

पर्यावरण मंजूरी

STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY

SEAC-2315/C.R.531/TC-II
Environment Department
Room No. 217, 2nd Floor
Mantralay Annexe
Mumbai - 400 032
Date: 6 February 2017

To,
M/s Babenco Developers Ltd
At Lohegoan, Tal Haveli,
Dist. Pune.

Subject: Environment Clearance for proposed residential project 'Indrayani Sankalp' at S. No. 32/1, 32/2, 32(P), 26/1, 26/2, 25/2/1, 25/2/2, 25/2/3, 25/2/4, 25/4/1/2/1, 25/4/1+2/2, 25/4/2+1/3, 25/4/1+2/4, 25/4/1+2/5, 25/4/1+2/6, 27/1 of Village Lohegaon, Tal Haveli, Distt. Pune.

Sir,

This has reference to your communication on the above mentioned subject. The proposal was considered as per EIA Notification - 2006, by the State Level Expert Appraisal Committee - III, Maharashtra in its 54th Meeting and recommended the project for prior environmental clearance to SELAA. Information submitted by you is yet to be considered by the State Level Impact Assessment Authority. However, we take into consideration the information for the 4 required compliance points has been submitted to the department.

It is noted that the proposal is considered by SEAC-III under screening category 8(a) B2 as per EIA Notification 2006.

Sr.No.	Particular	Commitment On
1.	Name of Project	Proposed Residential Project " Indrayani Sankalp at S.Nos. 32/1, 32/2, 32(P), 26/1, 26/2, 25/2/1, 25/2/2, 25/2/3, 25/2/4, 25/4/1/2/1, 25/4/1+2/2, 25/4/2+1/3, 25/4/1+2/4, 25/4/1+2/5, 25/4/1+2/6, 27/1, of Village Lohegaon, Haveli Taluka, Pune , by Bebanco Developers Ltd
2.	Name, contact number & address of Proponent	Mr. Digant Kapadia Bebanco Developers Limited Shivsagar Estate 'A' Block, 2 nd floor' Dr. A.B. Road, Worli, Mumbai - 400018
3.	Name, contact number & address of Consultant	Aditya Environmental Services Pvt.Ltd. 107, Hiren Light Industrial Estate, Mogul Lane, Mahim, Mumbai - 400016 Phone : 022 - 24456473 email : adityaenviro@vsnl.com
4.	Accreditation of consultant (NABET Accreditation)	QCI NABET Accreditation for Building and large construction projects & Township and Area Development Projects.
5.	Type of project : Housing project/	Proposed residential project

	Industrial Estate/ SRA scheme/ MHADA/ Township or others	
6.	Location of the project	S.Nos. 32/1, 32/2, 32(P), 26/1, 26/2, 25/2/1, 25/2/2, 25/2/3, 25/2/4, 25/4/1/2/1, 25/4/1+2/2, 25/4/2+1/3, 25/4/1+2/4, 25/4/1+2/5, 25/4/1+2/6, 27/1, of Village Lohegaon, Haveli Taluka, Pune. Latitude & Longitude of the project Site: 18°37' 13.08" N 73°56'52.42"E 18°37' 11.24" N 73°57'30.82"E 18°36' 41.40" N 73°57'24.67"E 18°36' 57.12" N 73°57'10.54"E
7.	Whether in Corporation / Municipal/ other area	PMRDA
8.	Applicability of the DCR	PMRDA
9.	IOD/IOA/Concession Document or any other form of document as applicable (Clarifying its conformity with local planning rules and provisions)	PMRDA Commencement certificate submitted
10.	Note on the initiated work (If applicable)	NA
11.	LOI / NOC from MHADA/ other approvals (If applicable)	NA
12.	Total Plot Area (sq.m.) Deductions Net Plot area	Area of Plot : 4,71,257.43 m ² Deductions : 269.04 m ² Balance Plot area : 470,988.39 m ² Deductions : 70,648.26 m ² Net plot area : 3,60,306.12 m ²
13.	Permissible FSI (including TDR etc.)	Total Permissible FSI : 5,75,345.86 m ²
14.	Proposed Built-up Area (FSI & Non - FSI)	Total proposed FSI area : 5,70,463.88 m ² Total proposed Non FSI area : 3,26,164.56 m ² Total proposed BUA (FSI + Non FSI) : 8,96,628.44 m ²
15.	Ground – coverage Percentage (%) (Note : Percentage of plot not open to sky)	Total Ground Coverage : 75,668.21 m ² i.e. 15.9% of balance plot area.
16.	Estimated cost of the project	Rs. 1815 crores
17.	No. of building & its configuration(s)	Proposed development involves construction of 7 Residential sectors having 105 residential buildings with 9510 flats & 160 shops (sector 1 and 2). 4 amenity areas to be developed as office complex, fire station hospital, school and commercial complex respectively. Houses/ Flats of Sectors 1 &

2 will be handed over to members of Maharashtra Police Megacity Co-op Housing Society Ltd.

