EXECUTIVE SUMMARY

REDEVELOPMENT OF RESIDENTIAL PROJECT

AT

F.P.NO. 1198 & 1199, TPS IV OF MAHIM DIVISION, MUMBAI

BY

M/S. SURAJ ESTATE DEVELOPERS PVT. LTD.

1. INTRODUCTION TO PROJECT

After recognizing the need of redevelopment of building having total 18 nos. of tenants on the plot bearing F.P.No. 1198 & 1199, TPS IV of Mahim Division, Mumbai, is now being developed by M/s. Suraj Estate Developers Pvt. Ltd. The developer has proposed composite redevelopment on plot bearing F.P.No. 1198 & 1199, TPS IV of Mahim Division, Mumbai and the proposal is for a new building of a Basement + Ground Floor + 1st to 30th upper floors for residential use, which will be a sale building only. The surrounding of the existing plot is also of mixed use i.e. residential and commercial. The site is surrounded by many more authorized structures.

PROPOSAL HISTORY

- **For F. P. No. 1198 of Mahim Division, Mumbai**

There exists a CESSED structure on the plot. **The existing CESSED structure is of Ground Floor having 01 nos. of residential tenants consuming 112.094 sq mtrs of built up area as certified by the Executive Engineer, Mumbai Building Repair & Reconstruction Board, Mumbai, dated 12.10.2015**. The land use of the existing plot is residential as per the CESSED "A (R)" category certificate as certified by Asstt. Assessor & Collector 'G/North' Ward, Dadar, Mumbai, dated 21.06.2007.

- **For F. P. No. 1199 of Mahim Division, Mumbai**

There exist total five CESS structures on this plot.

1.The structure numbered as Ward No. 2698(2-B), Street no. 13-B, Palkhy Gully, Kashinath Dhuru Road, Dadar (W), Mumbai, has a ground floor with 07 no. of Residential tenements consuming 132.01 sq mtrs of built up area.

2. The structure numbered as Ward No. 2698(2-C), Street no. 13-C, Palkhy Gully, Kashinath

Dhuru Road, Dadar (W), Mumbai, has a ground floor with 04 no. of Residential tenements consuming 83.21 sq mtrs of built up area.

3. The structure numbered as Ward No. 2700(1), Street no. 11-A, Palkhy Gully, Kashinath Dhuru Road, Dadar (W), Mumbai, has a ground floor with 07 no. of Residential tenements consuming 150.88 sq mtrs of built up area.

4. The structure numbered as Ward No. 2698(2), Street no. 13, Palkhy Gully, Kashinath Dhuru Road, Dadar (W), Mumbai, has a ground & mezzanine floor with 07 no. of Non Residential tenements consuming 76.44 sq mtrs of built up area.

5. The structure numbered as Ward No. 2698(2-A), Street no. 13-A, Palkhy Gully, Kashinath Dhuru Road, Dadar (W), Mumbai, **has a ground & mezzanine floor** with 07 no. of **Non Residential/Residential** tenements consuming 76.44 sq mtrs of built up area.

Thus there are total 33 No. of CESS tenements on this plot.

The proposal had earlier been placed in 45th MCZMA Meeting dated 07.06.2008, vide Table Item No. 2, and had been forwarded to MoEF, as the cost of the project was above Rs. 5 Crores. Accordingly, the proposal has been accorded clearance from the Ministry of Environment and Forests, New Delhi, vide letter No. 10-90/2008-IA-III dated 16.09.2008, for sale building of Ground + 18 floors and Rehabilitation building of Ground + 7 Upper Residential Floors.

The plans for Rehab building comprising of Ground Floor + 1ST to 7TH Upper floors have been approved by MCGM, based on MOEF clearance, and the work is in progress for rehab building and no work has been started for sale building yet.

The proposal is now amended in view of provisions contained in CRZ 2011 notification, wherein benefits of DCRs as on the date of approval of amended plans is extended for CESS

category building redevelopment.

Now the proposal has received the Revised MHADA NOC for FSI 3.00 or the FSI required for rehabilitation of existing occupiers plus 60% incentive FSI, whichever is higher, in accordance with modified DC Regulations 33(7), as amended till date dated 12.10.2015.

This proposal as said earlier is a composite redevelopment of two plots bearing FP No. 1199 and 1198, of which the rehabilitation building, for existing tenants has been constructed on plot bearing F.P.No. 1198, Mahim Division, Mumbai. However Occupation certificate is not yet obtained.

The project sites have undertaken the HTL/LTL Demarcation form IRS Chennai, and the proposal was put forward in MCZMA's 97th and 98th Meeting, in which it was accorded MCZMA Non CRZ status vide letter No. CRZ 2014/CR 300/TC 4 dated 17.04.2015. According to this letter, the area affected by CRZ II for **F.P. No. 1199 of Mahim Division, Mumbai is 544.7 m^2** and **F.P. No. 1198, Mahim, Mumbai is in NON CRZ Area. As part of the plot admeasuring 544.70 sq mtrs out of total area of 1497.88 m^2 is affected by CRZ-II, the present proposal of public hearing is being processed.**

PRESENT CASE SCENERIO

The plot bearing F. P. No. 1198, Mahim Division, Mumbai, has one Rehabilitation building, under construction, with Ground Floor + 1st to 7th Upper floor.

