EXECUTIVE SUMMARY

REDEVELOPMENT OF RESIDENTIAL PROJECT

AT

F. P. NO. 625, TPS IV OF MAHIM DIVISION, RANADE ROAD,DADAR,

MUMBAI

BY

M/S SURAJ ESTATE DEVELOPERS PVT. LTD.

1. INTRODUCTION TO PROJECT

After recognizing the need of development of plot bearing F. P. No. 625, TPS IV of Mahim Division, Ward No. GN- 4644(3), Building No. 89, Ranade Road, Dadar, Mumbai, having total 5 nos. of tenants were residing at very dangerous building structure is now being developed by M/s Suraj Estate Developers Pvt. Ltd. The developer of the plot is going to develop a Basement + Ground Floor + 1- 7 upper floors for residential cum commercial building.

There existed one CESSED category structure and 5 Non Cessed ground storey structure on the plot. The existing CESSED category structure was of Ground Floor + 1 upper Floor with 5 nos. of Residential tenants having 296.23 sq. mtrs of built up area. 5 Nos. of Non CESSED Structures consuming 649.62 sq mtrs of built up area respectively, which was inclusive of staircase areas. The land use of the Existing plot is residential and commercial as per certified tenant list by Deputy Engineer, GN, B.B.R. & R.B. Board, Bombay, dated 09/07/2003 and ins1vkjd¢P;kpection extract of MCGM and CESSED category certificate for the property situated in the Residential zone. MHADA has awarded revised NOC for redevelopment of the said property with 2.5 FSI or FSI required for the rehabilitation of existing occupiers plus 50% incentive, whichever is higher; dated 10/06/2013 for the CESSED Category Certificate. Both the CESSED and Non CESSED category structures are affected by CRZ II area.

The existing cessed and non cessed structures are now being redeveloped into a residential cum commercial building of Basement + Ground Floor + 1- 7 upper Floors. The basement floor will be used for car parking. The ground floor will be having two shops, one 1BHK flat and one 1RK flat. The first floor will have one 1BHK flat and two 2BHK flat. The 2nd floor will have two 3BHK flats. The 3rd floor will also have three 2BHK flats. The 4th, 5th & 6th floors will have two 1BHK

flat and three 1RK flats on each floor respectively. The 7th floor will have two 1BHK flat, one 1RK flat & one 2BHK flat. Out of these 29 flats/ tenements and 2 shops, 5 flats/ tenements/shops will be given for rehabilitation of existing tenant. Total 26 flats will be sale components in this building.

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 and roads.

The site under reference is affected by CRZ-II zone. It abuts HTL of Arabian Sea. It is on the landward side of the existing Swatantrya Veer Sawarkar Road existing prior to 19/02/1991. 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. 23,29,66,00/- (Rupees Twenty Three Crore Twenty Nine Lakh Sixty six Thousand Only) as per the valuation report carried by certified registered valuer.

2. PURPOSE OF THE REPORT

Proposed redevelopment of plot bearing F. P. No. 625, TPS IV of Mahim Division, Ward No. GN- 4644(3), Building No. 89, Ranade Road, Dadar, Mumbai, and thereby obtain Environmental Clearance as per clause 33(7) of DCR – 1991 in force as on 6th January 2011. The Plot was occupied by a cessed A category building along with 5 Nos. of NON CESSED building, which is proposed to be redeveloped. As per MoEF Notification dated 6/1/2011, redevelopment of dilapidated, cessed and unsafe buildings in CRZ areas are permitted with special advantages, in which the project is planned as per DCR's in force as on 6/1/2011 and staircase/ lobby/ lift area is

claimed free of FSI, as per clause 35(2)c of DCR 1991. The proposal is submitted for prior CRZ clearance, as per the requirement of amended CRZ notification-2011 and the check list finalised by MCZMA vide Office Memorandum dated 02/07/2011..

Current development thus will help the existing tenant to get permanent, safe structure..

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.

3. DESCRIPTION OF THE PROJECT

3.1 NATURE OF THE PROJECT

This is a proposal for redevelopment of residential building situated at F. P. No. 625, TPS IV of Mahim Division, Ward No. GN- 4644(3), Building No. 89, Ranade Road, Dadar, Mumbai, in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. (Approx distance 205 mtrs.)

