



It is projected that the population in Mumbai would be approximately 13.94 million by 2034, it is only through adequate planning which would ensure a stable living index quotient, writes Architect Dilip Deshmukh.

Development Plan 2034

A journey towards a smart city

The Development Plan (DP) of Mumbai, which was earlier published in 1967 and 1991 respectively, will be revised for the third term in 2016.

While the Development Plan of 1967 was vague and it had only few pages of Development Control (DC) rules, it included a long list of clarifications till 1984. In between, a lot of policy decisions to the tune of 1,500-plus circulars were issued. In

case of confusion on various silent matters under the Development Control Regulation (DCR), clarifications were issued which became the part of the regulation. A lot of new rules came into force and finally the DP and their clarifications were available only to a handful of architects at that time. This resulted in only a few architects being able to practice as per the rules and who were able to make access to

the decision makers in the lobby of corporation and the Urban Development Department (UDD).

Earlier, there have been instances where reservation of one ward was shifted to another. In addition, there have been cases where certain high-ranking official would use their discretionary powers to wave off the rule for financial gains and viability of proposals. This privilege was,

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however, not available to other builders or architects. After the publication of the DP of 1991, almost all the decisions taken by the corporation on the policy documents were compelled to be scrapped in the absence of concurrence of UDD.

Similarly, as per the second DP, which was published in 1991, the concept of Transfer of Development Rights (TDR) was introduced in which an additional floor space index (FSI) of 1.0 was allowed in lieu of the TDR. Ideally, TDR consumption of open spaces requirement criterion should have been designed for an FSI 2.0. In the past 20 years, Municipal Corporation of Greater Mumbai (MCGM) has not recommended amending the open space criterion. A large part of revenue--perhaps, running into crores--in lieu of deficiency in open space was collected from developers as well as consumers.

In addition, as a premium for deficiency in open space, the MCGM was also getting revenue in the form of development charges, stair-case premium, Intimation of Disapproval (IOD) and Debris Deposits Scrutiny Fees, and extra water and sewerage charges, among others. However, the deficiency in open space was charged for all floors and linked with the ready-reckoner rates. This has started adding to overhead expenses for the consumers resulting in the market rates increasing since then. Developers and architects were demanding that deficiency in open space premium should be charged maximum to the area of the plot but it was never done. In the last 20 years, the corporation must have made revenue running into crores from development of open spaces deficiency premium,

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**- Dilip Deshmukh,
Architect**

stair-case premium. Citizens have seen development of minimal reservation and practical improvement of zero-infrastructure compared to revenue amassed.

Due to exorbitant overheads and delays in approvals from the MCGM, the cost of a project started spiraling. In order to compensate the increase in market prices of flats, some builders started encroaching compulsory open spaces by constructing 4-5 feet *chajja* (balcony), flower bed, in such a way that it could be used by enclosing in habitable space. While in one particular case, a lily pond of around 12x12 feet was showcased, in others the refuge floor was designed after every 2-3 floors. Further, parking area was planned next to living room and proposed more than the required parking spaces. Ducts open to the sky were so designed that they could be misused later on after getting the occupancy certificate (OC). Taking cognizance of such situations, the then municipal commissioner Subodh Kumar had introduced the concept of fungible FSI to the tune of 35 percent of the FSI on

January 4, 2012. This decision led to curbing of all such malpractices. He was instrumental in bringing in transparency and introducing a level play-ground in the building proposal corridor.

In this modified DC Regulation proposed by then municipal commissioner, existing buildings were given additional fungible compensatory FSI for free of cost. For sale component, it was as per the ready reckoner rates. Due to this, market rates were enhanced by Rs 2,000 per square feet (sq. ft.) rate on the sale component.

However, in the wake of Adarsh Housing Society scam in 2010, several officers, including bureaucrats were reluctant to take the initiative to grant any concession or revenue relaxation and taking initiative to grant legitimate proactive scope and space to the industry. Lower rank officials would take cognizance of minor details before passing it on to higher authorities. Due to this instance, the reports which were of around 5-6 pages extended to upto 50 pages, thereby making things difficult for the architect fraternity at that time. This was termed to be the worst phase for the architects.

