



# STATE ENVIRONMENT IMPACT ASSESSMENT AUTHORITY, (SEIAA), ORISSA.

(Constituted vide order No. S.O. 2674 (E) Date 17<sup>th</sup> Nov. 2008 of Ministry of Environment & Forest, Govt. of India, Under Environment Protection Act, 1986.) Qr. No. 5RF-2/1, Unit-IX, Bhubaneswar-751022  
[E-mail-seiaaorissa@gmail.com](mailto:E-mail-seiaaorissa@gmail.com), Website - [www.orissaseiaa.gov.in](http://www.orissaseiaa.gov.in)

Ref. No. \_\_\_\_\_

Dt. \_\_\_\_\_

To

M/s. Falcon Real Estate (P) Ltd.,  
A-22, Cuttack Road, Falcon House,  
1<sup>st</sup> Floor, Bhubaneswar – 751006

Sub: Residential Housing Project at Patia, Bhubaneswar

Ref: Your letter no. nil dated 06.04.2009, letter no. nil dated 11.11.2009, and letter no. nil dated 24.11.2009

Sir,

This has reference your above letters along with the application for Terms of Reference (TOR) for Environmental Clearance on the above mentioned subject and our discussion with you on the same from time to time. The SEIAA has considered the application.

The project as described in your proposal has the following salient features:

- Type of project: Residential Group Housing Complex
- Promoters: M/s Falcon Real Estate (P) Ltd
- Location: Patia, Bhubaneswar, Orissa
- BDA approval: BDA letter no. 1972/BP dated 17-02-2009
- Project cost: Rs. 19.65 crores
- Floors: Stilt + 7 floors
- Total plot area: 8096.65 sq m. (2.0 acre)
- Total Built-up Area: 21,411 sq m. (Parking area + Common area + Service area + Built up area)
- Parking area: 3034 sq m.
- Common area: 3246 sq m.
- Ground coverage: 3760 sq m. (49.98% of plot area)
- Service area: 149 sq m.
- Built-up area: 15,058 sq m.
- Open space: 3762.51 sq m.
- Exclusive green area: 1704.51 sq m.
- Community centre: 352.0 sq m.
- Convenient shops: 121.0 sq m.
- Swimming pool: 106 sq m.
- FAR: 2

- Maximum height of building: 24 m
- Total no. of units: 112
- Nature of building: Residential-cum-Commercial
- Water requirement during construction: 50,000 lit/day
- Drinking water requirement during operation: 80 kl/day
- Source of drinking water: Presently ground water extracted through 3 nos. of 200 mm dia bore wells and treated as may be required depending on quality of water; In future from PHEO community supply system
- Conservation of water to be done by Rooftop Rainwater Harvesting through Recharge Pits
- Around 76.5 KLD of waste water is estimated to be generated, which will be treated in a proposed Sewage Treatment Plant (STP). Of this, 25.2 KLD of treated water will be re-used for flushing, 20 KLD for green belt and landscaping, 12 KLD for dust suppression, 6 KLD for car washing and the remaining 11.3 KLD of treated effluent will be discharged to nearby drain.
- Estimated solid waste generation in the operation stage: 224 kg/day
- Solid waste management to be done as per conventional methods with proper waste management practices from collection to storing, transportation and ultimate treatment by vermin-composting to produce manure
- Adequate provision will be made for safety measures against fire hazards
- No destruction of existing vegetation will be done
- No natural water body exists within the area, to be affected by the project
- New plantation, both fruit bearing and flowering, to be done
- Total power requirement is 1600 KW
- Environment management to be done with provision as detailed in the DPR in respect of air, noise, land, water etc. in complete shape.

