Developing Dharavi!

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The proposal explores conditions beneficial to both residents and the government. It proposes a Dharavi Development Board comprising of a people’s council, government council and a People’s participatory board comprising a social development council and urban development council. 10% of land is handed over to the government for sale. Dismantleable transit camps are proposed in existing open spaces. Proposes a hierarchy of roads. The jury found the proposal unconvincing as it left the residents with the same size of housing as current with only infrastructure improved and retained existing eligibility criteria to identify residents.
PREMISE

Dharavi today stands as a community considered both illegal as well as industrious. 80% of Dharavi’s residents work within it, in small scale or home-based industries. The city of Mumbai wishes to hold on to Dharavi, a settlement that contributes around INR 3,000 cr to its GDP.

Workers have migrated from different parts of the country to live and work in Dharavi. These communities have built almost 85 nagars in Dharavi structured either by occupation, region, language, caste or religion. The working conditions however are often hazardous and neglectful of the health and safety of its workers.

The housing in Dharavi has evolved over time, spontaneously yet systematically, organic yet ad hoc, adjusting to space constraints. The system of housing functions in a way that the housing unit is seen as part of a larger community. Dharavi’s built and unbuilt character is due to the ability to communicate across houses on the street, the small home-based industries and the street being a life line to social living. However, there is a lack of adequate infrastructure that deprive residents of better living conditions.

Seen as a resident, Dharavi is home that they’ve occupied and built over several years. Yet they feel neglected by the Government and consider themselves to be the unwanted citizens of the nation.

Several projects have been initiated to redevelop Dharavi, and most have been flawed in their outlook. Some consider the process an opportunity to dig into the gold mine. Dharavi is seen as the land of opportunity, with land values close to INR 35,000 per sq ft. Some consider it an opportunity to foster personal gain. Some consider it an opportunity to provide only for the community, thereby working towards no profit.

This proposal is based on the premise that a participatory process shared by Government and residents is most befitting in recreating the hybrid nature of Dharavi, regulating a development process and allowing people to build their own community.

GUIDING PRINCIPLES

- Work towards minimal gain with minimal loss. The proposal aims at exploring conditions that could be beneficial and befitting to both parties.

- Shape, strengthen and structure before redevelopment.

- Retain Dharavi’s identity of nagars, and work from the level of the nagars and build Dharavi as a whole.

- Retain the “jugaad” nature, particularly related to housing, that makes Dharavi, Dharavi.

- Set up a governance structure that is inclusive so that processes are shared by Government and residents.

- See transit camps as the building blocks for development.

- Improve industrial spaces and infrastructure.
GOVERNANCE

A Dharavi Development Board is set up backed by State Government funding.

Stage 1: Social Development Council informs people about the development process.

Stage 2: Nomination of people’s council members and people’s representatives from each sector.

Stage 3: As the construction process starts, the Social Development Council, works with the Urban Development Council to provide solutions.

Stage 4: People’s Representatives then allocate houses for the residents who have submitted necessary documents for eligibility.

Dharavi Development Board

Public Participatory Board  
Government Council  
People’s Council

The PPB acts works towards an inclusive participatory development process. It involves the residents as its key participants.

The GC represents the Government, and works towards making final decisions and reports to the higher State Government.

The PC represents the residents of Dharavi, and works towards making final decisions and reports to the Government council.

# Social Development Council  
# Urban Development Council

Headed by the director of the PPB, this body has 6 SDC members, and 3 UDC members.

12 Council Members  
1 per sector

Each GC member is assigned a specific sector. They coordinate with PC member of the sector and report to the State.

A PC member is chosen from each sector by the residents of the same sector.

Government Representatives  
6 for 12 sectors

Government Representatives  
6 for 12 sectors

People Representatives  
1 per neighbourhood

The SDC and UDC members work towards complete public participation. They are assisted by students from colleges for the UDC.

6 Government representatives work under the GC members collectively. The GR’s are not assigned to specific sectors but facilitate the work are each sector coordinating with the people representatives.

