

EXECUTIVE SUMMARY
REDEVELOPMENT OF RESIDENTIAL
PROJECT

AT

C.S. NO. 936, MAHIM DIVISION,
VEER SAVARKAR MARG,
G/N WARD, MUMBAI

BY

M/S KHANDWANI EXPORTS PVT. LTD.

1. INTRODUCTION

After recognizing the need of redevelopment on plot bearing C.S. No. 936, Mahim Division, Veer Savarkar Marg, G/N Ward, Mumbai, having six residential tenants/ occupants residing at CEsSED Category building is now being redeveloped by M/s Khandwani Exports Pvt. Ltd. The developer has proposed to develop one building with Ground floor + 1- 15 upper floors building for residential use.

The existing structure is a CEsSED 'A' category structure of Ground + 1 upper floors structure. The use of the existing structure on the plot is Residential as per the existing plan of structure as well as the list of existing tenants, as certified by MHADA. The same structures are now to be redeveloped into a residential building. The building has Ground + 1- 15 upper floors including MHADA's sharing flats and sale flats and parking floors (Parking Tower).

The ground floor will be used for water tanks for storage, meter rooms, entrance lobby, parking, etc. The 1st – 2nd floors, 4th - 5th floors, 7th floor and 9th - 14th floors will have two 2BHK flats on each floor respectively. The 3rd floor will also have one 4BHK flat. The 6th floor will have one 3BHK flat and one 1RK flat. The 8th floor will have one 3BHK flat. The 15th floor will have one 1BHK flat. Thus total 27 flats/ tenements are proposed in the said new building. Out of these 27 flats/ tenements, 6 flats/ tenements will be given for rehabilitation of existing tenants and total 4 no of tenements will be handed over to MHADA, as per MHADA NOC. Total 17 flats will be sale components in this building.

The developer of the said plot is going to handover the following flats to MHADA as follows-

Floor No.	Total No. of Flats
1 st Floor	2
2 nd Floor	2
Total	4

Thus the developer will handover total of 4 flats to MHADA having total BU Area of ____ sq mtrs.

The site under reference is surrounded by many more authorized roads and structures and is affected by CRZ-II zone. It is situated on the landward side of the existing Swatyantrya Veer Savarkar Marg. Hence the development is permitted subject to the CRZ clearance. 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. 30,00,00,000/- (Rupees Thirty Crores Only) as per the valuation report.

2. PURPOSE OF THE REPORT

Proposed redevelopment on plot bearing C.S. No. 936, Mahim Division, Veer Savarkar Marg, G/N Ward, Mumbai, as per clause 33(7) of DCR – 1991 in force as on 6th January 2011 and thereby obtain CRZ - Environmental Clearance as per S.O.19(E) dated 6th Jan 2011. The Plot is occupied by a CEsSED 'A' category building of Ground + 1upper floors structure, 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 tenants to get permanent, safe structure. At present they are residing in old building. Photos of the same are attached in Annexure I.

3. DESCRIPTION OF THE PROJECT

3.1 NATURE OF THE PROJECT

This is a proposal for redevelopment of residential building situated at Swatyantrya Veer Savarkar Road, Mahim, Mumbai in CRZ-II belt, as the same is situated within 500 mtrs. from Arabian Sea.

The subject plot is situated on the landward side of existing Swatyantrya Veer Savarkar Road; which is in existence much prior to 19th Feb 1991.

The Plot is situated in Residential zone and is under the reservation of Housing for Dishoused as per 1967 DP as well as Revised 1993 DP. The FSI permitted on the plot under reference is 2.5, as per DCRs in force as on 6th Jan 2011. However, the FSI proposed to be consumed is 2.5 only.

Development of plots reserved for PH/HD is permissible under DCR 33(7) for cessed building redevelopment, as per DCRs in force as on 6th Jan 2011.

