STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY (SEIAA), ODISHA.

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Ref. No. 6155/SEIAA Date 12.10.18

SEIAA File No: 75165/32-NCP/05-2018

To

Mr. Rahul Choudhary,
Sr. Executive (Project)
Paramitra Smart Infra SNA Private Ltd.
Plot No. 133, District Centre,
Near Bilasani Mandap, Chandrasekharpur
Bhubaneswar-751021, Khordha

Sub: Proposal for proposed (G+4) storied affordable housing project at mouza-Chandrasekharpur, Bhubaneswar, Dist- Khurda, Odisha of M/s Paramitra Smart Infra Pvt. Ltd with total built-up area 88,217.71 m^2-Environmental Clearance regarding.

Ref: Your online application for issue of EC vide File No: SIA/OR/NCP/75165/2018 dated 26.05.2018.

Sir,

This has reference to your application seeking environmental clearance of the project proposal mentioned above. The proposal has been appraised on the basis of the documents enclosed with the application such as Form-1, Form-IA, Conceptual Plan / EMP and clarifications furnished to SEAC in response to their observations.

Background:

1. This is a proposal for Environmental Clearance for proposed (G+4) storied affordable housing project at mouza-Chandrasekharpur, Bhubaneswar, Dist - Khurda, Odisha by M/s Paramitra Smart Infra Pvt. Ltd with total built-up area 88217.71 m^2.
2. Paramitra Smart Infra Private Limited is developing the site in partnership with Bhubaneswar Development Authority (PPP Mode). The project (PPP) guidelines stipulate 13.71 acres land area allocation for EWS Housing while remaining 6.5 acres land will be utilized for private development based on the market dynamics and development guidelines.

3. The proposed site is located at Chandrasekharpur, Bhubaneswar, Odisha. The Geographical co-ordinate of the project site is: Latitude - 20° 19' 15.23" N & Longitude - 85° 48' 12.66" E. The project site is well connected with Nandan Kanan road which take towards National Highway - 5 (Kolkata-Chennai Road). Nandan Kanan road is 1.5 Km from proposed AHP site. The nearest railway station is Bhubaneswar Railway station at a distance of approx 7.4 Km in South East direction. The nearest airport is Biju Patnaik Airport at a distance of approx. 8.3 Km in South direction from project site. The site is located adjacent to the local landmarks, Buddha Jayanti Park and Lumbini Convention. There is no structure or encroachments on the site. The site is easily accessible from Nandan Kanan Road.
4. The building details of the project is as follows:

Total Plot Area	= 50,694.96 sqm
Total Built up Area	= 88,217.71 sqm
Ground Coverage	= 18426.09 sqm
Total Greenbelt Area	= 10,654.89sqm (21 %)
Total Road Area	= 16,366.27 sqm
Total Parking (Open)	= 8,969.42 sqm

5. Requirement for the project are as follows:

(i) Power requirement:

The daily power requirement for the proposed Affordable Housing Project is preliminarily assessed as 3155 KW source from CESU. In order to meet emergency power requirements during the grid failure, there is provision of 1 no. of DG set having 250 KVA capacities for power back up in the EWS Project.
For energy conservation, there will be 75 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting, so
Energy conservation by using Solar Street Lighting = 75 x 72 = 5400 watt = 5.4 KW
Energy conservation by using Solar lighting for common area = 200 KW
Total Energy Conservation = (200+ 5.4) KW = 205.4 KW
Total Energy saving = 205.4/3155 = 0.0651 x 100 = 6.5 %

(ii) Water requirement:

Fresh make up of 938 m^3/day will be required for the project which will be sourced from PHED/Municipal Supply. Waste water of 1198.8 KLD will be treated in a STP of 1400 KLD capacity, which includes primary, secondary and tertiary treatment. After treatment the treated water will be discharge to the Master Drain.
Rain Water will be harvested through 14 no. of recharging pits.

(iii) Green Belt Development:

Green belt will be developed over an area of 10,654.89 m^2 which is 21 % of the plot area; by using the local species.

(iv) 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/capita/day, which will be about 10160 x 0.45 = 4572 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.