Every sector has one people’s representative for every existing neighbourhood. The PR’s work towards facilitating the development, by making inventories, assigning housing plots, and so on.
FINANCE

Housing Cost: Government

<table>
<thead>
<tr>
<th>Housing Unit (sq m)</th>
<th>Cost per Unit (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1.62 lakh</td>
</tr>
<tr>
<td>8</td>
<td>1.98 lakh</td>
</tr>
<tr>
<td>14</td>
<td>3.63 lakh</td>
</tr>
<tr>
<td>22</td>
<td>4.99 lakh</td>
</tr>
<tr>
<td>28</td>
<td>6.19 lakh</td>
</tr>
<tr>
<td>34</td>
<td>7.69 lakh</td>
</tr>
</tbody>
</table>

The Government undertakes the cost for the construction of foundation, structural columns, structural beams and floor slabs.

Housing Cost: People

<table>
<thead>
<tr>
<th>Housing Unit (sq m)</th>
<th>Cost per Unit (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2.18 lakh</td>
</tr>
<tr>
<td>8</td>
<td>2.66 lakh</td>
</tr>
<tr>
<td>14</td>
<td>3.70 lakh</td>
</tr>
<tr>
<td>22</td>
<td>4.48 lakh</td>
</tr>
<tr>
<td>28</td>
<td>4.87 lakh</td>
</tr>
<tr>
<td>34</td>
<td>5.62 lakh</td>
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</tbody>
</table>

The people undertake the cost for the construction of masonry, plastering, flooring, doors and windows, wall paint. The cost above is taken as an average rent, residents however may build their housing units as per individual requirements.

Total Project Cost

<table>
<thead>
<tr>
<th>Proposed area for development</th>
<th>345.63 acres</th>
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</thead>
<tbody>
<tr>
<td>Proposed Government area (15%)</td>
<td>51.84 acres</td>
</tr>
<tr>
<td>Remaining area for development</td>
<td>293.79 acres</td>
</tr>
<tr>
<td>Road area (45%)</td>
<td>132.2 acres</td>
</tr>
<tr>
<td>Built up area (Ground)</td>
<td>161.58 acres</td>
</tr>
</tbody>
</table>

**Total built up area** 484.75 acres
**Cost per sq m** 8,197 INR

**Total construction cost for Government** 633.41 INR cr
**Total cost for Road** 150.41 INR cr
**Cost for services 10% (electrical, sanitation)** 339 INR cr

**Total cost for housing development** 2,122.8 INR cr
**Cost for 1 Transit Camp** 2.83 INR cr

**Total cost for 48 Transit Camps** 135.84 INR cr

**Total project cost** 2258.66 INR cr
(Excludes peoples construction cost of INR 1,604 cr)

**Total income from saleable component** 4,237 INR cr
**Total profit to Government** 1,979 INR cr

Out of 557 acres, the land available for development is 345.63 acres (including roads, but excluding green spaces, and existing built area - SRA/private). Considering the 15% release of land from each neighbourhood as proposed, 85.1 ha of land is made available to the Government.

Out of this 15% land available, the Government is allowed a sale component of 10% (34.56 acres) and the remaining 5% of land is for community uses that include public health centres, parks, playgrounds and gardens, community halls, dhobi ghats, localised areas for markets and the like.

Key areas are identified within the fabric of Dharavi to locate sale component buildings. These areas have been chosen because the built fabric consists mainly of SRA or privately developed structures that are around G+7 or G+8.
PLANNING

Restructuring Roads
Roads are used as the structuring mechanism: Primary and secondary roads divide Dharavi into 12 sectors; tertiary roads divide sectors into neighbourhoods (based on existing land parcels); streets and lanes further divide these into clusters or nagars of 1,200-1,500 families. By structuring roads in this manner, clear transport networks are achieved with some being vehicular and some being pedestrian.

Transit Camps
Stage I- Transit camps will be built in the existing open spaces.
Stage II- The development process yields open spaces in every neighbourhood up to 15% in which transit camps can be accommodated.

Locations for the transit camps are within a 500m radius of current housing locations. The camps are proposed to be temporary structures.

