Form-1& 1A: Vishwagreen Realtors Pvt. Ltd. Proposed Project Plan S at Plot No. D- 108/1, T.T.C. Industrial Area, Nerul, Navi Mumbai.

December 2016

APENDIX I
(See Paragraph-6)

FORM-1

(I) Basic Information

Sr. No.	Item	Details
1	Name of the Project	Vishwagreen Realtors Pvt. Ltd. Proposed Commercial development at Plot No. D-108/1, T.T.C. Industrial area, Nerul, Navi Mumbai, District – Thane, Maharashtra.
2	S. No. in the Schedule	The project falls under category A of project activity number 8(a) as per MOEF EIA notification dated 14th September, 2006.
3	Proposed capacity/area /length/tonnage to be handled/command area/lease area/ number of wells to be drilled	The subject project will be developed in the, • **Total Plot area:** 3300.00 Sq. M. • **Deduction:** Nil • **Net plot area:** 3300.00 Sq. M.
4	New/Expansion/Modernization	This is a new project.
5	Existing Capacity/Area etc.	**Total Plot area:** 3300.00 Sq. M. **FSI area:** 9798.852 Sq. M. **Non FSI area:** 17876.305 Sq. M. **Total BUA:** 27675.157 Sq. M.
6	Category of Project i.e. 'A' or 'B'	'A'
7	Does it attract the general condition? If Yes, Please specify	No
8	Does it attract the specific condition? It yes, Please specify	No
9	Location	The Project site is located at Plot No. D-108/1, T.T.C. Industrial area, Nerul, Navi Mumbai, District – Thane, Maharashtra.
	Plot/Survey/ Khasra No.	Plot No. D-108/1
	Village	T.T.C. Industrial area, Nerul, Navi Mumbai
	Taluka	Thane
	District	Thane
	State	Maharashtra
10	Nearest railway station/airport along with distance in kms.	Juinagar Railway Station: 2.1 Km. Mumbai Airport: 26.7 Km.
11	Nearest Town, City, District Headquarters along with distance in kms.	The nearest town from the project site is Nerul.
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	The project site comes under MIDC.
13	Name of the applicant	**M/s. Vishwagreen Realtors Pvt. Ltd.**
14	Registered Address	**M/s. Vishwagreen Realtors Pvt. Ltd.**

		321, B wing, Arenja corner, Plot No. 71, Vashi, Navi Mumbai- 400705, India.
15	Address for correspondence:	**M/s. Vishwagreen Realtors**
	Name	Mr. Siddharth Khanna
	Designation(Owner/Partner/CEO)	Owner
	Address	321, B wing, Arenja corner, Plot No. 71, Vashi, Navi Mumbai, Maharashtra.
	Pin Code	400705
	Authorized Representative	Mr. K Srinivasan
	E-mail	srinivasan@kesariprojects.com
	Telephone No.	22- 27813317
	Fax No.	NA
16	Details of Alternative Sites examined, If any. Location of these sites should be shown on a top of sheet	No
17	Interlinked Projects	NA
18	Whether separate application of interlinked project has been submitted?	NA
19	If yes, date of submission	NA
20	If no, reason	NA
21	Whether the proposal involves approval/clearance under: if yes, details of the same and their status to be given. (a) The Forest (Conservation) Act, 1980? (b) The Wildlife (Protection) Act, 1972? (c) The C.R.Z. Notification, 1991?	No
22	Whether there is any Government Order/Policy relevant/relating to the site?	NA
23	Forest land involved (hectares)	No
24	Whether there is any litigation pending against the project and/or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the Court, if any and its Relevance with the proposed project.	No

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	Basically land is Barren land. The proposed project site is designated for the intended purpose and the proposed built- up area is **27,675.157** Sq. M.
1.2	Clearance of existing land, vegetation and building?	No	**NA**
1.3	Creation of new land uses:	No	**NA**
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Ground water quality and Soil testing analysis has been carried out.
1.5	Construction Works?	Yes	About **27,675.157 Sq**. M. will be construction work. Building configuration are as follows: Basement + Ground + First + Second – Fourth Parking + 28 Floors (Total: Basement + Ground + 31 Floors)
1.6	Demolition Works?	No	Demolition permission taken from MIDC.
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	Temporary labour sheds and adequate sanitation facilities will be provided to the construction laborers at the site during the construction work.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations.	Yes	Existing structure present but demolished and demolition permission was taken from MIDC. Excavated material during construction will be used for landscape and backfilling therefore there will not be any solid waste problem from the generation of construction- excavated earth.
1.9	Underground works including mining or tunneling?	No	NA
1.10	Reclamation works?	No	NA
1.11	Dredging?	No	NA
1.12	Offshore structures?	No	NA
1.13	Production and manufacturing Process?	No	NA

