Appendix I

(See paragraph-6)

Form 1

(a) For item (I) relating to the Basic Information, the following shall be substituted, namely:-

Sr. No.	Item	Details
1	Name of the project	Residential Construction Project by Ravinanda Landmark Unit V
2	S. no in the scheduled	8 (a)
3	Proposed capacity / Area/ length/ tonnage to be handled/command area/lease area/No. of wells to be drilled	Area of Plot : 27100 sqm FSI: 30544.59 sqm Non FSI: 18348.57 sqm Total Built up area: 48893.16 sqm
4	New / Expansion / Modernization	New
5	Existing Capacity/Area etc	Not Applicable
6	Category of the project i.e. 'A' or 'B'	Project category B2; Activity under Item 8 (a) of the EIA Notification dated 14th September 2006 as amended on 1st December, 2009 does not require scoping and public consultation
7	Does it attract the general condition? If yes, please specify	Not Applicable
8	Does it attract the Specific conditions? If yes, please specify	Not Applicable
9	Location	
	Plot/Survey /Khasra No.	Gat no. 142/1
	Village	Keshnand
	Tehasil	Haveli
	District	Pune
	State	Maharashtra
10	Nearest railway station /Airport along with distance in Km	**RAILWAY:** Pune railway station is at 17 km. **AIRWAY:** Lohagaon Airport is about 11 km from site **ROADWAY:** Nagar Road is 3.5 km away from site.

Sr. No.	Item	Details
11	Nearest town/city/district/Headquarters with distance in Km	Pune
12	Village pachayats, zilla parishad, Municipal corporation, Local body (complete postal addresses with telephone no. to be given	Keshnand
13	Name of the Applicant	Ravinanda Landmark Unit V
14	Registered address	D 38 Vastushree Complex, market Yard
15	Address for correspondence	Same as In Point No.14
	Name	Mr. Sameer Jain
	Designation (Owner/Partner/CEO)	Authorised partner
	Address	Same as In Point No.14
	Pin Code	Pune 411 037
	E-mail	E-mail : sameer.jn@gmail.com
	Telephone no.	020-41202488
	Fax No.	---
16	Details of alternatives sites examined, if any. Location of these site should be shown on topo sheet	Not Applicable
17	Interlinked Projects	Not Applicable
18	Whether separate application of interlinked project has been submitted?	Not Applicable
19	If yes, date of submission	Not Applicable
20	If no, reason	--
21	Whether the proposal involves approval/clearance ; Under if yes details of the same and their status to be given 1. Forest (Conservation) Act, 1980? 2. Wildlife (Protection) Act, 1972? 3. C.R.Z. Notification, 1991?	No, Since the proposal under reference is in developing part of the Pune city.
22	Whether there is any government order/policy relevant relating to the site	No
23	Forest land involved (hectors)	No forest land involved

Sr. No.	Item	Details
24	Whether there is any litigation pending against the project and/or land in which the project is proposed 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, Not Applicable

(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**	Please Refer **Annexure I : Location Map** **Annexure II : Layout plan** **Annexure III : Contour map**
1.2	Clearance of existing Land, vegetation and building?	**No**	No clearance of existing trees is required.
1.3	Creation of new land uses?	**Yes**	As stated in Point 1.1
1.4	Pre-construction investigation e.g. borehole, soil testing?	**Yes**	Soil testing will be done on the project site.
1.5	Construction works	**Yes**	The proposal pertains to construction of Residential complex. Please refer **Annexure IV: Area statement**
1.6	Demolition work	**No**	No demolition is involved.
1.7	Temporary sites used for construction works or housing of construction workers?	**Yes**	We are providing Labor camp at construction phase with all facilities.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations	**Yes**	Excavation for foundation is prominent activity. The debris and rubble removed would be used as filling material for leveling and for road construction. Top soil will be stored for landscaping

Sr. No	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.9	Underground works including mining or tunneling?	**No**	Not Applicable as the proposal pertains to construction of Residential Complex only.
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 processes?	**No**	Not Applicable as the proposal pertains to construction of Residential complex.
1.14	Facilities for storage of goods or materials?	**No**	Temporary storage godown will be provided for storage of construction material on site.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	**Yes**	Please refer **Annexure XIV: Details of Solid Waste Generation, Treatment and Disposal**
1.16	Facilities for long term housing of operational workers?	**No**	Not Applicable since project under reference is residential construction project.
1.17	New road, rail or sea traffic during construction or operation?	**Yes**	The development will not have major impact on traffic pattern. Internal roads will be well constructed to manage traffic. Please refer **Annexure VI: Parking Statement and Annexure VII: Parking and Traffic management layout**
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	**Yes**	**Construction Phase** There will be increase in some road traffic. In construction phase 10-12 trucks per day. JCB may play once or twice a day. **Operation Phase:** The development will not have major impact on traffic pattern internal roads will be well constructed to manage traffic. The site comes under Pune Municipal corporation area.
1.20	New or diverted transmission lines or pipelines?	**No**	Not Applicable
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	**No**	Not Applicable.
1.22	Stream crossing?	**No**	Not Applicable

