PROCEEDINGS OF THE MEETING OF STATE LEVEL EXPERT APPRAISAL COMMITTEE, ODISHA HELD ON 08th NOVEMBER, 2021

The SEAC met on 08th November, 2021 at 03:00 PM through Video Conferencing in Google Meet under the Chairmanship of Sri. B.P. Singh. The following members were present in the meeting.

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

CONSIDERATION OF OLD PROPOSALS (COMPLIANCE RECEIVED):

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

ITEM NO. 01

PROPOSAL OF ENVIRONMENTAL CLEARANCE OF M/S. UTKAL REALTORS PVT LTD. FOR CONSTRUCTION OF HOUSING PROJECT (RESIDENTIAL USE TYPE) LOCATED AT- PAHALA, BHUBANESWAR, DIST – KHORDHA WITH TOTAL BUILT UP AREA -30,990.21 SQM. OF SRI. PRAKASH CHAND BHURA (EC)

1. This is a proposal for Environmental Clearance of M/s. Utkal Realtors Pvt Ltd. for construction of Housing Project (Residential use type) located at- Pahala, Bhubaneswar, Dist – Khordha with total built up area -30,990.21 m^2. of Sri. Prakash Chand Bhura.
2. The proposal is for Environmental Clearance for proposed construction of proposed 2MLCP+Services+16 Storied Residential Apartment Building & B+G+3 Club and Convenient Shopping over Plot No. 292, 293, 294, 295, 296, 295/687 & 298, Khata No. 352/322, 352/237, 352/238 & 352/236 in Mouza- Pahala, Bhubaneswar, Dist- Khurda, Odisha of M/s Utkal Realtors Pvt. Ltd.
3. The proposed site is located at Pahala, Bhubaneswar, Odisha. The Geographical co-ordinate of the project site is: Latitude - 20° 20' 26.60" N & Longitude - 85° 53' 04.07" E. and the area comes under Survey of India Toposheet No- 73H/15. The project site is well connected with National Highway-16 (Jharpokharia-Chennai Road) at a distance of 0.13km. The nearest railway station is Bhubaneswar Railway station at a distance of approx.. 10.6 Km in South West direction. The nearest airport is Biju Pattnaik International Airport Bhubaneswar at a distance of approx. 13.4 Km in South-West direction from project site. The site is located adjacent to the local landmarks, Haridaspur Mosque, Jagannath Temple, Pahala etc. There is no structure or encroachments on the site. The site is easily accessible from NH-16 Road.
4. Meteorology - The maximum temperature is about 36.0° C and the minimum temperature is 16.0° C felt in the area. The average annual rainfall in the area is 1326.16 mm.

5. Building Details Of The Project :

Total Plot Area	:	8,457.86 sqm
Kisam of Land	:	Gharabari
Residential Built up Area	:	26,718.91 sqm
Commercial Built up Area	:	4,271.30 sqm
Total Built up Area	:	30,990.21 sqm
Ground Coverage	:	2,875.00 sqm
Road & Paved Area	:	2,368.15 sqm
Green Belt Area	:	1,776.15 sqm (21.0 % Plot Area))
Total Parking Area	:	7,709.50 sqm (30 % of Residential FAR Area + 50 % of commercial FAR Area)
Height of the Building	:	59.45 m (Residential) & 14.95 m (Commercial)

6. **Requirement for the Project:**

(a) **Statutory clearances Required /obtained**: BMC has provisionally Approved the builder plan vide letter no. 27719, dated 04.10.2019

Water & Sewerage connection from PH Division vide letter no. 1212, dated 21.01.2020

Ground Water application submitted to CGWA vide application no. 21-4/2492/OR/INF/2020, dated 18/05/2020. NHAI permission for Storm & Wastewater discharge.

(b) **Water requirement**:

Fresh make up of 75.0 m^3/day will be required for the project which will be sourced from Ground water. Waste water of 95.6 KLD will be treated in a STP of 110 KLD capacity, which includes primary, secondary and tertiary treatment. After treatment the treated water will be discharge to the Highway Drain.

(c) **Power requirement**:

The daily power requirement for the proposed building is preliminarily assessed as 1056 KW (Solar System- 53.6 KW & CESU – 1002.4 KW). In order to meet emergency power requirements during the grid failure, there is provision of 2 nos. of DG set having 500 KVA capacities for power back up in the proposed building project.

For energy conservation, there will be 50 nos. of Solar Lighting poles (@72 Watt) has been proposed for Street & common area solar lighting, so

Energy conservation by using Solar Street Lighting = 50 x 72 = 3600 watt = 3.6 KW

Energy conservation by using Solar lighting for common area = 50 KW

Total Energy Conservation = (50+3.6) KW = 53.6 KW

Total Energy saving = 53.6/1056 = 0.050 x 100 = 5.0 %

(d) **Rain Water Harvesting:**

Rain Water will be harvested through 4 nos. of recharging pits.

(e) **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).

7. **Green Belt Development:** Green belt will be developed over an area of 1,776.15 sqm which is 21.0 % of the plot area; by using the local species like Neem, Karang, Golden Champa, Bakul, Bela, Bottle Palm, Cheekoo, Guava etc.

8. **Solid Waste Management:** From the residential complex solid waste in form of food waste from kitchen and miscellaneous waste will be generated @ 0.45 kg/person/day, which will be about 279.0 kg/day. The generated solid waste from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate

coloured beans. Proper waste management practices will be adopted during the collection, storing and disposal of the generated solid waste.

Waste generated from Commercial people will be @ 0.15 kg/capita/day, which will be about 84.0 kg/day

The waste generated from floating population in residents will be @ 0.15 kg/day, which will be 12 kg/day. Solid waste from sweeping and Dry Garbage containing non-biodegradable wastes like polythene bags, metal, ceramic Waste, glass etc. shall be stored in separate garbage bin and send to approved recyclers. Around 47.8 kg/day of STP sludge will be generated.

Solid Waste from Residential Population - 279.0 kg/day
Solid Waste from Commercial Population - 84.0 kg/day
Solid Waste from Floating Population - 12.0 kg/day
STP Sludge - 47.8 kg/day
Total Solid Waste Generation - 422.8 kg/day
STP Capacity – 110 KLD

9. Total Estimated population is ` 1260.

10. The total estimated Project cost is ` 30 Crores and Environment Management Cost is ` 2.2 Lakhs.

11. The Environment Consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd. Bhubaneswar, Odisha** along with the proponent made a detailed presentation on the proposal before the Committee.

12. The SEAC in its meeting held on Dt: 04.06.2020 decided to take decision on the proposal after the proponent submits the certain information/ documents followed by site visit of sub-committee of SEAC.

13. The project proponent has furnished compliances as desired by the committee and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
1.	Land documents with kissam of land	Total Land Area of proposed project is 8458.00Sqm/91041Sqft. (2.090Acres) and the Kissam of land is Gharabadi. Detail Land documents with kissam of land are attached in **Annexure-1.**	complied
2.	Copy of RoR indicating owner and type of land to be submitted	Total Land Area of proposed project is 8458.00 Sqm/91041.15 Sqft. (2.090Acres) and the Kissam of land is Gharabadi. The copy of 7 RoR is attached in **Annexure-1.** One plot i.e. plot no. 294 is under Utkal Builders Ltd. Which is sister concern of Utkal realtor Private Ltd. We are submitting the GPA & Development agreement in favor of Utkal Realtor Private Ltd. In **Annexure-1** for your reference.	complied
3.	Detailed basement height and construction design are to be submitted since it is located in low lying areas.	As per architectural designing, we are developing 2 MLCPs (Multi level car parking) /Podium + Service + 16 storied residential apartments since it is located in low lying area. All the floors having RCC Column & beam structure of suitable dimension	complied

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		above Natural Ground In case of amenity building, the level of NH is approx. 3 mt. high from NGL. So, its parking floor seems as basement from NH. Detailed design of it is attached in **Annexure-2**.	
4.	Exact distance of the project from NH-5 is to be submitted.	The proposed building project site is adjacent to the National Highway-16 (previously NH-5). There is one existing service road along the NH. The project boundary is on service road with 2-3 meters of access road to our plot. The details of it are attached in **Annexure-3.**	complied
5.	Permission from Govt. or private owners for discharge of non-monsoon water to municipality drain.	The National Highway Authority of India is developing side drain along the service road. The monsoon rain water & non sewer waste water after treatment in Effluent Treatment Plant shall be discharged into this drain after obtaining permission from NHAI. Since the drain development work just commenced we are submitting a legal affidavit to comply with this query at the appropriate time. An affidavit is attached in **Annexure – 4.**	Approval for disposal of storm water is attached. Legal affidavit in regard to this query is not attached as mentioned by PP in Annexure-4.
6.	Parking area calculation in ECS with consideration of floating population.	As per BDA, the parking requirement for Residential housing is 30% & for commercial & club complex is 50%. Accordingly the parking space required for residential area is 6021.75 sqm/64818.12 sqft which is equivalent to 201 ECS and the parking space required for commercial shop area is 1588.10 sqm/ 17094.31 sqft which is equivalent to 53 ECS. So the total ECS is required is 254 ECS. Remaining 91.95 sqm/989.75 sqft space & 4 ECS for floating population like visitor to residential houses & visitor for commercial. Detail parking area calculation in ECS is attached in **Annexure-5.**	Complied.
7.	Detailed calculation of the percentage (5%) of usage of solar/ renewable energy.	The electricity installed capacity for this project is 1237.28KW, accordingly to adhere to the 5% (61.864 KW) norms of solar energy we have planned to install Photovoltaic cell Frame shape of 73.71 sqm/793sqft to be located on the terrace area, The solar power will be mainly used for open area lighting, common corridor lighting & corridor lighting. Total Energy saving is 5% which is generated from solar System. Detail Calculation is attached in **Annexure-6.**	Complied.
8.	Detailed traffic density study with traffic management and traffic decongestion plan shall be done off to ensure that the current level of service of the roads with in 0.5 km radius of the Project and the NH is maintained and improved	The traffic study has carried on14.09.2020 to 20.09.2020 and traffic density study report is vetted by IIT Bhubaneswar. Detail Traffic Density Study report along with IIT Bhubaneswar letter is attached in **Annexure - 7**	Complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	upon after the implementation of the Project. The study must address the cumulative impact of all developments and increase habitation for the next ten years.		
9.	Site is located in flood prone area. High Flood Level (HFL) data to be collected and submitted.	The nearest gauging station in the upstream is Naraj (IB). The HFL at Naraj is 27.60m which is recorded in 31-Aug-82, Flood data of Naraj (IB) is given in **Annexure -8**. The project site is in the downstream, but as per the flood vulnerability Map, the site is not located in the flood prone area. (Source - BMTPC)	Complied.
10.	Distance of the project site from NH-16 is 130 meter. Ownership of land area of 130 meter from the project site (document to be submitted) for discharge of treated water to drain.	The proposed building project site is adjacent to the National Highway-16 (previously NH-S). There is one existing service road along the NH. The project boundary is on service road with 2-3 meters of access road to our plot. The details of it are attached in **Annexure-3.** Treated non sewer waste water will be discharged to the National Highway (NH) side drain.	**Annexure-3** comprises google layout of project plots. Permission from the NHAI is to be submitted for discharge of treated water to drain.
11.	Status of approval of the building plan by the BDA along with copy of approval letter, if any to be submitted.	Bhubaneswar Municipal Corporation (BMC) has provisionally approved the Building plan vide letter no. 27719, dated 04.10.2019. BMC provisionally letter is attached in **Annexure -9.**	Complied.
12.	Sketch of the Public drain including the permission from the authority of the drain to take the additional load of discharge of the treated water of this Project.	Our above said proposed project has been vetted by drainage division BMC vide letter no. 90059, dated 14.12.2020 for discharge of excess storm water to the BMC drain.	Complied.
13.	Status of permission for drawal of ground water from Water Resources Department, Govt. of Odisha.	NOC has been granted by Regional Director Central Ground Water Authority vide application no.21-4/2492/OR/INF/2020, dated 18-05-2020 Application copy is attached in **Annexure - 10**.	Complied.
14.	This G+16 building has projected height of 59.9 meters. Permission/ NOC from Airport authority is needed. Status of permission of Airport Authority of India.	As per conditional approval obtained from BMC, the height of building is 63.65 mt. As per Guidelines for Colour coded Zoning Map (CCZM) from Airport Authority of India on dated 18.07.2017, Height Clearance is not required from AAI. Guideline is given in **Annexure- 11**. However, to be on safe site we have already submitted application on dated 04.03.2021 to AAI for the said permission after obtaining the survey report.	Complied.
15.	4 RWH pits is much less which shall be increased adequately. Design to be submitted.	Instead of traditional percolation pits, we are providing bore well of 200mm dia. with percolation allowed at the aquifer level. Where we are drawing water for residential	Complied.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		use.6 Nos. of 11.3 Cu.mtr. each Rainwater Percolation pits are proposed. Hence total in-total proposed volume of pit is 67 Cu.mtr. Detailed design calculations with section of percolation pit as per BDA and BMC norms provided in **Annexure-12.**	
16.	Location of 2 DG sets along with venting height shall be justified that it will not cause air and noise pollution to inhabitants there.	For required backup power, 2 nos. of DG Sets are proposed. The exhaust shall be provided as per pollution norms laid by CPCB. Since our DG Sets location are along the compound wall, we proposed the vent pipe along the building wall to highest point of the building & vent is 3 m in highest point. Detail proposal for DG Sets is attached in **Annexure- 13**.	Complied.
17.	Three tier greenbelt shall be developed on periphery with more number of plants. Min, max and average width of greenbelt be furnished.	We proposed to develop three tier hierarchal greenbelt along the periphery of the building and the width of the Green Belt is max. 3m and min.1.0m. Green Belt layout is given in **Annexure-14.**	Complied.
18.	Water balance during monsoon and non-monsoon period to be submitted.	Total Domestic and Flushing Water Requirement of the proposed project is 87.43 KLD and 49.57 KLD respectively. We have tried to maintain zero discharge, some of the treated water is re-used for flushing purpose, car washing purpose and gardening purpose (in non-monsoon period) and surplus treated water is discharged into BMC drain adjacent to site. Storm water collected during rain will be discharged into rainwater percolation pits. The details of Rainwater recharge pit are also we are attaching in Annexure- 12. The detailed Water Balance during Non-monsoon & monsoon season is given in **Annexure- 15**	Complied.

14. The SEAC in its meeting held on Dt: 28.06.2021 recommended the following:

A. Decision on grant of Environmental Clearance for the proposal shall be taken after the proponent furnish the following information / documents:

i) Approval for disposal of storm water is attached. Legal affidavit in regard to this query is not attached as mentioned by PP in Annexure-4.

ii) Permission from the NHAI is to be submitted for discharge of treated water to drain.

iii) An undertaking in form of legal affidavit indicating that the construction work has not been started.

B. Environmental Clearance can be considered after receipt of information / documents from the proponent as stated above. The Sub-Committee of SEAC will visit the site within 6 months from the date of issue of Environmental Clearance to verify the progress of the project as well as conditions stipulated in Environmental Clearance. However, either during the visit of the SEAC Sub-committee and/or at any time, if it is noticed that stipulated conditions on which EC is granted is not in place or found otherwise, steps will be taken for revocation of EC granted.

15. The project proponent has furnished compliances as desired by the committee and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
(i)	Approval for disposal of storm water is attached. Legal affidavit in regard to this query is not attached as mentioned by PP in Annexure-4.	Submitted the legal affidavit regarding disposal of storm water as **Annexure – 1.**	Complied
(ii)	Permission from the NHAI is to be submitted for discharge of treated water to drain.	We have got the letter from NHAI towards deposit of fees for issuance of NHAI NOC as **Annexure -2**. We will submit it shortly.	Permission from the NHAI need to be submitted for discharge of treated water to drain.
(iii)	An undertaking in form of legal affidavit indicating that the construction work has not been started.	Submitted the legal affidavit regarding construction work has not been started as **Annexure – 3.**	Complied

16. The SEAC in its meeting held on Dt: 13.09.2021 decided to take decision on the proposal after receipt of the following from the proponent:

    a) Permission from the NHAI need to be submitted for discharge of treated water to drain.

17. The project proponent has furnished document as desired by the committee and same has been verified

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 valid for a period of 7 years with stipulated conditions as per **Annexure-A.**

However, the Sub-Committee of SEAC will visit the site within 6 months from the date of issue of Environmental Clearance to verify the progress of the project as well as conditions stipulated in Environmental Clearance. However, either during the visit of the SEAC Sub-committee and/or at any time, if it is noticed that stipulated conditions on which EC is granted is not in place or found otherwise, steps will be taken for revocation of EC granted.

I<u>TEM NO. 02</u>

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF ’SIKSHA ‘O’ ANUSANDHAN DEEMED UNIVERSITY’’ FOR CONSTRUCTION AND EXPANSION OF EXISTING CLINICAL AREA FROM 15669.32 SQM. TO 49881.63 SQM. OF SUM ULTIMATE MEDICARE WITHIN THE PREMISES OF CAMPUS-II HAVING INSTITUTIONAL AREA - 99961.04 SQM. OVER AN AREA 10.560HA. ON PLOT NO.268, 2685, 2686, 2671, 2672, 2673, 2674 & 2675 KHATA NO.2239 AT MOUZA- GHATIKIA, KALINGA NAGAR, BHUBANESWAR, ODISHA OF SRI BIBEKANANDA PRADHAN (DEPUTY MANAGER) - EC

1. The proposal is for Environmental Clearance of 'Siksha 'O' Anusandhan Deemed University'' for construction and expansion of existing Clinical area from 15669.32 sqm. to 49881.63 sqm. of Sum Ultimate Medicare within the premises of campus-II having institutional area -99961.04 sqm. over an area 10.560Ha. on plot no.268, 2685, 2686, 2671, 2672, 2673, 2674 & 2675 Khata No.2239 at Mouza- Ghatikia, Kalinga Nagar, Bhubaneswar, Odisha of Sri Bibekananda Pradhan (Deputy Manager).
2. The project falls under category "B" or activity 8 (a)-Building and Construction projects under EIA Notification dated 14th September 2006 as amended from time to time.
3. This project is construction and expansion of existing Clinical area from 15669.32 sqm to 49881.63 sqm of Sum Ultimate Medicare" within the premises of Campus-II having Institutional Area- 99961.04 sqm (Proponent had obtained approval from SEIAA in 2013 for a built-up area of 50553.11 Sqm vide letter no. 8743/SEIAA Dated-19.12.2013), over plot no, Plot No.2687,2685,2686,2671,2672,2673,2674 & 2675 Khata No.2239 at Mouza-Ghatikia under Bhubaneswar Development Authority.
4. Proponent had obtained approval from SEIAA in 2013 for & CTO in 2019 for 350 Hospital Bed vide letter no upto-31.03.2024.
5. **Location and Connectivity** - The Project Site is located at - Mouza-Ghatikia. The Geographical coordinates of the project site is: Latitude – 20º 16′ 56.01" N to 20°17' 1.10"N & Longitude – 85°46'20.41"E to 85°46'27.18"E. The Project Site is well connected to a network of existing SUM Hospital road running all the way from in N & W direction and Khandagiri- Chandaka road at New, while the Ghatikia Main road serves in thr S direction. The hospital has two gates that serve the dual purpose of entry and exit. The same service road acts as connecting link between one part of the city with the other which is used by the patients and general public. Nearest Railway Station is Bhubaneswar Railway station is 7.43km. Nearest Airport is Biju Pattanaik Airport – 5.50km.
6. The site is coming under Bhubaneswar Development Authority. The total plot area is 105645.13 sqm / 26.096Ac. or 10.560 Ha. with total built-up area 149842.7 Sqm. Clinical built up area = 49881.63 Sqm. [Existing -15669.32 sqm + Proposed-34212.31sqm]. Institutional Built up area= Existing-99961.04 sqm. No. of clinical Beds=350
7. **The Building Details of The Project**:

   Total Plot Area: 105645.13 m^2/ 26.096Ac. or 10.560 Ha.
   Total Built –Up Area: 149842.7 Sqm
   Ground Coverage 29726.92 m2 (28.15% of the Plot Area)
   Maximum Height of Building = 21 mt
   Parking Area– 42672.45 m2 = (40 % Of total FAR Area
   Open parking – 21005.83 (19.89%)
   Internal Roads =12,468.36 m2 (11.81 % of Plot Area)
   Paved Area = 3,710.97 m2 (3.51 % of Plot Area)
   Green belt Area =24,298.38 m2 (23.01% of the Plot Area)
   Open space ,Other Services (Water tanker, STP, RWH, Waste Storage etc.) = 14396.29 (13.63 % of Plot Area)
8. **Water requirement**: During Operation phase the fresh water requirement is approx. 471 KLD (clinical area and institutional area), out of which total domestic water requirement for Clinical- 137.5 KLD, Hostel & Institutional is 333 KLD, and flushing water is 248 KLD. The potential water supply source for the project can be mainly classified as: Municipal Water Supply. /STP treated water which can be used for non-potable uses.The capacity of STP for

existing & Expansion Hospital block is 200 KL including 50 KL ETP provisioned. For Institutional area Hostel block STP capacity provided-825 KL.