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.14	Facilities for storage of goods or materials?	Yes	Temporary sheds will be constructed for the storage of construction materials during construction phase as per the material requirement.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	**Solid Waste Management** **Construction Phase** During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets will also be provided during peak labor force. **Operation Phase** Total population of the commercial scheme is **2284 Nos.** Quantity of Total Solid waste – 573.50 KLD Quantity of Wet Waste – 401.45 KLD Quantity of Dry Waste – 172.05 KLD Biodegradable and non biodegradable waste will be segregated. Dry waste will be sent for recycling and wet waste will be treated by **"Organic Waste Converter"** for composting. **Liquid Waste Management** **During Construction:** From water tankers (For Construction): 10- 20 KLD. (Depending upon the construction activity). From local authority. (For workers): 12 KLD. **During Operation:** Source: MIDC Total Water Demand: 106.28 **M^3/Day** Domestic Water Demand: 45.68 **M^3/Day** Flushing water Demand: 57.10 **M^3/Day** Car washing: 3.50 **M^3/Day** Total treated water available: 83.25 **M^3/Day**

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
			Treated water reused: 60.60 **M^3/Day**
1.16	Facilities for long term housing of operational workers?	No	NA
1.17	New road, rail or sea traffic during construction of operation?	No	NA
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	No	NA
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	NA
1.20	New or diverted transmission lines or pipelines?	No	NA
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	NA
1.22	Stream crossings?	No	NA
1.23	Abstraction or transfers of water from ground or surface waters?	No	During construction phase MIDC water supply/ Tanker water will be used for the construction purpose.
1.24	Changes in water bodies or the land surface affecting drainage or run-off	No	NA
1.25	Transport of personnel or materials for construction, operation or decommissioning?	No	NA
1.26	Long-term dismantling or decommissioning or restoration works?	No	NA
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	NA
1.28	Influx of people to an area in either temporarily or permanently?	Yes	**Construction Phase** **150 Nos.** workers and **35 Nos.** staff. **Operation Phase** Total population is expected to be **2284.**
1.29	Introduction of alien species?	No	NA
1.30	Loss of native species or genetic diversity?	No	NA

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
1.31	Any other actions?	No	NA

2. Use of Natural resources for construction or operation of project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply).

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
2.1	Land specially undeveloped or agricultural land (ha)	No	NA
2.2	Water (expected source & competing users) unit KLD	Yes	**During Construction: 50 M^3/Day** From water tankers (For Construction): 10- 20 KLD. (Depending upon the construction activity). From local authority. (For Workers): 12 KLD. **During Operation:** Source: MIDC Total Water Demand: 106.28 **M^3/Day** Domestic Water Demand: 45.68 **M^3/Day** Flushing water Demand: 57.10 **M^3/Day** Car washing: 3.50 **M^3/Day** Total treated water available: 83.25 **M^3/Day** Treated water reused: 60.60 **M^3/Day**
2.3	Minerals (MT)	No	NA
2.4	Construction material – stone, aggregates, and/soil (expected source-MT)	Yes	Companies authorized/ approved local vendor.
2.5	Forests and timber (source-MT)	No	NA

2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	Electricity Source: MSEDCL Total Demand Load for Project: KW **During Construction** Source of power supply for project- D.G. Sets (100 KVA, 1 no.) **During Operation** **Source:** MSEDCL Alternative Back up: Diesel Generator (DG) Set for lifts, Common Lighting, water pumps & other essential services. Capacity of D.G. set for Common Amenities: 250 KVA- 2 Nos. for Fire pump with AMF &Auto Load sharing panel with sound proof enclosure with dB level not greater than 75 dB (A).
2.7	Any other natural resources (use appropriate standard units)	No	NA

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	NA
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	NA
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	It can improve the living standard of that area.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	NA
3.5	Any other causes	No	NA

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	NA
4.2	Municipal waste (domestic and or commercial wastes)	Yes	**Solid Waste Management** **Construction Phase** During the construction phase, soak pits and septic tanks will be provided for disposal of waste water. Temporary sanitary toilets will also be provided during peak labor force. **Operation Phase** Total population of the commercial scheme is **2284 Nos.** Quantity of Total Solid waste – 573.50 KLD Quantity of Wet Waste – 401.45 KLD Quantity of Dry Waste – 172.05 KLD Biodegradable and non biodegradable waste will be segregated. Dry waste will be sent for recycling and wet waste will be treated by **"Organic Waste Converter"** for composting.
4.3	Hazardous wastes (as per hazardous waste management rules)	No	NA
4.4	Other industrial process wastes	No	NA
4.5	Surplus product	No	NA
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Sludge from STP will be used as manure for green belt development at site.
4.7	Construction or demolition wastes	Yes	Approximately 500 Cu. Ft. will be earthwork and will be used for back filling.
4.8	Redundant machinery or equipment	No	NA
4.9	Contaminated soils or other materials	No	NA
4.10	Agricultural wastes	No	NA
4.11	Other solid wastes	No	NA