Sr. No	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.23	Abstraction or transfers of water from ground or surface waters?	**No**	Not Applicable
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	**No**	Not Applicable.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	**Yes**	Transport of raw material to the site for construction by Truck / Dumper.
1.26	Long-term dismantling or decommissioning or restoration works?	**No**	Not Applicable since there is no dismantling involved in the project.
1.27	Ongoing activity during decommissioning which could have an impact on the environment.	**No**	Not Applicable since there is no Decommissioning.
1.28	Influx of people to an area in either temporarily or permanently?	**Yes**	Please refer **Annexure V: building configuration, occupancy details**
1.29	Introduction of alien species?	**No**	No, Project proponent have proposed all the indigenous species
1.30	Loss of native species or genetic diversity?	**No**	Not Applicable.
1.31	Any other actions?	**No**	No other action with reference to construction

2. Use of Natural resources for construction or operation of the 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 especially undeveloped or agricultural land (ha)	**No**	Not Applicable as land is vacant unutilized and Barren.
2.2	Water (expected source & competing users) unit: KLD	**Yes**	**Construction phase:** Water supply required during construction will be fulfilled by tankers **Operation Phase:** source of water during operation is Hinjewadi MIDC. Please Refer **Annexure VI: Water Demand and Water Budget.**

Sr. No.	Information/checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.3	Minerals (MT)	**No**	Since this is a construction project there will be no use of major minerals for construction.
2.4	Construction material – stone, aggregates, sand / soil (expected source – MT)	**Yes**	Materials will be procured from authorized Dealer
2.5	Forests and timber (source – MT)	**No**	No wood or timber will be used at greater extent during construction phase by project proponent.
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)	**Yes**	Please Refer **Annexure XVI: Details of Energy & Non Conventional Energy Use**
2.7	Any other natural resources (use appropriate standard units)	**No**	No use of other natural resource

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**	No use of hazardous substances.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	**No**	No such activity will be carried out which will change or affect vectors to born.
3.3	Affect the welfare of people e.g. by changing living conditions?	**No**	Project will not negatively affect welfare of people.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	**No**	People will not be affected by project rather since project aimed to provide good infrastructure and amenities to people in operation phase.
3.5	Any other causes	**No**	No use or storage of harmful or hazardous material within the project area during construction and operation phase.

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	**Yes**	Debris, excavated material for foundation will be used as filler material for low lying areas.
4.2	Municipal waste (domestic and or commercial wastes)	**Yes**	Please Refer **Annexure XVII: Details of generation, Treatment and Disposal of Solid Waste.**
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	**No**	No hazardous waste will be generated.
4.4	Other industrial process wastes	**No**	Not Applicable. Since the project under reference is residential construction project.
4.5	Surplus product	**No**	Not Applicable.
4.6	Sewage sludge or other sludge from effluent treatment	**Yes**	Sewage Sludge will be used as manure after treatment.
4.7	Construction or demolition wastes	**Yes**	Construction waste will be used for roads and as fill material for leveling and road, pathway construction.
4.8	Redundant machinery or equipment	**No**	No redundant machinery or equipment at project site.
4.9	Contaminated soils or other materials	**No**	No contamination of soil because land is kept unutilized before this development. Soil Testing is done prior to project
4.10	Agricultural wastes	**No**	Not Applicable

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

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**	Vehicular movement, energy back up DG sets, will be sources of air pollution.
5.2	Emissions from production processes	**No**	Not Applicable since the project under reference is Residential construction project & there is no manufacturing process involved.
5.3	Emissions from materials handling including storage or transport	**No**	Not Applicable since use of ready mix concrete Containing fly ash will be done for construction.
5.4	Emissions from construction activities including plant and equipment	**Yes**	Dust emissions may occur during excavation and earthwork proper care will be taken to reduce dust emission. Please refer **EMP**
5.5	Dust or odors from handling of materials including construction materials, sewage and waste	**Yes**	Dust will be generated during transport and handling of material.
5.6	Emissions from incineration of waste	**No**	No incineration of waste will be carried out at site.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	**No**	No burning of waste will be carried out at site.
5.8	Emissions from any other sources	**No**	None as this project pertains to construction of Residential Project.

