

**PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL  
COMMITTEE, ODISHA HELD ON 14<sup>TH</sup> FEBRUARY, 2020**

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The SEAC met on 14<sup>th</sup> February, 2020 at 11:00 AM in the Conference Hall of Odisha State Pollution Control Board, Bhubaneswar under the Chairmanship of Sri. B. P. Singh. The following members were present in the meeting.

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

The agenda-wise proceedings and recommendations of the committee are detailed below:

**ITEM NO. 01**

**PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF PROPOSED CONSTRUCTION OF TEACHING HOSPITAL OF 500 BEDS (PT. RAGHUNATH MURMU MEDICAL COLLEGE & HOSPITAL) AT VILLAGE -RANGAMATIA, BARIPADA, DIST- MAYURBHANJ (BUILT UP AREA 45621.61 SQM) BY DEAN & PRINCIPAL, PRMMCH, BARIPADA. (EC)**

1. The Proposal is for Environmental Clearance for proposed construction of teaching hospital of 500 Beds (Pt. Raghunath Murmu Medical College & Hospital) at village – Rangamatia, Baripada, Dist- Mayurbhanj of Dean & Principal, PRMMCH, Baripada.
2. The Total Plot Area is 81948.21 m<sup>2</sup> (20.25 Acres), and the built-up area of the project will be 45621.61 m<sup>2</sup>.
3. Since, the built-up area of the project is less than 1,50,000 m<sup>2</sup> . Hence, it falls under Activity 8(a), Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments.
4. The hospital had 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 varies specialty departments.
5. The geographical co-ordinates of the project site is: Latitude – 20° 54' 44.01"N & Longitude - 86° 47' 30.70" E which falls under Topo sheet No- 73K/9, 73K/13 & 73J/16. Nearest Highway SH-61 connecting Baripada - Balasore is 0.42 km from the project site. The nearest railway station is Baripada Railway station at a distance of approx. 6.25 Km. The nearest airport is Biju Patnaik Airport at a distance of approx. 210 Km from project site. Nearest habitation is Sankhabhanga – 0.77 km.
6. **Meteorology:** During summer months the maximum temperature rises up to 39°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 70-80% throughout the year. The highest and lowest monthly mean relative humidity so far recorded is 95% (Dec) and 28% (April).

## 7. The building details of the project:

Particular	Name/Area (m <sup>2</sup> )	Proposed
Project Name	Proposed Construction of Teaching Hospital for the new Govt. Medical college at Baripada, Odisha	--
Plot Area	81948.21 m <sup>2</sup>	81948.21 m <sup>2</sup>
Ground Coverage @ % of the Total plot area	--	9299.81 m <sup>2</sup> (11.35 %)
FAR	--	0.50
Built up Area	--	45621.61 m <sup>2</sup>
Road Area	--	9193.88 m <sup>2</sup> (11.23 %)
Parking	--	14122.23 m <sup>2</sup>
Green Area	--	17273.98 m <sup>2</sup> (21.07%)
Power/Electricity Requirement & Sources	NESCO of Odisha	1930 KW
No. of DG sets	--	3x1000+1x160 KVA
Water requirement & Sources	Ground Water Supply	237.5 KLD
Sewage Treatment & Disposal	--	STP Capacity - 300 KLD ETP Capacity - 50 KLD
Estimated Population	--	Hospital Bed - 500 Floating Population - 1000

8. **Water Requirement:** Total Fresh water required is 237.5 KLD for the project which will be sourced from Ground water (6 nos. Bore wells). Waste water of 281 KLD will be generated and which will be treated in a STP of capacity 300 KLD & ETP of capacity 50 KLD, 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 NESCO 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 3160 KVA DG Set (3x1000+1x160 KVA) capacities will be provided. For energy conservation, there will be 139 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting which is 75 KW (4.4%).
10. **Rain Water Harvesting** is proposed which will be harvested through 24 no. of recharge pits considering, total storm water flow to be 968 m<sup>3</sup>/hr.
11. **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).
12. **Green Belt Development:** Green belt will be developed over an area of 17273.98 m<sup>2</sup> which is 21.07 % of the plot area by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
13. **Solid Waste Management:** From the domestic uses solid waste in form of food wastes from kitchen and miscellaneous wastes will be generated @ 0.45 kg/capita/day, which will be about 801 kg/day. The generated solid wastes from the residential complex will be collected into a garbage bin located at a suitable location inside the complex. Bio-medical wastes generation from 500 beds is 750 Kg/day. Solid wastes from sweeping will also is stored into the garbage bin. The solid wastes 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.

14. **Parking** provisions for the project will be 14122.23 m<sup>2</sup>.
15. The **total project cost** is ` 150 Crores and Environment Management Cost = ` 1.9 Crores
16. The project proponent along with the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation on the proposal.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 7 years with stipulated conditions as per **Annexure – I**.

## **ITEM NO. 02**

### **PROPOSAL FOR PROPOSED TEACHING HOSPITAL 500 BEDS FOR THE NEW GOVT. MEDICAL COLLEGE AT BALASORE, ODISHA OF FAKIR MOHAN MEDICAL COLLEGE & HOSPITAL - (BUILT UP AREA- 45621.61SQM) OF DEAN AND PRINCIPAL OF FAKIR MOHAN MEDICAL COLLEGE & HOSPITAL (EC)**