Phases	Building type	No.of Buildings	No.of floors	No.of Tenements
I	Sector 1	36	P +14	2968 flats 80 shops
II	Sector 2	24	P +14	2320 flats 80 shops
III	Sector 3	21	P +14	1918
	Amenity 2 – Hospital	1	G + 3	74 beds
	Amenity 3 – School	1	G + 5	-
IV	Sector 4	3	P +14	330
	Sector 5	9	P +14	990
	Sector 6	8	P +14	656
	Sector 7	4	P +14	328
V	Amenity 1 – Office Complex	1	G + 6	27 offices
	Fire Station	1	Ground floor	
	Amenity 4 – Commercial Complex	1	G + 4	268 shops 18 offices

18. **Number of tenants and shops**

Particulars	No.of flats / shops / offices	Tenants
Sectors 1 - 7	9510 flats 160 shops	47550 955
Amenity 1 – Office Complex	27 offices	1932
Amenity 2 – Hospital	74 beds	634
Amenity 3 – School		3585
Amenity 4 Commercial Complex	268 shops 18 offices	7481

19. **Number of expected residents/ users**

Residential (all sectors) : 47550
Shops for sector 1 & 2 : 954
Hospital : 634
Office complex : 1932
Commercial complex : 7481
School : 3585
Total Population : 62136 nos.

20.	Tenant density per hectare	202.5 Tenement / hectors 1011.2.Tenement / hectors																					
21.	Height of the building (s)	Proposed maximum Ht. of the Building : 45 m																					
22.	Right of way (Width of the road from the nearest fire station to the proposed building(s)	6 m wide road from the nearest fire station to the project. Nearest fire station : Rajmata Jijau fire station, Bhosari Nearest fire Station Distance : 9.2 Km.																					
23	Turning radius for easy access of fire tender movements from all around the building excluding the width for the plantation	For easy access of fire tender 9 m wide internal driveway & 9m turning radius will be provided.																					
24	Existing structure(s)	Temporary shed for storage of prefab machinery & equipment exists on site . Also a temple exists on site which will be retained																					
25	Details of the demolition with disposal (If applicable)	Temporary shed for storage of prefab machinery & equipment exists on site which will be demolished after completion of the project.																					
26	Total Water Requirement	<p>During construction phase : Source : Private water tankers Total water requirement by labours : 22.5 m³/ day During operation phase : Dry season : Source : Wadgaon Shinde grampanchayat + MJP Total water requirement (including swimming pool) – 7735.9 kld</p> <table border="1"> <thead> <tr> <th>Details</th> <th>Dry Season (kld)</th> <th>Wet Season (kld)</th> </tr> </thead> <tbody> <tr> <td>Fresh water (in m³/ day)</td> <td>4758.49</td> <td>4758.49</td> </tr> <tr> <td>Recycled water(Flushing)</td> <td>2533.23</td> <td>2533.23</td> </tr> <tr> <td>Recycled water (Gardening)</td> <td>432.2</td> <td>–</td> </tr> <tr> <td>HVAC make up</td> <td>NA</td> <td>NA</td> </tr> <tr> <td>Swimming pool make up</td> <td>12</td> <td>12</td> </tr> <tr> <td>Excess treated water</td> <td>2864.19</td> <td>3296.39</td> </tr> </tbody> </table>	Details	Dry Season (kld)	Wet Season (kld)	Fresh water (in m ³ / day)	4758.49	4758.49	Recycled water(Flushing)	2533.23	2533.23	Recycled water (Gardening)	432.2	–	HVAC make up	NA	NA	Swimming pool make up	12	12	Excess treated water	2864.19	3296.39
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27	Details about Swimming Pool	<p>Dimensions : Volume : 340 cum (2 nos. of swimming pool 170 cum each) Water requirement for makeup : 12 kld</p> <p>Details of Plant & Machinery used for treatment of Swimming Pool water : Ozone system with chlorination unit along with the entire setup for water filtration and control panel.</p> <p>Details of quality to be achieved</p>																					

