

# Report of Sanctioned Revised Planning Proposals for Wadala Notified Area (WNA), Mumbai.



**Mumbai Metropolitan Region Development Authority  
(MMRDA)**



# Report of Sanctioned Revised Planning Proposals for Wadala Notified Area (WNA), Mumbai.

(This Report is the Part of Revised Planning Proposals sanctioned vide Government in Urban Development Department's Notification issued under section 115(3) of section 40(3)(d) of the Maharashtra Regional and Town Planning Act, 1966 vide Notification No. TPB-4318/464/CR-128/2019/UD-11, dated 16<sup>th</sup> September, 2019)



Chief, Town Planning Division  
MMRDA



Metropolitan Commissioner  
MMRDA



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Urban Development Dept  
Mantralaya, Mumbai - 32



**Mumbai Metropolitan Region Development Authority  
(MMRDA)**

1. Die folgenden Aussagen sind wahr oder falsch? Begründen Sie Ihre Antwort!

a) Die Funktion  $f(x) = \sin(x)$  ist auf  $\mathbb{R}$  umkehrbar.  
b) Die Funktion  $f(x) = \cos(x)$  ist auf  $\mathbb{R}$  umkehrbar.  
c) Die Funktion  $f(x) = \tan(x)$  ist auf  $\mathbb{R}$  umkehrbar.

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## 1. PREAMBLE

MMRDA was allotted land at Wadala in 1982 by Government of Maharashtra (GoM) on lease basis. Accordingly, Mumbai Metropolitan Region Development Authority (MMRDA) had prepared a four phase Layout for development of Truck Terminal at Wadala. The layout was approved by the Municipal Corporation of Greater Mumbai (MCGM). Subsequently, MMRDA was appointed as the Special Planning Authority (SPA) for the 'Wadala Notified Area' (WNA). The State Government has approved the Planning Proposals prepared by MMRDA for Wadala and has also approved a global FSI of 4.00 for the same. Out of four phases, MMRDA had initially proposed to develop phase I of Truck Terminal with certain essential infrastructure but the Truck Terminal could not become fully operational due to several constraints and non-cooperation by truck operators.

However, in the meeting of the Empowered Committee under chairmanship of Chief Secretary to GoM, held on June 5, 2010, it was decided to shift truck terminal from Wadala to Mankhurd or outside the Mumbai city and develop said area on the lines of Bandra-Kurla Complex.

Wadala is located at the heart of the city. As Mumbai has very short supply of land resource, it is imperative to exploit the available land to maximum possible extent. It is hence proposed to develop WNA to absorb the ever increasing demand for commercial spaces. This area is well connected by monorail stations, proposed Metro Line 4 and it has proximity to Anik BEST Depot, Eastern Express Highway and Eastern freeway. Thus, WNA is forming a multi-modal transport hub. Therefore, WNA is being envisaged as the future international business hub for Mumbai to be developed on the concept of Transit Oriented Development (TOD). This development will result into increase in land values at Wadala, which further will lead to higher revenue generation that can support infrastructure development in Mumbai Metropolitan Region (MMR). Therefore, it was decided to carry out revision in the Sanctioned Planning Proposals of WNA by using the best Urban Design practices across the world while considering the following:

- Existing and proposed road network and public transit
- Existing and proposed land uses and land allotments by MMRDA
- Development potential and phasing
- Preservation of existing salt pan lands and reserved forest
- Existing Planning Proposals and Development Control Regulations (DCRs)
- Specific Urban Design and Architectural Controls which enhances the imageability of the notified area through better built-form, open spaces, street design etc

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## 2. EXISTING SITUATION IN WADALA NOTIFIED AREA

### 2.1 Background

- Allotment of land: -

MMRDA was allotted land at Wadala in 1982 by Government of Maharashtra on lease basis. Accordingly, Mumbai Metropolitan Region Development Authority (MMRDA) had prepared a four Phase Layout for Truck Terminal at Wadala. The layout was approved by the Municipal Corporation of Greater Mumbai (MCGM). Out of four Phases of the sanctioned Layout, MMRDA had initially proposed to develop Phase I of Truck Terminal with certain essential infrastructure. However, the Truck Terminal could not become fully operational due to several constraints and non-cooperation by truck operators.

