



PUBLIC OPEN SPACE

MAPPING AND MANAGEMENT
STRATEGY FOR MUMBAI



URBAN
DESIGN
RESEARCH
INSTITUTE



Advocacy - Governance - Renewal

Public Open Space Mapping and Management Strategy for Mumbai



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About UDRI

The Urban Design Research Institute (UDRI) was established in 1984 as a public charitable trust in Mumbai, with the purpose of enriching the understanding of the urban environment and contributing to its improvement.

UDRI's mission is to transform Indian cities into inclusive centers of economic growth that are humane, balancing their cosmopolitan cultural heritage and social fabric with equitable development and efficient infrastructure.

Urban planning and policy, urban design, environmental planning, and heritage conservation are at the core of UDRI's work. Through an integrated system of public lectures, exhibitions, forums, publications, research programs, and online platforms, we serve as a vital resource for citizens, resident associations, academic institutions, NGOs, and government authorities.



About NAGAR

NAGAR (NGO Alliance for Governance and Renewal) is a citizen-led organization established in 2000 with the vision of improving the quality of life in Mumbai. Constituted as both a public charitable trust and a registered society, NAGAR builds upon the work of its former constituents - CitiSpace, CLEAN-Air, and CLEAN-Sweep.

NAGAR works across diverse urban themes, including the protection and enhancement of public open spaces, solid waste management, street vending regulation, air quality improvement, conservation of built and natural heritage, road space management, and water conservation.

Through advocacy, research, public engagement, legal interventions, and collaboration with citizens, civic organizations, academic institutions, and government agencies, NAGAR addresses critical urban challenges while fostering informed civic participation.



Executive Summary

Mumbai's open spaces are critical to the city's environmental resilience, public health, and overall quality of life. Yet, as rapid urbanization continues to intensify, these vital "breathing spaces" are increasingly threatened by encroachments, illegal developments, and fragmented management systems. The city today faces a twofold challenge; a severe deficit in per capita open space, falling significantly short of national standards; and inadequate protection, development, and maintenance of the limited open spaces that remain.

Over time, these challenges have been compounded by the absence of a transparent and integrated open space policy, along with inconsistent and poorly managed databases. Addressing these systemic gaps is essential not only to safeguard Mumbai's ecological balance and climate resilience, but also to ensure equitable access to healthy and liveable urban environments for its citizens.

Developed based on pilot case study in 2 Mumbai wards, the Public Open Space Mapping and Management Strategy comprises three key components:

1. **A ward-wise GIS-based spatial database** of Existing Open Spaces (EOS) and Reserved Open Spaces (ROS);
2. **An open space management strategy report** including a scalable open space mapping methodology and annexures documenting standard practices, and lessons from the field; and
3. **An action matrix integrated into an app** that empowers citizens to monitor open spaces and work with government agencies to resolve issues.

Together, these components aim to enable transparent and real-time monitoring, issue reporting, and collaborative governance between citizens, government agencies, civic organizations, and private stakeholders.

The strategy identifies key gaps in the current system, including discrepancies in municipal data, underutilized and inaccessible open spaces, overlapping institutional responsibilities, and limited financial and managerial capacity within existing departments.

To address these challenges, the report recommends:

1. **A public GIS platform** for public open space monitoring and citizen engagement;
2. **An urban-heat mitigation based approach** focused on acquisition and activation of Reserved Open Spaces (ROS);
3. An interdisciplinary **Ideation Cell** for facilitating stakeholder engagement to collate a design brief for large public open spaces before tendering;
4. **A Permanent Oversight Cell** for long-term management and maintenance post completing of large open spaces;
5. **Structured participation** of ALMs, community groups, and local stakeholders; and
6. An **open space prioritisation and funding framework** to identify opportunities for collaborative CSR funding towards select projects based on user feedback.

While the Development Plan remains the primary statutory instrument for planning urban amenities, the Open Space Management Strategy aims to function as a complementary guideline focused on targeted, implementation-oriented interventions. Effective management of open spaces in a mega-city like Mumbai requires robust, regularly updated, and publicly accessible data; a decentralised governance framework with active citizen partnerships serving as constant eyes on the ground; transparent funding mechanisms; and a shared vision to guide the city toward a more cohesive, resilient, and greener future. By integrating technology, governance reform, and citizen participation, the project establishes a practical and scalable framework for a more equitable and sustainable public realm.

Although comparable frameworks have been adopted in several international cities, similar guidelines are largely absent in the Indian context. This strategy therefore aims not only to support Mumbai's long-term urban sustainability goals, but also to serve as a potential roadmap for other Indian cities seeking to strengthen the planning, management, and stewardship of public open spaces.



Anuradha Parmar

Executive Director, UDRI

Acknowledgements

The effort to constitute the Open Spaces Committee in 2014* marked an important step towards framing a comprehensive strategy for Mumbai's open spaces.* Although the committee and its draft report did not progress beyond the draft stage, it initiated discussions on the need for similar efforts towards the management of open spaces in the city. Our strategy builds on these concerns and extends the effort to create a guiding framework beyond documentation.

This report draws from NAGAR's long-standing engagement with legal interventions concerning public open spaces. We thank Mr Shiraz Rustomjee, Ms Gulnar Mistry, Mr Akash Rebello, Mr Prateek Pai, and Mr Peterasp Sasuri for their valuable insights and engagement with the research.

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Nayana Kathpalia, trustee of NAGAR and UDRI, and member of the Executive Team of the INTACH Greater Mumbai Chapter, brought decades of experience in public open space advocacy in Mumbai, including her work on Oval Maidan and Cross Maidan since 1995.

Parul Kumtha, Principal Architect of Nature Nurture Architects and Planners and trustee of NAGAR, is empanelled as an Access Auditor under the *Access India Campaign*, of the Ministry of Social Justice and Empowerment, Government of India. Her expertise in accessibility strengthened the report's focus on inclusive public open space planning.

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We acknowledge the contribution of our survey team,** whose fieldwork across 627 sites formed the foundation of this report. We appreciate the support of the UDRI team, including Ninad Sansare, Kshitij Misra, Snigdha GK, Krisha Kothari, and Afreen Sheikh for their assistance from time to time.

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* Refer to Annexure B for the details on the Expert Committee and the draft report.

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Definitions

1. Natural Areas (NA)

Natural Area Zone (NA) is an environmentally sensitive zone amenable to buildable development with the approval of the Competent Authority. NA includes Sanjay Gandhi National Park, mangrove forests, mud flats and creeks.

2. Public Open Space (POS)

Those open spaces (OS) where there is right to access and any restrictions imposed are universally applicable.

3. Existing Open Spaces (EOS)

Public open spaces that are acquired by the government and are developed as public open spaces.

4. Reserved Open Spaces (ROS)

The parcel of lands that are reserved as public open spaces but are yet to be acquired by the government.

5. Layout RG

Layout RG (Recreational Grounds) are specific to the community of a particular layout making them accessible to the layout community only.

6. No Development Zone (NDZ)

RDDP (Report on Draft Development Plan 2034) defines No Development Zone as comprising potentially developable lands kept in abeyance for future development. These include areas demarcated as Special Development Zones (SDZ) and Natural Areas (NA)

7. Special Development Zone (SDZ)

Special Development Zone (SDZ) is a zone which is to be developed predominantly for the society at large with emphasis on Affordable Housing, POS and necessary Social Infrastructure.

8. SDZ I

Includes lands with encumbrances of protected slums.

9. SDZ II

The balance NDZ areas after excluding SDZ I and Natural Areas are demarcated as SDZ II

Abbreviations

1. DCPR:	Development Control & Promotion Regulations 2034
2. DP:	Development Plan
3. EOS:	Existing Open Spaces
4. FSI:	Floor Space Index
5. GoM:	Government of Maharashtra
6. MCGM:	Municipal Corporation of Greater Mumbai
7. MCZMA:	Maharashtra Coastal Zone Management Authority
8. MHADA:	Maharashtra Housing and Area Development Authority
9. MMRDA:	Mumbai Metropolitan Region Development Authority
10. MbPT:	Mumbai Port Trust
11. MoEF:	Ministry of Environment and Forest
12. NA:	Natural Area
13. NBC:	National Building Code
14. NGO:	Non-Government Organization
15. PG:	Playground
16. POS:	Public Open Spaces
17. RDDP 2034:	Revised Draft Development Plan 2034
18. RG:	Recreation Ground
19. ROS:	Reserved Open Spaces
20. SDZ:	Special Development Zone
21. SPA:	Special Planning Authority
22. SRA:	Slum Rehabilitation Authority
23. SRDP-1991:	Sanctioned Revised Development Plan-1991
24. TDR:	Transferable Development Rights
25. TPS/TP Scheme:	Town Planning Scheme
26. URDPFI:	Urban and Regional Development Plans Formulation and Implementation
27. AR:	Accommodation Reservation
28. CRZ:	Coastal Regulation Zone
29. CTS No.:	Cadastral Traverse Survey Number



Kaifi Azmi Park, K-West ward, Andheri (West) | Source: UDRI + NAGAR

1

Introduction

1.1. Overview

Public open spaces (POS) are key to health and wellbeing of people in cities and their importance is well acknowledged in both national and international standards. The United Nations' Sustainable Development Goals (SDGs), established in 2015, emphasise the need for universal access to safe, inclusive, and accessible green and public spaces as a target under the broader goal of Sustainable Cities & Communities (SDG 11.7),¹ highlighting the need for ensuring access as a key criteria in the definition of open spaces.

Typically, public open spaces are designated as ground level, open-to-sky green areas and include parks, gardens, playgrounds, beaches, promenades, and public plazas. Their planning, management, and regulation are guided by development plans, which vary across different jurisdictions. Definitions and criteria for POS differ significantly across countries, states, and cities, leading to diverse standards for their provision and governance.

The Charter of Public Space² by UN-Habitat defines public spaces as “*all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive.*” It further emphasises that public spaces are essential for individual and social well-being, serving as communal areas that reflect cultural diversity, natural heritage, and collective identity.³ In terms of spatial allocation, UN-Habitat recommends that **15-20% of total urban land should be designated as open space.**

Similarly, the World Health Organization (WHO) suggests a minimum of **9 sq.m. per capita** and emphasises that **all residents should have access to a green space within a 15-minute walking distance.**⁴ While these guidelines use different metrics, they share a common goal: ensuring the equitable distribution and accessibility of public open spaces in urban areas.

Nationally, the **Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines suggest a benchmark of 10-12 sq.m. per capita open space for Indian cities.** This includes recreational space, organised green areas, and other common spaces like vacant lands, flood plains, forest cover, etc.⁵ For the built-up civic areas, the **National Building Code (NBC)**⁶ suggests **3 sq.m. per capita open space as minimum norm.**

While these standards provide a reference for cities to plan and manage their open spaces effectively, contributing to sustainable and liveable urban environments, it is important to note, that **‘access to open spaces’ is a key element missing from the national guidelines.**

¹ “Sustainable Development Goals,” UNDP, accessed January 3, 2025, <https://www.undp.org/sustainable-development-goals>.

² The discussion draws on the broader concept of public space as defined in international frameworks. While often used interchangeably, public space is a broader, globally applied term with definitions that vary across contexts. Public open space is used more specifically within particular cities or planning frameworks.

³ UN-Habitat, Global Public Space Toolkit: From Global Principles to Local Policies and Practice, nos. 978-92-1-132656-7 (UN-Habitat, 2016), 6.

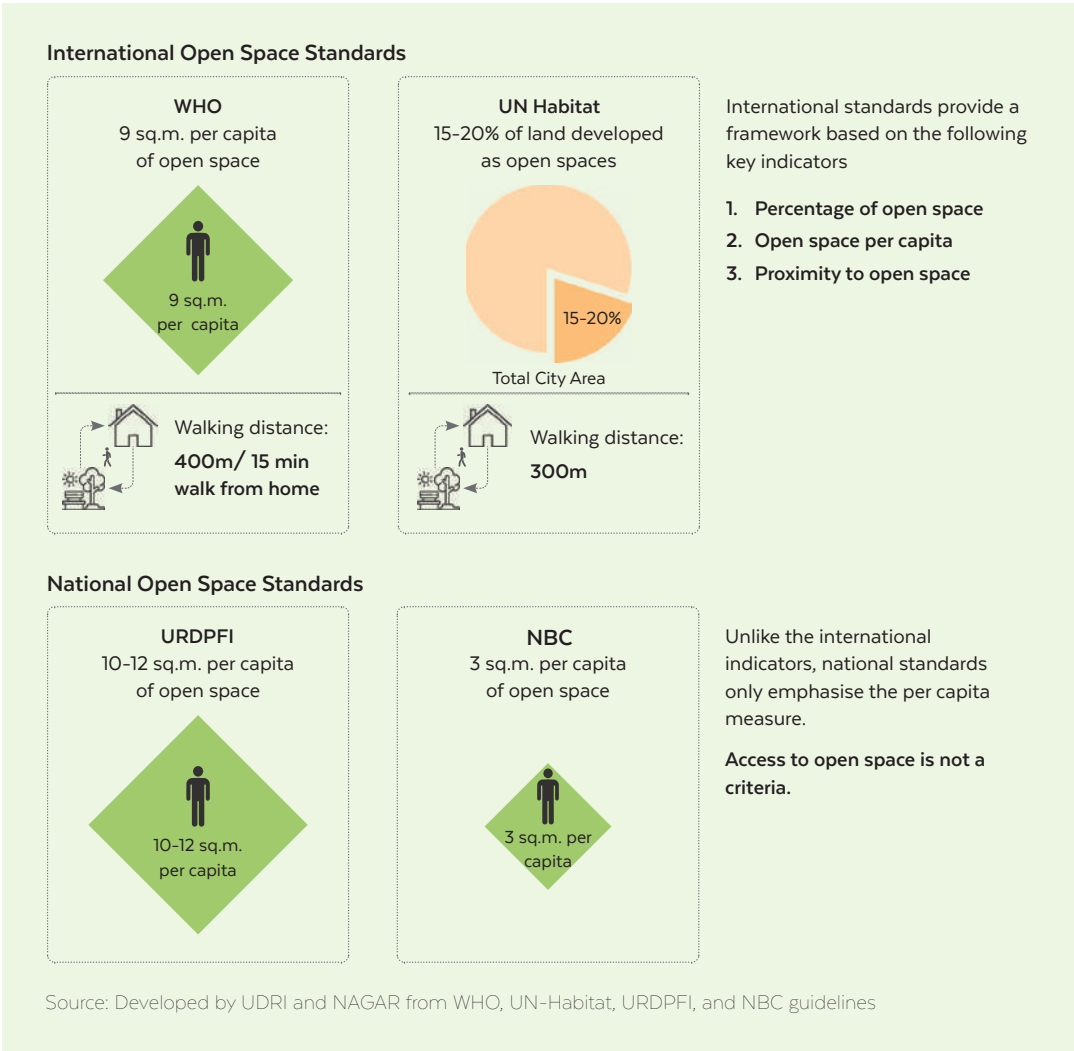
⁴ Pablo Vaggione, Urban Planning for City Leaders, nos. 978-92-1-132505-8 (United Nations Human Settlements Programme (UN-Habitat), 2013), 43.

⁵ Town and Country Planning Organisation, Urban and Regional Development Plans Formulation and Implementation (URDPFI) guidelines, Vol. 1 (Ministry of Urban Development, GoI, 2015), 386-88, 603.

⁶ The NBC, unlike the URDPFI, focuses specifically on built-up areas and recommends a minimum standard primarily for recreational public open spaces excluding natural areas.

Although the national and international guidelines provide a benchmark, they do not hold legislative power. Instead, cities and municipal corporations define their own standards and provision through development plan regulations, mandated by the Town Planning Act. As a result, open space availability across Indian cities varies substantially.

Figure 1: International and national open space standards

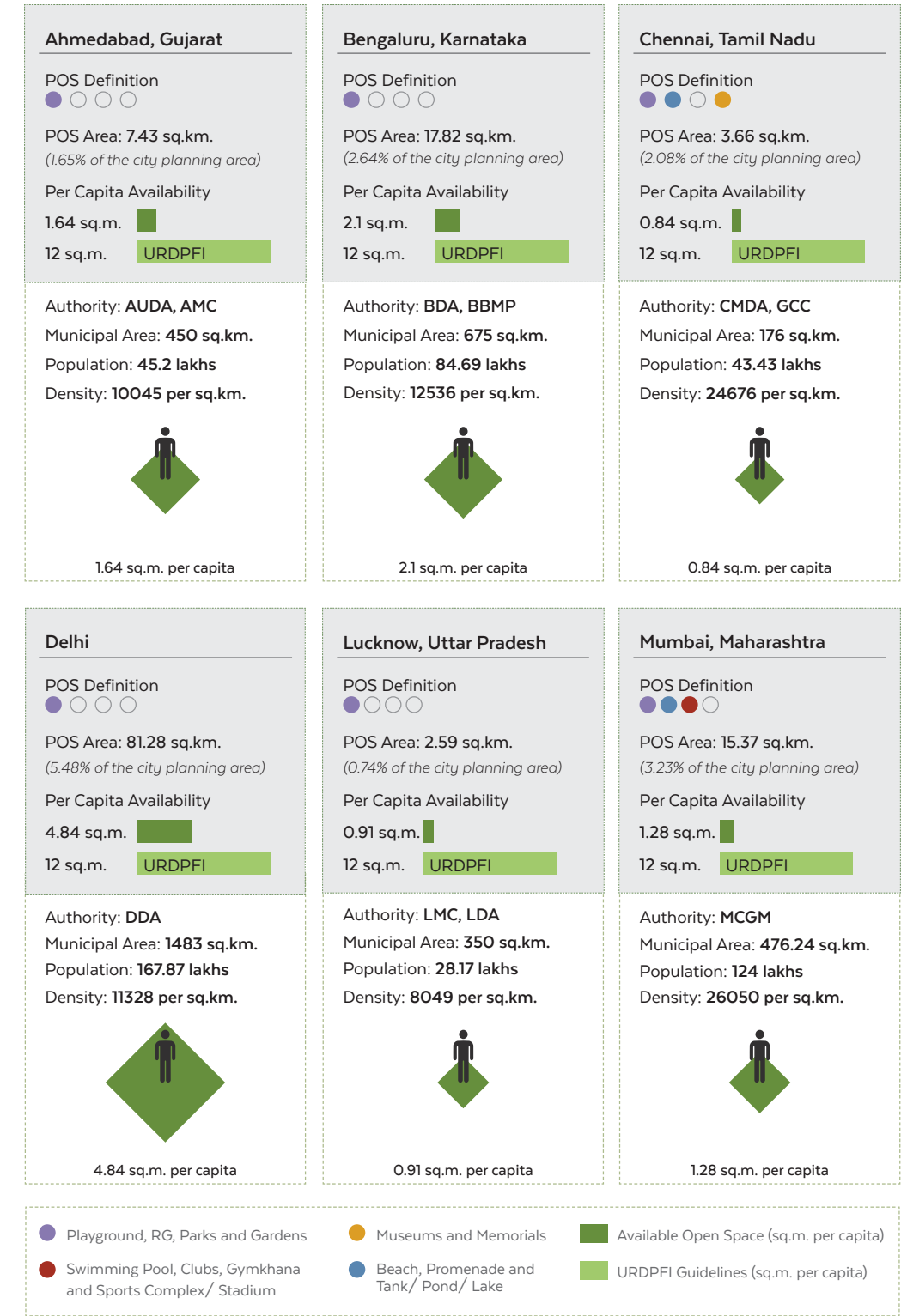


Comparing public open spaces across cities is difficult because each city defines them differently. Figure 2 illustrates these variations across six Indian cities, with each coloured circle representing a category of open space included in a city's POS definition.

Bengaluru, Delhi, Lucknow, and Ahmedabad count only parks, gardens, and playgrounds as public open spaces; Chennai also includes waterfronts and cultural spaces; Mumbai uses an even broader definition that includes clubs and sports complexes. Another variation is the planning area used. Mumbai, Delhi, and Lucknow measure open space distribution within city limits, while the other cities use larger metropolitan area boundaries.

Despite these variations, none of the six cities meet the URDPFI norm of 12 sq.m. per capita. Greater Mumbai, the most densely populated, offers only 1.28 sq.m. per capita existing open space.

Figure 2: Open space provision across 6 Indian cities

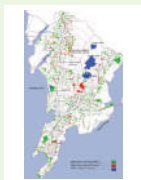


Source: Developed by UDRI and NAGAR from the planning documents of the respective cities

1.2. Understanding Open Spaces in Mumbai

In Mumbai, over the past two decades, multiple studies have been conducted to document and analyse open spaces in the city, listed in Figure 3 below. These studies provide valuable insights into the evolving nature of Mumbai’s open spaces, shaping discussions on their availability, accessibility, and management.

Figure 3: Studies examining various aspects of public open spaces in Mumbai

	2010 Breathing Spaces Fact file of 600 DP designated public open spaces by NAGAR (CitiSpace)	The project surveyed and mapped 1400 open spaces designated by the Development Plan in 1991 and provided a report detailing the condition of selected 600 open spaces in its publication 'Breathing Spaces'.
	2011 Open Mumbai Re-envisioning the city and its open spaces by PK Das & Associates	Open Mumbai presented a comprehensive vision plan for open space improvement, management, and maintenance, utilising satellite imagery for mapping purposes.
	2012 Inventorisation of Open Spaces and Water Bodies in Greater Mumbai by Neera Adarkar Associates & MMREIS	Mapped all waterbodies and DP 1991 demarcated open spaces in the city through detailed on-ground surveys to identify issues endangering these amenities and offered recommendations.
	2021 The HARITA Project by Project Mumbai and Ministry of Mumbai's Magic	Mapped around 700 gardens and recreational grounds in Mumbai.

Additionally, there are other studies including WRI’s ‘*Greening Mumbai – Citizen’s Handbook for Greening Initiatives*’ in collaboration with MCGM, ‘*The Trees of Mumbai*’ by the Bombay Natural History Society and the Mumbai Metropolitan Region – Environment Improvement Society, and ‘*A Manual for Urban Greening in MMR*’ by MMREIS, that have explored and documented broader environmental aspects, including tree cover, mangroves, water bodies, and biodiversity within public open spaces.

Each of these efforts addresses different but interconnected aspects of urban ecology and open-space management. Ideally, the insights and recommendations from these diverse studies should be consolidated into a comprehensive open space strategy that complements and works in parallel with land use plans, particularly in larger cities.

While land use plans typically identify and designate public open spaces, they rarely articulate how these areas should be preserved, stewarded, or managed over the long term. To bridge this gap, many global mega cities rely on **supplementary planning documents** that offer clear operational guidance for protecting, enhancing, and governing public open spaces. Notable examples include the *City of London’s Open Space Strategy*⁷, *Barcelona’s Pla Natura (Nature Plan) 2021-2030*⁸, and *Amsterdam’s Green Infrastructure Vision 2050: A Liveable City for People Plants and Animals*.⁹

In contrast, Mumbai currently lacks a complementary framework of this nature. While the Development Plan (DP) establishes the overarching spatial and regulatory structure, it is not designed to serve as a comprehensive tool for managing the full lifecycle of public open spaces. Therefore, **there is a critical need for dedicated supplementary planning guidelines that focus explicitly on open space management, both to strengthen the DP and to ensure its effective operationalisation.**

Recognising this need, the Maharashtra State Government’s Urban Development Department (UDD) in 2012 constituted a committee comprising experts, NGOs, and government representatives to draft an open space policy for the entire city. The committee’s recommendations were intended to guide strategies for effective planning, development, and maintenance of open spaces. **In April 2014, ‘Open Space Committee Draft Report’ was compiled** (Annexure B). However, the report was never formally released, and no steps were taken to operationalise its recommendations.

Despite various studies, efforts, and ongoing advocacy, the state of Mumbai’s open spaces remains largely in a poor state. Not only are open spaces encroached and in dilapidated condition, but there is also a discrepancy in the way open spaces are defined, their areas calculated, and allocated use. This leads to misrepresentation of open-space-related facts leading to a lack of transparency and accountability in the way open spaces are managed and maintained.

Figure 4: Examples of encroached and/or unused public open spaces in Mumbai



Source: UDRI and NAGAR survey photos

7 City of London Corporation, The City of London Open Space Strategy (London: City of London Corporation, 2015), <https://www.cityoflondon.gov.uk/assets/Services-Environment/open-space-strategy.pdf>

8 Ajuntament de Barcelona, Pla Natura Barcelona 2021-2030 (Barcelona: Ajuntament de Barcelona, 2021), <https://bcnroc.ajuntament.barcelona.cat/jsui/bitstream/11703/123630/3/Barcelona%20Nature%20Plan%202030%20WEB.pdf>

9 City of Amsterdam, Department of Planning and Sustainability, Amsterdam Green Infrastructure Vision 2050: A Liveable City for People, Plants, and Animals (Amsterdam: Department of Planning and Sustainability, 2020), https://carbonneutralcities.org/wp-content/uploads/2020/09/Amsterdam-Green-Infrastructure-Vision-2050_toegankelijk_02092020.pdf

The protection and management of public open spaces involve multiple stakeholders and require continuous dialogue among them. As open spaces are a public good, they demand constant monitoring and management, a task that cannot be effectively handled by a single government agency alone. Active participation of citizens and local communities significantly supports the management and monitoring of these spaces across the city.

To enable such participation, it is essential to maintain an accurate and up-to-date public database of all open spaces. This database should provide relevant information and reflect on-ground realities, ensuring that all stakeholders are well-informed and equipped to contribute effectively. Additionally, a complementary open space management strategy document that interprets all the policy information pertaining to the open spaces, along the lines of the 2014 open space draft report, needs to be developed and updated regularly.

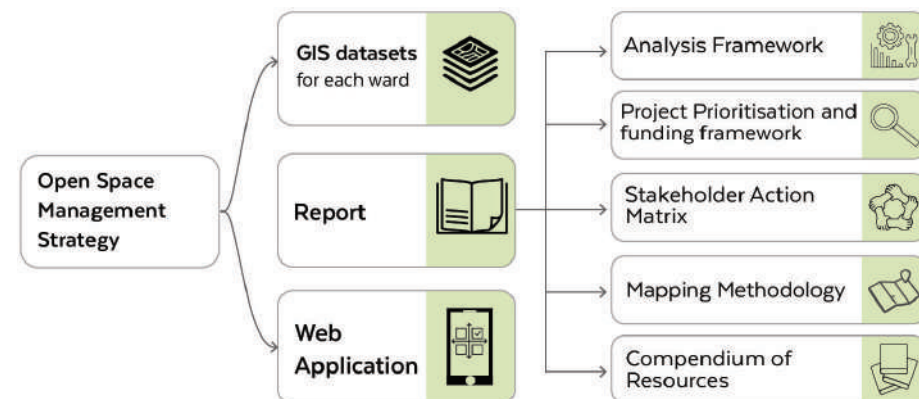
1.3. Public Open Space Mapping and Management Strategy

Jointly initiated by UDRI (Urban Design Research Institute) and NAGAR (NGO Alliance for Governance and Renewal), the Open Space Mapping and Management strategy maps DP 2034 designated open spaces in 2 pilot wards in Greater Mumbai - K-West and P-North (Figure 6). A multi-dimensional framework that integrates policy, governance, physical, and spatial attributes within a single GIS platform is developed.

The strategy comprises 3 key components.

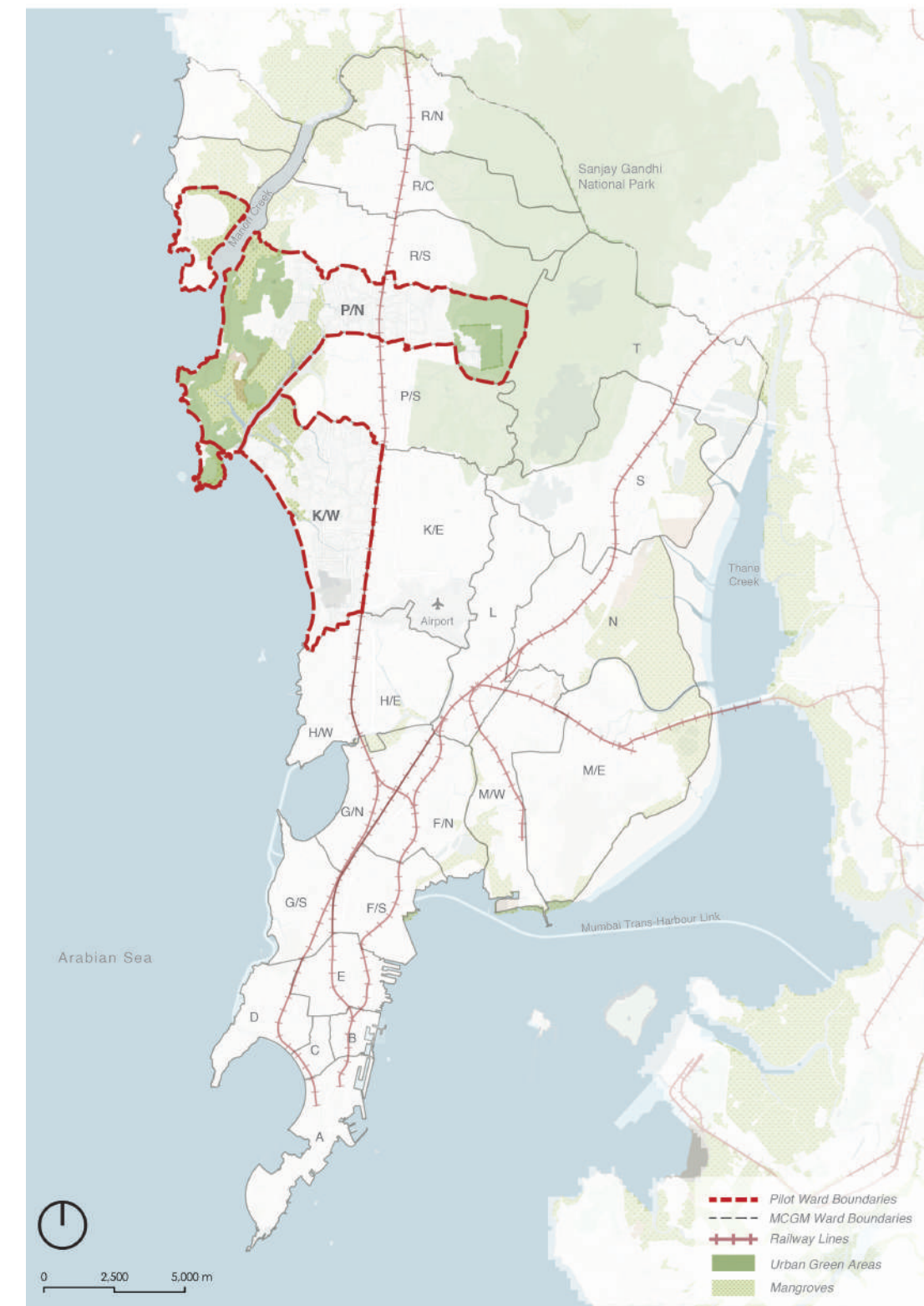
1. A GIS database of open spaces in K-West and P-North.
2. An open space management and strategy document that includes, analysis framework, Project prioritisation and funding framework, stakeholder action matrix, mapping methodology, and compendium of resources.
3. An interactive digital app for citizens to raise and track grievances, and collaborate with the government to resolve them (to be developed).

Figure 5: Components of open space management strategy



Source: UDRI and NAGAR

Figure 6: Pilot wards P-North and K-West



Source: UDRI and NAGAR

Methodology

The methodology combines field surveys, spatial mapping, and data integration to build a comprehensive understanding of public open spaces. A total of 627 public open spaces, including both reserved and existing open spaces, are documented and spatially referenced within a GIS framework.¹⁰

The mapping methodology is documented in detail in Annexure A. **Keeping scalability in mind, the survey and mapping methodology is planned as a roadmap to guide other institutes and organisations to carry out similar exercises in their respective wards**

The process comprises the following stages.

1. **City Diagnostics:** Understanding the open space policy, management, and funding mechanisms in the city. For this study, Greater Mumbai has been documented in Chapter 2
2. **Mapping Methodology:** This includes 3 main components.
 - a. **Framework Preparation:** Two administrative wards, K-West and P-North (Figure 6), were selected as pilot wards. Existing datasets from the Development Plan 2034 and municipal sources were consolidated to identify all DP reserved and designated public open spaces in the selected wards. A survey template and data management framework were created.
 - b. **Survey and Mapping:** On-site assessments were conducted based on the developed framework to capture spatial boundaries, accessibility, amenities, land use, encroachments, and maintenance conditions. Each site was geo-referenced using GPS coordinates to ensure spatial precision. A GIS-based approach was used for precise mapping, data management, and analysis of public open spaces. A total of 627 DP-designated public open spaces were surveyed.
 - c. **GIS Data Integration:** Data collected for each site, using a structured proforma was integrated into GIS and metadata was linked to visual maps. Field and secondary data were integrated by type, ownership, and functional characteristics.

A detailed mapping methodology is provided in Annexure A.

3. **Data analysis and parameter development:** The survey database for K-West and P-North wards was analysed using parameters that capture critical issues affecting access, usability, design quality, and environmental performance. These are detailed in Chapter 3.
4. **Stakeholder Consultation:** Ward-wise open space data was shared with local community groups, elected representatives, and public officials. These engagements were aimed to validate the analysis and capture additional issues, to support the development of actionable tools and strategies. These are detailed in section 3.2 and 3.3.

¹⁰ This study is based on the survey of 627 open spaces in K-West and P-North conducted in 2024. Conditions and changes after 2024 are not considered.

02

City Diagnostics

The development plan serves as the primary legislative framework guiding the provision and protection of open spaces in large cities. However, significant inconsistencies persist in how these spaces are defined, managed, and governed. Therefore, as a starting point, it is essential to examine the broader management and funding structures within which urban open spaces operate.

This section provides a comprehensive understanding of the policies, standards, and guidelines shaping Mumbai's public open spaces under the following subheads.

2.1 Legislative Provisions for Open Spaces in Mumbai

2.2 Distribution of POS Within the Administrative Wards

2.3 Governance, Ownership, and Management of Mumbai's POS

2.4 Annual MCGM Budget Allocation for POS Development

2.1. Legislative Provisions for Open Spaces in Mumbai

There are various types of open spaces spread across Mumbai. The city's western coastline has popular beaches such as Juhu, Versova and Girgaon Chowpatty while the northern suburbs feature ecologically important natural areas like Sanjay Gandhi National Park, and the eastern areas are enhanced by the presence of mangroves. Southern parts of the city are rich in historical parks like Oval Maidan, Azad Maidan, Mahalaxmi Racecourse, and Veermata Jijabai Bhosale Botanical Garden and Zoo, established during colonial times.

The development plan (DP) is the main statutory document that maps and categorises these open spaces in the city. **It is important to note that small waterbodies within the city are also categorised and documented under open spaces.** Refer Annexure C to see all the categories and their permissible uses under DP 2034.

The primary role of the DP is to make land use provisions to accommodate amenities as per future projected demand in the city. Public open spaces (POS) is one such amenity, and one of the guiding objectives of DP 2034 is to *“endow the city with the enhanced environment and quality of life; for which it specifically focuses on the development of open spaces.”*¹¹ The DP 2034 allocates 6.13 sq.m. per capita open space increasing it from 2.48 sq.m. per capita in DP 1991.¹² Figure 9 shows the comparison between DP 1991 and DP 2034 allocation of open spaces.

¹¹ Municipal Corporation of Greater Mumbai, Report on Draft Development Plan - 2034 (MCGM, 2016), 95.

¹² The difference between the two DP figures is largely due to a change in how POS were classified. DP 2034 includes a wider range of categories under POS compared to DP 1991, resulting in a significantly expanded definition. Because the scope of what qualifies as POS changed between the two plans, the per-capita POS figures are not directly comparable.

2.1.1. Provision of Open Spaces in the DP 1991

The Development Plan for 1991 (DP 1991) broadly categorised all open spaces in Mumbai into Public Open Spaces (POS) and No Development Zone (NDZ). The POS were further categorised into

- 1. **Designated Open Spaces (DOS):** plots already existing on the ground
- 2. **Reserved Open Spaces (ROS):** plots earmarked for future acquisition and development as open spaces.

DP 1991 allocated 2968.3 ha of POS (DOS + ROS), providing about 2.48 sq.m. per capita¹³, against its own standards of 2 sq.m. per capita in the Island City and 4 sq.m. per capita in the suburbs.¹⁴

As shown in Figure 9, POS, as defined in DP 1991, included gardens and parks (G), playgrounds (PG), recreational grounds (RG), clubs and gymkhanas, beaches and promenades, swimming pools, and stadiums.

The NDZ covered 13,706 ha, accounting for 32% of the city’s total area.¹⁵ It included green belts, hills, woodlands, mangroves, swamps, outer parks, etc. Many of NDZ areas, not included in the open space calculation, were ecologically sensitive, yet their role in conservation or public utility was not clearly defined and the regulation did not clearly outline permissible and non-permissible uses. Instead, several NDZ tracts were reserved for potential future development, lacking explicit mandates for environmental protection.

2.1.2. Provision of Open Spaces in the DP 2034

The DP 2034 introduces a revised classification of open spaces in Mumbai (Figure 9). It claims to provide a total of 6.13 sq.m. per capita public open space,¹⁶ and a total of 10.32 sq.m. per capita when Natural Areas are included.¹⁷

One of the key changes is the reconfiguration of No Development Zones (NDZ) from DP 1991.

All ecologically sensitive areas are extracted from NDZ and placed under a newly designated Natural Areas (NA) category, ensuring their permanent protection against built development. Within Natural Areas, only limited activities such as boardwalks, trekking facilities, public sanitary conveniences, sewerage pumping stations, and other essential municipal facilities are permitted.¹⁸

The remaining NDZ lands, previously earmarked for potential development, are reorganised into two new categories:

- 1. **Special Development Zone-I (SDZ-I):** zones occupied by protected occupants as defined under Slums Act, 1971
- 2. **Special Development Zone-II (SDZ-II):** mostly vacant land on which development is proposed predominantly for Affordable Housing (AH), POS and other amenities.

POS (DOS + ROS)
provision in DP 1991:
2.48 sq.m. per capita

POS provision in DP
2034: **6.13 sq.m. per capita**

¹³ Neera Adarkar, Inventorisation of Open Spaces & Water Bodies in Greater Mumbai (Adarkar Associates, n.d.), 25.
¹⁴ Municipal Corporation of Greater Mumbai (MCGM), RDDP - 2034 (MCGM, 2016), 70.
¹⁵ MCGM, RDDP - 2034 (MCGM, 2016), 100.
¹⁶ MCGM, RDDP - 2034 (MCGM, 2016), 150.
¹⁷ MCGM, RDDP - 2034 (MCGM, 2016), 76.
¹⁸ MCGM, RDDP - 2034 (MCGM, 2016).

Terminologies of the Development Plan 2034

Public Open Spaces (POS)

Public Open Spaces (POS) are those Open Spaces (OS) where there is right to access and any restrictions imposed are universally applicable. Additionally, DP 2034 recognises clubs, gymkhanas, and swimming pools as public open spaces, as a sizable number of citizen benefit from these spaces. DP 2034 sets a standard of 4 sq.m. per capita for the total provision of POS.

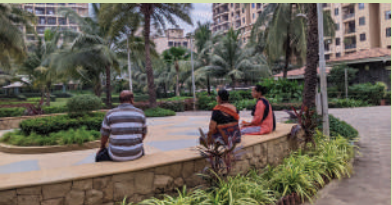
The POS land use has two designations – EOS and ROS.



Kaifi Azmi Park, Andheri West
Source: UDRI + NAGAR

Existing Open Spaces (EOS)

Public open spaces that are acquired by the government and are developed as public open spaces. It is further classified into 13 subcategories (see Figure 9). Currently, the city provides 1.28 sq.m. per capita EOS.



Shiela Raheja Manoranjan Maidan, Malad (E)
Source: UDRI + NAGAR

Reserved Open Spaces (ROS)

The parcel of lands that are reserved as public open spaces but are yet to be acquired by the government. Most of these plots are under private ownership and are expected to be acquired by the government by 2034. It is further classified into 10 subcategories (see Figure 9). The DP aims to acquire 1892.22 ha of ROS (1.48 sq.m. per capita).



Slum Occupied ROS, SV Road, Andheri (W)
Source: UDRI + NAGAR

Natural Areas (NA)

Natural Area Zone (NA) is an environmentally sensitive land use zone amenable to buildable development with the approval of the Competent Authority. The Existing Land Use (ELU) shows presence of 27.87% of Natural Areas.¹⁹ These include the Sanjay Gandhi National Park, mangrove forests, mud flats and creeks. Permissible facilities in natural areas include boardwalks in mangroves, trekking paths, public toilets, and sewerage pumping stations, along with any uses allowed by Ministry of Environment, Forest and Climate Change (MoEFCC) notifications. No buildable development is permitted except essential municipal facilities. Newly emerged mangroves in Thane Creek (14.96 sq.km.) are included in this zone.



River in Sanjay Gandhi National Park
Source: Wikipedia

Special Development Zone (SDZ)

DP 2034 defines SDZ as comprising potentially developable lands kept in abeyance for future development. SDZ comprises 3,734 ha of land (8.59%) (proposed zone).²⁰

¹⁹ Municipal Corporation of Greater Mumbai, Report on Draft Development Plan - 2034 (MCGM, 2016), 27.
²⁰ Municipal Corporation of Greater Mumbai, RDDP 2034 (MCGM, 2016).

The Public Open Space (POS) land-use category has also been restructured significantly:

- 1. The term Designated Open Space (DOS) was replaced with Existing Open Space (EOS) for clarity.
- 2. The previous classification was expanded into 13 distinct categories, each defined by its intended usage. **Within its 13 categories, DP 2034 includes gymkhanas and swimming pools as open spaces because they benefit many users.**
- 3. Reserved Open Spaces (ROS) remained as plots designated for future acquisition and open space development.