		<p>a. pH = 7.0 to 7.6 b. Chlorine content : 0.8 to Ippm residual chlorine in pool Approx. Capital cost : Rs. 64,00,000/- Approx. O & M cost : Rs. 7,80,000/-</p>																																
28	Rain water Harvesting (RWH)	<p>Level of the Ground water table : Pre monsoon approx. 7 -9.5 m (in lower elevations) Post monsoon approx. 6 -7 m (in lower elevations)</p> <ul style="list-style-type: none"> • Size and no of RWH tank(s) and Quantity :NA • Capacity of RWH tanks : NA • Location of RWH tank(s): NA <p>No of recharge pits : A total One existing Well and 20 shaft well of maximum 2m inner diameter and 7m depth (to max 0.5 min original/ jointed rock compact basalt), An In-well (borewell inside the well) early 45m in depth 10 borewells of 60m in chambers Maximum 1.5 m inner diameter and depth 1m</p> <p>Approx. Capital & cost : 40,00,000/- Approx. O & M cost : 15,00,000/-</p>																																
29	UGT tanks	<table border="1"> <thead> <tr> <th>Description</th> <th>Residential Sectors</th> </tr> </thead> <tbody> <tr> <td>Domestic water tank</td> <td>6471 kld</td> </tr> <tr> <td>Flushing water tank</td> <td>3274 kld</td> </tr> <tr> <td>Fire suppression</td> <td>2450 kld</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Description</th> <th>Office complex</th> <th>Hospital</th> </tr> </thead> <tbody> <tr> <td>Domestic water tank</td> <td>58 kld</td> <td>281 kld</td> </tr> <tr> <td>Flushing water tank</td> <td>73 kld</td> <td>43 kld</td> </tr> <tr> <td>Fire suppression</td> <td>100 kld</td> <td>50 kld</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Description</th> <th>School</th> <th>Commercial complex</th> </tr> </thead> <tbody> <tr> <td>Domestic water tank</td> <td>108 kld</td> <td>225 kld</td> </tr> <tr> <td>Flushing water tank</td> <td>135 kld</td> <td>281 kld</td> </tr> <tr> <td>Fire suppression</td> <td>200 kld</td> <td>200 kld</td> </tr> </tbody> </table>	Description	Residential Sectors	Domestic water tank	6471 kld	Flushing water tank	3274 kld	Fire suppression	2450 kld	Description	Office complex	Hospital	Domestic water tank	58 kld	281 kld	Flushing water tank	73 kld	43 kld	Fire suppression	100 kld	50 kld	Description	School	Commercial complex	Domestic water tank	108 kld	225 kld	Flushing water tank	135 kld	281 kld	Fire suppression	200 kld	200 kld
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30	Storm water drainage	The storm water collected through the strom water drains of adequate capacity will be led to recharge pits																																
31	Sewage and Waste water demand	<p>Sewage generation from proposed project : 6536.3 m³/ day</p> <ul style="list-style-type: none"> • Total Capacity of STP : 6605 m³/ day • STP Technology : MBBR technology <p>Separate STPs are provided phase wise and sector wise as under :</p> <table border="1"> <thead> <tr> <th>Phases</th> <th>Sector</th> <th>Sewage Generation (kld)</th> <th>STP Capacity(kld)</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Sector 1 : 4 STPs</td> <td>1835.3</td> <td>a) 495 b) 885 c) 395</td> </tr> </tbody> </table>	Phases	Sector	Sewage Generation (kld)	STP Capacity(kld)	I	Sector 1 : 4 STPs	1835.3	a) 495 b) 885 c) 395																								
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		II	Sector 2 : 2 STPs	1419.1	a) 760 b)670																																			
		III	3 STPs Sector 3 Amenity 2 – Hospital (ETP) Amenity 3 – School	1165.1 194 145	a) 1170 b) 200 c) 5 d)150																																			
		IV	4 STPs Sector 4 Sector 5' Sector 6 Sector 7	200 601 398.5 199.2	e) 210 f)610 g)400 h)200																																			
		V	2 STPs Amenity 1 – Office complex Amenity 4 - Commercial Complex	78.2 302.9	a) 80 b) 310																																			
		<p>Budgetary allocation (Capital cost and O & M cost) Approx. Capital Cost : Rs. 10,71,00,000/- Approx. O & M Cost : Rs. 1,29,00,000/-</p>																																						
32	Solid waste Management	<p>Waste generation in the Pre-Constuction and Construction phase :</p> <p>1.Waste generation : Total labour Solid Waste Generation : 100 kg/day Wet waste generation : 60 kg/ day Dry waste generation : 40 kg/ day</p> <p>2.Disposal of the construction waste debris :The Construction waste generated during construction shall be segregated, reused on site and surplus shall be led to scrap dealers for recycling.</p> <p>Waste generation in the Operation Phase</p> <p>Total waste generated : 27344.4 kg/ day Wet waste (Kg/day) : 15692.76 kg/day Dry waste (Kg/day) : 14363.1 kg/day</p> <table border="1"> <thead> <tr> <th>Phases</th> <th>Building Type</th> <th>Total waste (kg/d)</th> <th>Wet waste (kg/d)</th> <th>Dry Waste (kg/d)</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>Sector 1</td> <td>7539.2</td> <td>4499.7</td> <td>3039.5</td> </tr> <tr> <td>II</td> <td>Sector 2</td> <td>5919.2</td> <td>3527.7</td> <td>2391.5</td> </tr> <tr> <td>III</td> <td>Sector 3</td> <td>4795</td> <td>2877</td> <td>1918</td> </tr> <tr> <td></td> <td>Amenity 2 – Hospital</td> <td>81.4</td> <td>32.56</td> <td>48.84</td> </tr> <tr> <td></td> <td>Amenity 3 – School</td> <td>869.2</td> <td>358.5</td> <td>537.7</td> </tr> <tr> <td>IV</td> <td>Sector 4</td> <td>825</td> <td>495</td> <td>330</td> </tr> </tbody> </table>				Phases	Building Type	Total waste (kg/d)	Wet waste (kg/d)	Dry Waste (kg/d)	I	Sector 1	7539.2	4499.7	3039.5	II	Sector 2	5919.2	3527.7	2391.5	III	Sector 3	4795	2877	1918		Amenity 2 – Hospital	81.4	32.56	48.84		Amenity 3 – School	869.2	358.5	537.7	IV	Sector 4	825	495	330
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	Sector 5	2475	1485	990
	Sector 6	1640	984	656
	Sector 7	820	492	328
V	Amenity 1 - Office Complex	483	193.2	289.8
	Amenity 4 – Commercial Complex	1870.2	748.1	1122.1
	Total	27344.4	15692.76	14363.1

