KALPA-TARU®

To,
The Member Secretary, EAC
Infrastructure Projects-2
Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi

07.10.2020

Subject: Environmental Clearance for residential project at plot bearing CTS No. 533 (pt), 533/2 (pt) to & 553 (pt) of of village Nahur, L. B. S. Road, Mulund (W), T- Ward M/s Kalpataru Ltd.

Ref.: Proposal No. IA/MH/MIS/174154/2020 submitted on 23.09.2020
EDS Letter dated 04.10.2020

Dear Sir,

The above referred proposal requesting grant of environmental clearance is submitted as Category A project as SEIAA, Maharashtra is not constituted.

EDS are created vide letter dated 04.10.2020 and directions are given for submission of conceptual plan with signed copy of Form-1 and make the entries of monitoring data in the form, if collected. In this regard we are hereby submitting Conceptual Plan and Form-1 signed copy. Further, the project is a new project under B-2 Category as listed at serial number 8(a) of the Schedule to EIA Notification 2006. Therefore, monitoring data for the project are not recorded.

In view of the above, we hereby request you to accept the proposal and list in the agenda of the forth-coming meeting of the Hon'ble EAC.

Thanking you,

Yours faithfully

For **M/s. Kalpataru Ltd.**

Authorized Signatory

KALPATARU LIMITED
CIN No : U45200MH1988PLC050144
91, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (E), Mumbai 400 055. India.
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APPENDIX I

(See paragraph – 6)

FORM – 1

(I) Basic Information

Sr. No.	Item	Details
1.	Name of the project/s	Proposed commercial project on subdivided plot bearing CTS No. 533(pt), 533/2(pt), & 553 (pt), of village Nahur, L. B. S. Road, Mulund (W), T- Ward.
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: 5,000.00 sq. mt. FSI BUA Area: 33,750.00 Sq.mt. Non-FSI Area: 29141.57 Sq.mt. Total Construction Area: 62,891.568 Sq.mt.
4.	New/Expansion/Modernization	New
5.	Existing Capacity/ Area etc.	NA
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.	Proposed plot bearing CTS No. 533 (pt.), 533/2 (pt.) to & 553 (pt) of village Nahur, L. B. S. Road, Mulund (W), T- Ward
	Village	Village Nahur
	Taluka	Mulund
	District	Mumbai
	State	Maharashtra
10.	Nearest railway station Nearest airport	Nahur Railway station Chhatrapati Shivaji International Airport
11.	Nearest Town, city, District headquarters along with distance in kms.	Mumbai
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal address with telephone nos. to be given)	Municipal Corporation of Greater Mumbai (MCGM)
13.	Name of the applicant	**M/s. Kalpataru 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	Ms. Preeti Kataria
	Designation (Owner/Partner/ CEO)	Advisor
	Address	91, Kalpataru Synergy, Opp. Grand Hyatt, Santacruz (East), Mumbai 400 055.
	Pin Code	400 055.
	E-mail	kl@kalpataru.com
	Mobile number	9594015533
	Telephone No.	022- 30643709
	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 (d)	No

- *Capacity corresponding to sectoral activity (such as production capacity for manufacturing, mining lease area and production capacity for mineral production, area for 23 mineral exploration, length for linear transport infrastructure, generation capacity for power generation etc.,)*