- Appointment as the SPA: -

The State Government of Maharashtra vide its notification no. TPB-4305/CR-318/05, UD-11, dated December 3, 2005, designated MMRDA as Special Planning Authority (SPA) for Wadala Notified Area (WNA) for development of Truck Terminal, Inter State Bus Terminal (ISBT) and ancillary activities

- Sanction to the Planning Proposals (SPP): -

The Planning Proposals and Development Control Regulations (DCRs) of the said notified area excluding CS No. 6 (Pt) and 9 (pt) of village Anik Wadala was sanctioned vide its notification dated 16.11.2010 and dated 10.1.2011 respectively.

- Inclusion of Mathadi Land: -

The land bearing C.S. No. 6 (pt) and 9 (pt) of village Anik Wadala admeasuring 65000sqm allotted to Mathadi Kamagar Co-op Housing Society was included in the said Notified Area vide notification no TPB-4308/116/CR-20/08/UD-11 dated 10.08.2011. The land area for WNA as per the Sanctioned Planning Proposals is 115.34 Ha. However as per the GIS based Survey, the total site area is 122.10 Ha.

- Empowered Committees Decision: -

In the meeting of the Empowered Committee held on June 5, 2010 under the chairmanship of Hon. Chief Secretary to GoM, it was decided to shift Wadala Truck Terminal at Mankhurd or outside the Mumbai city and develop said area on the lines of Bandra-Kurla Complex.





## 2.2 Details of Land

In the Sanctioned Planning Proposals (SPP), lands were indicated only for transportation related activities and commercial purposes. Apart from that, one plot was reserved for Staff Housing, Play ground and School respectively.

In Phase-I out of four phases, MMRDA had allotted 21 plots to 'Bombay Goods Transport Association' (BGTA) and 'Maharashtra Rajya Truck Tempo Tankers Bus Vahatuk Mahasangh' (Mahasangh) and 'Mumbai Pune Motor Malak Shramjeevan premises C.S.Ltd.' for construction of godowns and transport offices. Five plots for Workshop and Spare parts use, one plot for Dhaba -Dormitory, one plot for Weigh Bridge and two plots for Petrol pumps were allotted from truck terminal point of view. MMRDA had constructed four office buildings and one amenity building at initial stage of development.

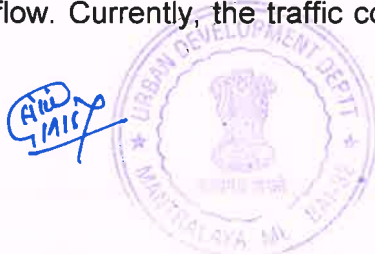
In the WNA, major portion of the land was occupied by 'buildings in Truck Terminal' (Ground +1 to Ground +3 storey structures) (approx. 19 ha), the Reserved Forest Zone (approx. 27 ha), land allotted to Mathadi Kamgar CHS (approx. 6 ha), Lodha Crown Buildmart Pvt. Ltd. (approx. 10 ha) and Wadala Monorail Yard (approx. 7 ha). Therefore, considering the earlier allotments, it is found that only 42% of land area is available for development. This 42% developable land area excludes mandatory open spaces, access roads, utilities etc.

On the basis of Empowered Committee's decision to develop the area as a commercial center and to optimally utilise the permissible FSI, it was decided to relocate all the buildings in existing Phase-I into a single building and utilise the vacated land for mixed use or commercial development.

## 2.3 Existing Traffic and Transportation Infrastructure

The Wadala Notified Area lies along Sewri-Chembur Road, about 2.5 km away from Guru Tegh Bahadur (GTB) Station on the Harbour Line. The Sewri-Chembur Road further connects to the Eastern Express Highway, an arterial road of the city which enhances the connectivity. Mukundrao Ambedkar Road (M.A. Road) passing through the site from east to west connects Sewri-Chembur Road to Dr Babasaheb Ambedkar Road.

As per the Sanctioned Planning Proposal for WNA, 4.5 Ha of land area within the site is indicated for the establishment of an Inter-State Bus Terminal (ISBT). Preliminary data of traffic volumes from the site was collected to understand the existing road network capacity and traffic flow. Currently, the traffic comprises of taxis, trucks and private four-



wheelers. The Anik BEST Depot, adjacent to the SPA boundary is one of the largest bus depots in the city. A good number of buses operate on this route.

