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FORM-1

(I) Basic Information

Sr. No.	Item	Details
1	Name of the Project	Proposed Residential Building On Final Plot No. 459 and 495 at Panvel, Taluka-Panvel, District-Riagad, Maharashtra.
2	S. No. in the Schedule	8 (a)
	Proposed capacity/area /length/tonnage to be handled/command area/lease area/ number of wells to be drilled	• Total plot area: 9,583.00 Sq.mt. • Total FSI area: 39,335.15 Sq.mt. • Total Non FSI Area: 23,735.256 Sq.mt. • Total Construction Area: 63,070.406 Sq.mt
4	New/Expansion/Modernization	Housing project
5	Existing Capacity/Area etc.	Not applicable
6	Category of Project i.e. 'A' or 'B'	'B 2'
7	Does it attract the general condition? If Yes, Please specify	No
8	Does it attract the specific condition? If yes, Please specify	No
9	Location	Panvel, Navi Mumbai
	Plot/Survey/Khasra No.	F. P No. 459 & 495
	Village	Panvel
	Tehsil	Panvel
	District	Raigad
	State	Maharashtra
10	Nearest railway station/airport along with distance in kms.	Panvel Railway Station
11	Nearest Town, City, District Headquarters along with distance in kms.	Panvel
12	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	Panvel Municipal Corporation
13	Name of the applicant	M/s. Kalpataru & Sharyans
14	Registered Address	101, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (E), Mumbai 400 055
15	Address for Correspondence:	101, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (E), Mumbai 400 055
	Name	**Mr. Imtiaz Kanga** Authorized Signatory 101, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (E), Mumbai 400 055
	Designation(Owner/Partner/CEO)	
	Address	
	Pin Code	
	E-mail	kns.A@kalpataru.com

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	Telephone No.	022 30645000
	Fax No.	022 30643131
16	Details of Alternative Sites examined, If any. Location of these sites should be shown on a topo sheet	NA.
17	Interlinked Projects	No
18	Whether separate application of interlinked project has been submitted?	Not applicable
19	It yes, date of submission	Not applicable
20	If no, reason	Not applicable
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?	NA NA CRZ is not applicable
22	Whether there is any Government Order/Policy relevant/relating to the site?	NA
23	Forest land involved (hectares)	Nil
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

** Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area of mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.)*

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(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)	Yes	The project is a residential project. Land use is residential land use as per PMC.
1.2	Clearance of existing land, vegetation and building?	Yes	Clearance of vegetation as per permission granted by PMC as involved. Compensatory plantation is proposed as per the norms.
1.3	Creation of new land uses	Yes	The project is a residential project. Land use is residential land use as per PMC.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Geo-Technical investigations have been carried out.
1.5	Construction works?	Yes	It is a residential development.
1.6	Démolition Works?	Yes	Not applicable
1.7	Temporary sites used for construction works or housing of construction workers?	Yes	A small portion of plot area shall be reserved for material storage and temporary housing of laborers.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	Yes	A residential building with following configuration wing: WingA, Wing B, Wing C & Wing D — Configuration: 2Basements+Ground/Stilt+1st floor (Resi.+Podium)and2nd floor(Resi.+Podium) +3rd to 19th floors
1.9	Underground works including mining or tunneling?	No	No underground works including mining or tunnelling is carried out.
1.10	Reclamation works?	No	Not Applicable
1.11	Dredging?	No	Not Applicable
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing Process?	No	Not Applicable
1.14	Facilities for storage of goods or materials?	Yes	Temporary sheds shall be constructed for the storage of construction materials during construction phase as per the material requirement.
1.15	Facilities for treatment or	Yes	**SOLID WASTE**:

