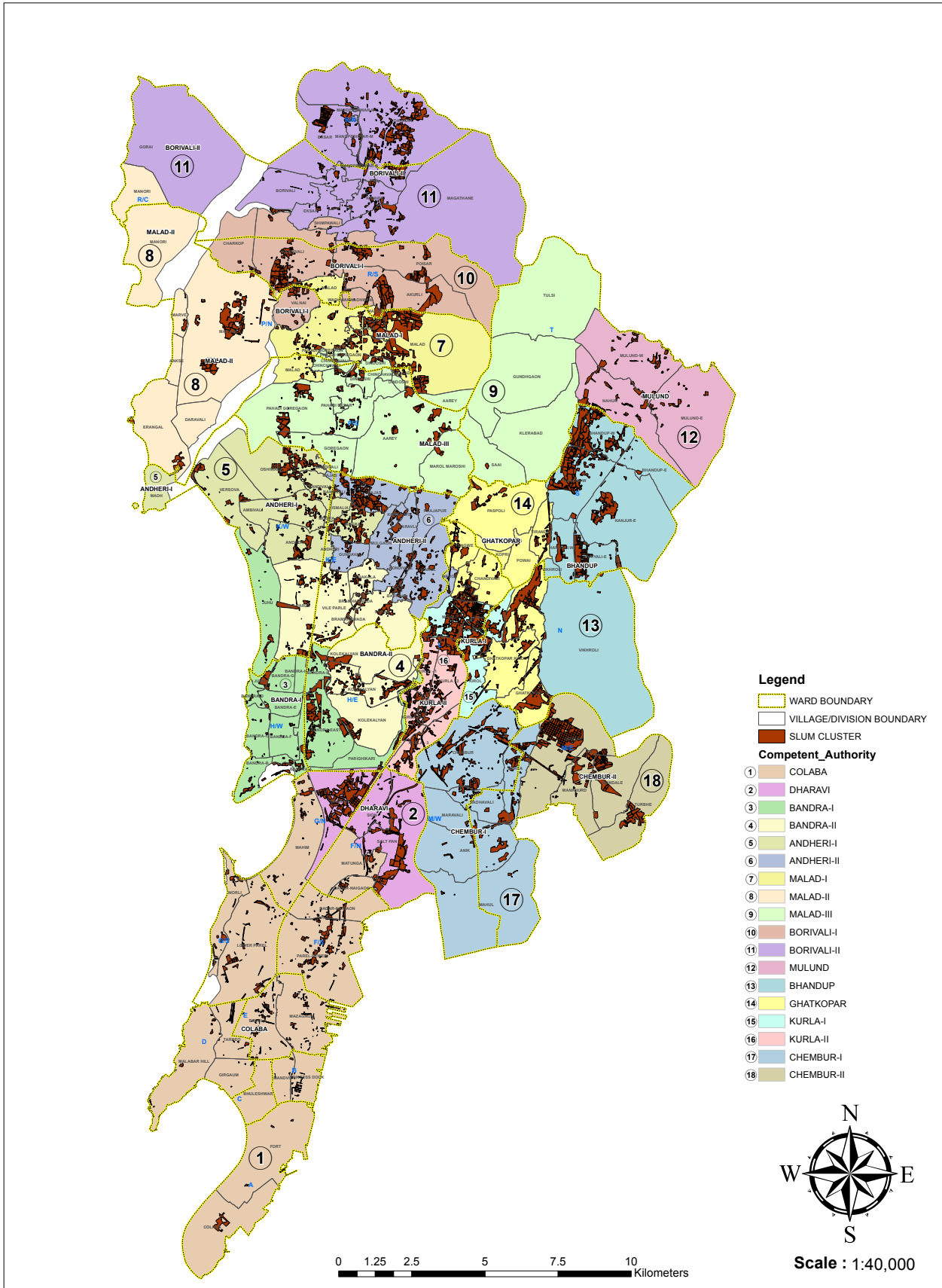


**RENEWAL OF PUBLIC HOUSING DEVELOPMENT IN
MUMBAI**

NATWAR PAREKH SRA COMPOUND - GOVANDI



Ward & Village wise Slum Cluster Map of Greater Mumbai Showing area Boundaries of Competent Authority- GPS Survey 2015-16