E-waste : 3 kg/ day

Biomedical waste : 29.6 kg/ day

Total STP Sludge (Dry sludge) : approx. 378.3 kg/ day

Mode of Disposal of waste :

Dry – waste :

Dry waste will be segregated into recyclable and non- recyclable waste. Non degradable waste will be handed over to “SwACH” (Co-operative enterprises for waste collection.)

Sanitary waste will be incinerated. Dried sludge from STP will be used as manure.

- Wet - waste :

Biodegradable waste will be treated in Organic Waste Converter. Total 11 OWCs are provided for different sectors and amenities.

- E – waste : will be sent to SWACH
- Hazardous waste : Not applicable
- Biomedical waste (If applicable) : Will be sent to PASSCO

Area requirement : Total area provided for the storage and treatment of the solid waste:

S.No.	OWC	Area m ²
	Phase I	
1	OWC 1 for sector 1	260
	Phase II	
2	OWC 2 for sector 2	169.8
	Phase III	
3	OWC 3 for sector 3	178.2
4	OWC 4 for amenity 2 (Hospital)	42
5	OWC 5 for amenity 3 (School)	60
	Phase IV	

		<table border="1"> <tr> <td>6</td> <td>OWC 6 for sector 4</td> <td>60</td> </tr> <tr> <td>7</td> <td>OWC 7 for sector 5</td> <td>92.5</td> </tr> <tr> <td>8</td> <td>OWC 8 for sector 6</td> <td>92</td> </tr> <tr> <td>9</td> <td>OWC 9 for sector 7</td> <td>60</td> </tr> <tr> <td></td> <td>Phase V</td> <td></td> </tr> <tr> <td>10</td> <td>OWC 10 for amenity 1 (offices)</td> <td>48</td> </tr> <tr> <td>11</td> <td>OWC 11 for amenity 4 (commercial complex)</td> <td>62.2</td> </tr> </table> <p>Budgetary allocation OWC (Capital cost and O&M cost) approx. Capital cost : 3,06,50,000/- approx. O & M cost : 71,57,977/-</p> <p>Sanitary Napkin Incinerator (Capital cost and O&M cost) approx. Capital cost : 14,60,000/- approx. O & M cost : 7,54,582/-</p> <p>Smart Baler Machine (Capital cost and O&M cost) approx. Capital cost : 24,00,000/- approx. O & M cost : 13,46,599/-</p>	6	OWC 6 for sector 4	60	7	OWC 7 for sector 5	92.5	8	OWC 8 for sector 6	92	9	OWC 9 for sector 7	60		Phase V		10	OWC 10 for amenity 1 (offices)	48	11	OWC 11 for amenity 4 (commercial complex)	62.2									
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33	<p>Green Belt Development: 1. Required RG area on virgin land – 47098.8 m² (10% of balance plot area) 2. Provided RG area on virgin land – 48763 m² (10.34% of balance plot area) 2.1 Lawn area : 26863 m² 2.2 Shrub bed area : 21900 m² 3. Club house area swimming pool : 883 m² 4. Peripheral Green area : 12483.55 m² Total landscape area : 62129.55 m² (13.19% of balance plot area)</p>																															
	<p>No. & list of trees species to be planted in the ground RG : 5930 nos. of trees</p> <p>List of proposed plantation on ground:</p> <table border="1"> <thead> <tr> <th>S.No.</th> <th>Botanical Name</th> <th>Common Name</th> <th>Qty</th> <th>Characteristics & Ecological Importance</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Azadiracta indica</td> <td>Neem</td> <td>201</td> <td>A medium to large size hardy tree which stand hard in drought conditions.</td> </tr> <tr> <td>2</td> <td>Acacia auriculiformis</td> <td>Earleaf Acacia</td> <td>600</td> <td>Medium size tree widely grown along roads, grown in warm climate under both dry and moist conditions.</td> </tr> <tr> <td>3</td> <td>Milingtonia hortensis</td> <td>Indian Cork Tree</td> <td>329</td> <td>Evergreen tree, grows well in both dry and moist regions</td> </tr> <tr> <td>4</td> <td>Khaya senghalis</td> <td>Khaya</td> <td>166</td> <td>Large roadside tree</td> </tr> <tr> <td>5</td> <td>Jacaranda mimosifolia</td> <td>Jacaranda</td> <td>144</td> <td>Medium sized gracious deciduous tree, flowering tree which prefers moderate climate</td> </tr> </tbody> </table>		S.No.	Botanical Name	Common Name	Qty	Characteristics & Ecological Importance	1	Azadiracta indica	Neem	201	A medium to large size hardy tree which stand hard in drought conditions.	2	Acacia auriculiformis	Earleaf Acacia	600	Medium size tree widely grown along roads, grown in warm climate under both dry and moist conditions.	3	Milingtonia hortensis	Indian Cork Tree	329	Evergreen tree, grows well in both dry and moist regions	4	Khaya senghalis	Khaya	166	Large roadside tree	5	Jacaranda mimosifolia	Jacaranda	144	Medium sized gracious deciduous tree, flowering tree which prefers moderate climate
