



**STATE LEVEL ENVIRONMENT IMPACT ASSESSMENT AUTHORITY,
ODISHA, BHUBANESWAR**

Ref. No. 8240/SEIAA

Date 29.05.20

SEIAA File No. 121673/19-MIS/01-2020

To

Mr. Lalit Kumar Meher,
Dean & Principal,
Bhima Bhoi Medical College & Hospital, Balangir,
At/Po/Dist-Balangir, Pin-767002

Sub: Proposal for construction of teaching hospital of 500 beds for the new Govt. Medical College at Balangir of Bhima Bhoi Medical College & Hospital with built up area- 45621.61 m²) of Dean and Principal of Bhima Bhoi Medical College & Hospital - Environmental Clearance Regarding.

Ref: Your online application dated 09.01.2020 for issue of EC vide File No: SIA/OR/MIS/121673/2019.

Sir,

This has reference to your online application seeking environmental clearance of the project proposal mentioned above. The proposal falls in the sub category 8(a) of the schedule of EIA Notification, 2006 as amended from time to time. The proposal has been duly appraised by SEAC, Odisha 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. The proposal is for environmental clearance for proposed construction of teaching hospital of 500 beds for the new govt. medical college at balangir, odisha of bhima bhoi medical college & hospital of dean and principal of bhima bhoi medical college & hospital.
2. The total plot area is 65194.85 Sqmt and the built-up area proposed of the project will be 45621.61 Sqmt.
3. Since, the built-up area of the project is less than 1,50,000 Sqmt, it falls under Activity 8(a), as Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments thereto.

4. The hospital will have 500 beds with service facility of all the regular clinical departments along with ICU, SNCU, PICU and separate OPDs for each department. The five-storied building hospital will have 500 beds with specialty departments.
5. The site is located near to SH-42 in Balangir town, Odisha, near to gandhrel village. The geographical co-ordinates of the project site is: Latitude - 20° 42' 15.0" N & Longitude - 83° 27' 0.16" E. The nearest railway station is balangir railway station (major station) at a distance of approx 6.1 Km & bichhupali railway station is about 20.5 Km away from the site. The nearest airport is Vivekananda Airport at Raipur, Chhattisgarh which is 234 km away. Biju Patnaik International Airport, Bhubaneswar is 327 km away from project site & Rourkela Airport is about 305.0 Km away from the site. Balangir bus stand is at 23.0 Km from site.
6. Meteorology: During summer months the maximum temperature rises up to 44°C and May is the hottest month. December is the coldest month of the year when the average daily temperature drops down to 7°C. Relative humidity is around 60-70% throughout the year. The highest and lowest monthly mean relative humidity so far recorded is 97% (Dec) and 26% (April).
7. The details of the project is given below:

Particular	Name/Area (m ²)	Proposed Area Details
Plot Area	65232.25 m ²	65232.25 m ²
Ground Coverage @ % of the total plot area	--	9299.81 m ² (14.26%)
FAR	--	0.63
Built up Area	--	45621.61 m ²
Road Area	--	8746.53 m ² (13.41%)
Parking Area	--	13686.48 m ²
Green Area	--	16800.66 m ² (25.76%)
Power/Electricity Requirement & Sources	WESCO of Odisha	1930 KW
No. of DG sets	--	3x750 KVA 1x82.5 KVA
Water requirement & Sources	Ground Water Supply	237.5 KLD
Sewage Treatment & Disposal	--	STP Capacity - 300 KLD ETP Capacity - 50 KLD
Estimated Population	--	Patient - 500 Floating- 1000

8. Water Requirement: Fresh water make up of 237.5 m³/day will be required for the project which will be sourced from ground water. Waste water of 281 KLD will be treated in a STP of 300 KLD capacity & ETP of 50 KLD Capacity, which includes primary, secondary and tertiary treatment. After treatment the treated water will be discharge to the drain.
9. Power requirement: The total consolidated electrical load estimate for proposed project is about 1930 KW. The power will be entirely supplied by 11 KV source of WESCO of Odisha. Also, in case of power cut, 100 % power backup generator will be provided for common uses only. For this purpose, diesel generator having 2332.5 KVA DG Set (3x750+1x82.5 KVA) capacities will be provided. For energy conservation, there will be 103 nos. of solar lighting poles (@72 Watt) has been proposed for street & common area solar lighting which is 83.1 KW (4.7%).

