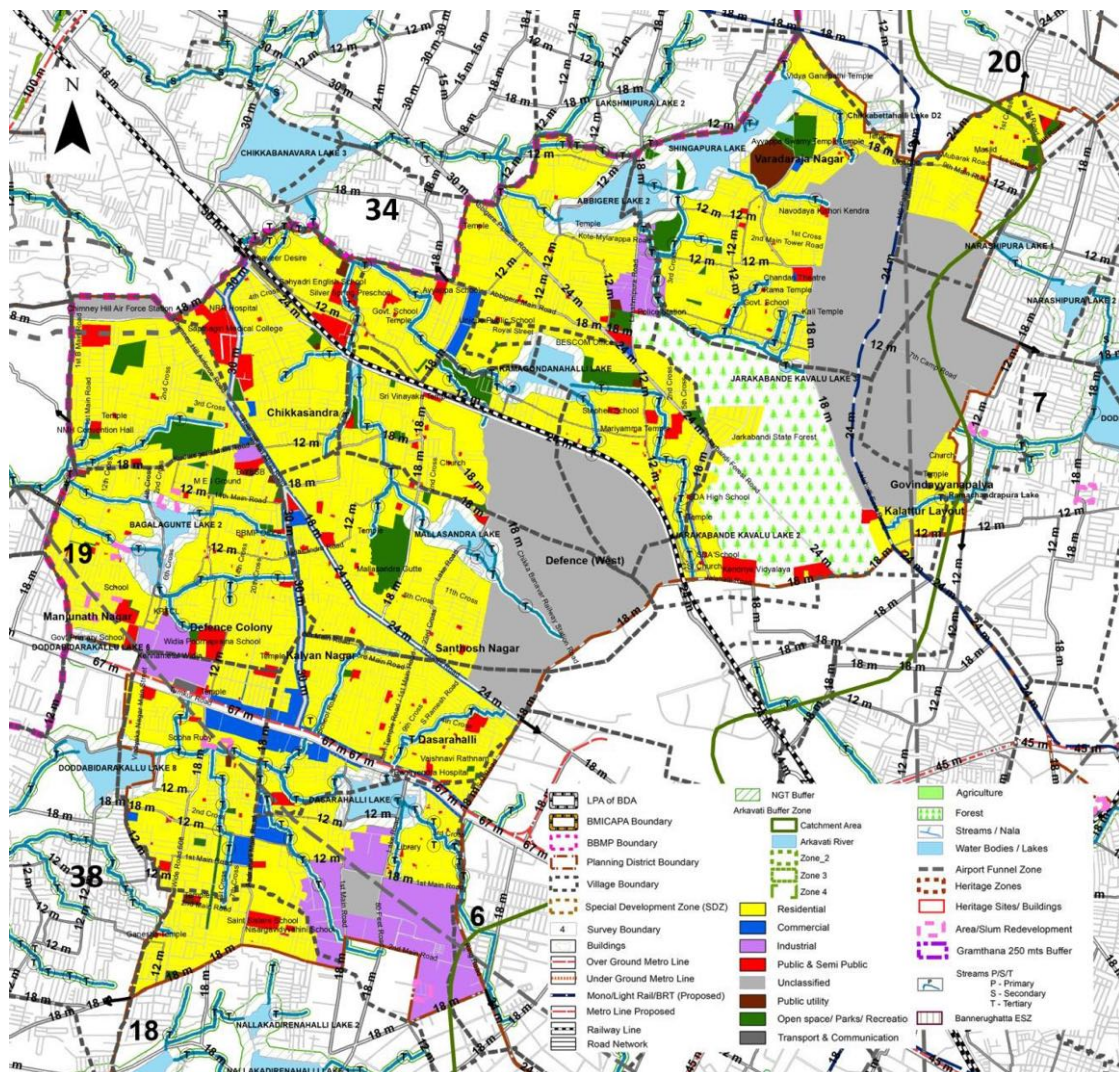




Table 20-2: PD 19 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1107.04	43.52
Commercial	43.07	1.69
Industrial	96.12	3.78
Public & Semi Public	68.15	2.68
Unclassified	404.08	15.88
Public Utility	11.83	0.47
Parks / Open Spaces	59.57	2.34
Transport & Communication	275.32	10.82
Forest	148.35	5.83
Streams	5.04	0.20
Water Bodies	59.03	2.32
NGT Buffer	266.27	10.47
Total Developable Area	2543.88	100.00
Agriculture	11.88	-
Total PD Area	2555.76	-

2. The RMP2031 proposes city level public transport infrastructure such as Metro/MRT and LRT/Mono Rail/BRT along roads within the Planning District. They are the following:
 - a. Metro/MRT Phase II: On Tumukuru road with 3 metro stations.
 - b. LRT/ Mono Rail/BRT: SH 39 (Hesarghatta Main road and Andrahalli main road) with 6 stations in this planning district.
 - c. Commuter Rail System: at Chikbanavara railway junction
3. RMP2031 proposes improved road network connectivity with road proposal between Abbigere and pipeline road.
4. The RMP2031 proposes 1 Intermodal Interchange at 8th Mile T Dasarahalli junction on Tumkur road and at Chikbanavara station.
5. Transit Oriented Development Zone is proposed to be applicable around all Metro rail, LRT/Mono Rail/ BRT stations/terminals located in the Planning District.
6. In order to improve the accessibility to Public Transport Stations (Metro, BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks. This shall greatly enhance first and last mile connectivity to the Public Transport Stations.
7. RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross section, provision of Pedestrian and wherever possible NMT facilities along with improvement of junction on roads of a) Hesarghatta Main Road, Pipeline Road, b) Handrihalli main road.
8. The RMP2031 has identified 1 road junctions that are to be taken up for geometric improvements for better and smoother traffic flow.
9. As mentioned earlier, entire PD drains into Arkavathi River and T.G.Halli catchment. The natural drainage within the PD have been classified as following:



- a. Drainage downstream from Mallasandra lake and Bagalagunti lake 2 towards secondary streams connecting the Arkavati River - Tertiary
 - b. Drainage downstream from Dasarahalli lake via Doddabidirakallu lake 8 towards a secondary stream connecting the Arkavati River - Tertiary
10. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
 11. The RMP2031 proposes the lake protection and rejuvenation of Kammagaundanahalli kere, Mallasandra kere, Dasarahalli tank, Abbigere Lake, Shingapur Kere, Bagalkunte Kere and its natural streams by preparing lake and surrounding area development plan.
 12. The RMP2031 proposes the protection of the forest areas – Jarakbande Kaval. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.
 13. The RMP2031 recognizes the present status of slums and potential for Redevelopment of Slums that needs to be taken up.
 14. The RMP2031 proposes physical infrastructure, for Solid Waste Management of 11 DWCC, 4 OWCC, 1 AGGR, 2 BMU, 1 CPU and 1 IWPU in this planning district. Additionally, the RMP2031 proposes 1 220 kV power substation, 1 fire station in this planning district.
 15. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
 16. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determine the areas for informal activities/ street vending and detailed upgradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

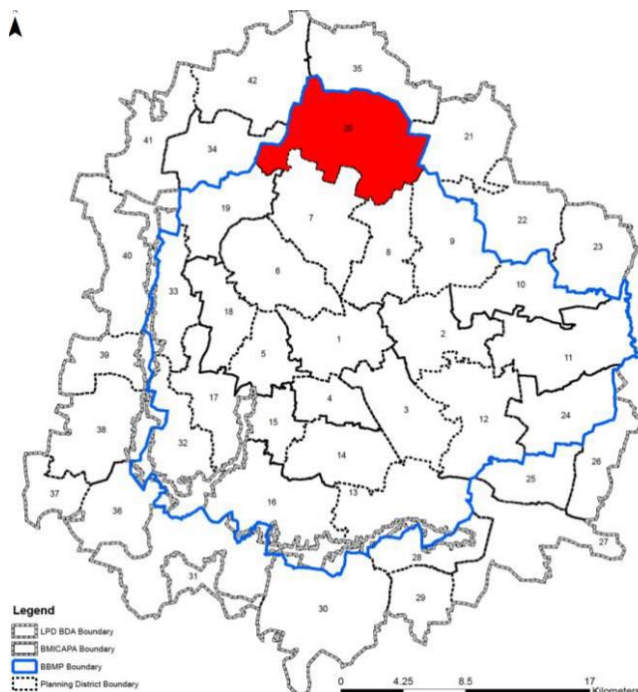
The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 19: Jalahalli – Jarakabandekaval.

- 1. Road Development Plan:** Road Development as envisaged as Master Plan level for development and implementation of Master Plan roads. Road development plan is to be prepared for all Master Plan roads.
 - a. RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads.
 - b. Upgradation of Roads:
 - i. Pipeline road,
 - ii. Hesarghatta main road,
 - iii. Handrihalli Main road and
 - iv. Nagasandra main road
 - v. Development of link from Abbigere and pipeline road
 - c. Junction Improvement Plan
 - i. T Dasarahalli 8th Mile Junction
- 2. Development of Public Transport System**
 - a. Metro Phase II: on Tumkuru road with Nagasandra metro station, Dasarahalli metro station, Jalahalli metro station.



- b. LRT/ Mono Rail/ BRT: SH 39 with stations at Chikbanavara, Bagalgunte, Saptagiri College of Engg, 8th Mile T Dasarahalli, Nagasandra Cross , Handrihalli Circle.
 - c. Commuter Rail System: at Chikbanavara railway junction
- 3. Development of Intermodal Stations:**
 - a. Chikkabanavara junction
- 4. Accessibility Improvement Plans:**
 - a. For Planned Metro Stations
- 5. Preparation of Parking Plans for Commercial Areas/ Places:**
 - b. Tumkur Road
 - c. Pipeline Road
 - d. Hesarghatta Road
- 6. Area Redevelopment:**
 - a. Ravindranagar Slum – Mallasandra
 - b. Muneswar Block Slum
 - c. Ramachandrapura Slum
- 7. Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Dasarahalli Lake Rejuvenation Plan,
 - c. Abbigere Lake Rejuvenation Plan,
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
- 8. Preparation of Slum Redevelopment Plans.**
- 9. Declaration of Street Vending Zones / Areas / Streets.**
- 10. Development of Physical Infrastructure / Facilities:**
 - a. SWM Dry Waste Collection Centres: 11 No.s
 - b. SWM Organic Waste Collection Centres: 04 No.
 - c. SWM Aggregator: 01 No.
 - d. SWM Central Processing Unit: 01 No.
 - e. SWM IWPU: 01 No.
 - f. 220 kV Substation: 01 No.
 - g. Fire Station: 01 No.
- 11. Preparation of Disaster and Hazard Mitigation Plan:**
 - a. Urban Flooding Mitigation Plan for areas that are vulnerable to flooding along Tumukuru road and surrounding areas
 - b. Development of Mini-Fire Station : A mini fire station is proposed to be developed to reduce the vulnerability of the PD to fire.

21. PD 20: YELAHANKA



Population (2011 Census): 2,26,985

Area of PD: 5429.44 Ha

Wards in PD: 5

Gross Density: 42.8 pph

Planning District 20 is located in the northern side of the BMA planning area and is between Hessarghata Main Road and Hennur Main Road. The PD is spatially structured around the NH 7(Bellary road) and SH9 (Yelahanka main road). The PD is predominantly characterised by large institutional campuses, system of lakes and well planned residential layouts. Also there are large tracts of vacant land (28.91%) and Agricultural land (21.12%). The RMP2031 proposes further densification

and integration with transit system .

1. The Yelahanka PD extent admeasures 5429.44 ha and comprises of 5 wards namely Kempegowda (1), Chowdeshwari (2), Atur (3), Yelahanka Satellite (4) and Jakkur (5).
2. The Yelahanka new town, and part of the Yelahanka airbase are located in this planning district.
3. The Bengaluru- Mumbai highway and the proposed Peripheral Ring Road alignment passes through this PD.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 20 has population of 2,26,985 with a decadal growth rate of 97.49% (2001- 2011) and work force participation rate of 42.09 % of the population. The gross density is 41.8 pph, whereas the average residential density is 271.90 pph. The gross density is highest in Yelahanka Satellite ward (86pph) and the least in Jakkur ward (22 pph).
5. There are 55,728 households (2011), with an average household size of 4.1, which higher than BMA (4.01).

Industry and Commerce

6. Rail-wheel Factory, Pharmaceutical manufacturers, small scale apparel and plastic industries are the predominant industrial activities and in total accounts for 4.04%.

Existing LandUse

7. Vacant land Use is the predominant land use at 29.21 % while Agriculture and allied activities accounts for 20.92 % of the total PD area. Residential land use takes up 16.19 % of the area. Transport/Communication Land Use accounts for 6.98 % of the total land area. Public-Semi Public constitutes 6.17 % while public semi-public unclassified accounts for 4.6 % of the total landuse area. Figure 21- 1 and Table 21- 1 presents the Existing Land Use Map and Existing Land Use area statement respectively.

Transportation

8. The transport infrastructure in this PD includes BMTC bus services with autos, cabs act as feeder services
9. As proposed by BMRCL, metro alignment of Phase II has coverage within this PD from the city towards BIAL via Bellary road.
10. NH - 7 Bellary Main Road connects one from the city to BIAL and Hyderabad, and SH9 Doddaballapur Main Road connects one to Yelahanka and further Doddaballapur. Bellary road is punctured by 2 sub arterial roads from the east which are Kogilu road and Bagalur main road.

Figure 21-1: PD 20 Existing Land Use Map

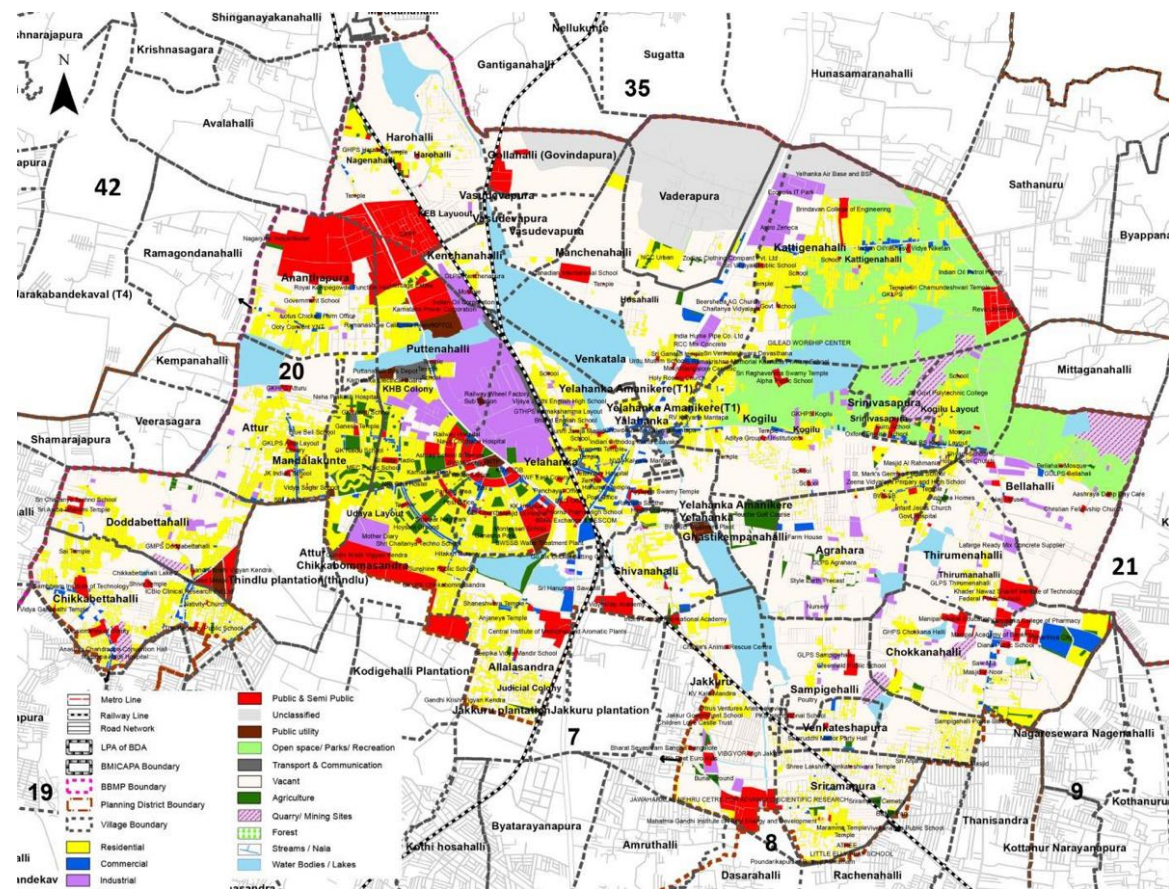




Table 21-1: PD 20 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	872.42	16.07
Commercial	88.52	1.63
Industrial	221.41	4.08
Quarry/ Mining Sites	77.85	1.43
Public Semi Public	334.91	6.17
Pubic & Semi Public - Unclassified	249.49	4.60
Public Utility	23.22	0.43
Parks & Open Spaces	81.39	1.50
Transport Communication	393.73	7.25
Vacant	2713.65	49.98
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	13.89	0.26
Water Bodies	358.90	6.61
Total	5429.38	100.00

Physical and Social Infrastructure

11. As per BWSSB, the percentage of households having metered water supply connections 14.76% and percentage of households having metered sewage connections is 17.5%, 2 GSLR and 2 Sewage Treatment Plants and 4 Pumping Stations and Borewells. As per BBMP, there are 2 DWCC and 2 land fills are located.
12. There are 114 schools in the PD. The important educational institutes in the PD are REVA University, VIBGYOR, Shristi School of design. Further, 17 private and Government hospitals, 1 fire station, 3 police stations and 2 burial grounds located in this PD.

Parks and Open Spaces

13. This PD, Yelahanka New town has ample green spaces but there is a need for provision of larger parks and open spaces at PD level. Provision of adequate parks, playground and open spaces for future population needs to be planned while protecting the lake and valley system is imperative.

Lakes and Drainage

14. The lakes in this PD are Yelahanka Lake, Atur Lake, Putanahalli Lake, Jakkur Lake, Kogilu Lake and Allalasandra Lake.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: NETWORK DEVELOPMENT, TRANSIT INTEGRATION, DENSIFICATION AND DISASTER MITIGATION, ENCIRONMENT PROTECTION AND CREATION OF PARK AND OPEN SPACES.

PROPOSALS

1. The governing principles for PD are

- a. Radial based High Density Development
 - b. Network Development while integration with existing development
 - c. Public transport development and integration
2. Figure 21-2 and Table 21-2 presents the Proposed Land Use Map and Proposed Land Use Area Statement respectively.

Figure 21-2: PD 20 Proposed Land Use Map

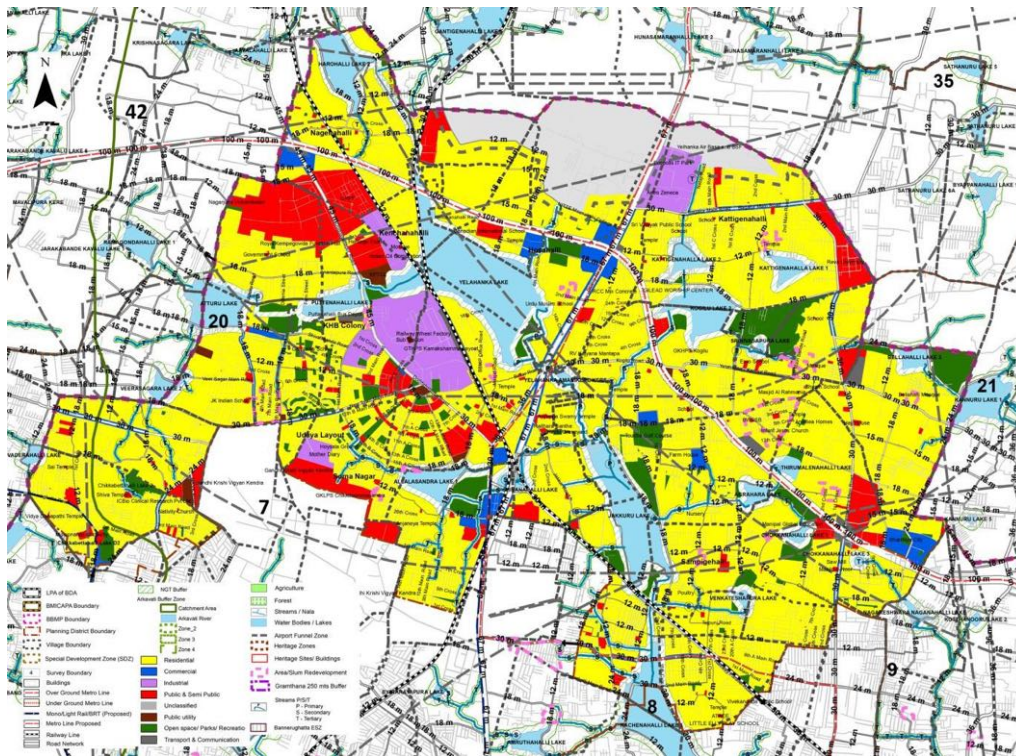


Table 21-2: PD 20 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	2794.22	51.46
Commercial	99.74	1.84
Industrial	172.78	3.18
Public & Semi Public	347.78	6.41
Unclassified	247.77	4.56
Public Utility	18.49	0.34
Parks / Open Spaces	228.91	4.22
Transport & Communication	664.37	12.24
Forest	0.00	0.00
Streams	11.98	0.22
Water Bodies	339.00	6.24
NGT Buffer	504.40	9.29
Total Developable Area	5429.44	100.00
Agriculture	0	-
Total PD Area	5429.44	-



3. The RMP2031 proposes city level public transport infrastructure such as Metro/MRT and LRT/Mono Rail/BRT along roads within the Planning District. They are the following:
 - a. Metro/MRT: Metro alignment to Kempegowda International Airport (KIAL) which is an extension of Nagwara Metro Line (of Phase II, BMRCL) along Bellary road.
 - b. Metro/MRT: along the Peripheral Ring Road.
 - c. LRT/Mono Rail/BRT: along the Major Sandeep Unnikrishnan Road.
 - d. Commuter Rail System: along Yelahanka railway station.
4. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed network connectivity enhancement:
 - a. Inner Peripheral Ring Road: along Major Sandeep Unnikrishnan Road.
 - b. Road geometry and Junction improvement: RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross-section, provision of pedestrian and wherever possible NMT facilities. The Masterplan also proposes improvement of junction on these roads of Major Sandeep Unnikrishnan Road.
5. The RMP2031 proposes 1 Intermodal Interchange at at intersection of PRR and Bellary road.
6. Transit Oriented Development Zone is proposed to be applicable around all Metro rail, LRT / BRT stations/terminals located in the Planning District.
7. In order to improve the accessibility to Public Transport Stations (Metro, BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks. This shall greatly enhance first and last mile connectivity to the Public Transport Stations.
8. Re-development of areas like Allalasandra, Bestara colony south of Yelahanka Kere, Kovempu nagar, is proposed to be taken-up.
9. It is proposed that Slum Redevelopment be carried out in phased manner for all slums in a phased manner.
10. The PD drains into the Hebbal Valley important natural drains within the PD are classified as follows:
 - a. Drainage downstream of Yelahanka lake via Jakkuru leading towards Rachenahalli lake further continuing towards Rampura lake -Primary
 - b. Drainage downstream from Singanayakanahalli Ammanikere towards Harohalli lake connecting the Hebbal primary stream - Secondary
 - c. Other drainage/ streams leading to secondary streams (as marked in PLU) - Tertiary
11. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
12. The RMP2031 proposes the lake protection and rejuvenation of Yelahanka Lake, Atur Lake, Putanahalli Lake, Jakkur Lake, Kogilu Lake and Allalasandra Lake its natural streams by preparing lake and surrounding area development plan.
13. RMP2031 proposes 1 Regional Park/ large scale park in this PD. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.



14. The RMP2031 recognizes the present status of slums and potential for Redevelopment of Slums that needs to be taken up.
15. The RMP2031 proposes physical infrastructure, for Solid Waste Management of 7 DWCC, 3 OWCC, 2 AGGR, and 1 IWPU and 1 CWPU in this planning district. Additionally, the RMP2031 proposes 1 220 kV power substation, 3 Nos STPs and 1 No. ISPS in this planning district.
16. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas/ streets for Informal activities/ Street Vending activities and prepares detailed up gradation plans for such areas/ roads/ streets.
17. RMP2031 proposes Disaster & Hazard Mitigation Plan for low lying areas of south of Yelahanka Kere.
18. To improve green cover and provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 20: Yelahanka

1. Road Development Plan:

- a. RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Upgradation of Master Plan roads:
 - i. Major Sandeep Unnikrishnan Road,
 - ii. New Town Road,
 - iii. Doddaballapur road and
 - iv. Kogillu road.

2. Development of Public Transport System:

- a. Namma Metro:
 - i. KIAL Alignment on Airport Road
 - ii. Along Peripheral Ring Road
 - iii. LRT/ Mono Rail/ BRT: Major Sandeep Unnikrishnan Road,
 - iv. CRS: Yelahanka railway station

3. Development of Intermodal Interchange Stations:

- a. At intersection of PRR and Bellary road and Bellary road.

12. Preparation of Slum Redevelopment Plans.

13. Declaration of Street Vending Zones / Areas / Streets.

14. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Yelahanka Lake Rejuvenation Plan,
 - c. Atur Lake Rejuvenation Plan,
 - d. Putanahalli Rejuvenation Plan



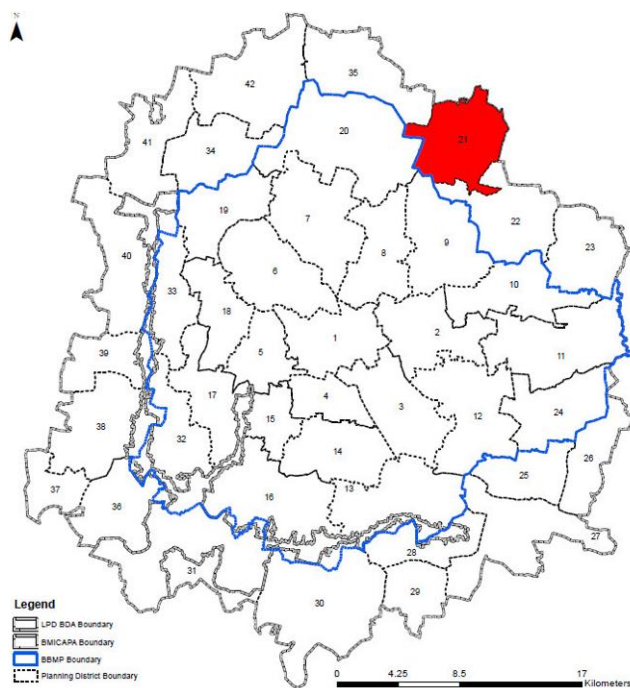
- e. Jakkur Lake Rejuvenation Plan
- f. Kogilu Lake Rejuvenation Plan
- g. Allalasandra Lake Rejuvenation Plan

15. Lake Surrounding Area Development Plan: It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

16. Development of Physical Infrastructure / Facilities:

- | | |
|--|---------|
| a. SWM Dry Waste Collection Centres: | 07 No.s |
| b. SWM Organic Waste Collection Centres: | 03 No. |
| c. SWM Aggregator: | 02 No. |
| d. SWM Coconut Waste Processing Unit: | 01 No. |
| e. SWM Integrated Waste Processing Unit: | 01 No. |
| f. 220 kV Substation: | 01 No. |
| g. Sewage Treatment Plan: | 03 No. |
| h. Intermediate Sewage Pumping Stations: | 01 No. |

22.PD 21: MARENAHALLI – KANNUR



Population (2011 Census): 28,594

Area of PD: 3132.2 ha

Gramathanas in PD: 12

Gross Density: 06 pph

Marenahalli Planning District (PD 21) is located in the North-Eastern side of BMA between Hennur Main Road and Kadda Agrahara Main road. PD is predominantly agricultural with large quarry and mining sites. It shares its boundary with BIAPPA and Hoskote Planning Authority.

The RMP2031 proposes limited growth along Peripheral Ring Road while retaining the Agriculture Zone and Development of Regional Park.

1. The Marenahalli – Kannur PD extent admeasures 3132.2 Ha and falls within Bidarahalli and Jalla Hoblis and comprises of 12 villages namely Marenahalli, Bagalaru, Chagalai, Dasanayakanahalli, Mitaganahalli, Kannuru, Kadasonnappanahalli, Doddenahalli, Yarappanahalli, Nadagavadagollahalli, Chikkagubbi and Bommasandra.
2. This PD is in the peripheral parts of BMA. Major portion of the area is under agricultural use. The proposed PRR alignment is to the south of this PD.

A. EXISTING STATUS

Demography

3. As per Census 2011, PD has population of 17,420 with a decadal growth rate of 47.3% (2001-2011). (11,825). The work force participation rate is 44.5% of the population. The gross density is 5.64 persons per hectare (pph), whereas the average residential density is 153.80 pph. The gross density is highest in Kadasonnappanahalli village (15pph) and the least in Doddenahalli village which is uninhabited
4. There are 3,829 households (2011), with an average household size of 4.5, which higher than BMA (4.01).

Industry and Commerce

5. Agriculture, livestock rearing, stone quarrying and cement block factories are the predominant industrial activities seen in this PD. Hosur Bande, a live granite quarry located in Mittaganahalli village has quarrying activities and cement block factories.

Existing LandUse

- The predominant landuse in this planning district is Agriculture Zone that accounts for 55.61 %. Figure 22- 1 and Table 22- 1 presents the Existing Land Use Map and Existing Land Use area statement respectively.

Housing and Slums

- Marenahalli is the largest Gramthana followed by Kannuru and Yarrapanahalli which is witnessing planned residential development in the form of lay- outs. Squatter settlements and temporary housing have sprung up around the Hosur Bande quarry site mainly for the workers. There are no slums in this PD.

Traffic and Transportation

- Hennur Main road, Chikkagubi Main road, Kadda Agrahara Main road and other village roads provide connectivity within and outside the PD.
- The major forms of public transport provided by BMTC buses while autos, cabs act as feeder services.

Physical and Social Infrastructure

- Marenahalli PD does not have metered water or sewage connections and is largely dependent on water tankers.

Figure 22-1: PD 21 Existing Land Use Map

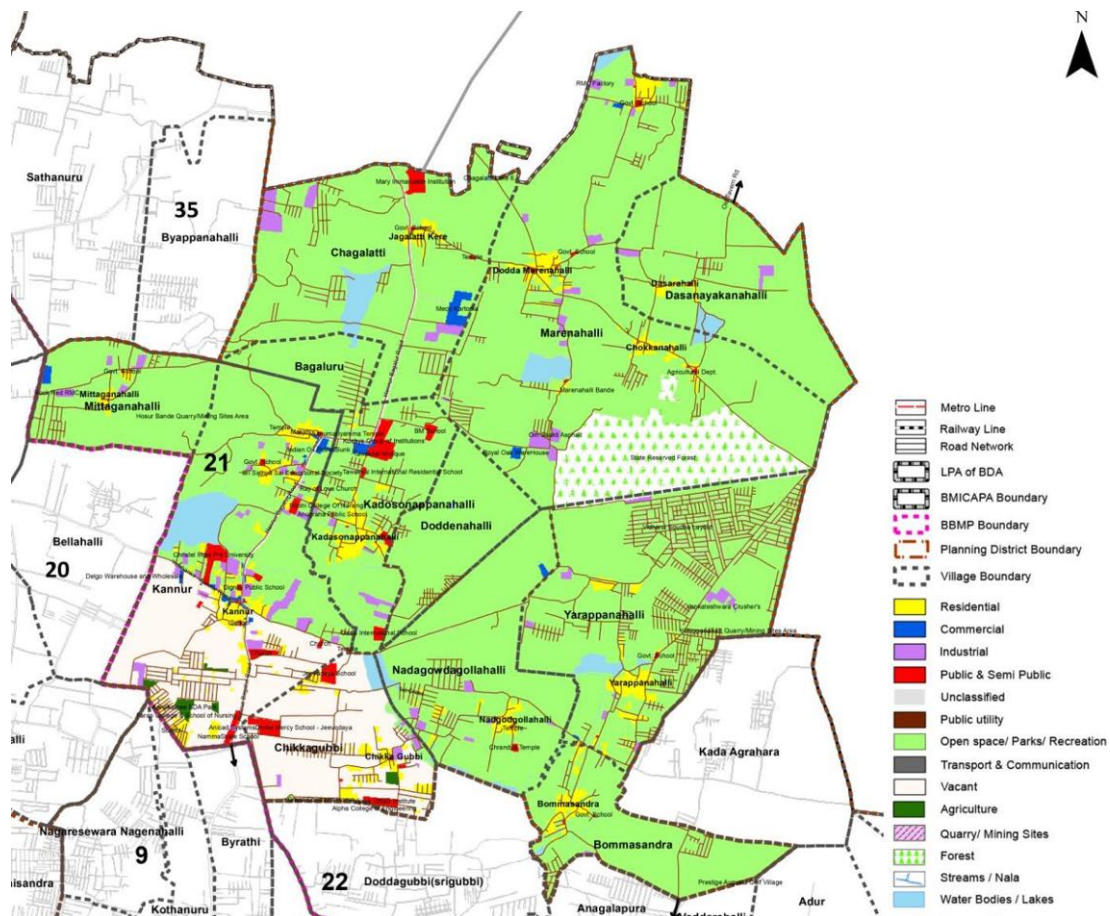




Table 22-1: PD 21 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	113.60	3.63
Commercial	12.38	0.40
Industrial	59.82	1.91
Quarry/ Mining Sites	223.21	7.13
Unclassified	32.06	1.02
Public Utility	0.03	0.00
Parks & Open Spaces	5.05	0.16
Transport and Communication	109.83	3.51
Vacant	629.10	20.09
Agriculture	1741.85	55.61
Forest	132.04	4.22
Streams	4.38	0.14
Water Bodies	68.82	2.20
Total	3132.20	100.00

11. Social infrastructure in this PD is: 17 schools located in the PD. The major educational institutions include schools like Oasis international school, BM English School and colleges like Alpha college of Engineering, Koshy's college of nursing and management and Faran College of nursing and 1 fire station.

Lakes and Drainage

12. The lake system located in the PD drains to the Pennar River onto the Krishnagiri dam and further joins the Cauvery River. The important lakes located in the PD are Kannuru Lake, Chikka Gubbi Lake and Bagaluru Lake (which is just outside the PD boundary).

Parks and Open Spaces

13. Parks and Open Spaces account for a negligible share of land in this planning district. To the east of the PD is government reserved forest land at Marrenahalli village which extends outwards of the BMA boundary and is the largest open space. Provision of adequate parks, playground and open spaces for future population needs to be planned while protecting the lake and valley system is imperative.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PRESERVATION OF AGRICULTURE BELT, PLANNED DEVELOPMENT ALONG PRR, VILLAGE DEVELOPMENT, DEVELOPMENT OF REGIONAL PARK

PROPOSALS

1. The RMP2031 proposes preservation of agriculture zone with limited development along PRR, conversion of Quarry site into Regional Park and Gramthan Development are the guiding principles of this PD. The Proposed Land Use Map and Proposed Land Use area statement are presented in Figure 22-2 and Table 22-2 respectively.
- 2.

Figure 22-2: PD 21 Proposed Land Use Map

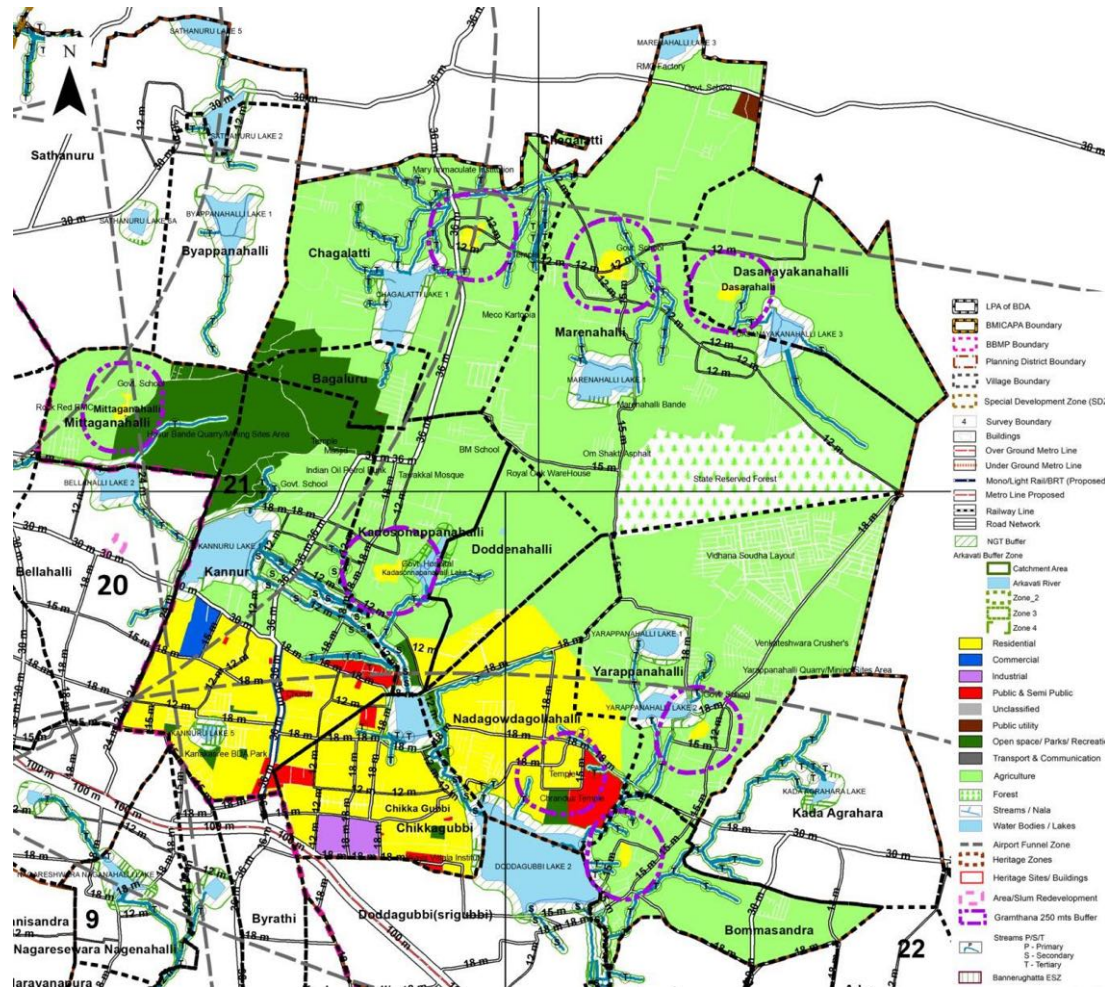


Table 22-2: PD 21 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	369.29	72.78
Commercial	11.78	2.32
Industrial	7.09	1.40
Public & Semi Public	13.06	2.57
Unclassified	0.00	0.00
Public Utility	0.00	0.00
Parks / Open Spaces	7.70	1.52
Transport & Communication	52.42	10.33
Forest	0.00	0.00
Streams	0.63	0.12
Water Bodies	6.06	1.19
NGT Buffer	39.37	7.76
Total Developable Area	507.41	100.00
Agriculture	2624.79	-
Total PD Area	3132.20	-



3. The RMP2031 proposes city level public transport infrastructure passes through this Planning District. They are as following:
 - a. Metro/MRT: along the Peripheral Ring Road.
 - b. BRTS: along the Hennur – Bagaluru road which is proposed as the alternative connectivity to the KIAL airport.
4. In order to improve the accessibility to Public Transport Stations (Metro, BMTC Bus Stations) it is proposed to strengthen the road network by providing footpaths and cycle tracks. This shall greatly enhance first and last mile connectivity to the Public Transport Stations.
5. The RMP2031 proposes village development for Marenahalli, Bagaluru, Chagalai, Dasanayakanahalli, Mitaganahalli, Kannuru, Kadasonnappanahalli, Doddenahalli, Yarappanahalli, Nadagavadagollahalli, Chikkagubbi and Bommasandra. The village development plan would include Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of SWM facilities, etc.
6. The PD drains into the Hebbal Valley important natural drains within the PD are classified as follows:
 - a. Drainage downstream of Kannuru Lake1 towards Doddagubbi lake2 - Secondary
 - b. Other drainage/ streams downstream along the valley towards the BMA boundary - Tertiary
7. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
8. The RMP2031 proposes the lake protection and rejuvenation of Kannuru Lake, Chikka Gubbi Lake and Bagaluru Lake.
9. Hosur Bande, a large stone quarry is proposed for redevelopment to a regional park. Existing mining activities to be banned and the quarry will serve the purpose of a regional park for BMA. The natural depression and contours of the quarry could be used to create a naturally landscape park or could even facilitate adventure sports.
10. RMP2031 proposes 1 Regional Park/ large scale park in this PD. The open spaces and parks are proposed to be maintained and given good accessibility and improvement in parking facilities.
11. Considering the water tables are comparatively low in the northern portion of BMA, it is proposed to make rain water harvesting systems mandatory for all new developments.
12. To meet the additional power requirements within the PD a one 220 KV substation is proposed in the PD.
13. To meet the fire safety requirements within the PD a fire-station is proposed to be developed.
14. To meet the requirements for present and future waste generation, new solid waste management infrastructures are proposed which includes 3 new DWCC's at Kadosonappanahalli, Marenahalli, Yarappanahalli villages and 1 new OWCC.



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 20: Yelahanka

1. Road Development Plan:

- a. RMP2031 Road Demarcation and Land Acquisition for development of Category -1 Roads.
- b. Upgradation of Master Plan roads:
 - i. Hennur – Bagaluru road
 - ii. Chikkagubi Main road
 - iii. Kadda Agrahara Main road

2. Development of Public Transport System:

- a. Namma Metro:
 - i. Along Peripheral Ring Road
- b. BRT on Hennur – Bagaluru road

3. Village Development Plans for all village within the PD.

4. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Kannuru Lake Rejuvenation Plan,
 - c. Chikka Gubbi Lake Rejuvenation Plan,
 - d. Bagaluru Lake Rejuvenation Plan

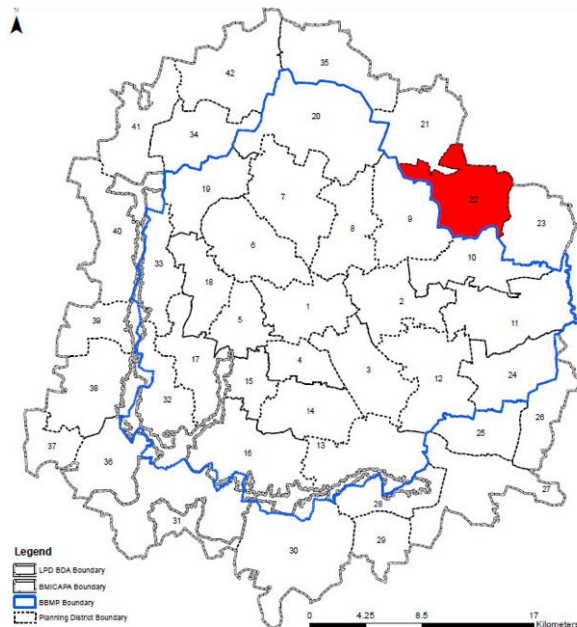
5. Lake Area Development Plan: It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

6. Development of 1 Regional Park at quarry site of Hosur Bande

7. Development of Physical Infrastructure / Facilities:

- a. SWM Dry Waste Collection Centres: 03 No.s
- b. SWM Organic Waste Collection Centres: 01 No.
- c. 220 kV Substation: 01 No.
- d. Fire Station: 01 No.

23.PD 22: BIDARAHALLI



Population (2011 Census): 23,314

Area of PD: 3216.94 ha

Gramthana in PD: 13

Gross Density: 07 pph

Bidarahalli Planning District (PD 22) is located in the north-eastern side of BMA planning area between Doddagubbi Main Road and Old Madras Road. This PD shares boundary with tehHoskote LPA.

RMP 2031 proposes growth along the PRR and preservation of Agriculture Zone.

1. The PD falls completely within Bidarahalli Hobli. The PD comprises of 13 villages namely Kada Agrahara, Anagalapura, Byappanahalli, Vaddarahalli, Adooru, Bidarahalli, Ramapura, Huvina Ane, Maragondanahalli, Kithaganooru, Hale halli, Hirandahalli, Doddagubbi (Srigubbi).
2. Avalahalli Main Road and Kethigannur Main Road are the two main roads in the PD.

A. EXISTING STATUS

Demography

3. As per Census 2011, PD has a population of 23,314 with decadal growth rate of 66.30 % (2001- 2011). The work force participation rate is 42.82% of the population. The gross density is 7.22 persons per hectare (pph), whereas the average residential density is 137.36 pph. The gross density is highest in Maragondanahalli village (16 pph) and the least in Huvina Ane village which is uninhabited
4. There are 5,252 households (2011), with an average household size of 4.4, which higher than BMA (4.01).

Industry and Commerce

5. Agriculture, livestock rearing, brick kilns, engineering-mild steel welding and small scale industries (2.11%) are the predominant industrial activities seen in the PD.

Existing LandUse

6. The predominant landuse in this planning district is under Agriculture Zone. is characterised predominantly by the agricultural hinterland of BMA (52.76%), large tracts of vacant lands (26.46%) and large lakes (6.05%). Figure 23-1 and Table 23-1 presents the Existing Land Use Map and Existing Land Use area statement respectively.

Figure 23-1: PD 22 Existing Land Use Map

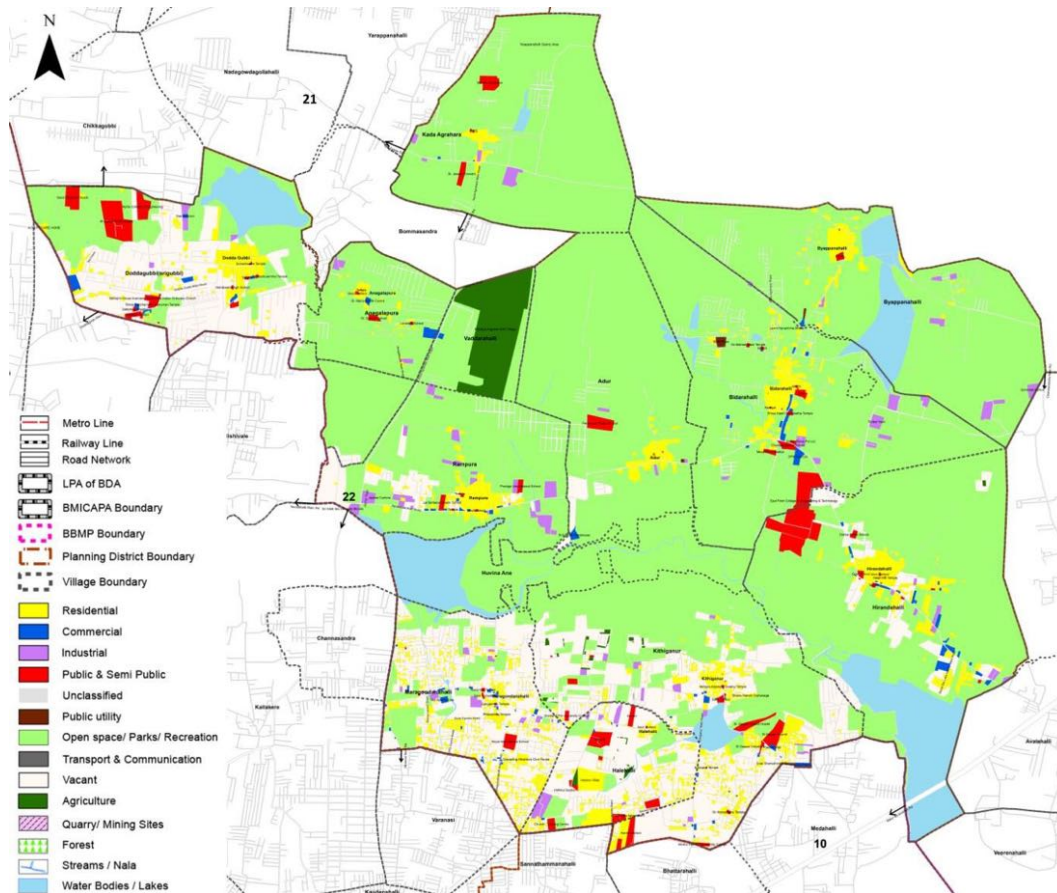


Table 23-1: PD 22 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	169.40	5.27
Commercial	15.01	0.47
Industrial	35.48	1.10
Quarry/ Mining Sites	28.96	0.90
Public Semi Public	53.48	1.66
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.98	0.03
Parks & Open Spaces	44.86	1.39
Transport Communication	128.02	3.98
Vacant	777.35	24.16
Agriculture	1759.43	54.69
Forest	0.00	0.00
Streams	9.18	0.29
Water Bodies	194.74	6.05
Total	3216.90	100.00



Housing and Slums

7. Residential land use accounts for 3.63 %. Hirandahalli is the largest Gramthana followed by Bidarahalli which has upcoming planned residential development. Also seen are paying guest accommodations around the educational institutions like East Point Engineering College and Garden City College.

Traffic and Transportation

8. Avahalli Main Road, Kethi Ganur Main Road and a small stretch of Old Madras Road (OMR) and village roads provide connectivity within and outside the PD. The major forms of public transport provided by BMTC buses while autos, cabs act as feeder services.

Physical and Social Infrastructure

9. The PD does not have metered water supply or sewage connections.
10. The Social Infrastructure in this PS is 27 schools and educational institutions include East point engineering college, Garden City College and Indus Valley Residential School. There is a lack of adequate social infrastructure in the PD like health care facilities and government schools. However there is potential for development of social infrastructure due to availability of land.

Lakes & Drainage

11. The Hebbal lake system located in the PD drains to the Pennar River onto the Krishnagiri dam and further joins the Cauvery River. The wetland system seen is part of the Yelemallapa Chetty lake series.
12. The lakes in this PD are home to rich bio-diversity but are under threat due to unsustainable development. The important lakes located in the PD are Rampura Lake (half of the lake is located in the PD), Yelemallapa Chetty lake (portion of it), Kitaganur Lake, Bidarahalli Lake and Gunduru Lake.

Parks and Open Spaces

13. There are no formal parks and open spaces. The provision of adequate parks, playground and open spaces for future population needs to be planned while protecting the lake and valley system is imperative.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: HIGH DENSITY DEVELOPMENT ALONG PRR, PRESERVATION OF AGRICULTURE ZONE, DEVELOPMENT OF REGIONAL PARK AND GRATHANA DEVELOPMENT AND ENVIRONMENTAL PROTECTION.

PROPOSALS

1. Given the characteristics of the planning district and directions from RMP2031, the guiding principles for formulating the proposals for the PD are
 - a. Promotion of high density development along PRR.
 - b. Environment protection and Gramthana development.

2. Figure 23-2 and Table 23-2 presents the Proposed Land Use Map and Proposed Land Use area statement respectively.

Figure 23-2: PD 22 Proposed Land Use Map

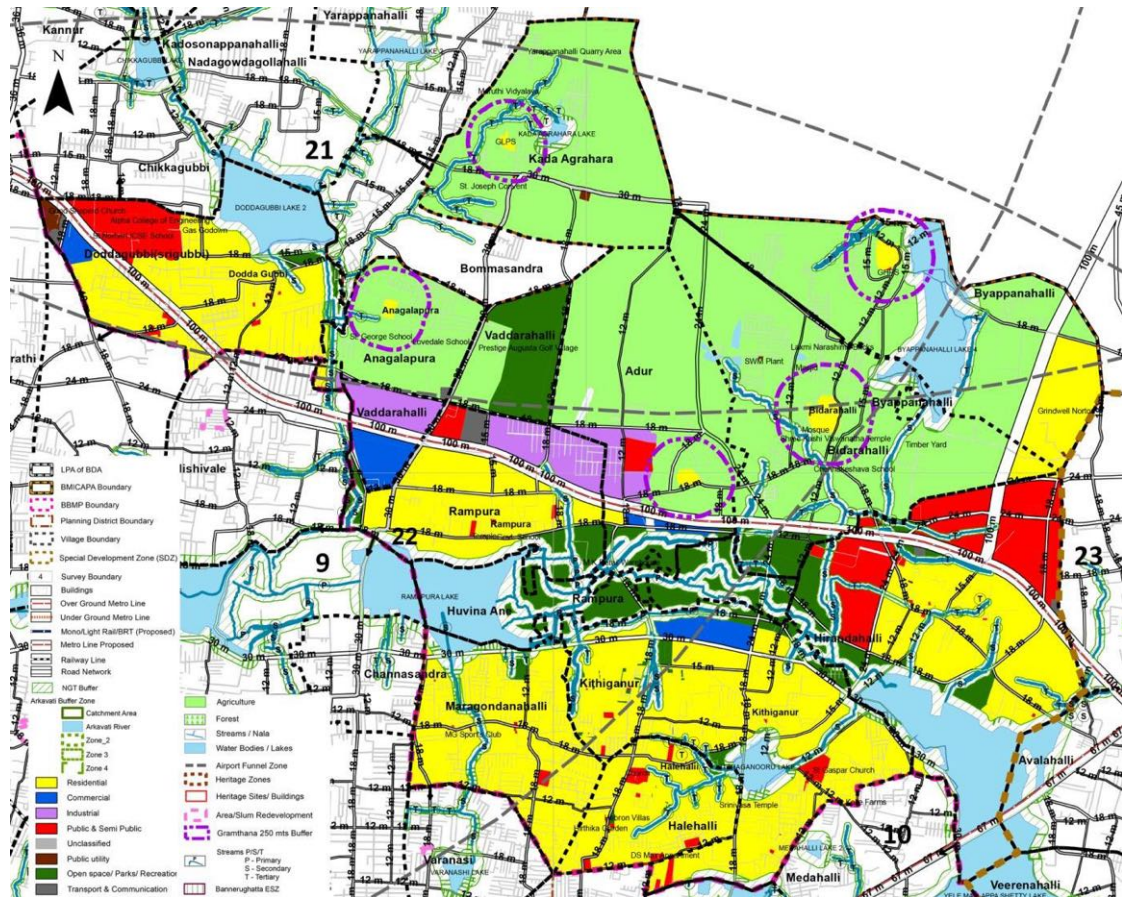


Table 23-2: PD 22 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	835.79	42.54
Commercial	40.97	2.09
Industrial	61.36	3.12
Public & Semi Public	153.67	7.82
Unclassified		0.00
Public Utility	4.00	0.20
Parks / Open Spaces	164.84	8.39
Transport & Communication	286.45	14.58
Forest		0.00
Streams	7.10	0.36
Water Bodies	119.65	6.09
NGT Buffer	290.86	14.80
Total Developable Area	1964.69	100.00
Agriculture	1252.24	-
Total PD Area	3216.93	-



3. The RMP2031 proposes city level public transport infrastructure passes through this Planning District. They are as following:
 - a. Metro/MRT: along the Peripheral Ring Road.
 - b. LRT/ BRT: along the Inner Peripheral Ring Road
4. The road network development proposed is as under:
 - a. A BMRDA proposed 100m wide Intermediate Ring Road (IRR) has been included with certain modifications looking into ground situation.
 - b. The PRR and the Inner PRR pass through the center of the PD clearly defining the pattern of development. The road network has been developed accordingly.
 - c. Chanasandra Main Road which goes onto become Kada Agrahara Main Road is proposed as a 30m wide road which connects one towards Hoskote LPA.
5. It is proposed to retain the agriculture zone on the northern side. However in order to provide facilities within villages, it is proposed to prepare a Village Development Plan.
6. The PD drains into the Hebbal Valley important natural drains within the PD are classified as follows:
 - a. Drainage downstream of Rampura lake towards Yele mallappa chetty lake - Primary
 - b. Drainage downstream of Bayappanahalli Lake 4 to connect Hebbal primary stream - Secondary
 - c. Other drainage/ streams leading to primary/secondary streams (as marked in PLU) - Tertiary
7. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
8. The RMP2031 proposes the lake protection and rejuvenation of Rampura Lake.
9. Development of a Regional Park in the valley between Rampura and Yellamallappa Chetty Lake. This is to protect the valley system and improve green cover.
10. It is proposed that water and sewage network plan is prepared for areas falling within the conurbation area for planned network development.
11. To meet the additional power requirements within the PD a one 220 KV substation is proposed in the PD.
12. To meet the requirements for present and future waste generation, new solid waste management infrastructures are proposed which includes 10 DWCC, 2 OWCC and 1 Bio-Methanation Unit.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 22: Bidarahalli.

