



Shuvam Construction (P) Ltd.

564, Vivekanand Marg, Bhubaneswar - 751 002, Ph. +91 674 2432946, Telefax : +91 674 2435537
E-mail : shuvamconstruction@yahoo.co.in / Web Site : www.shuvamconstruction.com

To

Deputy Director General of Forest (C),
Ministry of Environment Forest & Climate Change,
Integrated Regional Office
A/3, Chandrashekharapur, Bhubaneswar – 751023, Odisha

Sub: Half Yearly Compliance Report of Environmental Clearance of 2B+G+14 high rise residential apartment building in Mouza- Ghatikia, Bhubaneswar, Dist- Khurda, Odisha by M/s. Shuvam Construction (P) Ltd. for the period of June 2023.

Reference: PARIVESH EC proposal number: **SIA/OR/MIS/227993/2021**

EC Identification Number: **EC22B038OR134872**

Sir ,

With reference to the above-mentioned Environmental Clearance of Environmental Clearance of 2B+G+14 high rise residential apartment building in Mouza- Ghatikia, Bhubaneswar, Dist- Khurda, Odisha by M/s. Shuvam Construction (P) Ltd., the EC was granted by the SEIAA, Odisha on dated 22/07/2022.

The detailed compliance report of the above mention project for the period of June 2023 has been attached with this letter.

It is requested to kindly acknowledge and certify the same.

Jayesh Patel

Thanking You
Yours Faithfully
Director
SHUVAM CONSTRUCTION PRIVATE LIMITED

Copy to:

1. Member Secretary, Odisha State Pollution Control Board
2. Member Secretary, State Environmental Impact Assessment Authority, Odisha

Brief Summary of the Project		
Particular	Proposed	Permissible
Project Name	Proposed Housing Project (2B+G+14 High Rise Residential Apartment Building Project) M/s Shuvam Construction (P) Ltd	
Plot Area	10732.17 Sqm	--
Ground Coverage (Roof top Area)	3053.12 Sqm (28.55%)	6439.3 Sqm (60% of the plot area)
Total Built up Area	56722.86 Sqm	--
Total FAR Area	44996.50 Sqm	--
FAR	4.192	1.75
Maximum Height	50.93 meter	--
No. of recharge pit	32	--
Drive Way Width	7.5 meter	--
Parking Area	22308.36 Sqm	13498.95 Sqm (30 % of Residential FAR Area)
Green Belt Area	28323 Sqm (24.61 % of Plot area)	2146.4 Sqm (20% of Plot)
Power/Electricity Requirement & Sources	1482 KW	--
No. of DG sets	2 x 500 KVA	--
Fresh Water requirement & Sources	141 KLD Source:	--
Sewage Treatment &	STP Capacity 200 KLD	--
Estimated Population- Residential, Floating/visitors	Residential Population: 1420 Nos. Floating Population: 142 Nos.	--

General Conditions

Sno.	Condition	Compliance
1.	The project proponent shall ensure that the guidelines for building and construction projects issued vide MoEF & CC's OM No.19-2/2013-IA.III dated 9 th June, 2015, are followed to ensure sustainable environmental management.	Agreed, we will ensure guidelines for building and construction projects issued vide MoEF & CC's OM No.19-2/2013-IA.III dated 9 th June, 2015, are followed for sustainable environmental management. The list of documents required as per the above stated OM are mentioned below:
	Document	Obtained/Under process
	1. Environmental Clearance	Obtained, Annexure-1
	2. Form 1 and Form 1A	Obtained, Annexure-2
	3. Permission Under Sub-Section (3) of the Section-16 of Odisha Development Authority Act'1982 (Odisha Act, 1982), Permission from town planning Authority, BDA/BMC	Obtained, Annexure-3
	4. Consent to Establish (CTE) from State Pollution Control Board:	Obtained , Annexure-4
	5. Consent to Operate (CTO) from State Pollution Control Board:	To be obtained.
	6. Ground Water NOC from CGWA:	Obtained , Annexure-5
	7. NOC from Airport Authority of India:	Obtained, Annexure-6
	8. Structural Stability Certificate vetted:	Obtained, Annexure-7
	9. Permission from Drainage Division of BMC for discharge of excess storm water and treated water	Obtained, Annexure- 8
	10. Fire Safety Clearance has been recommended by Odisha Fire Services:	Obtained , Annexure-9
	11. The Traffic Study Report:	Obtained, Annexure-10
	12. Clearance from Chief explosives for storing diesel for DG sets:	To be obtained if required
	13. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.	Under Process
	14. CER Plan	Obtained
	15. EMP	Obtained, Attached as Annexure- 11
	16. Constitution of Environmental Management Committee:	Under Process
	17. Newspaper Advertisement photo	Not Obtained



