PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 21ST MAY, 2022

The SEAC met on 21st May, 2022 through video conferencing in Google Meet under the Chairmanship of Sri. B.P. Singh. The following members were present in the meeting.

1.	Sri. B. P. Singh	-	Chairman
2.	Dr. K. Murugesan	-	Secretary
3.	Dr. D. Swain	-	Member
4.	Prof. (Dr.) P.K. Mohanty	-	Member
5.	Prof. (Dr.) H.B. Sahu	-	Member
6.	Sri. J. K. Mahapatra	-	Member
7.	Sri. K. R. Acharya	-	Member
8.	Prof. (Dr.) B.K. Satpathy	-	Member
9.	Dr. K.C.S Panigrahi	-	Member
10.	Dr. Sailabala Padhi	-	Member

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

The compliances furnished by the proponents were verified by the members through e-mail and also proceedings of the meeting were confirmed by the members through e-mail. The decision of the committee on case-to-case basis as follows:

ITEM NO. 01

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. STALWART PROJECT PVT. LTD. FOR PROPOSED HOUSING PROJECT OF B1+B2+G+12 (A-BLOCK) AND B1+B2+G+12 (B-BLOCK) RESIDENTIAL CUM COMMERCIAL BUILDING OVER AN TOTAL BUILT UP AREA 23568.11 SQM. LOCATED IN MOUZA - JAGAMARA, BHUBANESWAR, DIST – KHURDA, ODISHA OF SRI SARAT KUMAR SAHU – EC

1. The proposal is for Environmental Clearance of M/s. Stalwart Project Pvt. Ltd. for proposed housing project of B1+B2+G+12 (A-Block) and B1+B2+G+12 (B-Block) residential cum commercial building over an total built up area 23568.11 sqm. located in Mouza - Jagamara, Bhubaneswar, Dist – Khurda, Odisha.
2. As per EIA Notification dated 14th Sept, 2006, as amended from time to time; this project falls under Category “B”, Project or Activity 8(a) Building and Construction projects (EIA Notification dated 14th Sep, 2006 as amended on 2009).
3. Stalwart Projects Private Limited has awarded for Development of Private Housing Project 0.89 Acres of land at Plot No.:1146/2852, 1145/2853, 1146, 1145, 1157,1158/3181, 1141, Kht No.: 1133/66, 1133/1954, 1133/435, 1133/3181, 1133/7230 Near NH-16 Road, at Mouza -Jagamara, Bhubaneswar, Khurda, Odisha-754005.
4. **Location and Connectivity –** The proposed site is located at mouza- Jagamara, Bhubaneswar, Dist – Khurda, Odisha. The Geographical co-ordinate of the project site is Latitude 20°15'17.9"N & Longitude 85°48'10.2"E. River Bhargabi is flowing at a distance of 8Km in the North direction. The Nearest Railway Stations are Retang at 2.7 Km. The nearest Airport is Biju Patnaik Airport, Bhubaneswar, which is approx. 0.5 km from the project site.

5. The site is coming under Bhubaneswar Development Authority.
6. BMC has provisionally approved the Building Plan vide Letter No. 74285, dated 05.10.2021.
7. Ground Water Clearance from CGWA vide NoC no. CGWA/NOC/INF/ORIG/2021/13660, dated 08.11.2021.
8. Height Clearance from AAI vide Letter No. BHUB/EAST/B/040121/538348, dated 23.04.2021.
9. The total plot area is 3590.10 sq.m with total built-up area 23568.11Sqm.
10. The building details of the Project:

Particular	Proposed	Permissible
Project Name	Stalwart Project Pvt Ltd	--
Plot Area	3590.10 Sqm	--
Ground Coverage	1414.93 Sqm	--
FAR (Floor Area Ratio)	5.09	-
Total FAR Area	18308.98 Sqm	
Built up Area	23568.11 Sqm	--
Total Residential Area	16085.66 Sqm	
Total Commercial Area	1648.74 Sqmt	
Maximum Height	38 m	--
Green Belt Area	722 Sqm (20 %)	722 Sqm (20 %)
Road Area	1453.17 Sqm	
Parking Area	Basement 1: 2576.19 sqm Basement 2: 2640.81 sqm Ground Floor: 369.73 Sq.m Total – 5586.73 Sqm	5586.73 Sqm
Maximum No. of Floor	B1+B2+G+12	--
Power/Electricity Requirement & Sources	Total – 735.48 KW	--
No. of DG sets	1x750 KVA	--
Water requirement	68 KLD (Fresh)	--
Sewage Treatment Plant	STP Capacity - 100 KLD	--
Estimated Population-Residential, Commercial, Floating/visitors	Residential - 750 Nos. Floating – 75 Nos. Commercial- 16nos.	--

11. **Water Requirement** – During operation phase water will be sourced from Ground Water. Fresh Water requirement is 68 KLD as per consumption for the Residential People 750 @ 90 lpcd = 67.5 m3/day, Flushing for Residential People 750 @ 45 = 33.75 m3/day, Fresh Water Consumption for commercial people will be 16 nos @ 15 = 0.24 m3/day, Flushing for commercial people will be 16 @ 30 lpcd = 0.48 m3/day. Floating People will be 75 nos @ 5 = 0.37 m3/day, Flushing for Floating People will be 75 @ 10 lpcd = 0.75 m3/day.
12. **Total no.of Rain water Harvesting pits** – 7 nos for the project.

13. **Power Requirement** - The total consolidated electrical load estimate for proposed project is about 735.48 KW. The power will be entirely supplied by source of TPCODL of Odisha State Electricity Board. Also, in case of power cut, 100 % power backup generator will be provided for common uses only. For this purpose diesel generator having 750 KVA (1 nos.) capacities will be provided.

    Solar Street Lighting:

    There are 40 nos of Solar Lighting poles (@72 Watt with panel for generation) has been proposed for Street lighting,

    Energy conservation by using Solar Street Lighting = 40 x 72 = 2880 watt = 2.9 KW

    Solar Lighting For Common Area

    In the proposed area, we can propose 35 nos. of solar PV panels.

    Therefore, total amount of electrical energy generated by 35 nos. of PV Solar panel = 12.07 KW-hr.

    Assuming, only 4 hours of sunlight available throughout the day time, therefore electrical energy generated by 67 nos. of PV solar panel per day = 48.28 KW

    Saving Using Solar System:

    Total Energy Saving = (48.28 + 2.9) KW = 51.18 KW

    Total Solar Energy saving = 51.18/735.48 = 0. 069 x 100 = 6.9 %

14. **Solid waste Management -** From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 337.5 kg/day.

Sl. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residents	750 @ 0.45 kg/day	337.5
2.	Floating Population	75 @ 0.15 kg/day	11.25
3.	Commercial population	16 @ 0.15 kg/day	2.4
4.	STP sludge		43.82
Total Solid Waste Generated			**394.97**

15. **Green Belt**- Green belt will be developed over an area of 722 Sqm (20 %)of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijuli, Kaniara, Tagar, Hena, etc..

16. **Parking Details –** Total parking area allocated to the project is 5586.73sqm/ 158ECS.

17. The project cost is ` 43 crores and Environmental Monitoring programme – 2.15 crores.

18. The proponent along with the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation before the SEAC on the proposal on **22.12.2021**.

19. The SEAC in its meeting held on dated 22.12.2021 decided to take decision on the proposal after receipt of the certain information / documents from the project proponent followed by site visit by the Sub-Committee of SEAC to the proposed site.

20. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	Source of water is stated to be ground water. Why cannot be sourced from water supply of CMC /WATCO/ PHD? Letter from appropriate authority be submitted that water supply from pipe water supply is not possible.	The Public water supply is not available in the project area. We have applied to PHD for water supply in the proposed project but PHD is suggest to draw water from Ground Water source. The NoC for Water & sewerage connection has been received from Public Health Division vide letter no.5493, dated 14.03.2022. The NoC copy is attached in **Annexure-1**.
ii.	PH of Ground water is found to be 6.9 which is very low against the standard of 6.5 -8.5. Thus, from health point of view, measures to improve the same be submitted.	One sample has been collected from near project site & tested in the NABL laboratory. Ground Water test report is attached in **Annexure-2**.
iii.	Excess treated waste water is said to be discharged to nearby drain. Thus, the distance of the drain from the project boundary and the ownership / Row of the said land be submitted along with the permission from drain Authority to take the Addl. load of this project. Besides, the start & the fall out of the drain to which the treated waste water will be discharged be informed.	Excess treated water will be discharged to nearest drain which is master Drain No.8. The drain is just near to the project boundary. We have already applied to BMC for discharged of treated water in this drain, once the permission letter will be received from BMC we will submit to SEAC/SEIAA committee before commencement of the project. An undertaking is attached in **Annexure -3**. CDP map showing master drain is attached in **Annexure-4**. A layout plan showing internal drains & external drain which is connected to main drain is attached in **Annexure -5**.
iv.	No of rain water harvesting pits (RWHP) 05 Nos has been calculated based on maximum hourly rain fall of 120mm in 24hrs with retention time of 25mtrs and co-efficient of run-off of paved surface as 0.15. This calculation be re-visited taking in to consideration of hourly maximum rainfall in 24hours is past 30 years based on logical climate data with real time input an co-efficient of run-off & retention time or reference be submitted on their basis.	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 24 m^3/hr and total 8 nos of rain water harvesting pits has been provided for ground water recharging. Details calculation is given in **Annexure-6**.
v.	Parking in terms of ECS & space, both for 4 wheelers / 2 wheelers / Bicycle	Total parking area provided for the proposed building is 5586.73sqm and

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	for residential apartment as well as commercial complex as per the norms showing the demarcation in the layout map be submitted, considering the residents, visitors & floating population for commercial complex as well be submitted.	ECS provided for the building is 177 nos of 4 wheelers & 68 nos. of 2 wheelers including bicycle. Parking layout showing 4 wheelers & 2 wheelers parking is attached in **Annexure-7**.
vi.	722m^2 land (exactly 20%) has been stated to have been taken for green belt development. Green belt has been shown in patches and not continuous. As such, details of dimensions of green belt with continuous stretch surrounding the boundary with three tier plantations be submitted.	Total greenbelt area provided for the proposed building is 735.9sqm, which is 20.5% of the total plot area (3590.1 sqm). We propose to develop three tier hierarchal greenbelt along the periphery of the building. Greenbelt drawing is attached in **Annexure-8**.
vii.	Provisions of solar power (7.1%) of total power demand in stated to have been made. Details of plan and consumption calculation vis-s-vis the generation of the same be submitted.	Total power generation from Solar system is 51.18 KW through 67 nos. of PV Panels & 40 nos. of Solar Street Lighting. The Solar PV panel will be installed at Roof of the building. Total power demand of the proposed building is 735.48 KW. So total solar power generation from the proposed building is 6.9% of total power demand. Details solar calculation is attached in **Annexure-9**.
viii.	The proposed site is a very crowded area i.e NH-16 is at a distance 700 mtr, Airport at 500mtr, ITER at 400 mtr etc. Thus, traffic study must be undertaken by a domain expert / reputed institute at all the above intersecting points, considering traffic 10 years ahead and decongestion plan based on the study finding be submitted.	The traffic Study Report has been carried out by Indian Institute of Technology (IIT), Bhubaneswar considering decongestion plan. The Vetted Traffic Study Report is attached in **Annexure-10**.
ix.	Location of the DG set w.r.t predominant wind direction vis-à-vis the location of the apartment & commercial complex be submitted along with installation drawing of the exhaust pipe of the stack of DG Set be submitted.	The predominant wind direction of the proposed project area is South and the DG set will be installed as wind flow from South to North. The DG Set position is marked in the layout with respect to predominant wind direction and location of the building tower along with installation drawing/ Layout is enclosed as **Annexure-11**.

21. The proposed site was visited by the sub-committee of SEAC on 25.03.2022. Following are the observations of the sub-committee.

    i) The PP was Advised to make Independent Entry Road with Footpath for Pedestrian and similar Independent Exit Road.

ii) The PP was Adviced to segregate Land for Green Belt with provision of rows of Trees in a Heirarchial manner covering atleast 20% of the land area. The Balance Area for Lawn, Parks, Gardens and Ornamental Horticulture Work for use by the Residence may be marked in separate Colourshade as Landscaping .

iii) Since, the source of Water is only Ground Water PP is required to submit NOC from CGWA, Approval of Water Resource Departrment, Govt. Of Odisha. Provision of Water Treatment Plant (WTP), Adequate Number and Capacity of Over Head Tank for Fresh Water and Waste Water for re-use in Toilets through Dual Plumbing System after Traetment in STP. The Black Water may be Treated in STP and the Grey Water in Waste Water Treatment Plant (WWTP) for re-use and even recharge to Ground Water after Meeting the Water Quality, to adhere to 50% recharge to Ground Water along with Rain Water harvesting to meet the target of 50% of Drawl of Water. Similarly the Storm Water may be allowed to pass through Oil Water Separation and PH Correction Pit before discharge in Open Drain.

iv) Since, the open Drain is existing coming up in the Main Road Side it was Suggested to Re-Engineer the slope of the Entire Plot to Main Road side after Construction of Basement Roof.

v) The Parking along with ECS to be re-calculated to meet the norm in view of the crowded Khandagiri – Pokhariput Road.

vi) Permission of Drainage Division and Swerage Board/WATCO to be obtained for Discharge of Waste Water and Swerage Water.

Considering the information furnished and the presentation made by the consultant, **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – A** in addition to the following specific conditions**.**

i) **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.**

ii) The Proponent, before implementation of the project, 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. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission/ possession as the case may be.

iii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.

iv) Trees located within the project area shall be transplanted in green belt along boundary.

v) Use of STP treated water shall be increased by planting more trees in green belt, car & floor washing and discharge to drain should be reduced.

vi) Independent Entry and Exit Road with Footpath for Pedestrian should be provided.

vii) As proposed 3 tier green belt/tree cover over minimum 20% of the land area should be maintained meticulously.

viii) The project proponent shall obtain NOC from CGWA, Approval of Water Resource Department, Govt. Of Odisha for use of ground water.

ix) 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.

x) Since, the open Drain is existing/ 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.

xi) Adequate Parking shall be ensured in view of the crowded Khandagiri – Pokhariput Road.

xii) Permission of Drainage Division and Sewerage Board/WATCO shall be obtained for Discharge of excess STP treated water.

xiii) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

xiv) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

xv) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

xvi) Separate Entry and Exit Gate for Residential and Commercial building shall be implemented

xvii) 40% parking for commercial and 30% parking for residential and 10% of total parking for visitors shall be maintained minimum with separate area for residential and commercial parking

xviii) From the Traffic study it is seen that the study was carried out by CEMC and based on the data collected IIT has vetted it. Since, the study was not carried out by a reputed institute, fresh traffic study to be conducted by a reputed institute and submitted to SEIAA with mitigation plan if any. Till such time the Project proponent will not take up any construction work.

xix) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 2

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S ALL ODISHA STATE BANK OFFICERS HOUSING CO-OPERATIVE SOCIETY LTD FOR PROPOSED CONSTRUCTION OF HOUSING PROJECT OF (LB+UB+S+14) AND (LB+UB+S+20) RESIDENTIAL APARTMENT "GRACE" OVER AN AREA OF AREA OF 1.409 HA/3.48 ACRES AT: MOUZA SUBUDHIPUR, & SANKARPUR, BHUBANESWAR, DIST – KHURDA WITH TOTAL BUILT UP AREA- 74268.84 SQM OF SRI KRATIKESWAR SAHU (SECRETARY) - EC

1. The proposal is for Environmental Clearance of M/s All Odisha State Bank Officers Housing Co-operative Society Ltd for proposed construction of housing Project of (LB+UB+S+14) and (LB+UB+S+20) residential apartment "Grace" over an area of area of 1.409 Ha/3.48 Acres At - Mouza Subudhipur, & Sankarpur, Bhubaneswar, Dist – Khurda with total built up area - 74268.84 Sqm.

2. The project falls under category "B" or activity 8 (a) - Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.

3. M/s All Odisha State Bank Officers Housing Co-operative Society Ltd. has planned to develop a proposed Residential Apartment Building "Grace" at Plot No. 1/888/1294, 2/950/1215, 30/835, 29/1252, 29/874, 28/1266, 27/1265, 31/120/126, Mouza-Subudhipur, Plot No. 2023, 2022, 2015, 2016, 2017, 2018, 2020, 036/9878, Mouza- Shankarpur, Tahasil- Bhubaneswar, District-Khordha, State-Orissa, Village Panchayat has permitted the construction of proposed residential project at the project site. The proposed site is located at mouza Subudhipur & Sankarpur, Bhubaneswar, Dist Khurda, Odisha.

4. **Location and connectivity** - The proposed site is located at mouza Subudhipur & Sankarpur, Bhubaneswar, Dist Khurda, Odisha. The Geographical co-ordinate of the project site is: Latitude 20°15'39.07"N and longitude 85°45'10.59"E. The project site is well connected to National Highway-16 (AH-45) at a distance of 0.8 km in East Direction. The nearest railway station is Bhubaneswar Railway station at a distance of approx 6.2 Km. The nearest airport is Biju Patnaik Airport at a distance of approx. 6.7 Km in East direction from project site.

5. The site is coming under development plan of Bhubaneswar Development Authority.

6. The Building Details Of The Project:

Particular	Proposed
Project Name	Proposed (LB+UB+S+14) and (LB+UB+S+20) residential apartment building plan for all Odisha state bank officers housing co-operative society
Plot Area	As per document:14100.32 Sqm As per Possession:14095.20 Sqm
Ground Coverage	4050.1 Sqm (28.73 %)
Total FAR Area All Blocks including Basement	53,535.83 Sqm
Built up Area	74,268.84 Sqm

Total No. of units (Block 1 & 2)	Block-1=140 nos Block-2=177 nos Total= 317 no. of units
Maximum Height	Block-1: 45.00 mt Block-2: 63.00 mt
Road Area	7226.06 sqm
Parking Area	17735.17 Sqm (33.1 % of FAR Area)
Green Belt Area	2,819.04 Sqm (20 %)
Maximum No. of Floor	(LB+UB+S+14) &(LB+UB+S+20)
Power/Electricity Requirement & Sources	Total Power - 1912 KW Power from Solar –95.6 KW TPCODL- 1816.4 KW
No. of DG sets	2 x 500 KVA
Fresh Water requirement & Sources	148 KLD Source: Ground Water
Sewage Treatment & Disposal	STP Capacity 200 KLD
Estimated Population-Residential including Floating/visitors	Residential Population: 1585 Nos. Floating Population: 160 Nos.
Project Cost	135 Crore

7. **Water requirement**: Fresh make up of 147 m3/day will be required for the project which will be sourced from Ground water. Waste water of 188 KLD will be treated in a STP of 200 KLD capacity, which includes primary, secondary and tertiary treatment.

8. **Waste water details**: Every building generates wastewater amounting about (80 % of fresh water consumed + 95 % of flushing water). The major source of wastewater includes the grey water from kitchens, bathrooms and black water from toilets. It is expected that the project will generate approx. 188 m3/day of wastewater. The wastewater will be treated in the STP of capacity of 200KLD provided within the apartment. Out of which 179 m3/day will be recycled within the project for flushing (73.8 m3/day), landscaping (10.9 m3/day), STP loss (9.4 m3/day) & Dust suppression in Road Area(15.6 m3/day). In case of Monsoon period 188 m3/day will be recycled within the project for flushing (73.8 m3/day), STP loss will be 9.4 m3/day and 105 m3/day surplus will be generated which will be discharged to the drain.

9. **Power requirement**: The total consolidated electrical load estimate for proposed project is about 1912 KW. The power will be entirely supplied by source of TPCODL of Odisha State Electricity Board. Also, in case of power cut, two nos. of diesel generator having capacities 500 KVA capacity will be provided.

   For energy conservation, there will be 99 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting, so

   Energy conservation by using Solar Street Lighting = 99x72 = 7182 watt = 7.1 KW

   Energy conservation by using Solar lighting for common area = 95.6 KW

Total Energy Conservation = (95.6+7.1) KW = 102.7 KW

Total Energy saving = 102.7/1912 = 0.053 x 100 = 5.3 %

10. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 10 recharge pits from the plot area.
11. **Parking Requirement**: Total parking area provided is 17735.17 m^2 Sq.mt./621ECS and space provided is basement, ground and open parking area.
12. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4).
13. **Green Belt Development**: Green belt will be developed over an area of 2,819.04 sqm which is 20.0 % of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
14. **Solid Waste Management**: From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 713 kg/day and from floating population in residents will be generated @ 0.15 kg/person/day which will be about 24kg/day. The generated solid waste from the residential apartment will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste.

Sl. No.	Category	Counts (heads)	Waste generated
1.	Residents	1585 @ 0.45 kg/day	713 kg/day
2.	Floating population in residents	160 @ 0.15 kg/day	24 kg/day
3.	STP sludge		94 kg/day
Total Solid Waste Generated			**831 kg/day**

15. The total population of project will be 1585 persons for residential and 160nos for floating population.
16. The estimated project cost is ` 135 Crores and Environment Management Cost is ` 6.7 crores.
17. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar,** made a detailed presentation on the proposal on 17.12.2021.
18. The SEAC in its meeting held on 17.12.2021 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of sub-committee of SEAC to the proposed site.

    i) "Kisam" of the land with conversion to "Gharabari" from appropriate Revenue Authority.

    ii) Construction is stated to have started against the original plan approval by BDA having Built-up area less than 20,000m^2. As such, the details of original plan of BDA vis-a-vis

the construction made with 3D photographs and justification as to why it will not be treated as a “violation”.

iii) Besides, in view of increase is height & two floors on the original foundation, structural stability certificate needs to be submitted for the revised plan from BDA approved structural engineer.

iv) Source of water (fresh water) is stated to be ground water for 147 KLD. But pipe water supply (surface water) is available nearby. Hence, it is necessary to explore the possibility of use of surface water, and only a borewell shall be used for emergency purpose. In case the authority regrets, then drawl of ground water shall be allowed. So, the PP need to submit the letter to this effect from the appropriate authority.

v) Discharge of treated waste water is said to be 78 KLD during non-monsoon & 105 KLD during monsoon period which is very high. As such, the PP need to confirm more plantation so that discharge of treated waste water to drain can be reduced.

vi) Green belt is stated to be 2819.04m^2 (exactly 20%) of plot area. Thus, the detailed calculation of 2819.04m^2 with dimension of the green belt around the boundary continuous be submitted showing the same in the layout.

vii) The lateral distance between the boundary of the proposed project and the public drain / sewer is said to be about 500 mtr to which the treated waste water shall be discharged.

viii) Exact distance between the project site & the drains / sewer with ownership of the land / Row since the same need to be in favour of RR.

ix) Permission of the authority of the drain / sewer to take the addl. load of this proposed project including the scheduled operation of the sewer.

x) How much storm / run–off water shall be discharged to drain with calculation and as percentage of total such water?

xi) No. of Rain Water Harvesting pits (RWHP) be re-calculated considering maximum hourly rain fall in 24 hrs on the basis of logical climate data in past 30 years with Co-efficient of run-off (real time input).

xii) Parking in terms of space and ECS for 4 wheelers, 2 wheelers including bicycles be calculated separately for dwellers & visitors (floating population) indicating the norm as well and showing it in the layout map & be submitted.

xiii) Detail plan with calculation of solar power consumption (both in street lighting & open space) again generation with percentage of the same against total power demand.

xiv) Traffic study be undertaken by domain expert at intersecting point of the lead road of the project with NH / Public Road with decongestion plan (if necessary) based on study findings, taking into consideration traffic 10 years ahead with thus, project & projects in the vicinity & public traffic be submitted.

xv) Stack height of DG sets with installation drawing of exhaust pipe be submitted.

xvi) “NOC” from CGWA & permission from W.R Deptt. Govt of Odisha is required for drawl of ground water.

xvii) Copy of refusal letter by PHED/WATCO to the Project for supply of surface water, be submitted, so that the (Ground Water) can be allowed depending on water requirement as per norm, numbers & dia of borewells, Yield of water as per CGWA NOC, numbers

of OVERHEAD Tank for Fresh Water & Waste Water separately & connected to dual plumbing system for Toilet flush.

xviii) Provision WTP, Wastewater Treatment Plant for non-sewer water, STP, Oil water separator pit for storm water to be marked on the layout plan with respective capacities.

19. **The project proponent was requested vide letter no. 88 (6)/ SEAC–(Misc)-28, dated 25.01.2022 to submit the information / documents as sought by the SEAC at para 18 above. But, they have not yet furnished the same.**

20. The proposed site was visited by the sub-committee of SEAC on 25.03.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

i) The PP was Adviced to make Independent Entry Road with Footpath for Pedesterian and similar Independent Exit Road. The PP was adviced to segregate land for Green Belt with provision of rows of Trees in a Heriachical manner covering atleast 20% of the land area. The balance area for Lawn, Parks, Gardens and Horticulture Work for use by the Residents may be marked in separate colourshade as landscaping.

ii) The PP claims that they had initially taken final building plan approval of BDA & then ORERA for construction of building in the transition period the building By-Laws got amended in August 2020 along with more FAR which encouraged Builder to modify the building plan to add more floors which attracted EC.

iii) Since the source of Water is only Ground Water PP is required to submit NOC from CGWA, Approval of Water Resource Departrment, Govt. Of Odisha. Provision of Water Treatment Plant (WTP), Adequate Number and Capacity of Over Head Tank for Fresh Water and Waste Water for re-use in Toilets through Dual Plumbing System after Traetment in STP. The Black Water may be Treated in STP and the Grey Water in Waste Water Treatment Plant (WWTP) for re-use and even recharge to Ground Water after Meeting the Water Quality, to adhere to 50% recharge to Ground Water along with Rain Water harvesting to meet the target of 50% of Drawl of Water. Similarly the Storm Water may be allowed to pass through Oil Water Separation and PH Correction Pit before discharge in Open Drain.

iv) Provision of Ventilation in lowest Basement, Light, Fire Safety upto roof top terrace for Safety & Environment Health.

v) Since the open Drain and the Swerage line is coming up in the Main Road Side it was Suggested to Re-Engineer the slope of the Entire Plot to Main Road side after Construction of Basement Roof.

vi) The Parking along with ECS appears to be in order is satisfactory.

vii) Permission of Drainage Division and Swerage Board/WATCO to be obtained for Discharge of Waste Water and Swerage Water along with Right of way Permission of land if involved in connect to Drain sewer line.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of information / documents as requested vide letter no: 88 (6)/ SEAC–(Misc)-28, dated 25.01.2022 and as sought by the Sub-Committee of SEAC at para 20 above.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SHUVAM CONSTRUCTION PVT. LTD. FOR CONSTRUCTION OF HOUSING PROJECT OF 2B+G+14 HIGH RISE RESIDENTIAL APARTMENT BUILDING IN MOUZA - GHATIKIA, BHUBANESWAR, DIST KHURDA, ODISHA OVER TOTAL BUILT UP AREA OF 56722.86 SQ.M OF SRI KANTILAL PATEL (DIRECTOR) - EC

1. The proposal is for Environmental Clearance of M/s. Shuvam Construction Pvt. Ltd. for construction of Housing Project of 2B+G+14 High Rise Residential Apartment Building in Mouza - Ghatikia, Bhubaneswar, Dist - Khurda, Odisha over total built up area of 56722.86 sq.m.
2. The project falls under category “B” or activity 8 (a)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s Shuvam Construction (P) Ltd proposed 2B+G+14 High Rise Residential Apartment Building project is 2.652 Acres/10732.17sqm. of land at Plot No.: 4016, 4023/ 9099, 4010/10999, 4010/ 9061, 3971, 3969, 4020, 4025, 4019, 4017, 4022, 4026, 4021, 4027, 4018, 4023, 3967/ 9599, 4024, 3967, 3968, 3970, 4011/9062, 4011, 4023/9086, 4010/10998, 4028, khata no-1678, 607, 988/958, 803, 720, 1101, 1678, 238, 1988/87, 1988/86, 535, 1228, 1332, 1123, 1139, 1988/957, Kissam - Gharabari, Mouza-Ghatika, Dist-Khordha Odisha in favour of M/s Shuvm Construction (P) Ltd..
4. **Location and connectivity** - The proposed site is located at Ghatikia, Bhubaneswar, Odisha. The Geographical co-ordinate of the project site is Latitude - 20°16’15.78”N & Longitude - 85° 46’44.81”E. The project site is well connected with Ghatikia main road and The National Highway-16 is located at the distance of 0.3 Km & 1.4 km. The nearest Railway station is Bhubaneswar Railway Station at a distance of approximately 5.2 Km from the project site. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is at a distance of 5 Km from the project site. The site is located adjacent to the local landmarks, Kalinga Nagar, Shympur etc. There is no structure or encroachments on the site. The site is easily accessible from NH-16 Road.
5. The site is coming under development plan of Bhubaneswar Development Authority.
6. The Building Details Of The Project:

Particular	Proposed	Permissible
Project Name	Proposed Housing Project (High Rise Residential Apartment Building Project)	
Plot Area	10,732.17 Sqm	--
Ground Coverage	3,053.12 Sqm (28.55%)	--
Total Built up Area	56,722.86 Sqm	--
Total FAR Area	44,996.50 Sqm	--
FAR	4.192	7.0

Maximum Height	50.93 meter	--
No. of recharge pit	14	--
Drive Way Width	7.5 meter	--
Parking Area	22,308.36 Sqm	13,498.95 Sqm (30 % of FAR Area)
Green Belt Area	2,641.18 Sqm (24.61 % of Plot area)	2,146.4 Sqm (20% of Plot area)
Power/Electricity Requirement & Sources	Total Power - 1482 KW Power from Solar – 78.5 KW TPCODL- 1403.5 KW	--
No. of DG sets	2 x 500 KVA	--
Fresh Water requirement & Sources	141 KLD Source: Ground Water	--
Sewage Treatment & Disposal	STP Capacity 200 KLD	--
Estimated Population-Residential, Floating/visitors	Residential Population: 1520 Nos. Floating Population: 152 Nos.	--

7. **Water requirement**: Fresh make up of 141 m3/day will be required for the project which will be sourced from Ground water. Waste water of 180.16 KLD will be treated in a STP of 200 KLD capacity, which includes primary, secondary and tertiary treatment.