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6	Ailanthus excelsa	Maharukh	168	Large tree, good for roadside plantation																				
7	Spathodea campanulata	African Tulip	417	A large handsome deciduous flowering tree																				
8	Lagerstromia flosregineae	Tamhan	518	State flower tree of Maharashtra, grows in hot and dry climate.																				
9	Cassia fistula	Bahava	573	Small deciduous tree. Excellent flowering tree for arid regions.																				
10	Butuea monosperma	Palas	376	Small deciduous tree. Good for roadside plantation																				
11	Erythrina indica	Pangara	371	Medium sized tree, scarlet bright flower tree																				
12	Bahunia racemosa	Aapta	711	Small hardy tree																				
13	Albizia lebbeck	Shirish	186	Shady, large tree, bal shaped flowers																				
14	Terminalia catappa	Badam	530	Tall deciduous, fruit bearing																				
15	Plumeria alba	Champa	461	Ornamental flowering tree																				
16	Michelia champaca	Sonchapha	181	Medium sized evergreen tree, fragrant yellow flowers, butterfly host plant																				
Total			5930																					
<ul style="list-style-type: none"> • Number & list of trees species to be planted around the border of nallah / stream / pond (if any) : NA • Number of existing trees : 55 • Number, size, age and species of trees to be cut, trees to be transplanted: 18 trees to be transplanted and 37 trees to be protected. <p>NOC for the Tree transplantation / compensatory plantation, if any :- NA Budgetary allocation (Capital cost and O&M cost) approx. Capital cost: Rs. 1,89,34,637/- approx. O & M Cost: Rs. 15,14,771/-</p>																								
34																								
35	Energy	<p>Power supply: Construction phase: Total Demanded load = 950 KW DG : 1 no of 400 KvA</p> <p>Operational phase Connected Load – 52531.4 KW Maximum Demand = 28856.14 KvA 259 KW load will be catered through renewable energy no. of DG sets:</p> <table border="1"> <thead> <tr> <th>Phases</th> <th>Building type</th> <th>No.of DG sets</th> <th>Stack height (m)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">I</td> <td rowspan="2">Sector 1</td> <td>1 x 320 KvA</td> <td>3.5</td> </tr> <tr> <td>1 x 160 KvA</td> <td>2.5</td> </tr> <tr> <td rowspan="2">II</td> <td rowspan="2">Sector 2</td> <td>1 x 250 KvA</td> <td>3.1</td> </tr> <tr> <td>1 x 140 KvA</td> <td>2.3</td> </tr> <tr> <td>III</td> <td>Sector 3</td> <td>1 x 200 KvA</td> <td>2.8</td> </tr> </tbody> </table>			Phases	Building type	No.of DG sets	Stack height (m)	I	Sector 1	1 x 320 KvA	3.5	1 x 160 KvA	2.5	II	Sector 2	1 x 250 KvA	3.1	1 x 140 KvA	2.3	III	Sector 3	1 x 200 KvA	2.8
Phases	Building type	No.of DG sets	Stack height (m)																					
I	Sector 1	1 x 320 KvA	3.5																					
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		1 x 140 KVA	2.3
	Amenity 2 – Hospital	1 x 250 KVA 1 x 320 KVA	3.1 3.5
	Amenity 3 – School	2 x 500 KVA 1 x 125 KVA	4.4 2.2
IV	Sector 4	1 x 160 KVA	2.5
	Sector 5	1 x 200 KVA	2.8
	Sector 6	1 x 200 KVA	2.8
	Sector 7	1 x 140 KVA	2.3
V	Amenity 1 – Office complex	1 x 500 KVA 1 x 250 KVA	4.4 3.1
	Amenity 4 – Commercial Complex	4 x 500 KVA 1 x 600 KVA	4.4 4.9

