

**EXECUTIVE SUMMARY**  
**REDEVELOPMENT OF RESIDENTIAL**  
**PROJECT**

**AT**

**C.S. NO. 28 OF MAZGAON DIVISION,**  
**MUMBAI**

**BY**

**M/S MERLIN DEVELOPERS & MR. FIROZ**  
**N. M. VORA**

## 1. INTRODUCTION TO PROJECT

After recognizing the need of development of plot bearing C.S. No. 28 of Mazgaon Division, Mumbai, having total 4 nos. of tenants is now being developed by M/s Merlin Developers & Mr. Firoz N. M. Vora. The developer of the plot is going to develop a Ground Floor + 7 upper floors for re accommodation and free sale.

There existed one CEsSED category ground + 1 storey structures and two Non CEsSED category structures on the plot. The existing CEsSED category structure was of ground + 1 storey with 4 nos. of Residential tenants having 189.19 sq. mtrs of built up area. The land use of the Existing plot is residential as per certified tenant list by Deputy Chief Engineer, M.B.R. & R.B. Board, Mumbai, dated 12/03/2014 and CEsSED category certificate dated 11/12/2013 for the property having the use 'AR', situated in the Residential zone. There exists a Bakery cum Godown in Non-CesSED structure. 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 02/05/2014 for the CEsSED Category structure. Both the CEsSED and Non CEsSED category structures are affected by CRZ II area.

The existing cessed structures and non cessed structure are now being redeveloped into a residential building with bakery for rehabilitation on ground floor + 1- 7 upper Floors for residential use. The ground floor will be having Entrance lobby, parking area, society office, one shop and other amenities. The first to sixth floor will have four 1BHK flats on each floor. The 7<sup>th</sup> floor will have one nos. of 1BHK flat and one nos. of 1RK flat. Out of these 27 flats/ tenements/shops, 5 flats and one shop tenements will be given for rehabilitation of existing tenant and 1 No. of flats / tenements will be surrendered to MHADA. Total 20 flats will be sale components in this building.

The surrounding of the existing plot is 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 is on the seaward side of the existing Eastern Express Freeway Road existing prior to 19/02/1991. The plot is on the landward side of existing authorized buildings, in existence prior to 19/02/1991. Hence the work is permitted subject to the approval of MCZMA. 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. 6,80,600/- (Rupees Six Crore Eighty Lakhs and Six Thousand Only) as per the valuation report carried by certified registered valuer.

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

Proposed redevelopment of plot bearing C.S. No. 28 of Magaon Division, 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 buildings along with one NON CEsSED building, which are proposed to be redeveloped together. 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. For the FSI generated from redevelopment of NON-CESSED structure, FSI and other norms as on 19.2.1991 (i.e. DCR 1967) will be followed and for FSI generated from redevelopment of cessed structure, FSI and other norms as on 6<sup>th</sup> Jan 2011 have been applied as per provisions contained in clause 8(V) of CRZ-2011 notification. 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 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 **C.S. No. 28 of Magaon Division, Mumbai**, in CRZ-II belt, as the same is situated within 500 mtr. from Arabian Sea. (Approx distance **470** mtrs.)

The proposal is for redevelopment of residential and commercial building, which are situated on the land ward side of existing Eastern Express Freeway Road, the road **in existance prior to 19/2/1991, as may be seen from CZMP of Mumbai** and on landward side of existing authorized structures **in existance prior to 19/2/1991**.

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 2.26, as per DCRs in force as on 6<sup>th</sup> Jan 2011, which is worked out on the governing criteria of 2.5 FSI on the remainder plot area after deducting the land component of non cessed category structure and claiming 1.33 FSI (Captive) on land component of Non Cess structure, which is inclusive of staircase area.