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Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	disposal of solid waste or liquid effluents?		Total 1046-/day solid waste is expected to be generated in the project. Bio – degradable waste of 418/day is expected to be treated in OWC for manure. Remaining solid waste consisting of Non – Biodegradable waste: 627 kg/day is proposed to be handed over to Local authorities. **SEWAGE**: 278KLD wastewater generated from the site is proposed to be treated in STP. The treated water will be utilized for flushing & landscaping. The excess treated water shall be discharged to Municipal drain. The sludge shall be reused for landscaping
1.16	Facilities for long term housing of operational workers?	No	No long-term housing facilities proposed as most of the skilled/unskilled manpower required for the construction /operation activities have been hired from the nearby areas.
1.17	New road, rail or sea traffic during construction of operation?	No	The project site is within a municipal limits of PMC with well-connected developed roads abutting the plot. Hence, no new roads are required to be constructed.
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?	No	No new Rail/road is required. The entire essential infrastructure is already available. The existing approach from DP Road near to the site have been utilized.
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	There will be no diversion or closure of the existing transport routes and infrastructure.
1.20	New or diverted transmission lines or pipelines?	No	Not Envisaged
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	Not Envisaged.
1.22	Stream crossings?	No	There is no stream passing through the site.
1.23	Abstraction or transfers of water from ground or surface waters?	No	Not Envisaged.
1.24	Changes in water bodies or the land surface affecting drainage or run-off	No	Water bodies are not proposed to be changed. However, the existing surface of the site will change. Hence, run-off from the site will be affected.
1.25	Transport of personnel or materials for construction, operation or	Yes	The existing road abutting the site shall be utilized for the transportation of material and personal.

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Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
	decommissioning?		
1.26	Long-term dismantling or decommissioning or restoration works?	No	Not applicable.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	No de-commissioning is involved.
1.28	Influx of people to an area in either temporarily or permanently?	Yes	***Construction Phase:*** During the construction phase laborers shall be provided temporary accommodation. ***Operation Phase:*** After completion of the project, the total occupancy of the project is expected to be approx. 2324Nos.
1.29	Introduction of alien species?	No	There is no introduction of alien species
1.30	Loss of native species or genetic diversity?	No	No
1.31	Any other actions?	No	Not envisaged

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	The land is in highly developed infrastructure area under the jurisdiction of PANVEL Municipal Corporation
2.2	Water (expected source & competing users) unit KLD	Yes	***Construction Phase:*** The water demand will be met by Tanker water. ***Operation Phase:*** **Total water demand** of the project is expected to be338KLD (Domestic+Landscape+flushing+Pool balancing) approximately wherein; Domestic Water requirement: 210 KLD, Flushing water requirement 107 KLD and Landscape water requirement: 11KLD. The PMC/Recycled Water will meet total water requirement**.**
2.3	Minerals (MT)	No	Not Applicable
2.4	Construction material – stone, aggregates, and/soil (expected source-MT)	Yes	Maximum attempt shall be made to procure construction materials from local vendors.

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2.5	Forests and timber (source-MT)	Yes	Apartments shall involve use of timber for doors.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	Yes	**<u>During Operation Phase</u>** Connected Load: 3161- KW Demand Load: 1465KW **<u>Source: MSEB/Local electricity supplier</u>** DG set shall be provided for backup power to emergency facilities.
2.7	Any other natural resources (use appropriate standard units)	No	Not envisaged

3.0 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)	Yes	Used oil from DG Set shall be sold to approved vendors only.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	The proposed site is within a developed urban environment. The general hygiene conditions are not conducive for development of disease. The development is envisaged to improve the existing hygiene
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Positive impact due to enhanced and hygienic living conditions generation. Aesthetic value of area shall be improved. It shall provide employment opportunities to the local people in terms of skilled and unskilled labour during construction and service personnel during operational phase.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	Not Anticipated.
3.5	Any other causes	No	No other causes identified.