1. **Road Development Plan:**
 - a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
 - b. Junction improvement for intersections of existing and masterplan roads.



2. Development of Public Transport System:

- a. Namma Metro:
 - i. Along Peripheral Ring Road
- b. LRT/BRT on Inner Ring Road
- c. BRT on Kada Agrahara Road

3. Preparation of Village Development Plans for all villages within the PD.

4. Development of Regional Park

5. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan,
 - b. Rampura Lake Rejuvenation Plan,
 - c. Kitaganur Lake Rejuvenation Plan,
 - d. Bidarahalli Lake Rejuvenation Plan and
 - e. Gunduru Lake Rejuvenation Plan

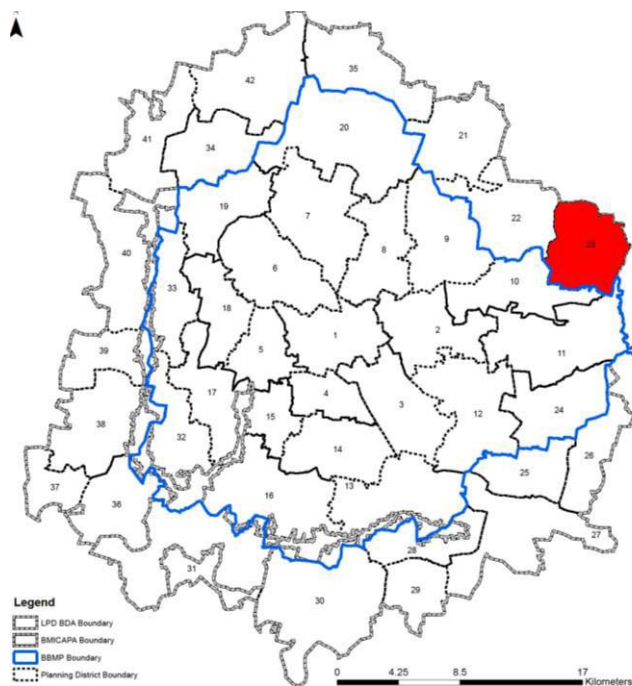
6. Lake Area Development Plan: It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

7. Development of Physical Infrastructure / Facilities:

- a. SWM Dry Waste Collection Centres: 10 No.s
- b. SWM Organic Waste Collection Centres: 02 No.
- c. SWM Bio-Methanation Unit: 1 No.
- d. 220 kV Substation: 01 No.

8. Preparation of water supply and sewage network plan for conurbation areas.

24. PD 23: CHEEMASANDRA SPECIAL DEVELOPMENT ZONE



Population (2011 Census): 39,377

Area of PD: 2729.41 ha

Villages in PD: 17

Gross Density: 14.4 pph

Cheemasandra Planning District (PD No. 23) is located in the North-Eastern side of BMA between Old Madras Road (NH4) and Whitefield Main road. It is characterised predominantly by existing agricultural use, large tracts of vacant land and industrial activity at Cheemasandra. PD boundary is shared with LPA of Hoskote Planning Authority.

The RMP2031 proposes development of special development zone promoting high density planned employment centres and residential development.

1. The Planning District comprises of 17 villages namely Veeranahalli, Kurudasonnenahalli, Cheemasandra, Katamnalluru, Bhanadapura, Konadasapura, Goravigere, Bidare Agraharavu Chikkanagenahalli, Doddabanahalli, Kannamangala, Dommasandra, Chikkabanahalli, Sheegihalli, Nimbekayipura, Avalahalli, Kumbena Agrahara and Kajisonnenahalli.

A. EXISTING STATUS

Demography

2. As per Census 2011, PD has 39,377 inhabitants, which has increased by 82.84 % from 2001(21,536). There are 18,333 resident workers which account for a work force participation of 46.56% which is higher than the BMA average of 44.5%. There are 12772 households (2011), with an average household size of 3.1, which is lower than BMA average (4.01). The gross density is 14.4 persons per hectare (pph), whereas the average residential density is 168 pph. The gross density is highest in Aavalahalli village (45 pph) and the least is in Dommasandra village (3 pph).

Industry and Commerce

3. The PD has very sparse commercial land use. There is scattered industrial development in the planning district seen around Cheemasandra and Virgonagar Industrial area. Food

processing, glass industries and some manufacturing industries are the predominant industrial activities seen in the PD.

Housing and Slums

4. Kannamangala is the largest Gramthana followed by Cheemasandra and Sheegihalli which is witnessing planned residential development in the form of gated communities and plotted development. High rise apartments are seen along Old Madras Road (NH4).

Traffic and Transportation

5. Old Madras Road (NH4), SH 35 and Budigere Main road and village roads provide connectivity within and outside the PD. The major forms of public transport are BMTC buses and a few private buses, while autos, cabs act as feeder services. No BMTC depot/ KSRTC bus depot is present in the PD area. The PRR alignment has been proposed through this PD and will trigger future development in the PD. A well planned road network would provide better connectivity in the future.

Existing LandUse

6. The predominant landuse in this planning district is agriculture (53.26%) followed by vacant (19.29%). Residential use within the PD account for 10.29%. **Figure 24-1 and Table 24-1** presents the Existing Land Use Map and Existing Land Use Analysis for the Planning District.

Figure 24-1: PD 23 Existing Land Use Map

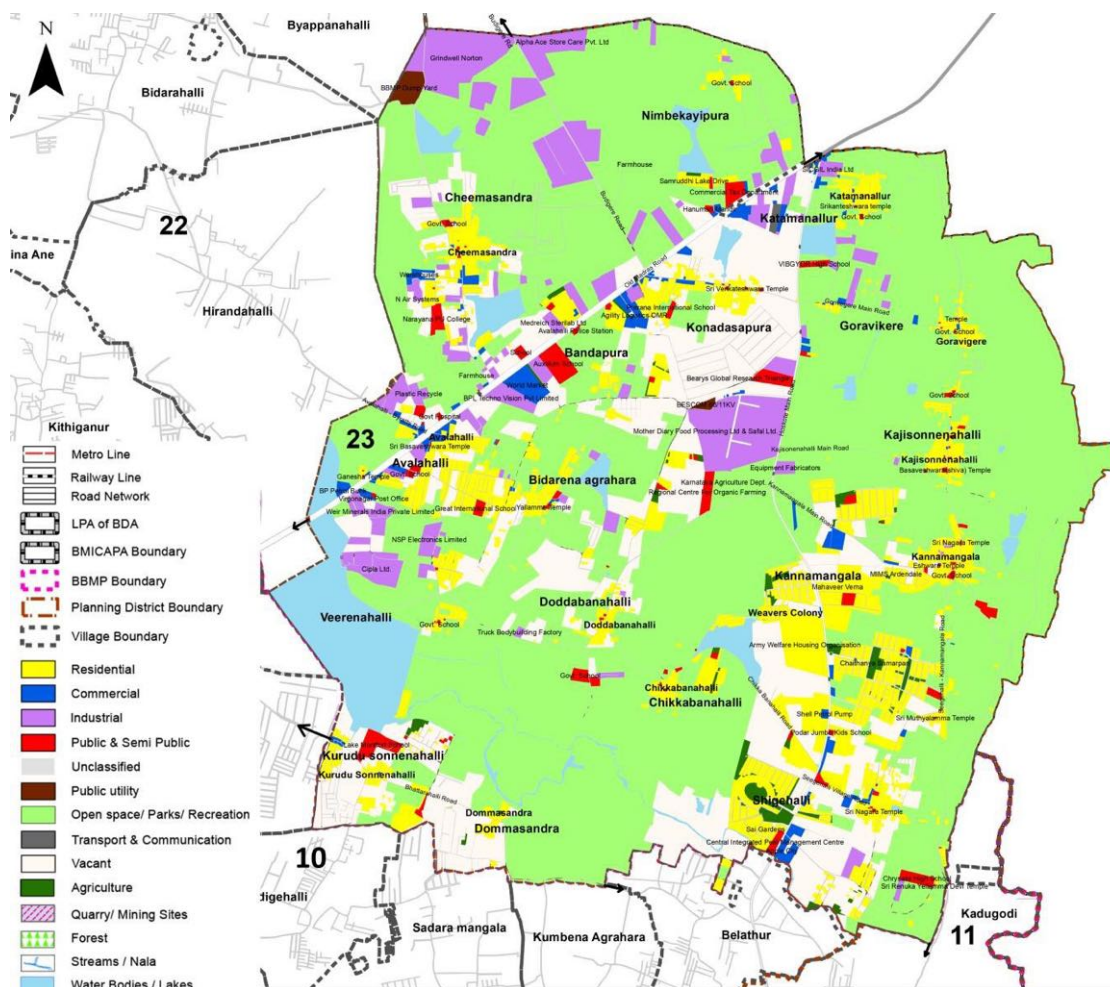


Table 24-1: PD 23 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	280.45	10.29
Commercial	29.87	1.10
Industrial	54.47	5.67
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	154.68	1.24
Unclassified	33.93	1.24
Public Utility	4.92	0.18
Parks & Open Spaces	16.90	0.62
Transport and Communication	96.77	3.55
Vacant	526.39	19.29
Agriculture	1453.55	53.26
Forest	0.00	0.00
Streams	7.13	0.26
Water Bodies	124.81	4.57
Total	2729.28	100.00

Physical and Social Infrastructure

7. Public and Semi Public land uses account for 1.23% as per the existing land use 2015. There are 17 schools located in the PD. There is a lack of adequate social infrastructure in the PD like health care facilities and government schools. There is a fire station located in the PD.

Parks and Open Spaces

8. There are inadequate parks and open spaces. The provision of adequate parks, playground and open spaces for future population needs to be planned while protecting the lake and valley system is imperative.

Lakes & Drainage

9. The wetland system seen in this PD is part of the Yelemallapa Chety series. The lakes in this PD are home to rich bio-diversity but are under threat due to unsustainable development. The important lakes located in the PD are Yellamallappa Chety Lake and Chikkabanahalli Lake.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH AND ENABLING ECONOMIC GROWTH, INTEGRATION OF CITY CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION.

1. PD is under constant flux as developments are following radial as well as scattered development pattern. It becomes imperative that RMP2031 directs for planned urban development and promotion of economic growth along proposed major Ring and Radials.
2. RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Halanayakanahalli – Kodathi is one of these nodes/ zones proposed to be

development. The guiding principles for developing PD as Special Development Zone is as following:

- a. Promotion of Economic Growth along Rings/ Radials
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption
 - c. Promotion of Transit Oriented Development around Metro/ Mono Rail Stations
 - d. Protection and Conservation of Lake Systems
 - e. Planned Open Spaces
3. The Planning District has been designated as Special Development Zone and be governed by special regulations as stipulated in Zoning Regulations.
 4. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 24-2 and Table 24-2 respectively. The proposed land use has been designed to promote the economic activities along PRR, and major roads while residential use zone would promote work live play concept. Park & open spaces have been distributed across the planning district and are mostly located around lakes.
 5. The PD is physically structured along Old Madras Road as a major arterial road. State Highway-35 is proposed to be extended to BIAL and will serve as a new link for people traveling from south Bengaluru. Once SH 35 touches Old Madras Road at Budigere Cross, it joins the Town Ring Road i.e Sivas Road and finally connects to BIAL via SH 104. In order to achieve a high intensity of development a grid based network system has been proposed.

Figure 24-2: PD 23 Proposed Land Use Map

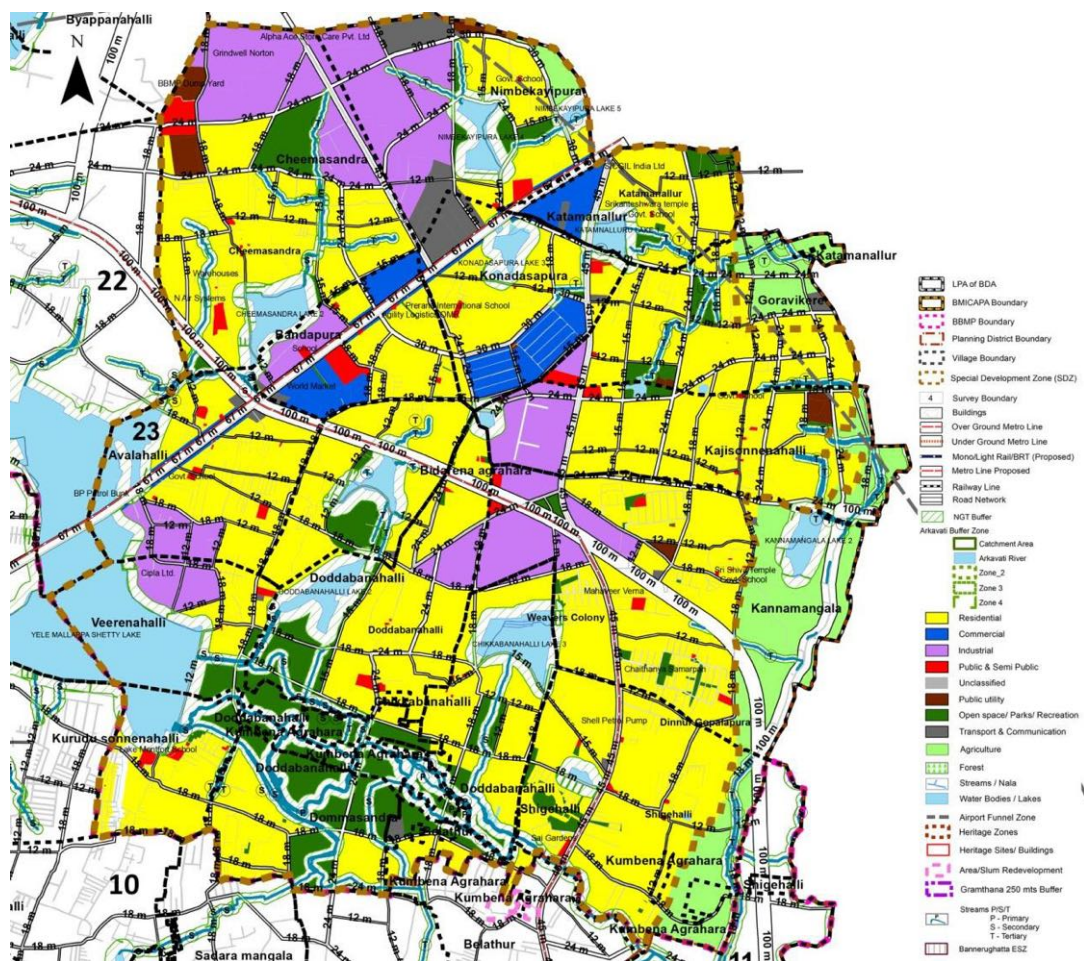




Table 24-2: PD 23 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1168.30	46.56
Commercial	69.58	2.77
Industrial	256.17	10.21
Public & Semi Public	31.95	1.27
Unclassified	0.00	0.00
Public Utility	18.03	0.72
Parks / Open Spaces	152.96	6.10
Transport & Communication	364.98	14.55
Forest	0.00	0.00
Streams	6.77	0.27
Water Bodies	113.42	4.52
NGT Buffer	327.14	13.04
Total Developable Area	2509.30	100.00
Agriculture	220.2	-
Total PD Area	2729.41	-

6. Public Transport systems proposed are:

- a. LRT/ Mono Rail/ BRT on Old Madras Road
- b. LRT/ Mono Rail/ BRT on Inner PRR
- c. Metro on PRR

7. RMP2031 proposes that the lakes within the PD namely Yellamallappa Chetty Lake and Chikkabanahalli Lake are to be protected and conserved. The lakes fall under the Hebbal valley system.

8. The streams leading to Yellappa Chetty lake from Rampura Lake and the down stream of Yellappa Chetty lake= Primary. Other drainage/ streams leading to Hebbal primary streams (as marked in PLU) = Tertiary.

9. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM and no sewage be allowed to flow into the streams and lakes.

10. To meet the requirements for present and future waste generation, new solid waste management infrastructures are proposed which includes 21 new DWCC's, 2 OWCC's and 1 Bio Methanation Unit. 1 220 KV Sub-Station is proposed and 1 Fire Station is proposed

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD23: Cheemasandra planning District

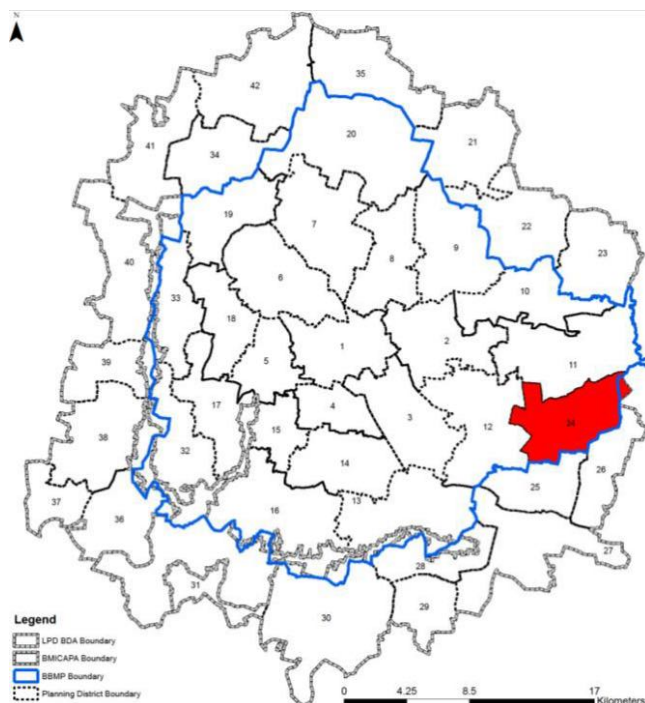
1. Road development plan

- a. Development of BMRDA regional link road with Town Ring Road of Hoskote LPA
- b. Junction improvement programme
 - Budigere Junction
 - Kattanallur Gate



- Intersections of SH-35 and Gottikegere Road
 - Intersections of SH-35 and Seegihalli Road
2. **Proposed Public transport systems:**
- LRT/ Mono Rail/ BRT along Old Madras Road connecting to Hoskote
 - LRT/ Mono Rail/ BRT on Inner PRR
 - Proposed Metro Phase on PRR
 - ISBT- 1 no
 - Bus Station- 1 no
3. **Inter Modal Interchanges** are proposed at the junctions of Old Madras Road with PRR and Inner PRR and junction of Whitefield Main Road with PRR
4. **Logistic Hub and truck terminals are proposed within the PD**
5. **Development of Regional Park within the buffers of Yellamallappa Chety Lake**
6. **Lake rejuvenation and stream development plan is proposed**
7. **Village development plans** for Veeranahalli, Kurudasonnenahalli, Cheemasandra, Katamna-lluru, Bhanadapura, Konadasapura, Goravigere, Bidare, Agraharavu Chikkanagenahalli, Doddabanahalli, Kannamangala, Dommasandra, Chikkabanahalli, Sheegihalli, Nimbekayipura, Avalahalli, Kumbena Agrahara and Kajisonnenahalli villages.
8. **Physical and Social Infrastructure**
- a. To meet the requirements for present and future waste generation, new solid waste management infrastructures are proposed which includes 21 new DWCC's, 2 OWCC's and 1 Bio Methanation unit.
 - b. 1 220 KV Sub-Station is proposed
 - c. 1 Fire Station is proposed

25. PD 24: VARTHUR – GUNJUR



Population (2011 Census): 55,838

Area of PD: 2870.19 ha

Wards in PD: 1

Villages in PD: 1

Gross Density= 20PPH

Varthur - Gunjur Planning District (PD. No. 24) is located in the south-eastern side of BBMP between Varthur Main Road and Sarjapura Main Road. It is witnessing heightened growth from eastern (Varthur/ SH35) and western sides (ORR Side), with large urban Gramathans and planned large scale developments - mostly residential.

The RMP2031 proposes to develop the PD that would promote high density planned employment centres and residential developments, while protecting environmentally sensitive areas.

1. Planning District comprises of Varthur Ward of BBMP and Valepura village of Varthur Hobli and admeasures about 2870.20Ha.
2. Old Airport Road/ Varthur Road, SH35, Balagere Road, Panathur Road/ Gunjur Palya Road/ Gunjur-Mugalur Road, Muthasandra Main Road, Halasahalli Cross Road, Munnekollal Main Road are some of the roads forming the connectivity network within the planning district. The Bengaluru – Salem railway line passes through PD with station at Belandur.
3. The PD despite being opened for development by RMP 2015 still has large amount of vacant lands (about 67% of total PD area), which offers an opportunity for planned development and integrating existing developments. The Residential land use accounts for ~ 15% total PD area with majority of residential areas being located towards Outer Ring Road, Varthur Road (above Varthur kere), along SH35 and Balagere Road. Varthur, Balagere, Gunjur, Gunjur Palya, Panathur, Madhura Nagar, and Sorahunase are the major gramthanas that were merged with erstwhile BMP to form BBMP and are now large and dense urban settlements. PD is witnessing large scale high end and high density residential developments as well as has several schools and educational institutes run by both Government and private sector.

A. Existing Status

Demography

4. As per Census, in 2011, PD had 55,838 inhabitants, which increased by decadal growth rate of 115.1% (2001-2011). The work force participation rate is 42.2% of the total PD population.

There are 14,571 households (2011), with an average household size of 3.83, which is lower than BMA (4.01).

5. The gross density is 19 persons per hectare (pph), whereas the average residential density is 171.17 PPH.

Industry and Commerce

6. The PD has not seen much of commercial growth, and has very less commercial land use, which is concentrated along SH35 and partly on Varthur Road. There is a big vegetable and wholesale market in Varthur.

Existing Land Use

7. **Figure 25-1** and **Table 25-1** presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Figure 25-1: PD 24 Existing Land Use Map

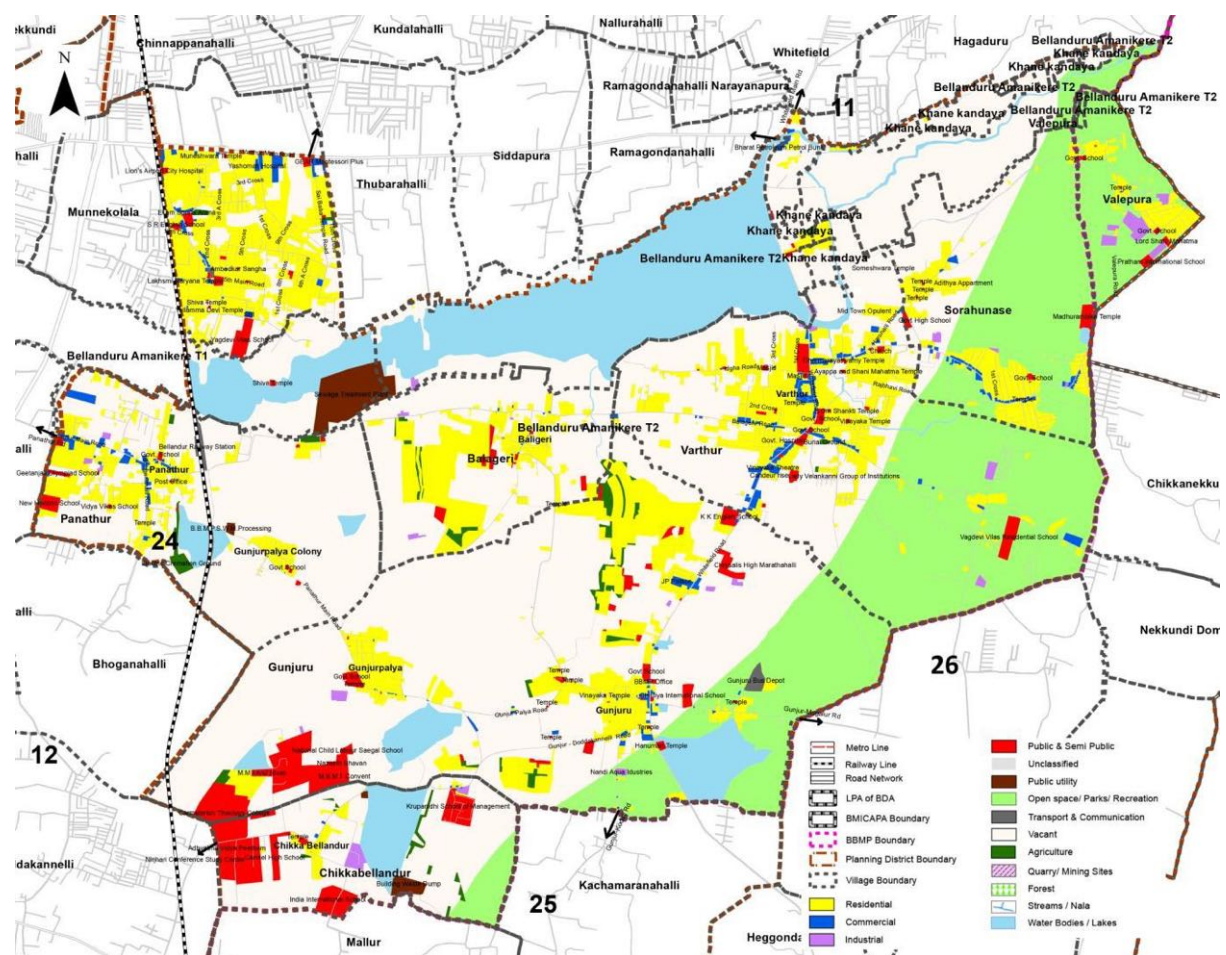




Table 25-1: PD 24 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	425.64	14.83
Commercial	25.54	0.89
Industrial	12.97	0.45
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	78.76	2.74
Unclassified	0.00	0.00
Public Utility	20.31	0.71
Parks & Open Spaces	16.73	0.58
Transport Communication	60.69	2.11
Vacant	1926.42	67.12
Agriculture	0.00	0.00
Forest	0.00	0.00
Streams	12.30	0.43
Water Bodies	290.84	10.13
Total	2870.19	100.00

Housing and Slums

8. The majority of residential areas being located towards Outer Ring Road, Varthur Road (above Varthur kere), along SH35 and Balagere Road. Varthur, Balagere, Gunjur, Gunjur Palya, Panathur, Madhura Nagar, and Sorahunase are the major Gramthanas (now part of BBMP). These are dense urban settlements. Further, large number of high end and high density residential complexes, private layouts and high rise apartments are coming up and will further increase the residential densities in future. The built form currently is low rise but in the upcoming developments it is high rises in gated communities. The gross density is 19 persons per hectare (pph), whereas the average residential density is 171.17 pph. The gross density in Varthur village is 20 pph followed by Valepura ward which is 16 pph.
9. There 3 slums located in Varthur ward. The population residing in slums is 2534 which accounts for 4.5% of the ward population.

Traffic and Transportation

10. As mentioned earlier, the Outer Ring Road (outside PD but close proximity to PD Old Airport Road/ Varthur Road, SH35, Balagere Road, Doddakannelli – Kadubeesanahalli Road, Panathur Road/ Gunjur Palya Road/ Gunjur-Mugalur Road, Muthasandra Main Road, Halasahalli Cross Road, Munnekollal Main Road, Bhoganahalli Road are the existing roads defining the connectivity network within the planning district. Panathur Road is main critical link between ORR and SH35, as it provides connectivity with ORR and other roads with in Planning District.
11. Though outside the PD planning district, the Namma Metro ORR Blue Line (KR Puram Stretch to Silkboard) alignment is implemented by the BMRL is located in the close proximity to this PD. Three planned metro stations at Deverabesanahalli, Kadubeesanahalli and Marathahalli are located near to PD.

12. The Bengaluru – Salem railway line passes through PD with a station at Belandur. The railway station is located to the western side of this PD. There is one BMTC Depot located at Gunjur. Though there are several bus stops on existing roads, there is no bus station is available within the planning district.

Physical and Social Infrastructure

13. As per BWSSB, only ~8.6% of total households have metered water connections, whereas sewage connections is with only ~5.3% of total households. There is 1 STP located to the south west of Varthur Lake along the Balagere road. As per BBMP, there is 1 Dry Waste Collection Centre located in this PD. There is one electric crematorium located in Panathur
14. There are 35 schools including some international schools, two collages - Government PU Collage and Krupanidhi Collage of Pharmacy, 2 Government healthcare centres and few private hospitals, within the PD.

Park and Open Spaces

15. The PD has predominant vacant land use and agriculture in nature but lacks any formal large scale parks and open spaces. However, the valley downstream of Varthur kere is potential area for creating park and open space while protecting the valley.
16. There is one private Badminton Academy within the planning district. Also, many of the upcoming gated communities are providing for open spaces within the campus.

Lakes and Drainage

17. Varthur Kere, Chikkabellanduru Kere, Panathur Kere, Gunjuru Kere, Gunjurpalya and Bhoganahalli Kere (last three are in Gunjur Revenue Village), are present in PD. All these lakes are within the Koramangala – Challaghatta Valley Watershed. All lakes within PD drain into Varthur Kere.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH AND ENABLING ECONOMIC GROWTH, INTEGRATION OF CITY CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION.

PROPOSALS

1. This PD is witnessing rapid transformation. Developments, primarily residential in nature, show different characteristics - a) the low rise residential areas as an extension of erstwhile gramathans, b) high rise apartments along existing roads (including extensions developments along ORR) c) scattered yet connected high end large scale residential complexes and d) erstwhile gramathans which are short of infrastructure facilities. It therefore becomes imperative for RMP2031 to guide planned urban development and promotion of economic growth within the planning district and upgrade/ provide for the infrastructure.

2. RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Varthur - Gunjur is one among these to be developed as nodes/ zones. The guiding principles for developing PD as Special Development Zone is as following:
 - a. Promotion of Economic Growth on Work – Live – Play Concept
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption while integrating existing road network
 - c. Promotion of Transit Oriented Development around Metro/ Mono Rail Stations
 - d. Upgradation/ Provision of Physical Infrastructure within erstwhile gramathans (urban villages)
 - e. Protection and Conservation of Lake System
 - f. Planned Open & Open Spaces
3. The RMP2031 proposes a Special Development Zone in this PD that be governed by special regulations as stipulated in Zoning Regulations.
4. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 25-2 and Table 25-2 respectively. The proposed land use has been designed to promote the economic activities along PRR, and major roads while residential use zone would promote work live play concept. Park & open spaces have been distributed across the planning district and are mostly located around lakes.

Figure 25-2: PD 24 Proposed Land Use Map

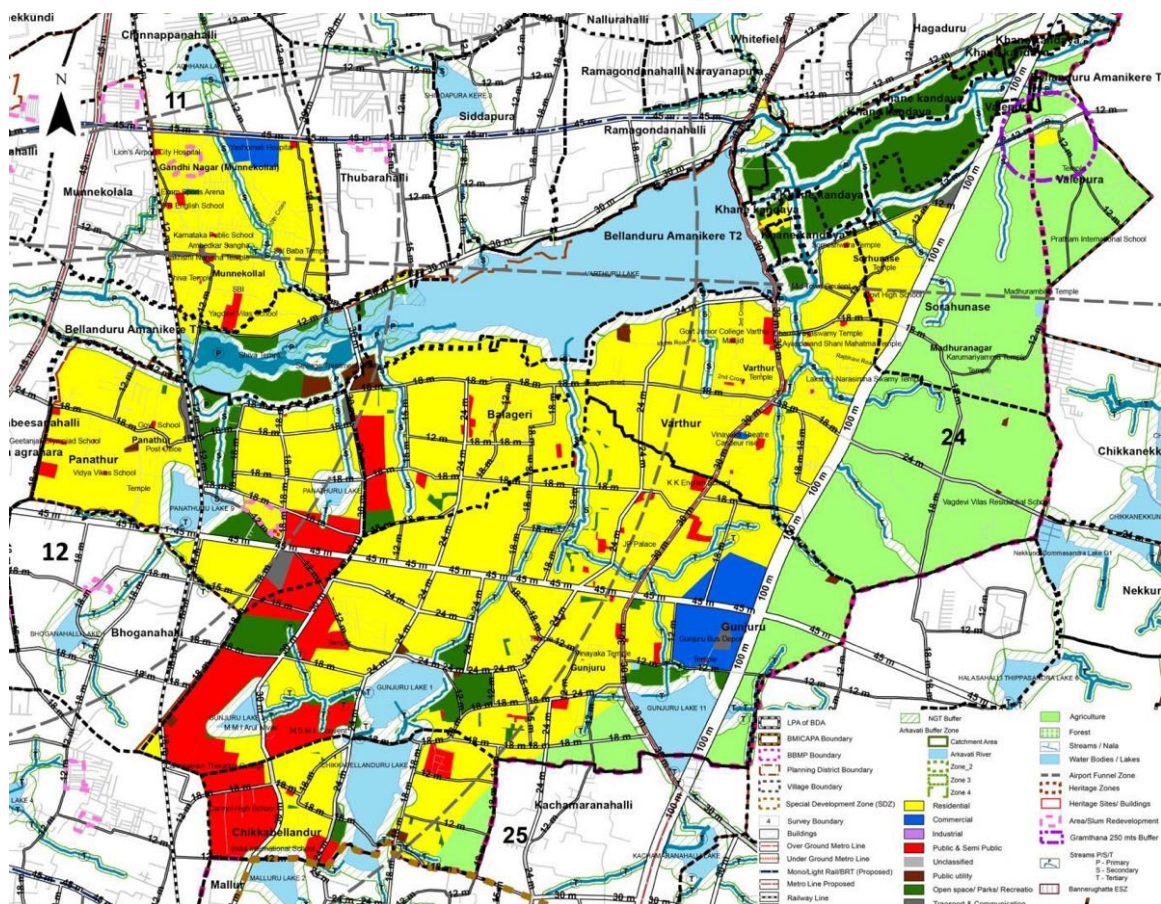




Table 25-2: PD 24 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1095.49	48.93
Commercial	24.50	1.09
Industrial		0.00
Public & Semi Public	162.46	7.26
Unclassified		0.00
Public Utility	11.38	0.51
Parks / Open Spaces	162.48	7.26
Transport & Communication	215.91	9.64
Forest		0.00
Streams	10.56	0.47
Water Bodies	260.43	11.63
NGT Buffer	295.59	13.20
Total Developable Area	2238.80	100.00
Agriculture	631.39	-
Total PD Area	2870.19	-

Traffic and Transportation

5. The Proposed Northern Peripheral Ring Road, Proposed Inner Peripheral Ring Road, Varthur Main Road/ Old Airport Road, SH35 and Sarjapura Road along with existing Panathur Road, Balagere Road, Gunjuru Palya Road, Railway line, development permissions granted by BDA and earlier proposals of RMP 2015 has formed basis for new circulation network within the planning district. The proposed network is of gird pattern nature.
6. It is proposed that all master plan roads within Planning District be developed as per the proposed cross section for respective widths, as to ensure that footpaths and cycle tracks are developed during the road development. This will help improve the accessibility within the planning district as this will facilitate movement of non-motorised transport.
7. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. CRS: It is proposed that Bellandur Railway Stations is developed to cater to passengers using CRS.
 - b. Metro PRR Link: It is proposed to develop metro link along proposed PRR at city level. However a stretch wherein SH35 and PRR runs parallel (from Kannamangala Village in PD 23 till Gunjur Kere), the Metro is proposed to take SH35 route. Accordingly, it is proposed to develop metro stations at a) Varthur Kodi (interchange with Mono Rail), b) Varthur (near PU Collage), c) Varthur Police Station, d) near Chrysalis High School, e) Intersection of proposed 45m wide road and SH35 (Gunjur), and f) Intersection of PRR and SH35 (near Gunjur Kere).
 - c. Mono Rail/ LRT/ BRTS on Old Airport Road: The proposed Mono Rail / LRT/ BRTS from Trinity Metro Station to Varthur Kodi touches the PD on northern side. Within PD, a



- station is proposed to be developed at Kundalahalli Gate Station (which is an interchange with Inner PRR Mono Rail/LRT/ BRTS Link).
- d. Mono Rail /LRTS/BRTS Inner PRR: The proposed Mono Rail / LRT/ BRTS around Inner Peripheral Ring Road passes through the PD. It is proposed to develop stations at a) Balagere b) Intersection of Proposed 45 Mt Road (Gunjur Palya), c) Intersection of Proposed Master Plan Roads (near Bhoganahalli Kere), and d) Intersection with Gunjur Road (after Carmelaram Mount Carmel Church then leading to Sarajapura Road).
 - e. BMTC Bus Stations: In addition to existing Gunjur Depot, it is proposed to develop 3 additional Bus Stations/ Terminal – a) a long PRR (Surhaunse), b) adjoining Balagere Road) and c) along 45mt wide road.
8. Intermodal Interchange Stations are proposed to be developed at a) Kundalahalli Gate Junction and Varthur Kodi .
 9. The Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges within the planning district.
 10. New Link/Widening of Certain Roads/ Development of Flyover Overs/ Railway under Bridge: The RMP2031 proposes upgration/ widening of certain roads and development of Flyovers/ Railway under Bridge/ pass, etc to be taken up within the planning district. The RMP2031 recommends that design of flyovers/ bridges be done considering proposed Mono Rail system.
 - a) 45 m wide road connecting ORR to SH35: A 45m wide road is proposed to be developed using existing alignment of New Horizon Collage Road and then Greenfield straight alignment to SH 35 from the junction of New Horizon Collage road and Doddakannelli – Kadu Beesanahalli Road crossing railway line. This road would be part of larger city wide network formation and is strategically placed between old airport road/ varthur road and Sarjapura Road. It is proposed that this 45m wide road is extended till BMR level Satellite Town Ring Road.
 - b) Development of existing roads as per RMP2031 proposal: The RMP2031 proposes that all existing roads like Old Airport Road/ Varthur Road, SH35, Balagere Road, Doddakannelli – Kadubeesanahalli Road, Panathur Road/ Gunjur Palya Road/ Gunjur-Mugalur Road, Muthasandra Main Road, Halasahalli Cross Road, Munnekollal Main Road, Bhoganahalli Road are developed as per proposed Right of Ways and are proposed road cross-sections.
 - c) Widening of Railway Underpass at Panathur: The RMP2031 proposes that the present railway underpass at Panathur be widened to four lanes to allow smoother vehicular traffic movement.
 - d) Clover Leaf Interchange Intersection of Proposed 45M wide road and PRR: The RMP2031 proposes that junction of proposed 45 Mt wide road and proposed PRR be a clover leaf interchange and no permission for development be granted within 250m from centre line of both the roads.
 - e) Geometric Improvement of SH35 at Varthur Kere Bund: The RMP2031 proposed that, while developing SH35 as per proposed RoW, geometric improvement of SH35 (which is also the bund for Varthur Kere), is taken up to smoothen the traffic flow.
 11. The RMP2031 has identified 15 junctions for geometric improvements for better and smoother traffic flows and to be taken up on priority, and particularly in Greenfield areas.

Protection of Lakes and Drainage

12. Majority of lakes within the PD have retained their characteristics despite new abutting developments. In order to protect and conserve lakes and streams as well as avoid flooding in future as surface runoff increases due to urbanisation, the RMP2031 proposes that all lakes and streams be demarcated on ground within two years from notification of RMP2031 and lake development plan be prepared for all the lakes within the PD.
13. As mentioned earlier, all these lakes are within PD fall within Koramangala Challaghatta watershed, and drain into Varthur kere. The natural drainage system has been classified as following:
 - a. Streams Between Bellanduru Kere and Varthur Kere and downstream of Varthru kere have been classified as Primary
 - b. Streams downstream of Gunjur Kere and Chikka Bellanduru Kere and leading to Varthur Kere have been classified as Secondary Streams
 - c. Streams upstream of Gunjur Kere and Chikka Bellanduru Kere have been classified as Tertiary.
14. RMP2031 proposes to retain the valley portion between Railway Line and Varthur Kere and downstream of Varthur Kere (till PRR/ BMA Boundary) as park and open space, thereby restricting developments in the valley area.

Upgradation of Urban Villages

15. The RMP2031 proposes that upgradation of erstwhile gramathans like Varthur, Balagere, Panathur, Gunjur, Chikka Bellandur, Gunjur Palya, Surhaunse and Valepura is undertaken in to provide necessary infrastructure and facilities.

Social and Physical Infrastructure Provisions

16. To meet the future requirements, the RMP2031 proposes development of 1 no. of Fire Station, 1 no of 220kv Sub-station, 5 DWCCs, 1 OWCCs, and 1 Bio – Methanation Unit for solid waste management within the planning district.
17. Further, the RMP2031 proposes that 1 graveyard be developed within the earmarked open spaces at appropriate location.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 24: Varthur – Gunjur

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Widening/ Upgradation of Certain Roads:
 - i. Widening of Railway Underpass on Panathur Road
 - ii. Development of Clover Leaf Interchange Intersection of Proposed 45m wide Road and PRR

iii. Development of Existing Village Roads as per proposed Right of Way

- Old Airport Road/ Varthur Road,
- SH35,
- Balagere Road,
- Doddakannelli – Kadubeesanahalli Road,
- Panathur Road/ Gunjur Palya Road/ Gunjur-Mugalur Road,
- Muthasandra Road,
- Halasahalli Cross Road,
- Munnekollal Main Road,
- Bhoganahalli Road

c. Junction Improvement Programme:

- Kundalahalli Gate
- Varthur Kodi
- Varthur Junction (Intersection of SH35 and Muthasandra Road)
- Intersection of SH35 and Balagere Road (near Varthur Police Station)
- Varthur Police Station Junction (Intersection of SH35 and Halasahalli Main Road)
- Gunjur Junction Intersection of SH35 and Gunjur-Mugalur Road
- Intersection of SH35 and Gunjur – Doddakannelli Road
- Kachamaranahalli Cross Gate Junction
- Chikka Bellandur
- Intersection of Panathur Road and Balagere – Gunjurpalya Road
- Intersection of Panathur Road and Bhoganahalli Road
- Intersection of Panathur Road and Doddakannelli-Kadubeesanahalli Road
- Intersection of Harohalli Road and Muthasandra Road
- Intersection of Velapura Road and Muthasandra Road
- Intersection of Gunjurpalya Road and Balagere-Gunjur Road

2. Development of Public Transport System:

- a. Metro - Peripheral Ring Road
- b. Mono Rail /LRT/BRTS: Trinity to Varthur Kodi
- c. Mono Rail /LRT/BRTS: Inner Peripheral Ring Road
- d. BMTC Bus Station: 03 Locations

3. Development of Multimodal Interchange Stations

- a. Kundalahalli Gate Junction and
- b. Varthur Kodi

4. Development of Parks and Open Spaces:

- a. Valley Portion between Railway Line and Varthur Kere
- b. Valley Portion downstream of Varthur Kere
- c. Other Park & Open Spaces as earmarked in PLU

5. Protection and Rejuvenation of Lakes and Streams:



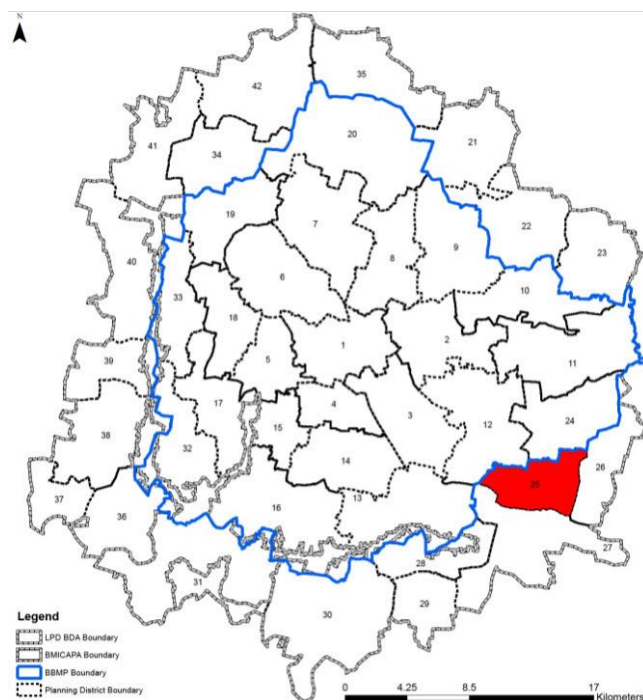
- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan
 - b. Varthur Kere Rejuvenation Plan
 - c. Gunjuru Kere Rejuvenation Plan,
 - d. Chikkabellanduru Kere Rejuvenation Plan
 - e. Panathur Kere Lake Rejuvenation Plan,
 - f. Gunjurpalya Kere Lake Rejuvenation Plan,
 - g. Bhoganahalli Kere Rejuvenation Plan,
 - h. Kachamaranahalli kere Rejuvenation Plan,
 - i. One unnamed Kere in Panathur
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

6. Upgradation of Urban Villages:

7. Development of Social and Physical Infrastructure/ Facilities:

a) Fire Station:	01 Nos.
b) Crematorium:	01 Nos.
c) Graveyard:	01 Nos.
d) 220kV Sub-Station:	01 Nos.
e) SWM Dry Waste Collection Centre:	05 Nos.
f) SWM Organic Waste Collection Centre:	01 Nos.
g) SWM Bio-Methanation Unit:	01 Nos.
h) GLSR/ISP/STP:	As per BWSSB plan for 110 Villages

26.PD 25: HALANAYAKANAHALLI – KODATHI SPECIAL DEVELOPMENT ZONE



Population (2011 Census): 15,614

Area of PD: 1999.70 ha

Gross Density (2011 Census): 08 pph

Villages in PD: 8

Gram Panchayats: Halanayakanahalli & Kodathi

Halanayakanahalli – Kodathi Planning District (PD No.11) is located outside BBMP but abutting to BBMP boundary with Sarjapura Road cutting through its centre. It is witnessing urban expansion along Sarjapura Road, Huskuru –Kodathi Road and areas abutting to BBMP boundary. It is being seen as next important IT/ ITES/ Business Office destination for being located close to electronic city (adjoining PD 27).

RMP2031 proposes to develop Special Development Zone promoting high density planned employment centres and residential developments.

A. EXISITING STATUS

1. Planning District 25 comprises of eight villages falling under two Gram Panchayats, namely Halanayakanahalli, Chikkanayakanahalli, Hadoshiddapura, Chikkakannelli, (all falling under Halanayakanahalli Gram Panchayat), Soolakunte, Kodathi, Mulluru and Kachamaranahalli (all falling under Kodathi Gram Panchayat).
2. The Sarjapura Road, State Highway 35, Chikkanayakanahalli Road, Kodathi – Huskuru Road, Kodathi – Dommasandra Road, Gunjur – Kodathi Road define the present circulation pattern within PD. Bengaluru – Hosur Railway Line runs north south through the PD. There is one Kodathi Bus depot is located within the PD.
3. Gramathana's (village settlements) are the main residential areas, while residential layouts and High rise apartment are present towards the western side (adjoining BBMP) and scattered as well. Major Gramathana's are Halanayakanahalli, Hodisiddapura, Kodathi and Sulikunte. Wipro IT SEZ is being developed within PD and commercial establishments are seen along Sarjapura road.
4. As per Census 2011, the PD had 15614 people, which is an increase by 240% from 2001 Census (6534). The workforce participation is 43.6 % of the total population. There are 3837 house- holds in this PD, with average household size 4.1 which is slightly higher in comparison to that of BMA (4.01). The Average Gross density is 7.83pph.

5. The PD is predominantly Agriculture with 66% of total PD area being under agriculture use. Residential land use accounts for 7% total PD area with majority of residential areas being located close to BBMP boundary, along Sarjapura Road and Gramathana's. The vast open spaces provide for opportunity to have planned and high density development. **Figure 26-1** and **Table 25-1** presents the existing land use map 2015 and existing land use area statement for Planning District respectively.

Figure 26-1: PD 25 Existing Land Use Map

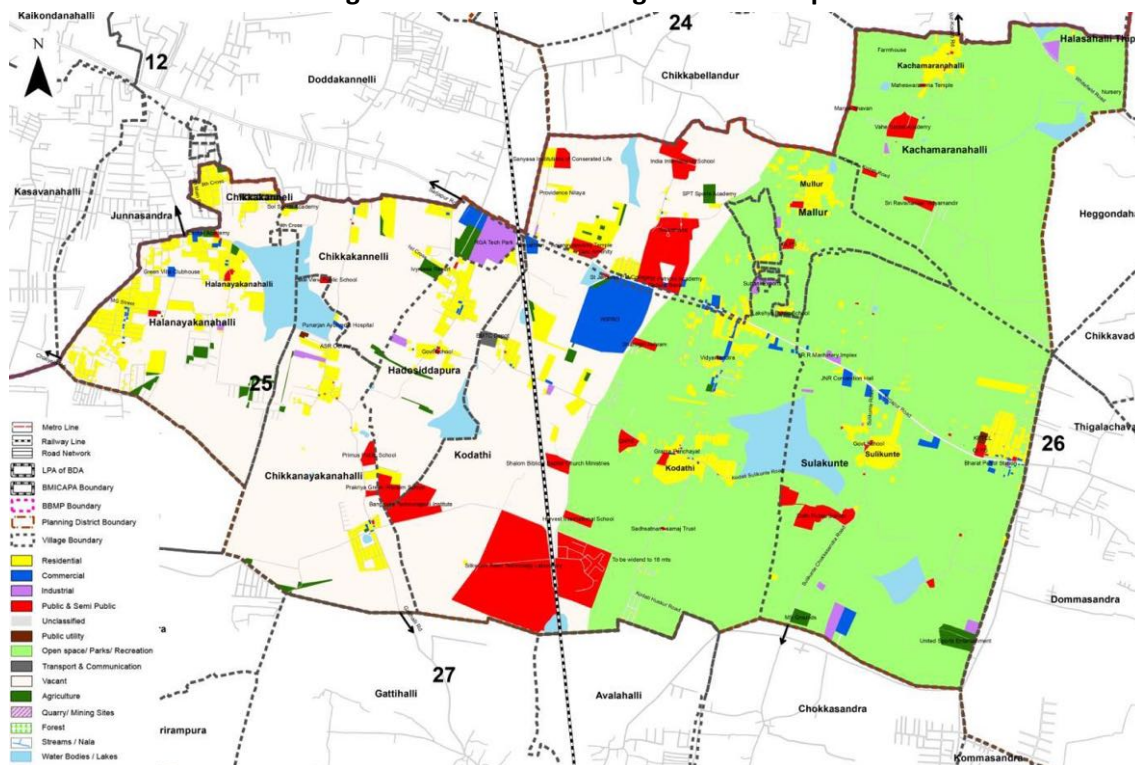


Table 26-1: PD 25 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	146.78	7.34
Commercial	9.22	0.46
Industrial	14.36	0.72
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	98.26	4.91
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.68	0.03
Parks & Open Spaces	15.47	0.77
Transport Communication	55.41	2.77
Vacant	274.63	13.73
Agriculture	1310.05	65.51
Forest	0.00	0.00
Streams	1.42	0.07
Water Bodies	73.41	3.67
Total	1999.69	100.00



6. As this PD is on the outskirts of BMA, very less developments on social infrastructure has been observed. There are 19 schools in this PD and some of the major schools are Delhi Public School, Sri Sri Ravishankar vidya Mandir and Harvest International School. There are Primary healthcare centres, but there is a lack of any major healthcare facility, and presently several areas in this PD do not have easy access to healthcare facilities within 5kms. There is a need of hospitals and other social infrastructure.
7. Kodathi kere, Halanayakanahalli Lake, Hadosiddapura Lake, Malluru Kere, Sulikunte Kere, are the five main lakes fully within PD and have retained their characteristics. While Kachamaranahalli kere, Gunjuru Kere, Chikkabellanduru Kere, and Avalahalli Kere are partly falling within PD. In addition there are 5 unnamed lakes, one in Halanayakanahalli (with dense plantation), two in Kodathi (both breached) and two in Sulikunte villages (not breached). All these lakes are within Koramangala Challaghatta watershed, and except for Halanayakanahalli lake drain into Varthur kere. Halanayakanahalli kere drain into Bellanduru Kere. The railway line broadly defines the drainage pattern.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH AND ENABLING ECONOMIC GROWTH, INTEGRATION OF CITY CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION.

PROPOSALS

11. PD is witnessing transforming rapidly into urban landscape and developments are following radial as well as scattered development pattern. It becomes imperative that RMP2031 directs for planned urban development and promotion of economic growth along proposed major Ring and Radials.
12. RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Halanayakanahalli – Kodathi is one of these nodes/ zones proposed to be development. The guiding principles for developing PD as Special Development Zone is as following:
 - a. Promotion of Economic Growth along Rings/ Radials
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption
 - c. Promotion of Transit Oriented Development around Metro/ Mono Rail Stations
 - d. Protection and Conservation of Lake System
 - e. Planned Open & Open Spaces
13. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 26-2 and Table 26-2 respectively. The proposed land use has been designed to promote the economic activities along PRR, and major roads while residential use zone would promote work live play concept. Park & open spaces have been distributed across the planning district and are mostly located around lakes.