Now the proposal is for Basement + Ground floor + 1st to 30th Upper Residential floors, including parking floors, which has been proposed on plot bearing F.P.No. 1199, Mahim Division, Mumbai, for composite purpose (Rehab + sale).

In the new building on n plot bearing F.P.No. 1199, Mahim Division, Mumbai, basement will be used for car parking, UG Tanks and other facilities. The ground floor in the proposed building will

be used for Entrance Lobby, Sub Station, Car Lift, etc. The 1st to 7th floor will be used for car parking. The 8th floor will be used as Service Floor. The 9th Floor will have two 1BHK flat and 10th floor will have three 1BHK flats. The 11th floor will have one 1BHK and one 2BHK flat, along with one 1.5BHK flat. The 12th floor will have one 2BHK and one 2BHK flat. The 13th floor will have one 3BHK flat and one 2BHK flat. The 14th, 15th, 17th to 19th, 21st to 23rd and 25th to 27th floor will have two 3BHK flats on each floor. The 16th floor and 24th floor will have one 4BHK flat on each floor. The 20th floor will be Fire Check Floor. The 28th and 29th floor will have one 8BHK duplex flat, on these floors combined. The 30th Floor will have one multipurpose room flat. Thus the developer has proposed total 38 residential flats in the said building. Thus there will be 08 flats for handing over to MHADA, 09 No. of flats for rehabilitation and 21 flats to be used as sale flats, in this proposal.

#The site under reference is partly affected by CRZ-II zone. It is within 100 mtrs. from the HTL of Mahim bay It is on the landward side of the existing Kashinath Dhuru Road, in existance prior to 19/2/1991, as may be seen from CZMP of Mumbai as well as from old 1967 DP of the area. Hence the work is permitted subject to the approval of CRZ clearance. Thus property attracts the CRZ legislation, which is reflected in CZMP plan.

The development site does not fall or contain the environmentally sensitive areas as specified in the Coastal Regulation Zone notification.

The total cost of the project is Rs. 24,46,43,270/- (Rupees Twenty Four Crore Forty Six Lakh Forty Three Thousand Two Hundred and Seventy Only) as per the valuation report,), apportion to the area affected by CRZ II on F. P. No.1199, Mahim, Mumbai.

1. PURPOSE OF THE REPORT

Proposal is for composite redevelopment on plot bearing F. P. No. 1198 & 1199, TPS IV of Mahim Division, Mumbai and thereby obtain CRZ Clearance as per clause 33(7) of DCR – 1991 in force as on date. The Plot is occupied by CESSED category structures. The said CESSED category structures are now proposed to be redeveloped on these plots. The present proposal envisage the redevelopment of CESSED structure, by availing FSI 3.00 or the FSI required for rehabilitation of existing occupier plus 60% incentive FSI, whichever is higher as per DCR's in force as on date.

Current development thus will help the existing tenant to get permanent, safe structure. At present they are residing in unsafe building. As the site under reference is affected by CRZ-II zone, it attracts the CRZ legislation as per 6th January 2011 notification for Coastal Regulation Zone (CRZ and the regulating activities in the CRZ).

2. DESCRIPTION OF THE PROJECT

3.1 NATURE OF THE PROJECT

This is a proposal for composite redevelopment on plot bearing F. P. No. 1198 & 1199, TPS IV of Mahim Division, Mumbai, in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. The proposal is for redevelopment of residential building, which is situated on the landward side of existing Kashinath Dhuru Road, in **existance prior to 19/2/1991, as may be seen from CZMP of Mumbai as well as from old 1967 DP of the area.**

The Plot is situated in Residential zone and not under any reservation as per 1967 DP as well as Revised 1993 DP. The FSI proposed is 3.00 or the FSI required for rehabilitation of existing occupiers plus 60% incentive FSI, whichever is higher, with the permissible fungible FSI.