CROWDING ANALYSIS

Existing Crowding
Area of neighbourhood: 21,672 Sq.M
Area of roads: 7,847 Sq.M (36.2%)
Number of housing: 954 (477/Floor)
Number of commercial: 345
(230 at Ground, 115 at First)
Total number of units: 1,299
Existing Indoor Crowding: 3,391 people/ha
Existing Street Crowding: 16,188 people/ha
Existing FSI: 1.2

Proposed Crowding
Area of neighbourhood: 21,672 Sq.M
Area of roads: 9,878 Sq.M (45%)
Number of housing/commercial units: 443 units/
floor
Total number of units: 1,329
Proposed Indoor Crowding: 3,216 people/ha
Proposed Street Crowding: 14,830 people/ha
Existing FSI: 1.8

The proposed crowding is lesser than the existing only marginally. This is because the proposal aims at housing all current residents of Dharavi.
HOUSING

Housing process begins with identification of existing housing area units. In this neighbourhood sample, out of 477 units, 10-16 sq m units and 16-24 sq m units are predominant.

Proposed housing thus makes five categories of housing ranging from 6 to 34 sq m units. Of these only 6-8 sq m units have common toilets, while the rest of the units have individual toilets.
Existing neighbourhood sample is taken. Currently road widths vary between as low as 0.6m to 3m.

Existing block shapes and geometries are taken into consideration and the land is parcelling accordingly.

Land parcels are further regulated. The context plan in the sector is overlaid to oversee the connections into other neighbourhoods and sectors.

The route for the main street is identified and it is made sure that the neighbourhood is linked to the surroundings through two or three main points.

Land parcelling should also keep in mind type of physicality (linear, cluster, or mixed) and the type of function (residential, commercial-residential, manufacturing residential).

Land parcels are then shrank in-order to accommodate wider roads. Streets are 4.5m wide and lanes are 2.5m wide.

The development scheme adopted provisions that 15% of land to be given to the Government. The process next identifies the correct land parcel for this purpose.

The land parcel then accommodates existing religious/public structures. It also makes provisions for future provision of open space, amenities and infrastructure.
PHASING

Phase 0
A period of one year is taken to complete an inventory of the 12 sectors and list residents eligible for development as per the 1995 cut-off date.

Phase 1
7 Months  Construction time for 24
18 Months  Transit Camps Relocating to transit camps (1.5 months); Constructing serviced layouts (7 months); Constructing individual tenements by people (8 months); Relocating to residence (1.5 month)
18 Months  Repetition of Process after the relocation of first set of 5,616 families.

Phase 2
18 Months  Relocation of 5,616 families
18 Months  Relocation of 5,616 families
11,232 families
7 Months  Additional 24 camps
18 Months  Relocation of 5,616 families
18 Months  Relocation of 5,616 families
22,464 families

Phase 3
18 Months  Relocation of 11,232 families
18 Months  Relocation of 11,232 families
18 Months  Relocation of 11,232 families
33,696 families

Project Phasing
12 Years  ~ 70,000 families
**POLICY**

Eligible residents receive first choice in selecting houses, followed by a lottery system for others. It is proposed that any requirement of changing allocated house be exchanged with other residents and notified in a maximum period of 15 days from the date of allotment.

The Government is allowed to sell saleable land only for small scale industries or commercial uses that restrict building heights to G+2 floors (10m height). This restriction prevents the increase in the density of Dharavi.

**TRANSPORT**

The proposal brings in hierarchy in the road networks, providing for all facilities that are currently lacking such as water supply, sewer and electrical lines. All roads are designed to accommodate underground utilities under the footpath. The proposal eliminates the concept alleys with minimum width of lanes around houses being 2.5 m.

Roads are classified into:

- **Primary (external connectivity)** include Sion Dharavi Link Road and Lal Bahadur Shastri Marg
  - 6 Lanes
  - Parking provision along one edge

- **Secondary (internal)** include 60 Feet Road and 90 Feet Road
  - 4 Lanes
  - Parking provision along two edges
  - Push cart and cycle lanes along both edges

- **Tertiary (Neighbourhood)** include the Dharavi Cross Road, Valmiki Road and similar
  - 3 Lanes
  - 2 Push cart lanes
  - Parking optional

- **Streets and lanes (Cluster)**
  - Shared spaces with pedestrian priority over cars

**INDUSTRY**

The proposal aims at improving connectivity and road network and safety standards. Similar industrial units are combined into a single industrial unit. The parties share equal percentages of profit. Apart from annual revenue, the combined industrial unit also pays a nominal fee to the Government for improvement and maintenance.