The DP 2034 plans to add a total of 750 ha or 1.75 sq.m. per capita to the public open spaces through the development of SDZ portions of Aarey forest, Sanjay Gandhi National Park and salt pans.²¹

In addition, DP 2034 demarcates 6 meters ‘buffers’ on either side of rivers, creeks, and nallahs to be used as pedestrian walkways adding 0.37 sq.m. per capita open space to the city. It also hopes to add significant open space to the city’s repository through the development of industrial lands, areas under Special Planning Authorities (SPA) and Coastal Road reclamation to the tune of 0.57 sq.m. per capita.²²

Re-categorisation of the NDZ in the DP 2034, provides clarity on permissible activities, development requirements, and the distinction between developable and non-developable open spaces. However, many limited access places like clubs and gymkhanas, and medians and traffic islands have been added to the open space category.

Figure 8: Commonly used per capita numbers

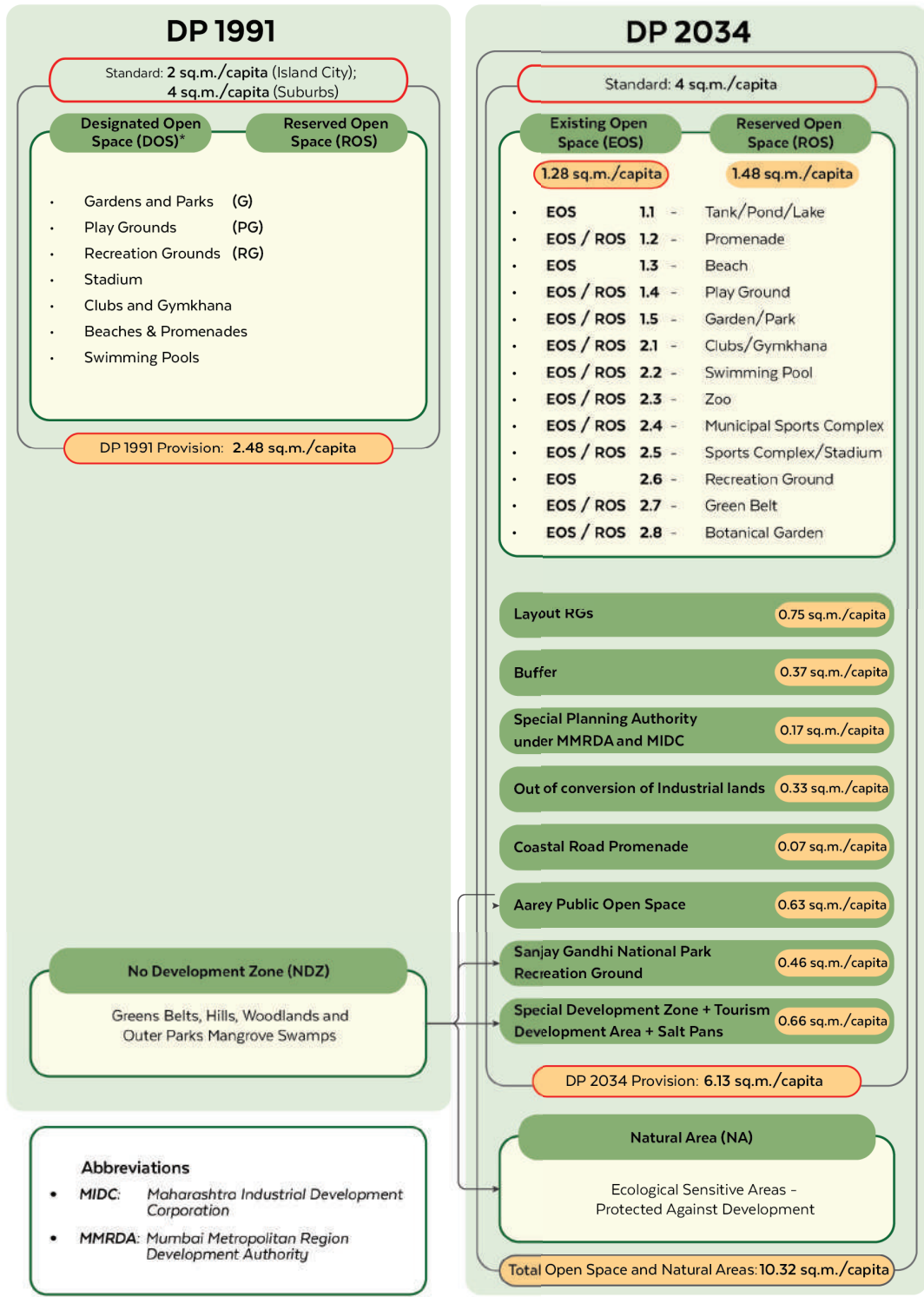
Per Capita numbers explained			
Documents and articles refer to multiple per capita numbers even as we compare Mumbai’s 1991 and 2034 DPs. The table below attempts to capture some of the commonly used numbers.			
	Category	DP 1991	DP 2034
1	DP adopted standard for POS provision	2 sq.m./capita for city, 4 sq.m./capita for suburbs	4 sq.m./capita
2	Total POS across Mumbai	2.48 sq.m./capita	6.13 sq.m./capita (broader categories)
3	POS (EOS + ROS) only across Island City limits	1.97 sq.m./capita	2.94 sq.m./capita
4	POS (EOS + ROS) only across Mumbai Suburban limits	2.67 sq.m./capita	2.7 sq.m./capita
5	Existing Open Space as per DP provision	Not specified	1.28 sq.m./capita
6	POS + Natural Areas	Not specified	10.32 sq.m./capita

Source: UDRI and NAGAR, data from RDDP and Inventorisation of Open spaces & Water Bodies in Greater Mumbai report

21 Municipal Corporation of Greater Mumbai, RDDP 2034 (MCGM, 2016).

22 MCGM, RDDP - 2034 (MCGM, 2016), 150.

Figure 9: Comparison of Open Space provision in DP 1991 and DP 2034



Source: Developed by UDRI and NAGAR from Development Plan 1991 and 2034

2.2. Distribution of POS Within the Administrative Wards

The DP aims to provide a minimum of 4 sq.m. per capita public open space by year 2034. On a satellite image, the city of Mumbai appears lush and green with large swaths of greenery especially in the north and east. However, Figure 10 on the right shows a different picture of open space distribution across the 24 administrative wards of Mumbai, as most of the visible green areas in the north east are mangroves and not accessible to public. It captures per capita public open space (POS) distribution across these wards in relation to their population density. For each ward, this per capita open space distribution is further bifurcated into area of existing and reserved open space (EOS and ROS). The wards of the Island City and those in the suburban areas exhibit contrasting patterns in open space provision, shaped by their historical development, administrative policies, planning decisions, and socio-economic factors, some of which are discussed in more detail below.

Island City

The Island City, comprising wards A to G (North and South), shows a large deviation in the per capita provision of open spaces. On average, the overall total POS provision in the Island City is at 2.94 sq.m. per capita, with wards A and B representing the two extremes with POS provision at 9.4 and 0.5 square meters per capita, respectively.²³

During colonial rule, A Ward area emerged as the centre of power, trade, and administration leading to the creation of vast open spaces, many of which remain intact today. Several of these spaces hold heritage status, ensuring their protection. There are also strong civic action and community groups that have worked hard over the years to ensure protection of these spaces (Annexure H). The presence of large government and institutional campuses, along with docks and naval zones further contributes to the area's abundance of open spaces and greenery. Combined with its low population density, these factors give A Ward the highest per capita open space ratio in the city. Likewise, Wards D and G-South have moderate population densities but also offer a greater amount of existing open space per capita due to their respective sea fronts.

In contrast, Wards B, C, E, F-North, F-South, and G-North historically served as industrial precincts during the colonial era, accommodating densely populated working-class residential blocks. While many industries have since relocated outside Mumbai, the high-density housing remains, making it challenging for local authorities to allocate and acquire land for new public open spaces. Additionally, B and C Wards encompass high-density mixed-use neighbourhoods such as Kalbadevi, Bhuleshwar, Manish Market, Dongri, and Masjid Bunder, while Dharavi, one of Asia's largest informal settlements, is located in G-North Ward.

Given these constraints, the Island City has increasingly turned to infrastructure and land reclamation projects to generate new public open spaces. The Coastal Road Project on the west coast has resulted in the creation of considerable Reserved Open Spaces (70 ha)²⁴, significantly enhancing ROS in G-South and D Wards.

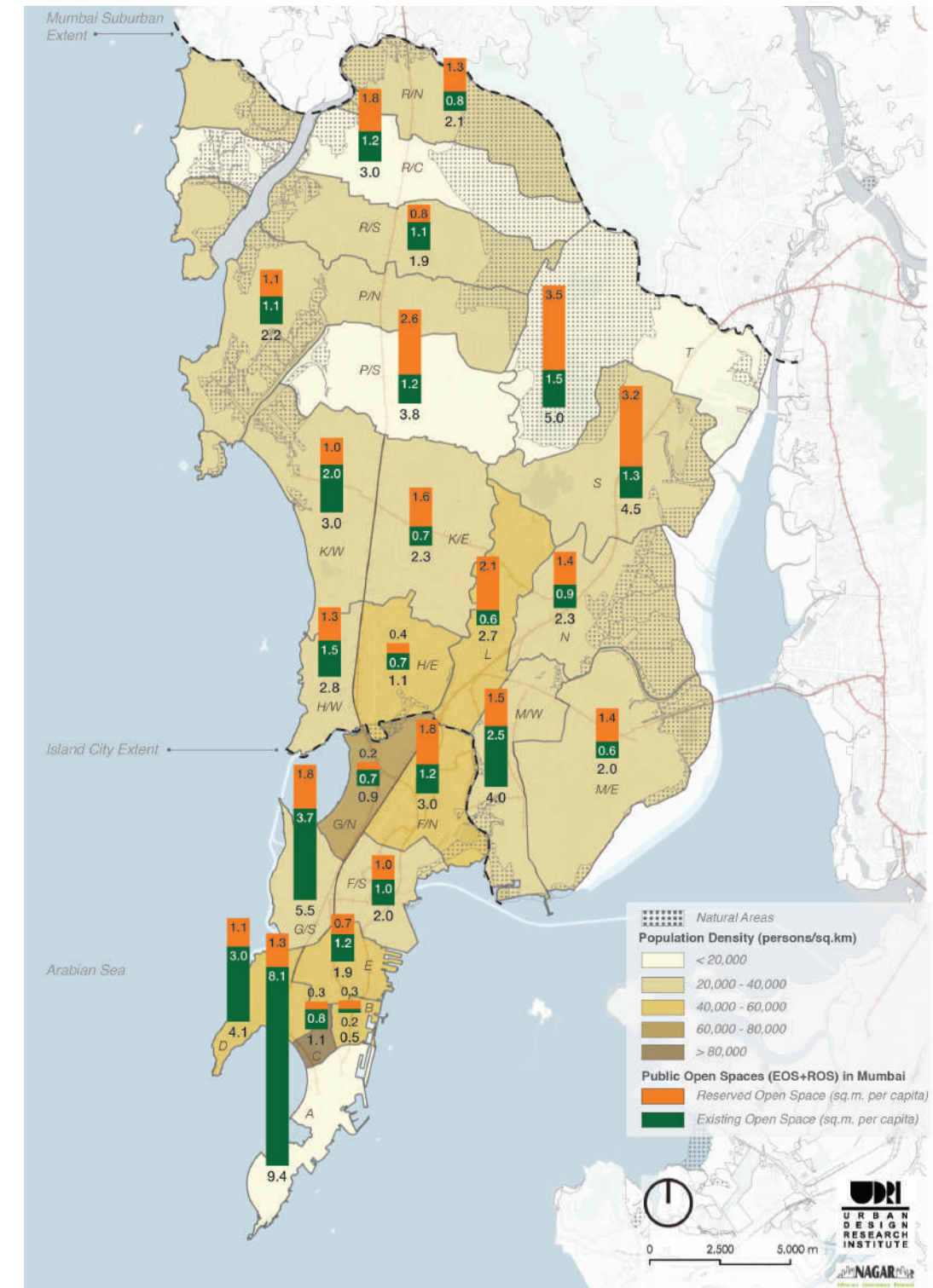
DP 2034 EOS + ROS provision island city: 2.94 sq.m. per capita

By adding 1.8 sq.km. of ROS, the Coastal Road Project has expanded open space in G/S & D Wards

²³ Municipal Corporation of Greater Mumbai, Report on Draft Development Plan - 2034 (MCGM, 2016), 441.

²⁴ Nayanika Bose, "Mumbaikars Await 5 Key Aligned Projects Including Green Space Even as Mumbai Coastal Road Opens Up," The Indian Express (Mumbai), January 29, 2025.

Figure 10: Per capita availability of POS within the administrative wards of Mumbai



Source: Developed by UDRI and NAGAR based on data from year 2011 to 2018 in the DP 2034

Mumbai Suburban

Beyond G-North and F-North wards of Island City, Greater Mumbai extends into the eastern and western suburbs, comprising 15 administrative wards from H-West to M-East, stretching northward to R-North. Unlike the Island City, which evolved under colonial planning with defined layouts, the suburbs expanded rapidly after independence, often without comprehensive planning. Introduction of TDR in the early 1990s allowed developers to shift development rights from Island City plots to unused suburban plots in northern parts. This redirected rapid construction northwards, resulting in high density gated developments without significantly contributing to POS in these suburban wards. Although the suburbs contain large natural areas like Sanjay Gandhi National Park (SGNP) and mangroves, these spaces are concentrated in a few pockets, leaving many dense residential and informal settlement areas with little accessible open space.

Due to limited foresight in planning, the **average per capita provision of Existing Open Space (EOS) in the suburbs is 1.05 sq.m. per capita.**²⁵

The lowest EOS provision is in M-East (0.6 sq.m. per capita), L (0.6 sq.m. per capita) and H-East (0.7 sq.m. per capita). Both L and H-East have the highest population density among the suburb wards, while M-East is among the city’s poorest areas with more than three fourth of the population living in slums.²⁶ Low EOS provision within these wards is mainly due to extremely high informal settlement densities, very little municipal land, and the historic use of large tracts of land for dumping grounds, industries, rail and transport infrastructure.

An interesting anomaly is the M-West ward. Despite being adjacent to M-East, where there is low per capita POS, M-West ward has the highest EOS provision of 2.5 sq.m. per capita. This can be attributed to its very different land-use history, planned residential layouts, institutional campuses, and creek-side green belts, with far lower density of informal settlements and fewer land intensive infrastructure uses that otherwise constrain open space in M-East.

The average reserved open space (ROS) in the Suburbs is 1.7 sq.m. per capita, nearly double the 0.9 sq.m. per capita in the Island City. Wards T and S have the highest ROS provision with 3.5 sq.m. per capita and 3.2 sq.m. per capita respectively because both wards urbanised relatively late. Historically, these wards contained significant public and institutional landholdings, including major industrial estates in Mulund (T ward) and large campuses such as IIT Bombay and lake catchments in Powai-Bhandup areas (S ward), which prevented dense subdivision and preserved contiguous open tracts. Proximity to the SGNP in T ward and major lakes, hills, and forest patches in S Ward, also restricted intensive construction, leading to more land being designated as open space. **Despite the high ROS provision, these wards continue to struggle with managing eco-sensitive zones, as the absence of formal SGNP buffer guidelines makes it difficult to clearly separate protected areas from surrounding open spaces and prevent encroachment.**

While T and S wards perform strongly in terms of land availability and natural buffers, this pattern is not consistent across the city, highlighting the broader disparities in open space distribution.

The city aims to provide a standard 4 sq.m. per capita POS, however it is not evenly distributed across the administrative wards.

25 Municipal Corporation of Greater Mumbai, Report on Draft Development Plan - 2034 (MCGM, 2016), 441.
26 Municipal Corporation of Greater Mumbai, Report on Draft Development Plan - 2034 (EDDP) (MCGM, 2015), 34.

2.3. Governance, Ownership, and Management of Mumbai’s POS

Ownership of open spaces in Mumbai involves a web of stakeholders, each with distinct roles and interests. It is fragmented among local authorities, state and central government agencies, as well as private organisations and individuals.

The following section captures the vast number of Central, State, and local bodies, agencies, and authorities involved and their role in the provision, regulation, management, and maintenance of open spaces in the city.

Central Government Ministries, Statutory, and Autonomous Bodies

- **Ministry of Environment, Forests and Climate Change (MoEFCC):** The MoEFCC formulates and implements the Coastal Regulation Zone (CRZ) regulations in India and sets rules for managing and developing coastal open spaces, including beaches and waterfronts, within the CRZ framework.
- **Central Zoo Authority (CZA):** The CZA provides technical assistance, guidelines, standards, and norms for maintenance and management of zoo premises.
- **Ministry of Youth Affairs & Sports, Sports Authority of India (SAI):** Manages sports complexes and academies across India to promote sporting excellence in the country.
- **Mumbai Port Authority (MbPA):** Parts of Mumbai’s extensive coastline and its harbours are owned and managed by the Central government’s autonomous body the MbPA to provide sea port facilities. These areas also include multiple promenades, parks, gardens, recreational grounds etc. under MbPA ownership and oversight.

State Government Authorities, Parastatals, & Representatives

- **State Urban Development Department (UDD):** The Maharashtra State UDD provides overarching policies and regulations for land use, development, and urban planning across the state, including Mumbai.
- **Maharashtra State Tree Authority:** Sets guidelines on green cover conservation, tree plantation, and compensatory planting.
- **Maharashtra Housing and Area Development Authority (MHADA):** Provides housing and occasionally includes open spaces within its layouts, especially in planned residential zones.
- **Mumbai Metropolitan Region Development Authority (MMRDA):** It occasionally manages open spaces connected to large infrastructural projects like metro stations or green buffers around roads and rail.
- **Maharashtra Coastal Zone Management Authority (MCZMA):** MCZMA provides guidelines for permissible activities in coastal areas, including beaches and mangroves, which are critical open spaces for public use and environmental protection.
- **Elected Representatives (MP & MLA):** They advocate for local issues and influence decisions on development of open spaces. They can also allocate funds from their discretionary Local Area Development Fund for development projects in their constituencies.

Municipal Corporation of Greater Mumbai (MCGM)

- **Development Planning (DP) Department:** Works on allocating land use in the Development Plan, including the designation of open spaces.
- **Estate Department:** Handles land leasing and licensing issues, including open space leases to private entities or NGOs for maintenance.
- **Garden Department:** Responsible for maintaining gardens, parks, playgrounds, and tree plantations. It also undertakes tree-planting drives, gives permission for tree cutting across the city, removes dead trees, and maintains the greenery.
- **Ward Offices:** Responsible for day-to-day maintenance of parks, gardens, and other open spaces within each municipal ward. Ward officers handle complaints, facilitate local improvements, and ensure open space upkeep.
- **Elected Councillors:** They work with ward offices, advocate for local issues, and can influence decisions on development and funding of open spaces.²⁷

The city also has a history of private entities managing and developing large tracts of open spaces. These are typically held on long-term leases that grant permission for development and management, resulting in the establishment of exclusive clubs and parks with highly restricted public access. Despite this, these areas are still classified as part of Mumbai’s open space network.

2.3.1. Management of Public Open Spaces under MCGM

Majority of open spaces in Mumbai are owned by MCGM and their management and maintenance is carried out in two ways:

- I. By custodians employed within the MCGM organisation structure
- II. By third parties including NGOs, trusts, and elected representatives

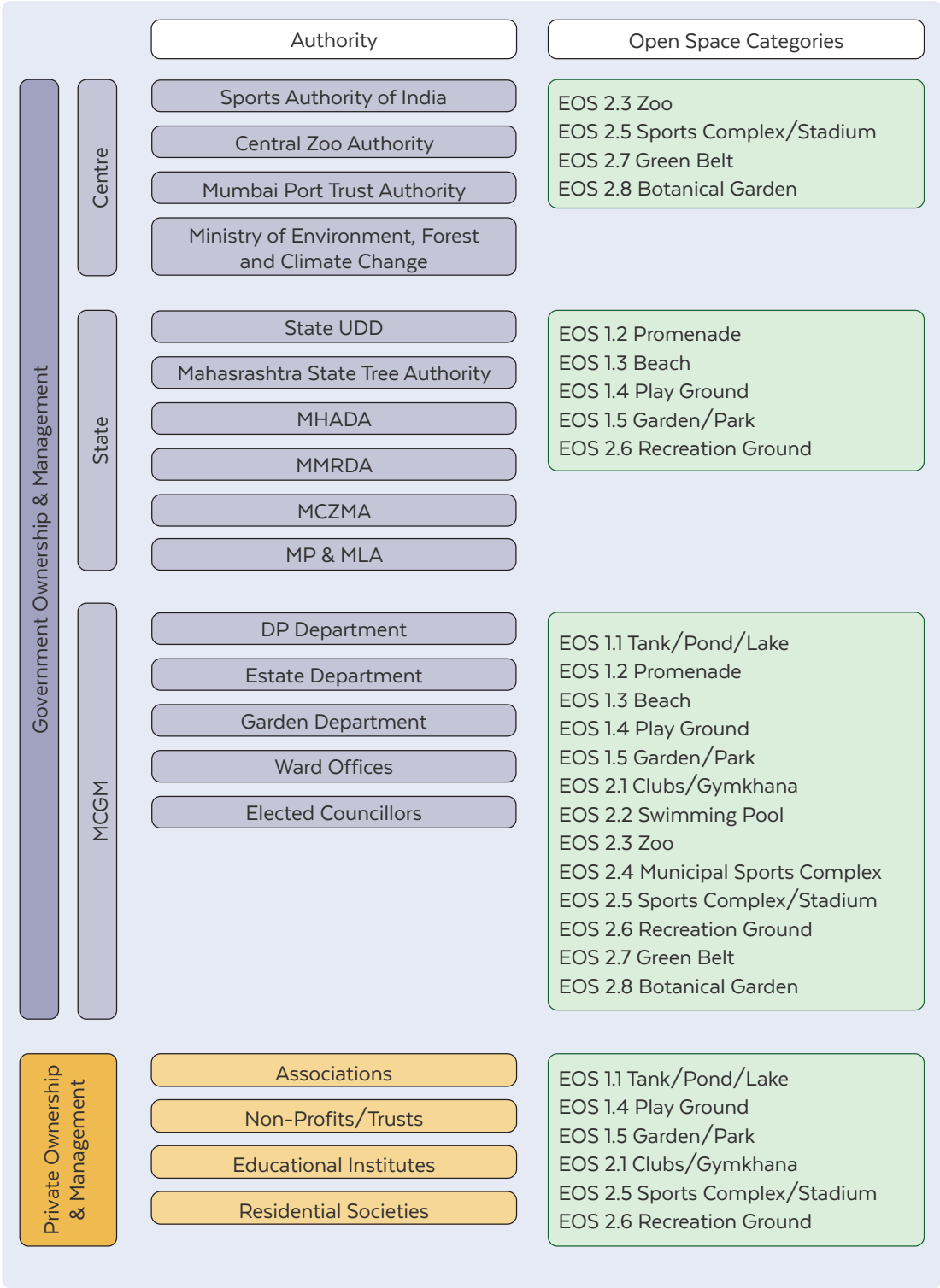
I. MCGM Organisation Structure

The structure is headed by the administrative wing comprising of:

- a. **The Municipal Commissioner**, also known as the **Tree Officer**, is responsible for chairing the Tree Authority and holds the power to approve the felling of trees.
- b. There are 4 Additional Municipal Commissioners, each assigned different areas of the city – Island City, Eastern Suburb, Western Suburb and/or departments and, **one of them is assigned the garden department of the city.**
- c. Each of the current 19 Deputy Municipal Commissioners (DMC) are assigned zones/ areas/ departments/ projects to assist the Municipal Commissioner or the Additional Municipal Commissioner and **one of them holds the title of the DMC of Garden and Infrastructure Cell of the city.**

²⁷ This section is adapted from research and content developed by CIVIS; all formatting, integration into the report, and creation of graphics were undertaken by UDRI & NAGAR.

Figure 11: Ownership and management of POS categories in Mumbai



Source: Developed by UDRI and NAGAR from MCGM website and stakeholder interviews

The primary function of the MCGM DP Department is to acquire ROS.

As part of the city’s annual budget, the DP Department makes specific expenditure provisions towards acquiring ROS (gardens, parks, and playgrounds). **However, only 3.35% of the annual DP Department budget for project works has been allocated for the acquisition of ROS in FY 2024-25.**²⁸ This is discussed in more detail at the end of this chapter in section 2.4.

Once acquired, the roles of development, management, and ongoing maintenance of gardens/parks (G), playgrounds (PG) and recreation grounds (RG) are distributed across four key bodies serving as the core operational units as shown in Figure 12.

i. Garden Department

MCGM’s Garden Department functions at the city level; operating as a facilitator, monitor, and decision maker for the development of gardens/parks (G), playgrounds (PG) and recreation grounds (RG) in the city. **This department is led by the Superintendent of Garden and Trees and 8 Deputy Superintendent of Gardens (of 7 Zones of Mumbai and 1 Tree Authority).** Based on the nature of work, tasks are allocated to the various departments and bodies, such as the Garden Infrastructure Cell (GIC), Ward Offices and Solid Waste Department.

The city’s annual budget includes specific provisions under Garden Department for the development of new gardens, playgrounds, and recreation grounds after they area acquired and as well as for the upgradation and maintenance of existing ones.

The total annual budget allocation (FY 2024-25) for the Garden Department was 178.5 Crore out of the total MCGM budget 59,955 Crore.²⁹ There has been a steady decline in this budget over the years. This is discussed in more detail at the end in Section 2.4.

ii. Ward Office

Each administrative ward in the city has a Ward Office headed by the Assistant Commissioner (or Ward Officer). The Ward Office includes representatives from various departments within the MCGM and serves as the primary interface for implementing MCGM’s directives at the local level by addressing the infrastructure needs and overseeing the maintenance of public amenities.

With respect to public open spaces, two key personnel operate within the Ward Office:

- a. Horticulture Assistant (HA):** They oversee the upkeep, development, and routine inspections of playgrounds, gardens, and recreational grounds, while also issuing permissions for events in the open spaces within their respective wards.
- b. Junior Tree Officer (JTO):** They oversee the issuance of permits and routine inspection for tree trimming, tree transplantation, and cutting of dead or dangerous trees across different sites. They also enforce legal action against unauthorised tree cutting.

²⁸ Budget Estimates 2024-25 (Municipal Corporation of Greater Mumbai, 2024).
²⁹ Budget Estimates 2024-25.

Both the Horticulture Assistant and Junior Tree Officer, report to the Garden Department and Assistant Superintendent of Gardens to make decisions. Small-scale maintenance and coordination are carried out by the Assistant Engineer of Maintenance and Repair within the Ward Office, under the supervision of the Assistant Commissioner.

The Garden Department funds all the Ward Offices for the maintenance and management of gardens, playgrounds, and recreation grounds under their jurisdiction. The fund allocation is centrally managed, and the Ward Offices have limited resources (employed or contractual basis) for routine maintenance and day-to-day services, including tasks such as lighting, solid waste management, and water supply.

Various other departments like Garden Infrastructure Cell (GIC) coordinate with them on a project-to-project basis, providing support and expertise as needed.

i. Garden Infrastructure Cell (GIC)

The Garden Infrastructure Cell is constituted within the MCGM. The cell is composed of a multidisciplinary team that includes civil engineers, mechanical engineers, and architects. It is responsible for development of gardens and executing heavy civil work related to gardens, playgrounds, and recreation grounds based on instructions and funds provided by the Garden Department. This cell plays a crucial role in carrying out large scale development and maintenance projects, typically above Rs 25 Lakhs.³⁰

ii. The Coordinator (Sports and Entertainment)

This is a department within the MCGM and is responsible for the operation, management, and maintenance of swimming pools, municipal sports complex, clubs/gymkhana, and public theatres. It is headed by the Coordinator, who oversees the daily functioning of this department. Each theatre and swimming pool within MCGM’s purview follows a standardised operational structure, replicated on every site. This structure typically includes an Administrative Officer, an Assistant Manager, Clerks and, Technical and Non-Technical staff.

All budget allocations for this department are made under the Garden Department as a separate cost centre for Coordinator (Sports and Entertainment). Pool wise budget provision is made for the maintenance of swimming pools.³¹

I. Third Parties

Beyond the core administrative framework, several key stakeholders play a crucial role in the management and development of public open spaces in Mumbai.

i. Elected Representatives

Public open spaces in Mumbai benefit significantly from the elected representatives who contribute by voicing the aspirations

³⁰ Garden Infrastructure Cell, November 18, 2025, Telephonic.
³¹ Coordinator (Sports and Entertainment, MCGM), “Response to RTI on ROS and EOS in Mumbai, Application No. 771,” August 4, 2025.

and needs of the local population. They advocate for projects and initiatives based on community feedback and are instrumental in driving development at the local level. Open space-related issues are often the main items in many election manifestos, with political parties frequently using promises of new gardens, upgraded amenities, and improved maintenance as key tools to address public concerns regarding the neighbourhood open spaces.

a. **Corporators** are allocated discretionary funds as part of the annual MCGM budget for local area improvement projects. A local corporator, receives an annual fund allocation of Rs 1-2 crores, a portion of which is frequently directed towards enhancing public open spaces.³² These funds are typically used for the installation of essential public space furniture such as lighting, dustbins, benches, seating, and planters.

b. **Members of Parliament (MPs) and Members of the Legislative Assembly (MLAs)** have access to larger funds through MP-LAD (MP Local Area Development funds) and MLA-LAD (MLA Local Area Development funds) respectively, which are often utilised for the development of parks, gardens and playgrounds. On the direction of an MP or MLA, MHADA (Maharashtra Housing and Area Development Authority) undertakes the comprehensive development and upgradation of open space plots.

i. Corporates and Institutions

Large corporations and philanthropic trusts often participate in the development and upkeep of public open spaces as part of their Corporate Social Responsibility (CSR) initiatives. Their involvement helps them build social capital and foster stronger connections with the local community.

ii. Citizen Groups

ALMs and civic groups are engaged in identifying local issues and advocating for improvements in neighbourhood open spaces on a day-to-day basis. These groups engage proactively with authorities to address concerns and propose solutions that enhance the quality of public spaces in their communities. They actively raise funds for the improvement of their neighbourhood spaces by using Corporate Social Responsibility (CSR) models or receive donations from corporate entities or trusts eager to engage with and contribute to their communities.

The management of public open spaces by private entities was formally introduced through Mumbai's open space policy, commonly referred to as the caretaker adoption policy. This open space policy provision is summarised in the adjoining inset and the detailed policy is included in the Annexure E. It is important to understand this policy as it has gradually enabled the backdoor encroachment of many open spaces in Mumbai over the years.

32 Linah Baliga, "The Missing Corporator Is a Vital Citizen Connect Lost | Mumbai News," June 3, 2024, <https://www.hindustantimes.com/cities/mumbai-news/the-missing-corporator-is-a-vital-citizen-connect-lost-101709665721454.html>.

Given the challenges posed by the complex network of stakeholders involved, local community groups, Advanced Local Management (ALM) groups, and citizen-led trusts continue to play a crucial role in managing and maintaining many open spaces in Mumbai. As key stakeholders, they regularly monitor neighbourhood spaces and report issues such as neglect, poor maintenance, and safety or security concerns to the relevant government authorities, helping ensure accountability.

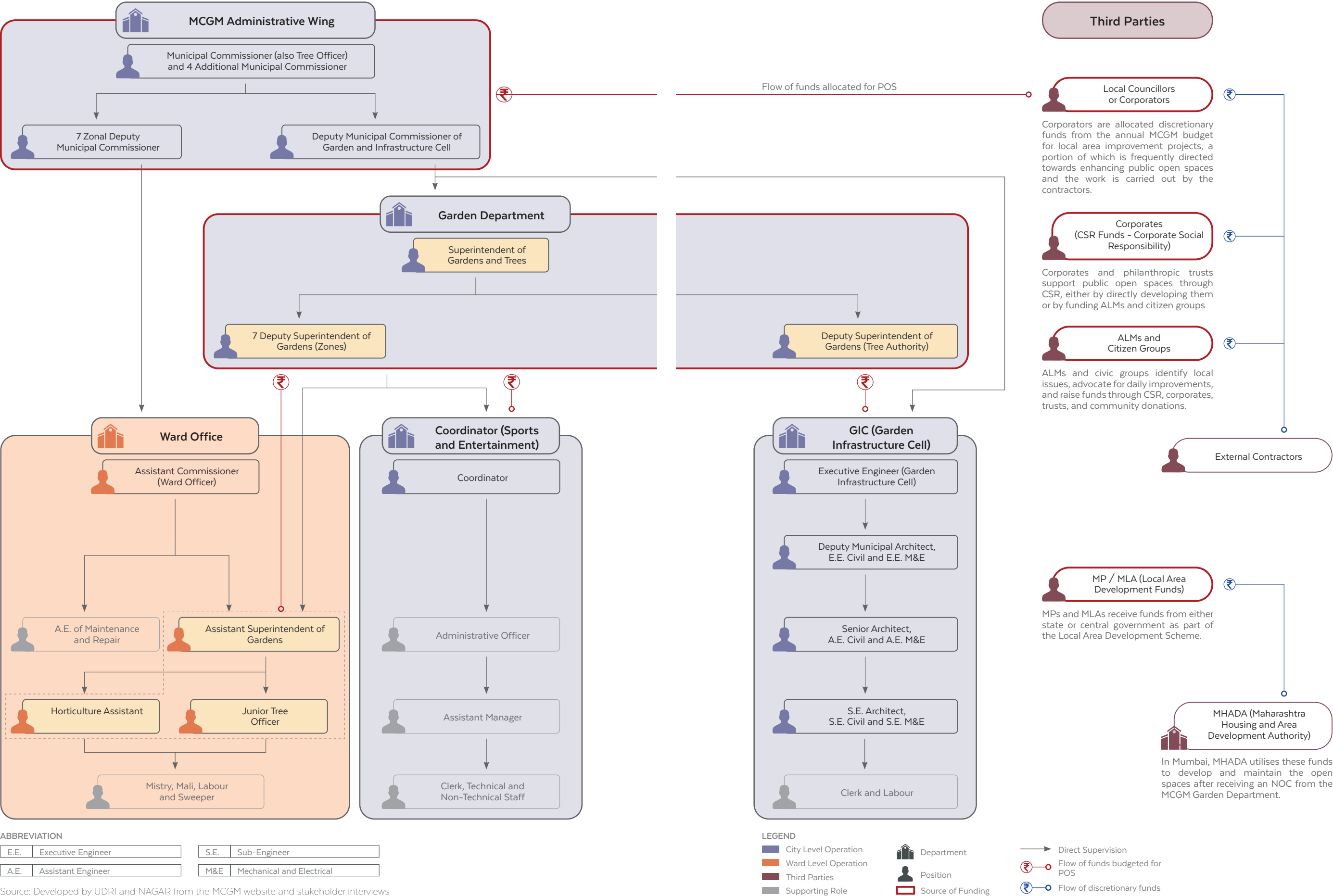
There are also examples of local groups mobilising elected officials, businesses, and philanthropists to create funds dedicated to protecting, enhancing, and beautifying public spaces. Through ongoing dialogue with local representatives, government officials, and community members, these citizen action groups provide a continuous platform for collaboration, resulting in lasting improvements and the long-term preservation of open spaces. Annexure H captures case studies and stories of such engagement in Mumbai.

Open Space Policy (Caretaker Adoption Policy)

MCGM introduced the Open Space Policy in 1991, allowing adoption for maintenance and operation or appointing a caretaker for development (including construction of amenity) and upkeep of open spaces (Annexure E). Despite several amendments over the years, the policy continued to allow corporations, NGOs, and resident associations to manage public open spaces, subject to MCGM regulations, demonstrated funding capacity, and guaranteed free, non-discriminatory public access. **A total of 216 plots were allocated under the adoption framework and 9 plots under the caretaker one to private entities.**

In 2005, MCGM revised its guidelines to allot municipal plots reserved as recreation grounds and playgrounds on adoption and caretaker terms, but the High Court (Nagpur Bench) stayed the Caretaker Policy in 2007. A subsequent amendment in 2015 repealed the caretaker provision entirely, permitting only adoption for five years, extendable thereafter, with no new caretaker sites allowed; the 7 existing caretaker-managed plots continued (Annexure E). In 2023, the corporation attempted to reintroduce a similar framework through the Draft RG-PG Policy, but the policy did not progress beyond the draft stage. **At present, there is no policy framework in the city regarding the management and maintenance of open spaces.**

Figure 12: MCGM organisation structure for POS management



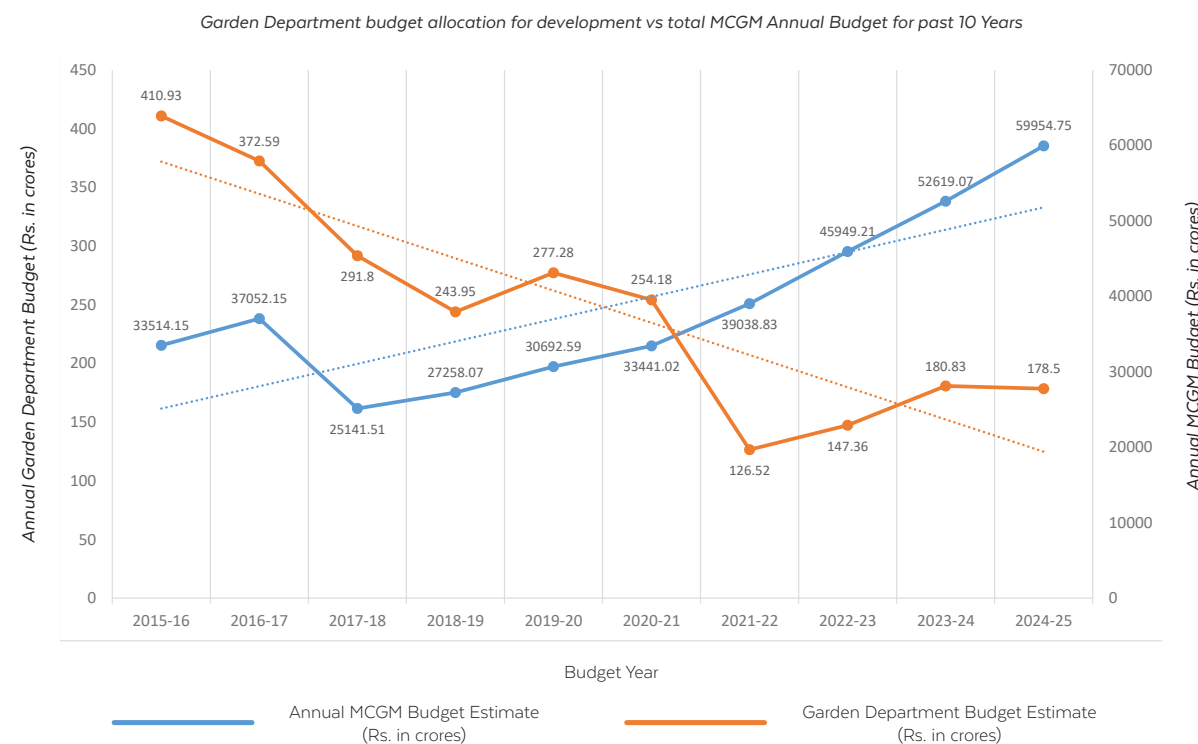
2.4. Annual BMC Budget Allocation for POS Development

The Mumbai Municipal Corporation Act of 1888 (BMC Act), which outlines regulations for the city, classifies the maintenance of open spaces as a discretionary duty for the civic body, rather than a mandatory obligation. The lack of mandated rules or by-laws have led MCGM to adopt a very limited budgetary allocation towards the development and maintenance of this public amenity. MCGM budget data specifically allocated to open spaces over the years isn't always comprehensively itemised in public records, as the MCGM budget often aggregates open spaces with other urban development and beautification expenditures.

The estimate budget allocation for gardens, parks, recreation grounds, and playgrounds in Mumbai has been consistently decreasing from 1.23% in 2015-16 to 0.30% in 2024-25.³³ Figure 13 shows the trend of percentage budget allocation for the period of 10 years. Under MCGM, the Ward-wise funds allocation for Existing Open Spaces (EOS) is determined during the budget planning process in consultation with the ward committee and submitted to the Municipal Commissioner.

There is a lack of transparency regarding the funding allocated for the acquisition of open spaces posing significant challenges in identifying the roadblocks that delay or hinder the acquisition process. This is particularly concerning for Reserved Open Spaces (ROS) marked in the 1991 Development Plan (DP), many of which are still awaiting acquisition.

Figure 13: Comparative allocation: Garden Department vs total MCGM budget (2015 – 2025)



Source: Developed by UDRI and NAGAR from the MCGM Budget reports and CIVIS data

³³ Budget Estimates 2024-25.

2.4.1. Acquisition of Reserved Open Spaces (ROS)

Any land that is reserved in a development plan, regional plan or a town planning scheme, for public purposes is to be acquired by the development authority, planning authority or any appropriate authority after the publication of a development plan, draft regional plan or any other plan/ town planning scheme. In Mumbai, to develop new public open spaces, land parcel under the category of reserved open spaces (ROS) is acquired by the MCGM after the release of Development Plan 2034 (released in 2018).

Lapsing of Reservations

According to the provisions of Section 127 of the MR&TP Act, if land reserved for any public purposes in a sanctioned development plan is not acquired or utilised within ten years from the date the plan comes into force, the landowner or any interested party may initiate the process for its release by serving a Purchase Notice to the relevant planning authority.³⁴

If no steps toward acquisition is taken by the authority within twelve months of receiving the notice, then the reservation is deemed to have lapsed. Consequently, the land becomes available to the owner for development in accordance with the regulations in practice. The State Government is required to declare the lapsing of the reservation by issuing a notification which must be published in the official gazette.

