

## **1. INTRODUCTION TO PROJECT**

After recognizing the need of development of plot bearing FP No.782 of TPS (IV), Mahim, at Gokhale Road, Dadar, Mumbai having total 19 nos. of tenants 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 Ground Floor + 1- 9 upper floors for residential cum commercial building.

There exists one CEsSED structure and three Non Cessed structures on the plot. The existing CEsSED structure is of Ground Floor + 1 upper Floor having 19 nos. of Residential cum commercial tenants and three Non CEsSED structures are of Panchashil ( Gr. fl +5 upper floors -part), Suyog (Gr. fl + 3 upper floors) and Building no 48-BA (Ground floor structure) consuming 1151.60sq mtrs, 739.97 sq mtrs and 217.25sq. mtrs of built up area respectively, which is inclusive of staircase areas. The land use of the Existing plot is residential and commercial as per the Inspection Extract of MCGM and CEsSED category certificate for the property situated in the Residential zone. The cessed structure is not affected by CRZ II but the non-cessed structure on the same plot falls under CRZ II area.

The existing cessed structure is now being redeveloped into a residential cum commercial building of **Ground Floor + 1- 9 upper Floors for Residential and Commercial use**. Three Non-cessed structures are to be retained on the said plot area. 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.

The site under reference is partially affected by **CRZ-II zone**. It abuts HTL of Arabian Sea. It is on the landward side of the existing Swatanrya Veer Sawarkar Road and Vijay Manjerakar Road. 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. 14, 24, 00,000/- (Rupees Fourteen Crores Twenty Four Lacs Only) as per the valuation report carried by certified registered valuer.

## **2. PURPOSE OF THE REPORT**

Proposed redevelopment of plot bearing FP No.782, of TPS (IV), Mahim, at Gokhale Road, Dadar (W), Mumbai and thereby obtain Environmental Clearance as per clause 33(7) of DCR – 1991 in force as on 6th January 2011. The Plot is occupied by a CEsSED A category structure along with three non cessed structures. The said Cessed category structure is now proposed to be redeveloped and three Non-cessed structures are to be retained on the plot. The present proposal envisage the development of CEsSED structure on NON CRZ portion of the plot, by availing 3 FSI as per DCR's in force as on today.

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 6<sup>th</sup> 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 **FP No.782 of TPS (IV), Mahim, at Gokhale Road, Dadar, Mumbai** in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. (Approx distance 174 m)

The proposal is for redevelopment of residential building, which is situated **on the landward side of existing Swatantrya Veer Sawarkar Road, both roads in existence 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 3.00 on the remainder of the plot area after deducting the land component of Non-CESSED category structures, as per DCR's in force as on today.

