APPENDIX - I
(See paragraph - 6)
FORM 1

(I) Basic Information

Sr.No.	Item	Details
1.	Name of the project/s	**Proposed project is a residential building**
2.	S. No. in the schedule	8 (a) B2
3.	Proposed capacity/area/length/tonnage to be handled/command area/lease area/number of wells to be drilled	**Total plot area:** 3,763.40 Sq. mt. Net Plot area: 3,763.40 Sq. mt. Built up area as per FSI: **22,000.00**Sq.mt. Non-FSI ARea : **38,392.18**sq.mt **Total Construction Built-up area**: 60,392.18 Sq.mt. **Project Proposal:** Proponent has Proposed a Residential building with ground floor/ stilt + 1st to 8th podiums + 9th podium/ 1 st Amenity /Stilt + +2nd Amenity level +Service floor +1st to 40th Resi. Upper floors
4.	New/Expansion/Modernization	New Project
5.	Existing Capacity/ Area etc.	New proposal.
6.	Category of project i.e. 'A' or 'B'	B2
7.	Does it attract the general condition? If yes, please specify.	Not Applicable
8.	Does it attract the specific condition? If yes, please specify.	Not Applicable
9.	Location	
	Plot/Survey/Khasra No.	Residential building on plot bearing CTS no. 134A/3 (Pt), CTS No. 134A/4 of village Akurli, Kandivali (E).
	Village	Village Akurli, Kandivali
	Taluka	Boriwali
	District	Mumbai
	State	Maharashtra
10.	Nearest railway station Nearest airport	Kandivali Railway Station (0.50 Km)
11.	Nearest Town, city, District headquarters along with distance in kms.	Kandivali, Mumbai
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Municipal Corporation of Mumbai (MCGM)
13.	Name of the applicant	**M/s. Neo Pharma Pvt. Ltd.**
14.	Registered Address	101, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (East), Mumbai 400 055.
15.	Address for correspondence	101, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (East), Mumbai 400 055.
	Name	Mr. Jayant Oswal
	Designation (Owner/Partner/ CEO)	Director
	Address	91, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (East), Mumbai 400 055.
	Pin Code	400 055.
	E-mail	neopharma@kalpataru.com
	Mobile number	9594015533
	Telephone No.	022- 30645000
	Fax No.	--

16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a 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	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?	Not Applicable
(b)	The Wildlife (Protection) Act, 1972?	Not Applicable
(c)	The C.R.Z Notification, 1991?	Not Applicable
22.	Whether there is any Government Order/Policy relevant/ relating to the site?	Not Applicable
23.	Forest land involved (hectares)	Not applicable
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) Order /directions of the Court, if any and its relevance with the proposed project	No

(II) Activity

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

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	Yes	The proposed project is in line with Development plan.
1.2	Clearance of existing land, vegetation and building?	Yes	9 trees to be cut
1.3	Creation of new land uses?	No	--
1.4	Pre-construction investigation e.g. bore houses, soil testing?	Yes	Geotechnical Investigation has been carried out
1.5	Construction works?	Yes	Proponent has Proposed a Residential building with Ground floor/ Stilt + 1st to 7th podiums + 8th Podium/Amenity/ Stilt + Service floor +1sth to 40th Resi. Upper floors+ Service floor + Amenity floor.
1.6	Demolition works?	No	NA
1.7	Temporary sites used for construction works or housing of construction workers?	No	--
1.8	Above ground building, structures or earthworks including linear structures, cut and fill or excavations	Yes	Proponent has Proposed a Residential building with Ground floor/ Stilt + 1st to 7th podiums + 8th Podium/Amenity/ Stilt + Service floor +1sth to 40th Resi. Upper floors+ Service floor + Amenity floor.
1.9	Underground works including mining or Tunneling?	No	--
1.10	Reclamation works?	No	--
1.11	Dredging?	No	--
1.12	Offshore structures?	No	--
1.13	Production and manufacturing processes?	No	--
1.14	Facilities for storage of goods or materials?	Yes	Temporary storage facilities to store the construction raw material