Tools Available for Acquisition of Reserved Open Spaces in Mumbai

Annual city budget makes separate provisions for the development plan implementation, which includes acquisition and development of lands for various purposes including open spaces. When a plot is privately owned, the MCGM has three approaches for acquisition.

1. One option is for MCGM to directly purchase the land from the private owner, and then initiating the acquisition process.
2. The second option allows the private owner to develop the entire plot and hand over the developed open space to MCGM. In return, the private party receives Transfer of Development Rights (TDR) as compensation for both the land and construction costs, which they can utilise on their other property.³⁵ Once the private owner hands over the public open space (POS) to the DP Department, it is then transferred to the ward department. With the transfer of ownership, the responsibility for maintaining the open space and financing the upkeep also shifts to the MCGM wards.
3. The third option is to use Accommodation Reservation (AR), a planning tool to incentivise the private owner to hand over a part of land to MCGM as per the regulation along with the developed amenity for the intended public use at no cost or any encumbrances.³⁶ The balance land is developed with permissible basic FSI and development rights (DR) as permissible under the regulation (Annexure C).

AR - wherein the plot owner surrenders the specified part of the plot for public purpose with developed amenities corresponding to its reservations, in exchange for TDR of such plot to be utilised on the balance area (Regulation 17 (1))

³⁴ Maharashtra Regional and Town Planning Act, 1966, S 127.

³⁵ Municipal Corporation of Greater Mumbai, Development Control and Promotion Regulations (2018), 93-97.

³⁶ Municipal Corporation of Greater Mumbai, Development Control and Promotion Regulations (2018), 1, 39-58.



Unnamed playground in P-North ward, Azad Nagar, Malvani, Malad West | Source: UDRI + NAGAR

3

Analysis Parameters

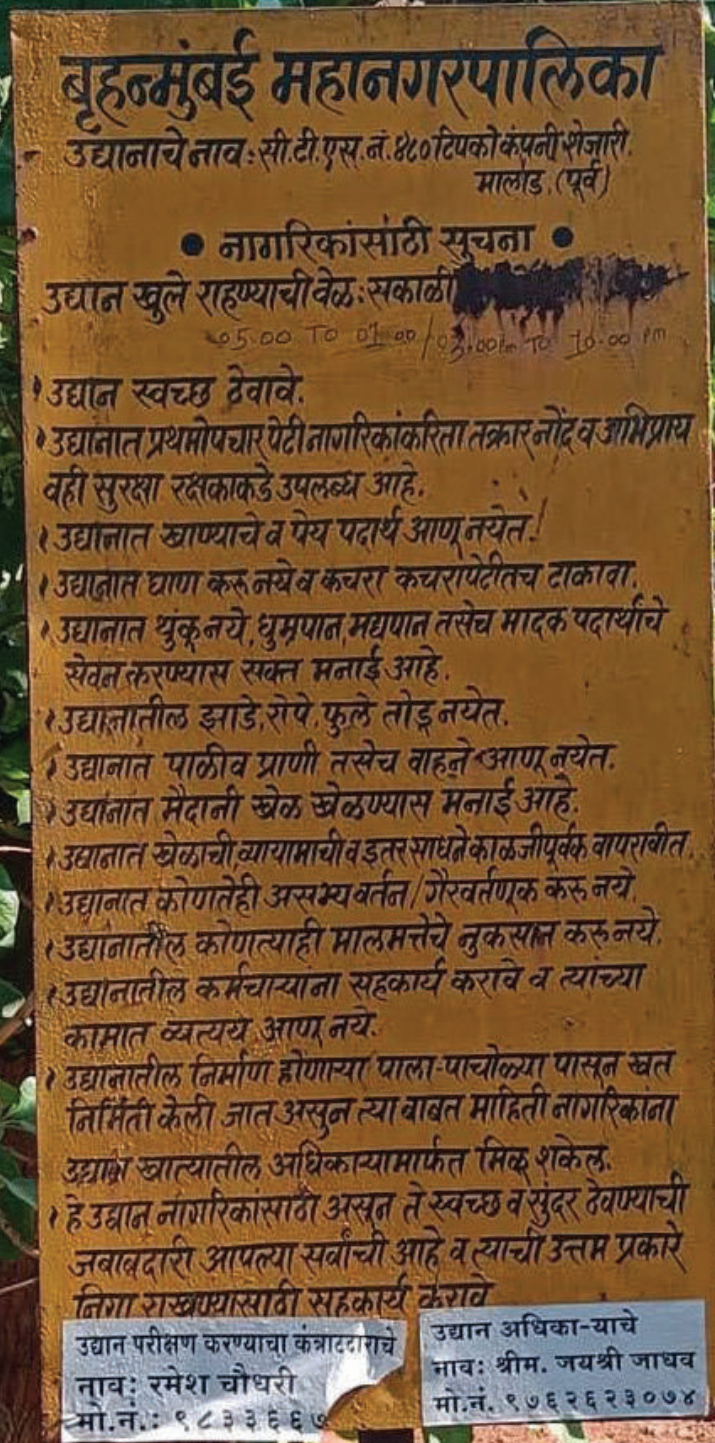
A survey of DP designated public open spaces across the pilot wards was conducted using the mapping methodology detailed in Annexure A. Data was collected across 24 indicators and systematically evaluated to establish and prioritise the analytical framework.

The primary objective of this framework is to develop a data-driven action plan for increasing per capita usable open space within the city. The strategy operates on two core dimensions:

1. Sub-city (ward-level) assessment of DP implementation, specifically examining progress in delivering reserved open spaces (ROS) to meet projected future demand.
2. Evaluation of existing open spaces (EOS), with particular attention to identifying underperforming, inaccessible, or inadequately developed sites.

This dual approach enables a structured analysis of both planned provision and on-ground usability. While the strategy highlights the gap between open space provision as stated in the DP and the actual extent of usable POS available on the ground, the broader objective is to establish a multi-pronged, evidence-based mechanism to address systemic challenges related to public open space and inform short, medium, and long-term actionable interventions.

The analysis is further supported through the development of an actionable stakeholder action matrix, structured as a tool to find sustained mechanisms and partnerships to first understand and then solve any problem. The matrix establishes clear linkages between identified challenges, recommended intervention pathways, and the strategic partnerships necessary for effective implementation, thus providing a practical mechanism to translate analytical findings into coordinated and outcome-oriented execution.



Unnamed Park in P-North ward, near Tipco Company, Malad (East) | Source: UDRI + NAGAR

3.1. Analysis Framework

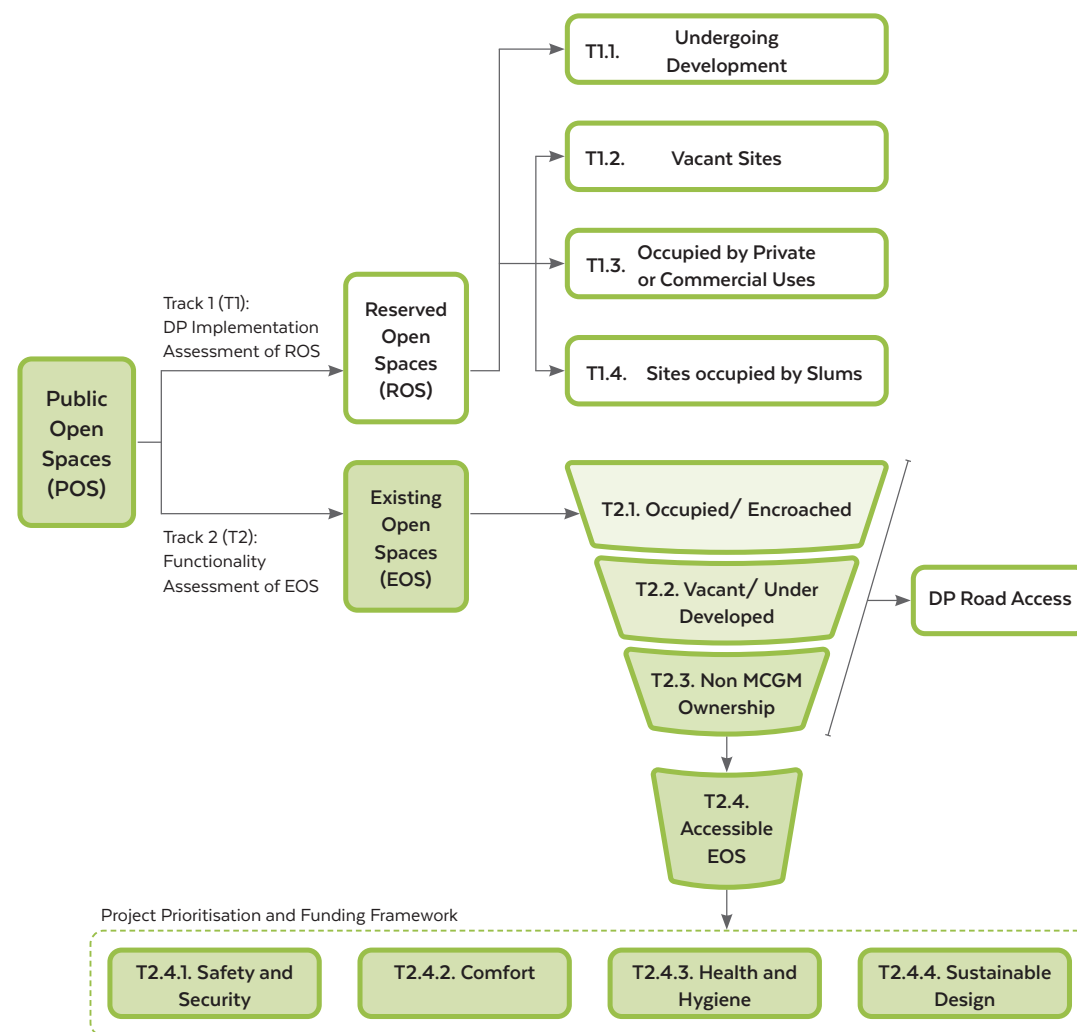
ROS vs EOS Sites

The first level of analysis starts with clearly bifurcating the public open space data into Reserved Open Spaces (ROS) and Existing Open Spaces (EOS) as shown in Figure 14.

ROS sites are designated in the DP for future acquisition and development as public open spaces within its 20-year planning horizon. These sites may not have any physical manifestation as open spaces and may currently be under entirely different land uses. The ROS sites are evaluated under the **first track of analysis – DP Implementation Assessment (Track 1)**.

EOS in contrast includes all sites marked in the DP as having been acquired and are intended to be functioning as accessible public open spaces for the city. These sites have a clear on-ground presence and are operational within the city's open space network. The EOS sites will undergo evaluation under the **second track – Functionality Assessment (Track 2)**.

Figure 14: POS analysis framework



Source: UDRI and NAGAR

Track 1 : DP Implementation Assessment of ROS

An evaluation of the ROS data captures sites under the following categories:

T 1.1. Undergoing Development:

Many ROS sites have been acquired and are being developed to be usable open spaces since the release of DP 2034 in year 2018. It is essential to highlight these sites as they reflect positive progress towards implementation of the development plan. They serve as data points that can be used to track the allocation of funds towards DP implementation in each ward.

Figure 15: Example of ROS undergoing development, Ustad Bismillah Khan Udyan, Malad East (P-North ward)

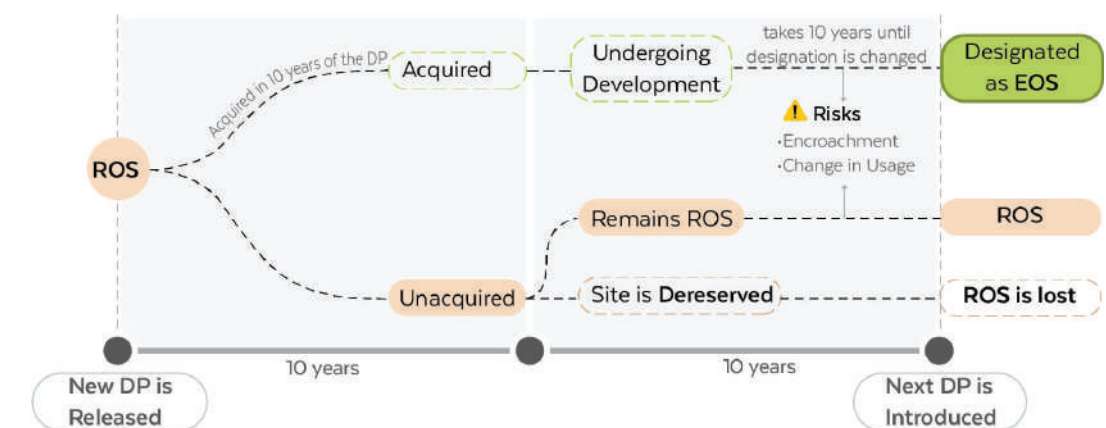


Source: UDRI and NAGAR survey photos

However, these acquired public open spaces do not currently reflect under the DP's EOS data. It is important to monitor these sites to ensure accurate transition and designation in the subsequent DPs to ensure their protection from encroachment.

Ideally, these should be updated immediately in the DP database once acquired. Subsequent to acquisition, these sites should immediately display public notices declaring MCGM ownership, to create awareness about its status as a public amenity and avoid further arbitrary usage.

Figure 16: Lifecycle of a Reserved Open Space



Source: UDRI and NAGAR

T 1.2. Vacant Sites:

Typically empty plots, uninhabited or without any construction or formal use, these sites often remain unattended. Such sites often experience unmonitored garbage dumping, temporary usage as construction yards and storage sheds, or become overgrown with vegetation. Assessing such vacant sites is essential to understand a ward’s potential for future development of accessible public open spaces. **These sites represent the most immediate opportunity for transformation, such vacant ROS sites can be prioritised for acquisition and development.**

Figure 17: Example of vacant ROS, Janakalyan Nagar, Malad West (P-North ward)



Source: UDRI and NAGAR survey photos

T 1.3. Sites Occupied by Private or Commercial Uses:

For ROS demarcated on privately owned or occupied sites, either commercial or residential, the city uses tools like Accommodation Reservation (AR), and Transferable Development Rights (TDR) as means of acquisition and compensation. However, the process involves long negotiations, legal work and is challenging.

If such privately owned sites are not acquired within ten years from the date of the DP coming into force, the owner may apply for its de-reservation and development. Thus, acquisition of such plots is time sensitive and needs urgent action.

Figure 18: Private occupation on ROS, Mira Nagar, Malad East (P-North ward)



Source: UDRI and NAGAR survey photos

T 1.4. Sites Occupied by Slums:

Many ROS reservations have been designated on slum-occupied sites with the expectation that rehabilitation would eventually free up land for public open spaces. Several of these sites have remained reserved as ROS since the DP 1991, yet have not materialised either as rehabilitation projects or as public open spaces. The slow, complex slum rehabilitation regulations have led to prolonged delays, leaving many of these sites unavailable for public use for decades.

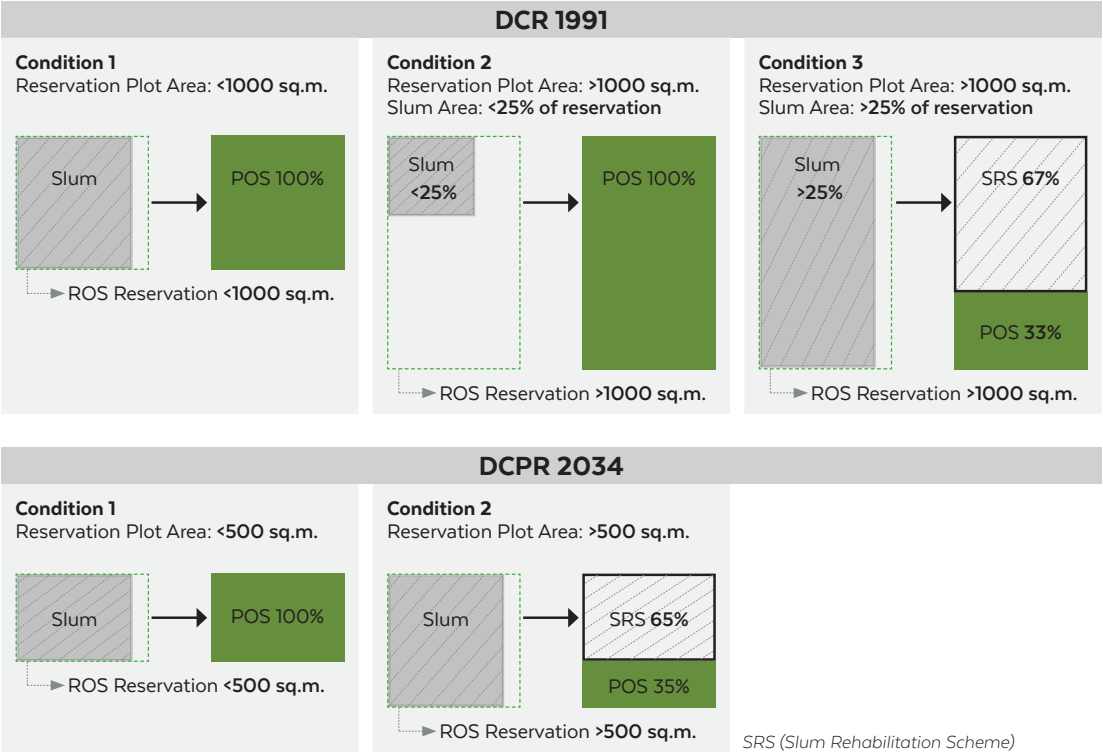
The redevelopment challenges and the associated extended timelines make these open spaces a long-term priority, and hence must be continuously tracked, recorded and monitored to ensure public access and availability.

Slum Rehabilitation Schemes on Open Space Reservations

A notification under the Development Control Regulations for Greater Bombay (DCR) 1992 introduced in-situ slum rehabilitation on reserved sites larger than 1,000 sq.m., provided at least 25% of the land was occupied by slums. The regulation allowed not more than 67% of the site to be used for rehabilitation while requiring the remaining 33% to be retained as a contiguous public open space.

Under DCPR 2034, this provision was reintroduced as Regulation 17(3)(D)(2) with a more permissive framework. Under the current regulations, reserved sites larger than 500 sq.m. now qualify for redevelopment, with 35% of the plot to be retained as a public open space. As a result, more small reserved open plots can be redeveloped, further reducing and fragmenting Mumbai’s already scarce open spaces (The detailed regulation is included in the Annexure D).

Figure 19: Redevelopment of slum occupied, reserved open space plots under SRA policy



Source: UDRI and NAGAR

Track 2: Functionality Assessment of EOS

EOS demarcations on a DP does not guarantee translation into an accessible public open space on ground. Multiple factors affect and limit access to an open space like existing encroachments, underdeveloped sites etc.

The EOS data has been evaluated through a 4-criteria telescopic process. Each level of analysis progressively filters out sites that are not available for public open space usage. These filters include presence of encroachments, identification of vacant or empty plots without meaningful open space development, and land ownership criteria, specifically excluding sites not owned by MCGM.

The final output is the actual number of usable open spaces in the city. Even they have varying degrees of usability. The 4th criteria evaluates these remaining open spaces based on four additional parameters of Safety and Security, Comfort, Health and Hygiene, and Sustainable Design.

The evaluation framework criteria for EOS sites are detailed below:

T 2.1. Occupied or Encroached Sites:

It was observed during survey, sites with more than 50% area under encroachment, resulted in a general perception that the site was not available for access and usage directly violating public rights to that space. Hence EOS sites with 50% or more area occupied by unauthorised construction have been considered inaccessible.

Figure 20: Example of occupation or encroachment on EOS, Gautam Nagar, Jogeshwari West (K-West ward)



Source: UDRI and NAGAR survey photos

T 2.2. Vacant or Under-Developed EOS Sites:

Vacant sites are essentially empty EOS plots with no productive use. Without on-site amenities and development corresponding to its intended use such sites remain inaccessible due to their non-productive nature. Vacant undeveloped EOS sites often turn into unmonitored waste dumps, informal parking lots, or unsafe areas with wild vegetation growth, thereby becoming inaccessible and unavailable for usage.

However, such sites present the easiest opportunity for quick intervention to develop and increase the number of usable public open space.

Figure 21: Example of vacant/under developed EOS, Kevni Pada, Jogeshwari West (K-West ward)



Source: UDRI and NAGAR survey photos

T 2.3. Non-MCGM Ownership Sites:

In the DP, MCGM demarcates multiple privately-owned playgrounds attached to and owned by educational and medical institutions, museums, and trusts as EOS, without intending to acquire them, given that it is accessible to general public conditionally.³⁷

The private entity in such cases imposes separate operational rules that limit or restrict access to general public. Such sites are also leveraged by the private institutes for monetary gains through imposition of hefty usage fees and membership charges. Despite being developed as per DCPR 2034 rules and having all required amenities corresponding to its intended use, such EOS sites remain inaccessible due to filters imposed based on the owner's discretion.

Figure 22: Example of non-MCGM ownership existing open space; Andheri Recreational Club, Gilbert Hill, Andheri West (K-West ward)



Source: UDRI and NAGAR survey photos

³⁷ Municipal Corporation of Greater Mumbai, Development Control and Promotion Regulations (2018), 60.

DP Road Access

All POS should have access via a DP recognised and demarcated road. Access roads recognised and demarcated on the DP are legally safeguarded against encroachment. Their designation ensures continuity of access and service provision to any abutting site.

Public open spaces that have direct frontage and access from a DP Road benefit from this statutory protection ensuring legally secure entry, improved visibility, and safety and long-term accessibility.

Conversely, sites without such direct and visible DP Road access remain vulnerable as they are often absorbed into abutting sites and usage, appropriated for private use.

Figure 23: Example of land locked EOS without DP Road access in Kamala Nagar, Vile Parle West (K-West ward)



Source: UDRI and NAGAR survey photos

T 2.4. Accessible EOS:

This section presents a further layer of analysis on the filtered usable EOS sites, through a Project Prioritisation and Funding Framework.

The framework, based on a scoring system, assesses how users perceive and experience these open spaces. It is informed by the user interviews conducted during the on-field surveys. The responses, though not quantified, were used to assign weightage to key evaluation parameters and determine the attributes that strongly influence perceptions of public open space usage.

The assessment focuses on four qualitative parameters:

- T2.4.1. Safety and Security
- T2.4.2. Comfort
- T2.4.3. Health and Hygiene
- T2.4.4. Sustainable Design

Each site is evaluated against these four parameters, each comprising multiple indicators as illustrated in Figure 24. The detailed ranking framework can be referred to in Annexure I.

Sites are scored out of 100 and subsequently ranked based on the adequacy of provision of these indicators, enabling identification of areas for targeted improvements and sustained investments.

This prioritisation framework to guide improvements is structured as an important tool to inform meaningful CSR interventions, so that projects can be prioritised and phased for implementation at scale across the ward. Such phased implementation can support holistic improvement of public open spaces as compared to limiting investments and benefits to a few sites.

The ranking is also supported by benchmark examples that demonstrate effective provision of most of the identified indicators and thus serve as a reference model for design improvements in other sites.

 46 T2.4.1. Safety & Security

Open spaces cater to a wide range of users, including children, women, the elderly, and other vulnerable groups. For all users and their caregivers, the perception of safety and security has been evaluated as the highest priority factor influencing their willingness to use these spaces. Inadequate lighting, poor visibility, absence of security personnel, and encroachments can significantly discourage use.

Five design parameters are identified for the safety and security category and are allotted a total of 46 points out of 100.

 26 T2.4.2. Comfort

This criterion focuses on the availability and quality of basic amenities like walking paths, park furniture, landscape elements, signage etc. that enhance the user experience within an open space.

The score for the category is evaluated based on five parameters with an overall weightage of 26 out of 100.

 22 T2.4.3. Health & Hygiene

The Health and Hygiene criteria evaluates how effectively open spaces support cleanliness, sanitation, and overall well-being through provision of essential facilities that contribute to a healthy and safe environment for users.

The overall score for this category is 22 out of 100.

 06 T2.4.4. Sustainable Design

The parameters under Sustainable Design assess the extent to which open spaces integrate environmentally responsible practices and features that enhance long-term resilience. Currently for this study only 2 main criteria were chosen based on the pilot surveys.

This category has an overall score of 6 on 100.

Figure 24: Scoring under POS improvement prioritisation framework

Parameters	Score	Physical Indicators
 T2.4.1. Safety and Security	10	a. Entrance signage board with site details
	10	b. Boundary wall with full site visibility
	10	c. Adequate lighting
	10	d. Presence of security guard and cabin
	06	e. CCTV surveillance system
 T2.4.2. Comfort	06	a. Adequate seating area & benches
	03	b. Presence of shading devices
	03	c. Sidewalks leading to site entrance
	06	d. Internal pathways
	08	e. Instructional signages with clear guidelines
 T2.4.2. Health and Hygiene	08	a. Waste collection through municipal authority
	08	b. Provision of segregated dustbins
	03	c. Provision of first aid kit
	03	d. Access to toilet blocks in 100m proximity
 T2.4.2. Sustainable Design	03	a. Presence of solar light
	03	b. Presence of rain water harvesting system
Total:	100	

Source: UDRI and NAGAR

3.2. Stakeholder Action Matrix

Based on the analysis of public open spaces and the stakeholders involved in their management and use, a Stakeholder-Action Matrix has been developed. The matrix systematically maps recurring challenges and links them to key actors responsible for resolving them. **It serves as a practical tool to help community groups and users identify the relevant authorities and stakeholders for effective issue resolution related to public open spaces.**

The Stakeholder Matrix is structured around three core components as detailed below:

1. Typical Issues and Challenges:

The typical issues are identified from the on-ground observations and surveys, analysis of the collected quantitative data, and frequent engagement with local stakeholders in the pilot wards.

These challenges are categorised into five groups:

- A. User Access to Open Spaces:** Issues faced by users in accessing public open spaces in their neighbourhoods.
- B. User Experience within Open Spaces:** Challenges faced by users while using public open spaces.
- C. Specific Open Space Category Issues:** Issues unique to certain types of open spaces, such as beaches and swimming pools, which require category-specific considerations.
- D. Impact on Surrounding Neighbourhoods:** Issues faced by residents living around open spaces due to activities associated with these spaces.
- E. Policy and Governance-related Issues:** Gaps related to planning, governance, and policy that cannot be addressed through on-ground interventions alone.

2. Group of stakeholders:

These are the key players responsible for the resolution of POS challenges and are broadly grouped into two categories –government stakeholders and community representatives, based on their roles, responsibilities, influence, and level of engagement in the planning, management, monitoring, and use of public open spaces.

3. Type of action required:

Based on the nature of intervention, four large categories of participation and action have been identified as follows:

- a. Development:** Interventions related to the creation, upgrading, or improvement of public open spaces and their infrastructure.
- b. Maintenance/ Enforcement:** Actions required for the upkeep, monitoring, regulation, and enforcement of rules within public open spaces.
- c. Nudge:** Actions that promote and encourage stakeholders to take necessary steps
- d. Funding (₹):** This layer of intervention captures opportunities for securing funds in addition to the BMC allocations.

Typical Issues and Challenges	City Level		
	BMC DP Department	BMC Garden Department	Road and Traffic Department
A. User Access to the Open Space			
1 Entrance signage indicating open space category and timing is not available			
2 Gates to the open space remain locked during usable public hours (6:00am - 1:00pm, 4:00pm - 10:00pm)			
3 Main entrance to the open space is not clearly visible			
4 Public access timings are highly restrictive, allowing usage for a very limited time			
5 Entry and access is controlled by private groups (caretakers, clubs, institutes)			
6 Entry to open space requires heavy entrance fees/membership charges			
7 Continuous private events such as weddings, festivals, tournaments, or political gatherings restrict access			
8 The public road (DP Road) approaching the open space has not been constructed or is poorly maintained			
9 Footpaths leading to the open space are poorly maintained, encroached or entirely missing making access difficult			
10 There are no ramps or railings (universal accessibility features) at the entrance for ease of access for elderly or differently-able users			
11 Open space is not visible due to encroachments (permanent or temporary)			
12 Water-logging or flooding during monsoons makes the open space inaccessible			
B. User Experience Inside the Open Space			
1 Lack of security guards makes users feel unsafe inside the open space			
2 There are no surveillance or monitoring systems installed inside the open space			
3 The open space lacks fencing or proper boundary protection			
4 Open space feels unsafe because of high and solid boundary walls			
5 Signage providing instructions, rules, or directions is missing inside the open space			
6 Lighting inside the open space is insufficient			
7 Sports facilities and open-air gym equipments are broken or unusable			
8 Organised group activities (yoga classes, etc) occupy large portions of the open space and restrict general public use			
9 Internal pathways and jogging tracks are poorly maintained			

Type of action: Development Maintenance/Enforcement Nudge Funding

[illegible]

Legend

Type of action: ■ Development ■ Maintenance/Enforcement ■ Nudge ₹ Funding

[illegible]



Kaifi Azmi Park, K-West ward, Andheri (West) | Source: UDRI + NAGAR

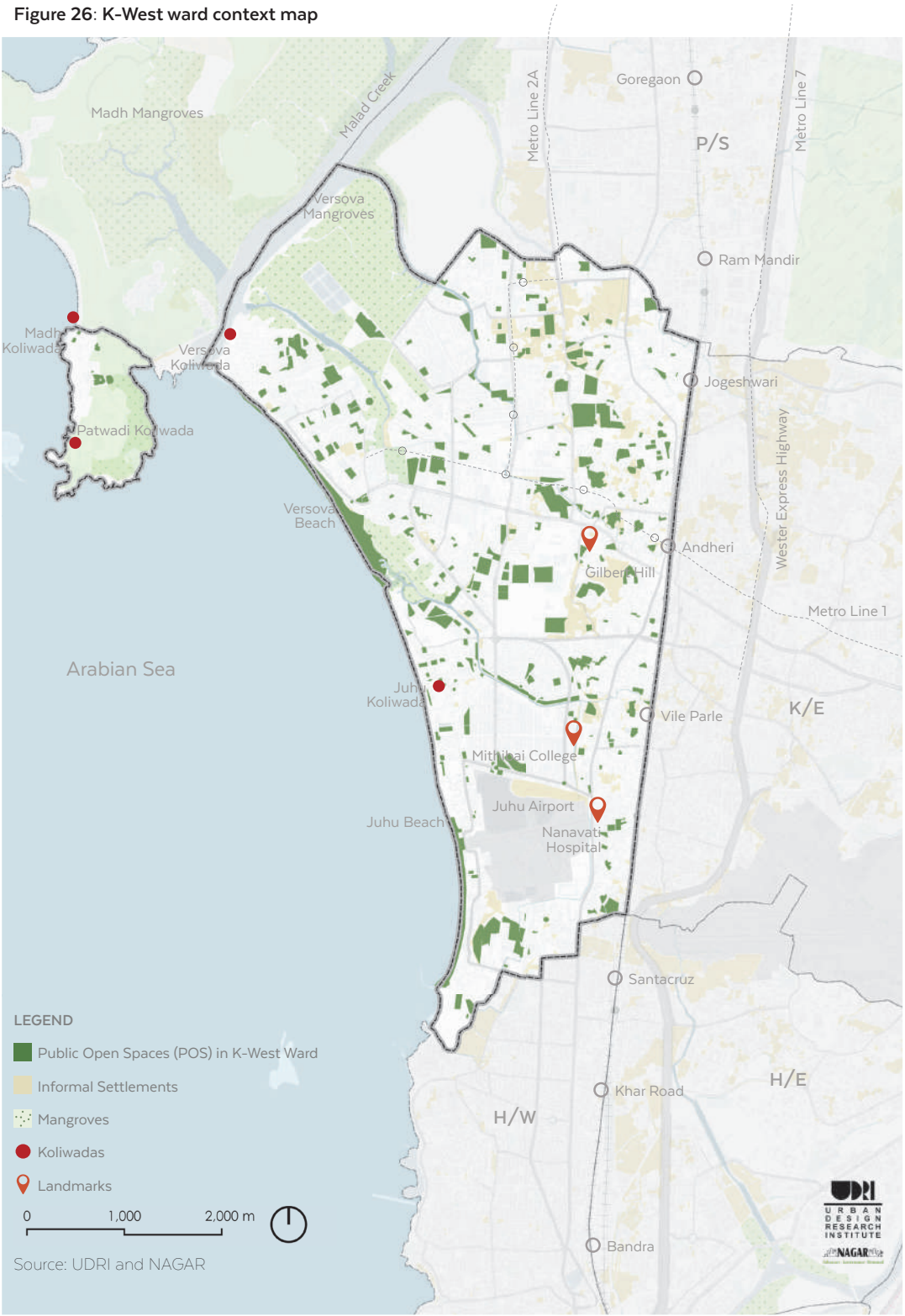
04

Analysis of POS in Pilot Wards

4A. K-West Ward

POS Analysis

Figure 26: K-West ward context map



4A.1. K-West Ward Profile

Figure 27: Key map - K-West ward



Spatial Extent

Total K-West Ward Area

2518.17 Ha

MCGM Area

2464 Ha

MMRDA Area

54.17 Ha

Demographic Insights

K-West Population - 2011 K-West Projected Population 2031

7,49,000 (2011 Census) **7,39,000** (Report on Draft Development Plan 2034)

K-West Slum Population 2011

2,15,678 - 29% (2011 Census)

Built Form

Primarily residential, the ward contains some of Mumbai's oldest Gaothans and Koliwad areas characterised by ground-plus-one built structures. Outside these settlements, the ward has mid-to high-rise residential towers, generally ranging from G+8 to G+20 and above in select pockets. However, building heights in the Juhu area is constrained, due to restrictions imposed within the funnel zone of the Juhu Aerodrome.

K-West ward also includes several pockets of informal settlements, located along the eastern edge of the ward, particularly close to Jogeshwari Railway Station. These areas are witnessing rapid transformation under redevelopment schemes.

Transport Network

K-West ward has three major transport infrastructure - Suburban Railways, and Metro Line 1 & 2 - that connects it to the rest of the city. Public buses under the BEST service bus support local and citywide movement. In addition, the Juhu Aerodrome remains an important landmark for planning and commercial aviation within the ward.

Amenities and Landmarks

Prithvi Theatre and the ISKCON temple in the ward serve as prominent cultural and religious anchors. There are several educational institutions in the ward like Narsee Monjee Institute of Management Studies, Mithibai College, Bharatiya Vidya Bhavan, Kamla Raheja Vidyanidhi Institute for Architecture, S. P. Jain Institute of Management and Research, etc. The ward also has historic landmarks of Madh Fort and Gilbert Hill which is a graded heritage POS within the ward. Key healthcare institutions such as HBT Medical College, Dr R. N. Cooper Municipal General Hospital and Nanavati Max Super Speciality Hospital are also located within the ward limits.

Natural Features

Two of Mumbai's prominent waterfronts, Juhu Beach and Versova Beach, stretch along this ward, which function as major recreational spaces as well as critical coastal buffers. There are protected mangrove belts in the ward, around Versova and the Oshiwara creek system.

Climate Vulnerability in K-West

Low-lying areas near the creeks are prone to seasonal waterlogging. The upcoming Versova-Bhayandar coastal road is expected to affect the mangrove belts of the Versova and increase the risk of seasonal waterlogging and flooding in the surrounding areas.

4A.2. Analysis of K-West Ward Public Open Spaces

ROS v/s EOS Sites:

There are a total of **341** DP demarcated POS in the K-West ward, equivalent to **2.9 sq.m. per capita**. Of these, **178 plots are Reserved Open Spaces (ROS)** comprising 52% of the total number. Area wise these ROS sites account for **35% (78.85 ha)** of the total open space area within the ward.

Only **163** plots are **Existing Open Spaces (EOS)**, amounting to **1.9 sq.m. per capita**. Area wise these EOS sites account for **65% (143.56 ha)** of the total open space area within the ward.

Most EOS sites are predominantly categorised and evenly distributed as gardens, playgrounds, and recreational grounds. However nearly 44% EOS area is concentrated within 8 sites under the categories of beach, tank/pond/lake, club/gymkhana, and municipal sports complex, together addressed as others in Figure 28.

New open spaces are getting added mainly in gardens and parks, and playgrounds category.

Figure 28: Snapshot of DP demarcated POS in K-West ward

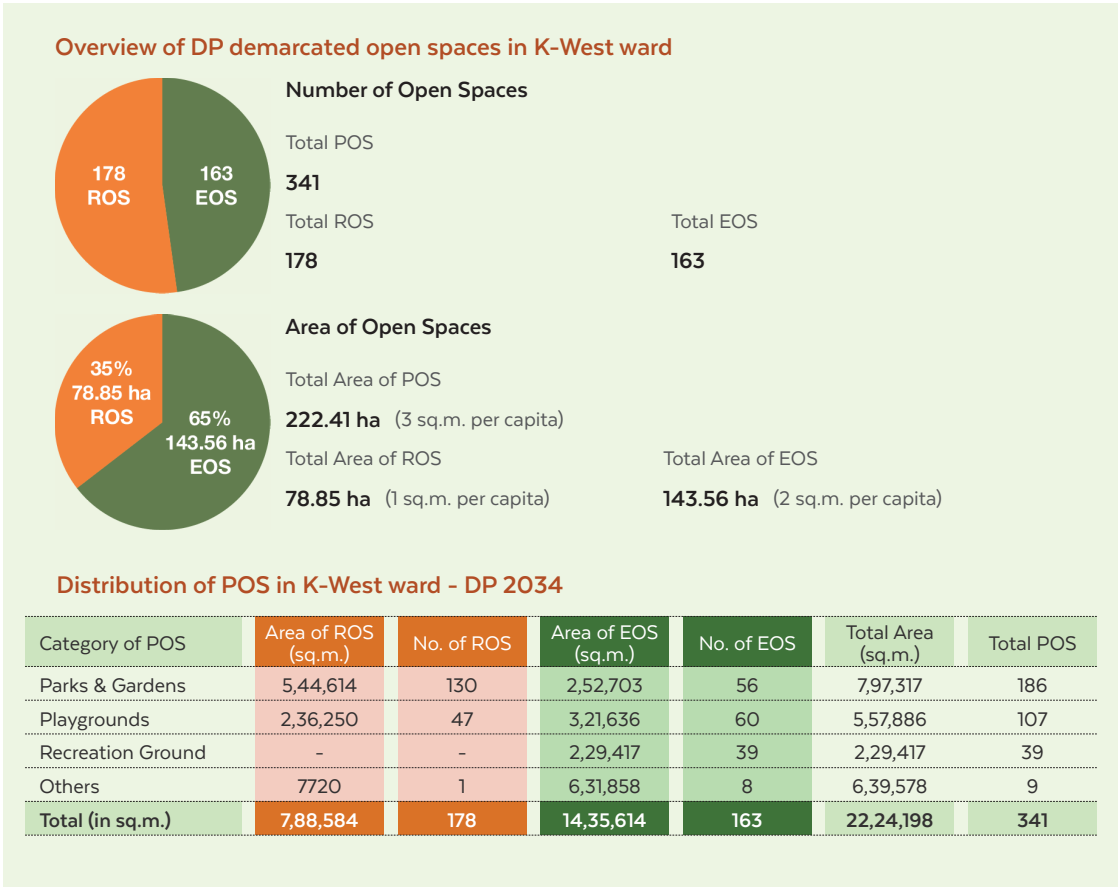
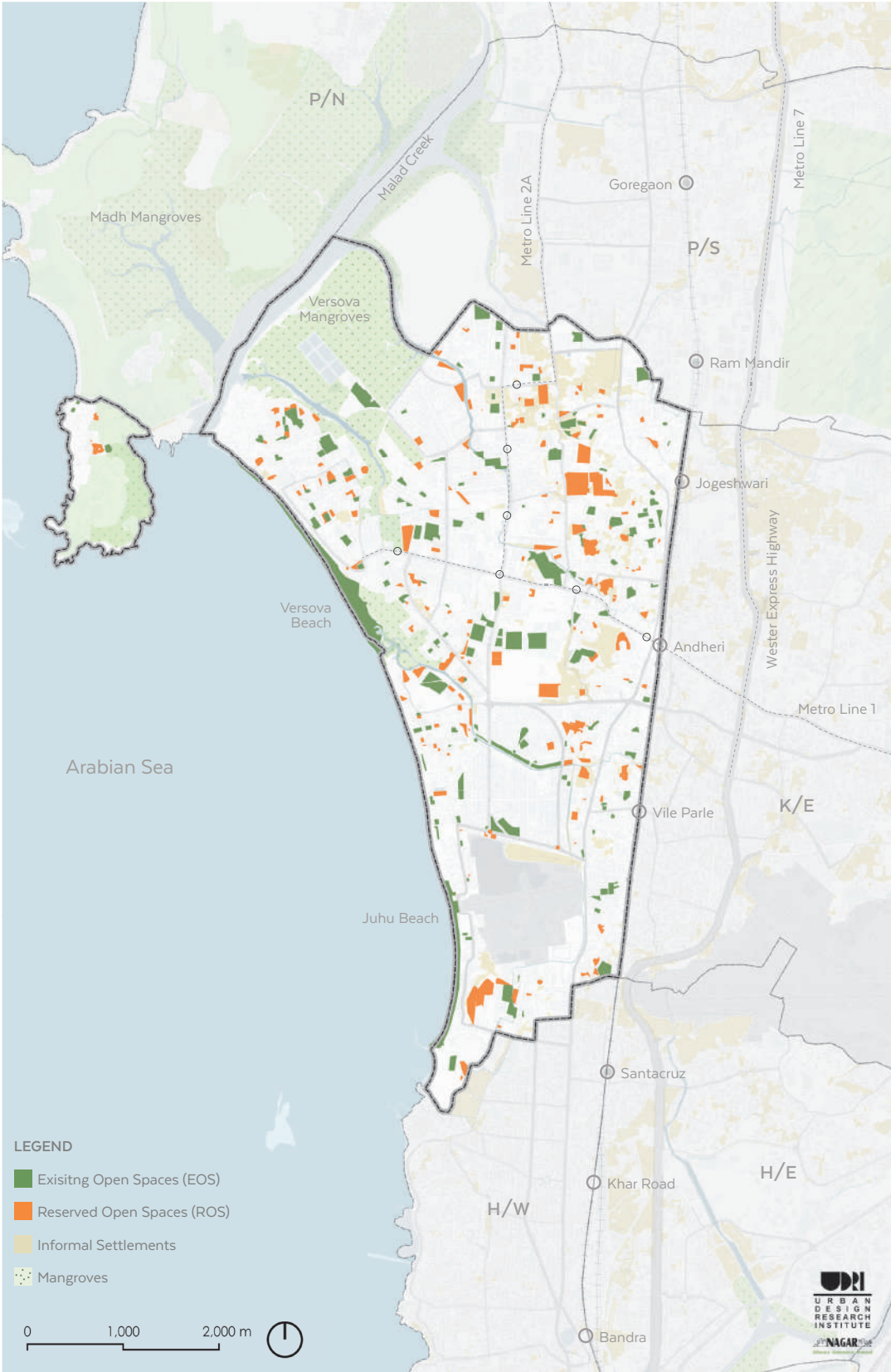


Figure 29: Public open spaces in K-West ward



Source: UDRI and NAGAR

Track 1: DP Implementation Assessment for ROS

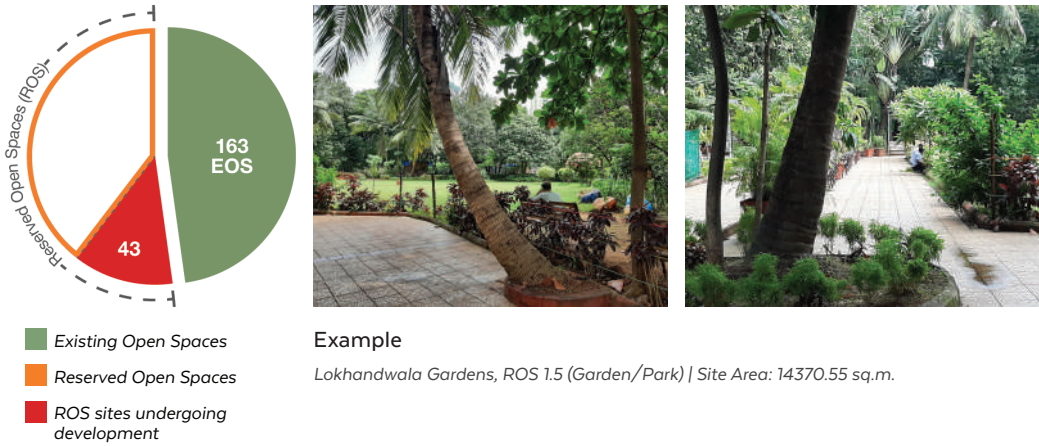
T 1.1. Undergoing Development:

Of the 178 ROS in K-West ward, **43 sites (4 playgrounds + 39 gardens)** are either **completely developed or are undergoing development** as per their assigned DP usage. These sites are positive indicators of successful DP implementation, demonstrating that **nearly 25% of the targets for acquisition and development of new public open spaces in K-West ward have already been undertaken.**

The official DP records of these sites should be updated immediately to reflect the on-site development and ensure their protection from encroachment. Such sites should also immediately display public notices declaring MCGM ownership, to create awareness about its status as a public amenity and avoid further arbitrary usage.