9. **Waste water details**: Waste Water Generation From Clinical : 185 KLD , Treated Waste Water Recovered & to be reused - 128 KLD (Zero Discharge). Waste Water Generation From Institutional Area : 443 KLD , Treated Waste Water recover -355 KLD & to be reused - 321 KLD (34 KLD discharge to nearest Municipal Drain). Excess Waste Water discharge to nearest drain – 124 KLD (During Rainy Season)

10. **Power requirement**: The total power requirement for Clinical, Institutional and Hostel Blocks are approx. 1890.25 KWH . MRS received power supply at 33KV from TPCODL. In order to provide 24 x 7 power supply for the clinical building and common area of campus-II, it is proposed to provide 100% emergency power back up in clinical area Common area enclosures. Emergency power back Capacity (Clinical)-2x1500 KVA & 1X500 KVA. Emergency power back Capacity (Hostel and Institutional Area)-2x500 KVA & 1X600 KVA. Recommended stack height is =h+0.2*√KVA=28.7 M (Highest Building),Stack height provided = 30 m.

11. **Rain Water Harvesting**: Total Run Off from Storm Water 4028.2 m³/Hr, Total runoff to be harvested for 15 minutes i.e. 1007 cum so based on 1no. Harvesting pit volume 43 cum we required 25 nos. Rain water Harvesting Pits..

12. **Parking Requirement**: The requirement of parking area is provided as per BDA guidelines. A total area of 42672.45 sqm (40 % of total FAR Area as per ODA planning standards) is earmarked for post project scenario for parking vehicles, two wheelers and four wheelers. Parking areas for cycles are provided. Parking lots are properly demarcated for two wheelers and four wheelers. Total 1707 ECS has been provided.

13. **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).

14. **Green Belt Development**: Total green area measures 24298.3799 sqm (approx. 23 % of total plot area area).

15. **Solid Waste Management**: Total quantity of Municipal Solid Waste : (Existing And Expansion) = 2885.85 kg/day. Bio-degradable waste-=1815.4 kg/day.Non- bio degradable waste-=1070.45 kg/day. Hand Over to Authorized Agencies. Hospital/Biomedical waste = 525 kg/day. General Waste =393 kg/day. Biomedical waste = 132 kg/day. Segregation, Storage & Disposal as per Bio-medical Waste Management Rules 2016.

16. The estimated project cost is ` 1330 Crores and cost for EMP is 1332 lakhs.

17. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 22.09.2021. The SEAC decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by site visit of Sub-Committee of SEAC.

18. The project proponent has furnished document as desired by the committee and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Detailed land schedule with kissam of land in tabulated form along with supportive land documents of all	Detailed land schedule with kissam of land and land use pattern of all academic / institutional / clinical buildings / parking

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	academic/institutional/clinical buildings/parking space and physical features of the existing and proposed expansion showing the same in layout map including land use pattern.	space and physical features of the existing and proposed expansion is attached as **Annexure-1.**
(ii)	Comparative table showing existing and proposed project in terms of environment features / parameters and physical features / parameters including safety with 3D pictures including the distance between the buildings as against the norm.	A comparative table showing environment features, Parameters and Physical features are given in **Annexure-2**.
iii)	Separate STP and ETP units or brief write up for integrated setup.	There are Separate STP and ETP units. Brief write up STP & ETP is attached as **Annexure-3**.
iv)	Chemical analysis report on discharge of STP and ETP vis-à-vis norms and discharge of integrated setup of STP and ETP.	STP & ETP are separate. Chemical analysis report of STP & ETP is attached as **Annexure-4.**
(v)	Traffic study report from an institute of repute and decongestion plan at intersecting points of exit & entry with public road.	Traffic study report is attached as **Annexure-5**.
vi)	Provision for Incinerator to be made and if not, to justify, in absence of incinerator, how the organic wastes, infectious waste etc. would be deactivated to avoid further pollution and hazardousness.	Health facility generated waste and being disposed of as per Biomedical Waste Management Rules 2016. Details of collection, segregation, storage and handed over to authorized vendor are given in **Annexure-6**.
vii)	Monitoring plan and measures to be taken for safely disposal of Bio-medical wastes.	Described in point no. 6.
iii)	Layout of DG set location with respect to wind direction.	Annually average wind direction in Bhubaneswar is SOUTH. Annexure-7- layout plan showing location of DG Set as per wind direction.
ix)	Details of solar panel accommodated and utilised with power generation details vis-à-vis total power used per day.	Details of solar panel accommodated and utilized with power generation details are given in **Annexure-8** Total power consumption - 1890.25 KWH.
(x)	Details of 8 months zero discharge concept with water balance.	Details of 8 months zero discharge concept with water balance is attached as **Annexure-9.**
xi)	Building wise built-up area of existing and proposed expansion.	Details of Building wise built-up area of existing, conversion to clinical area and proposed newly construction area for expansion are given in **Annexure-10.**
xii)	Permission/NOC from BMC for discharge of treated water to existing drain for existing and additional load	Permission/NOC from BMC for discharge of treated water to existing drain for existing and additional load is attached as **Annexure-11.**
iii)	Layout and breakup percentage for green belt and landscape.	
v)	Fire-fighting and parking arrangements	Fire-fighting and parking arrangements for existing and expansion is attached

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
		as **Annexure-12.**
v)	Rain water harvesting and recharging details to be submitted.	Rain Water harvesting and recharging details are attached as **Annexure -13.**
vi)	Parking provision in terms of space and ECS (both for two wheelers and four wheelers) in reference to present beds, OPD and proposed expansion in consideration of patients visitors, doctors, and medical staff be submitted.	As described in **Annexure – 12.**
vii)	Permission/license of proposed HSD storage tank including details of the present arrangement.	Permission / license of proposed HSD storage tank given in **Annexure – 14**.

19. The Sub-Committee of SEAC visited the site on 30.10.2021 and discussed with the Proponent and the Consultant on issues raised during presentation and subsequent clarifications. The proponent explained the details with the Layout and physical position of extensions for which EC is sought. Following have been observed and advised for submission:

    i) The revised layout map to be submitted for the site with correct width of internal Road for firefighting services, parking place and its area, plantation place and its area, proposed parking place and area, proposed plantation place and its area.

    ii) Please give a comparative statement (in a tabular form) of total built up area after expansion , parking area(separately for two and four wheelers) as percentage of total built up area as per norms, present parking area as percentage of built area and proposed parking area as percentage of total built up area. In the similar line, statement in tabular form be provided for plantation.

    iii) Proponent needs to give in writing that all roads need to be maintained with clearances for movement of vehicles including the firefighting service road. Proponent to ascertain that no vehicles to be parked in passage area inside the hospital or on the road in front of the hospital.

    iv) The DG set stack height needs to be minimum 35 m considering the nearest building height and all safety factors and to change the direction of outlet to the wind ward side(North-East).

    v) Revenue maps with land kisam, area and allotment order of the areas proposed for extension to be submitted.

    vi) Greenery to be developed surrounding the hospital extension areas, as well as in the proposed playground area.

    vii) Details of Solar facilities available and to be created with calculation of energy and percentage of total power consumption needs to be provided.

    viii) SEAC may make a visit after one year of EC to ascertain and verify the implementation of agreed points by the proponent.

20. The project proponent has furnished document as advised by the Sub-Committee during site visit and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
(i)	The revised layout map to be submitted for the site with correct width of internal Road for fire fighting services, parking place and its area, plantation place and its area, proposed parking place and area, proposed plantation place and its area.	Revised layout map with internal Road for firefighting services, parking place with area, proposed parking place with area, plantation place with area for existing & proposed are annexed as a **Annexure-1**	Specific Condition to be stipulated in EC that PP to adhere to the revised and corrected layout submitted to maintain safety for firefighting activity when need arises.
(ii)	Please give a comparative statement(in a tabular form) of total built up area after expansion , parking area(separately for two and four wheelers) as percentage of total built up area as per norms, present parking area as percentage of built area and proposed parking area as percentage of total built up area. In the similar line, statement in tabular form be provided for plantation.	A comparative table showing environment features, Parameters and Physical features are given in **Annexure-2 .**	-do -
(iii)	Proponent needs to give in writing that all roads need to be maintained with clearances for movement of vehicles including the firefighting service road. Proponent to ascertain that no vehicles to be parked in passage area inside the hospital or on the road in front of the hospital.	NOTED We will take care that there is no traffic problem in front of the hospital Building.	Specific Condition to be stipulated in EC.
(iv)	The DG set stack height needs to be minimum 35 m considering the nearest building height and all safety factors and to change the direction of outlet to the wind ward side (North-East).	As per the DGCA norms Campus-2 comes under the zone of Flight Funnel and according to this norm the max height of the DG stack cannot be more than 31 mtr. All buildings situated in campus-2 their max height is 26 mtr so we have kept the stack height of DG at 31 mtr following DGCA rules. As per SEAC committee suggestion on day of visit to our site we have already changed the direction of DG stack smoke outlet to windward direction.	Specific Condition to be stipulated in EC that building heights to be restricted after the proposed expansion due to constraints in increase of stake heights.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
(v)	Revenue maps with land kisam, area and allotment order of the areas proposed for extension to be submitted.	Detailed land schedule with. kissam of land and land use pattern of all academic/institutional/clinical buildings/parking space and physical features of the existing and proposed expansion is attached as **Annexure-3**	Specific Condition to be stipulated in EC that all land's kisam, for proposed constructions, needs to be essentially converted to "gharabari"
(vi)	Greenery to be developed surrounding the hospital extension areas, as well as in the proposed playground area.	We provide Total green area measures 24298.3799 sqm (approx. 23 % (20 % plantation and 3% lawn area) of total plot area area).	Specific Condition to be stipulated in EC that parking, plantation and solar facilities to be implemented as proposed at appropriate time.
(vii)	Details of Solar facilities available and to be created with calculation of energy and percentage of total power consumption needs to be provided.	Details of solar panel accommodated and utilized with power generation details are given in **Annexure-4** Total power consumption 1890.25 KWH.	Specific Condition to be stipulated in EC that parking, plantation and solar facilities to be implemented as proposed at appropriate time.
(viii)	SEAC may make a visit after one year of EC to ascertain and verify the implementation of agreed points by the proponent.	Noted	Specific Condition to be stipulated in EC.

21. The proposal was put up in the 57th meeting of SEIAA held on 05.08.2021. It was decided by the Authority that “The PP may furnished a clear picture designating particular buildings or portions of buildings which comprise the educational area; and thus indicate the rest of the building existing now as clinical complex. The history of construction of both these categories of building be furnished so as to ascertain which area the buildings constructed after the year 2006. The proposed new buildings of the project proposal now submitted may similarly be designated as part of educational or clinical complex”.

22. The proposal was put up in the 58th meeting of SEIAA held on 25.08.2021. It was decided by the Authority that “The PP has not submitted the required information as per our letter no.

2075 dated 06.085.2021. The proposal may be transmitted to SEAC for appraisal. A copy of our letter may also be sent to SEAC for their information".

23. The project proponent has furnished the compliance to the letter of SEIAA, Odisha which was found in the hard copy file of SEIAA, Odisha.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance valid for a period of 7 years with following specific conditions in addition to the conditions as per **Annexure-B.**

i) The Project Proponent shall adhere to the revised and corrected layout as submitted to maintain safety for fire-fighting activity when need arises.

ii) The Project Proponent shall maintain all roads with clearances for movement of vehicles including the fire-fighting service road. Proponent shall also ascertain that no vehicles to be parked in passage area inside the hospital or on the road in front of the hospital.

iii) Building heights to be restricted after the proposed expansion due to constraints in increase of stack heights of DG sets as per restriction imposed by Airport Authority.

iv) Kisam of the part of the land is "Patita". All the land kisam shall be converted to "Gharabari" before going for construction activity for the project.

v) Greenery to be developed surrounding the hospital extension areas, as well as in the proposed playground area.

vi) Parking, plantation and solar facilities to be implemented as proposed at appropriate time.

vii) Permission from BMC/ PH Engg Department is required to take additional load of treated waste water from STP (excess) after the expansion.

viii) The proponent shall operate STP and ETP separately as standalone system and both shall not be inter-connected.

ix) The proponent shall explore the provision of Incinerator of adequate capacity and design must be there to handle infectious waste, organic waste and health hazardous wastes in a Medical college and hospital of this magnitude.

x) Traffic study report concludes in findings that near Sum Ultimate, LOS (level of service)is "E" means poor as per IRC. So, the Decongestion plan as given by the proponent shall be implemented for compliance with a definite time frame commensurating with expansion.

xi) The Sub-Committee of SEAC will visit the site within 1 year from the date of issue of Environmental Clearance to verify the progress of the project as well as conditions stipulated in Environmental Clearance. However, either during the visit of the SEAC Sub-committee and/or at any time, if it is noticed that stipulated conditions on which EC is granted is not in place or found otherwise, steps will be taken for revocation of EC granted.

ITEM NO. 03

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF SIKSHA O ANUSANDHAN UNIVERSITY FOR CONSTRUCTION AND EXPANSION OF EXISTING CLINICAL AREA FROM 13543 SQM. TO 69911SQM. OF "IMS & SUM HOSPITAL" WITHIN THE PREMISES OF CAMPUS- III HAVING INSTITUTIONAL AREA - 78855.7 SQM. OVER AN AREA 7.98HA. ON PLOT NO. F1,F2,F3,C1,C2,C3.C4 & C5 AT MOUZA-GHATIKIA, BHUBANESWAR OF SRI BIBEKANANDA PRADHAN (DEPUTY MANAGER) – EC

1. The proposal is for Environmental Clearance of Siksha O Anusandhan University for construction and expansion of existing Clinical area from 13543 sqm. to 69911sqm. of "IMS & SUM HOSPITAL" within the premises of campus- III having institutional area - 78855.7 sqm. over an area 7.98Ha. on Plot No. F1,F2,F3,C1,C2,C3.C4 & C5 at Mouza-Ghatikia, Bhubaneswar of Sri Bibekananda Pradhan (Deputy Manager).

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

3. This project is construction and expansion of existing Clinical area from 13543 sqm to 69911sqm of "IMS & SUM HOSPITAL" within the premises of Campus- III having Institutional Area-78855.7 sqm, over Plot No. F1, F2, F3, C1, C2, C3.C4 & C5 at Mouza-Ghatikia under Bhubaneswar Development Authority.

4. The project proponent had applied a proposal to SEIAA, Odisha on dated 05.07.2013 for construction of Siksha O Anusandhan University, IMS & SUM Hospital (Campus-I) bearing, khata no-Nil, plot no. C-2, C-3, C-4, C-5, C-1 & F-1 at village-Ghatikia, BBSR, Khordha of Mis Sikhya O Anusandhan University at Ghatikia, BBSR with total built-up area 74,219.189 sq.m. [68,012.05 sq.m of Built-up area was constructed before EIA notification 2006 and proposed built-up area after EIA notification 2006 is 10,072.52 sqm.]

5. The SEAC observed that the proposed built-up area after EIA notification, 14.09. 2006 is less than 20,000m^2. Hence, EC was not required at that time. The project proponent was communicated the same vide letter no. 8741/SEIAA, dated 19.12.2013 by SEIAA, Odisha.

6. Proponent had obtained approval from SEIAA in 2013 for a built-up area of 50553.11 Sqm (vide letter no. 8743/SEIAA Dated-19.12.2013) & CTO in 2019 for 350 HOSPITAL BED vide letter no 7441-IND-I-CON-6685 With Concent Order No.-2883 on dated 23.07.2019 valid upto-31.03.2024.

7. **Location and Connectivity** - The Project Site is located at - Mouza-Ghatikia. The Geographical coordinates of the project site is: Latitude – 20°16'54.09"N to 20°17'2.78"N & Longitude – 85°45'57.44"E to 85°46'13.80"E. The Project Site is well connected to a network of existing SUM Hospital road running all the way from in N & E direction and Khandagiri-Chandaka road at N, while the Ghatikia Main road serves in the S direction. The hospital has two gates that serve the dual purpose of entry and exit. The same service road acts as connecting link between one part of the city with the other which is used by the patients and general public. Nearest Railway Station is Bhubaneswar Railway station is 7.65km. Nearest Airport is Biju Pattanaik Airport – 6.1km.

8. The Building Details of The Project:

   Total Plot Area: 79808.72 m2/ 19.72116 Ac. Or 7.98 Ha. + Additional area for green belt 2.16 Ac

   Total proposed Built –Up Area: 148766 m2 (Existing Institutional area 126688 m2(proposed for convert teaching area 47833 m2 to clinical area) +

Existing Clinical area 13543 m2+ Proposed newly Construction of Clinical area 8535.1m2)

Ground Coverage 27879.2 m2 (34.9 % of the Plot Area)

Maximum Height of Building = 21 mt

Parking Area–40409 sqm (40 % of total FAR Area For Clinical as per ODA planning standards)

Open parking –31483.0 (39.45 %)

Internal Roads =9896.3 m2 (12.40 % of Plot Area)

Green belt Area =10550.7 m2 (13.22% of the Plot Area)

9. **Water requirement**:. Total Water Requirement For Clinical -718 KLD [493 KLD (Domestic) + 225 KLD (Flushing) Total Water Requirement For Institutional-175 KLD [107 KLD (Domestic) + 68 KLD (Flushing) Source: PHD water supply. Waste Water Generation From Clinical : 569 KLD + 32 KLD(From ETP) , Treated Waste Water Recovered -541 KLD & to be reused-405 KLD. Waste Water Generation From Institutional Area : 146.3 KLD , Treated Waste Water recover -132 KLD & to be reused-Zero Discharge. Capacity of Sewerage Treatment Plant for Clinical and Institutional Area - 600 expand to 1500 KLD (MBBR Type). Capacity of Effluent Treatment Plant -50 KL (MBBR Type)

10. **Power requirement**: The total power requirement for Clinical, Institutional and Hostel Blocks are approx. 1425 KWH. MRS received power supply at 33KV from TPCODL. In order to provide 24 x 7 power supply for the clinical building and common area of campus-II, it is proposed to provide 100% emergency power back up in clinical area Common area enclosures. Emergency power back Capacity (Clinical)-2x1000 KVA. Emergency power back Capacity (Hostel and Institutional Area)-1x1000 KVA. Recommended stack height is =h+0.2*√KVA=28.7 M (Highest Building),Stack height provided = 30 m

11. **Rain Water Harvesting**: Total Runoff from Storm Water from Site is 1007 m^3 so based on 1no. Harvesting pit volume 43 cum required 61 nos. Rain water Harvesting Pits.