The proposal is for redevelopment of residential building, which is situated on the landward **s**ide of existing Swatantrya Veer Sawarkar Road, the roads **in existance prior to 19/2/1991, as may be seen from CZMP of Mumbai.**

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 2.18, as per DCRs in force as on 6 th Jan 2011, which is worked out on the governing criteria of rehab plus 50% incentive on the remainder plot area after deducting the land component of non cessed category structures.

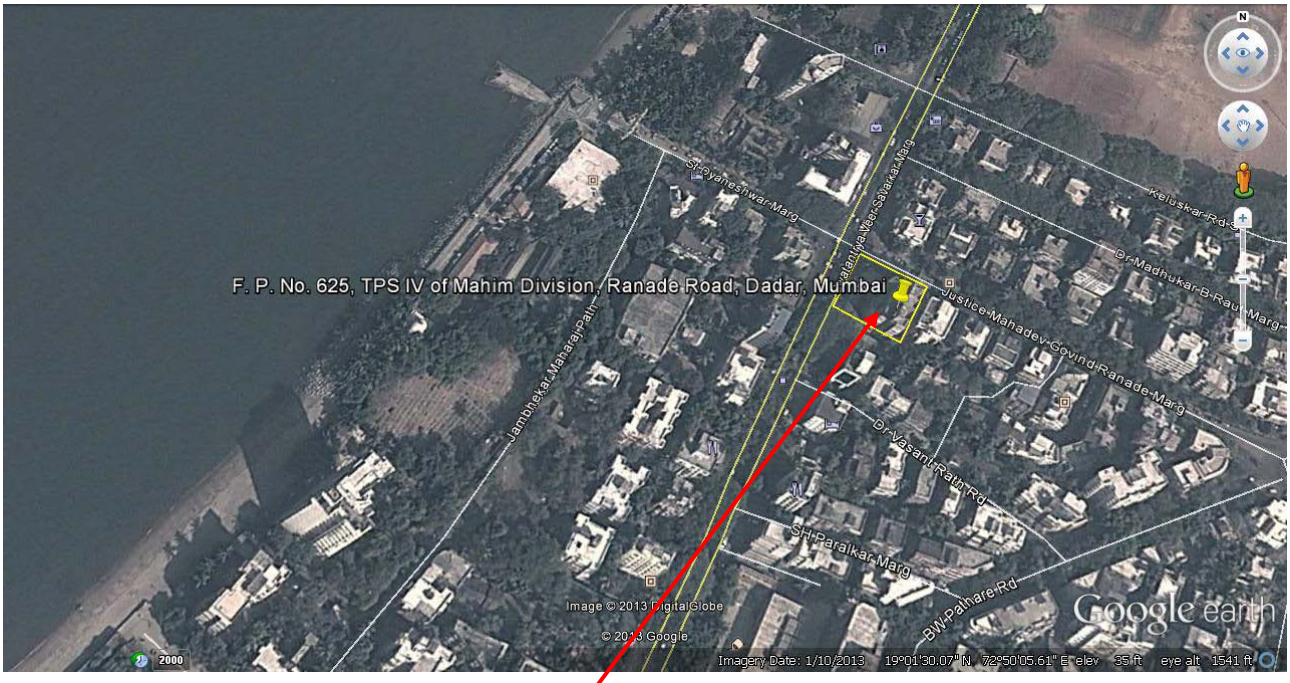
3.2 SIZE OF THE PROJECT

Total Area of the said plot is 788.00 sq. mtr. Cost of the Project is Rs. 23,29,66,00/- (Rupees Twenty Three Crore Twenty Nine Lakh Sixty six Thousand Only).

