

A 21st Century Factory to Live and Work

07

SHORTLISTED

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The team bases their ideas on the premise that this is a social housing project and not a real estate one. It proposes four different housing typologies for different areas in Dharavi and an integration of social amenities, without densifying Dharavi. Residents are expected to finance their own construction with external funds for infrastructure alone. MHADA and the DRP is expected to work with communities directly with no involvement of the developer. The jury found the master plan and housing ideas well defined and worked out however aspects of governance, livelihood sustenance during redevelopment and other key aspects were missing.





PREMISE

“Why can’t Mumbai be the next Shanghai?” was a development agenda proposed by one of the recent Governments of Maharashtra. Rather than reaching out to concerned stakeholders in understanding issues specific to the city of Mumbai, authorities are continuously lured into the superficial imagery of other cities.

Transformations effected through such skewed visions, followed up by weak policy decisions, have only been exploited by developers, resulting in mass commercialisation clubbed with unsustainable densities in large scale urban projects. Such a trend has adversely affected the housing delivery mechanism of authorities, which now favour the developer in selling urban visions in the guise of making profits, with hardly any concern to user needs or to the overall benefit of the city.

The ongoing redevelopment of the Parel Mills as well the Slum Rehabilitation Scheme seems to present an ideal example of this recent trend that seems to have engulfed the housing delivery mechanism of Mumbai.

In view of the above contextual frame, Dharavi seems to be yet another large urban parcel that has fallen prey to this recent trend of redevelopment. However, the initial plans prepared by Mukesh Mehta, evidently pro-developer, were successfully rejected by the local community and NGOs.

The future of Dharavi lies in its ability to offer a better neighbourhood to the communities within it and a new public domain to the city of Mumbai. Yet, this is still locked up in negotiations with local authorities.

Along with its informal, highly networked means of production, Dharavi not only caters to the immediate demands of the city, but has also successfully established a global market for its indigenous goods. It is precisely this unique quality of entrepreneurship that sets it aside from other informal settlements within the city of Mumbai.

So how can a plan capture this form of industrial urbanism? What kind of housing typologies could be deployed, wherein a reasonable amount of privacy and workplace could coexist?

GUIDING PRINCIPLES

- It must be recognised that all slum housing is “social housing” and that the DRP is a representative project of the woes of all existing slums of Mumbai city.
- The Government should consider this DRP proposal at par with any other Infrastructure projects such as roads, rails, health, education, water, power, etc. where the cost of land is notional and belongs to the Government itself.
- The DRP should be de-linked with all private developers - it is not a speculative real estate project, pretending to provide free housing to existing slum dwellers.

GOVERNANCE

The above contextual frame would call for a direct involvement of governing authorities i.e. Dharavi Redevelopment Authority as well as MHADA in engaging with the community to facilitate as well as provide the necessary housing stock as part of the Dharavi Redevelopment Plan.

The intention is to eliminate the role of the developer. Barring certain components of commercial space (which would also be developed by the Dharavi Redevelopment Authority), there shall be no provision of housing stock put up for sale in the real estate market.

FINANCE

The Government should consider this DRP proposal at par with other infrastructure projects such as roads, railways, health, education, water, power, etc. where the cost of land is notional and belongs to Government itself.

The finance model of DRP is conceived on self-contribution by existing occupants towards construction/development costs of the project - thus the existing occupants will have a stake in economic growth along with a sense of social inclusion.

Cost of Construction for 50 dwelling units (28.7 sq m each)		
1	Transit cost of existing residents - rentals (50 x INR 10,000 x 30 months)	15,000,000
2	Site development and Infrastructure (2,000 sq m x INR 1,000/ sq m)	2,000,000
3	Building construction cost (2,000 sq m x INR 14,000 sq m)	28,000,000
4	Establishment and finance cost (2,000 sq m x INR 1,200/ sq m)	2,400,000
	Sub-total	47,400,000
	Contingencies	2,600,000
	Total Construction cost Rate: INR 25,000/sq m or INR 10,00,000 per dwelling unit	50,000,000

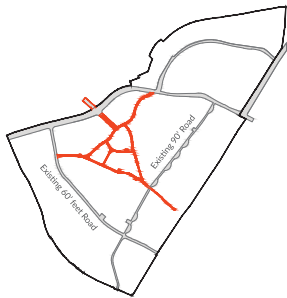
Recovering Costs		
1	Initial contribution by each resident per unit (50 units x INR 2,50,000)	12,500,000
2	Site development and infrastructure (2,000 sq m x INR 1000/ sq m)	37,500,000
	Total	50,000,000
	Plus: Maintenance corpus by resident (50 units x INR 25,000 each)	1,250,000

PLANNING

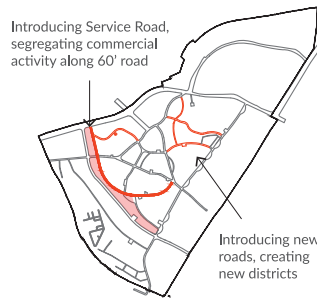
The proposed master plan considers the current population of Dharavi i.e. 3,50,000 people over five sectors as the absolute density target to be achieved. Additional density to the already congested Dharavi would be unsustainable.

The plan retains existing SRA schemes, religious structures, institutional buildings and works within the existing road network.

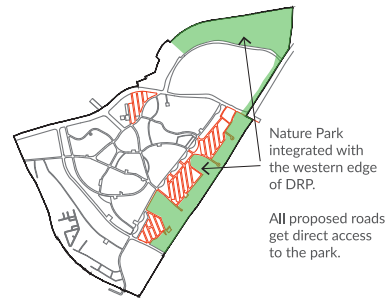
Nagar demarcations are notional boundaries, whereas religious structures play a key role and are sought to be strengthened as public spaces in the new districts.