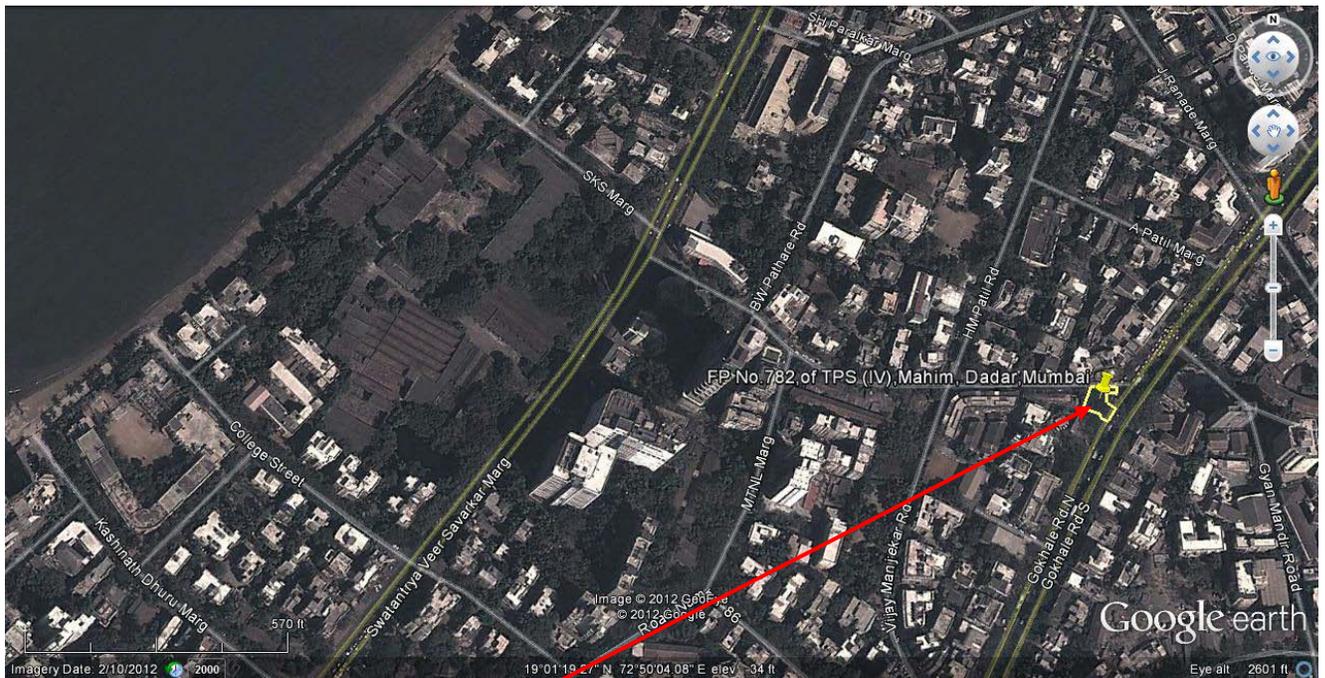
#### **3.2 SIZE OF THE PROJECT**

Total Area of the said plot is 1874.59 sq. mtr. out of which 609.59 sq.mtr. plot area is out of CRZ II area and comprises cessed structure and part of Non CESSSED structure on the same. The total plot area, less land component of Non-CESSED structures, is actually less than the plot area beyond CRZ and 3 FSI is claimed on this lesser area i.e. the 289.01 sq mtrs of plot area is considered for FSI purpose for which 844.09 sq. mtr. area is proposed for FSI purpose as per DCR's in force as on today. Cost of the Project is Rs.14,24,00,000.00 ( Rupees Fourteen Crore Twenty Four Lacs Only). Fungible FSI as per present rules is claimed on the BU area accrued on NON CRZ portion.

### 3.3 LOCATION

The FP No.782 of TPS (IV),Mahim,at Gokhale Road,Dadar,Mumbai is in the heart of the city. The nearest railway station is Dadar Railway Station, 0.8 Km on the central line.