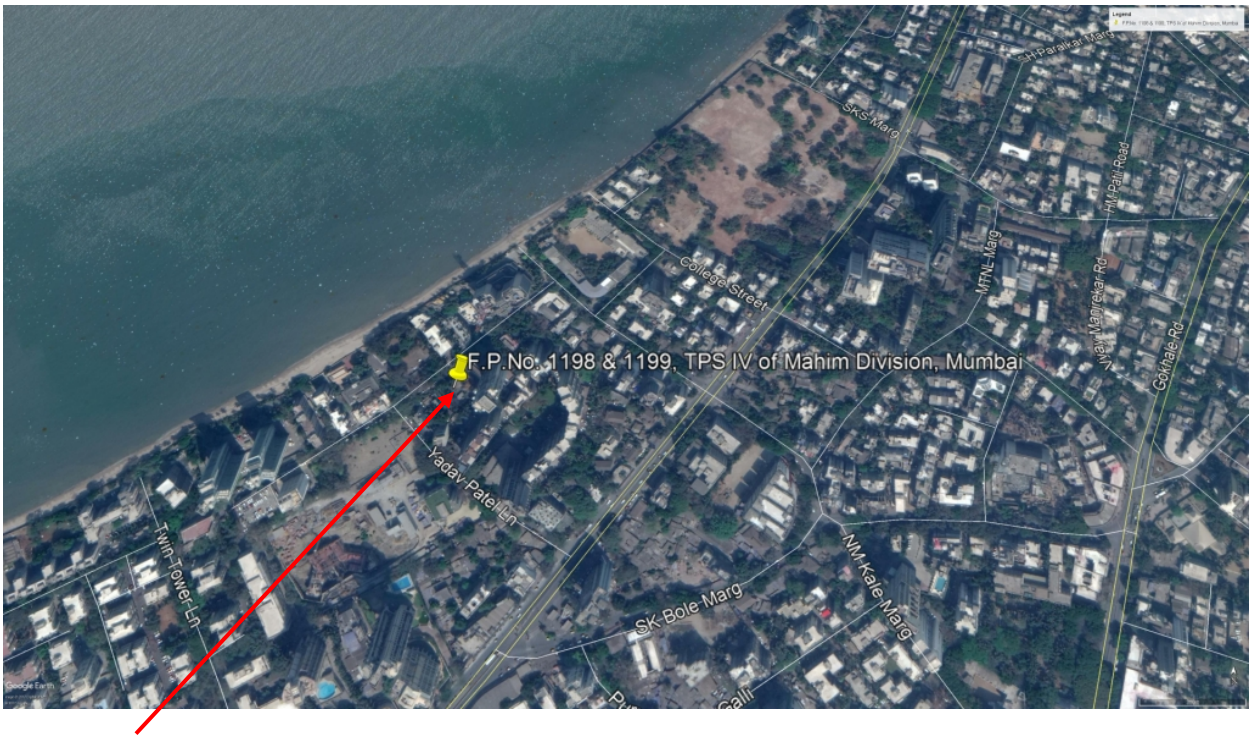
3.2 SIZE OF THE PROJECT

Total Area of the said plot is 1497.83 sq. mtrs. Cost of the Project is Rs. 24,46,43,270/- (Rupees Twenty Four Crore Forty Six Lakh Forty Three Thousand Two Hundred and Seventy Only), apportion to the area affected by CRZ II on F. P. No.1199, Mahim, Mumbai.

3.3 LOCATION

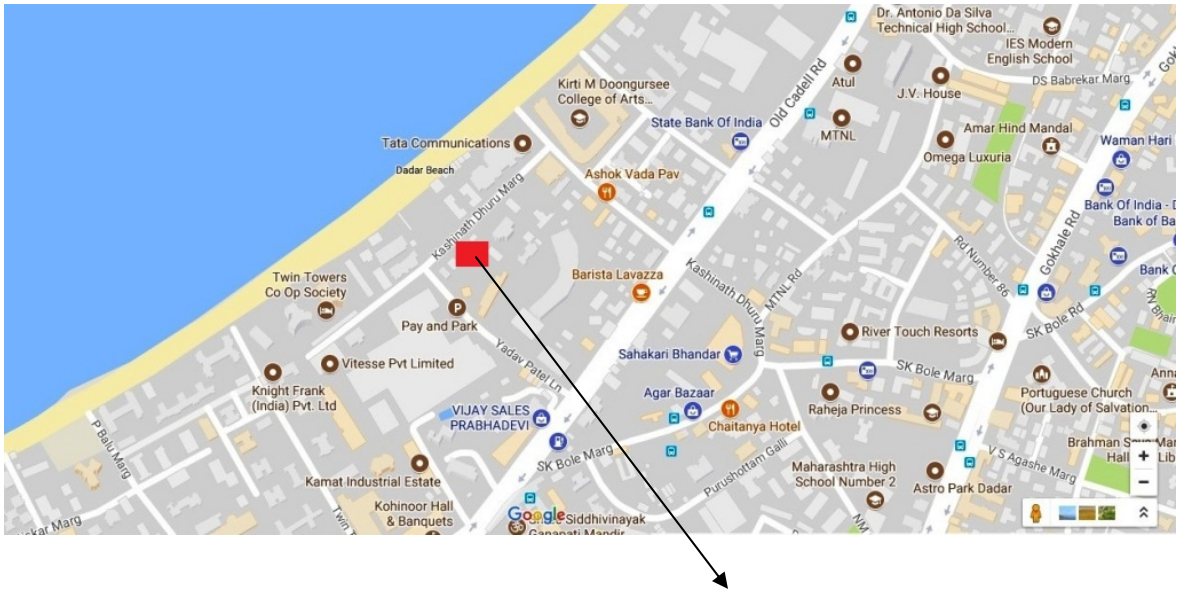
The F. P. No. 1198 & 1199, TPS IV of Mahim Division, Mumbai, is in the heart of the city. The nearest railway station is Dadar Railway Station, 3.00 kilometers on the Central line.

