



DRAFT DEVELOPMENT PLAN - 2034 GREATER MUMBAI

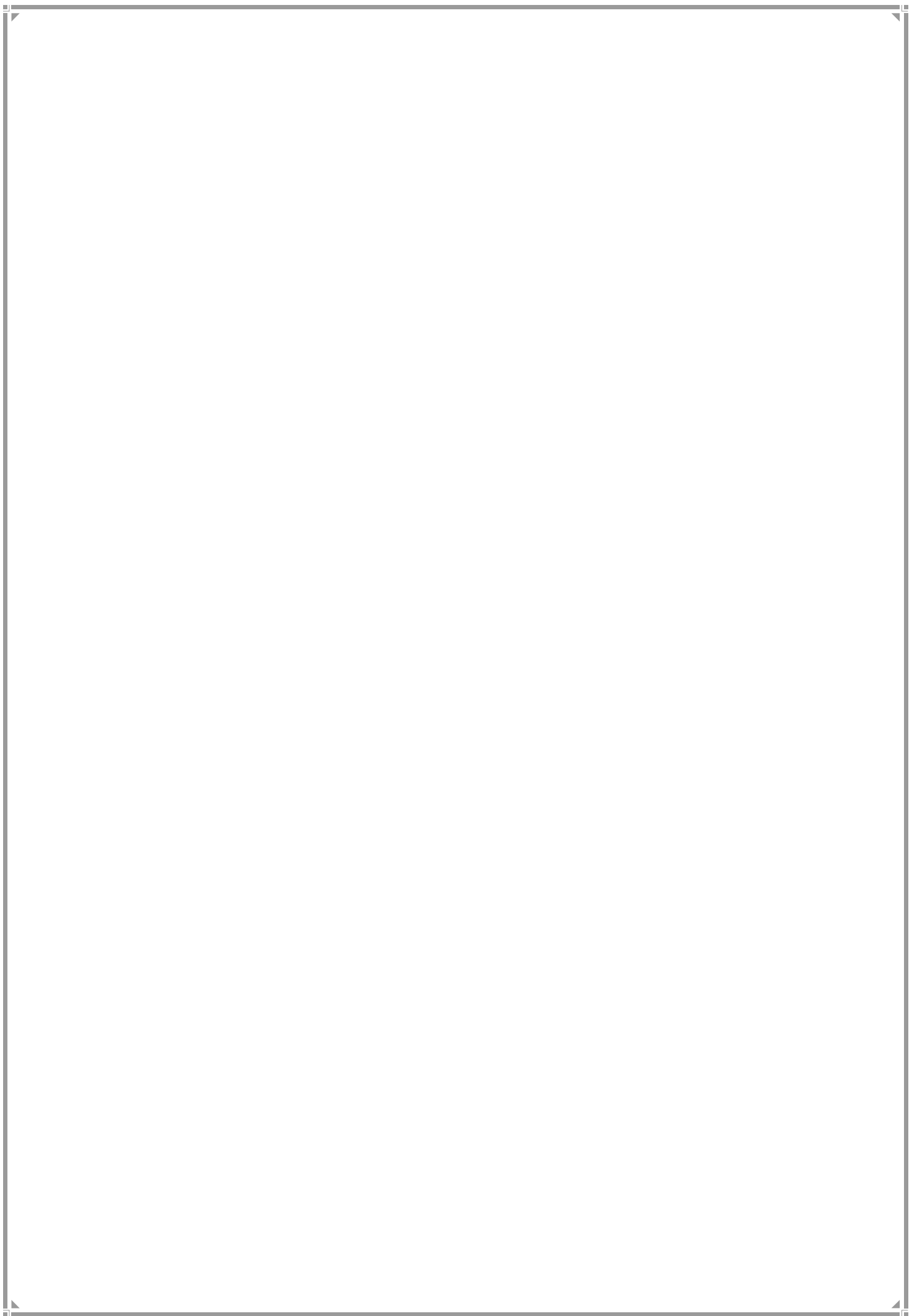
REPORT ON DRAFT DEVELOPMENT PLAN - 2034 (MAY - 2016)



बृहन्मुंबई महानगरपालिका मुख्यालय



**GREATER MUMBAI
REPORT ON
DRAFT DEVELOPMENT PLAN -2034**





महापौर, मुंबई



स्नेहल सूर्यकांत आंबेकर

महानगरपालिका सभागृह,

महानगरपालिका मार्ग, सी. एस. टी., मुंबई - ४०० ००१.

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भविष्यातील आगामी २० वर्षांच्या कालावधीमध्ये मुंबई शहराच्या विकासाच्या दृष्टीने महत्वाचा असलेला सुधारित प्रारूप विकास आराखडा २०३४ बृहन्मुंबई महानगरपालिका प्रशासनाने तयार केला आहे.

दिनांक २३.०२.२०१५ रोजी बृहन्मुंबई महानगरपालिका प्रशासनाने प्रसिध्द केलेला प्रारूप विकास आराखडा २०३४, राज्य शासनाने दिनांक २५.०४.२०१५ रोजी दिलेल्या निर्देशानुसार दुरुस्त करून सुधारित प्रारूप विकास आराखडा २०३४ म्हणून तयार केला आहे. हा सुधारित प्रारूप विकास आराखडा २०३४ तयार करतांना सन १९९१ चा मंजूर सुधारित विकास आराखडा हा आधारभूत म्हणून घेण्यात आला. सदर आराखडा तयार करतांना महानगरपालिका प्रशासनाने प्रथमच विभाग स्तरावरील अभियंत्यांची मदत घेतली. सदर आराखड्यासोबतच विकास नियंत्रण नियमावलीसुद्धा सन १९९१ ची विकास नियंत्रण नियमावली आधारभूत म्हणून घेऊन सुधारण्यात आली. सुधारित प्रारूप विकास आराखडा २०३४ मधील नामनिर्देशने, विकास नियोजन रस्ते तसेच विकास नियंत्रण नियमावली याबाबतीतील दुरुस्त्या महानगरपालिका प्रशासनाने सदर आराखडा तयार करतांना वेळोवेळी महापालिकेच्या संकेतस्थळावर प्रसिध्द करून प्रस्ताविलेल्या बदलांची माहिती जनतेस उपलब्ध करून दिली. विकास आराखड्यात प्रथमच महिलांसाठी व वृद्धांसाठी विशेष तरतूदी करण्याचा प्रयत्न महानगरपालिका प्रशासनाने केला आहे. सुधारित प्रारूप विकास आराखडा २०३४ व त्यावरील सूचना व हरकती नागरिकांकडून मागविण्याकरीता प्रसिध्द करण्यात येत आहे. सदर आराखड्यावरील सूचना व हरकतींवर विचार विनिमय करण्यासाठी स्थायी समितीच्या ३ सदस्यांची आणि संचालक, नगर रचना यांनी नियुक्त केलेल्या चार तज्ञ सल्लागारांची नियोजन समिती गठीत करण्यात येईल. सर्व लोकप्रतिनिधी, नागरिक, सहभागीदार, अशासकीय संस्था, सहकारी गृहनिर्माण संस्था, शिक्षण तज्ञ तसेच व्यावसायिक, व्यापारी संस्था ह्यांना माझे असे आवाहन आहे की, आपण मुंबई शहराच्या विकासाच्या दृष्टीने आपणापुढे प्रसिध्द केलेल्या ह्या सुधारित प्रारूप विकास आराखड्याचे अवलोकन करून आपले विधायक अभिप्राय सादर करावेत.

सदर कालावधीमध्ये संबंधितांकडून आलेल्या हरकती / सूचनांचा बृहन्मुंबई महानगरपालिका प्रशासनाने गांभिर्याने विचार करावा व त्याचे अवलोकन करून योग्य ती अंमलबजावणी करण्यात यावी.

बृहन्मुंबई महानगरपालिका आपल्या सर्वांच्या सांघिक सहकार्याने, ह्या विकास आराखड्यास मूर्त रूप देण्यासाठी कटिबध्द आहे.

महापौर

बृहन्मुंबई महानगरपालिका

AJOY MEHTA

I. A. S.

Municipal Commissioner



बृहन्मुंबई महानगरपालिका

No. :

Date :



Setting precepts of development for one of the largest global cities is decidedly far wider than the compass of a Development Plan. Most developmental policies and emanating schemes, however, need to have a spatial context for translation on ground. From that perspective, the Development Plan is a hugely significant long-term document.

The Revised Draft Development Plan (RDDP) 2034 sets out the spatial framework of the City of Greater Mumbai for the delivery of sustainable development and enhanced quality of life for all its citizens. The RDDP is marked by its effort to strike a balance between aspects of the City's economy, environment and social justice. Given space constraints in Greater Mumbai, this has been a tough challenge. I am happy to state that despite the difficulties, the RDDP has been able to cover considerable distance in addressing these tasks. These comprise the employment aspect of the city, both in the formal and informal sectors, for women as well as men with a view to retain the City's economic primacy. The creation of a sizeable zone called Natural Area along with completely permeable and non-buildable Public Open Spaces (POS) are further buttressed by buffers along rivers, creeks and nalas. These and other DP environmental spaces such as those for solid waste and sanitation, supported by environmental provisions, have been fashioned to protect the City's environment. As much effort has been placed in finding spaces for gender, differently abled, the children and the old, the homeless and the forsaken. A standout feature in this regard is the RDDP's proposal to provide affordable housing to a million households of the City. In order that the City may operate with efficiency, infrastructure provisions have been strengthened in the areas of roads and transportation, water and sewerage and ward level services and conveniences that the citizens require.

Art and culture, recreation and leisure and quality institutions embellish a city's excellence. The RDDP has made a special effort to see that these are sufficiently reinforced in the City of art and entertainment.

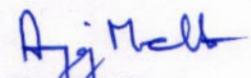
There has been weeding out of provisions that invaded nooks and corners of what an individual could build and not build and many modern principles of living that had been left out in the earlier Regulations have found a place. In sum, the RDDP aims to set a progressive agenda and proposes to promote ease of doing business.

The RDDP has been seized of the concern to see that the Plan fructifies in its fullness. It has especially set out a new accommodation Reservation Policy combine with FSI and TDR that would take negativity out of reservations.

While the process of assembling the RDDP was ongoing, all effort was made to render it transparent, both as a good governance practice and as a means of achieving greater product quality. Parts of work that got completed were put on MCGM's Website for citizens to study and share their observations. These were studied in-house and were factored in the ongoing work. Additionally, interactions with a wide spectrum of stakeholders, academicians, NGOs and citizens were repeatedly held to impart fullness to the RDDP.

The preparation of the revised Draft DP has taken a year of intense work. Scores of urban planners, engineers, GIS experts and men and women of knowledge in other allied fields, assisted by MCGM's Departments and Wards applied themselves to the process of rectification and recasting. In many ways, the RDDP was a job done by the MCGM workforce. I compliment them for their effort. I would also put on record my appreciation for the valuable inputs given by Corporators, Group Leaders, MLAs and MPs of the City. Their insights helped us align the Development Plan to meet the aspirations of the people. The work done by Mr. Ramnath Jha as leader of D.P. team needs special mention. His leadership, vision and meticulous approach has enabled us to deliver a D.P. within the time frame and which also meets the test of transparency and inclusiveness.

I trust that in the months to come, the RDDP would be further discussed in order to serve the citizens better and that the process of the City getting a new DP would be completed and the task of its implementation would begin in right earnest.


(Ajoy Mehta)



Ramanath Jha
OSD (DP Revision)

FOREWORD

Two major statutes relate to the Municipal Corporation of Greater Mumbai (MCGM). The more elderly is The Mumbai Municipal Corporation Act (Bom. III of 1888). It primarily deals with the composition, duties, conduct and governance of the Municipal Corporation. It stipulates, in essence, how the urban local body will operate. The other is The Maharashtra Regional and Town Planning Act, 1966 (MR&TP) that prescribes the manner in which the municipal product would be crafted. It is the latter that primarily concerns us while we draw up the **Revised Draft Development Plan 2034 (RDDP)**.

For a city, the Development Plan is the most significant strategic document that it prepares every twenty years. It sets out a composite economic, environmental and social framework for the subsequent two decades. Quite emphatically, if implemented in full, a city spatially would be what the Development Plan says it would be.

Ensnared in the Mumbai Metropolitan Region (MMR), Greater Mumbai has dominated the MMR, the State and the country's urban landscape through its demographic size and its financial clout. However, as Aristotle said, 'A great city is not to be confounded with a populous one'. What has made Mumbai what it is today is clearly not its demographic size alone. It has been rendered great by its great people that have lifted the city by their enterprise and in the sweat of their brow, lending credence to Plato's words that a 'city is what it is because our citizens are what they are'.

Mumbai's Revised Draft DP 2034 (RDDP) envisions the continuation of Mumbai's economic dominance, an improved living environment and an enhanced provision of equitable livelihood and physical and social infrastructure. In its broadest approach, the quality of any city invariably rests on its economy, its environment and its equity. A city that overemphasizes one to the detriment of the others imbalances itself. In the effort at this revision, therefore, we have made every effort to eliminate imbalance, as far as possible, in an already highly built city with huge scarcity of land for meaningful readjustments.

This RDDP has not had the leisure to conduct new studies or assemble fresh data. It has relied on the 'Preparatory Studies' carried out by the

Earlier Draft DP 2034 (EDDP) already published and data that has been marshaled in the EDDP's voluminous Report. That Report may continue to be of great value to those who wish to delve in more detailed data and background analysis. Much of that contextual data continues to be valid and has not been reproduced in the RDDP, although it is replete with references to snippets of information harvested from the EDDP. However, in many other substantive ways, the RDDP marks a departure from the EDDP. Some of the earlier stipulations have been abandoned. Others have been toned down. In summary, it would be apposite to state that this revision imbibes much of what was well received of the EDDP and eliminates most of what was widely opposed.

The RDDP proposes emphasis, inter alia, on the creation of green spaces, on affordable housing, on the city's improved educational and health profile, on assisting the lives of those contributing to the city through the informal sector, on facilitating working women at all levels, on providing for the needs of special groups of citizens, on art and culture, on pedestrianization, institutional strengthening and on affording the performance of municipal and other public services through space allocations. And for these, it proposes a financing methodology that eschews acquisition of land and embraces partnership with the land provider. It lays great store on plan implementation rather than mere preparation.

The effort at revision has been arduous, but a rare learning experience. As OSD for DP Revision, I would firstly like to thank the Hon CM Maharashtra, Shri Devendra Phadnavis, Shri Ajoy Mehta, Municipal Commissioner, MCGM and Shri Nitin Kareer, PS (UD) for reposing trust in me to assist MCGM in doing a difficult job. During the last one year, I have had interactions with hundreds of citizens and organizations espousing different causes. All of them have contributed in sharpening ideas and making the process of revision more wholesome. I express my gratitude to all of them.

The process of revision has been almost entirely MCGM's in-house effort. For the first time, along with MCGM's DP Central Team, Assistant Commissioners of wards and their colleagues were involved and were aided by ward-level urban planners. Without their tireless zeal, this work would not have been completed. I owe my deepest thanks to all of them.

The attention afforded by the MCGM Commissioner, Shri Ajoy Mehta was both strategic and operational. We had weekly briefings on the progress of DP and discussion on contentious issues. He piloted all matters that needed to go to MCGM's non-official bodies and sorted out issues that threatened to derail the process of plan preparation. I acknowledge his enormous contribution.

Putting together a Development Plan for the greatest megacity of India cannot but leave room for debate and improvement. I trust that the months that follow would be spent on crafting a DP, shaped further to provide Mumbai's citizens a city that they richly deserve.

Ramanath Jha
OSD (DP Revision)

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LIST OF ABBREVIATIONS

AAI	- Airport Authority of India	CNG	- Compressed Natural Gas
ACD	- Areas for Comprehensive Development	CPCB	- Central Pollution Control Board
AH	- Affordable Housing	CR	- Commercial Residential
AIILSG	- All India Institute of Local Self Government	CRZ	- Coastal Regulation Zone
ALM	- Advanced Locality Management	CS/CTS	- Cadestral Survey/ Cadestral Terrain Survey
APMC	- Agriculture Produce Market Committee	CST	- ChhatrapatiShivaji Terminus
AR	- Accommodation Reservation	CTS	- Comprehensive Transport Study
ASI	- Archeological Survey of India	CZMP	- Coastal Zone Management Plan
ATC	- Area Traffic Control	DA	- Differently Abled
B(a)P	- Benzo(a)Pyrene	DCR	- Development Control Regulations
BARC	- Bhabha Atomic Research Centre	DDA	- Delhi Development Authority
BBMP	- Bruhat Bangalore MahanagaraPalike	DFC	- Dedicated Freight Corridor
BBRB	- Bombay Building Repair Board	DG	- Diesel Generator
BBRRB	- Bombay Buildings Repairs & Reconstruction Board	DMIC	- Delhi Mumbai Industrial Corridor
BDD	- Bombay Development Department	DMO	- Disaster Management Office
BEST	- Brihanmumbai Electric Supply and Transport Undertaking	DMRC	- Delhi Metro Rail Corporation
BHK	- Bedroom, Hall, Kitchen	DNA	- Dharavi Notified Area
BIFR	- Board for Industrial and Financial Reconstruction	DO	- Dissolved Oxygen
BIT	- Bombay Improvement Trust	DP	- Development Plan
BKC	- Bandra-Kurla Complex	DPR	- Detailed Project Report
BMC	- Brihanmumbai Municipal Corporation	DRMMP	- Disaster Risk Management Master Plan
BMEC	- Bengaluru Mumbai Economic Corridor	DRP	- Dharavi Redevelopment Project
BOD	- Biochemical Oxygen Demand	DU	- Dwelling Unit
BPCL	- Bharat Petroleum Corporation Limited	EBL	- Exclusive Bus Lane
BPMC	- Bombay Provincial Municipal Corporation	ECBC	- Energy Conservation Building Code
BRIMSTOWAD	- Brihanmumbai Storm Water Drain	EDDP	- Earlier Draft Development Plan
BRTS	- Bus Rapid Transit System	EEH	- Eastern Express Highway
BTP	- Bombay Town Planning	EIS	- Environment Improvement Society
BSE	- Bombay Stock Exchange	ELU	- Existing Land Use
BSNL	- Bharat Sanchar Nigam Limited	EMI	- Equated Monthly Installment
BUA	- Built Up Area	ES	- Eastern Suburbs
C	- Commercial	ESA	- Existing Situation Analysis
CBD	- Central Business District	ESR	- Environmental Status Report
CDP	- City Development Plan	EWS	- Economically Weaker Section
CHS	- Co-operative Housing Society	FAO-UN	- Food and Agriculture Organization of the United Nations
CIDCO	- City and Industrial Development Corporation of Maharashtra Ltd.	FBC	- Form Based Codes
CMP	- Comprehensive Mobility Plan	FCFSI	- Fungible Compensatory Floor Space Index
		FCI	- Food Corporation of India
		FFC	- Fact Finding Committee
		FH	- Free Housing
		FOB	- Foot Over Bridge
		FSI	- Floor Space Index
		GDDP	- Net District Domestic Product

GDP	- Gross Domestic Product	MHADA	- Maharashtra Housing & Area Development Authority
GHMC	- Greater Hyderabad Municipal Corporation	MHWW	- Multipurpose Housing for Working Women
GIS	- Geographic Information System	MIDC	- Maharashtra Industrial Development Corporation
GMP	- Greater Mumbai Police	MIG	- Middle Income Group
GMUA	- Greater Mumbai Urban Agglomeration	MLD	- Million Liters per Day
GoI	- Government of India	MMB	- Maharashtra Maritime Board
GoM	- Government of Maharashtra	MMC	- Mumbai Municipal Corporation
Ha	- Hectare	MMR	- Mumbai Metropolitan Region
HH	- HouseHold	MMRC	- Mumbai Metro Rail Corporation
HIG	- High Income Group	MMRDA	- Mumbai Metropolitan Region Development Authority
HPCL	- Hindustan Petroleum Corporation Limited	MoEF	- Ministry of Environment and Forest
HPEC	- High Powered Expert Committee	MPCB	- Maharashtra Pollution Control Board
HT	- High Tension	MR& TP	- Maharashtra Regional and Town Planning
HTL	- High Tide Line	MRVC	- Mumbai Railway Vikas Corporation
I	- Industrial	MSDP	- Mumbai Sewage Disposal Project
IC	- Island City	MSRDC	- Maharashtra State Road Development Corporation
ICDS	- Integrated Child Development Scheme	MSW	- Municipal Solid Waste
ICT	- Information & Communication Technology	MT	- Metric Tonne
IIT	- Indian Institute of Technology	MTDC	- Maharashtra Tourism Development Corporation
INR	- Indian Rupee	MTHL	- Mumbai Trans Harbour Link
IOCL	- Indian Oil Corporation Ltd.	MTNL	- Mahanagar Telephone Nigam Limited
IOD	- Intimation of Disapproval	MRTS	- Mass Rapid Transit System
IPT	- Intermediate Public Transport	MUIP	- Mumbai Urban Infrastructure Project
ISBT	- Inter-State Bus Terminal	MUTP	- Mumbai Urban Transport Project
ISZ	- Included in Surrounding Zone	NA	- Natural Area
IT/ITES	- Information Technology / Information Technology Enabled Services	NAINA	- Navi Mumbai Airport Influence Notified Area
ITI	- Industrial Training Institute	NASVI	- National Alliance of Street Vendors of India
JnNURM	- Jawaharlal Nehru National Urban Renewal Mission	NBC	- National Building Code
JNPT	- Jawaharlal Nehru Port Trust	NDDP	- Net District Domestic Product
JTC	- Joint Technical Committee	NDP	- Net Domestic Product
LA	- Land Acquisition	NDZ	- No Development Zone
LAP	- Local Area Plan	NGO	- Non-Governmental Organisation
LIG	- Lower Income Group	NH	- National Highway
LMV	- Light Motor Vehicle	NHAI	- National Highway Authority India
LPCD	- Litres Per Capita per Day	NITIE	- National Institute of Industrial Engineering
MbPT	- Mumbai Port Trust	NIUA	- National Institute of Urban Affairs
MBR	- Master Balancing Reservoir	NMT	- Non Motorised Transport
MCGM/ BMC	- Municipal Corporation of Greater Mumbai / Brihanmumbai Municipal Corporation	NOC	- No Objection Certificate
MCZMA	- Maharashtra Coastal Zone Management Authority	NUHHP	- National Urban Housing and Habitat Policy

NUHM	- National Urban Health Mission	RTO	- Regional Transport Office
NULM	- National Urban Livelihood Mission	RUB	- Road under-Bridges
NWDA	- National Water Development Authority	RWH	- Rain Water Harvesting
OS	- Open Space	SDP	- Sanctioned Development Plan
PAP	- Project Affected People	SCADA	- Supervisory Control and Data Acquisition
PC	- Public Convenience	SEEPZ	- Santacruz Electronics Export Processing Zone
PCB	- Pollution Control Board	SEZ	- Special Economic Zone
PCU	- Passenger Car Unit	SHG	- Self Help Groups
PH/HD	- Public Housing / Housing for Dishoused	SPA	- Special Planning Authority
PIB	- Press Information Bureau	SRA	- Slum Rehabilitation Authority
PLU	- Proposed Land Use	SRDP	- Sanctioned Revised Development Plan
POS	- Public Open Space	STP	- Sewage Treatment Plan
PP	- Per Person	SWD	- Storm Water Drainage
PPH	- Persons Per Hectare	SWM	- Solid Waste Management
PPL	- Public Parking Lot	TAZ	- Traffic Analysis Zone
PPP	- Public Private Partnership	TDA	- Tourism Development Area
PS	- Principal Secretary	TDR	- Transfer of Development Rights
PSC	- Public Sanitary Convenience	TISS	- Tata Institute of Social Science
PSF	- Power Supply Facility	TOD	- Transit Oriented Development
Pt	- Part	TP	- Town Planning
R	- Residential	TPD	- Tonne per Day
RC	- Residential Commercial	TRC	- Trade Refuse Charges
RCF	- Rashtriya Chemical Factory	UD	- Urban Development
RDDP	- Revised Draft Development Plan	UDPFI	- Urban Development Plan Formulation and Implementation
RTDZ	- Recreation and Tourism Development Zone	ULB	- Urban Local Body
RFCTLA RR	- Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation & Resettlement	UMMTA	- Unified Mumbai Metropolitan Transport Authority
RG	- Recreation Ground	URC	- Urban Renewal Cluster
RH	- Rental Housing	URS	- Urban Renewal Scheme
R.L.	- Road Length	UTTIPEC	- Unified Traffic and Transportation Infrastructure (Planning & Engineering) Centre
ROB	- Road over-bridges	VAG Corridor	- Versova Andheri Ghatkopar Corridor
ROW	- Right of Way	WHO	- World Health Organization
RP	- Regional Plan	WS	- Western Suburbs
RR	- Ready Reckoner		
RTE	- Right to Education		

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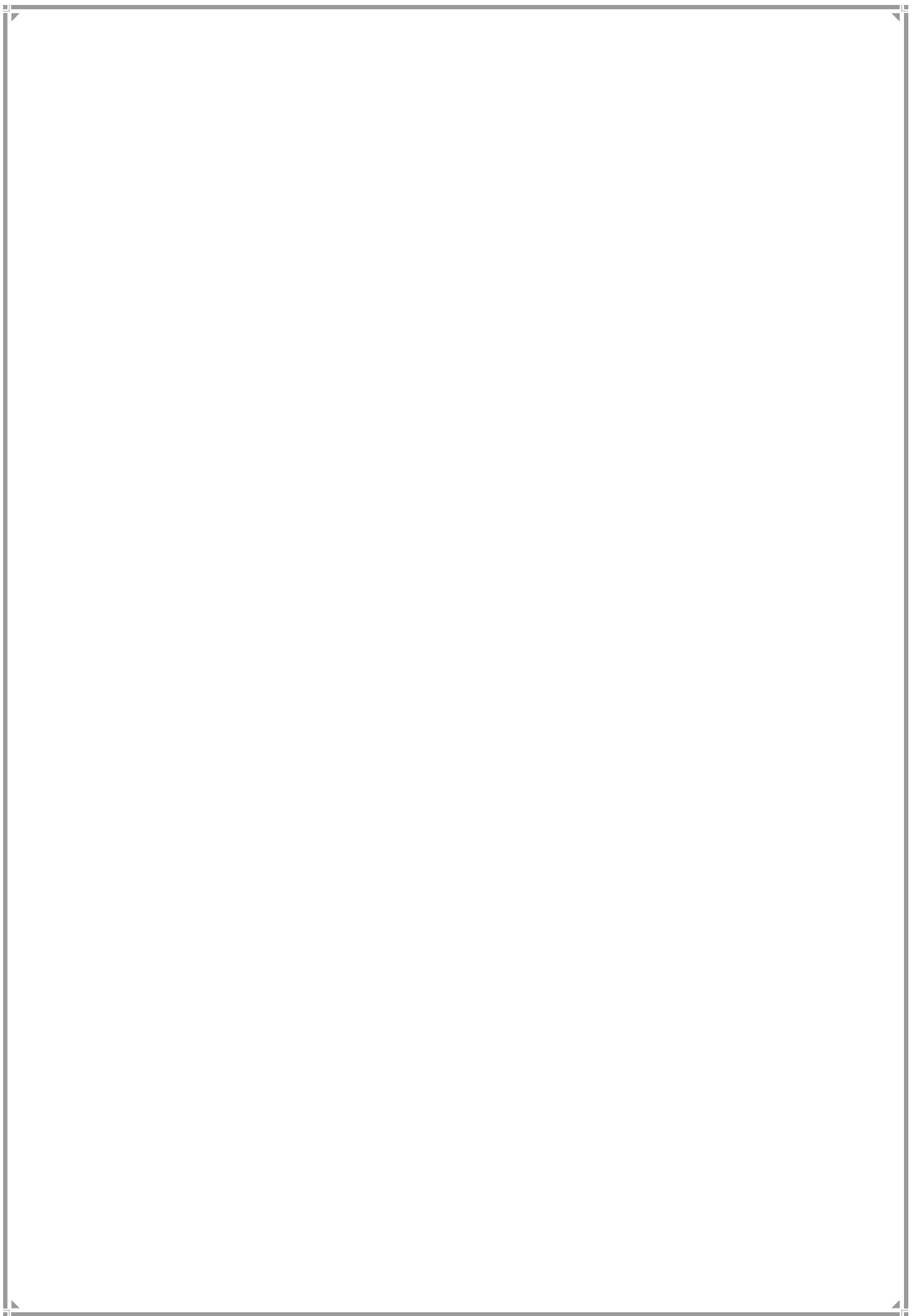
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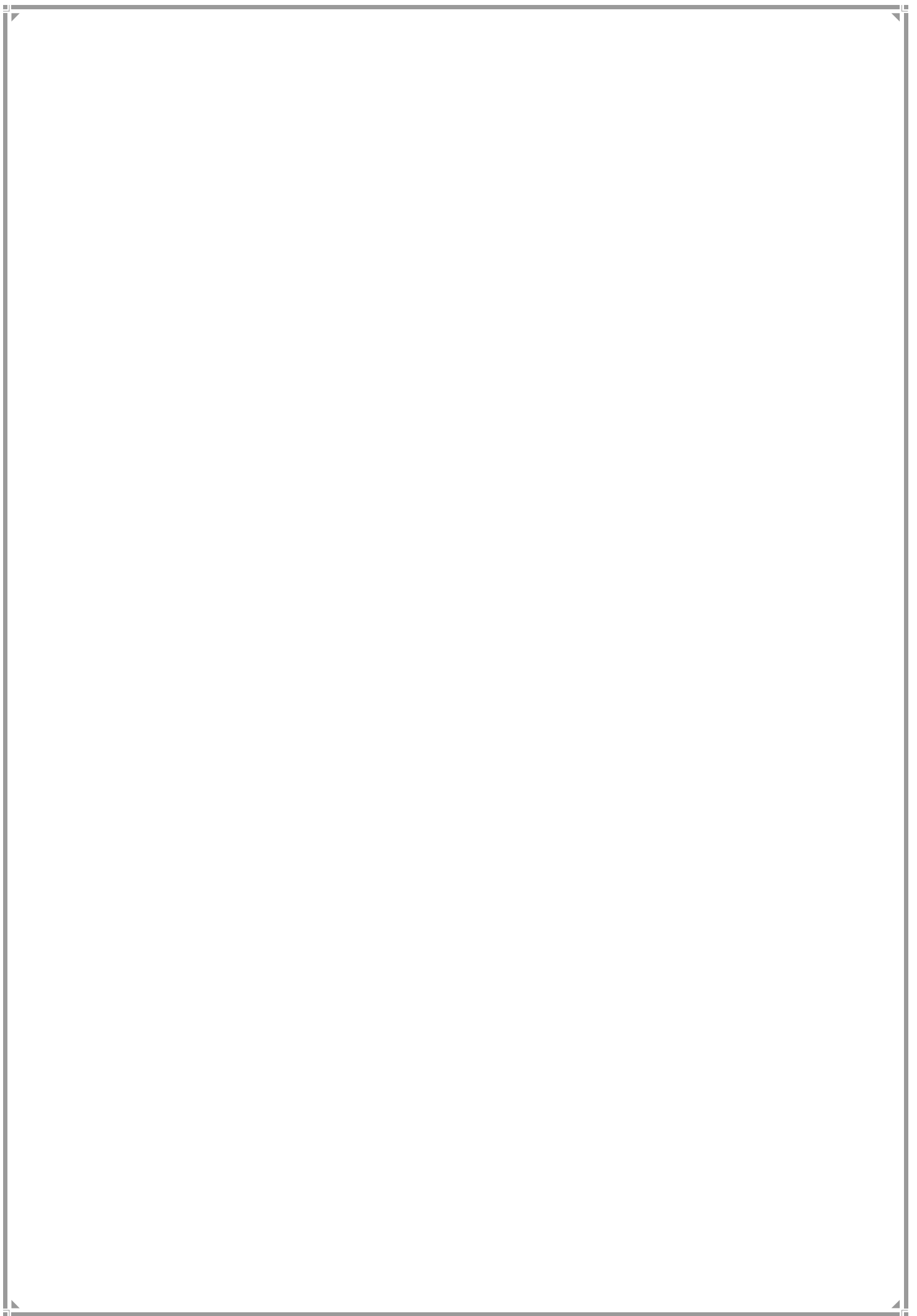
PART-1

EXISTING SITUATION



Chapter 1

PLANNING AREA AND REVISION PROCESS



CHAPTER 1

PLANNING AREA AND REVISION PROCESS

1. Contextual Background

The preparation of a Development Plan is a Planning Authority's statutory obligation. The Sec 38, MR&TP Act 1966 directs the Planning Authority, to '*revise the Development plan, either wholly, or the parts separately after carrying out, if necessary, fresh survey and preparing an existing land use map of the area within its jurisdiction*'. The Act also stipulates that any Development Plan must be in accordance with the provisions of a Regional plan. This implies that the Regional plan is the beacon, and its broad prescriptions and assumptions will guide the cities within that region.

The Constitution (seventy-fourth) Amendment Act also considers urban planning as a local responsibility. The Twelfth Schedule of the Indian Constitution, inserted along with the passage of the Constitution (seventy-fourth) Amendment Act lists '*urban planning including town planning*' as the very first function of Urban Local Bodies (ULB). This is followed by two other functions listed at numbers two and three, both linked to the Development Plan. They are regulation of land-use and construction of buildings and planning for economic and social development.

The first Development Plan for Bombay was sanctioned in 1967. The second DP of the City, known as DP 1991 was sanctioned in parts from 1991 to 1994. DP 2034 is the third Development Plan for Greater Mumbai.

1.1 Planning Area

The total land of Greater Mumbai identified in **Earlier Draft Development Plan 2034 (EDDP)** was 458.28 sq km. The Municipal Corporation of Greater Mumbai (MCGM), however, was the Planning Authority of area that was more modest, since about 9.43% of the cited area fell under the jurisdiction of Special Planning Authorities (SPA). Three such SPAs exist in Greater Mumbai – MMRDA (Mumbai Metropolitan Region Development Authority), SRA (Slum Rehabilitation Authority) and MIDC (Maharashtra Industrial Development Corporation). The EDDP therefore, prepared a Development Plan for 415.05 sq. km.

In the interim, however, several fresh additions have either happened or are proposed. The ELU 2012 located the emergence of an additional area of 14.96 sq. km, full of mangroves, in Thane creek, probably due to siltation. This area is outside the current MCGM limits. It is proposed, however, by the **Revised Draft Development Plan 2034 (RDDP)** for merger in the MCGM boundary and will be shown as Natural Area.

The Coastal Road approved by GoM adds a further area of 1.80 sq. km through reclamation of the sea. The alignment of this Road is being marked on the PLU (Proposed Land Use). It is also proposed that any changes in the alignment of Coastal Road that would get necessitated

during implementation would automatically become part of the DP 2034. Further, an area of 1.20 sq km is proposed as green reclamation (POS).

The addition of these lands makes Greater Mumbai's total land area **476.24 sq. km.**

Table 1.1 Additional Areas accruing to MCGM

SN	SOURCE	TOTAL AREA	AREA IDENTIFICATION	DATE
1	Land Mass through siltation	14.96 SQ KM	Thane Creek	ELU 2012
2	Coastal Road + Green Reclamation	03.00 SQ KM	Reclamation from sea	GoM 2015
		17.96 SQ KM		

Moreover, Government of Maharashtra (GoM) transferred three pieces of land from MMRDA to MCGM adding a total of 111.58 Hectares (approx. 1.11 Sq. km) to the area of this Planning Authority (MCGM).

Table 1.2 Recently Added Areas to MCGM from MMRDA

SN	TRANSFERRED FROM	TOTAL AREA	AREA IDENTIFICATION	DATE
1	MMRDA	27.36 Ha	Between Mithi River and LBS Marg at BKC	30 Aug 2014
2	MMRDA	47.37 Ha	'A' Block comprising MHADA layout at BKC	18 Nov 2015
3	MMRDA	36.85 Ha	West side of Swami Vivekananda Rd, Oshiwara	18 Nov 2015
	ALL AREAS	111.58 Ha	Approx. 1.11 sq. km	

These cited additions and deletions leading to changes in area and percentages are as follows.

Table 1.3 MCGM & SPA Areas

AREA CLASSIFICATION	MCGM AREA	MCGM (PLANNING AUTHORITY) AREA	SPA AREA
EDDP AREA	458.28 SQ KM	415.48 SQ KM	42.80 SQ KM
NEW LAND MASS IN ELU	14.96 SQ KM	14.96 SQ KM	
COASTAL ROAD + GREEN RECL	3.00 SQ KM	3.00 SQ KM	
FROM SPA TO MCGM		1.11 SQ KM	- 1.11 SQ KM
TOTAL	476.24 SQ KM	434.55 SQ KM (91.24%)	41.69 SQ KM (8.76%)

The cited changes, as Table 1.3 shows, would make MCGM's DP area as 434.55 SQ KM (91.24%) leaving area with SPA at 41.69 SQ KM (8.76 %).

With a view not to delay the RDDP, however, the MCGM has decided to take up the planning of the areas transferred from the SPA separately. This option is exercised in accordance with provisions under Sec 34 of the MR&TP Act 1966.

1.2 Planning Process

MCGM followed the statutory steps stipulated in the MR&TP Act 1966 in preparing the Development Plan. The Corporation by its Resolution No. 767 dated 20.10.08 accorded sanction to declare the intention of revision of the Development Plan by following the process as laid down under Section 23 of the MR&TP Act.

This was followed by the preparation of a GIS base map of Greater Mumbai. This provided the foundation for the preparation of Existing Land Use Plan (ELU) that was published on 12 Dec 2012. Subsequent to the ELU, the Proposed Land Use Plan (PLU) was prepared as directed under Sec 22 of the MR&TP Act. The DP was to *'generally indicate the manner in which the use of Development of land in the area of a Planning Authority shall be regulated, and also indicate the manner in which the development of land therein shall be carried out'*.

This was preceded by an assessment of the existing status through the use of base map and the ELU 2012. The assessment comprised population, economy, social and physical infrastructure, transportation, environment, amenity space (health, education, open spaces and other social amenities), road area, residential space and regulatory conditions. The assessment allowed an understanding of the challenges that Greater Mumbai faced. This was helped by preparatory studies and numerous studies that had already been carried out by other research undertaken in the context of the city.

The proposals for allocation of land for various purposes necessitated three significant projections. One was projections in regard to demography, economy, demands for space and infrastructure and such city requirements during the Plan period. The other was the determination of benchmarks in regard to these requirements. The third was to assess the gaps, that is, what the city had and what the city would need in the next twenty years. These understandings led to the allocation of space in order to bridge the amenity gaps of the city as far as possible. Wherever gaps remained, it was incumbent on the city administration to work towards their provisioning in the subsequent years.

1.3 Publication of EDDP 2034 & Subsequent GoM Revision Decision

After due process, the **Earlier Draft DP 2034 (EDDP)** was published as provided u/s 26(1) of the MR&TP Act 1966 on 25.02.2015 in the Government Gazette and in local newspapers. Thereafter, GoM appointed a Committee under the Chairmanship of the Chief Secretary, GoM to submit a report on the published Draft DP 2034. Subsequent to the submission of report by the Committee, GoM by its order of 23 April 2015 u/s 154 of the MR&TP ACT 1966 directed that the published Draft DP 2034 be revised and republished in a period of four months. The revision should undertake the correction of errors as well as an examination of planning and legal matters and consequent refurbishment that may be necessary. This period was further extended up to 22 Feb 2016 and thereafter up to 31 May 2016. This task has now been completed and the **Revised Draft DP 2034 (RDDP)** stands revised and republished.

1.4 The Revision Process

The process of DP revision began with a series of interactions with groups of citizens and officials. This was with a view to a proper appreciation of multiple perceptions and concerns in regard to EDDP and the formulation of a strategy to address those perceptions and concerns. The revision process mainstreamed the administrative ward as the cutting edge. A team of urban planners were brought in to assist the ward staff to provide field support to City level decision makers. As a revision strategy, the SRDP 1991 was adopted as the reference point for a comparative view on several aspects of the revision. These included designations, DP roads, reservations, development permissions, conversion of industrial land to residential or commercial and others. Additionally, specific points for revision indicated in the GoM Order of 23 April 2015 have been followed.

I. Designations

It was widely observed after the publication of EDDP 2034 that several oversight errors in regard to designations had crept in. With a view to eliminate these, about 10,000 designations were physically verified by ward urban planners and ward engineers. Wherever errors were noticed, the process of rectification was initiated. These were displayed on the website of MCGM on 30.10.2015 for further public inputs. Based on public observations, site verifications and in-house examination, a set of decisions in regard to rectifications were made and implemented.

It would be appropriate to say a few words here about the ELU (Existing Land Use) and PLU (Proposed Land Use). The Planning Authority is mandated to prepare an existing land use map (Sec 25, MR&TP Act 1966). This is 'a map indicating the use to which lands are put at the time of preparing the map'. (Definitions, Sec 2, MR&TP Act 1966).

The ELU 2012 was published after its completion to invite citizens' comments on the existing land uses as reflected in the maps prepared. These maps, for each ward were displayed in the respective Ward offices and were also made available on the MCGM web portal. These were accompanied by the ELU 2012 report. Initially public comments were requested in the form of letters and emails for a time period of 30 days. However, due to an overwhelming response the period was extended by 3 months. The comments were scrutinized and each site was then inspected by the MCGM. Depending on the relevance of the comments the ELU was updated. In view of the ELU process having been completed in 2012 after due public consultation, the RDDP 2034 has treated the ELU 2012 as finalized and not subject to further scrutiny before the RDDP is published.

Designations are a subject of PLU (Proposed Land Use) and public observations in regard to them have been taken cognizance of and errors in regard to designations have been corrected on the PLU. Some confusion has prevailed in regard to the concept of designations. The MCGM stand on the matter needs to be clarified.

The word designation has a unique connotation in the context of Mumbai's Development Plan. Designation is a public amenity provided or aided by an appropriate authority on a

parcel of land. The acquisition of land and the development of public amenity on that land would generally materialize through the use of any of the DP instruments available for acquisition and development. The DP instruments, inter alia, comprise land acquisition by payment of money, by the grant of TDR, by the use of accommodation reservation, by other provisions of DCR or any other method that the DP may provide.

It is further clarified that designations are already developed reservations. It follows that designations were reservations in the earlier DPs and have since fructified in terms of the provision of specified public amenities. Hence, all reservations of the earlier DPs that already stand developed would post-development continue to be termed as designations in the subsequent DPs. Such designations will continue till such time that they exist, unless altered or rescinded by an order of the competent authority.

Reservations of the past DPs that have not been developed would continue to be termed as reservations in the subsequent DPs for those specific public amenities, unless altered or rescinded by the competent authority.

A public amenity privately provided is a designation if it involves specific concession/concessions granted by a public authority, such as land, or monetary grant, or additional FSI for the provision of a distinct public amenity.

Layout RGs are not being marked as designations. They are for the enjoyment of the residents of the layout and not subject to mechanical acquisition as public amenities. Hence they do not qualify to be designations. They were mandated under the DCRs under which the layouts were developed and must compulsorily be kept open. It may, however, be possible that some Layout RGs have escaped notice due to oversight and continue to be designated in RDDP 2034. These are subject to correction and can be taken up for such correction as provided as in DCR Part I, Administration, 6 (c).

Public amenities privately provided, of free volition, without DP stipulation and without any concession granted by a public authority for the provision of such public amenities are not designations and will not be marked on PLU as designations.

However, since the private party has provided them for public use, they would be taken into consideration in the computation of overall public amenities in the city.

A problem that continued to cause public concern was in regard to plots where part of the use was private and part public. For instance, a private residential complex on a plot also had a public parking facility. These were marked, to begin with, as public parking lots, developed under 33 (24) of DCR 91, and rightly so, as the idea was to capture designations. However, in view of public discomfort, it was decided after tortuous deliberations, to mark them as public parking lots, but to qualify them with the letters 'pt' denoting 'part'. This clarified that there was something else on the plot that was not designated.

II. Roads

EDDP 2034 had shown the following categories of roads on DP sheets:

- a) Newly proposed DP roads not in existence earlier
- b) 1991 DP roads not developed till date and hence shown as proposed DP roads
- c) Widening of existing developed roads
- d) New Public Streets created u/s 291 of the MMC Act 1888
- e) Sanctioned Regular Line of Existing Streets u/s 297 (1) of the MMC Act 1888

Of the above, (a), (b) and (c) are proposals under the MRTTP Act 1966 while (d) and (e) are streets done under MMC Act 1888 after following due process under that Act.

The RDDP, after a detailed road review has proposed the following.

Firstly, roads that were initiated under the MMC Act 1888 and had already reached statutory finality under that Act did not require to be subjected to another round of suggestions and objections and a reopening of their scrutiny under the MR&TP Act 1966. It is therefore, proposed that these roads need not be shown on the DP sheets but a list of such roads be appended to the DP (**Appendix 1, DP Appendices**) on MCGM Web Portal for information and with the clear observation that they are not subject to suggestions and objections since due process of law has been completed under the MMC Act 1888.

Widening of existing roads, the third category of roads, has been entirely abandoned, except those shown in SRDP 91. They did not seem to be backed by any scientific study. Moreover, it was felt that widespread hardships would be caused to occupants of existing structures that would have to be pulled down.

Additionally, the Building Proposal Section was directed to provide information of all such cases where IODs had been issued before 25.02.2015 and new proposed DP roads were proposed on such properties in EDDP. In such cases, proposed roads were deleted. A clear position taken by RDDP in regard to layout roads is that these are not public roads and will not be mechanically subject to acquisition by the Planning Authority.

As a consequence, only the following roads have been shown on the revised Draft DP sheets:

- i. Newly proposed DP roads not in existence earlier,
- ii. SRDP1991 DP roads not developed till date and hence shown as proposed DP roads
- iii. SRDP1991 DP roads partly developed and hence shown as existing roads with widening as per SRDP1991 road width ,and
- iv. New DP roads proposed in NDZ and salt pan lands for better connectivity and integrated development.

Of the above four categories, some roads that did not satisfy feasibility benchmarks have also been dropped. The review of roads brought up some roads shown as existing on D.P. Sheets but not existing on site. Similarly, some roads that were existing on site and shown on SRDP 1991 were not shown on EDDP sheets. Such roads were surveyed and rectifications have

been carried out in the RDDP sheets. It is still possible that some errors in regard to roads and road alignments have been missed or misinterpreted. The DCRs provide a mechanism for their correction without following a lengthy process of DP modification.

III. Suggestions and Objections

After the EDDP was published, over 65,000 suggestions and objections were received. However, once the EDDP was subjected to a fresh revision and republication of the draft DP, the suggestions and objections received on EDDP lost legal validity and would have to be treated as infructuous. In this regard, attention is drawn to Sec 28 (2) of the MRTPA Act, 1966 : *“The Planning Authority or the said Officer shall forward all objections and suggestions received by it to a Planning Committee (consisting of three members of the Standing Committee of the Planning Authority and such additional number of persons, not exceeding four, appointed by the Director of Town Planning having special knowledge or practical experience of matters relating to town and country planning or environment or relating to both for consideration and report....”*

Quite clearly, the examination of objections and suggestions received must statutorily be done by the Planning Committee duly constituted. This would now be done post publication of the RDDP, when a window would be provided to file fresh suggestions and objections.

Despite the legal position cited above, the DP team that undertook revision did go through the lot of suggestions and objections with the sole intention of any possible lessons that could be learnt from them.

IV. Amenity Standards

In the EDDP, a detailed analysis of various standards adopted in the country and abroad was undertaken. It finally decided to adopt most of the norms adopted in SRDP 1991. But in certain instances SRDP 1991 standards were reduced. The RDDP has reverted to the norms that were stipulated in SRDP 1991. However, an attempt has been made to improve upon those benchmarks wherever possible. Some of these norms may not have been entirely achieved by RDDP. However, those benchmarks have been retained so that the DP may work towards their achievement whenever future opportunities arise.

V. Public Open Spaces

The argument between built environment and open environment emerged as one of the key issues after publication of EDDP. In view of the tardy implementation of public open spaces reservations in DPs 1964 and 1991, the city ran large deficits of public open spaces. One of the primary objectives of RDDP has been to address this imbalance. In this context, a detailed explanatory note on public open spaces may be perused at Chapter 20 of this Report.

VI. Affordable Housing

The lack of Affordable Housing in Greater Mumbai is one of the glaring deficiencies in the city. The RDDP has devoted a separate chapter on this subject. The RDDP has made a sincere

attempt to address this issue by earmarking spaces in the city entirely devoted to affordable housing. In this regard, the Pradhan Mantri Awas Yojana and draft Maharashtra Housing Policy have been kept in mind. For a full appreciation of the provisions, reference to Chapter 21 in the Report and the DCRs is requested.

VII. Equity

A city must provide adequately for the needs of special groups in its search for social equity. These comprise women, the informal sector, the differently-abled, the aged, children and those without shelter and their specific needs. The RDDP has travelled quite some distance to recognize these groups as contributors to the city and provide for them in various ways. These include multi-purpose housing for working women, care centres, adhar Kendra with skill development centre, old age homes, homeless shelters and public conveniences. Details of the provisions in regard to these groups may be perused in Chapter 22 of this Report.

VIII. Gaothan / Koliwada / Adivasipada Settlements within Mumbai Limits

The local/ native inhabitants of Mumbai are traditionally located in the areas commonly recognized as Gaothans/ Koliwadadas. There are 88 Gaothans/ Koliwadadas and these are marked in the RDDP 2034.

The Koliwadadas are commonly identified as a densely populated habitat of the koli community along the coastal areas. There is no land record regarding Koliwadadas to identify the exact area and extent of Koliwadadas. The demarcation of koliwada area in revenue records is underway. The Govt. of Maharashtra in Revenue department has constituted a Committee to delineate the Koliwadadas boundaries and their extent. On finalization of the same, these would be superimposed on the RDDP. The development of Gaothans/ Koliwadadas shall be as per provisions in DCR 33 (16) of RDDP 2034.

In addition to Gaothans/ Koliwadadas, there are number of Adivasipadas/ hamlets within geographical limit of MCGM. The list of Adivasipadas as received by the Tribal Development Department, Govt of Maharashtra is appended as Annexure to the report (DP Appendices – Appendix 4)

IX. Mapping Mumbai Slums

Government of Maharashtra has charged the Slum Rehabilitation Authority (SRA) with the responsibility of mapping all slums in Mumbai. In view of this, it would be inadvisable to duplicate the effort of SRA by MCGM. Hence it is proposed that the mapping of slums will not be included in the process of RDDP 2034.

X. Heritage

Mumbai's Heritage List was sanctioned and notified by the State Government on 24th April 1995 along with DCR-67 (Heritage Regulations) of 1991 comprising 633 numbers of entries / sites / buildings / structures / Precincts and additional list of 15 numbers of Milestones. Subsequently, a few more were sanctioned and notified as additions to the Heritage List.

A new Heritage List has also been published on 31st July 2012 comprising a 'Review of the sanctioned heritage list of 1995' and 'Draft new heritage list from City & Suburbs'. The List is undergoing a reappraisal by a Committee. Subsequent to its review, it would be submitted to GoM for its consideration, sanction and notification. Post notification by GoM, they would stand added as entries to the City's Heritage List.

Since the Heritage List is subject to periodical revisions, the List will stand modified by fresh heritage notifications by GoM as and when buildings and precincts are notified. The Heritage List appended to the DP will automatically stand modified and become part of the DP 2034. For the purpose of taking cognizance of heritage status of all sites/structures/precincts included in the published list of 31 July 2012 minus subsequent deletions by Government notification, DP remarks will continue to be issued by the DP Department of MCGM.

The complete List (all entries/sites/structures/precincts of 1995 Heritage List as well as of 2012 Heritage List) stand appended as Appendix 2, DP Appendices and may be perused on MCGM website, DP Appendices.

XI. DCRs

The DCRs of the RDDP 2034 assume 1991 DCRs in their current shape as the base. However, all salutary features of EDDP DCRs that were well received have been assimilated. Some of the very significant provisions in the DCRs are in the direction of ensuring a balance between economy, environment and equity, catalyzing development, creating a background for ease of business, providing for areas of public amenity deficits and ascertaining implementation of the DP. For a more detailed account, Chapter 25 of the Report may be seen.

XII. Zoning

The five zones in the RDDP 2034 are Natural Area (NA), No Development Zone (NDZ), Residential Zone (R), Commercial Zone (C), and Industrial Zone (I). However, the provisions of RDDP recognize the mixed-use nature of Greater Mumbai's land use. The concept of zone conversion has been accepted. A more comprehensive description may be seen at Chapter 13 of the Report.

XIII. Legends

The very high numbers of legends in SRDP 1991 were changed in the EDDP and a more concise and modern method was used. The RDDP has accepted the method as well as the shortened list of legends, both for designations and reservations. However, a limited number of legends, especially for reservations have been added. They are primarily with two objectives. The first is to avoid some amount of confusion that crept in due to clubbing of activities under a single legend. The other was to protect equity provisions where it was assumed that certain groups would lose out if clubbed with others. These were mainly in the area of gender and other weaker sections.

XIV. Reservations

The RDDP, while reserving lands, has shown a clear propensity to work towards addressing the deficits of open spaces, affordable housing and social equity issues as far as possible, in the limited un-built space available, since these are areas that have demonstrably gone into deficits in Greater Mumbai. It has, in search for more land, re-instated many of the SRDP 1991 reservations that the EDDP 2034 deleted. DPs of the past were found wanting in putting up an implementation mechanism that could convert reservations into public amenities on ground, primarily on account of lack of resources as well as the inability to provide a robust tool that would adequately satisfy and incentivize the land owner whose lands had been reserved. The standout feature in this regard is the highly attractive accommodation reservation policy that the RDDP 2034 has proposed.

XV. Planning Sectors

The EDDP proposed the creation of Sectoral Plans “for effective service delivery”. The 24 administrative wards of the City were further sub-divided into 150 planning sectors so as to create workable spatial units. Each could then be planned for physical infrastructure services (water supply, sewerage, solid waste, storm water drainage, traffic and transportation and others) as well as social services (education, health, recreation and others). The EDDP also indicated that a Sectoral Plan “would be required every 5-10 years so as to address concerns regarding investments and institutional capacity building for better service delivery”. Since such infrastructure planning is a continuous municipal process, the RDDP proposes that the MCGM could separately take a view on this for an appropriate decision. Hence the RDDP does not propose its clubbing with the DP process.

XVI. Local Area Plans

The EDDP had also proposed that the city-level DP be followed by detailed local plans providing for such details as urban renewal, housing, shopping, improvements to poor layouts, control of architectural features and open spaces. The proposal is on the strength of Sec 33 of the MR&TP Act 1966, allowing the Planning Authority to prepare plans for ‘areas of comprehensive development’. While the DP at the city level cannot replicate the more informed, customized and comprehensive nature of local plans, there are evident difficulties. Many scores of such plans would have to follow the same arduous and prolonged process of the city-level DP, “as is provided by Sections 25,26,27,28, 30 and 31 as respect a draft Development plan and submit such plan or plans from time to time to the State Government for sanction, along with a report -

- (a) Explaining the proposals and the stages of the development programme by which it is proposed to execute the plan or plans.
- (b) Giving an appropriate estimate of the cost involved in executing the proposals of the plan or plans.” (Sec 33 (2) MR&TP Act 1966).

Such plan preparation, however, is likely to be visited by issues that, in the current municipal structure, may create more problems than it would solve. Firstly, such second tier plans were not done in either in 1964 or 1991. MCGM, therefore, does not have any administrative structure to handle the preparation of more than 200 LAPs. As cited above, each LAP must traverse the same comprehensive process as the DP under the MR&TP Act. Even if a method is found to administratively support the exercise of LAP preparation, it is likely to take considerable time, first at the MCGM and then at the level of the State Government. The LAPs are additionally likely to end up making a large number of amendments to the DP and to the DCRs. As the EDDP itself admits “The Plans may require some changes in the DP, its regulatory framework as also specific investment programmes”. The result would be multiple DPs and multiple DCRs applicable to specific Local Areas, engendering a significant degree of confusion, and the need for a larger ULB bureaucracy for interpretation and implementation. Since such layered process of planning has not been followed in the past, its introduction at this late juncture may not be salubrious to the equally significant task of timely plan implementation. The RDDP, therefore, has not favored the retention of the proposal for Local Area Plans. If the need were felt in certain instances, nothing would stop the Planning Authority to initiate the process of Local Area Plans as stipulated under the MR&TP Act. A detailed ward level exercise has however been undertaken and may be seen in part 3 of the Report.

XVII. TOD

The RDDP has proposed to abandon TOD zones and the high FSI provisions along existing and upcoming transit nodes that were recommended by EDDP. The linkage of high FSI and its availability on payment of high premium was widely seen as defeating the stated objective of affordable housing. Transit oriented development, as a composite concept, however, has many salutary ideas interwoven and RDDP proposes to further them.

XVIII. Aarey Colony

The RDDP has proposed to drop the opening up of Aarey land for institutional use and other developmental uses that were recommended by EDDP in search of new growth centres. In regard to the Metro Car shed proposed within Aarey (34.41 Ha) or alternatively at Royal Palms (89.32 Ha), a Committee has been constituted by GoM under the chairmanship of MMRDA MC. The RDDP 2034 will accept the decision taken by GoM on the matter. The RDDP, in keeping with the nature of the land, has proposed a 113 hectare botanical garden and zoo to be created.

XIX. Religious Structures

In the RDDP 2034 designations are shown in various colours with hatched lines. No such marking in regard to religious structures appears in the RDDP. The ‘Zone’ name on the religious structure has also been eliminated and has been inserted elsewhere in that ‘Zone’. Moreover, only some prominent religious structures have been marked on DP sheets by their popular name. These are only indicative. Religious structures, marked in SRDP 1991, have been continued in RDDP except where any correction is required.

XX. Street Vendors

In view of the provisions of the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014, it is proposed that the finalized vending zones decided by the Vending Committee, whenever approved, will get appended to the DP. Moreover, while the predominant user of lands would continue to operate at other times, it would stand suspended in time slots in which hawking activity would be permitted. Since vending zones/activity/time slots would be subject to alteration every five years, the vending zone/activity/time slots would stand modified as per newly finalized vending zone/activity/time slots by the MCGM. In the interim, the List of ward-wise hawking zones declared by Hon. Supreme Court in its judgment dated 12 Feb 2007 effective as on today has been uploaded on the MCGM website as Appendix 3, DP Appendices.

XXI. GIS

The Revision work necessitated the engagement of a team of GIS technicians with sound experience of Development Planning work. Guidelines were formulated after multiple rounds of discussions and meetings. The broad strategy was to verify the SRDP 1991 and EDDP map overlap as well as existing ground realities for updating. This Team followed a tight time schedule and interacted with the MCGM DP Department. The tasks comprised the incorporation of missing data, designation corrections, removal of cancelled reservations, deletion and retention of roads and logical road alignments, insertion of new legends, new reservations and the incorporation of new layers.

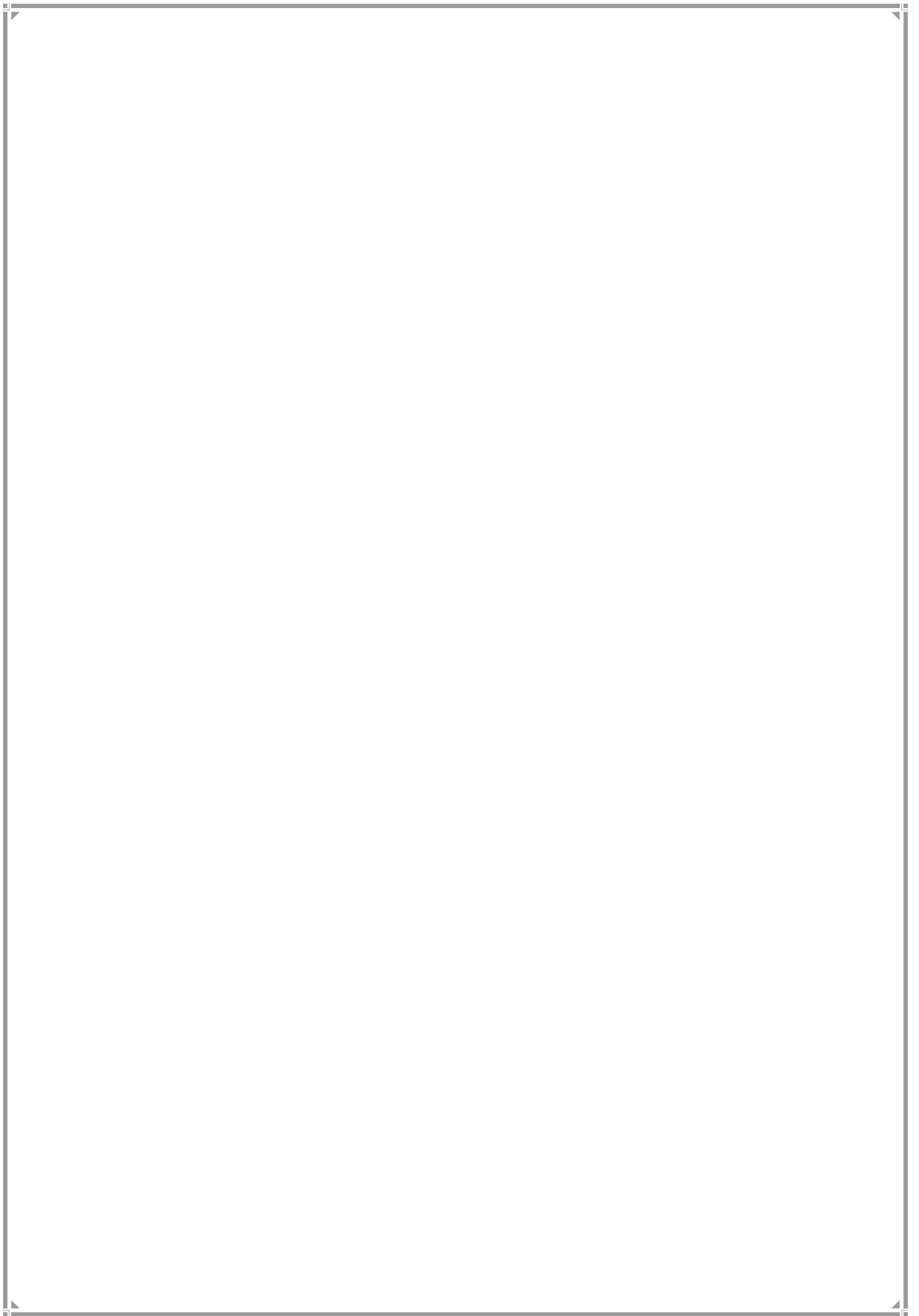
XXII. Appendices

All Appendices that are proposed to be appended to the RDDP 2034 will comprise a very large number of pages. Different appendices will be subject to revision and correction in different time periods. In the interest of convenience and in the interest of keeping the DP Report to a manageable size, it is proposed that the Appendices will be displayed on the **MCGM website under the Heading DP 2034 Appendices.**

Apart from the above cited issues, a number of provisions that were proposed in the EDDP have been modified or tweaked by RDDP. These are dealt with in detail in the Chapters ahead.

Chapter 2

THE REGIONAL CONTEXT



CHAPTER 2

THE REGIONAL CONTEXT

Spread over the districts of Thane and Raigad, the Mumbai Metropolitan Region (MMR) covers an area over 4,355 sq. km comprising eight Municipal Corporations, 9 Municipal Councils along with other towns and villages. The population of the Mumbai Metropolitan Region is 22.8 million (Census 2011).

Table 2.1: MMR Population & Growth

S.N.	Urban Local Body	Census 2001 Figures	Annual Compound Growth Rate (%) 1991-2001	Census 2011 Figures	Annual Compound Growth Rate (%) 2001-2011
1	Municipal Corporation of Greater Mumbai	1,19,78,450	1.90	1,24,42,373	0.38
2	Thane Municipal Corporation	12,62,551	4.62	18,41,488	3.85
3	Ulhasnagar Municipal Corporation	4,73,731	2.53	5,06,098	0.66
4	Kalyan- Dombivali Municipal Corporation	11,93,512	1.64	12,47,327	0.44
5	Mira- Bhayandar Municipal Corporation	5,20,388	11.48	8,09,378	4.52
6	Bhiwandi-Nizampur Municipal Corporation	5,98,741	4.68	7,09,665	1.71
7	Navi Mumbai Municipal Corporation	6,67,611	8.21	11,20,547	5.32
8	Vasai-Virar city Municipal Corporation	7,58,339	6.67	12,22,390	4.89
9	Ambarnath Municipal Council	2,03,804	4.94	2,53,475	2.21
10	Kulgaon –Badlapur Municipal Council	97,948	6.51	1,74,226	5.93

S.N.	Urban Local Body	Census 2001 Figures	Annual Compound Growth Rate (%) 1991-2001	Census 2011 Figures	Annual Compound Growth Rate (%) 2001-2011
11	Alibaug Municipal Council	19,496	1.81	20,743	0.62
12	Karjat Municipal Council	25,531	2.37	29,663	1.51
13	Khopoli Municipal Council	58,664	2.68	71,141	1.95
14	Matheran Municipal Council	5,139	0.88	4,393	-1.56
15	Panvel Municipal Council	1,04,031	5.84	1,80,020	5.64
16	Pen Municipal Council	30,201	3.41	37,852	2.28
17	Uran Municipal Council	23,251	2.72	30,439	2.73
18	Census Town	2,16,161	5.27	6,30,841	11.30
19	MMR Rural	11,28,977	3.03	14,74,291	2.70
	TOTAL	1,93,66,526	2.79	2,28,06,350	1.65

2.1 Geography, Geology & Climate

The Mumbai Metropolitan Region is largely comprised of lowlands located west of the Sayhadri hills with an average elevation of less than 100 metres above sea level. The Region has a varied landscape. A series of North-South hill ranges mark the centre and East, several rivers run across the land and there is a long coastline with estuaries, bays and creeks in the North and the South.

Geologically, the region is in the Deccan lava country with basalt constituting major formations with the exception of Greater Mumbai, which has a different geology. Hot springs are found at Vajreshwari, Ganeshpuri and Akloli. Other features of geological value include several features within Greater Mumbai viz. Gilbert Hill at Andheri (with hexagonal basaltic columns), Sewri (with pillow lavas), Worli Hills (frog beds- intra-trappean beds of great scientific value) and the raised beaches of Manori (which are a record of significant historical geological processes).

The climate of MMR is equable with no large seasonal variations. Proximity to the sea results in high humidity. The region experiences a hot, humid summer and a mild winter. The monsoons are marked by particularly heavy rains and the average rainfall is over 2000 mm per annum. Temperatures have been increasing over the years and summers have been

getting hotter. Monsoons also have been recording very heavy rains of high intensity within 24-hour duration.

2.2 Population Growth

At the heart of MMR is Greater Mumbai. Early development in Greater Mumbai revolved around the port and the mills to its south. As the city grew, it expanded northwards along its twin suburban railway networks and till 1968 most of the growth in MMR was confined to Greater Mumbai. Post 1968, the Suburbs in Greater Mumbai grew along with areas surrounding Greater Mumbai viz. Thane, Kalyan, Mira-Bhayander, Vasai-Virar and Navi Mumbai. The suburban rail networks have been crucial in this story of urban expansion.

Since 1980, the MMR has been witnessing a higher decadal growth rate than Greater Mumbai. The MMR added 3.44 million people in the last decade. However, the annual compound decadal growth rate (2001-2011) of the MMR, which is 1.65%, is lower than the previous (1991-2001) annual compound decadal growth rate of 2.79%. Within the MMR, the fastest growing cities in the last decade (2001-11) are Navi Mumbai, Vasai-Virar, Mira Bhayandar, and Thane.

2.3 Transport and Communications

a. Railways

The MMR is connected to Greater Mumbai through the suburban rail networks of the Central and Western Railways, which serve as the lifelines of the region. The Western Railway offers links with the Western states and North India while Central Railway provides links with Central, Eastern, Northern and Southern parts of the country. The suburban networks have been extended and strengthened with the Western line now extending up to Dahanu Road and the Central Line extending up to Karjat, Khopoli and Kasara on the mainline. New lines connect Dahanu Road to Diva and Panvel through a branch line via Bhiwandi Road- Vasai Road while another is planned to connect Uran to Nerul/Belapur. Urbanisation has rapidly followed wherever train services have ensured connectivity to Greater Mumbai.

b. Roads

Apart from the Railways, the MMR is well connected to Greater Mumbai through several highways and expressways. These include:

- The Sion-Panvel Highway
- The Mumbai-Ahmedabad Expressway: It is part of National Highway 8 (NH8) and passes through almost all of Mumbai's Western Suburbs, where it is known as Western Express Highway.
- The Mumbai-Nashik Expressway: It is part of National Highway 3 (NH3) and passes through Thane and Bhiwandi. In Greater Mumbai, the highway is known as Eastern Express Highway.

- Mumbai-Pune Expressway: The expressway has reduced the travel time between Mumbai and Pune to approximately two hours. This is in addition to the older NH 4.

c. Ports

The MbPT and the JNPT are the two major ports in the MMR. They are leading ports for POL and container cargo respectively. The quantum of trade volume at the ports places pressure on nearby infrastructure. Dedicated road connectivity and its integration with rail connectivity to the hinterland needs to be provided for.

d. Airport

Mumbai Airport (with International and Domestic terminals) is an important air traffic node of the country. Air traffic in 2031 is projected to rise to 54 million (Domestic) and 21 million (International) from about 30.2 million (Total) presently. The airport also handles 0.63 million tons of freight annually (2012-13). The Mumbai Domestic Airport handles about 685 flights per day, i.e., approximately 1 flight (landing or take off) every two minutes.

2.4 Interdependencies between Greater Mumbai and MMR

Greater Mumbai is closely linked to the cities within the MMR with 60% of all the jobs in the MMR being concentrated in Greater Mumbai. The availability of affordable homes in adjoining cities in MMR has meant that people working in Greater Mumbai reside outside Mumbai and commute. Some cities in the MMR function largely like Suburbs of Greater Mumbai while others have a good mix of employment as well as residences. Since 1980, there has been a decline in the manufacturing sector within Greater Mumbai. In the MMR, the same period has seen a rise in manufacturing and the secondary sector. Recent socio-economic surveys indicate that since the 1980s the population of Navi Mumbai has received a significant share of migrants from Greater Mumbai.

The MMR has significant industrial zones including the Thane Belapur belt, the Kalyan complex, the Taloja MIDC and the Patalganga and Rasayani industrial areas. Major infrastructural facilities that serve Greater Mumbai are located in the MMR including the JNPT port at Nhava Sheva, major markets like the APMC market in Vashi and the iron and steel market at Kalamboli.

2.5 Regional Plans: Review of Past Plans

Since the delineation of the MMR in 1967 with a view to comprehensively plan the Region, two Regional Plans have been prepared. The First Regional Plan was sanctioned in 1973, which was subsequently revised, and the Second Regional Plan for 1996-2011 was sanctioned in 1999. RP is now due for revision and work on the Third Regional Plan is currently underway. The DP 2034 for Greater Mumbai has to take cognizance of RP 1996.

RP 1973: The Regional Plan 1973, proposed containment of Mumbai's growth through dispersal of economic activities to new growth centres. Accordingly, Navi Mumbai was

planned as a counter-magnet along with new growth centres at Bandra-Kurla and Kalyan. Restrictions on new industries within Greater Mumbai were introduced through the Industrial Location Policy. Bulk land acquisition was seen as the solution to prevent speculation and raise resources for infrastructure. Such acquisition of land, however, was successful only in part in Navi Mumbai.

RP 1996: The Second Regional Plan 1996-2011 aimed to promote regional economic growth through hi-tech, non-polluting industries in Greater Mumbai, facilitating revival of sick industrial units and directed new industrial growth to underdeveloped parts of the region. It proposed BKC as an International Finance and Business Centre and small offices without increasing existing industrial or commercial zones. Urban renewal and redevelopment of older dilapidated areas along with recycling of land and space were also to be promoted. In situ upgradation and providing land tenure were initial steps envisaged for slums which were to then eventually redevelop. The Plan recommended the increase in the supply of land and infrastructure so as to facilitate increased shelter provision. The RP 1996 also recommended a market oriented approach to land and exploring alternatives to compulsory land acquisition which included accommodation reservation and TDR.

RP 1996 also outlined strategies for water supply, transportation strategies and the environment. Of particular relevance to Greater Mumbai were enhanced road networks in Suburbs, the Anik-Panjarapol Expressway and E-W links between the Eastern and Western Expressways, the Malad- Dahisar Relief Road, the Airoli bridge and widening of Tilak bridge at Dadar. It recommended the Trans Harbour Link and also demand management measures such as parking control and cordon pricing along with a strategy for publicly managed private bus services.

The RP 1996 is due for revision and the draft of the Third Regional Plan is almost ready.

2.6 Notified Areas under Special Planning Authorities

In addition to the Regional Plan proposals, the RDDP 2034 takes cognizance of the proposals contained in the sanctioned Development Plans for the eight SPA areas within the jurisdiction of the MCGM. The RDDP 2034 has taken cognizance of the development plans prepared for these areas since they not only have direct and indirect impacts on their immediate surroundings but considering their special functions, they have an impact on Greater Mumbai as a whole.

2.6.1 Backbay Reclamation Scheme

The Backbay Scheme was planned by the State Government in 1920 consisting of eight blocks. Of these only 4 blocks were reclaimed by 1930 after which the reclamation was frozen and a policy decision taken in 1978 to freeze development due to public criticism. MMRDA was appointed SPA in 1983 to plan and develop the remaining blocks with amenities. The DP was sanctioned in 2001.

2.6.2 Bandra Kurla Complex

The Bandra Kurla Complex was initially conceived in RP 1973 for internal restructuring to decongest South Mumbai. MMRDA was appointed in 1977 as SPA for this area covering an area of 370 Ha. After the 1991 economic reforms MMRDA repositioned BKC as a financial and business centre and initially developed 19 Ha of housing and several government offices in 'E' Block. 'G' Block has emerged as a new financial district with headquarters of many banks and financial institutions. More than 2 lakh jobs have been provided already and apart from offices, it also has staff quarters, hospitals, hotels, the Diamond Bourse, and an exhibition and convention centre. As cited in Chapter 1 of this Report, two parcels of land (27.36 Ha and 47.37 Ha) from BKC have now been transferred from MMRDA to the MCGM.

2.6.3 Oshiwara District Centre

MMRDA plans for this 102 Ha area were approved in 1992. As per policy approved by the Government, the lands are acquired at nominal price of Re.1/- and then leased to the owner for a period of 60 years. So far the MMRDA has acquired and leased back 22.39 Ha. In 2002, the planning proposals were modified to permit residential use up to 50% in the Core Commercial Zone and in the Commercial Transformation Zone. However, it is unlikely that it will achieve its original intention of being a district centre in Western Suburbs. Almost 50% area is covered by slums and is being redeveloped under SRA. As cited in Chapter 1 of this Report, 36.85 Ha of Oshiwara District Centre has now been transferred from MMRDA to the MCGM.

2.6.4 Wadala Truck Terminus

The Wadala Truck Terminal (115.44 Ha) was conceived to decongest Island City. It was proposed along with the Inter State Bus Terminal (ISBT), to create parking for trucks which are parked in Mumbai in areas such as Masjid Bunder, Wadi Bunder and Carnac Bunder as well as along the Western and Eastern Express Highways. However, the truck terminal could not develop as intended. Instead, MMRDA, appointed SPA in 2005, is exploring other possibilities of residential and commercial development.

2.6.5 Dharavi Notified Area

SRA was initially appointed as SPA for Dharavi Notified Area (DNA) admeasuring 178 ha in 2005. Later, 62 ha were added to DNA in 2009. SRA has published draft planning proposals for DNA in 2013. The anticipated population is 437,630. The basic strategy is to provide a 300 sq ft. dwelling unit to all eligible slum dwellers by offering incentive FSI for sale to potential investor. Unlike SRA scheme, all 5 sectors will be taken up for renewal by selecting an investor through a transparent bidding process by SRA.

2.6.6 Mumbai (CS) International Airport

On privatization of airport, the MMRDA was appointed as SPA for the Mumbai International Airport Notified area in 2009.

2.6.7 Gorai Manori Uttan Recreation and Tourism Development Zone (RTDZ)

Measuring 43.13 sq km, it includes 8 villages and falls within the jurisdiction of two municipal corporations- Greater Mumbai (19.52 sq km) and Mira Bhayander (23.61 sq km).

2.6.8 Marol Industrial Area and SEEPZ

SEEPZ (111 acres) was set up in 1973 exclusively for electronics hardware manufacturing. Later Software Development and the Gems & Jewellery companies were also permitted. SEEPZ was converted into an SEZ in 2000. Land and Built up spaces are offered on lease by MIDC. There are several Standard Design Factories, Gems & Jewellery Factories, towers and multi-storied buildings within SEEPZ. An export-manufacturing hub, SEEPZ-SEZ has a Business Facilitation Centre and an in-house Customs clearance facility to enable easy export of goods.

2.6.9 Dr. Babasaheb Ambedkar Memorial

The Indu Mill Compound has been allotted for Dr. Babasaheb Ambedkar Memorial and MMRDA has been appointed as its SPA. It measures 4.77 Ha.

2.7 Significant Regional Planning Initiatives since 1991

Several significant regional planning initiatives have been undertaken since the DP 1991 apart from the Regional Plan 1996.

1. Business Plan for MMR 2021 - by MMRDA (2007): Provides forecasts of economy, population, employment, infrastructure demand and investment needs, and financing plan.
2. Comprehensive Transportation Study for MMR, MMRDA (2008): The report includes findings of household survey covering 66,000 households carried out in 2005, forecasts of population and employment for 2016, 2021 and 2031 and scenario of geographic distribution of population and employment at various levels of geographical disaggregation the finest being over 1000 TAZs (Traffic Analysis Zones) for MMR.
3. Master Plan for Metro Network: MMRDA by using the services of DMRC, prepared Master Plan of Metro Network for Greater Mumbai in 2008.
4. Concept Plan 2054: MTSU on behalf of MMRDA prepared a long term Concept Plan in 2011. The Plan proposed polycentric growth for the MMR with Greater Mumbai retaining its primacy. However, this Concept Plan has no statutory backing.

2.8 Significant Regional Development Initiatives

Other significant developments in the MMR, likely to impact Greater Mumbai, include the following:

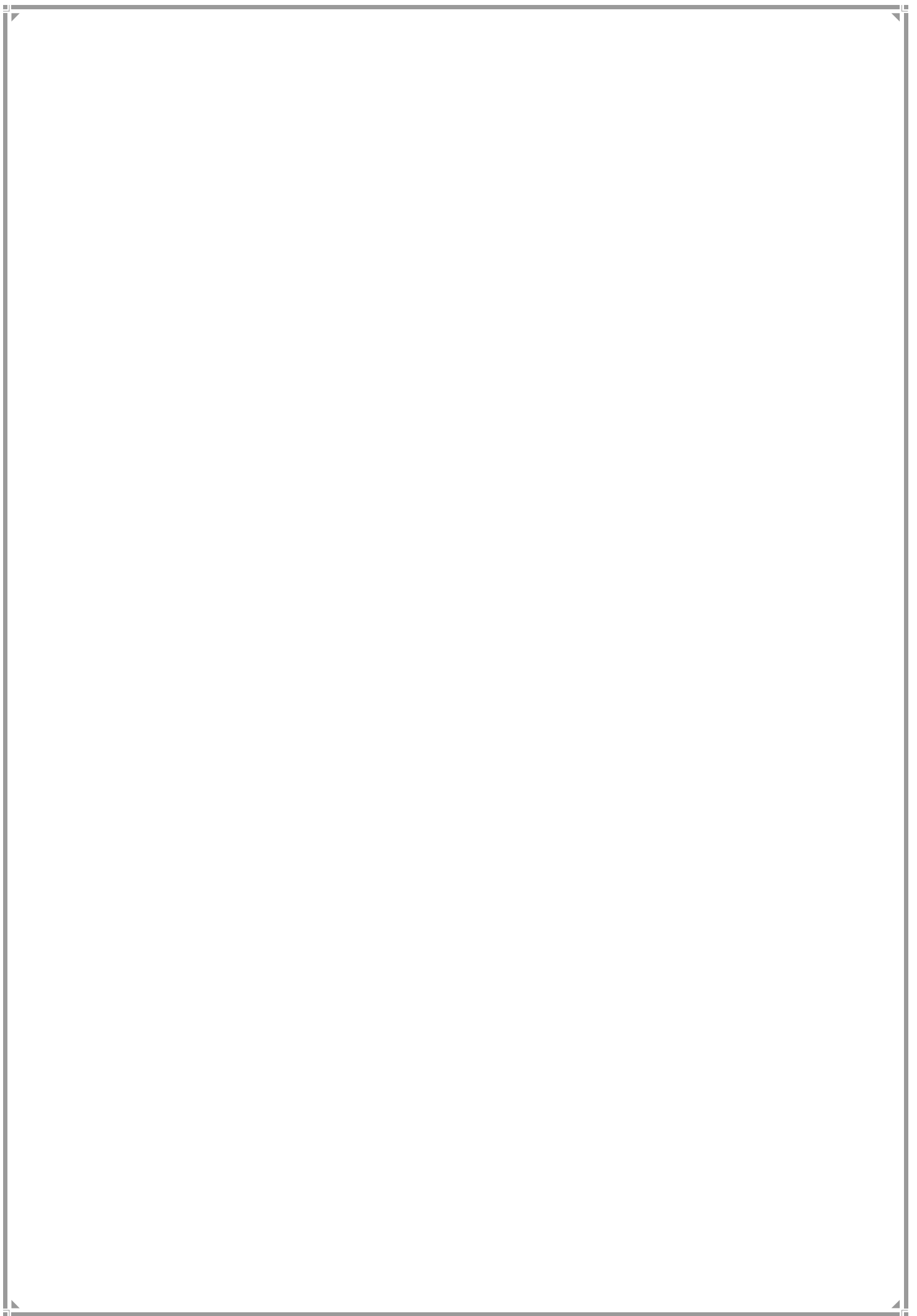
1. Navi Mumbai International Airport and Navi Mumbai Airport Influence Notified Area (NAINA): A second international airport is planned to be developed in Navi

Mumbai. CIDCO has been appointed SPA for NAINA which encompasses an area of about 20 km radial distance around the proposed airport. CIDCO is currently engaged in preparing DP for this area.

2. Delhi- Mumbai Industrial Corridor (DMIC): This USD 90 billion mega infrastructure project having a length of 1,483 km, is being implemented with financial and technical aid from Japan. A multi-modal high axle load dedicated freight corridor (DFC) is being established between Delhi and Mumbai with end terminals at Dadri JNPT. A 150 km band on either side (influence zone) is being developed as DMIC. An estimated 180 million people, 14 percent of the population, are to be affected by the corridor's development, envisaged to majorly impact Mumbai and MMR.
3. Bengaluru-Mumbai Economic Corridor (BMEC): This 1000 km corridor to be developed by the Government of India in partnership with UK would have an influence area spread across the states of Karnataka and Maharashtra .The Project would be a well-planned, resource-efficient industrial base served by sustainable connectivity infrastructure, bringing significant economic benefits to the two states. The BMEC project would in all likelihood have a major influence on freight traffic at the JNPT and MbPT ports, the coast line of Maharashtra and Mumbai and spur development of dry ports in the MMR. Given this growth impetus at JNPT, implementation of the MTHL may spur development at the Sewri junction at Greater Mumbai.

Chapter 3

EXISTING LAND USE



CHAPTER 3

EXISTING LAND USE

The Existing Land Use (ELU) Map 2012, a key component of the DP 2034 plan preparation process (mandated under Section 25 of the MR&TP Act, 1966), was prepared based on an exhaustive Existing Land Use survey that recorded existing land uses in Greater Mumbai. The land uses were mapped on the GIS platform so as to create an integrated database of existing spatial and non-spatial data.

3.1 Existing Land Use Classification

For the Existing Land Use Map, several categories and sub-categories of land uses were listed along with utilities and amenities that were then recorded and mapped during the ELU survey. In addition, colour codes for representation during the mapping of these land use categories were finalized with reference to the DP 1991. These are detailed below.

Main Land Uses: There are significant changes since the DP 1991 in both the categories as well as the nature of classification used for the ELU 2012. The Main Land Use Categories have been illustrated below along with the respective codes and sub codes that have been used to denote them in the Existing Land Use Map.

3.1.1 Creation of GIS Base Map

The Base map is formed through a series of overlays of spatial data layers as provided by MCGM on a base layer of the Quick Bird satellite image. The following is a description of the components used in the base map preparation:

a) Base layer - The Quick Bird high-resolution satellite image (0.61m resolution) of the MCGM jurisdiction, provided by MCGM for the year 2012, has formed the base layer of the Base Map.

b) Data layers - Several layers available in the database provided by MCGM were used as overlays on the Quick Bird satellite image of the area under MCGM, to create the Base Map. These include:

- *Jurisdiction boundaries:* Ward boundaries, areas under Special Planning Authorities, Town Planning Schemes, and other boundaries of spatial disaggregation (detailed later);
- *Physical features:* Street blocks, buildings, property (cadastral parcels as far as data is available);

- *Transportation:* highways, roads, road centrelines, railways, railway stations, airport boundary, water based transportation facilities, BEST bus depots/bus stations, and all other transportation infrastructure parcels and networks;
- *Utility infrastructure:* High tension lines, water pipelines (visible above ground), sewage and solid waste management facilities, etc.;
- *Environmentally sensitive areas:* National park, forests, hills, nallas, water bodies etc.
- *Heritage Conservation areas:* Designated heritage structures and precincts.

3.1.2 Spatial Disaggregation

To form the base map, various levels of disaggregation present within MCGM area were considered. These were 2 District boundaries (Island City and Suburban), 3 Zones (Island City, Eastern and Western Suburbs) and 24 Administrative Ward boundaries. Apart from the above, several other spatial divisions exist within MCGM area, which include Census Sections, Electoral Wards, Traffic Analysis Zones, Zones and Sub-zones of the Ready Reckoner as well as the Areas under Special Planning Authorities (SPAs).

The 88 *Census Sections* are delineated by the Office of Registrar General and Census Commissioner, GoI, Ministry of Home Affairs for the purpose of Census data. The data from this level have been effectively used as reference for verifying distribution of population across various levels of disaggregation (Zones, administrative Wards, and Planning Sectors).

The 227 *Electoral Wards* are created by the Election Commission of Maharashtra for conducting general elections and election of comparators through municipal elections. The electoral Ward boundaries have been superimposed on the Ward boundaries to check for conformity issues. However, these have not been directly used for analysis.

The 577 *Traffic Analysis Zone Sections* (TAZ) within MCGM (out of total 1030 in MMR) as devised by the Comprehensive Transport Study (CTS) for MMR for assessment of travel demand. The data from these TAZ have been used in situation analysis for population, employment and transport systems at Ward levels for 2005 and 2011.

The *Ready Reckoner* has 124 subzones based on village boundaries for land and property price data. This data is used to derive DP implementation cost and revenue mobilization.

GoM has appointed **SPAs** for areas within Greater Mumbai, notified under Section 40 of the MR&TP Act. These areas together account for an area of 43.22 ha as per the Existing Land Use report.

3.2 Existing Land Use

The ELU 2012 provides information regarding the various current uses of land and the extent of development since the publication of the DP 1991. Based on the ELU 2012, an assessment of the various land uses and their distribution across the various Wards of the City was done

at the level of Greater Mumbai, followed by Ward level. FSI mapping was also undertaken for the entire city to understand the extent of FSI consumed. A GIS database has been created which includes spatial and non-spatial data pertaining to demography, population, employment, land use, environment, social infrastructure and physical infrastructure and existing FSI. The land use distribution along with analyses of Transport Networks, Employment, Environment and Population dynamics helped assess general growth trends, determine areas of opportunity and generate future scenarios. The ELU 2012 also provided data on existing open spaces, social amenities, transport and other physical infrastructure in Greater Mumbai, the level of DP 1991 implementation as well as gap assessment of amenities.

3.2.1 Land Use Distribution

Greater Mumbai's total area admeasures 458.28 sq km. However, the DP for Greater Mumbai excludes SPA area and was prepared for 415.05 sq km. A mangrove area of 14.96 sq km in Thane Creek has emerged, but was not considered in calculations since it was beyond MCGM boundary. The ELU survey reveals that only 65.34% (271.17 sq km) of the Planning Area of Greater Mumbai is developed, whereas 34.66% is undeveloped. The undeveloped area includes Natural Areas, Vacant Lands, Plantations and Salt Pans. Of the Developed Area, 38.08% is occupied by Residential uses, 8.27% by Industrial uses, 3.36% by Commercial uses & 1.33% by Offices. Amenities constitute 5.63%, Open Space 5.67% and Public Utilities & facilities 2.56%. Transport & Communication facilities constitute 19.57%, Roads occupy 13.79% of developed area and Railways occupy 2.97%. Together 33.43% of the developed area is under Amenities, Open Space, Public Utilities and Transport.

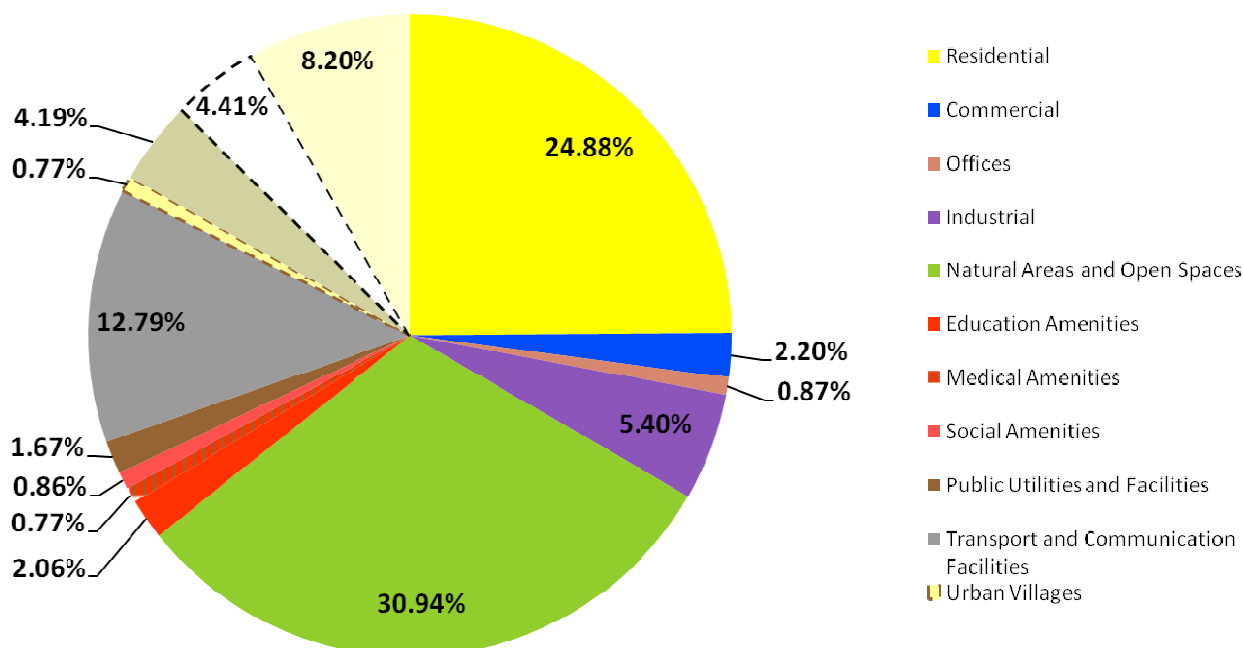
Table 3.1: Existing Land Use distribution for Greater Mumbai 2012 Source: ELU 2012

Existing Land Use Categories (2012)	Greater Mumbai			
	Area (ha)	% of Total Area	Per Capita Area (sq.m)	% of Developed Area
Residential	10,327.09	24.88	8.30	38.08
Commercial	911.46	2.20	0.73	3.36
Offices	360.96	0.87	0.29	1.33
Industrial	2,242.88	5.40	1.80	8.27
Open Spaces	1,537.78	3.70	1.24	5.67
Education Amenities	853.81	2.06	0.69	3.15
Medical Amenities	318.44	0.77	0.26	1.17
Social Amenities	355.81	0.86	0.29	1.31
Public Utilities and Facilities	693.43	1.67	0.56	2.56
Transport & Communication Facilities	5,306.92	12.79	4.27	19.57

Existing Land Use Categories (2012)	Greater Mumbai			
	Area (ha)	% of Total Area	Per Capita Area (sq.m)	% of Developed Area
Urban Villages	318.42	0.77	0.26	1.17
Primary Activity (P1, P3, P4, P5, P6, P7)	939.22	2.26	0.75	3.46
Unclassified	1,829.77	4.41	1.47	6.75
Vacant Land (only under Construction)	1,121.97	2.70	0.90	4.14
DEVELOPED AREA	27,117.95	65.34	21.79	100.00
UNDEVELOPED AREA				
Natural Areas	11,303.82	27.23	9.08	
Vacant Land (excluding under construction)	2,282.82	5.50	1.83	
Primary Activity (P2, P8)	801.11	1.93	0.64	
UNDEVELOPED AREA	14,387.75	34.66	11.56	
TOTAL PLANNING AREA	41,505.71	100.00	33.36	
Area under Special Planning Authority	4,322.79	9.43		
TOTAL MCGM AREA	45,828.50			

Note: Primary activities under the Developed Areas include – P1 (Fishing / Drying Yard), P3 (Dairy), P4 (Buffalo Stables), P5 (Cattle Pounds), P6 (Quarry), and, P7 (Dhobi Ghat). Primary activities under the Undeveloped Areas include – P2 (Plantation), and, P8 (Salt Pan Lands).

Figure 3.1 Existing Land Use distributions, 2012



3.2.1 Existing Land Use 2012

The current distribution of land uses as per the ELU 2012 indicates some development patterns which are in accordance with proposals of DP 1991, while some others have not yet been actualized. New land use patterns have also emerged.

- Of the total Development Plan Area (415.05 sqkm), 271.17 sqkm or 65 % is developed area;
- A more pronounced polycentric pattern has developed with multiple nuclei that function as employment nodes;
- The Oshiwara and Kanjurmarg District Centres in the Eastern Suburbs have not been realised;
- Development continues to be structured along corridors, largely along transport network.
- However, in the Western Suburbs, in Wards K/W, K/E, P/N, R/C, R/S, areas in proximity to railway corridors have developed into new mixed use centres, eg. areas surrounding Andheri, Goregaon, Malad and Borivali Railway Stations.
- Major transport networks such as Worli Sea-Link, Jogeshwari-Vikhroli Link Road, Santacruz-Chembur Link Road, Eastern Freeway are completed. The Coastal Road has been approved;
- Areas around Lower Parel-Elphinstone Road have emerged as places of new office concentration through redevelopment of erstwhile Textile Mills. Industrial Areas are

transforming into residential and Commercial Areas. Andheri-Kurla Road has emerged as a concentration of IT, ITES activities through transformation of Industrial Areas;

- Older Residential Areas are being more intensely redeveloped as mixed use areas;
- Greater Mumbai predominantly comprises a mixed land use, including residential, commercial and office uses. Commercial and Office Land Use centralities are primarily found along road infrastructure and in proximity to existing transit stations. Several areas presently occupied by Industrial Land Use, areas occupied by old dilapidated structures in Cessed Areas and large slums demonstrate a potential for transformation;

The current development patterns observed in the four distinctive Land Uses as per ELU 2012 are detailed below:

3.2.2 Residential Uses: A context of mixed land uses

The northernmost Suburbs are more residential while the Island City has a smaller residential land allocation. Formal and informal markets co-exist and are concentrated around railway stations. The ELU 2012 for Western Suburbs of Malad and Dahisar (wards P/N, R/N respectively) and in the Eastern Suburbs of Mulund, Ghatkopar and Chembur-Govandi (T, N and M wards respectively) indicates that these are predominantly residential in use. Industrial uses in these Wards have transformed into high income residential cum retail and entertainment hubs. In the Western Suburbs, the residential development is hemmed in by Natural Areas, and seems wedged in by the sea and the coastal zone on the west and the National Park on the east. In the Eastern Suburb of Govandi (M/E ward), there has been a significant introduction of slum resettlement projects.

As explained earlier, the ELU 2012 incorporates several sub categories for Residential uses, viz., single family dwelling, and multifamily apartments, chawls, Govt. Housing and slums. Of these, the Multi Family Apartments display predominance in occupancy of land in Greater Mumbai, followed by the slums. The ELU 2012 shows significant slum settlements in Malad, Kandivli, Andheri (E) and Bandra -Khar -Santacruz (E) (wards P/N, R/S, K/E, H/E respectively) in the Western Suburbs and in all the Eastern Suburbs – Kurla, Chembur, Govandi, Ghatkopar and Bhandup (Wards L, M/W, M/E, N and S with the exception of Mulund, the T ward). Chawls predominantly occupy the Island City. Urban Villages comprising Gaothans and Koliwadass, that are mainly Residential Areas, constitute 0.77% of the developed Area.

3.2.3 Commercial Use

The spatial structure for Commercial Land Use reflects the growth strategy of the Regional Plan 1973 and the DP 1991 of promoting polycentric development. While Nariman Point-Fort, Worli and Bandra Kurla Complex are established centralities for Commercial-Office use, the cluster formed by Prabhadevi - Lower Parel, SEEPZ - Andheri - Powai are also emerging as strong office areas with a mix of Residential uses. LBS Marg – Ghatkopar - Vikhroli areas are other emerging Commercial Areas. New office and commercial centres have developed in Bandra (E), Andheri (E), Lower Parel, Malad and Powai-Kanjurmarg-Bhandup (Wards H/E, K/E,

G/S, P/N, S respectively). Large retail and entertainment hubs have emerged in Andheri (W), Malad, Kurla, Ghatkopar (Wards K/W, P/N, L, N respectively). The mill areas around Parel (in Wards G/S, F/S) reflect a mix of office-commercial use forming a significant node.

3.2.4 Industrial Use

There is an increase of service sector activities in Greater Mumbai and a decrease in manufacturing and industry. However, Industrial Land Use in Greater Mumbai has not transformed in significant quantum to non-industrial use. Industrial properties abutting major roads have transformed into commercial uses while inner streets persist in industrial activity. The Commercial use along the major roads may serve as catalysts to spawn Land Use change towards the interior. The existing Suburban Rail linkages (Western and Central lines), proposed metro and mono rail alignments and road networks that link areas along the East-West alignment are likely to encourage consolidation of the City's mixed-use character. Transformation of Mill lands and industrial uses into retail and entertainment is observed in the Island City in Lower Parel. In the Suburbs other industrial uses along LBS Marg in Kurla, Ghatkopar, Powai, Mulund and S.V. Road and Link Road have also converted into office and residential uses. Conversion of Industrial Areas into commercial-office areas is very visible in case of Textile Mills or along Andheri Kurla Road.

3.2.5 Natural Areas

The ELU 2012 shows presence of 27.87% of Natural Areas. These include the Sanjay Gandhi National Park, mangrove forests, mud flats and creeks. Almost all of these natural areas are equally distributed between the Eastern and Western Suburbs. Only about 1% of the natural area is located in the Island City. Some of the natural areas were included in the No Development Zone of DP 1991. The NDZ also included water bodies, primary activity areas like plantations and saltpans and some areas where low density/low FSI development was permissible.

3.2.6 Cessed Buildings

The housing stock in the Island City is an aging stock with several buildings over a hundred years old. The Bombay Buildings Repair & Reconstruction Board (BBRRB) was created under the BBRB Act 1969 to deal with dilapidated buildings in the Island City of Bombay and make them safe for habitation. A repair cess was levied on rent controlled residential buildings as per the BBRB Act. Consequently, these buildings are called 'cessed buildings', numbering 19,642 in 1969. The BBRRB was later merged under MHADA in 1976. In 2008, according to MHADA there were 16,104 cessed buildings in Mumbai. Various FSI concessions have been extended to promote redevelopment of cessed Buildings.

3.2.7 Heritage Buildings and Precincts

a. Archaeological Sites. Greater Mumbai has a rich historical past pre-dating the Christian era. In Greater Mumbai, there are seven monuments which are notified as protected monuments under The Ancient Monuments and Archaeological Sites and Remains Act, 1958.

These are,

- Sion fort, along with all ancient Portuguese remains of buildings situated to the north, east and south-east sides of the hill, Ward F-North,
- Monolithic Bas relief depicting Shiva, Parel, Ward F-South
- Jogeshwari caves, Majas, Ward K-East
- Kondivate Caves (Mahakali caves) Ward K East
- Buddhist caves, Kanheri, Ward R-Central
- Mandapeshwar caves, Ward R-North
- Old Portuguese Churches, Ward R-North
- Portuguese Monastery over Mandapeshwar Cave & large watch tower on the adjoining hill, Mandapeshwar, Ward R-North

The Ancient Monuments and Archaeological Sites and Remains Act, 1958 mandates that a 100-meter distance be left around the monument as prohibited area and 200 meter after the first 100 meters as a regulated development zone. While the Kanheri Caves are well protected due to their location within a protected area like the National Park the other sites are engulfed by urban development. It is clear that except for Kanheri Caves, and Sion Fort (to some extent), all the monuments are located in the midst of urban development. Many of these are already overshadowed by the development that has taken place around them.

Listed Heritage buildings and precincts

According to the Heritage Regulations of 1995, 609 buildings have been listed as heritage buildings and 33 precincts have been identified as heritage precincts in Greater Mumbai. They are concentrated in the Island City. The buildings have been graded as either Grade I or Grade II or Grade III structures, based on the significance of the individual structure. The grading also reflects the level of change allowed in each category. The Grade I list includes an elite group of 48 entries that are acknowledged as the most significant heritage structures in the city. The existing Heritage list is currently undergoing revision and a new Draft list of Heritage buildings and precincts has been published. The suggestions and objections phase is currently underway before the list gets notified. These are appended on MCGM website.

Table 3.2: Heritage buildings and precincts

Heritage Buildings	No.
Grade I	41
Grade II A	166
Grade II B	122
Grade III	252
Total	609
Listed Heritage precincts in the city – 33	

Table 3.3: Existing Land Use of listed heritage properties

Land use	Area (%)
Residential + Urban Villages	23.52
Commercial + Offices	6.42
Industrial	1.12
Social Amenity	11.94
Natural Areas & Open Spaces	29.92
Public Utility & Facilities	0.76
Transport & Communications	5.88
Others	20.46
Total	100.00

3.2.8 Area under Coastal Regulation Zone

According to the approved CZMP prepared under CRZ Notification, 1991 of MoEF, the coastal stretches of Greater Mumbai are divided into following three zones.

1. *CRZ-I*: In case of Mumbai this is essentially an area between the Low Tide Line and High Tide Line. The North West coastal area like Gorai, Uttan, areas around Manori river, area where Mithi river meets Mahim creek and on eastern side Godrej Vikroli grassland and mangrove forest along Thane creek etc are demarcated as CRZ-I, which is environmentally sensitive zone. This CRZ-I area covers 40.44 sq. km in Greater Mumbai. In addition to this, areas along coastal road and allied open space reservations are the new proposals within CRZ-I.
2. *CRZ-II*: This is a coastal area within 500m buffer from sea and 100 m or equal to the width of the creeks whichever is lesser that is already developed. The development is permissible in this zone only on landward side of the existing road or structure, provided the land use and FSI remain same as permissible prior to 13th Feb. 1991. CRZ-II covers 43.48 sq. km of area in Mumbai.
3. *CRZ-III*: It includes areas that are relatively undisturbed and those do not belong to either CRZ-I or II which include coastal zone in the rural areas (developed and undeveloped) and also areas within municipal limits which are not substantially built. Within CRZ-III area up to 200mts from HTL on the landward side in case of seafront and 100 m along tidal influenced water bodies or width of the creek whichever is less is earmarked as “No Development Zone (NDZ)”. CRZ-III covers 13.14 sq.km area in Mumbai. Significant CRZ-III area is located on North Western edges of the MCGM and some parts along Thane creek.

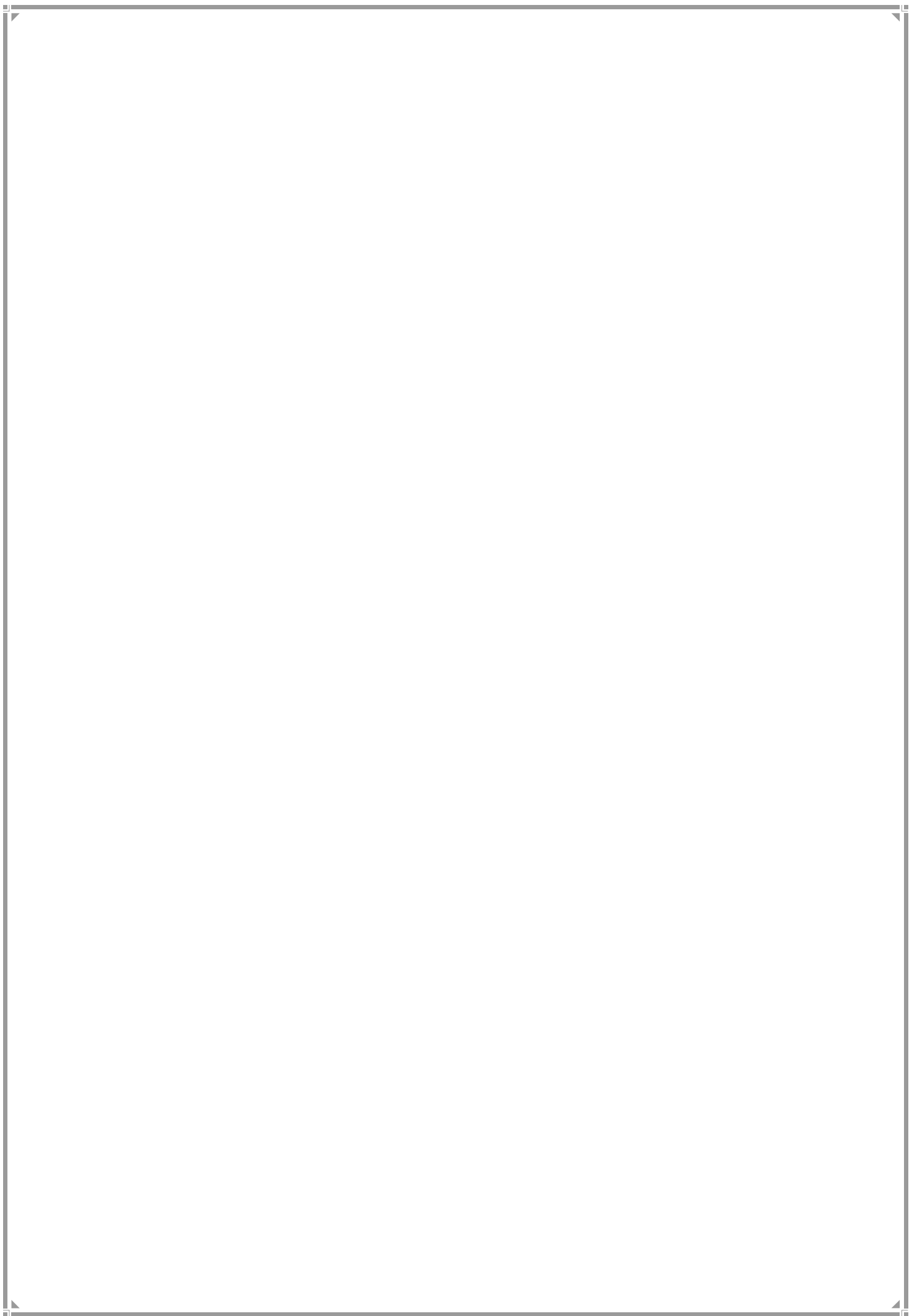
Table 3.4: Greater Mumbai: Total area under CRZ I, II & III

Zone	Total Area (Ha)	Area within CRZ (Ha)	Area within CRZ (%)
Island City	6,480.56	2,418.09	37.31
Western Suburbs	18,736.89	5,932.38	31.66
Eastern Suburbs	16,228	2,573.85	15.86
Greater Mumbai	41,505.71	10,924.32	26.32

Table 3.4 reveals that 26.32% of the total area of Greater Mumbai is affected by CRZ. About 37.31% of the total area of the Island City, 31.66% of the total area of the Western Suburbs and 15.86% of the total area of the Eastern Suburbs are affected by different types of CRZ. A new CZMP is to be prepared under a new CRZ Notification, 1991 of MoEF. However, the revised HTL and Hazard Line as specified in the notification are not yet available.

Chapter 4

POPULATION



CHAPTER 4

POPULATION

4.1 Population: Declining Decadal Growth Rate

The population of Greater Mumbai recorded in the **2011 Census** is **12.44 million**. Since 1991, the growth rate of the population of Greater Mumbai has reduced significantly. In 1991 the decadal growth rate dropped to 20.41 % from 38.07% in 1981. This further dropped sharply to 3.87% in 2011.

Table 4.1: Decadal population variation, Greater Mumbai

Census Year	Population	Decadal Variation	Percentage Decadal Variation
1901	927,994	--	--
1911	1,148,757	220,763	23.79
1921	1,380,448	231,691	20.17
1931	1,397,812	17,364	1.26
1941	1,801,356	403,544	28.87
1951	2,994,444	1,193,088	66.23
1961	4,152,056	1,157,612	38.66
1971	5,970,575	1,818,519	43.80
1981	8,243,405	2,272,830	38.07
1991	9,925,891	1,682,486	20.41
2001	11,978,450	2,052,559	20.68
2011	12,442,373	463,923	3.87

Source: Census of India, 2001 and 2011

A comparison of the population trends in the Island City and the Suburban District indicates that the population in the Island City has reached near stability or marginal reduction since 1981. The absolute population in 2011 was recorded at about 3.08 million as against 3.28 million in 1981. On the other hand, the population in the Suburban District has grown consistently. It recorded a figure of 9.35 million in 2011 against 4.95 million in 1981. However, the decadal growth rate in the suburbs has recorded a decline from 70.97% in 1981 to 8.29% in 2011.

Table 4.2: Population and decadal growth of Island City and Suburban District: 1961 – 2011

Census Year	Island City			Suburbs		
	Population	Decadal Variation	% Decadal Variation	Population	Decadal Variation	% Decadal Variation
1961	2,771,933	442,913	19.02	1,380,123	714,699	107.41
1971	3,070,378	298,445	10.77	2,900,197	1,520,074	110.14
1981	3,285,040	214,662	6.99	4,958,365	2,058,168	70.97
1991	3,174,889	-110,151	-3.35	6,751,002	1,792,637	36.15
2001	3,338,031	163,142	5.14	8,640,419	1,889,417	27.99
2011	3,085,411	-252,620	-7.57	9,356,962	716,543	8.29

Source: Census of India, 2001 and 2011

4.2 Population Distribution

Within Greater Mumbai, the population of the Suburban District is larger than that of the Island City. Further, the share of Suburban population has been increasing consistently since 1981 with City population showing the opposite trend.

Table 4.3: Percentage share of population in Greater Mumbai: 1981 – 2011

Area	Percentage of Population to Total Population			
	1981	1991	2001	2011
Island City	39.85	31.99	27.87	24.79
Suburbs	60.15	68.01	72.13	75.21
Greater Mumbai	100	100	100	100

Source: Census 1981-2011

4.2.1 Ward Wise Population Distribution

The ward wise population for 2001 and 2011 is given below. The absolute population in the Island City has decreased while that in the Suburbs, both Eastern and Western has increased. The population is inclusive of SPA population.

Table 4.4: Ward wise Population of Greater Mumbai in 2001 and 2011

Zones	Wards	Area (ha)	Population 2001	Population 2011	Gross Density 2001 (pp ha)	Gross Density 2011 (pp ha)
Island City	A	1121	210,847	185,014	188	165
	B	266	140,633	127,290	529	479
	C	191	202,922	166,161	1061	869
	D	830	382,841	346,866	461	418
	E	717	440,335	393,286	614	548
	F/N	1,201	524,393	529,034	437	441
	F/S	965	396,122	360,972	410	374
	G/N	876	582,007	599,039	664	684
	G/S	929	457,931	377,749	493	407
	Total	7,097	3,338,031	3,085,411	470	435
Western Suburbs	H/E	1,289	580,835	5,63,445	451	437
	H/W	865	337,391	3,01,375	390	348
	K/E	2,400	810,002	823,885	338	343
	K/W	2,442	700,680	748,688	287	307
	P/N	4,672	798,775	941,366	171	202
	P/S	2,529	437,849	463,507	173	183
	R/C	4,803	513,077	562,162	107	117
	R/N	1,418	363,827	431,368	257	304
	R/S	1,831	589,887	691,229	322	377
	Total	22,249	5,132,323	5,527,025	231	248
Eastern Suburbs	L	1,556	778,218	902,225	500	580
	M/E	3,389	674,850	807,720	199	238
	M/W	1,740	414,050	411,893	238	237
	N	2,535	619,556	622,853	244	246
	S	2,975	691,227	743,783	232	250
	T	4,288	330,195	341,463	77	80
	Total	16482	3,508,096	3,829,937	213	232
Greater Mumbai	45828	11,978,450	12,442,373	261	272	

*Census 2011 Population for Wards H/E and H/W has been updated to reflect the change in Ward boundaries of these Wards.

The Ward P/N in the Western Suburbs has the highest population of nearly one million among all 24 wards, holding 7.5% of the total population. Ward B in Island City on the other hand, has the lowest population of 127,290 among all 24 Wards.

4.2.2 Slum Population

In 2001 the slum population in Greater Mumbai constituted 52.52% of the total population (excluding the areas notified under SPAs). In 2011 this figure came down to 41.85% (including the areas notified under SPAs). However, the extent of slums has increased as per satellite images. Slums are mostly located along watercourses/creeks, on precarious hillsides, in low-lying areas, on the periphery of forests and along railway tracks. Majority of them are in wards L, M/E.

Table 4.5: Ward wise slum population of Greater Mumbai in 2001 and 2011

Ward Name	Slum Population (2001)	Slum Population (2011)
A	60,893	63,400
B	18,746	14,400
C	0	0
D	38,077	33,000
E	52,230	77,800
F/N	304,500	308,400
F/S	141,653	95,200
G/N	324,886	189,600
G/S	151,506	78,300
Island city	1,092,491	860,100
H/E	457,622	241,006
H/W	138,541	112,294
K/E	472,226	403,800
K/W	316,065	108,800
P/N	508,435	504,500
P/S	210,591	264,000
R/C	173,160	104,300
R/N	169,662	221,500
R/S	326,235	399,200
Western Suburb	2,772,537	2,359,400
L	658,972	490,400

Ward Name	Slum Population (2001)	Slum Population (2011)
M/E	523,324	245,300
M/W	283,557	217,200
N	435,009	385,600
S	593,300	537,900
T	116,250	111,800
Eastern Suburb	2,610,412	1,988,200
Greater Mumbai	6,475,440	5,207,700

4.3 Work Force

The total worker participation rate in Mumbai has been consistent between 35-40% since 1961. The male participation rate has been steady at between 55-61%. Despite a steady increase in female participation rate from 8.81% in 1961 to 16.38% in 2011, a large gap in male/female rates continues.

Table 4.6: Worker participation rates in Mumbai

Census	Work Participation Rate %			
	Year	Total	Male	Female
1961		40.62	61.73	8.81
1971		36.82	57.66	7.72
1981		35.21	55.45	8.97
		[0.51]	[0.59]	[0.41]
1991		35.25	55.08	11.02
		[0.65]	[0.76]	[0.52]
2001		37.27	56.87	13.06
		[2.02]	[2.59]	[1.32]
2011		37.98	56.38	16.38
		[2.36]	[2.65]	[2.02]

Source: Census of India 1961-2011

As per Census 2011 data, out of the 5,019,419 resident workers, the Island City has 1,284,396 while the Suburban District has 3,735,021 workers.

4.4 Sex Ratio

As per Census 2011, the overall sex ratio of Greater Mumbai is 853, lower than the State average of 925 and the National average of 940. The figure has grown from 809 in the 2001 Census. The ratio for population below the age of 6 is 913, higher than the State average of 883 and in line with the National average of 914. This ratio has however declined from the figure of 922 recorded in 2001.

Table 4.7: Sex Ratio*

	Overall Sex Ratio				Sex Ratio below 6 years		
	Ward	Census 2001	Census 2011*	Increase between 2001 and 2011	Census 2001	Census 2011*	Increase between 2001 & 2011
Island City	A	733	828	95	910	903	-7
	B	735	807	72	935	907	-28
	C	587	695	108	921	911	-10
	D	863	896	33	911	910	-1
	E	755	820	65	917	920	3
	F/N	791	855	64	927	918	-9
	F/S	831	892	61	902	886	-15
	G/N	800	809	9	932	938	6
	G/S	773	809	36	931	899	-32
	Island City	763	832	69	921	914	-7
Western Suburbs	H/E	800	822	22	931	918	-13
	H/W	894	902	8	937	930	-7
	K/E	837	870	33	931	918	-14
	K/W	847	865	18	924	916	-9
	P/N	819	855	36	925	909	-16
	P/S	791	858	67	917	924	7
	R/C	892	944	52	907	905	-2
	R/N	821	846	25	892	893	2
	R/S	760	822	62	912	901	-12
	Western Suburbs	829	862	33	907	912	5
Eastern Suburbs	L	760	802	42	924	915	-9
	M/E	801	850	49	941	920	-21
	M/W	829	893	64	927	909	-18
	N	855	873	18	913	912	-1
	S	822	865	43	916	909	-7

	Overall Sex Ratio				Sex Ratio below 6 years		
	Ward	Census 2001	Census 2011*	Increase between 2001 and 2011	Census 2001	Census 2011*	Increase between 2001 & 2011
	T	894	938	44	920	908	-12
	Eastern Suburbs	827	857	30	925	914	-11
	Greater Mumbai	809	853	44	922	913	-9

*Note: Ward boundaries are marginally revised after publication of Census 2011. The implications on the Sex Ratio can only be recorded in Census 2021.

4.5 Literacy Rate

The districts of Greater Mumbai lead the State in literacy rates. Mumbai City recorded 89.2 and Suburban Mumbai 89.9. Female literacy rates are slightly lower at 86.5 and 86.4 respectively.

4.6 Decreasing Household Size

The average household size in Greater Mumbai has reduced from 4.8 in 2001 to 4.4 in 2011.

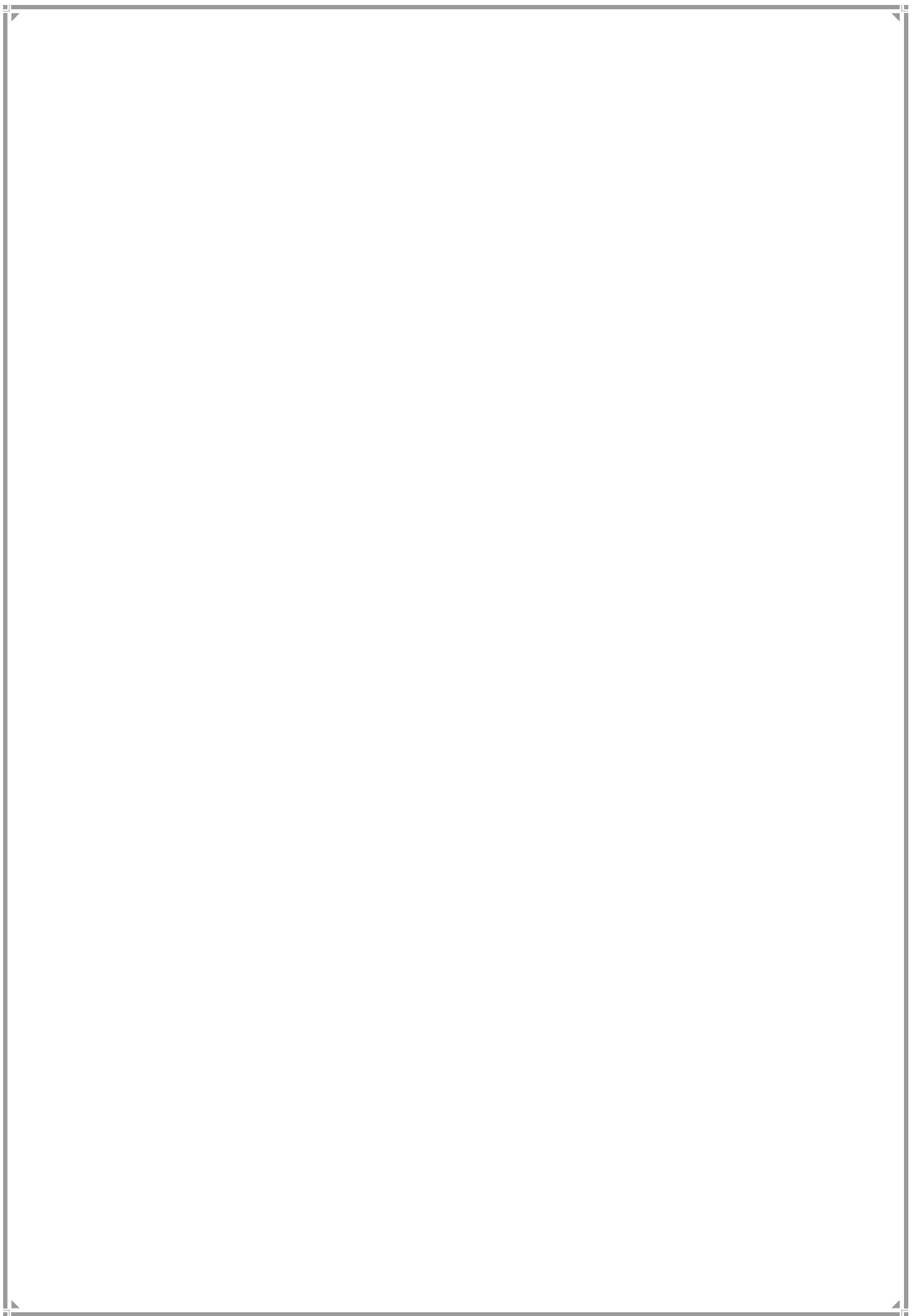
Table 4.8: Distribution of number of households in Greater Mumbai: 2001 - 2011

District	No. of Households (Census)		Average Household Size	
	2001	2011	2001	2011
Island City	677,163	706,595	4.9	4.6
Total Suburbs	1,838,426	2,130,451	4.7	4.4
Greater Mumbai	2,515,589	2,837,046	4.8	4.4

Source: Census of India, 2001 and 2011

Chapter 5

ECONOMY



CHAPTER 5

ECONOMY

5.1 Greater Mumbai's Primacy as Financial Centre of India

Greater Mumbai's economy has transformed over time from a major trading port to a manufacturing hub (particularly famous for textiles) and then into a services and financial centre. While the decline of the textile industry was due to a variety of factors, the intention of the Government to decongest the City and to disperse industrial activity saw re-location of many manufacturing units.

Further, with the unleashing of economic reforms in 1991, new economic opportunities were opened up in sectors such as IT & ITES, entertainment, hospitality, banking, financial services and insurance. Mumbai which already had a firm base in some of these sectors established its leadership in these new services activities. Many economic indicators such as banking transactions, stock exchange trading volumes, tax revenue share, and foreign investors' presence all testify to the City's dominance of these spheres. These have led to ambitious plans for establishing Mumbai as an International Financial Centre.

5.2 A Review of National & State Government Policies Post DP 1991

Several policies at the Central and State levels pertaining to the location of industries, the location of offices and Special Economic Zones since the DP 1991 have guided the economic transformation of the City.

5.2.1 Central Government Policies on Location of Industries

The New Industrial Policy was introduced in 1991 to help Indian industry to modernize, increase productivity and competitiveness. Incentives were given to start industries in backward areas. In million plus cities, no locational clearance was necessary for setting up industry within the industrial area designated prior to 24th July 1991 or any location beyond 25 kms from the periphery of these cities. This was further relaxed for non-polluting industries such as electronics, computer software and printing. Industrial location would continue to be regulated by the local zoning and land use regulations and environmental legislations.

The Government of India passed the Special Economic Zones Act in 2005 with a view to promote SEZs as drivers of economic growth in the country. The main objectives were to generate economic activity, promote exports, create employment opportunities and develop infrastructure. It laid down the procedure for setting up of SEZs and specified the fiscal provisions, concessions and exemptions granted to SEZ units and developers. It also envisaged a crucial role for State governments in promoting SEZs within their state.

5.2.2 GoM Policies and Documents impacting Location of Industries, Offices and SEZs

During 1958-1968, State government policy was in favour of decongesting Mumbai and discouraging new industries. Accordingly, the Regional Plan 1973 and the Industrial Location Policy 1974 were drawn up. The Regional Plan for MMR focussed on location of offices and suggested a poly-nucleated structure and dispersal of population and economic activities away from the city. It emphasized relocation of wholesale and office establishments from South Mumbai. Following the Regional Plan, 1973, MMRDA in 1977 introduced a policy discouraging new growth of offices and wholesale establishments. According to this Policy all developments (including change of use) accommodating offices or wholesale establishments or exceeding FSI of 1.33 needed prior permissions of MMRDA. This Policy remained in force till 1992, when these provisions were incorporated in DCR 1991.

a. Development Plan 1991

- In order to regulate the development of offices in the different land use zones, the development control measures addressed office use as ancillary use and stated that all ancillary uses shall not exceed 50% of the floor space of the principal use. In C1, that is local commercial zones, shops and offices with a carpet area of forty square meters (40 sq m) were permitted. There were to be no district commercial zones (C2) in the Island City but in areas identified for development as district centres in the suburbs and extended Suburbs. In the purely Residential Zone (R1), professional offices of less than 30 sq m area use were only allowed. In the Residential Zone with Shop Line (R2), professional offices each not exceeding 100 sq m area were allowed only in the Suburbs and extended suburbs. Data processing units which use computers were also allowed. In independent buildings, business offices on roads of 18 m wide and more outside the Island City, were permitted subject to fulfilment of parking and other requirements. Data processing units using computers were permissible in Service Industries Zones (I1) with certain restrictions on employees and floor space. In General Industries Zone (I2) and Special Industries Zones (I3), existing and newly built up areas could be allowed for offices outside the Island City and as part of a package of measures recommended by Board for Industrial & Financial Reconstruction (BIFR), Financial Institutions and Commissionerate of Industries for revival of potentially viable sick industrial units. Newly built up and existing areas in the cotton textile mills could be used for diversified industrial users with office space as ancillary, subject to FSI of 1 and compliance with all other regulations.
- Development promotion measures to identify areas outside the Island City, besides the already developing Bandra Kurla Complex for district cum commercial complexes. These were at Oshiwara-Jogeshwari, Kanjurmarg, Vikhroli, and Bangur Nagar.

b. The MMR Regional Plan (1996-2011)

It suggested a relook at the previous policies of complete prohibition of new offices in the Island City in view of the macroeconomic reforms and the resultant increase in demand for office spaces in central locations. The plan suggested a policy framework based on recycling

of land under non-residential obsolete uses such as industries, warehousing, etc. This policy focused on the following:

- Developing the Bandra Kurla Complex as an International Finance and Business Centre to facilitate the development of Mumbai as an off-shore financial centre;
- Real estate development resulting out of this policy must take into account and pay for social costs such as congestion and infrastructure strengthening. This would require an assessment of properties at their true market values for property tax purposes.
- No increase in the existing industrial and commercial zones which may bring additional pressure on infrastructure may be allowed in Greater Mumbai. Offices may be allowed to compete with high tech non-polluting industries.
- Reconstruction of existing office stock located in old buildings may be allowed at consumed FSI;
- Urban renewal to bring about infrastructure and environmental improvement involving changed land uses including office development for large concentrations of old buildings in non-residential zones in derelict areas. Recycling of land and space used for now obsolete activities may be promoted through integrated planning and development.
- The Plan stated that adoption of the policy would require amendments to the sanctioned Development Plan and DCR for Greater Mumbai 1991 and the proposed amendments would have to undergo public scrutiny.

c. New Industrial Location Policy 1992

Formulated jointly by MMRDA and Industries Department of GoM, the policy divides MMR into 3 zones.

Zone I: Greater Mumbai and Thane Municipal Corporation and Mira-Bhayandar Municipal Council

Zone II: Kalyan and Navi Mumbai Municipal Corporation, Ulhasnagar, Ambernath, Kulgaon-Badlapur Municipal Councils and Bhiwandi, Uran and Vasai-Virar sub regions.

Zone III: Rest of MMR

The policy also classifies the various industries into **Schedule I** industries comprising non-polluting, high tech, or high value-added units, **Schedule II** industries comprising highly polluting, hazardous, or obnoxious units and industries other than Schedule I and II.

- New units and expansion of existing Schedule I units is permitted in Zone I. New units or expansion of existing units under Schedule II are prohibited in Zone I. Marginal expansion of existing units other than schedules I and II is permitted as long as additional power is restricted to 25% of the existing connected load;

- New units other than Schedule II units are allowed freely in Zone II. Schedule II units are allowed only in existing MIDC areas;
- All industries are permitted in Zone III without locational clearance from Industries Directorate.
- Construction of new or expansion of existing industrial estates is permitted as long as the type of industries they intend to accommodate are permissible in the zone.

d. Government of Maharashtra Policy regarding setting up of SEZs (2001)

The policy is concerned with various aspects of setting up SEZs. It provides for several exemptions to the SEZ units and developers such as local taxes exemption, electricity duty exemption, etc. The policy declared SEZs as 'industrial townships to enable them to function as self-governing, autonomous municipal bodies'.

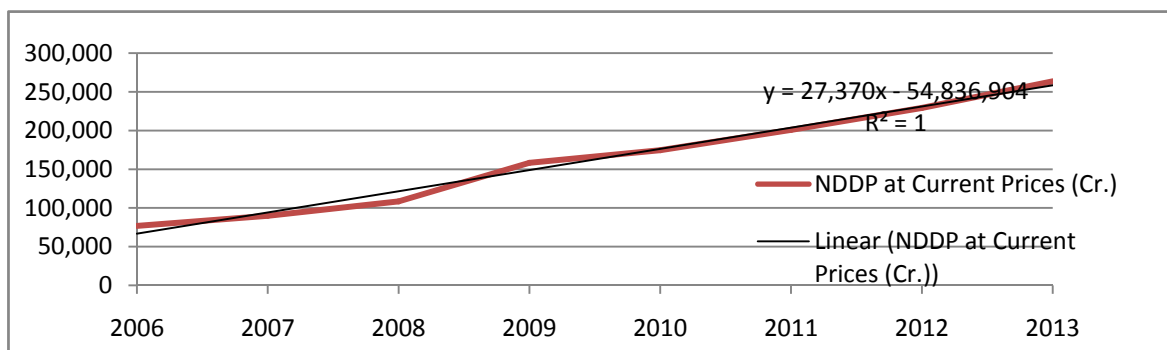
Following the passing of the Central SEZ Act, a large number of SEZs have been approved. In addition to SEEPZ there are smaller SEZs, mainly sector specific IT SEZs in MMR.

As a result of State and Central policies, through the creation of new employment centres and promotion of SEZs, polycentric growth has been achieved. Significant dispersal of activity has also been achieved through relocation of wholesale markets from the Island City into the MMR and the setting up of the JNPT at Nava Sheva and development of Bandra Kurla Complex and recycling of industrial land for ITES within Greater Mumbai. The following sections look at some indicators of Greater Mumbai's economic performance and trends.

5.3 Trends in Gross District Domestic Product and Per Capita Incomes in Mumbai

Mumbai has enjoyed a leadership position in all spheres of economic activity including manufacturing, information technology, banking, insurance, financial services and entertainment. However, since the 80s, manufacturing activity led by textiles sector declined and services sector became more prominent. The State government compiles estimates of GDDP and NDDP (Gross and Net District Domestic Products) and publishes them in annual Economic Surveys. Despite methodological limitations these provide a trend. The same is presented below. Figure 5.1 below shows the NDDP of Greater Mumbai at current prices. Growth rate over a seven year period is 18% p.a.

Figure 5.1 NDDP at current prices (Crores)



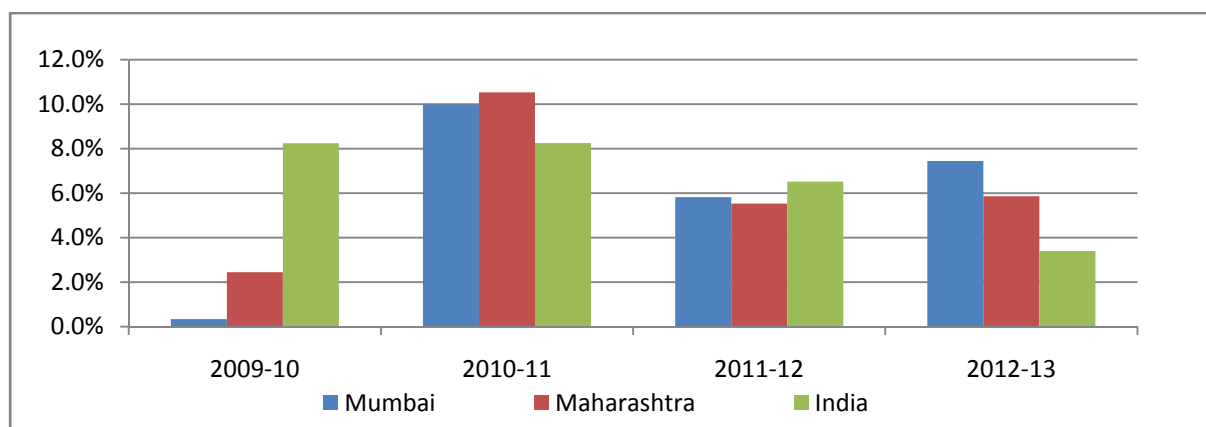
Source: Annual Economic Surveys of Maharashtra, Director of Economics and Statistics, Government of Maharashtra

Table 5.2: Net Domestic Product in rupees crores at constant 2004-05 prices

Year	Mumbai	Maharashtra	India
2008-09	138,007	584,179	3,664,388
2009-10	138,474	598,455	3,966,407
2010-11	152,297	661,469	4,293,585
2011-12	161,161	698,086	4,573,328
2012-13	173,162	739,040	4,728,776

During this period Maharashtra accounted for about 16% of India's GDP and Mumbai's GDP was about 24% of Maharashtra's GDP. In the past it was generally observed that the growth rate of Mumbai was a couple of basis points higher than that of Maharashtra and Maharashtra was a shade better than India. While there was a departure from this pattern for a few years, it returned in 2012-13.

Figure 5.3: Growth rate of Net Domestic Product at constant prices



5.4 Emerging sectors of growth and spatial clustering

Trends indicate that certain activities are likely to drive MMR's economy over the next few decades. These comprise financial services including Banking and Insurance, IT and ITES, Communications, Biotechnology, Media and entertainment, Retail, Logistics and warehousing near the ports and High end export oriented manufacturing particularly in SEZs. Mumbai historically developed as a mono-centric city with port, government, banking and insurance, stock exchange and wholesale trade all being concentrated in and around Fort. Now with diversification of economic growth, a clear pattern of spatial clustering is emerging.

Table 5.4: Spatial clustering

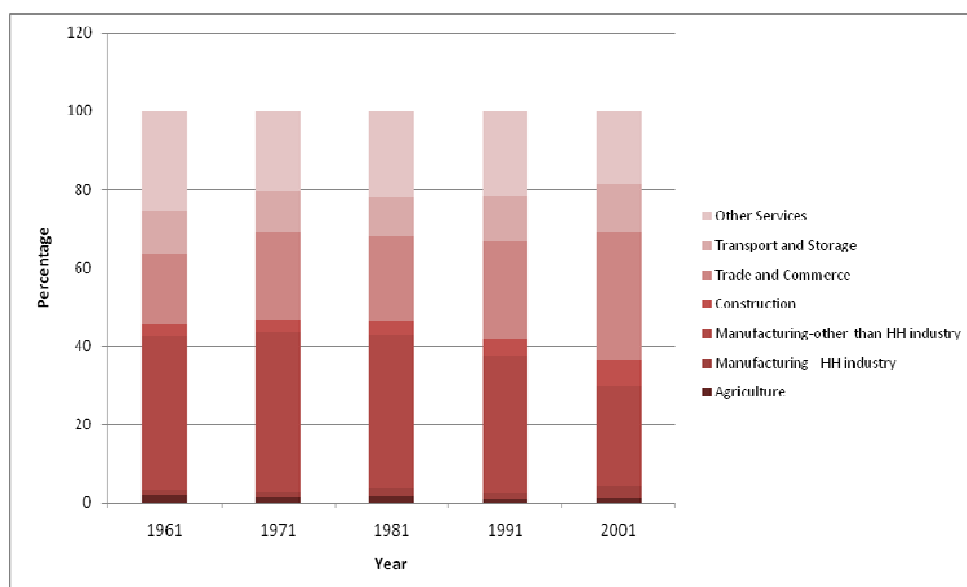
Sr. No.	Key Cluster	Location
1	Financial services including banking and insurance	Fort, Nariman Point, Bandra Kurla Complex
2	IT and ITES	Andheri-Kurla Road, Malad
3	Media and entertainment	Malad-Link Road, Goregaon
4	Retail	Lower Parel Mill District, Malad, Mulund
5	Logistics and warehousing	Wadala Truck Terminus
6	High end export oriented manufacturing	SEEPZ, Andheri

Source: Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

5.5 Employment Characteristics

Since 1990, employment patterns in Mumbai have witnessed a huge shift from manufacturing towards the service sector, with around 70% production being contributed by the services sector. Total manufacturing employment, including construction activity fell from 44% to 35% between 1961 and 2001. Total service sector employment increased from 55% to 64% in the same period.

Figure 5.5: Distribution of resident workers by industrial activity in Greater Mumbai (Source: Census 1961 – 2001)

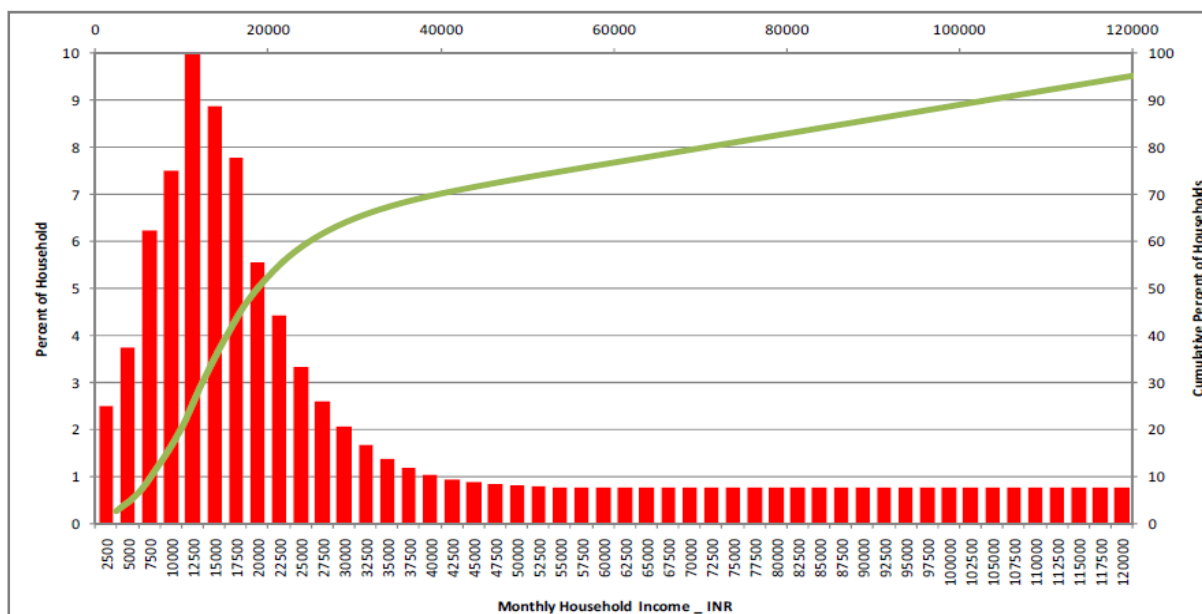


5.6 Income Distribution in Greater Mumbai

A 2010 study (Annez et al) had estimated Greater Mumbai's distribution of households according to monthly household income based on 2005 prices. According to this estimate

25% of households in Greater Mumbai have a monthly income less than Rs. 12,500. The median monthly income is Rs. 20,000 and only 9% of the households have income in excess of Rs. 60,000 per month.

Figure 5.6: Household income distribution for Greater Mumbai (in 2005 Prices)



Source: Working with the Market - Approach to Reducing Urban Slums in India, WB Policy Research Working Paper 5475, Patricia Clarke Annez, Alain Bertaud, Bimal Patel, V. K. Phatak

Note: In this paper, income distribution is estimated for 2007-08 at 2004-05 prices.

5.7 Mumbai's Real Estate Market

Mumbai's real estate is one of the most expensive in the world. The real estate market is considerably influenced by regulatory regimes and financial markets. It is prone to intense speculative activity particularly when supply is constrained by regulations. Speculative activities, supply side constraints coupled and strong interest groups have contributed to soaring real estate prices.

Property prices in the South and West are considerably higher than those in the East and North. The city wide mapping of the Ready Reckoner rates reveals that the real estate prices are the highest along the western coast in the Island City and parts of the Western Suburbs, and begin to lower as one moves northeast in the City. The rates are also lower along the south-western periphery of the National Park and around Chembur and Trombay. Residential property prices too are considerably higher in the South and Western coast than those in the East and North. Areas in proximity to railway stations and along major road networks also command higher residential land prices.

The median household income is only Rs. 20,000 per month, while the lowest price for even a single bedroom public housing unit starts from Rs. 14,00,000. Given that the cost of housing is much higher than the affordable range of 4-5 times a family's annual gross income, it is

apparent that nearly half of the population is unable to afford to own a house, even of minimum standards.

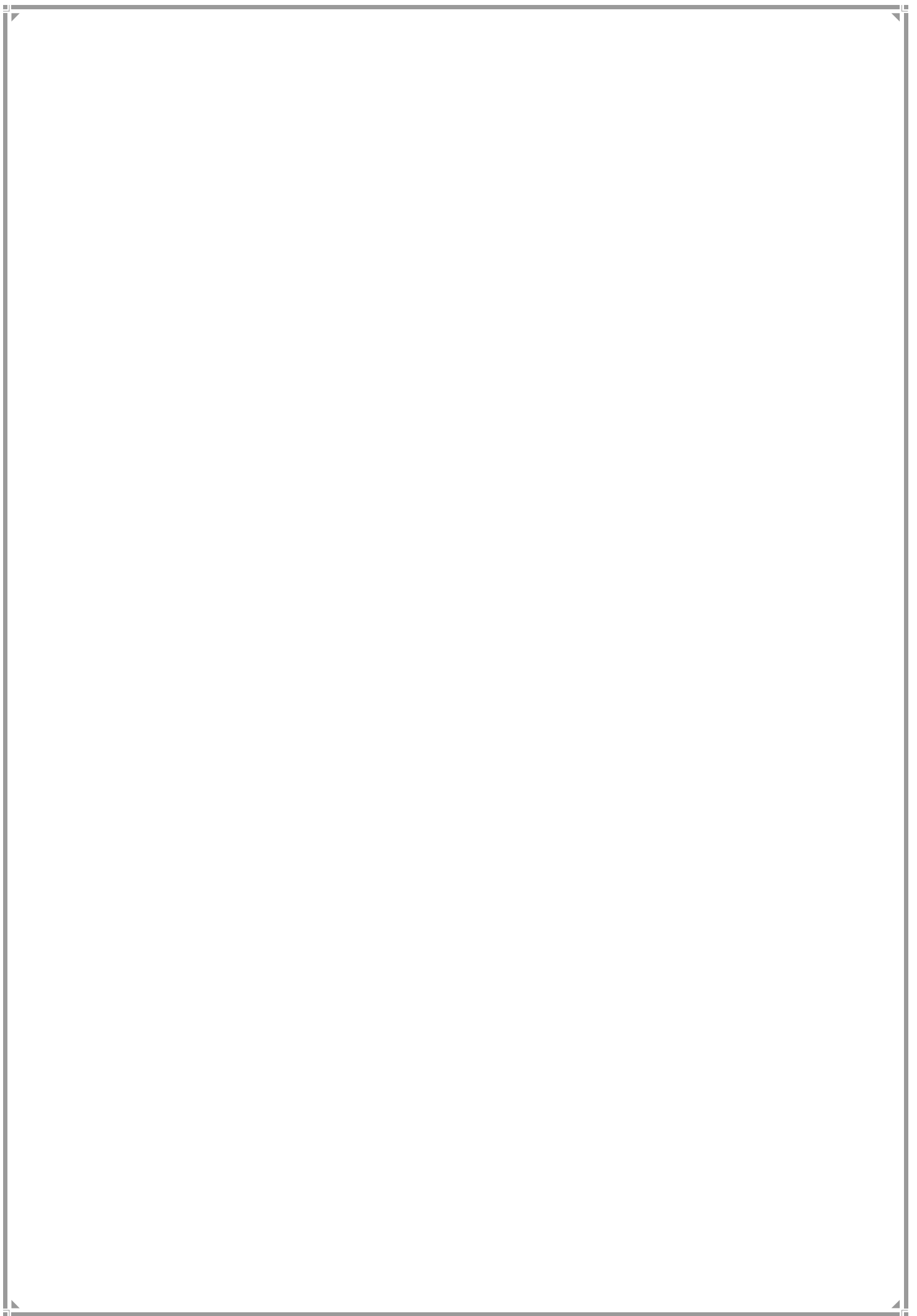
5.8 Conclusion

Greater Mumbai's economy has undergone transformation from manufacturing activity to services activity. Around 70% of industrial activity is in the services sector. Greater Mumbai's economy has grown at a remarkable rate of 9%. At constant prices in the year 2008-09, the Net District Domestic Product of Mumbai was pegged at over Rs. 138,007 Crores accounting for around 24% of Maharashtra's Net State Domestic Product. The per capita income in Greater Mumbai is about twice the national average.

Only 9% of the population of Greater Mumbai earns more than Rs. 60,000 per month and 25% of the households earn less than Rs. 12,500 per month. Given that the cost of housing is much higher than the affordable range (median income at Rs 20,000) of 4-5 times a family's annual gross income, nearly half of the population is unable to afford to own a house, even of minimum standards.

Chapter 6

TRANSPORT



CHAPTER 6

TRANSPORT

6.1 Transport in the Mumbai Metropolitan Region

Every day, around 4.5 million people enter Greater Mumbai and 4.47 million people move out. Linkages of Greater Mumbai with MMR have a major role in retaining the primacy of Greater Mumbai.

Transport Linkages with the Region

With increasing urbanization in MMR outside Greater Mumbai and with Greater Mumbai still being the most important economic centre, the inter linkages between Greater Mumbai and MMR are vital. Rail and Road are the major existing networks within Greater Mumbai that extend to MMR and beyond. The Concept Plan for MMR has conceived a grid of highways with an intermediate spacing of around 3 to 4 km in the region connected with Greater Mumbai by means of multiple trans-harbour links and through landward highways along north and north east of Greater Mumbai.

A vital objective of the Comprehensive Transportation Study (CTS) 2008 was to support both intensification and green-field development, in order to overcome the chronic shortage of all forms of urban building space in the MMR at more affordable levels. A range of alternative growth scenarios of population and employment distribution in Greater Mumbai and Rest of the Region were evolved in order to determine the sensitivity of the road and transit system networks for different development options and strategies.

CTS 2008 Long Term Strategy

1. Study recommends “Transit First” as a sustainable transportation policy.
2. Hierarchical multi-modal transport system is proposed for effectively integrating the mobility function with local area travel needs.
3. Corridor protection i.e. need for protecting and acquiring the ROW for the Regional Road and Transit Networks has been recommended on priority basis and incorporating the same in a revised MMR Regional Plan and DPs of ULBs has been recommended.
4. Candidate corridors for exclusive bus lane systems have been identified to handle the road based public transport demand efficiently, some of which would serve as a precursor to rail based transit.
5. Multi-modal transport corridors, which are cost intensive and efficient, improving the connectivity to various growing clusters of the region have been proposed.

6.2 Modes of Urban Transport

- Greater Mumbai has a distinct advantage of a high modal share of 76% (excluding pedestrian) in favour of public transport, primarily road and rail. The Central and Western Suburban Rail Services, carry an estimated 7 million passengers every day while the public bus transport system handles 5.5 million passengers. Pedestrian traffic at 51% of all modes is also very high.
- Greater Mumbai's public transport systems have not kept pace with the City's growth. Therefore it is witnessing acute road congestion and overcrowding in trains and buses. Since the last DP 1991, vehicular traffic volumes and automobile ownership have risen substantially, resulting in building more flyovers and undertaking regular road widening. These in turn have often led to the reduction of valuable pedestrian space. High air pollution and provision of safe facilities for pedestrians are major concerns. Regional level transportation within the City is largely under the purview of state and central agencies.
- This chapter provides an overview of the assessment of urban passenger transport in Greater Mumbai, focusing on four key modes of transport namely formal public transport, private motorized transport, informal (motorized) transport and non-motorized transport (NMT). The four modes of passenger transport illustrate wide variations in trends and conditions, and thus accessibility.

6.2.1 Private Transport

Private motorized transport, with an annual growth rate of 15.5 %, is fast becoming the most preferred mode for commuting. A primary reason is the intolerable crowding levels in Suburban trains. Within Greater Mumbai, the proportion of cars is the highest in Island City and lowest in Eastern Suburbs. On an average, the proportion of cars in Greater Mumbai and MMR is 44% and 37% respectively.

6.3 External Road Traffic Entering Greater Mumbai

Greater Mumbai experiences a large volume of entry and egress of passengers and goods traffic on a daily basis. They have a considerable impact on traffic along the main arteries. The traffic survey by CTS along major entrances to Greater Mumbai shows high volumes of traffic exchanges along the connection to Vasai Virar towards North and along connections towards Navi Mumbai.

Table 6.1 Traffic volumes in Greater Mumbai

Location Name	Daily Traffic (Vehicles)	(PCUs)	Bus (%)	Goods (%)	Cars (%)	2-W (%)	Others (%)
NH-8: Near Dahisar Toll Plaza	87,067	90,284	3.61	11.62	26.91	28.16	29.7

Location Name	Daily Traffic (Vehicles)	(PCUs)	Bus (%)	Goods (%)	Cars (%)	2-W (%)	Others (%)
LBS Marg: Mulund Toll Plaza	40,153	33,254	4.21	4.33	16.60	44.23	30.63
Old NH-3: Near Kasheli Bridge	25,713	39,292	3.54	39.41	18.09	20.22	18.74
Airoli Toll Plaza	46,892	55,127	3.50	16.11	39.31	35.23	5.85
Vashi Toll Plaza	83,039	1,29,223	8.40	25.30	42.10	16.70	7.5

Source: The Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

6.4 Traffic Volume on major roads of Greater Mumbai

- All the main arterial roads have a high percentage of private vehicle traffic (cars) ranging 24% to 51% of total transport volume whereas percentage of bus traffic is very low. This is one of the major reasons for traffic congestion along the corridors.
- Goods vehicles ply highest on Sion – Panvel highway from and towards Navi Mumbai (42% of total traffic volume) due to presence of JNPT and other goods that are handled in the area. Eastern Express Highway also has a considerable proportion of goods traffic.

Table 6.2: Main arterial roads with traffic volumes more than 60,000 PCU/16 hr in Greater Mumbai

1	Netaji Subhash Marg	71,906 PCU/16Hr: Two wheelers, taxi, Car /Jeep constitute 97.8%, buses at 0.7%
2	Palton Road	67,062 PCU/16Hr: Taxis constitute 42% and cars 25%, Two wheelers 18.7%
3	Lajpatrai Road	65,087 PCU/16Hr: Cars constitute 51% of the total vehicular traffic
4	Baba Saheb Ambedkar Marg	59,367 PCU/16Hr: Cars and Two wheelers constitute 34% and 30% respectively
5	Sion - Bandra Link Road	1,08,158 PCU/16Hr: Cars 34%, Two wheelers 24% and Goods vehicles 13%,buses at 2.8%
6	Eastern Express Highway	1,01,586 PCU/16 Hr : Cars 33%, Good vehicles 24%, Two wheelers 14%
7	Western Express Highway	66,403 PCU/16 Hr : Cars 29%, Two wheelers 24%, auto rickshaw 14%,Buses 2.6%
8	Sion - Panvel Highway	1,04,714 PCU/16 Hr: Goods vehicles 42%, Cars29%,Two wheelers 15% and Buses 10.4%

Source: The Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

The CTS 2008 also indicates that traffic volumes along the next hierarchy of road networks, shows comparatively higher proportion of IPT traffic, personal vehicles and buses.

Table 6.3 Main arterial roads with traffic volumes 40,000 to 60,000 PCU/16 hr in Greater Mumbai

1	Maharshi Karve Marg	46,150 PCU/16 Hr : Taxi 42%, Buses 4.2%
2	E Moses Road	54,909 PCU/16 Hr: Cars and Taxis 63%, Buses 2.6%
3	S.G Barve Marg	55,810 PCU/16 Hr: Cars 23%, auto-rickshaw 20%, Goods vehicles 16% Two wheelers 12%, Buses 11% and non motorized vehicles at 2.5%
4	BKS Devashi Marg	57,211 PCU/16Hr: cars 40%, auto rickshaws 17%, Two wheelers 17%, goods vehicle 10.5% , buses 8.9%
5	Link Road (Oshiwara)	41,800 PCU/16 Hr: Cars 25%, auto- rickshaws 25 %, Buses 9% and cycles 8%
6	Approach Road to Domestic Airport	42,026 PCU/16 Hr: Passenger cars constitute the maximum share of traffic
7	Tilak Bridge	57,721 PCU/Hr: cars 38%, Taxis 36% and Two wheelers 16 %, Buses 5.7% and non motorized traffic at 3.7%
8	Mathuradas Vasanji Road	58,503 PCU/16 Hr: Auto Rickshaw 31%, Cars+ Two wheelers 21% and Buses 10%

Source: The Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

6.5 Public Transport

This section contains assessment of road based, rail based and water based public transport networks.

6.5.1. Road Networks and Road Based Transport Networks

Major North-South arterial road networks in Greater Mumbai are the Western Express Highway, Eastern Express Highway and Sion-Panvel Highway. They are also backbones of the MMR's road transport system. In general, there is insufficient East-West cross road links in Greater Mumbai. Street networks are narrow and constrained by lack of appropriate management of traffic and parking.