SLUMS IN THE CONTEXT OF MUMBAI

Defining Slums:

UN-HABITAT defines a slum household as a group of individuals living under the same roof in an urban area who lack one or more of the following:

- Durable housing of a permanent nature that protects against extreme climate conditions.
- Sufficient living space which means not more than three people sharing the same room.
- Easy access to safe water in sufficient amounts at an affordable price.
- Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
- Security of tenure that prevents forced evictions

A Slum, for the purpose of Census, has been defined as residential areas where dwellings are unfit for human habitation by reasons of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangement of street, lack of ventilation, light, or sanitation facilities or any combination of these factors which are detrimental to the safety and health.

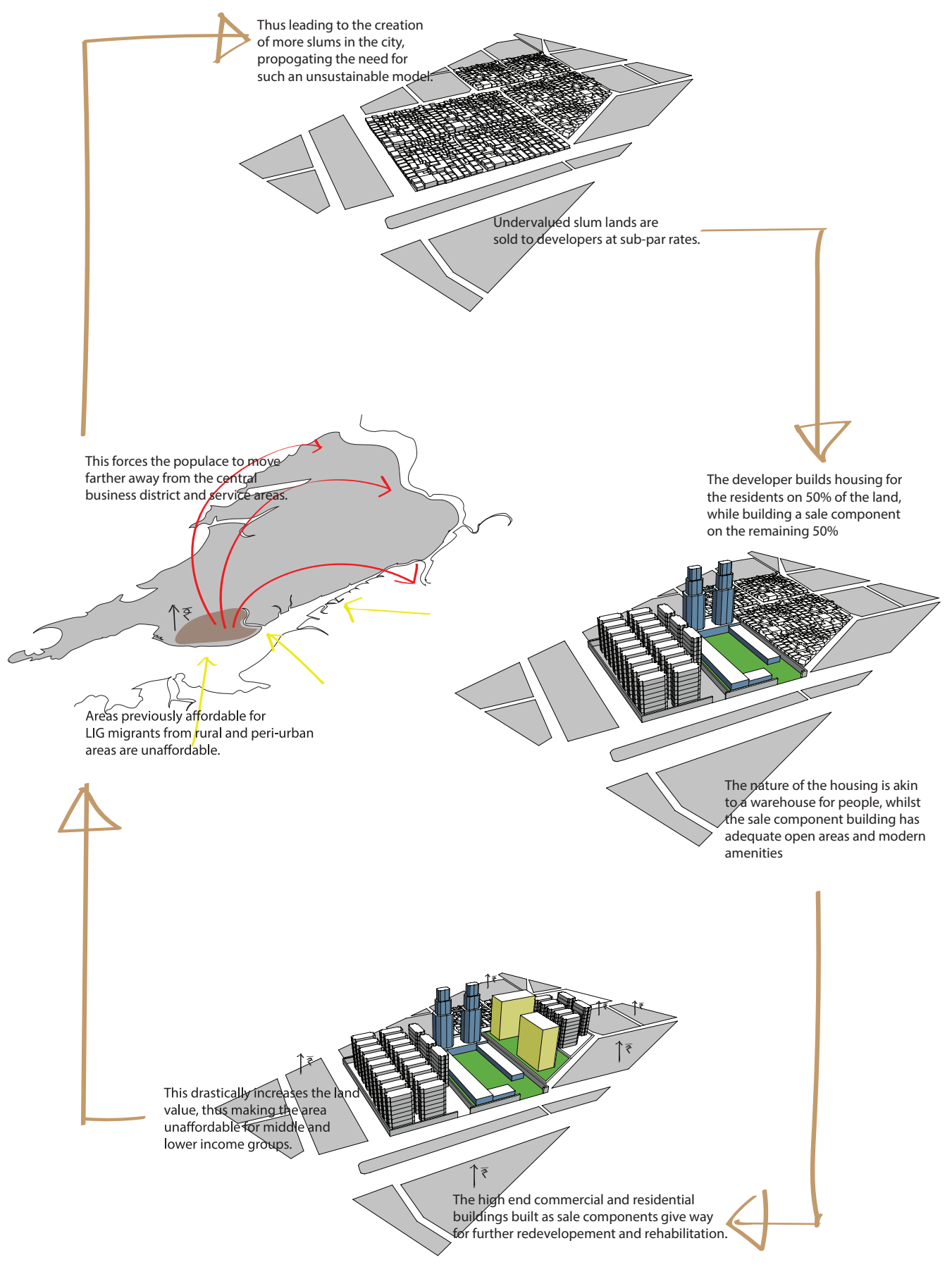
(Housing stock, Amenities and assets in slums – Census of India 2011)