Based on the information, documents & clarification provided by you, the SEIAA hereby accords Environmental Clearance in favour of the project for a period of 5 years under the provision of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the following stipulated conditions:

1. GENERAL

- i) The applicant (Project proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by him in Form-1, Final EIA reports and Environment Management Plan (EMP), read with conditions hereunder, in compliance with the prescribed statutory norms and standards.
- ii) The applicant will take statutory clearance/approval/permission from the concerned authorities and line departments in respect of his project as and when required.
- iii) For post environmental clearance monitoring, the applicant will submit half-yearly compliance report in respect of the stipulated terms and conditions of this Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Orissa on 1<sup>st</sup> June and 1<sup>st</sup> December of each calendar year.
- iv) The applicant (project proponent) will adopt the prescribed norms, and standards provided in the National Building Code of India, 2005 specially relating to:
  - a) Fire protection and life safety of occupants of the buildings.
  - b) Safety of personnel during construction, operation and demolition of buildings.
  - c) Lighting and natural ventilation of building.
  - d) Safety from electrical fire, shock and lightening of the buildings,
  - e) Air-conditioning, heating and mechanical ventilation of the buildings

- f) Acoustics and noise control of the buildings.
- g) Installations of lifts and escalators in the buildings
- h) Water supply, sewerage, drainage and sanitation including solid waste management of the buildings.
- i) Landscaping of surrounding areas of the buildings.
- j) Utmost steps to be taken to protect the environment of any natural or cultural heritage sites within the core area, i.e 5 KM radius from the site.

2. CONSTRUCTION PHASE

- i) Provision shall be made for the housing of construction labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, temporary/mobile toilets with treatment facilities, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- ii) A First Aid Room with adequate facilities as per rules will be provided in the project both during construction and operation of the project.
- iii) All the topsoil excavated during construction activities should be stored for use in horticulture/landscape development within the project site.
- iv) Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
- v) Soil and ground water samples will be tested to ascertain and then ensure that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.
- vi) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and dump sites for such material must be secured so that they do not leach into the ground water.
- vii) Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Orissa Pollution Control Board.
- viii) The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules 1986 prescribed for air and noise emission standards.
- ix) The diesel required for operating DG sets shall be stored in underground tanks as per prevalent rules and if required, clearance from Chief Controller of Explosives shall be taken.
- x) Vehicles used for bringing construction materials to the site should be in good condition, should have a pollution check certificate, conform to applicable air and noise emission standards, and should be operated only during non-peak hours.
- xi) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/OPCB.
- xii) Fly ash should be used as building material in the construction as per the provisions of notifications on Fly Ash dated September 1999 and amended as on 27<sup>th</sup> August 2003. The above condition is applicable as the project site is located within the 100 km of Thermal Power Stations.
- xiii) Ready mixed concrete must be used in building construction.
- xiv) Storm water control and re-use should be as per CGWB and BIS standards for various applications.

- xv) Water demand during construction should be optimized by adopting best practices without compromising quality.
- xvi) Permission to draw ground water shall be obtained from the competent authority/authorities prior to construction/operation of the project.
- xvii) Separation of gray and black water may be done by the use of dual plumbing lines. In such a case, grey and black water should be treated separately.
- xviii) Fixtures for showers, toilet flushing and drinking water should be for low flow type by use of pressure reducing devices or sensor based control.
- xix) Adequate arrangements must be done to treat the wastewater generated before it is disposed. For this, the wastewater may be led to the city sewers if feasible, for which permission should be obtained from the State Public Health engineering Organisation (PHEO) and/or the Orissa Water Supply Sewerage Board (OWSSB) as the case may be. In case PHEO/OWSSB are not able to provide the services as intimated by them, the proposed STP should be constructed taking adequate care to dispose the final effluent at points approved by competent authorities so that local flooding and pollution due not occur. In such a case, the disposal points should be shown clearly in a map/drawing of the area.
- xx) Use of glass may be reduced up to 40% of total outer wall area to reduce the energy consumption and load on air-conditioning. If necessary, high quality double glass with special reflective coating may be used in the windows.
- xxi) Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
- xxii) Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code.
- xxiii) The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipments, etc. as per National Building Code of India, 2005 including protection measures from lightning etc.
- xxiv) Regular supervision of the above and other measures for monitoring should be put in place all through the construction phase to avoid disturbance to the surroundings.