Source of supply : MSEDCL.

Energy saving measures

The following energy conservation methods are proposed in the project.

1	Timers and contractors will be used to switch on / off common are & external landscape and facade lighting.
2	T5 fluorescent lamps (cfl) with high frequency ballast will be used for corridors and common areas & EXTERNAL ROAD LIGHTS.
3	All fluorescent light fixtures are specified to incorporate electronic chokes which have less wattloss compared to electro-magnetic chokes and result in superior operating power factor. This indirectly saves energy. Electronic chokes also improves life of the fluorescent lamps.
4	Energy efficient cfl/t5/led lamps which give approx. 30% more light output for the same watts consumed and therefore require less nos. of fixtures and corresponding lower point wiring costs.
5	All cables will be de-rated to avoid heating during use. This also indirectly reduces losses and improves reliability. To achieve the same we have considered current carrying capacity of all the cables laid through ground/air whichever is minimum.
6	125 LTR solar water heating is provided per flat.
7	Solar PV panel system is proposed for street lighting and building common loads.

%-age of Saving : 26.36%

compliance of the ECBC guidelines : (Yes/No) (If yes then submit compliance in tabular form) : Yes

Compliance with Energy Conservation Building Code (ECBC) 2007

5.2.2	Minimum equipment efficiencies for Air conditioning	NA
5.2.4	Ducting in AC spaces to have insulation of R 0.6	NA
5.2.5	All air and water systems of HVAC to be balanced and records maintained.	NA
5.2.6.1	Condenser locations	NA
6.2.1	Solar water heating for minimum 20% design capacity	Complies
6.2.2	Equipment efficiency standards	Complies
7.2	Lighting controls occupancy sensors	NA
7.2.1.4	Exterior lighting to be controlled by photo sensor or time switch	Complies
7.4	Exterior lighting power to be with in specified limits	Complies
8.2.1.1	Maximum allowable power loss from transformer to be with in specified limits	NA
8.2.2	Energy efficient motors	All motors and in PHE systems will have nominal full load efficiency as per IS 12615
8.2.3	Power factor be maintained between 0.95 and unity	NA
8.2.4	Check metering	Complies
8.2.5	Power distribution system losses to be maintained less than 1%	NA

Electricity requirement from MSEDCL 52531.44 KW
H.T. Line passing through the plot, if any : No.

Budgetary allocation (Capital cost and O & M cost)

DG sets:

approx. Capital Cost, Rs. 3,70,79,000/-

approx. O & M Cost, Rs. 1,67,28,800/-

Solar PV panel :

approx. Capital Cost, Rs. 3,88,80,000/-

approx. O & M Cost, Rs. 19,44,000/-

Solar water heating:

approx. Capital Cost, Rs. 13,15,76,500/-

approx. O & M Cost, Rs. 1,31,57,650/-

36 Environmental management plan budgetary allocation during construction phase (with break-up) :

Sr. No.	Particulars	Approx. cost (in Rs.)
1	Erosion control, dust suppression measures, top soil preservation	49,44,48,652.50/-
2	Labor camp toilets	24,00,000/-
3	Labor safety equipment and training	20,00,000/-
4	Environmental monitoring (per year)	2,75,000/-
5	Disinfection and health check-ups (per year)	2,30,000/-
6	Environmental monitoring cell	3,00,000/-
	Total	49,96,53,652/-

Quantum and generation of corpus fund and commitment :

Project proponent shall operate and maintain the premises for 1 year after giving possession and a corpus fund will be made available for O & M of the project. During this tenure the developer shall undertake annual maintenance contract for maintaining the environmental infrastructure on site.

- Responsibility for further O & M :

The corpus fund and all the AMC's shall be transferred to the society.