8. Rain Water Harvesting: is proposed which will be harvested through 26 no. of recharging pits considering, total storm water flow in the area to be 1044.0 m³/hr.
9. 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).
10. Green Belt Development: Green belt will be developed over an area of 16800.66 m² which is 25.76 % of the plot area; by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
11. Solid Waste Management: From the domestic use, solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/capita/day, which will be about 801 kg/day. The generated solid waste from the residential complex will be collected into a garbage bin located at a suitable location inside the complex. Bio-medical waste generation from 500 beds is 750 Kg/day. Solid waste from sweeping will also be stored into the garbage bin. The solid waste will be segregated at source and will be stored in separate coloured bins (different biodegradable & non-biodegradable bins). Proper waste management practices will be adopted during the collection, storing and disposal of the generated solid waste. Floating/ Visitors sludge of 150 kg/day will be generated
12. Parking provisions for the project will be 13686.48 Sqmt.
13. The total project cost is Rs.150 Crores and Environment Management Cost is Rs.2.0 Crores
14. The project proponent along with the consultant M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar made a detailed presentation on the proposal before the SEAC on 14.02.2020.
15. 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 on 14.02.2020 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) Odisha, after considering the proposal; appraisal report and recommendations of SEAC, hereby accords environmental clearance to the project valid for a period of 7 years under the provisions of EIA notification 2006 and subsequent amendments thereto subject to strict compliance of all conditions stipulated as follows. Detailed compliance report of these conditions is mandatorily to be submitted by the project proponent to SEIAA at half yearly intervals by 1st June and 1st December of each year and status of compliance of stipulated EC conditions shall also be uploaded in the website of the Ministry.



Stipulated Conditions:

I. Specific Conditions:

A. Construction Phase:

1. Project Proponent has to obtain prior Consent to Establish under Section 25& 26 of the Water (Prevention & Control of Pollution) Act' 1974 and under Section 21 of the Air (Prevention & Control of Pollution) Act' 1981 from State Pollution Control Board before start of construction activities.
2. Construction site should be adequately barricaded before the construction begins.
3. 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.
4. As proposed, 26 nos. of rain water harvesting pits for artificial ground water recharge shall be installed as per CGWB guidelines.
5. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
6. Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
7. No ground water shall be extracted for the project work at any stage during the construction phase. If ground water will be used during construction phase, they shall obtain permission from the Water Resource Department, Govt. of Odisha.
8. Considering the peak water consumption of the occupants, the design of the water supply system and the sewage disposal system of the project should be based on the provisions of water consumption.
9. The proponent shall explore the possibility to use the municipality supply water instead of ground water.
10. The proponent shall maintain the natural pond within the project site and use the same for rainwater harvesting purpose.
11. Provision shall be made for the housing of construction labourers within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, 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.
12. A First-Aid room will be provided in the project site both during construction and operation of the project.
13. All the top soil excavated during construction activities should be stored separately for use in land filling, horticulture/landscape development within the project site.
14. Disposal of muck during construction phase should not create any adverse effect on the neighboring communities and will be disposed off taking the necessary precautions for general safety and health aspects of people only in approved sites with the approval of competent authority.
15. Construction spoils, including bituminous material and other hazardous materials should not be allowed to contaminate watercourses, ground water and dump sites




by following safe dumping / disposal practice as per statutory rules and norms with necessary approval of the Odisha State Pollution Control Board.

16. The fuel for diesel generator sets to be used during construction phase shall use low sulfur diesel fuel and should conform to Environment (Protection) Rules 1986 prescribed for air emission and noise standards.
17. The diesel required for operating DG sets shall be stored in underground tanks and, if required, clearance from the Chief Controller of Explosives shall be taken.
18. Vehicles used for bringing construction materials to the site should be in good condition and should have a pollution check certificate, covered and conform to statutory air and noise emission standards and should be operated only during non-peak hours of the day.
19. 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 taken to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ OPCB.
20. Fly ash bricks should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and as amended thereafter.
21. Ready mixed concrete would be used in building construction.
22. Storm water control and its re-use should be as per CGWB and BIS standards for these applications.
23. Fixtures for showers, toilet flushing and drinking water should be of low flow type and restricted to requirements by use of aerators, avoiding wastage pressure reducing devices or sensor based controls.
24. Use of glass may be maximum upto 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.
25. Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
26. Opaque wall should meet prescriptive requirements as per Energy Conservation Building Code.
27. The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of firefighting equipments etc. as per National Building Code of India, 2005 including protection measures from lightning etc.
28. Regular supervision of the above and other measures for monitoring should be in place all through the construction phase to avoid disturbances and pollution to the surroundings.

B. Operation Phase:

1. Fresh water requirement shall not exceed 237.5 m³/day.
2. 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 SEIAA, Odisha and the Regional Office, MoEF&CC along with six monthly Monitoring reports.