Earlier, India was rated at 142nd position in ease of doing business. However, the new government has undertaken some initiatives that have proved to be beneficial for the building industry. Chief Minister Devendra Fadnavis has undertaken initiatives that are aimed at ease of doing business, including the functioning of Building Proposal department.

It is pertinent to say that the redevelopment projects such as 33/7 were hampered because of the high court order and the compulsory clause of 6 metres open space around a building making

it accessible from the municipal road. This proved to be a planning constraint as small plots--ranging from 300 square metres (sq.m.) to 700 sq.m.--became unbuildable. Moreover, as the height of a building increased, extra areas such as additional staircases, lifts were required to be proposed, including additional floors to consume FSI. Consequently, all the burden was transferred to an end-user and prices shot up beyond the affordability to the sale component. There was a demand from the industry that whatever extra construction is given to the rehab building as a facility, over and above the fungible and incentive FSI some formula should be worked out for compensating additional FSI beyond what is permissible otherwise.

Meanwhile, the government had come up with lot of notifications u/s 154, on various issues of public parking, Slum Rehabilitation Authority (SRA), Dharavi Redevelopment Project (DRP), policy on MHADA, among others.

The draft DP was published for the third time on July 25, 2015. However, the chief minister has sent it back to the corporation since it was observed that there were lot of lacunas and misrepresentations. He has given a time frame of four months for amendments. Now, the MCGM is correcting all shortcomings and

already the extension of time is given on the request of corporation in this regard.

Draft DP 2034: A Preview

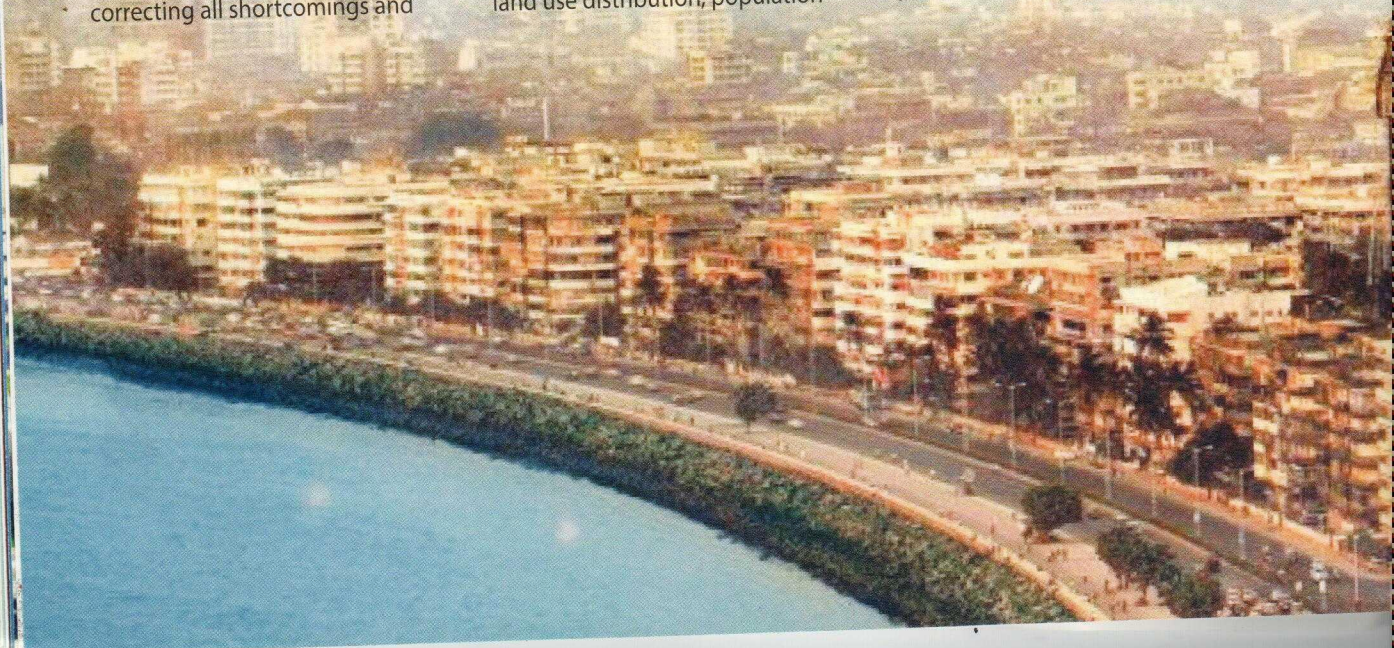
The draft DP 2034 has been divided into 10 parts, which includes administration, procedures of development control, public streets, means of access and layouts, land-use zoning, FSI, development of land for public purposes, building design regulations, design for physically-challenged people, urban safety and environment sustainability. It remains a simplified format and covers all the lacunas of previous DC regulation. Moreover, the corporation has defined the executive summary and the design basis report of DP on various case studies in the past and also derived conclusion on various aspects like population, density, existing land use, among others. In the history of corporation, the municipal corporation has published the existing land use in 2012 which capture the land use till date at the parcel level. Categories and sub-categories of land uses were included in existing land use (ELU) maps and substantial details were enumerated to facilitate the analysis. As per the draft DP, Mumbai has been divided into 150 planning sectorals at local level. A study had been undertaken on assessment of land use distribution, population