12. **Parking Requirement**: The requirement of parking area is provided as per BDA guidelines. A total area of 40409sqm (40 % of total FAR Area as per ODA planning standards) is earmarked for post project scenario for parking vehicles, two wheelers and four wheelers. Parking areas for cycles are provided. Parking lots are properly demarcated for two wheelers and four wheelers. Total 1606 ECS has been provided.

13. Fire fighting Installations: Hospital block- As per clause 3.1.4 of NBC-2016, the said Hospital is classified under group C; Institutional Buildings. Hostel block-As per clause 3.1.4 of NBC-2016, the said Hostel is classified under group A; in subdivision A-3 dormitories.

14. **Green Belt Development**: Total green area measures 10550.7 sqm (approx. 13.22 % of total plot area area).

15. **Solid Waste Management**: During the operation phase, waste will comprise domestic as well as Biomedical waste. The solid waste generated from the project shall be mainly MSW (Municipal solid waste) approx. 2885kg/day, Biodegradable solid waste = 1815.4 kg/day, Non -Biodegradable solid waste =1070.45 kg/day, Biomedical waste is 525 kg/day

16. The estimated project cost is ` 1505 Crores and cost for EMP is ` 1332 lakhs.

17. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on 22.09.2021. The SEAC decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by site visit of Sub-Committee of SEAC.

18. The project proponent has furnished document as desired by the committee and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
(i)	Detailed land schedule with kissam of land in tabulated form along with supportive land documents of all academic / institutional / clinical buildings / parking space and physical features of the existing and proposed expansion showing the same in layout map including land use pattern.	Detailed land schedule with. kissam of land and land use pattern of all academic/institutional/clinical buildings/parking space and physical features of the existing and proposed expansion is attached as **Annexure-1**
(ii)	Comparative table showing existing and proposed project in terms of environment features / parameters and physical features / parameters including safety with 3D pictures including the distance between the buildings as against the norm.	A comparative table showing environment features, Parameters and Physical features are given in **Annexure-2**.
iii)	Separate STP and ETP units or brief write up for integrated setup.	There are Separate STP and ETP units. Brief write up STP & ETP is attached as **Annexure-3**.
v)	Chemical analysis report on discharge of STP and ETP vis-à-vis norms and discharge of integrated setup of STP and ETP.	STP & ETP are separate. Chemical analysis report of STP & ETP are attached as **Annexure-4.**
v)	Traffic study report from an institute of repute and decongestion plan at intersecting points of exit & entry with public road.	Traffic study report is attached as **Annexure-5.**
vi)	Provision for Incinerator to be made and if not, to justify, in absence of incinerator, how the organic wastes, infectious waste etc. would be deactivated to avoid further pollution and hazardousness.	Health facility generated waste and being disposed of as per Biomedical Waste Management Rules 2016.
vii)	Monitoring plan and measures to be taken for safe disposal of Bio-medical wastes.	Described in point no. 6.
iii)	Layout of DG set location with respect to wind direction.	Annually average wind direction in Bhubaneswar is SOUTH. **Annexure-7- layout plan showing location of DG Set as per wind direction.**
x)	Details of solar panel accommodated and utilised with power generation details vis-à-vis total power used per day.	Details of solar panel accommodated and utilized with power generation details are given in **Annexure-8**. Total power consumption -1425 KWH.
x)	Details of 8 months zero discharge concept with water balance.	Details of 8 months zero discharge concept with water balance is attached as **Annexure-9.**
xi)	Building wise built-up area and proposed expansion.	Details of Building wise built-up area of existing, conversion to clinical area and proposed newly construction area for expansion are given in **Annexure-10.**
xii)	Permission/NOC from BMC for discharge	Permission/NOC from BMC for

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent
	of treated water to existing drain for existing and additional load.	discharge of treated water to existing drain for existing and additional load is attached as **Annexure-11.**
iii)	xiii. Layout and breakup percentage for green belt and landscape.	Fire-fighting and parking arrangements for existing and expansion is attached as **Annexure-12.**
v)	Rain water harvesting and recharging details to be submitted.	Rain water harvesting and recharging details are attached as **Annexure-13.**
v)	Fire-fighting and parking arrangements	
vi)	Parking provision in terms of space and ECS (both for two wheelers and four wheelers) in reference to present beds, OPD and proposed expansion in consideration of patients visitors, doctors, and medical staff be submitted.	As described in **Annexure-13.**
vii)	Permission/license of proposed HSD storage tank including details of the present arrangement.	Permission/license of proposed HSD storage tank given in **Annexure-14.**

19. The Sub-Committee of SEAC visited the site on 30.10.2021 and discussed with the Proponent and the Consultant on issues raised during presentation and subsequent clarifications. The proponent explained the details with the Layout and physical position of extensions for which EC is sought. Following have been observed and advised for submission:

i) The revised layout map to be submitted for the site with correct width of internal Road for firefighting services, parking place and its area, plantation place and its area, proposed parking place and area, proposed plantation place and its area.

ii) Please give a comparative statement(in a tabular form) of total built up area after expansion , parking area(separately for two and four wheelers) as percentage of total built up area as per norms, present parking area as percentage of built area and proposed parking area as percentage of total buli up area. In the similar line, statement in tabular form be provided for plantation.

iii) Proponent needs to give in writing that all roads need to be maintained with clearances for movement of vehicles including the firefighting service road. This needs to be done immediately.

iv) The proponent has been advised to maintain proper stack height (needs to be minimum 30 m or higher than the height of the highest building nearby) or explore the possibility of relocating the DG set to proper position for safety of the hospital as well as for the nearby inhabitants.

v) Revenue maps with land kisam, area and allotment order of the areas proposed for extension including the land to be developed for greenery to be submitted.

vi) Revenue map with land kisam, area and allotment order of the land allotted (for relocating the playground by SOA and 2.67 acres adjacent to the 200ft road in front of SUM hospital) needs to be submitted.

vii) Greenery to be developed surrounding the parking field (old playground), proposed multi-storeyed parking and new playground proposed.

viii) Proponent is also advised to ensure through an undertaking that no vehicles will be allowed to park on the roads in front of the hospital areas as it is creating traffic congestion. Alternately, they may try to handover the responsibility to BMC and till such period it will be proponent responsibility to maintain safety around hospital areas.

ix) Details of Solar facilities available and to be created with calculation of energy and percentage of total power consumption needs to be provided.

x) A fresh traffic density study be carried out by an institute of repute (considering the proposed expansion and relocations) may be submitted.

xi) SEAC may make a visit after one year of EC to ascertain and verify the implementation of agreed points by the proponent.

20. The project proponent has furnished document as advised by the Sub-Committee of SEAC and same has been verified as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i)	The revised layout map to be submitted for the site with correct width of internal Road for firefighting services, parking place and its area, plantation place and its area, proposed parking place and area, proposed plantation place and its area.	Detailed land schedule with. kissam of land and land use pattern of all academic/institutional/clinical buildings/parking space and physical features of the existing and proposed expansion is attached as **Annexure-1**	Specific Condition to be stipulated in EC that PP to adhere to the revised and corrected layout submitted to maintain safety for firefighting activity when need arises
(ii)	Please give a comparative statement(in a tabular form) of total built up area after expansion , parking area(separately for two and four wheelers) as percentage of total built up area as per norms, present	A comparative table showing environment features, Parameters and Physical features are given in **Annexure-2 .**	-do-

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	parking area as percentage of built area and proposed parking area as percentage of total buli up area. In the similar line, statement in tabular form be provided for plantation.		
iii)	Proponent needs to give in writing that all roads need to be maintained with clearances for movement of vehicles including the firefighting service road. This needs to be done immediately.	NOTED We will take care that there is no traffic problem in front of the hospital Building.	Specific Condition to be stipulated in EC.
iv)	The proponent has been advised to maintain proper stack height (needs to be minimum 30 m or higher than the height of the highest building nearby) or explore the possibility of relocating the DG set to proper position for safety of the hospital as well as for the nearby inhabitants.	As Sum Hospital-Campus-3 is a running hospital so, we have got permission to operate DG from Fire and electrical department. We have considered DG as a Backup power source only which we operate taking all necessary safety measures as per guidelines of Fire department (Govt.of Odisha) and also BDA. Our main source of Supply is transformer. As per SEAC committee suggestion we have already added sprinkler in DG and transformer area for extra safety precautions. We have kept DG at the center by keeping in view of less voltage drop. As per SEAC committee suggestion regarding the increase in DG Stack height we have already completed the work i.e we have already increased the DG Stack height.	Specific Condition to be stipulated in EC.
(v)	Revenue maps with land kisam, area and allotment order	Revenue maps with land kisam, area and allotment order of the areas proposed	Specific Condition to be stipulated in EC that all land's kisam, for proposed

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	of the areas proposed for extension including the land to be developed for greenery to be submitted.	for extension including the land to be developed for greenery are attached as **Annexure-3**.	constructions, needs to be essentially converted to "gharabari"
vi)	Revenue map with land kisam, area and allotment order of the land allotted (for relocating the playground by SOA and 2.67 acres adjacent to the 200ft road in front of SUM hospital) needs to be submitted.	Attached As **Annexure-3**	Specific Condition to be stipulated in EC that all land's kisam, for proposed constructions, needs to be essentially converted to "gharabari"
vii)	Greenery to be developed surrounding the parking field (old playground), proposed multi-storeyed parking and new playground proposed.	Details of Greenery to be developed surrounding the parking field (old playground), proposed multi-storied parking are given in **Annexure-1.**	Specific Condition to be stipulated in EC.
viii)	Proponent is also advised to ensure through an undertaking that no vehicles will be allowed to park on the roads in front of the hospital areas as it is creating traffic congestion. Alternately, they may try to handover the responsibility to BMC and till such period it will be proponent responsibility to maintain safety around hospital areas.	We take necessary action for controlling the traffic conjunction out site of the hospital premises.	Specific Condition to be stipulated in EC that parking, plantation and solar facilities to be implemented as proposed at appropriate time.
ix)	Details of Solar facilities available	Details of solar panel accommodated and utilized	Specific Condition to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	and to be created with calculation of energy and percentage of total power consumption needs to be provided.	with power generation details are given in **Annexure-4** Total power consumption - 1425 KWH.	
(x)	A fresh traffic density study be carried out by an institute of repute (considering the proposed expansion and relocations) may be submitted.	Traffic study report is attached as **Annexure-5**	Specific Condition to be stipulated in EC that traffic study provided considering the proposed expansion to be validated by an institute of repute. Also to take the mitigation measures referring to the recommendations of traffic study as well as agreeing to the sub-committee suggestions (clearances in all internal roads, handing over to BMC the front parking area in future or managed by PP in a safe manner, remove parking from the front road etc.), to avoid congestions.
xi)	SEAC may make a visit after one year of EC to ascertain and verify the implementation of agreed points by the proponent.	NOTED	Specific Condition to be stipulated in EC.

21. The proposal was put up in the 57th meeting of SEIAA held on 05.08.2021. It was decided by the Authority that “The PP may furnished a clear picture designating particular buildings or portions of buildings which comprise the educational area; and thus indicate the rest of the building existing now as clinical complex. The history of construction of both these categories of building be furnished so as to ascertain which area the buildings constructed after the year 2006. The proposed new buildings of the project proposal now submitted may similarly be designated as part of educational or clinical complex”.

22. The proposal was put up in the 58th meeting of SEIAA held on 25.08.2021. It was decided by the Authority that “The PP has not submitted the required information as per our letter no. 2075 dated 06.085.2021. The proposal may be transmitted to SEAC for appraisal. A copy of our letter may also be sent to SEAC for their information”.

23. The project proponent has furnished the compliance to the letter of SEIAA, Odisha which was found in the hard copy file of SEIAA, Odisha.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** on behalf of the

project proponent, the SEAC recommended for grant of Environmental Clearance valid for a period of 7 years with following specific conditions in addition to the conditions as per **Annexure-C.**

i) The Project Proponent shall adhere to the revised and corrected layout submitted to maintain safety for fire-fighting activity when need arises.

ii) The Project Proponent shall maintain all roads with clearances for movement of vehicles including the fire fighting service road. Proponent shall also ascertain that no vehicles to be parked in passage area inside the hospital or on the road in front of the hospital.

iii) Building heights to be restricted after the proposed expansion due to constraints in increase of stack heights of DG sets as per restriction imposed by Airport Authority.

iv) Kisam of the part of the land is "Patita". All the land kisam shall be converted to "Gharabari" before going for construction activity for the project.

v) Greenery to be developed surrounding the parking field (old playground), proposed multi-storeyed parking and new playground proposed.

vi) Parking, plantation and solar facilities to be implemented as proposed at appropriate time.

vii) Proponent is also advised to ensure through an undertaking that no vehicles will be allowed to park on the roads in front of the hospital areas as it is creating traffic congestion. Alternately, they may try to handover the responsibility to BMC and till such period it will be proponent responsibility to maintain safety around hospital areas.

viii) The proponent shall take the mitigation measures referring to the recommendations of traffic study as well as agreeing to the sub-committee suggestions (clearances in all internal roads, handing over to BMC the front parking area in future or managed by PP in a safe manner, remove parking from the front road etc.), to avoid congestions.

ix) Permission from BMC/ PH Engg Department is required to take additional load of treated waste water from STP (excess) after the expansion.

x) The proponent shall operate STP and ETP separately as standalone system and both shall not be inter-connected.

xi) The proponent shall explore the provision of Incinerator of adequate capacity and design must be there to handle infectious waste, organic waste and health hazardous wastes in a Medical college and hospital of this magnitude.

xii) **The Sub-Committee of SEAC will visit the site within 1 year from the date of issue of Environmental Clearance to verify the progress of the project as well as conditions stipulated in Environmental Clearance. However, either during the visit of the SEAC Sub-committee and/or at any time, if it is noticed that stipulated conditions on which EC is granted is not in place or found otherwise, steps will be taken for revocation of EC granted.**

ITEM NO. 04

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S KHUSI REALCON PVT. LTD. FOR PROPOSED RESIDENTIAL / COMMERCIAL APARTMENTS TOWER-1 (2B+G+9), TOWER-2 (2B+G+22) & TOWER-3 (2B+G+23) OVER AN AREA 2.44 ACRES AT MOUZA-PAHALA, BHUBANESWAR, DIST- KHURDA, ODISHA OF SRI VIKASH KUMAR JAIN (PROJECT HEAD) WITH TOTAL BUILT UP AREA - 63215.5 SQM - EC

1. The proposal is for Environmental Clearance of M/s. Khusi Realcon Pvt. Ltd. for Proposed Residential/ Commercial Apartments Tower-1 (2B+G+9), Tower-2 (2B+G+22) & Tower-3 (2B+G+23) over an area 2.44 acres at Mouza- Pahala, Bhubaneswar, Dist- Khurda, Odisha of Sri Vikash Kumar Jain (Project Head) with total built up area - 63215.5sqm.

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

3. M/s Khusi Realcon Pvt. Ltd. proposes to construct Residential / Commercial Apartments Tower-1(2B+G+9), Tower-2 (2B+G+22) & Tower-3(2B+G+23). The project is in Plot No.:- 210, 199,208/1244, 126, 125/1242,123/1243/1844, 124,211/1746, 211, and Khata No.:- 352/1205, 352/1206, 56/98,352/1226, 56/102, 352/122 and Kissam – Gharabari of Mouza-Pahal, Bhubaneswar, Dist- Khurda, Odisha.

4. **Location and Connectivity** - The Project Site is a part of the Survey of India Toposheet No. 73H/15 & 73H/16. The proposed site is located at Mouza - Pahala, Tahashil -Bhubaneswar, Dist - Khurda, Odisha. The Geographical co-ordinates of the project site is: Latitude –20^0 20' 2.27" N & Longitude - 85^0 52' 57.78" E. The project site is well connected with National Highway NH-16 at a distance of approx 0.2 Km in East direction. The nearest railway station is Vani Vihar Railway station at a distance of approx 6.8 Km in South-West direction & Bhubaneswar Railway Station at a distance 10.3 Km in South-west direction. The nearest airport is Biju Patnaik International Airport at a distance of approx. 13.7 Km in South-west direction from project site.

5. The site is coming under Bhubaneswar Development Authority. The project comprises of Tower 1 2B+G+9, Tower 2 2B+G+22, Tower 3 2B+G+23.

6. The total plot area is 9877.92 Sqmt with total built-up area 63,215.5 sqm Sq.mt.

7. The Building Details of The Project:

Particular	Proposed
Project Name	Khushi Realcon Pvt. Ltd.
Plot Area	9877.92 Sqm
Ground Coverage	3225.0 sqm (32.65 %)
FAR (Floor Area Ratio)	4.52
Built up Area	63,215.5 sqm
Maximum Height	78.85 m
Total Parking Area	13,847.8 sqm
Green Belt Area	2181.25 sqm (22.08%)
Maximum No. of Floor	Tower 1 2B+G+9, Tower 2 2B+G+22, Tower 3 2B+G+23

Power/Electricity Requirement & Sources	Total - 1543 KW Solar – 82.6 KW CESU – 1460.4 KW
No. of DG sets	3x500 KVA
Water requirement	156.0 KLD (Fresh)
Sewage Treatment Plant	STP Capacity - 250 KLD
Estimated Population-Residential, Commercial, Floating/visitors	1970 nos.

8. **Water requirement**: The total water requirement for the project will be approx.235 KLD, out of which domestic water demand is 148.5 KLD and commercial is 7.5 KLD. The fresh water requirement will be 156 KLD. Fresh water will be extracted from ground water through borewell.

9. **Waste water details**: The project will generate approx. 200 KLD (sewage load) of wastewater. The wastewater will be treated in an onsite STP of 250 KLD capacity. Out of which 190.0 m3/day will be recycled within the project for flushing (79.0 m3/day), landscaping (8.7 m3/day), dust suppression (3.3 m3/day) and 99.0 m3/day will become surplus which will be discharged to drain.

10. **Power requirement**: The daily power requirement for the proposed complex is preliminarily assessed as 1543 KW (Solar System- 58 KW & CESU – 1485 KW). In order to meet emergency power requirements during the grid failure, there is provision of 3 nos. of DG sets having 500 KVA capacities for power back up in the Residential/Commercial Building Project. Total Energy saving from renewable energy = (72.5+10.1) KW = 82.6 KW i.e 5.3 % is contributed from solar energy.

11. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 11 recharge pits from the plot area.

12. **Parking Requirement**: Total parking area required 13847.8 m^2 Sq.mt./497 ECS and basement parking area will be provided.

13. 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).

14. **Green Belt Development**: Out of the total area, green belt will be developed over an area of 2181.25 sqm (22.08% of the plot area).

15. **Solid Waste Management**: From the residential complex solid waste inform of food wastes from kitchen and miscellaneous wastes will be generated @ 0.45 kg/person/day, which will be about 729.0 kg/day. The generated solid wastes from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate-coloured bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid wastes and construction and demolition wastes. Around 100 kg/day of STP sludge will be generated.

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residents	1620 @ 0.45 kg/day	729.0

2.	Commercial	50 @ 0.15 kg/day	7.5
3.	Club	100 @ 0.15 kg/day	15.0
4.	Floating Population	200 @ 0.15 kg/day	30.0
5.	STP sludge		100.0
Total Solid Waste Generated			**881.5 kg/day**

16. The total population of project will be 1970 persons.

17. The estimated project cost is ` 95 Crores and cost for EMP is 2.17 crores.

18. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on **10.08.2021**.

19. The SEAC in its meeting held on dated **10.08.2021** decided to take decision on the proposal after receipt of certain information / documents from the proponent followed by visit of the Sub-Committee of SEAC to the site.

20. The project proponent has furnished compliance as desired by SEAC and same has been verified by the SEAC on **05.10.2021** as follows:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
(i)	Detailed land schedule with kissam of land in tabulated form. Whether land kissam has been converted to "Gharabari", if so, detailed document to be submitted.	Total Land Area of proposed project is 9,877.92 Sqm/106325.04 Sqft. (2.44 Acres) and the Kissam of land is Gharabadi. Detail Land documents with kissam of land are attached in **Annexure-1.**	-------
(ii)	Layout of drainage system and exact distance of project site to nearest drain and outfall of drain.	Layout plan showing drainage system is attached in **Annexure-2.** The nearest drain is Municipal Drain which is approx. 50m from the project site. The Municipal Drain Photo is attached in **Anenxure-3.**	Needs verification during site visit
(iii)	Status of NOC from BMC/ appropriate authority for the above drain for sewage disposal.	Drainage Plan of the proposed building has been approved by Bhubaneswar Municipal Corporation (BMC) vide letter no. 66690, dated 19.08.2021. BMC letter is attached in **Annexure-4.**	-------
(iv)	Proposal to increase in usage of treated waste water in premises and thereby reducing quantity of discharge to drain. Revised water balance to be submitted.	Total Domestic and Flushing Water Requirement of the proposed project are 156.0 KLD and 79.0 KLD respectively. The treated water is re-used for flushing purpose, car washing purpose and gardening	-------

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		purpose (in non-monsoon period) and surplus treated water is discharged into BMC drain adjacent to site. The detailed Water Balance during Non-monsoon & monsoon season is given in **Annexure-5.**	
(v)	Surface runoff management plan with details of surface water to be used in the project.	Instead of traditional percolation pits, we are providing bore well of 200mm dia. With percolation allowed at the aquifer level. Where we are drawing water for residential use. 06 Nos. of 16.24 Cu.mtr. each Rainwater Percolation pits are proposed. Hence total proposed volume of pit is 91.0 Cu.mtr. Detailed design calculations with section of percolation pit as per BDA and BMC norms provided in **Annexure-6.**	-------
(vi)	Percentage of Rain water Harvesting /recharging vis-à-vis fresh water consumption according to norms of CGWA be submitted.	We have recharge almost 91 cum/day water through 06 nos. of recharge pits to ground which is equivalent to 43% of total fresh water withdrawal.	-------
vii)	Details of DG sets to be installed at the suitable places after due consideration of pre-dominant wind direction to avoid air pollution from entering the dwelling house of the colony. DG set location w.r.t wind direction, stack height with layout / installation and drawing of the stack / exhaust pipe be submitted, considering cumulative capacity(s) of all DG sets and height of the tallest tower.	For required backup power, 2 nos. of DG Sets are proposed. The exhaust shall be provided as per pollution norms laid by CPCB. Since our DG Sets location are along the compound wall, we proposed the vent pipe along the building wall to highest point of the building & vent is 4.5 m in highest point. $H = 78.85 + 0.2\sqrt{500}$ $= 78.85 + 0.2 \times 22.36$ $= 78.85 + 4.5$ $= 83.35\ m \approx 83\ m$ Height of the DG Set stack is 83m. Layout drawing of DG Sets is attached in **Annexure-7.**	-------
viii)	Adequate parking in terms of ECS for dwelling units, floating population &	As per BDA, the parking requirement for Residential housing is 30%. Accordingly	Needs to be ascertained during site visit with drawings and plan

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	visitors with locations including compatibility with the proposed parking space provided needs to be submitted in tabular form.	the parking space required for residential area is 13670.1 sqm which is equivalent to 497 ECS. So the total ECS is required for residential building is 488 ECS. Remaining 9 ECS for floating population like visitor to residential houses & visitor. Detail Parking area calculation in ECS is attached in **Annexure- 8.**	
(ix)	Fire clearance from the appropriate authority need to be obtained and their observations is to be submitted.	Recommendation letter for Fire Safety Clearance is given in **Annexure-9.**	-------
(x)	Plan for solar power with exact calculations to be submitted.	The electricity installed capacity for this project is 1543.0 KW, accordingly to adhere to the 5.3% (82.6 KW) norms of solar energy we have planned to install Photovoltaic cell Frame shape of 80.0 sqm to be located on the terrace area. The solar power will be mainly used for open area lighting, common corridor lighting & corridor lighting. Total Energy saving is 5.3% which is generated from solar System. Detail Calculation is attached in **Annexure-10.**	Norm is not 5.3%. Further proponent to explain the details calculation during site visit.
(xi)	Since, this being a flood prone/ water lodging zone, detailed SOP for proper management of the same to be submitted.	The nearest gauging station in the upstream is Naraj (IB). The HFL at Naraj is 27.60m which is recorded in 31-Aug-82, Flood data of Naraj (IB) is given in **Annexure-11**. The project site is in the downstream, but as per the flood vulnerability Map, the site is not located in the flood prone area. (Source - BMTPC).	-------
xii)	Permission status from Water Resources Deptt. for usage of ground water.	Application has already submitted to Central Ground Water Authority vide application no. 21-4/2832/OR/INF/2021, dated 03.06.2021; Application copy	-------

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		is attached in **Annexure- 12.**	
xiii)	Details of solid waste management.	Total 881.5 kg/day Solid Waste will be generated for proposed project. Solid Waste will be collected in Color bins and it will be segregated in Organic Waste Converter. Detail Solid Waste proposal is given in **Annexure-13.**	-------
xiv)	Separate compartments for storing of storm water and sewage water.	Two separate drain will be provided for Storm Water & Sewage Water. Storm Water & Treated Water will be discharge different location. Drainage Plan is already given in **Annexure-2.**	-------
xv)	Findings of traffic study undertaken at point of intersection with NH Vis-a vis the norm in terms of PCU and traffic decongestion measures recommended if any be submitted.	The traffic study report is attached in **Annexure-14.**	-------

21. The SEAC in its meeting held on dated **05-10-2021** decided to take decision on the proposal after a site visit by Sub-Committee of SEAC.

22. The Sub-Committee of SEAC visited the site on 07.10.2021 and the observations of the Sub-Committee are as below:

    i) The environment consultant was not present during the visit and hence some of the documents could not be shown and explained. However, the proponent was present for deliberation.

    ii) The drain map (inside till connecting the main drain) could not be exhibited, hence proponent may be informed to submit the same showing the ETP, drain layout, rain water harvesting charge pits etc.

    iii) The Chimney positioning although is at one corner of the land, the height is less (as informed about 30 mt compared to the building height which is much more. This is a point of concern as smoke and dust movements would be there towards the nearer residents. The proponent needs to make changes to increase the height of outlet to overcome the above or change the position of Chimney.

    iv) The existing drain is about 200 mts away from the site and as per BMC letter, the proponent needs to construct the drain after the design is approved by BMC. In this regard, the proponent needs to submit: Letter from appropriate authority having the ownership of land and giving right for the same construction and use for discharging the treated effluent. Clear letter of using for discharge of treated effluent is required.

    v) Parking: The proponent is having both commercial and residential units. Thus, parking and entry needs to be separate. Proponent needs to send documents in support of the same. Also, a table showing the ECS, no of apartments, 2-wheeler and 4-wheeler parking slots, floating and visitors parking etc for both residential and

commercial provided by them. There should not be mix-up of place marked for residential and commercial parking. There should be Minimum 10% of total ECS for Addl parking for visitors and floating population.

vi) Details of calculation of solar energy to be used to arrive the % of total power consumption needs to be submitted.

vii) Traffic study needs to be carried out by a reputed institute and submitted.

viii) Although the land level is not much down than the road level, proponent may submit an explanation about mitigation measure for water ingression in case of heavy rainfall considering the location of the area.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the information/ documents from the proponent as desired by the Sub-Committee of SEAC as per **Para - 22** above.

ITEM NO. 05

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF M/S. KHUSI REALCON PVT. LTD FOR PROPOSED RESIDENTIAL APARTMENT TOWER-1 (B+S+23), TOWER-2 (B+S+22), TOWER-3 (B+S+22) & TOWER-4 (B+S+22) LOCATED AT MOUZA-PAHALA, TAHASIL-BHUBANESWAR, DIST- KHORDHA OF MR. PRADEEP THACKER (DIRECTOR) - EC

1. The proposal is for Environmental Clearance of M/s. Khusi Realcon Pvt. Ltd for proposed Residential Apartment Tower-1 (B+S+23), Tower-2 (B+S+22), Tower-3 (B+S+22) & Tower-4 (B+S+22) located at Mouza-Pahala, Tahasil-Bhubaneswar, Dist- Khordha of Mr. Pradeep Thacker (Director).

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

3. M/s Khusi Realcon Pvt. Ltd. proposes to construct Residential / Commercial Apartments Tower-1(B+S+23), Tower-2 (B+S+22), Tower-3 (B+S+22) & Tower-4 (B+S+22). The project is in Plot No.:- PlotNo: 277, 272, 275, 269, 281, 272/683 Khata No- 352/1194, 352/1204, 352/185, 352/1242, 352/1241, 352/1195 and Kissam – Gharabari of Mouza- Pahal, Bhubaneswar, Dist- Khurda, Odisha.

4. **Location and Connectivity** - The Project Site is a part of the Survey of India Toposheet No. 73H/15 & 73H/16. The proposed site is located at Mouza - Pahala, Tahashil -Bhubaneswar, Dist - Khurda, Odisha. The Geographical co-ordinates of the project site is: Latitude –20^0 20’ 16.9” N & Longitude - 85^0 53’ 3.5” E. The project site is well connected with National Highway NH-16. The nearest railway station is Vani Vihar Railway station at a distance of approx 6.53 Km & Bhubaneswar Railway Station at a distance 9.5 Km. The nearest airport is Biju Patnaik International Airport at a distance of approx. 15 Km in South-west direction from project site.

5. The site is coming under Bhubaneswar Development Authority. The project comprises of Tower 1 B+S+23, Tower 2 B+S+22, Tower 3 B+S+22 and Tower-4 (B+S+22).

6. The total plot area is 15565.82 Sqmt with total built-up area 84372 Sq.mt.

7. The Building Details of The Project:

Particular	Proposed
Project Name	Khushi Realcon Pvt. Ltd.
Plot Area	15565.82 Sqm.
Ground Coverage	5589.69 sqm (39.51 %)

Particular	Proposed
FAR (Floor Area Ratio)	4.07
Built up Area	84372.2 sqm
Maximum Height	78.85 m
Total Parking Area	19000.9 sqm
Green Belt Area	3421.6 sqm (21.99 %)
Maximum No. of Floor	Tower-1(B+S+23), Tower 2(B+S+22), Tower-3(B+S+22) Tower-4(B+S+22)
Power/Electricity Requirement & Sources	Total - 2620 KW Solar - 83 KW CESU - 2537 KW
No. of DG sets	4x700 KVA
Water requirement	257 KLD (Fresh)
Sewage Treatment Plant	STP Capacity - 350 KLD
Estimated Population-Residential, Commercial, Floating/visitors	3090 nos.

8. **Water requirement**: The total water requirement for the project will be approx. 367 KLD, out of which domestic water demand is 245 KLD and commercial is 12 KLD. The fresh water requirement will be 257 KLD. Fresh water will be extracted from ground water through borewell.

9. **Waste water details**: The project will generate approx. 328 KLD (sewage load) of wastewater. The wastewater will be treated in an onsite STP of 350 KLD capacity. Out of which 312 KLD will be recycled within the project for flushing (129.0 KLD), landscaping (14 KLD), dust suppression (12 KLD) and 157.0 KLD in non monsoon period and 183.0 KLD in monsoon period will be discharged to drain.

10. **Power requirement**: The daily power requirement for the proposed complex is preliminarily assessed as 2620 KW (Solar System- 83 KW & CESU – 2537 KW). In order to meet emergency power requirements during the grid failure, there is provision of 4 nos. of DG sets having 700 KVA capacities with DG set stack height is 40m for power back up in the Residential/Commercial Building Project. Total Energy saving from renewable energy = 133.39 KW i.e 5.1 % is contributed from solar energy.

11. **Rain Water Harvesting**: Rain Water will be harvested and recharge through 12 recharge pits from the plot area.

12. **Parking Requirement**: Total parking area required 19000.9 m^2 Sq.mt./728 ECS will be provided.

13. 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).

14. **Green Belt Development**: Out of the total area, green belt will be developed over an area of 3421.6 sqm (21.99% of the plot area).

15. **Solid Waste Management**: From the residential complex solid waste inform of food wastes from kitchen and miscellaneous wastes will be generated @ 0.45 kg/person/day, which will be about 1224.0 kg/day. The generated solid wastes from the residential complex will be segregated as biodegradable and non-biodegradable. This will be collected in separate-

coloured bins. Proper waste management practices will be adopted during the collection, storage and disposal of the generated solid wastes and construction and demolition wastes.

S. No.	Category	Counts (heads)	Waste generated (kg/day)
1.	Residents	2720 @ 0.45 kg/day	1224.0
2.	Commercial	270 @ 0.15 kg/day	40.5
3.	Club	150 @ 0.15 kg/day	22.5
5.	STP sludge		0.16
TOTAL SOLID WASTE GENERATED			**1287.16 kg/day**

16. The total population of project will be 3090 persons.

17. The estimated project cost is ` 30 Crores and cost for EMP is ` 0.75 Crores.

18. The project proponent along with the consultant **M/s Centre for Envotech & Management Consultancy Pvt. Ltd., Bhubaneswar** made a detailed presentation on the proposal on **01.09.2021**.

19. The SEAC in its meeting held on dated **01.09.2021** decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of the Sub-Committee of SEAC to the site.

i) Detailed land schedule with kissam of land in tabulated form. Whether land kissam has been converted to “Gharabari”, if so, detailed document to be submitted.

ii) Layout of drainage system and exact distance of project site to nearest drain and outfall of drain.

iii) Status of NOC from BMC/ appropriate authority for the above drain for sewage disposal.

iv) Proposal to increase in usage of treated waste water in premises and thereby reducing quantity of discharge to drain. Revised water balance to be submitted.

v) Surface runoff management plan with details of surface water to be used in the project.

vi) Percentage of Rain water Harvesting /recharging vis-à-vis fresh water consumption according to norms of CGWA be submitted.

vii) Details of DG sets to be installed at the suitable places after due consideration of pre-dominant wind direction to avoid air pollution from entering the dwelling house of the colony. DG set location w.r.t wind direction, stack height with layout / installation and drawing of the stack / exhaust pipe be submitted, considering cumulative capacity(s) of all DG sets and height of the tallest tower.

viii) Adequate parking in terms of ECS for dwelling units, floating population & visitors with locations including compatibility with the proposed parking space provided needs to be submitted in tabular form.

ix) Fire clearance from the appropriate authority need to be obtained and their observations is to be submitted.

x) Plan for solar power with exact calculations to be submitted.

xi) Since, this being a flood prone/ water lodging zone, detailed SOP for proper management of the same to be submitted.

xii) Permission status from Water Resources Deptt. for usage of ground water.

xiii) Details of solid waste management.

xiv) Separate compartments for storing of storm water and sewage water.

xv) Findings of traffic study undertaken at point of intersection with NH Vis-a vis the norm in terms of PCU and traffic decongestion measures recommended if any be submitted.

xvi) Proposal to install 2 DG sets of higher capacities instead of four DG sets of capacity 4x700 KVA.

xvii) Proposal to install electric charging points for Electrical Vehicles in basement parking.

23. The proponent was requested vide letter no. 643 (3)/SEAC-Misc-28, dated 20.09.2021 to furnish the information / document as decided in the SEAC meeting held on 01.09.2021. But, the proponent has not furnished the same.

24. The Sub-Committee of SEAC visited the site on 07.10.2021 and the observations of Sub-Committee are as below:

a) The environment consultant was not present during the visit and hence some of the documents could not be shown and explained. However, the proponent was present for deliberation.

b) The drain map (inside till connecting the main drain) could not be exhibited, hence proponent may be informed to submit the same showing the ETP, drain layout, rain water harvesting charge pits etc.

c) The Chimney positioning although is at one corner of the land, the height is less (as informed about 30 mt compared to the building height which is much more. Although currently, the nearby site is full of trees, this may be a point of concern in future. The proponent needs to make changes to increase the height of outlet to overcome the above.

d) As per BMC letter about 800+ mt drain needs to be constructed by the proponent. The flow of water from project site and construction of drains are in opposite direction. There is no drain of BMC in the direction of flow of water for a longer distance. Further, proposed drain construction area is occupied by others at some places, trees and electric lines are also there. In this regard, the proponent needs to submit: Letter from appropriate authority having the ownership of land and giving right for the same construction and also use for discharging the treated effluent. Clear letter of using for discharge of treated effluent is required. Further, how the construction of drain in opposite direction is going to serve the purpose needs to be brought out from the appropriate authority along with construction process as trees, electrical poles etc are already there.

e) Parking: The proponent needs to submit a table showing the ECS, no of apartments, 2-wheeler and 4-wheeler parking slots, floating and visitors parking etc provided by them. There should be Minimum 10% of total ECS for Addl parking for visitors and floating population.

f) Details of calculation of solar energy to be used to arrive the % of total power consumption needs to be submitted.

g) Traffic study needs to be carried out by a reputed institute and submitted.

h) Although the land level is not much down than the road level, proponent may submit an explanation about mitigation measure for water ingression in case of heavy rainfall considering the location of the area.

After detailed discussion, the SEAC decided to take decision on the proposal after receipt of the information/ documents from the proponent as requested vide letter no. 643 (3)/SEAC-Misc-28, dated 20.09.2021 and as desired by the Sub-Committee of SEAC as per **Para - 24** above.