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

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<table>
<tr><th>Sr. No.</th><th>Information/Checklist Confirmation</th><th>Yes / No</th><th>Details thereof (with approximate quantities/ rates, wherever possible) with source of information data</th></tr>
<tr><td>4.1</td><td>Spoil, overburden or mine wastes</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>4.2</td><td>Municipal waste (domestic and or commercial wastes)</td><td>Yes</td><td>Both Bio- degradable and non-degradable solid waste produced during the operational phase have been provided, as follows:
<table>
<tr><th>Sr. No.</th><th>Type Of Waste</th><th>Quantity (kg/day)</th><th>Management/Disposal</th></tr>
<tr><td>1</td><td>Biodegradable Waste</td><td>418</td><td>Treated in OWC.</td></tr>
<tr><td>2</td><td>Non-biodegradable Waste</td><td>627</td><td>Segregated/Sale/Collected by local authority</td></tr>
</table></td></tr>
<tr><td>4.3</td><td>Hazardous wastes (as per hazardous waste management rules)</td><td>Yes</td><td>DG Sets shall be used. Used oil from the D.G set shall be sold to approved vendors.</td></tr>
<tr><td>4.4</td><td>Other industrial process wastes</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>4.5</td><td>Surplus product</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>4.6</td><td>Sewage sludge or other sludge from effluent treatment</td><td>Yes</td><td>Sludge from STP will be used as manure for gardening/landscaping.</td></tr>
<tr><td>4.7</td><td>Construction or demolition wastes</td><td>Yes</td><td>Will be used to maximum on site. It shall be used as backfilling material during construction of internal roads to the best possible extent and rest sold to vendors for disposal.</td></tr>
<tr><td>4.8</td><td>Redundant machinery or equipment</td><td>No</td><td>All Equipments used for construction shall be of standard quality and maintained on regular basis.</td></tr>
<tr><td>4.9</td><td>Contaminated soils or other materials</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>4.10</td><td>Agricultural wastes</td><td>No</td><td>Not Applicable</td></tr>
<tr><td>4.11</td><td>Other solid wastes</td><td>No</td><td>Not Applicable</td></tr>
</table>

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

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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	Yes	• Emissions from DG set when it is operated in case of emergency. • Emissions from Heavy vehicles during Construction Phase. • Emissions from light vehicles during Operations Phase.
5.2	Emission from production processes	No	No such activity has been proposed.
5.3	Emissions from materials handling including storage or transport	Yes	Fugitive emissions are expected to be generated, while handling and transportation of materials to site, But is temporary in nature.
5.4	Emissions from construction activities including plant and equipment	Yes	The project may cause rise in dust levels during construction phase. Precautions have been taken to reduce dust generation during construction phase: • RMC use reduces the handling of cement, sand and concrete thus dust emission has been minimized. • RMC use reduces the trucks trips. • Tarpaulins used to cover trucks carrying debris. • Water sprinkling done at regular intervals to reduce control of dust generation on unpaved roads.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	***Construction Phase:*** Fugitive dust emissions generated due to movement of vehicles and material handling. Tarpaulin sheets shall be used to cover the vehicles and water sprinkling shall be done to arrest dust generation due to vehicles. ***Operation Phase:*** During Operation Phase, emissions generated from operation of DG sets in emergency cases. Minimal emissions generated from movement of vehicles as fugitive dust as because paved roads.
5.6	Emissions from incineration of waste	No	Not applicable

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Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not Applicable
5.8	Emissions from any other sources	No	Not Applicable.

6.0 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 equipment used for drilling, cutting operations. D.G Sets shall be proposed in acoustically designed enclosures so as to reduce the noise from D.G Set. For control of noise following measures have been adopted: • Properly maintained equipment shall be used. • High noise generating construction activities shall be carefully planned. • Workers working near high noise construction machinery shall be provided with PPE.
6.2	From industrial or similar processes	No	Not Applicable
6.3	From construction or demolition	Yes	Due to utilization of equipment for demolition of existing buildings & new construction, noise shall be generated. Therefore, following precautions will be taken to control noise pollution: • High noise generating construction activities shall be carefully planned. • Installation, use and maintenance of mufflers on equipment. • Workers working near high noise construction machinery supplied with PPE.
6.4	From blasting or piling	No	Not Applicable.