Main expressways in Greater Mumbai are:

- Western Express Highway connecting Bandra to Dahisar;
- Eastern Express Highway connecting Sion to Thane;
- Sion-Panvel Highway; and
- Eastern Freeway connecting Mankhurd to P. D'Mello Road.

Main arterial roads in Island City are:

- Western Corridor (Netaji Subhash Marg, Peddar Road, Anne Besant Road);
- Central Corridor (Baba Saheb Ambedkar Road, Senapati Bapat Marg and Maulana Azad Marg);
- Eastern Corridor (P.D'Mello Road and Rafi Ahmed Kidwai Marg).

Main roads in the Suburban District are:

- Swami Vivekananda Road;
- Linking Road and the New Link Road (Western Relief Road); and
- Lalbahadur Shastri Marg.

Major East-West cross-links in Suburban District are:

- Jogeshwari -Vikhroli Road (JVLK);
- Andheri-Ghatkopar Link road;
- Santacruz Chembur Link Road;
- Sion-Mahim Link Road.

6.6 Existing Road Network

- Roads constitute 8.16% of the total area and 14% of the developed areas in Greater Mumbai. In the Island City roads constitute 16% of the developed area as compared to 13% in Suburbs.
- Street networks in most of Greater Mumbai are old, narrow and their capacity is reduced considerably due to on-street parking, pedestrian spill over on the streets and hawkers and other encroachments. Station Areas throughout the city are typically congested. With commercial establishments and informal markets nearby, high density vehicular and pedestrian traffic, they are subject to bad traffic snarls during peak hours.
- Most areas in the Island City, such as Navy Nagar, Marine Drive, Horniman Circle, Colaba, Mazgaon, Parel, Dadar, Matunga, Sion and Mahim are planned developments, with gridded network of streets. However, the Bazaar areas in the Island city, including Null Bazaar, Bhendi Bazaar areas experience traffic conflicts due to their narrow streets, bazaar activity and high pedestrian movements. Gaothans and Koliwadass face similar issues arising out of narrow pedestrian road networks. East-West connectivity across the Western and Eastern Suburbs is limited to the Jogeshwari Vikhroli Link Road, the Andheri-Ghatkopar Link Road and the recently opened Santacruz-Chembur Link Road. This is grossly insufficient. Further, in some parts of the Western suburbs, the East-West connectivity between road and rail lines is poor.

- All the above result in reduced mobility and inefficient traffic flow. 79% of the City roads are of width below 30m and almost half of the roads have only two or three lanes.

6.7 Ongoing, New and Proposed Plans & Projects

The Development Plan takes into account various proposed new transport projects and their current status.

6.7.1 Recently Completed Projects

- **Eastern Freeway:** This 16.8 km access-controlled freeway connects the Eastern Expressway at Ghatkopar with South Mumbai at P. D'Mello Road. A 13.59 km stretch from Orange Gate on P D'Mello Road up to Panjarpol, near RK Studios in Chembur is operational, reducing travel time from 90 minutes to a mere 15 minutes.
- **Santacruz-Chembur link:** The 6.5 km double deck flyover has reduced journey time from Santacruz to Chembur to 17 minutes.
- **Andheri-Ghatkopar link:** The 7.9 km road connecting the Western Express Highway in Andheri to Ghatkopar via Saki Naka and Asalpha is almost fully operational.
- **Sahar Elevated Road connecting to International Airport:** This 2 km long elevated road connects the Mumbai International Airport to the Western Express Highway.

6.7.2 Proposed Road Links

- **Mumbai Trans Harbour Link (MTHL):** The proposed 22.5 km long 6-lane bridge will connect Sewri on the Island City to Nhava on the mainland with interchanges at Sewri and near Chirle village on NH4B. It includes a 16.5 km long sea link.
- **Elevated Link from Sewri to Worli Sea Link:** The proposed elevated road to connect areas between MTHL interchange and Worli Sea Link will improve connectivity between the Mainland and the Western Suburbs.
- **Coastal Road (West):** This road is designed to provide a 35.60 km long coastal road between Nariman Point and Malad with 18 interchanges. This involves reclamation of about 1.8 km.
- **Goregaon-Mulund Link Road:** Is proposed by the MCGM to strengthen East-West connectivity

6.8 Bus Network

BEST with a fleet strength of about 4500 (including about 400 air-conditioned) buses operates over 500 routes in Greater Mumbai and nearby adjoining locations. It also runs ferry services between Manori and Malad. Though an important feeder system for the suburban rail

system, it is constrained by general traffic congestion. About 63.5% of the fleet runs on CNG. The CTS has projected a rapidly diminishing role for bus transport (from existing 25% to around 9%) in the coming two decades. Metro, Monorail and increased personal transport are projected to take its place.

6.8.1 Bus Terminals

Existing major bus terminals are at Mumbai Central, Parel, and Dadar, in the Island City and at Kurla, Borivali and Nancy Colony in the suburbs. These facilitate the role of bus transport as feeders to the rail networks. CTS proposes new inter-city bus terminals between Bandra and Borivali in the Western Suburbs and between Kurla and Mulund in the Eastern Suburbs. Also, there is a dedicated interstate bus terminus near the Wadala Truck Terminal in Greater Mumbai. Parking facilities and basic passenger amenities are required at all existing locations.

6.8.2 Bus Depots and Bus Stations

MCGM's Traffic Department has assessed the existing infrastructure and found deficiencies as per details in Table 6.6 below. Additional depots are required at Mulund East, Dahisar East and at Trombay.

6.8.3 Facilities for Private Bus Stops/Terminals

Private buses also play a major role in intercity movement. At present the pickup and drop-off points by private buses are informally organised. Lack of dedicated facilities at these points causes obstruction to general traffic movement and inconvenience to passengers. These existing gaps need to be met.

Table 6.4: Requirements in existing bus stations

	Requirement of Bus stations	Remarks
1	Mulund station West	There are 10 routes functioning whereas there is only a two seat chowky and temporary shelter are available on road
2	Vikhroli station West	Lack of dedicated space for buses
3	Nahur station East	Bus station requires to be planned near the new railway station
4	Kurla station East	Lack of space for manoeuvring of buses whereas the area faces heavy traffic
5	Kurla station East	Lack of dedicated space for buses and operations control are on road
6	Andheri station East	Lack of dedicated space for buses and operations control are on road
7	Jogeshwari station East	Lack of dedicated space for buses and operations control are on road

	Requirement of Bus stations	Remarks
8	Shivshahi Prkalp or Santhosh Nagar	Off loading of Dindoshi bus station and to cater new developments up to Santosh Nagar
9	Malad Railway station West	Operations are controlled from 3 different chowky and lack of dedicated space for buses
10	Borivali station West	There are 12 routes controlled from the chowky whereas there is lack of space
11	Borivali station East	There are 24 routes controlled from the chowky whereas there is lack of space
12	Dahisar station East	There is no chowky at the vicinity
13	Oshiwara station East or West	Bus station requires to be planned near the new railway station
14	Bandra station East	The operations control point is on road and lack of dedicated space
15	Byculla station West	The operations control point is on road and lack of dedicated space
16	Mahul	The operations control point is on road and lack of dedicated space
17	Refineries	The operations control point is on road and lack of dedicated space
18	Sewri station West	Bus station requires to be planned near the new monorail station and to serve the new linkage planned in BPT premises.

Source: Traffic Planning Department, MCGM

6.9 Railways

The Railway system is considered as the lifeline of Mumbai. Its high reliability and low cost ensure a vital role for it within Greater Mumbai and with the outside world. The Western Railway line connects Churchgate Terminus in the Island City to Dahisar running along the western coast. It extends beyond upto Ahmedabad and Delhi. The Central Railway lines connect the Chhatrapati Shivaji Terminus in the Island City to Mulund. It extends beyond to connect with the rest of the Country. The Suburban network comprises three segments:

- Western Line: The Western line runs from Churchgate station in the Island City and to Dahanu Road, 124 km to the North. It has 36 stations including long distance train terminals such as Mumbai Central, Dadar and Bandra.

- Central Main Line: The Central Railway line runs from Chhatrapati Shivaji Terminus (CST) to Kalyan with branches thereafter to Khopoli (61 km) and Kasara (67 km). The Central Railway runs through long distance train stations Dadar and Kurla.
- Central Harbour line services extend from Mumbai CST station. One branch runs north-west to join the Western Railway line at Bandra and further continues till Andheri, whereas the other line continues northwards to Kurla, where a connection is made with CR main line, before turning East to serve Mankhurd, and across the Thane creek to provide access to the Navi Mumbai area till Panvel. Between Mumbai CST and Wadala Road the line is exclusively used for suburban traffic. However, north of Wadala the lines are shared with freight traffic to and from Mumbai docks. The two Central lines have 62 stations between them.

Rail Passenger Volumes

Daily average volume into Greater Mumbai on the Central Main Line is 6,24,000 incoming and 5,33,000 outgoing. On the Western Line, it is 2,50,000 and 2,09,000 respectively. On the Harbour Line the corresponding figures are 4,50,000 and 3,08,000.

The stations in the central part of Greater Mumbai, such as Dadar, Mahim, Bandra, Andheri, Kurla and Ghatkopar face the highest concentration of passenger movement. Most of these stations are also served by more than one railway line. While Dadar is served by the Western and the Central Railway lines, stations from Mahim to Andheri are served by the Western and Harbour lines. Kurla is served by Central line and Harbour line. These stations act as interchanges between the Western, Central and Harbour lines and hence have major impact on the surrounding Land Uses and transport in the areas.

Intercity Rail Network

A number of intercity trains originate from/terminate in Greater Mumbai. The Western Railway inter-city passenger stations are Mumbai Central, Dadar, Bandra, Andheri and Borivali. The Central Railway stations are Chhatrapati Shivaji Terminus (CST), Dadar and Lokmanya Tilak Terminus (Kurla). All these stations are not only important nodes of rail traffic but also of bus and car traffic in view of high volume of passenger boarding and discharge.

Gaps in the Existing System

Passenger traffic in the suburban railway system has increased six times since its inception, but its capacity has been augmented by only about 2.3 times. Hence the system is under immense pressure during peak hours, when on an average each train carries 4500 passengers against its capacity of 1,750 passengers. The rail-based transport system predominantly caters to the North-South traffic East-West railway connectivity is crucial to disperse the concentration of passenger movement and is being met to some extent by the partially commissioned Metro Rail and Mono Rail projects.

6.9.1 Goods Movement

As per the CTS, Greater Mumbai attracts the maximum tonnage of goods amounting to 46.3% in the MMR. Greater Mumbai also attracts 29.8% of movement of goods vehicles in the MMR. Good originating at Navi Mumbai form 48.3% of total tonnage. Correspondingly 43.0% of goods vehicles come from Navi Mumbai. This is due to the location of Jawaharlal Nehru Port, APMC, steel markets and other goods handling in Navi Mumbai. Therefore, in terms of movement of goods vehicles connectivity to Navi Mumbai is of major importance. Other important origin-destinations with respect to goods related connections to Greater Mumbai are Kalyan, Vasai, Virar, and rural areas of MMR and Thane.

6.9.2 Goods Terminals

There are 14 goods terminals located in Greater Mumbai including the Wadala Truck Terminal, Railway Yard Mulund, Railway Yard Goregaon, Reay Road terminal yards, FCI godowns, Borivali, Wadi Bandar Railway Yard, BPCL Sewri Oil Depots, HPCL Sewri Oil Depots, BPCL Sewri Oil Depots, IOCL Sewri Oil Depots, HPCL Terminal II Sewri, HPCL, Terminal I, Wadala, and FCI Godowns Wadala. The CTS has projected a 5.7% growth of goods traffic in MMR and has proposed additional truck terminals at strategic locations in the region. However, none of the proposals in the CTS for additional goods terminals fall within Greater Mumbai.

6.9.3 Western Railway-New Corridor

Additional elevated rail corridor from Oval Maidan to Virar has been proposed by the Western Railway to be implemented in the PPP mode, in order to cater to the large passenger volumes in this route.

6.9.4 Metro Rail

In view of the limitations and saturation of existing networks, Metro Rail System is proposed for a total length of 146 km (within MCGM limits) to provide access within convenient walking distances to areas within Greater Mumbai. The following Metro lines are under various stages of implementation and planning.

Table 6.7 Proposed metro rail routes in Greater Mumbai

Metro Line	Route	Length (km)
Phase- 1: Committed Routes		
Line 1	Versova – Andheri – Ghatkopar corridor (Completed)	12
Line 2	Dahisar-Charkop – Bandra-Mankhurd	39.2
Line 3	Colaba-Bandra-SEEPZ	33

Metro Line	Route	Length (km)
Line 5	Wadala- Ghatkopar – Kasar Vadavali	20
Phase- 2: Recommended Routes		
Line 6	BKC –Airport- Kanjurmarg	19.5
Line 7	Andheri (E)- Dahisar (E)	18
Line 8	Wadala – Carnac Bundar	13.3
Line 9	Sewri - Prabhadevi	3.5

Source: The Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

Of the committed Metro Rail alignments, Lines 1 and 2 are above grade and Line 03 runs underground. The CTS underlines the need to extend the Metro rail network to important centres of MMR to ensure balanced development in the Region.

6.9.5 Mono Rail

Monorail is envisaged as a feeder network to mass transit system. It occupies very limited space on ground, can negotiate sharp turns and can negotiate steep gradients easily. Implementation of about 20 km stretch from Sant Gadge Maharaj Chowk (Jacob circle)-Wadala to Chembur with 18 stations as pilot project is operational.

6.10 Airports

Mumbai Airport (with International and Domestic terminals) currently handles 30.2 million passengers and 0.63 million tons of freight annually. (2012-13). The Mumbai Domestic Airport handles about 685 flights per day, i.e, one landing or take-off every two minutes. The volume is expected to reach 54 million domestic 21 million international passengers by 2031. This will result in significant increase in road and public transport and possibly for faster access between the existing and proposed new airport. Specific new road projects and the 2nd phase of the metro rail are will address the increased demand for connectivity. Juhu Airport currently serves as a heliport and handles all helicopters operations.

6.11 Public Water Transport-Regional Services

Given the vast coastline of Greater Mumbai and the Region, inland water transport may help augment the existing public transport systems. MSRDC has been tasked to develop passenger jetties to promote inland water transport between Nariman Point and Borivali and between South Mumbai and Navi Mumbai. Access to terminals, uncertainty of schedules due to weather conditions, restricted period of operation and need for reliable disaster management systems are prime constraints. Currently, Manori and Versova handle the maximum passengers by ferry launches in the MMR.

6.12 Pedestrian Movement

Presently, pedestrian trips comprise 51% of total trips made in Greater Mumbai. 72.5% trips for education are also on foot. Workers of economically weaker sections, especially women and children, constitute a significant proportion of pedestrians. In addition, most of the public transport journeys (60%) necessarily start and end as walk trips. The walk trips are considerably short; more than 80% are of less than 15 minutes.

Presently, several conditions discourage pedestrian movement. Several permanent and semi-permanent structures along edges of the right of way of streets, haphazard parking of vehicles, lack of designated hawking area especially around the railway stations, discontinuous footpaths with changing levels, all contribute to the problem. Moreover, the footpaths and facilities are not equipped to serve differently abled people.

Undesirable and unsafe pedestrian environments force commuters to switch to mechanized modes. Longer North-South rail trips and distances greater than 1 km between places of work/residential areas and stations (especially in the northern part of the Western Suburbs, for example, at Malad, Kandivali) discourage walking. Inadequate traffic management around transit nodes and lack of pedestrian cross over facilities at strategic locations increase conflict in pedestrian and vehicular traffic.

6.13 Transport Issues

6.13.1 Integrated Land use and Transport System

Greater Mumbai has a strong interconnectedness between transport networks and commercial and residential uses. The proposed metro and monorail networks need to be considered as important Land Use structuring elements for future development. Identifying current and future station hubs is a necessary step in establishing a hierarchy within the transportation network, which would then inform future Land Use planning.

6.13.2 Local Level Street Network

Missing road links in the Suburbs and large land parcels without public thoroughfares (erstwhile industrial lands) in the Island City create traffic bottlenecks. While there is deficiency of road space in Greater Mumbai, getting more road space is difficult as the City is already highly built. However, it may be possible to look for opportunities in the course of redevelopment of parts of the City.

6.13.3 Missing Links along Roads, Railway Crossings and Railway Stations

Lack of connectivity between important roads, presence of at grade railway lines and other obstructions also contribute to longer trip lengths by road. This affects smooth flow of traffic and causes bottlenecks along the main road networks. There is a need for enhanced connectivity across railway lines, expressways in the form of new links, bridges and

crossovers not only along main roads but also at local levels across railway lines, highways and at other locations that lack linkages.

6.14 The Comprehensive Mobility Plan for Greater Mumbai

The cited MCGM Study has just been completed. It incorporates the detailed activities which will proactively contribute to ensuring sustainable transportation in Greater Mumbai and at local levels.

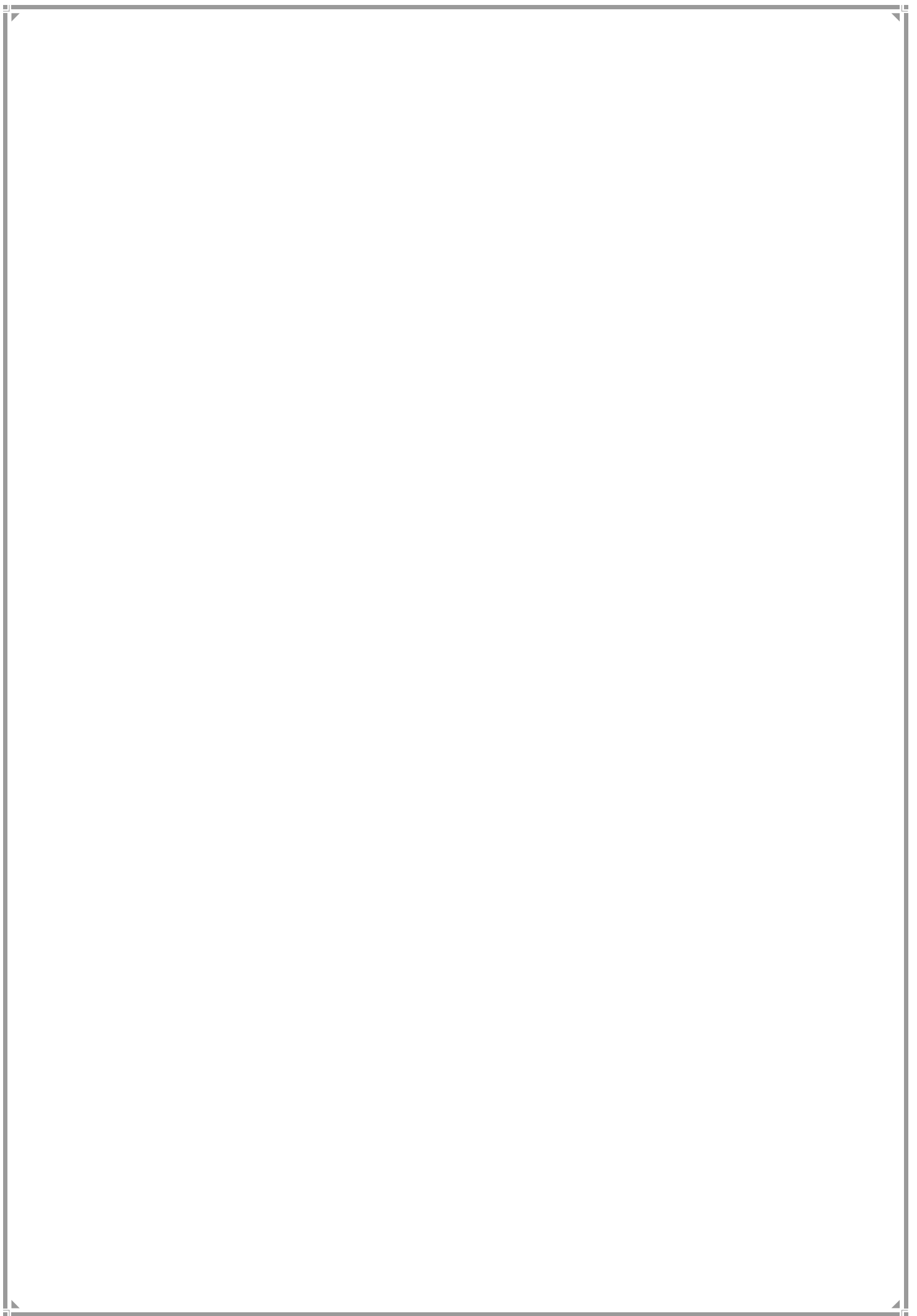
The project has, inter alia, done the following detailed primary surveys:

1. Survey of floating population
2. Passengers Survey of transit/city bus/IPT/ Private transport
3. Workplace surveys
4. Parking surveys
5. Non-Motorized Traffic Surveys
6. Pedestrian surveys
7. Missing links & D.P Roads
8. Give TOD parameters for Mumbai City
9. Study of the physical roadway characteristics (including functional condition of pavement, pedestrian pathways, etc. in detail)
10. Study of the effect of various alternative development strategies

In addition to the above surveys, the CMP has also reviewed the existing transport scenario to develop an appropriate Land Use Transportation model for evolving future urban and transport network strategies. It also reflects on the impact of new land use development and/or control policies for evaluating short term management measures. It takes cognizance of the infrastructure development and has prepared an impact analysis.

Chapter 7

PHYSICAL INFRASTRUCTURE



CHAPTER 7

PHYSICAL INFRASTRUCTURE

Basic physical infrastructure including water, sewerage, storm water collection, solid waste disposal systems is fundamental to life in a city and the means to assuring quality of life for citizens.

Physical infrastructure is provided through different departments within the MCGM which have their own Master Plans. Based on these Master Plans, specific proposals have been formulated for augmentation of physical infrastructure for Greater Mumbai. These include the MUIP and projects within the BRIMSTOWAD Report. Several of these proposals have been approved and some are under implementation. For each of the physical infrastructural components, existing availability and projected demand has been compiled and gaps, if any, identified. The RDDP has taken cognizance of existing and proposed infrastructure facilities so as to ensure that adequate land parcels are reserved for meeting future demand.

7.1 Water Supply

Water supply requirement of Greater Mumbai including domestic, commercial and industrial is around 4000 million litres per day (MLD). The total water supplied at present is about 3,350 MLD, comprising domestic, commercial and industrial uses.

Extent of Supply

As per the Revised City Development Plan by MCGM, there are 3,61,862 water connections across 3,76,991 properties in Greater Mumbai, with coverage of around 96%. On average, one domestic water supply connection serves 8 households, whereas slum areas are provided with group connections with one connection for 15 families. Per capita supply of 268 LPCD is higher than general Indian standards. However, this figure varies widely across wards. Of the total supply, only 62% is billed.

Water Sources

The entire water supply is based on lakes created by impounding rainwater by constructing dams across rivers and valleys at locations as far away as 173 km. The existing water supply system consists mainly of a network of pipelines, tunnels, balancing reservoirs, pumping stations and lakes as detailed in Table 7.1.

Table 7.1: Existing sources of water supply for MCGM

Sr. No	Source Name	Water Yield (MLD)	Distance from city	Treatment Plant
1	Vihar Lake	90	Within city limits	Vihar
2	Tulsi Lake	18	Within city limits	Tulsi
3	Tansa Lake	472	100 km from city	Bhandup Complex
4	Modak Sagar	455	100 km from city	Bhandup Complex
5	Upper Vaitarna	635	173 km from city	Bhandup Complex
6	Bhatsa	1,800	100 km from city	Partly at Panjarapur & partly at Bhandup Complex
7	Sub - Total	3470		
8	En route supply	-120		
	Total supply	3,350		

Source: Revised Gap Analysis report, Revised City Development Plan, MCGM, 2012

Water Treatment and Distribution System

Water is mainly treated at two major water treatment plants, which are Bhandup and Panjarapur treatment plants. Table 7.2 explains the capacity of the treatment plants.

Table 7.2: Major water treatment plants

Name of the Water Treatment Plant	Design capacity (MLD)	Peak operational flow (MLD)
Bhandup	1,910 + 910	2,100 + 910
Panjarapur	1,365	1,365
Vihar	90	-
Tulsi	18	-

Source: Presentation on Municipal Corporation of Greater Mumbai Water Sector Initiatives

The treated water is then stored in the Master Balancing Reservoirs at Bhandup Complex and Yewai. It is further distributed to 26 service reservoirs spread through the city by a network of inlet mains that remains charged for 24 hours. Duration of water supply to consumers is between 2 to 6 hours daily. The supply pressure is in the range of 1 to 1.5. Water mains are about 4000 km long and have 800 numbers of valves operating daily. The city is divided into 109 distribution zones with 615 leak detection zones.

Quality of Water Supply

As per Environment Status of Brihanmumbai 2010-11 report by MCGM, percentage of samples that met the potable water standards decreased over last few years. In 2011, 24.64% of the water samples recorded unfit as per standards.

The Water Supply Project Department plans, designs and lays water networks across the city and on completion of the project hands it over to Hydraulic Engineering Department for operations and maintenance. The Hydraulic Engineering Department also provides approvals for new connections.

Ongoing and Proposed Projects

Table 7.3 below gives details of the proposed projects.

Table 7.3: Future sources of water supply

S.N.	Sources	Proposed Yield in MLD	Ownership	Expected Year of Completion
1	Middle Vaitarna	455	MCGM	2012 (completed in 2014)
2	Gargai	455	GoM	Engineering and Environmental study in Progress
3	Pinjal	865	GoM	
4	Damanganga	1586	NWDA	2025
5	Kalu	590*		
6	Shai (in PWC report)	940**		
	Total	4891		

Source: Hydraulic Engineering Dept., MCGM

Challenges pertaining to the Water Supply System

Water supply system is required to be upgraded at multiple dimensions to meet the future demand. Several projects are being undertaken by MCGM. Following are the major issues to be addressed.

- MCGM supplies about 268 LPCD, which is well above the adequacy standard. However, coverage of water supply network remains an issue. On an average, 8 households are served by a single domestic connection whereas it serves 15 households in the case of slums. However, many slums, which have developed post 1995, are not provided with water connections.
- Ageing of pipeline network in the city causes risk of water contamination as water pipes run parallel and close to the sewers.
- Need for improving efficiency and reducing non-revenue water levels.
- Inequitable distribution ranging from 2 to 24 hours of supply.

If the proposed schemes progress as scheduled, current shortfall and future demands can be met.

7.2 Sewerage System

Since a large portion of Greater Mumbai's population lives in slums, providing sanitation services continues to be a major challenge. As per Revised City Development Plan, MCGM, 2012, Greater Mumbai generates around 2,680 MLD of sewage. Of this only about 1,700 MLD or 63% is collected.

Existing System: Providing sanitation and waste water disposal facilities is an obligatory function of MCGM. Major sewage works are taken up or planned in two stages, Stage-I: Sewerage Master Plan (1979-2005) and Stage-II: Mumbai Sewage Disposal Project (MSDP)-II (2005-2025). Currently 60% of the Greater Mumbai area covering 42% of population (including 2% of the slum population) is connected with piped sewer lines.

Table 7.4: Existing sewerage system details

S.N.	Particulars	Details
1	Length of Sewer Lines	1,500 kms
2	No. of Sewage Pumping Stations	53 nos
3	No. of Waste Water Treatment Zones / Facilities	7 nos
4	No. of Outfalls	3 nos
5	No. of Lagoons	3 nos
6	No. of Connections up to property level manholes	95,000
7	Inspection chambers	53,000
8	Total estimated sewage generated	2,680 MLD
9	Total sewage collected in conveyance	1,700 MLD
10	Pumping capacity installed	5,579 MLD
11	Total treatment capacity	2,826 MLD
12	Size of Maximum Sewers	6' dia and 6' x 9' in case of ellipsoid sections

Source: Revised Gap Analysis report, Revised City Development Plan, MCGM, 2012

7.2.1 Institutional Setup

Sewerage in Greater Mumbai is planned, implemented and operated by two departments of MCGM, viz., Sewerage Project Department and Sewerage Operations Department. The Sewerage Project Department plans, designs and lays sewer networks across the city and on completion of the project hands it over to the Sewerage Operations Department for

operations and maintenance. The department also provides approvals for new connections. The Sewerage Operations Department is responsible for maintenance and operations.

7.2.2 Proposal and status of Implementation: Sewerage Master Plan-I and II

The major sewerage projects undertaken or planned by MCGM in the last half century can be broadly put under two master plans, MSDP-I between 1979-2005 and MSDP-II between 2005-2025. The main objective of the MSDP-I project is to strengthen the capacity of MCGM in all aspects of the management of the sewerage services. The works under this master plan have been completed in 2003. The Sewerage Master Plan-II for the period from 2005 to 2025 with a proposed expenditure of Rs. 5,570.4 Crores (year 2001 base) is to be implemented in five phases and covers slum areas. However, despite these projects being undertaken, connectivity to sewerage network and environmentally friendly means of disposal of sewage continues to be a challenge in Greater Mumbai.

7.2.3 Challenges Pertaining to the Sewerage system

There is a lack of sewerage network up to the last mile for nearly 40% of Greater Mumbai. Compliance with pollution control standards is inadequate. Malad Creek receives a large volume of untreated sewerage from diverse sources in addition to preliminary treated effluent discharges from Malad. Though the capacities of the sewerage network and of the treatment plants are quite high, not all generated sewerage is captured. The demand for water is increasing due to changing lifestyles and correspondingly the amount of sewage generated too. Sewer lines in many places are more than 100 years old and dilapidated; therefore, there is risk of environmental pollution due to leaking sewers.

7.3 Storm Water Drainage

Storm water drainage system is central to addressing the long term sustainability of the city. Greater Mumbai receives monsoon rainfall from June to September. Average rainfall is around 2000mm of which 70% is received during July and August. The original topography of the area includes a network of creeks, rivers and system of drains that play a major role in storm water discharge in Greater Mumbai. This Storm Water Drainage (SWD) network of rivers, major and minor nallas, underground drains and closed pipes is also affected by tidal variation while releasing water into the sea.

7.3.1 Existing System

The present SWD system in the city is more than 150 years old. It constitutes a network of underground drains and laterals, about 440 km long in the Island City, road side surface drains, about 2000 km long, mainly in the Suburbs, major nallas 215 km long and minor nallas 156 km long with 176 outlets into the Arabian sea. The SWD system is capable of handling rain intensity of 25 mm per hour at low tide. The flow from the open SWD is discharged either into nallas, culverts, creek or sea. Tidal variation is a major consideration in the system of storm water drains (SWD) for releasing rainwater as well as wastewater into sea. The details of all 176 outfalls are given in Table 7.6. Table 7.5 gives a summary of SWD network.

Table 7.5: Summary on storm water drainage

Drain Hierarchy/ Type (km)	Island City (km)	Eastern Suburbs (km)	Western Suburbs (km)	Total (km)
Major Nallas (width > 1.5m)	23.37	90.20	101.50	215.07
Minor Nallas (width < 1.5m)	48.00	66.40	42.10	156.50
Arch /Box Drains	82.35	40.00	51.93	174.28
Road Side Open Drains	20.00	669.48	1297.50	1986.98
Closed Pipe or Dhara Drains	443.00	36.20	86.03	565.23
Total SWD length	616.72	902.28	1579.07	3098.07
Road Length	506.46	927.65	507.05	1941.16
Number of Water Entrances	34972	609	1706	37287

Source: Greater Mumbai CDP 2005-2025

The overall drainage network length is around 3,098 km as compared to the road length of 1941 km. The ratio between drainage network length and road length in Greater Mumbai is 1.6. The ratio is higher in Western Suburb at 3.1 whereas in the Island city and Eastern Suburbs the ratio is 1.1 and 1.0 respectively.

7.3.2 Institutional setup for Storm Water Drainage

Storm Water Drainage services are provided by Storm Water Drainage Department and respective Ward offices, under jurisdiction of Director (Engineering Services and Projects) and Additional Commissioner (City) for Administrative functions.

7.3.3 Proposals, Projects and Status of Implementation

Flooding in Mumbai July 2005

The proposals for SWD improvements in Greater Mumbai need to be seen in the backdrop of the flooding of the City in the rains of 26 July 2005. While heavy rainfall and its concentrated intensity were reasons for the flooding, the inadequacy of the SWD network both in terms of its capacity and inadequate maintenance also contributed. Some of the measures undertaken in this regard and the progress on these are shown in table 7.6. Efficient storm water drainage system is essential to ensure long-term sustainability of Greater Mumbai.

Table 7.6: Storm water drainage projects implementation status

Phase	Physical progress (original DPR)	Financial progress with DPR cost
BRIMSTOWAD Phase-I	83.7%	132.67%
BRIMSTOWAD Phase-II	43.1%	119.47%
Storm water pumping station phase-I	55.0%	133.02%
Storm water pumping station phase-II	0%	0%
Mithi river project	40%	51.35%

Source: Revised Gap Analysis report, Revised City Development Plan, MCGM, 2012

7.4 Solid Waste (MSW)

Solid waste management involves segregation & collection, storage, transfer, transportation, processing and disposal of solid waste. Every day about 7800 metric tons (MT) of solid waste is generated. Additionally, construction and demolition waste collected is about 4700 MT per day. There are two separate wings in MCGM - Solid Waste Management and Transport to handle Municipal Solid Waste.

Table 7.7: Solid waste in Planning Area of DP

	Solid Waste Type	
1	Wet organic material	54%
	Dry organic material	15%
	Recyclables and paper	19%
	Inert material	13%
	Garbage Collection	
2	Number of community Collection Points	3,751
	Garbage collection from community points	48%
	Garbage collection from houses	52%
3	Dumping Sites in operation in numbers (Deonar, Mulund and Kanjur)	03
4	Total length of streets swept everyday (in kms)*	1,800
5	Total biomedical waste generated by various municipal and private medical institutions	Around 9 tonnes/day

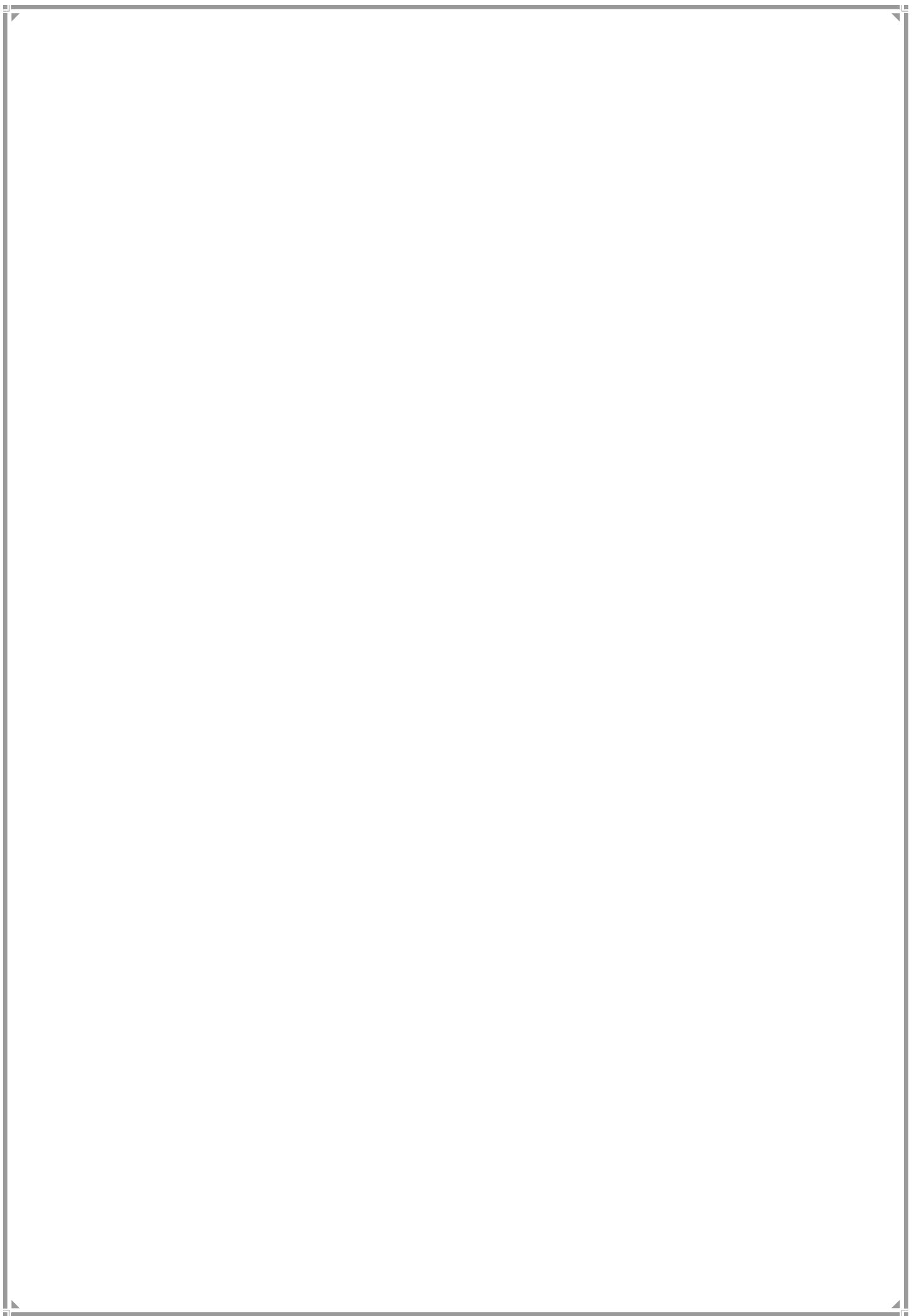
Source: Environmental Status of Brihanmumbai, 2010-11, Report by MCGM* Report on "Fact Finding Committee on Mumbai Floods" Vol.I, committee chaired by Dr. Madhavrao Chitale, 2006

7.4.1 Issues relating to Solid Waste Management

Only around 83% of the MSW is collected, leaving the possibility of residual dumping in unaccounted areas. The total waste recovered including recyclables is 619 MT per day, which is only 10% of total municipal waste generated. The rest of the entire solid waste collected including construction, demolition and municipal waste are dumped in the land fill sites without treatment. Only around 50% of the houses are covered under door to door collection system. Community collection dustbins cause inconvenience and unpleasant conditions. Slums present specific difficulties of access, inhibiting collection. Waste often gets dumped into open streams/nallas, necessitating regular desilting of SWDs. There is also lack of segregation at source. Despite this, the hard work put into cleaning up Mumbai it was rewarded as Gol ranked the City as the cleanest megacity of India.

Chapter 8

SOCIAL INFRASTRUCTURE



CHAPTER 8

SOCIAL INFRASTRUCTURE

8.1. Existing Distribution and Provision of Amenities and Open Space

The MR&TP Act, 1966 lists a large number of amenities that could be provided in the DP. They include those for education, health, social welfare, markets, culture, open spaces, sports, nature, transport, communication and public buildings.

DP 1991 had adopted differential planning standards for the Island City and the Suburbs, prescribing a specific area or number for a specified population. For ease of comparison, the EDDP translated them into per capita land requirement as given below.

Table 8.1 DP 1991 Space norms

AMENITY	DP 1991 STANDARD	PER CAPITA NORM
EDUCATION		
Primary School	1/9,000 Population (Island City) 1/6,000 Population (Suburbs) 3.76 sqm/ pupil (including playground) (Island City) 5.52 sqm /pupil (Suburbs)	0.376 sqm pp (Island City) 0.552 sqm pp (Suburbs)
Secondary School	1/12,000 Population (Island City) 1/9,000 Population (Suburbs) 3.76 sqm/ pupil (Island City) 5.52 sqm /pupil (Suburbs)	0.376 sqm pp (Island City) 0.552 sqm pp (Suburbs)
MEDICAL AMENITIES		
Dispensary	1/50,000 - Area of site 668.9 sqm, covering an area of 1.5 km radius	0.013 sqm pp
Maternity home	50 beds for 1,00,000 population Area of site, 41.8 sqm/bed in the Island City and 83.61 sqm/bed in the Suburbs	Island City- 0.021 sqm pp Suburbs- 0.042 sqm pp
Hospital	4 beds/1,000 population. Island City site- 41.8 sqm/bed Suburbs site- 83.61 sqm/bed	Island City- 0.167 sqm pp Suburbs- 0.33 sqm pp

AMENITY	DP 1991 STANDARD	PER CAPITA NORM
SOCIAL AMENITIES		
Fire station	50,000 to 3, 00,000 population – 4,500 sqm (with staff quarters), 3,000 sqm (without staff quarters). This includes 2 fire engines, 1 ambulance, 1 pumping unit; After 3,00,000 population, 1 pumping unit for each 1,00,000 population.	0.05 sqm pp Average
Burial ground & Cemetery	1 Cemetery of 1.6 ha per ward	
Market	Island City site- 0.20 ha/50,000 population Suburbs site- 0.20 ha/20,000 population	Island City- 0.04 sqm pp, Suburbs- 0.1 sqm pp
OPEN SPACES		
	Island City- 0.20 ha/1,000 population Suburbs- 0.40 ha/ 1,000 population	Island City 2 sqm pp, Suburbs 4 sqm pp

8.1.1 Per capita Provision of Amenities and Open Space

a) Open Space

Greater Mumbai has a fair cover of open spaces. If all varieties of open spaces in the city are added, they make up a significant area of 128.41 sq km or a per capita open space availability of 10.32 sq m. However, a large part of these are not accessible. Those that are publicly accessible are such open spaces where there is entry to all citizens or to local communities. These amount to 15.37 sq. km or a per capita open space availability of 1.24 sq m.

The DP 1991 had adopted a standard of 2 sq m per person for the Island City and 4 sq m pp for the Suburbs. In view of deficiencies in public open spaces, there has to be an attempt to reach these standards and have an eye on bettering them whenever the opportunity arises during the DP 2034 time frame.

b) Medical Amenity

MCGM provides primary level care through health posts, dispensaries and postpartum centres; secondary care through maternity clinics, peripheral and specialty hospitals and tertiary care through hospitals including medical college. Currently the MCGM operates 26 maternity homes, 161 Dispensaries, 167 health posts and 10 Municipal Hospitals. The average per capita availability of all medical amenities is 1.24 sq m pp.

In general, all medical uses which occupy a plot of land are captured by the ELU. However, whenever private dispensaries, maternity home, consulting clinics etc. are located within a floor of a building used for residential/commercial purpose, these are not captured in the ELU 2012. In the revision process, an attempt has been made to capture them and account for them as far as possible.

There is an imbalance with respect to the location of municipal health amenities across wards relative to both the Ward population as well as the slum population in each Ward. There are a large number of general practitioners, private nursing homes and hospitals and private super specialty hospitals that take care of the gaps in the public healthcare system.

c) Educational Amenities

The MCGM has been providing free primary education as a major obligatory function since Independence. At present it runs 1255 primary schools, 109 secondary schools and 430 private aided primary schools. The average per capita space available for education is 0.69 sq m pp. Education in Greater Mumbai is provided by MCGM along with private institutions. Even though the municipal education facilities are evenly distributed in Greater Mumbai, their adequacy as per the local population density and local requirement is of concern. This has implications for some wards like L, M/E and M/W wards that have high slum populations but few schools.

d) Social Amenities and Public Utilities

The average per capita space available in Greater Mumbai for select social amenities (police and fire stations, cemeteries, municipal markets and public sanitation conveniences) is 0.29 sq m pp. Currently, there are 40 police stations and 30 fire stations in Greater Mumbai. There are a number of Municipal markets (21.73 ha) and semi-wholesale markets (1.44 ha, largely in the Island City) in Greater Mumbai. The per capita space available for Public Utilities and Facilities is 0.56 sq m pp. The MCGM has 46 municipal cemeteries and cemeteries and burial grounds currently occupy 122.37ha. As against the previous DP standard of 1 cemetery per ward, the actual number is higher.

8.1.2 Levels of Amenity Provisions

With reference to the DP 1991 planning standards, the area within MCGM is underserved with regard to educational amenities, well served as regards medical amenities and poorly served in terms of Open Spaces. However, there are disparities across the three Zones, the Island City and the Eastern and Western Suburbs. Further, there are major ward variations.

8.2. Accessibility to Amenities

In addition to the levels of amenities, a spatial accessibility assessment in Greater Mumbai was also undertaken. Approximately 94.59% of residential areas have access to a municipal education facility within a distance of 1.0 km. 59.86% of residential areas have access to municipal medical facility within 1 km and 93.02% within 2 kms. 99.88% of the residential areas have some form of open space available within 1 km. Only 7 of the 24 wards, 3 in the Island City, 3 in the Western suburbs and 1 in the Eastern suburbs meet the DP 1991 standards.

Table 8.2: Area for Educational amenities as per existing Land Use, 2012

Land Use Categories		AREA (ha)			
		Greater Mumbai	Island City	Western Suburbs	Eastern Suburbs
Educational Amenities	Municipal Primary School	63.67	15.37	25.43	22.88
	Secondary School	143.25	46.66	66.52	30.08
	Primary cum Secondary School	94.87	17.78	52.46	24.63
	Special School	6.42	3.70	0.93	1.79
	College	111.50	33.91	56.95	20.64
	Polytechnic	22.99	2.16	12.88	7.95
	Professional College	113.40	27.20	17.61	68.59
	University/IIT	276.71	8.29	99.17	169.25
	Civic Training Institute	9.50	0.17	6.51	2.82
	Others	11.48	3.20	5.38	2.90
	Total	853.81	158.44	343.86	351.51
	Per Capita primary education (sq. m)		0.05	0.11	
	Per Capita secondary education (sq.m)		0.15	0.20	
	Per Capita as per DP 1991 standard for primary & secondary (sq. m)		0.376	0.552	

Table 8.3: Area for Medical amenities as per existing land use, 2012

Land Use Categories		Area (ha)			
		Greater Mumbai	Island City	Western Suburbs	Eastern Suburbs
Medical Amenities	Municipal Dispensary	6.97	2.80	2.27	1.90
	Community Dispensary	3.39	0.77	1.87	0.75
	Veterinary Dispensary	1.06	0.50	0.15	0.41
	Municipal Maternity Home	3.63	0.96	1.58	1.09
	Municipal Hospital	56.05	32.70	16.27	7.08
	Private Hospital	62.79	20.55	27.12	15.11
	Government Hospital	58.57	54.18	0.77	3.62
	Other Medical Services	3.59	1.73	1.80	0.05
	Sub-total	196.05	114.19	51.83	30.01
	Per Capita (sq. m)	0.17	0.37	0.09	
	DP 1991 Standard Per Capita (sq. m)		0.2	0.385	
	Hindu Traditional or Electrical	36.52	13.19	13.44	9.89
	Muslim Cemetery	39.33	18.10	9.98	11.26
	Christian Cemetery	24.00	15.33	7.12	1.55
	Buddhist Cemetery	0.23	0.00	0.23	0.00
	Composite Cemetery	0.63	0.00	0.63	0.00
	Jewish Cemetery	2.56	2.56	0.00	0.00
	Tower of Silence	18.73	18.73	0.00	0.00
	Others	0.37	0.26	0.00	0.11
Sub-total	122.37	68.17	31.40	22.81	
Total	318.42	182.36	83.23	52.82	

Note: Cemeteries, crematoria and burial grounds are classified under Medical Amenities in the ELU since they are managed by the Health Department. However, while analyzing the provision of amenities they have been computed under Social Amenities

Table 8.4: Area for Social amenities as per existing land use, 2012

	Land Use Categories	Greater Mumbai	Island City	Western Suburbs	Eastern Suburbs
		Area (Ha)			
Social Amenities	Welfare Centre	18.86	7.25	9.05	2.56
	Public Hall	51.53	14.83	23.34	13.36
	Auditorium / Theater	7.75	4.13	2.72	0.90
	Cinema /Multiplex	17.65	8.50	4.41	4.74
	Open Air Theater	1.52	0.75	0.77	0.00
	Cultural Centre	1.43	0.52	0.76	0.15
	Art Gallery	0.46	0.46	0.00	0.00
	Museum	5.57	5.57	0.00	0.00
	Aquarium	0.49	0.45	0.05	0.00
	Temple	70.88	13.83	40.81	16.25
	Church	28.00	8.24	15.20	4.56
	Mosque	32.17	14.01	9.99	8.17
	Gurudwara	4.20	0.91	1.90	1.39
	Parsi Agiary	6.17	5.25	0.84	0.08
	Jain Temple	15.14	4.31	7.58	3.25
	Synagogue	0.26	0.26	0.00	0.00
	Buddhist Temple	3.67	0.74	0.73	2.20
	Other Religious	4.12	1.37	1.82	0.92
	Police Station	16.17	6.92	5.61	3.64
	Police Chowky	5.74	1.90	2.36	1.48
	Court	7.87	5.95	1.23	0.68
	Prison	5.25	5.18	0.06	0.00
Other Social Amenities	50.93	3.52	23.82	23.59	
TOTAL	355.81	114.86	153.03	87.93	

	Land Use Categories	Greater Mumbai	Island City	Western Suburbs	Eastern Suburbs
		Area (Ha)			
Public Utilities & Facilities	Electric Power Plant	62.56	0.00	0.00	62.56
	Electric Transmission Station	9.67	2.58	3.50	3.59
	Transmissions lines / HT Lines	0.00	0.00	0.00	0.00
	Receiving Station	31.72	6.40	16.87	8.45
	Water Trunk Mains/Aqueducts	23.66	0.37	4.34	18.95
	Water Treatment Plant	74.93	0.00	0.53	74.40
	Water Reservoirs	75.18	7.56	37.15	30.47
	Water Pumping Station	9.26	2.64	4.60	2.01
	Sewage Treatment Plant/ Aerated Lagoons	53.20	0.18	15.84	37.19
	Sewage pumping Stations	30.36	15.49	10.44	4.44
	Public Sanitary Convenience	14.91	3.06	5.90	5.95
	Solid Waste Disposal	290.49	1.59	16.96	271.95
		Sanitary Refuse Shed	0.00	0.00	0.00	0.00
Fire Brigade Station/ Command Centre		13.23	3.27	5.84	4.11
Other Utilities		4.25	1.16	0.37	2.73
TOTAL		693.43	44.29	122.35	526.79

8.3 Accessibility to Open Spaces

Table 8.5: Distribution of Natural Areas and Open Spaces: Ward wise

Zones	Ward	Population 2011	Open Space Land Area (Ha)*	Open Space Per Capita Land Area (sq. m pp)	Natural Areas per ward** (Ha)	Total Open Space and Natural Areas (Ha)	Per Capita Natural Areas and Open Space Land Area (sq. m pp)
Island City	A	185014	74.86	4.05	3.37	78.24	4.23
	B	127290	2.03	0.16	0.00	2.03	0.16
	C	166161	13.23	0.80	0.00	13.23	0.80
	D	346866	87.95	2.54	63.11	151.07	4.36
	E	393286	42.41	1.08	0.37	42.78	1.09
	F/N	529034	51.95	0.98	170.49	222.44	4.20
	F/S	360972	26.57	0.74	30.69	57.27	1.59
	G/N	599039	42.01	0.70	5.74	47.75	0.80
	G/S	377749	125.15	3.31	83.88	209.03	5.53
Western Suburbs	H/E	557239	30.65	0.55	2.95	33.60	0.60
	H/W	307581	37.15	1.21	28.86	66.01	2.15
	K/E	823885	64.46	0.78	32.45	96.92	1.18
	K/W	748688	155.92	2.08	411.72	567.63	7.58
	P/N	941366	557.69	5.92	1151.68	1709.38	18.16
	P/S	463507	77.46	1.67	184.96	262.41	5.66
	R/N	431368	203.61	4.72	418.82	622.43	14.43
	R/C	562162	1478.31	26.30	576.10	2054.42	36.54
	R/S	691229	489.53	7.08	115.01	604.54	8.75
Eastern Suburbs	L	902225	61.91	0.69	55.78	117.68	1.30
	M/E	807720	45.05	0.56	438.30	483.35	5.98
	M/W	411893	96.53	2.34	297.02	393.55	9.55
	N	622853	65.28	1.05	1336.48	1401.75	22.51
	S	743783	111.39	1.50	658.43	769.82	10.35
	T	341463	2070.10	60.62	764.16	2834.26	83.00
Greater Mumbai		12,442,373	6,011.22	4.83	6,830.38	12,841.60	10.32

Source: Existing Land Use Survey, 2012

* **Includes:** Playground, Recreational Ground, Parks and Garden, Clubs and Gymkhana, Promenade, Beach, Swimming Pool and Sanjay Gandhi National Park****Includes:** Sanjay Gandhi National Park, Mangroves, Mud Flats, Hills, River/ Creeks/ Natural Water Bodies, Lakes, Tanks/ Ponds

8.4 Public Purpose Lands: Existing Tools

Ensuring that land marked out for public purpose gets acquired is one of the key objectives of DP. However, past experience in regard to procurement of land for public amenities has not been very satisfactory. The tools of accommodation reservation and TDR used in SRDP 1991 improved the situation but proved insufficient in tackling the procurement of land. Designated amenities in the SRDP 1991 covered 21.3 sq km and proposed reservations covered 41.9 sq km. In the MCGM jurisdiction, presently, 37.5 sq km of land are covered by amenities.

8.4.1 Land Acquisition

MR&TP Act declares that any land reserved in a Development Plan for a public purpose shall be deemed to be land needed for public purpose within the meaning of LA Act 1894 (Sec. 125). The Act further empowers the Planning Authority to acquire the land by agreement or by granting TDR or applying to the State Government for compulsory acquisition under LA Act 1894 (Sec. 126). The LA Act 1894 has now been repealed by Right to Fair Compensation & Transparency in Rehabilitation & Resettlement Act 2013 (RFCTLARR 2013). An assessment was conducted to evaluate the status of implementation of SRDP 1991. The exercise revealed that at Ward level, amenity implementation ranged between a negligible 5% to approximately 40%, owing mostly to challenges that acquisition of land poses. The RFCTLARR further enhances the value of compensation for land acquisition in cities at two times the Ready Reckoner Rate. It is evident that compulsory land acquisition within the provisions of the RFCTLARR has been made highly difficult in Greater Mumbai.

8.4.2 Accommodation Reservation (AR)

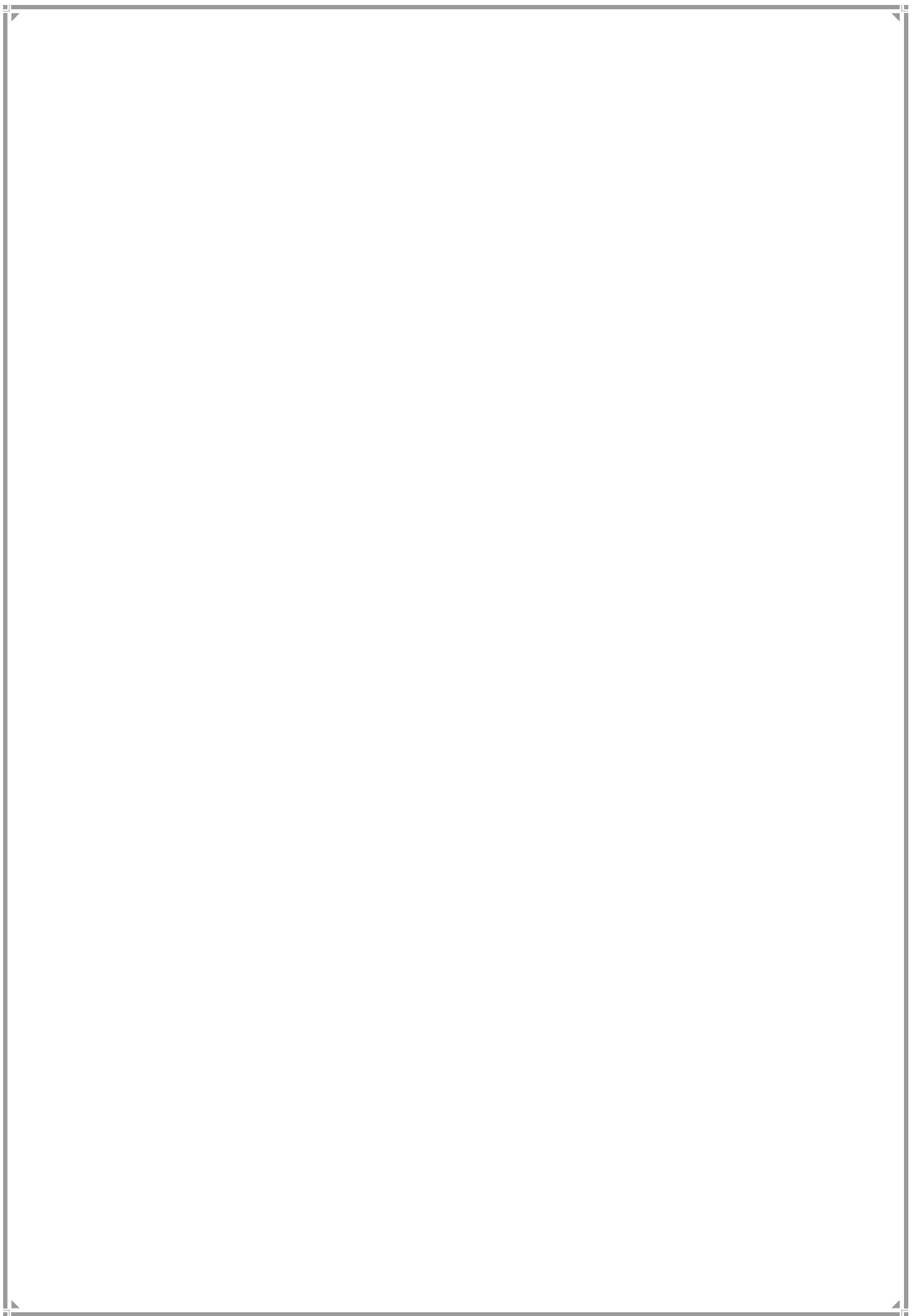
The SRDP 1991 introduced this planning tool to incentivize the private owner to develop the amenity on a land sharing basis. This, along with TDR, enabled SRDP 1991 to harvest more land than earlier for public purpose. And yet, the response of the land owners was tepid, primarily on account of AR potential being less attractive than an unreserved parcel of land. The AR tool, therefore, needs re-engineering.

8.4.3 Transferable Development Rights (TDR)

SRDP 1991 also pressed into service the concept of TDR. MR&TP Act, 1966 was amended in 1994 with retrospective effect from 25th March 1991 to provide legal basis for TDR as a substitute for monetary compensation. Transferable Development Rights (TDR) has been the most successful tool in procuring amenities at no extra cost to MCGM. There has, however, been a drop in the amenities obtained through this scheme since the introduction of TDR for Slum redevelopment, which offers higher incentives to the developers.

Chapter 9

ENVIRONMENT



CHAPTER 9

ENVIRONMENT

The natural systems of Greater Mumbai consist of hills and bays, coastal ecosystem, natural drainage system including rivers, and the forest areas. Greater Mumbai has 26 km of coastline along its western edge. A third of the area of Greater Mumbai is under natural Open Spaces including forests, water bodies, mangroves and wetlands. It is also one of the few cities in the world to have a National Park (Sanjay Gandhi National Park) within city limits. Greater Mumbai has three lakes (Powai, Vihar and Tansa), four rivers (Mithi, Oshiwara, Dahisar, and Poisar) and several creeks and hills. However, large areas under marsh and mangroves have been reclaimed to accommodate an ever-growing population which creates flooding in several areas during the monsoon season.

9.1 Environment Status Report

Sec 63B of the Mumbai Municipal Corporation Act makes it mandatory for the Municipal Commissioner, to place before the Corporation before 31 July every year, *'a report on the status of environment ...in respect of the last financial year, covering such matters and in such manner as may be specified by the State Government, from time to time'*. The objective is to continue to obtain comparable data on environmental benchmarks and take necessary steps for improving the city environment.

9.2 Status of Environment

The overall status of the environment is analyzed in terms of standard indicators that measure air quality, water quality and noise level.

Pollution Indicators

a) Air Quality

The key causes for air pollution include industries, automobiles, dust due to construction activity and foul gases due to unattended sewage and garbage. The air quality for MCGM is monitored against a set of six major pollutants at fixed monitoring sites at six places (Worli, Khar, Andheri, Bhandup, Borivali, Maravli).

Table 9.1 contains the summary of readings for the six pollutants vis-à-vis the CPCB standards. Three of the pollutants are within prescribed limits while three are found in excess at some locations. Seasonal fluctuation due to wind direction, monsoon etc, and variations in air quality could be noted.

Table 9.1: Comparison with CPCB standards (annual avg.) at fixed air monitoring sites in 2010-2011

Sr. No.	Unit	SO ₂	NO ₂	NH ₃	SPM	LEAD	B (a)P**
1	Range*	7 - 10	14-50	37-242	125-642	0.07-0.37	0.3-0.9
2	Maximum at	Maravli & Bhandup	Maravli	Maravli	Maravli	Maravli	Maravli & Khar
3	CPCB Standards Annual Average	50 µg/m ³	40 µg/m ³	100 µ/m ³	140 µ/m ³	0.5 µ/m ³	1 ng/m ³
4	Comparison with Standards	Not Exceeded	Exceeded at Maravli & Khar	Exceeded Maravli	Exceeded at all sites except Borivali	Not Exceeded	Not Exceeded

* Unit µ/m³; ** Unit ng/m³

Source: Environmental Status of Brihanmumbai 2010-2011, MCGM and ** Benzo(a) Pyrene

Table 9.2 below shows that transport sector is the single major contributor to air pollution in MCGM

Table 9.2: Emission load of Mumbai city in the year 2010-2011 (Tons/Day)

Sr. No.	Use	SO ₂ :	Particulate Matter	NOX	CO	HC	Total
1	Domestic	4.41	9.15	29.23	93.81	34.74	171.34
2	Industrial	24.01	0.21	0.05	-	-	24.27
3	Refuse burning	0.16	1.56	0.32	5.99	2.22	10.25
4	Transport						
4.1	Transport (Diesel)	5.96	2.48	34.15	18.12	7.16	67.87
4.2	Transport (Petrol)	0.66	0.18	18.2	265.3	39.05	323.39
	Total	35.2	13.58	81.95	383.22	83.17	597.12

Source: EIG, MCGM

Table 9.3 below shows the trend of pollution across three years (2008-08 to 2010-11) at six locations, two each in the three zones of Greater Mumbai.

Table 9.3 Site wise percentage of samples exceeding CPCB (24 hrs standards in the Year 2008-2011 average)

Sr. No.	Site	SO ₂			NO ₂			NH ₃			SPM			LEAD		
		08 - 09	09 - 10	10 - 11	08 - 09	09 - 10	10 - 11	08 - 09	09 - 10	10 - 11	08 - 09	09 - 10	10 - 11	08 - 09	09 - 10	10 - 11
1	Worli	0	0	0	46	6	7	0	0	0	41	45	36	0	1	0
2	Khar	0	0	1	47	9	2	1	0	0	59	60	50	0	0	0
3	Andheri	0	2	0	46	16	2	1	0	0	60	57	39	0	0	0
4	Bhandup	0	0	0	37	2	0	0	0	0	60	52	48	0	0	0
5	Borivali	0	0	0	2	0	0	0	0	0	9	12	11	0	0	0
6	Maravli	0	1	0	44	30	9	20	24	17	71	84	88	1	2	6

Source: Environmental Status of Brihanmumbai 2010-2011, MCGM

b) Water Quality

Drinking Water Quality

The contamination of drinking water directly leads to water borne diseases like Cholera, Gastroenteritis, E Coli, Jaundice, Dysentery, Diarrhea, Typhoid, Hepatitis A, etc. The major source of water contamination is bacteriological content which is caused by inadequate sanitation. Table 9.4 below shows the ward-wise water quality in terms of percentage of unfit samples across three years (2008-09 to 2010-11). The water quality data shows a general increase in the percentage of unfit samples in all three zones and across most wards between 2008 - 09 to 2009 -10. However, that has come down slightly in the next year. The wards having particularly higher percentages of unfit samples (ranging above 30%) are Ward A and Ward E in the Island City, Ward P/S in the Western Suburbs and Ward L in the Eastern Suburbs. On the other hand, the wards having particularly lower percentages of samples (ranging below 20%) are Ward P/N in the Western Suburbs and Ward N in the Eastern Suburbs and none in the Island City.

Table 9.4: Ward wise % of unfit water samples April 2008 to March 2011

No.	Ward	% of unfit samples 2008-2009	% of unfit samples 2009-2010	% of unfit samples 2010-2011
1	Reservoir	10.1	22.6	16.03
Island City				
2	A	17.51	31.7	32.5
3	B	16.47	26.2	26.97
4	C	16.74	27.9	26.6
5	D	14.92	29.2	25.41

No.	Ward	% of unfit samples 2008-2009	% of unfit samples 2009-2010	% of unfit samples 2010-2011
6	E	16.67	29.6	36.68
7	F/N	10.83	22.9	22.67
8	F/S	10.46	25.2	27.71
9	G/N	10.86	23.4	22.5
10	G/S	9.59	26.0	26.34
Western Suburbs				
11	H/E	15.67	27.1	23.86
12	H/W	10.83	21.3	20.3
13	K/E	13.59	23.6	26.91
14	K/W	15.89	29.1	21.49
15	P/N	9.21	19.9	18.51
16	P/S	25.5	39.3	32.24
17	R/C	15.3	25.5	27.32
18	R/N	12.49	24.3	22.04
19	R/S	11.76	26.4	22.52
Eastern Suburbs				
20	L	19.13	30.5	32.94
21	M/E	10.43	25.1	22.97
22	M/W	10.3	25	21.16
23	N	11.42	28.4	16.82
24	S	21.01	29.1	27.03
25	T	8.25	24.7	21.64
	Total	13.8	26.1	24.64

Source: Water testing Laboratory, G/N ward office, Dadar, MCGM

Coastal Water Quality

Most of the coastal water tested had higher than permissible levels of BOD (except Malabar Hill) and Faecal Coliform (except at Haji Ali). This clearly shows the pollution outcomes of inadequate sanitation and lack of secondary level sewage treatment. See Table 9.5.

Table 9.5: Coastal water quality of Mumbai - 2010-2011

Location	pH	DO in ppm	BOD in ppm	Faecal Coliform
Gateway of India	7.81	5.20	9.31	758
Nariman Point	8.00	5.48	5.45	900
Malabar Hill	8.08	5.95	4.60	1600
Haji Ali	8.08	5.43	5.75	500
Worli Seaface	7.92	5.21	8.45	882
Shivaji Park	7.92	5.54	5.08	1600
Juhu Beach	7.68	4.95	5.65	1750
Versova Beach	7.84	4.69	8.71	1070
Mithi river	7.31	3.27	30.11	1800
SW-IV Standards (Harbour Waters)	6.50 -9.00	3.00	5.00	500
BOD: Biochemical Oxygen Demand; DO: Dissolved Oxygen				

Source: MPCB

c) Noise Level

The prevailing daytime noise levels in most areas across the city (residential, commercial, airport and silent zones) are higher than the permissible PCB standard.

Noise levels observed in various zones is given in the Table 9.6 below. The highest deviation is in the Airport area while in the Industrial areas it is within the prescribed levels.

Table 9.6: Range of noise levels observed with respect to the standards, 2010-2011

Area	Prevailing Noise Levels in Mumbai	C.P.C.B. Standard	
		Day dB (A)	Night dB (A)
Residential	60-73	55	45
Commercial	59-79	65	55
Traffic	65-85	65	55
Airport Area	80-88	65	55
Silence Zone	55-78	50	40
Industrial	60-74	75	70
Indicative Sound Level During Festival & Processions			
Ganesh Festival	78-108	-	-
Diwali Festival	69-91	-	-

Source: Central Pollution Control Board and EIG, MCGM; Environmental Status of Brihanmumbai, 2010-11, MCGM

Health Impacts of Increased Noise Pollution

Increased noise pollution can lead to a variety of health issues. As per the WHO, “Excessive noise seriously harms human health and interferes with people’s daily activities at school, at work, at home and during leisure time. It can disturb sleep, cause cardiovascular and psycho physiological effects, reduce performance and provoke annoyance responses and changes in social behavior.”

9.3 Environmental Vulnerability

Greater Mumbai areas are prone to three potential natural hazards of flooding, landslides and earthquake. Of these, flooding is the major threat because of its greater impact on life and property.

9.3.1 Areas Prone to Flooding

Greater Mumbai is vulnerable to environmental risks like flooding and landslides, caused due to heavy annual rainfall. Its estuarine setting, coupled with continuous reclamation in marsh lands and low lying areas have led to an obstruction in the natural flow of water bodies and drains. Most of Greater Mumbai is on reclaimed lands that are almost flat, which makes the city naturally prone to flooding. Prime city locations are lower than high tide level. Similarly, low lying coastal edges and river floodplains are susceptible to flooding.

9.3.2 Areas Prone to Landslides

Several areas around hill slopes in Greater Mumbai are prone to landslides. The risk is more during the monsoon. Areas around hill slopes in Ghatkopar, Bhandup and Kurla in the Eastern Suburbs are prone to landslides resulting in increased exposure of slopes to erosion and water infiltration. Slum populations residing on these hill slopes are at high risk.

Table 9.7: Chronic flooding spots in Greater Mumbai

Island City	Western Suburb	Eastern Suburb
<ul style="list-style-type: none"> • S.V.P Low level • Sandhurst Road • Burhni College • Mumbai Central • King Circle • Hindmata • Sakhubai Mohite Marg • Wadala 	<ul style="list-style-type: none"> • Juhu Tara Rd and S.V. Rd junction, Santacruz (W) • Milan Subway – Santacruz (W) • Andheri Subway, Andheri (W) • Marol Market, Andheri Kurla Road, Andheri (W) • Vidyanidhi Complex, JVPD North, Vile Parle (W) • Gazdar Bundh, Santacruz (W) • Bhogale Chowk, Vileparle (E) • Junction of M. G. Rd, Subhash Road Vileparle (E) • Veera Desai Road, Andheri (W) 	<ul style="list-style-type: none"> • Kurla station (W) • L.B.S. Marg, C.S.T. junction to Sheetal cinema, Kurla (W) • From Premier Road to Milind Nagar nalla, Kurla (W) • Shanti Nagar, Baigan Wadi • Sindhi Society, Chembur (W) • Between 21st Road and Subhash Nagar Road, Jeevan Bhar Society,

Island City	Western Suburb	Eastern Suburb
Station • Maratha Mandir	<ul style="list-style-type: none"> • Kotkar nalla, Goregaon (W) • Piramal Nagar nalla, Goregaon • Rani Sati Marg, Akrani Pada, Malad (E) • Valnai Hutment colonies, Kandivali (W) • Link Road, Guri Pada, Malad (W) • Malad Subway, Malad (E) and (W) • Opp Kandivali Fire station, S.V.Rd, Kandivali (W) • Sambhaji Nagar, Dahisar (E) • Dahisar Subway, Dahisar (E) and (W) 	Chembur (W) <ul style="list-style-type: none"> • Shanta Jog Marg, Tilak Marg, Chembur (W) • Savan Bazar, N.G. Acharya Marg, Chembur (W) • Kirol Road, Near Fatima High School, Ghatkopar • New Pant Nagar from Vallabh Baug extension, lane up to Railway Police Quarters, Ghatkopar(E) • Naval Dockyard at L.B.S. Marg, Jn. of Chirag Nagar Road, Ghatkopar (W) • Bhandup village Road, near progressive steel co. Bhandup (W)

Source: Revised Gap Analysis report, Revised City Development Plan, MCGM, 2012

9.3.3 Climate change risk

Increased intensity of climatic events like increased rainfall, floods, unseasonal rain or drought, intense heat, sea level rise, cyclonic storm surges and increasing outbreaks of tropical diseases and epidemics are predicted outcomes of climate change and global warming. Greater Mumbai's coastal location and a large population living in close proximity to the coast render it highly vulnerable to many climate change effects, especially sea level rise and flooding. Since Mumbai is only a few meters above sea level and has four rivers flowing through it further increases its vulnerability to flooding. MCGM has prepared a separate storm water drainage plan to deal with the risks of flooding.

9.4 Health & Hygiene Impacts of Pollution and Current Infrastructure Management

Public health impacts are largely attributed to environmental pollution, in particular, the illnesses and diseases spread as a result of the following environmental problems:

- Poor Air quality (pollutants from transportation, domestic and construction-demolition activities)
- High levels of noise pollution
- Flooding during rains
- Poor quality of potable water
- Inadequate light and ventilation
- Inadequate sanitation facility

- Insufficient water and sanitation facility at schools

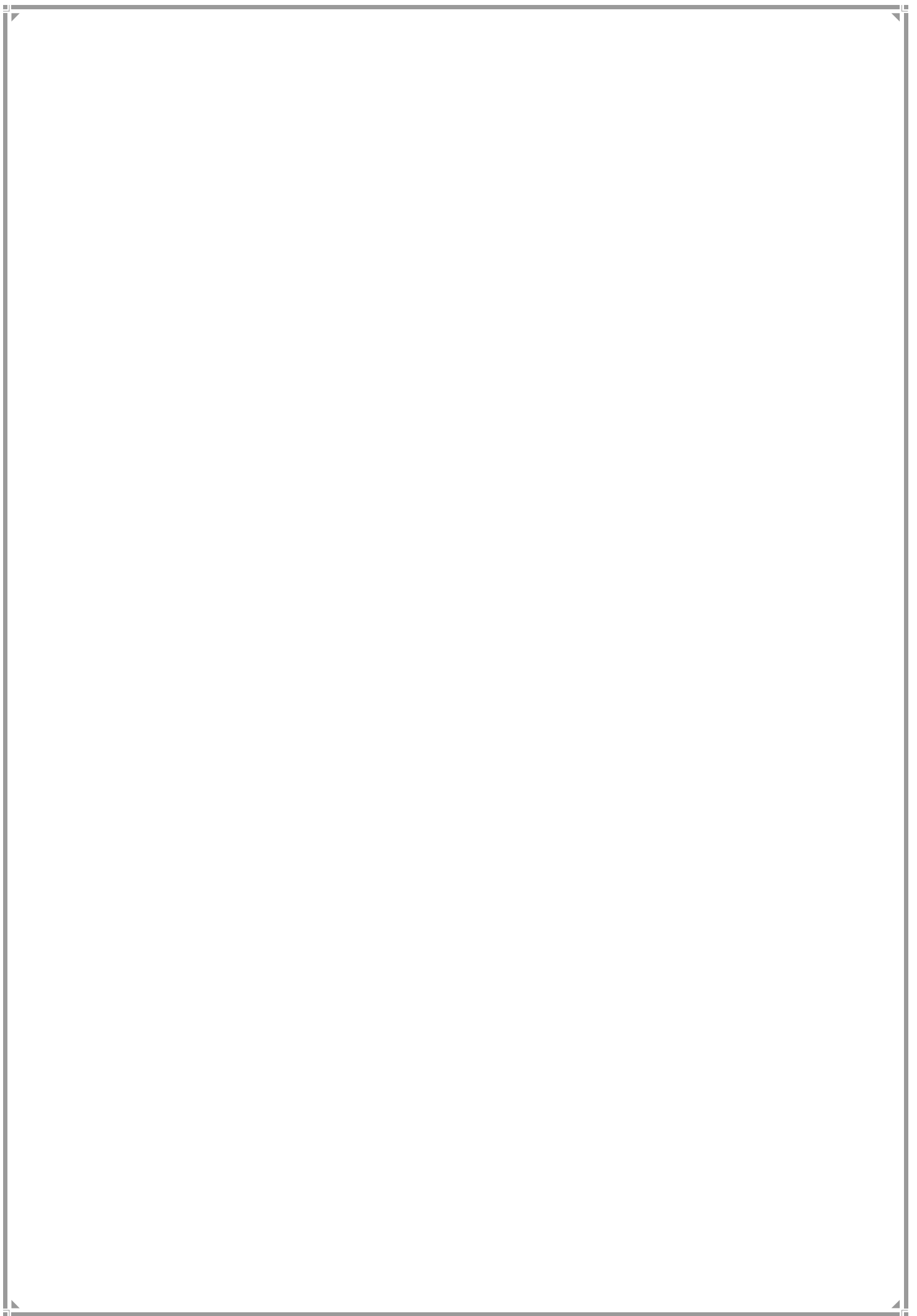
The top five sensitive diseases in Greater Mumbai are diarrhea, tuberculosis, hypertension, malaria and diabetes. These diseases are directly a result of either environmental pollution or due to the state of the current infrastructure management, with water related diseases forming the majority.

9.5 Environmental Impacts on Livelihoods and Economy

The link between the state of the environment, health and therefore economic well being has been written about and is well established. In Mumbai's context, the floods of 2005 caused havoc and resulted in huge economic losses. Some of the environmental costs are direct and tangible while others are less obvious. Livelihoods of 50,000 Koli fisher folk are directly dependent on the state of our coastal environment while adivasipadas are dependent on forest lands. Many more people would be directly affected by the pollution of Mumbai's coastal waters and by poor quality of drinking water. Many residents especially children in the city are adversely impacted due to poor air quality in the city. Increased morbidity due to poor environmental conditions results in decreased productivity and poor quality of life. The poor are at increased risk due to the degraded environments that they live in. Lack of access to basic sanitation and water supply compound the risks that they are exposed to. Enhancing biodiversity and mitigating pollution will have a direct impact on the quality of life of all residents of the city regardless of income.

Chapter **10**

FLOOR SPACE INDEX AND DENSITY



CHAPTER 10

FLOOR SPACE INDEX AND DENSITY

FSI as a tool for managing physical development was first introduced in 1967. Since then its use as a policy instrument has evolved covering a wide range of objectives. The Chapter describes the existing pattern of consumption of FSI.

10.1 Assessing Existing Consumption of FSI

The definition of FSI included in DCR 1991 is “the quotient of the ratio of the combined gross floor area of all floors, excepting areas specifically exempted under these Regulations, to the total area of the plot”, viz: -

$$\text{Floor Space Index (FSI)} = \frac{\text{Total covered area on all floors}}{\text{Plot area}}$$

Various types of covered areas ranging from staircases to fitness centre are excluded from computation of FSI. Furthermore, additional FSI by way of TDR or incentive FSI as in case of public parking is also available.

10.1.1 Methodology of FSI Computation for ELU 2012

The computation of FSI follows the following method of assessment.

- a) Blocks comprising number of plots surrounded by streets were identified. Blocks also cover slum areas;
- b) Area footprints of buildings in each block is calculated;
- c) An average number of storey's of the structures in the Block is noted;
- d) The total of footprint area ('b' above) in the Block is then multiplied by the average number of storey's ('c' above) to obtain the total built up area;
- e) Bulk Built Up Area so derived is then divided by block area to calculate FSI.

Since in this method, it is not possible to identify the floor area exempted from FSI computation, the FSI computed as above would always be larger than permitted FSI and is therefore called as **Bulk FSI** and since it is calculated on net plot area, it is called **Net Bulk FSI**. The difference between the Net Bulk FSI so assessed and the statutory FSI would be particularly significant in new buildings with larger above ground parking areas.

10.1.2 FSI Consumption Pattern

Greater Mumbai displays a Net Bulk FSI consumption ranging from 0.93 to 7.35 and above. FSI Consumption patterns are as under:

Table 10.1: FSI Consumption

Zone	FSI	Areas	Predominant Land Use
Island City	1.33-2.00	Apollo Bunder, Cumballa Hill, Tardeo, Agripada, Chinchpokli, Siddharth Nagar, Naigaon, Lalbaug, Parel, Shivaji Park, Purandare Wadi, Juvekar Wadi, Phoenix Mills	Commercial except Shivaji Park and Cumballa Hill (Residential)
	2.00-3.00	MCGM HQ, Bombay Hospital, Churchgate Stn, Bhang Wadi, Wagh Wadi, Chira Bazaar, Kalbadevi, Gowalia Tank, Anand Nagar	Commercial and Residential
	3.00-4.00	Ballard Estate, Masjid Bunder, Chinch Bunder, Chippi Chawl, Near Chandan Wadi and Gai Wadi	Commercial except Ballard Estate (Office)
	4.00 & above	BSE, Horniman Circle, Flora Fountain, Bora Bazaar, around Shahid Bhagat Singh Marg, some cessed buildings	Commercial and Office, except Bora Bazaar (Mixed)
Western Suburbs	1.00-2.00	Hanuman Nagar, Bhim Nagar, Kamala Nagar, JVPD Scheme Vidyanidhi, Chincholi Bunder, Mamletdar Wadi, Kanchpada, Saibaba Nagar, Chiku Wadi, Babhai Naka, Charkop Village	Residential
	2.00-3.00	Vithalds Nagar Hsg. Colony, Podar Educational Complex, Hasamukh Nagar, Dahisar Ganpat Patil Nagar and Anand Park, Jai Jawan Nagar,	Residential except Podar Edu. Complex (Edu.)
Eastern Suburbs	1.00-2.00	Saki Naka Junction, Mulund Colony, Johnson and Johnson, Mulund Bus Depot, Mulund Sonapur	Residential except Johnson and Johnson (Industrial)
	2.00-3.00	Annabhau Sathe Nagar and Shivaji Nagar Chembur and Hiranandani Powai and Panchkutir Ganesh Nagar	Residential

10.1.3 Areas with High FSI

- Development Nodes:** There is a direct co-relation between location of employment nodes and higher consumption of FSI. In the Island City, the highest concentration of FSI is around Nariman Point and close to Dadar railway interchange. The areas of highest consumption of FSI are located in Wards A, B and C that house the Central Business District (CBD) of Greater Mumbai These are areas that are easily accessible from CST and Churchgate that are major suburban terminals. Also erstwhile textile

mill areas now emerging as new hubs for commerce, offices and entertainment, show relatively high Net Bulk FSI.

- The Western Suburbs display employment nodes and/or commercial centres of high FSI consumption along major railway stations and at intersections of major roads such as S.V. Road and Linking Road. The Eastern Suburbs indicate relatively high FSI at Bhandup-Mulund cluster.
- **Road and Transport Networks:** Transport (both rail and arterial road) networks have a major role in determining the FSI distribution pattern in Greater Mumbai. Most of the areas which have Net Bulk FSI in the range of 1.5 and 3.0 are located near or along the major road and rail corridors. Nodes such as Andheri, Jogeshwari, Malad, Kandivali and Borivali have higher FSI.
- **Slum Rehabilitation Schemes:** In the Eastern Suburbs the pockets with very high FSI are not directly connected to the railway corridors; rather they are the slum rehabilitation areas around BPCL (Ward M/W), Govandi and Mankhurd (Ward M/E).
- Policies such as rehabilitation of slum areas cause concentration of high FSI, which in turn is related to policies granting incentive FSIs and land availability with Government agencies to plan resettlements.

10.1.4 Density

DP 1967 and SRDP 1991 both had included maximum permissible densities along with FSI as a regulating parameter. 250 dwelling units per hectare at FSI 1.00 (or 1250 persons/ha) was generally prescribed.

Table 10.2: Density

High Density (1500 pph – 2500 pph) and High FSI (2.00-4.00)	Annabhau Sathe Nagar and Shivaji Nagar Chembur, Chinch Baunder, Chippi Chawl, Dongri, Chira Bazaar, Null Bazaar and Bhuleshwar
High Density (1000 pph – 1800 pph) and Low FSI (1.33-2.00)	Apollo Bunder, Kurar Village, Pathan Wadi, Dindoshi, Cotton Green, Gandhi Nagar, Masjid Bunder East, Mazgaon and Dana Bunder, Indian Oil Nagar, ACC Nagar
Low Density (below 1000 pph) and High FSI (2.00-4.00)	Hindu Gymkhana, Police Grounds, Prem Nagar slums and Prem Nagar
Low Density (below 1000 pph) and Low FSI (1.33-2.00)	Cumballa Hill and Zoroastrian Colony, Jai Jawan Nagar, Juhu, Danda, Pali Hill, Pali Village, Saibaba Nagar, Vazira Naka, Spenta Residency near Chimatpada

10.1.5 Comparison of FSI distribution and ratio of Employment to total population

A study of the relation between per capita employment space consumed to existing distribution of FSI reveals the following:

- Areas with high FSI (Above 2.30) and high Employment to Population ratio include Ballard Estate, Fort, Bora Bazaar in Ward A, Masjid Bunder in Ward B and Kalbadevi in Ward C;
- Areas with high FSI (Above 2.30) and low Employment to Population ratio include Hiranandani Powai in Ward S and Marine Lines in Ward C;
- Areas with medium FSI (1.21 to 2.30) and high Employment to Population ratio include Dadar in G/N, Andheri in Ward K/W and Chincholi Bunder in Ward P/N;
- Areas with medium FSI (1.21 to 2.30) and low Employment to Population ratio include Antop Hill, CGS Colony in Ward F/N; Khar and Bandra in Ward H/W and Sarvodaya Parshwanath Nagar Mulund, Vishwakarma Nagar in Ward T;
- Areas with low FSI (less than 0.50 to 1.20) and high Employment to Population ratio include MbPT in Ward A, Motilal Nagar, Bangur Nagar in Goregaon, Ward P/S;
- Areas with low FSI (less than 0.50 to 1.20) and low Employment to Population ratio include Malabar Hill in Ward D, Vidyavihar in Ward N, Gorai in Ward R/C and Malwani in Ward P/N;

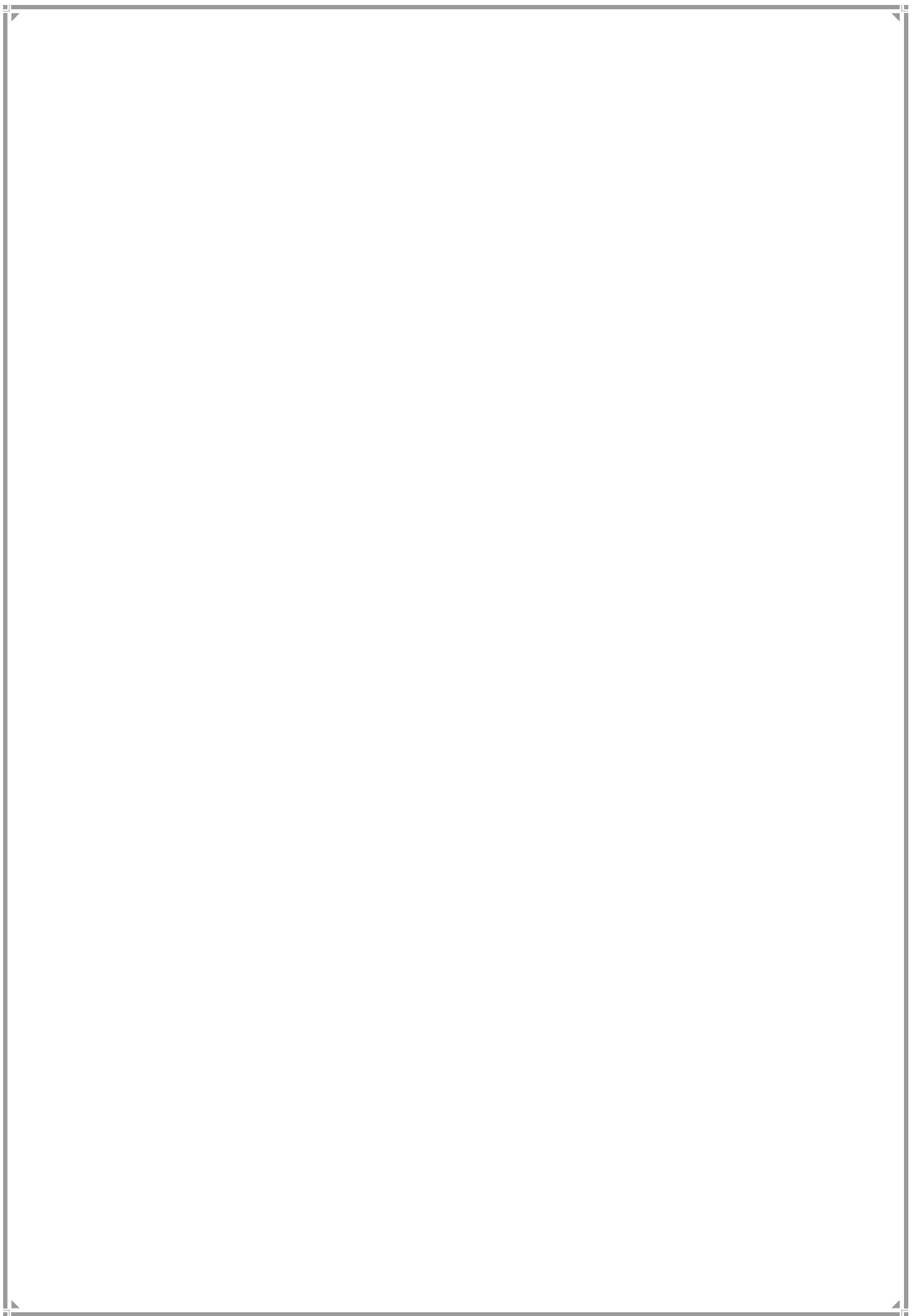
Island City has a very high concentration of employment in the high and medium FSI zone and along the movement corridors in the Western Suburb. Eastern Suburbs have many areas of low and medium FSI supporting substantial employment.

10.1.6 Integration of Transport Network and FSI in Greater Mumbai

Areas with concentration of high Net Bulk FSI are located in proximity to transit stations such as Churchgate, Chhatrapati Shivaji Terminus, Dadar and employment centres such as Fort, Bora Bazaar, Nariman Point, Ballard Estate, and Null Bazaar in the Island City. The predominant land uses in these areas is Commercial and Office. In the Eastern Suburbs, pockets that have the highest Net Bulk FSI are not directly connected to railway corridors. These largely correlate to slum rehabilitation areas around BPCL (Ward M/W), Govandi and Mankhurd (Ward M/E) which have a high ground coverage hence high FSI consumption.

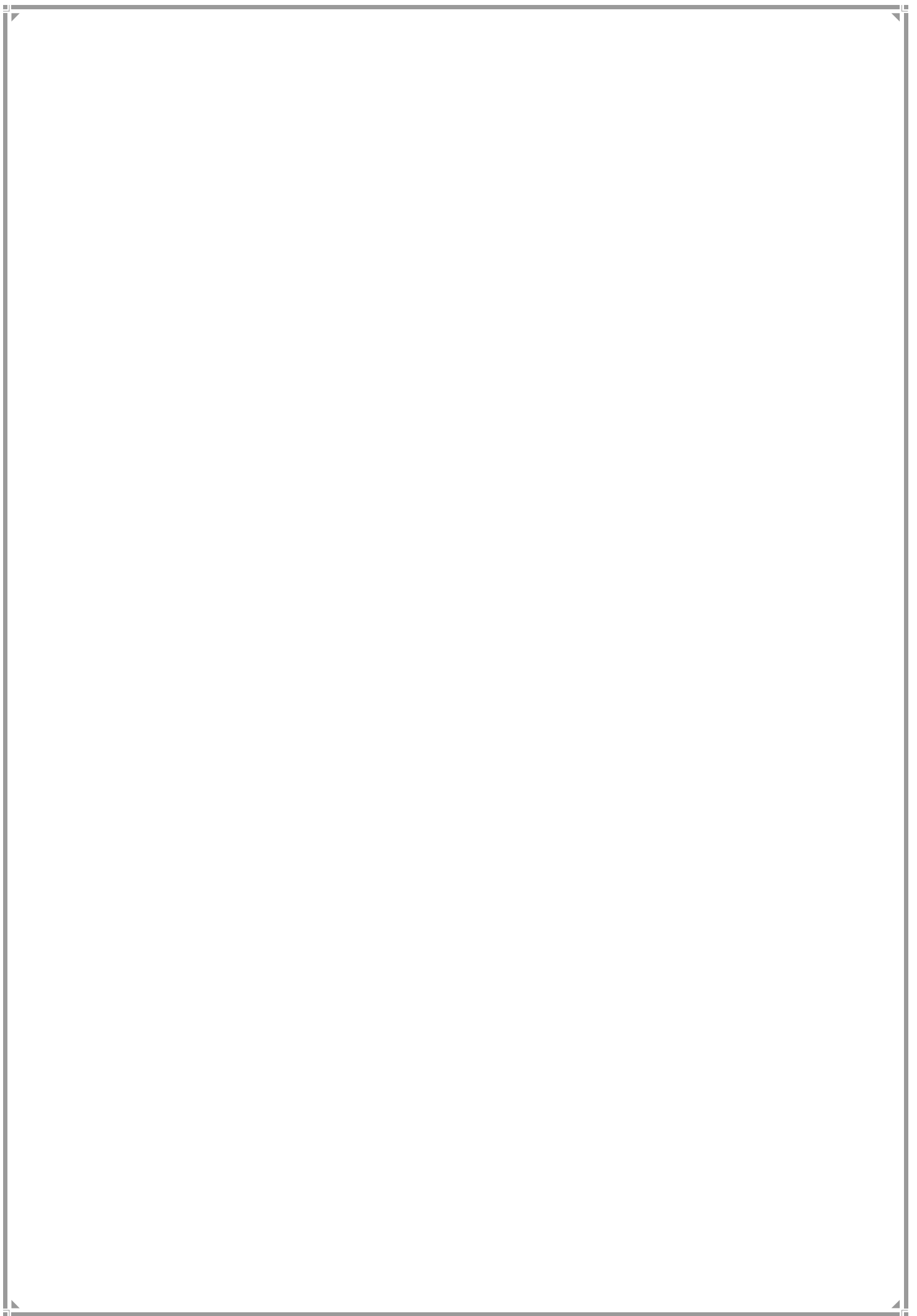
PART-2

PROPOSALS



Chapter **11**

PROJECTIONS



CHAPTER 11

PROJECTIONS

The future growth of the City for the period 2014-2034 has been envisioned both from an economic perspective as well as from demographic projections. Future spatial demands for the RDDP 2034 would emerge out of these projections and have been explained in this Chapter.

11.1 Economic Projections

Mumbai's economy, in terms of GDP at current prices, has been growing at an average of 13% from 1993-1994 to 2010-11. Its share in India's GDP has been around 3%.

11.1.1 Economic Growth Projections

Based on available economic data, the NDDP of Mumbai is expected to grow at 7% per annum. Since the population growth projection is comparatively much lower, it would be safe to assume that per capita NDDP in 2034 would be substantially higher and would lead to larger per capita consumption of housing and consumption of other goods.

11.1.2 Sectoral Composition of Mumbai's NDDP

Over the last four decades, there has been a continuing decline in the primary and secondary sectors with a corresponding increase in the tertiary sector. Assuming that this trend will continue, the present and projected sectoral distribution of Mumbai's NDDP is given below.

Table 11.1 Current and Projected sectoral share of Mumbai's NDDP

Sector	Activities	Current Share (%)	Projected (2034) Share (%)
Primary	Agriculture and Allied	1	0.5
Secondary	Manufacturing and Construction industries	31	20
Tertiary	Communications, trade, hospitality, banking, financial services, etc	68	80

11.1.3 Emerging Centres of Growth and Spatial Clustering

Historically, Mumbai's economic activities such as the port, government offices, banking and insurance services, the stock exchange, and wholesale trade, were all concentrated in and around the Fort area. The development of Navi Mumbai and the business district at the Bandra Kurla Complex (BKC), flagged off in the 1970s, created additional centres of growth. Further new economic clusters have emerged in Greater Mumbai since then. The reinforcement of the City's economy beckons the creation of a conducive macro-economic

environment. The DP would need to contribute to economic robustness through the overall provision of adequate space for business, the enabling of more affordable space, quality of life and ease of doing business.

11.2 Employment Projection

The EDDP 2034 based its employment projection on the Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008. In conjunction with other factors, it was projected that employment for Greater Mumbai would range between 6.2 and 7.35 million. However, MCGM has now come out with its Comprehensive Mobility Plan (CMP) in 2016. This document projects that employment in Greater Mumbai would be of the order of 8 million. The RDDP has accepted this figure.

11.3 Demographic Projection

The starting point of demographic projection for Greater Mumbai is the Census demographic data of 2011, which put the population at 12.44 million. Using this as the base, the EDDP 2034 abandoned the historical trend as a valid method for population projection, since the city, as is the case of other large metros, showed that demographically it was in a state of stabilization. Greater Mumbai's share of population in the Greater Mumbai Urban Agglomeration went down from 90.02 % in 1971 to 67.73 % in 2011 and its household size fell from 4.8 in 2001 to 4.4 in 2011. While the EDDP 2034 studied several methods for futuristic demographic projection, it placed reliance on the 'ratio method' and reached estimates of 12.66 million in 2014, 13.32 million in 2024 and 13.94 million in 2034. Land requirements for the preparation of Proposed Land Use (PLU) were accordingly based on the projected population figure of 13.94 million.

While the above cited figure was arrived at by EDDP, it did not have the population figures worked out by the Regional Plan available. The RDDP 2034, however, is privy to the latest Draft RP projections assembled by MMRDA. The projections are founded on the trend-based method considering the 2011 Census population figures. Further, linear/longitudinal/polynomial projection methods have been considered to determine the regional population and populations of individual ULBs within the MMR. The projected population of Greater Mumbai is as stated in the Table below:

Table 11.2 Draft RP Population Projection for Greater Mumbai

Area	1991	2001	2011	2021	2031	2034
Greater Mumbai (population in millions)	9.93	11.98	12.44	12.79	11.91	11.40

Source: MMRDA Draft Regional Plan, 2015

In this regard, attention is drawn to Sec 27 of the MR&TP Act 1966. It states that "*where any area within the jurisdiction of a Planning Authority is included in a Region, the Planning Authority or as the case may be, the said officer shall have regard to, and be guided by, the*

proposals made in any draft Regional Plan, or any final Regional Plan, as the case may be, while preparing the draft Development Plan...”.

The RDDP has adopted the highest population figure projected by the draft RP. This is **12.79 million** that Greater Mumbai would reach by 2021. All other projections are worked on the basis of this central demographic number.

11.3.1 Demographic Projection at Administrative Wards level

The Greater Mumbai projected population has thereafter been distributed at the ward level. The same methodology as adopted by the EDDP 2034 has been adopted by RDDP 2034. This was based on the projected population for Greater Mumbai and the ratio of population of various wards. These projected populations are stated below.

Table11.3: Population projections for Wards (in thousands)

District / Ward	Census Population				Projected Population		
	1981	1991	2001	2011	2021	2031	Horizon Year 2034
A	168	195	211	185	168	137	128
B	147	118	141	127	112	88	83
C	271	199	203	166	152	125	117
D	384	400	383	347	336	295	279
E	517	411	440	393	361	298	280
F/N	815	431	524	529	482	393	370
F/S		417	396	361	351	312	294
G/N	446	560	582	599	580	511	482
G/S	537	445	458	378	344	281	264
Island City	3,285	3,175	3,338	3,085	2,886	2,440	2,297
H/E	707	452	581	563	557	518	493
H/W		318	337	301	288	234	217
K/E	529	693	810	824	835	769	733
K/W	396	576	701	749	782	739	708
P/N	368	604	799	941	1,036	1,021	990
P/S	296	351	438	464	484	457	438
R/N	389	619	364	432	510	501	535
R/C			513	562	576	564	494
R/S	173	335	590	691	782	788	766
L	434	617	778	902	981	958	926
M/E	566	471	675	808	902	900	874
M/W		352	414	412	414	377	358

District / Ward	Census Population				Projected Population		
	1981	1991	2001	2011	2021	2031	Horizon Year 2034
N	878	507	620	623	632	583	556
S	--	567	691	744	779	739	709
T	223	289	330	341	347	321	306
Total Suburbs	4,958	6,751	8,640	9,357	9,905	9,470	9,103
Greater Mumbai	8,243	9,926	11,978	12,442	12,790	11,910	11,400

Source: Projections based on Draft RP/Census 2011

Note: The Ward R/C was a part of Ward R/N until 1995. Therefore, for convenience, population projection for the years 2021, 2031 and 2041 has been done as a cumulative figure and later for the years 2014, 2024 and 2034 the cumulative figure has been distributed based on the ratio method by projecting the ratios.

11.4 Number of Households

Census 2011 revealed a decline in the average household size in Greater Mumbai from 4.8 in 2001 to 4.4 in 2011. The trend of Island City having greater average household size than the Suburban District continues. The average Island city household size is down from 4.9 to 4.7 in 2011 and the Suburban District down from 4.6 to 4.4 in 2011. The household size is expected to decline further to 4.2 in 2024 and 4.0 by 2034. These household sizes yield the following number of households in the cited years.

Table11.4: Projected households in Greater Mumbai for 2021, 2031 and 2034

District / Ward	Projected Number of Households		
	2021 (average household size 4.2)	2031 (average household size 4)	2034 (average household size 4)
Greater Mumbai	3,045,238	2,977,500	2,850,000

Source: Projected, 2012/Draft RP

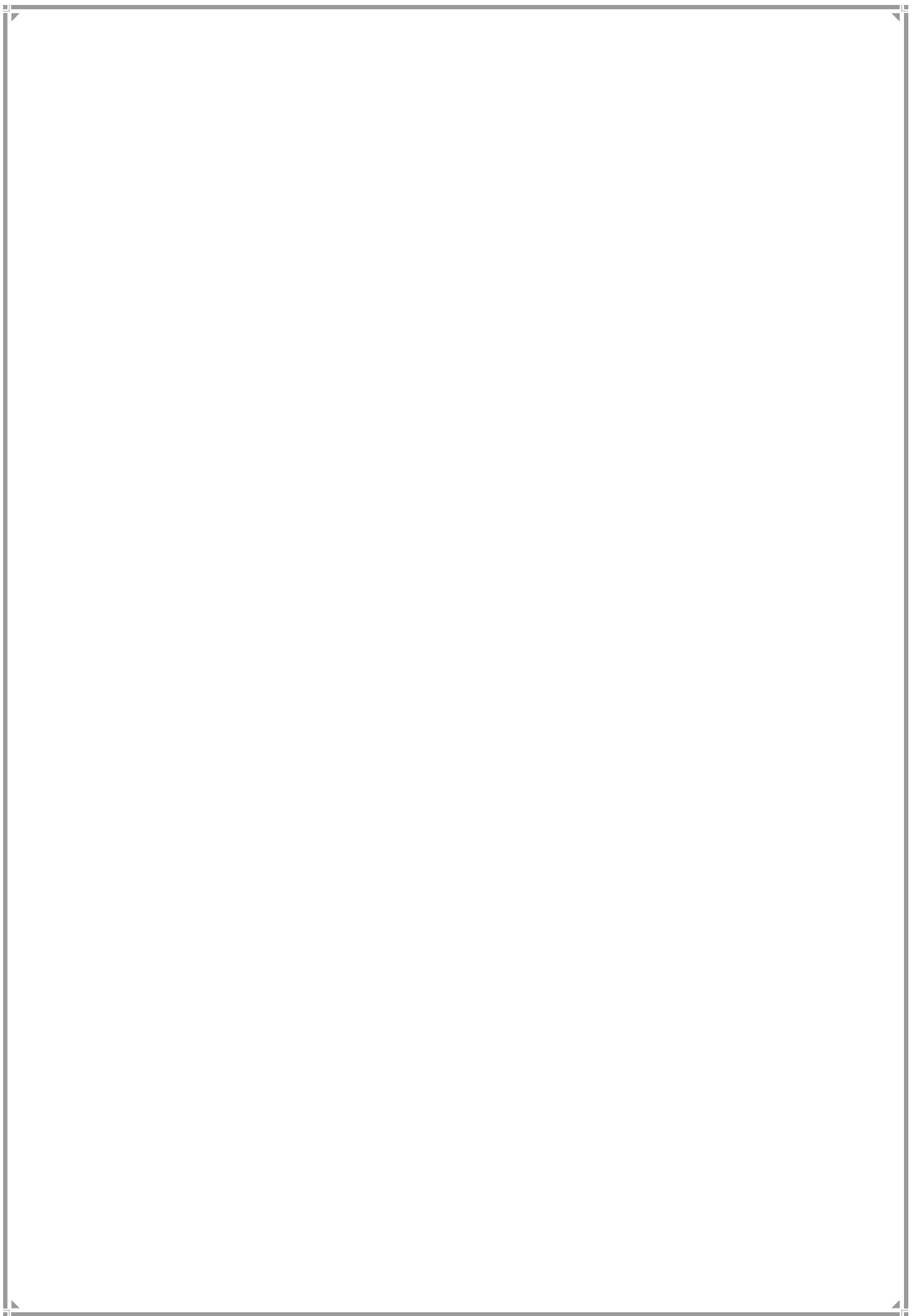
11.5 Projections & Development Plan

A basket of economic factors indicated that the economic growth of Mumbai would continue into the next two decades, despite the declining demographic trends. This is sought to be buttressed through a strategy to retain the economic robustness of the city.

Economic growth is likely to translate into greater per capita income during the planning period and result in demands of more space per capita for residential and commercial use, more public amenities and utilities. The DP would have to respond to these demands.

Chapter 12

VISION, GOALS AND OBJECTIVES



CHAPTER 12

VISION, GOALS AND OBJECTIVES

VISION RDDP 2034

Promote a Global City that balances its vibrant Economy with Environment and Equity to emerge as the most livable megacity.

GOALS

Sr. No.	
1	Retain Greater Mumbai's Economic Primacy
2	Endow the City with enhanced Environment (Quality of Life)
3	Inject greater Equity
4	Implement DP through Partnerships

OBJECTIVES

ECONOMIC : Retain Mumbai's Primacy as the Economic Driver of Region, State, Country & Beyond

S.N.	OBJECTIVES	TARGETS
1	Provision for Commercial Space & Office Space	10,000 Ha
2	Provision for Markets	Included above
3	Strengthen Polycentric Development	
	i. More mixed-use growth	Spatial Provision
	ii. Enhanced business opportunity in all buildable zones	included above
4	Provide Greater Accessibility	
	i. More Public Transport	145 km of Metro
	ii. More Roads	1851.65 Ha
	iii. More Pedestrianization	Placed in Wards Report
	iv. Telescoped off-street parking and paid on-street parking	Provision in DCRs

S.N.	OBJECTIVES	TARGETS
5	Make Business Cheaper	
	i. Cheaper commercial, office and hotel space	Increase volume of space
	ii. Reduce commercial premiums	80.0% from 100%
	iii. Allow higher FSI (Independent Plot & size of Plot)	3/4/5
6	Provide Institutional Space	
	i. Financial & Technical Institutions	8% of area marked in NDZ, TDA, MbPT and Salt Pan Lands
	ii. Science & Research Institutions	
	iii. Environment & Medical Institutions	
	iv. Planning & Management Institutions	
	v. Other Institutions	
7	Promote Ease of Doing Business	
	i. Permissions	Reduce number
	ii. Speed up approvals	Condense time

ENVIRONMENT: Endow the City with enhanced Environment (Quality of Life)

S.N.	OBJECTIVES	TARGETS
1	Protect Natural Areas	12,859 Ha (area at 5 included)
2	All built growth outside OS and POS	No construction, concretization
3	Maintain permeability of OS & POS	No construction, concretization
4	Carve out fresh POS from NDZ, TDZ, Salt Pan & MbPT lands	25 %
5	Merge new-found mangroves in Greater Mumbai area	1496 Ha
6	Reclaim for Green Space & Green Space alone	120 Ha
7	Make significant additions to Recreational Space	
	Leisure Parks	4.95 Ha
8	Provide for Art, Culture, Recreation, Leisure & Sports	Art - 24.29 Ha and Provisions through DCR
9	Preserve Heritage	Finalize 2012 Heritage List

EQUITY: Inject Greater Equity (Social amenities and amenities for Special Groups)

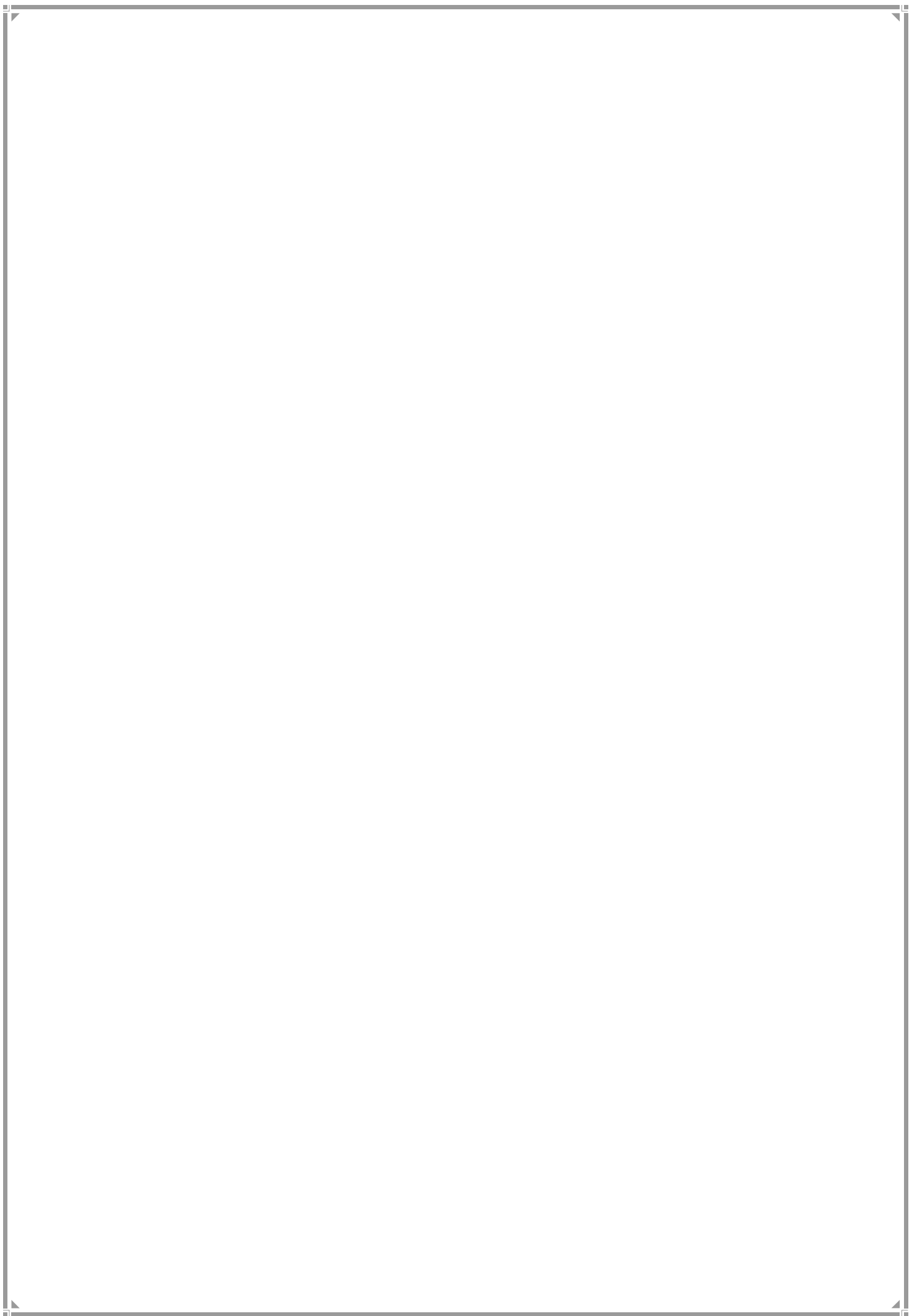
S.N.	OBJECTIVES	TARGETS
1	Education	1.574 m ² per person
2	Health	0.419 m ² per person
3	Films & TV Studios	Provisions through DCR
4	Other Social Amenities (Market & Cemetery)	0.13m ² per person
5	Provide Affordable Housing (AH)	1 million units of 30, 45 & 60 m ²
6	Provide Rental Housing	Out of AH
7	Create Vending Areas	Appended on MCGM website
8	Create Skill Centres for the Informal Sector Workers	1 per administrative ward
9	Provide for Gender	
	i. Multipurpose Housing for Working Women	1 per administrative ward
	ii. Care Centre	1 per electoral ward
	iii. Aadhar Kendra & Skill Development Centre	1 per administrative ward
	iv. Vending area for women	Out of total vending areas
	v. Affordable housing for women	Out of AH
	vi. Rental Housing for women	Out of AH
	vii. Public Conveniences for women	20 % of all PCs
10	Differently Abled	
	i. Customized public buildings	Customize DCRs
	ii. Customized Roads	Customize DCRs
	iii. Customized Housing	Customize DCRs
11	Children	
	i. Play spaces	In Care Centre, Primary School & carved out amenity space
	ii. Reading spaces	
12	Aged	
	i. Old Age Homes including Geriatric Care Centres	1 per administrative ward
13	Students' Hostels	1 per administrative ward
	i. Girls Students' Hostel	Out of Students Hostel
	ii. Boys Students' Hostel	Out of Students Hostel
14	Homeless Shelters	100

DP IMPLEMENTATION: Implement DP through Partnerships

S.N.	OBJECTIVES	TARGETS
1	Procurement of Reserved land for Public Amenities	Use of Incentivized Accommodation Reservation, TDR, FSI & Partnership with Owners
2	Budgetary Support for DP Implementation	DP to be first Charge on DP funds
3	Managing Public Amenities	Partnership with Social Institutions & Players

Chapter 13

LAND USE ZONING



CHAPTER 13

LAND USE ZONING

Land use Zoning is an urban planning process for regulating the use, form, design and compatibility of development. Lands are partitioned into zones, each zone allowing certain specific uses and disallowing others.

The Planning Area of Greater Mumbai is substantially already developed. The ELU 2012 placed the developed area at 65.34%. 34.66% contains Natural Areas, Vacant Lands, Plantations and Salt Pans. 24.88% is occupied by Residential uses, 5.40% by Industrial uses, 2.20% by Commercial uses and 0.87% by Offices. The ELU 2012 also tells that there is a large proportion of mixed use of residential and commercial land use across Greater Mumbai and distinct urban fabrics displaying distinct character and history.

The RDDP 2034 proposes five land use zones:

1. **Residential (R):** The Residential Zone will have predominant residential use. However, a number of compatible commercial uses would be allowable in this Zone. This is in keeping with the mixed use character of the City. Commercial activities allowed in this zone are designed to serve retail local needs that would be available in the neighbourhood. They would positively impact convenience, quality of life, more pedestrian trips and a diminished use of vehicles. The SRDP 1991 norms of commercial activities have been revised and expanded to suit current and future requirements. These have been listed in Tables B and C of DCR 34.3.
2. **Commercial (C):** The Commercial Zone will have a predominant commercial use with Office, Retail and Service spaces. However, this Zone will also have a mixed use character. Here, residential use will be permitted. In addition, service industries will be allowed. Apart from positive transportation impacts, provision of residential space and services would prevent this Zone from becoming lifeless after working hours. Areas to carry out logistic activities, truck terminals, some manufacturing activities that deal with rubber, plastic, metal, electronic goods, leather, etc. that are not permitted in the Residential Zone are permissible in this Zone. However, warehousing activities of hazardous materials, manufacturing and processing of chemicals, textile products etc would not be permissible. CBDs shall form part of commercial zone, and will have FSI 5. All octroi nakas will continue to be used for the purposes of octroi, but where they are also marked as CBD, they would have the ability to fully utilize the unutilized potential. Details of uses permitted in this Zone are enumerated in Tables B and C of DCR 34.3.3.
3. **Industrial Zone (I):** The primary land use in the Industrial Zone will be manufacturing industries. New industrial activity shall be non-polluting, non-hazardous and subject to clearance from MPCB. Existing Industrial users are protected subject to certification from MPCB. However, conversion of land use to R or C can be permitted as specified

in the DCRs. No residential development shall be permitted adjacent to existing hazardous industries in Industrial Zone to ensure safety and insulate residential communities from industrial traffic and other irritants, and to shield industry from complaints generated from nuisance.

4. **Natural Area Zone (NA):** Greater Mumbai area is home to ecologically sensitive areas like mangroves, coastal wetlands, forests, parts of salt pan lands in CRZ I and natural water courses such as lakes, rivers, nallas, streams, ponds, etc. These nurture the city's ecology and biodiversity. The Sanjay Gandhi National Park and estuarine mangrove patches are standout features of Mumbai's natural biodiversity. These areas need to be unremittingly protected from the march of the built environment in the long-term interest of the city. The RDDP, therefore, has retained the EDDP categorization of such lands in the Natural Areas. No buildable development on these lands would be permissible, except for Municipal facilities. The ELU discovery of newly emerged mangroves in Thane Creek spread over 14.96 sq km are included in this Zone.
5. **No Development Zone (NDZ):** SRDP 1991 demarcated certain environmentally sensitive lands such as marshy lands along the creek, hilly areas, agricultural lands, high tide areas and barren lands and some lands under primary activity as No Development Zone. These erstwhile NDZ areas occupied a total area of 13,706 Ha. The EDDP showed that of the total area forests, water bodies, areas under SPAs, unclassified area and area under CRZ I cover majority of the land use, at 75.52%. Of the balance land, 17.29% is presently under Gaothans, Slums and Industries. 12.49% of NDZ had been included as designation and reservation of land for public purpose.

RDDP defines No Development Zone as comprising potentially developable lands kept in abeyance for future development. Hence all lands that were eco-sensitive are now in Natural Area and no longer NDZ. NDZ now comprises 3,734 ha of land. RDDP looks at all such land under NDZ as a means of assisting the City to bridge its major deficits. These comprise Affordable Housing, Public Open Space, Institutional Areas and Public Amenities. The NDZ lands have been brought under a Policy under which such lands would have come forward for development.

As a result, earlier uses permissible under NDZ have been taken out except for those that are smaller parcels of land and are not able to come for development under the larger NDZ Development Policy. Similarly, all reservations that had been fastened on to NDZ lands have also been taken out. Reference, in this context, may be made to the Policy spelt out in the Chapter 21 on Affordable Housing, where along with lands under TDA, Salt Pan and MbPT have been clubbed to subserve the interests of the City as a whole without in any way impairing the ability of Land owners to harness the potential of their lands.

Table No 13.1 : Area for Proposed Zones

Sr. No	Zones	Area in Ha	Percentage %
1	Natural Area (NA)	12,859	29.59
2	No Development Zone (NDZ)	3,734	8.59
3	Residential	21,909	50.42
4	Commercial	1,262	2.90
5	Industrial	3,691	8.49
Total (excluding SPA area)		43,454	100

Overlay Zones

There are several regulatory boundaries presently in force in Greater Mumbai that are incorporated into the DP 2034, in addition to the above Land Use Zones. External regulations impacting development in Greater Mumbai are:

- Height restrictions are in force in areas adjoining the airports and in areas within aircraft flight path. These restrictions are imposed by AAI (Airport Authority of India).
- CRZ Notification 1991 imposes development restrictions in areas demarcated as CRZ I, II and III. In environmentally sensitive CRZ I areas no development is permitted while CRZ III are essentially undeveloped areas where limited development is permitted. Both these zones are observed in EDDP 2034. CRZ II is recognised as already developed. However, MoEF has imposed restrictions on development of this zone as per provision of Notification dated 19.02.1991, except that a modified Notification dated 06.01.2011 allows redevelopment of cessed, dilapidated and unsafe buildings and redevelopment of slums as per the provisions of DCR 1991. Moreover, it has granted a status of CRZ III to open spaces - existing or proposed. This is anachronistic and not conducive to integrated development of CRZ II with adjoining areas. DP 2034 therefore has not followed the stipulations of CRZ Notification 1991 in respect of CRZ II. A new CZMP is required to be prepared under MoEF Notification of 2011. This is under progress.
- Development is controlled within the protective buffer zone around listed Archaeological Sites, as per 'The Ancient and Historical Monuments and Archaeological Sites and Remains (Declaration of National Importance) Act, 1951 (No LXXI of 1951)'. In Greater Mumbai, the listed sites include Sion Fort, Mahakali Caves, Jogeshwari Caves, Kanheri Caves, Mandapeshwar Caves, Portuguese Monastery over Mandapeshwar Caves, Old Portuguese Church and Monolithic bas relief depicting Shiva in Parel.
- Development of lands having heritage structures or in heritage precinct is governed by the provision of heritage regulation.

- NOC from MMRDA is required for development in the influence zone of the Metro/Mono.
- NOC from MOEF/MCZMA for the development of plots having BUA more than specified in MOEF Notification/areas falling in CRZ is required.
- Development of lands for religious purpose/hospitality/starred category hotels /Lodging/Hotels having short term accommodation facility requires NOC from the Police. Additionally, starred category hotels require approval from MTDC.
- The development of all lands adjoining /parallel to the railway tracks need NOC from Railways for development within 30 m. Railways are to come up with standards that shall be universally applicable for the entire city so that time consumed in procurement of NOC from Railway authorities will be saved.
- The development of lands along Highways within buffer zone.
- The development of lands falling under the Buffer zones of Nalla, Rivers as recommended by the Chitale Committee (FFC).
- Development on all lands under the Ministry of Defence is governed by Defence Authorities. Additionally, areas around Jail & Defence installations are governed by guidelines issued by these departments from time to time.
- These overlay zones have been incorporated in the Proposed Land Use Maps which imply applicability of the respective Acts unless otherwise mentioned in the Development Control Regulations.
- Requirement of NOCs are described in DCR 57 & Appendix III thereof.

Table No 13.2 Areas in which, Development is not allowed

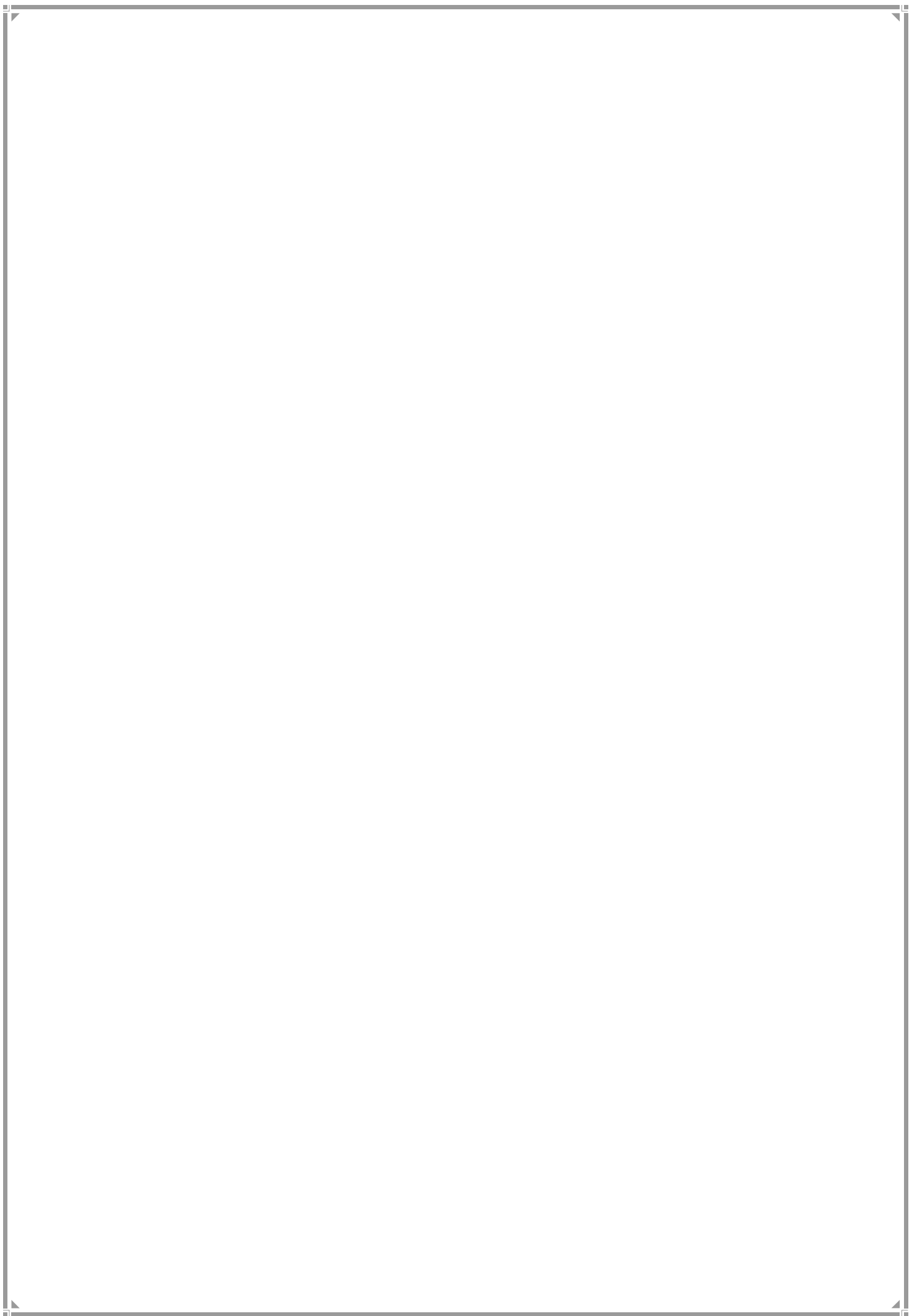
Sr.No.	Landuse	Area in Ha	Area in Sq. Km.
1	Natural area	10593	105.93
2	Natural Water Course	2189	21.89
3	Defense Wireless Centre	128	1.28
4	Aarey Colony	800	8.00
5	CRZ-I (Excl. NA)	1416	14.16
6	CRZ-III (Excl. NA)	706	7.06
7	Archeological Survey (100m)	43	0.43
8	POS -Designations	1634	16.34
9	POS-Reservations	1892	18.92
	Total	19401	194.01

Table No 13.3 Areas in which Development is allowed with restriction

Sr. No	Landuse	Area Ha	Area in Ha
1	CRZ-II	3474	34.74
2	Railway Buffer	1093	10.93
3	Archeological Survey (100m-300m)	346	3.46
4	GRADE I HERITAGE	44	0.44
5	GRADE I HERITAGE BUFFER	362	3.62
6	GRADE I & II HERITAGE PRECINCT	16	0.16
7	AIRPORT FUNNEL	4208	42.08
8	FILM CITY	165	1.65
9	BPCL	25	0.25
10	HPCL	201	2.01
11	RCF	70	0.70
12	BARC	1043	10.43
13	Jail	5	0.05
14	MbPT	750	7.50
	Total	11802	118.02

Chapter 14

EMPLOYMENT



CHAPTER 14

EMPLOYMENT

Greater Mumbai as the central city of MMR has been the principal producer and source of jobs. Its economy is its very heart that pumps vibrancy and well-being into its entire body and its ability to generate jobs is its very cause of existence. Mumbai has performed this role admirably till now. Despite very high real estate costs, locational advantages have compelled many to do business in Greater Mumbai. However, the City's jobs over the years have shifted out of manufacturing into people-oriented services sectors. These should now generate jobs in Greater Mumbai.

14.1 Spatial Inputs for Employment

Whereas the strategy of economic growth would have several non-spatial and non-land use components, the RDDP is concerned with the provision of space and such land instruments that would aid the economy and enable it to generate employment. This is an area that, of late, has not received due primacy in the land use planning process that has been very overly concerned with residential development. In the process, Mumbai's non-competitive office rentals have forced the City to lose out to other major cities. This is despite high demand for office space in Greater Mumbai. The RDDP proposes to take steps to redress this imbalance.

14.1.1 Provision of Commercial & Office Space

The Draft Final Report on the Comprehensive Mobility Plan (CMP) for Greater Mumbai, submitted in Jan 2016 puts the employment numbers at 8 million for the year 2034, as against a number of 7.35 million based on the Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008. At 12.5 sq. m of employment space per person, the RDDP proposes an area of 10,000 ha as employment space demand for Greater Mumbai in the year 2034.

14.1.2 FSI & Premium

The costs of commercial and office space are sought to be reduced by two significant steps. One is the provision of higher FSI to employment spaces in commercial zones and CBDs so as to introduce a downward impact on the per sq. m cost of employment space. With the same objective, premium charged for commercial space is proposed to be brought down by 20%. Lower costs should also be helped by the volume of space that is sought to be generated both by provision of additional space as well as generating greater interest among providers to move towards commercial and office space provision.

14.1.3 Mixed Use

The RDDP proposes to allow mixed uses and enhanced small scale commercial activities in residential zones both to promote the operations of the market and buttress productivity

through quicker access to services and reducing transport trips. In regard to IT industry, the DCRs already permit the location of IT industry in several zones, including residential.

14.2 Improved Transportation

Greater Mumbai is well on the path of augmenting its public transportation networks through metro, mono, suburban rail and BRT and the provision of more roads. It is expected that MCGM will use the Comprehensive Mobility Plan recently submitted, to put into place superior mobility infrastructure. This will have an enormous impact in reducing bottlenecks and improving the business environment of the City.

14.3 Hotel Industry

A further significant sector of growth in Greater Mumbai is that of hotels, restaurants and catering that have strong linkages to the growth of tourism. Here the higher FSI hitherto provided only to star hotels is proposed to be extended to all categories of hotels. It is only proper that costs of hotel rooms across the board come down so that the City competes in this area with other big cities and the tourism industry of the city gets a fillip.

14.4 Entertainment Industry

Greater Mumbai is home to the country's largest entertainment industry. In recent years the volume of business in the TV sector has increased manifold leading to massive television productions; but the sector has been constrained due to shortage of studio space in Greater Mumbai along with high costs. The RDDP proposes to bridge this deficit through spatial inputs and by allowing the easy establishment of such centres.

The RDDP proposes to further aid the entertainment industry by encouraging the conversion of closed cinema theatres into composite entertainment spaces along with other uses. With revolutionary changes in entertainment technology, cinema theatres with the traditional single screen have been left stranded without business that will provide them viability. It is equally true that a rising economy puts more money into citizens' hands that would get spent partly on entertainment, now in larger measure than before. Hence the mass disappearance of cinema theatres from the field of entertainment to other more lucrative fields would be an unwelcome development. And yet a method would have to be found that allows assets to be used in useful ways rather than languish in disuse. The DCRs incorporate a strategy in regard to cinema theatres, focusing on different entertainment options as the first charge on theatres, but at the same allowing fruitful use of the locked assets.

14.5 Recreation & Sports

The RDDP proposes to strengthen provision for sports in the city through the creation of large sports complex that would allow Mumbai to host large national and international sporting events. A large Botanical Park and Zoo is proposed in Aarey Colony that should allow relocation of larger animals from the current zoo in Jijamata Udyan to the proposed larger zoo and permit more area to be allocated to the Jijamata Udyan. Additionally, Leisure Parks are proposed to be created that would be composite spaces for all-day family recreation and

entertainment. These are sought to be equipped with space for games, picnic, relaxation, movies and social gatherings. This is with the overall view to encourage recreation and leisure industry.

14.6 Institutional Space

The provision of space for institutions should also support the generation of jobs. The RDDP proposes to create such institutional spaces for urban planning, management, finance, fashion, design, technology, medicine, science and high-end research and art, music and cultural academies.

14.7 Commercial Use of Octroi Nakas

The Octroi Nakas of MCGM are at strategic locations in the City. These have not been utilised to their potential. It is hence proposed to mark them as Octroi cum Commercial Spaces. They could then use their full potential, combining functions of octroi collection and transportation as well as provision of commercial and office spaces for revenue generation.

Table No. 14.1 : Proposed CBD areas.

S. No	Ward	Area is ha
1	ME	41.52
2	T	5.44
3	RN	2.2

14.8 Digital Mumbai

Mumbai's digitization holds potential to significantly impact business efficiency in the City and enhance employment. Government of India is pushing forward the digitization of the country. As the premier city in the country, Mumbai must pursue its own digitization and the DP would strive to provide what would be needed in the city in regard to digital connectivity and universal access to Broadband. The DP would also facilitate MCGM's efforts at connectivity with regard to municipal facilities. These would include right of way issues for fibre optic deployment and land-use requirements in PLU. The DCRS have been suitably amended to incorporate and facilitate broadband infrastructure.

Digitization holds enormous potential in bringing about simplification, speed and transparency in the way business is conducted. It will enable real-time delivery of services to citizens seamlessly. Education and health are important areas where the City can benefit. However, the provision of digital infrastructure will have to be backed by digital empowerment of the entire City citizenry through a huge effort at universal digital literacy.

14.9 Ease of Doing Business

The RDDP proposes to supplement efforts afoot in MCGM to review institutional frameworks and make business simpler and easier in the City. The restrictive developmental control

regime is sought to be altered through changes effected in the DCRs. In this regard the RDDP has proposed to abandon the two stage permission process of the EDDP.

14.10 The Informal Sector

The RDDP targets to create more business and employment in the Informal Sector. The size of this sector, as is well known, outstrips the size of the formal and plays a critical part in the City's economy. Many of the informal sector activities have strong supportive linkages with the formal and are likely to expand further. The sector should, therefore, generate more employment, should command higher productivity and improve incomes in that sector. The RDDP proposes to provide succour to the Sector through allocation of space and spatial instruments that allow acquisition of skills through capacity inputs in skill centres and authorized locations for business.

14.10.1 Vending Zones

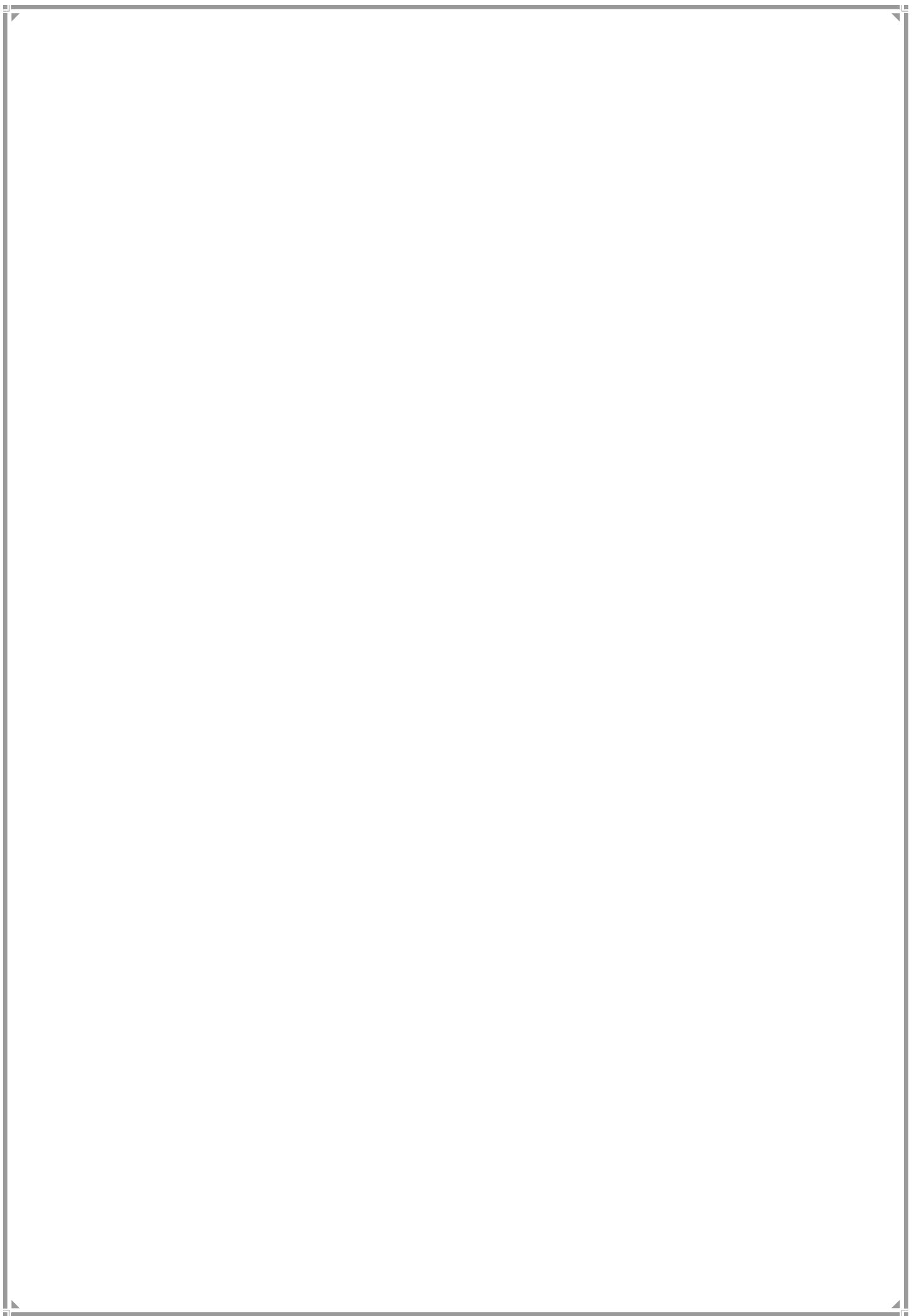
RDDP has proposed a number of sites for the provision of Vending Zones in municipal markets to service the local needs. It is expected that these will catalyse marketing convenience of citizens and assist employment generation. In view of the provisions of the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014, it is proposed that the finalized vending zones decided by the Vending Committee, whenever approved, will get appended to the DP. The Act removes one of the huge constraints of vending by imparting legitimacy to vending in the vending zones.

14.10.2 Additional Vending Zones

The RDDP proposes to provide further access to vendors in spaces where they are not earmarked for vending zones. It is a practice in many parts of the world where vendors are allowed to sell their goods when the primary activity in specified places are not happening, such as in parking lots on holidays. In such time slots, the RDDP proposes to allow vending. This means that while the predominant user of lands would continue to operate at other times, it would stand suspended in time slots in which hawking activity would be permitted by the Vending Committee. The vending activity, however, would have to be regulated so that it does not, under any circumstance, impede or displace the primary user.

Chapter **15**

ENVIRONMENT



CHAPTER 15

ENVIRONMENT

Cities are places where, in search of economic productivity, high levels of emissions, waste and pollutant materials are produced; the greater part of energy is consumed and large carbon footprints on ecology are left. The RDDP proposes to counterbalance the economic efficiency of Greater Mumbai with environmental preservation. Towards that end, Greater Mumbai will strive to conserve its Natural Areas, augment green cover in the City, preserve its water bodies and take preventive measures to mitigate natural adversities such as floods. The RDDP proposes more active use of the annual Environmental Status Report to watch and improve its environment.

15.1 Protecting Natural Areas

The DP proposes preservation of all major watercourses which include major rivers such as Oshiwara, Poisar, Dahisar and Mithi; and the major creeks like the Mahul Creek, Irla Creek, Versova-Malad Creek and Manori–Gorai Creek and water bodies like tanks and ponds. With a view to augment mechanisms for preservation, a buffer along rivers, creeks and nallas are being marked in RDDP. These would be in the nature of pedestrian open spaces doubling for inspection

Greater Mumbai's ecology and biodiversity is very rich in spite of pronounced urban growth. The key features of the region are Sanjay Gandhi National Park and the Marine Ecosystem along Mumbai's West and East coast. Mumbai is the only mega city in the world having a National Park within its boundaries. Other Natural Areas include mangroves, salt pans & hills. An area of 14.96 sq km, newly identified in the ELU, is proposed to be merged within municipal limits and form a part of the City's Natural Area.

For Greater Mumbai the environmental features play a crucial role. The mangroves guard against tidal erosions and support an ecosystem of flora & fauna; rivers & natural drains prevent flooding and the greens function as lungs aside from supporting flora & fauna. In addition to maintaining ecological balance, the environmental features can become excellent recreational spaces, improve the quality of urban environment and contribute to the city's image. A significant amount such of land could be utilized smartly to transform Mumbai into a very attractive and livable city, offering great quality of life.

In order to conserve all ecologically sensitive areas which include forests, mangroves, water bodies and all areas under CRZ-I, the DP 2034 has demarcated these as Natural Areas. A separate category called Natural Areas has been formed in the Proposed Land Use to reflect these environmental features, where any kind of buildable development is not permitted. The DP proposes Natural Areas over a total land mass of 12,859 ha, forming 29.59% of planning area.

15.2 Preserving Large Urban Greens

The limited availability of land proves to be a constraint for making provision of Public Open Spaces (POS) in the city for DP 2034 (see Chapter 20). Despite this, the DP has striven to incorporate proposals for reservation and designation of land for POS. In addition, existing large urban greens in Greater Mumbai, such as the BARC, IIT, TISS and Mumbai University (Kalina) Campuses may serve as lung spaces, if a balance between development, green cover and open space is maintained. These areas will require special attention by the respective agencies for integration of all environmental networks to enhance the ecology and biodiversity of the city.

Relatively large urban greens are areas that have a significant concentration/intensity of flora and fauna, support natural ecosystems, are in a natural condition and are ecologically significant even if they are not publicly accessible.

15.3 Disaster Risk Management

Greater Mumbai is vulnerable to different disasters in varied degrees with the floods and landslides causing maximum hazard. The DP 2034 takes cognizance of the Mumbai Disaster Risk Management Master Plan which has studied disaster issues in detail.

15.3.1 Managing Floods

Floods in Greater Mumbai need to be seen in the backdrop of the unprecedented flooding of the City in the rains of July 2005. The event caused severe hardship to the citizens including substantial loss of public and private property, breakdown of power and telecom services and disruption of road, rail and air traffic. Among the principal causes of the floods were

- Very heavy rains, viz, 944 mm and 1011 mm respectively in Mumbai and Vihar between the afternoon of 26th and 27th July. Further the concentrated intensity of the rainfall was very severe on July 26, 2005, measuring 380 mm during the three hours between 1430 hrs and 1730 hrs, i.e., over 125 mm per hour. This precipitation was way higher than the designed capacity of the storm water drainage systems even currently being built (and even higher than the older drains) making the floods inevitable.
- Delay in flood water recession. This was due to incomplete cross-drainage works, litter of excavated material, reduction and blocking of water way and obstruction to flow due to silting, encroachment, etc.

A number of risk mitigating measures already been undertaken by MCGM. These include implementation of BRIMSTOWAD and procurement of high capacity pumps, etc. In addition the RDDP suggests the following.

- Preparation of contour maps of smaller interval by Department of SWD
- Creation of an urban Hydrology unit in MCGM

- **Buffers**

The city has several low-lying areas that are prone to seasonal flooding whenever heavy rainfall coincides with high tides. To mitigate the flood vulnerability of the city the RDDP 2034, proposes to demarcate buffers along rivers, creeks and nallas, on either side of the water courses, which are to be maintained as development free zones. This buffer zone will help reduce flooding risks by permitting water bodies to flood their banks without affecting people. These buffers, wherever possible, will be city wide open spaces that would be walkable along with their use for environmental maintenance.

- **Permeability**

RDDP proposes to maintain permeability in all the POS. These provisions have been made through the DCR. RDDP continues to maintain the existing ponds/ water bodies by marking them as designations.

15.3.2 Address areas prone to landslides

Greater Mumbai's geography consists of hills. Most of the hills were razed to accommodate the increasing demand for space or quarried to provide construction material for new developments. Of the remaining hills many are encumbered by slums for lack of affordable housing in the city. During monsoons due to soil erosion these are prone to landslides causing damage to property and loss of human life. The RDDP 2034 suggests the following approach to mitigate landslides.

- **Protect hills and with Steep Slopes**

Regulations have been introduced to protect slopes which are steeper than 40% and development on such slopes is curtailed as these are prone to landslides. Some steep slopes are currently encumbered by informal settlements and many are located on slopes steeper than 40%. These are now zoned as Natural Areas in RDDP 2034 with restrictions on development. This is taking into consideration the danger that steep slopes pose to human life due to landslides caused by heavy rains in Greater Mumbai. In order to protect the people residing on these steep slopes and conserve these areas for increasing biodiversity, the RDDP 2034 recommends rehabilitation and resettlement of the existing inhabitants of these settlements to be undertaken on a priority basis.

15.4 Water Conservation

- **Greening the Grey**

Concerns about water shortage and pollution have received increased attention over the past few years. The strategy is to establish appropriate proposal for treatment of segregated domestic black and grey water. In addition a strategy, for developing alternative sources for meeting the future water demand for Greater Mumbai is also highlighted.

- **Rainwater Harvesting**

Greater Mumbai receives maximum rainfall with an average of 2,000 mm annually. About 65% of the city is already developed; indicating that there is a large percentage of built surfaces such as rooftops, terraces, balconies, etc. These surfaces invariably present an opportunity for RWH in the city. The quantity of rainwater that can be harvested works out to approx. 590 MLD (assuming 50% roof surfaces and 70% water is collected) this water may be utilized for non potable uses. It is therefore necessary to bring majority of the areas in the city under rainwater harvesting. Environmental codes that address water harvesting, reduction of water demand through grey water recycling for non-potable uses have been included in the regulations in DP 2034. To enable this DP 2034 has reduced the plot size limit for mandatory implementation of RWH. This will encourage the smaller plots in the city which form a significant percent of the city's area to take up rainwater harvesting. RWH is now applicable for all plots not less than 500 sqm as opposed to the 1,000 sqm proposed by DP 1991.

15.5 Solid Waste Management

Greater Mumbai generates 11,550 metric tons of waste every day including construction debris. Municipal solid waste includes commercial and residential waste generated from areas under the MCGM and SPAs. Current practice involves the municipal body collecting waste from surrounding areas, transferring it to collection stations and dumping it at three dumping grounds.

1. Deonar
2. Kanjurmarg
3. Mulund

With an increase in solid waste generation due changes in lifestyle, processing is a concern. This is further exacerbated with lack of land fill sites for future due to significant resistance at local level. This would pose a major challenge for enabling environmentally sustainable solid waste management. The RDDP 2034 recommends following strategies for sustainable solid waste management.

15.5.1 Reduce solid waste entering landfills

Current solid waste practices that use landfills are an environmental hazard. Though MCGM promotes segregation of solid waste at source, ensuring local treatment at neighborhood level can ensure better resource management and reduce landfills and their impacts. The RDDP 2034 demarcates all existing sorting sheds as lands for neighborhood level segregation centers and has additionally reserved sorting centres as per the proposals provided by the SWM department. Above this, additional sorting centres have been provided in locations suggested by the ward. The provision of SWM sorting centres in 24 wards has been given in the Ward Report (Part-3):

The DCR includes regulations for providing wet waste segregation and in situ treatment space in buildings and POS.

The existing landfill at Deonar which has been in operation from 1927 has reached its capacity and is slated for scientific closure after which it will serve as a much needed large POS in the Eastern Suburbs. Similarly, the landfill site at Gorai which is under scientific closure will also serve as POS in the Western Suburbs.

The DCR specifically incorporates regulations that address environmental sustainability. These include mandatory rainwater harvesting of housing societies and new construction/reconstruction, waste water recycling, energy efficient buildings through mandatory adherence to ECBC codes and tree plantation provisions for landscaping.

15.6 Sanitation

Provision of adequate Toilet blocks would contribute to the well being of the city population, providing respite to old people and labor force especially the women. Based on the internal data assessment, RDDP has accounted for existing, proposed and under construction Toilet blocks as on March 2016, and proposed future provisions upto 2019. Additionally, the DCR provisions propose 50% toilet units to add floors to the existing ground floor structures to tap the full potential of the existing Toilet block plots. The following table gives provision details made in the Island city, Eastern Suburbs and Western Suburbs:

Table No. 15.1: Public Toilet Provision island City

Sr. No.	Description	DA	Female	Male	Male Urinal
	Unit	No. of Seats	No. of Seats	No. of Seats	No. of Urinal
A	Details from SWM Dept				
1	Norms as per SWM	1 Seat per 250 DA	1 Seat per 100 Female	1 Seat per 250 Male	1 Urinal per 250 Male
2	Total Requirement	338	12449	9959	9959
3	Existing Provision	43	1788	3627	1713
4	Addl. Provision till March 2016	10	172	154	103
5	Addl. Provision (April 2016 to March 2019)	NA	1272	1903	NA
6	Total Provision by SWM	53	3232	5684	1816
B	RDDP Provision				
1	Additional Floor	22	894	1814	857
2	New PSC block	22	88	66	66
3	Total RDDP Provision	44	982	1880	923
C	Total Provision (SWM + RDDP)	97	4214	7564	2739
D	Surplus (+) / Deficit (-)	- 241	- 8235	- 2396	- 7221

Table No. 15.2: Public Toilet Provision Eastern Suburbs

Sr.No.	Description	DA	Female	Male	Male Urinal
	Unit	No. of Seats	No. of Seats	No. of Seats	No. of Urinal
A	Details from SWM Dept				
1	Norms as per SWM	1 Seat per 250 DA	1 Seat per 100 Female	1 Seat per 250 Male	1 Urinal per 250 Male
2	Total Requirement	56	2064	1651	1651
3	Existing Provision	23	787	1415	726
4	Addl. Provision till March 2016	4	60	60	44
5	Addl. Provision (April 2016 to March 2019)	NA	1003	1503	NA
6	Total Provision by SWM	27	1850	2978	770
B	RDDP Provision				
1	Additional Floor	12	394	708	363
2	New PSC block	68	272	204	204
3	Total RDDP Provision	80	666	912	567
C	Total Provision (SWM + RDDP)	107	2516	3890	1337
D	Surplus (+) / Deficit (-)	+ 51	+ 415	+ 2338	- 314

Table No. 15.3: Public Toilet Provision Western Suburbs

Sr.No.	Description	DA	Female	Male	Male Urinal
	Unit	No. of Seats	No. of Seats	No. of Seats	No. of Urinal
A	Details from SWM Dept				
1	Norms as per SWM	1 Seat per 250 DA	1 Seat per 100 Female	1 Seat per 250 Male	1 Urinal per 250 Male
2	Total Requirement	97	3598	2879	2879
3	Existing Provision	33	1022	1692	807
4	Addl. Provision till March 2016	9	212	207	175
5	Addl. Provision (April 2016 to March 2019)	NA	1272	1903	NA
6	Total Provision by SWM	42	2506	3802	982
B	RDDP Provision				
1	Additional Floor	17	511	846	404
2	New PSC block	30	120	90	90
3	Total RDDP Provision	47	631	936	494
C	Total Provision (SWM + RDDP)	89	3137	4738	1476
D	Surplus (+) / Deficit (-)	- 9	- 461	+ 1859	- 1403

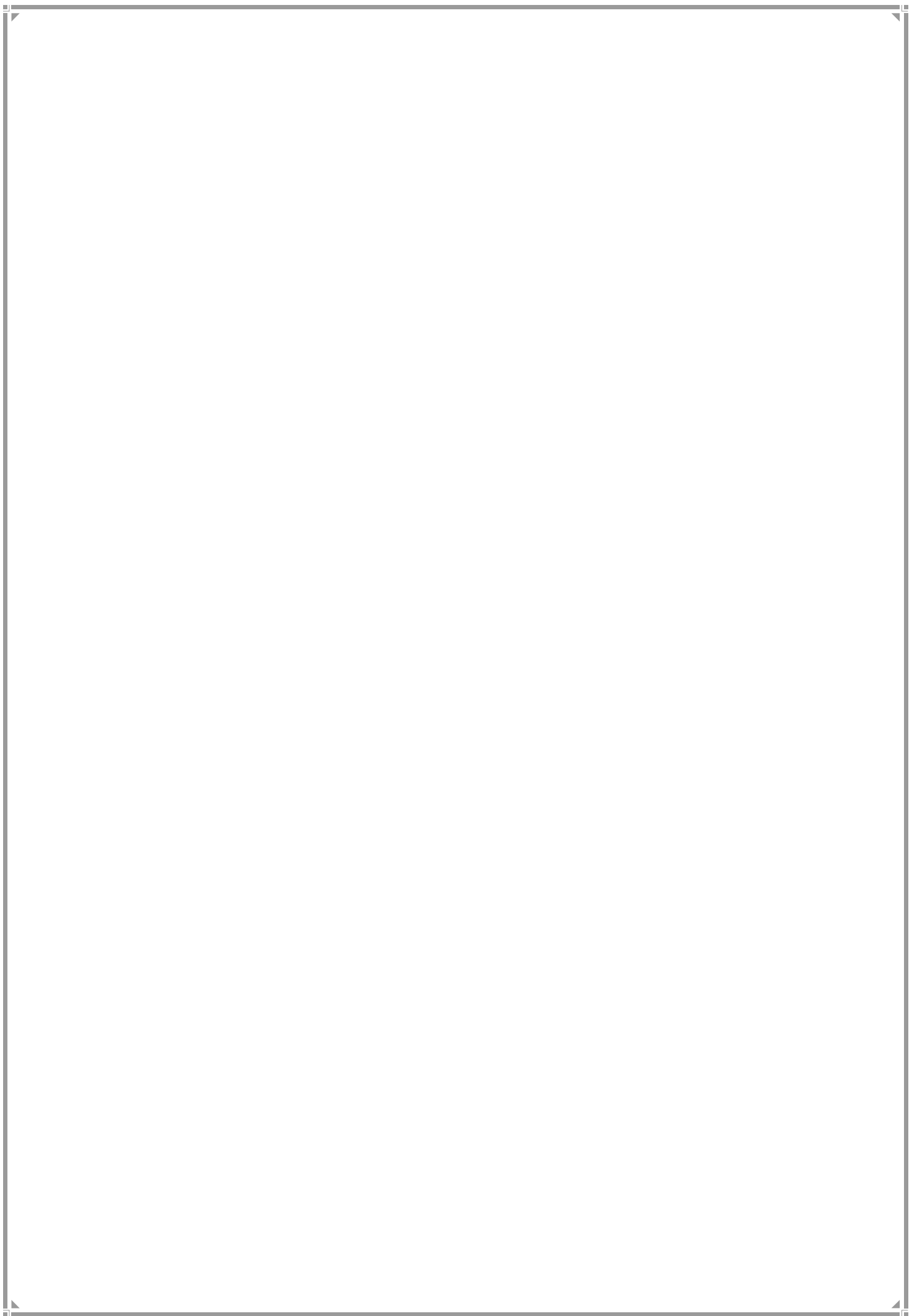
Source: MCGM SWM Dept.

15.7 Environmental Status Report

The MMC Act 1888 mandates the presentation of an Environmental Status Report of the City on an annual basis. The objective clearly is to keep a constant watch on the City's environment and identify areas where mitigation measures are necessary. There is a deficit, however, in converting ESR data into actionable targets and policy corrections. The RDDP recommends that the MCGM treats this document as a key resource for city decisions and strive to inject participation in environmental management.

Chapter 16

BUA & FSI



CHAPTER 16

BUA & FSI

This Chapter deals with details of built up area (BUA) required for functions of employment and housing and the FSI needed to satisfy projected requirements. The population taken into consideration for these calculations is 12.79 million projected in draft RP of MMR.