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	• STP for treatment of sewage • Segregation of solid waste into non-biodegradable and biodegradable garbage • Treatment of biodegradable waste by composting method. • Non-biodegradable waste shall be handed over to vendors for recycling • Sludge from STP : As manure
1.16	Facilities for long-term housing of operational workers?	No	--
1.17	New road, rail, or sea traffic during construction or operation?	No	18.30 m wide existing road will be used during construction or operation phase
1.18	New road, rail, air waterborne or other transport infrastructure including new or altered routes and stations, ports, airports etc?	No	--
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic Movements?	No	18.30 m wide existing road will be used during construction or operation phase
1.20	New or diverted transmission lines or pipelines?	No	--
1.21	Impoundment, damming, culverting, realignment or other change to the hydrology of watercourses or aquifers?	No	--
1.22	Stream crossings?	No	--
1.23	Abstraction or transfers of water from ground or surface waters?	No	Water will be supplied from MCGM, water NOC received from mcgm
1.24	Changes in water bodies or the land surface affecting drainage or run-off.	No	No water bodies are involved. However, there shall be minor change in the storm water runoff due to finished surfaces as well as the drainage pattern due to the new construction.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	There will be transport of construction materials. Precautions will be taken to reduce the impact of the vehicular movement by trying to avoid the vehicular trips during peak hours.
1.26	Long-term dismantling, decommissioning, or restoration works?	No	--
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	--
1.28	Influx of people to an area in either temporarily or permanently?	Yes	Since this is a residential development, there will be influx of 1,623 occupants.
1.29	Introduction of alien species?	No	--
1.30	Loss of native species or genetic diversity?	No	--
1.31	Any other actions?	No	--

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	The land is in developed infrastructure area.
2.2	Water (expected source & competing users) unit : KLD	Yes	**During Construction Phase –**For Workers: Estimated 13.5 KLD (Source: From MCGM/potable tanker water)

<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></td><td></td><td></td><td>For Construction : estimated 10 – 20 KLD (depending on construction activity)
(Source: From tanker water)
Note: the actual water requirement may vary as per the actual requirement.
During Operational Phase –
• Domestic water.: 136 KLD
• Flushing: 69 KLD
• Gardening: 6 KLD</td></tr>
<tr><td>2.3</td><td>Minerals (MT)</td><td>No</td><td>--</td></tr>
<tr><td>2.4</td><td>Construction material – stone, aggregates, and / soil (expected source – MT)</td><td>Yes</td><td>Maximum attempt to obtain the construction materials from nearby locations shall be made.</td></tr>
<tr><td>2.5</td><td>Forests and timber (source – MT)</td><td>Yes</td><td>Wood will be proposed for doors.</td></tr>
<tr><td>2.6</td><td>Energy including electricity and fuels (source, competing users) Unit: fuel (MT), energy (MW)</td><td>Yes</td><td>During Constructional Phase –
150 KW (Estimated)

During Operational Phase –
Source: TATA/ Adani
<table>
<tr><th>Component</th><th>Values</th></tr>
<tr><td>Connected load</td><td>3,877 KW</td></tr>
<tr><td>Maximum demand</td><td>1,279 KW</td></tr>
<tr><td>D.G. sets
(for emergency back up during power failure)</td><td>1 D.G. set of capacity 990 kVA</td></tr>
</table></td></tr>
<tr><td>2.7</td><td>Any other natural resources (use appropriate standard units)</td><td>No</td><td>--</td></tr>
</table>

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	--
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	--
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Due to creation of Residential building, job creation in informal sector is expected.
3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.,	No	--
3.5	Any other causes	No	--

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

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities / rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	--
4.2	Municipal waste (domestic and or commercial wastes)	Yes	During Operation phase, the total quantity of solid waste: 730 Kg /day. (Biodegradable and Non-
4.3	Hazardous wastes (as per Hazardous waste Management Rules)	No	Waste oil generated from D.G. shall be stored at separate location duly marked and will be sold to the authorized recyclers
4.4	Other industrial process wastes	No	--
4.5	Surplus product	No	--
4.6	Sewage sludge or other sludge from effluent treatment.	Yes	Sludge from STP shall be used as manure.
4.7	Construction or demolition wastes	Yes	Construction waste generated during construction activity recycled on site to the extent possible and partly disposed by vendors.
4.8	Redundant machinery or equipment	No	--
4.9	Contaminated soils or other materials	No	--
4.10	Agriculture wastes	No	--
4.11	Other solid wastes	No	--