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**	**Construction phase:** The significant source of noise pollution will be the machinery used for construction and vehicular movement. **Operation phase:** During operation phase the only source of noise will be operation of mechanical equipment, vehicular traffic and DG sets however, and these will be operated during

Sr. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			emergency only.
6.2	From industrial or similar processes	**No**	Not Applicable
6.3	From construction or demolition	**Yes**	Due to construction machinery / vehicle movement. However, site is vacant and no demolition is involved.
6.4	From blasting or piling	**No**	No blasting will be carried out.
6.5	From construction or operational traffic	**Yes**	No Significant disturbance due to traffic noise during construction and operation.
6.6	From lighting or cooling systems	**No**	Not Applicable
6.7	From any other sources	**No**	Not Applicable

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**	No handling storage or use of hazardous waste is envisaged
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	**No**	The treated sewage from STP will be utilized for gardening & flushing thus there will be no impact on the surface/ground water.
7.3	By deposition of pollutants emitted to air into the land or into water	**No**	No risk of contamination due to pollutants in air or water **Refer EMP** for further details
7.4	From any other sources	**No**	Not Applicable
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	**No**	Operation phase of project will be only residential hence no question of long term building of pollutants. Construction phase will be only for few months

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 approxim quantities/rates, wherever possible) v source of information data

8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances	**No**	Not Applicable as no hazardous substances are proposed to be used at site.
8.2	From any other causes	**No**	Not Applicable
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	**No**	The area is not subject to flooding as Maharashtra Irrigation Department.

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**
9.1	Lead to development of supporting. facilities, 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	**No**	Not Applicable The site and nearby areas are developed with good supportive infrastructure Like roads, transport facility, entertainment and hospitals.
9.2	Lead to after-use of the site, which could have an impact on the environment	**No**	Not Applicable
9.3	Set a precedent for later developments	**No**	Not Applicable
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	**No**	Not applicable since there are only 2-3 projects were going on in nearby areas of the site

(III) ENVIRONMENTAL SENSITIVITY

Sr. No.	**Areas**	**Name/ Identity**	**Aerial distance (within 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	**None**	Not Applicable,
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	**None**	Not Applicable
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	**None**	Not Applicable
4	Inland, coastal, marine or underground waters	**No**	Not Applicable
5	State /National boundaries	**No**	Not Applicable
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	**Yes**	Project site is well connected by roads to various ways of Pune.
7	Defense installations	**No**	Not Applicable
8	Densely populated or built-up area	**Yes**	Project located in developing area of Pune city
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	**No**	Not Applicable
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	**No**	Not Applicable
11	Areas already subjected to pollution or environmental damage. (Those where existing legal environmental standards are exceeded)	**None**	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)	**Nil**	Not Applicable

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

Date:
Place: Pune

Signature of the Applicant
Mr.Sameer Jain
Ravinanda Landmark Unit V
D-38 Vastushree complex , market yard.pune:411037

Appendix I I

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 program)

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 landuse 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 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. If not available attach only conceptual plans.

Name and address of the project	:	Residential cum commercial Construction Project by Ravinanda Landmark Unit V
Location of the project		
Name of the Place	:	Gat No. 142/1
Tehsil District	:	***Haveli*** Pune
Latitude/Longitude Nearest	:	Latitude 18°34'24.96"N Longitude 73°1'24.57"E

The land use of the area is purely residential and commercial and the project would not alter the existing land use. As per Development Plan of Town Planning (sanctioned by State Government),

residential cum commercial development on this plot is permissible; the plot under reference has been lying unutilized previously. The plot is leveled with no major undulations.

Please refer Following

- **Annexure I: Location Map**
- **Annexure II: Layout Map**
- **Annexure III : Contour Map**

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.

A	**Area Break up**	Total Plot Area	27100 Sq. m
		FSI	30544.59 Sqm
		Non FSI	18348.57 Sqm
		Total Built up area	48893.16 Sqm
		Please Refer **Annexure IV :Area statement**	
B	**Vehicular Parking Details**	Vehicular parking will be provided as per NBC/DC rules	
C	**Water Requirement & Sources**	Source of water for will be Keshnand Grampanchyat during operational phase. **Please refer Annexure VI: Water requirement of the project and water balance statement**.	
D	**Power**	Power supply will be through MSEDCL during operation phase. **Please refer Annexure XVI: Details of energy and fuel requirement of the project**	
E	**Connectivity**	RAILWAY: Pune railway station is at a distance of at 17 km. AIRWAY: Lohgaon, Airport at about 11 km from site Roadway: Nagar Road at 3.5 km	
F	**Community Facilities**	Schools, Colleges, Hospitals, Gardens, Market, Recreation, Hotels are in vicinity of project	

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 site is located in developing area of Pune city. The project proponents have proposed a design, which has minimum stilt area enabling more and more open spaces for recreation. There would be no impact on community facilities and land use as it is already a Residential area. Land use map is enclosed for reference. As regards to the disturbance to local ecology, it is note worthy that the land is barren at present and the project proponents have proposed for a landscape. In view of this, the project will not have any adverse impact rather the positive impact as far as greenery and ecology is concerned.