8. **Waste water details**: Every building generates wastewater amounting about (80 % of fresh water consumed + 95 % of flushing water). The major source of wastewater includes the grey water from kitchens, bathrooms and black water from toilets. It is expected that the project will generate approx. 180.16 m3/day of wastewater. The wastewater will be treated in the STP of capacity of 200KLD provided within the apartment. Out of which 171.16 m3/day will be recycled within the project for flushing (70.7 m3/day), landscaping (10.5 m3/day), STP loss (9.0 m3/day) & Dust suppression in Road Area (15 m3/day) and 74.96 m3/day surplus will be generated which will be discharged to the drain.

9. **Power requirement**: The daily power requirement for the proposed Private Developer Project is preliminarily assessed as 1482 KW (Solar- 78.5 KW & TPCODL- 1403.5 KW) source from TPCODL of Odisha State Electricity Board. In order to meet emergency power requirements during the grid failure, there is provision of 2 nos. of DG set having 500 KVA (2 Nos.) capacities for power back up in the Residential Housing Project.

   For energy conservation, there will be 123 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting, so

   Energy conservation by using Solar Street Lighting = 123x72 = 8856 watt = 8.8 KW

   Energy conservation by using Solar lighting for common area = 69.7 KW

   Total Energy Conservation = (69.7+8.8) KW = 78.5 KW

   Total Energy saving = 78.5/1482 = 0.052 x 100 = 5.2 %.

10. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 32 recharge pits from the plot area.
11. **Parking Requirement**: Total parking area provided is 22308.36 m^2 Sq.mt./636ECS and basement parking area and visitors open parking area has been provided.
12. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4).
13. **Green Belt Development**: Out of the total area, green belt will be developed over an area of 2641.18 sq.m (24.16 % of the plot area).
14. **Solid Waste Management**: From the proposed housing project solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 684 kg/day. The waste generated from floating population in residents will be @ 0.15 kg/day, which will be 22.8 kg/day. Total amount of solid waste generated of the project will be 331 kg/day. The generated solid waste from the residential areas will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste. which will be disposed through BMC.
15. The total population of project after proposed will be 625 persons.
16. The estimated project cost is ` 95 Crores and Environment Management Cost is ` 204 lakhs.
17. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation on the proposal.
18. The SEAC in its meeting held on dated 14.12.2021 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of sub-committee of SEAC to the proposed site.
    i) As ROR document submitted by PP, part of the land is “Sarad” & not “Gharabari”. Therefore, the PP needs to submit the land document with conversation to “Gharbari” from appropriate Revenue authority before start of construction of the project.
    ii) The source of fresh water is stated to be Ground water. Since pipe line water supply / surface water supply is available nearby, drawl of ground water cannot be allowed. However, one” bore well” may be allowed to meet emergency need. This needs to be confirmed by PP.
    iii) To submit the distance of public drain / sewer line from the boundary of the project for connectivity of internal drain & the ROW of the said land in favour of PP including permission of the drain / sewer line authority to take the additional load of excess treated waste water and discharge of excess storm / run off water.
    iv) Drain network with dimension for both waste water (untreated / treated) & surface run off / storm water in the layout map be submitted along with the quantity of excess storm / run off water to be discharged to drain / sewer line with calculation be submitted.

v) Quantity & percentage of drain OH / storm water to be discharged vis-s-vis total said water.

vi) Discharge of treated waste water to drain is stated to be 77 KLD (during monsoon) which is very high. Therefore, plantation augmentation and provision of vehicle washing be worked out to reduce it & be submitted.

vii) Maximum hourly rain fall in 24 hrs has been taken 20mm / hr. Maximum hourly rain fall in 24 hrs be taken from past 30 years date (logical climate date) and accordingly, rain water harvesting pits be designed & calculated.

viii) No of RWHP has been calculated to be 32 which looks high. So, the calculation with maximum rain fall date as indicated above be re-calculated and accordingly, re-submitted.

ix) Solar power consumption with detailed plan & calculation be submitted including the open space against the generation through the same source along with percentage of the total power demand be submitted.

x) Parking for two wheelers (including bicycles) be provisioned in terms of ECS & separate space in the layout for all categories of users be work out and submitted.

xi) NH is stated to be at a distance of 0.3 KM / 1.4 Km. Fresh traffic study at intersecting points with public road / NH be undertaken through a domain experts and report be submitted along with decongestion measures (if required) based on study findings, taking traffic road of 10 years ahead into consideration.

xii) Separate gates for entry & exit with pedestrian pathways of suitable dimension be made & shown in the layout map & submitted.

xiii) Fire Safety Clearance from appropriate authority need to be submitted.

xiv) Details of construction activity carried out if any.

xv) The Letter of refusal of surface water supply by PHED, BMC, or WATCO to the Project may be submitted to avail Groundwater, With the Number of Borewells, dia, location, yield & requirement be furnished.

xvi) The layout may be re-visited to accommodate the greenbelt in the outer (entire) periphery of the project without Breaking the continuity from the Entry gate to the Exit gate.

xvii) The open/covered drain & road of adequate width may be provided after providing the greenbelt with 03 rows of staggard design tree plantation in a hierarchical method.

xviii) The provision of a Water Treatment plant for use when required, Waste Water Treatment plant (To reduce pressure on STP), STP, and OIL water separator pit before disposal of the Storm Water may be shown in layout plan.

xix) Status of permission from BMC/WATCO for disposal of Treated Waste Water in covered Drain and treated sewer in Sewerage Line available in the vicinity.

xx) The Per head - Per day (with the likely maximum number of inhabitants) Water supply norms Conceived/Considered for the Project may be mentioned & accordingly adequate no. of overhead Tank for fresh water and number of wastewater Treated over Head tank connected to dual plumbing system may be mentioned.

xxi) The recommendation letter may be obtained from State Govt. Fire Safety Dept on submission of layout plan & structural design and their Field Visit. This Fire Safety Recommendation letter along with the commitment to Comply the condition will facilitate issue of Fire Safety Certificate, Completion Certificate & Occupancy Certificate for the Project.

19. The project proponent was requested vide letter no. 85 (3)/ SEAC–(Misc)-28, dated 25.01.2022 to submit the information / documents as sought by the SEAC at para 18 above. The project proponent has furnished compliance as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	As ROR document submitted by PP, part of the land is "Sarad" & not "Gharabari". Therefore, the PP needs to submit the land document with conversation to "Gharbari" from appropriate Revenue authority before start of construction of the project.	Total land area of the proposed project is 10,732.17 Sqm (2.65 Acres) and the kisam of land is Gharabari. Details Land document is attached in **Annexure-1**.
ii.	The source of fresh water is stated to be Ground water. Since pipe line water supply / surface water supply is available nearby, drawl of ground water cannot be allowed. However, one" bore well" may be allowed to meet emergency need. This needs to be confirmed by PP.	The Public water supply is not available in the nearby the project area; once the public water supply is available the permission will be obtained from Public Health Division (PHD). Ground water permission obtained from CGWA vide letter no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021. Ground Water Clearance letter is attached in **Annexure-2**.
iii.	To submit the distance of public drain / sewer line from the boundary of the project for connectivity of internal drain & the ROW of the said land in favour of PP including permission of the drain / sewer line authority to take the additional load of excess treated waste water and discharge of excess storm / run off water.	The distance of the Public Drain is 80 meter from the proposed project boundary. The drainage plan & drawing has been approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 10071, dated 28.01.2022. The drainage permission letter & drawing is attached in **Annexure-3**.
iv.	Drain network with dimension for both waste water (untreated / treated) & surface run off / storm water in the layout map be submitted	Waste Water drain line and storm water drain line with drain dimension is showing in layout. Layout plan showing waste water & storm water

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	along with the quantity of excess storm / run off water to be discharged to drain / sewer line with calculation be submitted.	line is given in **Annexure-4.** Total 67 m3 storm water will be generated in the proposed building and storm water will be recharged through 05 nos. of rain water harvesting pits.
v.	Quantity & percentage of drain OH / storm water to be discharged vis-s-vis total said water.	Total 67 m3 /hr rain water will be available for recharged/harvested through 05 nos. of rain water harvesting pits. Details rain water harvesting calculation is attached in **Annexure-5**.
vi.	Discharge of treated waste water to drain is stated to be 77 KLD (during monsoon) which is very high. Therefore, plantation augmentation and provision of vehicle washing be worked out to reduce it & be submitted.	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 m3 /day), Landscaping (10.5 m3 /day), Dust Suppression (15 m3 /day), Vehicles Washing (8.6 m3 /day) & 66.36 m3 /day water will be discharge to drain in Non-monsoon season and during Monsoon season 76.86 m3 /day water will be discharge to drain. Details water balance is attached in **Annexure-6**.
vii.	Maximum hourly rain fall in 24 hrs has been taken 20mm / hr. Maximum hourly rain fall in 24 hrs be taken from past 30 years date (logical climate date) and accordingly, rain water harvesting pits be designed & calculated. No of RWHP has been calculated to be 32 which looks high. So, the calculation with maximum rain fall date as indicated above be re-calculated and accordingly, re-submitted.	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 m3 /hr and total 05 nos. of rain water harvesting pits has been provided for ground water recharging. Detail calculation is given in **Annexure-5**.
viii.	Solar power consumption with detailed plan & calculation be submitted including the open space against the generation through the same source along with percentage of the total power demand be submitted.	Total power generation from Solar system is 84.72 KW through 55 nos. of PV Panels & 123 nos. of Solar Street Lighting. Total power demand of the proposed building is 1482.0 KW. So total solar power generation from the proposed building is 5.7% of total power demand. For Solar Power distribution, 123 Nos. of Solar

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		Street Light poles of 8.9 KW capacities is directly connected with Solar Panel and 75.88 KW Solar energy generated from 55 nos. of PV Panel is directly connected with electric grid Details solar calculation is attached in **Annexure-7**.
ix.	Parking for two wheelers (including bicycles) be provisioned in terms of ECS & separate space in the layout for all categories of users be work out and submitted.	Total parking area provided for the proposed building is 8146.17 sqm and ECS provided for the building is 636 nos. of 4 Wheelers & 204 nos. of 2 Wheelers including bicycles. Parking layout showing 4 wheelers & 2 wheelers parking is attached in **Annexure-8**.
x.	NH is stated to be at a distance of 0.3 KM / 1.4 Km. Fresh traffic study at intersecting points with public road / NH be undertaken through a domain experts and report be submitted along with decongestion measures (if required) based on study findings, taking traffic road of 10 years ahead into consideration.	The Traffic Study Report has been carried out by Indian Institute of Technology (IIT), Bhubaneswar. The vetted traffic study report is attached in **Annexure-9**.
xi.	Separate gates for entry & exit with pedestrian pathways of suitable dimension be made & shown in the layout map & submitted.	Separate gates are provided for entry & exit with pedestrian pathways. The dimension of the entry gate is 7.0 m & 7.0 m in exit gate. Layout map is attached in **Annexure-4**.
xii.	Fire Safety Clearance from appropriate authority need to be submitted.	The Fire Safety Clearance has been recommended by Odisha Fire Services vide recommendation letter no. RECOMM12041300120210001 78, dated 17.07.2021. Recommendation letter is attached in **Annexure-10**.
xiii.	Details of construction activity carried out if any.	No construction activity is started in the proposed project site. Once the Environmental Clearance letter is received the construction work will be started.
xiv.	The Letter of refusal of surface water supply by PHED, BMC, or WATCO to the Project may be submitted to avail Groundwater, With the Number of Borewells, dia, location, yield & requirement be furnished.	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

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		no. CGWA/NOC/INF/ORIG/2021/12932, dated 16.09.2021. Ground Water Clearance letter is attached in **Annexure-2**.
xv.	The layout may be re-visited to accommodate the greenbelt in the outer (entire) periphery of the project without Breaking the continuity from the Entry gate to the Exit gate.	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. Greenbelt Layout is attached in **Annexure-11**.
xvi.	The open/covered drain & road of adequate width may be provided after providing the greenbelt with 03 rows of staggard design tree plantation in a hierarchical method.	The covered internal drain is provided along the road, the width of the internal road is 7.62m, which is provided after greenbelt area. The layout plan showing Greenbelt, Internal Drain Line is attached in **Annexure-11.**
xvii.	The provision of a Water Treatment plant for use when required, Waste Water Treatment plant (To reduce pressure on STP), STP, and OIL water separator pit before disposal of the Storm Water may be shown in layout plan.	The Water Treatment Plant has been provided in the proposed project. Sewage Treatment Plan of capacity 200 KLD will be provided for treatment of waste water. Layout plan showing drainage system is attached in **Annexure-11**.
viii.	Status of permission from BMC/WATCO for disposal of Treated Waste Water in covered Drain and treated sewer in Sewerage Line available in the vicinity.	The drainage plan & drawing has been approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 10071, dated 28.01.2022. The drainage permission letter & drawing is attached in **Annexure-3**.
xix.	The Per head - Per day (with the likely maximum number of inhabitants) Water supply norms Conceived/Considered for the Project may be mentioned & accordingly adequate no. of overhead Tank for fresh water and number of wastewater Treated over Head tank connected to dual plumbing system may be mentioned.	Per head 135 liters per day water will be required for the proposed project. Total fresh water requirement of the proposed project is 141 KLD. The capacity of overhead Tank is 150 KLD for fresh water and 200 KLD capacities Overhead Tank for Treated Water will be provided for the proposed project.
xx.	The recommendation letter may be obtained from State Govt. Fire Safety Dept on submission of layout plan & structural design and their Field Visit. This Fire Safety Recommendation letter along with the commitment to Comply the	The Fire Safety Clearance has been recommended by Odisha Fire Services vide recommendation letter no. RECOMM1204130012021000178, dated 17.07.2021. Recommendation letter is attached in **Annexure-10**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	condition will facilitate issue of Fire Safety Certificate, Completion Certificate & Occupancy Certificate for the Project.	

20. The proposed site was visited by the sub-committee of SEAC on 25.03.2022. Following are the observations of the sub-committee.

i) The Land between the Main Road and the Plot there is a Stretch of Govt. Land which is claim to be Road as per CDP 2030. The PP to submit evidence to Establish this Fact & assurance to develop the same road at own cost if not done by BMC/BDA.

ii) The PP was advised to make Independent Entry Road with Footpath for Pedesterian and similar Independent Exit Road.

iii) The PP was Advised to segregate Land for Green Belt with provision of rows of Trees in a Heirarchial manner covering atleast 20% of the land area. The Balance Area for Lawn, Parks, Gardens and Ornamental Horticulture Work for use by the Residence may be marked in separate Colourshade as Landscaping area.

iv) It was verified that few Plots belongs to Subham Construction, Few Plots to Satyam Construction and remaining Plots of Land Owner. It was Suggested to have Legal Arrangement of Land Owner for Developement Agreement with Subham Construction. Satyam Construction to also take Companies Board Resolution to Develop the Land through Subham Construction.

v) Since the source of Water is only Ground Water PP is required to submit NOC from CGWA, Approval of Water Resource Departrment, Govt. Of Odisha. Provision of Water Treatment Plant (WTP), Adequate Number and Capacity of Over Head Tank for Fresh Water and Waste Water for re-use in Toilets through Dual Plumbing System after Treatment in STP. The Black Water may be Treated in STP and the Grey Water in Waste Water Treatment Plant (WWTP) for re-use and even recharge to Ground Water after Meeting the Water Quality, to adhere to 50% recharge to Ground Water along with Rain Water harvesting to meet the target of 50% of Drawl of Water. Similarly the Storm Water may be allowed to pass through Oil Water Separation and PH Correction Pit before discharge in Open Drain.

vi) Provision of Ventilation in lowest Basement, Light, Fire Safety upto roof top terrace for Safety & Environment Health.

vii) Since the open Drain and the Swerage line is coming up in the Main Road Side it was Suggested to Re-Engineer the slope of the Entire Plot to Main Road side after Construction of Basement Roof.

viii) The Parking along with ECS appears to be in order.

ix) Permission of Drainage Division and Swerage Board/WATCO to be obtained for Discharge of Waste Water and Swerage Water.

Considering the information furnished, the presentation made by the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** along with the project proponent and observation of the Sub-Committee of SEAC during site visit, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – B** in addition to the following specific conditions**.**

i) **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.**

ii) The Proponent, before implementation of the project, 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. Also, in case of the connecting drain passing through others land (Govt. or Private land), the Proponent shall obtain the permission/ possession as the case may be.

iii) The proponent shall use solar energy at least to the tune of 5% of total power requirement as proposed.

iv) Trees located within the project area shall be transplanted in green belt along boundary.

v) Use of STP treated water shall be increased by planting more trees in green belt, car & floor washing and discharge to drain should be reduced.

vi) Independent Entry and Exit Road with Footpath for Pedestrian should be provided.

vii) As proposed 3 tier green belt/tree cover over minimum 20% of the land area should be maintained meticulously.

viii) The project proponent shall obtain NOC from CGWA, Approval of Water Resource Department, Govt. Of Odisha for use of ground water.

ix) 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.

x) 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.

xi) It was verified that few Plots belongs to Subham 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 Subham Construction. Satyam Construction to also take Companies Board Resolution to Develop the Land through Subham Construction.

xii) Provision shall be made for Ventilation in lowest Basement, Light, Fire Safety upto roof top terrace for Safety & Environment Health.

xiii) Since the open Drain and the Swerage 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.

xiv) Permission of Drainage Division and Swerage Board/WATCO shall be obtained for Discharge of STP treated Water.

xv) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

xvi) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

xvii) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

xviii) From the Traffic study it is seen that the study was carried out by CEMC and based on the data collected IIT has vetted it. Since, the study was not carried out by a reputed institute, fresh traffic study shall be conducted by a reputed institute and submitted to SEIAA with mitigation plan if any within a period of 3 months.

xix) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S PARAMITRA SMART INFRA SNA PRIVATE LTD. FOR MODIFICATION AND EXPANSION OF PROPOSED "SHANTI NAGAR AWAS YOJNA" [PRIVATE DEVELOPER PROJECT] LOCATED AT MOUZA-SATYA NAGAR, PLOT NO. -121'125'126'128'129'130&143(P), THANA-NEW CAPITAL BHUBANESWAR, DISTRICT -KHORDHA, ODISHA OF SRI SHYAM SUNDAR PADHY – EC.

1. **M/s Paramitra Smart Infra SNA Private Ltd.** is coming with Environmental Clearance for Expansion and Modification and of proposed **"SHANTI NAGAR AWAS YOJNA"** [Private Developer Project] At mouza- Satya nagar, plot no. -143(P), Thana-New Capital Bhubaneswar, District -Khordha, Odisha of - M/s Paramitra Smart Infra SNA Private Ltd.
2. Shantipalli slum is located on the land belonging to the General Administration (GA) department. Government of Odisha has decided that BDA, which is also the State Level Nodal Agency, shall implement the in-situ redevelopment project of Santipalli slum. Accordingly, the land (on which the cluster is situated) is being transferred to BDA. There will be permanent change in land use pattern as mostly GA land will be used for construction of private development based on the market dynamics and development guidelines.

3. Paramitra Smart Infra SNA Private Limited is developing the site in partnership with Bhubaneswar Development Authority (PPP Mode). The project (PPP) guidelines stipulate 7.797 acres land area allocation for EWS Housing, while remaining 2.1 acres land will be utilized for private development based on the market dynamics and development guidelines. Proposed area is coming under Wholesale Commercial Use Zone as per CDP.
4. Land has been acquired for residential - development under an In-Situ slum Redevelopment Project. The land will be used for construction of Residential complex with club. There will be permanent change in land use pattern, as mostly land will be used for construction of Residential Complex with Retail & Club. Total land acquired for this project is 8498.7 sqm 2.10 Ac. Proposed Total Built-up Area is **119108.29 sqm [Existing 49927.11 sqm. to proposed 119108.29 sqm]**
5. The proposed expansion project will have a total building foot-print of 3111.84 sqm (36.62% of the total plot area & (existing ground coverage 1912.37 SQM. (22.5%) Total green area proposed 3438.57 sqm (40.46 % of total area (exclusive plantation area 1755.83 sq.m. (20.66 %) and lawn area 1682.74 sqm (19.80%) of the plot area)
6. The Geographical coordinates of the project site is 20°17'7.54"N & - 85°51'2.19"E. The nearest airport is Biju Pattanaik Airport which is 5.4 km away from the project site towards S-S-W direction. Bhubaneswar railway station is 2.36 km away from the project site towards SSW direction. Vanivihar railway station is 0.8 km away from the project site towards N-N-E direction. (Aerial distance). Maharshi College Road is adjacent To Project Site at the distance of 0.70 km in E direction. NH-203 (Cuttack-Puri Road) at the distance of 0.95 km in NW direction.
7. The total water requirement is approx. 356 KLD (domestic + flushing), out of which total domestic water requirement for residential and shops are 244 KLD & flushing water is 112 KLD. The total fresh water requirement is approx. 244 KLD on daily basis. The wastewater will be treated up to tertiary level in one STP of 350 KLD capacity provided within the complex generating 260 KLD of recoverable treated waste water from STP which will be recycled within the project sit and excess treated waste water will be discharge to existing municipal drain.
8. The power supply shall be supplied by TPCODL. The maximum demand load is estimated at 3658KW There is provision of Power backup for the residential project will be through DG sets of total capacity -1x2000 KVA & 1X1500 KVA silent DG Set.
9. Solid waste generation will be approximately 970 KG/DAY which will be supplied to Bhubaneswar Municipality for further disposal. Recyclable and non-recyclable wastes will be disposed through Govt. approved agency. Hence, the Municipal Solid Waste Management will be conducted as per the guidelines of Solid Wastes Management Rules, 2016.
10. During the operational stage, operation of Standby DG Sets and Vehicular Movements are main source for air pollution. Low sulfur diesel oil (LDO or HSD) will be used in DG sets. Water will be sprinkled to suppress dust, while cleaning and sweeping the roads and pavements. Proper traffic management and provision of acoustic enclosure for silent type

DG sets will control noise level. Plantation along the peripheral boundary walls will also act as acoustic screen or vegetative barrier against the propagation of noise and pollutants.

11. Total project cost is ` 153.84 Cr

12. The Environment consultant **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 04.02.2022.

13. The SEAC in its meeting held on dated 04.02.2022 decided to take decision on the proposal after receipt of the Certain information / documents from the proponent followed by site visit of the sub-committee of SEAC. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Land document with kissam of the land (Sabik and Hal).	The plot no.143 (P) which is comes under the proposed project area already been approved by the Bhubaneswar Development Authority and SEIAA in previous EC Letter no.6389/SEIAA. Paramitra Smart Infra SNA Private Limited is developing the site in partnership with Bhubaneswar Development Authority (PPP Mode). The project (PPP) guideline stipulated a total of 7.797 acres land area allocation out of which 4.146 acres for EWS Housing, 1.551 acre for road widening & remaining 2.1 acres land will be utilized for private development based on the market dynamics and development guidelines. Proposed area is coming under Wholesale Commercial Use Zone as per CDP. Shantipalli slum is located on the land belonging to he General Administration (GA) department. Government of Odisha has decided that BDA, which is also the State Level Nodal Agency, shall implement the in-situ redevelopment project of Santipalli slum. Accordingly, the land (on which the cluster is situated) is being transferred to BDA. There are mostly GA land will be used for construction of private development based on the market dynamics and development guidelines. Attached as **Annexure -1**.
ii)	Layout of internal drains / sewer along with ownership of the land / ROW since the same need to be in favour of PP.	We will treat the waste water of the residential colony in well-designed sewage treatment plant having capacity of 350 KLD (MBBR Type). Excess Treated Water Discharge to Municipal Sewer -14 KLD (during Dry Season) & 54 KLD (during Monsoon Season). The entire common sewage network running all over the project site will handle the sewage from all the units within and is to be setup using 150mm diameter Stoneware pipes/ HDPE pipes. The estimated waste water effluent for treatment within the project site to handle the load. The effluent network shall connect all the units of the project through 150mm diameter HDPE pipes. The pipelines have been designed keeping in mind the requirement per the National Building Code and to operate on natural gravitational flow under the effect of the gradient of 6M difference available within the site. They are of sufficient capacity to handle the sewage / effluent within the project site. 54KLD of treated water from STP, in excess post utilization during

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>monsoon season, shall be connected to Public Sewerage System with the necessary permission from concerned authority. Permission of Bhubaneswar Municipality Corporation is attached as Annexure-2.
The proposed pipeline network, along the Master Plan, and cross-section of pipeline is enclosed here with as Annexure-2A.</td></tr>
<tr><td>iii)</td><td>Permission of the authority of the drain / sewer to take the addl. load of this proposed project including the scheduled operation of the sewer system.</td><td>Corporation is attached as Permission of Bhubaneswar Municipality Annexure-.2
Only54KLD of treated water from STP, in excess post utilization during monsoon season, shall be connected to Public sewearge System with the necessary permission from concerned authority. The municipal adjacent to the project site in North direction of proposed drain exists project site. The existing municipal drain is adeqate to take the extra load of54 KLD which dischrgae only during the rainy season.
as permission of Bhubaneswar Municipality Corporation is attached Annexure-.2</td></tr>
<tr><td>iv)</td><td>Parking in terms of space and ECS for 4 wheelers, 2 wheelers including bicycles be calculated separately for dwellers & visitors (floating population) indicating the norm as well and showing it in the layout map & be submitted.</td><td>
<table>
<tr><th>SL No.</th><th>Name of Area</th><th>Area in Sqm</th><th colspan="2">No. of ECS for4 Wheerlers@ 32sqm and 2wheelers @12 sqm(As per NBC)</th></tr>
<tr><td>1</td><td>Parking provided in Basement -1</td><td>6011.55</td><td colspan="2">188nos -for Dwellers</td></tr>
<tr><td>2</td><td>Parking provided in Basement -2</td><td>6476.62</td><td colspan="2">202nos -for Dwellers</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Parking provided in Basement -3</td><td rowspan="2">6696.92=4132+2565(10% for visitors parking)</td><td>Dwellers</td><td>65no .of ECS for 4 Wheelers 172Nos of parking for 2 wheelers</td></tr>
<tr><td>visitors</td><td>40no .of ECS for 4 Wheelers 107Nos of parking for 2 wheelers</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>4</td><td>Parking provided in Basement -4</td><td>6425.92=3861+2565(10% for visitors parking)</td><td>Dwellers</td><td>60no .of ECS for 4 Wheelers 161Nos of parking for 2 wheelers</td></tr>
<tr><td></td><td></td><td></td><td>visitors</td><td>40no .of ECS for 4 Wheelers 107Nos of parking for 2 wheelers</td></tr>
<tr><td>5</td><td>Surface parking</td><td>36.00</td><td></td><td>Parking for differently abled</td></tr>
<tr><td></td><td>Total</td><td>2567. 01sqm</td><td>Dwelers</td><td>Visitors</td></tr>
<tr><td></td><td></td><td></td><td>4 Wheelers -515 nos. 2 Wheelers -333 nos.</td><td>4 Wheelers-80 nos. 2 Wheelers-214 nos.</td></tr>
</table>
Total parking area required30 %of built up area=23883.sqm
Total parking area provided= 25674. 01sqm
Annexure Parking and traffic layout plan is attached as-.3
</td></tr>
<tr><td>v)</td><td>Stack height of DG sets with installation drawing of exhaust pipe be submitted.</td><td>
<u>DG SETS STACK HEIGHT CALCULATION</u>
• Calculating Stack Height of DG sets For A facility:
be provided with each generator set The minimum height of stack to can be worked out using the follwing formula:
Formula:-
H=h+0. 2x KVA √
Where:
H= Total heightof stack in meter, h = Height of the building in meters
KVA = Total generator capacity of the set in KVA
• For 500 KVA DG Sets
Stack Height = 119+.2√500
= 119+4.47
= 123 Mtr
Say = 123 Mtr.
Annually Predominant wind direction of Bhubaneswar is S & SW
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>direction. Location of DG set will be based on the down wind direction of annually pre-dominant wind direction.
The location of the stack of DG Set is fixed such that it will not have any effect on the surrounding area.

