

Item No.263.11: Application for Environmental Clearance under EIA notification dated 14.09.2006 for setting up of group housing project namely “Crescent City Apartments” at Village Ayali Khurd, Teh & District Ludhiana, Punjab by M/s Vadhera Apartments Pvt Ltd (Proposal No. SIA/PB/INFRA2/442407/2023).

The Project Proponent has applied for obtaining Environmental Clearance under EIA notification dated 14.09.2006 for setting up of group housing project at Village Ayali Khurd, Teh & District Ludhiana, Punjab. The total land area of the project is 7.996 acres having built-up area of 1,53,250.09 sq.m.

The Project Proponent proposes to construct 9 residential blocks (2 BHK,3 BHK,4 BHK & Penthouse having 574 dwelling units, club, retail and land reserved for nursery school). The project is covered under category 8(b) of the schedule appended with EIA notification dated 14.09.2006. The Project Proponent has deposited Rs 153251 (Rs 38315/- vide UTR no. IBKL230410252766 dated 10.04.2023 and Rs 114936/- vide UTR no. N243232617831569 dated 31.08.2023). The adequacy of the fee has been checked and verified by the support staff of SEIAA. The Project Proponent has submitted layout plan approved from Chief Town Planner, Punjab for the total land area of 32358.410 sq.m having built up area of 1,53,250.09 m².

Punjab Pollution Control Board vide letter No. 7103 dated 12.10.2023 furnished the latest construction status report is as under:

“It is intimated that the site of the project was visited by the Officer of the Board on 28.09.2023 and point wise report is as under:

- 1. No constructional activity has been started at site yet.*
- 2. There is no MAH and Air Polluting industry, river, drain and eco-sensitive structures within the radius of 500m from the boundary of the project.*
- 3. The site falls within the limits of Notified Master Plan, Ludhiana (2007-31). As per Notified Master Plan, Ludhiana, the site falls partially in “Mix Land Use” along road front and partially in “Residential Land use Zone”. The permission for CLU for residential (Group Housing) use has been granted by the Senior Town Planner, Ludhiana vide Memo No. 3125 STP(L)/TW12A dated 22.09.2021.*
- 4. The proposed site of the colony is suitable for establishment of such type of projects as per the criteria prescribed by Government of Punjab, Department of Science, Technology & Environment vide Notification No. 3/6/07/STE (4)/2274 dated 25.07.2008, amended on 30.10.2009.”*

Deliberations during 263rd meeting of SEAC held on 16.10.2023.

The meeting was attended by the following:

- (i) Mr. Rajiv Vadhera, CEO, M/s Vadhera Apartments Pvt Ltd.
- (ii) Dr. Sandeep Garg, EC-Coordinator M/s Eco Paryavaran Laboratories & Consultant Pvt Ltd.
- (iii) Mrs. Jyoti Rani, EC- Coordinator M/s Eco Paryavaran Laboratories & Consultant Pvt Ltd.

The Committee allowed the Environmental Consultant to present the salient features of the application proposal. Thereafter, the Environmental Consultant presented the case as under:

Sr. No.	Description	Details
1	Basic Details	
1.1	Name of Project & Project Proponent	Group Housing Project namely "Crescent City Apartments" by M/s Vadhera Apartments Pvt. Ltd.
1.2	Proposal	SIA/PB/INFRA2/442407/2023
1.3	Location of Project	Hadbast No. 153, Village Ayali Khurd, Tehsil & Distt. Ludhiana, Punjab.
1.4	Details of Land area & built-up area	Total Plot Area = 7.996 acres (32,358.410 m ²) Built-up Area as per the application proposal = 1,53,250.09 m ²
1.5	Category under EIA notification dated 14.09.2006	8(b)
1.6	Cost of the project	Rs. 238.17 Crores
2.	Site Suitability Characteristics	
2.1	Whether project is suitable as per the provisions of Master Plan	As per Master Plan of Ludhiana, project site falls within proposed mixed land use along road front. Location of project is earmarked in the Master Plan.
2.2	Whether supporting document submitted in favour of statement at 2.1, details thereof: (CLU/building plan approval status)	Permission for Change in Land use (CLU) for land area measuring 7.996 acres issued by Department of Town & Country Planning, Punjab vide memo no. 3125 STP(L)/TW12A dated 22.09.2021 submitted