Figure 26-2: PD 25 Proposed Land Use Map

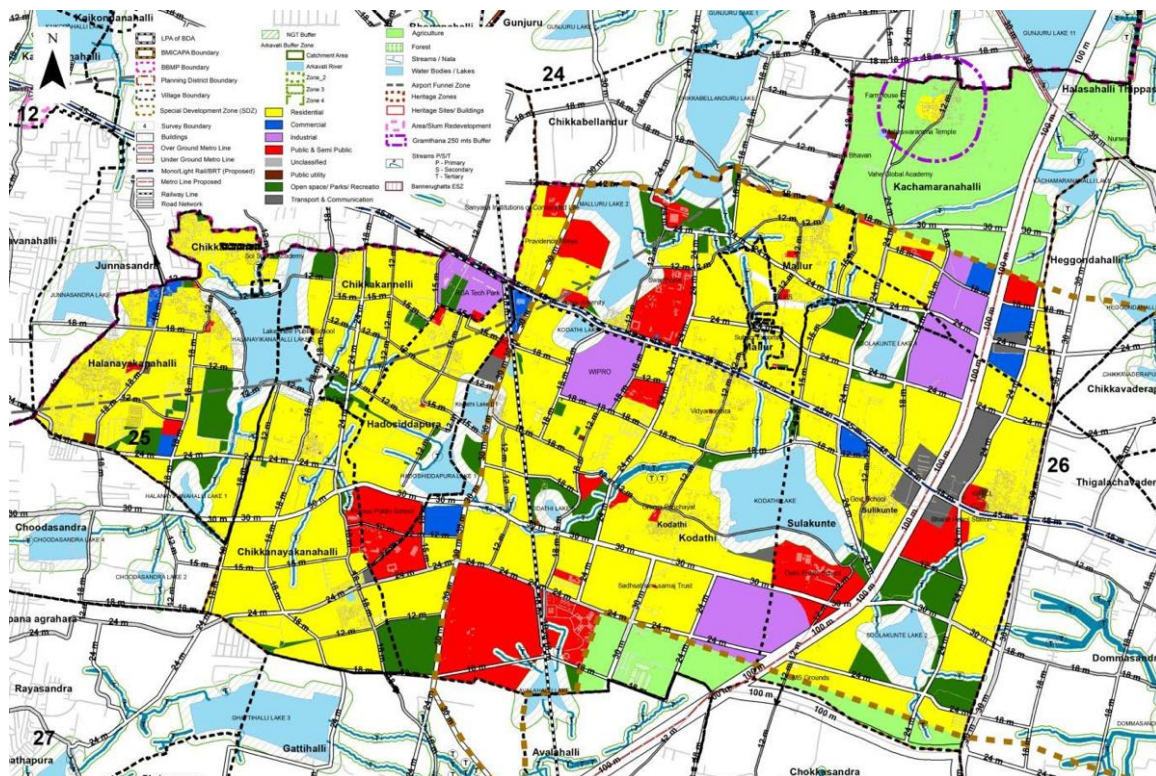


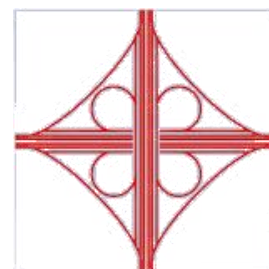
Table 26-2: PD 25 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	837.61	47.79
Commercial	23.72	1.35
Industrial	85.17	4.86
Public & Semi Public	150.69	8.60
Unclassified	0.00	0.00
Public Utility	1.62	0.09
Parks / Open Spaces	101.62	5.80
Transport & Communication	205.06	11.70
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	69.34	3.96
NGT Buffer	277.69	15.85
Total Developable Area	1752.51	100.00
Agriculture	247.17	-
Total PD Area	1999.69	-

Traffic and Transportation

14. The Proposed Northern Peripheral Ring Road, Proposed Inner Peripheral Ring Road and Sarjapura Road along with existing Chikkanayakanahalli Road, Kodathi – Huskuru, Gattihalli Road and Gunjuru – Kodathi, and lakes, has formed basis for new circulation network within the planning district.

15. It is proposed that all master plan roads within Planning District be developed as per the proposed cross section for respective widths, as to ensure that footpaths and cycle tracks are developed during the road development. This shall help improve the accessibility within the planning district as this will facilitate movement of non-motorised transport.
16. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. Metro PRR Link: It is proposed to develop metro link along proposed PRR at city level. It is proposed to develop metro stations at a) Intersection of PRR and SH35 (near Gunjur Kere), b) Interchange with BMTC (in Kachamaranahalli Village) at the centre of proposed major employment centre, and c) Intersection of PRR with Sarjapura Road (interchange with Mono Rail 5).
 - b. Mono Rail / LRT/ BRTS on Sarjapura Road: It is proposed to develop a Mono Rail link along the Sarjapura Road from Ibbalur Metro Station till Tchuddadenahalli on Sarjapura Main Road near BMA boundary. The proposed Mono Rail link passes through this Special Development Zone providing much needed connectivity with Metro ORR as well as Metro PRR. The first station within PD is an Interchange with Mono Rail along Inner Peripheral Ring Road and followed by stations along Sarjapura road at a) Wipro SEZ, b) Kodathi Gate, c) Gouthamagara, d) Interchange with Metro at PRR, e) Muthanallur Cross, f) Dommasandra Circle, and g) the terminal station at Tchuddadenahalli.
 - c. Mono Rail / LRT/ BRTS around Inner Peripheral Ring Road passes through the PD and it is proposed to develop stations at a) Kadugodi (interchange with CRS, BMTC Kadugodi Bus Station & Whitefield Metro), b) Hope Farm, c) Whitefield Police Station, d) Whitefield, d) Hagadur, and e) Varthur Kodi then leading to Varthur Village.
17. Intermodal Interchange Stations are proposed to be developed at 2 locations – a) Kachamaranahalli Village , and b) Intersection with Sarjapura Road at Sulikunte.
18. The Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges within the planning district.
19. Widening of Certain Roads/ Development of Flyover Overs/ Railway under Bridge: The RMP2031 proposes upgration/ widening of certain roads and development of Flyovers/ Railway under Bridge, etc, to be taken up within the planning district. The RMP2031 recommends that design of flyovers/ bridges be done considering proposed Mono Rail system.
 - a) Widening of Railway Bridge: The RMP2031 proposes that the present railway bridge be widened from four lanes to six lanes in future.
 - b) Clover Leaf Interchange Intersection of Sarjapura Road and PRR: The RMP2031 proposes that junction of Sarjapura Road and proposed PRR be a clover leaf interchange. Further, at this location an intermodal interchange station is proposed to be developed between Metro PRR and Mono Rail Sarjapura Road. Both the design of junction and intermodal interchange be done together.





- c) Flyover at Dommasandra Circle: The RMP2031 proposes that a six lane flyover be constructed (Sarjapura Road Direction) at Dommasandra Circle. This junction is also proposed for geometric improvement. Hence the development of flyover and junction improvement be done together so as to provide seamless and uninterrupted vehicular movement and pedestrian crossing facilities.
 - d) Widening of existing village roads: The RMP2031 proposes that all existing are developed as proposed by RMP 2031 and as per proposed road cross-sections.
- 20. The RMP2031 has identified several junctions for geometric improvements for better and smoother traffic flows and to be taken up on priority, and particularly in Greenfield areas.
 - 21. The RMP2031 has identified several junctions for geometric improvements for better and smoother traffic flows and to be taken up on priority, and particularly in Greenfield areas.
 - 22. Majority of lakes within the PD have retained their characteristics despite developments are coming abutting them. In order to protect and conserve lakes and streams as well as avoid flooding in future as surface runoff increases due to urbanisation, the RMP2031 proposes that all lakes and streams be demarcated on ground within two years from notification of RMP2031 by Gram Panchayats and lake development plan be prepared for all the lakes within the PD.
 - 23. As mentioned earlier, all these lakes are within PD fall within Koramangala Challaghatta watershed, and drain into Varthur kere except for Halanayakanahalli kere. The Halanayakanahalli kere drain into Bellanduru Kere. This is probably due the railway line, which divides the PD and also defines the drainage pattern.
 - 24. The classification natural drainage system defined, all streams within the planning districts have been classified as Tertiary.
 - 25. The RMP2031 proposes that upgradation of all gramthans of the villages is undertaken in time bound manner to provide necessary infrastructure and facilities.
 - 26. To meet the future requirements, the RMP2031 proposes development of 1 no. of Fire Station, 1 no of 220kv Sub-station, 10 DWCCs, 2 OWCCs, and 1 Bio – Methanation Unit for solid waste management within the planning district.
 - 27. Further, the RMP2031 proposes that 1 crematorium and 1 graveyard be developed within the earmarked open spaces at appropriate location.
 - 28. The RMP2031 proposes that a detailed water supply and sewage network plan for areas outside BBMP (though outside its jurisdiction) but within Conurbation be prepared. This will help determine the locations for WTP, GLSR and OHTs.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 25: Halanayakanahalli – Kodathi

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Widening/ Upgradation of Certain Roads:
 - iv. Widening of Railway Bridge on Sarjapura Road



- v. Development of Clover Leaf Interchange Intersection of SH35 and PRR
- vi. Development of Flyover at Dommasandra Circle
- vii. Upgradation Of Existing Village Road
 - Chikkanayakanahalli Road,
 - Kodathi – Huskuru,
 - Gattihalli Road,
 - Gunjuru – Kodathi,
 - Dommasandra Huskuru Road,
 - Sulikunte-Chokkasandra Road,
 - Kodathi – Sulikunte Road
 - Dommasandra – Chandapura Road
- c. Junction Improvement Programme:
 - Carmelram Gate
 - Ambedkar Nagar Junction (intersection of Sarjapura Road and Road leading to Mulluru.
 - Gouthamagara Junction (intersection of Sarjapura Road and Sulikunte Road).
 - Muthanallur Cross (Intersection of Sarjapura Road and Dommasandra – Chandapura Road
 - Intersection of Hukuru – Dommasandra Road and Kodathi – Huskuru Road
 - Intersection of Sulikunte – Chokkasandra Road and Kodathi – Sulikunte Road

2. Development of Public Transport System:

- a. Metro - Peripheral Ring Road
- b. Mono Rail /LRT/BRTS: Ibbalur to Tchuddadenahalli
- c. Mono Rail /LRT/BRTS: Inner Peripheral Ring Road
- d. BMTC Bus Station: 03 Locations
- e. BMTC Depot: 01 location along PRR

3. Development of Multimodal Interchange Stations

- a. Kachamaranahalli Village and
- b. Intersection of PRR and Sarjapura Road at Sulikunte.

4. Development of Logistic Hub/ Truck Terminal

- a. At the intersection of PRR and Sarjapura Road as indicated in PLU Map

5. Development of Parks and Open Spaces: as earmarked in PLU

6. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan



- b. Kodathi Kere Rejuvenation Plan
 - c. Halanayakanahalli Lake Rejuvenation Plan,
 - d. Hadosiddapura Lake Rejuvenation Plan,
 - e. Malluru Kere Rejuvenation Plan,
 - f. Sulikunte Kere Rejuvenation Plan,
 - g. Kachamaranahalli kere Rejuvenation Plan,
 - h. Gunjuru Kere Rejuvenation Plan,
 - i. Chikkabellanduru Kere Rejuvenation Plan
 - j. Avalahalli Kere Rejuvenation Plan
 - k. Five Unnamed Dried lakes Rejuvenation Plan
- c. Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

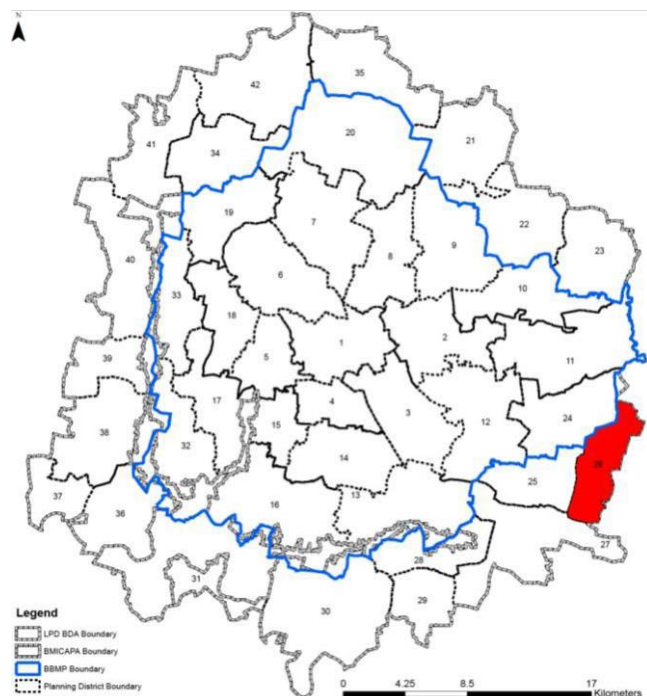
7. Upgradation of Urban Villages

8. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|---|--------------------------------|
| a) Fire Station: | 01 Nos. |
| b) Crematorium: | 01 Nos. |
| c) Graveyard: | 01 Nos. |
| d) 220kV Sub-Station: | 01 Nos. |
| e) SWM Dry Waste Collection Centre: | 10 Nos. |
| f) SWM Organic Waste Collection Centre: | 02 Nos. |
| g) SWM Bio-Methanation Unit: | 01 Nos. |
| h) WTP: | as required and as per details |

9. Preparation of Water Supply and Sewage Network Plan for PD 25 (Gram Panchayath Halanayakanahalli and Kodathi)

27. PD 26: Dommasandra Special Development Zone



Population (2011 Census): 21300

Area of PD: 1938.9 Ha

Gross Density (2011 Census): 11 PPH

Villages in PD: 9

Gram Panchayats: Dommasandra, Yamare & Neriga

Dommasandra Planning District (PD No.26) is located outside BBMP on the periphery and on south eastern side of BMA. Sarjapura Road passes through its southern side. It is witnessing urban expansion along Sarjapura Road and SH 35 in a predominantly agricultural landscape.

RMP2031 proposes growth along the Sarjapura road while retaining the agriculture landscape rest of the PD.

1. Planning District comprises of nine villages falling under three different Gram Panchayats, namely Dommasandra GP, Yamare GP and Neriga GP. The nine Villages are a) Dommasandra (Dommasandra GP), Thigalachavadadenahalli (Yamare GP), Heggondahalli, Chikkavaderapura, , Ramanayakanahalli, Halasahalli Thippasandra, Nekkundi Dommasandra, Katheriguppe and Chikkanekkundi (all in Neriga GP).
2. The Sarjapura Road, State Highway 35, Dommasandra – Channasandra Road, Huskuru – Dommosandra Road, Gunjur – Magalur Road, Halasahalli Cross Road/ Nekkundi Dommasandra Road defines the present circulation pattern within PD.
3. Gramathana's (village settlements) are the main residential areas, while residential layouts and High rise apartment are present along Sarjarapura Road. Dommasandra is the largest village with majority of PD's population residing in Dommasandra.

A. Existing Status

Demography

4. As per Census, in 2011 PD had 21300 residents, which has increased by 53.7% from the year 2001 (13857). The workforce participation is 42% (with 8961 resident workers) of the PD population. There are 5374 households with average household size 4.0 which is very similar to the average household size in BMA (4.01). The Average Gross density is 11 PPH.
5. The PD is predominantly Agriculture with 77% of total PD area being under agriculture use. Residential land use accounts for 6% total PD area with majority of residential areas being located along Sarjapura Road and Dommosandra village. The vast open spaces provide for opportunity to have planned and high density development. Figure 27-1 and **Table 27-1**

present the existing land use map 2015 and existing land use area statement for Planning District 26 respectively.

6. As this PD is on the outskirts of BMA, very less developments on social infrastructure has been observed, however, there are 17 schools in this PD including some international schools and one private playground. PD is devoid of any major healthcare facilities. Two cricket grounds are present in Dommasandra Village.

Figure 27-1: PD 26 Existing Land Use Map

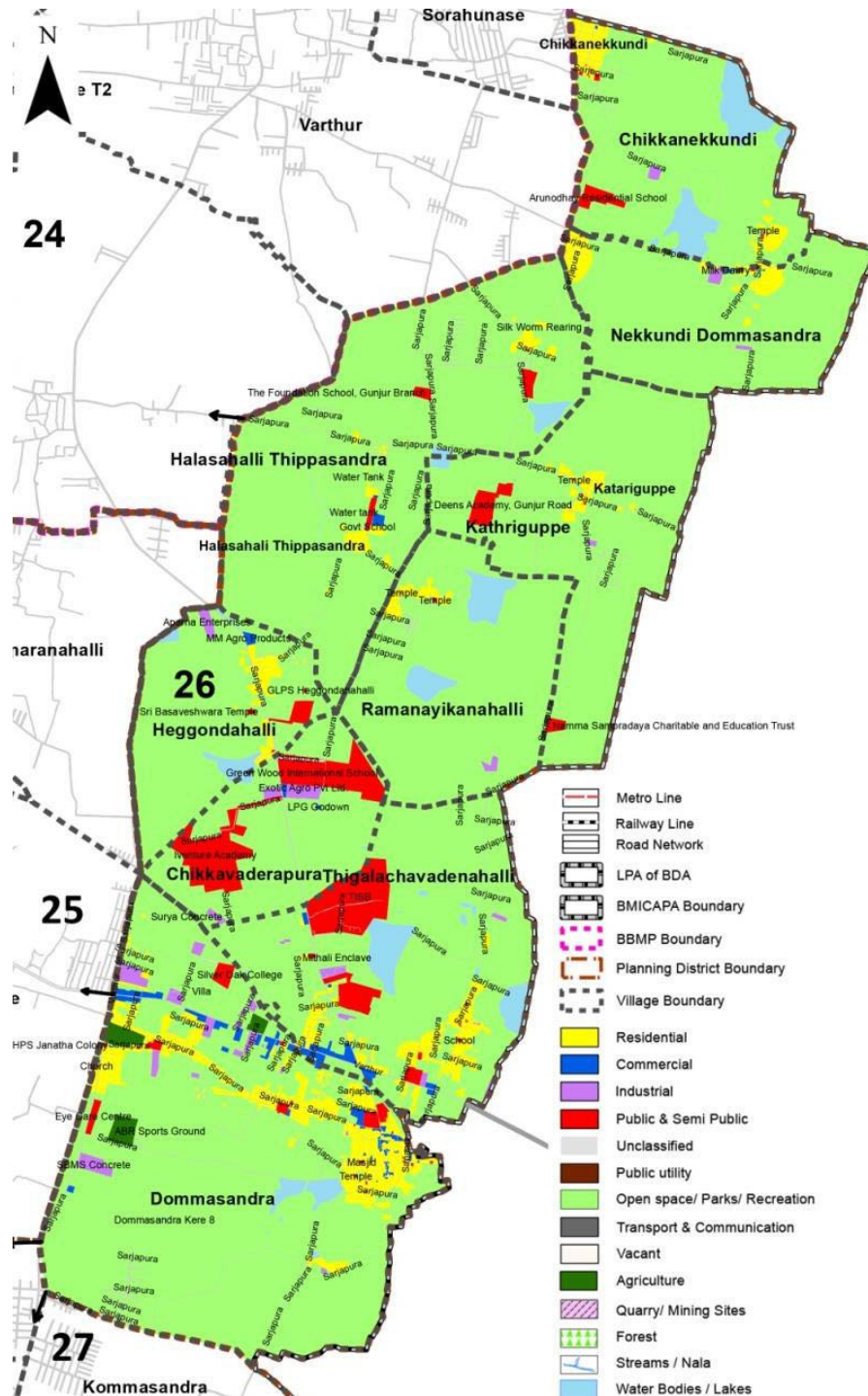




Table 27-1: PD 26 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	98.26	5.07
Commercial	11.49	0.59
Industrial	16.66	0.86
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	65.94	3.40
Unclassified	0.00	0.00
Public Utility	0.03	0.00
Parks & Open Spaces	6.08	0.31
Transport Communication	30.96	1.60
Vacant	143.63	7.41
Agriculture	1507.92	77.77
Forest	0.00	0.00
Streams	0.41	0.02
Water Bodies	57.53	2.97
Total	1938.91	100.00

7. There are 12 lakes either partly or fully falling within the Planning District. Chikkanekkundi and Ramanayakanahalli village both have two lakes. Chikkanekkundi has Muthasandra Kere and Chikkanekkundi Kere, whereas Ramanayakanahalli has Ramanyakanahalli Kere and unnamed lake. Similarly Thigalachavadadenahalli village has two lakes namely Thigalachavadadenahalli kere and Chambenahalli kere (parly falling in Anekal Planning Authority. Halasahalli lake, Dommasandra lake, Heggondahalli lake, Chikkavaderapura lake, Nekkundi Dommasandra kere and Kachamaranahalli kere (part) are other lakes falling within PD. Most of the lakes are witnessing growth of vegetation within the lake bed and also farming. Nekkundi Dommasandra kere has been breached due to plotted development.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH ALONG RADIAL ROAD, VILLAGE DEVELOPMENT AND ENVIRONMENTAL PROTECTION.

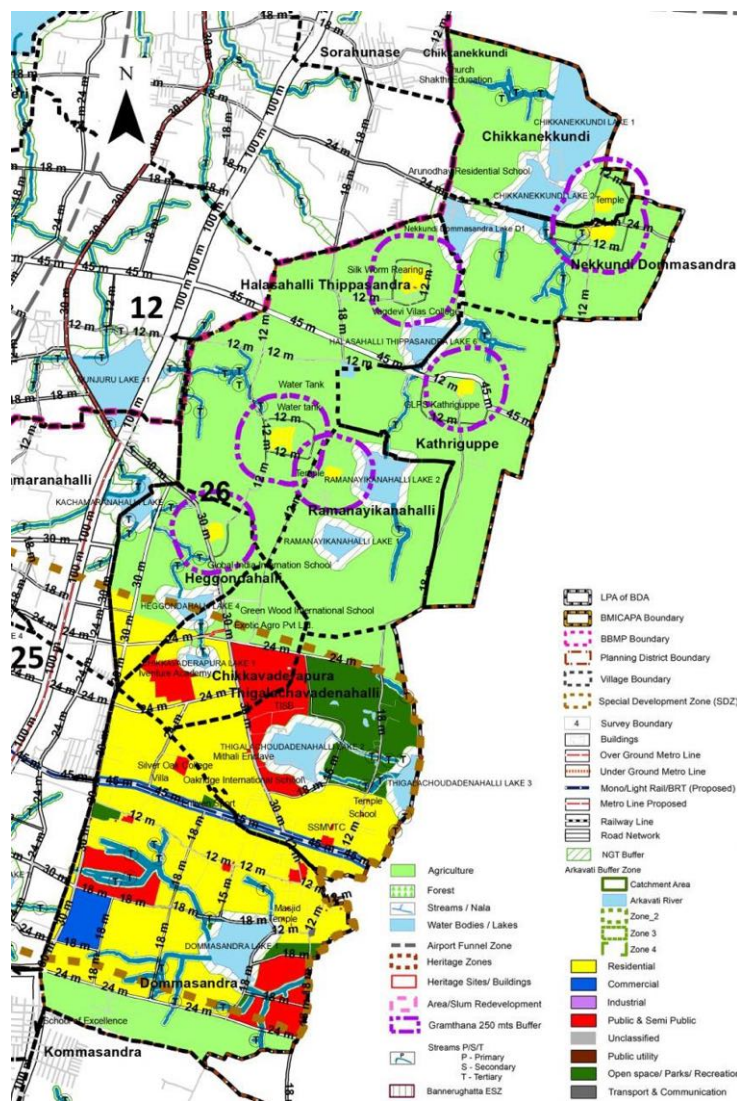
PROPOSALS

- PD is witnessing Radial growth and is an extension to PD 25 which has been designated as Special Development zone promoting growth along radial road i.e. Sarjapura Road. The RMP2031 therefore proposes Radial Growth along the Sarjapura Road while retaining rest the area under Planning Zone C (preservation). However, RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Halanayakanahalli – Kodathi (adjoining PD) and PD Dommasandra are among these nodes/ zones. Hence, a band

along the Sarjapura road has been brought under development framework and is designated as Special Development Zone.

2. The guiding principles for developing Dommasandra PD as Special Development Zone as well as preserving its agriculture landscape are as following:
 - a. Promotion of Radial Growth along Sarjapura Road
 - b. Protection and Conservation of Lake System
 - c. Planned Open & Open Spaces
 - d. Preservation of Agriculture Zone
3. The proposed land use has been designed to promote the economic activities along Sarjapura Road while residential use zone would promote work live play concept. In order to support Sarjapura Road two parallel roads from PRR are proposed till BMA Boundary. Sarajapura Road, PRR and SH35 have formed the basis for development of Grid Pattern Road Network with the planning district. Park & open spaces have been distributed across the planning district and are mostly located around lakes. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 27-2** and **Table 27-2** respectively.

Figure 27-2: PD 26 Proposed Land Use Map



**Table 27-2: PD 26 Proposed Land Use Area Statement**

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	842.62	48.99
Commercial	57.42	3.34
Industrial	166.63	9.69
Public & Semi Public	60.02	3.49
Unclassified	0.00	0.00
Public Utility	1.90	0.11
Parks / open spaces	46.29	2.69
Transport & Communication	233.12	13.55
Forest	0.00	0.00
Streams	2.32	0.13
Water Bodies	110.80	6.44
NGT Buffer	198.89	11.56
Total Developable Area	1719.99	100.00
Agriculture	2193.70	-
Total PD Area	3913.70	-

4. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation and livability. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
5. The Sarjapura Road, SH35, Dommasandra –Chandapura Road, Gunjur – Mugalur Road, and Halasahalli Cross Road/ Nekkundi Dommasandra Road has formed basis for new circulation network within the planning district, which is a grid patterned road network within conurbation limits while outside conurbation in agriculture zone existing village road have been retained. Further, in agriculture zone, around Gramathans, it is proposed to develop a Gramathana Periphery Road.
6. It is proposed that all master plan roads (including roads connecting villages) within Planning District be developed as per the proposed cross section for respective widths, as to ensure that footpaths and cycle tracks are developed during the road development. This will help improve the accessibility within the planning district as this will facilitate movement of non-motorised transport.
7. RMP2031 proposed Mono Rail/ LRT/ BRTS along Sarjapura road is the main stay public transport providing connectivity with rest of city level Public Transport Network . There are three stations within PD – namely a) Muthanallur Cross, b) Dommasandra Circle, and c) the terminal station at Tchuddadenahalli (with BMTC Bus Station). Multimodal Interchange Stations is proposed to be developed at Tchuddadenahalli.
8. The Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges within the planning district.



9. To improve the public transport connectivity across Planning District, it is proposed that BMTC bus stations are developed at Nekkundi Dommasandra, Kathriguppe and Dommasandra.
10. Widening of Certain Roads/ Development of Flyover Overs: The RMP2031 proposes upgradation/ widening of certain roads and development of Flyovers/ Railway under Bridge, etc, to be taken up within the planning district. The RMP2031 recommends that design of flyovers/ bridges be done considering proposed Mono Rail system.
 - e) Flyover at Dommasandra Circle: The RMP2031 proposes that a six lane flyover be constructed (Sarjapura Road Direction) at Dommasandra Circle.
 - f) Widening of existing village roads: The RMP2031 proposes that all existing roads are upgraded as proposed by RMP 2031 and are developed as per proposed road cross-sections.
8. The PD has four different watersheds, while Koramangala Challaghatta is well known and has defined nomenclature, the other three have been named by RMP 2031 and are a) Chikkanekkundi – Muthsandra, b) Heggagondanahalli – Ittuguru and c) Dommasandra - Yamare. It is important to note here that watershed analysis is limited to BMA only, and for this reason three watersheds within a small area have been defined.
9. Chikkavaderapura Kere, Heggondanahalli Kere, and Kachamaranahalli Kere are part of Koramangala Challaghatta valley and drain into Varthur Kere. Ramanayikanahalli, Halasahalli Kere, Nekkundi Dommasandra, Chikkanekkundi Kere and Muthsandra Kere all drain into primary stream leading from Varthur Kere and joining to Kelavarapelli Reservoir. Whereas Thigalachoudadenahalli Kere and Dommasandra Kere despite being in different watershed drain into Ittangur Kere outside BMA.
10. As mentioned earlier, Most of the lakes are witnessing growth of vegetation within the lake bed and also being used for farming, whereas Nekkundi Dommasandra kere has been breached due to plotted development. In order to protect and conserve lakes and streams as well as avoid flooding in future as surface runoff increases due to urbanisation within the PD and adjoining PD, the RMP2031 proposes that all lakes and streams be demarcated on ground within two years from notification of RMP2031 by Gram Panchayats and lake development plan be prepared for all the lakes within the PD. It is proposed that breached lakes/ tanks are redeveloped and rejuvenated as well by relocating the activities being performed within lake bed.
11. As per the classification of natural drainage system within BMA, all the streams within the planning districts have been classified as Tertiary Streams.
12. The RMP2031 proposes that upgradation of Gramthan's of the villages within Conurbation is undertaken in time bound manner to provide necessary infrastructure and facilities.
13. To meet the future requirements, the RMP2031 proposes development of 1 no. of Fire Station, 1 no of 220kv Sub-station, 8 DWCCs (3 within Conurbation Limits and one each in Gramathana's), and 1OWCCs, for solid waste management within the planning district.
14. RMP2031 proposes that 1 crematorium and 1 graveyard will be developed within the earmarked open spaces at appropriate location.



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 26: Dommasandra

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Development of Flyover at Dommasandra Circle
- c. Widening Of Existing Village Road
 - Dommasandra – Chandapura Road
 - Dommasandra Huskuru Road,
 - Gunjur – Mugalur Road,
 - Halasahalli Cross Road/ Nekkundi Dommasandra Road
- d. Junction Improvement Programme:
 - Dommasandra Junction
 - Muthanallur Cross (Intersection of Sarjapura Road and Dommasandra – Chandapura Road
 - Intersection of Hukuru – Dommasandra Road and Kodathi – Huskuru Road

2. Development of Public Transport System:

- a. Mono Rail /LRT/ BRTS
- b. BMTC Bus Station: 03 Locations

3. Development of Intermodal Interchange Stations

- a. Tchuddadenahalli Interchange

4. Development of Gramathana Periphery Roads and Village Roads: It is proposed to develop gramathana periphery roads for following gramathans (as indicated in PLU Map)

5. Development of Parks and Open Spaces

- a. Development of Sports Complex
- b. Parks and Open Spaces as demarcated in PLU Map

6. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan
 - b. Dommasandra Kere Rejuvenation Plan
 - c. Chikkavaderapura Kere Rejuvenation Plan,
 - d. Heggondahalli Kere Rejuvenation Plan,
 - e. Kachamaranahalli Kere Rejuvenation Plan
 - f. Ramanayakanahall Rejuvenation Plan,
 - g. Halasahalli Kere Rejuvenation Plan,
 - h. Nekkundi Dommasandra Kere Rejuvenation Cum Resettlement Plan,

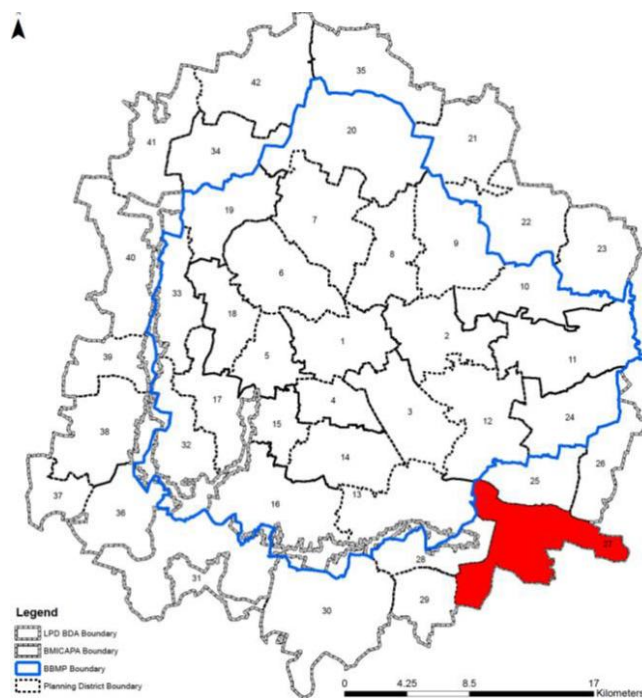


- i. Chikkanekkundi Kere Rejuvenation Plan
 - j. Muthsandra Kere Rejuvenation Plan
 - k. Thigalachoudadenahalli Kere Rejuvenation Plan
 - l. Two Unnamed Dried lakes Rejuvenation Plan
- c. Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

7. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|---|---|
| a) Fire Station: | 01 Nos. |
| b) Crematorium: | 01 Nos. |
| c) Graveyard: | 01 Nos. |
| d) 220kV Sub-Station: | 01 Nos. |
| e) SWM Dry Waste Collection Centre: | 08 Nos. |
| f) SWM Organic Waste Collection Centre: | 01 Nos. |
| g) WTP, OHT, GLSR and STP | to be decided based on Water Supply & Sewage Network Plan |
| h) Preparation of Water Supply and Sewage Network Plan for Conurbation Area | |

28. PD 27: SINGASANDRA-HEBBAGODI-KOMMASANDRA



Population (2011 Census): 90831

Area of PD: 3913.6 Ha

Villages in PD: 21

Gross Density: 23.2 pph

This Planning District is located on the south eastern side of BMA, outside BBMP. Huskur temple is an important landmark in this PD.

The RMP2031 proposes to retain the existing agricultural landuse prevailing in this planning district and develop part of the conurbation adjoining electronic city as a special development zone.

1. This PD consists of 21 villages namely Gollahalli, Thirupalya (comes under Jigani Hobli), Hebbagodi, Gollahalli, Veerasandra (comes under Attibele Hobli), Chikkanagamangala, Gulamangala, Shingena Agrahara, Ghotamaranahalli, Madivala, Kaggalipura, Kommasandra, Hosahalli, Chokkasandra, Harohalli, Huskuru, Avalahalli, Ghuttihalli, Shrirampura, Rayasandra, Choodasandra (comes under Sarjapura Hobli).

A. EXISTING STATUS

Demography

2. As per Census 2011, PD 27 has a populaion of 90831, which has increased rapidly by 189 % from the year 2001 (31329). The total resident workers in this PD are 54026, which makes up more than 59 % of the populaion in this PD. There are 24790 households in this PD, with average household size 3.66 which is less than the average household size in BMA (4.01). The Average Gross density is 23.2 pph and the residenial density is 327.6 pph.

Industry and Commerce

3. The predominant landuse is under agriculture. Veersandara Industrial Area, part of Bommasandara Industrial area and APMC (Agriculture Produce Market Commitee) fruit market come within this Planning District. Some brick kilns factories and small scale industries under KSSIDC (Karnataka State Small Scale Industries Development Corporation) are also seen in this Planning District

Existing Land Use

4. The predominant land use in this planning district is agricultural landuse. The existing landuse map and the land use area statement are presented below in Figure 28-1 and Table 28-1 respectively.

Figure 28-1: PD 27 Existing Land Use Map

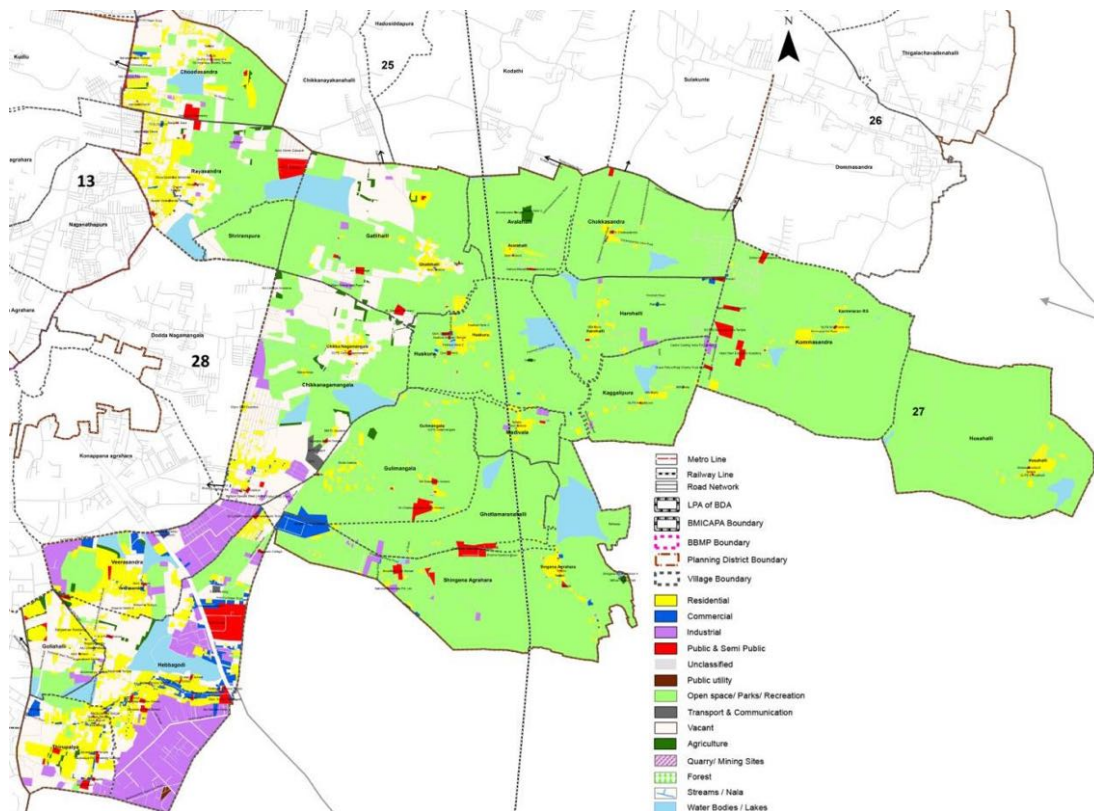


Table 28-1: PD 27 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	308.75	7.89
Commercial	40.31	1.03
Industrial	184.90	4.72
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	56.91	1.45
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.93	0.02
Parks & Open Spaces	9.96	0.25
Transport Communication	122.13	3.12
Vacant	773.90	19.77
Agriculture	2234.43	57.09
Forest	0.00	0.00
Streams	4.52	0.12
Water Bodies	176.96	4.52
Total	3913.70	100.00



Housing and Slums

5. This planning district has grown very rapidly owing to economic growth in this area and the neighboring economic nodes like Electronic City. It is seen that there are several upcoming residential layouts in this PD

Traffic and Transportation

6. Huskur Road is the major arterial road passing through the PD, part of Hosur road (NH 7) and Chandapura-Dommasandara road comes under this planning district as well. Railway line is also passing through this Planning District. There is Chikkanagmangala bus depot in this PD

Physical and Social Infrastructure

7. This planning district has several schools (26 in number); there is a gap in tertiary healthcare infrastructure in this PD. Present gaps are being met by the availability of good educational facilities and healthcare centres in the neighbouring PDs. Primary healthcare is being provided by the primary health centres in the villages within this PD. There is a gap in water supply and sanitation facilities which needs to be met. There is one integrated waste processing unit (IWPU) in this P.D.

Lakes & Drainage

8. There are several lakes in this planning district like Sreerampura (Partly), Tirupalya (partly), Tirupalya Kere 2, Veerasandra, Hebbagodi Lake, Chikkanagamangala Lake, Gulimangala, Harohalli, Chokkasandra, Gatahalli, Huskur, Shingenagrahara Kere, Gotemaranahalli Kere, Hosahalli Kere (Gandhi Nagara), Chokkasandra Kere, C. Harohalli Kere, Huskooor Kere. The natural heritage in the form of lakes needs to be preserved.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PRESERVATION OF AGRICULTURAL BELT, PLANNED DEVELOPMENT IN THE SPECIAL DEVELOPMENT ZONE, VILLAGE DEVELOPMENT

PROPOSALS

1. Most part of this planning district falls under the 'consolidation zone' of the RMP 2031 where it is proposed to provide appropriate infrastructure to support planned higher density development. The agricultural areas outside the conurbation are proposed to be retained in its natural state.
2. The Proposed Land Use map and Land Use Area Statement is presented in Figure 28-2 and Table 28-2.
3. Public Transport System planned at city level passes through this PD and they are
 - a. Electronic City Metro (It is proposed that electronic city link is extended till Chandapura)
 - b. The RMP2031 proposes Metro along PRR.
 - c. To improve the public transport facility it is proposed to develop a bus depot in PD 27
4. A 30 m road is proposed by BMRDA for BMR circulation plan has been incorporated with certain amendments looking into the ground conditions.

Figure 28-2: PD 27 Proposed Land Use Map

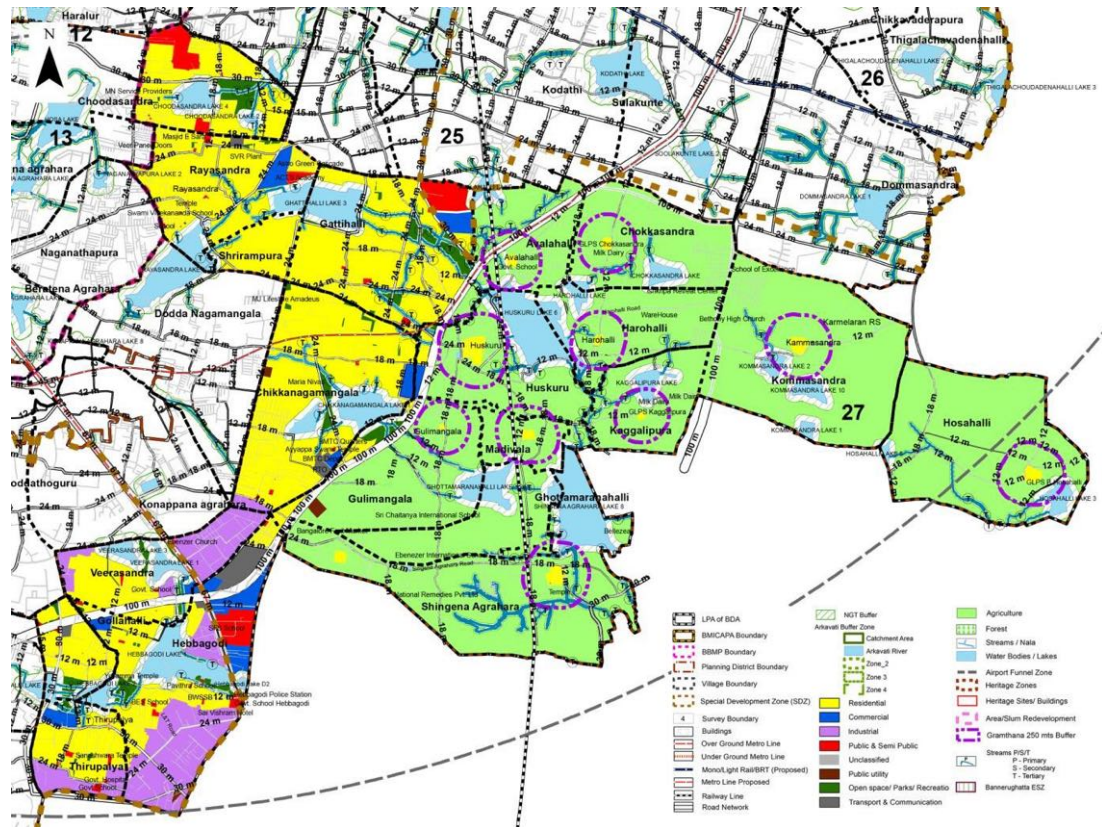


Table 28-2: PD 27 Proposed Landuse Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential		
Commercial		
Industrial		
Public & Semi Public		
Unclassified		
Public Utility		
Parks / open spaces		
Transport & Communication		
Forest		
Streams		
Water Bodies		
NGT Buffer		
Total Developable Area		
Agriculture	2193.70	-
Total PD Area	3913.70	-

- The RMP2031 proposes development of the following roads: Hullimangala Road, Singena Agrahara Road, Chandapura Dommasandra Road. The PRR is proposed across this planning



- district. The RMP2031 proposes appropriate road infrastructure to improve connectivity in the areas along the PRR that support economic activities.
6. A PD level large Park is proposed to be developed for providing recreational facilities to residents.
 7. The RMP2031 proposes the protection and conservation of the lakes: Tirupalya Kere 2, Veerasandra, Hebbagodi Lake, Chikkanagamangala Lake, Gulimangala, Harohalli, Chokkasandra, Gatahalli, Huskur, Shingena Agrahara Kere , Gotemaranahalli Kere, Hosahalli Kere (Gandhi Nagara), Chokkasandra Kere, C. Harohalli Kere, Huskooor Kere. The natural heritage in the form of lakes needs to be preserved.
 8. **Protection of streams:** The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM and no sewage be allowed to flow into the streams and lakes. The important natural drains within the PD are classified as follows:
 - a. Drainage downstream of Doddathoguru lake 3 via Konappana Agrahara Lake 8, Rayasandra lake 1, Ghattihalli lake 3 towards Huskuru Lake 6 reaching Shingena Agrahara lake 8 = Tertiary
 - b. Drainage downstream of Chikkanagamangala lake via Gottamaranahalli lake reaching Shingena Agrahara lake 8 = Tertiary
 9. To mitigate provide comfort to pedestrians and NMT facilities and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.
 10. The RMP2031 proposes development of fire station at Hebbagodi as required by the Karnataka Fire and Emergency Services. The masterplan also proposes a 200 KV substation and 4 Dry Waste Collection Centers in PD 27.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 27

1. Road Development Plan:

- a. Road development plan is to be prepared for all Master Plan roads.
- b. Junction improvement plan
 - i. Singhena Agrahara cross
 - ii. Huskur Gate
 - iii. Intersection of Huskur road and Singena Agrahara
- c. Safe Pedestrian Crossings
 - i. Huskur Gate on Hosur Road
- d. BMR Regional Link

2. Development of Transportation Infrastructure:

- a. Metro: Metro is proposed along the PRR in Phase 3.
- b. One Multi modal hub is proposed at Huskur Gate on the Hosur Main road.
- c. Bus depots are proposed at Huskur Village and at Huskur Gate on Hosur Road.

3. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated.

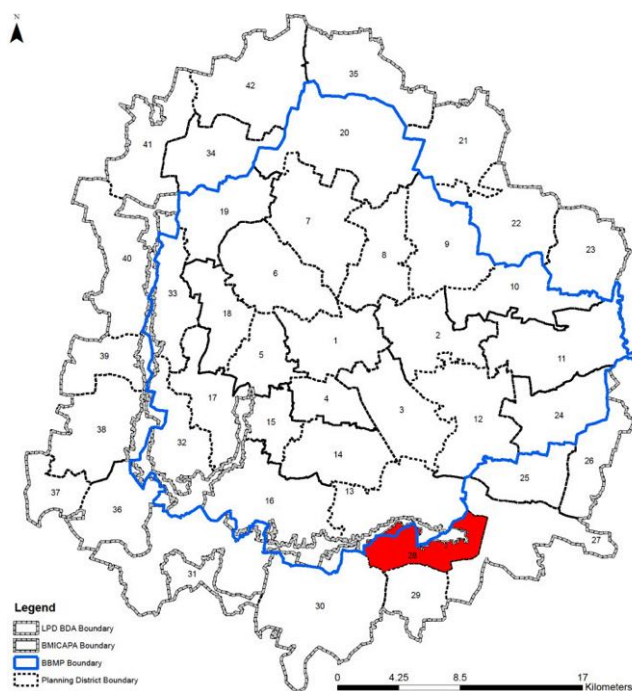


- b. **Rejuvenation of Lakes & Streams:** It is proposed that a detailed Lake and Stream Rejuvenation Plan be prepared. The project identified therein be taken up under Village Development Plan.
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared. Such plan be in conformity to proposals of RMP 2031.

4. Physical and Social Infrastructure

- | | |
|--------------------------------|-------|
| a. Dry Waste Collection Centre | 4 Nos |
| b. Fire Station | 1 No. |
| c. 220 Kv Substation | 1 No. |

29. PD 28: ELECTRONIC CITY – DODDATHOGURU



Population (2011 Census): 51,092

Area of PD: 2138.3 ha

Villages in PD: 7

Gross Density : 23.9 pph

Electronic City – Doddathoguru

Planning District is located at the southern quadrant of BMA, outside the BBMP jurisdiction, at the south side of the NICE corridor. The PD has seen high decadal growth rate owing to the Electronic City Phase that is located here and its accessibility to the NICE corridor.

The RMP2031 proposes limited development activities, whilst rest of area is proposed to agriculture land use, owing to the existing pattern of

development and activities.

1. The Doddathoguru – Electronic City PD comprises of 7 villages, Hommadevanahalli, Doddanagamangala (part in BMICAPA), Doddathoguru (part in BMICAPA), Konappana Agrahara (part in BMICAPA), Mylasandra, Bettadasanapura, and Vittasandra.
2. The major landmarks in the area are the Electronic City Phase – I and Phase- II along the either side of the Hosur road at the east of the PD. Other land marks are Infosys campus, Crowne Plaza etc.
3. Electronic City is a major work centre for BMA, hence has high density, while the village settlements and residential layouts in the Westen side of the Planning District have relatively lower density.
4. Hosur road, Electronic City Elevated Toll Expressway, Begur-Koppa road and Neeladri road, Villasandra main road, CK Palya road, Wipro Avenue, Velankani road are the major roads in this Planning District. The NICE Ring road is accessible along the northern boundary of the Planning District.

A. EXISTING STATUS

Demography

5. As per Census 2011 the PD 28 has a population of 51,092, with a decadal growth rate of by 129.89 % (2001-2011). The workforce participation rate is 54% of the population. The Gross density is 23.9 pph, and the residential density is 190.01 pph.
6. There are 14,068 households in this PD, with average household size 3.6 which is less in comparison to that of BMA (4.01).

Industry and Commerce

7. The important employment nodes in the PD are the Wipro SEZ, Electronic City Phase 1 and Phase 2 (part) that is home to various IT and ITES such as Infosys, HCL, Velankini Software Park etc. Other manufacturing industries such as Bharat Heavy Electronic Limited and Garment manufacturing industry Arvind Mills along with Biotechnology industries are also located in this PD..
8. Commercial and office spaces such as Salarpuria office complex and Commercial and Business complex of Crowne Plaza is located here. The land of Electronics City initially acquired by KIADB area (late 1970s), was sold to KEONICS where individual industries were bought land off KEONICS. The area was collectively maintained by KEONICS and Gram Panchayats (of Doddathoguru and Konappana Agrahara). After which ELCIA (Electronic City Industrial Association) was founded to look after maintenance and funds in 1997. ELCITA (Electronic City Industrial Township Authority) founded in 2003 under the Municipalities Act.

Land Use

9. The predominant land use is under vacant land use with ~32.95% of the PD land area followed by agriculture land use with ~25.28% of land area. Due to the presence of the Electronic City, the industrial land use accounts for ~11.66% and that of residential land use is 13.4%.
10. The residential land use in the PD can be augmented significantly to cater to the existing employment and economic node. This PD shows characteristic of being mixed land use, due to industrial and office space along with residential land use. This is because the trend is increasingly, conversion of industrial land use to residential land use. Therefore, strategies such as walk to work can be employed with extensive NMT employed as a sustainable transport mechanism. **Figure 29-1** and **Table 29-1** presents the existing land use and existing land use area statement for PD 16 respectively.

Figure 29-1: PD 28 Existing Land Use Map

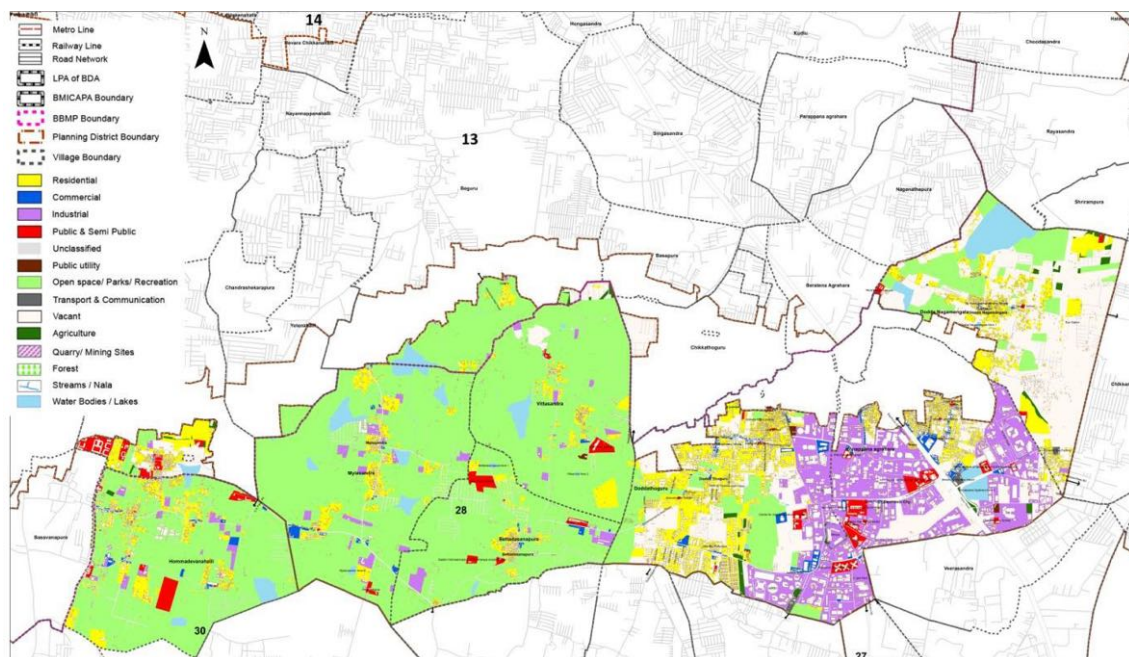




Table 29-1: PD 28 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	232.09	12.92
Commercial	24.36	1.36
Industrial	241.50	13.44
Quarry/ Mining Sites	103.70	5.77
Public Semi Public	30.88	1.72
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	1.40	0.08
Parks & Open Spaces	10.09	0.56
Transport and Communication	80.21	4.47
Vacant	293.38	16.33
Agriculture	720.56	40.11
Forest	0.00	0.00
Streams	1.76	0.10
Water Bodies	56.44	3.14
Total	1796.38	100.00

Housing and Slums

11. Residential land use (13.4%) has residential character is of layout typology, with villa plots along with high rise apartment typology. The Planning District has Thunga Layout in Mylasandra, Chamundeshwari layout in Electronic City. Unoccupied Residential layouts in villages of Hommadevanhalli and Mylasandra. Some high rises are also located proximal in Electronic City area. Additionally, service apartments and PG accommodation are also found here, due to the educational institutions and IT industry. The existing residential character comes across as layout typology, with villa plots along with high rise apartment typology. (Smriti Nagar and Nirmal Nagar etc.)

Traffic and Transportation

12. 175 km is the approximate road length in this PD. Hosur Road is the major arterial road in the PD along with the Electronic City elevated Toll Expressway over the Hosur road that connects the Electronic City to the Silk Board Junction. The important interchanges are Electronic City elevated corridor meets the Electronic city on the either sides of the Hosur road (i.e. 1st main road and the loop that meets the 2nd cross road.). The NICE Ring road is accessible along the northern boundary of the PD. Other local roads in the PD are Begur-Koppa road and Neeladri road, Villasandra main road, CK Palya road, Wipro Avenue, Velankani road.
13. As proposed by the BMRCL, metro alignment of Phase II has coverage within this PD which is extension of the Yellow Line on the Mysore road. The 2 metro stations in this alignment are Electronics City 2 metro station and Huskur road metro station.
14. The Transport infrastructure in this PD includes 1 BMTC bus depot located at Electronic City, Phase II along the Hosur road.

Physical and Social Infrastructure

15. There are no metered water supply and sewage and sanitation connections in this PD. There is one fire station located in the Electronic City and 2 numbers of existing 66 kV substation located in this PD. The social infrastructure in this PD is 30 schools along with other educational institutions such as IIIT, Institute of Bioinformatics and Biotechnology Sikkim Manipal University.

Park and Open Spaces

16. There are some parks and open spaces, most of which are within private townships, not accessible to public. Some layouts have the neighbourhood level parks or CA sites.
17. There are two quarry sites located in this PD. One large quarry located and that is spread at Vittasandra and Mailasandra, and the other one located at south-west of the PD, in the village, Bettadasanapura.

Lakes and Drainage

18. The lakes in the PD are Rayasandra lake, Ittasandra Kere, Chikkakammanahalli, lake Mylasandra lake, Hommadevanahalli Kere.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DEVELOPMENTAL ACTIVITIES IN THE EASTERN PART OF PD DUE TO LOCATION OF ELECTRONIC CITY AND DENSIFICATION OF RESIDENTIAL AREAS IN A PLANNED MANNER, IMPROVED TRANSPORT CONNECTIVITY AND INFRASTRUCTURE, TRANSIT INTEGRATION.

PROPOSALS

1. The RMP2031 proposes densification of the residential areas in a planned manner along with increased public transport share and other transit integration and infrastructure upgradation.