and employment distribution, existing FSI consumption patterns, access to social and physical infrastructure at planning sectoral levels. They have also studied challenges facing Greater Mumbai. It has been found that land parcel is limited. The city is characterised by inequitable distribution of space, amenity and infrastructure demand, given its vast population that resides in slums.

Greater Mumbai is stated to be a competitive and an inclusive sustainable city. It needs a paradigm shift in a broad framework of development and redevelopment. About 45, 828.49 hectares' per capita land is available in Mumbai city. While the per capita land developed is 36 percent in the city, it is 21 percent in the suburbs. It is further stated that 65 percent land is developed and only rest 35 percent needs to be developed in future. There is a high demand for residential housing in Greater Mumbai and Mumbai city.

It is projected that the population in Mumbai would be approximately 13.94 million by 2034. While the population of the Island City is estimated to decline by 20 percent in 2034, it shall increase by 80 percent in the suburbs.

The proposed spatial development strategy given in the Draft DP recognizes the emerging structure according to the shape, the land use and FSI policy.



The proposed zoning framework is mixed-land use. Therefore, DP 2034 has proposed mixed-land uses zones in Mumbai. Residential Commercial (RC), Commercial-cum-Residential- (CR), Industrial zone can be converted to RC/CR zones. These zones allow flexibility in future urban transformation. Natural area zones – these zones are proposed with the aim to conserve the ecology like ponds, forests, costal wet lands and others.

Incidentally, the concept of FSI is seen as a total paradigm shift, it is ranging from 2 to 8 based on demand and proximity to the transportation. More the public transport system is available, more FSI is proposed. And all these FSI beyond a certain limit is required to be purchased from the corporation at a particular ready-reckoner rates ranging from 70-100%. And open spaces for high-rise buildings are subject to width of the road and consumption of FSI. Open spaces per capita is 1.24 sq.m, which excludes all natural area that is not as per international standards. Hence, a solution needs to be developed so that open spaces per capita is at least 5 sq.m. as per international standards.

Currently, a vast population resides in slums. Moreover, no eco-system has been developed in the last 60 years. The DP 2034, therefore, needs to find strategies in terms of a holistic approach in the

city's renewal and redevelopment of old dilapidated, tenanted and cooperative societies in the city and suburbs, including but not limited to transportation and other amenities.

However, the DP is silent on international standards and references are not mentioned for all the amenities per capita in the suburbs and cities. There is a challenge to provide improved infrastructure in a stipulated time as well as acquisition of road setbacks and proposing widening to such roads and making available smooth transportation and ease of traffic. Instead of providing widening of existing roads in the DP, a feasibility study is required by local survey departments and Traffic and coordination departments.

It is essential that a priority clause should have been mentioned in the DC Regulation. Whosoever comes back to handing over of the road setback within a year or two will be compensated with an incentive FSI over and above what is stated in the draft DC regulation.

Similarly, if reservation is handed over within a year or two, owners shall be privileged to develop the land with a higher FSI available in the ward.