1. The Proposal is for Environmental Clearance for proposed construction of teaching Hospital of 500 Beds for the new Govt. Medical College at Balasore, Odisha of Fakir Mohan Medical College & Hospital of Dean and Principal of Fakir Mohan Medical College & Hospital.
2. The Total Plot Area is 140747.27 m<sup>2</sup> and the built-up area proposed for the project will be 45621.61 m<sup>2</sup>.
3. Since, the built-up area of the project is less than 1,50,000 m<sup>2</sup> . Hence, it falls under Activity 8(a), Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments.
4. The Hospital had 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 varies specialty departments.
5. The Site is located near NH-16 in Balasore City, Odisha. The Geographical co-ordinates of the project site is: Latitude - 21° 31' 22.78" N & Longitude - 86°53'3.31" E. The project site is well connected with National Highway-16. The nearest railway station is Balasore Railway station at a distance of approx. 4.62 Km from the site. The nearest airport is Biju Pattnaik Airport, Bhubaneswar at a distance of approx. 180 Km from project site.
6. **Meteorology**: During summer months the maximum temperature rises up to 39°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 70-80% throughout the year. The highest and lowest monthly mean relative humidity so far recorded is 95% (Dec) and 28% (April).
7. **The building details of the project:**

<b>Particular</b>	<b>Permissible</b>	<b>Proposed</b>
Project Name	Construction of Teaching Hospital for the new Govt. Medical college at Balasore, Odisha	

Proceedings of the SEAC meeting held on 14<sup>th</sup> February, 2020

**Secretary, SEAC**

Plot Area	--	140747.27 m <sup>2</sup>
Ground Coverage @ % of the Total plot area	56298.91 m <sup>2</sup> (40%)	9299.81 m <sup>2</sup> (6.60%)
FAR	1.75	0.29
Built up Area	--	45621.61 m <sup>2</sup>
Road Area	--	11041.89 m <sup>2</sup>
Parking Area	13686.483 m <sup>2</sup>	15411.78 m <sup>2</sup>
Green Area	--	20932.61 m <sup>2</sup> (28.6%)
Power/Electricity Requirement & Sources	--	1562.0 KW
No. of DG sets	--	3x750+1x82.5 KVA
Water requirement & Sources	--	244.4 KLD
Sewage Treatment & Disposal	--	STP Capacity - 320 KLD ETP Capacity - 50 KLD
Estimated Population- Residential, Floating / visitors, Commercial	--	Hospital Bed - 500 Floating Population - 1000

8. **Water Requirement:** Fresh make up of 244.4 m<sup>3</sup>/day will be required for the project which will be sourced from Ground water. Waste water of 303.5 KLD will be generated, which will be treated in a STP of 320 KLD capacity & ETP of 50 KLD Capacity, which includes primary, secondary and tertiary treatment. After treatment, the treated water will be discharged to the Drain.
9. **Power requirement:** The total consolidated electrical load estimate for proposed project is about 1562 KW will be source of NESCO of Odisha. In order to meet emergency power requirements during the grid failure, for this purpose diesel generator having 2332.5 KVA DG Set (3x750+1x82.5 KVA) capacities for power back up in the proposed Project. For energy conservation, there will be 12 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting which is 58.4 KW (4.2%).
10. **Rain Water Harvesting** is proposed which will be harvested through 27 no. of recharging pits considering, total storm water flow to be 1077 m<sup>3</sup>/hr.
11. **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).
12. **Green Belt Development:** Green belt will be developed over an area of 20932.61 m<sup>2</sup> which is 28.6 % of the plot area by using the local species like Radhachuda, Nageswar, Akash Neem, Ashok, Polanga, Karang, Bela, Pijilu, Kaniara, Tagar, Hena, etc.
13. **Solid Waste Management:** From the domestic uses solid waste in form of food wastes from kitchen and miscellaneous wastes will be generated @ 0.45 kg/capita/day, which will be about 801 kg/day. The generated solid wastes from the residential complex will be collected into a garbage bin located at a suitable location inside the complex. Bio-medical wastes generation from 500 beds is 750 Kg/day. Solid wastes from sweeping will also be stored into the garbage bin. The solid wastes will be segregated at source and will be stored in separate coloured bins (different biodegradable & non-biodegradable bins). Proper wastes management practices will be adopted during the collection, storing and disposal of the generated solid wastes. Floating/ Visitors sludge of 150 kg/day will be generated.

14. **Parking** provisions for the project will be 15411.78 m<sup>2</sup>.
15. The **total project cost** is ` 150 Crores and Environment Management Cost is ` 2.2 Crores.
16. The project proponent along with the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** made a detailed presentation on the proposal.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 7 years with stipulated conditions as per **Annexure – II**.

### **ITEM NO. 03**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF TEACHING HOSPITAL OF 500 BEDS FOR THE NEW GOVT. MEDICAL COLLEGE AT BALANGIR, ODISHA OF BHIMA BHOI MEDICAL COLLEGE & HOSPITAL OVER AN AREA 16.11 ACRES WITH BUILT UP AREA- 45621.61 M<sup>2</sup>) OF DEAN AND PRINCIPAL OF BHIMA BHOI MEDICAL COLLEGE & HOSPITAL (EC)**

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 m<sup>2</sup> and the built-up area proposed of the project will be 45621.61 m<sup>2</sup>.
3. Since, the built-up area of the project is less than 1,50,000 m<sup>2</sup> . Hence, it falls under Activity 8(a), Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments.
4. The Hospital had 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 varies Specialty Departments.
5. The Site is located near SH-42 in Balangir City, Odisha, adjacent to Gandhrel Village, which is a major landmark. 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 from the site. The nearest airport Vivekananda Airport at Raipur, Chhattisgarh is 234 km away. Biju Patnaik International Airport in the State Capital, Bhubaneswar is 327 km from project site & Rourkela Airport is about 305.0 Km from the site. Balangir Bus Stand is 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 building details of the project:

Particular	Name/Area (m <sup>2</sup> )	Proposed
Project Name	Proposed Construction of Teaching Hospital for the new Govt. Medical college at Balangir, Odisha	
Plot Area	65232.25 m <sup>2</sup>	65232.25 m <sup>2</sup>
Ground Coverage @ % of the Total plot area	--	9299.81 m <sup>2</sup> (14.26%)
FAR	--	0.63
Built up Area	--	45621.61 m <sup>2</sup>
Road Area	--	8746.53 m <sup>2</sup> (13.41%)
Parking Area	--	13686.48 m <sup>2</sup>
Green Area	--	16800.66 m <sup>2</sup> (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 make up of 237.5 m<sup>3</sup>/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 to be 1044.0 m<sup>3</sup>/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 m<sup>2</sup> 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 uses 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 is 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

Proceedings of the SEAC meeting held on 14<sup>th</sup> February, 2020

Secretary, SEAC

12. **Parking** provisions for the project will be 13686.48 m<sup>2</sup>.
13. The **total project cost** is ` 150 Crores and Environment Management Cost is ` 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.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s. Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 7 years with stipulated conditions as per **Annexure – III**.

#### **ITEM NO. 04**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PROPOSED CONSTRUCTION OF 24 BLOCKS OF G+4 STORIED ALONG WITH TWO STORIED COMMUNITY HALL AND SHOPPING ARCADE UNDER REHABILITATION PROJECT FOR SLUM & INFORMAL SETTLEMENTS UNDER HFA FOR ECONOMICALLY WEAKER SECTION (EWS) OVER AN AREA OF 5.27 ACRES AND BUILT UP AREA OF 36207.96 M<sup>2</sup> AT GHATIKIA, BHUBANESWAR OF BHUBANESWAR DEVELOPMENT AUTHORITY (EC).**

1. The Proposal is for Environmental Clearance for proposed Construction of 24 blocks of G+4 storied along with two storied Community Hall and Shopping Arcade under Rehabilitation Project for Slum & Informal Settlements under HFA for Economically Weaker Section (EWS) over an area of 5.27 acres and built up area of 36207.96 m<sup>2</sup> at Ghatikia, Bhubaneswar developed by BDA.
2. Since, the built-up area of the project is less than 1,50,000 m<sup>2</sup> . Hence, it falls under Activity 8(a), Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments
3. The Project shall be financed by OUIDF (Odisha Urban Infrastructure Development Fund).
4. The proposed project will be constructed based on precast concrete technology as this technology is economically and ecologically suitable for large construction projects. The precast material will be transported to the project site from the existing batching plant located at Subudhipur at a distance of about 3 Km via road.
5. The Total Plot Area is 21326.93 m<sup>2</sup> and the built-up area proposed of the project will be 36207.96 m<sup>2</sup>. The land is belongs non forest land category on Khata No: 2333 & 2334 Plot No. 584, 4997, 4998 of Mouza – Ghatikia, Bhubaneswar, Odisha. Kisam: Patita.
6. The Project will be consisting of 24 blocks of G+4 storeyed building over an area of 5.27 acres along with two storied community hall. 928 residential apartments and 32 shopping arcades. The site is surrounded by 200ft wide road on the eastern side and connecting to Ghatikia Chhak.
7. The Site is located near NH-5, which is about 3 km and Ghatikia Main road is about 0.3 km. The nearest railway station is Bhubaneswar Railway station at a distance of approx. 10 Km. The nearest airport is Biju Patnaik International Airport about 8.0 km. Nearest rivers are Kuakhia River is about 11 km and Bhargabi River is 12 km. Nearest Nalas are Jhumuka Nala is 7 km and Gangua Nala is 9 km. Nearest canal is Daya canal 6.5 km. Nearest sanctuaries are Chandaka Elephant Sanctuary is about 7 km and Nandankanan Zoological park is 15 km. Nearest Archaeological site is Khandagiri caves about 2.8 km.

Proceedings of the SEAC meeting held on 14<sup>th</sup> February, 2020

**Secretary, SEAC**

Bharatpur Reserve forest is about 2.5 km. The site is plain without any vegetation. However boundary plantation has been done by BDA along the project boundary.

8. **Meteorology:** The maximum temperature is about 36 °C and the minimum temperature is 16 °C felt in the area. The average annual rainfall in the area is 1326.16 mm.
9. **The Building Details Of The Project:**

Sl. No.	Description	Coverage Area
1	Total Plot Area	21326.93 m <sup>2</sup>
2	Total Built up area	36207.96 m <sup>2</sup>
3	Area of Each Typical Residential Block	1477.79 m <sup>2</sup>
4	No. Of Residential Blocks	24 Nos.
5	Total Area of Residential Buildings	35466.96 m <sup>2</sup>
6	Shopping arcade area ( Ground Floor only)	1104 m <sup>2</sup>
7	Community Hall ( Ground Plus One Floor)	741 m <sup>2</sup>
8	Housing units	928
9	Mandatory Green Cover	3113.91 m <sup>2</sup>
10	Parking	3610.3 m <sup>2</sup>
11	FAR	1.7

10. **Power requirement:** The daily power requirement for the proposed complex is preliminarily assessed as 1500 KW. Sourced from CESU and BCDD-II, Bhubaneswar, Odisha. Total Energy Conservation by using Solar Lighting = 75KW i.e. 5 %.
11. **Water requirement:** Total amount of domestic water requirement will be 516 KLD which will be made available from PHED. Total amount of domestic water requirement will be 516 KLD. Out of this amount 412 KLD will be total sewage load. Total Sewage flow /day will be 90% of the total sewage load. There is the proposal of installation of 500 KLD STP for the treatment of waste water generated from the apartments. 50 KLD of the treated waste water will be used for gardening purpose, another 20KLD of treated water will be used for washing and rest of the water will be disposed through the nearby Municipal Sewage Drain. The storm water disposal at the site will be made through peripheral drain system connecting to main drain along with 100-0' wide BT road existing. This work will be taken up during the time of site development work.
12. **Rain Water Harvesting** is proposed which will be harvested through 25 no. of recharging pits. Total harvestable quantity of rainfall from the project site is 964.8 m<sup>3</sup>.
13. **Fire fighting Installations:** The height of the building is up to 15 Mts. So there is no need for installing any Fire Fighting equipment. However internal road of 6Mt width has been demarcated for movement of fire vehicle.
14. **Green Belt Development:** Green belt will be developed over an area of 3113.91 m<sup>2</sup>.
15. **Parking provisions** for the project will be 3610.3 m<sup>2</sup>.
16. **Solid Waste Management:** Total amount of solid waste generated during operation phase of the project will be 1920 kg/day. The recyclable material like thermocol, cartoon boxes, newspaper waste is given back to suppliers for recycling. The domestic waste materials like food waste, vegetable waste and others will be disposed through BMC. The sludge generated from the STP will be dried in sludge drying yard and used as fertilizer for the plants within the project site.