Retain existing main roads and consolidate traces of existing roads



Segregation of commercial areas along 60 Feet Road



Realigning roads along a north-south axis



Proposed master plan

Proposed road network and buildings

Built up Area of existing SRA schemes: 7,20,000 sq m

Total Density in Dharavi: 3,50,000 people

Density in proposed Master Plan:

3,50,000-65000 = 2,85,000 people

Type A

Offers limited frontage but linear clustering channelises people and goods along the interior of districts.

Type B

1. Realigns the edge of Kumbharwada along the 90 Feet Road to address the traffic caused by the spill over of goods. This road becomes one of the major connectors within the DRP, complete with parking bays, drop off points, pathways etc.
2. Opens the interiors of Kumbharwada through a network of 9m wide streets.



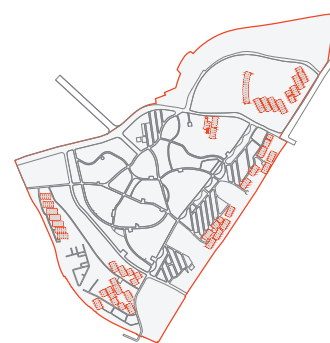
Type A



Type B



Type C



Type D

Type C

The G+4 type C walk-up apartments are adopted in Sector 2. They segregate access for ground and upper level units, making a clear distinction between internal community spine and market street. Type C is also used to negotiate the edge along Koliwada with an intent to influence the Kolis to maintain a low-rise built type within their area.

Type D

This proposed typology negotiates the railway edge.

The master plan proposes four housing typologies located in specific districts each with their own local planning implications.

HOUSING



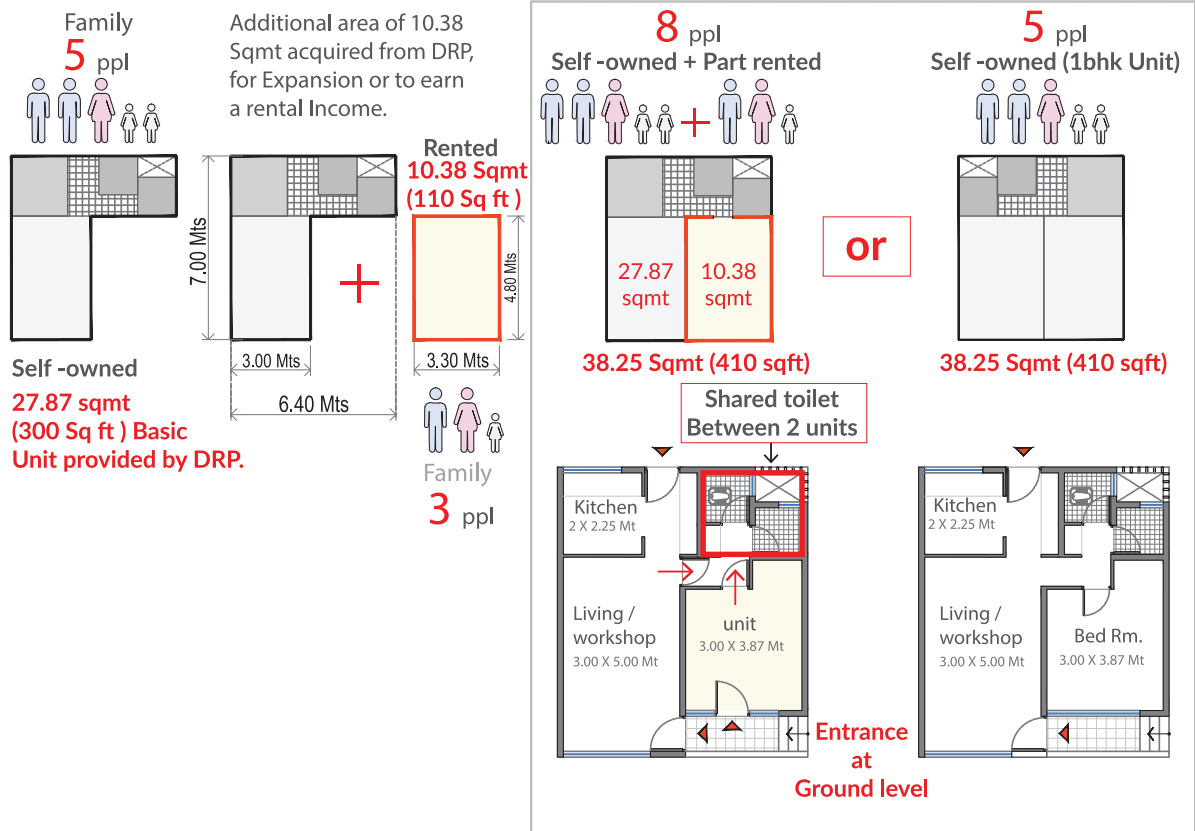
Final Phase 2030
Location plan of housing typologies

PHASING



Type A	146 Blocks of G + 7 Storey	1,32,000 sq m Ground coverage	1,208,000 sq m Total built up area	175,000 people Density
Type B	07 Blocks of G + 2 Storey	4,200 sq m Ground coverage	13,900 sq m Total built up area	3,400 people Density
Type C	398 Blocks of G + 4 Storey	26,000 sq m Ground coverage	144,900 sq m Total built up area	24,500 people Density
Type D	40 Blocks of G + 7 Storey	26,000 sq m Ground coverage	480,000 sq m Total built up area	65,000 people Density
Total BUA of A + B+ C and D TYPE			1,854,900 sq m	267,900 people
Commercial	10 (A+ Along 60 Feet Road) 4 (Compound 13)	2,200 sq m Ground coverage	18,000 sq m Total built up area	—
Industrial	25 (Compound 13)	17,000 sq m Ground coverage	36,000 sq m Total built up area	—
SRA structures	720,000 sq m Total built up area			65,000 people Density
Proposed housing / Commercial / Industrial + Existing structures : 2,628,900 sq m (~26.30 lakh sq m)				332,900 people (Density ~3.3)
Total built up area				