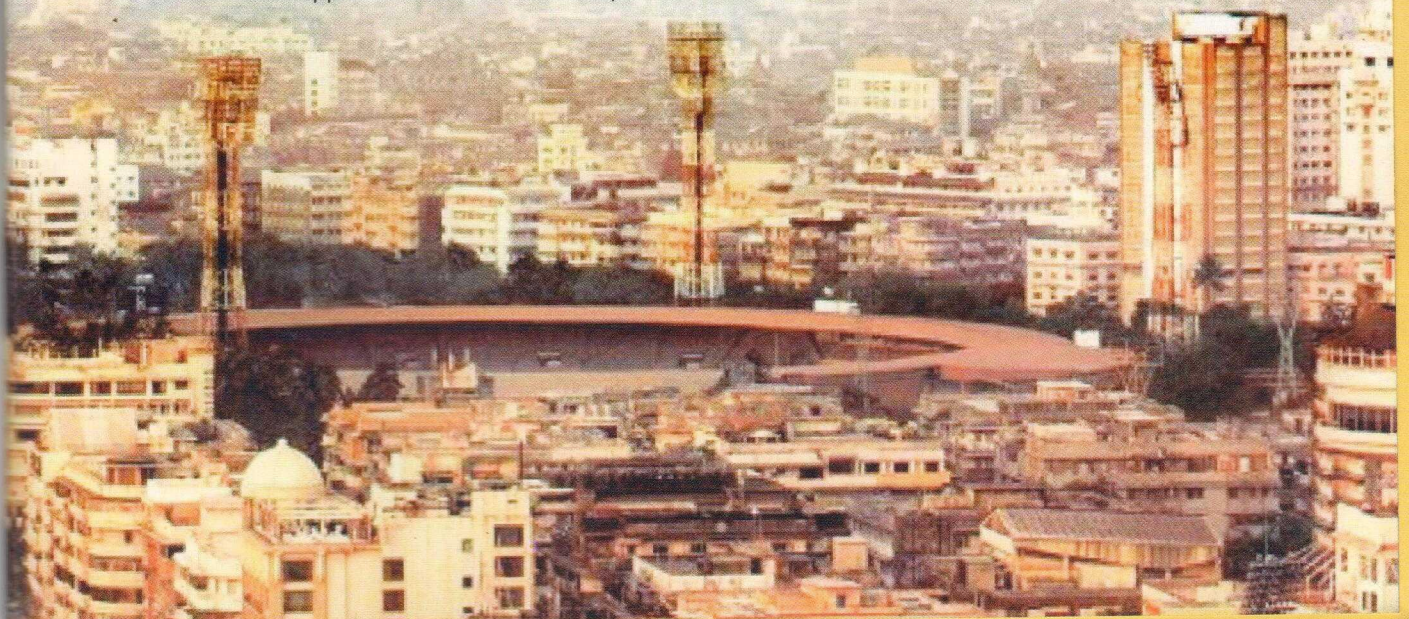
In order to develop Mumbai into a smart city, the corporation must form sectoral plan to make sector smart. The minimum area of a sector shall not be less than 20,000 sq.m. The future of Mumbai

is in developing it into a smart city. Since the city is already developed, sectoral development could be thought about, which could be classified as smart sectors.

Suggestions

In the DP 2034, the corporation has not taken care of public parking space sufficiently, which it states need to be developed at every 1,000 metre stretch on roads more than 18.30 metre wide. I suggest that it should have been regulated to have public parking facility on all reservations. Ideally, all public reservation, amenities open space near the station area can be developed as Palika Bazaar on the lines of New Delhi.

No hawkers should be allowed to sell on the streets. At the same time, reserved grounds shall be allowed as podiums by law to accommodate hawkers and parking. If regulations of the DP 2034 are implemented, then within five years it would've successfully paved the way for good governance. The new DP shall soon be published and tabled in the corporation and it is hoped that it is acceptable to all levels of citizenry. It is only a matter of time that the performance record of the corporation would be revealed. Most importantly, citizens should participate in providing suggestions and raising objections within the stipulated time period stated by the



corporation, thus displaying their solidarity and integrity.