Figure 30 illustrates a well-developed garden that includes children’s play areas, maintained pathways, CCTV surveillance, and other essential amenities. Despite offering a high-quality, user-friendly environment, the site continues to be marked as a ROS in the DP.

Figure 30: Undergoing development



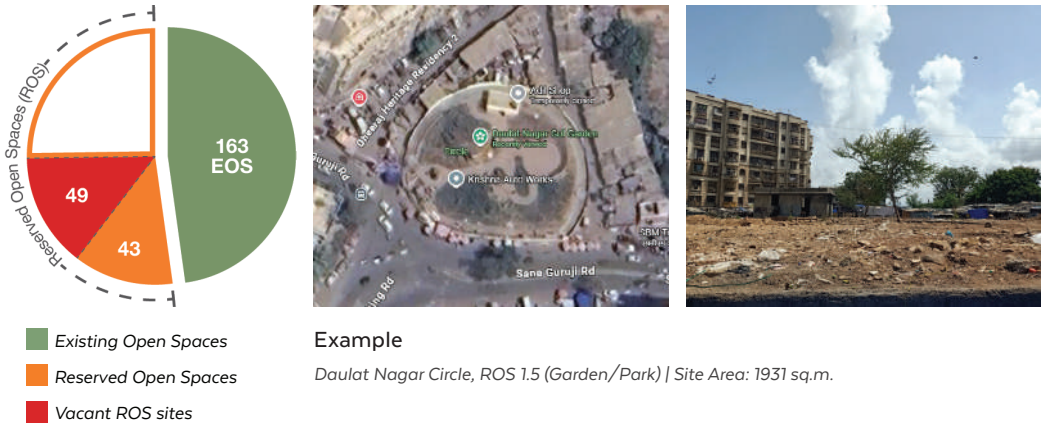
T 1.2. Vacant Sites:

Of the remaining 135 reserved open spaces, **49 sites are observed to be vacant, without significant usage or construction.**

These sites must be prioritised for acquisition and quick transformation, as they have limited encumbrances. Currently, out of the 49 vacant ROS sites many have **overgrown wild vegetation** (16) or have been transformed into **informal parking lots** (03) and **garbage dumps** (05).

The site illustrated in Figure 31 is located at a road junction within a densely populated residential area. It offers excellent visibility and accessibility to the surrounding neighbourhood. As it’s completely vacant, it presents an opportunity for immediate development into a functional and accessible public open space.

Figure 31: Vacant sites

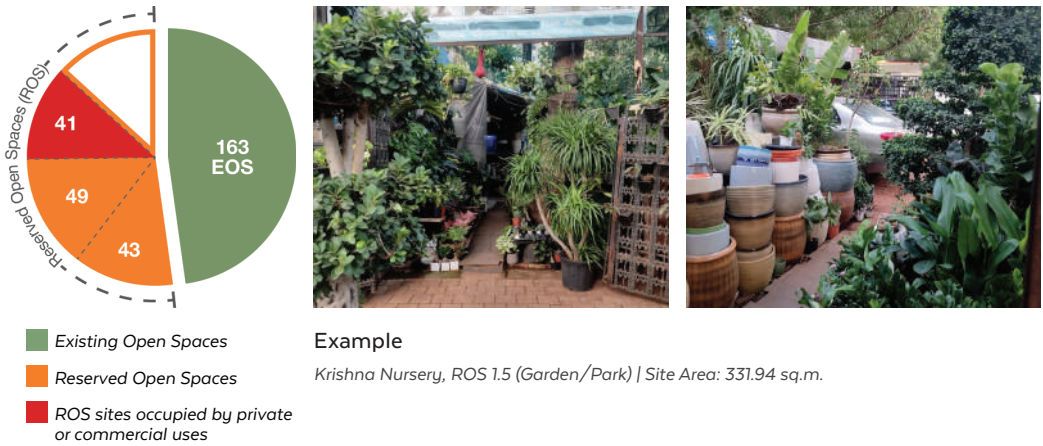


T 1.3. Sites Occupied by Private or Commercial Uses:

41 ROS sites in K-West ward have formal residential layouts and commercial set-ups on them. These sites present a far greater challenge in acquisition. If the habitation of the sites is legal, the sites may also choose to undergo de-reservation (allowable if MCGM does not acquire them within the first ten years of the DP time period). These 41 sites in the K-West ward are critical for time-sensitive acquisition.

The site illustrated in Figure 32 represents one such condition. Designated as a reserved garden, it is currently being used as a commercially operated nursery. The site is managed privately.

Figure 32: Sites occupied by private or commercial uses



T 1.4. Sites Occupied by Slums:

In the K-West Ward, 45 ROS sites are demarcated on sites with existing informal settlements. Of these, 36 occupied sites have been demarcated as ROS since the DP 1991.

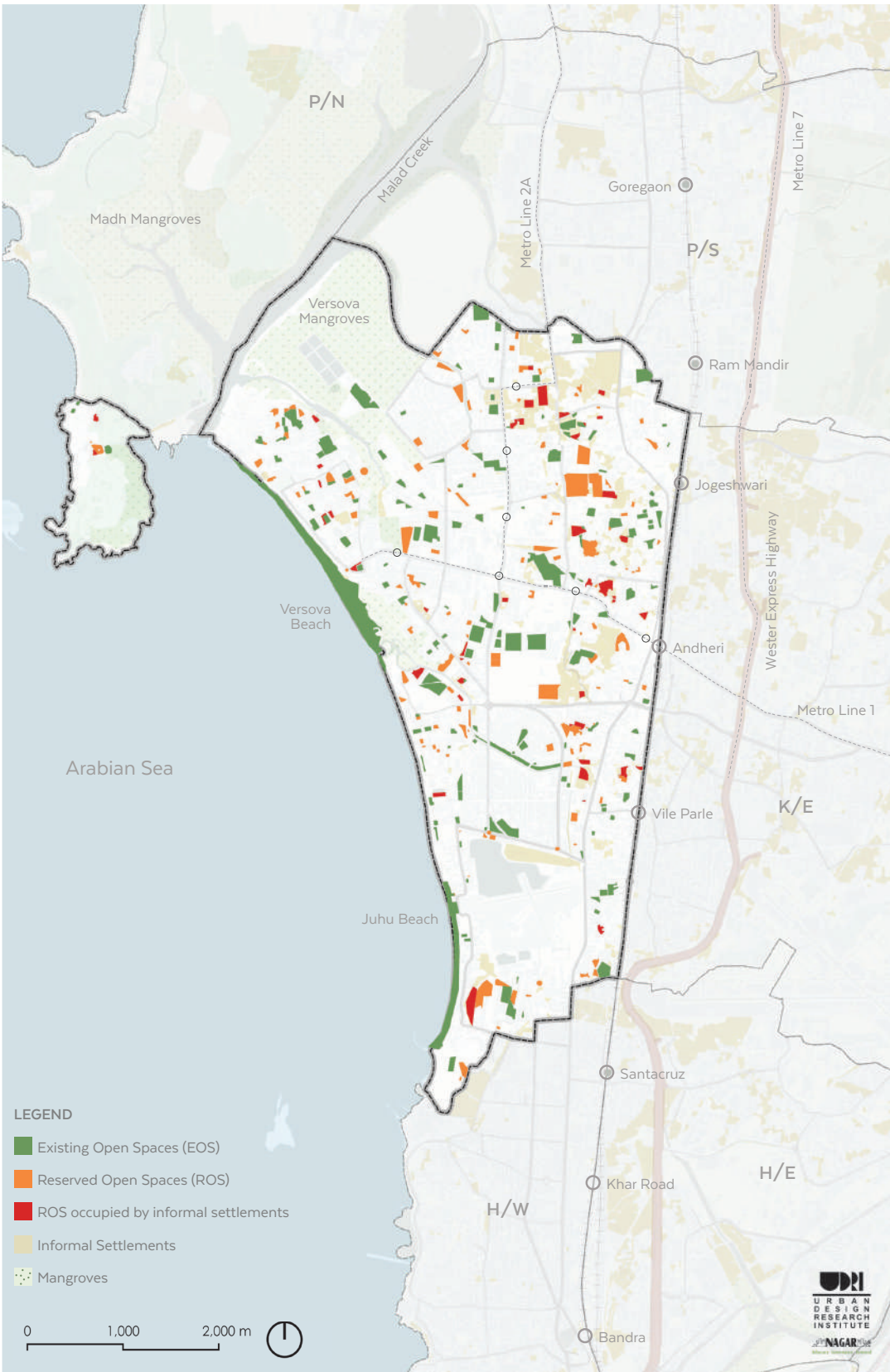
The site example in Figure 33 exemplifies this condition. Originally designated as a recreation ground in the DP 1991 and occupied by slums, the site continues to remain a ROS in DP 2034, with a revised reservation as a playground (ROS 1.4). This shift, without an on-ground transformation, underscores the persistent challenges and prolonged timelines involved in converting encumbered reserved open spaces into functional public amenities.

Figure 33: Sites occupied by slums



Map in Figure 34 represents the locations of ROS sites occupied by slums. These sites are primarily concentrated in the eastern parts of the K-West ward. A significant number of them are part of larger slum clusters. The transformation of these parcels is closely tied to broader questions of slum rehabilitation and cluster-level redevelopment, making their conversion into accessible public open spaces a complex and long-term challenge.

Figure 34: ROS sites occupied by informal settlements



Track 2: Functionality Assessment of EOS

There are 163 EOS in the K-West ward demarcated in the DP 2034, the assumption is that all of these must be accessible to a large section of the population.

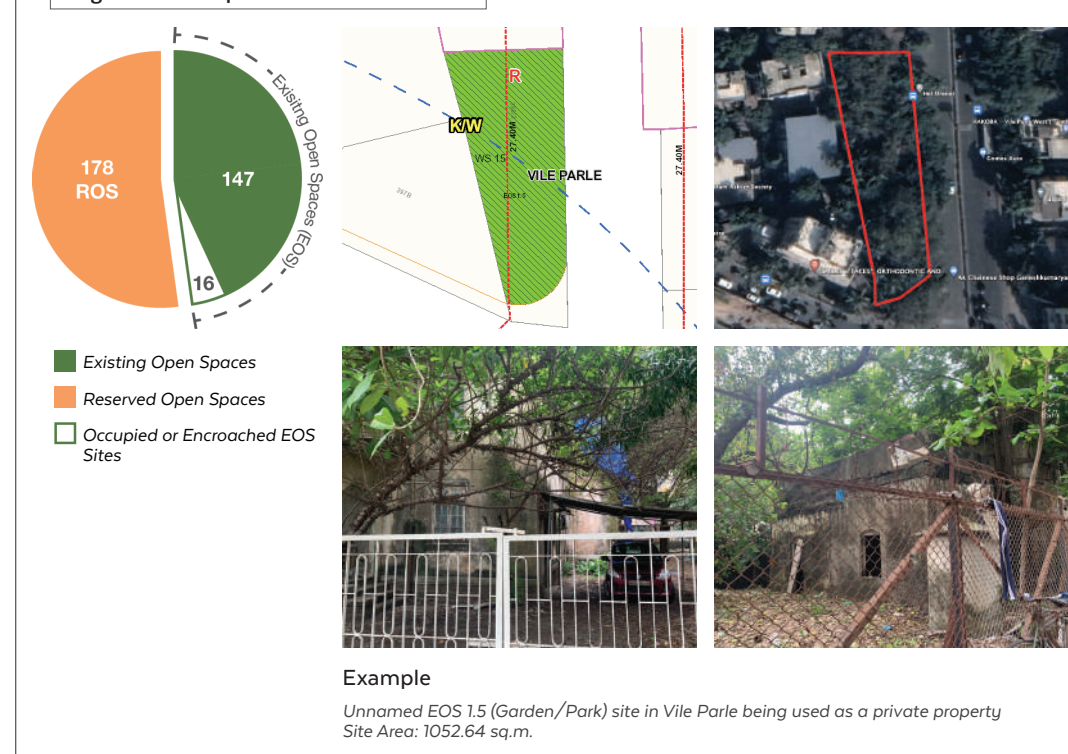
However, on-ground observations for the EOS sites, highlight policy, regulatory, and implementation gaps. Analysis is focused on aspects causing inaccessibility to these sites or factors that limit or allow conditional access as follows:

T 2.1. Occupied or Encroached Sites:

16 EOS sites (10% of all existing open space sites) are partly or wholly occupied. The nature of the occupation is primarily permanent informal residential structures (07). Some sites are also occupied by residential apartments (04) and commercial buildings (02). Growth of encroachments and occupations on existing open space sites is indicative of larger gaps in monitoring, surveillance and enforcement.

The site illustrated in Figure 35 is an EOS plot that is currently being used as a private residence. The site has two residential structures at the edge of the plot with an open space in the middle separating them. Due to the private use, the site is not accessible to the general public and similar pattern can be seen across all the sites that are either occupied or encroached for private use.

Figure 35: Occupied or encroached sites



T 2.2. Vacant or Under-Developed EOS Sites:

15 EOS sites categorised as gardens, playgrounds, or recreation grounds, do not exhibit corresponding development, amenities or usage and are largely empty. These sites are informally being used as parking, waste dump yard, or are covered with wild, unchecked vegetation, making them inaccessible and unusable as a public space for play and leisure. Such Existing Open Spaces are indicative of larger gaps in monitoring and challenges related to sustained maintenance and upkeep.

Figure 36 illustrates an example of an underdeveloped EOS site. The site is partially inaccessible, covered by overgrown vegetation, garbage dumping, and instances of open burning. However, unlike ROS sites, these parcels are already in public ownership and designated as EOS, making them relatively easier to transform. This positions them as high-priority sites for immediate development.

Figure 36: Vacant or under-developed sites



T 2.3. Non-MCGM Ownership Sites:

Of the 163 EOS sites, 53 are inaccessible due to ownership by non-MCGM entities or their management rights being vested in a specific department of the MCGM other than the Garden Department. Where management rights are held by specific non-government entities, the access to these sites becomes either conditional, or restricted.

Most sites under private management - trusts, associations, groups etc - largely demarcated as EOS 2.6 (Recreational Grounds), require either a membership bought at a large sum, or a hefty entry fee. Some limit public access to a stipulated few hours of the day, only accessible through prior booking.

10 (09 playgrounds and 01 garden) managed by private and government schools, earmark limited hours daily – outside of school timings – for public use subject to permission. However, the absence of clear signage indicating public access hours and the procedure for obtaining permission results in these sites being treated as private amenity spaces, with access effectively controlled by the respective institute management.

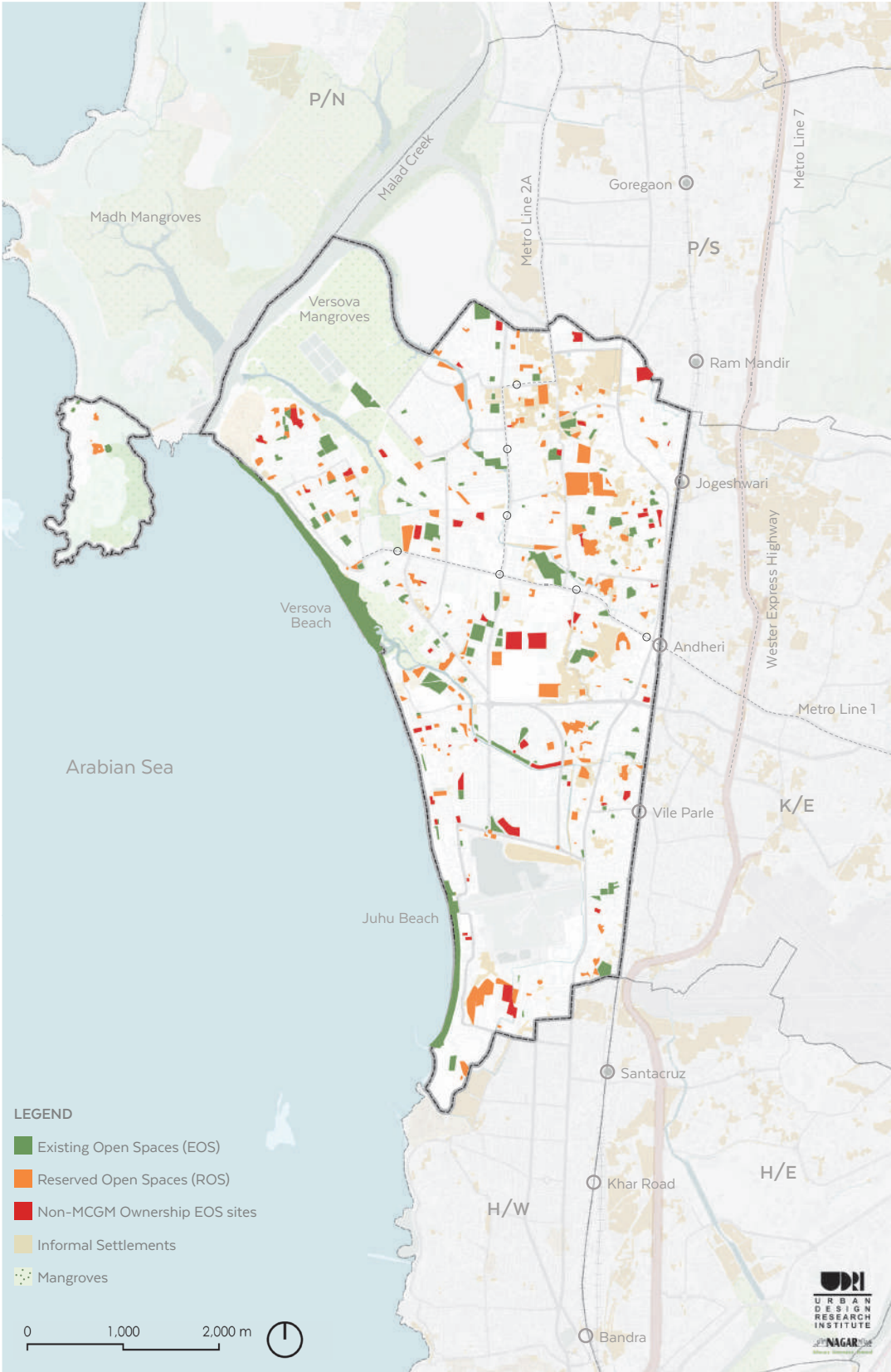
Conversely, 16 sites that displayed detailed information boards – outlining dos and don’t’s, timings, fees, responsible authorities, and emergency contact details – remained publicly accessible, irrespective of being managed by a private entity.

These privately managed sites indicate that in absence of information in the public domain, sites risk becoming inaccessible.

Figure 37 illustrates one such example, the Andheri Recreation Club, where the site, though designated as EOS2.6, a recreational ground, is privately owned and accessible only through membership. This creates a significant barrier, rendering the space highly exclusive and limiting its use to a restricted group of users.



Figure 38: Inaccessible EOS sites due to non-MCGM ownership



Source: UDRI and NAGAR

DP Road Access to Sites:

As mentioned earlier, access through a DP-designated road is a critical statutory requirement for ensuring public accessibility to an open space. The data reveals that 17 EOS sites do not have direct access from a DP-recognised road. Consequently, many of these sites remain tucked away from public view and are accessible only through private streets or informal access points. Over time, several of these spaces have been repurposed for private or ancillary uses such as fish drying, garbage dumping, parking, and private open spaces.

The site in Figure 39 exemplifies this condition. It lacks direct access from a DP road and is only reachable through the adjoining private properties. This not only restricts public entry but also visually disconnects the site from the larger neighbourhood, effectively rendering it inaccessible and excluding it from functioning as a public open space.

Figure 39: No DP Road access to sites



Example

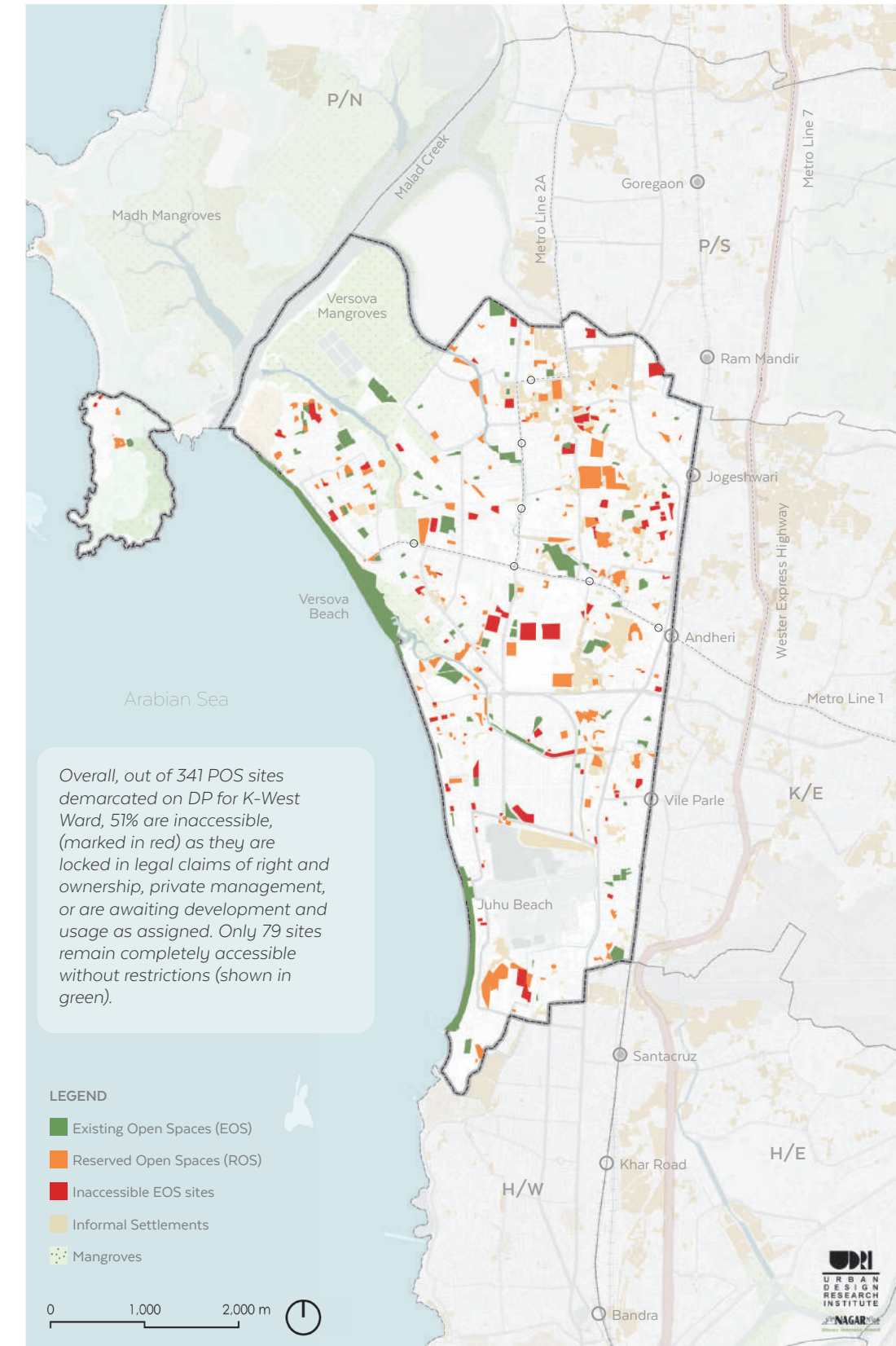
EOS 1.4 (Play Ground) functioning as a part of a private property | Site Area: 1140 sq.m.

T 2.4. Accessible EOS:

Only 79 out of 163 existing open spaces in K-West ward are identified to be accessible as shown on map in Figure 40. In this section, these 79 sites are evaluated and ranked for usability based on the Project Prioritisation and Funding Framework (Chapter 3, T2.4). This evaluation helps identify gaps in the provision of amenities and meaningful opportunities for CSR interventions.

The following sections presents a detailed overview of the performance of the 79 usable EOS sites in K-West ward.

Figure 40: Inaccessible EOS sites



Source: UDRI and NAGAR

T 2.4.1. Safety and Security:

The Safety and Security parameter is evaluated using the following five indicators:

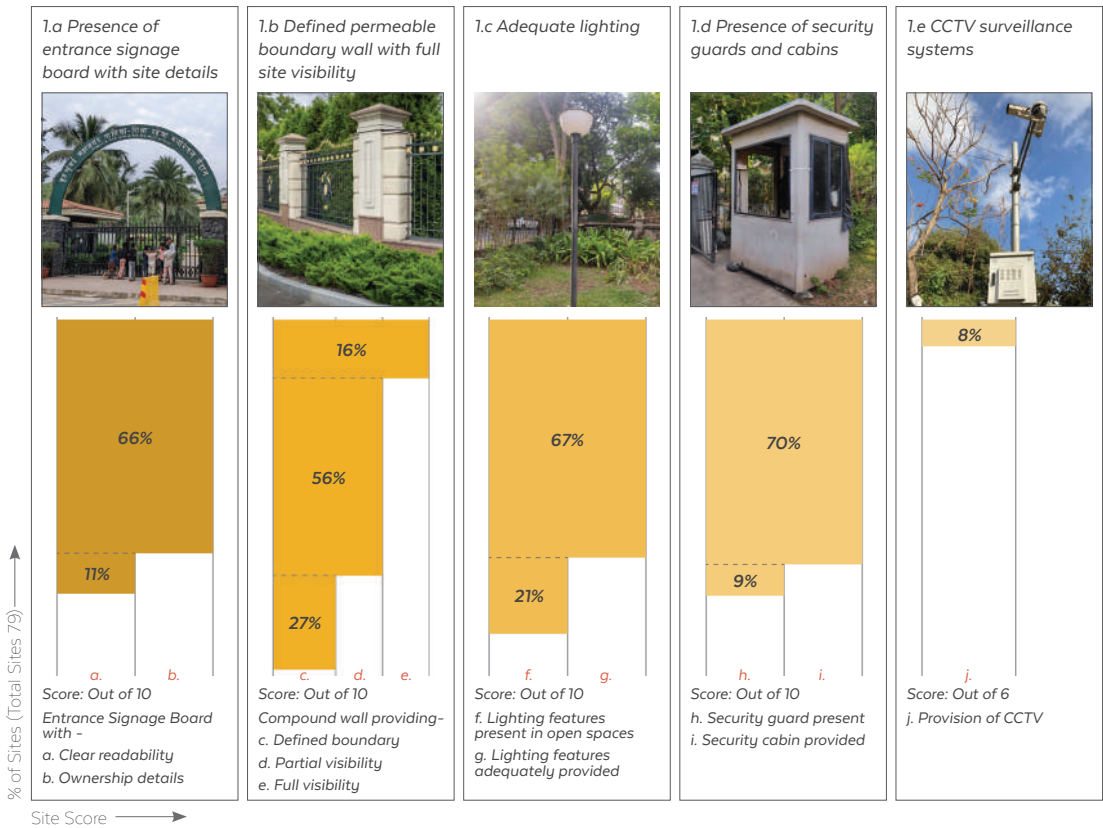
- 1.a. Presence of an **entrance signage board** displaying the site name and ownership or management details
- 1.b. A **defined permeable boundary wall** with full site visibility
- 1.c. Adequate **lighting**
- 1.d. Presence of **security guards and security cabins**
- 1.e. **CCTV surveillance**

The bar graphs in Figure 41 illustrate the adequacy of these amenities across the 79 evaluated sites. Key observations and areas of improvement have been captured:

- 1. While more than 66% sites satisfactorily provide entrance signage boards (1.a) with complete site details, lighting (1.c) and security guards with cabins (1.d). The remaining sites can be furnished with these amenities through CSR or BMC funding on priority as these were perceived as some of the most important features by most open space users.
- 2. While almost all open spaces have boundary walls (1.b), only 16% allow full visibility into the site. The opportunity lies in retrofitting solid boundary walls with permeable fencing or railings to improve public visibility inside the remaining 84% open spaces sites.
- 3. CCTV surveillance systems is the most consistently absent safety feature across evaluated sites (1.e), making its provision across parks, gardens, and playgrounds, a suitable ward-wide initiative to strengthen safety and monitoring within public spaces.

Figure 41: Evaluation of Safety and Security parameter using the following indicators

Total Score 46



T 2.4.2. Comfort

The Comfort parameter is evaluated using the following five indicators:

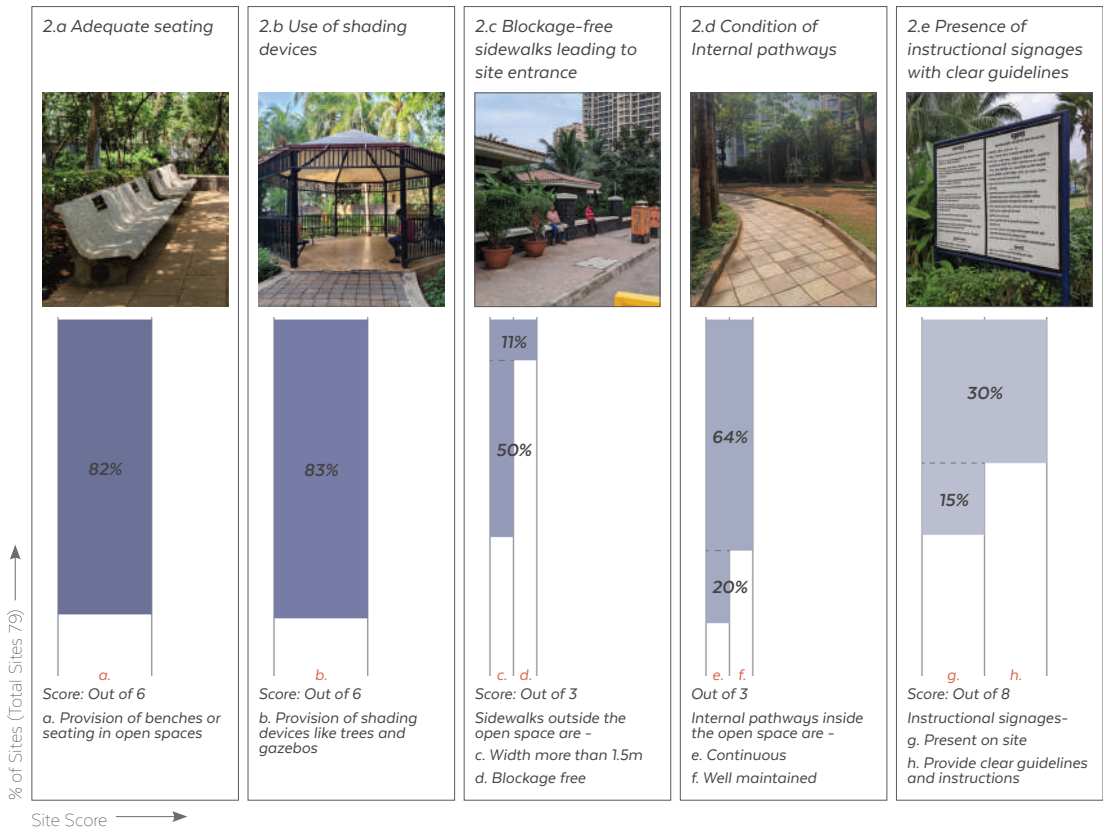
- 2.a. Adequate seating
- 2.b. Use of **shading devices**
- 2.c. **Blockage-free sidewalks** leading to site entrance
- 2.d. Condition of **internal pathways**
- 2.e. Presence of **instructional signage** with clear guidelines

The bar graphs in Figure 42 illustrate the adequacy of these amenities across the 79 evaluated sites. Key observations and areas of improvement have been captured:

- 1. More than 80% sites adequately provide seating, shading devices, and internal pathways (indicators 2.a, 2.b, and 2.d), but maintenance remains inadequate. The opportunity lies in establishing cyclical evaluations and a dedicated maintenance fund for long-term upkeep.
- 2. While 61% sites have sidewalks (2.c), only 11% sites are unobstructed. Access remains a challenge at 89% sites due to missing or obstructed sidewalks leading to entrances. Providing unobstructed sidewalks of at least 1.5 meters connecting surrounding neighborhoods to these sites can improve accessibility.
- 3. Instructional signage (indicator 2.e) is present at 45% sites, but only 30% sites provide complete information on timings, permitted activities, behavioral guidelines, and site rules. This presents an opportunity for quick intervention through the provision and upgradation of signage.

Figure 42: Evaluation of Comfort parameter using the following indicators

Total Score 26



T 2.4.3. Health and Hygiene:

The Health and Hygiene parameter is evaluated using the following four indicators:

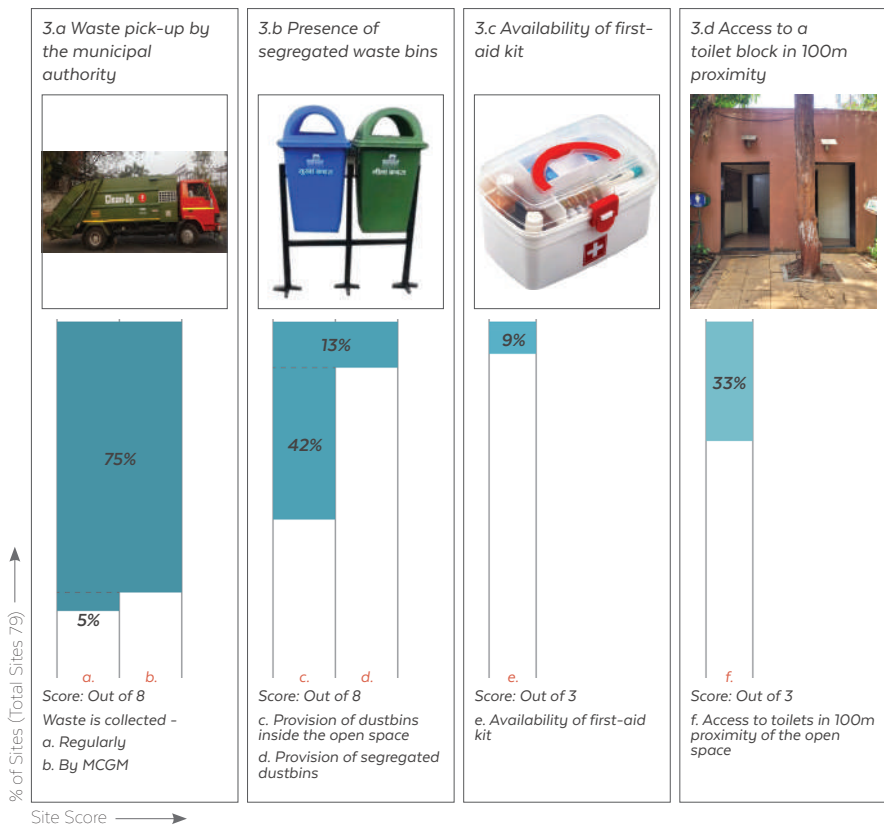
- 3.a. Waste pick-up by the municipal authority
- 3.b. Presence of segregated waste bins
- 3.c. Availability of a first aid kit on-site
- 3.d. Access to a toilet block within 100 meters of the open space

The bar graphs in Figure 43 illustrate the adequacy of these amenities across the 79 evaluated sites. Key observations and areas of improvement have been captured:

1. The municipal Solid Waste Management (SWM) department regularly collects waste (3.a) from 75% of the sites, with the key gap being on-site waste collection. Only 13% of the sites have segregated dustbins (3.b). Ward-wide provision of segregated bins, supported by awareness campaigns, offers a quick, low-cost intervention.
2. First-aid kits (3.c) are available at only 7 of 79 sites, presenting an opportunity for ward-wide provision.
3. While public toilets are often considered essential amenities, they can create hygiene and maintenance challenges and are better located near, rather than within public open spaces. Only 33% sites have a toilet block within 100 metres (3.d), thus requiring long-term planning and phased implementation for the remaining sites

Figure 43: Evaluation of Health and Hygiene parameter using the following indicators

Total Score 22



T 2.4.4. Sustainable Design:

The Sustainable Design parameter is evaluated using the following two indicators:

- 4.a. Solar lighting
- 4.b. Presence of rain water harvesting system

The bar graphs in Figure 44 illustrate the adequacy of these amenities across the 79 evaluated sites. Key observations and areas of improvement have been captured:

1. Only 4 sites have solar powered lights (4.a) installed, while just 6 sites have rainwater harvesting systems (4.b). Both the indicators critical for reducing resource consumption and enhancing the resilience of open spaces can be prioritised for implementation across the ward through CSR or Local Area Development funds.