1	Total DRP Area	2,403,000 sq m (590 acres)
2	Less: Lands under Nature Park + Power Station + Railways	501,000 sq m (120 acres)
3	Less: Road Network	374,000 sq m
4	Less: Open grounds, kabrastan etc.	60,000 sq m
	Net DRP Area for FSI purpose Total built up areas	1,468,000 sq m 2,630,000 sq m
Global FSI consumption		1.79



Housing Type A: Self Owned and Rental

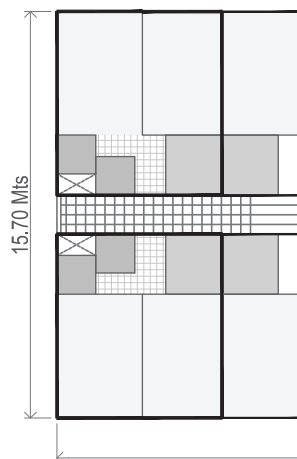
Two primary sources of income for a Dharavi resident are observed as follows :

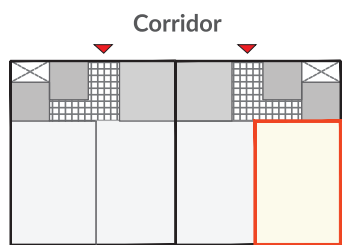
1. Home-based workshops
2. Rental income through incremental expansion of the house

Based on this observation, the following housing types are proposed:

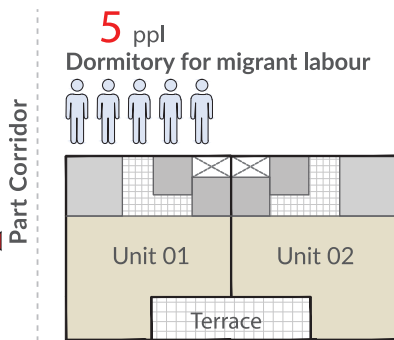
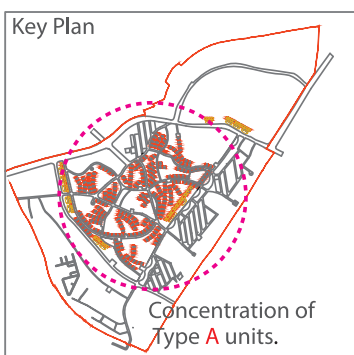
1. Rental for employees of home-based workshop
2. Rented to the same family they had been living with prior to redevelopment
3. Rented as a commercial unit

In most cases the additional area will be acquired from the DRP through a microloan, however the family may wish to hold onto a basic size of 300 sq ft in which case the additional area will be rented by DRP for commercial activity until the family can afford to acquire the same.

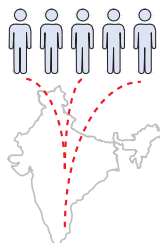




Organising Within a linear Cluster, access through corridor at upper levels.



Addressing existing densities of migrant labour within Dharavi



Dormitories could be integrated within the housing block to house a migrant worker who otherwise falls short to meet the requirements for compensation. Dormitories are owned by DRP, and the individual worker or his employer would pay rent for the same to DRP.

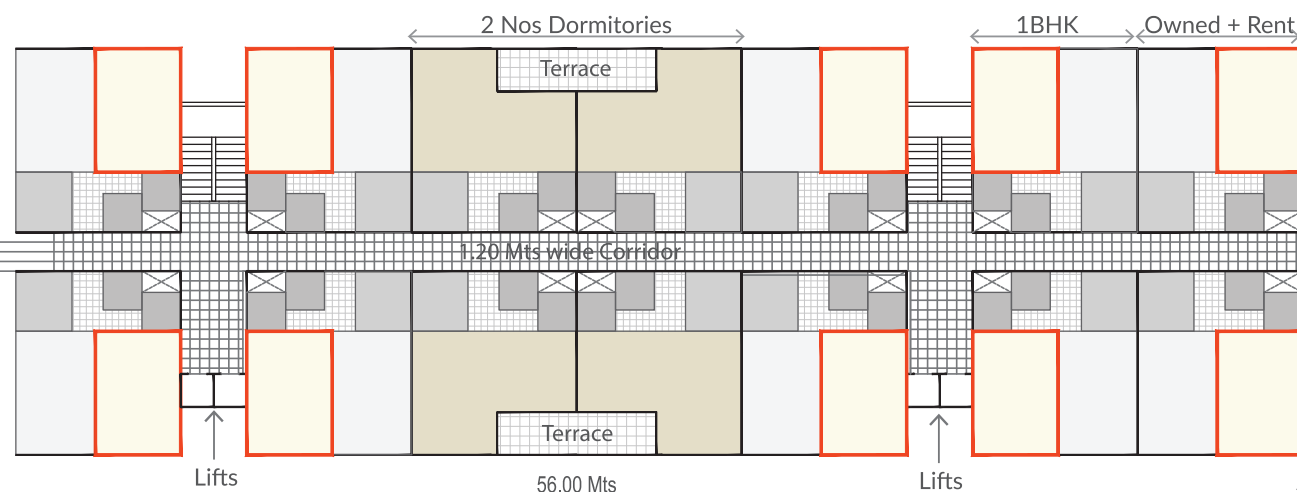
Type 'A'