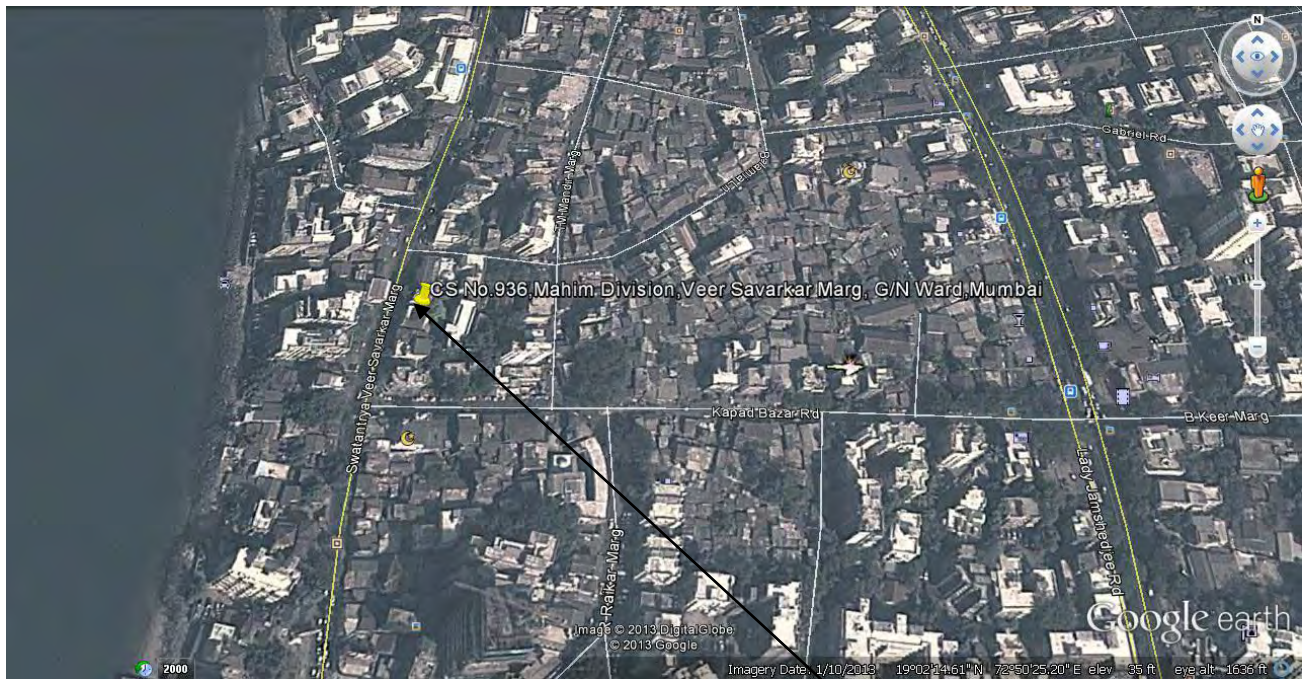
3.2 SIZE OF THE PROJECT

Area of the plot is 615.39 sq. mtr., which has been proposed for FSI purpose. The cost of the Project is Rs. 30,00,00,000/- (RupeesThirty Crores Only).

3.3 LOCATION

The bearing C.S. No. 936, Mahim Division, Veer Savarkar Marg, G/N Ward, Mumbai, is in the heart of the city. The nearest railway station is Mahim Railway Station on the western line, which is approximately 1.5 KMs from the subject site. The site is located around 180 meters away from the Mahim Dargha BEST Bus stop on Swatyantrya Veer Savarkar Road. The site is located within 500 mtrs from High Tide Line.