3	Forest, Wildlife and Green Area													
3.1	Whether the project required clearance under the provisions of Forest Conservations Act, 1980 or not:	Yes. The project involves diversion of 0.0128 ha of the forest land. Application has been filed online for Forest Clearance and is in process. Copy of acknowledgement submitted. However, access to the project from link road will be utilized till Forest clearance is obtained.												
3.2	Whether the project required clearance under the provisions of Punjab Land Preservation Act (PLPA), 1900.	No, undertaking in prescribed proforma has been submitted.												
3.3	Whether project required clearance under the provisions of Wildlife Protection Act, 1972 or not:	No. undertaking in prescribed proforma has been submitted												
3.4	Distance of the project from the Critically Polluted Area.	The nearest critical polluted area is Ludhiana Cluster VIII which is approx. 7 km from project location.												
3.5	Whether the project falls within the influence of Eco-Sensitive Zone or not.	No												
3.6	Green area requirement and proposed No. of trees:	Proposed Green area: 7,952.55 sq.m. No. of trees proposed: 685 trees												
4.	Configuration & Population													
4.1	<p>Proposal & Configuration</p> <p>9 Residential Blocks (2 BHK, 3 BHK, 4 BHK & pent houses) having 574 dwelling units, club, retail and land reserved for nursery school.</p> <p style="text-align: center;"><u>Table 1: Area Statement</u></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sl. No.</th> <th style="width: 60%;">Description</th> <th style="width: 30%;">Area (in sq.m.)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Total Plot area</td> <td style="text-align: center;">32,358.410 sq.m. (7.996 acres)</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Plot area reserved for nursery school</td> <td style="text-align: center;">887.320</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Net Plot Area</td> <td style="text-align: center;">31,471.090</td> </tr> </tbody> </table>		Sl. No.	Description	Area (in sq.m.)	1.	Total Plot area	32,358.410 sq.m. (7.996 acres)	2.	Plot area reserved for nursery school	887.320	3.	Net Plot Area	31,471.090
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4.	Permissible Ground Coverage (@ 30%)	9,441.327
5.	Achieved Ground Coverage (@ 23.7%)	7,470.494
6.	Total Permissible FAR	Unlimited
7.	Achieved FAR (@ 1:3.275)	1,03,068.911
8.	Non FAR	49,293.855
9.	School FAR (@ 1)	887.320
10.	Built-up Area (7+8+9)	1,53,250.09
11.	Permissible Green Area (@ 25%)	7,867.773
12.	Proposed Green Area (@ 25.27%)	7,952.55

Table 2: Block wise FAR & Non FAR details

S. No.	Blocks	BHK	FAR (in sq.m.)	Non-FAR (in sq.m.)
1	Block A1	4 BHK	14,800.298	1,621.550
2	Block A2, A3 & A6	3 BHK	32,234.826	3,711.555
3	Block A4	3 BHK	13,564.434	1,542.125
4	Block A5	3 BHK	12,154.688	1,389.655
5	Block A7 & A8	2 BHK	20,085.626	2,895.110
6	Block A9	3 BHK	5,733.953	1,545.817
7	Club Building B1	-	1,938.619	240.591
8	Retail R1	-	131.57	0
9	Podium and Stilt	-	2,424.897	13,081.472
10	Basement	-	-	23,265.98
11	School FAR @ 1	-	887.320	887.320
Total		-	1,03,956.231	49,293.855

4.2	Population details	3,207 persons			
		<u>Table 3: Population details</u>			
		S. No.	Description	No. of dwelling units	Criteria
1.	Residential	574 DUs	5 persons / DU	2,870	

		2.	Staff	-	-	50
		3.	Visitors population	-	@ 10% of Residential Population	287
		Total Estimated Population				3,207

5 Water

5.1 Total fresh water requirement:
272 KLD

Table 4: Water Demand & Wastewater Generation Details

S. No.	Details	Population / Area	Water Demand (in KLD)
1.	Residential @ 135 lpcd	2,807	387 KLD
2.	Floating @ 45 lpcd	50	2 KLD
3.	Visitors @15 lpcd	287	4 KLD
Water requirement			393 KLD
Flushing water req. (@ 45 lpcd for residential pop. & @ 20 lpcd for floating population & 10 lpcd for visitors)			129+1+3=133 KLD
Fresh water requirement			393 – 133 = 260 KLD
Make up water for swimming pool			12 KLD
Overall Fresh Water Demand			272 KLD
Wastewater Generated (@ 80%)			314 KLD
Proposed STP Capacity			500 KLD
Green area water req.		7,952.55 sq.m.	
Summer (@ 5.5 lt./m²/day)			44 KLD
Winter (@ 1.8 lt./m²/day)			14 KLD
Monsoon (@ 0.5 lt./m²/day)			4 KLD

5.2 Source: Borewells

5.3 Whether Permission for abstraction/supply of the fresh water from the Competent Authority (Y/N) No. Application has been filed to PWRDA; copy of acknowledgement is attached along.