Figure 44: Evaluation of Sustainable Design parameter using the following indicators

Total Score 6

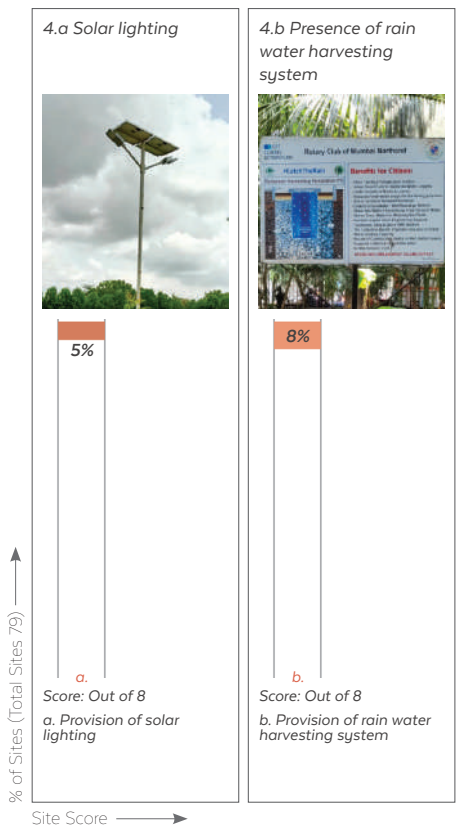
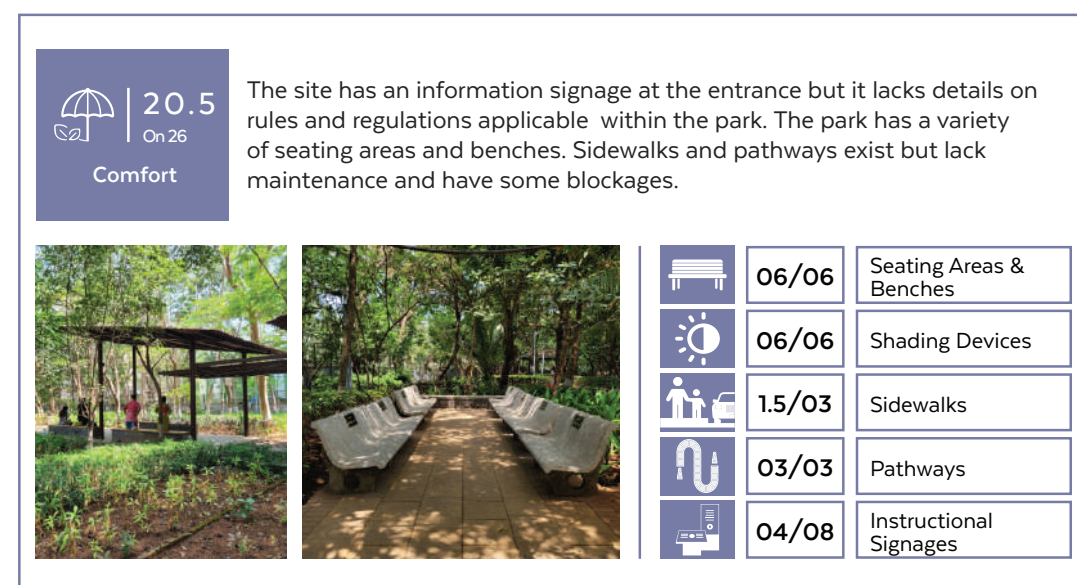
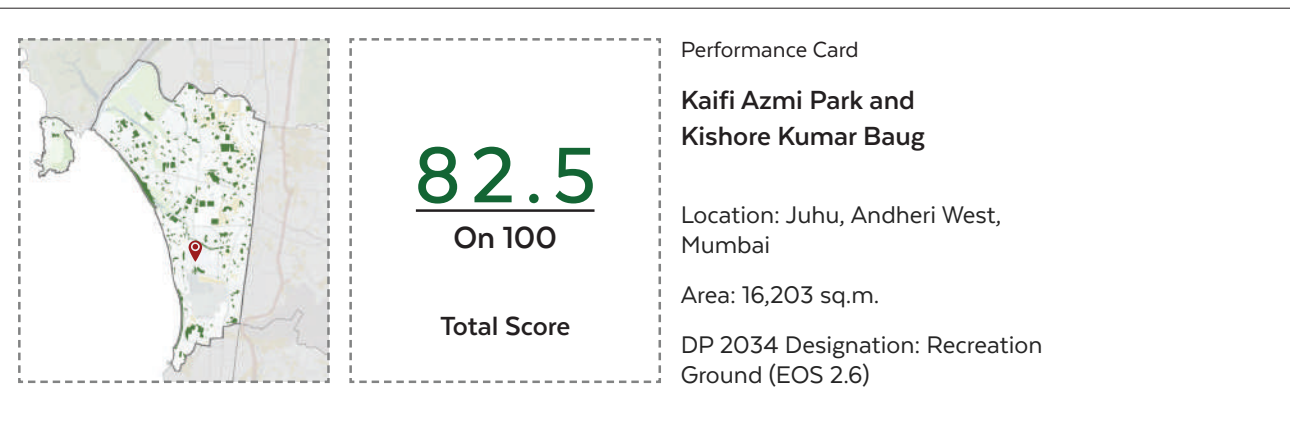


Figure 45: Best performing site in K-West ward



Kaifi Azmi Park and Kishore Kumar Baug

Once a dumping yard, Kaifi Azmi Park stands today as a well-designed and well-maintained public open space, transformed through the sustained efforts of citizen-led groups. It now serves as a vital neighborhood park with landscaped area, walking tracks, and shaded seating areas, reflecting how community participation can successfully reclaim and rejuvenate neglected urban land.



4A.3. K-West Ward Summary

Opportunities

1. K-West has one of the most active citizen networks in the city, that regularly engages in issues related to public open spaces within their neighbourhoods. These citizen groups have developed strong working relationships with both elected and municipal officials, often enabling timely responses, interventions, and visible improvements on the ground.
2. Public open spaces consistently feature as a priority area in the developmental agendas and manifestos of elected councillors, MPs, and MLAs in the ward. Consequently, Local Area Development (LAD) funds are frequently directed towards open space development, beautification, and improvement. This sustained political attention helps ensure that public open spaces receive regular investments and long-term support.
3. Several sites demarcated as ROS in the DP are currently undergoing development in K-West Ward. These ongoing projects reflect a broader commitment towards expanding public open spaces and indicate the presence of a responsive and proactive governing authority.

Challenges

1. Significant number of playgrounds, clubs, and gymkhanas in K-West ward are managed by private trusts, societies, and associations. Access to these spaces is often restricted through membership requirements, entry fees, and limited operating hours, reducing their availability to the wider public.
2. Research institutions, and educational organisations, NGOs have limited participation in public open space issues within the ward. Greater engagement from these stakeholders could help document best practices, introduce innovative solutions, support evidence based decision-making and strengthen data generation around open spaces.
3. A substantial number of ROS-designated sites in K-West ward are currently occupied by informal settlements or private residential and commercial developments. The lengthy timelines and limited feasibility of converting many such sites into public open spaces, demands a reassessment of ROS demarcation mechanisms.

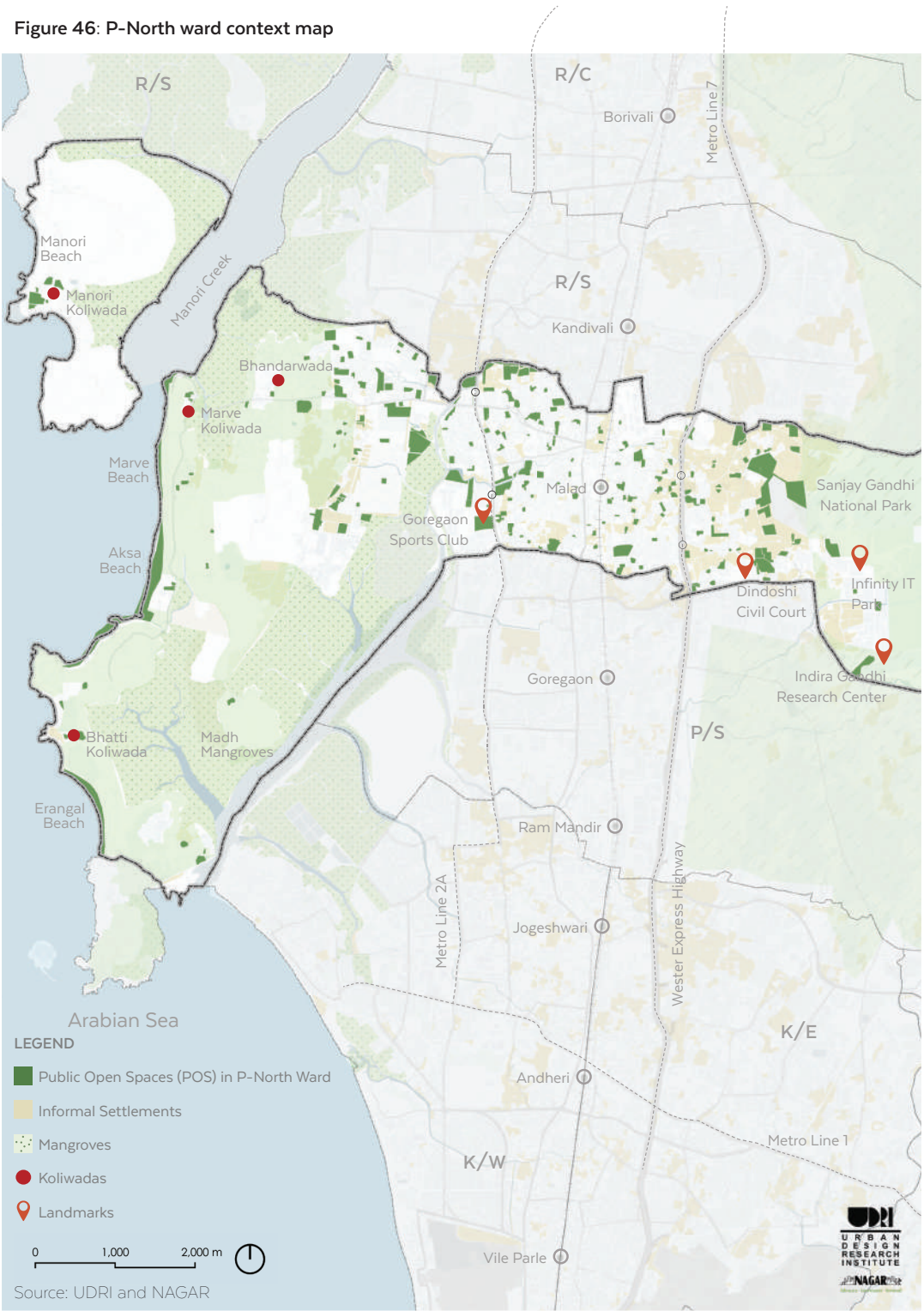


Pramod Navalkar Manoranjan Maidan, K-West ward, Andheri (West) | Source: UDRI + NAGAR

4B. P-North Ward

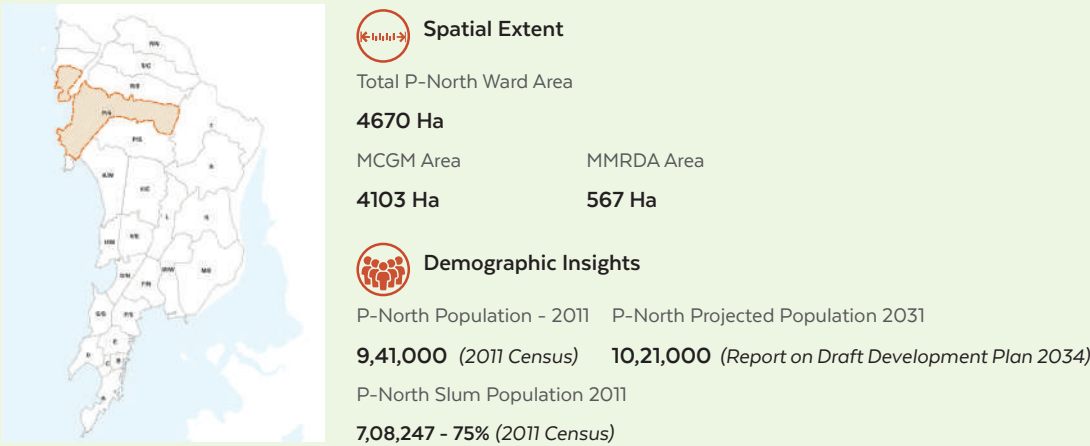
POS Analysis

Figure 46: P-North ward context map



4B.1. P-North Ward Profile

Figure 47: Key map - P-North ward



Built Form

P-North Ward includes some of the oldest Gaothans and Koliwadass and are largely characterised by ground-plus-one built structures. These areas have also seen the development of multiple resorts and hotels over time. Primarily residential in character, the ward also contains some of the densest informal settlements in Mumbai. Many of these settlements are undergoing redevelopment into high-rise residential towers. Overall, the urban fabric of P-North ward is dominated by mid to high-rise residential and mixed-use complexes.

Transport Network

Malad railway station, Yellow and Red Metro lines, along with two major arterial roads – Western Express Highway and New Link Road – provide strong north-south connectivity. Public buses operated by BEST further support both local and citywide mobility. The proposed Coastal Road is expected to further strengthen north-south connectivity for the ward. However, the city-wide east-west linkages and internal road networks remain limited. The proposed Goregaon-Mulund Link Road is envisioned to address this gap by improving east-west connectivity.

Amenities and Landmarks

INS Hamla a naval establishment, the Indira Gandhi Research Centre and the Infinity IT Park form important institutional and employment centres. Prominent residential areas within the ward include Orlem Colony and Evershine Nagar in the west, and the Nagri Nivara Parishad Housing Scheme Layout and Gokuldharm Layout in the east.

Natural Features

The two important natural areas – Sanjay Gandhi National Park and the Madh and Marve mangroves along the Malad and Manori creeks cover more than 50% of the ward's total area. In addition, the ward's western coastline has several beaches, including Aksa, Erangal and Marve.

Climate Vulnerability in P-North

Malavani and Malad Subway are prone to frequent flooding and waterlogging during monsoons. In addition Appapada, Krantinagar and Akurli, face risks of landslides as well as occasional wild animal incursions. The central parts of the ward also experience rising temperatures and heat stress during the summer months.

4B.2. Analysis of P-North Ward Public Open Spaces

ROS v/s EOS Sites:

There are **286** DP demarcated POS in the P-North ward, equivalent to **2.1 sq.m. per capita**. Of these, **165 plots are Reserved Open Spaces (ROS)** comprising 52% of the total number. Area wise these ROS sites account for **56% (108.63 ha) of the total open space area** within the ward.

Only **121 Existing Open Spaces (EOS)** sites remain, amounting to **0.9 sq.m. per capita**. Area wise these EOS sites account for **44% (86.04 ha) of the total open space area** within the ward.

Most EOS sites are predominantly categorised and evenly distributed as playgrounds and recreational grounds. However nearly 50% EOS area is concentrated within 23 sites under the categories of beach, tank/pond/lake, club/gymkhana and municipal sports complex, together addressed as others in Figure 48.

Additionally, P-North ward has only 10 existing gardens and parks. Hence, new open spaces are getting added mainly in gardens and parks, and playgrounds category.

Figure 48: Snapshot of DP demarcated POS in P-North ward

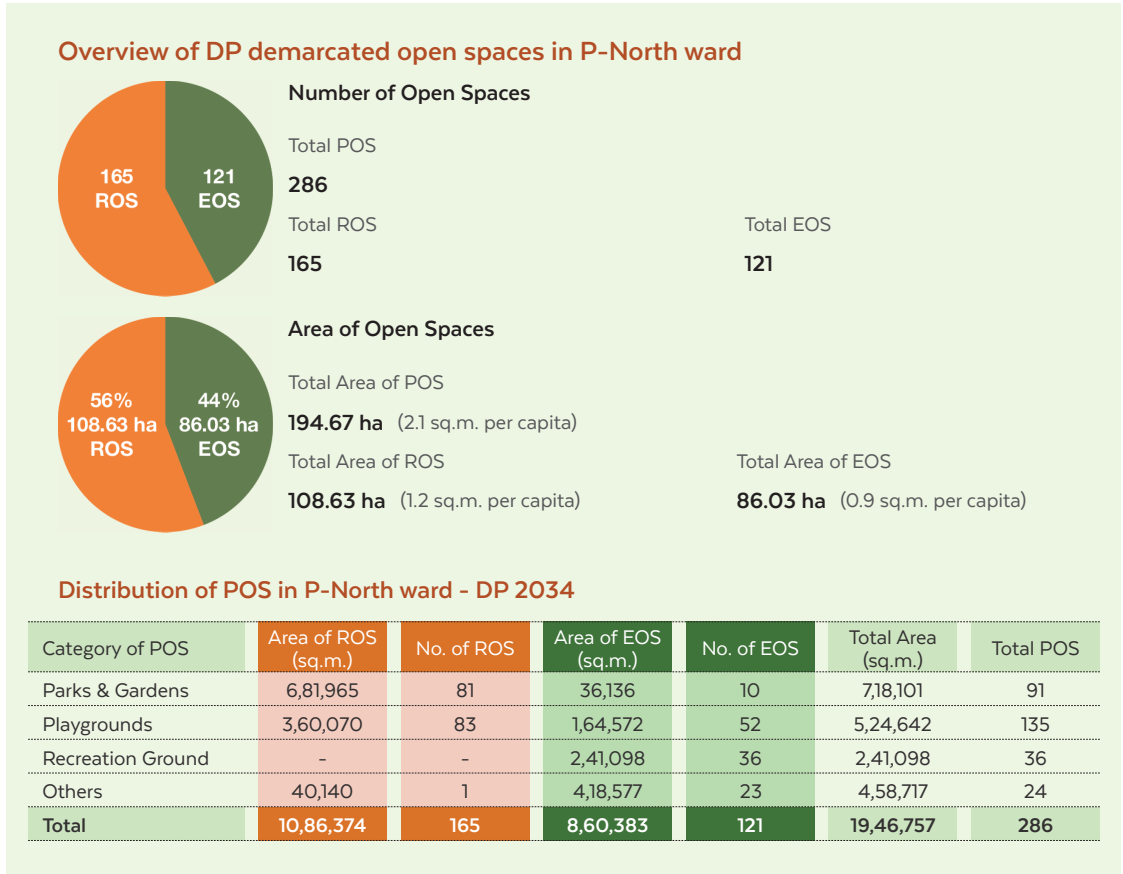
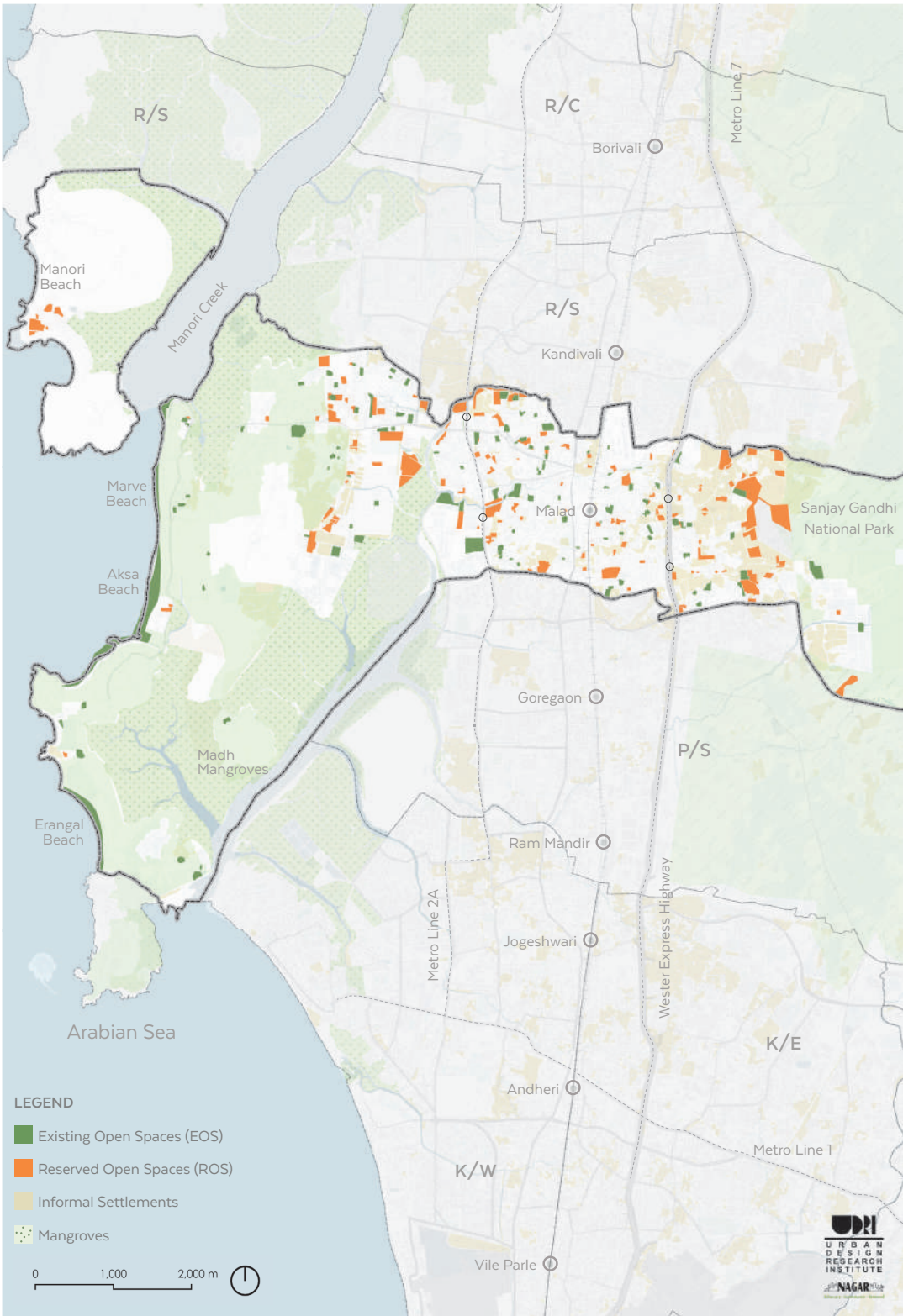


Figure 49: Public open spaces in P-North ward



Source: UDRI and NAGAR

Track 1: DP Implementation Assessment for ROS

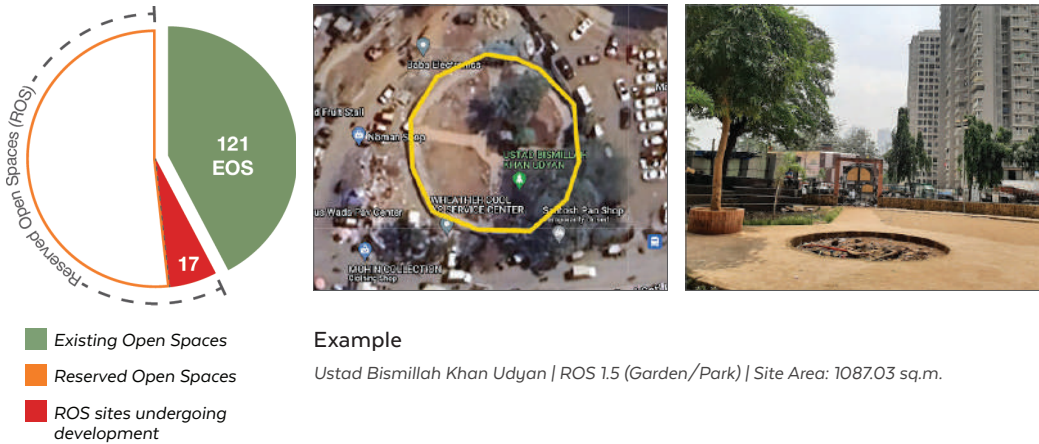
T 1.1. Undergoing Development:

Of the 165 ROS in P-North ward, 17 sites (7 playgrounds + 10 gardens) are either completely developed or are undergoing development as per their assigned DP usage. Seven of these sites are playgrounds, nine are gardens, and one is a recreation ground. These sites are positive indicators of successful implementation of the DP, demonstrating that nearly 10% of the targets for acquisition and development of new public open spaces in P-North ward have already been undertaken.

The official DP records of these sites should be updated immediately to reflect the on-site development and ensure their protection from encroachment. Such sites should also immediately display public notices declaring MCGM ownership, to create awareness about its status as a public amenity and avoid further arbitrary usage.

Ustad Bismillah Khan Udyan is a DP-designated ROS in the Malad (East) area of P-North ward. The site is completely functional as people are using the space for leisure as shown in Figure 50. However, it continues to be marked as a ROS in the DP.

Figure 50: Undergoing development



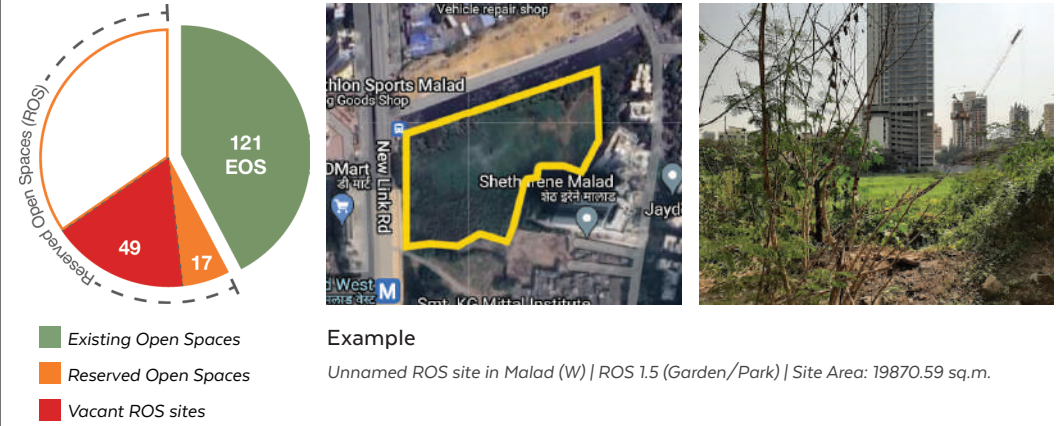
T 1.2. Vacant Sites:

Of the remaining ROS sites in P-North Ward, 49 sites are observed to be vacant, without significant usage or construction.

These sites must be prioritised for acquisition and quick transformation, as they have limited encumbrances. Currently, out of the 49 vacant ROS sites, several have overgrown wild vegetation (42), or have been transformed into an informal parking lot (01), or a garbage dump (01).

The site example shown in Figure 51 is reserved as a garden/park (ROS 1.5), and is completely vacant and overgrown with vegetation. The site presents significant potential to be developed into a garden.

Figure 51: Vacant sites



T 1.3. Sites Occupied by Private or Commercial Uses:

34 ROS sites in P-North ward have formal residential layouts and commercial set ups on them. These sites present a far greater challenge in acquisition. If the habitation of the sites is legal, the sites may also choose to undergo de-reservation (allowable, if the MCGM does not acquire them within the first ten years of the DP time period). These 34 sites in P-North ward are critical for time-sensitive acquisition.

The site illustrated in Figure 52 represents one such example. Designated as a playground, it is currently being used as a paid parking space for auto rickshaws.

Figure 52: Sites occupied by private or commercial uses



T 1.4. Sites Occupied by Slums:

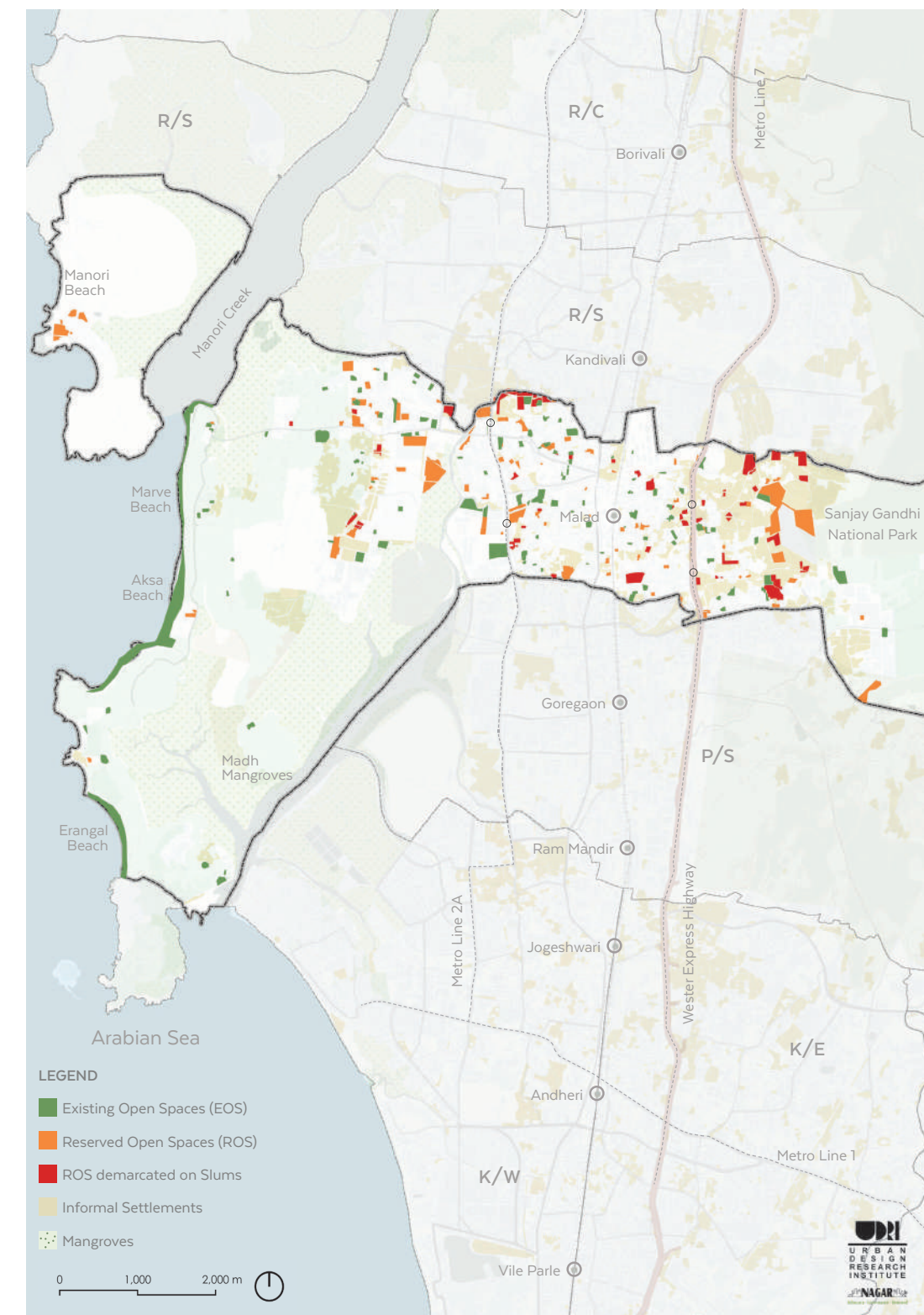
In the P-North ward, 65 ROS sites are demarcated on plots with existing informal settlements. Area wise these sites account for upto 40% area of all ROS in the ward. Of these, 53 sites have been so demarcated since the DP 1991.

Site example illustrated in Figure 53 has been reserved as ROS 1.4, a playground, since the DP 1991. The site is completely occupied by slums. This example underscores the persistent challenges and prolonged timelines involved in converting encumbered reserved open spaces into functional public amenities.



Map in Figure 54 represents the locations of ROS sites occupied by slums. These sites are primarily concentrated in the eastern parts of the P-North ward. A significant number of them are part of larger slum clusters. The transformation of these parcels is closely tied to broader questions of slum rehabilitation and cluster-level redevelopment, making their conversion into accessible public open spaces a complex and long-term challenge.

Figure 54: ROS sites occupied by informal settlements



Source: UDRI and NAGAR

Track 2: Functionality Assessment for EOS

P-North ward has 121 EOS as per the DP 2034, the assumption is that all of these must be accessible to a large section of the population.

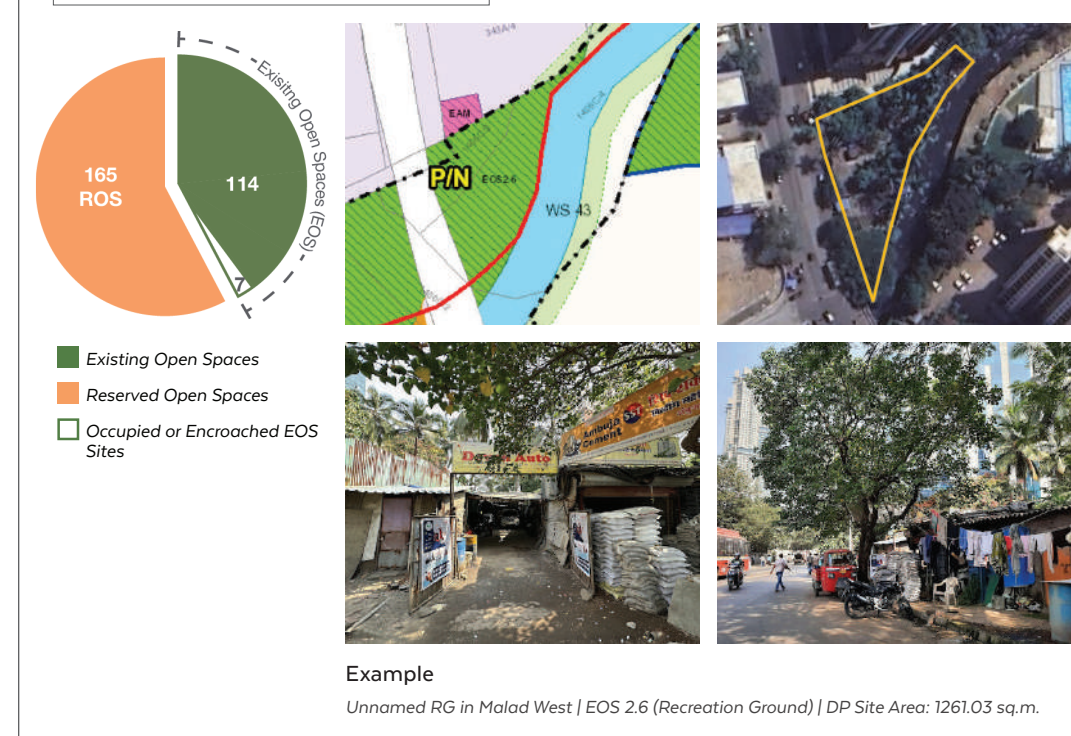
However, on-ground observations for the EOS sites highlight policy, regulatory, and implementation gaps. Analysis is focused on aspects causing inaccessibility to these sites or factors that limit or allow conditional access as follows:

T 2.1. Occupied or Encroached Sites:

7 EOS sites are partly or wholly occupied. The nature of the occupation is primarily permanent informal residential or commercial structures. Growth of encroachments and occupations on existing open space sites is indicative of larger gaps in monitoring, surveillance and enforcement.

The site illustrated in Figure 55 is designated as a Recreation Ground (EOS 2.6), but is currently occupied by commercial activities such as car repair shops. While such sites are marked as EOS in the DP 2034, the survey shows that they are completely inaccessible and do not function as public amenities.

Figure 55: Occupied or encroached sites

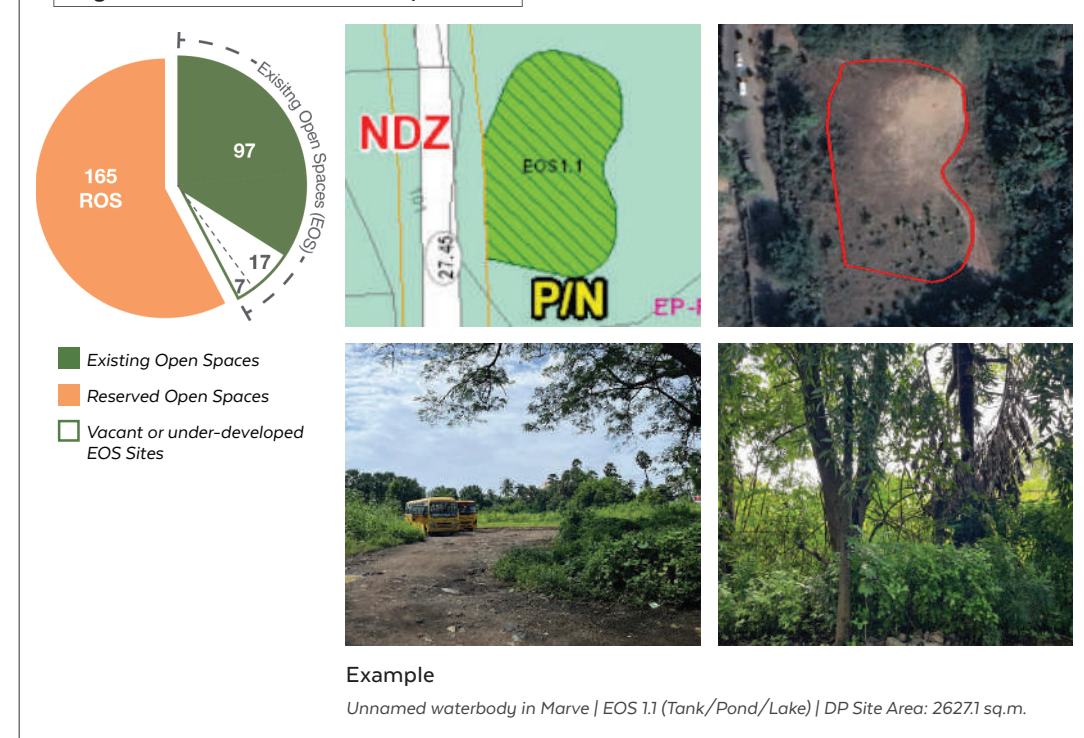


T 2.2. Vacant or Under-Developed EOS Sites:

17 EOS sites categorised as gardens, playgrounds, or recreation grounds, do not exhibit corresponding development, amenities or usage and are largely empty. These sites are informally being used as parking, waste dump yards, or are covered with wild, unchecked vegetation, making them inaccessible and unusable as a public space for play and leisure. Such Existing Open Spaces are indicative of larger gaps in monitoring and challenges related to sustained maintenance and upkeep.

The site illustrated in Figure 56 is categorised as Tank/ Pond/ Lake (EOS 1.1). However, during the survey, the waterbody was observed to be completely silted and the surrounding area was vacant and underdeveloped. This highlights a significant gap between its designated use and current condition, representing a missed opportunity to protect and rejuvenate urban water bodies, which are already scarce within the city.

Figure 56: Vacant or under-developed sites



T 2.3. Non-MCGM Ownership Sites:

Of the 121 EOS sites, 30 are inaccessible due to ownership by non-MCGM entities or their management rights being vested in a specific department of the MCGM (example: MCGM Education department in case of school playgrounds). Where management rights are held by specific non-government entities, the access to the site becomes either conditional, or restricted.

Most sites under private management - trusts, associations, groups etc - largely demarcated as EOS 2.6 (Recreational Grounds), require either a membership bought at a large sum, or a hefty entry fee.

Some limit public access to a stipulated few hours of the day, only accessible through prior booking

12 sites (11 playgrounds and 1 RG) managed by private and government schools, earmark limited hours daily – outside of school timings – for public use, subject to permission. However, the absence of clear signage indicating public access hours and the procedure for obtaining permission, results in these sites being treated as private amenity spaces, with access effectively controlled by the respective institute management.

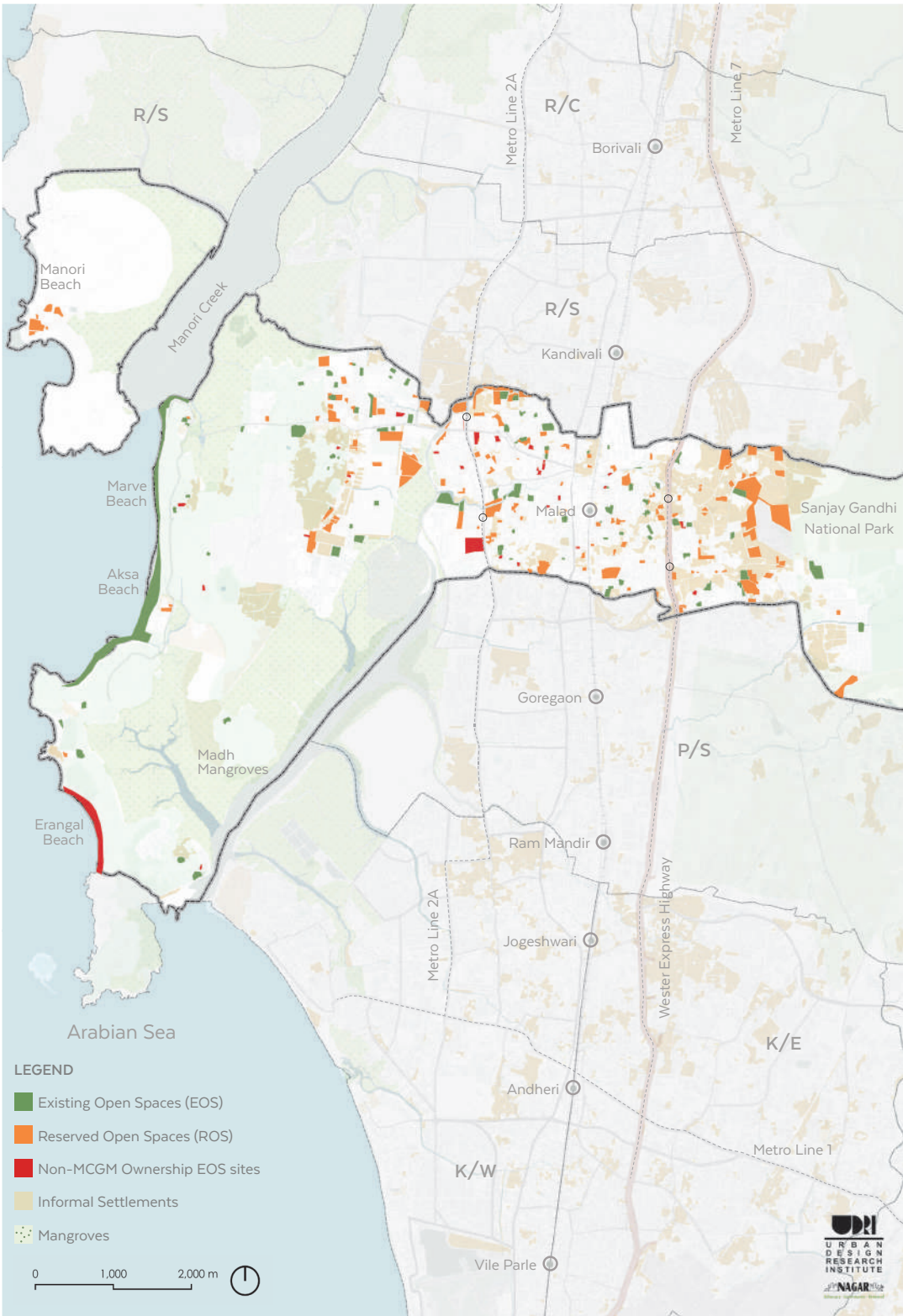
These privately managed sites indicate that in the absence of information in the public domain, sites risk becoming inaccessible.

The site illustrated in Figure 57 is designated as a playground (EOS 1.4) but is privately managed. It currently functions as a football ground that is accessible only through prior bookings, thereby restricting entry to a limited set of users.