5. Release of pollutants or any hazardous, toxic or noxious substances to air (kg/hr)

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	No	NA
5.2	Emission from production processes	No	NA
5.3	Emissions from materials handling including storage or transport	No	NA
5.4	Emissions from construction activities including plant and equipment	No	NA
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	As per EMP
5.6	Emissions from incineration of waste	No	NA
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	NA
5.8	Emissions from any other sources	No	NA

6. Generation of Noise and vibration, and emissions of Light and heat

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	Noise generation from construction equipments used for drilling, cutting operations. During Operation Phase, Noise will be generated due to operation of DG sets.
6.2	From industrial or similar processes	No	NA
6.3	From construction or demolition	Yes	As per EMP
6.4	From blasting or piling	No	NA
6.5	From construction or operational traffic	Yes	As per EMP
6.6	From lighting or cooling systems	No	NA
6.7	From any other sources	No	NA

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	No	NA
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Sewage effluents will be treated and reused for flushing, gardening areas and in car washing. **60.60 M^3/Day** treated water will be reused.
7.3	By deposition of pollutants emitted to air into the land or into water	No	NA
7.4	From any other sources	No	NA
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	NA

8. Risk of accidents during construction or operation of the project, which could affect human health or the environment

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	No	NA
8.2	From any other causes	No	There is a risk of accident during construction however proper safety measures will be taken.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, could burst etc)?	No	The project falls under moderate seismic zone-III and further it is not flood prone or landslide prone areas. Hence, no risk due to natural hazards is envisaged.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data

Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.1	Lead to development of supporting, lities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: Supporting infrastructure (roads, power supply, waste or waste water treatment, etc) Housing development Extractive industries Supply industries Other	Yes	Commercial Development
9.2	Lead to after use of the site, which could have an impact on the environment	No	NA
9.3	Set a precedent for later developments	No	NA
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	NA

(iii) Environmental Sensitivity

S. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Kharghar Forest area	13.2 Km.
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Panvel Creek	5.0 Km.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	NA	--
4	Inland, coastal, marine or underground waters	NA	--
5	State, National boundaries	No	Not Applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Not Applicable
7	Defense installations	No	Not Applicable
8	Densely populated or built-up area	The site is located in the densely populated Mumbai city. The nearest towns from the project site are, • Nerul	
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	DY Patil Hospital DY Patil International School Dr. DY Patil Sports Academy	Approx. 1.3 Km. Approx. 0.90 Km. Approx. 1.30 Km.
10	Areas containing important, high	No	Not Applicable

	quality or scarce resources *(ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*		
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	Not Applicable
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (*earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions*)	Yes	The project site lies in Seismic Zone III as per the seismic zone map of India and is moderately susceptible to earthquake. Further it is not flood prone or landslide prone areas. Hence, no risk due to natural hazards is envisaged.

(IV) Proposed Terms of Reference for EIA studies

Not applicable since it is a construction sector project.

"I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost."

Date: 03/11/2016

Place: Navi Mumbai

For M/s. Vishwagreen realtors Pvt. Ltd.

Vishwagreen Realtors Pvt. Ltd.
(I T Park Division)
FOR VISHWA GREEN REALTORS PVT. LTD.
(INFO TECH PARK DIVISION)
AUTHORISED SIGNATORY

Director/ Partner

Encl: As above

APPENDIX II
(See paragraph 6)
FORM-1 A
(Only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS

[Project proponents are required to provide full information and wherever necessary attach explanatory notes with the Form and submit along with proposed environmental management plan & monitoring programme]

1	**LAND ENVIRONMENT [Attach panoramic view of the project site and the vicinity]**
1.1	**Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use if any and the statutory approval from the competent authority to be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) The site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.**
	The proposed land use is in conformity with the DP of the area. **Agriculture / Livestock:** There is no agricultural activity in the vicinity of the proposed area.
1.2	**I. PROJECT DETAILS :** **A. Name & Location:** Plot No. D-108/1, T.T.C. Industrial Area, Navi Mumbai, Maharashtra. **B. Proposed Building Details:** **Table No.1: Building details**

Configuration	**Height**
1Building + Basement + Ground + First Floor + Second to Fourth floor parking + 28 Floors (Total Basement + Ground + 31 Floors)	**118.80 M**

C. Area Statement:
Table No.2: Area Statement

Sr. No.	**Description**		**Total (Area in Sq.mt)**
1.	Plot area		3300.00
2.	Deduction		**Nil**
3.	Net plot Area		3300.00
4.	Permissible FSI		**3.0**
5.	FSI Consumed		9798.852
6.	Non FSI area		17876.305
7.	Total Built up Area		27675.157
8.	RG area	On Ground	NA
		On Podium	NA