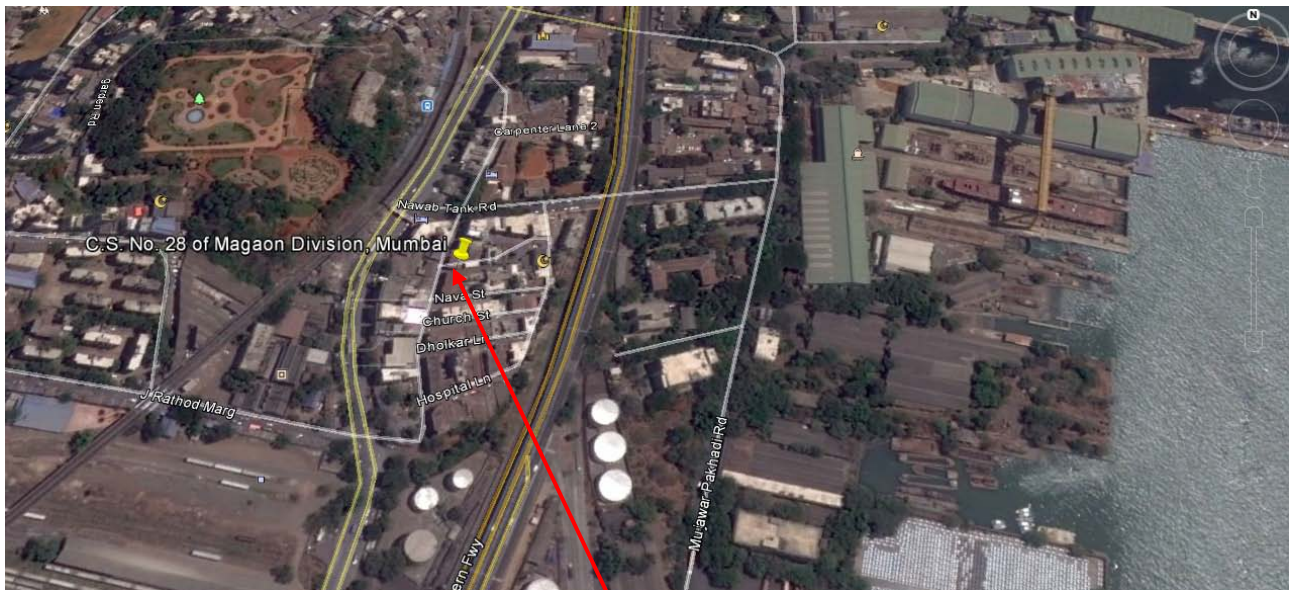
### 3.2 SIZE OF THE PROJECT

Total Area of the said plot is 1506.70 sq. mtr. Cost of the Project is Rs. 10,72,07,406/- (Rupees Ten Three Crore Seventy Two Lakhs Lakh Seven Thousand Four Hundred and Six Only).