Supporting documents enclosed as Annexure-4.</td></tr>
<tr><td>vi)</td><td>Green belt of plot area detail calculation with dimension continuous around the boundary showing in the layout map shall be submitted.</td><td>
<table>
<tr><td>TOTAL PLOT AREA 8498.7 Sqm.</td><td>TOTAL GREEN AREA 3438.57 Sq.m.</td><td>40.46%</td></tr>
<tr><td>20.66 % Plantation Area</td><td>1755.83 Sq.m.</td><td rowspan="2">139 Nos. Trees</td></tr>
<tr><td>19.80 % Lawn Area</td><td>1682.74 Sq.m.</td></tr>
</table>
<table>
<tr><td></td><td>Name</td><td>Area in Sqm.</td><td>No. of Trees</td><td>Spacing of trees</td></tr>
<tr><td rowspan="6">GREEN BELT AREA</td><td>GB-1</td><td>186.71</td><td>14</td><td>3M</td></tr>
<tr><td>GB-2</td><td>156.35</td><td>11</td><td>3M</td></tr>
<tr><td>GB-3</td><td>195.81</td><td>22</td><td>3M</td></tr>
<tr><td>GB-4</td><td>204.27</td><td>18</td><td>3M</td></tr>
<tr><td>GB-5</td><td>254.12</td><td>13</td><td>3M</td></tr>
<tr><td>TOTAL NO OF LARGE TREES</td><td></td><td>78</td><td></td></tr>
<tr><td rowspan="4">OTHER PLANTATION</td><td>PL-1</td><td>130.04</td><td>14</td><td>2M</td></tr>
<tr><td>PL-2</td><td>492.97</td><td>32</td><td>2M</td></tr>
<tr><td>PL-3</td><td>135.56</td><td>15</td><td>2M</td></tr>
<tr><td>TOTAL NO OF SMALL TREES</td><td></td><td>61</td><td></td></tr>
<tr><td colspan="2">TOTAL PLANTAION AREA</td><td>1755.83 Sq.m.</td><td></td><td></td></tr>
</table>
Landscape plan is attached as Annexure-5.
</td></tr>
<tr><td>vii)</td><td>Recommendations of Fire Safety Deptt.</td><td>Recommendations of Fire Safety Deptt. Is attached as Annexure-6.</td></tr>
<tr><td>viii)</td><td>A comparison table of earlier plan in terms of units, parking, built up area, green belt may be provided with norms.</td><td>
<table>
<tr><td>Description</td><td>As per previous EC (Expansion (After getting the EC, the construction work has not yet started at the project site.)</td><td>Proposed project (Existing+ Additional)</td></tr>
<tr><td>Building plan approval -status</td><td>Approved</td><td>Approved By BDA subject</td></tr>
<tr><td>Blocks /Phases</td><td>Block -02 (2B+G+25)</td><td>One Block (4B+G+36)</td></tr>
<tr><td>Area of plot</td><td>8489.7sq.mt.</td><td>Total Plot area = 8489.7sq.mt.</td></tr>
<tr><td>Built-up area</td><td>49927sq.mt.</td><td>119108.29sq.mt.</td></tr>
<tr><td>Ground coverage</td><td>1912.37sq.mt. (22.5%)</td><td>3111.84sq.mt. (36.62%)</td></tr>
<tr><td>Greenbelt area</td><td>2122.12sq.mt. (25%)</td><td>3438.57sq.mt. (40%)</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>F.A.R</td><td>4.7sq.mt.</td><td>79611.39sq.mt.</td></tr>
<tr><td>Revenue Plot No.</td><td>143(P)</td><td>143(P)</td></tr>
<tr><td>Dwelling Unit</td><td>336</td><td>280</td></tr>
<tr><td>For Residential</td><td>236</td><td>280</td></tr>
<tr><td>Fresh water requirement (KLD)</td><td>186 KLD</td><td>218 KLD</td></tr>
<tr><td>Power requirement</td><td>1713 KW</td><td>2429 KW</td></tr>
<tr><td>STP (KLD)</td><td>290 KLD</td><td>350 KLD</td></tr>
<tr><td>Height of the building</td><td>82mt.</td><td>119 mt.</td></tr>
<tr><td>No. of DG Set</td><td>02 nos. 1250 KVA</td><td>7 nos. 500 KVA</td></tr>
<tr><td>Project cost</td><td>96 Cr</td><td>153.84 Cr</td></tr>
</table>
</td></tr>
<tr><td>ix)</td><td>Structural stability for the change in the building plan from authorised structural Engineer of BDA be submitted.</td><td>Structural stability certificate is attached as Annexure -7.</td></tr>
<tr><td>x)</td><td>Since there is a reduction of 50 dwelling units in the revised proposal, Parking in terms of ECS compatible with the space provided as per norms indicating the norm of space per ECS with the copy of the referred document be submitted.</td><td>Parking provides as per Norms and parking details provides in point no-4.</td></tr>
<tr><td>xi)</td><td>Traffic Study copy be submitted.</td><td>Traffic Study report is attached as Annecure-8.</td></tr>
<tr><td>xii)</td><td>Calculation of RWHP (number) be revisited with maximum hourly rain fall in 24 hours in last 30 years of logical climate data with run off co- efficient s as per the norm/ realistic input and retention time.</td><td>
<table>
<tr><th colspan="5">RAINFALL RUN OFF CALCULATIONS</th><th></th></tr>
<tr><td>Area</td><td>8489.7</td><td>Catchment Area</td><td rowspan="2">Run off Coeff. [C]</td><td rowspan="2">Intensity of Rainfall (m/hr) in mm</td><td rowspan="2">Total (m3/hr) [Q]</td></tr>
<tr><td>Sr. No</td><td>Type of Surface</td><td>In sq.m</td></tr>
<tr><td>1</td><td>Paved Area</td><td>3147.76</td><td>0.65</td><td>0.16</td><td>327.367</td></tr>
<tr><td>2</td><td>Green Area</td><td>3438.57</td><td>0.15</td><td>0.16</td><td>82.52</td></tr>
<tr><td>3</td><td>Terrace</td><td>1912.37</td><td>0.85</td><td>0.16</td><td>260.082</td></tr>
<tr><td>Area (ac)</td><td>2.1</td><td colspan="4">8498.7</td></tr>
<tr><td colspan="5">Grand Total (1+2+3)</td><td>669.97</td></tr>
<tr><td>4</td><td colspan="5">Roof top water will be recharge to ground water through</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td colspan="5">recharge well. Water collected from other area =410m3/hr</td></tr>
<tr><td></td><td colspan="5">Considering 15 minutes retention period</td></tr>
<tr><td></td><td>VOLUME required</td><td>Say</td><td></td><td></td><td>102 m3</td></tr>
<tr><td>5</td><td colspan="5">Considering I No. Rain Water harvesting Pit of Size 3.0 m dia. and 5.0 m depth</td></tr>
<tr><td></td><td colspan="5">Volume of 1 Rain Water harvesting pi</td></tr>
<tr><td></td><td>Dia. of Pit (d) in Mtr.</td><td>=</td><td></td><td></td><td>3</td></tr>
<tr><td></td><td>Depth (D) in Mtr.</td><td>=</td><td></td><td></td><td>5</td></tr>
<tr><td></td><td>Volume of 1 Pit in Cum</td><td>=</td><td colspan="2">Pi X r2 X h</td><td></td></tr>
<tr><td></td><td></td><td>=</td><td colspan="2">3.14 x(1.5x1.5)x5</td><td>35.325</td></tr>
<tr><td></td><td>Say</td><td>=</td><td></td><td></td><td>35</td></tr>
<tr><td>6</td><td colspan="5">Total Nos of Rain Water Harvesting Pits</td></tr>
<tr><td></td><td>Total Volume Required</td><td>=</td><td colspan="2">102 m3</td><td></td></tr>
<tr><td></td><td>Volume of Unit Harvesting pit</td><td>=</td><td colspan="2">35</td><td></td></tr>
<tr><td></td><td>Total number of pits</td><td>=</td><td colspan="2">2.9</td><td></td></tr>
<tr><td></td><td>say</td><td>=</td><td colspan="2">3</td><td></td></tr>
<tr><td></td><td colspan="5">Providing 5 No of Rain Water Harvesting Pit of size 3.0m dia x 5.0m depth</td></tr>
</table>
Layout plan showing recharge pit is attached as Annexure-9.
</td></tr>
<tr><td>xiii)</td><td>Plan with detail calculation of solar power consumption vis-a- vis the generation and as percentage of total power demand be submitted.</td><td>
<table>
<tr><td>Solar Water Heating</td><td>20 % of total hot water requirement must be catered through Solar Thermal system</td><td>Total No. of Occupants in 4BHK @ 7 persons /flat = 280 x 7 = 1960nos.
Hot Water Requirement @ 25 lpcd x 1960 = 49000 liters
Solar Hot water system for 20 % of capacity = 9800 liters
Solar Panel Nos@ 500 Liter/Panel = 19.6 Nos.
Say = 20 Nos</td></tr>
<tr><td>Solar PV Panel</td><td>Providing for emergency lighting of common area (staircase, lift lobby lobby, basement etc.</td><td>5% of Demand Load SPV Modules of 445 Wp or above for a total capacity 128KW</td></tr>
</table>
</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent		
				SPV Panel Nos.@ 445 Wp/Panel = 288 Nos.

14. The SEAC in its meeting held on dated 15.03.2022 decided to take decision on the proposal after the site visit by the sub-committee of SEAC.

15. The proposed site was visited by the sub-committee of SEAC on 22.03.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

    a) Provision of bio waste or compost converter.
    b) Management of other solid wastes with documentary evidence.
    c) Agreement copies of BDA on Santipali slum development.
    d) No of OHT and Tanks for Dual Plumbing.
    e) Traffic study from reputed institute.
    f) All other points of Proceeding to be complied if not done.

16. The SEAC in its meeting held on dated 12.04.2022 decided to take decision on the proposal after receipt of information / documents as pointed out at para 15 above.

17. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
1.	Provision of bio waste or compost converter.	Attached as **Annexure-1.**
2.	Management of other solid wastes with documentary evidence.	Attached as **Annexure-2.**
3.	Agreement copies of BDA on Santipali slum development.	Attached as **Annexure-3.**
4.	No of OHT and Tanks for Dual Plumbing.	Attached as **Annexure-4.**
5.	Traffic study from reputed institute.	Attached as **Annexure-5.**
6.	All other points of proceeding to be complied if not done.	All other points of proceeding has been complied.

Considering the information furnished and the presentation made by the consultant, **M/s Visiontek Consultancy Services Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – C** in addition to the following specific conditions**.**

i) **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.**

ii) 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

iii) The proponent shall use solar energy atleast to the tune of of 5%of total power requirement as proposed.

iv) Trees located within the project area shall be transplanted to alongside the boundary green development area.

v) 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.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

viii) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

ix) The structural stability shall be vetted by NIT or IIT before construction

x) The PP shall adhere to terms of Agreement with BDA

xi) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENT CLEARANCE OF M/S ASSOTECH SUN GROWTH ABODE LLP FOR CONSTRUCTION OF MULTISTORIED RESIDENTIAL BUILDING "ASSOTECH PRIDE PHASE-1 EXTENSION" OVER PLOT AREA - 65383.16 SQM. LOCATED AT MOUZA- RUDRAPUR, BHUBANESWAR, DIST-KHURDA, ODISHA OF SRI. SASHANKA SHEKHAR ROUT (VICE PRESIDENT) (TOTAL BUIT UP AREA – 3,50,733.31SQM.) – EC

1. M/s Assotech Sun Growth Abode LLP (LLP Identification Number is (LLPIN) AAA-8036) is an Assotech Group company, which is the developer of this project. The Assotech Group was formed in the year 1986 and during the last 35 years the group has delivered projects in UP (Noida, Greater Noida, Ghaziabad), Haryana, (Gurugram & Faridabad) in Delhi NCR, Uttrakhand (Rudrapur-Nainital), Madhya Pradesh (Gwalior) and Odisha (Bhubaneswar). It has delivered over 45 projects comprising of over 40,000 residential apartments, shopping units and industrials project.
2. Currently the Assotech Group is developing affordable housing projects in Jharkhand (Ranchi) comprising of over 2500 apartments in four phases. It also proposes to develop similar project in Bhubaneswar located at Plot No. 274, NH-16, Rudrapur, Bhubaneswar.
3. It is also developing mid-segment housing project in Gurugram, Noida and Ghaziabad. These Projects nearing completion. Assotech Group has successfully completed 840 apartments housing complex "COSMOPOLIS" at Khandagiri, Dumduma, Bhubaneswar.
4. M/s Assotech Sun Growth Abode LLP. has Proposed Multistoried Residential Building "Assotech Pride Phase-1 Extension" over Plot No. - 274/9190, 276, 277/856, 277/8893, 279/10152, 279 & others Khata No: 412/1079, 412/1349 & others of Mouza-Rudrapur, PS-Balianta, Tehsil-Bhubaneswar, Dist-Khurda, Odisha. The Environment Clearance for existing building is already obtained from State Environment Impact Assessment Authority vide letter no. 7484/SEIAA, dated 06.11.2019 and Consent to Establish is obtained from State Pollution Control Board vide letter no. 693/IND-II-CTE-6353, dated 21.01.2020.
5. The Geographical co-ordinate of the project site is: Latitude –20^0 19' 40.2" to 20^0 19' 37.7" N & Longitude - 85° 53' 08.4"to 85° 53' 05.2" E. The project site is well connected with National Highway NH-16at a distance of approx 0.2 Km in West direction. The nearest railway station is Mancheswar Railway station at a distance of approx 4.24 Km in West direction& Bhubaneswar Railway Station at a distance 8.9 Km in South-west direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 10.8 Km in South-west direction from project site.
6. The maximum temperature is about 36.0^o C and the minimum temperature is 16.0^o C felt in the area. The average annual rainfall in the area is 1326.16 mm.
7. **The building details of the project are given below:**

Particular	Existing	Proposed	Total
Project Name	**Assotech Pride, PH-1 EXTENSION**		
Net Plot Area	52825.37 sqm (13.050 Acre)	14433.63 sqm (3.566 Acres)	67259.00 sqm (16.615 Acres)
Ground Coverage	23387.05sqm	15556.05 sqm	38943.10 sqm
FAR (Floor Area Ratio)	118843.72 sqm	166782.00 sqm	285625.72 sqm
Built up Area	136017.28 sqm	214716.03 sqm	350733.31 sqm
Maximum Height	45 m	130 m	130 m
Road Area	10506.06 sqm	9333.94 sqm	19840.00 sqm

Particular	Existing	Proposed	Total
Podium/Basement Parking	22015.70 sqm	43940.59 sqm	65956.29 sqm
Open Surface Parking	5500.00 sqm	146.72 sqm	5646.72 sqm
Total Parking Area	**27515.70 sqm**	**44087.31 sqm**	**71603.01 sqm**
Green Belt Area	23847.39 sqm (45.14 %)	-231.39 sqm	23616.00 sqm (35.11%)
Power/Electricity Requirement & Sources	Total - 4232 KW (4702 KVA) Solar - 455 KW (506 KVA) CESU - 3777 KW (4196 KVA)	Total - 2758 KVA Solar - 54 KVA TPOCDL - 2704 KVA	Total - 7460 KVA Solar - 560 KVA TPCODL – 6900 KVA
Capacity of DG sets	1500 KVA	4500 KVA	6000 KVA
Water requirement	551.4 KLD (Fresh)	241.4 KLD	792.8 KLD
Sewage Treatment Plant	750 KLD	300 KLD	1050 KLD
Estimated Population-Residential, Commercial, Floating/visitors	5930 nos.	2830 nos.	8760 nos.

8. The daily power requirement for the proposed complex is preliminarily assessed as **7460 KVA** (Solar System- 560 KVA&TPCODL – 6900 KVA). In order to meet emergency power requirements during the grid failure, there is provision of 6 nos. of DG set having total capacity 6000 KVA for power back up in the Residential Building Project.
9. For energy conservation, Roof Top Solar Power plant for captive power Generation = 12x 38KW = 560 kVA, Total Energy Conservation = 7460 KVA, Total Energy saving = 560/7460 = 8 %.
10. Fresh make up of 792.8 m^3/day will be required for the project which will be sourced from Ground water. Waste water of 1017 KLD will be treated in a STP of 1050 KLD capacity, which includes primary, secondary and tertiary treatment. After treatment the treated water will be discharge to the Prachi Drain.
11. Rain Water will be harvested through 23 nos. of recharging pits.
12. Firefighting system will be installed as per recommendation of the Firefighting Officer, Odisha and as per the guideline of NBC (part-4).
13. Green belt will be developed over an area of 23616.0 sqm which is 35.11% of the plot area; by using the local species like Casia Fistula, Conocarpus, Agave, Amla, Mango, Water Apple, Royal Palm, etc.
14. From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 3942 kg/day. The generated solid waste from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate-coloured beans. Proper waste management practices will be adopted during the collection, storing and disposal of the generated solid waste.

15. Solid waste from sweeping and Dry Garbage containing non-biodegradable wastes like polythene bags, metal, ceramic Waste, glass etc. shall be stored in separate garbage bin and send to approved recyclers. Around 140 kg/day of STP sludge will be generated.

S. No.	Category	Counts (heads)	Waste generated (kg/day)
i)	Residents	8760 @ 0.45 kg/day	3942.0
ii)	Floating Population	876 @ 0.15 kg/day	131.4
iii)	STP sludge		140.0
TOTAL SOLID WASTE GENERATED			**4213.4 kg/day**

16. Total Capital Cost = ` 624 Crores

17. Environment Management Cost = ` 2.62 Crores

18. The Environment consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., N-5/305, IRC Village, Bhubaneswar** along with the proponent has made a presentation on the proposal before the Committee on 04.02.2022.

19. The SEAC in its meeting held on dated 04.02.2022 decided to take decision on the proposal after receipt of the certain information / documents from the proponent followed by site visit by the Sub-Committee of SEAC to the proposed site. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Provisions of solar power (8%) of total power demand in stated to have been made. Details of plan and consumption calculation vis-s-vis the generation of the same be submitted.	Total power generation from solar system is 565 KVA. Total power demand of the Project is 7460 KVA. So total solar power generation from the proposed Project is 7.57% of total power demand. Details solar calculation is attached in **Annexure-1**.
ii)	Layout of internal drains in project with connection to existing drains.	The Layout Plan showing internal drain line of the building with connected to existing drain is attached in **Annexure-2**.
iii)	Permission from BMC and Highway authority (if the drain is immediately connecting to adjacent highway drain) for discharge of treated water.	The nearest drain to the proposed project site is Prachi Nala which is adjacent to the project site. The drainage plan has been approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 24923, dated 10.09.2019. BMC drainage approval letter is attached in **Annexure-3**.
iv)	Layout drawing showing separate parking for commercial, residential and floating population with separate entry and exits for the same.	The layout plan showing separate parking for Residential and Floating population with separate entry and exits is attached in **Annexure-4**.
v)	Traffic study report and fire clearance	The traffic density report has been vetted by Indian Institute of Technology (IIT) Bhubaneswar. Traffic study report is attached in Annexure-5 and Fire

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		Clearance recommended letter is attached in **Annexure -6**.

20. The SEAC in its meeting held on dated 15.03.2022 decided to take decision on the proposal after the site visit by the sub-committee of SEAC.

21. The proposed site was visited by the sub-committee of SEAC on 16.03.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

    a) There is a dead canal inside the premises of the project. The possession and permission including developments of the same like- constructing Culvert etc to be provided from the appropriate authority.

    b) Water storage arrangements and permission from appropriate authority.

    c) Main Entry and Exist drawing with dimensions and pavements provision.

    d) Total Parking, ECS and Visitor Parking (both 2 and 4 wheelers). Also % of visitor parking w.r.t. total parking.

    e) Land details for Service Plots including Ownership and Kisam.

    f) Solid waste disposal facilities and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated).

    g) NOC from BMC for drain connection and disposal of treated water load of the project.

    h) Copy with Possession of Private land connecting the final drain (external).

    i) Drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting.

    j) Details of WTP if any.

    k) Source of water with permission letter, Fire permission.

    l) No of OHT and Tanks for Dual Plumbing.

    m) Certified compliance report of PH-1 or earlier project.

    n) Party to give an undertaking that all statutory permissions including CGA, Fire etc to be obtained for the composite project as a whole.

22. The SEAC in its meeting held on dated 12.04.2022 decided to take decision on the proposal after receipt of information / documents as pointed out at para 21 above.

23. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	There is a dead canal inside the	We have submitted the letter to

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	premises of the project. The possession and permission including developments of the same like-constructing Culvert etc to be provided from the appropriate authority.	Superintending Engineer, Prachi Division, Bhubaneswar for construction of V.R. Bridge over Rudraour Sub-Minor Crossing. Submitted Letter is attached in **Annexure-1**.
ii.	Water storage arrangements and permission from appropriate authority.	We have submitted the letter to Superintending Engineer, Prachi Division, Bhubaneswar for using of canal to Water Reservoir & Rain Water Harvesting purpose. Submitted Letter is attached in **Annexure-2**.
iii.	Main Entry and Exist drawing with dimensions and pavements provision.	Main Entry and Exit drawing with dimension and pavement provision is attached in **Annexure-3**.
iv.	Total Parking, ECS and Visitor Parking (both 2 and 4 wheelers). Also % of visitor parking w.r.t. total parking.	Total parking area provided for the proposed project is 71603 sqm and total ECS provided for the 2527 ECS. Details calculation & Parking Layout is attached in **Annexure-4**.
v.	Land details for Service Plots including Ownership and Kisam.	Details Land document for Service Plots is attached in **Annexure-5**.
vi.	Solid waste disposal facilities and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated)	Total 4213.4 kg/day Solid Waste generated from the proposed building and solid waste will be processed in Organic Waste Converter. We have tie up with M/s Clean City Bhubaneswar for garbage disposal. Details are attached in **Annexure-6**.
vii.	NOC from BMC for drain connection and disposal of treated water load of the project.	Drainage Plan has been approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 24923, dated 10.09.2019. Drainage approval letter is attached in **Annexure-7**.
viii.	Copy with Possession of Private land connecting the final drain (external).	Possession Document for private land connecting to the final drain is attached in **Annexure-8**.
ix.	Drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting.	Total 31 nos. of Rain Water Harvesting pits has been provided in the proposed building. Details Rain Water Harvesting calculation & Drainage map of internal drains is attached in **Annexure-9**.
x.	Details of WTP if any	Water Treatment Plant is proposed for the residential building. Detail drawing of WTP is attached in **Annexure-10**.
xi.	Source of water with permission letter, Fire permission.	Water permission from CGWA & Fire Clearance is attached in **Annexure-11**.
xii.	No of OHT and Tanks for Dual	Details of Over Head Tank (OHT) and

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	Plumbing.	Tanks for dual plumbing are attached in **Annexure-12**.
xiii.	Certified compliance report of PH-1 or earlier project.	Certified Compliance report of Phase-1 is attached in **Annexure-13**.
xiv.	Party to give an undertaking that all statutory permissions including CGA, Fire etc to be obtained for the composite project as a whole.	All statutory permission is attached in **Annexure-14**.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., N-5/305, IRC Village, Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – D** in addition to the following specific conditions**.**

i) **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.**

ii) 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

iii) The proponent shall use solar energy at least of 5% of total power requirement as proposed.

iv) Trees located within the project area shall be transplanted to alongside the boundary green development area.

v) 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.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

viii) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

ix) Separate Entry and Exit Gate for Residential and Commercial shall be implemented

x) 40% parking for commercial and 30% parking for residential and 10% of total parking for visitors shall be maintained minimum with separate area for residential and commercial parking

xi) From the Traffic study it is seen that the study was carried out by CEMC and based on the data collected IIT has vetted it. Since, the study was not carried out by a reputed institute, fresh traffic study shall be conducted by a reputed institute and submitted to SEIAA with mitigation plan if any within a period of 3 months.

xii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S LA DEVELOPERS FOR RESIDENTIAL & COMMERCIAL PROJECT OVER A BUILT-UP AREA 56147.44 SQR LOCATED AT MOUZA- NAYAPALLI & MADHUSUDAN NAGAR, DISTRICT-KHURDA, BHUBANESWAR OF SRI DILIP KUMAR MOTWANI – EC.

1. M/s LA Developers proposes to construct a Residential cum Commercial project located at 1392, 1393, 1398, 1398/3312 & 3313, 1396/3382, 1394/4908/ & 4909, 1394/4966 & 4967, 1341/2127 & 2128 & 2129, 897,897/1822, 898, 899, 900, 901/1740 & 1776, 902/1777, 902/1754, 902/1971, 902, 903, 903/1755, 904/1736, 904/1976, 904/1972, 904/1837, 904/1909, 911,911/1495 &1970, 911/1495, 912/1727, 893/1906, 896, 895 of Mouza-Nayapalli & Madhusudan Nagar, District Khurda, Bhubaneswar, Odisha on a land measuring 2.90 acres or 11756.34 m^2.
2. The nearest Railway Station is Bhubaneswar Railway Station 2.6 km (SE) away from the project site and Biju Patnaik International Airport is at a distance of approx. 3.2 km in SW direction from the project site.
3. The project falls under category “B” or activity 8 (a) - Building and construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
4. The site is coming under development plan of Bhubneshwar Development Authority. The project having total 15 floors (LB+UB+G+14). The maximum height of the building will be 44.51 m.
5. The total plot area is 11756.34 sqm. Net Plot Area is 9590.78 sqm.
6. The permissible ground coverage will be 3836.31 sqm (39.99%) and proposed Ground Coverage will be 3053.66 (31.83%).
7. The permissible FAR will be 57544.68 sqm (@ 6 of plot area) and proposed FAR will be 40798.37 (4.253).
8. The Non-FAR for the project will be 15349.07 sqm.
9. Total Built up area for the project will be 56147.44 sqm.
10. The total population of project after operation of the project will be 1587 persons.

11. **Water Requirement:** The total water requirement will be Ground water met through Bore well which is approx. 170 KLD, out of which total domestic water requirement is 140 KLD. The total domestic water will be 140KLD, out of which fresh water requirement is approx. 104 KLD & flushing water will 57 KLD.
12. **Waste water details:** The project will generate approx. 140 KLD of wastewater. The wastewater will be treated in an onsite STP of 170 KLD capacity. The treated water (126 KLD @ 90% of total waste water) will be reused for flushing (57 KLD), horticulture (10 KLD). Surplus treated water during dry season (59KLD), monsoon season (68 KLD) and winter season (65KLD) will be discharged to external sewer with the requisite permission.
13. Total 16 Rain Water Harvesting (RWH) pit at different locations will be constructed.
14. **Parking Requirement:** Total parking area requirement will be 12377.09 m^2. And Total Parking i.e. 438 ECS will be provided.
15. **Power Requirement:** The power supply will be supplied by State Electricity Board. The requirement load for the project will be approx. 1247 kVA.
16. **Power Backup:** There is provision of 2 Nos. of DG sets of total 1500 kVA (2x 750 kVA) capacity for power back up out of which one DG set of 750 KVA will be kept as standby. Silent DG sets (Radiator cooled). Separate generator yard will be constructed for the residential block.
17. The total solid waste generation will be 675 kg/day.
18. Total green area measures 2416.08 m^2 i.e. 25.16% of the net plot area.
19. Total Project cost is ` 99.156 Crores including land and development cost.
20. The Environment consultant **M/s Grass Roots Research & Creation India (P) Ltd** along with the proponent has made a presentation on the proposal before the Committee on 18.02.2022.
21. The SEAC in its meeting held on dated 18.02.2022 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by site visit of the sub-committee of SEAC.
    i) Land document with kissam of the land (Sabik and Hal) and conversion of land to Gaharabari from Revenue Authority before start of the construction work.
    ii) Layout of internal drainage map and their fallout to external public drain.
    iii) Copy of permission of the concerned authority of the drain / sewer to discharge the treated water from project to the nearby drain including the ownership of the land/ ROW of the land between the project boundary and the public drain. In case of sewer, the schedule of operation of the same from the appropriate authority be submitted
    iv) Parking in terms of space and ECS for 4 wheelers, 2 wheelers including bicycles be calculated separately for dwellers & visitors (floating population) and commercial indicating the norm as well and showing it in the layout map & be submitted. Separate entry and exit gates for residential and commercial to be submitted in layout. Parking for 438 ECS has been stated to be provisioned as against 795 ECS as per MOEF&CC, Govt. of India guide norm as mentioned by PP. The difference be explained.

v) Copy of Traffic Study be submitted and it should cover all sensitive intersecting traffic points.

vi) Break up of greenbelt of plot area in terms of plantation and landscape. Revisit the detail calculation of 25% green belt in terms of norm of MoEF&CC, Govt. of India with dimension continuous around the boundary showing in the layout map be submitted

vii) Recommendations of Fire Safety Deptt. with peripheral road fir movement of fire fighting vehicles and fire control measures

viii) Plan with detail calculation of solar power consumption vis- a- vis the generation and as percentage of total power demand be submitted.

ix) Procedure to be undertaken to reduce noise level within limit during construction phase so that it is not affected to nearby vicinity and employees.

x) Procedure for regular monitoring of quality of treated water to be discharged to the drain.

xi) Physio-chemical analysis of ground water to be submitted.

xii) Copy of letter from PHED Deptt. for refusing to provide water supply to project site and also copy of refusal letter of WATCO for water supply to the project. Quality of ground water (physico- chemical analysis/ parameters), if used, be submitted. NOC from CGWA & permission from Water Resources Department, Government of Odisha need to be submitted for use/ drawl of ground water. Quantity of rain water to be harvested vis- a- vis the norm of CGWA be confirmed as against the proposed drawl of ground water

xiii) Layout map for commercial and residential complex.

xiv) Copy of letter of in-principal approval of building plan by BMC.

xv) Internal drain map.

xvi) Use of Compost converter for treatment of Sewarage solid waste

xvii) STP and ETP process details with technology adopted and post monitoring schedules

xviii) Copy of Airport Authority Clearance for height of the building.

xix) Stack height and position justification.

xx) In view of various options of Water supply provision, WTP is to be shown in the layout plan.

xxi) Provision of Lift, Light, Ventilation, and Fire Safety from the lowest basement to the terrace roof for Health and Safety of the Dwellers to be incorporated in the layout plan.

xxii) Provision of numbers with the capacity of Over Head Tank for Fresh Water for Drinking and Bathing purpose and Treated STP Waste Water exclusively for Toilet Flush with Dual Plumbing System to be incorporated in the Project.

xxiii) Submission of list of measure Electrical equipment like Transformer, DG, Lifts and other Electrical Appliances, Fixtures, Instruments and Devices likely to be installed in the Project along with its Star Rating as per BEE, Ministry of Power, Govt. of India, New Delhi as per the provision of Energy Conservation Act - 2003.