ITEM NO. 06

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR M/S CHETTINAD CEMENT CORPORATION PVT. LTD. FOR PROPOSED 2X1.0 MTPA CEMENT GRINDING UNIT AT KALINGANAGAR INDUSTRIAL COMPLEX, TEHSIL: DANGADI, DISTRICT: JAJPUR OF MR. A. ANNADURAI. (EC)

1. The proposal is for Environmental Clearance for M/s Chettinad Cement Corporation Pvt. Ltd. for proposed 2x1.0 MTPA Cement Grinding Unit for production of PPC, PSC, OPC & GGBS cement, over an area of 83.0 Ac. situated at- Kalinganagar Industrial Complex, Tahasil - Danagadi, District- Jajpur of Mr. A. Annadurai.
2. The project falls under Category "B", Project or Activity 3 (b) as per schedule of EIA Notification dated 14th Sep, 2006, as amended from time to time.
3. The total project area is 83.0 acres. About 27 acres (33%) of the total project area will be covered under green belt & plantation.
4. The coordinates of the area are Latitude - 20°56'9.54" N and Longitude - 86°3'14.12" E. Nearest town is Duburi located at a distance of 7.0 Km from the project site. National Highway (NH-200) is at a distance of 8.0 Km from the project site. Nearest village is Jakhapura Village-1.0 Km.
5. No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger / Elephant Reserve, Wildlife Corridor etc. falls within 10 km radius of the plant site. Total Cost of the proposed project will be ` 120 Crores. Capital cost for environmental protection measures will be ` 290.00 lakhs and Recurring cost would be ` 30.0 Lakhs.
6. Total power requirement for the proposed project will be 10 MVA which will be sourced from Odisha Power Transmission Corporation Limited. Total nos. of employees will be 185.
7. Total water requirement of proposed project is 100 KLD and sourced from IDCO water supply from nearby Brahmani River.
8. Raw materials required for the proposed project are Clinker, Slag, Gypsum & Fly ash. Clinker is proposed to be sourced from CCCPL's units established at Ariyalur, Ariyalur District, Tamil Nadu. Fly ash from nearby Thermal power plants. Gypsum will be procured from Pardeep Phosphate / IFFCO (110 Kms.) and slag would be procured from Jindal Stainless Limited, Tata Steel, Neelachal Ispat Ltd. Kalinganagar. Transportation of raw material and product (cement) would be done by road and railway.
9. Cooling Tower blow down will be re-circulated through cooling and treatment. The entire treated waste water will be recycled for various purposes inside the plant. Waste water generated from plant will be treated in the existing STP. The treated water from STP will be used for dust suppression & green belt development. Zero liquid discharge concept from plant operation shall be adopted

10. High efficient bag filters will be installed to maintain particulate matter emissions within permissible limit. Domestic effluent will be treated in STP and treated water will be used for plantation.
11. Dust collected from various pollution control equipment will be recycled back into the process. STP Sludge will be utilized as manure for plantation. Used oil will be sold to re-processors.
12. Earmuffs will be provided to all operators and employees working near the machinery to control noise pollution.
13. Drainage of the study area shows mainly dendritic pattern and consist of first, second and third order streams. Structurally controlled sub-parallel drainage can also be noted in the area. Overall drainage flow of the study area is from north to south and is mainly controlled by Brahmani River which flows from west to east at a distance of 5.3 Km in south side of the project site. Here, Brahmani River bifurcates into two streams- One stream as Kharsua River, which after flowing, continues to flow in the SW direction and Second stream continues as Brahmani River in south direction.
14. Streams such as Gonda nala, Ghagia nala, Kabari nala, Dhenkasai nala and Jhurjhuri nala flowing from northern part of the study area finally merge into the Brahmani River.
15. Within plant roof top rainwater harvesting shall be implemented. Harvested rain water will be recharged through a recharge pond (12m x 10m x 6m) to increase the ground water level of the area as per guidelines prescribed by Central Ground Water Board shall be taken into consideration for designing of rain water harvesting system. A part of rain water shall be preserved for plant use during lean season.
16. Baseline data collected from March'2019 to May'2019 (Pre - monsoon) as per MoEF&CC, Govt. of India Office Memorandum dated 29.08.2017.
17. ToR was issued for EIA study by the SEAC vide letter no. 1092/SEAC-173, dated 14.12.2018. Public Hearing was conducted on 06th March 2019.
18. The consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** along with the proponent have made a detailed presentation on the EIA/EMP report on 27.11.2019. The SEAC decided to take decision on the proposal after receipt of the following information / documents from the proponent. The project proponent has furnished the compliance and the SEAC verified the same as follows on 17.06.2020:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	Proposed Pollution Control Measures	Pollution Control Measures is enclosed as **Annexure-1.**	Conditions to be stipulated in Environmental Clearance.
b)	Certified Copy of agreement that land has been transferred from IDCO to project proponent name	Copy of land agreement attached as **Annexure-2**	Compiled
c)	Supporting documents regarding land schedule and kissam of land	Land schedule attached as **Annexure-3**	The land schedule and kissam of land reveals that 81.98 acres is sala, Jhati Jungle under Sabak kissam. The hal kissam of land is "Patita" and

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
			"Sarada". The proponent has to submit a certificate from the concerned DFO about the status of the land (forest / non-forest)
d)	Material Balance for each products (Input and Output Balance) PPC, PSC, OPC & GGBS	Material balance for each products enclosed as **Annexure-4**	Compiled
e)	Use of phospho-gypsum being generated from fertilizer plants in Odisha may be explored in reference to quality requirement of the proponent and cost benefit analysis as well	❖ Phospho-Gypsum from fertilizer Plants in Odisha can be utilized in the proposed Cement Grinding unit. ❖ P_2O_5 present in the Phospho-Gypsum increases the setting time reducing the one day strength and moisture present in it reduces the flow ability of material hindering process. Whereas these issues are rarely observed in the Mineral Gypsum. ❖ Landing Cost is more in Imported Gypsum. Considering the quality requirement, Operation cost is more in Phospho - Gypsum. ❖ Considering the above, Phospho Gypsum can be utilized 2-3 % which suits the required quality in the total Gypsum requirement of 5%.	Conditions to be stipulated in Environmental Clearance as specific condition as confirmed by the proponent.
f)	Submission of detailed Plant layout showing storage yards of raw materials, coal storage unit, ash generated from coal, products along with garland drains and retaining walls	Detailed Plant Layout is enclosed as **Annexure-5**	Compiled
g)	Permission Copy from IDCO that water will be supplied for proposed plant use	Permission copy of Water attached as **Annexure-6**	Conditions to be stipulated in Environmental Clearance as specific condition.
h)	Submission of water balance to be used in this	Water Balance enclosed as **Annexure-7**	Not given for both monsoon and non-

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	project in detail both monsoon and non-monsoon period		monsoon period. Detailed water balance to be given (monsoon and non-monsoon period).
i)	Details of parking provision for incoming and outgoing vehicles in new plant, inside and outside the plant	Parking area inside and outside the plant boundary marked in layout and attached as **Annexure-8**	Compiled
j)	Details of quantity of materials to be transported by rail and road	Details of quantity of material attached as **Annexure-9**	Compiled
k)	Details of green belt area and list of plant species selected should be cyclone resistant and high green leaf area	Details enclosed as **Annexure-10.** Total area of 27 acres (33%) out of 83 acres will be used for greenbelt development.	Conditions to be stipulated in Environmental Clearance.
l)	Drainage map showing location of 5 nallahs with distance from project site	Drainage Map is given in **Annexure-12**	Compiled
m)	ToR Point 4.xi to be complied in detail	ToR point 4.xi to be complied in detail and enclosed as **Annexure-12**	Compiled
n)	Repeat the study of inversion of temperature in winter season covering neighbouring industries along with the proposed plant and mitigative measures if any. Sampling locations should include residential areas. Inversion study to be done and report submitted from any Govt. Institution of national repute	Mixing Height data as given in the EIA/EMP report in Chapter-4 on hourly basis was taken from Envitrans website. Air Modelling, morning and afternoon mixing height data was referred from 'Atlas of Hourly Mixing Height and Assimilative Capacity of atmosphere of India (IMD, 2008)'. (The cover page of the Atlas is enclosed as **Annexure-13a**. For this project study on atmospheric inversion data, our consultant has requested to IMD Bhubaneswar and IMD Pune, but they have no data available with them for last 5 years. As per the notification of MoEF&CC, OM letter No.J-11013/41/2006-II (I) (part) dated 29th August 2017(copy of the same enclosed as **Annexure-13 b** } the baseline data should not be older than three years at the time of submission of proposal for grant of EC, as per the ToRs prescribed. But no data for atmospheric inversion are available for last three year	Three years atmospheric inversion data to be given.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		with IMD.	
o)	Compliance to issues raised in public hearing conducted on 06 March 2019	Compliance to the public hearing issues raised is attached as **Annexure-14**	Conditions to be stipulated in Environmental Clearance.
p)	Repeat the Iron content analysis in surface water, and if it is high then measures taken for reduction of it	Surface water results attached as **Annexure-15**	Compiled
q)	Ground water to be monitored once again and ground water analysis report to be submitted	Ground Water results attached as **Annexure-16**	Compiled
r)	Traffic Density Study to be carried out by Operational Research (OR) expert and report to be submitted	Details enclosed herewith as **Annexure- 17**	Not complied. To be submitted as sought by SEAC.
s)	Plan for biodiversity assessment	Detailed enclosed as **Annexure-18**	Compiled
t)	Separate the budget of Corporate Environment Responsibility and Environment Management and give details of each	Budget of Corporate Environment Responsibility & Environment management Plan are separately provided in EIA Report.	Conditions to be stipulated in Environmental Clearance.
u)	Identify the CSR and CER activities to be done in the proposed project	Activities identified for Corporate Environment Responsibility are separately provided in EIA Report & attached as **Annexure-19** CSR activities will be executed after commencement of production.	Conditions to be stipulated in Environmental Clearance.
v)	Specific Occupational health hazard study and check-ups to be done and budget allotted under it. Detail plan to be submitted	CCCPL will undertake regular periodical health checkup of our employees. Besides, One Mobile Medicare Unit will be functional which will provide door step services in villages and also provides medicine with free of cost. We will be operating a full time Occupational Health Centre with a qualified full time doctor. Once the plant will be in operation.	Conditions to be stipulated in Environmental Clearance.
w)	No. of water sprinklers and bag filters to be used	Enclosed as **Annexure-20**	Conditions to be stipulated in Environmental Clearance.
x)	Percentage of Solar/ renewable energy used in the proposed project and	As per the Proceedings of State level single window clearance authority Proceedings (73rd	Conditions to be stipulated in Environmental Clearance.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	detailed plan	meeting Dt- 29.07.2017), we will meet 5% Energy requirement of our proposed Grinding unit through Renewal energy source. Proposed to utilized 5 % Renewal energy in the total power requirement 9MW i.e., around 0.5 MW. 0.5 MW Solar Power plant will be installed in the proposed Grinding unit campus.	
y)	Details of rainwater harvesting proposed in the plant and amount compensated towards water requirement / recharging as well	Details of rainwater harvesting enclosed in **Annexure-21**	Conditions to be stipulated in Environmental Clearance.
z)	Detailed Carbon balance / budget should be compiled	Coal consumption / year = 46000 T Avg. Calorific value = 3800 k.Cal/kg Expected CO_2 emission = 70111 T Coal Emission CO_2 emission factor – 95.8 g CO2 / MJ 1 k.cal = 4186.8 J Proposed to utilised 5 % Renewal energy i.e., 0.45 MW i.e., 2970 MW which is equal to 2394 T of CO_2. (0.82 Central electricity authority CO_2 baseline data June 2018) Greenbelt development proposed is 27000 no of trees. CO_2 absorption potential of a 3 year old tree is 3.66 kg / year. i.e., 98 T of carbon dioxide absorption /year. Total carbon offset = 2394 +98 = 2492 T. Total Emission of CO_2 = 70111 T Total CO_2 offset = 2492 T Total CO_2 emission = 67619 T	Complied.

19. The SEAC in its meeting held on 17.06.2020, decided to take decision on the proposal after receipt of certain information/documents from the proponent. The project proponent has furnished the compliance and the SEAC verified the same as follows on 12.08.2020.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	The land schedule and	Forest Diversion letter dtd.15th	This is not clear from the

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	kissam of land reveals that 81.98 acres is sala, Jhati Jungle under Sabak kissam. The hal kissam of land is "Patita" and "Sarada". The proponent has to submit a certificate from the concerned DFO about the status of the land (forest / non-forest).	July, 2020 for allotted land of Ac.83.00 in favour for establishment of Cement Grinding Unit at Kalinganagar Industrial Complex, Jajpur of M/s. Chettinad Cement Corporation Private Limited enclosed as **Annexure-I**.	enclosed letter that the land proposed for the Cement Plant is coming within the land area diverted as per **Annexure-I**. Certificate from the concerned DFO has not been furnished.
b)	Detailed water balance to be given (monsoon and non-monsoon period).	Detailed water balance for Monsoon & Non-monsoon period attached as **Annexure-II**.	Zero Liquid Discharge to be adopted and accordingly specific conditions to be stipulated in Environmental Clearance.
c)	Inversion study needs to be done by the proponent by an expert agency of national repute, preferably Govt. agency.	After commissioning of plant, Inversion study will be carried out.	Specific conditions to be stipulated in Environmental Clearance that the proponent need to submit the study report within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA. A legal affidavit to be submitted to this effect by the proponent.
d)	Traffic density study to be done through a Govt. Institution.	Traffic study will be conducted after commissioning of plant.	Specific conditions to be stipulated in Environmental Clearance that the proponent need to submit the study report within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA. A legal affidavit to be submitted to this effect by the proponent.

20. The SEAC in its meeting held on 12.08.2020, decided to take decision on the proposal after receipt of certain information/documents from the proponent. The project proponent has furnished the compliance and the SEAC verified the same as follows on 09.04.2021.

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th><th>Views of SEAC</th></tr>
<tr><td>a)</td><td>This is not clear from the enclosed letter of the proponent</td><td>Certificate from the concerned DFO, Cuttack Forest Division vide letter no: 1887/5F dated 10.03.2021 has shown land details
<table>
<tr><th>Sl.no</th><th>Khata No.</th><th>Plot No.</th><th>Total Area</th><th>Allotted area in</th><th>Kissam Sabik</th><th>Remarks</th></tr>
</table></td><td>i) Letter from IDCO that the proponent</td></tr>
</table>

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th><th>Views of SEAC</th></tr>
<tr>
<td></td>
<td>dated 17.07.2020 (Annexure - I) that the land proposed for the Cement Plant is coming within the land area diverted. Certificate from the concerned DFO about the status of the land (forest / non-forest) is to be submitted.</td>
<td>
<table>
<tr><td></td><td></td><td></td><td></td><td>Acre</td><td></td><td></td></tr>
<tr><td>1</td><td rowspan="4">419</td><td>860</td><td>83.800</td><td>12.700</td><td>Sal Jungle</td><td rowspan="4">Diverted in favour of IDCO under FC Act.</td></tr>
<tr><td>2</td><td>858</td><td>189.400</td><td>49.980</td><td>Sal Jungle</td></tr>
<tr><td>3</td><td>859</td><td>83.100</td><td>0.800</td><td>Jhati Jungle</td></tr>
<tr><td>4</td><td>844</td><td>183.800</td><td>13.00</td><td>Jhati Jungle</td></tr>
<tr><td>5</td><td>420</td><td>845</td><td>3.780</td><td>1.020</td><td>Rasta</td><td></td></tr>
<tr><td>6</td><td>419/33</td><td>860/337</td><td>8.080</td><td>3.880</td><td>Sal Jungle</td><td rowspan="3">The land has not been diverted under FC act.</td></tr>
<tr><td>7</td><td rowspan="2">419/13</td><td>844/3401</td><td>3.000</td><td>0.720</td><td>Sal Jungle</td></tr>
<tr><td>8</td><td>844/3402</td><td>6.260</td><td>0.900</td><td>Sal Jungle</td></tr>
</table>
They have intimated that land measuring 5.5 acres area coming under Sal jungle in Sabik kissam. Further, they have intimated that they will leave away 5.5 acres of Sal Jungle from project activities.

The proponent has also intimated that they will not disturb or utilize 5.5 acres of leave away Sal Jungle land for project and other purpose.

<u>Land use pattern for the Project:</u>
<table>
<tr><th>Sl. No.</th><th>Land use purpose</th><th>Area in Ac. Acres</th><th>Description</th></tr>
<tr><td>1.</td><td colspan="3">PLANT AND MACHINERY AREA</td></tr>
<tr><td></td><td>i) Raw material storage Yard</td><td>10.00</td><td>Silo for clinker storage and Covered shed for slag & gypsum</td></tr>
<tr><td></td><td>ii) Cement grinding and Silos</td><td>16.00</td><td>Mill for grinding and Silo-3 Nos for storing cement</td></tr>
<tr><td></td><td>iii) Packing Plant</td><td>7.00</td><td>3 Nos. of packing plants and 8 Nos. of lorry loading machines and 14 Nos. of wagon loading machines</td></tr>
<tr><td></td><td>iv) Electrical yard</td><td>2.50</td><td>Electrical installations</td></tr>
<tr><td>2.</td><td>TRUCK PARKING</td><td>12.00</td><td>Space required for parking approximately 100 trucks</td></tr>
<tr><td>3.</td><td>GREEN BELT AND VACANT AREA</td><td>30</td><td>Approximately 1/3rd of the total plant area should be provided for green</td></tr>
</table>
</td>
<td>(Chetinad) has surrendered 5.5 acres of Sal Jungle which IDCO had allotted to them.
ii) Details of the infrastructures of the plant shown in the above 5.5 acres of Jungle land and relocation of the same in the rest of the land vis-à-vis the original layout.</td>
</tr>
</table>

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
		belt development,	
		Total **77.50**	
b)	A legal affidavit that Inversion study to be done by an expert agency of national repute preferably Govt. agency and the study report shall be submitted within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA.	Legal Affidavit has been furnished.	Specific Conditions to be stipulated in Environmental Clearance.
c)	A legal affidavit that Traffic density study to be done through a Govt. Institution and the study report shall be submitted within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA	Legal Affidavit has been furnished.	Specific Conditions to be stipulated in Environmental Clearance.

21. The SEAC in its meeting held on 09.04.2021, decided to take decision on the proposal after receipt of the following from the proponent followed by a site visit by SEAC Sub Committee. The project proponent has furnished the compliance and the SEAC verified the same as follows on 13.09.2021.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
a)	Letter from IDCO that the proponent (Chetinad) has surrendered 5.5 acres of Sal Jungle which IDCO had allotted to them	Letter from IDCO vide Lt no. IDCO Lr No. IDCO-LAE-7273/2017-14919 dated 04.09.2021	Copy submitted

<table>
<tr><th>Sl. No.</th><th>Information Sought by SEAC</th><th>Compliance furnished by the proponent</th><th>Views of SEAC</th></tr>
<tr><td>b)</td><td>Details of the infrastructures of the plant shown in the above 5.5 acres of Jungle land and relocation of the same in the rest of the land vis-à-vis the original layout</td><td>Revised layout by omitting 5.5 acres of land as per the land scheduled tabled below:
<table><tr><th>Sl No.</th><th>Khata No.</th><th>Plot No.</th><th>Area (In Acres)</th></tr><tr><td>1.</td><td>419/33</td><td>3376(P)</td><td>3.88</td></tr><tr><td>2.</td><td>419/13</td><td>844/3401 (P)</td><td>0.72</td></tr><tr><td>3.</td><td>419/13</td><td>844/3402 (P)</td><td>0.90</td></tr><tr><td colspan="3">Total</td><td>5.50</td></tr></table></td><td>Layout plan submitted.</td></tr>
</table>

22. The SEAC in its meeting held on 13.09.2021 decided to take decision on the proposal after a site visit by SEAC Sub-Committee.