(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.)**

<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>1.1</td><td>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)</td><td>No</td><td>The project is a commercial project. The permission for change in land-use is proposed by MCGM from Industrial to Commercial / land use.</td></tr>
<tr><td>1.2</td><td>Clearance of existing land, vegetation and buildings?</td><td>Yes</td><td>12 nos of trees are Proposed to be Cut</td></tr>
<tr><td>1.3</td><td>Creation of new land uses?</td><td>No</td><td>The project is a commercial project. The permission for change in land-use is proposed by MCGM from Industrial to Commercial/ Residential land use.</td></tr>
<tr><td>1.4</td><td>Pre-construction investigations e.g. bore houses, soil testing?</td><td>Yes</td><td>Geo-Technical investigations have been carried out.</td></tr>
<tr><td>1.5</td><td>Construction works?</td><td>Yes</td><td>Construction work will include construction of buildings with the configuration as following –
<table>
<tr><th>Sr. No</th><th>Wing</th><th>Configuration</th></tr>
<tr><td>1</td><td>One Tower</td><td>1Basement+ Grd. With shops having Gr + mezzanine / Stilt + 1st Podium (Parking/Comm.) + 2nd to 7th Podiums (Parking) + 8th Podium Comm./Refuge/Stilt) + 1st to 24th Floors Commercial</td></tr>
</table></td></tr>
<tr><td>1.6</td><td>Demolition works?</td><td>-</td><td>-</td></tr>
<tr><td>1.7</td><td>Temporary sites used for construction works or housing of construction workers?</td><td>Yes</td><td>Temporary accommodation with facilities like drinking water, toilets etc. will be provided.</td></tr>
<tr><td>1.8</td><td>Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations</td><td>Yes</td><td>Proponent has proposed commercial buildings on it. The above ground structures will comprise of 1 tower of commercial buildings with configuration as mentioned above in pt. no. 1.5 herein.</td></tr>
<tr><td>1.9</td><td>Underground works including</td><td>No</td><td>---</td></tr>
</table>

	mining or tunnelling?		
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 materials.
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 means of OWC. • 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	Existing LBS marg 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	Existing LBS marg will be used during construction or operation phase
1.20	New or diverted transmission lines or pipelines?	No	---
1.21	**Impoundment, damming, realignment or other changes to the hydrology of watercourses or aquifers?**	**No**	**---**
1.22	**Stream crossings?**	**No**	But There is a nalla adjoining to the plot.
1.23	**Abstraction or transfers of water from ground or surface waters?**	**No**	**---**
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	Yes	There shall be minor change in the storm water run-off due to finished surfaces. Proper Management is taken to provide adequate SWD drains

1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Existing road network within the city along with the roads abutting the project site will be utilized for the transportation of material. Workers required during peak hours will be deployed from local or nearby area.
1.26	Long-term dismantling or 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	***Construction Phase:*** Approx. 100 labors are estimated to work at site during peak construction phase. Note: The actual requirement of labors may vary as per the construction activity requirement. ***Operation Phase:*** On completion of the project, there will be regular movement of people, visitors, staff and related personals. Total population is expected to be 6,020 nos.
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	Agricultural land is not involved.

<table>
<tr><td>2.2</td><td>Water (expected source & competing users) unit: KLD</td><td>Yes</td><td>Construction Phase: Approx. 100 labors are estimated during construction phase.<table><tr><td>Workers</td><td>13.5 KLD</td></tr><tr><td>construction</td><td>20 -30 KLD</td></tr></table>The water demand will be met through MCGM supply/ tanker water.
Note: The actual water demand may vary as per the construction activity and worker requirement.
Operation Phase:
Total water demand of the project is expected to be 250 KLD:<table><tr><td rowspan="2">Domestic</td><td rowspan="2">135 KLD</td><td rowspan="2">Source: Municipal Supply</td></tr><tr></tr><tr><td>Flushing</td><td>110 KLD</td><td rowspan="2">Source: Recycled water</td></tr><tr><td>Gardening</td><td>5 KLD</td></tr></table></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, sand / 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 shall be used 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>• Construction Phase: 150 kW (estimated)
• Operation Phase:
  • Connected load = 4683.78 KW
  • Max. Demand Load = 3189.18 KW
  • Source: MSEDCL
3 nos. of D. G. sets of capacity 1500 kVA each is proposed as backup during power failure and emergency only.</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	No	---