146 Blocks of G + 7storey

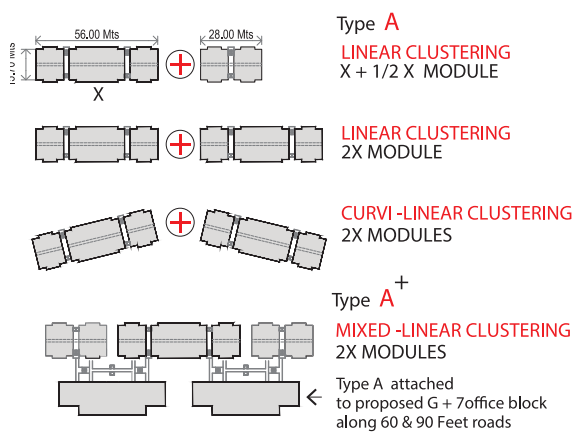
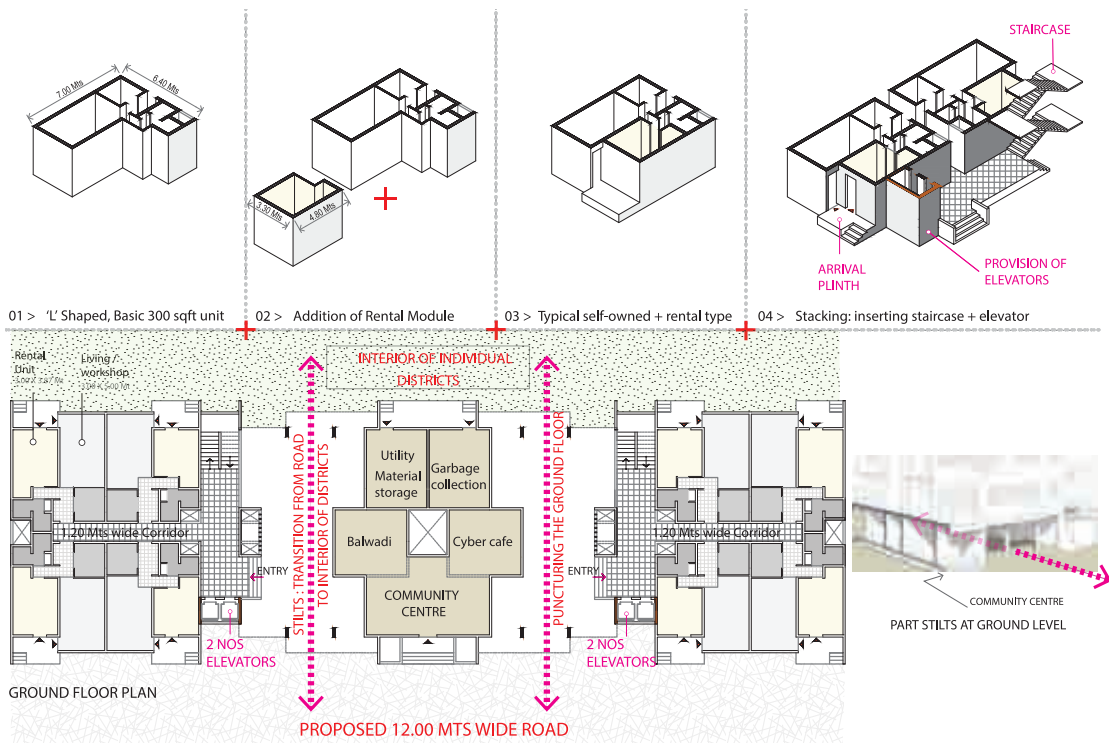
1,32,000 sqm Ground Coverage

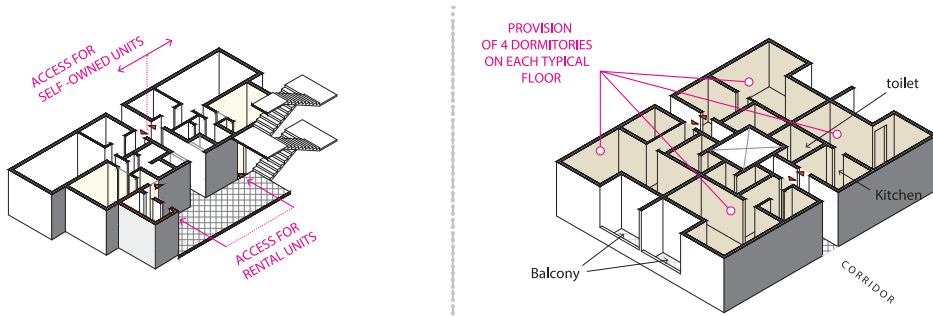
12,08,000 sqm Total Built Up Area

1,75,000 people Density



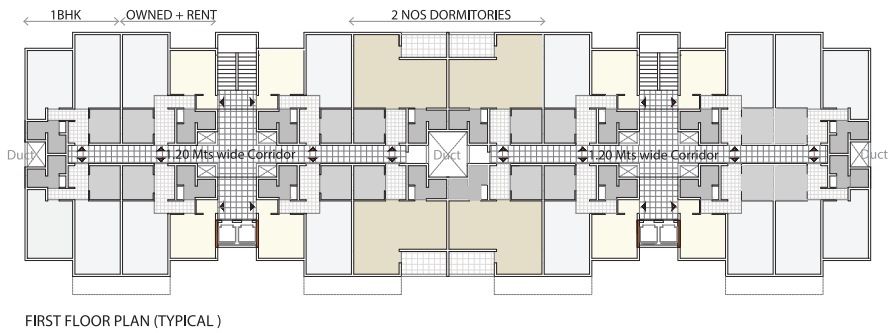
Resultant floor plate through a combination of ownership pattern