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6.5	From construction or operational traffic	Yes	***During Construction phase:*** There will be transportation of materials for construction work. Precautions have been taken to reduce the impact of the vehicular movement such as No vehicular trips at peak traffic hours and no honking zones. ***During Operation Phase:*** The vehicular parking has been restricted only in the adequate parking area provided, which helped in reducing noise pollution due to traffic congestion. Adequate tree plantation will also help to reduce the noise level and enhance air quality.
6.6	From lighting or cooling systems	No	Not Envisaged
6.7	From any other sources	No	Not Envisaged

7.0 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	Not Applicable
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	Wastewaters generated from domestic uses will be 278 KLD. Treated water will be utilized for Landscape, & flushing. Balance treated water will be disposed off to Municipal Drain
7.3	By deposition of pollutants emitted to air into the land or into water	No	Dust will be generated during construction phase from earthworks and movement of vehicles. Appropriate fugitive dust control measures, including water sprinkling of exposed areas and dust covers for trucks, shall be provided to minimize any impacts. DG exhaust shall be discharged at appropriate height.
7.4	From any other sources	No	Not Anticipated
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	Not Anticipated

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8.0 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	Not Anticipated
8.2	From any other causes	No	Not Envisaged
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 seismic zone-III as per IS1893 (Part-1):2002. Structural design is made earthquake resistant as per IS codes.

9.0 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
9.1	Lead to development of supporting utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	Supporting and ancillary development will take place. The project provides a well designed residential housing area for the occupants.
	Supporting infrastructure (roads, power supply, waste or waste water treatment, etc)	Yes	Internal road, Rain Water Harvesting, STP, RG etc. have been proposed.
	Housing development	Yes	The project provides a well designed residential housing area for the occupants.
	Extractive industries	No	Not Applicable
	Supply industries	No	Not Applicable
	Other	No	

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Sr. No.	Information/Checklist Confirmation	Yes/No	Details thereof (with approximate quantities/ rates, wherever possible) with source of information data
9.2	Lead to after use of the site, which could have an impact on the environment.	No	Not Anticipated.
9.3	Set a precedent for later developments	Yes	The project will provide good infrastructure and better life style which will set an example for later developments in the surrounding area.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	No	NA

(iii) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (with 15-km) Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	Yes	Nil
2	Areas which are important or sensitive of ecological reasons – wetlands, water courses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	Gadi river passes at a approximate distance of 200 m.
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Nil
4	Inland, coastal, marine or underground waters	Yes	Gadi river passes at a approximate distance of 200 m.
5	State, national boundaries	No	The project is located within Municipal limits.
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	Not Applicable.
7	Defense installations	No	No defense installation in the neighborhood.
8	Densely populated or built-up area	Yes	Residential, Commercial and Industrial area all around the site.
9	Areas occupied by sensitive man made land uses *(hospitals, schools, places of worship,*	Yes	Schools, hospitals and small temples are observed in 10 km radius.

Sr. No.	Areas	Name/ Identity	Aerial distance (with 15-km) Proposed project location boundary
	community facilities)		**1) Nearest Hospital**:- MGM Hospital , Vashi 5.91 Km :-Towards North. **2) Nearest School:-** Kendriya Vidyalaya, 1.12 Km :-Towards South-East. **3) Nearest College :-** S. P. More Engineering College 1.62 Km :- Towards North - East.
10	Areas containing important, high quality or scarce resources *(ground water resource, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	No	The project will meet water from Panvel Municipal Corporation for its use after proper permissions are obtained.
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded)*	No	All parameters of Air, water and Noise etc. will be maintained within the permissible limit.
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)*	No	This area is generally plain& come under **seismic zone –III** according to Indian Standard Seismic zoning map.

(b) The following shall be inserted at the end, namely:

"I hereby give 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 give, if any to the project will be revoked at our risk and cost."

