

**EXECUTIVE SUMMARY**

**REDEVELOPMENT OF RESIDENTIAL  
PROJECT**

**AT**

**C.S. NO. 220 AND 221 OF MAZGAON  
DIVISION, SITUATED AT 13-15-17, 1<sup>ST</sup>  
CARPENTER STREET, E WARD, MUMBAI**

**BY**

**M/S. NAKHWA & JASOL DEVELOPERS  
L.L.P.**

## **1. INTRODUCTION TO PROJECT**

After recognizing the need of redevelopment of building having total 18 nos. of tenants on the plot bearing C.S. No. 220 and 221 of Mazgaon Division, Situated at 13-15-17, 1st Carpenter Street, E Ward, Mumbai, is now being developed by M/s. Nakhwa & Jasol Developers L.L.P. The developer is going to construct a new building of a Ground Floor + 1<sup>st</sup> to 19<sup>th</sup> upper floors for residential use. 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.

There exists CEsSED structure on the plot under reference. The existing CEsSED structure is of Ground Floor + 1 upper floor having 18 nos. of residential tenants consuming 427.22 sq mtrs of built up area as certified by Bombay Building Repair & Reconstruction Board. The land use of the existing plot is residential as per the list of tenants as certified by Bombay Building Repair & Reconstruction Board and CEsSED "A (R) + C (R)" category certificate as certified by Asstt. Assessor & Collector 'E' Ward of MCGM for the property situated in the Residential zone. The CEsSED structure is affected by CRZ II area.

The ground floor in the proposed building will be used as mini rotator parking floor and other amenities. The first to fourth floor will have one multipurpose room, along with mini rotator parking on each floor. The 5<sup>th</sup>, 6<sup>th</sup>, 9<sup>th</sup> to 13<sup>th</sup>, 16<sup>th</sup> to 17<sup>th</sup> floors will have one 1BHK flat and one multipurpose room on each floor. The 7<sup>th</sup> to 8<sup>th</sup> floor, 14<sup>th</sup> to 15<sup>th</sup> and 18<sup>th</sup> to 19<sup>th</sup> floors will have one no. of 1BHK flats duplex shared between the floors along with one multipurpose flat on 4<sup>th</sup>, 14<sup>th</sup> and 18<sup>th</sup> floors each. The 8<sup>th</sup> and 15<sup>th</sup> floor will be used as refuge area. Thus the developer has proposed total 31 residential flats in the said building. Thus there will be 18 flats for the rehabilitation of the existing tenants and 13 flats to be used as sale flats, in this proposal.

The site under reference is affected by **CRZ-II zone**. It is within 500 mtrs. from the HTL of

Arabian Sea, on the eastern side (from Port Trust side). It is on the landward side of the existing Mujawar Pakhadi 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. 3, 14, 47,000/- (Rupees Three Crore Fouteen Lakhs Forty Seven Thousand Only) as per the valuation report carried by certified registered valuer.

## **1. PURPOSE OF THE REPORT**

Proposed redevelopment of plot bearing C.S. No. 220 and 221 of Mazgaon Division, Situated at 13-15-17, 1st Carpenter Street, E Ward, Mumbai and thereby obtain CRZ Clearance as per clause 33(7) of DCR – 1991 in force as on 6th January 2011. The Plot is occupied by a CESSSED category structure. The said CESSSED category structures are now proposed to be redeveloped on the plot. The present proposal envisage the development of CESSSED structure, by availing 3.576 FSI, which is rehab plus 60% incentive over rehab area as per DCR's in force as on 6<sup>th</sup> January 2011.

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).

## **2. DESCRIPTION OF THE PROJECT**

### **3.1 NATURE OF THE PROJECT**

This is a proposal for redevelopment of residential building situated at C.S. No. 220 and 221 of Mazgaon Division, Situated at 13-15-17, 1<sup>st</sup> Carpenter Street, E Ward, Mumbai in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. (Approx distance 400 m).

The proposal is for redevelopment of residential building, which is situated on the landward side of existing Mujawar Pakhadi Road, **in existence 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 3.576 FSI, which is rehab plus 60% incentive over rehab area, as per DCR's in force as on 6<sup>th</sup> January 2011.