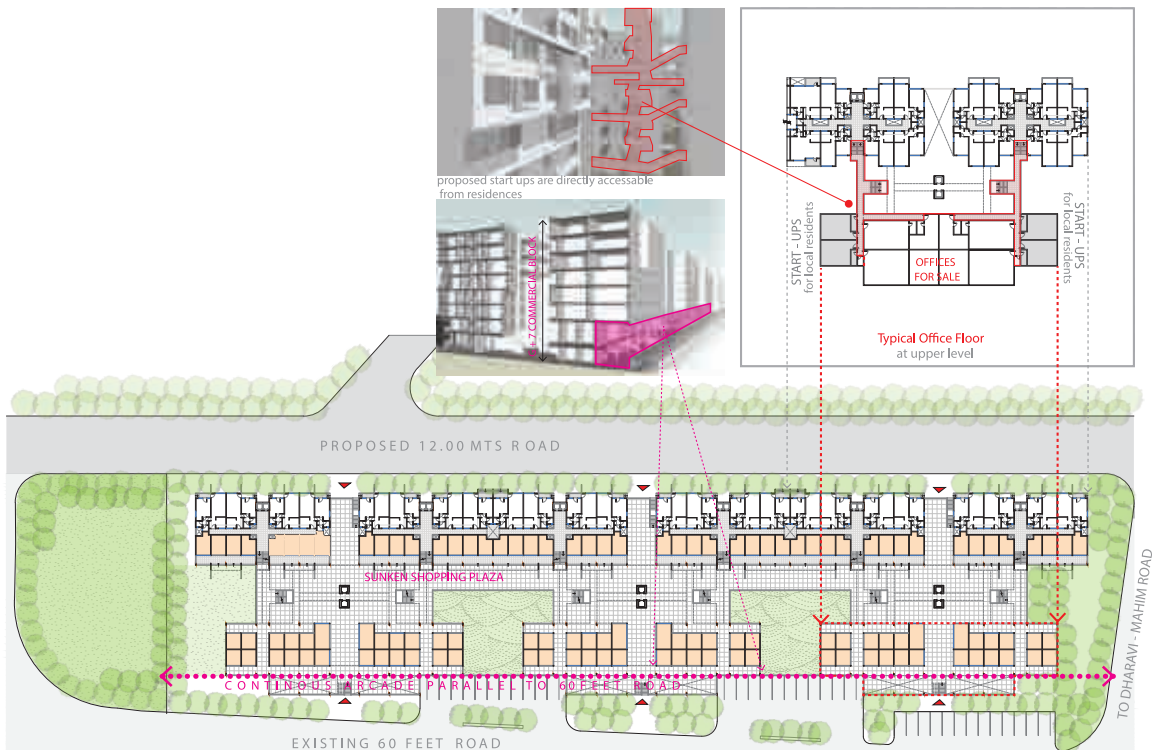


05 > Segregating access for Self-owned and rental units at upper level

06 > Cluster of Dormitories



Type A: Unit Plans and Sections



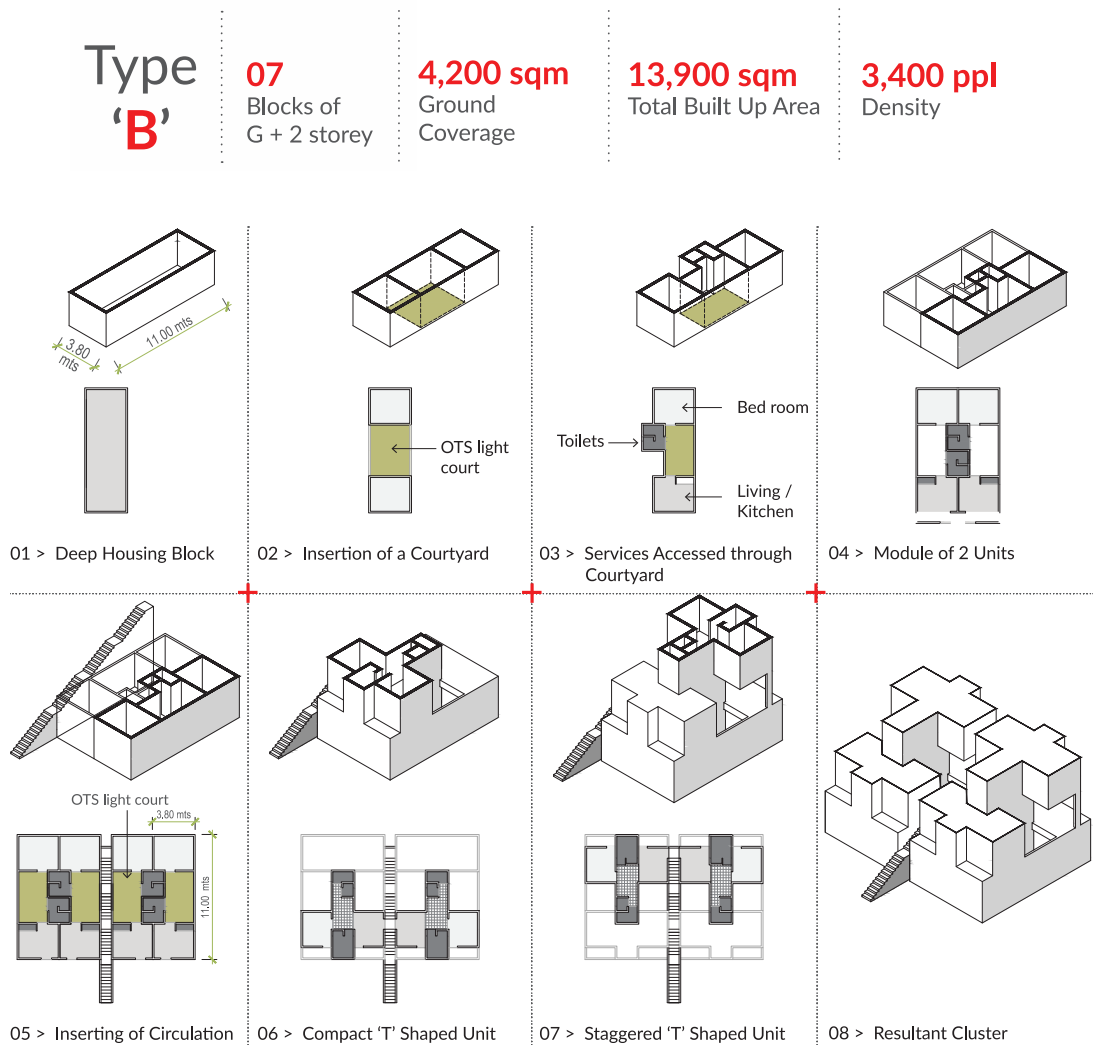
Housing Type B: in Kumbharwada

A distinct variation is observed in the size of footprints occupied by hutments on either sides of 90 Feet Road. Although a majority of the edges defining sector 3 and 4 have been developed under the SRA Scheme, sector 2, within which Kumbharwada is located still remains undeveloped.