22. The project proponent was requested vide letter no. 228 (2)/ SEAC–(Misc)-28, dated 03.03.2022 to submit the information / documents as sought by the SEAC at para 21 above. But, they have not yet furnished the same

23. The proposed site was visited by the sub-committee of SEAC on 22.03.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

    a) Certificate of Structural Stability from appropriate authority as it is situated adjacent to the big drain.
    b) Water resources department permission as commercial unit is a part of the project
    c) Provision of compost converter and how other solid wastes shall be managed with documentary proof of any agreement done for the same.
    d) Traffic study from a reputed institute
    e) Technology to be adopted for sewerage, waste water treatment and provision of Bio waste converter if any (details) to be given
    f) Revenue map of land superimposing the project site and plot plan starting the entry areas.
    g) Kisam and ROR of land
    h) Internal drain map showing fall out to existing drain.
    i) Permission from BMC for discharging excess treated water.
    j) **All points mentioned in proceeding**

24. The SEAC in its meeting held on dated 12.04.2022 decided to take decision on the proposal after receipt of information / documents as requested vide letter no: 228 (2)/ SEAC–(Misc)-28, dated 03.03.2022 and as sought by the Sub-Committee of SEAC at para 23 above.

25. The project proponent has furnished the compliance as requested vide letter no**: 228 (2)/ SEAC–(Misc)-28, dated 03.03.2022** and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
1.	Land document with kissam of the land (Sabik and Hal) and conversion of land to Gaharabari from Revenue Authority before start of the construction work.	Copy of Land documents with kissam of the land (Sabik and Hal) and conversion of land to Gaharabari is attached as **Annexure-I**.
2.	Layout of internal drainage map and their fallout to external public drain.	Layout of internal drainage map and their Fallout to external public drain is attached as **Annexure-II**.
3.	Copy of permission of the concerned authority of the drain / sewer to discharge the treated water from project to the nearby drain including the ownership of the land/ ROW of the land between the project boundary and the public drain. In case of sewer, the schedule of operation of the same from the appropriate authority be	We will discharge the surplus treated water to existing drain which is adjacent to the site and we are in progress to obtain the permission for the same. We will submit the copy of permission within a month. A copy of undertaking for the same is attached as **Annexure-III**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	submitted.	
4.	Parking in terms of space and ECS for 4 wheelers, 2 wheelers including bicycles be calculated separately for dwellers & visitors (floating population) and commercial indicating the norm as well and showing it in the layout map & be submitted. Separate entry and exit gates for residential and commercial to be submitted in layout. Parking for 438 ECS has been stated to be provisioned as against 795 ECS as per MOEF&CC, Govt. of India guide norm as mentioned by PP. The difference be explained.	Revised parking Calculations: 2 wheelers parking = 65.77 or 66 ECS i.e. 132 Nos. 4 wheelers parking = 363ECS i.e. 363 Nos. Bicycle parking =8.77 or 9 ECS i.e. 27 Nos. Total Proposed ECS=66+363+9=438 ECS 10% of the proposed parking will be visitor parking i.e 44 ECS. Hence, revised parking including 4 wheelers, 2 wheelers, bicycle and visitors Parking will be 482 ECS. There was typographical mistake mentioning 795 ECS. Please consider 482 ECS as per Bhubaneswar Building by laws. Revised traffic Plan showing separate entry and exit is attached as **Annexure-IV**.
5.	Copy of Traffic Study be submitted and it should cover all sensitive intersecting traffic points.	Copy of Traffic Study Report with all sensitive intersecting traffic points is attached as **Annexure-V**.
6.	Break up of greenbelt of plot area in terms of plantation and landscape. Revisit the detail calculation of 25% green belt in terms of norm of MoEF&CC, Govt. of India with dimension continuous around the boundary showing in the layout map be submitted	Total green is proposed to be 2416.08 m2 (25.15% of net plot area) which will include Plantation area = 1,932.54 m2 (20.15%) + Lawn area = 479.53 m2 (5%). No. of trees required = 1 tree/80 sqm. of net plot area = 9,590.78/80 = 119.88 say 120 nos. Total no. of trees proposed = 150 nos. Copy of Layout Plan is attached as **Annexure-VI.**
7.	Recommendations of Fire Safety Deptt. with peripheral road fir movement of fire fighting vehicles and fire control measures	Copy of Fire Recommendation is attached as **Annexure-VII**.
8.	Plan with detail calculation of solar power consumption vis- a- vis the generation and as percentage of total power demand be submitted.	The requirement load = 1247 kVA = 997.6 KW Required Solar Power As per guidelines =

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		104 kW i.e. more than 5% Required No of Solar Panel@395watt =264 Nos. Undertaking for solar is attached as **Annexure-VIII**. Plan for Solar Power installation is attached as **Annexure-IX**.
9.	Procedure to be undertaken to reduce noise level within limit during construction phase so that it is not affected to nearby vicinity and employees.	The average sound level recorded at the project site is found to be 63.2 dBA in day time; this was due to residential and commercial activities near the project site and traffic movement on the highway as well as adjacent roads near the project. However, the sound level was found to be well within the acceptable range (65–55 dBA). Following Mitigation Measures to be adopted to reduce noise level during construction Phase- • Regular maintenance of construction machinery. • The site will be enclosed with 5m high barricade wall at the periphery. As per National Building Code (NBC) 2005, barrier blocks reduce external LA10 noise level to at least 60-70dB (A) at any point 1.0 m from inward looking façade. • The DG sets will be acoustically enclosed
10.	Procedure for regular monitoring of quality of treated water to be discharged to the drain.	In general, the grab samples to be collected for physical, chemical tests and microbiological tests (sampling, procedures described in 'Standard Methods for the Examination of Water and Wastewater (APHA)'). The representative sample will be taken in a washed clean plastic bottle. The collected sample require on the spot analysis for parameters such as DO, pH and residual chlorine. When the samples are taken, the containers will be preserved immediately in a suitable ice box till they are taken to a laboratory and preserved in the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		refrigerator there till they are taken up for analysis. 2 to 3 litres of grab sample would be enough to perform all the tests and repeat some tests, if required. All samples will be immediately transported to the laboratory for analysis.
11.	Physio-chemical analysis of ground water to be submitted.	Physio-chemical analysis Reports of ground water is attached as **Annexure-X**.
12.	Copy of letter from PHED Deptt. for refusing to provide water supply to project site and also copy of refusal letter of WATCO for water supply to the project. Quality of ground water (physico- chemical analysis/ parameters), if used, be submitted. NOC from CGWA & permission from Water Resources Department, Government of Odisha need to be submitted for use/ drawl of ground water. Quantity of rain water to be harvested vis- a- vis the norm of CGWA be confirmed as against the proposed drawl of ground water	We are in progress to obtain permission from PHED Deptt. & WATCO for water supply to project site. An undertaking regarding the same is attached as **Annexure-III.** If the concerned authority will refuse to supply the municipal water then only we will use ground water as we have received NOC from CGWA vide letter No. CGWA/NOC/INF/ORIG/2021/13792 dated 24.11.2021. Copy of the same is attached as **Annexure-XI**. Physio-chemical analysis Reports of ground water is attached as **Annexure-X**. We are in progress to obtain permission from Water Resources Department, Government of Odisha, undertaking regarding the same is attached as **Annexure-III**. We will collect 343 cum or KLD storm water in 16 RWH pits to recharge the ground water. Detailed calculations with RWH pit diagram are attached as **Annexure-XII**.
13.	Layout map for commercial and residential complex.	Layout of commercial & residential complex is attached as **Annexure-XIII**.
14.	Copy of letter of in-principal approval of building plan by BMC.	We have applied to Bhubaneswar Municipal Corporation for Building plan approval and we have correspondence letter from BMC for submission of EIDP fee vide letter no. 17961 dated 23.03.2022. We also have submitted the demand

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		draft to BMC as EIDP fee. Copy of the same is attached as **Annexure-XIV**.
15.	Internal drain map.	Copy of Internal drain map is attached as **Annexure-XV.**
16.	Use of Compost converter for treatment of Sewerage solid waste	The bio degradable waste including sewerage solid waste will be treated in in house Organic Waste Converter and the compost will be used as manure Detailed calculation of organic waste converter is attached as **Annexure – XVI.**
17.	STP and ETP process details with technology adopted and post monitoring schedules	As this is a residential project along with some necessary commercial facilities so that we will installed STP only. There will no provision of ETP. The STP will be MBBR based technology. Details of STP along with technology adopted is attached as **Annexure-XVII**.
18.	Copy of Airport Authority Clearance for height of the building.	Copy of Airport Authority Clearance for height of the building is attached as **Annexure-XVIII**.
19.	Stack height and position justification.	DG Stack calculations are attached as **Annexure-XIX**. DG set and DG stack will be installed in SE direction as per wind pattern.
20.	In view of various options of Water supply provision, WTP is to be shown in the layout plan.	15 cum/h water generation W. T. P will be Provided in our project. Undertaking regarding the same is attached as **Annexure-III**.
21.	Provision of Lift, Light, Ventilation, and Fire Safety from the lowest basement to the terrace roof for Health and Safety of the Dwellers to be incorporated in the layout plan.	Provision of Lift, Light, Ventilation, and Fire Safety from the lowest basement to the terrace roof for Health and Safety of the Dwellers are provided in layout plan. Copy of Basement Plans is attached as **Annexure-XX**.
22.	Provision of numbers with the capacity of Over Head Tank for Fresh Water for Drinking and Bathing purpose and Treated STP Waste Water exclusively for Toilet Flush with Dual Plumbing System to be incorporated in the Project.	**For Block-A** 1 No. of Domestic Over Head Tank of 20 cum Capacity. 1 No. of Flushing Over Head Tank of 15 cum Capacity.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		1 No. of Over Head Fire Fighting Tank of 5 cum Capacity **For Block-B** 2 No. of Domestic Over Head Tank of 20 cum Capacity. 2 No. of Flushing Over Head Tank of 10 cum Capacity. Capacity of Over Head Fire Fighting Tank=5 cum Copy of Dual Plumbing Plan is attached as **Annexure-XXI**
23.	Submission of list of measure Electrical equipment like Transformer, DG, Lifts and other Electrical Appliances, Fixtures, Instruments and Devices likely to be installed in the Project along with its Star Rating as per BEE, Ministry of Power, Govt. of India, New Delhi as per the provision of Energy Conservation Act - 2003.	All Electrical equipment like Transformer, DG, Lifts and other Electrical Appliances, Fixtures, Instruments and Devices will with 3 star rating will be installed at project site.

26. The project proponent has not yet submitted the information / documents as sought by the Sub-Committee of SEAC at para 23 above.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the information / documents as sought by the Sub-Committee of SEAC at para 23 above.

As per compliance furnished, EC needs to be recommended with specific conditions.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF BIO-TECH SOLUTIONS FOR COMMON BIOMEDICAL WASTE TREATMENT FACILITY (CBWTF) OVER AN AREA 1.058 ACRES AT PLOT NO 155/1020 AND 15/1025, VILLAGE - JAMAPALLI, TAHASIL - BINIKA, DIST- SUBARNAPUR OF SRI RAJENDRA KUMAR SAHU -TOR

1. The proposal was considered by the committee to determine the "Terms of Reference (ToR)" for undertaking detailed EIA study for the purpose of obtaining environmental clearance in accordance with the provisions of the EIA Notification, 2006 and amendment thereafter.
2. M/s. Bio-Tech Solutions has proposed Common Biomedical Waste Treatment Facility (CBWTF) at Plot No 155/1020 and 15/1025, Village: Jamapalli, Tehsil: Binika, Dist: Subarnapur, State: Odisha.

3. Proposed project falls under Projects activity 7 (da) “Biomedical Waste Treatment Facilities” as per EIA Notification dated 14th September, 2006 and its subsequent amendments made in 17th April 2015.
4. The Geographical Coordinates are Latitude: 21° 5'20.90"N & Longitude: 83°45'43.60"E.
5. Application for ToR approval was submitted on 14th Jan, 2022.
6. There is no Common Bio Medical Waste Treatment Facility in South-West Odisha. Distance from existing facility which is located in Sundargarh district to their proposed project is about more than 75km.
7. The land has been already owned by M/s. Bio-Tech Solutions.
8. The total area for the proposed facility is 2.0 Acre acquired by company where and total project area is 1.058 Acre.
9. PP has also secured CTE from OSPCB Vide Letter No. 6053/III CON (NOC)/164/2021-22 dated 18.11.2021.
10. There is no National Park/ Wild Life Sanctuary. However, some RF/PF has been observed in 10 km radius of the project area for which NOC has been obtained from DFO, Subarnapur Forest Division.
11. No Interstate Boundary within 10 km radius of the Project Site. Hence, general condition as specified in EIA Notification 2006 is not applicable for Category 7(da) Projects.
12. Total Water required during operation phase would be 9 KLD.
13. Total Power requirement during operation phase would be 150 KVA. One DG set is also proposed as a back in case of power failure, having 75 KVA capacity.
14. 30 (permanent) employees will be hired for the proposed facility during operation phase.
15. Total cost of the project is estimated to be Rs 1.90 Crores.
16. The area for project development would be 1.058 acre. The company will carry out greenbelt/plantation in 33.36% of the total dedicated area.
17. For Liquid Effluents Management, 6 KLD of ETP is proposed with ZLD Concept.
18. For Domestic Waste Water Management, Septic Tank followed By Soak pit is proposed.
19. This is purely independent project and does not interconnect with any other project. No alternative site has been examined as the proposed expansion will be done within the existing area.
20. The Environment consultant **M/s Vardan Environet, Plot No. 82A, Sector-5, IMT Manesar, Gurugram, Haryana-122051** along with the proponent has made a presentation on the proposal before the Committee on 19.02.2022.
21. The SEAC in its meeting held on dated 19.02.2022 decided the following:

A. Decision on issue of ToRs for EIA Study for the proposal to be taken after receipt of the following information / documents from the proponent.

i) Certificate from the State Pollution Control Board, Odisha indicating that there is no Common Bio-Medical Waste Facility within 150 kms from the site of proposed Common Bio-Medical Waste Facility.

B. Following specific ToRs to be issued for EIA study, if decided to issue ToRs.

i) Kisam of the land with Sabak/ Haal including conversion to Industrial use.

ii) Location of the Incinerator and DG setw.r.to predominant wind direction vis - a - vis the habitation and public roads.

iii) Basis of capacity of Incinerator and stack height.

iv) Disposal management with SOP of incineration ash and ETP sludge

v) Green belt with strech and dimensions.

vi) Odour management with SOP to arrest the same.

vii) Inversion/ Dispersion study of Incinerator and accordingly, based on the findings of the study, the green belt stretch location be also linked and SOP to negate the effect of Dioxin and During, Hg etc.

viii) Leachate from land filling/ ETP drains/ flow in details.

ix) Stack emission and Leachate chemical analysis

x) Adoption of OHSAS.

xi) NOC from CGWA and permission from WR Department, Government of Odisha for drawl of ground water.

xii) Detail plan and calculation of solar power consumption vis- a vis generation and percentage of total power demand.

xiii) Submission of a list of recognized Hospitals, Nursing Homes, Clinics along with the corresponding Beds considered for this Project.

xiv) Submission of Documents for a prior arrangement with T.S.D.F for Hazardous Waste like incinerator Ass Plastic Recyclers for Plastic Wastes, Metal foundries for recycling Metal Sharps, etc.

22. The project proponent has intimated along with certificate of the State Pollution Control Board, Odisha that there is no CBWTF present with applicable 75 Km radius from the proposed project as per requirement of CPCB Guideline for Establishment of CBWTF. The State Pollution Control Boad, Odisha has also intimated that as per estimation of distance carried out through Google earth M/s Bio-Tech Solutions at Jamapali. PO: Binka, Dist: Subarnapur is located at a distance of approximately 215 K.M., 115 K.M. & 192 K..M. from M/s Sani Clean Pvt. Ltd.. Tangiapada, Khurda and M/s Mediaid Marketing Services, Amsarang. Sundargarh & M/s Mediaid Marketing Services, Seragada. Berhampur respectively.

23. The SEAC opined the following:

a) CPCB guidelines 2016 for CBWTDF stipulates that the coverage area of a CBWTDF

located within the respective state/UT shall be allowed to cater healthcare units situated at a radial distance of 75 KMs. However, in coverage area where 10,000 beds are not available within a radial distance of 75 KMs existing CBWTDF may be allowed to cater the healthcare units situated upto 150 KMs radius w.r.t its location.

b) From the Certificate furnished by the State Pollution Control Board, Odisha, another Common Bio-medical Waste Treatment Facility in the name of M/s Mediaid Marketing Services, Amsarang. Sundargarh is operating. The distance between these two Common Bio-Medical Waste Treatment Facility is approximately 115 kms.

c) The SEAC has no power to take any decision to allow this unit violating the guidelines of CPCB issued in this regards. However, the SEIAA may consider to take a decision on the matter to allow such unit and issue standard ToRs in addition to the following specific ToRs for EIA study after obtaining views from CPCB and / or MoEF&CC, Govt. of India and also obtaining information from other States. Moreover, the SEAC has no objection from technical point of view if such unit is allowed in that area.

   i) Kisam of the land with Sabak/ Haal including conversion to Industrial use.

   ii) Location of the Incinerator and DG setw.r.to predominant wind direction vis - a - vis the habitation and public roads.

   iii) Basis of capacity of Incinerator and stack height.

   iv) Disposal management with SOP of incineration ash and ETP sludge

   v) Green belt with strech and dimensions.

   vi) Odour management with SOP to arrest the same.

   vii) Inversion/ Dispersion study of Incinerator and accordingly, based on the findings of the study, the green belt stretch location be also linked and SOP to negate the effect of Dioxin and During, Hg etc.

   viii) Leachate from land filling/ ETP drains/ flow in details.

   ix) Stack emission and Leachate chemical analysis

   x) Adoption of OHSAS.

   xi) NOC from CGWA and permission from WR Department, Government of Odisha for drawl of ground water.

   xii) Detail plan and calculation of solar power consumption vis- a vis generation and percentage of total power demand.

   xiii) Submission of a list of recognized Hospitals, Nursing Homes, Clinics along with the corresponding Beds considered for this Project.

   xiv) Submission of Documents for a prior arrangement with T.S.D.F for Hazardous Waste like incinerator Ass Plastic Recyclers for Plastic Wastes, Metal foundries for recycling Metal Sharps, etc.

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S OBCC LIMITED FOR CONSTRUCTION OF B+G+5 JAGANNATH BALLAV PILGRIM CENTER OVER AN AREA OF 9.127 ACRES WITH TOTAL BUILT UP AREA- 77808.1 SQM AT MOUZA - DANDIMALA SAHI, PURI TOWN, TAHASIL - PURI, DIST - PURI, ODISHA OF SRI SRIDHAR ROUT (SENIOR PROJECT MANAGER OBCC LTD) – EC

1. This proposal is for Environmental Clearance of M/s OBCC Limited for Construction of B+G+5 Jagannath Ballav Pilgrim Center over an area of 9.127 Acres with total built up area- 77808.1sqm at Mouza - Dandimala Sahi, Puri Town, Tahasil - Puri, Dist - Puri, Odisha.
2. The project falls under category “B” or activity 8 (a) - Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The state government of Odisha has planned to develop the infrastructure of the Lord Jagannath Temple at Puri under the ABADHA. The Jagannath Ballav Pilgrim Center is one of the projects to be implemented under the same scheme aimed at beautifying the district of Puri. The project is envisioned as a mix of multi-level parking, commercial space, a meditation center and multi-modal hub. The proposed project is for construction of B+G+5 storied parking and shopping complex with a total plot area for the project will be 9.127 acres with built up area of 77808.1 sq.m.
4. **Location and connectivity** - The proposed site is located at Mouza Dandimala Sahi area, Puri near the Narendra Pokhari. The Geographical co-ordinate of the project site is Latitude: 19° 48' 45" N, Longitude: 85° 49' 23" E and is on Khata No. 25, Plot No: 168(P) 169(P), 170(P), 171, 172(P), 187. 188, 189, 190, 192(P), 193(P), 202(P), 228, 229, 230, 231, 232, 233, 234, 235 and Kisam: Bagayat, Gharabari, Sarada etc. The project site is well connected with the SH-59 at 300m & SH 203 – 500m. The nearest Railway station is Puri Railway Station at a distance of approximately 1.6 Km from the project site. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is at a distance of 61 Km from the project site. Nearest sanctuary is Balukhanda- Konark Wildlife Sanctuary at 3.5km.
5. The site is coming under development plan of Puri - Konark Development Authority.
6. The Building Details Of The Project:

Particular	Proposed
Plot Area	37756.86 Sqm (9.127Ac.)
Ground Coverage	12637.10 Sqm (33.47 %)
Total Built up Area	77808.1001 sqm
Basement	13012.39
Ground Floor	12172.74
1st Floor	11393.33
2nd Floor	11782.68
3rd Floor	11398.74
4th Floor	10602.50

5th Floor	7170.4

7. **Water requirement**: Total water requirement for the project will be 175 KLD out of which 90 KLD will be fresh water and 85 KLD will be recycled water which used for flushing purpose. There is the proposal for installation of 200 KLD STP. The treated water from STP will be utilized for Flushing, HVAC use, Plantation and other miscellaneous purpose. No waste water will discharge outside the project.
8. **Power requirement**: Power requirement for the project will be 4 MV and for backup power DG set of 2000 kVA will be installed within the premises. 10% of the total electricity requirement will be met through solar energy which will be utilized for street lighting and water heating system.
9. **Rain Water Harvesting**: There is the proposal for construction of rain water harvesting pits 7 nos. within the premises of the project area to collect about 50% of the rainfall received from the area and used for ground water recharge.
10. **Parking Requirement**: Total parking area provided is 46088.57 m^2 sq.mt.
11. **Fire fighting Installations**: An addressable fire alarm and voice evacuation system will be provided in accordance with the NBC 2016, NFPA-72 – National Fire Alarm Code and the CFO (local Fire Authority) requirements. One no. 4-way fire brigade inlet connection has been provided near tank for charging fire underground tanks. One no. 2-way fire draw out connection has been provided near tank for withdrawal of water from fire underground tanks.
12. **Green Belt Development**: Green belt will be developed over an area of 10117 sqm which is 20.0 % of the plot area and 2480nos of saplings will be planted within boundary and plantation SW patch of the site by using the local species like Teak, Mango, Sisoo, Pijuli, Ata, Jamu, Sunari, Chakunda, Karanja, Neem, Sirisa, Kadamba, Krushachuda, Nadia, Radhachuda, Champa, Mandar, Tagar, Kaniar, Karabira, Kamini, Godibana, Brazil flower, Top soil generated during construction will be utilized for green belt development
13. **Solid Waste Management -** There will be generation of 1600 kg of solid waste during the operation phase of the project. Out of which 960 Kg will be organic waste and 640 Kg will be inorganic waste. Inorganic waste will be disposed through Puri Municipal Corporation. Individual waste bins will be installed at approach points for collection of inorganic waste by the Municipal workers and for organic waste a composting yard of 100 sq.m x 3.5 m height will be provided at ground floor with a bio converter machine of capacity 650 Kg/ day.
14. The estimated project cost is ` 230.625 Crores.
15. The project proponent along with the consultant **M/s Kalyani Laboratories Pvt. Ltd., Bhubaneswar,** made a detailed presentation on the proposal.
16. The SEAC in its meeting held on dated 17.12.2021 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of sub-committee of SEAC to the proposed site.

    i) Part of the land is stated to be Ag land Bagayat, Jalasraya waste land etc by PP and hence, “Kisam” of the land with conversion to “Gharbari” from appropriate Revenue

Authority be done before start of the construction. As per "HAAL" RoR, Tahasildar has confirmed that there is no forest Land indicating there is that no record is available as to "Sabik" record. So, this needs to be confirmed as to "Sabik record" by appropriate Revenue Authority.

ii) Parking to be re-cast in terms of ECS for both 4 wheelers & two wheelers including bicycles commensurating with space and the standard norms / basis.

iii) It is stated by PP that there will be 'Zero' discharge', However, any excess treated waste water / run-off / storm water will be discharged to "Badadanda" canal, As such, the lateral distance between boundary of the project & the said nala / drain be indicated with ROW / ownership of the same / said land and permission from drain authority to take the additional load of the project.

iv) Rain water Harvesting pits (RWHP) be recalculated considering maximum hourly rain fall is 24 hours at Puri on the basis of logical climate data in past 30 years with co-efficient of run-off on real time input, retention (hold) time and water table at Puri & be submitted. The design of recharge pits are required to be submitted.

v) Traffic study be undertaken by domain export at entry & exit different intersecting points including SH-59/Public roads with decongestion plan as necessary based on study findings taking into consideration the traffic load 10years ahead with this project & public traffic at Puri be submitted.

vi) DG set(s) location in reference to predominant wind direction & residential / habitational installations including DG set stack height and installation drawing of exhaust pipes be submitted.

vii) Details of solar power production and consumption with % of total power to be furnished.

17. The project proponent has furnished the compliance as requested and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	Part of the land is stated to be Ag land Bagayat, Jalasraya waste land etc by PP and hence, "Kisam" of the land with conversion to "Gharbari" from appropriate Revenue Authority be done before start of the construction. As per "HAAL" RoR, Tahasildar has confirmed that there is no forest Land indicating there is that no record is available as to "Sabik" record. So, this needs to be confirmed as to "Sabik record" by appropriate Revenue Authority.	Application has been made for conversation of land from the appropriate authority. The converted land record will be submitted within 1 month period. Tahsildar, Puri has confirmed that there is no forest land included in the project site as per "HAAL" RoR.
ii.	Parking to be re-cast in terms of ECS for both 4 wheelers & two wheelers including bicycles commensurating with space and the standard norms / basis.	The project is envisioned as mix of multi-level parking, commercial space, a meditation center and multi-modal hub. The project is meant for parking of max 1458 nos of four wheelers and 151 two wheelers. Detail ECS calculation for four-

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		wheeler, two wheelers is as below: Proposed Parking required = 1458 Cars = 1458 ECS 151 Two Wheelers = 31 ECS Total ECS for the Project = 1489 ECS for Stilt Parking @30 sqm/ECS Total Parking Space required for the project = 1489 ECS x 30 Sqm = 44670 Sqm Total Parking Space provided = 46088.57 Sqm
iii.	It is stated by PP that there will be 'Zero' discharge', However, any excess treated waste water / run-off / storm water will be discharged to "Badadanda" canal, As such, the lateral distance between boundary of the project & the said nala / drain be indicated with ROW / ownership of the same / said land and permission from drain authority to take the additional load of the project.	There will be no discharge from the project to outside. The treated waste water from STP will be utilized for flushing, HVAC make up, gardening, plantation and washing purpose. In the project no waste water will be discharged outside the project site. Details of waste water generation and utilization is given in **Annexure-1**. Surface runoff from the area will be harvested and recharging pits will be constructed for ground water recharge. A detail of rain water harvesting is given as **Annexure -2**. No excess treated waste water / run-off /storm water will be discharged to "Badadanda" Nala.
iv.	Rain water Harvesting pits (RWHP) be recalculated considering maximum hourly rain fall is 24 hours at Puri on the basis of logical climate data in past 30 years with co-efficient of run-off on real time input, retention (hold) time and water table at Puri & be submitted. The design of recharge pits are required to be submitted.	Rain water harvesting calculation is revised an attached as **Annexure -2**.
v.	Traffic study be undertaken by domain export at entry & exit different intersecting points including SH-59/Public roads with decongestion plan as necessary based on study findings taking into consideration the traffic load 10years ahead with this project & public	The proposed project will be providing parking facility for the incoming vehicles to holy city Puri. This project will not create any additional traffic to the existing road, rather this project will manage the traffic load of the pilgrims coming to Puri and create a proposer parking management for 1458

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	traffic at Puri be submitted.	four wheelers and 151 two wheelers. The traffic study at SH-59 has been already carried out and attached. **Annexure -3**. There is no proposal for residential activity within the project site.
vi.	DG set(s) location in reference to predominant wind direction & residential / habitational installations including DG set stack height and installation drawing of exhaust pipes be submitted.	For the proposed project 2 x 1500KVA DG set will be installed for backup power. As per CPBC regulations, DG rating more than 1000 kVA shall be provided with stack of 30m for Flue exhaust / 6m above building terrace floor. The location of the DG set has been given **Annexure-4**.
vii.	Details of solar power production and consumption with % of total power to be furnished.	Details of solar power production and consumption with % total power is attached as **Annexure -5**.

18. The proposed site was visited by the sub-committee of SEAC on 22.03.2022 and site visit report is awaited.

    Site visit report shall be submitted within 3 days of visit. Delay in submission raise many Qs. Sub-committee shall be asked to furnish report immediately for reccomendations accordingly.