16.1 Employment

As cited in Chapter 11 on 'Projections', the EDDP 2034 had relied on the Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008 for its employment projection. In conjunction with other factors, it projected that employment for Greater Mumbai would range between 6.20 and 7.35 million. However, the study commissioned by MCGM titled the 'Comprehensive Mobility Plan' that has come out in 2016, projects an employment figure of 8.0 million.

Since the RDDP aims at positioning Greater Mumbai as the pivot of employment in the Region, and with that view intends to improve availability, along with reduced cost of space for commerce and office, it has accepted the figure of employment projected by the Comprehensive Mobility Plan put at 8 million.

For setting a standard for employment space per employee, the National Building Code, 2005 figure of 10 sq. m per person, and an additional space of 2.5 sq. m per person for ancillary uses, totalling 12.5 sq. m per person was adopted by the EDDP. The RDDP proposes to accept this standard. With an 8.0 million employment potential and with an average of 12.5 sq. m per employee, the total employment BUA demand stands at 100 million sq. m or 10,000 ha.

16.2 Housing

In regard to BUA for housing, the EDDP had projected an average per capita demand of 27 sq. m per person, up from the current per capita availability of 9 sq. m per capita. This was on account of the expected increase in incomes and the desire for greater adequacy of living space that Greater Mumbai would witness. Additionally, the household size was likely to reduce to 4 persons per household. The total demand for housing that EDDP accordingly calculated came to 34,853 ha.

The RDDP proposes to adopt the current four categories of housing and their present benchmarks. For this purpose, it has used the data of EDDP, but compacted the several groups into 4 groups -EWS, LIG, MIG and HIG. Since the DP looks forward up to 2034, the factors of improved economy, higher per capita incomes and heightened aspirations need consideration. Hence, each category of housing has been given a mark-up by an approximate factor of 1.7. In this regard, DCR 34.3.4 (A) 4(f) and 34.3.4. (B) 4(c) may be perused. The calculations are depicted in the Table below, that yield a total Housing BUA demand of about 26,000 hectares and a per capita BUA demand of approximately 20 square metres.

Table 16.1 Housing BUA Demand 2034

SN	HOUSING CATEGORY	CURRENT BUA (M ²)	TOTAL PROJECTED POP 2034	PROPOSED BUA(M ²) PP	TOTAL PROPOSED HOUSING BUA (Ha)
1	EWS	7.5	35,60,572	13	4629
2	LIG	11.25	47,22,916	19	8974
3	MIG	15	34,69,670	26	9021
4	HIG	20	10,37,340	34	3527
	TOTAL		12,79,0498	Av 20.44 PP	26,151 or 26,000 Ha

16.3 Total BUA Demand for Greater Mumbai

The total BUA demand for Greater Mumbai for employment and housing adds up to 36,000 ha. These figures do not include built up area required for educational, healthcare and other community facilities and public utilities. Among public amenities, the largest area is going into Public Open Spaces (POS).

16.4 Net Plot Area

In order to arrive at the mean FSI to meet BUA demand, the net plot area of Greater Mumbai is 13,337 ha.

16.5 Mean FSI

The mean FSI for the entire city works out to 2.7.

16.6 Allocation of FSI

The proposed FSI regime of RDDP for general development comprises Zonal (Basic) FSI and additional FSI on payment of premium/TDR totalling to permissible FSI. The permissible FSI in the entire city is proposed at 2.0 for general development, except areas around BARC and Akse, Marve, Erangal, Gorai & Manori proposed with less than 1 FSI. No TDR is permissible in these areas.

Further, the redevelopment schemes, considering their difficulties and the social desirability of their fructification, have been allocated more FSI. For instance, Slum Redevelopment Regulation 33(10) is allocated FSI up to 4 required for rehabilitation plus incentive thereon. Redevelopment of cessed structures Regulation 33(7) allocates minimum FSI 3.0 for rehabilitation plus incentive thereon whichever is more. Moreover, given vacant land constraints in Greater Mumbai, social amenity lands have also been allocated more FSI. With a view to give a fillip to the City's economic activities, FSI for commercial activities on independent plots and Residential hotels have been allocated FSI up to 5 depending on the size of the plot. The FSI for industrial activity is 1.0. and no TDR or additional FSI is admissible.

Apart from permissible FSI, the fungible compensatory FSI is allowed to the extent of 35% for residential and 20% for commercial and industrial. In aggregate, the Projected mean FSI would approximately be around 3.5 and total BUA would be 46,679 ha as against 56,808.55 ha of the EDDP.

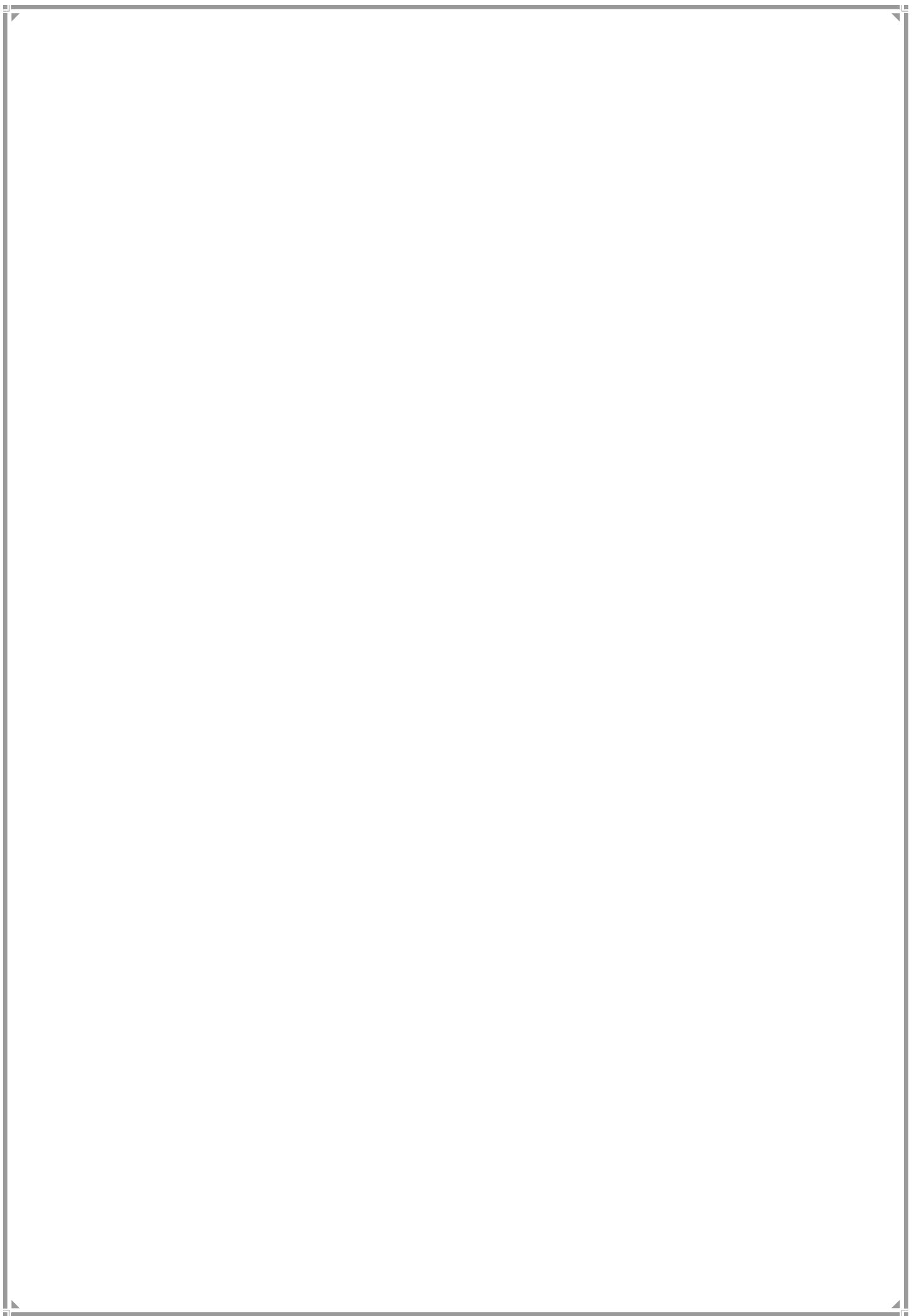
However, it would be realistic to assume that the entire development/redevelopment may not fructify by 2034. Considering that about 80% development may fructify, the BUA will be 37,343 ha and the mean net FSI that would get generated would be approximately 2.80.

Table No: 16.2: Net Plot Area

Sr. No.	Description	Area in Ha	Percentage
I	Total City area	47624	100.00%
II	Area excluded from Net Plot Area	34287	71.99%
III	Net Plot area	13337	28.01%
A	Areas excluded from Net Plot area		
1	SPA	4280	8.99%
2	Natural Area & CRZ I	14275	29.97%
3	Existing and Proposed Road area	5982	12.56%
4	Designation (Excl. Housing & Offices)	6808	14.30%
5	Reservation (Excl. Housing & Offices)	2141	4.50%
6	Remaining Area of Aarey	800	1.68%
	Total	34287	71.99%

Chapter 17

PROVISION OF LAND FOR PUBLIC PURPOSE



CHAPTER 17

PROVISION OF LAND FOR PUBLIC PURPOSE

The provision of land for public amenities is stipulated in Section 22 of the MR&TP Act. The Act lists out amenities for education, health, social and cultural purposes, for public entertainment and government use, various kinds of open spaces and sports facilities, for transport and communication, community facilities and for industrial and commercial functions. Besides, section 61 of the MMC Act lists out the Corporation's obligatory and discretionary duties. Spatial allocation for water and sewerage, public toilets, SWM facilities, roads, cemeteries, fire brigade, public markets and municipal offices are the most important. The Constitution (seventy-fourth) Act inserted Schedule 12 in the Constitution listing municipal functions. Slums, poverty alleviation, urban forestry and parking lots, inter alia, find prominent mention. These together demand a large list of amenities for coverage. The RDDP has made an effort to provide for them as far as possible.

The search for open land for the cited public purposes in an already substantially built city has been a difficult task. The RDDP has also had, at the back of its mind, the heightened cost of land after the passage of RFCTLARR and the limited ability of MCGM to acquire the land by paying monetary compensation. Despite these difficulties, the quality of life in Mumbai is dependent on the provision of adequate public amenities. Compromises with amenity standards quite clearly would lead to fall in quality of life.

17.1 Provision Strategy

In the stated context, the RDDP proposes the following strategy to achieve the best possible result.

- i. Use lands available with MCGM and Government to provide certain categories of built amenities, so as to avoid land costs.
- ii. Optimize the use of built space available with the MCGM, but yet not utilized, by marking part of unutilized spaces available for public amenities.
- iii. Optimize the use of designated and reserved lands through multiple provision of compatible users.
- iv. Count privately provided public amenities without designating and reserving them. These include schools and educational amenities, hospitals and health amenities, layout RGs and any other similar amenities in a variety of categories which have been separately accounted for.
- v. Maintain the volume of amenities proposed by the EDDP, despite a reduction in the projected population for 2034.

- vi. Use land instruments to garner lands without costs by establishing partnerships with Land Owners through incentives.
- vii. Bring POS under the Accommodation Reservation Policy to allow their acquisition without costs.
- viii. Adopt better standards than the past for a better quality of life. The RDDP may not have provided the total volume of amenities today in accordance with the adopted standards. They are, however, benchmarks that the City would strive to achieve whenever future opportunities arise.

17.2 Computation of Amenities

In regard to computation of amenities, the RDDP proposes to do the following.

- a. Amenity areas that were provided by past DPs and stand developed and marked as designations have been accounted for.
- b. Fresh reservations that were marked in EDDP have generally been retained. However, lands on which IODs were issued, or involved government allocation for a different purpose, or were lands of Government agencies that were in advanced stages of preparation for vital internal use, and reservations that ran counter to RDDP strategy have been deleted.
- c. Reservations that were provided by past DPs and could not be developed have been carried forward and counted. These Reservation lands include lands that have been encroached, including such lands now under slums. The DCRs provide a mechanism so that, when these lands get developed, part of the land can be reclaimed for the amenity for which the land stood reserved.
- d. Public Amenities that have been provided privately have been accounted for as far as possible in computing amenity availability.
- e. POS computation includes Layout RGs, and all varieties of open spaces accessible to a large number of citizens.
- f. In view of the very poor implementation of the past two DPs, the Accommodation Reservation Policy has been highly incentivized. This has meant that total land areas provided under reservation would get reduced during implementation. This is a trade-off that cannot be avoided if DP implementation has to be improved. The reduction in amenity area that would result has been accounted for.

17.3 Current Provision of Amenities in Greater Mumbai

The current level of amenity provision in Greater Mumbai is shown in the Table below.

Table 17.1: Current Amenity Provision

AMENITIES	CURRENT PROVISION (m ² pp)
Health	0.15
Education	0.57
Social	0.16
POS	1.09

Source: EDDP

17.4 RDDP Amenities & Standards

The amenities considered by RDDP for provision and the legends and standards adopted for them have been listed in Chapter 18. The land demand for amenities has been calculated on the basis of per capita benchmarks and the population projected by draft RP, that is 12.79 million. However, wherever the total land provision of EDDP 2034 exceeds the arrived number, the higher land provision has been made.

For ready reference, the amenities and their standards are reproduced here.

Table 17.2 AMENITY STANDARDS

AMENITIES	RDDP 2034 (m ² pp)
EDUCATION	1.574
Primary School	0.552
Secondary School	0.552
Higher Education	0.470
HEALTH	0.419
Dispensary	0.014
Maternity Home	0.045
Hospital	0.360
SOCIAL	0.13
Burial Grounds/ Cemetery	0.03
Local Market	0.1
POS	4
Neighborhood Parks	1.2
Community Parks	0.8
Ward level Parks	1
City level Parks	1
TOTAL	6.123

17.5 Total Land Demand for Amenities

On the basis of above standards, the total land demand for amenities is as stated in the Table 17.3. The Amenity Planning benchmarks established above have been used to estimate the total land requirement for amenities in Greater Mumbai, for a population of 12.79 million for 2034. Land demand is estimated for amenities including Health, Education, Social and Open Spaces.

For provision of physical infrastructure, viz., water supply, sewerage, solid waste and utility infrastructure, including power supply, space benchmarks have not been established. The demand for these public utilities and facilities is given by different departments of the MCGM, like Fire Safety, Police, Sewerage, Water Supply, Solid Waste Management and other State government departments. Spatial provisioning is therefore based on specific departmental needs. These has been included in the RDDP.

The population in SPA areas is also taken into consideration when estimating the amenities land demand for Greater Mumbai RDDP 2034. These areas are not under the MCGM jurisdiction, however the area of the amenities provided in the Development Plan of the SPA are taken for the Computation of the Demand.

The total land demand has been arrived at by multiplying per capita benchmark of each public amenity by the total projected population for 2034 (12.79 million). While the land demand for Gender & Equity amenities have also been translated into standards of sq m per person, these are per administrative ward/electoral ward with a total plot area per facility.

Table 17.3 Total Land Demand for amenities in Greater Mumbai

AMENITIES	PER CAPITA STANDARD (M ² PP)	TOTAL DEMAND (Ha)
Education	1.574	2013.22
Primary & Secondary School	1.104	1,412.07
Health	0.419	0537.06
Dispensary/Health Post	0.014	0018.13
Maternity Home	0.045	0058.59
Hospital	0.360	0460.34
Social	0.130	0166.26
Burial Ground/Cemetery	0.03	0038.36
Municipal/Retail Markets	0.1	0127.90
Public Open Space	4	5,116.20
TOTAL	6.123	7,832.74

17.5.1 Meeting Land Demand for POS

The land requirement for POS, expectedly, is very high, since the standard has been doubled to 4 sq. m per person. However, in the long-term interest of the city, the higher standard would exhort the Planning Authority at all times to find the quantum of land, whenever opportunities arise. The RDDP, however, has striven to find as much POS land as possible. This is detailed in a separate Chapter 20 on POS.

17.5.2 Meeting Land Demand through BUA

The other public amenities, barring a few, such as cemetery, can satisfy the land requirement through built-up area. These comprise educational amenities, health amenities, gender and equity amenities and partly social amenities. They can also be met through the provision of multiple compatible amenities on the same land parcel.

17.5.3 Zone wise Land Area Demand for Amenities

Zone wise amenity land demand is estimated based on planning benchmarks. The Table below includes the summary of total land demand for Amenities:

Table 17.4: Land Demand for Amenities at Greater Mumbai Level, Island city, Western Suburbs and Eastern Suburbs

Amenities	Greater Mumbai (Ha)	Island City (Ha)	Eastern Suburb (Ha)	Western Suburb (Ha)
Education	2013.22	454.23	638.30	920.69
Health	537.06	121.18	170.28	245.60
Social-Amenities	166.26	37.52	052.72	076.02
Open Space	5116.20	1154.35	1622.10	2339.75
Total Land Demand	7832.74	1767.28	2483.40	3582.06

17.5.4 Ward wise Land Demand for Amenities

The land demand break-up ward-wise for the above cited amenities is shown in the Table below.

Table 17.5: Ward-wise Land Demand for Amenities

Wards	Total Land Demand for Amenities (Ha)	Land Demand for Un-built Amenities (Ha)	Land Demand for Built Up Amenities (Ha)
A	102.73	67.6	35.13
B	68.68	45.2	23.48
C	93.17	61.31	31.86
D	205.46	135.21	70.25

Wards	Total Land Demand for Amenities (Ha)	Land Demand for Un-built Amenities (Ha)	Land Demand for Built Up Amenities (Ha)
E	220.99	145.43	75.56
F/N	295.04	194.16	100.88
F/S	215.02	141.5	73.52
G/N	355.37	233.86	121.51
G/S	210.82	138.73	72.09
City Total	1767.28	1163.00	604.28
H/E	341.04	224.43	116.61
H/W	176.19	115.95	60.24
K/E	511.26	336.45	174.81
K/W	479	315.22	163.78
P/N	634.29	417.41	216.88
P/S	296.24	194.95	101.29
R/C	352.47	231.95	120.52
R/N	312.57	205.7	106.87
R/S	479	315.22	163.78
Western Total	3582.06	2357.28	1224.78
L	600.84	395.4	205.44
M/E	552.47	363.57	188.9
M/W	253.24	166.65	86.59
N	387.02	254.69	132.33
S	477.21	314.04	163.17
T	212.62	139.92	72.7
Eastern Total	2483.4	1634.27	849.13
Suburb Total	6065.46	3991.55	2073.91
Mumbai Total	7832.74	5154.55	2678.19

17.6 Demand Gap Analysis at City Level

An assessment of total demand for amenity land at Island City and the Suburbs with respect to existing amenities available and vacant land available for making reservations for public purpose was conducted.

Table 17.6: Amenities Land Demand Gap at Greater Mumbai Level

	Greater Mumbai (Ha)	Island City (Ha)	Eastern Suburbs (Ha)	Western Suburbs (Ha)
1. Total Demand	7832.74	1767.28	2483.4	3582.06

	Greater Mumbai (Ha)	Island City (Ha)	Eastern Suburbs (Ha)	Western Suburbs (Ha)
2. Total existing amenity land available	3034.18	1008.86	869.18	1156.14
3. Unmet Land Demand Gap	4798.56	758.42	1614.22	2425.92

17.6.1 Demand Gap at Ward Level

Table 17.7: Ward wise Land Demand for Amenities

Wards	Projected Population 2034	Total Demand (Ha)	Total existing Amenity Available (Ha)	Total Amenities Land Demand Gap (Ha)
A	167,750	102.73	202.07	-99.34
B	112,159	68.68	8.30	60.38
C	152,146	93.17	23.64	69.53
D	335,501	205.46	160.79	44.67
E	360,859	220.99	116.20	104.79
F/N	481,795	295.04	133.10	161.94
F/S	351,106	215.02	116.51	98.51
G/N	580,300	355.37	75.65	279.72
G/S	344,279	210.82	172.6	38.22
City Total	2885894	1767.28	1008.87	758.41
H/E	556,893	341.04	145.32	195.72
H/W	287,712	176.19	85.11	91.08
K/E	834,851	511.26	132.74	378.52
K/W	782,185	479.00	251.44	227.56
P/N	1,035,762	634.29	142.75	491.54
P/S	483,746	296.24	136.22	160.02
R/C	575,580	352.47	99.30	253.17
R/N	510,420	312.57	56.55	256.02
R/S	782,185	479.00	106.71	372.29
Western Total	5849334	3582.06	1156.13	2425.93
L	981,145	600.84	109.26	491.58
M/E	902,147	552.47	89.60	462.87
M/W	413,524	253.24	122.68	130.56
N	631,990	387.02	98.75	288.27
S	779,260	477.21	352.26	124.95

Wards	Projected Population 2034	Total Demand (Ha)	Total existing Amenity Available (Ha)	Total Amenities Land Demand Gap (Ha)
T	347,205	212.62	96.64	115.98
Eastern Total	4,055,271	2483.40	869.19	1614.21
Suburb Total	9,904,605	6065.46	2025.32	4040.14
Mumbai Total	12,790,498	7832.74	3034.20	4798.54

17.7 Bridging Demand Gap at City Level

Given the scarcity of land in Greater Mumbai and the unmet built amenity demand, the space demand for built amenities is proposed to be met by considering the buildable potential of available land wherever feasible.

The provision of amenity land at ward level is as follows.

Table 17.8: Re-estimating Ward wise land area demand and provision considering FSI for built up amenities

Ward	Amenities Demand (Ha)			DP 2034 Designation (Ha)		Gap-1 Surplus (+) / Deficit (-) (Ha)		DP 2034 Reservation (Ha)		Gap-2 Surplus (+) / Deficit (-) (Ha)	
	Un-built	Built	Total	Un-built	Built	#Un-built	Built	Un-built	Built	#Un-built	Built
A	67.6	35.13	102.73	150.35	51.72	82.75	16.59	9.22	1.06	91.97	17.65
B	45.2	23.48	68.68	3.92	4.38	-41.28	-19.10	3.45	1.14	-37.83	-17.96
C	61.31	31.86	93.17	18.93	4.71	-42.38	-27.15	3.31	1.96	-39.07	-25.19
D	135.21	70.25	205.46	128.39	32.40	-6.82	-37.85	35.19	2.84	28.37	-35.01
E	145.43	75.56	220.99	55.01	61.19	-90.42	-14.37	25.79	9.52	-64.63	-4.85
F/N	194.16	100.88	295.04	68.18	64.92	-125.98	-35.96	83.44	17.83	-42.54	-18.13
F/S	141.5	73.52	215.02	47.46	69.05	-94.04	-4.47	34.45	12.33	-59.58	7.86
G/N	233.86	121.51	355.37	45.73	29.92	-188.13	-91.59	15.09	8.03	-173.04	-83.55
G/S	138.73	72.09	210.82	150.43	22.16	11.70	-49.93	47.68	7.13	59.39	-42.80
City Total	1163.00	604.28	1767.28	668.42	340.45	-494.58	-263.83	257.63	61.84	-236.96	-201.98
H/E	224.43	116.61	341.04	39.32	106.00	-185.11	-10.61	22.85	10.32	-162.26	-0.30
H/W	115.95	60.24	176.19	49.50	35.61	-66.45	-24.63	35.69	2.62	-30.76	-22.01
K/E	336.45	174.81	511.26	65.38	67.36	-271.07	-107.45	135.08	28.27	-135.99	-79.18
K/W	315.22	163.78	479.00	157.93	93.51	-157.29	-70.27	90.36	23.20	-66.93	-47.07
P/N	417.41	216.88	634.29	109.43	33.32	-307.98	-183.56	121.28	30.50	-186.70	-153.06
P/S	194.95	101.29	296.24	58.43	77.79	-136.52	-23.50	129.84	15.22	-6.68	-8.28
R/C	231.95	120.52	352.47	69.73	29.57	-162.22	-90.95	102.36	36.88	-59.86	-54.07
R/N	205.7	106.87	312.57	34.88	21.66	-170.82	-85.21	75.30	24.52	-95.51	-60.69
R/S	315.22	163.78	479.00	81.11	25.60	-234.11	-138.18	68.51	29.76	-165.60	-108.42
Western Total	2357.28	1224.78	3582.06	665.71	490.43	-1691.57	-734.35	781.26	201.29	-910.31	-533.07
L	395.4	205.44	600.84	62.64	46.62	-332.76	-158.82	212.52	26.09	-120.25	-132.73
M/E	363.57	188.9	552.47	57.82	31.78	-305.75	-157.12	132.53	23.61	-173.22	-133.51
M/W	166.65	86.59	253.24	103.52	19.16	-63.13	-67.43	63.35	18.10	0.23	-49.33
N	254.69	132.33	387.02	59.89	38.86	-194.80	-93.47	87.79	19.59	-107.01	-73.87

Ward	Amenities Demand (Ha)			DP 2034 Designation (Ha)		Gap-1 Surplus (+) / Deficit (-) (Ha)		DP 2034 Reservation (Ha)		Gap-2 Surplus (+) / Deficit (-) (Ha)	
	Un-built	Built	Total	Un-built	Built	#Un-built	Built	Un-built	Built	#Un-built	Built
S	314.04	163.17	477.21	97.62	254.64	-216.42	91.47	262.59	39.00	46.18	130.47
T	139.92	72.7	212.62	57.26	39.39	-82.66	-33.31	119.53	16.87	36.87	-16.44
Eastern Total	1634.27	849.13	2483.40	438.74	430.45	-	-418.68	878.32	143.26	-317.21	-275.42
Suburb Total	3991.55	2073.91	6065.46	1104.45	920.88	-	-	1659.58	344.55	-	-808.48
Mumbai Total	5154.55	2678.19	7832.74	1772.87	1261.33	-	-	1917.20	406.40	-	-
						3381.68	1416.86			1464.48	1010.47

17.8 Getting the Land for RDDP 2034

DP implementation has been the bane of local planning authorities. Cities have spent great energy in the preparation of DP but have been found greatly wanting in their implementation. The acquisition of lands for public amenities has been the greatest obstacle. This is because any reservation that gets attached to any land has been unwelcome by the land owners. They have viewed reservations as a punishment and a forcible usurpation of their valuable assets that would have fetched them handsome dividends.

The MR&TP Act provides for the acquisition of reserved lands. This, as a rule, does not seem to be an option any longer. The new Land Acquisition Act (RFCTLARR 2013) provides for very heavy costs to be paid to the owner. Mass purchase of reserved lands has moved beyond urban local bodies, no matter how big their budgets. Even earlier, the 1964 and 1991 DPs did not have any great success in procuring lands through acquisition.

17.8.1 Past Implementation of DP

Implementation of DP 1964 and 1991 fell far short of the proposed volume of amenities. Health, Social Amenities and Open Space wereright at the bottom, struggling at the one-third or below one-third mark.

This apparently was because TDR and AR policies were still not attractive and reservations were still viewed as a negative imposition. Local Planning Authorities, therefore, have little choice but to make these instruments highly attractive. Since reservations are for the purpose of public amenities enjoyed by the entire city population at the cost of the 'reserved landowners', it is only fair and equitable that the 'reserved landowners' get adequately compensated. However, the determination of 'adequacy' has not been sufficiently computed by policy makers. As a consequence, the DP has not been able to win the co-operation of the 'reserved landowners'.

Neither are the Indian ULBs financially robust. As a general rule, most municipal money is taken up by wage bills and maintenance activities. A very small proportion is available for asset building and perking up quality of life. As a consequence, the most important quality of life instrument, the DP, has languished through non-implementation. If Mumbai has to

improve its quality of life, while it needs to do many other things, it certainly needs to implement the DP in the time frame provided.

In the EDDP 2034, the implementation money was to come overwhelmingly from premium FSI. However, since the RDDP 2034 proposes to discard premium FSI (A & B), the primary instrument of implementation would have to be a robust Accommodation Reservation (AR) policy, in conjunction with the instruments of TDR and FSI. MCGM's budgetary support would be required as a gap-filling instrument or in cases where land is of the ownership of the MCGM or in exceptional instances where other support is needed.

17.8.2 Accommodation Reservation 2034

The RDDP 2034, accordingly, has put in place an AR policy that would not only compensate, but generously incentivize 'reserved landowners' with a package that would persuade them to become partners in the city's development. The RDDP proposes such an alternative. It bases the acquisition of reserved lands on the combined plank of AR, TDR and FSI. It begins by taking into account what would be the potential of any land, if not reserved, and if it could be developed residentially/commercially. It then moves to make the AR policy so attractive that the potential that an owner would earn from reserved land would be considerably greater than a similar unreserved land.

The above statement needs some detailed explanation. Reservations fall under several public amenities – schools, hospitals, open spaces. Three different percentages of land contribution have been fixed. Of the reserved lands, health and other amenities would require a contribution of 40 %. Schools would require a minimum contribution of 50% on account of 40 % open area for playground. Public Open Spaces and non-buildable amenities would require a contribution of 70 % of the reserved area with the additional benefit to the Owner of merging the layout RG of his development in the POS, if he so desires, without the compulsion of carving out the RG in his layout.

Whatever area is required for public amenities would generally be acquired under AR. The rest of the area would be released from reservation and could be developed by the owner in accordance with developments permissible in the surrounding zone. Under the new proposed AR policy, the following would be allocable to the owner:

1. The owner would be eligible for the developmental potential of the entire plot on the remnant portion of the plot under his possession. The FSI would be calculated on the basis of the gross plot area.
2. He would also be eligible for TDR permissible on the entire plot. This means that all TDR of the entire plot would be eligible to be loaded on the remnant portion of the plot under the owner's possession.
3. The owner would also be eligible for an incentive FSI equal to the land area contributed by him. Thus, if the contribution of the owner is 500 sq m, his incentive FSI would be 500 sq m.

4. The 'reserved land owner' where his land is reserved for a non-buildable reservation such as playground or garden, would get the additional benefit of not requiring to keep 15% RG in his portion of the plot if he so desires.
5. The percentage of land that the 'reserved land owner' would hand over would depend on the nature of reservation. This would be as per Annex to the AR Policy.
6. The owner would develop the amenity as stipulated by MCGM on the surrendered portion of the plot and would be paid the construction cost with profit. The total construction cost plus profit would be converted into FSI by dividing the total amount by the applicable ready reckoner rate.

The following is an illustrative example. Let us presume the size of the land plot is 1000 m². It is situated in the suburbs and its Zonal basic FSI is 1. The following would be the computation.

Table 17.9 : Example of AR

POTENTIAL IF PLOT UNRESERVED		POTENTIAL UNDER CURRENT AR IF PLOT RESERVED (50%)		POTENTIAL UNDER PROPOSED AR IF PLOT RESERVED (50%)		
FSI	1000 m ²	FSI	1000 m ²	FSI	1000 m ²	OWNER CAN BUILD ALL FSI ON HIS PORTION OF THE PLOT.
TDR	1000 m ²	TDR	500 m ²	TDR	1000 m ²	
		BUILD FREE & HANDOVER TO MCGM	500 m ²	INCENTIVE FSI	500 m ²	NO CAP EXCEPT FEASIBILITY.
				BUILD & GET FSI	500 m ² AS PER ASR	OWNER CAN CARRY AWAY UNCONSUMED FSI AS TDR IF NECESSARY
RETAIN	1000 m ² (ENTIRE PLOT)	RETAIN	500 M ² (HALF OF THE PLOT)	RETAIN	500 m ² (HALF OF THE PLOT)	
TOTAL	2000 m ² ON 1000 m ² PLOT	TOTAL	(1500 m ²) - CONSTRUCTION COST	TOTAL	2500 m ² + (CONSTR FSI)	

17.8.3 TDR & RFCTLARR

The RDDP has proposed that Transfer of Development Rights could be used as an adjunct to AR or could be separately used, depending on the exercise of choice by the Owner. The use of RFCTLARR would be used as the last resort when other available tools have not been successful.

17.9. Creating a Pool of Land for Public Purpose

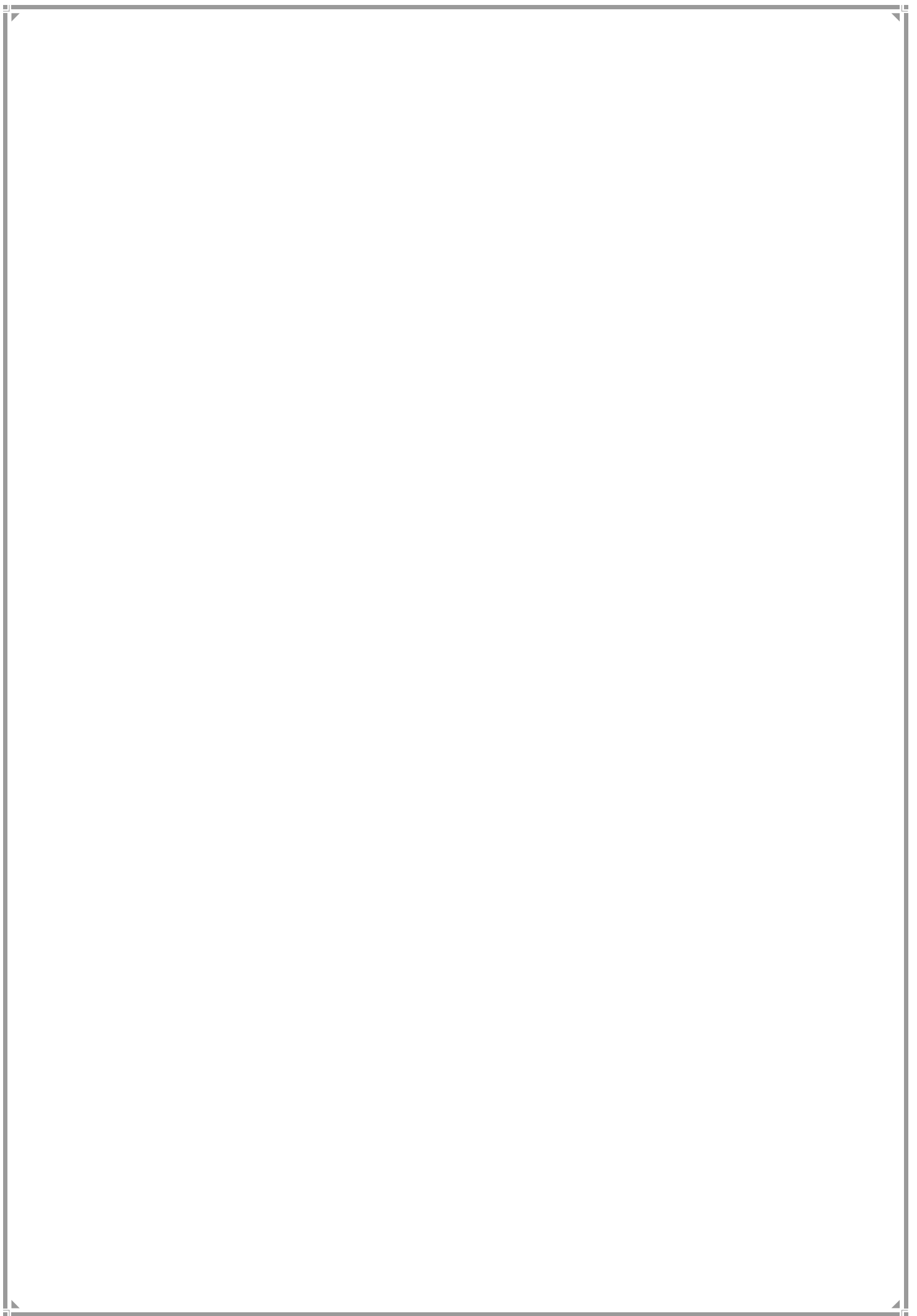
Since the extent of vacant land in Greater Mumbai is rather limited, most development in Mumbai is expected to happen through redevelopment. The EDDP proposed that in the process of such redevelopment, there could be contributions mandated for public purpose. It also proposed that use of such land could be decided when such land became available. The priorities of the community could be at that time considered for specific allocations. Such contribution coming from each redevelopment project would also ensure the equitable distribution of amenities over the City. This provision has been retained in the RDDP with some modification.

Table 17.10: Contribution of Land for public purpose

Sr. No.	Requirement of Amenity Land to be handed over to the M.C.G.M.	Percentage of Amenity Area
1.	For plots with area from 4,000 to 10,000 sq.m	5.00%
	For plots with area more than 10,000 sq.m	10.00%
2.	Changing Industrial zone of plot to Residential and/or Commercial depending upon the plot size	5.00% to 20.00%
3.	Development in Cotton Textile Mills	17.00%

Chapter **18**

LEGENDS & STANDARDS



CHAPTER 18

LEGENDS & STANDARDS

18. Legends for Designations and Reservations

Legends are abbreviations depicting designations and reservations on the Proposed Land Use (PLU). Designations are public amenities already developed. Reservations are parcels of land mandated for specific public amenities and yet to be developed. Designations are depicted by a colour with black/hatched lines whereas only colour and no hatched lines depict reservations.

The SRDP 1991 depicted designations/reservations by the use of the name of the public amenity, e.g. Burial Ground, Swimming Pool. Sometimes an individual facility was named in detail, e.g. Tata Institute of Social Sciences (TISS). This led to a large number of designations, approximately 380.

18.1 Manner of Legend Depiction

The EDDP 2034 modernized legend depiction by crafting categories, intermediate categories and detailed categories. These were assigned Codes and Sub-Codes. For instance, Education is a category, School is an intermediate category and Municipal School is a detailed category. To explain through an example, in the legend DE1.1, D stands for 'Designation', E for the Category 'Education', 1 for Intermediate Category 'Municipal' and .1 for Sub-Category 'School'. All Educational Designations would have DE as common. This exercise led to a sizable reduction in the number of Designation legends. A similar method was used for Reservations. For instance, in the legend RE1.1, R stands for Reservation, E for Education, 1 for Municipal and .1 for School. The RDDP 2034 has accepted the principles adopted by EDDP 2034 as well as the curtailment of the number of legends with a few modifications.

18.2 Additional Designation Legends

The addition of legends for designations are primarily for greater clarity. They are designed to disallow future difficulties in redevelopment or blurring of separate kinds of uses on the same plot. The word 'part' has been used where a plot combines a designation with a non-designated facility. For instance, let us assume that a public parking lot also has a residential building on the same plot. This would be designated as PPL (Pt), indicating that something else exists on the plot other than a public parking lot which is not designated. Similarly, where AR as per SRDP 1991 has been developed on part land, this would be indicated as (Pt) preceding the respective legend code.

Combination of compatible uses

Due to scarcity of vacant lands and to tap the full potential of the existing amenities, some of the existing amenities and proposed reservations have been considered for multiple uses.

These have been indicated with plus (+) sign followed with the new compatible uses which is reflected in the Ward reports (Part III of this report).

18.3 Additional Reservation Legends

The additions in the area of reservations are in institutions, gender, social equity and urban livelihoods. The additions in institutions are with a view to strengthen the institutional profile of the city both from the economic angle and the social angle. It was additionally felt that some of the social equity areas were significantly in deficit. Their provisioning, therefore, required that they were not merged in a 'hold all' legend and got overlooked in comparison with the other amenities. It was, therefore, necessary to take them out of the general social basket. Similarly, in the legends for open spaces, playgrounds have been separated from gardens and parks. The EDDP's intentions in bringing about flexibility were noble but they left a lot of discretion that could create imbalances in the cited areas.

18.4 List of Designations and Legends

The following is the List of Designations and their Legends

Table 18.1: List of Designation Legends

Sr.no.	Code	Designation (124 Nos)
Education		
1	DE1.1	MUNICIPAL SCHOOL
2	DE1.2	PRIMARY & SECONDARY SCHOOL
3	DE1.3	SPECIAL SCHOOL
4	DE2.1	COLLEGE
5	DE2.2	UNIVERSITY/IIT
6	DE3.1	OTHER EDUCATION
Health		
7	DH1.1	MUNICIPAL DISPENSARY/HEALTH POST
8	DH1.2	MUNICIPAL HOSPITAL
9	DH1.3	MUNICIPAL MATERNITY HOME
10	DH2.1	GOVERNMENT HOSPITAL
11	DH3.1	CHARITABLE DISPENSARY
12	DH3.2	PRIVATE HOSPITAL
13	DH3.3	REHABILITATION CENTER
14	DH3.4	VETERINARY HOSPITAL
15	DH3.5	OTHER MEDICAL FACILITY
Public Open spaces		
16	DOS1.1	TANK/POND/LAKE
17	DOS1.2	PROMENADE
18	DOS1.3	BEACH
19	DOS1.4	PLAY GROUND
20	DOS1.5	GARDEN/PARK
21	DOS2.1	CLUBS/GYMKHANA

Sr.no.	Code	Designation (124 Nos)
22	DOS2.2	SWIMMING POOL
23	DOS2.3	ZOO
24	DOS2.4	MUNICIPAL SPORTS COMPLEX
25	DOS2.5	SPORTS COMPLEX / STADIUM
26	DOS2.6	RECREATION GROUND
27	DOS2.7	GREEN BELT
Housing		
28	DR1.1	MUNICIPAL STAFF QUARTERS
29	DR1.2	POLICE STAFF QUARTRES
30	DR1.3	GOVERNMENT STAFF QUARTRES
31	DR1.4	BEST STAFF QUARTRES
32	DR1.5	MUNICIPAL HOUSING
33	DR2.1	REHABILITATION & RESETTLEMENT
Public Utility & Facilities		
34	DPU1.1	FIRE STATION/COMMAND CENTER
35	DPU2.1	FUEL STATION
36	DPU3.1`	POLICE STATION
37	DPU3.2	POLICE CHOWKY
38	DPU3.3	CORRECTION FACILITIES
39	DPU3.4	POLICE FACILITIES
40	DPU3.5	COURT
41	DPU4.1	POST & TELEGRAPH
42	DPU4.2	TELEPHONE EXCHANGE
43	DPU4.3	RADIO TRANSMISSION
44	DPU4.4	TELEVISION STATION
45	DPU4.5	WIRELESS STATION
46	DPU5.1	ELECTRIC POWER PLANT
47	DPU5.2	ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY
48	DPU6.1	SERVICE INDUSTRIAL ESTATE
Public Offices		
49	DO1.1	MUNICIPAL OCTROI NAKA
50	DO1.2	MUNICIPAL PRINTING PRESS
51	DO1.3	MUNICIPAL OFFICE
52	DO2.1	GOVERNMENT OFFICE
53	DO3.1	OTHER PUBLIC OFFICES
Social Amenities		
54	DSA1.1	MUNICIPAL RETAIL MARKET
55	DSA1.2	RETAIL MARKET
56	DSA1.3	WHOLESALE MARKET
57	DSA1.4	SHOPPING CENTER
58	DSA2.1	BEGGARS HOME
59	DSA2.2	CHILDREN HOME

Sr.no.	Code	Designation (124 Nos)
60	DSA2.3	ORPHANAGE
61	DSA2.4	OLD AGE HOME
62	DSA2.5	WELFARE CENTER
63	DSA2.6	WOMEN HOSTEL
64	DSA2.7	STUDENT HOSTEL
65	DSA2.8	LIBRARY
66	DSA2.9	HOMELESS SHLETER
67	DSA3.1	AUDITORIUM
68	DSA3.2	CINEMA THEATER
69	DSA3.3	DRAMA THEATER
70	DSA3.4	ART GALLERY
71	DSA3.5	MUSEUM
72	DSA3.6	OPEN AIR THEATER
73	DSA3.7	AQUARIUM
74	DSA3.8	PUBLIC HALL
75	DSA3.9	PLANETARIUM
76	DSA4.1	HINDU TRADITIONAL / ELECTRIC CENETERY
77	DSA4.2	MUSLIM CEMETERY
78	DSA4.3	CHRISTIAN CEMETERY
79	DSA4.4	BUDDHIST CEMETERY
80	DSA4.5	COMPOSITE CEMETERY
81	DSA4.6	JEWISH CEMETERY
82	DSA4.7	TOWER OF SILENCE
83	DSA4.8	CEMETERY
84	DSA4.9	OTHER SOCIAL AMENITY
85	DSA5.2	ABATTOIR
86	DSA 7.1	FILM/ TV STUDIO
Municipal Services		
87	DMS1.1	ROAD DEPOT
88	DMS1.2	MUNICIPAL CHOWKY
89	DMS1.3	MUNICIPAL FACILITIES
90	DMS2.1	TRANSPORT GARAGE
91	DMS2.3	ASPHALT PLANT
92	DMS2.4	MUNICIPAL LABORATORY
93	DMS2.5	MUNICIPAL WORKSHOP
94	DMS2.6	MUNCIPAL LAUNDARY
95	DMS3.1	SOLID WASTE MANAGEMENT FACILITIES
96	DMS3.2	LANDFILL SITES
97	DMS4.1	SEWAGE TREATMENT PLANT / FACILITIES
98	DMS4.3	SEWAGE PUMPING STATION
99	DMS5.1	RESERVOIR
100	DMS5.2	WATER PUMPING STATION

Sr.no.	Code	Designation (124 Nos)
101	DMS5.3	WATER TREATMENT PLANT
102	DMS5.4	WATER TRUNK MAIN/ACQUADUCT
103	DMS5.5	HYDRAULIC ENGINEERING DEPARTMENT FACILITIES
104	DMS6.1	STORM WATER PUMPING STATION
Primary Activity		
105	DP1.1	FISH & NET DRYING YARD
106	DP1.2	FISH COLD STORAGE/GODOWN/FISHING RELATED INDUSTRIES
107	DP2.1	DHOBI GHAT
108	DP3.1	CATTLE POUND/ DAIRY
109	DP4.1	DAIRY
Transportation		
110	DT1.1	TRUCK TERMINUS
111	DT1.2	STATE TRANSPORT DEPOT
112	DT1.3	REGIONAL TRANSPORT OFFICE
113	DT1.4	BEST BUS FACILITIES
114	DT1.6	PARKING LOT
115	DT1.6 (PT)	PUBLIC PARKING LOT
116	DT2.1	WATER TRANSPORT TERMINAL
117	DT2.2	JETTY
118	DT3.1	AIRPORT/HELIPORT
119	DT4.1	RAILWAY STATION
120	DT4.2	RAILWAY TERMINUS
121	DT4.3	RAILWAY YARDS
122	DT4.4	METRO/MONO RAIL CARSHED
123	DT 4.5	INTERMODAL TRANSPORT TERMINUS
AMENITY		
124	DAM	AMENITY PLOTS
		TOTAL DESIGNATIONS

18.1.2 List of Reservations and Legends

The following is the List of Reservations and their Legends

Table 18.2: List of Reservation Legends

Sr. No.	Code	Reservations (84 Nos)
EDUCATION		
1	RE1.1	MUNICIPAL SCHOOL
2	RE1.2	PRIMARY AND SECONDARY SCHOOL
3	RE1.3	SPECIAL SCHOOL
4	RE2.1	HIGHER EDUCATION
5	RE3.1	OTHER EDUCATION
6	RE 4.1	URBAN PLANNING INSTITUTE
7	RE 4.2	MEDICAL INSTITUTE

Sr. No.	Code	Reservations (84 Nos)
8	RE 4.3	FINANCE INSTITUTE
9	RE 4.4	OTHER INSTITUTES
HEALTH		
10	RH1.1	MUNICIPAL DISPENSARY/ HEALTH POST
11	RH1.2	HOSPITAL
12	RH1.3	MUNICIPAL MATERNITY HOME
13	RH3.1	REHABILITATION CENTER
14	RH3.4	VETERINARY HOSPITAL
PUBLIC OPEN SPACES		
15	ROS1.2	PROMENADES
16	ROS1.4	PLAY GROUND
17	ROS 1.5	GARDEN/ PARK
18	DOS 2.1	CLUB/GYMKHANA
19	ROS2.3	ZOO
20	ROS2.4	MUNICIPAL SPORTS COMPLEX
21	ROS2.5	SPORTS COMPLEX / STADIUM
22	ROS 2.7	GREEN BELT
HOUSING		
23	RR1.1	MUNICIPAL STAFF QUARTRES
24	RR1.2	POLICE STAFF QUARTRES
25	RR1.3	GOVERNMENT STAFF QUARTRES
26	RR 1.5	MUNICIPAL HOUSING
27	RR1.6	POLICE HOUSING
28	RR1.7	GOVERNMENT HOUSING
29	RR2.1	REHABILITATION & RESETTLEMENT
30	RR2.2	AFFORDABLE HOUSING
31	RR 3.1	KOLI HOUSING
PUBLIC UTILITY & FACILITY		
32	RPU1.1	FIRE STATION
33	RPU2.1	FUEL STATION
34	RPU3.1	POLICE STATION
35	RPU3.2	POLICE CHOWKY
36	RPU3.5	COURT
37	RPU3.4	POLICE FACILITIES
38	RPU3.3	CORRECTION FACILITIES
39	RPU5.2	ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY
40	RPU 6.1	SERVICE INDUSTRIAL ESTATE
PUBLIC OFFICES		
41	RO1.3	MUNICIPAL OFFICE
42	RO2.1	GOVERNMENT OFFICE
43	RO3.1	DISASTER MANAGEMENT FACILITY
SOCIAL AMENITIES		

Sr. No.	Code	Reservations (84 Nos)
44	RSA1.1	MUNICIPAL MARKET WITH VENDING ZONE
45	RSA1.2	RETAIL MARKET WITH VENDING ZONE
46	RSA2.1	MULTI PURPOSE COMMUNITY CENTRE
47	RSA2.7	STUDENTS HOSTEL
48	RSA2.9	HOMELESS SHELTER
49	RSA3.3	CULTURAL CENTRE/DRAMA THEATER / THEATER
50	RSA3.5	MUSEUM
51	RSA 3.6	ART GALLERY
52	RSA 3.7	LEISURE PARK
53	RSA4.8	CEMETERY
54	RSA 4.9	OLD AGE HOME
55	RSA5.1	EXHIBITION CENTRE
56	RSA5.2	MULTI PURPOSE HOUSING FOR WORKING WOMEN
57	RSA6.1	CARE CENTER
58	RSA6.2	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE
59	RSA6.3	PUBLIC CONVENIENCE
60	RSA 7.1	FILM STUDIO / TV STUDIOS
61	RSA 8.1	ANIMAL SHELTER
MUNICIPAL SERVICES		
60	RMS1.1	ROAD DEPOT
61	RMS1.2	MUNICIPAL CHOWKY
62	RMS1.3	MUNICIPAL FACILITIES
63	RMS2.1	TRANSPORT GARAGE
64	RMS3.1	SOLID WASTE MANAGEMENT FACILITIES
65	RMS3.2	LAND FILL SITE
66	RMS3.3	SCRAP YARD
67	RMS4.1	SEWAGE TREATMENT PLANT / FACILITES
68	RMS4.3	SEWAGE PUMPING STATION
69	RMS5.1	RESERVOIR
70	RMR5.2	WATER PUMPING STATION
71	RMS5.3	WATER TREATMENT PLANT
72	RMS5.5	HYDRAULIC ENGINEERING STORE / OFFICE
73	RMS6.1	STORM WATER PUMPING STATION
PRIMARY ACTIVITY		
74	RP1.1	FISH & NET DRYING YARD
75	RP 2.1	DHOBBI GHAT
76	RP 3.1	CATTLE POUND
TRANSPORTATION		
77	RT1.1	TRUCK TERMINUS
78	RT1.2	STATE TRANSPORT DEPOT
79	RT1.4	BEST BUS FACILITIES
80	RT1.6	PARKING LOT

Sr. No.	Code	Reservations (84 Nos)
81	RT2.1	WATER TRANSPORT TERMINAL
82	RT2.2	JETTY
83	RT3.1	METRO / MONO RAIL CARSHED
AMENITY		
84	RAM	AMENITY PLOT

18.2 Amenity Standards

In the EDDP, a detailed analysis of various standards adopted in the country and abroad was made. It finally decided to adopt most of the standards adopted in SRDP 1991. But in certain instances 1991 standards were reduced. The EDDP also converted standards into per capita standards.

The RDDP has followed the following principles in respect of standards for public amenities:

- i. The standards adopted by SRDP 1991 in respect of public amenities have been retained.
- ii. However, 1991 adopted separate standards for the island city and for suburbs. The RDDP has abandoned this duality and taken the higher of the two standards in each public amenity category as the standard.
- iii. While the effort has been made to satisfy standards in regard to built amenities in terms of land area, the RDDP proposes to meet standards through BUA in the event of shortfall in land.
- iv. For Public Open Space (POS) and cemetery, however, the standard reflects the land area.
- v. The conversion of standards into per capita by EDDP has been accepted.

The following Table exhibits the adopted norms. It also states the norms of 1991 and EDDP for comparison.

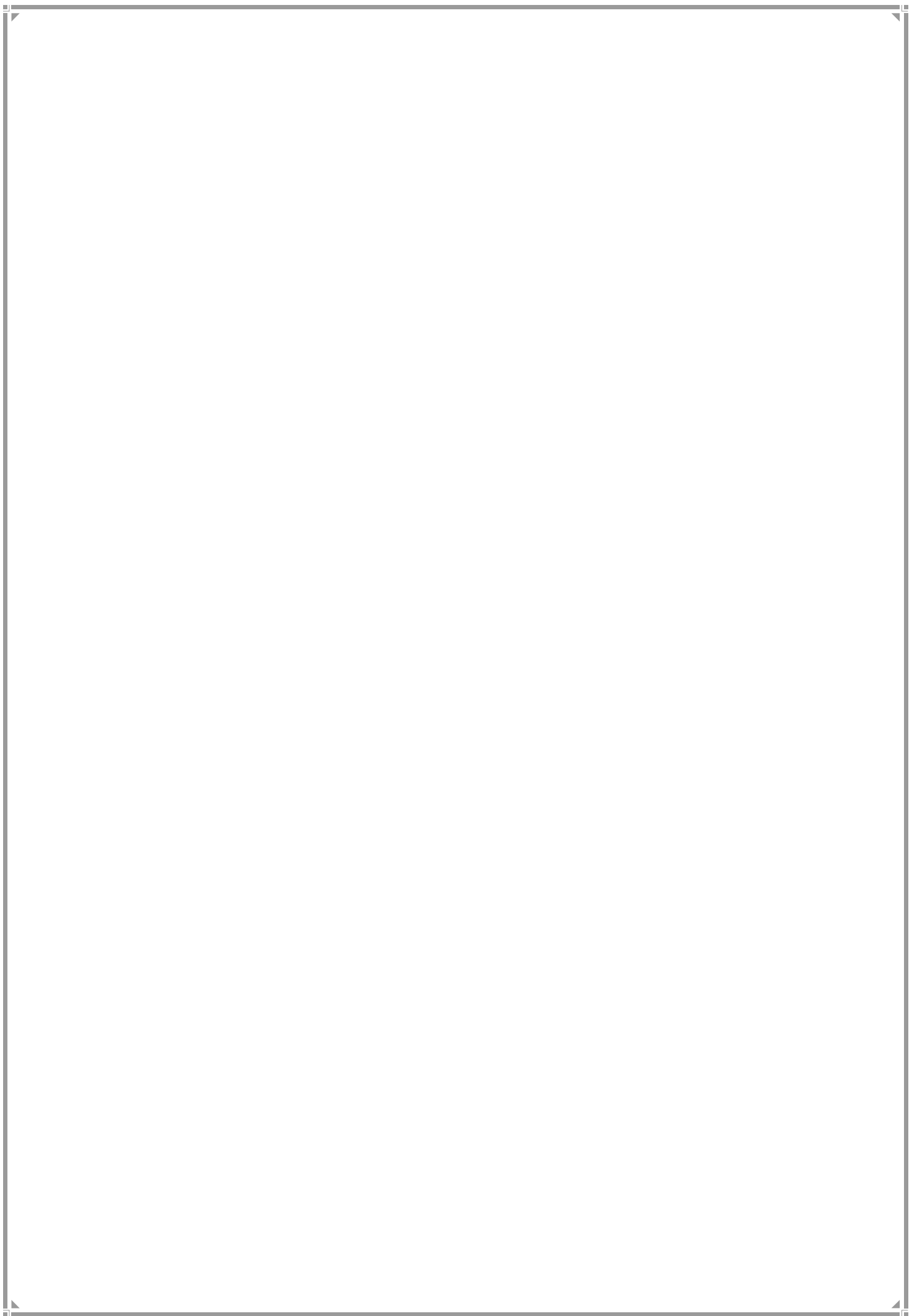
Table 18.3: Comparative Amenity Standard Norms (m² per person)

AMENITY		1991		2034	
		Island City	Suburbs	EDDP (All City)	RDDP (All City)
EDUCATION		0.752	1.104	1.37	1.574
	Primary School	0.376	0.552	0.4	0.552
	Secondary School	0.76	0.552	0.5	0.552
	Higher Education	-	-	0.47	0.47
HEALTH		0.2	0.385	0.385	0.419
	Dispensary	0.013	0.013	0.013	0.014

AMENITY		1991		2034	
		Island City	Suburbs	EDDP (All City)	RDDP (All City)
	Maternity Home	0.021	0.042	0.042	0.045
	Hospital	0.167	0.33	0.33	0.360
SOCIAL					0.13
	Burial Ground & Cemetery (per ward)	1.5 Ha	1.5 Ha	0.03	0.03
	Local Market			0.06	0.1
PUBLIC OPEN SPACES		2	4	2	4
	Neighborhood Parks			0.6	1.2
	Community Parks			0.4	0.8
	Ward level Parks			0.5	1
	City level Parks			0.5	1

Chapter 19

EDUCATION, HEALTH & SOCIAL AMENITIES



CHAPTER 19

EDUCATION, HEALTH & SOCIAL AMENITIES

Education and Health are the two most significant public amenities that are provided by the Planning Authority. The relationship between education and health is generally large. On the one hand, there are positive health consequences related to increased education; on the other, better health leads to better levels of schooling.

19.1 Education

The Constitution (Eighty-sixth Amendment) Act, 2002 inserted Article 21-A in the Constitution of India to provide free and compulsory education to all children in the age group of 6 to 14 years as a Fundamental Right. The Right of Children to Free and Compulsory Education (RTE) Act, 2009, which represents the consequential legislation envisaged under Article 21-A, means that every child has a right to full time elementary education of satisfactory and equitable quality in a formal school which satisfies certain essential norms and standards. The Supreme Court has stepped in to endorse the RTE Act 2009 and has made it mandatory for private schools to reserve 25% of its seats free for underprivileged children.

In Greater Mumbai, primary education (Std. I -VII) has been an obligatory function, while pre-primary and secondary are discretionary functions. Consequently, MCGM dominates the primary education space and private organizations are key players in the secondary education space. The current land provision as per ELU 2012 for all levels of educational amenities in the City is 0.57 sq. m per person.

19.1.1 Multiple use of Educational Space

The RDDP proposes to recommend 0.552 m² pp for primary and secondary education each and 0.47 m² pp for higher education. This takes the total educational standard to 1.574 m² pp. There are, however, other compatible educational functions that are also required to be factored in. For these, space has been a constraint. It is possible, however, to allow primary, secondary and higher educational space to be shared when the primary users are not functional. Education for differently abled children, teachers' training, vocational classes, training classes, music classes, dance classes, information dissemination efforts could all find a place so that the educational space is fully utilized and no educational function suffers for want of space. MCGM could formulate guidelines for such use and charge appropriately if private organizations requested space/slot allocation. It is emphasized, however, that the needs of primary user shall not be displaced and other than primary user would only come into play after the needs of primary amenity is comprehensively satisfied.

19.1.2 Impact of Technology on Education

The impact of technology in education has great significance for our schools, students and teachers. Students can be saved the burden of carrying books to schools and can instead

carry information in the digital format. Children can learn faster. In fact, children need not attend school on all days and can only congregate, say twice a week for interactive face to face sessions. Since the City intends to be fully broad-band enabled, this can transform the way children learn or the manner in which they are taught. This would free space for more students and would lead to more intensive use of educational assets and more intensive learning. The RDDP exhorts MCGM to find possible solutions that can at the same time accelerate education, cut cost, and generate revenue through allocation of educational space.

19.2 Health

Health amenities include dispensaries, maternity homes and hospitals. The MCGM runs a large healthcare system including several large municipal hospitals, municipal dispensaries, maternity clinics and health posts. The municipal health system is supported by a large number of private hospitals, nursing home and clinics. The average per capita space across Greater Mumbai is 0.15 m² per person, but the standard is not evenly achieved across all wards. Looking at the significance of health care, the RDDP has proposed a space standard of 0.419 m² per person for all levels of health care needs. The multiple use of health space is both a possibility and a necessity in order to optimize the use of such space. However, the principles on which multiple uses of health space would operate shall be the same as in education. The needs of primary user shall not be displaced and other than primary user would only come into play after the needs of primary amenity is comprehensively satisfied.

19.2.1 Economic & Employment Angle of Health

It ought to be additionally borne in mind that some of the health facilities in Greater Mumbai are of national and international repute and draw a large number of patients from outside the City. This puts pressure on the City's health infrastructure. At the same time, such health facilities add to Mumbai's economy. Such assets need to be supported and more health facilities need to be created from the economic and employment point of view as well as from the angle of City's reputation as a top health destination. This must go hand in hand with strengthening of the other local health facilities serving primarily the City population.

19.2.3 Research & Institutional Support

The health services of the city will fare better if they are supported by greater space allocation to older nationally reputed hospitals or more branches at fresh locations in the City where space is available. The City should also encourage newer entrants in areas in which Greater Mumbai is deficient. The RDDP has proposed fresh hospital sites as well as space for institutes of medical research. These should stand in good stead in keeping Mumbai at the forefront of health services.

19.3 Social Amenities

Social amenities, as provided in the MR&TP Act comprise a large number. The most important of them in the eyes of Mumbai's DP have been burial grounds/cemeteries, fire

stations, police stations and police chowkies, local municipal markets and community welfare centres.

19.3.1 Expanded Basket of Social Amenities

The RDDP, apart from the amenities listed above, has proposed to introduce a number of other social amenities for gender, informal sector and special groups. Those are treated in a separate Chapter. The RDDP proposes 0.03 sq. m per person for burial grounds/cemeteries, 0.10 sq. m for local municipal markets taking the total for all social amenities to 0.13 sq. m per person.

19.3.2 Multiple Compatible Uses

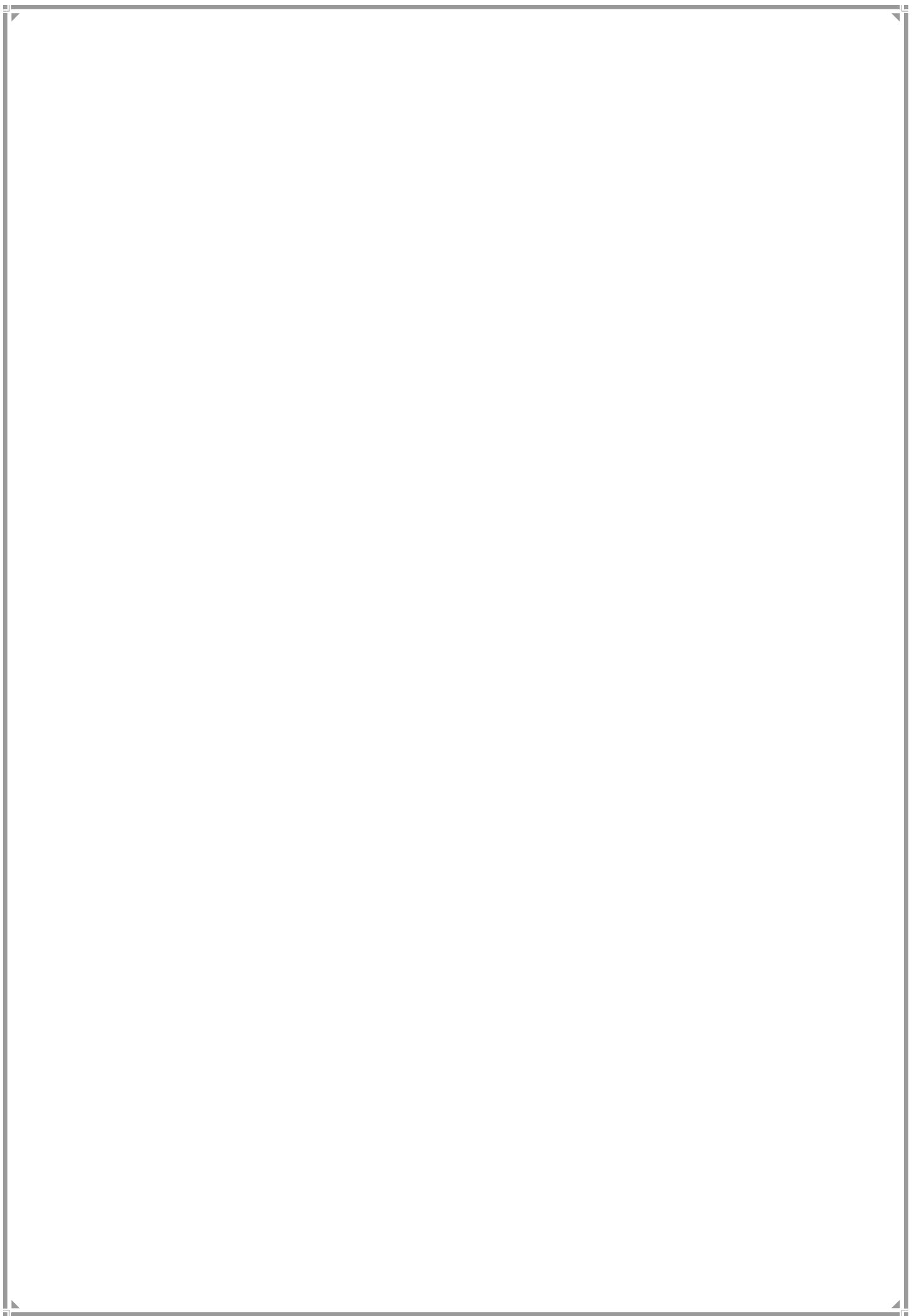
Some of the social amenities may also allow other compatible users. For instance, the RDDP proposes to allow fire quarters within fire stations, police quarters within police stations, combine police chowky with police station, vending zones and segregated homeless shelters in local markets. A great amount of flexibility is sought to be injected in these lands and buildings in regard to users so that it encourages sensible and fulsome use of the assets.

19.3.3 Computation of Provision for Social amenities

The RDDP proposes to compute education, health and social amenities on the basis of built up area rather than land area. All these amenities are being provided an FSI of 4. However, the RDDP proposes to use FSI when required, meaning thereby that if a certain amount of land has become available, but does not satisfy the sq. m per person standard for that amenity, FSI would then come into play to the extent the norm is fulfilled. However, in case of additional requirement, the land would have the potential to fulfil the requirement and improve upon the standard set.

Chapter 20

PUBLIC OPEN SPACES (POS)



CHAPTER 20

PUBLIC OPEN SPACES (POS)

20.1 Open Spaces (OS) that are Public Open Spaces (POS)

RDDP 2034 proposes to describe Public Open Spaces (POS) as those open spaces (OS) where there is right to access and any restrictions imposed are universally applicable. Open spaces that are available to all members of a local community, such as residents of a housing society, are local community spaces. So are clubs, gymkhanas and swimming pools that are available on membership or fee basis. However, since a sizeable number of citizens enjoy such spaces, the RDDP has treated them as Public Open Spaces.

20.2 Open Spaces (OS) that are not Public Open Spaces (POS)

The above means that all lands zoned as Natural Areas fall into the realm of Open Spaces. However, if they are not accessible to a sizeable number of people, they are not POS. Additionally, such open spaces that are exclusive to a family, as in a private bungalow are private open spaces, and not POS. The RDDP, however, proposes over a period of time to attempt the meaningful conversion of certain OS into POS so that the citizens of the City have larger accessible areas for enjoyment.

The RDDP 2034 has attempted to list all types of OS and POS. This is with a view to afford a comprehensive idea of the magnitude of open space the City possesses. It also allows a better watch on open spaces and a realistic benchmark for future comparisons

20.3 Role of POS

POS play a critical role in a city. They serve the purpose of lungs for the city and impose a much-needed balance between the built and the open environment. They allow a decent quality of life for citizens who could spend time away from home, either for exercise or for recreation, or for interacting with nature. Playgrounds are equally vital, especially for children, for both physical and mental growth or for youthful energy to be channeled in the rightful direction. POS also promotes the growth of human qualities such as friendship, sharing of joy, knowledge, sorrow, because they allow space and opportunities for interaction. They are a great asset for public health as they allow for safe walking by the elderly, safe play by children. They also permit public activities, such as debates, discourses and awareness campaigns.

However, one of the most critical deficits in Greater Mumbai is in regard to POS. The strategy, therefore, must be to allocate additional land for POS. A supplementary strategy would be to convert more existing Open Spaces into POS.

20.4 Strategies to Enhance POS

The RDDP 2034 proposes the following steps in regard to this public amenity:

- The RDDP 2034 has improved upon the 1991 POS standards by adopting a uniform standard of 4 sq. m pp for the entire city. This is with a view to attempt to achieve these in the future even if not achieved today, whenever areas become available for fresh allocation. These will especially emerge out of substantial areas in Mumbai that would become eligible for redevelopment or fresh development in hitherto zones not considered for development.
- Types of lands that the RDDP proposes to count as POS include RGs, PGs, public/semi-community spaces, layout RGs, designated public open spaces, open spaces in educational institutions and other public institutions, 1991 reservations of POS including those deleted in EDDP on account of encroachment, PGs in schools, greens below flyovers, promenades, publicly accessible beaches and all buffers. The test of POS is that a sizeable number of people can enjoy that open space.
- The RDDP proposes reclamation of a natural pocket of the sea that can supplement greens in the city. The RDDP calls this “Green Reclamation”. It is emphasized that the reclaimed space would be for the purpose of public open space and open space alone and for no other purpose. These greens have the potential to transform the face of Greater Mumbai. In doing this, care would have to be taken that the interests of local fishing communities will be protected wherever they have rights of egress and ingress into the sea. The RDDP exhorts that the Coastal Road Project may consider adding another 50 m on the seaward side to further enhance the green component of Greater Mumbai.
- POS that are within private layouts and characterized as local community spaces have been counted as POS with the sole view to recognize that these are available for enjoyment to a sizeable community of people. The RDDP clarifies that by mere virtue of such planning arithmetic, they do not stand subject to mechanical acquisition or conversion to a public open space beyond the local communities that have enjoyed the open space in the past. It may also be noted that the MCGM has avoided designating these layout RGs in the PLU to amply demonstrate and clarify that they are not mechanically subject to acquisition.
- Since the population projection of Greater Mumbai includes all of Mumbai including SPAs, POS in their areas have also been accounted for.
- The reduction of legends for open spaces under one category in EDDP 2034 is proposed to be substantially reversed. In the context of reservations, legends except RG used in SRDP 1991 are proposed to be restored (PG and G). This will prevent an imbalance in favor of one particular type of POS, such as playground. In the context of designations, however, RG perforce must continue.

- For designations, the allowable **construction of 15%** in RG has **prospectively** been proposed to be done away with. They would then get restricted to such construction that enhances the enjoyment of POS. These are already provided for in the DCRs.
- SRDP 1991 POS that have been de-reserved on account of being encroached are generally proposed to be re-reserved as shown in DP 1991. This would send out clear signals that encroachers are not incentivized. Additionally, DCRs provide a mechanism for part development of these encroached spaces as POS.
- No Development Zone(NDZ) is zone comprising potentially developable land kept in abeyance for future development. The intention is not to bar them from construction for all time. Eco-sensitive areas of erstwhile NDZ were already merged into Natural Area by EDDP. A sizable chunk of land out of NDZ - a clear 25 % is proposed under POS. Additionally, lands for affordable housing, education, health and social amenities and institutions are proposed to carve out POS out of their areas. A similar dispensation is proposed in MbPT Land, Salt Pan Land and Recreation and Tourism Zone. Public Green areas carved out of these lands would help bridging the POS deficit.
- In RDDP 2034, with a view to increase the basket of public open spaces, it was proposed that 10% of plot area be carved out as public open space available to the entire city. However, the layouts earlier had to keep minimum 15% of open space. It is now proposed that the area of open space be optimized based on the total size of the layout. However, these will be open spaces for the exclusive enjoyment of the community within the layout. They will still be categorized as POS.
- In view of sudden torrential rains and recurrent floods in Mumbai, it is vital that every step be taken to aid the egress of water. It is, therefore, proposed that all public open spaces will avoid any reduction of permeability of such green spaces. Construction will be restricted to only such uses that allow enjoyment of the facility for the purpose designated. This is spelt out in DCRs.
- POS ought to be designed to play a significant role in community cohesiveness. This objective can be furthered through several methods such as provisions in open spaces for small meetings, discussion groups, open air conferences and the like.
- Some of the POS would require to pay special attention to the needs of the old, provide accessibility to the handicapped and pathways that provide for wheeled transport such as motor scooters, wheelchairs and strollers. They would have to provide for seating to cater for people who are less mobile. Large POS are proposed to have areas that could be used as picnic spots.
- Leisure Parks have been proposed by the RDDP. These will be substantially green spaces equipped with food district, amphitheater, Cineplex, playground, picnic spaces and playgrounds and parking for families to enjoy their weekends and spare time.

- It is possible to develop permeable pathways in some mangroves for people to walk. These will serve a double purpose of keeping a watch on mangroves so that they are not encroached. At the same time, it would be an exhilarating experience to walk along their edge.

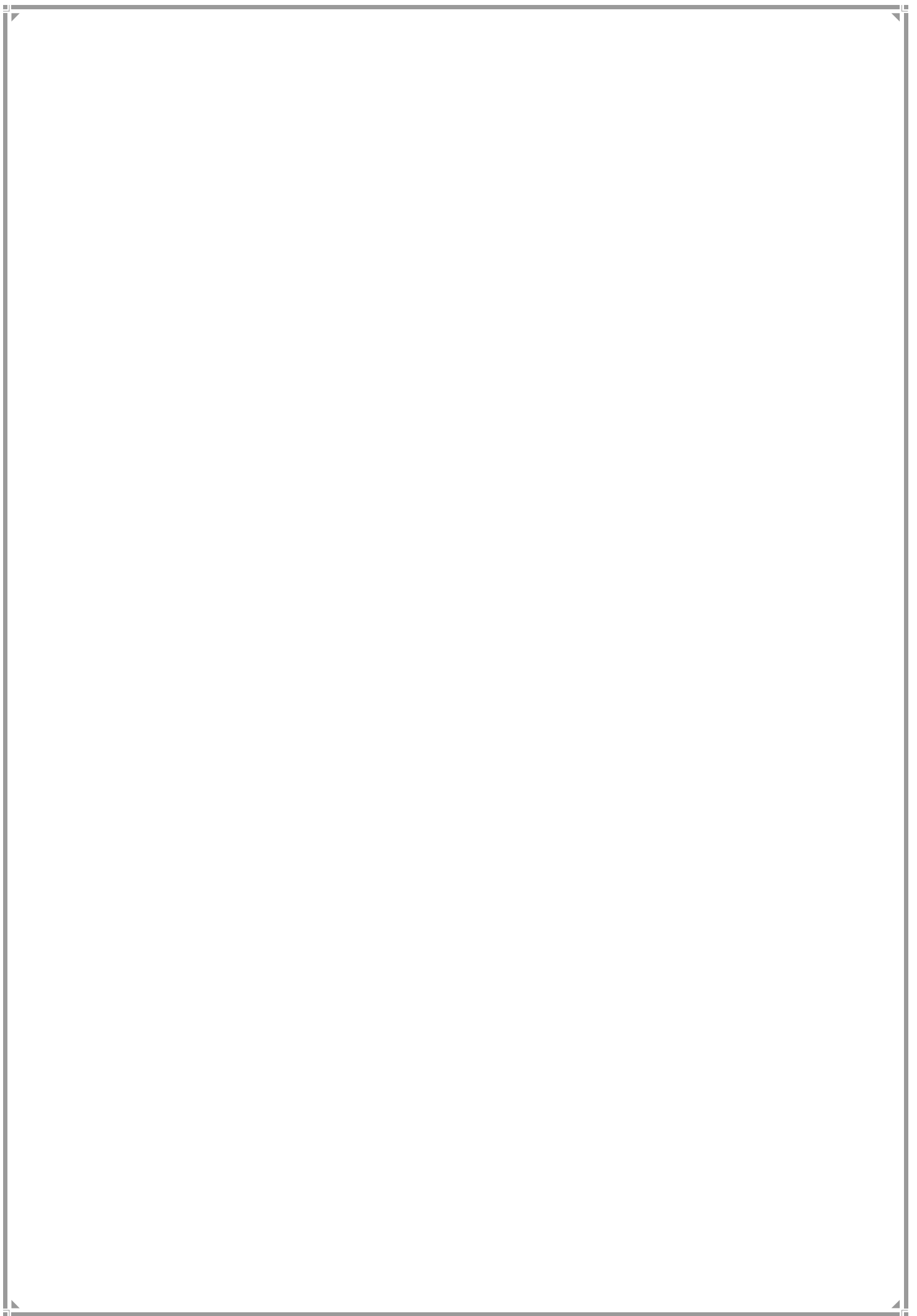
TABLE 20.1: Total Provision of Public Open Space

Sr. No	TYPE OF POS	AREA (HA)	PP M ²
1	RESERVATIONS	1892.22	1.48
2	DESIGNATIONS	1633.67	1.28
3	LAYOUT RGs	964.78	0.75
4	NDZ +TDA+SALT PAN	850	0.66
5	AAREY POS	800	0.63
6	SANJAY GANDHI NATIONAL PARK RG	588	0.46
7	BUFFER	472.05	0.37
8	SPA	428.05	0.17
9	OUT OF CONVERSION OF INDUSTRIAL LANDS	117.64	0.33
10	COASTAL ROAD PROMENADE	88	0.07
		7834.41	6.13

1. Includes all reservations, that is, lands reserved for POS yet to be developed
2. Includes all lands that have been developed as POS
3. No RGs were to be carved out of plots below 1,000 sq m. For larger plots, 15 to 25 % RG was mandated. An average of 10 % of net plot area (residential non-slum) has been considered. For slums 8 % of net plot area has been taken.
4. This is 25% POS that will accrue out of 3000 ha of land considered for development of Affordable Housing. An additional 100 ha has been considered to accrue out of Institutional Area & Public amenity areas of the above cited 3,000 ha.
5. Since Aarey lands will substantially be open, they have been factored.
6. Recreation Zone in SGNP that is open to the public has been considered.
7. Buffers marked along rivers, creeks, nallas and pipelines have been taken.
8. The SPA POS is in MMRDA and MIDC lands.
9. Lands that would come for conversion from industrial zone into residential/commercial (25% of total zone area) has been considered. Of this land, 15% POS has been assumed.
10. The Coastal Road as planned will have a public promenade and has been considered.

Chapter 21

AFFORDABLE HOUSING



CHAPTER 21

AFFORDABLE HOUSING

21.1 Challenges Facing Affordable Housing in Greater Mumbai

Housing is a universal need. Yet, in Greater Mumbai, a very small portion of the population can afford to convert its need into demand. A combination of several factors have pushed prices beyond the grasp of the overwhelming majority of Mumbai's citizens. Those schemes and processes that are presently in operation have proved to be either sluggish or inadequate in resolving the question in a given time frame.

21.2 Pradhan Mantri Awas Yojana

In regard to housing, of recent, the Pradhan Mantri Awas Yojana has been announced by the Ministry of Housing & Urban Poverty Alleviation that envisions Housing for All. The mission seeks to address the housing requirement of urban poor, including slum dwellers, through four programme verticals. These are (a) Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource, (b) Promotion of Affordable Housing for weaker section through credit linked subsidy, (c) Affordable Housing in Partnership with Public & Private sectors and (d) Subsidy for beneficiary-led individual house construction. The Scheme Guidelines 2015 state that the mission will support houses up to 30 sq m carpet area and a slum rehabilitation grant of Rs. 1 lakh per house would be admissible.

21.3 Maharashtra State New Housing Policy & Action Plan, 2015

The final draft of Maharashtra State New Housing Policy & Action Plan, 2015 is also currently under circulation. The thrust of the policy is towards housing for Economically Weaker Section (EWS), Lower Income Group (LIG) and Middle Income Group (MIG). It has set a target of creating 1.1 million homes in MMR by 2022. Of these, about 790,000 homes are targeted in Greater Mumbai for 2022. The Policy strives to create land banks, increase supply of affordable housing and improve quality of life.

21.4 RDDP Strategy for AH

The RDDP proposes to complement the efforts of GoI and GoM in this vital area. The RDDP's AH scheme proposes to take the cost of land out of the AH equation through the deployment of land instruments. The RDDP recognizes current available options and other formulations that are possible for affordable housing. These may be attempted and are mentioned below in this Chapter. But the affordable housing issue has taken such gigantic proportions in Greater Mumbai that every possible scheme and method available for achieving it must be attempted. The RDDP proposes some answers. One particular proposal, the RDDP AH Scheme, targets the construction of about 5 lakh AH units.

21.5 Households Requiring Affordable Housing

The RDDP has for all demographic profiling assumed the highest population figure proposed by the Draft Regional Plan. This is 12.79 million. Assuming a household size of 4 persons, the maximum number of households would be 3,19,7500 or 3 million. Of these, 62 per cent or 1.8 million HH fall in the bracket that is eligible for free housing. Of the remaining 1.2 million HH, there would be some that are not looking for AH, either because they have housing, or can buy housing at cost from the market, or are looking for rental housing or have other alternatives. Of these 1.2 million HH, the RDDP assumes 6,50,000 HH that require housing. Additionally, it would be safe to assume that some 20 % of the free housing bracket may like to opt for affordable housing, if quickly available.

The following Table summarizes the assumptions.

Table 21.1: Total No. of Households for AH

TOTAL HOUSEHOLDS	PER CENT	NO. OF HOUSEHOLDS (ROUNDED OFF)	HOUSEHOLDS NEEDING HOUSING
Total Households	100	30,00,000	-
Eligible for Free Housing (FH)	62	18,00,000	-
Those requiring Housing	-	06,50,000	06,50,000
Households out of FH opting for AH	20 per cent of 18,00,000	03,50,000	03,50,000
Total Households looking for Affordable Housing	-	-	10,00,000

21.6 Total Land for Affordable Housing

The Table above puts the affordable housing requirement at 10 lakh households. For a proper estimation of land that would be required for 1 million tenements, the households need to be broken down into multiple groups needing different levels of housing. This is attempted below. The Table categorizes households into EWS, LIG and MIG households. 35 % of these are presumed to be EWS, 35 % LIG and 30 % MIG.

Table 21.2: Total land for 1 million households

Area of Unit	Per cent	Households	Total Area (m ²)	Total area (Ha) FSI 3
30 sq m (EWS)	35	3,50,000	1,05,00,000	350
45 sq m (LIG)	35	3,50,000	1,57,50,000	525
60 sq m (MIG)	30	3,00,000	1,80,00,000	600
		10,00,000	44,25,00,00	1475

21.7 Available Schemes for AH

With the addition of RDDP proposals, there are eleven schemes and within them, many more methods/choices available for the provision of AH. The RDDP believes that each of these are capable of contributing to the AH stock. Together they could wholly bridge the AH deficit. These are listed in the Table Below.

Table 21.3: AH Schemes

SN	SCHEME	AGENCY/AGENCIES	POSSIBLE CONTRIBUTION (LAKH UNITS)
CURRENTLY AVAILABLE OPTIONS			
1	Slum Redevelopment	Owner/Slum-Cooperative Society/NGO/SRA	1.00 L
2	Cessed Building Development	Owner/Occupants' Co-operative Society/Developer	0.50 L
3	Co-operative Housing Society	Co-op Housing Society/Developer	0.75 L
4	MHADA/ Development	MHADA	0.50 L
5	MHADARedevelopment	MHADA/Co-operative Housing Society/Developer	1.00 L
6	Open Market	Owner/Developer	0.25 L
	TOTAL		4.00 L
RDDP ADDITIONAL OPTIONS			
7	Pradhan Mantri Awas Yojana	MCGM (30 m ² component)	1.75 L
8	RDDP AH Scheme	MCGM (45 m ² & 60 m ² component)	3.25 L
9	Reserved AH Plots	Owner/Developer	0.25 L
10	Inclusionary Housing out of Private Layout Development	Owner/Developer	0.25 L
11	MbPT	MbPT	0.50 L
	TOTAL		6.00 L
	GRAND TOTAL		10.00 L

21.7.1 Identifying Lands for RDDP AH Scheme

For the specific RDDP AH Scheme, possible areas of development in Greater Mumbai that can be primarily linked to the provision of affordable housing have been identified. These are four

land parcels, of different ownerships. They are NDZ (No Development Zone) lands, TDA (Tourism Development Area) lands, Salt Pan Lands and MbPT Lands. These four parcels of land can make a very sizeable contribution to the provision of Affordable Housing along with the provision of other public amenities in the City that have critical deficits and need to be reinforced. None of the lands proposed fall in Natural Area, already declared unbuildable. These would be potentially developable land.

21.7.2 Areas assumed out of the Land Parcels

The lands available in the four parcels cited above are indicated below. EDDP calculated NDZ having a total of 13,706.32 Ha. 75 % of this area was shown under forests, water bodies, CRZ 1 or under SPA. Out of the remaining 25 % area, totaling 3,355 ha, 3.75 % was occupied by slums, gaathan and industries. 1.15% was under existing roads. Additionally, some 12.5 % of land or 1,711.96 ha was taken up by EDDP 2034 for reservations and designations. This left a total area of 7.18% or 984.41 ha. RDDP proposes to remove NDZ reservations since amenity land would accrue out of the AH scheme on these lands. A larger pool of land thereby becomes available for AH, taken at 2100 ha. About 1,100 ha are assumed out of 2007 ha of TDA, and about 130 ha out of 797.24 ha of Salt Pan lands. The land parcels shown are assumptions and may not completely fructify or may be exceeded.

60 ha out of 721.24 ha of MbPT Lands have been marked for AH. This land parcel has not been shown in the Table below since this is entirely for AH. MbPT's contribution to amenities has been separately marked. Given the significance of AH in the context of the City and the primacy Gol and GoM attach to AH, it is expected that both private and public agencies would lend unqualified support to the proposal.

Table 21.3: Total land available for DP AH Scheme

LAND TYPE	TOTAL LAND (Ha)	APPROX AREA (Ha) ASSUMED
NO DEVELOPMENT ZONE	3,355	2,100
REC & TOURISM DEV AREA	2007	1,100
SALT PAN	721.24	0,130
TOTAL		3,330

Of the total land shown above in Table 21.3, it is proposed to set aside approximately 10% of the land for road connectivity.

Table 21.4: Balance land after deducting land for roads

TOTAL LAND	3,330
LAND FOR ROAD CONNECTIVITY	0330
BALANCE LAND	3000

The balance lands are suggested to be used for the following purposes, targeting to bridge amenity gaps as well as provide amenities for the estimated incoming population. The FSI assumed for the RDDP AH scheme is 3. The 30 sq metre unit component is proposed by RDDP to be linked to the GoI Housing Scheme and named “Pradhan Mantri Awas Yojana”.

Table 21.5: Proposed Land Use of NDZ

USE	PERCENT	AREA (Ha)
OWNER'S SHARE	34	1020
AH	25	0750
POS	25	0750
INSTITUTIONAL AREA	08	0240
EDUCATION	04	0120
HEALTH	03	0090
SOCIAL AMENITIES	01	0030
TOTAL	100	3000

Table 21.6: Total Population Served by AH

TOTAL UNITS EXPECTED FROM RDDP AH SCHEME	5,00,000
APPROX POPULATION @ HH SIZE OF 4	20,00,000

21.7.3 Agencies for Development of RDDP AH Scheme

Those involved in providing AH are today State parastatal agencies such as MHADA and SRA. In view of the huge volume of AH needed, the MCGM can play a vital role. It is, therefore, proposed that Government may be the implementing agency in Salt Pan Lands and MCGM in Recreation and Tourism Area Lands and NDZ lands. MbPT will implement the AH scheme in its own land.

21.7.4 Opportunity to bridge City Amenity Deficits

At the same time, the city will be able to cater to its institutional needs and create world class institutions on institutional lands. By consuming full FSI on lands allocated, Greater Mumbai would improve availability of educational, health and social space as well as Public Open Spaces. The RDDP proposes that these POS would be used as Playgrounds, Gardens, Leisure Parks and Cultural Spaces. It is proposed that 35 % of POS be used as Playgrounds, 35 % as Gardens and 20 % as Leisure Parks and 10 % as Cultural Spaces.

21.7.5 Use of Institutional Lands

The RDDP proposes spatial provision for the creation of various kinds of institutions. These comprise Urban Planning Institutes, medical institutes, financial and technical institutes, science and Research institutes and institutes of art, music and culture. The RDDP proposes

that 486 ha of land provided for Institutional Area may be split up equally between institutions under the five heads cited in Chapter 12: 'Vision, Goals and Objectives'.

21.8 Co-operative Housing Societies

More housing/affordable housing is proposed to be created out of redevelopment of co-operative housing societies more than 30 years old that have been allowed construction cost in the form of FSI as an additionality to accommodate housing requirement of expanded families in situ.

21.9 Reservations for Affordable Housing & Contribution by Other Agencies & Schemes

In addition to the above, certain plots are reserved for affordable housing. These will further supplement the affordable housing stock that is sought to be created. Other agencies such as MHADA & SRA, through their housing/redevelopment programmes are expected to add to the affordable housing numbers. Contributions are also expected out of lands for inclusionary housing to be culled out of layouts and from the open market.

21.10 Rental Housing

It would be naïve to assume that the need for housing automatically translates into a desire for housing on ownership basis for all home seekers. A confluence of several factors lead many people to prefer rental housing. Renting offers a flexible housing choice that enables households to adapt to changing financial circumstances, including the need to relocate quickly, whether to find a more affordable home or to move to a job elsewhere in the country. Where employments are annually renewed or are short term, individuals would not like to get into arrangements that would drive their lives into a financial knot. There could be potential risks, such as potential loss of wealth from falling home values. Rental housing allows greater ease of moving and is a preferable option for those in jobs that are transferable. It also provides the flexibility to select housing that better fits the family budget and the freedom from responsibility for home maintenance. Young adults are the most likely age group to rent. For those that have just started jobs away from their family homes, the lower transaction costs and flexibility of renting makes it a natural choice during a stage in life marked by frequent changes in jobs, periods as a student and shifts in personal relationships. While households of all incomes rent homes, it is nonetheless true that a share of renters have low incomes. It should be expected that about 20 to 30 % of the total affordable housing will get into the pool of rental housing. Part of this housing should be available to working women.

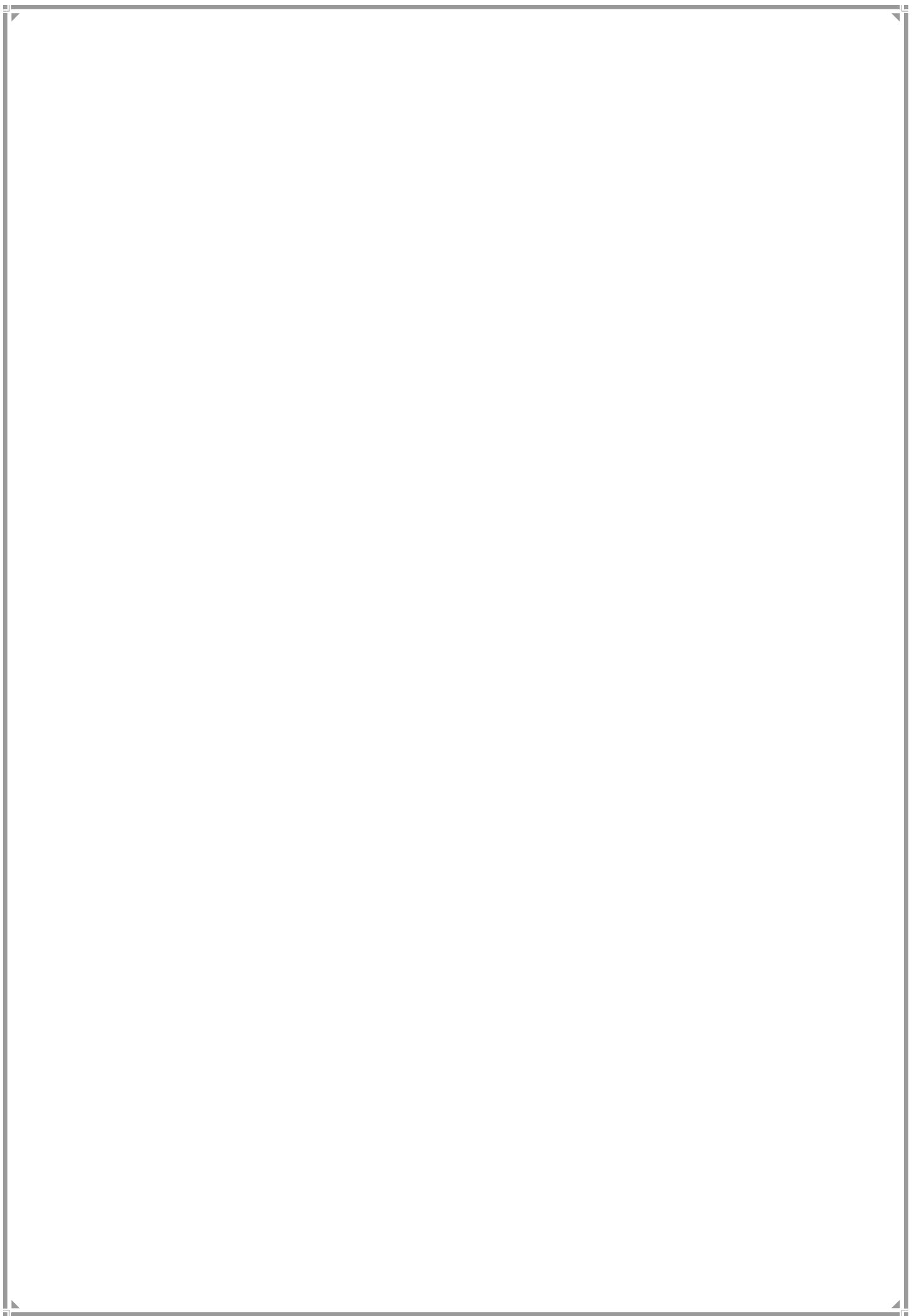
21.11 Cafeteria Approach for Slums

The provision of free housing through cross-subsidization is dependent on the market and participation of the private sector. It would therefore be a fair proposition that wherever slum dwellers are amenable to other methods of housing provision, such methods ought to be encouraged. This would lead us to a 'cafeteria approach' where a basket of optional methods could be allowed to operate.

Those who have applied themselves to this problem for years or have worked with slum communities have suggested such methods as formation of co-operative societies and provision of collective land tenure to the CHS on long lease, in-situ site and services program, development through community land trusts etc. The idea is that the local dynamics relating to different slums may be different. If the slum dwellers are amenable to a different solution, they may be allowed to move on that path. The RDDP proposes that these are reasonable suggestions and if they have the strength of fructification, they should be carefully examined for application.

Chapter 22

GENDER, SPECIAL GROUPS AND SOCIAL EQUITY



CHAPTER 22

GENDER, SPECIAL GROUPS AND SOCIAL EQUITY

A city is home to the most diverse group of stakeholders with varied socio-economic conditions. Each has a set of necessities that may be different from the others. A city, therefore, cannot be planned with any single group in mind or merely keep in sight the imaginary average citizen; it requires reaching out to accommodate the needs of all groups that contribute or have contributed or wish to contribute to the good of the city. Populations hence must be broken down into segments and services customized to satisfy their requirements. It is true that city customization is difficult and some of the peculiar needs of different groups may even be adversarial. However, the ideal city, without ignoring the needs of any group, would try to arrive at the largest synergy possible and the best provisioning of needs that can be skillfully managed. It is only then that a city can be branded as inclusive.

22.1 GENDER

Among the multiple sets of citizens that require particular consideration are women. Research and empirical evidence have resoundingly proven that assumed gender disparities in mind and body that got entrenched over time in custom and law will not stand scrutiny in an environment of equal opportunity. For a city, providing such equality of opportunity to women is not merely a matter of social justice. It is also a question of empowerment, national development and Mumbai's economic salubrity.

The RDDP 2034 proposes a departure from gender blindness to gender mainstreaming in the Development Plan. In the area of the needs of women, some of their outstanding issues have been highlighted over a longish period of time. Many of these are linked to the provision of space and hence to the Development Plan.

Women, whether low-wage employees, such as those employed in household assistance or vendors or those who work in offices need access to housing and public transport between places of residence and work. Those that have children need support systems that take care of their children so that they can go to work. Those that work in the informal sector or have capabilities to produce goods need access to markets. Households, where women are sole providers specially require a basket of assistance through support services.

It could be said with some pride that despite some aberrations, Mumbai has been the most gender-friendly city in the country. Positions, however, in the torrent of time, are likely to get dissipated with speed, if not fortified by fresh initiatives. The RDDP recognizes this and a number of proposals are sought to be injected to radically enhance women's participation in the city's economy and improve the lives of Mumbai women.

The work force in Greater Mumbai has shown an increase in the participation of women, up from 8.81 % in 1961 to 16.38 % in 2011. This, however, is much lower than the men, standing at 56.38% in 2011. The RDDP proposes to make significant contributions in correcting this

imbalance. Among the reasons making the participation of women difficult is lack of housing for single women, cost of housing, limited care facilities for children of married women and single mothers, lack of skills, market/vending space and training facilities for informal sector women workers, lack of public conveniences and adequate transport.

The overall objective is to make women a much larger proportion of Mumbai's work force by providing opportunities that enhance their happy experience of working and living in Mumbai. The DP proposes to do this by filling some of the spatial gaps.

The RDDP recognizes that there is commonality in many of the needs of women and men. However, in several others, women use the city and its services/amenities differently. Women, therefore, have to have their own space in the city and many services need to be customized to suit their requirements. The RDDP proposes accordingly to move towards a plan that is more equitable, more receptive and endowed with greater opportunities for women. For the first time, it is proposed to put the DP through some serious gendering.

In this context, the RDDP has the following objectives.

1. More young women should join the Mumbai workforce, gradually equaling the number of men.
2. They should have the option to live and work independently.
3. Such women should be able to locate secure residential foothold so that their enjoyment of employment and the city is enhanced.
4. Married women with small children should be able to go to work.
5. To promote their independent functioning, the city should provide child care centres to take care of their children.
6. Women who work in the informal sector should have the same freedom to work and live independently and be supported by spatial provisions.
7. The city should enable the acquisition of skills by women through capacity building avenues
8. Elderly women, without shelter, should be provided residence and services.
9. So should women who need special assistance due to domestic violence and other trauma.
10. The City should provide a host of services for the achievement of the cited objectives.

In order to attain the above objectives, the RDDP has introduced new legends for reservations and separated gender requirements from the basket of general social amenities, lest gender needs get drowned in the pool of other social provisions. However, within each of these legends and consequent space allocations, the key is to promote multiple functionality so that a basket of choices is available. These provisions are :-

- **Multipurpose Housing for Working Women (MHWW)**

This residential provision would not be on ownership basis. This would be a combination of working women's hostel comprising single and double rooms, dormitories, studio apartments and will be available on rent. It will also have a guest house for women who travel to the city for work. The space would ideally include conference rooms and multi-purpose halls that can, inter alia, be used for skill provision, lectures and sharing. Preferably plot sizes of 1000 sq m have been proposed in the RDDP to be located in areas where commercial, office establishments and/or institutions of higher learning exist or are proposed. The RDDP proposes at least one MHWW in each Administrative Ward.

- **Neighborhood Care Centre**

This would be a multi-purpose centre, with space for child care facilities with common work area for women, reading room facilities for girls, and ICDS centres. It can be a stand alone with the child care facility on the ground floor or ground level area in residential housing spaces. It is proposed to provide about 1400 sq m of built space for a population of 10,000. The RDDP proposes one Care Centre of 500 sq m in every electoral ward.

- **Adhar Kendra**

The RDDP looks at an Adhar Kendra performing several functions. It would be designed to stock products made by SHG (Self Help Groups) women. The Kendras would also provide people skilled-workers for services. In addition, these centres will have multi-purpose halls, which could also be used for entrepreneurial training to SHGs. Some Adhar Kendras would also serve as support to women that have faced violence at home. Attempt has been made to locate the amenity in areas, which provide sufficient footfall, preferably around markets and railway stations and on the main roads to ensure visibility. The RDDP proposes to provide plots of around 500 sq m in size at each administrative ward level as far as possible.

- **Vending areas for Women**

The RDDP has taken cognizance of the Street Vendors Act and the DCRs have been drafted specifically to facilitate hawking in the city. It is also proposed that spaces will be created within markets for hawking by women that could serve as outlets for goods produced by the SHGs.

- **Women Skill Centres**

Government of India has been emphasizing imparting training for skills. Some of the skills required in a city are best provided by women. At the same time women have shown ability to transcend traditional barriers and prove themselves in fresh employment and entrepreneurial areas. The RDDP recognizes this and has attempted to

provide space for women skill centres with tailor-made courses within the Adhar Kendra.

- **Homeless Shelters**

The RDDP proposes that at least 10 % homeless shelters provided in the city would be for women.

- **Public Toilets for Women**

The RDDP proposes to provide as many public convenience blocks as possible in every ward. These blocks would have general public toilets and some exclusive toilet blocks for women, designed differently to cater for gender. This would comprise toilet blocks and drinking water facility at the ground level with another floor built to provide changing room and resting space for naka and domestic workers, as well as drinking water facilities.

- **Housing for Women**

The RDDP 2034 lays emphasis on affordable housing. Some of such housing is proposed to be specifically marked for single women and women-headed families. Similarly, RDDP lays great store on rental housing and proposes a rental housing percentage out of affordable housing stock. Some of these are proposed to be such housing only for women. The RDDP also proposes several old age homes. Some of these are proposed to be for elderly women.

22.2 CHILDREN

The RDDP proposes to contribute to the creation of child-friendly cities and to spatially aid the development of a child's happiness and wellbeing. The mandatory provision of a layout RG, along with its environmental angle, is also with a view to allow play areas for children. In order to assure similar outdoor facilities, both for small and older children, the RDDP has retained a separate legend for playgrounds and proposes to disallow any construction on these PGs. In schools, the DP proposes to adhere, wherever possible, to retain the mandated provision of playgrounds for outdoor games. The Planning Authority will additionally keep in view the provision of some indoor space in schools for indoor games, reading and extracurricular activities. The RDDP proposes that a percentage of such built-up spaces would be reserved for differently abled children. A new addition in the RDDP is the provision of Composite Recreational Areas for outdoor weekends. These would contain, inter alia, play spaces for children for a variety of games, relaxation areas for the old, picnic areas, movie areas, food courts and some parking encouraging Mumbai's families/citizens to enjoy their weekends/non-working days.

22.3 THE DIFFERENTLY ABLED

The Persons with Disabilities (Equal Opportunities, Protection of Rights and full participation) Act, 1995 requires that equal opportunities are offered to differently abled people, including non-discrimination in transport, on the roads and in built environment. The DCRs provide a separate section dealing with the requirements of differently abled people. The RDDP has taken care to provide for customized public buildings, public roads and public spaces. Public buildings are defined as all such buildings, owned by Government or private, where by virtue of their character, a large number of people visit their premises to avail of their services.

The DCRs incorporate design guidelines for ensuring barrier free environment for the differently abled. Availability of lift up to terrace floor with unobstructed terrace floor has been inserted enabling easy movement of wheel chairs on the terraces. For differently abled children, the RDDP encourages provisions in schools and playspaces, specifically addressing their needs. It is expected that design provisions for accessibility in DCRs would allow for the inclusion of newer technologies and innovations that would improve accessibility and barrier free environments.

22.4 THE OLD

While India exults in being one of the youngest nations on the globe, this may not afford it comfort for too long. The National Policy on Older Persons 1999 recognizes that “Demographic ageing, a global phenomenon, has hit Indian shores as well.” It is estimated that senior citizens in India will constitute 8.9 % of the population by 2016, 12.40 per cent of the population by 2026 and 21 % by 2050. In regard to Mumbai, based on the cited estimates, a linear calculation (see Table below) reveals that the city would be home to 1.5 to 1.9 million persons above the age of 60.

Table 22.1: Older Persons Population, Greater Mumbai

YEAR	PROJECTED TOTAL POPULATION(MILLION)	60+ POPULATION 2021 (MILLION)	PER CENT
2021	12.79	1.5	12
2031	11.91	1.8	15.5
2034	11.40	1.9	17

Source: National Policy on Older Persons, 1999

The oddity in the situation is that while economic development has added to the ability of people to live longer lives, the fact that they will live in cities does not inspire confidence about the well-being of the old. Cities appear to be unkind to the old, and the mega cities seem to be even less kind. Thus, while on the one hand, fruits of greater prosperity and better public health have given human beings longer lives, cities do not seem to provide the environment in which they can live happily. The RDDP proposes to address this issue partly by

the provision of old age homes combined with the provision of geriatric care centres within such homes.

- **Old Age Homes**

The RDDP proposes Old Age Homes of 1000 sq m plots in each ward, preferably near hospitals and gardens. The RDDP proposes that these homes would be equipped with Geriatric Day Care Centres. Some of these would be earmarked for elderly women.

- **Other Services for the Aged**

The RDDP also proposes that the City should make efforts to provide the following:

- installation of countdown pedestrian signals at intersections
- strengthen public transport with low floor buses
- provide affordable pick up and drop off vehicles for the old
- erect access-for-all buildings
- enable social participation

Markets in some cities in the developed world are providing a wide range of services to encourage the old to achieve 'active ageing'. These services can be a considerable market and can supplement the efforts of the City in making Greater Mumbai 'age-friendly'.

22.5 URBAN LIVELIHOODS

The **National Urban Livelihoods Mission** aims "to reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self employment and skilled wage employment opportunities, resulting in an appreciable improvement in their livelihoods on a sustainable basis, through building strong grassroots level institutions of the poor". The mission also aims at "providing shelters equipped with essential services to the urban homeless in a phased manner. In addition, the mission would also address livelihood concerns of the urban street vendors by facilitating access to suitable spaces, institutional credit, social security and skills to the urban street vendors for accessing emerging market opportunities".

22.5.1 The Informal Sector

The Informal Sector plays a vital role in the economy of Mumbai. All development indicates that the informal sector is larger than the formal and is likely to expand further. A serious attempt at alleviating poverty leads us to the role of the informal sector in such alleviation. The sector should generate more employment, should command higher productivity and yield incomes that allow the poor to work themselves out of the vicious cycle of poverty. The current scene, however, is replete with several constraints that disallow the informal sector from playing such a role. Some constraints, such as availability of capital are not for the DP to

address. But DP can help in providing space and spatial instruments that allow acquisition of skills through capacity inputs and authorized locations for business.

- **Skill Centres**

The DP has proposed skill centres at the ward level to impart skills to men and women in the informal sector that would enable them to have more and better skills and larger productivity in the trade that they undertake.

- **Vending Zones**

In view of the provisions of the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014, it is proposed that the finalized vending zones decided by the Vending Committee, whenever approved, will get appended to the DP.

- **Additional Vending Zones**

Moreover, while the predominant user of lands would continue to operate at other times, it would stand suspended in time slots in which hawking activity would be permitted by the Vending Committee. Since vending zones/activity/time slots would be subject to alteration every five years, the vending zone/activity/time slots would stand modified as per newly finalized vending zone/activity/time slots by the MCGM.

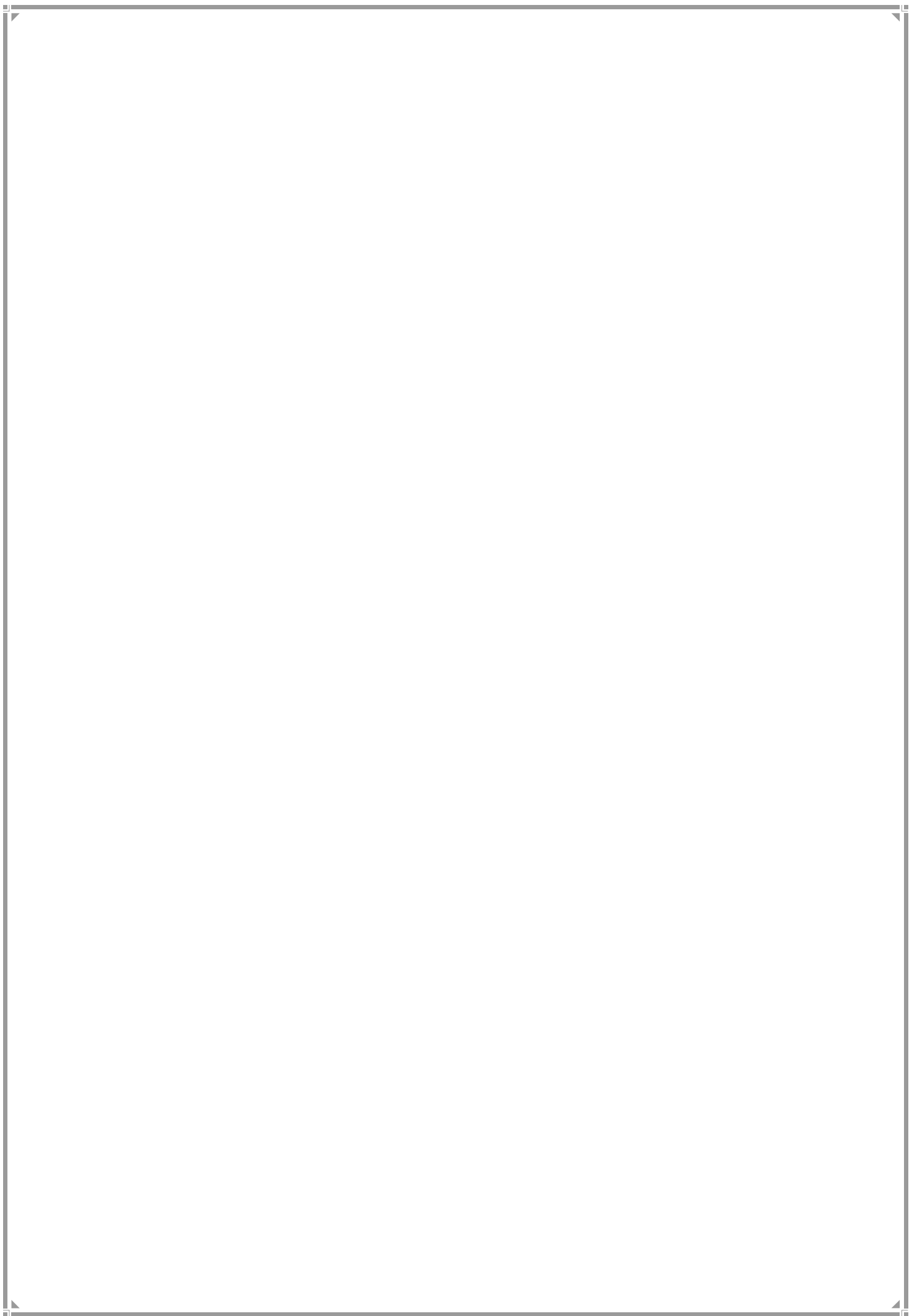
22.5.2 Homeless Shelters

On the socio-economic ladder, the urban homeless come right at the bottom. The National Urban Housing & Habitat Policy (NUHHP) 2007 exhorts that cities ensure the provision of all-weather shelters with basic infrastructure. It proposes that for every one lakh population, a hundred people need to be provided for with a space of 50 sq ft per person. Some of these should cater to single women and their dependent children, the old, infirm and the mentally challenged.

Census 2011 counted 57,416 homeless in the city. Some rise in the homeless population has been factored in (59,013), although one would hope that with a rising economy, this may as well dive down. Currently, Mumbai has a limited number of homeless shelters. The RDDP proposes to set up additional numbers of homeless shelters in the city with a minimum plot area of 500 sq m each. These shelters as per requirement would be divided into men shelters, women shelters, family shelters and special shelters. The first would be for single working men, the second for single working women and their dependent children, the third for families living on the streets and the fourth for such special groups as the old without care, mentally challenged and those out of them that are ill. The shelters would have to be equipped with toilets, baths, urinals, kitchen, common areas, locker facilities and maintenance space. The NULM guidelines and standards may, for these purposes, be referred to.

Chapter 23

ART & CULTURE, RECREATION & LEISURE



Chapter 23

ART & CULTURE, RECREATION & LEISURE

23.1 Art & Culture

Mumbai has had a very rich culture and has been home to great art and artistes over the years. However, this profile of Mumbai needs reinforcement in the Development Plan through spatial provisions that allow art galleries, museums, art and music schools and art and cultural events. Art and culture, however, need not be locked up in museums and galleries, but can beautify and invigorate squares, streetscapes, public open spaces such as gardens and public sites such as airports, convention centres and government buildings enhancing public spaces for all residents and visitors to our City. The RDDP proposes to provide occasion and environment for citizens who wish to express themselves creatively. Such opportunity would allow the fruition of artistically vibrant neighbourhoods and community art centres, and collaboration between local, national and international artistes that could highlight the history and values of our community into cultural landmarks that could become cornerstones of the City's identity.

The RDDP proposes to provide space for art and culture through reservations such as museums, art galleries, cultural centres, drama theatres. Further, it recognises sub categories within amenities of Education, Open Spaces and Heritage buildings allowing art and culture in regulated hours without hindrance to primary functions. The RDDP also proposes formalization of certain spaces in the city which currently contribute towards art and culture in an informal way.

In the lands earmarked for institutional areas, the RDDP proposes that 20 % of institutional space may go under the legend 'other institute' that would essentially allow for the creation of art galleries, museums, music schools and cultural spaces.

A similar artistic use would be permissible in multipurpose community centres, libraries, reading rooms, exhibition centres, public halls and parking lots where citizens could creatively express themselves. The DCRs provide for the use of Public Open Spaces such as Gardens, Leisure Parks and amphitheatres for the purposes of art and culture in defined time slots.

Similarly, it would be permissible in educational complexes and heritage areas and precincts to allow art and culture related activities when their primary functions are not being performed or not compromised.

Different art and culture events in different varieties of POS are illustrated below:

1. Promenade : *Western and Eastern Coastline, Pipeline*
2. Play Ground / Maidans

3. Garden/ Park
4. Club/Gymkhana
5. Stadium
6. Tanks
7. Green Belt
8. Traffic Islands
9. Beach/ Chowpatty
10. Under Flyover spaces
11. Pedestrianized streets

23.2 Heritage buildings and precincts:

This would contribute towards celebration of the heritage built form and its architectural as well historical significance and provision of art and cultural space for the city and citizens of Mumbai.

Different art and cultural events in varieties of Heritage buildings/ precincts are noted below:

1. Forts
2. Mills (defunct)
3. Cinema Theatres (defunct)
4. Caves
5. Gaothans
6. Precincts - Establish City art districts
7. Railway Stations – Art Plazas

23.3 Funding for Heritage Building Maintenance

Two Markets have been identified as 'Heritage Markets'. Income generated from these markets would be directed to a separate Heritage Maintenance Account and will be used to maintain Heritage buildings as and when necessary. The details of the 2 markets are mentioned in table 23.1 below.

Table No. 23.1 Details of proposed Heritage Markets

NO	WARD	CS/CTS No.	Village /Division	RESERVATION_CODE	AREA(HA)
1	F/N	2(part)	Salt Pan Division	RSA1.1	1.7228
2	N	194B	Ghatkopar	RSA1.1	1.2179

23. 4 Cinema Theatres

Mumbai is the birthplace of Indian cinema and its hallmark cinema theatres were sought after by Mumbai's citizens for viewing Marathi, Regional, Bollywood and Hollywood movies. However, technological changes and customer choices have made most of the existing cinema theatres unviable. The RDDP allows the development of non-operational cinema theatres into other uses. However, it ensures that the entertainment profile of the City is not destroyed by the wholesale diversion of cinema halls into non-entertainment spaces. The Owners could move their space to other uses, provided part of the entertainment function is retained in the form of a 150 seater Cineplex. Alternately, they could use the entire space for other entertainment-related functions such as TV studios, art galleries, drama theatres etc. As a last option, they could fall under the AR policy where they would surrender 40 % of the land to MCGM for entertainment-related uses and use the rest of the space for uses permitted in the surrounding zone. It is hoped that these provisions would allow dead assets to be utilized for more productive and more contemporary uses.

23.5 Recreation & Leisure

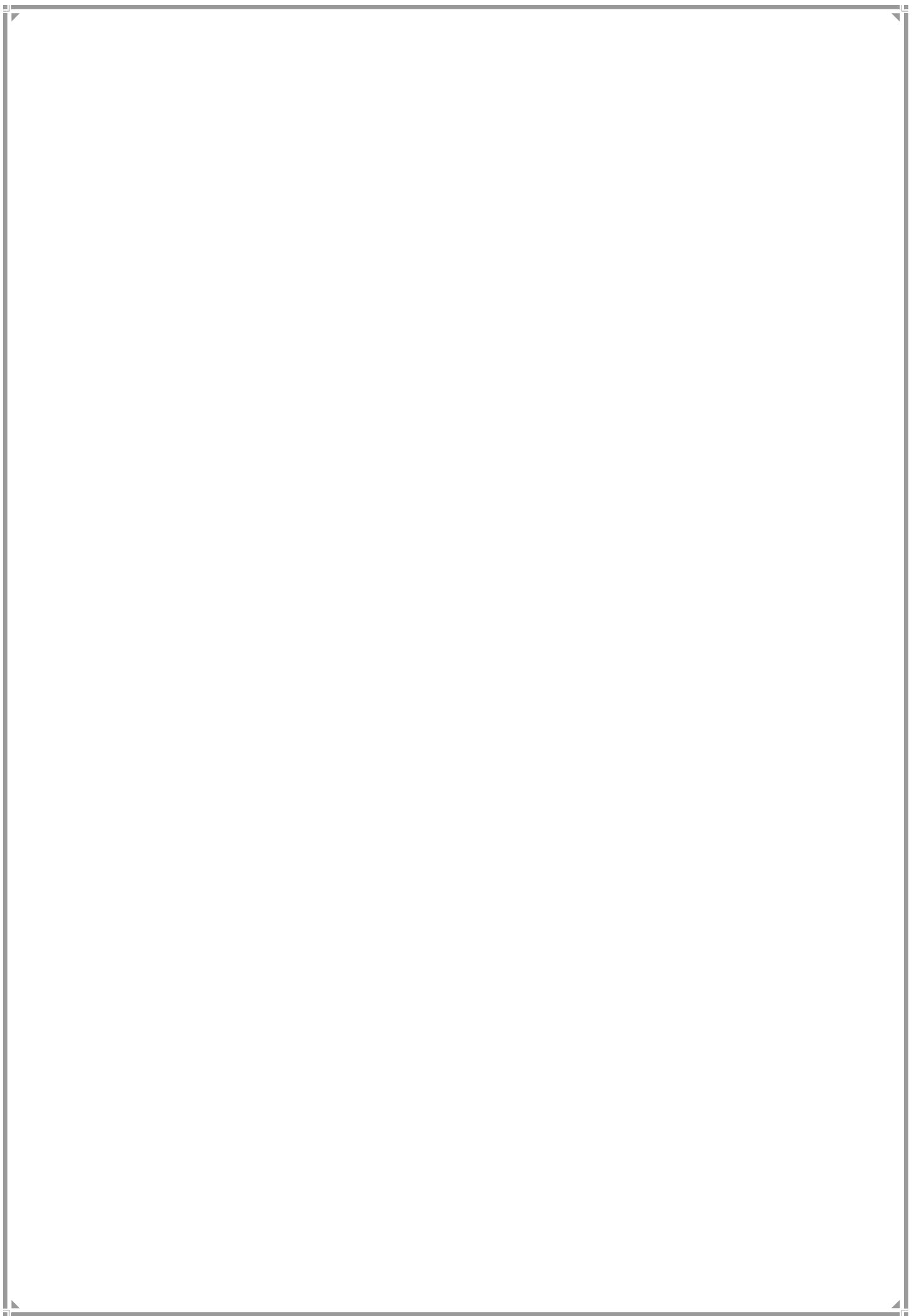
Cities need to provide ample opportunities for recreation and leisure so that families, friends and groups of citizens can take time out of work and study and spend time together that would provide time for enjoyment and bonding. The RDDP proposes to create Leisure Parks that would comprise gardens, play spaces, food courts, cultural spaces and other entertainment spaces for this purpose. These uses would be allowed in select POS as well under DCR.

24.6 Water Sports

Mumbai's large coast line offers great opportunity for water sport activity. GoM in partnership with MbPT/MCGM should harness the use of the sea to bolster fishing, tourism and water sports by providing full-fledged marinas at selected places on its own or through private participation. These marinas will cater for the fishing community, having fully equipped fishing harbours with parking for boats, repairs and maintenance facilities, storage, parking for vehicles/trucks, fishermen's club, restaurants and marketing facilities. Additionally, these marinas would be used for operation and maintenance of private yachts, sailing boats, speed boats and water sports clubs along with wharfs for coastal tours/water borne transport services, clubs, restaurants etc. for locals as well as tourists.

Chapter 24

TRANSPORTATION



CHAPTER 24

TRANSPORTATION

It is now universally acknowledged that the driving philosophy behind a city's transport policy should be to maximize mobility of the largest number of people in the shortest possible time in order to achieve the largest economic efficiency and the minimum adverse environmental impact. This quite clearly points towards an efficient public transport system as the focal point of transport decisions. Fortunately, Mumbai's transportation sector exhibits a very high modal share in favor of public transport. More people walk, take a train, ride in a metro, get on to a bus or use para transit than those who drive around in cars. Despite these salubrious transit factors, transportation is listed among the City's top challenges. More, therefore, needs to be done in relation to transportation. A number of initiatives are already underway to add greater strength to public transportation modes and this Report shall deal with them in pages ahead. Additionally, the RDDP proposes the following in relation to city transportation and its various facets.

24.1 Roads

Indian cities, in general, allocate limited physical area to roads. Over time, these road networks, punctured by repeated intersections lose capacity to handle the mounting volume of traffic. The RDDP proposes to increase spatial provision to roads. Besides, roads that establish regional connectivity, intra city connectivity, new DP roads and SRDP 1991 DP roads not developed earlier have been proposed.

24.1.1. Roads for Regional Connectivity

Three new roads are being proposed to enhance the regional connectivity of the city to the surrounding region:

- **Ghatkopar-Koparkhairane Link Road;**
- **Mumbai Trans Harbour Link;**
- **Goregaon- Aarey- Mulund -Airoli bridge**

These will be the new roads linking Navi Mumbai to Mumbai. This project will help decongest the existing two link roads namely Sion-Panvel Expressway and Ghatkopar-Mulund Road. The actual alignment and subsequent mode of construction of the three regional connectivity roads (elevated or underground) and their additional arms, will be decided at an appropriate stage. Accordingly, the alignment of the cited roads will stand automatically amended in DP.

24.1.2. Intracity Connectivity

A new western coastal road has been proposed as an expressway with a width of 45 m, which has access control and stretches from Charkop metro station to Bandra Sea Link to Nariman Point. The proposed coastal road will provide intra city connectivity. Its alignment has been

marked on DP sheets. It may, however, be stated that the alignment is provisional and may undergo changes as hitherto unseen facts about the alignment come to light during comprehensive detailing and operationalization. The alignment of the road would accordingly stand amended in the DP without any further cumbersome process. The proposed Coastal road passes through the City's existing and proposed road network. In stretches, it also runs along its coast and elsewhere beyond the coast. In parts, it is elevated and in others it assumes the form of a tunnel. The detailing of the project is being assessed by the Coastal Road Cell of MCGM.

24.1.3. Missing Links

Some of the DP Roads of SRDP 1991 that were proposed but have not as yet been completed and are vital in terms of establishing significant linkages, have been brought back in RDDP. The RDDP proposes to make these more meaningful by their further augmentation.

24.1.4 New DP & Other Roads

EDDP 2034 had shown the following categories of roads on DP sheets:

- i. Newly proposed DP roads not in existence earlier
- ii. SRDP 1991 DP roads not developed till date and hence shown as proposed DP roads
- iii. Widening of existing developed roads
- iv. New Public Streets created u/s 291 of the MMC Act 1888
- v. Sanctioned Regular Line of Existing Streets u/s 297 (1) of the MMC Act 1888

Of the above, (i), (ii) and (iii) are proposals under the MRTP Act 1966 while (iv) and (v) are streets done under MMC Act 1988. Roads (iv) and (v) have been created under the MMC Act after following due process under that Act.

Apart from the MR&TP Act 1966, the MMC Act 1888 has robust provisions in regard to roads. Before proposing any road for widening, a vehicular survey is carried out and total station survey of the existing structures along both sides of the road is also done. After such analysis, the Traffic Department of MCGM proposes the prescription of a regular line u/sec 297 (1) (a) of the MMC Act. The section empowers the Municipal Commissioner to prescribe a line on each side of any public street. The Act, however, stipulates that the Corporation has to authorize Commissioner to prescribe fresh line in substitution for any earlier line or for any part thereof after:-

- (i) publishing public notice of the proposed line by the Commissioner and
- (ii) after Corporation have considered all the objections to the said proposal

Further, the Commissioner when authorized by the Corporation in this behalf may at any time

- (a) lay out and make a new public street

- (b) agree with any person for making a street for public use through the land of such person
- (c) declare any street made under an improvement scheme to be a public street

The Commissioner also has the power to acquire open land within a regular line of a street u/s 299 (1) as well as power to acquire premises for improvement of a Public Street u/s 296 of MMC Act. The Commissioner, further, may acquire any land required for the purpose of opening, widening, extending or otherwise improving any public street or of making any public street, and the buildings if any standing on such land, subject to the provision of Sec 90, 91, 92 of the same Act. As per the provision of MMC Act, the Commissioner can initiate the acquisition proceedings in respect of R.L. This is less time consuming compared to regular acquisition proceedings.

The RDDP 2034, after a detailed road review decided to do away with some categories of roads. Firstly, roads that were initiated under the MMC Act 1888 and had already reached statutory finality under that Act did not require to be subjected to another round of suggestions and objections and a reopening of their scrutiny under the MR&TP Act 1966. Further it makes the acquisition of land more difficult. Given the strengths of the provisions under the MMC ACT 1888, it is therefore, proposed that these roads need not be shown on the DP sheets but a list of such roads be appended to the DP (Appendix 1, DP Appendices) on MCGM Web Portal for information and with the clear observation that they are not subject to suggestions and objections since due process of law has been completed under the MMC Act 1888.

As a consequence, only the following will be shown on the revised Draft DP sheets:

- I. Newly proposed DP roads not in existence earlier,
- II. SRDP1991 DP roads not developed till date and hence shown as proposed DP roads
- III. SRDP1991 DP roads partly developed and hence shown as existing roads with widening as per SRDP1991 road width ,and
- IV. New DP roads proposed in NDZ and salt pan lands for better connectivity and integrated development.

The construction of bridges, subways, FOB's, ROB's, tunnels etc., are not shown separately in RDDP. Any such road structures would be constructed wherever required by MCGM as per feasibility and technical requirement, and will automatically form part of DP.

24.1.5 Sanctioned RLs

MCGM data reveals that the MCGM has sanctioned a large number of RLs. These will be implemented in phases. The total list with details is displayed on MCGM website. A summary of this data is shown in the Table below:

Table 24.1 Sanctioned RLs

Road Width (meters)	No of RLs	Length (kms)
6 to 9	206	031.452
9 to 12	288	069.128
12 to 18	372	118.353
18 to 24	309	183.641
24 to 30	127	121.752
Above 30	101	102.361
TOTAL	1403	626.687

24.1.6 East-West Connectivity across Railway Lines

The RDDP proposes certain linkages across railway lines with the objective of creating east-west connectivity. This will release some burden of traffic on existing east-west links.

24.1.8. Classification and Summary of All Roads

Table 24.2 gives an idea of all roads that exist and are proposed in Greater Mumbai and details thereof for an understanding of the kind of road network that the City would have by 2034.

Table 24.2 : Summary of D.P. Roads

Wards	Existing Road in Ha	Proposed Roads in Ha	Proposed Road Widening in Ha	Total Proposed Roads in Ha	Total Roads in Ha
A	169.79	17.86	1.25	19.10	188.90
B	57.21	0.00	0.00	0.00	57.21
C	49.06	1.16	2.70	3.85	52.91
D	111.97	3.84	19.89	23.73	135.69
E	122.39	1.01	8.59	9.60	131.99
F/N	161.39	36.41	14.59	51.00	212.38
F/S	132.93	13.88	3.96	17.84	150.77
G/N	115.06	10.72	2.44	13.16	128.22
G/S	112.95	6.41	4.44	10.85	123.80
City Total	1032.74	91.28	57.85	149.13	1181.87
H/E	169.14	32.83	28.16	60.99	230.13
H/W	152.76	17.86	11.42	29.29	182.05
K/E	274.54	43.23	61.80	105.03	379.57
K/W	275.77	67.29	73.78	141.07	416.84
P/N	188.21	135.82	92.23	228.06	416.27

Wards	Existing Road in Ha	Proposed Roads in Ha	Proposed Road Widening in Ha	Total Proposed Roads in Ha	Total Roads in Ha
P/S	209.77	48.74	26.85	75.58	285.36
R/C	222.97	74.44	29.60	104.04	327.01
R/N	100.47	46.06	17.50	63.56	164.04
R/S	146.69	47.05	38.13	85.18	231.87
Western Suburbs Total	1740.32	513.33	379.48	892.81	2633.13
L	162.48	59.04	49.47	108.51	270.99
M/E	181.54	56.70	56.97	113.67	295.21
M/W	192.42	25.54	69.74	95.27	287.69
N	166.47	73.38	37.50	110.88	277.35
S	220.16	132.99	38.29	171.28	391.44
T	134.30	97.87	112.22	210.09	344.40
Eastern Suburbs Total	1057.38	445.52	364.19	809.71	1867.09
Suburbs total	2797.70	958.85	743.67	1702.52	4500.21
Total	3830.43	1050.13	801.52	1851.65	5682.08

24.2 Public Transport

In regard to public transport initiatives, Greater Mumbai shall benefit immensely from the expansion of metro planned by MMRDA/MMRC and the suburban rail initiatives by the Railways. These will be complemented by the bus initiatives included in the Comprehensive Mobility Plan of MCGM. In addition, the RDDP has identified certain stretches of roads that are amenable to complete pedestrianization.

24.2.1 Metro Network

A Metro network of about 145 km (inclusive of 11 km length of VAG Metro corridors which is under operation) for the horizon year 2034. These are being planned by MMRDA and MMRC. The list of Metro corridors is as in Table 24.3:

Table 24.3 Proposed metro rail routes in Greater Mumbai

Metro Line	Route	Length (km)
Phase- 1: Committed Routes		
Line 1	Versova – Andheri – Ghatkopar corridor (Completed)	12
Line 2	Dahisar-Charkop – Bandra-Mankhurd	39.2

Line 3	Colaba-Bandra-SEEPZ	33
Line 5	Wadala- Ghatkopar – Kasar Vadavali	20
Phase- 2: Recommended Routes		
Line 6	BKC –Airport- Kanjurmarg	19.5
Line 7	Andheri (E)- Dahisar (E)	18
Line 8	Wadala – Carnac Bundar	13.3
Line 9	Sewri - Prabhadevi	3.5

Source: The Comprehensive Transportation Study for Mumbai Metropolitan Region, July 2008

24.2.2 Suburban Rail Projects

In regard to suburban rail projects, the list is as follows:

- a) Completion of on-going MUTP II projects;
- b) CST-Panvel fast corridor;
- c) Premium corridor between Andheri and Virar;
- d) Premium Elevated Corridor between Kurla- Thane-Bhiwandi; and
- e) CBTC on harbour line

24.2.3 Re-engineering Railway Stations in Greater Mumbai

Railways are the lifeline of Mumbai transportation. Rail stations are thronged daily with hundreds of thousands of commuters. However, the stations generally have been found wanting in terms of appearance, passenger facilities and inter-modal connectivity. There has been interest, however, in the refashioning of the station area, in the use of airspace above railway lines and in re-doing platforms of railway stations in the city. Demands for larger FSI have been made. The RDDP favours redevelopment of railway stations in terms of larger passenger facilities and space provision for better inter-modal connectivity along with creation of some commercial space. However, any mass construction that leads to further congestion of the station areas is going to be highly detrimental to passenger welfare, security and transport needs of the city. A sound proposal from the Railways that combines its reasonable commercial needs with passenger needs and meshes with city infrastructure is welcome.

24.3 Parking

Most large cities around the globe are faced with the challenge of parking. In India, car ownership per person is still low in comparison with the developed nations. Despite this, parking problem in mega cities is already a monster. It took the country some time to accept that more roads, road widening, flyovers and subways cannot bail a city out of the woes of traffic jams and parking. Such daily experience universally promoted opinion that favoured the promotion of public transport.

A variety of solutions emerged such as rail-based rapid transit systems and BRTS. The experience, however, is that the promotion of public transport has been woefully inadequate in destroying the onslaught of more cars on roads. On the one hand, more auto companies find themselves equipped with licenses to manufacture cars and employ more and more people to increase production. They are buoyed by market demand and have a strong economic role. On the other, as prices of cars fall, incomes of families rise and easy car loans are available, the desire of people to own a car gets stronger. The city is left to contend with the inevitable consequence of rising congestion on roads. Cities are finding it difficult to negotiate between the collective frustration at traffic immobility, individual pleasure of personal possession and the economic significance of auto companies in generating jobs.

24.3.1 Off-street Parking

Since the problem of the car is not likely to disappear soon, and the will for a drastic rejection of the car nowhere appears to be in sight, the RDDP proposes that in the cited context, the parking issue be bisected into off road parking and on road parking. Avenues of augmenting off road parking would have to be provided. The RDDP has adopted the minimum parking norms recommended by the MCGM to GoM in 2012, with certain modifications for approval. A major modification is that developers can go in for more parking at higher premiums. The premiums have been telescoped, with a view to inject disincentives for cars, much like the tariffs for power.

The DCRs, in addition, provide for incentive FSI for construction of multi-storied parking in private plots and handing them over to MCGM free of cost. They also allow development of underground parking below public open spaces, playgrounds, parks and gardens and DP roads. For mutual benefit of property owners, common shared space for parking is also allowed under DCRs. Multi-level car park and mechanized parking have also been provided for in the Regulations.

24.3.2 On-street Parking

The RDDP, in regard to parking on roads and other public places, regards this as private use of public space and hence recommends a parking policy that charges for all parking and telescopes it as cited above. In order to relieve roads from excessive parking, underground parking below open spaces has been allowed. This is a compromise forced by human realities. However, all such underground facilities shall have to be created without materially impairing the enjoyment of public open spaces by the citizens. The RDDP believes that the city must push on with the provision of quality public transport, multi-modal integration and inject public transport with such quality, efficiency, comfort and safety that it can largely displace private vehicular trips.

24.3.3 Parking Authority

In congested urban areas parking can be a time consuming and expensive proposition. An important consideration, therefore, would be on how to maximize usage of parking space. At the same time, regulation that reasonably constricts parking on public spaces needs to be put

in place based on certain benchmarks that the city is able to evolve, such as the levels of congestion a city is prepared to live with. Looking at parking as a component of a city's public infrastructure, several cities around the world have created by statute parking authorities in order to provide convenient, safe, and affordable parking in the city. The parking authority is vested with the responsibility of overseeing parking arrangements in the city and managing parking spaces. The DCRs have stipulated the provision of such Parking Authority at the MCGM level. The Parking Authority, among other things, shall prepare digital GIS map of all parking spaces in the MCGM area, develop Parking Regulations for MCGM along with ITES enabled SOPs for management of parking spaces. The Parking Regulations shall cover the following aspects:

- Restrictions on locations for parking and fees associated therewith;
- Procedures for establishment of parking zones and other restricted areas;
- Procedures for long term rental parking privileges; and
- Parking violations with a schedule of penalties thereof and the procedures for appeals and contesting summons issued pursuant to these Regulations

24.4 Integrated Ticketing

From the point of view of commuter convenience, it is important that she or he should be able to travel from home to destination, if necessary, by using multiple transport systems run by different public or private agencies, but without going through the hassle of buying multiple tickets. International efforts in this regard have yielded wonderful results and technological advances have supported initiatives in this regard. A multimodal ticket covers such varieties of transport as bus, tram, train, ferry. Within these categories, a single ticket could cover a travel pass, a day pass, a pensioner excursion, single or return journey, zoo and aquarium pass. This makes travel by public transport very simple and enhances the value and acceptability of public transport.

Contactless smart cards used in Singapore and Hong Kong, for instance, make these cities one of the first to implement contactless smart card payment on all the main modes of public transportation. The technologies and initiatives cited above augur well for public transport systems and for commuters. The RDDP considers it appropriate that such a system should be put in place for Greater Mumbai.

24.5 Organizational Coordination

A major drawback in resolving a number of transport issues in the City has been the lack of a single agency to oversee and co-ordinate urban transport planning and development. Different agencies of the Central Government and the State Government are involved in some aspect or the other of urban transport, but are working in isolation. A single agency would facilitate the integrated planning and development of urban transport systems, a more optimal allocation of resources, better coordination of operations and more effective management. From the point of view of possible coordination, a unified transport authority that decides on broad issues of transport and priorities in transport that allow all agencies to

work for the same overall goal is needed. Such a body has been suggested by the National Urban Transport Policy, directing States to set up a unified metropolitan transport authority for the million plus cities. UMMTA, which is already functional for Mumbai Metropolitan Region needs to be endowed with more teeth.

24.6 Comprehensive Mobility Plan

MCGM has come out with the Draft Final Report on the Comprehensive Mobility Plan (CMP) for Greater Mumbai in Jan 2016. The CMP is rich in current transportation and allied data and proposes development of transportation network for all modes including optimal utilization of funds and manpower. It seeks to address inadequate transport facilities in Greater Mumbai that create problems of congestion, delays and hazards. The perspective year of CMP is the same as horizon year of DP – 2034. However, it divides its proposals into short term (2016-19), medium term (2020-24) and long-term (2025-2034).

The CMP proposes that by 2034, Greater Mumbai should be equipped with the following transport infrastructure.

24.6.1 Exclusive Bus Lanes (EBL) for the Horizon Year 2034

The list of projects identified for implementation in the next 20 years are presented in CMP for Greater Mumbai. These are for horizon years where travel demand on metro corridors was insufficient to justify investments in a metro line. The approximate length of EBL network proposed is 73 km by 2019, 153 km by 2024 and a cumulative 256 km by 2034. Inter-State bus terminals, inter-city/intra-regional bus stations and truck terminals have also been proposed for short-term, medium-term and long-term horizons.

24.6.2 Road Network Plan

The proposed Road network consists of roads with widening links to the extent of about 707 km. The proposed Road network also consists of newly proposed roads/ links (missing links), RoB/RUBs near Mumbai Port trust, etc. to the extent of about 219 km. Road capacity enhancements in terms of lane-km is addition of about 3,300 lane-km to the existing/ongoing construction of road/highway system which is about 4,650 lane-km.

24.6.3 Proposed Short & Medium Transportation Strategies and Policies

The focus of medium & short term transportation strategy is mainly on enhancing the capacity of the public transport systems, strengthening and widening of existing roads and development of missing links and traffic management measures.

24.6.4 Traffic Management Measures

- a) Intersection improvements and traffic signal installations;
- b) ATC expansion for effective use of traffic signals;

- c) Grade separation of major intersections where at-grade improvements would be inadequate;
- d) At-grade and grade separated pedestrian facilities particularly in the vicinity of rail/metro stations and transport terminals;
- e) Provision of protected raised footpath facilities on either side existing major road corridors and implementation of proposed NMT policy;
- f) Full grade separated railway crossings for vehicular traffic (ROBs/ RUBs);
- g) Grade separated crossings for pedestrian traffic (FOBs/ Subways) to minimize pedestrian trespassing across rail corridors or at high intensity pedestrian corridors and major roads;
- h) Demand management measures (parking controls) to secure maximum social value from network use;
- i) Parking policy for Greater Mumbai; and
- j) Improving the enforcement efficiency and incident management capability.

24.6.5 Station Area Traffic Improvement Schemes/ Measures

Improving the access to the Suburban railway stations; b) Enhancing the parking facilities; c) Providing pedestrian walkways; and d) Improving the pedestrian circulation and free-flow within and around the station area by providing additional FOBs.

24.6.6 Operation and Maintenance Cost

The routine maintenance cost for both road and rail infrastructure is 0.2% of the construction cost per year and Periodic Maintenance is 1.25% of the construction cost every seventh year.

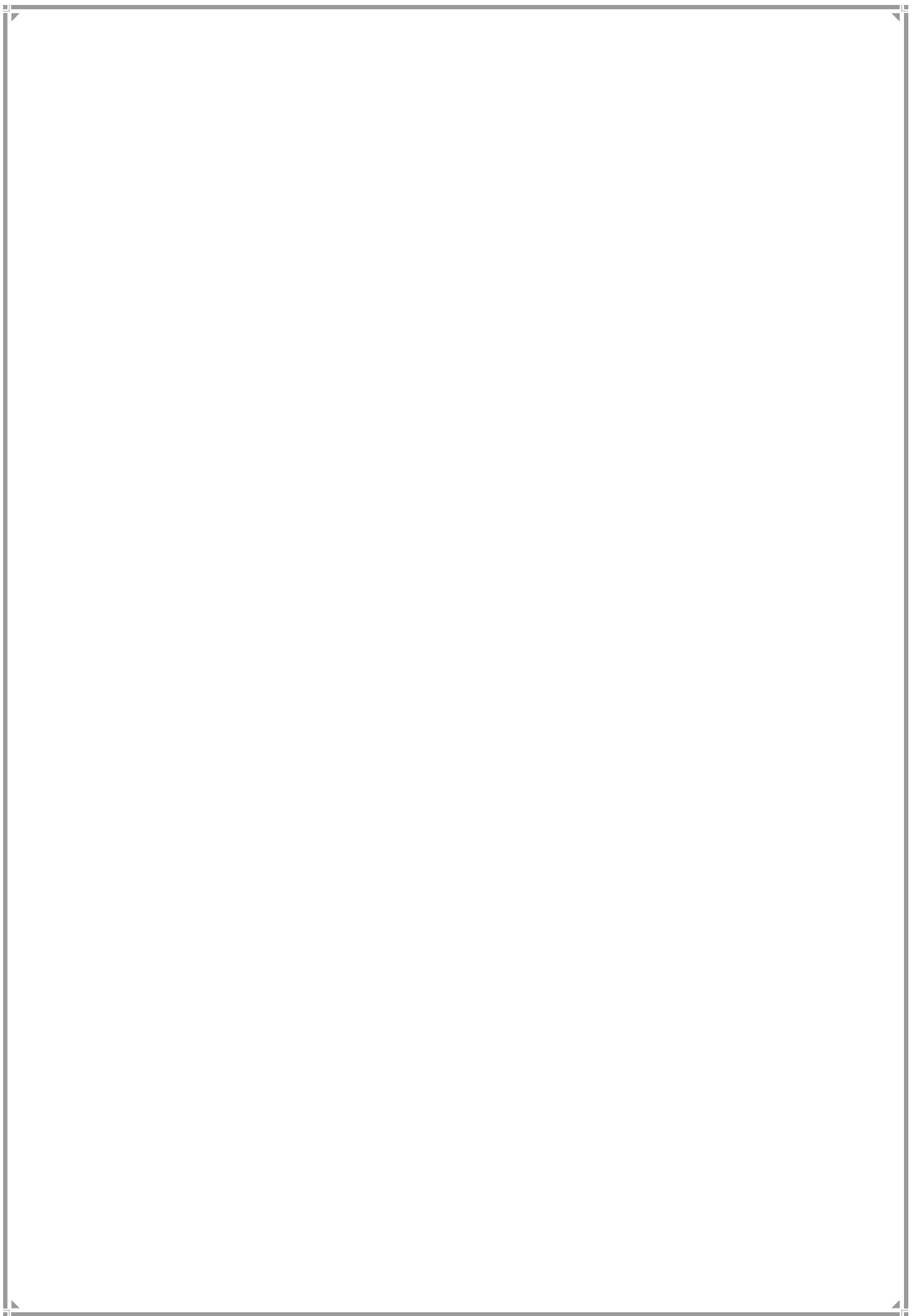
The CMP is still to undergo stages of approval. Once approved, MCGM shall have to undertake its implementation.

24.6.7 Pedestrianisation

Wherever Pedestrianisation is proposed, the ward wise Pedestrianisation proposals are included in Wards Report (Part 3 of this Report) of respective wards. However, these proposal needs to be further studied for its feasibility and implementation.

Chapter 25

DEVELOPMENT CONTROL REGULATIONS



CHAPTER 25

DEVELOPMENT CONTROL REGULATIONS (DCRs)

25.1 DCRs and their Significance

The DCRs are a vital part of the DP. They seek to manage and regulate development to ensure that all development takes place in such a manner that it conforms to a pre-determined set of policies or standards. They seek to make sure the orderly and rational development of land to create sustainable human settlements. They ensure that buildings are structurally sound and will not endanger the safety or lives of those who live in or use them and their surroundings and that they are provided with the basic services and facilities necessary to support the purpose for which they are erected. They are designed to safeguard the environment and natural resources so that they are managed carefully for the enjoyment of present and future generations. Development control is the most visible part of the land use planning process.

25.2 Objectives of DCRs

The RDDP 2034 proposes the following objectives for DCRs.

- The DCRs should grant permissions consistent with the policies and objectives of the RDDP. In this regard, they should balance economy with environment and social equity.
- They should maximize open spaces, affordable housing and social equity that are areas of significant deficit
- Keep 1991 DCRs as the base, but incorporate provisions of EDDP DCRs that received wide support
- DCRs should catalyse development rather than impede it
- They should be simple, easily understood and should further ease of business
- They should enable full implementation of DP by bringing down DP cost

The DCRs of RDDP 2034 have, accordingly, kept the 1991 DCRs in their current shape as the base, but have incorporated provisions of EDDP that received wide support. The RDDP has reviewed policies injected by EDDP that were subject of intense citizen censure. Above all, the RDDP has worked on instruments that would allow very substantial implementation of the DP through land instruments and without substantial budgetary support.

25.3 DCR Provisions

Some of the standout features of the RDDP DCRs are the following:-

25.3.1 Definitions

- Several definitions that were not part of DCR 1991 have been borrowed from EDDP and in certain instances refined. These include accommodation reservation, designation, Natural Area and No Development Zone

25.3.2 Designation Correction

- The DCRs allow for correction of errors in designation at the level of the Municipal Commissioner, once such an error is brought to the notice of the Corporation and a full investigation is made. This will allow ease of correction without the DP modifications process.

25.3.3 FSI & TDR

- Basic zonal FSI of City and Suburbs has been maintained along with fungible FSI. This means that Island City Base FSI continues to stand at 1.33 and the Base Suburban FSI at 1. Fungible FSI at 35 per cent of basic FSI continues to be an additionality for residential uses and at 20 per cent for Commercial and Industrial uses.
- With a view to simplification of FSI calculation, permissible FSI would be calculated on the gross plot area without any deduction of Layout RG.
- The EDDP's indexation of TDR with Ready Reckoner Rate is proposed to be accepted.
- The permissible limit of FSI is proposed to be equated in City and Suburbs. This means that both in City and Suburbs, it would be possible to take the FSI up to 2 by the addition of premium FSI or TDR or both and in whatever combination desired. This addition will be 0.67 in the case of Island City since its base FSI is 1.33 and will be one for suburbs since its base FSI is 1.
- The RDDP allows the receipt of TDR in Island City.
- It is proposed that Reserved land for Public Purposes/DP Roads/Road widening, will get additional BUA equal to area of the plot so surrendered in the form of FSI/ TDR.
- The RDDP proposes that built up area in lieu of cost of construction of built up amenity handed over would be given in the form of FSI/TDR.

25.3.3 Additional FSI

- RDDP proposes to bring back the provisions of DCRs 33.
- However, some changes have been made. The changes are in relation to commerce and office space, star hotels, public amenities, IT/Biotech, MHADA and SRA.

- The additional FSI proposed for commerce, star hotels and IT/Biotech are with a view to reduce costs, encourage larger employment.
- A similar provision for public amenities, MHADA and SRA are to assist the construction of more affordable housing and bridging amenity deficits.
- The RDDP proposes higher FSI for CBDs and new growth centres for commercial development, Affordable Housing, redevelopment of Municipal Markets and for facilitating removal of road bottlenecks.
- The RDDP has proposed additional FSI for redevelopment of existing residential housing societies and residential tenanted buildings excluding cessed buildings.

25.4 Zoning

- Residential-Commercial (RC) and Commercial-Residential (CR) zones are proposed to be discarded. The RDDP sticks to the zones of Residential, Commercial, Industrial, No Development Zones and Natural Areas. However, the EDDP concept of zone conversion has been accepted.
- Larger compatible commercial activity, however, is proposed to be allowed in residential areas that would lead to heightened convenience and reduced trips.
- Transit Oriented Development provisions of EDDP providing for densification along transit routes with premium FSI of 5 and 8 have been abandoned. But some of the TOD principles of promoting public transport and walkability have been retained. Pedestrian plazas have been proposed on select roads, road sections where such walkability is feasible.

25.5 Commerce & Employment

- CBDs have been proposed for balanced and heightened employment across the whole City.
- Commercial Premium has been reduced.
- Additional FSI is proposed for commercial development in CBD and on independent plots in Commercial and Residential zone, otherwise permissible as per the provisions of DCR.
- Cinema theatres have been allowed to convert to other entertainment uses. However, if they wish to move out of entertainment, a policy has been laid for sharing land with the Planning Authority for public amenities.
- Commercial BUA has been put at 10,000 ha and residential BUA at 26,000 ha. In addition, BUA will also emerge out of the provision of buildable public amenities.
- Institutional Spaces have been sought to be created, especially in NDZ, TDA, and Salt Pan lands.

25.6 Affordable Housing

- A separate chapter explains the proposal of affordable housing, targeting 1 m units for affordable housing comprising units of 30 sq. m, 45 sq. m and 60 sq. m. Affordable housing, public open space, institutional space and amenity space provisions are proposed in NDZ, TDA, MbPT lands and Salt Pan lands. These will be developed under a common policy that seeks to make up for deficit areas in Greater Mumbai.
- Private Owners could come forward under the Policy to develop their lands where, after deducting ten percent land for roads, the Policy would allow 34 percent land to be retained by the owner with 0.8 to 1 FSI of the entire plot to be utilized on the Owner's share of land.
- Of the remaining 66% land, 25% would be put under affordable housing, 25% under Public Open Space, 8% under institutions and 8% for the whole gamut of buildable public amenities such as education, health social and equity amenities.
- MHADA has been allowed an additional FSI of 1 for affordable housing and SRA/Govt.'s requests for similar reasons have been factored in.

25.7 Heritage, Fire and Environment

- The RDDP substantially goes along with EDDP on Heritage DCRs. However, Heritage property owners have been given the same kind of incentives as in the case of reservations under the AR policy.
- Fire and Environmental provisions of the EDDP have been retained.
- EDDP's proposal to mechanically acquire Layout RGs has been abandoned by RDDP. These will remain for the enjoyment of the layout community.
- Non-buildable reservations are proposed to be barred from any construction. Green terraces have been allowed while granting permission. This means that prospectively, no part of any Public Open Space, including RGs will be available for any construction except amenities such as public sanitary conveniences and gardener chowky. Additionally, all concretization such as metal paved walking tracks and other kinds of concretization are not permissible. This is to augment permeability in the City allowing water more space to escape. This is in line with environmental recommendations.
- A buffer on either side of rivers, creeks, nallas and some other areas have been proposed. The general width prescribed is 6 metres. These will be pedestrian walk ways and used for maintenance of natural assets. This is in line with environmental recommendations.
- Large open spaces are to be created through reclamation of the sea. Such reclamation will be only for greens and for no other purpose.
- Theme gardens are sought to be created.

- Weekend Leisure Parks have been proposed equipped with food district, amphitheatre, Cineplex, playground, picnic spaces and playgrounds and parking for families to enjoy their weekends and spare time.

25.8 Social Equity & Public Amenities

- EDDP's provision of inclusionary housing is proposed to be retained. However, the minimum area of 2000 sq. m that was prescribed by EDDP has been raised to 4000 sq. m in accordance with GoM guidelines.
- Carving out amenity lands from layouts has been retained in concept. However, contributory land percentages rise with the size of the layouts so that larger layouts contribute larger percentages.
- A whole host of amenities have been included for women, working in both the formal and the informal sector with a view to have a larger percentage of working women in the City. There is provision for old age homes, geriatric care centres, skill centres, provisions for children such as play parks, reading and painting spaces and homeless shelters.
- DCRS especially provide for the requirements for differently abled. All public buildings will have to abide by these DCRs. Road design will also have to be designed for the differently abled.
- Hawking provisions, skill centres, open floors in markets for the Informal sector workers have been proposed along with additional space in areas where the Vending Committee decides in prescribed time slots. At these times the primary use would stand suspended.
- The concept of multiple compatible amenities on a single plot has been proposed. In case of difficulty in compatibility, two amenities could exist with planned activity and segregation, along with a separate entry and exit.
- With a view to cut DP cost, many new reservations and ward requirements have been proposed on such lands that avoid fresh acquisition.
- Proportion for public amenity and mill workers housing have been increased in mill land without FSI loss to owner.
- Public Convenience blocks are sought to be maximized. Wherever, such blocks permit addition of one more storey, such addition shall be made.

25.9 Other Regulatory Provisions

- Simplification of legends for designations and reservations by EDDP have been retained, along with their method of numbering. However, some additions have been made in the number of legends, mainly in regard to equity and social provisions and for larger clarity.

- The DCRs propose a single standard for the entire city and the highest standard among 1991, EDDP, City and Suburb has been adopted. The idea is to plan for better quality.
- Height of service floor is proposed to be raised from 1.5 to 1.8 metres.
- Requirement of electricity companies have been rationalized.
- Repairs not involving core structural changes are proposed to be excluded from permission Changes will only have to be intimated to the MCGM.
- The concept of three stage high rise and permissibility based on road width, staircase requirements have been retained.
- Sizes of staircase requirement prescribes by the EDDP have been retained and fire check floor deleted.
- Height restrictions that have been proposed by Airports Authority of India have been accepted. In these areas falling under the AAI influence zones, provisions are being proposed to partially compensate the landowners by allowing more intensive use of space below ground.
- The DCRs allow for a larger flexibility for Government, parastatals, urban local body, and public sector undertakings in the use of their lands.
- A separate provision has been added to the DCRs for removal of road bottlenecks. The provision allows resettlement of commercial or residential PAPs in the ward on any plot of land willing to accommodate them in lieu of incentive-loaded FSI/TDR compensation.
- Scrutiny has been restricted to strategic safety issues (structure, fire, hygiene, FSI etc.) while granting permission.
- A provision has been made allowing revocation of permission obtained that has been obtained through fraudulent means, such as submission of false documents.
- EDDP parking provisions have been replaced by a telescopic formula for parking where larger parking provisions will attract higher premiums. Area-wise standards that were part of 1991 DCRs are proposed to be collapsed into a common standard for the entire city.
- Underground parking and select public amenities have been allowed under POS.