One notices deep housing blocks marking the southern edge of Sector 2. With the priority being in maximising the surface area of the house along the road, the housing cluster along

the edges of Kumbharwada act as barriers, offering little or almost no access to the interiors of the nagar.

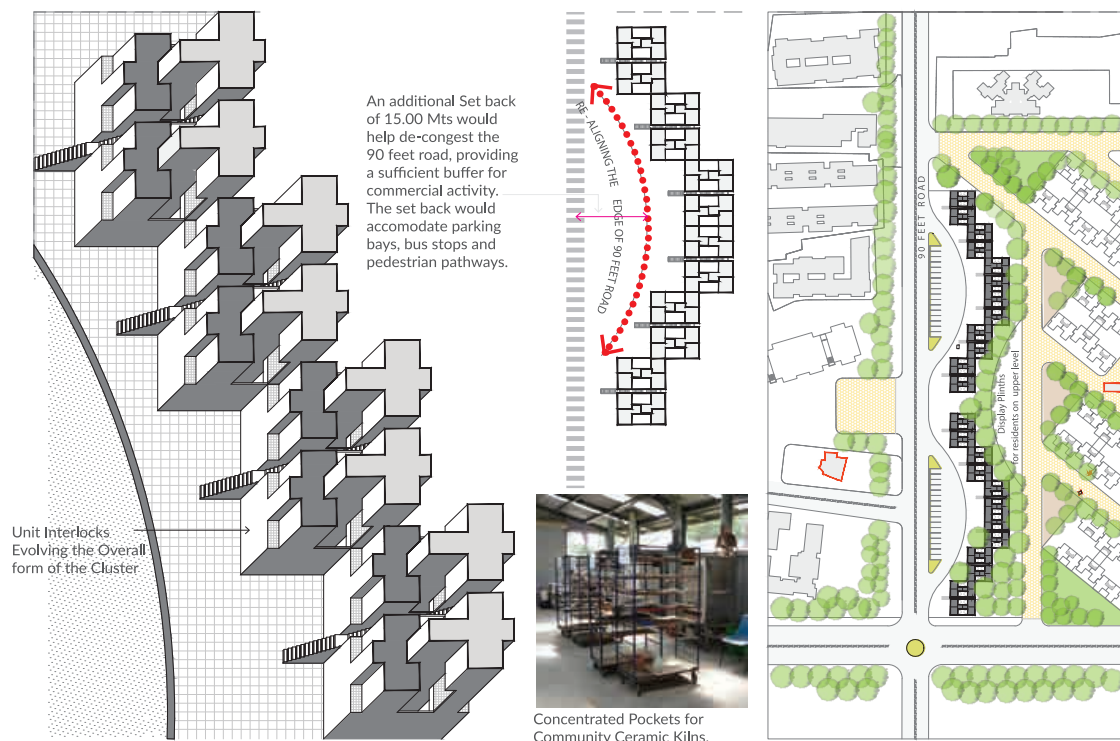
The sheer volume of ceramics that spill out on to the road justify the skewed dimensions of the house; which in most cases has to double up as a residence, a workshop and then subsequently as storage for daily production. A network of alleys intermittently marked by firing kilns offers a distinct character as well as a series of nodes along which the community will interact.