 **GPS Map Camera**



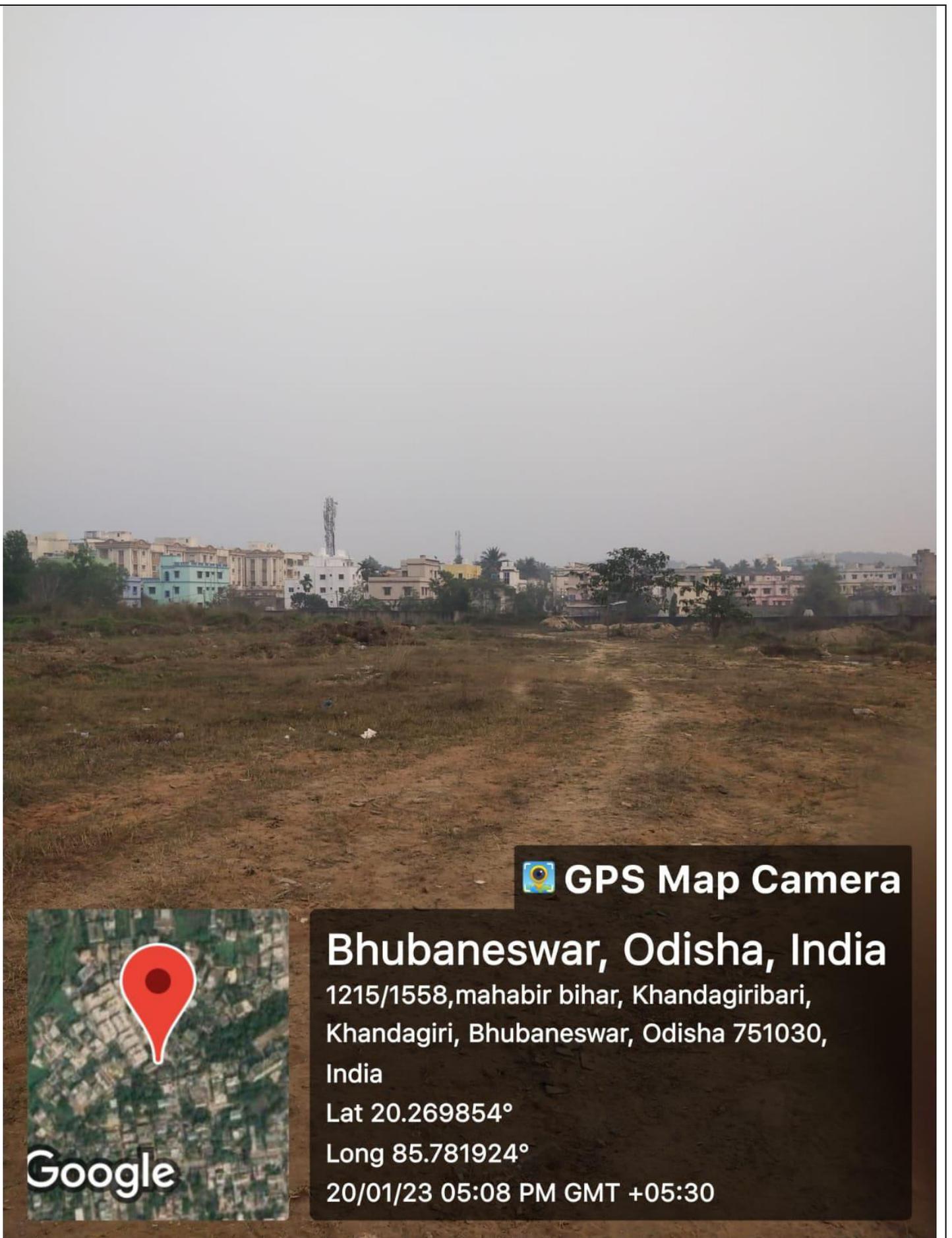
Bhubaneswar, Odisha, India

1215/1558,mahabir bihar, Khandagiribari,
Khandagiri, Bhubaneswar, Odisha 751030,
India

Lat 20.269854°

Long 85.781924°

20/01/23 05:08 PM GMT +05:30



 **GPS Map Camera**



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Khandagiri, Bhubaneswar, Odisha 751030,
India

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20/01/23 05:08 PM GMT +05:30



2.	The approval of the Competent Authority shall be obtained in regard to structural safety of buildings against earthquake, adequacy of fire fighting equipment as per National Building Code including protection measures from lightning.	Obtained, Annexure-7
3.	The project proponent shall obtain all necessary clearance/ permission from all concerned agencies including Bhubaneswar Development authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.	Obtained, Annexure-3
4.	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board.	CTE :Obtained , Annexure-4 CTO: To be obtained
5.	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 etc. The housing may	Agreed, housing facilities with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc has been provided for construction labours, these temporary shelters shall be removed after completion of construction work.

	be in the form of temporary structures to be removed after the completion of the project.																												
6.	A First Aid Room shall be provided in the project both during construction and operations of the project.	Agreed : First Aid Room will be provided with all necessary medicines																											
7.	The company shall draw up and implement corporate social Responsibility plan as per the Companies Act of 2013.	The project is not falling under the criteria of project for which CSR is mandatory, therefore, there is no need to spend on CSR.																											
8.	As per the MoEF&CC, Govt. of India Office Memorandum dated 30.09.2020, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. Appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, skill development, cross drains, solid waste management facilities, rain water harvesting, soil moisture conservation works, avenue plantation, etc. The activities proposed under CER shall be restricted to the affected area around the project. The activities proposed for CER shall be implemented and to be completed within three years and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement and to the District Collector. It should be posted on the website of the project proponent.	<p>Agreed, CER budget is as follows :</p> <table border="1"> <thead> <tr> <th colspan="3">CORPORATE ENVIROMENT RESPONSIBILITY PLAN</th> </tr> <tr> <th colspan="3">OVER ALL SUMMARY</th> </tr> <tr> <th>SL.NO</th> <th>DESCRIPTION OF WORK</th> <th>AMOUNT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>TREE PLANTATION</td> <td>₹ 10,00,000.00</td> </tr> <tr> <td>2</td> <td>SEWARAGE TREATMENT PLANT</td> <td>₹ 50,00,000.00</td> </tr> <tr> <td>3</td> <td>HARDSCAPE (SCULPTURES, KIDS PLAY AREA, ETC.)</td> <td>₹ 5,00,000.00</td> </tr> <tr> <td>4</td> <td>INTERNAL ROAD</td> <td>₹ 10,00,000.00</td> </tr> <tr> <td>5</td> <td>INDOOR AMENITIES(SOCIETY, KITCHEN, ETC.)</td> <td>₹ 40,00,000.00</td> </tr> <tr> <td colspan="2">GRAND TOTAL</td> <td>₹ 1,15,00,000.00</td> </tr> </tbody> </table> <p>Amount in words :</p> <p>Note:</p> <ol style="list-style-type: none"> 1) Detailed estimate : the rates and quantity may vary upto (+ , - , 10%) 2) Taxes will be extra & as per actuals, will be based on the suppliers tax structure 	CORPORATE ENVIROMENT RESPONSIBILITY PLAN			OVER ALL SUMMARY			SL.NO	DESCRIPTION OF WORK	AMOUNT	1	TREE PLANTATION	₹ 10,00,000.00	2	SEWARAGE TREATMENT PLANT	₹ 50,00,000.00	3	HARDSCAPE (SCULPTURES, KIDS PLAY AREA, ETC.)	₹ 5,00,000.00	4	INTERNAL ROAD	₹ 10,00,000.00	5	INDOOR AMENITIES(SOCIETY, KITCHEN, ETC.)	₹ 40,00,000.00	GRAND TOTAL		₹ 1,15,00,000.00
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9.	A copy of this Environmental Clearance letter shall be displayed on the website of the Odisha State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre	The copy of this Environmental Clearance letter is displayed on the website, link for the same is																											

	and Collector's Office/ Tahsildar's office for 30 days.	http://164.100.213.216/E-Sign/Esign/ECLSEIAA_190886_2849D7_SIA_OR_MIS_227993_2021.pdf
10.	Officials from the Regional Office of MoEF&CC, Bhubaneswar/SPCB, Odisha who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.	Agreed, full cooperation, facilities and documents/data during inspection of project by Officials from the Regional Office of MoEF&CC, Bhubaneswar/SPCB, Odisha shall be provided.
11.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.	Agreed , We may apply fresh application in SEIAA, Odisha if required. Any change(s) in scope of the project will not be done without prior approval of SEIAA, Odisha.
12.	The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Agreed , As mentioned in this condition we shall comply to any additional safeguard measures subsequently added by SEIAA, Odisha and ensure all EC conditions are complied within stipulated timeline.
13.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Will be obtained if required
14.	All EC condition stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.	Agreed