	<i>Details thereof</i>		
5.4	Total wastewater generation:	314 KLD	
5.5	Treatment methodology: (STP capacity, technology & components)	314 KLD of wastewater will be generated from the project which will be treated in proposed STP of 500 KLD capacity (to be installed in two modules of 250 KLD each) based on MBBR Technology followed by UF.	
5.6	Treated wastewater for flushing purpose:	133 KLD	
5.7	Treated wastewater for green area in summer, winter and rainy season:	Summer: 44 KLD Winter: 14 KLD Monsoon: 4 KLD	
5.8	Utilization/Disposal of excess treated wastewater.	Excess treated water will be disposed of to GLADA sewer. Permission for discharging excess treated wastewater not submitted.	
5.9	Cumulative Details:		
	Sr. No.	Total water Requirement	Total wastewater generated
			Treated wastewater
			Flushing water requirement
			Green area requirement
			Excess will be disposed to GLADA
	1.	405 KLD	314 KLD
			308 KLD
			133 KLD
			Summer: 44 KLD Winter: 14 KLD Monsoon: 4 KLD
			Summer: 131 KLD Winter: 161 KLD Monsoon: 171 KLD
5.10	Rain water harvesting proposal:	8 nos. of rain water recharging pits will be constructed in the project for artificial rain water recharging within the project premises.	
6	Air		
6.1	Details of Air Polluting machinery:	Total 4 DG sets of 750 KVA each.	
6.2	Measures to be adopted to contain particulate emission/Air Pollution	DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper dispersion.	
7	Waste Management		

7.1	Total quantity of solid waste generation	1722 kg/day																														
7.2	Details of management and disposal of solid waste (Mechanical Composter/Compost pits)	Biodegradable waste will be composted in 2 Composters of 300 kg each. Non-biodegradable waste (recyclable waste) will be disposed off through authorized recycler vendors. Inert waste will be dumped to authorized dumping site.																														
7.3	Details of management of Hazardous Waste.	Hazardous Waste in the form of used oil from DG sets will be generated which will be managed & disposed off to authorized vendors as per the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and its amendments.																														
8	Energy Saving & EMP																															
8.1	Power Consumption:	Total power demand = 3,200 KW																														
8.2	Energy saving measures:	LEDs have been proposed instead of CFLs in the project. Further, solar panels have been proposed within the project premises. Detailed energy savings is attached along.																														
8.3	<p>Details of activities under Environment Management Plan. Mr. Kranti Vadhera (Director) will be responsible for implementation of Environment Management Plan. Details of EMP during construction & operation phase is given below:</p> <p>Construction & Operation Phase</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Title</th> <th>Capital Cost (Rs. Lakhs)</th> <th>Recurring Cost (Rs. Lakhs/Annum)</th> <th>Recurring Cost (Rs. Lakhs/Annum)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Wastewater Management (STP of 500 KLD capacity to be installed in two modules of 250 KLD each)</td> <td>65</td> <td>2</td> <td>8</td> </tr> <tr> <td>2.</td> <td>Air & Noise Pollution Management (anti-smog guns, tarpaulin sheets / barricading, water sprinklers, etc.)</td> <td>10</td> <td>1</td> <td>1</td> </tr> <tr> <td>3.</td> <td>Landscaping</td> <td>10</td> <td>3</td> <td>7</td> </tr> <tr> <td>4.</td> <td>Rain water recharging (8 Pits)</td> <td>15</td> <td>2</td> <td>4</td> </tr> <tr> <td>5.</td> <td>Miscellaneous (Environment monitoring cost, Management of Environment Cell, etc.)</td> <td>5</td> <td>2</td> <td>2</td> </tr> </tbody> </table>		Sl. No.	Title	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/Annum)	Recurring Cost (Rs. Lakhs/Annum)	1.	Wastewater Management (STP of 500 KLD capacity to be installed in two modules of 250 KLD each)	65	2	8	2.	Air & Noise Pollution Management (anti-smog guns, tarpaulin sheets / barricading, water sprinklers, etc.)	10	1	1	3.	Landscaping	10	3	7	4.	Rain water recharging (8 Pits)	15	2	4	5.	Miscellaneous (Environment monitoring cost, Management of Environment Cell, etc.)	5	2	2
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6.	Solid Waste Management (2 Composters of 500 & 300 kg)	25	3	5
7.	Energy Efficient measures (LEDs, Solar Panel system, etc.)	100	1	5
	Total	Rs. 230 Lakhs	Rs. 14 Lakhs/annum	Rs. 32 Lakhs/annum