The conditions of slums in Mumbai :

Informal settlements, colloquially known as 'Slums' are a deeply rooted and complexly interwoven part of the urban fabric of Indian Metropolises. The industrial and service based employment opportunities in large metropolises like Mumbai are a magnet for rural-urban and urban-urban migration into the city.

As the country's commercial capital, Mumbai is a hub for migration, and owing to the city's inability to meet the extreme housing stock, home to 52 lakh slum dwellers(*Census of India 2011*).

With the onset of the new governance and the 'Housing for all' scheme, A large number of the informal self built settlements in Mumbai are facing rehabilitation in the name of development, caused by insensitive and exclusionary policy making leading to exclusionary treatment of slum dwellers. One of the most pressing issues is the warehousing of slum communities in poorly designed and constructed buildings with inadequate light and ventilation and inhumane densities.



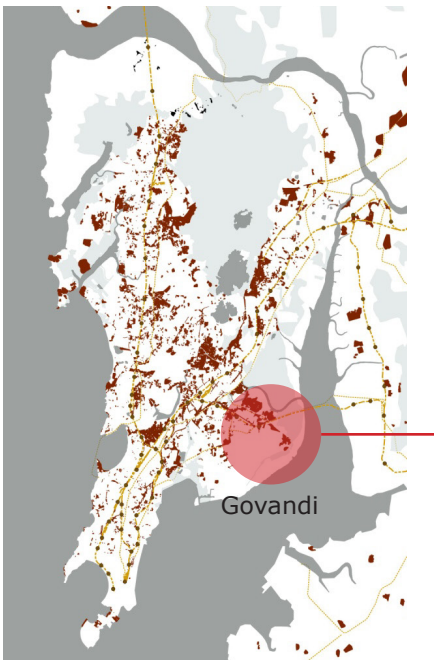
THE SLUM REHABILITATION AUTHORITY

Throughout Mumbai's history, a number of rehabilitation and redevelopment schemes have been implemented, with varying, but deeply problematic results. The schemes are reflective of the government body's attitude toward the city's poor working class. In the decades after independence, the *Urbs Prima in Indis* ambition has been pursued under the aspiration of achieving 'world class' status by emulating other cities: Paris in the 1950s and 60s, New York in the 70s and 80s, Singapore in the 90s, and Shanghai in the first decade of the new millennium (*Mahadevia and Narayanan, 2008*). It appears that for more than a century, the municipal government and the various parastatal agencies operating in the city have been more efficient at dis-housing than housing the urban poor. However, the scale and intensity of dishousing since liberalization in the 1990s have increased dramatically (*ibid*).

Following is a short summary of the strategies applied by the State toward re-housing slum dwellers:

1. The Government's initial response up to the early 1970s was treating such settlements as illegal and resorting to demolition and clearance.
2. After massive public protests against 'inhuman practices', the second phase of response was to tolerate the slum structures as a housing solution and provide civic amenities to the slum dwellers as environmental improvement works. An Act called the Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act, 1971 was passed and improvement works were defined therein. It was accepted that when slums are to be removed for public purposes these slums have to be relocated elsewhere.
3. The third phase in the 80's was defined by proactive government involvement in the re-housing of slum dwellers in the city, with assistance from the World Bank.
4. The Slum Rehabilitation Authority (SRA) was established in 1995 and uses a Public-Private development model. Acting under the purview of the Slum Rehabilitation Scheme, Private developers are granted access to highly valued slum lands for a fraction of the land price. The developer has to build accommodation for all of the residents on the selected site, which is given to the slum dwellers for free (Rehabilitation colony). The developer is incentivised with a higher Floor Space Index (FSI) or Transferable Development Rights (TDR), for a sale component building. The SRA has carried out around 1500 projects along with private developers (built and proposed) till date.