	affect disease vectors (e.g. insect or water borne diseases)		
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	Due to commercial development, job opportunities in formal and 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 Wet Waste (Kg/day): 435 Dry Waste (Kg/day): 653 Mode of Disposal of Waste: Dry waste: To be sold to vendors for recycling. Wet Waste: To be treated by OWC
2	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	Used oil from DG set will be stored carefully and will be handed over to authorized vendor for disposal.
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 will be used as manure.
4.7	Construction or demolition wastes	Yes	Maximum attempt will be made to use construction waste within site. The excess construction debris will be disposed through local vendors.
4.8	Redundant machinery or equipment	No	---
4.9	Contaminated soils or other materials	No	---
4.10	Agricultural 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	• Emission will be generated from vehicular transport to the project. • Emissions due to standby D.G set operations.
5.2	Emissions from production processes	No	---
5.3	Emissions from materials handling including storage or transport	Yes	• Emissions will be generated while handling and transportation of materials like cement, sand etc. to site and will be temporary in nature. • RMC will be used to reduce dust generation due to material handling. • Regular water sprinkling will be done to reduce dust generation • Transportation of materials will be done by covered trucks.
5.4	Emissions from construction activities including plant and equipment	Yes	The project may cause rise in dust level during construction phase. Precautions shall be taken to reduce dust generation during construction phase. • RMC will be used to reduce dust generations due to material handling. • Regular water sprinkling will be done to reduce dust generation. • Transportation of materials will be done by covered trucks.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	During Construction phase • Dust generation will be controlled as described above in 5.4 During operation phase, • Wet Waste shall be treated by OWC and compost shall be used as manure • Sewage shall be treated in STP
5.6	Emissions from incineration of waste	No	---
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	---
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 is used for drilling, cutting operations.
			• Operation of DG sets only in case of power failure.
			• 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.

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; • Excavation 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:** Transport of materials for construction work. Precautions will be taken to reduce the impacts of the vehicular movement. **During Operation Phase:** The vehicular parking will be restricted only in the adequate parking area provided, which would help in reducing noise pollution due to traffic congestion. Adequate tree plantation will also help to reduce the noise level and enhance air quality.

6.6	From lighting or cooling systems	No	---
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 218 KLD is proposed to be installed for treatment of sewage of capacity 220 KLD. Treated water 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 will be generated during construction phase from earthworks and movement of vehicles. Appropriate fugitive dust control measures, including water sprinkling over exposed areas and dust covers for trucks, will be provided to minimize any impacts. DG exhaust will be discharged at appropriate height.
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, cloudburst etc)?	No	There is no history of such a disaster in the project area. This area falls under seismic zone –III according to Indian Standard Seismic zoning map.

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 utilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.:	Yes	
	• Supporting infrastructure (roads, power supply, waste or waste water treatment, 31 etc.)	Yes	Supporting infrastructure is already in existence
	• housing development	No	It's a commercial development.
	• extractive industries	No	
	• supply industries	No	
	• other	No	
9.2	Lead to after-use of the site, which could have an impact on the environment.	No	Not anticipated as site is to be utilized for construction of commercial buildings.
9.3	Set a precedent for later developments	Yes	This will create job opportunity I formal and informal sector such as employees, security, maintenance, labours, workers etc.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	Municipal Corporation of Greater Mumbai's well defined Development Plan in place to take care of such cumulative growth.

(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.	Sanjay Gandhi National Park	Approx. 1.0 km
2.	Areas which are important or sensitive for ecological reasons - Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests.	Sanjay Gandhi National Park Vihar Lake	Approx. 1.0 km Approx. 2.09 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. 1.0 km
4.	Inland, coastal, marine or underground waters	Vihar Lake	Approx. 2.09 km
5.	State, National boundaries.	The project is located within municipal limits.	
6.	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas.	Not Applicable	--
7.	Defence installations.	No defense installation in the neighborhood.	--
8.	Densely populated or built-up area.	The Site is located within developed city.	--
9.	Areas occupied by sensitive man-made land uses *(hospitals, schools, places of worship, community facilities)*	The project site is located in well-developed area	--
10.	Areas containing important, high quality or scarce resources *(groundwater resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)*	Not Applicable	--
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	This area is generally plain & come under seismic zone –III.

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

Form 1 - Proposed Commercial project on sub divided plot bearing CTS No. 533 (pt), 533/2(pt) & 553 (pt), of village Nahur, L. B. S. Road, Mulund (W), T- Ward

"1 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".

For M/s. Kalpataru Ltd.

Authorized Signatory

Date:
Place: Mumbai

Signature of the Applicant Authorized 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: Proposed project on plot bearing CTS No. 533(pt), 533/2 (pt), & 553 (pt), of village Nahur, L. B. S. Road, Mulund (W), T- Ward. **Land Use Pattern:** The project is situated in the midst of already developed surroundings with mixed users i.e. residential & commercial users. Permission for allowing change of user from industrial user to residential / commercial user has been accorded by Local Municipal authority. **Site levels:** The site is a flat land. The following details are enclosed. Site Location Map Google Image – Annexure I Layout Plan – Annexure II

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 30.50 mt. existing L.B.S. road Nearby railway station is Nahur railway station.