During operation phase (with Break-up) -

Sr. No.	Particular	Approx. capital cost (in Rs.)	Approx. O & M cost (in Rs.)
1	Sewage treatment plan	10,71,00,000/-	1,29,00,000/-
2	OWC	3,06,50,000/-	71,57,977/-
3	Sanitary napkin incinerator	14,60,000/-	7,54,582/-
4	Smart baler machine	24,00,000/-	13,46,599/-
5	Landscaping	1,89,34,637/-	15,14,771/-
6	Rain water harvesting	40,00,000/-	15,00,000/-
7	WTP	8,20,00,000/-	24,80,000/-
8	ETP	12,00,000/-	2,40,000/-
9	Sonic filters	30,00,000/-	82,000/-
10	Fountains and bubblers	32,00,000/-	1,98,000/-
11	Solar PV panel	3,88,80,000/-	19,44,000/-
12	Solar water heating	13,15,76,500/-	1,31,57,650/-
13	Environmental monitoring	-	11,50,100/-

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Traffic Management

Nos. of the junction to the main road & design of confluence. The site is located in residential zone. The development will be accessible from 6m wide wadgaon shinde road while the internal driveways are 9m.

Parking details:

		Type	Applicable no. of parking as per DCR			Provided parking		
			4W	2W	Cycle	4W	2W	Cycle
		Sector 1	728	3270	3270	728	3270	3270
		Sector 2	491	2613	2613	491	2613	2613
		Sector 3	639	1917	1917	639	1917	1917
		Sector 4	110	330	330	110	330	330
		Sector 5	330	990	990	330	990	990
		Sector 6	219	657	657	219	657	657
		Sector 7	109	327	327	109	327	327
		Office complex	101	404	404	101	404	404
		Hospital	82	205	205	82	205	205
		School	-	368	1840	-	368	1840
		Commercial Complex	419	1676	1676	419	1676	1676
		<p>Total provided cars : 3228 Total provided 2-W : 12757 Total provided cycles : 14229</p> <p>total area provided for parking (stilt) : 65,220 m² No. of car parking provided : 2174 Area per car including driveway : 30 m²</p> <p>Total area provided for parking (open) ; 26,350 m² No. of car parking provided : 1054 Area per car including drive way L 25 m²</p> <ul style="list-style-type: none"> • Width of all internal roads: 9m, Turning radius : 9M 						
38	CRZ/RRZ clearance obtain, if any	Not applicable						
39	Distance from protected area / critically polluted areas / eco-sensitive areas / inter-state boundaries	Not applicable						
40	41. check list for the other necessary approvals							
42		Status of the approval	Name of the competent authority			Date of the issued letter		
43	CFO NOC for the above said building structure(s)	Received for full height of sector 1.	Department of Fire Services, Government of Maharashtra					
44	HRC NOC for the above said building structure(s) (if applicable)	Not applicable						

45	NOC for the above said building structure(s) from the aviation authority (if applicable)	Not applicable		
46	Consent for the water for the above said detail(s)	Received	Pune Municipal Corporation	
47	Consent for the drainage for the above said detail(s)	Received	Pune Municipal Corporation	
48	Consent for the electric supply for the proposed demand	In process	MSEB	
49	Pre-certification for Green Building from Indian Green Building Council and other recognized institutes (if applicable)	NA		
50	Court order (if applicable)	NA		
51	Other approvals (if any)	Received	Agreement with SWACH for the collection and disposal of dry waste and e-waste	20/06/2016

3. The proposal has been considered based on the information submitted with respect to compliance points from the 54th Meeting of the SEAC-III. The information submitted is considered to be satisfactory. Considering that the tenure of the SEIAA has ended and a new Authority is yet to be formed, it is decided to grant environmental clearance to this project based on the submitted information under the provisions of Environment Impact Assessment Notification 2006, subject to following terms and conditions.

General Conditions for Pre-construction phase:-

1. This environmental clearance is issued subject to restricting total built up area of 62,750.46 Sq.m as approved by Local Planning Authority.
2. This environmental clearance is issued subject to land use verification. Local authority/planning authority should ensure this with respect to Rules, Regulations, Notification, Government Resolutions, Circulars, etc. issued if any. Judgment/orders issued by Honorable High Court, Honorable NGT, Honorable Supreme Court regarding DCR provisions, environmental issues applicable in this matter should be verified. PP should submit exactly the same plans appraised by concern SEAC and SEIAA. If any discrepancy found in the plans submitted or details provided in the above para may be reported to environment department. This environmental clearance issued with respect to the environmental consideration and it does not mean that State Level Impact Assessment Authority (SEIAA) approved the proposed land use.
3. As the project is in the proximity of the river Indrayani; no liquid or solid waste shall be disposed off in the river or in its vicinity or in any water body/nalla etc.
4. Occupancy Certificate shall be issued by the Local Planning Authority to the project only after ensuring sustained water availability, connectivity of sewer line to the project site and proper disposal of treated water as per environmental norms.