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

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Use of CPCB approved D.G. sets during power failure.
5.2	Emissions from production processes	No	--
5.3	Emissions from materials handling including storage or transport	Yes	• Frequent water sprinkling will be done to minimise the fugitive dust emissions due to handling and loading-unloading activities • Use of RMC to reduce dust generation due to material handling. • Use of covered trucks while transportation of material will be done. • Use of suitable PPE by workforce while handling construction materials as required.
5.4	Emissions from construction activities including plant and equipment	Yes / Marginal	• Frequent water sprinkling will be done to minimise the fugitive dust emissions due to handling and loading-unloading activities • Use of RMC to reduce dust generation due to material handling. • Use of covered trucks while transportation of materials will be done. • Use of suitable PPE by workforce while handling construction materials as required.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	Dust generation controlled as described above. For odour control: Proper ventilation to be provided around STP and solid waste management facilities
5.6	Emissions from incineration of waste	No	--
5.7	Emissions from burning of waste in open air (e.g. slash materials,	No	--

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
	construction debris)		
5.8	Emissions from any other sources	No	--

6. Generation of Noise and Vibration, and Emissions of Light and Heat :

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data.
6.1	From operation of equipment e.g. engines, ventilation plant, crushers.	Yes	• Noise generation from construction equipment used for drilling, cutting operations. • Operation of DG sets only in case of power failure during operation phase. • For control of noise following measures shall be adopted: • Equipment shall be regularly maintained • Personal Protective Equipment (PPE) shall be provided to construction workers. • Acoustic enclosure for DG Set with stack height as per norm will be provided.
6.2	From industrial or similar processes.	No	--
6.3	From construction or demolition.	Yes	The construction activities will include the following noise generating activities; • Concreting and mixing. • Heavy vehicle movement. etc. Following precautions are taken to control noise pollution: • High noise generating activities will be carried out with proper planning. • Workers working near high noise machinery would be provided with PPE. • Acoustic enclosure for DG Set will be provided.
6.4	From blasting or piling.	No	--
6.5	From construction or operational traffic.	Yes	**During Construction phase:** There will be Transport of materials. Precautions shall be taken to reduce the impact of the vehicular movement. **Operation Phase :** • The vehicular parking restricted only in the adequate parking area provided, which helps in reducing noise pollution due to traffic congestion.
6.6	From lighting or cooling systems	No	--
6.7	From any other sources	No	--

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	--
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge).	No	Sewage Treatment Plant of capacity 190 KLD is proposed to be installed for treatment of sewage 178 KLD. Treated wastewater will be used for flushing and gardening within the premises. Excess treated water will be discharged to municipal drain.
7.3	By deposition of pollutants emitted to air into the land or into water.	No	Dust during construction phase from earthworks and movement of vehicles. Provision of dust control measures, including water sprinkling of exposed areas and dust covers

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
			for trucks, to minimize any impacts. Stack height of DG set shall be as per CPCB guidelines.
7.4	From any other sources.	No	--
7.5	Is there a risk of long term build up of pollutants in the environment from these sources?	No	--

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

Sr. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities/rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc from storage, handling, use or production of hazardous substances.	No	--
8.2	From any other causes.	No	--
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, and cloudburst)?	No	--

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 wastewater treatment, etc.)	No	Supporting infrastructure is already in existence
	• housing development • extractive industries • supply industries • other	yes	It is a Residential development
9.2	Lead to after-use of the site, which could have an impact on the environment	No	---
9.3	Set a precedent for later developments	Yes	Will create job opportunities in construction and operation phase with support staff like security, maintenance, household workers, shopkeepers etc.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	--

(III) Environmental Sensitivity

Sr. No.	Areas	Name/ Identity	Aerial distance (within 15 km.) from Proposed project location boundary
1	Areas protected under international conventions, national or local legislation for	Sanjay Gandhi National Park	Approx. 2.93 Km

	their ecological, landscape, cultural or other related value		
2	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Gorai creek	Approx. 5.87 Km
		Tulsi lake	Approx. 6.89 Km
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Sanjay Gandhi National Park	Approx. 2.93 Km
4	Inland, coastal, marine or underground waters	Gorai creek	Approx. 5.87 Km
		Tulsi lake	Approx. 6.89 Km
5	State, National boundaries	--	--
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	Western Express Highway	Approx.0.50 Km
7	Defence installations	--	--
8	Densely populated or built-up area	Mumbai	--
9	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	The project site is in well-developed area	--
10	Areas containing important, high quality or scarce resources *(Ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	--	--
11	Areas already subjected to pollution or environmental damage. *(those where existing legal environmental standards are exceeded*	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*)	Not applicable	The project site lies in Seismic Zone III as per the seismic zone map of India and is susceptible to earthquake.