3. 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 26 nos. shall be provided.
4. A complete plan for rainwater harvesting at the proposed site shall be drawn up and implemented to minimise ground water withdrawal thereby recharging ground water in the area. The complete rainwater harvesting plan after implementation shall be submitted to SEIAA.
5. Solid waste shall be collected, treated disposed in accordance with the Solid Waste (Management & Handling) Rules, 2016.
6. Solid waste shall be segregated into biodegradable, recyclable and inert category. Biodegradable waste shall be composted indigenously in Organic Waste Converter and the other waste categories shall be disposed suitably.
7. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.
8. No ground water shall be used during the operation phase. If ground water will be used during operation phase, they shall obtain permission from the Water Resources Department.
9. The proponent shall install an Effluent Treatment Plant (ETP) of capacity 50 KLD for treatment of effluent from different sources of hospital. The treated water from the ETP shall be neutralized for public health prior to other treatment processes.
10. STP of 300 KLD capacity shall be installed before start of the operation phase of the building. Treatment of 100% grey water by decentralized treatment should be done. Treated waste water from STP of 300 KLD capacity shall be recycled / reused to the maximum extent possible. Discharge of unused treated waste water shall conform to the norms and standards of the Odisha State Pollution Control Board. Necessary measures should be taken to mitigate the odour problem from STP.
11. The STP sludge should not be dried nor incinerated within the project site and should be disposed off as per the norms of SPCB, Odisha.
12. The STP must treat all kinds of pollutants present in it and its capacity should take into account the entire load of sewage generated from the hospital.
13. The project proponent will ensure that under no circumstances, the environment is polluted due to non-functioning / under performance of sewerage disposal system of the project.
14. Diesel power generating sets proposed as source of back-up 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 the stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets put together and should be more than the highest building height. Low sulfur diesel should be used. The location of the DG sets may be decided in consultation with Odisha State Pollution Control Board. Care may be

taken to avoid disposal of smoke /pollutants from DG sets in the residential area. Low sulfur diesel oil (LDO or HSD) is to be used in DG set.

15. 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 the sites shall be restricted to the permissible levels to comply with the prevalent regulations.
16. Green-belt & avenue plantation of trees over the area of 16800.66 m² (25.76 % of total plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Professional landscape architects should be engaged to design the green layout to provide for multi-tier plantation and green fencing all around, mitigating various environmental pollutants like dust, noise, emissions etc. At least 100 numbers of trees shall be planted and maintained at the site.
17. Weep holes in the compound walls shall be provided to ensure natural drainage of excessive rain water in the project area during the monsoon period after the harvesting operations. Care must be taken so that there is no water logging in the territory and drainage is 100%.
18. Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Traffic congestion shall be avoided inside the project site. The area ear- marked for parking shall not be used for any other purpose. Alternate entry and exit must be provided to handle excess traffic and emergency situations.
19. A report on the energy conservation measures confirming to energy conservation norms finalized by the Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R& U Factors etc. and submitted to the SEIAA, Odisha in three months' time before operation/ habitation.
20. The proponent shall use at least 5% of non-conventional energy (solar energy).
21. Central lighting and street lighting shall be based on solar power. Provisions of solar hot water storage / supplies at the roof top may be made as per statutory norms of CPCB/MoEF&CC/SPCB, Odisha.
22. Energy conservation measures like installation of LED for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Discarded bulbs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid toxic contamination. Use of solar panels be adopted to the maximum extent possible, especially for street lights.
23. 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, effluent 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.

24. The Project proponent has earmarked Rs.2.0 Crores towards environmental protection measures for the project. The year wise funds earmarked for environmental protection measures shall be kept in separate account and should be spend accordingly and not to be diverted for any other purpose. Year wise progress of implementation of action plan for EMP and expenditure shall be reported to the SEIAA, Odisha, Regional Office, MoEF & CC, Govt. of India, Bhubaneswar, SPCB along with the six monthly compliance report.

II. General Conditions:

1. The project proponent shall comply with all the conditions stipulated in the building approval letter.
2. 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 them in Form-1, Form-1A, and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.
3. The applicant will take statutory clearance / approval / permissions from the concerned authorities in respect of the project as and when required.
4. It shall be mandatory for the project management to submit six (06) monthly compliance reports on post environmental monitoring in respect of the stipulated terms and conditions in this Environmental Clearance to the State Environment Impact Assessment Authority (SEIAA), Odisha, SPCB & Regional Office of the Ministry of Environment & Forest, Odisha in hard and soft copies on 1st June and 1st December of each Calendar Year and shall upload the same in the website of the Ministry.
5. The project proponent shall comply all the conditions stipulated by the Fire Prevention Officer, Odisha.
6. The applicant will adopt the prescribed norms, and standards provided in the National Building Code of India, 2005.
7. 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.
8. 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, SPCB.
9. 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.

10. Officials from the Regional Office of MoEF&CC, Bhubaneswar/SPCB would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all entire document submitted to SEIAA, Odisha should be forwarded to the Regional Office of MOEF&CC, Bhubaneswar.
11. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
12. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
13. All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.
14. These stipulations would be enforced among others under the provisions of 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 EIA Notification, 2006.
15. The project proponent should 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 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 should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional Office of MoEF&CC, Govt. of India at Bhubaneswar.
16. 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 the proponent.
17. The proponents shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Offices of MoEF&CC, Bhubaneswar the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM₁₀, PM_{2.5}, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
18. The abovementioned stipulated conditions shall be complied in a time-bound manner. Failure to comply with any of the conditions mentioned above may result in cancellation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.



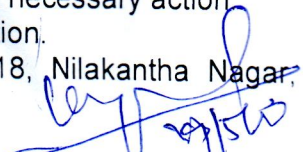
19. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

Yours faithfully,


Member Secretary

Memo No 8241/SEIAA / Dt. 29.05.20
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. Principal 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, Balangir, 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