Google Earth Image of the site

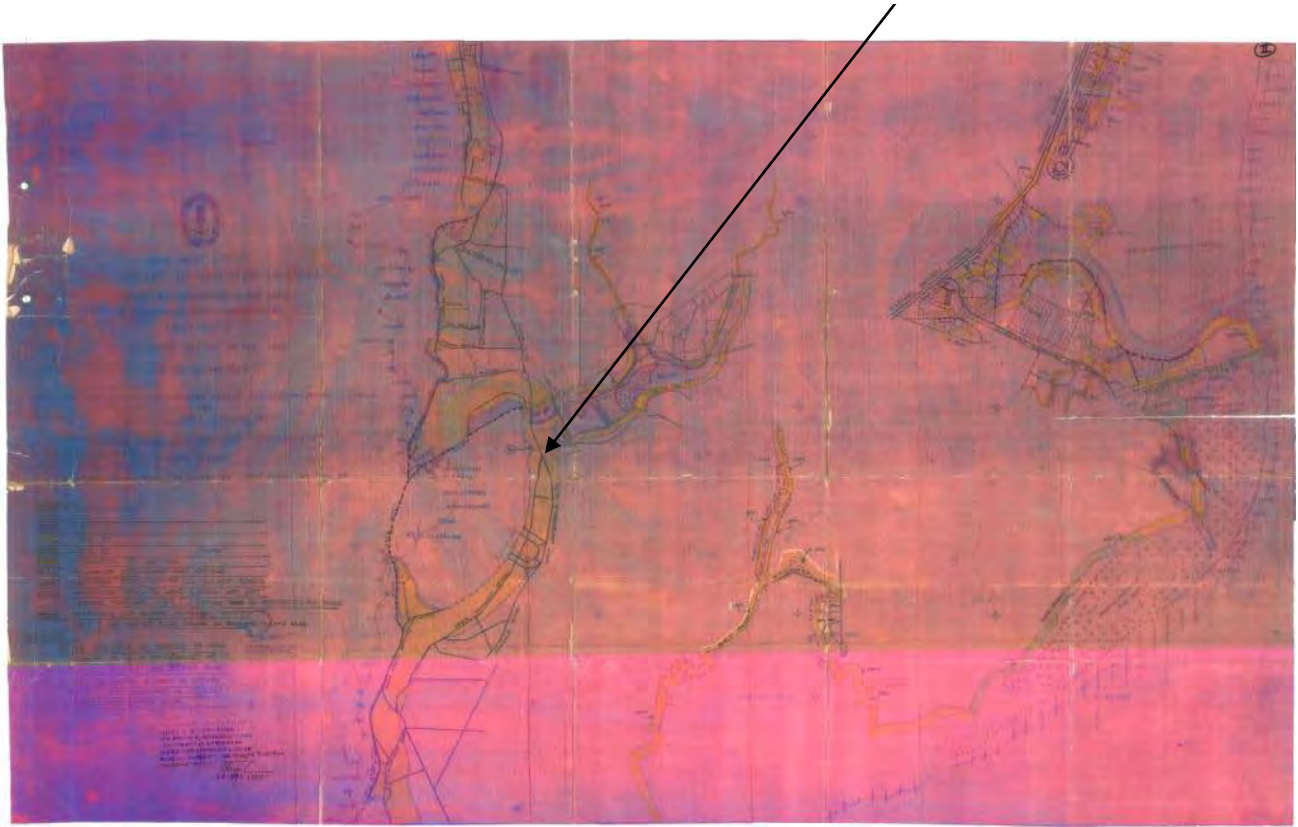


SITE UNDER REFERENCE



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 falls on the landward side of the existing Swatyantrya Veer Savarkar Road **in existence prior to 19/2/1991, as may be seen from CZMP of Mumbai as well as 1967 DP 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 in CRZ is 615.39 sq mtrs

Town / Tehsil	: Mumbai
District	: Greater Mumbai
State	: Maharashtra
Latitude	: 19° 02' 15.09" N
Longitude	: 72° 50' 21.26" E

3.5 PROPOSED DEVELOPMENT

3.5.1 AREA

Sr. No	Description	Details
1	Total Plot Area	615.39 sq. mtrs.
2	Deductions for setback area	153.84 sq. mtrs.
3	Balance area of plot(1-2)	461.55 sq. mtrs.
4	Additions for Floor Space Index- 100% for setback (As per DCR 33(7), 2.5 FSI is permissible on gross plot area)	153.84 sq. mtrs.
5	Total area	615.39 sq. mtrs.
7	FSI Permissible	2.5
8	Permissible Built up area	1538.48 sq. mtrs.
11	Total Built up Area Proposed	1538.34 sq. mtrs.
12	Total Construction Area	3700.00 sq. mtrs (Approximately)
13	Parking required by MCGM Rule	19
14	Parking provided	21

PROJECT DEVELOPMENT DETAILS

Proposed development		
1	Structure of Building	Ground + 1- 15 upper floors including parking floor.
2	Tenements proposed	27 nos.
	MHADA Tenements	04 nos.
3	Tenements existing	06 nos.
4	Height of Building from Ground level	49.50 mtrs
5	Emergency Power supply (D.G. Nos. x KVa	1 no. 35 KVa
6	Area required for D.G sets	5 sq. mtrs
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 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

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

OPERATIONAL PHASE WATER CONSUMPTION

Sr. No	Component/Head	Occupant load	Water Requirement		Remarks
			m ³ /day		
			Domestic	Flushing	
1.	Total residential population	140	12.6	6.3	@ 90/45 lpcd
2.	Total non residential population	38	0.76	0.95	@ 20/25 lpcd
3.	Total Quantity of Water Required	178	20.61 CMD		For a total population of 178 person.
4.	Grey Water generation	10.53 CMD			10.53 CMD to Grey Water Treatment plant (capacity 13 CMD)
5.	Sludge generated	0.21 CMD			-
6.	GWTP treated water	10.51 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 High Density Polyethylene (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 PHASE

Total Energy consumption: 0.26 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, poclain, 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 140 persons residing in the building, out of these, 38 will be floating non residential staff including drivers, security.