17. The total **cost of the Project** is ` 59.35 Crores.

18. The consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance for the project valid for a period of 7 years with stipulated conditions as per **Annexure – IV**.

#### **ITEM NO. 05**

#### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PROPOSED “NILAMADHAV AWAS YOJANA AN IN-SITU SLUM REDEVELOPMENT PROJECT ON PUBLIC PRIVATE PARTNERSHIP (PPP) MODEL” AT CHANDRASEKHARPUR, BHUBANESWAR, DIST-KHORDHA, OVER AN AREA OF 5.317 ACRES WITH BUILT UP AREA OF 40723.29 M<sup>2</sup>. DEVELOPED BY ZJSH SPV PRIVATE LTD. AND BHUBANESWAR DEVELOPMENT AUTHORITY (EC)**

1. The Proposal is for Environmental Clearance for proposed “Nilamadhav awas yojana an in-situ slum redevelopment project on Public Private Partnership (PPP) Model” at Chandrasekharpur, Bhubaneswar, Dist-Khordha, over an area of 5.317 acres with built up area of 40723.29 m<sup>2</sup>, developed by ZJSH SPV Pvt. Ltd. and Bhubaneswar Development Authority.
2. Since, the built-up area of the project is less than 1,50,000 m<sup>2</sup>. Hence, it falls under Activity 8(a), Category B2 as per Schedule of EIA Notification, 2006 and its subsequent amendments
3. The Bhubaneswar Development Authority (BDA) is proposing to construct an in-situ Slum Redevelopment Project on Public Private Partnership model named as Nilamadhav Awas Yojana. This is a redevelopment project for slums and informal settlement under housing for economically weaker section over an area of 8.18 Acres or 33103.29 Sq.Mts at Chandrasekharpur, Bhubaneswar. Out of the total area, 5.317 Acres is for Rehabilitation project (SRP area) & 2.863 Acres is for Developer’s Area (PDP area). This project is a residential project for delivering 1200nos. units housing to the Economically Weaker Section on rehabilitation area. The project report has been prepared for the project area of 5.317 Acres under in-situ Slum Redevelopment Project with total built up area of 40723.3 Sq.m.
4. The Total Plot Area is 21517 m<sup>2</sup> (5.317 Acres) and the built-up area proposed for the project will be 40723.3 m<sup>2</sup>. The land is belongs non forest land category. on Khata No: 619 Plot No. 324(p)& 326(p).
5. The project comprises of 2 Blocks: Block Type 1 (G+4) 40 units in each blocks – 21 blocks and Block Type 2 (G+4) 60 units in each blocks – 6 blocks. The Geographical co-ordinates of the project site is Latitude: 20°19’13.078”N- 20°19’17.699”N and Longitude: 85°48’53.966”E - 85°49’01.043”E, covering in Toposheet No. 73 H/15. The project connected through the road connecting Nandankanan - Jayadev Vihar Road to care Hospital at a distance of 0.5 km. The nearest railway station is Bhubaneswar Railway station at a distance of approx. 07 Km. The nearest airport Biju Patnaik International Airport about 7.5 km. Nearest river is Kuakhia River is about 5 km and Confluence point of Daya and Bhargabi River is 7 km. Nearest sanctuaries are Chandaka Elephant Sanctuary is about 7.7 km and Nandankanan Zoological park is 8.5 km. Sikharchandi Hill Forest is about 3 km.

Proceedings of the SEAC meeting held on 14<sup>th</sup> February, 2020

**Secretary, SEAC**

6. **Meteorology:** The maximum temperature is about 36°C and the minimum temperature is 16°C felt in the area. The average annual rainfall in the area is 1326.16 mm.

7. **The Building Details Of The Project:**

Attributes	Carpet Area in m <sup>2</sup>	Built up area in m <sup>2</sup>	Common Area in m <sup>2</sup>	Super Built up area in m <sup>2</sup>
<b>Unit Area</b>				
Block Type 1	23	27.2	4.95	32.2
Block Type 2	23	27.4	4.92	32.2
<b>Block Details</b>	<b>No of Blocks</b>	<b>Builtup area in Sq. m</b>	<b>Common Area in Sq. m</b>	<b>Super Built up area in Sq. m</b>
Block Type 1 (G+4) 40 units in each blocks	21 (840 Units)	1288		27048
Block Type 2 (G+4) 60 units in each blocks	6 (360 Units)	1932		11592
<b>Total</b>	<b>1200 Units</b>			<b>38640</b>
Multipurpose Amenities Center (G+2) (2% of the Built up area of EWS units)				924
Neighborhood shopping (G+2) (2% of the Built up area of EWS units)				310.11
Shop 1 (G+2)				985.97
Shop 2 (G+2)				223.32
Total Builtup area				40723.29
Parking (10% of the total built up area)				4098
Green Belt (10% of the total plot area)				2220