23. The Sub-Committee of SEAC visited the site on 11.10.2021 and discussed with the Proponent and the Consultant on issues raised during presentation and subsequent clarifications. The proponent explained the details with the Plant Layout and physical position of proposed plant. Following have been observed and advised:

    i) The project site is mostly lateritic with few bushes. The site was also with reasonably clean atmosphere even though other industries were there nearby. During our stay at project site, it was observed that there is less traffic in the road adjacent to the project site.

    ii) There are no trees available. The proponent was advised to stress on plantation which will help them in ZLD.

    iii) Being a dry process there is no process water requirement as explained by them. The party should use all the treated water (treated after domestic utility) in dust suppression and plantation etc to result ZLD. Proponent to submit his feedback.

    iv) Proponent needs to submit the internal drain layout for reference.

    v) Document from DFO with regard to forest land needs to be submitted

    vi) The Chimney height along with discharge quality vis-à-vis norm needs to be submitted

    vii) Various dust control and monitoring system proposed to be furnished.

    viii) On receiving the above, once the documents are in order, EC may be recommended.

24. The proponent has already submitted the above information along with the revised land use breakup with revised plant layout excluding forest land 5.5 acres and internal drain map.

Considering the information / documents furnished by the proponent and presentation made by the consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** on behalf of the project proponent, the SEAC recommended for grant of Environmental Clearance valid for a period of 7 years with following specific conditions in addition to the conditions as per **Annexure-D**.

i) **The proponent had initially proposed to set up the plant over 83 acres of land allotted by IDCO. Subsequently, the concerned DFO had certified that out of 83 acres of land, 76.48 acres of land has been diverted in favour of IDCO under FC Act, 1.02 acres is**

Rasta Kisam and 5.5 acres of land has not been diverted under FC Act. The proponent has surrendered 5.5 acres of forest land, out of 83 acres of land. The proponent has also submitted revised layout map to setup the plant over 77.5 acres of land. The proponent has also intimated that 1.02 acres of Rasta Kisam land has been converted for industrial use. The proponent shall setup the plant over 77.5 acres of land as per revised layout map submitted. The proponent shall convert 1.02 acres of Rasta Kisam land for industrial use from appropriate revenue authority before going for construction activity on this Rasta Kisam land. Under no circumstances, the proponent shall carryout any construction activity over the 5.5 acres of surrendered forest land.

ii) The proponent shall use all the treated water (treated after domestic utility) in dust suppression and plantation etc. to adopt ZLD concept.

iii) Inversion study shall be carried out by an expert agency of national repute preferably Govt. agency and the study report shall be submitted within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA, Odisha.

iv) Traffic density study shall be carried out through a Govt. Institution and the study report shall be submitted within 2 months of commercial operation of the plant and mitigation measures as and if necessary thereof to SEIAA, Odisha.

v) The proponent shall carryout regular periodical health checkup of their employees. As proposed, the proponent shall provide One Mobile Medicare Unit for door step services in villages and also provide medicine with free of cost. They shall operate a full time Occupational Health Centre with a qualified full time doctor, once the plant will be in operation as proposed.

vi) Use of phospho-gypsum being generated from fertilizer plants in Odisha shall be explored in reference to quality requirement of the proponent and cost benefit analysis as well.

ITEM NO. 07

PROPOSAL FOR ENVIRONMENTAL CLEARANCE OF B.D. PATNAIK MINERALS PVT. LTD FOR PRODUCTION OF 0.25 MILLION TPA LIMESTONE & DOLOMITE MINES OVER AN MINING LEASE AREA OF 44.742HA LOCATED AT VILLAGES - SARUMUHAN AND CHUNAGHUTI, TAHASIL- RAJGANGPUR, DISTRICT- SUNDERGARH, ODISHA OF SRI AJAY KUMAR PATNAIK (UNDER VIOLATION CASE) - EC

1. This is a proposal for Environmental Clearance for Sarumuhan-Chunaghuti Limestone & Dolomite Mines of M/s B.D. Pattnaik Minerals (P) LTD. has proposed for production of 0.25 MTPA of limestone over an area of 44.742 ha. at Villages - Sarumuhan and Chunaghuti , P.S- Rajgangpur, Dist: Sundargarh, Odisha.

2. The mine is situated at Sarumuhan and Chunaghuti Villages, P.S. Rajgangpur in Sundargarh District of Odisha. The latitude is 22^0 17' 25" to 22^0 18' 10" N and longitude is 84^0 36' 01" to 84^0 36' 13" E. Mandira reservoir is situated at a distance of 0.3 km north side of the ML area. The mine is well connected by all weathered murram road diverted from the main road of Sundargarh- Raurkela on SH-10. The nearest railway station/bus stand is available at Rajgangpur (12km), the nearest airport is Jharsuguda (70 km) & the nearest city is Rourkela (23 km). Sundargarh is the district headquarters situated at 62 km & Bhubaneswar, state capital 260 Km in Odisha from the mines.

3. The Mining Lease of 173.087 ha was first granted in favour of M/s B. D. Patnaik on 02.09.2075 for a period of 20 years, which had expired on 01.09.1995. The Lessee submitted his application for 1st renewal of Mining Lease over a reduced area of 44.742 hectares which was granted by the collector, Sundargarh of Odisha vide letter no.7974/M dated on 16.8.1996 for a period of another 20 years i.e. 02.09.1995 to 01.09.2015. In the meantime, the said mining lease over an area of 44.742 hectares in village Sarumuhan and Chunaghuti was transferred from M/s B. D. Patnaik to M/s B. D. Patnaik Minerals (P) Ltd on 25.07.2000. The Mining Lease area involves Non Forest Govt. waste land.

4. As per amendment of MMDR Act 2015, the mining lease is now deemed to have been extended for a period of fifty years i.e. up to 01.09.2025. The total surface right granted to the lessee is to the tune of 27.22 acres and was available to the lessee in two phases.

5. The mine is closed by Deputy Director of Mines, Rourkela since November'2009 vide letter no - 14247 (25) on dated 07 11.2009 due to want of Environmental Clearance (EC) and noticed as violation.

6. The Application for Environmental Clearance was submitted by the proponent to SEIAA, Odisha on 24 01.2013 and accordingly, the ToR was issued on 27.11 2013 Base line data were generated from Dec' 2013 to Feb' 2014. Accordingly, draft EIA/EMP report has been prepared. The Public Hearing for the proposal has already been conducted on 24.06.2015.

7. Accordingly, the final EIA report submitted to SEIAA, Odisha for Environmental Clearance on 24.11.2016 But, in the meantime, a Notification was issued by the MoEF&CC on 14.03 2017 to apply the violation case at Central level and accordingly they had applied to the MoEF&CC, Govt. of India, New Delhi within the stipulated time.

8. Again on 16 03.2018, an OM was issued by the MoEF&CC, Govt. of India mentioning "All the proposals of category 'B' projects/activities pertaining to different sectors, received within six months only i.e. up to 13th September, 2017 on the Ministry's portal, but yet not considered by the EAC in the Ministry, shall be transferred online to the SEAC/SEIAAs in the respective States/UTs' and accordingly, the proposal was transferred to SELAA, Odisha for consideration.

9. This is a case of violation due to production of 637 MT of limestone during 2008-09 and 2009-10 without Environmental Clearance.

10. Deputy Director of Mines, Rourkela vide letter no-2992 on dated 15.11 2017, noticed to show cause for payment of ` 1,78,020/- towards compensation under section 21 (5) for production in violation of Act.

11. The project falls under Category" B" as per MoEF&CC, Govt. of India Notification as the Mining Lease Area is less than 100 ha (as per S.O. 3977, dt.14.08.2018).

12. The SEAC confirmed the case to be of violation of the EIA Notification and recommended for issuing Standard Term of Reference with specific Term of Reference and additional specific conditions as recommended by CSIR-NEERI on carrying capacity study for undertaking EIA and preparation of Environmental Management Plan (EMP).

13. ToRs was issued under violation by the SEAC, Odisha vide letter no. 1088/SEAC-95, dated 14.12.2018.

14. **Method of Mining** - Mining activities in the lease area is proposed to be worked out by Semi mechanized method of mining under OTFM-A category to produce required production target in the ensuing modified plan period. At first to exploit the limestone from the quarry top soil will be removed by scrapping using excavators. The topsoil will be stacked at the earmarked site for future use. Limestone will be loosened through drilling & blasting. Rock breaker will be used to avoid secondary blasting. Controlled blasting technique will be practised by using delay detonators.

15. After blasting, ROM will be crushed and screened to various sized ore as per the buyer's specification by the proposed 30 TPH crusher-cum-screening plant. All the mining activities like drilling, blasting, excavation, loading and transportation will be carried out by using heavy earth moving machineries to produce 2,50,399 MT (maximum) limestone per annum.

16. Drilling & Blasting: Drilling of the blast holes is proposed to be done by a compressed air jack hammer. Hence 6 nos. of jackhammer are required of which 5 will be in operation & the 6th one will be kept as stand by. The diameter of the drill rod is 32mm. To carry on blasting operation, class III explosive (special gelatine) 80% strength & class VI (detonator and safety fuse of standard length) will be used in the mine.

17. Loading & Transportation: The generated ROM ore will be transported to the crusher site by the 10 T capacity tippers. A total of eleven nos. of 10-tonne capacity tippers will be required to transport the ROM ore to the crusher plant side. The generated waste will be dispatched to the nearby proposed dump. Total trucks required per day is 8.

18. Nature of waste: The limestone deposit of the area is associated with a topsoil of thickness 0.5-1.0 meter. The soil found in the area is fertile in nature. During the development period, some amount of OB will also be generated mainly in the form of phyllite & slate. During the mining activities, there will also be waste generated mainly as an inter burden. As revealed from the quarry sections, bands of phyllite and slate would constitute the inner burden apart from limestone having CaO < 35%.

19. Dumping site: In the ensuing modified plan period, the total quantity of waste as IB and OB to be dumped from the limestone quarries in the year 2020-21 to 2024-25 would be about 1,13,014 m3. It has been proposed to dump this generated waste at the northwestern side of the lease area. This quantity of waste will be stacked in an area of 1.866 hectares with a dump height of 23 m with 3 nos of terraces. At the end of the plan period, the proposed dump will be maintained at 291.7 MRL.

20. Green belt: Enhancement of Green belt development/ plantation will be developed in the project site and in the periphery of the project boundary, which will improve the floral and faunal diversity of the project area. A belt of trees with a thick canopy will be created to intercept dust, gaseous pollutants, and noise.

21. Water Requirement: There will be no use of water in the mining operation. Water will be required for domestic purposes, sprinkling for dust suppression, and green belt development only. The total water requirement for the proposed project will be about 10 m3 /day during Non-monsoon as follows. This quantity of water will partly be sourced from the three water storage tanks (Total Capacity of these Three Tanks will be 450 m3) proposed within the lease area to store harvested rainwater through rainwater harvesting system and partly from the nearby ponds. No groundwater will be used for the purpose.

22. Power requirement: The mining operations will be carried-out by machinery which is run by diesel. No powered equipment will be deployed.2 No of DG sets 60 and 150KVA will be used.

23. Employment Generation: The total manpower requirement for this mining project is 95 persons. Preference for employment will be given to locals. The project will also generate indirect employment opportunities for the locals. .

24. The total cost of the project is ` 3.09 Crores.

25. The consultant **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar** made a detailed presentation on the revised project before the SEAC on behalf of the project proponent on 19.02.2021.

26. The SEAC in its meeting held on Dt: 19.02.2021 decided to take decision on the proposal after receipt of the following information / documents from the proponent followed by visit of sub-Committee of the SEAC to the mining site to ascertain possible damage to Mandira Dam and to decide specific conditions for the purpose.

27. The project proponent has furnished compliances as desired by the committee vide letter no: Nil dated 30.03.2021 and same has been verified as follows on 09.04.2021:

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
i.	Plot wise kissam of land duly certified by concerned Tahasildar	The land document duly certified by Tahasildar is submitted.	-----
ii.	Details of case registered by the State Government under section 19 of Environment (P) Act, 1986 for violation and its current status with supporting documents	The Collector & District Magistrate, Sundargarh has issued the letter to the Public Prosecutor, Sundargarh to take legal action and file the case against the project proponent as per the provisions contained under section 19 of EP Act, 1986. Copy of letter is submitted.	-----
iii.	Mitigation measures to be undertaken during mining to protect Mandira Dam	Mitigation measures towards protection of Mandira Dam is mentioned in compliance report.	Specific condition to be stipulated in EC.
iv.	Identification of occupational health hazards and mitigation measures towards it including periodical visit / health check up by trained occupational health expert, both for employees / workmen / and people of neighboring habitation	Occupational health hazards and mitigation measures to be undertaken is mentioned in compliance report.	Specific condition to be stipulated in EC.
v.	Details of waste management i.e. composition and nature	Details of waste management is submitted in compliance report.	Specific condition to be stipulated in EC.

Sl. No.	Information Sought by SEAC	Compliance furnished by the proponent	Views of SEAC
	of waste generated, tabulated form showing year wise waste generation, usage and storage		
vi.	Details of Top soil generation and its utilization	Top soil generated - 25321cum will be stacked over an area of 2100 cum located at southern part of lease.	Specific condition to be stipulated in EC.
vii.	Documents related to permission letter from WR Deptt, Govt. of Odisha for mining activity near to Mandira Dam	Mandira Dam is 6km away from lease. So, there will be no influence of mining activity on Mandira Dam. Hence no permission is required.	Specific condition to be stipulated in EC.
viii.	Total Plantation should be carried out within 2 years and maintenance to be continued in remaining years. Trees present in mining area should be uprooted & transplanted in safety zone	Agreed by proponent. Details given in report.	Specific condition to be stipulated in EC.
ix.	Copy of modified mining plan incorporating progressive mine closure plan	Chapter – 8 of mining plan has been submitted.	----
x.	Undertaking in form of legal affidavit by project proponent for payment of entire levy amount raised by the State Government for excess production before going for operation of the mine	Payment challan has been submitted.	Specific condition to be stipulated in EC.
xi.	Compliance to issues raised in public hearing conducted on 24.06.2015 along with proposed actions to be taken in physical terms on the environmental issues raised during Public Hearing	Issues raised in public hearing will be addressed by project proponent.	Specific condition to be stipulated in EC.
xii.	The cost of ecological damage assessment is seemed to be very less. This should to be re-calculated with sufficient justification and revised document to be submitted	Total ecological damage cost has been revised to Rs.4,57,300.00	Specific condition to be stipulated in EC.

28. The SEAC in its meeting held on dated 09.04.2021 decided to take decision on the proposal after visit of sub-Committee of the SEAC to the mining site to ascertain possible damage to Mandira Dam and to decide specific conditions for the purpose.

29. The Sub-Committee of SEAC conducted site visit on 07.09.2021. The following observations were made:

i) It was observed that thick vegetation has developed in the lease area. The old mining benches are also hardly visible.

ii) It was observed that the road that leads to the mine and also passes through the lease was being widened probably by the Forest department.

iii) In order to have a clear picture of the physical features within the lease boundary and nearby area, the coordinates of boundary pillars were collected from the mining authority and was superimposed on Google Earth imagery. This has been presented in Figure 3. The mine is about 5 Kms from the Mandira dam. However, the reservoir water reaches within 250m from the lease boundary. It is unlikely to have any significant impact on the dam, since semi- mechanized mining is proposed.

iv) It may be seen that substantial part of the road passes through the lease area. There is a possibility of a serious hazard to persons travelling on the road particularly due to fly rocks arising out of blasting. Moreover, the road may get damaged due to various mining activities.

v) It is suggested that the mining authority should assess the impact of blasting by carrying out a few trail blasts in the beginning through an institution/organization having the domain expertise and the optimum blasting parameters should be established in order to avoid any adverse impact.

30. The SEAC observed the following:

a) The proposal was considered by the State Level Expert Appraisal Committee (SEAC), Odisha in its meeting held on 25th October, 2018 for appraisal of the proposal for ToR in pursuance of the MoEF&CC, Govt. of India Notification dated 14th March, 2017. The SEAC, after deliberations on the proposal in terms of the provisions of the Notification dated 14th March, 2017, confirmed the case to be of violation of the EIA Notification, 2006 and recommended for the following:

(i) The State Government to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986, and further no Consent to Operate to be issued till the project is granted Environmental Clearance.

(ii) The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of Environmental Clearance. The quantum is recommended by the SEAC based on EIA report and finalized by the regulatory authority i.e. SEIAA, Odisha. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC and approval of the regulatory authority i.e. SEIAA, Odisha.

(iii) Public hearing has already been conducted for the proposal earlier on 24.06.2015, a copy of which is also furnished with EIA/EMP. For this reason, conducting a fresh

Public Hearing has been exempted. But, CER issues raised as per MoM of public hearing will be put as physical as specific condition.

b) EIA/EMP study report has been prepared by a NABET Accredited / NABL Accredited Consultant namely **M/s Visiontek Consultancy Services Pvt. Ltd., Bhubaneswar**.

c) Detailed assessment of Ecological Damage, Remediation Plan and Natural and Community Resource Augmentation Plan has been incorporated in the EIA report.

d) An amount of ` 4,57,300.00/- (Rupees Four lakhs fifty seven thousand and three hundred only) has been estimated in the EIA / EMP report towards the cost of assessment of Environmental / Ecological damage due to violation as well as Natural and Community Resource Augmentation Plan.

e) There is no specific guideline issued by the MoEF&CC, Govt. of India for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan.

f) In the absence of any guidelines, the cost as suggested by the proponent in the EIA report above to be taken into account for remediation plan as well as Natural and Community Resource Augmentation Plan. However, the proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future and accordingly the proponent has to comply. To this effect, they have to submit an undertaking in form of a legal affidavit.

g) No record is available in the file about initiation of legal action against the project proponent by the State Govt./SPCB under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. To this effect, they have to submit a legal affidavit that no legal action is either initiated or pending against them.

After detailed discussion, the SEAC recommended for grant of Environmental Clearance for production of 0.25 million TPA limestone & dolomite mines over an mining lease area of 44.742 ha located at villages - Sarumuhan and Chunaghuti, Tahasil- Rajgangpur, District- Sundergarh, Odisha with the following specific conditions in terms of the provisions of the MoEF&CC, Govt. of India notification dated 14th March, 2017 in addition to the conditions stipulated as per **Annexure – E**. **However, the Environmental Clearance shall be issued by the SEIAA after receipt of relevant bank guarantee stated above.**

(i) The SEAC recommended for an amount of ` 4,57,300.00/- (Rupees Four lakhs fifty seven thousand and three hundred only) towards Remediation plan and Natural and Community Resource Augmentation plan as the proponent has gone for excess production of chromite Ore without prior Environmental Clearance under EIA Notification, 2006.