Figure 57: Non-MCGM ownership sites



Figure 58: Inaccessible EOS sites due to non-MCGM ownership



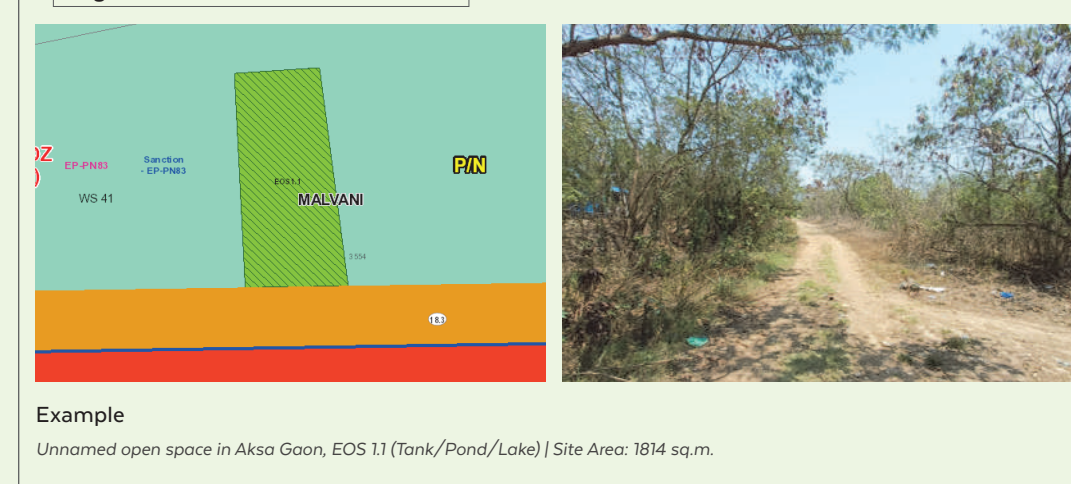
Source: UDRI and NAGAR

DP Road Access to Sites:

As mentioned earlier, access through a DP-designated road is a critical statutory requirement for ensuring public accessibility to an open space. The data reveals that **14 EOS sites do not have direct access from a DP-recognised road**. Consequently, many of these sites remain tucked away from public view and are accessible only through private streets or informal access points. Over time, several of these spaces have been repurposed for private or ancillary uses such as fish drying, garbage dumping, parking, and private open spaces.

Figure 59 illustrates an example of such a site, which currently lacks a designated DP road for access. Although the DP shows a proposed road abutting the site, it has not been constructed on ground, resulting in the absence of a clear and direct entry.

Figure 59: No DP Road access to sites

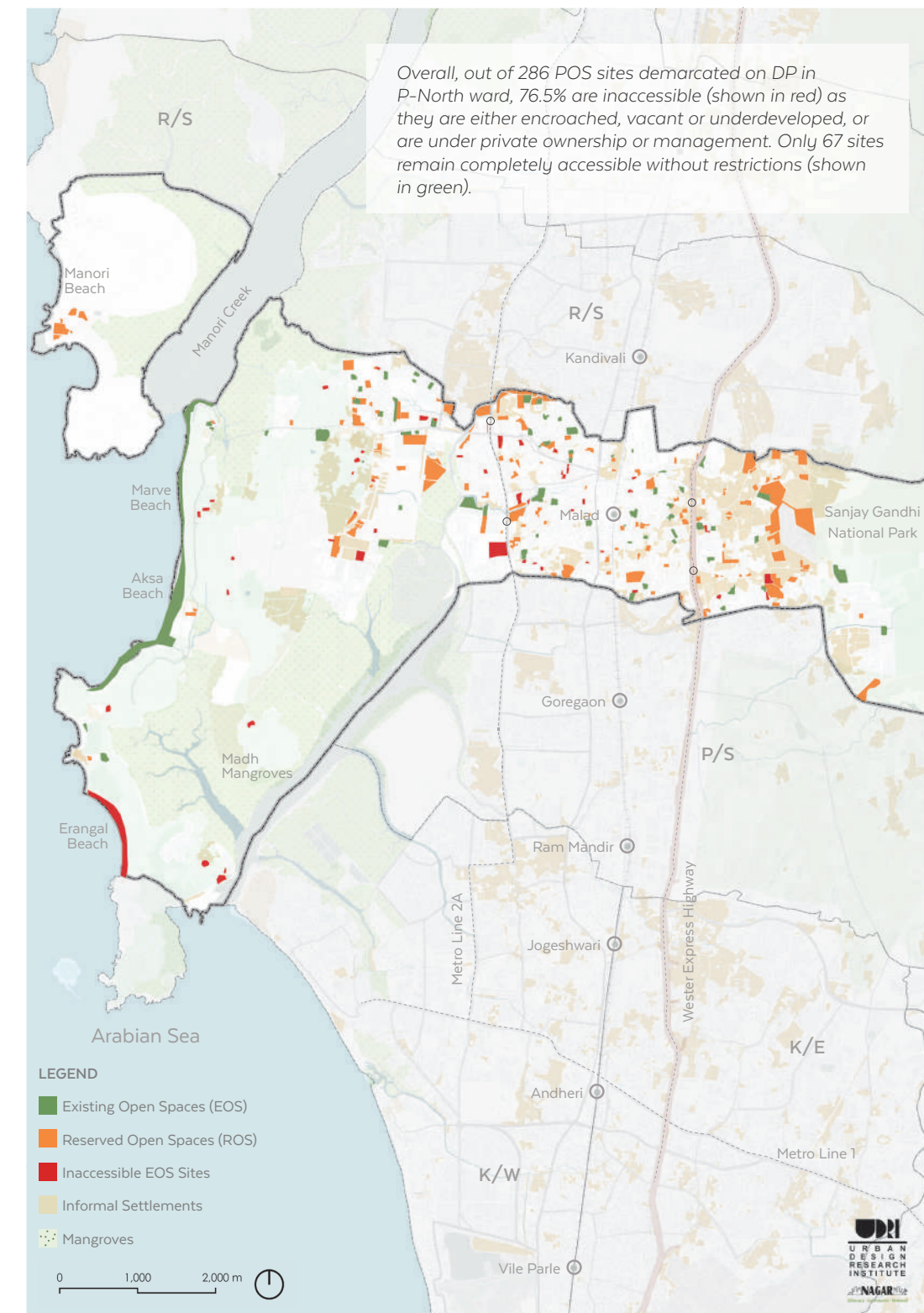


T 2.4. Accessible EOS:

Only 67 out of 121 existing open spaces in P-North ward are identified to be accessible as shown on map in Figure 60. In this section, these 67 sites are evaluated and ranked for usability based on the Project Prioritisation and Funding Framework (Chapter 3, Section T2.4). This evaluation helps identify gaps in the provision of amenities and meaningful opportunities for CSR interventions.

The following sections presents a detailed overview of the performance of the 67 usable EOS sites in P-North ward.

Figure 60: Inaccessible EOS sites



Source: UDRI and NAGAR

T 2.4.1. Safety and Security:

The Safety and Security parameter is evaluated using the following five indicators:

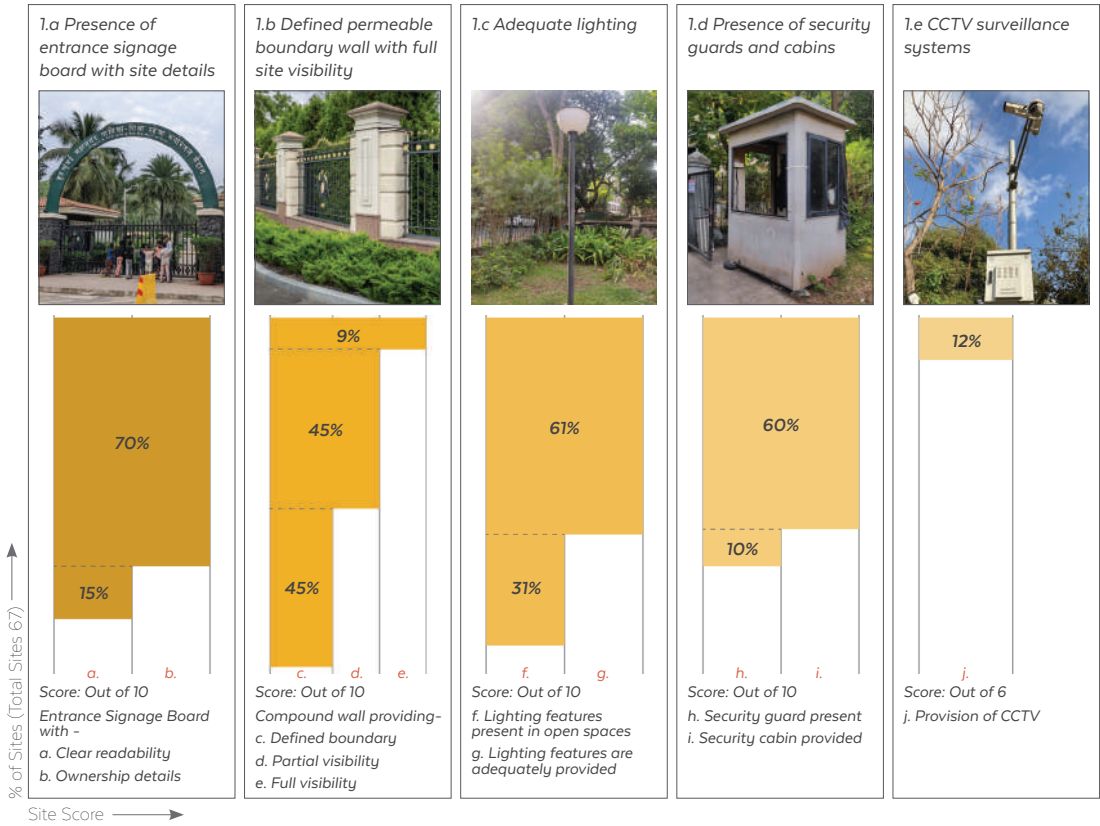
- 1.a. Presence of an **entrance signage board** displaying the site name and ownership or management details
- 1.b. A **defined permeable boundary wall** with full site visibility
- 1.c. Adequate **lighting**
- 1.d. Presence of **security guards and security cabins**
- 1.e. **CCTV surveillance**

The bar graphs in Figure 61 illustrate the adequacy of these amenities across the 67 evaluated sites. Key observations and areas of improvement have been captured:

- 1. While more than 60% sites satisfactorily provide entrance signage boards (1.a) with complete site details, lighting (1.c) and security guards with cabins (1.d). The remaining sites can be furnished with these amenities through CSR or BMC funding on priority as these were perceived as some of the most important features by most open space users.
- 2. While almost all open spaces have boundary walls (1.b), only 9% allow full visibility into the site. The opportunity lies in retrofitting solid boundary walls with permeable fencing or railings to improve public visibility for the remaining 91% of the open spaces.
- 3. CCTV surveillance systems (1.e) is the most consistently absent safety feature across evaluated sites, making its provision across parks, gardens, and playgrounds, a suitable ward-wide initiative to strengthen safety and monitoring within public spaces.

Figure 61: Evaluation of Safety and Security parameter using the following indicators

Total Score 46



T 2.4.2. Comfort

The comfort parameter is evaluated using the following 5 indicators:

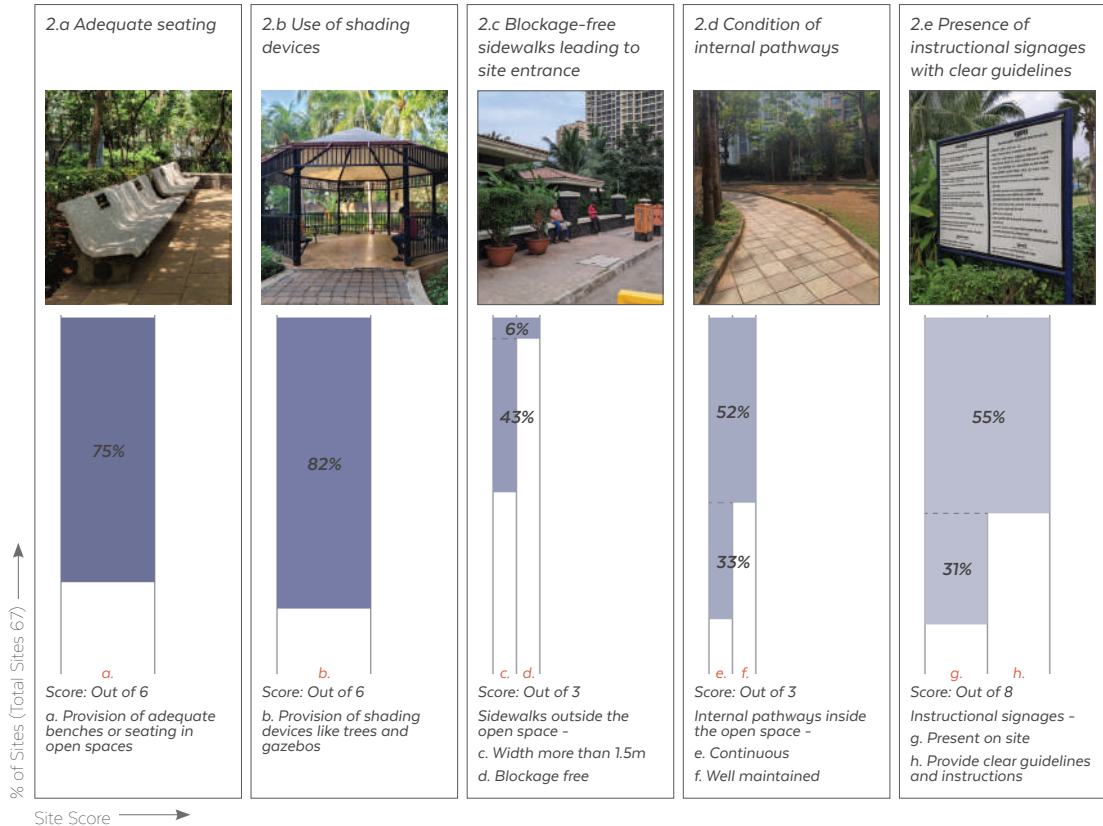
- 2.a. Adequate seating
- 2.b. Use of **shading devices**
- 2.c. **Blockage-free sidewalks** leading to site entrance
- 2.d. Condition of **internal pathways**
- 2.e. Presence of **instructional signage** with clear guidelines

The bar graphs in Figure 62 illustrate the adequacy of these amenities across the 67 evaluated sites. Key observations and areas of improvement have been captured:

- 1. More than 75% sites adequately provide seating (2.a) and shading devices (2.b), but maintenance remains inadequate. The opportunity lies in establishing cyclical evaluations and a dedicated maintenance fund for long-term upkeep.
- 2. While 49% sites have sidewalks (2.c), only 6% sites are unobstructed. Access remains a challenge at 94% sites due to missing or obstructed sidewalks leading to entrances. Providing unobstructed sidewalks of at least 1.5 metres connecting surrounding neighbourhoods to these sites can improve accessibility.
- 3. While 85% of sites provide internal pathways (2.d) and instructional signage (2.e), only over 52% of are in good condition. Establishing a cyclical evaluation system and dedicated maintenance fund can support their long-term upkeep.

Figure 62: Evaluation of Comfort parameter using the following indicators

Total Score 26



T 2.4.3. Health and Hygiene:

The Health and Hygiene parameter is evaluated using the following four indicators:

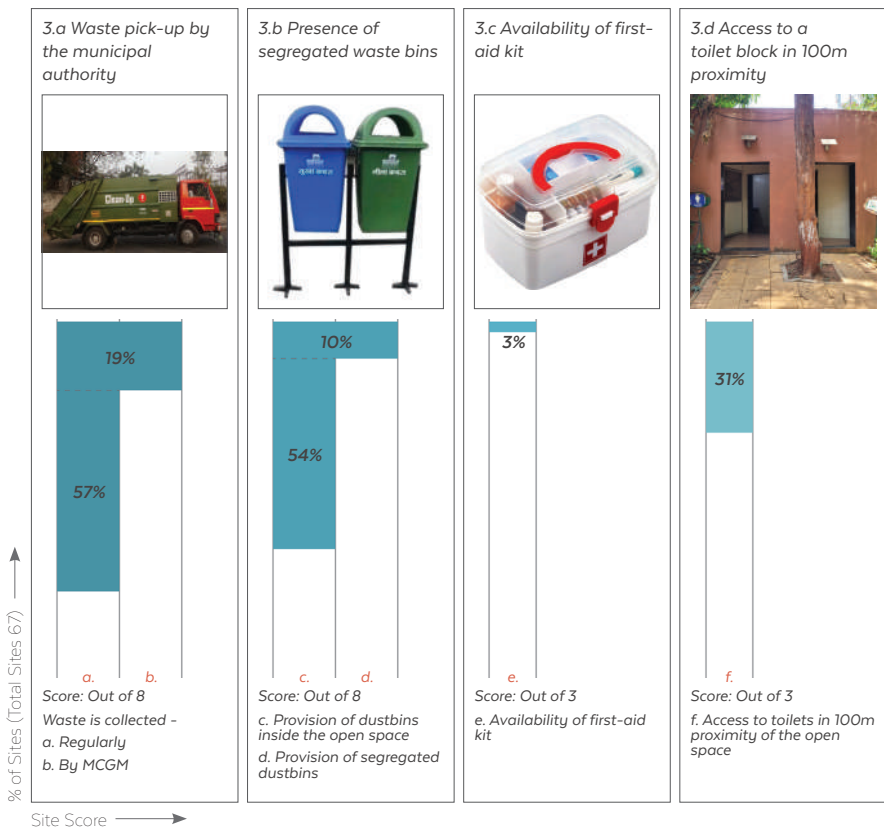
- 3.a. Waste pick-up by the municipal authority
- 3.b. Presence of segregated waste bins
- 3.c. Availability of a first aid kit on-site
- 3.d. Access to a toilet block within 100 meters of the open space

The bar graphs in Figure 63 illustrate the adequacy of these amenities across the 67 evaluated sites. Key observations and areas of improvement have been captured:

1. The municipal Solid Waste Management (SWM) department regularly collects waste (3.a) from only 19% sites. The remaining sites manage waste independently, highlighting the need for better coordination and monitoring between the SWM wing and site management authorities.
2. Only 10% sites have segregated bins (3.b). Additionally, first-aid kits (3.c) are available at just 2 of 67 sites. Ward-wide provision of segregated bins and first-aid kits offers a low-cost, high-impact intervention.
3. While public toilets are often considered essential amenities, they can create hygiene and maintenance challenges and are better located nearby rather than within public open spaces. Only 31% sites have access to a toilet block within 100 metres (3.d), thus requiring long-term planning and phased implementation for the remaining sites

Figure 63: Evaluation of Health and Hygiene parameter using the following indicators

Total Score 22



T 2.4.4. Sustainable Design:

The Sustainable Design parameter is evaluated using the following two indicators:

- 4.a. Solar lighting
- 4.b. Presence of rain water harvesting system

The bar graphs in Figure 64 illustrate the adequacy of these amenities across the 67 evaluated sites. Key observations and areas of improvement have been captured:

1. Only 6 sites have solar powered lights (4.a) installed, while just 3 sites have rainwater harvesting systems (4.b). Both the indicators critical for reducing resource consumption and enhancing the resilience of open spaces can be prioritised for implementation across the ward through CSR or Local Area Development funds.

Figure 64: Evaluation of Sustainable Design parameter using the following indicators

Total Score 6

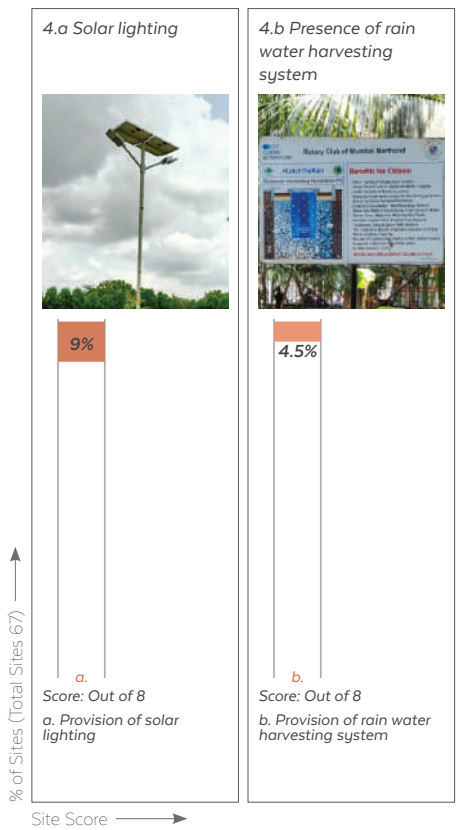
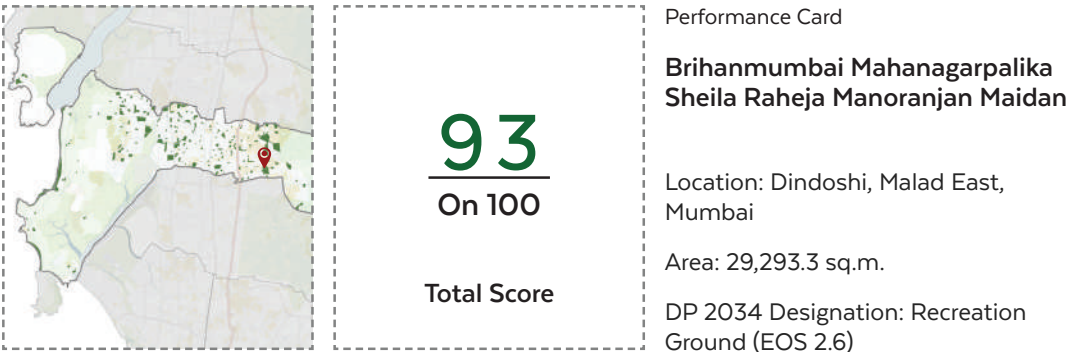


Figure 65: Best performing site in P-North ward



Brihanmumbai Mahanagarpalika Sheila Raheja Manoranjan Maidan

Sheila Raheja Maidan is a public park located in the Dindoshi-Malad East neighborhood of Mumbai. It features well-maintained walking trails, recreational amenities, play areas for children, amphitheater and a pond. The recreation ground is used by people of all age groups.



46
On 46

Safety & Security

The garden is enclosed by a well-defined porous boundary wall that provides clear visual access from the outside. The park entrance features a prominently displayed signage board and a security cabin with a permanently stationed guard. The space is well-lit with sufficient lighting fixtures, and monitored by CCTV cameras, ensuring comprehensive surveillance.



	10/10	Entrance Signage Board
	10/10	Boundary Wall
	10/10	Lighting
	10/10	Security Guard and Security Cabin
	06/06	CCTV Surveillance



18
On 22

Health and Hygiene

Dustbins are strategically placed throughout the garden, with regular waste collection (not by MCGM) ensuring cleanliness. A well-maintained toilet facility is available for visitors. For emergencies, a first aid kit is kept with the security guard. The garden's upkeep is managed by a maintenance staff appointed through a private agency, ensuring the site is regularly maintained.





	04/08	Waste Pick Up
	08/08	Dustbins
	03/03	First Aid Kit
	03/03	Toilet Block



26
On 26

Comfort

Information signage is available in both English and Marathi and notice boards display a clear set of rules and regulations for park usage. The garden features a variety of seating areas and shading devices enhancing comfort for visitors. Pathways within the garden have non-skid surfaces for safety, while the sidewalks outside the garden are well-defined and free of blockage.





	06/06	Seating Areas & Benches
	06/06	Shading Devices
	03/03	Sidewalks
	03/03	Pathways
	08/08	Instructional Signages



03
On 06

Sustainable Design

The garden has solar powered lighting features, however, a rainwater harvesting system has not been integrated on site.



	03/03	Solar Lights
	00/03	Rain Water Harvesting

4B.3. P-North Ward Summary

Opportunities

1. Several ROS sites are designated on vacant and empty plots with no concurrent use. At the same time, many EOS sites do not exhibit any public and productive usage and are largely lying empty. These sites represent significant opportunities for quick and targeted interventions that can improve the ward's per capita availability of publicly accessible open spaces.
2. The ward benefits from active and receptive political leadership including councillors, MPs, and MLAs, who play an important role in shaping local development priorities. Strengthening their understanding of the role public open spaces play in enhancing climate resilience, reducing urban vulnerabilities and improving quality of life can help secure stronger administrative and political support for evidence-based planning, development, and maintenance of open spaces across the ward.

Challenges

1. P-North ward has relatively few citizen groups and individuals actively engaging in issues related to public open spaces. The existing groups are dispersed across the ward and operate largely in isolation, with no common platform or network connecting them. This limited civic engagement reduces opportunities for collective advocacy, oversight, and accountability in the management of open spaces. As a result, issues often remain unaddressed for extended periods, and improvements tend to be piecemeal or reactive rather than strategic and sustained.
2. Public open spaces in P-North ward receive little attention from research institutions. The educational institutes within the ward are also not active stakeholders in relation to public open spaces. This weakens the network of awareness. Greater engagement from these stakeholders could help document best practices, introduce innovative solutions, support evidence based decision-making and strengthen data generation around open spaces.
3. A substantial number of ROS-designated sites in P-North ward are currently occupied by informal settlements or private residential and commercial developments. The lengthy timelines and limited feasibility of converting many such sites into public open spaces, demands a reassessment of ROS demarcation mechanisms.

5

Opportunities

In Mumbai, large-scale construction and infrastructure development have always been a priority. This has led to open spaces increasingly being treated as residual outcomes of development rather than an essential amenity.

This Public Open Space Mapping and Management Strategy finds that the gap lies in both designation and delivery;

1. We are neither able to secure and manage the 4 sq.m. per capita open space that exists as per the DP 2034,
2. Nor are we able to add to the open spaces to reach the minimum national requirement of 10 sq.m. per capita.

Competing land pressures, gaps in governance structures, and profit-oriented land value capture regulations are affecting both quantity and quality of open space. At the same time, unclear guidelines, and inflated or inadequate public open space data further blur the distinction between what is available on paper Vs on ground reality of accessible and functional open spaces. As a result, monitoring and managing these spaces becomes increasingly difficult, while efforts to build sustained community and government partnerships for decentralised and inclusive decision-making are weakened.

This concluding chapter synthesizes the insights from the study and advances the framework and strategy for strengthening the planning, management, and monitoring of public open spaces in Mumbai at varying scales. The conclusion is structured as opportunities and suggestions to larger questions on governance structures, policy, and common issues that are related to public open spaces in the city.

5.1. Can Mumbai get to the 10 sq.m. Minimum Per Capita Open Space National Standard?

In Mumbai, where land availability is severely constrained, achieving the minimum per capita open space standards has been particularly challenging, especially in the city's denser wards. While the long-term solution or greening requires a comprehensive approach that integrates public and private vacant land within a broader city-wide vision, this strategy focuses on highlighting some immediate opportunities that can incrementally add to the existing open space numbers.

Opportunity 1:

Unlock value from already acquired Existing Open Spaces (EOS) that remain underutilized or inaccessible.

Based on the analysis of K-West and P-North wards, the quick-win opportunities are the underdeveloped and underutilized EOS sites. K-West ward contains 15 underutilized EOS plots and 17 plots lacking DP road access, while P-North ward contains 17 underutilized plots and 14 inaccessible plots. The Garden Department can undertake landscape and amenity development on acquired sites, while the DP department can prioritise the provision of public road access (DP Road) to unlock usability and avoid private encroachment.

Unnamed site, General Arun Kumar Vaidya Marg, P-North ward, Malad (East)
Source: UDRI + NAGAR

Opportunity 2:**Prioritise updating government records to reflect ROS acquisition and development, demonstrating tangible progress in DP implementation.**

In K-West there are 43 sites, and 17 sites in P-North that are acquired, developed and are being used as open space since DP 2034 was released in 2018. These plots still show up as ROS on the MCGM DP Remarks website. Typically, these records are updated officially only in the next DP revision cycle every 20 years. This gap in the municipal records data leaves many plots vulnerable to encroachment and misuse after development.

Additionally, formal recognition and recording of already acquired ROS within the DP and municipal databases should be accompanied by on-ground measures such as clearly demarcated municipal signage indicating ownership and reservation status. Such interventions improve visibility, discourage encroachment, and encourage public vigilance and participation in safeguarding these spaces.

This is also a missed opportunity to highlight the positive efforts of the MCGM towards implementing the DP and making these amenities available to the citizens. 15 % of the ROS in these two wards is acquired, but the records don't reflect or advertise that.

Figure 66: A developed ROS site in Andheri West that is yet to be updated as EOS on the DP



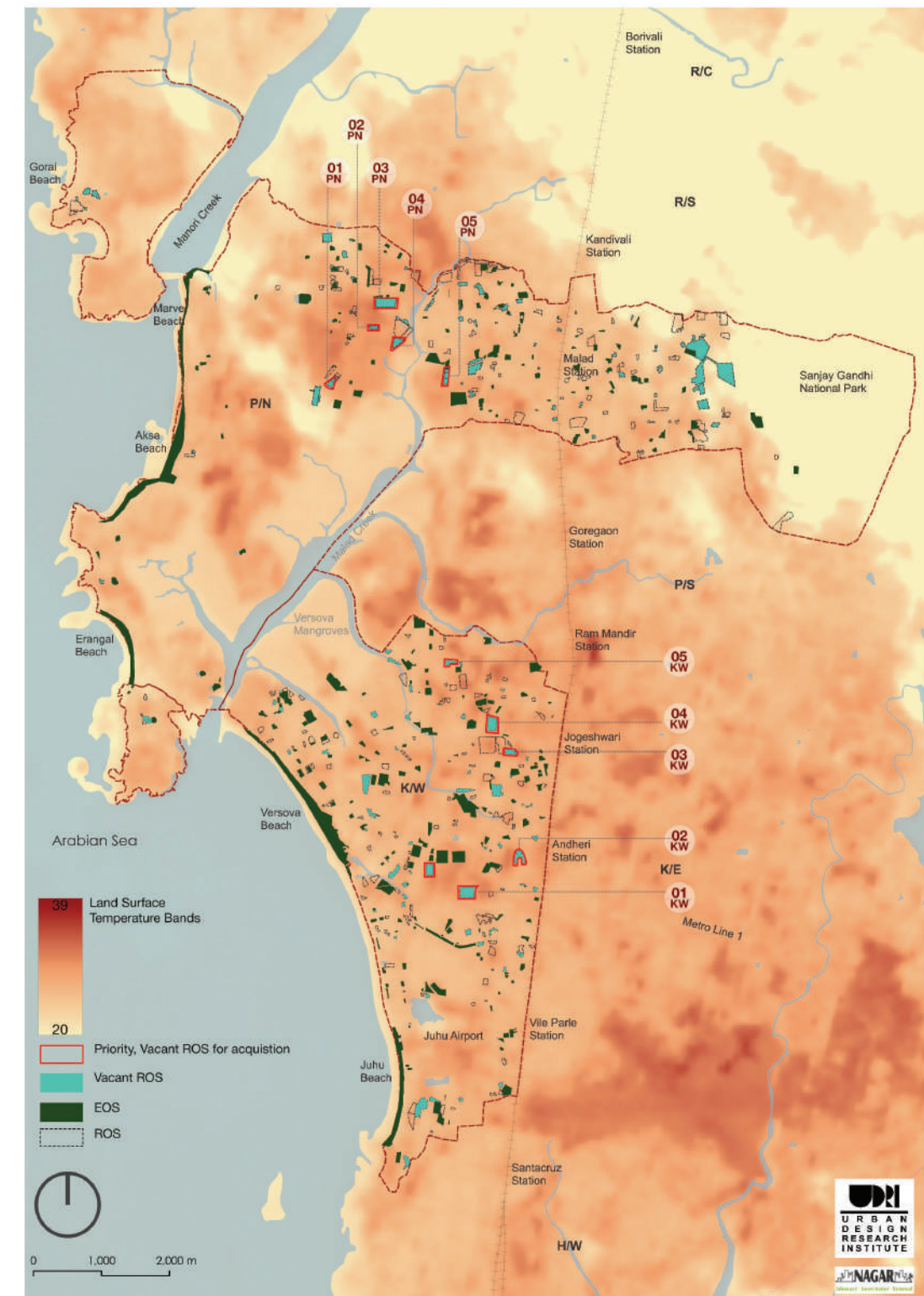
Source: UDRI and NAGAR survey photos

Opportunity 3:**Strategic acquisition of reserved open spaces (ROS) for maximum environmental impact.**

Develop a citywide, data-driven priority list for acquiring Reserved Open Spaces (ROS) through phased, impact-based planning. As shown in Figure 67, overlaying heat stress intensity with the open space database helps identify unacquired ROS in high-heat zones for targeted greening.

The analysis identifies five high-priority ROS sites per ward for immediate acquisition. These are vacant sites with high environmental benefit. This integrated approach ensures acquisition is focused where it can most effectively reduce urban heat and improve liveability. The method is scalable and replicable, providing a clear framework for climate-responsive ROS acquisition citywide.

Figure 67: Priority ROS for acquisition in K-West and P-North wards, based on land surface temperature



Source: UDRI and NAGAR

5.2. Is the BMC Best Equipped to Imagine and Design Mumbai's Open Spaces?

With the Coastal Road Project, and the redevelopment of the Mahalaxmi Racecourse, for the first time large tracts of land (amounting to ~70 hectares and ~48 hectares respectively) have become available in the city for public open space use.

While classifications such as PG and RG for playgrounds and gardens respectively, provide broad guidance for the development of smaller open spaces, **there remains a significant policy and planning gap in defining the programming and use of larger public open spaces to meet diverse community needs.**

Furthermore, **there is no current framework to address the long-term stewardship, management and maintenance of these large, city-level open spaces throughout their lifecycle.**

Cities like Delhi and Bangalore facing similar challenges, demonstrate two distinct approaches to the management of large urban open spaces. Delhi explores a public-private partnership model through a dedicated management trust for Sunder Nursery, a 36-hectare urban park. In contrast, Bengaluru has adopted a model that is firmly embedded in the government machinery. The management and maintenance of its iconic Lalbagh Botanical Garden and Cubbon Park, are overseen by a dedicated administrative structure within Karnataka Horticulture Department.

The Sunder Nursery Management Trust brings together public institutions such as the Ministry of Urban Development, Central Public Works Department, South Delhi Municipal Corporation and the Archaeological Survey of India, alongside private partners like the Aga Khan Trust for Culture and the Aga Khan Foundation to deliver and sustain high-quality large public landscapes. Beyond conservation and maintenance of both heritage and landscape, the trust aims to develop revenue-generating activities for long-term sustainability and establish a model for private support and participation in urban improvements. Most importantly, the formation of the Trust ensures that the land and asset ownership remain with public authorities. Annexure H provides a detailed comparison of open space management structures across 5 Indian cities.

Mumbai's Garden Department, already constrained in technical, financial, and managerial capacity, is not sufficiently equipped to independently manage these expansive, multifunctional landscapes. Recognising these gaps, the strategy has put forth the recommendation for

Opportunity 1:

Establish an Ideation Cell to address the pre-construction gap by institutionalising the design phase.

This cell should include a dedicated interdisciplinary team responsible for formulating design briefs for large (over 4000 sq.m.)³⁸ public open spaces. Such briefs should be developed through structured stakeholder and technical consultations including assessments for ecology, accessibility, infrastructure capacity, operations, and long-term maintenance requirements. Once finalized, design tenders and bids should be invited

³⁸ UN-Habitat, "SDG Indicator 11.7.1 Training Module: Public Space," United Nations Human Settlement Programme (UN-Habitat), 2018.

against this approved design brief to ensure that proposed interventions respond to clearly defined public objectives.

Large public open spaces are evolving forms of civic infrastructure requiring long-term vision, expertise and care. They play a vital role in advancing the city's greening and environmental ambitions, and therefore require continuous innovation through competitions, data-backed design thinking, and interdisciplinary collaboration. The Ideation Cell is envisioned as a platform to foster this integrated imagination, connecting public open spaces with broader city-wide ecological and environmental resilience goals.

Opportunity 2:

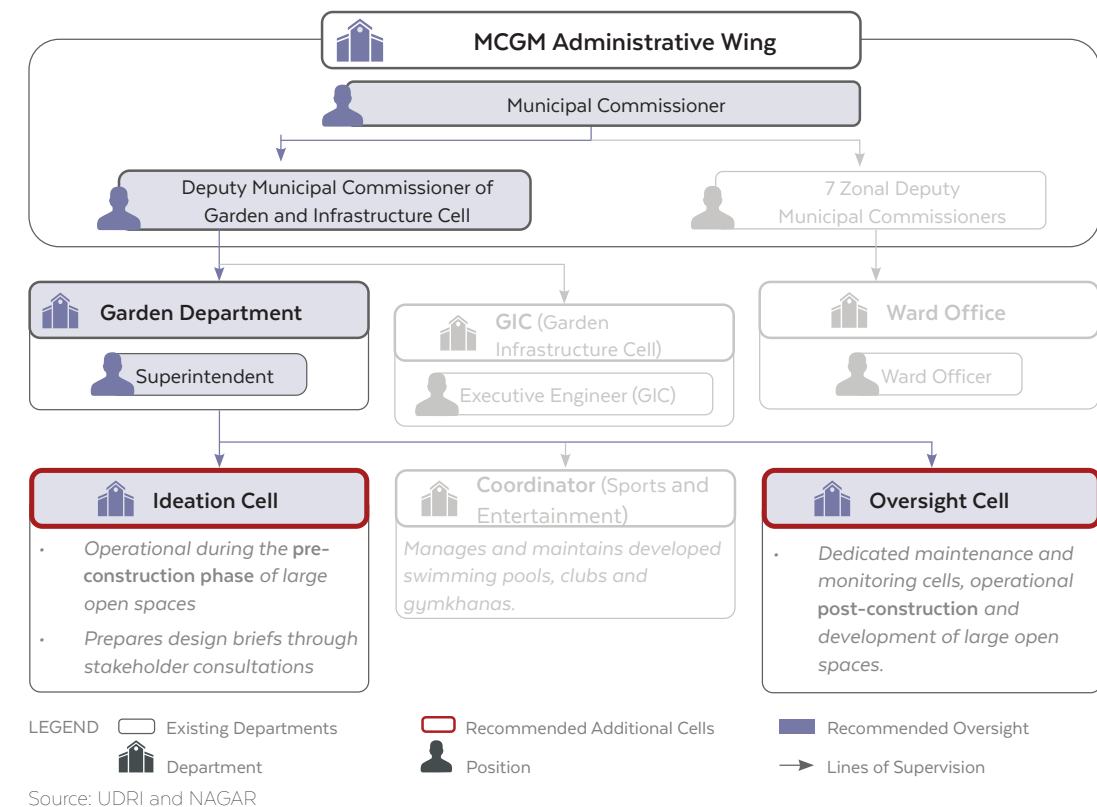
Establish a dedicated oversight cell for each of the newly created large open spaces to address the post-construction gap by providing long-term stewardship.

Each cell would ensure that management plans are not only prepared but actively implemented, covering maintenance regimes, financial planning, monitoring, and adaptive improvements over time. It would also ensure that these spaces are used and maintained in alignment with their intended purpose, as designated in the Development Plan (DP).

Together, these institutional mechanisms are intended to address the current fragmentation across design, development and long-term management especially for large open spaces. Both bodies would operate within the existing governance structure, which has been discussed below and illustrated in Figure 68.

Annexure F, proposes a detailed structure for these bodies.

Figure 68: Recommended organisational structure for management of large open spaces



5.3. Whose Job is it to Manage the Existing Open Spaces Currently?

Ideally, one would think that once the open space is under the jurisdiction of BMC or other government authority, it should be adequately managed. In practice, however, the study finds that citizen groups and NGOs play a significant role in maintaining and managing these spaces. Several Advanced Locality Management (ALM) groups in the pilot wards have successfully undertaken this responsibility by mobilising additional financial resources.

Working in coordination with the corporation, they have played two critical roles: ensuring vigilance and enabling sustained upkeep and long-term improvements.

The Juhu Citizen Welfare Group, in K-West Ward, has played a key role in upgrading and maintaining gardens in the Juhu Area. The ALM successfully mobilised funds through public contributions, and corporate support, raising nearly Rs 40 lakhs in one instance for the development of a neighbourhood park.

To address the recurring management and maintenance challenges, the group has adopted innovative measures to reduce costs and resource dependence. At one of the garden, water from an on-site well is used for irrigation, while at another, revenue from the sale of coconuts to a local vendor is utilised to cover electricity bills. The ALM also monitors the spaces for asocial behaviour and regularly flags issues related to security, maintenance, staffing and contractor performance with their local elected representatives and ward office for quick resolution.

Similarly, Oval Trust, a citizen-led, not-for-profit group managing the heritage grounds of the Oval Maidan in A Ward, undertakes pre-monsoon tree pruning, post-monsoon lawn mowing, and disposal of the waste generated within the grounds. They also manage and hire security guards and gardeners to ensure that the state government-owned playground remains usable and safe. For such initiatives, the Oval Trust is supported by private institutions like Tata Trusts.

Opportunity 1:

Formally engage all registered ALMs within a ward to support open space management.

ALMs function as important intermediaries, articulating community needs and mobilising political and administrative support. They have the deepest understanding of local issues, user needs, and everyday challenges pertaining to public open spaces in their areas. Thus, there is an opportunity to institutionalize this support by:

- Embedding their role, in Ward Committees and Area Sabhas, through quarterly, agenda-driven consultations focused on public open space management, maintenance, and grievance redressal. Their representation in these committees should also be proportional to ward size, replacing the current cap of a maximum of three members per ward.³⁹
- Managing a public open space is resource-intensive and cannot rely solely on citizens as de facto custodians. Effective maintenance must be anchored in a robust governance framework backed by transparent and adequate fund allocations.

³⁹ (No date) MyBMC - welcome to BMC's website. Available at: <https://portal.mcgm.gov.in/irj/portal/anon-ymous/qlwardcom> (Accessed: 10 July 2026).

The BMC should publish a ward-wise and function-wise breakdown of expenditures under the Garden Department, clearly distinguishing capital investments in the development of new open spaces from recurring expenditures on maintenance, cleanliness, and staff salaries. These allocations should also earmark dedicated funds for AMCs to support the routine upkeep of open spaces under their jurisdiction. At present, capital expenditure on open spaces accounts for only 0.3% of the BMC's 2024-25 budget, with no separate budget heads distinguishing development from maintenance activities.

Cities like Delhi, with complex institutional arrangements, face similar challenges in managing public amenities, cultural heritage, and open spaces. In response, the Delhi State Government established the **Delhi Parks and Garden Society** under the Societies Registration Act, 1860 as an umbrella coordinating body, to streamline the management of parks and gardens across multiple agencies such as the Municipal Corporation of Delhi (MCD), Delhi Development Authority (DDA), New Delhi Municipal Council (NDMC), Public Works Department (PWD), and Central Public Works Department (CPWD).