ITEM NO. 09

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. SREE METALIKS LTD. FOR KHANDBANDH IRON ORE MINES FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 0.702 MTPA TO 1.50 MTPA WITH OPENCAST FULLY-MECHANIZED MINING METHOD BY INSTALLATION OF CRUSHING & SCREENING PLANTS OVER ML AREA OF 35.774HA LOCATED IN BAITARANI RESERVE FOREST NEAR VILLAGE KHANDBANDH, TAHASIL – BARBIL, DISTRICT - KEONJHAR OF SRI REWATI RAMAN SHARMA – EC.

1. The Khandbandh Iron Ore Mines is captive mines of M/s Sree Metaliks Ltd spreads over an area of 35.774 hectares located in Baitarani Reserve Forest under Keonjhar Forest Division near village Khandbandh under Barbil Tahasil of Keonjhar District, Odisha. The entire mining lease area of 35.774 ha falls within the Baitarani Reserve Forest. The Mining Lease area was granted vide letter no III(A)SM-36/2002/407/SM dated 11.01.2017 under Rule 8(2) of MCR 2016 for a period of 50 years in favor of M/s Sree Metaliks Ltd. Subsequently, the ML was executed on 11.01.2017 for a period of 50 years from the date of execution i.e. w.e.f. 11.01.2017 to 10.01.2067 in favor of M/s Sree Metaliks Ltd. After the execution of the lease deed the mining operation was started on 21.03.2018. The mine is part of Survey of India Topo sheet bearing No.73G/5 and is bounded by the latitudes from 22° 06' 16.72057" to 22° 07' 41.65495"N &85° 25' 32.28303" to 85° 26' 40.67115"E.
2. The proposal was appraised in the SEAC meeting held during 14.7.2021 and the committee recommended for prescribing ToRs for undertaking EIA study for proposed

project. Accordingly, SEIAA, Odisha prescribed ToRs vide letter 1798/SEIAA dated 26.07.2021 for Environment Clearance enhancement in production capacity from 0.702 MTPA TO 1.50 MTPA with crushing & screening plants by fully mechanised mining method. As per the EIA Notification 2006(and amendment thereof), the project fall under activity wise 1(a) and Category 'B' with area threshold limit.

3. The life of the mine is calculated to be 08 year after the modified review period. (5 years of Review of Mining Plan period + 3 years of conceptual period).
4. Opencast Fully mechanized method of mining will be adopted to develop the mines laterally and down ward. The mine will be operated in a three shift basis as per the existing practice. Process of excavation and loading of overburden/waste will be done by deploying hydraulic excavators and dumpers.
5. During plan period 2 quarry i.e. 1 & 2 will be developed and further it will merge to single Quarry. Fully Mechanized open cast mining with Crushing & screening units. Geological Reserves is 17.71 Million Tonnes. Mineable Reserves is 10.973 Million Tonnes, Average Bench height & width are 6m & 9m respectively. The final slope angle of the pit will be 45° at the end of the life of the mine, Cut-off grade considered is +58% Fe. Mineral reject is +45 to -58% Fe. 70% of the mineral reject produced will be blended with +58% ore and consumed, Life of mine is 8 years including the present plan period, Total generation of waste during plan period is 1969469 Cum. During Conceptual period 1047192 cum waste will be generate. Out of which 30% will be utilized for road maintenance. Remaining 70% will be backfilled in the earmarked site, Total generation of mineral rejects during plan period is 2710383 T. During conceptual period 655187 Cum mineral reject will be generated. out of which 70% will be blended and used and remaining 30% will be stacked temporarily in 2 no's of subgrade dump and further it will be re-handled, Mode of transportation will be through 25t to 30t dumper/Volvo.
6. The total 1.620 ha safety zone area is been under green belt/plantation program.
7. The Deep Hole–Drilling and blasting using bulk explosive (SME) shall be practiced. The design of blasting parameters was determined (Burden, Spacing, Charging and Stemming) to minimize the impact of ground vibration, noise & air over pressure and fly rock. Basically the blasting design would be with a spacing of 3.0 m and Burden of 2.5m and with a sub grade drilling of 0.6 m depth (10% of total bench height). The blasting is being carried out as per CFRI, Dhanbad.
8. Reclamation and rehabilitation work will be undertaken as per the progressive mine closure plan.
9. Total quantity of water requirement for the project is 159.80 m3/day out of which 150 m3/day will be met from Sona River and 9.80 m3/day will be from ground water. For withdrawal of water from both the source NOC had been obtained from the Proponent.
10. Total Electricity required is 735 KVA and same will be sourced from state Grid. Two no's DG set of 15 KVA and 25 KVA shall be installed for standby purpose. At present power requirement meets from DG set only.
11. Fuel Requirement in mine will be 5 KLD HSD for mining equipments and haulage purposes, which is procured just in time manner from outside petrol pumps.
12. There will be 166 employees required for Mining Operation. However secondary employment shall be generated with the operation of the mine, which shall directly affect 166 families and indirectly affect another 85 families for their livelihood.
13. The ML area is approachable from Joda via Bichhakundi. It is 8 km away from Joda.

Banspani and Jururi Railway station are the nearest railway station from the lease area. Banspani Railway station at 10km and Jururi Railway station is 12km away from the lease area. Bhubaneswar airport (320 km away) is the nearest airport from the area. There is an airstrip/ helipad near Bhadrasai, Barbil which is around 21km from the lease area.

14. The project will start within 45 days of issuance of environmental clearance from SEIAA Odisha
15. Project Cost is Rs 32.43 Crore (Rs 29.8 Crore capital cost + Rs 2.63 Crore CER Cost)
16. The monitoring to study the present environmental condition in terms of its components at the location was carried out from Oct 2020 to Dec 2020.
17. The meteorological conditions in an area regulate the transport and diffusion of air pollutants released into the atmosphere. These data are very important for proper interpretation of the baseline information as well as for input prediction for air quality prediction models. Based on the last three months' average diurnal climatologically data from the AERMOD source. Wind is blowing from South-West to North-East and resultant wind direction is 117º which is 14%.
18. Average rainfall of 10 years from 2006 to 2018 is1418.7mm. Site specific temperature is 130 min and 340 max. Similarly Humidity is 19% to 97%, Rainfall is 0.0mm to 13.1mm.Predominant wind direction is SW to NE.
19. For Ambient Air Quality eight location are chosen. Out of eight, four are chosen from Project site & four are chosen within the buffer zone having distance 2.73 to 4.56km within 5km radius distance from the project boundary inward direction to the resultant wind direction is expected to carry the total pollution load.It is observed that the all parameters at all stations are well within the limits prescribed by Central pollution control Board.
20. The baseline air quality data indicates that the average PM10 ranges from 41.8-80.2µg/m³, PM2.5 ranges from11.8-45.20µg/m³, SO2 ranges from 4.2-9.22µg/m³,NOx ranges from 8.2-17.2 2µg/m³.As per NAAQS norms 100, 60, 80 & 80 µg/m³ respectively is the ranges. The concentration of Particulate matter in nearby areas shows that the impact of mines is not so significant or the line source of dust emission is under control. In an overall sense the AAQ are well within the NAAQS standard for the area.
21. Based on the proposed production enhancement, the maximum increments in the concentrations of PM10, PM2.5& NOx are 5 µg/m3, 0.1 µg/m3, 0.1 µg/m3 respectively and the resultant concentrations are well within the NAQMS standards.
22. To assess the level of fugitive dust due to mining and allied activities, 8monitoring stations were selected within the lease considering the activity area. The fugitive emission from probable sources within the leasehold area are well within the limits and is under control due to regular water sprinkling on the haulage roads and open areas within the mine.
23. The assessment of noise pollution on neighborhood environment due to the project was carried out keeping in view, all the considerations mentioned. Location N1, N2,N3& N4 are within project site. N5,N6,N7& N8 is farthest from the Project area which are within 2km to 6.50Km from the mine lease boundary. Core Zone Noise quality ranges in day time 55.1 to 60.8dB(A) & at night time 43.1-45.3 dB(A). Buffer Zone Noise quality ranges in day time 42.7to 45.3 dB(A) & at night time 35.8-37.5 dB(A). So, as per CPCB Residential area day time will be 55dB(A)& night time will be 45 dB(A) from which it is understood that the buffer zone noise quality is within the norms.
24. The surface water location has been chosen within 10km radius from the project site to know the surface water quality. Considering no such discharge from the project, any

surface water impacts is quiet impossible other than any probable seepage and percolation to nearby static water bodies, however four surface water samples were considered i.e. Upstream & Downstream of Suna River, Water from river Baitarani near village Jalahari & water from Dalco Nala.

25. The pH of the water samples collected ranged from 6.5 to 7.8. TDS ranges from 63 to 105mg/l, Sulphate ranges from 9 to 23mg/l, Nitrate ranges from 2.2 to 3.6mg/l, Chloride ranges from 12.4 to 16.2mg/l, Fluoride ranges from 0.26 to 0.54mg/l. However, from Surface water standard IS2296-Class-C pH ranges 6.5-8.5, TDS 1500mg/l, Sulphate 400mg/l Nitrate 50mg/l, Chloride 600mg/l & Fluoride 1.5mg/l it is observed that all the 4 location water are within the permissible water.
26. The local water level fluctuation between Pre and Post monsoon 2011, in the Project area is between 4.0 to 4.5 m. The annual replenishable groundwater resource of the area is about 46.57 mcm. Based on the regional utilization of GW, the stage of development is only 41.40%.
27. The ground water location has been chosen within 10km radius from the project site to know the ground water quality. Open wells as well as operating public bore wells were chosen for the sampling.
28. The pH of the GW samples collected ranged from 6.2 to 6.99 and within the acceptable limit of 6.5 to 8.5. The total dissolved solids were found in the range of 38.4-182.2 mg/l. Total Hardness is ranged from 34 to 104mg/l. Chloride ranges from 13.6-28.17mg/l. Sulpahte ranges from 1.57-5.71mg/l. Iron ranges from <0.07mg/l. However, as per GW standard IS:10500:2012 all the values are within the acceptable limit at all locations.
29. In all samples, toxic substances are within the limits, with bacteria is in absence. Thus, the ground water is required can be used for drinking and domestic use after necessary primary treatment, softening and disinfection.
30. The study area is characterized by two types of soil – Alfisols and Ultisols.Soil samples from 5 locations are taken within the core and buffer zone for analysis. From the analysis the pH ranges from 6.48 to 6.72 from this the it concluded that soil is weak acidic in nature, Bulk Density ranges from 1.28-1.31 gm/CC. Water holding capacity ranges from 21.2- 22.1%. Nitrogen ranges from 0.051- 0.056 %. Phosphorus ranges from 0.0-17 0.019 %. Potassium ranges from 0.066- 0.069 %. From the above soil analysis data soil is fertile and good for agriculture process.
31. The common flora existing in the lease hold area as well as in the buffer zone around a radius of 10 Kms of the project area are Shorea robusta,Terminlia belerica(Bahada), Terminalia tomentosa, Adina cordifolia, Anogeissus latifolia(Dhaura), Madhuca latifolia, Lagerstroernia flosreginae, Lagerstroernia parviflora(Patuli), Holarrhena antidysenterica, Phyllanthus emblica, Ficus benghalensis, Madhuca indica, Anoegeissus latifolia, Diospyros melanoxylon, Mangifera indica, Terminalia alata(Asan), Syzygium cumini(Jamun), Schleichera oleosa(Kusum) etc. Elephant, Sloth bear, Monitor Lizard are placed under Schedule-I as per Wild Life (Protection) Act, 1972 is found in the buffer zone area.
32. There is no National Park, Wildlife Sanctuary, Elephant Reserve, BiosphereReserve, Ramsar site or Tiger Reserve in the study area.Site Specific Conservation Plan prepared and approved by PCCF (wild Life) and Chief Wild Life Waden,Odisha vide memo No 4400/1WL(C) SSP-311/2011 dated 02.07.2011. The project has estimated cost of Rs 82 lakhs for both buffer & core zone. Out of the above amount Rs 68.00 lakhs has been deposited under CAMPA.

33. There are 27 villages are coming within 5 km of the project impact zone the Khandbandh Iron Ore Mines project area for which need based assessment survey has been done. For immediate implementation 6 villages has been taken i.e. Khandbandh, Chormalda, Kundrupani, Guruda, Chhatabar & Tilapur.

34. There is no human settlement in the M. L. area. The project does not envisage any leasing or acquisition of private land. Hence there will not be any land ousters who have to be resettled our rehabilitated.

35. The project located at Khandbandh under Barbil division in Keonjhar District, Odisha. The total work force are highly skilled, skilled workers, semi-skilled, Executive staff & contractual are 166, Out of which, 30- 40 employees belong to villages are - Khandbandh, Chormalda, Kundrupani, Guruda, Chhatabar & Tilapur, within 5-7km radius of the M L area.

36. The average Volume to Capacity (V/C) ratio for base year of study road network is estimated is about 0.279. In the study road network, improvements such as road widening on NH-215 which is going to be completed soon, road widening from Joda to Kalimati is going on which has been considered for performance evaluation.

37. As per the CRRI study the additional allowable Iron ore is estimated for base year as per maximum V/C threshold (0.70) is about 214 Million Tons Per Annum (MTPA) for study road network in Joda- Barbil region. So, the additional traffic from Khandbandh Iron Ore Mines i.e. 8 tucks/hour add in the existing traffic on the road after start the mining operation which will have very negligible impact. The V/C ratio will remain in Category “B”.

38. Impact Assessment of the study area carried out for both operation and Mine Development phase of the proposed mines and mitigate measures are recommended for different environment such as Air, Water, Land, Biological Environment, Socio economic, Noise.

39. Water sprinkling will be done at regular intervals on the dust prone areas such as haul roads and other possible dust generation areas to suppress emission and distribution of dust particles. Plantation will be undertaken in the safety zone to arrest the air borne dust from further spreading.

40. In order to take extra protection measure of kundra nalla loose boulder wall retaining wall followed by cemented wall followed by garland drain has been made.Settling pond/ check weirs has been provided at the strategic location. Further during the expansion the same run-off management structures will be augmented towards arrest the wash-off materials to settle the sediments.

41. The maximum noise level prescribed by Director General of Mine Safety (DGMS) for an 8 hours exposure is 90dB (A). Therefore, control measures suggested to keep the noise level within permissible limit.

42. Delay detonators will be used to split a large vibration package in to a number of small vibration levels. Vibration will also be minimized by changing the broad blasting parameters on trial & error basis.

43. During the social impact assessment process, locals raised the question regarding more job opportunities. The proposed facility would generate jobs for the women laborers during construction as well as operation phase.This project will increase the economic activities around the area, creating avenues for direct/indirect employment in the post project period.

44. Site selection has little relevance with respect to a mining project, which is mainly guided

by geological occurrence of minerals and ores. Moreover, as stated earlier, Khandbandh iron ore mines is an existing iron ore mine of M/s. Sree Metaliks. Therefore, the site alternative is not pertinent with respect to the present proposal.

45. For Work Zone weekly twice at various locations in the mines with parametersPM10, PM2.5, NO2, SO2 & CO and mineralogical com position monitoring will be done.

46. For Ambient Air Quality two consecutive day in a week/station or as per SPCB requirement at 5 different locations (Core zone 2 + Buffer zone 3)with parameters Sulphur dioxide(SO2),Oxides of Nitrogen(NO2), Respirable Particulate(PM2.5/10) & CO monitoring shall be done.

47. For Meteorology Continuous monitoring throughout the year 1 location within the mine lease area of parameters Wind speed and direction, Rainfall, Temperature and humidity monitoring shall be done.

48. For Surface water Quarterly once or as per SPCB/MoEF & CC requirement as per IS 2296 location Upstream and downstream of Baitarani, Jalahuri, Suna nadi monitoring shall be done.

49. For Ground water Quarterly once or as per SPCB/CGWA/MoEF &CC requirement as per IS-10500:2012 monitoring shall be carried out Near Mine Lease area, Open well near village Jurudi, Jajanga & Jalahuri

50. For Noise level of work zone & ambient noise level Fort-nightly once or as per SPCB/DGMS requirement active mine working area, haul road, lease peripheral areas and based on their requirement &priority &different locations in and around the mines with consulting with Regional Officer, SPCB respectively monitoring shall be carried out.

51. For Vibration monitoring shall be carried out at least two places within the mine lease area at an appropriate distance from the blast face. Its hall be ensured that the vibration level due to blasting are less than the DGMS prescribed limits with parameters such as peak particle velocity, Air over pressure, fly rock measurements monitoring shall be carried out.

52. For Socioeconomic environment in and around (local Villages) of the mines as per CSR activities and reported six monthly with EC compliance monitoring carried out. For Biological Environment Green belt development monitored inside mines area and buffer zone where ever plantation is being/will be carried out as per the six monthly compliance report.

53. Details of Occupational Health environment shall be monitored and reported along with six monthly compliance reports.

54. After analysis the analysis report are shall sent to OSPCB and Regional Office, MoEF & CC monthly basis. A copy of report shall be available in the mines with the concerned inspecting officers.

55. The project has incurred an expenditure towards establishment of infrastructure related to environmental management system is Rs.76 Lakhs. However, the operating cost envisaged for recurring expenditures is Rs.26.14 Lakhs per year.

56. For the socio-economic development of the local villages Sree Metaliks has been spend nearly 30 lakhs for different CSR activities for the year 2020-21. As per the recommendation of Need base assessment study by AISD, an amount of Rs 755.97 lakhs has been estimated for various socio-economic development in next 5 years. However in lieu of the recent notification of CER Spending, the final implementation plan and associated costs shall be decided based on the outcomes of Public Hearing is coming

around Rs 2.63 Crore and according the project cost is Rs 32.43 Crore.

57. The Public hearing was held on 06.12.2021 at 11.00 am at Baitarani Reserve Forest. Sushama Bilung, Additional District Magistrate, Keonjhar and Shri Puskar Chandra Behera, RO, SPCB was addressed the meeting.

58. Statement of issues and demands raised by the public and commitment of the project proponent during the public hearing held on 06.12.2021 at 11.00 am at Baitarani Reserve Forest 03 kms from village Khandbandhh and about 20 mts from Dalpahad Basti under Baitarani Reserve Forest(A) area. The public hearing implementation cost is coming Rs 2.63 Crore.

59. Risk Assessment and Disaster Management Plan in connection with mining and allied operations of the project will be spelt out in detail to cover possible dangers / risks / explosions /accidents, etc. likely to arise from the project operations, including on site and off site emergency plans to meet the disastrous situations if any.

    - Occupational Safety &Health
    - Socio Economic Study
    - Biodiversity Study with Audit Mechanism
    - Blasting Study
    - Dump Slope Study

60. Due to the proposed project there will be improvement in physical infrastructure by up gradation of nearby infrastructural facilities. M/s Shree Metaliks Private Limitedis very much conscious about the socio-economical development of neighbouring areas, wants to change the quality of life and to develop social well- being of communities where it operates.

61. As the project will be considerable employment & trade opportunities with the commencement of the production activities. Secondary jobs will also bind to be generated to provide daily needs and services to the work force. This will increase the demand for essential daily utilities in the local market.

62. The EMP has been designed within the framework of various legislative and regulatory requirements on environmental and socio-economic aspects. Capital Cost earmarked for environmental Management Plan is 55.00 lakh and recurring cost shall be 19.lakh/annum

63. Dust will be generated from mine working faces, occasional drilling and blasting, stock piles, crushing activity and also during handling and transportation of the material.

64. Wind erosion resulting in particulate dispersion, fugitive dust during loading and unloading are mitigated by adopting optimum height of release of material from trucks, spraying water to maintain optimum moisture on the surface to preclude dust raise, provision of greenery surrounding the stock piles.

65. Water sprinkling in haul roads to reduce the fugitive dust emissions.

66. Overloading of trucks will be avoided to mitigate fugitive dust during transportation of mineral.

67. Dry fog system has also been fixed in tertiary crusher area.

68. Noise Quality Management

69. Plantation of native trees in row around mine periphery including safety barrier area along the roads, other noise generating centers and simultaneous plantation in backfilled area to act as acoustic barriers.

70. Sound proof operator's cabin for equipment like Excavator, Tippers/Dumper, etc.

71. For less noise generation proper and regular maintenance of equipment shall be carried out.

72. Providing in-built mechanism for reducing sound emissions.

73. Providing earmuffs to workers exposed to higher noise level.

74. Workers which are engaged in the noise prone area regular health check-up of workers including Audiometry test shall be carried out.

75. The noise level status shall be displayed in the operational machinery on the machines to know the extent of noise level and to control the time to which the worker is exposed to higher noise levels.

76. Waste water generated from domestic purpose which is being treated through STP. Garland drains & retaining walls have been constructed all around the dumps and plantation of native species on the dump slopes to minimize erosion. Drain shall regularly de-silt and maintained. Regular maintenance shall be carried out for the run-off management structure.

77. Detail planning has been made for undertaking plantation. Regarding green belt development plan, till date a total of 4.696 Ha area has already been covered under plantation in safety zone area etc. within the lease area. Total 11740 no's of plantation existing at strategic locations like Safety zone, Dump slope, Haul road side etc. Further, for the next 10 year Lessee has planned for plantation of 18000 no's of saplings over an area of 7.04 Ha. Capital cost of Rs 21 lakhs & recurring cost of Rs 9.64 lakhs has been estimated for this purpose.

78. Adoption of systematic and scientific mining, proper and timely execution of various environment management plan like fixed, mobile water sprinkling, rainwater harvesting, controlled blasting practices, effective solid waste management technique, surface run of management, surface drainage management, occupational health management, etc., will ensure maintenance of future environmental quality within statutory limits after the proposed expansion also.

79. The proponent along with the consultant **M/s. Ardra Consulting Services Pvt. Ltd., Bhubaneswar (NABET certificate No NABET/EIA/1922/IA0055)** made a detailed presentation on the EIA/EMP report before the SEAC.

80. The SEAC in its meeting held on dated 28.03.2022 decided to take decision on the proposal after receipt of the following information / documents from the proponent.

    (i) A comparative statement in matrix form of base line data regarding environmental parameters during the year 2009 submitted w.r.t EC granted is 2009 and the same parameters data in 2021 for above proposed EC be submitted.

    (ii) Comparative position of PH (Public Hearing) issues raised during 2009, action taken on the same and issues raised in 2021 and action proposed thereof with definite time frame and associated cost be submitted.

    (iii) A comparative statement of salient physical features and environmental parameters of the existing Mines and proposed expansion be submitted in matrix form. The physical

features, viz: dumps, retaining walls, garland drains, settling pond, RWHPs etc. be shown in the respective lay out maps and superimposed layout map of the proposed expansion on the existing one.

(iv) Permanent occupational Health Centre committed by Project proponent put as a specific condition in EC in 2009 by SEIAA and is not complied as of to-day as observed in EC compliance report of RO, MoEF&CC, Bhubaneswar. Therefore, a specified definite time for compliance of the same be submitted, the copy of which will be forwarded to concerned District Administration for information & necessary action.

(v) Certified copy of compliance to CTO conditions from Pollution Control Board, Odisha for the existing mines be submitted.

(vi) Copy of compliance to NEERI recommendations be submitted with reference to physical features along with photographs, viz: Haulage Road, Plantation in Haulage Road, Parking Plaza etc.

(vii) Socio-economic gaps as found out by socio-economic study be outlined, the mitigation measures recommended by experts(s) / Institute with time frame, target population and the cost associated be submitted. Action proposed by Project Proponent vis-à-vis the expert's recommendation be submitted.

(viii) Tie-up / Agreements with Beneficiation / palletisation plant for beneficiation of low-grade Iron Ore with relevant document copy be submitted along with the capacity & capacity utilisation of the said plants vis-à-vis the generation of the low-grade Iron from existing mine, its current management & proposed expansion for at least next 5 years.

(ix) What happens to total run-offs during monsoon at present and the proposed expansion in future? Management of the estimated quantity & disposal thereof be submitted.

(x) Total 160 KLD water from "Suna River" is stated to be drawn and 9.8 KLD from ground water through bore well (being drawn now & in future also). So, it is suggested that 9.8 KLD ground water drawl be dispensed and the same be drawn from "Suna River" for drinking water purpose with necessary treatment & with due permission from W.R Deptt, Govt of Odisha. Though 'NOC' is taken from CGWA for 9.8 KLD ground water, necessary permission to be taken for the same from W.R Deptt, Govt of Odisha also.

(xi) Existing management & de-siltation of Suna River, Kakrapani Nala & surrounding about 15% Agriculture lands be submitted along with a write-up on illustration being practiced and for future with proposed expansion also.

(xii) Physio-chemical analysis of water of Suna River with sediment analysis of the river including silica content be done & submitted to find potential of silt generation.

(xiii) How vegetation is changing & what type of vegetation is changing due to the effect of the mining?

(xiv) 166 Permanent employees and more than 200 floating employees will be working for this proposed mining i.e. total about 400 people will be engaged for the proposed mining as stated by project proponent during presentation. There is no STP inside the Mines and stated to have a STP outside the Mines. Details location of the STP with connectivity between mines & the STP shall be submitted. Further, the capacity of the said STP, details of effluents generated by the mines & the people outside with calculation and disposal details of treated waste water & STP sludge be submitted

with connectivity drawing etc.

(xv) The possible important risk factors are slope failure of ore, OB & its dumps, Mineral waste, flying rocks during blasting, intersection with underground water in mining, seepage of mining etc. Mitigation measures for the above be submitted.

(xvi) Protection & conservation plan of endangered, threatened and nearly threatened species / wild lives likely to be affected due to the existing mines & proposed expansion be submitted, identifying the species also.

(xvii) Comments on petition received through SEIAA on this mine be submitted.

After receipt of comments on petition received through SEIAA on this mine from the lessee, if required, a site visit to be conducted by the sub-Committee of SEAC to verify the fact.