2. **Building Details:**

Proposed Building has following configuration :

Sr. No	Wing	Configuration
1	One Tower	1Basement+ Grd. With shops having Gr + mezzanine / Stilt + 1st Podium (Parking/Comm.) + 2nd to 7th Podiums (Parking) + 8th Podium Comm./Refuge/Stilt) + 1st to 24th Floors Commercial

C. Area Statement:

Table 2: Area Statement

No.	Description	Area (Sq. mt.)
1	Total Plot Area	5,000.00
2	FSI Area	33,750.00
3	Non-FSI Area	29141.57
4	Total Construction Built-up Area (FSI + Non FSI)	62,891.568

D. Parking Statement:

Table 3: Parking Statement

Component		Parking Spaces provision (Nos.)	
	Required	Permissible	Proposed
4-wheeler parking	472	708	489

E. Water requirement for the project:

3. During Construction Phase:

For Workers: 13.5 KLD (Source: From MCGM/potable tanker water)

For Construction :20-30 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)	135	MCGM
2	Flushing (in KLD)	110	STP treated water
3	Gardening (in KLD)	5	STP treated water

F. Sewage Generation

Table 5: Sewage Generation

Description	Quantity of Sewage generated (KLD)	Treatment/ Disposal
Operation Phase	218	Treatment in STP and reuse of treated sewage for flushing (110 KLD) & gardening (5 KLD) within the premises. Excess treated sewage shall be disposed to municipal drain. The sludge shall be used as manure

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**
435	653	1088

- Segregation of non-biodegradable and biodegradable garbage on site.
- Bio degradable garbage: Treatment by method of composting
- Non- biodegradable garbage: To be handed over to vendors for recycling
- STP Sludge: To be use as manure

5. Power requirement:

During Construction Phase – 150 KW (estimated)

During Operation phase:

Table 8: Power Requirement

	Residential
Connected load	4683.78 KW
Maximum demand	3189.18 KW
D.G. Sets (For emergency back-up in case of power failure)	3 D. G. Sets of capacity of 1500 kVA each

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).**
	Municipal Corporation of Greater Mumbai has a 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)**
	There is a difference of 3.00 m on site from W to E towards the existing road. Nalla is adjoining the plot
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 off through vendors.
1.7	**Give details regarding water supply, waste handling etc. during the construction period.**
	Water Requirement during Construction Phase: For Workers:13.5 KLD (Source: From MCGM/potable tanker water) For Construction :20-30 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.
2	**WATER ENVIRONMENT**
2.1	**Give the total quantity of water requirement for the proposed project with the breakup of requirements for various uses. How will the water requirement be met? State the sources & quantities and furnish a water balance statement.** **Water Requirement & Source:** **During Construction Phase –** For Workers:13.5 KLD (Source: From MCGM/potable tanker water) For Construction :20 – 30 KLD (Source: From MCGM/potable tanker water) Note: the actual water requirement may vary as per the actual requirement. **During Operation Phase –**

Water Balance Chart :