Beyond coordination, the Society undertakes greening projects on vacant and underutilised land, monitors park conditions, and supports local bodies in improving maintenance standards. It also directly manages select nurseries and parks. **Importantly, it plays a catalytic role in fostering public participation by disbursing funds to NGOs and Resident Welfare Associations, thereby incentivising community-led stewardship of public spaces.**

Opportunity 2:

Transform citizens into partners in open space management.

Strengthening citizen participation through structured partnerships can enhance the management, maintenance, and responsiveness of public open spaces. The strategy has developed the following interventions can help establish citizens as active partners in governance:

- An action matrix tool**, that identifies recurring issues related to public open spaces and links them to appropriate response strategies, clearly mapping the roles of relevant government agencies and private stakeholders that can be mobilised to address them.
- Interactive digital app or platform**, that enables citizens to act as the "eyes on the ground" for public open spaces. The app would support the government by facilitating issue reporting, grievance tracking, and time-bound resolution, providing a structured interface between citizens and the administration. This would ensure that issues are raised, monitored, and addressed in a transparent, accountable, and efficient manner.

5.4. Are There Other Ways of Funding Open Spaces?

In addition to BMC funding, our study found that many open spaces have been rejuvenated using MP and MLA funds. A review of election manifestos across political parties in Mumbai also revealed multiple commitments to open space development, highlighting its significance as both a public investment priority and a key area of political attention.

Private investment through CSR initiatives has further contributed to open space improvements, including provision of lighting, seating, playground equipment, signage, and tree plantation.

The **Kaifi Azmi Park in K-West ward** was developed in the year 2002-3 using the MP-LAD (Local Area Development) funds, transforming the vacant piece of land, used for garbage dumping and bootlegging, into an educational and interactive garden. The efforts included provision of walking tracks, pavilions, greenhouses, and on-site facilities for solid waste composting and recycling. Similarly, while the Lallubhai Park saw complete transformation into a flower park, other parks like **Shahid Chandrashekar Azad Garden**, or **Parsi Colony Park** saw small interventions like upgradation of lights, pathways and lawn work, using the **MLA-LAD funds**.

Opportunity 1:

Scale open space improvements through strategic funding partnerships

Open space projects supported by elected representatives and CSR through targeted funding have delivered tangible benefits. However, these interventions are typically small-scale and highly localized in nature. There is an opportunity to move these isolated initiatives to larger scale data backed improvement projects creating shared value and more sustainable outcomes.

The POS Prioritisation and Funding Framework outlined in the Strategy Report (Chapter 3, Section T2.4) serves as a practical tool to identify essential, tangible elements that every open space should provide. **By assessing and ranking spaces based on how effectively they deliver these components, the framework establishes a clear and actionable pathway for enhancing usability, accessibility, and overall user experience.**

Guided by this framework, MLA funds and CSR contributions from multiple donors can be pooled to **deliver targeted, measurable and high-impact improvements in usability, safety, comfort, hygiene and sustainability**. Because these projects are derived from a data-backed strategy, they also help ensure that public interest and equitable outcomes remain central to investment decisions.

Initiatives such as MCGM's 'Participate Mumbai', a web platform aimed at connecting corporates, organisations, citizens and volunteers represents a positive step towards engaging private sector participation. It attempts to align CSR funding with on-ground needs while enabling citizen participation.

5.5. How has the SRA and Caretaker Policy Impacted Open Spaces?

The largest threat to Mumbai's open spaces has emerged from the city's own development policies, particularly redevelopment under the Slum Rehabilitation Authority (SRA) and the Caretaker Policy.

In the pilot wards, **110 reserved open space (ROS) sites are currently occupied by informal settlements** (K-West: 45/178 sites; P-North: 65/165 sites). Of these, **89 sites have been reserved as ROS since the 1991 Development Plan**. Yet, they have neither been developed into functional public open spaces nor gone under SRA redevelopment for over two decades.

As a result, precious open space is not brought back into circulation for intended use. There is also a gap in the policy governing the development of such lands. Under the existing framework (Annexure D), when redevelopment happens on these encroached open spaces, **only 35% of the total plot area comes back to the city as open space and is often not contiguous**. This 35% open space needs to be developed and made ready for public use before being handed over to the Municipal Corporation upon completion of the project, ensuring that it remains open, accessible, and available to all members of the public. However, there is no clear monitoring mechanism to ensure the extent to which the open space is actually developed. In practice, these areas are often used for construction-related activities during project implementation and **may remain underdeveloped, inaccessible, or unavailable for public use post project completion**.

Opportunity 1:

Create a comprehensive city-wide data portal on the number of SRA sites.

It is essential that every redevelopment project seeking approval explicitly declare and publicly record the public open space it proposes to generate. This information should be integrated into accessible municipal platforms to enable citizens to track delivery and ensure accountability.

The Caretaker Policy 1991 (Annexure E), enabled the privatisation of public open spaces. The policy allowed private organisations to undertake the development and maintenance of open spaces through leases for a minimum of 33 years. In practice, over the next 16 years, many of these spaces were converted into semi-private or exclusive areas, including clubs and gymkhanas. Although the policy was eventually stayed in 2007 and several spaces were taken back by the BMC, **the city permanently lost access to 11 large open spaces** (Annexure E), including gymkhanas/clubs, recreation grounds (RG), gardens (G), and playgrounds (PG).

5.6. A Way Forward – from Mapping to Collective Action

The proposed strategy is envisioned not as a static report, but as the foundation for an evolving, city-wide framework for public open space governance in Mumbai and other Indian cities. **At its core, it seeks to establish a collaborative platform through which government institutions, communities, experts, and civil society can collectively shape, manage, and enhance urban open spaces.**

1. The strategy introduces a **scalable methodology for mapping open spaces and developing a comprehensive open space database.** Ideally, such a platform should be publicly accessible, institutionally supported, and continuously updated through partnerships between government agencies, academic institutions, and community organisations.
2. Beyond data creation, the strategy aims to **catalyse dialogue around the larger strategic gaps in the governance of open space including gaps in policy, institutional coordination, and funding mechanisms.** The recommendations presented here are intended as starting points for wider discussion, refinement, and validation. User groups, experts, and government need to come together to structure the framework for such systemic change.
3. By making spatial data and governance processes more accessible, **it encourages broader public imagination around long-term urban visions, ecological restoration, and climate resilience.** In particular, it can support coordinated city-wide efforts toward targeted greening interventions, the protection of vulnerable open spaces, and the strengthening of environmental resilience.
4. This strategy presents two tools to facilitate targeted open space investment and collaboration between the government and community:
 - i. A Project Prioritisation and Funding Framework; project selection using user feedback and aligns projects with targeted funding opportunities, and
 - i. A stakeholder action matrix; that will evolve into a citizen-facing app, enabling users to raise grievances, connect with the appropriate authority, and collaboratively resolve issues.
5. Finally, the strategy includes **an evolving annexures section designed as a practical knowledge resource that documents standard practices, implementation tools, and lessons from the field** that can be adapted and replicated across different contexts.

Ultimately, the strategy advocates a shift from reactive and fragmented management practices toward a proactive, data-driven, and community-centered framework for governing public open spaces. By embedding participation, transparency, and long-term stewardship into urban planning processes, it aims to support more inclusive, resilient, and environmentally responsive cities.

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Sheila Raheja Manoranjan Maidan, P-North Ward, Malad (West), Source: UDRI + NAGAR

Annexure A: Mapping Methodology

This section presents a detailed methodology for mapping public open spaces (POS) in urban areas. Developed using the documentation and analysis of 627 public open spaces in two Greater Mumbai wards, K-West and P-North, as pilot study, the approach provides guidelines on how to gather the right data and what information is required to inform effective POS management strategies. While certain criteria reflect Mumbai’s unique context, the methodology is intentionally designed to remain context-agnostic, offering a systematic and scalable blueprint for stakeholders, including urban planners, researchers, and government authorities, to conduct similar mapping exercises in diverse contexts.

The mapping process is structured into the following broad stages:

- 1. Framework Preparation
- 2. Survey and Mapping
- 3. GIS Integration

Figure 69: Mapping methodology structure

Time	GIS Based Mapping Methodology		Resources
2 Months	Framework Preparation	Step 1: Pilot Site/ Ward Selection	  
		Step 2: Data Management	
		Step 3: Survey Form	
		Step 4: Testing the Survey and Cursory Site Visit	
3 Months	Survey and Mapping (~300 sites)	Step 1: Survey Teams and Training	    
		Step 2: Survey	
		Step A: Pre-Site Visit	
		Step B: Site Visit	
		Step C: Post-Survey Compilation	
1 Month	GIS Integration (~300 sites)		  
LEGEND			
 Project Team		 Computer Systems	
		 Mapping & Data Analysis Softwares	
		 Survey Team	
		 Data Collection Tools	

Source: UDRI and NAGAR

1. Framework Preparation

This initial phase of the mapping methodology focuses on creating a comprehensive survey template to document key aspects of public open spaces. However, a critical first step is to select some pilot areas to initiate the mapping process.

STATS

Suggested Time

Two months

Participants

Project Team

Output

» Land use map of pilot wards through stitched DP sheets

» QGIS shapefiles of traced DP boundaries

» Survey form

Tools

» Microsoft Excel

» QGIS

» Adobe Photoshop

» Google Forms

Step 1: Pilot Site/Ward Selection

We conceived this study as a ward wise scalable mapping exercise. Hence, based on preliminary research of the DP, the existing land use categories were compared for all the Mumbai administrative wards. Different criteria including percentage distribution of open spaces, variety of open space categories, natural areas, water bodies, developed mass, presence of informal settlements, flooding spots, and heat spots were compared to shortlist the wards. Additionally, other criteria like location, size/area and accessibility of the individual ward were also considered as a prerequisite for selection of the pilot wards. Finally, K-West and P-North were identified as pilot wards as they fulfil most of the prerequisites for the research-based projected outcomes.

A complete land use profile of the pilot wards was created using DP 2034 sheets provided by MCGM. Individual DP sheets were geo-referenced onto a GIS platform³⁸ using satellite imagery as a base. These geo-referenced sheets were stitched together to create base maps that served as a reference to accurately identify and locate designated open space reservations for the mapping exercise. See Figure 70.

Step 2: Data Management

Early on, it is important to establish efficient methods for data storage and management. For this mapping exercise, the wards were further divided into smaller manageable units based on electoral (Prabhag) boundaries for easy survey execution.³⁹ Figure 71 shows the Prabhag boundaries within K-West and P-North wards.

Polygons for all DP demarcated public open spaces were traced on GIS using stitched and geo-referenced DP sheets as base; giving an accurate count of public open space sites and their location. The constant or pre-defined data like Ward, Prabhag, DP reservation, for each site were added to its respective polygon’s attributes.

Following key steps were followed to manage the data.

1. A unique identification code was given to each POS site. This became the ID for efficient tracking and organisation of physical files, soft files as well as GIS metadata for each open space site.

38 QGIS – an open source software was adopted for the mapping survey

39 Prabhag boundary was chosen as it represents a well-established and widely recognised administrative unit, with designated corpora-tors responsible for the welfare and development of its constituents.

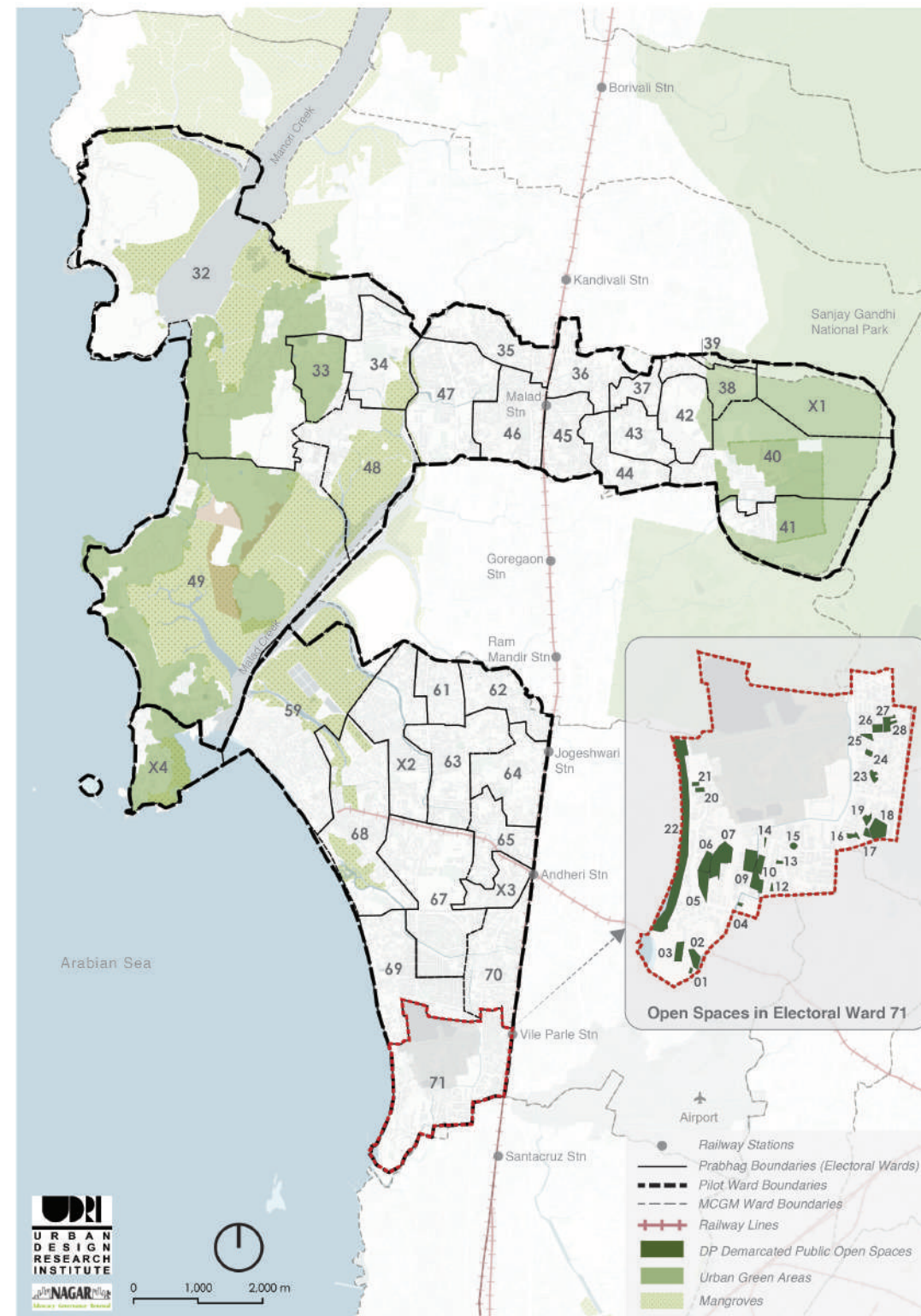
Public Open Space Mapping and Management Strategy For Mumbai

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Figure 70: Land use profile of K-West and P-North through stitched DP sheets

Source: Developed by UDRI and NAGAR from Development Plan (DP 2034)

Figure 71: Electoral boundaries of K-West and P-North used for mapping and data management



Source: UDRI and NAGAR

Sites within each *Prabhag* were numbered in sequence. For example, in K-West ward, the bottom most *Prabhag* 71 had 28 sites; they were each given a site number 1-28. Sites within *Prabhag* 69, just above *Prabhag* 71 had 38 sites. Their site numbers were continued from 29 to 66, and so on, as shown in Figure 71).

Finally, each open space's Unique Site ID was generated comprising: **WardName_PrabhagName_SiteNumber**, for example KW_78_39 implies Site no. 39 that is in K-West ward and *Prabhag* No. 78.

2. A physical and corresponding **digital folder system** was created for each site:

Physical data handling: All the data was maintained *Prabhag* wise in folders. Each *Prabhag* folder included (see Figure 72)

- a. A *Prabhag* Index Sheet containing a table (columns of- Unique Site ID, Surveyor Names, Survey Date, Proforma filled) to monitor the teams and surveys.
- b. A Ward Map with all *Prabhag* divisions, train routes and train stations marked.
- c. A-4 size zoomed in *Prabhag* map (DP Sheet with open spaces) printed on a transparent gateway sheet.
- d. A-4 size zoomed in (same scale as the gateway DP sheet) *Prabhag* satellite image with open spaces marked and numbered.
- e. A sleeve for each open space containing:
 - i. Zoomed in A-4 size satellite image for the open space site with its Unique site ID
 - ii. A-4 tracing sheet for on-site sketches and observations.
 - iii. A completed survey printout (surveys were done digitally on google forms)

3. **Digital data handling:** An **open source cloud drive** was used to share and collate data from all the survey teams. Once validated, this data was transferred to the organisation servers. (This process was useful to coordinate data digitally from different sources without dealing with permissions to access the organisation's database). Folders for each site were created digitally mirroring the physical folder structure and nomenclature.

Step 3: Survey Form

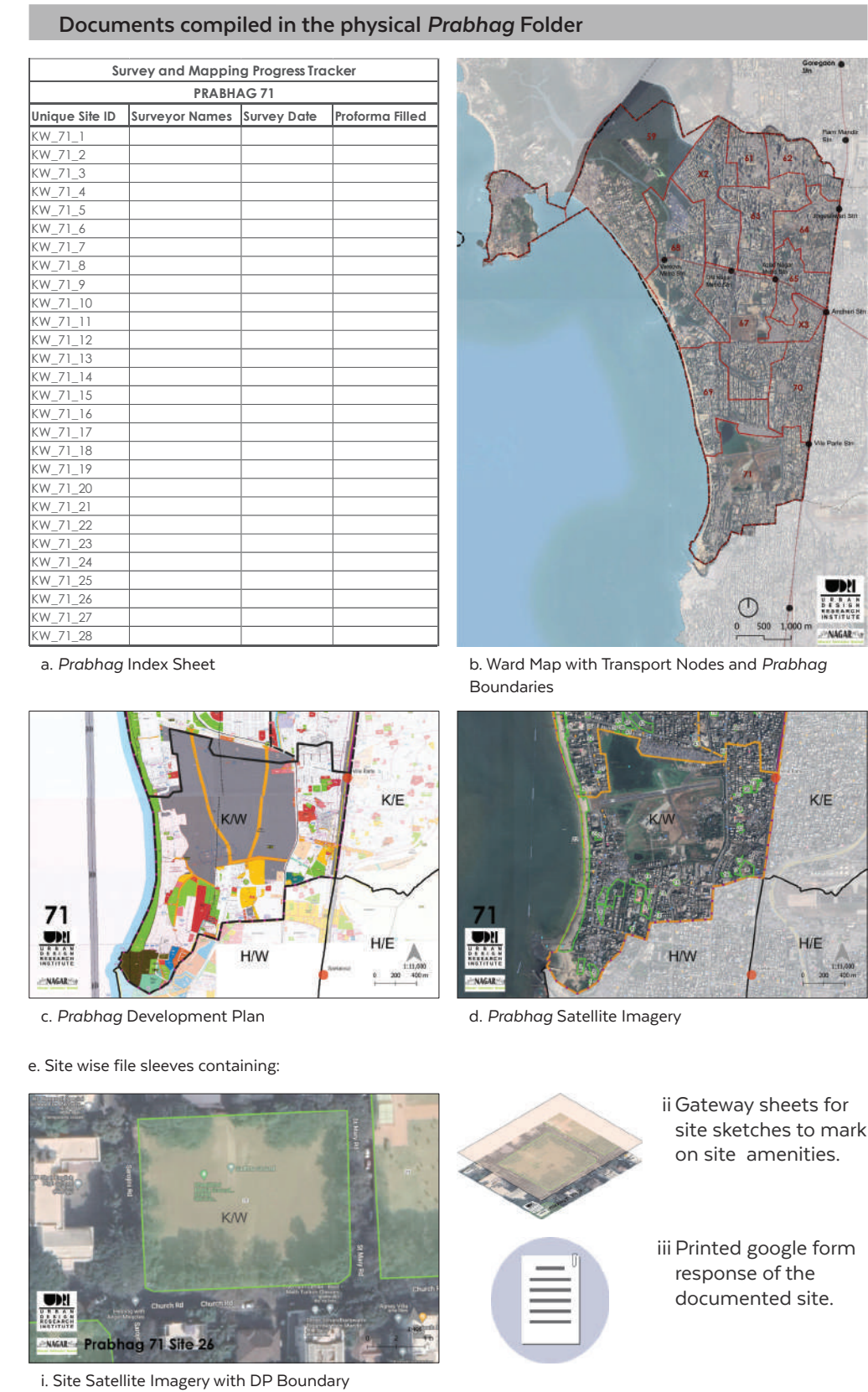
Survey Form: The survey form was designed to include two main sections comprising one defining dimension and six analytical dimensions:

1. **Defining Dimension:** This dimension identifies, locates and defines the site and its surroundings through criteria such as Unique Site ID; Name as observed on entrance board; Ward, Zone, CS No., Site Area, Designation/Reservation, Sub-category as per DP 2034 sheets; Ownership, Management, Governing Authority/ Jurisdiction, Use/ Activities through observation and interviews. Additionally, survey photographs and videos were captured to support the information gathered for the defining dimension.
2. **Analytical Dimensions:** These dimensions are used to evaluate and analyse the quality and ground reality of open space sites. These include accessibility; safety; amenities and infrastructure; sustainable and environmental factors; encroachments and a miscellaneous parameter to capture specific and unique issues. The final sample survey is included in Annexure G for reference.

Scan for Detailed Survey Form or [Click here](#)



Figure 72: Mapping kit



Source: UDRI and NAGAR

Step 4: Testing the survey and cursory site visit

An initial site visit was conducted to a few sample sites in each of the wards. The aim was to validate the survey parameters and make necessary edits. The site visit was done using a hard copy version of the survey and eventually the survey was refined and once the parameters were finalised, it was translated into a google form for final survey visits.

The survey had 7 dimensions with initially 29 indicators and 154 sub-indicators. These were finally refined to 24 indicators and 106 sub-indicators. These were eventually coded in Google forms for the digital survey.

During the initial site visit, we were looking for

1. Ease of access to the sites including availability of public transport, public paths/roads leading up to the sites.
2. Overall safety in and around the site.
3. Any other specific issues like permissions required, encroachments and unique features etc.

This helped with the initial validation of the defining and analytical parameters of the survey. This was also useful to get a sense of the survey workload to program and plan the site visits.

Once the number of survey teams required and program for the site visits was decided, the process of on-boarding the survey teams was initiated. We had 2-member survey teams comprising people from diverse backgrounds including architecture, urban design, urban planning, geography and the social sciences.

A team of survey leads was also identified. Each survey lead was responsible for managing 4-5 teams. A GIS resource was also part of the overall team.

Tip

1. The survey and mapping process are designed to be conducted completely using open source software and applications, making it easily replicable with minimum capital input.
2. Use an external Hard Drive to transfer visual media without losing its metadata (GPS coordinates)

2. Survey and Mapping

Step 1: Survey Teams and Training

A training workshop was organised for the survey teams covering the following:

1. **Introduction to the Development Plan:** Understanding Mumbai’s Development Plan and reservation framework.
2. **Open Spaces of Mumbai:** An overview of the typologies and significance of public open spaces in the city.
3. **Survey Methodology:** Detailed explanations of how to conduct the survey, including how to use the survey forms, trace site boundaries, and document findings through standardised formats such as images, videos, sketches, presentations, and notes.
4. **Data Compilation:** Teams were taught basics of using Google My Maps, an open-source, free-for-all mapping platform, to map the sites. These layers were then transferred to QGIS to create comprehensive open space layers. Additional templates for documenting visual information were also shared.

5. Site Visit: A practical session where the surveyors visited a public open space to apply theoretical knowledge and engage with real-world survey conditions.

The session also covered basics around public transport and access to the sites, basic safety protocols and documentation and reporting schedules.

STATS

**Suggested Time**
Three months (for 300 sites)

**Participants**
Project Team (Survey leads + GIS expert) + Surveyors

Output
Survey data of all sites captured through Google forms, Google My Maps, and Site PPTs

**Tools**
» Google Forms
» Google My Maps
» PowerPoint Presentation
» PlantNet (plant identifying app)

Step 2: Surveys

The survey was divided into three phases:

- A. Pre-site visit
- B. Site visit
- C. Post-survey compilation

Phase A: Pre-site visit

Before the site visits, secondary research was done by the teams to plan their visit including modes of transportation to reach the site, other available public transportation in the vicinity and studying the area surrounding the site remotely via Google Maps and Google Satellite. Secondary site research involved the DP study of the allotted sites, the DP study of adjoining plots to understand designated land use (later verified onsite), and research on any news/ article published about the site. Reconnaissance showed that most sites missed boundaries and extents. Hence, surveyors were asked to save pinned locations to find the sites easily during the site visit.

An important step was to mark the access road as per the DP sheet which was later validated on site. DP road access is a key-criteria to fulfil the public access aspect for any open space.

Phase B: Site visit

During each site visit, teams typically covered 3-4 locations. In Mumbai, most open spaces are accessible from 6 AM to 1 PM and 4 PM to 10 PM. Teams were encouraged to visit these sites during peak hours to document usage patterns. While most locations could be fully assessed in a single visit, some required a second visit when usage patterns varied significantly between morning and evening.

During the site visit, the following was typically followed:

- 1. Reach the site via public transportation, as it was important to understand access to open space for all users.

- 2. Document the nearest lamp-post and its number for record keeping through photographs, as this provides a constant on-site landmark which is also well documented in government records.
- 3. Mark the accurate GPS location of the site, on your phone for future reference from the tentative centre point of the site.
- 4. Fill out the given Survey Form of the site under study on your phone.
- 5. Document all aspects of the site in detail via geotagged pictures and videos.
- 6. Sketch a rough plan of the site (on tracing paper) to mark entry exit points, site boundary, built structures, pathways, permeable and non-permeable areas, green cover, encroachments, specific unique features, and site equipment (point locations).

Tip

- 1. 4 survey teams managed by 1 team lead, mapped approximately 40 sites per week. Overall it took nearly three months for survey and compilation of each ward covering approximately 350 sites.
- 2. While filling the survey forms, it is essential to accurately record the Unique Site ID in the form, as it helps equate the survey data to the spatial data in the later steps of data compilation.

Phase C: Post-survey compilation

In addition to the physical drawings and notes, after the survey, the teams were required to complete and compile 4 items for each site including:

- 1. **Google survey proforma** (completed during the site visit)
- 2. **Site plans on Google My Maps:** The on-site physical sketches prepared for each site were digitised using satellite imagery as the base on an open-source mapping platform - Google My Maps. The components of each sketch were systematically categorised into a standardised template of **10 spatial layers** as follows:
 - a. **Existing Site Boundaries (polygon layer):** Polygon was created to capture the existing extent of the site
 - b. **Access Path (line layer):** Lines were drawn to capture site access road (DP Vs Private) and presence of sidewalks outside the site. Within the site, lines were drawn to capture pathways and dirt roads. A basic description of the name and condition of the Path was added here, however, majority of the data regarding the condition and surface (permeable vs impermeable) was captured in the google survey.
 - c. **Entries/ Exits (point layer):** All entries were categorised and marked under three headers- DP Road Entry, Formal Entry/ Exit and Informal Entry/ Exit. A description of the entry type was provided, i.e., vehicular or pedestrian entry with size and type of entrance gate vs opening vs no specific entrance.
 - d. **Accessible Area (polygon layer):** This layer documents areas/ portions/ extents of the site that are accessible and available for use.
 - e. **On-site Built Forms (polygon layer):** On-site permissible built structures like security cabins, gazebos, gymnasiums etc. are captured in this layer.
 - f. **Encroachments (polygon layer):** Polygons demarcating non- permissible built structures in contradiction to the public open space usage designation like residential or informal settlements, commercial buildings etc are marked.

- g. **Permeable Areas (polygon layer):** Areas with good earth and capacity for water percolation are marked for each site.
- h. **Transportation Facilities (point layer):** All public/private transportation and parking were mapped here. Bus stops, taxi stops, train stations, bike stands, and two-wheeler and four-wheeler parking lots were marked here. A description of the nature (formal vs informal) and condition of the transportation facility was added.
- i. **Vegetation (point layer):** Locations and name of large trees was captured, especially in areas where there was shaded seated. Location of mangroves was also captured. Plant identifying app (PlantNet) was used to identify the flora species.
- j. **Amenities (point layer):** All amenities including tennis court, basketball turf, drinking water facility, gazebo, promenade, dustbins, hawkers, and garbage segregation or composting areas were marked. Any unique features and amenities were also captured.

Initially individual files on Google My Maps were created for each site. Over time, this approach was revised to generate *prabhag*-wise files, each consolidating all sites within a *Prabhag* and organised into 10 spatial layers.

- 3. **Pictures** with geolocations uploaded to My Albums on a common email ID showing the condition of the site.³⁸
- 4. **PowerPoint Presentation** (Optional)

In addition, site wise PowerPoint presentations were prepared on a standard template. These facilitated a consolidated overview of each site, bringing together key information in a single location and reducing the need to navigate multiple datasets. However, **this step is optional** and may be taken up based on availability of time and resources.

The PowerPoint presentations template included the following details.

- a. Site Boundary and Site Details
- b. Site DP Plan (1991 and 2034 DP)
- c. Link to the filled Proforma
- d. Sketch of the Site’s Plan
- e. Zoomed in Map (Google My Maps)- showing all the 10 layers made
- f. Pictures of the site with descriptions
- g. Remarks- Any extra data collected during the survey not reflected in the Proforma was added as remarks here.

The final 4-item stack was uploaded to the server in the designated folder structure for each site.

38 It is essential to use external Hard Drive to transfer visual media without losing its metadata (GPS coordinates)

3. GIS Integration

Post the survey three items are mainly generated:

- 1. A DP Boundary Layer: Traced on GIS before beginning the survey
- 2. 10 sapatial layers on Google My Maps
- 3. Excel Sheet generated from the survey forms

To create one integrated GIS database out of the above three items, the following steps must be followed.

Part A:

- 1. Download the excel spreadsheet generated from the Google survey forms in CSV format for each Prabhag. Check and clean for inconsistencies, spelling errors, and syntax.
- 2. Merge all downloaded CSV files into a singular spreadsheet on Microsoft Excel. This step is easy, as all prabhags have the same column structure. One of these columns also contains the respective Site Unique ID.
- 3. Import the CSV file into QGIS as a layer. Attach the CSV layer to the DP Boundary layer using the Site Unique ID column as reference using ‘Merge Vector Layers’ Command. A new layer is generated. This spatial layer illustrates DP Boundaries for all POS in the ward with its on-ground condition reflected in the attribute table.

Part B:

- 4. Download each Google My Maps file as a KML.
- 5. Merge the 10 spatial layers of all KML files on QGIS. This step should generate 10 final spatial layers for open spaces in each ward.
- 6. Add a new column in the attribute table of each layer. Fill out this column with the respective Site Unique ID for each feature. This column allows each feature to be identified in relation with its respective site, allowing tracking of multiple features across a site boundary.
- 7. We now have 12 layers on QGIS – the traced DP Boundary layer with details from the survey form attached in the attributes and the 10 spatial layers capturing various features of the sites. These layers together provide a wholistic spatial and qualitative picture of the on-ground conditions for a POS site.

STATS



Suggested Time
Two to three months for
compiling approximately
650 sites



Output
Master files on QGIS



Tools
» QGIS
» My Maps
» Microsoft Excel



Participants
GIS Expert

Annexure B:
Open Space Committee Draft Report

The State Government of Maharashtra constituted **The Open Space Committee, to prepare a policy framework for the planning of open spaces in Mumbai in 2012.** The Committee marked the first formal collaboration between government agencies, urban experts, architects, and civil society organisations to develop a shared vision for Mumbai’s public open spaces.



Scan for complete report or [Click here](#)

The committee comprised the following members:

1. Commissioner, MCGM (Chairman)
2. An officer nominated by the Metropolitan Commissioner, MMRDA, not below the rank of Additional Commissioner (Member)
3. An officer not below the rank of Chief Engineer, nominated by the Secretary, PWD (Member)
4. Chief Executive Officer, Maharashtra Housing Board or Chief Officer, Mumbai Board (Member)
5. Managing Director, MSRDC (Member)
6. Chief Executive Officer, MIDC (Member)
7. Shri. Pranab Kishor Das, Architect (Invited Expert)
8. Director (Engineering Services and Project), MCGM (Member Secretary)

The Government resolution envisioned the inclusion of two additional experts:

1. CitiSpace (Now NAGAR, NGO Alliance for Governance and Renewal)
2. Smt. Neera Adarkar, Architect

A draft report was prepared by the Committee in 2014. The report reviewed the existing condition of open spaces in the city and proposed a comprehensive policy framework for their planning, protection, development, and management.

The report aimed to:

1. Review existing policies, regulations, and legal frameworks for open spaces in Mumbai.
2. Study planning practices and standards for open spaces.
3. Assess the availability, accessibility, hierarchy, and quality of open spaces in the city.
4. Recommend strategies for improving planning, conservation, acquisition, and maintenance of POS

Some of the key recommendations the report provided:

1. Increasing the supply and equitable distribution of open spaces across the city.
2. Protecting natural assets such as mangroves, wetlands, hills, and waterfronts.
3. Strengthening policy and regulatory mechanisms for planning and maintenance.
4. Improving accessibility, inclusivity, and environmental quality of public open spaces.
5. Developing uniform planning and design guidelines for recreation grounds, gardens, parks, and playgrounds.
6. Establishing institutional and monitoring mechanisms for long-term management of POS.

Despite extensive research and recommendations developed through the committee process, the report was never formally released by the government, and its recommendations were never operationalised through policy or implementation mechanisms.

Over time, the committee itself dissolved, leaving the question of open-space planning and governance in Mumbai without a comprehensive, coordinated policy framework.

Annexure C:
Development of Reserved Open Spaces
(Permissible Usage and Accomodation Reservation)



Scan for more details or [Click here](#)

DCPR 2034 17(1) Development of Reserved land for Public Purposes

Tables 4 and 5 of the DCPR 2034 outline the permissible development for selected public open space categories. Table 4 specifies allowable primary and ancillary uses for Promenades, Zoos, Municipal Sports Complexes, Botanical Gardens, and Green Belts, while Table 5 provides accommodation reservation provisions for Gardens/Parks, Playgrounds, Sports Complexes, and Clubs/ Gymkhanas. These provisions apply only to specific open space categories and do not cover all public open spaces.

These tables identify:

1. Permissible Use: the principal activities for which the reservation is intended.
2. Ancillary Activities: supporting facilities that are allowed to ensure effective functioning of the main use.
3. Applicable Development Conditions: conditions under which the reservation may be developed.

Figure 73: Common set of conditions and authority/persons for development of Reservations (Table No. 3, DCRP 2034)

Symbol	Applicable Conditions for Development
1	The Corporation or Appropriate Authorities may entrust the development, operation and maintenance of the entire reservation to an appropriate agency
2	The Owner will be allowed to develop the reservation only for its intended purpose
3	The Owner will be allowed to develop the reservation on Accommodation Reservation basis.
Za	Maximum % of plot area that can be used for ancillary uses
Zb	Maximum % of permissible built up area as per Zonal (basic) FSI of the reservation area that can be used for ancillary users.
X	Maximum % of development rights, permissible at Zonal (basic) FSI, of the reservation area affecting the plot, to be constructed as built-up amenity/amenity for reservation under AR.
Y	Maximum % of reserved plot to be set aside for built-up amenity developed under AR and to be handed over to MCGM, along with the built-up amenity

Figure 74: Reservations to be developed for the intended purposes along with permissible uses & ancillary activities (Table No. 4, DCRP 2034)

Reservation Sub Category	Users Permitted		Conditions for Development (refer table 3)
	Permissible Uses	Ancillary Uses	
ROS 1.2 Promenade	Coastal road, Promenades along the periphery of water body /river /sea /pipeline	Watchman cabin, gardener chowky, toilet block, art and culture related uses, public toilet facilities	1 = The corporation or appropriate authorities may entrust the development, operation and maintenance of the entire reservation to an appropriate agency

ROS 2.3 Zoo	Zoo, aquarium with permissible FSI of 0.025		1 = The corporation or appropriate authorities may entrust the development, operation and maintenance of the entire reservation to an appropriate agency
ROS 2.4 Municipal Sports Complex	Sports complex for various or individual sports activity, enclosed sports facility for indoor games, facility for Indian sports, gymnasium, swimming pool, drama, theatre, public toilet facilities, changing rooms, locker rooms	Open air stage, cafeteria, restaurant, rest rooms, welfare activities, social and cultural activity/ amenities, art and culture related uses, hostel rooms, and other ancillary facilities, watchman cabin, gardener's chowky, instrument room, sports store/ shop etc	1 = The corporation or appropriate authorities may entrust the development, operation and maintenance of the entire reservation to an appropriate agency Zb = Maximum 15% of permissible built up area at Zonal (basic) FSI of the built-up reservation area that can be used for ancillary users.
ROS 2.7 Green Belt	Green belt/ Promenades and substation, distribution facility	Watchman cabin, gardener chowky, toilet block (at suitable location)	-
ROS 2.8 Botanical Garden	Botanical Garden	Watchman cabin, gardener chowky, toilet block (at suitable locations)	The corporation or appropriate authorities may entrust the development, operation and maintenance of the entire reservation to an appropriate agency

Accommodation Reservation (AR) mechanism

The development of reserved lands under the **Accommodation Reservation (AR) mechanism** is addressed in **Table 5 of the DCPR 2034**. The provisions enable landowners to develop reserved plots by constructing and handing over specified built-up amenities and, where applicable, a designated portion of the reserved land to the MCGM or the Appropriate Authority in lieu of FSI/TDR.

The applicable requirements vary depending on the reservation category and plot size (above or below 1,000 sq. m.), with the extent of land and built-up area to be surrendered determined by the prescribed ‘X’ and ‘Y’ values for each reservation category. Table 5 also identifies the permissible reservation-specific amenities and conditions for categories such as Playgrounds, Gardens/Parks, Clubs/Gymkhanas, and Sports Complexes/ Stadium.

The Additional Notes to Table 5 further clarify the implementation of AR provisions, including the grant and utilisation of TDR, ownership transfer procedures, operation and maintenance responsibilities, treatment of existing amenities and reservations, exemptions from Layout Open Space (LOS) requirements in specified cases, and other reservation-specific conditions.

Together, Table 5 and the Additional Notes establish the regulatory framework for the implementation of Accommodation Reservation under DCPR 2034.

Annexure D:
Development of Reserved Open Spaces occupied by Slums



Scan for more details or [Click here](#)

Under Mumbai’s planning framework, Reserved Public Open Spaces (ROS) occupied by slums have historically been treated differently under the Development Plan regulations. It permits a substantial portion of the land to be used for rehabilitation housing, with approximately one-third of the plot required to be retained as open space.

As a result, **slum-occupied ROS plots undergo a redevelopment process distinct from other ROS reservations, reducing the extent of public open space.**

1. Regulation under DP 1991

In 1992, the Maharashtra Government issued a notification for slums located on lands reserved as public open spaces under the Development Plan 1991.

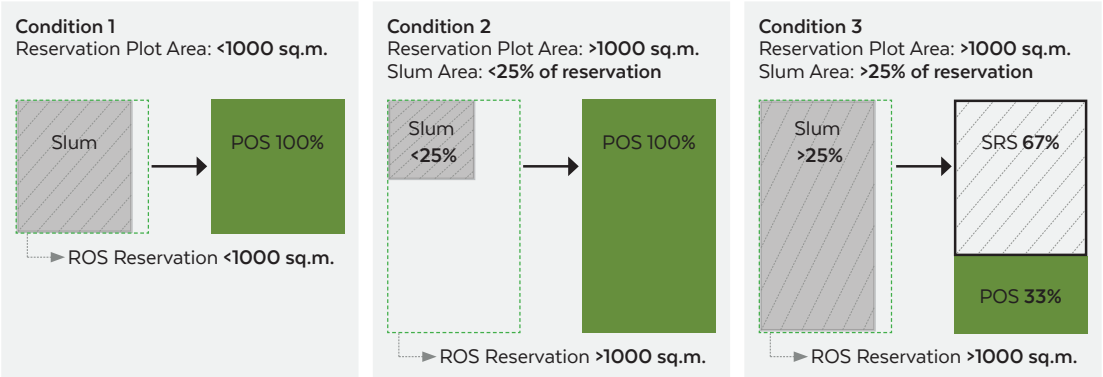
The amended regulation provided that the land would be **cleared and restored to its original reservation only if:**

- 1. The plot area was less than 1,000 sq.m.; or
- 2. In plots exceeding 1,000 sq.m., encroachments covered less than 25% of the total area.

In cases where encroachments covered more than 25% of a plot measuring over 1,000 sq.m., the policy **permitted redevelopment under the Slum Rehabilitation Scheme (SRS)**, subject to the following conditions:

- 1. Up to 67% of the plot could be used for rehabilitation development, and
- 2. The remaining 33% had to be retained as public open space.

Figure 76: SRA policy under DP 1991



Source: UDRI & NAGAR

Writ Petition 1152 of 2002

NAGAR, NGO Alliance for Governance and Renewal (formerly CitiSpace), challenged this regulation in the Bombay High Court in 2002, contending that Public Open Spaces in Mumbai are limited and this development mechanism results in a net loss of open spaces, violating the intent of their original reservation as a public amenity.

The Court granted a stay on the implementation of this policy in 2002, mandating that no

such development could proceed without prior court approval. **As per the Stay order, 100% of the plot should ideally revert to the city as open space, ensuring that any proposal for slum rehabilitation on reserved open spaces could not be undertaken arbitrarily or without judicial oversight.**

Following the stay, many developers approached the High Court seeking case-specific permissions to proceed with redevelopment. In several cases, scrutiny at the proposal stage led to revisions of redevelopment layouts, enabling the complete restoration of the reserved open spaces. In cases where this was not possible, it was suggested to explore alternative mechanisms such as land realignment from adjacent parcels.