81. The project proponent has furnished the compliance as requested and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	A comparative statement in matrix form of base line data regarding environmental parameters during the year 2009 submitted w.r.t EC granted is 2009 and the same parameters data in 2021 for above proposed EC be submitted.	Comparative statement in matrix form for the Baseline data in 2009 and 2021 is attached as **Annexure-1**.
ii.	Comparative position of PH (Public Hearing) issues raised during 2009, action taken on the same and issues raised in 2021 and action proposed thereof with definite time frame and associated cost be submitted.	Public hearing commitment of 2009 with its implementation status and present public hearing commitment with budgetary provision is attached as **Annexure-2**.
iii.	A comparative statement of salient physical features and environmental parameters of the existing Mines and proposed expansion be submitted in matrix form. The physical features, viz: dumps, retaining walls, garland drains, settling pond, RWHPs etc. be shown in the respective lay out maps and superimposed layout map of the proposed expansion on the existing one.	A comparative statement of salient environmental physical features like dumps, retaining walls, garland drains, settling pond etc. of existing & proposed with layout map is attached as **Annexure-3**.
iv.	Permanent occupational Health Centre committed by Project proponent put as a specific condition in EC in 2009 by SEIAA and is not complied as of to-day as observed in EC compliance report of RO, MoEF&CC, Bhubaneswar. Therefore, a specified definite time for compliance of the same be submitted, the copy of which will be forwarded to concerned District Administration for	A full time occupational health Doctor already been engaged for the treatment of employees and locals in the Khnadbandh village. Photos attached as **Photo-1**. However, inside the mine premises a first Aid center has been established. The same will be extended to a full time Occupational health Centre by 30th June 2022. The declaration by project proponent in this regard is attached as **Annexure-4**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	information & necessary action.	
v.	Certified copy of compliance to CTO conditions from Pollution Control Board, Odisha for the existing mines be submitted.	Certified CTO compliance by SPCB, Odisha is attached as **Annexure-5**.
vi.	Copy of compliance to NEERI recommendations be submitted with reference to physical features along with photographs, viz: Haulage Road, Plantation in Haulage Road, Parking Plaza etc.	Detailed of NEERI compliance with evidence of photographs is attached as **Annexure-6.**
vii.	Socio-economic gaps as found out by socio-economic study be outlined, the mitigation measures recommended by experts(s) / Institute with time frame, target population and the cost associated be submitted. Action proposed by Project Proponent vis-à-vis the expert's recommendation be submitted.	Need based Assessment Study towards socio-economic development have been conducted by Asian Institute of Sustainable Development (AISD), Ranchi. The gaps as found out by socio-economic study be outlined, the mitigation measures recommended by experts/ institute with time frame, target population and the cost associate has been well covered under **"Need Assessment and Enterprise Social Commitment (ESC) Plan"- chapter VI**. According to the study Rs 7.55 Crore budgetary estimation has been done for development in infrastructure, Health & Education, Livelihood program, Employment programme and special programmes in the next 5 years in and around the nearby village. The same is attached as **Annexure-7**.
viii.	Tie-up / Agreements with Beneficiation / palletisation plant for beneficiation of low-grade Iron Ore with relevant document copy be submitted along with the capacity & capacity utilisation of the said plants vis-à-vis the generation of the low-grade Iron from existing mine, its current management & proposed expansion for at least next 5 years.	Khandbandh Iron Ore Mines of Sree Metaliks Ltd. is a captive mine. The ore generated from the mine is being utilized in its plant located at Rugudi and Anra in the Keonjhar district. The details of generation and management of sub-grade/low grade iron ore along with documentary proof of Beneficiation/ Palletization plant is attached as **Annexure-8.**
ix.	What happens to total run-offs during monsoon at present and the proposed expansion in future? Management of the estimated quantity & disposal thereof be submitted.	Details of Surface run-off generation with management is attached as **Annexure-9**.
x.	Total 160 KLD water from "Suna River" is stated to be drawn and 9.8 KLD from ground water through bore well (being drawn now & in future also). So, it is suggested that 9.8 KLD ground water drawl be dispensed and	Total Water: 159.80 KLD. Out of which 150 KLD is from Sona River for which NOC granted by Water Resource Dept., Odisha and 9.8 KLD from ground water for which NOC granted by CGWA. Water from Suna river is mainly used for mining & allied

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	the same be drawn from "Suna River" for drinking water purpose with necessary treatment & with due permission from W.R Deptt, Govt of Odisha. Though 'NOC' is taken from CGWA for 9.8 KLD ground water, necessary permission to be taken for the same from W.R Deptt, Govt of Odisha also.	activities and ground water is mainly used for drinking purpose only. However, as suggested by the Hon'ble committee we will explore the possibility towards permission from W.R. Dept., Odisha for use of 9.8 KLD surface water from Suna river.
xi.	Existing management & de-siltation of Suna River, Kakrapani Nala & surrounding about 15% Agriculture lands be submitted along with a write-up on illustration being practiced and for future with proposed expansion also.	Surface run-off management structures like retaining wall, garland drain, check dam & check weirs have been provided at the strategic location inside our mines towards zero discharge from the mines. Till date there has been no overflow flow from our mine premises to nearby water body i.e. Suna River. However, we used to de-silt the check dam/check weirs inside our mine premises, village ponds of surrounding areas and if required water bodies like Suna river and Kakrapani Nalla etc. The SOP practiced during de-siltation process is attached as **Annexure-10**
xii.	Physio-chemical analysis of water of Suna River with sediment analysis of the river including silica content be done & submitted to find potential of silt generation.	Physio-chemical analysis of Suna River along with sediment analysis report is attached as **Annexure-11**.
xiii.	How vegetation is changing & what type of vegetation is changing due to the effect of the mining?	The mining area is inside the Baitarani Reserve forest. Nearby adjacent other leases are Khndabandh Mines of TATA and Khandbandh Mines of OMC which are operating much before this mine. Trees like Sal, Karanj, Neem, Mango, Asan, Kendu etc. are existed and after grant of forest clearance tree enumeration with felling done in most of the area as approved by Divisional Forest Officer, Keonjhar in reference to the approved Mining Plan in phased manner. Gap Planation has been done in the safety zone area. Apart from this plantation also done in the 1.436 Ha of back filling area. Native species like Neem, karanj, Anla, Asan, Bela, Radhachuda, Krishnachuda, Pijuli, Gambhari, Harida etc. has been planted. In the mine closure all the area will be planted with native species. So there is no change in vegetation.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
xiv.	166 Permanent employees and more than 200 floating employees will be working for this proposed mining i.e. total about 400 people will be engaged for the proposed mining as stated by project proponent during presentation. There is no STP inside the Mines and stated to have a STP outside the Mines. Details location of the STP with connectivity between mines & the STP shall be submitted. Further, the capacity of the said STP, details of effluents generated by the mines & the people outside with calculation and disposal details of treated waste water & STP sludge be submitted with connectivity drawing etc.	There is no housing/camp inside the lease area. Whatever the little bit waste water generated from toilet is being treated through Soak pit and same will be continuing during expansion also. Out of 166 permanent employees more than 100 employees are staying in their respective houses nearby Khandbandh, Joda, Barbil area etc. The floating employees are also from the surrounding village area. However, 30 KLD STP is already established at contractor colony which 5 km away from the mine lease area. The details of the STP is attached as Annexure-12.
xv.	The possible important risk factors are slope failure of ore, OB & its dumps, Mineral waste, flying rocks during blasting, intersection with underground water in mining, seepage of mining etc. Mitigation measures for the above be submitted.	As of today there is no such incidence of slope failure mines and dump in the Joda-Barbil-Koira region. However, Slope stability has been conducted by CIMFR, Dhanbad. The recommendation of the same is being implemented. Towards control blasting, blasting vibration study has been conducted by CIMFR, Dhanbad and the recommendation of the same is being implemented. There is no such intersection of ground water as per the approved mining plan. Slope stability study report and Blasting vibration study report is attached **Annexure-13 & Annexure-14.**
xvi.	Protection & conservation plan of endangered, threatened and nearly threatened species / wild lives likely to be affected due to the existing mines & proposed expansion be submitted, identifying the species also.	There is no such schedule-1, endangered & threatened species inside the mine lease area. In the buffer zone schedule-1 species like Elephant, Sloth bear, Monitor Lizard are found. Towards conservation & protection of flora & fauna Site Specific Conservation Plan prepared and approved by PCCF (wild Life) and Chief Wild Life Warden, Odisha. The project has estimated cost of Rs 82.00 lakhs for both buffer & core zone. Out of the above amount Rs 68.00 lakhs has been deposited under CAMPA. Further towards awareness among local people awareness programme carried out in monthly basis apart from Wildlife Week, World Environment Day, Vano Mahostav,

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		Earth Day etc. Apart from employee, we used create awareness among locals, School children through Audio visual, Essay writing and Painting competition. The approval of PCCF (wild Life) and Chief Wild Life Warden, Odisha is attached as Annexure-15 and Authenticated flora & fauna list is attached as **Annexure-16**.
xvii.	Comments on petition received through SEIAA on this mine be submitted.	The comments of the petition received through SEIAA is attached as **Annexure-17**.

82. The SEAC opined Comments of the lessee at **Annexure – 17** of the ADS on petition received through SEIAA on this mine is satisfactory and to the fact and hence, no field visit is required.

Considering the information furnished and the presentation made by the consultant **M/s. Ardra Consulting Services Pvt. Ltd., Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance with stipulated conditions as per **Annexure – E.**

ITEM NO. 10

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S EVOS BUILDCON PVT. LTD. FOR EXPANSION OF RESIDENTIAL APARTMENT PROJECT OVER AN BUILT-UP AREA 23464.49 SQMT LOCATED AT PLOT NO. 552, KHATA NO. 313, MOUZA- SIPASARUBALI, PURI, ODISHA OF SRI KALINGA KESHARI RATH – EC.

1. M/s Evos Buildcon Pvt. Ltd. proposes an Expansion of Residential Apartment Project. The project site is located at Plot No. 552, Khata No. 313, Mouza- Sipasarubali, District-Puri, Odisha on a land measuring 1.917 acres or 7,758.55 m^2.
2. The project falls under category “B” or activity 8 (a) - Building and construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. The site is coming under development plan of PKD Authority. There are Total 1 Towers i.e. Residential, Departmental Store, Restaurant, Banquet Hall, SPA, Swimming Pool & Kids Pool, Open Food Court.
4. The nearest Railway Station is Puri Railway Station is about 5.6 km (NE) away from the project site and Biju Patnaik International Airport is at a distance of approx. 49 km in North direction from the project site.
5. The project has total 11 floors (G+10). The maximum height of the building will be 35.53m. The total plot area is 7758.55 sqm. Net Plot Area is 7446.37 sqm. The permissible ground coverage will be 2,978.548 sqm (40%) and proposed Ground Coverage will be 2912.20 (39.10%). The permissible FAR will be 37,231.85 sqm (@ 5 of plot area) and proposed FAR will be 21919.25 (2.943). The Non FAR for the project will be 1,545.24 sqm. Total Built up area for the project will be 23,464.49 sqm. The total population of project after proposed will be 2530 persons.

6. The total water requirement will be Ground water met through Bore well which is approx. 285 KLD, out of which total domestic water requirement is 276 KLD. The total domestic water will be 186 KLD, out of which fresh water requirement is approx. 186 KLD & flushing water will 90 KLD.
7. The project will generate approx. 239KLD of wastewater. The wastewater will be treated in an onsite STP of 290 KLD capacity. The treated water (215 KLD @ 90% of total waste water) will be reused for flushing (90 KLD), horticulture (8KLD). Surplus treated water during dry season (117KLD), monsoon season (124 KLD) and winter season (122KLD) will be discharged to external sewer with the requisite permission.
8. Total parking area requirement will be 5,479.812 m2. And Total Parking i.e. 283 ECS will be provided.
9. The power supply will be supplied by State Electricity Board. The requirement load for the project will be approx. 1414 kVA. There is provision of 2 Nos. of DG sets of total 445 kVA (1x 320 kVA +1x 125) capacity for power back up during power frailer. Silent DG sets (Radiator cooled). Separate generator yard will be constructed for the residential block.
10. The total solid waste generation will be 1050 kg/day.
11. Total green area measures 1,861.59 m2. Total no. of trees proposed = 120 trees.
12. Total Project cost is INR 78.297 Crores including land and development cost.
13. The project proponent along with the consultant **M/s Grass Roots Research & Creation India (P) Ltd.** made a detailed presentation on the proposal before the SEAC.
14. The SEAC in its meeting held on dated 28.03.2022 decided to take decision on the proposal after receipt of the certain information / documents from the proponent followed by site visit by sub-committee of SEAC.
15. The project proponent has furnished the compliance as requested and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	The "Kisam" of the land including that of "road affected" area of 312.18m^2 (as stated) as per "HAAL / Sabak" revenue record be submitted and the construction work shall start only after the land is converted to "Gharabari" kisam by the appropriate Revenue Authority.	The "Kisam" of the land including that of "road affected" area of 312.18 m2 is converted to "Gharabari" kisam by the appropriate Revenue Authority. Copy of land papers is attached as **Annexure-I.**
ii.	Since it is an expansion proposal	3D images are attached as **Annexure-II**. Existing built-up area is 14,306.82 mP2. Copy of building plan

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td>and construction is stated to have already started, the details of the construction done already with figures & 3D picture duly certified by the charted Engineer be submitted. Details of the existing project such as built-up area, copy of building plan approval letter along with building plan of existing project etc. be submitted.</td><td>approval letter and approved building plan for existing part is attached as Annexure-III (a) and Annexure-III(b)</td></tr>
<tr><td>iii.</td><td>Justification as to why this project will not be considered as a violation case.</td><td>As per the Building Plan approved by Puri Konark Development Authority vide file no. 329 PKDA, Puri dated 13.04.2021 [copy attached as AnnexureIII(a)], the Built-up area of existing part is 14,306.82 sqm i.e. less than 20,000 sqm, Hence, does not fall under the purview of EIA Notification, 2006.
Post expansion, the Built-up area of project will become = 23,464.49 sqm which attracts Schedule 8(a) of EIA notfn. and therefore, we submitted an application to SEIAA, Odisha on 11th Feb 2022 for seeking prior EC for expansion of the project. There is no violation in this case.</td></tr>
<tr><td>iv.</td><td>A comparative statement in matrix form containing all salient & relevant features of building construction & environmental parameters be submitted showing the same in the respective layout map (for original as well as proposed expansion) to scale including the superimposed one, showing plot area, road affected area, built-up area, ground coverage, FAR area, STP, drainage, green belt, entry & exit gate, with</td><td>Comparative area statement is given below
<table>
<tr><th>S. No.</th><th>Description</th><th>Existing area (m2)</th><th>Proposed Area(m2)</th><th>Total Area</th></tr>
<tr><td>1.</td><td>Total Plot area</td><td>7758.55</td><td>Nil</td><td>7758.55</td></tr>
<tr><td>2.</td><td>Road Affected Area (To be surrendered)</td><td>312.18</td><td>Nil</td><td>312.18</td></tr>
<tr><td>3.</td><td>Net Plot Area</td><td>7446.37</td><td>Nil</td><td>7446.37</td></tr>
<tr><td>4.</td><td>Permissible Ground Coverage</td><td>(@ 40% of net plot area) 2,978.548</td><td>Nil</td><td>(@ 40% of net plot area) 2,978.548</td></tr>
<tr><td>5.</td><td>Proposed Ground Coverage</td><td>(@30.73 % of net plot area) 2288.65</td><td>623.55</td><td>(@39.10% of net plot area) 2912.20</td></tr>
<tr><td>6.</td><td>Permissible</td><td>(@ 2.75</td><td>Nil</td><td>(@ 5.0 of</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th colspan="5">Compliance furnished by the proponent</th></tr>
<tr><td></td><td>pedestrian path for residential & commercial complexes, parking, building heights etc.</td><td></td><td>FAR</td><td>of net plot area) 20,477.51</td><td></td><td>net plot area) 37,231.85</td></tr>
<tr><td></td><td></td><td>7.</td><td>Total Proposed FAR</td><td rowspan="3">(@1.921 of plot area) 14,306.82</td><td rowspan="3">7612.43</td><td>(@2.943of net plot area) 21919.25</td></tr>
<tr><td></td><td></td><td>Commercial FAR Area</td><td>745.34</td></tr>
<tr><td></td><td></td><td>Residential FAR Area</td><td>21173.91</td></tr>
<tr><td></td><td></td><td>8.</td><td>Non-FAR</td><td>2288.68</td><td>-743.44</td><td>(Balcony Area + Ground floor parking area) 787.50+ 757.74 = 1,545.24</td></tr>
<tr><td></td><td></td><td>9.</td><td>Total Built-up area</td><td>16,595.5</td><td>+6,868.99</td><td>23,464.49</td></tr>
<tr><td></td><td></td><td>10.</td><td>Required Parking Area as per bye laws</td><td colspan="3">(@25% of residential FAR area+40% of commercial FAR area) = 5293.47+298.13 = 5591.6</td></tr>
<tr><td></td><td></td><td>11.</td><td>Proposed Parking Area</td><td>3709.00</td><td>1,921.11</td><td>5630.11</td></tr>
<tr><td></td><td></td><td>12.</td><td>Proposed Green Area</td><td>(@25% of net plot area) 1,861.59</td><td>NIL</td><td>(@25% of net plot t area) 1,861.59 [which includes 20.5% area (1526.50 sqm) for Green belt & 4.5 % area (335.08sqm) for lawn]</td></tr>
<tr><td></td><td></td><td>13.</td><td>Height of the building (m) (up to terrace level)</td><td>24</td><td>11.53</td><td>35.53m</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		Existing site layout is attached as **Annexure-III** (b) and layout for proposed expansion showing all environmental features like STP, drainage, green area, DG stacks, etc. is attached as **Annexure-IV**.
v.	Since built-up area is stated to be increased from 16,595.50 m^2 to 23,464.49 m^2, including ground coverage expansion of 623.55 m^2, the detail features that need to come up in additional ground coverage be indicated & shown, since ground coverage is proposed to be expanded from 30.73 % to 39.10 % & height of the building to increase by 11.53 mtr.	The additional ground coverage i.e. 623.55 sqm will be utilised for construction of new block which will be G+10 floors (35.53 m). In the earlier block which is having ground coverage = 2285.65 sqm with B+S+7 floors (24 m height), 3 new floors will be added. Copy of site layout showing additional ground coverage area is attached as **Annexure-V**.
vi.	Since the height of the building (s) is proposed to be increased is ten of floors, structural stability certificate to be submitted by PKDA approved engineer. If it is already done by NIT, Rourkela as stated during presentation, then the same need to be endorsed / authenticated by PKDA.	Copy of Structural stability certificate has been obtained from NIT, Rourkela for construction of ten floors. Copy attached as **Annexure-VI**.
vii.	Entry & Exit gates with pedestrian need to be provisioned separately for residential complex & commercial complex and submitted showing in the layout with appropriate	Copy of Site Layout showing separate Entry & Exit gates for residential complex & commercial complex with pedestrian pathway is attached as **Annexure- IV**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	dimensions.	
viii.	Parking to be shown & Submitted in the layout map as follows along with norms indicating the area, numbers and percentage: ✓ For residential & commercial complex separately. ✓ For 4 wheelers & 2 wheelers separately. ✓ ECS in terms of 4 wheelers & 2 wheelers indicating the space provided as per the norm & the relevant document for the norm followed. ✓ Parking provision in terms of ECS & space as well compatible with no of dwelling units & visitors (floating population for residential complex & commercial complex).	Revised Plan showing separate Parking for residential & Commercial is attached as **AnnexureVII**. Revised Parking Calculations are as under: • 2 wheelers parking (Residential) = 21.85 ECS i.e. 44 Nos. • 4 wheelers parking (Residential) = 278 ECS i.e. 278 Nos. • 2 wheelers parking (Commercial) = 2 ECS i.e. 4 Nos. • 4 wheelers parking (Commercial) = 11ECS i.e. 11 Nos. Hence, revised parking including 4 wheelers, 2 wheelers, bicycle and visitors parking will be 482 ECS. The parking facilities have been proposed as per NBC 2016 norms. Relevant pages of NBC attached as **Annexure-VIII**.
ix.	Surplus treated waste water is stated to be given to	Surplus treated water will be discharge to external drain which is approx. 350m away from the project site. We have already obtained permission from Gorual Gram

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	nearby construction sites / farmers / Park plantation / External roads etc in the report, but during presentation, it was stated that the same will be discharged to external sewer / drain. This needs to be clarified & confirmed. In case the treated water is to be given to farmer, construction, documentary evidence needs to be submitted. Further, since this arrangement cannot be permanent and consistent, it is necessary to provide connectivity of excess treated water to the nearby drain. For discharging to external sewer/ drain, the permission / NOC from the drain authority to be submitted to take the additional load. The lateral distance between the proposed project boundary & the external drain / sewer be submitted including the ownership/ROW of the land need to be in favour of Project Proponent. Internal drainage map with quantity of both treated waste water / storm / run-off water be submitted.	Panchayat for disposal of rain water and surplus storm water to nearby PWD/NH drain located in mouza- Sipasarubali in process to obtain the NOC from the drain authority. Copy attached as **Annexure-IX**. Layout showing drain connectivity is attached as **Annexure-X**.
x.	Green Belt was stated to be 14% in	Total proposed green area is 1,861.59 m2 (25.00% of net plot area) which will include Plantation area = 1526.50 m2 (20.5%) +

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	the report circulated / uploaded, but corrected to 7.2% during presentation. As such the details with dimension of green belt coverage for the original & proposed expansion be submitted showing in the layout map. Greenbelt area is proposed to be less than 20%. It should be increased to 20% or more and accordingly, revised greenbelt plan be submitted.	Lawn area = 335.08 m2 (4.5%). As per the suggestion of SEAC, we have increased plantation area from14% to 20.5% of net plot area. Revised Landscape Plan is attached as **Annexure-XI**.
xi.	The source of domestic / drinking water is stated to be "Bore well". Since, Puri Municipality has agreed to provide water for similar housing projects, the Project proponent need to approach the concerned Authority for the purpose and submit the design of the sump to be provisioned for storage of municipality water and show it in the layout map.	We are in process of obtaining permission from Puri Municipality for water supply to our project site and will also submit a copy of the permission to SEIAA, Odisha. An undertaking regarding the same is attached as **Annexure-XII.** In case, the Municipal Authority is unable to supply water for our project, we will use ground water for which we have received NOC from CGWA vide letter No. CGWA/NOC/INF/ORIG/2021/14281 dated 10.01.2022. Copy of CGWA NOC is attached as **Annexure-XIII**.
xii.	Certificate from the concerned authority that the project is not located in the sweet water zone of Puri be submitted.	Our project site is not located in the sweet water zone of Puri. We are in process to obtain certificate from the concerned authority. An undertaking regarding the same is attached as **Annexure-XII**.
xiii.	DG sets location to be shifted from shown south-east corner considering the prevailing wind	Updated site layout with revised DG sets location is attached as **Annexure-IV**. Predominant wind direction is NE. DG set location will be NW as per the wind direction. To mitigate

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	direction as discussed during presentation. Location of dwelling towers and the drawing of the installation of the exhaust pipe of DG sets to be submitted. Study report on extent of sea breeze and land breeze impact over that area and accordingly position of DG set strictly followed.	sea breeze and land breeze impacts on the project, following measures will be adopted:- 1) Use of stainless steel or corrosion resistant metals. 2) Use of fiberglass framed doors and windows to avoid them from corroding. 3) Minimised use of wood in building construction. Only treated would be used to minimise its rotting. 4) Use of durable construction material especially for external paint and plastering. 5) Employing an experienced maintenance agency for regular maintenance of building
xiv.	Considering Puri being severe cyclone prone place and high flood zone, and site is approximately 900 mtr from Bay of Bengal (Sea), detailed mitigation measures for disaster be submitted.	Copy of Risk Assessment and Disaster Management Plan is attached as **Annexure-XIV**.
xv.	Certificate from the concerned authority that the project is not located within the CRZ.	Copy of CRZ NOC obtained from Puri Konark Development Authority is attached as **Annexure- XV**
xvi.	Since no rain water recharge is proposed considering the geography, details of rain water harvesting & its use be submitted.	As per soil investigation study, ground water level at site varies from 1.80-1.95m. Hence, it is not feasible to recharge ground water, therefore, we have proposed a Rainwater Storage Tank of 170 mP3P. The stored rain water will be treated and used to meet the water demand of the project.
xvii.	Total power requirement is stated to be 1414 KVA. Details of solar power generation & consumption thereof with calculation be submitted showing as the percentage of total power demand.	Total power requirement for project is 1414 kVA. It is proposed to meet 10% of electrical load i.e. 141 kVA through solar energy. Solar Power will be used for external lighting.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
viii.	Fire Tender Corridor details with dimensions showing in the layout map be submitted along with approval of Fire Services Authority.	Fire recommendation is attached as **Annexure-XVI** and Fire Fighting Plan with fire corridor is attached as **Annexure-XVII**.

16. The proposed site was visited by the sub-committee of SEAC on 27.04.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

    a) Land documents with conversion to Gharabari kisam

    b) Copy of Fire authority recommendation

    c) Copy of Road affected area document

    d) NOC from appropriate authority for connecting the excess treated water to final drain.

    e) The PP needs to submit proof of documents with timeline, responsibility and drain plan for construction of road side drain connecting to existing drain with permission from the authority (Municipality or Panchayat etc) before execution of the project. Any private land if used for drain then the ROR or POA to be submitted.

    f) Provision of solid waste disposal system to be submitted in details including STP waste. In case of any tie up with any agency for disposal, documentary support to be provided.

    g) Internal drain map with final fall out planned. Also rain water harvesting, recharge pits, storm water management, dual plumbing etc to be shown in the map along with revised green belt map and % of plantation in green belt.

    h) Source of water with permission letter from Ground water authority as well as Water Resource department as commercial uses are envisaged. Document in support of non-availability of supply water to be submitted.

    i) Provision of Roof top Solar PV system and Solar calculation details with generation and consumption in terms of % of total power to be provided

    j) Revised Map showing Entry and exit gates (Needs to be separate for residential and commercial) for both residential and commercial area. Parking areas for residential, commercial and visitors (separately) with ECS calculation vs norms and also mention the % of each parking w.r.t. respective area and number of apartments. All parking to qualify the norms. Information to be submitted in tabular form with norms.

    k) Traffic study from a reputed institute with mitigation measure if any.

    l) NOC from CRZ

    m) Structural stability with sufficient documentary proof of foundations and vetted by PKD

n) Documents with tabular form giving all parameters including STP, ETP capacities, green belt, no of units, parking etc – Previous approval vs Present and expansion proposed

o) All points raised in proceedings (if not submitted)

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the information / documents as desired by the sub-committee of SEAC at para – 16 above.

The project needs to be recommended in view of compliances furnished with some specific conditions.

ITEM NO. 11

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S ALISHAN REALCON PVT. LTD FOR PROPOSED HOUSING PROJECT OF S+5 STORIED RESIDENTIAL APARTMENT BUILDING OVER AN BUILT-UP AREA OF 39,288.93 SQ.M. AT MOUZA- NUAHATA, DIST – CUTTACK, ODISHA OF SRI MANOJ KUMAR DASH (DIRECTOR) – EC

1. The proposal is for Environmental Clearance of M/s Alishan Realcon Pvt. Ltd for Proposed housing Project of S+5 storied residential apartment building over an built-up area of 39,288.93 Sq.m. at Mouza- Nuahata, Dist – Cuttack, Odisha.
2. The project falls under category “B” or activity 8 (a) - Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. Alishan Realcon Private Limited has proposed for development of private housing project of area 15256.64 sqm in plot No.: 1085, 1122, 1124, 1090 Khata No- 13-D1, 498/240, 139 & 498/2111 at Mouza- Nuahata, Cuttack, Dist-Cuttack..
4. **Location and connectivity** - The proposed site is located at Mouza- Nuahata, Cuttack, PS- Balianta, Dist- Cuttack, Odisha. The Geographical co-ordinate of the project site is Latitude 20°22'24.81"N & Longitude 85°53'19.57"E. The project site is well connected with the National Highway-16 & Puri-cnanal road located at the distance of 0.1 Km & 0.2 km. The nearest Railway station is Mancheswar Railway Station at a distance of approximately 5.5 Km from the project site. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is at a distance of 16 Km from the project site.
5. The site is coming under development plan of Cuttack Development Authority.
6. The Building Details Of The Project:

Particular	Proposed	Permissible
Project Name	Proposed S+5 storied Residential Apartment Buildings	
Plot Area	15256.64 Sqm (1.52 Ha)	--
Ground Coverage	7635.57 Sqm (50 %)	--
FAR (Floor Area Ratio)	2.1	--
Built up Area	39288.93 sqm	--
Maximum Height	38 m	--

Particular	Proposed	Permissible
Road Area	3465.32 sqm	--
Open Parking Area	1104.43 sqm	8061.80 sqm
Total Parking Area	8146.17 sqm	
Green Belt Area	3051.32 sqm (20.0 %)	3051.32 sqm (20.0 %)
Maximum No. of Floor	S+5	--
Power/Electricity Requirement & Sources	Total – 1435 KW	--
No. of DG sets	2x700 KVA	--
Water requirement	129.7 KLD (Fresh)	--
Sewage Treatment Plant	STP Capacity - 170 KLD	--
Estimated Population-Residential, Floating /visitors	1390 nos.	--

7. **Water requirement**: Fresh make up of 129.7 m3/day will be required for the project which will be sourced from Ground water. Waste water of 166.08 KLD will be treated in a STP of 170 KLD capacity, which includes primary, secondary and tertiary treatment.

8. **Waste water details**: Every building generates wastewater amounting about (80 % of fresh water consumed + 95 % of flushing water). The major source of wastewater includes the grey water from kitchens, bathrooms and black water from toilets. It is expected that the project will generate approx. 166.08 m3/day of wastewater. The wastewater will be treated in the STP of capacity of 170 m3/day provided within the complex. Out of which 170 m3/day will be recycled within the project for flushing (65.6 m3/day), landscaping (12.38 m3/day),STP loss (8.5 m3/day) & Dust suppression in Road Area (6.67 m3/day). 65 m3/day will be used as HVAC system in case of non-monsoon period. In case of Monsoon period 170 m3/day will be recycled within the project for flushing (65.6 m3/day), 65 m3/day will be used as HVAC system, STP loss will be 8.5 m3/day and 26.98 m3/day surplus will be generated which will be discharged to the drain.

9. **Power requirement**: The total consolidated electrical load estimate for proposed project is about 1435 KW. The power will be entirely supplied by source of TPCODL of Odisha State Electricity Board. Also, in case of power cut, 100 % power backup generator will be provided for common uses only. For this purpose diesel generator having 700 KVA (2 nos.) capacities will be provided.

   There are 70 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street lighting,

   Energy conservation by using Solar Street Lighting = 70 x 72 = 5040 watt = 5.04 KW

   Energy Saving by using Solar Lighting = 71 KW

   Energy Saving by using Solar Street Lighting = 5.04 KW

Total Energy Saving = 71 + 5.04 = 76.04 KW

Total Energy Saving = 76.04/1435 = 0.0529 = 5.2 %

10. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 07 recharge pits from the plot area.
11. **Parking Requirement**: Total parking area provided is 8146.17 m^2 sq.mt./ 278ECS and space provided is stilt and open parking area.
12. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4).
13. **Green Belt Development**: Green belt will be developed over an area of 3051.32 sqm which is 20.0 % of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
14. **Solid Waste Management**: From the proposed housing project solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 556 kg/day. The waste generated from floating population in residents will be @ 0.15 kg/day, which will be 21 kg/day. The generated solid waste from the residential apartment will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste.