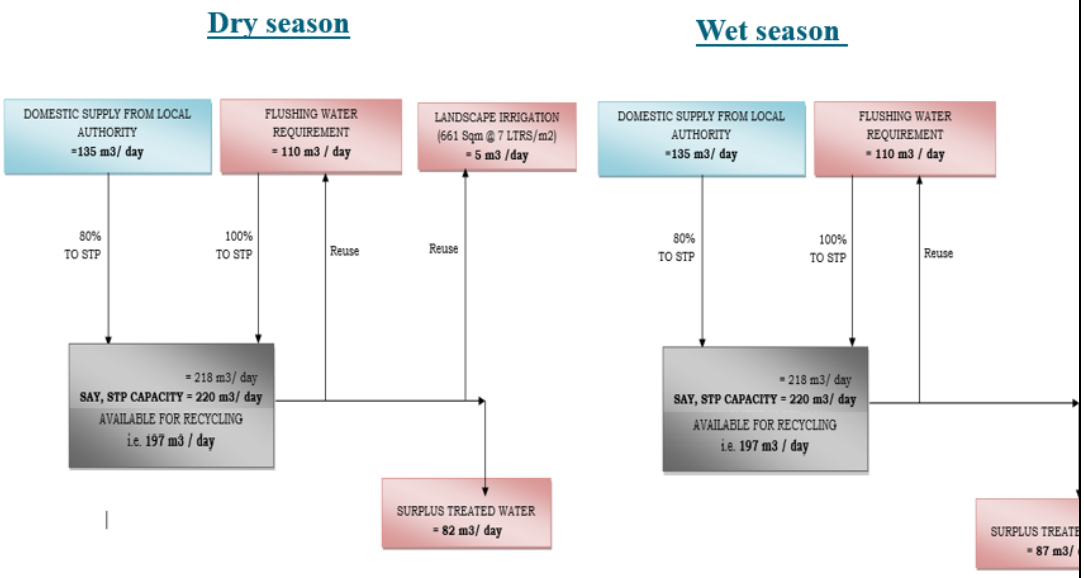

Table 9: Total Water Requirement

Use	Quantity	Source
Domestic (in KLD)	135	MCGM
Flushing (in KLD)	110	STP treated water
Gardening (in KLD)	5	STP treated water

2.2	**What is the capacity (dependable flow or yield) of the proposed source of Water?**
	Domestic water supply (135 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 (110 KLD) and gardening (5 KLD) would be fulfilled by recycling of treated wastewater 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 218 KLD. Treatment of sewage in Sewage Treatment Plant (STP) of capacity 220 KLD. Treated sewage will be reused for flushing (110 KLD) and gardening (5 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 pits 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. Precaution to avoid water logging on site are proposed to be taken. Proper management of channelization of storm water from site by using proper internal SWD system and discharge points of adequate capacity. Proper maintenance of storm water drainage to avoid choking of drains and flooding on site
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 sewage of 218 KLD from project will be treated through STP having 220 KLD capacity and reused for flushing and gardening. Excess treated water (82 KLD) will be released 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 (110 KLD) and gardening (5 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 total 19 no. of existing trees on site. Trees proposed to be cut are 12 nos.
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: 19 Nos. Trees to be planted: As per tree NOCs from Local Authority.
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 a significant 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 • 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 has 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. • Planned 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 has 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 for common amenities like staircase lighting lifts etc. 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?**
	NA
6.2	**Will there be any adverse impacts from new constructions on the existing structures? What are the considerations taken into account?**
	No existing structure on site.
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.**
	There will be influx of 6020 persons
7.2	**Give details of the existing social infrastructure around the proposed project.**
	Proposed project is located within the developed city area with 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.
7.3	**Will the project cause adverse effects on local communities, disturbance to sacred sites or other cultural values? What are the safeguards proposed?**
	Project will not cause adverse effects on local communities, disturbance to sacred sites or other cultural values.
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)**
	Maximum effort to procure the basic engineering materials like aggregate, cement, sand, blocks. Etc. locally shall be practised.
8.2	**Transport and handling of materials during construction may result in pollution, noise & public nuisance. What measures are taken to minimize the impacts?**
	Mitigation Measures for Air Pollution during Construction Stage: • Use of properly covered vehicles to carry construction material • All the contractors / Vendors instructed to use vehicles having PUC certificates • Loading and unloading of material at site done under supervision of Security staff • Storage of construction material at identified site/ temporary godowns at site • Water sprinkling for dust suppression. • To minimize the occupational health hazard, proper personal protective equipment (PPE) shall be provided to the workers
8.3	**Are recycled materials used in roads and structures? State the extent of savings achieved?**
	Inert demolished and excavated material used in filling work and construction of temporary structures to maximum extent.
8.4	**Give details of the methods of collection, segregation & disposal of the garbage generated during the operation phases of the project.**
	• 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
9	**ENERGY CONSERVATION**
9.1	**Give details of the power requirements, source of supply, backup source etc. What is the energy consumption assumed per square foot of built-up area? How have you tried to minimize energy consumption?**
	Power Requirement **During Construction Phase –** Reliance: 150 KW (Estimated)

During Operational Phase -

Source: MSEDCL

Component	Values
Connected load (in KW)	4683.78 KW
Maximum demand (in KW)	3189.18 KW
D.G. sets (for emergency back up during power failure)	3 D. G. sets of capacity of 1500 kVA each