9.	Ground Coverage	1469.272 (44.52%)
10.	No. of basement, Basement area	1Basement and area 1974.122 Sq. Mt.
11.	No. of podium, Podium area	1 Stilt + 5 Levels of podium parking and area 6915.966 Sq. Mtrs.
12.	Total no. of units	1 Commercial Building
13.	Building Configuration	1Building + Basement + Ground + First Floor + Second to Fourth floor parking + 28 Floors (Total Basement + Ground + 31 Floors)

D. Parking Statement:

Table No.3: Parking Statement

Sr. No.	Description	Total
1.	Parking Required	233
2.	Parking Proposed	233
3.	2 Wheeler Proposed	--
4.	Parking Area (Sq. M.)	6915.966

1.3	**What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use, disturbance to the local ecology).**
	The proposed project is a commercial project. This area will be now converted into well organized complex which will have better living conditions. Also green features such as STP, Rain water harvesting, additional tree plantation, etc shall be practiced. Hence this project will have overall positive impact socio economy.
1.4	**Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc. may be given).**
	No, there will not be any significant land disturbance in erosion, subsidence & instability.
1.5	**Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)**
	No, the proposal will not involve alteration of natural drainage systems.
1.6	**What are the quantities of earthwork involved in the construction activity-cutting, filling, reclamation etc. (Give details of the quantities of earthwork involved, transport of fill materials from outside the site etc)**
	Debris, demolition waste and excavated material generated partly disposed. Excess soil shall be disposed to authorized site with permission from local authority.
1.7	**Give details regarding water supply, waste handling etc during the construction period.**
	Water Requirement during Construction Phase: From water tankers (For Construction): 10- 20 KLD. (Depending upon the construction activity). From local authority. (For Workers): 12 KLD. The sewage generated approximately 11 KLD.
1.8	**Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified from the proposed activity)**

	No.
1.9	**Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)**
	Solid Waste Generation during Construction Phase: Debris, demolition waste and excavated material generated partly disposed. Excess soil shall be disposed to authorized site with permission from local authority and handed over to local authority.
2	**WATER ENVIRONMENT**
2.1	**Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.** **Water Requirement & Source:** **During Construction Phase –** From water tankers (For Construction): 10- 20 KLD. (Depending upon the construction activity). From local authority. (For Workers): 12 KLD. **During Operational Phase** Source- **MIDC** Total Water Demand: 106.28 **M^3/Day** Domestic Water Demand: 45.68 **M^3/Day** Flushing water Demand: 57.10 **M^3/Day** Car washing: 3.50 **M^3/Day** Total treated water available: 83.25 **M^3/Day** Treated water reused: 60.60 **M^3/Day**
2.2	**What is the capacity (dependable flow or yield) of the proposed source of Water?**
	Domestic Water Supply from local authority.
2.3	**What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)**
	Drinking water quality of Class A as per Indian Standard: 10500, 2004 from local authority.
2.4	**How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)**
	About 60.60 KLD of water will be recycled for flushing and car washing at commercial building.
2.5	**Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)**
	NA.
2.6	**What is the incremental pollution load from wastewater generated from the proposed activity? (Give details of the quantities and composition of wastewater generated from the proposed activity)**
	The quantity of sewage is about 90% of domestic water consumption. The waste water generated from the proposed activity shall be domestic. The sewage will be collected from 234 tenements.
2.7	**Give details of the water requirements met from water harvesting? Furnish details of the facilities created.**
	It is proposed to provide open collecting well. This being commercial project proponents shall be responsible for the operation and maintenance till he does the convergence of property to the members. All further maintenance will be done by the Society.
2.8	**What would be the impact of the land use changes occurring due to the proposed project on the runoff characteristics (quantitative as well as qualitative) of the area in the post construction phase on a long term basis? Would it aggravate the problems of flooding or water logging in any way?**