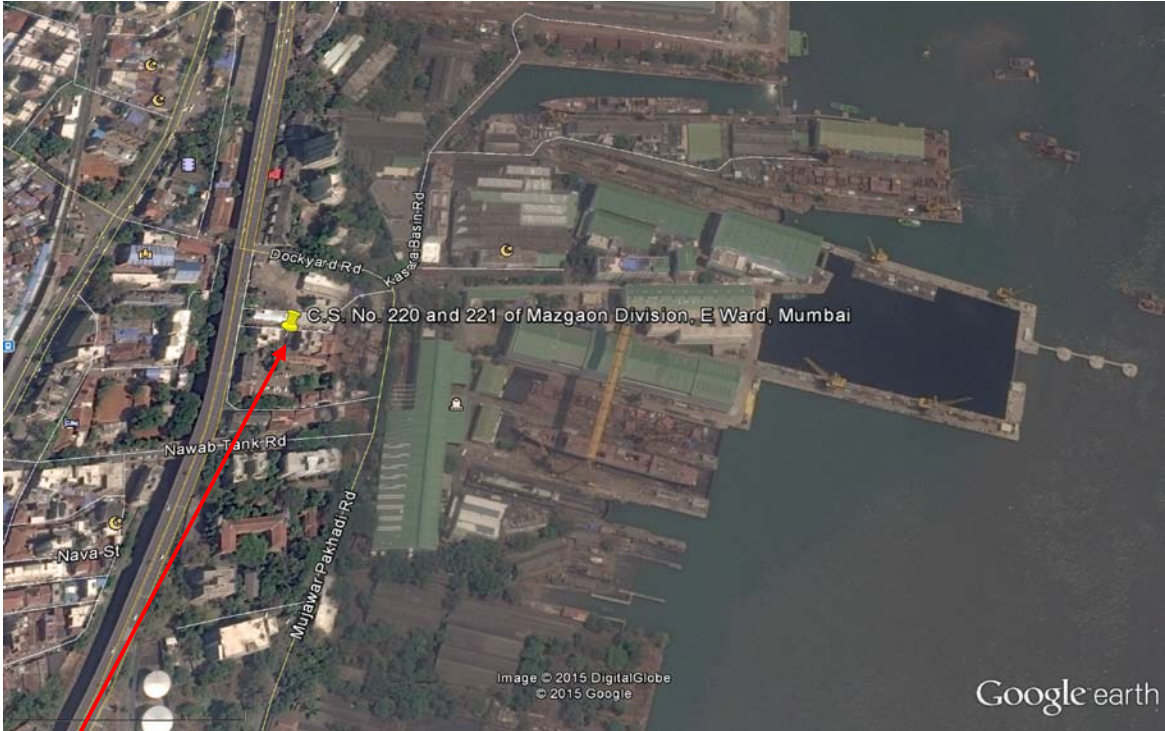
### **3.2 SIZE OF THE PROJECT**

Total Area of the said plot is 273.51 sq. mtrs. Cost of the Project is Rs. 3, 14, 47,000/- (Rupees Three Crore Fouteen Lakhs Forty Seven Thousand Only).