The Proposed Land Use Map and Proposed Land Use area statement are presented in **Figure 29-2** and

2. **Table 29-2** respectively.
3. The RMP2031 proposes city level public transport infrastructure of Metro along the Hosur road that provides connectivity and accessibility to Electronic City. It is provided by BMRCL through the Phase II Metro.
4. The RMP2031 also proposes 1 BMTC Bus depot at Bettadasanapura Cross, near the junction of Begur-Koppa road and the Bettadasanapura Bypass road. This depot is located at the edge of the PD boundary. Additionally, 1 BMTC bus stations is proposed along the Neeladri road.
5. Transit Oriented Development Zone is proposed to be applicable around all Metro rail / rail stations/terminals located in the Planning District.
6. In order to improve the accessibility to Public Transport Stations (Metro,/BMTC Bus Stations) it is proposed to strengthen the existing road network by providing footpaths and cycle tracks.

Figure 29-2: PD 28 Proposed Landuse Map

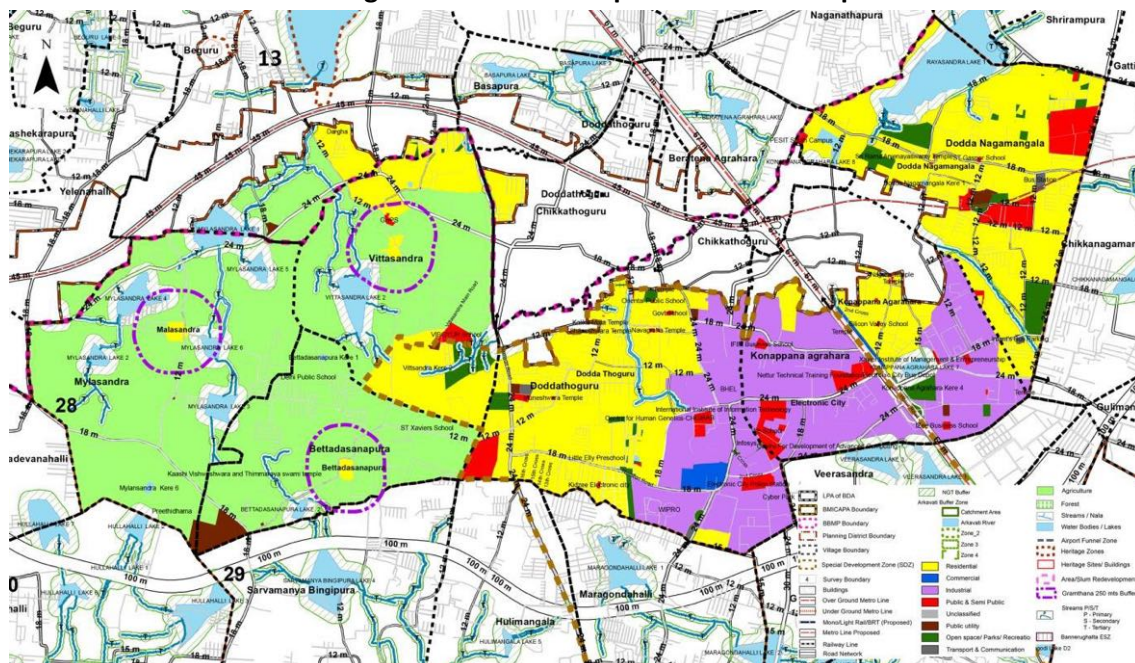


Table 29-2: PD 28 Proposed Landuse Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	490.25	47.71
Commercial	7.72	0.75
Industrial	258.66	25.17
Public & Semi Public	49.68	4.83
Unclassified	0.00	0.00
Public Utility	3.44	0.33
Parks / Open Spaces	34.67	3.37
Transport & Communication	100.25	9.76
Forest	0.00	0.00
Streams	0.65	0.06
Water Bodies	25.95	2.53
NGT Buffer	56.28	5.48
Total Developable Area	1027.55	100.00
Agriculture	769.38	-
Total PD Area	1796.38	-

7. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed network connectivity enhancement:

- Peripheral Ring Road:** It is proposed to develop the 100m RoW Peripheral Ring Road that runs partly through the western most part of the PD in the village Hommadevanhalli and Basavanapura. It forms the outer ring to the NICE ring road.



- b. Connectivity between Begur Koppa road and Neeladri road: This provides access and connectivity to Bettadasanapura and Niladri Nagar.
 - c. Overall Geometric Improvement of Certain Roads: Apart from Master Plan Roads, RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities.
8. RMP2031 proposes that a detailed parking plan be prepared for identified areas of PD.
9. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
10. The RMP2031 proposes the quarry sites spread over the villages, at Vitasandra and Mailasandra to be developed as an open space cum large Regional Park that cater to the citizens of the south of BMA. Additionally, the quarry site at Bettadasanapura is also proposed as Open Space in this PD.
11. The natural drainage within the PD have been classified as following:
 - a. Streams downstream of naranyanaghatta kere (Singena Agrahara kere) = Secondary
 - b. Drainage downstream of Mylasandra lake and Vittasandra lake = Tertiary
12. The RMP2031 proposes that these streams be kept free of all encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
13. The RMP2031 proposes the lake protection and rejuvenation of all lakes and their natural streams by preparing lake and surrounding area development.
14. To cater to future management and operations of Solid Waste, it is proposed that 5 Dry Waste Collection Centres, 2 Bio-Methanation Unit, 3 Organic Waste Collection Centres, 3 Aggregator, 2 Central Processing Unit and 1 Integrated Waste Processing Plants are proposed to be developed within the Planning District.
15. The RMP2031 proposes for an additional of 220kV Substation to cater to the future power demand and 2 Fire Stations in this PD.
16. The RMP2031 proposes a comprehensive Disaster and Hazard Mitigation Plan be prepared for the low lying and flood prone areas in this PD.
17. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas for Informal activities/ Street Vending and detailed upgradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 28 Doddathoguru – Electronic City:

1. **Road Development Plan**
 - a. Master Plan Road Demarcation and Land Acquisition for development of Category – 1 Roads and other categories in phased manner.
 - b. Upgradation of Master Plan Roads
 - i. Peripheral Ring Road
 - ii. Hosur Road
 - iii. Begur-Koppa Road Neeladri road,
 - iv. Villasandra main road

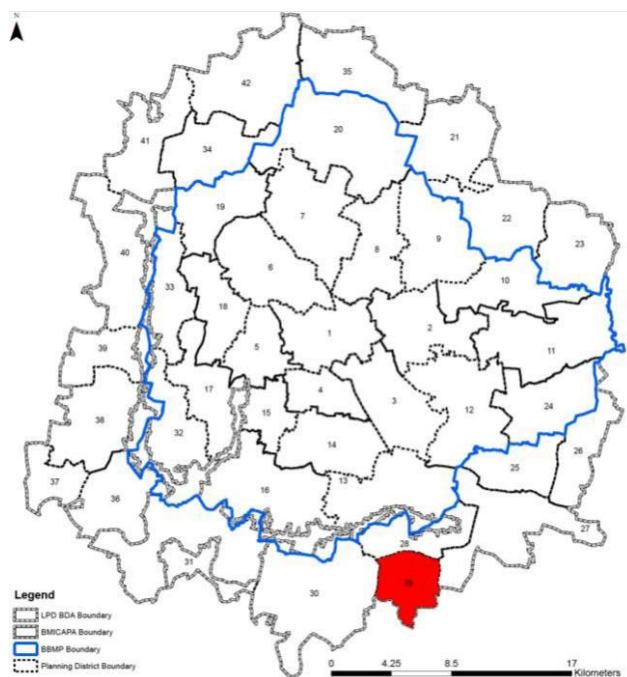


- v. CK Palya road
 - vi. Wipro Avenue
 - vii. Velankani road
 - c. Junction Improvement Programme
 - i. Intersection of Hosur Road and 2nd cross road
 - ii. Intersection of Hosur road and 1st main road (under the Electronic City flyover),
 - iii. Intersection between Neeladri road and Bettadasanapura road
2. **Development of Public Transport System**
 - a. Namma Metro
 - i. Metro Phase II of Yellow Line.
 - ii. Metro PRR
3. **Accessibility Improvement Plans:**
 - a. For Planned Station (Metro & Mono Rail)
 - b. For Electronic City
4. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:**
 - a. Hosur Road
 - b. Wipro Avenue Road
5. **Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - a. RMP2031 Streams Rejuvenation Plan
 - b. Rayasandra lake Rejuvenation Plan
 - c. Ittasandra Kere Rejuvenation Plan
 - d. Mylasandra lake Rejuvenation Plan
 - e. Chikkakammanahalli lake Rejuvenation Plan
 - f. Hommadevanahalli Kere Rejuvenation Plan
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.
6. **Declaration of Street Vending Zones/ Areas/ Streets**
7. **Development of Physical Infrastructure/ Facilities:**
 - a) SWM Dry Waste Collection Centre: 5 Nos.
 - b) SWM Organic Waste Collection Centre: 03 Nos
 - c) Bio-Methanation Unit: 02 No.s
 - d) Aggregators: 03 No.s
 - e) Central Processing Unit: 02 No.s
 - f) Integrated Waste Processing Plants: 01 No.s
 - g) 220kv Sub-station: 01 Nos



8. Preparation of Disaster and Harzard Mitigation Plan for Electronic City

30.PD 29: HULIMANGALA



Population (2011 Census): 14,600

Area of PD: 1630 ha

Gross Density (2011 Census): 09 pph

Villages in PD: 5

Gram Panchayat: Hulimangala

The Planning District 29 is located in the extreme south of BMA sharing LPA boundary and abutting to Jigani - Bommasandra Industrial area (towards its south east) and Electronic City (towards its North east). The major landmarks in the area are the Indian Institute of Health Management and Research (IIHMR).

RMP2031 proposes limiting the growth in the areas adjoining to Electronic City and Jigani – Bommasandra Industrial Area, Gramathana Development and Development of Rural/ Village Roads.

A. EXISTING STATUS

1. The Hulimangala Planning District admeasures 1630 Ha (16.30 sq.km.) and comprises of 5 villages namely, Sarvamanya S. Bingipura, Nanjapura, Vabasandra, Hulimangala and Maragondanahalli. Hulimangala being the largest Gramathana. All these villages are within Hulimangala Gram Panchayat.
2. As per Census 2011, there are 14600 residents and of which 43.2 % are workers. Population growth has witnessed 74% decadal growth rate with maximum growth in the areas adjoining to Electronic city and Jigani Bommasandra Industrial Area. The total resident workers are 6318 (43 % of the population). There are 3574 households with average household size 4.1, which is slightly higher than the average household size in BMA (4.01). The Average Gross density is 9 pph, whereas the net residential density is around 190 pph.
3. Gramathana's (village settlements) are the main residential areas, while unoccupied residential layouts and High rise apartment are present towards the eastern side. Major Gramathana's are Hulimangala and S. Bingipura.
4. PD is predominantly agriculture in nature and is witnessing scattered unplanned developments. Agriculture land use accounts for 80% of PD area, followed by residential accounting for 4.94%. Water bodies and streams account for 4.0% whereas 8% of the land area is under industrial use and quarrying sites over ~36ha of land (2.19 % of the PD area). Around 2.79% of the land use in this planning district is under industries this is due to presence of industries adjoining to Jigani – Bommasandra Industrial Area, brick kilns (which are temporary in nature, and stone crushing activities. **Figure 30-1** presents the existing land use map **Table 30-1** presents the existing land use area statement respectively.

Figure 30-1: PD 29 Existing Land Use Map

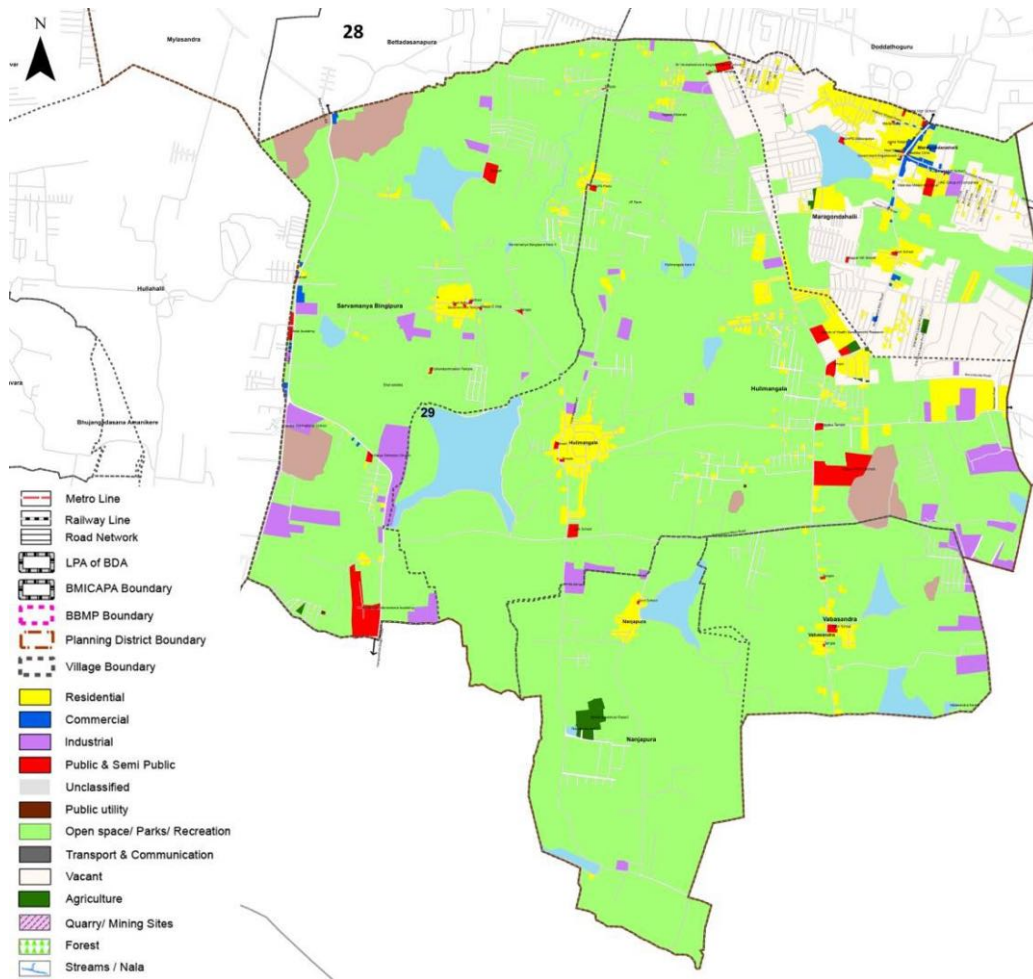


Table 30-1: PD 29 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	80.47	4.94
Commercial	3.65	0.22
Industrial	45.46	2.79
Quarry/ Mining Sites	35.66	2.19
Public Semi Public	14.73	0.90
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.11	0.01
Parks & Open Spaces	3.48	0.21
Transport Communication	62.84	3.86
Vacant	376.02	23.07
Agriculture	941.84	57.78
Forest	0.00	0.00
Streams	1.05	0.06
Water Bodies	64.69	3.97
Total	1630.00	100.00



5. Begur – Koppa road, Begur – Harapannahalli Road, Neeladari Road, Hulimangala road, Shikaripalya main road and village roads define the present connectivity within the PD. The Jigani-Bommasandra link road is connected through the Hulimangala Cross road and the Bannerghatta Road through the Begur-Koppa road. Certain Roads of Jigani –Bommadasandra Industrial terminates at the BMA/ PD boundary.
6. There is a gap in access to healthcare facilities and the planning district is devoid of metered water supply and sanitation connections, etc. However, a landfill site (at the Bettadasanapura Cross) and one 66kv sub-station is located within the PD. Institutions such as Indian Institute of Health Management and Research (IIHMR) and few international schools are located in this PD.
7. The major lakes in this PD are Hulimangala Kere, Bingipura Kere, Maragondanahalli Kere Vabasandra lake, Nanjapur Kere , Tirupalya Kere-1 (partly), Jigani Kere (Part) and other lakes as per Revenue records.
8. Being in the peripheral areas of BMA, there are no provisions of parks and open spaces presently, while large parts of the PD are vacant. There is very good potential to earmark land for parks and open spaces for the future.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: RISTRICTED GROWTH, GRAMATHANA DEVELOPMENT, IMPROVED CONNECTIVITY, AND CONSERVATION/ PROTECTION OF LAKES & STREAMS PROPOSALS

1. RMP2031 proposes growth in areas adjoining to Jigani-Bommasandra Industrial Area and Electronic City –limiting the growth to eastern side of the PD. Thus, a very limited area has been added to conurbation limit and mainly for residential purpose.
2. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 30 – 2 and Table 30-2.
3. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation and livability. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
4. The Proposed land use map and Proposed Land Use distribution is depicted in Figure 30-2 & Table 30-2 respectively.
5. A PD level Park on the present quarry sites (in Hulimmangala Village adjoin to Vabasandra Village) is proposed to be developed for providing recreational facilities to residents and industrial workers.

Figure 30-2 PD 29 Proposed Land Use Map

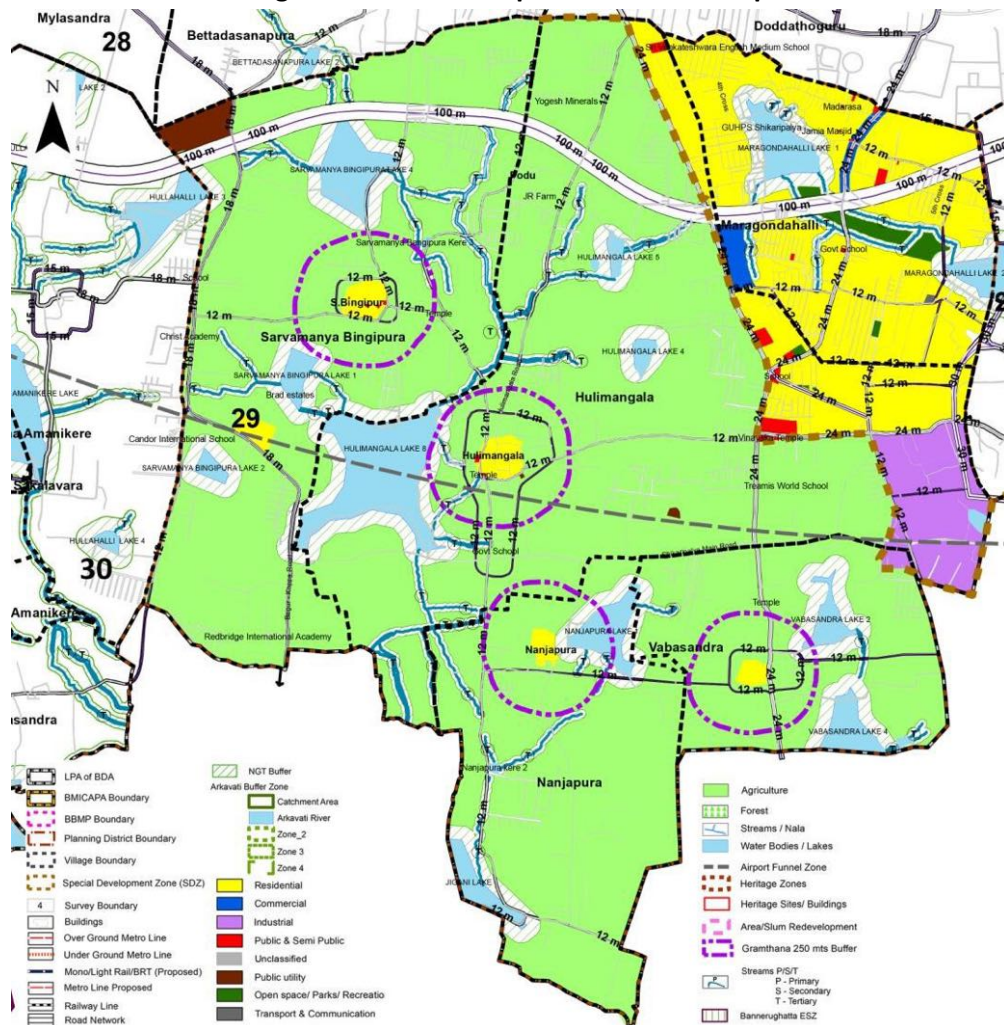


Table 30-2: PD 29 Proposed Landuse Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	161.66	53.72
Commercial	5.53	1.84
Industrial	35.53	11.81
Public & Semi Public	2.37	0.79
Unclassified	0.00	0.00
Public Utility	0.00	0.00
Parks / Open Spaces	5.93	1.97
Transport & Communication	50.52	16.79
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	9.76	3.24
NGT Buffer	29.63	9.85
Total Developable Area	300.94	100.00
Agriculture	1329.06	-
Total PD Area	1630.00	-



6. To improve the public transport facility it is proposed to develop BMTC bus stations at Hulimangala, S. Bingipura, Vasbasandra, along Neeladri road and at Nanjapura Gramathana. In addition, a Bus Depot/ Terminal is proposed to be developed at Bettadasanapura Cross along the PRR alignment.
7. The RMP2031 proposes development of five village roads (existing stretches with limited new stretches) running west to east linking Begur – Koppa/ Harappanahalli Road to Jigan Bommasandra Industrial Area and Electronic City New Town Road. In addition, it is proposed to widen Begur Koppa Road, Hulimangala Road, Hulimangala – Vabasandra Road with extension till BICON park (on eastern side) and till Beguru Harappanahalli Road (on western side), roads within this PD. A Gramathana periphery road is proposed to be developed for S. Bingipura, Hulimangala and Vabasandra Villages.
8. A City level SWM landfill site is proposed to be developed at quarry site at S. Bingipura village and at the same location, it is proposed that Integrated Waste Processing Yard to be developed. Further, it is proposed to develop a Dry Waste Collection Centre in each village. One organic waste converter is proposed to be developed at quarry site in Hulimangala.
9. The RMP2031 proposes the protection and conservation of all lakes and the natural streams. The RMP proposes a Lake Rejuvenation and lake surrounding area
10. To mitigate provide comfort to pedestrians and NMT facilities and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.

PROGRAMS AND PROJECTS

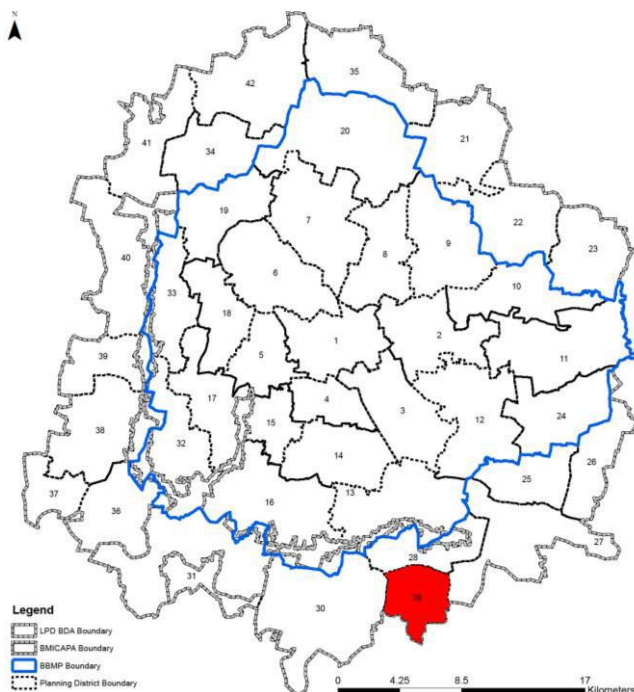
The RMP2031 has been broken down the proposals into implementable programs and projects for every planning district. Following are the projects for PD29, Hulimangala:

1. **Village Development Plans**
2. **Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Rejuvenation of Lakes & Streams:** It is proposed that a detailed Lake and Stream Rejuvenation Plan be prepared and taken up under Village Development Plan.
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared.
3. **Development of Park:** A PD level park is proposed to develop at the present quarry site in Hulimangala.
4. **Road Development Plan:** Most important master plan road proposals includes a) PRR, b)Hulimangala Main Road (extending till Jigani Lake), c)Begur Koppa Road, d)Begur - Harappanahalli Road, e) Road Connecting Neeladri Road and Institute of Health Management Research, etc. It is proposed that geometric design of existing and proposed road network should be undertaken.
5. **Development of Public Transport System:**
 - a. Bus Depot: One at quarry site near Bettadasanapura Cross
 - b. BMTC Bus Stations: It is proposed to develop Bus Station at following locations:



- i. Hulimangala Village (next to Gramathana Periphery Road)
 - ii. Vadasandra Village (at Quarry Site near Vadasandra Village Boundary)
 - iii. S. Bingipura Village (next to Gramathana Periphery Road)
 - iv. Hulimangala Village (near Institute of Health Management Research)
6. **Development of Gramathana Periphery Roads and Village Roads:** It is proposed to develop gramathana periphery roads for following gramathans (as indicated in PLU Map).
7. **Junction Improvement Programme (JIP):** JIP for geo-metric improvements is proposed for following intersections:
 - a. Bettadasanapura Cross,
 - b. Hulimangala Junction (Tri-junction of Road Connecting Neeladri Road and IIHMR and Hulimangalal Road),
 - c. Vabasandra Junction,
 - d. Hulimangala Cross Junction,
 - e. Vadasandra – Thirupalaya Road Intersection,
8. **Development of SWM Facilities:**
 - a. Land Fill and Integrated Waste Processing Yard: A regional level combined facility where in landfill and integrated waste processing yard is proposed to be developed at quarry site at S. Bingipura.
 - b. Construction of DWCC: One each in Gramathana
 - c. Organic Waste Converter: One near quarry site in Hulimangala.

31.PD 30: BANNERUGHATTA



Population (2011 Census): 33275

Area of PD: 5293 ha

Gross Density (2011 Census): 06 pph

Villages in PD: 19

Gram Panchayats: Bannerughatta and Mantapa

The PD is located in the south most boundary of the BMA. This PD has been carved out based on Bannerughatta Forest/ National Park and its Eco-Sensitive Zone. The National Park is a tourism spot and attracts huge tourist footfalls.

The RMP2031 proposes the environment protection and promotion of eco- tourism as per the notification on Eco-Sensitive Zone for the Bannerghatta National Park by the MoEF. Broadly the RMP2031 proposes that the present status quo be maintained except for the natural growth of existing Gramathanas.

A. EXISTING STATUS

1. The Bannerughatta Planning District admeasures 5293 Ha (52.93 sq km) comprises of 18 villages namely, Kannaikana Agrahara, Bhoothanahalli, Bilvadarahalli, Bannerughatta Kaval, Bhyrappanahalli, Bannerughatta, Halesampigehalli, Laskshmipura, Kallakere, Vaderahalli, Sakalavara, Mantapa, Nallasandra, Begihalli, Ramasandra, Hullakasavanahalli, Bhujengadasana Amanikere, Hullahalli. Bannerughatta Village is major Gramathana. These villages are falling within Bannerughatta Gram Panchayat and Mantapa Gram Panchayat.
2. Bannerughatta National Park (BNP), it's Eco-sensitive Zone (ESZ) as defined by Ministry of Environment and Forest (MoEF), Government of India (GoI), and Eco-tourism defines the characteristics of this planning district. Bannerughatta National Park/ Forest and Zoological Park are major tourist destinations of the State.
3. The MoEF, GoI draft notification S.O. 2116(E) dated 15.06.2016 declaring Eco Sensitive Zone around Bannerghatta National Park Karnataka has defined the the extent of Eco-sensitive zone and the regulates the land use and activities within the Eco-Sensitive zones around national parks & wildlife sanctuaries.
4. The extent of the BNP within Local Planning Area of Bangalore Development Authority is approximately 15.89 sq km. The BNP/ forest falls within 11 villages (part or full). Figure 31-1 presents the extent of BNP on Cadastral Village Map, whereas Table 31-1 presents the details of forest lands within LPA of BDA.

Figure 31-1: PD 30 Map Showing GPS Points of Bannerghatta Wild Life Range, Bannerghatta National Park on Cadastral Village Map

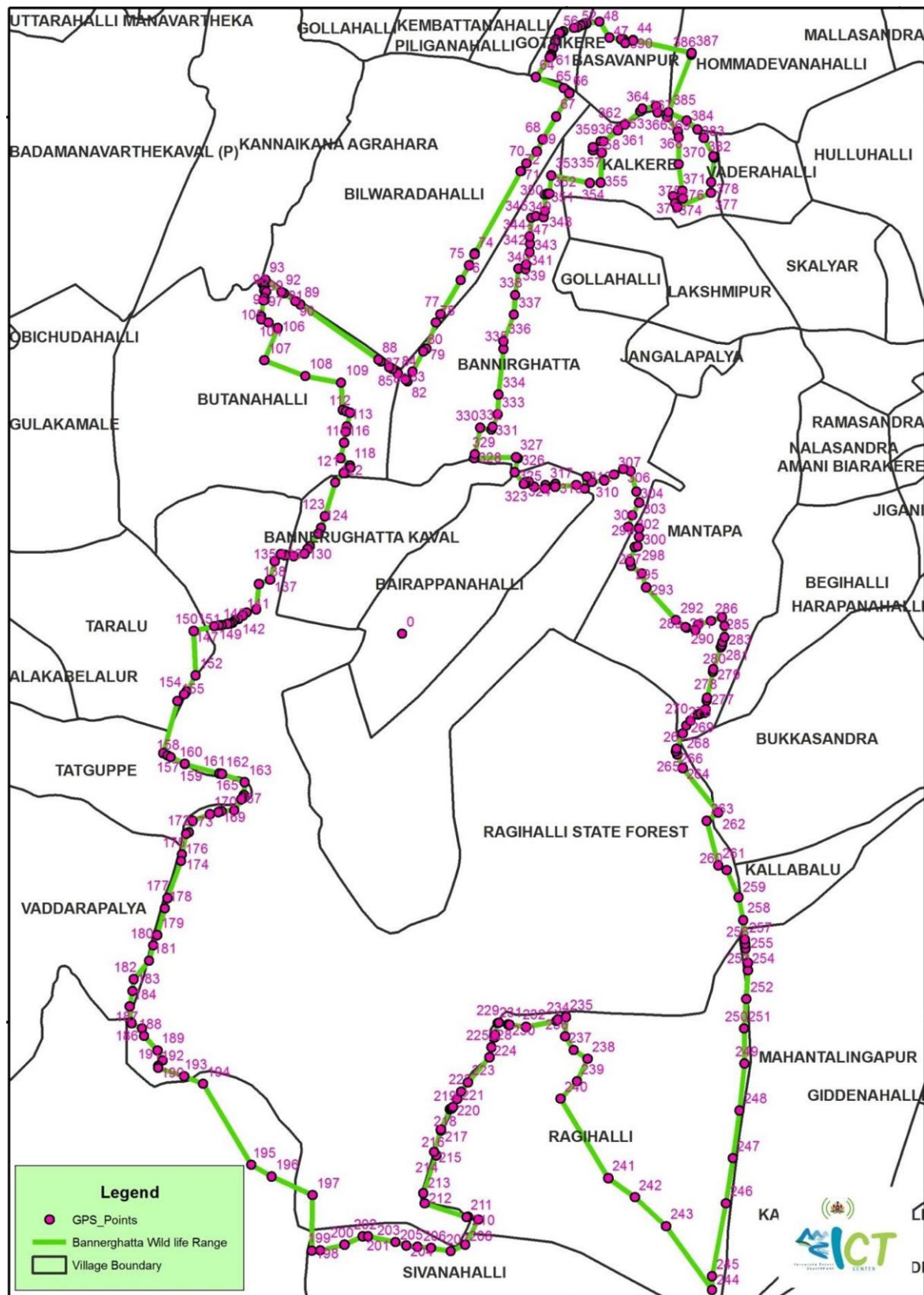


Table 31-1: PD 30 Villages within LPA of BDA with BNP

Sl.No.	Village Name	Taluk	District
1	Piliganahalli	Bangalore south	Bangalore Urban
2	Gottigere	Bangalore south	Bangalore Urban
3	Basavanpura	Bangalore south	Bangalore Urban
4	Hommadevanahalli	Bangalore south	Bangalore Urban
5	Kalkere	Anekal	Bangalore Urban
6	Vaderahalli	Anekal	Bangalore Urban
7	Gollahalli	Anekal	Bangalore Urban
8	Bannerghatta	Anekal	Bangalore Urban
9	Byrappanahalli	Anekal	Bangalore Urban
10	Mantapa	Anekal	Bangalore Urban
11	Begihalli	Anekal	Bangalore Urban
12	Bilwaradahalli	Anekal	Bangalore Urban
13	Bhuthanahalli	Anekal	Bangalore Urban
14	Bannerghatta Kaval	Anekal	Bangalore Urban

5. The Eco-Sensitive Zone proposed along the Bannerghatta National Park, varies between 100m to 1 km or full village from its boundary. Within LPA of BDA ESZ is applicable to 13 villages (in part or full). Table present the list of villages of LPA of BDA falling within the Eco-Sensitive Zone as per Draft MoEF notification, whereas Figure 31-2 & Figure 31-3 presents the extent of ESZ on the existing land use map and revenue village map respectively.

Table 31-2: PD 30 Villages of LPA of BDA falling within ESZ of BNP

Sl. no	Map Id *	Village Name	ESZ Distance from BNP Boundary	Taluk	Extent (ha)
1	2	3	4	5	7
1	1	Piliganahalli	100 mtr	Bangalore south	0.180
2	2	Gottigere	100 mtr	Bangalore south	8.940
3	3	Basavanpura	100 mtr	Bangalore south	13.420
4	4	Hommadevanahalli	100 mtr	Bangalore south	12.420
5	5	Kalkere	100 mtr	Anekal	37.970
6	6	Vaderahalli	Entire village boundary	Anekal	74.800
7	7	Gollahalli	Entire village boundary	Anekal	70.900
8	8	Bannerghatta	Entire village boundary	Anekal	427.990
9	9	Byrappanahalli	Entire village boundary	Anekal	136.360
10	10	Mantapa	Entire village boundary	Anekal	432.090
11	11	Begihalli	Entire village boundary	Anekal	207.650

Sl. no	Map Id *	Village Name	ESZ Distance from BNP Boundary	Taluk	Extent (ha)
12	24	Bilwaradahalli	100 mtr	Anekal	35.640
13	25	Bhuthanahalli	100 mtr	Anekal	63.120

Source: MoEF, Gol draft notification S.O. 2116(E) dated 15.06.2016. * as per MOEF notification

Figure 31-2: PD 30 Extent of Eco-Sensitive Zone of Bannerughatta National Park on ELU

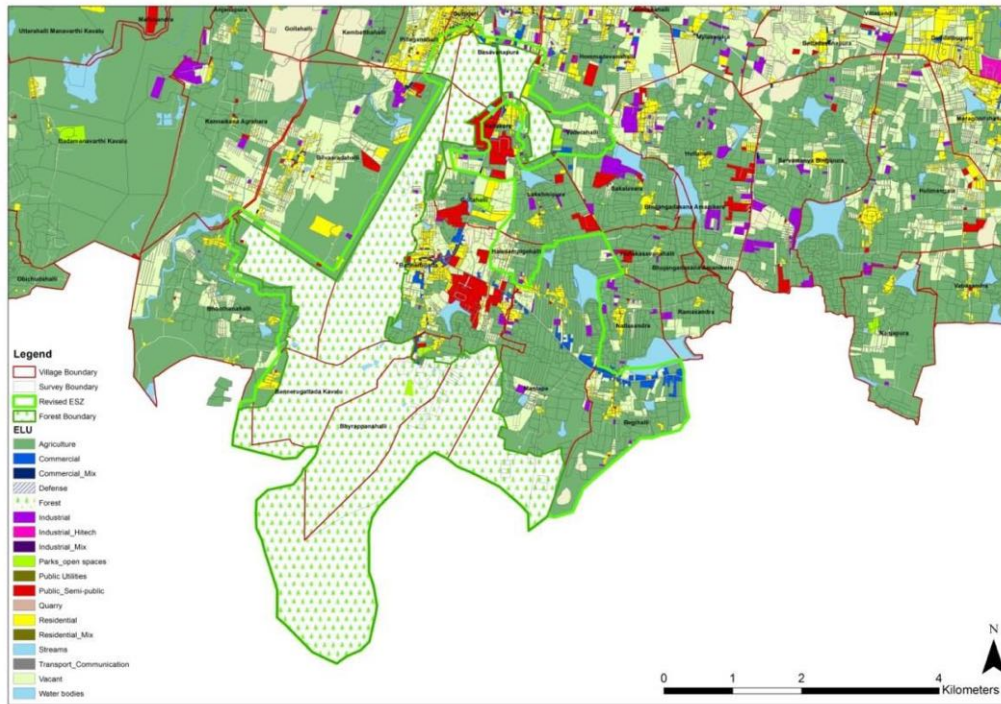
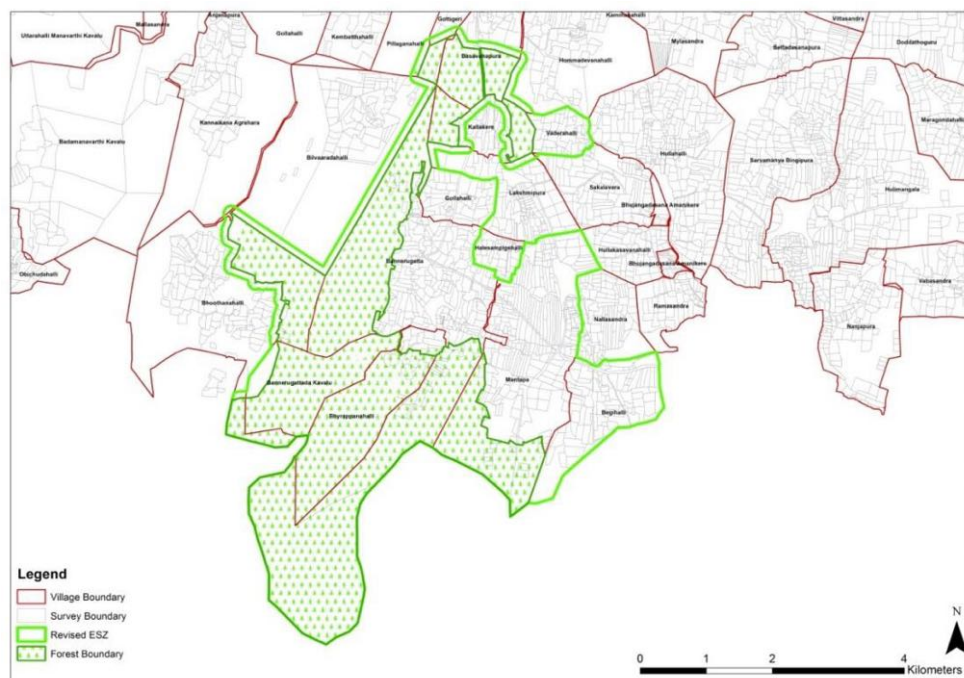


Figure 31-3: PD 30 Extent of Eco-Sensitive Zone of Bannerughatta National Park on Village Map

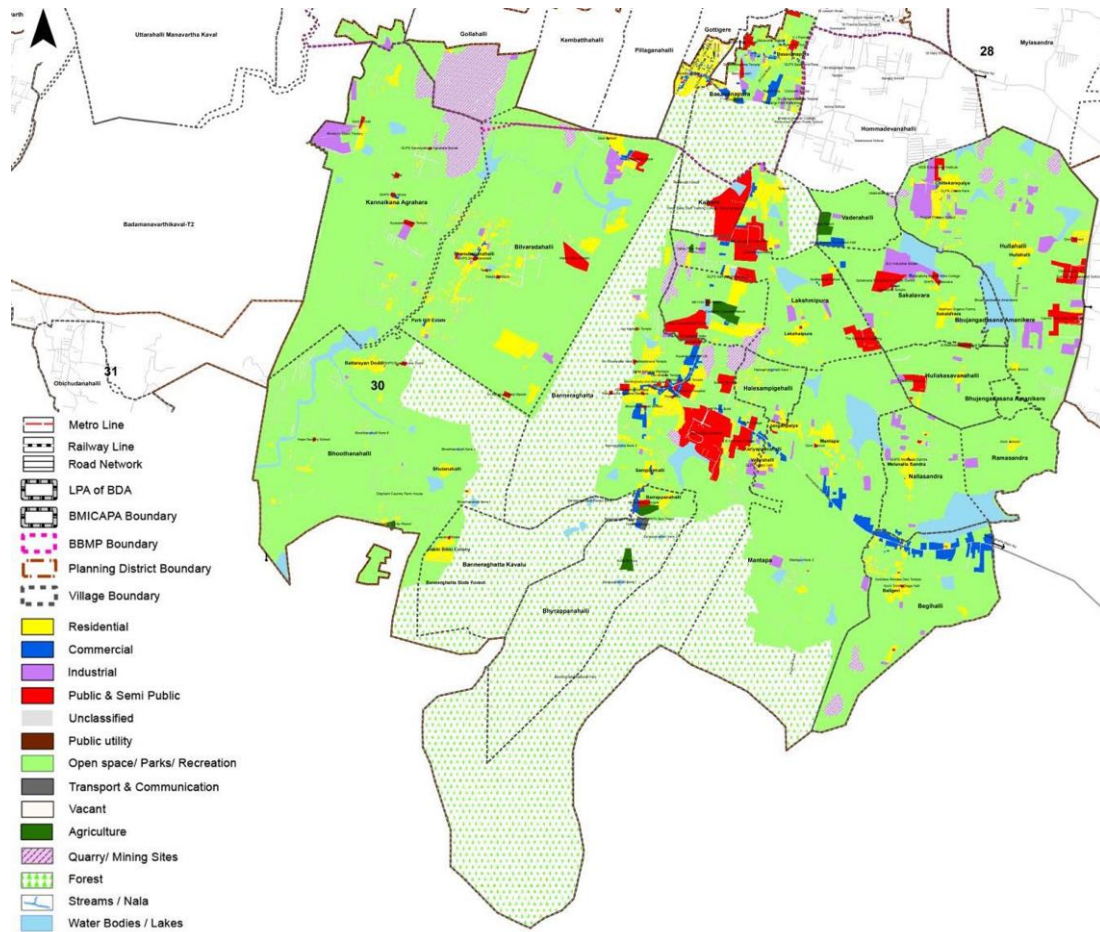


6. As per Census 2011, there are 33275 residents and of which 46% are workers. Population growth has seen 71.9% decadal growth rate with maximum growth in Gottigere village. The total resident workers in this PD are 15895, which makes up 46% of the population. There are 8285 households in this PD, with average household size 4 which is same as the average household size in BMA (4.01). The Average Gross density is 6 pph and the residential density is 192.85pph
7. Industrial units such as Sakalwara Industrial Estate, Glass factory are present, while Quarrying activities and stone crushers are seen in the Kanikana Agrahara village. A few resorts clubs, hotel and other commercial activities are in the proximity of the BNP. There are several educational institutions present in this area and in Bannerughatta village.
8. Bannerghatta road and Sakaleshwar road are the main arterial roads in this PD that further connect to Kanakpura road and Jigani-Anekal road respectively.
9. Agriculture (~54.24%) is predominant activity while large share of land (28.9%) is under forest land. The residential areas (including Gramathanas) accounts for 3.8% of total area. Gramathanas are main stay for residential areas however, while unoccupied residential layouts which are sparsely located are also seen. The quarries accounts for 2.4% of total area. Figure 4 presents the existing land use map whereas Table 3 presents the existing land use statement.
10. There are no metered water supply and sewage and sanitation connections in this PD. There is an electric substation in the Bannerughatta village. This PD has a few international schools and a nursing college, AMC college campus, campus of Union Bank Staff Training College etc.
11. The existing landuse is represented by the map **Figure 31-4** and the landuse area statement is presented in **Table 31-3**.

Table 31-3: PD 30 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	201.56	3.58
Commercial	49.46	0.88
Industrial	87.08	1.55
Quarry/ Mining Sites	129.21	2.29
Public Semi Public	128.56	2.28
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.42	0.01
Parks & Open Spaces	14.20	0.25
Transport and Communication	459.34	8.15
Vacant	7.54	0.13
Agriculture	2863.89	50.82
Forest	1529.61	27.15
Streams	3.78	0.07
Water Bodies	160.24	2.84
Total	5634.89	100.00

Figure 31-4: PD 30 Existing Land Use Map



12. There is scope of developing Sports facilities due to availability of vacant lands, agricultural lands, and quarries which may be filled and developed as parks and playgrounds.
13. The larger lakes like Sakalavara Lake, Mantapa Lake, Bidrekere Lake and Bannerghatta Lake (part of the Hulimavu lake series) are within the planning district and provides an opportunity for their protection and rejuvenation.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ENVIRONMENT PROTECTION (ECO-SENSITIVE ZONE OF BANNERUGHATTA NATION PARK AND LAKES & STREAMS), PROMOTION OF ECO-TOURISM, GRAMATHANA DEVELOPMENT, IMPROVED RURAL CONNECTIVITY.

PROPOSALS

1. RMP2031 proposals are guided by Bannerughatta Forest and Eco-sensitive zone, where it proposed to retain all approved existing developments and promote the eco-tourism activities within Eco-sensitive zone for Bannerughatta Forest as per draft notification S.O. 2116(E) dated 15.06.2016 issued by the Ministry of Environment and Forest. The final extent of Bannerughatta Forest Eco-Sensitive Zone shall be as notified by MoEF. The areas outside Eco-sensitive Zone are proposed to be retained as Agriculture Zone. The developments within

this planning district are proposed to be guided by regulations imposed by MoEF Notification and Zoning Regulations for Planning Zone C of RMP 2031.

2. The RMP2031 proposes village development and improved the connectivity through Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
3. A regional park is proposed to be developed in the existing mine/ quarry area in Anjanapura, Kannaikana Agrahara and Golahalli village. It is also proposed that all the mines/ quarries area adjoining to Forest Boundary (Bannerughatta Village, Laxmipura Village) and within PD (Vaderahalli) to be developed as Village Forests/ Park.
4. The Proposed Land Use Map and Propose land use distribution is presented in **Figure 31-5** and Table 31-4 respectively.

Figure 31-5: PD 30 Proposed Land Use Map

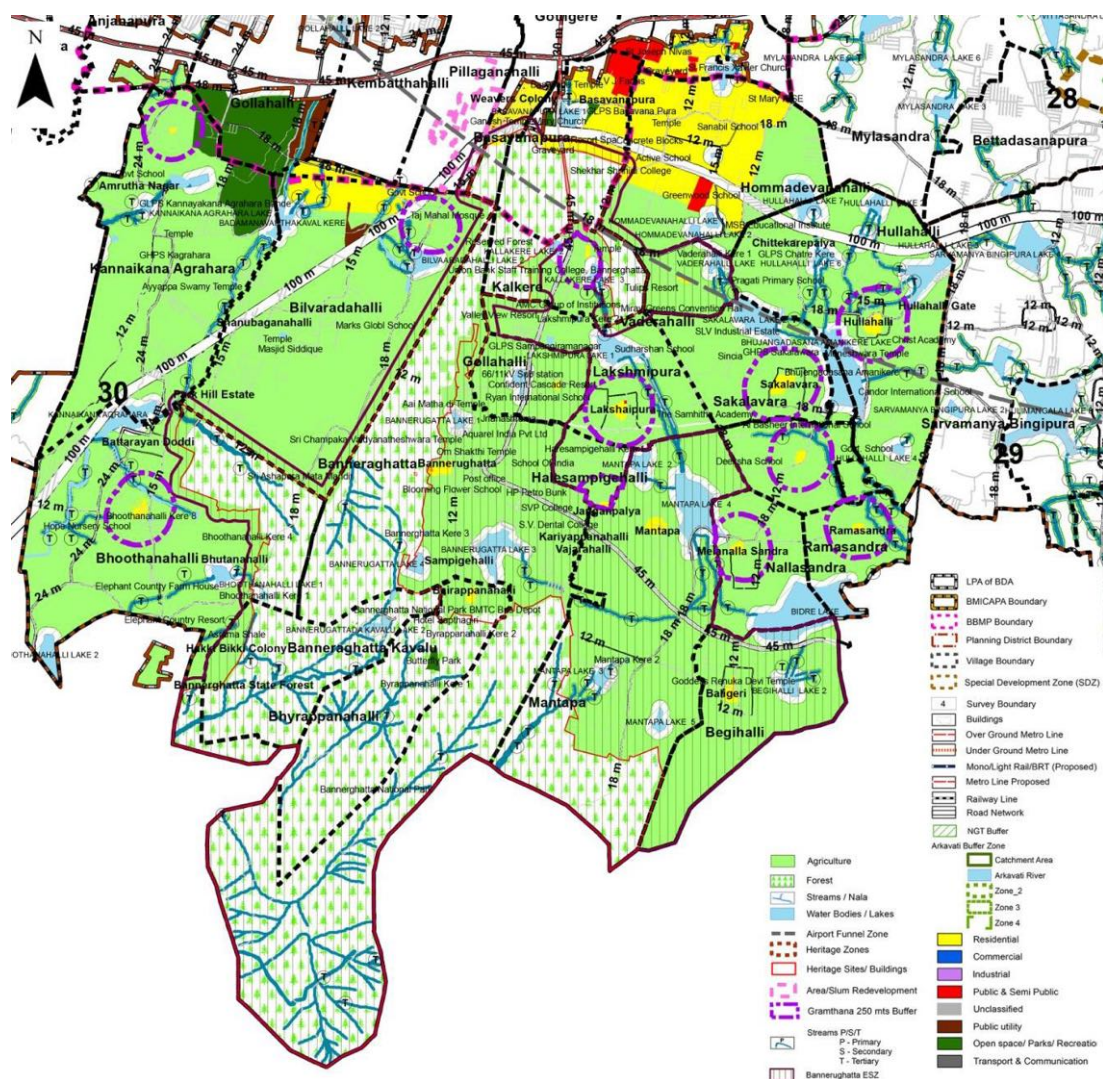


Table 31-4: PD 30 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	225.45	58.48
Commercial	0.00	0.00
Industrial	0.00	0.00
Public & Semi Public	25.12	6.52
Unclassified	0.00	0.00
Public Utility	10.98	2.85
Parks / Open Spaces	4.43	1.15
Transport & Communication	53.97	14.00
Forest	22.95	5.95
Streams	1.29	0.34
Water Bodies	5.51	1.43
NGT Buffer	35.80	9.29
Total Developable Area	385.51	100.00
Agriculture	5249.39	-
Total PD Area	5634.89	-

5. A large playground is proposed to be developed in mine/ quarried area falling in Halesampigehalli, Lakshmipura, Bannerughatta, and Gollahalli located at place where all four village boundaries meet corner and one in village Hullahalli (near northern boundary of Village above the proposed Peripheral Ring Road).
6. To improve the public transport facilities, it is proposed to develop at two locations Bus Terminal cum Depots. One at Ragihalli Gate Cross (as indicated in Proposed Land Use map) along the Bannerughatta Main Road and second at Anjanapura village, abutting BMICAPA boundary and on existing quarry area.
7. To improve the connectivity, the RMP2031 proposes development road connecting Bannerughatta Main road and Beguru Harappanahalli Road (using existing stretches with limited new stretches) running west to east. It is proposed to develop a road connecting Sakalavara Road and Dinnepalya Road. The existing Sakalavara Road and Existing Road (via Malle Nalasandra) meeting at Ragihalli Gate Cross) is proposed to be widened to 24m and develop as an alternative to Bannerughatta Main Road for bypass traffic. In addition, it is proposed to develop connectivity improvement links with the PD as shown in Proposed Land Use Map.
8. A City level SWM Integrated Waste Processing Yard is proposed to be developed at quarry site at Anjanapura village. Further, it is proposed to develop a Dry Waste Collection Centre in each village.
9. The RMP2031 proposes the protection and conservation of Sakalavara lake, Mantapa lake, Bidrekere lake and Bannerghatta lake and other lakes and their natural streams. It is therefore proposed that a Lake Rejuvenation and lake surrounding area plan be prepared and implemented.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 30, Bannerughatta:



1. Village Development Plans

2. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Rejuvenation of Lakes & Streams:** It is proposed that a detailed Lake and Stream Rejuvenation Plan be prepared and taken up under Village Development Plan.
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared.

3. Development of Parks:

A large scale PD level park is proposed to develop at the present quarry site Located at Anjanapura, Kanikana Agrahara and Golahalli village. And PD level park and playgrounds are proposed to be developed in the quarry sites at Golahalli, Lashmipura & Bannerughatta villages respectively.

4. Road Development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads.
 - i. Development of PRR,
 - ii. 24 m RoW road coming from Anjanapura 80 ft road Amruth nagar,
 - iii. 24 m Sakalwara main road
 - iv. 18m Row proposed road at Lakshmipura village
 - v. Byataranarayana road extending till Weaver's colony
 - vi. Villages Roads (12m and 15m wide) as shown in PLU Map
- b. Development of Gramathana Periphery Roads and Village Roads: It is proposed to develop gramathana periphery roads for following gramathans (as indicated in PLU Map)
 - i. Hullahalli
 - ii. Sakalavara
 - iii. Malle Nallasandra
- c. Junction Improvement Programme (JIP): JIP for geo-metric improvements is proposed for following intersections:
 - i. Junction of proposed PRR and the proposed 18 m wide road at Pilaganahalli village.
 - ii. Junction between PRR and Bannerghatta road
 - iii. Junction between Bannerghatta Road and Dinnepalya road
 - iv. Junction between Bannerghatta road and Sakalvara road
 - v. Junction between Bannerghatta road and Kaggadasapura road
 - vi. Junction at Bannerghatta road and Ragihalli Gate

5. Development of Public Transport Infrastructure:

- a. Bus Depots:
 - i. At Ragihalli Gate Cross along the Bannerughatta Main Road
 - ii. At Anjanapura village, abutting BMICAPA boundary and existing quarry area.
- b. BMTc Bus Stations
 - i. Hullahalli Village: near Hullahalli Cross Bus Stop
 - ii. Sakalavara Village: along Sakalavara Road near T-Junction next to Telecommunication Tower.

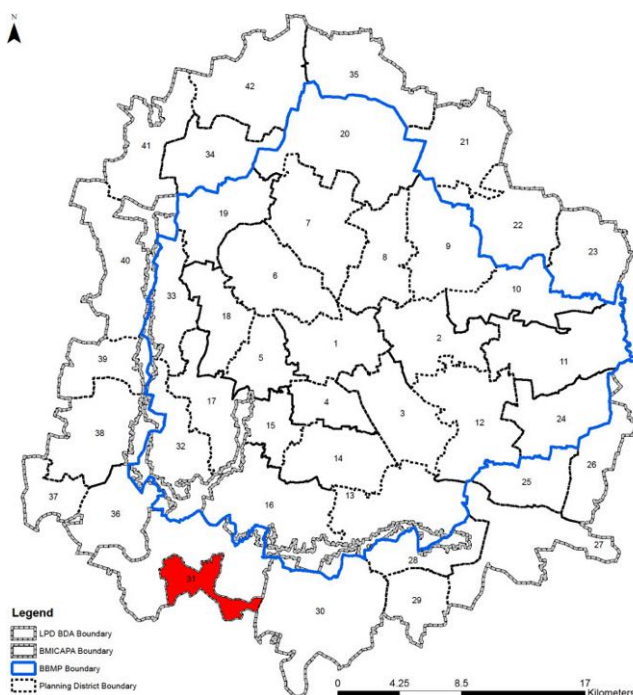


6. Development of Sanitation / SWM Facilities:

- a. Integrated Waste Processing Yard: A regional level integrated waste processing yard is proposed to be developed at quarry site at Anjanapura.
- b. Construction of DWCC: One each in Gramathana
- c. Construction of 1 STP at Bilwardali

7. Development of Regional Level Fire Station at Bannerughatta Village: It is proposed to develop fire station by filling abandoned quarry site in Bannerughatta Village.