	Management plan for Flood is as follows : • Storm water drain shall be cleaned at regular interval. • Mapping the areas within or leading in or out of the building that will be water logged, flooded or isolated due to the flood. The areas will be marked after completion of the project (as final ground levels etc. will be available after completion).
2.9	**What are the impacts of the proposal on the ground water? (Will there be tapping of ground water; give the details of ground water table, recharging capacity, and approvals obtained from competent authority, if any)**
	It is proposed to provide open collecting well. This being commercial project proponents shall be responsible for the operation and maintenance till he does the convergence of property to the members. All further maintenance will be done by the Society.
2.10	**What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts).**
	The runoff from the site during construction phase would be very negligible. This will be prevented as under : Use of wet jute cloth covering the walls and soaking the same with minimum quantity of water to avoid dripping. This will also help in conserving water. By collecting the running water in an impervious pit and using the same again for curing purpose.
2.11	**How is the storm water from within the site managed?(State the provisions made to avoid flooding of the area, details of the drainage facilities provided along with a site layout indication contour levels)**.
	Internal storm water drains will be constructed strictly in accordance to the governing authority regulations. The storm water collected through the storm water drains.
2.12	**Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)**
	• During construction phase, temporary mobile toilets shall be used. Hence there will not be unsanitary conditions around the project site. • Regular segregation and disposal of solid waste generated by these workers shall be as per local practices. • First aid and medical facilities will be provided to all the concerned people working on the site. • Proper housekeeping will be maintained throughout the premises.
2.13	**What on-site facilities are provided for the collection, treatment & safe disposal of sewage? (Give details of the quantities of wastewater generation, treatment capacities with technology & facilities for recycling and disposal).**
	The sewage will be collected from 234 tenements. The quantity of sewage is about 90% of domestic water consumption. The waste water generated from the proposed activity shall be domestic. Sewage will be treated in sewage treatment Plant. The treated sewage will be partly recycled for flushing and partly connected to Municipal sewer line.
2.14	**Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.**
	Recycling of treated sewage for flushing, AC makeup and gardening. Color coding for dual plumbing system shall be done as per standard practices.
3	**VEGETATION**
3.1	**Is there any threat of the project to the biodiversity? (Give a description of the local ecosystem with its unique features, if any)**
	There is no threat to the biodiversity due to the project under reference.
3.2	**Will the construction involve extensive clearing or modification of vegetation? (Provide a detailed**

	account of the trees & vegetation affected by the project).
	RG Area not required.
3.3	**What are the measures proposed to be taken to minimize the likely impacts on important site features (Give details of proposal for tree plantation, landscaping, creation of water bodies etc along with a layout plan to an appropriate scale)**
	RG Area not required.
4	**FAUNA**
4.1	**Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details.**
	No
4.2	**Any direct or indirect impacts on the avifauna of the area? Provide details.**
	No
4.3	**Prescribe measures such as corridors, fish ladders etc to mitigate adverse impacts on fauna.**
	Not applicable.
5	**AIR ENVIRONMENT**
5.1	**Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)**
	The project will result in negligible increase in the atmospheric concentrations of gases like PM, SO2, NOX & CO due to D.G. sets operation (backup power only) and the increased traffic activity. The proposed activity will not result in the formation of any heat island, as the building will be covered with high solar reflective index materials. Though three and four wheelers movement is expected during operation phase, its impact would be negligible. Construction and demolition activities generate the emission of toxic substances like magnesium, limestone and dust. Although the increase is not much high, general trend at Bharat IV & V vehicles and use of community transport will help to lower the values of CO, posing less of an impact on-site and at receptor locations.
5.2	**What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.**
	During construction phase, Dust, Particulate Matter is the main pollutant, which may be generated during construction activities. Other emission sources are intermittent and include emissions of SO_2 NOx and CO from materials transport of heavy vehicles on site etc. Proper upkeep and maintenance of vehicles, sprinkling of water on roads and construction site are some of the measures that would reduce the impact during construction phase. **Sources of Air pollution During Operational phase :** The gaseous emissions from vehicles. Emissions from DG set while in operation only during power failure. **Mitigation Measures**: ➢ The traffic congestion will be avoided by proper parking arrangement and maintaining smooth traffic flow. ➢ Regular PUC checkup for vehicles. ➢ CPCB approved DG sets only will be used. ➢ Proper maintenance of DG sets shall be done and Low sulphur fuel shall be used. **The proposed project will not have any direct impact on air environment after completion.**
5.3	**Will the proposal create shortage of parking space for vehicles? Furnish details of the present level**