15.	<p>The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.</p>	<p>The copy of EC order is available in the website link of the same is</p> <p>http://164.100.213.216/E-Sign/ESign/ECLSEIAA_190886_2849D7_SIA_OR_MIS_227993_2021.pdf</p> <p>Newspaper Advertisement is not available.</p>
16.	<p>A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParisad / Municipal Corporation, Urban Local Body 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.</p>	<p>Agreed , Our Company Website URL is given below https://www.shuvamconstruction.com/</p>
17.	<p>The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral 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.</p>	<p>Agreed , EC was granted by SEIAA, Odisha on dated 22.07.2022 , The first Half yearly Compliance report shall be submitted to the Bhubaneswar Regional Office MoEF&CC, Govt. of India, and Regional office Bhubaneswar Odisha State Pollution Control Board for information and necessary action. The results of monitored data after collection of the same, shall be uploaded in the website of the company (https://www.shuvamconstruction.com/) and the criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project will be monitored and displayed at a convenient location near the main gate after collection of above mentioned data. An undertaking of the same is attached as Annexure _</p>

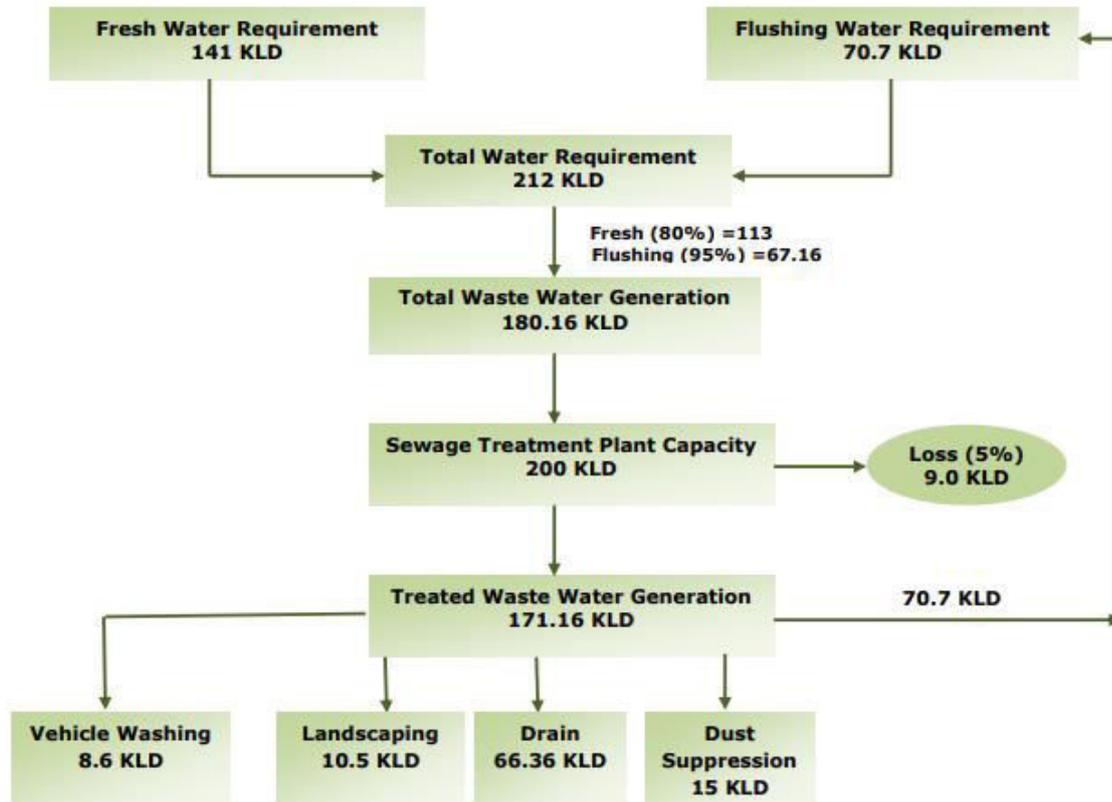
18.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the Odisha State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF & CC, Govt. of India by E-mail.	Agreed , The environmental statement in Form-V for the financial year 2022-23 will be submitted to Odisha State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently on or before 31.03.2023 . The status of compliance of EC conditions shall be sent to Bhubaneswar Regional Offices of MoEF & CC, Govt. of India by E-mail and copy of the same will be uploaded in the website of the company (https://www.shuvamconstruction.com/)
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Specific Conditions:

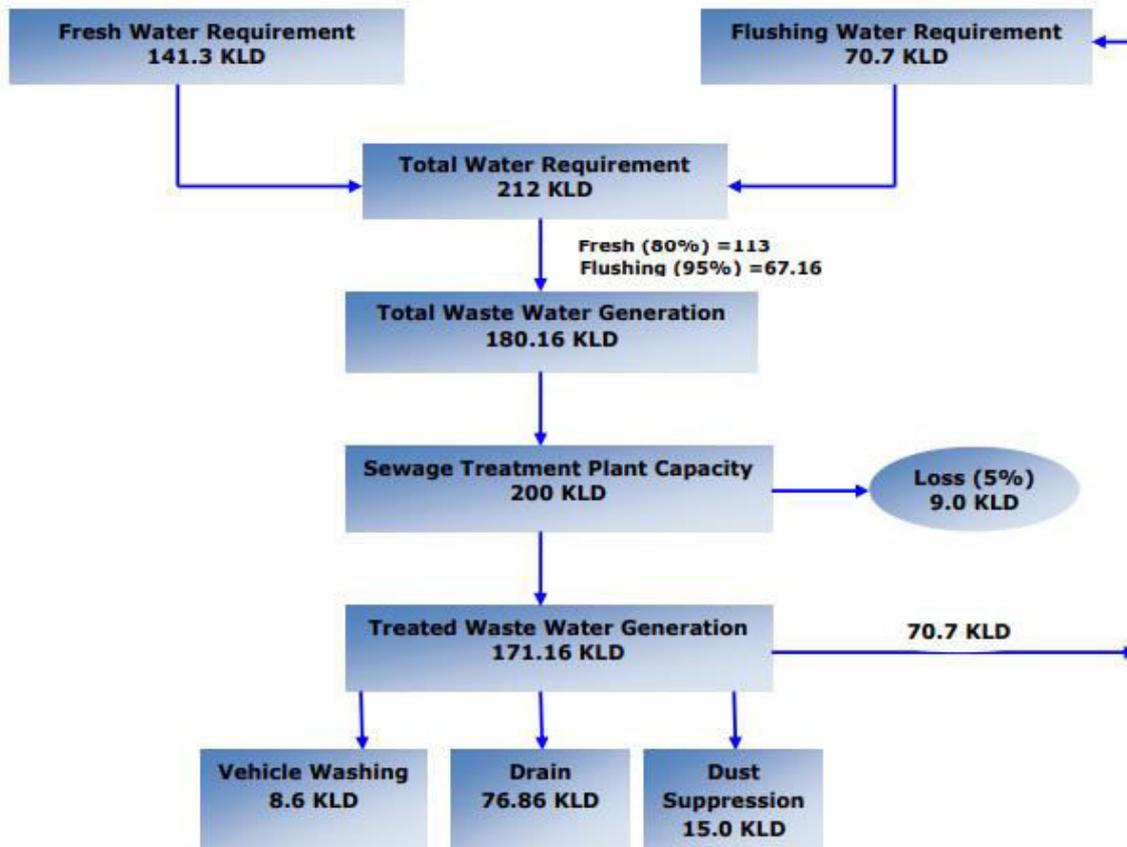
Sn	Condition	Compliance
1.	The project shall adopt & implement 'Zero discharge' principle to the extent feasible, and shall maximize recycling and reuse of treated waste water generated in the project. All waste water generated shall be treated in the STP and the treated waste water shall be recycled and reused within the project so as to minimize extraction of ground water. Also ground water recharge by surplus waste water in the project plot area shall be maximized. The PP shall formulate and submit a report within two months on the final discharge point of all treated waste water after recycling and use in ground water recharge showing the points of disposal/reuse/recycling in the project. For discharge of any quantity of treated waste water to outside the project area premises, the exact location of drain, etc. to which such discharge will be made and permission of competent authority allowing such discharge have to be reported. The layout of pipe lines, etc to take the waste water to the approved	Agreed, Project activity is not yet started but the proposed plan for the same is as follows: Total waste water generated for the proposed project is 180.16 KLD which is treated in Sewage Treatment Plant of capacity 200 KLD, after treatment in STP 171.16 KLD treated water will be available for recycled within the project for Flushing (70.7 m ³ /day), Landscaping (10.5 m ³ /day), Dust Suppression (15 m ³ /day), Vehicles Washing (8.6 m ³ /day) & 66.36 m ³ /day water will be discharge to drain in Non-monsoon season and during Monsoon season 76.86 m ³ /day water will be discharge to drain also Waste Water drain line and storm water drain line with drain dimension is showing in layout. Layout plan showing waste water & storm water line is given in Annexure-4.

discharge point has to be elaborately depicted on map and submitted. The EC is liable to be revoked if such report is not submitted within the said time period”.

Water Balance during Non Monsoon Period



Water Balance during Monsoon Period



- | | |
|---|--|
| <p>2. The solid waste shall be duly segregated into biodegradable and non-biodegradable components and handled in separate areas earmarked for segregation of solid waste, as per Solid Waste Management Rules, 2016. The biodegradable waste generated shall be utilized through the Organic Waste Converter to be installed at the project site. Solid waste disposal shall be by micro composting of all bio degradable waste inside the premises. The inert waste (bio-non degradable components like plastics) shall be disposed off as per norms only at authorized site. The mode of disposal of all such waste at any approved site shall be reported, even if it is handed over to any authorised vendor. Construction & Demolition (C&D) waste from the project (debris) shall be segregated and managed as per C&D Waste Management Rules, 2016 and the detailed mode of disposal to the final disposal point shall also be reported. The PP</p> | <p>Agreed , No construction activity has been started yet. Therefore, Construction & Demolition (C&D) waste from the project (debris) is not yet generated. After start of construction, the waste generated from Construction & Demolition (C&D) waste from the project (debris) shall be segregated and managed as per C&D Waste Management Rules, 2016 and the detailed mode of disposal to the final disposal point shall also be reported After the operationalization of the project. The construction site wastewater would be routed through catch pit/ sedimentation basin prior to final / ultimate disposal to proper drainage system. Sewage will be treated in septic tank-soak pit system. Waste to be generated during the construction period includes construction waste and solid waste. Usable / recyclable material will be sold off to waste recyclers. Unusable construction will be used for land development activities within the project site, solid waste in form of food waste from kitchen and miscellaneous waste is estimated to be generated @ 0.45 kg/person/day, which will be about 639 kg/day. The waste generated from the floating population of residents will be @ 0.15 kg/day, which will be 21.3</p> |
|---|--|

	shall formulate a concrete implementation plan and submit a report showing on the layout plan of the final disposal point of biodegradable waste, non-biodegradable waste and debris generated during construction. These reports have to be submitted online to SEIAA within a period of two months. The EC is likely to be revoked if such report is not submitted within the said time period.	kg/day. The generated solid waste from the residential areas will be segregated as biodegradable and non-biodegradable. This will be collected in separate coloured bins. The biodegradable waste will be sent to in house micro-composting pit and will be converted to organic fertiliser and will be used wed for plantation within the project site, excess will be sold to nearby nursery's. The Non-biodegradable waste shall be handed over to authorised vendors. The mode of disposal of all such waste with name of the authorised vendor shall be reported. A concrete implementation plan and a report showing on the layout plan of the final disposal point of biodegradable waste, non-biodegradable waste and debris generated during construction shall be submitted after start of construction activity.
3.	The Proponent before implementation of the project shall convert the land to Gharabari and shall take the ownership of the land if not already taken.	Agreed ,The land is Garabari and ownership of the same has been taken.
4.	The Proponent shall obtain permission/NOC from Executive Engg (PHD) and / or from the appropriate authority for disposal of excess STP treated water to the nearest drain without which the Proponent will not start construction work. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission and possession as the case may be.	Obtained, Annexure- 8
5.	The proponent shall use solar energy at least of 5% of total power requirement as proposed.	<p>Agreed , Proposed Solar Lighting for Common Area: In the proposed area, we can propose 55 nos. of solar PV panels. Size of each PV solar panel = 1.560 m x 1.05 m Therefore, area covered by single PV solar panel = 1.638 m²</p> <p>Therefore, Total area covered by 55 nos. of PV solar panels = 90.09 m² (Roof Top) Total Roof Area of the project is 3053.0 sqm Each PV Solar panel generates energy through solar rays = 345 Watts-hr Therefore, total amount of electrical energy generated by 55 nos. of PV Solar panel = 18.97 KWhr.</p> <p>Assuming, only 4 hours of sunlight available throughout the day time, therefore electrical energy generated by 55 nos. of PV solar panel per day = 75.88 KW.</p>