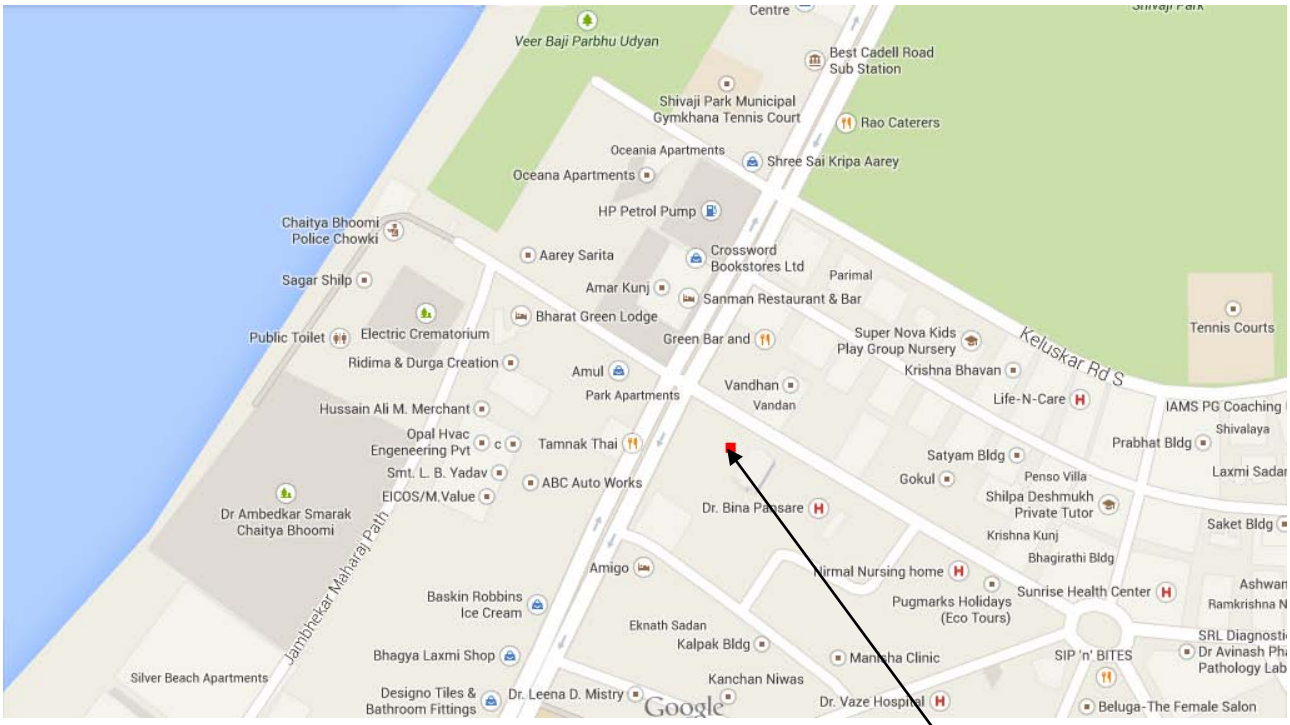
3.3 LOCATION

The F. P. No. 625, TPS IV of Mahim Division, Ward No. GN- 4644(3), Building No. 89, Ranade Road, Dadar, Mumbai is in the heart of the city. The nearest railway station is Dadar Railway Station, 1.30 Km on the central line.