Attributes	Numbers	Ground Coverage area of each type	Total Ground Coverage area in m <sup>2</sup>
Plot area			21456.25
Green Area			2220
Block Type 1 (Ground Coverage)	21	257.63	5410.23
Block Type 2 (Ground Coverage)	6	386.4	2318.4
Multipurpose amenities center	1	274.92	274.92
Neighborhood Shopping 1	1	310.11	310.11
Neighborhood Shopping 2	1	117.7	117.7
UGR (Capacity 2,40,000L)	1	63.6	63.6
UGR (Capacity 60,000L)	1	24.5	24.5

Attributes	Numbers	Ground Coverage area of each type	Total Ground Coverage area in m <sup>2</sup>
Parking			4098
Periphery Road			4575.4
Internal Road			1542.19

8. **Power requirement:** The daily power requirement for the proposed complex is preliminarily assessed as 1277 KW. Sourced from CESU and BCDD-II, Bhubaneswar, Odisha. Out of the total electricity requirement 1200 KW will be require for 1200 units of EWS Block. 30KW will be utilized for UGR Fire Fighting and 10KW for Multipurpose Center other 3 KW will be used for Neighborhood Shopping & street lighting. Total Energy Conservation by using Solar Lighting = 63.85 KW i.e. 5 % of total power consumption.
9. **Water requirement:** Total amount of domestic water requirement will be 822 KLD & 10 KLD of the water will be used for gardening purpose. A 400mm dia of sewer lines has been laid by JICA which will be adequate to carry the sewage load generated by the project.
10. The storm water disposal at the site will be made through peripheral drain system connecting to main drain along with 100-0' wide BT road existing. This work will be taken up during the time of site development work.
11. **Rain Water Harvesting** is proposed which will be harvested through 60 no. of recharging pits. Total harvestable quantity of rainfall from the project site is 1131 m<sup>3</sup>.
12. **Green Belt Development:** Green belt will be developed over an area of 2220 m<sup>2</sup> (10%).
13. **Parking provisions** for the project will be 4098 m<sup>2</sup>.
14. **Solid Waste Management:** Taking into consideration of living style of Bhubaneswar city the solid waste generation factor of 0.4 kg/capita/day has been taken into consideration resulting approximately 2400 Kg / day of solid waste generated. The recyclable material like thermocol, cartoon boxes, newspaper waste is given back to suppliers for recycling. The domestic waste materials like food waste, vegetable waste and others will be disposed through BMC.
15. The total **cost of the Project** is ` 83 crores.
16. The consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** along with the proponent has made a detailed presentation before the SEAC.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Kalyani Laboratories (Pvt) Ltd. Pahala, Bhubaneswar** on behalf of the project proponent, the SEAC recommended to reject the proposal for the following reasons:

- (i) Greenbelt area is proposed less than 20% (i.e. 10%).
- (ii) There is no proposal for installation of STP.
- (iii) Parking area proposed is inadequate (i.e. 10% instead of 20%)
- (iv) There is no provision of lift though proposal is for G+5 storied building.

**However, the Committee recommended that the proposal can be reconsidered if the proponent submits the revised proposal complying to the above.**

## **ITEM NO. 06**

### **PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR PRODUCTION OF 90043 TPA OF IRON ORE FROM NANGALSILA IRON ORE MINES OVER AN AREA OF 45.333 HA LOCATED IN VILLAGE NANGALSILA & MURUMDIHI, UNDER RAIRANGPUR TAHASIL DIST- MAYURBHANJ OF GOURI SHANKAR CHOUBEY (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. The Nangalsila Iron Ore mining lease of Sri Gouri Shankar Choubey over an area of 45.333 ha located in Village- Nangalsila & Murumdihi under Rairangpur Tehsil, in the district of Mayurbhanj of Odisha State.
3. The Nangalsila & Murumdihi Iron Ore mining lease over 45.931 ha was first granted on 19.04.1985 in favor of Sri Gouri Shankar Choubey and executed on 19.04.1985 for the period of 20 years.
4. 1st Renewal of Mining Lease Application for the same area been filed to the Steel & Mines Department in accordance with the provision of over 45.931 has Rule, 24A(1) of MCR, 1960 for a further period of 20 years. As per section 8A(3) of Mines and Minerals (Development and Regulation) Amendment Act , 2015 the lease period supposed to extended upto 18.04.2035 subjected to execution of Supplementary lease deed.
5. Part of the non working lease area over 0.598 Ha inclusive of 0.174 Ha of village forest land and 0.424 Ha of non forest land was proposed to be surrendered to State Govt. on 03.03.2011 to keep the project technically and commercially viable. So, Final Mine Closure Plan for the part surrendered lease area over 0.598 ha. has been approved by IBM on 28.10.2011 vide IBM's letter No. FMCP/MAN/04-ORI/BHU/2011-12.
6. Surface right has been acquired over an area of 32.780 hectares (80.75 Ac., 6.95 Ac.Govt. & 73.80 AC. Pvt Land) from the Collector, Dist: Mayurbhanj, Odisha.
7. The mining operation was stopped by the Mining Officer, Baripada since 19.11.2009 due to want of environmental clearance and other statutory clearance.
8. Since, the mining operation was closed more than two years, the lease was declared as lapse by Govt. of Odisha, vide letter No. 5711/S & M dated 25.06.2015.
9. Lessee has filed the revision application which was consider by the Revisional Authority and the Lapse Order was set aside by order dated 11.05.2016 and remanded back to the State Govt. for suitable reconsideration.
10. Now the hearing is going on for consideration of application.
11. Accordingly Mining Officer, Baripada demanded an amount of Rs.2, 91, 58, 813 /- towards extraction in violation of EP Act and ` 54, 82, 233.45/- towards failure to deliver the undeposited stock.
12. However, after depositing ` 4,57,71,500/- including applicable interest the demand for common cause/compensation, State Govt. has communicated the status of lease to IBM vide letter no. 6746/DM dated 29.08.2019.
13. On receipt of the status report IBM has approved the modification of mining plan for period 2015-16 to 2019-20 vide letter No. MRMP/A/32-ORI/Bhu/2019-20/1781 dated 03.12.2019.