		<p>Total saving from Solar System: Total Energy Saving = $(75.88 + 8.9) \text{ KW} = 84.78 \text{ KW}$ Total Solar Energy saving = $84.78/1482.0 = 0.057 \times 100 = 5.7 \%$</p> <p>Distribution of Solar Energy: 123 Nos. of Solar Street Light poles of 8.9 KW capacities is directly connected with Solar Panel. 75.88 KW Solar energy generated from 55 nos. of PV Panel is directly connected with electric grid.</p>
6.	Trees located within the project area shall be transplanted to alongside the boundary green development area.	Not Applicable as no trees are located within the project area.
7.	To reduce discharge of treated water to open drain, the proponent shall use more water for increased number of trees proposed to be planted in the green belt area & shall also utilize this treated water for car washing, floor washing to minimize the surplus discharge to drain.	surplus discharge to drain has been reduced to the maximum extend possible , The treated water from STP will be utilised for Green area development, washing of floors and vehicles, and Groundwater recharge.
8.	As proposed,3 tier green belt/tree cover over minimum 20% of the land area should be maintained meticulously	Agreed, The greenbelt is provided all along the periphery of the proposed project site. Total 2642.18 sqm of greenbelt area, which is 24.61% of the total plot area is provided for greenbelt development.
9.	The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.	<p>Agreed, The following Pollution Control measures shall be implemented after start of the project, the estimated cost of the EMP has been attached below:</p> <p>Air quality management Air Quality Management during Construction Phase</p> <ul style="list-style-type: none"> • Water sprinkling on haulage roads & stock piles to avoid dust . • Vehicle & construction equipments will be maintained properly to reduce exhaust gas emission. • Cement will be unloaded within covered space. • Covering of vehicle carrying building materials. • Trees will be planted before the construction activities. <p>Air Quality Management during Operation Phase</p> <ul style="list-style-type: none"> • Vehicles not having PUC certificates will be discouraged to enter the site. • DG sets will be kept inside separate sheds and will be provided with adequate stack height as per CPCB Norms. • Water will be sprinkled to suppress dust, while cleaning and sweeping the roads and pavements. • Open burning of litter and garbage will not be allowed <p>Water resource management Regarding the management of water quality during the construction period of the proposed complex, wastewater generation from the</p>

construction activities as most of water is used for mixing in construction materials, curing & dust suppression. However, domestic effluent generated from toilets of workers camp will be discharged to soak pit via septic tank. During the operational phase, the waste water generated from different blocks will be treated in STP. The treated waste water will be used for flushing, landscaping & dust suppression purpose. The rain water collected from building roofs will be led to suitably to rain water harvesting recharging pits. Storm water from various blocks shall be connected to adjacent drain for final disposal.

Solid waste management Separate raw material handling yard within the project site will be made. Cement will be separately stored under closed shed. Sand will be stacked neatly under tarpaulin cover. Bricks and steel will be laid in open. Recycled materials may be used in roads and land development activities, other waste like cuttings and scrap will be send to vendor. The solid waste will be segregated at source and will be stored in separate coloured bins. Proper waste management practices will be adopted during the collection, storing and disposal of the generated solid waste. The waste will be sent to Government approved agency for final disposal.

Land Management After the completion of the project, bare surfaces within the project site will be covered with vegetation. While landscaping the open areas, gentle gradient in the land surfaces will be maintained as far as possible to avoid soil erosion. During excavation, the topsoil will be kept separate and used as topping material after land filling, dressing, grading or leveling work is complete. Building materials will be stored on a platform within a covered area.

Landscape and Green Belt Development An adequate greenbelt 2641.18 m² (24.61 % of the plot area) or plantation around the project will be developed. This will minimize the effects of air pollution, noise pollution and soil erosion inside the area. Thus, the landscaping and plantation programmed within the project site will improve the aesthetic quality of the project site as well as of the surrounding environment.

Energy Conservation measures Energy efficient features will be adopted, i.e. LED lighting features, Solar Street lighting, solar water Heating and Maximum utilization of natural light. The building shall be comply to the Energy Conservation Building Code (ECBC) with proper windows to reduce heat gain but increasing light availability. The walls and roofs will be also designed suitably to reduce heat gain.

Noise management Noise Management during Construction stage:

- Rotating or imparting machines Shall be used an anti vibration mountings.
- Regular service & maintenance of equipments and machineries will be done. • Vehicles not having proper silencer will not be allowed to site.
- Construction activities will be allowed during the day only.

Noise Management during Operation stage:

- Adequate greenbelt will be developed along the peripheral boundary walls, which will act as acoustic screen or vegetative barrier against the propagation of noise.
- DG sets will be provided with acoustic enclosure to control noise level as per CPCB prescribed norms.

Table No. C1-3: Estimated cost for Environmental Management

Sl. No.	Details	Capital Cost in Lakhs (Non-recurring)	Recurring Cost per annum (in Lakhs)
1	Air Pollution Control	147	14.7
2	Waste Water Management	131	13.1
3	Water Treatment Plant	32.80	3.28
4	Solid Waste Management	82	8.2
5	Environmental Monitoring	7.64	0.764
6	Greenbelt Development	115	11.5
Total		515	51.5

10.	The proponent shall comply with the provision of structural stability certificate as per the bye- law of the Development Authority.	Obtained, Annexure-7
11.	Water Treatment Plant (WTP) shall be provided, if ground water is not potable. Adequate Number and Capacity of over head tank for fresh water and treated Water shall be made. Rain Water harvesting pits should be refreshed periodically and its number be increased for greater ground water recharge.	Agreed
12.	Permission of drainage division and sewerage board/WATCO shall be obtained for discharge of STP treated Water.	Agreed, the said permission shall be obtained.