### **3.3 LOCATION**

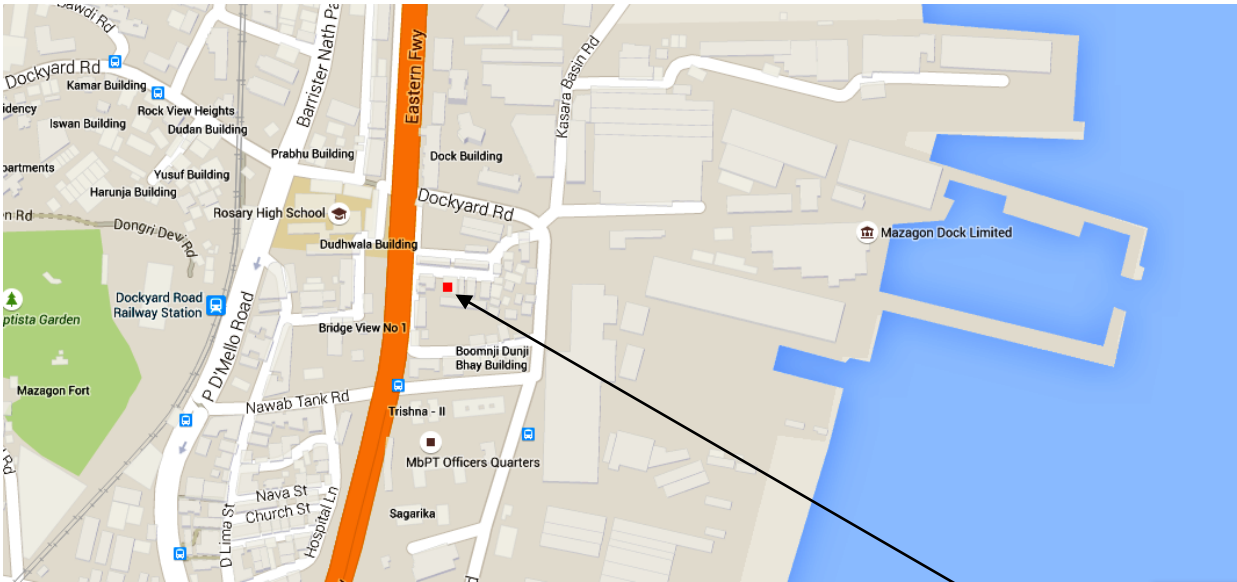
The C.S. No. 220 and 221 of Mazgaon Division, Situated at 13-15-17, 1<sup>st</sup> Carpenter Street, E Ward, Mumbai is in the heart of the city. The nearest railway station is Dockyard Railway Station, 500 meters on the Harbor line.

Google Earth Image of the site



SITE UNDERREFERENCE

**Location map of the site**



SITE UNDER REFERENCE





CRZMP Plan showing location of reference Plot



SITE UNDER REFERENCE

### 3.4 SITE DESCRIPTION

The site under reference is partially affected by CRZ-II zone and the property falls on landward side of the existing Mujawar Pakhadi 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 273.51 sq. mtr.

Town / Tehsil	:	Mumbai
District	:	Greater Mumbai
State	:	Maharashtra
Latitude	:	<b>18°57'59.62"N</b>
Longitude	:	<b>72°50'46.97"E</b>



### 3.5 PROPOSED DEVELOPMENT

#### 3.5.1 AREA

Sr. No.	Description	Details
1.	Total Plot Area	273.51 sq. mtrs.
2.	Deductions for setback area	0.00 sq. mtrs.
	a) Road set back area	17.67 sq. mtrs.
	b) proposed road	0.00 sq. mtrs.
	c)any Reservation	0.00 sq. mtrs.
	Total (a+b+c)	17.67 sq. mtrs.
3.	Net area of plot (1-2)	255.84 sq. mtrs.
4.	Deduction for	0.00 sq. mtrs.
	a)Recreation ground (DEDUCTABLE)	0.00 sq. mtrs.
	b) Internal roads	0.00 sq. mtrs.
	c) Total(a-b)	0.00 sq. mtrs.
5.	Balance area of plot (3-4)	255.84 sq. mtrs.
6.	Additions for F.S.I purpose	17.67 sq. mtrs.
7.	Total area ( 5+6 )	273.51 sq. mtrs.
8.	F.S.I Permissible	3.576

9.	CREDIT F.S.I.40%	0.00 sq. mtrs.
10.	Permissible floor area	978.34 sq. mtrs.
11.	Existing Floor Area (TO BE DEMOLISHED)	0.00 sq. mtrs.
12.	Proposed area	978.32 sq. mtrs.
13	Excess Balcony Area Taken in F.S.I (as per B©	0.00 sq. mtrs.
14	Total built up area proposed	978.32 sq. mtrs.
15.	F.S.I. consumed (15/7)	
<b><u>Parking Statement</u></b>		
16.	Parking required by MCGM Rule	8 Nos.
17.	Parking provided	8 Nos.