(IV) Proposed Terms of Reference for EIA studies: Not applicable

"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: 21 Mar 20

Signature of the Applicant

Place: Mumbai

(Authorised Signatory)

APPENDIX II
(See paragraph 6)

FORM-1 A (only for construction projects listed under item 8 of the Schedule)

CHECK LIST OF ENVIRONMENTAL IMPACTS

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

1	**LAND ENVIRONMENT [Attach panoramic view of the project site and the vicinity]**
1.1	**Will the existing land use get significantly altered from the project that is not consistent with the surroundings? (Proposed land use must conform to the approved Master Plan / Development Plan of the area. Change of land use if any and the statutory approval from the competent authority to be submitted). Attach Maps of (i) site location, (ii) surrounding features of the proposed site (within 500 meters) and (iii) The site (indicating levels & contours) to appropriate scales. If not available attach only conceptual plans.**
	Site Location: Residential building on plot bearing CTS no. 134A/3 (Pt), CTS No. 134A/4 of village Akurli, Kandivali (E) **Land Use Pattern:** Land under reference is situated in residential zone. A residential building is proposed. **Site levels:** The site is a flat land. The following details are enclosed. Site Location Map Google Image Layout Plan

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.**

1. Connectivity and community facilities

The site is well connected by 18.30 mt. existing road. Nearby railway station is Kandivali suburban railway station of Mumbai.

2. Building Details:

Proposed Residential building has following configuration :

Residential building with Ground floor/ stilt + 1st to 8th podiums + 9th podium/ 1 st Amenity /Stilt + +2nd Amenity level +Service floor +1st to 40th Resi. Upper floors.

C. Area Statement:

Table 2: Area Statement

No.	Description	Area (Sq. mt.)
1	Total Plot Area	3,763.40
2	Net Plot Area	3,763.40
3	Built - up Area as per FSI	22,000.00
4	Total Construction Built-up Area (FSI + Non FSI)	**60,392.18**

D. Parking Statement:

Table 3: Parking Statement

Component	Parking Spaces provision (Nos.)	
	4W	2W
Required Parking	388	-
Proposed Parking	352	

E. Water requirement for the project:

3. During Construction Phase:

For Workers: estimated 13.5 KLD (Source: From MCGM/potable tanker water)
For Construction :estimated 10-20 KLD (Source: From MCGM/potable tanker water)
Note: the actual water requirement may vary as per the actual requirement.

4. During Operation Phase:

Table 4: Total water requirement for the project and source

No.	Description	Quantity of water required in KLD	Source of water supply
1	Domestic (in KLD)	136	MCGM
2	Flushing (in KLD)	69	STP treated water
3	Gardening (in KLD)	6	STP treated water

F. Sewage Generation

Table 5: Sewage Generation

Description	Quantity of Sewage generated (KLD)	Treatment/ Disposal
Operation Phase	178	Treatment in STP and reuse of treated sewage for flushing (69 KLD) & gardening (6 KLD) within the premises. Excess treated wastewater shall be disposed to municipal drain.

G. Solid Wastes Generation from the project:
During Operation Phase:

Table 7: Solid Wastes During Operation Phase

Solid Waste Generation (Kg/day)		
Bio-Degradable	**Non - Biodegradable**	**Total**
438	292	730

- Segregation of non-biodegradable and biodegradable garbage on site.
- Bio degradable garbage: Treatment in by composting method
- Non- biodegradable garbage: Handed over to vendors for recycling
- STP Sludge: Use as manure

5. Power requirement:

During Construction Phase – 150 kW (Estimated)
Source: -Tata/ Adani

During Operation phase:
Source: - Tata/ Adani

Table 8: Power Requirement

	Residential
Connected load	3,877 KW
Maximum demand load	1,279 KW
D.G. Sets (For emergency back-up in case of power failure)	1 D.G. set of capacity 990 kVA

