

# Dharavi

## Citizen Action for Urban Renewal

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The proposal focuses on the generation of public open space and public facilities. It proposes a new Dharavi Regulatory Authority comprising of co-operative societies, CBOs and the State Government where security of tenure forms the basis of a partnership. The jury found this proposal to be incomplete and not fully thought out.



## PREMISE

Throughout history, plans of settlements are distinguished by a systematic provision of public health infrastructure. Sanitation was a critical determinant of urban planning up to the twentieth century when the mobility of people and goods became the overriding principle. At the turn of the millennium, scientists confirmed that one of significant causes of planetary climate change, with its adverse implications for human survival, is the way cities are built.

As urbanisation increases, slums in cities grow faster. These slums are distinguished by a degraded physical environment (human habitat) and enhanced conviviality (community support system). This duality ensures survival. The degradation is generally due to a lack of sewerage and drainage. The conviviality generates a spirit of enterprise to overcome material deprivation.

Dharavi is an extreme case of dysfunctional urbanisation, but the severity of its physical degradation is matched by a remarkable abundance of enterprise, which makes it a significant contributor to the economic life of Mumbai.

The reinvention of Dharavi relies on the inherent energy of the residents directed to manage the upgradation of public space and utilities, within a framework of sustainable collective.

## GUIDING PRINCIPLES

The guiding principles are integrated by equity as the overriding value, defined by access to public resources and decision making to balance consumption and ensure environmental sustainability.

### **Built Environment**

Residents need to expand their accommodation to achieve better living conditions and to enjoy the real estate potential of their property, keeping in mind the inseparable mix of residential and livelihood spaces.

### **Public Health**

High densities change the balance of natural elements, particularly the neglect of sanitation. The proposal focuses on the improvement of public utilities, starting with sewerage and drainage.

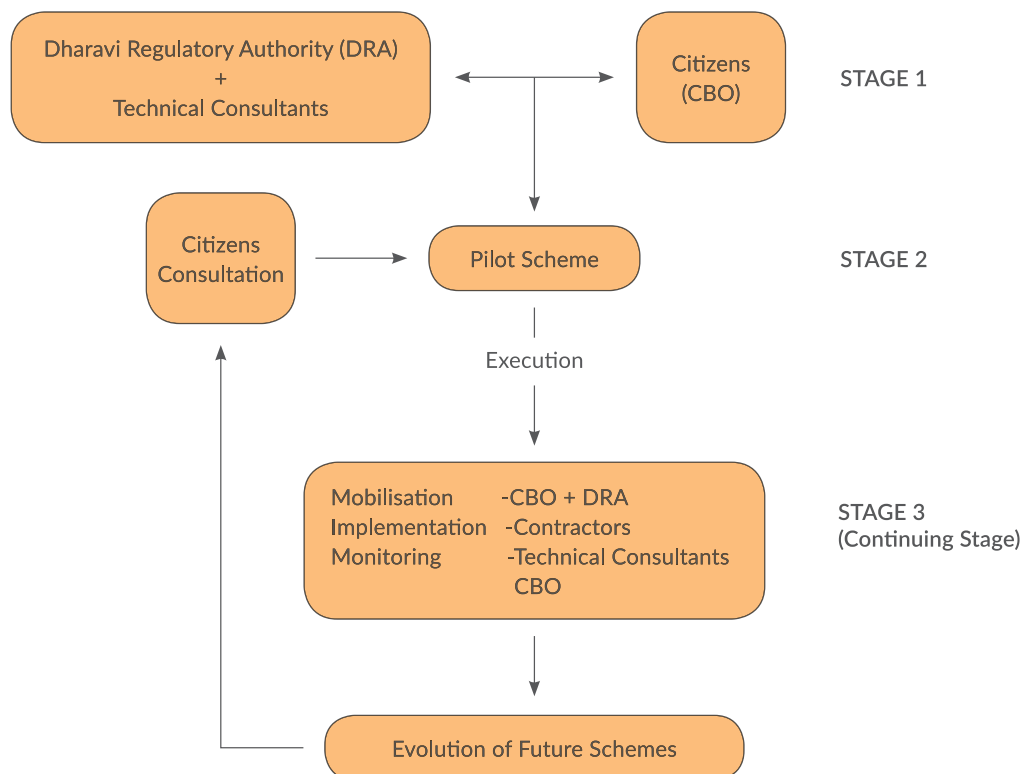
### **Public Space**

The ratio of public open space to private built space is a crucial determinant of sustainable urban form and so the proposal greatly increases the provision of public open space, both at ground level and in the air.