Through these interventions, approximately **45 acres** of public open space were preserved and restored to their original reservation at the proposal stage, preventing their diversion to rehabilitation development.

As part of the court order, developers were required to clear the realigned open space, remove any slum encroachments, construct a boundary wall and gate, and hand over the cleared land to the MCGM as public open space before completing the SRA scheme.

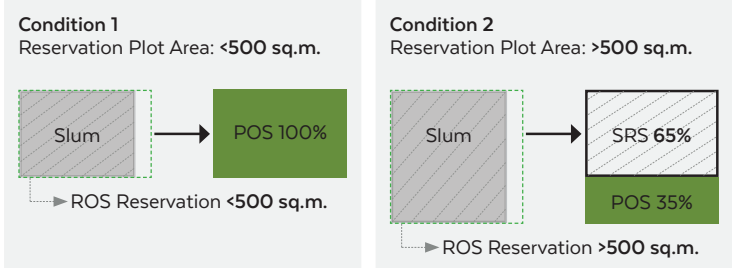
The stay remained in force for nearly twelve years. In 2014, the High Court directed the State Government to revisit the 1992 policy and formulate a revised framework for addressing slum encroachments on reserved public open spaces.

2. DP 2034: Regulation 17(3)(D)(2)

The Development Plan 2018 incorporated the 1992 policy through Regulation 17(3)(D) (2) of the Development Control and Promotion Regulations. While retaining the basic redevelopment framework, it introduced two significant changes:

- 1. The redevelopment-to-open-space ratio was revised from 67:33 to 65:35; and
- 2. The minimum plot size threshold was reduced from 1,000 sq. m. to 500 sq. m., substantially expanding the number of plots eligible for redevelopment under the scheme.

Figure 77: SRA policy under DP 2034



Source: UDRI & NAGAR

Writ Petition 1152 of 2002 reopened

In 2022, NAGAR filed an Interim Application challenging the newly introduced regulation, asserting that **the policy, instead of reflecting expert input or meaningful revision, was essentially a repackaging of the earlier regulation and was contrary to public interest. Reducing the minimum plot size from 1,000 sq.m. to 500 sq.m. and removing the 25% encroachment criterion expands the scope of the regulation.**

Through this application, NAGAR sought to have the regulation struck down and reiterated the arguments raised in its original petition filed in 2002. The matter remained under consideration for three years, culminating in a final judgment pronounced in 2025.

Bombay High Court Judgment

The Bombay High Court’s judgment dated 19 June 2025 upheld the legality of Regulation 17(3)(D)(2) of the DCPR 2034, which permits slum rehabilitation on lands reserved as public open spaces, provided that 35% of the land is retained and developed as accessible open space. While declining to strike down the regulation, the Court exercised its powers under Article 226 of the Constitution to issue **17 directions** to safeguard public interest, environmental rights, and ensure transparent implementation.

17 Directions

While upholding the constitutional validity of Regulation 17(3)(D)(2), the Bombay High Court issued 17 detailed directions aimed at safeguarding public open spaces and ensuring that the Regulation is implemented as an exceptional rehabilitation measure rather than a mechanism for the continued loss of reserved open land. The directions require strict retention of the mandatory 35% open space in a contiguous and publicly accessible form, establish monitoring and compliance mechanisms, mandate GIS-based mapping of reserved open spaces, prohibit fresh encroachments, provide for public handover and maintenance of retained open spaces, and call for periodic review of the policy’s environmental and urban planning impacts.

The case, spanning over two decades since the initial stay in 2002, underscores the contested nature of urban land use in Mumbai, particularly when public open spaces are caught between constitutional guarantees and developmental pressures. The institutionalised 65:35 ratio reflects a pragmatic compromise, one that attempts to reconcile the urgency of slum rehabilitation with the need to retain a portion of public open space. However, what remains unclear and unaddressed throughout the prolonged legal process is why this specific ratio was deemed optimal. Neither the State, the SRA, nor the MCGM placed on record any detailed financial models, spatial assessments, or environmental analyses to justify this proportion, nor did they present data-backed reasoning for why alternative frameworks were not feasible. No comparative scenarios were offered, for instance, on what scale of housing could be delivered if public land retention were increased, or if cross-subsidies or public-private partnerships were used differently. The absence of such evaluation leaves a gap in transparency and raises important questions about how planning decisions are being made in contexts involving scarce public land.

Annexure E:
Public Open Space Policy
(Adoption + Caretaker)



Scan for more
details or
[Click here](#)

The first formal attempt to frame a policy for the development and management of public open spaces in Mumbai was through the introduction of the Adoption and Caretaker Policy in 1991.

Conceived as a mechanism to address the growing challenges of maintaining, funding, and managing public open spaces, the policy enabled the participation of private parties, institutions, and individuals in the upkeep and development of these lands.

Through the twin mechanisms of “adoption” and “caretaker” options, the policy marked a significant shift in the governance of public open spaces by **introducing public-private participation within the city’s open space management framework**.

While the stated objective was to improve the restoration, maintenance, and security of public open spaces, the policy simultaneously opened avenues for long-term private control, restricted access, and construction activities within lands reserved as public open spaces under Development Plan regulations.

As a result, the policy became a critical turning point in reshaping the ownership, accessibility, and governance of Mumbai’s public open spaces.

The policy was specific for the open spaces reserved as gardens/parks, playgrounds, recreation grounds, clubs/gymkhanas, sports complexes, and swimming pools.

Key Differences Between the “Adoption” and “Caretaker” Mechanisms

Under the “Adoption” policy, reserved public open spaces may be **handed over for a limited period of five years** for the purpose of restoration and maintenance.

- The policy imposes strict restrictions on construction activities.
- No buildings or permanent structures are permitted except for a small gardener’s hut measuring 10 ft × 10 ft (100 sq. ft. built-up area).
- Permissible interventions are limited to fencing, landscaping, lighting, and security provisions, thereby largely retaining the open and public character of the land.

In contrast, the “Caretaker” policy enables reserved open spaces to be handed over for significantly longer durations, with agreements extending for a **minimum of 33 years and capable of indefinite renewal**.

- The Caretaker policy permits substantial construction activity on public open space under Development Plan (D.P.) regulations.
- Permissible developments include gymkhanas, restaurants, bars, clubs, and ancillary structures. Between 25% and 33% of the area of the ground may be used for buildings and construction.
- Additionally, 10% of the plot area may be utilised as a plinth area, while up to 15% of the total plot area may be consumed as FSI.
- A further 25% of the plot area may be used for ancillary structures, resulting in several thousand square feet of built-up development within lands originally designated as public open spaces.

What was the effect of the policy on the public open spaces of Mumbai?

Following the release of the Municipal Corporation’s first Open Spaces Policy in 1991, 239 public open space plots were made available under the adoption programme, while nine recreation grounds covering approximately 98,558 sq. m. were handed over for management.

Over time, the outcomes of these two mechanisms differed considerably. Many open spaces managed under the Adoption Policy continued to serve the public as intended. However, several recreation grounds allotted under the Caretaker Policy gradually evolved into private clubs and gymkhanas, with access restricted through expensive membership fees. In 2015, the Chief Minister directed the Municipal Corporation of Greater Mumbai (MCGM) to reclaim plots allotted under both policies. While most adoption-based allotments were subsequently taken back, many recreation grounds handed over under the caretaker mechanism continue to remain under the control of private clubs and gymkhanas even today (refer to the list below).

What is the current status of the policy?

At present, Mumbai does not have a dedicated policy governing the management of public open spaces. The earlier mechanisms through which open spaces were handed over have effectively ceased, and no comprehensive framework is currently in operation.

In 2023, the Municipal Corporation of Greater Mumbai (MCGM) initiated an effort to introduce a Draft RG-PG Policy aimed at regulating the management and maintenance of recreation grounds and playgrounds. However, the draft policy was never finalised or adopted, and no new policy has been brought into force since.

Currently, there are **7 plots in Mumbai under the caretaker policy controlled by private parties**. These plots include parks, gardens, playgrounds, and recreational grounds. The caretaker policy allowed private entities to manage these spaces, but it has been scrapped in the new draft policy proposed by the Brihanmumbai Municipal Corporation (BMC), which aims to limit the adoption of open spaces and prioritize local associations for their maintenance.

Figure 78: Plots under caretaker policy privately controlled

Sr. No	Name and Address	Ward	Area (sq.m)	Reservation Code	Reservation Text	Name of the agency
1	Prabhodankar Thackeray Maidan CTS NO 252 part, 255 part, 256 part, 257, 258, 259, 260 part, 261, 262, 270, 271 part, 272 part, 274/2 part, 435 part, Hissa No 23 , junction of M G Road and Shahaji Raje Marg, Vile Parle (East), Mumbai / 57.	K-East	9,230	EOS 1.4	Play Ground	Chatrapati Shivaji Smarak Samiti
2	CTS no 190 B, JVLR, Jogesgwari east	K-East	20,000	EOS 2.6	Recreation Ground	Matoshree Arts and Sports Club

Sr. No	Name and Address	Ward	Area (sq.m)	Reservation Code	Reservation Text	Name of the agency
1	Prabhodankar Thackeray Maidan CTS NO 252 part, 255 part, 256 part, 257, 258, 259, 260 part, 261, 262, 270, 271 part, 272 part, 274/2 part,435 part, Hissa No 23 , junction of M G Road and Shahaji Raje Marg, Vile Parle (East), Mumbai / 57.	K-East	9,230	EOS 1.4	Play Ground	Chatrapati Shivaji Smarak Samiti
2	CTS no 190 B, JVLR, Jogesgwari east	K-East	20,000	EOS 2.6	Recreation Ground	Matoshree Arts and Sports Club
3	CTS No. 92A, Charat singh colony, chakala, Andheri (E)	K-East	1,354	EOS 1.4	Play Ground	G B pant foundation
4	Probhodan Kridangan CTS No. 360, 360/1 Probhodhan Marg, Siddharth Nagar, Goregoan (W).	P-South	12,885	EOS 2.4	Municipal Sports Complex	M/s Probhodhan
5	CTS No.94-C at Ma-haveer Ngr., Kandivali (W)Mumbai 400067	R-South	9244	EOS 2.6	Recreation Ground	Kamala Vihar Sports Club
6	Sachin Tendulkar Gymkhana CTS No. 128A/59/1 vill. Kandivli, Borsapada, Borivali(W), Mumbai 400067	R-Central	42291	ROS 1.4	Play Ground	M/s. Mumbai cricket Association
7	CTS No. 1582(pt) Plot no.34&35 village Vile Parle (w) Mumbai 4000049	K-West	21015	EOS 1.4	Play Ground	M/s Lion Clubs Of Bombay Willingdon Crescent

Source: Draft RGPG Adoption Policy, MCGM 2023

Annexure F: Framework for City Level Large Public Open Spaces in Mumbai

Mumbai’s existing framework for the maintenance of open spaces primarily caters to neighbourhood-level public parks, gardens, playgrounds, and recreational grounds, with separate provisions for the management and maintenance of swimming pools, gymkhanas, and sports complexes. However, a roadmap for the management of city-level large public open spaces (greater than 4000 sq.m; as per UN-Habitat (2018) report on Public Space) is missing from the current framework.

With the Coastal Road Project, for the first-time large tracts of lands (amounting to approximately 53 hectares) have become available in the city for public open space use. However, unlike cities like Delhi, Bangalore and others, Mumbai doesn’t have an institutional structure or framework for development and maintenance of such large-scale public open spaces.

The momentum from the local community groups and ALMs on their aspirations for the Coastal Road Open space, presents two opportunity areas to capture and formalise citizen voices into an institutional framework for large public open spaces in the city. The aforesaid framework for public open spaces may be structured around the following two opportunity areas:

A. Design and Development Stage:

This stage determines the overall vision and direction of development. It is important to get all inputs noted during this stage to ensure that the design addresses the needs of the people.

A Citizen Consultation Panel/Cell: At the stage where architectural/landscape firms (often international) are onboarded to develop and deliver the large open spaces, this cell will help communicate the local people’s needs and aspirations to architects, designers and developers for translation into spatial and design decisions. Many groups have articulated their ideas through detailed schematics and drawing that capture the local aspirations. This cell will ensure a two-way communication channel between what the stakeholders want and ensure its adequate incorporation in the final design ensuring the design is sustainable, responsive and functionally inclusive.

B. Post-Design and Maintenance Stage:

Long term management and maintenance of Public Open Spaces is a recurring challenge for MCGM. A dedicated committee must be instituted to ensure that in the long run, the open spaces remain public, free from encroachment or privatization, and equitably accessible to all irrespective of who is managing and maintaining it. Such a committee can facilitate monitoring, accountability, and transparency in the ongoing management and use of large public open spaces.

Hence, we propose the following organisational framework for these 2 bodies:

1. An Ideas Cell/ A Citizen Consultation Panel/Cell:

Purpose:

MCGM’s Garden Infrastructure Cell (GIC) is responsible for design, development and execution of large-scale parks, gardens and recreational grounds in the city. It’s multidisciplinary team of architects, civil and mechanical engineers undertake heavy civil works for large open spaces based on directions and funding from the Garden Department.

However, the single lane communication channel between the Garden Department and the

GIC does not adequately capture citizen aspirations or broader stakeholder visions for large public open spaces. This framework requires strengthening through the inclusion of diverse voices.

An Ideas Cell (A Citizen Consultation Panel/Cell) that serves as a platform for communication and collaboration between the Garden Department, GIC, external design and execution team, citizen representatives, think tanks and experts, the funders and multiple other stakeholders, should be constituted within the GIC to strengthen the existing framework. Such a panel will ensure that the vision for each open space reflects the collective aspirations of the community and the city.

The Cell embedded within the GIC, should function in the pre-development stage, guiding the design and conceptualisation of large public open spaces (over 4000 sq.m.), by generating and collating all ideas and expectations.

During execution, the GIC must ensure that all inputs provided by the Cell/Panel are appropriately reviewed, addressed and incorporated where relevant.

Roles and Responsibility:

- Facilitate the generation and collation of ideas for the design and use of the open space.
- Communicate the aspirations, expectations, and needs of citizens and stakeholders to the appointed architect or design consultant.
- Review and relay design responses to the public and collect feedback at various stages of the design process.
- Ensure, through a continuous and participatory process, that the design of the open space aligns with the broader needs, priorities, and aspirations of the city’s residents

Composition of the Cell:

- Deputy Municipal Architect (GIC) - Chairman
- Garden Superintendent
- Urban Designers / Planners
- Horticulturist / Landscape Architect
- Representatives of Educational/ Research Institutes

Rotational Members:

- The Ward officers from the concerned wards
- Representatives from the locally registered ALM groups
- Local Corporators and MLAs from the concerned Wards
- Architects
- Geologists
- Botanists

2. Public Open Space Monitoring Committee:

Purpose:

Public Open Space Monitoring Committee, headed by the Garden Superintendent, will oversee the long-term management, operation, and upkeep of developed, large public open spaces in the city (over 4000sq.m). The Committee will ensure that these spaces are used and maintained in alignment with their intended purpose, as designated in the Development Plan (DP).

Roles and responsibility:

- Ensure that the usage and activities within the open space are consistent with the DP designations and approved plans
- Monitor the usage of all areas within the open space and recommend design revisions for portions that are underutilized or not functioning optimally
- Oversee all financial disbursements related to the maintenance and development of the space, ensuring efficiency, accountability, and transparency.
- Facilitate discussions with funders, partners, and community groups to strengthen and optimize space usage.
- Engage with local communities to understand their evolving needs and deliberate on ways to incorporate them within DP-driven frameworks
- Serve as a communication bridge between funders and communities, relaying community needs and feedback to the relevant stakeholders and ensuring responsive design or management adjustments

Composition of the Committee:

- Deputy Municipal Commissioner (Gardens)
- Garden Superintendent - Chairman
- Expert Panel consisting of
- Auditor
- Landscape Architect / Horticulturist
- Urban Designer and Planners
- Architect

Rotational Members:

- Ward officers from the concerned wards
- Representatives from the locally registered ALM groups
- Corporators / MLAs from concerned wards
- Representatives of educational/ research institutes

Meetings:

The Committee shall convene under the leadership of the Garden Superintendent on a quarterly basis, or as required, to review progress, deliberate on issues, and take decisions to ensure effective governance and maintenance of the open spaces under its purview.

For each public open space under discussion- the representatives from the concerned wards must be present.

Annexure G: Management of Large Open Spaces in Indian Cities

1. Bengaluru:

1.1 Cubbon Park (120 ha) and Lalbagh Botanical Garden (97 ha)

Located within Bengaluru's Central Administrative Area, Cubbon Park (120 ha) and Lalbagh Botanical Garden (97 ha) are among the city's most significant public open spaces. Situated in the heart of Bengaluru, these parks serve as important cultural, historical, ecological, and tourism landmarks. Given their scale and significance, the following management and maintenance framework has been adopted:

A. Dedicated Governance Structure and Budgetary Allocation

- Both parks are managed by the Horticulture Department of the Government of Karnataka
- Each park operates under a clearly defined management hierarchy headed by a Deputy Director of Horticulture
- The dedicated governance structure helps minimise bureaucratic delays associated with overlapping jurisdictions and fragmented responsibilities.
- As state-managed assets, the parks are included within the State Budget, ensuring a consistent source of funding for their maintenance and operation.
- Dedicated annual budget allocations support landscaping, repairs, cleanliness, security, and other operational requirements.

B. Regulated Public Use with Operational Flexibility

- The parks are open to the public daily from 6:00 AM to 6:00 PM
- They accommodate a wide range of activities, including recreation, walking, photography, public gatherings, marathons, and cultural events; however, gatherings of more than 20 people require prior permission.
- The presence of a dedicated management structure and clearly defined chain of responsibility facilitates efficient grievance redressal and streamlines the approval process for events and organised activities.

2. Delhi

2.1 Sunder Nursery (36 ha)

In Delhi, Sundar Nursery Management Trust was established as a public-private partnership solely for the management and maintenance of the Sunder Nursery, a 36 ha heritage park. The Trust demonstrates how multi-agency collaboration, bringing together public institutions such as the Ministry of Urban Development, Central Public Works Department, South Delhi Municipal Corporation and the Archaeological Survey of India, alongside private partners like the Aga Khan Trust for Culture and the Aga Khan Foundation can deliver and sustain high-quality large public landscapes.

Beyond conservation and maintenance of both heritage and landscape, the trust aims to develop revenue generating activities for long-term sustainability and establish a model for private support and participation in urban improvements. Most importantly, the formation of the Trust ensures that the land and asset ownership remain with public authorities.

2.2 Yamuna Biodiversity Park (185 ha), Tughlaqabad Biodiversity Park (81 ha), Kamla Nehru Ridge (49 ha)

A. Centralized Governance Structure

Delhi Biodiversity Foundation under the Delhi Development Authority is the single unilateral body that deals with the notification, ownership, and development of biodiversity parks. Joint collaboration with the Centre for Environmental Management of Degraded Ecosystems, University of Delhi and special recruitment of trained professionals and scientists for conservation efforts, and for the development and management of Biodiversity Parks.

B. Budgetary Allocation

The maintenance and management are budgeted under DDA's annual budget.

C. Public Accessibility

Yamuna Biodiversity Park has phase-wise/seasonal timings 10:30 am-5:00 pm (Phase I); 6:00 am-11:00 am (Phase II); 4:00 pm-7:00 pm (Phase III)

Field visits for educational institutions are also provisioned for.

2.3 Delhi Gardens and Parks Society

- Delhi Gardens and Parks Society is an umbrella body formed by the Government of National Capital Territory (delhi state government) under the Societies Registration Act, 1860.
- To coordinate the management of parks and gardens in the national capital territory with Municipal Corporation Delhi (MCD), Delhi Development Authority (DDA), New Delhi Municipal Council (NDMC), Public Works Department (PWD), Central Public Works Department (CPWD) and Residents Welfare Associations (RWA)
- Involve and fund RWAs and NGOs to maintain parks and gardens and take up greening initiatives
- Provide expert consultations to all stakeholders
- Identify vacant spaces and take up greening projects or maintain parks and nurseries

3. Hyderabad:

3.1 Sanjeevaiah Park (37 ha), Lake View Park (4 ha), Eco park (35 ha), Lumbini Park (3 ha)

A. Dedicated Management Structure

- Several Large Open Spaces are located within the Hussain Sagar Lake region, the development and management of which has been entrusted to Buddha Purnima Project Authority (BPPA).
- Established originally as a special-purpose vehicle for the development of the Lake Area, the BPPA was subsequently merged into the Hyderabad Municipal Development Authority (HMDA). It now functions as a dedicated unit within the HMDA responsible for the development, environmental upgradation and management of the of the lake and its surrounding precinct, including several recreational and public open spaces like the Sanjeevaiah Park (37 ha), Eco Park (35 ha), Lake View Park (4 ha), and Lumbini Park (3 ha).
- Consequently, these large public open spaces are managed and maintained by a dedicated unit within HMDA and benefit from earmarked institutional attention and dedicated funding allocations.

B. Revenue Generating Models Adopted:

- Entry to most of the parks is chargeable, with fees ranging from Rs 2 at Sanjeevaiah Park to Rs 20 at NTR Gardens. Several parks also adopt differential pricing, with entry charges varying across different time slots during the day.
- Additional revenue is generated through charging a fee for filmshoots and photography

sessions at designated locations. The HMDA facilitates online booking for such activities through its website.

- Furthermore, the operation and management of Lake View Park have been entrusted to a private company under a Build-Operate-Transfer (BOT) arrangement, enabling private sector participation in the maintenance and management of public open spaces.

4. Kochi:

4.1 Subhash Park (4.65 ha)

A. Management through a dedicated institution

- The Kochi Municipal Corporation has entrusted the management and maintenance of Subhash park to The Centre for Heritage, Environment and Development (c-hed), the Corporation's research and environmental planning wing.
- C-HED has prepared a comprehensive maintenance and management plan to guide the park's development, conservation, and day-to-day operations.
- To support implementation, the institution has mobilised financial resources through dedicated Corporate Social Responsibility (CSR) contributions from private donors, supplementing municipal funding.
- C-HED has also fostered partnerships with educational and research institutions, local communities, and elected representatives to undertake environmental and community-based initiatives like strategic tree planting drive (Kawaki) or MoU with architecture and design colleges for design of Subhash Park.

5. Ahmedabad

5.1 Riverfront Parks (70 ha)

Ahmedabad Municipal Corporation established a SPV (special purpose vehicle) called the SRFDCL (Sabarmati riverfront Development Corporation Limited) to develop and manage the Sabarmati Riverfront Development. Largely an infrastructure project, nearly 205 ha of land was reclaimed under it, of which 70 ha or nearly 25% was earmarked for development in large city level open spaces.

A. Management Structure

- Along with the Sabarmati riverfront, the SRFDCL is also responsible for the development and management of the reclaimed spaces including the public open spaces.
- Functioning on a Build, Maintain, Operate and Transfer (BMOT) basis
- A dedicated SPV structure facilitates quicker decision-making and implementation by avoiding delays arising from multiple layers of municipal approvals
- Collectively around 23 ha of the reclaimed lands have been developed into six parks namely Usmanpura Riverfront Park (1.85 ha), Shahibaug Rivefront Park (6.2 ha), Riverfront Flower Park (3.85 ha), Riverfront Biodiversity Park (9 ha), Riverfront Children Park (0.55 ha), and B. J. Park (1.7 ha).

B. Public Accessibility

- All parks have regulated entry within specified hours ranging from 6 AM to 10 PM.
- Entries are ticketed and priced starting from Rs 20 upto Rs 50
- The SRFDCL makes the rules and regulations for operations of these parks.

Annexure H:

Case Studies: Oval Maidan, Juhu Gardens, and Rani Bagh

Oval Maidan

Example of Citizen-Led Stewardship for Safeguarding public Open Spaces

- Location: Oval Maidan, Churchgate, Mumbai (A Ward)
- Area: 22 acres
- DP 2034 Designation: EOS 2.6 Recreation Ground
- Ownership Rights: State Government of Maharashtra
- Managed by: OVAL Trust (Organization for Verdant Ambience and Land) since 1998
- Special Feature: Grade I Heritage Site

Background

By the early 1990s, Oval Maidan had fallen into a state of neglect and disrepair. The ground had become overrun with encroachments, illegal parking, and waste dumping, making it unsafe and inaccessible for public use. The absence of regular maintenance and oversight led to the deterioration of the turf, loss of greenery, and misuse of the open space. These conditions created an urgent need for restoration and long-term stewardship to reclaim the space for citizens and preserve its heritage value.

The Oval- Cooperage Residents Association established the OVAL Trust, a public charitable trust in 1994 to mobilize funds for the restoration of the site. The Association also filed petitions seeking the removal of illegal structures from the ground. In 1997, the Trust submitted a detailed proposal for the restoration and beautification of the Oval Maidan, which received approval from the State Government. Since then, the OVAL Trust has been the primary steward of this Grade I Heritage Site, overseeing its maintenance and upkeep.

Key ingredient of success:

The restoration and ongoing maintenance of the Oval Maidan owe their success largely to the effective collaboration among diverse stakeholders — all united by a shared vision for the space. This collective effort fostered a sense of ownership, ensured accountability, and enabled sustained stewardship of the Maidan.

Figure 79: Oval Maidan



Source: FORT Heritage Conservation Association

The case of Oval Maidan illustrates the key phases involved in the development and maintenance of public playgrounds as follows:

1. Advocacy and Imagination
2. Funding and Development
3. Long-Term Management

Each phase is accompanied by a set of key actions and the stakeholders responsible for driving them forward. In all phases, the OVAL Trust has served as the primary steward, leading the initiatives in collaboration with various partners. The following section outlines phase wise key actions, associated stakeholders and examples drawn from the Oval Maidan restoration process. It is followed by the annual maintenance costs for the upkeep of the playground.

Phase I: Advocacy and Generation of a shared Imagination

Objective: Build public awareness, generate collective interest, create a shared vision for development of public open space, secure permissions

Figure 80: Key stakeholders and their roles in building a shared vision for Oval Maidan

Key Action	Associated Stakeholder	Example from Oval Maidan Restoration
Raise concerns about neglect and under use, obtain required permissions, secure administrative and legal approval	The governing authority (Ward Office/ MCGM / State Government)	In 1994, local residents around the Oval Maidan formed the OVAL Trust to restore and maintain the Maidan, creating a formal structure for community stewardship
develop conceptual layouts, circulation plans, and environmentally sound designs and BOQs	Architects Civil engineers Landscape Architects / Horticulturists	Bombay Collaborative prepared the proposal and undertook the restoration, ensuring the design respected the Maidan’s heritage context while improving accessibility and landscape quality.
gather feedback build ownership, and ensure the plan meets diverse community needs.	Local residents/ Regular visitors/ ALM	‘Save the Oval’ campaign was organised by residents to create awareness about preserving the Maidan.
raise awareness, highlight issues of neglect, and gain public support.	Media/Press	Media coverage of Oval Maidan’s revival campaigns strengthened citizen initiatives.

Phase II: Development of Oval Maidan

Objective: Execute the approved plan in partnership with authorities, funders, and local service providers

Figure 81: Key stakeholders and their roles: Development of Oval Maidan

Key Action	Associated Stakeholder	Example from Oval Maidan Restoration
Mobilise Funds	Corporate Sponsors / CSR Partners	TATA Group and Coca-Cola, along with individual entrepreneurs funded Oval Maidan’s restoration, demonstrating a successful public-private-citizen partnership
Execute construction works as per approved plans	Contractors and Vendors	Independent contractor hired for fencing, turf repair, ground leveling, pathways, and peripheral plantations. Specialized consultants engaged for rainwater harvesting system design and implementation.
Ensure rule compliance, public safety, prevent encroachments, and maintain order	Local Police / Traffic Department	Mumbai Police helped clear illegal hawkers and ensure rule compliance.

Phase III: Maintenance and Long-Term Stewardship

Objective: Execute the approved plan in partnership with authorities, funders, and local service providers.

Figure 82: Key stakeholders and their roles: Maintenance and long term stewardship Oval Maidan

Key Action	Associated Stakeholder/ Collaborator	Example from Oval Maidan Restoration
For ongoing coordination, periodic reviews, and support in maintenance activities	MCGM / State Government	Tree maintenance, complains are logged online to MCGM by OVAL Trust, permissions are granted for activities with State’s and sports department consultation by OVAL Trust
For continuous funding of maintenance, upgrades, and community amenities	CSR / Donor Partners	The OVAL Trust continues to oversee the daily upkeep of the Maidan, supported by annual funding from Tata Trusts for maintenance and improvements
To conduct transparency, usage, and sustainability audits.	Civic NGOs/ experts / research institutions	OVAL Trust, along with sister organizations, contributed to the UNESCO nomination of the heritage precinct and actively highlighted the importance of Oval Maidan within the heart of the precinct.
To encourage responsible use, voluntary clean-ups, and participatory monitoring.	Citizens / User Groups	OVAL Trust engages walkers and sports users to maintain the activities in the Maidan and create awareness about the importance of open spaces in the city.
To disseminate results, highlight success stories, and maintain accountability.	Media / Public Forums	Media coverage of Oval Maidan’s revival strengthened citizen trust in local governance

The following is the breakup of annual maintenance costs for Oval Maidan

Category	Annual Maintenance (INR)
Staff Salaries (Trust, Security, Gardeners)	20,00,000
Water supply	30,000
Electricity	40,000
Trees, Waste and Ground Maintenance	29,30,000

Approximate annual maintenance for Oval Maidan: INR 50,00,00

For more details refer to: Mumbai Reader 2022-23 article: Citizens Can Make Transformational Changes in Their Surrounds

Scan the QR or [Click here](#)



Gardens along Juhu Beach

Birla Garden, Nippon Garden, Coastal Garden, Juhu Pet Park, Juhu Beach Garden

- Location: Juhu Beach, Juhu, Mumbai (K/W ward)
- DP 2034 Designation: EOS 1.5 Garden/Park, EOS 2.6 Recreation Ground, EOS 1.3 Beach
- Ownership Rights: Municipal Corporation of Greater Mumbai (MCGM)
- Managed by: Juhu Citizens Welfare group

Background

Seven Public Open Spaces along Juhu beach emerged through citizen-led initiatives in response to the degradation and neglect of the area, encroachments, and the lack of accessible public recreational spaces for the residents.

Gardens including Juhu Beach Garden, Birla Garden, and Nippon Garden, were developed by local residents, primarily by Juhu Welfare Citizen’s Group, which were underutilized, transforming areas previously used for parking, garbage dumping, or other non-permissible activities into recreational spaces. Once established, these gardens were handed over to the MCGM, while resident groups continued to play an active stewardship role.

The case demonstrates a model of shared governance between MCGM. Citizen’s group, and MLA, in which citizens function as custodians and pressure groups to ensure the protection and upkeep of public open spaces.

Figure 83: Juhu Beach Garden



Source: UDRI and NAGAR Survey Photos

Veermata Jijabai Bhosale Botanical Udyan and Zoo (Rani Bagh)

- Location: Byculla, Mumbai (E Ward)
- Area: 60 acres
- DP 2034 Designation: EOS 1.5 + EOS 2.3 + EOS 2.8
- Managed by: MCGM

Background

A proposal to transform Rani Bagh into a large “international zoo” in 2007 sparked concern among citizens who feared that Mumbai’s only heritage botanical garden would lose much of its green cover, historic character, and public accessibility. In response, a small group of nature enthusiasts came together to study the plans, gather information through the Right to Information Act, and engage with planning and heritage authorities. What began as an informal citizens’ initiative gradually evolved into a sustained campaign focused on protecting the garden’s trees, pathways, open spaces, and heritage features. In 2012, the group was formulated into a registered public charitable trust, the Save Rani Bagh Botanical Garden Foundation.

Over the sixteen years, the group worked alongside environmental organisations, experts, and concerned residents, participating in hearings, reviewing plans, conducting awareness programmes, and submitting representations to statutory bodies.

Their efforts contributed to several revisions and rejections of redevelopment proposals, helping ensure that the botanical garden’s landscape and public open spaces remained largely intact. The story of Rani Bagh is therefore not just about a garden, but about how sustained citizen engagement shaped decisions affecting one of Mumbai’s most important green public spaces.

For more details refer to: Mumbai Reader 2022-23 article:
Saving Mumbai’s Sole Heritage Botanical Garden

Scan the QR or
[Click here](#)



Figure 84: Aerial view of Rani Bagh



Source: Save Rani Bagh Botanical Garden Foundation

Annexure I:
Scoring Details: POS Prioritisation and Funding Framework



46
On 100
Safety & Security

Safety & Security

Open space users range from toddlers and children to elderly and women. For the vulnerable and their caregivers, the sense of safety and security in the open space becomes the foremost deciding factor on choosing to access it. In this study the dimension of providing ‘safety and security’ within an open space is thus considered the most important with 40% weightage on the scoring index.

Score Out of 46	Physical Indicator	Sub-Indicator	Marks				
	10	Entrance Signage Board	Visible entrance signage	N	00	Y	05
			Signage with ownership details	N	00	Y	05
Entrance Signage board with Owner details is essential as it assures visitors of access to an open space. A well-maintained and clearly visible signage board with MCGM logo reflects the commitment of the authority to the welfare of the community and provides a point of contact for raising concerns and queries.							
	10	Boundary Wall	Demarcated Boundary	N	00	Y	04
			Porous Boundary	N	00	Y	03
			Full Visibility inside	N	00	Y	03
A demarcated boundary of an open space safeguards its cadastral extents and contains the open space activities. Also, the physical characteristic of the boundary regulates visual access to the open space. A demaracted boundary that allows maximum visual connect between the external and the internal while containing them, ensures constant monitoing of the space and protects it from encroachments. Visibility inside the open space also encourages more use of it.							
	10	Lighting	Presence of Lighting	N	00	Y	05
			Optimal Sufficient Lighting	N	00	Y	05
Well lit pathways, play areas, seating and common areas signifiacntly reduce the risk of accidents, slips and falls. Adequate lighting also deters deviant and criminal behaviour in these public spaces. All accessible areas of an open space should be well lit and without blind spots for maximum safety.							
	10	Security	Presence of Security Guard	N	00	Y	05
			Presence of Security Cabin	N	00	Y	05
Security Guard are perceived as enforcers of rules overlooking maintenance and order in an open space by general public. Presence of uniformed security guards with dedicated stations/cabins allows caregivers confidence that their children can play and explore the area safely.							
	06	CCTV Surveillance	Presence of CCTV	N	00	Y	06
Provision of CCTV is an additional layer of monitoring. It creates a sense of being constantly watched. For miscreants this becomes a deterrent and for the users a security measure. The live feeds from the CCTV can also be used to respond promptly in case of emergencies.							



26
On 100
Comfort

Comfort

Within Comfort dimension, five parameters are evaluated, with the highest scores assigned for the provision of seating and benches, followed by sidewalks, pathways, shading devices, and information signage. This emphasis on essential amenities ensures that users feel welcomed and comfortable, ultimately encouraging greater engagement with the space.

Score Out of 26	Physical Indicator	Sub-Indicator	Marks
 06	Seating Areas and Benches	Provision of Benches	N 00 Y 06
Seating areas offer visitors a place to rest and relax, which is particularly important for the elderly, children, and individuals with mobility issues. Spaces that feature communal seating not only provide comfort but also facilitate social interactions, fostering a sense of community among users. By enhancing usability and comfort, these seating arrangements encourage more repeat visits to the park, contributing to a vibrant and engaging environment that welcomes all members of the community.			
 06	Shading Devices	Provision of Shading Devices	N 00 Y 06
Use of trees, sheds, pergolas etc enhance comfort in open spaces by providing shelter from heat, rain, strong winds etc. During the hot summers, these create cooler spots in the open space where people can rest and enjoy outdoor activities comfortably. They add a sense of enclosure in vast spaces making them humane.			
 03	Sidewalks	Sidewalks with width > 1.5m	N 00 Y 1.5
		Blockage Free Sidewalks	N 00 Y 1.5
Sidewalks along the periphery of the open spaces provide a leveled and accessible surface for individuals including those with mobility challenges, parents with strollers, and elderly. By separating pedestrians from vehicular traffic, sidewalks ensure the safety of those accessing open spaces on foot, making these spaces more inclusive. In our study, we assess the condition, materiality, and any blockages that may hinder the functional performance of these sidewalks.			
 03	Pathways	Continuous Pathways	N 00 Y 1.5
		Well Maintained	N 00 Y 1.5
Walking tracks and pathways inside open space provide clear directions and structured routes, making it easier for people to navigate the area. Designated walking tracks offer specific areas for walking, jogging, and running, promoting physical activity. Additionally, nonskid pathways are crucial for preventing slips and falls, especially during the rainy season. Such surfaces are particularly important for individuals with mobility challenges, the elderly, and parents with strollers, ensuring that all users can enjoy the space safely and comfortably.			
 08	Informational Signages	Presence of General Signages	N 00 Y 04
		With instructions and guidelines	N 00 Y 04
Informational signage in open spaces help visitors easily locate entrances, exits and key features like toilets, play areas, and sports facilities, informs them of the do's and dont's. The survey identified signage like notice boards with instructions and regulations, direction signs, and signage for sports facilities and other amenities provided in the open spaces.			



Health & Hygiene

Health & Hygiene

Under the Health and Hygiene dimension, four parameters are evaluated. The highest priority is assigned to the provision of dustbins, which are essential for encouraging proper waste disposal and maintaining cleanliness. Following this, the efficiency of waste pick-up systems is assessed. The third parameter is the availability of first aid kits, which enhances safety and preparedness for minor injuries. Lastly, the condition and accessibility of toilet blocks are evaluated, as these amenities significantly impact the overall user experience and comfort in public open spaces.

Score Out of 22	Physical Indicator	Sub-Indicator	Marks
	08Waste Pick Up	Regular Waste Disposal	N00Y04
		MCGM – waste disposal service	N00Y04
The survey assessed whether official BMC waste pickup services were consistently implemented across all accessible existing open spaces. This parameter is critical for evaluating the Municipal Corporation of Greater Mumbai’s (MCGM) involvement in the maintenance and management of the open spaces under its jurisdiction.			
	08Dustbins	Provision of Dustbins	N00Y04
		Segregated	N00Y04
The provision of dustbins is evaluated at two levels: the overall availability of dustbins and the provision of segregated dustbins. The latter is particularly important as it facilitates more efficient waste management processes.			
	03First Aid Kit	Provision of First Aid Kit	N00Y03
		The presence of first aid kits enable immediate treatment for minor injuries, helping to prevent complications and providing reassurance to users, especially parents and the elderly. Additionally, first aid kits support broader health initiatives and can serve as a resource for training community members in basic first aid practices.	
	03Toilet Block	Toilet Block in 100m proximity	N00Y03
		A cleaned and well-maintained toilet facilities encourage longer stays and increased use of these spaces, making them more accessible for families, the elderly, and individuals with specific needs.	



Sustainable Design

Sustainable Design

The parameters of sustainability in open spaces encompass greening efforts, tree cover, vegetation, and natural features. These indicators not only influence the immediate perception of the space but also play a crucial role in enhancing the long-term resilience of the surrounding neighborhood. Under this dimension, two parameters are evaluated. The provision of rainwater harvesting and solar lighting are the key measures included in the scoring.

Score Out of 06	Physical Indicator	Sub-Indicator	Marks				
	03	Solar Light	Use of Solar Powered Lights	N	00	Y	03
			Solar lights in open spaces provide sustainable, eco-friendly lighting through renewable energy. They reduce electricity costs, lower carbon footprints, and ensure safety by illuminating pathways and common areas, deterring criminal activity, and reducing the risk of accidents. Solar lighting also requires minimal maintenance and infrastructure, making it a cost-effective solution for public open spaces, while encouraging greater use during evening hours.				
	03	Rain Water Harvesting	Rain Water Harvesting	N	00	Y	03
			Rainwater harvesting measures in open spaces act as natural sponges, effectively absorbing and managing rainwater. During heavy rains, especially in cities like Mumbai that experience intense monsoons, these systems help mitigate the effects of water runoff by allowing rainwater to gradually seep into the ground. In the broader context of sustainability, rainwater harvesting is a critical component in reducing dependency on piped or bottled water for irrigation in parks and gardens.				

Annexure J:
Trees List

Scan for Detailed
Compendium or
[Click here](#)



The study compiles more than 30 commonly found plants and trees across opens paces in K-West and P-North wards in Mumbai. The compendium provides on insight on common names, physical characteristics like height, foliage, colour, life span etc and on sun, water, and soil requirements. The compendium of following plants and trees is available on the following link:

Figure 85: Tree list

Common Name	Scientific Name
1. Coconut Palm	Cococ nucifera
2. Peepal Tree	Ficus religiosa
3. Banyan Tree	Ficus Benghalensis
4. Copper Pod Tree	Peltophorum pterocarpum
5. Arjun Tree	Terminalia arjuna
6. Date Palm	Phoenix dactylifera
7. Mango Tree	Mangifera indica
8. Jamun	Syzygium cumini
9. Neem Tree	Azadirachta indica
10. Tamarind Tree	Tamarindus indica
11. Flamboyant Tree	Delonix regia
12. Indian Almond Tree	Terminalia catappa
13. Golden Apple Tree	Aegle marmelos
14. Sapodilla Tree	Manikara Zapota
15. Queen Palm	Syagruss romanzoffiana
16. Cashew Tree	Anacardium occidentale
17. Ashoka Tree	Saraca asoca
18. Plumeria Pagoda Tree	Plumeria rubra
19. Guava	Psidium guajava
20. Papaya	Carica papaya
21. Banana	Musa spp
22. Lemon	Citrus limon
23. Night Jasmine	Nyctanthes arbor-tristis
24. Hibiscus	Hibiscus rosa-sinensis
Bougainvillea	Bougainvillea spp.
26. Sweet Lime	Citrus limetta
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