The right step

On January 2, 2016, the chief minister has inaugurated a manual for building approval version 1.1 for ease of doing business. As per this manual, all the building approvals shall be predictable and no extra paper would be required to be submitted. This would certainly provide a much-needed boost to the industry. In a recent workshop for the construction industry, municipal commissioner Ajoy Mehta mentioned that builders should be regarded as stakeholders and the predictable building approval manual is aimed at easing business for the community.

Previously, the entire responsibility with regards to ownership, no-objection certificate (NOC) remarks required for building and proposals were undertaken by the various departments of MCGM. Now, government-approved consultants have been appointed for the task. They can self-certify and get an approval in a stipulated time period of 60 days. Even for zero-ground, the corporation is giving approval in seven days on submission of the proposal which is a landmark decision. Interestingly, even the commencement certificate is being given up to plinth level.

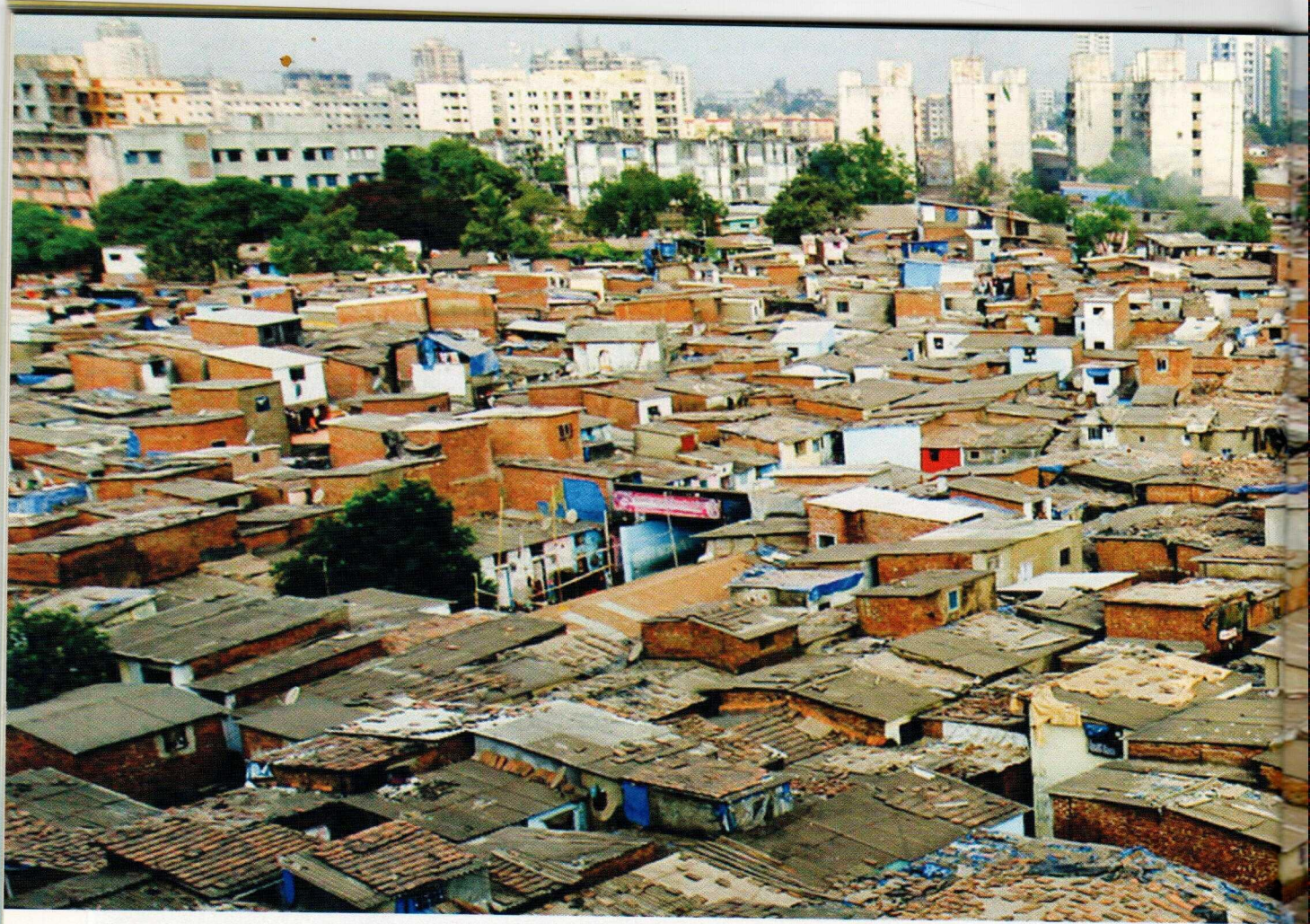
Now DDP 2034 will again be republished and we are hopeful that it will reflect the sentiments of experts. MCGM received 50,000 suggestion and objections, which are hopefully verified, accordingly corrected in the revised DDP 2034. However, it will remain a mystery as to how it will be implemented to achieve affordable housing for less fortunate and homeless families residing in Mumbai.