### 3. OPERATION PHASE

- i.) The installation of the Sewage Treatment Plant (STP) should be certified by OWSSB and a report in this regard should be submitted to the SEIAA, Orissa before the project is commissioned for operation. Treated effluent from STP shall be recycled/ reused to the maximum extent possible.
- ii.) Treatment of grey water may be done through decentralized treatment. Discharge of unused treated effluent shall conform to the norms and standards of the Orissa State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP.
- iii.) The Solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry / inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- iv.) Diesel power generating sets proposed as source of backup power for lifts, elevators and common area illumination during operation phase should be of enclosed type and conform to Environment Protection (EP) Rules, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Low sulphur diesel should be used for the purpose. The location of the DG sets may be decided in consultation with Orissa State Pollution Control Board.

- v.) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of building shall be restricted to the permissible levels to comply with the prevalent regulations.
- vi.) Plantation of trees shall be done as per approved layout plan.
- vii.) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- viii.) Rain water harvesting for roof run-off and surface run-off, as per plan submitted, should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The bore-well for rainwater recharging should be kept at least 5 mts. above the highest groundwater table.
- ix.) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- x.) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking should be fully internalized and no public space shall be utilized for this purpose.
- xi.) A Report on the energy conservation measures confirming to energy conservation norms finalized by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc. and submitted to the SEIAA, Orissa in three months time.
- xii.) Energy conservation measures like installation of CGLs/TFLs for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the maximum extent possible.
- xiii.) The building blocks should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.
- xiv.) The proponent shall furnish detailed information on domestic E-waste which includes obsolete personal computers (PC) etc., which shall be disposed off as per CPCB/MoEF, Govt. of India guidelines. A detailed proposal to this effect shall be submitted to SEIAA within four months time.
- xv.) The funds earmarked for the environment protection measures shall be judiciously utilized. Under no circumstances this shall be diverted for other purposes. Year-wise expenditure for this fund should be reported to the SEIAA, Orissa.
- xvi.) The above mentioned stipulated conditions shall be complied in time bound manner. Failure to comply with any of the conditions mentioned above may result in withdrawal of this environmental clearance and attract action under the provisions of Environment Protection (EP) Act, 1986.

Bhagirathi Behera, IFS  
Member Secretary, SEIAA

Copy to :

1. Ministry of Environment & Forests, Govt. of India, Paryavaran Bhawan CGO complex, Lodhi Road, New Delhi for kind information.

2. Principal Secretary to Government, Forests & Environment Dept., Orissa for kind information.
3. Chairman, State Pollution Control Board, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-8, Bhubaneswar for kind information.
4. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A-31, Chandrasekharpur, Bhubaneswar for kind information.
5. Chairman, Central Pollution Control Board, CBD-cum-office Complex, East Arjun Nagar, New Delhi, 110032 for kind information.
6. Vice Chairman, Bhubaneswar Development Authority, Akash Sobha Building, Pandit Jawaharlal Nehru Marg, Bhubaneswar-751001 for kind information.
7. Chief Engineer, PH (Urban), Orissa, 1<sup>st</sup> Floor, Heads of Dept. Building, Bhubaneswar -751001 for kind information.
8. Chief Engineer-cum-Member Secretary, Orissa Water Supply & Sewerage Board, Satya Nagar, Bhubaneswar -751007 for kind information.
9. Collector, Khurda for kind information and necessary action.
10. Chairman/Member/Member Secretary, SEIAA for kind information.
11. Chairman, SEAC/ Secretary, SEAC, Parivesh Bhawan, A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar for kind information.
12. Guard file for record.

Member Secretary, SEIAA