Sl. No.	Category	Counts (heads)	Waste generated
1.	Residents	1390 @ 0.45 kg/day	556 kg/day
2.	Floating population in residents	140 @ 0.15 kg/day	21 kg/day
3.	STP sludge		83.04 ~83 kg/day kg/day
Total Solid Waste Generated			**660 kg/day**

15. The total population of project will be 1390 persons for residential and floating population.
16. The estimated project cost is ` 72 Crores and Environment Management Cost is ` 3.6 crores.
17. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar,** made a detailed presentation on the proposal on 17.12.2021.
18. The SEAC in its meeting held on dated 17.12.2021 decided to take decision on the proposal after receipt of the certain information / documents from the proponent followed by visit of sub-committee of SEAC to the proposed site. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	"Kisam" of the land with conversation to "Gharbari" from appropriate Revenue Authority.	Total land area of the proposed project is 15256.64 sqm and the kissam of land is Gharabari, Land

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		document is attached in **Annexure - 1**.
ii)	Source of water: why not from public water supply with provision of sump & maximum one bore well of suitable capacity to meet emergency need. If the authority does not allow, the letter to this effect from the later be submitted.	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). The letter from PH Division regarding Non-availability of Public Water Supply is attached in **Annexure-2**.
iii)	In case of drawl of ground water "NOC" from CGWA & permission from W.R Deptt, Govt of Odisha be submitted.	Ground Water permission has been obtained from CGWA vide NoC No. CGWA/NOC/INF/ORIG/2021/13373, dated 19.10.2021. Ground Water Clearance copy is attached in **Annexure -3.**
iv)	Distance between boundary of the project and Public drain for discharge of treated waste water is stated to be approx. 200mtr. The ownership / ROW of the said land and permission from drain authority to take the additional land of this project to be submitted.	We have already submitted the Drainage Plan to Cuttack Municipality Corporation & the vetting process is under process. Once the Drainage Approval will be obtained from respected Authority we will submit the NOC to SEAC/SEIAA committee before commencement of the project. We have already deposit the Infrastructure development fee to EIDP. Letter & fee deposit receipt is attached in **Annexure -4**.
v)	How much rain water available shall be recharged / harvested and balance disposal?	Total 111 m^3/day rain water will be available for recharged/ harvested through 7 nos. of rain water harvesting calculation is attached in **Annexure-5**.
vi)	No. of rain water harvesting pits (RWHP) be re-calculated considering maximum hourly rainfall in 24 hrs on the basis of logical climate data in past 30 years with co-efficient of run off on real time input, retention time and water table being a low level / lying area. The design of recharge pits are required to be submitted.	Rain water harvesting pits (RWHP) has been calculated as per 30 years Rainfall data (1988-2021), as per 30 years data maximum rainfall is 330 mm/day and hourly rainfall is 33 mm/hr. So total rain water available for recharging is 111m^3/hr and total 7 nos. of rain water harvesting pits has been provided for ground water recharging. Detail calculation is given in **Annexure-5**.
vii)	Being low lying area, and NH-16 being any at 100 mtr distance & Puri canal at 200 mtr distance, elevation of the base be suitably worked out & confirmed.	A detailed contour survey has been made and drainage plan has been prepared by a consultant. The plinth level of the project is

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		proposed there so that the storm water will be discharged in the concrete storm water drain already available adjacent to canal. Drainage drawing is attached in **Annexure -12**.
viii)	Green Belt is said to be 3051.52m^2 (exactly 20% of plot area); Detailed calculation with dimension continuous around the boundary showing in the layout map be submitted.	Total greenbelt area provided for the proposed building is 3188.75 sqm, which is 20.6% of the total plot area (15479.21 sqm). We proposed to develop three tier hierarchal greenbelt along the periphery of the building. Greenbelt drawing is attached in **Annexure-6**.
ix)	Parking is terms of space & ECS for 4 wheelers, 2 wheelers including bicycles in terms of the norm as well compatibility for dwellers/ residents, visitors / floating population be re-worked out & submitted showing the space for the same in the layout map.	Total parking area provided for the proposed building is 8146.17 sqm and ECS provided for the building is 253 nos. of 4 wheelers & 204 nos. of 2 Wheelers including bicycles, Parking layout showing 4 wheelers & 2 wheelers parking is attached in **Annexure-7**.
x)	Detail plan with solar Power Consumption against generation with percentage of total power demand, both for street lighting, open space and any other use be submitted.	Total power generation from Solar system is 80.92 KW through 55 nos. of PV Panels & 70 nos. of Solar Street Lighting. Total power demand of the proposed building is 1435.0 kw. So total solar power generation from the proposed building is 5.6% of total power demand. Details solar calculation is attached in **Annexure-8**.
xi)	Stack height of DG set (s) with installation drawing of exhaust pipe (s) be submitted.	For required backup power, 1 no. of DG Set of capacity 250 KVA is proposed. The exhaust shall be provided as per pollution norms laid by CPCB. Since our DG Sets location are along the compound wall, we proposed the vent pipe along the building wall to highest point of the building & vent is 3 m in highest point. Details proposal for DG Sets is attached in **Annexure-9**.
xii)	Traffic study be undertaken by domain expert at entry & exit gates of the project and intersecting point (s) of the lead road of the project with NH-16 (any 100mtr away) / public road with decongestion plan as necessary based on study finding taking into consideration the traffic load 10 years ahead with this project & projects in the vicinity & public traffic be	The traffic Study report has been vetted by Indian Institute of Technology (IIT) Bhubaneswar. Traffic Study report is attached in **Annexure-10**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	submitted.	
xiii)	DG set location to be shifted in reference to predominant wind direction & location of the towers and shown in the layout map & submitted along with installation drawing of exhaust pipe.	The predominant wind direction of the proposed project area is South and the DG set will be installed as wind flow from South to North. The DG Set position is marked in the layout with respect to predominant wind direction and location of the building tower along with installation drawing/ layout is enclosed as **Annexure-11**.

19. The SEAC in its meeting held on dated 15.03.2022 decided to take decision on the proposal after the site visit by the sub-committee of SEAC.

20. The proposed site was visited by the sub-committee of SEAC on 06.04.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

    a) Documentary evidence of existing sub roads connecting the high way from plot site with Revenue map indicating details of sub roads ownership (like- POA, Free gift, Revenue Road etc). Also, the Appropriate authority/committee report on road and its development
    b) Visitor parking area, number of 4 and 2 wheelers and percentage to be provided with total parking of residentials.
    c) Land Kisam to be converted to Gharabari if not done.
    d) Solid waste disposal facilities including STP waste and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated)
    e) NOC from CMC for drain connection and disposal of treated water load of the project
    f) Copy with Possession/POA of Private land connecting the final drain (external)
    g) Internal drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting
    h) Source of water with permission letter. Also fire authority recommendation/permission(if not submitted)
    i) No of OHT and Tanks for Dual Plumbing
    j) Stack height in meter with calculation vis-à-vis building height and placement of DG set
    k) Integrated Solar PV set on roof top with generation, consumption and percentage to be provided.
    l) As the drain is at higher height than the current ground level, the PP to maintain the terrane with piling operation so that the excess treated water could be discharged to the drain. The PP to ensure maximum utilization of treated water for internal use with more plantations.
    m) Traffic summary and mitigation measure
    n) All points raised in proceedings (if not submitted)

21. The SEAC in its meeting held on dated 12.04.2022 decided to take decision on the proposal after receipt of information / documents as sought by the Sub-Committee of SEAC at para 20 above.

22. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i.	Documentary evidence of existing sub roads connecting the high way from plot site with Revenue map indicating details of sub roads ownership (like- POA, Free gift, Revenue Road etc). Also, the Appropriate authority/committee report on road and its development	Documentary evidence like Land Document of existing sub roads connecting from the highway to our project site is attached in **Annexure -1**.
ii.	Visitor parking area, number of 4 and 2 wheelers and percentage to be provided with total parking of residentials.	Total parking area provided for the proposed building is 8146.17 sqm and ECS provided for the building is 253 nos. of 4 wheelers & 204 nos. of 2 wheelers including bicycles. Parking layout showing 4 wheelers & 2 wheelers parking is attached in **Annexure -2**.
iii.	Land Kisam to be converted to Gharabari if not done.	Total land area of the proposed project is 15256.64 sqm and all land has already been converted to Gharabari. Land document is attached in **Annexure-3**.
iv.	Solid waste disposal facilities including STP waste and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated)	Total Solid Waste generated from the proposed project is 660 kg/day. The solid waste will be collected in separate colored bins. We have tie up with M/s. Jagruti Welfare Organization for Collection & Transportation of solid Waste. Consent Letter from Jagruti Welfare Organization is attached in **Annexure -4**.
v.	NOC from CMC for drain connection and disposal of treated water load of the project	Cuttack Municipal Corporation has approved the Standard Operating Procedure (SOP) for approval of External Infrastructure Development Plan (EIDP) & deposit of External Infrastructure Development fee. SOP for EIDP is attached in **Annexure-5**. We have deposit Rs. 18,86,517.00 on 10.02.2022 towards 1% of External Infrastructure Development fee to Cuttack Municipal Corporation (CMC). Fee deposit letter is attached in **Annexure-6**.
vi.	Copy with Possession/POA of Private land connecting the final drain (external)	Land Document for private land connecting to the final drain is attached in **Annexure-7**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
vii.	Internal drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting	Internal drainage map showing internal drain, Rain water harvesting, dual plumbing lines & final drain connection lines is attached in **Annexure-8**.
viii.	Source of water with permission letter. Also fire authority recommendation/ permission (if not submitted)	Source of water is Ground Water & permission has been obtained from CGWA VIDE NoC No.CGWA/NOC/INF/ORIG/2021/13373, dated is attached in **Annexure-9** and Fire Clearance is not required for the project due to non-high rise building.
ix.	No of OHT and Tanks for Dual Plumbing	Layout plan for overhead tanks and dual plumbing tanks is attached in **Annexure-10**.
x.	Stack height in meter with calculation vis-à-vis building height and placement of DG set	1 no. of DG set of capacity 250 KVA is required for the proposed building. For the proposed project it is assessed that height of the stack shall be 18 m. $H=h+0.2\sqrt{KVA}$ $H=15+0.2\sqrt{250}$ H=15+3.16 H=18.16m Where, H=height of the sack attached to the DG set in the meter. H=height of the building (15 m) KVA= Capacity of the DG set (250 KVA) We proposed the vent pipe along the building wall to highest point of the building & vent is 3 m in highest point. Detail proposal for DG Sets is attached in **Annexure-11**.
xi.	Integrated Solar PV set on roof top with generation, consumption and percentage to be provided.	Total power generation from Solar system is 80.92 KW through 55 nos. of PV Panels & 70 nos. of Solar Street Lighting. Total power demand of the proposed building is 1435.0 KW. So total solar power generation from the proposed building is 5.6% of total power demand. Details solar calculation is attached in **Annexure-12**.
xii.	As the drain is at higher height than the current ground level, the PP to maintain the terrane with piling operation so that the excess treated water could be discharged to the drain. The PP to ensure maximum utilization of treated water for internal use with more plantations.	A detailed contour survey has been made and drainage plan has been prepared. The height of the drain & Ground Level will be maintained. The map showing level of the building & drain is attached in **Annexure-13**.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
xiii.	Traffic summary and mitigation measure	The Traffic study report has been vetted by Indian Institute of Technology (IIT) Bhubaneswar. Traffic summary and mitigation measures are attached in **Annexure-14**.
xiv.	All points raised in proceedings (if not submitted)	All points raised in presentation is already submitted on 24.02.2022

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – F** in addition to the following specific conditions**.**

i) **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.**

ii) The Proponent shall obtain permission/NOC from Executive Engg (PHD) and / or from the appropriate authority for disposal of 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

iii) The proponent shall use solar energy of 5% of total power requirement as proposed.

iv) Trees located within the project area shall be transplanted to alongside the boundary green development area.

v) 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.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

viii) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

ix) From the Traffic study it is seen that the study was carried out by CEMC and based on the data collected IIT has vetted it. Since, the study was not carried out by a reputed institute, fresh traffic study shall be conducted by a reputed institute and submitted to SEIAA with mitigation plan if any within a period of 3 months.

x) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 12

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S UTKAL BUILDERS LTD. FOR PROPOSED CONSTRUCTION OF (2B+S+11) MULTI STORIED RESIDENTIAL APARTMENT & (2B+G+9) STORIED COMMERCIAL BUILDING OVER AN AREA 4809.70 SQMT WITH TOTAL BUILT UP AREA- 25385.95 SQM AT MOUZA- PATIA, BHUBANESWAR, DIST- KHURDA OF SRI RAKESH BHURA (DIRECTOR) – EC

1. The proposal is for Environmental Clearance of M/s Utkal Builders Ltd. for Proposed Construction of (2B+S+11) Multi Storied Residential Apartment & (2B+G+9) Storied Commercial Building over an area 4809.70 SqMt With Total Built Up Area- 25385.95 Sqm At Mouza- Patia, Bhubaneswar, Dist- Khurda, Odisha.
2. The project falls under category "B" or activity 8 (a) - Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s Utkal Builders Ltd has awarded for Development of Private Housing Project 1.2 Acres of land at Plot No.: 369/1940/4889, 369/1940/4892, 369/1940/4891, 369/2381. Mouza-Patia, Bhubaneswar, Dist-Khurdha, Pincode-751024 Odisha.
4. **Location and connectivity** - The proposed site is located at Patia, Bhubaneswar, Odisha. The Geographical co-ordinate of the project site is: Latitude 20°20'36.93" to 20°20'38.61" Longitude 85°49' 17.83" to 85° 49' 22.75". The project site is well connected with Nandankanan Road and The National Highway-5 is located at the distance of 5.2 km. The nearest Railway station is Mancheswar Railway Station which is 3.28 Km from the project site. The nearest Airport is Biju Patnaik International Airport, Bhubaneswar which is 10.79 Km from the project site.
5. The site is coming under development plan of Bhubaneswar Development Authority.
6. The Building Details Of The Project:

Particular	Proposed	Permissible
Project Name	Proposed Commercial Tower (LB+UB+G+9) & Residential Tower (LB+UB+S+11)	--
Plot Area	4809.70 Sqm	--
Ground Coverage	1635.29 Sqm (34 % of plot area)	--
Total Built up Area	25,385.95 Sqm	--
Total FAR Area	18283.08 Sqm	--
Built Up Area (Residential)	11116.97 Sqm	--
Built Up Area (Commercial)	6659.60 Sqm	--
FAR	3.80	3.80
Maximum Height	39.07 mtr	--
Road & Paved Area	1106.2 Sqm	--

Parking Area	7609.38 Sqm	6150.80 Sqm (30 % of Residential FAR Area + 40 % of commercial FAR Area)
Green Belt Area	1045.59 Sqm (21.7 % of Plot area)	961.9 Sqm (20 % of Plot area)
Power/Electricity Requirement & Sources	1652.8 KW	--
No. of DG sets	2 x 250 KVA & 1 x 125 KVA	--
Fresh Water requirement & Sources	96.69 KLD Source-Ground Water Supply	--
Sewage Treatment & Disposal	STP Capacity, 150 KLD	--
Estimated Population-Residential, Floating/visitors	696 nos.	--
Estimated Population-Commercial, Floating/visitors	660 nos.	--

7. **Water requirement**: Fresh make up of 96.69 m^3/day will be required for the project which will be sourced from Ground water. Waste water of 129.76 KLD will be treated in a STP of 150 KLD capacity, which includes primary, secondary and tertiary treatment.

8. **Waste water details**: Every building generates wastewater amounting about (80 % of fresh water consumed + 100 % of flushing water). The major source of wastewater includes the grey water from kitchens, bathrooms and black water from toilets. It is expected that the project will generate approx. 109.7 m^3/day of wastewater. The wastewater will be treated in the STP of capacity of 150 m^3/day provided within the complex. Out of which 123.27 m^3/day will be recycled within the project for flushing (52.413 m^3/day), landscaping (2.42 m^3/day),STP loss (6.4 m^3/day) and 68.44 m^3/day surplus will be generated which will be discharged to the drain.

9. **Power requirement**: The total consolidated electrical load estimate for proposed project is about 1652.82 KW (Connected Load)/701.0 KW (Demand Load). The power will be entirely supplied by 11 KV source of TPCODL of Odisha State Electricity Board. Also, in case of power cut, 100 % power backup generator will be provided for common uses only. For this purpose diesel generator having 250 KVA (2 Nos.) & 125 KVA (1 No.) capacities will be provided.

   There are 110 nos of Solar Lighting poles (@72 Watt) has been proposed for Street lighting,

   Energy conservation by using Solar Street Lighting = 110 x 72 = 7920 watt = 7.9 KW

   Energy conservation by using Solar lighting for common area = 98 KW

   Total Energy Conservation = (98 + 7.9) KW = 105.9 KW

Total Energy Saving = 105.9/1652.8 = 0.0640 x 100 = 6.4%

10. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 3 recharge pits from the plot area.
11. **Parking Requirement**: Total parking area provided is for residents 4926.36m^2 or 152 ECS and for commercial purpose is 2683.02m^2 or 77ECS. Space provided is lower, upper basement and ground floor.
12. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4).
13. **Green Belt Development**: Green belt will be developed over an area of 1045.59 Sqm which is 21.7 % of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
14. **Solid Waste Management**: From the proposed private Housing project solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 313.2 kg/day and waste generated from the commercial will be @0.15 kg/day, which will be 99 kg/day. The generated solid waste from the residential and commercial complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate colored bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid waste and construction and demolition waste.

S. No.	**Category**	**Counts (heads)**	**Waste generated**
i)	Residents	696 @ 0.45 kg/day	313.2 kg/day
ii)	Commercial population (including Floating Population)	660 @ 0.15 kg/day	99 kg/day
iii)	STP sludge		54.85 kg/day
Total Solid Waste Generated			**467.05 kg/day Say 467 kg/day**

15. The total population of project will be 696 persons for residential and 660nos for commercial.
16. The estimated project cost is ` 46 Crores and Environment Management Cost is ` 2.3 crores.
17. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation on the proposal on 17.12.2021.
18. The SEAC in its meeting held on dated 17.12.2021 decided to take decision on the proposal after receipt of the certain information / documents from the proponent

followed by visit of sub-committee of SEAC to the proposed site. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
i)	Kisam" of the land with conversion to "Gharabari" from appropriate Revenue Authority.	Total land area of the proposed project is 4809.70 Sqm and Land document is attached in **Annexure -1**.
ii)	Source of water WATCO / Municipality with provision of sump. If the authority regrets, the said letter to be submitted. One bore well may be allowed to meet emergency need.	The Public water supply is not available in project area; once the public water supply is available the permission will be obtained from Public Health Division (PHD). The letter from PH Division regarding Non-availability of Public Water Supply is attached in **Annexure-2**.
iii)	In case of drawl of ground water, "NOC" from CGWA & permission from W.R Deptt, Govt of Odisha to be submitted.	Application for Ground Water clearance is already applied to CGWA. Once the Ground Water NoC received from CGWA, we will apply to Water Resource Department, Govt. of Odisha for final approval.
iv)	Lateral distance between the boundary of the project site and public drain for discharging treated waste water with ownership / ROW of the said land and permission from drain authority to take the additional land of this project.	The public drain is adjacent to the project site. We have already submitted the Drainage Plan to Bhubaneswar Municipal Corporation & the vetting process is under process. Once the Drainage Approval we will submit the NoC to SEAC/SEIAA Committee before commencement of the project. Undertaking regarding drainage is attached in **Annexure-3**.
v)	21% of rain water available is stated to be recharged / harvested. The method of disposal of balance 79% rain water is required to be specified, since it is likely to create local flooding.	Total 25 m^3 rain water will be available for recharged/harvested through 1 no. of rain water harvesting storage tank & 100% rain water will recharged through this tank. Details rain water harvesting calculation is attached in **Annexure-4**.
vi)	No. of rain water harvesting pits (RWHP) be re-calculated considering maximum hourly rainfall in 24 Hours on the basis of logical climate data in past 30 years with co-efficient of run-off on real time input. The design of RWH pits are required to be submitted.	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 37mm/hr. So total rain water available for recharging is 25m^3/hr and total 1 no. of rain water harvesting tank will be provided for ground water recharging. Detail calculation is given in **Annexure-4**.
vii)	Parking in terms of space & ECS for 4 wheelers, 2 wheelers including Bi-cycles be re-visited separately for residential & commercial complex for dwellers and visitors and floating population indicating the norm as well showing	As per BDA Norms total ECS required for the proposed residential & commercial building is 152nos. and total ECS provided for the proposed building is 158 nos. So total 158 nos. of 4 wheeler & 27 nos. of 2 wheelers will be provided in the proposed building. Detail Layout plan showing parking plan is attached

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	it in the layout map.	in **Annexure-5**.
viii)	Both entry & exit Gates for residential & commercial complex to be provisioned separately with adequate dimension & pedestrian rain pathways.	Separate entry & exist gate has been provided for Residential unit with dimension of 6.015m and Separate entry & exist gate has been provided for Commercial unit with dimension of 6.015m. Layout plan showing separate entry & exit for residential & commercial building is attached in **Annexure-6**.
ix)	Green belt of 961.9m^2 (exactly 20%) of plot area detail calculation with dimension continuous around the boundary showing in the layout map be submitted.	Total greenbelt area provided for the proposed building is 1104.03 sqm is 21.14% of the total plot area (5221.15 sqm). We proposed to develop three tier hierarchal greenbelt along the periphery of the building. Greenbelt drawing is attached in **Annexure-7**.
x)	Detail plan with calculation of solar power consumption against generation with percentage of the same against total power demand, both for street lighting and open space be submitted.	Total power generation from solar system is 107.8 kw through 75 nos. of PV Panels & 60 nos. of Solar Street Lighting. Total power demand of the proposed building is 1652.8 kw. So total solar power generation from the proposed building is 6.5% of total power demand. Details solar calculation is attached in **Annexure-8**.
xi)	Stack height of DG set (S) with installation drawing be submitted.	For required backup power, 2x250 KVA & 1x125 KVA DG sets will be proposed for the proposed building. The stack height of the DG set is 43m. The exhaust shall be provided as per pollution norms laid by CPCB. Since our DG Sets location are along the compound wall, we proposed the vent pipe along the building wall to highest point of the building & vent is 3m in highest point. Detail proposal for DG sets is attached in **Annexure-9**.
xii)	Traffic study be undertaken by domain expert at entry & exit gates of the project and intersecting point of the lead road of the project with NH / Public road with decongestion plan (as & if necessary) based on study finding taking into consideration traffic load 10years ahead with this project and projects in the vicinity & public traffic be submitted.	We have already deposit the fee & building plan to Indian Institute of Technology (IIT) Bhubaneswar for vetting of Traffic Report. Traffic Study report is attached in **Annexure-10**.

19. The SEAC in its meeting held on dated 15.03.2022 decided to take decision on the proposal after the site visit by the sub-committee of SEAC.

20. The proposed site was visited by the sub-committee of SEAC on 06.04.2022. Following are the observations of the sub-committee and proponent needs to submit relevant documents as below:

a) Revenue map superimposing the project site and road connectivity with documentary support for land between road and boundary (meant for road purposes).
b) Copy of BMC bye law for internal road and drive way.
c) To increase the width of entry and exit gates and revised Layout map with entry and exit and ramp separate for residential and commercial vehicle movements. Accordingly, revised green belt to be shown and calculated.
d) Parking (4 and 2 wheelers) areas for residential, commercial and visitors (for both separately) with ECS calculation vs norms and also mention the % of each parking w.r.t. total parking and no of duelling units.
e) As there are 2 DG set and 2 separate stacks, it was advised to work out the possibility to connect them to make one stack and as per norms of CPCB.
f) Internal drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting (if not submitted earlier).
g) No of OHT and dual plumbing units
h) Source of water with permission letter from Ground water authority as well as Water Resource department as commercial uses are envisaged. Also Fire authority permission copy.
i) Permission from BMC for discharge of extra load of treated water to the adjacent drain.
j) Solid waste disposal facilities including STP waste and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated)
k) Provision of integrated Roof top Solar PV system and Solar calculation details with generation and consumption in terms of % of total power to be provided
l) Summary of traffic report and mitigation measure as the front road has high traffic movements.
m) All points raised in proceedings (if not submitted)

21. The SEAC in its meeting held on dated 12.04.2022 decided to take decision on the proposal after receipt of information / documents as sought by the Sub-Committee of SEAC at para 20 above.

22. The project proponent has furnished the compliance and the SEAC verified the same as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
a)	Revenue map superimposing the project site and road connectivity with documentary support for land between road and boundary (meant for road purposes).	Project Site and Road Connectivity has been superimposed in Revenue Map. Revenue map is attached in **Annexure-1**. Land Document is attached in **Annexure- 2**.
b)	Copy of BMC bye law for internal road and drive way.	Copy of BDA bye law for internal road & drive way is attached in **Annexure-3**.
c)	To increase the width of entry and exit	We have provided separate entry & exit for

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	gates and revised Layout map with entry and exit and ramp separate for residential and commercial vehicle movements. Accordingly, revised green belt to be shown and calculated.	residential building & commercial building and also provided separate ramp for residential & commercial building for movement of vehicle. Total greenbelt area provided for the proposed building is 1031.00 sqm which is 21.43% of total plot area. Layout map showing Greenbelt, Entry & exit is attached in **Annexure-4**.
d)	Parking (4 and 2 wheelers) areas for residential, commercial and visitors (for both separately) with ECS calculation vs norms and also mention the % of each parking w.r.t. total parking and no of duelling units.	Parking provided for residential building is 150 Nos. (Total dwelling unit is 80), Parking provided for commercial building is 77 Nos., Parking provided for visitor is 15 nos. and total 30 nos. of two wheeler parking provided for the proposed building. Detail calculation is attached in **Annexure-5**.
e)	As there are 2 DG set and 2 separate stacks, it was advised to work out the possibility to connect them to make one stack and as per norms of CPCB.	2 DG sets will be provided for the proposed building, one DG set for residential building & one DG set for commercial building and two separate stacks is provided for the proposed DG sets of 43.44 meter height. DG set stack height section layout is attached in **Annexure-6**.
f)	Internal drainage map of internal drains, Rain water harvesting their nos, dual plumbing lines and final connection. Calculation of Rain water harvesting (if not submitted earlier).	Internal Drainage map showing internal drains, rain water harvesting, dual plumbing lines & final discharged lines is attached in **Annexure-7**. Calculation of Rain Water harvesting is already submitted on 24.02.2022.
g)	No of OHT and dual plumbing units	OHT and Dual Plumbing units' layout is attached in **Annexure-8**.
h)	Source of water with permission letter from Ground water authority as well as Water Resource department as commercial uses are envisaged. Also Fire authority permission copy.	Application for Ground Water clearance is under process. Once the Ground Water NoC received from CGWA, we will apply to Water Resource Department, Govt. of Odisha for final approval and Fire clearance is under process.
i)	Permission from BMC for discharge of extra load of treated water to the adjacent drain.	The public drain is adjacent to the project site. We have already submitted the External Infrastructure Development Plan (EIDP) to Bhubaneswar Municipal Corporation (EIDP Plan is attached in **Annexure-9**) & the vetting process is under process. Once the Drainage Approval will be obtained from respected Authority we will submit the NoC to SEAC/SEIAA Committee before commencement of the project. Undertaking regarding drainage is attached in **Annexure-10**.
j)	Solid waste disposal facilities including	Total Solid Waste generated from the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	STP waste and any tie up for garbage disposal (documents to be provided with a brief on how the types of solid wastes to be separated)	proposed project is 467 kg/day. Waste generated from the Sewage Treatment Plant is 54.85 kg/day. We have proposing Organic Waste Converter for proposed building. Details proposal for Solid Waste Management is attached in **Annexure- 11**.
k)	Provision of integrated Roof top Solar PV system and Solar calculation details with generation and consumption in terms of % of total power to be provided	Total power generation from Solar system is 107.8 KW through 75 nos. of PV Panels & 60 nos. of Solar Street Lighting. Total power demand of the proposed building is 1652.8 KW. So total solar power generation from the proposed building is 6.5% of total power demand. Details solar calculation is attached in Annexure-12. Solar Panel design layout is attached in **Annexure-13**.
l)	Summary of traffic report and mitigation measure as the front road has high traffic movements.	The Traffic study report has been vetted by Indian Institute of Technology (IIT) Bhubaneswar. Traffic Study report is attached in **Annexure-14**.
m)	All points raised in proceedings (if not submitted).	All points raised in presentation is already submitted on 24.02.2022.

Considering the information furnished and the presentation made by the consultant, **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** along with the project proponent, the SEAC recommended for grant of Environmental Clearance valid for 10 years with stipulated conditions as per **Annexure – G** in addition to the following specific conditions**.**

i) **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.**

ii) 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

iii) The proponent shall use solar energy of 5% of total power requirement as proposed.

iv) Trees located within the project area shall be de-rooted and re-rooted / transplanted to alongside the boundary green development area.

v) 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.

vi) The proponent shall implement the Pollution Control Measures and safeguards as proposed in the Environment Management Plan (EMP) of project report.

vii) The proponent shall Comply to the provision of structural stability certificate as per the bye- law of the Development Authority.

viii) When the public water supply will be available adjacent to/ in the vicinity of the proposed project in future, the PP shall avail it following due procedure of the Govt if the concerned authority agrees and dispense with the drawl of ground water except one borewell for emergency purpose. The PP shall take up suitably for the purpose with the concerned authority of the Government.

ix) From the Traffic study it is seen that the study was carried out by CEMC and based on the data collected IIT has vetted it. Since, the study was not carried out by a reputed institute, fresh traffic study shall be conducted by a reputed institute and submitted to SEIAA with mitigation plan if any within a period of 3 months.

x) Greenbelt map submitted by the proponent does not comply with the required norm as in the total commercial area there are no trees shown, whereas another provided within traffic study shows green belt surrounding the commercial area. PP shall ascertain and implement greenbelt throughout the periphery as far as possible.

xi) Setback for fire corridor shall be provided as per Fire authority regulation/norms.

xii) All compliances submitted/ committed by PP(s) shall be strictly adhered to them in addition to all the conditions/ specific conditions of EC.

ITEM NO. 13

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR ROYAL HERITAGE RESIDENTIAL APARTMENT BUILDING PROJECT (S+6) OVER AN AREA 2.66AC. NEAR SHAILASHREE PALACE, GATE NO.1 , PALACE LINE, KOSHAL CHOWK, BOLANGIR OF SRI NIRAJ AGRAWAL (TOTAL BUILT UP AREA - 24843.9 SQM) - EC

1. The proposal is for Environmental Clearance of Royal Heritage Residential Apartment Building Project (S+6) over an area 2.66Ac. near Shailashree Palace, Gate No.1 , Palace Line, Koshal Chowk, Bolangir of Sri Niraj Agrawal (total Built up area - 24843.9 sqm).
2. The project falls under category “B” or activity 8 (a) - Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. M/s Royal Heritage Residential Apartment Building Project (S+6) over an area 2.66Ac. at Plot NO: 1291/2324, 1293/2325 of Khata no. 368/5386, Plot NO: 1372/2331, 1373/2332, 1380/2333, 1381/2334, 1382/2335,1383/2336 of Khata No. 368/223.
4. **Location and connectivity** - The proposed site is located near to Shailashree Palace, Gate No.1, Palace Line, Koshal Chowk, Bolangir, Odisha. The Geographical co-ordinate of the project site is: Latitude 20°41’ 45.74” N & Longitude 83°28’ 13.53” E. The project site is well connected with National Highway - 201 (Bhawanipatna-Balangir Highway). The nearest railway station is Balangir Railway station at a distance of approx 2.6 Km in East-East- South. The nearest airport is Deogan Air strip which is 20.22 km away from the project site towards S direction. Biju Pattanaik International Airport which is 250 km away from the project site towards SE direction. Nearest Town: Balangir – 1.10Km (N-E), District Headquarters: Balangir at – 2.5 Km (NE).