Proceedings of the SEAC meeting held on 14<sup>th</sup> February, 2020

**Secretary, SEAC**

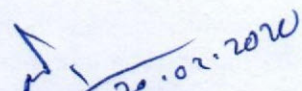
14. Mining Officer, Baripada demanded an amount of Rs.2, 91, 58, 813 /- towards extraction in violation of EP Act and ` 54, 82, 233.45/- towards failure to deliver the undeposited stock. Further for MP/CTO violation demand notice was raised for an amount of Rs. 4,65,279/-
15. Payment confirmation for Rs. 4,57,71,500/- has given by Director of Mines, Odisha Vide its letter No. MX-III (d) -77/2016 5629/DM dt. 23.07.2019.
16. Last Scheme of Mining of this Nangalsila Iron Ore Mine was approved by the Indian Bureau of Mines, Bhubaneswar vide letter No. SM/OTFM/27-ORI/BHU /2011-12 dated 28.10.2011 for a period of 5 years from 2010-11 to 2014-15. Final Mine Closure Plan of the part surrendered area over 0.598 hectare prepared under Rule 23C of MCDR, 1988 was approved by the Indian Bureau of Mines, Bhubaneswar vide letter No. FMCP/MAN/04-ORI/BHU/2011-12 dated 28.10.2011 and reclamation and rehabilitation work completion certificate of FMCP approved area (0.598 ha) was obtained from IBM vide his Certificate No.T/FMCP/C/I/BHU-2011 dated 08.02.2012. Since the extent of M.L area has been reduced from 45.931 hectares to 45.333 hectares after surrender of 0.598 hectare, this Modification of Mining Plan has been prepared under Rule 17(3) of MCR, 2016 along with Progressive Mine Closure Plan under Rule 23 of MCDR, 2017 in respect of the M.L area applied for retaining over 45.333 hectares for a period of five (5) years from FY 2015-16 to 2019-20 and submitted for approval.
17. A total of 2.104 Million Tonne iron ore reserve has been estimated in the M.L area applied for retaining which has formed the basis for preparation of this Modification of Mining Plan. The mine will be operated as a Category-A (OTFM) Mine to produce iron ore 90, 043 T / annum.
18. The lease area covers a part of Survey of India Toposheet bearing No.73J/4 and bounded by the latitudes from 22009'16.568" to 22009'40.185"N and longitudes from 86012'53.685" to 86013'28.742"E. Nearest State Highway is SH –Bisoi-Rairangpur : 11.00 km (NE). Nearest National Highway is NH 49 9 .5Kms & Rairangpur-Dhenkikot NH 220 is 14 km. Nearest Railway Station is Kuldiha Railway station at 5 km. Nearest river is Khadkhai River at 0.5 Kms and Khadkhai Reservoir is 2 km. National Park/Wild Life Sanctuary/Eco Sensitive areas is Similipal Biosphere Reserve 14 Kms.
19. Nangalsila Iron Mine is situated at the foot hill region of Sulaipat hill. M.L area displays a flat topography. Highest and lowest altitudes are noted at 300.5m and 291.5m above mean sea level. The maximum altitude difference is (300.5 – 291.5=) 9m. M.L area consists of mainly waste land as well as agricultural field and bisected by Khadakai Canal. Drainage system is dendrite type. There is neither seasonal nor perennial nala in the M.L area. The drainage system of the area is mostly influenced by Khadakai canal which passes through the lease area SE to NW and controls the drainage system in the region. The land use of the lease area is 45.931 Ha i.e Nangalsila (Govt. land – 13.585 Ha.and Private land – 27.511 Ha) & Murumdihi (Govt. land – 1.460 Ha.and Private land – 3.375 Ha).
20. The maximum production will be 90043 Tons/annum. The total geological reserve is about 98808 t, out of which 95868 t have been considered as mineable reserves. Open cast semi-mechanized mining method will be adopted with the deployment of machines like Jack hammer drill, Compressor, Hydraulic excavators & Tippers etc. Only one bench of 2-3m height will be developed and the bench slope will be kept nearly vertical (800) with horizontal.
21. ROM ore will be up-graded in the ML area in respect of size and grade by way of dry crushing and screening for value addition. About 30 % of runoff ore will be marketed to the


consumer after manual breaking, sorting sizing and blending. Remaining 70 % of the production will be screened by the existing 60 TPH capacity Screening Plant. The average grade of ore produced from this mine is not less than 45 % of Fe.

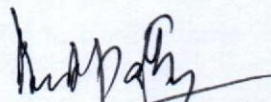
22. Two existing quarries namely Quarry-1 and Quarry-5 will be developed simultaneously laterally to produce iron ore @0.90 Mt / annum. During life of the mine 75,572 Cum. of waste to be generated and stored in 1.182 ha. of area earmarked for waste dumping. At the end of the mining dump material will be re-handled for back filling mined out area and no area remains as dump. Top soil to be generated shall be stacked separately and use for reclaimed area rehabilitation purpose.
23. Water table will not be intercepted, as ultimate depth of Mining will 3 m. whereas water table in the area is minimum 15 m below the surface. As such there is no possibility for encountering any underground water source. Any rain water, accumulated in the pit during monsoon, will be naturally drained within 2 or 3 days.
24. 15 KLD will be required, out of which 3 KLD for drinking purpose, 2 KLD for plantation and 10 KLD for dust suppression purpose. It is proposed to tap this quantity of water as per suitability.
25. The total manpower in this project is 111 persons.
26. The total project cost is ₹ 1.65 Crores and Environment Management Cost is ₹ 0.30 Crores.
27. The consultant **M/s Srushti Seva private limited, Nagpur** along with the proponent has made a detailed presentation before the SEAC.