The major mass transit projects connecting Wadala are:

- **Mumbai Monorail Project:** - Mumbai's first monorail runs through Wadala from Chembur Railway Station to Sant Ghadge Maharaj Chowk. Three monorail stations namely GTB Nagar, Bhakti Park and Wadala Depot lie within the proposed site.
- **Metro Line 4:** - MMRDA is implimenting elevated Metro Line 4 Wadala-Thane-Kasarwadavali which runs along Sewri-Chembur Road.
- **Eastern Freeway Project:** - This is a 16.4 km signal-free, elevated, high speed corridor connecting South Mumbai and eastern suburbs. The WNA has access to the Freeway at Bhakti Park (outside the SPA area).
- **Sewri-Chembur Link Road:** - This 36.58 m wide road runs along eastern edge of the WNA which further leads to Eastern Express Highway.
- **BKC Connector:** - MMRDA is constructing a 1.6 km elevated road from Bandra-Kurla Complex to the Eastern Express Highway. This will reduce travel time between BKC to Easter Express Highway (near WNA) from 45 minutes to 15 minutes. Wadala can be easily accessed via the Sewri-Chembur Link Road through the Eastern Express Highway.



### 3. OBSERVATIONS

#### 3.1 Observation

It is observed that no organised commercial and retail activities exist in the area and its surrounding. Wadala can be imagined as an annexe to Bandra Kurla Complex. It will also be a suitable location for the hospitality sector and Food & Beverages sector. Natural features such as the Rawali Channel and the wetlands though in deteriorated condition due to encroachment and industrial pollution can be rejuvenated to become a great asset for the Notified Area as well as the city.

There would be a large transit population moving through the WNA once all transportation links are completed, which may increase population pressure in this area. Overall, the modifications are based on recognising the significance of WNA's location, its proximity to Bandra-Kurla Complex and its unique transport and environmental features. WNA can fill the gap in the area (and the city) with regards to potential commercial/office spaces, organised retail and hospitality, supported with appropriate socio-cultural amenities.

The following are the constraints for consuming entire Global FSI of 4.00:

- 1) the land available for development is limited,
- 2) As per Civil Aviation NOC the permissible heights of building above mean sea level is between 104m to 154 m
- 3) Mandatory 25% of land area on virgin soil be kept as Recreational Open Space (ROS)

In light of the above constraints, high-rise development is envisaged to utilize Global FSI of 4.00.

#### 3.2 Market Study and Asset Allocation for WNA

Considering the developable land and neighbourhood profile of the location; a mixed use, commercial hub is proposed in the WNA. A mix of uses will complement the residential character of the surrounding area and give the flexibility to supplement with assets that the area lacks.

Around the world, a number of new business districts have mushroomed to keep in pace with economic expansion and businesses. With the advent of technology, benchmarks have been set to establish office spaces which prioritize security and quality of real estate space.

In this regard, some domestic and international case studies were carried out. The salient features that can be adopted in WNA are as follows:



1. To avoid too much dependence on private vehicles, a network of pedestrian public spaces is proposed to be developed to be linked to the nodes of Mass Public Transportation (Metro and Monorail) and an International Standard Feeder System (AC Bus). The Feeder System is planned in such a way that every building at the Site is within a few hundred meters walking distance from a bus-stop;
2. Access to Pedestrian Public Open Space (Parks or Plazas) – the Public ROS and the private ROS will always be accessible by the general public and be located at a clearly visible location.
3. Public Open Space (Parks or Plazas) will be developed in combination with a concentration of Food & Beverages places, retail & leisure opportunities etc.
4. In order to create a cohesive street frontage with lots of retail at ground floor and a lively pedestrian friendly nature it's important that the length of the building's façade faces the main road. This means that the street façade and pedestrian front space will be interrupted on much less locations by vehicular entry and exit points and building side setbacks. The front plot boundaries must be as permeable as possible.
5. Introducing a mix of uses like developing residential units, serviced apartments and hotels within the CBD, will also add to the vibrancy and create a larger catchment for retail and restaurants. A mix of uses is essential for long time resilience of the area and in response to the large transit uses in the 700-800m walking radius of each other.
6. Though there are provisions for DCRs, Architectural Controls and Urban Design Guidelines, individual developers will have flexibility to make their buildings stand apart.
7. Based on market studies and projections, about 60% distribution of commercial asset with 30% residential was found to be most suitable.