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 Construction material required for the proposed redevelopment is given below.

Sr. No.	Item	Unit	Quantity	Source	Process
1.	Sand	CUM	1178	River bed/ Creek	Nil
2.	Aggregate	CUM	2621	Quarry	Crushing
3.	Standard Bricks	M.T	949	Red Soil	Heating, Moulding
4.	Timber	M.T	43	Forest	Cutting & Trimming
5.	Construction Waste	Kg/ Day	81	-	-

- 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.

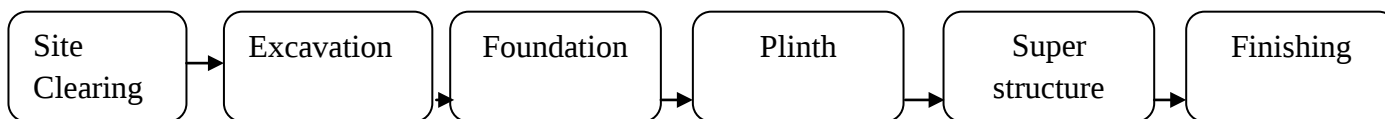
4.2 LIST OF EQUIPMENTS

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 mtr 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 mtr. 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 ₂ ($\mu\text{g}/\text{m}^3$)	50 ~ 80	80	10-15	10-15
NO _x ($\mu\text{g}/\text{m}^3$)	40 ~ 80	80	5-10	5-10

Ref: 24 Hourly values as per Central Pollution Control Board, National Ambient Air Quality

Monitoring, Notification 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 10.53 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.

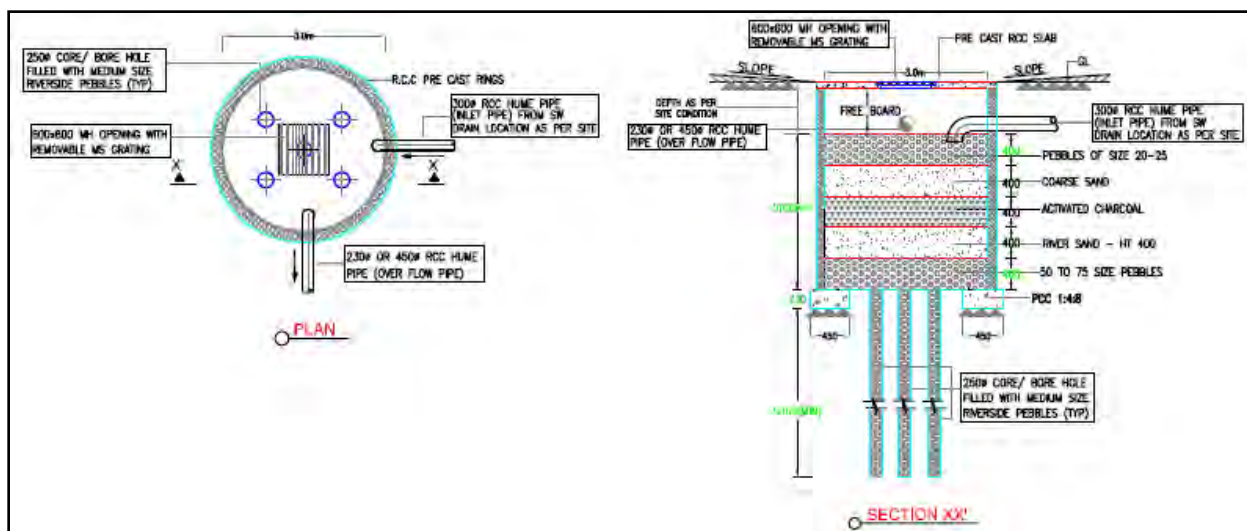
3] **Treatment & Disposal**:-The Domestic Effluent generated in construction phase will be disposed off in existing MCGM Sewer.

4] **Rain Water Harvesting**: The plot is already covered with CEsSED 'A' category building of Ground + 1 upper structure and is proposed to be developed into a residential building of Ground + 1- 15 upper floors including parking floors. The plot area is 615.39 sq mtrs,. The available area for rain water harvesting 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 are 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 89 kg per day) and organic waste (27 Kg/ day) will be segregated properly and stored in 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 project is estimated to be completed by December 2016 if everything went as per planning.

7. TRAFFIC MANAGEMENT

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 21 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 5.0 mtr will be done to protect the surrounding area of the project site from nuisance /dusting.
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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