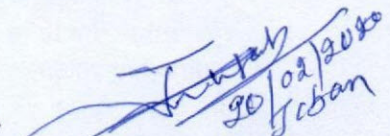
Considering the information / documents furnished by the proponent and presentation made by the consultant on behalf of the project proponent, the SEAC decided to take decision on the request of the proponent after the proponent submits following information / documents.

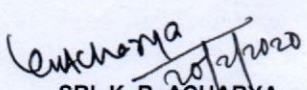
- (i) Details of violation under Environment Clearance to be submitted.
- (ii) Year of commencement of mining operation along with year wise past production details.
- (iii) Aerial distance of Kuldiha Sanctuary from mining lease area certified by concerned DFO.
- (iv) Justification as to why the proposal will not be considered as a violation case.

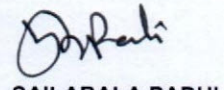
  
SRI B.P. SINGH  
CHAIRMAN, SEAC

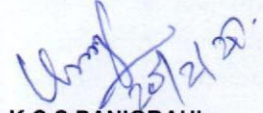
  
DR. D. SWAIN  
MEMBER, SEAC

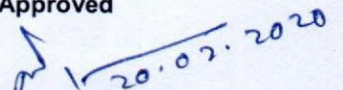
  
PROF. (DR.) B.K. SATPATHY  
MEMBER, SEAC

  
SRI. J. K. MAHAPATRA  
MEMBER, SEAC

  
SRI. K. R. ACHARYA  
MEMBER, SEAC

  
DR. SAILABALA PADHI  
MEMBER, SEAC

  
DR. K.C.S PANIGRAHI  
MEMBER, SEAC

Approved  
  
Chairman, SEAC

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR PROPOSED CONSTRUCTION OF TEACHING HOSPITAL OF 500 BEDS (PT. RAGHUNATH MURMU MEDICAL COLLEGE & HOSPITAL) AT VILLAGE -RANGAMATIA, BARIPADA, DIST- MAYURBHANJ (BUILT UP AREA 45621.61 SQM) BY DEAN & PRINCIPAL, PRMMCH, BARIPADA. (EC).**

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**I. SPECIFIC CONDITIONS:**

**A. CONSTRUCTION PHASE:**

1. Construction site should be adequately barricaded before the construction begins.
2. 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.
3. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
4. 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.
5. 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.
6. 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.
7. The proponent shall explore the possibility to use the municipality supply water instead of ground water.
8. The proponent shall maintain the natural pond within the project site and use the same for rainwater harvesting purpose.
9. 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.
10. A First-Aid room will be provided in the project site both during construction and operation of the project.
11. All the top soil excavated during construction activities should be stored separately for use in land filling, horticulture/landscape development within the project site.
12. 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.
13. 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.

14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Ready mixed concrete would be used in building construction.
20. Storm water control and its re-use should be as per CGWB and BIS standards for these applications.
21. 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.
22. 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.
23. Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
24. Opaque wall should meet prescriptive requirements as per Energy Conservation Building Code.
25. 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.
26. 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:**

27. Fresh water requirement shall not exceed 237.5 m<sup>3</sup>/day.
28. 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.
29. 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 24 nos. shall be provided.

Secretary, SEAC



30. Solid waste shall be collected, treated and disposed in accordance with the Solid Waste (Management & Handling) Rules, 2016.
31. 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.
32. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.
33. 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.
34. 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.
35. 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.
36. 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.
37. 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.
38. 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.
39. 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.
40. 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.
41. Green-belt & avenue plantation of trees over the area of 17273.98 m<sup>2</sup> (21.07 % of total plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. 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.
42. 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%.
43. 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.

44. 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.
45. The proponent shall use atleast 5% of non-conventional energy (solar energy).
46. 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.
47. 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.

## **II. GENERAL CONDITIONS:**

48. The project proponent shall comply with all the conditions stipulated in the building approval letter.
49. 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.
50. The applicant will take statutory clearance / approval / permissions from the concerned authorities in respect of the project as and when required.
51. The applicant will submit half-yearly compliance report on post-environmental monitoring in respect of the stipulated terms and conditions in the Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha, on 1st June and 1st December of each calendar year.
52. The project proponent shall comply to all the conditions stipulated by the Fire Prevention Officer, Odisha.
53. The applicant will adopt the prescribed norms, and standards provided in the National Building Code of India, 2005.
54. 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.
55. 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.
56. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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.

Secretary, SEAC

57. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
58. 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.
59. All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.
60. 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.
61. 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.
62. 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 the proponent.
63. 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; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.
64. 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.
65. The above mentioned 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.

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR PROPOSED TEACHING HOSPITAL 500 BEDS FOR THE NEW GOVT. MEDICAL COLLEGE AT BALASORE, ODISHA OF FAKIR MOHAN MEDICAL COLLEGE & HOSPITAL - (BUILT UP AREA- 45621.61SQM) OF DEAN AND PRINCIPAL OF FAKIR MOHAN MEDICAL COLLEGE & HOSPITAL (EC).**

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**I. SPECIFIC CONDITIONS:**

**A. CONSTRUCTION PHASE:**

1. Construction site should be adequately barricaded before the construction begins.
2. 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.
3. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
4. 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.
5. 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.
6. 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.
7. The proponent shall explore the possibility to use the municipality supply water instead of ground water.
8. The proponent shall maintain the natural pond within the project site and use the same for rainwater harvesting purpose.
9. 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.
10. A First-Aid room will be provided in the project site both during construction and operation of the project.
11. All the top soil excavated during construction activities should be stored separately for use in land filling, horticulture/landscape development within the project site.
12. 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.
13. 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.