Rs. 2.38 Crores (@ 1% of project cost) will be spent under additional environmental activities. Details of activities to be undertaken in Village Ayali Khurd are given below:

- Provision of solid waste management within the village.
- Construction and maintenance of parks.
- Construction of rooms in Govt. Primary/High Schools and provision of computer labs.
- Development of panchayati land.

The Committee, on perusal of the application proposal observed that the Project Proponent has proposed to discharge its excess treated wastewater into sewer, however no permission has been obtained from local authority (GLADA) for discharging the same. Henceforth, the Committee asked the project proponent to provide the alternative scheme for disposal of excess treated waste water till the time the project sewer is connected with GLADA sewer.

In this regard, the Project Proponent apprised the Committee that he shall carry out the construction of the project in two phases. The project proponent proposed to construct Block Nos. A1 to A6 in Phase I and Block Nos. A7 to A9 & Club (1 acre land) in Phase II. The Project Proponent has proposed to develop Phase II (1 acre land) under Karnal Technology till the connection of project sewer with MC, Sewer. The Project Proponent submitted the layout plan with revised water demand by considering the construction of Phase I only. The population estimation and water demand has been revised accordingly with details as under:

First Phase

(A) Estimation of Population & Water Demand

Sr. No.	Description	Population (No. of Persons)	Criteria for water demand	Water demand (KLD)	Flushing Water Criteria	Flushing Water Requirement
1	Residential Towers (Block nos. A1 to A6 in Phase I) – 364 DUs @ 5 Persons/DU	1820	135 LPCD	246	45 LPCD	82

2	Staff	50	45 LPCD	2	20 LPCD	1
3	Visitors	182	15 LPCD	3	10 LPCD	2
	Total	2052		251		85

(B) Cumulative details:

Sr. No.	Total water Requirement KLD	Total wastewater generated KLD	Treated wastewater KLD	Flushing water requirement KLD	Green area requirement KLD	Into sewer KLD
1.	251 KLD	201 KLD	197 KLD	85 KLD	Summer-44 KLD Winter-14 KLD Monsoon-4 KLD	Summer-68 KLD Winter-98 KLD Monsoon-108 KLD

The Committee was satisfied with the revised proposal submitted by the Project Proponent and after detailed deliberations decided to award silver grading and forward the case to SEIAA with a recommendation to grant Environmental Clearance for establishment of Group Housing Project namely "Crescent City Apartments" at Hadbast No. 153, Village Ayali Khurd, Tehsil & Distt. Ludhiana, Punjab by M/s Vadhera Apartments Pvt. Ltd. subject to the standard and specific conditions:

Specific Condition:

- (i) **The Project Proponent shall not carry out the development of Phase II i.e., Block No. A7 to A9 & Club and shall maintain this area under Karnal Technology till the final outlet of the project carrying excess treated wastewater is connected with the MC, sewer.**

I. Statutory compliances:

- i) The project proponent shall obtain all necessary clearances/ permissions from all relevant agencies including the town planning authority before commencement of work. All the construction shall be done in accordance with the local building bye laws.
- ii) The approval of the Competent Authority shall be obtained for the structural safety of buildings due to earthquakes, adequacy of firefighting equipment, etc. as per the National Building Code including protection measures from lightning, etc.

- iii) The project proponent shall obtain forest clearance under the provisions of the Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purposes is involved in the project.
- iv) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- v) The project proponent shall obtain Consent to Establish / Operate under the provisions of the Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the Punjab Pollution Control Board.
- vi) The project proponent shall obtain the necessary permission for the abstraction of groundwater/ surface water required for the project from the competent authority.
- vii) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- viii) All other statutory clearances such as the approvals for storage of diesel from the Chief Controller of Explosives, Fire Department, and Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.
- ix) The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, Construction & Demolition Waste Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
- x) The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly.
- xi) The project site shall conform to the suitability as prescribed under the provisions laid down under the master plan of the respective city/ town. For that, the project proponent shall submit the NOC/ land use conformity certificate from Deptt. of Town and Country Planning or other concerned Authority under whose jurisdiction, the site falls.
- xii) Besides the above, the project proponent shall also comply with siting criteria/guidelines, standard operating practices, code of practice, and guidelines if any prescribed by the SPCB/CPCB/MoEF&CC for such types of projects.
- xiii) The project proponent shall construct the buildings as per the layout plan approved from the Competent Authority and in consonance of the project proposal for which this environment clearance is being granted.