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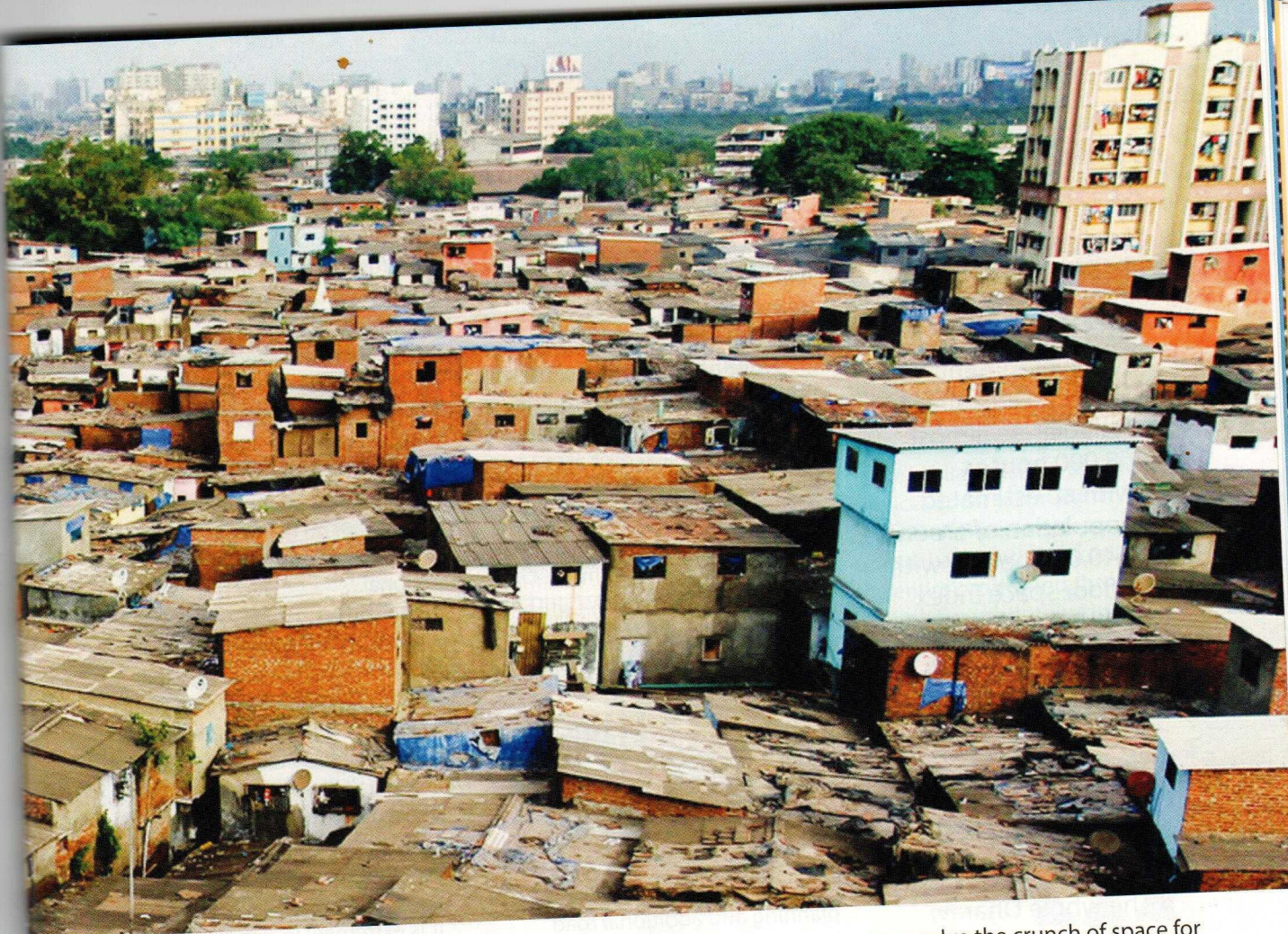
Draft Development Plan 2034: What it lacks