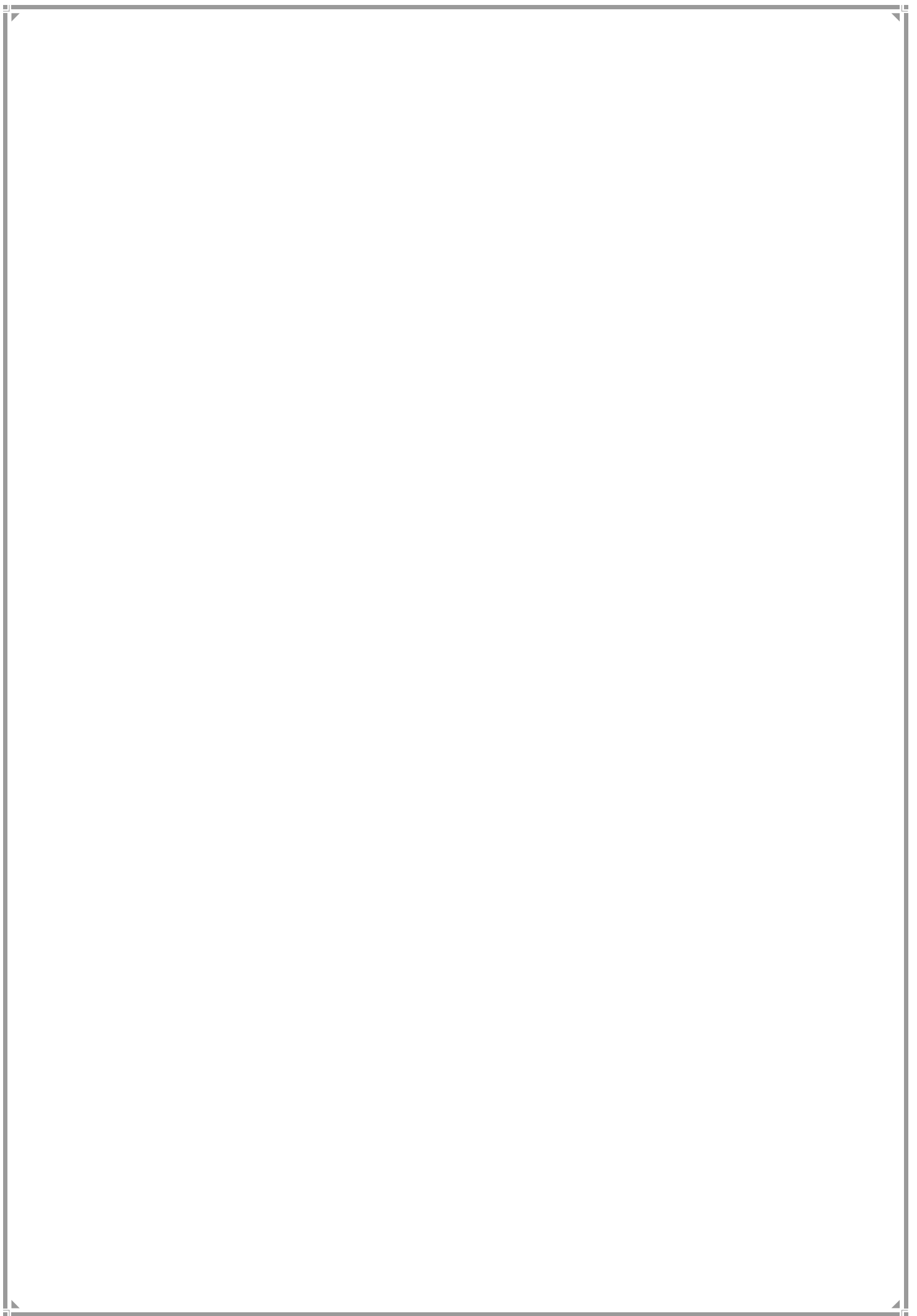
25.10 DP Implementation (FSI, AR & TDR)

- The RDDP relies on Accommodation Reservation (AR), TDR and FSI as the main plank of DP implementation. The most significant provisions, therefore, in DCRs of RDDP 2034 are those relating to accommodation reservation and their use in partnership with the land owners whose lands have been reserved.

- The current Accommodation Reservation policy has been rewritten with a view to highly incentivizing surrender of land for public purpose and development of reservation in the stipulated time frame.
- All reservations will have sharing formula with owner between 40 and 70 % of the land.

Chapter 26

FINANCING THE DP



CHAPTER 26

FINANCING THE DP

26.1 Past DP Performance

Making a Development Plan and then failing to fully or even substantially implement it has been the fate of almost all Development Plans across the country. The evil effect of such failure is evident in the shortages of public amenities witnessed in cities. Table 26.1 gives us an idea of past implementation of Greater Mumbai's DP 1964.

Table 26.1 DP1964 Implementation

SN	SECTOR	COST	SPENT	PER CENT
1	PHYSICAL INFRASTRUCTURE	259.08	227.29	87.73
2	SOCIAL INFRASTRUCTURE	90.71	27.15	29.93
3	OTHERS	348.83	00.44	00.13
	TOTAL	698.62	254.88	36.48

Source: DP 1991

The DP 1964 had a total estimated implementation cost of about Rs. 700 cr including water supply and sewerage system. Available data reveals that from 1964 to 1978, only Rs.254.88 crores could be spent. This was 36.48 % of the total DP implementation cost. Of this, Rs. 175.08 cr was spent on water supply and sewerage and Rs. 42.72 cr on transportation projects aggregating Rs. 217.8 cr. It can be seen from Table 26.1 that social expenditure was very low. Education, Health, Recreation and Housing had a total outlay of 320.25 cr. The expenditure was 27.15 cr or 8.47 per cent. A further disaggregation reveals that expenditure on Education was 32.38% and on Open Spaces (Recreation) 6.93 %. DP 1991 states that in physical terms, the achievement was even worse. Table 26.1 clearly demonstrates that in financial terms, the implementation of social infrastructure did not cross the one-third mark, that physical infrastructure took precedence over social infrastructure and almost got fully implemented. The provision of Public Open Spaces (POS) lagged far behind and remained almost fully unimplemented.

Table 26.2 DP 1991 Implementation

SN	SECTOR	AREA RESERVED (Ha)	AREA IMPLEMENTED (Ha)	PER CENT
1	PHYSICAL INFRASTRUCTURE	1150	453	39.39
2	SOCIAL INFRASTRUCTURE	3195	1000	31.29
3	OTHERS	5338	1806	33.83
	TOTAL	9683	3259	33.65

Source: EDDP 2034

Table 26.2 gives us an idea of SRDP 1991 implementation. The SRDP 1991 employed TDR and Accommodation Reservation as principal instruments for DP implementation. Despite this, it can be seen that DP implementation languished at 33.65%. In both the cases of SDP 1964 and SRDP 1991, implementation of social infrastructure was around 30 per cent and was behind physical infrastructure, although there was a sharp decline in the implementation of physical infrastructure in SRDP 1991. POS was again one of the major sufferers. The implementation of SRDP 1991 left a lot to be desired. Till date, implementation of open spaces is at a low 31%, of education at 36%, health at 26%, social amenities at 24%, transport at 40%, public utilities at 40%, other amenities at 35% and municipal housing at 34%. This gives an average of 33%.

There are two principal reasons that have resulted in such injurious deficits. The first is the municipal inability to fund the implementation of the DP. The second is the disengagement of the DP from the annual budget formulation exercise of the ULBs where DP does not figure as the base reference document for futuristic planning.

The RDDP 2034 emphasizes that the DP is central to a city's quality of life. Hence its implementation is axiomatic. Lack of resources for DP or disregard of DP leading to sizeable amenity deficits will only lead to progressive drop in quality of life. The RDDP, therefore, proposes the following strategies.

26.2 DP as a significant charge on Municipal Budget

- i. Make DP the first charge on the municipal budget in regard to asset building activities, after the costs of salaries and wages and maintenance of services are met. Assets that would come to fruition out of DP would be core contributors to quality of life. It is expected that the annual budgetary exercise would take into account a little more than one twentieth of the DP amenity provisions and make budgetary allocations for them, wherever other revenues/instruments fall short in support.
- ii. All development plan money is proposed to be utilized solely for the implementation of the DP. These comprise premium charges, development charges, FSI, FCFSI, FCFSI-SRA and DCR 64 (b). The MR&TP Act states that Development Charges that are recovered under section 124B of MR&TP Act will be separately accounted for and will be utilised for the purposes of providing public amenities in the area under the jurisdiction of the MCGM.

26.3 DP Stream of Income

The sources of income from the DP stream are the following:

26.3.1 Development Charges

Section 124A of MR&TP Act 1966 mandates the Planning Authority to levy a development charge on the use or change of use of any land or building, or development of any land or building, for which permission is required under provisions of the Act. This development

charge is classified as per the user of the land viz. Industrial, Commercial, Residential and Institutional. The rates at which the development charges are levied are prescribed in Second Schedule of the Act and are a percentage of the rates of developed land mentioned in the Stamp Duty Ready Reckoner of that year.

26.3.2 Other Charges and Fees

Sub-section 22(m) of MR&TP Act 1966 empowers the Planning Authority to impose fees, charges and premium, at such rate as fixed by the Planning Authority from time to time for grant of additional floor space index or for special permissions or for the use of discretionary powers under the relevant Development Control Regulations. This section has given powers for imposition of conditions and restrictions in regard to the open space/ setbacks to be maintained around building, the percentage of building area for a plot, the location, number, size, height, number of storeys etc.

This provision has been used for charging additional FSI in respect of buildings of educational, medical and government institutions, recovering of additional 0.33 FSI for the buildings in suburbs, grant of Fungible Compensatory FSI and recovering premium on account of deficient open spaces provided around the buildings.

26.3.3 Premium Charges

Regulation 33(2), 33(3) and 33(4) of Development Control Regulation 1991 has exploited the aforesaid provision for charging the premium for grant of additional FSI in respect of buildings on independent plots of educational, and medical institutions and institutional buildings of Government or public authorities or of registered public charitable trusts or of Medical Institutions run on co-operative basis established for charitable purposes and starred category hotels. Such additional FSI is permissible subject to the payment of premium to Government as may be decided by Government, out of which 50% is payable to the Corporation.

Similarly, the Development Control Regulation has also made provision for charging premium for the areas covered by staircases/ lift wells including lobbies as specified, excluding those covered under D.C. Regulation 1991, No.35 (2) (iii) with special written permission of the Commissioner.

26.3.4 Premium towards 0.33 FSI

This amendment in the Development Control Regulations 1991 was as per the section 22(m) of MR&TP Act 1966, which gave powers to Planning Authority for imposition of premium, at a rate fixed by the Planning Authority.

26.3.5 Fungible compensatory Floor Space Index (FCFSI)

The premium charged towards FCFSI has now become one of the major sources of income from the development plan department accounting for almost half the income from the DP stream.

26.3.6 Income under DCR 64(b)

Regulation No. 64(b) of Development Control Regulations, 1991 provides certain discretionary powers to the Municipal Commissioner. Under this regulation the Commissioner can permit dimensions prescribed in the regulation to be modified except relating to FSI. This provision has been mainly utilised by MCGM for condoning the deficiencies created in the open spaces to be left around the building for light and ventilation.

26.4 MCGM Budget 2016-17

The budget estimates of MCGM for 2016-17 stand at Rs 37, 052.15 cr and capital expenditure at Rs.12, 874.78 cr. Of its revenue estimates for 2016-17 totaling Rs 25,642.88 cr, octroi is expected to yield 27 per cent or Rs 6,895 cr, DP receipts should bring in 24 per cent or 6,284.71 cr and property tax 19 per cent or 4,956.18 cr. However, the buoyancy in octroi revenues this year has been missing, mainly on account of a steep fall in international prices of crude oil. The DP stream also showed a downward trend. The ultimate passage of the Goods & Services Tax bill will spell further problems for MCGM. "While the Govt. intends to put in place a system to suitably address and compensate the loss of octroi, it is also now necessary that MCGM begins a process of restructuring its fiscal resources." (Budget Speech of MC MCGM 2016-17, pg. 11).

26.5 Trend of Income from Development Plan

Cumulative receipts from the DP stream, as reported in MC MCGM's budget speech 2016-17 were the following:

Table 26.3 Receipts from Development Plan

YEAR	B.E 2014-15	R.E 2014-15
2014-15	4,444.27	5,074.82
2015-16	5,823.74	4,732.44
2016-17	6,284.71	-

Despite fluctuations, the income from the Development Plan shows that it is large; that DP revenues have emerged to be a primary source for MCGM and that they stand second only to octroi. This would mean that if the acquisition of land is taken care of by other means, the DP income should substantially take care of the asset building cost.

26.6 Cost of Implementation of DP

The RDDP has proposed reservation of land for public purposes in the following categories:

- i. For public open spaces
- ii. For roads and road widening

- iii. For built amenities
- iv. For utilities.

For each of the above purposes, land acquisition through the route of RFCTLARR 2013 will be the last resort. Land could be procured by way of grant of TDR in lieu of monetary compensation. In addition, the draft RDDP has made a provision of contribution of land toward the pool of land for public purpose. However, the route of Accommodation Reservation has been made highly incentivized to allow maximum development through this instrument. Developmental expenditure for roads, open spaces and built-up spaces for amenities has also been covered under Accommodation Reservation in a spirit of partnership with the original land owner.

The total land to be acquired for public purpose by 2034 is 59.43 million sq m. Out of this about 11.30 million sq. m should accrue through the pool of land for public purpose. The rest, around 48.12million sq m are proposed as reservations. These comprise 9.71million sq m for amenities, 0.72million sq m for public utilities, 18.52 million sq m for roads and 19.17million sq m for open space and cemeteries. This does not include land under reservation that is already acquired and the land that would be acquired by agencies other than MCGM.

For public amenities, the DCRs prescribe an FSI of 4. However, the entire FSI in all cases need not be consumed if prescribed standards are met and the total City/Ward demand is satisfied at a lower FSI level. It is estimated that buildable public amenities, as a broad average, will consume FSI 2. Land from pool of land for public purpose will be built at FSI of 0.5. The total built up area estimated to be constructed for public purposes is 19.17million sq m This built-up area does not include construction to be carried out by agencies other than MCGM and the civil works required for installations of plant and equipment by MCGM departments.

26.6.1 Components of cost

The cost of procuring land and development listed above is estimated below.

26.6.2 Basis for estimating cost

Cost estimates are carried out in 2013-14 prices. The unit costs for the above cost components are given in Table 26.4 below:

Table 26.4: Components of Cost

Sr. No.	Components	Unit cost
1	Land acquisition	2.2 times the Ready Reckoner Rate (2016)
2	Cost of Road construction	Rs. 9,020 /sqm
3	Cost of Road widening	Rs. 7,150/sqm
4	Cost of building construction	Rs. 25,000/sqm
5	Cost of Open Space Development	Rs. 3,230/sqm

26.6.3 Total estimated cost

The total cost of implementing development plan is estimated based on the above and is summarized below:

Table 26.5: Estimated Cost

Sr. No.	Components	Area in sqm	Estimated Cost Rs. in Crores
1	Acquisition of all reserved lands (100%)	48,121,192	1,344,506
2	Cost of Road construction	10,501,254	9,472
3	Cost of Road widening	8,015,228	5,731
4	Cost of Building construction	19,767,350	49,418
5	Cost of Open Space and Cemetery Development	19,172,011	6,193
	Total		1,415,320

The costs calculated above show the total volume of money that would be required to implement the DP, if it were to be completely implemented in money terms. It is clear that DP as a complete charge on the municipal budget does not stand even a slim chance to get implemented. But it ought to doubly demonstrate to citizens that the DP story cannot be written in isolation by the MCGM. It must draw the Owners of lands into partnerships and get them on its side to see the DP through. The DP, therefore, must primarily serve the interests of Mumbai's citizens, but it cannot ignore the interests of the landowners. The AR policy has attempted to address both in the overall interest of the City and ought to be seen in that perspective.

Table No. 26.6: Funding Mechanism

Sr. No.	Components	Total Estimated Cost (in Crore)	Mechanism of Acquisition and Construction	Monetary Funding through budgetary provisions by MCGM
1	Total Acquisition of Land	1,344,506		
a	Acquisition of reserved lands through AR (80%)	1,075,605	Accommodation Reservation	0
b	Acquisition of reserved lands through TDR (10 %)	134,451	TDR	0
c	Acquisition of reserved lands by Authorities other than MCGM (5%)	67,225	Appropriate Authority	0
d	Acquisition of reserved lands through monetary	67,225	Development Charge &	67,225

Sr. No.	Components	Total Estimated Cost (in Crore)	Mechanism of Acquisition and Construction	Monetary Funding through budgetary provisions by MCGM
	compensation by MCGM (5%)		Premiums	
2	Cost of Road construction	9,472	MCGM Budget	9,472
3	Cost of Road widening	5,731	MCGM Budget	5,731
4	Cost of Building Construction	49,418		
a	Cost of Building construction through AR (80%)	39,534	Accommodation Reservation	0
b	Cost of building construction by Authorities other than MCGM (5%)	2,471	Appropriate Authority	0
c	Cost of building construction by MCGM (15%)	7,413	MCGM Budget	7,413
5	Cost of Open Space and Cemetery Development	6,193		
a	Cost of Open Space and Cemetery Development through AR (80%)	4,954	Accommodation Reservation	0
b	Cost of Open Space and Cemetery Development by MCGM (20%)	1,239	MCGM Budget	1,239
6	Total	587,071		91,080

26.6.4 Sources of Revenue

The RDDP 2034 proposes that MCGM would move to a platform of partnership with the land owners whose lands have been reserved for public amenities. Under the supervision of MCGM and its agents, the owners would provide land and developed amenities. Since they are partners in the provision and since their land assets are being used to provide the public amenities, their contribution to the city and the city community is larger than the others and therefore ought to be adequately rewarded for their services. The RDDP 2034, therefore, proposes the most incentivized formula hitherto devised so that reservation would no longer be viewed as an unfair imposition but a rewarding experience beyond the normal unreserved lands and their potential.

The RDDP makes an assessment of the potential of a normal unreserved land and betters it by providing a higher potential for reserved lands. This would remove the stigma on reservation as a means of punishment. It is expected that this would allow all acquisition of lands for public purpose through Accommodation Reservation (AR) and will be readily and

happily embraced by land owners. At the same time, it would help a much larger implementation of the Development Plan.

The AR also provides compensation in the form of FSI/TDR for amenity space built by the Owner. It is, therefore, expected that a substantial part of such construction would happen under AR relieving the Municipal Budget from a substantial cash burden.

There, however, would be certain amenities, such as amenities on municipal/Govt. lands that shall have to be built by the Planning Authority. In such cases, the municipal budget will have to step forward.

It is expected that RDDP 2034 would be mainstreamed in the budgetary process and implementation money would be found as follows:

- i. All capital costs of water and sewerage would be met out of Budget G, for education out of Budget E, for public transport out of Budget C and for tree plantation out of Tree Authority funds.
- ii. Provision for activities such as Roads, Health, Fire, Cultural activities, Sports would be out of operating surplus achieved by MCGM.
- iii. Provision for gender, disabled, old and child-friendly activities would be out of operating surplus carved out for such activities.
- iv. Provision for urban livelihoods would be out of operating surplus apportioned for such activities.
- v. As stated above, money for DP implementation out of municipal budget would be for such parts of works that have not been able to garner compliance through other implementation tools. The MCGM would, therefore, first explore other funding instruments that could be available, as described above.

26.7 Monitoring

The EDDP 2034 had a detailed chapter on Monitoring and Evaluation. This may be referred to by the MCGM. A lot of data in regard to Mumbai is collected by a whole host of organizations, including governmental departments. The job of the MCGM in many areas would be to put the data together and carry out an analysis for MCGM use. It would be in the interest of MCGM to completely automate development permission and use GIS to track physical development. They are critical to accurate information and a modernized MCGM.

26.7.1 DP Implementation Cell

To carry out the data bank creation, monitoring and evaluation process, it is proposed to form a separate Implementation Cell within D.P Department with adequate professional and geospatial support. The cell will provide inputs to the D.P. Department on matters related to growth trends of the city, based on which the DP will be reviewed and modified. The cell will

coordinate with various departments of the MCGM and hire survey teams for the regular updation of non-spatial database.

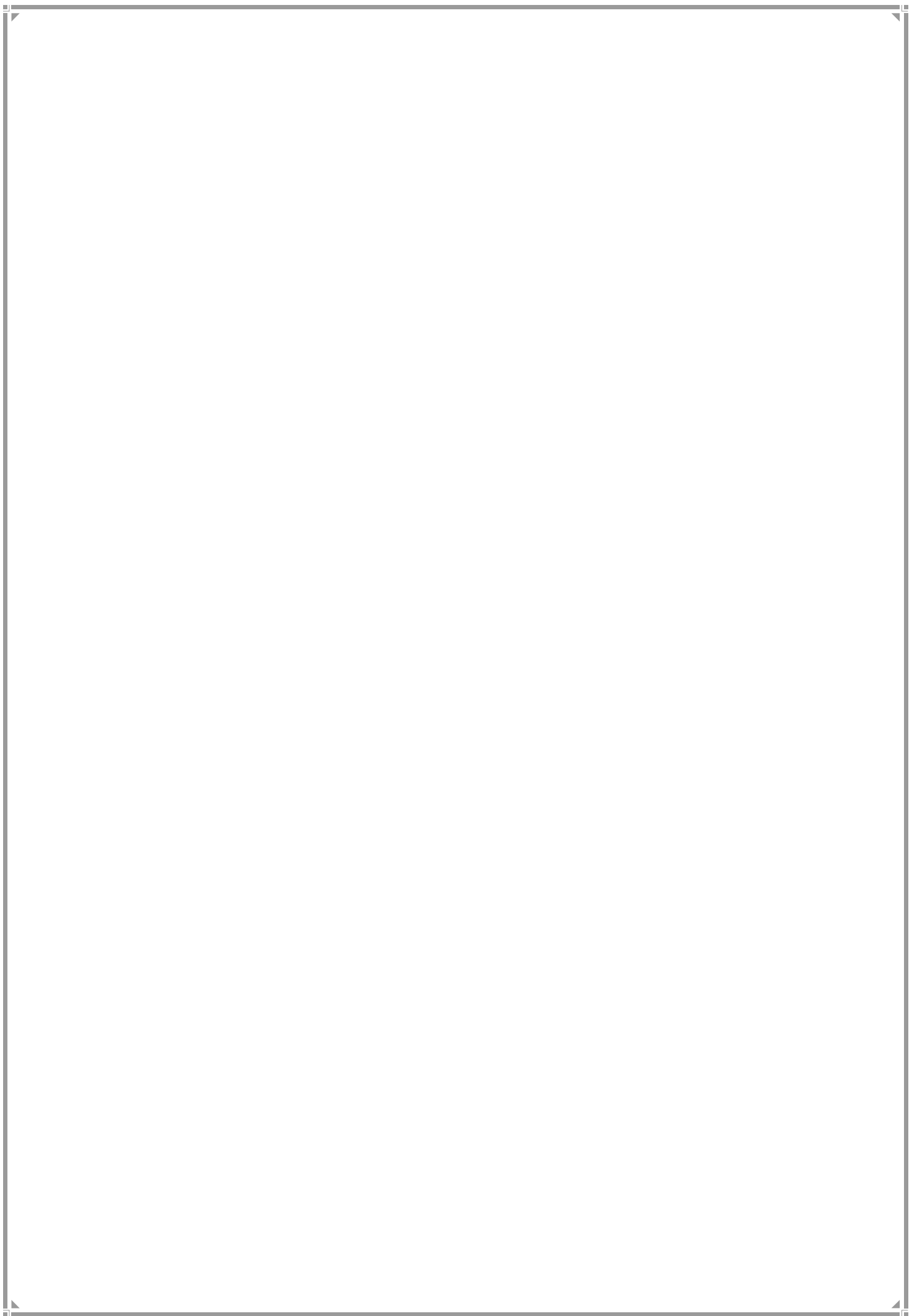
The formulation of the Implementation Cell is proposed to be carried out before the sanctioning of the RDDP 2034, so that after RDDP 2034 is sanctioned by the State Government, its implementation can be commenced immediately without further delay, as it was experienced in case of SDP 1967 and SRDP 1991. Till the RDDP 2034 is sanctioned, the Cell will carry out the base work to constitute it, its institutional framework within existing system, define the roles, chart out the methodology as well as work out the modalities of the implementation process through Five year and Annual targets.

26.7.2 Five Year and Annual Targets

The monitoring of the DP in terms of actual provision of public amenities, in view of past experience, would be the most significant task. The overall targets of DP require to be divided into four five yearly targets and each five yearly target into annual targets. A clear strategy needs to be spelt out every year along with the annual budgetary exercise and allocations need to be made wherever required. Budgetary resources would be required after the use of land instruments are exhausted or fall short. Accommodation Reservation, TDR and FSI and partnership with the owner are proposed to be principal instruments in procuring land and developing the amenity. The new incentivized formula for AR should be eminently useful in DP implementation. However, in cases where land is of the ownership of the MCGM or lands are encumbered or the nature of reservation does not allow the deployment of land instruments, budgetary allocation would be vital. The DP revenue would be the first one available for allocation, followed by appropriate Budget Heads and budgetary surplus available for capital works.

PART-3

WARD REPORTS



WARD REPORTS

While the RDDP has not recommended the cumbersome process of preparation of Local Area Plans as ordained in the MRTTP Act, it has nevertheless undertaken a comprehensive exercise for local planning with the identical objective of addressing neighborhood-level issues. This process has been carried out by Urban Planners in all 24 wards, who headed the process, along with the wards officials.

The team of urban planners visited sites, interacted with wards officials and various departments of the wards. The consultations were then expanded to include interactions with local citizens, NGOs and other stakeholders of the respective wards. The 3rd part of this report broadly summarizes the results of this substantial effort.

This process brought forth ground level issues and wards level amenity deficiencies. Subsequent interactions helped identify answers and solutions. These have been included as wards proposals in the RDDP. The active engagement of a wide spectrum of stakeholders has rendered the RDDP proposals more realistic and highly implementable. RDDP published the work on its portal in every phase and displayed sheets for public knowledge.

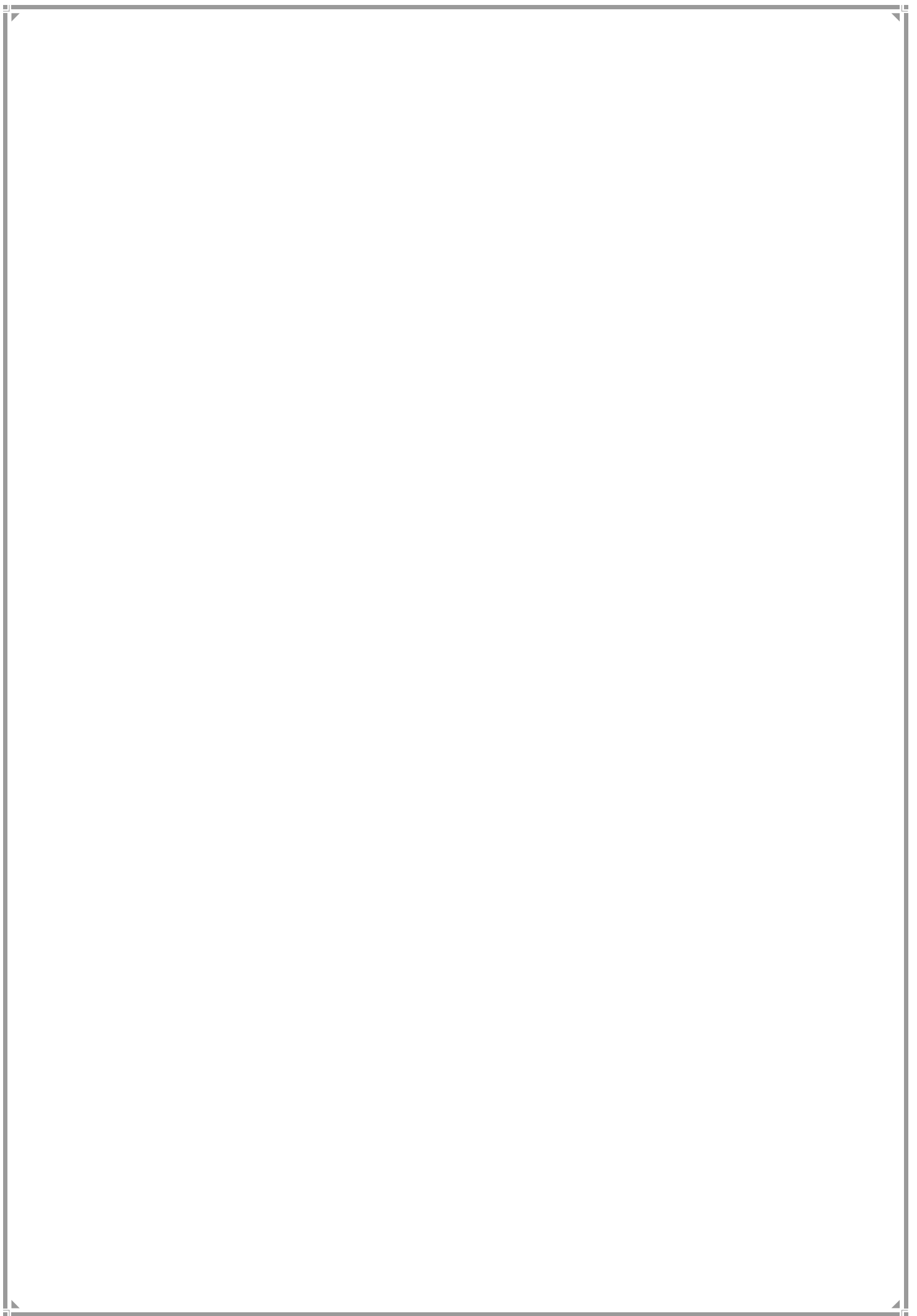
The first part covers the wards profile in terms of jurisdiction, boundaries, population, connectivity and existing amenities along with a key location map. The second part includes the proposed land use plan which indicates the ward-wise provision of designations, reservations proposed in RDDP.

The third part gives an assessment of existing amenities and calculates the future requirement. Radar diagrams accordingly have been prepared.

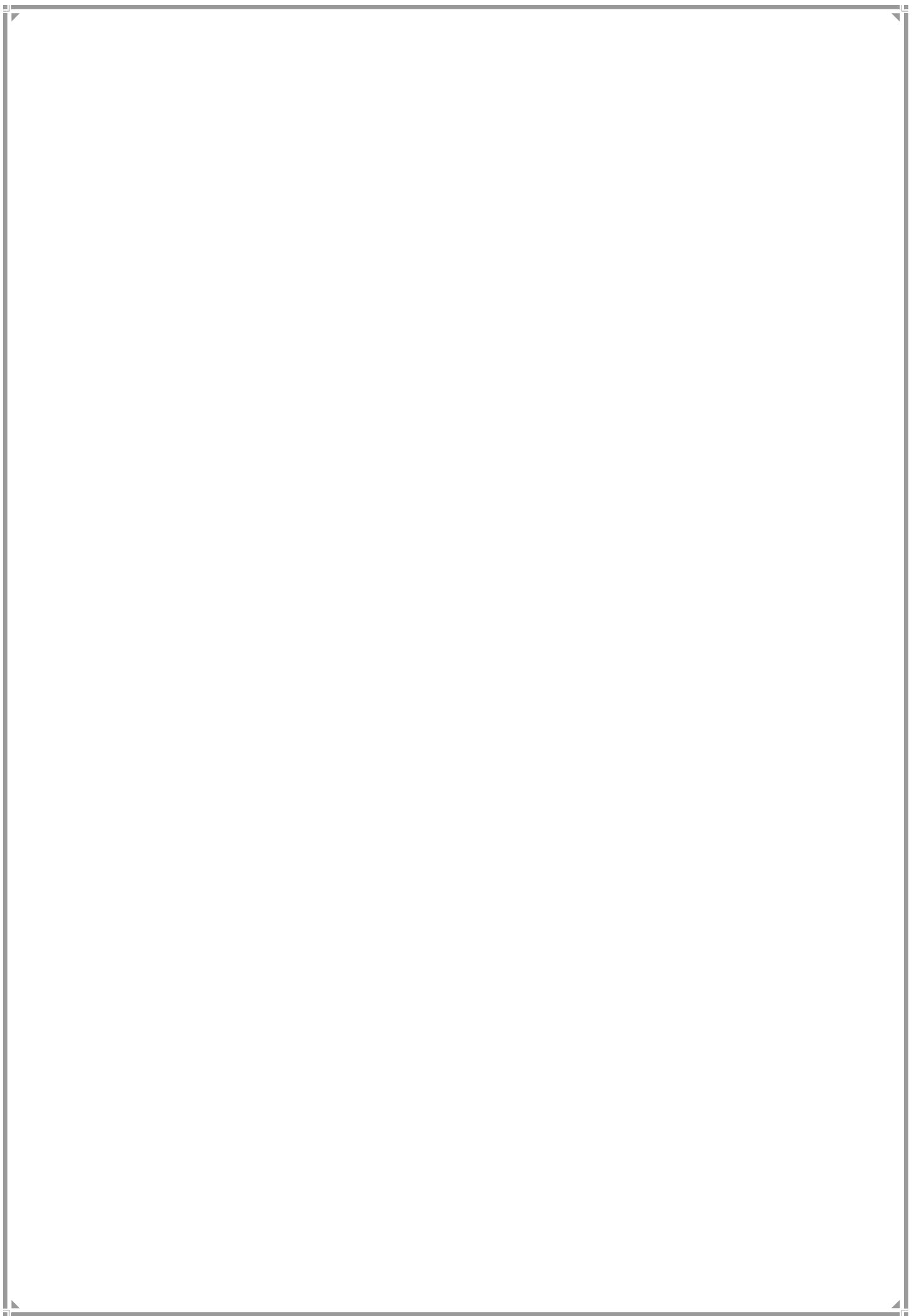
The ward-level Reservation part consists of all new reservations pertaining to social amenities, open spaces on Municipal and Collector owned plots. It also consists of wards requirements, especially for SWM facilities, deficient amenities and Municipal requirements. These are highlighted as newly introduced categories to address the equity and environment aspect at the neighborhood level other than rest of the reservations.

The last part consists of the reservations which are not shown in the DP sheet but are crucial to ward planning and an important addition to the RDDP. These include proposals under flyover for Municipal, SWM, public conveniences, pedestrianisation and gender related specifications. Multiple designations and reservations that are indicated in the map with a legend and a '+' sign have been elaborated here. This list has to be referred along with the sheets to know the multiple reservations that have been proposed in the plots.

ISLAND CITY WARDS



A WARD



1. A Ward Profile

Location Map



JURISDICTION

Ward Area- 1,120.91 ha

Developed Area - 877.96 ha

(78.32% of Ward Area)

WARD BOUNDARIES

North – Lokmanya Tilak Marg

East -Arabian Sea

West - Arabian Sea

South - Arabian Sea

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 2.10	2021 – 1.67
2011 – 1.85	2031 – 1.36
	2034 – 1.28

Density –165pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal School – 4
 Primary and Secondary School - 26
 Municipal Hospitals - 1
 Government Hospital - 4
 Private Hospitals - 4
 Municipal Dispensary/Health Post - 3
 Cemetery - 1

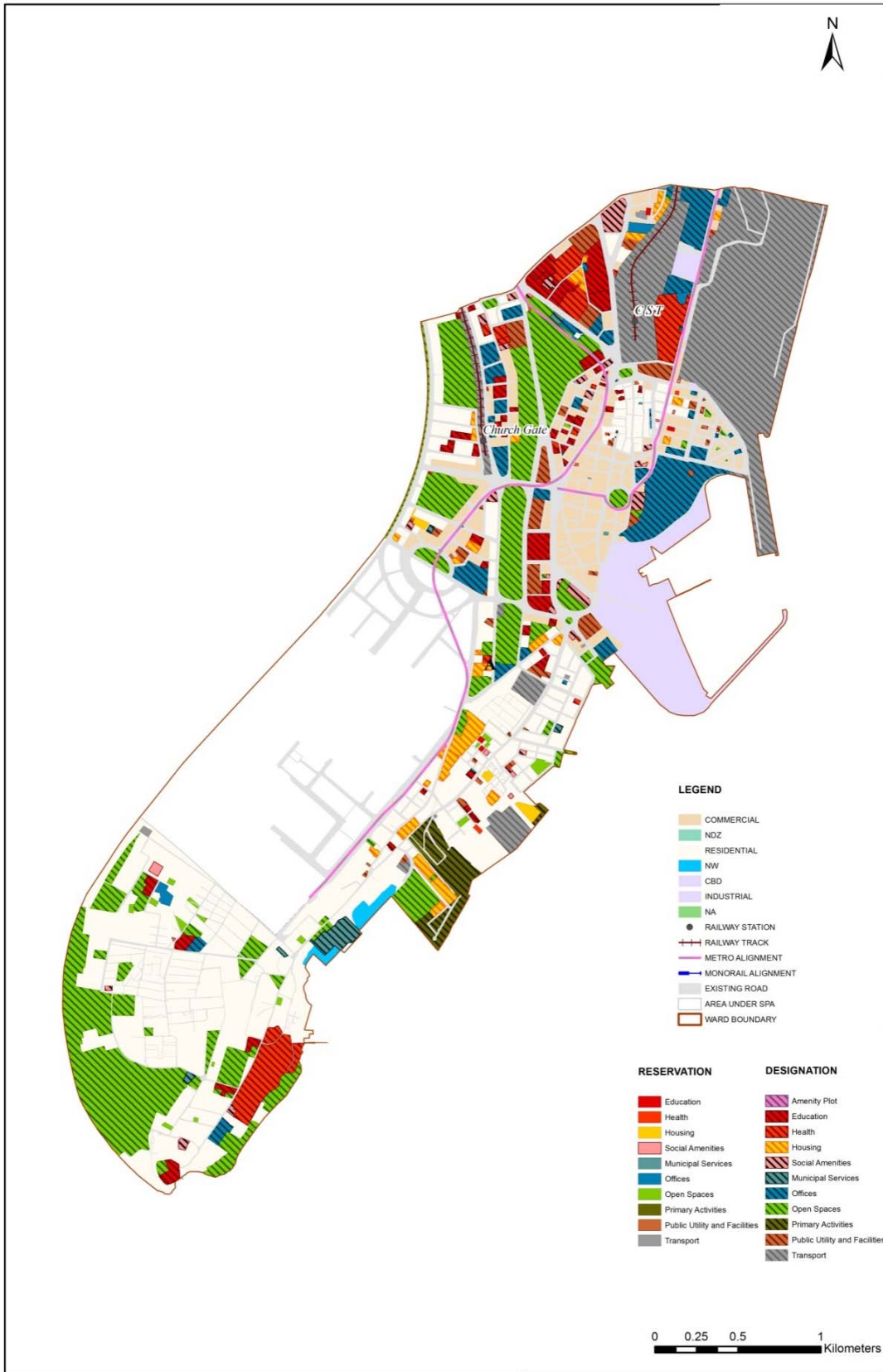
CONNECTIVITY

Major Roads – Capt. PrakashPetheMarg (Cuffe Parade), ShahidBhagat Singh Road, Nathalal Parekh Marg, General JagannathBhosleMarg, Madam Cama Road, Dr DadabhaiNowroji Road.

Railway Stations – CST &Churchgate

Future Proposals – Metro Stations - CST, Churchgate, Hutatama Chowk, Cuffe Parade, Badhwar Park & Vidhan Bhavan

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis –

S.No.	Amenity	Projected Population - A Ward	Norms (sq.m./person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	1,67,750	1.574	26.40	25.53
2	Health	1,67,750	0.419	7.03	24.00
3	Market	1,67,750	0.100	1.68	2.19
4	Cemetery	1,67,750	0.030	0.50	0.36
5	Open Space	1,67,750	4.000	67.10	149.99

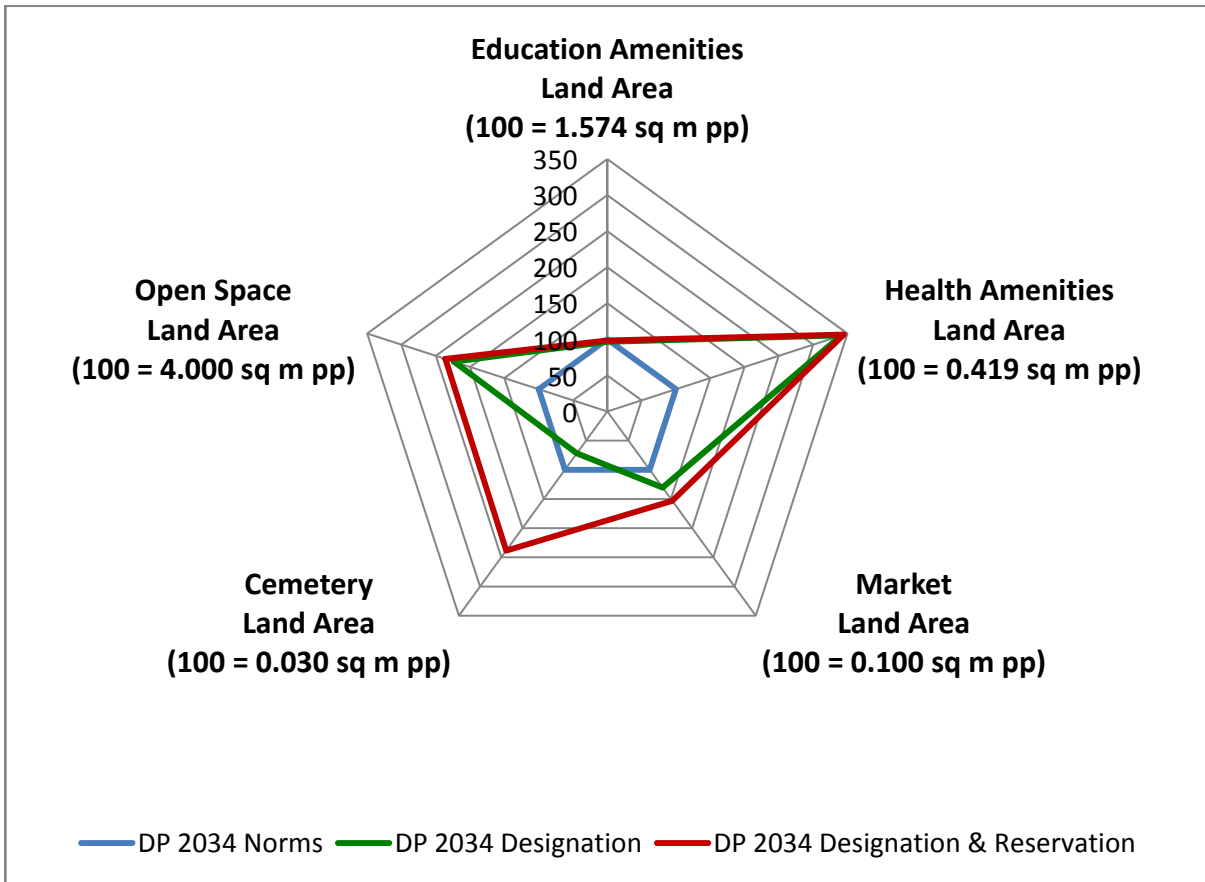
Proposed Amenities and Norms Achieved –

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	26.40	25.96	-0.44	1.548
2	Health	7.03	24.24	17.21	1.445
3	Market	1.68	2.57	0.89	0.153
4	Cemetery	0.50	1.20	0.70	0.072
5	Open Space	67.10	158.37	91.27	9.441

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for S.No. 1,2&3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved –



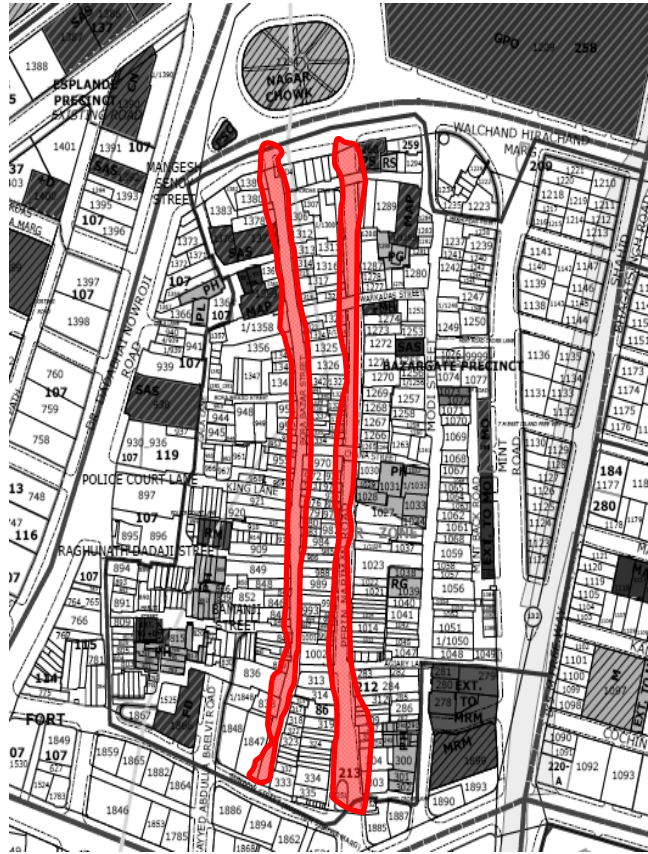
3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	NAME OF AMENITY	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	4
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTRE	RSA 6.1	2
4	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
5	PUBLIC CONVENIENCE	RSA 6.3	1
6	HOMELESS SHELTER	RSA 2.9	2
7	OLD AGE HOME	RSA4.9	1
8	DISASTER MANAGEMENT FACILITY	RO 3.1	1
9	MUNICIPAL OFFICE	RO1.3	1
10	MUNICIPAL DISPENSARY/HEALTH POST	RH1.1	1
11	MUNICIPAL CHOWKY	RMS1.2	2
12	SOLID WASTE MANAGEMENT FACILITY	RMS3.1	1

New Reservations which cannot be shown in the map

- 1. Pedestrianization of Bora Bazaar Street & Perin Nariman Road.
- 2. Homeless Shelter below FOB opposite Pratishtha Bhavan (5B)
- 3. Homeless Shelter below FOB opposite Ayakar Bhavan (5A)
- 4. Parking below Cross Maidan.

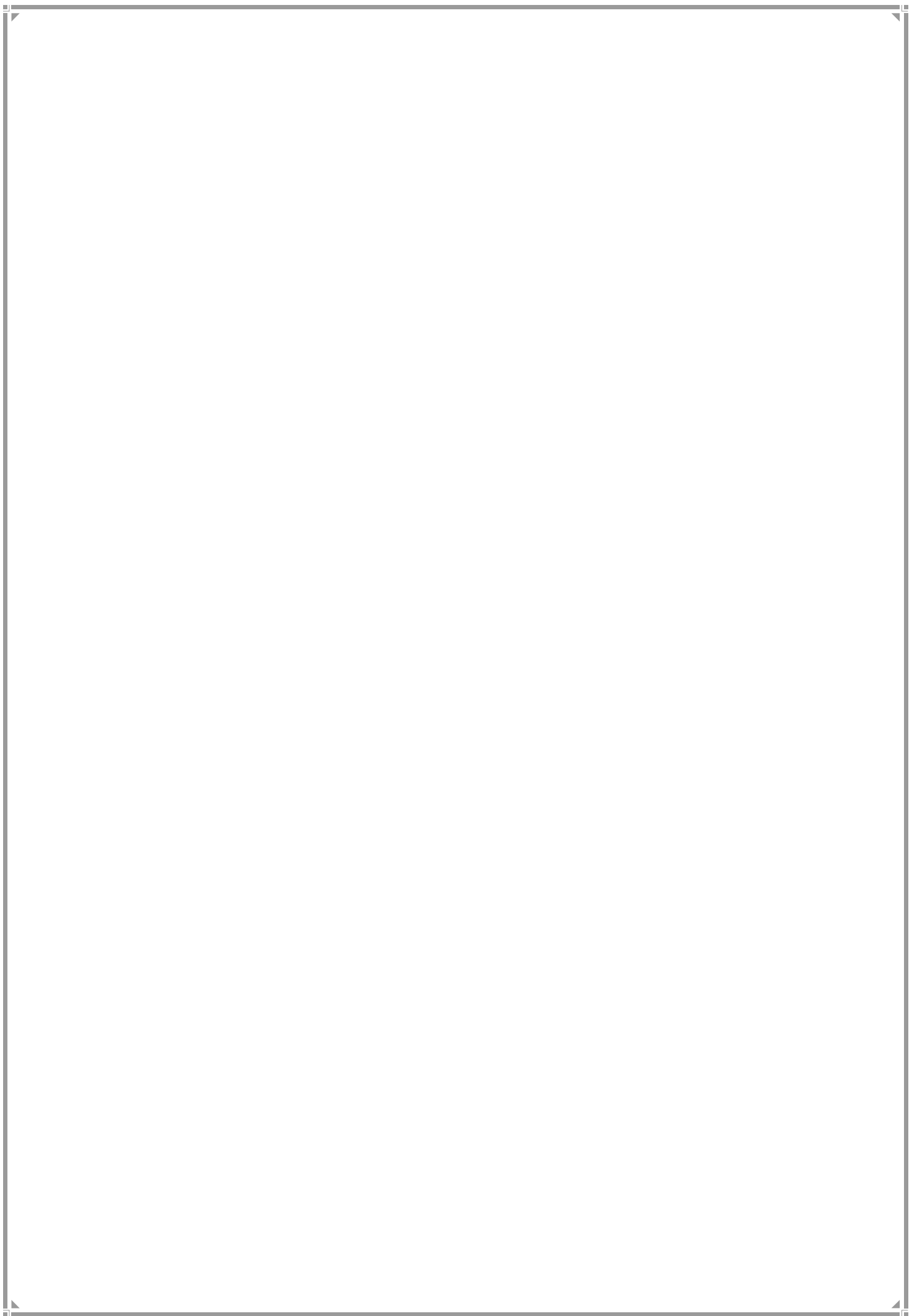


Multiple Designations and Reservations

Sr No.	DP Sheet No.	FP/CTS No.	Village	Names of Multiple Designations/Reservations	Code of Primary Designation/Reservation displayed on DP sheet as
1	IC 03	479	Colaba	1. SPORTS COMPLEX/STADIUM (DOS 2.5) 2. PLAY GROUND (DOS 1.4)	DOS 2.5+
2	IC 05	142	Colaba	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. MUNICIPAL OFFICE (DO1.3)	DSA 1.1+
3	IC 05	434, 435	Colaba	1. POLICE STATION (DPU 3.1) 2. POLICE STAFF QUARTERS (DR 1.2)	DPU 3.1+
4	IC 05	1935, 1948, 3	Colaba	1. CLUBS/GYMKHANA (DOS 2.1) 2. RECREATION GROUND (DOS 2.6)	DOS 2.1+
5	IC 05	140	Colaba	1. MULTI PURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2) 2. AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 3. CARE CENTRE (RSA 6.1)	RSA 5.2+
6	IC 05	109	Colaba	1. GARDEN/PARK (ROS 1.5) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS 3.1)	ROS 1.5+
7	IC 07	1630	Fort	1. RECREATION GROUND (DOS 2.6) 2. Offices	DOS 2.6+
8	IC 08	1159, 1/1159	Fort	1. COURT (DPU 3.5) 2. GOVERNMENT OFFICE (DO 2.1)	DPU 3.5+
9	IC 08	1078	Fort	1. MUNICIPAL OFFICE (DO 1.3) 2. MUNICIPAL STAFF QUARTERS (DR 1.1)	DO 1.3+
10	IC 08	1899	Fort	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1)	DSA 1.1+
11	IC 08	1359	Fort	1. MUNICIPAL SCHOOL (DE1.1) 2. OTHER EDUCATION (RE 3.1)	DE1.1+
12	IC 08	Bhatia Baug, 9999	Fort	1. MUNICIPAL CHOWKY (DMS 1.2) 2. OTHER SOCIAL AMENITIES(DSA 4.9)	DMS 1.2+
13	IC 08	1883	Fort	1. OLD AGE HOME (RSA 4.9) 2. AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 3. CARE CENTRE (RSA 6.1)	RSA 4.9+

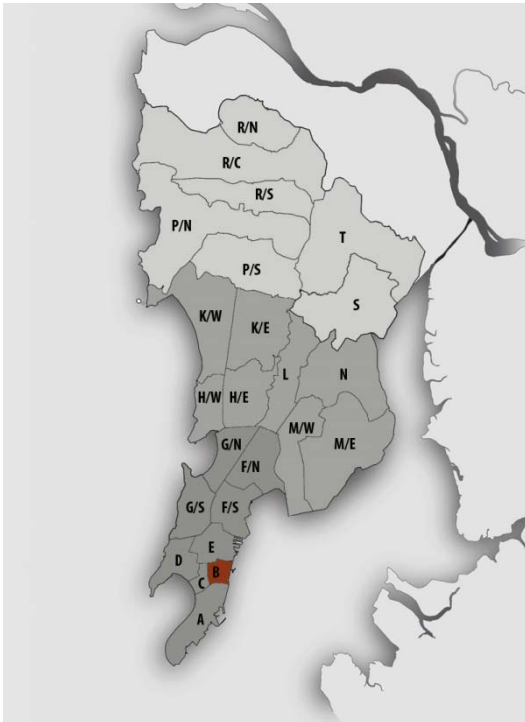
Sr No.	DP Sheet No.	FP/CTS No.	Village	Names of Multiple Designations/Reservations	Code of Primary Designation/Reservation displayed on DP sheet as
14	IC 10	1448, 1/1448, 2/1448, 3/1448	Fort	1. POLICE STATION (DPU 3.1) 2. COURT (DPU 3.5)	DPU 3.1+
15	IC 10, IC 11	1459, 1460, 1/1460, 2/1460, 1B/1460, 1C/1460	Fort	1. COLLEGES (DE 2.1) 2. PRIMARY & SECONDARY SCHOOL (DE 1.2)	DE 2.1+
16	IC 11	1510, 1507, 1453	Fort	1. MUNICIPAL PRINTING PRESS (DO 1.2) 2. MUNICIPAL DISPENSARY/HEALTH POST (RH 1.1) 3. MUNICIPAL MATERNITY HOME (RH 1.3)	DO 1.2+
17	IC 11	1481	Fort	1. WHOLESALE MARKET (DSA 1.3) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1)	DSA 1.3+
18	IC 11	1498	Fort	1. POLICE STATION (DPU 3.1) 2. POLICE STAFF QUARTERS(DR1.2)	DPU 3.1+
19	IC 11	1504, 14/1504	Fort	1. PARKING LOT (RT 1.6) 2. HOMELESS SHELTER (RSA 2.9) 3. MUNICIPAL CHOWKY (RMS 1.2) 4. PUBLIC CONVENIENCE (RSA 6.3)	RT 1.6+
20	IC 11	1500	Fort	1. MUNICIPAL OFFICE (RO 1.3) 2. MUNICIPAL CHOWKY (RMS 1.2) 3. DISASTER MANAGEMENT FACILITY (RO 3.1)	RO 1.3+

B WARD



1. B Ward Profile

Location Map



JURISDICTION

Ward Area - 265.82 ha

Developed Area - 261.58 ha
(98.40% of Ward Area)

WARD BOUNDARIES

North – JinabhaiMulajiRathod Road, ShivdasChampsiRoad and RamchandraBhatMarg

East -P.D' Mello Road

West -Ibrahim Rahimtulla Road and Abdul Rehman Street

South– LokmanyaTilakMarg

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 - 1.40	2021 - 1.12
2011 - 1.27	2031 - 0.87
	2034 - 0.82

Density – 478pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School -8

Primary and Secondary School - 28

Health post -2

Dispensaries - 5

Cemetery- 1

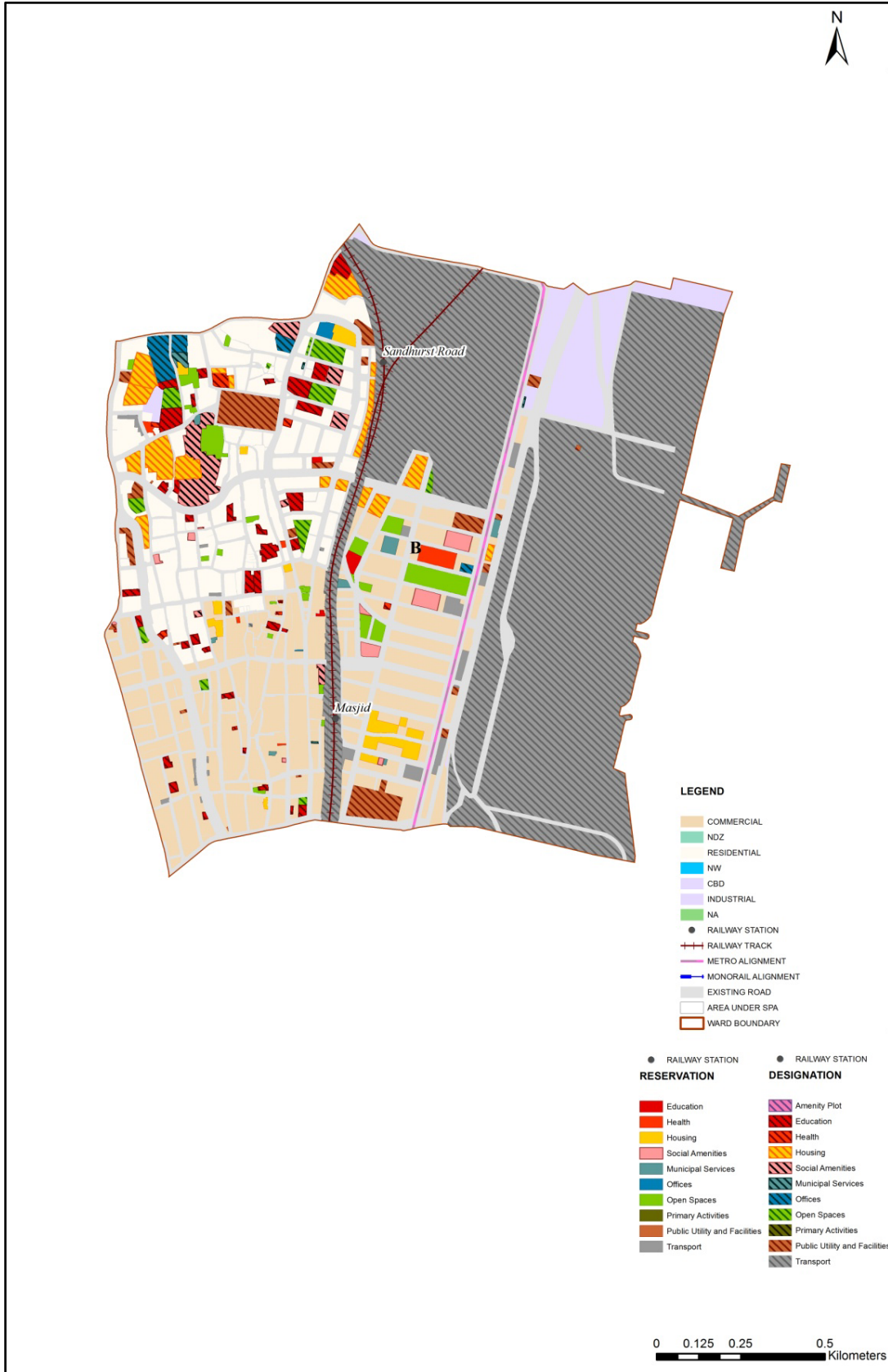
CONNECTIVITY

Major Roads – JJ Flyover / Mohammed Ali Road, P. D'Mello / Frere Road, JinabhaiMulajiRathod Road, ShivdasChampsi Road, RamchandraBhatMarg, Ibrahim Rahimtulla Road, Abdul Rehman Street and LokmanyaTilakMarg

Railway Stations– MasjidBunder Station and Sandhurst Road Station

Future Proposals–Metro Line along P. D'Mello / Frere Road

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis

S. No.	Amenity	Projected Population – B Ward	Norms (sq.m/ person)	Total Requirement (Ha)	Designation (Ha)
1	Education	1,12,159	1.574	17.65	3.66
2	Health	1,12,159	0.419	4.70	0.53
3	Market	1,12,159	0.100	1.12	0.19
4	Cemetery	1,12,159	0.030	0.34	1.85
5	Open Space	1,12,159	4.000	44.86	2.07

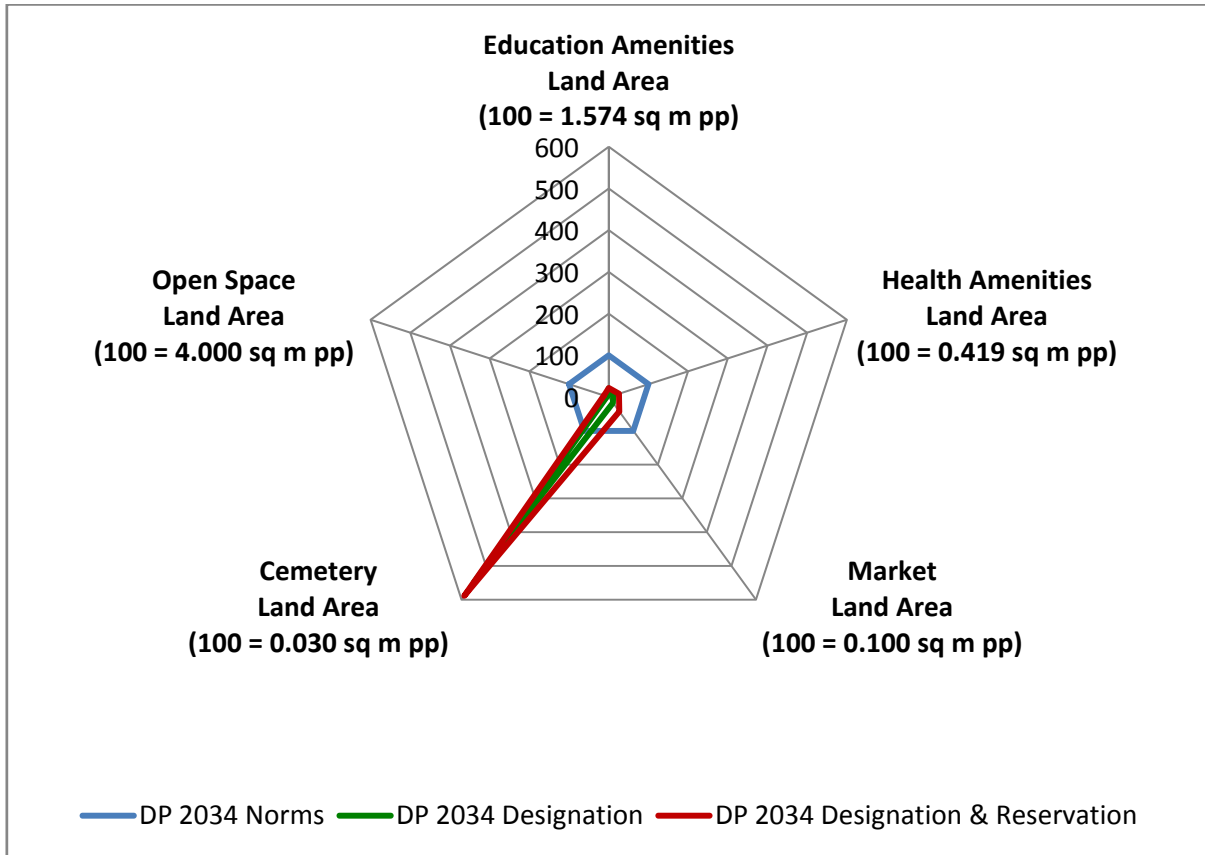
Proposed Amenities and Norms Achieved

S. No.	Amenity	Total Requirement (Ha)	Designation and Reservation (Ha)	Land Deficit (-)/ Surplus (+) (Ha)	Norms Achieved (sq.m/ person)
1	Education	17.65	3.83	-13.82	0.341
2	Health	4.70	1.21	-3.49	0.108
3	Market	1.12	0.48	-0.64	0.043
4	Cemetery	0.34	1.98	1.64	0.177
5	Open Space	44.86	5.46	-39.40	0.487

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
2	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTRE	RSA 6.1	2
5	SOLID WASTE MANAGEMENT FACILITY	RMS 3.1	2
6	HOMELESS SHELTER	RSA 2.9	2
7	OLD AGE HOME	RSA4.9	1
8	DISASTER MANAGEMENT FACILITY	RO 3.1	1
9	HOSPITAL	RH1.2	1
10	MUNICIPAL SCHOOL	RE1.1	1
11	CEMETERY	RSA4.8	1
12	AADHAR KENDRA WITH SKILL DEVELOPMENT	RSA6.2	3

New Reservations which cannot be shown in the map

1. Pedestrianisation of streets at
 - (1) Road no. 4 Nowroji Hill near Dongri Municipal Market,
 - (2) Road no. 7 Nowroji Hill near Dongri Municipal Market and
 - (3) Road leading from Samantbhai Nanji Marg to Ramchandra Bhatt Marg.

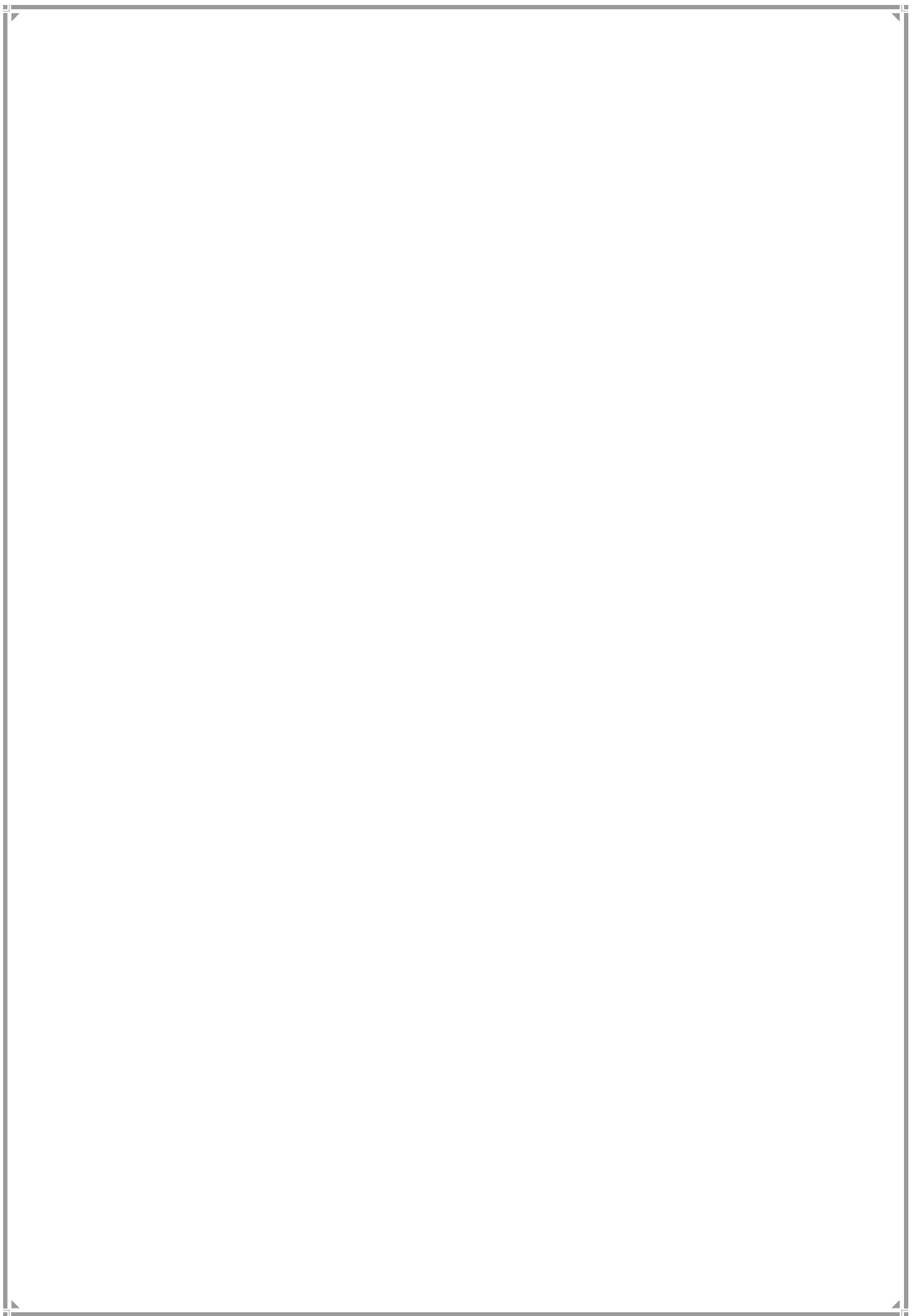


Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
1	IC 14	114	MANDVI	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	RSA1.1+
2	IC 14	96 TO 99	MANDVI	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. CARE CENTRE (RSA6.1) 3. OLD AGE HOME (RSA4.9)	RSA5.2+
3	IC 14	133/1721	MANDVI	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	DSA1.1+
4	IC 14	165	MANDVI	1. MUNICIPAL SCHOOL (RE1.1) 2. DISASTER MANAGEMENT FACILITY (RO3.1)	RE1.1+
5	IC 14	FP NO. 9	MANDVI	1. CULTURAL CENTRE / DRAMA THEATRE / THEATRE (RSA3.3) 2. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1)	RSA3.3+
6	IC 14	136 TO 144	MANDVI	1. GARDEN / PARK (ROS1.5) 2. CEMETERY (RSA4.8)	ROS1.5+
7	IC 14	926 TO 930	MANDVI	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+
8	IC 14	911 1/911 2/911 1A/911	MANDVI	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9)	DSA1.1+
9	IC 14	23/1721	MANDVI	1. POLICE STATION (DPU3.1) 2. POLICE STAFF QUATERS (DR1.2)	DPU3.1+

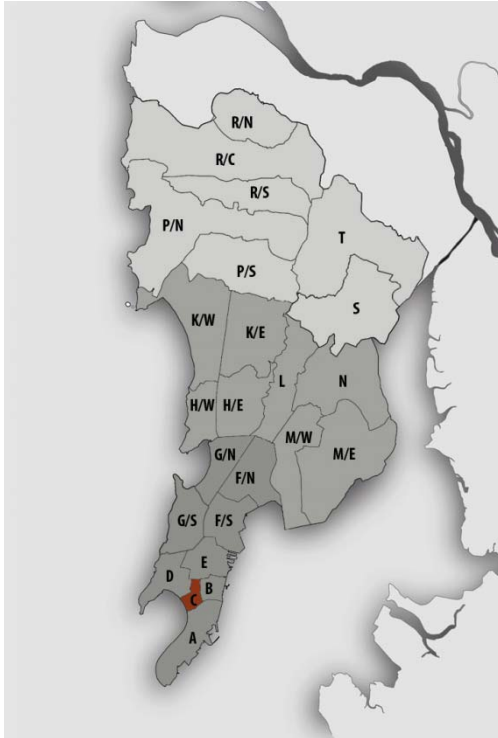
S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
10	IC14	1923	MANDVI	1. TRANSPORT GARAGE (DMS2.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DMS2.1+
11	IC14	FP NO. 1, 2, 3	MANDVI	1. POLICE STATION (DPU3.1) 2. FIRE STATION/ COMMAND CENTER (DPU1.1)	DPU3.1+
12	IC14	1122	MANDVI	1. PUBLIC HALL (DSA3.8) 2. PRIMARY & SECONDARY SCHOOL (DE1.2)	DSA3.8+
13	IC14	128	MANDVI	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9) 3. ADHAR KENDRA WITH SKILL DEVELOPEMENT CENTER (RSA6.2)	RSA1.1+
14	IC11	911	MANDVI	1. PLAY GROUND (ROS1.4) 2. GARDEN/PARK(ROS1.5)	ROS1.4+

C WARD



1. C Ward Profile

Location Map



JURISDICTION

Ward Area - 191.30 Ha.

Developed Area - 190.21 Ha.

(99.43% of Ward Area)

WARD BOUNDARIES

North –MaulanaShaukat Ali Road and Kamthipura

East – KalbadeviMarg and Abdul Rehman Street

West - Arabian Sea

South –LokmanyaTilakMarg

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 - 2.02	2021 – 1.52
2011 - 1.66	2031 – 1.24
	2034 – 1.16

Density – 867pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 7
 Primary and Secondary School - 17
 Health post -3
 Dispensaries – 5
 Maternity Home - 1
 Cemetery - 5

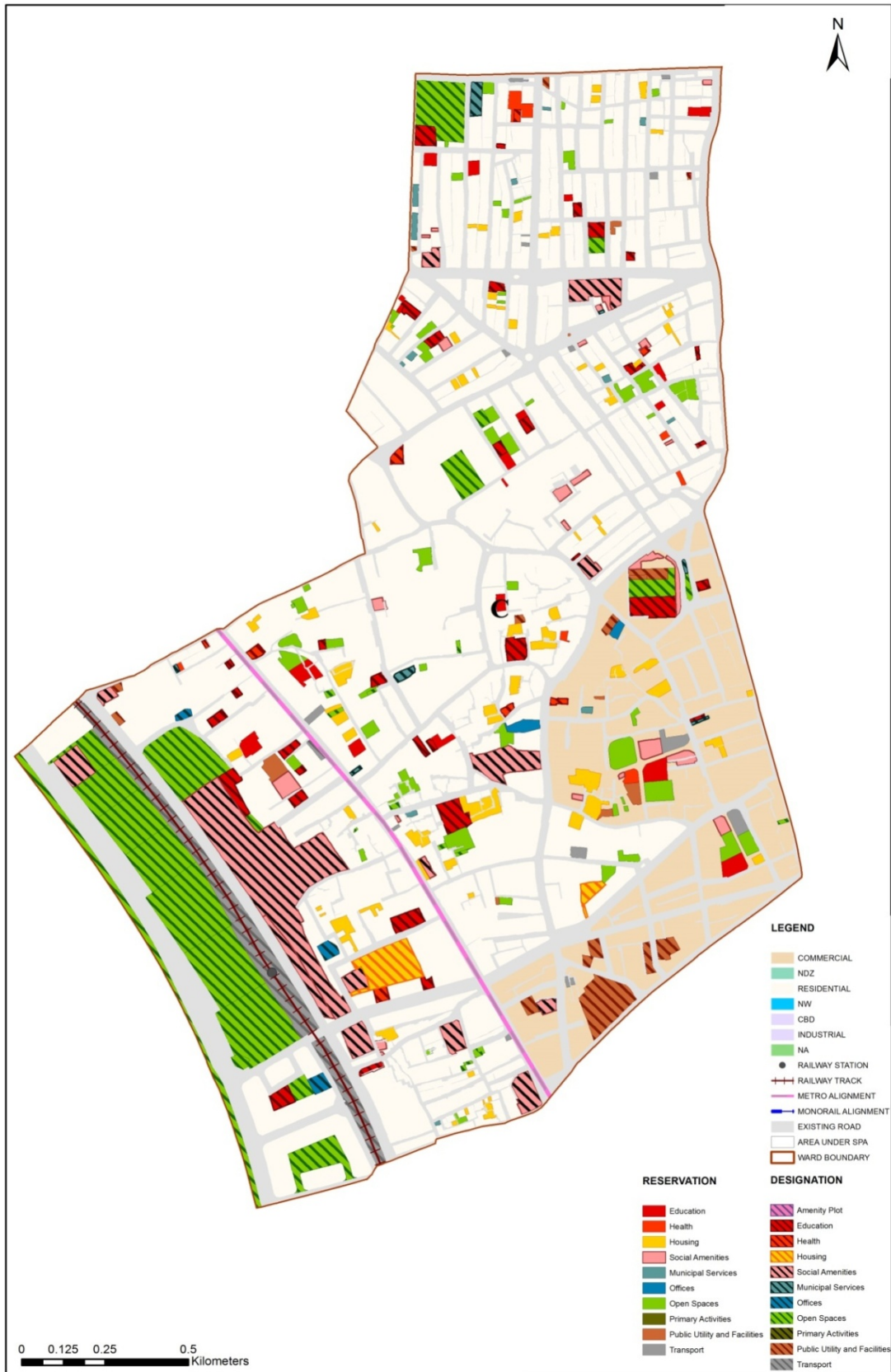
CONNECTIVITY

Major Roads - Marine Drive, MaharshiKarveMarg, Jagannath Shankar Sheth Road, Kalbadevi Road, LokmanyaTilakMarg, Abdul Rehman Street and SardarVallabhbhai Patel Marg

Railway Station – Marine Lines

Future Proposals– Metro Line 3 - Colaba–Bandra–SEEPZ

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis-

S. No.	Amenity	Projected Population – C Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation (Ha.)
1	Education	1,52,146	1.574	23.95	2.59
2	Health	1,52,146	0.419	6.37	0.74
3	Market	1,52,146	0.100	1.52	1.37
4	Cemetery	1,52,146	0.030	0.46	5.43
5	Open Space	1,52,146	4.000	60.86	13.50

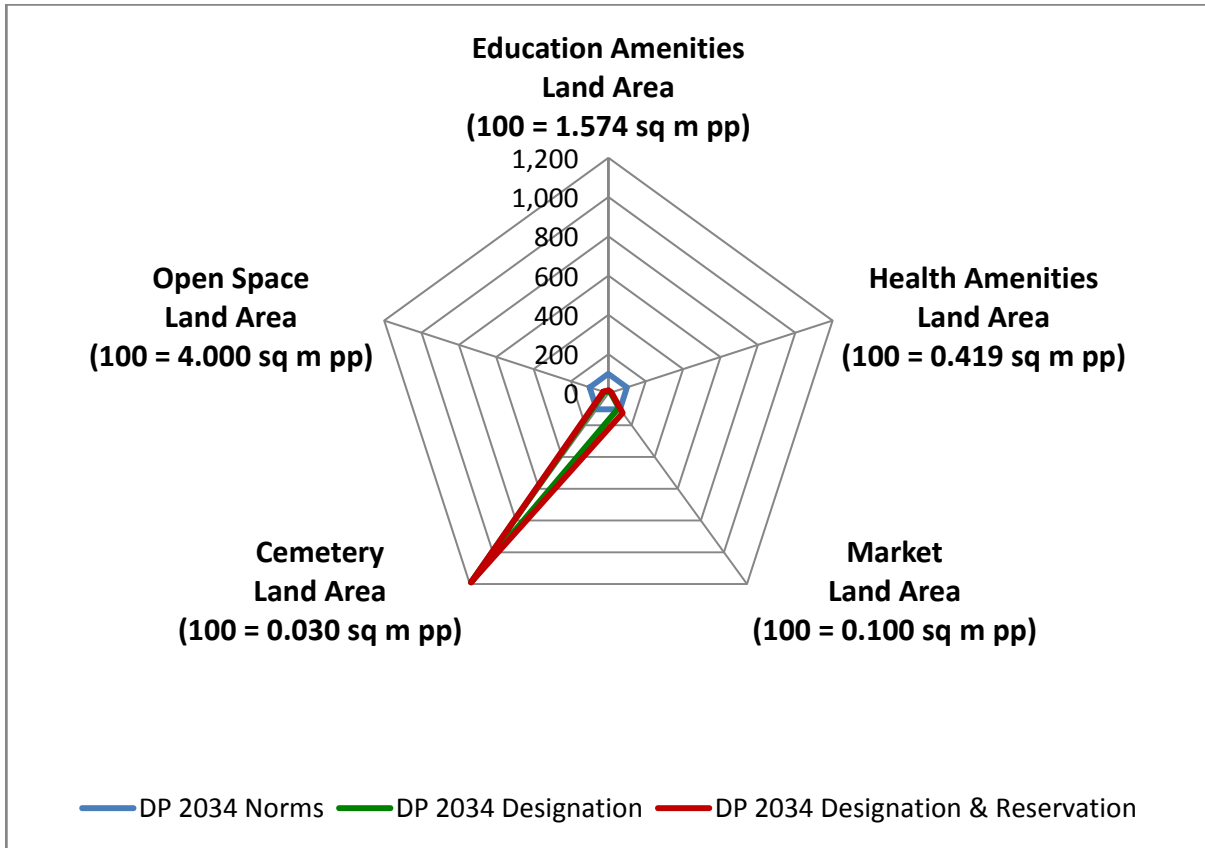
Proposed Amenities and Norms Achieved –

S.No	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	23.95	3.72	-20.23	0.245
2	Health	6.37	1.07	-5.30	0.070
3	Market	1.52	1.88	0.36	0.124
4	Cemetery	0.46	5.43	4.97	0.357
5	Open Space	60.86	16.81	-44.05	1.105

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. Nos. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3.Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	7
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTRE	RSA 6.1	2
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	1
6	PUBLIC CONVENIENCE	RSA 6.3	11
7	HOMELESS SHELTER	RSA 2.9	2
8	OLD AGE HOME	RSA4.9	1
9	DISASTER MANAGEMENT FACILITY	RO 3.1	1
10	MUNICIPAL STAFF QUARTERS	RR1.1	1
11	MUNICIPAL OFFICE	RO1.3	1
12	MUNICIPAL DISPENSARY/HEALTH POST	RH1.1	6
13	MUNICIPAL CHOWKY	RMS1.2	4
14	SOLID WASTE MANAGEMENT FACILITY	RMS3.1	13

New Reservations which cannot be shown in the map

1. Underground parking to be provided at Mumbadevi compound along with the designation of playground.
2. Pubic Sanitary Convenience: Three units of PSC blocks are proposed along Netaji Subhash Chandra Bose Road.
 - I. Near Taraporawala Aquarium (Collector Land) CS – 1/474
 - II. Near Wilson College Gymkhana (Collector Land) CS – CS 471
 - III. Near Indian Oil Fuel Station (Collector Land) CS – 1762
3. Pedestrianisation proposed to be introduced in the wards it has narrow roads and is more of mixed use activities including retail markets and small scale industries. This is proposed to be taken up after a further detailed study.

Multiple Designations and Reservations

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	IC 10	1762, 1761	Bhuleshwar	1. RECREATION GROUND (DOS2.6) 2. FUEL STATION (DPU2.1)	DOS2.6+
2	IC 10	-	Bhuleshwar	1. MUNICIPAL OFFICE (DO1.3) 2. PARKING LOT (RT1.6) 3. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITIES (RPU5.2)	DO1.3+
3	IC 10	481	Bhuleshwar	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	DE1.2+
4	IC 10	1/448	Bhuleshwar	1. MUNICIPAL SCHOOL (DE1.1) 2. MUNICIPAL OFFICE (RO1.3)	DE1.1+
5	IC 10	427	Bhuleshwar	1. MUNICIPAL HOUSING (DR1.5) 2. MUNICIPAL STAFF QUARTRES (RR1.1) 3. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 4. DISASTER MANAGEMENT FACILITY (RO3.1) 5. MUNICIPAL CHOWKY (RMS1.2)	DR1.5+
6	IC 10	395	Bhuleshwar	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHLETER (RSA2.9)	DSA1.1+

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
7	IC 10	119	Bhuleshwar	1. LIBRARY (DSA2.8) 2. PUBLIC HALL (DSA3.8)	DSA2.8+
8	IC 10	1,2	Bhuleshwar	1. COURT (DPU3.5) 2. POLICE STATION (DPU3.1)	DPU3.5+
9	IC 10	1640/4, 1640/6	Bhuleshwar	1. MUNICIPAL SCHOOL (DE1.1) 2. MULTI PURPOSE COMMUNITY CENTRE (RSA2.1) 3. STUDENTS HOSTEL (RSA2.7) 4. MUNICIPAL CHOWKY (RMS1.2)	DE1.1+
10	IC 10	-	Bhuleshwar	1. RECREATION GROUND (DOS2.6) 2. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2)	DOS2.6+
11	IC 10	1/1762	Bhuleshwar	1. MUNICIPAL CHOWKY (DMS1.2) 2. PUBLIC CONVENIENCE (RSA6.3)	DMS1.2+
12	IC 10	2194, 2195	Bhuleshwar	1. MUNICIPAL MATERNITY (DH1.3) 2. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2)	DH1.3+
13	IC 10	481	Bhuleshwar	1. PARKING LOT (DT1.6) 2. PUBLIC CONVENIENCE (RSA6.3) 3. SOLID WASTE MANAGEMENT FACILITY (RMS3.1)	DT1.6+
14	IC 10	691	Bhuleshwar	1. PARKING LOT (RT1.6) 2. PUBLIC CONVENIENCE (RSA6.3)	RT1.6+

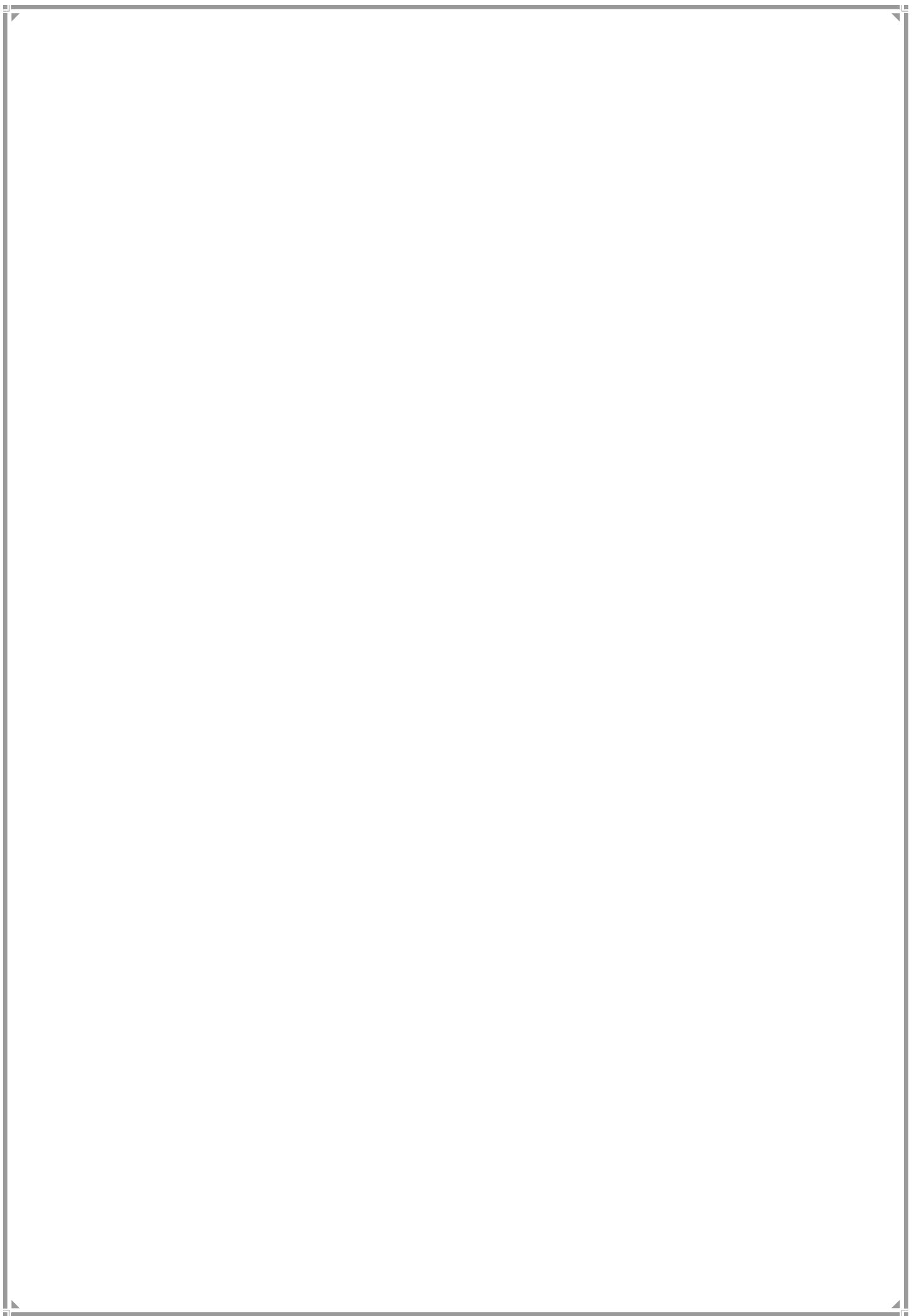
S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
15	IC 10	2335	Bhuleshwar	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4) 3. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RE1.1+
16	IC 10	2/481	Bhuleshwar	1. SERVICE INDUSTRIAL ESTATE (RPU6.1) 2. GOVERNMENT OFFICE (RO2.1) 3. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	RPU6.1+
17	IC 10	481	Bhuleshwar	1. OLD AGE HOME (RSA4.9) 2. CARE CENTER (RSA6.1) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 4. MUNICIPAL CHOWKY (RMS1.2)	RSA4.9+
18	IC 10	2283, 2289	Bhuleshwar	1. MULTI PURPOSE COMMUNITY CENTRE (RSA2.1) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA2.1+
19	IC 10	2336, 2337	Bhuleshwar	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+
20	IC 10	2246, 2247, 5/2249, 2251	Bhuleshwar	1. REHABILITATION & RESETTLEMENT (RR2.1) 2. MUNICIPAL SCHOOL (RE1.1)	RR2.1+
21	IC 10	1984, 1985, 1986	Bhuleshwar	1. MUNICIPAL SCHOOL (RE1.1) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RE1.1+
22	IC 10	1042, 2/1040, 1040, 3/1040	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
23	IC 10	904, 905	Bhuleshwar	1. GARDEN/ PARK (ROS1.5) 2. SOLID WASTE MANAGEMENT FACILITIES(RMS3.1)	ROS1.5+

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
24	IC 10	1704, 1705, 1706, 1707, 1708, 1709, 1710, 1673	Bhuleshwar	1. REHABILITATION & RESETTLEMENT (RR2.1) 2. MULTI PURPOSE COMMUNITY CENTRE (RSA2.1)	RR2.1+
25	IC 10	1937, 1943	Bhuleshwar	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+
26	IC 10	1135	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
27	IC 10	1107, 1108, 1109, 1110, 1135	Bhuleshwar	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.1+
28	IC 13	2414	Bhuleshwar	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9)	DSA1.1+
29	IC 13	3927	Bhuleshwar	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2) 2. OTHER SOCIAL AMENITY (DSA4.9)	DPU5.2+
30	IC 13	4077	Bhuleshwar	1. POLICE CHOWKY (DPU3.2) 2. POLICE STAFF QUARTRES (DR1.2)	DPU3.2+
31	IC 13	1640/6	Bhuleshwar	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2) 2. PLAY GROUND (DOS1.4) 3. MUNICIPAL CHOWKY (DMS1.2)	DPU5.2+
32	IC 13	1640/6	Bhuleshwar	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2) 2. PLAY GROUND (DOS1.4)	DPU5.2+

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
33	IC 13	1597	Bhuleshwar	1. MUNICIPAL CHOWKY (DMS1.2) 2. OTHER SOCIAL AMENITY (DSA4.9)	DMS1.2+
34	IC 13	4316, 4317, 4318, 4319, 4320, 4321	Bhuleshwar	1. MUNICIPAL SCHOOL (RE1.1) 2. PUBLIC CONVENIENCE (RSA6.3)	RE1.1+
35	IC 13	2933	Bhuleshwar	1. GARDEN/ PARK (ROS1.5) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	ROS1.5+
36	IC 13	3299, 3300	Bhuleshwar	1. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 2. CARE CENTER (RSA6.1)	RMS3.1+
37	IC 13	2943	Bhuleshwar	1. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 2. PUBLIC CONVENIENCE (RSA6.3)	RMS3.1+
38	IC 13	2797	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
39	IC 13	2795, 2796	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
40	IC 13	1637, 1638, 1639	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
41	IC 13	1594, 1595, 1636	Bhuleshwar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	RSA1.2+
42	IC 13	3837, 3855	Bhuleshwar	1. REHABILITATION & RESETTLEMENT (RR2.1) 2. RETAIL MARKET WITH VENDING ZONE (RSA1.2)	RR2.1+

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
43	IC 13	3571, 3572	Bhuleshwar	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (RPU5.2) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 3. MUNICIPAL CHOWKY (RMS1.2)	RPU5.2+

D WARD



1. D Ward Profile

Location Map



JURISDICTION

Ward Area – 830.20 Ha (MCGM Planning Area)

Developed Area – 755.50 ha

(91.00% of Ward Area)

WARD BOUNDARIES

North – Keshavrao Khadye Marg & G/S Ward

East -T. P. Street, C & E ward

West – Arabian Sea

South – Arabian Sea

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 - 3.82	2021 – 3.35
2011 - 3.47	2031 – 2.95
	2034 – 2.78

Density – 239.25 pph (As per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 20

Primary and Secondary School - 29

Health post – 8

Dispensaries – 8

Cemetery - 4

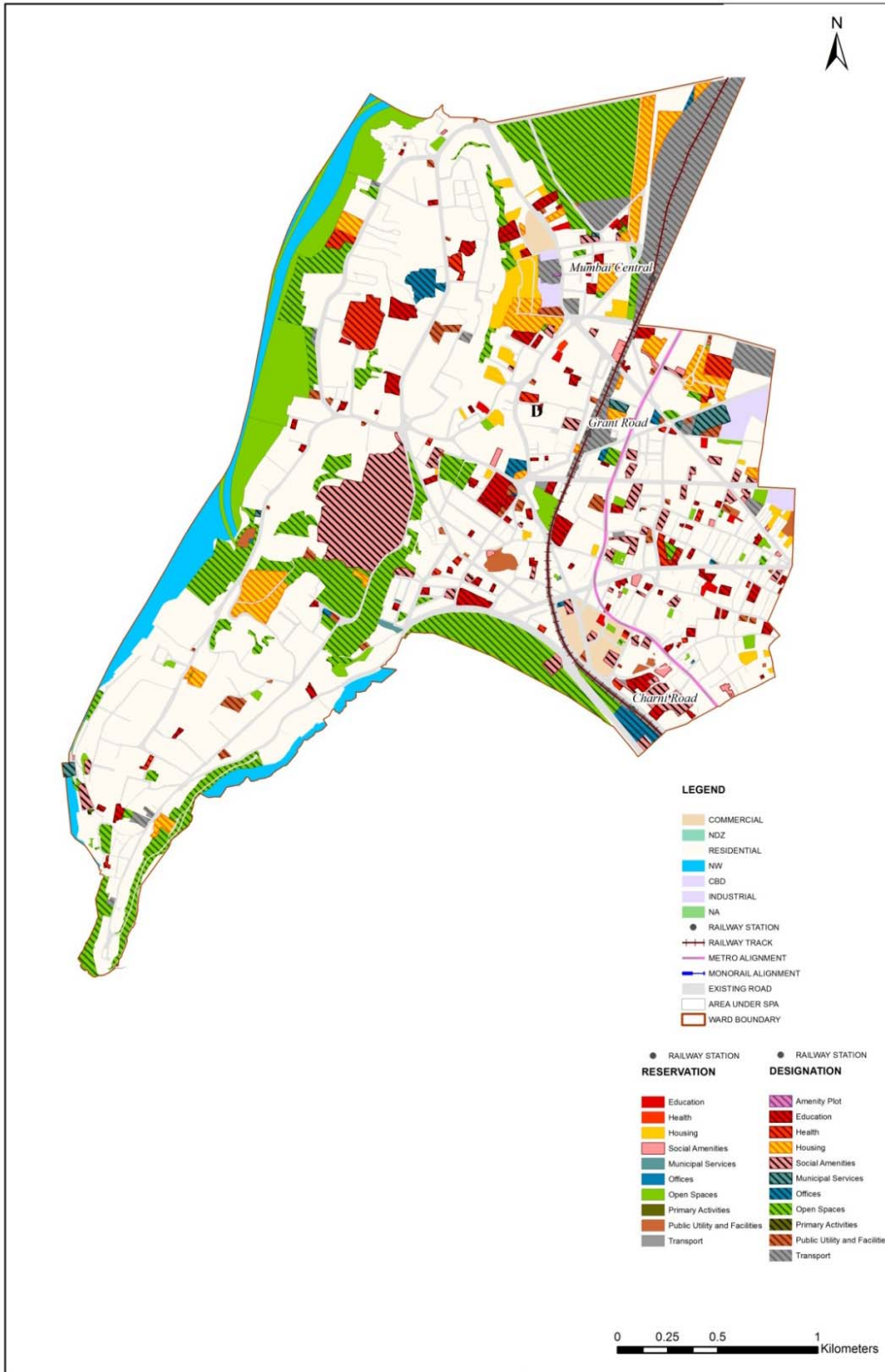
CONNECTIVITY

Major Roads – Pd. Madan Mohan Malvia Marg, Dr.Dadasaheb Bhadkamkar Marg, Bhulabhai Desai Marg, Dr. Gopalrao Deshmukh Marg, Maulana Shaukatali Road, V. P. Road, Jagganath Shankar Seth Road, Walkeshwar Road, B. Indrajit Road & Netaji Subhaschandra Bose Road.

Railway Stations – Charni Road Stn, Grant Road Stn, Bombay Central Stn.

Future Proposals– Metro Line Stations, Coastal Road & Central Island Express Way.

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis

S. No.	Amenity	Projected Population – D Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	3,35,501	1.574	52.81	20.64
2	Health	3,35,501	0.419	14.06	10.19
3	Market	3,35,501	0.100	3.36	1.57
4	Cemetery	3,35,501	0.030	1.01	23.12
5	Open Space	3,35,501	4.000	134.20	105.27

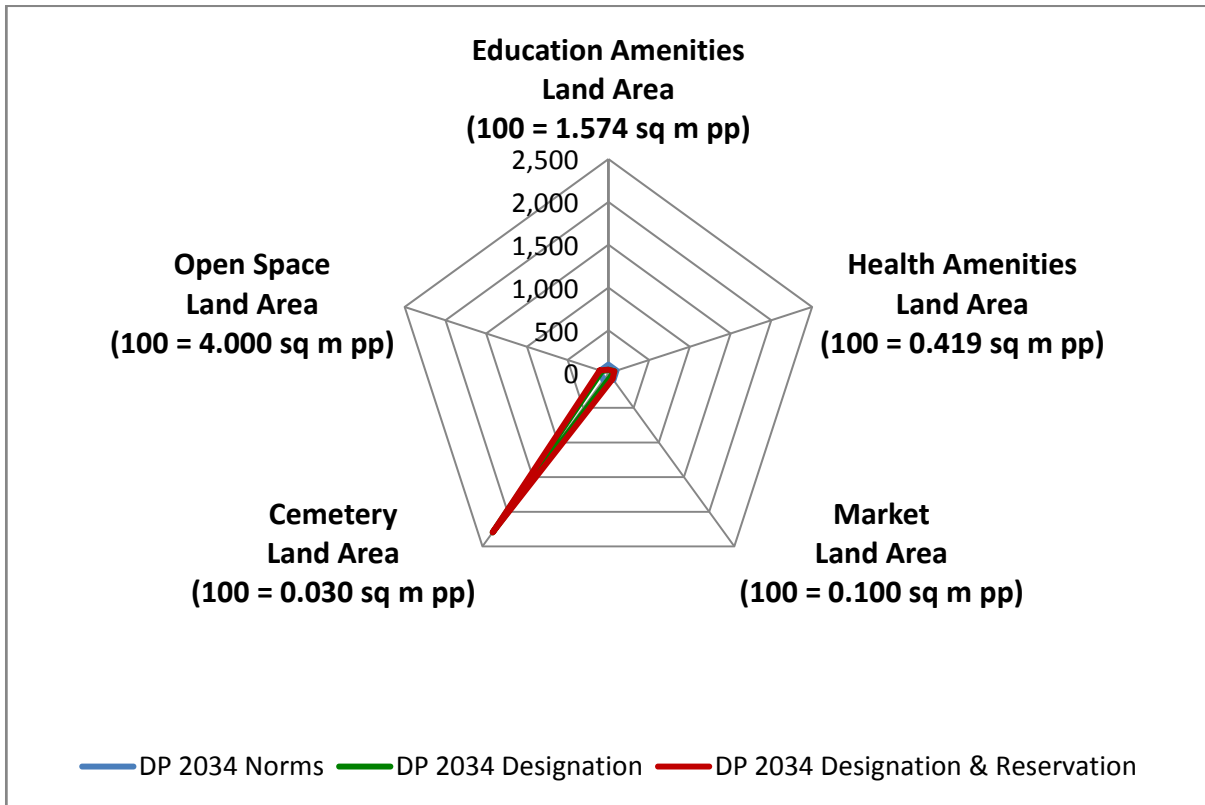
Proposed Amenities and Norms Achieved

S. No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	52.81	21.98	-30.83	0.655
2	Health	14.06	10.41	-3.65	0.310
3	Market	3.36	2.85	-0.51	0.085
4	Cemetery	1.01	23.12	22.11	0.689
5	Open Space	134.20	140.46	6.26	4.187

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

Sr. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
2	AADHAR KENDRA WITH SKILL DEVELOPMENT CENTER	RSA 6.2	1
3	CARE CENTRE	RSA 6.1	5
4	OLD AGE HOME	RSA 4.9	1
5	HOMELESS SHELTER	RSA 2.9	3
6	PUBLIC CONVENIENCES	RSA 6.3	6
7	PROMENADES	ROS 1.2	1
8	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	2
9	MULTIPURPOSE COMMUNITY CENTER	RSA 2.1	2
10	DISASTER MANAGEMENT FACILITY	RO 3.1	1
11	MUNICIPAL SPORTS COMPLEX	ROS 2.4	1
12	MUNICIPAL FACILITIES	RMS 1.3	1
13	SOLID WASTE MANAGEMENT FACILITIES	RMS 3.1	4
14	GREEN BELT	DOS 2.7	15

New Reservations which cannot be shown in the map

Proposed L.D. Chowky at C.S. No. – 5/380 & 5A/380 of Malabar Hill Division.

Below Flyover Provisions –

Facilities like SWM Store's and Dry Waste Segregation Center bellow Kennedy Bridge.

Over Bridges Provisions–

Public Conveniences for Women at Mumbai central station bridge

Multiple Designations and Reservations

Sr. No.	DP Sheet No.	CS No.	Division	Name of Multiple Designations / Reservations	Code Of Primary Designation & Reservation Displayed On DP Sheet As
1	IC 09	141 & 1/2	Malabar Hill	1.GOVERNMENT STAFF QUARTER (DR1.3) 2. RECREATIONAL GROUND (DOS2.6)	DR 1.3 +
2	IC 09	114	Malabar Hill	1. PARKING LOT (DT1.6) 2. MUNICIPAL RETAIL MARKET (DSA1.1)(PT) 3. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2)(PT)	DT 1.6 +
3	IC 09	1A/114	Malabar Hill	1. BEST BUS FACILITY (DT 1.4) 2. BEST STAFF QUARTERS (DR 1.4)	DT 1.4 +
4	IC 09	207	Malabar Hill	1. SEWAGE PUMPING STATION (DMS4.3) 2. SEWAGE TREATMENT PLANT / FACILITIES (DMS4.1)	DMS 4.3 +
5	IC 10	4	Girgaon	1. MUNICIPAL SCHOOL (DE1.1) 2. OLD AGE HOME (RSA4.9)	DE1.1 +
6	IC 10	313, 314, 315	Girgaon	1.MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2. PARKING LOT (RT1.6)	RSA2.1+
7	IC 10	1736	Girgaon	1. GOVERNMENT OFFICE (DO2.1) 2. DISASTER MANAGEMENT FACILITY (RO3.1)	DO2.1 +
8	IC 12	371	Malabar Hill	1. GARDEN / PARK (DOS1.5) 2. RESERVOIR (DMS5.1)	DOS 1.5+
9	IC 12	373	Malabar Hill	1. RECREATION GROUND (DOS2.6) 2. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES(DMS5.5) 3.MUNICIPAL STAFF QUARTER (DR1.1)	DOS 2.6+

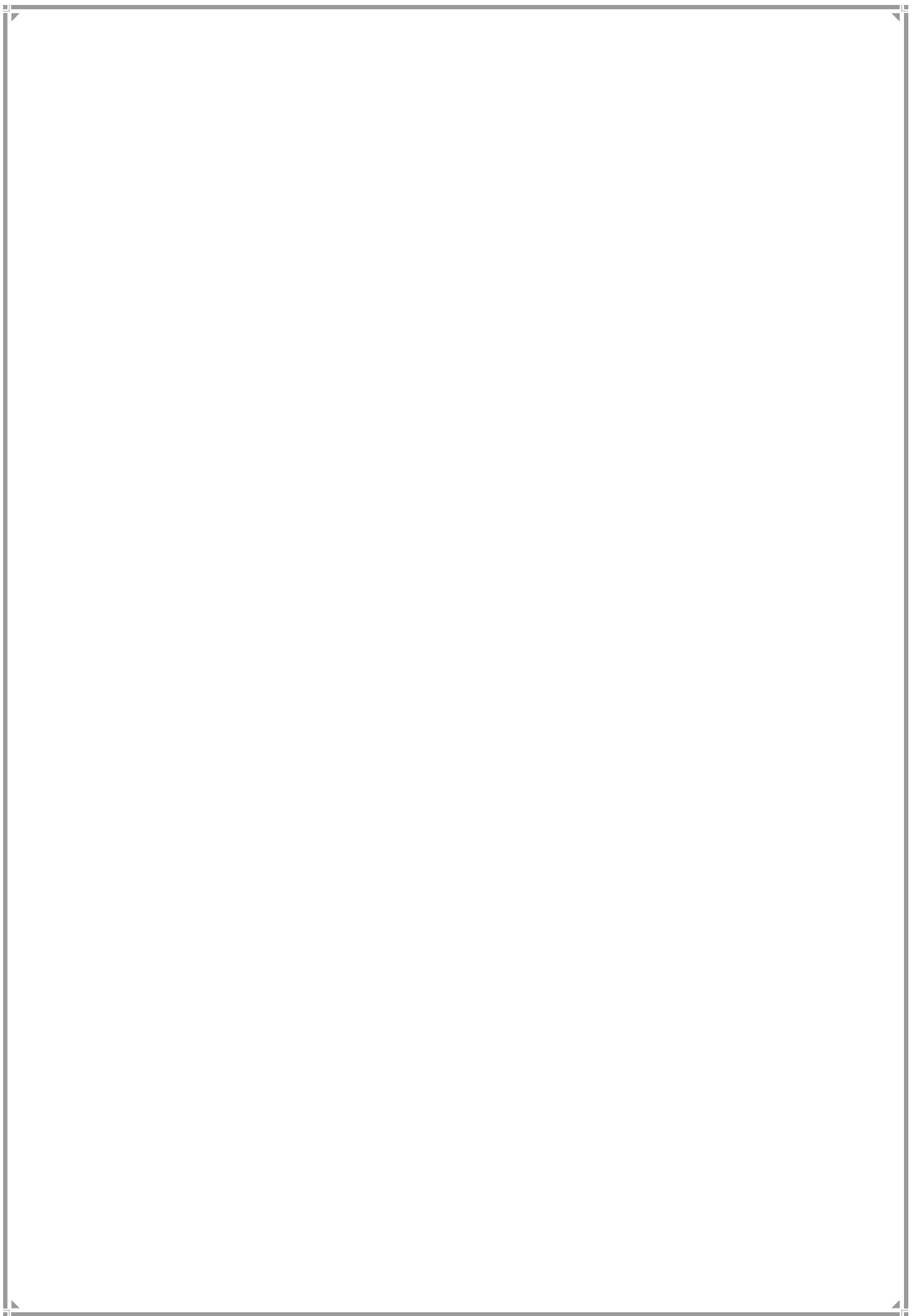
Sr. No.	DP Sheet No.	CS No.	Division	Name of Multiple Designations / Reservations	Code Of Primary Designation & Reservation Displayed On DP Sheet As
10	IC 12	440	Malabar Hill	1.RECREATION GROUND (DOS2.6) 2. MUNICIPAL CHOWKY (RMS1.2) 3. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	DOS 2.6+
11	IC 13	516, 496, 513, 512	Malabar Hill	1.PRIMARY & SECONDARY SCHOOL (DE1.2) 2. STUDENT HOSTEL (DSA2.7)	DE1.2+
12	IC 13	2/521	Malabar Hill	1. MUNICIPAL OFFICE (DO1.3) 2. MUNICIPAL STAFF QUARTER (DR1.1)	DO1.3+
13	IC 13	429	Malabar Hill	1. RECREATION GROUND (DOS2.6) 2. SEWAGE PUMPING STATION (DMS4.3)	DOS2.6+
14	IC 13	12/380	Malabar Hill	1. MUNICIPAL RETAIL MARKET (DSA1.1)(PT) 2. DRAMA THEATRE (DSA3.3)(PT)	DSA1.1+
15	IC 13	382, 1/382	Malabar Hill	1.ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2) 2. BEST STAFF QUARTERS (DR1.4)	DPU5.2+
16	IC 13	373	Malabar Hill	1. MUNICIPAL STAFF QUARTER (DR1.1) 2. RECREATION GROUND (DOS2.6)	DR1.1+
17	IC 13	518	Malabar Hill	1. MUNICIPAL OFFICE (DO1.3) 2. CARE CENTRE (RSA6.1)	DO1.3+
18	IC 13	434	Malabar Hill	1. GREEN BELT (DOS2.7) 2. WATER PUMPING STATION (DMS5.2)	DOS2.7+
19	IC 13	1087	Girgaon	1. PLAY GROUND (DOS1.4)(PT) 2. PRIVATE HOSPITAL (DH3.2)(PT)	DOS1.4+
20	IC 13	1562	Girgaon	1.PUBLIC HALL (DSA3.8) 2. STUDENT HOSTEL (DSA2.7)	DSA3.8+
21	IC 13	13	Girgaon	1. FUEL STATION (DPU2.1) 2. BEST BUS FACILITY (RT1.4)	DPU2.1+
22	IC 13	1/255	Tardeo	1. MUNICIPAL DISPENSARY / HEALTH POST (DH1.1) 2. MUNICIPAL MATERNITY HOME (DH1.3)	DH1.1+
23	IC 13	70	Tardeo	1. PLAY GROUND (DOS1.4) 2. PUBLIC CONVENIENCE (RSA6.3)	DOS1.4+
24	IC 13	156, 1/156, 157	Tardeo	1. ROAD DEPOT (DMS1.1) 2. PUBLIC CONVENIENCE(RSA6.3)	DMS1.1+

Sr. No.	DP Sheet No.	CS No.	Division	Name of Multiple Designations / Reservations	Code Of Primary Designation & Reservation Displayed On DP Sheet As
25	IC 13	76	Tardeo	1. TRANSPORT GARAGE (DMS2.1) 2. MUNICIPAL CHOWKY (DMS1.2)	DMS2.1+
26	IC 13	652	Malabar Hill	1. MUNICIPAL SCHOOL (RE1.1) 2. CARE CENTRE (RSA6.1)	RE1.1+
27	IC 13	5/380, 5A/380	Malabar Hill	1. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES(RMS5.5) 2. CARE CENTRE (RSA6.1) 3. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RMS5.5+
28	IC 13	392	Malabar Hill	1. MUNICIPAL FACILITY (RMS1.3) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 3. MUNICIPAL CHOWKY (RMS1.2)	RMS1.3+
29	IC 13	313, 314, 315	Girgaon	1. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2. PARKING LOT (RT1.6)	RSA2.1+
30	IC 13	953	Girgaon	1. PUBLIC CONVENIENCE (RSA6.3) 2. HOMELESS SHELTER (RSA2.9)	RSA6.3+
31	IC 13	4/1000, 1005, 1006	Girgaon	1. MUNICIPAL SCHOOL (RE1.1) 2. MUNICIPAL DISPENSARY / HEALTH POST (RH1.1) 3. CARE CENTRE (RSA6.1)	RE1.1+
32	IC 13	1634	Girgaon	1. MUNICIPAL CHOWKY (RMS1.2) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RMS1.2+
33	IC 13	1/28, 3/28, 5/28, 12/28, 14/28, 102, 99, 28	Girgaon	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
34	IC 13	631, 2/631, 637	Girgaon	1. MUNICIPAL SCHOOL (RE1.1) 2. MUNICIPAL STAFF QUARTER (RR1.1)	RE1.1+

Sr. No.	DP Sheet No.	CS No.	Division	Name of Multiple Designations / Reservations	Code Of Primary Designation & Reservation Displayed On DP Sheet As
35	IC 13	166	Tardeo	1. MUNICIPAL SCHOOL (RE1.1) 2. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1)	RE1.1+
36	IC 15	765, 766, 881, 2/881, 882, 883,	Malabar Hill	1. RECREATIONAL GROUND (DOS2.6) 2. SWIMMING POOL (DOS2.2)	DOS2.6+
37	IC 16	3/661	Malabar Hill	1. LIBRARY (DSA2.8)(PT) 2. MUNICIPAL DISPENSARY / HEALTH POST (DH1.1)(PT)	DSA2.8+
38	IC 16	821	Malabar Hill	1. WELFARE CENTRE (DSA2.5)(PT) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	DSA2.5+
39	IC 16	712, 1/669	Malabar Hill	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITY (DPU5.2) 2. BEST BUS FACILITY (DT1.4)	DPU5.2+
40	IC 16	1/839, 2/ 839	Malabar Hill	1. PARKING LOT (DT1.6) 2. OTHER SOCIAL AMENITY (DSA4.9)	DT1.6+
41	IC 16	1/255	Tardeo	1. MUNICIPAL DISPENSARY / HEALTH POST (DH1.1) 2. MUNICIPAL MATERNITY HOME (DH1.3)	DH1.1+
42	IC 16	383PT	Tardeo	1. MUNICIPAL SCHOOL (DE1.1) 2. PRIMARY & SECONDARY SCHOOL (DE1.2)	DE1.1+
43	IC 16	353, 354	Tardeo	1. BEST BUS FACILITY (DT1.4) 2. PUBLIC CONVENIENCE (RSA6.3)	DT1.4+
44	IC 16	243, 241- 242	Tardeo	1. PARKING LOT (DT1.6)(PT) 2. SERVICE INDUSTRIAL ESTATE (RPU6.1)	DT1.6(PT)+
45	IC 16	7/383, 3A/409	Tardeo	1. GREEN BELT (DOS2.7) 2. MUNICIPAL SPORTS COMPLEX (ROS2.4)	DOS2.7+
46	IC 16	231	Tardeo	1. MUNICIPAL HOUSING (DR1.5) 2. MUNICIPAL CHOWKY (RMS1.2)	DR1.5+
47	IC 16	8/383	Tardeo	1. MUNICIPAL HOUSING (DR1.5) 2. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES(DMS5.5)	DR1.5+

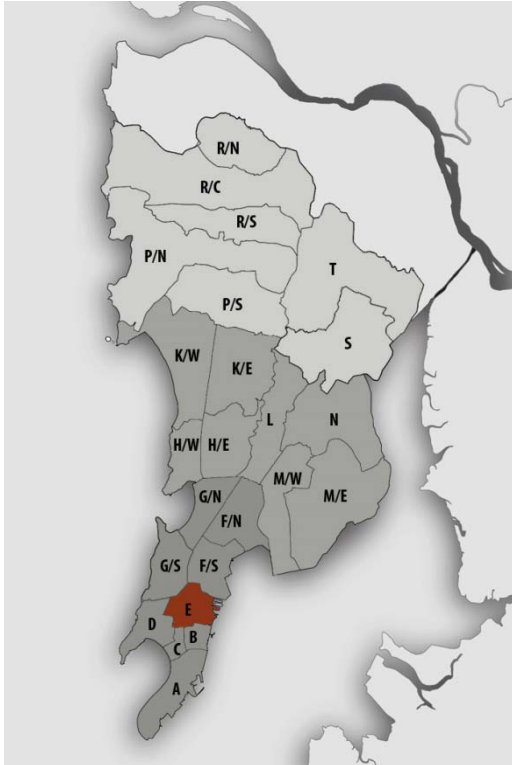
Sr. No.	DP Sheet No.	CS No.	Division	Name of Multiple Designations / Reservations	Code Of Primary Designation & Reservation Displayed On DP Sheet As
48	IC 16	661, 5/661	Malabar Hill	1. REHABILITATION & RESETTLEMENT (RR2.1) 2. MUNICIPAL SCHOOL (RE1.1) 3. PLAY GROUND (ROS1.4)	RR2.1+
49	IC 16	231	Tardeo	1. GARDEN / PARK (ROS1.5) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	ROS1.5+
50	IC 16	56, 253, 252	Tardeo	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
51	IC 16	327	Tardeo	1. MULTI-PURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. CARE CENTRE (RSA6.1) 3. MUNICIPAL CHOWKY (RMS1.2)	RSA5.2+

E WARD



1. E Ward Profile

Location Map



JURISDICTION

Ward Area – 727.39 ha (MCGM Planning Area)

Developed Area – 727.31 ha (MCGM Planning Area)
(99.1% of Ward Area)

WARD BOUNDARIES

North – Chinchpokhli Station

East – Mazgaon Dock

West - Western Railway Line (Mumbai Central Station)

South – J.J. Hospital

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 4.40	2021 – 3.60
2011 – 3.93	2031 – 2.98
	2034 – 2.80

Density – 520 ppn (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 19
Primary & Secondary Schools – 52
Hospitals - 4
Dispensaries – 5
Maternity Home - 5
Cemetery – 3

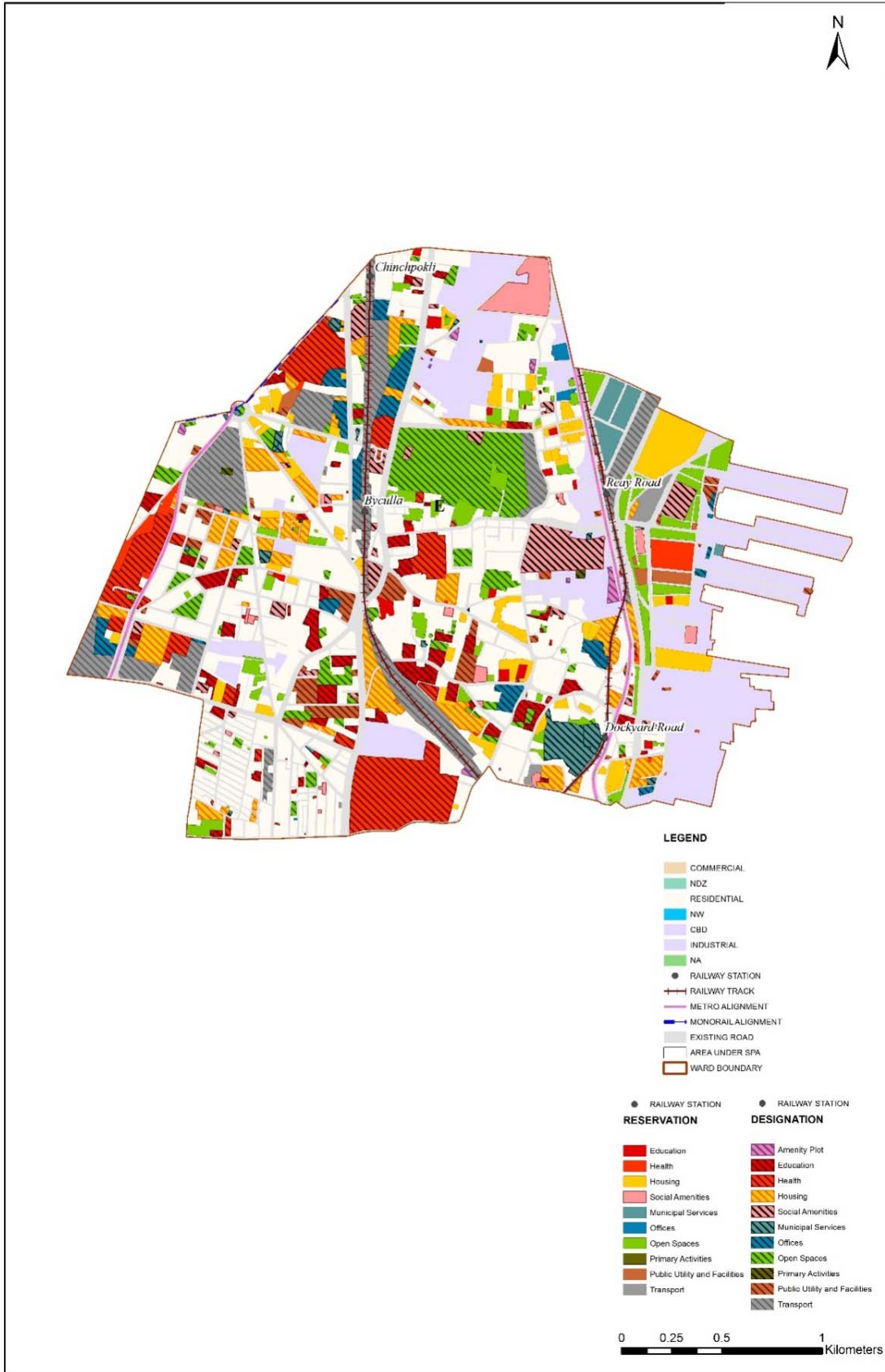
CONNECTIVITY

Major Roads – N.M. Joshi Marg, B.A. Road, Keshav Rao Khade Marg, Barrister Nath Pai Marg

Railway Stations – Chinchpokhli Station, Mumbai Central, Byculla, Ray Road, Dockyard Road

Future Proposals– Metro Line 3 -Colaba–Bandra–SEEPZ

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis –

S.No.	Amenity	Projected Population – E Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	3,60,859	1.574	56.80	18.76
2	Health	3,60,859	0.419	15.12	40.07
3	Market	3,60,859	0.100	3.61	2.36
4	Cemetery	3,60,859	0.030	1.08	10.93
5	Open Space	3,60,859	4.000	144.34	44.08

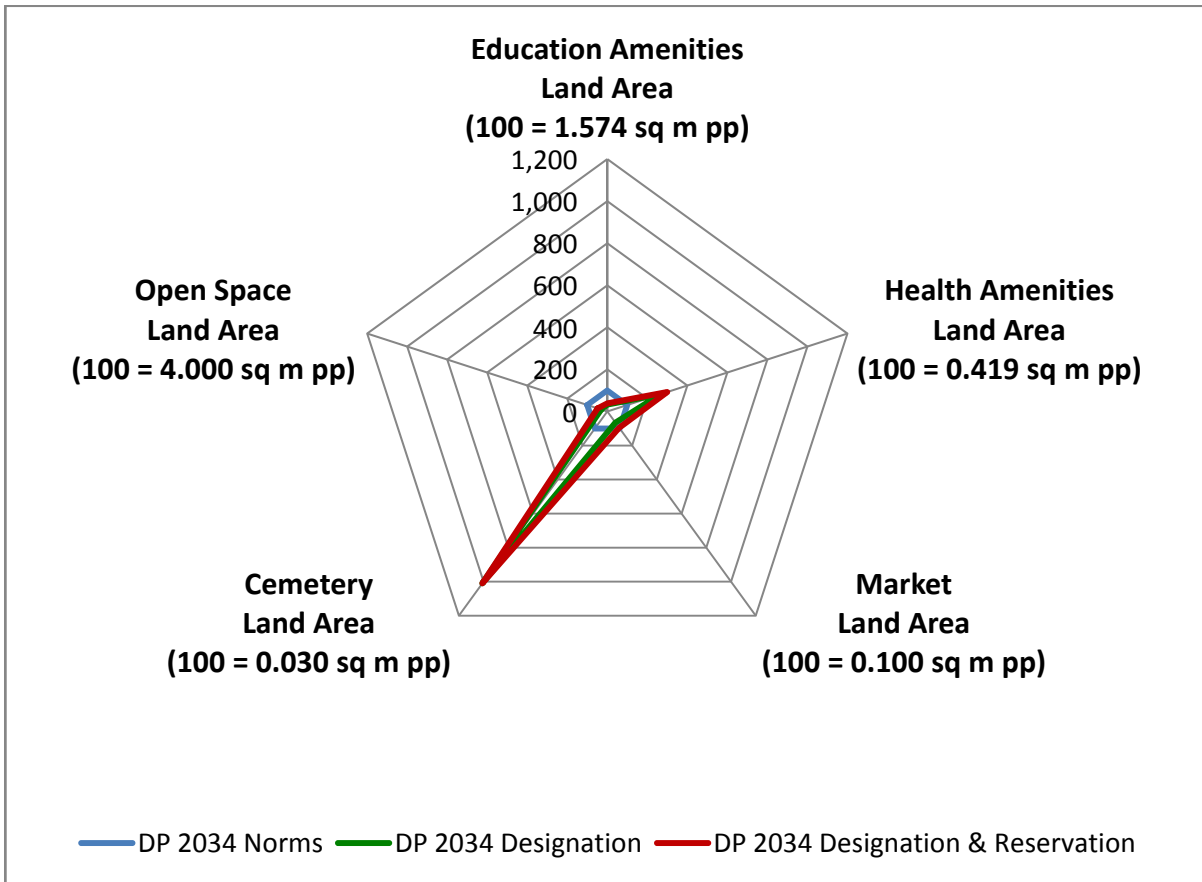
Proposed Amenities and Norms Achieved –

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	56.80	21.92	-34.88	0.607
2	Health	15.12	45.33	30.21	1.256
3	Market	3.61	3.47	-0.14	0.096
4	Cemetery	1.08	10.93	9.85	0.303
5	Open Space	144.34	69.87	-74.47	1.936

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

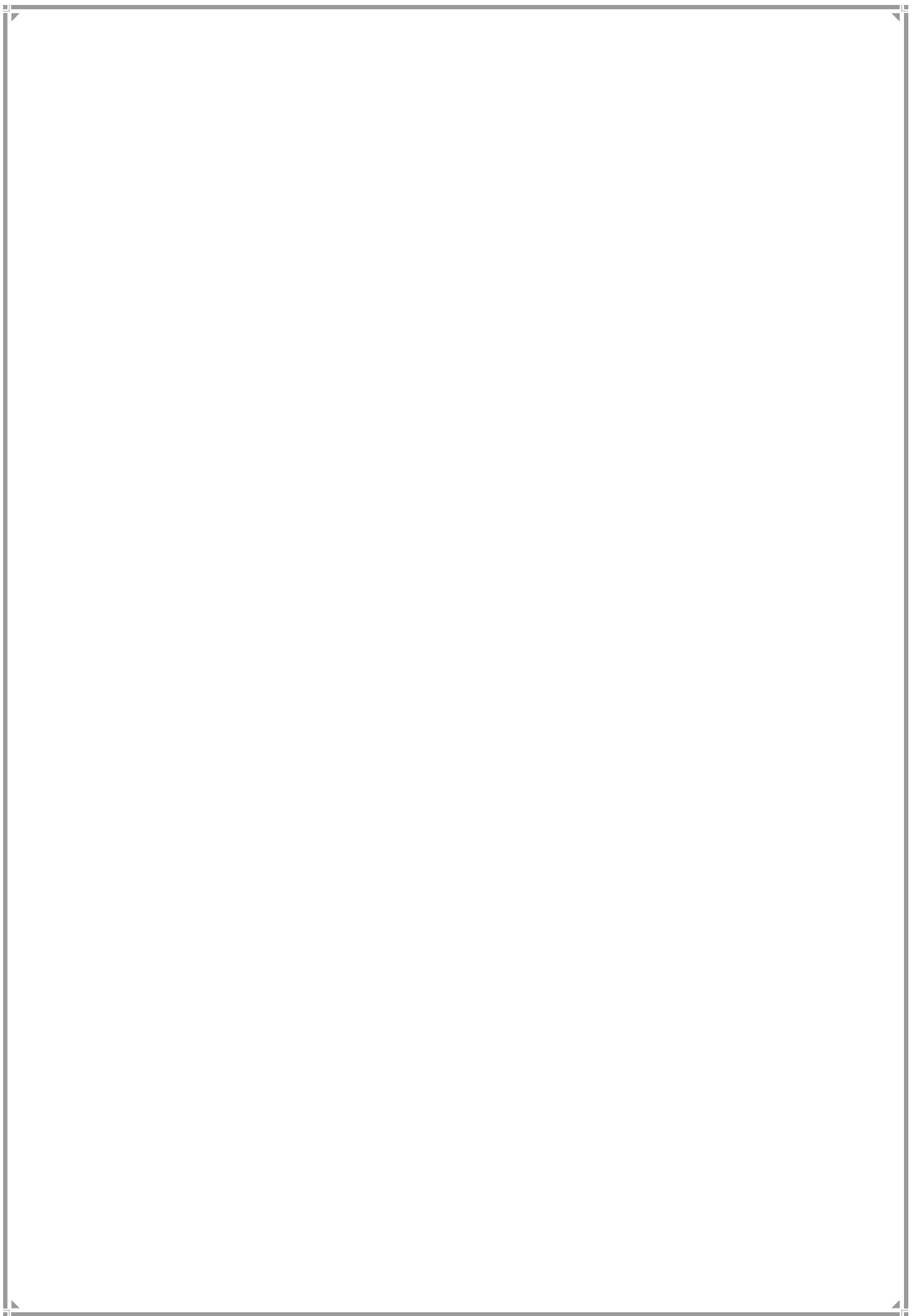
S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	7
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTRE	RSA 6.1	2
4	AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
5	HOMELESS SHELTER	RSA 2.9	2
6	OLD AGE HOME	RSA4.9	1
7	DISASTER MANAGEMENT FACILITY	RO 3.1	1
8	MUNICIPAL OFFICE BUILDING	RO1.3	2
9	MUNICIPAL CHOWKY	RMS1.2	6
10	AFFORDABLE HOUSING	RR2.2	2
11	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	4

Multiple Designations and Reservations

S. No	DP Sheet No.	CS/CTS No.	Division/ Village	Name of Multiple Designations & Reservations	Code of Primary Designation/Reservation displayed on DP Sheet
1	IC 17, IC 14	72, 71,71/3	Mazgaon	1.RESERVOIR (DMS5.1) 2.GARDEN/PARK (DOS1.5)	DMS5.1+
2	IC 17	185, 1	Mazgaon	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL SCHOOL (DE1.1) 3. MUNICIPAL STAFF QUARTERS (DR1.1)	DSA1.1+
3	IC 16	388	Mazgaon	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2.WHOLESALE MARKET (DSA 1.3)	DSA1.1+
4	IC 17	448,446, 447	Mazgaon	1. WELFARE CENTRE (DSA2.5) 2. CARE CENTRE (RSA6.1) 3. AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2)	DSA 2.5+
5	IC 18	2/2022 1/2022 2024 2023 2020 2021	Byculla	1.MUNICIPAL PRINTING PRESS (DO1.2) 2. MUNICIPAL OFFICE (DO 1.3) 3. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS5.5) 4. DISASTER MANAGEMENT FACILITIES (RO3.1)	DO1.2+
6	IC 17, IC18	593 (PT) 591 591/1 2/592 1/592 3/592 563 592	Mazgaon	1.GARDEN/ PARK (DOS1.5) 2.ZOO (DOS 2.3)	DOS 1.5+
7	IC 14	79, 76	Mazgaon	1.MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. MULTIPURPOSE COMMUNITY CENTRE(RSA 2.1)	RSA 5.2+

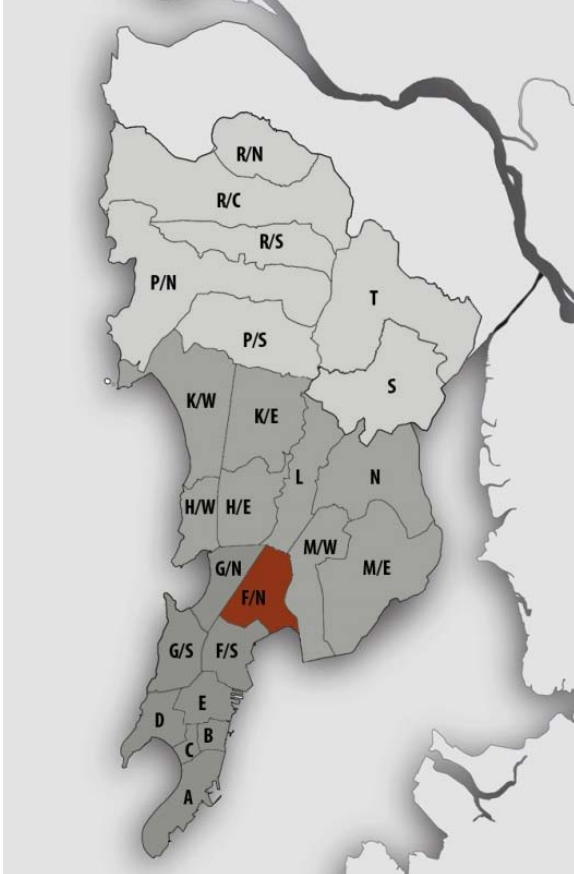
S. No	DP Sheet No.	CS/CTS No.	Division/ Village	Name of Multiple Designations & Reservations	Code of Primary Designation/Reservation displayed on DP Sheet
8	IC 13	1A/1099	Byculla	1.MUNICIPAL OFFICE (RO1.3) 2.AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2)	RO1.3+
9	IC 17	400	Mazgaon	1.PLAY GROUND (ROS1.4) 2. MUNICIPAL SCHOOL (RE1.1)	ROS 1.4+
10	IC 17	397, 396	Mazgaon	1.OLD AGE HOME (RSA4.9) 2.CARE CENTRE (RSA 6.1)	RSA 4.9+
11	IC 18	1970	Byculla	1.MUNICIPAL STAFF QUARTERS (RR1.1) 2. MUNICIPAL OFFICE(RO1.3)	RR1.1+
12	IC 19	768 763 761 770	Mazgaon	1.MUNICIPAL SCHOOL (RE1.1) 2.PLAY GROUND (ROS1.4)	RE1.1+
13	IC 19	831	Mazgaon	1. RG 2. MUSEUM (RSA3.5)	R.G. + RSA3.5
14	IC 17	593 (PT) 591 591/1 563 563 563 584 2/576 576 576/1 576/1A 565 565/1B 565/1 565/1A	Mazgaon	1.GARDEN/PARK (ROS 1.5) 2. ZOO (ROS 2.3)	ROS 1.5+
15	IC 13	1351 1346 1345	Byculla	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2.RETAIL MARKET WITH VENDING ZONE (RSA1.2)	RSA1.1
16	IC 17	587 688 688 590	Mazgaon	1.GARDEN/ PARK (ROS 1.5) 2. ZOO (ROS 2.3)	ROS 1.5

F/NORTH WARD



1. F-North Ward Profile

Location Map



JURISDICTION

Ward Area– 1285.37 ha

Area under SPA (MMRDA) – 119.87 ha

Area under MCGM – 1165.5 ha

Developed Area – 821.07 ha

(70.44 % of Ward Area)

WARD BOUNDARIES

North – Chunabhatti Railway Station

East – Sewri Chembur Road

West - Central Railway Line

South – Naigaon Cross Road

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001–5.24	2021–4.82
2011–5.29	2031–3.93
	2034–3.70

Density – 411.55 pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 26

Primary and Secondary School - 35

Municipal Dispensaries / Health post -9

Cemetery - 6

CONNECTIVITY

Major Roads: Sion Kurla Road, Dadar TT Flyover, Sion Matunga Flyover, Dr. Babasaheb Ambedkar Marg, Rafi Ahmed Kidwai Marg.

Suburban Railway Station – Dadar Railway Station, Matunga station and Sion station on the Central Railway, and Wadala, Chunabhatti & Guru Tej Bahadur Nagar on the Harbour Railway.

Future Proposals - Proposed Metro & Mono Rail Station at Wadala Iconic Tower station, Dadar (E), Wadala Bridge, Acharya Atre Nagar, Antop Hill, GTB Nagar, Wadala Depot, and Bhakti Park.

Proposed Land Use Map



LEGEND

COMMERCIAL	RAILWAY STATION	RAILWAY STATION
NDZ	RESERVATION	DESIGNATION
RESIDENTIAL	Education	Amenity Plot
NW	Health	Education
CBD	Housing	Health
INDUSTRIAL	Social Amenities	Housing
NA	Municipal Services	Social Amenities
RAILWAY STATION	Offices	Municipal Services
RAILWAY TRACK	Open Spaces	Offices
METRO ALIGNMENT	Primary Activities	Open Spaces
MONORAIL ALIGNMENT	Public Utility and Facilities	Primary Activities
EXISTING ROAD	Transport	Public Utility and Facilities
AREA UNDER SPA		Transport
WARD BOUNDARY		



2. Gap Analysis

Existing Amenities and Demand Analysis –

S.No.	Amenity	Projected Population – F North Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	4,81,795	1.574	75.83	48.30
2	Health	4,81,795	0.419	20.19	14.90
3	Market	4,81,795	0.100	4.82	1.72
4	Cemetery	4,81,795	0.030	1.45	6.35
5	Open Space	4,81,795	4.000	192.72	61.83

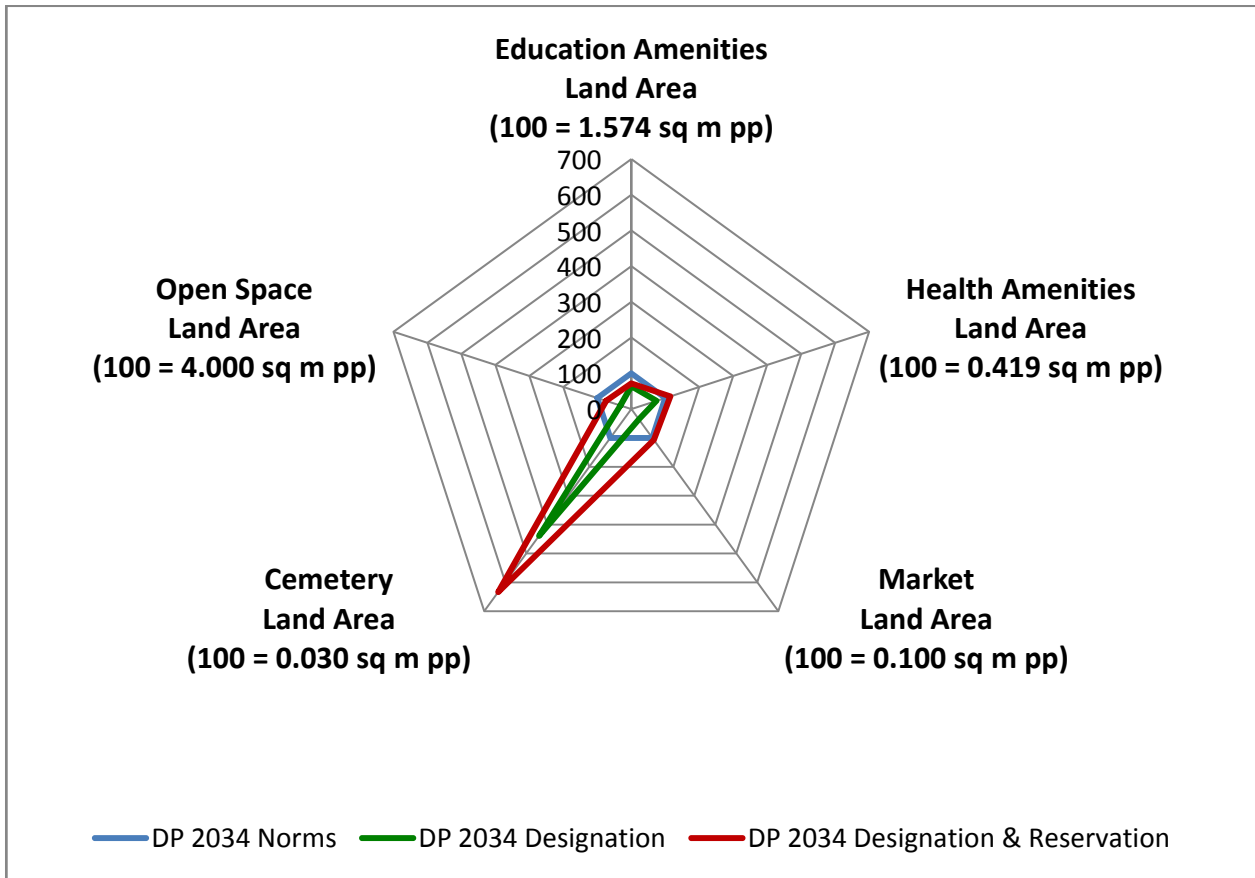
Proposed Amenities and Norms Achieved –

S.No	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	75.83	54.41	-21.42	1.129
2	Health	20.19	23.19	3.00	0.481
3	Market	4.82	5.16	0.34	0.107
4	Cemetery	1.45	9.16	7.71	0.190
5	Open Space	192.72	142.46	-50.26	2.957

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	STUDENTS HOSTEL	RSA 2.7	1
2	CARE CENTRE	RSA 6.1	2
3	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
4	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
5	HOMELESS SHELTER	RSA 2.9	2
6	HYDRAULIC ENGINEERING DEPARTMENT FACILITIES	RMS 5.5	1
7	ROAD DEPOT	RMS 1.1	1
8	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	2
9	MUNICIPAL OFFICE	RO1.3	1
10	MUNICIPAL CHOWKY	RMS1.2	2

Summary of New City Level Reservations Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MEDICAL INSTITUTE	RE4.2	1

New Reservations which cannot be shown in the map

1. The portion below the Matunga flyover from Maheshwari circle to Tulpule chowk proposed to be developed as theme garden. The area under development is 7000 sq. Mt.
2. There is reservation of RR2.1 (Rehabilitation & Resettlement) + RR1.1 (Municipal Staff Quarter) at Azad Nagar near Wadala Railway Station. The Municipal Staff quarter is to be developed for 20% area.
3. The ground level parking area is reserved on the DMS5.4 (Water Trunk Main / Aqua duct) in front of Shanmukhanand Hall.
4. The plot bearing CS No. 2 (pt) of Salt Pan Division of 1.7 Ha reserved for Market is identified as Heritage Market.

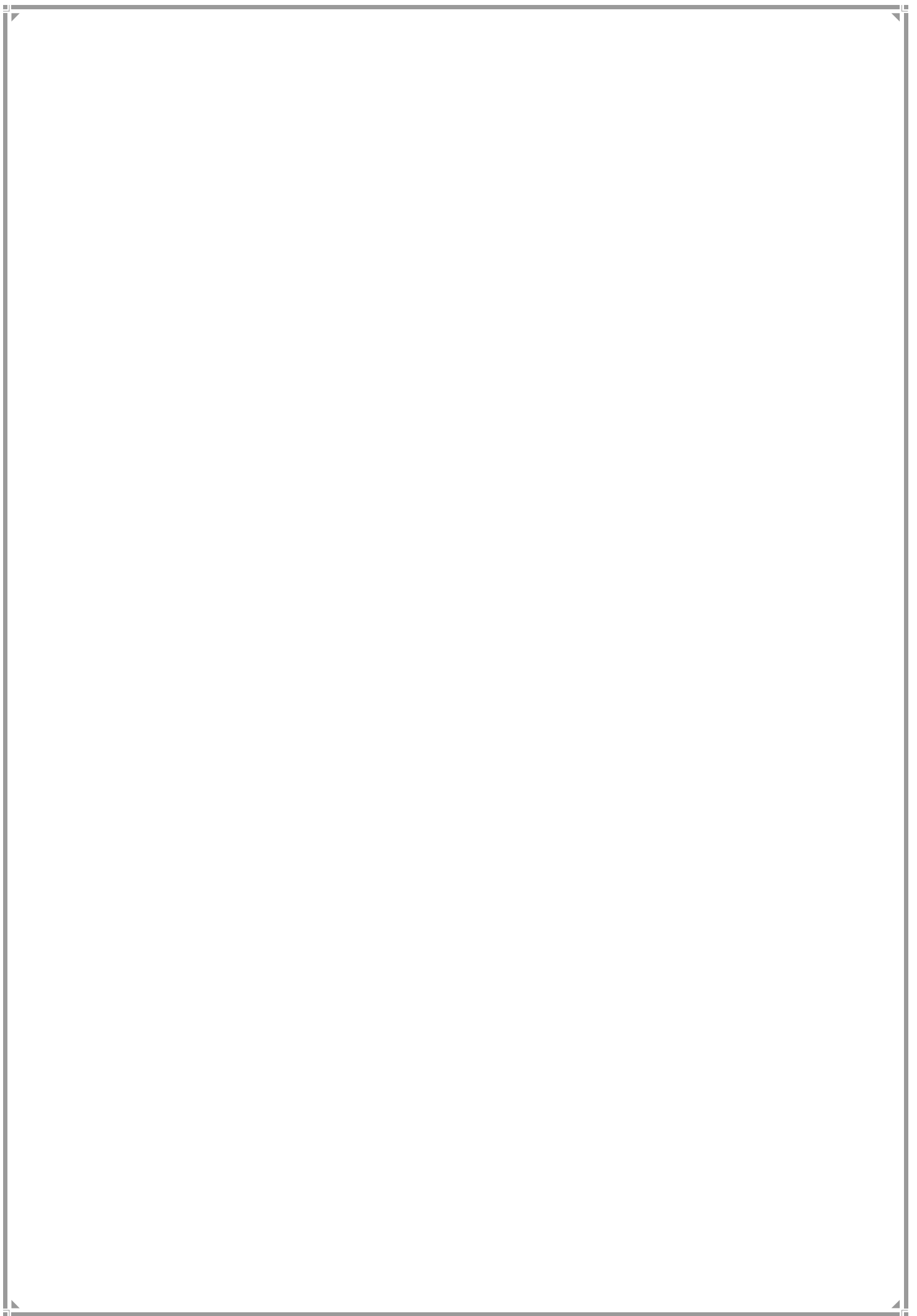
Multiple Designations and Reservations

Sr. No.	DP Sheet no.	CS/CTS No.	Division / Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	IC 24	335, 339, 340, 342, 346 to 348, 350 to 357, 437	Dadar-Naigaon	1. REHABILITATION & RESETTLEMENT (DR2.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DR2.1+
2	IC 24	437	Dadar-Naigaon	1. REHABILITATION & RESETTLEMENT (DR2.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DR2.1+
3	IC 24	335, 337 to 341, 1/341, 342, 437, 987, 1002	Dadar-Naigaon	1. REHABILITATION & RESETTLEMENT (DR2.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DR2.1+

Sr. No.	DP Sheet no.	CS/CTS No.	Division / Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
4	IC 24	497	Dadar-Naigaon	1. MUNICIPAL HOUSING (DR1.5) 2. MUNICIPAL CHOWKEY (RMS1.2) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 4. CARE CENTER (RSA 6.1) 5. HOMELESS SHELTER (RSA2.9)	DR1.5+
5	IC 24	976	Dadar-Naigaon	1. SEWAGE TREATMENT PLANT FACILITIES (RMS4.1) 2. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS 5.5)	RMS4.1+
6	IC 27, 24	30, 31, 32	Dadar-Naigaon, Matunga	1. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 2. ROAD DEPOT (RMS 1.1)	RMS3.1+
7	IC 25	1/359, 8A/358, 358, 6 (pt)	Dadar-Naigaon, Salt Pan	1. POLICE STATION (DPU3.1) 2. POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
8	IC 27	241/10, 242/10, 243/10	Matunga	1. PUBLIC HALL (DSA3.8) 2. LIBRARY (DSA2.8) 3. OTHER EDUCATION (DE3.1)	DSA3.8+
9	IC 27	339A/10	Matunga	1. MUNICIPAL SCHOOL (DE1.1) 2. MUNICIPAL OFFICE (RO1.3)	DE1.1+
10	IC 27	339A/10	Matunga	1. MUNICIPAL OFFICE (DO1.3) 2. MUNICIPAL SCHOOL (DE1.1)	DO1.3+
11	IC 27	9999	Matunga	1. LIBRARY (DSA2.8) 2. WELFARE CENTER (DSA2.5)	DSA2.8+
12	IC 27	547	Matunga	1. MUNICIPAL CHOWKY (DMS1.2) 2. PLAY GROUND (DOS1.4)	DMS1.2+
13	IC 27	9999	Matunga	1. RECREATION GROUND (DOS2.6) 2. WELFARE CENTER (DSA2.5)	DOS2.6+
14	IC 27	42, 2/6	Sion	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1)	DSA1.1+
15	IC 28	88, 1/889(pt)	Salt Pan	1.GOVERNMENT OFFICE (DO2.1) 2.GOVERNMENT STAFF QUARTERS (DR1.3)	DO2.1+
16	IC 28	84(pt)	Salt Pan	1.MUNICIPAL DISPENSARY / HEALTH POST (DH1.1) 2.SHOPPING CENTER (DSA1.4)	DH1.1+

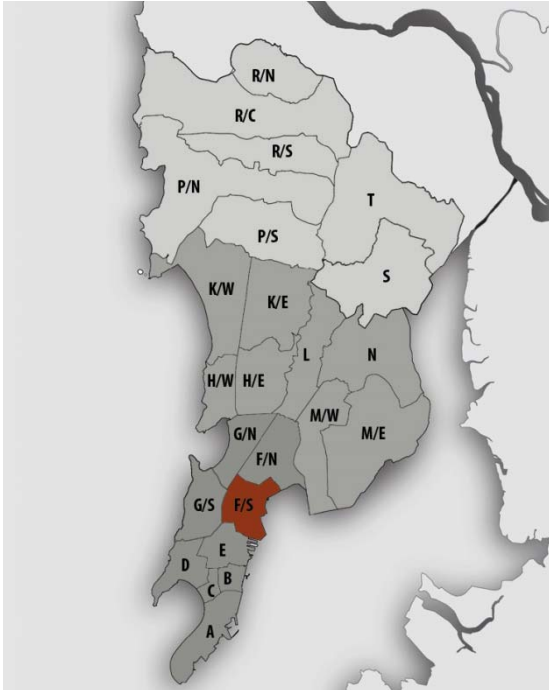
Sr. No.	DP Sheet no.	CS/CTS No.	Division / Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
17	IC 28	2/357, 2A/357, 2B/357	Matunga	1.SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 2.MUNICIPAL CHOWKY (RMS1.2) 3.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 4.CARE CENTER (RSA 6.1) 5.HOMELESS SHELTER (RSA2.9)	RMS3.1+
18	IC 30	5, 10, 11	Sion	1.MUNICIPAL STAFF QUARTERS (DR1.1) 2.MUNICIPAL HOUSING (DR1.5)	DR1.1+
19	IC 30	5	Sion	1.WATER TRUNK MAIN / AQUADUCT (DMS5.4) 2.GARDEN / PARK (DOS1.5)	DMS5.4+
20	IC 30	2/12, 6, 86, 87, 89	Sion, Salt Pan	1.RESERVOIR (DMS5.1) 2.MUNICIPAL STAFF QUARTERS (DR1.1)	DMS5.1+
21	IC 30	2/12	Salt Pan	1. GARDEN / PARK (ROS1.5) 2. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1)	ROS1.5+
22	IC 32	19, 315B/6	Sion	1.COLLEGE (DE2.1) 2.OLD AGE HOME (DSA2.4)	DE2.1+
23	IC 32	19, 25	Sion	1.COLLEGE (DE2.1) 2.OLD AGE HOME (DSA2.4)	DE2.1+
24	IC 32	1/24	Sion	1.PUBLIC HALL (DSA3.8) 2.STUDENTS HOSTEL (DSA2.7) 3.OTHER SOCIAL AMENITY (DSA4.9)	DSA3.8+

F/SOUTH WARD



1. F-South Ward Profile

Location Map



JURISDICTION

Ward Area - 987.24 ha

Developed Area -904 ha

(91.56% of Ward Area)

WARD BOUNDARIES

North – Mumbai Marathi Granth Sangrahalaya Road and Road No.26

East -Arabian Sea (MBPT Area)

West - Central Railway line

South- Datta Ram Lad Path and Digvijay Mill

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 3.96	2021 – 3.51
2011 – 3.61	2031 – 3.11
	2034 – 2.94

Density –355pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 23
 Primary And Secondary School – 21
 Health Post /Dispensaries – 11
 Municipal Hospital- 6
 Government Hospital- 7
 Maternity Homes- 1
 Municipal Cemetery -1
 Private Cemetery -2

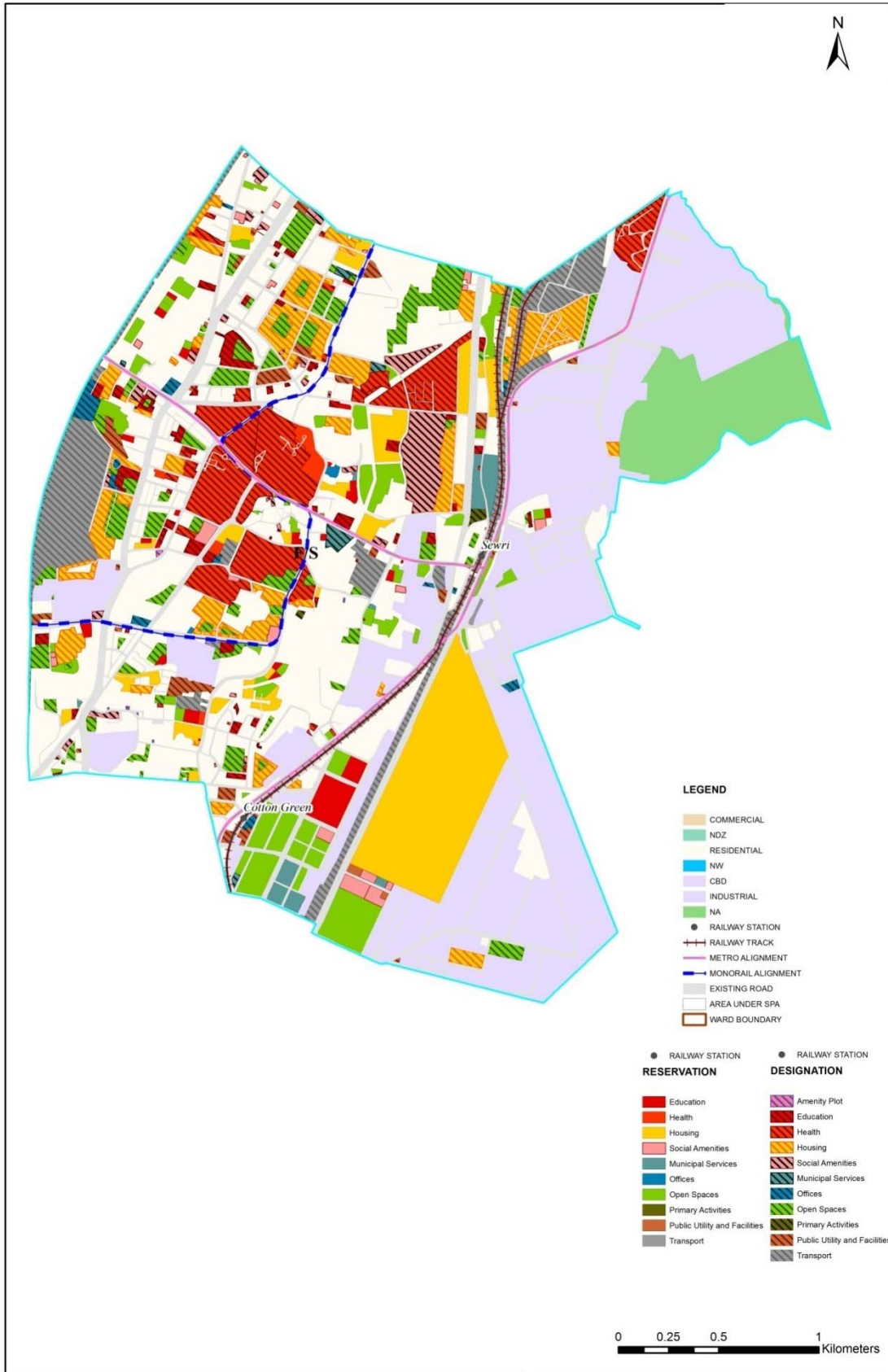
CONNECTIVITY

Major Roads – DrBabasahebAmbedkar Marg, (Central Island Expressway), Rafi Ahmad Kidwai Marg, Bombay Port Trust Road, Eastern Freeway

Railway Stations – Elphinstone Road station, Curry road station, Parel station and Sewri station

Future Proposals – 1. Proposed Mono Rail Stations - Naigaon Mono Rail Station, Ambedkar Nagar Mono Rail Station, Mint Colony Mono Rail Station
 2. Elevated Highway which connects to Mumbai Trans Harbour Link

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis –

S.No.	Amenity	Projected Population – FSouth Ward	Norms (sq.m/person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	3,51,106	1.574	55.26	15.51
2	Health	3,51,106	0.419	14.71	51.84
3	Market	3,51,106	0.100	3.51	1.70
4	Cemetery	3,51,106	0.030	1.05	10.41
5	Open Space	3,51,106	4.000	140.44	37.05

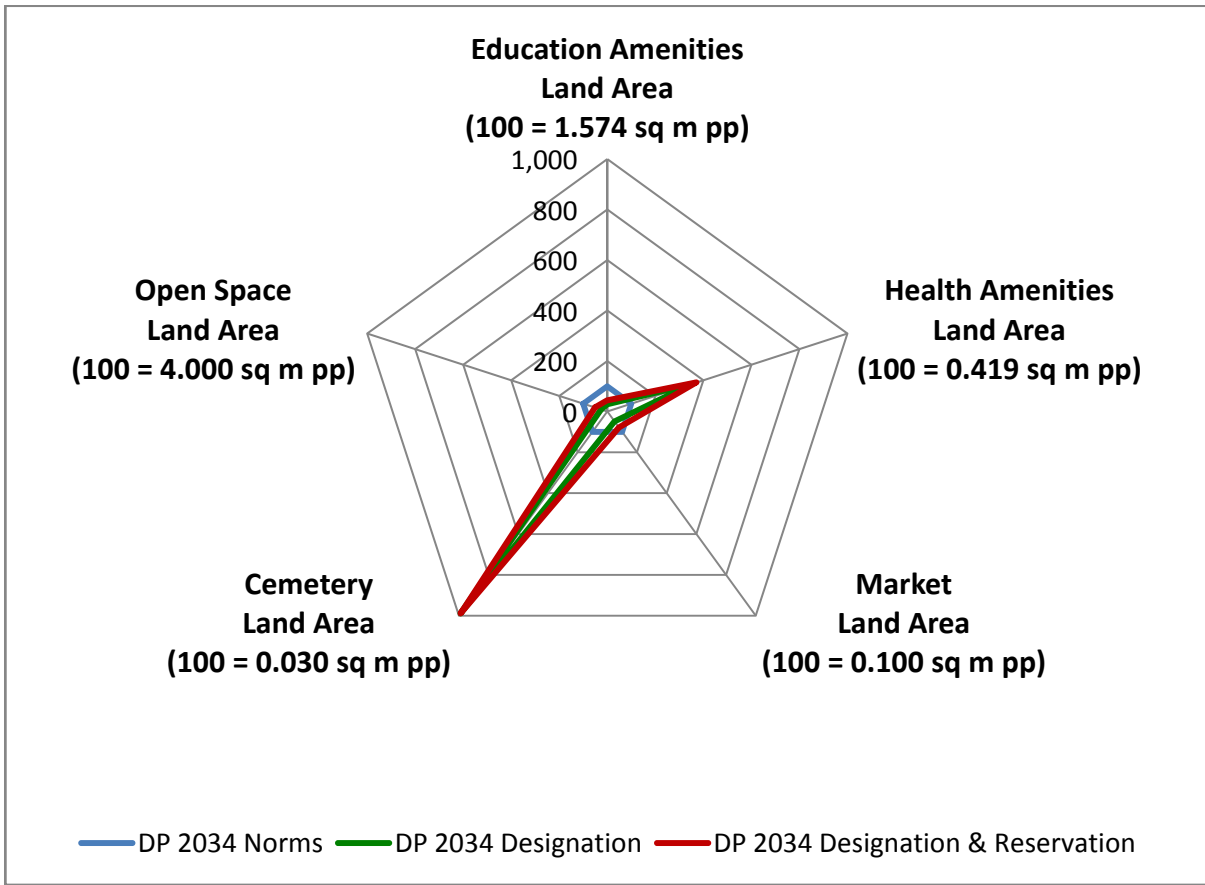
Proposed Amenities and Norms Achieved –

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/person)
1	Education	55.26	24.01	-31.25	0.684
2	Health	14.71	54.61	39.90	1.555
3	Market	3.51	2.77	-0.74	0.079
4	Cemetery	1.05	10.41	9.36	0.296
5	Open Space	140.44	71.51	-68.93	2.037

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved –



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA2.1	3
2	STUDENTS HOSTEL	RSA2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA5.2	1
4	CARE CENTRE	RSA6.1	1
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA6.2	1
6	HOMELESS SHELTER	RSA2.9	1
7	OLD AGE HOME	RSA4.9	1
8	DISASTER MANAGEMENT FACILITIES	RO3.1	1
9	STUDENTS HOSTEL (DORMITORIES - PATIENTS RELATIVES)	RSA2.7	1

Summary of New City Level Reservations Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	Museum	RSA 3.5	1
2	Film / TV Studios	RSA 7.1	1
3	Other Institute	RE 4.4	1

New Reservations which cannot be shown in the map**Below Flyover Provisions –**

Spaces under flyovers such as flyover at Hindamata Junction, Flyover at Dadar Fire Station Junction have been used for Public toilets, Dry waste segregation center, Municipal chowkies, Community spaces, Police chowky, Rest Rooms for traffic police.