Date: 07 October 20

Signature of the Applicant

Place: Mumbai

(Authorised Signatory)

FORM-1A
(Only for Construction Projects listed under Item 8 of Schedule)
Checklist of Environmental Impacts

1. Land Environment

Requirement	Compliance
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 form the competent authority are 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.	• The Proposed project is Residential Building. • The site is under Jurisdiction of Panvel Municipal Corporation. • The project land is in the residential zone. • The proposed land use is in conformation with the approved Municipal Master
1.2. List out all the major project requirements in terms of the land area, built up area, water consumption, power requirement, connectivity, community facilities, parking needs etc.	➢ **Name & Location: Proposed Residential Project On Final Plot 459 & 495 At Panvel, Taluka-Panvel, District-Raigad.** It's a new project. ➢ **Area Statement:** • Total plot area: 9,583.00 Sq.mt. • Total FSI area: 39,335.15 Sq.mt. • Total Non FSI Area: 23,735.256 Sq.mt. Total Construction Area: 63,070.406 Sq.mt ➢ **Water consumption**: ➢ Total Water Requirement (land+flus+domes+ pool makeup) (CMD);338 ➢ Fresh water (CMD) & source (domestic -210 CMD by PMC (Panvel Municipal Corporation) ➢ Recycled water (CMD): 234CMD Flushing: 107 CMD Gardening: 11CMD ➢ **Power requirement:** Operation phase: Connected load 3161 KW Maximum demand 1465KW Source: MSEB/Local Electricity supplier DG set shall be provided for backup power to emergency

<table>
<tr><td></td><td>facilities.

➢ Parking requirement:
No of parking: 267 Nos. of 4 wheelers
1176 Nos. of 2 wheelers

➢ Width of all Internal roads (m):6 to 12 mt
➢ Occupancy load: 2324No’s.
➢ Solid Waste:

<table><tr><td>Type Of Waste</td><td>Quantity (kg/day)</td></tr><tr><td>Biodegradable Waste</td><td>418</td></tr><tr><td>Non-biodegradable Waste</td><td>627</td></tr></table></td></tr>
<tr><td>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 landuse, disturbance to the local ecology)</td><td>The proposed project is within the limits of Panvel Municipal Corporation. Panvel Municipal Corporation has sanctioned DP. The Development Plan provides for open spaces, community facilities in accordance with the proposed development. The proposed user on the plot is as per the sanctioned DP.</td></tr>
<tr><td>1.4. Will there is any significant land distribution resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc may be given)</td><td>There will be no significant land disturbance due to the project. The existing land and surrounding area is flat/table land without having any undulations. The existing terrain will be retained.</td></tr>
<tr><td>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)</td><td>Natural Drainage System will not be altered.

There will be no alteration of natural drainage however in the site proper storm water drainage will be provided to prevent flooding. Water storage tanks also proposed.</td></tr>
<tr><td>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.)</td><td>The excavated material shall be reused for back filling, Road work, temporary works etc. to the maximum extent. The excess shall be transported be transported in covered trucks through vendors.</td></tr>
<tr><td>1.7. Give details regarding water supply, waste handling etc. during the construction period.</td><td>During construction phase, water supply shall be met through tanker water. Solid waste shall be collected at designated locations on the site and handed over to PMC.</td></tr>
<tr><td>1.8. Will the low lying areas & wetlands get altered? (Provide details of how low lying and wetlands are getting modified</td><td>No. There is no wetland in the project area.</td></tr>
</table>

from the proposed activity)	

2. Water Environment

Requirement	Compliance
2.1. Give the total quantity of water requirement for the proposed project with the break-up of requirements for various uses. How will the water requirements met? State the sources & quantities and furnish a water balance statement.	Construction Phase : During construction phase, water shall be supplied by tanker water. <u>Operation Phase:</u> Total Water Requirement; ➢ Fresh water (CMD) & source (domestic -210 CMD by PMC (Panvel Municipal Corporation) ➢ Swimming pool make up 10 CMD • Flushing: 107- CMD • Gardening: 11- CMD Source: Recycled water-Municipal
2.2. What is the capacity (dependable flow or yield) of the proposed source of water?	For water supply the project is dependent on PMC & recycled water. Recycled water used for gardening flushing.
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)	Being well developed urban area, Water supply shall be from the Panvel Municipal Corporation (PMC).
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)	Total recycled water generated from the project is 234KLD. All secondary water requirements like flushing & gardening shall be fulfilled by treated water from STP.
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)	No
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)	278KLD wastewater shall be generated from domestic uses of residential treated in STPs of different capacities and excess treated water shall be disposed off to Municipal drain.
2.7. Give details of the water requirements met from water harvesting? Furnish details of the facilities created.	Rain water harvesting pits are proposed.
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?	The storm water runoff shall be properly channelized through designed Storm water drainage system.