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 no significant land disturbance as the land is leveled. Soil profile of sub-surface is given as The land has been lying unutilized, thus there is no possibility of soil erosion/subsidence etc. The Pune city is in seismic zone III and entire construction will be done considering the above.

Seismic Environment & Precautions commitment

Pune lies in the seismically active zone of Koyna Region, which is about 100 km south of Pune. Pune has recently been upgraded to lie in the zone III, which is the second most dangerous seismic zone in India. Consequently, Pune has experienced some moderate-intensity and many low-intensity earthquakes. Although earthquakes were not known to have originated in Pune itself, an earthquake of a very slight intensity took place in Pune that had its epicenter in Dehu, about 13 km from the main city.

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)

The proposed development is planned in such a manner that it will not alter the existing drainage pattern of the area Please refer **Annexure III for contour Map of project site.**

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)

Earth work will be required only for foundation activity. Land is leveled with no major undulations. Some backfilling will be done using debris removed from exaction during foundation.

1.7 Give details regarding water supply, waste handling etc during the construction period.

Sub-stratum removed will be used for back filling the plinth/foundation in order to bring formation level of plot above the road level to facilitate storm water drainage. The landfill able part of waste from use of construction raw materials/building materials will also be used for filling up the plot. Balance if any will be utilized as fill material in other construction site in vicinity by the proponents. Please refer **Annexure VII** for water requirement

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 wetland or low laying areas are altered due to construction please refer contour map

1.9 Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labor and the means of disposal)

Waste will also be generated during building construction due to use of various raw material. This waste-stream will largely comprise of primary materials such as cement metal and quarried natural aggregates. Dose not cause any health hazard

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 met? State the sources & quantities and furnish a water balance statement.

At time of operation, source of water will be Keshnand Grampanchayat. Please refer **Annexure VII: water requirement** of the project and water balance statement. Requirement of flushing and gardening will be fulfilled by recycled water

2.2 How much of the water requirement can be met from the recycling of treated wastewater? (Give the details of quantities, sources and usage)

40 % of total water requirement will be met through recycled water **Please refer Annexure VI Water demand and water balance.**

2.3 Will there be diversion of water from other users? (Please assess the impacts of the project on other existing uses and quantities of consumption)

Not Applicable as there is no diversion of water from other users. Source of water is Keshnand Grampanchyat.

2.4 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)

Please Refer **Annexure IX** for quality and characteristics of waste water generation.

2.5 Give details of the water requirements met from water harvesting? Furnish details of the facilities created.

Rain water harvesting is done to recharge ground water table. Daily water requirement will get fulfilled by Pune Municipal Corporation and recycled water will be used for gardening

2.6 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?

Strom water management will be done by project proponent at project site with arrangement of rain water harvesting pits. Overflow will be connected to municipal storm water drainage line. Hence no problem of flooding will occur in construction and operation phase as well.

2.7 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 will be positive impact on ground water table of the area. Rain water harvesting will be done to recharge ground water of the area. Ground water will not be used in any case during construction or operation

2.8 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 plot is located in developing area. The run-off during construction period will be diverted to municipal storm water system and during operation phase development of landscape and rain water harvesting techniques will reduce runoff from the area.

2.9 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)

The storm water drains in the area are closed type. The drains are laid along roads & carry the water to the Municipal storm drain. Please refer External storm water drainage layout of the area.

2.10 Will the deployment of construction laborers particularly in the peak period lead to unsanitary conditions around the project site (Justify with proper explanation)

No, there will be no unsanitary conditions around the site. as the workers will not live within the plot. & the workers will be provided with toilet, which will be connected to a septic tank. Thus, there will be no impact on surrounding due to sewage disposal.

2.11 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)

Sewage Treatment Plant will be provided.

2.12 Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use.

Recycled water from sewage treatment plant after tertiary treatment will be used for flushing.

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)

Since there is no flora existing at site, there is no threat to bio-diversity. Further, the project proponent proposes to plan adequate green belt. Green belt details enclosed.

3.2 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)

Landscape plan and Tree plantation Please Refer **Annexure IX.**

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)

Landscape plan and list trees enclosed as **Annexure IX**

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.

Not Applicable as site is located in fully urbanized area i.e in the developing area of Pune City

4.2 Any direct or indirect impacts on the avifauna of the area? Provide details.

Not applicable

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 impacts during construction phase will be temporary and will be restricted to dust/particulates during land development and construction. During operation phase only impacts will be due to traffic to ferry occupants to city area. The site was previously a vacant land. Thus, there will be no increase in air pollution due to traffic. During the construction phase due to excavation activity, dust emissions are expected. All other emission sources are intermittent and include emissions from materials transport, from heavy vehicles on site etc. During Operational phase minimal impacts on air quality due to vehicular emissions in the premises and emissions from DG sets while in operation are expected.