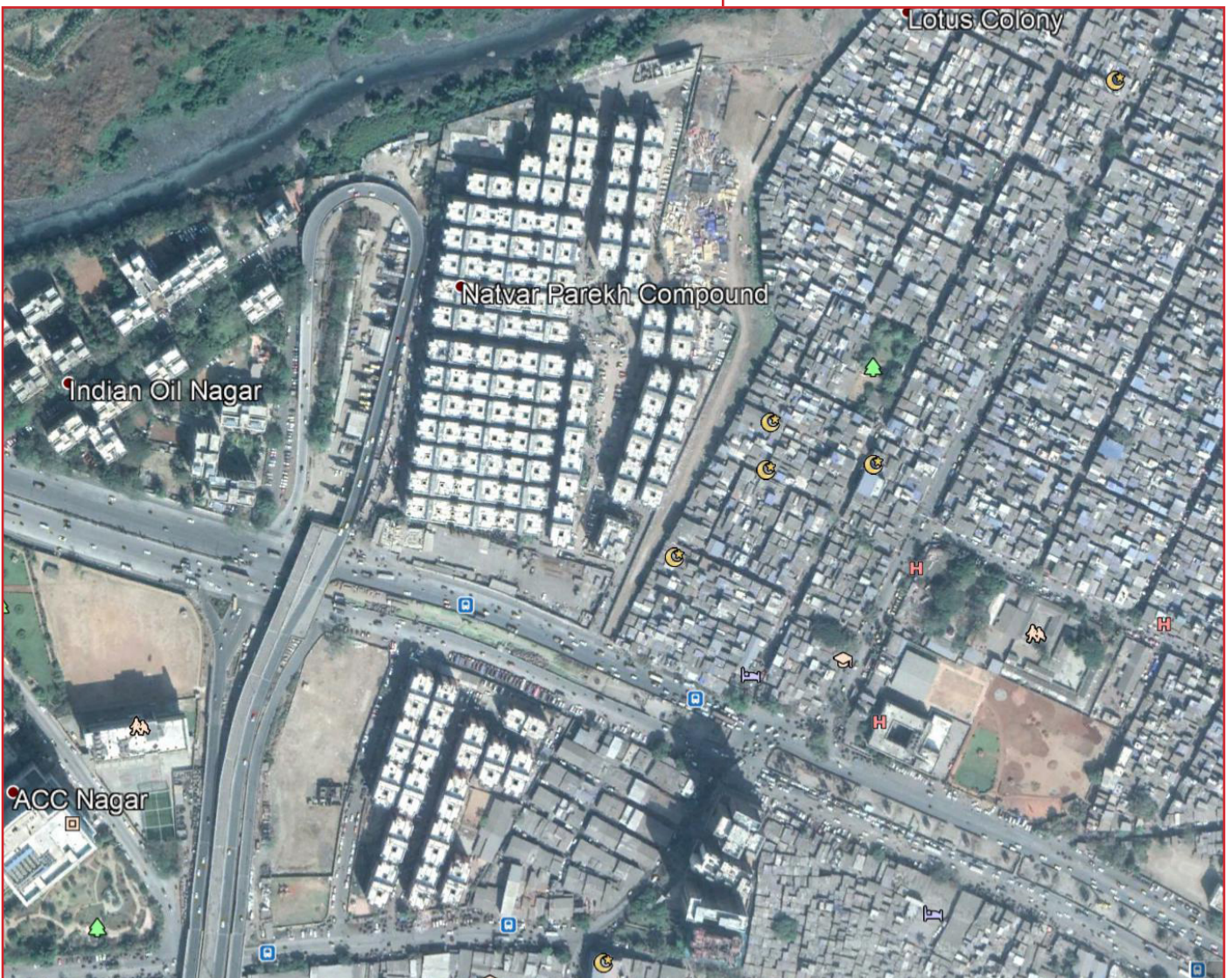
The SRA model has subverted the responsibility of the government body to provide safe, hygienic, livable and affordable housing for the city's slum and pavement dwellers. Putting such a responsibility in the hands of private developers has made the already marginalized slum dwellers victims of impatient capital and profit oriented building practices.