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)	There shall be no extraction of ground water. Post construction stage, Rain water harvesting system shall be provided.
2.10. What precautions/measures are taken to prevent the run-off from construction activities polluting land and aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts)	Sediment traps/Silt basins shall be provided to arrest soil erosion.
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)	Storm water drain of adequate size, constructed strictly in accordance to the governing authority regulations shall be provided to manage storm water from within the site.
2.12. Will the deployment of construction labourers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)	During construction phase the sewage generated shall be collected in septic tank/soak pits. Hence it will not lead to unsanitary conditions around the project site.
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 quantity of wastewater 278 KLD generated from the project shall be treated in STP with different capacities and recycled water used for gardening and flushing purpose and excess to be disposed to Municipal drains.
2.14. Give details of dual plumbing system if treated wastewater is used for flushing of toilets or any other use.	Dual plumbing system shall be provided for use of treated wastewater for flushing operations.

3. Vegetation

Requirement	Compliance
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)	There are some trees out of them some will be cleared after getting Tree NOC; Total RG area Proposed: 1313 sq.m
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)	Trees shall be retained which are not affected by building lines. Compensatory tree plantation and new tree plantation shall be done as per tree NOC.

4. Fauna

Requirement	Compliance
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 displacement of fauna - both terrestrial and aquatic
4.2. Any direct or indirect impacts on the avifauna of the area? Provide details.	No major impact on the avifauna of the area.
4.3. Prescribe measures such as corridors, fish ladders etc. to mitigate adverse impacts on fauna.	The project is located on landmass and there is no need to provide corridors and fish ladders etc.

5. Air Environment

Requirement	Compliance
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)	No. The project design has been provided sufficient parking for the area. Necessary arrangements will be made for smooth entry and exit of vehicles. Parking will be provided as per prevailing regulations.
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.	Dust is likely to be generated during constructional phase. Mitigation measures to be proposed: • Dust Control by Water Sprinkling, • Transport vehicles shall be covered with Tarpaulin sheets. • Vehicles and instruments shall be regularly maintained. • Barricades shall be provided along the periphery of the construction site.
5.3. Will the proposal create shortage of parking space for vehicles? Furnish details of the present level of transport infrastructure and measures proposed for improvement including the traffic management at the entry and exit to the project site.	No. Adequate parking will be proposed for the building. Internal roads will be planned within the proposed project for smooth entry and exit of vehicles.
5.4. Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.	Detailed movement pattern shall be given in EIA report.
5.5. Will there be significant increase in traffic noise & vibrations? Give details of the sources and the measures proposed for mitigation of the above.	The project proponent has proposed to provide well organized parking arrangement, which would help in reducing noise levels due to vehicular movement in the parking area. The mitigation is proposed through a detailed EMP that will be planned to reduce the noise

	and vibration impacts during the construction phase.
5.6. What will be the impact of D.G. sets & other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.	D.G. Sets shall be operated only in case of power failures during operational phase for emergency services only D.G. sets shall be provided with acoustic enclosure and the discharge of flue gases shall be at adequate stack height (as per CPCB guidelines).