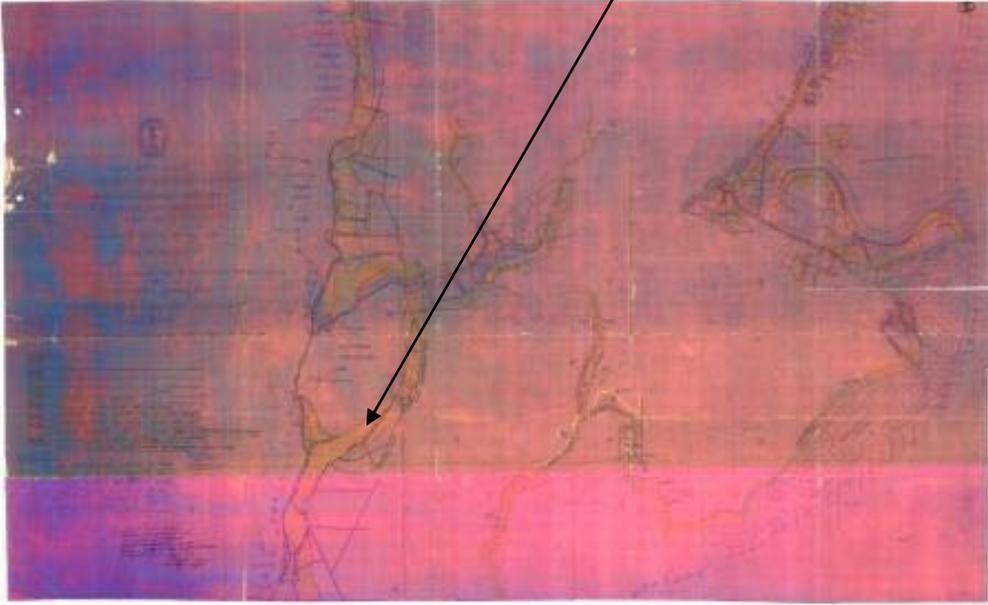
#### Google Earth Image of the site



#### SITE UNDERREFERENCE



SITE UNDER REFERENCE



CZMP Plan showing location of reference Plot

### 3.4 SITE DESCRIPTION

The site under reference is partially 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 1874.59 sq. mtr. out of which 1390.02 sq.mtr. plot area is in CRZ II and have three non cessed building on the same, which are to be retained on the plot. The proposed redevelopment of cessed building is having plot area of 289.01 sq.mt and the same will be used for construction activity.

Town / Tehsil : Mumbai

District : Greater Mumbai

State : Maharashtra

Latitude : 19°01' 17.93" N

Longitude : 72°50' 14.48" E

### 3.5 PROPOSED DEVELOPMENT

#### 3.5.1 AREA

Sr. No.	Description	Details
1	Total Plot Area	1874.59sq mtrs
2	Deductions for setback area	0.00sq mtrs
3	Balance area of plot(1-2)	1874.59sq mtrs
5	Plot area under CRZ	1390.02 sq mtrs
6	Plot are under Non CRZ	609.59 sq mtrs
7	BU Area of existing non Cessed structures to be retained (Staircase and lift areas are counted in FSI)	2108.83 sq mtrs
8	Plot considered for Redevelopment of CESSSED structure	289.01 sq mtrs
9	Permissible Built up area (without fungible)	867.03 sq mtrs
10	Total Built up Area Proposed (without fungible)	844.09 sq mtrs
11	FSI Proposed	2.90
12	Total Construction Area	2700.00 sq mtrs (Approx.)
13	Parking required by MCGM Rule	14
14	Parking provided	23

**PROJECT DEVELOPMENT DETAILS**

Proposed development		
1	Structure of Building	Ground Floor + 1-9 upper floors including upper parking floors, refuge areas and commercial floors.
2	Tenements existing	19 including Commercial and Residential
3	Tenements proposed	26 including Commercial and Residential
4	Height of Building from Ground level	34.80 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	
	<ul style="list-style-type: none"> <li>• Earthquake Resistance Building structure</li> <li>• Rain water Harvesting System in the complex</li> <li>• Energy Conservation; Provision of Solar water heating system.</li> <li>• Eco-Friendly Measures</li> <li>• Optimum use of Timber</li> </ul>	

### 3.5.2 UTILITIES

The Utilities required during the construction phase are 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

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

<b>Water Balance (Operation Phase)</b>					
Sr. No.	Component/ Head	Occupants	Water Requirement		Remarks
			Domestic	Flushing	
1	Total residential population	90	8.1	4.05	@ 90/45 lpcd
2	Total non residential population	24	0.48	0.6	@ 20/25 lpcd
3	Total Commercial population	16	0.32	0.4	@ 20/25 lpcd
4	Car washing	0.12 CMD			23 cars (@5L per car)
5	Total Quantity of Water Required	13.95 CMD			For a total population of 130
6	Grey Water generated	7.01 CMD			7.10 CMD to Treatment plant (capacity 9 CMD)
7	Sludge generated	0.14 CMD			-
8	Grey Water treated recycled water	7.00 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: 0.17 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 90 persons residing in the building, 24 persons will be non residential staff including drivers, security and 16 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	619	River bed	Nil
2.	Aggregate	CUM	1376	Quarry	Crushing
3.	Standard Bricks		498	Red Soil	Heating, Moulding
4.	Timber	M.T	23	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	42	-	-

- 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.