Mumbai and its slums (Author)



SRA colonies in Govandi (Google Earth)



Natwar Parekh Compound (Google Earth)

FAILINGS OF THE SLUM REHABILITATION SCHEME CASE STUDY : INDIAN OIL COLONY, GOVANDI

Decades of lobbying for basic services for slum and pavement dwellers in Mumbai led to the current public housing model developed by the SRA in collaboration with civic society and grassroots agencies. Constantly under immense pressure from various authorities to clear out slum dwellers from different parts of the city, the coordination work was highly focused on getting families off the streets and into a space with four walls and a roof that they would soon call home. However, a livable healthy space is one that takes care of both the physical and mental well being of its residents. This includes well lit and well ventilated areas along with spaces for recreation and community activities.

Nearly over two decades after the SRA came into being and the completion of Mumbai's first public housing, questions about the livability of these developments are being raised. With leaking roofs, inadequate rainwater drainage and waste management system, shortage of clean water, lack of light and ventilation inside apartments and common areas, lack of green and open spaces for both children and adults; these housing developments are falling into a state of disrepair affecting everyday life including raising significant health challenges amongst the residents. The deteriorating condition of the housing complexes poses a risk of residents moving out of the apartments allocated to them and setting up slums elsewhere.

The communities living in these developments understand and acknowledge that it is not viable (financially and logistically) to demolish the current apartment blocks and build new ones. However, they are keen on exploring options to upgrade their homes and make their living environment better. The proposed initiative to renew the public housing developments will take on a two pronged approach, one would be to introduce and inculcate behavioural changes through active community engagement and the other, physical intervention through design and engineering (but without any major structural changes).

This initiative requires a design intervention in close collaboration with the community members living in the housing estate. As a starting point, one of the housing estates in Govandi called the Natwar Parikh Compound (commonly known as Indian Oil SRA) has been suggested. Amongst one of the first public housing estates this was developed with loans from the World Bank as well as other government funds it was built under the TDR scheme by the land owning authority, and was part of the free housing stock in the city. While offering 'free' housing to the urban poor is well intentioned, the quality of the design and construction were compromised. Indian Oil SRA has a total of 60 buildings built by a number of contractors selected by the MMRDA out of which 29 are leased to the MCGM. Further, 9 buildings are still vacant and are in a delapidated condition, vandalised by the anti-social elements. Each building has 96 units and the total occupancy of this housing development is approximately 25,000 (including illegal squatters). Blocks 6B, 11C and 12C have been selected to begin the intervention. These blocks have been chosen as the Federation has known the residents living there from their time as pavement dwellers, and believe that the demonstration project might have higher chances of succeeding with this particular group.

Indian Oil Colony (Natwar Parekh Compound) Land Use Mapping



Legend

- Building Footprint
- Waste dumping area
- Road Area
- Usable Open area
- Parking areas
- Unusable Area