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.

Impacts of dust generation during construction will be felt to a slight extent by people living on adjacent plots. To reduce these impacts following measures are proposed:

- Temporary barriers to be erected to reduce dust impact to nearby areas.
- Water sprinkling during construction to reduce dust emissions.
- Trucks only to ply during day time
- Use of ready mix concrete carried in enclosed container
- Dust covers on trucks used for transportation of material

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 & exit to the project site

The proposed project will not create shortage of parking space for vehicle as adequate parking space is proposed for the Residential Complex.

5.4 Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.

Traffic Management Will be as follows

- Internal roads
- Pathways
- Driving instructions along with parking and site map will be displayed at appropriate place for visitors as well as for residents

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.

Traffic noise and vibration will increase during construction/ operation phase.

Measures during construction phase:

- Temporary barriers to be erected to reduce dust impact to nearby areas.
- Trucks only to ply during day time
- Plantation of trees to reduce effects of noise pollution

5.6 What will be the impact of DG sets &other equipment on noise levels & vibration in & ambient air quality around the project site? Provide details.

DG sets will be used only in emergencies during power failure. The proponents will ensure that DG Sets are supplied by standards suppliers. The DG Sets shall be provided with the acoustic enclosures to control the noise completely.

6 Aesthetics

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?

As the site is located residential area, there is no question of building being obstacle to view or scenic amenity or landscape,

6.2. Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?

There will be no adverse impacts on the existing structures within vicinity. As project will have minimum stilt area with lot of open space around it.

6.3. Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.

Not Applicable

6.4 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

There are no anthropological / archaeological sites or artifacts nearby proposed project within 1Km.

7. Socio-Economic Aspects

7.1. Will the proposal result in any changes to the demographic structure of local population? Provide the details.

The proposal involves construction of residential Complex but the development comes under PMRDA hence not much affects the demographic structure.

7.2. Give details of the existing social infrastructure around the proposed project.

Social infrastructure is well built as plot is in the developed area of Pune. School/Hospitals/Residential buildings etc. exists nearby Along with these good communication and transport facilities are available

7.3. Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?

Not Applicable

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)

No use of energy efficient processes or specialized building material for energy conservation.

8.2. Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?

Special care will be taken during transportation of construction material like cement, sand, aggregate etc as considerable quantities of such material would be transported from various material suppliers. Since road transport is unavoidable, such movement will be carried out during non- peak hours as far as possible

8.3. Are recycled materials used in roads and structures? State the extent of savings achieved?

Waste generated during building construction due to use of various raw materials will largely comprise of primary materials such as cement, metal and quarried natural aggregates. Part of the sub-stratum removed will be used for back filling the plinth/foundation in order to bring formation level of plot above the road level to facilitate storm water drainage. A part of raw material waste will also be used for filling up the plot. Fly ash utilization will be up to 20 % in concrete blocks and other non-load bearing construction.

8.4. Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.

The project proponents have proposed installation of Garbage Room to collect solid waste. The garbage will be segregated and recyclable waste will be disposed through recyclers. The biodegradable waste will be composted by organic waste convertor and utilized as manure. **Note on Solid waste Management is attached as Annexure VII.**

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?

Please Refer **Annexure VIII: Energy and fuel consumption and other details of energy conservation.**

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?

1. Increase natural source of light through glazed windows
2. Provision of 230 mm thick brick wall to filter heat radiation in to room thereby reducing electrical heating

9.4. What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.

Orientation of building will be designed so as to use of maximize natural daylight.

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 for hot water to reduce energy usage in the operation phase

9.6 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?

Building has been oriented in North -South the walls on East and south will have minimum openings. Also roof will be provided with top deck insulation. About 25% energy saving is expected due to reduced consumption for air conditioning.

9.7 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

Not Applicable

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?

Not Applicable as this is a relatively small development to result in climate change

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.

Not Available

9.10 Precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.

Refer **Annexure –X:** Fire Tender Movement Plan

9.11. If you are using glass as wall material provides details and specifications including emissive and thermal characteristics.

Not Applicable

9.12. What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.

Not Applicable

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.

Solar energy will be used for hot water to reduce energy usage in the operation phase.