13.	The land between the main road and the plot there is a stretch of Govt. land which is claimed to be road as per CDP 2030. The project proponent shall obtain necessary permission from the concerned authority to establish such Govt. land to be road and develop the same road at own cost if not done by BMC/BDA.	Agreed to comply
14.	It was verified that few Plots belongs to Shuvam Construction, few plots to Satyam Construction and remaining plots of land owner. The project proponent shall make legal arrangement of land owner for development agreement with Shuvam Construction. Satyam Construction shall also take Company Board Resolution to develop the land through Shuvam Construction.	Will be complied.
15.	Provision shall be made for ventilation in lowest basement, light, fire safety upto roof top terrace for safety & environment health.	Agreed, Ventilation of lower basement will be made , Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha, and Bhubaneswar and as per the guideline of NBC (part-4). The fire fighting system comprises of Hose Reel, Down Comer, Manual operated electric fire alarm system, Terrace Tank, Extinguisher and Terrace pump. Safe evacuation rout for building residents should be cleared marked to ensure safety of residents during any emergency. Terrace shall be properly fenced.
16.	Since the open drain and the sewerage line is coming up in the main road side, the proponent shall re-engineer the slope of the entire plot to main road side after construction of basement roof.	Agreed, The slope of the plot will be towards main road side as per the condition.
17.	Separate entry and exit gate for Residential building shall be implemented.	Agreed, Separate entry and exit gate will be constructed.
18.	All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.	Agreed, All compliances submitted shall be strictly adhered in addition to all the conditions/ specific conditions of EC.
(I) <u>Natural Drainage:</u>		

19.	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on 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 rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.	Agreed, The natural drain system will be maintained for ensuring unrestricted flow of water. No construction will be made to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) will not be made for maintaining the drainage pattern and to harvest rain water.
20.	The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.	Agreed, The distance of the Public Drain is 80 meter from the proposed project boundary. The permission to discharge the excess storm water to drain , drainage plan & drawing approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 10071, dated 28.01.2022.
21.	Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.	Agreed , Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project is submitted.
(II) <u>Water Requirement and Rain Water Harvesting:</u>		
22.	No ground water shall be extracted for the project work at any stage during the construction phase without obtaining the permission from the Water Resources Department, Govt. of Odisha/ CGWB.	<p>Agreed, During the Construction Stage For major construction activities daily requirement of water will be 34 m³ (Norms Construction (Peak)@0.6m³ /1000sqm BUA) per day.</p> <p>Water consumption for the resident laborers will be 34 @ 70 lpcd = 2380 liters.</p> <p>Therefore, during the construction phase, total daily water requirement will be : 3400 liters + 2380 liters = 5780 liters = 5.7 m³ /day.</p> <p>This will be sourced by Private tankers.</p>
23.	For <u>meeting the total water requirement for the project upto maximum 212 KLD (fresh</u>	Agreed,The Public water supply is not available in the vicinity of the project area; once the public water supply

	<u>makeup water requirement is approx. 141 KLD) from ground water source, necessary prior permission has to be obtained from the Water Resources Department, Govt. of Odisha/ CGWB, failing which no ground water is allowed to be tapped. PP shall install water meter at all water drawal and intake points.</u>	is available the permission will be obtained from Public Health Division (PHD). Total 4 nos. of Borewells has been approved by CGWA vide letter no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021. Ground Water Clearance letter is attached in Annexure-2 Water Meters will be installed at all water drawal and intake points and reports from the same shall be submitted after operation.
24.	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 water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.	Agreed, The Public water supply is not available in the vicinity of the project area; once the public water supply is available the permission will be obtained from Public Health Division (PHD). Total 4 nos. of Borewells has been approved by CGWA vide letter no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021.
25.	The quantity of fresh water 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, Odisha along with six monthly Monitoring reports.	Agreed, The quantity of fresh water usage, water recycling and rainwater harvesting will be measured and recorded using water meters to monitor the water balance the record of the same shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
26.	Installation of dual pipe plumbing 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, conditioning etc. shall be done.	Agreed, We will install dual pipe plumbing 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, conditioning etc. will be done.
27.	Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.	Agreed, We will install and use water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation and will be incorporated in the building plan.
28.	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual	Agreed, Separation of grey and black water will be done by the use of dual plumbing system.

	plumbing system be done.	
29.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Agreed, Curing agents as well as other best practices has been used during construction work for reducing water demand.
30.	Any ground water 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. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.	Agreed, The Public water supply is not available in the vicinity of the project area; once the public water supply is available the permission will be obtained from Public Health Division (PHD). Total 4 nos. of Borewells has been approved by CGWA vide letter no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021.
31.	The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.	Agreed, The Public water supply is not available in the vicinity of the project area; once the public water supply is available the permission will be obtained from Public Health Division (PHD). Total 4 nos. of Borewells has been approved by CGWA vide letter no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021. Once Public water supply is available one borewell will be kept as standby.
32.	A complete plan for rainwater harvesting at the proposed site shall be drawn up and implemented. The complete rainwater harvesting plan shall be submitted to SEIAA within one month from this day. As proposed, 05 nos. of rain water harvesting pits for artificial ground water recharge shall be installed as per CGWB guidelines.	Agreed, Rain water harvesting pits (RWHP) has been calculated as per 30 years Rainfall data (1988-2021), as per 30 years data maximum rainfall is 364 mm/day and hourly rainfall is 37 mm/hr. So total rain water available for recharging is 67 m ³ /hr and total 05 nos. of rain water harvesting pits has been provided for ground water recharging. Detail calculation is given in Annexure-5.
(III) <u>Solid Waste :</u>		
33.	The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.	Agreed, No construction activity has been started yet. Therefore, Construction & Demolition (C&D) waste from the project (debris) is not yet generated. After start of construction, the waste generated from Construction & Demolition (C&D) waste from the project (debris) shall be segregated and managed as per C&D Waste Management Rules, 2016 and the detailed mode of disposal to the final disposal point shall also be reported After the operationalization of the project. The construction site wastewater would be routed through catch pit/ sedimentation basin prior to final / ultimate disposal to proper drainage system. Sewage will be