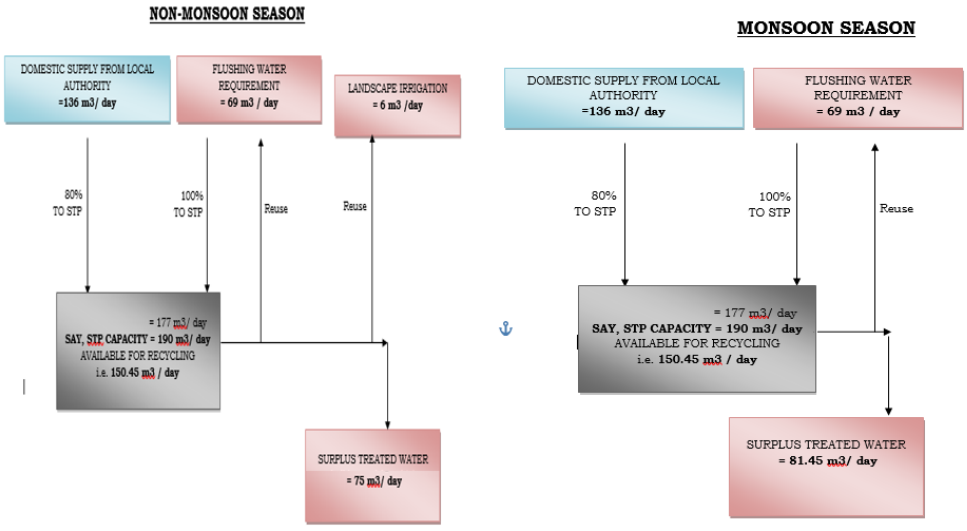
1.3 **What are the likely impacts of the proposed activity on the existing facilities adjacent to the proposed site? (Such as open spaces, community facilities, details of the existing land use, disturbance to the local ecology).**

MCGM has sanctioned Development Plan in force. While preparing development plan open spaces, community facilities etc are planned for proposed population in future. Hence, necessary provisions are already taken care of by the Planning Authority.

1.4	**Will there be any significant land disturbance resulting in erosion, subsidence & instability? (Details of soil type, slope analysis, vulnerability to subsidence, seismicity etc. may be given).**
	No, there will not be any significant land disturbance in erosion, subsidence & instability. Also in Seismic Zone III as per IS Code 1893. Hence, chances of any seismic activity resulting into disturbance to land or erosion are minimal.
1.5	**Will the proposal involve alteration of natural drainage systems? (Give details on a contour map showing the natural drainage near the proposed project site)**
	No. The plot is more or less flat
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.)**
	Cutting / filling is restricted to basement only. Construction waste generated during construction activity shall be partly recycled/reused on site and partly disposed by means of vendors.
1.7	**Give details regarding water supply, waste handling etc. during the construction period.**
	Water Requirement during Construction Phase: For Workers: estimated 13.5 KLD (Source: From MCGM/potable tanker water) For Construction :estimated 10-20 KLD (Source: From MCGM/potable tanker water) Note: the actual water requirement may vary as per the actual 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.
1.9	**Whether construction debris & waste during construction cause health hazard? (Give quantities of various types of wastes generated during construction including the construction labour and the means of disposal)**
	The construction debris will include soil, bricks, tiles, etc. All this material will be utilized on the same site to extent possible. The excess shall be disposed by means of vendors. No hazardous waste is involved.
2	**WATER ENVIRONMENT**
	Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement. **Water Requirement & Source:** **During Construction Phase –** For Workers: estimated 13.5 KLD (Source: From MCGM/potable tanker water) For Construction :estimated 10-20 KLD (Source: From MCGM/potable tanker water) Note: the actual water requirement may vary as per the actual requirement. **<u>During Operational Phase</u>**

Table 9: Total Water Requirement

Use	Quantity	Source
Domestic (in KLD)	136	MCGM
Flushing (in KLD)	69	STP treated water
Gardening (in KLD)	6	STP treated water