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.
- Solar PV system shall be provided
- Recommending the benefits of adopting BEE 5 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 3 D.G. sets of capacity of 1500 kVA each 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?**
	Glass will be provided as per requirement
9.4	**What passive solar architectural features are being used in the building? Illustrate the applications made in the proposed project.**
	No passive solar architectural features provided
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 equivalent to 1 % of demand load and energy generated shall be used for common utilities.
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 may 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.**
	Energy efficient air conditioning system and lighting shall be done. The occupants shall be instructed to use air conditioning system comprising of CFC and HCFC free refrigerants only.
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 construction of building envelope will be as per prevalent norms
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.**
	Glass will be used as wall material which will be compliant to prevalent norms
9.12	**What is the rate of air infiltration into the building? Provide details of how you are mitigating the effects of infiltration.**
	Air infiltration rate will be as per the prevalent norms
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 PV shall be proposed equivalent to 1 % of demand load and energy generated shall be used for common utilities.
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 ,	• Green spaces shall be developed. • DG sets will be installed as per CPCB norms.

<table>
<tr><td></td><td></td><td></td><td>emissions from DG (standby),</td><td>• Plantations will be done wherever possible.</td></tr>
<tr><td></td><td>Groun
d wate</td><td>Groundwater contamination</td><td><u>Construction phase</u>
Wastewater generated from labour camp</td><td>Wastewater generated shall be disposed off by connecting to existing sewer line.</td></tr>
<tr><td></td><td></td><td></td><td><u>Operation phase</u>
Sewage disposal</td><td>Sewage generated (218 KLD) will be treated in the proposed STP of capacity 220 KLD. The treated wastewater shall be used for flushing (110 KLD) and landscaping (5 KLD) purpose and excess (82 KLD) will be discharged into municipal drain.</td></tr>
<tr><td></td><td>Surfac
Water</td><td>Surface water contamination</td><td><u>Construction phase</u>
Surface runoff from site during construction activity</td><td>Temporary Storm water drains along with silt traps/basins shall be proposed on site.</td></tr>
<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 C & D waste as follows
<table>
<tr><th>Elements</th><th>Management</th></tr>
<tr><td>Steel scrap</td><td>It shall be sold to recycler</td></tr>
<tr><td>Concrete</td><td rowspan="3">It shall be used for backfilling, construction of temporary structures, pavement construction etc. The excess if any shall be disposed by means of vendors</td></tr>
<tr><td>Blockwork</td></tr>
<tr><td>Flooring/ Tiling/ Dado</td></tr>
<tr><td>Empty Cement bags</td><td>They shall be sent for reusing and recycling.</td></tr>
</table></td></tr>
<tr><td></td><td></td><td></td><td><u>Operation phase</u>
Disposal of municipal solid waste.</td><td>• Segregation of Bio-degradable and Non-biodegradable waste into different bins shall be done by educating the occupants.</td></tr>
</table>

<table>
<tr><td></td><td></td><td></td><td></td><td>• Bio-degradable waste (435 kg/day) will be collected and treated in an OWC and compost shall be used as manure.
• Non-biodegradable waste (653 kg/day) will be handed over to local vendors or recyclers for recycling.</td></tr>
<tr><td rowspan="2">Flora & fauna (biological environment)</td><td rowspan="2">Displacement of flora and fauna</td><td><u>Construction phase</u>
Site development during construction</td><td>There are 19 no. 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>
<tr><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>19</td><td>Nos.</td></tr><tr><td>Trees to be cut</td><td>12</td><td>Nos.</td></tr></table></td></tr>
<tr><td>Socio-economic environment</td><td>Displacement of any community or economic resources</td><td><u>Operation phase</u>
Site operation.</td><td>The project will provide employment opportunities to the locals in terms of labour during the construction. During operation phase service personnel during operation period.</td></tr>
<tr><td 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 Exit.
Entry/ exit through 30.50 mt wide existing road.</td></tr>
</table>

Form 1A - Proposed project on sub divided plot bearing CTS No. 533 (pt), 533/2(pt) & 553 (pt), of village Nahur, L. B. S. Road, Mulund (W), T- Ward

Annexure I – Google Image

LATITUDE: 19°10'11.04" N
LONGITUDE: 72°56'19.36" E

Annexure II – Layout plan