Google Earth Image of the site

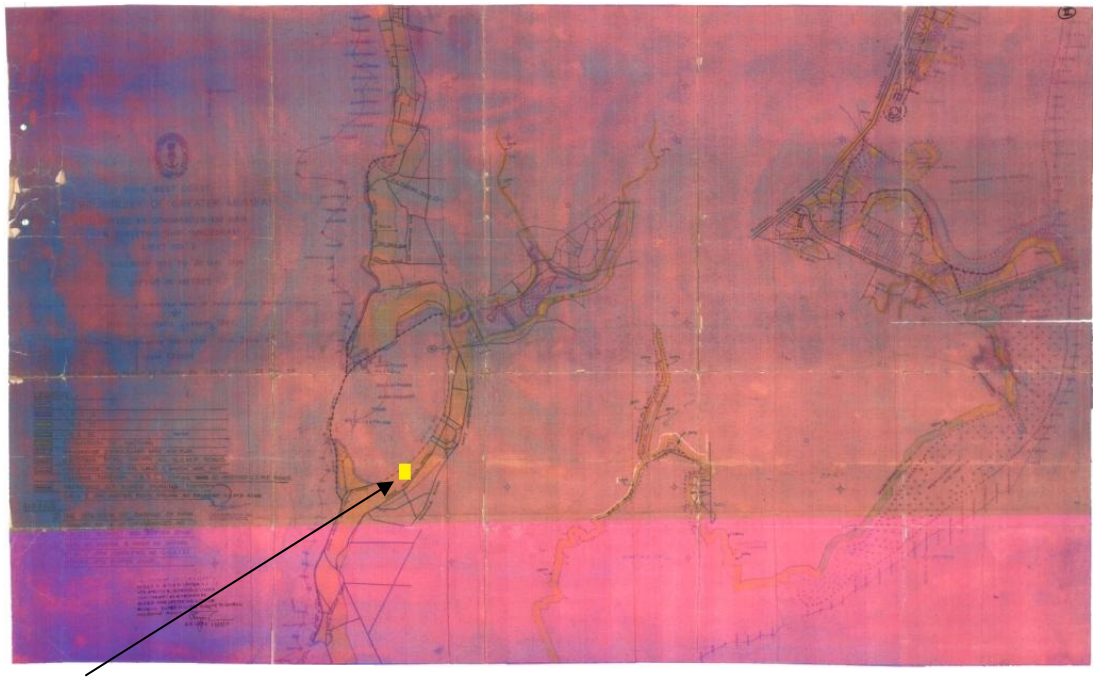


SITE UNDERREFERENCE

Location map of the site



SITE UNDERREFERENCE



SITE UNDER REFERENCE#

CZMP Plan showing location of reference Plot

3.4 SITE DESCRIPTION

The sites under reference are partially affected by CRZ-II zone and the property falls on landward side of the existing Kashinath Dhuru Road, which is reflected in CZMP of Mumbai. Thus property attracts the CRZ legislation as per CRZ - 2011. The development site does not fall or contain the environmentally sensitive areas as specified in the Coastal Regulation Zone notification. Total plot Area is 1497.83 sq. mtr.

Town / Tehsil	:	Mumbai
District	:	Greater Mumbai
State	:	Maharashtra
Latitude	:	**19° 1'11.55"N**
Longitude	:	**72°49'47.37"E**

3.5 PROPOSED DEVELOPMENT

3.5.1 AREA

Sr. No.	Description	Area
1.	Area Of Plot	1497.83 m^2
2.	Deductions for	0.00 m^2
	a) Road set back area	
	b) Proposed road	0.00 m^2
	d)% amenity space as per DCR 56/57	0.00 m^2
	Other	0.00 m^2
	Total (a+b+c+d)	0.00 m^2
3.	Balance area of plot (1-2)	1497.83 m^2
4.	Deduction for 15% Recreational Ground/ 10%Amenity space	0.00 m^2
5	Net Area of plot (3 minus 4)	1497.83 m^2
6	Additions for FSI	
	2a) 100%	0.00 m^2

	2b) 100%	0.00 m^2
7	Total Area (5 plus 6)	1497.83 m^2
8	F.S.I Permissible	3.00
9	9a)FSI Credit available by Development Rights	0.00 m^2
10	Permissible floor area	4493.49 m^2
11	Existing Floor Area	0.00 m^2
12	Proposed built up area :Building No. 1	3575.59 m^2
	: Building No. 2	917.90 m^2
13	Excess Balcony Area Taken in F.S.I	0.00 m^2
14	Purely Residential Built up Area	4411.54 m^2
14a	Remaining Non Residential Area	81.95 m^2
14b	Total built up area proposed (11 + 12 + 13)	4493.49 m^2
15	F.S.I. consumed on net holding (14b/3)	3.00
	Details of FSI availed as per DCR 35(4)	
1	Fungible Built up Area component Proposed vide DCR 35(4) for purely residential= or < (14A x 0.35) (1106.91 + 158.23 + 12.62+ 42.68)	1325.08 m^2 30.04%
2	Fungible built up area component proposed vide DCR for non residential = or < (14 B x 0.20)	12.10 m^2 14.77%
3	Total fungible built up area vide DCR 35(4) = (B.1 +B.2)	1337.18 m^2
4	Total gross built up area proposed (14 + B.3)	5830.67 m^2
	Deficit Area	223.16 m^2

Parking Statement

Required Parking	78.00 Nos
Provided Parking	87.00 Nos
Building Structure	Basement + Ground Floor + 1st to 7th Podium for Parking + 8th floor as service floor + 9th to 19th floor for residential use + 20th floor as fire check floor+ 21st to 30th upper floors for residential use.
Height of Building	114.4 Meters

PROJECT DEVELOPMENT DETAILS

Proposed development		
1	Structure of Building	Basement + Ground Floor + 1st to 7th Podium for Parking + 8th floor as service floor + 9th to 19th floor for residential use + 20th floor as fire check floor+ 21st to 30th upper floors for residential use.
2	Tenements existing	20 Nos.
3	Tenements proposed	38 Nos.
4	Height of Building from Ground level	114.4 Meters
5	Emergency Power supply (D.G. Nos. x KVa	1 no. 35 KVa
6	Salient features of the project	
	• Earthquake Resistance Building structure • Rain water Harvesting System in the complex • Energy Conservation; Provision of Solar water heating system. • Eco-Friendly Measures • Optimum use of Timber	