### **3.3 Conclusions**

The Government has sanctioned Global FSI of 4.00 for WNA (excluding reserved forest area and Mathadi Kamgar CHS). However, there are constraints to achieve maximum consumption of FSI due to height restriction by Ministry of Civil Aviation and existing commitments.

The presence of monorail stations and proposed metro stations within the site as well as nearby regional infrastructure will enable excellent connectivity for potential employees and residents. These improvements have opened up a part of the city, earlier inaccessible due to no direct transportation services. Many transportation improvements



are being implemented and already existing in the site that makes it more conducive to large scale high rise development on the lines of a Transit-Oriented development (TOD).

It is envisaged that this Transit Oriented Development will have Commercial, Mixed Land Use, Residential development accompanied by Socio-Cultural amenities and public utilities and pedestrianised network within and around the Public Transport Nodes.

The Central Business District (CBD) is traditionally the focal point of the city and is usually a part of the old city. However, as a city matures, a number of alternate business districts have been seen to gain prominence (like Bandra Kurla Complex). This is attributed to the rising prices at the CBD, lack of upgraded spaces, dated technology and limited scope of expansion. Traditional Business Districts begin to lose their prominence over a cycle of twenty years as new locations get developed.

The decision towards relocation/redevelopment of the Wadala Truck Terminal (WTT) area has provided the Wadala Notified Area an opportunity to have an exciting mix of land uses and building types, rather than be surrounded by dysfunctional, low-rise development. The WNA provides the unique and final opportunity to create from scratch to an international standard, large-scale development at the heart of the Mumbai. Once BKC reaches saturation over the next decade or so, WNA can be conceived as the third CBD of Mumbai which will fill the gap in the market for quality commercial spaces.

Therefore, the commercial center at WNA can be envisioned to reflect the following core characteristics as an integral part of its planning and design:

- Mixed Use
- Transit Oriented Development
- Smart not in terms of technology but due to the inherent qualities that respond to site and context
- Self-sustaining-ecologically, socially and culturally.

The dominant planning features of a Central Business District form the basis of revised Planning Proposals for Wadala Notified Area. A detailed layout along with the Urban Design Guidelines will be prepared by proposing Land Use Distribution, sub-division of land parcels and providing recreational open spaces, which will be approved by the Metropolitan Commissioner.



## 4. REVISED PLANNING PROPOSALS

The proposed revision includes the following land uses:

### 4.1 Mixed Land Use

Selected plots in WNA are designated for Mixed Land Use. Mixed Land Use allows combinations of offices with other uses, like facilities in the retail and leisure sector, (private) education and healthcare, hospitality, cultural and the residential sector. This strategy will give flexibility from planning point of view.

Secondly, the central location within Mumbai of an integrated, large scale development in combination with the great connectivity by different modes of Public Transportation, gives the unique opportunity to create a modern mixed use CBD. Such CBD will be equivalent of the ones found in contemporary cities around the world.

### 4.2 Multimodal Transport Use

Wadala Monorail Station is already developed within the Notified area. An area of 6.97 Ha surrounding the station is indicated as Multimodal Transport Zone. It has potential for Commercial and Residential Development. MMRDA is intending to develop this area for Commercial and Residential uses in future.

### 4.3 Monofunctional Land use

Office towers have the strongest functional and spatial relationship with the mixed use environment. Therefore, plots placed at north and south of the Mixed Use Plots in the layout are indicated for Commercial land use. The plots along the southern edge of the Notified Area, with unobstructed views overlooking the Reserved Forest Zone and the Bay area in the distance, are reserved for Residential. Already a substantial residential component is created in the notified area with Lodha Crown Buildmart Pvt. Ltd.'s project of almost 3000 apartments and other big residential development to the east of WNA. Hence, the amount of plots reserved for pure residential use is modest. A plot is reserved for affordable housing sector as well.