6. Aesthetics

Requirement	Compliance
6.1. 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?	No. The project is well designed and shall enhance aesthetics of the area.
6.2. Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?	There shall be negligible adverse impacts due to new constructions on the existing structures.
6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.	The design of the project is influenced by the regulation set out by local authority and modern needs of the society.
6.4. Are there any anthropological or archaeological sites or artefacts nearby? State if any other significant features in the vicinity of the proposed site have been considered.	There are no anthropological or archaeological sites or artefacts nearby proposed site.

7. Socio-Economic Aspects

Requirement	Compliance
7.1. Will the proposal result in any changes to the demographic structure of local population? Provide the details.	Project influxes of 2324 Nos. people. After completion of the project.
7.2. Give details of the existing social infrastructure around the proposed project.	Proposed project is located within the Residential and commercial zone of high urban infrastructure region which is located in Panvel.
7.3. Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?	The proposed project will not cause any adverse effects on local communities, disturbance to sacred sites or other cultural values.

8. Building Materials

Requirement	Compliance
8.1. May involve the use of building materials with high-embodies energy. Are the construction materials produced with energy efficient	The basic engineering materials like RMC, cement, sand, blocks, etc shall be purchased from local vendors.

processes? (Give details of energy conservation measures in the selection of building materials and their energy efficiency)	
8.2. Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?	• The construction material shall be carried in properly covered vehicles. • All the contractors / Vendors shall be instructed to use properly maintained vehicles. • Security staff present at site to supervise loading and unloading of material at site. • Construction material stored at identified site/ temporary godowns at site. • Internal roads maintained in good conditions with regular sprinkling of water to curb the dust nuisance to the surrounding. • Tree plantation along the periphery.
8.3. Are recycled materials used in roads and structures? State the extent of savings achieved?	Yes, the construction debris shall be reused in backfilling, roads and temporary works.
8.4. Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.	The solid waste management facility has been proposed as per MSW rules. • Segregated Garbage shall be collected manually from each household and brought to the garbage collection room. • The wet garbage (biodegradable waste) to be treated into OWC and converted to manure. The manure shall be used for gardening/landscaping which required and rest handed over to vendors. • The dry garbage (non biodegradable waste) handed over to PMC for further disposal.

9. Energy Conservation

Requirement	Compliance
9.1. Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of build-up area? How have you tried to minimize energy consumption?	**Power Supply:** Connected Load = 3161 KW Demand Load = 1465 KW Source of Power – MSEB/Local Electricity supplier DG sets shall be provided with proper acoustic enclosure for emergency services.
9.2. What type of, and capacity of, power back-up to you plan to provide?	DG set have been provided for backup power to emergency facilities.

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?	Clear glass shall be proposed for windows.
9.4. What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.	Building orientation, wall to window ratio and thermal properties of envelop are being considered to reduce solar heat gain and to maximize provision of natural light and ventilation.
9.5. Does the layout of streets and 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?	Solar systems shall be proposed
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 West and the Roof? How much energy saving has been effected?	Depending upon the site location, efforts are being made by the Architects to maximize the shading of walls.
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.	Yes. Energy efficient lighting shall be provided for common areas. The customers shall be educated regarding the importance of energy efficient/star rated electrical appliances.
9.8. What are the likely effects of the building activity in altering the microclimates? Provide a self assessment on the likely impacts of the proposed construction on creation of heat islands & inversion effects?	As this will be construction project, air pollution is not expected to be a major concern.
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.	• High SRI material shall be provided to the roof.
9.10. What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.	Proper precautions and safety measures shall be taken according to Chief Fire Officer, of the PMC. Moreover proper fire detection/extinguishing system, exit facilities, etc. installed for safety purpose. Refuse area have been provided as per norms.
9.11. If you are using glass as wall material, provide details and specifications including emissivity and thermal characteristics.	Glass shall be used for window areas.
9.12. What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.	Dwelling units shall be provided with adequate ventilation.

9.13. To what extent the non-conventional energy technologies are utilised in the overall energy consumption? Provide details of the renewable energy technologies used.	Solar system shall be proposed to the possible extent.