3.5.2 UTILITIES

The Utilities required during the construction phase area water, power, fuel and Labour.

i) **WATER:** (Expected Consumption – total 35 cum/day)

For Construction activities: 30 cum/day & For Domestic use: 5 cum/day

Water Balance (Construction Phase)				
Sr. No.	**Consumption**	**Input m^3/Day**	**Loss m^3/Day**	**Effluent m^3/Day**
1.	Construction Activities	30	30 (Tanker consumption)	Nil
2.	Domestic (50 Site Workers)	5	1	4
Total		**35**	**31**	**4**

Water Balance (Operation Phase)					
Sr. No.	Component/ Head	Occupants	Water Requirement		Remarks
			Domestic	Flushing	
1	Total residential population	247	22.23	11.115	@ 90/45 lpcd
2	Total non residential population	94	1.88	2.35	@ 20/25 lpcd
4	Car washing	0.61 CMD			87 cars (@7L per car)
5	Total Quantity of Water Required	37.575 CMD			For a total population of 175 persons
6	Grey Water generated	19.00 CMD			19.00 CMD to Treatment plant (capacity 24 CMD)
7	Sludge generated	0.38 CMD			-
8	Grey Water treated recycled water	18.96 CMD			-

1] Source: - Water will be available from Mumbai (MCGM) for domestic use and from Tanker for construction purpose.

2] Storage: -Water for construction will be stored in open tank.

Drinking water will be stored in HDPE tank.

ii) **POWER**

DURING CONSTRUCTION

(Expected Consumption- about 0.3 MW)

1] An Electricity supply of 0.3 MW will be available from BEST. It is mainly required for some construction equipments, general lighting etc.

2] All Fire & Safety measures will be taken as appropriate and will be supervised by the Authority.

DURING OPERATION

Total Energy consumption: 0.65 MW

The electricity supply will be available from BEST/ TATA/RELIANCE.

iii) FUEL

DURING CONSTRUCTION PHASE

Diesel (5 L/day during excavation & 10 L/day post excavation).

All the equipment are electrically driven except JCB, porcelain, and concrete mixers.

DURING OPERATION PHASE

Diesel will be required to run the D. G. Set in case of power failure. Hence the quantity of diesel consumed will vary depending upon the usage of D. G set.

1. Storage: Diesel and oil will be stored in drums / tins with proper identification mark/labels in identified areas only.
2. Fire and safety measures will be taken as per the guidelines from concerned authority.
3. All Safety and fire precautions will be followed.

iv) MANPOWER

DURING CONSTRUCTION PHASE

(Expected Manpower – about 50)

Approximately 50 persons will be working during the peak time of construction phase. These persons will be on the project site during 0900 hrs. Except Security Personnel, who will be on the field round the clock for twenty – four hours.

DURING OPERATION PHASE

POPULATION

There will be about 247 persons residing in the building, 94 persons will be non residential staff including drivers, security etc. in the building.

4. CONSTRUCTION PHASE

The type of Construction Materials, Equipments used during the construction phase and persons involved in various activities on the field affect the status of environment to a great extent. The impact of construction Activities on various components of environment on the on the project site and surrounding area is predicated in this section.

4.1 LIST OF MATERIALS

The approximate construction material required for the proposed redevelopment is given below.

Sr. No.	Item	Unit	Quantity	Source	Process
1.	Sand	CUM	3976	River bed	Nil
2.	Aggregate	CUM	8845	Quarry	Crushing
3.	Standard Bricks	M.T.	3201	Red Soil	Heating, Moulding
4.	Timber	M.T.	145	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	273	-	-

- The basic engineering materials like aggregate, cement, sand and bricks/blocks will be purchased locally. However, finishing materials will be purchased keeping in mind the energy conservation aspect.

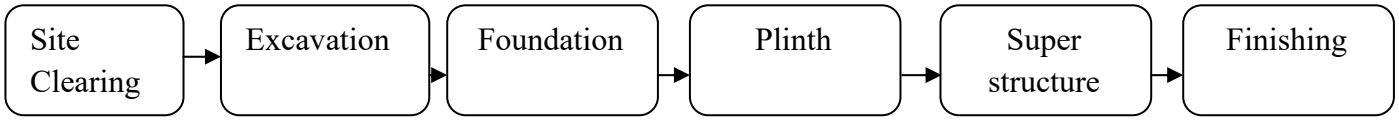
4.2 LIST OF EQUIPMENTS

The construction equipments required for the residential building is given below.

Sr. No.	Equipments	Numbers	Operation	Duration
1.	JSB, Poclain	1	Diesel	Short
2.	Dumpers	2	Diesel	Short
3.	Goods lifts/ Personal lifts	1	Electric	Total
4.	Vibrators	4	Electric	Total
5.	Dewatering Pumps	1	Electric	Total
6.	Concrete Mixers	1	Electric	Total
7.	Wood Cutting Machine	1	Electric	Total
8.	Drill Machine	1	Electric	Total

4.3 CONSTRUCTION PROCEDURES

The outline of the construction procedure is described below schematically.