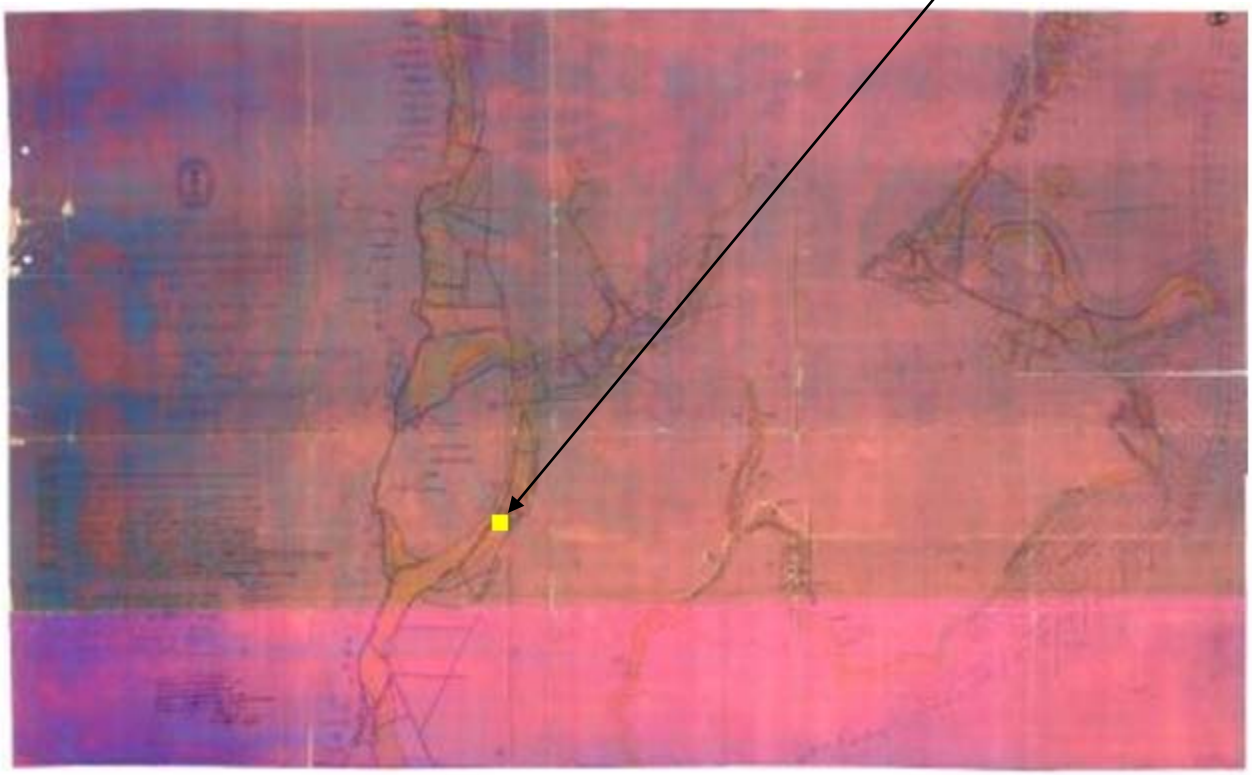
Google Earth Image of the site



SITE UNDERREFERENCE



SITE UNDER REFERENCE



CZMP Plan showing location of reference Plot

3.4 SITE DESCRIPTION

The site under reference is affected by CRZ-II zone and the property fall on landward side of the existing Swatantrya Veer Sawarkar**,** which is reflected in CZMP plan. 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 788.00 sq. mtr.

Town / Tehsil	:	Mumbai
District	**:**	Greater Mumbai
State	**:**	Maharashtra
Latitude	**:**	$19^{o}01'$ 30.41" N
Longitude	**:**	$72^{o}50'$ 09.53" E

3.5 PROPOSED DEVELOPMENT

3.5.1 AREA

Sr. No.	Description		Details
1	Total Plot Area		788.00 sq. mtrs.
2	Deductions for setback area		160.68 sq. mtrs.
3	Balance area of plot(1-2)		627.32 sq. mtrs.
4	Additions for FSI (a) 100%		627.32 sq. mtrs.
5	Total Area of Plot		788.00 sq. mtrs.
6	FSI Permissible		2.50 & 1.33
7	Plot area for NON CESSED structure		138.38 sq. mtrs.
8	Remainder of plot area after deducting land component comprising of NON CESSED structure		649.62 sq. mtrs.
9	Permissible Floor Area	138.38 x 1.33 = 184.04 sq. mtrs. 649.62 x 2.50 = 1624.05 sq. mtrs.	1808.09 sq. mtrs.
10	Excess Balcony Area taken in FSI		11.62 sq. mtrs.
11	Proposed Area		1709.44 sq. mtrs.
12	Total Built up Area Proposed		1721.00 sq. mtrs.
13	FSI Proposed		2.18
14	Total Construction Area		2700.00sq.mtrs. (Approx)
15	Parking required by MCGM Rule		15
16	Parking provided		17

PROJECT DEVELOPMENT DETAILS

Proposed development		
1	Structure of Building	Basement + Ground Floor + 1-7 upper floors including commercial area.
2	Tenements existing	CESSED structure: 5 residential tenements NON CESSED structure: 5 tenements
3	Tenements proposed	31 including Commercial and Residential tenements.
4	Height of Building from Ground level	26.85 mtrs
5	Emergency Power supply (D.G. Nos. x KVa	1 no. 35 KVa
6	Area required for D.G sets	5 sq. mt
7	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	145	13.05	6.525	@ 90/45 lpcd
2	Total non residential population	27	0.54	0.675	@ 20/25 lpcd
3	Total Commercial population	8	0.16	0.2	@ 20/25 lpcd
4	Car washing	0.09 CMD			17 cars (@ 5L per car)
5	Total Quantity of Water Required	21.15 CMD			For a total population of 180
6	Grey Water generated	10.84 CMD			10.84 CMD to Treatment plant (capacity 14 CMD)
7	Sludge generated	0.22 CMD			-
8	Grey Water treated recycled water	10.81 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: 0.19 MW

The electricity supply will be available from BEST.