## GOVERNANCE

The process of implementation is expected to be a partnership between the State and Dharavi residents. This authority will enter into detailed negotiations with residents of a particular neighbourhood, facilitated by technical consultants, to design a pilot scheme together. This scheme will be executed jointly by residents and the regulatory authority, implemented by jointly selected contractors and monitored by chosen technical consultants. The results of the pilot project will be jointly evaluated and lessons learnt will be incorporated in the next neighbourhood project to be undertaken.

The governance strategy proposes the creation of a Dharavi Regulatory Authority composed of a federation of existing co-op societies and other CBOs to partner with the State government, MHADA/MMRDA.



## POLICY

Security of tenure is the basis for a partnership of governance between people and the State. What the community has legitimised has to be given legal form.

The DRA will set out standards and bye-laws.

Plot holders to become shareholders in legally constituted Housing Societies (under the Maharashtra Apartment Ownership Act, 1970). These will have the power to make decisions regarding day to day functioning of the built environment and for collection of revenue from shareholders.

Decisions regarding maintenance and sustenance of the built environment will be negotiated between partners.

## FINANCE

The value of the existing built accommodation is worked out and the projected increase of built accommodation is calculated. From this value the projected development cost is subtracted which shows a revenue generation potential of INR 3,500 cr.

This is a sum which will allow benefits to partners, Dharavi plot holders and the State Government, within a negotiated framework.

\* Assumed cost of capital 12%

\* Assumed growth in rents 5%

Valuation of the project after value additions and development		
<b>Residential Activities</b>		
Total revised residential area	sq ft	71,790,357.00
Valuation of new residential activity		
New monthly rent	INR	10,000.00
For a hutment of Site	sq ft	1,614.50
New yearly rent per sq ft	INR	74.33
Value of property per sq ft	INR	1,114.50
New valuation of the residential area	INR	1,800,000.00
Total valuation of the residential property post development	INR	<b>8,003.88 cr</b>
<b>Commercial Activities</b>		
Total revised commercial area	sq ft	18,566,750.00
Valuation of current commercial activity		
New monthly rent	INR	20,000.00
For a commercial place of size	sq ft	1,614.50
Revised yearly rent per sq ft	INR	148.65
Revised value of commercial property per sq ft	INR	2,229.79
New valuation of a commercial place	INR	3,600,000.00
Total valuation of the commercial property post development	INR	<b>4,140 cr</b>

Total valuation of commercial and residential property **12,143.88 cr**

### Development Costs

Built Accommodation	INR 1,100.0 cr
Services	INR 30.0 cr
Development of New Open Space on Ground	INR 110.0 cr
Construction of <i>Gacchi</i> New Open Space In Air	INR 90.0 cr
Total Costs	INR 1,330.0 cr
Recurring Costs Annually	INR 20 cr (@10%)

### Development Potential

Revenue generation potential is calculated to be INR 3,582 cr.

### Revenue Sharing

The revenue generation potential will be shared between state and plot holders in terms determined through negotiation.

\* Assumed cost of capital

\* Assumed growth in rents

Current valuation / perceived value of the project by current residents		
<b>Residential Activities</b>		
Total current residential area	sq ft	71,790,357.00
Valuation of current residential activity		
Current monthly rent	INR	5,000.00
For a hutment of site	sq ft	1,614.50
Current yearly rent per sq ft	INR	37.16
Value of property per sq ft	INR	557.45
Current valuation of a hutment	INR	900,000.00
Total valuation of the residential property	INR	4001.94 cr
<b>Commercial Activities</b>		
Total current commercial area	sq ft	18,566,750.00
Valuation of current commercial activity		
Current monthly rent	INR	10,000.00
For a commercial place of size	sq ft	1,614.50
Current yearly rent per sq ft	INR	74.33
Value of commercial property per sq ft	INR	1,114.90
Current valuation of a commercial place	INR	1,800,000.00
Total valuation of the commercial property	INR	2,070 cr

Total valuation of commercial and residential property 6,071.94 cr

## PLANNING

For planned redevelopment, the primary emphasis is given to the creation of public open spaces.

A major part of the built will be residential accommodation.

The improvement of public utilities, starting with sewerage and drainage will guide the plan.

Along the main roads there is commercial activity which will not be disturbed but the inner part of housing is proposed to be removed to generate a large open ground which can serve as a maidan for the whole of Dharavi.

A small number of plots will be cleared to generate a public open space network in the master plan and to introduce a 'service core' provision through tower blocks.