Note:

1. The project is expected to be completed within five years (Maximum) period Construction Parameters and Quality will be strictly adhered to as per the approved architectural design data/map. All the regulations of government authorities will be followed.
2. All the safely precaution will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities.
3. Site barricading by corrugated tin sheets up to height of 5.0 mtrs will be done to protect the surrounding area of the project site from nuisance /dusting.
4. All electrical connections & cables will be checked by authorized persons to ensure the safety of workers on field.
5. Water sprinkling will be done, wherever required to reduce the dusting in atmosphere. Jute barricading along building / plot boundary shall be provided to minimize noise level from construction activities.
6. The safety and security officers shall supervise the site.
7. Safety helmets will be mandatory to all the persons present on the site during the construction activities.
8. Hand gloves and dust masks will be provided to persons handing construction materials during the operation.
9. Safety belts will be provided to the persons working at height during the operation.
10. Safety nets will be arranged at a height at about 5.0mtr.when the structures get raised above the required height from the ground.

5. ENVIRONMENTAL CONCERNS

5.1 AIR POLLUTION

1] Source: - The source of Air Emissions is from the use of some equipment like concrete pumps, mixers, etc. These equipments consume Diesel as fuel during their operation. Carbon Monoxide, Hydrocarbons, Oxides of Nitrogen and Particulate Matter etc. will be the major pollutants.

Fugitive Emissions i.e. Emissions from construction activities will mainly consist of dust. Movement of Heavy & light vehicles, for loading and unloading of Construction Materials, transporting people, will also add on to source of emissions.

Parameter	Permissible Range	CPCB Limits	AVG Range Before Activity	During Activity
SPM ($\mu g/m^3$)	100 ~ 200	200	80-100	150-200
RSPM ($\mu g/m^3$)	50 ~ 100	100	20-30	50-100
SO2 ($\mu g/m^3$)	50 ~ 80	80	10-15	10-15
NOx ($\mu g/m^3$)	40 ~ 80	80	5-10	5-10

Ref: 24 Hourly values as per Central Pollution Control Board, National Ambient Air Quality Monitoring, Notification 11th April, 1994, Schedule 1.

5.2 AIR POLLUTION MITIGATION

Sr. No.	Source	Mitigation	
1.	Vehicle	i]	All the vehicles coming to the site will be ensured to be in good condition having PUC.
		ii]	Public awareness to use Green Fuel will be done.
2.	Solid Waste	i]	Proper segregation and collection of waste will be ensured.
		ii]	Location of loading and unloading will be fixed.

		iii]	Good Housekeeping practices will be ensured at the premises.
3.	Construction Activities	i]	Noise / Dust nuisance preventions by barricading site up to 5.0 meter height by GI Sheets
		ii]	Water sprinkling on dry site, sand.
		Iii]	Maximum use of electrical driven construction equipments with regular maintenance.

5.3 WATER POLLUTION

1] **Use**: - The MCGM water will be used for domestic purpose i.e. drinking water for staff and laborers working on the field whereas bore well water/Tanker water will be used for various constructions activities like, Concreting, Plastering , Flooring & Finishing etc.

2] **Effluent**: - There will be no generation of effluent from construction activities as the water used for concreting; Plastering, Flooring and Finishing etc. will get evaporated during drying or curing time. All the construction activities are physical in nature. The Domestic Effluent will be generated due to the persons working on the site who will require water for drinking, cleaning, bathing etc.

Sullage generated during operation phase will amount to 19.29 CMD of which 19.00 CMD will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

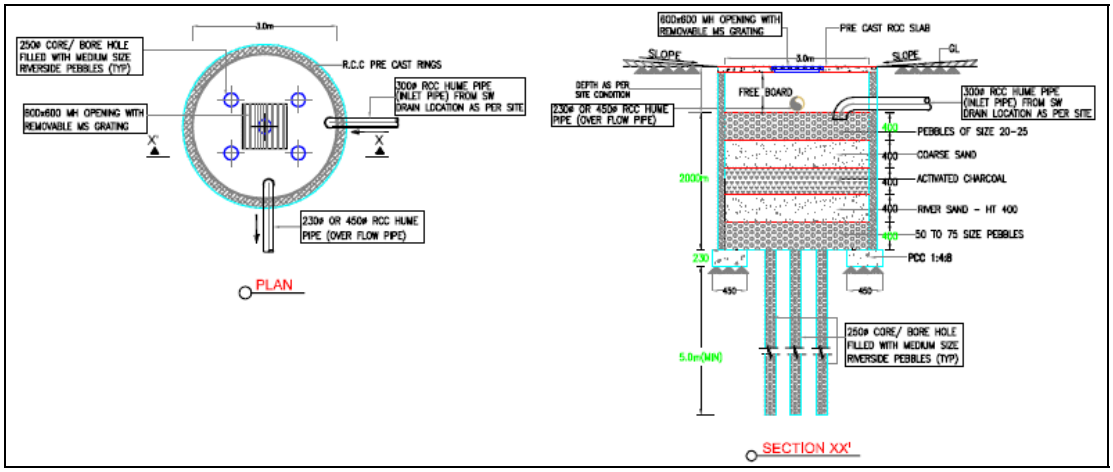
3] **Treatment & Disposal**: - The Domestic Effluent generated in construction phase will be disposed off in existing MCGM Sewer.

4] **Rain Water Harvesting**: - The Plot is occupied by a CESSED A category buildings. A new sale cum rehab building is now proposed to be redeveloped in Basement + Ground + 1st to 30th Upper Floor building. Roof rain water harvesting is proposed in the project. The permeable paver blocks are proposed along with 2 Recharge pits to increase the percolation of rain water into the soil rather than flowing

to the drain.