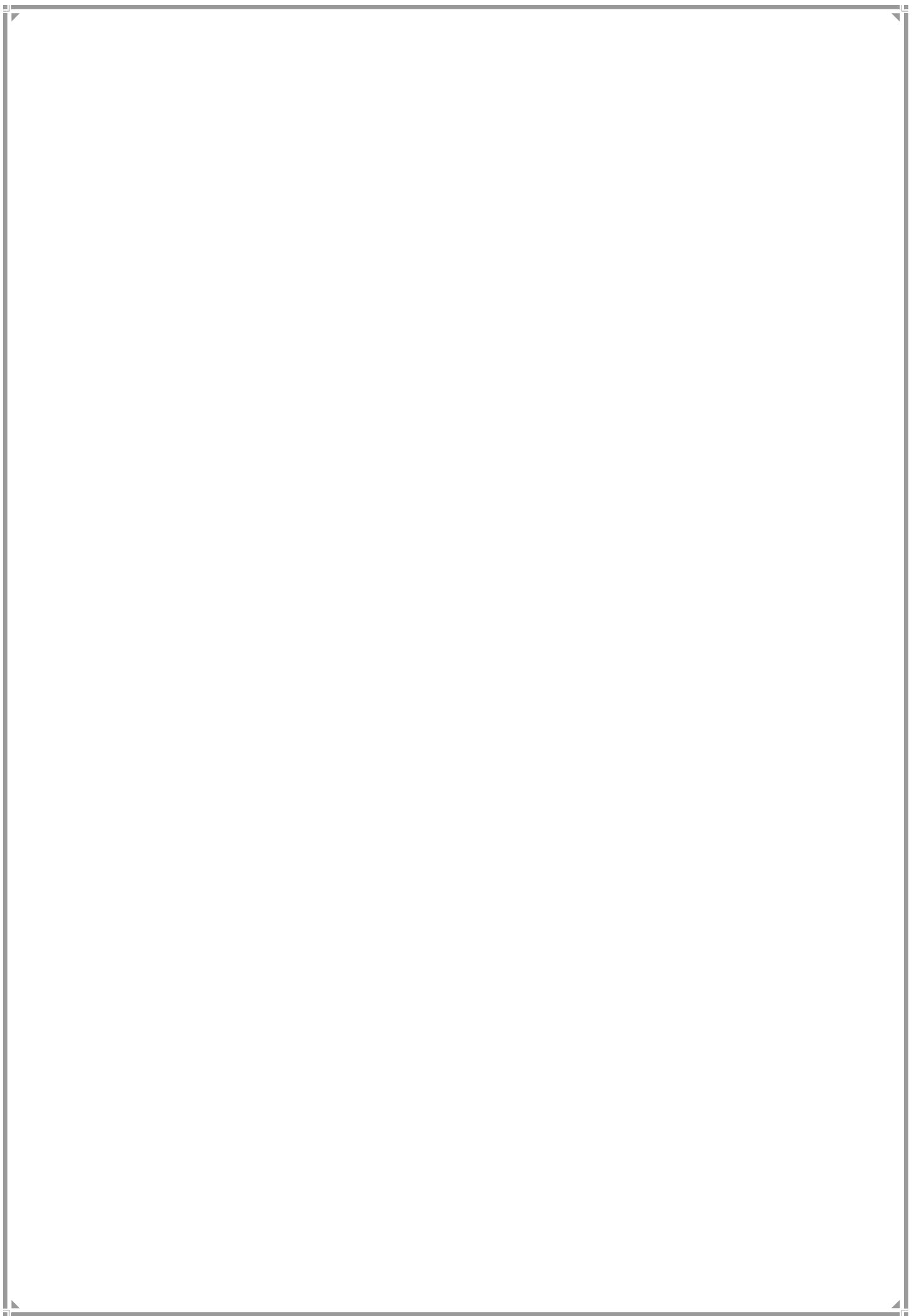
Multiple Designations and Reservations –

S.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	IC 19	49	Parel Seweri	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	DSA1.1+
2	IC 19	7/147	Parel Seweri	1.POLICE STATION(DPU3.1) 2.POLICE STAFF QUARTERS(DR1.2)	DPU3.1+
3	IC 19	6/148	Parel Seweri	1.MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1) 2.GOVERNMENT OFFICE(DO2.1)	DH1.1+
4	IC 19	6/148	Parel Seweri	1.MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1) 2.LIBRARY (DSA2.8)	(DH1.1) +
5	IC 19	3/124	Parel Seweri	1.MUNICIPAL STAFF QUARTERS (DR1.1(PT)) 2.REHABILITATION & RESETTLEMENT (DR2.1(PT))	DR1.1(PT)+
6	IC 21	156A/74	Parel Seweri	1.PRIMARY & SECONDARY SCHOOL(DE1.2) 2.COLLEGE (DE2.1)	DE1.2+

S.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
7	IC 21	138A/74	Parel Seweri	1.MUNICIPAL HOSPITAL(DH1.2) 2.OTHER MEDICAL FACILITIES(DH3.5)	DH1.2+
8	IC 21	334,335	Parel Seweri	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL STAFF QUARTER (DR1.1)	DSA1.1+
9	IC 21	209	Parel Seweri	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2. STUDENTS HOSTEL (DORMITORIES - PATIENTS RELATIVES) (RSA2.7)	DSA1.1+
10	IC 21	447, 650 (PT)	Parel Seweri	1.POLICE STATION(DPU3.1) 2.POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
11	IC 21	283/145	Parel Seweri	GOVERNMENT STAFF QUARTERS (DR1.3) GOVERNMENT OFFICE(DO2.1)	DR1.3+
12	IC 21	6/108	Parel Seweri	1.BEST STAFF QUARTERS(DR1.4) 2.BEST BUS FACILITIES(DT1.4)	DR1.4+
13	IC 21	4D/209	Parel Seweri	1.RETAIL MARKET(DSA1.2(PT)) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	DSA1.2(PT)+RSA1.1
14	IC 21	77	Parel Seweri	1.MUNICIPAL HOUSING (DR1.5(PT)) 2.MUNICIPAL STAFF QUARTERS (DR1.1(PT))	DR1.5(PT)+
15	IC 21	331-332	Parel Seweri	1.RETAIL MARKET(DSA1.2) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	DSA1.2+
16	IC 21	202	Parel Seweri	1. RESERVOIR (DMS5.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DMS5.1+
17	IC 21	138B-1/74	Parel Seweri	1.MUNICIPAL STAFF QUARTERS (DR1.1(PT)) 2. HOSPITAL (RH1.2)	DR1.1(PT)+
18	IC 21	71	Parel Seweri	1.MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT (RSA6.2)	RSA 2.1+

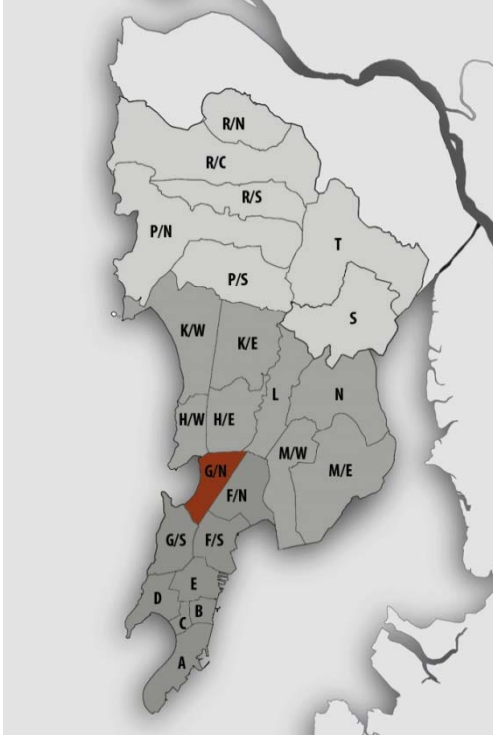
S.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
19	IC 21	71	Parel Seweri	1.MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2. CARE CENTRE (RSA6.1)	RSA 2.1+
20	IC24	12, 1/13	Dadar Naigaon	1.MUNICIPAL OFFICE(DO1.3) 2.MUNICIPAL DISPENSARY/HEALTH POST(DH1.1)	DO1.3+
21	IC24	817	Dadar Naigaon	1.PRIMARY &SECONDARY SCHOOL(DE1.2) 2.COLLEGE (DE2.1)	DE1.2+
22	IC24	706	Dadar Naigaon	1.POLICE STATION(DPU3.1) 2.POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
23	IC24	61	Dadarnaigaon	1.COURT(DPU3.5) 2. MUNICIPAL SCHOOL (DE1.1)	DPU3.5 +
24	IC24	1/705	Dadar Naigaon	1.MUNICIPAL MATERNITY HOME (DH1.3) 2.MUNICIPAL STAFF QUARTERS (DR1.1)	DH1.3+
25	IC24	54/27	Dadar Naigaon	1.FIRE STATION/ COMMAND CENTRE(DPU1.1) 2.MUNICIPAL STAFF QUARTERS (DR1.1)	DPU1.1+
26	IC24	46/62, 47/62	Dadar Naigaon	1.PRIMARY & SECONDARY SCHOOL(DE1.2) 2.COLLEGE (DE2.1)	DE1.2+
27	IC24	43/62, 44/62	Dadar Naigaon	1.PRIMARY & SECONDARY SCHOOL(DE1.2) 2.COLLEGE (DE2.1)	DE1.2+
28	IC24	17A/76	Dadar Naigaon	1.PUBLIC HALL (DSA3.8) 2.OTHER EDUCATION(DE3.1)	DSA3.8+
29	IC24	103, 1/104	Dadar Naigaon	1.MUNICIPAL RETAIL MARKET (DSA1.1 (PT)) 2.MUNICIPAL OFFICE(DO1.3 (PT))	DSA1.1(Pt)+
30	IC24	36/62,37 /62	Dadar Naigaon	1.MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2. MUNICIPAL DISPENSARY/HEALTH POST (RH1.1)	RSA2.1+

G/NORTH WARD



1. G-North Ward Profile

Location Map



JURISDICTION

Ward Area– 831.54 ha

Developed Area -98% of the ward area under MCGM Jurisdiction

SPA Area under (**Dharavi**) – 234.37 ha (shared with L & HE wards)

SPA Area under **MMRDA** - 4.7868 ha

SPA Area under **BKC (Bandra Kurla Complex)** - 589.92 ha (shared with HE & HW wards)

WARD BOUNDARIES

North – Mahim Causeway, Mahim Creek

East – Western Railway Line, Dharavi Village

West - Mahim Bay, Arabian Sea

South– Kakasaheb Gadgil Marg

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 5.82	2021 – 5.80
2011 – 5.99	2031 – 5.11
	2034 – 4.82

Density – 721pph(as per 2011 Population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities

EXISTING EDUCATION AND HEALTH AMENITIES

(Excluding SPA (Dharavi) Area)

Municipal Primary Schools – 11
 Primary & Secondary Schools– 28
 Hospitals - 4
 Dispensaries – 4
 Maternity Home-4
 Cemetery – 4

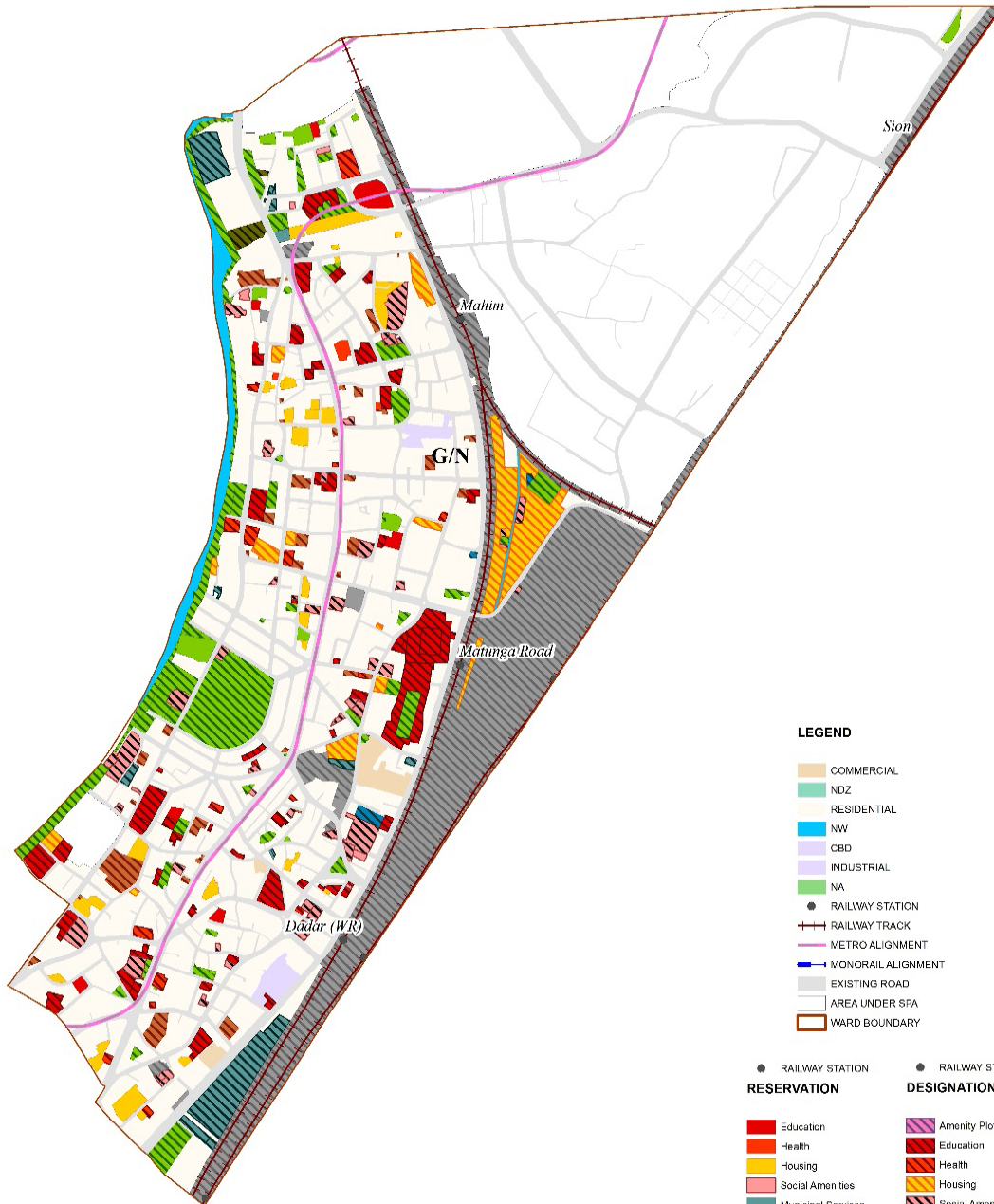
CONNECTIVITY

Major Roads: LalBahadur Shastri Marg, Senapati Bapat Marg, and Swatantryaveer Sarvarkar Marg

Suburban Railway Station - Dadar, Elphinstone Road, Matunga Road and Mahim

Future Proposals - Proposed Metro Station at Siddhivinayak Metro Station, Dadar Metro Station, Shitla Devi Metro Station and Dharavi Metro Station

Proposed Land Use Map



LEGEND

- COMMERCIAL
- NDZ
- RESIDENTIAL
- NW
- CBD
- INDUSTRIAL
- NA
- RAILWAY STATION
- RAILWAY TRACK
- METRO ALIGNMENT
- MONORAIL ALIGNMENT
- EXISTING ROAD
- AREA UNDER SPA
- WARD BOUNDARY

● RAILWAY STATION	● RAILWAY STATION
RESERVATION	DESIGNATION
Education	Amenity Plot
Health	Education
Housing	Health
Social Amenities	Housing
Municipal Services	Social Amenities
Offices	Municipal Services
Open Spaces	Offices
Primary Activities	Open Spaces
Public Utility and Facilities	Primary Activities
Transport	Public Utility and Facilities
	Transport



2. Gap Analysis

Existing Amenities and Demand Analysis -

S.No.	Amenity	Projected Population - G North Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	5,80,300	1.574	91.34	22.77
2	Health	5,80,300	0.419	24.31	3.80
3	Market	5,80,300	0.100	5.80	3.36
4	Cemetery	5,80,300	0.030	1.74	6.40
5	Open Space	5,80,300	4.000	232.12	39.33

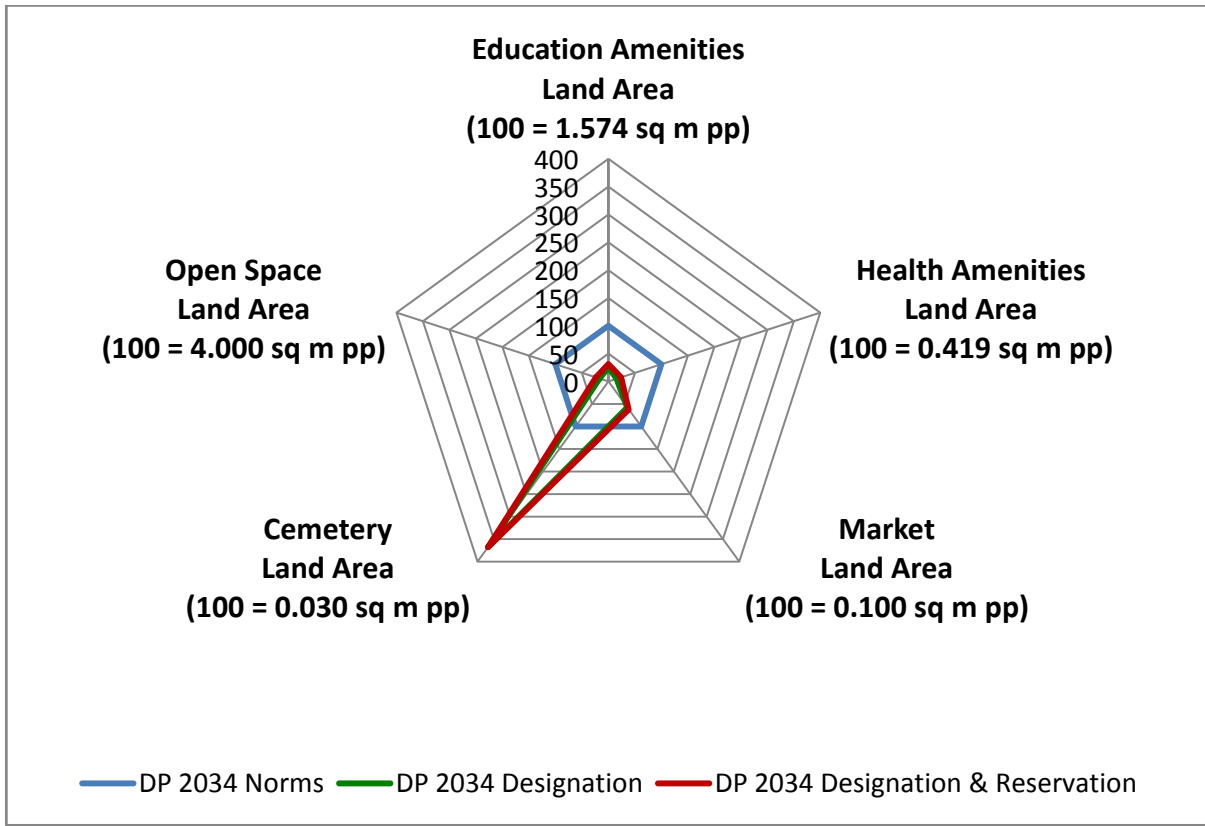
Proposed Amenities and Norms Achieved –

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	91.34	28.47	-62.87	0.491
2	Health	24.31	5.88	-18.43	0.101
3	Market	5.80	3.61	-2.19	0.062
4	Cemetery	1.74	6.40	4.66	0.110
5	Open Space	232.12	54.42	-177.70	0.938

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
2	STUDENTS HOSTEL	RSA 2.7	0
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTRE	RSA 6.1	5
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	1
6	PUBLIC CONVENIENCE	RSA 6.3	2
7	HOMELESS SHELTER	RSA 2.9	2
8	OLD AGE HOME	RSA4.9	1
9	DISASTER MANAGEMENT FACILITIES	RO3.1	1
10	MUNICIPAL STAFF QUARTERS	RR1.1	1
11	MUNICIPAL DISPENSARY/HEALTH POST	RH1.1	2
12	MUNICIPAL CHOWKY	RMS1.2	6
13	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	1

Multiple Designations and Reservations

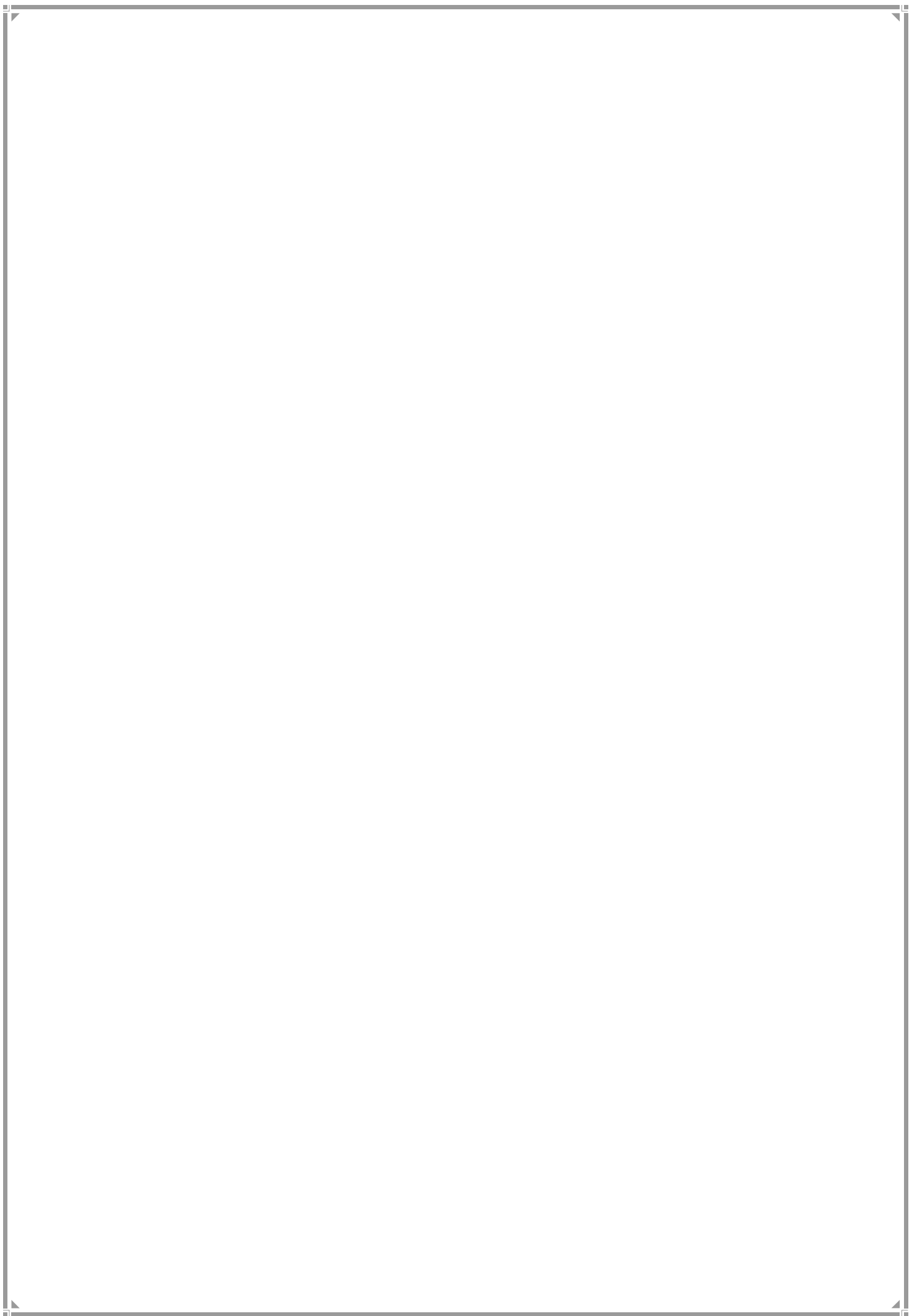
Sr. No.	DP Sheet no.	F.P. No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	IC 24	570 TPS- IV	Mahim	1. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. LIBRARY (DSA2.8)	DH1.1+
2	IC 24	546,548 TPS- IV	Mahim	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. PUBLICPARKING LOT (DT1.6 (PT))	DSA1.1+
3	IC 24	983 TPS- IV	Mahim	1. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. MUNICIPAL MATERNITY HOME (DH1.3) 3. CARE CENTER (RSA6.1)	DH1.1+
4	IC 24	404 TPS- IV	Mahim	1. POLICE STATION (DPU3.1) 2. POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
5	IC 27	286 TPS-IV	Mahim	1. MUNICIPAL SCHOOL (RE1.1) 2. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 3. CARE CENTER (RSA6.1) 4. MULTIPURPOSE COMMUNITY CENTER (RSA2.1) 5. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RE1.1+
6	IC 27	47 TPS-IV	Mahim	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9)	DSA1.1+
7	IC 27	49 TPS-IV	Mahim	1. MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1) 2. LIBRARY (DSA2.8)	DH1.1+
8	IC 27	14 TPS-IV	Mahim	1. PUBLIC HALL (DSA3.8) 2. LIBRARY (DSA2.8)	DSA3.8+
9	IC 27	13 TPS- III	Mahim	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+

Sr. No.	DP Sheet no.	F.P. No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
10	IC 27	13 TPS- III	Mahim	1. MUNICIPAL MARKET WITH VENDING ZONE (DSA1.1) 2. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	DSA1.1+
11	IC 27	37 TPS- III	Mahim	1. MUNICIPAL HOUSING (DR1.5) 2. CARE CENTER (RSA6.1)	DR1.5+
12	IC 27	205 TPS- III	Mahim	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DSA1.1+
13	IC 27	119B TPS- III	Mahim	1. MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1) 2. LIBRARY (DSA2.8)	DH1.1+
14	IC 27	1140 TPS- IV	Mahim	1. MUNICIPAL CHOWKY (DMS1.2) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DMS1.2+
15	IC 27	14 TPS- IV	Mahim	1. PUBLIC HALL (DSA3.8) 2. LIBRARY (DSA2.8)	DSA3.8+
16	IC-27 IC-29	C.S. NO. 3	Dharavi	1. LIBRARY (DSA2.8) 2. PLAY GROUND (DOS1.4) 3. GOVERNMENT STAFF QUARTERS (DR1.3)	DSA2.8+
17	IC 29	96B TPS- II	Mahim	1. BEST STAFF QUARTERS (DR1.4) 2. BEST BUS FACILITIES (DT1.4)	DR1.4+
18	IC 29	232 TPS- III	Mahim	1. RETAIL MARKET (DSA1.2) 2. MUNICIPAL OFFICE (DO1.3)	DSA1.2+
19	IC 29	249 TPS-III	Mahim	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+
20	IC 29	539 TPS- III	Mahim	1. MUNICIPAL RETAIL MARKET (DSA1.1 (PT)) 2. HOMELESS SHELTER (RSA2.9)	DSA1.1(PT) +
21	IC 29	539 TPS- III	Mahim	1. MUNICIPAL RETAIL MARKET (DSA1.1 (PT)) 2. MUNICIPAL FACILITIES (RMS1.3)	DSA1.1(PT) +

Sr. No.	DP Sheet no.	F.P. No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
22	IC 29	568B,56 6B4, 566B3, 566B1, 568A,56 6B2 & 566A TPS-II	Mahim	1. MUNICIPAL STAFF QUARTERS (DR1.1) 2. CARE CENTER (RSA6.1)	DR1.1+
23	IC 29	355 TPS-III	Mahim	1. REHABILITATION CENTER (DH3.3) 2. OTHER SOCIAL AMENITY (DSA4.9)	DH3.3+
24	IC 29	1095, 1096, 1/1391	Mahim	1. ORPHANAGE (DSA2.3) 2. PRIMARY & SECONDARY SCHOOL (DE1.2)	DSA2.3+
25	IC 29	1/1379, 2/1379, 3/1379, 4/1379, 5/1379, 6/0379, 7/1379, 8/1379, 9/1379, 1381, 1382,13 83, 1388,13 78, 1380,13 87, 1/1385, 2/1389, 1389,3/ 1389, 1/1371, 1379	Mahim	1. MULTI PURPOSE COMMUNITY CENTRE (RSA2.1) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RSA2.1+
26	IC 29	1395- 1397 & 1399	Mahim	1. POLICE STATION (DPU3.1) 2. POLICE STAFF QUARTERS (DR1.2)	DPU3.1+

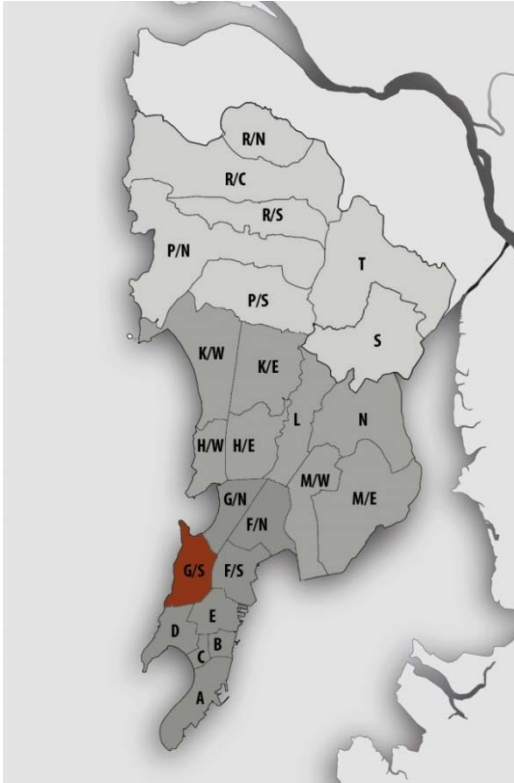
Sr. No.	DP Sheet no.	F.P. No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
27	IC 29	766 TPS- III	Mahim	1. BEST BUS FACILITES (DT1.4) 2. BEST STAFF QUARTERS (DR1.4)	DT1.4+
28	IC 29	1462	Mahim	3. SOLID WASTE MANAGEMENT FACILITIES (RMS 3.1) 4. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES(RMS5.5) 5. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 6. OLD AGE HOME (RSA4.9)	RMS3.1+
29	IC 29	1/1408, 2124, 2116,15 05, 1505(PT)	Mahim	1. REHABILITATION & RESETTLEMENT (RR2.1) 2. DISASTER MANAGEMENT FACILITIES (RO3.1) 3. MUNICIPAL FACILITIES (RMS1.3) 4. SCRAP YARD (RMS3.3) 5. PUBLIC CONVENIENCE (RSA6.3) 6. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RR2.1+
30	IC-29	1506	Mahim	1. MUNICIPAL MARKET WITH VENDING ZONE(RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
31	IC-29	2116	Mahim	1. PLAY GROUND (DOS1.4) 2. COLLEGE (DE2.1)	DOS1.4+
32	IC-31	2/1505	Mahim	1. GARDEN / PARK (DOS1.5) 2. MUNICIPAL CHOWKY (DMS1.2)	DOS1.5+
33	IC-31	1502	Mahim	1. MUNICIPAL CHOWKY (DMS1.2) 2. WATER PUMPING STATION (DMS5.2)	DMS1.2+
34	IC-31	1470	Mahim	1. SEWAGE PUMPING STATION (DMS4.3) 2. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITIES (DPU5.2)	DMS4.3+

G/SOUTH WARD



1. G-South Ward Profile

Location Map



JURISDICTION

Ward Area – 974.11 ha

Developed Area – 817.85 ha

(83.96 % of Ward Area)

WARD BOUNDARIES

North – Kakasaheb Gadgil Marg, Kashinath Dhuru Marg

East – Central Railway Line

West – Arabian Sea

South – Keshavrao Khade Marg

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 4.58	2021 – 3.44
2011 – 3.78	2031 – 2.81
	2034 – 2.64

Density – 388 pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 23

Primary and Secondary School –16

Health post / Dispensary -13

Municipal Maternity Home - 1

Cemetery -7

CONNECTIVITY

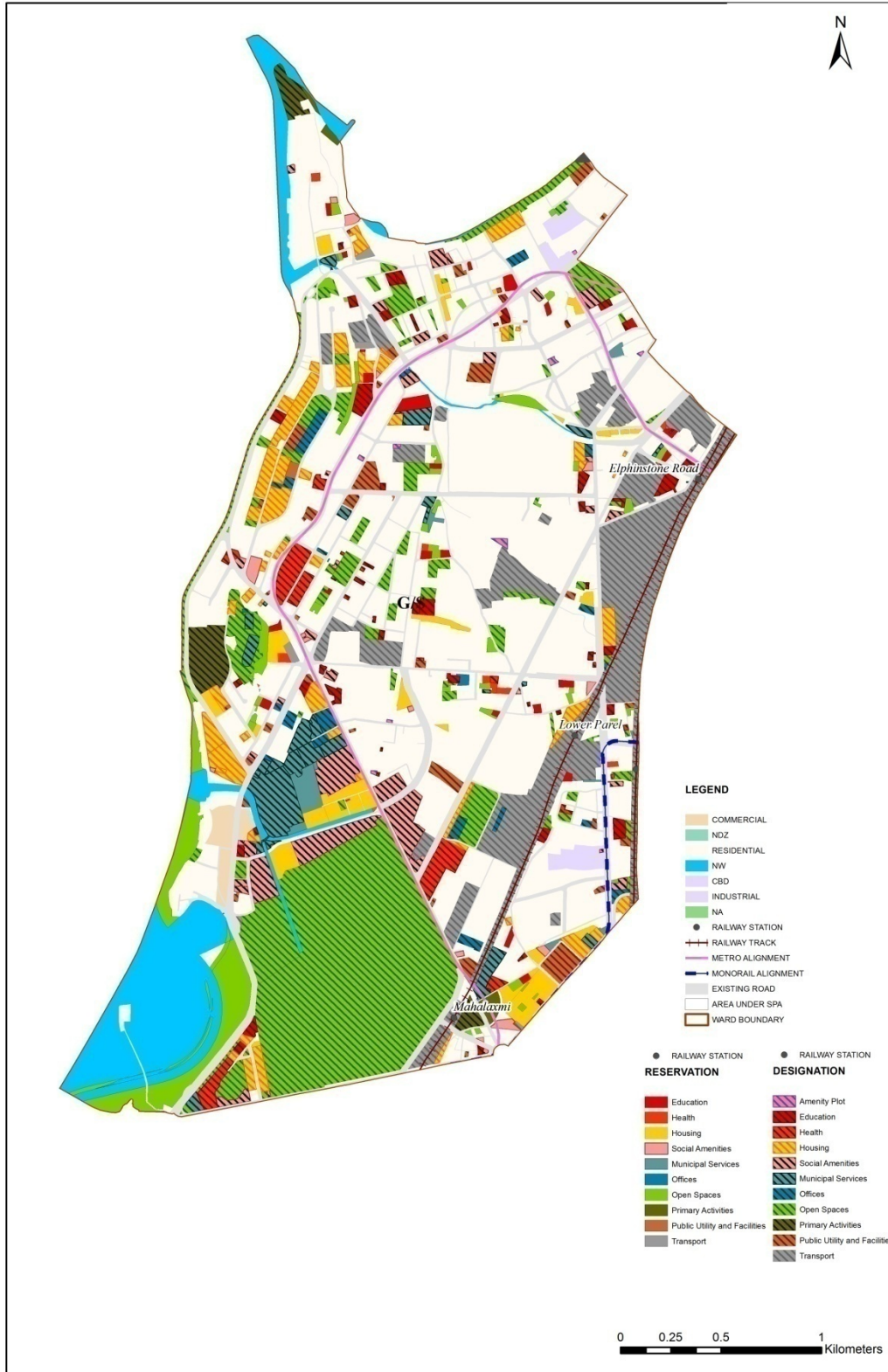
Major Roads: N. M. Joshi Marg, Senapati Bapat Marg, Dr. Annie Besant, E Mozes Road, Keshavrao Khade Marg, Sane Guruji Marg Pandurang Budhkar Marg, Swatantraveer Sawarkar Marg

Western Railway Station – Lower Parel & Elphinstone Bridge, Curry Road

Future Proposals: Metro Station: Sidhhivinayak, Dadar Metro, Science Museum, Acharya Atrre Chowk, Worli

Mono Rail Station: Gadge Maharaj Chowk, Chinchpokali, Lower Parel

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – G South Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	3,44,279	1.574	54.19	11.72
2	Health	3,44,279	0.419	14.43	9.69
3	Market	3,44,279	0.100	3.44	0.75
4	Cemetery	3,44,279	0.030	1.03	9.81
5	Open Space	3,44,279	4.000	137.71	140.62

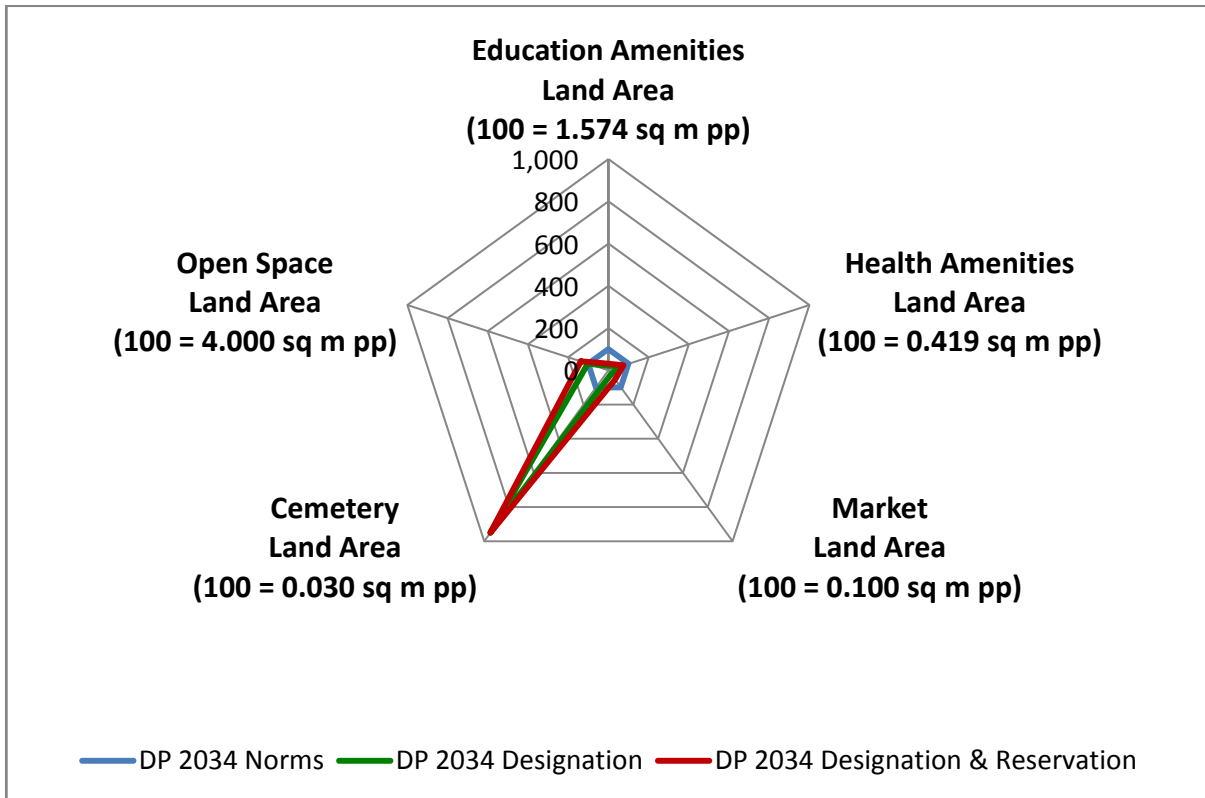
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	54.19	16.61	-37.58	0.482
2	Health	14.43	10.81	-3.62	0.314
3	Market	3.44	1.87	-1.57	0.054
4	Cemetery	1.03	9.81	8.78	0.285
5	Open Space	137.71	188.31	50.60	5.470

Note:

1. Additional POS would be available from the redevelopment of cessed/non-cessed buildings.
2. The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTRE	RSA 6.1	5
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	1
6	PUBLIC CONVENIENCE	RSA 6.3	33
7	HOMELESS SHELTER	RSA 2.9	4
8	OLD AGE HOME	RSA4.9	1
9	DISASTER MANAGEMENT FACILITIES	RO3.1	1
10	MUNICIPAL OFFICE	RO1.3	1
11	MUNICIPAL CHOWKY	RMS1.2	1
12	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	1
13	MUNICIPAL MARKET WITH VENDING ZONE	RSA1.1	1
14	SCRAP YARD	RMS 3.3	1

Multiple Designations and Reservations

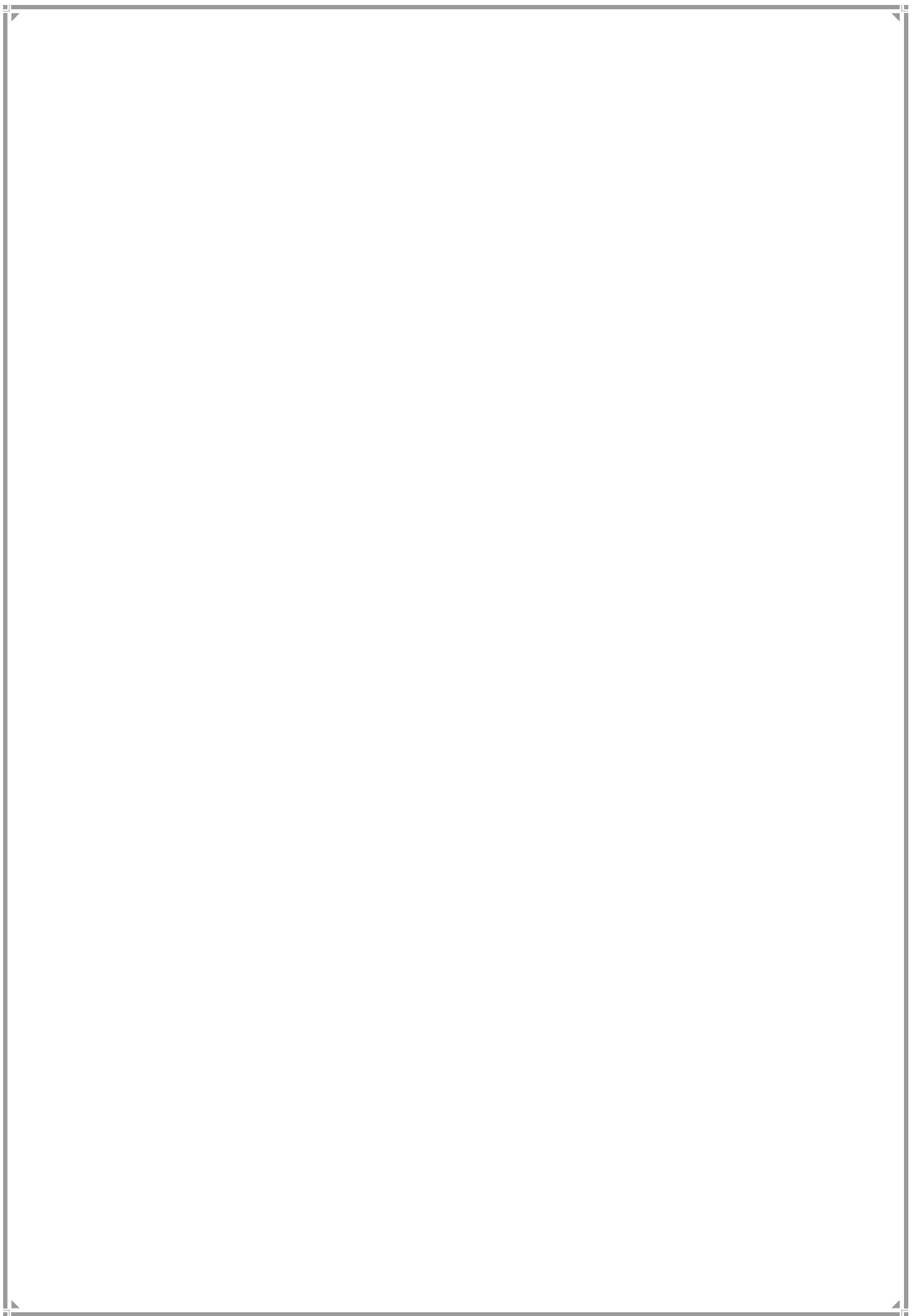
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1	IC 18	1575	Lower Parel	1. WOMEN HOSTEL (DSA2.6) 2. CARE CENTER (RSA6.1)	DSA2.6+
2	IC 18	72, 43, 1/9999	Lower Parel	1. MUNICIPAL SCHOOL (DE1.1) 2. OTHER EDUCATION (DE3.1)	DE1.1+
3	IC 18	1/69	Lower Parel	1. GOVERNMENT HOSPITAL (DH 2.1) 2. OLD AGE HOME (RSA 4.9)	DH2.1+
4	IC 18	2/80, 1/80, 80	Lower Parel	1. PUBLIC HALL (DSA3.8) 2. CLUB / GYMKHANA (DOS2.1) 3. PRIMARY & SECONDARY SCHOOL (DE1.2)	DSA3.8+
5	IC 18	2/102	Lower Parel	1. GOVERNMENT OFFICE (DO2.1) 2. GOVERNMENT STAFF QUARTERS (DR1.3)	DO2.1+
6	IC 18	47/10, 47 (pt)	Lower Parel	1. MUNICIPAL HOUSING (DR1.5) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DR1.5+
7	IC 18	58, 80	Lower Parel	1. MUNICIPAL OFFICE (DO1.3) 2. MUNICIPAL CHOWKY (DMS1.2)	DO1.3+
8	IC 18	1	Lower Parel	1. MUNICIPAL HOUSING (RR1.5) 2. MUNICIPAL DISPENSARY / HEALTH POST (RH1.1)	RR1.5+
9	IC 18	1	Lower Parel	1. ROAD DEPOT (RMS1.1) 2. MUNICIPAL CHOWKY (RMS1.2)	RMS1.1+
10	IC 20	47(PT)	Lower Parel	1. SEWAGE TREATMENT PLANT / FACILITIES (DMS 4.1) 2. DISASTER MANAGEMENT FACILITIES (RO 3.1) 3. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS 5.5)	DMS4.1+
11	IC 20	151, 154	Lower Parel	1. WELFARE CENTER (DSA2.5) 2. LIBRARY (DSA2.8)	DSA2.5+

Sr.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
				3.MUNICIPAL DISPENSARY / HEALTH POST (DH1.1)	
12	IC 20	983	Worli	1.MUNICIPAL STAFF QUARTERS (DR1.1) 2.MUNICIPAL HOUSING (DR1.5)	DR1.1+
13	IC 20	1/173, 173	Lower Parel	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL HOUSING (DR1.5)	DSA1.1+
14	IC 20	983	Worli	1.MULCIPAL STAFF QUARTERS (DR1.1) 2.MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 3.CARE CENTRE (RSA6.1)	DR1.1+
15	IC 20	47(PT)	Lower Parel	1.SEWAGE PUMPING STATION (DMS4.3) 2.STORM WATER PUMPING STATION (DMS6.1)	DMS4.3+
16	IC 20	227 to 230, 230/1, 154, 231	Lower Parel	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2.HOMELESS SHELTER (RSA2.9)	RSA1.1+
17	IC 20	1/149	Lower Parel	1.MUNICIPAL DISPENSARY / HEALTH POST (RH1.1) 2.REHABILITATION & RESETTLEMENT (RR2.1)	RH1.1+
18	IC 20	1/265, 437, 268, 286	Lower Parel	1.REHABILITATION & RESETTLEMENT (RR2.1) 2.HOMELESS SHELTER (RSA2.9)	RR2.1+
19	IC 20	983	Worli	1.MULTIPURPOSE COMMUNITY CENTER (RSA2.1) 2.CARE CENTER (RSA6.1)	RSA2.1+
20	IC 20	256, 257	Lower Parel	1.MUNICIPAL DISPENSARY / HEALTH POST (RH1.1) 2.REHABILITATION & RESETTLEMENT (RR2.1)	RH1.1+
21	IC 20	286, 782	Lower Parel	1.ROAD DEPOT (RMS1.1) 2.MUNICIPAL STAFF QUARTERS(RR1.1)	RMS1.1+

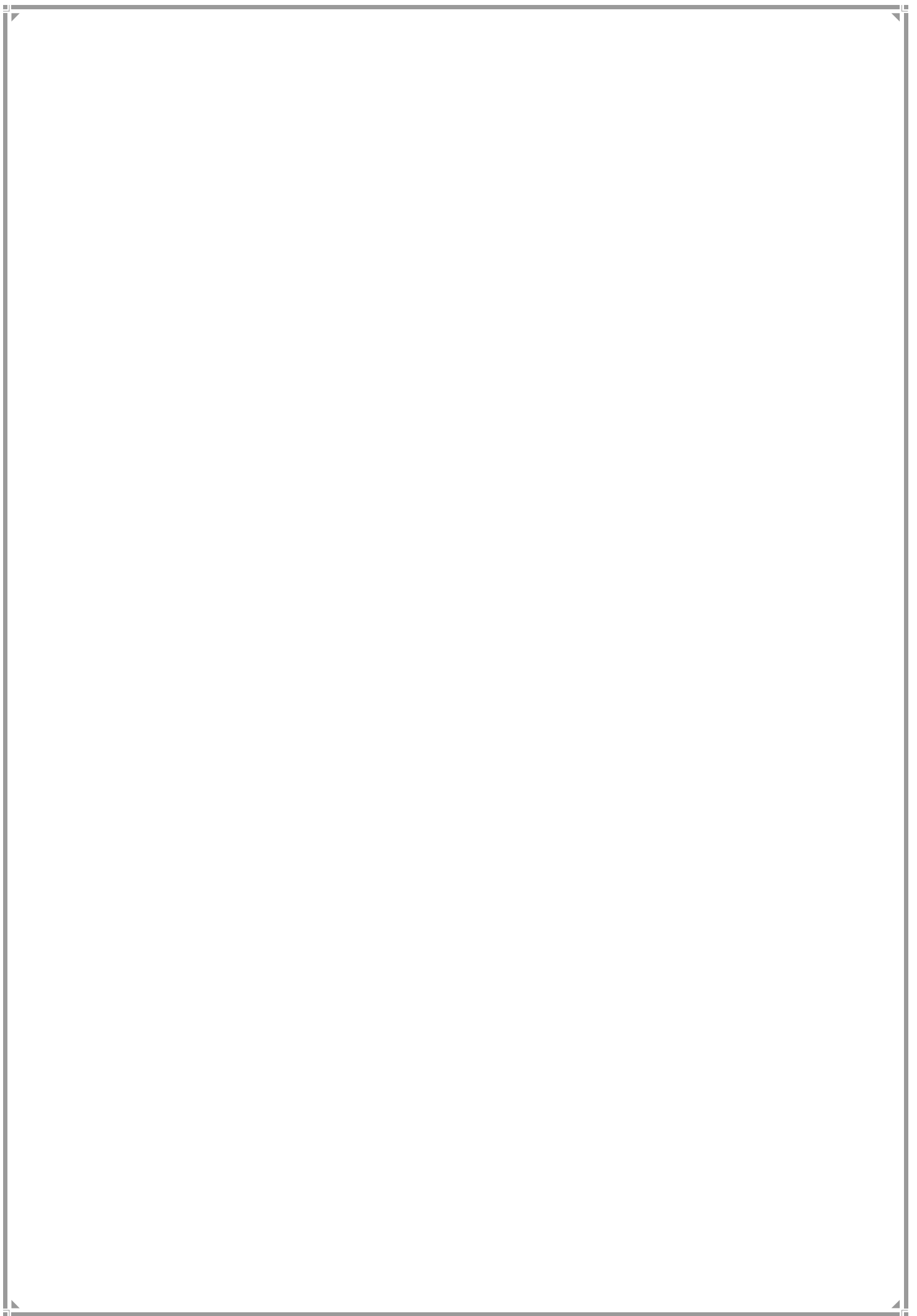
Sr.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
22	IC 20	47(PT)	Lower Parel	1.SEWAGE TREATMENT PLANT / FACILITIES (RMS 4.1) 2.SOLID WASTE MANAGEMENT FACILITIES (RMS3.1)	RMS4.1+
23	IC 20,23	1544/9999, 837, 837/1	Lower Parel	1. WELFARE CENTRE (DSA2.5) 2.AD HAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 3.CARE CENTRE (RSA6.1.)	DSA2.5+
24	IC 23	1/198, 778-780	Worli	1.BEST BUS FACILITIES (DT1.4) 2.BEST STAFF QUARTERS (DR1.4)	DT1.4+
25	IC 23	998	Worli	1.WELFARE CENTRE (DSA 2.5) 2.CARE CENTRE (RSA 6.1)	DSA2.5+
26	IC 23	1624	Lower Parel	1.TELEPHONE EXCHANGE (DPU4.2) 2.GOV'T STAFF QTRS (DR1.3)	DPU4.2+
27	IC 23	209, 1638	Worli, Lower Parel	1Z.ELECTRIC TRANSMISSION AND DISTRIBUTION FACILITY (DPU5.2) 2. BEST STAFF QUARTERS (DR1.4)	DPU5.2+
28	IC 23	1629	Lower Parel	1.MUNICIPAL STAFF QUARTERS (DR1.1) 2.MUNICIPAL HOUSING (DR1.5)	DR1.1+
29	IC 23	4/830, 833	Lower Parel	1. MUNICIPAL STAFF QUARTERS (DR1.1) 2.MUNICIPAL DISPENSARY / HEATH POST (DH1.1)	DR1.1+
30	IC 23	2/914, 913, 286	Lower Parel	1.PARKING LOT (DT1.6) 2.DAM	DT1.6(PT)+
31	IC 23	209	Worli	1.PRIMARY & SECONDARY SCHOOL (DE1.2) 2.STUDENT HOSTEL (RSA2.7)	DE1.2+
32	IC 23	224, 225, 208	Worli	1.STORM WATER PUMPING STATION (DMS6.1) 2.SEWAGE PUMPING STATION (DMS4.3)	DMS6.1+
33	IC 23	905	Mahim	1. PLAY GROUND (DOS1.4)	DOS1.4+

Sr.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
				2.SPORTS COMPLEX / STADIUM (DOS2.5) 3. PARKING LOT (DT1.6) 4. SHOPPING CENTER (DSA1.4)	
34	IC 23	1028	Mahim	1.SOLID WASTE MANAGEMENT FACILITIES (RMS 3.1) 2.MUNICIPAL FACILITIES (RMS1.3) 3.HOMELESS SHELTER (RSA2.9)	RMS3.1+
35	IC 26	259 to 265, 262/1, 263/1, 224/1, 224, 330, 331, 333	Worli	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2.KOLI HOUSING (RR3.1)	RSA1.1+

WESTERN SUBURB WARDS

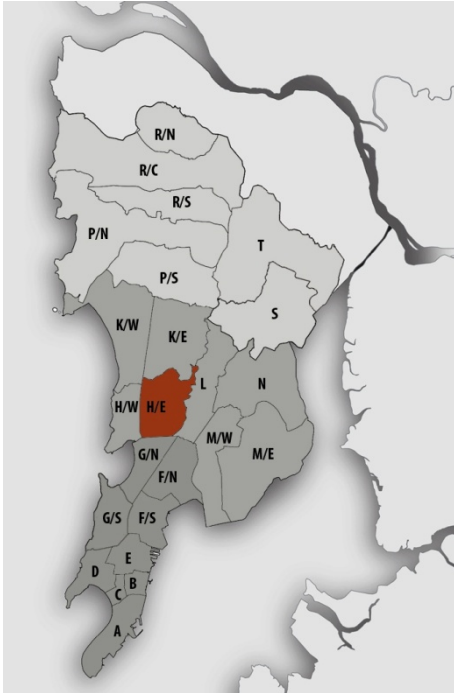


H/EAST WARD



1. H-East Ward Profile

Location Map



JURISDICTION

Ward Area–1241.93ha

Ward Area under SPA–583.98ha

Ward Area under MCGM jurisdiction - 657.94ha

Developed Area –97.14 %

WARD BOUNDARIES

North - Vile Parle subway

East -Mithi River, C.S.T Road and Santacruz (East)

West - Western Railway Line

South - Dharavi Link Road

POPULATION

Existing
(in lakhs)

2001 –5.81

2011 –5.57

Projected
(in lakhs)

2021 –5.56

2031 –5.18

2034 – 4.92

Density –448pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 8

Primary &Secondary Schools – 18

Hospitals - 2

Dispensaries – 7

Maternity Home - 1

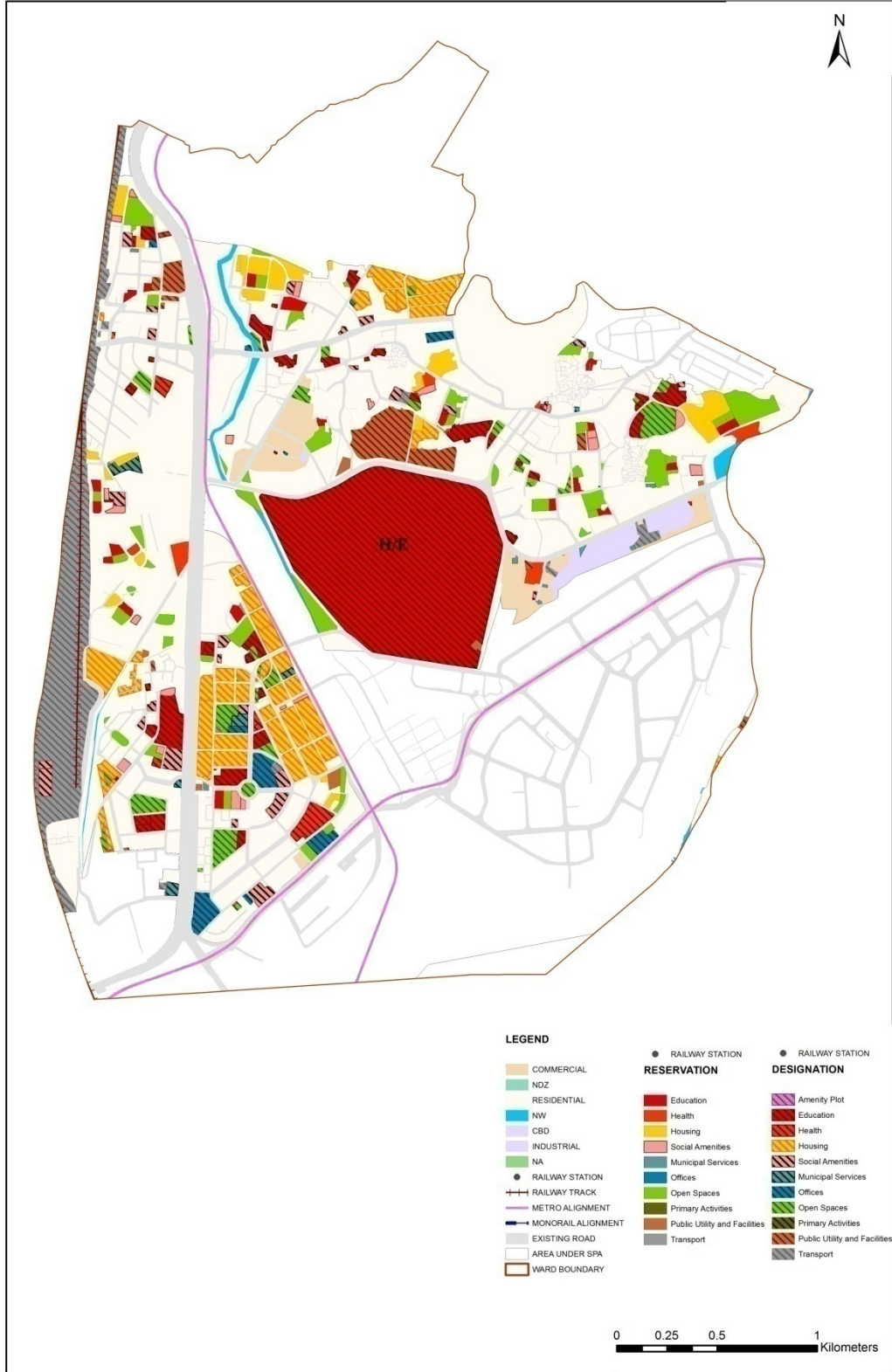
Cemetery – 2

CONNECTIVITY

Major Roads –Western Express Highway , Jawaharlal Nehru Road, CST Road , Hans-Bhugra Road (Santacruz –Chembur Link Road),Kalina-Kurla Road.

Railway Stations – Khar Railway Station, Santacruz Railway Station, Bandra Railway station& Bandra Terminus.

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – H East Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	5,56,893	1.574	87.65	100.10
2	Health	5,56,893	0.419	23.33	4.05
3	Market	5,56,893	0.100	5.57	1.85
4	Cemetery	5,56,893	0.030	1.67	1.78
5	Open Space	5,56,893	4.000	222.76	37.54

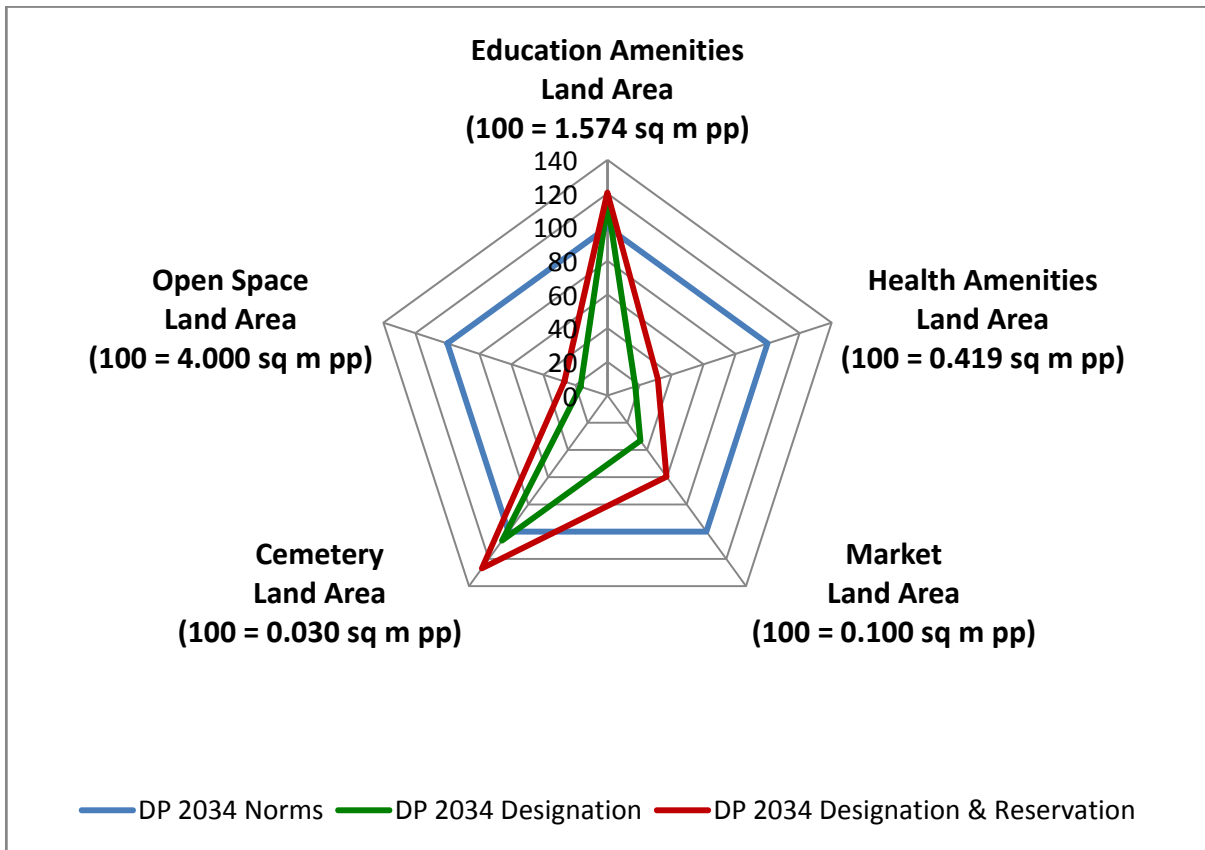
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	87.65	105.65	18.00	1.897
2	Health	23.33	7.34	-15.99	0.132
3	Market	5.57	3.32	-2.25	0.060
4	Cemetery	1.67	2.12	0.45	0.038
5	Open Space	222.76	60.05	-162.71	1.078

Note:

The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	2
4	CARE CENTRE	RSA 6.1	4
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	3
6	PUBLIC CONVENIENCE	RSA 6.3	5
7	HOMELESS SHELTER	RSA 2.9	3
8	OLD AGE HOME	RSA4.9	1
9	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
10	RETAIL MARKET WITH VENDING ZONE	RSA 1.2	1
11	SCRAP YARD	RMS 3.3	2
12	MUNICIPAL CHOWKY	RMS1.2	2
13	MUNICIPAL FACILITIES	RMS 1.3	1
14	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	1
15	HYDRAULIC ENGINEERING DEPARTMENT FACILITY	RMS 5.5	1

New Reservations which cannot be shown in the map

1. Shamrao Vitthal Bank, J.N. Road, CTS 961(pt) – Use of Reading room/ Abhyasika, Study Rooms for Students is proposed in addition to existing Library use.
2. Windsor Lane, CTS 5436 (B) - Use of Reading room/ Abhyasika, Community Centre, and Meeting Room, is proposed in addition to existing Library use.

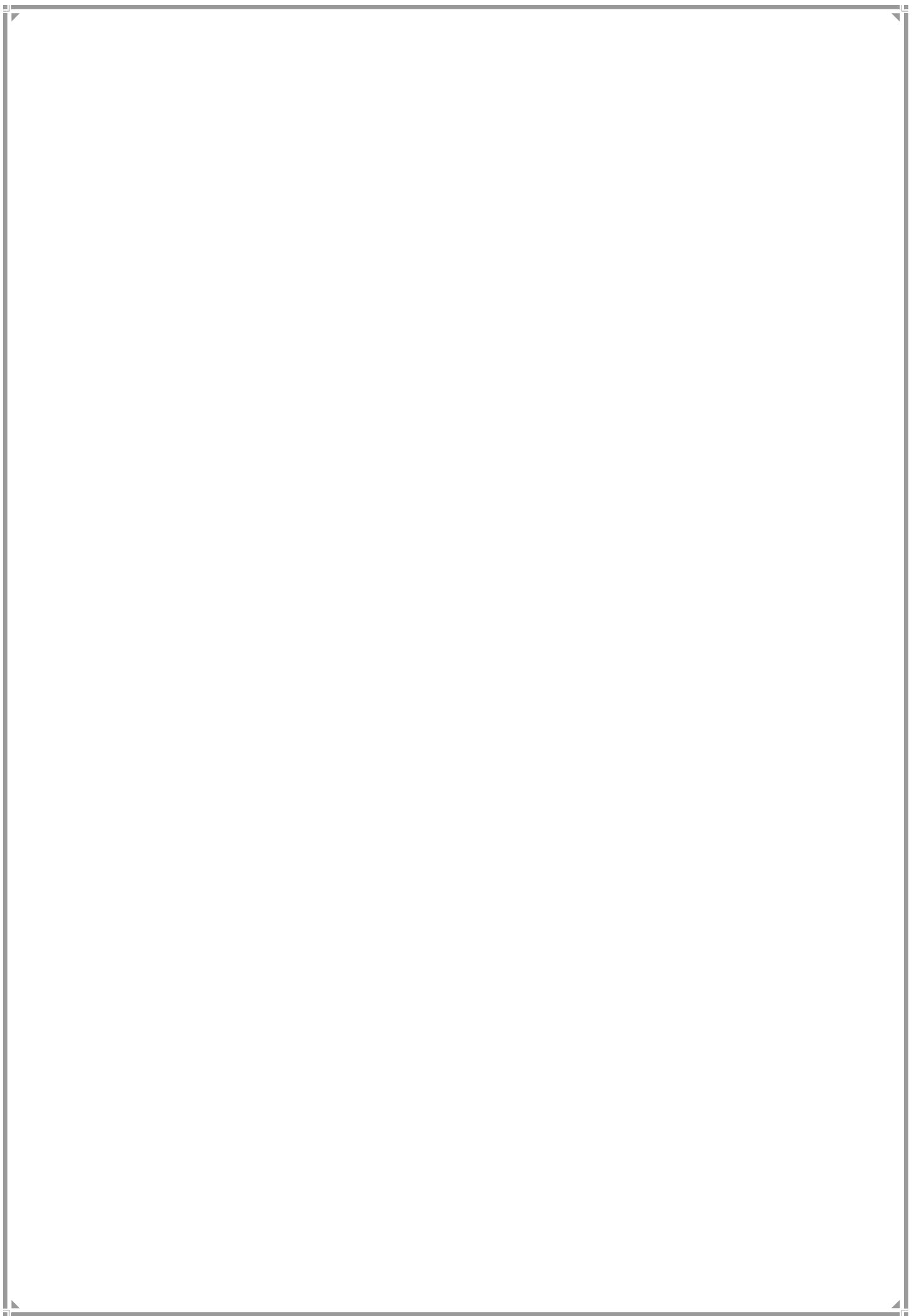
Multiple Designations and Reservations

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS06	629(PT)	Bandra East	1. POLICE STATION (DPU3.1) 2. POLICE FACILITIES (DPU 3.4)	DPU3.1+
2	WS06	590,591	Bandra East	1.WELFARE CENTRE(DSA 2.5) 2.GARDEN/PARK (DOS 1.5)	DSA2.5+
3	WS06	-	Bandra East	1.MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. MUNICIPAL DISPENSARY / HEALTH POST (RH 1.1)	RSA 2.1+
4	WS06	633(pt)	Bandra East	1.OTHER EDUCATION (RE 3.1) 2. STUDENTS HOSTEL (RSA 2.7)	RE 3.1+
5	WS06	589(pt)	Bandra East	1.PLAY GROUND (ROS 1.4) 2. PUBLIC CONVENIENCE (RSA 6.3)	ROS 1.4+
6	WS06	589(pt)	Bandra East	1.MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. CARE CENTRE(RSA 6.1) 3.AD HAR KENDRA WITH SKILL DEVELOPMENT CENTER(RSA 6.2)	RSA 2.1+
7	WS06	629/999 9	Bandra East	1. WATER PUMPING STATION (DMS 5.2) 2.RESERVOIR (DMS 5.1)	DMS 5.2 +
8	WS06	30	Bandra East	1. MUNICIPAL MATERNITY HOME (RH 1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1)	RH 1.3+
9	WS06	444,445, 448,443	Bandra East	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1)	RSA 2.1+

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
10	WS07	5530(A)	Kolekalyan	1.SCRAP YARD (RMS 3.3) 2. PUBLIC CONVENIENCE (RSA 6.3)	RMS 3.3+
11	WS09	-	Kolekalyan	1.LIBRARY (DSA 2.8) 2.MUNICIPAL DISPENSARY / HEALTH POST (DH1.1)	DSA 2.8+
12	WS09	-	Kolekalyan	1.MUNICIPAL SCHOOL (DE1.1) 2. SPECIAL SCHOOL (DE 1.3)	DE 1.1+
13	WS09	964 & 965	Kolekalyan	1.MUNICIPAL RETAIL MARKET (DSA 1.1) 2. MUNICIPAL OFFICE (DO 1.3) 3. HOMELESS SHELTER(RSA 2.9)	DSA 1.1+
14	WS09	2/17	Kolekalyan	1.PLAY GROUND (DOS 1.4) 2. PUBLIC CONVENIENCE(RSA 6.3)	DOS 1.4 +
15	WS09	401,402, 426,455, 692	Kolekalyan	1.PRIMARY AND SECONDARY SCHOOL (RE1.2) 2. HIGHER EDUCATION(RE2.1)	RE1.2+
16	WS09	-	Kolekalyan	1.MUNICIPAL MARKET WITH VENDING ZONE(RSA 1.1) 2. REHABILITATION AND RESETTLEMENT (RR2.1)	RSA1.1+
17	WS09	1930 TO 1937 & 1939(PT)	Kolekalyan	1.MUNICIPAL MATERNITY HOME (RH 1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1)	RH1.3+
18	WS09	1890,1801	Kolekalyan	1.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE(RSA 6.2) 2. CARE CENTRE (RSA 6.1) 3. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2)	RSA 6.2+
19	WS09	FP 60	Bandra East	1. GARDEN/PARK (DOS 1.5) 2.SEWEAGE TREATMENT PLANT/FACILITIES (DMS4.1)	DOS 1.5 +
20	WS09	FP 36	Bandra East	1. RECREATION GROUND (DOS 2.6) 2.CLUBS/GYMKHANA (DOS 2.1)	DOS 2.6 +
21	WS09	19	Bandra East	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1)	RSA 2.1+

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
22	WS09	692,401, 402,426, 435	Kolekalyan	1.PRIMARY AND SECONDARY SCHOOL(RE 1.2) 2. HIGHER EDUCATION (RE2.1)	RE 1.2+
23	WS10	6544	Kolekalyan - Kalina	1.PLAY GROUND (DOS 1.4) 2. TANKS/PONDS/LAKES (DOS 1.1)	DOS 1.4+
24	WS10	5862,58 63,5871	Kolekalyan - Kalina	1.MUNICIPAL MARKET WITH VENDING ZONE(RSA 1.1) 2. HOMELESS SHELTER (RSA 2.9)	RSA 1.1+
25	WS10	7301/17, 7301/18	Kolekalyan- Kalina	1.RETAIL MARKET WITH VENDING ZONE(RSA 1.2) 2. HOMELESS SHELTER (RSA 2.9)	RSA 1.2+
26	WS10	5144	Kolekalyan	1.SCRAP YARD (RMS 3.3) 2. PUBLIC CONVENIENCE (RSA 6.3)	RMS 3.3+
27	WS12	FP 133	Bandra East	1.MUNICIPAL DISPENSARY /HEALTH POST (DH 1.1) 2. PRIMARY AND SECONDARY SCHOOL (DE1.2)	DH 1.1+
28	WS12	FP 156	Bandra East	1.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 2.CARE CENTRE (RSA 6.1) 3. PUBLIC CONVENIENCE (RSA 6.3)	RSA 6.2 +
29	WS12	FP 153	Bandra East	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2) 2. CARE CENTRE (RSA 6.1)	RSA 5.2 +

H/WEST WARD



1. H-West Ward Profile

Location Map



JURISDICTION

Ward Area - 865.04 ha
(MCGM Area)+ 92 ha (Area under SPA (BKC), out of total 589.92 ha that is shared with H.E ward)

Developed Area -766 ha (MCGM Area)
(Constitutes 88.55% of Ward Area)

WARD BOUNDARIES

North - Milan Subway Road

East - Western Railway Line

West - Carter Road along the Western Coastline

South - Mahim Causeway

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 3.37	2021 – 2.87
2011 – 3.08	2031 – 2.33
	2034 – 2.87

Density –341pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 12
Primary and Secondary School – 31
Municipal dispensary/Health post – 9
Special School & other Education - 4
Municipal hospital – 2
Maternity home/Postpartum centre – 2
Cemetery- 7

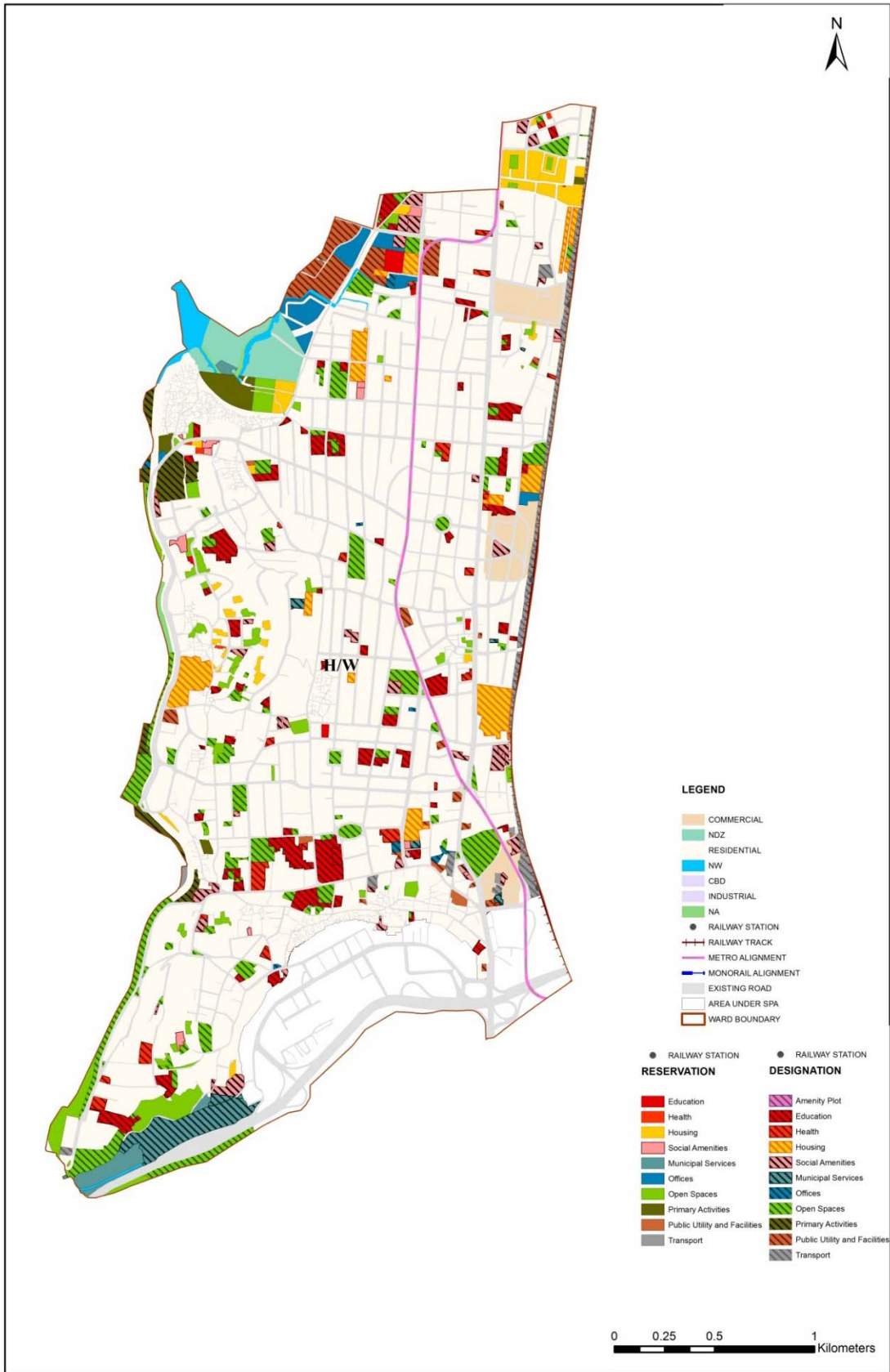
CONNECTIVITY

Major Roads – Carter road, Milan subway road, Mahim cause way, SV Road, Pali hill road, Linking road, Ambedkar road and Hill road serving as the most predominant road networks within & around the ward.

Suburban Railway Stations – Bandra station, Khar station & Santacruz railway station

Future Proposals– Bandra Metro station & coastal road stretch skirting the Bandra fort while connecting coastal freeway up to Chimbai village, where a bridge is proposed.

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – H West Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	2,87,712	1.574	45.29	26.79
2	Health	2,87,712	0.419	12.06	6.56
3	Market	2,87,712	0.100	2.88	2.26
4	Cemetery	2,87,712	0.030	0.86	4.39
5	Open Space	2,87,712	4.000	115.08	45.11

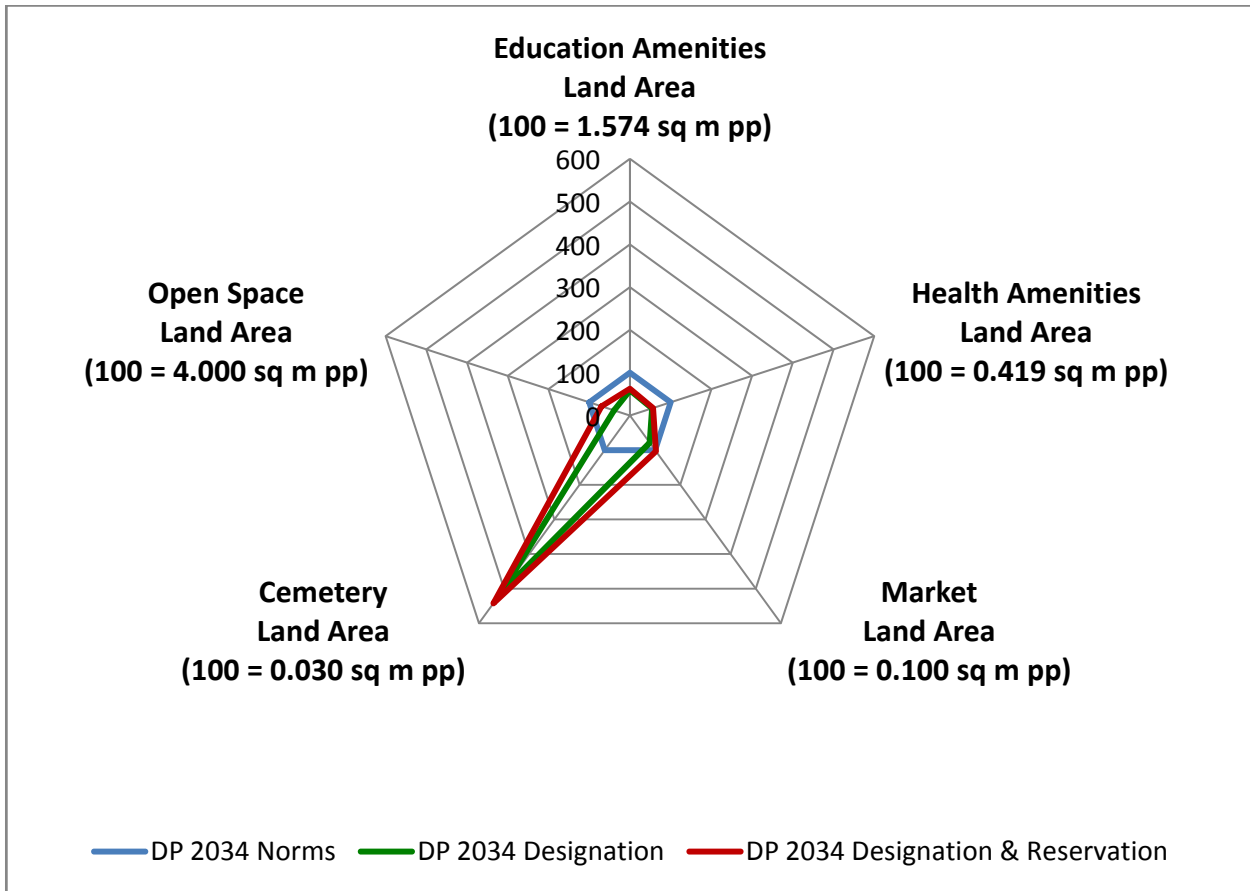
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	45.29	28.39	-16.90	0.987
2	Health	12.06	6.87	-5.18	0.239
3	Market	2.88	2.97	0.10	0.103
4	Cemetery	0.86	4.68	3.82	0.163
5	Open Space	115.08	80.51	-34.58	2.798

Note:

The norms for S.No. 1, 2 & 3 above would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



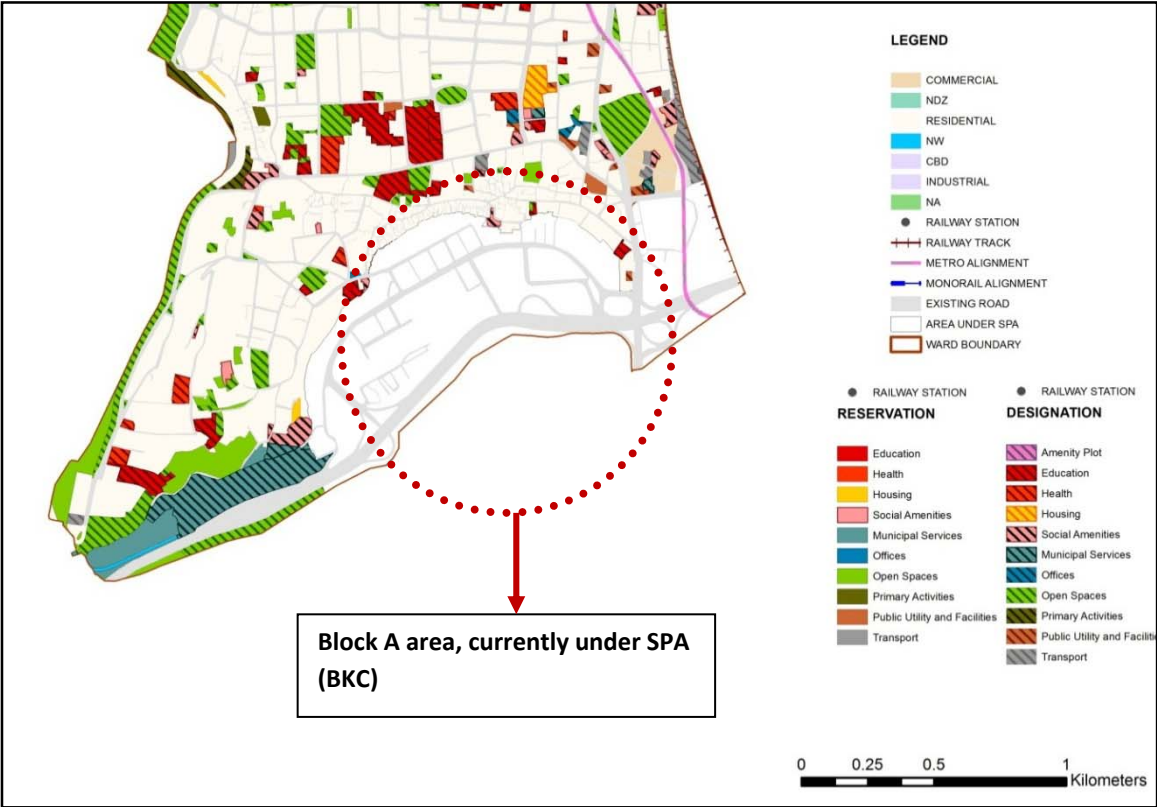
3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	STUDENTS HOSTEL	RSA 2.7	1
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTRE	RSA 6.1	3
4	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
5	HOMELESS SHELTER	RSA 2.9	5
6	OLD AGE HOME	RSA4.9	1
7	DISASTER MANAGEMENT FACILITY	RO 3.1	1
8	MUNICIPAL OFFICE	RO1.3	1

New Reservations which cannot be shown in the map

- 1. Underground parking to be provided at Patwardhan garden along with the designation of playground.
- 2. Muslim cemetery reserved in newly acquired block A (SPA Area)
- 3. Play ground in Block A
- 4. Municipal officers' quarters in Block A



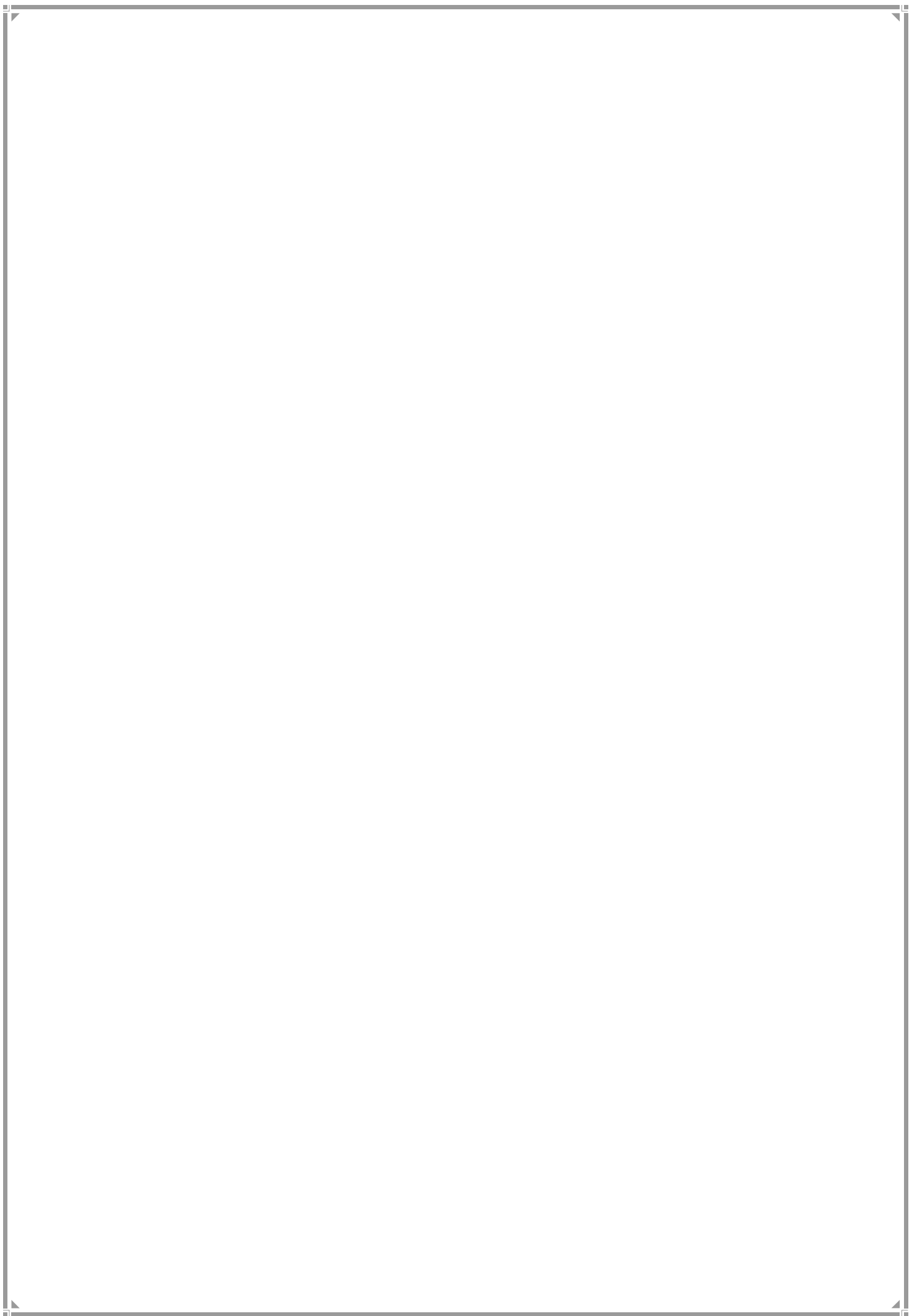
Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1.	WS-03	(37-38) pt	Bandra C	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2) 2. CARE CENTRE (RSA 6.1)	RSA5.2 +
2.	WS-03	(37-38) pt	Bandra C	1. ORPHANAGE (DSA 2.3) 2. MULTIPURPOSE COMMUNITY CENTER (RSA 2.1) 3. CARE CENTRE (RSA 6.1)	DSA 2.3 +
3.	WS-05	844,845, 846	Bandra C	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. CARE CENTER (RSA 6.1)	DSA 1.1 +
4.	WS-05	864, 865, 866, 867	Bandra C	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA 6.2)	DSA 1.1 +
5.	WS-02	1040, 1044-1046pt, 1047 pt, 1048	Bandra B	1. MUNICIPAL RETAIL MARKET WITH VENDING ZONE(RSA 1.1) 2. MUNICIPAL FACILITIES (RMS 1.3) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE(RSA 6.2) 4. HOMELESS SHELTER (RSA 2.9)	RSA 1.1 +
6.	WS-05	1584-1588, 1591, 1101B/26	Bandra C	1. MUNICIPAL RETAIL MARKET WITH VENDING ZONE (RSA 1.1) 2. OLD AGE HOME (RSA 4.9) 3. STUDENT HOSTEL (RSA 2.7)	RSA 1.1 +
7.	WS-09	871 pt	Bandra E	1. MUNICIPAL OFFICE (RO 1.3) 2. DISASTER MANAGEMENT FACILITY (RO 3.1)	RO1.3 +

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
8.	WS-03	1372 A & B	Bandra F	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. HOMELESS SHELTER (RSA 2.9)	DSA 1.1 +
9.	WS-06	791	Bandra E	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. HOMELESS SHELTER (RSA 2.9)	DSA 1.1+
10.	WS-08	454A	Bandra D	1. MUNICIPAL RETAIL MARKET (DSA 1.1) 2. HOMELESS SHELTER (RSA 2.9)	DSA 1.1 +
11.	WS-09	540	Bandra H	1. MUNICIPAL RETAIL MARKET WITH VENDING ZONE (RSA 1.1) 2. HOMELESS SHELTER (RSA 2.9)	RSA 1.1 +
12.	WS-02	55, 74, 79, 80-86, multiple CTS.	Bandra C	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. COLLEGES (DE2.1)	DE 1.2 +
13.	WS-08	41, 42	Bandra E	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. COLLEGES (DE2.1)	DE 1.2 +
14.	WS-05, WS-06	NA	Bandra F	1. COLLEGES (DE2.1) 2. PRIMARY & SECONDARY SCHOOL (DE1.2)	DE 2.1 +
15.	WS-01	907, 906B/2 etc..	Bandra B	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. COLLEGES (DE2.1)	DE 1.2 +
16.	WS-08	401	Bandra G	1. MUNICIPAL SCHOOL (DE1.1) 2. SPECIAL SCHOOL (DE1.3)	DE 1.1+
17.	WS-08	1101A, etc..	DANDA	1. FISH & NET DRYING YARD (DP1.1) 2. COMPOSITE CEMETERY (DSA4.5)	DP 1.1 +
18.	WS-12	FP 74	Ville parle	1. RETAIL MARKET (DSA1.2) 2. REHABILITATION & RESETTLEMENT (RR2.1)	DSA1.2+

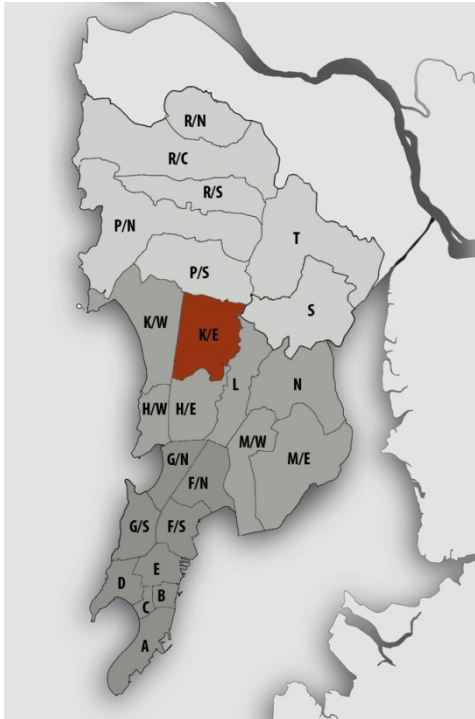
S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
19.	WS 08	919, 910 etc..	BANDRA-D	1. MUNICIPAL DISPENSARY/HEALTH POST (RH1.1) 2. HOSPITAL (RH1.2)	RH1.1+
20.	WS 09	NA	BANDRA-G	1. PRIMARY & SECONDARY SCHOOL (RE1.2) 2. HIGHER EDUCATION (RE2.1)	RE1.2+
21.	WS 09	859	Bandra E	1. MUNICIPAL OFFICE (RO1.3) 2. DISASTER MANAGEMENT FACILITY (RO3.1)	RO1.3+
22.	WS 02	246, 245, 247, etc.	BANDRA-C	1. FISH & NET DRYING YARD (RP1.1) 2. KOLI HOUSING (RR3.1)	RP1.1+
23.	WS 08	920, 919, 921, 911	BANDRA-D	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. KOLI HOUSING (RR3.1)	RSA1.2+

K/EAST WARD



1. K-East Ward Profile

Location Map



JURISDICTION

Ward Area - 2400 ha
 - 1676 ha (MCGM Planning Area)

Developed Area -1,543 ha (MCGM Planning Area)- (92.06% of Ward Area)

SPA Area under **International Airport** (MMRDA) - 844ha (shared with L & HE wards)
 SPA Area under **MIDC** (MIDC) - 138 ha

WARD BOUNDARIES

North - Jogeshwari Vikhroli Link Road (JVLR) & Aarey Milk Colony
East -Mithi River
West - Western Railway Line
South - Air India Road & International Airport

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 8.10	2021 – 8.34
2011 – 8.24	2031 – 7.69
	2034 – 7.32

Density – 343pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 25
 Primary &Secondary Schools– 52
 Hospitals -4
 Dispensaries – 8
 Maternity Home- 6
 Cemetery – 9

CONNECTIVITY

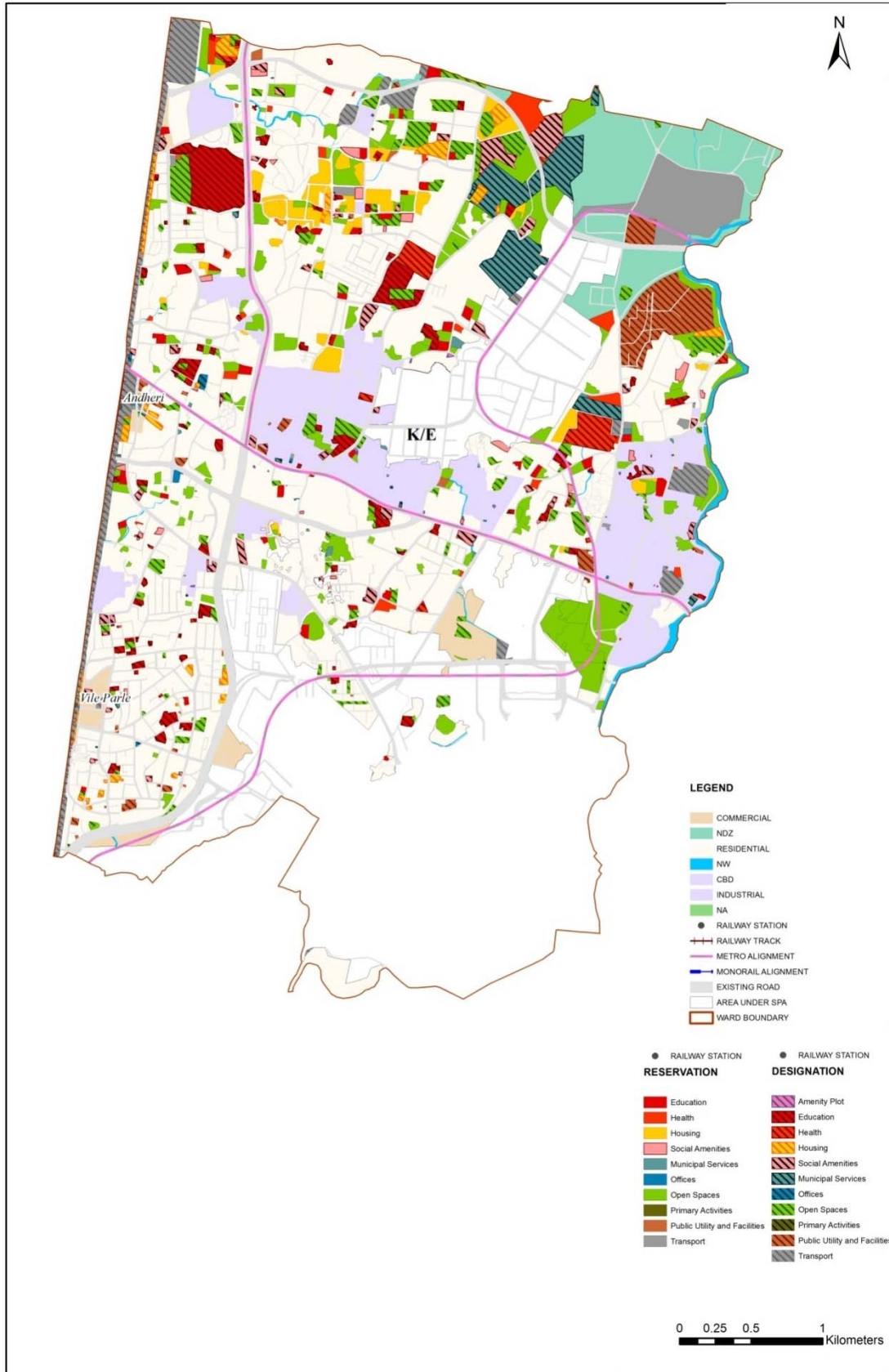
Major Roads – Mathuradas Vassanji Road (Andheri Kurla Road), Mahakali Caves Road, Swami Nityanand Road (Sahar Road), N. S. Phadke Marg (Andheri Ghatkopar Link Road), Jogeshwari Vikhroli Link Road, Western Express Highway

Railway Stations – Vile Parle, Andheri, and Jogeshwari

Metro Stations - Line – 1 - Andheri, Western Express Highway, Chakala, Airport Road, and Marol NakaStations

Future Proposals– Metro Line 3 -Colaba–Bandra–SEEPZ& Metro Line along Western Express Highway

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – K East Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	8,34,851	1.574	131.41	46.56
2	Health	8,34,851	0.419	34.98	16.56
3	Market	8,34,851	0.100	8.35	4.24
4	Cemetery	8,34,851	0.030	2.50	3.97
5	Open Space	8,34,851	4.000	333.94	61.41

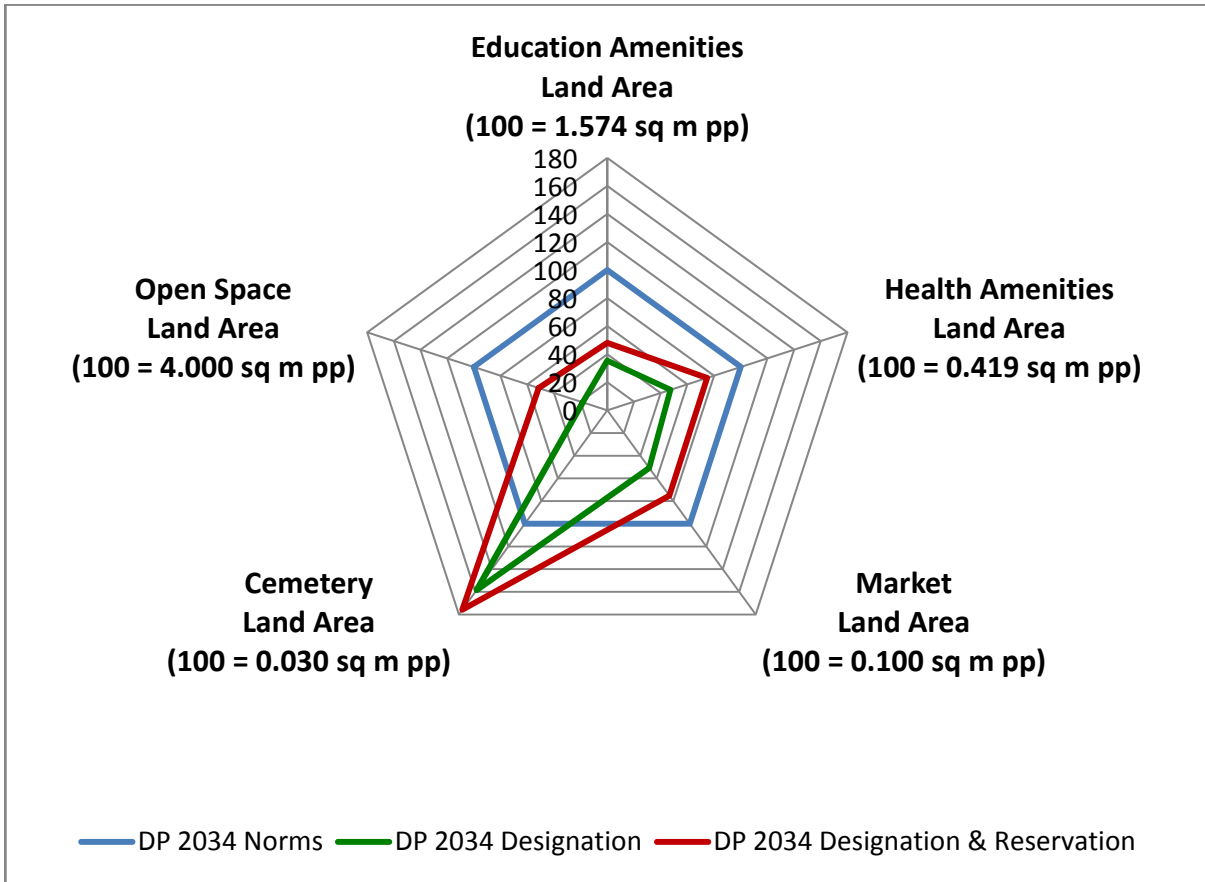
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	131.41	63.19	-68.22	0.757
2	Health	34.98	26.16	-8.82	0.313
3	Market	8.35	6.28	-2.07	0.075
4	Cemetery	2.50	4.40	1.90	0.053
5	Open Space	333.94	171.44	-162.50	2.054

Note:

The norms for Sr. Nos. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	2
2	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
3	STUDENTS HOSTEL	RSA 2.7	2
4	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	2
5	CARE CENTRE	RSA 6.1	10
6	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	6
7	PUBLIC CONVENIENCE	RSA 6.3	2 (For Women) & Space below Flyovers
8	HOMELESS SHELTER	RSA 2.9	7
9	OLD AGE HOME	RSA 4.9	1
10	DISASTER MANAGEMENT FACILITIES	RO 3.1	1
11	MUNICIPAL CHOWKY	RMS1.2	11
12	MUNICIPAL FACILITIES	RMS1.3	4
13	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	5

Summary of New City Level Reservations Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	SPORTS COMPLEX / STADIUM	ROS 2.5	1
2	ART GALLERY	RSA 3.6	1

New Reservations which cannot be shown in the map

1. Below Flyover Provisions –

Provisions of Public Conveniences, SWM Facilities like SWM Store's and SWM Motor Loader Chowkies are proposed below flyovers existing in K East Ward. Existing potential is identified below –

a. Flyovers –

- i. Western Expressway Highway – passing in the north - south direction through the ward limits.
- i. Jogeshwari Vikhroli Link Road – passing in the east - west direction through the ward limits.

b. Road Over Bridges (ROB) –

- i. Hindu Hridhay Samrat Balasaheb Thackeray ROB – Connecting east and west areas of Jogeshwari.
- ii. G K Gokhale ROB – Connecting east and west areas of Andheri.
- iii. Captain Vinayak Gore ROB – Connecting east and west areas of Vile Parle.

2. Other Reservations –

Sr. No	DP Sheet No.	FP/ CTS No.	Division/ Village	Names of Designation/ Reservation which cannot be shown in the map	Designation / Reservation	Site Status / Additional Note
1	WS 28	51 (Pt), 52 (Pt)	Majas	Designation of Municipal Maternity / Post Partum Centre + Reservation of Municipal Retail Market	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	Market Reservation is for PAP's affected during construction of Jogeshwari ROB
Proposed Reservations on Built -Up Amenities						
2	WS 15	109 (Pt)	Vile Parle	Designation of Rehabilitation & Resettlement + Reservation of Municipal Facilities (Part)	1. REHABILITATION & RESETTLEMENT (DR2.1) 2. MUNICIPAL FACILITIES (RMS1.3 [PART])	5% Built-up Amenity (part of ground floor)
3	WS 19	213 (Pt), 214 (Pt) & 29/1	Mulgaon & Chakala	Reservation of Municipal Facilities (Part)	MUNICIPAL FACILITIES (RMS1.3 [PART])	5% Built-up Amenity (part of ground floor)
Proposed Reservations of Public Conveniences for Women						
4	WS 16	760/C (Pt)	Marol	Reservation of Public Conveniences for Women	PUBLIC CONVENIENCES (RSA6.3)	5% Vacant Amenity Plot
5	WS 15	23 (Pt)	Vile Parle	Reservation of Public Conveniences for Women	PUBLIC CONVENIENCES (RSA6.3)	Dilapidated SWM Chowky

Multiple Designations and Reservations

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS 12	228 (TPS VILE PARLE No.V)	Vile Parle	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL STAFF QUARTERS (DR1.1)	DSA1.1+
2	WS 12	321 (TPS VILE PARLE No.II)	Vile Parle	1. MUNICIPAL OFFICE (DO1.3) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DO1.3+
3	WS 12	199A (TPS VILE PARLE No.V)	Vile Parle	1. WELFARE CENTER (DSA2.5) 2. PRIMARY & SECONDARY SCHOOL (DE1.2)	DSA2.5+
4	WS 12, 15	310 (TPS VILE PARLE No.II)	Vile Parle	1. MUNICIPAL SCHOOL (DE1.1) 2. PLAY GROUND (DOS1.4)	DE1.1+
5	WS 15	1 (TPS VILE PARLE No.I)	Vile Parle	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. DRAMA THEATER (DSA3.3)	DSA1.1+
6	WS 15	713, 715A (Pt), 716 (Pt)	Vile Parle	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+
7	WS 15	582 (Pt)	Vile Parle	1. WELFARE CENTER (DSA2.5) 2. STUDENTS HOSTEL (RSA2.7)	DSA2.5+
8	WS 15	211 (Pt), 218	Vile Parle	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
9	WS 15	228 (TPS VILE PARLE No.II)	Vile Parle	1. POLICE CHOWKY (RPU3.2) 2. PUBLIC CONVENIENCE(RSA6.3)	RPU3.2+
10	WS 15	140 (Pt) (TPS VILE PARLE No.V)	Vile Parle	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+

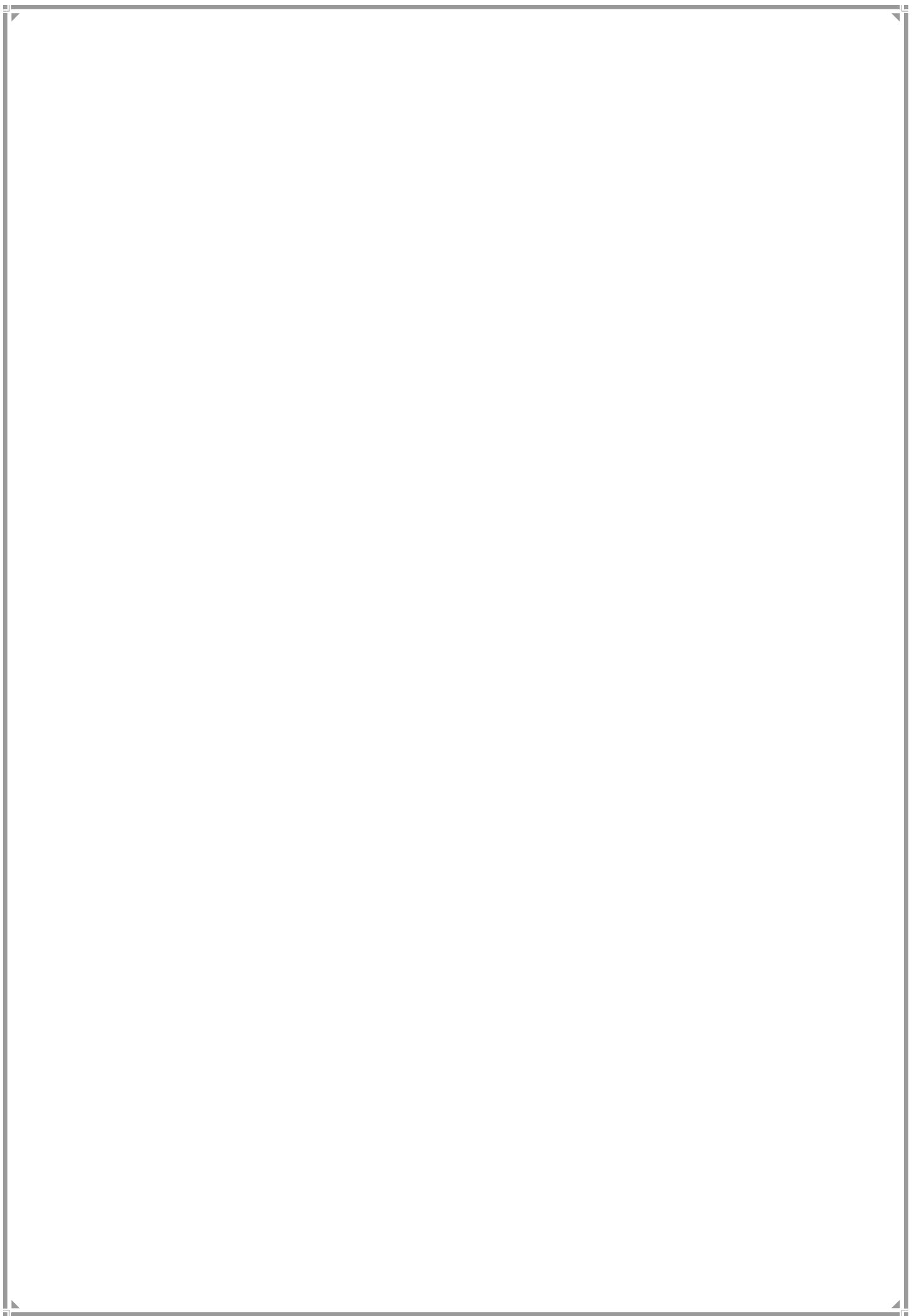
Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
11	WS 16	167/2, 167/3, 182/5 (Pt), 183, 184 (Pt), 199	Sahar	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+
12	WS 16	8 (Pt), 10, 11, 12	Sahar	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DE1.2+
13	WS 16	728 (Pt), 758C, 759D (Pt)	Marol	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 3. CARE CENTER (RSA6.1)	RH1.1+
14	WS 18	125/4, 125/5 (Pt), 125/6 (Pt)	Gundavali	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9)	DSA1.1+
15	WS 18	271 (Pt)	Gundavali	1. ROAD DEPOT (DMS1.1) 2. MUNICIPAL CHOWKY (DMS1.2)	DMS1.1+
16	WS 18	11 (Pt)	Vile Parle	1. MUNICIPAL SCHOOL (DE1.1) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 3. MULTI PURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 4. CARE CENTER (RSA6.1)	DE1.1+
17	WS 18	79 (Pt), 81 (Pt), 86 (Pt)	Gundavali	1. MUNICIPAL MATERNITY HOME (RH1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RH1.3+
18	WS 18	472A (Pt), 472C (Pt)	Chakala	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 2. CARE CENTER (RSA6.1)	RSA6.2+
19	WS 19	300 (Pt), 301 (Pt), 302, 303, 304 (Pt), 307 (Pt), 308 (Pt)	Marol	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. RETAIL MARKET (DSA1.2)	DSA1.1+

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
20	WS 19	157, 168	Kondivata	1. WELFARE CENTER (DSA2.5) 2. MULTI PURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 3. CARE CENTER (RSA6.1)	DSA2.5+
21	WS 19	241 (Pt), 4 (Pt), 5, 6, 7	Mulgaon, Chakala	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. PLAY GROUND (DOS1.4) 3. GARDEN/PARK (DOS1.5)	DE1.2+
22	WS 19	176 (Pt), 177, 178, 179 (Pt), 180, 181 (Pt), etc.	Marol	1. BEST BUS FACILITIES (DT1.4) 2. BEST STAFF QUARTERS (DR1.4)	DT1.4+
23	WS 19	135 (Pt)	Marol	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+
24	WS 19	57 (Pt), 60 (Pt), 64A (Pt), etc.	Mulgaon	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. OTHER EDUCATION (DE3.1)	DE1.2+
25	WS 19	15 (Pt)	Vyaravali	1. RETAIL MARKET (DSA1.2) 2. PARKING LOT (DT1.6)	DSA1.2+
26	WS 19	1281 (Pt)	Marol	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. STUDENT HOSTEL (DSA2.7)	DE1.2+
27	WS 19	42 (Pt), 56 (Pt), 57 (Pt), 58 (Pt)	Kondivata	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
28	WS 19	284 (Pt), 285	Marol	1. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2. CARE CENTER (RSA6.1)	RSA2.1+
29	WS 19	51 (Pt), 158 (Pt), 159 (Pt), 160, etc.	Kondivata	1. MUNICIPAL MATERNITY HOME (RH1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RH1.3+
30	WS 23	60	Majas	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+

Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
31	WS 23	142 (Pt)	Majas	1. MUNICIPAL SCHOOL (DE1.1) 2. PLAY GROUND (DOS1.4) 3. STUDENTS HOSTEL (RSA2.7)	DE1.1+
32	WS 23	356 (Pt), 357 (Pt)	Mogra	1. MUNICIPAL SCHOOL (DE1.1) 2. MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DE1.1+
33	WS 23	83 (Pt)	Mogra	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. PLAY GROUND (DOS1.4)	DE1.2+
34	WS 23	58 (Pt), 62 (Pt), 81 (Pt), 82 (Pt), etc.	Mogra	1. MUNICIPAL SCHOOL (RE1.1) 2. PLAY GROUND (ROS1.4)	RE1.1+
35	WS 24	171/2, 175A/3	Majas	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL OFFICE (DO1.3)	DSA1.1+
36	WS 24	12 (Pt)	Prajapur	1. ELECTRICITY TRANSMISSION & DISTRIBUTION FACILITIES (DPU5.2) 2. OTHER EDUCATION (DE3.1)	DPU5.2+
37	WS 24	134 (Pt), 135 (Pt)	Majas	1. MUNICIPAL MATERNITY HOME (RH1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RH1.3+
38	WS 24	175A/4 (Pt), 175 (Pt)	Majas	1. MUNICIPAL MATERNITY HOME (RH1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RH1.3+
39	WS 28	52 (Pt)	Majas	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	DH1.3+
40	WS 28	230 (Pt), 232 (Pt), 233, 234 (Pt), 235/412 (Pt), etc.	Majas	1. HINDU TRADITIONAL / ELECTRIC CEMETERY (DSA4.1) 2. TEMPLE	DSA4.1+
41	WS 29	32B (Pt), 32C (Pt), 33/B/2	Majas	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 2. CARE CENTER (RSA6.1)	RH1.1+

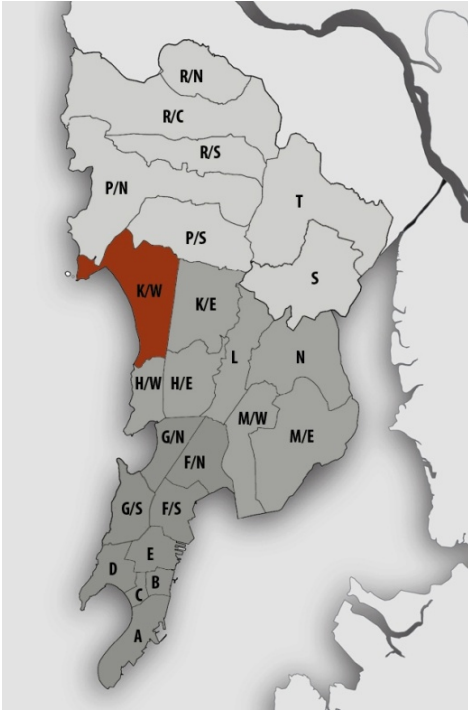
Sr. No.	DP Sheet No.	FP / CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
42	WS 29	190A/1A/1 (Pt), 190A/1B (Pt), 182A/1 (Pt), 182B (Pt)	Majas	1. HOSPITAL (RH1.2) 2. MEDICAL INSTITUTE (RE4.2)	RH1.2+

K/WEST WARD



1. K-West Ward Profile

Location Map



JURISDICTION

Ward Area –2518.22ha

Developed Area - 1887 ha

(74.93% of Ward Area)

SPA Area – 54.17 ha

WARD BOUNDARIES

North – Oshiwara Bridge and Nallas

East -Western Railway Line

West – Arabian Sea

South – Milan Subway

POPULATION

Existing
(in lakhs)

Projected
(in lakhs)

2001–7.01000

2021–7.82185

2011–7.49000

2031–7.39014

2034–7.08465

Density –297.43 pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School - 16

Primary and Secondary School - 56

Municipal Dispensary/Health Post - 15

Cemetery -21

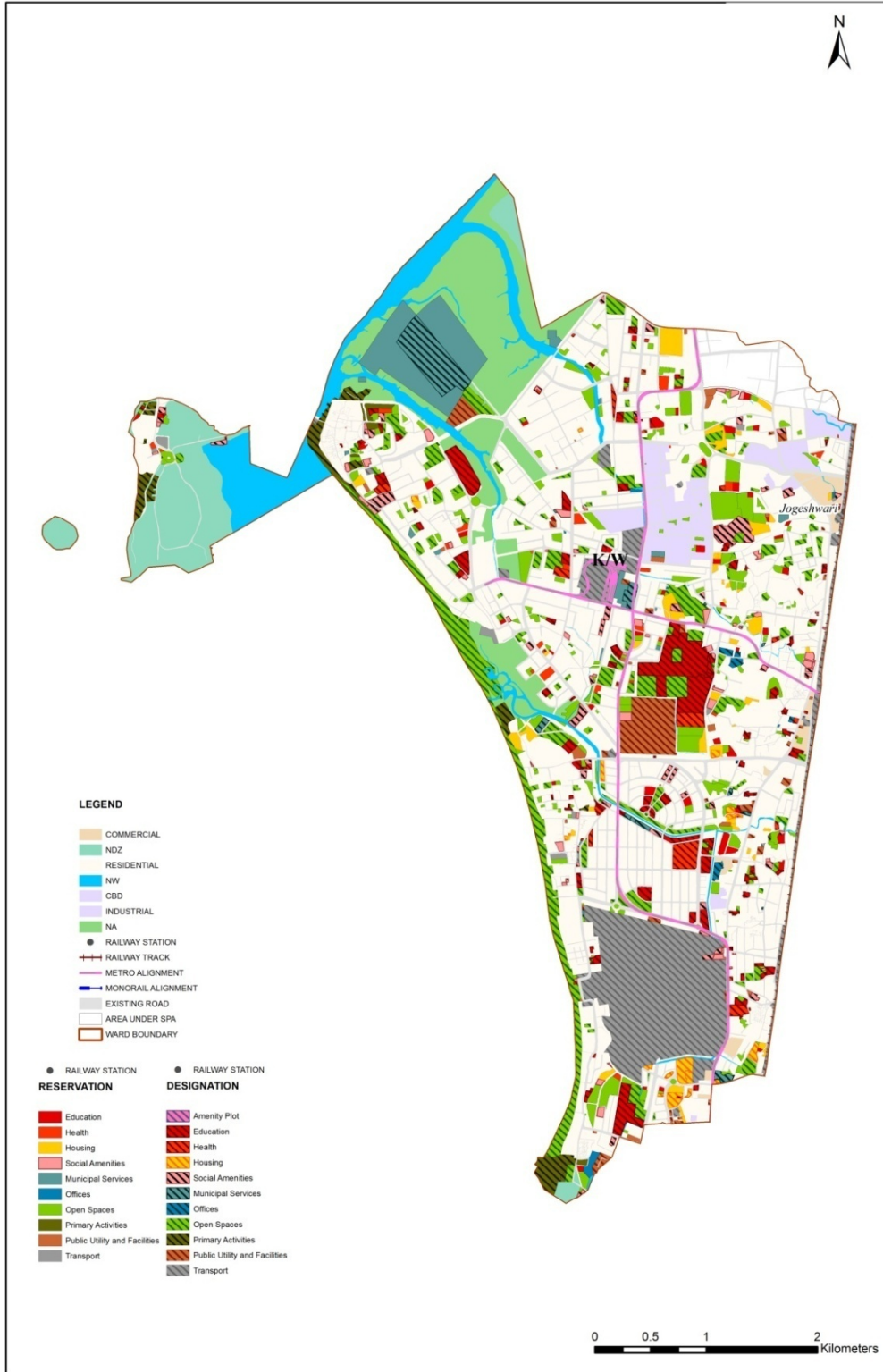
CONNECTIVITY

Major Roads -Swami Vivekananda Road, Jay Prakash Narayan Road, Ceaser Road, Char Bungalow Road, Juhu Road & Dadabhai Road

Railway Station – Andheri, Vile Parle & Jogeshwari

Metro Station– Andheri, Azad Nagar, D.N. Nagar & Versova

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – K West Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	7,82,185	1.574	123.12	72.52
2	Health	7,82,185	0.419	32.77	16.89
3	Market	7,82,185	0.100	7.82	4.11
4	Cemetery	7,82,185	0.030	2.35	11.66
5	Open Space	7,82,185	4.000	312.87	146.27

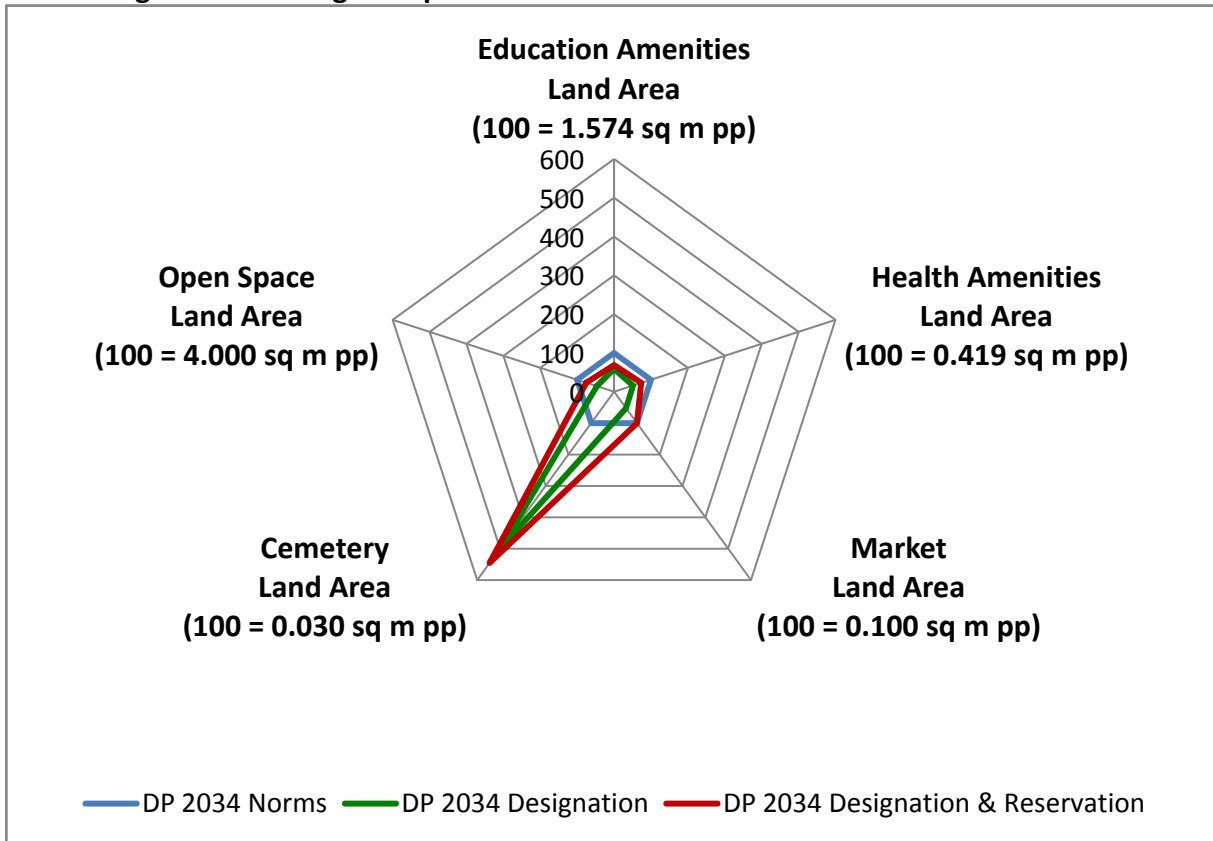
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	123.12	84.68	-38.44	1.083
2	Health	32.77	24.15	-8.62	0.309
3	Market	7.82	7.87	0.05	0.101
4	Cemetery	2.35	12.80	10.45	0.164
5	Open Space	312.87	235.49	-77.38	3.011

Note:

The norms for Sr. Nos. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	STUDENTS HOSTEL	RSA 2.7	1
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTRE	RSA 6.1	9
4	ADHAR KENDRA WITH SKILL DEVELOPMENT	RSA 6.2	2
5	PUBLIC CONVENIENCE	RSA 6.3	1
6	HOMELESS SHELTER	RSA 2.9	1
7	OLD AGE HOME	RSA4.9	1
8	MUNICIPAL DISPENSARY/HEALTH POST	RH1.1	2
9	MUNICIPAL CHOWKY	RMS1.2	1

New Reservations which cannot be shown in the map

- 1) Homeless shelter for Woman (RSA2.9) on CTS no .1049 A, Juhu
- 2) Public Convenience, Municipal Chowkies & parking below Bridge, Milan Subway, Vile Parle

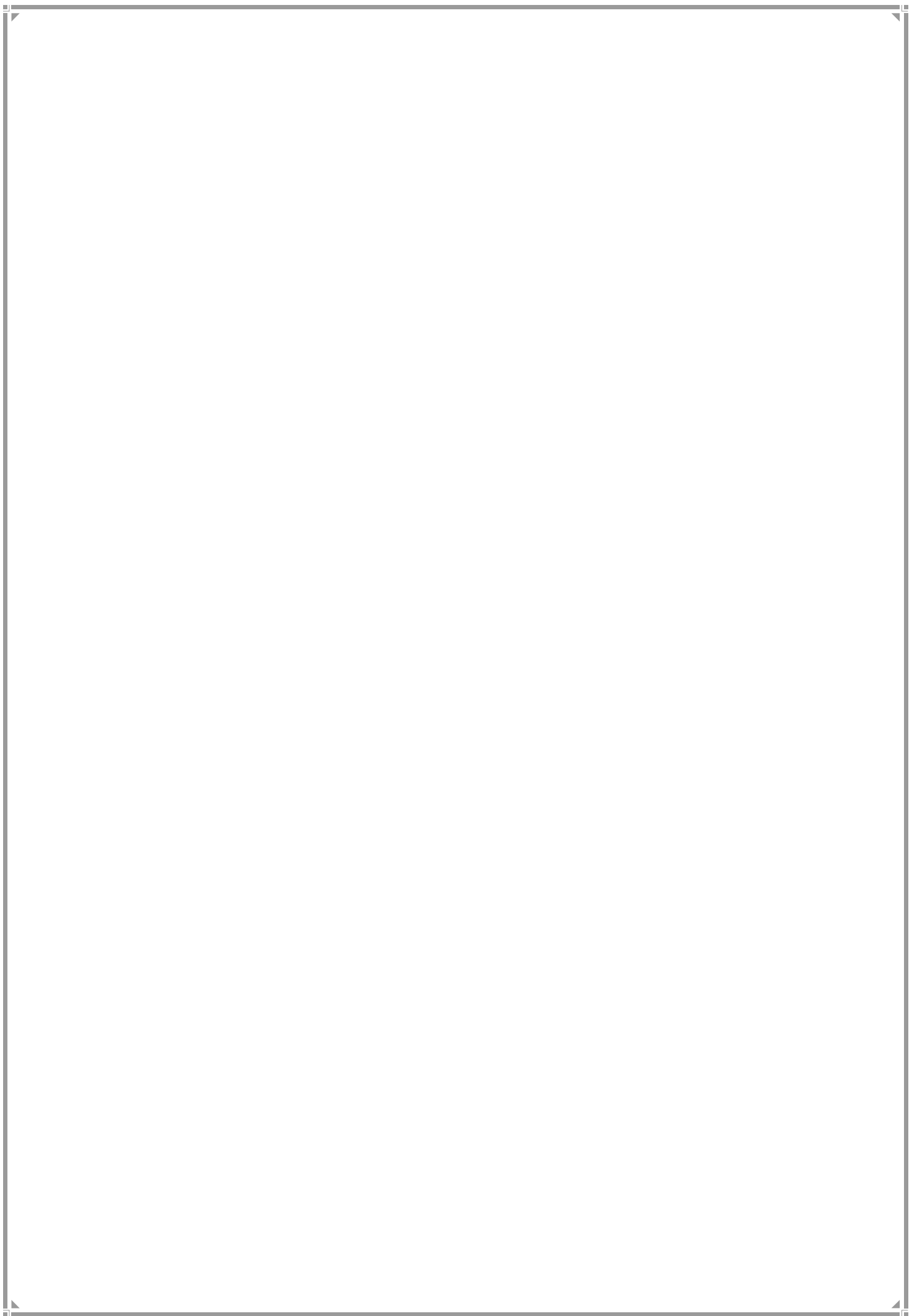
Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS27	1/123A	Oshiwara	1 MUNICIPAL DISPENSARY /HEALTH POST (DH1.1) 2.PRIMARY & SECONDARY SCHOOL (DE1.2)	DH1.1+
2	WS27	1/122A	Oshiwara	1.MUNICIPALDISPENSARY /HEALTH POST(DH1.1) 2.PRIMARY & SECONDARY SCHOOL (DE1.2)	DH1.1+
3	WS27	1(Pt)	Oshiwara	1.MUNICIPALDISPENSARY /HEALTH POST(DH1.1) 2.PRIMARY & SECONDARY SCHOOL (DE1.2)	DH1.1+
4	WS27	1011	Versova	1.MUNICIPAL SCHOOL (DE1.1) 2.MUNICIPALDISPENSARY/HEALTH POST (DH1.1)	DE1.1+
5	WS14	574	Juhu	1CLUB/GYMKHANA (DOS2.1) 2LIBRARY (DSA 2.8)	DOS2.1+
6	WS18	197	Andheri	1.PLAY GROUND (DOS 1.4) 2.CLUB/GYMKHANA (DOS2.1)	DOS1.4+
7	WS15	11	Vile Parle	1.RECREATION GROUND) (DOS 2.6) 2.CLUB/GYMKHANA (DOS 2.1)	DOS2.6+
8	WS12	1582	Vile Parle	1.PLAY GROUND (DOS1.4) 2.RECREATION GROUND (DOS 2.6)	DOS1.4+
9	WS12	1599,1598	Vile Parle	1.PLAY GROUND) (DOS 1.4) 2.RECREATION GROUND(DOS2.6)	DOS1.4+
10	WS18	195/144,195/164,195/165A,195/145 &195(Pt)	Andheri	1.WOMEN HOSTEL (DSA2.6) 2.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE(RSA6.2) 3.CARE CENTRE(RSA6.1)	DSA2.6+
11	WS18	16B	Vile Parle	1.WOMEN HOSTEL (DSA2.6) 2.CARE CENTRE (RSA6.1)	DSA2.6+
12	WS23	195(pt)	D.N. Nagar Andheri.	1. PUBLIC HALL (DSA3.8) 2. OLD AGE HOME (RSA4.9) 3. CARE CENTRE(RSA6.1)	DSA3.8+

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
13	WS23	154A,156,166,161,34/2,34/1,158,155,157B,157C,154C &81B	Ambivali	1. RECREATION GROUND (DOS2.6) 2. PLAY GROUND (DOS1.4)	DOS2.6+
14	WS23	838(Pt) Plot No. A-5	Ambivali	1. MUNICIPAL. RETAIL MARKET (DSA1.1) 2. MUNICIPAL .HOUSING (DR1.5)	DSA1.1+
15	WS27	1/59 &1/66	Oshiwara	1. MUNICIPAL RETAIL MARKET) (DSA1.1) 2. MUNICIPALHOUSING) (DR1.5)	DSA1.1+
16	WS15	32	Santacruz Transport Garage, Vile Parle	1. MUNICIPAL STAFF QUARTERS (DR1.1) 2. MUNICIPAL DISPENSARY/HEALTH POST (RH1.1) 3.CARE CENTRE(RSA6.1)	DR1.1+
17	WS27	582.583&584	Versova	1. MUNICIPAL CHOWKY(RMS1.2) 2. MUNICIPAL FACILITIES (RMS1.3)	RMS1.2+
18	WS23	769,768	Ceaser Road, Ambivali	1.MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2.CARE CENTRE(RSA6.1)	RSA2.1+
19	WS18	22	Vile Parle, JVPD Scheme	1.OTHER EDUCATION (RE3.1) 2.STUDENTS HOSTEL (RSA2.7)	RE3.1+
20	WS22	833(Pt)	Ambivali, Model Town	1.MULTIPURPOSE HOUSING FOR WORKING WOMAN (RSA5.2) 2.CARE CENTRE (RSA6.1)	RSA5.2+
22	WS15	455,438,439,454B, 452,453 & 454A	Vile Parle	1.OTHER EDUCATION (RE3.1) 2.STUDENT HOSTEL (RSA2.7)	RE3.1+
23	WS27	695	Versova	1.MUNICIPAL DISPENSARY/HEALTH POST(RH1.1) 2.MUNCHOWKY (RMS1.2)	RH1.1+
24	WS23	20,23,25,24 & 38	Ambivali	1. MUNICIPAL SCHOOL (RE1.1) 2.PLAY GROUND (ROS1.4)	RE1.1+

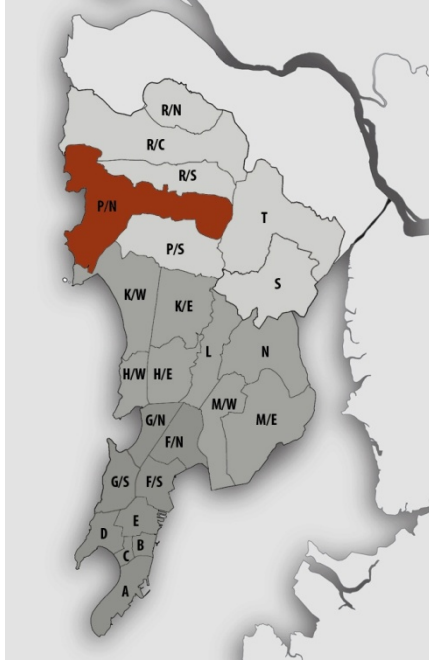
S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
25	WS27	1031	Versova	1.MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2.CARE CENTRE (RSA6.1)	RSA2.1+
26	WS14	512/8	Juhu	1.MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2.CARE CENTRE(RSA6.1)	RSA2.1+
27	WS23	179	Andheri	1.MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2.ADHAR KENDRA WITH SKILL DEVELOPMENT (RSA6.2) 3.CARE CENTRE(RSA6.1)	RSA2.1+
28	WS14	511A,511 B,511C	A.B. Nair Road, Juhu	1.MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2.CARE CENTRE(RSA6.1)	RSA2.1+
29	WS27	1263D	Yari Road, Versova	1.RETAIL MARKET WITH VENDING ZONE(RSA1.2) 2.HOMELESS SHELTER(RSA2.9)	RSA1.2+
30	WS28	308,309,310,311,312,313,45 & 1(Pt)	Oshiwara	1. MUNICIPAL SCHOOL(RE1.1) 2.PLAY GROUND (ROS1.4)	RE1.1+

P/NORTH WARD



1. P-North Ward Profile

Location Map



JURISDICTION

Total Ward Area – 4670.05 ha

Developed Area – 1724.74 ha

(42 % of Ward Area)

SPA AREA (Under MMRDA) - 567 ha

WARD BOUNDARIES

North: Charkop Industrial Estate, Shankar Lane, Manori

East: Indira Gandhi Research Centre and Sanjay Gandhi National Park

West: Arabian Sea

South: Chincholi Bunder

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 7.98	2021 – 10.35
2011 - 9.41	2031 – 10.21
	2034 – 9.89

Density – 201 pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School –32
 Primary and Secondary School -33
 Colleges- 5
 Dispensaries/Health post – 13
 Municipal hospital - 2
 Government Hospital - 1
 Maternity Home- 5
 Cemetery - 10

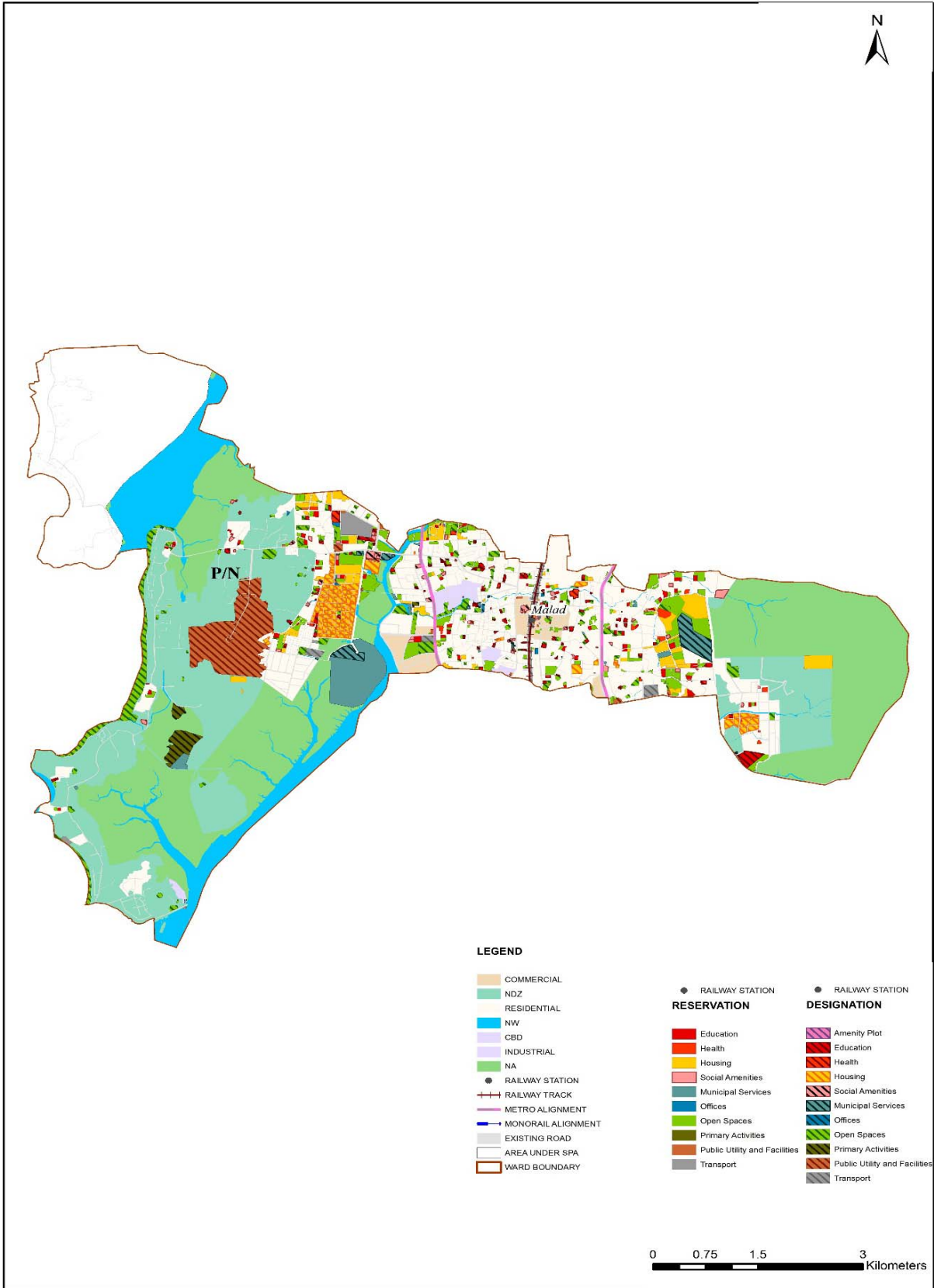
CONNECTIVITY

Major Roads -S.V. Road, Link Road, Western Express Highway, Malad Marve Road, Datta Mandir Road, Daftary Road, Rani Sati Marg

Suburban Railway Station – Malad Railway Station

Future Proposals - Proposed metro lines passes through Western Express Highway and Link road. Coastal road proposed in the ward which starts from link road and passes through Malvani.

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – P North Ward	Norms (sq.m/person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	10,35,762	1.574	163.03	23.61
2	Health	10,35,762	0.419	43.40	7.58
3	Market	10,35,762	0.100	10.36	2.14
4	Cemetery	10,35,762	0.030	3.11	4.31
5	Open Space	10,35,762	4.000	414.30	105.12

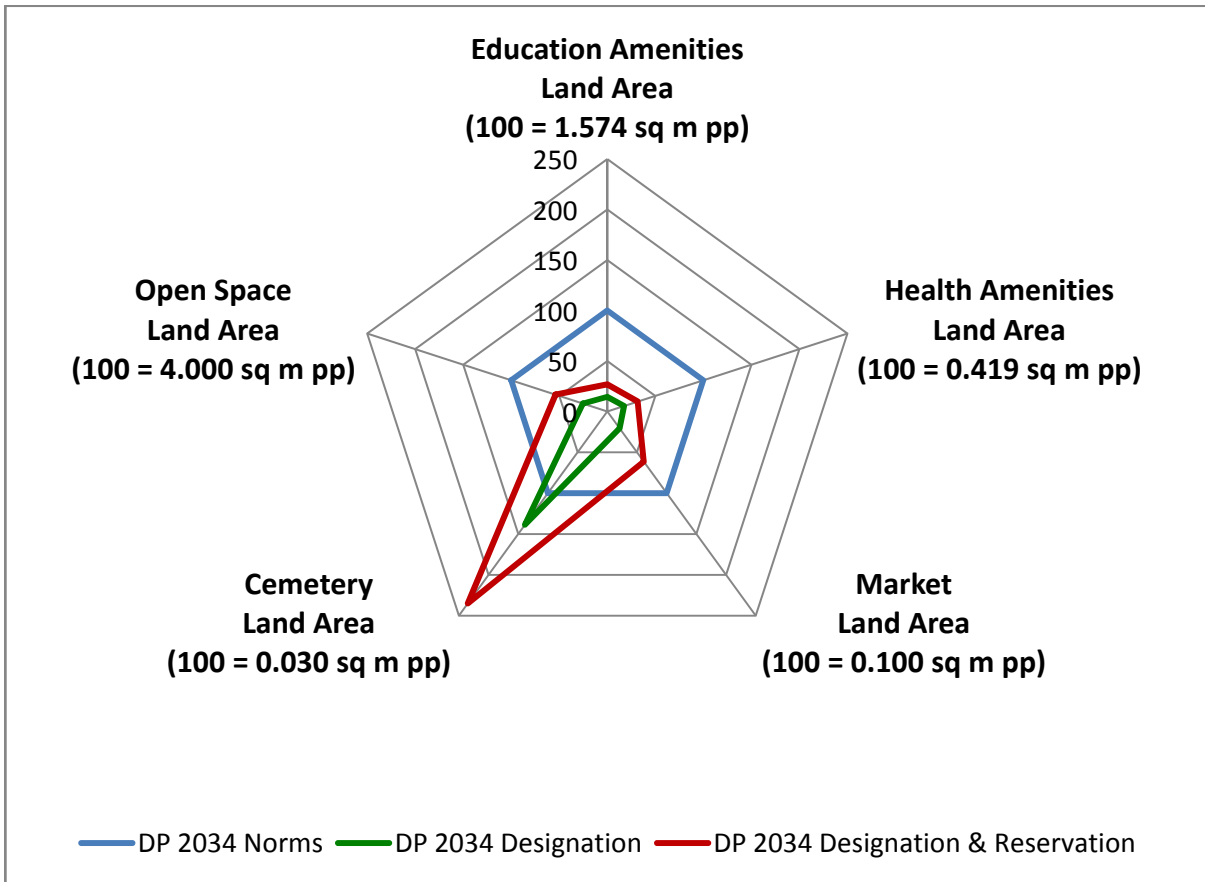
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/person)
1	Education	163.03	43.66	-119.37	0.422
2	Health	43.40	13.78	-29.62	0.133
3	Market	10.36	6.37	-3.99	0.062
4	Cemetery	3.11	7.30	4.19	0.070
5	Open Space	414.30	223.41	-190.89	2.157

Note -

The norms for Sr. No. 1,2&3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA2.1	1
2	STUDENTS HOSTEL	RSA2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA5.2	1
4	CARE CENTRE	RSA6.1	6
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA6.2	2
6	HOMELESS SHELTER	RSA2.9	2
7	OLD AGE HOME	RSA4.9	1
8	DISASTER MANAGEMENT FACILITIES	RO3.1	2
9	SPORTS COMPLEX/ STADIUM	ROS2.5	1
10	MUNICIPAL MARKET WITH VENDING ZONE	RSA1.1	2

New Reservations which cannot be shown in the map

1. Care Centre is proposed in Malad east on CTS:692/2/2A/1. On site it is residential apartment with vacant shops on ground floor which belongs to MCGM. Care Centre is proposed on ground floor.
2. SWM chowkies are proposed below Times of India Flyover.
3. Public convenience blocks are proposed under Times of India Flyover on Western Express Highway, next to Shantaram Talao, on the footpath besides reliance office on W.E.H.