14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Ready mixed concrete would be used in building construction.
20. Storm water control and its re-use should be as per CGWB and BIS standards for these applications.
21. 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.
22. 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.
23. Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
24. Opaque wall should meet prescriptive requirements as per Energy Conservation Building Code.
25. 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.
26. 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 244.4 m<sup>3</sup>/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 27 nos. shall be provided.

Secretary, SEAC

4. Solid waste shall be collected, treated and disposed in accordance with the Solid Waste (Management & Handling) Rules, 2016.
5. 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.
6. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.
7. 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.
8. 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.
9. Treatment of 100% grey water by decentralized treatment should be done. Treated waste water from STP of 320 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. Green-belt & avenue plantation of trees over the area of 20932.61 m<sup>2</sup> (28.6 % of total plot area) shall be done using native tree species/shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. 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.
16. 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%.
17. 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.

18. 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.
19. The proponent shall use atleast 5% of non-conventional energy (solar energy).
20. 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.
21. 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.

## **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. The applicant will submit half-yearly compliance report on post-environmental monitoring in respect of the stipulated terms and conditions in the Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha, on 1st June and 1st December of each calendar year.
5. The project proponent shall comply to 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.
9. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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

Secretary, SEAC

entire document submitted to SEIAA, Odisha should be forwarded to the Regional Office of MOEF&CC, Bhubaneswar.

10. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
11. 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.
12. All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.
13. 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.
14. 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.
15. 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 the proponent.
16. 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; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.
17. 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.
18. The above mentioned 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.

Secretary, SEAC



**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR CONSTRUCTION OF TEACHING HOSPITAL OF 500 BEDS FOR THE NEW GOVT. MEDICAL COLLEGE AT BALANGIR, ODISHA OF BHIMA BHOI MEDICAL COLLEGE & HOSPITAL OVER AN AREA 16.11 ACRES WITH BUILT UP AREA- 45621.61 M<sup>2</sup>) OF DEAN AND PRINCIPAL OF BHIMA BHOI MEDICAL COLLEGE & HOSPITAL (EC).**

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**I. SPECIFIC CONDITIONS:**

**A. CONSTRUCTION PHASE:**

1. Construction site should be adequately barricaded before the construction begins.
2. 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.
3. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
4. 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.
5. 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.
6. 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.
7. The proponent shall explore the possibility to use the municipality supply water instead of ground water.
8. The proponent shall maintain the natural pond within the project site and use the same for rainwater harvesting purpose.
9. 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.
10. A First-Aid room will be provided in the project site both during construction and operation of the project.
11. All the top soil excavated during construction activities should be stored separately for use in land filling, horticulture/landscape development within the project site.
12. 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.
13. 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.

14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Ready mixed concrete would be used in building construction.
20. Storm water control and its re-use should be as per CGWB and BIS standards for these applications.
21. 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.
22. 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.
23. Roof should meet the prescribed requirement as per Energy Conservation Building Code by using appropriate thermal insulation material.
24. Opaque wall should meet prescriptive requirements as per Energy Conservation Building Code.
25. 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.
26. 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 m<sup>3</sup>/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.

Secretary, SEAC

4. Solid waste shall be collected, treated and disposed in accordance with the Solid Waste (Management & Handling) Rules, 2016.
5. 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.
6. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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.
15. Green-belt & avenue plantation of trees over the area of 16800.66 m<sup>2</sup> (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. 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.
16. 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%.
17. 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.

18. 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.
19. The proponent shall use atleast 5% of non-conventional energy (solar energy).
20. 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.
21. 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.

## **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. The applicant will submit half-yearly compliance report on post-environmental monitoring in respect of the stipulated terms and conditions in the Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA), Odisha, on 1st June and 1st December of each calendar year.
5. The project proponent shall comply to 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.
9. Officials from the Regional Office of MoEF&CC, Bhubaneswar 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

Secretary, SEAC

entire document submitted to SEIAA, Odisha should be forwarded to the Regional Office of MOEF&CC, Bhubaneswar.

10. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
11. 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.
12. All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.
13. 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.
14. 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.
15. 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 the proponent.
16. 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; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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.
17. 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.
18. The above mentioned 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.

Secretary, SEAC

**CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR PROPOSED CONSTRUCTION OF 24 BLOCKS OF G+4 STORIED ALONG WITH TWO STORIED COMMUNITY HALL AND SHOPPING ARCADE UNDER REHABILITATION PROJECT FOR SLUM & INFORMAL SETTLEMENTS UNDER HFA FOR ECONOMICALLY WEAKER SECTION (EWS) OVER AN AREA OF 5.27 ACRES AND BUILT UP AREA OF 36207.96 M<sup>2</sup> AT GHATIKIA, BHUBANESWAR OF BHUBANESWAR DEVELOPMENT AUTHORITY (EC)**

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**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.
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.

**TOPOGRAPHY AND NATURAL DRAINAGE**

5. 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**

6. As proposed, fresh water requirement from ground water shall not exceed 516 m<sup>3</sup> per day.
7. 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.
8. 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.

9. 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.
10. 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.
11. 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.
12. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
13. 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 25 nos. shall be provided.
14. 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.

#### **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 STP of capacity 500 KLD. The treated effluent from STP shall be recycled/re-used for flushing, gardening and DG Cooling.

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**

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 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.
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, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.
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<sup>2</sup> 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. The proponent shall increase the greenbelt area to 20% of plot area.

### **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.

### **TRANSPORT**

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 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.
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 1<sup>st</sup> 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, 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<sub>2</sub>, NO<sub>x</sub> (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 31<sup>st</sup> 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.