*** (AS PER MOEF GUIDELINES)**

- **Percolation Pits: 2 nos. (0.5 * 0.5 * 2m)**



5] **Storm Water Discharge**:

Storm water drains will be constructed for proposed facility as per the norms. The recharge pits and Rain water recharge pits will help to reduce the run off and reduce the load on external storm water drain.

5.4 NOISE POLLUTION

Location	Range dB (A)
	Day Time
National Ambient Air Quality Standards (For Residential Zone)	55

5.5 NOISE LEVEL MITIGATION

Sr. No.	Source	Mitigation
1.	Near Residential Areas	i] Site Barricading by corrugated tin sheets will be done to protect the surrounding area. ii) Construction Activity will be carried out during daytime only.
2.	Nearby Traffic	i] All the vehicles coming to the site will be ensured in good condition, having Pollution Under Check (PUC). ii] Smooth Roads will be maintained in a project site.
3.	Construction Equipments	i] All the equipments will be run during daytime only. ii] Lubricants will be applied to all the equipments at proper interval. Iii] Acoustic Enclosure will be provided for all the Equipments

2] It is evident from the nature of operation (i.e. Construction) that the Concentration of suspended particulate matter would be higher than the other two parameters.

3] Control of Emission: - Proper precaution will be taken to reduce the particulate matter by water sprinkling on the dry site area, barricading the periphery by corrugated tin Sheets of 5.0 mtrs height to protect the surrounding area from dusting. The pollution generated will be controlled by, allowing vehicles that will comply to mass Emission Standard (Bharat Stage –III) stipulated by Central Pollution Control Board (CPCB)–Ministry of Environment & forest (MoEF), New Delhi. Also it will be ensured that the vehicles will carry PUC certificate. To minimize air pollution efforts shall be made by use of equipments, which area electric power driven.

5.6 SOLID WASTE MANANGMENT DURING OPERATIONAL PHASE

1] The project proponents have proposed provision for segregation and collection of biodegradable & non-biodegradable waste within the premises.

2] Solid transfer stations have been proposed for collection, sorting, segregation, storage & transportation of biodegradable and non-biodegradable waste.

Calculation for quantum of solid waste to be generated in the building:

- Total no of persons = 341 persons
- Total Residential Population= 247 persons
- Total Non Residential Population = 94 persons
- Generation of Total waste per person of residential population = 0.6 kg/ capita per day (as per As per assessment of per capita Waste Quantity – a) Residential Refuse : 0.3 to 0.6 kg/ capita per day, of NBC 2016)
- Generation of Total waste per person of Commercial population = 0.2 kg/ capita per day (as per As per assessment of per capita Waste Quantity – b) Commercial Refuse : 0.1 to 0.2 kg/ capita per day, of NBC 2016)
- Thus total solid waste generation, for residential population will be 247 x 600 gms/person/day = 148.20 Kg
- Thus total solid waste generation, for Commercial/ Non Residential population will be 94 x 200 gms/person/day = 18.80 Kg
- Thus solid waste generated in the project will be 167 kg/day.
- Generation of organic waste = 40% of total waste (as per guidelines in As per assessment of per capita Waste Quantity, of NBC 2016)
- So total organic waste generated by the occupants = 167 x 40 % = 66.88 Kg by all occupants of the building.
- Total inorganic waste generated will be 100.20 kg/ day.

5.6.1 Measures for treatment of Solid Waste Generated on the site

- Segregation of non biodegradable and biodegradable garbage on site.
- Bio degradable garbage: Treatment in OWC (Organic Waste Convertor)

- Non- biodegradable garbage: Segregated into recyclable and non-recyclable waste.
- Recyclable waste: Handed over to recyclers
- Non-recyclable waste: Handed over to M.C.G.M.
- STP Sludge (Dry sludge): Used as manure within the premises for plants.
- We will provide two bins of each capacity 5 kg at every landing.
- The debris generated due to demolition and excavated material shall be partly reused on site and partly shall be disposed off to authorized Landfill sites with permission from M.C.G.M.

5.7 DEMOLITION WASTE AND CONSTRUCTION WASTE MANAGEMENT

As per the G.S.R. 317(E), dated 29.03.2016, Construction and Demolition Waste Management Rules, 2016,

"*(4) Duties of the waste generator -*
(1) Every waste generator shall prima-facie be responsible for collection, segregation of concrete, soil and others and storage of construction and demolition waste generated, as directed or notified by the concerned local authority in consonance with these rules.

(4) Every waste generator shall keep the construction and demolition waste within the premise or get the waste deposited at collection centre so made by the local body or handover it to the authorized processing facilities of construction and demolition waste; and ensure that there is no littering or deposition of construction and demolition waste so as to prevent obstruction to the traffic or the public or drains.

(5) Every waste generator shall pay relevant charges for collection, transportation, processing and disposal as notified by the concerned authorities;"

The project proponent will apply to the The Collector and District Magistrate Office, Mumbai City and the Solid Waste Management Department, M.C.G.M., for "Permission for handling, transportation & dumping" of debris and construction waste generated under "Debris Management Plan" for the project and dump the demolition and construction waste at said the permission letter given by MCGM.

The following care will be taken-

1. The developer will barricade along the boundary of the plot to sufficient height (i.e. Minimum 20 ft.) so as to avoid escape of dust particles, as well as deposit to spreas on street/ footpath, drains, etc

2. The developer will make arrangement to cover the vehicles deployed, to be covered by tarpaulin or other suitable material.
3. Desinated transport Contractor and designated vehicles with given numbers, on the permissions, with designated path will be followed.