	Water Balance Diagram 
2.2	**What is the capacity (dependable flow or yield) of the proposed source of Water?**
	Domestic water supply (136 KLD) from Municipal corporation of Greater Mumbai.
2.3	**What is the quality of water required, in case, the supply is not from a municipal source? (Provide physical, chemical, biological characteristics with class of water quality)**
	Drinking water supply by MCGM
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)**
	All Secondary requirements like flushing (69 KLD) and gardening (6 KLD) would be fulfilled by recycling of sewage from STP. Disposal of excess treated waste water to municipal drain.
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)**
	MCGM has common water supply.
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)**
	Sewage generation will be 178 KLD. Treatment of sewage in Sewage Treatment Plant (STP) of capacity 190 KLD. Treated sewage will be reused for flushing (69 KLD) and gardening (6 KLD). Disposal of excess treated sewage to municipal drain.
2.7	**Give details of the water requirements met from water harvesting? Furnish details of the facilities created.**
	Rain water harvesting pit shall be provided.
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?**
	There will not be major impact on the run-off, due to proposed project. Channelization of storm water from site by using proper internal SWD shall be done and discharge points of adequate capacity shall be proposed.

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 will be no ground water tapping.
2.10	**What precautions/measures are taken to prevent the run-off from construction activities polluting land & aquifers? (Give details of quantities and the measures taken to avoid the adverse impacts).**
	The following measures taken which helps in conserving water and in turn for reducing runoff from the site during construction phase: • Use of wet jute cloth covering the walls and soaking the same with minimum quantity of water to avoid dripping • Separate storage for construction material to ensure that the same is not carried away with rain water • Provision of Sediment trap/ Silt basins to avoid soil erosion • The Storm water drain shall be designed as per the prevailing norms. • Regular cleaning and inspection shall be performed.
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 drains will be constructed strictly in accordance to the governing authority regulations. However, the following measures shall be adopted for effective Storm water management: • Regular inspection and cleaning of storm drains • Provision of silt traps in storm water drains • Educating regarding avoiding application of pesticides and herbicides before wet season
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)**
	The following measures are taken to avoid unsanitary conditions: • Disposal of sewage to existing sewer line • First aid and medical facilities • Proper housekeeping • Regular pest control • Site sanitation • Educating the construction force regarding importance of hygiene
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 wastewater generated at site proposed to be circulated through closed conduits to the in situ sewage treatment plant during operation phase. The entire sewage178 KLD from project will be treated through STP having 190 KLD capacity and reused for flushing and gardening. Excess treated water (85 KLD) will be discharged into Municipal drain.
2.14	**Give details of dual plumbing system if treated waste used is used for flushing of toilets or any other use**
	Separate recirculation lines are proposed for flushing and gardening. The treated water from the STP shall be recycled for flushing (69 KLD) and gardening (6 KLD)
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)**
	No
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 40 no of existing trees on site.
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)**
	Existing Trees on site: 40 Nos. Trees to be cut – 9 Nos. Trees to be transplanted – 23 Nos.
4	**FAUNA**
4.1	**Is there likely to be any displacement of fauna- both terrestrial and aquatic or creation of barriers for their movement? Provide the details**
	No
4.2	**Any direct or indirect impacts on the avifauna of the area? Provide details**
	No
4.3	**Prescribe measures such as corridors, fish ladders etc. to mitigate adverse impacts on fauna**
	Not applicable
5	**AIR ENVIRONMENT**
5.1	**Will the project increase atmospheric concentration of gases & result in heat islands? (Give details of background air quality levels with predicted values based on dispersion models taking into account the increased traffic generation as a result of the proposed constructions)**
	There shall be change in air environment during construction phase, which shall be temporary in nature. During the operational phase, there shall not be increase in any atmospheric concentration of gases and shall not result in heat islands.
5.2	**What are the impacts on generation of dust, smoke, odorous fumes or other hazardous gases? Give details in relation to all the meteorological parameters.**
	During construction phase, Dust, Particulate Matter is the main pollutant, which may be generated during construction activities. Other emission sources are intermittent and include emissions of SO2, NOx and CO from materials transport of heavy vehicles on site etc. Proper upkeep and maintenance of vehicles, sprinkling of water on roads and construction site are some of the measures that would reduce the impact during construction phase. **Sources of Air pollution During Operational phase :** • The gaseous emissions from vehicles • Emissions from DG set while in operation only during power failure **Mitigation Measures:**