Waste generated from Floating people will be @ 0.15 kg/capita/day, which will be about 1867 x 0.15 = 280.0 kg/day. 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 agency for final disposal. The biodegradable waste will be converted to manure by an organic waste convertor, which will be used for landscaping.

Sl. No.	Category	Counts (heads)	Waste generated
1.	Residents	10,160 @ 0.45 kg/day	4572.0 kg/day
2.	Floating Population	1,867 @ 0.15 kg/day	280.0 kg/day
3.	STP sludge		480.0 kg/day
Total Solid Waste Generated			5332.0 kg/day

(v) Estimated Project cost:

Total Capital Cost = Rs. 95 Crores
Environment Management Cost =Rs. 1.05 Crores

6. The proposed site was visited by the Sub-Committee of SEAC on 17.08.2018 to ascertain the actual position needs to be undertaken. The sub-committee recommended that the site is eligible for proposed project.
7. The proponent along with the consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar made a detailed presentation before the SEAC.

Considering the information furnished by the proponent and presentation made by the consultant on behalf of proponent, the State Expert Appraisal Committee (SEAC) after due considerations of the relevant documents submitted by the project proponent and clarification/documents furnished to it have appraised the proposal and recommended for grant of Environmental Clearance for the project valid for a period of 7 years, stipulating various conditions.

The State Environment Impact Assessment Authority (SEIAA) after considering the proposal and recommendations of SEAC, Odisha hereby accords Environmental Clearance in favour of the project valid for a period of 7 (seven) years under the provisions

of EIA Notification 2006 and subsequent amendments thereto subject to strict compliance of all stipulated conditions, as follows.

Stipulated Conditions

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 fire fighting 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.

Topography and Natural Drainage:

4. 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.

Water Requirement, Conservation, Rain Water Harvesting, and Ground Water Recharge:

5. As proposed, fresh water requirement from PHED water supply shall not exceed 938 KLD. No ground water tapping will be done without due permission.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.

11. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
12. 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. As proposed 07 (Seven) nos. of rain water harvesting recharge pits shall be provided.
13. 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 drawal of water.
14. A complete plan for rainwater harvesting so as to harvest the quantum of rain water at the proposed site during the rainy days equal to the total quantity of water to be consumed for various usages by the building project in a full year shall be drawn up and implemented.

Solid Waste Management:

15. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
16. 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.
17. 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.
18. 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.
19. 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:

20. Sewage shall be treated in the STP of capacity 1400 KLD with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing, gardening and DG Cooling. As proposed, excess treated water shall be used for nearby construction site or will discharge to municipal sewer with prior permission of competent authority.
21. 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.

22. No sewage or untreated effluent water would be discharged through storm water drains.
23. 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.
24. 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.

Energy Conservation:

25. 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.
26. 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.
27. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.
28. 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.
29. 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.
30. 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:

31. 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.
32. All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.
33. **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.**
34. 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.
35. For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.
36. 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:

37. 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 10,654.89 m^2 area (21% of plot area) shall be provided for green area development.

Top Soil Preservation and Reuse:

38. 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.

Transportation:

39. 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
40. 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.
41. 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 5 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.
42. 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.

Environment Management Plan:

43. 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:

44. 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.

45. A First Aid Room shall be provided in the project both during construction and operations of the project.
46. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.
47. 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(II) 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, ZillaParisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.
11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall also update the same on the website of MoEF & CC periodically. It shall simultaneously be sent to the Regional Office of MoEF & CC, 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 by E-mail.

Yours faithfully,

Member Secretary

Memo No 6456/SEIAA / Dt. 12.10.18

Copy to

1. Joint Secretary (Environment), Ministry of Environment, Forests and Climate Change Govt. of India, Indira Paryavaran Bhavan, Jor Bagh Road, Aliganj, New Delhi-110003 for information.
2. Additional Chief Secretary, Forests & Environment Dept., Government of Odisha for information.
3. Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for information.
4. Additional Principal Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for information.
5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032 for information.

6. Member Secretary, CGWA, 18/11, Jamnagar House, ManSingh Road, New Delhi-110011 for information.
7. Collector, District Magistrate, Khordha, for kind information and necessary action.
8. Chairman/Member/Member Secretary, SEIAA for kind information.
9. Chairman, SEAC/Secretary, SEAC, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for kind information.
10. Guard file for record.

Member Secretary