32. PD 31: AGARA



Population (2011 Census): 12925

Area of PD: 1876.43 ha

Number of Villages: 04

Gross Density: 07 PPH

The Agara Planning District (No 31) is located at the south-western edge of BMA and flanked by the BMICAPA (NICE Corridor), three sides the north, east and west. Kanakapura road (NH209), and Devagere Road (Connecting NH209 & NH275 (Mysore Road)) are two important roads passing through the predominantly agriculture landscape.

RMP2031 proposes to preserve the present status while allowing for natural growth.

A. EXISTING STATUS

1. The Agara Planning District admeasures 1876.43 Ha (18.76 sq km) and comprises of 4 villages (some fully and some partly) namely, Agara, Badamanavarthakaval (T2), Badamanavarthakaval (T1; partly), Obichudahalli and Uttarahalli Manavarthakaval. These villages are in Agara and Kaggalipura Gram Panchayats.
2. As per Census 2011, there are 12925 residents, an increase by 96.5% from the year 2001 (6578). The total resident workers are 5476, which makes up 46.9 % of the population. There are 3158 households with average household size 4.1 which is higher than the average household size in BMA (4.01). The Average Gross density in this PD is 7 pph.
3. The planning district is characterized by predominantly agriculture landscape (Agriculture land use accounts for 78% of PD area), presence of Art of Living Ashram, Karnataka State Sericulture Research & Development Institute, Indus Business Academy and institutions belonging to the Art of Living, and scattered unoccupied residential layouts. Public Semi-public Use (4.49%) is more than residential land use (3.49%). There is one Ayurvedic hospital within the campus of Art of Living Ashram. Kanakapura Road (NH209), Pipeline Road, Devagere Road and the village road network defines the connectivity. **Figure 32-1** and **Table 32-1** presents the existing land use map and existing land use area statement for PD.

Figure 32-1: PD 31 Existing Land Use Map

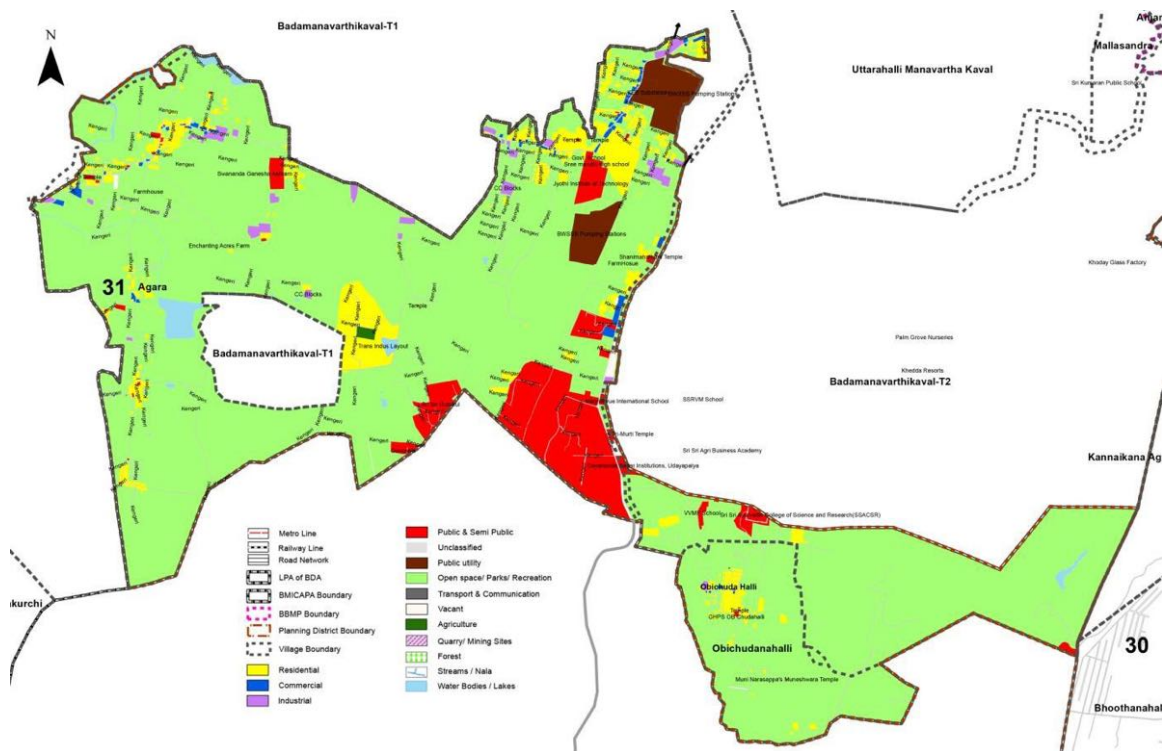


Table 32-1: PD 31 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	58.64	5.40
Commercial	4.53	0.42
Industrial	8.13	0.75
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	63.32	5.83
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	20.01	1.84
Parks & Open Spaces	20.01	1.84
Transport Communication	58.75	5.41
Vacant	1.70	0.16
Agriculture	841.29	77.40
Forest	0.00	0.00
Streams	1.41	0.13
Water Bodies	9.09	0.84
Total	1086.88	100.00

- City level public infrastructure in the north-eastern part of the PD which has a Cauvery Water Pumping Station on Kanakapura Road and a KPTCL sub-station in Thathaguni. In terms of social infrastructure, there are 18 schools, most of them serving neighbouring planning districts. Being in the peripheral areas of BMA; some areas in this planning district do not

have access to primary schools within 1 km walking distance. Only some settlements have basic educational infrastructure like anganwadi/ primary school.

- There are three lakes within the PD, the biggest one Agara lake is mostly outside the PD, while other two lakes are within the PD.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PRESERVATION, GRAMATHANA DEVELOPMENT, IMPROVED CONNECTIVITY.

PROPOSALS

- The RMP2031 proposes preservation while allowing natural growth, gramathana development and connectivity improvement. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation and livability. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc. Figure 32-2 and
-
- Table 32-2 present the Proposed Land Use Map and Proposed Land Use Distribution for planning District.

Figure 32-2: PD 31 Proposed Land Use Map

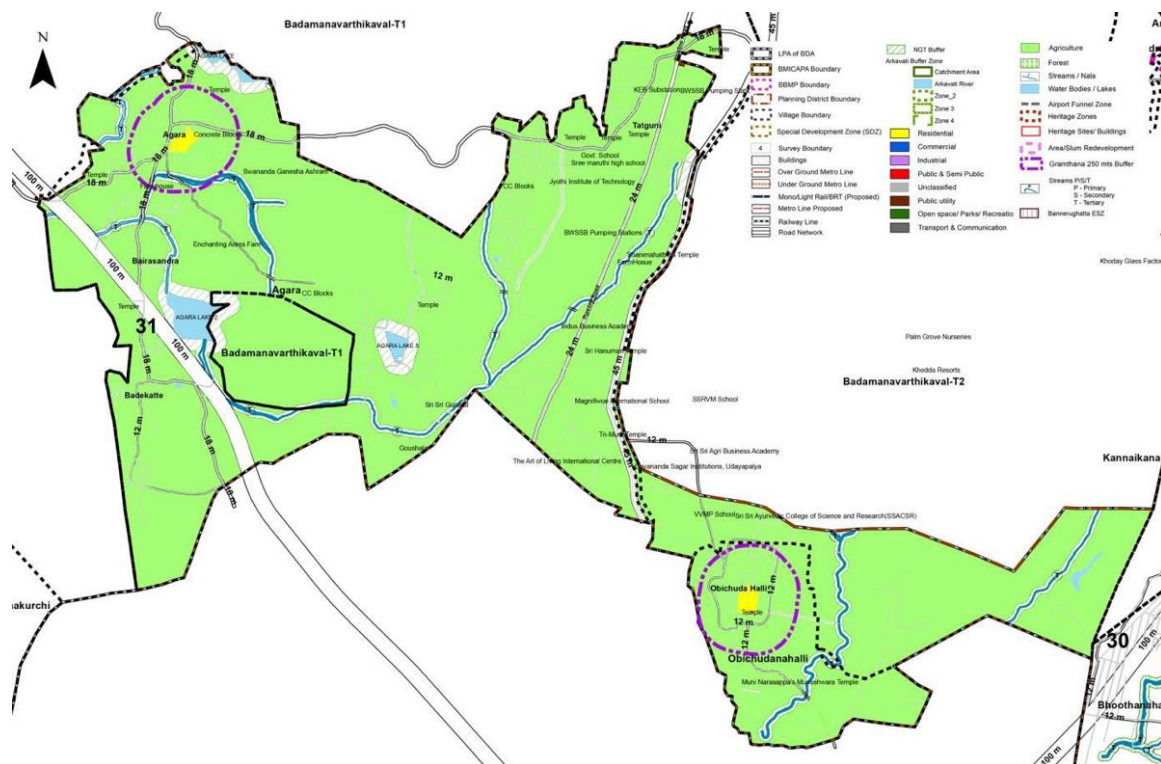


Table 32-2: PD 31 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	0.00	0.00
Commercial	0.00	0.00
Industrial	0.00	0.00
Public & Semi Public	0.00	0.00
Unclassified	0.00	0.00
Public Utility	0.00	0.00
Parks / open spaces	0.00	0.00
Transport & Communication	0.00	0.00
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	0.00	0.00
NGT Buffer	0.00	0.00
Total Developable Area		0.00
Agriculture	1087.77	-
Total PD Area	1087.77	-

- To improve the public transport facility it is proposed to develop BMTC Bus Station cum Bus Depot at Agara Cross and Bus Stations at Agara, Obichudahalli and Basappanapalya.
- In addition to Peripheral Ring Road, the RMP2031 proposes widening of Devagere Road (from Agara Cross (on Kanakapura Road) to Kumbalgodu Cross (On Mysuru Road) from existing width to 24m. The RMP2031 also proposes development of village roads (existing stretches with limited new stretches) to improvement connectivity within the planning district. Gramathana Periphery road is proposed to be developed for Banjarapalya and Gangasandra.
- A City level Regional Fire Station is Proposed to be developed along the Kanakapura Road. This fire station will service BMA and certain areas falling within Kanakapura LPA.
- It is proposed to develop a Dry Waste Collection Centre in each village. One organic waste converter is proposed to be developed in Agara Village.
- The RMP2031 proposes the protection and conservation of all three lakes within PD. It is therefore proposed that a Lake Rejuvenation and lake surrounding area plan be prepared.
- To provide comfort to pedestrians and cyclists, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.

PROGRAMS AND PROJECTS

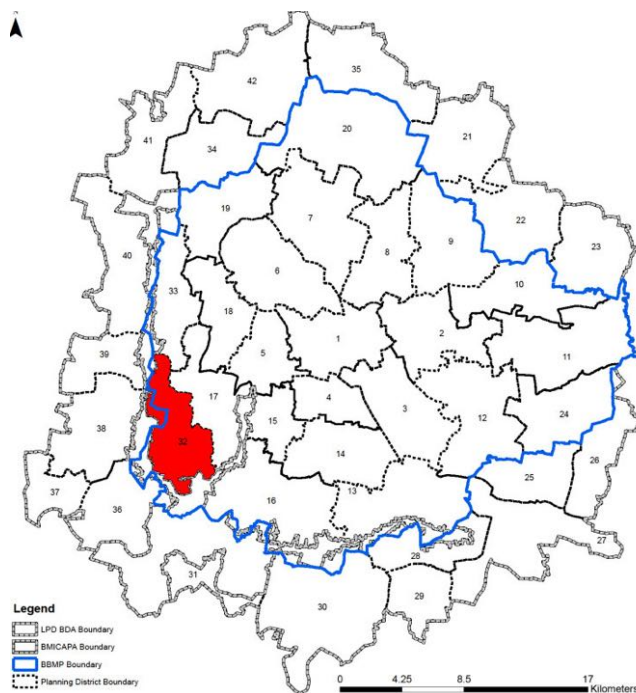
The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD31:

- Village Development Plans**
- Protection and Rejuvenation of Lakes and Streams:**



- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Rejuvenation of Lakes & Streams:** It is proposed that a detailed Lake and Stream Rejuvenation Plan be prepared for all lakes within this PD.
 - c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared .
- 3. Road Development Plan:**
- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads:
 - Peripheral Ring Road
 - Devagere Road
 - Kanakapura Road
 - b. Development of Village Roads
 - Agara to Thimmegowdana Palya Road via Banjarapalya
 - Road from Devagere Road to Banjarapalya via Basappanpalya
 - Road from Banjarapalya to Uttari
 - Road from Basappanpalya to Uttari
 - New Village Road Links
 - New Village Road Links
 - Gramathana Periphery Roads
 - c. Junction Improvement Programme:
 - Agara Cross Junction
 - Thathaguni Cross Junction
 - Intersection of Existing and New Links
 - d. Development of Gramathana Periphery Roads
- 4. Development of Public Transport System:**
- a. Bus Station cum Depot: One at Agara Cross
 - b. BMTC Bus Stations: It is proposed to develop Bus Station at following locations:
 - i. Agara Village
 - ii. Obichudahalli
 - iii. Basappanapalya
- 5. Development of SWM Facilities:**
- a. Construction of DWCC: One in Agara Village
 - b. Organic Waste Converter: One in Agara Village
- 6. Development of Regional Fire Station**
- Fire Station: Near Thathaguni Cross

33.PD 32: ULLALU – KENGERI



Population (2011 Census): 1,00,882

Area of PD: 2451 ha

Wards in PD: 4 (2 part)

Gross Density: 41.15 pph

The Planning District 32, Ullalu-Kengeri is located at south west of the BMA planning area. The Vrishabhavathi River flows through the PD, rendering several areas in this PD, ecologically sensitive. The PD is bounded by BMIC (NICE) along the West and South and shares its boundary with BMICAPA area and the NICE Corridor.

The RMP2031 proposes densification of the residential areas in a planned manner along with increased public transport share and other transit

integration and infrastructure upgradation.

1. The Ullalu- Kengeri Planning District comprises of 4 wards in total. The wards being two wards Ullalu (130) and Kengeri (159); partly in BMIC, one village (Kengeri Gollahalli) and western part of Hemmigepura ward (198).
2. The urban character is low rise, medium dense with residential areas concentrated in Kengeri Satellite town, Rajarajeshwari nagar, Banashankari 6th Stage, Jnanabharti, Sonnenahalli, Shirke Layout, SMV layout. Major work and IT centre of Global Village is located in this PD.
3. Mysore road, 80 ft road of the Kengeri Satellite town, Dodda basti main road, Kommaghatta road, Dr. Vishnuvardhan road, Railway parallel road, Kenchanahalli road, Pattangere road / Global Village road are the major roads within this PD. Additionally the NICE ring road is also accessible from the western boundary of the PD.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 32 has a population of 1,00,882, with a decadal growth of 119% from the year (2001-2011). The work force participation rate 41% of the population. The gross density is 41.15 pph and the residential density is 242.2 pph.
5. There are 25,161 households in this PD, with average household size 4.01, which is same as the average household size in BMA (4.01).

4. The total workforce in this PD is 41,501. The major employment node in the PD is the Global Village SEZ, which has IT/ITES industries. There are also a few industries and factories along the Mysore road. Neighbourhood commercial areas along 80 ft road (passing through the Kengeri Satellite Town) cater to the existing residential areas.

5. The predominant land use is under vacant land use with ~46.76% of the PD land area which has potential for development and densification. Approximately 17% of the land use in this planning district is under residential owing to the upcoming layouts. The agricultural land use share in the total area 19.14%. ~9.47 % of the land area is under transportation and communication land use. **Figure 33-1 and Table 33-1** presents the existing land use map and existing land use area statement for PD 32.



Table 33-1: PD 32 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	424.77	17.33
Commercial	61.52	2.51
Industrial	50.24	2.05
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	94.39	3.85
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	14.90	0.61
Parks & Open Spaces	34.86	1.42
Transport Communication	232.15	9.47
Vacant	990.49	40.40
Agriculture	469.22	19.14
Forest	0.00	0.00
Streams	20.50	0.84
Water Bodies	58.49	2.39
Total	2451.52	100.00

Housing and Slums

- Residential land use (17.33%) has the residential character of low rise layout type. Residential areas are concentrated in Kengeri Satellite town and layouts in the north of the PD, such as Rajarajeshwari nagar, Banashankari 6th Stage, Gnanabharti, Sonnenahalli, Shirke Layout, SMV layout etc. There are many upcoming layouts and apartments in the PD.
- There are 15 slums located in 3 slums out of which 2 are notified. The ward with most number of slums is Kengeri (ward no. 159) where 7 slums are located within it. The populations residing in the slums are 10,325 which accounts for 10.2% of the PD population.

Traffic and Transportation

- The main arterial roads in this PD are the Mysore road that runs diagonally from the centre of the PD. The other major roads are Dodda Basti main road, 80 ft road of the Kengeri Satellite town, Kommaghatta road that meets from the western side that connects to Mysore road, Dr. Vishnuvardhan road that meets from the eastern side that connects Mysore road, Railway parallel road, Kenchanahalli road. It is noteworthy that the PD is bounded by the BMICAPA along its western and southern boundary. Hence the NICE ring road is accessible from this PD through the interchanges at Mysore road and also accessible is the NICE expressway.
- Railway line passes through this PD, with stations of Kengeri Railway Station, Nyanadahalli Railway Station and Jnanabharti Railway Station are located on this railway line.
- 1 BMTC bus Depot and one BMTC TTMC, both at Kengeri are located in this PD.
- Metro services are proposed and currently under implementation by the BMRCL with alignment along the Mysore road (3 metro stations of the Green Line; Kengeri metro station, Mallasandra metro station and Pattangere RVCE metro station).

Physical and Social Infrastructure

12. As per BWSSB, the percentage coverage of households having metered water connections is ~42% and percentage of households having sewage connections is ~26%. There are 2 GSLRs, 1 STP at Kengeri, the Vrishabhavathy Tertiary Treatment road located at Hemmigepura ward (ward no. 198) and 3 pumping stations. As per BBMP, there are 2 Dry Waste Collection Centres located in this PD.
13. Social infrastructure in this PD includes 61 schools in this PD. Several institutes of higher education like BGS group of institutions and RV engineering college are located in this planning district. There are 5 private and government hospitals (including BGS Hospital). There is a police station in this planning district.

Park and Open Spaces

14. This PD locates the Thurahalligudda State and Reserved Forest and the Mailasandra Reserved Forest. There are several neighbourhood parks that are part of various layouts. Only 1.42 % of the total land in this PD is under Parks and Open Spaces. This indicates a lack of open spaces in this Planning district.

Lakes and Drainage

15. The primary stream of Vrishabhavathi river runs north east to south direction of this PD. There are many plantations along Vrishabhavathi River which passes through the PD. The major lakes in the PD are Kengeri kere, Hosakere Lake, Dubasipalya kere, Uttrahalli Lake, Gandhinagar, Ullal kere and Mallasandra kere 1.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DENSIFICATION OF RESIDENTIAL AREAS IN A PLANNED MANNER, IMPROVED TRANSPORT CONNECTIVITY AND INFRASTRUCTURE, TRANSIT INTEGRATION AND ENVIRONMENT PROTECTION.

PROPOSALS

1. The RMP2031 proposes densification of the residential areas of Banashankari 6th stage, Rajarajeshwari nagar, BEML layout, Kengeri Satellite Town, Sir M. Vishveshwaraiah layout, SMV layout of Ullalu in a planned manner along with increased public transport share and other transit integration and infrastructure upgradation. **Figure 33-2 and Table 33-2** presents the Proposed Land Use Map and Proposed Land Use analysis for the Planning District.
2. RMP2031 proposes city level public transport infrastructure of Metro Rail and LRT/Mono Rail/BRT running along roads within the Planning District to ensure a greater share of public transport and to improve connectivity and accessibility.
 - a. Railway Station: Better accessibility and connectivity to Kengeri railway station catering to the CRS public transport.
 - b. Metro on Mysore Road: It is proposed to extend the metro on Mysore road (Green Line) with stations of Kengeri metro station, Mallasandra metro station and Pattangere RVCE metro station, whose construction is currently ongoing.

- c. Metro on PRR: It is proposed to develop metro rail all along the Peripheral Ring Road / NICE Ring Road, that is accessible from the western boundary of this PD.
- d. LRT/Mono Rail/BRTS on Inner Peripheral Ring Road: LRT/ Mono Rail/ BRT is proposed on the 30 m RoW Inner PRR passing through the PD. Stations are proposed at JSS Academy of Technical Education bus stop, stations at junction of Inner PRR and Mysore road.

Figure 33-2: PD 32 Proposed Land Use Map

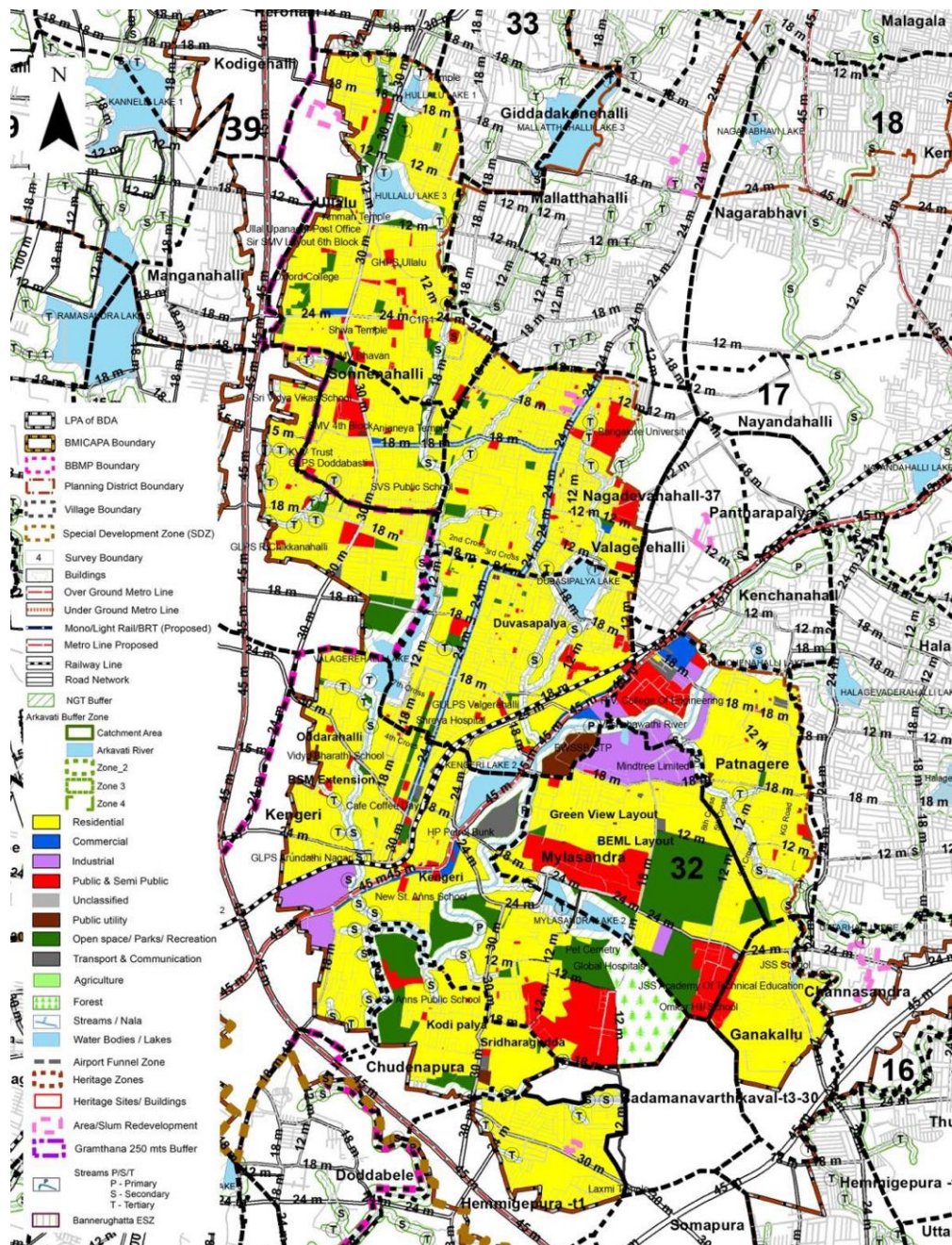


Table 33-2: PD 32 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1293.16	52.75
Commercial	25.77	1.05
Industrial	66.06	2.69
Public & Semi Public	166.52	6.79
Unclassified	0.00	0.00
Public Utility	12.49	0.51
Parks / Open Spaces	166.22	6.78
Transport & Communication	324.04	13.22
Forest	40.85	1.67
Streams	20.05	0.82
Water Bodies	52.14	2.13
NGT Buffer	284.21	11.59
Total Developable Area	2451.52	100.00
Agriculture	0.00	-
Total PD Area	2451.52	-

3. The RMP2031 proposes 1 Inter State Bus Terminal (ISBT) next to the existing BMTC TTMC.
4. The RMP2031 proposes 1 intermodal interchange at junction of Mysore road, NICE ring road and the NICE Expressway.
5. In order to improve the accessibility to Public Transport Stations (Metro/BMTC Bus Stations) it is proposed to strengthen the existing road network by providing footpaths and cycle tracks. This will greatly enhance first and last mile connectivity to the Public Transport Stations.
6. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed network connectivity enhancement:
 - e. Inner Peripheral Ring Road: It is proposed to develop the 30m RoW Inner Peripheral Ring Road that is concentric and runs between the two rings of Outer Ring Road and Peripheral Ring Road.
 - f. Connectivity between Mysore road, Rajarajeshwari nagar and Kengeri Satellite Town to be improved through the proposed 30 m wide Inner PRR.
 - g. Better Connectivity to Global Village and areas such as BEML layout.
 - i. Overall Geometric Improvement of Certain Roads: Apart from Master Plan Roads, RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads. These roads are a) Mysore road b) Inner PRR c) Kommaghatta Road d) Dr. Vishnuvardhan Road e) Dodda Basti Main Road e) Pattanagere Main road f) Global Village Tech Park Road
7. The RMP2031 has identified 8 road junctions that are to be taken up for geometric improvements for better and smoother flow of traffic.
8. RMP2031 proposes that a detailed parking plan be prepared by BBMP for identified areas.



9. The Planning District drains into the Vrishabhavathi River. The natural drainage within the PD have been classified as following:
 - a. Drainage Primary downstream of Vrishabhavathi River that flows from Nayandahalli lake towards Kumbalgodu lake = Primary
 - b. Drainage downstream of Valagerahalli lake connecting the Vrishabhavathi stream = Tertiary
10. The RMP2031 proposes that these streams be kept free from encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
11. The RMP2031 proposes the lake protection and rejuvenation of the primary stream of Vrishabhavathi river and of Kengeri kere, Hosakere lake, Dubasipalya kere, Uttrahalli lake, Gandhinagar, Ullal kere and Mallasandra kere 1 and its natural streams by preparing lake and surrounding area development plan.
12. The RMP2031 recognizes the present status of slums and potential for in-situ (to the extent possible) Redevelopment of Slums and proposes that slum redevelopment be taken in a phased manner.
13. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 3 Dry Waste Collection Centres, 1 Organic Waste Collection Centres, are proposed to be developed within the Planning District by BBMP.
14. The RMP2031 proposes for an additional of 220kV Substation to cater to the future power demand and 1 additional STP for future demand.
15. It is essential to have good and quality access to social infrastructure; hence it is proposed to have 1 Fire station and 1 burial and cremation ground.
16. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads, sub-arterial and important roads.
17. The RMP2031 proposes a comprehensive Disaster and Hazard Mitigation Plan be prepared for the low lying and prone at areas of, Ganapathipura along Chunchaghatta road, Maruthi Nagar located south of Chunchaghatta lake, Vittal Nagar and Subramanyapura on either sides of Dorai lake.
18. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas for Informal activities/ Street Vending and detailed upgradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 32 Ullalu - Kengeri:

1. **Road Development Plan:**
 - a. Master Plan Road Demarcation and Land Acquisition for development for Category 1
 - b. Upgradation of Master Plan roads
 - i. Mysore Road
 - ii. Kommaghatta Road
 - iii. Dr. Vishnuvardhan Road
 - iv. Dodda Basti Main Road
 - v. Pattanagere Main road



- vi. Global Village Tech Park Road
- c. Junction Improvement Programme
 - i. Intersection between SMV Layout 3rd Block and Govt. Press Layout at Ullalu Village road
 - ii. Junction at Mariyappanapalya bus stop
 - iii. Junction at Kenchanapura Cross bus stop, between Dodda Basti Main road and 4th Main Road
 - iv. Intersection between Oddarapalya Bus stop road and Old Outer Ring Road.
 - v. Junction at Sonnenahalli bus stop on the Dodda Basti road
 - vi. Junction near Kengeri Police Station on the Mysore road (Below the bridge)
 - vii. Intersection at Mysore road and Dr. Vishnu Vardhan road
 - viii. Intersection at Mysore road and Pattangere main road (that connects Global Village Tech Park)
- 2. **Development of Public Transport System**
 - a. CRS
 - i. Railway line from Mysuru along the Kengeri Railway Station and till ORR
 - b. Namma Metro
 - i. Metro Phase II of Green Line.
 - ii. Metro Phase III along PRR / NICE Ring Road
 - c. LRT/Mono Rail/BRTS
 - i. Along Inner PRR
- 3. **Accessibility Improvement Plans:**
 - a. For Planned Stations (Railway, Metro & Mono Rail)
 - b. Intermodal Interchanges
 - c. BMTC Bus TTMC
 - d. For Global Village Tech Park and surrounding areas
- 1. **Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places:**
 - a. Mysore Road
 - b. Inner PRR
- 2. **Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Kengeri kere Rejuvenation Plan
 - iii. Hosakere lake Rejuvenation Plan
 - iv. Dubasipalya kere Rejuvenation Plan
 - v. Uttrahalli lake Rejuvenation Plan



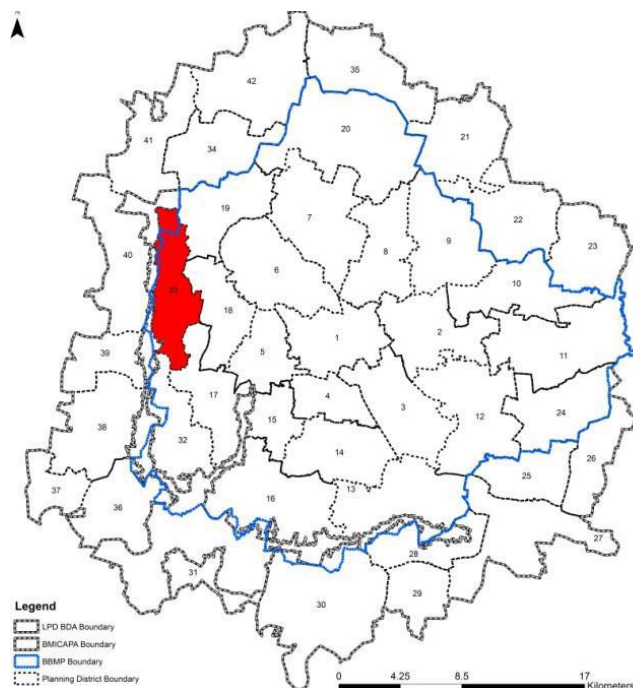
- vi. Gandhinagar Rejuvenation Plan
- vii. Ullal kere Rejuvenation Plan
- viii. Mallasandra kere 1 Rejuvenation Plan
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

3. Declaration of Street Vending Zones/ Areas/ Streets

4. Development of Physical Infrastructure/ Facilities:

- | | |
|---|---------|
| h) SWM Dry Waste Collection Centre: | 03 Nos. |
| i) SWM Organic Waste Collection Centre: | 01 Nos. |
| j) 220kv Sub-station: | 01 Nos. |

34.PD 33: HEROHALLI



Population (2011 Census): 2,19,451

Area of PD: 2321 ha

Wards in PD: 3

Gross Density: 86 pph

The Planning District 33, Herohalli is located at Western boundary of the BMA. PD is characterised predominantly by residential development abutting Peenya Industrial Area and has large tracts of vacant land. PD shares its boundary with BMICAPA.

The RMP2031 proposes densification of the residential areas in a planned manner along with transit integration and infrastructure upgradation and planning for parks and open spaces.

1. The Herohalli PD comprises of 3 BBMP wards-Herohalli (72), Dodda Bidarakallu (40), Hegganahalli (71), of Dasanapura Zone and three villages (in parts & full) namely Thirumalapura, Chikkabidarakalu and Srikantapura falling between BBMP and BMICAPA boundary.
2. The urban character is low-rise, highly compact in certain pockets with mainly plotted and some sporadic development pattern with residential areas of Maruthi layout, Ragavendra nagar, Venkateshwara layout, BEL layout Phase I, Byregowda layout, Sir M Vishveshwaraiah layout, ITI Employees Layout, SBI colony, Syndicate Bank Employees Housing Society, SMV layout 7th block, 8th block.
3. Tumkuru Road (NH 4) and Magadi road (SH 85), Andirahalli Main Road and Kuvempu Road are the major roads in this Planning District. The NICE ring road is accessible from the Western boundary with the interchange at BIEC along the Tumkuru road.

A. EXISTING STATUS

Demography

4. As per Census 2011, PD 33 has a population of 2,19,451 with a decadal growth of 179.8% from the year (2001-2011). The work force participation rate 48.62% of the population.
5. There are 58,870 households in this PD, with average household size 3.7, which is lesser as the average household size in BMA (4.01).

Industry and Commerce

6. There are two pockets of industrial developments: South of Peenya Industrial Area, and along the Tumkuru road. Byraveshwara Industrial Estate in Hogganahalli ward and Ragavendra industrial estate

Existing Land Use

7. The predominant land use is under vacant land use accounts for ~36.32% of the PD land area which has potential for development and densification. Residential land use accounts for ~22.76% of the PD area. Agriculture land use accounts for ~12.79%. Transport/Communication land uses accounts for ~9.4%. Industrial land use accounts for ~5.3% since the PD contains a part of Peenya Industrial Area. **Figure 34-1** and Table 34-1 present the Existing Land Map and Existing Land Use analysis for this PD.

Figure 34-1: PD 33 Existing Land Use Map

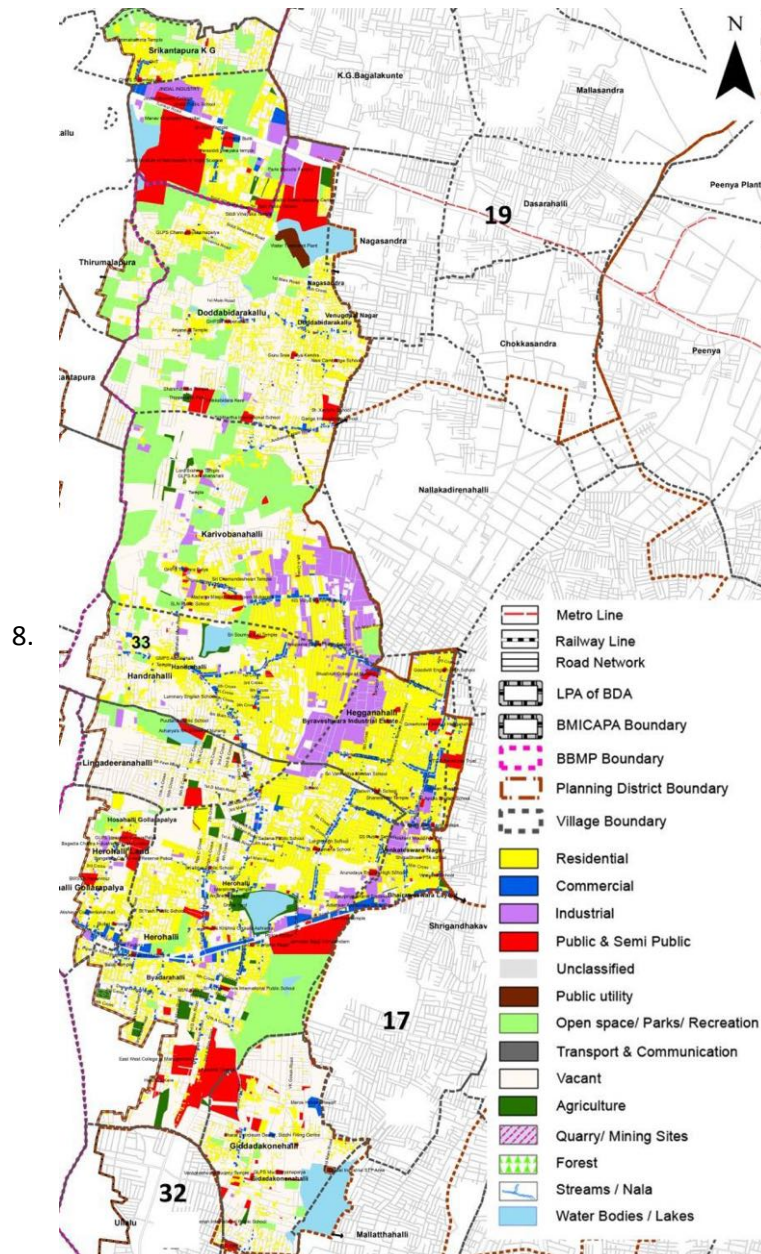


Table 34-1: PD 33 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	517.47	22.29
Commercial	61.20	2.64
Industrial	122.98	5.30
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	110.94	4.78
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	6.17	0.27
Parks & Open Spaces	20.15	0.87
Transport Communication	217.76	9.38
Vacant	828.46	35.69
Agriculture	358.78	15.46
Forest	0.00	0.00
Streams	5.94	0.26
Water Bodies	71.45	3.08
Total	2321.31	100.00

Housing and Slums

9. Spatially the PD has the as low-rise, highly compact in certain pockets, with plotted developments in some areas and sporadic development in other areas. The built character in this PD is variable, and is low rise and high density in the Herohalli ward due to residential areas of Maruthi layout, Ragavendra nagar, Venkateshwara layout, BEL layout Phase I, Byregowda layout, Sir M Vishveshwaraiah layout, ITI Employees Layout, SBI colony, Syndicate Bank Employees Housing Society, SMV layout 7th block, 8th block.
10. There are vacant but upcoming layouts in ward of Dodda Bidarakallu in areas such as Lingadheeranahalli, Tippenahalli etc.
11. The Gross density is 86 pph and the average residential density is 94.5 pph. The gross density is highest in Hegganahalli ward (338 pph) and the least is in Thirumalapura village which is uninhabited.
12. There are 13 slums located in the 3 wards in the PD out of which 1 slum is notified. The ward with most number of slums is Dodda Bidarakallu (ward no. 40) where 6 slums are located within it. The population residing in slums is 12,619 which accounts for 5.8% of the PD population.

Traffis and Transportation

13. As proposed and implemented by the BMRCL, metro alignment of Phase II has coverage within this PD which is extension of Purple Line on the Tumkuru road. The 2 metro stations in this alignment are Jindal metro station and Manjunathnagar metro station.
14. The main arterial roads in this PD are Tumkuru Road (NH 4) and Magadi road (SH 85) that provide connectivity to PD, however internal connectivity lacks planned hierarchy as only Andirahalli Main Road and Kuvempu Road provides for the internal connectivity. It is

noteworthy that the PD is bounded by the BMICAPA along its western boundary. Hence the NICE ring road is accessible from this PD through the interchange at BIEC along the Tumkuru road.

Physical and Social Infrastructure

15. As per BWSSB, the percentage coverage of households having metered water connections is ~8.3% and percentage of households have sewage connections is ~5%. There are 1 GSLRs, 1 STP located next to the Dodda Bidarakallu lake in the Dodda Bidarakallu, and 1 Intermediate Sewage Pumping Stations (ISPS). As per BBMP, there are 1 Central Processing Unit and 2 Dry Waste Collection Centres located in this PD. According to KPTCK, there are 1 66Kv substations located here.
16. Social infrastructure in this PD includes 86 schools in this PD. and several higher educational institutions. Prominent educational institutions in this area are Jindal Public School, Basava Academy of Engineering, Sri Venkateshwara Nursing Collage, and East West Group of Colleges. There are 4 government and private healthcare centres in this PD. There is 1 fire station located in this PD.

Park and Open Spaces

17. There are not adequate parks, playgrounds and open spaces in this PD.

Lakes and Drainage

18. The lakes in this PD are part of the Vrishabhavathi Valley and which drains into the Byramangala Reservoir near Bidadi and finally joins the Cauvery River near Mekedattu, Kanakapura. The lakes in this PD are, Dodda Bidarakallu lake, Madwara lake (part), Karivobanahalli lake, Nallakadiranahalli (part), Gangondanahalli (part), Handrahalli lake, Lingadheeranahalli lake, Herohalli Lake 1, Herohalli lake 3, Andrahalli Lake, Mallathalli Lake.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: DENSIFICATION OF RESIDENTIAL AREAS IN A PLANNED MANNER, IMPROVED INFRASTRUCTURE, TRANSIT INTEGRATION AND PLANNING OF PARKS AND OPEN SPACES.

PROPOSALS

1. The PD extent falls under the Planning Zone B, with its eastern part fully developed. The RMP2031 proposes densification in the western part of the Planning District of areas in BEL layout (1st Phase & 2nd Phase), Byregowda layout, Vishvesharaya Nagar 8th block, , Lingadheeranahalli, Tippanahalli, Mysore lamps Employees Cooperative Society layout, Vinayakanagar, Dooda Bidarakallu, Anchepalya and Ravi Kirloskar layout and regulation of densities in areas of D-Group layout, Syndicate Bank layout, Vidhyamanya nagar, Raghavendra nagar, Byraveshara naga, Maruti layout etc. The Proposed Land Use Map and the Proposed Land Use Area statement are given in **Figure 34-2 and Table 34-2** respectively.
2. RMP2031 proposes city level public transport infrastructure of Metro Rail and LRT/Mono Rail/BRT running along roads within the Planning District to ensure a larger share of public transport and to improve connectivity and accessibility:

- Figure 34-2: PD 33 Proposed Land Use Map**

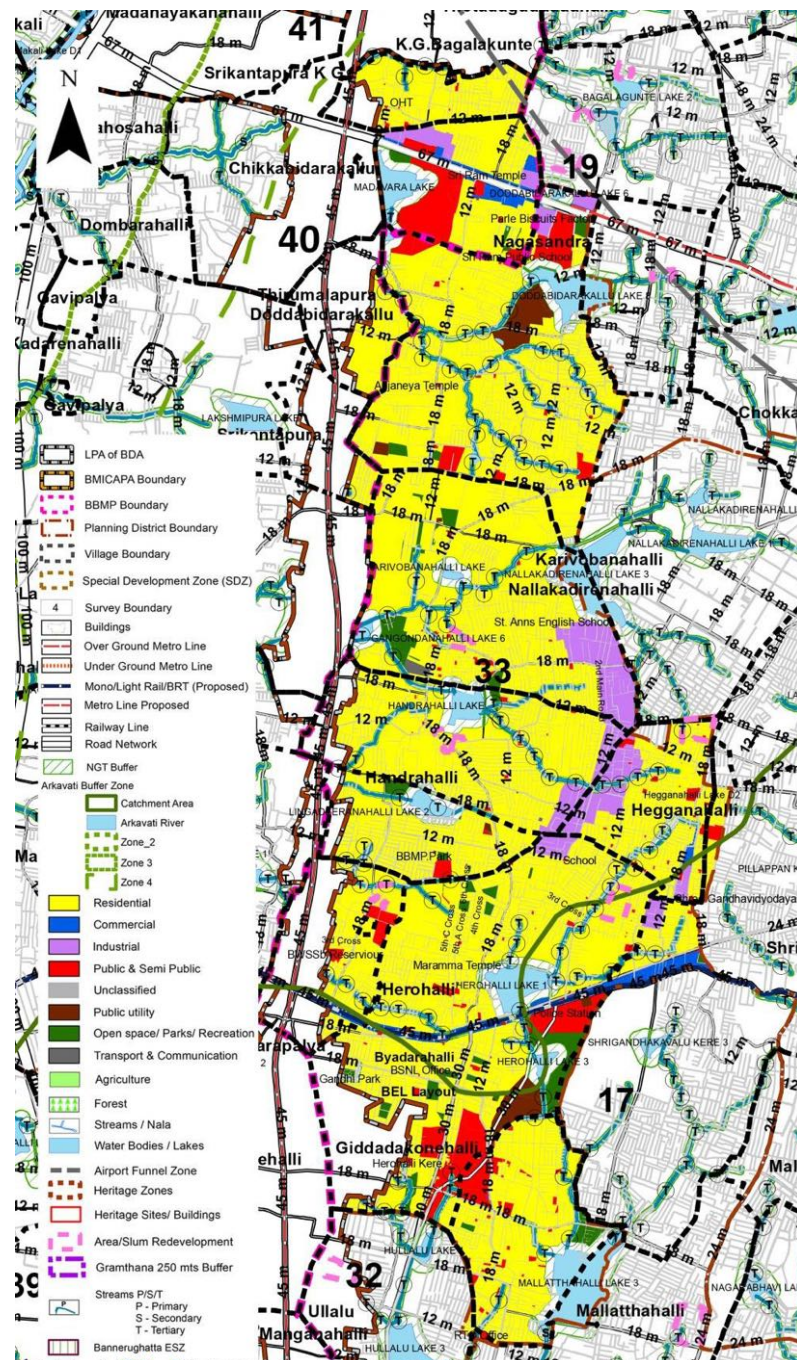


Table 34-2: Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1391.34	59.94
Commercial	24.40	1.05
Industrial	86.10	3.71
Public & Semi Public	119.92	5.17
Unclassified	0.00	0.00
Public Utility	26.58	1.15
Parks / Open Spaces	48.35	2.08
Transport & Communication	296.51	12.77
Forest	0.00	0.00
Streams	5.44	0.23
Water Bodies	69.02	2.97
NGT Buffer	253.66	10.93
Total Developable Area	2321.31	100.00
Agriculture	0.00	-
Total PD Area	2321.31	-

3. The RMP2031 proposes 1 BMTC TTMC near Bayalanjenyanagar Andrahalli bus stop.
4. The RMP2031 proposes 1 Intermodal Interchange along the intersection of Magadi road and NICE Ring Road.
5. Transit Oriented Development is proposed to be applicable around all metro located in the Planning District.
6. In order to improve the accessibility to Public Transport Stations (Metro/BMTC Bus Stations) it is proposed to strengthen the existing road network by providing footpaths and cycle tracks.
7. Further, to improve overall connectivity within and with other areas outside planning district following improvements are proposed network connectivity enhancement:
 - a. Inner Peripheral Ring Road: It is proposed to develop the 30m RoW Inner Peripheral Ring Road that is concentric and runs between the two rings of Outer Ring Road and Peripheral Ring Road. Its alignment in this PD that runs from the south of the PD, which meets the Magadi road. It extends beyond the Magadi road as Handrahalli road to 18m that caters to BEL layout and meets Tumkuru road.
 - b. Connectivity is proposed to be improvised in Dodda Biadarakallu village and Jinnagaramma layout, Andrahalli and Vidyamanya nagar and Lingadheernahalli.
 - c. Overall Geometric Improvement of Certain Roads: Apart from Master Plan Roads, RMP2031 proposes overall geometric improvement of certain roads which includes uniform right of way and cross –section, provision of Pedestrian and wherever possible NMT facilities. Also include improvement of junction on these roads. The roads are a) Magadi road b) Inner PRR c) Tumkur Road.
8. The RMP2031 has identified 1 road junctions that is to be taken up for geometric improvements for better and smoother flow of traffic.



9. RMP2031 proposes that a detailed parking plan be prepared for Magadi road, Tumkur road, Inner PRR.
10. To provide comfort to pedestrians and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for arterial roads and sub-arterial.
11. Entire PD drains into Arakavati River and all the lakes are connected to Arakavati River through network of drains/ streams. The natural drainage within the PD have been classified as following:
 - a. Drainage downstream of Nallakadirenahalli lake 3 via Gangondanahalli lake 3 towards Arkavathi river - Secondary
 - b. Drainage downstream of Dasarahalli lake via Doddabidirakallu towards Madavara lake towards Arkavathi river – Tertiary.
 - c. Drainage downstream of Handrahalli lake towards Gangondanahalli lake further continuing towards Arkavathi river - Tertiary.
 - d. Drainage downstream of Mallathhalli lake towards secondary stream connecting Vrishabhavathi River – Tertiary.
12. The RMP2031 proposes that these streams be kept free from encumbrances, sludge, SWM, and no sewage be allowed to flow into the streams and lakes. It is therefore proposed that all lakes be properly interconnected and rejuvenated.
13. The RMP2031 proposes the lake protection and rejuvenation of are, Dodda Bidarakallu lake, Madwara lake (part), Karivobanahalli lake, Nallakadiranahalli (part), Gangondanahalli (part), Handrahalli lake, Lingadheeranahalli lake, Herohalli Lake 1, Herohalli lake 3, Andrahalli Lake, Mallathalli lake and its natural streams by preparing lake and surrounding area development plan.
14. To cater to future management and operations of Solid Waste in future, it is proposed that in addition to existing facilities, 6 Dry Waste Collection Centres, 1 Organic Waste Collection Centres, 1 Aggregator.
15. The RMP2031 proposes for 1 additional of 220kV Substation to cater to the future power demand.
16. It is essential to have good and quality access to social infrastructure; hence it is proposed to have 2 Fire station and 2 burial and cremation ground.
17. The RMP2031 recognizes the present status of slums and potential for in-situ (to the extent possible) Redevelopment of Slums.
18. The open spaces and parks are proposed to be maintained and given good accessibility.
19. RMP2031 proposes that BBMP, in accordance to the provisions of Street Vending Act, 2015, determines the areas for Informal activities/ Street Vending and detailed upgradation plans for such areas/ roads/ streets are prepared.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 33 Herohalli:



1. Road Development Plan:

Master Plan Road Demarcation and Land Acquisition for development for Category 1

a. Upgradation of Master Plan roads

i. Inner PRR or Ring 4

ii. Magadi Road

iii. Tumkur Road

b. Junction Improvement Programme

Intersection between Magadi Road and the Inner PRR (E-West College road)

2. Development of Public Transport System

a. Namma Metro

iii. Metro Phase II of Purple Line.

iv. Metro Phase III along PRR / NICE Ring Road

b. LRT/Mono Rail/BRT

ii. Along Inner PRR

3. Preparation of Parking Plans for Commercial Areas/ Public Buildings/ Places

a. Magadi road

b. Tumkur road

c. Inner PRR

4. Protection and Rejuvenation of Lakes and Streams:

a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.

b. **Preparation of Lakes & Streams Rejuvenation Plan:**

i. RMP2031 Streams Rejuvenation Plan

ii. Dodda Bidarakallu lake Rejuvenation Plan

iii. Handrahalli lake Rejuvenation Plan

iv. Lingadheeranahalli lake Rejuvenation Plan

v. Herohalli Lake 1 Rejuvenation Plan

vi. Herohalli lake 3 Rejuvenation Plan

vii. Andrahalli Lake Rejuvenation Plan

viii. Mallathalli lake Rejuvenation Plan

ix. Karivobanahalli lake Rejuvenation Plan

x. Madwara lake (part) Rejuvenation Plan

xi. Nallakadirahalli (part) Rejuvenation Plan

xii. Gangondanahalli (part) Rejuvenation Plan

c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

5. Declaration of Street Vending Zones/ Areas/ Streets

6. Development of Physical Infrastructure/ Facilities:

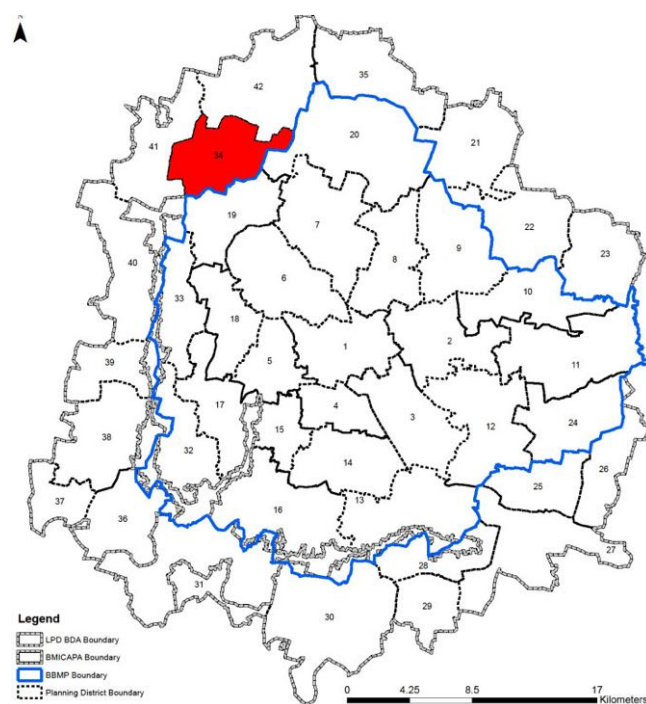


- a) SWM Dry Waste Collection Centre: 06 Nos.
- b) SWM Organic Waste Collection Centre: 01 Nos.
- c) SWM Aggregators: 01 Nos.
- d) 220kv Sub-station: 01 Nos.

7. Preparation of Disaster and Harzard Mitigation Plan

- a) Flood prone areas of Kairobanahalli and
- b) Flood prone areas of along Magadi road next to Herohalli lake

35.PD 34: CHIKKABANWARA



Population (2011 Census): 47043

Area of PD: 2680.17ha

Villages in PD: 18

Gram Panchayats: Chikkabanawara, Vaderahalli, Somashettahalli and Kasaghattapura

Gross Density: 18 pph

The Chikkabanawara Planning District (PD No. 34) is located in the north-western side in abutting to BBMP Boundary. It is characterised by haphazard developments along Hessarghatta Road and areas abutting to BBMP, and agricultural landscape.

The RMP2031 proposes to promote planned growth while maintaining the present conurbation, integrate public transport systems, and environment protection.

A. EXISTING STATUS

1. Chikkabanawara Planning District admeasures 2680.17ha (26.80 sqkm) with 18 villages from four different Gram Panchayats, namely – Chikkabanawara GP, Vaderahalli GP, Somashettahalli GP and Kasaghattapura GP. Village within PD are Vaderapura, Shyamarajapura, Lakshmipura, Guddahalli, Ganigerahalli, Chikkabanawara, Vaderahalli, Soladevanahalli, Somashettahalli, Kempenahalli, Medi Agrahara, By- lakere, Guni Agrahara, Veerasagara, Kalathammanahalli, Kasagata- pura, Kempapura, Kumbarahalli. The Hessarghatta Road and Bengaluru – Mumabi Railway line run parallel to each other and through the PD. There are two stations within the PD, namely – Chikkabanawara and Soldevanahalli Railway Stations.
2. Hessarghatta Main Road (SH39), Ganigarahalli Main Road, Abbigere Main Road, Hessarghatta Road (other than SH39), Abbigere Industrial Road, Kempapura Road, Bylakere Road, are few road that defines circulation network for PD.
3. As per Census 2011, PD has 47,043 inhabitants, which has increased by 111.1% from 2001 (22,281) and there are 17,463 (37.12%) resident workers. There are 10,907 households (2011), with an average household size of 4.3, which is higher than BMA (4.01). The gross density is 17.5 persons per hectare (pph), whereas the average residential density is 206.65 pph. The gross density is highest in Chikkabanawara village (43 pph) and the least in Vaderapura which is uninhabited.