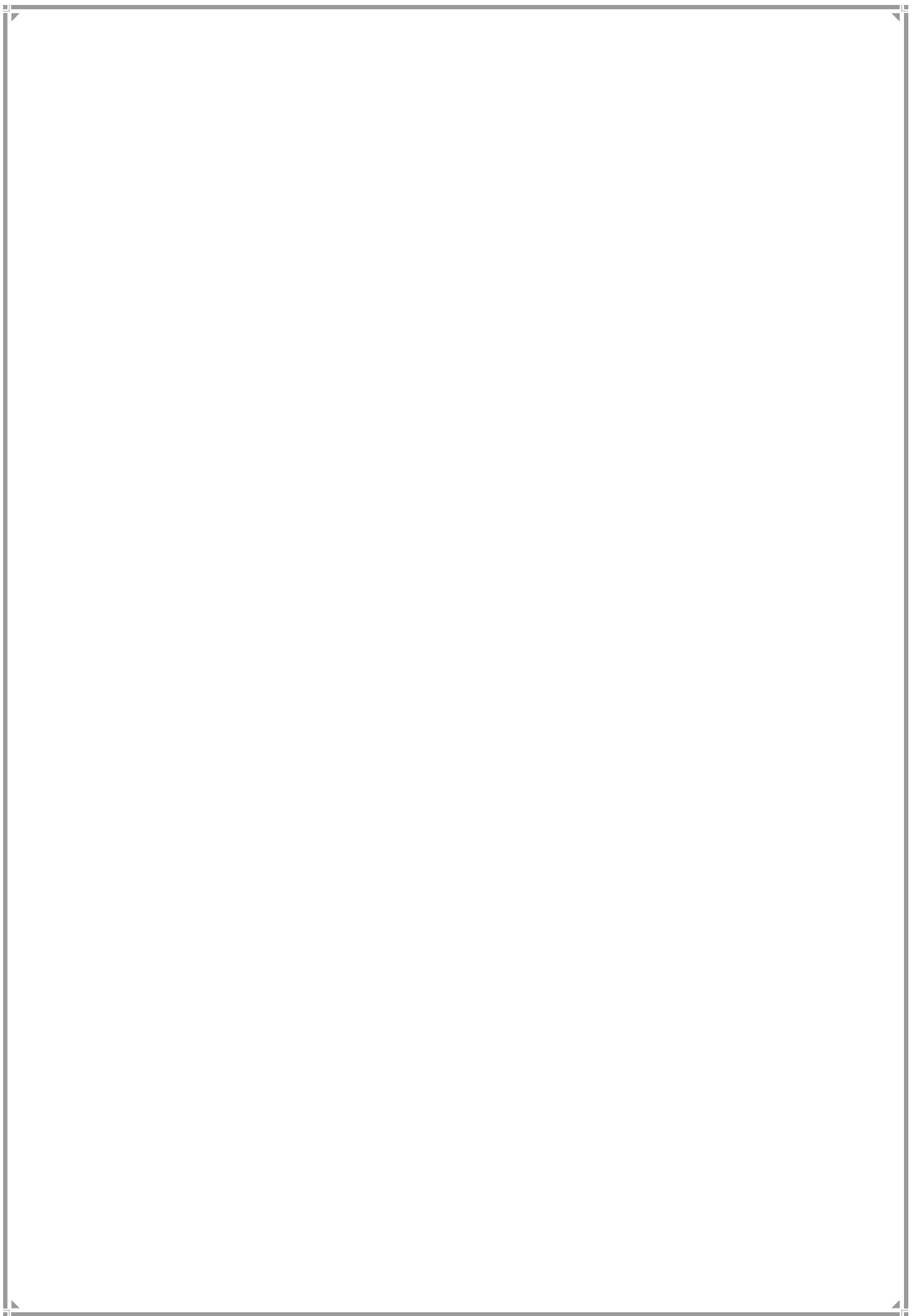
Multiple Designations And Reservations

Sr. No.	DP Sheet No	CS/CTS	Village/Division	Name of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP Sheet
1	WS 47	462	Malvani	1. WOMENS HOSTEL(DSA 2.6) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	DSA2.6+
2	WS 47	2840(PT)	Malvani	1. PRIMARY/SECONDARY SCHOOL(RE1.2) 2. STUDENTS HOSTEL (RSA2.7)	RE1.2+
3	WS 47	1475, 1476, 1478	Malvani	1. MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2. OLD AGE HOME(RSA4.9)	RSA2.1+
4	WS 42	3252(PT)	Malvani	1. WELFARE CENTRE (DSA2.5) 2. CARE CENTRE (RSA6.1)	DSA2.5+
5	WS 39	827C/27 (PT)	Malad East	1. MUNICIPAL MARKET WITH VENDING ZONES(RSA1.1) 2. HOMELESS SHELTER(RSA2.9)	RSA1.1+
6	WS 42	2840(PT)	Malvani	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
7	WS 43	769	Malad West	1. MUNICIPAL OFFICE(DO1.3) 2. ROAD DEPOT(DMS1.1) 3. DISASTER MANAGEMENT FACILITY(RO3.1)	DO1.3+

Sr. No.	DP Sheet No	CS/CTS	Village/Division	Name of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP Sheet
8	WS 43	1406C/5	Malad West	1. GARDEN/PARK(ROS1.5) 2. CARE CENTRE(RSA6.1)	ROS1.5+
9	WS 44	610(PT)	Malad East	1. CARE CENTRE(RSA6.1) 2. PUBLIC CONVENIENCE(RSA6.3)	RSA6.1+
10	WS 44	136(PT)	Dindoshi	1. MUNICIPAL DISPENSARY / HEATH POST(DH1.1) 2. CARE CENTRE(RSA6.1)	DH1.1+
11	WS 43	960/7(PT)	Malad West	1. MULTIPURPOSE COMMUNITY CENTRE(RSA2.1) 2. CARE CENTRE(RSA6.1)	RSA2.1+
12	WS 42	2841(PT)	Malvani	1. SEWAGE TREATMENT PLANT/FACILITIES(DMS4.1) 2. SOLID WASTE MANAGEMENT FACILITIES(RMS3.1)	DMS4.1+
13	WS 42	3525(PT)	Malvani	1. BEST BUS FACILITIES(DT1.4) 2. BEST STAFF QUARTERS(DR1.4)	DT1.4+
14	WS 43	788A	Malad West	1. ROAD DEPOT(DMS1.1) 2. MUNICIPAL CHOWKY(DMS1.2)	DMS1.1+
15	WS 43	751, 752	Malad West	1. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES(DMS5.5) 2. TRANSPORT GARAGE(DMS2.1)	DMS5.5+
16	WS 43	754, 768	Malad West	1. PLAYGROUND(DOS1.4) 2. GARDEN/PARK(DOS1.5)	DOS1.4+
17	WS 44	70, 694, 696(PT)	Malad East	1. RESERVOIR(DMS5.1) 2. MUNICIPAL STAFF QUARTERS(DR1.1)	DMS5.1+
18	WS 43/44	825	Malad East	1. TANK/POND/LAKE(DOS1.1) 2. RECREATION GROUND(DOS2.6)	DOS1.1+

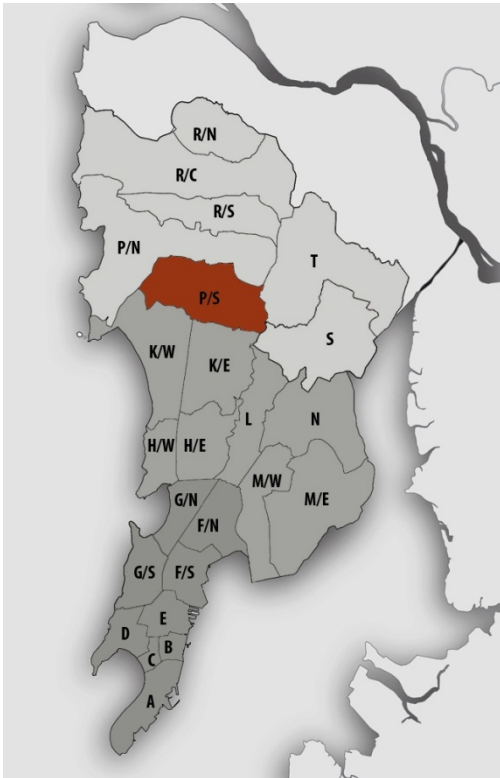
Sr. No.	DP Sheet No	CS/CTS	Village/Division	Name of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP Sheet
19	WS 47	1618, 1619, 1620, 1621, 1622, 1664, 1667	Malvani	1. PRIMARY & SECONDARY SCHOOL(DE1.2) 2. PLAYGROUND(DOS1.4)	DE1.2+
20	WS 47	2837	Malvani	1. MUNICIPAL STAFF QUARTERS(DR1.1) 2. MUNICIPAL HOUSING(DR1.5)	DR1.1+
21	WS 48	322A, 307/28/5, 307/28/4, 307/22C	Valnai	1. WELFARE CENTRE(DSA2.5) 2. LIBRARY(DSA2.8)	DSA2.5+
22	WS 39	99, 108	Dindoshi	1. COURT(RPU3.5) 2. GOVERNMENT HOUSING(RR1.7)	RPU3.5+
23	WS 42	3510, 3513	Malvani	1. RETAIL MARKET WITH VENDING ZONE(RSA1.2) 2. MUNICIPAL STAFF QUARTERS(RR1.1)	RSA1.2+
24	WS 43	554B	Malad West	1. POLICE STATION(RPU3.1) 2. POLICE STAFF QUARTERS(RR1.2)	RPU3.1+
25	WS 43	392, 390A, 554, 386, 393	Malad East	1. MUNICIPAL SCHOOL(RE1.1) 2. PRIMARY/SECONDARY SCHOOL(RE1.2)	RE1.1+
26	WS 43	558B	Malad East	1. MUNICIPAL OFFICE(RO1.3) 2. DISASTER MANAGEMENT FACILITIES(RO3.1)	RO1.3+
27	WS 44	355, 481	Kurar	1. MUNICIPAL MATERNITY HOME(RH1.3) 2. MUNICIPAL STAFF QUARTERS(RR1.1)	RH1.3+
28	WS 43	654	Malad West	1. PLAYGROUND(DOS1.4) 2. MUNICIPAL DISPENSARY / HEATH POST (DH1.1)	DOS1.4+
29	WS 43	654	Malad West	1. MUNICIPAL DISPENSARY / HEATH POST (DH1.1) 2. PLAYGROUND(DOS1.4)	DH1.1+

P/SOUTH WARD



1. P-SouthWard Profile

Location Map



JURISDICTION

Ward Area - 2519.10 ha
0.02% of this area is under the SPA.

Under MCGM Jurisdiction - 2471.67 ha
More than 80% of the area under MCGM jurisdiction is developed

Area under Aarey Colony – 1068 ha

WARD BOUNDARIES

North – Veer Savarkar Flyover, Film City
Marg&ChincholiBunder Road

East – Film City Road & Sanjay Gandhi National Park

West – Malad Creek

South – Jogeshwari-Vikroli Link Road &Oshiwara Link Road

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 - 4.38 Lakhs	2021 – 4.83 lakh
2011 - 4.64 Lakhs	2031 – 4.57 lakh
	2034 – 4.38 lakh

Density – 184pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 8

Primary and Secondary School - 39

Health post / Dispensaries – 3

Municipal Hospital / Municipal Maternity home - 5

Cemetery - 4

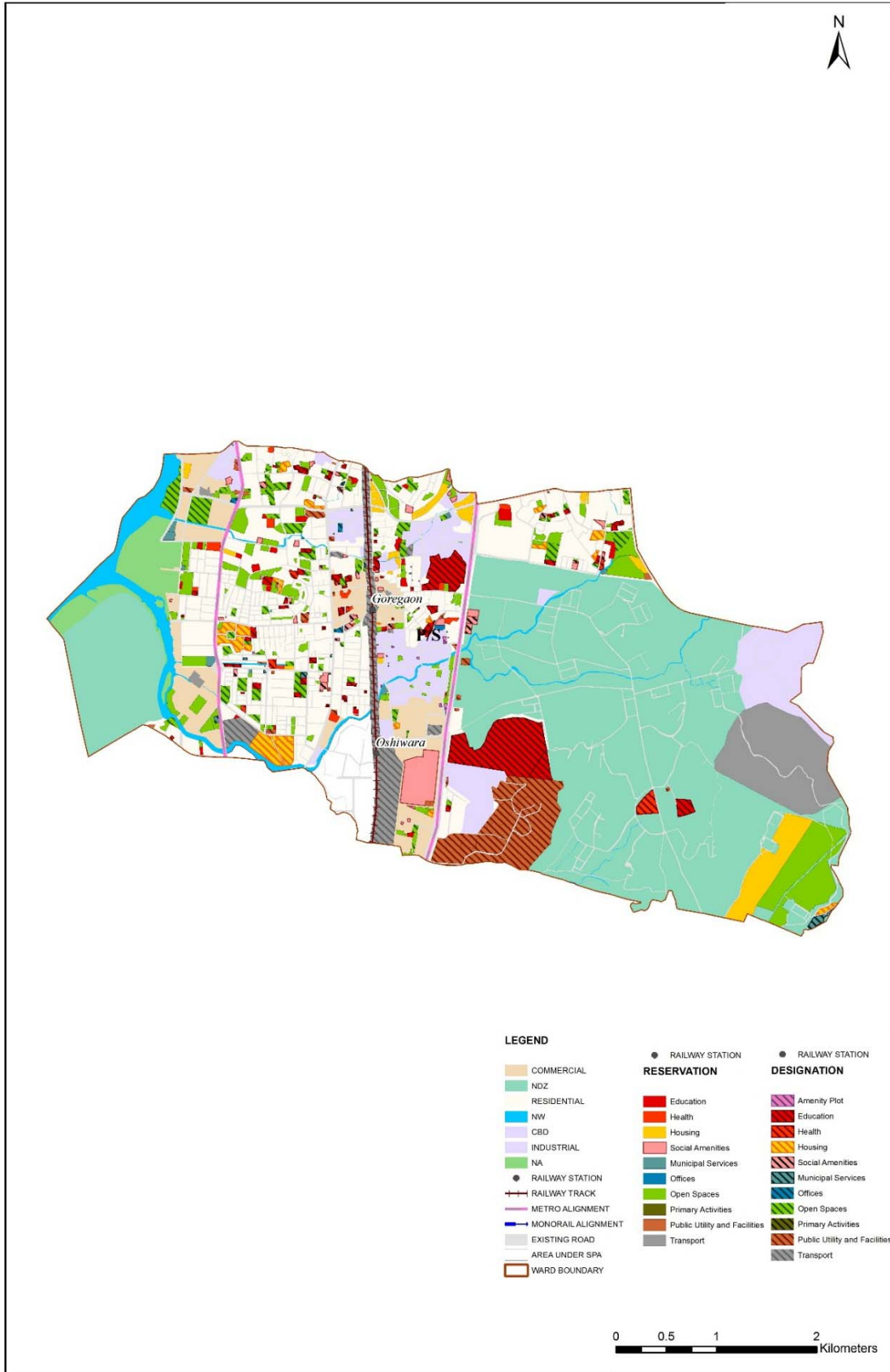
CONNECTIVITY

Major Roads: Link Road, Western Express Highway, S.V. Road

Suburban Railway Station: Goregaon Railway Station

Future Proposals: Proposed Metro stations at Kasturi Park Metro Station, Bangur Nagar Metro Station, Oshiwara Metro Station

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – P South Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	4,83,746	1.574	76.14	69.74
2	Health	4,83,746	0.419	20.27	5.90
3	Market	4,83,746	0.100	4.84	2.15
4	Cemetery	4,83,746	0.030	1.45	3.72
5	Open Space	4,83,746	4.000	193.50	54.71

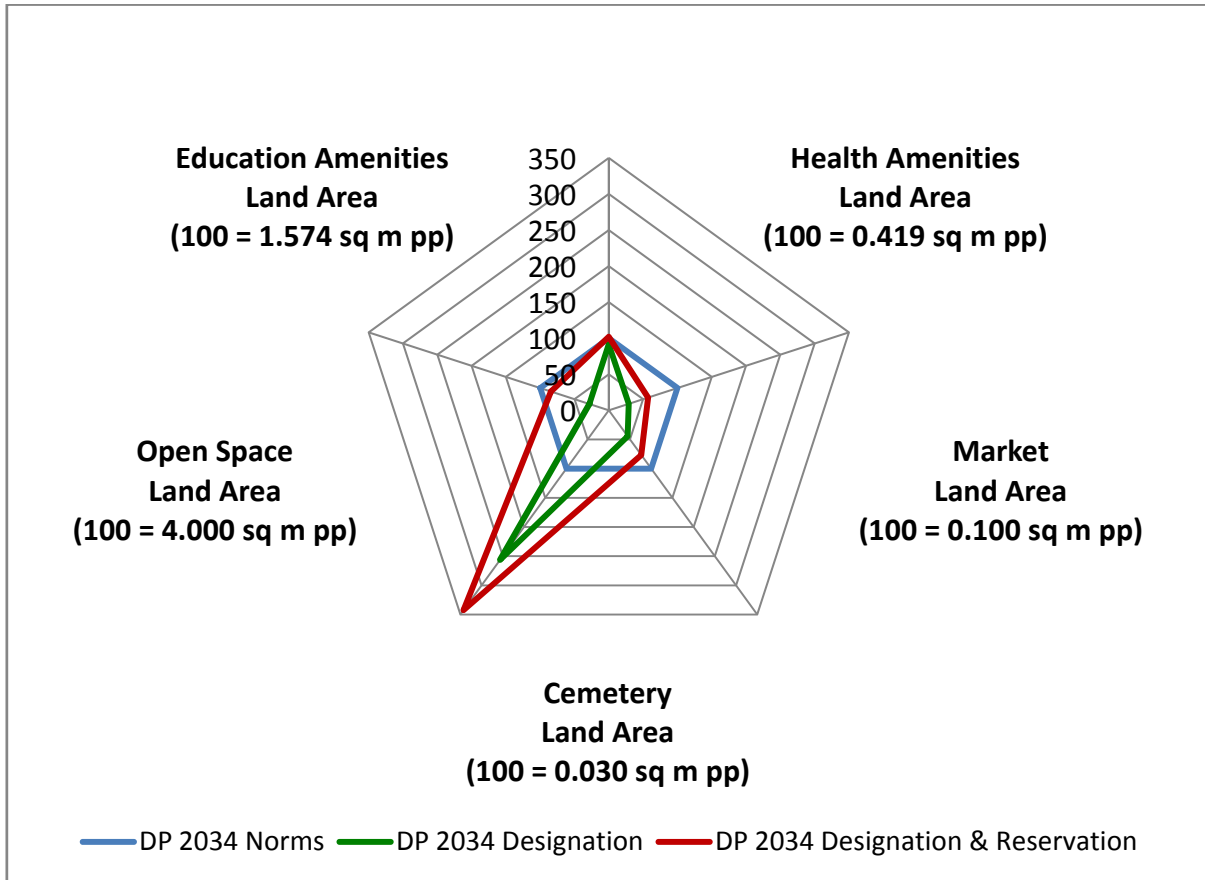
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	76.14	77.68	1.54	1.606
2	Health	20.27	11.62	-8.65	0.240
3	Market	4.84	3.71	-1.13	0.077
4	Cemetery	1.45	4.97	3.52	0.103
5	Open Space	193.50	163.26	-30.24	3.375

Note:

The norms for Sr.No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
2	RETAIL MARKET WITH VENDING ZONE	RSA 1.2	1
3	STUDENTS HOSTEL	RSA 2.7	1
4	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
5	CARE CENTRE	RSA 6.1	6
6	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
7	PUBLIC CONVENIENCE	RSA 6.3	4
8	OLD AGE HOME	RSA4.9	1
9	SOLID WASTE MANAGEMENT FACILITIES	RMS 3.1	2
10	MUNICIPAL FACILITIES	RMS 1.3	1
11	MUNICIPAL CHOWKY	RMS 1.2	1
12	POLICE CHOWKY	RPU 3.2	1

New Reservations which cannot be shown in the map

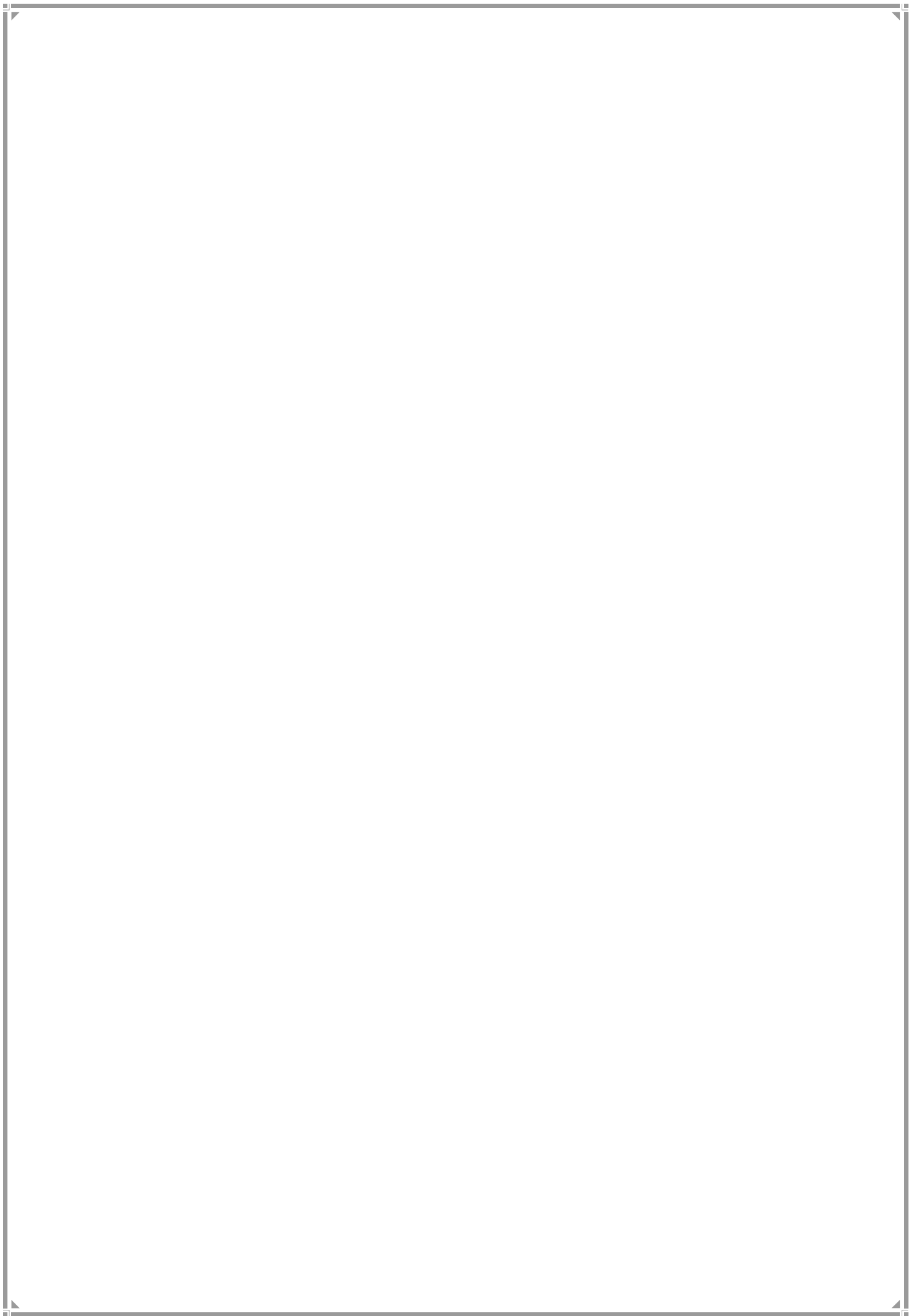
1. Municipal Chowky, Police Chowky to be provided below flyover Jogeshwari and below flyover at Oberoi mall.
2. Three public conveniences to be provided below flyover Aarey check naka junction, below flyover Jogeshwari and below flyover at Oberoi mall respectively.
3. Greenbelts below flyover Jogeshwari, flyover Oberoi mall and flyover Aarey check naka junction.

Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS 28	185	Goregaon	1.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 2.CARE CENTRE (RSA 6.1)	RSA 6.2+
2	WS 33	746/13, 750, 751, 784, 785, 787	Pahadi Goregaon (W)	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 3. CULTURAL CENTER/DRAMA THEATRE/THEATRE (RSA 3.3)	DSA 1.1+
3	WS 33	359	Pahadi Goregaon (W)	1.ROAD DEPOT (DMS1.1) 2. MUNICIPAL CHOWKY (DMS 1.2)	DMS 1.1+
4	WS 33	215	Pahadi Goregaon (W)	1.MUNICIPAL SCHOOL (DE 1.1) 2.MUNICIPAL OFFICE (DO 1.3)	DE1.1+
5	WS 33	223	Pahadi Goregaon (W)	1.PRIMARY & SECONDARY SCHOOL (DE 1.2) 2. PLAYGROUND (DOS 1.4)	DE 1.2+
6	WS 33	224	Pahadi Goregaon (W)	1.PRIMARY & SECONDARY SCHOOL (DE 1.2) 2. PLAYGROUND (DOS 1.4)	DE 1.2+
7	WS 33	460/6	Pahadi Goregaon (E)	1.SOLID WASTE MANAGEMENT FACILITIES (RMS 3.1) 2. PUBLIC CONVENIENCE (RSA 6.3)	RMS 3.1+

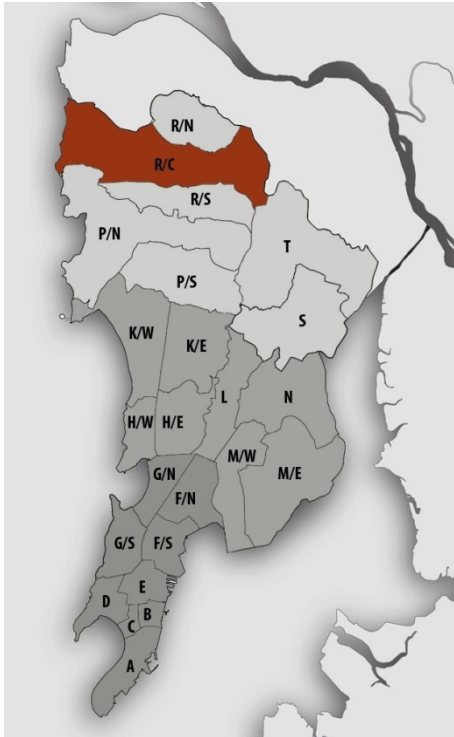
S.No	DP Sheet no.	CS/CTS No.	Division/Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
8	WS 33	532 pt	Pahadi Goregaon (E)	1.GARDEN/PARK (ROS 1.5) 2. PARKING LOT (RT 1.6)	ROS 1.5+
9	WS 38	55 pt	Pahadi Goregaon (W)	1.WELFARE CENTRE (DSA 2.5) 2. CARE CENTRE (RSA 6.1)	DSA 2.5+
10	WS 38	202, 203	Pahadi Goregaon (E)	1.RETAIL MARKET (DSA 1.2) 2.RETAIL MARKET WITH VENDING ZONE (RSA 1.2)	DSA 1.2+
11	WS 38	175 pt	Pahadi Goregaon (E)	1.WELFARE CENTRE (DSA 2.5) 2. CARE CENTRE (RSA 6.1)	DSA 2.5+
12	WS 38	1406G/5, 1406A/25B /2, 1406A/26	Malad (W)	1.MUNICIPAL OFFICE (DO 1.3) 2. SOLID WASTE MANAGEMENT FACILITIES (DMS 3.1)	DO 1.3+
13	WS 38	1214/8	Malad (W)	1.MUNICIPAL SCHOOL (RE 1.1) 2.STUDENT HOSTEL (RSA 2.7)	RE 1.1+
14	WS 38	900A/3	Pahadi Goregaon (W)	1.MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2) 2.CARE CENTRE (RSA 6.1) 3. SOLID WASTE MANAGEMENT FACILITIES (RMS 3.1)	RSA 5.2+
15	WS 38	1406G/4, 1406G/5	Malad (W)	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL HOUSING (RR 1.5)	RSA 1.1+
16	WS 39	158C/1A, 158D/2	Dindoshi	1.WELFARE CENTRE (DSA 2.5) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 3.CARE CENTRE (RSA 6.1)	DSA 2.5+

R/CENTRAL WARD



1. R-Central Ward Profile

Location Map



JURISDICTION

Ward Area – 4795 ha

SPA area – 1440 ha (Out of 2007 ha shared with PN ward)

MCGM Planning Area – 3355 ha

Natural area in MCGM Planning Area – 1927 ha

Developable area – 1428 ha

Developed Area – 1217 ha (85.22% of Developable Area)

National Park area accessible – 588 ha

WARD BOUNDARIES

North – Devidas Road, Sudhir Phadke Flyover, Dahisar River at Daulat Nagar, Chogle Nagar

South – Borsapada Road, Gaodevi Road, Thakur Village Road

East – Sanjay Gandhi National Park

West – Recreation and Tourism Development Zone (MMRDA – SPA)

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 5.13	2021 –5.76
2011 –5.62	2031 –5.64
	2034 –4.94

Density – 117pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 20
 Primary and Secondary Schools – 38
 Municipal Dispensaries/Health post – 9
 Municipal Maternity Home – 7
 Municipal Hospital – 1
 Cemetery - 3

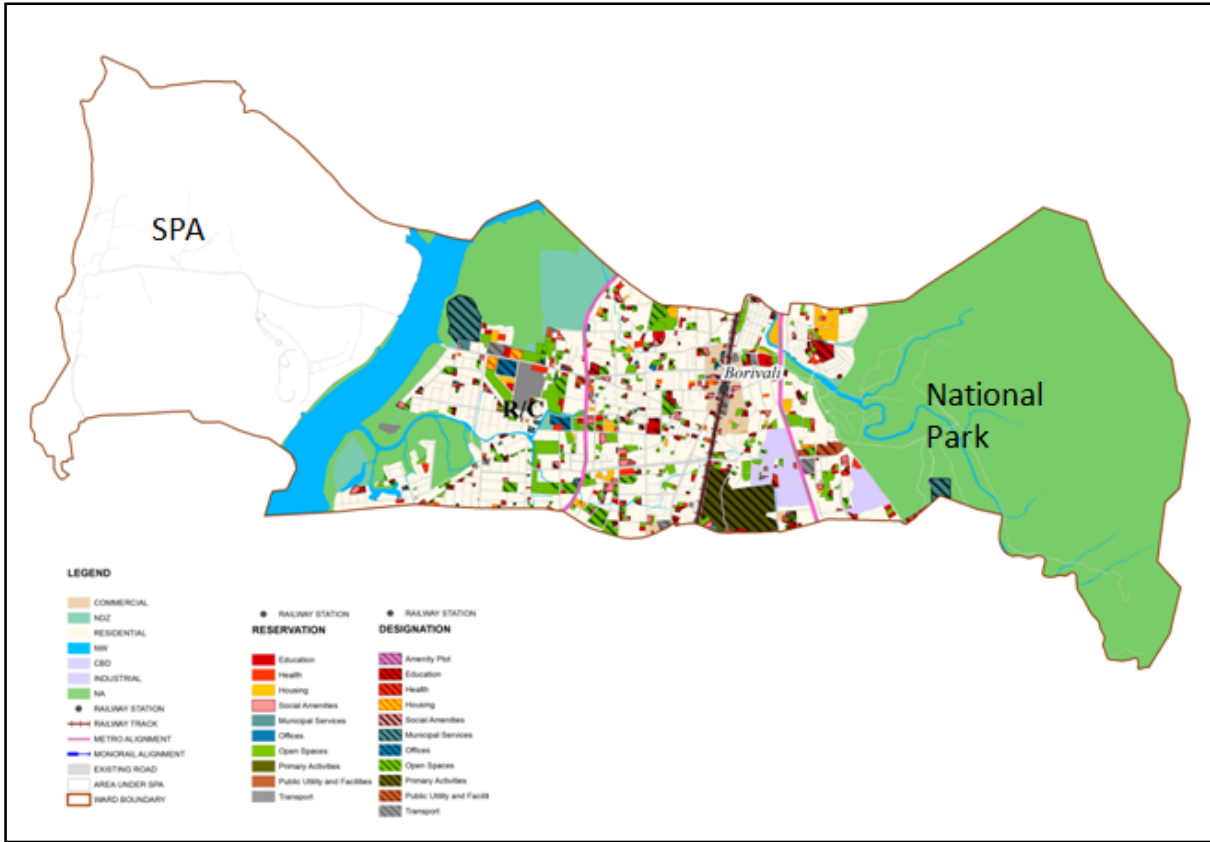
CONNECTIVITY

Major Roads - Western Express Highway, Swami Vivekanand road and Link Road running North-South direction connecting other wards of Mumbai. While Devidas Road, Chandavarkar Road, Lokmanya Tilak Road, Shimpoli Road, R.M. Bhattad Road, Borsapada Road, Mahatma Gandhi Road, Kasturba Road and Dattapada road are the internal roads

Suburban Railway Station – Borivali

Future Proposals – Metro Lines along Link Road and Western Express Highway

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – R Central Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	5,75,580	1.574	90.60	22.99
2	Health	5,75,580	0.419	24.12	4.16
3	Market	5,75,580	0.100	5.76	2.42
4	Cemetery	5,75,580	0.030	1.73	3.47
5	Open Space	5,75,580	4.000	230.23	66.26

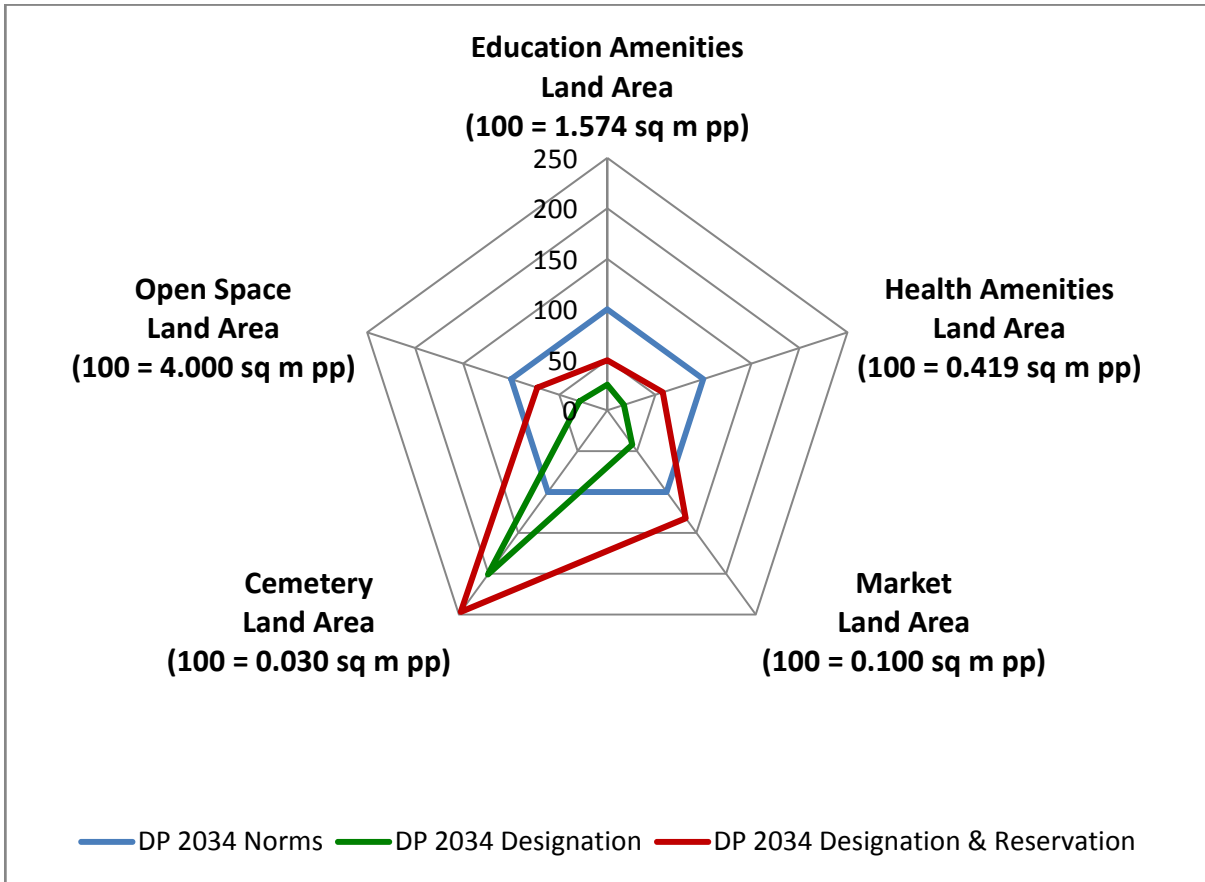
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	90.60	44.92	-45.68	0.780
2	Health	24.12	13.93	-10.19	0.242
3	Market	5.76	7.60	1.84	0.132
4	Cemetery	1.73	4.26	2.53	0.074
5	Open Space	230.23	167.83	-62.40	2.916

Note:

1. The norms for Sr. No. 1, 2& 3 would be achieved or exceeded through Built-up Area.
2. The accessible National Park area is not counted in open space.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



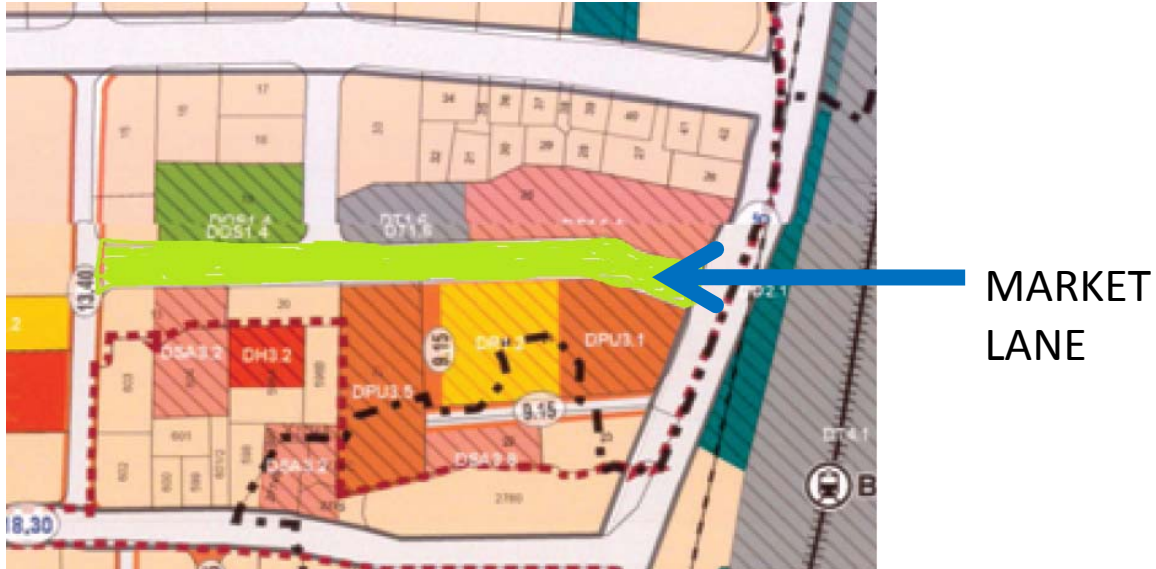
3. Reservations – Ward Level

Summary of New Social Amenities proposed in RDDP-2034

Sr. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA1.1	2
2	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
3	STUDENTS HOSTEL	RSA 2.7	2
4	HOMELESS SHELTER	RSA 2.9	1
5	LEISURE PARK	RSA 3.7	2
6	OLD AGE HOME	RSA 4.9	4
7	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
8	CARE CENTRE	RSA 6.1	8
9	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
10	MUNICIPAL FACILITIES	RMS 1.3	3
11	SOLID WASTE MANAGEMENT FACILITIES	RMS 3.1	1
12	SEWAGE TREATMENT PLANT/FACILITIES	RMS 4.1	1
13	SEWAGE PUMPING STATION	RMS 4.3	1
14	HYDRAULIC ENGINEERING DEPT. FACILITY	RMS 5.5	1
15	PARKING LOT	RT 1.6	2
16	AMENITY PLOT	RAM	7

New Reservations which cannot be shown in the map

Pedestrian way on Market Lane running between Borivali Police Station and Municipal Market at S.V. road in Borivali west



Multiple Designations and Reservations

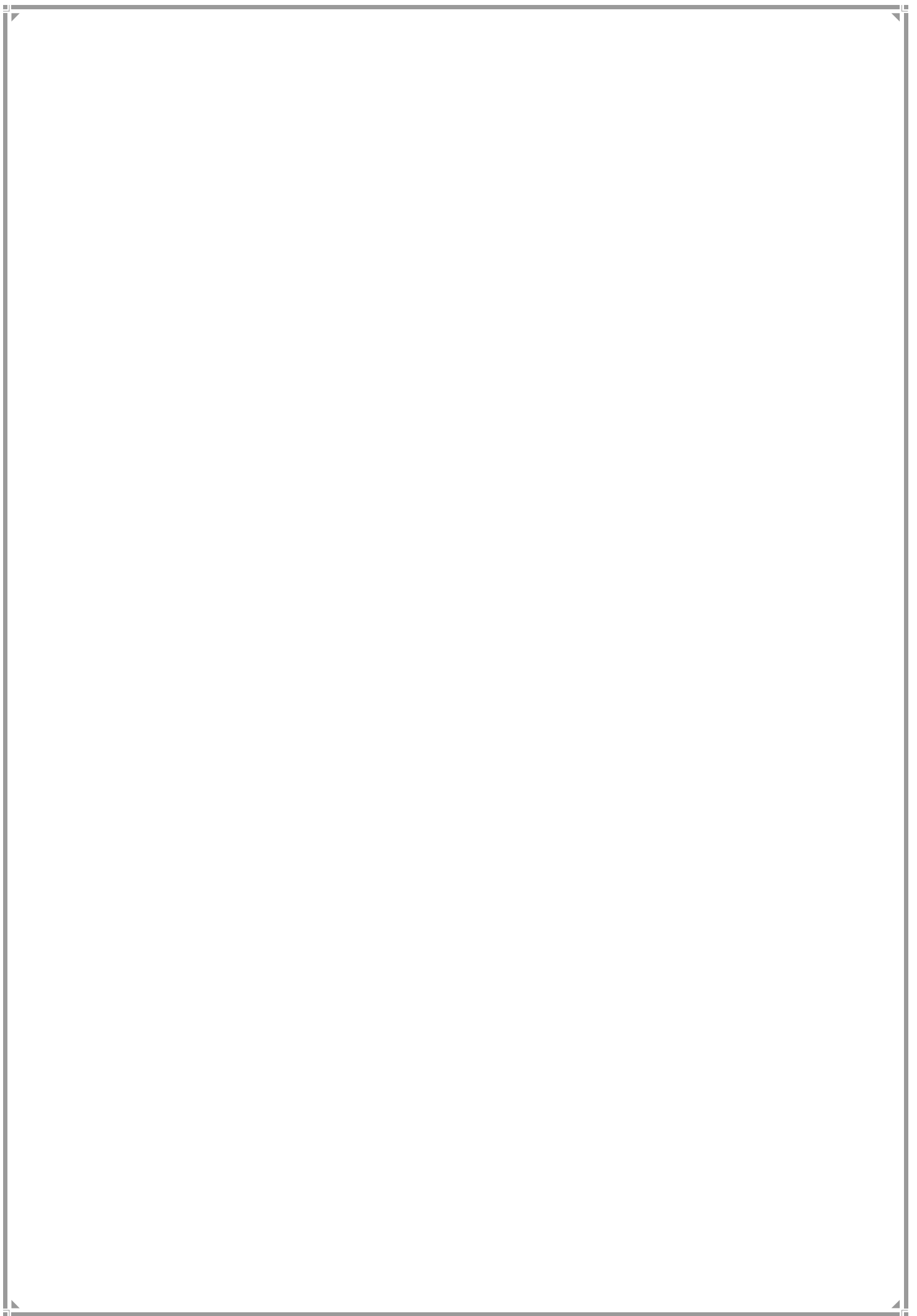
Sr. No	DP Sheet no.	CTS/FP No.	Village/TPS	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS58	F.P. 238(PT)	Borivali TPS-III	1. MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1) 2. LIBRARY (DSA2.8)	DH1.1+
2	WS58	F.P. 3	Borivali TPS-II	1. MUNICIPAL SCHOOL (DE1.1) 2. POLICE STATION (DPU3.1)	DE1.1+
3	WS58, WS63	F.P. 25(PT)	Borivali TPS-I	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. HOMELESS SHELTER (RSA2.9)*	DSA1.1+
4	WS63	476A/2, 477, 478B, 480, 481A/2, 481/1B	Borivali	1. GARDEN/PARK (DOS1.5) 2. WELFARE CENTRE (DSA2.5)	DOS1.5+
5	WS63	2032, 2033, 2321, 2322	Eksar-N	1. LIBRARY (DSA2.8 Pt.) 2. RETAIL MARKET (DSA1.2)	DSA2.8+

Sr. No	DP Sheet no.	CTS/FP No.	Village/TPS	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
				Pt.) 3. MUNICIPAL DISPENSARY/ HEALTH POST (DH 1.1Pt)	
6	WS63	352, 355	Borivali	1. TANK/POND/LAKE (DOS1.1) 2. GARDEN/PARK (DOS1.5)	DOS1.1+
7	WS63	2477	Eksar-N	1. LIBRARY (DSA2.8) 2. MUNICIPAL DISPENSARY/ HEALTH POST (DH 1.1)	DSA2.8+
8	WS52	3A/2/144T- 1 pt	Charkop	1. CARE CENTRE (RSA6.1) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	RSA6.1+
9	WS53	43, 45, 46, 47	Magathane	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 2. MULTIPURPOSE COMMUNITY WELFARE CENTRE (RSA2.1)	RH1.1+
10	WS53	407, 408, 409, 410, 411	Poisar	1. SOLID WASTE MANAGEMENT FACILITIES (RMS3.1) 2. HYDRAULIC ENGINEERING DEPT FACILITY (RMS5.5)	RMS3.1+
11	WS58	166	Shimpvali	1. SEWAGE TREATMENT PLANT/FACILITIES (RMS4.1) 2. SEWAGE PUMPING STATION (RMS4.3)	RMS4.1+
12	WS58	F.P. 721	Borivali TPS-III	1. REHABILITATION AND RESETTLEMENT (RR2.1) 2. CARE CENTRE (RSA6.1)	RR2.1+
13	WS58	197(PT)	Eksar	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 2. MUNICIPAL MATERNITY HOME (RH1.3)	RH1.1+

Sr. No	DP Sheet no.	CTS/FP No.	Village/TPS	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
14	WS58	617-649-650	Borivali TPS-III	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. CARE CENTRE (RSA6.1) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	RSA5.2+
15	WS63	532B/7, 1541/1, 1541/7, 1541/8, 2033	Eksar-N	1. MULTIPURPOSE COMMUNITY WELFARE CENTRE (RSA2.1) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RSA2.1+
16	WS63	F.P. 49B, 50	Borivali TPS-I	1. GARDEN/PARK (ROS1.5) 2. PARKING LOT (RT1.6)	ROS1.5+
17	WS63	31C & 331, 472	Eksar-S & Borivali	1. GOVERNMENT OFFICE (RO2.1) 2. GOVERNMENT STAFF QUARTERS (RR1.3)	RO2.1+
18	WS63	F.P.66B	Borivali TPS-I	1. PRIMARY AND SECONDARY SCHOOL (RE1.2) 2. MUNICIPAL CHOWKY (RMS1.2)	RE1.2+
19	WS 62	Gorai Dumping Ground Borivali		1. LAND FILL SITE (DMS 3.2) 2. GARDEN/ PARK (ROS 1.5)	DMS3.2+
20	WS64	2052, 2054, 2055, 2057, 2065, 2067, 2171, 2174, 2175	Dahisar	1. RETAIL MARKET WITH VENDING ZONE (RSA1.2) 2. REHABILITATION AND RESETTLEMENT (RR2.1)	RSA1.2+

* The reservation of Homeless Shelter is proposed only on the existing Municipal Market Building which is proposed to be redeveloped and not on the entire Designation.

R/NORTH WARD



1. R-North Ward Profile

Location Map



JURISDICTION

Ward Area–1417.67 ha

Developed Area–702.02 ha

(49.51% of Ward Area)

WARD BOUNDARIES

North – Mira - Bhayander

East – Sanjay Gandhi National Park

West – Natural Area (Mangroves)

South – Devidas Road (R - Central Ward)

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 –3.64	2021 –5.10
2011–4.32	2031 –5.00
	2034 –5.35

Density – 304pph (As per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 13

Primary and Secondary School – 15

Municipal Dispensary/Health Post – 8

Cemetery - 1

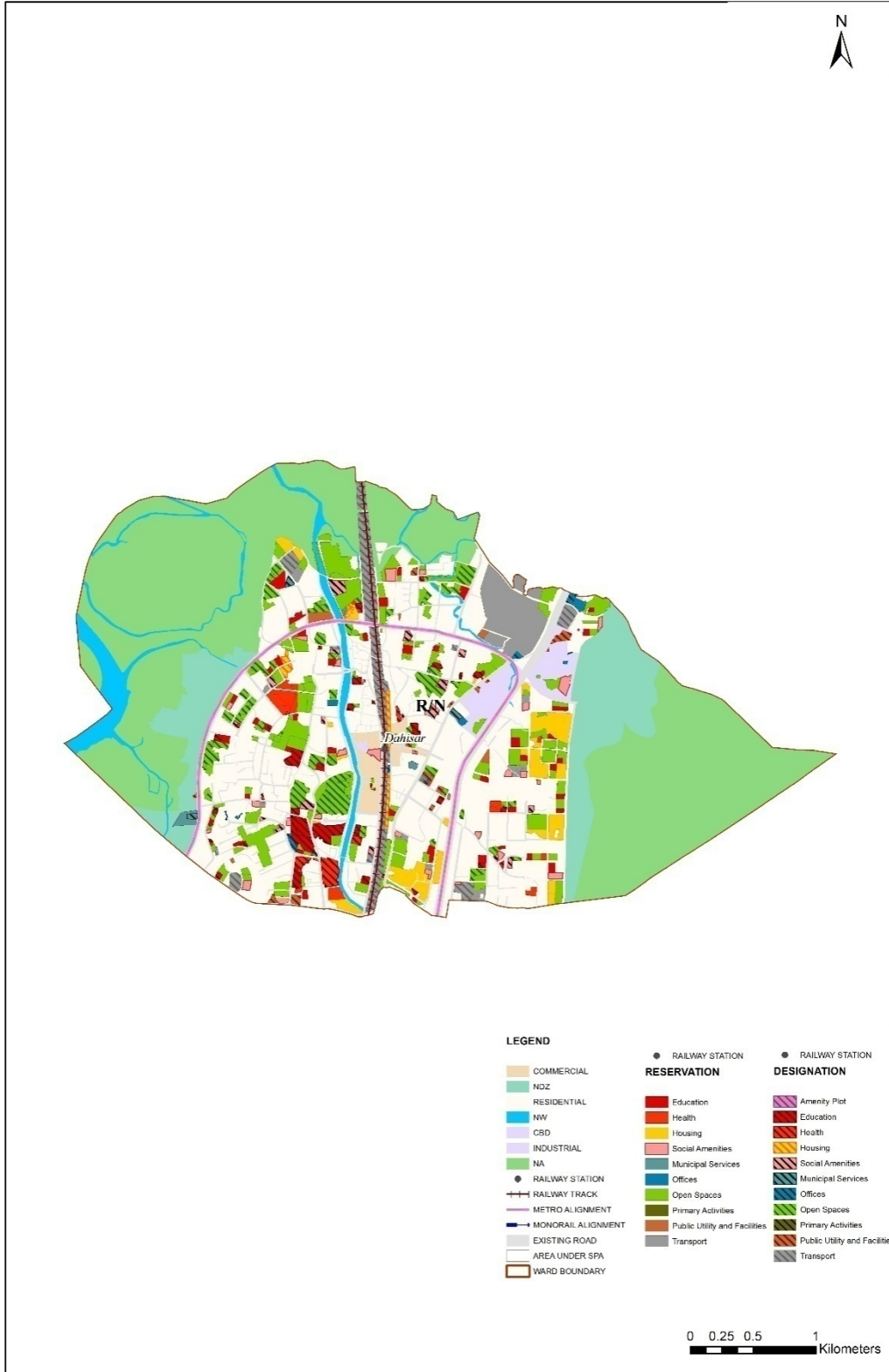
CONNECTIVITY

Major Roads - Western Express Highway, New Link Road, Swami Vivekanand Road, Devidas Road, Laxman Mhatre Road, CST Road, etc

Suburban Railway Station – Dahisar

Future Proposal - Proposed Metro Station at Kandarpada Road, Rushi Sankul, Dahisar,

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – R North Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	5,10,420	1.574	80.34	14.68
2	Health	5,10,420	0.419	21.39	5.20
3	Market	5,10,420	0.100	5.10	1.79
4	Cemetery	5,10,420	0.030	1.53	1.36
5	Open Space	5,10,420	4.000	204.17	33.52

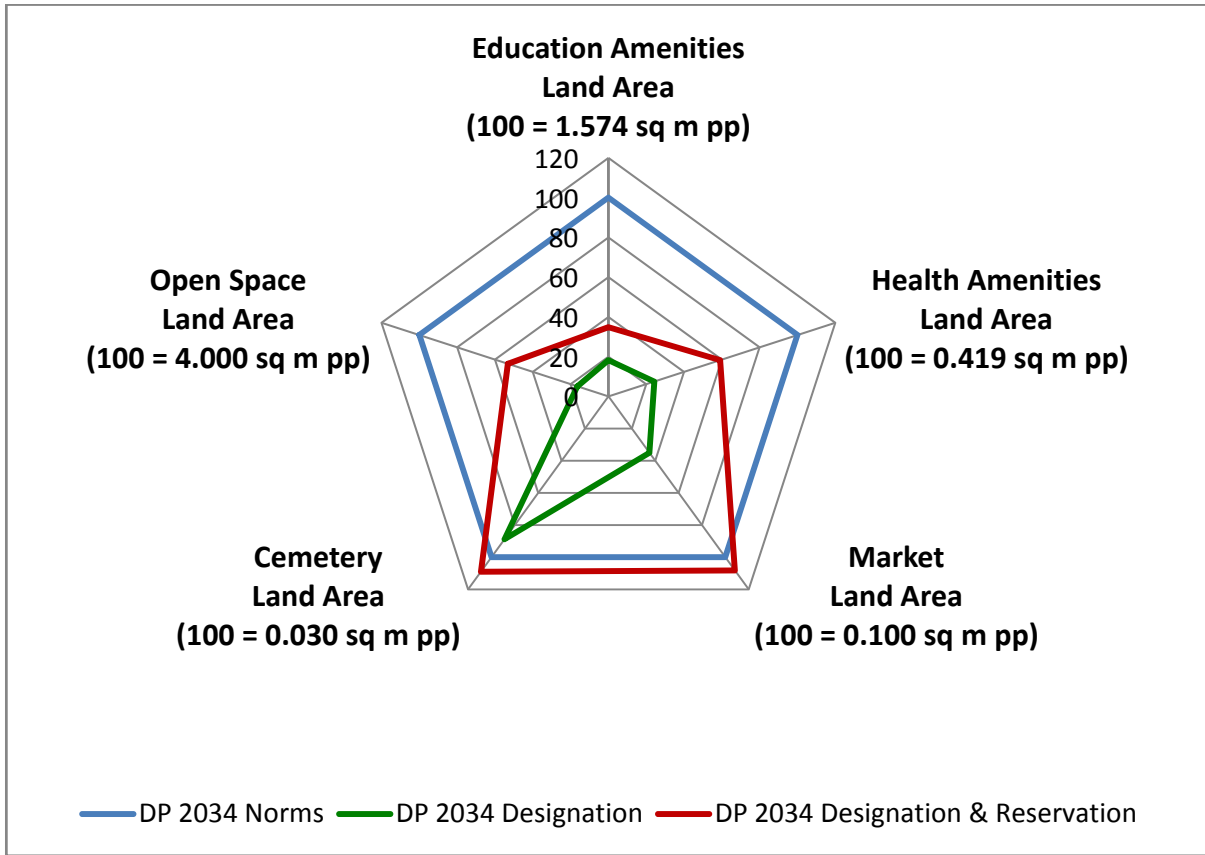
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	80.34	28.00	-52.34	0.549
2	Health	21.39	12.66	-8.73	0.248
3	Market	5.10	5.53	0.42	0.108
4	Cemetery	1.53	1.67	0.14	0.033
5	Open Space	204.17	108.52	-95.65	2.126

Note:

The norms for Sr. No 1, 2 & 3 would be achieved or exceeded through Built-up Area

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	STUDENTS HOSTEL	RSA 2.7	1
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTRE	RSA 6.1	7
4	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	3
5	PUBLIC CONVENIENCE	RSA 6.3	3
6	HOMELESS SHELTER	RSA 2.9	3
7	OLD AGE HOME	RSA4.9	1
8	DISASTER MANAGEMENT FACILITY	RO 3.1	1
9	SOLID WASTE MANAGEMENT FACILITIES	RMS3.1	2
10	MUNICIPAL OFFICE	RO1.3	1
11	MUNICIPAL FACILITIES	RMS1.3	1

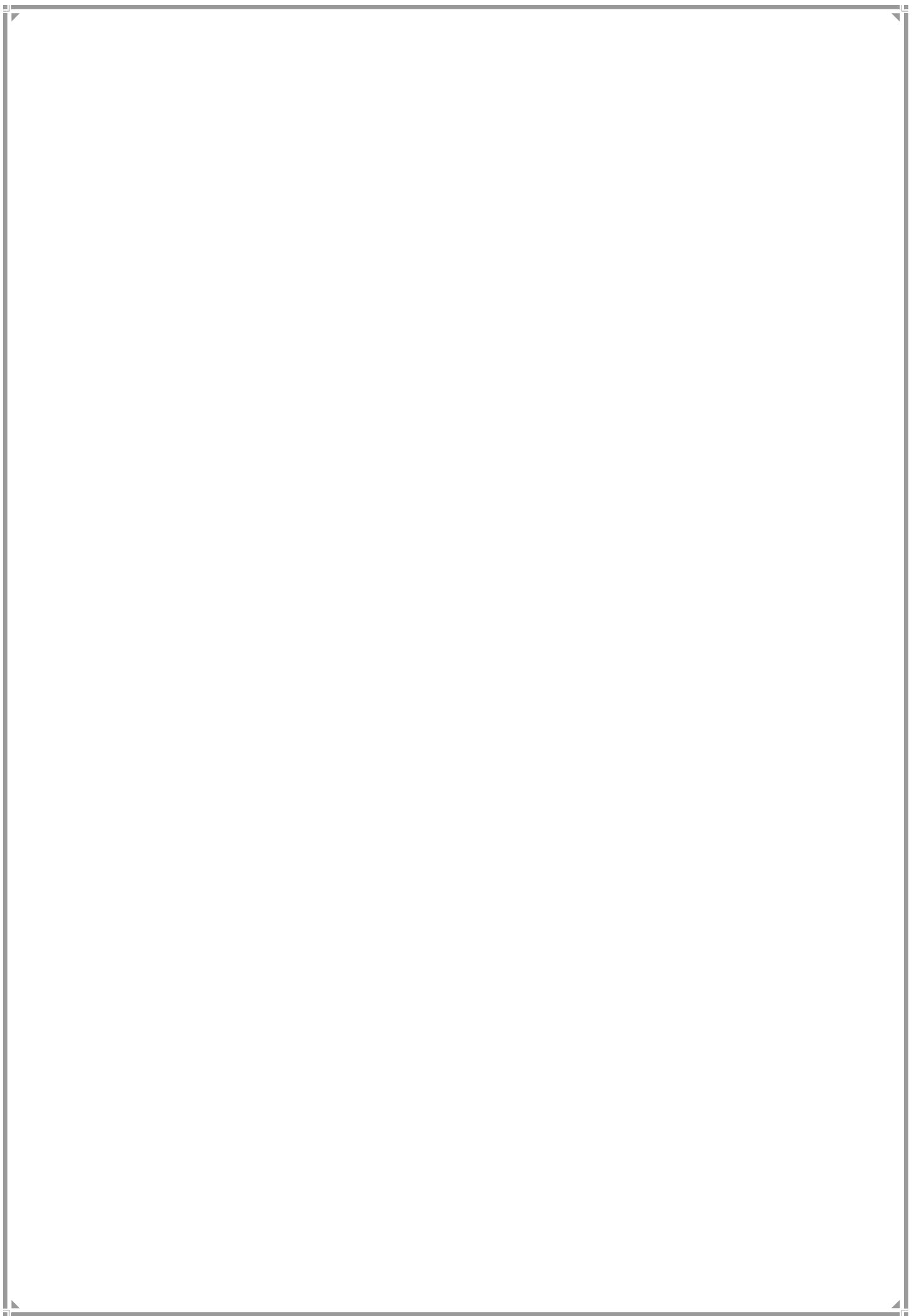
Multiple Designations and Reservations

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS 64	2400B/E, 2400A/4, 2400, 2400A/D	Dahisar	1.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. LIBRARY(DSA2.8)	DH1.1+
2	WS 64	2400C/A, 2400B/C, 2400	Dahisar	1.MUNICIPAL RETAIL MARKET(DSA1.1) 2. REHABILITATION & RESETTLEMENT (DR2.1)	DSA1.1+
3	WS 68	880B/1, 880B/2, 880A	Eksar	1.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. MUNICIPAL MATERNITY HOME(DH1.3)	DH1.1+
4	WS 68	679	Dahisar	1. WELFARE CENTRE (DSA2.5) 2. HOMELESS SHELTER (RSA2.9)	DSA2.5+
5	WS 68	678, 679	Dahisar	1.MUNICIPAL SCHOOL(DE1.1) 2.PLAY GROUND(DOS1.4)	DE1.1+
6	WS 69	2561, 2543	Dahisar	1.MUNICIPAL RETAIL MARKET(DSA1.1) 2. REHABILITATION & RESETTLEMENT (DR2.1)	DSA1.1+
7	WS 73	368/1, 335/9, 368/5, 335/6	Dahisar	1.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. LIBRARY(DSA2.8)	DH1.1+
8	WS 74	1419D, 1418C, 1419C	Dahisar	1.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2. LIBRARY(DSA2.8)	DH1.1+
9	WS 74	1317, 1320 to 1324, 1326, 1361, 1362	Dahisar	1.WELFARE CENTER (DSA2.5) 2.MUNICIPAL DISPENSARY/HEALTH POST(DH1.1) 3.LIBRARY(DSA2.8)	DSA2.5+

S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
10	WS 63	1439A/1, 1438, 1439A/2, 1439A/3, 1387/6, 1387/29, 1387/5, 407/b	Eksar/ Borivali	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA2.9)	RSA1.1+
11	WS 63	1387/1, 1387/27, 1387/17, 1387/19, 1387/21, 1387/20	Eksar	1.MUNICIPAL SCHOOL(RE1.1) 2.PLAY GROUND(ROS1.4)	RE1.1+
12	WS 64	2330B, 2330A/1/1	Dahisar	1. MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 2. CARE CENTRE(RSA6.1)	RSA2.1+
13	WS 64	2348/1, 2353, 2346/5, 2346/9, 2367, 2348, 2350	Dahisar	1.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 2.CARE CENTER (RSA6.1) 3.PUBLIC CONVENIENCE(RSA6.3)	RSA6.2+
14	WS 68	36A, 119/1, 119	Mandpeshwar	1.MULTI PURPOSE COMMUNITY CENTRE (RSA2.1) 2.CARE CENTRE(RSA6.1)	RSA2.1+
15	WS 68	1343, 1325, 1342, 220	Eksar/ Mandpeshwar	1.MULTI PURPOSE HOUSING FOR WORKING WOMEN(RSA5.2) 2. OLD AGE HOME (RSA4.9) 3.STUDENTS HOSTEL (RSA2.7) 4. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 5.CARE CENTER (RSA6.1)	RSA5.2+
16	WS 68	880B/1, 873B, 876, 867, 870, 880C, 873C, 878, 879, 880A, 1062	Eksar	1.MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1) 2. MUNICIPAL MATERNITY HOME (RH1.3)	RH1.1+
17	WS 69	982, 973, 981	Dahisar	1.SOLID WASTE MANAGEMENT FACILITY & ALLIED ACTIVITY(RMS3.1)	RMS3.1+

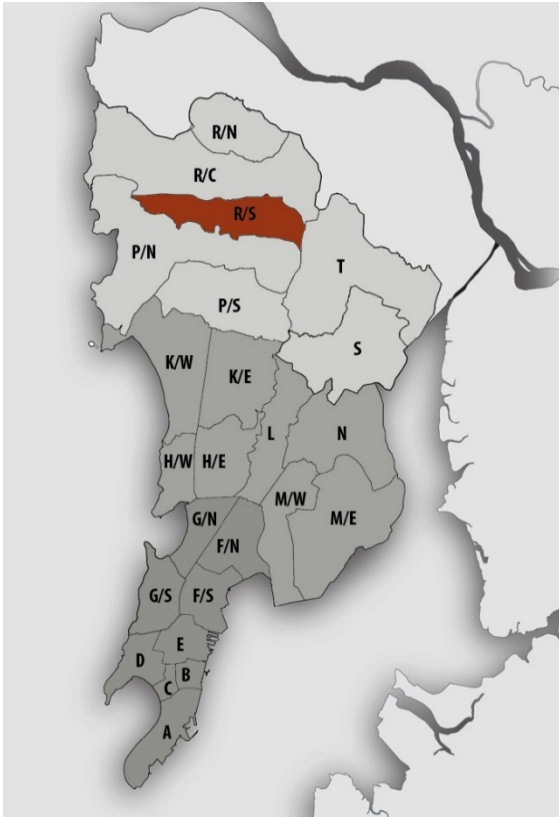
S. No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
				2. CARE CENTER (RSA6.1) 3.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 4.PUBLIC CONVENIENCE(RSA6.3)	
18	WS 69	1660, 1662	Dahisar	1.HOMELESS SHELTER (RSA2.9) 2.PUBLIC CONVENIENCE(RSA6.3)	RSA2.9+
19	WS 69	2793, 2794, 2795	Dahisar	1.MUNICIPAL DISPENSARY/ HEALTH POST(RH1.1) 2. MUNICIPAL MATERNITY HOME (RH1.3)	RH1.1+
20	WS 74	1409, 1406A, 1413, 1414A, 1415	Dahisar	1.MULTI PURPOSE COMMUNITY CENTRE (RSA2.1) 2.CARE CENTRE(RSA6.1)	RSA2.1+

R/SOUTH WARD



1. R-South Ward Profile

Location Map



JURISDICTION

Ward area- 1,831.31 ha.

**Developed area - 63%,
Natural areas - 37%**

(Sanjay Gandhi National Park & the
Manori Creek)

WARD BOUNDARIES

NORTH - Borsapada Road

EAST- Sanjay Gandhi National Park

WEST- Arabian Sea

SOUTH - Charkop Industrial Estate,
Shankar Lane, Manori

POPULATION

Existing (in Lakhs)	Proposed (in Lakhs)
2001- 5.90	2021- 7.82
2011- 6.91	2031- 7.87
	2034- 7.65

Density– 377pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 54

Primary and Secondary School – 52

Health post - 9

Dispensaries – 9

Cemetery - 2

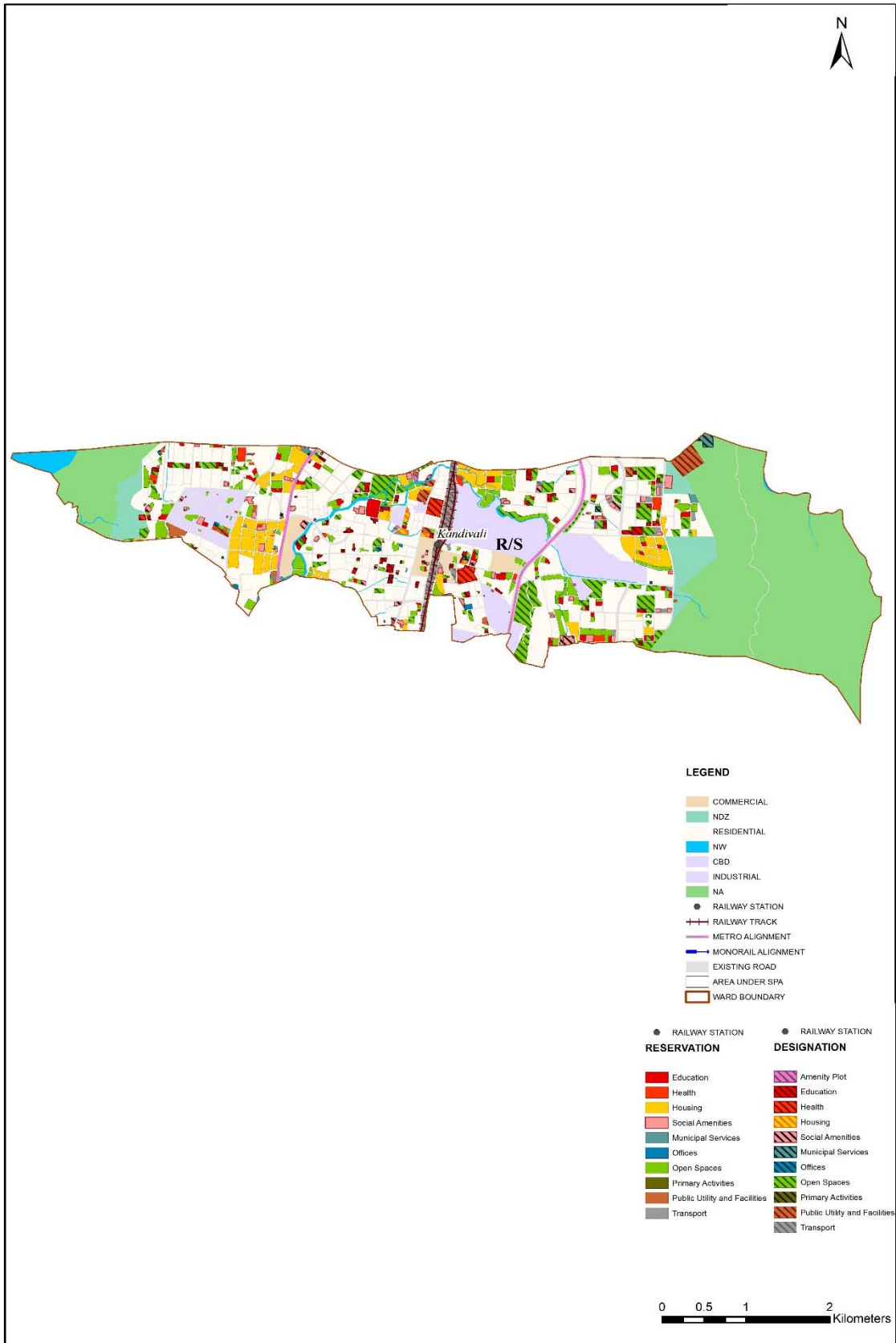
CONNECTIVITY

Major Roads:Western Express Highway, New link Road and S.V. Road, M.G. Road, Akurli Road and Borsapada road

Railway Station:Kandivali Railway Station

Future Proposals:Kandivali west and Ekta Nagar Metro Station

Proposed Land Use Map



2. GAP Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – R South Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	7,87,531	1.574	123.96	16.13
2	Health	7,87,531	0.419	33.00	7.60
3	Market	7,87,531	0.100	7.88	1.87
4	Cemetery	7,87,531	0.030	2.36	2.83
5	Open Space	7,87,531	4.000	315.01	78.28

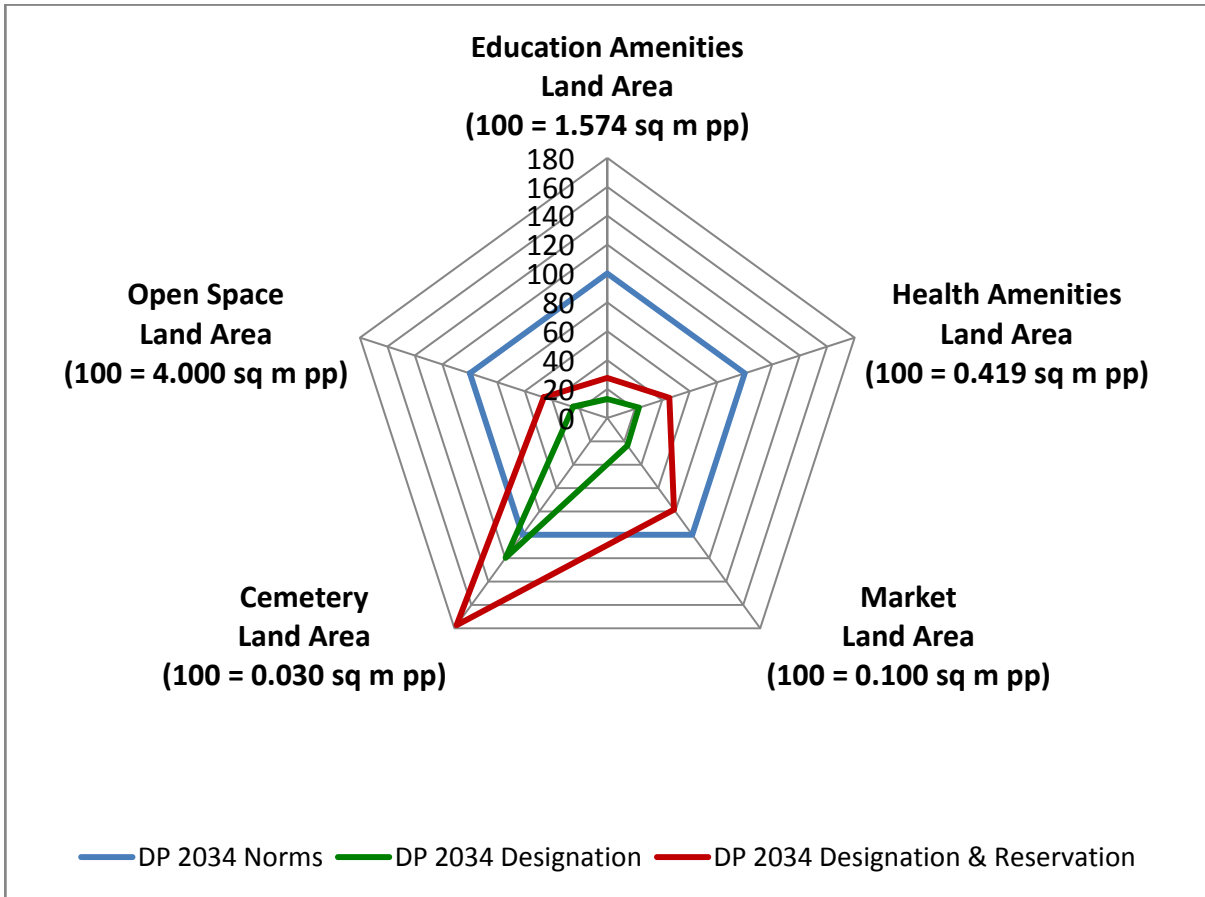
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	123.96	34.30	-89.66	0.436
2	Health	33.00	14.88	-18.12	0.189
3	Market	7.88	6.18	-1.70	0.078
4	Cemetery	2.36	4.19	1.83	0.053
5	Open Space	315.01	145.43	-169.58	1.847

Note:

The norms for Sr. No. 1,2 and 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations- Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

Sr. No.	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
2	OLD AGE HOME	RSA 4.9	1
3	CARE CENTRE	RSA 6.1	4
4	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	2
5	STUDENTS HOSTEL	RSA 2.7	1
6	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
7	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
8	HYDRAULIC ENGINEERING DEPARTMENT FACILITIES	RMS 5.5	1
9	HOMELESS SHELTER	RSA 2.9	1
10	DISASTER MANAGEMENT FACILITIES	RO 3.1	1

Sr. No.	Name of Amenity	Legend	Proposed
11	MUNICIPAL CHOWKY	RMS 1.2	1
12	SOLID WASTE MANAGEMENT FACILITIES	RMS 3.1	2
13	CULTURAL CENTRE/DRAMA THEATRE/ THEATRE	RSA 3.3	2
14	CLUB/ GYMKHANA	ROS 2.1	1
15	POLICE STATION	RPU 3.1	1
16	MEDICAL INSTITUTE	RE 4.2	1
17	OTHER INSTITUTE	RE 4.4	1

New Reservation which cannot be shown in the map

Underground parking to be provided at CTS- 834, 840A/1 - DOS1.4; adjacent to Western Express Highway and Samata Nagar (Sheet no. WS 54)

Sr. no.	DP Sheet no.	CTS no.	Village/ Division	Names of Designation/ Reservation which cannot be shown in the map	Designation/ Reservation	Site status/ Additional Note
1	WS 54	834, 840A/1	Poisar	Underground Reservation of Parking Lot (RT1.6)	1. PLAYGROUND (DOS 1.4) 2.PARKING LOT (RT 1.6)	High tension line passing

Multiple Designations and Reservations

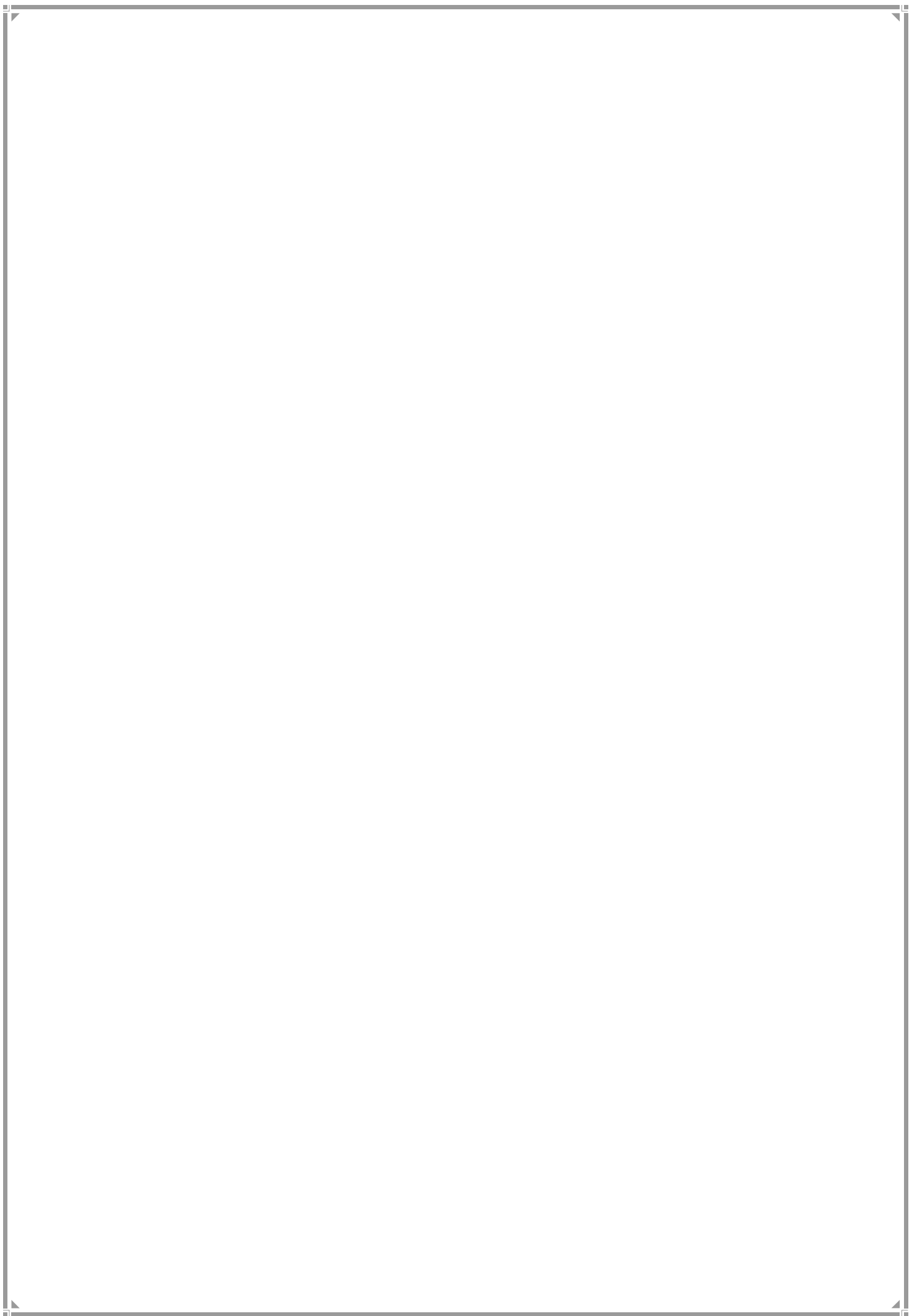
Sr.n o.	Sheet no.	CTS no.	Village/ Division	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	WS 48	93Bpt., 100pt., 101	Malad- W	1. LIBRARY (DSA2.8) 2.MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1)	DSA2.8+
2	WS 48	93	Malad- W	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2.PLAYGROUND (DOS1.4)	DE1.2+
3	WS 48	93	Malad- W	1. PRIMARY& SECONDARY SCHOOL (DE1.2) 2.PLAYGROUND (DOS1.4)	DE1.2+
4	WS 48	93	Malad- W	1. PRIMARY& SECONDARY SCHOOL (DE1.2) 2.PLAY GROUND (DOS1.4)	DE1.2+

Sr.n o.	Sheet no.	CTS no.	Village/ Division	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
5	WS 48	280 pt., 280A pt., 281pt.	Malad- W	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)	DSA1.1+
6	WS 48	63pt., 65, 66 pt.	Akurli	1. MUNICIPAL MATERNITY HOME (DH1.3) 2.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+
7	WS 48	24pt., 27, 28pt., 62pt., 66pt.	Akurli	1. ROAD DEPOT (DMS1.1) 2.AD HAR KENDRA WITH SKILL DEVELOPMENT CENTER (RSA6.2) 3.HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS5.5)	DMS1.1+
8	WS 48	134F/1A, 134F/1B, 134F/2	Akurli	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2.HOMELESS SHELTER (RSA2.9)	DSA1.1+
9	WS 48	72pt., 90pt., 91pt., 92pt., 93, 94A, 95, 96pt., 99pt.	Akurli	1. BEST BUS FACILITIES (DT1.4) 2.BEST STAFF QUARTERS (DR1.4)	DT1.4+
10	WS 48	68,69, 96pt., 97, 98, 99pt., 106, 107	Akurli	1. GOVERNMENT HOSPITAL (DH2.1) 2. GOVERNMENT STAFF QUARTERS (DR1.3)	DH2.1+
11	WS 48	96E	Wadhwan	1. POLICE STATION (DPU3.1) 2.POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
12	WS 48	66pt	Akurli	1. LIBRARY (DSA2.8) 2.WELFARE CENTRE (DSA2.5)	DSA2.8+
13	WS 49	163A pt.	Akurli	1. LIBRARY (DSA2.8) 2.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DSA2.8+

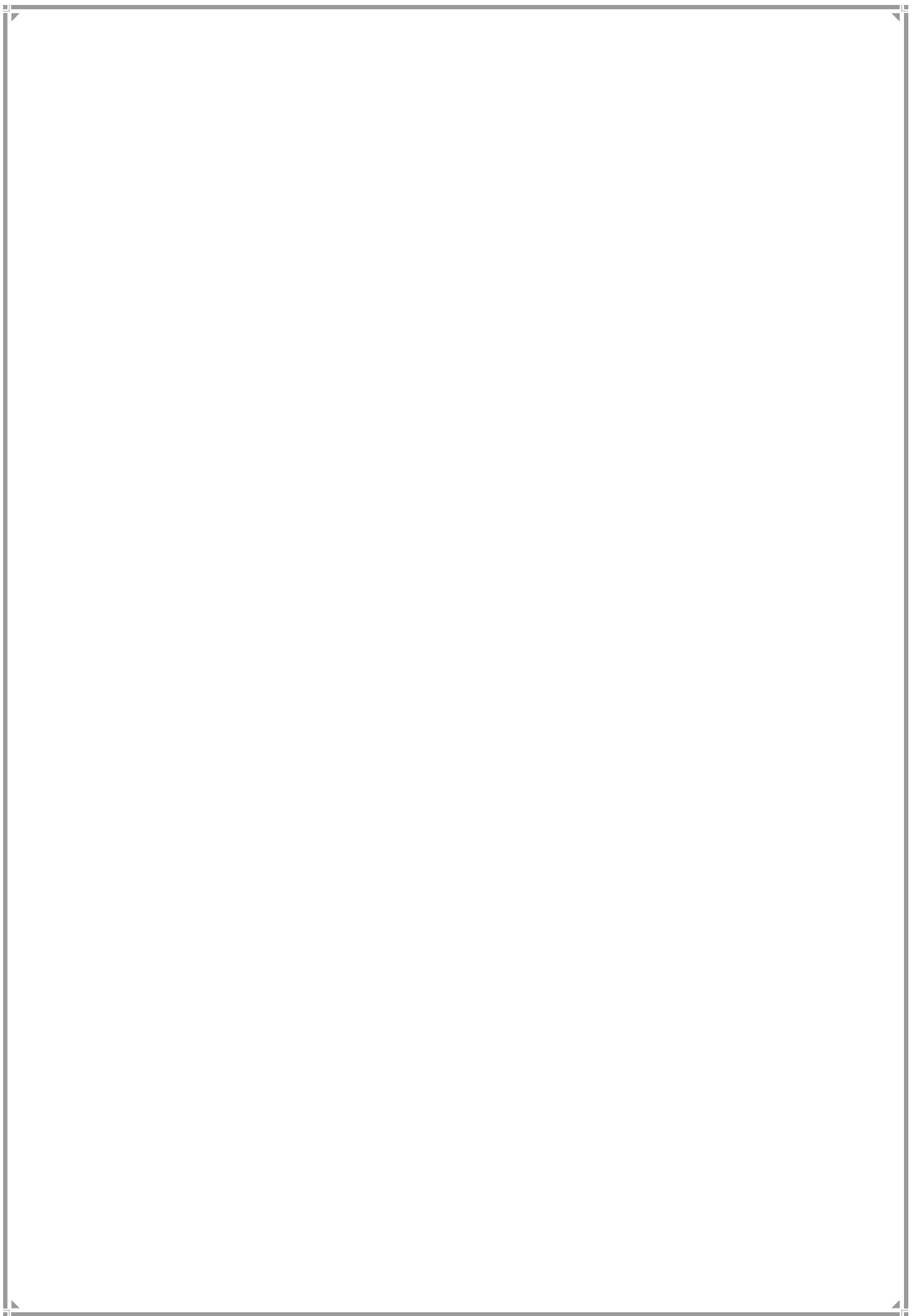
Sr.n o.	Sheet no.	CTS no.	Village/ Division	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
14	WS 52	449, 451pt.,45 2pt., 486pt., 487, 488pt., 489pt., 449, 574, 573pt.,57 2pt., 450pt., 451pt., 575pt.,	Charkop	1. MUNICIPAL MATERNITY HOME (DH1.3) 2.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1)	DH1.3+
15	WS 53	326	Poisar	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL OFFICE (DO1.3)	DSA1.1+
16	WS 53	225	Poisar	1. POLICE STATION (DPU3.1) 2.POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
17	WS 53	226	Poisar	1. POLICE STATION (DPU3.1) 2.POLICE STAFF QUARTERS (DR1.2)	DPU3.1+
18	WS 53	111pt., 112pt., 114pt., 115pt.	Kandivali	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2.MULTIPURPOSE COMMUNITY CENTRE (RSA2.1) 3.CARE CENTRE (RSA6.1)	DSA1.1+
19	WS 53	1153pt., 1156, 1157pt.	Kandivali	1. SWIMMING POOL (DOS2.2) 2.CLUB/ GYMKHANA (ROS2.1)	DOS2.2+
20	WS 54	778E	Poisar	1. MUNICIPAL MATERNITY HOME (DH1.3) 2.MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1)	DH1.3+
21	WS 54	809A/1/1 9A/1/1/3	Poisar	1. MUNICIPAL MATERNITY HOME (DH1.3) 2.MUNICIPAL DISPENSARY/ HEALTH POST (DH1.1)	DH1.3+

Sr.n o.	Sheet no.	CTS no.	Village/ Division	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
22	WS 49	174C pt.	Akurli	1. MULTI PURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2.ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 3.CARE CENTRE (RSA6.1)	RSA5.2+
23	WS 49	163A pt.	Akurli	1. DISASTER MANAGEMENT FACILITY (RO3.1) 2.MUNICIPALCHOWKY (RMS1.2)	RO3.1+
24	WS 53	27A, 134B	Kandivali, Poisar	1. OLD AGE HOME (RSA4.9) 2.CARE CENTRE (RSA6.1)	RSA4.9+
25	WS 54	326	Poisar	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL OFFICE (DO1.3)	DSA 1.1+
26	WS 49	852B/1	Poisar	1. MULTIPURPOSE HOSTEL FOR WORKING WOMEN (RSA5.2) 2.ADHARKENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 3.CARE CENTRE (RSA6.1)	RSA5.2+

EASTERN SUBURB WARDS

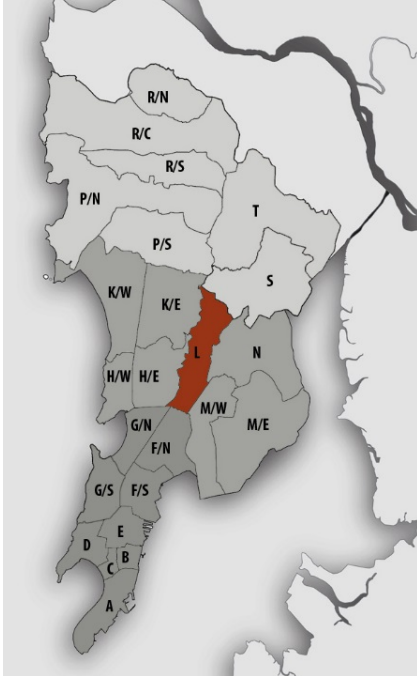


L WARD



1. LWard Profile

Location Map



JURISDICTION

Ward Area – 1562.54Ha (MCGM Area) +
159.89 Ha (Area under SPA)

Developed Area – 1275.99 ha (MCGM Area)
(90.69% of Ward Area)

WARD BOUNDARIES

North – Powai Lake, Jogeshwari Vikhroli Link Road (JVLR)

East – Priyadarshani, Nehru Nagar

West – International Airport, LBS Marg & BKC

South - Dharavi

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001- 7.78	2021 – 9.81
2011 – 9.02	2031 – 9.58
	2034 – 9.25

Density – 579.80pph(as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 45
Primary & Secondary Schools – 49
Hospitals - 4
Dispensaries – 20
Municipal Maternity Home - 2
Cemetery – 7

CONNECTIVITY

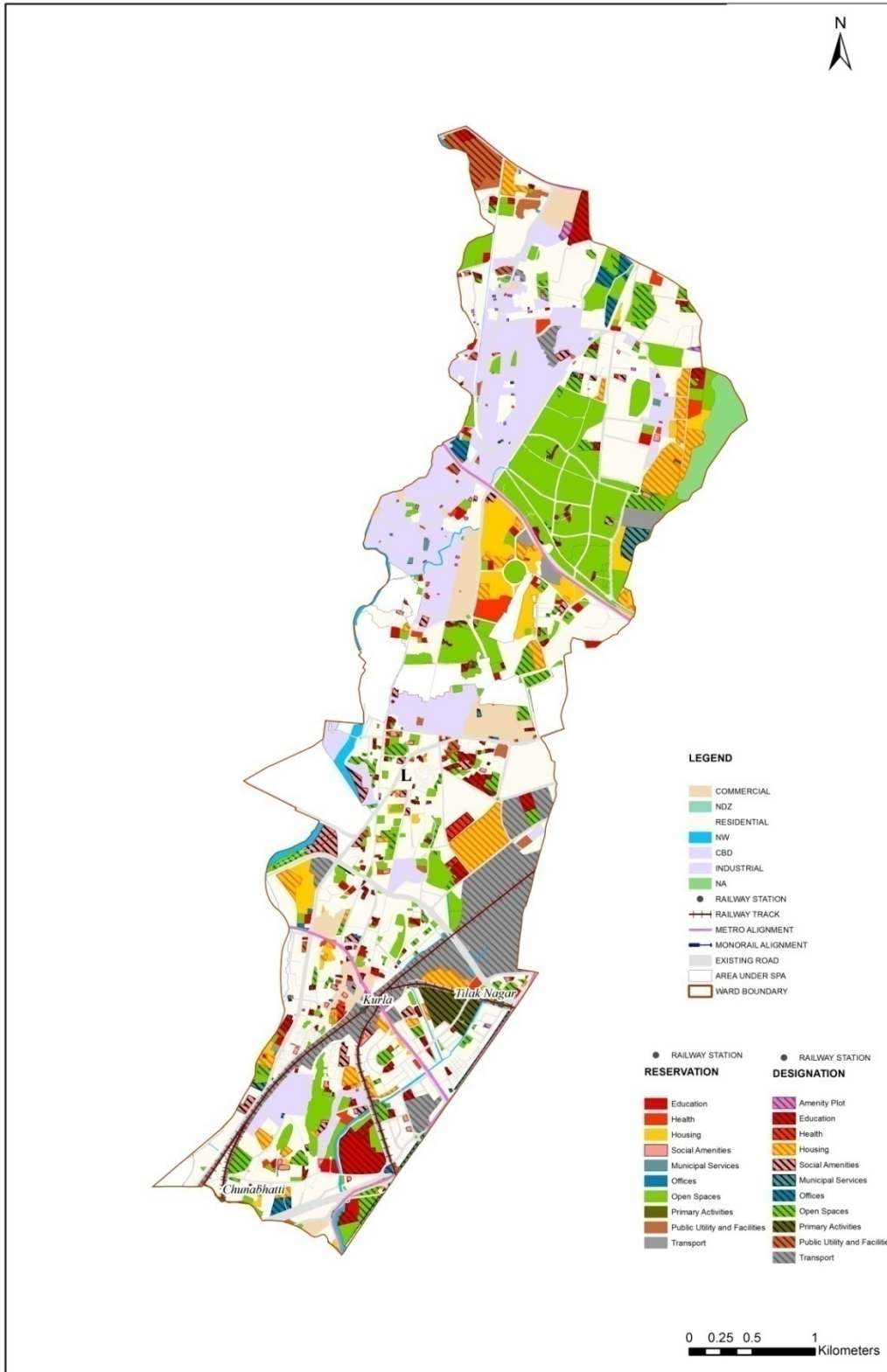
Major Roads – L.B.S. Marg, Andheri- Kurla Road, Eastern Express Highway, S.G. Barve Marg, and Saki-Vihar Road.

Railway Stations – Kurla Terminus and Chunabhatti Station

Metro Line – 1 Station - Saki Naka Metro Station, Subhash Nagar Metro Station

Future Proposals – 1 proposed metro routes - Charkop-Mankhurd

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis –

S.No.	Amenity	Projected Population – L Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	9,81,145	1.574	154.43	39.04
2	Health	9,81,145	0.419	41.11	4.40
3	Market	9,81,145	0.100	9.81	3.18
4	Cemetery	9,81,145	0.030	2.94	10.74
5	Open Space	9,81,145	4.000	392.46	51.90

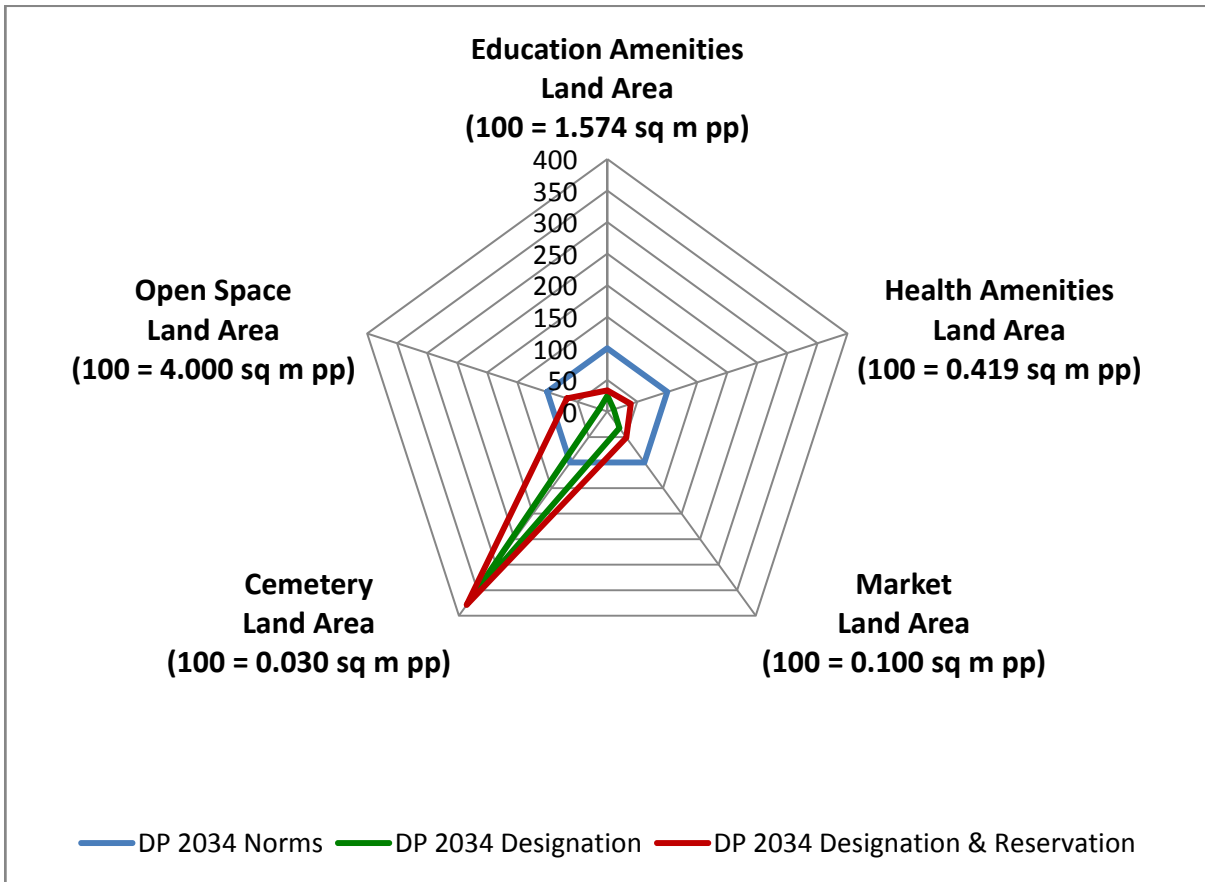
Proposed Amenities and Norms Achieved –

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	154.43	51.61	-102.82	0.526
2	Health	41.11	16.07	-25.04	0.164
3	Market	9.81	5.03	-4.78	0.051
4	Cemetery	2.94	11.15	8.21	0.114
5	Open Space	392.46	264.00	-128.46	2.691

Note:

The norms for Sr. no. 1, 2& 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	STUDENTS HOSTEL	RSA 2.7	2
2	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
3	CARE CENTER	RSA 6.1	14
4	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER	RSA 6.2	2
5	HOMELESS SHELTER	RSA 2.9	5
6	OLD AGE HOME	RSA4.9	1
7	DISASTER MANAGEMENT FACILITY	RO 3.1	1
8	MUNICIPAL OFFICE	RO1.3	1

Multiple Designations and Reservations

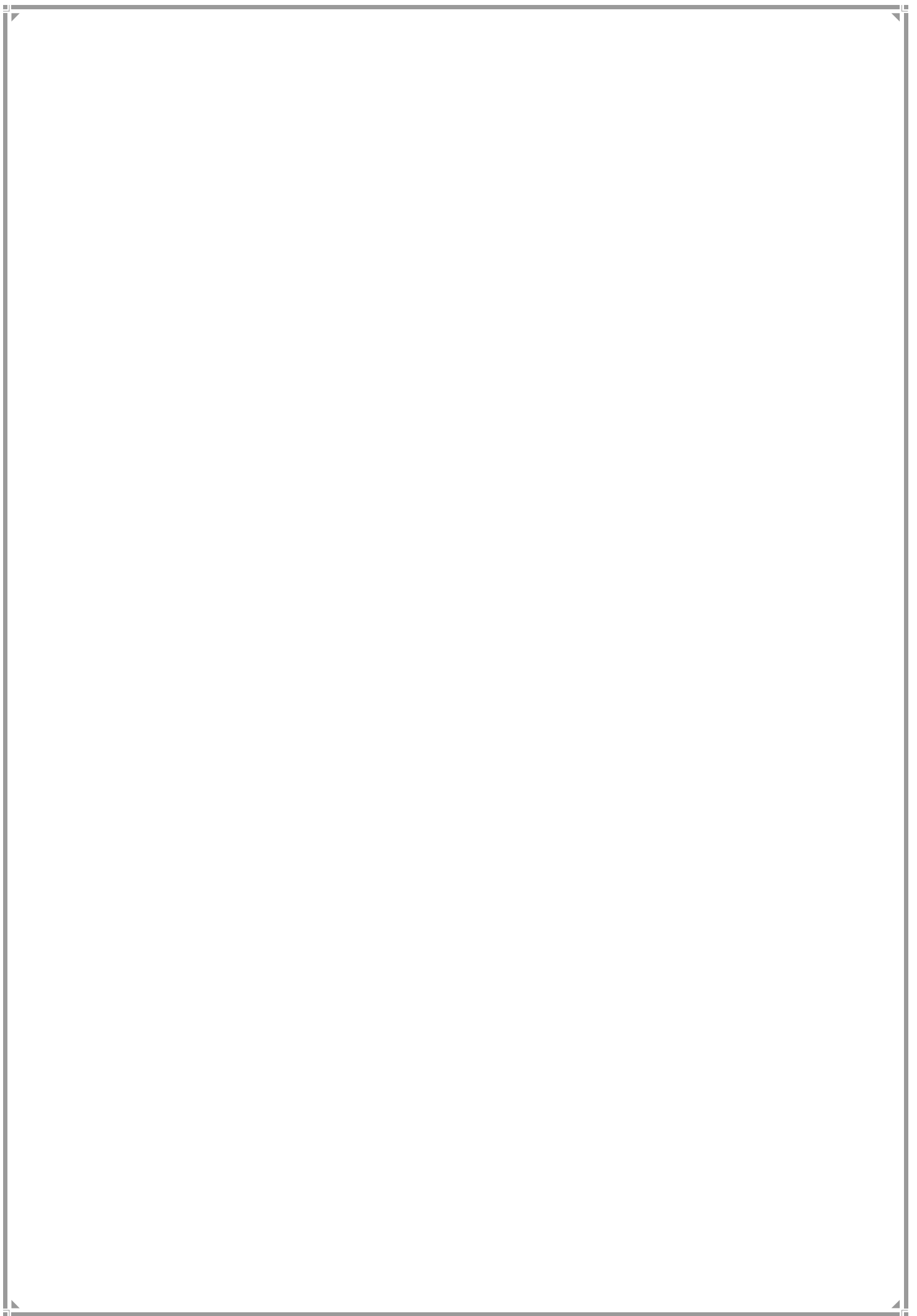
S. No.	Sheet No.	C.T.S. No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	ES 16	14 pt	Kurla 3	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA 2.9) 3. MUNICIPAL CHOWKY (RMS 1.2) 4. PUBLIC CONVENIENCE (RSA 6.3)	RSA 1.1+
2	ES 36	27/2	Tungwe	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. MUNICIPAL STAFF QUARTER (RR 1.1)	DSA 1.1+
3	ES 16	114/11 (114pt)	Chembur	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.2) 2. HOMELESS SHELTER(RSA 2.9)	RSA 1.2 +
4	ES 20	1 (pt)	Kurla 3	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. HOMELESS SHELTER (RSA 2.9) 3. PUBLIC CONVENIENCE (RSA 6.3)	RSA 2.1 +
5	ES 20	360 pt, 361 pt, 363, 364pt	Kurla 4	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. HOMELESS SHELTER (RSA 2.9) 3. PUBLIC CONVENIENCE (RSA 6.3)	RSA 1.1 +
6	ES 32	721, 721A&B	Mohili	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 2. CARE CENTRE (RSA 6.1)	RSA 6.1+
7	ES 36	31B/1	Tungwe	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2) 2. CARE CENTRE (RSA 6.1)	RSA 6.1+
8	ES 20	152, 8pt	Kurla 4, Parighikari	1. SEWAGE PUMPING STATION (DMS 4.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH 1.1)	DMS4.3 +
9	ES 20	153	Kurla 4	1. OLD AGE HOME (RSA 4.9) 2.CARE CENTRE (RSA 6.1)	RSA 4.9 +
10	ES 28	638/3	Mohili	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH 1.1) 2. CARE CENTRE (RSA 6.1)	RH 1.1 +
11	ES 24	212B	Kurla 1	1. PLAY GROUND (DOS 1.4) 2. STUDENTS HOSTEL (RSA 2.7)	DOS 1.4 +

S. No.	Sheet No.	C.T.S. No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
12	ES 33	24 pt, 11A pt	Chandivali	1. HOMELESS SHELTER (RSA 2.9) 2. POLICE FACILITIES (RPU 3.4) 3. PUBLIC CONVENIENCE (RSA 6.3)	RSA2.9 +
13	ES 16	476 Pt	Kurla 3	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. STUDENTS HOSTEL (RSA 2.7) 3. CARE CENTRE (RSA 6.1)	RSA2.1+
14	ES 24	343pt, 353 pt	Kurla 1	1. DESIGNATED GARDEN (DOS 1.4) 2. MUNICIPAL OFFICE (DO 1.3) 3. MUNICIPAL OFFICE (RO 1.3) 4. DISASTER MANAGEMENT FACILITY (RO3.1)	DOS 1.4+
15	ES 37	39 pt	Tungwa	1. SOLID WASTE MANAGEMENT FACILITY & ALLIED ACTIVITY (RMS3.1) 2. PUBLIC CONVENIENCE (RSA 6.3)	RMS3.1 +
16	ES 37	42 C/1	Chandivali	1. SOLID WASTE MANAGEMENT FACILITY & ALLIED ACTIVITY (RMS3.1) 2. CARE CENTRE (RSA 6.1)	RMS3.1 +
17	ES 20	536,538,539, 540, 549, 550, 551, 552	Kurla 4	1. MUNICIPAL RETAIL MARKET WITH VENDING ZONE (RSA 1.1) 2. SOLID WASTE MANAGEMENT FACILITY & ALLIED ACTIVITY (RMS3.1) 3. PUBLIC CONVENIENCE (RSA 6.3)	RSA 1.1 +
18	ES 20	591, 594 pt	Kurla 1	1. BEST BUS FACILITIES (RT1.4) 2. PUBLIC CONVENIENCE (RSA 6.3)	RT 1.4 +
19	ES 20	2 PT	Kurla 3	1. MUNICIPAL DISPENSARY/HEALTH POST (DH 1.1) 2. MUNICIPAL CHOWKY (DMS 1.2) 3. CARE CENTRE (RSA 6.1) 4. PUBLIC CONVENIENCE(RSA 6.3)	DH 1.1+
20	ES 20	546 pt	Kurla 1	1. MUNICIPAL OFFICE (DO 1.3) 2. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS 5.5)	DO 1.3 +
21	ES 32	783/12, 783/1pt	Mohili	1. MUNICIPAL DISPENSARY/HEALTH POST (RH 1.1) 2. CARE CENTRE (RSA 6.1)	RH 1.1 +
22	ES 33	77 pt	Saki	1. MUNICIPAL DISPENSARY/HEALTH POST (RH 1.1) 2. CARE CENTRE (RSA 6.1)	RH 1.1 +

S. No.	Sheet No.	C.T.S. No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
23	ES 32	662/3B	Mohili	1. MULTI PURPOSE COMMUNITY CENTRE (RSA 2.1) 2. CARE CENTRE (RSA 6.1)	RSA 2.1+
24	ES 37	73A/3pt, 73A/4	Tungwe	1. MUNICIPAL FACILITIES (RMS 1.3) 2. PUBLIC CONVENIENCE(RSA 6.3)	RMS 1.3 +
25	ES 20	11 pt	Kurla 3	1. REHABILITATION & RESETTLEMENT (RR 2.1) 2. RETAIL MARKET WITH VENDING ZONE (RSA 1.2)	RR 2.1+
26	ES 20	7pt, 11pt, 12pt	Kurla 3	1. REHABILITATION & RESETTLEMENT (RR 2.1) 2. RETAIL MARKET WITH VENDING ZONE (RSA 1.2)	RR 2.1+
27	ES 20	12 pt	Kurla 3	1. REHABILITATION & RESETTLEMENT (RR 2.1) 2. RETAIL MARKET WITH VENDING ZONE (RSA 1.2)	RR 2.1+
28	ES 24	762pt, 763pt, 764pt, 820pt	Kurla 2	1. MUNICIPAL SCHOOL (RE 1.1) 2. PLAY GROUND (ROS 1.4)	RE 1.1+
29	ES 29	351	Asalpe	1. MUNICIPAL SCHOOL (RE 1.1) 2. PLAY GROUND (ROS 1.4) 3. MUNICIPAL HEALTH POST/DISPENSARY (RH 1.1)	RE 1.1+
30	ES 33	175/1C PT, 175/1B PT	Mohili	1.GARDEN/PARK (DOS 1.5) 2.MUNICIPAL FACILITIES (DMS 1.3)	DOS 1.5+
31	ES 37	96E	Tungwe	1.MUNICIPAL SCHOOL (DE 1.1) 2.MUNICIPAL DISPENSARY/ HEALTH POST (DH 1.1) 3.POLICE FACILITIES (DPU 3.4)	DE 1.1+
32	ES 32	494	Mohili	1.SHOPPING CENTRE (DSA 1.4) 2.MUNICIPAL HOSPITAL(DH 1.2)	DSA 1.4 +
33	ES 24	637A	Kurla 2	1.MUNICIPAL HOSPITAL(DH 1.2) 2.AMENITY PLOT (DAM)	DH 1.2+
34	ES 33	41A/6	Chandivali	1.MUNICIPAL RETAIL MARKET (DSA 1.1) 2. OTHER SOCIAL AMENITY (DSA 4.9)	DSA 1.1+

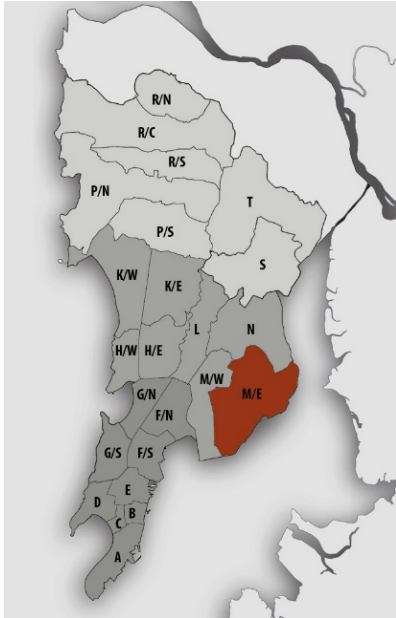
S. No.	Sheet No.	C.T.S. No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
35	ES 21	47 pt	Chembur	1. REHABILITATION & RESETTLEMENT (DR 2.1) 2. RETAIL MARKET (DSA 1.2)	DR 2.1+
36	ES 37	16pt, 4A	Saki	1. PARKING LOT (DT 1.6) 2. PUBLIC PARKING LOT (DT 1.6 PT)	DT 1.6+
37	ES 37	182A/1	Tungwe	1. PUBLIC PARKING LOT (DT 1.6 PT) 2. AMENITY PLOT (DAM)	DT 1.6 PT+
38	ES 33	41A/9	Chandivali	1. MUNICIPAL DISPENSARY/ HEALTH POST (DH 1.1) 2. MUNICIPAL MATERNITY HOME (DH 1.3)	DH 1.1+

M/EAST WARD



1. M-East Ward Profile

Location Map



JURISDICTION

Ward Area – 3819.71 ha

Developed Area – 2559.55 ha (67% of Ward Area)

Note: The complete ward area is under the MCGM jurisdiction

WARD BOUNDARIES

North - Subhash Nagar Nalah on the North

East -Thane Creek

West -RC Marg, RCF Colony, CG Marg, PanjrapoleJn, WT PatilMarg, Central Railway, Subhash Nagar Nalah

South -Arabian Sea

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001–6.75	2021 – 9.02
2011 – 8.08	2031 – 9.00
	2034 – 8.73

Population Density
244 pph

Slum Population
2.45 lakhs (30.37%)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Schools – 20

Municipal Dispensary/Health Post -11

Municipal Maternity Home – 2

Municipal Hospital - 1

Government Hospital - 1

Cemetery - 7

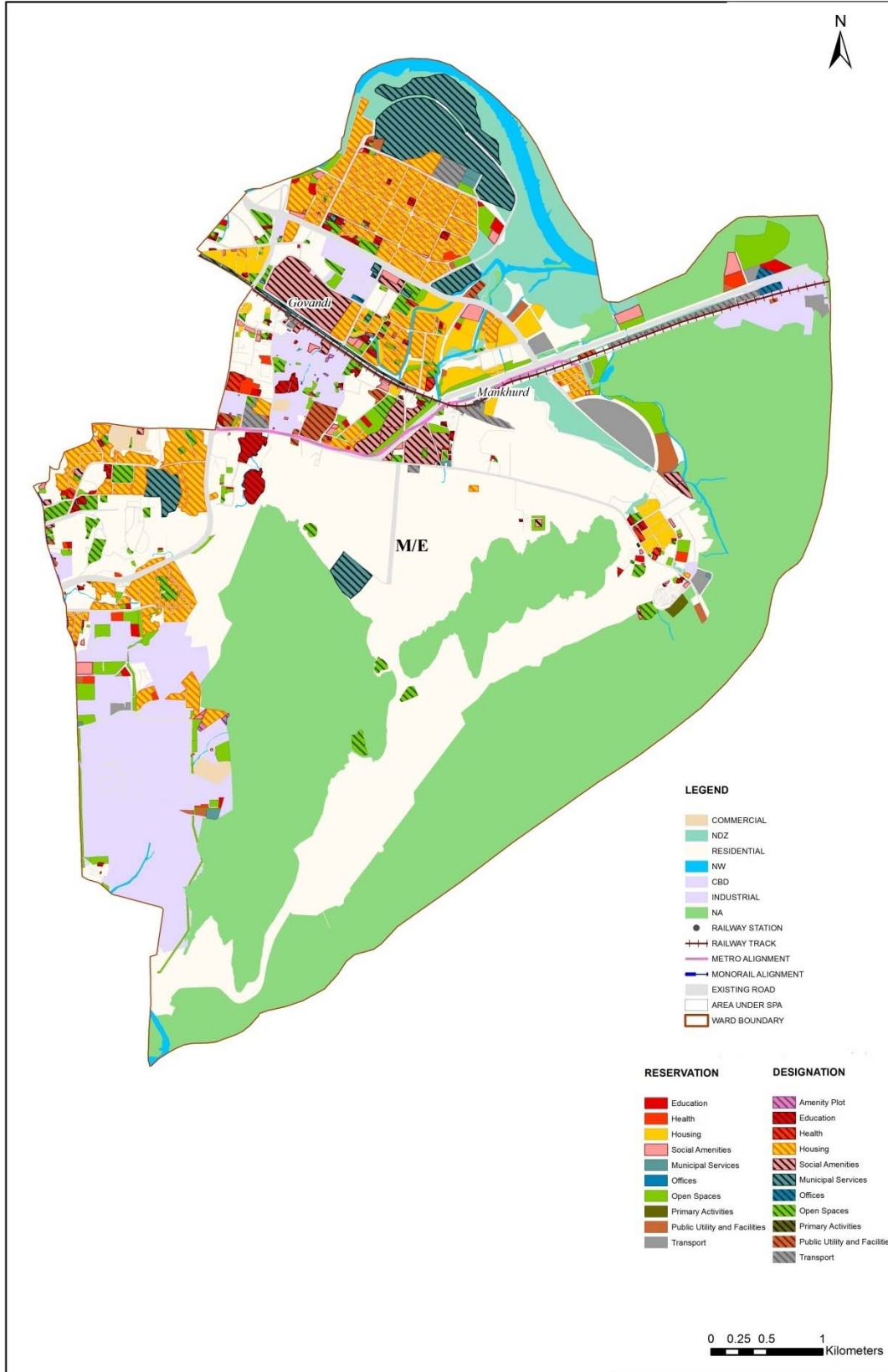
CONNECTIVITY

Major Roads – GhatkoparMankhurd Link Road, SionPanvel Highway, V N PuravMarg, Eastern Freeway, RC Marg

Suburban Railway Station–Govandi, Mankhurd

Future Proposal - Metro Station at Mankhurd

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population - M East Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	9,02,147	1.574	142.00	25.36
2	Health	9,02,147	0.419	37.80	6.25
3	Market	9,02,147	0.100	9.02	0.17
4	Cemetery	9,02,147	0.030	2.71	5.85
5	Open Space	9,02,147	4.000	360.86	51.97

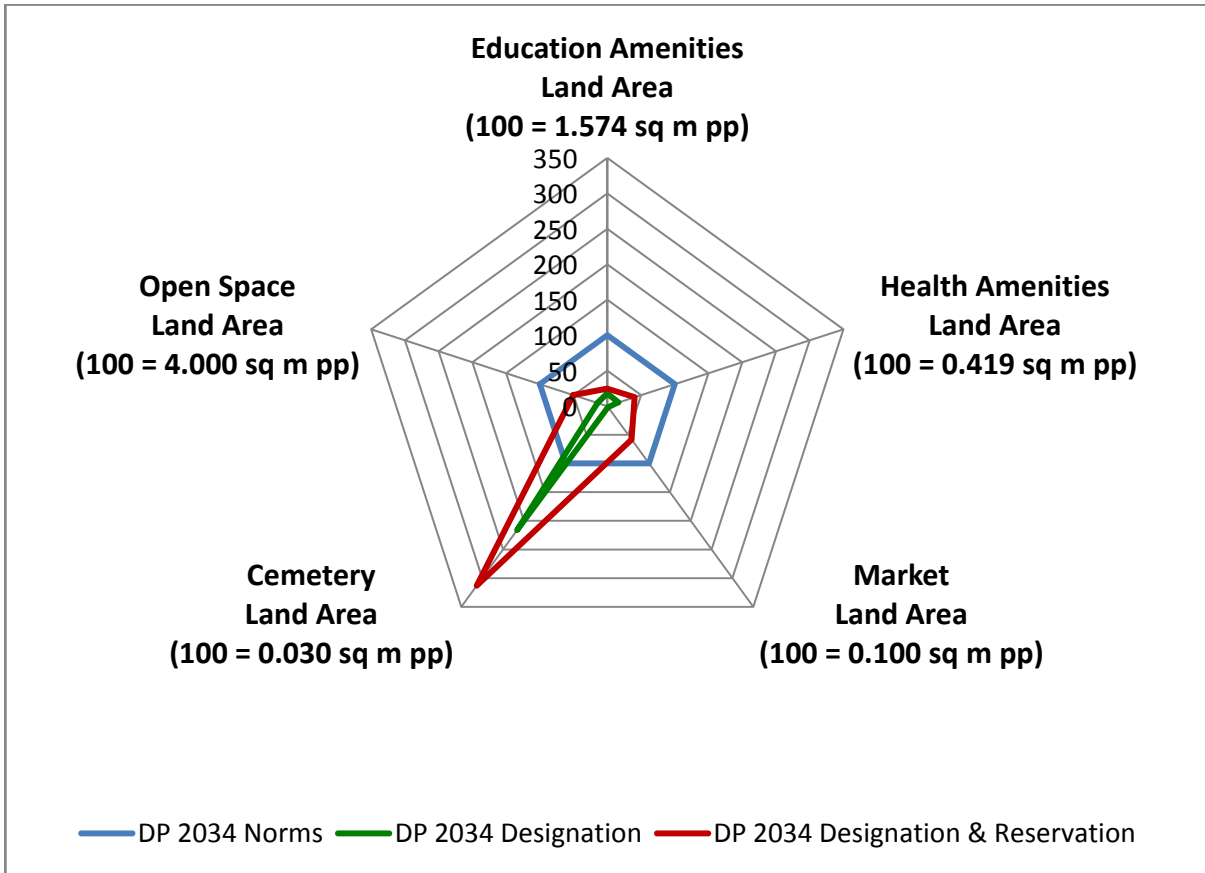
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	142.00	34.80	-107.20	0.386
2	Health	37.80	15.32	-22.48	0.170
3	Market	9.02	5.27	-3.75	0.058
4	Cemetery	2.71	8.47	5.76	0.094
5	Open Space	360.86	181.88	-178.98	2.016

Note:

The norms for S.No. 1, 2 &3 would be achieved or exceeded through Built-up area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P 2034

S. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL SCHOOL	RE 1.1	1
2	PRIMARY/SECONDARY SCHOOL	RE 1.2	1
3	OTHER EDUCATION	RE 3.1	1
4	MUNICIPAL DISPENSARY/HEALTH POST	RH 1.1	2
5	HOSPITAL	RH 1.2	2
6	MUNICIPAL MATERNITY HOME	RH 1.3	1
7	PLAYGROUND	ROS 1.4	2
8	GARDEN/PARK	ROS 1.5	4
9	FIRE STATION	RPU 1.1	3
10	DISASTER MANAGEMENT FACILITY	RO 3.1	1
11	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	2
12	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	2

S. No	Name of Amenity	Legend	Proposed
13	STUDENTS HOSTEL	RSA 2.7	1
14	CULTURAL CENTRE/DRAMA THEATRE/THEATRE	RSA 3.3	1
15	LEISURE PARK	RSA 3.7	1
16	OLD AGE HOME	RSA 4.9	1
17	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
18	CARE CENTRE	RSA 6.1	8
19	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
20	PUBLIC CONVENIENCES	RSA 6.3	1
21	MUNICIPAL FACILITIES	RMS 1.3	1
22	SOLID WASTE MANAGEMENT FACILITIES	RMS 3.1	3
23	SCRAP YARD	RMS 3.3	1
24	SEWAGE TREATMENT PLANT/ FACILITIES	RMS 4.1	1
25	HYDRAULIC ENGINEERING DEPARTMENT FACILITIES	RMS 5.5	1

Summary of New City Level Reservations Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	METRO/MONO RAIL CAR SHED	RT 3.1	1
2	SPORTS COMPLEX/STADIUM	ROS 2.5	1
3	OTHER EDUCATION	RE 3.1	1
4	CORRECTION FACILITIES	RPU 3.3	1
5	COURT	RPU 3.5	1

New Reservations which cannot be shown in the map

- 13 Solid Waste Management Chowkies of area less than 100 sqm exist on site but is not shown in the Development Plan Map due to concern of visibility in a map of scale 1:4000. The locations of the said designations of DMS 3.1 (Solid Waste Management Facility) are, LimboniBaug, Ankur Cinema, Kena Market, Trombay Police Station, Lotus Colony Chowky, Deonar Colony, Shivaji Nagar 2, Vashi Naka Chowky, Makhurd Station Road, Baiganwadi Signal, 90 ft road at Padma Nagar, BARC Main Gate, Essel Studio.
- The Reservation of RE 3.1 on ES 19, 23 near to Octroi Naka is specifically intended for a Sports School due to its proximity to a City Level Reservation of Sports Complex/Stadium.
- The Reservation of RE 3.1 at ES 22 next to Deonar Dumping Ground is specially intended for Solid Waste Management Research Centre and Skill Development Centre.

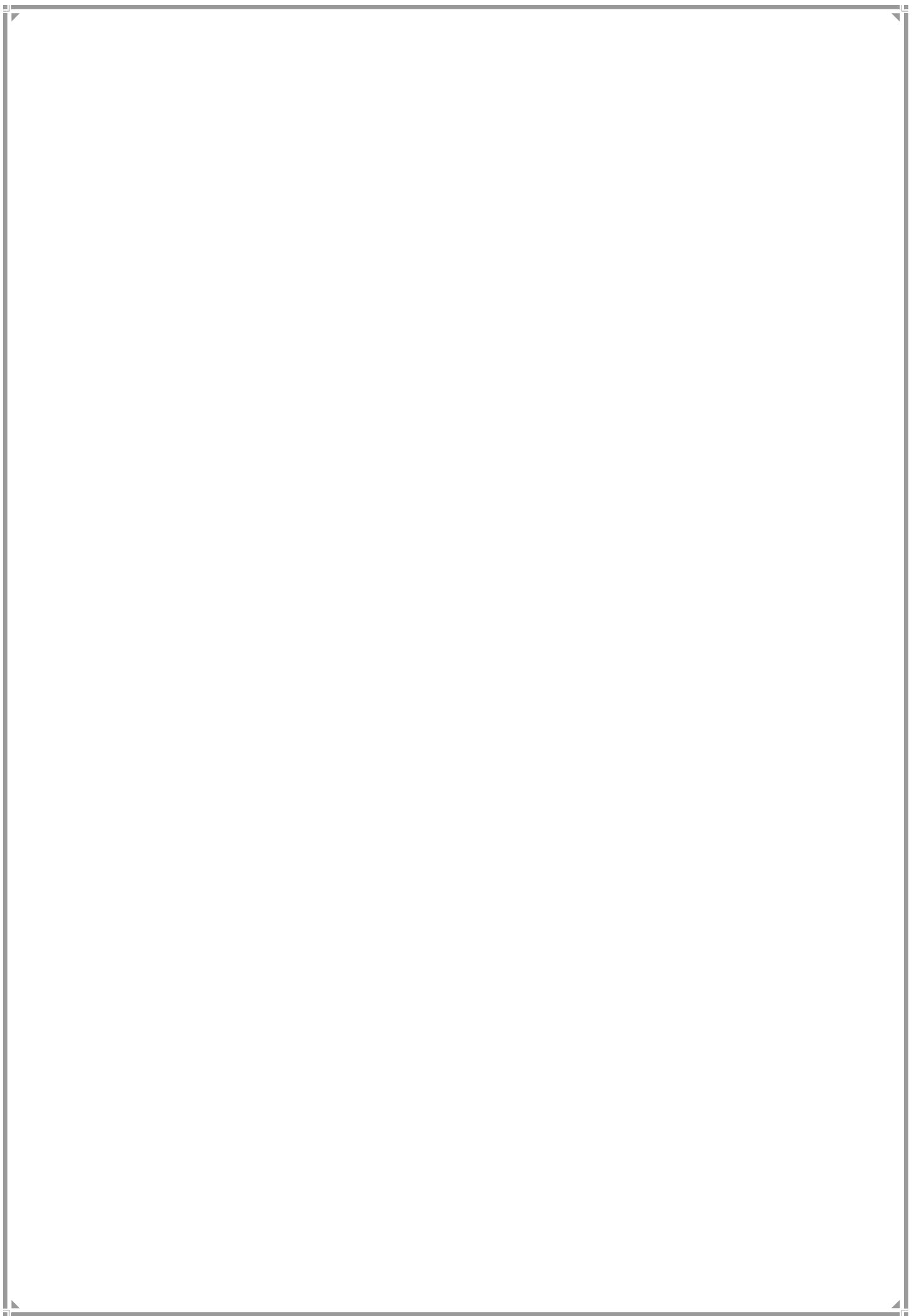
4. The Reservation of RH 1.2 in ES 17 continued from SRDP 1991, is also meant to include a Trauma Centre and Rehabilitation Centre.
5. Apart from the three Public Convenience reservations, Public Conveniences are reserved in all Markets and Open Spaces.
6. Two Solid Waste Management Facility (RMS 3.1) proposed in ES 17 are meant for Refuse Sheds and Transfer Stations and one Solid Waste Management Facility Reservation in ES 22 is primarily meant for Solid waste Sorting Shed.
7. Deonar Dumping Ground which a Landfill Site (DMS 3.2) is shown in ES 22, ES 26 is slated for closure and hence is proposed to be developed as a Public Open Space.

Multiple Designations and Reservations

Sr. No	Sheet No	CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
1	ES 17	664, 671, 658	Borla	1. PRIMARY & SECONDARY SCHOOL (DE 1.2) 2. COLLEGE (DE 2.1)	DE 1.2 +
2	ES 15	46, 47	Trombay	1. POLICE STATION (DPU 3.1) 2. MUNICIPAL CHOWKY (DMS 1.2)	DPU 3.1+
3	ES 13	200, 197, 205, 202, 198, 199, 678/202, 678, 206	Wadhavali, Borla	1. RESERVOIR (DMS 5.1) 2. MUNICIPAL STAFF QUARTERS (DR 1.1)	DMS 5.1+
4	ES 10, 14	-	Trombay	1. RESERVOIR (DMS 5.1) 2. MUNICIPAL STAFF QUARTERS (DR 1.1)	DMS 5.1+
5	ES 22	1(pt)	Deonar	1. MUNICIPAL DISPENSARY/HEALTH POST (DH 1.1) 2. MUNICIPAL MATERNITY HOME (RH 1.3)	DH 1.1+
6	ES 18	2B/4B, 2A	Mankhurd	1. MUNICIPAL MATERNITY HOME (DH 1.3) 2. MUNICIPAL HOSPITAL (DH 1.2)	DH 1.3+
7	ES 06	619	Mahul	1. PRIMARY/SECONDARY SCHOOL (RE 1.2) 2. PLAYGROUND (ROS 1.4)	RE 1.2+

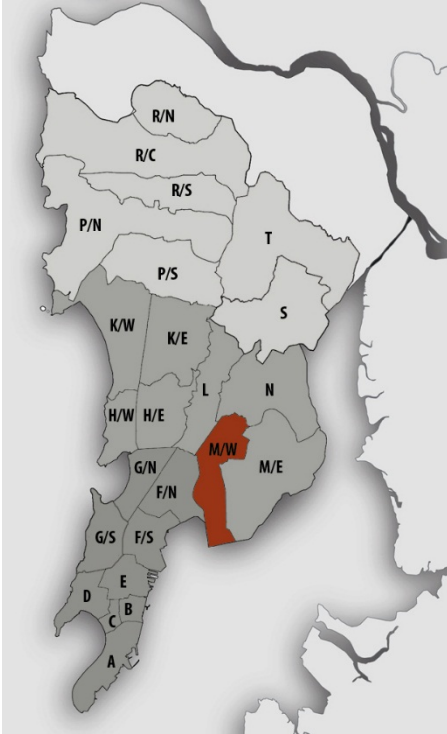
Sr. No	Sheet No	CTS No.	Village	Names of Multiple Designation/Reservation	Code of Primary Designation/Reservation displayed on DP sheet as
8	ES 22	1(pt)	Deonar	1. GARDEN/PARK (ROS 1.5) 2. PUBLIC CONVENIENCE(RSA 6.3)	ROS 1.5+
9	ES 18	3(pt), 2(pt), 1(pt)	Deonar	1. OLD AGE HOME (RSA 4.9) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA 6.2)	RSA 4.9+
10	ES 15	354, 263	Trombay	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. MUNICIPAL DISPENSARY/HEALTH POST (RH 1.1)	RSA 2.1+
11	ES 19	2(pt), 1(pt), 2/A(pt)	Mandale, Trombay	1. TRUCK TERMINUS (RT 1.1) 2. PARKING LOT (RT 1.6)	RT 1.1+
12	ES 22	1(pt)	Deonar	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE(RSA 6.2) 2. CARE CENTRE (RSA 6.1)	RSA 6.2+
13	ES 21	7(pt)	Borla	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. CARE CENTRE (RSA 6.1)	RSA 2.1+
14	ES 18	2(pt), 1(pt)	Deonar	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA 5.2) 2. CARE CENTRE (RSA 6.1)	RSA 5.2+
15	ES 17	89B, 250B	Deonar	1. HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS 5.5) 2. DISASTER MANAGEMENT FACILITIES (RO 3.1)	RMS 5.5+
16	ES 18	1(pt)	Mankhurd	1. MUNICIPAL FACILITIES (RMS 1.3) 2. PUBLIC CONVENIENCE (RSA 6.3)	RMS 1.3+
17	ES 22, 26	1 (pt)	Deonar	1. LANDFILL SITES (DMS3.2) 2. GARDEN/PARK (ROS1.5)	DMS3.2+

M/WEST WARD



1. M-West Ward Profile

Location Map



JURISDICTION

Ward Area – 1762.02 ha

Developed Area - 1360.91 ha

(77.23 % of Ward Area)

WARD BOUNDARIES

North – Chheda Nagar and Tilak Nagar

East – Eastern Free Way

West – Suman Nagar Junction

South – Mahul Village and BPCL

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 – 4.14	2021 – 4.13
2011 – 4.12	2031 – 3.76
	2034 – 3.58

Density – 234pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary Schools – 17
 Primary & Secondary Schools – 28
 Hospitals - 3
 Dispensaries – 3
 Municipal Maternity Home - 2
 Cemetery – 5

CONNECTIVITY

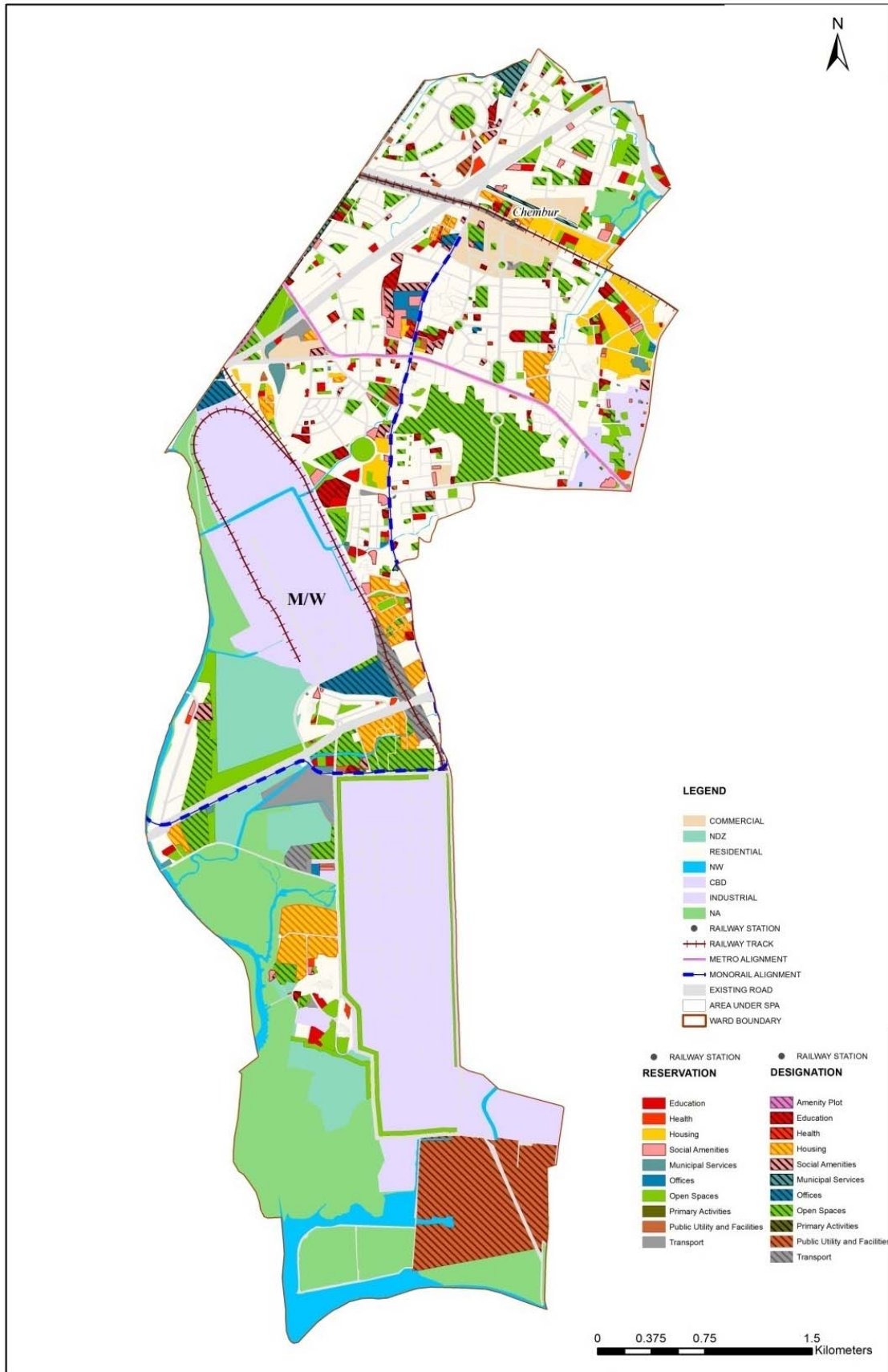
Major Roads – Eastern Freeway, Eastern Expressway Highway, Sion Panvel Highway, V.N. Purav Marg, RC Marg

Railway Stations – Chembur Railway Station (Harbour Line)

Monorail Stations - Chembur, VNP and RC Marg Junction, Fertilizer Township, Bharat Petroleum, Mysore Colony

Future Proposals– Mono Rail Next Phase Stations – S.G. Barve Marg, R.C. Marg and Shivaji Chowk

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – M West Ward	Norms (sq.m/person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	4,13,524	1.574	65.09	16.55
2	Health	4,13,524	0.419	17.33	1.54
3	Market	4,13,524	0.100	4.14	1.07
4	Cemetery	4,13,524	0.030	1.24	2.14
5	Open Space	4,13,524	4.000	165.41	101.38

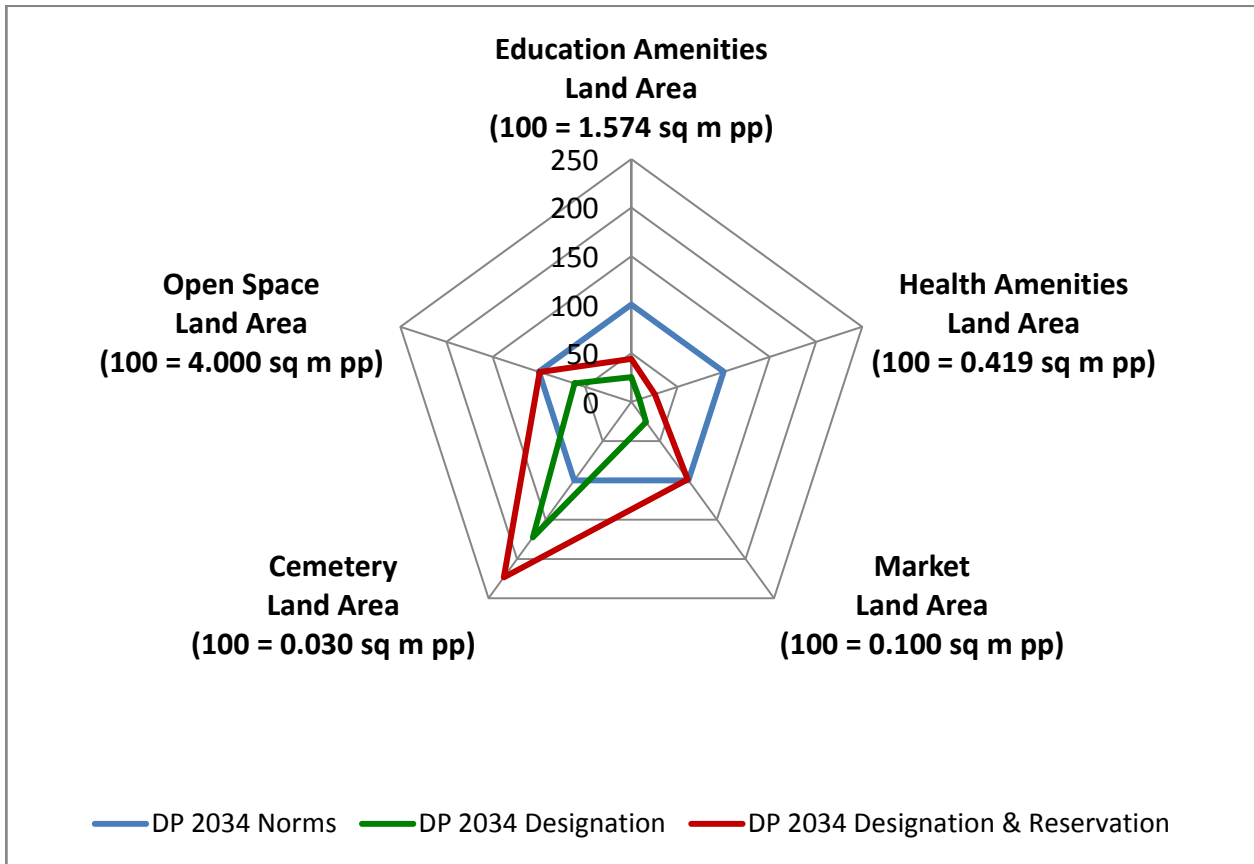
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/person)
1	Education	65.09	28.78	-36.31	0.696
2	Health	17.33	4.40	-12.93	0.106
3	Market	4.14	4.08	-0.06	0.099
4	Cemetery	1.24	2.77	1.53	0.067
5	Open Space	165.41	164.11	-1.30	3.969

Note:

The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTRE	RSA 6.1	4
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	1
6	PUBLIC CONVENIENCE	RSA 6.3	5 + 10 (under flyover)
7	HOMELESS SHELTER	RSA 2.9	3
8	OLD AGE HOME	RSA4.9	1
9	DISASTER MANAGEMENT FACILITY	RO 3.1	2
10	LEISURE PARK	RSA 3.7	1
11	MUNICIPAL FACILITIES	RMS1.3	4
12	HOSPITAL	RH1.1	1
13	SOLID WASTE MANAGEMENT FACILITY	RMS 3.1	2

New Reservations which cannot be shown in the map

1. Below Flyover Provisions –

Provisions of Public Conveniences, SWM Facilities like SWM Store's and SWM Motor Loader Chowkies are proposed below existing flyovers in M West Ward. Existing potential is identified below –

a. Flyovers –

- i. Eastern Expressway Highway – passing through the ward limits.
- ii. Ghatkopar – Mankhurd link Road
- iii. Sion Panvel Highway
- iv. Eastern Freeway
- v. Santacruz – Chembur Link Road

b. Below Escalators of the Monorail Stations

2. Underground parking to be provided on adjoining MCGM's Swimming pools open space which is adjoining to ward office and near to Chembur Railway Station.
3. Proposal of Vehicle free road / Pedestrian Road – Stretch of Chembur Govandi Road - Chembur station to junction below flyover (Towards RC Marg). It is subject to further study for its feasibility.