<table>
<tr><td></td><td>of transport infrastructure and measures proposed for improvement including the traffic management at the entry & exit to the project site.</td></tr>
<tr><td></td><td>The project proponents have proposed to provide well organized parking arrangement.
Table No.14: Parking Statement
<table>
<tr><th>Sr. No.</th><th>Description</th><th>Total</th></tr>
<tr><td>1.</td><td>Parking Required</td><td>233</td></tr>
<tr><td>2.</td><td>Parking Proposed</td><td>233</td></tr>
<tr><td>3.</td><td>2 Wheeler Proposed</td><td>--</td></tr>
<tr><td>4.</td><td>Parking Area</td><td>6915.966</td></tr>
</table></td></tr>
<tr><td>5.4</td><td>Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.</td></tr>
<tr><td></td><td>There will be sufficient wide entries & exits points and separate service road for service vehicles and fire tenders proposed in the project with sufficiently wide internal roads and pedestrian pathways.</td></tr>
<tr><td>5.5</td><td>Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.</td></tr>
<tr><td></td><td>The project being commercial project, the source of noise is mainly vehicular noise. The project proponents have proposed to provide well organized parking arrangement and maintaining smooth traffic flow which would help in reducing traffic congestion and noise levels. Trees would act as noise barrier and will reduce the noise level.
During power failure to mitigate the noise due to D.G. sets while in operation D.G. sets will be enclosed in acoustic enclosures.</td></tr>
<tr><td>5.6</td><td>What will be the impact of DG sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.</td></tr>
<tr><td></td><td>D.G. Sets will be operated only in case of power failures during operational phase. The Pollutants like RSPM, SO_2 that may arise from emissions from D.G. Sets will be discharged through vent of proper height.
D.G. sets are with inbuilt acoustic enclosures to reduce the noise of D.G. sets while in operation. Plantation of trees would act as noise barrier and will reduce the noise level.</td></tr>
<tr><td>6</td><td>AESTHETICS</td></tr>
<tr><td>6.1</td><td>Will the proposed constructions in any way result in the obstruction of a view, scenic amenity or landscapes? Are these considerations taken into account by the proponents?</td></tr>
<tr><td></td><td>No.</td></tr>
<tr><td>6.2</td><td>Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?</td></tr>
<tr><td></td><td>All precautions will be taken to mitigate the impact due to water, air and noise pollution during construction and operation phase. Environmental Management Plan is prepared and shall be implemented along with Environmental Monitoring Programme.</td></tr>
<tr><td>6.3</td><td>Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.</td></tr>
<tr><td></td><td>No, there are no such local considerations.</td></tr>
<tr><td>6.4</td><td>Are there any anthropological or archaeological sites or artifacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.</td></tr>
<tr><td></td><td>No.</td></tr>
<tr><td>7</td><td>SOCIO-ECONOMIC ASPECTS:</td></tr>
</table>

7.1	**Will the proposal result in any changes to the demographic structure of local population? Provide the details.**
	There will be influx of about ~ 2284 person
7.2	**Give details of the existing social infrastructure around the proposed project.**
	The proposed project site and its surrounding area lie at Rabale. The area is well served by electricity, telephone, and water and transportation infrastructure. The locality is equipped with government schools, colleges within the locality.
7.3	**Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?**
	No, the project will not cause any adverse effects on local communities, disturbance to sacred sites or other cultural value.
8	**BUILDING MATERIALS**
8.1	**May involve the use of building materials with high-embodied energy. Are the construction materials produced with energy efficient processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)**
	Cement, Bricks and steel are the main components of construction. For the purpose of paving, sun dried pavers will be used instead of baked pavers as they are manufactured from energy efficient processes. Instead of regular clay bricks, fly ash-cement bricks and laterite rock blocks available locally will be used. Also, ready mix concrete with 20% fly ash, PPC cement and recyclable aluminum in door and windows will be used to reduce environmental pollution at site.
8.2	**Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?**
	Transportation and handling of materials during construction phase results mainly in pollution of air &noise. The various steps proposed to mitigate the anticipated impacts are as under: • **To Control dust–** - Use of barricading the periphery - Dust mask will be provided to workers. • **To Control Gaseous emissions –** - Vehicle carrying materials to be transported must have PUC certificate. - Heavy vehicle movement will be allowed only during night time. - Construction equipments with idling control technologies will be used. - Regular maintenance of the equipments will be carried out. • **To control Noise generation –** - Barricade the site periphery by corrugated tin sheet so as to confine noise within site. - Ear muff/ ear plug will be provided to workers. - The construction activities will be carried out during the daytime only.
8.3	**Are recycled materials used in roads and structures? State the extent of savings achieved?**
	Yes, recycled materials will be used in roads and structures. Construction debris such as waste concrete and waste plaster can be used as sub base of drives way and footing. The excavated soil will be used for leveling the site and top soil will be conserved for landscaping.
8.4	**Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.**
	➢ Segregation of two types of garbage i.e. biodegradable and non-biodegradable shall be done by means of provision of two garbage bins with different color. ➢ This would ensure that waste segregation is done at source itself.

	➢ The non-biodegradable garbage shall be put into separate bins and shall be handed over to local authority ➢ Biodegradable garbage shall be treated in Organic Waste Converter and shall be used as manure.
9	**ENERGY CONSERVATION**
9.1	**Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?**
	Power requirement: **During Construction Phase –** Source: MSEDCL D.G. Sets: as per requirement **During Operational Phase -** Source: MSEDCL **Table No.18: Power Requirement** **Phase** / **Total (KW)** **Connected load** / 1167 KW **D.G** / 250 KVA capacity **Following Energy conservation measures are proposed for Energy Saving :** ➢ Monitoring of daily electricity consumption & recording of maximum demand will be done. ➢ Power factor correction. – will be provided for common loads only. ➢ Using less lights in common areas in non peak hours. ➢ Common area lighting with LED Lamps ➢ Multiple circuits for lighting. ➢ Solar energy use for water heater & lighting the part of the garden area & part of road.
9.2	**What type of, and capacity of, power back-up to you plan to provide?**
	Adequate nos. of DG shall be provided.
9.3	**What are the characteristics of the glass you plan to use? Provide specifications of its characteristics related to both short wave and long wave radiation?**
	Glass shall be used in commercial.
9.4	**What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.**
	➢ Maximize the use of natural lighting though design. ➢ The roof shall be insulated so that there will not be direct heat gain due to sunlight.
9.5	**Does the layout of streets & buildings maximize the potential for solar energy devices? Have you considered the use of street lighting, emergency lighting and solar hot water systems for use in the building complex? Substantiate with details.**
	Solar energy will be used.
9.6	**Is shading effectively used to reduce cooling/heating loads? What principles have been used to maximize the shading of Walls on the East and the West and the Roof? How much energy saving has been effected?**
	It is proposed to insulate the roofs of these buildings to minimize the heat gain and intern saving the electricity.
9.7	**Do the structures use energy-efficient space conditioning, lighting and mechanical systems? Provide technical details. Provide details of the transformers and motor efficiencies, lighting intensity and**