II. Air quality monitoring and preservation

- i) Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.
- ii) A management plan shall be drawn up and implemented to contain the current exceedance in the ambient air quality at the site.
- iii) The project proponent shall install a system to undertake Ambient Air Quality monitoring for common /criterion parameters relevant to the main pollutants released (e.g., PM10 and PM2.5) covering upwind and downwind directions during the construction period.
- iv) Diesel power generating sets proposed as a source of backup power 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 of low sulphur diesel would be the preferred option. The location of the DG sets may be decided in consultation with Punjab Pollution Control Board.
- v) Construction site shall be adequately barricaded before the construction begins. Dust, smoke and other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, and continuous dust/ wind-breaking walls all around the site (at least 3 m height or 1/3rd of the building height and maximum up to 10 m). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.
- vi) No Excavation of soil shall be carried out without adequate dust mitigation measures in place.
- vii) No loose soil or sand or construction and demolition waste or any other construction material that causes dust shall be left uncovered.
- viii) No uncovered vehicles carrying construction material and waste shall be permitted.
- ix) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- x) Grinding and cutting of building material in open areas shall be prohibited. A wet jet shall be provided for grinding and stone cutting.
- xi) Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
- xii) All construction and demolition debris shall be stored at the site within the earmarked area and roadside storage of construction material and waste shall be prohibited. All

demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules 2016.

- xiii) The diesel generator sets to be used during the construction phase shall be low sulphur diesel type and shall conform to the norms and regulations prescribed under air and noise emission standards.
- xiv) The gaseous emissions from the DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.
- xv) For indoor air quality, the ventilation provisions as per the National Building Code of India shall be complied with.
- xvi) Roads leading to or at the construction site must be paved and blacktopped (i.e., metallic roads should be built and used).
- xvii) Dust Mitigation measures shall be displayed prominently at the construction site for easy public viewing.
- xviii) Construction and Demolition Waste Processing and Disposal site shall be identified and required dust mitigation measures will be notified at the site

III. Water quality monitoring and preservation

- i) The natural drainage system should be maintained for ensuring unrestricted flow of water.
- ii) No construction shall be allowed which obstructs the natural drainage through the site, in wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rainwater.
- iii) Buildings shall be designed to follow the natural topography as far as possible. Minimum cutting and filling should be done.
- iv) The total freshwater use shall not exceed the proposed requirement as mentioned in the application proposal.
- v) Storage tank of adequate capacity shall be provided for the storage of treated wastewater and all efforts shall be made to supply the same for construction purposes.
- vi) During the construction phase, the project proponent shall ensure that the wastewater generated from the labour quarters/toilets shall be treated and disposed of in an environment-friendly manner. The project proponent shall also exercise the

option of modular bio-toilets or will provide proper and adequately designed septic tanks for the treatment of such wastewater and treated effluents shall be utilized for green area/plantation.

- vii) The project proponent shall ensure a safe drinking water supply to the habitants. Adequate treatment facility for drinking water shall be provided, if required.
- viii) The quantity of freshwater usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA along with six-monthly monitoring reports.
- ix) A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration, and the balance of water available. This should be specified separately for groundwater and surface water sources, ensuring that there is no impact on other users.
- x) At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape, etc. would be considered as pervious surface.
- xi) Dual pipe plumbing shall be installed for supplying fresh water for drinking, cooking and bathing, etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, air conditioning etc.
- xii) Installation of R.O. plants in the project will be discouraged in order to reduce water wastage in form of RO reject. However, in case the requirement of installing RO plant is unavoidable, the rejected stream from the RO shall be separated and shall be utilized by storing the same within the particular component or in a common place in the project premises.
- xiii) The project proponent shall also adopt the new/innovative technologies like low water discharging taps (faucet with aerators) /urinals with electronic sensor system /waterless urinals/twin flush cisterns/ sensor-based alarm system for overhead water storage tanks and make them a part of the environmental management plans/building plans so as to reduce the water consumption/groundwater abstraction.
- xiv) The project proponent will provide plumbing system for reuse of treated wastewater for flushing/other purposes etc. and will colour code the different pipelines carrying water/wastewater from different sources / treated wastewater as follows:

Sr. No	Nature of the Stream	Color code
a)	Fresh water	Blue
b)	Untreated wastewater from Toilets/ urinal and from Kitchen	Black

c)	Untreated wastewater from Bathing/shower area, hand washing (Washbasin / sinks) and from Cloth Washing	Grey
d)	Reject water streams from RO plants and AC condensate (this is to be implemented wherever centralized AC system and common RO has been proposed in the Project). Further, in case of individual houses/establishment this proposal may also be implemented wherever possible.	White
e)	Treated wastewater (for reuse only for plantation purposes) from the STP treating black water	Green
f)	Treated wastewater (for reuse for flushing purposes or any other activity except plantation) from the STP treating greywater	Green with strips
g)	Stormwater	Orange

- xv) Water demand during construction should be reduced by the use of pre-mixed concrete, curing agents, and adopting other best practices.
- xvi) The CGWA provisions on rainwater harvesting should be followed. A rainwater harvesting plan needs to be designed where the recharge bores of minimum one recharge bore per 5,000 square meters of the plot area and a storage capacity of a minimum of one day of the total freshwater requirement shall be provided. In areas where groundwater recharge is not feasible, the rainwater should be harvested and stored for reuse. The groundwater shall not be withdrawn without approval from the Competent Authority.
- xvii) All recharge should be limited to shallow aquifers.
- xviii) No groundwater shall be used during the construction phase of the project. Only treated sewage/wastewater shall be used. A proper record in this regard should be maintained and should be available at the site.
- xix) Any groundwater dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any groundwater abstraction or dewatering.
- xx) The quantity of freshwater usage, water recycling, and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC, and SEIAA along with six-monthly Monitoring reports.
- xxi) Sewage shall be treated in the STP with tertiary treatment by providing ultra-filtration Technology. STP shall be installed in a phased manner viz a viz in the module system designed in such a way so as to efficiently treat the wastewater with an increase in its quantity due to rise in occupancy. The treated effluent from STP shall be

recycled/reused for flushing and gardening. No treated water shall be disposed of into the municipal stormwater drain.

- xxii) No sewage or untreated effluent would be discharged through stormwater drains. Onsite sewage treatment with a capacity to treat 100% wastewater will be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry / SEIAA before the project is commissioned for operation. Treated wastewater shall be reused on-site for landscape, flushing, and other end-uses. Excess treated water shall be discharged as per statutory norms notified by the Ministry of Environment, Forest, and Climate Change. Natural treatment systems shall be promoted.
- xxiii) Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
- xxiv) Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed of as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.

IV. Noise monitoring and prevention

- i) Ambient noise levels shall conform to the commercial area both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during the construction phase. Adequate measures shall be made to reduce noise levels during the construction phase, so as to conform to the stipulated standards by CPCB/SPCB.
- ii) A noise level survey shall be carried out as per the prescribed guidelines and a report in this regard shall be submitted to the Regional Officer of the Ministry as a part of a six-monthly compliance report.
- iii) Acoustic enclosures for DG sets, noise barriers for ground-run bays, earplugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.

V. Energy Conservation measures

- i) Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.
- ii) Outdoor and common area lighting shall be LED.
- iii) Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased daylighting design and thermal mass,

etc. shall be incorporated in the building design. Wall, window, and roof U-values shall be as per ECBC specifications.

- iv) Energy conservation measures like the installation of LEDs for lighting the area outside the building should be an integral part of the project design and should be in place before project commissioning.
- v) Solar, wind, or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher.
- vi) At least 30% of the rooftop area shall be used for generating Solar power for lighting in the apartments so as to reduce the power load on the grid. A separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher.

VI. Waste Management

- i) A certificate from the competent authority handling municipal solid waste, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from the project shall be obtained.
- ii) The Project Proponent shall install Mechanical Composter of adequate capacity to treat wet component of the Solid Waste.
- iii) Disposal of muck during the construction phase should not create any adverse effect on the neighbouring communities and should be safely disposed of taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of the competent authority.
- iv) Separate wet and dry bins must be provided in each unit and at the ground level for facilitating the segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.
- v) Organic waste compost/ Vermiculture pit/ Organic Waste Converter/Mechanical Composter within the premises must be installed for treatment and disposal of the solid waste.
- vi) All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie-up must be done with the authorized recyclers.
- vii) Any hazardous waste generated during the construction phase, shall be disposed of as per applicable rules and norms with the necessary approvals of the State Pollution Control Board.
- viii) Use of environment-friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity.