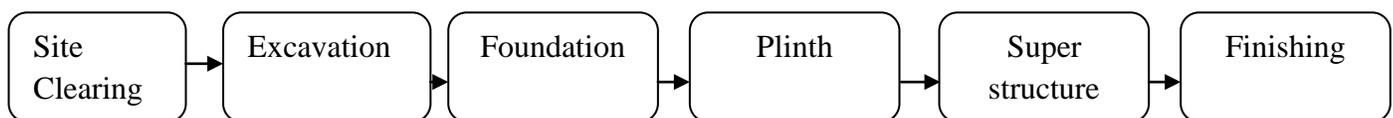
## 4.2 LIST OF EQUIPMENTS

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 ( $\mu\text{g}/\text{m}^3$ )	100 ~ 200	200	80-100	150-200
RSPM ( $\mu\text{g}/\text{m}^3$ )	50 ~ 100	100	20-30	50-100
SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	50 ~ 80	80	10-15	10-15
NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	40 ~ 80	80	5-10	5-10

Ref: 24 Hourly values as per Central Pollution Control Board, National Ambient Air Quality Monitoring, Notification 11<sup>th</sup> 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.

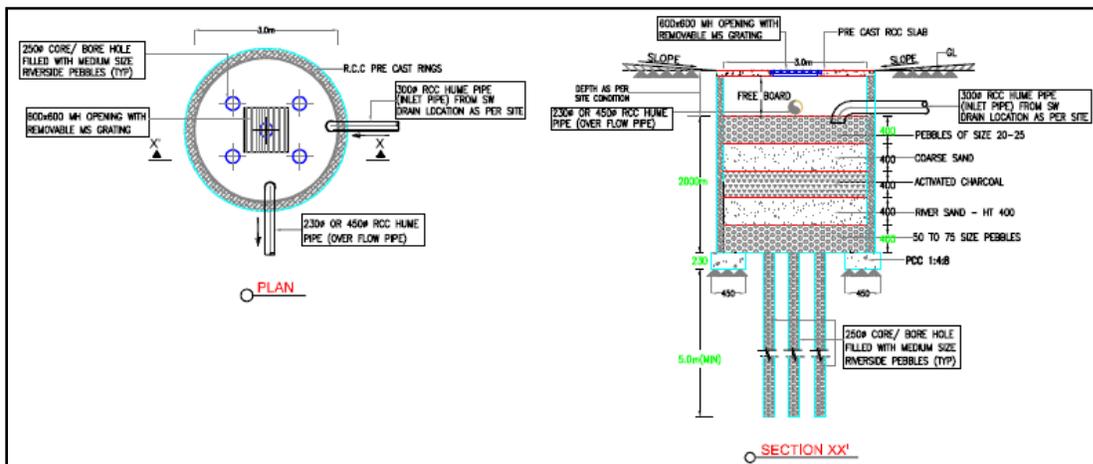
Sullage generated during operation phase will amount to 14.36 CMD of which 7.12 CMD will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

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 building along with three non cessed building. The said Cessed category building is now proposed to be redeveloped and three Non-cessed structures are to be retained. The plot is already covered with CESSSED A category structure of G + 1 upper floor and three NON CESSSED buildings. The said Cessed category building is now proposed to be redeveloped in ground + 1-9 Upper Floor building and three Non-cessed structures are to be retained. The plot area considered for redevelopment of Cessed category building is 289.01 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 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	<p>i] Site Barricading by corrugated tin sheets will be done to protect the surrounding area.</p> <p>ii) Construction Activity will be carried out during daytime only.</p>
2.	Nearby Traffic	<p>i] All the vehicles coming to the site will be ensured in good condition, having Pollution Under Check (PUC).</p> <p>ii] Smooth Roads will be maintained in a project site.</p>
3.	Construction Equipments	<p>i] All the equipments will be run during daytime only.</p> <p>ii] Lubricants will be applied to all the equipments at proper interval.</p> <p>Iii] Acoustic Enclosure will be provided for all the Equipments</p>

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 65 kg per day) and organic waste (20 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 2013 while the date of completion will be June 2015 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 60 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.
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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