4. The planning district is witnessing haphazard and unplanned growth along the Hesaraghatta Road and areas adjoining to BBMP Boundary, while majority of the land within earlier conurbation limit is still available for development. The upcoming developments are mainly plotted residential development and have about 20% of PD area under developmental activities. There are very few educational institutions like Arhcarya Group of Insistutions, Sri Krishna Institute of Technology that are present in PD along with 34 schools. Apart from Chikkabanavara Government Primary Healthcare Center there is no major healthcare facility within the PD. The agriculture use still accounts for more than 55%, while the residential use account for ~9%. **Figure 35-1 and Table 35-1** present the existing land use map and existing land use area for PD respectively.
5. The existing lake system consisting of 21 lakes flows into the Arakavathi River. The Chikkabanavara Kere, Kumbarahalli Kere, Ganigerahalli Kere, Lakshmipura Kere, Vaderahalli Kere, Medi Agrahara kere, Guni Agrahara Kere, one unnamed lake in Guni Agrahara Revenue Village, Kalathammanahalli Kere, Bylakere kere, two unnamed lakes in Bylakere revenue village, Veerasagara kere, Kasagattapura Kere, two unnamed lakes in Kasagattapura revenue village and Atturu Kere.
6. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water. There are no fire stations, burial ground/ crematorium/ cemeteries in PD. There is no SWM facility and sub-stations.

Figure 35-1: PD 34 Existing Land Use Map

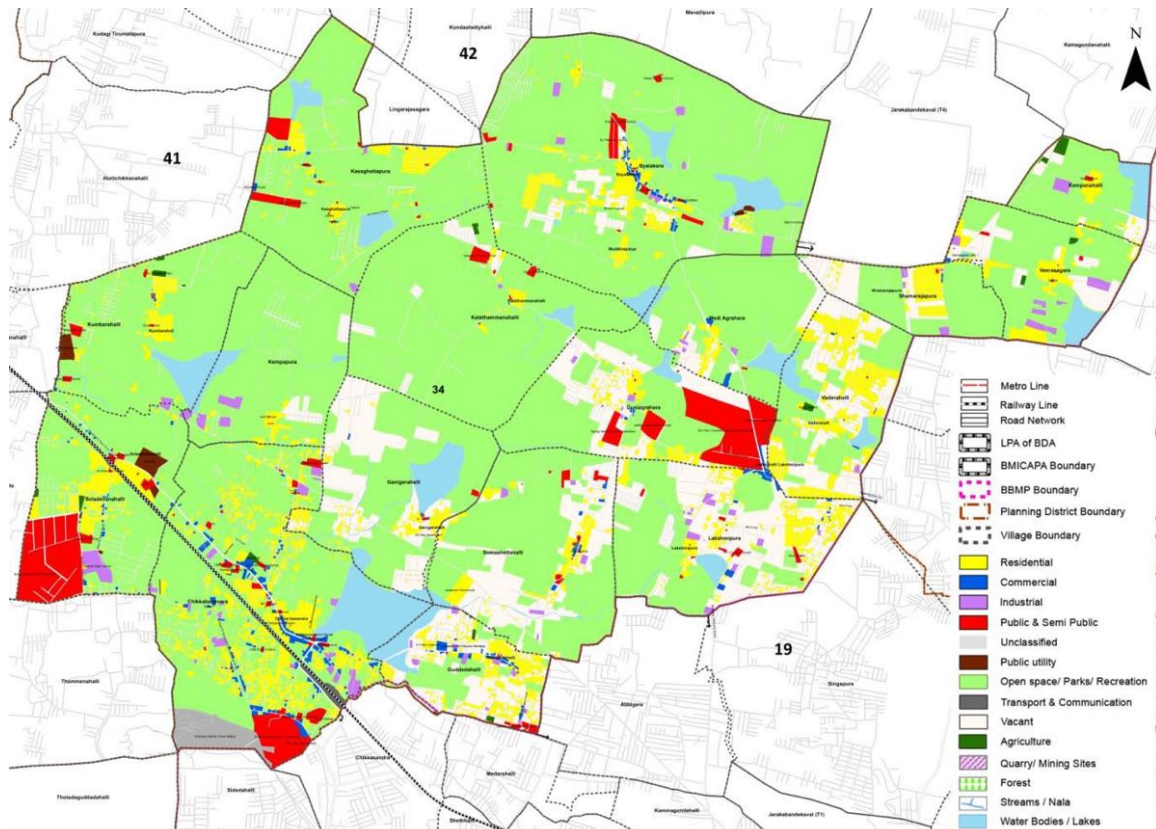


Table 35-1: PD 34 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	225.12	8.40
Commercial	18.31	0.68
Industrial	32.19	1.20
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	90.76	3.39
Pubic & Semi Public - Unclassified	15.37	0.57
Public Utility	5.96	0.22
Parks & Open Spaces	4.62	0.17
Transport Communication	122.84	4.58
Vacant	568.12	21.20
Agriculture	1468.65	54.80
Forest	0.00	0.00
Streams	7.07	0.26
Water Bodies	121.17	4.52
Total	2680.17	100.00

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PLANNED HIGH DENSITY GROWTH WITHIN CONURBATION AREA, IMPROVED CONNECTIVITY, CONSERVATION AND PROTECTION OF LAKES & STREAMS

PROPOSALS

1. This PD is witnessing road based development in areas adjoining BBMP which are haphazard and scattered. It becomes imperative that the RMP2031 directs for planned urban development and promotion of economic growth along proposed Peripheral Ring Road.
2. RMP2031 proposes development of various economic nodes across BMA and PD Chikkabanawara is one of these nodes (though not an SDZ) proposed to be developed. The guiding principles for developing PD as Special Development Zone is as following:
 - a. Promotion of Economic Growth along Peripheral Ring Road
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption
 - c. Promotion of Transit Oriented Development around Metro Stations
 - d. Protection and Conservation of Lake System and Vrushabhavati River
 - e. Planned Open & Open Spaces and Recreational Spaces
3. Further, for the villages outside conurbation, the RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. Hence, it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.

4. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 35-2 and Table 35-2** respectively. The proposed land use has been designed to promote the economic activities along PRR, while residential use zone would promote work live play concept.

Figure 35-2: PD 34 Proposed Land Use Map

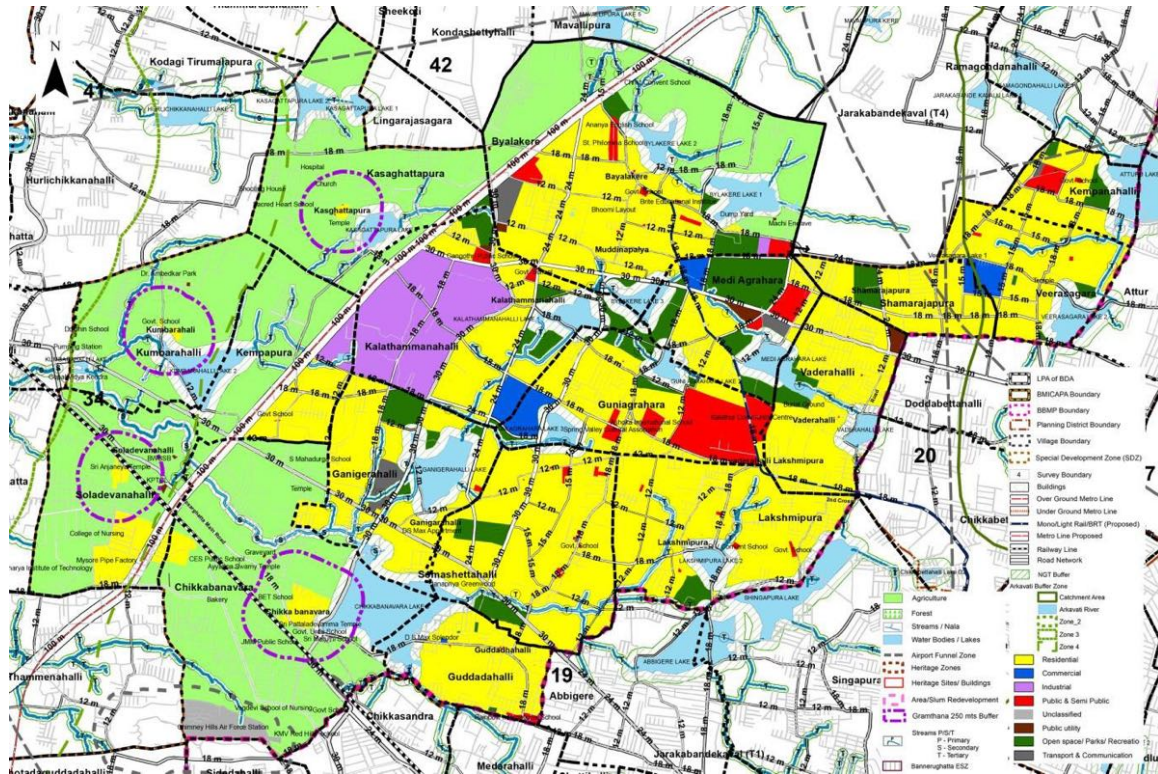


Table 35-2: PD 34 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	848.01	54.14
Commercial	24.40	1.56
Industrial	83.22	5.31
Public & Semi Public	57.61	3.68
Unclassified	0.00	0.00
Public Utility	4.87	0.31
Parks / Open Spaces	99.86	6.38
Transport & Communication	204.14	13.03
Forest	0.00	0.00
Streams	4.03	0.26
Water Bodies	48.01	3.07
NGT Buffer	192.10	12.26
Total Developable Area	1566.25	100.00
Agriculture	1113.92	-
Total PD Area	2680.17	-



5. The RMP2031 proposes large city sports complex in Medi Agrahara village which is to be developed for providing indoor and outdoor sporting facilities.
6. RMP2031 proposes network of public transport system for entire city and some these system passes through PD, which includes:
 - a. CRS: RMP2031 proposes that CRS be developed and two stations within the PD, namely Chikkabanavara and Soldevanahalli Railwaystations be developed for passenger movement.
 - b. Metro PRR: The proposed Metro PRR runs along the PRR which passes through the PD.
 - c. Mono Rail Inner PRR: The Proposed Mono Rail link runs along the proposed Inner PRR and passes through PD.
 - d. Mono Rail Link Hessaraghatta Road: The proposed Mono Rail Link to Hessaraghatta starts from Lottegahalli Railway Station (interchange with Metro + Railway) and runs along BEL Road and Hessaraghatta Road till Dodda Bylakere.
7. Multimodal Interchange Stations are proposed to be developed at 3 locations namely Chikkabanawara Railway Station, Medi Agrahara and Bylakere depending on the feasibility.
8. The RMP2031 proposes to develop ISBT cum Depot at Bylakere Village at the intersection of proposed PRR and Hessaraghatta Road and BMTC Station cum TTMC on Kempapura road. Further a Mini logistics hub proposed at Khasagattapura road.
9. The RMP2031 proposes development/ upgradation of all existing roads as per RMP2031 proposed right of way and typical cross section. A Gramathana periphery road is proposed to be developed for Thagachakuppe and Devagere.
10. To mitigate provide comfort to pedestrians and NMT facilities and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.
11. RMP2031 has identified junctions for geometric design improvement and upgradation of junction infrastructure. They include a) Chikka Banawara 5 arm Junction, b) Keregudahalli Bus Stand Cross, c) LakshmiPura Cross, and intersection of all existing roads.
12. The Natural drainage within PD has been classified as following:
 - a. The streams from Chikkabanawara Kere till Arakavati River = Secondary,
 - b. Other streams leading to other kere's and from other kere's to secondary kere = Tertiary.
13. The RMP2031 aims at the protection and conservation of streams and all lakes within the PD. Therefore it is proposed that a Lake and Stream Rejuvenation and Lake Surrounding Area Plan is to be prepared.
14. The RMP2031 proposes to develop a Dry Waste Collection Centre in each village, hence 18 DWCCs along with 2 OWCC, and 1 BMU are proposed to be developed within PD by Gram Panchayats. Also, one STP is proposed to be developed by BWSSB. One 220kv Sub-station is also planned to developed within the PD
15. The RMP2031 proposes development of Sports Complex, large Hospital, Fire Statoin and one crematorium within the Planning district.

Programmes and Projects

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD34:

1. Road Development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads:
 - i. Peripheral Ring Road
 - ii. New Master Plan Roads
- b. Development of Village Roads as per RMP 2031 proposals
- c. Junction Improvement Programme:
 - i. Chikkabanawara Junction
 - ii. Laxmipura Cross
 - iii. Keregudahalli Bus Stand Cross,
 - iv. Intersection of Existing and New Links

2. Development of Public Transport System:

- a. CRS
- b. Namma Metro:
 - i. Metro PRR: Along Proposed PRR
- c. Mono Rail
 - i. Inner PRR Mono Link
 - ii. Hessaraghatta Road Mono Link
- d. ISBT cum Depot: at Bylakere Village along PRR

3. Development of Multimodal Interchanges

- a. Chikkabanawara Railway Station (Mono+ Railway + Bus + IPT),
- b. Medi Agrahara (Mono + Mono +Bus+IPT)
- c. Bylakere (Metro + Mono + BMTC+IPT) depending on the feasibility.

4. Development of Mini Logistic Hub

5. Village Development Plans

6. Development of Parks and Open Spaces

- a. Sport Complex (Medi Agrahara Village)
- b. Park and Open Spaces as earmarked in PLU Map

7. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Rejuvenation Plan for Lakes & Streams:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Chikkabanawara Kere Rejuvenation Plan,
 - iii. Kumbarahalli Kere Rejuvenation Plan,
 - iv. Ganigerahalli Kere Rejuvenation Plan,
 - v. Lakshmipura Kere Rejuvenation Plan,
 - vi. Vaderahalli Kere Rejuvenation Plan,
 - vii. Medi Agrahara kere Rejuvenation Plan,



- viii. Guni Agrahara Kere Rejuvenation Plan,
- ix. Rejuvenation Plan for one unnamed lake in Guni Agrahara Revenue Village,
- x. Kalathammanahalli Kere Rejuvenation Plan,
- xi. Bylakere kere Rejuvenation Plan,
- xii. Rejuvenation Plan for two unnamed lakes in Bylakere revenue village,
- xiii. Veerasagara kere Rejuvenation Plan,
- xiv. Kasagattapura Kere Rejuvenation Plan,
- xv. Rejuvenation Plan for two unnamed lakes in Kasagattapura revenue village and
- xvi. Atturu Kere Rejuvenation Plan

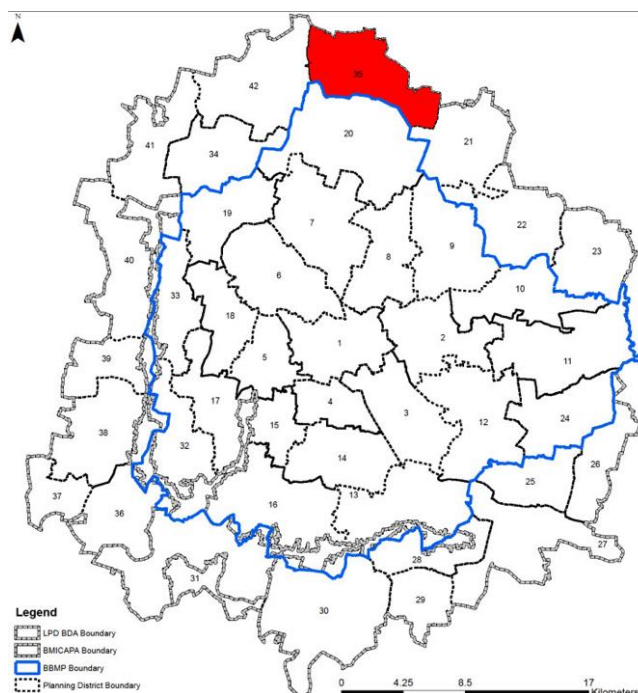
c. Lake Surrounding Area Development Plan: It is proposed that a Lake and Stream Area development plan be prepared .

8. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|--|---------------------------------------|
| a) Fire Station: | 01 Nos. (Chikkabanawara Village) |
| b) Crematorium: | 01 Nos. |
| c) Graveyard/ Burial Ground: | 01 Nos. |
| d) SWM Dry Waste Collection Centre: | 18 Nos. |
| e) SWM Organic Waste Collection Centre: | 02 Nos. |
| f) Bio-methanation Unit: | 01 Nos. |
| g) BWSSB Proposed STP: | 01 Nos. |
| h) 220kv Sub-station: | 01 Nos. |
| i) WTP, OHT, GLSR and STP
Sewage Network Plan | to be decided based on Water Supply & |

9. Preparation of Water Supply and Sewerage Supply Network System for PD

36. PD 35: BETTAHALASURU -HUNASAMARANAHALLI SPECIAL DEVELOPMENT ZONE



Population (2011 Census): 18,373

Area of PD: 3253 ha

Villages in PD: 12

Gram Panchayats: Bettahalasuru, Gantiganahalli, Sonnappanahalli and Hunasamaranahalli.

Gross Density: 06 pph

Bettahalasuru – Hunasamaranahalli Planning District (PD. No. 35) is located in the northern part of BMA along Bellary Road and shares with boundary with LPA of BIAAPA. It is witnessing heightened growth along Bellary Road. The PD is characterized by predominant agriculture use, large quarry area, developments along Bellary Road and Yelahanka Airforce Station.

The RMP2031 proposes to develop the PD as a Special Development Zone that would promote high density planned employment centres and residential developments, while protecting environmentally sensitive areas.

A. EXISTING STATUS

1. The planning district is located in the northern fringes of BMA, outside the BBMP jurisdiction along Bellary road. It comprises of 12 villages from four gram Panchayats, namely Bettahalasuru, Gantiganahalli, Sonnappanahalli and Hunasamaranahalli. Names of Villages in PD are Byappanahalli, Sathanuru, Hunasamaranahalli, Sonnappanahalli, Bettahalasuru, Nallakunti, Sugatta, Gantigenahalli, Lakshmisagara, Muddanahalli, Nagadasanahalli, and Thimmasandra.
2. Bellary Road, Yelahanka Air Force Station and other defence establishments, number of educational institutions – like Sir M Visvesvaraya Institute of Technology, Krishnadevaraya College Of Dental Sciences & Hospital, Sindhu Educational Institute, NITTE School Of Architecture, Padukone - Dravid Centre For Sports Excellence, Bettahalsuru large Quarry site, 11 lakes, Railwaline to Devanahalli (with station at Bettahalasuru, stone crushers, logistic facilities/ godowns, and large agriculture use defines the characteristics of this PD. There are 15 schools, whereas there is a gap in healthcare amenities as there is no large hospital or medical facility available within the planning district.

3. Bellary Road, Bagalur Road (SH 104), Sir MVIT Collage Road, proposed 30 m wide road to Bengaluru International Airport, Sugatta Main Road, Hosahalli Main Road, existing 18m wide road leading to BIAAPA, and other existing road defines the present network. The existing land use map and existing land use area statement is given in **Figure 36-1** and **Table 36-1** respectively.

Figure 36-1: PD 35 Existing Land Use Map

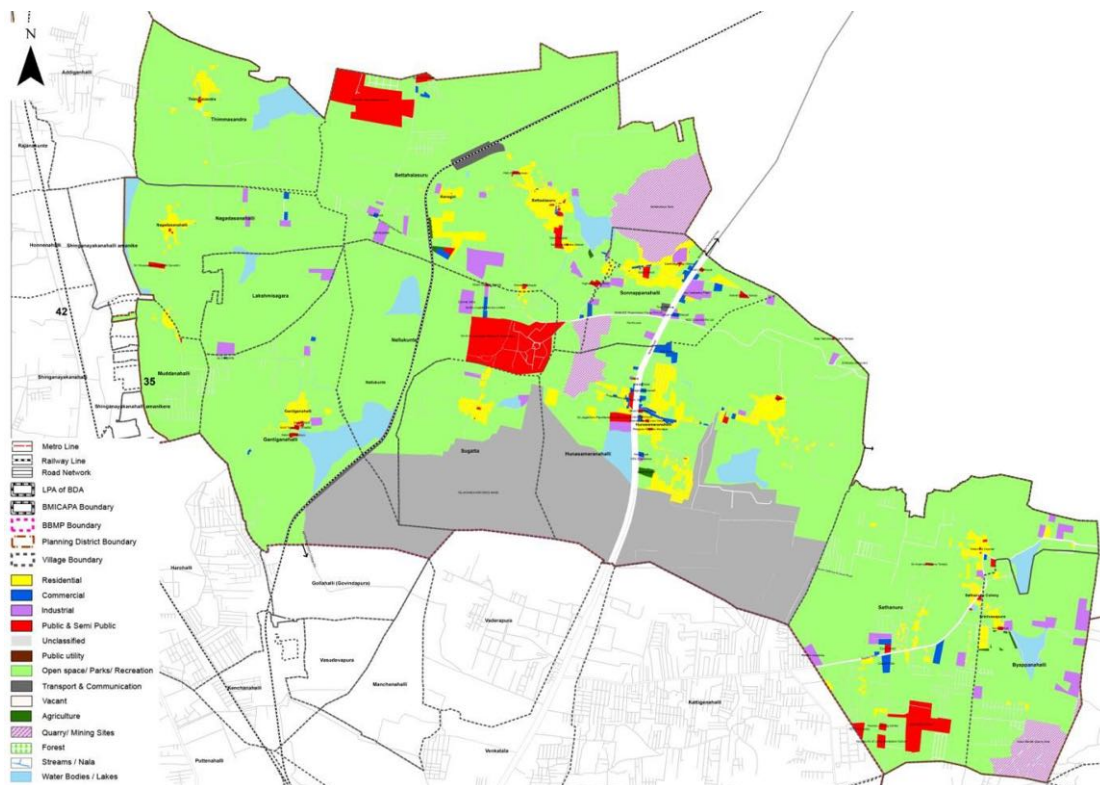


Table 36-1: PD 35 Existing Land Use Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	117.27	3.61
Commercial	15.05	0.46
Industrial	53.77	1.66
Quarry/ Mining Sites	100.49	3.10
Public Semi Public	84.13	2.59
Pubic & Semi Public - Unclassified	426.34	13.14
Public Utility	0.01	0.00
Parks & Open Spaces	2.67	0.08
Transport Communication	118.00	3.64
Vacant	520.47	16.04
Agriculture	1705.96	52.58
Forest	0.00	0.00
Streams	2.41	0.07
Water Bodies	97.69	3.01
Total	3244.26	100.00



4. As per Census, in 2011, PD had 28594 inhabitants, which increased by decadal growth rate of 55.6% (2001-2011). The work force participation rate is 42.2% of the total PD population. There are 6995 households (2011), with an average household size of 4.08, which slightly more than BMA (4.01). The gross density is 6 persons per hectare (pph).
5. Mining in Bettahalasuru Quarry, Stone Crushing and Cement manufacturing units, automobile repair and service centres, commercial establishment along Bellary Road and educational institutes are employment providers within PD.
6. Existing Railway line defines the watersheds within PD, the areas on eastern side of railway line drain outside BMA, whereas areas on western side drain into Hebbala valley. There are 11 lakes within PD and all are interconnected through network of drains.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH AND ENABLING ECONOMIC GROWTH, INTEGRATION OF CITY CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION.

PROPOSALS

1. RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Bettahalasuru - Hunasamaranahalli is one among these to be developed as nodes/ zones. The guiding principles for developing PD as Special Development Zone is as following:
 - a. Promotion of Economic Growth on Work – Live – Play Concept
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption while integrating existing road network
 - c. Promotion of Transit Oriented Development around Metro Rail Stations
 - d. Planning for Goods Transport
 - e. Upgradation/ Provision of Physical Infrastructure within erstwhile gramathans (urban villages)
 - f. Protection and Conservation of Lake System
 - g. Planned Open & Open Spaces
 - h. Banning of Mining, Quarrying and Crushing Activities within Conurbation Limits
2. The Planning District has been designated as Special Development Zone and be governed by special regulations as stipulated in Zoning Regulations.
3. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 36-2 and**
4. **Table 36-2** respectively. The proposed land use has been designed to promote the economic activities along Bellary Road, and major roads while residential use zone would promote work live play concept. A large sports complex is proposed to be developed on existing Bettahalsuru quarry area. Also part of Regional Park proposed on Hennur Bande quarry (in Mittiganahalli village) is within Byappanahalli village.

Figure 36-2: PD 35 Proposed Land Use Map

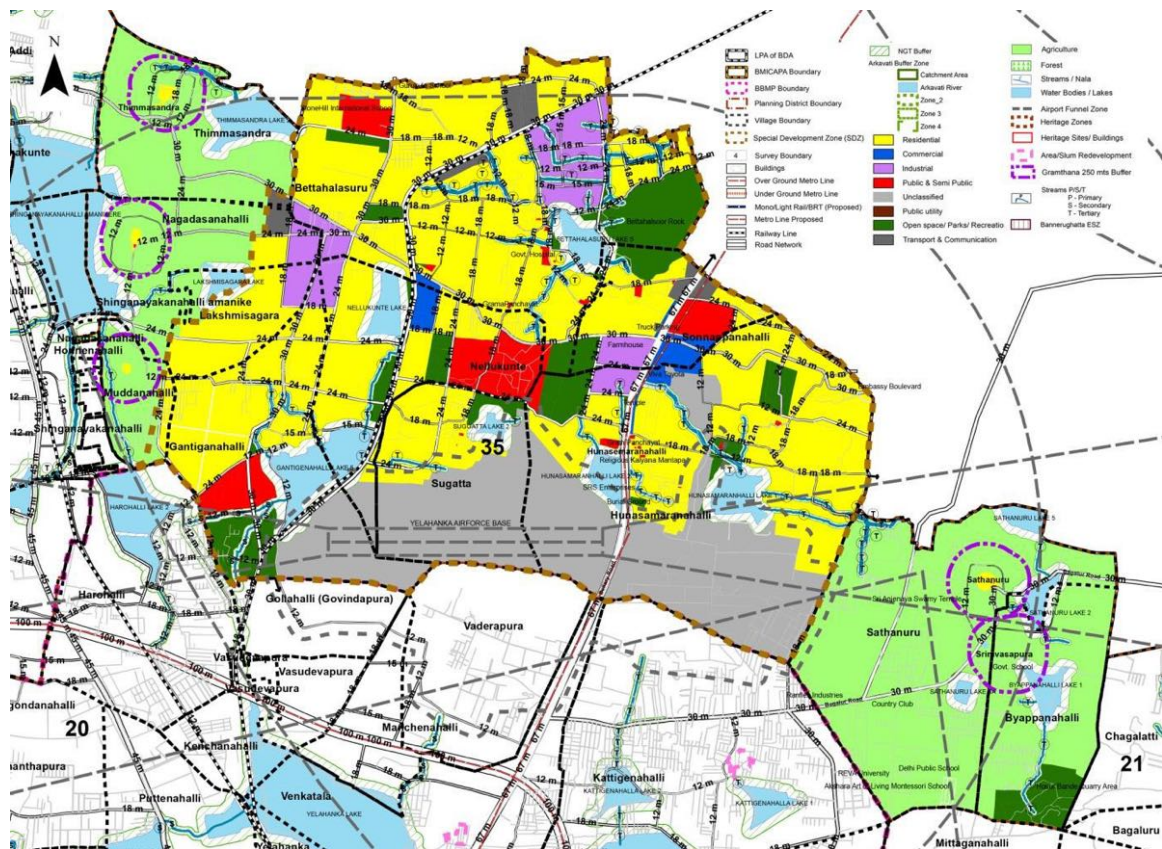


Table 36-2: PD 35 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	927.96	41.61
Commercial	24.45	1.10
Industrial	90.16	4.04
Public & Semi Public	91.56	4.11
Unclassified	428.61	19.22
Public Utility	0.38	0.02
Parks / Open Spaces	151.62	6.80
Transport & Communication	250.00	11.21
Forest	0.00	0.00
Streams	1.99	0.09
Water Bodies	64.68	2.90
NGT Buffer	198.74	8.91
Total Developable Area	2230.14	100.00
Agriculture	1014.26	-
Total PD Area	3244.26	-



5. It is proposed that all master plan roads within Planning District be developed as per the proposed cross section for respective widths, as to ensure that footpaths and cycle tracks are developed during the road development. This shall help improve the accessibility within the planning district as this will facilitate movement of non-motorised transport.
6. RMP2031 proposed city level public transport infrastructure like CRS, Metro and Mono Rail are running along roads within the Planning District.
 - a. CRS: It is proposed that Bettahalasuru Railway Stations is developed to cater to passengers using CRS.
 - b. Metro to Bengaluru International Airport: The Proposed metro to international airport runs along the Bellary Road and it is proposed to develop a station at Bettahalasuru Cross on Bellary road.
 - c. BMTC Bus Stations: It is proposed to develop 2 Bus Stations/ Terminal – a) Bettahalasuru Cross (Surhaunse), and b) Nelukunte Village
7. The Transit Oriented Development Zone is proposed to be applicable around all metro/ Mono Rail stations/ terminals/ interchanges within the planning district.
8. A mini logistic hub is proposed to be developed near Bettahalasuru Railway station.
9. Widening of Certain Roads/ Development of Flyover Overs/ Railway under Bridge: The RMP2031 proposes upgration/ widening of certain roads and development of Flyovers/ Railway under Bridge/ pass, etc to be taken up within the planning district. The RMP2031 recommends that design of flyovers/ bridges be done considering proposed Mono Rail system.
10. The RMP2031 has identified 4 junctions for geometric improvements for better and smoother traffic flows and to be taken up on priority, and particularly in Greenfield areas.
11. In order to protect and conserve lakes and streams as well as avoid flooding in future as surface runoff increases due to urbanisation, the RMP2031 proposes that all lakes and streams be demarcated on ground within two years from notification of RMP2031 and lake development plan be prepared for all the lakes within the PD.
12. As mentioned earlier, all these lakes are within PD fall in two different watersheds – a) Hebbala Watershed and b) outside BMA. The natural drainage system has been classified as following:
 - a. Streams downstream of Gantigenahalli Kere and leading to Yelahanka Kere = Secondary
 - b. All other streams leading to lakes and secondary streams = Tertiary
13. The RMP2031 proposes that upgration of gramathans is undertaken in to provide necessary infrastructure and facilities. It is also proposed that residential areas/ developepments located on edge of Bettahalsuru Bande are redeveloped.
14. To meet the future requirements, the RMP2031 proposes development of 1 no. of Fire Station, 1 no of 220kv Sub-station, 12 DWCCs, and 1 OWCCs, for solid waste management within the planning district.
15. Further, the RMP2031 proposes that 1 graveyard and 1 crematorium be developed within the earmarked open spaces at appropriate location within PD.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 35

1. Road Development Plan

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads and other master plan roads in phased manner.
- b. Widening/ Upgradation of Certain Roads:
 - i. Development of existing roads as per RMP2031 Proposal
 - ii. Railway under Bridge at Bettahalasuru (on Sir VNIT Road)
 - iii. Railway under pass at NITTE Road
 - iv. Widening of existing 18 M leading to BIAAPA
 - v. Development of Existing Village Roads as per proposed Right of Way
- c. Junction Improvement Programme:
 - Bettahalasuru Cross
 - VIT Cross on Bellary Road
 - Hunsamaranahalli Junction
 - Intersections of existing roads

2. Development of Public Transport System:

- a. Metro – Bengaluru International Airport
- b. BMTC Bus Station: 02 Locations

3. Development of Multimodal Interchange Stations

- a. Bettahalasuru Cross

4. Development of Parks and Open Spaces:

- a. Sports Complex at existing Bettahalasuru Bande
- b. Regional Park in Byappanahalli Village
- c. Other Park & Open Spaces as earmarked in PLU

5. Protection and Rejuvenation of Lakes and Streams:

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Lakes & Streams Rejuvenation Plan:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Bettahalasuru Kere Rejuvenation Plan,
 - iii. Gantiganahalli Kere Rejuvenation Plan,
 - iv. Byappanahalli Kere Rejuvenation Plan,
 - v. Sathanuru Kere Rejuvenation Plan,
 - vi. Rejuvenation Plan for one unnamed kere in Sathanuru Revenue Village
 - vii. Hunasamaranahalli Kere Rejuvenation Plan,
 - viii. Rejuvenation Plan for one unnamed kere in Hunasamaranahalli revenue village,
 - ix. Nallakunti Kere Rejuvenation Plan,



- x. Sugatta Kere Rejuvenation Plan,
- xi. Lakshmisagara Kere Rejuvenation Plan,
- xii. Thimmasandra Kere Rejuvenation Plan
- xiii. Shinganayakanahalli Amanikere Rejuvenation Plan

c. Lake Surrounding Area Development Plan: It is proposed that a Lake and Stream Surrounding Area development plan to be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

6. Upgradation of Villages/ Settlements:

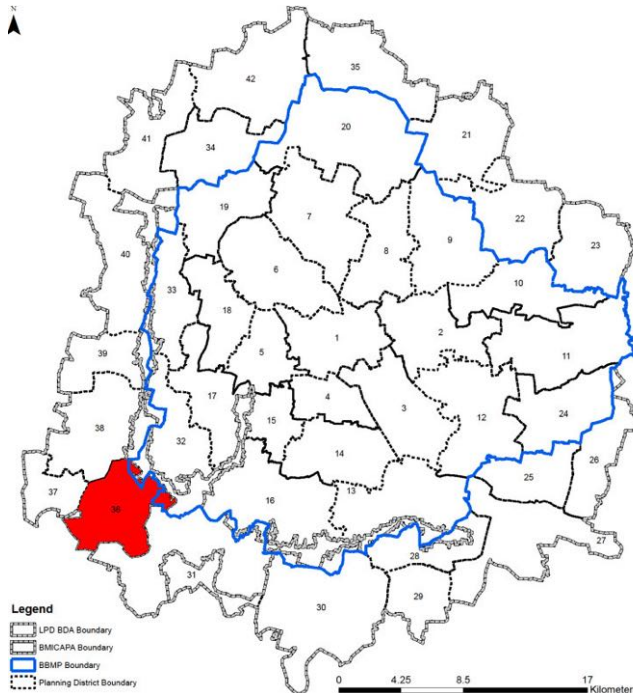
- Preparation of Village Upgradation Plan for all Gramathans,
- Preparation of Redevelopment Plan for Settlements around Bettahalasuru Bande

7. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|---|---------|
| a) Fire Station: | 01 Nos. |
| b) Crematorium: | 01 Nos. |
| c) Graveyard: | 01 Nos. |
| d) 220kV Sub-Station: | 01 Nos. |
| e) SWM Dry Waste Collection Centre: | 05 Nos. |
| f) SWM Organic Waste Collection Centre: | 01 Nos. |

8. Preparation of Water Supply and Sewage Network System Plan for PD

37. PD 36: KUMBALGODU SPECIAL DEVELOPMENT ZONE



Population (2011 Census): 23390

Area of PD: 2685.76 ha

Villages in PD: 12

Gram Panchayats: Kumbalagodu, Ramohalli and Kumbalagodu Gollahalli

Gross Density: 09 PPH

Kumbalagodu Planning District (PD No. 36) is located in the south-western periphery within BMP along Mysuru road and it shares its boundary with BMICAPA. It is characterised by the presence of large tracts Kumbalagodu Industrial Area, several education institutions, scattered, plotted as well as high rise residential development and Vrushabhavati River.

The RMP2031 proposes development of education oriented Special Development Zone in the planning district supported by public transport and recreational facilities.

A. EXISTING SITUTATION

1. Kumbalagodu Planning District admeasures 2685.76 Ha (26.85 sqkm) with 12 villages from three different Gram Panchayats, namely – Kumbalagodu GP, Ramohalli GP and Kumbalagodu Gollahalli GP. Village within PD are Chellaghatta, Doddabele, Venkatapura, Kambipura, Kumbalagodu, Kanaminake, Thagachikuppi, Kumbalagodu, Gollahalli, Gudamava, Devageri, Gangasandra, and Vasanthanahalli. The Mysuru Road and Bengaluru - Mysuru Railway line run parallel to each other and run north south in the PD.
2. Mysuru Road, NICE Road (outside PD on northern), Dodda Aladamara Road, Kumbalagodu Gollahalli Road and Chellaghatta – Sulikere (via Archakara Badavane) Road are the few roads that define circulation pattern in PD.
3. Kumbalagodu Industrial Area, individual industries, logistic faciltieis higher order educational insitutes and commercial establishments within the PD provide employment to thousands of people. Mysuru road is the backbone for all these developmental activities.PD is predominantly agriculture in nature with scattered, plotted as well as high rise residential development. Entire PD area is within the watershed of Vrushabhavati River.



4. Industrial activities are primarily concentrated in Kumbalagodu Industrial Estates and few industries are located along Mysuru Road. Higher educational institutes like - Christ University along with its Engineering and Management Schools, Don Bosco Institute of Technology, Rajarajeshwari College of Engineering, Medical College, Apollo Naturopathy Hospital and Research Centre, Sri Dharmasthala Manjunatheshwara Ayurvedic College and Hospital, BGS Residential School, are present in PD. In addition, there are 32 schools for local residents., However, this is no higher order hospital with bed facility within the PD.
5. As per Census 2011, PD has 32,239 inhabitants, which has increased by 106.35 % from 2001 (15,623) and there are 14817 (45.96 %) resident workers. There are 8,109 households (2011), with an average household size of 3.98, which is slightly lower than BMA (4.01). The gross density is 12 persons per hectare (pph), whereas the average residential density is 257.43 pph. The gross density is highest in Kumbalagodu village (16 pph) and the least in Vasanthanahalli village which is uninhabited.
6. Kumbalagodu and Kambipura gramthanas have maximum residential development in the form of village settlements, scattered residential plots/layouts and upcoming high rise apartments. BDA affordable housing scheme is under implementation in Kanaminake village.
7. Agriculture is the predominant land use with Agriculture and allied activities being performed in 59.38% of the total PD area. It is followed by Vacant Land (15.06%) and Industrial Land Use (5%). There are scattered residential development areas in the form of village settlements, layouts and apartments (6.73%). Public & Semi Public accounts for 6.57%. Water bodies and streams account for 1.99% of the PD area. Transport/Communication Land Use accounts for 3.83% of the PD area.
8. The existing land use map and existing land use area statement is given in **Figure 37-1 and Table 37-1** respectively.
9. The existing lake system flows into the Vrishabhavati River and then onto Byramangala Reservoir, near Bidadi and finally joins the Cauvery River near Mekedattu, Kanakapura. The Devagiri Kere, Kumbalagodu Kere, two unnamed lakes in Kumbalagodu Revenue Village, Kanamini kere, one unnamed lake in Kanamini revenue village, Kambipura kere, and three unnamed lakes in Kambipura revenue village. The PD has the one of the lowest elevations in BMA (about 628 to 650 mts).
10. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water. There are no fire stations, burial ground/ crematorium/ cemeteries in PD. There is one BBMP operated SWM Central Processing Unit at Kumbalagodu village.

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Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	181.39	6.74
Commercial	21.21	0.79
Industrial	134.79	5.01
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	175.52	6.52
Unclassified	0.00	0.00
Public Utility	4.64	0.17
Parks & Open Spaces	28.40	1.06
Transport Communication	103.38	3.84
Vacant	396.88	14.74
Agriculture	1591.86	59.14
Forest	0.00	0.00
Streams	34.70	1.29
Water Bodies	18.95	0.70
Total	2691.72	100.00



B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: SPECIAL DEVELOPMENT ZONE WITH PLANNED HIGH DENSITY GROWTH AND ENABLING ECONOMIC GROWTH, INTEGRATION OF CITY CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION.

PROPOSALS

1. PD is witnessing road based development and is now also extending beyond mysuru road and is seeing scattered development pattern. It becomes imperative that RMP2031 directs for planned urban development and promotion of economic growth along proposed major Ring and Radials.
2. RMP2031 proposes development of various economic nodes/ special development zones across BMA and PD Kumbalagodu is one of these nodes/ zones proposed to be developed. The guiding principles for developing PD as Special Development Zone is as following:
 - a. Promotion of Economic Growth along Radials Road (Consolidating Industrial Areas and Promoting Educational and Healthcare uses)
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption
 - c. Promotion of Transit Oriented Development around Metro Stations
 - d. Protection and Conservation of Lake System and Vrushabhavati River
 - e. Planned Open & Open Spaces and Recreational Spaces
3. The Planning District has been designated as Special Development Zone and be governed by special regulations as stipulated in Zoning Regulations.
4. Further, for the villages outside conurbation, the RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. Hence, it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
5. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in Figure 2 and Figure 3 respectively. The proposed land use has been designed to promote the economic activities along PRR, Mysuru Road and major roads while residential use zone would promote work live play concept. Roads of 24m, 18m and 15m have been proposed to improve the circulation and promote the proposed Public Semi-Public area. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 37-2 and Table 37-2** respectively.
6. The RMP2031 proposes large Public – Semi- Public pocket at the south of the PD and along the Mysore Road contiguous to the Christ University. The intent is to develop a Hospital, Sports Complex and for other educations institutions of schools and colleges. A PD level large Park and open space is proposed along and to the south of Kumbalagodu Lake which is to be developed for providing recreational facilities to residents and industrial workers.

The map illustrates the land use planning for Kumbalagodu Gollahalli. Key features include:

- Zones:** Residential (yellow), Commercial (green), Industrial (red), Public & Semi Public (purple), Unclassified (blue), Open Space/Park/Recreation (brown), Public Utility (grey), and Transport & Communication (dark green).
- Water Bodies:** Chikkeluru Lake, Doddebele Lake, Devageri Lake, and several smaller ponds.
- Roads and Railways:** Major roads like NH-4 and NH-9 are shown, along with railway lines and proposed metro lines.
- Infrastructure:** Schools like BGS International School, hospitals, and public facilities are marked.
- Legend:** Provides a key for all symbols, including survey boundaries, building footprints, and specific land use categories.

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	913.96	41.50
Commercial	18.92	0.86
Industrial	200.25	9.09
Public & Semi Public	311.99	14.17
Unclassified	0.00	0.00
Public Utility	5.75	0.26
Parks / Open Spaces	103.06	4.68
Transport & Communication	320.89	14.57
Forest	0.00	0.00
Streams	24.72	1.12
Water Bodies	13.72	0.62
NGT Buffer	289.01	13.12
Total Developable Area	2202.28	100.00
Agriculture	489.44	-
Total PD Area	2691.72	-



7. To improve the public transport facility it is proposed to extend the Metro Rail alignment along the Mysuru road till Kanmanike. It is suggested to extend the metro till Bidadi. It is proposed to develop interchange at NICE Junction where PRR Metro meets. Mysuru Road Metro. Subsequently, stations are proposed to be developed at a) Rajarajeshwari College of Engineering, b) Anchepalaya, c) Ramohalli Cross, d) Kumbalagodu, e) Kumbalagodu Industrial Estate, f) Kaniminike and g) terminal at ISBT proposed at the BMA Boundary.
8. The RMP2031 proposes to develop ISBT cum Depot at Kanminke Village at BMA Boundary, and BMTC bus stations at Challaghatta village (along the proposed 18m master plan road) and Devagere Village.
9. Connectivity Improvement between Mysore Road to Magadi Road New Links: RMP2031 proposes a 30 m wide new road connecting Magadi road to Mysururoad, running parallel to the PRR. It passes through villages of Ramohalli, Malagondanahalli, Maragondanahalli, Sulikere and Kenchanapura, Kumbalagodu, Yellachaguppe, Channenahalli.
10. The RMP2031 proposes development/ upgradation of all existing roads as per RMP2031 proposed right of way and typical cross section. A Gramathana periphery road is proposed to be developed for Thagachakuppe and Devagere.
11. To mitigate provide comfort to pedestrians and NMT facilities and improve street aesthetics, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.
12. RMP2031 has identified junctions for geometric design improvement and upgradation of junction infrastructure. They include a) Intersection of Mysuru Road and Kumbalagodu Gollahalli Road, b) Ramohalli Cross (it is proposed to develop a Trumpet Flyover or bi directional Flyover at this Junction), c) Jagadale Factory Junction, d) Anchepalya Junction (road leading to Kambipura), e) Basava Nagar Junction, f) intersection of Kumbalagodu Gollahalli Road and Devagere Road, and g) Subbarayappanapalya Cross.
13. The RMP2031 also proposes development of Rail under Bridge at two level crossings, namely on Dadda Aladamara Road, Challeghatta Railway Gate and proposed road crossing Railway Line.
14. The Natural drainage within PD has been classified as following:
 - a. Vrushabhavati River = Primary
 - b. The streams from Ramohalli Kere till Vrushabhavati River = Secondary,
 - c. The streams from Bheemanakuppe Kere till Vrushabhavati River = Secondary,
 - d. Other streams leading to other kere's and from other kere's to secondary kere = Tertiary.
15. The RMP2031 aims at the protection and conservation of the Vrishabhavathi river, streams and all lakes within the PD. Therefore it is proposed that a Lake and Stream Rejuvenation and Lake Surrounding Area Plan be prepared and implemented.
16. The RMP2031 proposes to develop a Dry Waste Collection Centre in each village, hence 12 DWCCs along with 2 OWCC, and 1 BMU are proposed to be developed within PD by Gram Panchayats. Also, one STP and one ISP are proposed to be developed by BWSSB.
17. The RMP2031 proposes development of Sports Complex, Fire Statoin and one crematorium within the Planning district.

Programmes and Projects

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD36:

1. Road Development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads:
 - i. Peripheral Ring Road
 - ii. Proposed 30m wide Road from Mysuru Road to Magadi Road
 - iii. Dodda Aladamara Road (widening)
 - iv. Kumbalagodu Gollahalli Road (widening)
 - v. New Master Plan Roads
- b. Development of Village Roads as per RMP 2031 proposals
- c. Development of Railway Under Bridge
 - i. Near BDA Housing Scheme (at Kanmineke)
 - ii. Railway Gate on Dodda Aladamara Road
 - iii. Challeghatta Railway Gate
 - iv. All proposed Master Plan Roads
- d. Junction Improvement Programme:
 - i. Intersection of Mysuru Road and Kumbalagodu Gollahalli Road,
 - ii. Ramohalli Cross (it is proposed to develop a Trumpet Flyover or bi directional Flyover at this Junction),
 - iii. Jagadale Factory Junction,
 - iv. Anchepalya Junction (intersection of Mysuru road and road to Kambipura),
 - v. Basava Nagar Junction,
 - vi. intersection of Kumbalagodu Gollahalli Road and Devagere Road,
 - vii. Subbarayappanapalya Cross
 - viii. Intersection of Existing and New Links

2. Development of Public Transport System:

- a. **Namma Metro:**
 - i. Mysuru Road: Extension of Mysuru Road Metro till Kanmanike Proposed ISBT
 - ii. Metro PRR: Along NICE Corridor
- b. ISBT cum Depot: Kanmanike Village
- c. BMTC Bus Stations:
 - 1) Chellaghatta Village
 - 2) Devagere Village

3. Village Development Plan: It is proposed that Gram Panchayat prepares Village Development Plans for each village within Planning District for implementation of Master Plan proposals.

4. Development of Parks and Open Spaces

- a. Sport Complex (Kanmanike Village)
- b. Regiona Park (Kanmanike Village)



5. Protection and Rejuvenation of Lakes and Streams:

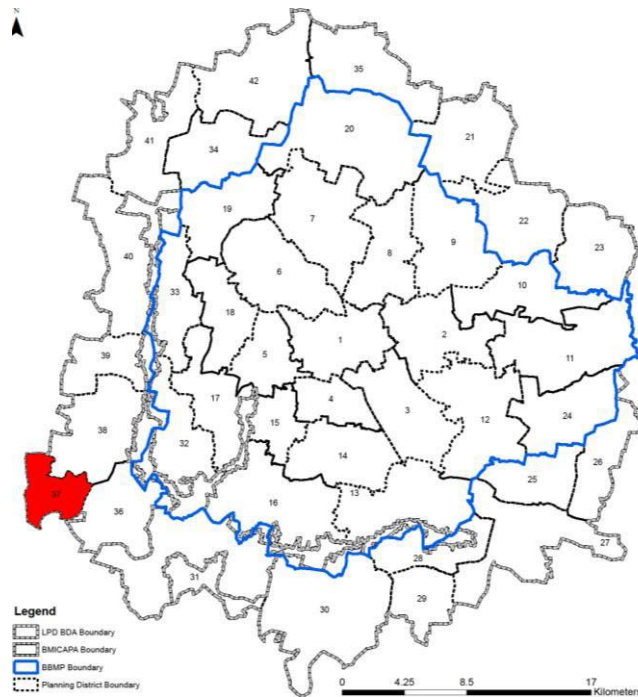
- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Preparation of Rejuvenation Plan for Lakes & Streams:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Devagiri Kere Rejuvenation Plan,
 - iii. Kumbalgodu Kere Rejuvenation Plan,
 - iv. Rejuvenation Plan for two unnamed lakes in Kumbalgodu Revenue Village,
 - v. Kanamini kere Rejuvenation Plan,
 - vi. Rejuvenation Plan one unnamed lake in Kanamini revenue village,
 - vii. Kambipura kere Rejuvenation Plan,
 - viii. Rejuvenation Plan for three unnamed lakes in Kambipura revenue village.
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared.

6. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|---|---|
| a) Fire Station: | 01 Nos. (Kumbalagodu Village) |
| b) Crematorium: | 01 Nos. |
| c) Graveyard/ Burial Ground: | 01 Nos. |
| d) SWM Dry Waste Collection Centre: | 09Nos. |
| e) SWM Organic Waste Collection Centre: | 02 Nos. |
| f) Bio-methanation Unit: | 01 Nos. |
| g) BWSSB Proposed STP: | 01 Nos. |
| h) BWSSB Proposed ISP: | 01 Nos. |
| i) WTP, OHT, GLSR and STP | to be decided based on Water Supply & Sewage Network Plan |

7. Preparation of Water Supply and Sewerage Supply Network System

38.PD 37: DODDA ALADA MARA



Population (2011 Census): 4708

Area of PD: 1375.25 ha

Villages in PD: 10

Gram Panchayats: Chunchanakuppe

Gross Density: 04 pph

The Dodda Aladamara Planning District (PD NO.37) is located on the South-Western corner of BMA and shares the boundary with Magadi Local Planning Area. The Dadda Aladamara or the Big Banyan Tree – an important natural heritage is located in PD. Kumbalgodu Forest abuts the PD on southern side, whereas mining/ quarrying activities are happening on western side. The PD is predominantly agriculture in nature with village settlements and few residential pockets.

The RMP2031 proposes to retain entire PD as an agricultural zone with focus on heritage conservation and improved connectivity.

A. EXISTING STATUS

1. The PD admeasures 1375.25 Ha (13.75 sqkm) and falls within Chunchanakuppe Gram Panchayat of Kengeri Hobli. It comprises of 10 villages, namely - Chikkeluru Venkatapura, Chikkeluru, Kethavalli Narasipura, Kethohalli, Kethohalli Ramapura, Koluru, Kolura Nanjundapura, Kolura Gurayapura, Sheshagiripura, and Chikkeluru Ramapura.
2. PD being located on south – western corner of the LPA boundary, shares the boundary with Magadi Local Planning Area. The areas adjoining to PD but inside Magadi LPA have opened up areas for urbanization by Magadi Master Plan and are witnessing large scale plotted developments which are still to be occupied. Further, ISRO has developed an Indian Deep Space Network centre in Sulivara, which is just 3km away for LPA of BDA. However, despite the fact that several plotted residential layouts has come up in LPA of Magadi, the PD has retained its agriculture characteristics.
3. The Big Banyan Tree or the Dodda Aladamara, which is a 400 year old Banyan tree and is located in Kethohalli village. The Kumbalgodu State Forest defines certain sections of the southern boundary of PD.
4. Dadda Aladamara Road and Hejjalla - Kempadyapanahalli both emanating from Mysuru Road, Kolur- Byalalu Road and Kothehalli – Hejjala Road define the existing connectivity within the Planning District.
5. The planning district is characterized by predominantly agriculture landscape (Agriculture land use accounts for 86% of PD area), presence of few scattered unoccupied residential

layouts and minning/ quarrying activities. The residential area accounts for mere 2.5% of PD area, which are mostly Gramathan areas. **Figure 38-1 and Table 38-1** presents the existing land use map and existing land use area statement for PD respectively.

Figure 38-1: PD 37 Existing Land Use Map

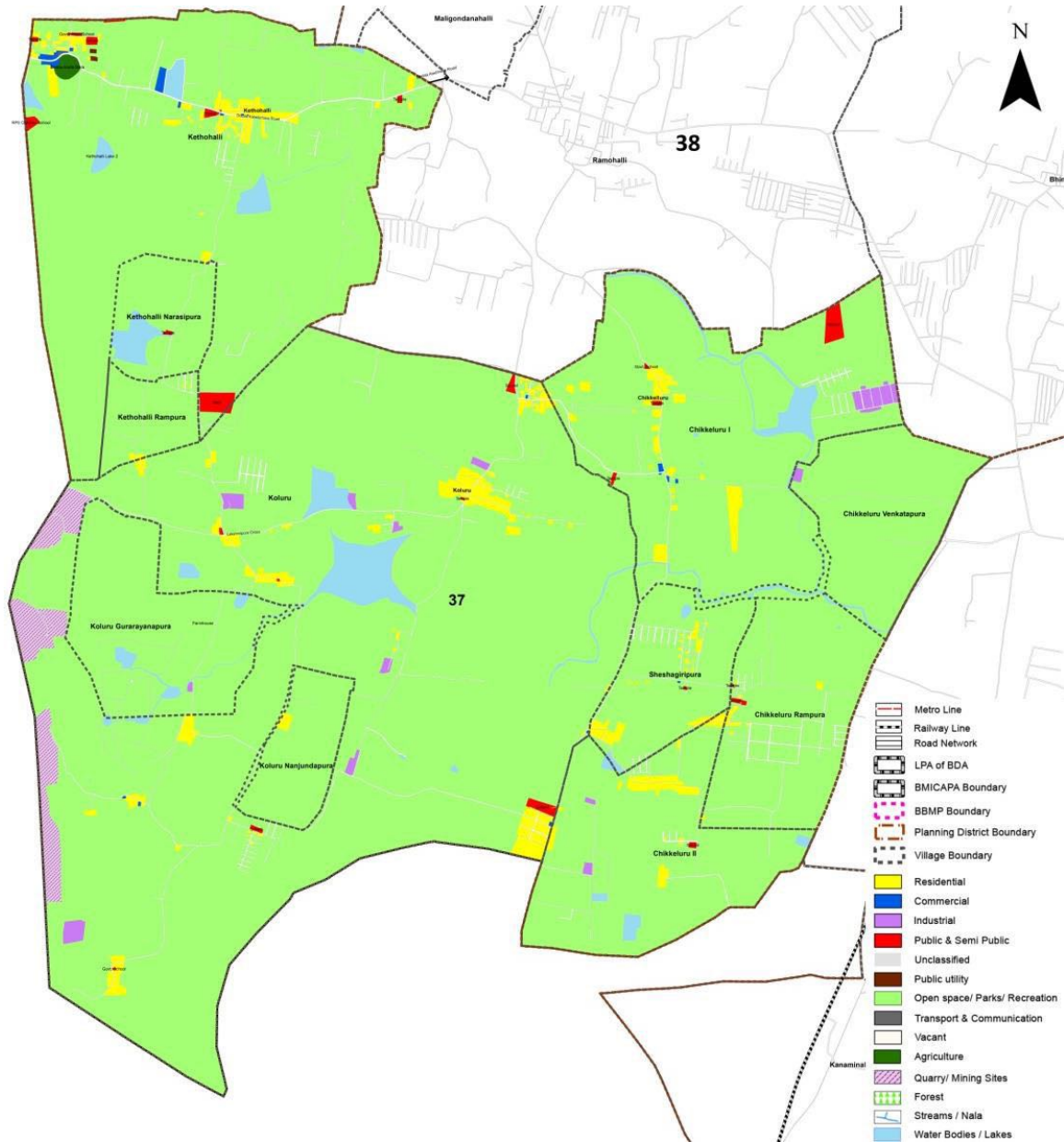


Table 38-1: PD 37 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	32.20	2.34
Commercial	1.26	0.09
Industrial	5.66	0.41
Quarry/ Mining Sites	15.88	1.15
Public Semi Public	5.66	0.41
Unclassified	0.00	0.00
Public Utility	0.14	0.01
Parks & Open Spaces	1.06	0.08
Transport Communication	26.59	1.93
Vacant	75.36	5.48
Agriculture	1176.66	85.56
Forest	0.00	0.00
Streams	4.84	0.35
Water Bodies	29.02	2.11
Total	1375.25	100.00

6. As per Census 2011, PD has 4,708 inhabitants, with a decadal growth rate of 29.33% (2001-2011). In 2011, there were 2,051 resident workers, thus the work force participation rate is 43.55%. There are 1110 households (2011), with Avg. Household size comes to 4.24, which is higher than BMA (4.01). The gross density is 3.5 persons per hectare (pph), whereas the average residential density is 149 pph.
7. Chikkeluru and Kethohalli are the two gramthanas of comparatively larger size. There are residential areas and village settlements that are sparsely populated.
8. Dodda Aladamara is tourist attraction place, and has some commercial establishment providing supporting commercial activities. In addition, within agriculture zone, Milk producing centres, brick kilns, concrete block making, quarrying and polymer factory are some of industrial activities within the PD. There are several farms and nurseries within the PD.
9. Water Supply is ground water dependent and is done by Rural Development and Panchayat Raj Department, GoK. Being village settlements, there is no sewage network. There is a need for providing proper sanitation waste management facilities within the gramathans.
10. There are around 24 schools located in this PD. However for healthcare, the population is dependent on adjoining PD and city health facilities. A Green Village Turf Cricket Ground is located in Kolur Gururayanapura.
11. There are six lakes, two in Kethohalli (one abutting Dodda Aladamara Road and other near Kethohalli – Koluru Road), Chikkeluru Kere, Koluru Kere, Lakkayyanapalya Kere and Kethohalli Narasipura Lake within the planning district. All these lakes and PD area drain into Vrishabhavathi River.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PRESERVATION, GRAMATHANA DEVELOPMENT, IMPROVED CONNECTIVITY.