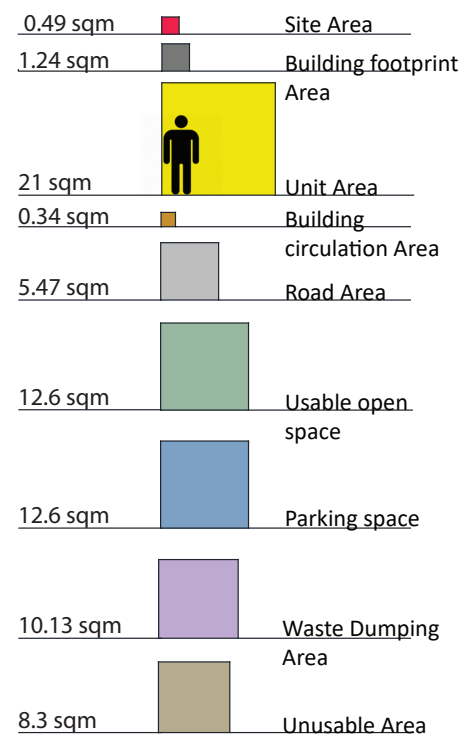


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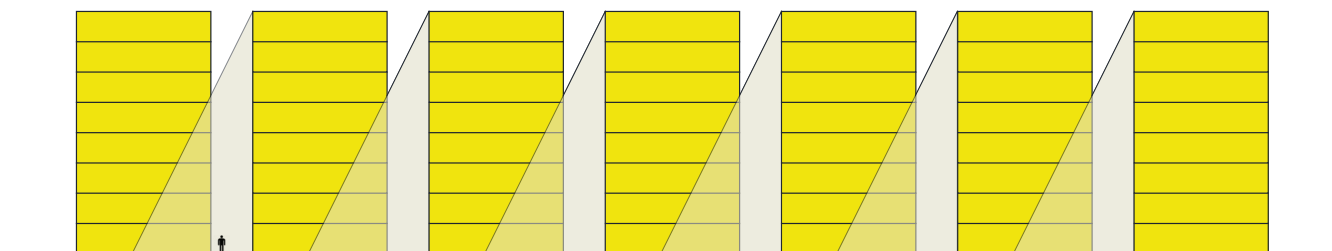
Basic Information about Natwar Parekh Compound:

1. Number of Dwelling Units (DU).....5856 units
2. Area per dwelling unit.....21 sqm
3. Total Residential Built up Area.....1,22,967 sqm
4. Population at capacity @ 5 people per household.....29,280 people
5. Dwelling unit density (du/ha).....976 units/ha
6. Population Density (people/ha).....4880 people/ha

Land Area Distribution		Area (sqm)	% of land area	Sq.m per capita
1	Total Scheme Area	59,328	100%	0.49 sqm
2A	Total Building footprint area	26,047	43%	1.24 sqm
2B	Total Unit area (unit area x units per floor x floors per building x no of buildings)	1,22,976	207%	21sqm
2C	Total building circulation area	85,400	143%	0.34 sqm
3	Road Area	5,344	9%	5.47 sqm
4	Open Area			
4A	Usable open space	2308	3.80%	12.6 sqm
4B	Parking Space	2306	3.80%	12.6 sqm
4C	Waste Dumping Area	2888	4.80%	10.13 sqm
5	unusable area	3504	5.90%	8.3 sqm



Space per person



Site Section

Indian Oil Colony (Natwar Parekh Compound) Social Infrastructure mapping



PROPOSED INTERVENTIONS

Along with the residents of the chosen blocks at the Indian Oil SRA the Federation envisages this as a one-year project with initial focus on the following, but not limited to:

- Cleanliness, water and solid waste management both inside the apartment blocks as well as the spaces in between and the common open areas.
- Introduce landscape spaces in the open areas for a healthier and safer environment for children and adults alike. Potentially creating a multipurpose use for the fire tender routes while improving the drainage and paving quality of the outdoor areas.
- Improvements to water proofing and plumbing in the apartments.
- Improvements and design kits to create better spaces within the apartments.
- Upgrading the common areas within the buildings and allocating corridor spaces for girls to play, space for the elderly to gather outside the confines of their apartments, and for other group related activities.
- Upgrade and improve roof terraces for larger gatherings.

In collaboration with the Curry Stone Foundation, the community will get access to a network of architects and engineers who have done innovative works in various areas of design and construction. A thorough collaboration between designers and community members has the possibility to establish a process of how designers (including students of architecture, planning and design, young designers and researchers) can better engage with these end users. The successful implementation of this project could additionally lead to (initial ideas of certain outcome, needs to be developed further):

- Spatial research and a better understanding the relationship of these communities to the urban environment and how that impacts future development of cities – live case studies. What does it mean to design and develop a city that is inclusive?
- Appropriate material and technological innovation
- Design methodologies and templates for renewal of existing public housing development as well as new construction

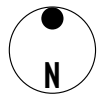
This initiative will become an exercise in getting feedback on the housing developments from the communities living there while the demonstration of the renewal of the selected blocks will lead to finding possible solutions to address the inadequacies that have been identified. This process will help establish a design methodology and model that can be replicated. A successful implementation of this demonstration could lead to the improvement of multiple public housing developments in Mumbai. And possibly bring reform to this typology and impact future design and development of housing as well as a set up guidelines to create healthy living environments for the communities. 60 % of the eligible slum and pavement dwellers in Mumbai are yet to be housed and the lessons from this exercise has the potential of changing the way affordable housing developments are built in the future, both in this city and others around the country.