Stretch marked in the following map -



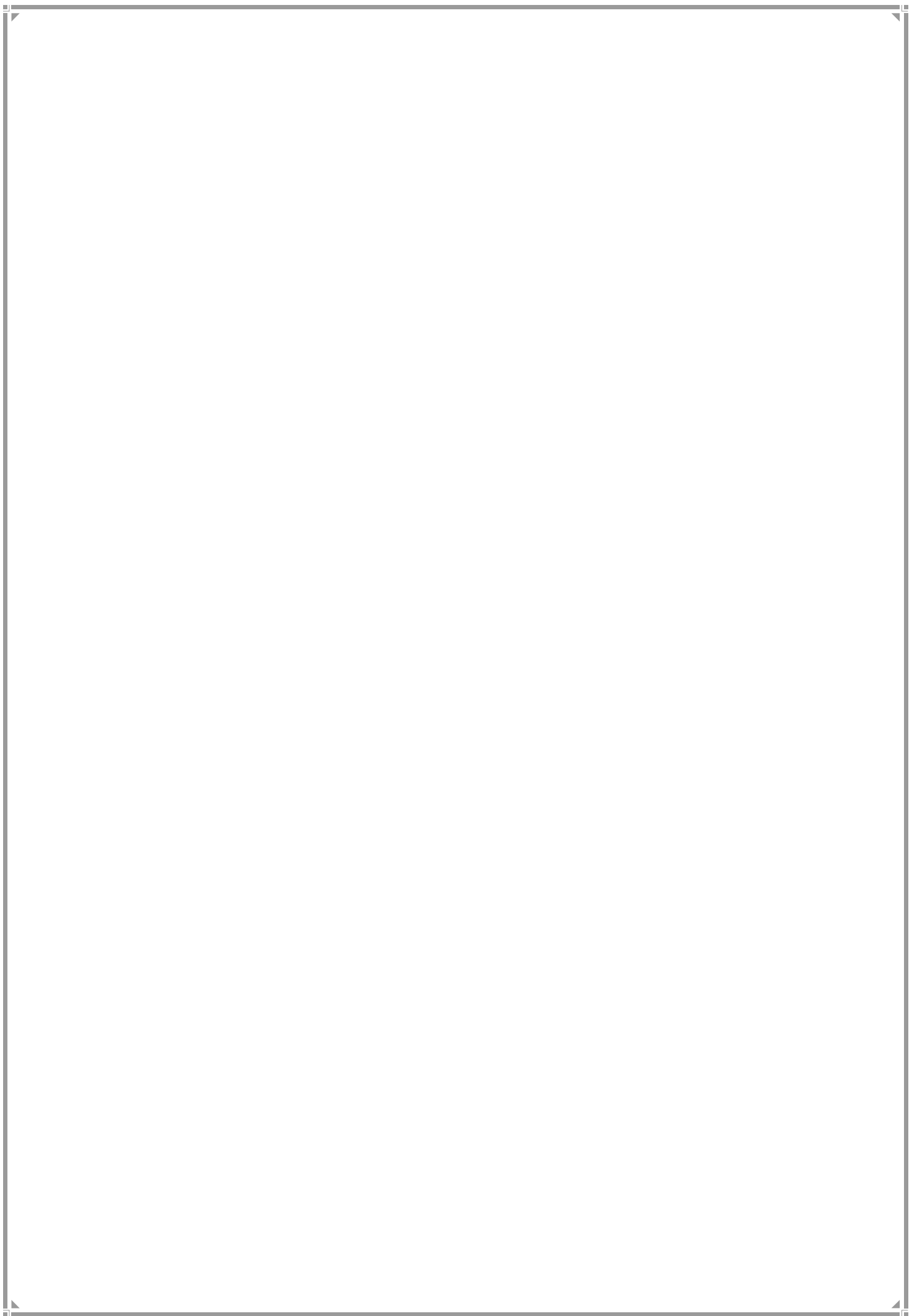
Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
1	ES 05	2/7A pt, 2/6pt, 2/8 pt	Mahul	1. MUNICIPAL MATERNITY HOME (RH1.3) 2. MUNICIPAL DISPESARY/ HEALTH POST (RH1.1)	RH1.3+
2	ES 08	1pt	Anik	1. MUNICIPAL DISPESARY/ HEALTH POST (RH1.1) 2. MUNICIPAL MATERNITY HOME (RH1.3) 3. MULTIPURPOSE COMMUNITY CENTER (RSA2.1)	RH1.1+
3	ES 13	318, 319pt, 320pt	Wadhavali	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL STAFF QUARTERS (RR1.1)	RSA1.1+
4	ES 13	1pt	Maravali	1. GOVERMENT OFFICE (DO2.1) 2. GOVT STAFF QUARTERS (RR1.3)	DO2.1+
5	ES 13	166A	Maravali	1. GOVERMENT OFFICE (DO2.1) 2. GOVT STAFF QUARTERS (RR1.3)	DO2.1+
6	ES 13	460, 461, 462pt, 497pt	Wadhavali	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.2) 2. MULTI PURPOSE COMMUNITY CENTRE (RSA2.1)	RSA1.2+
7	ES 16	361pt, 361/2pt, 353pt	Chembur	1. MUNICIPAL FACILITIES (RMS1.3) 2. PARKING LOT (RT1.6)	RMS1.3+
8	ES 16 & ES 17	360C, 360Apt	Chembur	1. WELFARE CENTE (DSA 2.5) 2. OTHER EDUCATION (RE 3.1) 3. CULTURAL CENTER / DRAMA THEATRE/ THEATER (RSA 3.3)	DSA2.5+
9	ES 17	676, 675pt	Borla	1. MULTIPURPOSE COMMUNITY CENTER (RSA2.1) 2. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 3. OLD AGE HOME FOR WOMEN (RSA4.9)	RSA2.1+

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
10	ES 17	424, 421pt	Borla	1. MUNICIPAL DISPENSARY / HEALTH POST (DH1.1) 2. CARE CENTER (RSA6.1)	DH1.1+
11	ES 17	452/19A /4 , 452A	Borla	1. MULTIPURPOSE COMMUNITY CENTER (RSA2.1) 2. CARE CENTER (RSA6.1)	RSA2.1+
12	ES 17	164	Wadhawali	1. DISASTER MANAGEMENT FACILITIES (RO3.1) 2. PUBLIC CONVIENCE (RSA6.3)	RO3.1+
13	ES 17	90pt,91pt, 94pt,107pt,105pt, 106pt, 108pt	Borla	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL HOUSING (RR1.5)	RSA1.1+
14	ES 17	299pt, 296pt, 398pt	Borla	1. MUNICIPAL FACILITIES (RMS1.3) 2. MUNICIPAL STAFF QUARTERS (RR1.1)	RMS1.3+
15	ES 17	289pt, 299pt, 300pt	Borla	1. MUNICIPAL FACILITIES (RMS1.3) 2. MUNICIPAL STAFF QUARTERS (RR1.1)	RMS1.3+
16	ES 17	285, 91pt, 92pt, 86pt, 87pt, 88pt, 89pt 105pt, 106pt, 107pt, 108pt	Borla	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL HOUSING (RR1.5)	RSA1.1+
17	ES 17	1729pt	Chembur	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL HOUSING (RR1.5) 3. ADHAAR KENDRA WITH SKILL DEVELOPMENT (RSA 6.2)	RSA 1.1+
18	ES 17	128A pt	Chembur	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1) 2. MUNICIPAL HOUSING (RR1.5)	RSA 1.1+

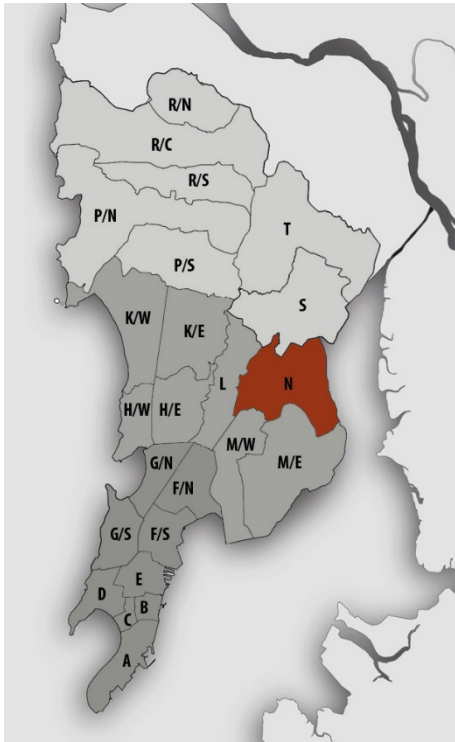
S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
19	ES 17	469pt, 471pt	Chembur	1. STUDENT HOSTEL (RSA 2.7) 2. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2)	RSA 2.7+
20	ES 17	619/26 pt	Chembur	1. MUNICIPAL FACILITIES (RMS 1.3) 2. PUBLIC CONVENIENCE (RSA6.3)	RMS 1.3+
21	ES 17	468	Chembur	1. MUNICIPAL MATERNITY HOME (DH1.3) 2. MUNICIPAL DISPENSARY (DH1.1) 3. HOSPITAL (RH1.2)	DH1.3+
22	ES 20	100	Chembur	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.2) 2. AFFORDABLE HOUSING (RR2.2)	RSA1.2 +
23	ES 21	661pt	Chembur	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2. HOMELESS SHELTER (RSA 2.9) 3. PUBLIC CONVENIENCE (RSA6.3)	RSA1.1+
24	ES 21	661pt	Chembur	1. HOMELESS SHELTER (RSA 2.9) 2. PUBLIC CONVENIENCE (RSA6.3)	RSA2.9+
25	ES 21	661pt	Chembur	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.2) 2. HOMELESS SHELTER (RSA2.9) 3. PUBLIC CONVENIENCE (RSA6.3)	RSA1.2+

N WARD



1. N Ward Profile

Location Map



JURISDICTION

Ward Area - 2968.38ha

Developed Area – Approx 40%
(MCGM Planning Area)

SPA Area under **Naval depot** - 0.35ha

WARD BOUNDARIES

North -P. Godrej Marg

South -Ghatkopar Mankhurd link road, Netaji Palkar Marg

East -Mangroves Forest & Thane Creek

West– Ghatkopar High Level Reservoir and Chandivali Sangharsh Nagar

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001 - 6.20	2021 - 6.32
2011 - 6.23	2031 - 5.83
	2034 - 5.56

Density – 210pph (as per 2011 population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary & Secondary School – 24

Dispensaries & Health Post – 7

Municipal Maternity Home & Hospital – 4

Cemeteries – 6

CONNECTIVITY

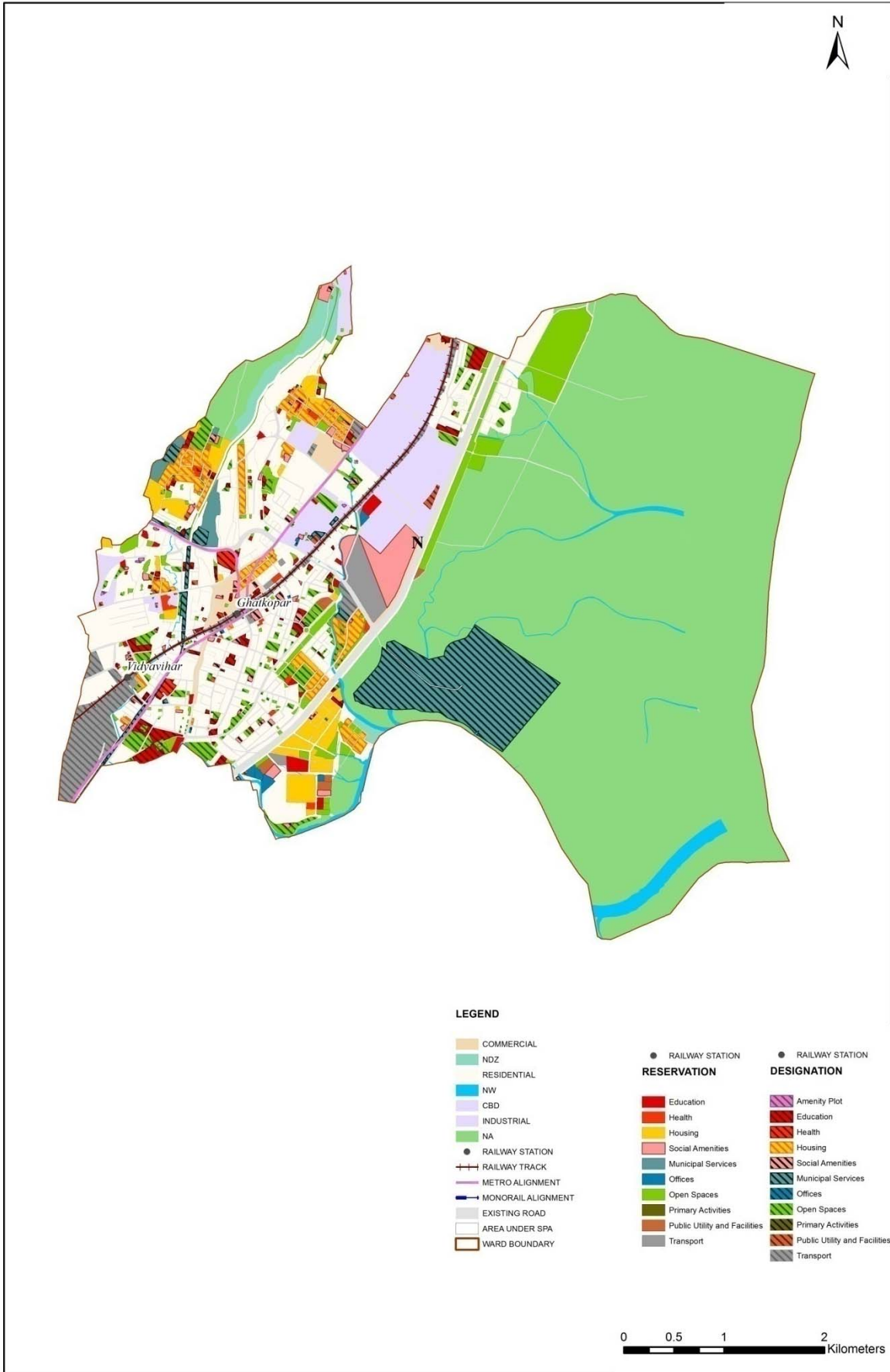
Major Roads – Eastern Express Highway, Andheri Ghatkopar Link Road, Lal Bhadur Shastri Marg, M.G. road & Br. Nath Pai Road

Suburban Railway Station – Ghatkopar and Vidya Vihar stations

Metro Line I Stations- Versova – Andheri - Ghatkopar metro line, Ghatkopar Station, Jagruti Nagar Station

Future Proposals - Proposed Metro Station - Godrej, Ramabai Nagar, Firozsha Nagar, Vidya Vihar Station and Vikroli

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – N Ward	Norms (sq.m/ person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	6,31,990	1.574	99.48	27.992
2	Health	6,31,990	0.419	26.48	8.9818
3	Market	6,31,990	0.100	6.32	1.8896
4	Cemetery	6,31,990	0.030	1.90	1.82
5	Open Space	6,31,990	4.000	252.80	58.0683

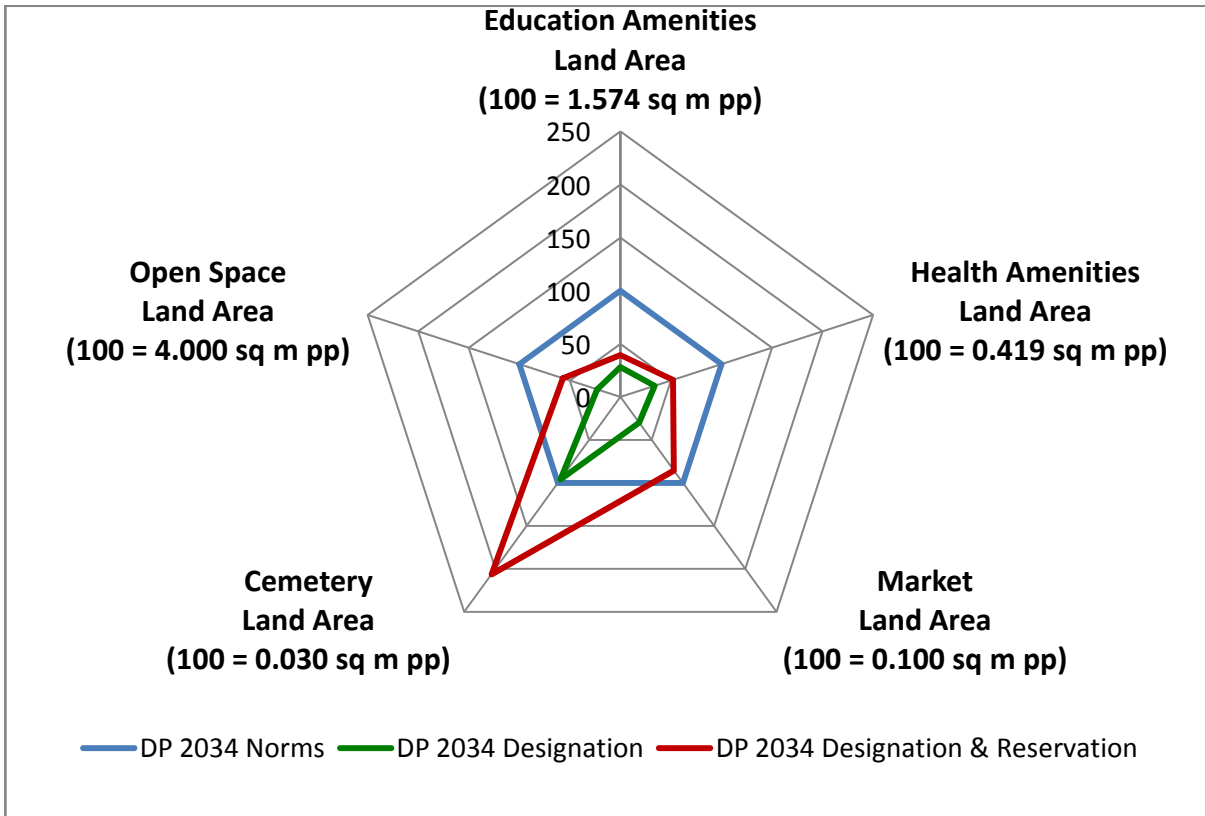
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/ person)
1	Education	99.48	39.28	-60.19	0.622
2	Health	26.48	13.77	-12.71	0.218
3	Market	6.32	5.41	-0.91	0.086
4	Cemetery	1.90	3.91	2.01	0.062
5	Open Space	252.80	143.77	-109.02	2.275

Note:

The norms Sr.No. 1, 2 & 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	RETAIL MARKET WITH VENDING ZONE	RSA 1.2	1
2	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
3	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
4	STUDENTS HOSTEL	RSA 2.7	1
5	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	1
6	CARE CENTRE	RSA 6.1	6
7	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
8	PUBLIC CONVENIENCE	RSA 6.3	5
9	HOMELESS SHELTER	RSA 2.9	1
10	OLD AGE HOME	RSA 4.9	1
11	DISASTER MANAGEMENT FACILITY	RO 3.1	1
12	SOLID WASTE MANAGEMENT FACILITY	RMS 3.1	1
13	REHABILITATION & RESETTLEMENT	RR 2.1	1
14	FIRE STATION	RPU 2.1	1
15	OTHER EDUCATION	RE 3.1	2

Summary of New City Level Reservations Proposed in R.D.D.P. 2034

S. No	Name of Amenity	Legend	Proposed
1	URBAN PLANNING INSTITUTE	RE 4.1	1
2	OTHER INSTITUTE (CULTURAL INSTITUTE)	RE 4.4	1

New Reservations which cannot be shown in the map

S. No.	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Designation/ Reservation which cannot be shown in the map	Designation / Reservation
1	ES 25	5222, 38 & 39	Ghatkopar Kiroli	Reservations of women's vending zones in Retail Market	RETAIL MARKET WITH VENDING ZONE (RSA 1.2)
2	ES 33	21	Ghatkopar	Reservations of women's vending zones in Municipal Market	MUNICIPAL MARKET WITH VENDING ZONE (RSA 1.1)
3	ES 25	4721 & 4722	Ghatkopar Kiroli	Reservation of Rajawadi (Municipal Hospital) staff	MUNICIPAL STAFF QUARTER (RR 1.1)
4	ES 30	51 & 52 (pt)	Vikhroli	Reservation of Engineering Hub of Eastern suburbs	MUNICIPAL OFFICE (RO 1.3)

S. No.	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Designation/ Reservation which cannot be shown in the map	Designation / Reservation
5	ES 30	51 & 52 (pt)	Vikhroli	Reservation of Cultural Institute	1. OTHER INSTITUTE (RE4.4) 2. CULTURAL CENTRE / DRAMA THEATRE / THEATRE (RSA3.3)
6	ES 25	484, 485A	Kirol	40% area should be reserved Homeless Shelters for Women & Children	HOMELESS SHELTER (RSA 2.9)
7	ES 26	1(pt)	Vikhroli	Reservation of ' N' Ward Municipal office with designated Municipal transport garage	1. TRANSPORT GARAGE (DMS 2.1) 2. MUNICIPAL OFFICE (RO 1.3)
8	ES 21	194B	Ghatkopar	Reservation of Heritage Market	1. MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1)

9. It has been observed that as N ward is connected with other parts of Mumbai via Suburbs railway and Mumbai Metro and also by road as it is centrally located with respect to Greater Mumbai city. Like some other few Wards in Mumbai N ward has a system of sharing Auto from various strategic locations of the ward for the station area which forms a good example of intermodal transit system which needs to be organized in systematic manner to facilitate the system in a better way for the commuters.

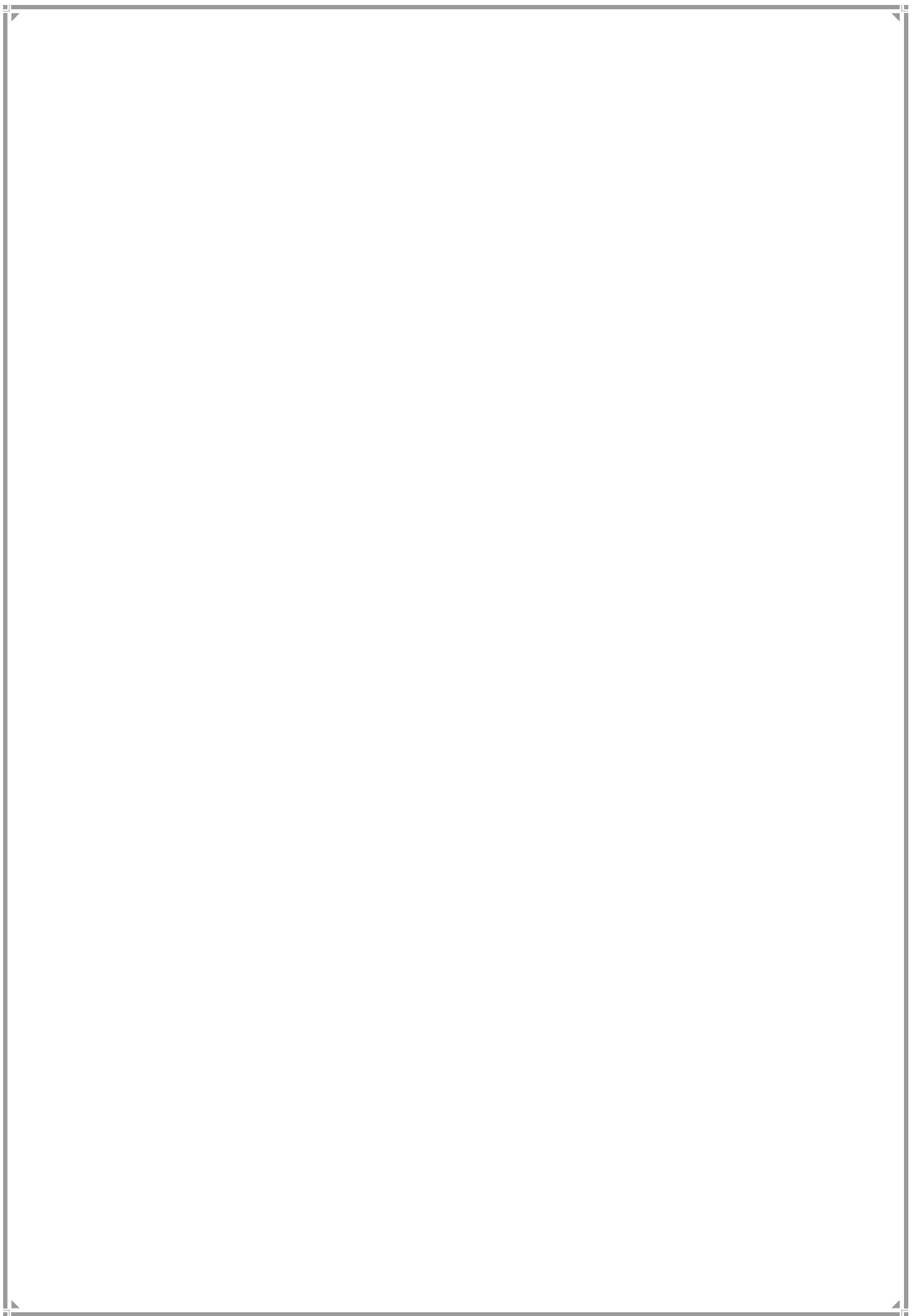
Multiple Designations and Reservations

S.No	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
1	ES 21	218 & 194A	Ghatkopar	1. PRIMARY & SECONDARY SCHOOL (DE1.2) 2. HIGHER EDUCATION (DE2.1)	DE 1.2 +
2	ES 21	194B	Ghatkopar	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1) 2. MUNICIPAL MATERNITY HOME (RH1.3)	RH 1.1 +
3	ES 25	356	Ghatkopar Kirol	1. MUNICIPAL SCHOOL (DE1.1) 2. POST & TELEGRAPH (DPU4.1)	DE 1.1 +
4	ES 25	FP No. 55 & 55/3	Ghatkopar Kirol	1. MUNICIPAL SCHOOL (DE1.1) 2. PLAY GROUND (DOS1.4)	DE 1.1 +
5	ES 25	463, 465,464 & 468/A	Kirol	1. WELFARE CENTRE (DSA2.5) 2. LIBRARY (DSA2.8)	DSA 2.5 +

S.No	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
6	ES 25	193	Ghatkopar	1. COLLEGE (DE2.1) 2. PRIMARY & SCEONDARY SCHOOL (DE1.2)	DE 2.1 +
7	ES25	394 & 430	Kirol	1. RETAIL MARKET (DSA1.2) 2. SOLID WASTE MANAGEMENT FACILITY (RMS3.1)	DSA 1.2 +
8	ES 25	5221, 5220,521 9,5218, 5217, 5216, 5215 5228C & 5222	Ghatkopar Kirol	1. RETAIL MARKET WITH VENDING ZONE (RSA 1.2) 2. PUBLIC CONVENIENCE (RSA6.3) 3. MUNICIPAL CHOWKY (RMS1.2)	RSA1.2+
9	ES 25	4723, 495/5/2 & 495/4/1	Ghatkopar Kirol	1. MULTIPURPOSE COMMUNITY CENTRE (RSA 2.1) 2. STUDENTS HOSTEL (RSA 2.7)	RSA2.1+
10	ES 25	268, 269, 271 & 272	Ghatkopar Kirol	1. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.3) 2. MUNICIPAL DISPENSARY/ HEALTH POST (RH1.1)	RH1.3+
11	ES 26	1(pt)	Vikhroli	1. TRANSPORT GARAGE (DMS2.1) 2. MUNICIPAL OFFICE (RO1.3)	DMS2.1+
12	ES 29	1(pt)	Kirol	1. MUNICIPAL SCHOOL (DE1.1) 2. CARE CENTRE (RSA6.1)	DE1.1+
13	ES 29	373, 372,371 & 368	Ghatkopar Kirol	1. MUNICIPAL STAFF QUARTERS (DR1.1) 2. SOLID WASTE MANAGEMENT FACILITY (RMS3.1)	DR1.1+
14	ES 29	4084C	Ghatkopar Kirol	1. TRANSPORT GARAGE (DMS2.1) 2. SOLID WASTE MANAGEMENT FACILITY (RMS3.1)	DMS2.1+

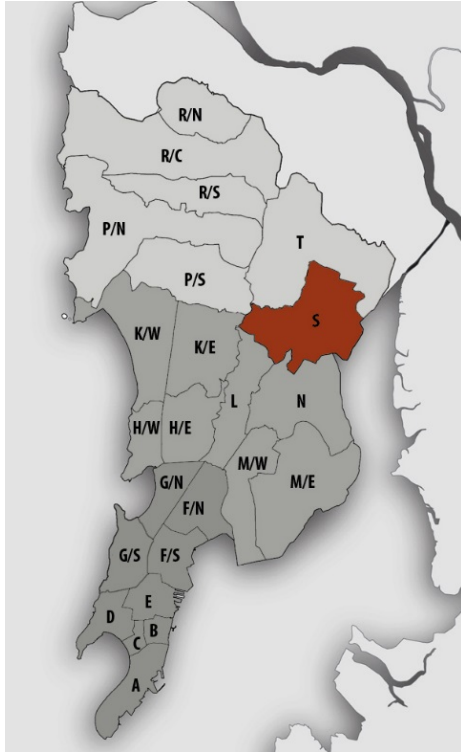
S.No	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
15	ES 29	FP No. 11	Ghatkopar Kiroli	1. MUNICIPAL MARKET (DSA1.1) 2. MUNICIPAL OFFICE (DO1.3) 3. DISASTER MANAGEMENT FACILITY (RO3.1) 4. SOLID WASTE MANAGEMENT FACILITY (RMS3.1)	DSA1.1+
16	ES 29	29, 72 & 73	Ghatkopar	1. OLD AGE HOME (RSA4.9) 2. CARE CENTRE (RSA6.1)	RSA4.9+
17	ES 29	582 to 593	Ghatkopar Kiroli	1. MUNICIPAL FACILITIES (RMS1.3) 2. PUBLIC CONVENIENCE (RSA6.3)	RMS1.3+
18	ES 30	51 & 52	Vikhroli	1. OTHER INSTITUTE (CULTURAL INSTITUTE) (RE4.4) 2. CULTURAL CENTRE / DRAMA THEATER / THEATER (RSA3.3)	RE4.4+
19	ES 33	2H	Ghatkopar	1. MUNICIPAL SCHOOL (DE1.1) 2. OTHER EDUCATION (RE3.1)	DE1.1+
20	ES 34	37	Vikhroli	1. WELFARE CENTRE (DSA2.5) 2. PUBLIC CONVENIENCE (RSA6.3)	DSA2.5+
21	ES 34	8A/3 & 8A/4	Vikhroli	1. MUNICIPAL SCHOOL (DE1.1) 2. OTHER EDUCATION (RE3.1)	DE1.1+
22	ES 34	68(pt)	Vikhroli	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 2. PUBLIC CONVENIENCE (RSA6.3) 3. MUNICIPAL CHOWKY (RMS1.2)	RSA6.2+
23	ES 34	21	Ghatkopar	1. MUNICIPAL RETAIL MARKET (RSA1.1) 2. PUBLIC CONVENIENCE (RSA6.3) 3. MUNICIPAL FACILITY (RMS1.3)	RSA1.1+
24	ES 34	48	Vikhroli	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 3. CARE CENTRE (RSA6.1)	RSA5.2+

S WARD



1. S Ward Profile

Location Map



JURISDICTION

Ward Area–3255.45 ha

Developed Area - 1927.40ha
(59% of Ward Area)

IIT & NITIE CAMPUS AREA – 220.23 ha

WARD BOUNDARIES

North: Goregaon-Mulund Link Road

East: Thane Creek Mangroves

West: Sanjay Gandhi National Park, Powai and Vihar Lakes

South: Ghatkopar area in the south

POPULATION

Existing (in lakhs)	Projected (in lakhs)
2001–6.91	2021–7.79
2011–7.44	2031–7.39
	2034–7.09

Density– 228pph (as per 2011population)

Note: Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 27

Primary and Secondary School - 42

Health post/ Dispensaries -6

Municipal Maternity Home – 3

Cemetery - 4

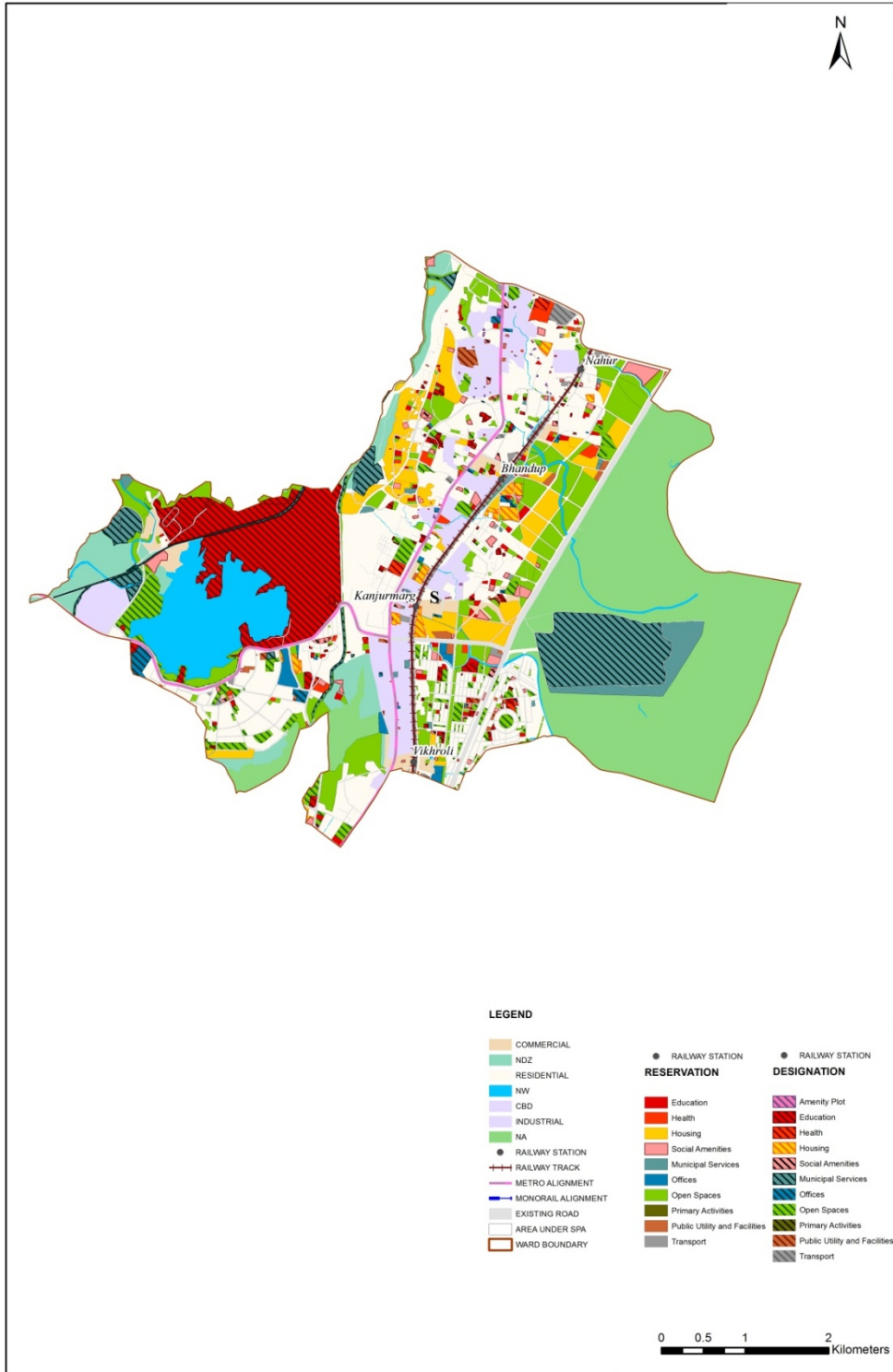
CONNECTIVITY

Major Roads - Jogeshwari-Vikhroli Link Road, LBS Road and the Goregaon-Mulund Link Road

Suburban Railway Station – Vikhroli, Kanjurmarg, Bhandup & Nahur

Future Proposal - Proposed Metro Stationat Kannamwar Nagar, Kanjurmarg, Chattrapati Nagar, Bhandup and Nahur

Proposed Land Use Map



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – S Ward	Norms (sq.m/person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	7,79,260	1.574	122.66	245.25
2	Health	7,79,260	0.419	32.65	7.60
3	Market	7,79,260	0.100	7.79	1.79
4	Cemetery	7,79,260	0.030	2.34	2.01
5	Open Space	7,79,260	4.000	311.70	95.61

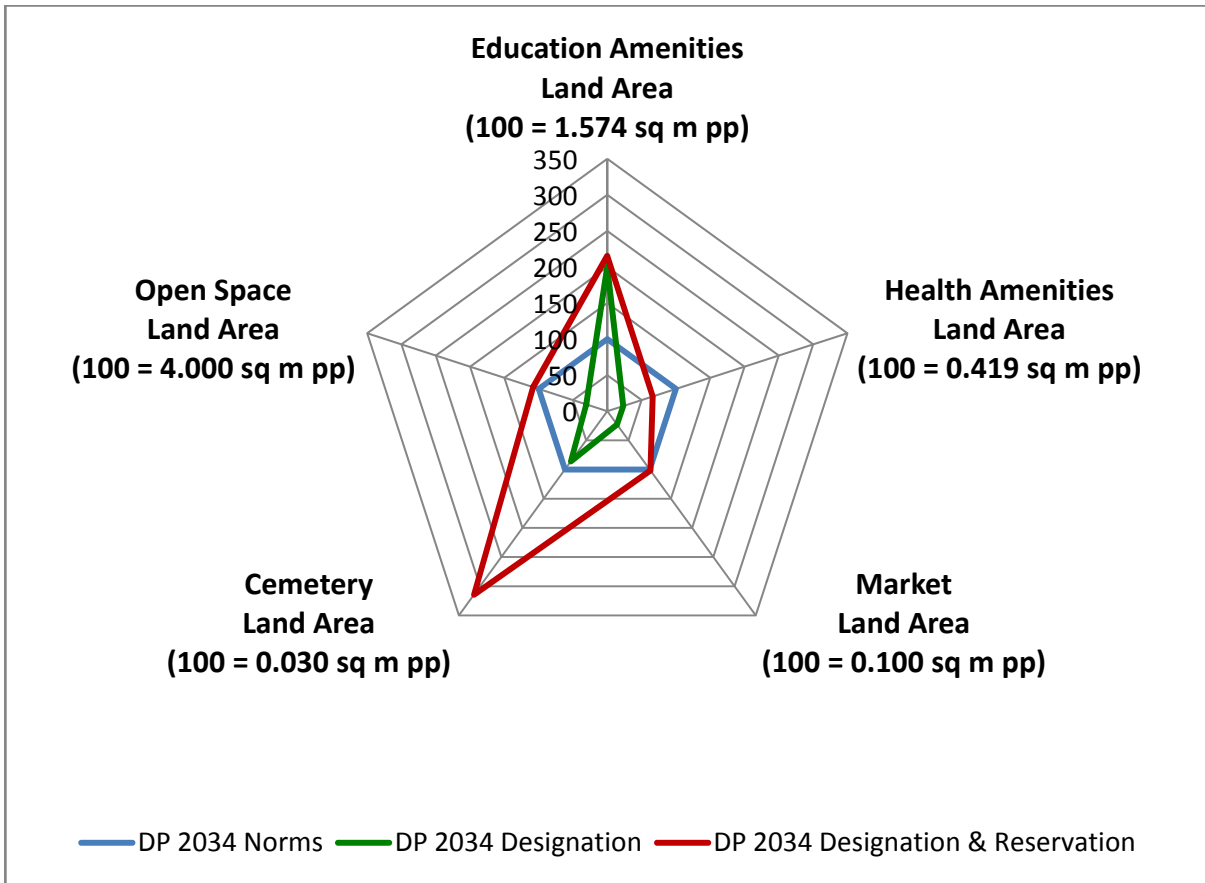
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/person)
1	Education	122.66	264.11	141.45	3.389
2	Health	32.65	21.61	-11.04	0.277
3	Market	7.79	7.92	0.13	0.102
4	Cemetery	2.34	7.35	5.01	0.094
5	Open Space	311.70	337.26	25.55	4.328

Note:

The norms for Sr. No. 1, 2 & 3 would be achieved or exceeded through Built-Up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	MULTIPURPOSE COMMUNITY CENTRE	RSA 2.1	1
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSE HOUSING FOR WORKING WOMEN	RSA 5.2	2
4	CARE CENTRE	RSA 6.1	13
5	AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE	RSA 6.2	2
6	PUBLIC CONVENIENCE	RSA 6.3	9
7	MUNICIPAL MARKET WITH VENDING ZONE	RSA1.1	3
8	OLD AGE HOME	RSA4.9	2
9	RETAIL MARKET WITH VENDING ZONE	RSA1.2	1
10	MUNICIPAL STAFF QUARTERS	RR1.1	1
11	LEISURE PARK	RSA3.7	1
12	HEALTH POST	RH1.1	9
13	MUNICIPAL CHOWKY	RMS1.2	7
14	SWM DRY WASTE CENTRE	RMS3.1	1

New Reservations which cannot be shown in the map

1. Public sanitary convenience facilities are proposed below fly over bridges at Vikhroli station, Jogeshwari Vikhroli Link Road, Airoli junction and Gandhi Nagar junction.
2. Buffer of about 6m width on both sides are proposed to be developed along the Tansa Pipe line providing public open space to the tune of 26,400sq.m.
3. Vending zones and public parking lots in all upcoming market developments that are within the periphery of station area are proposed. This is with a view to resolve hawkers issue and parking issues near station areas.

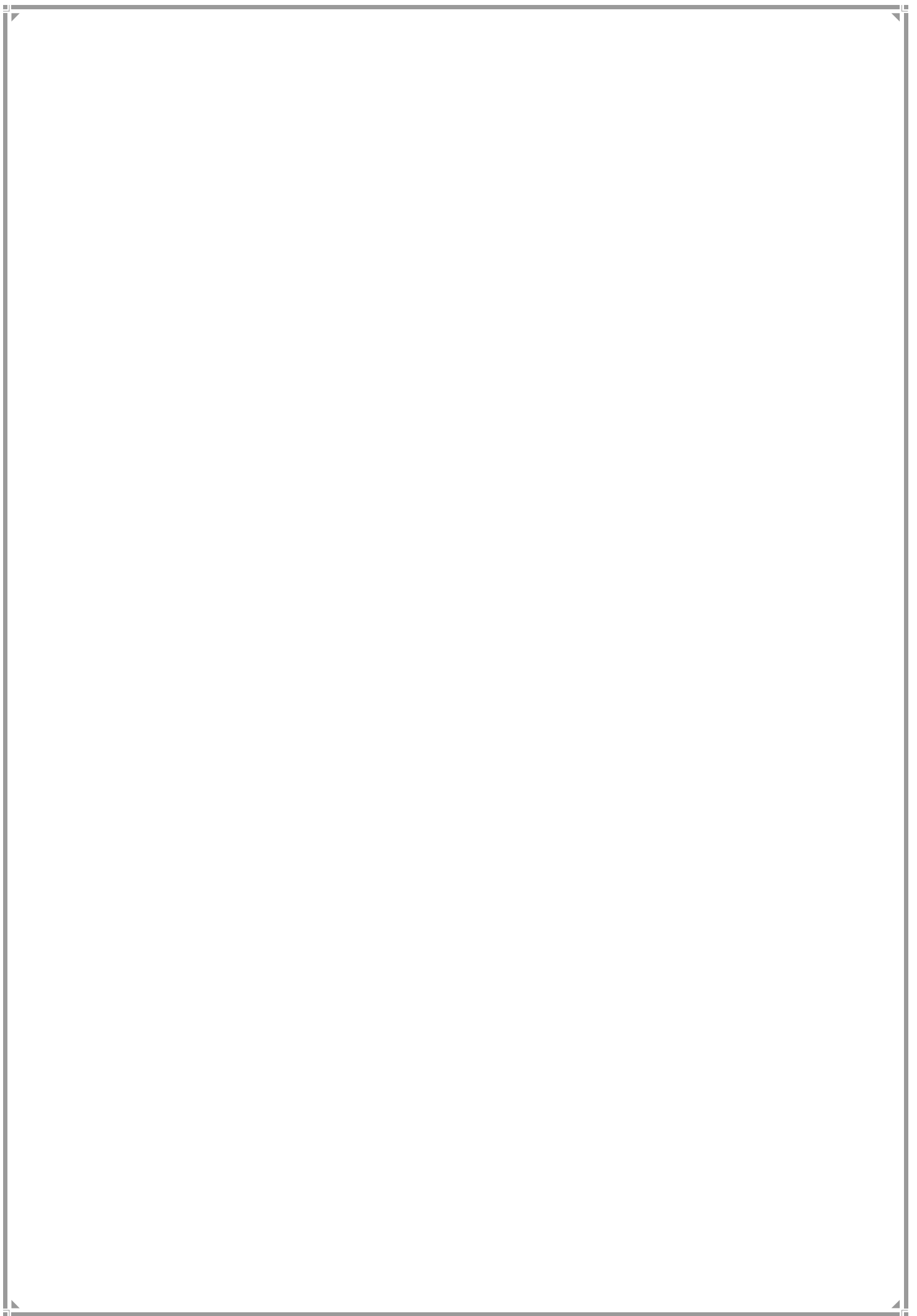
Multiple Designations and Reservations

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
1	ES-34	2A/4E	Ghatkopar	1. LIBRARY (DSA2.8) 2.WELFARE CENTRE (DSA2.5)	DSA2.8+
2	ES-37	7/23	Kopri	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2.CARE CENTRE (RSA6.1) 3. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	RSA5.2 +
3	ES-38	105, 105/5 TO 105/10, 105/23 TO 105/29 (PT)	Hariyali West	1.SOLID WASTE MANAGEMENT FACILITY (RMS3.1) 2.MUNICIPAL CHOWKY (RMS1.2)	RMS3.1 +
4	ES-38	356 PT	Hariyali East	1.PRIMARY & SECONDARY SCHOOL (DE1.2) 2.COLLEGE (DE2.1)	DE1.2+
5	ES-38	356 PT	Hariyali East	1.MUNICIPAL HOSPITAL (DH1.2) 2.MUNICIPAL STAFF QUARTERS (DR1.1)	DH1.2+
6	ES-38	165 PT	Hariyali East	1.LIBRARY (DSA2.8) 2.WELFARE CENTRE (DSA2.5)	DSA2.8+
7	ES-38	74, 74/1	Tirandaz	1.SHOPPING CENTER (DSA1.4) 2.PUBLIC HALL (DSA3.8)	DSA1.4+

S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
8	ES-38	356 PT	Hariyali East	1. COURT (DPU3.5) 2. SHOPPING CENTER (DSA1.4)	DPU3.5+
9	ES-38	179 PT	Hariyali East	1.MUNICIPAL RETAIL MARKET (DSA1.1) 2.MUNICIPAL STAFF QUARTERS (DR1.1)	DSA1.1+
10	ES-41	73, 74	Paspoli	1.CULTURAL CENTRE/DRAMA THEATER / THEATER (RSA3.3) 2.OTHER EDUCATION (RE3.1) 3.HOSPITAL (RH1.2)	RSA3.3+
11	ES-41	81	Paspoli	1.HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (DMS5.5) 2.MUNICIPAL CHOWKY (RMS1.2) 3.CARE CENTRE (RSA6.1)	DMS5.5+
12	ES41, ES44	5, 5/1, 5/17, 5/50	Paspoli	1.RESERVOIR (DMS5.1) 2.WATER PUMPING STATION (DMS5.2) 3.WATER TREATMENT PLANT (DMS5.3) 4.MUNICIPAL STAFF QUARTERS (DR1.1) 5.MUNICIPAL DISPENSARY (RH1.1) 6.CARE CENTRE (RSA6.1)	DMS5.1+
13	ES-42	581/25, 581/27, 581/29, 581/30, 582, 583, 585	Kanjur West	1.ROAD DEPOT (RMS1.1) 2.MUNICIPAL CHOWKY (RMS1.2)	RMS1.1+
14	ES-42	12/7 pt	Tirandaz	1.GARDEN/ PARK (ROS1.5) 2.CARE CENTRE (RSA6.1)	ROS1.5+
15	ES-42	657 PT	Kanjur East	1.POLICE STATION (RPU3.1) 2.COURT (RPU3.5)	RPU3.1+
16	ES45	617B/2	Kanjur West	1.MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2.OLD AGE HOME (FOR WOMEN) (RSA4.9) 3.AADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2)	RSA5.2+

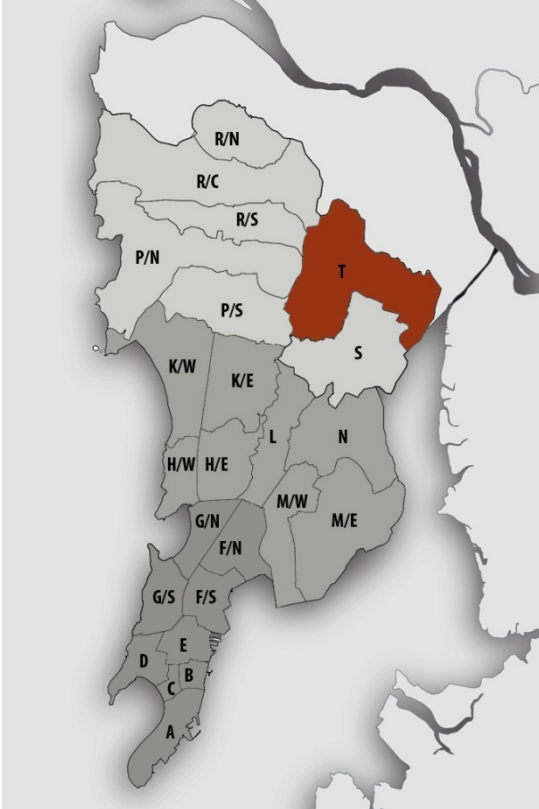
S.No	DP Sheet no.	CS/CTS No.	Division/ Village	Names of Multiple Designation/Reservation	Code of Primary Designation/ Reservation displayed on DP sheet as
17	ES-45	639	Kanjur West	1.MUNICIPAL CHOWKY (RMS1.2) 2.HYDRAULIC ENGINEERING DEPARTMENT FACILITIES (RMS5.5)	RMS1.2 +
18	ES-45	373 C/2	Kanjur West	1.MUNICIPAL DISPENSARY/HEALTH POST (RH1.1) 2.MUNICIPAL CHOWKY (RMS1.2)	RH1.1 +
19	ES-45	364A, 364B, 364C	Kanjur West	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2.MUNICIPAL OFFICE (RO1.3)	RSA1.1+
20	ES-45	200 TO 207, 1308, 1308/1 TO 1308/3	Kanjur West	1.RESERVOIR (DMS5.1) 2.WATER PUMPING STATION (DMS5.2) 3.MUNICIPAL STAFF QUARTERS (DR1.1)	DMS5.1+
21	ES-45	183	Kanjur West	1.STUDENT HOSTEL (DSA2.7) 2.PUBLIC HALL (DSA3.8)	DSA2.7+
22	ES-45, ES-46	1005 TO 1009 (ALL PT)	Bhandup East	1.WELFARE CENTRE (DSA2.5) 2.CARE CENTRE (RSA6.1)	DSA2.5 +
23	ES-46	540, 542, 543, 544, 592, 593, 594, 599, 600, 731	Bhandup East	1.MUNICIPAL MARKET WITH VENDING ZONE (RSA1.1) 2.MUNICIPAL FACILITIES (RMS1.3)	RSA1.1 +
24	ES-46	754A/4, 754B/1, 755, 758	Bhandup East	1.MUNICIPAL DISPENSARY/HEALTH POST (DH1.1) 2.MUNICIPAL MATERNITY (DH1.3)	DH1.1+
25	ES-49	283 pt, 284PT	Bhandup West	1.MUNICIPAL MATERNITY HOME (RH1.3) 2.MUNICIPAL DISPENSARY (RH1.1)	RH1.3+
26	ES-50	338	Bhandup West	1.MUNICIPAL STAFF QUARTRES (RR1.1) 2.GARDEN/ PARK (ROS1.5)	RR1.1+

T WARD



1. T Ward Profile

Location Map



JURISDICTION

WardArea – 4491.67 ha

(Under MCGM)

Developed Area - 24.06 %

WARD BOUNDARIES

North - S. G. Kelkar Company, Octroi Naka, Thane City

East –Salt Pans, Hari Om Nagar, Thane Creek

West–Sanjay Gandhi National Park, Mulund Colony

South–Goregaon-Mulund Link Road, Mulund Airoli Road

POPULATION

Existing

(In lakhs)

2001 – 3.30 Lakhs

2011 – 3.41 Lakhs

Projected

(In lakhs)

2021 – 3.47 lakh

2031 – 3.21 lakh

2034 – 3.06 lakh

Density - 76pph (As per 2011 Census Population)

Note:Maximum projected population of entire Mumbai city in 2021 is considered for provision of amenities.

EXISTING EDUCATION AND HEALTH AMENITIES

Municipal Primary School – 22

Primary and Secondary School -37

Health post/ Dispensaries – 4

Municipal Hospital/ MaternityHome – 4

Government Hospital – 1

Cemetery – 6

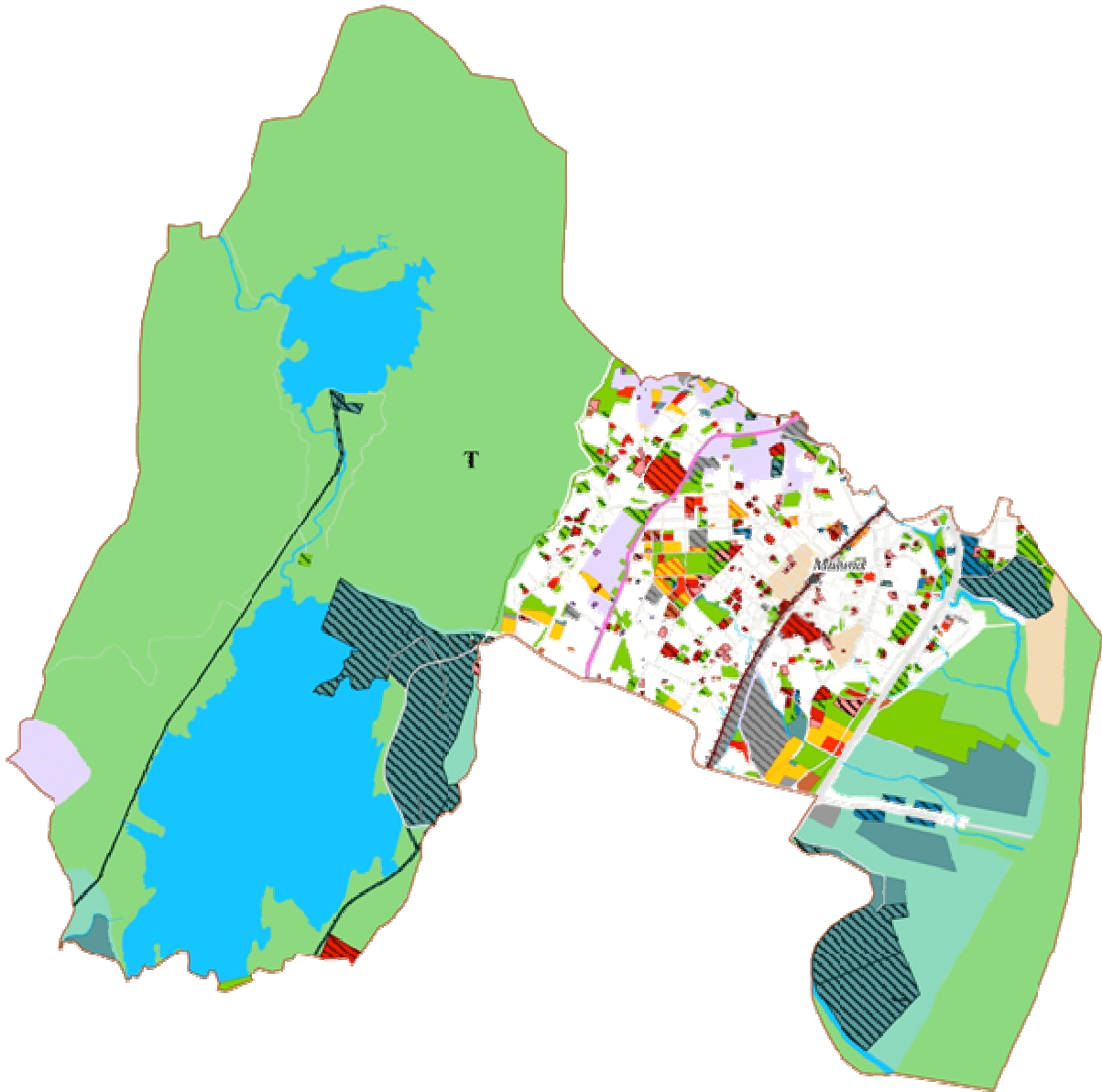
CONNECTIVITY

Major Roads: Eastern Express Highway, L.B.S. Marg, and Mulund-Goregaon Link Road& Mulund-Airoli Road

Railway Station: Mulund railway station, Nahur railway station.

Future Proposals: Proposed Metro Stations - Mithaghar and Mulund stations

Proposed Land Use Map



LEGEND

- COMMERCIAL
- NDZ
- RESIDENTIAL
- NW
- CBD
- INDUSTRIAL
- NA
- RAILWAY STATION
- RAILWAY TRACK
- METRO ALIGNMENT
- MONORAIL ALIGNMENT
- EXISTING ROAD
- AREA UNDER SPA
- WARD BOUNDARY

● RAILWAY STATION

RESERVATION

- Education
- Health
- Housing
- Social Amenities
- Municipal Services
- Offices
- Open Spaces
- Primary Activities
- Public Utility and Facilities
- Transport

● RAILWAY STATION

DESIGNATION

- Amenity Plot
- Education
- Health
- Housing
- Social Amenities
- Municipal Services
- Offices
- Open Spaces
- Primary Activities
- Public Utility and Facilities
- Transport



2. Gap Analysis

Existing Amenities and Demand Analysis

S.No.	Amenity	Projected Population – T Ward	Norms (sq.m/person)	Total Requirement (Ha.)	Designation Area (Ha.)
1	Education	3,47,205	1.574	54.65	26.37
2	Health	3,47,205	0.419	14.55	11.29
3	Market	3,47,205	0.100	3.47	1.72
4	Cemetery	3,47,205	0.030	1.04	4.48
5	Open Space	3,47,205	4.000	138.88	52.78

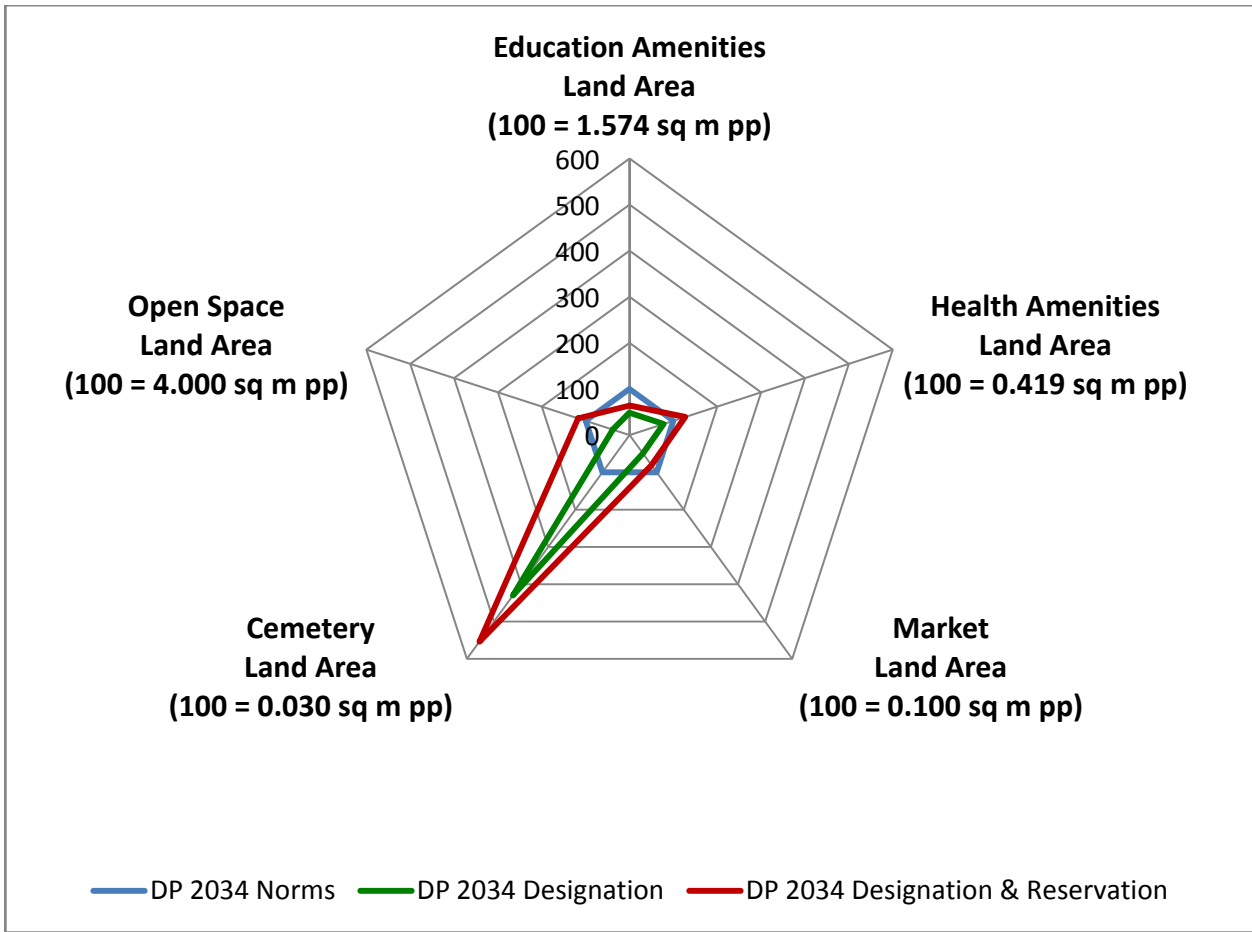
Proposed Amenities and Norms Achieved

S.No.	Amenity	Total Requirement (Ha.)	Designation and Reservation Area (Ha.)	Land Deficit (-)/ Surplus (+) (Ha.)	Norms Achieved (sq.m/person)
1	Education	54.65	34.99	-19.66	1.008
2	Health	14.55	18.46	3.91	0.532
3	Market	3.47	2.81	-0.66	0.081
4	Cemetery	1.04	5.77	4.73	0.166
5	Open Space	138.88	163.15	24.27	4.699

Note:

The norms for Sr.No. 1, 2 and 3 would be achieved or exceeded through Built-up Area.

Radar Diagram of Existing & Proposed Amenities and Norms Achieved



3. Reservations – Ward Level

Summary of New Social Amenities Proposed in R.D.D.P. 2034 –

S. No	Name of Amenity	Legend	Proposed
1	MUNICIPAL MARKET WITH VENDING ZONE	RSA 1.1	1
2	STUDENTS HOSTEL	RSA 2.7	1
3	MULTIPURPOSEHOUSING FOR WORKING WOMEN	RSA 5.2	1
4	CARE CENTER	RSA 6.1	5
5	ADHAR KENDRA WITH SKILL DEVELOPMENT CENTER	RSA 6.2	1
6	PUBLIC CONVENIENCE	RSA 6.3	7
7	HOMELESS SHELTER	RSA 2.9	3
8	OLD AGE HOME	RSA 4.9	2
9	GREEN BELT	ROS2.7	1
10	SOLID WASTE MANAGEMENT FACILITY	RMS 3.1	1

New Reservations which cannot be shown in the map

1. All roads in the ward are wide with a sparse tree line alongside. Considering this nature of the roads and the residential land use, pedestrianization is proposed in Mulund West especially on Ramratan Trivedi (R.R.T.) road near Mulund West railway station. However implementation of non-motorized transport in the ward is subject to detailed scientific studied.
2. The Lal Bahadur Shastri Marg, which is of the main arterial roads in the ward, is proposed to have a cycling track, which is again subject to feasibility studies at micro level.
3. Pay and Use public conveniences and ward level amenities such chowkies are proposed under the MHADA flyover in Mulund East.



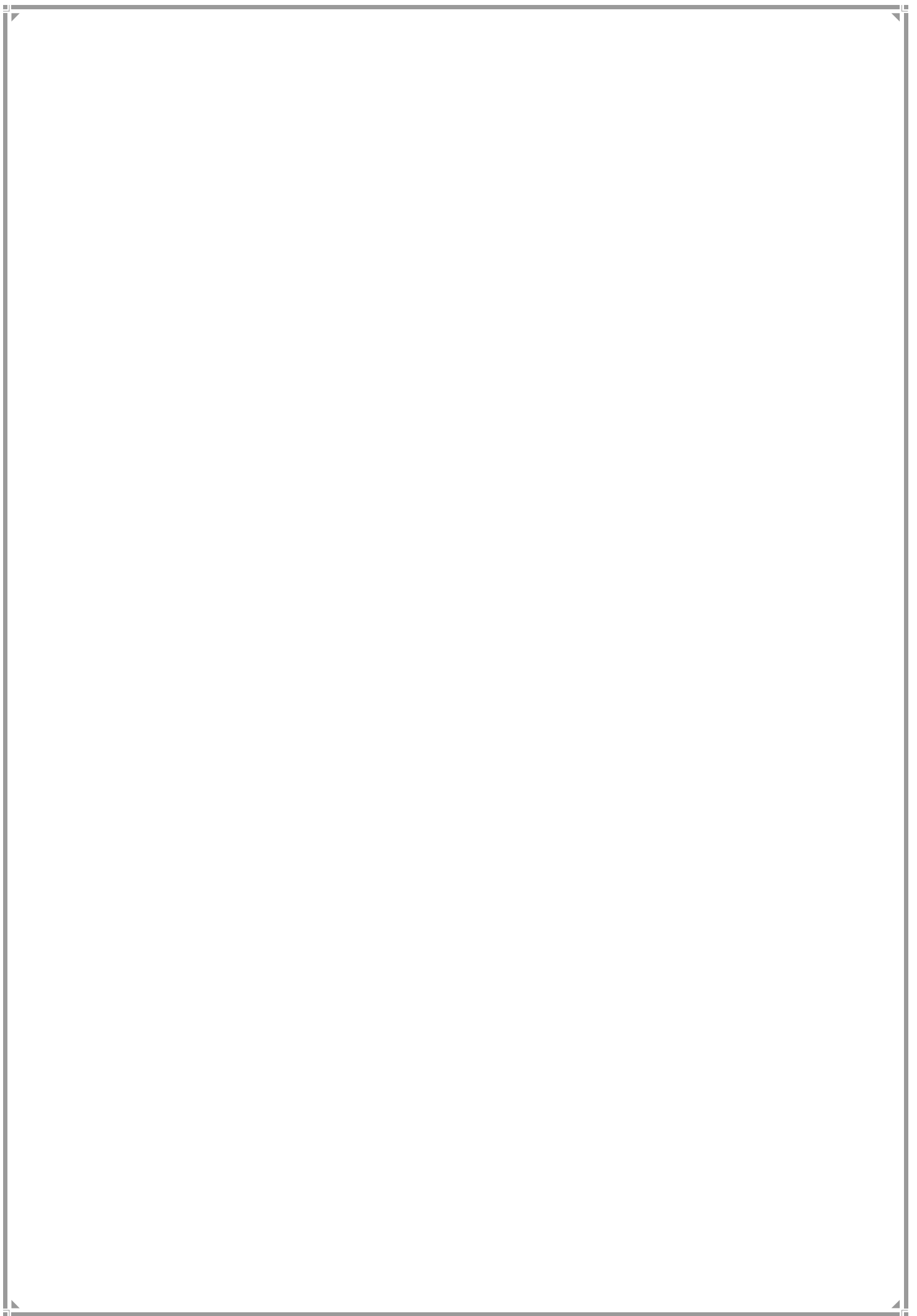
Multiple Designations and Reservations

S. No.	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Multiple Designation/ Reservation	Code of Primary Designation/Reservation displayed on DP sheet
1	ES 49	683	Nahur	1. PRIMARY AND SECONDARY SCHOOL (DE1.2) 2. WELFARE CENTRE (DSA2.5)	DE1.2+
2	ES 53	551/13	Mulund West	1. PUBLIC PARKING LOT (DT1.6) (PT) 2. MUNICIPAL RETAIL MARKET (DSA1.1)	DT1.6+
3	ES 53	465B/1	Mulund West	1. WELFARE CENTRE (DSA2.5) 2. LIBRARY (DSA2.8)	DSA2.5+
4	ES 54	1110/13	Mulund West	1. SHOPPING CENTRE (DSA1.4) 2. REHABILITATION & RESETTLEMENT (DR2.1)	DSA1.4+
5	ES 54	863, 864, 865, 1120, 1121, 868, 869, 896/6	Mulund East	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. STUDENTS HOSTEL (RSA2.7) 3. PUBLIC CONVENIENCE (RSA6.3)	DSA1.1+
6	ES 54	676/1, 676/2, 676B	Mulund West	1. COURT (DPU3.5) 2. GOVERNMENT OFFICE (DO2.1)	DPU3.5+
7	ES 54	550/33	Mulund West	1. RETAIL MARKET (DSA1.2) 2. CARE CENTRE (RSA6.1) 3. PUBLIC CONVENIENCE (RSA6.3)	DSA1.2+

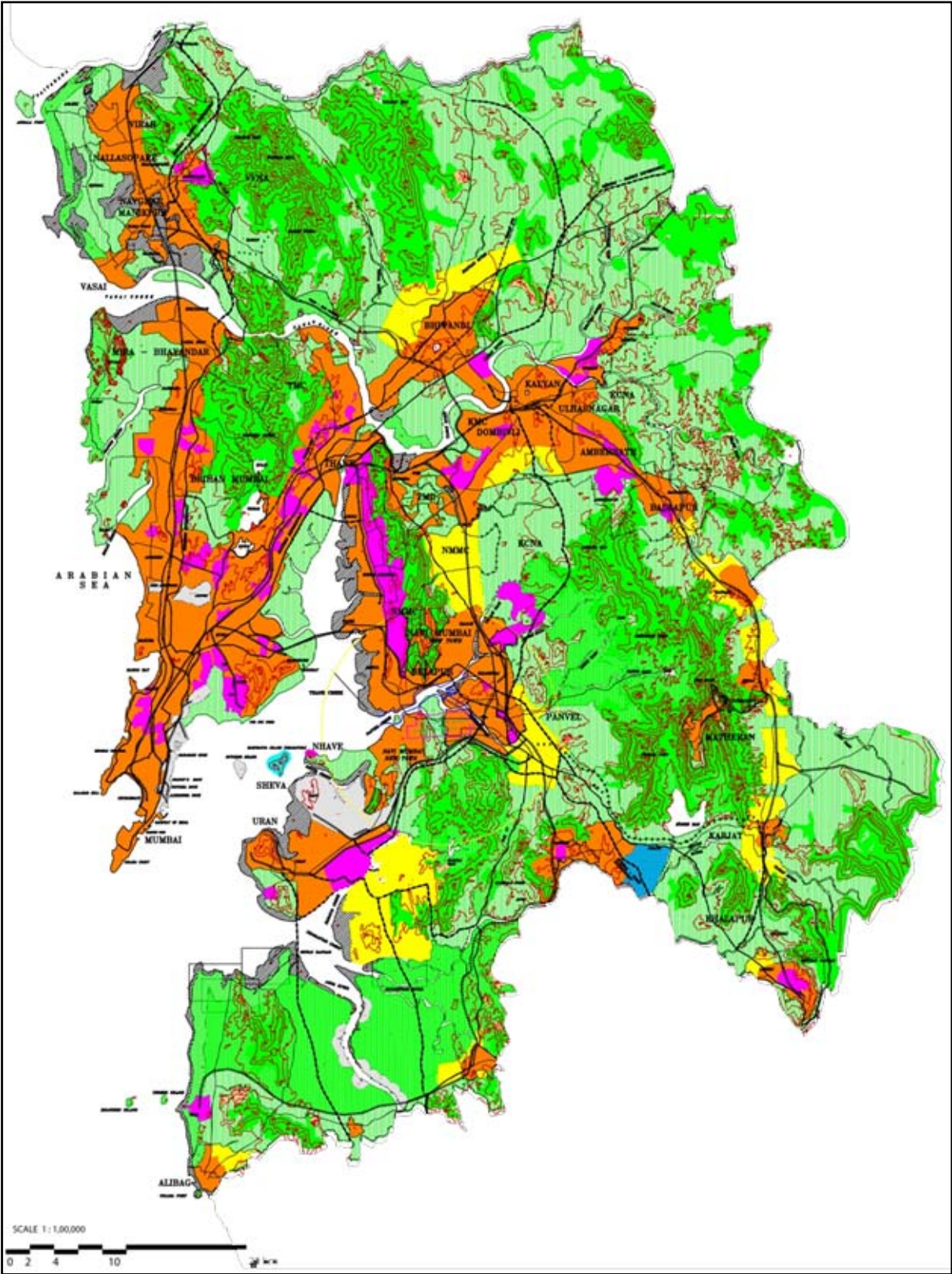
S. No.	DP Sheet No.	CS/ CTS No.	Division/ Village	Names of Multiple Designation/ Reservation	Code of Primary Designation/Reservation displayed on DP sheet
8	ES 54	128, 130, 131, 131/1	Mulund East	1. MUNICIPAL OCTROI NAKA (DO1.1) 2. TRUCK TERMINUS (DT1.1)	DO1.1+
9	ES 54	131, 132, 133	Mulund East	1. PRIMARY AND SECONDARY SCHOOL (DE1.2) 2. WELFARE CENTRE (DSA2.5)	DE1.2+
10	ES 57	647, 648	Mulund West	1. WATER PUMPING STATION (DMS5.2) 2. WATER TREATMENT PLANT (DMS5.3)	DMS5.2+
11	ES 57	29/3B 661/B	Mulund West	1. RETAIL MARKET (DSA1.2) 2. CARE CENTRE (RSA6.1) 3. PUBLIC CONVENIENCE (RSA6.3)	DSA1.2+
12	ES 57	29/3B	Mulund West	1. WELFARE CENTRE (DSA2.5) 2. LIBRARY (DSA2.8)	DSA2.5+
13	ES 58	880	Mulund West	1. MUNICIPAL RETAIL MARKET (DSA1.1) 2. CARE CENTRE (RSA6.1) 3. PUBLIC CONVENIENCE (RSA6.3)	DSA1.1+
14	ES 58	661/1/3	Mulund West	1. PRIMARY AND SECONDARY SCHOOL (DE1.2) 2. WELFARE CENTRE (DSA2.5)	DE1.2+
15	ES 58	647, 648	Mulund West	1. TRUCK TERMINUS (DT1.1) 2. MUNICIPAL OCTROI NAKA (DO1.1)	DT1.1+
16	ES 50	1020	Mulund East	1. MULTIPURPOSE COMMUNITY (RSA2.1) 2. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 3. CARE CENTRE (RSA6.1) 4. PUBLIC CONVENIENCE (RSA6.3)	RSA2.1+
17	ES 54	1030	Mulund West	1. ADHAR KENDRA WITH SKILL DEVELOPMENT CENTRE (RSA6.2) 2. CARE CENTRE (RSA6.1)	RSA6.2+
18	ES 54	1029	Mulund West	1. MULTIPURPOSE HOUSING FOR WORKING WOMEN (RSA5.2) 2. OLD AGE HOME (RSA4.9)	RSA5.2+

PART-4

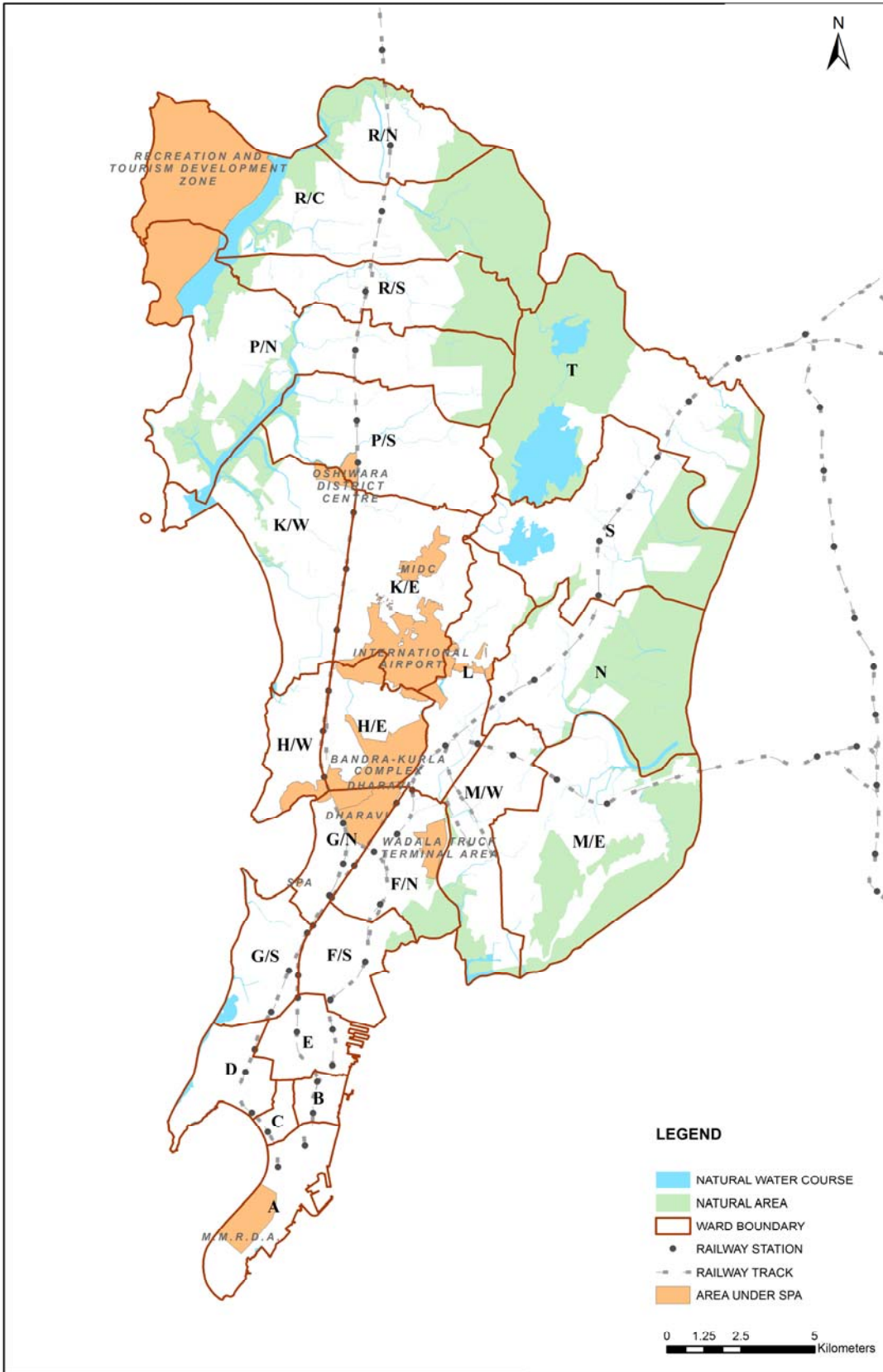
MAPS



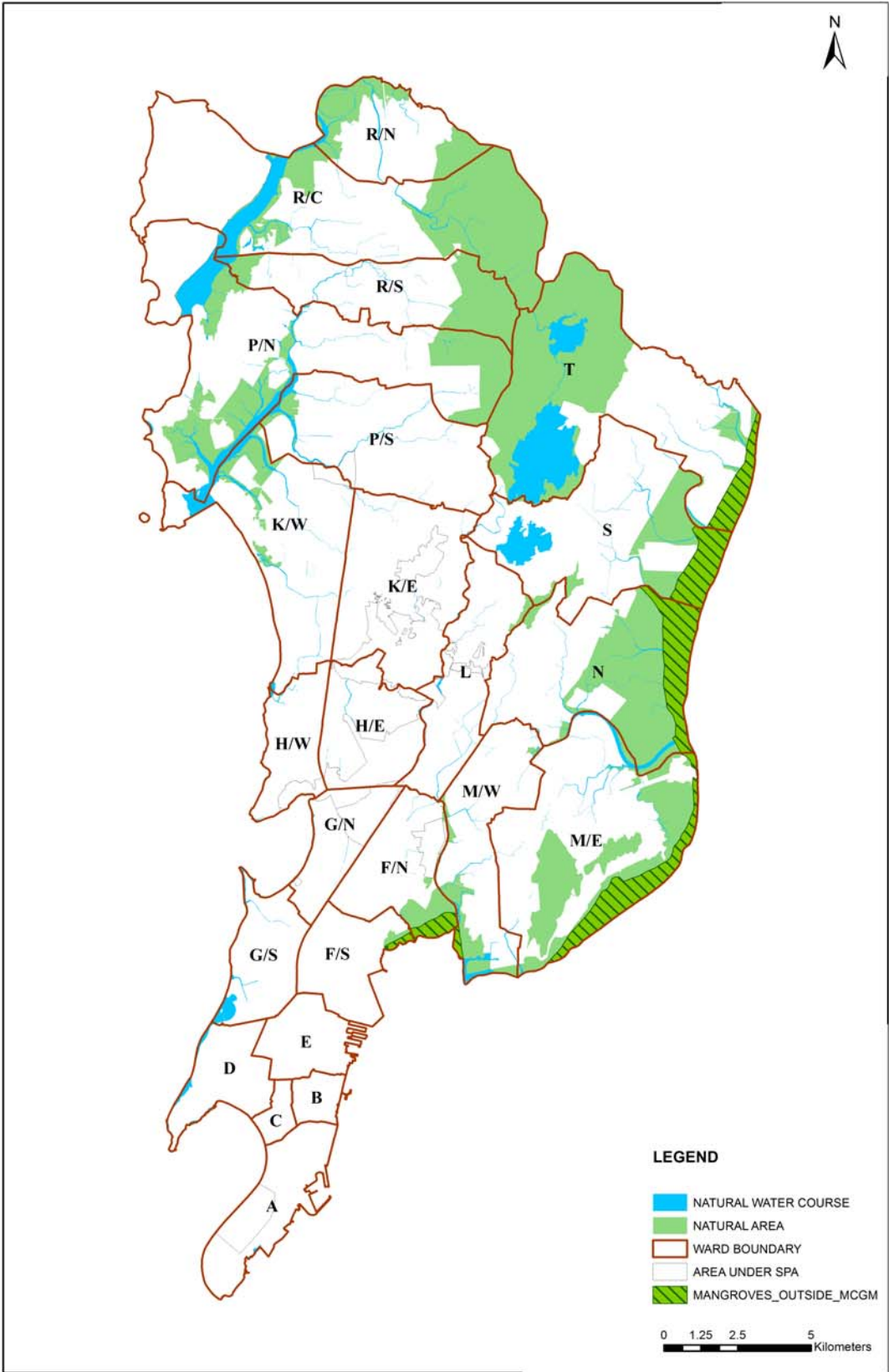
Map 1 Regional Plan: Mumbai Metropolitan Region, 1996-2011



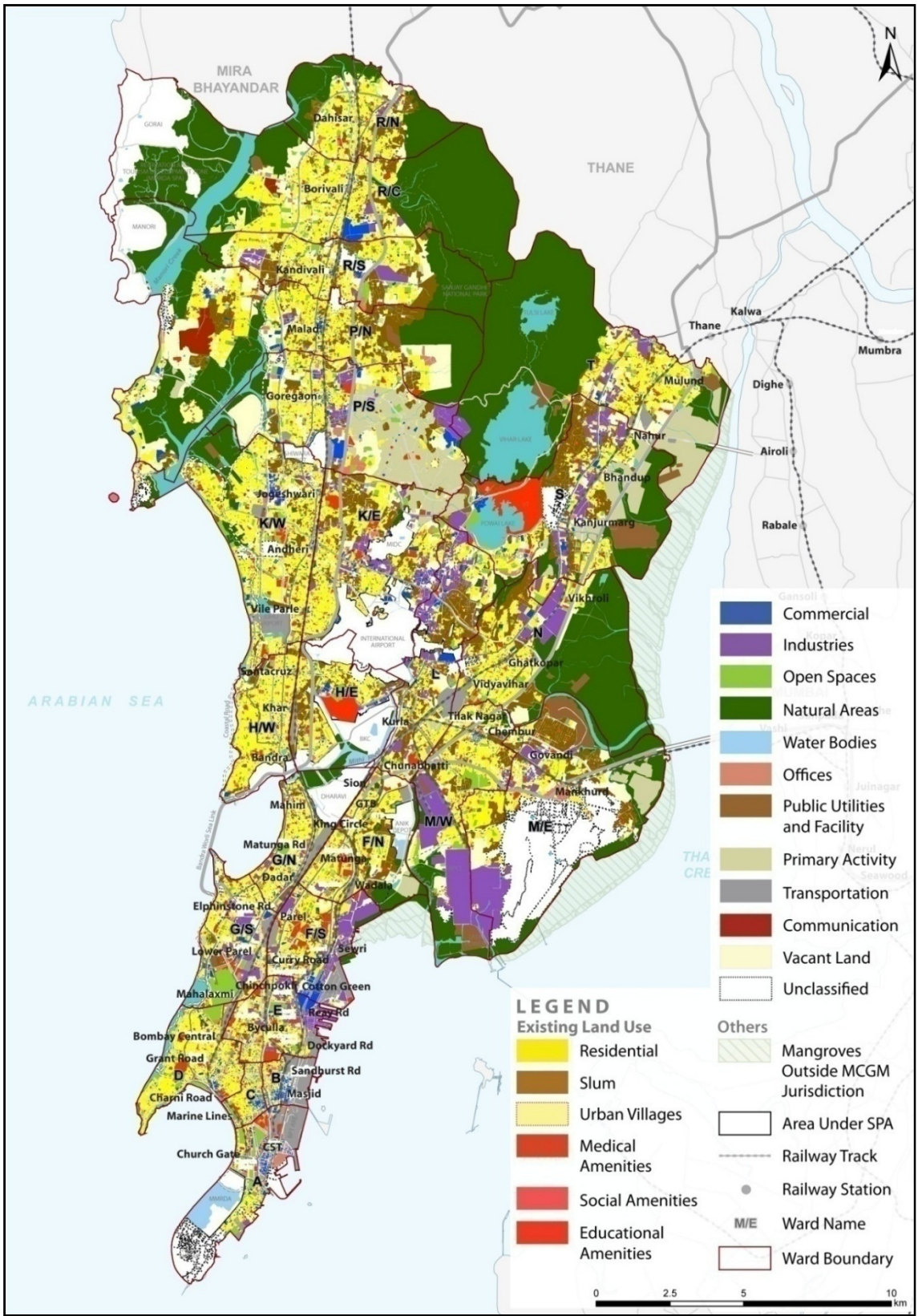
Map 2: Notified area under Special Authorities



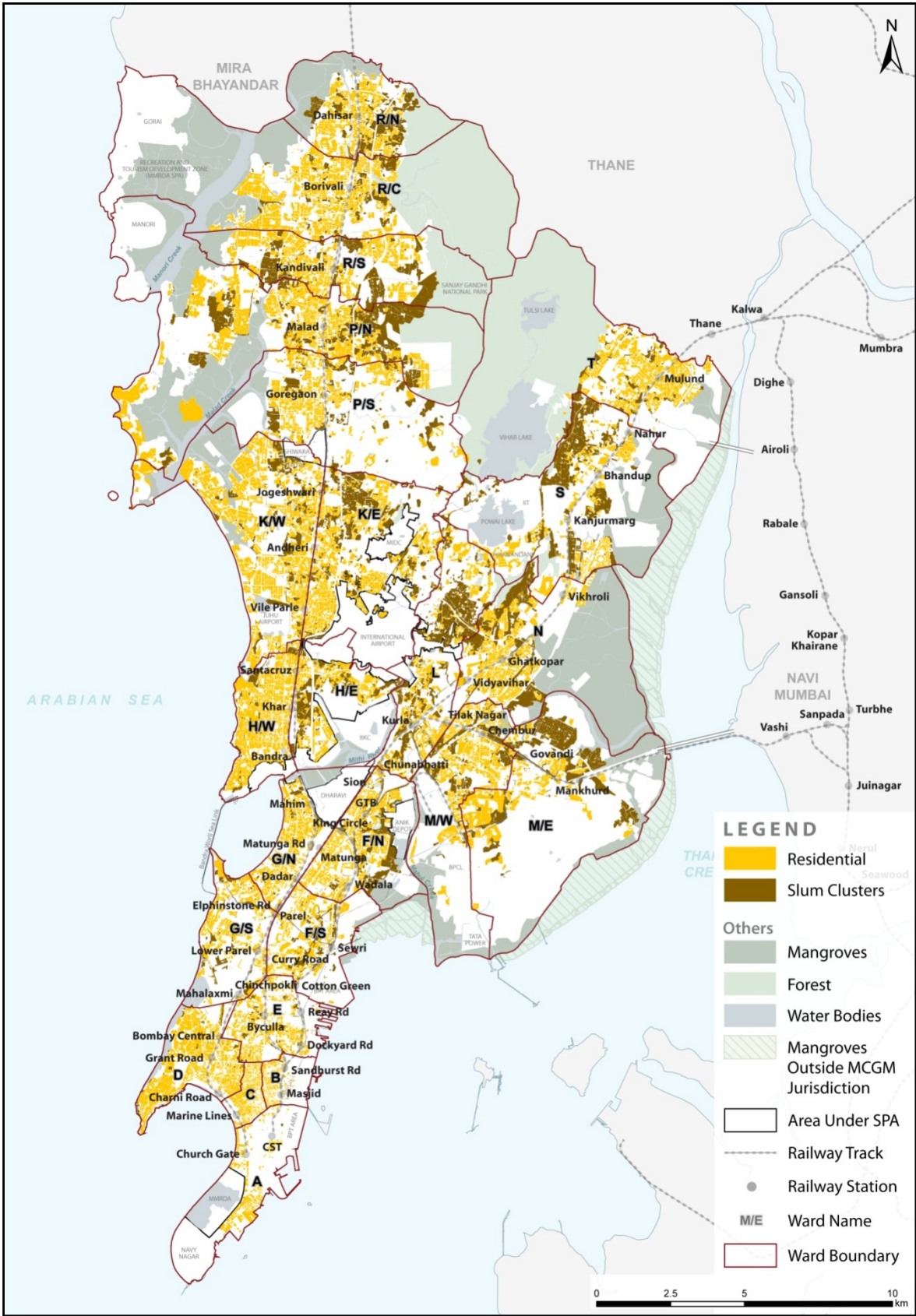
Map 3: Additional Mangroves included in MCGM Jurisdiction



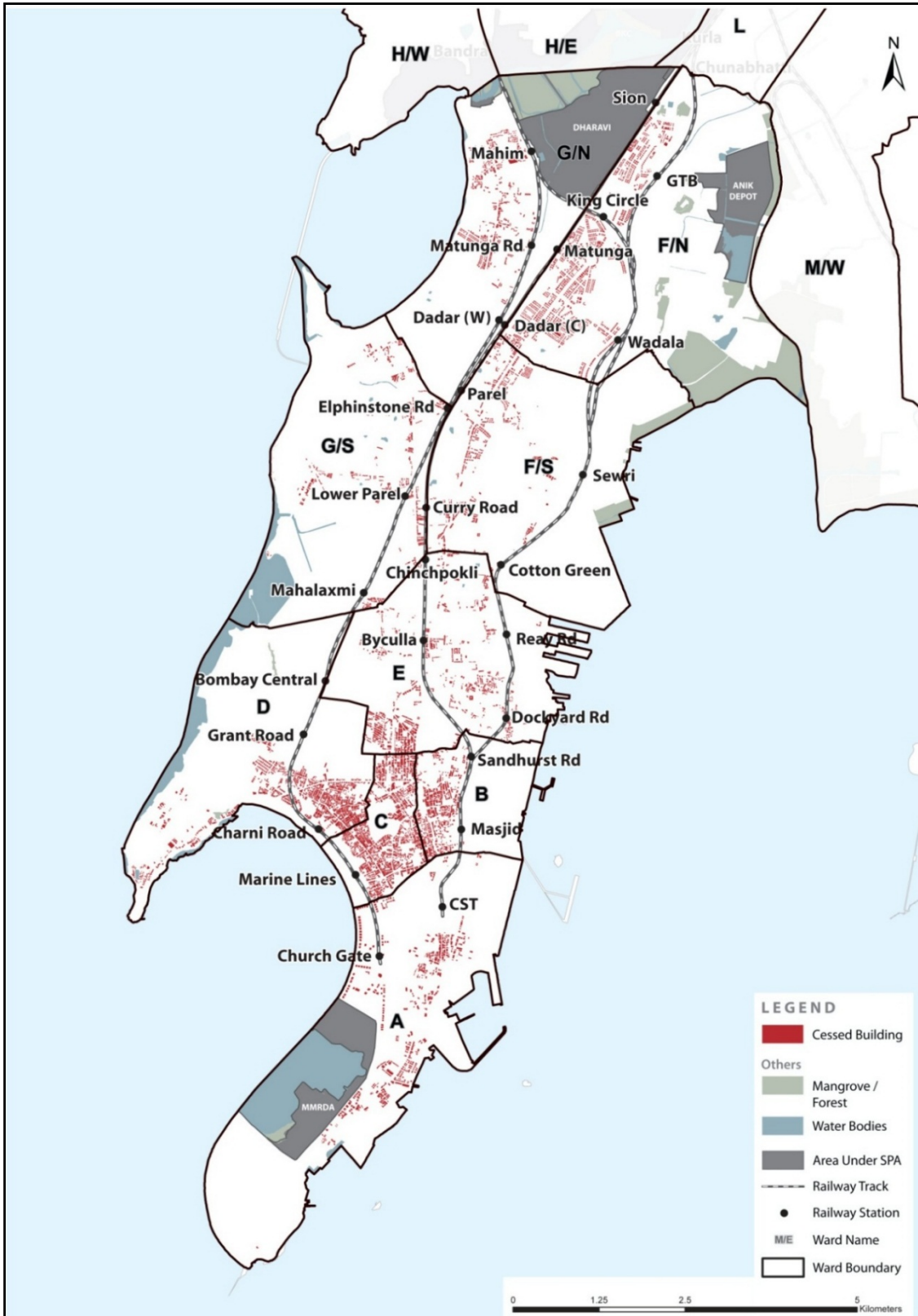
Map 4: Greater Mumbai: Existing Land Use 2012



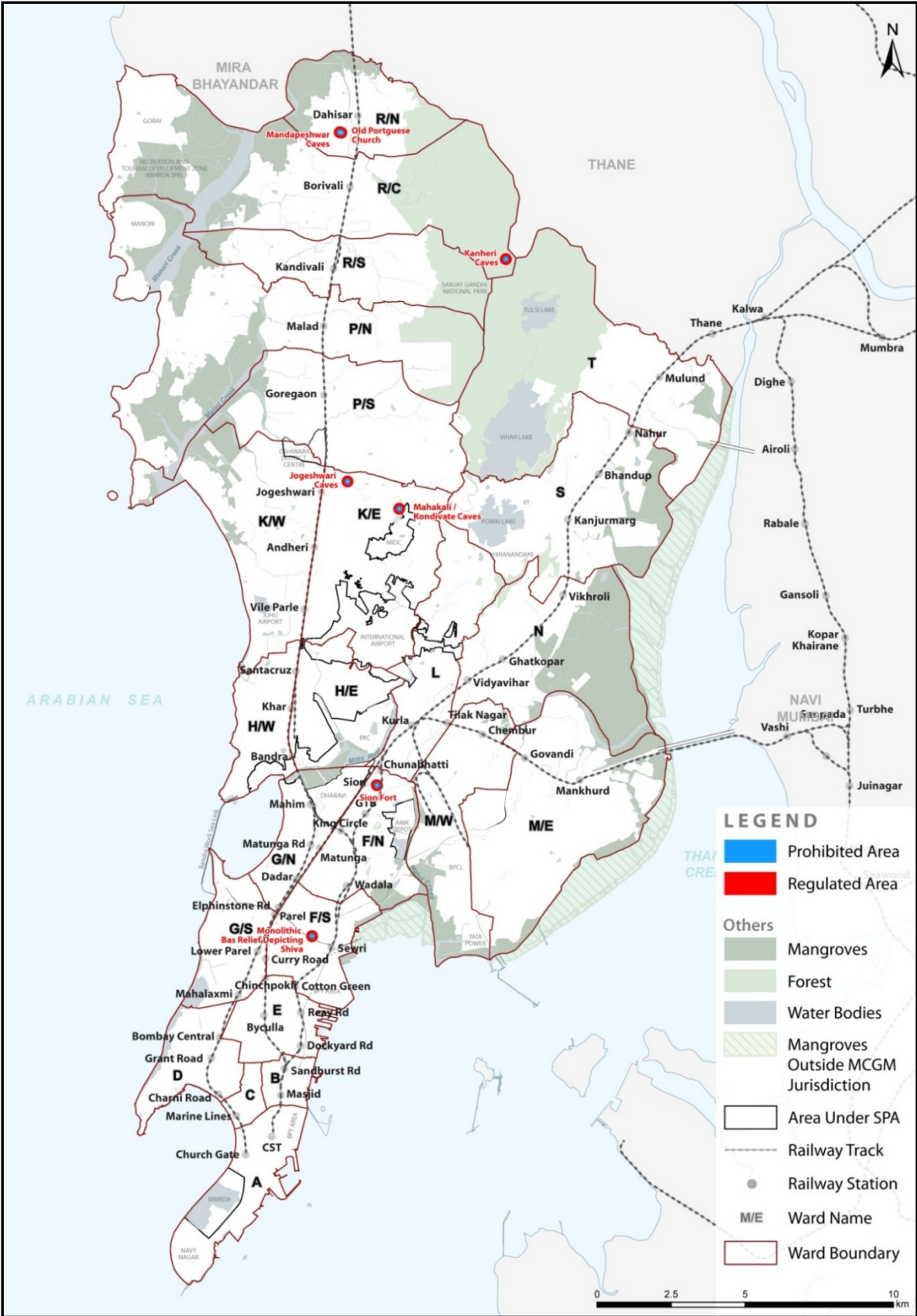
Map 5: Greater Mumbai ELU 2012 Residential Uses



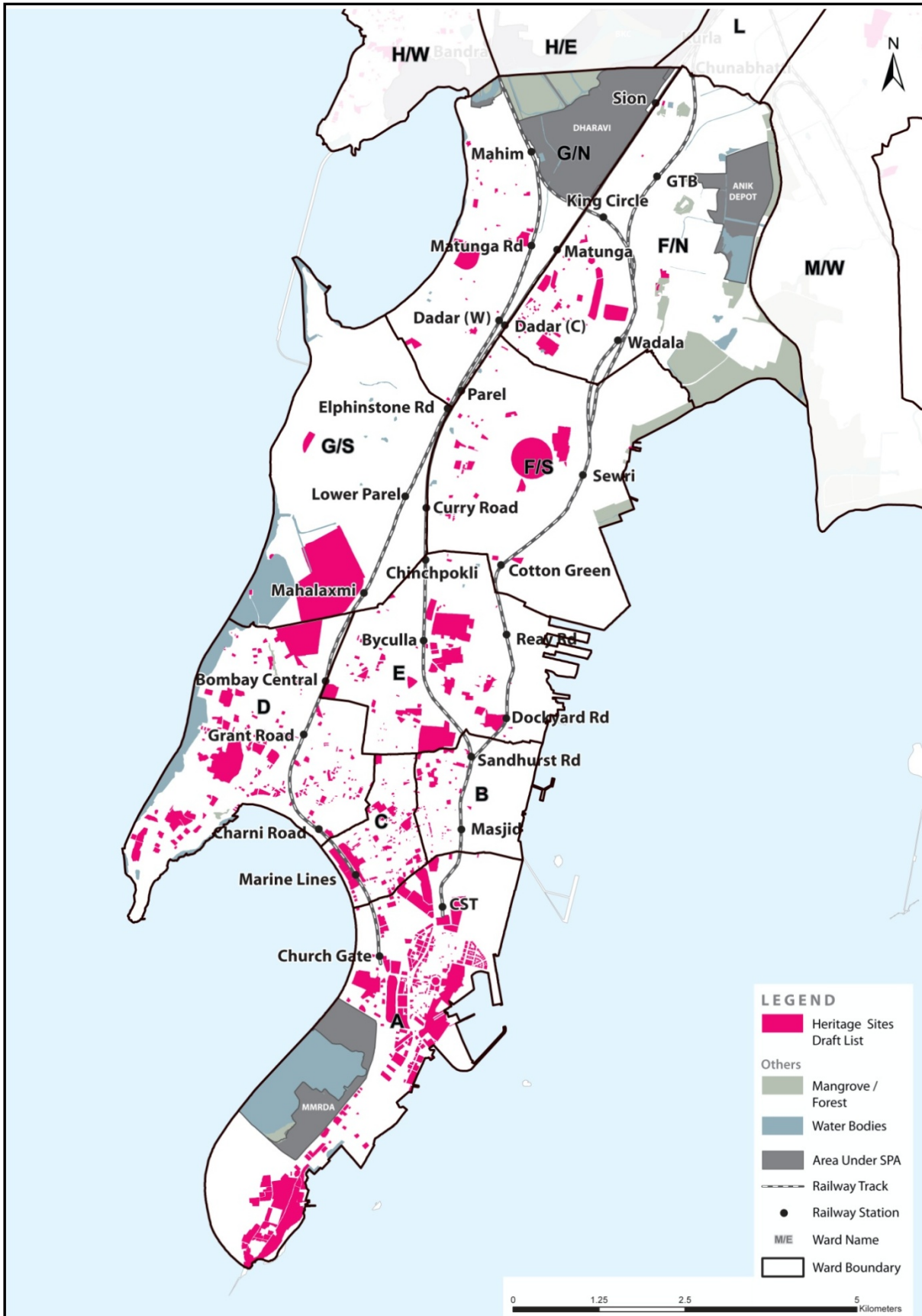
Map 6: Map of Island City showing Cessed buildings



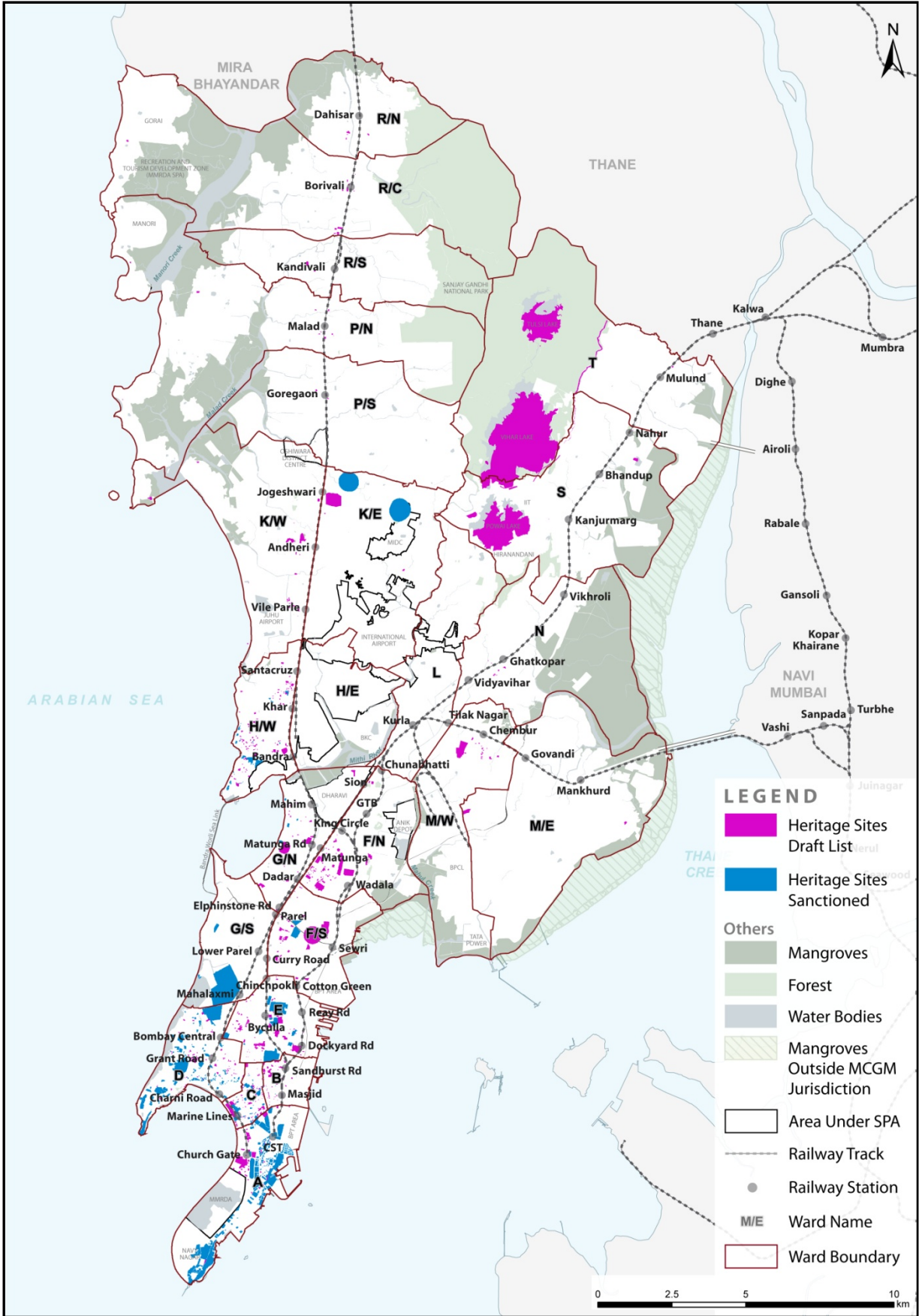
Map 7: Map showing 100m & 200m Buffer zone around ASI Monuments



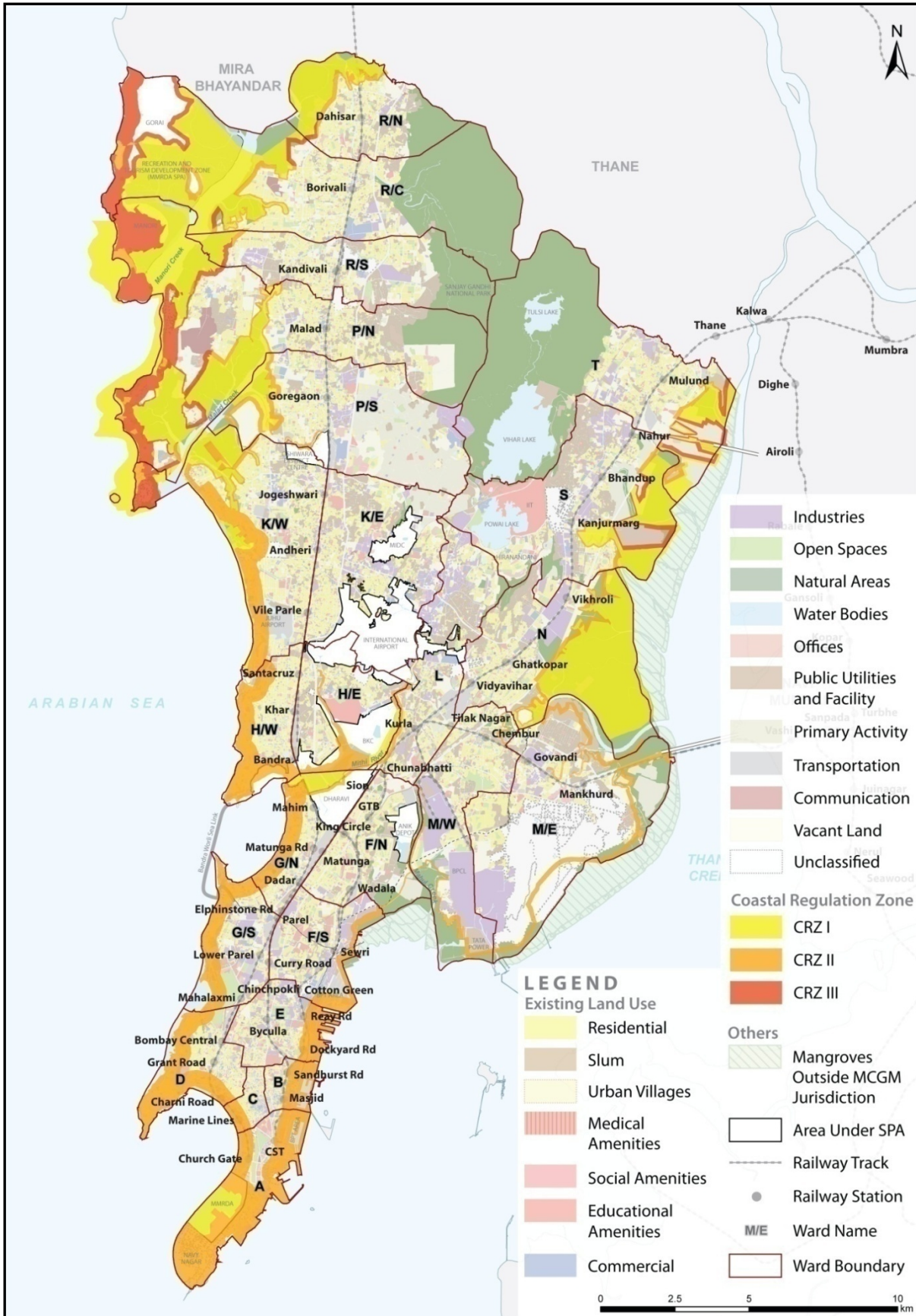
Map 8: ELU: Heritage sites in Greater Mumbai



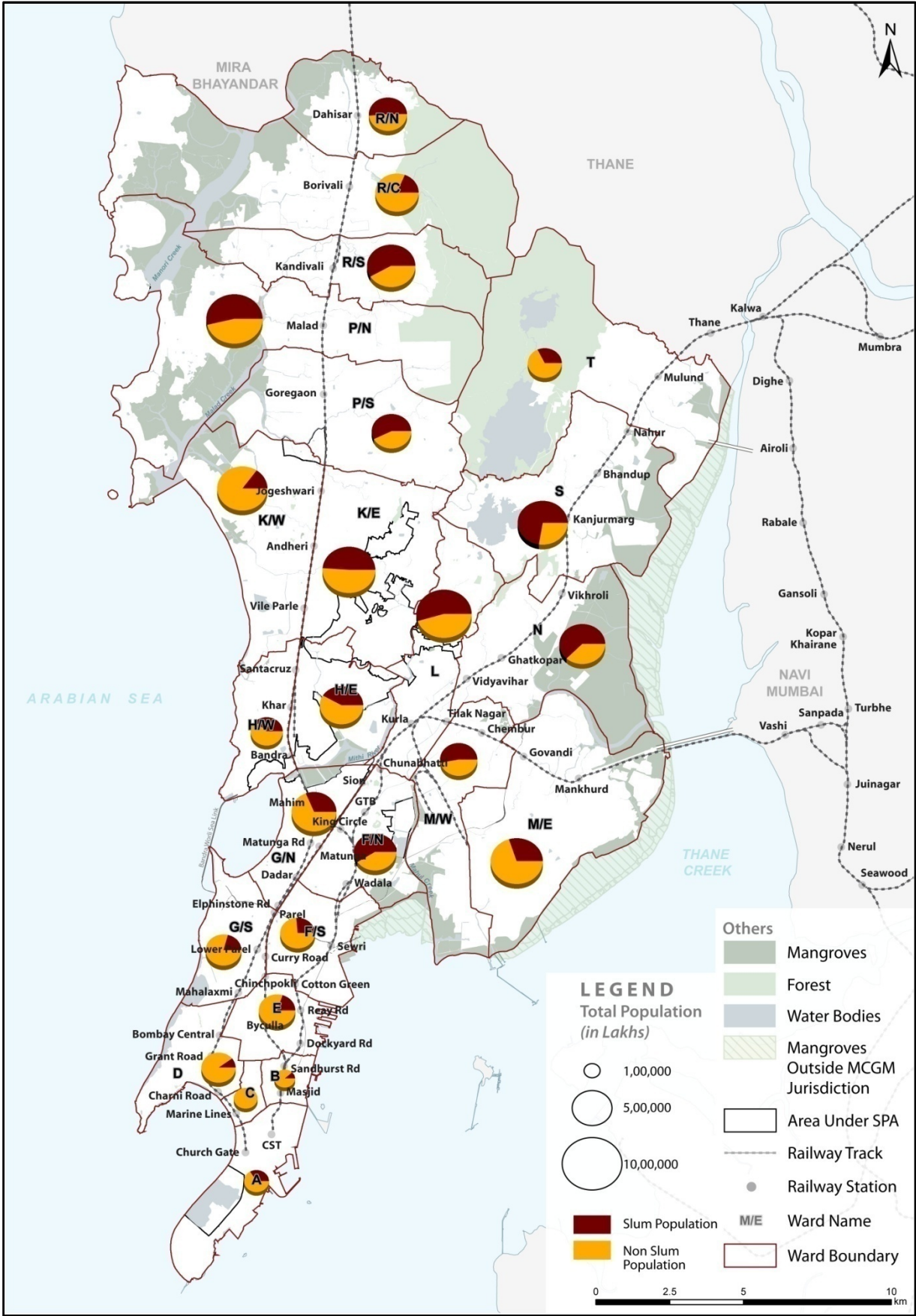
Map 9: Heritage sites, 2013



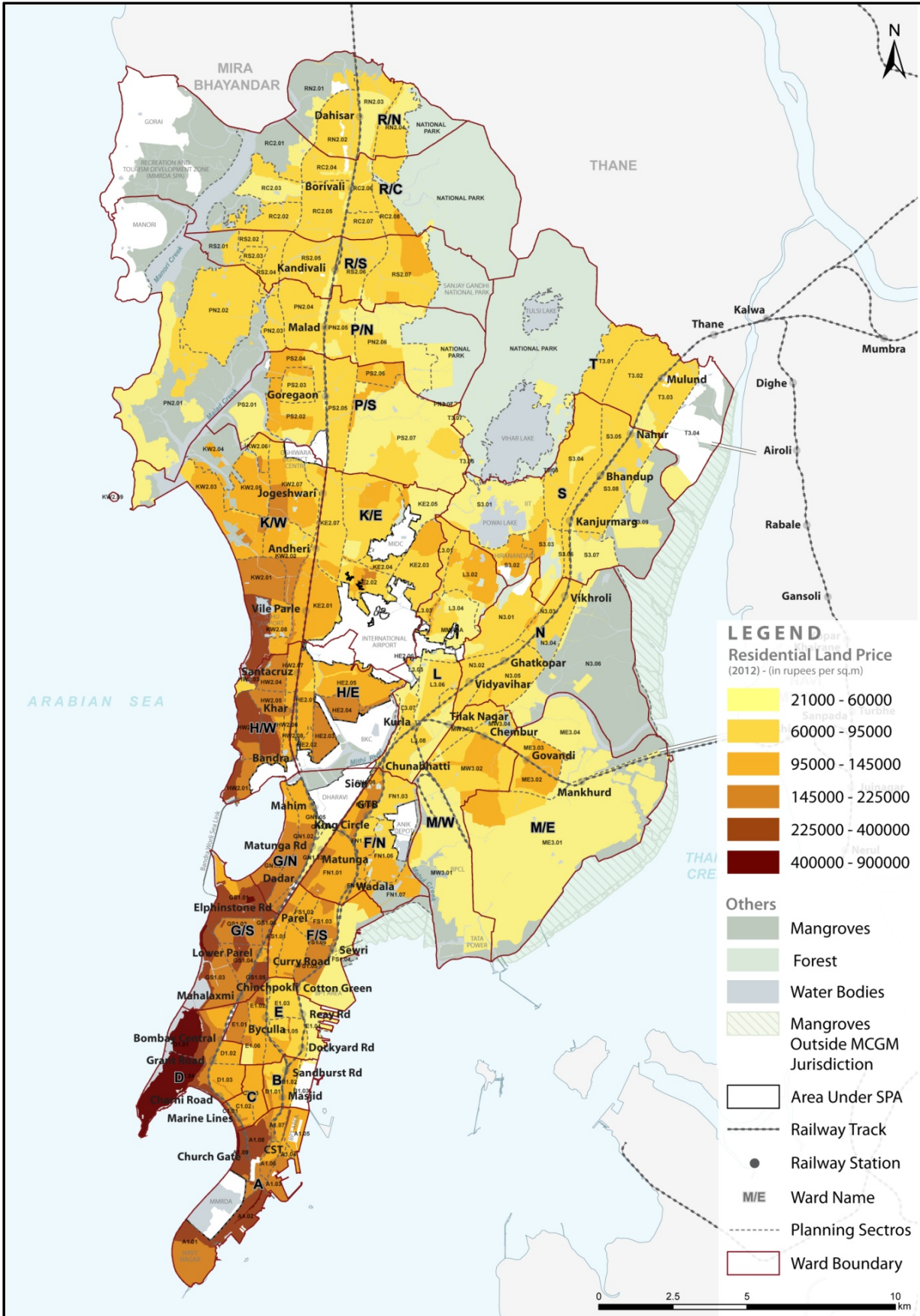
Map 10: ELU: CRZ I II & III



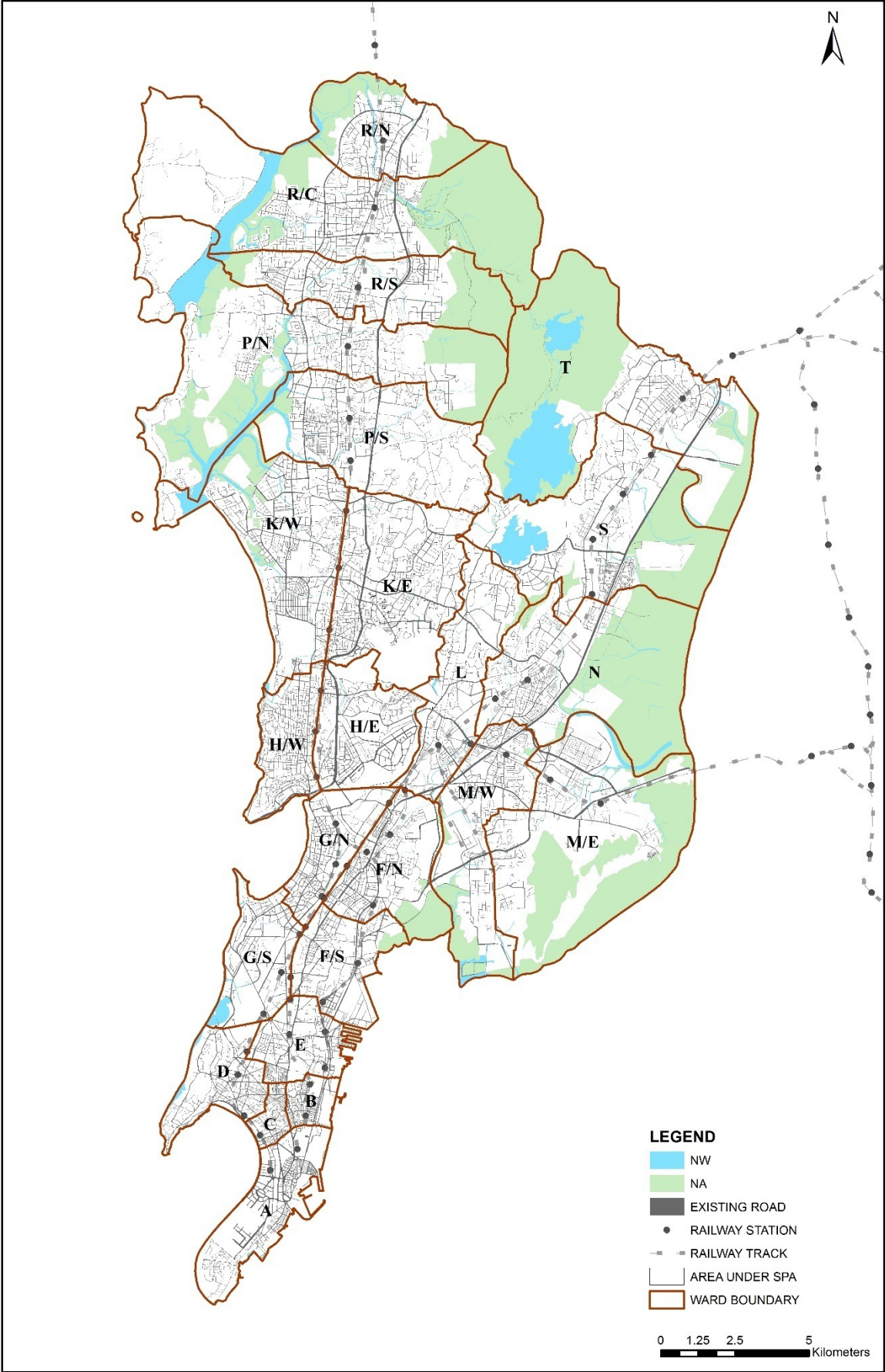
Map 11: Ward wise slum population and non-slum population in Greater Mumbai



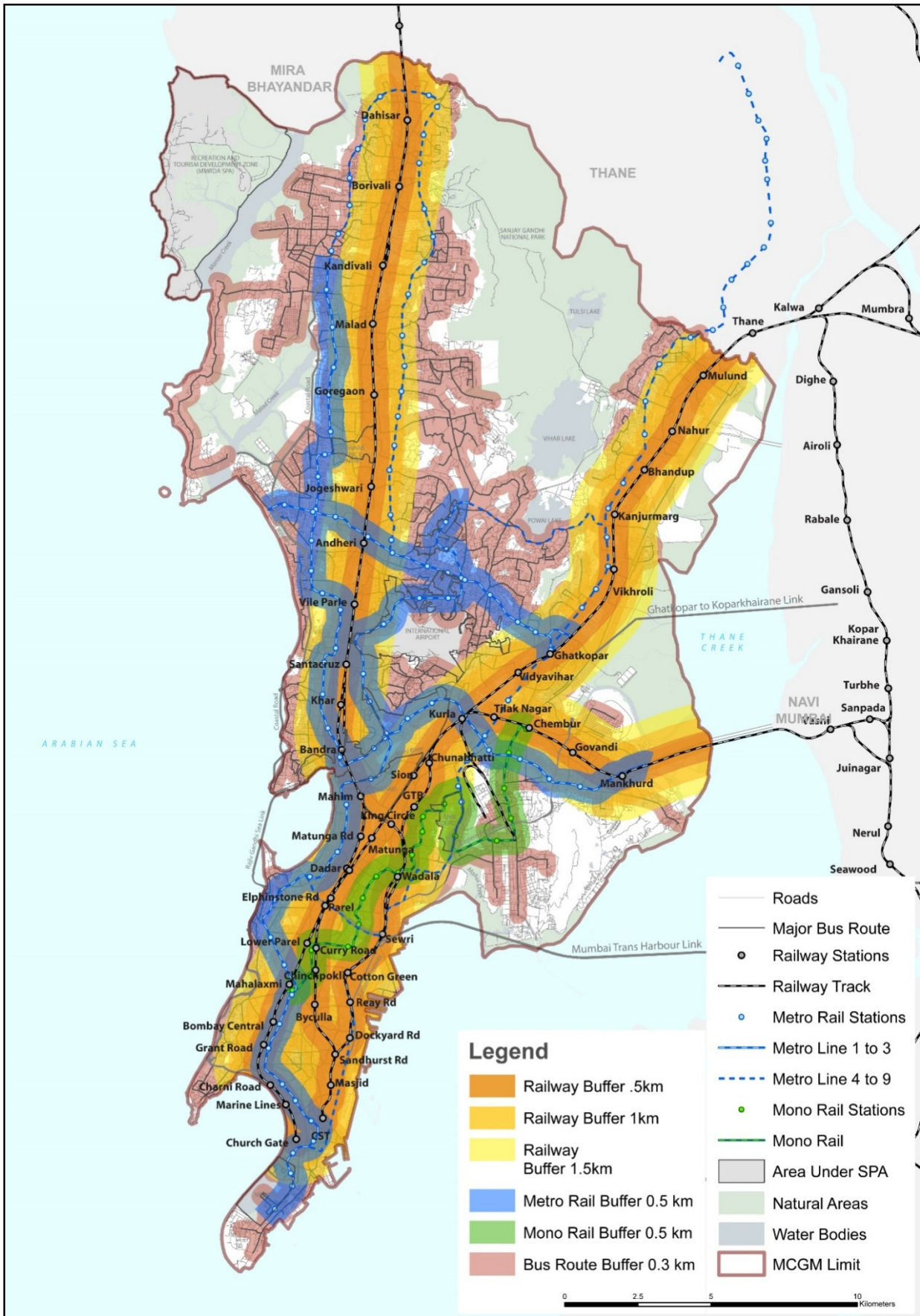
Map 12: Residential land price in Greater Mumbai



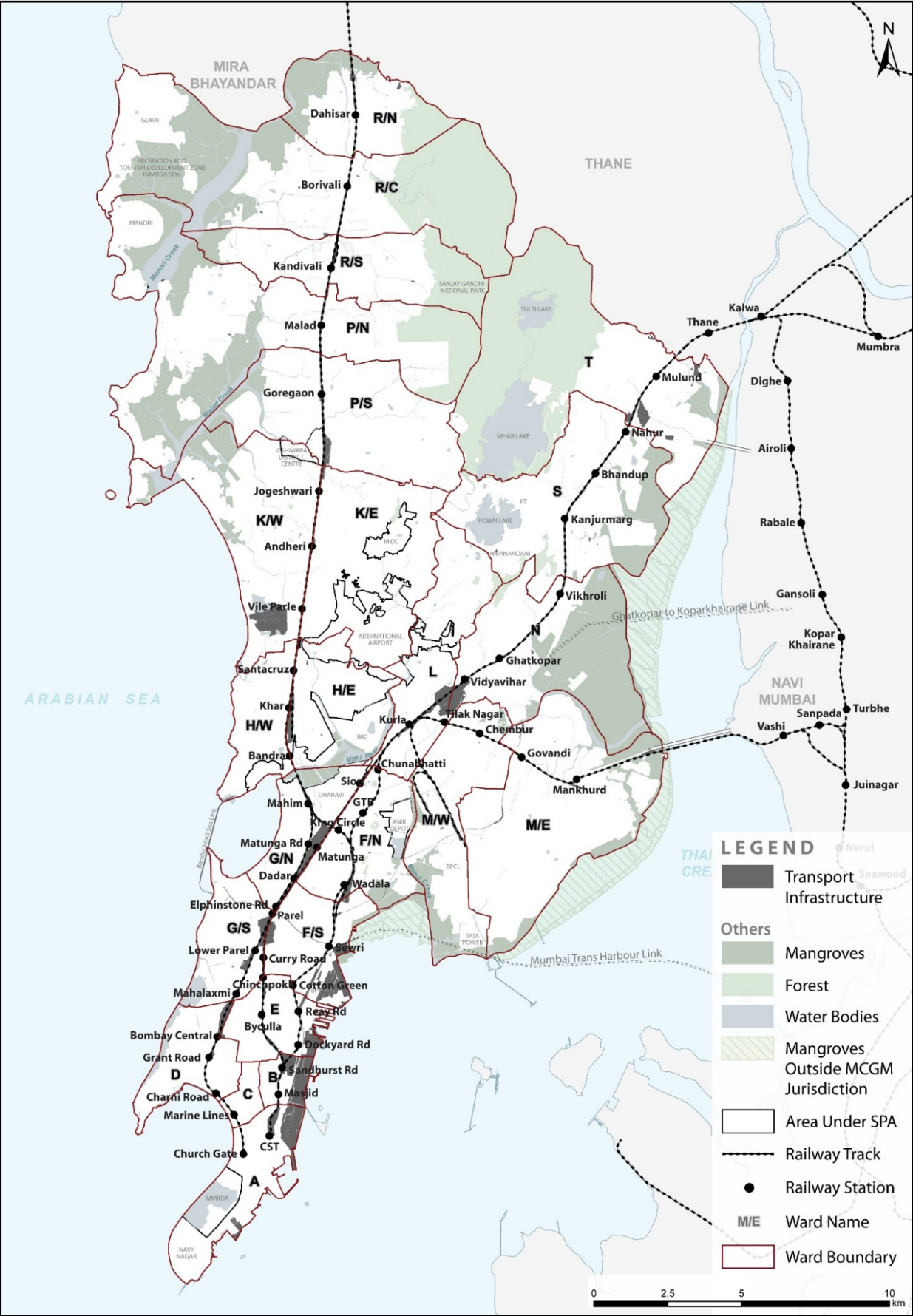
Map 13: Road network in Greater Mumbai



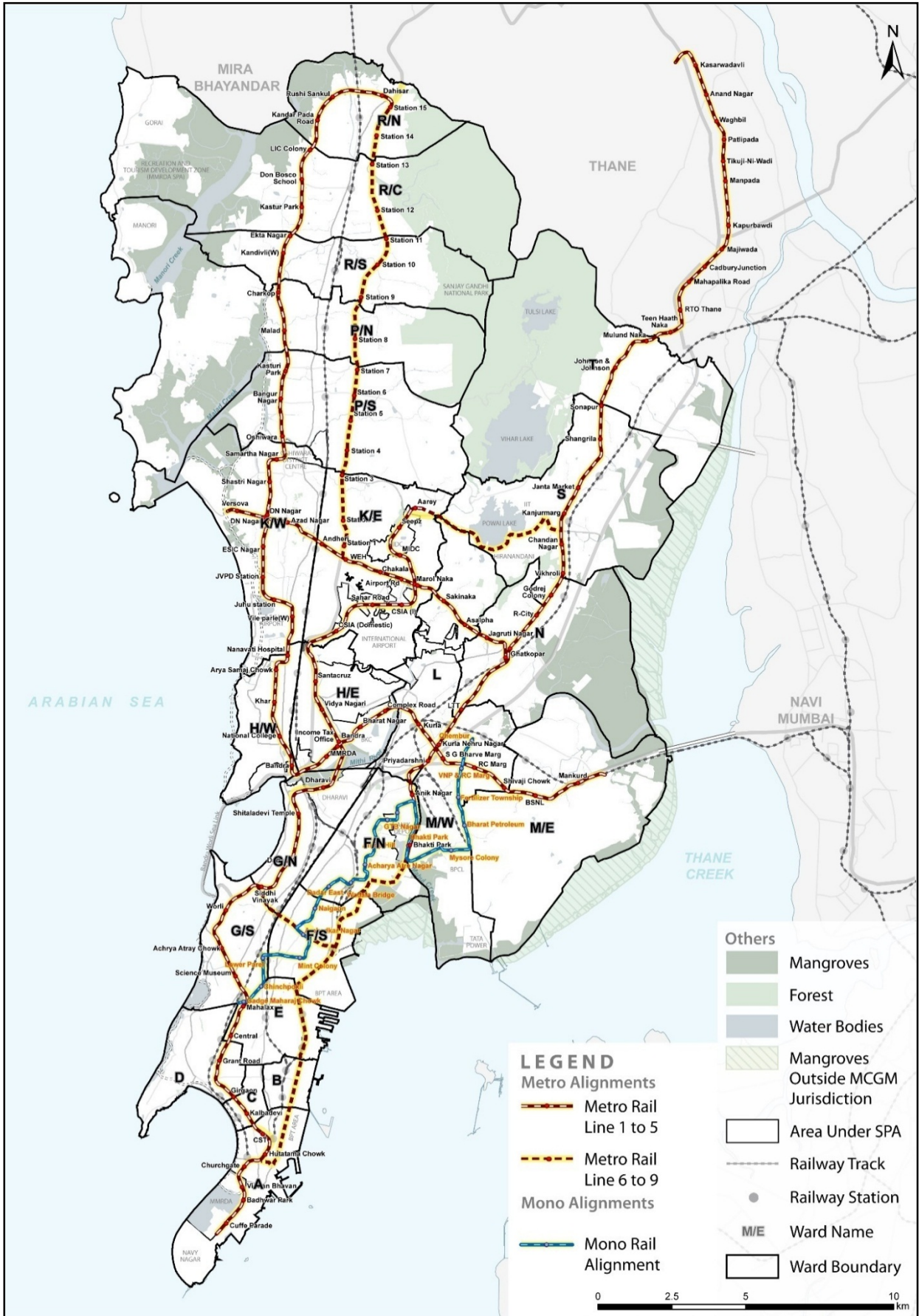
Map 14: Accessibility by Railways and Major Bus Routes in Greater Mumbai



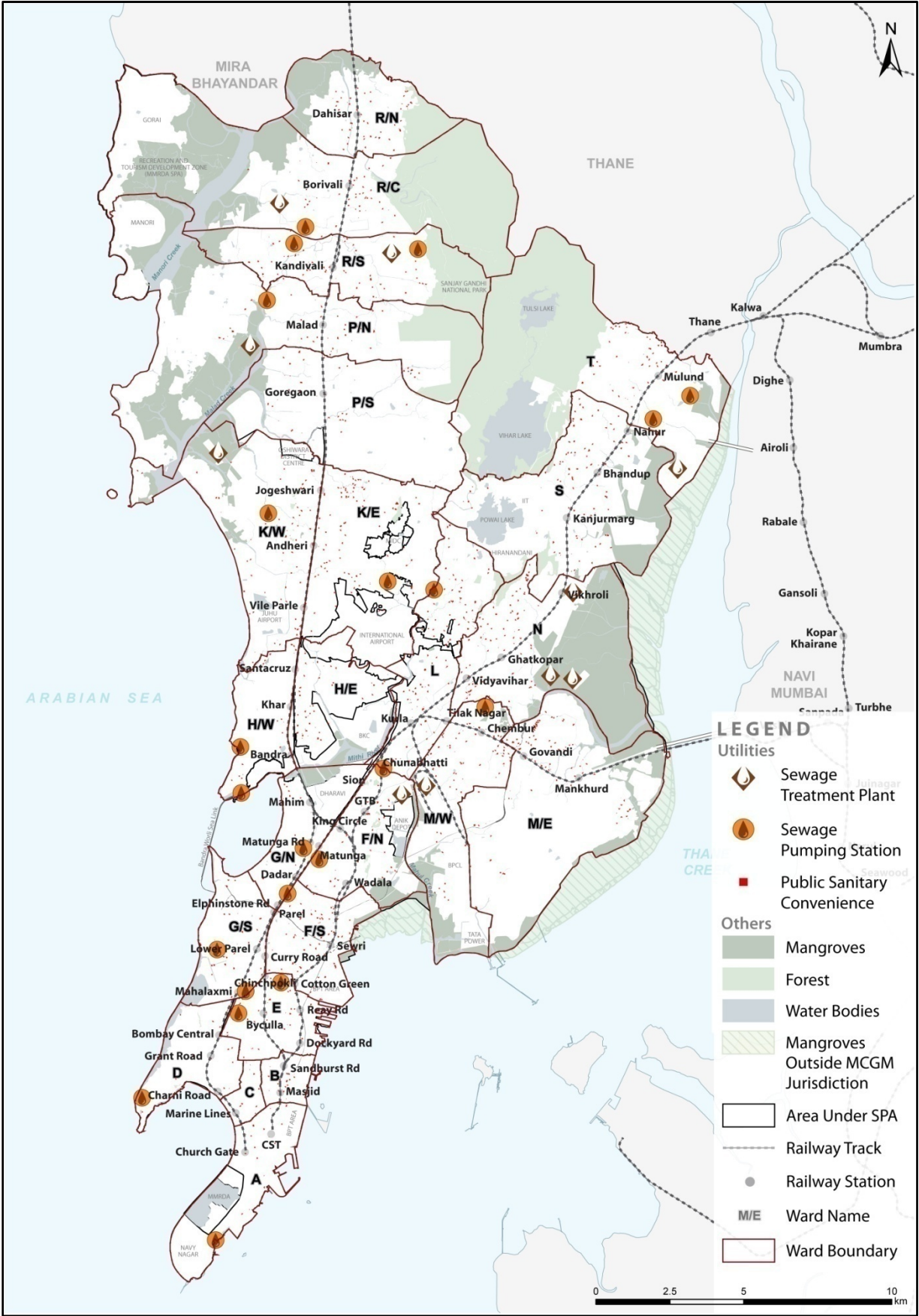
Map 15: Existing transport infrastructure land in Greater Mumbai



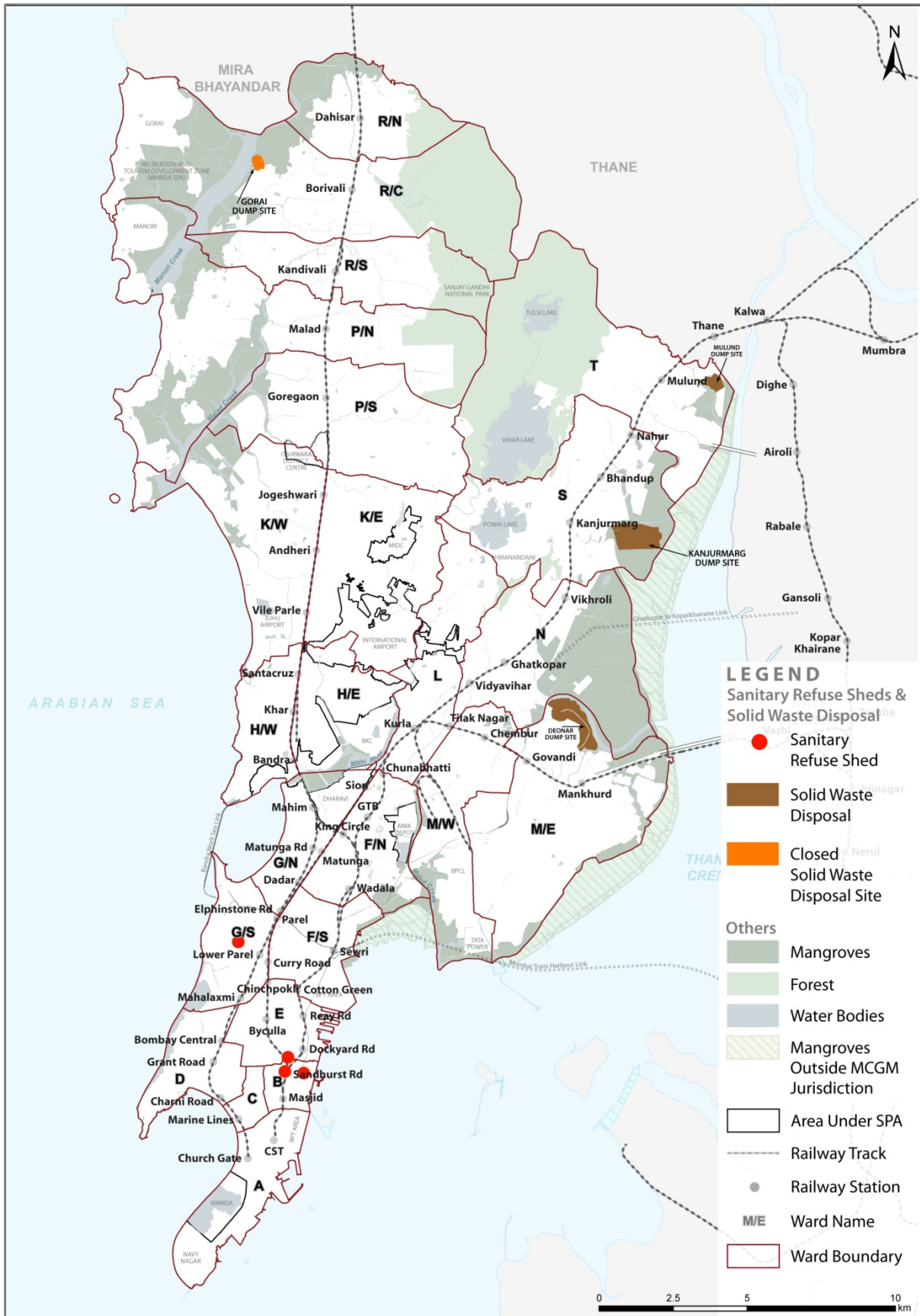
Map 16: Mass Transit Networks in Greater Mumbai



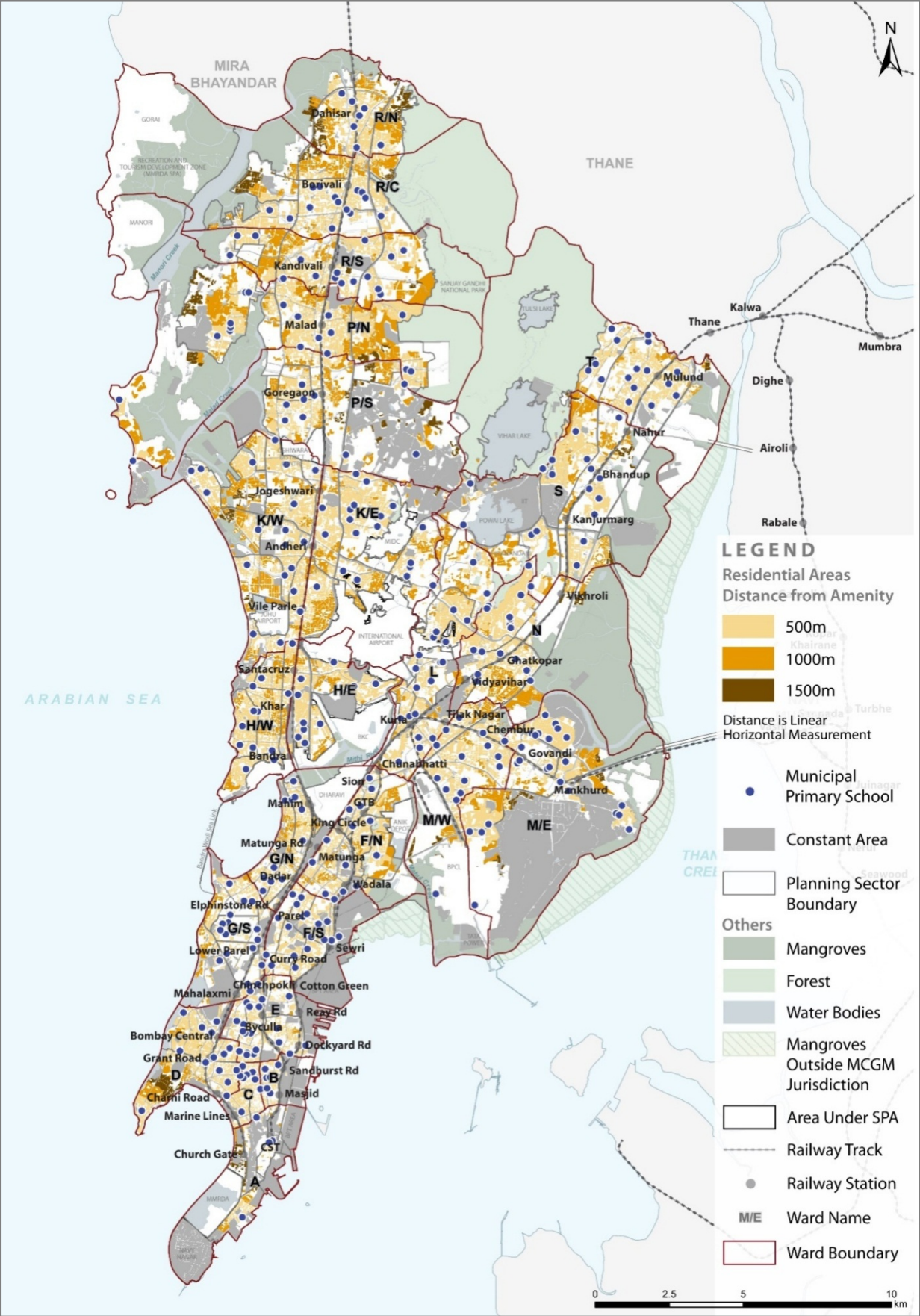
Map 17: Existing Sewage Treatment Plants, Pumping Stations and Public Sanitary Convenience



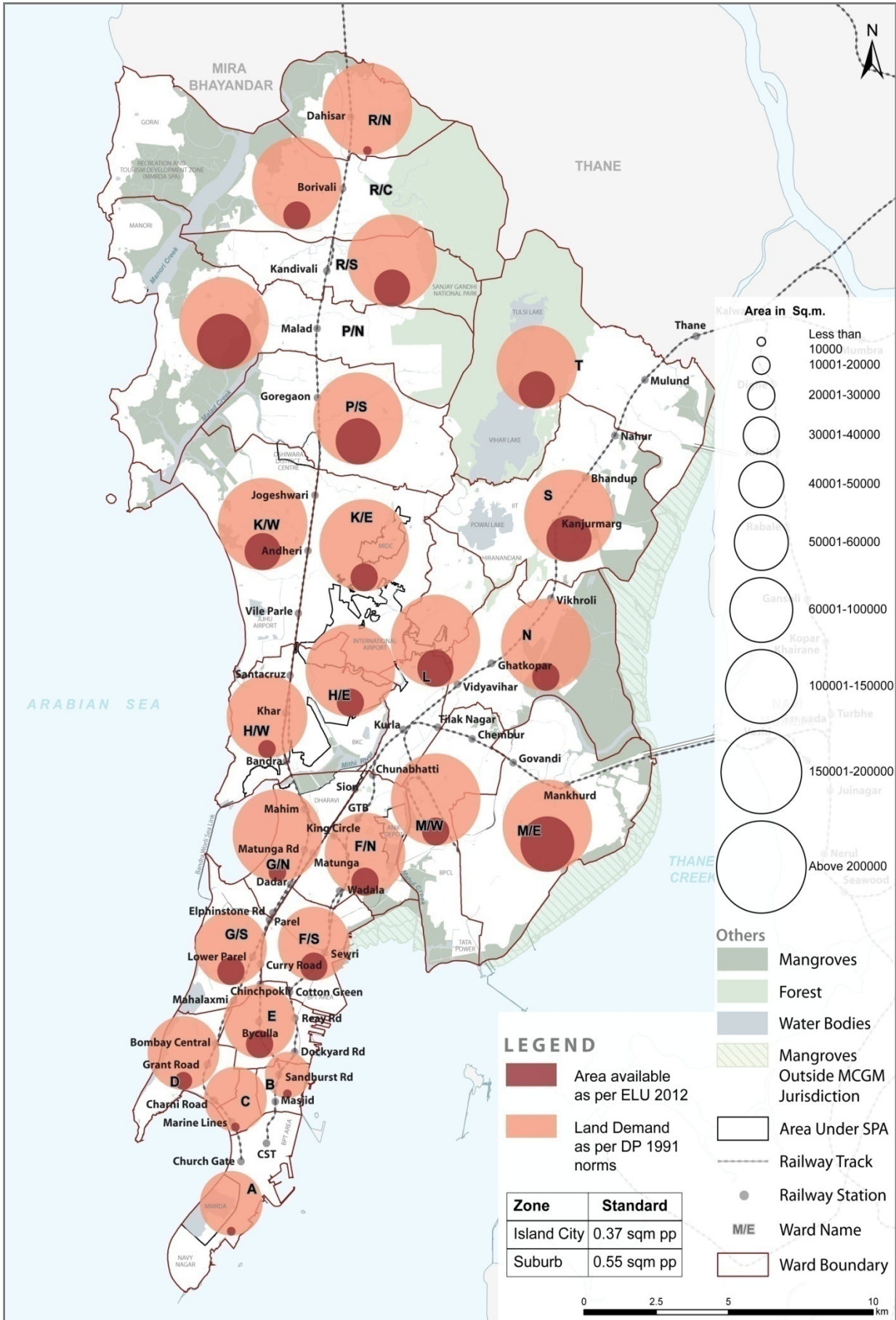
Map 18: Existing Sanitary Refuse Sheds and Solid Waste Disposal Sites



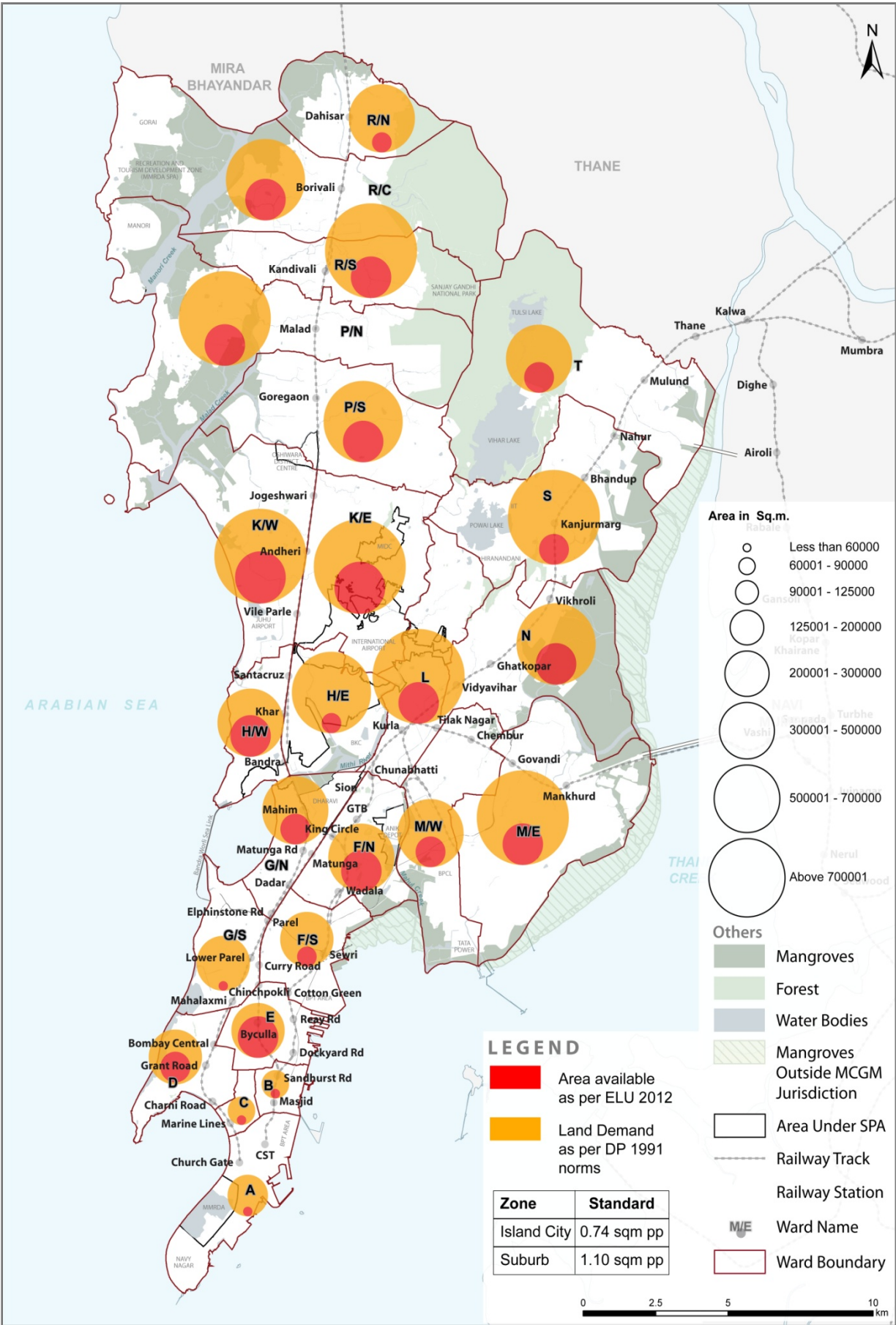
Map 19: Accessibility and Spatial Distribution of Primary Level Education Amenity



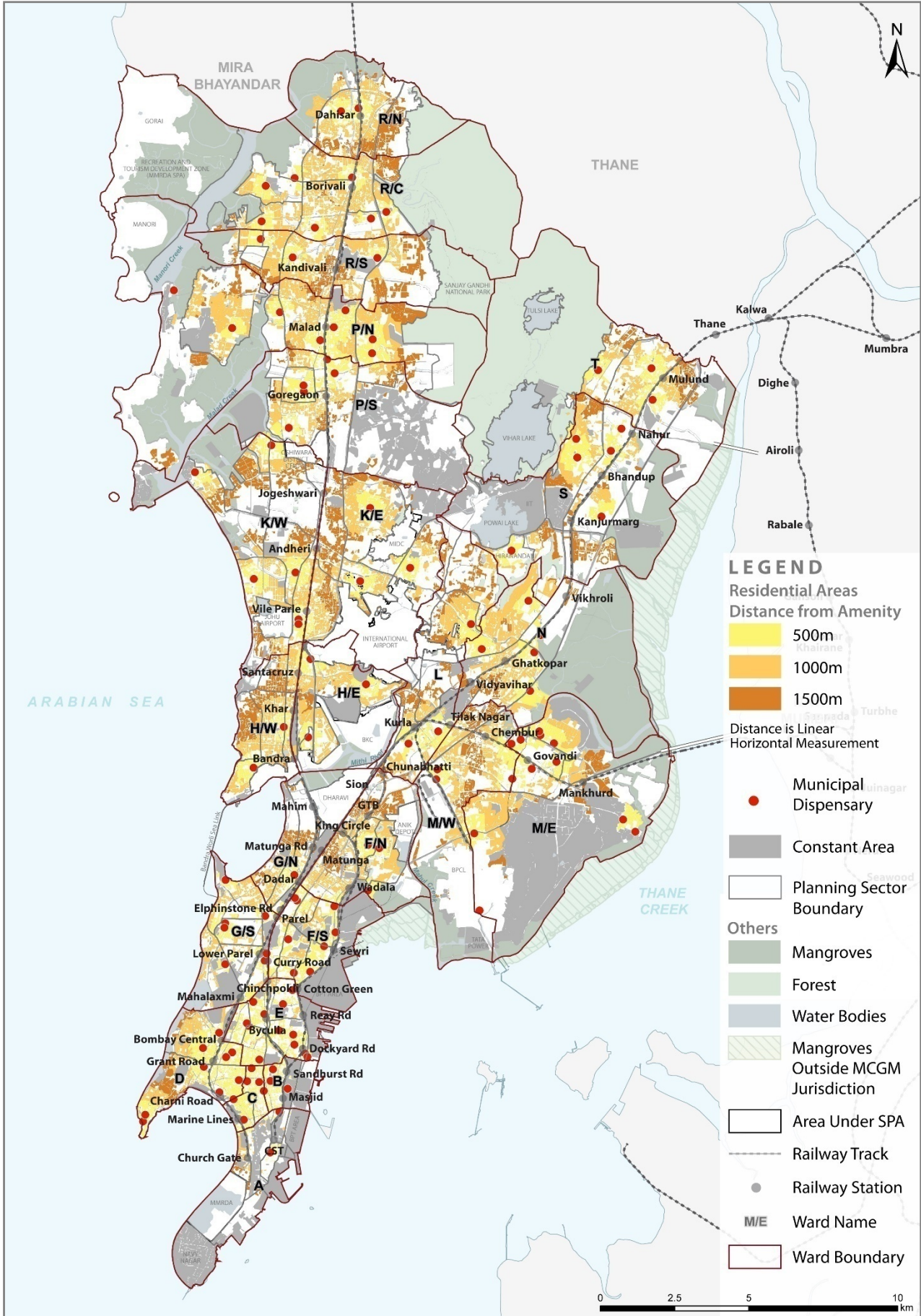
Map 20: Current Demand Gap for Primary Education



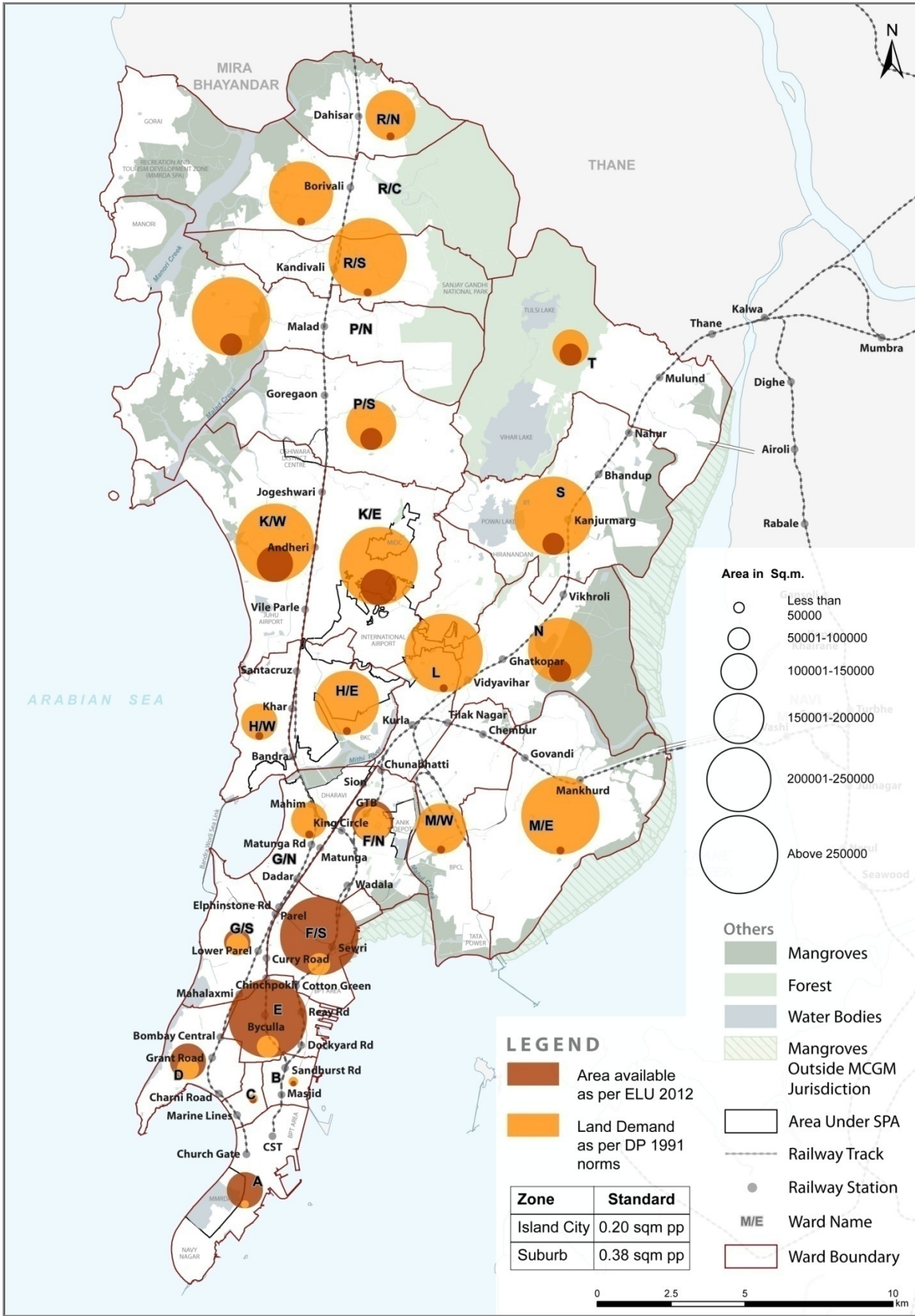
Map 21: Current Demand Gap for Primary and Secondary Education



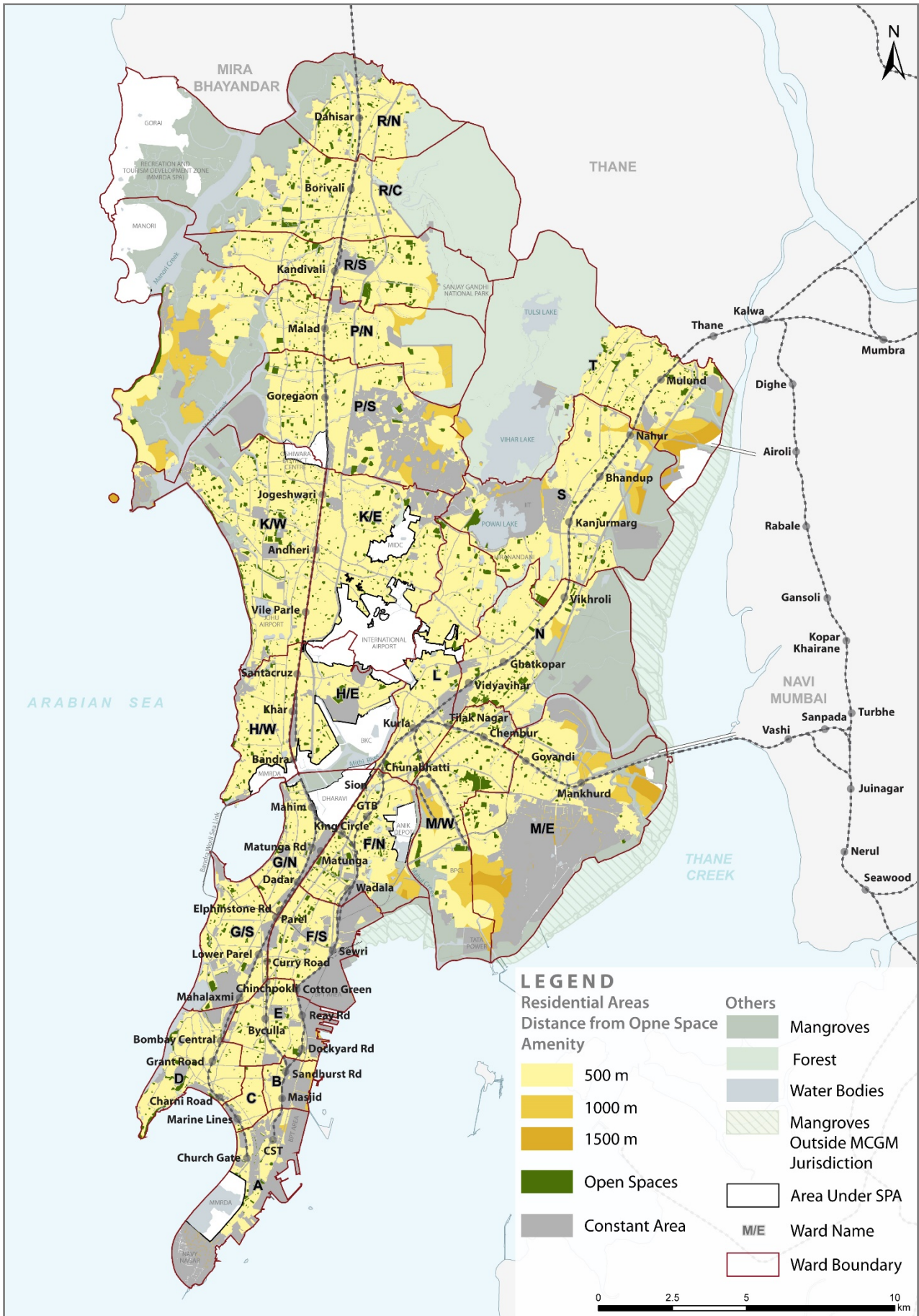
Map 22: Accessibility and Spatial Distribution of Medical Amenity