PROPOSALS

1. The RMP2031 proposes preservation and maintaining the Agriculture zone for entire PD while allowing natural growth, gramathana development and connectivity improvement.
2. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation, development of Bus Stations, development of SWM facilities, etc. **Figure 38-2 and Table 38-2** represent the Proposed Land Use Map and Proposed Land Use area statement for Planning District.

Figure 38-2: PD 37 Proposed Land Use Map

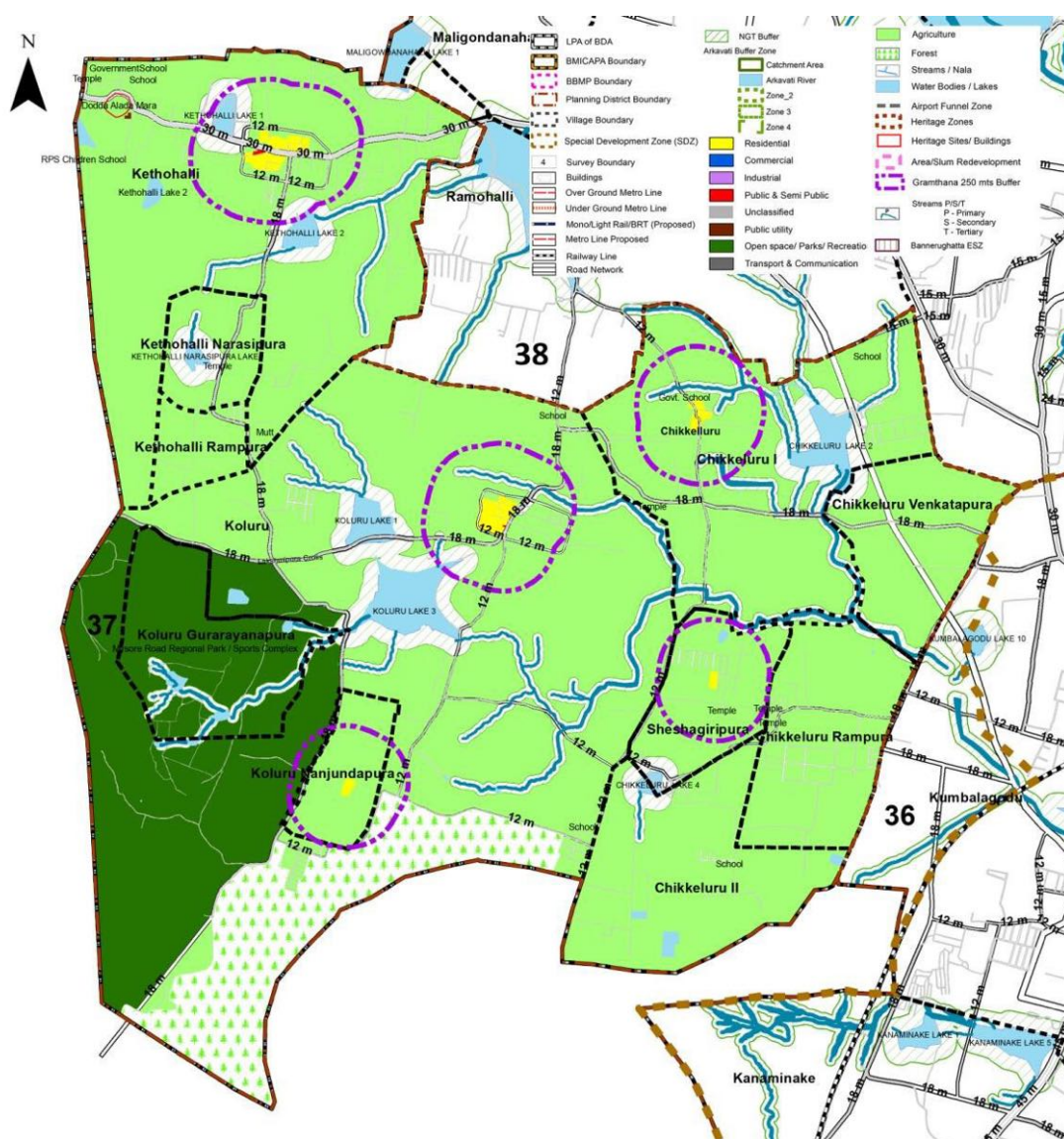




Table 38-2: PD 37 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	0.00	0.00
Commercial	0.00	0.00
Industrial	0.00	0.00
Public & Semi Public	0.00	0.00
Unclassified	0.00	0.00
Public Utility	0.07	0.07
Parks / Open Spaces	0.00	0.00
Transport & Communication	0.00	0.00
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	0.00	0.00
NGT Buffer	0.00	0.00
Total Developable Area	0.00	00.00
Agriculture	1375.25	-
Total PD Area	1375.25	-

3. To improve the public transport facility it is proposed to develop BMTC Bus Station cum Bus Depot at Kethohalli (adjacent to Nesarga Polymers) and Bus Stations in Kolor.
4. At city level a road connecting Mysuru Road (Kumbalgodu Industrial Area) and Magadi Road (Channenhalli) is proposed and it passes through the PD (north eastern corner). Further, to improve the connectivity within the PD, it is proposed that the Dodda Aladamara road to be widened to 30m wide (except for a stretch 50m on either side of Dodda Aladamara Tree) and all village roads.
5. The agriculture landscape allows slow run off of rain water when compared to highly urbanised areas, at the same time, agriculture landscape provides an opportunity to protect and develop the natural drainage and lakes for future. The RMP2031, therefore proposes the protection and conservation of Kethohalli (one abutting Dodda Aladamara Road and other near Kethohalli – Kolor Road), Chikkalur Kere, Kolor Kere, Lakkayyanapalya Kere and Kethohalli Narasipura Lake as well as natural streams. Thus, a Lake Rejuvenation plan be prepared and implemented. The streams from Ramohalli Kere till Vrushabhavati River is classified as Secondary, whereas other streams leading to other kere's and from other kere's to secondary kere are classified as Tertiary.
6. On infrastructure side, the RMP2031 proposes 2 Dry Waste Collection Centre in the villages of Kethohalli and Kolor Guryapura and 1 Integrated Waste Processing Plant in Kolor Village on the existing mining/ quarry areas. Further, the RMP2031 proposes that 1 burial and cremation ground be developed within the PD at appropriate location as identified by Gram Panchayat.
7. To provide comfort to pedestrians and cyclists, the RMP2031 proposes road side and avenue plantation for all master plan roads and village roads as indicated in the proposed land use plan for the Planning District.



PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD31:

1. Village Development Plan.

2. Protection and Rejuvenation of Lakes and Streams:

- d. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- e. **Rejuvenation of Lakes & Streams:** It is proposed that a detailed Lake and Stream Rejuvenation Plan be prepared for all lakes within the PD.
- f. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared.

3. Road Development Plan:

- e. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads:
 - Proposed Road from Mysuru Road to Magadi Road
 - Dodda Aladamara Road
- f. Development of Village Roads
 - Kolur- Byalalu Road
 - Kothehalli – Hejjala Road
 - Kothehalli – Kolur Road
 - New Village Road Links (15m)
 - New Village Road Links (12m)
 - Gramathana Periphery Roads
- g. Junction Improvement Programme:
 - Kethohalli Junction
 - LK Shivakumar Circle
 - Intersection of Existing and New Links

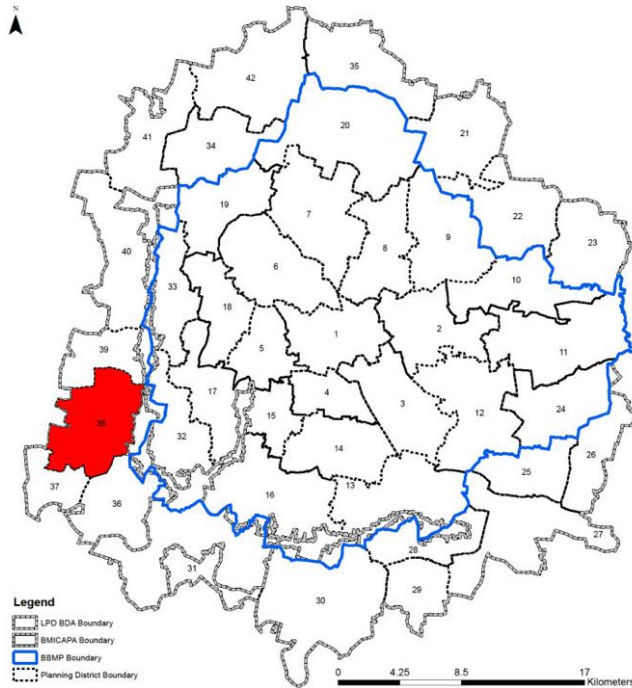
4. Development of Public Transport System:

- a. Bus Station cum Depot: One at Kethohalli Village
- b. BMTCL Bus Stations: one at Kolur Village

5. Development of Social and Physical Infrastructure/ Facilities:

- | | |
|---|---------------------------------------|
| j) Crematorium: | 01 Nos. |
| k) Graveyard: | 01 Nos. |
| l) SWM Dry Waste Collection Centre: | 02Nos. |
| m) SWM Organic Waste Collection Centre: | 01 Nos. |
| n) Integrated Waste Processing Unit: | 01 Nos. |
| o) WTP, OHT, GLSR and STP | to be decided based on Water Supply & |
| Sewage Network Plan | |

39. PD 38: SULIKERI - BHEEMANAKUPPE



Population (2011 Census): 20,016

Area of PD: 3209.5 ha

Villages in PD: 11

Gram Panchayats: Sulikere and Ramohalli

Gross Density: 06 pph

Sulikeri - Bheemanakuppe Planning District (PD No.38) is located on Western side in BMA and shares its boundary with LPA of BMICAPA on East and LPA of Magadi Planning Authority on west. The PD is characterised by the presence of large lakes, the Sulikere forest the upcoming BDA Shri Nadaprabhu Kempowda Layout and agriculture land use.

The Master Plan has adopted the RMP 2015 proposals as growth as envisaged is yet to happen, thus retaining the RMP 2015 conurbation and rest of the area as agriculture zone and aiming at Environmental Protection.

A. EXISTING STATUS

1. The PD admeasures 3209.49 ha (32.09 sq.km.) and falls under the Kengeri Hobli. It comprises of 11 villages - Ramasandra, Kenchanapura, Soolikeri, Maaragondanahalli Krishnasagara, Maaragondanahalli, Maligowdanahalli, Ramohalli, Bheemanakuppe Ramasagara, Bheemanakuppe, Kommagatta, and Kommagatta Krishnasagara. These villages are fall within two Gram Panchayats, namely - Ramohalli and Sulikere. It may be noted that Ramasandra and Kommaghatta villages partly under the Jurisdiction of LPA of BDA and LPA of BMICAPA.
2. The PD is presently witnessing the transition from agriculture landscape to urban with the implementation of large BDA Sir Nadaprabhu Kempegowda Layout scheme. In addition, the presence of large lakes like – Ramohalli kere, Bheemanakuppe kere, Sulikere, Maragondanahalli Krishnasagara kere, the Sulikere forest, large village settlement like – Ramohalli, scattered and unorganised plotted developments, spotted quarrying, agriculture fields define the characteristics of PD.
3. Ramohalli is the largest Gramthana followed by Ramasandra (part in BMICAPA). The BDA Scheme is being implemented in Ramasandra, Kenchanapura, Kommagatta, and Kommagatta Krishnasagara which are located along the NICE Ring Road.
4. Dodda Aladmara Road, Taverkere – Kengari Road, Kommagatta Road and Bettanapalya – Ramohalli road, are the four main roads along with village road define the present circulation pattern while NICE Peripheral Ring Road abuts the planning district on eastern side. There is no BMTC Station/ depot in this part of BMA.

5. The development of BDA Scheme will ensure that additional population is accommodated without adding additional areas for urbanisation. Future population residing in BDA Scheme area is located to the west of the NICE ring road are well connected with BBMP.
6. As per Census 2011, PD has 20,016 inhabitants, with a decadal growth rate of 69.60% (2001-2011) and there are 39.8% resident workers. There are 4,800 households (2011), with Avg. Household size being 4.17, which is higher than BMA (4.01). The gross density is 6 persons per hectare (pph), whereas the average residential density is 215 pph. The gross density is highest in Ramohalli Village (9 pph) and the least in Bheemanakuppe Ramasagara which is uninhabited.
7. The brick kilns, concrete block making, saw mill, milk production are the major economic activities along with some educational institutes located in PD.
12. Agriculture land use is predominant land use with agriculture and allied activities being performed in ~63.22% of the total PD area. It is followed by Vacant Land with upcoming residential areas (17.29%), Forest (Soolikere Reserved Forest) and Water bodies & Streams accounting for 6.66% and 5.26% of PD area respectively. Residential Land Use and Transport and Communication Land Use accounts for 3.04% and 0.19% respectively in PD area. **Figure 39-1 and Table 39-1** presents the existing land use map and existing land use area statement for PD respectively.

Figure 39-1: PD 38 Existing Land Use Map

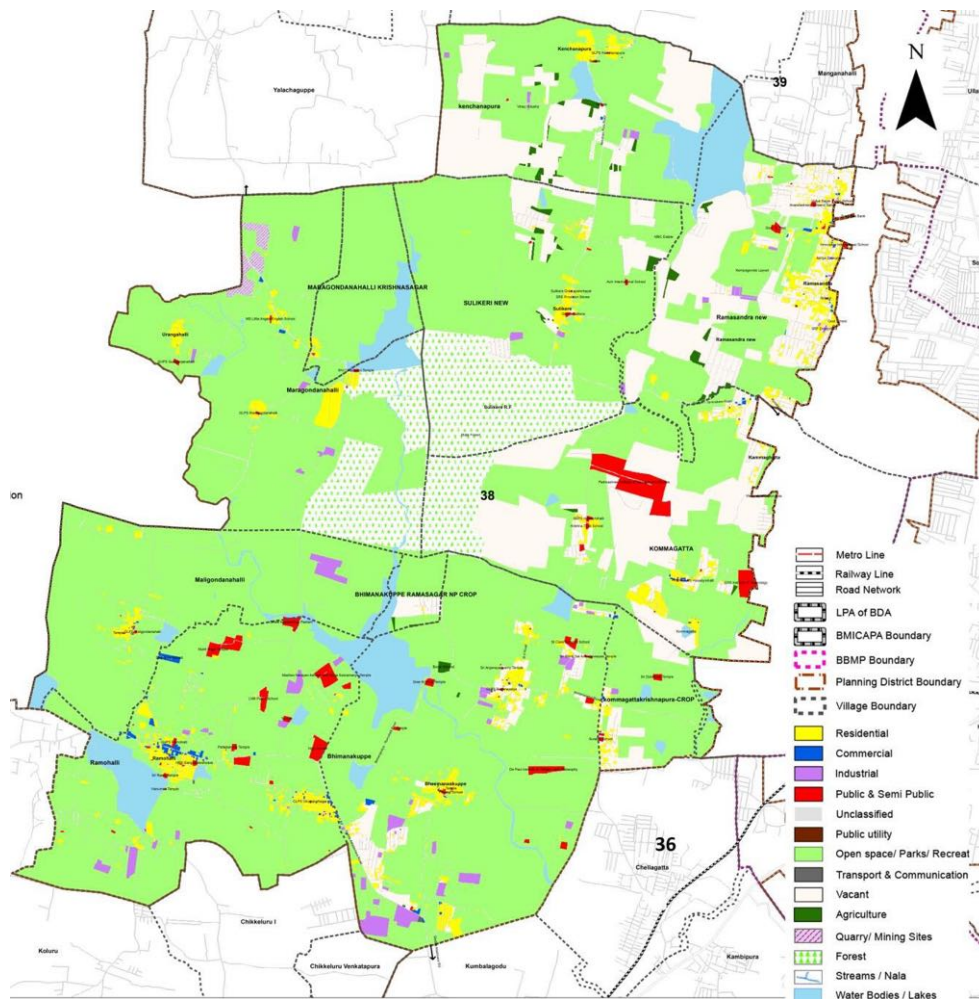


Table 39-1: PD 38 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	97.71	3.04
Commercial	6.19	0.19
Industrial	28.77	0.90
Quarry/ Mining Sites	7.07	0.22
Public Semi Public	32.75	1.02
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.18	0.01
Parks & Open Spaces	10.97	0.34
Transport Communication	66.96	2.09
Vacant	549.54	17.12
Agriculture	2025.11	63.10
Forest	213.78	6.66
Streams	8.74	0.27
Water Bodies	161.72	5.04
		0.00
Total	3209.49	100.00

8. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water. As per Rural Development and Panchayat Raj Department, there 13 Government schools present in the PD.
9. Sulikere – Bheemanakuppe PD area drains into Vrishabhavathi River. Ramohalli Lake, Bheemanakuppe Lake (spread into three different villages), Hoskere Lake (Maragondanahalli Krishnasagara Kere), Sulikere Lake, Kenchanapura Lake, Two water bodies/ lakes in Kammaghatta village, two water bodies/ lakes in Kammaghatta Krishnasagara village, two water bodies/ lakes in Maligondanahalli village, One water body/ lake each in Bheemanakuppe Village, Soolikere Village and Maragondanahalli village are the lakes/ water bodies present within the Planning District calling for protection from future developments.
10. Soolikere Reserved Forest is the major open space in agriculture landscape. Provision of adequate parks, playground and open spaces for future population need to be planned while protecting the lake and valley system is imperative.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: PRESERVATION AND CONSOLIDATION, IMPROVED CONNECTIVITY, AND PROTECTION OF LAKES & STREAMS

PROPOSALS

1. The Planning District falls under two planning zones of RMP2031 – Planning Zone B (Consolidation) and Planning Zone C (Agricultural Zone). Hence the governing principles for

the proposals for this PD are derived from both the concepts. The governing principle for this PD are as following:

- a. Promotion of Planned Developed in BDA Scheme Area and thereby further densification
 - b. Protection and Conservation of Lake System and Flood Protection
 - c. Preservation of the Agriculture land use
2. The RMP2031 proposes no further extension of urbanisable area and thus has limited the conurbation area to present extents for development activities on eastern side whilst the western part of the PD is proposed to continue as the Agriculture land use.
 3. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation and livability. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
 4. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 39-2 and Table 39-2** respectively.

Figure 39-2: PD 38 Proposed Land Use Map

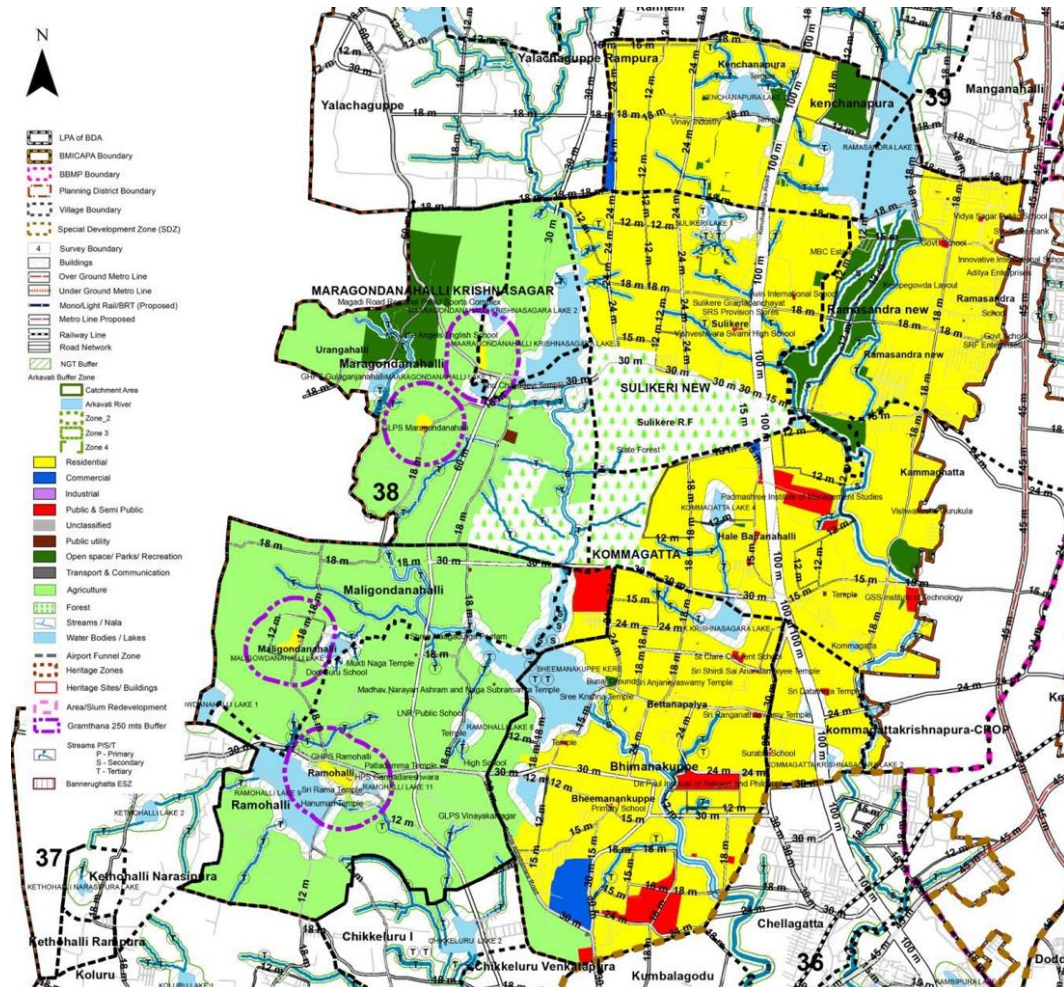




Table 39-2: PD 38 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	1150.73	63.80
Commercial	18.47	1.02
Industrial		0.00
Public & Semi Public	46.21	2.56
Unclassified	0.00	0.00
Public Utility	0.39	0.02
Parks / Open Spaces	59.88	3.32
Transport & Communication	226.72	12.57
Forest	17.08	0.95
Streams	2.76	0.15
Water Bodies	60.58	3.36
NGT Buffer	220.89	12.25
Total Developable Area	1803.70	100.00
Agriculture	1405.79	-
Total PD Area	3209.49	-

5. RMP2031 proposes city level metro network which include Metro PRR, though outside the PD and in BMICAPA it is proposed to develop metro stations at intersection of existing roads for ease of passenger movement. Locations of stations be finalized during feasibility and DPR stage. Further, RMP2031 proposes new road connecting Mysuru Road and Magadi Road that cater to the connectivity between the south, south-west and west of the LPA and additionally catering to the upcoming dense development in Kempegowda Layout located in this PD. It is proposed that the road be designed to accommodate BRTS in future if required.
6. In order to improve last mile connectivity and extend the public transport system to neighborhood level it is proposed to develop one BMTC Bus Terminal / Depot is proposed on Ramohalli along the new 30 m wide road connecting between Bettanapalya- Ramohalli and at the other Bus Terminus / Depot at Sulikere along the 100m wide PRR/Road between Mysore Road to Magadi Road.
7. Peripheral Ring Road, Dodda Aladamara Road, Tavarakere – Kengeri road, Bettanpalya-Ramohalli road, Sulikere main road, have been designated as Arterial Roads.
8. The RMP2031 proposes upgradation of Master Plan Roads to improve their service levels of these roads. Upgradation shall include development of road as per defined cross section, providing underground services (water supply, sewage, drainage, telecommunication cables, electric cables upto 220kv, etc), Junction Improvements (including providing traffic signals), Flyovers, Bus Bay/ Shelter, cycle tracks, footpath, etc).
9. As mentioned earlier, PD area drains in Vrushabhavati River. The natural drainage has been classified as following:
 - a. Drainage down stream of Kannelli connecting to Vrushabhavati River (via Sulikere) = Secondary



- b. Drainage downstream of Yalachaguppe kere connecting Hosakere (Maragondanahalli Krishnasagara Kere) leading to Bhimanakuppe and further to Vrushabhavati River = Secondary.
 - c. Drainage downstream of Ramohalli Kere and Lakkanpalaya Kere and meets at point from there to Vrushabhavati River = Secondary
 - d. All other drainages leading to lakes and secondary streams (as shown in PLU Map) = Tertiary
10. The RMP2031 proposes the protection and conservation of Ramohalli Lake, Bheemanakuppe Lake (spread into three different villages), Hoskere Lake, Soolikere Lake, and their natural streams. It is therefore proposed that a Lake Rejuvenation and lake surrounding area be prepared.
11. In order to cater to present and future infrastructure requirements, the RMP2031 proposes one 220kv power sub-station, and 9 DWCCs within Conurbation area and 2 in villages of Ramohalli and Sulikere for solid waste management within the planning district. The RMP2031 also proposes 1 burial ground and 1 cremation ground at suitable location within the PD.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 38 Sulikere – Bheemanakuppe:

1. Road development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Development of new links connectivity:
 - i. 30 m wide new road connecting Magadi road to Mysore road
 - ii. 30m new road connecting from Bettanapalya Ramohalli Road to PRR
 - iii. 30 m wide new road connecting the village of Bheemanakuppe Ramasagara and PRR.
 - iv. 24m wide new road connecting from Tavelkere - Kengeri Road to Sulikere Main Road
 - v. 24 m wide new road connecting from Tavelkere - Kengeri Road to Ittege factory bus stop.
 - vi. 18 m wide new road connecting PRR to Hoskere lake.
- c. Upgradation of Master Plan Roads
 - i. Dodda Aladamara Road,
 - ii. Tavarakere – Kengeri road,
 - iii. Bettanapalya-Ramohalli road,
 - iv. Sulikere main road
- d. Development of Gramathana Periphery Roads and Village Roads:
 - i. Malagondanahalli village periphery road
 - ii. Existing Village Roads
- e. Geometric Improvement of Existing Junctions



2. Protection and Rejuvenation of Lakes and Streams:

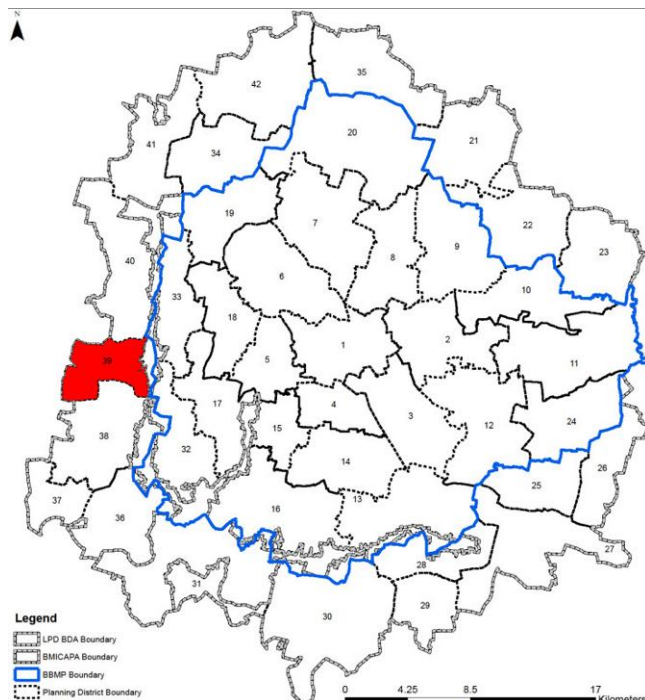
- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Rejuvenation of Lakes & Streams**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Bheemanakuppe Kere Rejuvenation Plan
 - iii. Ramohalli Kere Rejuvenation Plan,
 - iv. Maaragondanahalli Krishnasagara (Hosakere) Kere Rejuvenation Plan,
 - v. Sulikere Kere Rejuvenation Plan,
 - vi. Rejuvenation Plan for two Lakes in Bheemanakuppe Revenue Village
 - vii. Rejuvenation Plan for two Lakes in Kommaghatta Krishnasagara Revenue Village
 - viii. Kommaghatta Kere Rejuvenation Plan,
 - ix. Rejuvenation Plan for one Lake in Sulikere Revenue Village
 - x. Kenchanapura Kere Rejuvenation Plan,
 - xi. Rejuvenation Plan for two Lakes in Maragondanahalli Revenue Village
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

3. Development of Physical and Social Infrastructure/ Facilities:

- | | |
|---|---------------------------------------|
| a) Crematorium: | 01 Nos. |
| b) Graveyard: | 01 Nos. |
| c) SWM Dry Waste Collection Centre: | 11 Nos. |
| d) SWM Organic Waste Collection Centre: | 02 Nos. |
| e) Bio-Methanation Unit: | 01 Nos. |
| f) WTP, OHT, GLSR and STP | to be decided based on Water Supply & |
| Sewage Network Plan | |
| g) Fire Station: | 01 Nos. |
| h) Playgrounds: | 02 Nos. |
| i) Sports Complex | 01 Nos. |

4. Preparation of Water Supply and Sewage Network Plan for Conurbation Areas

40.PD 39: SHEEGEHALLI – YELACHAGUPPE



Population (2011 Census): 17,013

Area of PD: 1733.21 ha

Villages in PD: 7

Gram Panchayats: Kodagihalli and Tavarakere

Gross Density: 10 pph

Sheegehalli- Yelachaguppe Planning District (PD. No.39) is located Western side in BMA with Magadi Road passing through its north western side and running north of the PD. It shares its boundary with LPA of BMICAPA on eastern side and LPA of Magadi on western side. BDA Scheme Layout, unorganised and scattered developments all along Magadi Road, & NICE corridor and reducing agriculture use defines the characteristics of PD.

RMP2031 proposes to promote planned high density planned development, while retaining certain areas as agriculture.

A. EXISTING STATUS

1. Sheegehalli- Yelachaguppe PD admeasures 1733.21 ha (17.33 sqkm) and falls within the Taverkere and Yeshwanthapur Hobli. It comprises of 7 villages, namely – Kannelli, Sheegehalli, Channenahalli, Yalachaguppe Ramapura, Yalachaguppe, Kodagihalli and Manganahalli. Village Kodagihalli and Manganahalli are partly in LPA of BDA and partly in LPA of BMICAPA.
2. Machohalli Industrial Area, Kamath Industrial Layout along Magadi Road in PD 40 (north of PD 39), Srinidhi Industrial Estate, Nanjappa Industrial Estate in Sheegehalli, scattered industrial units, the upcoming BDA Scheme Sir Nada Prabhu Kempegowda Layout, unplanned plotted developments along Magadi Road, NICE corridor (in Kodagihalli), and along existing village roads, Jana Seva Vidhya Kendra, BBMP SWM Processing Units and BMTC Depot and breached agriculture lands defines the characteristics of planning district. Managanahalli (partly in BMICAPA) and Chenenahalli and Sheegehalli for being located along the NICE Peripheral Ring Road and Magadi Road are seeing many upcoming plotted residential developments. Given the land already developed and the existing plotted developments are expected to accommodate more population in future.
3. Magadi Road, NICE Road, Sheegehalli Main Road, Kenchanapura Road, Kodagihalli Main Road, Taverkere – Kengari Road, Pipeline Road and existing village roads define the circulation network for the PD.
4. As per Census 2011, PD has 17,013 inhabitants, with a decadal rate of 145% (2001-2011) and there are 42.2% resident workers. There are 4,031 households (2011), with Avg. Household

- size being 4.22, which is higher than BMA (4.01). The gross density is 10 persons per hectare (pph), whereas the average residential density is 176 pph.
5. Agriculture land use accounts for 61% of the total PD area, followed by vacant land use accounting for 22.9%. The residential areas are basically Gramathans and plotted development accounting for 4.84% of total area, whereas industrial use accounts for 2.97% of total area. **Figure 40-1 and Table 40-1** presents the Existing Land Use Map and Existing Land Use area statement respectively.
 6. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water. There are two big Solid Waste Management Facilities located within the PD.
 7. As per Rural Development and Panchayat Raj Department, there are 24 Government schools in Gram panchayats falling within this PD. Private educational institutes like Jana Seva Vidya Kendra are also present in the area. However there are certain pockets which do not have access to primary schools within 1 km radius. There is a gap in healthcare infrastructure, and the nearest hospitals are in the neighbouring planning districts, along Magadi road, and Mysuru Road.

Figure 40-1: PD 39 Existing Land Use Map

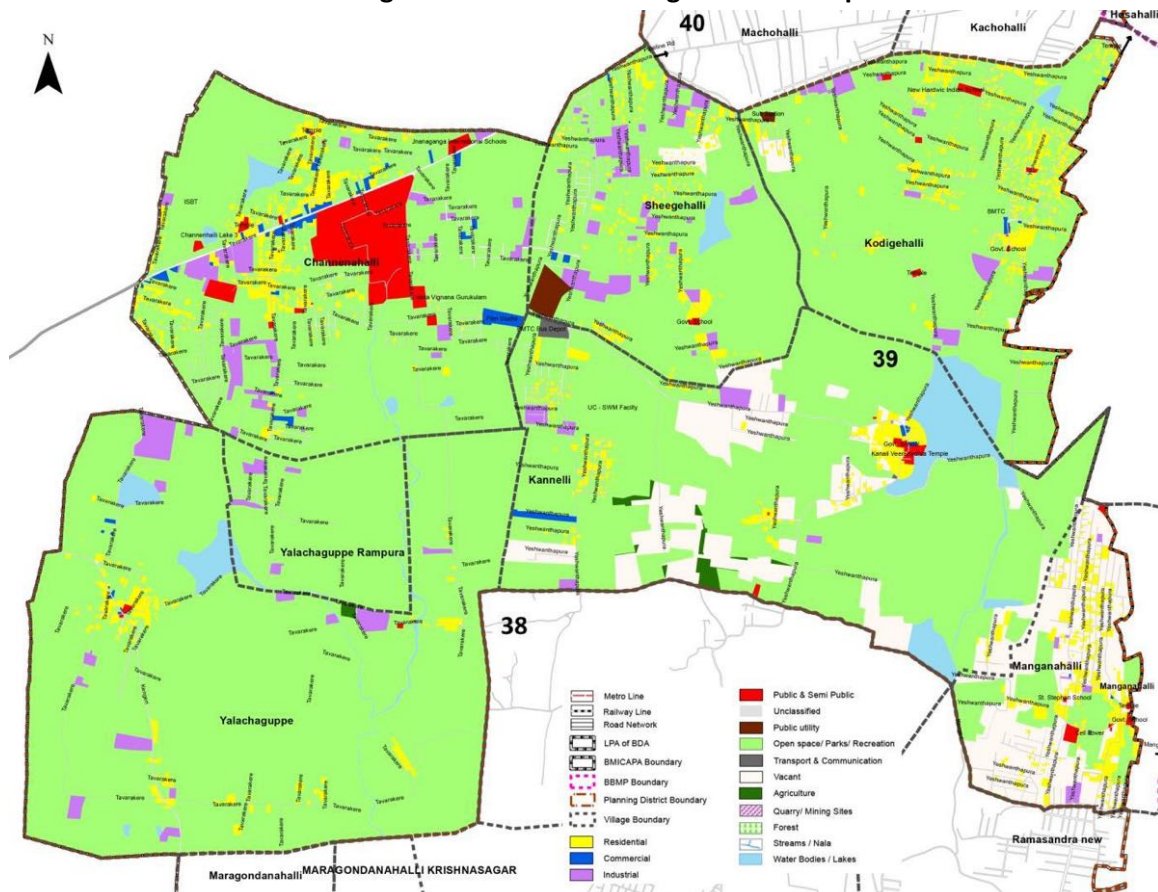




Table 40-1: PD 39 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	83.93	4.84
Commercial	7.53	0.43
Industrial	51.40	2.97
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	29.58	1.71
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	3.69	0.21
Parks & Open Spaces	3.76	0.22
Transport Communication	52.12	3.01
Vacant	393.30	22.69
Agriculture	1057.62	61.02
Forest	0.00	0.00
Streams	3.75	0.22
Water Bodies	46.53	2.68
Total	1733.21	100.00

8. While there is no playground within the PD, there is one big playground in Tavarkere e
9. Sheegehalli-Yellachaguppe PD area drains into Vrishabhavathi River. Channenahalli kere, Jogipalya lake (along Magadi Road), two lakes in Kodagihalli, Kannelli lake, Yalachaguppe Kere, Yelachaguppe 2nd kere, and Sulikere lake (part) are the lakes/ water bodies present within the Planning District calling for protection from future developments. One lake in Kodagihalli is seen with large scale plantation.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: HIGH DENSITY PLANNED DEVELOPMENT, INTEGRATION OF CIRCULATION NETWORK, AND ENVIRONMENTAL PROTECTION

PROPOSALS

1. PD is witnessing transforming rapidly into urban landscape and developments are following radial as well as scattered development pattern. It becomes imperative that RMP2031 directs for planned urban development and promotion of economic growth along proposed major Ring and Radials. Yet retain the agriculture zone in certain periphery area. The Planning District therefor falls under two planning zones of RMP2031 – Planning Zone B (Consolidation) and Planning Zone C (Agricultural Zone). Hence the governing principles for the proposals for this PD are derived from both the concepts. The governing principle for this PD are as following:
 - a. Promotion of Economic Growth along Rings/ Radials
 - b. Development of Grid Pattern Circulation System allowing higher FAR consumption
 - c. Promotion of Transit Oriented Development around Metro/ Mono Rail Stations
 - d. Protection and Conservation of Lake System and
 - e. Planned Open & Open Spaces

2. In the Agriculture Zone, the RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. It is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
3. The Proposed Land Use Map and Proposed Land Use Area Statement for the PD are given in **Figure 40-2 and Table 40-2** respectively.
4. The City level public transport infrastructure Metro Rail along Magadi Road and PRR are proposed to developed:
 - a. Magadi Road Alignment: The Magadi Road alignment is proposed to be developed starting from Magadi Road Metro Station and run along the Magadi Road till Channenahalli (LPA limit), where ISBT is proposed to be developed. Two stations are proposed to developed within PD – a) Janaseva Vidhya Kendra and b) Channenahalli (ISBT to be planned as inter change with Metro rail).
 - b. Metro PRR: RMP2031 proposes Metro all along PRR and NICE Corridor. It is proposed that interchange with Magadi Metro be designed as Interchange.
 - c. BRTS: RMP2031 proposes new road connecting Mysuru Road and Magadi Road that cater to the connectivity between the south, south-west and west of the LPA and additionally catering to the upcoming dense development in Kempegowda Layout located in this PD. It is proposed that the road be designed to accommodate BRTS in future if required.

Figure 40-2: PD 39 Proposed Land Use Map

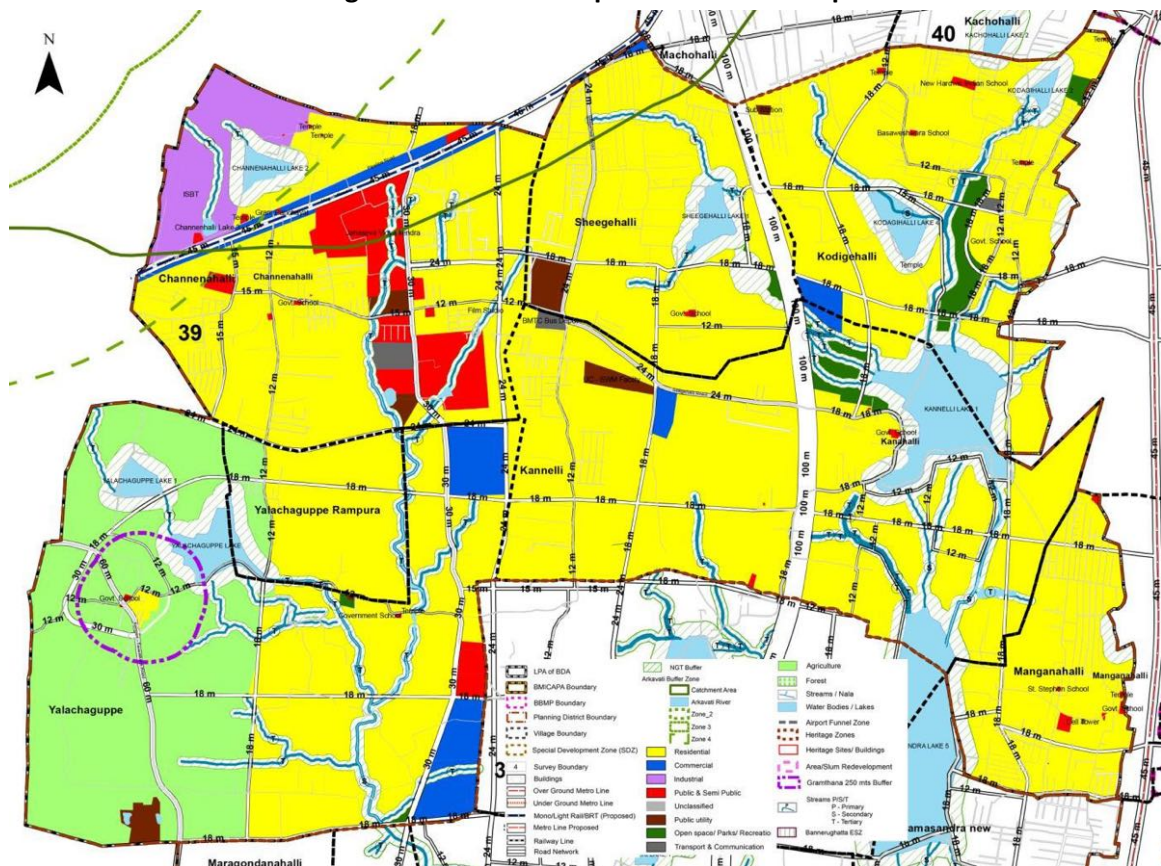




Table 40-2: PD 39 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	948.50	64.16
Commercial	37.92	2.57
Industrial	33.60	2.27
Public & Semi Public	42.30	2.86
Unclassified	0.00	0.00
Public Utility	10.79	0.73
Parks / open spaces	14.73	1.00
Transport & Communication	165.17	11.17
Forest	0.00	0.00
Streams	3.58	0.24
Water Bodies	36.56	2.47
NGT Buffer	185.50	12.55
Agriculture	254.56	-
Total PD Area	1733.21	-

5. RMP2031 proposes Inter State Bus Terminal on major radials and one such ISBT cum BMTC Depot is proposed to be developed Channenahalli village along the Magadi Road.
6. Next to ISBT, the RMP2031 proposes to develop one Mini Logistic Hub (including Truck Terminal in Channenahalli Village along the Magadi Road).
7. To improve the accessibility to Public Transport Stations (BMTC Bus Stations and Bus terminals) and residential areas, educational institutions it is proposed to strengthen the existing road network by providing footpaths and cycle tracks. It is proposed that BBMP and BDA prepare the area accessibility plans.
8. The RMP2031 has identified new links within the Planning district to improve the connectivity within the Planning District for ease of traffic movement.
9. The RMP2031 has identified three critical junctions for geometric improvements for better and smoother traffic flow and to be taken up on priority. Some of the critical junctions are
 - Junction of Magadi road and 30 m new road in Channenahalli (next to Jana Seva Vidhya Kendra). A flyover is proposed to be developed here in future.
 - Junction of Magadi Road and Honganahatti – Yelachaguppe road; a Trumpet Flyover is proposed to be developed.
 - Sheegehalli Cross Junction (Intersection of Magadi Road and Sheegihalli Main Road)
10. The RMP2031 proposes upgradation of Master Plan Roads to improve their service levels of these roads. Upgradation shall include development of road as per defined cross section, providing underground services (water supply, sewage, drainage, telecommunication cables, electric cables upto 220kv, etc), Junction Improvements (including providing traffic signals), Flyovers, Bus Bay/ Shelter, cycle tracks, footpath, etc). The Important roads identified for complete upgradation and geometric improvement are as following:
 - Magadi Road
 - Tavarakere - Kengeri Road
 - Sheegehalli Road



- Sheegehalli – Kannahalli Road
 - Kenchanapura main road
11. It is important to create new parks and open spaces for existing and developing areas within the planning district, the RMP2031 therefore proposes to develop a sports complex in Channelli Village.
 12. PD area, except for part of Channenahalli village north of Magadi Road, drains into Vrushabhavati River, while part of Channenahalli Village north of Magadi Road drains into Arakavathi River. Accordingly the natural drainage for PD has been classified.
 - a. Drainage down stream of Kannelli connecting to Vrushabhavati River (via Sulikere) = Secondary
 - b. Drainage downstream of Yalachaguppe kere connecting Hosakere (Maragondanahalli Krishnasagara Kere) leading to Bhimanakuppe and further to Vrushabhavati River = Secondary.
 - c. All other drainages leading to lakes and secondary streams (as shown in PLU Map) = Tertiary
 13. The RMP2031 proposes the protection and conservation of Channenahalli kere, Jogipalya lake (along Magadi Road), two lakes in Kodagihalli, Kannelli lake, Yalachaguppe Kere, 2nd kere in Yalachaguppe, a and their natural streams. It is therefore proposed that a Lake Rejuvenation and lake surrounding area be prepared and implemented.
 14. In order to cater to present and future infrastructure requirements, the RMP2031 proposes 8 DWCCs, 1 Organic Waste Collection Centre, and 1 Bio-methanation Unit for solid waste management within the planning district.
 15. The RMP2031 proposes that 1 Fire Stations, 1 burial ground and 1 cremation centre and 1 sports complex is developed in this Planning District.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 39 Sheegehalli – Yalachaguppe

1. Road development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Development of identified new link/ improved connectivity:
 - i. 30 m wide new road connecting to Magadi road passing through villages of Yalachaguppe, Yalachaguppe – Rampura and Channenahalli.
 - ii. 24m new road connecting from Yalachaguppe – Rampura Road to Magadi road.
 - iii. 24m wide new road connecting from Kannahalli Village to Magadi Road through the Kempegowda Layout.
 - iv. 18 m wide road for connectivity within the eastern part of the Kempegowda Layout which then extends further and joins the Magadi road.
 - v. 18 m wide new road connecting the NICE road, passing through the Kannahalli village.



- vi. 18 m wide road for connecting the NICE road, meeting the PRR at village Kodigehalli, and extending further to Seegehalli road and meeting the Magadi road.
- c. Upgradation of Master Plan Roads
 - i. Magadi Road
 - ii. Tavarakere - Kengeri Road
 - iii. Sheegehalli Road
 - iv. Seegehalli – Kannahalli Road
 - v. Kenchanapura Main Road
 - vi. Kodagihalli Main Road
- d. Junction improvement programme
 - i. Junction of Magadi road and 30 m new road in Channenahalli (next to Jana Seva Vidhya Kendra). A flyover is proposed to be developed here in future.
 - ii. Junction of Magadi Road and Honganahatti – Yellachaguppe road; a Trumpet Flyover is proposed to be developed.
 - iii. Sheegehalli Cross Junction (Intersection of Magadi Road and Sheegihalli Main Road)
 - iv. Intersection of existing village roads.
- e. Development of Gramathana Yellachaguppe Village Periphery Road

2. Development of Public Transport System:

- a. Namma Metro:
 - i. Magadi Road Metro
 - ii. PRR/ NICE Metro
- b. BRTS: New Link connecting Mysuru Road and Magadi Road
- c. Bus Stations: One each in Kodagihalli Village, and Yellachaguppe Village

3. Preparation of Village Development Plans

4. Protection and Rejuvenation of Lakes and Streams:

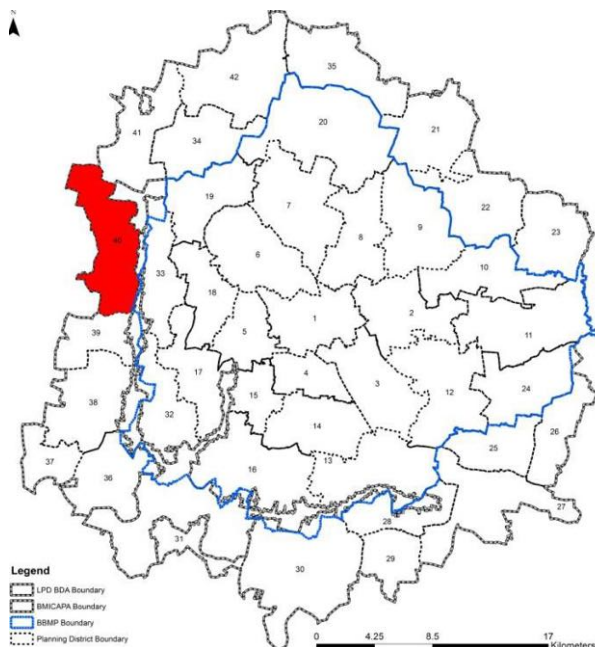
- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Rejuvenation of Lakes & Streams:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Kannelli Kere Rejuvenation Plan
 - iii. Yellachaguppe Kere Rejuvenation Plan
 - iv. Rejuvenation Plan for 2nd Lake in Yellachaguppe Village
 - v. Sheegehalli Kere Rejuvenation Plan
 - vi. Chennenahalli Kere Rejuvenation Plan
 - vii. Kodagihalli Kere Rejuvenation Plan
 - viii. Rejuvenation Plan for 2nd Lake in Kodagihalli Village
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.



5. Development of Physical and Social Infrastructure/ Facilities:

- | | |
|-------------------------------------|---------|
| a) Fire Station: | 01 Nos. |
| b) Crematorium: | 01 Nos. |
| c) Burial Ground: | 01 Nos. |
| d) SWM Dry Waste Collection Centre: | 09 Nos. |
| e) Organic Waste Collection Centre: | 02 Nos. |
| f) Bio-Methanation Unit: | 01 Nos. |

41.PD 40: MAKALI – MACHOHALLI



Population (2011 Census): 67,613

Area of PD: 3305.16 ha

Villages in PD: 19

Gram Panchayats: Dasanapura, Madavara, Machohalli, and Madanayakanahalli

Gross Density: 20 pph

Makali- Machohalli Planning District (PD. No.40) is located North Western quadrant in BMA and shares its boundary with LPA of BMICAPA on eastern side and LPA of Neelammangala on western side. The Arakavati River and its eco-sensitive zone, logistic & goods transport facilities along Tumukuru Road, Chemical industries along Magadi Road, scattered layouts in the agriculture zone defines the characteristics of PD.

The Master Plan, adopting the Aarkavati Eco sensitive zone, proposes limited development along Magadi Road and preservation of rest of the areas.

A. EXISTING STATUS

1. Makali – Machohalli PD admeasures ~3305.16 ha (33.05 sqkm) and falls completely within Dasanapura Hobli of Bengaluru North Taluk. It comprises of 19 revenue villages, namely - Madanayakanahalli, Makali, Adakimaranahalli, Dasanapura, Narayanapalya, Harokyathanahalli, Siddanahosahalli, Madavara, Lakshmipura, Dombarahalli, Gavipalya, Kadaranahalli, Vaddarahalli, Lakkenahalli, Gangondanahalli, Bylakonenahalli, Byandahalli, Machohalli and Kachohalli. Revenue villages Kachohalli, Bylakonenahalli, Gangondanahalli, Lakshmipura, Srikantapura, and Madavara are partly under LPA of BDA and partly under LPA of BMICAPA. These villages are part of four Gram Panchayats, namely Dasanapura, Madavara Machohalli, and Madanayakanahalli.
2. Tumukur Road on Northern side, Magadi Road on southern side, and NICE Road on eastern side of the PD defines the road circulation along with existing roads, namely Magadi Cross road at Machohalli, Neelamangala Road, Kachohalli Main Road, Machohalli Main Road, Lakshmipura Road. As proposed by BMRCL Phase II Metro alignment is on the Tumukuru Road, with metro stations located just outside the boundary of this PD. A BMTC bus training centre is located in the PD.
3. PD reflects road based growth pattern, particularly along Tumukuru Road and Magadi Road. Tumukuru Road is a major logistic and goods transport facility centre, while Magadi road has private industrial areas. Whereas the northern and central part of the PD has predominant agriculture land use. At the sametime there are several unplanned plotted layouts breaching agriculture zone. Development along NICE road is premodinantly residential in nature.

4. Logistics, Warehousing, Godown, Pharma along the Tumkuru road, Chemical and Textile along Magadi Road and brick kilns in Agriculture Zone, are the Industrial activities within PD, whereas Commercial activities are along Magadi and Tumukuru road. There are several educational institutes present in PD.
5. As per Census 2011, PD has 67,613 inhabitants, with a decadal growth rate 139% (2001-2011) and there are 47.9% resident workers in the PD. There are 17576 households (2011), with avg. household size being 3.85, which is higher than BMA (4.01). The gross density is 20 persons per hectare (pph), whereas the average net residential density is 310 pph. Madanayakanahalli, Siddanahosahalli, Machohalli and Kachohalli are among the most populated settlements with the PD. Most of the PD is witnessing developments of unplanned layouts for residential purposes.
6. Agriculture land use is the predominant land use in this PD which accounts for 76% of total PD area. The current residential land use accounts for only ~6.64% of PD area whereas Transport and Communication accounts for 5.63%. The Industrial use and commercial use accounts ~3.76% and ~3% respectively. **Figure 41-1 and Table 41-1** presents the Existing Land Use Map and Existing Land Use area statement respectively.