5. E-waste shall be disposed through Authorized vendor as per E-wast (Management and Handling) Rules, 2016.
6. This environmental clearance is issued subject to obtaining NOC from Forestry & Wild life angle including clearance from the standing committee of the National Board for Wild life clearance granted to the project which will be considered separately on merit.
7. PP has to abide by the conditions stipulated by SEAC & SEIAA.
8. The height, Construction built up area of proposed construction shall be in accordance with the existing FIS/FAR norms of the urban local body & it should ensure the same along with survey number before approving layout plan & before according commencement certificate to proposed work. Plan approving authority should also ensure the zoning permissibly for the proposed project as per the approved development plan of the area.
9. "Consent for Establishment" shall be obtained from Maharashtra Pollution Control Board under Air and Water Act and a copy shall be submitted to the Environment department before start of any construction work at the site.
10. All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

General Conditions for Construction Phase-

1. Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche and First Aid Room etc.
2. Adequate drinking water and sanitary facilities should be provided for construction workers at the site. Provisions should be made for mobile toilets. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.
3. The solid waste generated should be properly collected and segregated. Dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
4. Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
5. Arrangement shall be made that waste water and storm water do not get mixed.
6. All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
7. Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
8. Green Belt Development shall be carried out consideration CPCB guidelines including selection of plant species and in consultation with the local DFO/Agriculture Dept.
9. Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
10. Construction spoils, including bituminous materiel and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such material must be secured so that they should not leach into the ground water.
11. Any hazardous waste generated during construction phase should be disposed off as per applicable rules and norms with necessary approvals of the Maharashtra Pollution Control Board.
12. The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environments (Protection) Rules prescribed for air and noise emission standards.

13. The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from concern authority shall be taken.
14. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standard and should be operated only during non-peak hours.
15. Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/MPCB.
16. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September 1999 and amended as on 27th August, 2003. (The above condition is applicable only if the project site is located within the 100Km of Thermal Power Stations).
17. Ready mixed concrete must be used in building construction.
18. The approval of competent authority shall be obtained for structural safety of the building due to any possible earthquake, adequacy of firefighting equipment's etc. as per National Building Code including measures from lighting.
19. Storm water control and its re-use as per CGWB and BIS standards for various applications.
20. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
21. The ground water level and its quality should be monitored regularly in consultation with Ground Water Authority.
22. The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the MPCB and Environment department before the project is commissioned for operation. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treated effluent emanating from STP shall be recycled/refused to the maximum extent possible. Discharge of this unused treated effluent, if any should be discharge in the sewer line. Treatment of 100% gray water by decentralized treatment should be done. Necessary measures should be made to mitigate the odour problem from STP.
23. Permission to draw ground water and construction of basement if any shall be obtained from the competent Authority prior to construction/operation of the project.
24. Separation of gray and black water should be done by use of dual plumbing line for separation of gray and black water.
25. Fixtures for showers, toilet flushing and drinking should be of low flow wither by use of aerators or pressure reducing devices or sensor base control.
26. Use of glass may be reduced up to 40% to reduce the electricity consumption and load on air conditioning. If necessary, use high quality double glass with special reflective coating in windows.
27. Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfill requirement.
28. Energy conservation measures like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part if the project design and should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible like installing solar street lights, common solar water heaters system. Project proponents should install, after checking feasibility, solar plus hybrid non-conventional energy source as source of energy.
29. Diesel power generating sets proposed as source if backup power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG. Sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Maharashtra Pollution Control

10. A copy of the clearance letter shall be sent by proponent to the concerned Municipal Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
 11. The proponent shall upload the status of compliance of the stipulated EC conditions, including result of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, Nox (ambient levels as well as stack emissions) or critical sector parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
 12. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copied as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office CPCB and the SPCB.
 13. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Office of MoEF by e-mail.
4. The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponents has not violated any environmental laws in the past and whatever decision under EP Act or of the Honorable court will be binding on the project proponents. Hence this clearance does not give immunity to the project proponents in the case filed against him, if any or action initiated under EP Act.
 5. In case of submission of false document and non-compliance of stipulated conditions, Authority/Environment Department will revoke or suspend the Environmental Clearance without any intimation and initiate appropriate legal action under Environmental Protection Act, 1986.
 6. The Environment department reserves the right to add any stringent condition or to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.
 7. **Validity of Environment Clearance:** The environmental clearance accorded shall be valid for a period of 7 years as per MoEF&CC Notification dated 29th April, 2015.
 8. In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.
 9. The above stipulations would be enforced among others under the Water(Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.
 10. Any Appeal against this environmental clearance shall lie with the National Green Tribunal (Western Zone Bench, Pune), New Administrative Building, 1st Floor, D-, Wing, Opposite Council Hall, Pune, if Preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010


(S. M. Gavai)
Member Secretary, SEIAA