ENVIRONMENT MANAGEMENT PLAN

(The Environment Management Plan shall consist of all mitigation measures for each activity to be undertaken during the construction, operation and the entire life cycle to minimise adverse environmental impacts. It would also include the environmental monitoring plan for compliance of various environmental regulations and conditions in the EC. It will also state the steps that shall be taken in case of emergency such as accidents at the site including fire.)

10 Environment Management Plan

Environment Management Plan is mentioned below.

VEC		Source of Impact	Mitigation Measures
Air	**Construction phase** Construction related air emissions, including dust, on neighboring and nearby receptors.	All heavy construction activities. Movement of vehicles and transport of construction material. Site Preparation and other construction activities	**Dust suppression** • Internal unpaved roads shall be water sprinkled to suppress dust emitting from vehicular movement. • Wind breaks in the form of site barricades shall reduce the generation of fugitive dust from the site • All contractor shall be instructed to use PUC compliant vehicles
	Operation phase	Emission from vehicular traffic , emissions from DG (standby),	• Green spaces shall be developed. • DG sets will be installed as per CPCB norms. • Plantations will be initiated along the periphery of the plot shall also minimize the impact of the project activities.
Ground water	Groundwater contamination	**Construction phase** Wastewater generated from labour camp	Sewage is disposed to existing sewer line.
		Operation phase Sewage disposal	Sewage generated (278 CMD) will be treated in the proposed STP of capacity 300 CMD. The treated waste water shall be used for flushing (107 CMD) and landscaping (11 CMD) purpose and excess (115.75 KLD) will be discharged into municipal drain.
Surface Water	Surface water contamination	**Construction phase** Surface runoff from site during construction activity	Temporary Storm water drains along with silt traps/basins shall be proposed on site.

<table>
<tr><td></td><td>Land</td><td>Soil contamination</td><td><u>Construction phase</u>
Disposal of construction debris.</td><td>Excavation: The excavated soil used for backfilling to maximum extent and rest disposed by means of vendors.

Management plan for construction debris as follows
<table><tr><th>Elements</th><th>Management</th></tr><tr><td>Steel scrap</td><td>It shall be sold to recycler</td></tr><tr><td>Concrete</td><td rowspan="3">It shall be used for backfilling, construction of temporary structures, pavement construction etc. The excess if any shall be disposed by means of vendors</td></tr><tr><td>Blockwork</td></tr><tr><td>Flooring/ Tiling/ Dado</td></tr><tr><td>Empty Cement bags</td><td>They shall be sent for reusing and recycling.</td></tr></table></td></tr>
<tr><td></td><td></td><td></td><td><u>Operation phase</u>
Disposal of municipal solid waste.</td><td>• Segregation of Bio-degradable and Non-biodegradable waste into different bins shall be done by educating the occupants.
• Bio-degradable waste (418 kg/day) will be collected and processed in Organic Waste Converter /equivalent machines. The compost generated shall be used as manure.
• Non-biodegradable waste (627 kg/day) will be handed over to local vendors or recyclers for recycling.</td></tr>
<tr><td></td><td>Flora & fauna (biological environment)</td><td>Displacement of flora and fauna</td><td><u>Construction phase</u>
Site development during construction</td><td>During construction, existing trees which are proposed to be retained will be preserved properly by taking necessary measures. New tree plantation will be done after completion of the construction phase and before starting operation phase.</td></tr>
<tr><td></td><td></td><td></td><td><u>Operation phase</u>
Increase of green cover.</td><td>RG provided as per Regulation</td></tr>
<tr><td></td><td>Socio-economic environment</td><td>Displacement of any community or economic resources</td><td><u>Operation phase</u>
Site operation.</td><td>The project will provide employment opportunities to the locals in terms of labour during the construction. During operation phase service personnel during operation period.</td></tr>
<tr><td></td><td>Traffic</td><td>Increase of vehicular traffic</td><td><u>Construction phase</u>
Heavy vehicular movement</td><td>Vehicular movement will be restricted to non-peak hours and adequate parking facility will be provided.</td></tr>
</table>

				Operation phase Traffic due to the residents	