- Priority clause to develop the infrastructures, widening of road setbacks and reservation
- Public parking at every 1,000 metre stretch
- Palika Bazar underneath the R G / PG to facilitate the shops to the hawkers at every ward
- To include development of lands in suburb in urban renewal scheme
- To include all lands in D P where MIDC, MMRDA are SPA or wants
- To allow notional mergers of small parcels of lands to become developable by clubbing the plots without amalgamation
- To give additional incentive to land lords in lieu of plot prize
- SRA / MHADA schemes to generate affordable housing by giving additional FSI
- To allow R G over podium
- To have uniform FSI up to 6.5
- To develop Reservations with compulsory Public parking lot
- To insist double stilts on coastal plots situated within 1,000 metre from CRZ
- To deal with natural saucers like Kurla, Sion, Kalyan and plan to have separate set of regulation for reconstruction of lands
- To allow habitable users in Basement areas where height restrictions are imposed due to airport funnel
- To allow cantilever portions for proposed buildings within compulsory open spaces
- To develop SGNP at par with International Wild life sanctuary
- To develop Airport on Elevation 60.00 Mt from existing level
- To develop banks of Mithi river 50.0 Mt wide as Public open space and it can also be developed for water transportation or water sport activity
- To declare Ballard Estate as Business Zone
- To declare lands of MBPT as Business Hub and some part for affordable Housing



Dharavi Redevelopment Project Better planning for more occupancy need of the hour

Dharavi, which spreads across 240 hectares, has earned the nomenclature of being Asia's most thickly populated and largest slum area in Mumbai. With the recent state government nod for redeveloping Dharavi, renowned architect and Chairman of Mahanagar Vikas Parishad Dilip Deshmukh shares his insight on the topic



The Dharavi Redevelopment Project (DRP) aims to rehabilitate almost 68,000 houses with an estimated population of around 3,40,000 people with 4 floor space index (FSI). Out of this, 13,000 houses will be provided for the less fortunate and deprived citizens of Mumbai who cannot afford houses in the open market. Consequently, these individuals will have an opportunity to buy houses at an affordable price.

The whole Dharavi is divided into five sectors. This sectorial planning for redevelopment of Dharavi has set an example for the future smart sectors in Mumbai and hope to make an extra-ordinary example in the development of Mumbai in

sectors.

The Maharashtra Housing and Area Development Authority (MHADA) is offering 300 sq ft carpet area to the eligible tenants residing in Dharavi. However, it should have been at least 400 sq. ft. ideally, out of which 100 sq. ft. could be offered on subsidized rate, that is, anything between affordable and market rate. Reason being, in the current scenario of those tenants who are staying, there are more than seven persons per tenement against four persons per tenement. So, if this is the case, then the re-development should also be in accordance with this situation. Therefore, the rehabilitation should be done keeping in mind the number of persons per tenement, which

may solve the crunch of space for tenants staying at present.

Though this may not sound easy, it can, however, be tackled through proper planning. The main hurdle could be the height of the building if given 400 sq. ft. carpet area per tenement is offered. However, this can be dealt with proper communication and permissions from the civil aviation department.

Today, the authority has planned for ground-plus 18 floors rehabilitation building in the sector five, which is developed by the MHADA.