	air-conditioning load assumptions? Are you using CFC and HCFC free chillers? Provide specifications.
	Following Energy conservation measures are proposed for Energy Saving: ➢ Monitoring of daily electricity consumption & recording of maximum demand will be done. ➢ Power factor correction. – will be provided for common loads only. ➢ Using less lights in common areas in non peak hours. ➢ Common area lighting with LED Lamps ➢ Multiple circuits for lighting. ➢ Solar energy use for water heater & lighting the part of the garden area & part of road.
9.8	**What are the likely effects of the building activity in altering the micro-climates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat island & inversion effects?**
	It will not alter the microclimate. The construction will not cause inversion.
9.9	**What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.**
	The project is not centrally air conditioned thus the ECBC guidelines will not be applicable to this project. To reduce heat intake use of insulation or other materials will be decided by the occupants of the building.
9.10	**What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.**
	FIRE FIGHTING: ➢ As per the regulations of CFO NOC ➢ Provision of Fire Protection System. ➢ Provision of Fire Alarm System as per I.S code. ➢ Provision of Fire detection system. ➢ Provision of Fire hydrants, Fire pumps, booster pumps, sprinkler pumps: Electric, supply independent circuit & fire hydrant line. ➢ Provision of portable fire extinguishers of IS specification. ➢ Adequate underground and overhead separate water storage tanks. Complete Disaster Management Plan (DMP) is made by considering all the factors responsible for management of any minor or major disaster.
9.11	**If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.**
	Glass shall be used in commercial only for windows.
9.12	**What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.**
	It has not been studied.
9.13	**To what extent the non-conventional energy technologies are utilized in the overall energy consumption? Provide details of the renewable energy technologies used.**
	Will be provided.
10	**Environment Management Plan**
	The Environment Management Plan would consist of all mitigation measures for each activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations. It will state the steps to be taken in case of emergency such as accidents at the site including fire.

ENVIRONMENTAL IMPACT AND MANAGEMENT PLAN FOR THE PROJECT

EMP for Construction Phase

Sr. no.	Environmental Component	Activity	Impacts	Precautionary measures
1	Ambient Air Quality & Noise level	• Site Clearance • Excavation • Construction of Structures • Heavy vehicle traffic • Use of DG Set • Open burning of waste	• Increased level of dust & other air pollutants • Increased noise level.	**For controlling air pollution :** • Water Sprinkling • Cover on trucks • Use of RMC instead of preparing concrete at site • Vehicles with valid PUC • **DG sets:** CPCB approved low sulphur fuel. **For controlling noise pollution :** • Barricades along the periphery of the site. • Ear Plugs for Labourers • D.G. sets CPCB approved • No noisy work in night shifts. • Using electrically operated construction equipment.
2	Water	• Use of fresh • water for Construction activity / labors • Wastewater • generation • Disposal of site • Run off into SWD • Water logging	• Stress on the water supply in the vicinity • Sedimentation, • Pollution of nearby water courses. • Unhygienic condition for surrounding residents.	• Use of tanker water for construction. No burden on municipal supply • Provision of temporary toilets for labors. • Precaution to avoid water logging during construction
3	Soil	• Preconstruction and excavation debris • Storage of construction material / chemicals • Transportation of hazardous material	• Loss of good fertile soil • Soil erosion, Soil contamination due to mixing of construction	• Proper and Separate storage of construction material • Storage of all petroleum products

		• Residual paints Solvents/bituminous material etc. operation / maintenance Generation of garbage by labor	material/ accidental spillage of chemicals /oils	on impervious layers viz. concrete. • Transportation, storage and handling, disposal of HW as per their guidelines and handing it over to authorized agencies. • Use of electrically operated machinery. • Segregation of waste at Source
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site.			
4	Ecology	• Site clearance, Construction of structures, cutting of trees	• Disturbing natural flora and fauna • Loss of vegetation from chemical spills from vehicles	• Plantation of local tree species on the Periphery of site • Plantation of trees will start in middle of construction phase. • Regulation of vehicular trips and speed and proper maintenance of machinery.
5	Safety & Hygienic Measures	Construction work Labor	• Positive impact : Employment generation • Safety and hygiene at site may be affected during construction	• Adequate drinking water, toilet and bathing facilities. • Regular analysis of drinking water. • Personal protective and safety equipment will be provided. • First aid facility. • Regular health check up • Regular pest control at site.