(ii) The project proponent shall be required to submit a bank guarantee of an amount of ` 4,57,300.00/- (Rupees Four lakhs fifty seven thousand and three hundred only) towards Remediation plan and Natural and Community Resource Augmentation plan with the State Pollution Control Board, Odisha prior to the grant of Environmental Clearance.

(iii) The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the SEAC, Odisha and approval of the regulatory authority (i.e. SEIAA, Odisha).

(iv) The SEIAA, Odisha may consider to request to the Govt. in F&E Deptt., Govt. of Odisha to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986 for violation of the EIA Notification, 2006. Environmental Clearance is to be issued after initiation of legal action against the project proponent.

(v) The proponent has to abide by the guidelines if issued by the MoEF&CC, Govt. of India in future for assessment of Environmental and Ecological Damage as well as estimation of cost for remediation plan as well as Natural and Community Resource Augmentation Plan. To this effect, the proponent shall submit a legal affidavit.

(vi) Following specific conditions to be stipulated in Environmental Clearance:

(a) Haulage road shall be developed and maintained perennially and perpetually by the proponent in consultation with the concerned authority of the Govt.

(b) CER related issues as per MoM of public hearing held on 24.06.2015 may be prescribed as special condition in EC.

(c) Substantial part of the road passes through the lease area. There is a possibility of a serious hazard to persons travelling on the road particularly due to fly rocks arising out of blasting. Moreover, the road may get damaged due to various mining activities. The proponent shall take adequate measures in this regard.

(d) The mining authority shall assess the impact of blasting by carrying out a few trail blasts in the beginning through an institution/organization having the domain expertise and the optimum blasting parameters should be established in order to avoid any adverse impact.

(e) As per EIA report in project description, Bench width, height and angle is indicated along with Quarry slope and the proponent shall follow it as per approved mining plan and so also blasting procedure.

(f) The proponent shall maintain the road as raised during public hearing periodically as will be advised by the concerned road authority of the roads.

(g) With regard to the public road and safety of commuters, the proponent must follow all the precautionary measures prescribed by DGMS including maintenance of a safety zone.

ITEM NO. 08

PROPOSAL FOR ENVIRONMENTAL CLEARANCE FOR REDEVELOPMENT OF SCB MEDICAL COLLEGE & HOSPITAL, CUTTACK (PHASE-I) OVER AN AREA 136.36 AC OR 55.18 HA OF M/s ODISHA BRIDGE & CONSTRUCTION CORPORATION LIMITED OF SRI PRADIPTA KUMAR BAL – 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 as the total built-up area exceeds 1.5 lakh m^2.
2. The proposal is for Environmental Clearance for Redevelopment of SCB medical College & Hospital, Cuttack (Phase-I) over an area 136.36 Ac or 55.18 Ha of M/s Odisha Bridge & Construction Corporation Limited of Sri Pradipta Kumar Bal.

3. The project falls under category “B” or activity 8(b) - Townships and Area Development projects under EIA Notification dated 14th September 2006 as amended from time to time.
4. Shri Ram Chandra Bhanja (SCB) Medical College and Hospital is an undergraduate as well as a postgraduate medical institution with a tertiary care referral hospital. The redevelopment and expansion of SCB medical campus is proposed to be undertaken across approximately 136 acres of land area located next to the Mahanadi River.
5. The re-development plan shall broadly include construction of 3500 bedded Multi Specialist Hospital, Research facilities, Residential Block, Hostel Block, Guest Room with Ancillary Infrastructures like Playgrounds, Parking Facilities, Open Landscaped Spaces, Five nos. of entry points and robust circulation plan, Amenities and Services for Patients and Visitors, Extensive waiting areas, dormitory, Aahaar centre etc.
6. **Location and Connectivity** - The Project Site is a part of the Survey of India Toposheet No F45T15 & F45T16. The site falls between Latitude-20° 28'48.59"N to 20° 28'10.44"N and Longitude-85° 53'51.58"E to 85° 53'26.64"E in plot no and Khata no - 142 to 651 Manglabag (full or part) 1831 to 1853 Buxi Bazar. Proposed Project Site is well connected to a network of existing Taladanda canal road at E and ring road at NW. The hospital has two entrances with a service road which connects the main entrance to the rear entrance. The same service road acts as connecting link between one part of the city with the other which is used by the patients and general public. The main entrance is through the Manglabag side which has two gates for entry and exit. SSE direction. (KTJI) Katha Jori Railway station is 2.13 km away from the project site towards – S direction. Charbatia Airship -13.7 km- N, Biju Pattanaik airport – 31.5 km –S,Ravenshaw University- 1.2 Km –SSE, Barabati stadium- 2.08 km-NW, Barabati Fort: 2.72 KM –NW. NH-16/NH-55 – 2.7KM.
7. The site is coming under development plan of Cuttack Development Authority.
8. The total plot area is 5, 51,865 sqmtr or 136.37 Ac. or 55.18 Ha. and proposed super built-up area for phase-1(Existing + Proposed) = 781081.48 Sqm.
9. The Building Details of The Project:

Area Details - Proposed Buildings - Phase 1	
Building Name	**Total Built up Area (Sqm)**
Proposed Building	
Clinical	349543.00
Hostel	96328.93
Residential	170575.11
Other Facilities	9704.35
Total	**626151.39**

10. **Water requirement**: Total Water Requirement - 2757 KLD (Domestic + Flushing). Total Fresh Water Requirement - 2287 KLD; Source: water supply through PHED Supply, Cuttack .Total flushing water Requirement - 470 KLD; Source: Re-use of Treated water from STP.
11. **Wastewater Generation**: Total - 2298 KLD. Treated Wastewater to be reused - 470 KLD for Flushing, 71 KLD, for Green Belt Development, 15 KLD for HVAC etc. Capacity of Sewerage Treatment Plant - 2400 KL (MBBR Type) Capacity of Effluent Treatment Plant - 135 KL (MBBR Type) Treated Wastewater Reuse - 2220 KLD Excess Wastewater

discharge to nearest drain – 235 KLD (during Rainy Season).

12. **Power requirement**: Maximum Demand Load 25,568 KW /26,914 KVA Or Say 27 MVA & Source: - Supplied by TPCODL (Tata Power Central Odisha Distribution Limited). Solar Power - Maximum Demand Load through Solar Street Light, Water heater & other System. Back Up DG Set: 12 Nos. 2000 KVA, 415V DG Sets for Clinical Blocks, 6 Nos. 2000 KVA, 11KV DG Sets for HT Chillers, Boys & Girls Hostel and common area of Residential Blocks 415 Volt, Radiator Cooled DG Sets with stack height as per CPCB norms.(Recommended stack height is =h+0.2*√KVA=55 M).
13. **Rain Water Harvesting**: Total Runoff from Storm Water from Site is 22911 m³ so based on 1no. Harvesting pit volume 43 cum, 135nos rain harvesting pits has been proposed.
14. **Parking Requirement**: Total parking area available is 162498 sq.mt./ 5106 ECS (30 % of total FAR Area as per ODA planning standards) i.e., 100,361 sq.mt./3084 ECS for clinical & 62,137.29 sq.mt. / 2022 ECS for residential at basement parking, stilt and surface parking. There will be separate Entry/ Exit Point. The internal traffic generated by visitors shall be regulated and managed through well laid road (more than 12 mtrs (R/W). in each side) and parking system in the campus. The road system has been designed in accordance with the ODA, NBC codes/regulations. Pavement shall be designed in accordance with the IRC standards and codes. Necessary signs and road furniture shall be provided to ensure regulation and smooth flow of traffic. Peripheral road around the building is 7.5 mtrs wide (minimum R/W).
15. **Fire fighting Installations**: Fire fighting system will be installed as per recommendation of the Fire fighting Officer, Odisha and as per the guidelines of NBC 2016. Hospital block- As per clause 3.1.4 of NBC-2016, the said Hospital is classified under group C; Institutional Buildings. Hostel block-As per clause 3.1.4 of NBC-2016, the said Hostel is classified under group A; in subdivision A-3 dormitories. Residential block:-As per clause 3.1.2 of NBC-2016, the said Residential is classified under group A; Residential Buildings.
16. **Green Belt Development**: Total Green Area measures 120192 sqm (approx. 21% of the Total Plot Area) which will be area under tree plantation & gardening. About 6900 nos. of trees will be planted. Preference will be given to native trees. Allergy causing trees will be avoided. 495 KLD of treated waste water will be used for watering of the plants and garden. Apart from this terrace pot plantation outside the boundary and along the approach road
17. **Solid Waste Management**: MSW-2.289 Ton/day [Biodegrable waste = 1.335 Ton/day+ Non-Biodegradable=0.888 Ton/day]. Solid waste disposal - in Integrated Composting Plant and as per Solid Waste Management Rules 2016.Total Hospital waste = 5.250 Ton/day [Biomedical waste =0.788 Ton/day. Segregation, Storage & Disposal as per Bio-medical Waste Management Rules 2016.
18. The estimated project cost is ` 3500 Crores.
19. The project proponent along with the consultant **M/s Visiontek Consultancy Services Pvt Ltd**., **Bhubaneswar** made a detailed presentation on the proposal on 10.08.2021.
20. The SEAC in its meeting held on dated 10.08.2021 prescribed the following specific ToRs in addition to standard ToRs as per **Annexure – C** for conducting detailed EIA study.

    i) Detailed report on waste management i.e., collection and disposal of Biomedical waste, liquid waste and solid waste from the premises.
    ii) Separate provision for STP and ETP and chemical analysis of output water in each with

capacity of STP to be installed should be increased suitably at least by 20% to accommodate additional requirement.

iii) Whether Incineration will be done? if yes, details of waste to be incinerated.

iv) Distance and detailed layout of drainage system from project site to nearest drain and thereof outfall of drain.

v) Sample survey study for parking to be submitted. Traffic study from ring road to entry points. While arriving at Parking space in terms of ECS, an expert sample study needs to be undertaken for the existing hospital taking into consideration number of beds, hospital staff, residences, patient attendance and visitors beyond standard norms and extra polated for the proposed expansion. Traffic study at all five proposed entry points and entry and exit points interesting ring road by domain expert be undertaken and traffic decongestion if any observe as per study findings mitigation measures thereof be submitted

vi) Detailed plan for Environmental Monitoring Cell – an in-house permanent "Environment Management Cell" with Organogram and functions be submitted.

vii) Water logging issues how to resolve it in the project site.

viii) Proposal to increase in utility of treated waste water in premises and thereby reducing quantity of discharge to drain. Analysis report of treated waste water to be submitted.

ix) Increase in percentage of solar power usage.

x) Details of existing Fire safety measures and proposed.

xi) Details of earlier EC, Consent to Establish, Consent to Operate and Authorization issued and compliance to it.

xii) Kissam of the land of the proposed expansion and along with necessary documents from appropriate revenue authority be submitted.

xiii) Existing building under construction of 4099.77 sq.m as indicated be shown in the existing layout and the purpose be indicated.

xiv) Treated ETP waste as well as sludge need to be analyzed chemically (Chemical analysis) and accordingly, SOP of disposal to be submitted. ETP sludge is expected to be biologically toxic and hazardous.

xv) What is hospital waste? What are it's ingredients and a source of generation? How it is different from Bio- medical waste?

xvi) Layout with dimensions of storm water/ surface run off and waste water drains to be shown separately in the layout.

xvii) Due to unpredicted rainfall intensity, duration and frequency at least 20% increase in the dimension of the internal drain need to be in place to consultation and advice of domain expert.

xviii) Details of solar system with calculation item wise to be furnished.

xix) Location of DG sets with reference to wind direction vis-à-vis the location of the hospital and residential buildings and corresponding stack heights with installation of chimney drawings as per CPCV norm be submitted.

xx) What is the design of existing and proposed incinerator and details (ingredients) of non-bio degradable solid waste to be incinerated and disposal SOP of the residues of the incineration be submitted.

xxi) Each "zero discharge" possible are indicated in a term report.

xxii) A WTP, both for existing and propose expansion with detailed design be submitted.

xxiii) Structural stability of existing buildings of the existing hospital and residential buildings be submitted from authorized structural engineer.

21. The SEAC in its meeting held on 10.08.2021 recommended that a site visit of Sub-Committee of SEAC to be made after issue of Terms of References (ToRs) by SEIAA, Odisha and observations of sub-committee to be communicated to SEIAA, Odisha to issue additional ToRs if any so that the observations can be addressed by the proponent during EIA / EMP study for a consensus decision as this is an important and critical project.

22. The Sub-Committee of SEAC visited the site on 07.10.2021 and the observations of the Sub-Committee are as below:

A. Parking :

Parking only for light motor Vehicles (4 wheelers) is understood to have been proposed to be provided in basement of the 04 hospital Blocks and the space developed on south Eastern side of Taladanda Canal. No parking provision has been provided for two wheelers.

With this limited provision of Parking, it is expected to create serious traffic congestion as being observed in the existing hospital.

To overcome this difficulty, the following are suggested:

i) Parking space may be developed & provided in between the space between the adjacent 04 hospital blocks for two wheelers only, leaving clear space for internal road between the adjacent blocks for movement of commutators and the vehicles.
ii) To explore possibility of increase of one floor and dedicating ground floor for Parking, confirming to by-law applicable for hospital buildings in all the four hospital blocks.
iii) The space available in North-East direction of the proposed redevelopment site located at Jobra junction be developed and dedicated for parking, which is at least proximate to hospital blocks. The electrical Substation (small) be shifted from the said location.
iv) Either Bridge or foot over(s), may be two/three, be constructed over Taladanda Canal for movement of light Motor Vehicles (04 wheelers) for parking at the parking space proposed site at South-East direction of the proposed hospital Blocks on the other side of Taladanda Canal.

With the above suggestions, the parking provision be re- worked at considering and considering the requirement of proposed beds, OPDs, for projected patients, their visitors, floating Population, treating doctors and Concerned Medical staff and Pre-Submitted and separate Parking (both 4&2 wheelers) of residential facility be worked and re-submitted.

While working at parking requirement, it is to be calculated in terms of ECS, both for 4 wheelers & 2 Wheelers as per the standard norms.

B. Fire Tender Service:

It could be seen that no provision has been made for fire Tender corridor for free movement of

Fire Tenders in case of fire accidents.

So it is recommended to make Provision of dedicated Fire Tender corridor and submit the revised layout plan showing the same with dimensions along with the net work of internal roads & their dimensions.

C. Treatment & Discharge of waste water:

At present in existing SCB Medical College & hospital, there is an ETP for treatment hospital effluents and no STP exists. The hospital effluents after treatment is discharged to a tank in which domestic effluents are stored without treatment and both together is pumped out and drained through pipeline and falls at drain no.1 of CMC at Chhatra Bazar which ultimately is understood to have been discharged to “Kathajodi” River.

It was given to understand that similarly a parallel pipe line will be laid for discharge of waste

water to drain no.1 of CMC which will ultimately fall out at “Kathajodi”River.

a) With the above, the following are recommended:
   i) There must be separate ETP for hospital effluents & STP for domestic effluents.
   ii) Treated waste water from ETP out of hospital effluents (viz: OT, Laboratory etc.) need to be prohibited for discharge to CMC Drain/ any river/ water body and effluents after treatment in STP (unavoidable minimum) may be discharged after chemical analysis of output discharge (if admissible) with due permission of CMC /River Authority. Additional treated waste water from STP be utilized in more plantation.
   iii) STP facility be installed in existing S.C.B Medical College and hospital, Cuttack.

b) Internal drainage drawing with dimensions be submitted for surface run-off/ storm Water, hospital waste water & domestic waste water.

After detailed discussion, the SEAC recommended the following additional specific ToRs in addition to the ToRs recommended earlier.

A. Parking :

Parking only for light motor Vehicles (4 wheelers) is understood to have been proposed to be provided in basement of the 04 hospital Blocks and the space developed on south Eastern side of Taladanda Canal. No parking provision has been provided for two wheelers.

With this limited provision of Parking, it is expected to create serious traffic congestion as being observed in the existing hospital.

To overcome this difficulty, the following are suggested:

i) Parking space may be developed & provided in between the space between the adjacent 04 hospital blocks for two wheelers only, leaving clear space for internal road between the adjacent blocks for movement of commutators and the vehicles.

ii) To explore possibility of increase of one floor and dedicating ground floor for Parking, confirming to by-law applicable for hospital buildings in all the four hospital blocks.

iii) The space available in North-East direction of the proposed redevelopment site located at Jobra junction be developed and dedicated for parking, which is at least proximate to hospital blocks. The electrical Substation (small) be shifted from the said location.

iv) Either Bridge or foot over(s), may be two/three, be constructed over Taladanda Canal for movement of light Motor Vehicles (04 wheelers) for parking at the parking space proposed site at South-East direction of the proposed hospital Blocks on the other side of Taladanda Canal.

With the above suggestions, the parking provision be re- worked at considering and considering the requirement of proposed beds, OPDs, for projected patients, their visitors, floating Population, treating doctors and Concerned Medical staff and Pre-submitted and separate Parking (both 4&2 wheelers) of residential facility be worked and re-submitted. While working at parking requirement, it is to be calculated in terms of ECS, both for 4 wheelers & 2 Wheelers as per the standard norms.

B. Fire Tender Service:

It could be seen that no provision has been made for fire Tender corridor for free movement of

Fire Tenders in case of fire accidents.

So it is recommended to make Provision of dedicated Fire Tender corridor and submit the revised layout plan showing the same with dimensions along with the net work of internal roads & their dimensions.

C. Treatment & Discharge of waste water:

At present in existing SCB Medical College & hospital, there is an ETP for treatment hospital effluents and no STP exists. The hospital effluents after treatment is discharged to a tank in which domestic effluents are stored without treatment and both together is pumped out and drained through pipeline and falls at drain no.1 of CMC at Chhatra Bazar which ultimately is understood to have been discharged to "Kathajodi" River.

It was given to understand that similarly a parallel pipe line will be laid for discharge of waste water to drain no.1 of CMC which will ultimately fall out at "Kathajodi"River.

a) With the above, the following are recommended:
   i) There must be separate ETP for hospital effluents & STP for domestic effluents.
   ii) Treated waste water from ETP out of hospital effluents (viz: OT, Laboratory etc.) need to be prohibited for discharge to CMC Drain/ any river/ water body and effluents after treatment in STP (unavoidable minimum) may be discharged after chemical analysis of output discharge (if admissible) with due permission of CMC /River Authority. Additional treated waste water from STP be utilized in more plantation.
   iii) STP facility be installed in existing S.C.B Medical College and hospital, Cuttack.

b) Internal drainage drawing with dimensions be submitted for surface run-off/ storm Water, hospital waste water & domestic waste water.

Approved

15.11.2021

SECRETARY, SEAC

CHAIRMAN, SEAC

ANNEXURE - A

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR M/S. UTKAL REALTORS PVT LTD. FOR CONSTRUCTION OF HOUSING PROJECT (RESIDENTIAL USE TYPE) LOCATED AT- PAHALA, BHUBANESWAR, DIST – KHORDHA WITH TOTAL BUILT UP AREA -30,990.21 SQM. OF SRI. PRAKASH CHAND BHURA (EC).

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of 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.
5. The proponent shall obtain prior clearance from the Standing Committee of the National Board for Wild Life if the project will be located within any Eco-Sensitive Zone of Wild Life Sanctuary.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. The permission from competent authority will be obtained to discharge the excess storm water to drain if any. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially.
8. Permission for construction of drain alongside the adjacent NH under construction for allowing the proponent to discharge the treated waste water as well excess runoff water during monsoon from NH Authority shall be obtained. The construction of drains shall be synchronized with the completion of the construction of the Housing Project.