These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, Compressed earth blocks, and other environmentally friendly materials.

- ix) Fly ash should be used as a building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready-mixed concrete must be used in building construction.
- x) Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Rules, 2016.
- xi) Used CFLs and TFLs should be properly collected and disposed of or sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.

VII. Green Cover

- i) No naturally growing tree should be felled/transplanted unless exigencies demand. Where absolutely necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department.
- ii) At least a single line plantation all around the boundary of the project as proposed shall be provided. The open spaces inside the plot should be suitably landscaped and covered with vegetation of indigenous species/variety. The project proponent shall ensure the planting of trees in the project area at the identified location, as the per proposal submitted, with plants of native species preferably having broad leaves. The size of the plant thus planted should not be less than 6 ft and each plant shall be protected with a fence and properly maintained. The project proponent shall make adequate provisions of funds to ensure maintenance of the plants for a further period of three years and thereafter, protected throughout the entire lifetime of the Project. The species with heavy foliage, broad leaves, and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. The plantation should be undertaken as per SEIAA guidelines. The plantation to be carried out under Karnal Technology shall be in addition to the green area plantation of the project.
- iii) The Project Proponent shall develop a green belt with native tree species (having canopy type structure and especially trees, and not grass) before the completion of the project. The greenbelt shall inter alia cover the entire periphery of the unit provided that the number of trees to be planted should not be less than one tree per 80 sqm of the total land area. The canopy trees shall also be planted around the parking area to provide shade to the parked vehicles.
- iv) Where the trees need to be cut with prior permission from the concerned local Authority, a compensatory plantation in the ratio of 1: 10 (i.e. planting of 10 saplings

of the same species for every tree that is cut) shall be done and the newly planted saplings will be maintained for at least 5 years. Green belt development shall be undertaken as per the details provided in the project document.

- v) Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during the plantation of the proposed vegetation on site.
- vi) The project proponent shall not use any chemical fertilizer /pesticides /insecticides and shall use only Herbal pesticides/insecticides and organic manure in the green area.
- vii) The green belt along the periphery of the plot shall achieve an attenuation factor conforming to the day and night noise standards prescribed for commercial land use.
- viii) The project proponent shall submit the progress of developing the green belt in the six-monthly compliance report.

VIII. Transport

- i) A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.
 - a) Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
 - b) Traffic calming measures.
 - c) Proper design of entry and exit points.
 - d) Parking norms as per local regulations.
- ii) Vehicles hired for bringing construction material to the site should be in good condition and should have a valid pollution check certificate, conform to applicable air and noise emission standards, and should be operated only during non-peak hours.
- iii) A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 km radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on the cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies within this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

- iv) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space should be utilized.

IX. Human health issues

- i) All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris, or working in any area with dust pollution shall be provided with dust masks.
- ii) For indoor air quality, the ventilation provisions as per the National Building Code of India should be followed.
- iii) An emergency preparedness plan based on the Hazard Identification and Risk Provision 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, and medical health care, creche, etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- iv) Occupational health surveillance of the workers shall be done regularly.
- v) A First Aid Room shall be provided in the project both during construction and operations of the project.

X. Environment Management Plan

- i) The company shall have a well-laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violations of the environmental / forest/wildlife norms/conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. A copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of the six-monthly report.
- ii) A separate Environmental Cell both at the project and company headquarters level, with qualified personnel shall be set up under the control of senior Executive, who will report directly to the head of the organization.
- iii) An action plan for implementing following activities under EMP and environmental conditions along with the responsibility matrix of the company shall be prepared and shall be duly approved by the competent authority.