### 4.4 Civic/Social Amenities

Provisions for social amenities are made for Educational Facility, Police Station, Fire Station, and Cultural Facility. Since some of the buildings will be stand-alone low rise buildings, yet they may stand out from the rest of the built environment of high rise towers. Especially the Cultural attraction, prominently situated right at the heart of Wadala Notified Area should be designed to the highest International standards: an architectural Icon that will help putting the CBD on the map as a destination for residents from all over Mumbai and tourists alike.



#### 4.5 Public Utilities

The Utilities (Receiving Stations, Substations, Sewage Treatment Plant (STP), and Solid Waste Transfer Station) are planned as separate entities throughout the site. The existing STP is incorporated in the Layout. However, the existing Receiving Station in southern part of the area is too large of an area located inconveniently right in the middle of what is planned as commercial development. Two plots are provided as a Receiving Station at the edge of the Notified Area next to the Salt Pan Area and another near the Monorail Yard. 11 Distribution stations are provided, interspersed through the Notified Area, catering to a set of plots as per the projected electric loads.

The Solid Waste Transfer Station is located in the current Transit Camp area which will be developed only in the later stages of the project. Hence, the waste collection could temporarily take place in the area behind the Mathadi Housing plot, demarcated for the future STP.

#### 4.6 Hierarchy of Roads

##### Major Roads: -

Sewri-Chembur Road: It is proposed to continue width of this road i.e. 36.58 m. This road will have 4 lanes in each direction.

Mukundrao Ambedkar Road (M.A. Road): The width of the M. A. Road is partially determined by adjacent plot boundaries of the WNA, Monorail Depot Area and Lodha Development. The road will have 4 lanes in each direction. The M.A. Road acts as the main thoroughfare, one of five primary access roads directly connecting to Sewri-Chembur Road. It is therefore proposed to widen this road to 40m.

##### Primary and Secondary Roads: -

Primary Roads will have 3 lanes in each direction and parallel on-street parking on one side. Secondary Roads will have 2 lanes in each direction and parallel on street parking on one side.

##### Proposed Feeder Roads: -

Feeder roads to M.A. Road are proposed on which vehicular access to plots abutting M.A. Road will be provided. These roads will give access to plots and will subdivide larger zones.

Average lane width is considered as 3.50 m as per the Indian Road Congress standards. Right of Way (ROW) is designed to contribute towards balanced vehicular and pedestrian movement.



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#### 4.7 Vehicular Parking

Along Sewri-Chembur Road and the M.A. Road on-street parking is prohibited. Along one side of all internal public roads a continuous strip of parallel on street parking is planned. On-street parking is aimed at short term parking.

Dedicated space for taxis and rickshaw parking, Bus stops and secure bicycles parking facilities is allocated near Monorail Stations, Metro Stations and at the heart of the shopping area.

#### 4.8 Recreational Open Spaces (ROS)

Out of mandatory 25% Recreational Open Spaces, Public ROS is provided at Layout level and remaining part will be provided as Private ROS at Plot level. Both the public and private ROS are spacially integrated within built environment. Larger ROS at plot level are provided at the heart of development which can be accessible to all the public and will maintain vibrancy throughout the development. Provisions for amenities like dedicated eateries / kiosks, public toilets, bicycle parking, club houses, recreational facilities, market hall, etc is made in the ROS. Large pedestrian spaces under Plot-level ROS, Public Plazas and Parks will be accessible for pedestrians and visitors. Shops and businesses, public utilities etc will be located in such a manner that they don't restrict pedestrian movement.

#### 4.9 Land Use Distribution

The table below shows the overall land use distribution for the Wadala Notified Area. The total land area is 122.10 ha.

S.No.	Particulars	Proposed Land Area Distribution	
		(Ha)	(%)
1	Roads	35.18	28.81
2	R.O.S	11.12	9.11
3	Reserved Forest Zone	24.28	19.89
4	Residential Zone	8.27	6.77
5	Commercial Zone	22.42	18.36
6	Mixed Landuse Zone	8.01	6.56
7	Social & Cultural Facility	1.81	1.48
8	Public Utilities	3.20	2.62
9	Multimodal Transportation Zone	6.97	5.71
10	Rawali Channel	0.84	0.69
	Total	122.10	100

#### 4.10 Population Projection

The projected population including floating population in WNA will be approx. 2.40 lakh. Approx. 92,000 office jobs will be generated once WNA reaches its full development potential over the next thirty years. An additional 96,000 jobs is predicted to be generated due to the mixed use and transport related developments.