10. Environment Management Plan

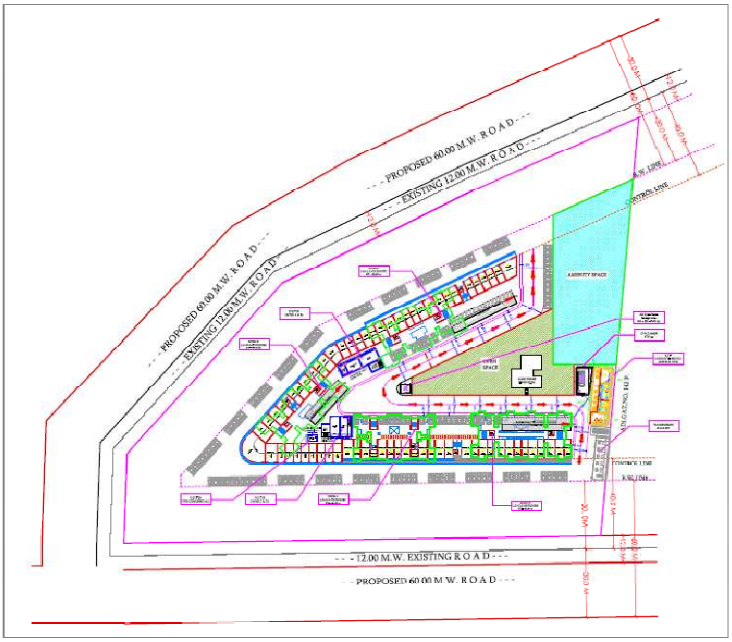
The Environment Management Plan would consist of all mitigation measures for each item wise activity to be undertaken during the construction, operation and the entire life cycle to minimize adverse environmental impacts as a result of the activities of the project. It would also delineate the environmental monitoring plan for compliance of various environmental regulations.

Annexure I

Location Map

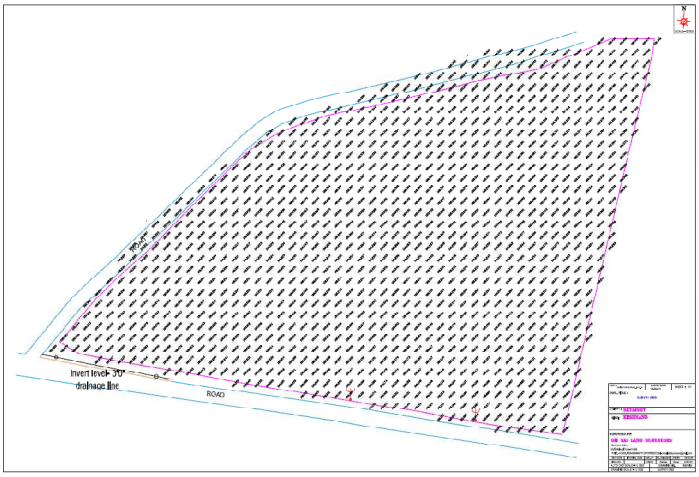
Annexure II

Conceptual Plan



Annexure III

Contour Plan



Annexure IV

Area Statement

Sr. No	Details	Area (sq. m.)
1	Plot area as per 7/12	27,100.00
2	**Deductions**	
3	Area Under road widening	11,466.57
4	Balance plot area	15,633.43
5	**Deductions**	
6	Amenity space [5X20%]	2,345.01
7	Net plot area	13,288.42
8	Permissible FSI (13288.42 X 0.9)	11,959.57
9	**Additions**	
	a) Free FSI 20% (11959.57 x 20%)	2,391.91
	b) Paid FSI (11959.57 x 20%)	2,391.91
10	Amenity space (20%)	2,345.01
11	Area Under road widening	11,466.57
12	Total Permissible FSI (8+9a+9b+11)	30,554.98
13	10 % Open space (5 X 10%)	1563.34
14	Proposed FSI	30,544.59
15	Non FSI	18348.57
16	Total Construction built up area	48,893.16

Break up of Free FSI

S. No.	Details	Area
1	Staircase	1214.52
2	Parking area	9219.60
3	Balcony	4214.47
4	Terrace	2496.14
5	Fire Lift	17.84
6	Refuge area	96.00
7	Electric meter room	90.00
8	Services	1000.00
	Total Non FSI	**18348.57**

Annexure V

Building configuration and Occupancy

Sr.No.	Building Name	Configuration	Height(m)	No of Tenements	Total Population*
1	A	LG +UG+15 fl	45.60	104	520
2	B	LG +UG +15 fl	45.60	103	515
3	C	LG + UG +15 fl	45.60	106	530
4	D	LG +UG +16 fl	48. 45	114	570
			Total	**427**	**2135**
5	Commercial		12.75	Area 6599.76	
	Shops			68	**204**
	Offices			136	**1211**
				Total Population	**3550**