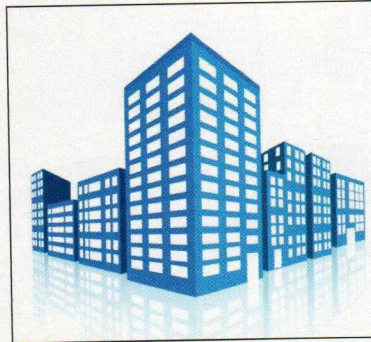
The construction cost of rehab buildings may not be affordable for the builders if the project gets delayed. The project must be completed in distance,

Highlights of Dharavi Redevelopment Project

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- 13,000 houses will be provided for the less fortunate and deprived citizen of Mumbai who cannot afford houses in the open market
- The whole Dharavi is divided in five sectors. This sectorial planning for redevelopment of Dharavi has set an example for the future smart sectors in Mumbai
- MHADA is offering to the tenants 300 sq ft carpet area to the eligible tenants residing in Dharavi
- The DRP is estimated to be completed in a period of seven years from the date of award of the contract for the developer.

time and form formula. Further, it is necessary that the building material is easily available at nearby locations to reduce the cost of construction. It is also important to shift the existing tenants to the transit camps within the set time frame.

While not just tenements, but also the infrastructure needs to be developed as per the standards. To combat the traffic snarl and improve the infrastructure as per the requirement, it is very much important to create traffic



planning and additional road network. However, in order to make the project successful, a two-tier road network and a skywalk for pedestrians may be required to ease commuting woes of pedestrians. It would prove revolutionary development if MHADA has taken care of all these steps.

Similarly, the commercial establishments shall also be planned in such a way that either they are accommodated at the ground floor of the building or within the radius of 0.5 kilometres. All the rehabilitation buildings in sectors shall be connected to each other by way of bridges or passages or skywalks, so that fast evacuation can be possible in case of any emergency. All the buildings shall be constructed for at least

30 storeys and special sanction from the civil aviation authority should be taken. If everything goes according to the plan in the future (in the next five years), then the Mumbai airport is proposed to be shifted to Navi Mumbai International Airport and there will only be cargo traffic at Mumbai airport. On behalf of Mahanagar Vikas Parishad, it has been suggested to propose elevated runway at the height of 60 metres after Uran airport becomes fully functional.

It will not only give additional space or construction in the neighbouring suburbs extending up to the Gateway of India on one side and Borivli on the other. Therefore, all the buildings in Dharavi shall have capacity to take extra floors in order to rehabilitate tenants as well as commercial tenants in a proper way.

It is extremely important to make quality construction for all the rehabilitation buildings. And to monitor this, a separate vigilance committee shall be appointed. Also, this committee should be given powers to dismiss a developer in case of inferior quality construction. A separate tribunal should also be set up to handle all sorts of disputes arising under the DRP, so that the matters are dealt on fast track basis.

If Dharavi redevelopment project shall grant option to developers to construct in the city or suburb sale component, transfer of development rights (TDR) shall be linked with ready-reckoner and equivalent TDR based on ready-reckoner shall be given to the developers along with the land to make the

proposal viable and successful. It is extremely important for developers to make the job-card for the project, so that there will be no confusion as to what date the project shall be completed and these timeline and necessary support shall also be extended by the government to make the proposal successful. If this timeline is not met, then developers will be burdened with increased overheads and interest component which will affect the profit considerably. And then, the developer will not be enthusiastic to work for the project.

An advanced construction methodology with robotics support shall be taken up to complete the project in time.

Meanwhile, the authorities have a vital role to play in this

project. The success of the project is equally in the hands of the authority as well as the developers. A strong teamwork is required in any case for the success of DRP. The developer shall be asked to submit detailed planning and execution along with job card. A thoughtful standard operating practice shall be asked from the developers and same shall be approved by the respective authority. The authority shall not impose any limitation for working around the clock.

Dharavi's redevelopment has already suffered a lot in the past. And if there is no synergy between the government and the developer, then this project will be a big example in the global market that India with their own

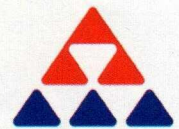
developers and without any standard operating practices couldn't perform and may have to depend in the future on other substitutes.

The success of this project fully depends upon the financial and technical capabilities, including the vast experience of the developer and the optimistic approach of the authority in supporting the developers to make available all the peripheral services and infrastructure.

Essentially, it is necessary to rework backwards while planning the entire project and then the action plan needs to be initiated. In addition, a positive attitude needs to be adopted towards this project by officials of the government authorised bodies.

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Formation of Slum Rehabilitation Authority



Government launched comprehensive Slum Rehabilitation Scheme in December 1995