## 5. INFRASTRUCTURE PLANNING

### 5.1 Traffic and Transportation

While considering the traffic and transportation planning, it is accounted that there will be a large transit population through the site owing to the public transit linkages such as the monorail, Metro Rail etc. Also, the surrounding area such as Ajmera Realty's i-Land and Sion will be growing with the residential market. Considering all these factors, the widths of proposed roads are planned adequately, with no road below 25.0m ROW. An optimum scenario for the traffic projections is considered where it is assumed that there will be dependence on private transport and public transit, since monorail stations and metro stations are located here along Sewri chembur link road.

#### Traffic: -

At present, the main access to the WNA is from the 36.58m wide Sewri-Chembur Road which connects the Eastern Express Highway and the Eastern Freeway and carries a significant volume of traffic. It is anticipated that maximum traffic will be generated during morning peak. Considering the land use distribution, especially commercial, it is evident that morning peak is going to be higher than evening peak.

As per the traffic estimates, 45% of the trips are to be carried out by public transport, considering the travel trends and the short distance between the Metro and Monorail station with the planned development. It is anticipated that walking will formulate a significant portion of the last mile commute.

Based on the trips generated during the most likely scenario, Volume/Capacity analysis was performed for full occupancy scenario to analyse the Level of Service for major roads. Based on junction analysis done for the entire site layout, it was observed that certain locations will become congested in future and traffic control measures will be adopted. Considering location of WNA and the surrounding development in the form of metro and monorail lines, providing grade separation would not be feasible. Therefore, it is proposed to signalize a few intersections to regulate traffic movement in future.

#### Transportation: -

Considering the nature and magnitude of the development, it is imperative that a structured Transit system be in place to cater to the traffic demand. The modifications are proposed with tremendous focus on existing Monorail line the proposed Metro Line 4. The monorail is already operational. It is assumed that Metro stations would be operational in



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near future. It is anticipated that a large proportion of residents as well as office - goers would prefer the Metro/Monorail network over private transport.

The Wadala Depot Monorail Station and GTB Nagar Monorail Station will be linked via Pedestrian Underpasses directly to all nearby plots along M.A. Road - creating a seamless pedestrian connection covering the entire breadth of the WNA. By planning, designing and constructing the pedestrian underpasses integral with the surrounding built environment and making them part of Shopping Streets, will contribute significantly to the comfort of both the commuting and general public.

Existing monorail line, the proposed metro line and their stations are planned elevated and along the median of Sewri-Chembur Road.

Interconnectivity between monorail and metro stations, as well as from metro stations to adjoining mixed use buildings will be taken up during plot-wise development.

## **5.2 Public Utilities and Services**

All the public utilities and services are proposed in the development according to the projected and floating population. Provisions are made in the Land Use Plan for the services like water supply, Sewer network, Solid Waste Management, Information Communication Technology Systems, Storm Water Drains, etc.

There is an existing Sewage Treatment Plant (STP) of 9.0 MLD which can be used for the initial development phases. As the WNA grows, an area for an additional STP is reserved within the layout. Two petrol pumps catering currently to the area have also been retained since they will be required in future by the residential and office population within and around. The road design considers specific utility corridors incorporated for the future. These include the Automated Waste Collection System (AWCS) and the Integrated Communication Technology layer (ICT). All the critical utilities are planned under the footpath. These have been planned in accordance with existing utility networks on site as per data received from MCGM.



## 6. Urban Design Guidelines & Architectural Controls

Urban design guidelines are adopted to advance the policies, goals and objectives of the development and help translate these directions into desired outcomes for the design of streets, parks, open spaces and buildings. Urban design guidelines prescribing the building envelope for most buildings (maximum building height and building footprint size, building alignment) are important, especially adjacent to the most prominent spaces in high density, mixed use areas. Well-proportioned public spaces and the mix of attractive facilities at street level that align them makes the area come alive, feel safe and inviting. The Guidelines take forward the ideas of walkability, transit focus, mixed use and culturally responsive public areas and also incorporate the learnings from case studies.