		<p>treated in septic tank-soak pit system. Waste to be generated during the construction period includes construction waste and solid waste. Usable / recyclable material will be sold off to waste recyclers. Unusable construction will be used for land development activities within the project site, solid waste in form of food waste from kitchen and miscellaneous waste is estimated to be generated @ 0.45 kg/person/day, which will be about 639 kg/day. The waste generated from the floating population of residents will be @ 0.15 kg/day, which will be 21.3 kg/day. The generated solid waste from the residential areas will be segregated as biodegradable and non-biodegradable. This will be collected in separate coloured bins. The biodegradable waste will be sent to in house micro-composting pit and will be converted to organic fertiliser and will be used wed for plantation withn the project site, excess will be sold to nearby nursery's. The Non-biodegradeble waste shall be handed over to authorised vendors. The mode of disposal of all such waste with name of the authorised vendor shall be reported. A concrete implementation plan and a report showing on the layout plan of the final disposal point of biodegradable waste, non-biodegradable waste and debris generated during construction shall be submitted after start of construction activity.</p>
34.	<p>Disposal of muck during construction phase shall not create any adverse effect on the neighbouring 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.</p>	<p>Agreed, The construction site wastewater would be routed through catch pit/ sedimentation basin prior to final / ultimate disposal to proper drainage system. Sewage will be treated in septic tank-soak pit system. Waste to be generated during the construction period includes construction waste and solid waste. Usable / recyclable material will be sold off to waste recyclers. Unusable construction will be used for land development activities within the project site. Proper fencing of project area will be done brfore start of construction work.</p>
35.	<p>Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.</p>	<p>Agreed, The generated solid waste from the residential areas will be segregated as biodegradable and non-biodegradable. This will be collected in separate coloured bins. The biodegradable waste will be sent to in house micro-composting pit and will be converted to organic fertiliser and will be used wed for plantation withn the project site, excess will be sold to nearby nursery's. The Non-biodegradeble waste shall be handed over to authorised vendors. The mode of disposal of all such waste with name of the authorised vendor shall be reported. Separate area has been reserved for solid waster management within the project site.</p>
36.	<p>Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with</p>	<p>Agreed, No hazardous waste will be generated during the construction phase. At the finishing stage, any waste related to Paints / Varnishes etc will be properly disposed off.</p>

	necessary approvals of the State Pollution Control Board.	
37.	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.	Agreed, A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be submitted.
(IV) <u>Sewage Treatment Plant:</u>		
38.	STP of 200 KLD capacity shall be installed before start of the operation phase of the building. Treatment of 100% grey water by decentralized treatment should be done. The treated waste water from STP shall be recycled / reused to the maximum extent possible. Flushing, washing, watering of the lawns and gardening, filter backwash ,cleaning of the floors, etc facilities are to be met by recycled water.Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP. The sewage treatment plant shall be made functional before the completion of Building Complex.	Agreed, Will be complied with before the operationalization of project.
39.	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 SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.	Will be complied with before the operationalization of project.
40.	Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it	Agreed

	perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.	
41.	A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.	Agreed
42.	The wastewater generated shall not be allowed to mix with storm water. The Project Proponent shall ensure separate approved line for discharge of treated waste water and that of storm water. No sewage or untreated effluent water would be discharged through storm water drains.	Agreed, Separate approved line for discharge of treated waste water and that of storm water will be constructed and maintained. No sewage or untreated effluent water would be discharged through storm water drains.
43.	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.	Agreed, Sludge from the onsite sewage treatment, including septic tanks, will be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
44.	The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and “Nala” before commencement of any activity at the project site.	Agreed
45.	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. Outdoor and common area lighting shall be LED. 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	Agreed, We will ensure Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency is strictly followed for which Outdoor and common area lighting will be LED, building design and architecture allows good amount of sunlight to light the building during day time, 5.7% of the energy requirement will be generated from solar energy which will be used for lighting common areas.

	<p>day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.</p>	
<p>(V) <u>Energy Conservation:</u></p>		
<p>46.</p>	<p>Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.</p>	<p>Agreed , Only CFLs / LED will be used for lighting the common area and area outside the building. Separate dustbins will be installed for disposal of such waste, and the waste will be collected by engaging approved recyclers, details of the same will be submitted after operationalization of the project.</p>
<p>47.</p>	<p>The proponent shall use renewable energy/ solar power of at least 5% of projected power requirement for the building premises.</p>	<p>Agreed , Proposed Solar Lighting for Common Area: In the proposed area, we can propose 55 nos. of solar PV panels. Size of each PV solar panel = 1.560 m x 1.05 m Therefore, area covered by single PV solar panel = 1.638 m²</p> <p>Therefore, Total area covered by 55 nos. of PV solar panels = 90.09 m² (Roof Top) Total Roof Area of the project is 3053.0 sqm Each PV Solar panel generates energy through solar rays = 345 Watts-hr Therefore, total amount of electrical energy generated by 55 nos. of PV Solar panel = 18.97 KWhr.</p> <p>Assuming, only 4 hours of sunlight available throughout the day time, therefore electrical energy generated by 55 nos. of PV solar panel per day = 75.88 KW.</p> <p>Total saving from Solar System: Total Energy Saving = (75.88 + 8.9) KW = 84.78 KW Total Solar Energy saving = 84.78/1482.0 = 0. 057 x 100 = 5.7 %</p>
<p>48.</p>	<p>Solar energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.</p>	<p>Agreed, Proposed Solar Lighting for Common Area: In the proposed area, we can propose 55 nos. of solar PV panels. Size of each PV solar panel = 1.560 m x 1.05 m Therefore, area covered by single PV solar panel = 1.638 m²</p> <p>Therefore, Total area covered by 55 nos. of PV solar panels = 90.09 m² (Roof Top) Total Roof Area of the project is 3053.0 sqm Each PV Solar panel generates</p>

		<p>energy through solar rays = 345 Watts-hr Therefore, total amount of electrical energy generated by 55 nos. of PV Solar panel = 18.97 KWhr.</p> <p>Assuming, only 4 hours of sunlight available throughout the day time, therefore electrical energy generated by 55 nos. of PV solar panel per day = 75.88 KW.</p> <p>Total saving from Solar System: Total Energy Saving = (75.88 + 8.9) KW = 84.78 KW Total Solar Energy saving = 84.78/1482.0 = 0. 057 x 100 = 5.7 %</p>
49.	<p>Solar power shall be used for lighting in the apartment to reduce the power load on grid. 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. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.</p>	<p>Agreed, Proposed Solar Lighting for Common Area: In the proposed area, we can propose 55 nos. of solar PV panels. Size of each PV solar panel = 1.560 m x 1.05 m Therefore, area covered by single PV solar panel = 1.638 m²</p> <p>Therefore, Total area covered by 55 nos. of PV solar panels = 90.09 m² (Roof Top) Total Roof Area of the project is 3053.0 sqm Each PV Solar panel generates energy through solar rays = 345 Watts-hr Therefore, total amount of electrical energy generated by 55 nos. of PV Solar panel = 18.97 KWhr.</p> <p>Assuming, only 4 hours of sunlight available throughout the day time, therefore electrical energy generated by 55 nos. of PV solar panel per day = 75.88 KW.</p> <p>Total saving from Solar System: Total Energy Saving = (75.88 + 8.9) KW = 84.78 KW Total Solar Energy saving = 84.78/1482.0 = 0. 057 x 100 = 5.7 %</p> <p>Also, Solar water heaters will be installed for generating hot water.</p>
50.	<p>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 environment friendly materials. Fly ash should be used as 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.</p>	<p>Agreed, Fly ash based cement shall be used for construction purpose.</p>