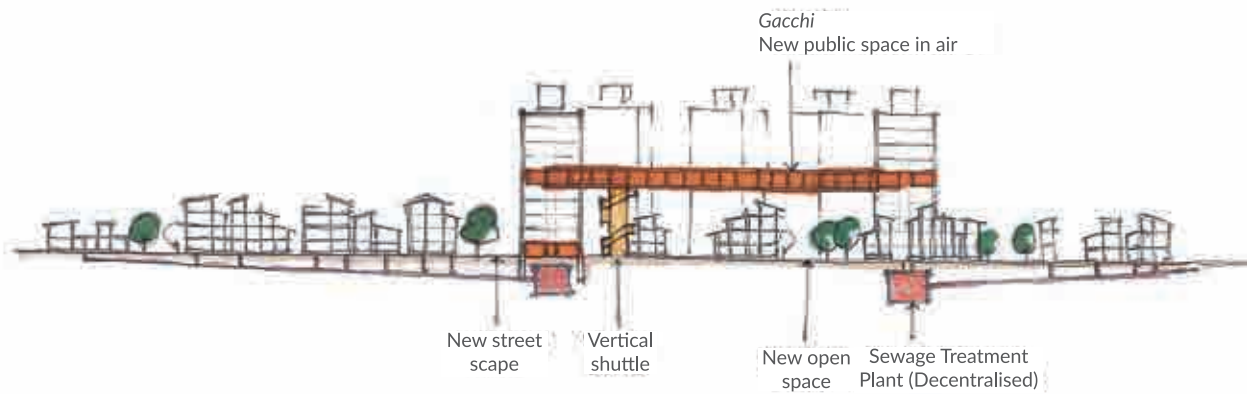
## HOUSING

In keeping with local practice, a maximum development of five floors is envisaged with a small percentage of accommodation of ten floors to facilitate increase of public space and facilities for Dharavi.

The ten storey proposed towers will be built on land released by negotiation with plot holders and as decided in the master plan. Displaced families will be rehoused in these towers. The towers will have in-built utility provisions and be able to provide services to old plots, using the improved open space and pathways network.

The fifth floors of the different towers will be connected by a system of floors bridging the space between towers that will be within a span of 30m. These upper level floors are for public use as open space and lined at the edges with social facilities like small shops, ATMs, clinics, crèches and other such public facilities. Vertical connections from the ground level to the upper level public space will be by a vertical elevator shuttle and emergency stairs, located as per the master plan.

The scale of the redevelopment is designed to be small enough for incremental construction in a phased manner for each neighbourhood or co-operative society to be able to negotiate timing and details of displacement, while livelihoods and enterprise are retained.



Proposed housing



- Built towers
- Gacchi - common terraces
- Open spaces generated
- Common toilets

Proposed master plan



# PHASING



## Generic neighbourhood phasing plans



Existing Built Fabric



Phase 1: Generation of public open space at the ground level

## Sample Cluster: Kumbharwada

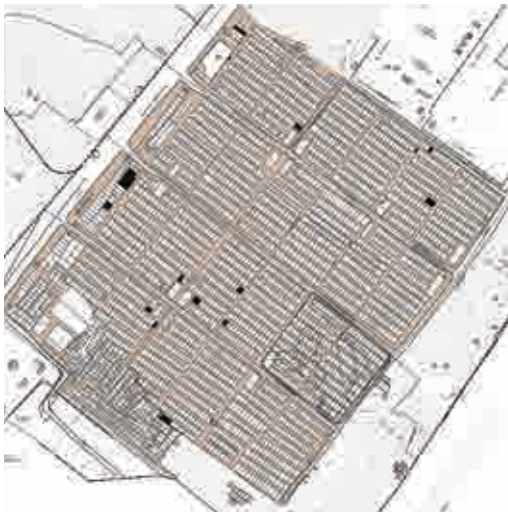


Existing cluster plan



Cleared cluster plan

## Sample Cluster: BMC Area



Existing cluster plan



Cleared cluster plan

## SERVICE INFRASTRUCTURE



Phase 2: Development of public facilities and open space at the upper levels



Proposed drainage plan



Proposed cluster plan



Proposed cluster plan

### Decentralised Sewage Systems

The primary concern is to improve public utilities, starting with sewerage and drainage provision, by using decentralised treatment plants small enough to be managed at the neighbourhood level. Each tower will have a sewage treatment plant, with treated water to be recycled, thus becoming a neighbourhood 'service core.'

### Surface Water Drainage

The topography is analysed to identify low lying areas and flows of storm water. A new open space system will be proposed so that low lying areas become the larger open grounds where rainwater can be harvested and recycled. The drainage pathways will be organised as public open spaces and as pedestrian movement networks. A main drain is proposed to be constructed along the road on the edge of Mahim Creek, with outflow channels through the mangrove park.