Throughout the development, the pedestrian friendly nature of the public realm and human scale is kept despite the prescribed high building density for the area. The perimeter block typology for the first few floors, combined with high rise towers above that have been setback far enough from the street, for the human scale experience, views to the sky and daylight at ground level will not get negatively impacted. The ground floor facing a public road or public space should have a transparent character and not contain any closed walls. Podium parking is integrated with the architecture of the entire building to create a seamless volume.

An arcade is proposed along all streets where a continuous retail front is prescribed. This is adopted as a unifying architectural feature that will protect pedestrians from the climate. Inspired by the historic arcades of the Fort historical district in south Mumbai, the arcade will play an important role in creating the right conditions for an attractive pedestrian friendly outdoor environment. Different buildings along the same street with a prescribed retail and arcade front will create a cohesive continuous spatial element along the street edge. This proposed arcade will provide space for uninterrupted movement of pedestrians. Although ownership will rest with the plot owner, the public at large will have easement rights of walking along the arcade. The arcade space will have a mandatory clear width of at least 4.5 meter from the building front alignment and a mandatory clear height of 6 meter. It is not permitted to enclose this arcade.

No Hoardings and advertisement Bill Boards will be permitted on the roof top or external facade of the building. Signage area is allowed only on two faces/facades of the building and on each facade upto a maximum of 2% of the facade surface area will be allowed. For retail upto a maximum of 10% of the facade surface area shall be allowed on the ground/first floor.



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For the purpose of this project, the Urban Design Guidelines are divided into CBD Level Guidelines, Landscape Guidelines and Plot-level Guidelines. CBD Guidelines apply to layout wide matters such as accessibility, streetscape, infrastructure, environmental considerations etc. The Plot-level guidelines are specific to a particular plot, which are further supported by the Architectural Controls specifying the use, permissible building heights, gross built-up area, setbacks etc. The Urban Design Guidelines supersede the Development Controls Regulations for Wadala Notified Area.

The projected FSI areas are demonstrated for each plot with the following assumptions at building level –

- Commercial spaces FSI at 70% of the gross built-up area, Residential space FSI at 60% of the gross built-up area and Retail space FSI at 85% of the gross built-up area. These are based on an analysis of the existing similar spaces at Bandra Kurla Complex. Office space upto tower level is calculated at 85% of the gross built-up area.
- A floor to floor height of 3.6m is proposed for commercial and 3m for residential uses and parking (basement and podium) on upper floors. Floor to floor height exceeding the above and upto 6m height will be counted into 1.5 times the FSI area for these uses.
- Arcade to be provided as per architectural controls and to be free of FSI
- Residential - 1 parking space for tenement of 45 to 70 sqm carpet area. 25% of the total parking space additionally provided for visitors parking.
- Commercial/Office - 1 parking space for every 37.5 sq m upto 1500 sqm (ie 40 cars) and for every 75 sqm of additional space for areas exceeding 1500 sqm
- Retail - 1 parking space for every 40 sqm of floor area upto 800 sqm and 1 parking space for every 80 sqm of space for areas exceeding 800 sqm
- To maximize the efficiency of the traffic flow, no direct vehicular access will be allowed from Sewri-Chembur Road and M.A. Road on to adjacent plots (with Lodha as exception). All adjacent plots will only be directly accessible by car from primary and secondary roads on the other side of the plots.
- Emergency Vehicular Access / Fire tender movement: All Buildings have been planned with Emergency Vehicular Access (Fire tender movement) to the front, sides and back of the buildings through the application of adequate setbacks. This is essential for high rise buildings.

The intent of the guidelines is to provide a basis for design, and not restrict the development/architectural features of the buildings.

To comply with the building heights restrictions whilst providing for 25% ROS and a significant portion of space set aside for wide roads to cope with the traffic indicates that it will not be possible to utilize the permissible Global FSI of 4.0. In order to try to reach the highest FSI possible, the Layout design must allow for almost all buildings to go up to the permissible building height. The Public Utilities and Social amenities are the only exceptions. Certain plots have restricted height from an urban form perspective to control view corridors, natural light and ground level experience of pedestrians.