	• The traffic congestion will be avoided by proper parking arrangement and maintaining smooth traffic flow • Regular PUC checkup for vehicles • Use of CPCB approved DG sets only • Proper maintenance of DG sets shall be done.
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.**
	No. The project proponents have proposed to provide well-organized arrangement for parking.
5.4	**Provide details of the movement patterns with internal roads, bicycle tracks, pedestrian pathways, footpaths etc., with areas under each category.**
	• Provision of adequate well organized parking arrangement for car parking. • One Entry & Exit • Proper internal road designed for avoiding traffic.
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 source of noise is mainly vehicular noise. The project proponents have proposed to provide well organized parking arrangement and maintaining smooth traffic flow which would help in reducing traffic congestion and noise levels.
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.**
	CPCB approved D.G. Set will be operated only in case of power failures and emergency only during operational phase. D.G. sets are with inbuilt acoustic enclosures to reduce the noise of D.G. sets while in operation. Plantation of trees to be done on site would act as noise barrier and will reduce the noise level.
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?**
	No.
6.2	**Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?**
	Due care will be taken to minimize the impacts on surroundings: • The construction site will be covered with barricading structures to prevent dust emissions, noise disturbance and other pollutants to the surrounding environment. • Construction activities shall be strategically planned to reduce noise generation and vehicular movement.
6.3	**Whether there are any local considerations of urban form & urban design influencing the design criteria? They may be explicitly spelt out.**
	No
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.**
	No
7	**SOCIO-ECONOMIC ASPECTS:**
7.1	**Will the proposal result in any changes to the demographic structure of local population? Provide the details.**
	Since this is a residential development there will be influx of 1,623 persons
7.2	**Give details of the existing social infrastructure around the proposed project.**

<table>
<tr><td></td><td>Proposed project is located within the city area of high urban infrastructure region. It is a well-developed area, having all modern amenities. Civil structures, School, Colleges, Hospitals, Recreation facilities, Markets, etc. are available in the area.</td></tr>
<tr><td rowspan="2">7.3</td><td>Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?</td></tr>
<tr><td>Project will not cause adverse effects on local communities, disturbance to sacred sites or other cultural values.</td></tr>
<tr><td>8</td><td>BUILDING MATERIALS</td></tr>
<tr><td rowspan="2">8.1</td><td>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)</td></tr>
<tr><td>Maximum effort to procure the basic engineering materials like aggregate, cement, sand, blocks. etc locally shall be practised. Construction materials produced with energy efficient processes shall be taken into account.</td></tr>
<tr><td rowspan="2">8.2</td><td>Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?</td></tr>
<tr><td>Mitigation Measures for Air Pollution during Construction Stage:
Construction materials will be suitably covered with tarpaulin cover during transportation.
Water sprinkling shall be done on internal roads where dust generation is anticipated.
To minimize the occupational health hazard, proper personal protective equipment (PPE) shall be provided to the workers.
Careful planning of machinery operation and scheduling of operations shall be done to minimise such impact.</td></tr>
<tr><td rowspan="2">8.3</td><td>Are recycled materials used in roads and structures? State the extent of savings achieved?</td></tr>
<tr><td>Inert demolished and excavated material used in filling work and construction of temporary structures to maximum extent.</td></tr>
<tr><td rowspan="2">8.4</td><td>Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.</td></tr>
<tr><td>Segregation of non-biodegradable and biodegradable garbage on site
Bio degradable garbage: Treatment by method of composting
Non- biodegradable garbage shall be handed over to vendors for recycling
STP Sludge: Use as manure</td></tr>
<tr><td>9</td><td>ENERGY CONSERVATION</td></tr>
<tr><td rowspan="2">9.1</td><td>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?</td></tr>
<tr><td>Power Requirement
During Construction Phase –
Source: TATA/ Adani
150 KW (Estimated)

During Operational Phase -
Source: Reliance
<table>
<tr><th>Component</th><th>Values</th></tr>
<tr><td>Connected load (in KW)</td><td>3,877 KW</td></tr>
<tr><td>Maximum demand (in KW)</td><td>1,279 KW</td></tr>
</table>
</td></tr>
</table>

		D.G. sets (for emergency back up during power failure)	1 D.G. set of capacity 990 kVA

Following Energy conservation measures are proposed:

- Energy efficient LED, T5 tube light which give more light output for the same watts consumed and therefore require less nos. of fixtures.
- Equipment efficiency standard power factor will be maintained between 0.95 and unity for major equipment like Lift, STP etc. This will reduce electrical power distribution losses in the installation.
- Timer based lighting for parking areas.
- Motion Sensor and timers in staircases. Use of VFD drives in lifts.
- Maximum use of natural ventilation and light.
- Recommending the benefits of adopting BEE star rated electrical appliances to the customers to increase energy savings.