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 145 persons residing in the building, 27 persons will be non residential staff including drivers, security and 8 people will be commercial population 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	795	River bed	Nil
2.	Aggregate	CUM	1769	Quarry	Crushing
3.	Standard Bricks		640	Red Soil	Heating, Moulding
4.	Timber	M.T	29	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	55	-	-

- 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.
- Fly ash generated from Thermal Power Plants will be used in concrete to the extent of about 20 to 30 %. Depending up on the grade of concrete specified.

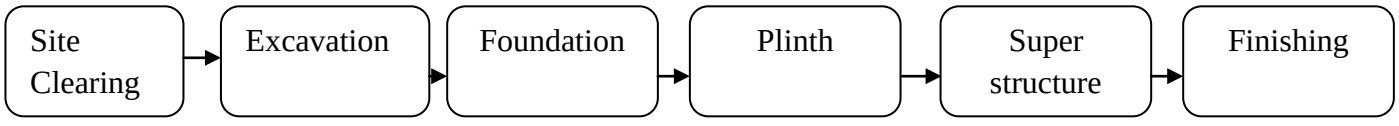
4.2 LIST OF EQUIPMENTS

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 three 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.

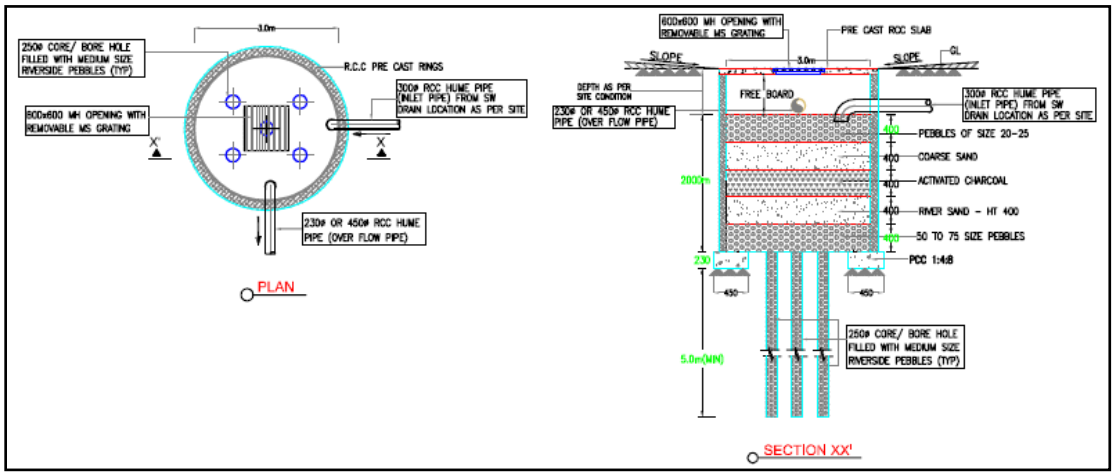
Sullage generated during operation phase will amount to 10.84 CMD which will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

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 building. The said Cessed category building is now proposed to be redeveloped in basement + ground + 1-7 Upper Floor building. The plot area considered for redevelopment of CESSED category building is 788.00 sq mtrs, which is very small. Hence roof rain water harvesting is proposed in the project. The permeable paver blocks are proposed along with 1 Recharge pits to increase the percolation of rain water into the soil rather than flowing to the drain.

*** (AS PER MOEF GUIDELINES)**

- **Percolation Pits: 1 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 runoff 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 –II) 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

1] Normal debris, waste concrete, soil, broken bricks, waste plasters etc. will be collected properly and will be reused for land filling in the premises.

2] Total solid waste (Quantity about 90 kg per day) and organic waste (28 Kg/ day) will be segregated properly and stored in a separate bins and will be disposed off as per MCGM rules.

3] Metallic Waste and paper waste will be collected separately and will be salvaged or recycled or sold to authorized recyclers.

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 2014 while the date of completion will be June 2017 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 17 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.

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.

SEISMIC ZONE MAP OF INDIA