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

9. As proposed, fresh water requirement from ground water shall not exceed 75 m^3 per day.
10. A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring

that there is no impact on other users.

11. The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA, Odisha along with six monthly Monitoring reports.
12. Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.
13. Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.
14. Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.
15. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
16. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of 04 (four) nos. shall be provided.
17. Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawl of water.
18. The proponent shall keep one bore well as standby domestic water source once municipal water supply is made available in the project area.

SOLID WASTE MANAGEMENT

19. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.
23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste

generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 110 KLD. The treated effluent from STP shall be reused for flushing, horticulture & Filter backwash.
25. Excess treated water shall be discharged to the drain only after getting the permission from the concerned authority. The proponent shall renovate the existing drain to accommodate the discharge and maintain it perennially. To this effect the proponent has to give a legal affidavit before going for construction activity.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/disposal/drainage systems along with the final disposal point.
27. Separate large recharge pits shall be constructed inside the project area to accommodate the rainwater in case the housing project period and the CDP of the Govt. does not synchronize with reference to construction of road and drain.
28. No sewage or untreated effluent water would be discharged through storm water drains.
29. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for operation. Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.
30. Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013.
31. The proponent shall obtain permission from the concerned authority to discharge the liquid waste to any drain i.e. the competent authority of the drain and “Nala” before commencement of any activity at the project site.

ENERGY

32. Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.
33. Energy conservation measures like installation of CFLs / LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning. Used CFLs, TFL and LED shall be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination.

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

35. Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.

36. Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include Fly Ash bricks, hollow bricks, AACs, Fly Ash Lime Gypsum blocks, compressed earth blocks, and other environment friendly materials. Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.

37. A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.

AIR QUALITY AND NOISE

38. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

39. AII construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

40. **Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.**

41. The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.

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

43. Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.

GREEN COVER

44. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 1,776.15 sqm which is 21.0 % of plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

45. Topsoil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas, and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.

TRANSPORT

46. A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.

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

47. A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.

48. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

49. Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.

50. A dedicated entry/exit and parking shall be provided for commercial activities.
51. Barricades shall be provided around project boundary.
52. Speed of the vehicles shall be restricted upto 15 kmph by erecting speed bumps at regular intervals at project site and proper signage shall be provided for guided vehicular movement and speed restrictions.
53. Parking shall be prohibited on the access road to the proposed project site.
54. Footpath shall be seamless with sufficient width.
55. No vehicles shall be allowed to stop and stand in front of the gate on main access.
56. A buffer of minimum 10 m shall be maintained between the entry/exit gate and the road to avoid traffic congestion.
57. The Traffic Management Plan prepared by the proponent shall be duly validated and certified by the State Concerned Competent Authority and shall have also their consent before implementation.

ENVIRONMENT MANAGEMENT PLAN

58. An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.

OTHERS

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

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

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.
3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.
4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.
5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.
7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.
8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.
9. Any appeal against this clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The

clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, Govt. of India, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

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

Environmental Scientist, SEAC

ANNEXURE – B

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR ’SIKSHA ‘O’ ANUSANDHAN DEEMED UNIVERSITY’’ FOR CONSTRUCTION AND EXPANSION OF EXISTING CLINICAL AREA FROM 15669.32 SQM. TO 49881.63 SQM. OF SUM ULTIMATE MEDICARE WITHIN THE PREMISES OF CAMPUS-II HAVING INSTITUTIONAL AREA -99961.04 SQM. OVER AN AREA 10.560HA. ON PLOT NO.268, 2685, 2686, 2671, 2672, 2673, 2674 & 2675 KHATA NO.2239 AT MOUZA- GHATIKIA, KALINGA NAGAR, BHUBANESWAR, ODISHA OF SRI BIBEKANANDA PRADHAN (DEPUTY MANAGER) - EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of 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.
5. Provision for electric point at each and every parking location for e- vehicle charging etc. shall be provided.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. NOC from drainage department for discharge of treated water to readymade municipality drain shall be obtained.

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

8. As proposed, fresh water requirement from Ground water / PHED water supply shall not exceed 471 KLD.
9. 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.
10. 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.

11. 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.
12. 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.
13. 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.
14. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.
15. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed 25 (twenty-five) nos. of rain water harvesting recharge pits shall be provided.
16. 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

17. The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules, 2016, and the Plastics Waste (Management) Rules, 2016 shall be followed.
18. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.
19. Bio-Medical waste shall be disposed off through common bio-medical waste facility as per the agreement made with the nearby Common Bio-medical waste facility.
20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.
21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.
22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 825 KLD. The treated effluent from STP shall be recycled/re-used for flushing, gardening and washing purpose. Surplus treated waste water shall be discharged to the drain provided by BMC for this project.
25. Clinical waste water shall be treated in ETP of capacity 50 KLD.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point.
27. No sewage or untreated effluent water would be discharged through storm water drains.
28. 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.
29. 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

30. 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.
31. 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.
32. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 2-5% 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.
33. 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.

34. 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.

35. 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

36. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

37. AII construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

38. **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.**

39. 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.

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

41. 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

42. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 24298.3799 sqm (approx. 23 %) of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

43. 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

44. 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

45. 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.

46. 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.

47. 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

48. 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

49. 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.

50. A First Aid Room shall be provided in the project both during construction and operations of the project.

51. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.

52. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.

2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.

3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.

4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.

5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act,

1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.

8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.

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

10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated EC 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, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

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

Environmental Scientist, SEAC

ANNEXURE – C

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR SIKSHA O ANUSANDHAN UNIVERSITY FOR CONSTRUCTION AND EXPANSION OF EXISTING CLINICAL AREA FROM 13543 SQM. TO 69911SQM. OF "IMS & SUM HOSPITAL" WITHIN THE PREMISES OF CAMPUS- III HAVING INSTITUTIONAL AREA - 78855.7 SQM. OVER AN AREA 7.98HA. ON PLOT NO. F1,F2,F3,C1,C2,C3.C4 & C5 AT MOUZA-GHATIKIA, BHUBANESWAR OF SRI BIBEKANANDA PRADHAN (DEPUTY MANAGER) – EC.

PART A - SPECIFIC CONDITIONS:

1. Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
2. The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of 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.
5. Provision for electric point at each and every parking location for e- vehicle charging etc. shall be provided.

TOPOGRAPHY AND NATURAL DRAINAGE

6. The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage Systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.
7. NOC from drainage department for discharge of treated water to readymade municipality drain shall be obtained.

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

8. As proposed, fresh water requirement from Ground water / PHED water supply shall not exceed Clinical -718 KLD and for Institutional-175 KLD.
9. 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.
10. 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.

11. 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.

12. 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.

13. 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.

14. Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

15. The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. As proposed 61 (six-one) nos. of rain water harvesting recharge pits shall be provided.

16. 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

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

18. Bio-medical waste shall be collected, treated and disposed in accordance with Bio-medical Waste Management Rules, 2016.

19. Bio-Medical waste shall be disposed off through common bio-medical waste facility as per the agreement made with the nearby Common Bio-medical waste facility.

20. Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.

21. Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.

22. Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

23. A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.

SEWAGE TREATMENT PLANT

24. Sewage shall be treated in STP of capacity 1500 KLD. The treated effluent from STP shall be recycled/re-used for flushing, gardening and washing purpose. Surplus treated waste water shall be discharged to the drain provided by BMC for this project.
25. Clinical waste water shall be treated in ETP of capacity 50 KLD.
26. A certificate from the competent authority shall be obtained for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point.
27. No sewage or untreated effluent water would be discharged through storm water drains.
28. 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.
29. 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

30. 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.
31. 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.
32. Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 2-5% 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.
33. 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.

34. 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.

35. 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

36. Construction site shall be adequately barricaded before the construction begins. Dust, smoke & other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3 meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.

37. AII construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.

38. **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.**

39. 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.

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

41. 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

42. No tree cutting/transplantation of existing trees has been proposed in the instant project. A minimum of 1 tree for every 80 m^2 of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and/or invasive species should not be used for landscaping. As proposed approx. 10550.7 sqm (approx. 13.22 %) of the plot area shall be provided for green area development.

TOP SOIL PRESERVATION AND REUSE

43. 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

44. 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

45. 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.

46. 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.

47. 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

48. 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

49. 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.

50. A First Aid Room shall be provided in the project both during construction and operations of the project.

51. The company shall draw up and implement corporate social Responsibility plan as per the Company's Act of 2013.

52. As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1st May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(ll) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report, and to the District Collector. It should be posted on the website of the project proponent.

PART B – GENERAL CONDITIONS

1. A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.

2. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC, Govt. of India and its concerned Regional Office.

3. Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.

4. In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.

5. The SEIAA, Odisha reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act,

1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

6. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, the Forest Conservation Act, 1980 and the Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

7. These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and the EIA Notification, 2006.

8. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within Seven days from the date of receipt of the Clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.

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

10. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad / Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

11. The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated EC 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, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO_2, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

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

Environmental Scientist, SEAC

ANNEXURE - D

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE OF M/S CHETTINAD CEMENT CORPORATION PVT. LTD. FOR PROPOSED 2X1.0 MTPA CEMENT GRINDING UNIT AT KALINGANAGAR INDUSTRIAL COMPLEX, TEHSIL: DANGADI, DISTRICT: JAJPUR OF MR. A. ANNADURAI. (EC).

I. Statutory compliance

i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.

ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report, (incase of the presence of schedule-1 species in the study area)

iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State pollution Control Board/ Committee.

v. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

vi. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

vii. The construction and demolition wastes to be generated from the proposed project shall be disposed of in accordance with the provisions of "Construction & Demolition Wastes Management Rules 2016".

viii. Municipal Solid Waste shall be disposed off as per the Solid Waste Management Rules, 2016 and amendment thereafter.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 Continuous Online Emission Monitoring System at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.

iii. The project proponent shall install system carryout to Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO**2** and NOx emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 1200 each), covering upwind and downwind directions.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality /fugitive emissions to the SEIAA, Odisha, Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six- monthly monitoring report.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.

vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

vii. Pollution control system in the cement plant shall be provided as per the CREP Guidelines of CPCB.

viii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

ix. Ensure covered transportation and conveying of raw material to prevent spillage and dust generation; Use closed bulkers for carrying fly ash.

x. Provide wind shelter fence and chemical spraying on the raw material stock piles and have separate truck parking area and monitor vehicular emissions at regular interval.

xi. The proponent shall provide designated parking space, both inside and outside the plant to avoid traffic congestion and conflict.

xii. The proponent shall not use pet coke as fuel in Hot Air Generator (HAG).

xiii. The proponent shall install permanent water sprinklers either on internal roads or dust prone area at loading-unloading, transfer, transportation inside the plant to control fugitive emission.

III. Water quality monitoring and preservation

i. The project proponent shall install Continuous Online Effluent Monitoring System with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. No. 612 (E) dated 25th August, 2014 (Cement) and subsequent amendment dated 9th May, 2016 (Cement) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to SEIAA, Odisha, Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No wastewater shall be discharged outside the factory premises and 'Zero Liquid Discharge (ZLD)' shall be adopted.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off

vii. The project proponent shall practice rainwater harvesting to maximum possible extent.

viii. Water meters shall be provided at the inlet to all unit processes in the cement plant.

ix. The project proponent shall make efforts to minimize water consumption in the cement plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to SEIAA, Odisha as well as Regional Office of the MoEF&CC, Govt. of India, Bhubaneswar as a part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time

V. Energy Conservation measures

i. Provide solar power generation on rooftops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly. The proponent shall use Solar / Renewable energy of 5 % of the expected actual power requirement.

ii. Provide the project proponent for LED lights in their offices and residential areas.

iii. Maximize utilization of fly ash, slag and sweetener in cement blend as per BIS standards.

VI. Waste management

i. The waste oil, grease and other hazardous shall be disposed of as per the Hazardous & Other waste (Management & Trans-boundary Movement) Rules, 2016.

ii. Garbage / food waste from Colony, Canteen & Guest House shall be used for vermicomposting and to be used as manure for green belt development.

iii. Ash generated from Hot Air generator (HAG) and dust generated from APC Devices shall be completely reused in Cement manufacturing process. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.

iv. STP sludge shall be used as manure for greenbelt development / plantation.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% (as proposed) of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.

ii. The proponent shall make plantation in the gap area to have uniformity alongside the boundary / periphery of the project including developing a suitable nursery as well.

iii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The PP shall provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. The proponent shall comply to the CER related issues raised in the proceedings of the public hearing held on 06th March 2019.

iv. Provision 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.

v. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in MoEF&CC, Govt. of India OM vide F.No. 22-65/2017-IA.III, dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the SEIAA, Odisha as well as MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level,

with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the SEIAA, Odisha, Regional Office, MoEF&CC, Govt. of India, Bhubaneswar along with the Six Monthly Compliance Report.

v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the cement plants shall be implemented.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM10, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the State Level Expert Appraisal Committee.

x. No expansion or modifications in the plant shall be carried out without prior approval of the SEIAA, Odisha.

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The SEIAA, Odisha may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The SEIAA, Odisha reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

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

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

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

Environmental Scientist, SEAC

ANNEXURE- E

CONDITIONS TO BE STIPULATED IN ENVIRONMENTAL CLEARANCE FOR B.D. PATNAIK MINERALS PVT. LTD FOR PRODUCTION OF 0.25 MILLION TPA LIMESTONE & DOLOMITE MINES OVER AN MINING LEASE AREA OF 44.742HA LOCATED AT VILLAGES - SARUMUHAN AND CHUNAGHUTI, TAHASIL- RAJGANGPUR, DISTRICT- SUNDERGARH, ODISHA OF SRI AJAY KUMAR PATNAIK (UNDER VIOLATION CASE) - EC.

A. SPECIFIC CONDITIONS:

1) Approval/permission of CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.

2) The amount proposed under **Corporate Environment Responsibility (CER)** head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

3) The amount (except occupational health) proposed under Environmental Management Plan (EMP) head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

4) The amount proposed under Occupational Health plan head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs& Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC, Bhubaneswar and SEIAA, Odisha before 1st July of every year for the activities carried out during previous year.

5) The Project Proponent shall set up an Environmental Management Cell comprises of persons having qualification and experience in the field of environment along with supporting staff. The details of the same needs to be submitted to the SEIAA, Odisha within 3 months of the grant of EC.

6) The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2ndAugust 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.

7) In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.

8) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

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

10) The Project Proponent shall keep a record of each blasting viz. location, number of holes, delay assigned of each hole, explosive quantity of each hole, blasting pattern etc.

B. STANDARD CONDITIONS: (AS MINISTRY'S O.M NO 22-34/2018-IA.III DATED 8.01.2019 &16.01.2020)

Statutory compliance

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

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

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

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

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

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

17) The Project Proponent shall adhere to the provision of the Mines Act, 1952, Mines and Mineral (Development & Regulation), Act, 2015 and rules & regulations made there

under. PP shall adhere to various circulars issued by Directorate General Mines Safety (DGMS) and Indian Bureau of Mines from time to time.

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

19) The Project Proponent shall follow the mitigation measures provided in MoEF&CC's Office Memorandum No. Z-11013/57/2014-1A. II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".

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

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

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

23) The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the

24) State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEF&CC Regional Office for compliance and record.

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

Air quality monitoring and preservation

26) The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM 10, PM2.5, N02, CO and S02 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/l, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.

27) Effective safeguard measures for prevention of dust generation and subsequent

suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEF&CC/ Central Pollution Control Board.

Water quality monitoring and preservation

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

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

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

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

record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.

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

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

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

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

Noise and vibration monitoring and prevention

36) The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.

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

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

Mining plan

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

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

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

Land reclamation

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

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

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

45) The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and help in adaptation of plant

species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.

46) The Project Proponent shall carry out slope stability study in case the dump height is more than 30 meters. The slope stability report shall be submitted to concerned regional office of MoEF&CC.

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

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

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

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

51) Slope study by an expert of repute of water dumps to be done and submitted within six months from the date of issue of EC to SEAC / SEIAA

Transportation

52) No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a ‘bypass’ road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load.

53) The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers.

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

55) Haulage road shall be developed and maintained perennially and perpetually by the proponent in construction with the concerned authority of the Govt. and to this effect, the proponent shall submit an undertaking in form of a legal affidavit

56) Traffic density study if not done by domain expert, then the expert to be ratified / authenticated by domain expert and submitted within a month time.

Green Belt

57) The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.

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

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

60) The Project Proponent shall undertake all precautionary measures for conservation and protection of endangered flora and fauna and Schedule-1 species during mining operation. A Wildlife Conservation Plan shall be prepared for the same clearly

delineating action to be taken for conservation of flora and fauna. The Plan shall be approved by Chief Wild Life Warden of the State Govt.

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

Public hearing and human health issues

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

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

64) The Proponent shall carry out Occupational health surveillance which be a part of HRA and include Biological Monitoring where practical and feasible, and the tests and investigations relevant to the exposure (e.g. for Dust a X-Ray chest; For Noise Audiometric; for Lead Exposure Blood Lead, For Welders Full Ophthalmologic Assessment; for Manganese Miners a complete Neurological Assessment by a Certified Neurologist, and Manganese (Mn) Estimation in Blood; For Inorganic Chromium- Fortnightly skin inspection of hands and forearms by a responsible person. Except routine tests all tests would be carried out in a Lab accredited by NABH. Records of Health Surveillance must be kept for 30 years, including the results of and the records of Physical examination and tests. The record of exposure due to materials like Asbestos, Hard Rock Mining, Silica, Gold, Kaolin, Aluminium, Iron, Manganese, Chromium, Lead, Uranium need to be handed over to the Mining Department of the State in case the life of the mine is less than 30 years. It would be obligatory for the State Mines Departments to make arrangements for the safe and secure storage of the records including X-Ray. Only conventional X-Ray will be accepted for record purposes and not the digital one). X-Ray must meet ILO criteria (17 x14 inches and of good quality).

65) The Proponent shall maintained a record of performance indicators for workers which includes (a) there should not be a significant decline in their Body Mass Index and it

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

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

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

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

69) The proponent shall implement the mitigative measures as suggested in the Study Report on effect of chromite mines to nearest human habitation.

70) Occupational health check-up shall be done by occupational health expert periodically for employees as well as nearby villagers.

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

Corporate Environment Responsibility (CER)

72) The activities and budget earmarked for Corporate Environmental Responsibility (CER) as per Ministry's O.M No 22-65/2017-IA. II (M) dated 01.05.2018 or as proposed by EAC should be kept in a separate bank account. The activities proposed for CER shall be implemented in a time bound manner and annual report of implementation of the same along with documentary proof viz. photographs, purchase documents, latitude & longitude of infrastructure developed & road constructed needs to be submitted to Regional Office MoEF&CC annually along with audited statement.

73) Project Proponent shall keep the funds earmarked for environmental protection measures in a separate account and refrain from diverting the same for other purposes. The Year wise expenditure of such funds should be reported to the

MoEF&CC and its concerned Regional Office.

Miscellaneous

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

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

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

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

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

79) In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.

80) The SEIAA, Odisha or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

81) Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

82) The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974. the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court and any other Court of Law relating to the subject matter.

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