Indian Oil Colony (Natwar Parekh Compound) Amenity mapping



Legend

- ⊕ Health clinics / Medical stores
- Religious buildings
- ⊞ Schools
- Police Station
- 🚗 Parking areas
- ⊞ Community Organisations / N.G.O's



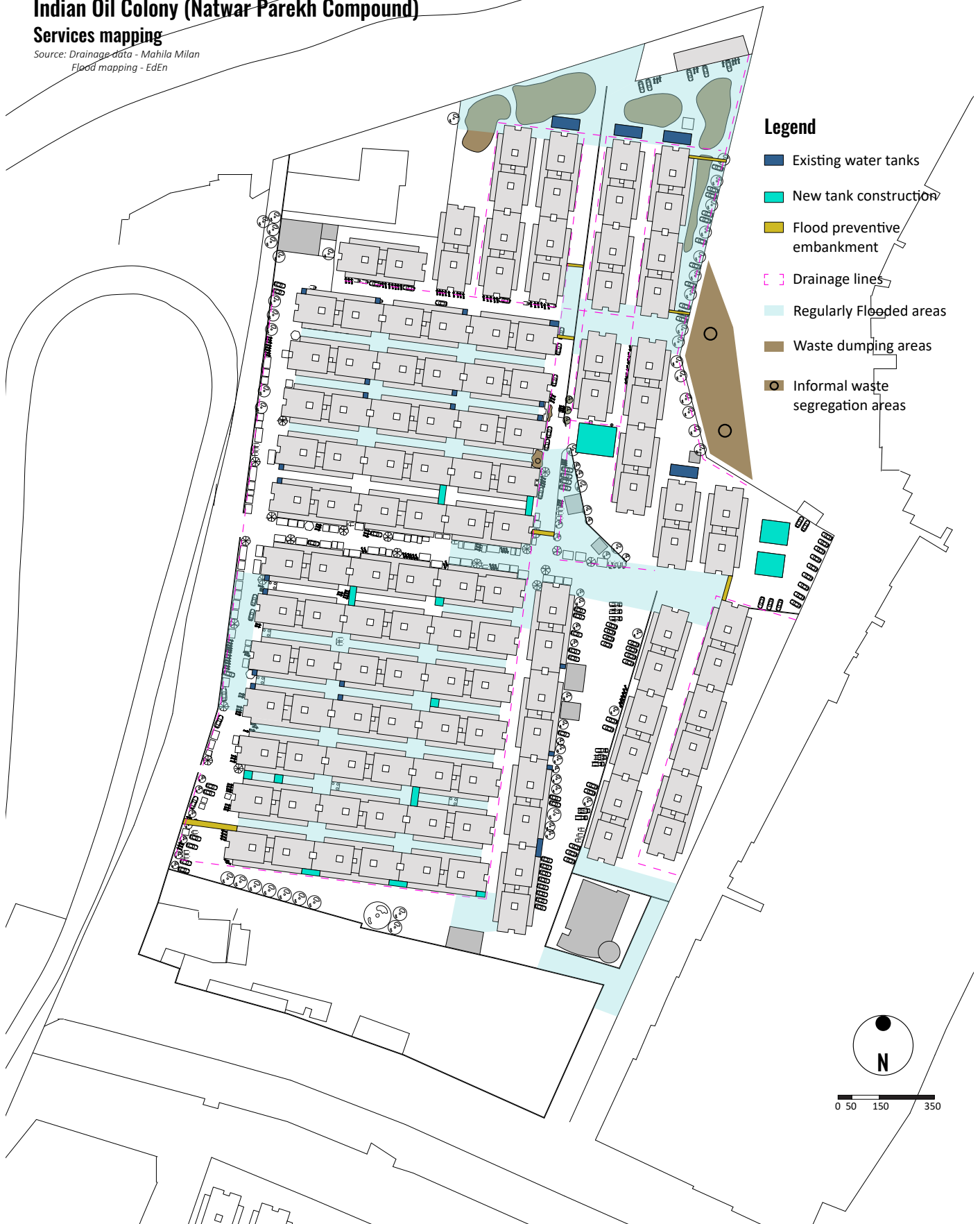
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Indian Oil Colony (Natwar Parekh Compound)

Services mapping

Source: Drainage data - Mahila Milan
Flood mapping - EdEn





Indian Oil Colony (Natwar Parekh Compound) Landscape mapping