				• Educational and awareness programme for safety measures.

EMP for Operation Phase

Sr. no.	Environmental Component	Activity	Impacts	Precautionary measures
1	Ambient Air Quality& Noise level	Increased vehicular trips, Use of DG sets	• Traffic • congestion • Air pollution • Increase in • noise level	• Adequate parking provision; well organized traffic management plan for Smooth flow of vehicles. • Regular PUC check-up for vehicles. • DG sets: As per CPCB norms, Proper Maintenance, Use of Low sulphur fuel. • Acoustic Enclosures for DG sets • Plantation of tress will reduce air pollution and also act as noise buffer.
2	Water	• Increased Demand of natural water, • Generation of waste water • Increased paved structure	• Stress on existing water supply, • Pollution of water bodies • Increased run off from site.	• Use of water saving practices • Adoption of dual flush system • Rain water harvesting • Plantation of less water consuming trees. • STP is planned and treated sewage will be used for secondary requirements like flushing and gardening.

3	Land	• Solid waste generation, • Transportation of hazardous material • Increased paved structure	• Improper disposal of waste, • accidental spillage of hazardous chemicals leads to soil contamination • Increased run off from site.	• Waste minimization recovery and reuse • Segregation at source for all solid waste streams • Recycling of non biodegradable garbage • Treatment of biodegradable garbage by Organic waste converter and its use as manure • Use of dried STP sludge as manure • Transportation, storage and handling, disposal of HW as per their guidelines and handling it over to authorized agencies. • Strom water drainage of adequate capacity.
	Even after taking precautions if soil is found to be contaminated, it shall be removed and disposed off to authorized site			
4	Ecology	Introduction of new tree species	• Disturbing natural flora and fauna • Increased exposure to anthropogenic activities.	• Plantation of local tree species.
5	Safety & Hygienic Measures	Influx of people	• Stress on all utilities, risk and danger due to natural and manmade disaster • Positive impact: Employment generation	• Emergency preparedness plan and Disaster management plan will be Prepared and explained with the help of local NGO's and surrounding people and authority.

Note: Environmental monitoring plan will be prepared based on Environmental management Plan. All environmental parameters will be studied as and when required and based on analysis result mitigation

measures will be implemented.

Hazardous Waste Management Plan:

Construction Phase:

Environmental Management Plan for Hazardous Waste Generation

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures
1	Leakages and spillage oil or fuel	* Contaminated soil if any shall be disposed off to Authorized Disposal Site. * Bituminous materials /any other chemicals shall not be allowed to leach into the soil.
2	Residual Paints/Solvents	--do--

Other hazardous wastes, if any, shall also be handled in the similar way through authorized dealers only.

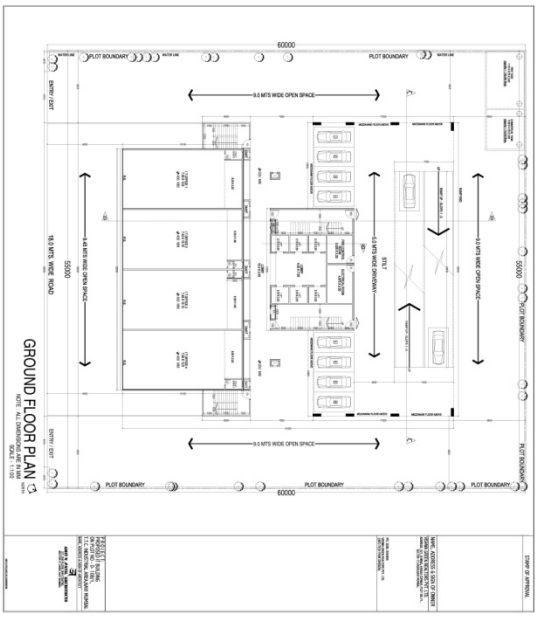
Operational Phase

Sr. No.	Source of Hazardous Waste Generation	Mitigation Measures	Disposal
1.	Waste Oil from D.G Sets	--	Waste oil will be handed over to authorized recyclers.

ANNEXURE I: GOOGLE IMAGE

Plot No. D-108/1, T.T.C. Industrial area, Nerul, Navi Mumbai

ANNEXURE II: MASTER LAYOUT



Access Road: 18.00 mt Wide
Internal Roads / Secondary Roads: 9.00 mt
Turning Radius: 9.00 mt