Figure 41-1: PD 40 Existing Land Use Map

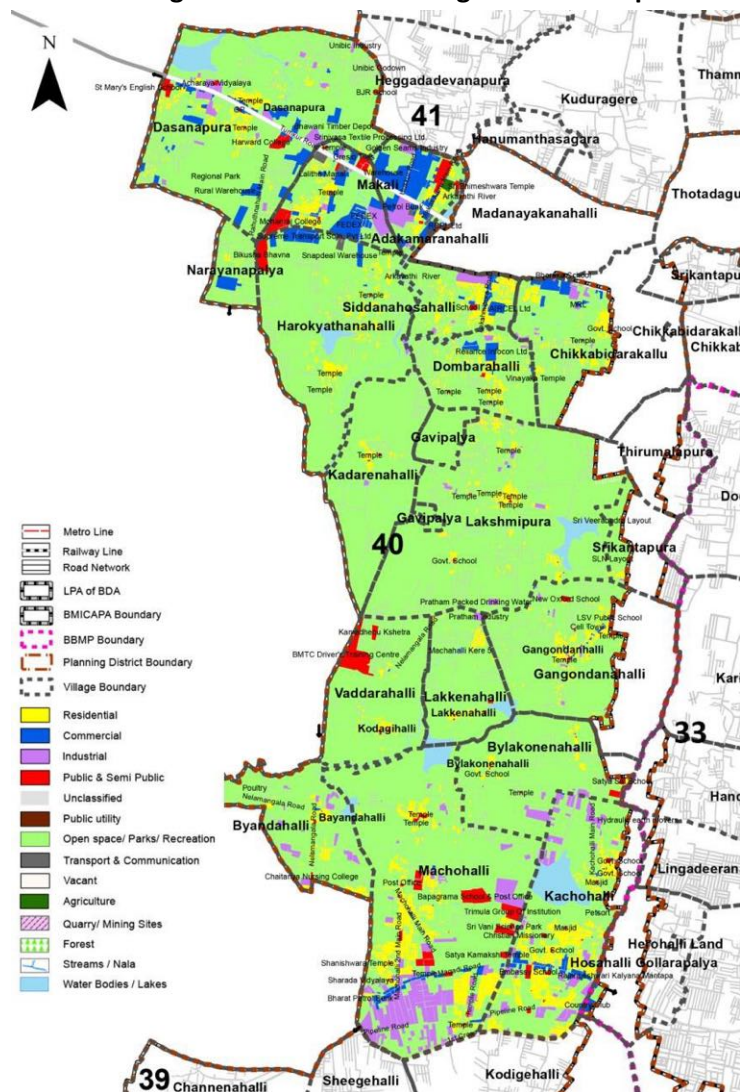




Table 41-1: PD 40 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	219.43	6.64
Commercial	104.12	3.15
Industrial	124.31	3.76
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	52.78	1.60
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	0.13	0.00
Parks & Open Spaces	1.14	0.03
Transport and Communication	186.25	5.64
Vacant	1060.27	32.08
Agriculture	1468.49	44.43
Forest	0.00	0.00
Streams	21.53	0.65
Water Bodies	66.73	2.02
Total	3305.16	100.00

7. The Arkavathy River passes through this PD, and the buffer zone of the T G Halli Reservoir (Zone 1, Zone 3 and Zone 4 covers parts of the PD. It thus contains several environmentally sensitive areas.
8. There are 9 lakes within PD and they are Kachohalli Lake, Bylkonhalli Lake, Byandahalli Tank, Lakkanahalli Lake, Lakshmipura Lake, Harokyathanahalli Lake, Makali Lake, Damodarhalli Lake and Dasanapura Lake.
9. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water.
10. As per Rural Development and Panchayat Raj Department, there are 41 schools in the PD. There is no playground, fire station and burial ground/ crematorium/ cemeteries in the PD.

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ENVIRONMENT PROTECTION (ARAKAVATI AND TG HALLI ECO-SENSITIVE ZONE AND LAKES AND DRAINAGE PROTECTION) AND PROPOMOTION OF LIMITED GROWTH IN SOUTHERN PART AND PRESERVATION OF AGRICULTURE ZONE.

PROPOSALS

1. The RMP2031 has adopted the provisions of Arakavati and TG Halli Eco-sensitive Zone which covers most of the northern section, including the existing developments along Tumurkuru Road, on the other hand RMP2031 proposes to include large scale developments along the Magadi Road for planned intervention. The planning district for this reason is falling under both planning zones of RMP2031 – Planning Zone B (Consolidation) and Planning Zone C (Agricultural Zone). Thus, the governing principle for this PD are as following:
 - a. Limited Growth and Integrating Existing Developments along Magadi Road

- b. Implementation of Arkavathy and TG Halli Eco-Sensitive Zone and Protection and conservation of Lakes.
 - c. Preservation of Agriculture land use
 - d. Guided Village Development
2. The RMP2031 proposes high intensity development in the consolidation zone, i.e, within the conurbation area to support residential and commercial areas while rest of the areas have been kept for agriculture use.
3. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
4. The Proposed Land Use Map and Proposed Land Use Distribution for the PD are depicted in **Figure 41-2 and Table 41-2** respectively.

Figure 41-2: PD 40 Proposed Land Use Map

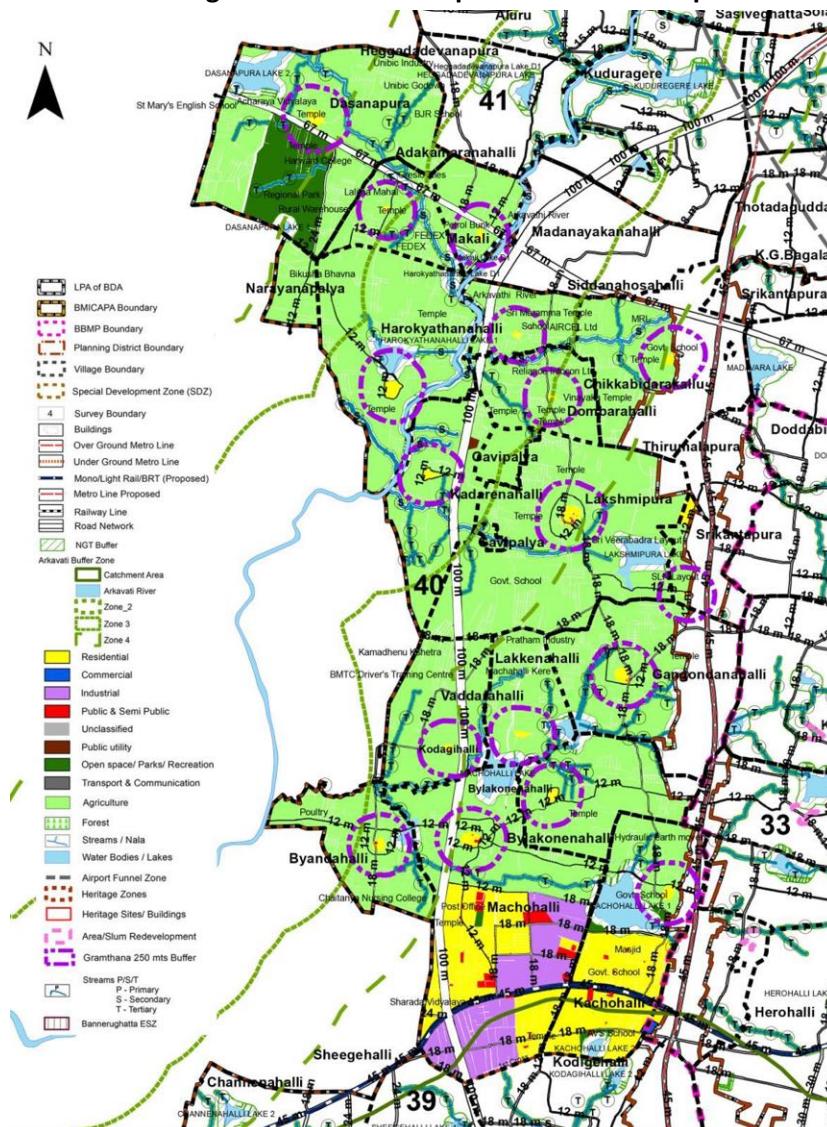




Table 41-2: PD 40 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	205.12	46.27
Commercial	7.77	1.75
Industrial	103.93	23.44
Public & Semi Public	11.86	2.68
Unclassified	0.00	0.00
Public Utility	0.07	0.02
Parks / Open Spaces	6.64	1.50
Transport & Communication	70.39	15.88
Forest	0.00	0.00
Streams	0.04	0.01
Water Bodies	16.31	3.68
NGT Buffer	21.20	4.78
Total Developable Area	443.34	100.00
Agriculture	2861.82	-
Total PD Area	3305.16	-

5. The City level public transport infrastructure are as follows:
 - a. Magadi Road LRT/ Mono Rail/ BRT Alignment: The Magadi Road alignment is proposed to be developed starting from Magadi Road Metro Station and run along the Magadi Road till Channenahalli (LPA limit). Two stations are proposed to be developed within PD – a) Sheegehalli Cross Junction, Kadabagere Cross, Machohalli, and Chikka Gollarhatti leading to interchange at NICE.
 - b. Metro PRR: RMP2031 proposes Metro all along PRR and NICE Corridor. It is proposed that interchange with Magadi Metro be designed as Interchange.
6. RMP2031 proposes Inter State Bus Terminal on major radials and one such ISBT cum BMTC Depot is proposed to be developed Adakaramarahalli village along the Tumukur Road (in Agriculture Zone) and second won at Machohalli along the Magadi Road. A bus depot is proposed at Kadaranahali village located at the edge of the BDA LPA boundary. An Integrated Logistics hub is proposed on Tumkur road in Makali outside the Arakavati Eco Zones.
7. To improve the accessibility to Public Transport Stations (BMTC Bus Stations and Bus terminals) and residential areas, it is proposed to strengthen the existing road network by providing footpaths and cycle tracks.
8. It is important to create new parks and open spaces for existing and developing areas within the planning district. The RMP2031 proposes development of Regional Park in Harokyathanahalli village.
9. Entire PD drains into Arakavati River and all the lakes are connected to Arakavati River through network of drains/ streams. The classification of natural drainage system within the PD is as following:
 - a. Arakavati River = Primary
 - b. Drainage downstream of Madavara Kere and connecting to Arakavati River = Secondary



- c. Drainage downstream of Lakshmipura Lake, Dasarahalli Lake (in BBMP), Nallakadirenahalli Lake (in BBMP) and Herohalli Kere (In BBMP) and connecting to Secondary Drain or has outfall outside LPA of BDA = Tertiary
10. The RMP2031 proposes the protection and conservation of all lakes within the PD. Lake Rejuvenation and lake surrounding area are required to be prepared.
11. In order to cater to present and future infrastructure requirements for BMA, the RMP2031 proposes development of one 220kv power sub-station, additional 6 DWCCs (in RR Nagar and villages of Machohalli, Kachohalli, Gangondanahalli, Dasanapura) for solid waste management within the planning district.
12. The RMP2031 proposes 1 fire station, 1 cremation ground and 1 burial ground at suitable locations within PD.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the programmes and projects for PD 40.

1. Road development Plan:

- a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
- b. Upgradation of Existing Roads
 - i. Magadi road is proposed to be widened
 - ii. Lakshmipura road is proposed to be widened
 - iii. Nelamangala road is proposed to be widened.
 - iv. Machohalli main road is proposed to be developed.
 - v. Kachohalli main road
 - vi. Other Village Roads
- c. Development of Village Periphery roads for:
 - i. Lakshmipura Gramathana,
 - ii. Gangondanahalli Gramathana,
 - iii. Harokyathanahalli Gramathana
 - iv. Malagondanahalli Village.
- d. Development of identified new link/ improved connectivity:
 - i. Peripheral Ring Road
 - ii. Pipeline road as alternate connection from Byaderahalli to Seegehalli.
- e. Junction Improvement Plan
 - i. Kadabagere Cross
 - ii. Sheegehalli Junction on Magadi road
 - iii. Machohalli Gate Junction
 - iv. Kachohalli Gate Junction
 - v. Ganagondanahalli Junction
 - vi. Madanayakanahalli Junction (On Tumukuru Road)
 - vii. Makali Cross Junction

2. Development of Public and Goods Transport System:



- a. Namma Metro
 - viii. Metro PRR
 - ix. Metro Magadi Road
- b. Inter State Bus Terminus:
 - x. Machohalli along the Magadi Road
 - xi. Tumkur road at Adakamaranahalli Bus Stop junction.
- c. Bus stations/ Depot:
 - xii. Bus Depot in Kadaranahalli village.
- d. Logistic Hub (Makali along Tumukuru Road)

3. Preparation of Village Development Plans

4. Development of Parks and Open Spaces

- a. Regional Park: 01 Nos. (Harokyathanahalli Village)

5. Protection and Rejuvenation of Lakes and Streams:

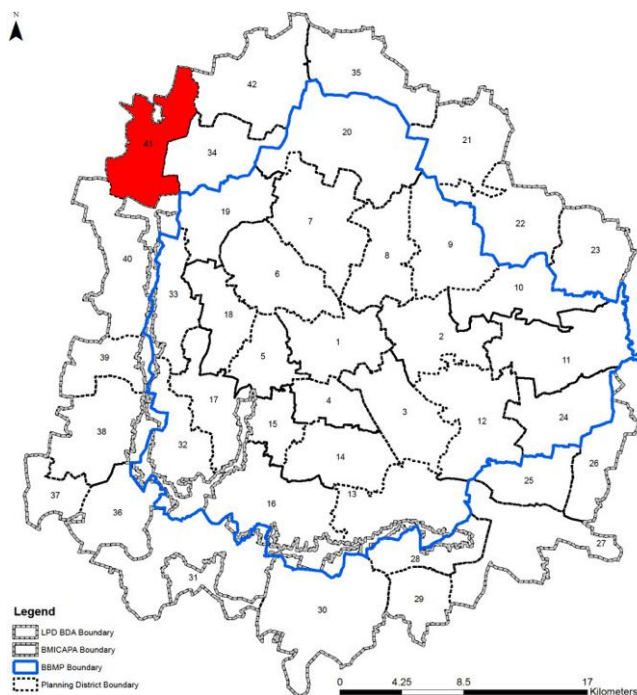
- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Rejuvenation of Lakes & Streams:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Kachohalli Kere Rejuvenation Plan
 - iii. Bylkonhalli Kere Rejuvenation Plan
 - iv. Byandahalli Tank Rejuvenation Plan
 - v. Lakkanahalli Kere Rejuvenation Plan
 - vi. Lakshmipura Kere Rejuvenation Plan
 - vii. Harokyathanahalli Kere Rejuvenation Plan
 - viii. Makali Kere Rejuvenation Plan
 - ix. Damodarhalli Kere Rejuvenation Plan
 - x. Dasanapura Kere Rejuvenation Plan
- d. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Surrounding Area development plan be prepared to upgrade the drainage and sewage infrastructure to stop flow of sewage into streams and lake as well as dumping of SWM.

6. Development of Physical and Social Infrastructure/ Facilities:

- a) Fire Station: 02 Nos. (Tumukuru & Magadi Road)
- b) Crematorium: 01 Nos.
- c) Burial Ground: 01 Nos.
- d) SWM Dry Waste Collection Centre: 06 Nos.
- e) Organic Waste Collection Centre: 01 Nos.
- f) STP/ OHT/ ISP/ GLSR: as per Water and Sewage Network
- g) 220kv Sub-station: 01 Nos. Kadaranahalli village

7. Preparation of Water and Sewage Network Plan for Conurbation Area and Gramathanas

42.PD 41: ALURU



Population (2011 Census): 23390

Area of PD: 2953.51 ha

Villages in PD: 16

Gram Panchayats: Madanayakanahalli, Aluru, Huskur, Hurlichikkanahalli, and Hesaraghatta

Gross Density: 08 pph

Aluru Planning District (PD. No.41) is located North west in BMA and shares its boundary with LPA of Neelammangala on western side and LPA of BMICAPA on southern side. The Arakavati River and its eco-sensitive zone is the basis for delineation of this predominantly agriculture PD.

The Master Plan in full adherence to Aarkavati Eco sensitive zone proposes to retain entire PD as agriculture zone and preservation of environment.

A. Existing Situation

1. The Aluru Planning District admeasures 2953.51 Ha (29.53 sq km) comprises of 16 revenue villages namely, Thammarasanaahalli, Hurlichikkanahalli, Kodagithirumalapura, Bilajaji, Hesaraghatta (Part), Tharabanaahalli, Sasiveghatta and Ivarakandapura villages in Hesaraghatta Hobli and Nagasandra, Narasipura, Muniyanapalya, Thammenahalli, Kuduragere, Aluru, Heggadadevanapura and Hanumanthasagara villages of Dasanapura Hobli. All these villages are under different by Gram Panchayats, namely Madanayakanahalli, Aluru, Huskur, Hurlichikkanahalli, and Hesaraghatta.
2. The Government of Karnataka in order to protect and preserve the watershed area of T.G. Halli Reservoir and Arakavati River, issued an Notification on T.G.Halli Conservation and its Zone (Notification G.O. No. FEE 215 ENV 2000 dated 18.11.2003, Bangalore) defining the extents of Eco-sensitive zones and regulations thereof. Aluru - Hesaraghatta Planning District has been delineated based these TG Hall and Arkavati River Buffer Zones.
3. The PD is characterized by the presence of Arakavati River and its eco-sensitive zone, Indian Institute of Horticulture Research, large lakes (Hesaraghatta (in part), Ivarakandapura Kere, Aluru Kere, etc), the Chimney Hill Air Force Station, Biscuit Factory, Aluru KSCA Cricket Ground, Aluru forest, BDA EWS Housing Scheme, Acharya Collage of Nursing and the predominant Agriculture landscape. The environmentally sensitive area is witnessing limited yet scattered developmental activities within the buffer zones and areas adjoining Aluru forest. Warehousing, Gowdown, and Biscuit Factory in Heggadadevanapura and scattered industries like Pharma, brick kiln, etc are the industrial activities within the PD.



4. Hessarghatta Main Road, Huskur Road, Kuduregere Road, KSCA Stadium Road, Shivakote Main Road, IIHR Main Road, Khasaghattapura Road, Acharya Doctor Sarvapalli Radhakrishnan Road, Makali - Aluru Road, and Tarabanahalli - Silvepura Road define the existing road network. Tumkuru Road passes through PD 40 and south of PD boundary. Similarly, Bengaluru – Mangaluru and Bengaluru – Mumbai Railway line passes through PD. There is an opportunity to develop small station at Muniyanapalya. No Bus Terminal/ Station currently have been established in this PD.
5. As per Census 2011, PD has 23390 inhabitants, which is has increased by 54.8% from 2001 (15114) and there are 10786 (46.1%) resident workers. There are 5812 households (2011), with Avg. Household size being 4, which is similar to average HH Size in BMA (4.01). The gross density is 8 persons per hectare (pph), whereas the average residential density is 310 pph.
6. Agriculture land use accounts for ~73% total PD area, followed by Water bodies accounting for almost 6% of total area. Residential accounts for 4.5%, which is primarily towards scattered plotted developmental and Gramathana's. Heggadadevanapura, Kodagithirumalapura, Hurlichikkanahalli, Ivarakandapura and Aluru are among the most populated settlements as well as they are witnessing plotted developments within the PD. BDA is also developing its Housing Scheme/ Flats in Aluru village. Transport and Communication accounts for 4.63% of total area The Industrial use and commercial use accounts 0.48% and 0.82% of total area respectively. Figure 42-1 and **Error! Reference source not found.** presents the Existing Land Use Map and Existing Land Use area statement for PD.
7. The Arkavathy River passes through this Planning District, and the buffer zone of the T G Halli Reservoir (Zone 1, Zone 3 and Zone 4) lies partly within this PD. Part of Hesaraghatta Reservoir, Aluru kere (part), Ivarakandapura Kere, Bilijaji Kere, Huralichikkanahalli Kere, Kuduregere Lake, Heggadadevanapura Kere Hanumanthasagara Kere, Kumbarahalli Kere, Unnamed 2nd Kere in Kumbharahalli village, unnamed 2nd Kere in Hurlichikkanahalli village, unnamed 2nd Kere in Aluru Village are the lakes available in PD. Two water bodies (as per revenue records) one in Heggadadevanapura and one in Kodagithirumalapura village have been breached, whereas some of water bodies are seen with dense vegetation.
8. Water Supply is through Rural Development and Panchayat Raj Department, GoK. Most the developmental activities are dependent on ground water.
9. There are 11 schools in the PD; however there are some pockets which do not have access to primary schools within 1 km radius. Private educational institutes like Sidaganga PU Collage, Indian Institute of Horticulture Research, Acharya Collage of Nursing, etc, are also present in the area. Karnataka State Cricket Association cricket ground facility is developed Alur village. This offers an opportunity to create large scale sporting complex. There is one grave yard in village Heggadadevanapura.

Figure 42-1: PD 41 Existing Land Use Map

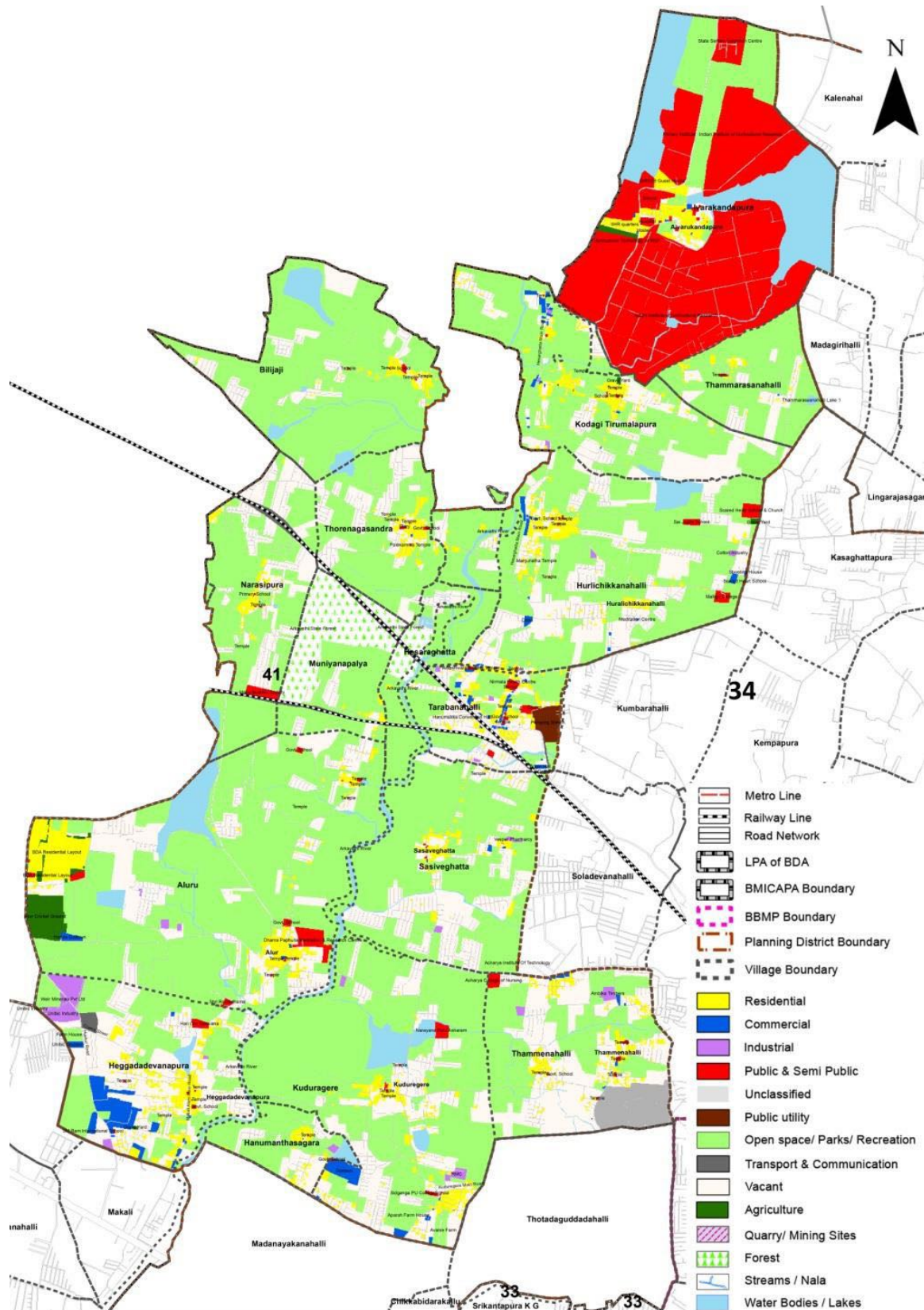


Table 42-1: PD 41 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	134.87	4.57
Commercial	24.33	0.82
Industrial	14.03	0.48
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	245.49	8.31
Pubic & Semi Public - Unclassified	18.09	0.61
Public Utility	4.89	0.17
Parks & Open Spaces	13.60	0.46
Transport Communication	127.70	4.32
Vacant	570.38	19.31
Agriculture	1583.58	53.62
Forest	48.86	1.65
Streams	29.08	0.98
Water Bodies	138.60	4.69
Total	2953.50	100.00

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ENVIRONMENT PROTECTION (IMPLEMENTATION OF TG HALLI & ARAKAVATI RIVER ECO SENSITIVE ZONE, LAKE REJUVENATION AND PROTECTION OF FOREST), PRESERVATION OF AGRICULTURE ZONE, GRAMATHANA DEVELOPMENT

PROPOSALS

1. The preservation and conservation of Arakavati eco-sensitive zones is the premise on which the PD area was delineated and the RMP2031 continues with its objective of environment protection and therefore has proposed preservation of entire PD as agriculture zone. While doing so the The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
2. The Proposed Land Use Map and Proposed land use area statement is presented in **Figure 42-2 and Table 42-2** respectively.
3. To improve the public transport facility it is proposed to develop BMTC bus stations at at Hurlechikkanahalli village and the other one at Kuduragere. As for CRS, the RMP2031 proposes that a railway station to cater to CRS passengers may be developed at Muniyanapalya, depending on the feasibility of development of railway station.

- Figure 42-2: PD 41 Proposed Land Use Map**

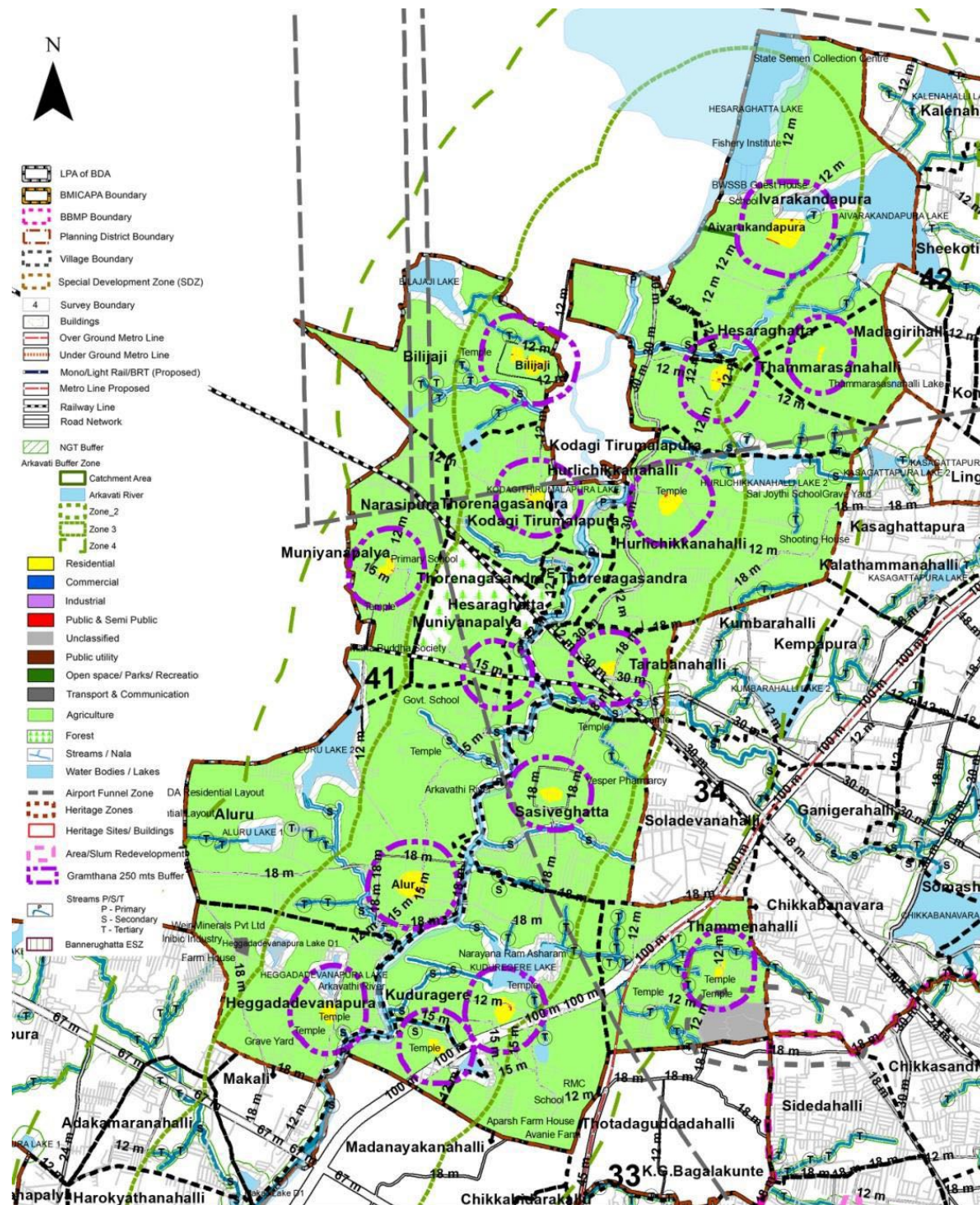


Table 42-2: PD 41 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	0.00	0.00
Commercial	0.00	0.00
Industrial	0.00	0.00
Public & Semi Public	0.00	0.00
Unclassified	0.00	0.00
Public Utility	0.07	0.07
Parks / Open Spaces	0.00	0.00
Transport & Communication	0.00	0.00
Forest	0.00	0.00
Streams	0.00	0.00
Water Bodies	0.00	0.00
NGT Buffer	0.00	0.00
Total Developable Area	0.00	00.00
Agriculture	2953.52	-
Total PD Area	2953.52	-

5. Entire PD drains into Arakavati River and all the lakes are connected to Arakavati River through network of drains/ streams. The classification of natural drainage system within the PD is as following:
 - a. Arakavati River = Primary
 - b. Drainage downstream of Chikkabanavara Kere and connecting to Arakavati River = Secondary
 - c. Drainage connecting directly to Arakavati River or Secondary Drain or has outfall outside LPA of BDA = Tertiary
6. The RMP2031 proposes the protection and conservation of Hesaraghatta Reservoir, Aluru kere, Ivarakandapura kere, Bilijaji Kere, Huralichikkanhalli Kere, Kuduregere Lake, Heggadadevanapura Kere Hanumanthasagara Kere, Kumbarahalli Kere, 2nd Kere in Kumbharahalli village, 2nd Kere in Hurlichikkanahalli village, 2nd Kere in Aluru Village and their natural streams. It is therefore proposed that a Lake Rejuvenation and lake surrounding area be prepared and implemented.
7. The RMP2031 proposes to develop one fire station within PD, and for SWM, it is proposed to develop 2 DWCCs, 1 OWCC and 1 Bio-methanation Unit for SWM, and 1 cremation centre are proposed to be developed.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 41, Alluru

1. **Village Development Plan:** It is proposed that Gram Panchayat prepares Village Development Plans for each village within Planning District for implementation of RMP2031 proposals.
2. **Protection and Rejuvenation of Lakes and Streams:**

- a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
- b. **Rejuvenation of Lakes & Streams:**
 - i. RMP2031 Streams Rejuvenation Plan
 - ii. Aluru Kere Rejuvenation Plan
 - iii. Ivarakandapura Kere Rejuvenation Plan
 - iv. Bilijaji Kere Rejuvenation Plan
 - v. Huralichikkanhalli Kere Rejuvenation Plan
 - vi. Kuduregere Kere Rejuvenation Plan
 - vii. Heggadadevanapura Kere Rejuvenation Plan
 - viii. Hanumanthasagara Kere Rejuvenation Plan
 - ix. Kumbarahalli Kere Rejuvenation Plan
 - x. Rejuvenation Plan for 2nd Kere in Kumbharahalli village
 - xi. Rejuvenation Plan for 2nd Kere in Huralichikkanahalli village
 - xii. Rejuvenation Plan for 2nd Kere in Aluru village
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan be prepared.
3. **Development of Park:** A large scale City level sports complex is proposed to develop near to Aluru Cricket ground.
4. **Road development Plan:**
 - a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
 - b. Upgradation of Existing Roads
 - i. Huskur Road,
 - ii. Kuduregere Road,
 - iii. KSA Stadium Road,
 - iv. Hessarghatta Main Road,
 - v. Shivakote Main Road,
 - vi. IIHR Main Road,
 - vii. Khasaghattapura Road,
 - viii. Acharya Doctor Sarvapalli Radhakrisnan Road
 - ix. Makali Alur Road,
 - x. Tarabanahalli Silvepura Road.
 - c. Development of Village Periphery roads for:
 - i. Aluru Gramathana,
 - ii. Sasiveghatta Gramathana,
 - iii. Thorenagasandra Gramathana
 - iv. Huralijikanahalli
 - v. Bilijaji
 - d. Development of identified new link/ improved connectivity:
 - i. Peripheral Ring Road
 - e. Junction Improvement Plan



- i. Intersection Section between one village road to another village road

5. Development of Public Transport System:

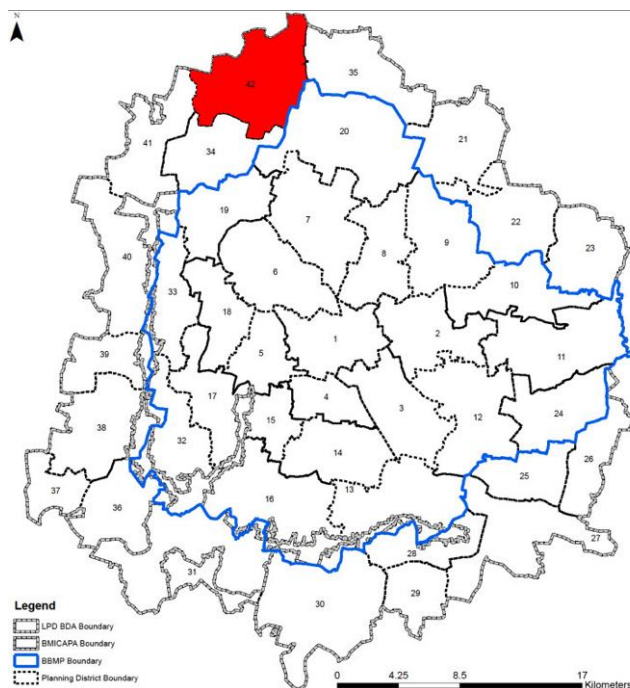
- a. Bus Station: One at Hurlechikkanahalli village and the other one at Kuduragere village.

6. Development of Physical and Social Infrastructure/ Facilities:

- | | |
|-------------------------------------|-------------------------|
| a) Fire Station: | 01 Nos. |
| b) Crematorium: | 01 Nos. |
| c) Burial Ground: | 01 Nos. |
| d) SWM Dry Waste Collection Centre: | 02 Nos. |
| e) Organic Waste Collection Centre: | 01 Nos. |
| f) STP/ OHT/ ISP/ GLSR:
Network | as per Water and Sewage |

7. Preparation of Water and Sewage Network Plan for Gramathanas

43.PD 42: RAJANAKUNTE



Population (2011 Census): 22,541

Area of PD: 4150.9 Ha

Villages in PD: 22

Gram Panchayats: Sheekoti, Rajanakunte, Shinganayakanahalli, and Vaderahalli

Gross Density: 05 PPH

Rajanakunte Planning District (Planning District no. 42) is located in northern periphery in BMA and shares its boundary with LPA of BIAPPA. PD is environmentally sensitive with 28 lakes, Jarakabande Reserved Forest/ Avalahalli Fores and Bylekere Peacock Santury.

The RMP2031 proposes that except for village settlements, the PD be preserved as agriculture zone and environmental protection.

A. EXISTING STATUS

1. Rajanakunte Planning District admeasures around 4150.9 ha and consists of 22 villages, namely - Addiganahalli, Shinganayakanahalli Amanikere, Shinganayakanahalli, Honnenahalli, Rajanakunte, Itagal- pura, Madappanahalli, Krishnarajapura, Krishnasagara, Aavalahalli, Ramagondahalli, Jyarakabandekavalu, Lingarajapura, Mylappanahalli, Muthakarahalli, Linganhalli, Shivakote, Kalenahalli, Maddagiri halli, Lingarajasagara, Kondasheihalli, and Mavalipura. These villages are part of four Gram Panchayats, namely - Sheekoti, Rajanakunte, Shinganayakanahalli, and Vaderahalli. PD shares its northern boundary with LPA of BIAAPA, which has influenced developments along Doddaballapura road in Rajanakunte and Adiganahalli villages.
2. The PD is characterized by the presence of Zone 4 of Arakavati River Conservation Area, 28 lakes (Shinganayakanahalli Amanikere being the largest), Jakabande Reserve Forest (Bylakere Peacock Reserve), Madappanahalli Forest Plantation, KMF Cattle Feed Mixing Plant, Yelahanka RTO Test Track, Power Grid Transit Camp, KPTCL Sub-station, Cricket Ground, educational insitututes like - International Centre for Theoretical Sciences, ICAR - National Institute of Veterinary Epidemiology and Disease Informatics, Indian Veterinary Research Institute, etc, Lingarajapura Integrated Waste Processing Using, large village settelements Adiganahalli, Rajanakunte, Shivakote, scattered and unplanned layouts in the predominant Agriculture landscape.



3. Doddaballapura Road, Sir MVIT Collage Road, Madhure Temple Road, Ivar Kandapura – MS Palya Road, Tarbanahalli – Yelahanka Road (via Dodda Bylekere), Singanayakanahalli-Lingarajapura Road, CRPF Camp to kurubarahalli Road (via Lingarajapura) are the major road within the PD.
4. Bengaluru – New Delhi Rail line passes through the PD, with railway station at Rajanakunte.
5. As per Census 2011, the PD has a population of 22541, which has increased with a decadal growth of 61.6% since 2001. There are 9,756 workers (workforce participation rate = 43.3%,) which is slightly lower than the BMA average of 44.5%. There are 5501 households with an average HH size of 4.10, which is higher than BMA (4.01). The gross density of the PD is 5 pph. The density is highest in Rajanakunte village (28 pph), whereas there are 4 uninhabited villages: Shinganayakanahalli Amanikere, Krishnasagara, Lingarajasagara and Jyarakabandekavalu.
6. The planning district has sparse access to medical services, with a large portion of the planning district more than 5 kms away from the nearest medical facility. There are about 26 schools in the planning district, yet some areas are more than 1 km away from the nearest primary school. There are higher educational facilities in this area, due to availability of large parcels of land. Several engineering colleges like BMS institute of Engineering, Pillappa college of Engineering and Sai Vidya Insitute of Technology.
7. Agriculture use accounts for 76% of total PD area, followed by Forests (accounting for ~8%) and water bodies accounting for ~5% of PD Area. Residential areas (mainly Gramathanas and scattered plotted developments) account for 3.76%. Figure 43-1 and **Error! Reference source not found.** represents existing land use map and existing land use area statement for the PD respectively.
8. Water Bodies and Streams account for 4.94% of total are as there are 28 lakes within the PD. Shinganayakanahalli Amani Kere (spread in six revenue villages), Kalenahalli Kere, Addiganahalli Kere, Aavalahalli Kere, Krishnasagara Kere, Honnenahalli Kere, Krishnarajapura Kere, Itagallipura Kere, four unnamed lakes in Itagallipura Revenue Village, Mylappanahalli Kere, one unnamed kere in Mylappanahalli Lake, Madappanahalli kere, three unnamed lakes in Madappanahalli revenue village, Mavallipura Kere, two unnamed kere in Mavallipura revenue village, Linganaahalli Kere, one unnamed lake in Linganaahalli, Ramagondanahalli Kere, Ivarukandapura Kere (part), and other unnamed lake within PD.
9. The ridge of Bengaluru passes through planning district, which has divided into two different watersheds and therefore drains into two different watersheds, namely – Hebbal Watershed and Arakavati Watershed. Lakes on the eastern side of Jarakabande Forest drain into Hebbal watershed whereas those on westernside drain into Arakavati River.

Figure 43-1: PD 42 Existing Land Use Map

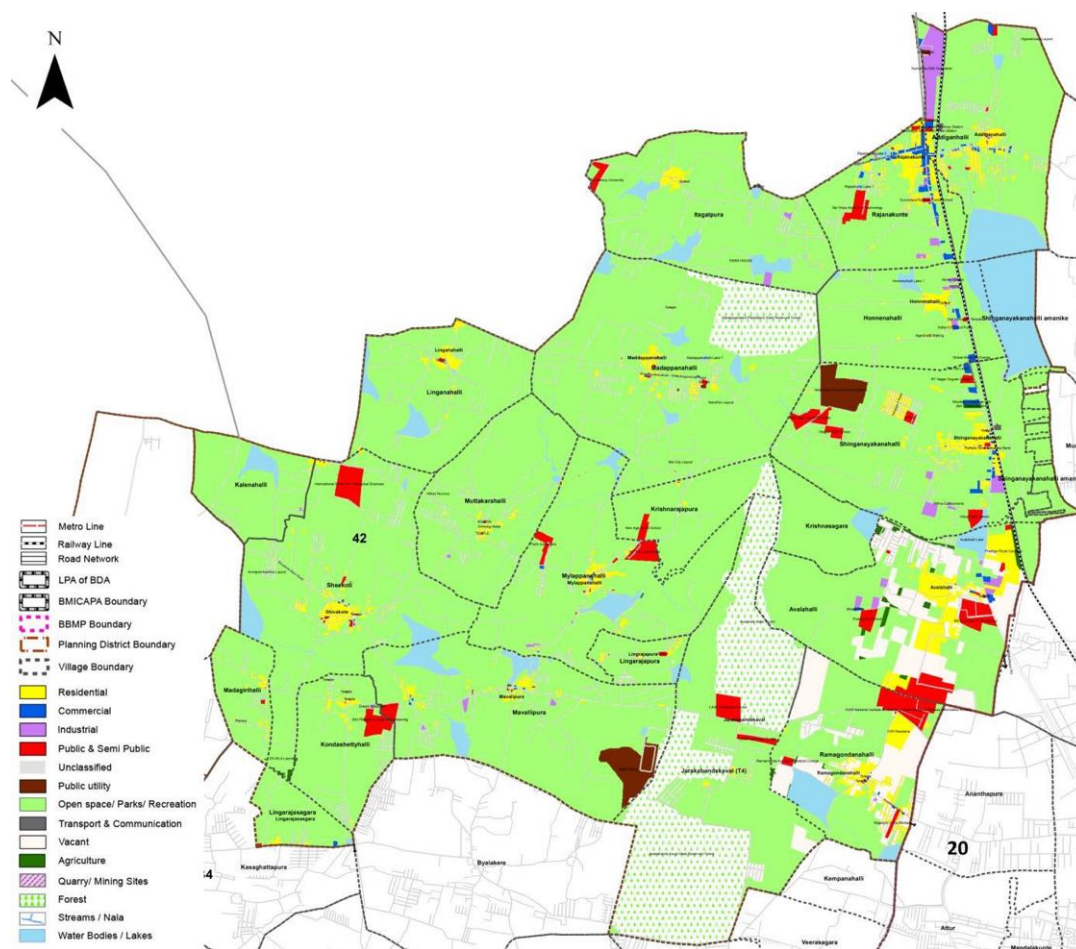


Table 43-1: PD 42 Existing Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage to Total Area (%)
Residential	145.70	3.51
Commercial	15.70	0.38
Industrial	24.79	0.60
Quarry/ Mining Sites	0.00	0.00
Public Semi Public	81.12	1.95
Pubic & Semi Public - Unclassified	0.00	0.00
Public Utility	30.22	0.73
Parks and Open Spaces	9.23	0.22
Transport Communication	65.35	1.57
Vacant	450.22	10.85
Agriculture	2790.47	67.23
Forest	333.16	8.03
Streams	7.85	0.19
Water Bodies	197.12	4.75
Total	4150.93	100.00

B. RMP2031 PROPOSALS

RMP2031 DIRECTIONS: ENVIRONMENT PROTECTION LAKE REJUVENATION AND PROTECTION OF FOREST), PRESERVATION OF AGRICULTURE ZONE, GRAMATHANA DEVELOPMENT AND TRANSPORT INTEGRATION

PROPOSALS

1. PD is witnessing developments all along Doddaballapura road and more profoundly in Rajanakunte – Adiganahalli village (for being next BIAAPA). At the same time, conurbation limits of RMP 2015 (south western sides in PD) are yet to be consumed. Further, the preservation and conservation lakes and drainage system is important objective of the RMP2031. The Peripheral Ring Road is proposed to be developed for BMA and it passes through southern side in PD. The RMP2031 therefore has following guiding principles for PD:
 - a. Limit the Growth to conurbation limits
 - b. Address the growth in Adiganahalli – Rajanakunte Area
 - c. Protection and conservation of lakes and drainage system
 - d. Protection and Conservation of Forest Areas
 - e. Preserving Agriculture use while guiding village development
2. The RMP2031 proposes to guide the village development and improved connectivity such that there is a wholesome approach to infrastructure upgradation. The focus is on village development and hence it is proposed to prepare Village Development Plan comprising of Infrastructure Development within Gramathana, development of Gramathana peripheral road, development of village roads (to improve accessibility), lake rejuvenation and lake area development, development of Bus Stations, development of SWM facilities, etc.
3. The Proposed Land Use Map and Proposed land use area statement is presented in Figure 43-2 and **Error! Reference source not found.** respectively.
4. RMP2031 proposed city level public transport infrastructure like CRS, and Metro are running along roads within the Planning District.
 - a. Metro PRR Link: The RMP2031, with a long term view, has proposed to develop metro link along proposed PRR alignment.
 - b. BRTS on Doddaballapura Road: The Master proposes to upgrade doddaballapura road from Yelahanka to Rajanakunte for Development of BRTS System.
 - c. CRS: The RMP2031 proposes that a railway station to cater to CRS passengers may be developed at Rajanakunte, depending on the feasibility of development of railway station.
5. To improve the public transport facility it is proposed to develop BMTC bus stations at Honnenahalli village (along Doddaballapura Road) and other one at Lingarajapuram (along proposed PRR).
6. The RMP2031 proposes development/ upgradation of all existing village roads and junction improvement be taken up for all existing intersection.

Figure 43-2: PD 42 Proposed Land Use Map

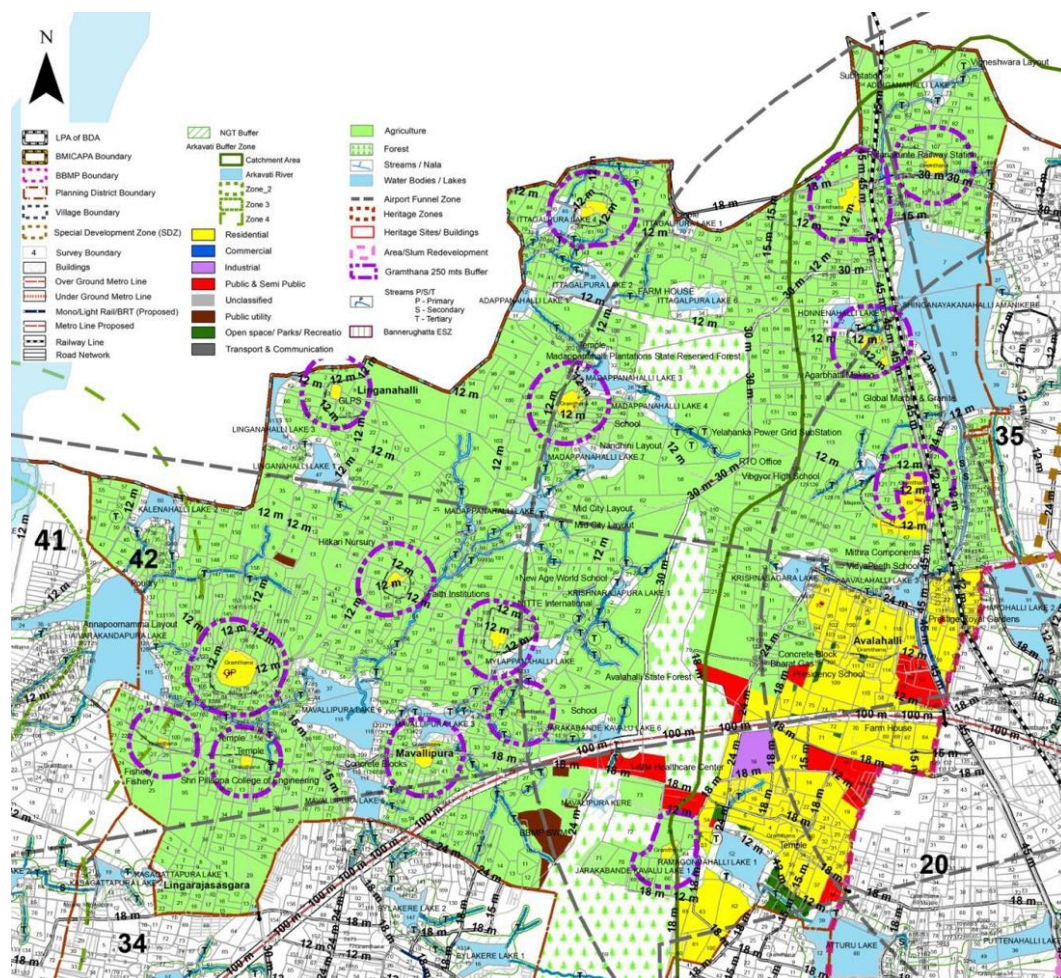


Table 43-2: PD 42 Proposed Land Use Area Statement

Landuse Category	Area (in Ha)	Percentage To Total Developable Area (%)
Residential	287.54	61.56
Commercial	2.92	0.63
Industrial	11.34	2.43
Public & Semi Public	41.84	8.96
Unclassified	0.00	0.00
Public Utility	0.00	0.00
Parks / Open Spaces	11.60	2.48
Transport & Communication	60.97	13.05
Forest	2.86	0.61
Streams	0.75	0.16
Water Bodies	17.67	3.78
NGT Buffer	29.57	6.33
Total Developable Area	467.06	100.00
Agriculture	0.00	-
Total PD Area	4150.93	-



7. As discussed earlier, PD is part of Arakavati watershed and Hebbala watershed. The classification of natural drainage system within the PD is as following (and have been marked in PLU Maps):
 - a. Drainage Downstream of Shinganayakanahalli Amanikere and connecting to Yelahanka Kere = Secondary
 - b. Drainage connecting directly to Arakavati River or Secondary Drain or has outfall outside LPA of BDA = Tertiary
8. The RMP2031 proposes the protection and conservation of all 28 lakes within the PD. and their natural streams. It is therefore proposed that a Lake Rejuvenation and lake surrounding area be prepared.
9. The RMP2031 proposes to develop one fire station within PD, and it is proposed to develop 2 DWCCs, 1 OWCC for SWM, and 1 cremation centre are proposed to be developed.

PROGRAMS AND PROJECTS

The RMP2031 has broken down the proposals to implementable programs and projects for every planning district. Following are the projects for PD 42, Rajanakunte

1. **Village Development Plan:** It is proposed that Gram Panchayat prepares Village Development Plans for each village within Planning District for implementation of RMP2031 proposals.
2. **Protection and Rejuvenation of Lakes and Streams:**
 - a. **Demarcation of Lakes and Streams:** It is proposed that the Lakes and streams within the PD be clearly demarcated on ground within first two years after notification of the RMP2031.
 - b. **Rejuvenation of Lakes & Streams:**
 - i. Master Plan Streams Rejuvenation Plan
 - ii. Shinganayakanahalli Amani Kere Rejuvenation Plan,
 - iii. Kalenahalli Kere Rejuvenation Plan,
 - iv. Addiganahalli Kere Rejuvenation Plan,
 - v. Aavalahalli Kere Rejuvenation Plan,
 - vi. Krishnasagara Kere Rejuvenation Plan,
 - vii. Honnenahalli Kere Rejuvenation Plan,
 - viii. Krishnarajapura Kere Rejuvenation Plan,
 - ix. Itagallipura Kere Rejuvenation Plan,
 - x. Rejuvenation Plan for four unnamed lakes in Itagallipura Revenue Village,
 - xi. Mylappanahalli Kere Rejuvenation Plan,
 - xii. Rejuvenation Plan for one unnamed kere in Mylappanahalli,
 - xiii. Madappanahalli kere Rejuvenation Plan,
 - xiv. Rejuvenation Plan for three unnamed lakes in Madappanahalli revenue village,
 - xv. Mavallipura Kere Rejuvenation Plan,
 - xvi. Rejuvenation Plan for two unnamed kere in Mavallipura revenue village,
 - xvii. Linganaahalli Kere Rejuvenation Plan,



- xviii. Rejuvenation Plan for one unnamed lake in Linganaahalli,
 - xix. Ramagondanahalli Kere Rejuvenation Plan,
 - xx. Ivarukandapura Kere Rejuvenation Plan
 - xxi. Rejuvenation Plan for other unnamed lake within PD.
- c. **Lake Surrounding Area Development Plan:** It is proposed that a Lake and Stream Area development plan should be prepared.
- 3. **Development of Park:** A large scale City level sports complex is proposed to develop near to existing Cricket ground in Ittagalapura.
- 4. **Road development Plan:**
 - a. Master Plan Road Demarcation and Land Acquisition for development of Category -1 Roads (as listed in Annexure) and other roads in phased manner.
 - b. Upgradation of Existing Roads
 - i. Doddaballapura Road,
 - ii. Sir MVIT Collage Road,
 - iii. Madhure Temple Road,
 - iv. Ivar Kandapura – MS Palya Road,
 - v. Tarbanahalli – Yelahanka Road (via Dodda Bylekere),
 - vi. Singanayakanahalli- Lingarajapura Road,
 - vii. CRPF Camp to kurubarahalli Road (via Lingarajapura)
 - c. Development of Village Periphery roads for villages as earmarked in PLU map
 - d. Development of identified new link/ improved connectivity:
 - i. Peripheral Ring Road
 - ii. 30m wide road from PRR to Doddaballapura (at Rajanakunte)
 - iii. Rajanakunte – Adiganahalli Periphery Road
 - e. Junction Improvement Plan
 - i. Railway Bridge at Rajanakunte to be widened to four lanes
 - ii. Intersection Section between one village road to another village road
- 5. **Development of Public Transport System:**
 - a. CRS – Development of Rajanakunte Railway Station
 - b. Namma Metro – Metro PRR
 - c. BRTS – Yelahanka to Rajanakunte (to be extended till Doddaballapura in future)
 - d. Bus Station:
 - i. At Honnenahalli village (along Doddaballapur Road)
 - ii. At Lingarajapura village (along proposed Peripheral Ring Road).
- 6. **Development of Physical and Social Infrastructure/ Facilities:**
 - a) Fire Station: 01 Nos.
 - b) Crematorium: 01 Nos.
 - c) Burial Ground: 01 Nos.
 - d) SWM Dry Waste Collection Centre: 04 Nos.
 - e) Organic Waste Collection Centre: 01 Nos.



- f) STP/ OHT/ ISP/ GLSR: as per Water and Sewage
Network

7. Preparation of Water and Sewage Network Plan for Gramathanas

Town Planner Member

BDA

Commissioner

BDA

Chairman

BDA



Bangalore Development Authority

**T. Chowdaiah Road, Kumarapark West,
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