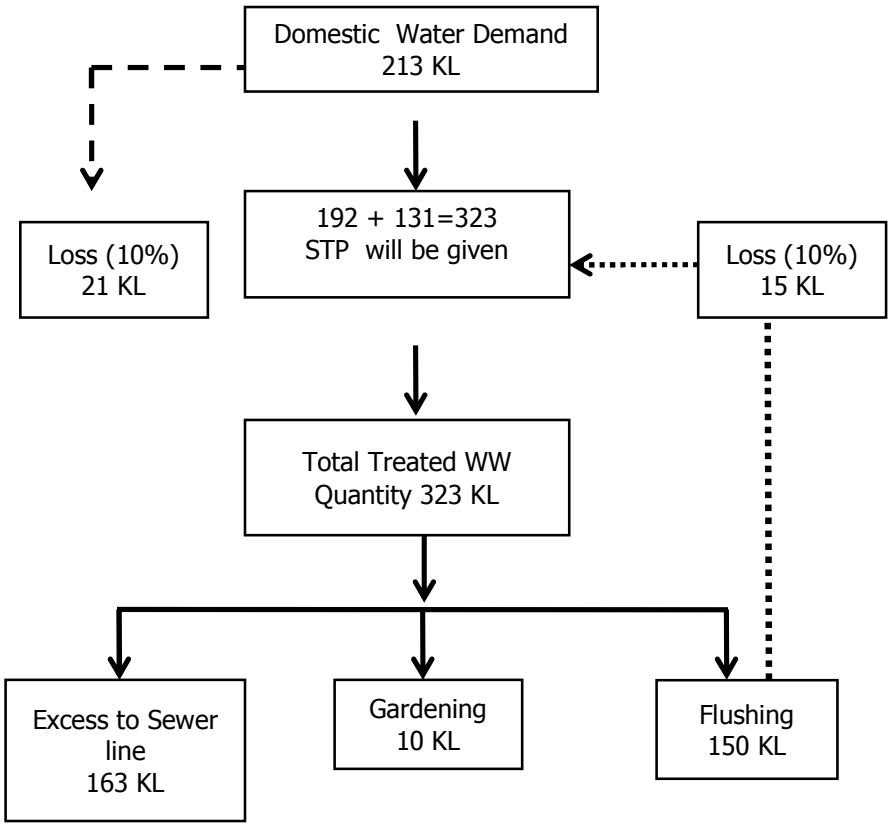
*5 persons per tenements

Annexure VI

Water demand and water Budget

A	**Residential Population**	
a	Total No. of tenements	427
b	Population @ 5 per flat	2135
c	Assumed water consumption [LPCD]	135
d	Domestic Water Requirement [kL]	192
e	Flushing Water Requirement [kl]	96
B	**Commercial Population**	
f	Commercial Area (sqm)	6599.76
g	Population	1415
h	Domestic Water Requirement [kl]	21
i	Flushing Water Requirement [kl]	50
j	Landscape area (assumed 1564 sq.m.)	10
K	Car Wash	4
Total Water Requirement [kl]		373
Total Domestic Water Requirement [kl]		213
Total Flushing Water Requirement [kl]		150

Water Balance



Annexure VII

SW Generation, Treatment and Disposal

Details	Residential	Commercial	Total
Population of project	2135	1415	3550
Biodegradable Waste generation (Kg/day/capita)	0.3	0.1	--
Total Biodegradable waste (kg/day)	**641**	**141**	**782**
Non Biodegradable waste generation (Kg/day/capita)	0.2	0.15	--
Total Non biodegradable waste (kg/day)	**427**	**213**	**640**
Disposal: Biodegradable Waste	**Mechanical composting**		
Disposal : Non-Biodegradable Waste	**Through Authorized Vendor**		
E-waste	Residential: 427 kg/year		

	Commercial: 100 kg/year
Disposal of E-waste	Through Authorized vendor
Disposal of STP sludge	Through mechanical composting as manure

Annexure VIII

Details of Energy Requirement & Energy Conservation Measures

- **Energy Requirement:**
  - **a. During Construction Phase:**
    - Source of power supply MSEDCL.
    - Total demanded load will be 101 KW (Approx.)
    - D.G. Sets. (Approx.150 KVA as backup).
  - **b. During Operation Phase:**
    - Source of supply: MSEDCL.
    - Connected load: 2426 KW
    - Maximum Demand : 1338 KW
    - Transformers: 630 KVA x 4, 315 KVA X 1
    - D.G. Sets: 600 KVA x 1
    - Fuel Requirement (Diesel)- Per Hour Basis

Energy Conservation measures

- Copper conductor cables are specified for sizes of 6.0 sq mm and below, this will reduce losses and improve reliability.
- All lifts shall be provided with AC variable voltage, variable frequency drives (ACVVF).
- Power factor shall be maintained 0.95 or higher. This will reduce electrical power distribution losses in the installation.
- Timers and photo-electric sensors shall be used to switch ON / OFF external landscape and facade lighting.
- LED Light fittings shall be used for corridors and common areas.
- Energy efficient fluorescent tube lights (T-5) shall be used in parkings.
- All fluorescent light fixtures are specified to incorporate electronic chokes which have less watt-loss compared to electro-magnetic chokes and result in superior operating power factor. This indirectly saves energy. Electronic chokes also improves life of the fluorescent lamps.
- Energy efficient fluorescent lamps & CFL lamps which give approx. 30% more light output for the same watts consumed and therefore require less nos. of fixtures and corresponding lower point wiring costs.
- Transformers shall have minimum no load losses as compared to conventional transformers.
- All cables shall be de-rated to avoid heating during use. This also indirectly reduces losses and improves reliability.