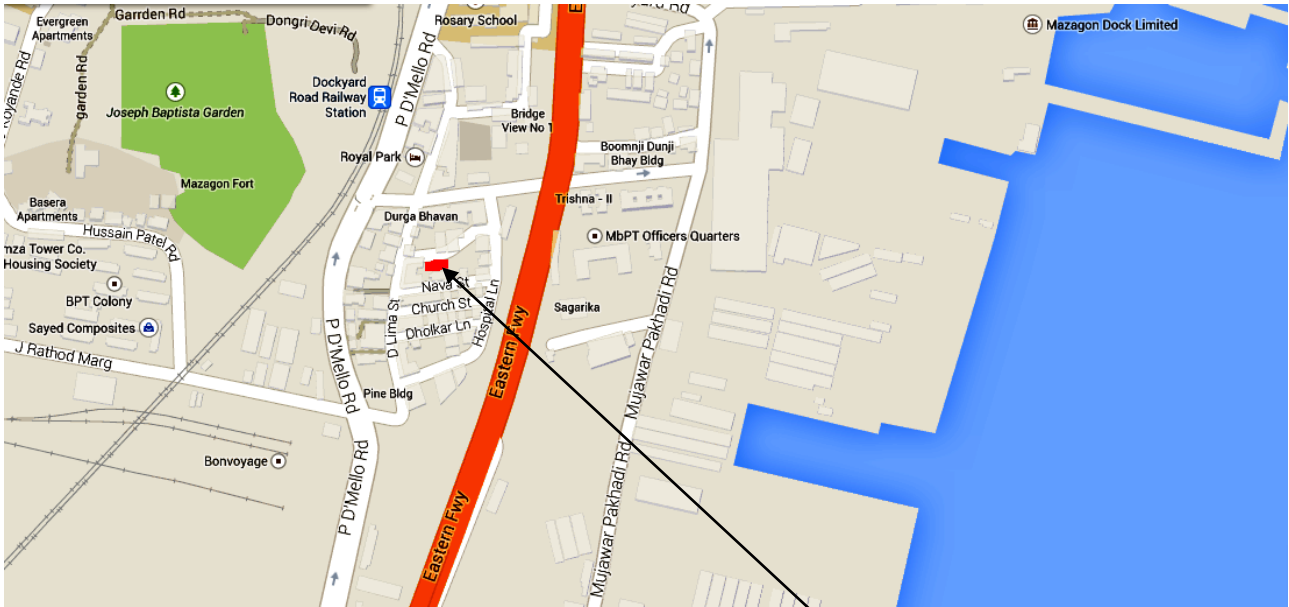
### 3.3 LOCATION

C.S. No. 28 of Magaon Division, Mumbai is in the heart of the city. The nearest railway station is Dockyard Railway Station, 0.80 Km on the harbour 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 seaward side of the existing road, which is reflected in CZMP plan and landward side of authorized structures. 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 1506.70 sq. mtr.

|               |   |                |
|---------------|---|----------------|
| Town / Tehsil | : | Mumbai         |
| District      | : | Greater Mumbai |
| State         | : | Maharashtra    |
| Latitude      | : | 18°57'53.90"N  |
| Longitude     | : | 72°50'40.42"E  |

### 3.5 PROPOSED DEVELOPMENT

#### 3.5.1 AREA

| Sr. No. | Description   | Details         |
|---------|---|-----------------|
| 1       | Area of plot  | 362.05 sq.mtrs. |
| 2       | Deductions for  |                 |
|         | a) Road set back area   | 38.10 sq.mtrs.  |
|         | b) Proposed Road  | 0.00 sq.mtrs.   |
|         | c) Any reservation (sub plot)   | 0.00 sq.mtrs.   |
| 3       | Balance Area of plot (1 -2)   | 323.95 sq.mtrs. |
| 4       | Deductions For  |                 |
|         | a)Recreational Ground   | 0.00 sq.mtrs.   |
|         | b)Internal Roads  | 0.0 sq.mtrs.    |
|         | c)Total area (a+b)  | 0.00 sq.mtrs.   |
| 5       | Net area of plot(3-4c)  | 323.95 sq.mtrs. |
| 6       | Additions for FSI   | 362.05 sq.mtrs. |
| 7       | Total area of plot (5 + 6)  | 362.05 sq.mtrs. |
| 8       | FSI Permissible ( 2.5 after deducting land component of noncessed) + (1.33 on land component of non cessed) | 2.5             |
| 9       | Credit of FSI 40% of plot area  | 0               |
| 10      | Permissible Floor Area  | 818.05          |
| 11      | Existing Floor Area (To be demolished)  | 0.00 sq.mtrs.   |
| 12      | Proposed Area   | 811.95 sq.mtrs. |
| 13      | Excess Balcony Area taken in FSI  | 5.83 sq.mtrs.   |



|    |                               |                           |
|----|-------------------------------|---------------------------|
| 14 | Total Built up Area Proposed  | 817.78 sq.mtrs.           |
| 15 | Total Construction Area       | 1400.00 sq.mtrs. (Approx) |
| 16 | Consumed FSI                  | 2.26                      |
| 17 | Parking required by MCGM Rule | 5 Nos                     |
| 18 | Parking provided              | 5 Nos                     |