5.8 SEISMICITY:

Seismic zone map was initially based on the amount of damage suffered by the different regions of India because of earthquakes. Following are the varied seismic zones of the nation,

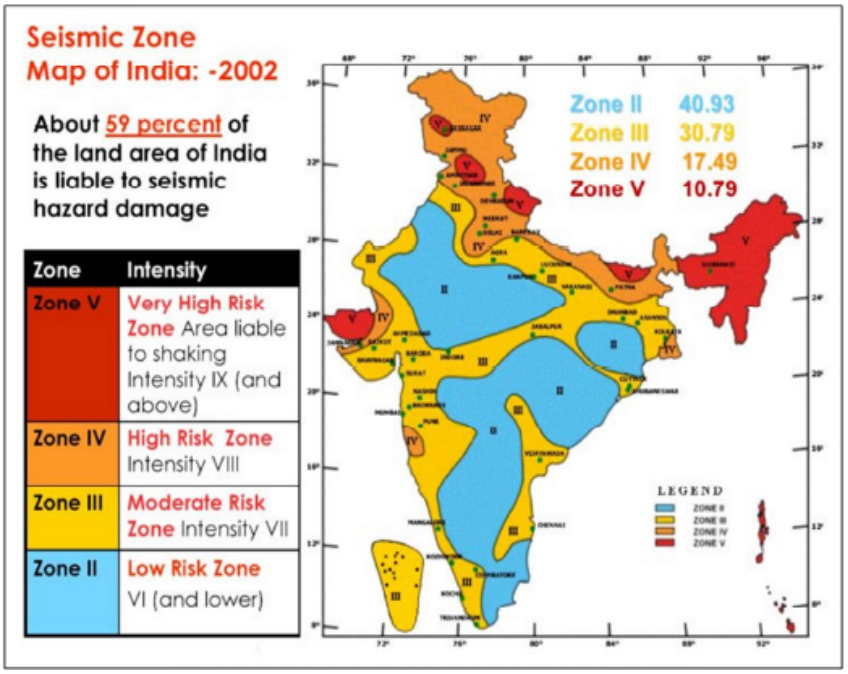
• Zone - II: This is said to be the least active seismic zone.

• Zone - III: It is included in the moderate seismic zone.

• Zone - IV: This is considered to be the high seismic zone.

• Zone - V: It is the highest seismic zone.

Proposed project and Study Area comes under Seismic Zone III.



6. PROJECT SCHEDULE AND COST ESTIMATES

The Proposed Project is Redevelopment project and will be started as soon as all government NOC's and CRZ Clearance is received to start the work. The projected Date of Start is June 2018 while the date of completion will be June 2021 if everything went as per planning.

7. TRAFFIC MANAGEMENT

7.1 CONSTRUCTION PHASE

- Storage and Godown area will be properly identified.
- There will be about adequate wider space for movements of vehicles and parking.
- The area for loading and unloading will be located at proper demarcated location in the premises.
- Thus the traffic management on the project site will be easily and smoothly monitored without any hindrance to the regular flow of traffic on the main road.

7.2 OPERATIONAL PHASE

- About 87 cars per day are expected to be accommodated in the premises. The parking space will be provided in basement and under stilt / parking floors. There is ample car parking space in the building on all sides; there will be smooth movements of cars.
- There will be 6.0 mtrs wide approach road to the building from municipal road for movements of vehicles and parking.
- Traffic Management Plan system will be approved from concern MCGM Authority.
- Thus the traffic management will be easily and smoothly monitored without any hindrance to the regular flow of traffic on the main road having width of 18.30 m.

8. ENVIRONMENTAL, HEALTH AND SAFETY

All the safety and security measures shall be observed at constructions site. Safety precautions will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities. The project authorities will ensure use of safety equipments for workers during execution process. The safety

and security officers shall supervise the site. Proper training will be given to workers and authorities to handle the hazard situation.

8.1 SAFETY MEASURES ON SITE

1. Parameters and Quality will be strictly adhered to as per the approved architectural design data/map. All the regulations of government authorities will be followed.
2. All the safely precaution will be observed as per the guidelines during the construction phase. Personal Protective Equipments (PPE) will be provided to all the personnel involved in the construction activities.
3. Site barricading by corrugated tin sheets up to height of 5.0mtr will be done to protect the surrounding area of the project site from nuisance/ dusting.
4. All electrical connections & cables will be checked by authorized persons to ensure the safety of workers on field.
5. Water sprinkling will be done, wherever required to reduce the dusting in atmosphere. Jute barricading along building / plot boundary shall be provided to minimize noise level from construction activities.
6. The safety and security officers shall supervise the site.
7. Safety helmets will be mandatory to all the persons present on the site during the construction activities.
8. Hand gloves and dust masks will be provided to persons handling construction materials during the operation.
9. Safety belts will be provided to the persons working at height during the operation.
10. Safety nets will be arranged at a height at about 5.0 mtrs when the structures get raised above the required height from the ground.

9. BENEFITS OF THE PROJECT

- The proposed redevelopment will initiate redevelopment of surrounding old building.
- The surrounding area will also be developed from residential point of view.

- It will provide employment opportunities to the local people in terms of labour during construction and services personnel during operational phase.
- Modern sanitation and infrastructure facilities will have minimal impact on living condition of local people.
- The project will improve living standard and welfare of the area and local people.