Construction & Operation Phase

Sl. No.	Title	Capital Cost (Rs. Lakhs)	Recurring Cost (Rs. Lakhs/ Annum)	Recurring Cost (Rs. Lakhs/ Annum)
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1.	Wastewater Management (STP of 500 KLD capacity to be installed in two modules of 250 KLD each)	65	2	8
2.	Air & Noise Pollution Management (anti-smog guns, tarpaulin sheets / barricading, water sprinklers, etc.)	10	1	1
3.	Landscaping	10	3	7
4.	Rain water recharging (8 Pits)	15	2	4
5.	Miscellaneous (Environment monitoring cost, Management of Environment Cell, etc.)	5	2	2
6.	Solid Waste Management (2 Composters of 500 & 300 kg)	25	3	5
7.	Energy Efficient measures (LEDs, Solar Panel system, etc.)	100	1	5
	Total	Rs. 230 Lakhs	Rs. 14 Lakhs/annum	Rs. 32 Lakhs/annum

Rs. 2.38 Crores (@ 1% of project cost) will be spent under additional environmental activities. Details of activities to be undertaken in Village Ayali Khurd are given below:

- Provision of solid waste management within the village.
- Construction and maintenance of parks.
- Construction of rooms in Govt. Primary/High Schools and provision of computer labs.
- Development of panchayati land.

XI. Validity

- i) This environmental clearance will be valid for a period of ten years from the date of its issue as per MoEF & CC, GoI notification No. S.O. 1807 (E) dated 12.04.2022 or till the completion of the project, whichever is earlier.

XII. Miscellaneous

- i) The project proponent shall obtain a completion and occupancy certificate from the Competent Authority and submit a copy of the same to the SEIAA, Punjab before allowing any occupancy.
- ii) The project proponent shall comply with the conditions of CLU, if obtained.

- iii) The project proponent shall prominently advertise in at least two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- iv) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn have to publicly display the same for 30 days from the date of receipt.
- v) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on a half-yearly basis.
- vi) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at the Environment Clearance portal and submit a copy of the same to SEIAA.
- vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put the same on the website of the company.
- viii) The project proponent shall inform the Regional Office as well as SEIAA Punjab, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitments made during public hearing and also those made to SEIAA / SEAC during their presentation.
- xi) No further expansion or modifications in the project shall be carried out other than those permitted in this EC without prior approval of SEIAA. In case of deviation or alterations in the project proposal from those submitted to the Ministry/SEIAA for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- xii) The Regional Office, MoEF&CC, Chandigarh, Punjab Pollution Control Board and SEIAA/ SEAC members nominated for the purpose shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the

officer(s) entrusted with this monitoring by furnishing the requisite data/information/monitoring reports.

- xiii) This Environmental Clearance is granted subject to final outcome of pending related cases in the Hon'ble Supreme Court of India, Hon'ble High Courts, Hon'ble NGT and any other Court of Law as may be applicable to this project.

XIII. Additional Conditions

- i) The approval is based on the conceptual plan/drawings submitted with the application. In case, there is variation in built-up area/green area/ any other details in the drawings approved by the competent authority, the Project Proponent shall obtain the revised Environmental Clearance.
- ii) The Project Proponent shall ensure that the natural drainage channels in the project site including streams, drains, choes, creeks, rivulets, etc. are not disturbed so that the natural flow of rainwater, etc is not impeded or disrupted in any manner.
- iii) Authorization from Punjab Pollution Control Board shall be obtained as applicable under the Bio-Medical Waste Management Rules 2016 as amended from time to time.
- iv) The solid waste other than Bio-Medical Waste & Hazardous Waste (dry as well as wet garbage) generated should be properly collected and segregated before disposal to Municipal Authorities in accordance with the Municipal Solid Waste (Management & Handling) Rules, 2000. No municipal waste should be disposed off outside the premises in contravention of relevant rules and by-laws. Adequate measures should be taken to prevent any malodour in and around the Project premises.
- v) In the event that the project proponent decides to abandon/close the Project at any stage, he shall submit an application in the prescribed form along with requisite documents through Parivesh to SEIAA for surrendering the Environmental Clearance as per the procedure prescribed in OM dated 29.03.2022 issued by the MoEF&CC. The project proponent shall be accountable for adherence/compliance of the EC conditions till such time as the project is finally closed by SEIAA, based upon the certified closure report of Integrated Regional Offices (IROs) of MoEF&CC, Chandigarh/PPCB.
- vi) This Environmental Clearance is liable to be revoked without any further notice to the Project Proponent in case of failure to comply with condition (v) above.
- vii) Concealing factual data or submission of false/fabricated data may result in revocation of this Environmental Clearance and attract action under the provisions of Environment (Protection) Act, 1986.

- viii) The Project Proponent shall manage the solid waste generated from the project as per the sub-rule-7 of rule-4 of SWM Rules 2016.
- ix) The Ministry reserves the right to stipulate additional conditions if found necessary. The Promoter Company in a time bound manner shall implement these conditions.
- x) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and other wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India/High Courts and any other Court of Law relating to the subject matter.
- xi) Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.