5. The site is coming under development plan of Balangir Muinicipality area.
6. The Building Details Of The Project:

Total plot area	10776.78	SQM
Total stilt floor area	7067.87	SQM
Proposed Buit Up Area		SQM
BLOCK A (Residence)		SQM
1st Floor	1567.84	SQM
2nd Floor	1567.84	SQM
3rd Floor	1567.84	SQM
4 th Floor	1567.84	SQM
5th Floor	1567.84	SQM
6 th Floor	1567.84	SQM
Total Built Up Area	9407.04	SQM
Block B (Shop And Residence)		SQM
Ground Floor (Shops)	322.98	SQM
1st Floor	2501.7	SQM
2nd Floor	2501.7	SQM
3rd Floor	2527.62	SQM
4 th Floor	2527.62	SQM
5th Floor	2527.62	SQM
6 th Floor	2527.62	SQM
Total Built Up Area	15436.86	Sqm
Proposed Total Built Up Area (Block A & Block B)	24843.9	Sqm
Ground Coverage	3.38%	
Far Consumed	2.25	

7. **Water requirement**: During operation phase water will be sourced from Ground Water (Public Health Department).Total Fresh Water requirement is 105 m3/day.Total Flushing Water requirement is 53 m3/day. Total Water requirement is 159
8. **Waste water details**: Proponent will treat & recycle the waste water generated from this project. Recycled water will be used within the project area. Total water requirement is 160 (Domestic + Flushing). The treated water recovered from STP will be 106 KLD and will be recycled & reused; out of which 54 KLD for toilet flushing, 30 KLD for Greenbelt & 7 KLD used in DG Set Cooling & 15 KLD for Road/general washing in the project site.
9. **Power requirement**: The daily power requirement for the proposed Residential Project is preliminarily assessed as 1092 KW source from TPWODL of Odisha State Electricity Board. In order to meet emergency power requirements during the grid failure, there is provision of 1 nos. of DG set having 200 KVA capacities for power back up in the Residential Housing Project.
10. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 4 recharge pits from the plot area.

11. **Parking Requirement**: Total parking area provided is for residents 7696.8m^2 or 224 ECS for 4 wheelers and 95 ECS for 2 wheelers. Residential area provided is 7356.276 sqm. and 193.788 sqm. for commercial purpose.

12. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guideline of NBC (part-4).

13. **Green Belt Development**: Total green area will measure 2155.356m2 (20 % of the total plot area). Trees like *Azadirachta indica, Cassia fistula, Terminalia arjuna, Butea monosperma* etc. and flowering and ornamental plants have been proposed to be planted inside the premises.

14. **Solid Waste Management**: Total solid waste generation 0.570 Ton/day. Adequate number of colored bins (green, blue and dark grey) separate for biodegradable and non-biodegradable will be provided at all strategic locations within the site. The solid waste will be thus segregated at source and collected. STP sludge, which is periodical in nature is proposed to be used for horticultural purpose only after removal of oil & grease. Horticultural Waste is proposed to be composted and will be used for gardening purposes. The solid waste generated from project will be mainly domestic in nature and the quantity of the waste will be 0.560 Ton/day. Solid wastes generated will be segregated into biodegradable 0.342 T/Day (waste vegetables and foods etc.) and Non-biodegradable or recyclable 0.228 Ton/day. (papers, cartons, thermo-cool, plastics, glass etc.) Components will collected in separate bins. Solid waste &. Recyclable and non-recyclable wastes will be disposed through Govt. approved agency.

15. The total population of project will be 1134 persons for residential and 16nos for commercial and 115nos for visitors.

16. The estimated project cost is ` 49.370 Crores.

17. The project proponent along with the consultant **M/s Green Circle. Inc., Vadodara** made a detailed presentation on the proposal.

18. The SEAC in its meeting held on dated 17.01.2022 decided to take decision on the proposal after receipt of the following from the proponent followed by site visit by the sub-committee of SEAC.

    (i) "Kisam" of the land alongwith relevant document from appropriate Revenue authority be submitted. The said document needs to be in favour of project proponent with conversion of "Kisam" to "Gharabari" before start of construction of the project.
    (ii) Since the project site is located very proximate to Collector's office, electric office besides being a crowded locality, traffic study be undertaken by a domain expert / institute of repute at relevant intersecting point(s) with all public roads, considering the traffic 10 years ahead with other projects and decongestion plan (as and if any required) based on study findings be submitted.
    (iii) Provision of parking, both in terms of ECs and space compatible to each other, confirming to norms showing detail calculation and the demarcation in the layout map for 4 wheelers / 2 wheelers / bicycles be submitted. While working out provision

of parking, no of dwelling units / visitors / floating population for residential apartment as well as commercial complex be considered and indicated / shown.

(iv) Detail plan with calculation of solar power consumption vis-à-vis the generation be submitted indicating the % of total demand.

(v) Location of DG set w.r.t. predominant wind direction and location of residential towers looks and hence, to be re-located accordingly. The basis of determination of stack height (25 mtrs) is not indicated. So, the stack height basis of selection of no of DG set(s) and their capacity(s) alongwith installation drawing of exhaust pipe of the stack be submitted.

(vi) Water balance (both monsoon & non-monsoon) be submitted including permission of the authority of the public drain to which the excess treated waste water / storm water shall be discharged. 'ROW' of the land connecting the internal drain and public drain be submitted with dimension and drawing.

(vii) Internal drainage network dimension and drawing for both waste water / treated waste water / storm / run off water be shown in the map and submitted. Entry and exit gate (s) with pedestrian pathways, drawing with di-mentions be shown in the layout map and submitted.

(viii) "Green belt" details with di-mention having continuous stretch along the fair sides of the boundaries and three tier plantations be submitted indicating the norms as well.

(ix) Provision of fire corridor for free movement of fire tender with drawing and dimensions and pedestrian path alongside be provisioned and submitted showing the same in the layout map...

(x) Rain water harvesting management with re-charging pits be submitted with detail claculations considering maximum hourly rain fall in 24 hours based on 30 years logical climate date, run off co-efficient and their norms / real time inputs, retention time etc.

(xi) The layout to accommodate WTP, Waste Water Treatment Plant, STP with Dual plumbing system with matching OVERHEAD tank for fresh water and waste water and OIL water separation pit for the project.

(xii) The recommendation of the Fire Safety Department be obtained on submission of revised layout plan and Superstructure plan prior to construction activity so that it can be accommodated during construction to facilitate issue of Fire Safety Certificate.

19. The project proponent has furnished the compliance and the SEAC verified the same as follows:

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td>(i)</td><td>"Kisam" of the land alongwith relevant document from appropriate Revenue authority be submitted. The said document needs to be in favour of project proponent with conversion of "Kisam" to "Gharabari" before start of construction of the project.</td><td>Kisam of all plots are converted to Gharabari. "Kisam" of the land alongwith relevant document from appropriate Revenue authority (Tahasildar of Balangir) RoR is attached as ANNEXURE-1.
<table>
<tr><td>KHATA NO</td><td>PLOT NO</td><td>KISAM</td><td>ACRE</td></tr>
<tr><td>368/5386</td><td>1291/2324
1293/2325</td><td>GHARA BARI
GHARA BARI</td><td>0.718
0.345</td></tr>
<tr><td>368/223</td><td>1372/2331
1373/2332</td><td>GHARA BARI</td><td>0.065
0.865</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>1380/2333
1381/2334
1382/2335
1383/2336</td><td>GHARA
BARI
GHARA
BARI
GHARA
BARI
GHARA
BARI
GHARA
BARI</td><td>0.170
0.050
0.405
0.045</td></tr>
<tr><td colspan="3">IN 2 NOS OF KHATA CONTAINING 8 NOS OF PLOT. TOTAL AREA IS</td><td>2.663 ACRE</td></tr>
</table>
</td></tr>
<tr><td>(ii)</td><td>Since the project site is located very proximate to Collector’s office, electric office besides being a crowded locality, traffic study be undertaken by a domain expert / institute of repute at relevant intersecting point(s) with all public roads, considering the traffic 10 years ahead with other projects and decongestion plan (as and if any required) based on study findings be submitted.</td><td>Traffic study report is attached as Annexure- 2.</td></tr>
<tr><td>(iii)</td><td>Provision of parking, both in terms of ECs and space compatible to each other, confirming to norms showing detail calculation and the demarcation in the layout map for 4 wheelers / 2 wheelers / bicycles be submitted. While working out provision of parking, no of dwelling units / visitors / floating population for residential apartment as well as commercial complex be considered and indicated / shown.</td><td>There are two separate entry and exit gates provided for commercial purpose and residential purpose. Provide adequate parking area for commercial and residential purpose. Details of parking area provided in. Attached as Annexure-3</td></tr>
<tr><td>(iv)</td><td>Detail plan with calculation of solar power consumption vis-à-vis the generation be submitted indicating the % of total demand.</td><td>Attached as Annexure-4.</td></tr>
<tr><td>(v)</td><td>Location of DG set w.r.t. predominant wind direction</td><td>The height of the project is higher than all the buildings around it. The height of the stack will be 3 m</td></tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	and location of residential towers looks and hence, to be re-located accordingly. The basis of determination of stack height (25 mtrs) is not indicated. So, the stack height basis of selection of no of DG set(s) and their capacity(s) alongwith installation drawing of exhaust pipe of the stack be submitted.	higher than the building height (20.5 m). The emission from the stack of DG sets will not have any impact on the buildings around them. The proposed DG sets will be equipped with acoustic enclosure to minimize noise generation and adequate stack height for proper emission dispersion. Proposed stack height as per norms-23.5 m. Location of DG Set with respect to annually average wind direction is South and the location of Dg set will be in the SW Direction. location of DG SET attached as **Annexure-5.**
(vi)	Water balance (both monsoon & non-monsoon) be submitted including permission of the authority of the public drain to which the excess treated waste water / storm water shall be discharged. 'ROW' of the land connecting the internal drain and public drain be submitted with dimension and drawing.	Drainage plan of project site given in **Annexure-6** NOC from Municipality.
vii)	Internal drainage network dimension and drawing for both waste water / treated waste water / storm / run off water be shown in the map and submitted. Entry and exit gate (s) with pedestrian pathways, drawing with di-mentions be shown in the layout map and submitted.	Drainage plan of project site given in **Annexure-7.**
viii)	"Green belt" details with di-mention having continuous stretch along the fair sides of the boundaries and three tier plantations be submitted indicating the norms as well.	Greenbelt Plan –Attached as **Annexure-8**.
(ix)	Provision of fire corridor for free movement of fire tender with drawing and dimensions and pedestrian path alongside be provisioned and submitted showing the same in the layout map...	Fire provision for proposed project site is attached as **Annexure-9.**
(x)	Rain water harvesting management with re-charging pits be submitted with detail	Layout plan showing location of rain harvesting recharging pits and quantity to be harvested taking into consideration the erratic rainfall pattern in the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	maximum hourly rain fall in 24 hours based on 30 years logical climate date, run off co-efficient and their norms / real time inputs, retention time etc.	
(xi)	The layout to accommodate WTP, Waste Water Treatment Plant, STP with Dual plumbing system with matching OVERHEAD tank for fresh water and waste water and OIL water separation pit for the project.	Layout plan showing location of WTP, Waste Water Treatment Plant, STP with Dual plumbing system with matching OVER HEAD tank for fresh water and waste water and OIL water separation pit for the project is attached as **Annexure-11**.
xii)	The recommendation of the Fire Safety Department be obtained on submission of revised layout plan and Superstructure plan prior to construction activity so that it can be accommodated during construction to facilitate issue of Fire Safety Certificate.	The layout plan which submitted for The recommendation of the Fire Safety Department is attached as **Annexure-12**.

20. The proposed site was visited by the sub-committee of SEAC on 22.04.2022 and site visit report is awaited.

Subcommittee shall furnish its report within 3 days of visit. Ask for report and accordingly decision.

Secretary, SEAC

Approved

31.05.2022

Chairman, SEAC

ANNEXURE - A

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. STALWART PROJECT PVT. LTD. FOR PROPOSED HOUSING PROJECT OF B1+B2+G+12 (A-BLOCK) AND B1+B2+G+12 (B-BLOCK) RESIDENTIAL CUM COMMERCIAL BUILDING OVER AN TOTAL BUILT UP AREA 23568.11 SQM. LOCATED IN MOUZA - JAGAMARA, BHUBANESWAR, DIST – KHURDA, ODISHA OF SRI SARAT KUMAR SAHU – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 68 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 07 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed of as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 100 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable 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.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 722 Sqm (20 % of the plot area) shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. 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.

ENVIRONMENT MANAGEMENT PLAN

58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE - B

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S SHUVAM CONSTRUCTION PVT. LTD. FOR CONSTRUCTION OF HOUSING PROJECT OF 2B+G+14 HIGH RISE RESIDENTIAL APARTMENT BUILDING IN MOUZA - GHATIKIA, BHUBANESWAR, DIST KHURDA, ODISHA OVER TOTAL BUILT UP AREA OF 56722.86 SQ.M OF SRI KANTILAL PATEL (DIRECTOR) - EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 141 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 32 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 200 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable 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.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 2,641.18 Sqm (24.61 % of plot area) shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. 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.

ENVIRONMENT MANAGEMENT PLAN

58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE - C

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S PARAMITRA SMART INFRA SNA PRIVATE LTD. FOR MODIFICATION AND EXPANSION OF PROPOSED "SHANTI NAGAR AWAS YOJNA" [PRIVATE DEVELOPER PROJECT] LOCATED AT MOUZA-SATYA NAGAR, PLOT NO. - 121'125'126'128'129'130&143(P), THANA-NEW CAPITAL BHUBANESWAR, DISTRICT -KHORDHA, ODISHA OF SRI SHYAM SUNDAR PADHY – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 244 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 32 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 350 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 5% of the demand load or as per the state level/ local building bye-law's requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 2,641.18 Sqm (24.61 % of plot area) shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. 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.

ENVIRONMENT MANAGEMENT PLAN

58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE - D

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S ASSOTECH SUN GROWTH ABODE LLP FOR CONSTRUCTION OF MULTISTORIED RESIDENTIAL BUILDING "ASSOTECH PRIDE PHASE-1 EXTENSION" OVER PLOT AREA - 65383.16 SQM. LOCATED AT MOUZA-RUDRAPUR, BHUBANESWAR, DIST-KHURDA, ODISHA OF SRI. SASHANKA SHEKHAR ROUT (VICE PRESIDENT) (TOTAL BUIT UP AREA – 3,50,733.31SQM.) – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 792.8 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 23 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 1050 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable 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.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

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43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 23616.0 sqm which is 35.11% of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
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55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
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58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE- E

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. SREE METALIKS LTD. FOR KHANDBANDH IRON ORE MINES FOR ENHANCEMENT IN PRODUCTION OF IRON ORE FROM 0.702 MTPA TO 1.50 MTPA WITH OPENCAST FULLY-MECHANIZED MINING METHOD BY INSTALLATION OF CRUSHING & SCREENING PLANTS OVER ML AREA OF 35.774HA LOCATED IN BAITARANI RESERVE FOREST NEAR VILLAGE KHANDBANDH, TAHASIL – BARBIL, DISTRICT - KEONJHAR OF SRI REWATI RAMAN SHARMA – EC.

(I) Statutory compliance

(i) This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.

(ii) The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August,2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors before commencing the mining operations.

(iii) The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.

(iv) This Environmental Clearance shall become operational only after receiving formal NBWL Clearance from MoEF&CC subsequent to the recommendations of the Standing Committee of National Board for Wildlife, if applicable to the Project,

(v) This Environmental Clearance shall become operational only after receiving formal Forest Clearance (FC) under the provision of Forest Conservation Act, 1980, if applicable to the project.

(vi) Project Proponent (PP) shall obtain Consent to Operate after grant of EC and effectively implement all the conditions stipulated therein. The mining activity shall not commence prior to obtaining Consent to Establish / Consent to Operate from the concerned State Pollution Control Board.

(vii) The PP shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

(viii) The Project Proponent shall obtain consents from all the concerned land owners, before start of mining operations, as per the provisions of MMDR Act, 1957 and rules made thereunder in respect of lands which are not owned by it.

(ix) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-l1013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine

lease areas or Habitations and villages are surrounded by the mine lease area".

(x) The Project Proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of surface water and from CGWA for withdrawal of ground water for the project.

(xi) A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.

(xii) State Pollution Control Board shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

(xiii) The Project Authorities should widely advertise about the grant of this EC letter by printing the same m at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board and web site of the Ministry of Environment, Forest and Climate Change (www.environmentclearance. nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

(xiv) The Project Proponent shall inform the MoEF&CC/SEIAA, Odisha for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred than mining operation shall only be carried out after transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.

(II) <u>Air quality monitoring and preservation</u>

(i) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM_{10}, $PM_{2.5}$, $NO_{2;}$ CO and SO_2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCl/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

(ii) Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM_{10} and $PM_{2.5}$ are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from ah sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble

chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

(III) Water quality monitoring and preservation

(i) In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEF&CC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.

(ii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintain. The natural water bodies and or streams which are flowing in an around the village, should not be disturbed. The Water Table should be nurtured so as not to go down below the pre-mining period. In case of any water scarcity in the area, the Project Proponent has to provide water to the villagers for their use. A provision for regular monitoring of water table in open dug wall located in village should be incorporated to ascertain the impact of mining over ground water table. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iii) Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.

(iv) The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease and maintain its records. The project proponent shall undertake regular monitoring of water quality upstream and downstream of water bodies passing within and nearby/ adjacent to the mine lease and maintain its records. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. PP shall carryout regular monitoring w.r.t. pH and included the same in monitoring plan. The parameters to be monitored shall include their water quality vis-a-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEF&CC / SEIAA, Odisha. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, SEIAA, Odisha, Central Ground

Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

(v) Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J-20012/1 /2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.

(vi) The project proponent shall construct retaining wall and settling pond within the lease area. Further, check dams shall be constructed at strategic locations in which rain water passes in rainy season. Finally, the excess supernanted after sedimentation shall be allowed to spill away through stone pitch structure to the nearby valley.

(vii) De-silting of agricultural lands in buffer zone and beyond including nearby Nalas/rivers perennially periodically and perpetually caused due to wash up of minerals/OB/dumps shall be done as per SOP submitted. A legal affidavit shall be submitted within 6 months from the date of issue of Environmental Clearance to this effect with periodicity of de-silting.

(viii) Detail design of the existing retaining wall and the proposed for the expansion from a chartered Civil Engineer shall be submitted within 6 months from the date of issue of Environmental Clearance to ensure that no silt after wash up is escaped from the core / buffer zone of the mines.

(ix) An area of 3.40Ha shall be kept for public use as pond and road. Hence, remaining 52.956Ha shall be planted during life of the mine in a phased manner i.e. within a period of 20 years.

(x) Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office, MoEF&CC annually.

(xi) Industrial waste water (workshop and waste water from the mine) should be properly collected and treated in an ETP as proposed so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.

(xii) The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board.

(IV) <u>Noise and vibration monitoring and prevention</u>

(i) The peak particle velocity at 500m distance or within the nearest habitation,

whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

(ii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.

(iii) The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The worker engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.

(V) <u>Mining Plan</u>

(i) The Project Proponent shall adhere to the working parameters of mining plan which was submitted at the time of EC appraisal wherein year-wise plan was mentioned for total excavation i.e. quantum of mineral, waste, over burden, inter burden and top soil etc.. No change in basic mining proposal like mining technology, total excavation, mineral & waste production, lease area and scope of working (viz. method of mining, overburden & dump management, O.B & dump mining, mineral transportation mode, ultimate depth of mining etc.) shall not be carried out without prior approval of the Ministry of Environment, Forest and Climate Change, which entail adverse environmental impacts, even if it is a part of approved mining plan modified after grant of EC or granted by State Govt. in the form to Short Term Permit (STP), Query license or any other name.

(ii) The Project Proponent shall get the Final Mine Closure Plan along with Financial Assurance approved from Indian Bureau of Mines/Department of Mining & Geology as required under the Provision of the MMDR Act, 1957 and Rules/ Guidelines made there under. A copy of approved final mine closure plan shall be submitted within 2 months of the approval of the same from the competent authority to the concerned Regional Office of the Ministry of Environment, Forest and Climate Change for record and verification.

(iii) The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-a-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(VI) Land reclamation

(i) The Overburden (O.B.) generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by D.G.M.S w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of top soil/OB dumps. The topsoil shall be used for land reclamation and plantation.

(ii) The reject/waste generated during the mining operations shall be stacked at earmarked waste dump site(s) only. The physical parameters of the waste dumps like height, width and angle of slope shall be governed as per the approved Mining Plan as per the guidelines/circulars issued by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of waste dumps.

(iii) The reclamation of waste dump sites shall be done in scientific manner as per the Approved Mining Plan cum Progressive Mine Closure Plan.

(iv) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

(v) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC, Govt. of India, Bhubaneswar as well as SEIAA, Odisha.

(vi) Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and topsoil / OB / waste dumps to prevent runoff of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.

(vii) Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the comers of the garland drains.

(viii) The top soil, if any, shall temporarily be stored at earmarked site(s) within the mine lease only and should not be kept unutilized for long. The physical parameters of the top soil dumps like height, width and angle of slope shall be governed as per the approved Mining Plan and as per the guidelines framed by DGMS w.r.t. safety in mining operations shall be strictly adhered to maintain the stability of dumps. The topsoil shall be used for land reclamation and plantation purpose.

(ix) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(VII) Transportation

(i) No Transportation of the minerals shall be allowed in case of roads passing through transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

(ii) The Main haulage road within the mine lease should be provided with a permanent water arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.

(iii) Traffic management shall be done as per recommendation of Traffic Management Study Report.

(iv) The Project Proponent shall provide parking plaza for the heavy vehicles within the lease area as recommendation of NEERI.

(VIII) Green Belt

(i) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side

of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

(ii) The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.

(iii) The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.

(iv) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-I species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

(v) And implemented in consultation with the State Forest and Wildlife Department. A copy of Wildlife Conservation Plan and its implementation status (annual) shall be submitted to the Regional Office of the Ministry.

(IX) <u>Public hearing and human health issues</u>

(i) The Project Proponent shall appoint an Occupational Health Specialist for Regular as well as Periodical medical examination of the workers engaged in the mining activities, as per the DGMS guidelines. The records shall be maintained properly. PP shall also carryout Occupational health check-ups in respect of workers which are having ailments like BP, diabetes, habitual smoking, etc. The check-ups shall be undertaken once in six months and necessary remedial/ preventive measures be taken. A status report on the same may be sent to MoEF&CC Regional Office and DGMS on half-yearly basis.

(ii) A commitment in form of an undertaking for periodical occupational health checkup of the employee and the local people shall be done through an occupational health expert as per the detailed action plan submitted with the proposal within 6 months from the date of issue of Environmental Clearance.

(iii) The Project Proponent must demonstrate commitment to work towards 'Zero Harm' from their mining activities and carry out Health Risk Assessment (HRA) for identification workplace hazards and assess their potential risks to health and determine appropriate control measures to protect the health and wellbeing of workers and nearby community. The proponent shall maintain accurate and systematic records of the HRA. The HRA for neighborhood has to focus on Public Health Problems like Malaria, Tuberculosis, HIV, Anaemia, Diarrhoea in children under five, respiratory infections due to bio mass cooking. The proponent shall also create awareness and educate the nearby community and workers for Sanitation, Personal Hygiene, Hand washing, not to defecate in open, Women Health and Hygiene (Providing Sanitary Napkins), hazard of tobacco and alcohol use. The Proponent shall carryout base line HRA for all the category of workers and thereafter every five years.

(iv) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x l4 inches and of good quality).

(v) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it should stay between 18.5 -24.9, (b) the Final Chest X-Ray compared with the base line X-Ray should not show any capacities, (c) At the end of their leaving job there should be no Diminution in their Lung Functions Forced Expiratory Volume in one second (FEV1),Forced Vital Capacity (FVC), and the ratio) unless they are smokers which has to be adjusted, and the effect of age, (d) their hearing should not be affected. As a proof an Audiogram (first and last need to be presented), (e) they should not have developed any Persistent Back Pain, Neck Pain, and the movement of their Hip, Knee and other joints should have normal range of movement, (f) they should not have suffered loss of any body part. The record of the same should be submitted to the Regional Office, MoEF&CC annually along with details of the relief and compensation paid to workers having above indications.

(vi) The Project Proponent shall ensure that Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

(vii) Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.

(viii) The activities proposed in Action plan prepared for addressing the issues raised during the Public Hearing shall be completed as per the budgetary provisions mentioned in the Action Plan and within the stipulated time frame. The Status Report on implementation of Action Plan shall be submitted to the concerned Regional Office of the Ministry along with District Administration.

(ix) Issues raised and recorded in proceedings of public hearing w.r.t. environment / pollution / CER shall be complied by the Mining Authority as per OM F. No. 22-65/2017-IA.III, dated 30.09.2020 of MoEF&CC, Govt. of India.

(X) Corporate Environment Responsibility (CER)

(i) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by SEAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner 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.

(ii) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the MoEF&CC and its concerned Regional Office / SEIAA, Odisha.

(XI) Miscellaneous

(i) The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.

(ii) The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

(iii) The project proponent shall establish a solar power plant with 30KVA capacity within the lease area as proposed.

(iv) The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MoEF&CC & its concerned Regional Office, SEIAA, Odisha, Central Pollution Control Board and State Pollution Control Board.

(v) A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.

(vi) The proponent shall comply all the specific conditions as recommended by CSIR-NEERI on carrying capacity study (as applicable) in time bound manner as proposed.

(vii) The mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

(viii) The project proponent shall augment infrastructure on drinking water, health care and education in nearby villages as per time bound action plan submitted.

(ix) The project proponent shall obtain permission from DGMS under 106(2b) to carry out blasting operation within the lease area.

(x) The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.

(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.

Environmental Scientist, SEAC

ANNEXURE - F

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S ALISHAN REALCON PVT. LTD FOR PROPOSED HOUSING PROJECT OF S+5 STORIED RESIDENTIAL APARTMENT BUILDING OVER AN BUILT-UP AREA OF 39,288.93 SQ.M. AT MOUZA- NUAHATA, DIST – CUTTACK, ODISHA OF SRI MANOJ KUMAR DASH (DIRECTOR) – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 129.7 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 07 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 170 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable 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.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 3051.32 sqm which is 20.0 % of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. 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.

ENVIRONMENT MANAGEMENT PLAN

58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

Environmental Scientist, SEAC

ANNEXURE - G

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S UTKAL BUILDERS LTD. FOR PROPOSED CONSTRUCTION OF (2B+S+11) MULTI STORIED RESIDENTIAL APARTMENT & (2B+G+9) STORIED COMMERCIAL BUILDING OVER AN AREA 4809.70 SQMT WITH TOTAL BUILT UP AREA- 25385.95 SQM AT MOUZA- PATIA, BHUBANESWAR, DIST- KHURDA OF SRI RAKESH BHURA (DIRECTOR) – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.
3. The project proponent shall obtain all necessary clearance/ permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.
4. The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM NO.19-2/2013-IA.III dated 9th June, 2015, are followed to ensure sustainable environmental management.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. 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.
7. 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.
8. 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.

WATER REQUIREMENT, CONSERVATION, RAIN WATER HARVESTING, AND GROUND WATER RECHARGE

9. As proposed, fresh water requirement from ground water shall not exceed 96.69 KLD.
10. 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.

11. 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.
12. 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.
13. 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.
14. 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 plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 3 nos. shall be provided.
17. 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 ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. 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.
21. 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.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. 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.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 150 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. 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 perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. 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.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. 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.
30. 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.
31. 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.

ENERGY

32. 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 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.
33. 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.

34. Solar, wind or other Renewable 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.

35. 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.

36. 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.

37. 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.

AIR QUALITY AND NOISE

38. 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, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, 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.

39. AII 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.

40. **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.**

41. 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.

42. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.

43. 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.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. 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. As proposed approx. 1045.59 Sqm which is 21.7 % of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. 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.

TRANSPORT

46. 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.

    - Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.
    - Traffic calming measures
    - Proper design of entry and exit points.
    - Parking norms as per local regulation

47. 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 kms radius of the project is maintained and improved upon after the implementation of the project.

48. 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 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.

49. 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.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. 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.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. 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.

ENVIRONMENT MANAGEMENT PLAN

58. 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.

OTHERS

59. 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 be in the form of temporary structures to be removed after the completion of the project.
60. A First Aid Room shall be provided in the project both during construction and operations of the project.
61. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
62. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire

activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. 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.
6. 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.
7. These 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.
8. 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.
9. Any appeal against this 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.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / 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.

11. 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, SO_2, 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.

12. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF&CC, Govt. of India by E-mail.

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