Based on studies carried out for tall buildings, it is seen that beyond a height of 60m, the effect of height of a building on the daylight levels is minimal – so a height of 100 m or 200 m does not really matter as far as the pedestrian is concerned. A separation of 20 m between tall buildings is adequate to allow pedestrians level views, light, ventilation and privacy to occupants of tall building. These guidelines, along with international and local best practices set the baseline for the building heights, form and setbacks at WNA.

#### **Flexible Planning: -**

A dynamic layout allows the WNA to respond to the market trends in terms of saleable plot size and hence saleable area. The current plot sizes range from 2,000sqm to 20,000sqm allowing a range of building floor plates from 1,500sqm to 5,500sqm. The major land uses in the layout for WNA are Commercial and Multi-modal Transportation. Mixed use is a separate land use. This gives the opportunity to develop a variety of building typologies and uses. Vertical mixed use towers will be visible in the upcoming development and will be the differentiator.

The layout allows for the amalgamation of plots when required. Two or more plots, located side-by-side, and not separated by proposed roads can be combined to build on a larger plot. In that case, the total built-up area of the combined plots will be permissible for development, subject to the modified Development Control Regulations for WNA and the Urban Design Guidelines.

#### **Pedestrian Oriented Spaces: -**

A large amount of public transit must be complemented with the right amount and character of pedestrian space to make it a truly successful Transit Oriented Development. The main pedestrian circulation is defined through the site connecting important points of origin (Transit) to all plots. The Monorail stations and Metro stations cover the entire



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Wadala Notified Area within an 800 m (10 minute) walking distance, and this experience is enhanced by creating points of interest along the walk as well.

Dedicated eating zones, wide shaded footpaths, well planned High Street Shopping, with an appropriate mix of public and recreational amenities cater to the everyday user without the obstructions to circulation on the pavement as seen in the rest of the city. At critical areas, pedestrian underpasses and bridges are planned depending on the pedestrian and vehicular traffic. Provision of street furniture and adequate lighting also encourage pedestrian movement. The most important feature is a shared pedestrian and bicycle path through the WNA. Secure bicycle parking facilities at all transit nodes will make cycling as the first (or last) mile of the daily commute an even more attractive option. Providing bicycle lanes in the footpath rather than the carriageway ensures that it is not violated by other vehicles and makes it safe. For the ease of pedestrian movement, underpasses and bridges are integrated within the landscape design. The Wadala Depot Monorail Station and GTB Nagar Monorail Station will be linked via Pedestrian Underpasses directly to the nearby plots along M.A. Road – creating a seamless pedestrian connection covering the entire breadth of the Site. It is not possible to have overhead skywalks here due to the elevated Monorail line.

Provisions are to be made as per Indian Road Congress (IRC-103-2012, CH 6) for 'Pedestrian Facilities Design Standards' including access on roads and footpaths for persons with disabilities.

The development is planned to reach its full potential over a period of 30 years given the current market situation, with a population of over 2.40 lakh people working, living and visiting the Notified Area when completed. Since Wadala area is part of the larger ward and the city, its impact on the vicinity will require certain regional level interventions to improve infrastructure conditions which must be taken into account for successful implementation and impact. This is an opportunity to provide the much needed "public" open space in Mumbai through the restoration of the Rawali Channel, Reserved Forest Zone and an apt implementation model for the large plazas and parks.



## 7. DEVELOPMENT CONTROL REGULATIONS

The Development Control Regulations (DCR) for Wadala Notified Area stipulates the deviations from the DCR Greater Mumbai as applicable from time to time. Wherever the regulations / sub regulations are not specifically prescribed in the regulations of WNA, the provisions of the Development Control Rules for Greater Mumbai, 1991 amended from time to time shall apply mutatis mutandis to the development of land appropriately.

The development within the following landuse zones will be governed by DCRs of WNA and Architectural Controls: -

- Commercial
- Residential
- Multimodal Transportation
- Mixed Land Use
- Social and Cultural Facility
- Public Utilities and Services
- Reserved Forest
- Water bodies

Within these landuse zones, reservations for amenities such as Fire Station, Police Station, Hospital, Cultural Center and service yards has been made. Also plot for 'Affordable housing' is reserved at layout level. Revision to the Development Control Regulations are proposed separately according to the revised Planning Proposals.



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