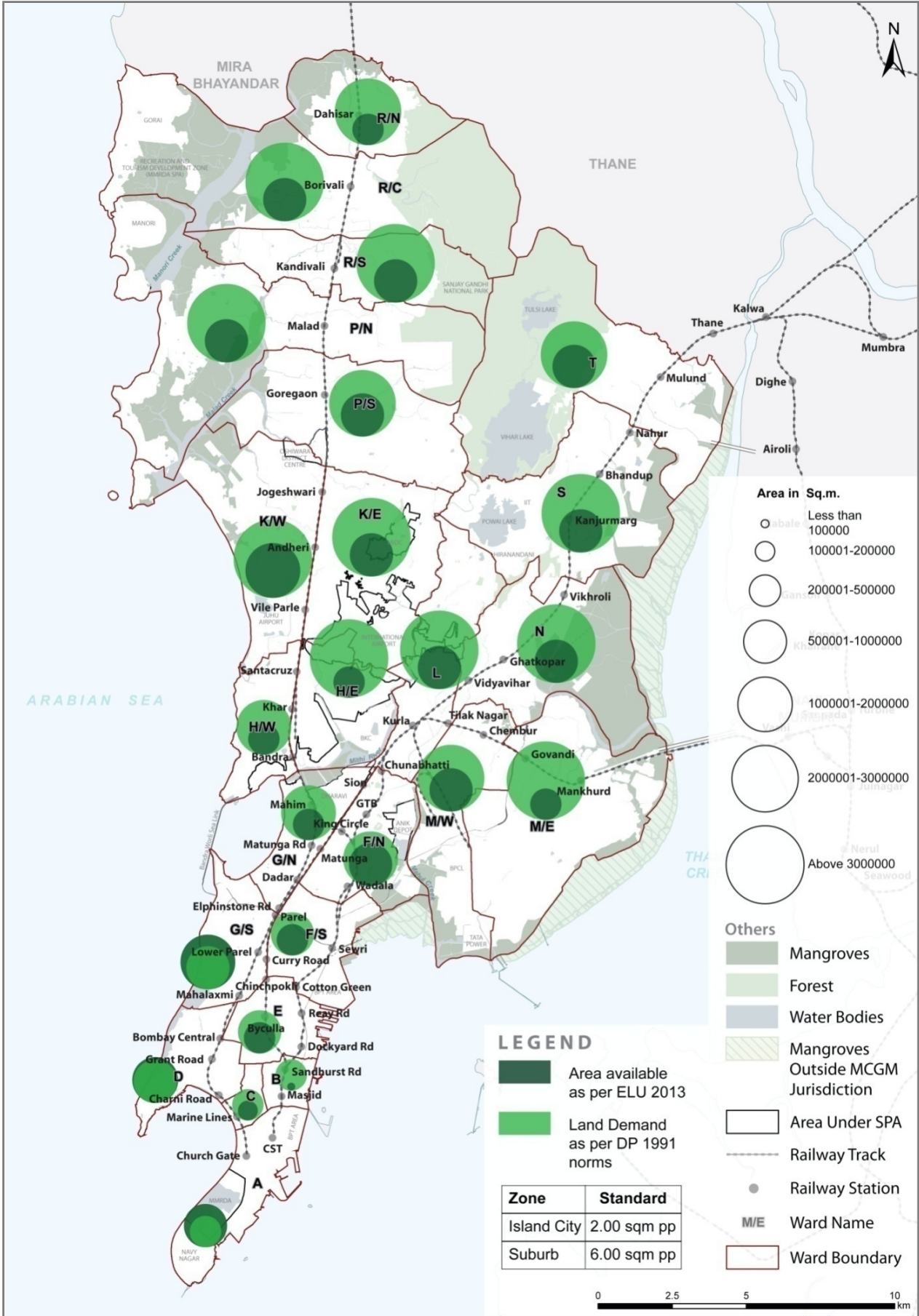
Map 23: Current Demand Gap for Medical



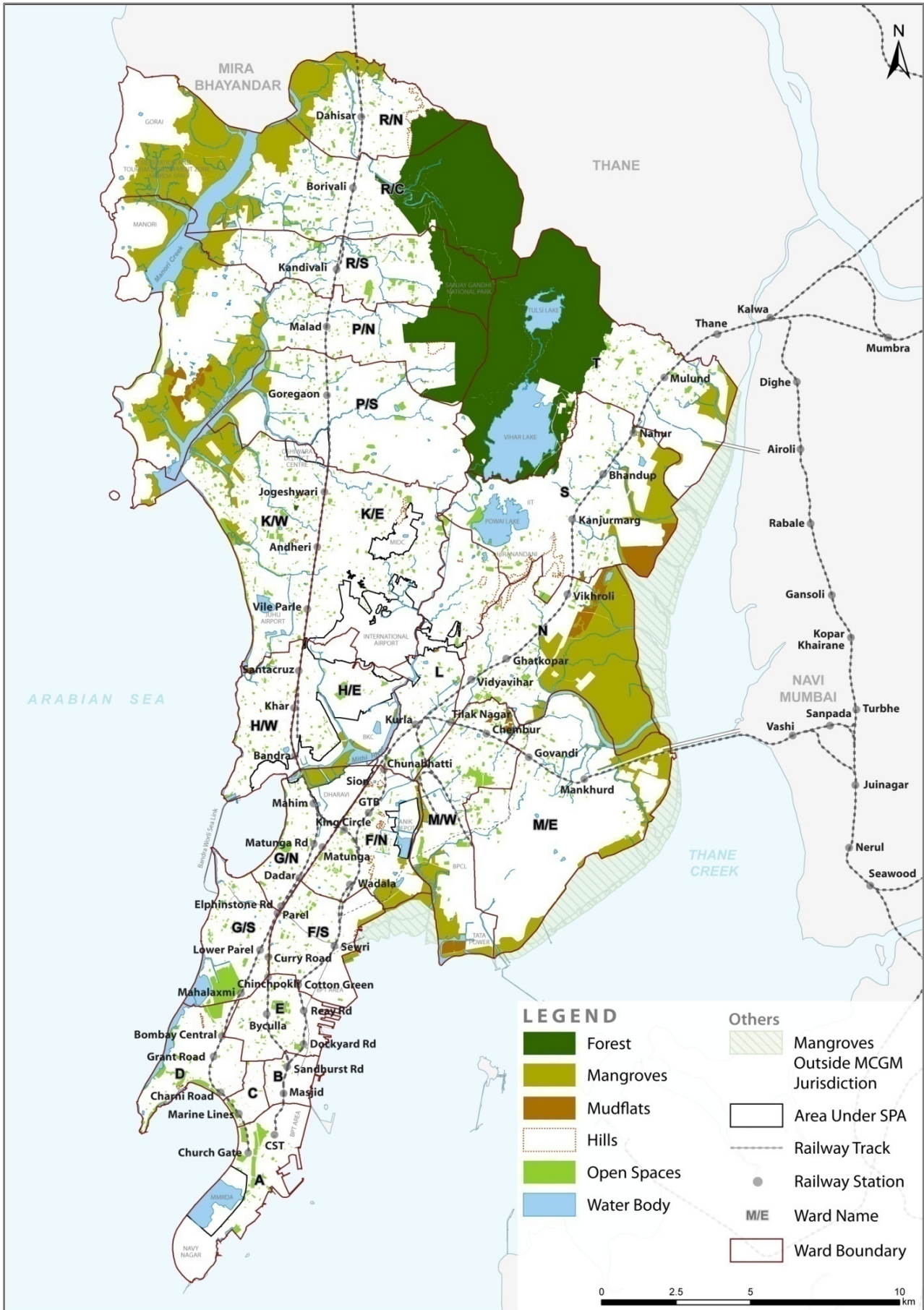
Map 24: Accessibility and Spatial Distribution of Open space



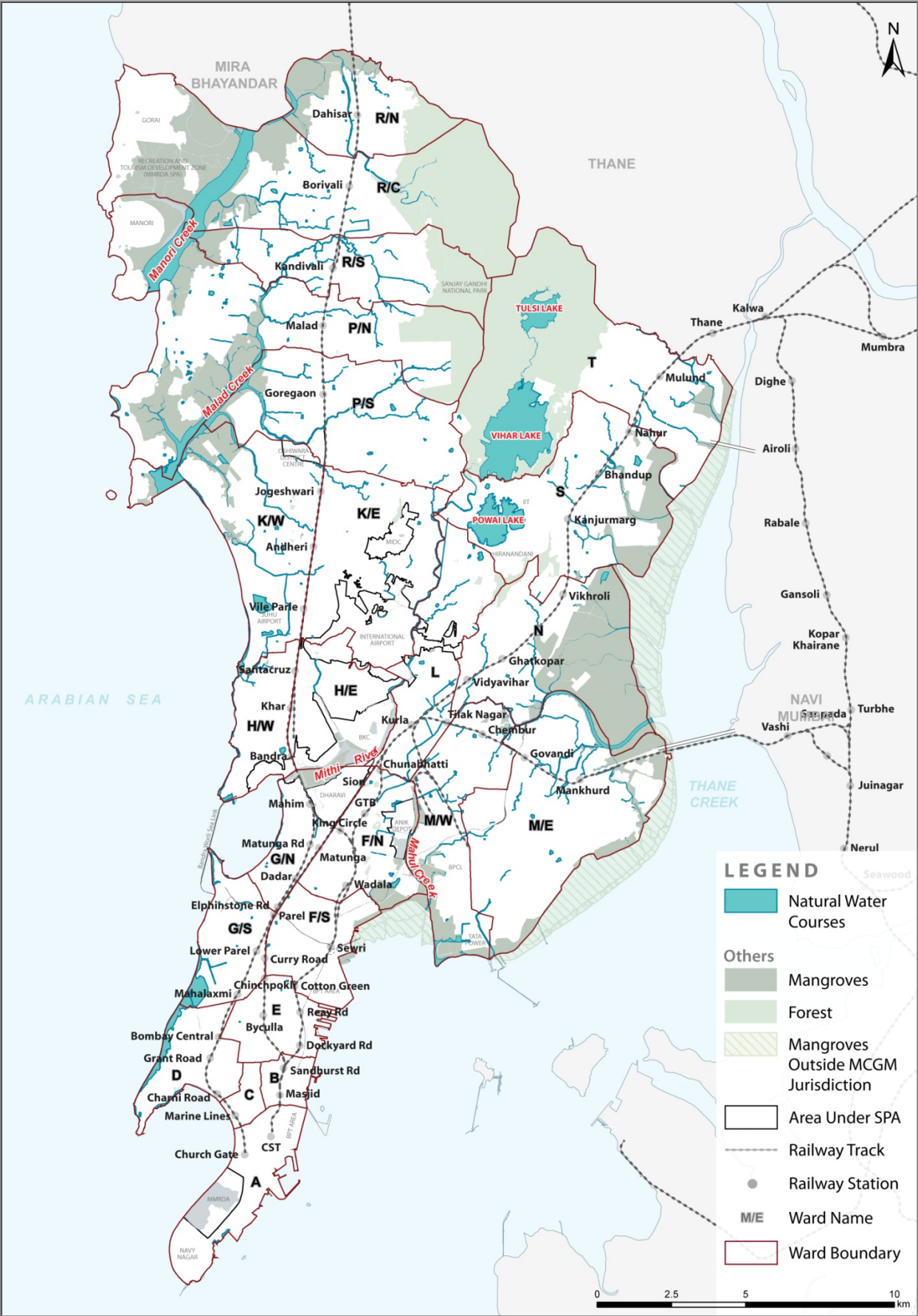
Map 25: Current Demand Gap for Open Space



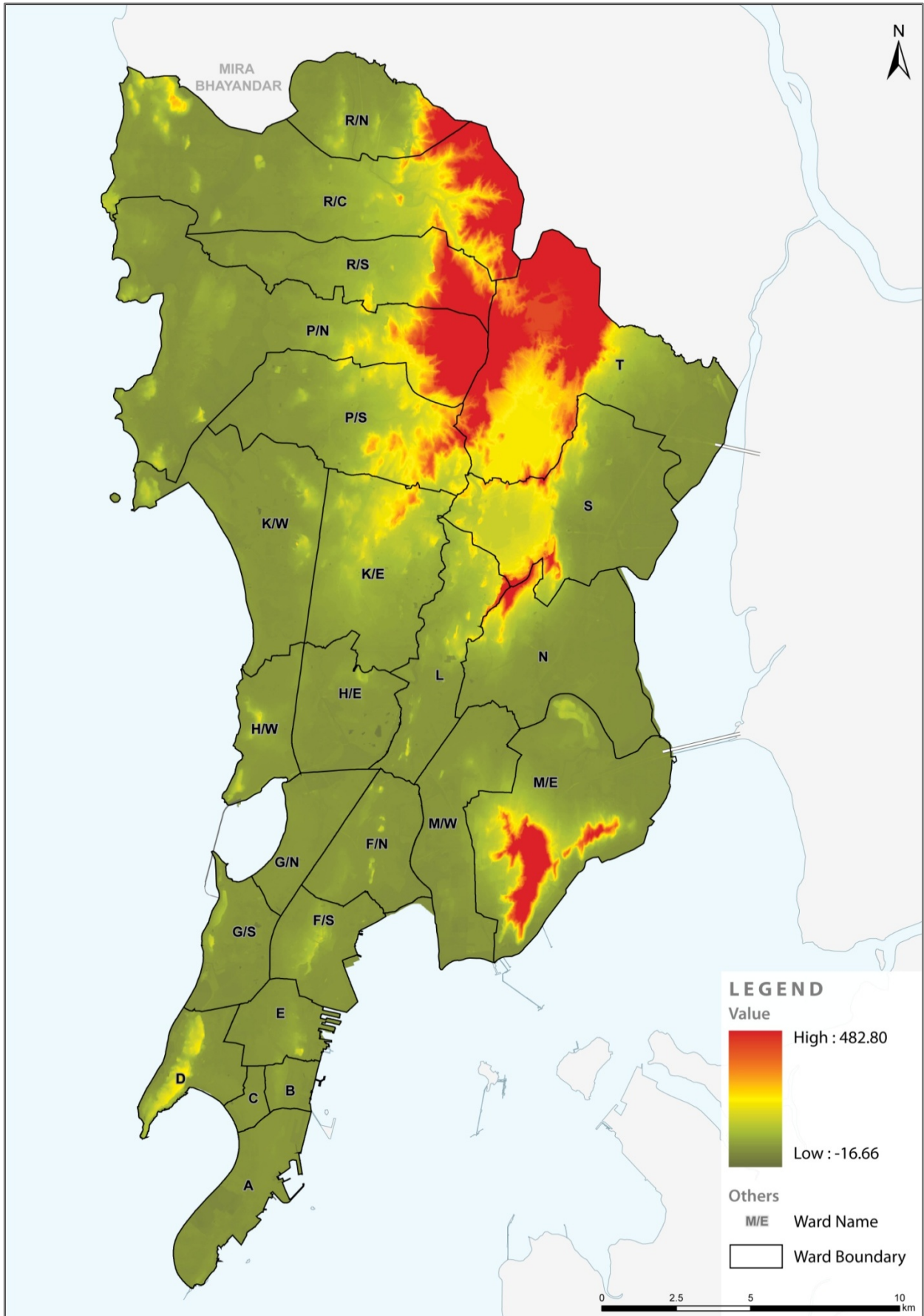
Map 26: Existing Natural Areas and Open Spaces



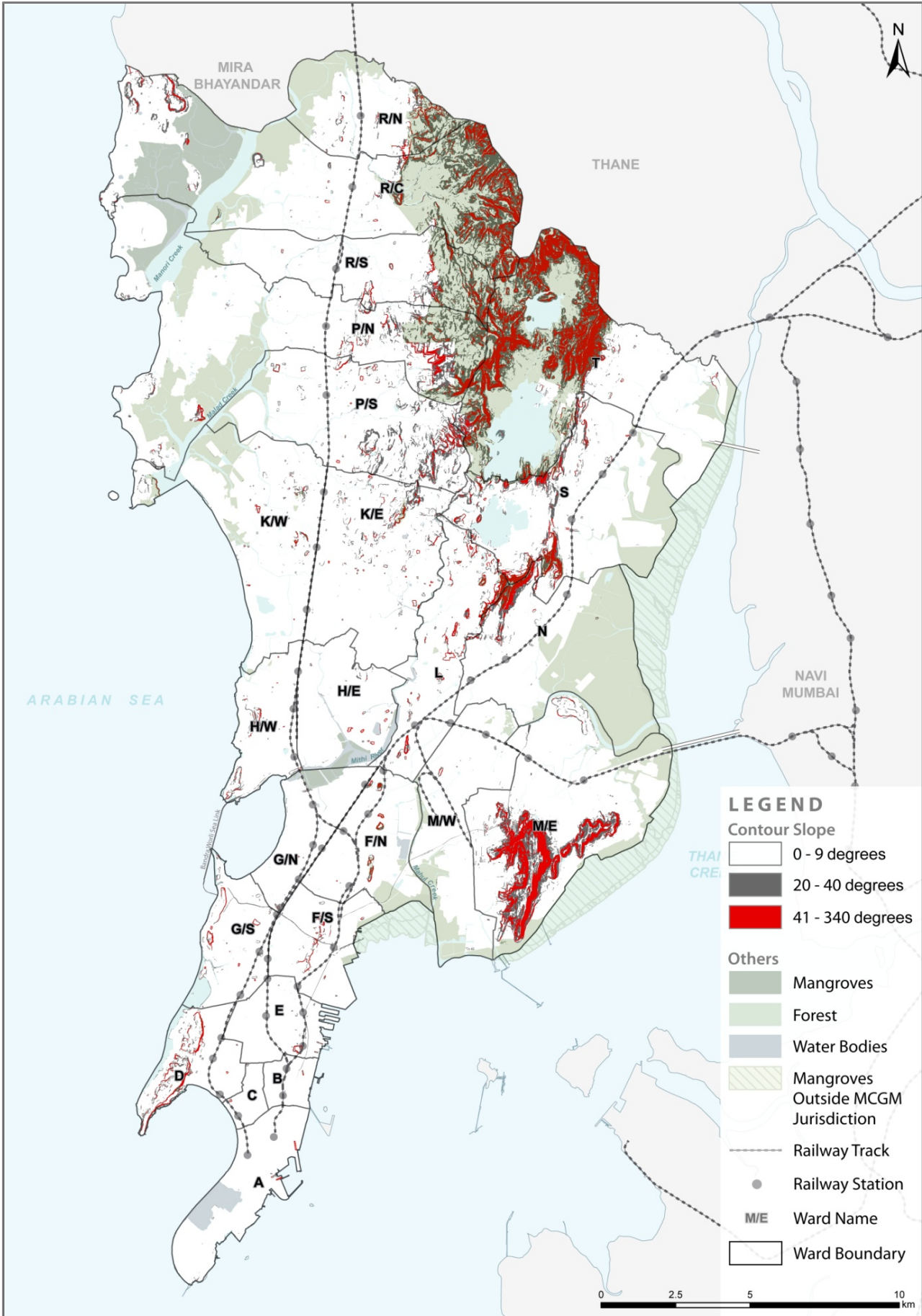
Map 27: Rivers and watercourses of Greater Mumbai



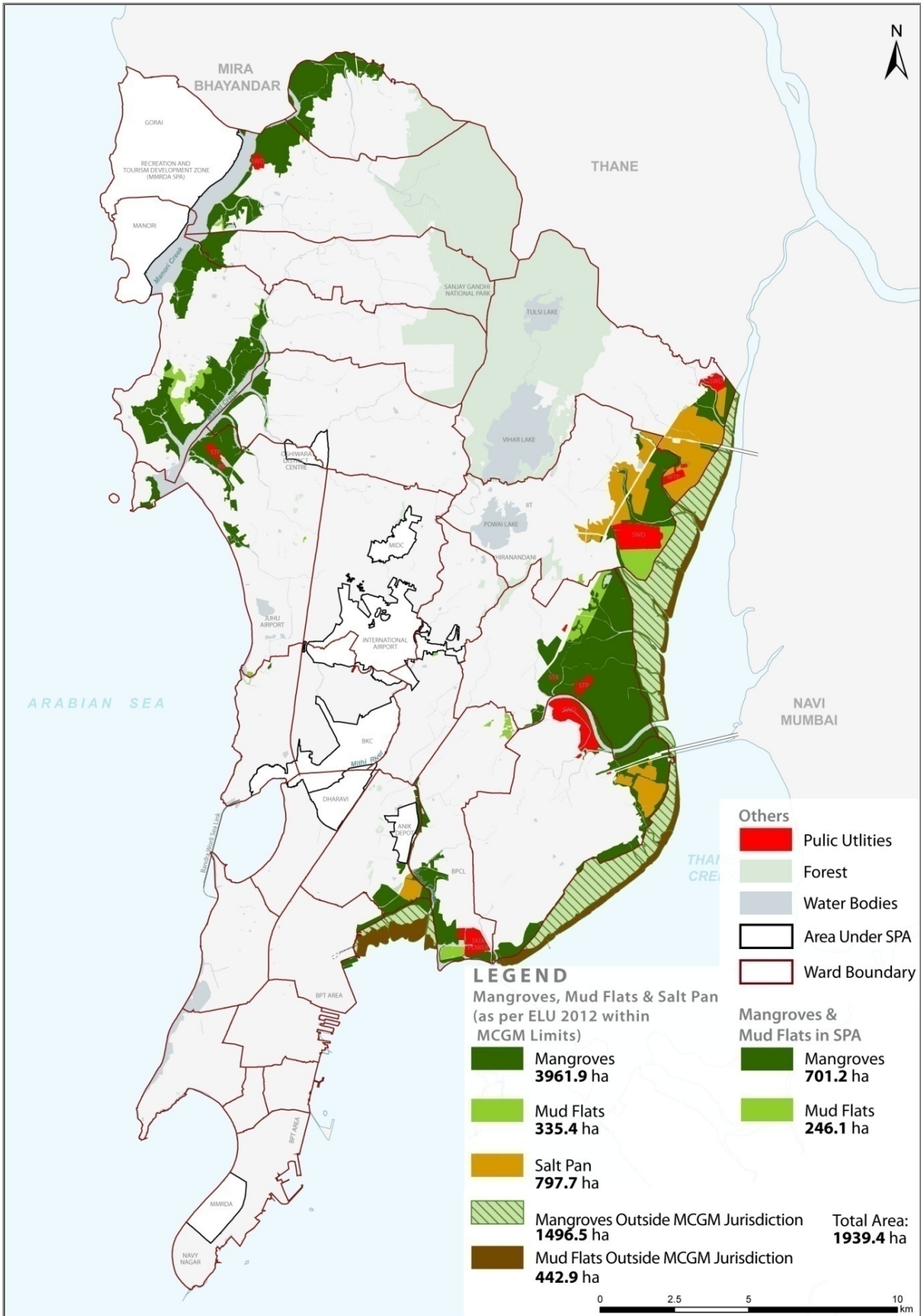
Map 28: Elevation Map of Greater Mumbai



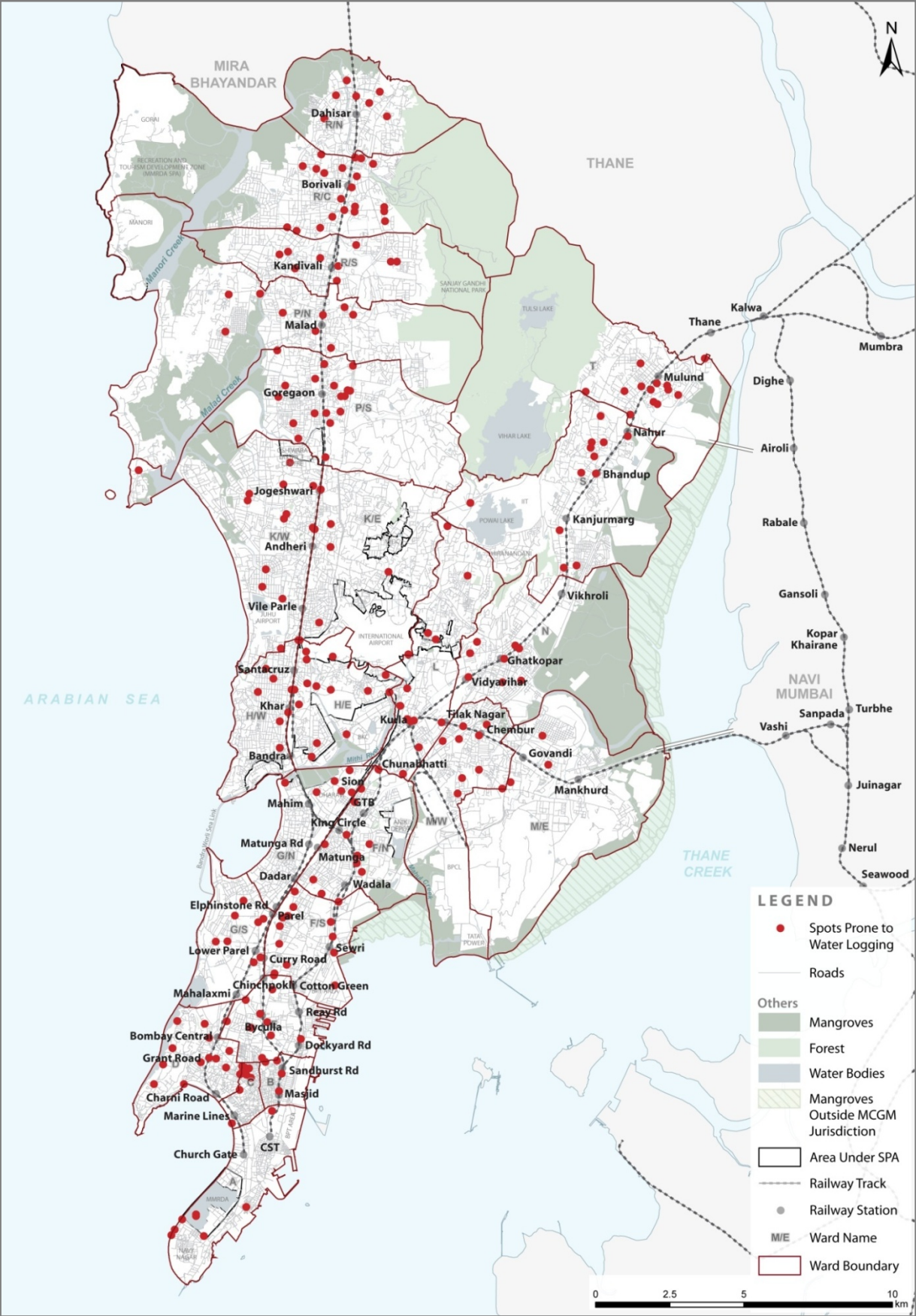
Map 29: Steep Slope Areas of Greater Mumbai, indicative of hills & hill ridges



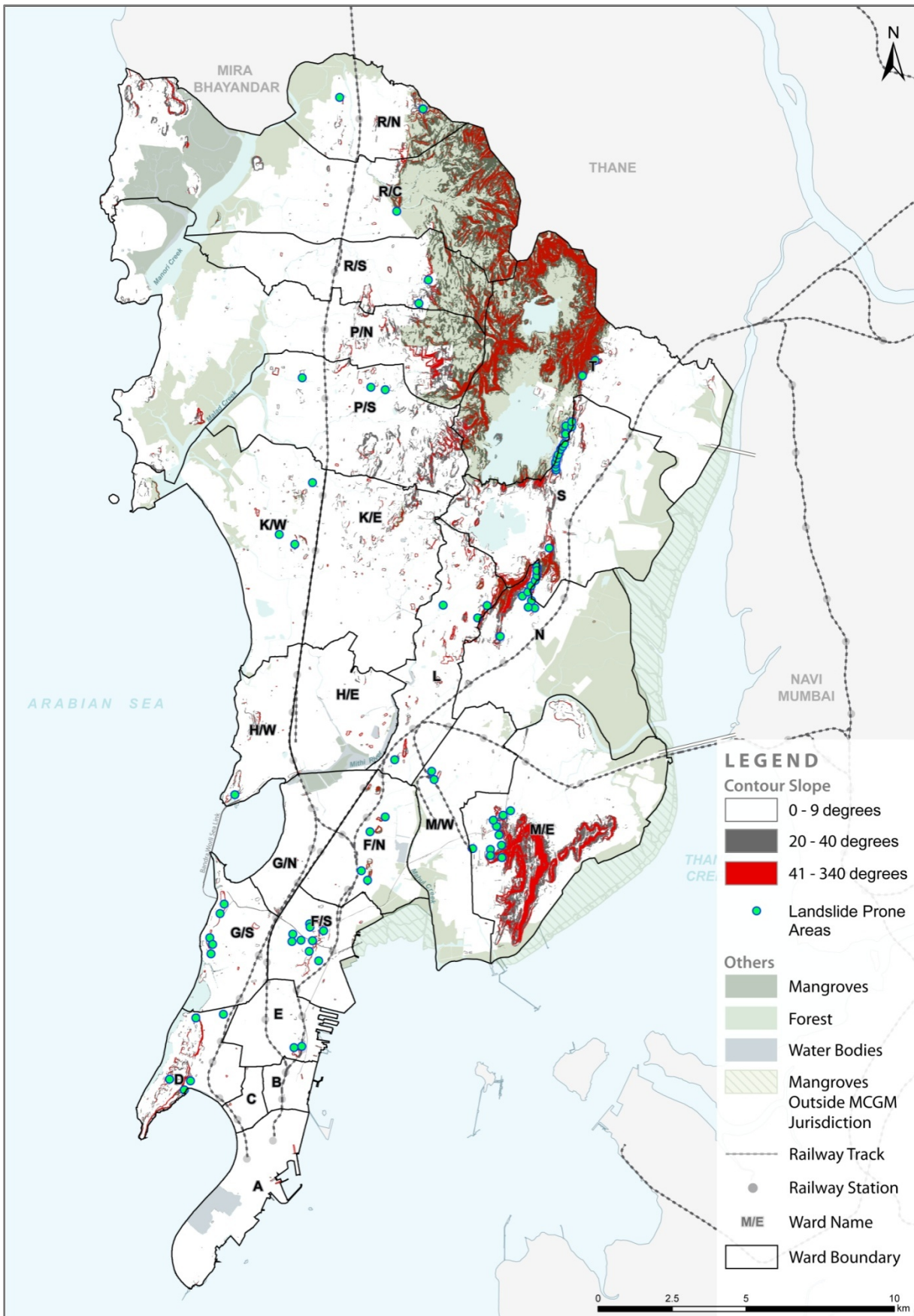
Map 30: Mangroves, mudflats & salt pans in Greater Mumbai



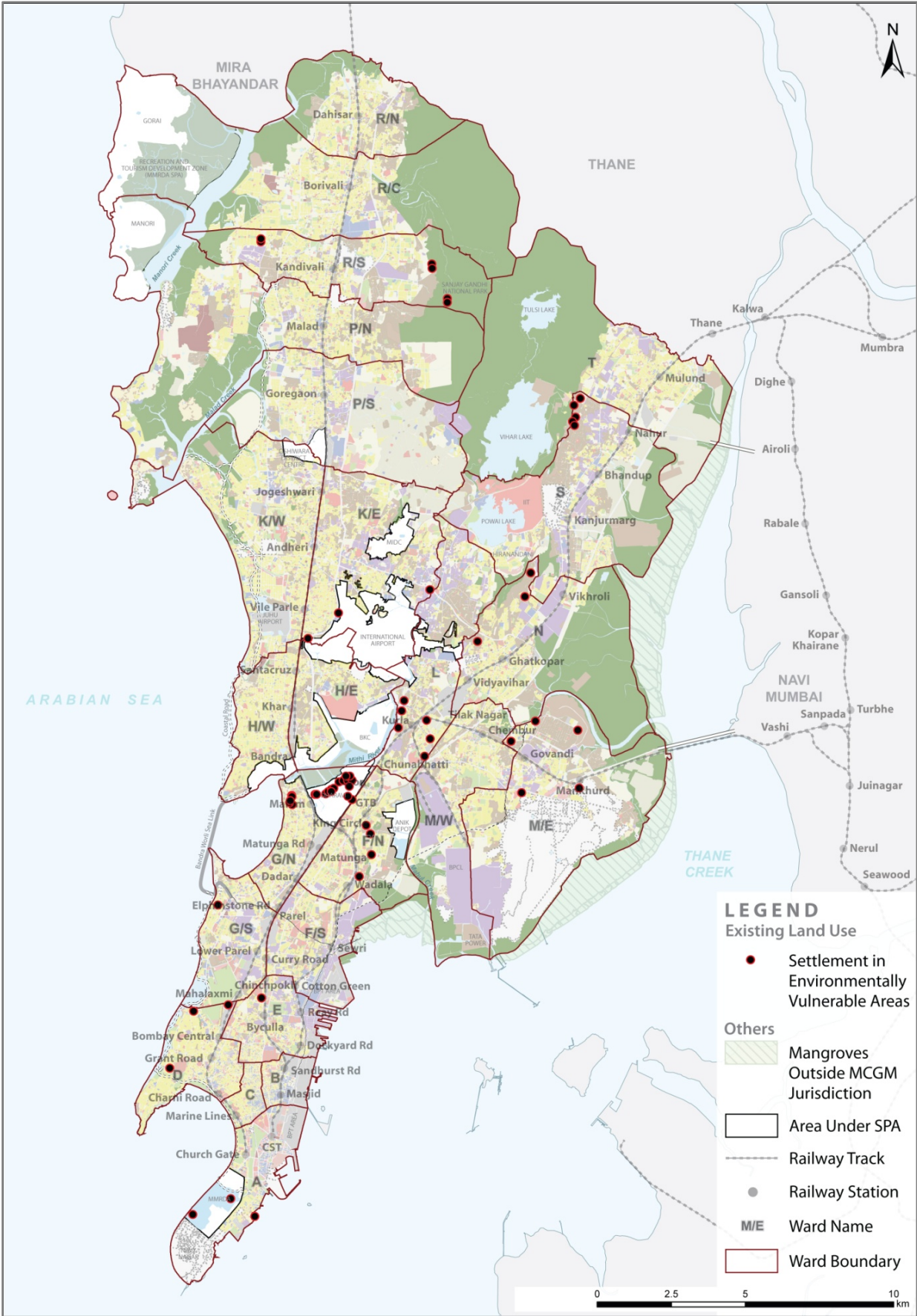
Map 31: Areas/ spots prone to water logging



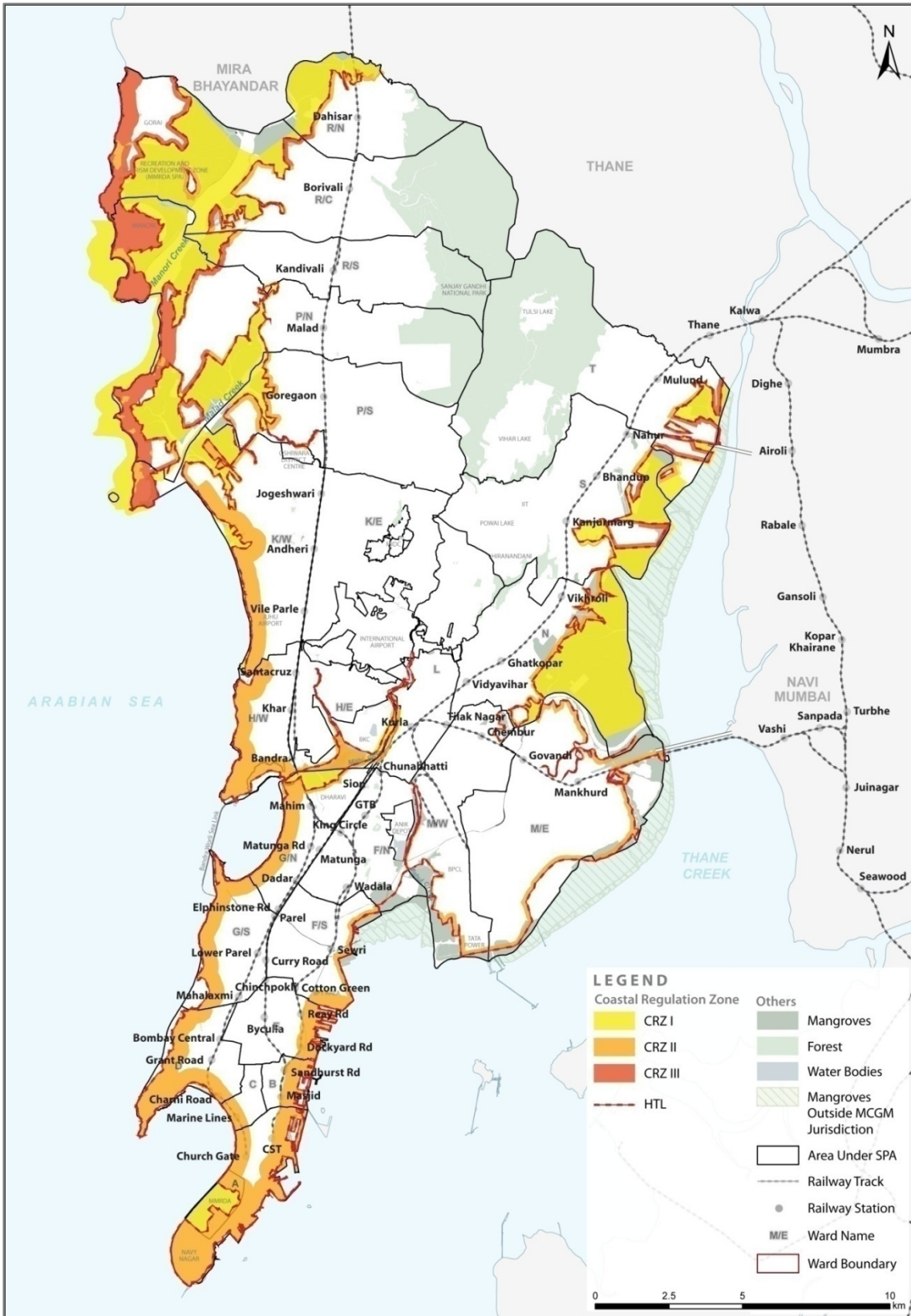
Map 32: Steep Slope areas and landslide prone area



Map 33: Settlements in environmentally vulnerable areas in Greater Mumbai

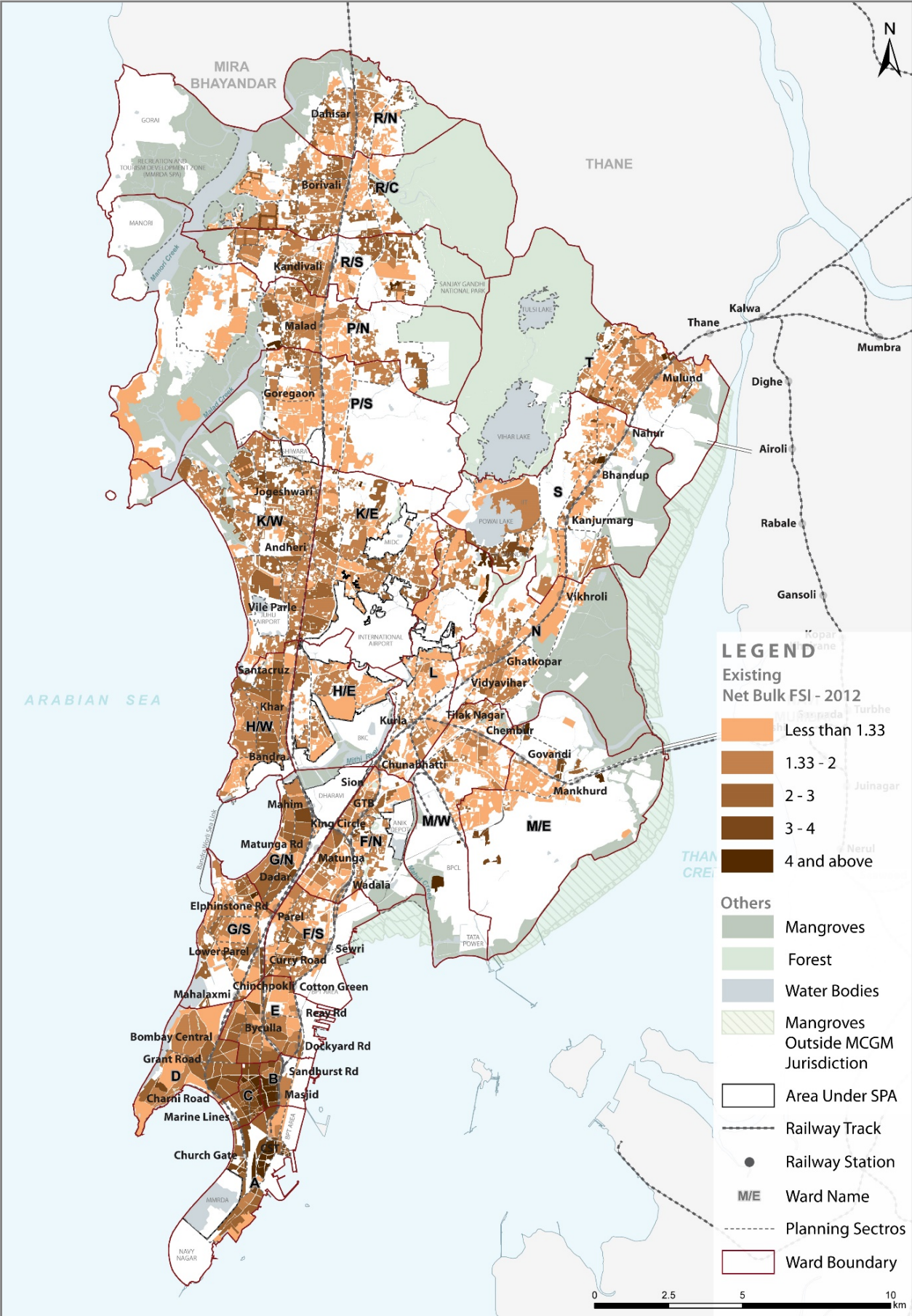


Map 34: Coastal Regulatory Zone boundaries & high tide line in Greater Mumbai

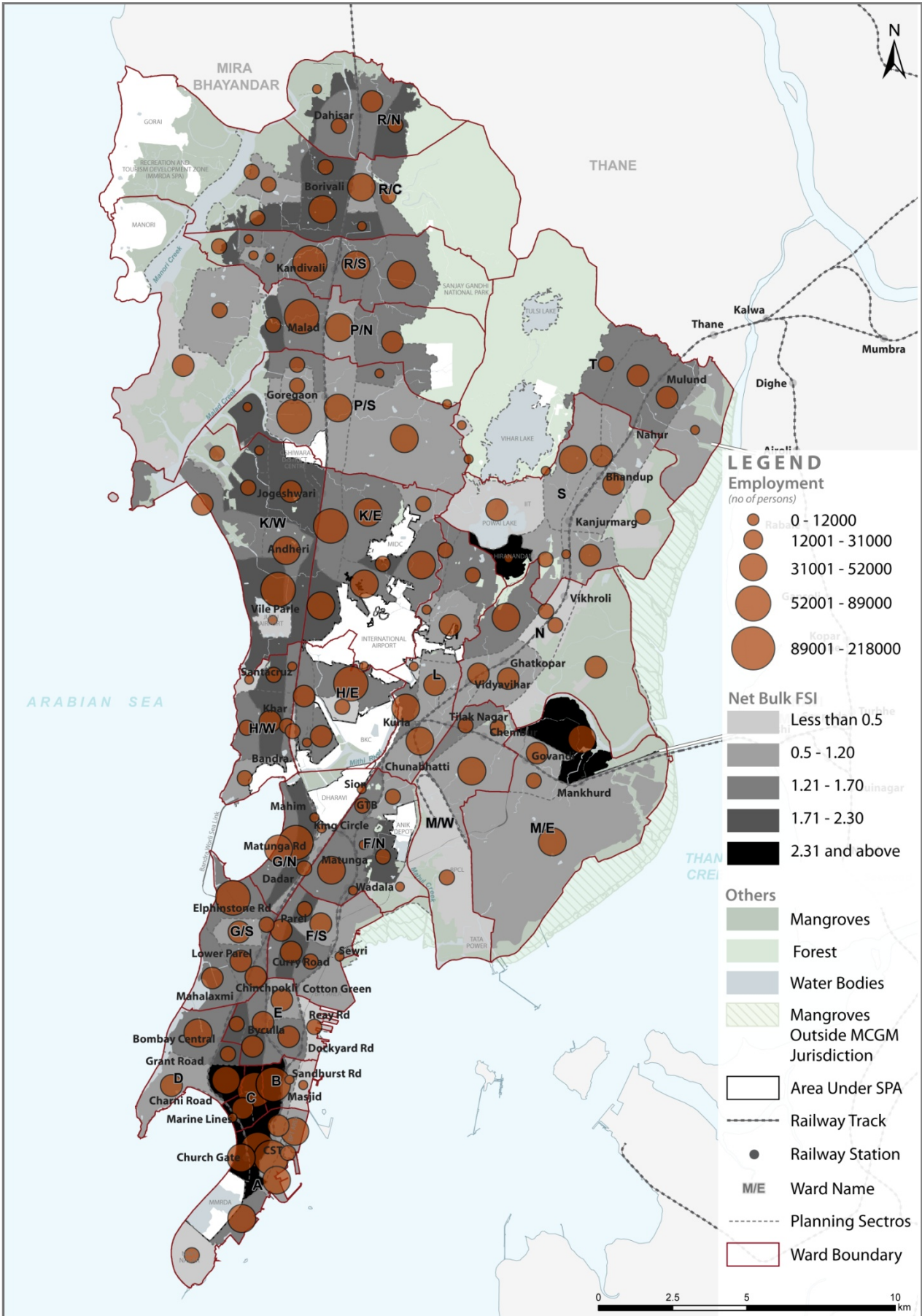


Source: HTL data..Source: CZMP, 2000

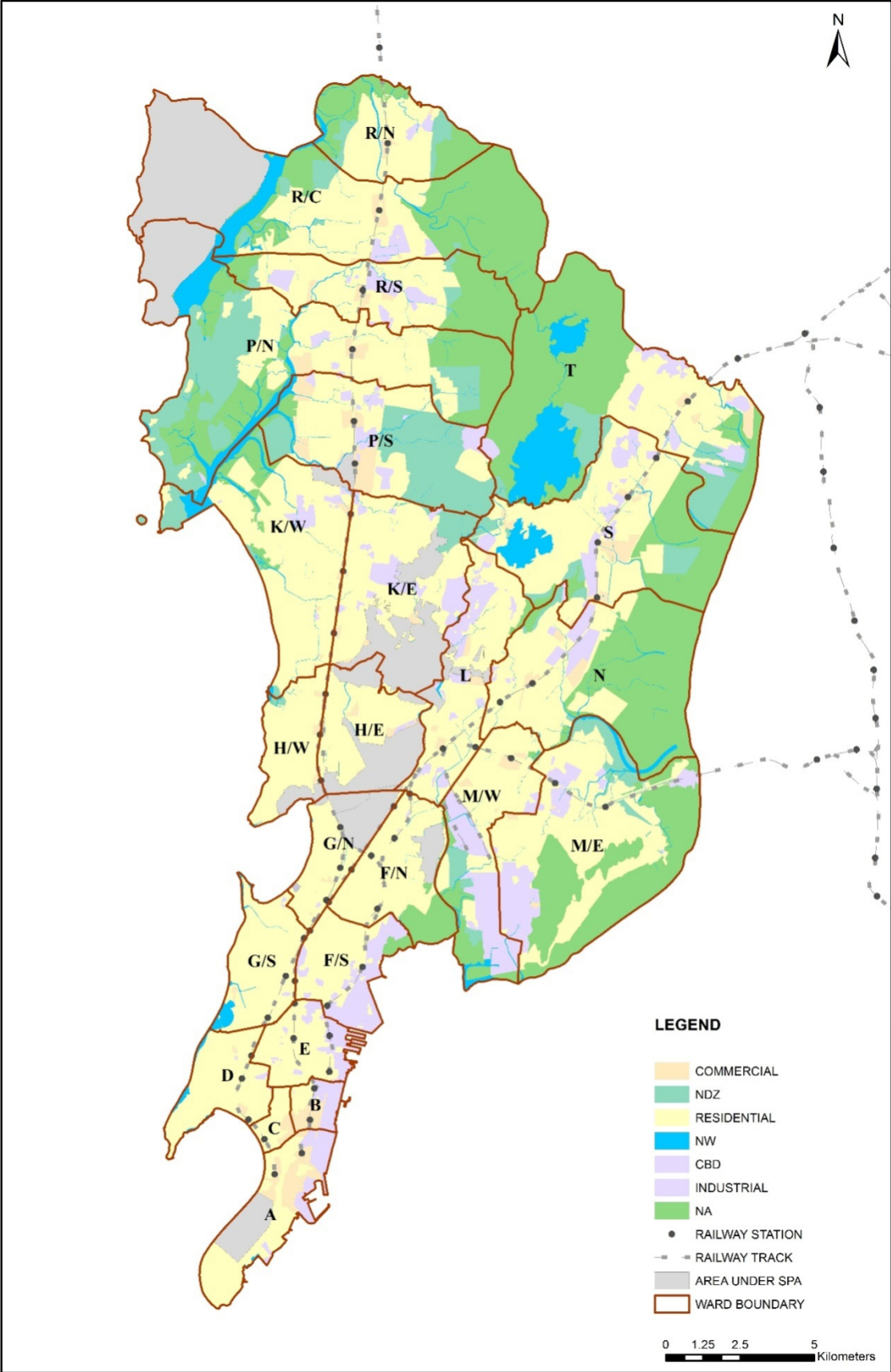
Map 35: Existing net bulk FSI in Greater Mumbai, 2012



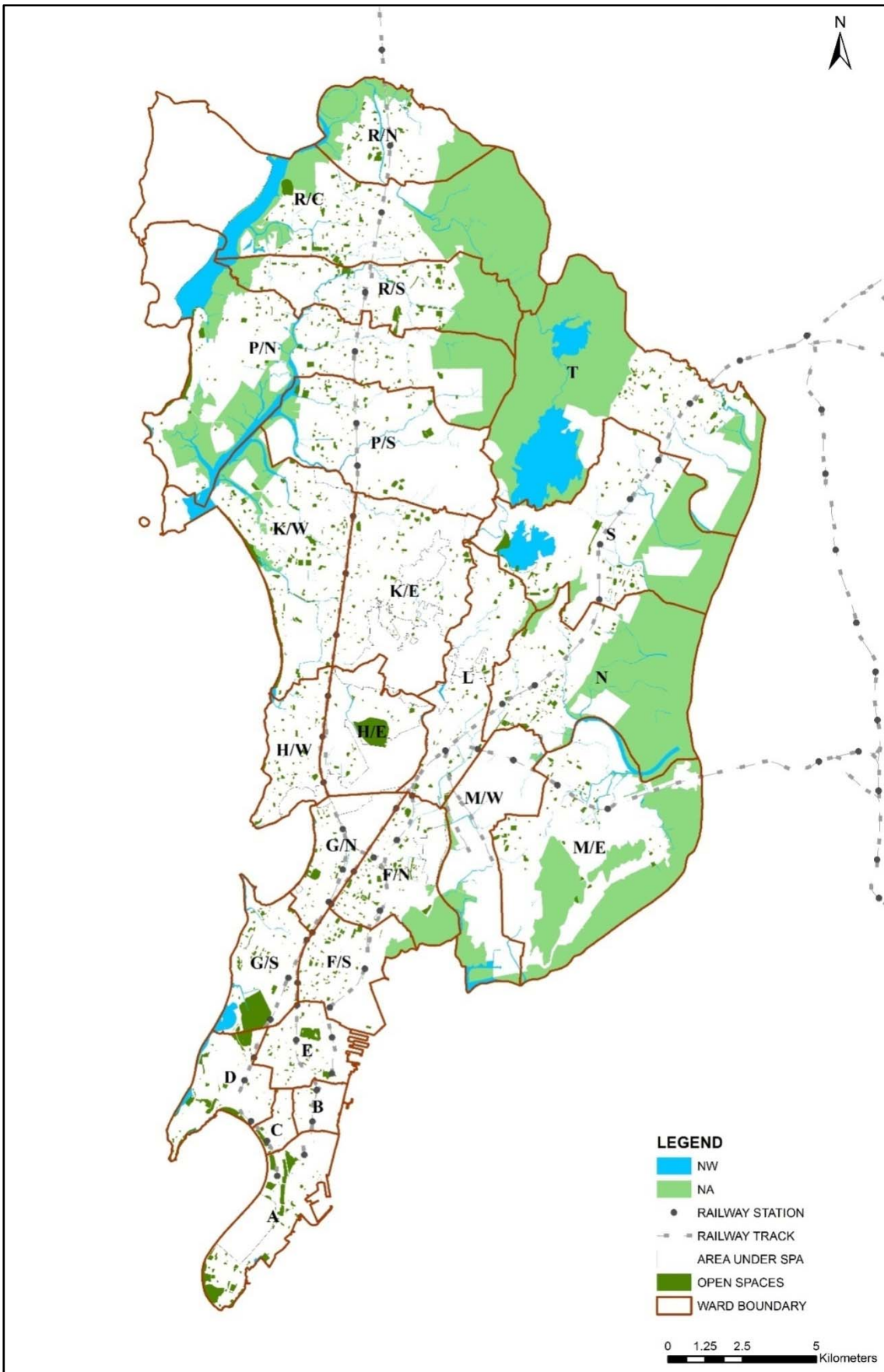
Map 36: Floor Space Index and Employment



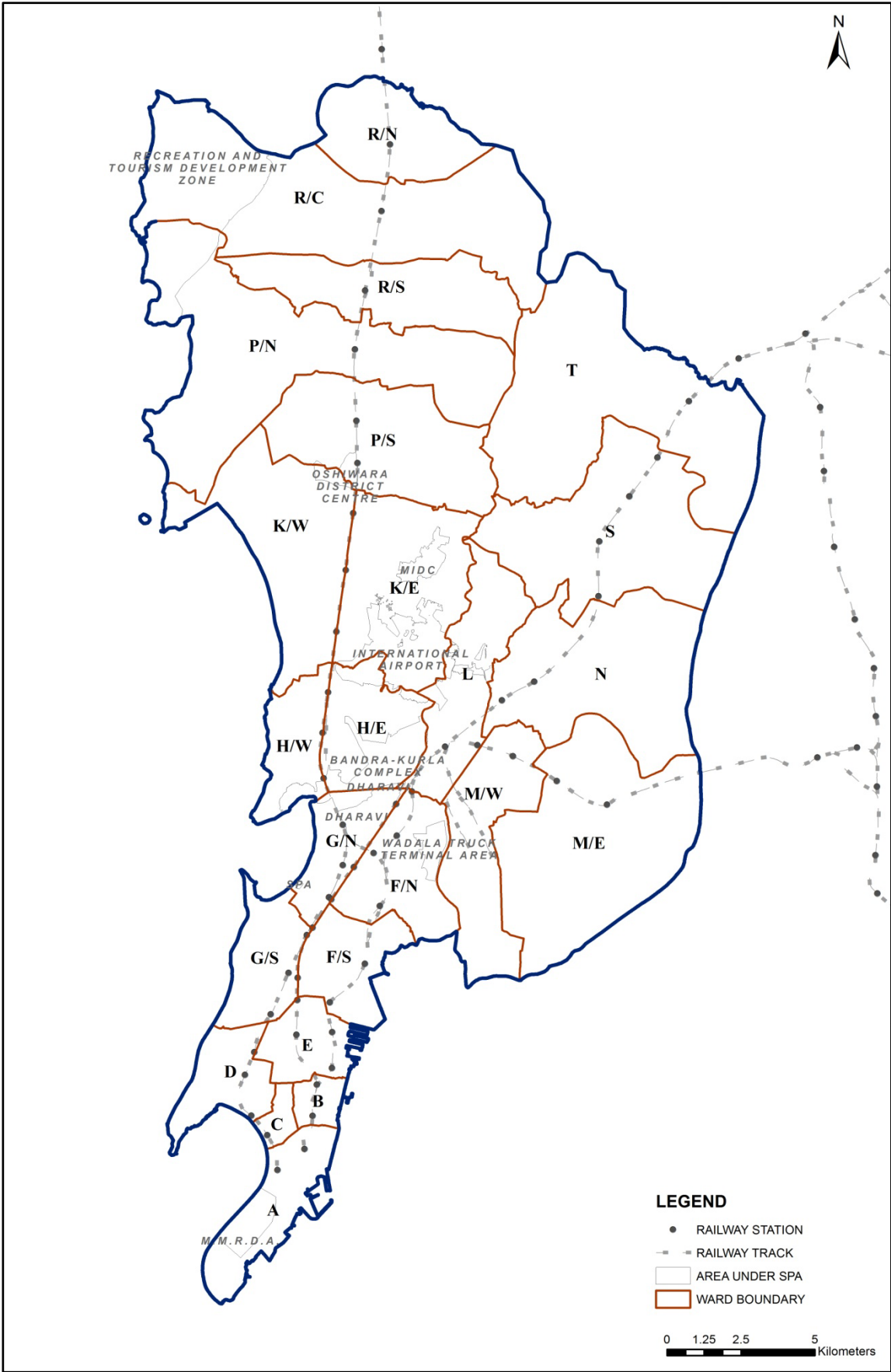
Map 37: Proposed Zones



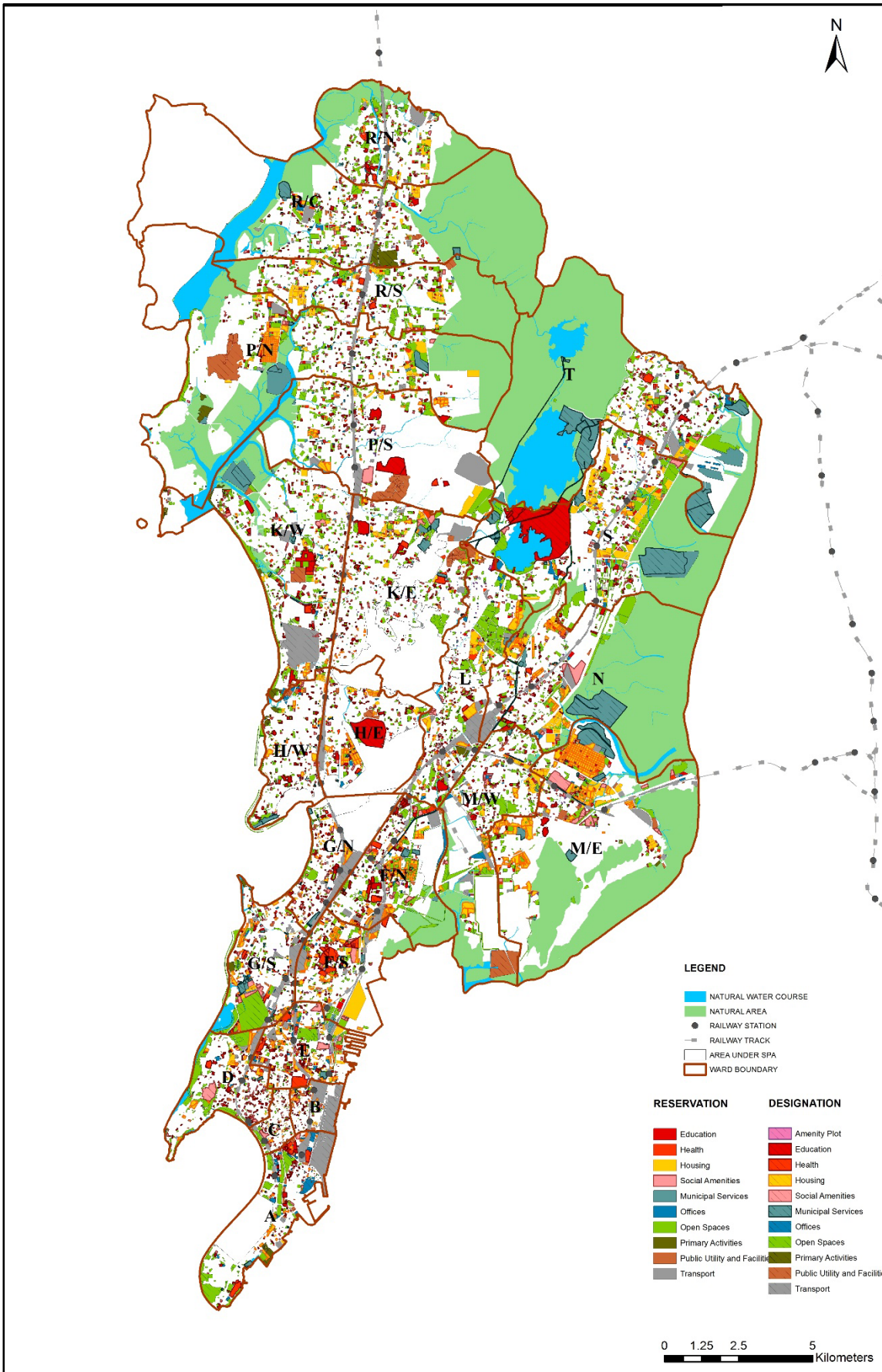
Map 38: Natural Area Zone



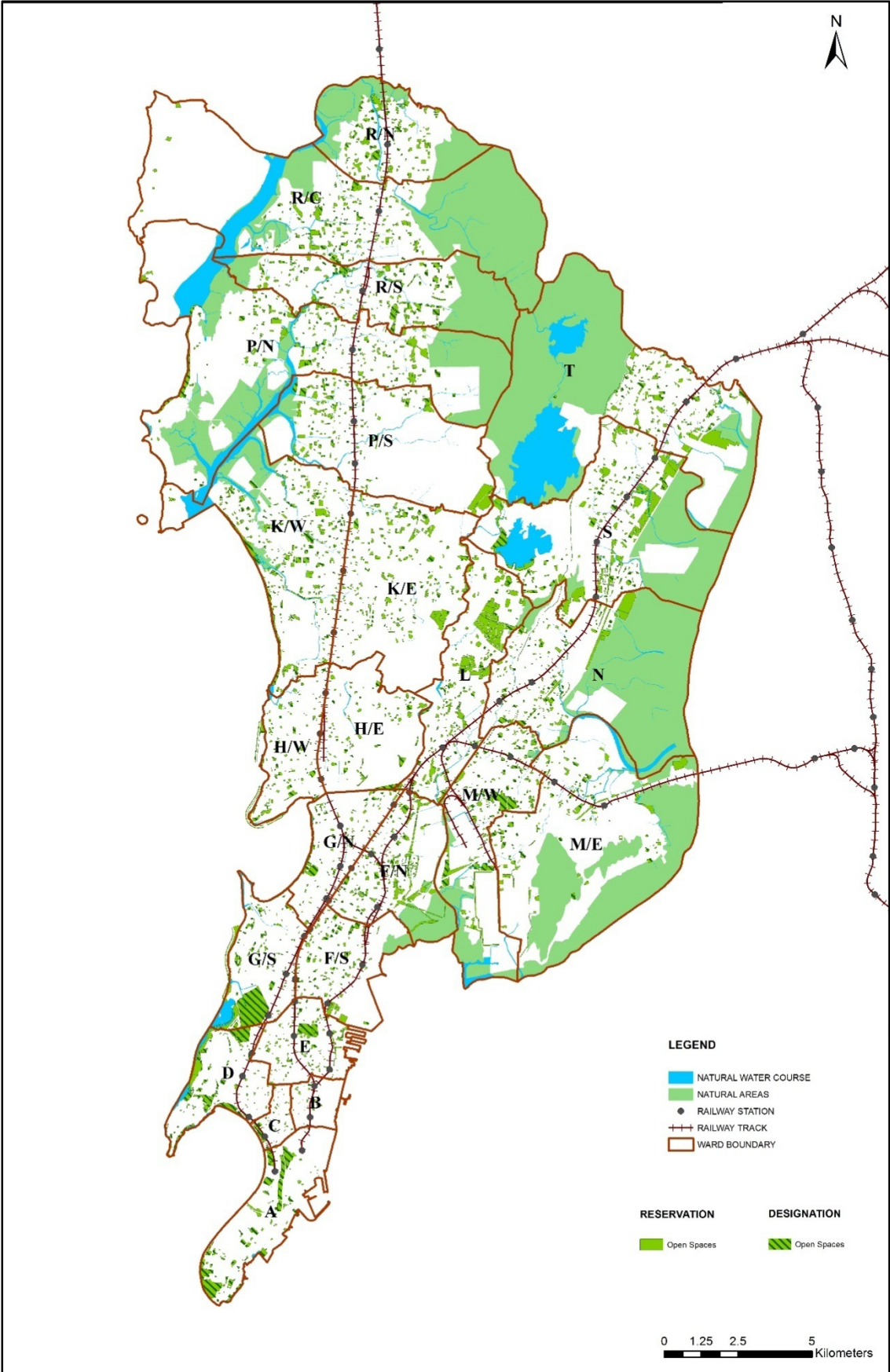
Map 39: Proposal for Subdivision of Administrative Ward boundaries



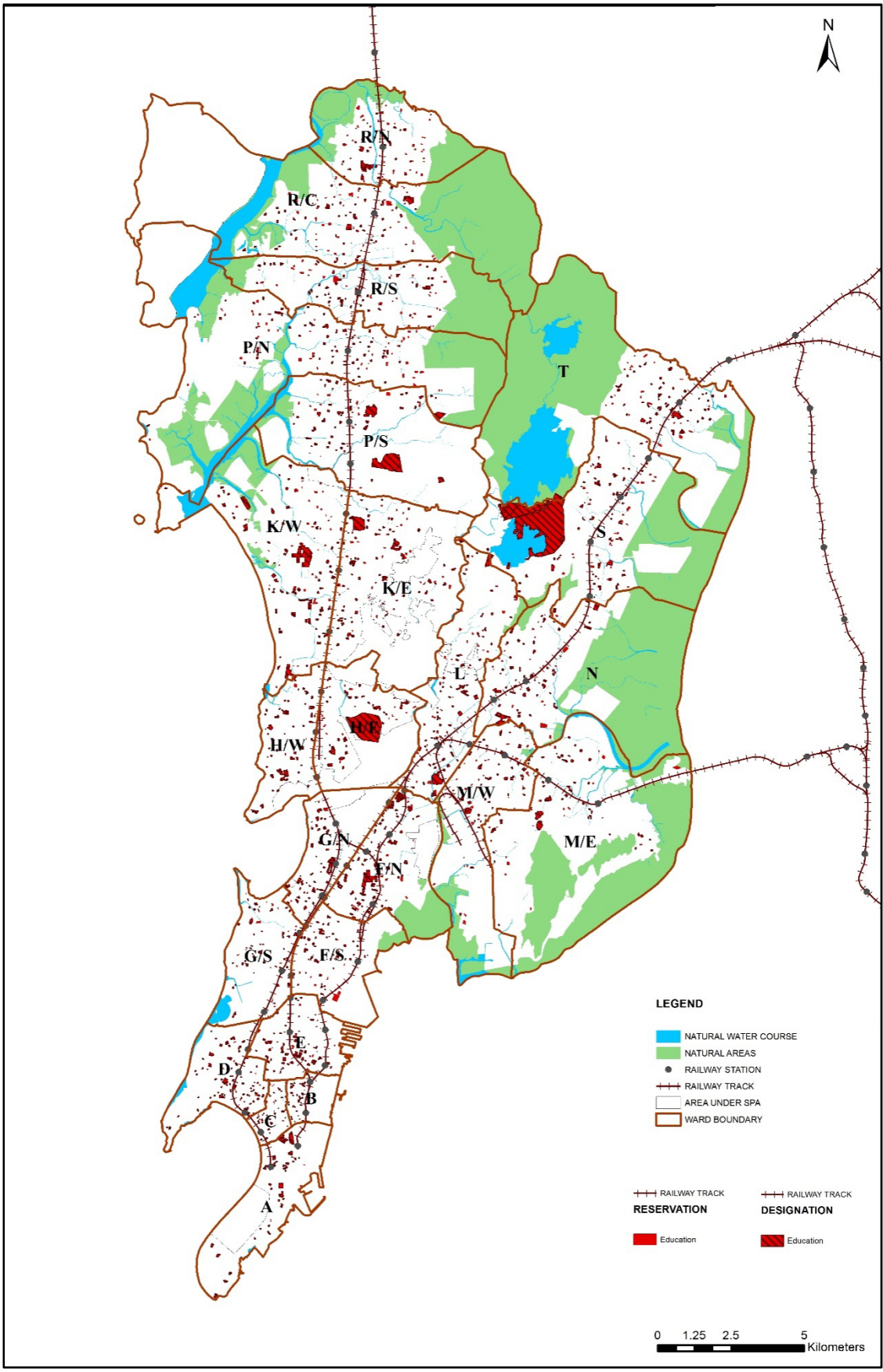
Map 40: Proposed Land Use – Amenities for Greater Mumbai



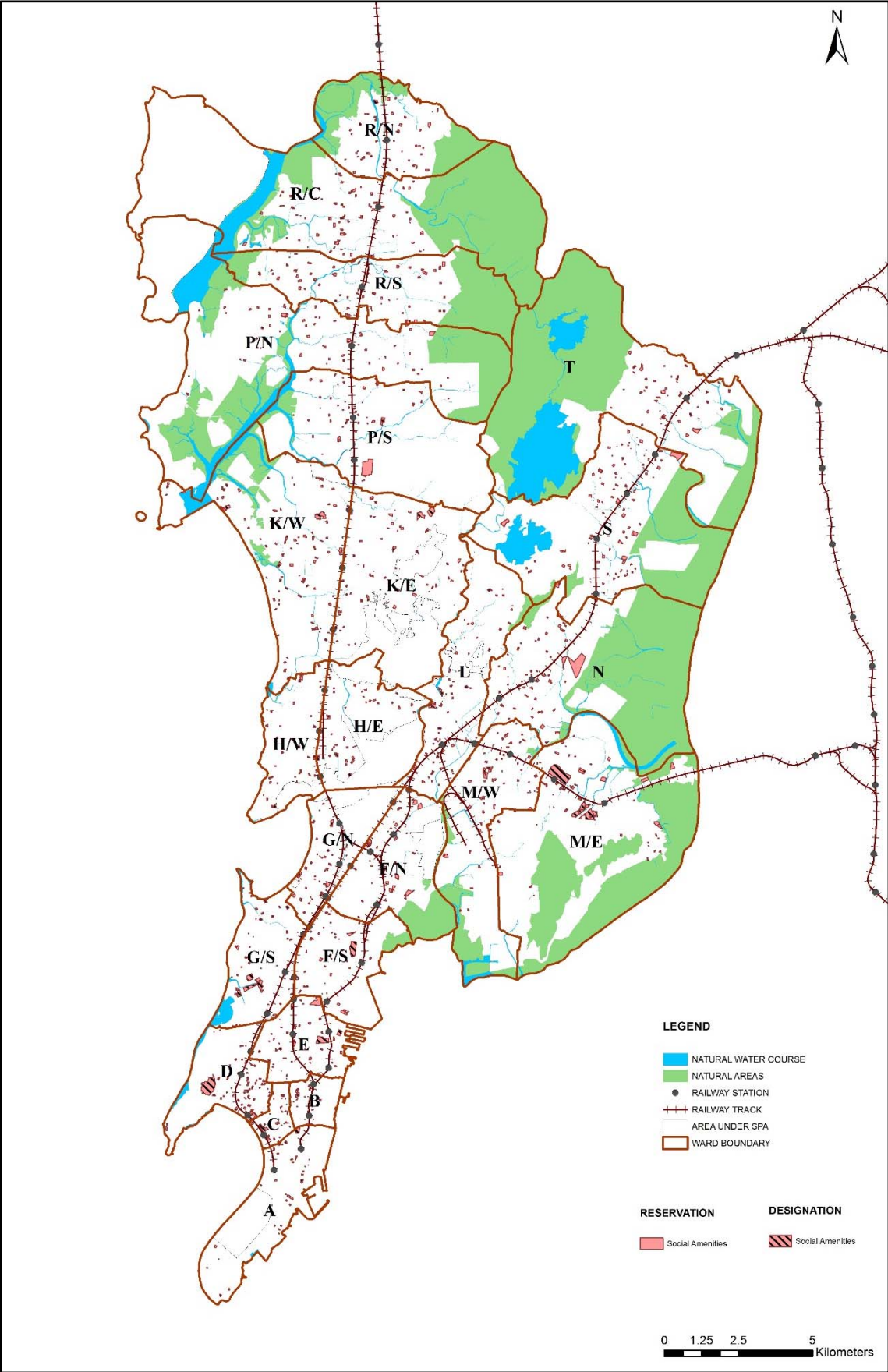
Map 41: Proposed Public Open Spaces for Greater Mumbai



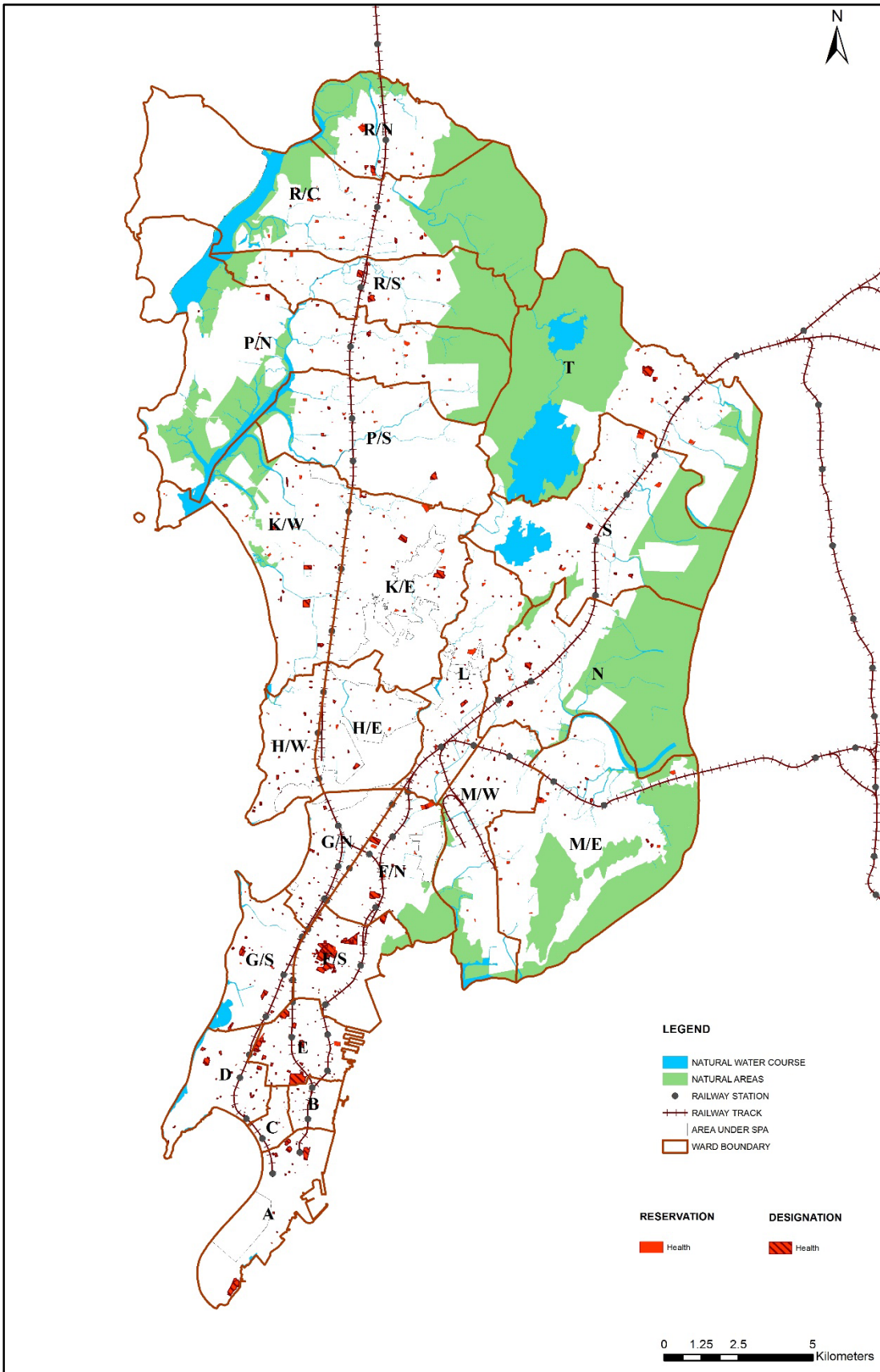
Map 42: Proposed Education amenities for Greater Mumbai



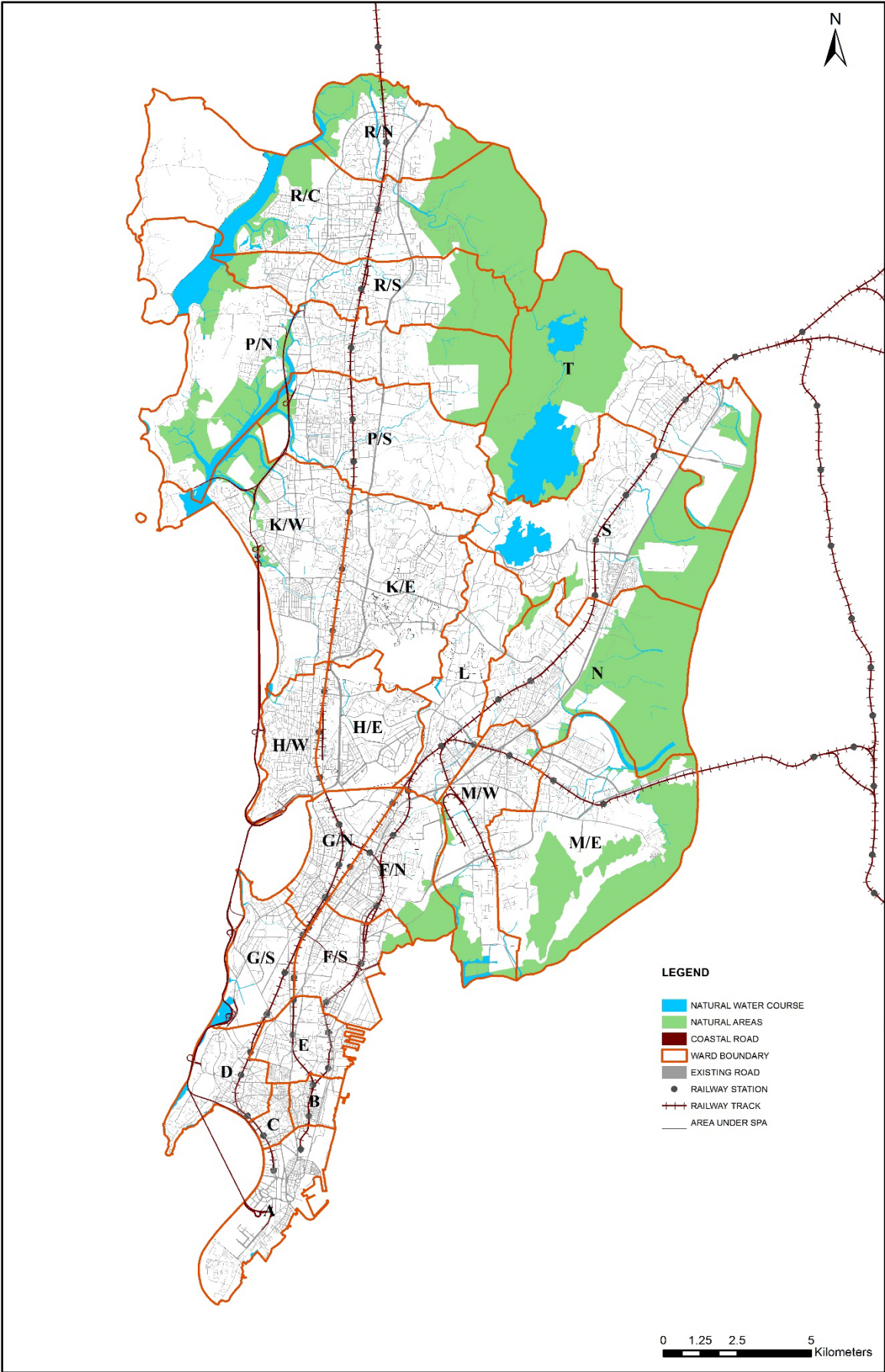
Map 43: Proposed Social amenities for Greater Mumbai



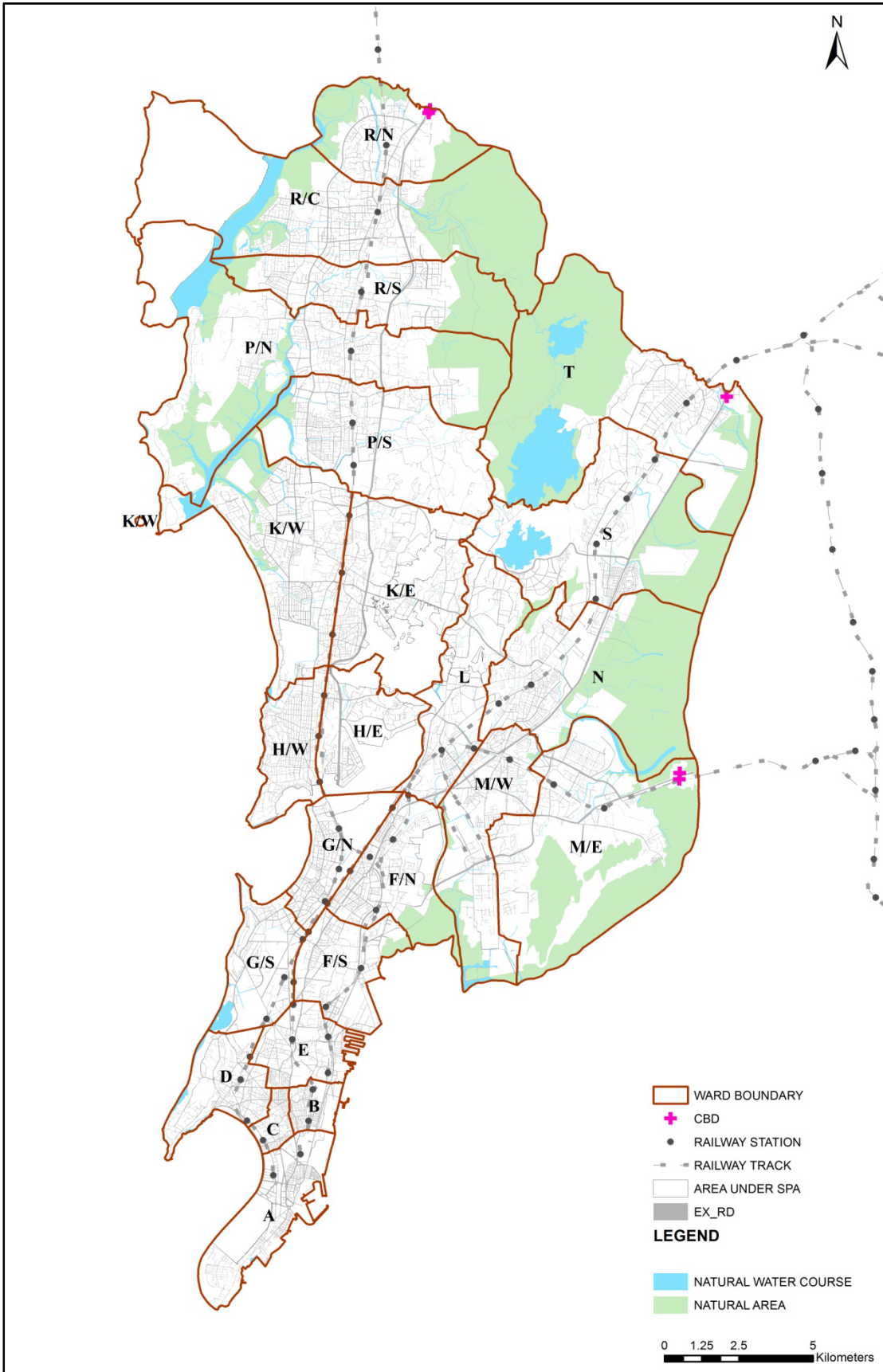
Map 44: Proposed Health amenities for Greater Mumbai



Map 45: Proposed intracity connectivity: Coastal road

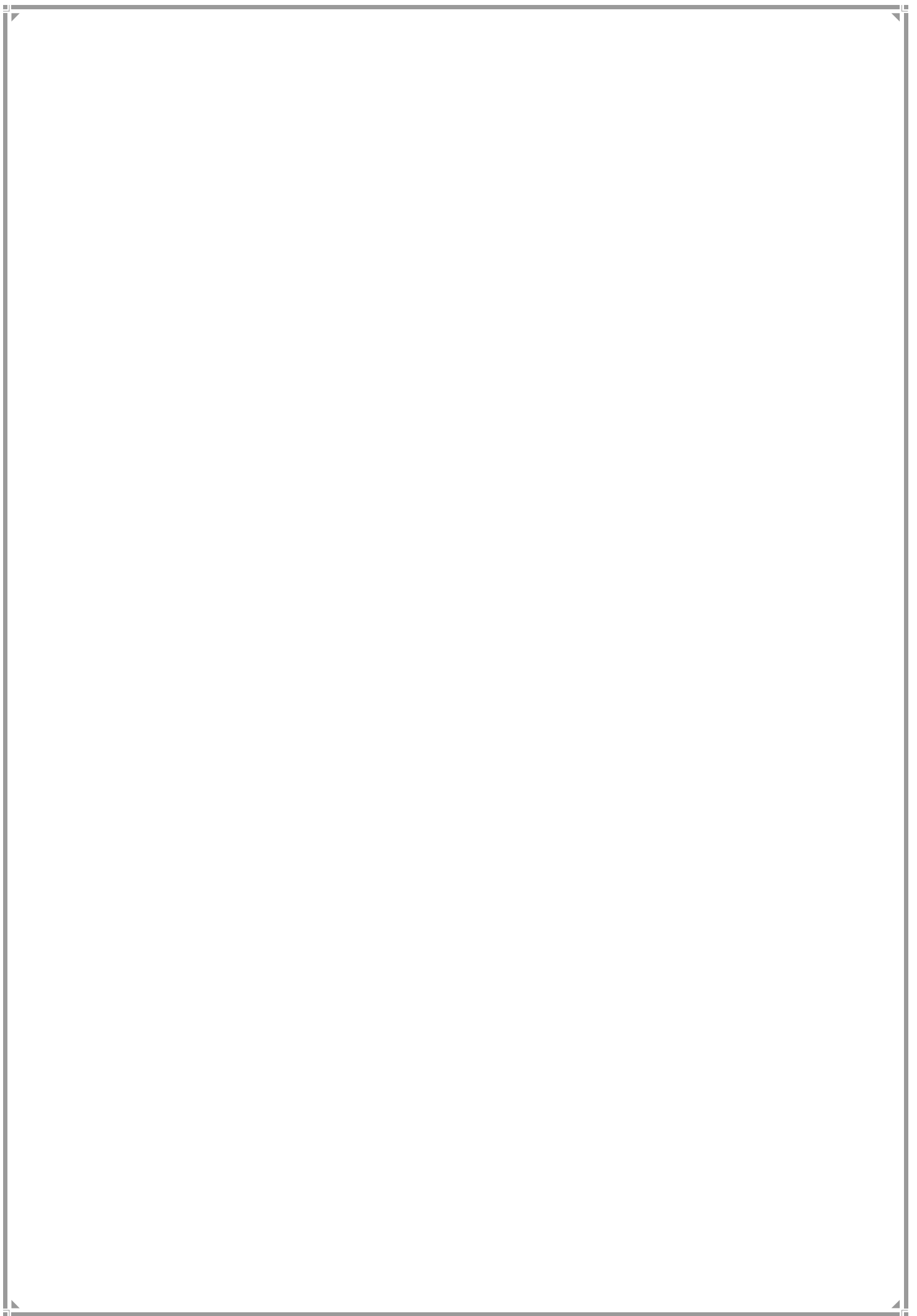


Map 46: Proposed Growth Centres



PART-5

ANNEXURES



Annexure 17.1 : Ward wise Proposed Public Open Space Provision in RDDP 2034

Wards	Population 2011	Population 2034	Demand For 2034*	RDP 2034 Designation	RDP 2034 Reservation	Total Provision	Existing Per Capita Land area	Proposed Per Capita Land area	Surplus (+)/ Deficit (-)
A	185,000	167,750	67.10	149.99	8.38	158.37	8.94	9.44	+91.27
B	127,000	112,159	44.86	2.07	3.40	5.46	0.18	0.49	-39.40
C	166,000	152,146	60.86	13.50	3.31	16.81	0.89	1.10	-44.05
D	347,000	335,501	134.20	105.27	35.19	140.46	3.14	4.19	+6.26
E	393,000	360,859	144.34	44.08	25.79	69.87	1.22	1.94	-74.47
F/N	529,000	481,795	192.72	61.83	80.63	142.46	1.28	2.96	-50.25
F/S	361,000	351,106	140.44	37.05	34.45	71.51	1.06	2.04	-68.94
G/N	599,000	580,300	232.12	39.33	15.09	54.42	0.68	0.94	-177.70
G/S	378,000	344,279	137.71	140.62	47.68	188.31	4.08	5.47	+50.60
City Total	3085000	2885894	1154.36	593.75	253.92	847.68	2.06	2.94	-306.68
H/E	557,000	556,893	222.76	37.54	22.51	60.05	0.67	1.08	-162.71
H/W	308,000	287,712	115.08	45.11	35.40	80.51	1.57	2.80	-34.58
K/E	824,000	834,851	333.94	61.41	134.65	196.06	0.74	2.35	-137.88
K/W	749,000	782,185	312.87	146.27	89.22	235.49	1.87	3.01	-77.39
P/N	941,000	1,035,762	414.30	105.12	118.29	223.41	1.01	2.16	-190.90
P/S	464,000	483,746	193.50	54.71	128.59	183.30	1.13	3.79	-10.20
R/C	562,000	575,580	230.23	66.26	101.57	167.83	1.15	2.92	-62.40
R/N	432,000	510,420	204.17	33.52	74.99	108.52	0.66	2.13	-95.65
R/S	691,000	782,185	312.87	78.28	67.15	145.43	1.00	1.86	-167.44
Western Total	5528000	5849334	2339.73	628.22	772.36	1400.58	1.07	2.39	-939.16
L	902,000	981,145	392.46	51.90	212.11	264.00	0.53	2.69	-128.46
M/E	808,000	902,147	360.86	51.97	129.91	181.88	0.58	2.02	-178.98
M/W	412,000	413,524	165.41	101.38	62.72	164.11	2.45	3.97	-1.30
N	623,000	631,990	252.80	58.07	85.70	143.77	0.92	2.27	-109.02
S	744,000	779,260	311.70	95.61	257.25	352.87	1.23	4.53	41.16
T	341,000	347,205	138.88	52.78	118.24	171.02	1.52	4.93	32.14
Eastern Total	3830000	4,055,271	1,622.11	411.70	865.94	1,277.64	1.02	3.15	-344.47
Suburb Total	9358000	9,904,605	3,961.84	1,039.92	1,638.30	2,678.22	1.05	2.70	-1,283.62
Mumbai Total	12443000	12,790,498	5,116.20	1,633.67	1,892.22	3,525.89	1.28	2.76	-1,590.30
Others Proposed (Refer Table No. 20.1 of Chapter 20)						4308.52	-	3.37	-
Grand Total						7834.41	-	6.13	+2718.21

Note: All areas in Hectares.

Total Demand for Public Open Space, with RDDP-2034 per Capita Norms of 4.00 sq.m.

Annexure 17.2 : Ward wise Proposed Education Amenities Provision in RDDP 2034

Wards	Population 2011	Population 2034	Demand For 2034*	RDP 2034 Designation	RDP 2034 Reservation	Total Provision	Existing Per Capita Land area	Proposed Per Capita Land area	Surplus (+)/ Deficit (-)
A	185,000	167,750	26.40	25.53	0.43	25.96	1.38	1.55	-0.44
B	127,000	112,159	17.65	3.66	0.17	3.83	0.29	0.34	-13.83
C	166,000	152,146	23.95	2.59	1.13	3.72	0.16	0.24	-20.23
D	347,000	335,501	52.81	20.64	1.35	21.98	0.59	0.66	-30.82
E	393,000	360,859	56.80	18.76	3.16	21.92	0.48	0.61	-34.88
F/N	529,000	481,795	75.83	48.30	6.11	54.41	0.91	1.13	-21.43
F/S	361,000	351,106	55.26	15.51	8.50	24.01	0.43	0.68	-31.26
G/N	599,000	580,300	91.34	22.77	5.70	28.47	0.38	0.49	-62.87
G/S	378,000	344,279	54.19	11.72	4.89	16.61	0.31	0.48	-37.58
City Total	3085000	2885894	454.24	169.46	31.44	200.90	0.55	0.70	-253.34
H/E	557,000	556,893	87.65	100.10	5.55	105.65	1.80	1.90	+18.00
H/W	308,000	287,712	45.29	26.79	1.60	28.39	0.87	0.99	-16.90
K/E	824,000	834,851	131.41	46.56	16.63	63.19	0.57	0.76	-68.21
K/W	749,000	782,185	123.12	72.52	12.17	84.68	0.97	1.08	-38.43
P/N	941,000	1,035,762	163.03	23.61	20.05	43.66	0.25	0.42	-119.37
P/S	464,000	483,746	76.14	69.74	7.94	77.68	1.50	1.61	+1.54
R/C	562,000	575,580	90.60	22.99	21.93	44.92	0.41	0.78	-45.68
R/N	432,000	510,420	80.34	14.68	13.32	28.00	0.34	0.55	-52.34
R/S	691,000	782,185	123.12	16.13	18.17	34.30	0.23	0.44	-88.82
Western Total	5528000	5849334	920.69	393.11	117.37	510.47	0.71	0.87	-410.21
L	902,000	981,145	154.43	39.04	12.57	51.61	0.43	0.53	-102.82
M/E	808,000	902,147	142.00	25.36	9.44	34.80	0.31	0.39	-107.20
M/W	412,000	413,524	65.09	16.55	12.23	28.78	0.40	0.70	-36.31
N	623,000	631,990	99.48	27.99	11.29	39.28	0.45	0.62	-60.19
S	744,000	779,260	122.66	245.25	18.86	264.11	3.30	3.39	+141.45
T	341,000	347,205	54.65	26.37	8.61	34.99	0.77	1.01	-19.66
Eastern Total	3830000	4,055,271	638.30	380.56	73.00	453.56	0.99	1.12	-184.74
Suburb Total	9358000	9,904,605	1,558.98	773.67	190.36	964.03	0.83	0.97	-594.95
Mumbai Total	12443000	12,790,498	2,013.22	943.13	221.80	1,164.94	0.76	0.91	-848.29

Note: All areas in Hectares.

Total Demand for Education Amenities includes all Educational institutes with RDDP-2034 per Capita Norms of 1.574 sq.m.

Annexure 17.3 : Ward wise Proposed Medical Amenities Provision in RDDP 2034

Wards	Population 2011	Population 2034	Demand For 2034*	RDP 2034 Designation	RDP 2034 Reservation	Total Provision	Existing Per Capita Land area	Proposed Per Capita Land area	Surplus (+)/ Deficit (-)
A	185,000	167,750	7.04	24.00	0.24	24.24	1.43	1.45	+17.20
B	127,000	112,159	4.71	0.53	0.68	1.21	0.05	0.11	-3.50
C	166,000	152,146	6.39	0.74	0.33	1.07	0.05	0.07	-5.32
D	347,000	335,501	14.09	10.19	0.22	10.41	0.30	0.31	-3.68
E	393,000	360,859	15.15	40.07	5.26	45.33	1.11	1.26	+30.18
F/N	529,000	481,795	20.23	14.90	8.29	23.19	0.31	0.48	+2.96
F/S	361,000	351,106	14.74	51.84	2.77	54.61	1.48	1.56	+39.87
G/N	599,000	580,300	24.37	3.80	2.08	5.88	0.07	0.10	-18.49
G/S	378,000	344,279	14.46	9.69	1.11	10.81	0.28	0.31	-3.65
City Total	3085000	2885894	121.18	155.76	20.97	176.74	0.54	0.61	+55.56
H/E	557,000	556,893	23.38	4.05	3.30	7.34	0.07	0.13	-16.04
H/W	308,000	287,712	12.08	6.56	0.31	6.87	0.23	0.24	-5.21
K/E	824,000	834,851	35.05	16.56	9.60	26.16	0.20	0.31	-8.90
K/W	749,000	782,185	32.84	16.89	7.27	24.15	0.22	0.31	-8.69
P/N	941,000	1,035,762	43.49	7.58	6.21	13.78	0.07	0.13	-29.71
P/S	464,000	483,746	20.31	5.90	5.72	11.62	0.12	0.24	-8.69
R/C	562,000	575,580	24.17	4.16	9.77	13.93	0.07	0.24	-10.24
R/N	432,000	510,420	21.43	5.20	7.46	12.66	0.10	0.25	-8.78
R/S	691,000	782,185	32.84	7.60	7.28	14.88	0.10	0.19	-17.96
Western Total	5528000	5849334	245.61	74.49	56.91	131.40	0.13	0.22	-114.21
L	902,000	981,145	41.20	4.40	11.67	16.07	0.04	0.16	-25.13
M/E	808,000	902,147	37.88	6.25	9.07	15.32	0.07	0.17	-22.56
M/W	412,000	413,524	17.36	1.54	2.86	4.40	0.04	0.11	-12.97
N	623,000	631,990	26.54	8.98	4.79	13.77	0.14	0.22	-12.77
S	744,000	779,260	32.72	7.60	14.01	21.61	0.10	0.28	-11.11
T	341,000	347,205	14.58	11.29	7.17	18.46	0.33	0.53	+3.88
Eastern Total	3830000	4,055,271	170.28	40.06	49.57	89.63	0.10	0.22	-80.65
Suburb Total	9358000	9,904,605	415.88	114.56	106.48	221.03	0.12	0.22	-194.85
Mumbai Total	12443000	12,790,498	537.06	270.32	127.45	397.77	0.21	0.31	-139.29

Note: All areas in Hectares.

Total Demand for Medical amenities included Hospitals, Maternity Hospitals and Dispensaries together with RDDP 2034 per capita Norms of 0.419 sq.mt.

Annexure 17.4 : Ward wise Proposed Cemetery Amenities Provision in RDDP 2034

Wards	Population 2011	Population 2034	Demand For 2034*	RDP 2034 Designation	RDP 2034 Reservation	Total Provision	Existing Per Capita Land area	Proposed Per Capita Land area	Surplus (+)/ Deficit (-)
A	185,000	167,750	0.50	0.36	0.84	1.20	0.02	0.07	+0.70
B	127,000	112,159	0.34	1.85	0.05	1.91	0.17	0.17	+1.57
C	166,000	152,146	0.46	5.43	0.00	5.43	0.36	0.36	+4.97
D	347,000	335,501	1.01	23.12	0.00	23.12	0.69	0.69	+22.11
E	393,000	360,859	1.08	10.93	0.00	10.93	0.30	0.30	+9.85
F/N	529,000	481,795	1.45	6.35	2.81	9.16	0.13	0.19	+7.71
F/S	361,000	351,106	1.05	10.41	0.00	10.41	0.30	0.30	+9.36
G/N	599,000	580,300	1.74	6.40	0.00	6.40	0.11	0.11	+4.66
G/S	378,000	344,279	1.03	9.81	0.00	9.81	0.28	0.28	+8.78
City Total	3085000	2885894	8.66	74.66	3.70	78.37	0.26	0.27	+69.71
H/E	557,000	556,893	1.67	1.78	0.34	2.12	0.03	0.04	+0.45
H/W	308,000	287,712	0.86	4.39	0.29	4.68	0.15	0.16	+3.82
K/E	824,000	834,851	2.50	3.97	0.43	4.40	0.05	0.05	+1.90
K/W	749,000	782,185	2.35	11.66	1.14	12.80	0.15	0.16	+10.45
P/N	941,000	1,035,762	3.11	4.31	2.99	7.30	0.04	0.07	+4.19
P/S	464,000	483,746	1.45	3.72	1.25	4.97	0.08	0.10	+3.52
R/C	562,000	575,580	1.73	3.47	0.79	4.26	0.06	0.07	+2.53
R/N	432,000	510,420	1.53	1.36	0.31	1.67	0.03	0.03	0.14
R/S	691,000	782,185	2.35	2.83	1.36	4.19	0.04	0.05	+1.84
Western Total	5528000	5849334	17.55	37.49	8.90	46.39	0.06	0.08	+28.84
L	902,000	981,145	2.94	10.74	0.41	11.15	0.11	0.11	+8.21
M/E	808,000	902,147	2.71	5.85	2.62	8.47	0.06	0.09	+5.76
M/W	412,000	413,524	1.24	2.14	0.63	2.77	0.05	0.07	+1.53
N	623,000	631,990	1.90	1.82	2.09	3.91	0.03	0.06	+2.01
S	744,000	779,260	2.34	2.01	5.34	7.35	0.03	0.09	+5.01
T	341,000	347,205	1.04	4.48	1.29	5.77	0.13	0.17	+4.73
Eastern Total	3830000	4,055,271	12.17	27.04	12.38	39.42	0.07	0.10	27.25
Suburb Total	9358000	9,904,605	29.71	64.53	21.28	85.81	0.07	0.09	56.10
Mumbai Total	12443000	12,790,498	38.37	139.19	24.98	164.18	0.11	0.13	125.81

Note: All areas in Hectares.

Total Demand for Cemetery, with RDDP-2034 per Capita Norms of 0.03 sq.mt.

Annexure 17.5 : Ward wise Proposed Market Amenities Provision in RDDP 2034

Wards	Population 2011	Population 2034	Demand For 2034 *	RDP 2034 Designation	RDP 2034 Reservation	Total Provision	Existing Per Capita Land area	Proposed Per Capita Land area	Surplus (+)/ Deficit (-)
A	185,000	167,750	1.68	2.19	0.38	2.57	0.13	0.15	+0.90
B	127,000	112,159	1.12	0.19	0.29	0.48	0.02	0.04	-0.64
C	166,000	152,146	1.52	1.37	0.50	1.88	0.09	0.12	0.36
D	347,000	335,501	3.36	1.57	1.27	2.85	0.05	0.08	-0.51
E	393,000	360,859	3.61	2.36	1.11	3.47	0.07	0.10	-0.14
F/N	529,000	481,795	4.82	1.72	3.44	5.16	0.04	0.11	0.34
F/S	361,000	351,106	3.51	1.70	1.06	2.77	0.05	0.08	-0.74
G/N	599,000	580,300	5.80	3.36	0.25	3.61	0.06	0.06	-2.19
G/S	378,000	344,279	3.44	0.75	1.12	1.87	0.02	0.05	-1.57
City Total	3085000	2885894	28.86	15.23	9.43	24.66	0.05	0.09	-4.20
H/E	557,000	556,893	5.57	1.85	1.47	3.32	0.03	0.06	-2.25
H/W	308,000	287,712	2.88	2.26	0.71	2.97	0.08	0.10	+0.10
K/E	824,000	834,851	8.35	4.24	2.04	6.28	0.05	0.08	-2.07
K/W	749,000	782,185	7.82	4.11	3.76	7.87	0.05	0.10	+0.05
P/N	941,000	1,035,762	10.36	2.14	4.24	6.37	0.02	0.06	-3.98
P/S	464,000	483,746	4.84	2.15	1.56	3.71	0.04	0.08	-1.13
R/C	562,000	575,580	5.76	2.42	5.18	7.60	0.04	0.13	+1.85
R/N	432,000	510,420	5.10	1.79	3.74	5.53	0.04	0.11	+0.42
R/S	691,000	782,185	7.82	1.87	4.31	6.18	0.02	0.08	-1.64
Western Total	5528000	5849334	58.49	22.83	27.01	49.84	0.04	0.09	-8.66
L	902,000	981,145	9.81	3.18	1.84	5.03	0.03	0.05	-4.78
M/E	808,000	902,147	9.02	0.17	5.10	5.27	0.00	0.06	-3.75
M/W	412,000	413,524	4.14	1.07	3.01	4.08	0.03	0.10	-0.06
N	623,000	631,990	6.32	1.89	3.52	5.41	0.03	0.09	-0.91
S	744,000	779,260	7.79	1.79	6.14	7.92	0.02	0.10	0.13
T	341,000	347,205	3.47	1.72	1.09	2.81	0.05	0.08	-0.66
Eastern Total	3830000	4055271	40.55	9.82	20.70	30.52	0.02	0.08	-10.03
Suburb Total	9358000	9904605	99.05	32.65	47.71	80.36	0.03	0.08	-18.69
Mumbai Total	12443000	12790498	127.90	47.87	57.14	105.02	0.04	0.08	-22.89

Note: All areas in Hectares.

Total Demand for Market Amenity with RDDP-2034 per Capita Norms of 0.1 sq.mt.

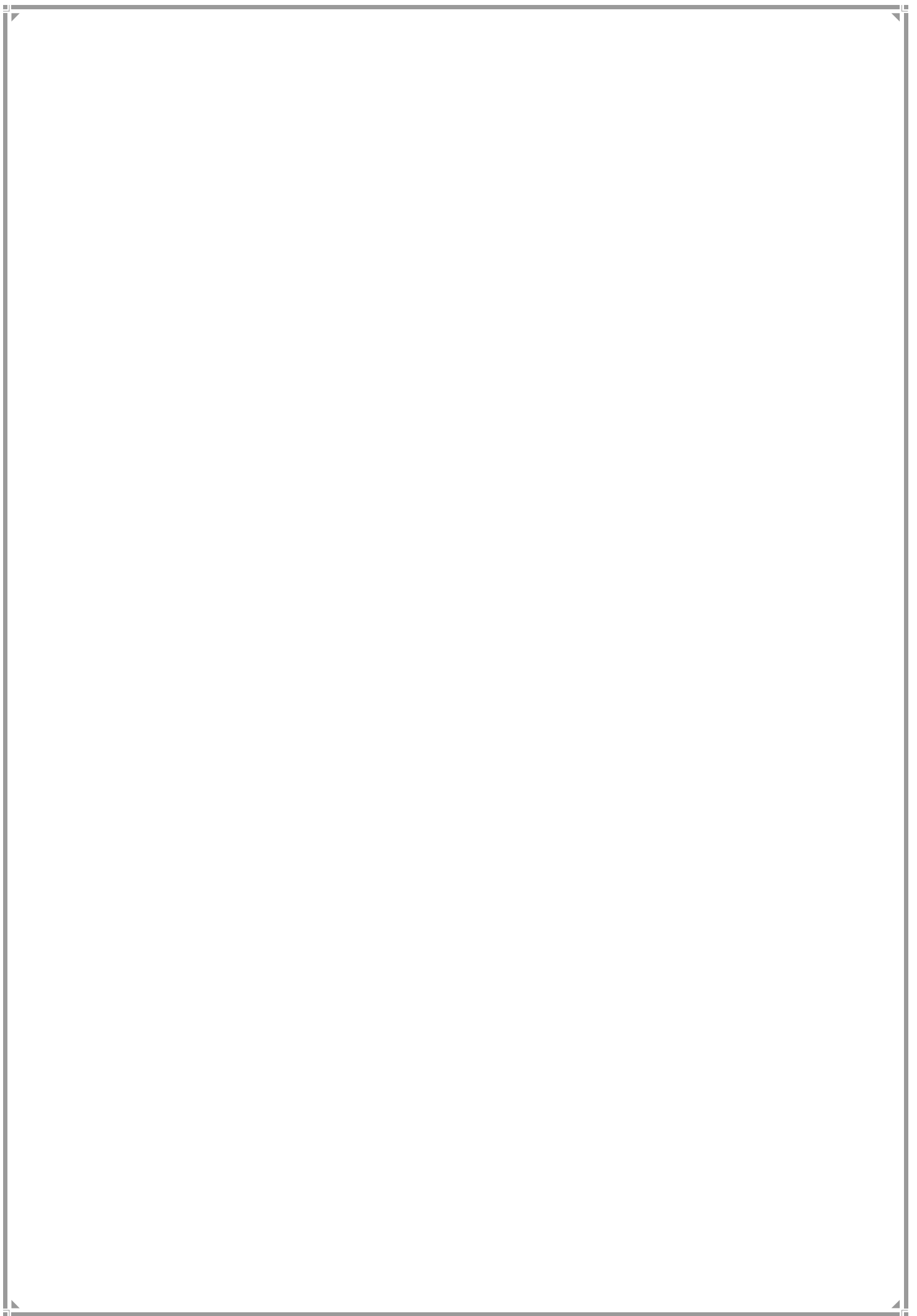
Annexure 22.1 : Total Provision of Social Equity related Amenity Reservations in RDDP 2034

Ward	Old Age Home	Multipurpose Housing for Working Women	Care Centre	Students Hostel	Multipurpose Community Centre	Aadhar Kendra with Skill Development Centre	Retail Market/ Municipal market with Vending Zone	Homeless Shelter
A	1	1	2	0	4	2	2	2
B	1	1	2	0	3	3	1	2
C	1	1	2	1	7	1	5	2
D	1	1	6	0	4	1	6	4
E	1	1	1	0	7	3	3	1
F/N	0	0	2	1	3	2	8	4
F/S	1	2	1	2	5	1	8	2
G/N	1	1	4	0	7	1	3	4
G/S	1	1	5	1	4	1	6	4
City Total	8	9	25	5	44	15	42	25
H/E	1	2	4	1	3	3	8	2
H/W	1	1	3	1	6	2	5	5
K/E	1	2	7	2	4	3	8	4
K/W	2	2	9	5	9	3	14	5
P/N	1	0	6	1	11	2	17	4
P/S	1	1	7	1	6	2	6	1
R/C	4	1	8	2	10	2	19	4
R/N	2	1	7	1	7	3	8	3
R/S	1	1	3	2	15	2	15	4
Western Total	14	11	54	16	71	22	100	32
L	1	1	14	2	8	2	14	5
M/E	1	1	8	1	7	3	14	3
M/W	1	2	4	1	11	1	15	3
N	1	1	6	1	6	2	9	1
S	2	1	13	1	18	3	19	5
T	1	1	5	1	10	2	3	4
Eastern Total	7	7	50	7	60	13	74	21
Suburb Total	21	18	104	23	131	35	174	53
Mumbai Total	29	27	129	28	175	50	216	78

Note: All figures are in Numbers.

PART-6

APPENDICES



APPENDICES

Appendix 1 –

Details of Road & Regular Lines

Displayed on MCGM website : <http://portal.mcgm.gov.in>

Path : 1) MCGM Main Page – RDDP 2034 – Appendices – Appendix 1 – RLs

Alternate Path : MCGM Main Page – Department – Chief Engineer (D.P.) – Docs - AE (Survey)
Road Line

And MCGM Main Page – Department – Roads & Traffic – Docs – Traffic Dept. RL

(Since R.L's are prescribed after completing necessary legal procedure under M.M.C. Act 1888, they are not liable for inviting suggestions and objections in Revised Draft Development Plan.)

Appendix 2 –

Heritage List

Displayed on MCGM website : <http://portal.mcgm.gov.in>

Path : MCGM Main Page – RDDP 2034 - Appendices – Appendix 2 - Heritage List & Govt.
Notifications

Alternate Path: MCGM Main Page – Department – Chief Engineer (D.P.) – Docs - Heritage List

Appendix 3 –

List of Vending Zones

Displayed on MCGM website : <http://portal.mcgm.gov.in>

Path : MCGM Main Page – RDDP 2034 – Appendices – Appendix 3 - Vending Zones

Alternate Path: MCGM Main Page – Department – Docs - Licence – [12051640.pdf](#)

Appendix 4 –

List of Adivasi Pada

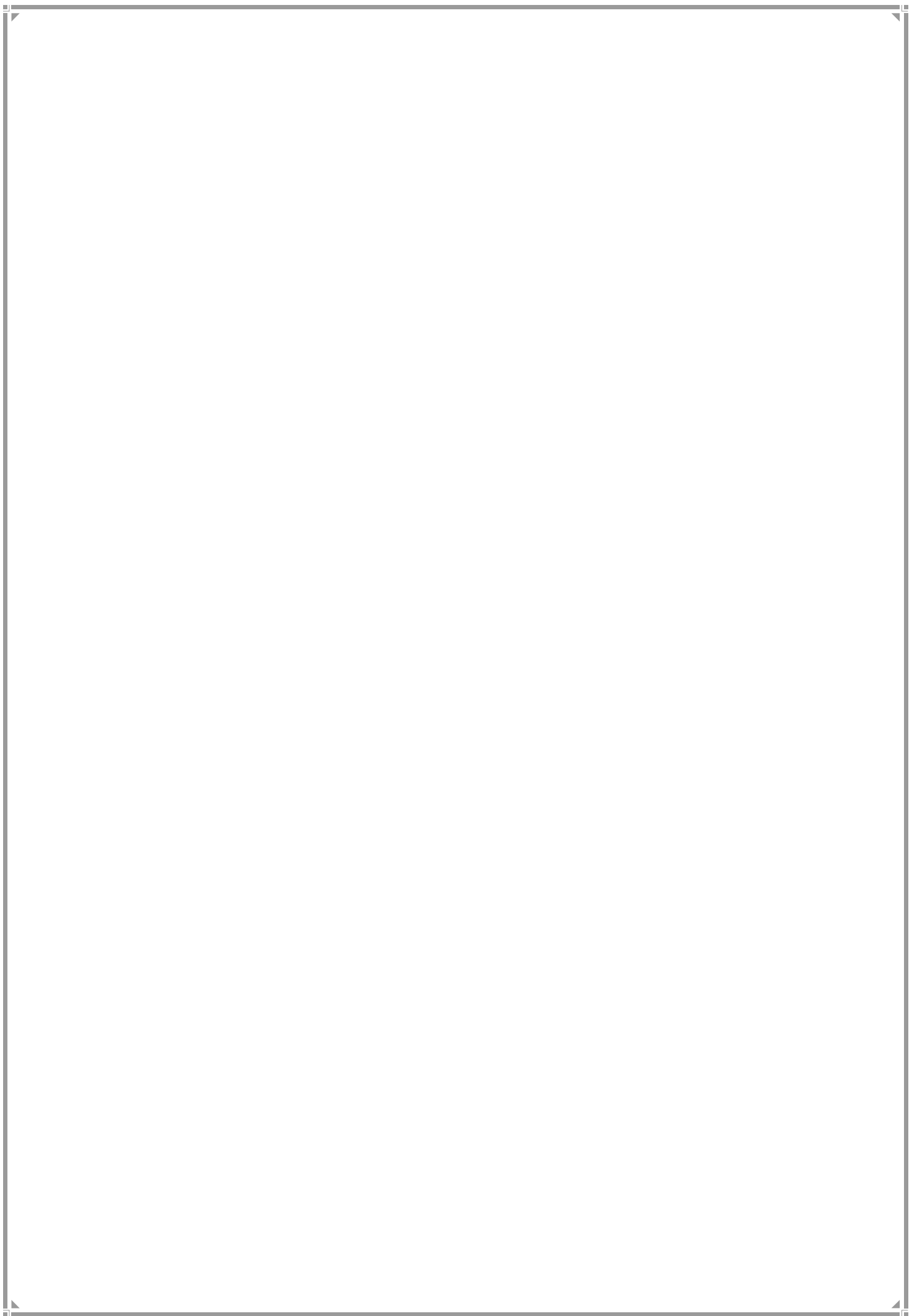
Displayed on MCGM website : <http://portal.mcgm.gov.in>

Path : MCGM Main Page – RDDP 2034 – Appendices – Appendix 4 – Adivasi Pada List

Alternate Path: MCGM Main Page – Department – Chief Engineer (D.P.) – Docs – Adivasi Pada
List

PART-7

RDDP-2034 TEAM



Draft Development Plan 2034 Team

1	Shri. Chithore V.P.	.....	Ch. Engineer (D.P.) i/c
2	Shri. Deshpande P.G.	.....	Dy. Chief Engineer (D.P.) I
3	Shri. More V.R.	.....	Dy. Chief Engineer (D.P.) I
4	Shri. Daftardar H.C.	.....	Town Planning Officer

D.C.R. Team

1	Shri. Kandalkar C.H.	.....	Executive Engineer (D.P.) D.C.R.
2	Shri. Bhat S.V.	.....	Asstt. Engineer (D.P.) D.C.R.
3	Shri. Mahajan S.R.	.....	Asstt. Engineer (D.P.) D.C.R.
4	Shri. Arvikar S.V.	.....	Asstt. Engineer (D.P.) D.C.R.
5	Shri. Shah L.K.	.....	Sub Engineer (D.P.) D.C.R.

D.C.R. Advisory Team

1	Shri. Kale A.N.	.....	Retd. Director (ES&P), MCGM
2	Shri. Jain A.K.	.....	Retd. Dy. Ch. Engineer (D.P.), MCGM
3	Shri. Joshi S.G.	.....	Retd. Dy. Ch. Engineer (D.P.), MCGM
4	Shri. Athalye R.P.	.....	Retd. Executive Engineer (D.P.), MCGM
5	Shri. Chiplunkar G.D.	.....	Retd. Asstt. Engineer (D.P.), MCGM
6	Col. Kenjalkar R. V. (Retd.)	.....	DCR Consultant

Planning Team

1	Shri. Daftardar H.C.	.....	Dy. Ch. Planner (A.P.) i/c (Team Leader)
2	Shri. Borale S.S.	.....	Urban Planner - (Education)
3	Smt. Bhatte A.S.	.....	Dy. M.A. - (Health)
4	Shri. Gandhi V.B.	.....	Urban Planner - (Internal Agencies)
5	Shri. Khsirsagar A.D.	.....	Urban Planner - (External Agencies)
6	Smt. Sahare V.S.	.....	Urban Planner - (Social Amenities)
7	Shri. Basle I.V.	.....	Urban Planner - (Open Spaces)
8	Smt. Shinde D.S.	.....	Urban Planner - (Social Amenities)

Co-ordinators

- | | | | |
|---|--------------------|-------|--------------------------------|
| 1 | Shri. Kubal M.S. | ..... | Executive Engineer (D.P.) Rev. |
| 2 | Shri. Sachdeo H.B. | ..... | Asstt. Engineer (D.P.) Rev. |

Development Plan Department

- | | | | |
|----|--------------------------|-------|--|
| 1 | Shri. Choudhary B.G. | ..... | Dy. Chief Engineer (D.P.) II |
| 2 | Shri. Mulay M.G. | | Dy. Chief Engineer (D.P.) II i/c &
Executive Engineer (D.P.) W.S. (P&R) |
| 3 | Shri. Patil V.E. | ..... | Executive Engineer (D.P.) E.S. |
| 4 | Shri. Dharmadhikari S.P. | ..... | Executive Engineer (D.P.) City |
| 5 | Shri Dalvi Y.S. | ..... | Executive Engineer (D.P.) City / T.P. |
| 6 | Shri Shendge A.N. | ..... | Executive Engineer (D.P.) W.S. (H&K) |
| 7 | Shri. Moramkar P.M. | ..... | Asstt. Eng. (D.P.) A, B, F/S) i/c |
| 8 | Shri. Chaudhary C.D. | ..... | Asstt. Eng. (D.P.) A, B, C, D, E |
| 9 | Shri. Bhoir N.N. | ..... | Asstt. Eng. (D.P.) E, G/S, G/N, F/S, F/N |
| 10 | Shri. Mahajan R.V. | ..... | Asstt. Eng. (D.P.) L & N |
| 11 | Shri. Jadhav R. A. | ..... | Asstt. Eng. (D.P.) M/E & M/W |
| 12 | Shri. Satav A.M. | ..... | Asstt. Eng. (D.P.) S & T |
| 13 | Shri. Nemane S.V. | ..... | Asstt. Eng. (D.P.) H/E, H/W & K/W |
| 14 | Shri. Wagh V.T. | ..... | Asstt. Eng. (D.P.) K/E & R/C |
| 15 | Shri. Chimane A.K. | ..... | Asstt. Eng. (D.P.) P/N & P/S |
| 16 | Shri. Pagare N.S. | ..... | Asstt. Eng. (D.P.) R/S & C.R.Z. |
| 17 | Shri. Nirmal S.R. | ..... | Asstt. Eng. (D.P.) R/N & G.I.S. |
| 18 | Smt. Narvekar S.V. | ..... | Sub Engineer (D.P.) F/N, G/S |
| 19 | Shri. Bari K.D. | ..... | Sub Engineer (D.P.) F/N |
| 20 | Smt. Suryavanshi S.U. | ..... | Sub Engineer (D.P.) A, B & C |
| 21 | Shri. Padelkar G.G. | ..... | Asstt. Eng. i/c & Sub Engineer (D.P.) C & D |
| 22 | Shri. Sonavane V.R. | ..... | Sub Engineer (D.P.) E |
| 23 | Shri. Dhadke U.B. | ..... | Sub Engineer (D.P.) F/South |
| 24 | Shri. Marathe A.J. | ..... | Sub Engineer (D.P.) G/N |
| 25 | Shri. Dighe M.D. | ..... | Sub Engineer (D.P.) L |
| 26 | Shri. Jagtap P.H | ..... | Sub Engineer (D.P.) L |

27	Shri. Sawalkar P.A.	.....	Sub Engineer (D.P.) M/W
28	Shri. Pol S.J.	.....	Sub Engineer (D.P.) M/W & T
29	Shri. Nasir A.K.	.....	Sub Engineer (D.P.) M/E
30	Shri. Nandekar M.R.	.....	Sub Engineer (D.P.) M/E
31	Shri. Jadhav V.P.	.....	Sub Engineer (D.P.) N
32	Shri. Godbole C.B.	.....	Sub Engineer (D.P.) N
33	Shri. Korgaonkar D.P.	.....	Sub Engineer (D.P.) S
34	Shri. Kharat R.B.	.....	Sub Engineer (D.P.) S
35	Shri. Nikale P.J.	.....	Sub Engineer (D.P.) T
36	Shri. Bapat G.V.	.....	Sub Engineer (D.P.) K/E
37	Smt. Bharate S.M.	.....	Sub Engineer (D.P.) K/E
38	Shri. Kaware P.H.	.....	Sub Engineer (D.P.) K/W
39	Shri. Wadalkar S.U.	.....	Sub Engineer (D.P.) K/W
40	Shri. Dudhbhate S.S.	.....	Sub Engineer (D.P.) H/E
41	Shri. Kamble Danial B.	.....	Sub Engineer (D.P.) H/W
42	Shri. Shinde S.S.	.....	Sub Engineer (D.P.) P/N
43	Shri. Zantye J.R.	.....	Sub Engineer (D.P.) P/N
44	Shri. Deshmane A.B.	.....	Sub Engineer (D.P.) P/S
45	Shri. Kabare S.S.	.....	Sub Engineer (D.P.) R/C
46	Shri. Nagare S.D.	.....	Sub Engineer (D.P.) R/S
47	Shri. Salvi P.V.	.....	Sub Engineer (D.P.) R/N
48	Smt .Kolvankar P.P.	.....	Sub Engineer (D.P.) R/N
49	Shri. Shidunkar M.H.	.....	Sub Engineer (Arch)
50	Shri. Govari R.A.	.....	Tracer (Gaothan, Koliwada & Adivasipada)

Town Planning Section

1	Shri. Patgaonkar R.G.	.....	Executive Engineer (T.P.)
2	Shri. Jadhav R.A.	.....	Asstt. Eng. (T.P.)
3	Shri. Jadhav V.P.	.....	Sub Engineer (T.P.)
4	Shri. Godse P.S.	.....	Sub Engineer (T.P.)

Sub Engineers / Architects deputed as Urban Planners for Ground Survey

1	Smt. Merchant Prachi	.....	Sr. Urban Planner & Team Leader
2	Smt. Arsiwala Munira	.....	A Ward Planner
3	Shri. Mezhuvolie Usou	.....	B Ward Planner
4	Shri. Mithun S. Anand	.....	C Ward Planner
5	Smt. Bapaye Priti	.....	D Ward Planner
6	Shri. Sayan Acharjee	.....	E Ward Planner
7	Shri. Keni Niraj	.....	D Ward Planner
8	Shri. Shah Lalit	.....	F/N Ward Planner
9	Shri. Badgujar Kiran	.....	F/N Ward Planner
10	Shri. Mendhe Sachin	.....	G/S Ward Planner
11	Shri. Khaire Hemant	.....	G/N Ward Planner
12	Smt. Sarode Deepali	.....	H/E Ward Planner
13	Smt. Kaul Himani	.....	H/W Ward Planner
14	Smt. Irani Farha	.....	K/E Ward Planner
15	Smt. Bodke Anamika	.....	K/W Ward Planner
16	Smt. Jade Dhriti	.....	P/S Ward Planner
17	Shri. Doctor Pratik	.....	P/N Ward Planner
18	Smt. Mithal Poorvi	.....	R/S Ward Planner
19	Shri. Vedpathak Mayur	.....	K/W & R/S Ward Planner
20	Shri. Patil Santosh	.....	R/C Ward Planner
21	Shri. Shet Ganesh	.....	R/N Ward Planner
22	Shri. Lakras Vishal	.....	L Ward Planner
23	Smt. Ansu Alexander	.....	M/E Ward Planner
24	Shri. Gawande Dinesh	.....	M/W Ward Planner
25	Smt. Valecha Sonal	.....	N Ward Planner
26	Shri. Jeurkar Manoj	.....	S Ward Planner
27	Smt. Kulkarni Neha	.....	T Ward Planner

G.I.S. Team

1	Dr. Khandke Abhijit	.....	All India Institute of Local Self Government
2	Smt. Pragati Singh	.....	All India Institute of Local Self Government
3	Shri. Sushil Sapkale	.....	All India Institute of Local Self Government
4	Shri. Kindre Ganesh	.....	All India Institute of Local Self Government
5	Shri. Kamathe Aniket	.....	All India Institute of Local Self Government
6	Shri. Nangare Santosh	.....	All India Institute of Local Self Government
7	Shri. Dhavale Om	.....	All India Institute of Local Self Government
8	Shri. Harsule Yogendra	.....	All India Institute of Local Self Government
9	Shri. Sonawane Sagar	.....	All India Institute of Local Self Government
10	Shri. Ashutosh Alone	.....	All India Institute of Local Self Government
11	Shri. Raval Abhijeet	.....	All India Institute of Local Self Government

A Ward

1	Shri. Chore Chandrashekhar	.....	Assistant Commissioner
2	Shri. Chavan Surendra	.....	Assistant Comm. (i/c) / Executive Engineer
3	Shri. Shegar Nandan	.....	Assistant Engineer (Maint.)
4	Shri. Jadhav Deepak	.....	Sub Engineer (Maint.)
5	Shri. More Sandeep	.....	Sub Engineer (Maint.)
6	Shri. Mulla Samir	.....	Jr. Engineer (Maint.)
7	Shri. Gitte Dnyaneshwar	.....	Jr. Engineer (Maint.)
8	Shri. Toraskar Nilesh	.....	Jr. Engineer (Maint.)
9	Shri. Samant Tushar	.....	Jr. Engineer (Maint.)

B Ward

1	Shri. Kilaje Shrinivas	.....	Assistant Commissioner
2	Shri. Dange Kishor	.....	Executive Engineer
3	Shri. Kohle Atul	.....	Assistant Engineer (Maint.)
4	Dr. Mohokar Vilas	.....	Medical Officer Health
5	Shri. Kedar Bharat	.....	Sub Engineer (Maint.)
6	Shri. Kharat Sachin	.....	Jr. Engineer (Maint.)
7	Shri. Rathod Jitendra	.....	Jr. Engineer (Maint.)
8	Shri. Khaire Rahul	.....	Supervisor

C Ward

1	Dr. (Smt.) Hasnale Sangita	.....	Assistant Commissioner
2	Shri. Singh Satyaprakash	.....	Assistant Commissioner
3	Shri. Gheghadmal Jivak	.....	Executive Engineer
4	Shri. Kolekar Swapnil	.....	Assistant Engineer (Maint.)
5	Shri. Mudhe Shankar	.....	Assistant Engineer (SWM)
6	Shri. Umbarje Vinayaditya	.....	Sub Engineer (Maint.)
7	Shri. Landagu Mayur	.....	Sub Engineer (SWD)
8	Shri. Gadhari Sushil	.....	Sub Engineer (SWM)
9	Shri. Sable Milind	.....	Jr. Engineer (Maint.)
10	Shri. Barke Sharad	.....	Jr. Engineer (Maint.)
11	Smt. Hampras Smita	.....	Jr. Engineer (Drg.)
12	Smt. Barmade Trishla	.....	Jr. Engineer (Drg.)

D Ward

1	Shri. Shirsagar Devidas	.....	Assistant Commissioner
2	Shri. Dhole Rajesh	.....	Executive Engineer
3	Shri. Tari Mandar	.....	Assistant Engineer (Maint.)
4	Dr. Bhajam Ananthrao	.....	Medical Officer Health
5	Shri. Shinde Aniket	.....	Sub Engineer (B. & F.)
6	Shri. Uike Sachin	.....	Sub Engineer (Maint.)
7	Smt. Patil Swati	.....	Jr. Engineer (Maint.)
8	Shri. Dhumal Maruti	.....	Jr. Engineer (Maint.)
9	Shri. Ramteke Mahesh	.....	Jr. Engineer (Maint.)
10	Shri. Sangar Mayuresh	.....	Jr. Engineer (Maint.)
11	Shri. Sonavane Tushar	.....	Jr. Engineer (Maint.)
12	Shri. Korad Vipul	.....	Jr. Engineer (Maint.)
13	Shri. Kachre Prathamesh	.....	Jr. Engineer (Maint.)
14	Shri. Kathore Rohit	.....	Jr. Engineer (Maint.)
15	Shri. Kasare Rupesh	.....	Labor

E Ward

1	Shri. Desai Kishore	.....	Assistant Commissioner
2	Shri. Dhumal D.R.	.....	Executive Engineer
3	Shri. Jhattare Netaji	.....	Assistant Engineer (Maint.)
4	Shri. Thakre Ishan	.....	Sub Engineer (Maint.)
5	Shri. Bodke Ankush	.....	Jr. Engineer (Maint.)
6	Smt. Bhosale Aditi	.....	Jr. Engineer (Maint.)
7	Shri. Tarmale Pravin	.....	Jr. Engineer (Maint.)
8	Shri. Bagade Vivek	.....	Jr. Engineer (Maint.)
9	Shri. Unhone Amey	.....	Jr. Engineer (Maint.)
10	Shri. Sheikh Mehmood	.....	Jr. Engineer (Maint.)
11	Shri. Katgaonkar Amol	.....	Jr. Engineer (Maint.)
12	Shri. Khairnar Ketan	.....	Jr. Engineer (Maint.)

F/South Ward

1	Shri. Mote Vishwas	.....	Assistant Commissioner
2	Shri. Parmar A. R.	.....	Executive Engineer
3	Shri. Rathod J. D.	.....	Assistant Engineer (Maint.)
4	Shri. Raikawad M. L.	.....	Assistant Engineer (Maint.)
5	Shri. Kadam P. R.	.....	Assistant Engineer (B. & F.)
6	Smt. Ushirkar S. B.	.....	Sub Engineer (Maint.)
7	Smt. Dhamnaskar P. P.	.....	Sub Engineer (Maint.)
8	Shri. Kulkarni M. D.	.....	Road Engineer
9	Shri. Mane M. D.	.....	Jr. Engineer (Maint.)
10	Shri. Gohil J. N.	.....	Jr. Engineer (Maint.)
11	Shri. Gawari R. R.	.....	Jr. Engineer (Maint.)
12	Shri. Nandanwar A. R.	.....	Jr. Engineer (Maint.)
13	Shri. Patil A. A.	.....	Jr. Engineer (Maint.)
14	Shri. Kharatmol D.	.....	Jr. Engineer (Maint.)
15	Shri. Thorat K. N.	.....	Jr. Engineer (B. & F.)
16	Shri. Barwade R.	.....	Jr. Engineer (B. & F.)

F/North Ward

1	Smt. Sasane Alka	.....	Assistant Commissioner
2	Shri. Ubale Keshav	.....	Assistant Commissioner
3	Shri. Mhatre Prakash	.....	Executive Engineer
4	Shri. Talape Namdev	.....	Executive Engineer
5	Shri. Pawaskar Abhimanyu	.....	Assistant Engineer
6	Shri. Gaikwad Subhash	.....	Assistant Engineer
7	Shri. Mane Sandeep	.....	Sub Engineer
8	Shri. Patil Bhargavendra	.....	Sub Engineer
9	Shri. Kshirsagar Ganesh	.....	Sub Engineer
10	Shri. Kale Parag	.....	Sub Engineer
11	Shri. Wasekar Kushal	.....	Junior Engineer
12	Shri. Kokate Vishal	.....	Junior Engineer
13	Shri. Anchewar Sohan	.....	Junior Engineer
14	Shri. Garje Arvind	.....	Junior Engineer
15	Shri. Nalge Yogesh	.....	Junior Engineer
16	Shri. Gadre Yogesh	.....	Junior Engineer
17	Smt. Khade Shalakra	.....	Junior Engineer
18	Smt. Pawar Ashwini	.....	Junior Engineer
19	Smt. Thakur Sarita	.....	Junior Engineer

G/South Ward

1	Shri. Ubale Keshav	.....	Assistant Commissioner
2	Dr. (Smt.) Kapse Shubhangi	.....	Assistant Commissioner
3	Shri. Navghare Rajratna	.....	Executive Engineer
4	Shri. Chavan Satish	.....	Assistant Engineer
5	Shri. Waghmare Sanjay	.....	Assistant Engineer
6	Shri. Dixit Abhijeet	.....	Sub Engineer
7	Shri. Parab Krishanaji	.....	Sub Engineer
8	Shri. Wankhede Sandesh	.....	Sub Engineer
9	Shri. Bhujabal Sanket	.....	Sub Engineer
10	Shri. Parab Deepak	.....	Junior Engineer

11	Shri. Bhalerao Hemant	.....	Junior Engineer
12	Shri. Aghav Appasaheb	.....	Junior Engineer
13	Shri. Chandane Hemant	.....	Junior Engineer
14	Shri. Pawar Dilip	.....	Junior Engineer
15	Shri. Warude Shrikant	.....	Junior Engineer
16	Smt. Game Praneeta	.....	Junior Engineer
17	Shri. Gupta Ravi	.....	Junior Engineer

G/North Ward

1	Shri. Ughade Sharad	.....	Assistant Commissioner
2	Shri. Biradar Ramakant	.....	Assistant Commissioner
3	Shri. Sawardekar Prakash	.....	Executive Engineer
4	Shri. Chavhan Rajesh	.....	Assistant Engineer (Maint.) Dadar
5	Shri. Bembde Shashikant	.....	Assistant Engineer (Maint.) Mahim
6	Shri. Bhosale Promod	.....	Assistant Engineer (T.P.) i/c
7	Shri. Thape Milind	.....	Sub Engineer (T. P.)
8	Shri. Pawar Sanjay	.....	Road Engineer (Dadar)
9	Shri. Chavhan Dnyaneshwar	.....	Road Engineer (Mahim)
10	Shri. Gholam	.....	Sub Engineer (Maint.)
11	Shri. Kadam Sandip	.....	Sub Engineer (Maint.)
12	Shri. Karanjkehele Mayur	.....	Sub Engineer (Maint.)
13	Shri. Malode Ajay	.....	Jr. Engineer (Maint.)
14	Shri. Chaughule Abhijit	.....	Jr. Engineer (Maint.)
15	Smt. Ahire Aprata	.....	Jr. Engineer (Maint.)
16	Smt. More R.P.	.....	Jr. Engineer (Maint.)
17	Shri. Vora Rahul	.....	Jr. Engineer (Maint.)
18	Shri. Parate Bhushan	.....	Jr. Engineer (Maint.)

H/East Ward

1	Shri. Singh Satyaprakash	.....	Assistant Commissioner
2	Shri. Gaikwad Prashant	.....	Assistant Commissioner
3	Shri. Garule Govind	.....	Executive Engineer

4	Shri. Vajpeyi Satyaprasad	.....	Assistant Engineer (Maint.)
5	Dr. Mohite Virendra	.....	Medical Officer Health
6	Shri. Anap Anil	.....	Sub Engineer (Maint.)
7	Shri. Raut Jaykumar	.....	Sub Engineer (Maint.)
8	Shri. Pawar Sanjay	.....	Sub Engineer (Roads)
9	Shri. Hulwan Prakash	.....	Jr. Engineer (Maint.)
10	Shri. Patil Vijay	.....	Jr. Engineer (Maint.)
11	Shri. Gawli Bhushan	.....	Jr. Engineer (Maint.)
12	Shri. Pathan Jamir	.....	Jr. Engineer (Maint.)

H/West Ward

1	Shri. Kamble Vijay	.....	Assistant Commissioner
2	Shri. Ughade Sharad	.....	Assistant Commissioner
3	Shri. Yadav Rajesh	.....	Assistant Engineer (Maint.)
4	Shri. Sayyed M.I.Z.	.....	Assistant Engineer (Maint.)
5	Dr. Nouni Arish	.....	Medical Officer Health
6	Shri. Bhonsle Dinesh	.....	Sub Engineer (Maint.)
7	Shri. Javanjal Manish	.....	Sub Engineer (Maint.)
8	Smt. Parab Swati	.....	Sub Engineer (Roads)
9	Smt. Patel Pallavi	.....	Jr. Engineer (Maint.)

K/East Ward

1	Shri Jain Devendra Kumar	.....	Assistant Commissioner
2	Dr. (Smt.) Kapse Bhagyashri	.....	Assistant Commissioner
3	Shri. Marathe Chandrashekhar	.....	Executive Engineer
4	Shri. Mohite Anandrao	.....	Assistant Engineer (Maint.)
5	Shri. Aigole Shailendra	.....	Assistant Engineer (Maint.)
6	Smt. Dalvi Nisha	.....	Sub Engineer (Maint.)
7	Shri. Patil Ranjit	.....	Sub Engineer (Maint.)
8	Shri. Rajas Rohit	.....	Sub Engineer (Maint.)
9	Shri. Kale Amit	.....	Sub Engineer (Maint.)
10	Shri. More Abhijit	.....	Sub Engineer (Maint.)

11	Shri. Dubey Manojkumar	.....	Sub Engineer (Roads)
12	Shri. Shaikh Asif	.....	Sub Engineer (Roads)
13	Shri. Sonone Nitin	.....	Sub Engineer (Roads)
14	Shri. Girgaonkar Ramesh	.....	Jr. Engineer (Maint.)
15	Shri. Narayankar Arun	.....	Jr. Engineer (Maint.)
16	Shri. Bos Krunal	.....	Jr. Engineer (Maint.)
17	Smt. Deshmukh Pallavi	.....	Jr. Engineer (Maint.)
18	Shri. Sarwade Sachin	.....	Jr. Engineer (Maint.)
19	Shri. Danole Tushar	.....	Jr. Engineer (Maint.)
20	Shri. Kamble Kiran	.....	Jr. Engineer (Maint.)
21	Shri. Yedle Dattatrya	.....	Jr. Engineer (Maint.)
22	Shri. Hunge Dinanath	.....	Jr. Engineer (Maint.)
23	Shri. Khedkar Amol	.....	Jr. Engineer (Maint.)

K/West Ward

1	Shri. Masurkar Parag	.....	Assistant Commissioner
2	Shri. Gajiwala Haresh	.....	Executive Engineer
3	Shri. Jadhav Harishchandra	.....	Assistant Engineer (Maint.)
4	Shri. Borse Sanjay	.....	Assistant Engineer (Maint.)
5	Shri. Patne Ajay	.....	Assistant Engineer (SWM)
6	Shri. Makane R.D.	.....	Sub Engineer (Maint.)
7	Shri. Chavan Rajesh	.....	Sub Engineer (Maint.)
8	Shri. Jadhav Sandesh	.....	Sub Engineer (Maint.)
9	Shri. Mohite Machindra	.....	Sub Engineer (Maint.)
10	Shri. Basantkar	.....	Sub Engineer (Maint.)
11	Shri. Pawar Mahesh	.....	Sub. Eng. (Maint) / Nodal Officer
12	Shri. Patke Pravin	.....	Jr. Engineer (Maint.)
13	Shri. Patil Anand	.....	Jr. Engineer (Maint.)
14	Smt. Joshi Shubhada	.....	Jr. Engineer (Maint.)
15	Shri. Bhabad Yogesh	.....	Jr. Engineer (Maint.)
16	Smt. Kamble Sanjana	.....	Jr. Engineer (Maint.)
17	Shri. Mane Sachin	.....	Jr. Engineer (Maint.)

18	Smt. Sarang Sushma	.....	Jr. Engineer (Maint.)
19	Shri. Jagtap Amit	.....	Jr. Engineer (Maint.)
20	Shri. Sharma Vicky	.....	Jr. Engineer (Maint.)
21	Shri. Chougule Prashant	.....	Jr. Engineer (Maint.)
22	Smt. Patil Snehal	.....	Jr. Engineer (Maint.)
23	Shri. Bhoir	.....	AS. Garden Dept.
24	Shri. Karande	.....	Jr. Tree Officer/ Horticulture Assistant

P/South Ward

1	Shri. Biradar Ramakant	.....	Assistant Commissioner
2	Shri. Dhonde Santoshkumar	.....	Assistant Commissioner
3	Shri. Narawde Ajit	.....	Executive Engineer
4	Shri. Dhiver Mahesh	.....	Assistant Engineer (Maint.)
5	Shri. Bure Hemant	.....	Assistant Engineer (B. & F.)
6	Shri. Mulani Salim	.....	Sub Engineer (Maint.)
7	Shri. Vaidya Pradnesh	.....	Sub Engineer (Maint.)
8	Shri. Nemade Mahesh	.....	Sub Engineer (Roads)
9	Smt. Chaphalkar Geeta	.....	Sub Engineer (Roads)
10	Shri. Chavan Suraj	.....	Sub Engineer (B. & F.)
11	Shri. Dongare Sudhir	.....	Jr. Engineer (Maint.)
12	Shri. Khedekar Amit	.....	Jr. Engineer (Maint.)
13	Smt. Raut Nikita	.....	Jr. Engineer (Maint.)
14	Shri. Patle Vikas	.....	Jr. Engineer (Maint.)
15	Shri. Shetye Nikhil	.....	Jr. Engineer (Maint.)
16	Shri. Patel Nasir	.....	Jr. Engineer (B. & F.)

P/North ward

1	Dr. (Smt.) Hasnale Sangita	.....	Assistant Commissioner
2	Shri. Jain Devendrakumar	.....	Assistant Commissioner
3	Shri. Gaekwad Kalayyapa	.....	Executive Engineer
4	Shri. Patil Nishikant	.....	Assistant Engineer (Maint.)
5	Shri. Jadhav Pankaj	.....	Assistant Engineer (Maint.)

6	Shri. Jadhav Amit	.....	Assistant Engineer (Maint.)
7	Shri. Panchal Naresh	.....	Assistant Engineer (B. & F.)
8	Shri.Dudhara Tushar	.....	Sub Engineer (B. & F.)
9	Shri. Jaisur Nirav	.....	Sub Engineer (Maint.)
10	Shri. Kadam Arvind	.....	Sub Engineer (Maint.)
11	Shri. Devkar Ravikant	.....	Sub Engineer (Maint.)
12	Shri. Mourya Ravi	.....	Sub Engineer (Maint.)
13	Shri. Sarang Jagdish	.....	Sub Engineer (Roads)
14	Shri. Tivarekar Pravin	.....	Jr. Engineer (Maint.)
15	Shri.Bhoir Dipesh	.....	Jr. Engineer (Maint.)
16	Shri. Satpute Vinod	.....	Jr. Engineer (Maint.)
17	Shri. Mahajan Gaurav	.....	Jr. Engineer (Maint.)
18	Shri. Jadhav Ashish	.....	Jr. Engineer (Maint.)
19	Shri. Nikam Nikhil	.....	Jr. Engineer (Maint.)
20	Shri. Kamble Vikrant	.....	Jr. Engineer (Maint.)
21	Smt. Tatekar Pallavi	.....	Jr. Engineer (Maint.)
22	Shri. Mane Omkar	.....	Jr. Engineer (Maint.)
23	Shri. Pujare Santosh	.....	Jr. Engineer (Maint.)
24	Shri. More Sudhir	.....	Jr. Engineer (Maint.)
25	Shri. Agrawal Siddharth	.....	Jr. Engineer (Maint.)
26	Shri. Dhavale Suraj	.....	Jr. Engineer (Maint.)
27	Shri. Sulane Arjun	.....	Jr. Engineer (Maint.)

R/South Ward

1	Shri. Gaikwad S. R.	.....	Assistant commissioner
2	Shri. Pabarekar S. S.	.....	Executive Engineer
3	Shri. Tirhekar V. C.	.....	Assistant Engineer (Maint.)
4	Shri. Walwatkar Jayant	.....	Sub Engineer (Maint.)
5	Shri. Chouhan Rakesh	.....	Sub Engineer (Maint.)
6	Shri. Dube Sushant	.....	Sub Engineer (Maint.)
7	Shri. Rathod Sunil	.....	Jr. Engineer
8	Shri. Dharmadhikari	.....	Jr. Engineer

9	Shri. Mandawakar Sandesh	.....	Jr. Engineer
10	Shri. Gade	.....	Jr. Engineer
11	Shri. Raut Niket	.....	Jr. Engineer

R/Central Ward

1	Shri. Gandhi Kishore	.....	Assistant commissioner
2	Shri. Bapat Umesh	.....	Executive Engineer
3	Shri. Pawar Prabhakar	.....	Assistant Engineer (Maint.)
4	Shri. Ingale Sanjay	.....	Assistant Engineer (Maint.)
5	Shri. Shinde Dattaram	.....	Sub Engineer (Maint.)
6	Shri. Dalvi Dattatray	.....	Sub.Engineer (T.P.)
7	Shri. Vinde Nitin	.....	Sub Engineer (SWM)
8	Shri. Nerurkar Anand	.....	Sub Engineer (Maint.)
9	Shri. Dudhbhate Sanjay	.....	Sub Engineer (Maint.)
10	Shri. Kulkarni Sachin	.....	Jr. Engineer (Maint.)
11	Smt. Lad Hemlata	.....	Jr. Engineer (Maint.)
12	Shri. Shirudkar Chetan	.....	Jr. Engineer (Maint.)
13	Shri. Rohile Nagnath	.....	Jr. Engineer (Maint.)
14	Smt. Padwal Pranali	.....	Jr. Engineer (Maint.)
15	Shri. Shinde Sanjay	.....	Tracer

R/North Ward

1	Shri. Dhonde Santosh	.....	Assistant Commissioner
2	Shri. Kamble Vijay	.....	Assistant Commissioner
3	Shri. Bhavari Devidas	.....	Executive Engineer
4	Shri. Pisal K. K.	.....	Assistant Engineer (Maint.)
5	Shri. Machewad Ramanand	.....	Sub Engineer (Maint.)
6	Shri. Gaikwad Sachin	.....	Sub Engineer (Maint.)
7	Shri. Chavan Harshal	.....	Sub Engineer (Maint.)
8	Shri. Sodaye Shrikant	.....	Jr. Engineer (Maint.)
9	Shri. Salunkhe Sandip	.....	Jr. Engineer (Maint.)
10	Shri. Patil Hemant	.....	Horticulture Assistant

L Ward

1	Shri. Sapkale Prashant	.....	Assistant Commissioner
2	Shri. Ambi Ajit Kumar	.....	Assistant Commissioner
3	Shri. Rahi Vivek	.....	Executive Engineer
4	Shri. Rathod Prashant	.....	Assistant Engineer (Maint.)
5	Shri. Khan Anis	.....	Assistant Engineer (Maint.)
6	Shri. Choudhari Chandrakant	.....	Assistant Engineer (B. & F.)
7	Shri. Palve Mangesh	.....	Sub Engineer (Maint.)
8	Smt. Bavkar Rupali	.....	Sub Engineer (Maint.)
9	Shri. Malvankar Narendra	.....	Sub Engineer (Maint.)
10	Shri. Patil Siddhesh	.....	Sub Engineer (Maint.)
11	Shri. Lokhande Rajendra	.....	Sub Engineer (Maint.)
12	Shri. Puri Anagraj	.....	Jr. Engineer (Maint.)
13	Shri. Usman Shikalgar	.....	Jr. Engineer (Maint.)
14	Shri. Ugale Tushar	.....	Jr. Engineer (Maint.)
15	Shri. Bharade Ritesh	.....	Jr. Engineer (Maint.)
16	Shri. Tari Rohan	.....	Jr. Engineer (Maint.)
17	Shri. Daur Sachin	.....	Jr. Engineer (Maint.)
18	Shri. Gavli Prashant	.....	Jr. Engineer (Maint.)
19	Shri. Sonar Rohit	.....	Jr. Engineer (Maint.)

M/East Ward

1	Shri. Dighavkar Kiran	.....	Assistant Commissioner
2	Shri. Kothari Atul	.....	Executive Engineer
3	Shri. Bendre Ganesh	.....	Assistant Engineer (Maint.)
4	Shri. Chakrapani Alle	.....	Assistant Engineer (Maint.)
5	Shri. Mahajan Vijay	.....	Sub Engineer (Maint.)
6	Shri. Jaiswar Abhimanyu	.....	Sub Engineer (Maint.)
7	Shri. Patil Bhushan	.....	Sub Engineer (Maint.)
8	Shri. Rokade Jagdish	.....	Sub Engineer (Maint.)
9	Shri. Tambe Sujit	.....	Jr. Engineer (Maint.)
10	Shri. Gaikwad Jalendra	.....	Jr. Engineer (Maint.)

11	Shri. Gavade Abhishek	.....	Jr. Engineer (Maint.)
12	Smt. Ugale Swati	.....	Jr. Engineer (Maint.)
13	Shri. Marathe Yugandhar	.....	Jr. Engineer (Maint.)
14	Smt. Mali Sujata	.....	Jr. Engineer (Maint.)
15	Smt. Sahare Swetha	.....	Jr. Engineer (Maint.)
16	Shri. Ishi Vijay	.....	Jr. Engineer (Maint.)
17	Shri. Purkar Yugant	.....	Jr. Engineer (Maint.)

M/West Ward

1	Shri. Kale Harshad	.....	Assistant Commissioner
2	Shri. Ghag Sambhaji	.....	Executive Engineer
3	Shri. Kasgikar Bhaskar	.....	Assistant Engineer (Maint.)
4	Shri. Nikalaje Santosh	.....	Sub Engineer (Maint.)
5	Shri. Pawar Balwant	.....	Sub Engineer (Maint.)
6	Smt. Ubhare Rashmi	.....	Sub Engineer (Maint.)
7	Shri. Nanote Pravin	.....	Sub Engineer (Roads)
8	Shri. Kakade Sachin	.....	Sub Engineer (Roads)
9	Smt. Parte Anusaya	.....	Sub Engineer (Roads)
10	Shri. Sonattake Kewal	.....	Jr. Engineer (Maint.)
11	Shri. Guhilot Raturaj	.....	Jr. Engineer (Maint.)
12	Shri. Laddha Hemant	.....	Jr. Engineer (Maint.)
13	Smt. Rathod Kalyani	.....	Jr. Engineer (Maint.)
14	Shri. Thombare Mahesh	.....	Jr. Engineer (Maint.)
15	Shri. Lambade Sandeep	.....	Jr. Engineer (Maint.)
16	Shri. Thakur A.P.	.....	Jr. Engineer (Maint.)

N Ward

1	Shri. Dwiwedi Sudhanshu	.....	Assistant Commissioner
2	Shri. Momle Bharat	.....	Assistant Engineer (Maint.)
3	Shri. Patil Madhukar	.....	Assistant Engineer (Maint.)
4	Shri. Chougule Deepak	.....	Sub Engineer (Maint.)
5	Shri. Chavan Sachin	.....	Sub Engineer (Maint.)

6	Shri. Palve Tushar	.....	Sub Engineer (Maint.)
7	Smt. Sagane Apurva	.....	Jr. Engineer (Maint.)
8	Shri. Nerkar Nikhil	.....	Jr. Engineer (Maint.)
9	Shri. Jadhav Prathamesh	.....	Jr. Engineer (Maint.)
10	Smt. Bhojar Komal	.....	Jr. Engineer (Maint.)
11	Smt. Kotwal Kalpana	.....	Jr. Engineer (Maint.)
12	Shri. Jagapure Kiran	.....	Jr. Engineer (Maint.)
13	Shri. Chavan Jagdish	.....	Jr. Engineer (Maint.)

S Ward

1	Shri. Gaikwad Prashant	.....	Assistant Commissioner
2	Smt. Jadhav Chanda	.....	Assistant Commissioner
3	Shri. Lokhande Girish	.....	Executive Engineer
4	Shri. Ahire Dilip	.....	Assistant Engineer (Maint.)
5	Shri. Pagar Rajendra	.....	Assistant Engineer (Maint.)
6	Dr. Jadhav Jitendra	.....	Medical Officer Health
7	Shri. Chavan Anil	.....	Sub Engineer (Maint.)
8	Shri. Patil Sanjaykumar	.....	Sub Engineer (Maint.)
9	Shri. Meghani Nandkumar	.....	Sub Engineer (Maint.)
10	Shri. Jadhav Bipin	.....	Sub Engineer (Maint.)
11	Shri. Thakare Sanjaykumar	.....	Sub Engineer (Maint.)
12	Shri. Mahajan Dnyandeep	.....	Jr. Engineer (Maint.)
13	Smt. Ukey Bhagyashri	.....	Jr. Engineer (Maint.)
14	Shri. Kudalkar Sameer	.....	Jr. Engineer (Maint.)
15	Shri. Pardeshi Ritesh	.....	Jr. Engineer (Maint.)
16	Shri. Nikam Ravindra	.....	Jr. Engineer (Maint.)
17	Smt. Patil Yogita	.....	Jr. Engineer (Maint.)
18	Shri. Kardile Mayur	.....	Jr. Engineer (Maint.)
19	Smt. Padwal Poonam	.....	Jr. Engineer (Maint.)
20	Smt. Pawra Manisha	.....	Jr. Engineer (Maint.)
21	Smt. Morkal Pooja	.....	Jr. Engineer (Maint.)
22	Shri. Kathore Rupesh	.....	Jr. Engineer (Maint.)
23	Smt. Suryavanshi Shailaja	.....	Horticulture Assistant

T Ward

1	Smt. Jadhav Chanda	.....	Assistant Commissioner
2	Shri. Sapkale Prashant	.....	Assistant Commissioner
3	Shri. Tawade Sunil	.....	Assistant Engineer (Maint.)
4	Shri. Jadhav Vitthal	.....	Assistant Engineer (Maint.)
5	Shri Pingle Sunil	.....	Road Engineer (Maint.)
6	Smt. Ghodekar Vrushali	.....	Road Engineer (Maint.)
7	Smt. Mate Veena	.....	Sub Engineer (Maint.)
8	Shri. Joshi Mahesh	.....	Sub Engineer (Maint.)
9	Shri. Koli Nikhil	.....	Jr. Engineer (Maint.)
10	Shri. Ghadge Amol	.....	Jr. Engineer (Maint.)
11	Smt. Rathod Minakshi	Jr. Engineer (Maint.)
12	Late Smt. Rokade Sneha	Jr. Engineer (Maint.)
13	Shri. Mohite Tanuj	Labour

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