## PROJECT DEVELOPMENT DETAILS

Proposed development		
1	Structure of Building	Ground Floor + 1 <sup>st</sup> to 19 <sup>th</sup> upper floors for residential use including upper parking floors, refuge areas.
2	Tenements existing	18 Nos.
3	Tenements proposed	31 Nos.
4	Height of Building from Ground level	59.15 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 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

<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	143	12.84	6.435	@ 90/45 lpcd
2	Total non residential population	32	0.64	0.80	@ 20/25 lpcd
4	Car washing	0.05 CMD			10 cars (@5L per car)
5	Total Quantity of Water Required	20.725 CMD			For a total population of 175 persons
6	Grey Water generated	10.81 CMD			10.65 CMD to Treatment plant (capacity 14 CMD)
7	Sludge generated	0.21 CMD			-
8	Grey Water treated recycled water	10.62 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/ 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 143 persons residing in the building, 32 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	648	River bed	Nil
2.	Aggregate	CUM	1441	Quarry	Crushing
3.	Standard Bricks	M.T.	522	Red Soil	Heating, Moulding
4.	Timber	M.T.	24	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	44	-	-

- 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.

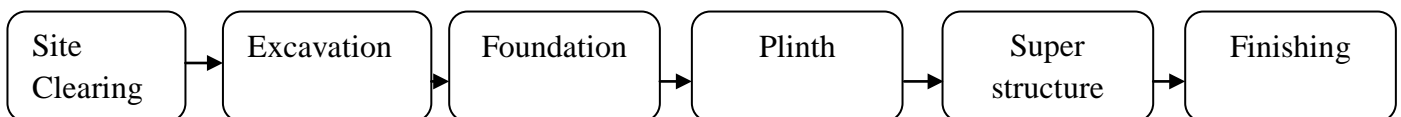
#### 4.2 LIST OF EQUIPMENTS

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 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 safety 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 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 5.0mtr.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.

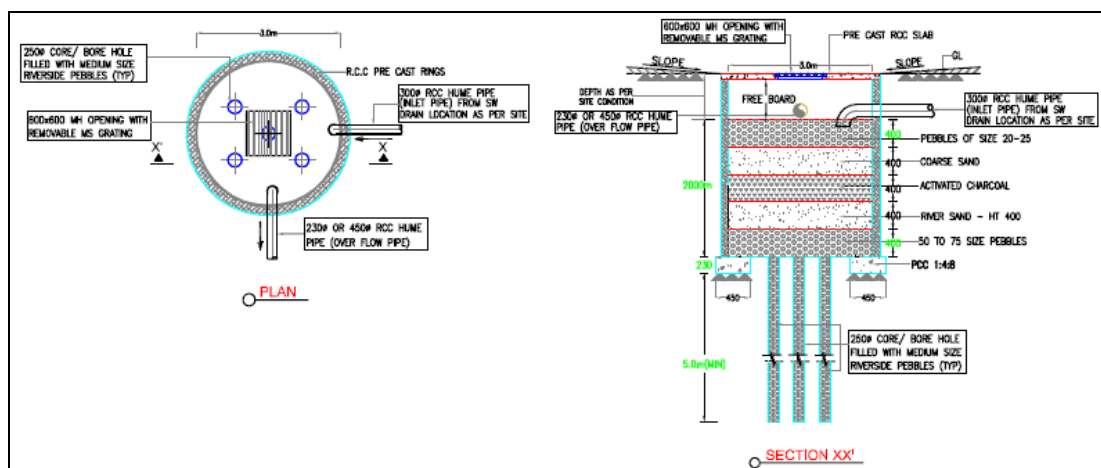
Sullage generated during operation phase will amount to 10.81 CMD of which 10.65 CMD will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

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. The said CEsSED category building is now proposed to be redeveloped. The plot is already covered with CEsSED A category Ground Floor + 1 upper floor buildings. The said CEsSED category building is now proposed to be redeveloped in Ground + 1<sup>st</sup> to 19<sup>th</sup> Upper Floor building. The plot area considered for redevelopment of CEsSED category building is 273.51 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	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**

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 87.50 kg per day) and organic waste (26.95 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 Jan 2016 while the date of completion will be June 2018 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 8 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 construction 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 safety 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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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