Evolution of housing typology



Type B: Unit Plans and Sections

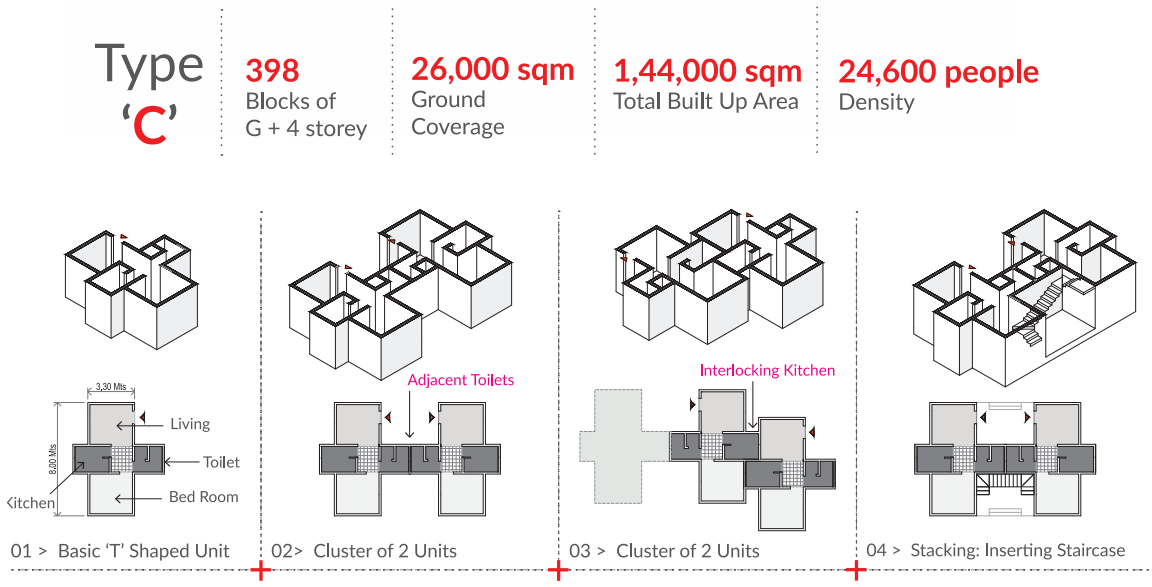


Type B: Cluster plan along 90 Feet Road

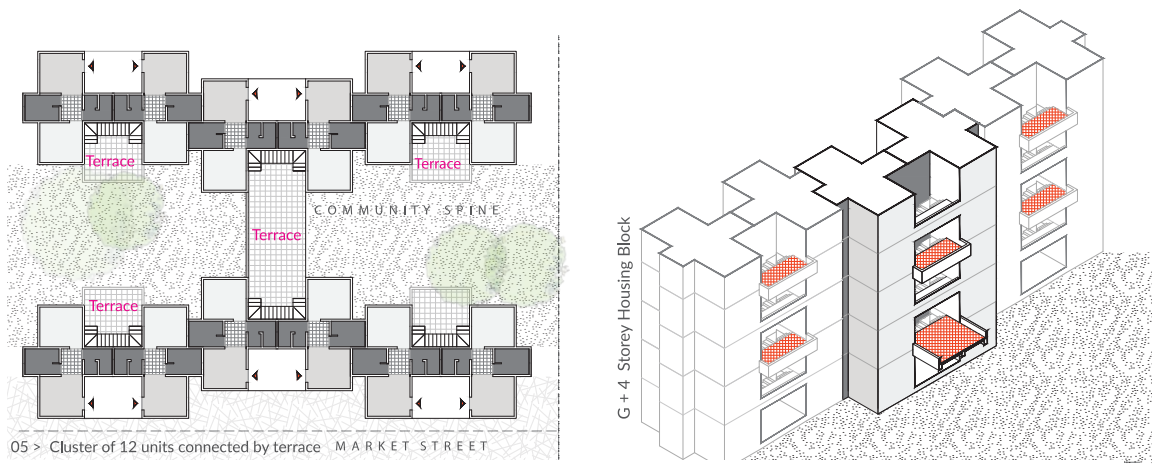
Housing Type C: along 90 Feet Road

Type C has been used to negotiate the edge along the Koliwada, with an intent to influence the Kolis to maintain a low-rise built type within

their own redevelopment. Housing Type C is a derivative of the module evolved along the edge of Kumbharwada. These are G+4 walk up apartments and will be extensively deployed within sector 2.



Evolution of housing typology



Type C: Cluster plans



Type C: Sections

Housing Type D: Along the railway line

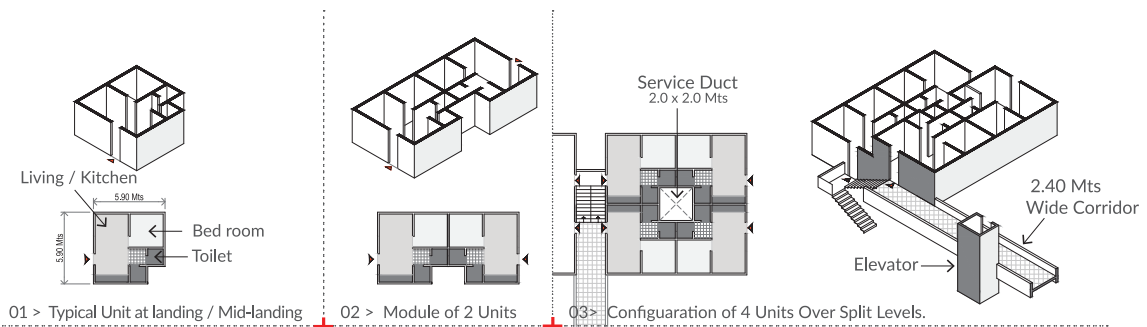
Type
'D'

40
Blocks of
G + 7 storey

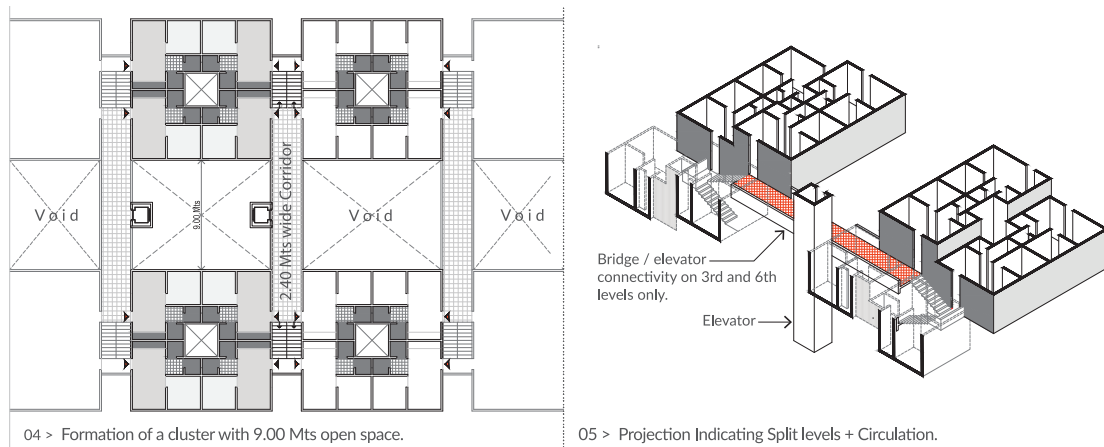
62,000 sqm
Ground
Coverage

4,88,000 sqm
Total Built Up Area

65,000 people
Density



Evolution of housing typology



Type D: Cluster plans



Type D: Sections

SOCIAL AMENITIES

The proposed layout for housing Type A, retains and reinforces all religious structures to be the principal markers of public space within the new districts, creates strategic sites for institutions and amenities and uses the stilt areas of blocks to provide integrated amenities.