9.2	**What type of, and capacity of, power back-up to you plan to provide?**
	Provision of 1 D.G. Set of capacity 990 kVA for emergency back up during power failure
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?**
	Single glazed glass shall be used.
9.4	**What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.**
	The basic building structure is designed in such a way that maximum natural light.
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.**
	Use of Solar PV 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 the West and the Roof? How much energy saving has been effected?**
	Horizontal shading devices in the form of chhajja shall be provided
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.**
	Building is naturally ventilated and hence no central air conditioned system is proposed.
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?**
	Alteration of microclimate is not notable in this case. Systematic design of buildings in order to assure light ventilation, open spaces , tree plantation as per requirement are considered which will help to reduce heat island effect.
9.9	**What are the thermal characteristics of the building envelope? (a) roof; (b) external walls; and (c) fenestration? Give details of the material used and the U-values or the R values of the individual components.**
	The proposed building is a residential building and naturally ventilated.

9.10	**What precautions & safety measures are proposed against fire hazards? Furnish details of emergency plans.**
	Standard fire safety norms as prescribed by Chief Fire Officer, MCGM will be followed.
9.11	**If you are using glass as wall material provides details and specifications including emissivity and thermal characteristics.**
	Single glazed glass units will be used.
9.12	**What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.**
	This is not a centrally air conditioned building.
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.**
	Use of Solar system shall be proposed.
10	**Environment Management Plan**

Environment Management Plan is mentioned below.

VEC		**Source of Impact**	**Mitigation Measures**
Air	**<u>Construction phase</u>** 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.
	<u>Operation phase</u>	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 done wherever possible.
Groun d wate	Groundwater contamination	**<u>Construction phase</u>** Wastewater generated from labour camp	Sewage is disposed to existing sewer line.
		<u>Operation phase</u> Sewage disposal	Sewage generated (178 KLD) will be treated in the proposed STP of capacity 190 KLD. The treated wastewater shall be used for flushing (69 KLD) and landscaping (6 KLD) purpose and excess (85 KLD) will be discharged into municipal drain.
Surfac Water	Surface water contamination	**<u>Construction phase</u>** 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>The demolition debris screened and non-hazardous debris used to maximum extent on site for backfilling, internal roads, recycling etc and rest disposed by means of vendors.
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="2">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><td>They shall be used for china mosaic treating on the roof. The excess if any shall be disposed by means of vendors</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 (438 kg/day) will be collected and processed in Organic Waste Converter /equivalent machines. The compost generated shall be used as manure.
• Non-biodegradable waste (292 kg/day) will be handed over to local vendors or recyclers for recycling.</td></tr>
<tr><td></td><td>Flora & fauna (biological</td><td>Displacement of flora and fauna</td><td><u>Construction phase</u>
Site development during construction</td><td>There are 40 trees in the plot under consideration. New tree plantation will be done after completion of the construction phase and before starting operation phase.</td></tr>
</table>

<table>
<tr><td></td><td>environment)</td><td></td><td><u>Operation phase</u>
Increase of green cover.</td><td><table><tr><th>Specification</th><th>Quantity</th><th>Unit</th></tr><tr><td>Existing trees</td><td>40</td><td>Nos.</td></tr><tr><td>No. of trees to be cut</td><td>9</td><td>Nos</td></tr><tr><td>No of trees to be transplanted</td><td>23</td><td>Nos</td></tr></table></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>No as the proposed development is on a vacant land in the city of Mumbai. 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 rowspan="2">Traffic</td><td rowspan="2">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>
<tr><td><u>Operation phase</u>
Traffic due to the residents</td><td>Provision of one Entry and one Exit.
Entry/ exit through 18.30 mt wide existing road.</td></tr>
</table>