### PROJECT DEVELOPMENT DETAILS

|                      |  |  |
|----------------------|--|--|
| Proposed development |  |  |
| 1                    | Structure of Building  | Ground Floor + 7 upper floors  |
| 2                    | Tenements existing   | CESSED structure: 4 residential tenements<br><br>NON CESSED structure: 1 tenements |
| 3                    | Tenements proposed   | 27 Residential tenements.  |
| 4                    | Height of Building from Ground level   | 23.90 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     | 130        | 11.70             | 5.85     | @ 90/45 lpcd   |
| 2                                      | Total non residential population | 15         | 0.30              | 0.375    | @ 20/25 lpcd   |
| 3                                      | Car washing                      | 0.025CMD   |                   |          | 5 cars (@ 5L per car)                                    |
| 4                                      | Total Quantity of Water Required | 18.225 CMD |                   |          | For a total population of 145 persons                    |
| 5                                      | Sullage generated                | 9.46 CMD   |                   |          | 9.46 CMD to Grey Water Treatment plant (capacity 12 CMD) |
| 6                                      | Sludge generated                 | 0.19 CMD   |                   |          | -  |
| 7                                      | GWTP treated recycled water      | 9.44 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: 0.12 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 130 persons residing in the building, 15 persons will be non residential staff including drivers, security, etc. 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     | 412      | River bed | Nil                |
| 2.      | Aggregate          | CUM     | 917      | Quarry    | Crushing           |
| 3.      | Standard Bricks    |         | 332      | Red Soil  | Heating, Moulding  |
| 4.      | Timber             | M.T     | 15       | Forest    | Cutting & Trimming |
| 5.      | Construction Waste | Kg/ Day | 28       | -         | -                  |

- 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.

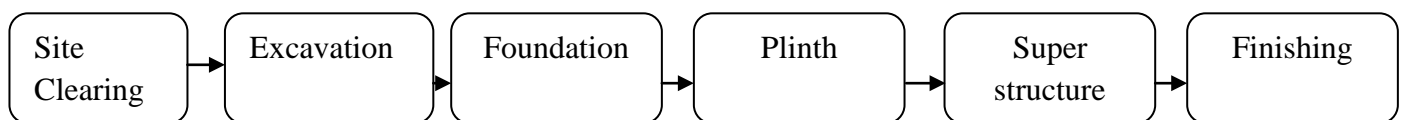
## 4.2 LIST OF EQUIPMENTS

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 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.

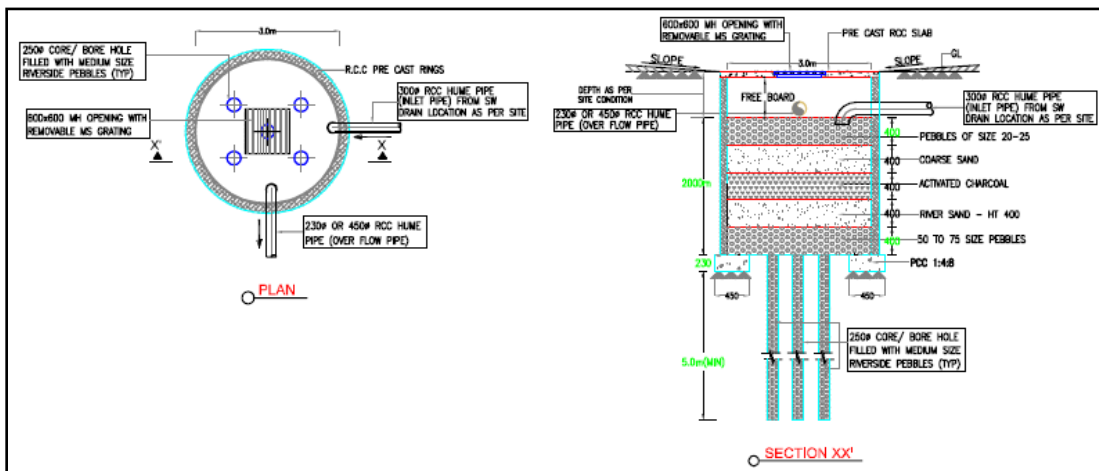
Sullage generated during operation phase will amount to 18.225 CMD which will be treated in the Grey Water Treatment Plant. The treated water will be used for non domestic purposes such as gardening, flushing etc.

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

4] **Rain Water Harvesting:-** There existed one CEsSED category ground + 1 storey structures and two Non CEsSED category structures on the plot. The existing CEsSED category structure was of ground + 1 storey with 4 nos. of Residential tenants having 189.19 sq. mtrs of built up area. The plot area considered for redevelopment of plot is 362.05 sq mtrs, which is 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<br>(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.<br><br>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).<br><br>ii] Smooth Roads will be maintained in a project site.                                   |
| 3.      | Construction Equipments | i] All the equipments will be run during daytime only.<br><br>ii] Lubricants will be applied to all the equipments at proper interval.<br><br>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 73 kg per day) and organic waste (22 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 December 2015 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 5 cars per day are expected to be accommodated in the premises. The parking space will be provided 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