In Type B, realigning the new *Kumbharwada* blocks along 90 Feet Road with a 15 ft buffer from the road will create new space for commercial activity, parking bays, bus stops and pedestrian pathways.



Layout for Housing Type A

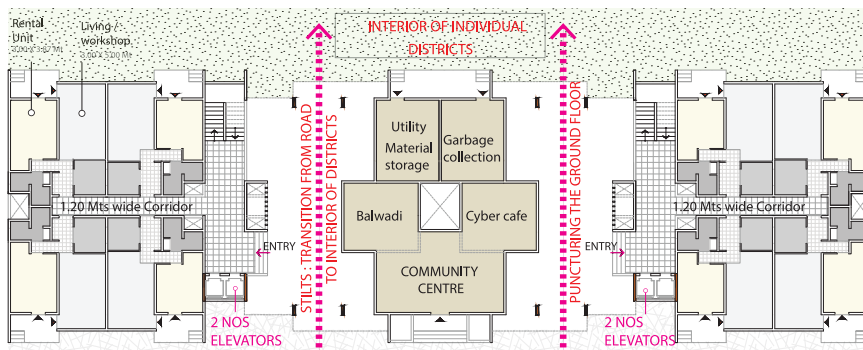
Religious Structures are the 'glue' that bind the community together. Their presence is reinforced through landscaping, allowing them to serve as markers of public space.

"Arrival Site" Strategic plots are reserved within new districts for institutions + amenities, their location offers a strong visual presence.

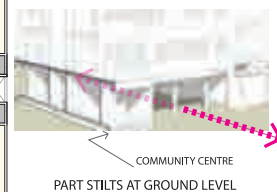
Partial stilts at the ground level of linear blocks provide sufficient porosity within the interior of individual districts. Connectivity is reinforced through a network of pathways, tying individual blocks and their shared



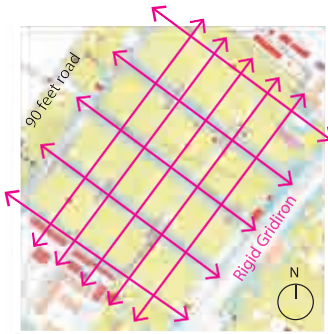
Layout for Housing Type B



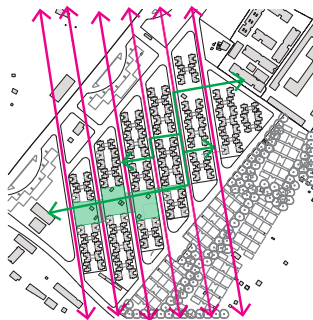
Integrated amenities in stilt area under Housing Type A



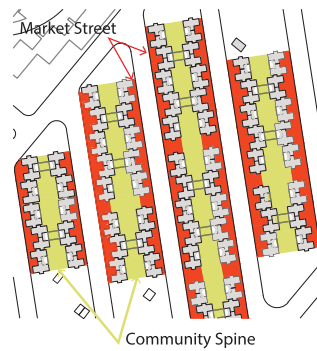
Under Type C, the blocks will be inserted after realigning roads in a north-south direction, using religious structures to help define a public realm, creating a peripheral market street and an internal community spine.



EXISTING
Sampling urban fabric: Sites and services scheme in Sector :2



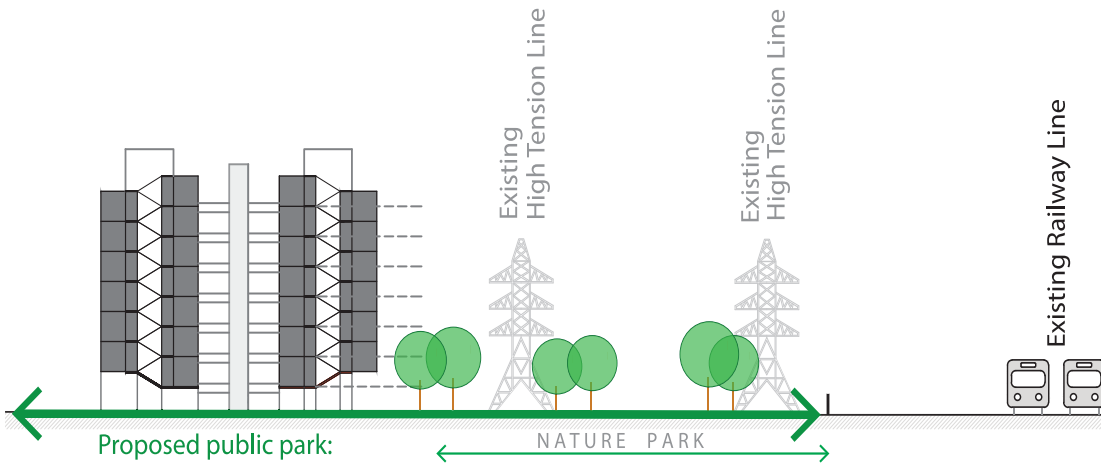
Inserting Type C blocks. Concentration of religious structures connected through landscape, defining a public realm.



Hierarchy of Space: Peripheral Market street and an Internal Community Spine.

Layout for Housing Type C

In Type D, the new housing block opens up the edge along the railway track and creates a nature park integrated under the existing high tension lines.



Layout for Housing Type D