(VI) <u>Air Quality Management and Noise Management:</u>		
51.	Construction site shall be adequately barricaded before the construction begins. Dust, smoke & 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, continuous dust/ wind breaking walls all around the site (at least 3-meter height). 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. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.	Agreed, All necessary steps were taken at the project site to reduce the air pollution and to improve the air quality, Pictures of the same will be submitted after start of construction.
52.	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. 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 mask.	Agreed, will be complied during construction phase. Pictures of the same shall be submitted after compliance.
53.	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. All construction and demolition debris shall be stored at the site (and not dumped on	Agreed , will be complied during construction phase. Pictures of the same shall be submitted after compliance.

	the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. 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 mask.	
54.	The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the 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.	Agreed, DG set installed are of low Sulphur diesel type and confirm to EPA. Also, Acoustic enclosure as well as stack of adequate height as per the norms has been provided with DG sets. Photographs of DG sets will be submitted after operation.
55.	For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.	Noted. NBC is followed for indoor air quality.
56.	Ambient noise levels shall conform to residential standard 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 construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.	Agreed, Ambient noise levels will be monitored in regular intervals during construction phase. Same will be complied in operational phase also. Test Reports for ambient noise level monitoring will be submitted.
(VII) <u>Green cover:</u>		
57.	Green-belt & avenue plantation of trees over the area of 2,641.18 Sqm (24.61% of plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. The species with heavy foliage, broad leaves and wide canopy cover	Agreed, Professional landscape architects are engaged to design the green layout, also professional person for plantation and maintenance of green are will be employed in full time basis. The green area of 24.61 % of plot area shall be developed after completion of construction activity. Pictures of the same shall be submitted.

	are desirable. Professional landscape architects should be engaged to design the green layout to provide for multi-tier plantation and green fencing all around, mitigating various environmental pollutants like dust, noise, emissions etc. A minimum of 1 tree for every 80 Sqmt of land should be planted and maintained. At the project site, at least 100 numbers of trees shall be planted and maintained at the site.	
58.	Rainwater from open spaces shall be collected and reused for landscaping and other purposes. Roof top rain water harvesting shall be adopted for the proposed Buildings. Rainwater harvesting at the proposed site shall be implemented. Before recharging the surface runoff, pre-treatment must be done to remove suspended matter, oil and grease.	Agreed, Rain water harvesting pits (RWHP) has been calculated as per 30 years Rainfall data (1988-2021), as per 30 years data maximum rainfall is 364 mm/day and hourly rainfall is 37 mm/hr. So total rain water available for recharging is 67 m ³ /hr and total 05 nos. of rain water harvesting pits has been provided for ground water recharging. Detail calculation is given in Annexure-5. pre-treatment will be done to remove suspended matter, oil and grease.
(VIII) <u>Top Soil Preservation and Reuse:</u>		
59.	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 plantation of the proposed vegetation on site.	Agreed, 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 plantation of the proposed vegetation on site
(IX) <u>Traffic & Transportation:</u>		
60.	A comprehensive mobility plan, as per Ministry of Urban Development 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. <ul style="list-style-type: none"> • Hierarchy of roads with proper segregation of vehicular and pedestrian traffic. • Traffic calming measures • Proper design of entry and exit points. 	Agreed, Adequate parking space will be provided within the project premises as per the layout plan. Wide roads for the entry and exit will be provided. Parking areas are fully internalized. Thus, there is no traffic congestion. Photographs will be submitted.

	<ul style="list-style-type: none"> • Parking norms as per local regulation 	
61.	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 01 km radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 01 km radius of the site 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.	Agreed, Traffic management and traffic decongestion plan has already prepared and same was approved by the Competent Authority. The detailed traffic management plan has been prepared in chapter 10 of the EMP, the same has been submitted with the EC application. The Traffic Study Report has been carried out by Indian Institute of Technology (IIT), Bhubaneswar. The vetted traffic study report is attached in Annexure-10.
62.	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 standards be operated only during non-peak hours.	Agreed, vehicles having valid PUCs shall only be permitted in the project during construction phase.
63.	A dedicated entry/exit and parking shall be provided for commercial activities.	Agreed, dedicated entry/exit and parking will be provided.
64.	Barricades shall be provided around project boundary.	Agreed, Proper barricades will be provided around project boundary.
65.	Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions	Agreed, Maximum Speed of the vehicles will be restricted to 15 kmph by installing speed bumps at regular intervals at project site and proper signage will be provided for guided vehicular movement and speed restrictions.
66.	Parking shall be prohibited on the access road to the proposed project site.	Agreed, Parking will be prohibited on the access road to the proposed project site.
67.	Footpath shall be seamless with sufficient width.	Agreed, Footpath will be seamless with sufficient width.
68.	No vehicles shall be allowed to stop and stand in	Agreed, No vehicles will be allowed to stop and stand in front

	stand in front of the gate on main access.	front of the gate on main access.
69.	A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion	Agreed, A buffer of minimum 10 m will be maintained between the entry/exit gate and the road to avoid traffic congestion
70.	The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation	Agreed, The detailed traffic management plan has been prepared in chapter 10 of the EMP, the same has been submitted with the EC application. The Traffic Study Report has been carried out by Indian Institute of Technology (IIT), Bhubaneswar. The vetted traffic study report is attached in Annexure-10.
(X) <u>Environment Management Plan:</u>		
71.	An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like sewage treatment plant, landscaping, rain water harvesting, energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.	Agreed, The Environmental Management Plan (EMP) has been prepared and submitted along with the EC proposal, all environmental conditions specified above will be complied within stipulated time. A dedicated Environmental Monitoring Cell with defined functions and responsibilities to implement the EMP and ensure compliance of EC conditions are complied will be set up by engaging suitable personal, the details of the same will be submitted. The environmental cell will ensure that the environment infrastructure like sewage treatment plant, landscaping, rain water harvesting, energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell will also keep the record of environment monitoring and those related to the environment infrastructure.
72.	It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1 st June and 1 st December of each calendar year. The proponent shall also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions.	Agreed, project management will submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1 st June and 1 st December of each calendar year and also upload the compliance report including results of monitored data, as applicable in the website of the Ministry for monitoring of EC Conditions.

Jaysh Patel

Director (Shuvam Cunstruction Pvt. Ltd)