Annexure IX

Landscape details

Mandatory Open space: 1563.34 sqm

Landscape area: 2841.30 sqm

Tree List

1.	*Azardirachtaindica*	*Neem*	*08*	Medicinal value, To control soil erosion. To improve soil erosion
2.	*Bahuniaracemosa*	*Apta*	*08*	Every part of the plant is medicinal, Drought tolerant species.
3.	*Murrayakoengii*	*Kadipatta*	*08*	Medicinal value, Edible leaves.
4.	*Aeglemarmelos*	*Bel*	*12*	Medicinal value ,Drought tolerant species.
5.	*Putrnjivaroxburghii*	*Putrnjiva*	*08*	Medicinal value, Drought tolerant species,
6.	*Roystoniaregia*	*Bottle palm*	*08*	Ornamental plant, Medicinal value, Birds & bats eat fruits.
7.	*Gmelinaarborea*	*Shivan*	*08*	Medicinal value, Drought tolerant species, Bird attracting species.
8.	*Mimosupselengii*	*Bakul*	*08*	Fragrant flowers, Medicinal value, To control soil erosion.
9.	*Caryotaurens*	*Fishtail palm*	*08*	Grown in any type of soil. Very Hardy.
10.	*Citrusspecies*	*Lemon*	*08*	Medicinal value, Edible fruit.
11.	*Nyctanthusarbortristis*	*Parijatak*	*08*	Fragrant flowers, Medicinal value,
12.	*Dalbergiasissoo*	*Shisav*	*08*	Medicinal value, Bird attracting species ,
13.	*Erythrinaindica*	*Pangara*	*08*	Fragrant flowers, Drought tolerant species, Birds attracting
	TOTAL NO. OF TREES		108	

COMPOUND WALL PLANT LIST

Sr.no.	Botanical Name	*Common Name*	*Qty*	*Characteristics & Ecological Importance*

1.	*Ailanthusexcelsa*	*Maharukh*	09	Medicinal value, Drought tolerant species.
2.	*Albizialebek*	*Shirish*	08	Medicinal for Skin, Fragrant flowers, To control soil erosion, Bird attracting species (Para kids eat seeds).
3.	*Choclospermumreligiosum*	*Sonsawar*	09	Medicinal value,Native species
4.	*Cordiadichotoma*	*Bhokar*	11	Medicinal value, Edible fruits,
5.	*Bauhiniablackiana*	*Kanchanraj*	09	Every part of the plant is medicinal, Drought tolerant species.
6.	*Ficusglomerata*	*Umber*	09	Medicinal value, Edible fruits, Bird attracting species
7.	*Buteamonosperma*	*Palas*	10	Medicinal value, Bird attracting species , To control soil erosion.
8.	*Syzygiumcumini*	*Jamun*	05	Medicinal value, Edible fruit.
9.	*Anthocephaluskadamba*	*Kadamb*	09	Medicinal value, To control soil erosion, Birds, squirrels, monkey eat fruits.
10.	*Azardirachtaindica*	*Neem*	06	Medicinal value, To control soil erosion. To improve soil erosion
11.	*Dalbergiasissoo*	*Shisav*	08	Medicinal value, Bird attracting species ,
12.	*Ficusarnottiana*	*Payar*	12	Drought tolerant species, Bird attracting species. To control soil erosion.
13.	*Bauhiniapurpurea*	*Gulabikanchan*	08	Every part of the plant is medicinal ,Drought tolerant species.
14.	*Ficusretusa*	*Nandruk*	06	Medicinal value, Bird attracting species, Drought tolerant species, Hardy plant.
15.	*Pongamiapinnata*	*Karanj*	08	Medicinal value, Drought tolerant species, To control soil erosion, Hardy

				plant.
16.	*Mangiferaindica*	*Mango*	08	Edible fruit, Bird attracting species.
17.	*Micheliachampaca*	*Sonchafa*	08	Medicinal value, Fragrant flowers, Butterfly larvae host plant, Bird attracting species, Fast growing.
18.	*Phyllanthusemblica*	*Awala*	09	Medicinal value, To control soil erosion.
19.	*Cassiafistula*	*Bahawa*	13	Medicinal value, Drought tolerant species, Very ornamental, Well flowering plant, Honey bee attracting species, Host plant for Butterfly.
20.	*Putrnjivaroxburghii*	*Putrnjiva*	08	Medicinal value, Drought tolerant species,
	TOTAL NO. OF TREES		173	